HUMBOLDT COUNTY RESOURCE CONSERVATION DISTRICT

SALT RIVER ECOSYSTEM RESTORATION PROJECT

SALT RIVER CHANNEL & RIPARIAN FLOODPLAIN CORRIDOR RESTORATION PLANS

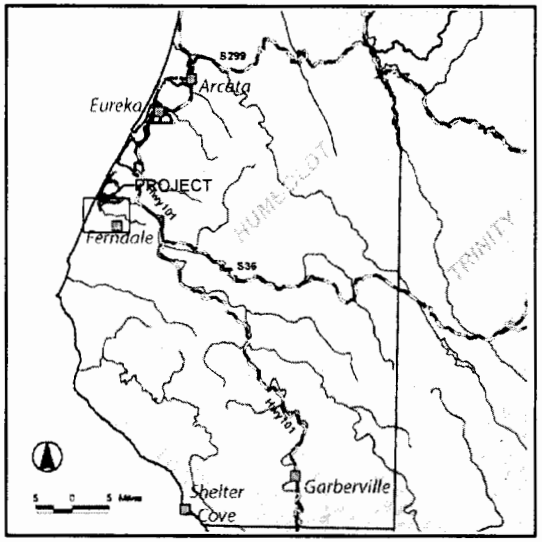
PHASE 2 CONSTRUCTION

MAY 2011

PREPARED BY

WINZLER & KELLY

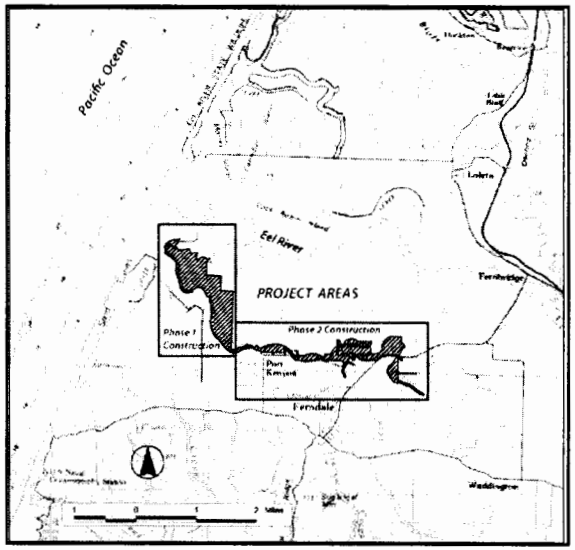
Michael Love & Associates



VICINITY MAP

IN COLLABORATION WITH

CALIFORNIA STATE COASTAL CONSERVANCY
CALIFORNIA WATER RESOURCES CONTROL BOARD
CALIFORNIA DEPARTMENT OF FISH & GAME
NATURAL RESOURCES AGENCY
U.S. FISH & WILDLIFE SERVICES
NATIONAL OCEANIC & ATMOSPHERIC ADMINISTRATION
USDA - NATURAL RESOURCES CONSERVATION SERVICES
CITY OF FERNDALE
COUNTY OF HUMBOLDT
H.T. HARVEY & ASSOCIATES
KAMMAN HYDROLOGY & ENGINEERING, INC.



LOCATION MAP

EXHIBIT NO. 10
APPLICATION NO.
1-10-032 – HUMBOLDT COUNTY RESOURCE CONSERVATION DISTRICT
PHASE 2 50% PLANS (1 of 70)

50% SUBMITTAL
NOT FOR CONSTRUCTION
MAY 2011

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-	-	ISSUE

08/13/2011 DRAWINGS C-8, -25, -31, -36, -40, -49 UPDATED

HUMBOLDT COUNTY RESOURCE CONSERVATION DISTRICT
SALT RIVER ECOSYSTEM RESTORATION PROJECT

COVER SHEET

PROJ NO: 10853-10-003
DRWN: pTJ CHKD: JS/SA

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SHEET 1 OF 72

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50% SUBMITTAL
NOT FOR CONSTRUCTION
MAY 2011

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HUMBOLDT COUNTY RESOURCE CONSERVATION DISTRICT
SALT RIVER ECOSYSTEM RESTORATION PROJECT

INDEX OF DRAWINGS

PROJ NO: 10653-10-003
DRWN: PTJ CHKD: JS/SA

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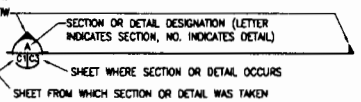
LEGEND:

GENERAL:

#	DIAMETER	℄	CENTER LINE
±	APPROXIMATE		
@	AT		



ABBREVIATIONS:

AB	ANCHOR BOLT
AB	AGGREGATE BASE
AC	ASPHALT CONCRETE PAVING
ADT	AVERAGE DAILY TRAFFIC
AGG	AGGREGATE
APPROX	APPROXIMATE (LY)
ARV	AIR-VACUUM RELEASE VALVE
ASS'Y.	ASSEMBLY
AVE	AVENUE
AWWA	AMERICAN WATER WORKS ASSOCIATION
@	AT
B-	BORING
BC	BEGIN CURVE
BFP	BACK FLOW PREVENTER
BM	BENCH MARK
BMP	BEST MANAGEMENT PRACTICE
BLDG	BUILDING
BLVD	BOULEVARD
BO	BLOW OFF
BOT	BOTTOM
BVC	BEGIN VERTICAL CURVE
BVCE	BEGIN VERTICAL CURVE ELEVATION
BVCS	BEGIN VERTICAL CURVE STATION
C	CONDUIT
CASQA	CA STORMWATER QUALITY ASSC.
CDFG	CA DEPART. OF FISH & GAME
CI	CAST IRON
CL, ℄	CENTERLINE
CLR	CLEAR, CLEARANCE
CO	CLEANOUT
CMP	CORRUGATED METAL PIPE
CMU	CONCRETE MASONRY UNIT
CONC	CONCRETE
CONT	CONTINUOUS
CONT'D	CONTINUED
COORD	COORDINATE
CV	CHECK VALVE
COR	CORNER
CU	CUBIC
d	PENNY (NAIL SIZE)
DIA, #	DIAMETER
DTL	DETAIL
DI	DROP (DRAINAGE) INLET
DF	DOUGLAS FIR
DR	DRIVE
DW	DOMESTIC WATER LINE
DWG	DRAWING
(E)	EXISTING
E	EAST
E	ELECTRICAL
E℄	END CURVE
EF	EACH FACE
EP	EDGE PAVING
EQ	EQUAL
ER	EDGE ROAD
EL/ELEV	ELEVATION
ELEC	ELECTRIC
ENGR	ENGINEER
E OHD	OVERHEAD ELECTRICAL LINES
EVC	END VERTICAL CURVE
EVCE	END VERTICAL CURVE ELEVATION
EVCS	END VERTICAL CURVE STATION
EW	EACH WAY
FIN	FINISH
FF	FINISH FLOOR
FH	FIRE HYDRANT
FL, ℄	FLOW LINE
FLR	FLOOR
FP	FIRE PROTECTION
FS	FINISHED SURFACE
FT	FOOT OR FEET
FTG	FOOTING
G	GAS LINE
GAL	GALLON
GALV	GALVANIZED
GB	GRADE BREAK
GR	GRADE
GRD	GROUND
GV	GATE VALVE
HB	HOSE BIBB
HCRCD	HUMBOLDT COUNTY RCD
HORZ	HORIZONTAL
HPS	HIGH PRESSURE SODIUM
HWY	HIGHWAY
HYD	HYDRANT
IE	INVERT ELEVATION
IP	IRON PIPE
INV	INVERT
JCT	JUNCTION
JP	JOINT UTILITY POLE
K	RATE OF CURVATURE
L	LENGTH
LAT	LATERAL
LS	LIFT STATION
LT	LEFT
LVC	LENGTH VERTICAL CURVE
MAX	MAXIMUM
M	METER
MFR	MANUFACTURER
MH	MAN HOLE
MIN	MINIMUM
MISC	MISCELLANEOUS
MG	MILLION GALLON
N	NORTH
(N)	NEW
NIC	NOT IN CONTRACT
NO	NUMBER
NTS	NOT TO SCALE
OC	ON CENTERS
OHD	OVERHEAD
OPNG	OPENING
PC	POINT OF CURVE
PCC	PORTLAND CONCRETE CEMENT
PE	POLYETHYLENE
PI	POINT OF INTERSECTION
PL	PLATE
P/L, ℄	PROPERTY LINE
PLCS	PLACES
PLWD	PLYWOOD
POC	POINT OF CONNECTION
PP	POWER POLE
PRC	POINT OF REVERSE CURVE
PRV	PRESSURE REDUCING VALVE
PSI	POUNDS PER SQUARE INCH
PT	POINT
PT	POINT OF TANGENT BEGINING
PT	PRESSURE TREATED
PVC	POLYVINYL CHLORIDE PLASTIC PIPE
PVI	POINT OF VERTICAL INTERSECT
R, RAD	RADIUS
RC	RELATIVE COMPACTION
RCP	REINFORCED CONCRETE PIPE
RD	ROAD
REDWD	REDWOOD
REQ'D	REQUIRED
REQ'T	REQUIREMENT
RPP	REDUCED PRESSURE PRINCIPAL
RSP	ROCK SLOPE PROTECTION
RT	RIGHT
R/W	RIGHT-OF-WAY
RWQCB	REGIONAL WATER QUAL. CONTROL BOARD
S	SLOPE
SAT	SATURATED
SCH, SCHED	SCHEDULE
SD	STORM DRAIN
SDMH	STORM DRAIN MANHOLE
SHT	SHEET
SIM	SIMILAR
SMA	SEDIMENT MANAGEMENT AREA
SO	SOUTH
SS	SANITARY SEWER
SST	STAINLESS STEEL
STA	STATION
STD	STANDARD
STL	STEEL
SWPPP	STORM WATER POLUTION PREVENTION PLAN
T	TANGENT
T, TEL	TELEPHONE
TBD	TO BE DETERMINED
TBM	TEMPORARY BENCH MARK
TC	TOP OF CURB
THK	THICK
TG	TOP GRATE
TP	TEST PIT
TS	TOP OF SLAB
TW	TOP OF WALK
TYP	TYPICAL
UBC	UNIFORM BUILDING CODE
UNO	UNLESS OTHERWISE NOTED
V	VOLT(S)
VERT	VERTICAL
W/	WITH
W	WATER
WD	WIDE
WM	WATER METER
WV	WATER VALVE
XING	CROSSING
XS	CROSS SECTION
YD	YARD

NOTE: CONTACT ENGINEER FOR ABBREVIATIONS NOT LISTED.

DESIGN NOTES:

1. CHANNEL HYDRAULIC DESIGN PROVIDED BY: KAMMAN HYDROLOGY & ENGINEERING, INC., SAN RAFAEL, CA, MARCH 2011 AND THE NATIONAL OCEANIC & ATMOSPHERIC ADMINISTRATION (NOAA FISHERIES), ARCATA, CA.
2. PORT KENYON ROAD CROSSING REPLACEMENT AT FRANCIS CREEK DESIGN PROVIDED BY COUNTY OF HUMBOLDT, JANUARY 2011.

TOPOGRAPHIC SURVEY NOTES:

1. TOPOGRAPHIC DATA IS BASED ON USACE PHOTOGRAMMETRY (2007) AND SUPPLEMENTED BY LACO ASSOCIATES (2011).
2. HORIZONTAL DATUM: NAD 83, CALIFORNIA ZONE 1, U.S. SURVEY FEET. VERTICAL DATUM NAVD 88

UTILITY NOTES:

1. ALL UTILITIES SHOWN WERE LOCATED FROM ABOVE GROUND VISUAL STRUCTURES. NO UTILITY (UNDERGROUND) RESEARCH WAS CONDUCTED FOR THIS SITE. NOTIFY UNDERGROUND SERVICE ALERT PRIOR TO ANY GRADING OR EXCAVATION WITHIN THE SITE AT 1-800-227-2800. CONTACT ADJACENT PROPERTY OWNERS TO DETERMINE IF THERE ARE ANY PRIVATE UTILITIES TO CONSIDER.
2. POTABLE WATER FACILITIES LOCATED WITHIN THE SALT RIVER CHANNEL CORRIDOR AND AS SHOWN ON THE PLANS ARE OWNED AND OPERATED BY THE RIVERSIDE COMMUNITY SERVICE DISTRICT (RCSD). THE CONTRACTOR SHALL COORDINATE ALL TEMPORARY AND PERMANENT DISTURBANCE WITH RCSD (PAUL SKOFIELD: 707-616-5624 OR NANCY TRUJILLO: 707-502-6005) MINIMUM 14-DAYS IN ADVANCE OF WORK.
3. POTABLE WATER FACILITIES LOCATED ON PORT KENYON ROAD OVER EASTSIDE DRAINAGE ARE OWNED AND OPERATED BY DEL ORO WATER DISTRICT AND SHALL REMAIN AND BE PROTECTED.
4. SANITARY SEWER FACILITIES LOCATED ON PORT KENYON ROAD ARE OWNED AND OPERATED BY THE CITY OF FERNDALE. THE CONTRACTOR SHALL COORDINATE ALL TEMPORARY AND PERMANENT DISTURBANCE WITH CITY OF FERNDALE (DOUG CULBERT: 707-786-9033 OR 707-786-9314)
5. PRIOR TO RELOCATION, ALL UTILITIES TO BE RELOACTED WITHIN THE COUNTY RIGHT OF WAY SHALL BE STAKED AND APPROVED BY THE COUNTY.

DEFINITION OF "LIMITS" SHOWN ON THE PLANS:

APPROXIMATE LIMITS OF EXCAVATION: DEFINES THE APPROXIMATE LIMITS OF PERMANENT GRADING OR LAND DISTURBANCE (EXCAVATING/FILLING).

APPROXIMATE LIMITS OF TEMPORARY DISTURBANCE: DEFINES THE APPROXIMATE LIMITS OF TEMPORARY CONSTRUCTION DISTURBANCES AND INCLUDES POTENTIAL HAUL ROADS, STAGING AREAS, AND STOCKPILING AREAS THAT SHALL BE RESTORED BACK TO PRE-CONTRUCTION CONDITIONS.

APPROXIMATE LIMITS OF PROJECT AREA: DEFINES THE APPROXIMATE LIMITS OF PROJECT AREA PRESENTED IN THE FINAL ENVIRONMENTAL IMPACT REPORT.

50% SUBMITTAL
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MARK	DATE	DESCRIPTION	BY&K

HUMBOLDT COUNTY RESOURCE CONSERVATION DISTRICT

SALT RIVER ECOSYSTEM RESTORATION PROJECT

LEGEND & ABBREVIATIONS

PROJ NO: 19653-10-003
DRWN: DTJ CHKD: JS/SA

G-3

SHEET 3 OF 72

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2011-05-04 9:29 AM TJAMES
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GENERAL AND GRADING NOTES:

1. THE CONTRACTOR SHALL COMPLETELY REVIEW, BE FAMILIAR WITH, AND ADHERE TO THE TERMS OF ALL PERMITS AND AGENCY APPROVALS FOR THIS PROJECT. THE HCRCD WILL BE RESPONSIBLE FOR SECURING AND PROVIDING TO THE CONTRACTOR COPIES OF ALL PERMITS, CERTIFICATIONS, OR AUTHORIZATIONS UNLESS NOTED OTHERWISE. FROM THE FOLLOWING AGENCIES INCLUDING, BUT NOT LIMITED TO: COUNTY OF HUMBOLDT, U.S. ARMY CORPS OF ENGINEERS, THE CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD SECTION 401, THE U.S. FISH AND WILDLIFE SERVICE, THE NATIONAL MARINE FISHERIES SERVICE, CALIFORNIA DEPARTMENT OF FISH AND GAME, AND THE CALIFORNIA COASTAL COMMISSION. COPIES OF ALL PERMITS WILL BE AVAILABLE UPON REQUEST AND SHALL REMAIN ONSITE THROUGHOUT THE DURATION OF CONSTRUCTION. THE CONTRACTOR IS RESPONSIBLE FOR WORKING WITH THE CONSTRUCTION MANAGER IN THE MONITORING AND REPORTING ASSOCIATED WITH THE NPDES PERMIT AND SUBMISSION OF A STORMWATER POLLUTION PREVENTION PLAN (SWPPP).

2. NO SHUTDOWN OF THE PROJECT SITE IS ANTICIPATED. HOWEVER, UNFORESEEABLE FIRE, GEO-HAZARD CONDITIONS, OR RAINS COULD REQUIRE THE CONSTRUCTION MANAGER TO SUSPEND CONSTRUCTION ACTIVITIES AT ALL OR PART OF THE SITE FOR SAFETY REASONS AT NO COST TO THE HCRCD OR THEIR REPRESENTATIVES.

3. THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ENGINEER UPON DISCOVERING SIGNIFICANT DISCREPANCIES, ERRORS OR OMISSIONS IN THE PLANS. PRIOR TO PROCEEDING WITH WORK IN THE AREA OF QUESTION, THE OWNER SHALL HAVE ITEM(S) CLARIFIED AS NEEDED BY THE ENGINEER.

4. CONTRACTOR SHALL MAINTAIN FREQUENT COMMUNICATIONS, AT LEAST DAILY, WITH THE ON-SITE CONSTRUCTION MANAGER TO DISCUSS DETAILS OF IMPLEMENTATION, ORDER OF WORK, METHODS OF MINIMIZING ENVIRONMENTAL IMPACTS AND OTHER RELEVANT COMPONENTS OF CONSTRUCTION. THERE WILL BE COMMUNICATION WITH THE ENVIRONMENTAL MONITOR AT LEAST ONCE PER WEEK EITHER IN A MEETING WITH THE CONSTRUCTION MANAGER AND CONTRACTOR REPRESENTATIVE OR INDIRECTLY THROUGH THE CONSTRUCTION MANAGER.

5. PERFORM GRADING IN ACCORDANCE WITH THE LATEST EDITION OF APPENDIX CHAPTER 33 OF THE CALIFORNIA BUILDING CODE AND APPLICABLE HUMBOLDT COUNTY REGULATIONS.

6. NATIVE TOPSOIL AND ORGANIC MULCH THAT IS EXCAVATED SHALL BE STOCKPILED ON SITE FOR RE-USE AFTER ROUGH GRADING IS COMPLETE. TOPSOIL AND ORGANIC MULCH SHALL BE PLACED ON THE ACTIVE BENCH AND CHANNEL BANKS ABOVE THE ACTIVE BENCH.

7. IF COARSE SANDS AND GRAVELS ARE ENCOUNTERED DURING THE CHANNEL EXCAVATION, THE MATERIAL SHALL BE SEGREGATED AND RE-USED IN THE ACTIVE CHANNEL GRADING AND NEW GRAVEL RIFFLES.

8. UNSUITABLE EXCAVATED MATERIAL SHALL BE REMOVED FROM SITE AND DISPOSED OF IN A MANNER CONSISTENT WITH APPLICABLE REGULATIONS SUCH AS COUNTY GRADING ORDINANCES AND COASTAL COMMISSION REQUIREMENTS. CONTRACTOR IS RESPONSIBLE FOR PROPER LEGAL DISPOSAL OF UNSUITABLE MATERIALS TAKEN FROM SITE.

9. THE LOCATION BETWEEN STATION 28+50 (CONFLUENCE OF REAS CREEK) AND 50+00 IS AN ARCHEOLOGICAL SENSITIVE AREA. A QUALIFIED ARCHEOLOGIST SHALL BE ONSITE DURING ALL CHANNEL EXCAVATION IN THIS REACH. THE CONTRACTOR SHALL NOTIFY THE CONSTRUCTION MANAGER MINIMUM OF 14-DAYS PRIOR TO EXCAVATION IN THIS REACH.

10. THE CONTRACTOR SHALL NOTE THAT PREHISTORIC MATERIALS THAT COULD BE ENCOUNTERED INCLUDE: OBSIDIAN AND CHERT FLAKES OR CHIPPED STONE TOOLS, GRINDING IMPLEMENTS, (E.G., PESTLES, HANDSTONES, MORTARS, SLABS), BEDROCK OUTCROPS AND BOULDERS WITH MORTAR CUPS, LOCALLY DARKENED MIDDEN, DEPOSITS OF SHELL, DIETARY BONE, AND HUMAN BURIALS. HISTORIC MATERIALS THAT COULD BE ENCOUNTERED INCLUDE: CERAMICS/POTTERY, GLASS, METAL, CAN AND BOTTLE DUMPS, CUT BONE, BARBED WIRE FENCES, BUILDING PADS, STRUCTURES, TRAILS/ROADS, RAILROAD RAILS AND TIES, TRESTLES, ETC. IN THE EVENT CULTURAL RESOURCES (I.E., HISTORICAL, ARCHAEOLOGICAL, AND PALEONTOLOGICAL RESOURCES, AND HUMAN REMAINS) ARE DISCOVERED DURING GRADING OR OTHER CONSTRUCTION ACTIVITIES, WORK SHALL BE HALTED WITHIN A 100 FOOT RADIUS OF THE FIND. A QUALIFIED ARCHEOLOGIST SHALL BE CONSULTED FOR AN ON-SITE EVALUATION. ADDITIONAL MITIGATION MAY BE REQUIRED BY THE COUNTY PER THE ARCHEOLOGIST'S RECOMMENDATIONS. IF HUMAN BURIALS OR HUMAN REMAINS ARE ENCOUNTERED, THE CONTRACTOR SHALL ALSO NOTIFY THE COUNTY CORONER.

GENERAL AND GRADING NOTES (CONTINUED):

11. SHOULD GRADING OPERATIONS ENCOUNTER HAZARDOUS MATERIALS, OR WHAT APPEAR TO BE HAZARDOUS MATERIALS, STOP WORK IN THE AFFECTED AREA IMMEDIATELY AND CONTACT 911 OR THE APPROPRIATE AGENCY FOR FURTHER INSTRUCTION.

12. ALL CONSTRUCTION SITES AND HAUL ROADS SHALL BE MAINTAINED, AS NECESSARY, TO MINIMIZE THE EMISSION OF DUST AND PREVENT CREATION OF NUISANCE TO ADJACENT PROPERTIES.

13. THE CONTRACTOR SHALL SUBMIT A DUST CONTROL PLAN FOR REVIEW AND APPROVAL BY THE COUNTY OF HUMBOLDT AND THE CONSTRUCTION MANAGER. THE DUST CONTROL PLAN SHALL INCLUDE CASQA BMPS.

14. BIOLOGICAL RESTRICTIONS – WILDLIFE: PRIOR TO START OF CONSTRUCTION, THE ENVIRONMENTAL MONITOR OR REPRESENTATIVES WILL GIVE CONTRACTOR'S STAFF A PRESENTATION REGARDING SPECIAL STATUS SPECIES AND RESTRICTIONS REQUIRED IN TERMS OF CONSTRUCTION START CLEARANCE SURVEYS, AND CONSTRUCTION MONITORING. BECAUSE OF THE HIGH NUMBER OF SPECIAL STATUS SPECIES THAT OCCUR IN THE AREA, MOST, IF NOT ALL, ELEMENTS MAY NOT BE IMPLEMENTED UNTIL AFTER CERTAIN DATES AND AFTER CONSTRUCTION CLEARANCE SURVEYS HAVE BEEN PERFORMED AND COMPLETED.

15. REQUIRED CLEARANCE SURVEYS: IF SPECIAL STATUS SPECIES ARE LOCATED DURING CLEARANCE SURVEYS, REQUIRED ACTIONS COULD INCLUDE, BUT ARE NOT LIMITED TO: 1) TEMPORARY DELAY IN CONSTRUCTION WHILE SPECIES ARE RELOCATED BY QUALIFIED BIOLOGISTS; OR 2) DELAY OF CONSTRUCTION UNTIL PREDETERMINED DATE A OF BREEDING SEASON WITH NO CONSTRUCTION OCCURRING WITHIN A BUFFER ZONE AROUND THE AREA WHERE SPECIES WERE FOUND.

16. SCHEDULING OF REQUIRED CLEARANCE SURVEYS: AT THE START OF CONSTRUCTION, THE CONTRACTOR WILL BE REQUIRED TO PROVIDE A CONSTRUCTION SCHEDULE, ON A WEEKLY BASIS, THE CONTRACTOR, CONSTRUCTION MANAGER, AND ENVIRONMENTAL MONITOR WILL MEET AND DISCUSS THE STATUS OF THE PROJECT AND UPDATES TO SCHEDULES. CLEARANCE SURVEYS WILL BE SCHEDULED WITH THE BASIS OF THIS REVISED WEEKLY SCHEDULE. THE CONTRACTOR WILL NOT BE ALLOWED TO START CONSTRUCTION UNTIL ALL THE APPROVED CLEARANCE SURVEYS HAVE BEEN PERFORMED. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO PROVIDE THE ENVIRONMENTAL MONITOR AND UPDATED SCHEDULE THAT ALLOW FOR ADEQUATE TIME TO SCHEDULE THE CLEARANCE SURVEYOR SURVEYS REQUIRED.

TRAFFIC CONTROL AND COUNTY ENCROACHMENT NOTES:

1. THE CONTRACTOR SHALL APPLY FOR AND OBTAIN A COUNTY OF HUMBOLDT ENCROACHMENT PERMIT FOR ALL TEMPORARY AND PERMANENT CONSTRUCTION ENTRANCES FROM COUNTY MAINTAINED ROADS. THE CONTRACTOR WILL BE RESPONSIBLE FOR ALL ENCROACHMENT PERMIT FEES.

2. CONTRACTOR TO SUBMIT TRAFFIC MANAGEMENT PLAN (TMP) FOR REVIEW AND APPROVAL BY THE ENGINEER AND COUNTY OF HUMBOLDT. THE TMP SHALL BE A LIVING DOCUMENT, UPDATED AS PROJECT CONDITIONS CHANGE. THE TMP SHALL SHOW ROAD ADT, PROPOSED ADT, DURATION, STAGING AREAS, AND SIGN PLACEMENT.

3. SITE VISIBILITY MUST BE MAINTAINED AT THE CONSTRUCTION ENTRANCES IN CONFORMANCE WITH COUNTY CODE.

4. TEMPORARY LANE CLOSURE TRAFFIC CONTROL TO BE CONSISTENT W/ LANE CLOSURE FOR LOW VOLUME, TWO LANE ROADS PER CURRENT EDITION OF CALTRANS MANUAL OF TRAFFIC CONTROLS AND IN CONFORMANCE WITH THE PROJECT SPECIFICATIONS.

5. ALL FUELING, EQUIPMENT MAINTENANCE, STAGING AND CONSTRUCTION MANAGEMENT SHALL BE LOCATED OUTSIDE THE COUNTY ROAD RIGHT OF WAY. NO CONSTRUCTION MATERIALS (CONSTRUCTION TRAILERS, STORAGE CONTAINERS, EQUIPMENT, ETC.) SHALL BE ALLOWED WITHIN THE COUNTY RIGHT OF WAY.

6. ALL EQUIPMENT AND LOADS OVER WEIGHT, LENGTH, WIDTH LIMITS WILL REQUIRE A TRANSPORTATION PERMIT FROM THE COUNTY OF HUMBOLDT. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING THESE PERMITS IF NECESSARY AND PAYING ALL PERMIT FEES.

7. ALL PUBLIC ROADS AND BRIDGES IMPACTED BY THE CONSTRUCTION ACTIVITIES SHALL BE CLEARED OF ALL SEDIMENT AND DEBRIS ON A DAILY BASIS OR AS DIRECTED BY COUNTY OF HUMBOLDT AND THE ENGINEER.

8. ALL ACTIVE CONSTRUCTION AREAS SHALL BE WATERED AT A RATE SUFFICIENT TO KEEP SOIL MOIST AND PREVENT FORMATION OF WIND-BLOWN DUST.

9. ALL TRUCKS HAULING SOIL, SAND, AND OTHER LOOSE MATERIALS SHALL BE COVERED, OR ALL TRUCKS SHALL BE REQUIRED TO MAINTAIN AT LEAST 2 FEET OF FREEBOARD, OR SHALL HAVE MOISTURE CONTENT, OR UTILIZE SOME OTHER METHODS THAT PREVENTS GENERATION OF FUGITIVE DUST.

10. EXPOSED STOCKPILES OF DIRT, SAND, AND SIMILAR MATERIAL SHALL BE ENCLOSED, COVERED, AND/OR WATERED DAILY, OR TREATED WITH NON-TOXIC SOIL BINDERS AS NECESSARY TO PREVENT GENERATION OF FUGITIVE DUST.

11. TRAFFIC SPEEDS ON UNPAVED ROADS SHALL BE LIMITED TO 10 MILES PER HOUR.

12. OUTDOOR DUST-PRODUCING ACTIVITIES SHALL BE SUSPENDED WHEN HIGH WINDS (>15 MPH) CREATE VISIBLE DUST PLUMES IN SPITE OF CONTROL MEASURES.

13. REASONABLE PRECAUTIONS SHALL BE TAKEN TO PREVENT THE ENTRY OF UNAUTHORIZED VEHICLES INTO THE CORRIDOR DURING NON-WORK HOURS.

14. THE CONTRACTOR SHALL COMPLY WITH AIR QUALITY MANAGEMENT DISTRICT (AQMD) RULE 420 (PARTICULATE MATTER) AND RULE 430 (FUGITIVE DUST EMISSIONS), OR SUCCEEDING AQMD RULES THAT CARRY OUT THE AQMD'S MANAGEMENT PROGRAM FOR PARTICULATE MATTER.

15. CONTRACTOR SHALL BE REQUIRED TO MINIMIZE IDLING TIME TO 5 MINUTES FOR ALL TRUCKS AND MAINTAIN PROPERLY TUNED EQUIPMENT.

16. HOURS OF CONSTRUCTION ACTIVITIES EXCEEDING 50 DBA SHALL BE LIMITED TO MONDAY THROUGH FRIDAY 7:00 A.M. TO 7:00 P.M. AND WEEKENDS AND HOLIDAYS FROM 9:00 A.M. TO 6:00 P.M. AND SUBJECT TO APPROVAL BY THE CONSTRUCTION MANAGER. MOVEMENT AND HAULING OF MATERIAL, AND ASSOCIATED ACTIVITIES SUCH AS RE-FUELING OR MAINTENANCE, SHALL BE LIMITED TO NORMAL WORKING HOURS FOR THE AREA, AS SPECIFIED ABOVE.

17. ALL EQUIPMENT SHALL OPERATE WITH FACTORY-EQUIPPED MUFFLERS.

18. TO THE DEGREE FEASIBLE, HAUL TRUCKS SHALL USE HAUL ROUTES ALONG THE EXISTING CHANNEL EXCAVATION PATH, OR ALONG ROADWAYS DISTANT FROM SENSITIVE RECEPTORS.

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HUMBOLDT COUNTY RESOURCE CONSERVATION DISTRICT
SALT RIVER ECOSYSTEM RESTORATION PROJECT

GENERAL NOTES 1 OF 2

PROJ NO: 10653-10-003
DRWN: pTJ CHKD: JS/SA

G-4

SHEET 4 OF 72

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EROSION, SEDIMENT, POLLUTION, & WASTE CONTROL NOTES:

1. THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING AND COMPLYING WITH THE NATIONAL POLLUTANT DISCHARGE ELIMINATON SYSTEM (NPDES) GENERAL PERMIT WASTE DISCHARGE REQUIREMENTS FOR DISCHARGES OF STORM WATER RUNOFF ASSOCIATED WITH CORRIDOR CONSTRUCTION ACTIVITY. THE SITE DISTURBANCE IS GREATER THAN 1 ACRE, THEREFORE THE CONTRACTOR IS RESPONSIBLE TO COMPLY WITH THE STORMWATER POLLUTION PREVENTION PLAN (SWPPP) FOR THE PROJECT. THE SWPPP SHALL BE DEVELOPED BY A QUALIFIED SWPPP DEVELOPER (QSD) AND BMP MONITORING AND REPORTING SHALL BE OVERSEEN BY A QUALIFIED SWPPP PRACTITIONER (QSP).

2. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO MINIMIZE EROSION AND PREVENT THE TRANSPORT OF SEDIMENT TO THE ADJACENT STREAM AND SENSITIVE AREAS.

3. PERFORM EROSION PREVENTION AND SEDIMENT CONTROL IN ACCORDANCE WITH THE LATEST EDITION OF CHAPTER 33 OF THE CALIFORNIA BUILDING CODE, APPLICABLE HUMBOLDT COUNTY REGULATIONS, AND SECTION 20 OF THE CALTRANS STANDARD SPECIFICATIONS.

4. AT A MINIMUM, THE CONTRACTOR SHALL EMPLOY THE FOLLOWING BEST MANAGEMENT PRACTICES (BMPS) AS DESCRIBED IN THE CURRENT CALTRANS STORM WATER QUALITY HANDBOOK AS NEEDED:

   - SS-2 PRESERVATION OF EXISTING VEGETATION
   - SS-10 OUTLET PROTECTION/VELOCITY DISSIPATION DEVICES
   - SC-1 SILT FENCE
   - NS-2 DEWATERING OPERATIONS
   - NS-3 PAVING AND GRINDING OPERATIONS
   - NS-5 CLEAR WATER DIVERSION
   - NS-9 VEHICLE EQUIPMENT AND FUELING
   - WM-1 MATERIALS DELIVERY AND STORAGE
   - WM-2 MATERIAL USE
   - WM-4 SPILL PREVENTION AND CONTROL
   - WM-8 CONCRETE WASTE MANAGEMENT
   - WM-9 SANITARY/SEPTIC WASTE MANAGEMENT

5. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO FIX ANY EROSION, SEDIMENT, POLLUTION, & WASTE CONTROL DEFICIENCIES IDENTIFIED BY THE OWNER OR THE OWNERS REPRESENTATIVE.

6. PRIOR TO FINAL ACCEPTANCE ALL AREAS OF THE SITE WILL BE VEGETATED OR PERMANENTLY STABILIZED AND ALL TEMPORARY SEDIMENT CONTROL MEASURES SHALL BE REMOVED.

7. ALL DISTURBED EARTH AREAS SHALL BE MULCHED AND SEEDED PER THE RE-VEGETATION AND PLANTING SPECIFICATIONS.

8. IF DISCREPANCIES OCCUR BETWEEN THESE NOTES, MATERIAL REFERENCED HEREIN OR MANUFACTURERS RECOMMENDATIONS, THEN THE MOST PROTECTIVE SHALL APPLY.

9. PRESERVATION OF EXISTING VEGETATION SHALL OCCUR TO THE MAXIMUM EXTENT PRACTICABLE.

10. DISCHARGES OF POTENTIAL POLLUTANTS FROM CONSTRUCTION SITES SHALL BE PREVENTED USING SOURCE CONTROLS TO THE MAXIMUM EXTENT PRACTICABLE. POTENTIAL POLLUTANTS INCLUDE BUT ARE NOT LIMITED TO: SEDIMENT, TRASH, NUTRIENTS, PATHOGENS, PETROLEUM HYDROCARBONS, METALS, CONCRETE, CEMENT, ASPHALT, LIME, PAINT, STAINS, GLUES, WOOD PRODUCTS, PESTICIDES, HERBICIDES, CHEMICALS, HAZARDOUS WASTE, SANITARY WASTE, VEHICLE OR EQUIPMENT WASH WATER AND CHLORINATED WATER.

11. WHENEVER IT IS NOT POSSIBLE TO UTILIZE EROSION PREVENTION MEASURES, EXPOSED SLOPES SHALL EMPLOY SEDIMENT CONTROL DEVICES, SUCH AS FIBER ROLLS AND SILT FENCES. FIBER ROLLS AND SILT FENCES SHALL BE TRENCHED AND KEYED INTO THE SOIL AND INSTALLED ON CONTOUR. SILT FENCES SHALL BE INSTALLED APPROXIMATELY 2 TO 5 FEET FROM TOE OF SLOPE.

12. THE CONTRACTOR SHALL PROTECT STORM DRAIN INLETS FROM POTENTIAL POLLUTANTS UNTIL DRAINAGE CONVEYANCE SYSTEMS ARE FUNCTIONAL, THE SITE IS STABILIZED, AND CONSTRUCTION HAS BEEN COMPLETED.

13. ENERGY DISSIPATERS SHALL BE INSTALLED AT STORM DRAIN OUTLETS WHICH MAY CONVEY STORM WATER FLOW LEADING TO SOIL EROSION.

14. SOIL AND MATERIAL STOCKPILES SHALL BE PROPERLY PROTECTED TO MINIMIZE SEDIMENT AND POLLUTANT TRANSPORT FROM THE CONSTRUCTION SITE.

EROSION, SEDIMENT, POLLUTION & WASTE (CONTINUED):

15. SOLID WASTE, SUCH AS TRASH AND DEBRIS, SHALL BE PLACED IN DESIGNATED COLLECTION AREAS OR CONTAINERS. THE CONSTRUCTION SITE SHALL BE CLEARED OF SOLID WASTE DAILY, OR AS NECESSARY, AND REGULAR REMOVAL AND PROPER DISPOSAL SHALL BE ARRANGED.

16. PROPER APPLICATION, CLEANING AND STORAGE OF POTENTIALLY HAZARDOUS MATERIALS, SUCH AS PAINTS AND CHEMICALS, SHALL BE CONDUCTED TO PREVENT THE DISCHARGE OF POLLUTANTS.

17. WHEN UTILIZED, TEMPORARY RESTROOMS AND SANITARY FACILITIES SHALL BE LOCATED AND MAINTAINED TO PREVENT THE DISCHARGE OF POLLUTANTS.

18. APPROPRIATE VEHICLE STORAGE, FUELING, MAINTENANCE AND CLEANING AREAS SHALL BE DESIGNATED AND MAINTAINED TO PREVENT DISCHARGE OF POLLUTANTS.

19. ENTRANCE(S) TO THE CONSTRUCTION SITE SHALL BE MAINTAINED IN A CONDITION THAT WILL PREVENT TRACKING OR FLOWING OF POTENTIAL POLLUTANTS OFFSITE. POTENTIAL POLLUTANTS DEPOSITED ON PAVED AREAS WITHIN THE COUNTY RIGHT-OF-WAY, SUCH AS ROADWAYS AND SIDEWALKS, SHALL BE PROPERLY DISPOSED OF EACH WORKING DAY OR MORE FREQUENTLY AS NECESSARY.

20. CHANGES TO THE STORM WATER POLLUTION PREVENTION PLAN MAY BE MADE TO RESPOND TO FIELD CONDITIONS. CHANGES SHALL BE NOTED ON THE PLAN WHEN MADE.

21. BECAUSE COFFER DAMS WILL BE INSTALLED AND THE CHANNEL WILL BE DEWATERED PRIOR TO EXCAVATION, EQUIPMENT WILL NOT BE OPERATED DIRECTLY WITHIN TIDAL WATERS OR STREAM CHANNELS OF FLOWING STREAMS, PRIOR TO FISH REMOVAL EFFORTS BEING COMPLETED.

22. SILT FENCES AND OR SILT CURTAINS WILL BE DEPLOYED IN THE VICINITY OF THE COFFER DAMS AND AT EXCAVATION OF SLOUGHS AT CULVERT INSTALLATION AND REMOVAL AREAS TO PREVENT ANY SEDIMENT FROM FLOWING INTO THE CREEK OR WETTED CHANNELS. IF THE SILT FENCES ARE NOT ADEQUATELY CONTAINING SEDIMENT, CONSTRUCTION ACTIVITY WILL CEASE UNTIL REMEDIAL MEASURES ARE IMPLEMENTED THAT PREVENTS SEDIMENT FROM ENTERING THE ADJACENT WATERS.

23. SEDIMENT SOURCES SHALL BE CONTROLLED USING BMPS SUCH AS FIBER ROLLS, SEDIMENT BASINS, AND/OR CHECK DAMS THAT WILL BE INSTALLED PRIOR TO OR DURING GRADING ACTIVITIES AND REMOVED ONCE THE SITE HAS STABILIZED.

24. EROSION CONTROL MAY INCLUDE REUSE OF ONSITE NATIVE TOP SOIL AND ORGANIC MULCH, SEEDING, EROSION CONTROL BLANKETS, PLASTIC COVERINGS, AND GEOTEXTILES OR OTHER BMPS AS REQUIRED.

25. EXCESS NUISANCE WATER ENCOUNTERED DURING EXCAVATION WILL BE PUMPED INTO THE SURROUNDING FIELDS OR INTO TEMPORARY SETTLING BASINS WITHIN THE CORRIDOR TO PREVENT SEDIMENT-LADEN WATER FROM ENTERING THE DOWNSTREAM CHANNEL. EXCAVATION NECESSARY TO CONNECT THE SALT RIVER CHANNEL BETWEEN PHASE I AND II SHALL OCCUR DURING A RISING TIDE SO THAT TIDAL WATER FLOWS INTO THE UPSTREAM RESTORED REACH AND SEDIMENT HAS IS ALLOWED TO SETTLE OUT, ALLOWING IMPACTS OF TURBID WATER GENERATED FROM EXCAVATIONS NECESSARY FOR CONNECTION TO BE MINIMIZED BY SETTLEMENT AND DILUTION.

26. APPROPRIATE ENERGY DISSIPATION DEVISES WILL BE UTILIZED TO REDUCE OR PREVENT EROSION AT DISCHARGE END OF DEWATERING ACTIVITY.

27. TURBIDITY AND PH MONITORING (AS REQUIRED IN THE MONITORING PLAN OF THE SWPPP) WILL BE CONDUCTED IN THE SALT RIVER THROUGHOUT THE SITE STABILIZATION PERIOD TO ENSURE THAT WATER QUALITY IS NOT BEING DEGRADED. TURBID WATER WILL BE CONTAINED AND PREVENTED FROM BEING TRANSPORTED IN AMOUNTS THAT ARE DETREMENTAL TO FISH, OR IN AMOUNTS THAT COULD VIOLATE STATE POLLUTION LAWS. SILT FENCES OR WATER DIVERSION STRUCTURES WILL BE USED TO CONTAIN SEDIMENT. IF SEDIMENT IS NOT BEING CONTAINED ADEQUATELY, AS DETERMINED BY VISUAL OBSERVATION, THE ACTIVITY WILL CEASE.

28. CONSTRUCTION MATERIALS, DEBRIS, AND WASTE WILL NOT BE PLACED OR STORED WHERE IT CAN ENTER INTO OR BE WASHED BY RAINFALL INTO WATERS OF THE U.S./STATE.

29. OPERATORS OF HEAVY EQUIPMENT, VEHICLES, AND CONSTRUCTION WORK WILL BE INSTRUCTED TO AVOID SENSITIVE HABITAT AREAS. TO ENSURE CONSTRUCTION OCCURS IN THE DESIGNATED AREAS AND DOES NOT IMPACT ENVIRONMENTALLY SENSITIVE AREAS, THE BOUNDARIES OF THE WORK AREA WILL BE FENCED OR MARKED WITH FLAGGING.

30. EQUIPMENT WHEN NOT IN USE WILL BE STORED OUTSIDE OF THE CHANNEL AND ABOVE HIGH TIDE ELEVATIONS.

EROSION, SEDIMENT, POLLUTION & WASTE (CONTINUED):

31. ALL CONSTRUCTION EQUIPMENT WILL BE MAINTAINED TO PREVENT LEAKS OF FUELS, LUBRICANTS OR OTHER FLUIDS INTO THE CHANNEL. SERVICE AND REFUELING PROCEDURES WILL BE NOT CONDUCTED WHERE THERE IS POTENTIAL FOR FUEL SPILLS TO SEEP OR WASH INTO THE CHANNEL.

32. EXTREME CAUTION WILL BE USED WHEN HANDLING AND/OR STORING CHEMICALS AND HAZARDOUS WASTES (E.G., FUEL AND HYDRAULIC FLUID) NEAR WATERWAYS, AND ANY AND ALL APPLICABLE LAWS AND REGULATIONS WILL BE FOLLOWED. APPROPRIATE MATERIALS WILL BE ON SITE TO PREVENT AND MANAGE SPILLS.

33. ALL TRASH AND WASTE ITEMS GENERATED BY CONSTRUCTION OR CREW ACTIVITIES WILL BE PROPERLY CONTAINED AND REMOVE FROM THE PROJECT AREA.

34. THE CONTRACTOR SHALL TAKE PREVENTATIVE MEASURES TO AVOID ANY SPILLS OR LEAKS ON THE SITE FROM PETROLEUM PRODUCTS. THE CONTRACTOR SHALL PREPARE A SPILL PREVENTION AND RESPONSE PLAN THAT WILL BE APPROVED BY THE CONSTRUCTION MANAGER AND ENVIRONMENTAL MONITOR. THIS MUST BE IMPLEMENTED AND ADHERED TO BY THE CONTRACTOR. AT A MINIMUM, THIS PLAN SHALL REQUIRE THAT STAGING, STORAGE, AND REFUELING AREAS AND ANY EQUIPMENT REPAIR OR SIMILAR ACTIVITY TAKE PLACE WHEN EQUIPMENT IS AT LEAST 100-FEET FROM ANY ACTIVE CREEK CHANNEL, DITCH, POND, OR FENCED SENSITIVE AREA. REFUELING SHALL ONLY OCCUR IN AREAS APPROVED BY THE CONSTRUCTION MANAGER OR ENVIRONMENTAL MONITOR. THE CONTRACTOR SHALL INSPECT AND FULLY CLEAN UP ANY SUCH LEAKS OR SPILLS THAT OCCUR ON THE SITE.

35. AT THE CONCLUSION OF CONSTRUCTION OF CERTAIN TASK ELEMENTS, THE CONTRACTOR WILL BE REQUIRED TO IMPLEMENT ADDITIONAL POST-CONSTRUCTION EROSION CONTROL MEASURES WHERE SPECIFIED IN THE PLANS OR WHERE DIRECTED BY THE CONSTRUCTION MANAGER OR ENVIRONMENTAL MANAGER IN ORDER TO PROTECT NATURAL RESOURCES. THESE MEASURES INCLUDE, BUT ARE NOT LIMITED TO, INSTALLING WEED-FREE STRAW MULCH AND TACKIFIER, WEED-FREE STRAW WATTLES OR STRAW LOGS, AND EROSION CONTROL BLANKET AND CONSISTENT WITH THE SWPPP AND RE-VEGETATION PLANS.

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ISSUE

HUMBOLDT COUNTY RESOURCE CONSERVATION DISTRICT
SALT RIVER ECOSYSTEM RESTORATION PROJECT

GENERAL NOTES
2 OF 2

PROJ NO: 10653-10-003
DRWN: pTJ CHKD: JS/SA

G-5

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SALT RIVER ECOSYSTEM RESTORATION PROJECT
CONSTRUCTION SEQUENCE
MAY 2011

ITEM	PHASE 1: RIVERSIDE RANCH TIDAL MARSH RESTORATION	Notes	6/1/11	6/15/11	7/1/11	7/15/11	8/1/11	8/15/11	9/1/11	9/15/11	10/1/11	10/15/11	11/1/11	11/15/11	12/1/11
1	Native seed collection - Lyngby's Sedge, Humboldt Bay Owl's Clover and if present Point Reyes Bird's Beak														
2	Identify and relocate or install temporary exclusions for sensitive species	(3)													
3	Limited manual removal of Spartina in adjoining areas														
4	Site Preparation (remove existing fencing and watering troughs, demolish and remove existing concrete slab and relocate water line)	(1)													
5	Remove riparian vegetation within proposed limits of excavation and stockpile on-site for re-use	(1) (2)													
6	Conduct earthwork internal to Ranch (construct internal sloughs channels and remain disconnected to Salt River)	(2) (3)													
			6/1/12	6/15/12	7/1/12	7/15/12	8/1/12	8/15/12	9/1/12	9/15/12	10/1/12	10/15/12	11/1/12	11/15/12	12/1/12
7	Identify and relocate or install temporary exclusions for sensitive species	(3)													
8	Conduct remaining earthwork internal to Ranch	(2) (3) (4)													
9	Construct new and refurbished berm and water control structures	(2) (5) (6)													
10	Install coffer dams, dewater and excavate salt river channel	(2) (7)													
11	Lower existing levees and fill existing inboard ditches	(2) (4)													
12	Construct outboard drainage ditch and new berm														
13	Fill ditches after removing internal water control structures	(7) (8)													
14	Lower remaining levees to final grade	(9)													
15	Connect internal channel network to Salt River	(10)													
16	Seed, mulch and install fencing														
17	Site Clean-up/rehab temporary roads/final punch list items/demobilization	(11)													
18	Plant riparian, wetland and upland vegetation per Habitat Mitigation and Monitoring Plan and Revegetation Plans														
ITEM	PHASE 2: SALT RIVER CHANNEL AND RIPARIAN CORRIDOR RESTORATION	Notes	6/1/12	6/15/12	7/1/12	7/15/12	8/1/12	8/15/12	9/1/12	9/15/12	10/1/12	10/15/12	11/1/12	11/15/12	12/1/12
1	Establish channel corridor access and temporary haul routes	(2) (12)													
2	Excavate Sediment Management Areas and channel corridor reaches absent of riparian trees and flow	(2)													
3	Install coffer dams, divert Francis Creek, Eastside Drainage, Salt River and Williams Creek	(2) (7)													
4	Excavate Francis Creek, Eastside Drainage and channel corridor reaches absent of riparian trees	(2) (7)													
5	Construct agricultural bridge crossings on Francis Creek and Eastside Drainage														
6	Construct Port Kenyon Road bridge crossing and relocate City of Ferndale sanitary sewer main														
7	Remove dense riparian vegetation within limits of excavation and stockpile on-site for reuse or haul off-site	(2)													
8	Excavate remaining channel corridor and relocate Riverside CSD water main crossing	(2)													
9	Construct instream habitat elements and bioengineered streambank														
10	Haul excavated sediment to beneficial reuse locations including agricultural uplands														
11	Seed, mulch and install fencing throughout channel corridor														
12	Site clean-up/rehab temporary roads/final punch list items/demobilization	(11)													
13	Plant riparian and wetland vegetation per Habitat Mitigation and Monitoring Plan and Revegetation Plans														

Notes:
1. Exclude disturbance to existing aquatic habitats including ditches, channels and ponded water areas. Minimize disturbance to Humboldt Bay Owl's Clover and Lyngby Sedge (prior to seed collection).
2. Pending results of pre-construction nesting and migratory bird surveys
3. Pending Dry Conditions and Avoid disturbance to Humboldt Bay Owl's Clover and Lyngby Sedge (prior to seed collection), Tidewater Goby Habitat (prior to dewatering), Nesting and migratory birds and Northern Red Legged Frog
4. Transfer non-saline soil between these two activities and pending environmental clearance for dewatering existing ditches.
5. Construct berm using saline soil derived from Salt River channel excavation and local material derived from Item 10.
6. Lower levees to grade that restores tidal exchange. Install work to facilitate material hauling associated with Item 10.
7. Start date pending fish relocation.
8. Start date pending environmental clearances. Install ditch plugs to segregate work into 300-foot cells
9. Work to be completed during neap tide period and provide sufficient lead-time to remaining construction
10. Work to be completed only after all other items complete
11. Prior to onset of winter rain
12. Pending dry conditions - install temporary fencing, gates and stabilized construction entrance/exits from County roads

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HUMBOLDT COUNTY RESOURCE CONSERVATION DISTRICT
SALT RIVER ECOSYSTEM RESTORATION PROJECT
CONSTRUCTION SCHEDULE

PROJ NO: 10653-10-003
DRWN: PTJ CHKD: JS/SA
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SHEET 6 OF 72

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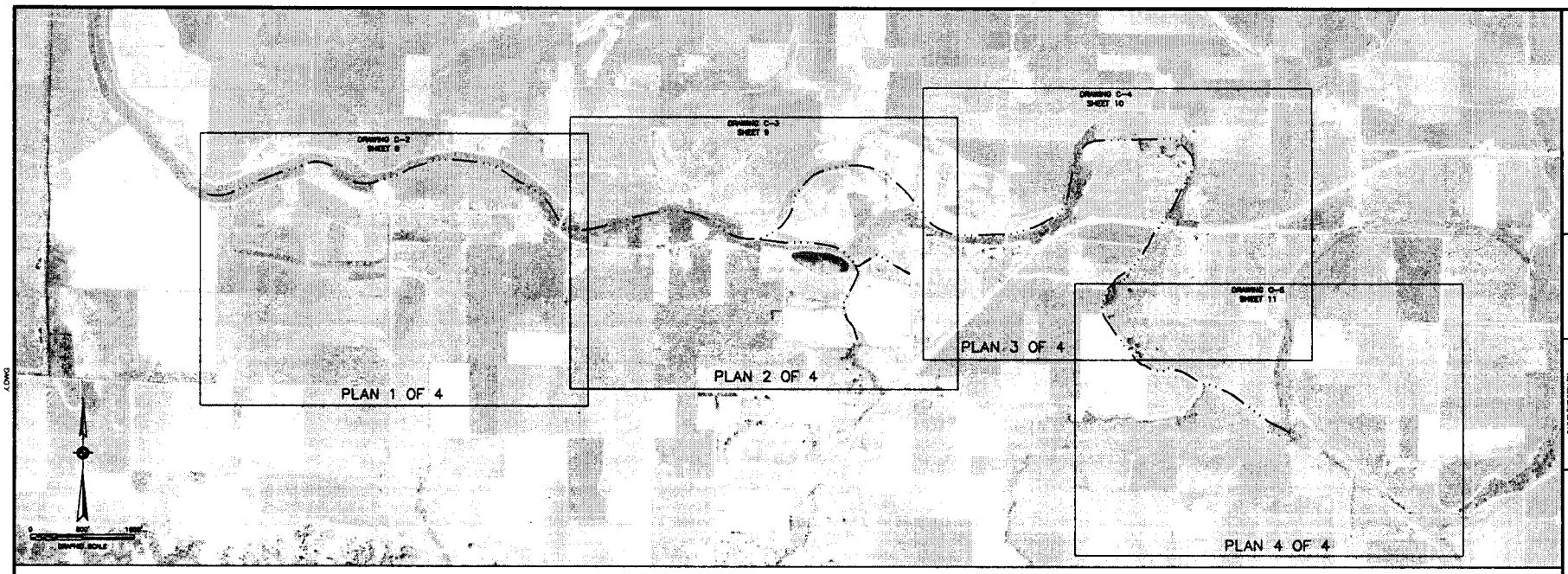

SITE PREPARATION PLAN INDEX

SITE PREPARATION AND VEGETATION REMOVAL NOTES:

1. MORE THAN 90 PERCENT OF THE PROJECT AREA IS AGRICULTURAL WETLAND OR RIPARIAN HABITAT. BECAUSE OF THE HIGH POTENTIAL FOR DAMAGE TO THESE RESOURCES FROM CONSTRUCTION, ALL CONSTRUCTION, EQUIPMENT ACCESS, HAULING AND STAGING ARE TO REMAIN WITHIN THE PROJECT AREA DESIGNATED AS SUCH ON THE PLANS. DUE TO THE SENSITIVE NATURE OF THE SITE, THE CONTRACTOR SHALL NOT ENTER INTO THESE AREAS FOR ANY REASON WITHOUT PRIOR AUTHORIZATION FROM THE CONSTRUCTION MANAGER OR ENVIRONMENTAL MONITOR. A QUALIFIED BIOLOGIST WILL PROVIDE ENVIRONMENTAL AWARENESS TRAINING TO ALL CONSTRUCTION PERSONNEL BEFORE CONSTRUCTION BEGINS. THE TRAINING WILL INCLUDE DESCRIPTIONS OF SENSITIVE SPECIES, AND DISCUSSION OF ALL REQUIRED PROTECTION MEASURES.

2. IN ACCORDANCE WITH FEDERAL AND STATE ENDANGERED SPECIES ACTS, ALL OBSERVATIONS OF SENSITIVE SPECIES WILL BE REPORTED TO THE CONSTRUCTION MANAGER.

4. IN CERTAIN AREAS DESIGNATED ON THE PLANS, TREES AND SHRUBS WILL NEED TO BE REMOVED OR LIMBED TO ALLOW FOR CONSTRUCTION ACTIVITIES SUCH AS EXCAVATION, HAULING OR FILLING OF DITCHES. TREES THAT ARE APPROVED FOR REMOVAL OR LIMBING WILL BE MARKED TO THE START OF CONSTRUCTION BY THE CONSTRUCTION MANAGER WITH SPECIAL FLAGGING. ANY TREES OR SHRUBS THAT THE CONTRACTOR BELIEVES WOULD TO BE REMOVED IN ADDITION TO THESE MARKED TREES AND SHRUBS WILL REQUIRE PRIOR APPROVAL FROM THE ENVIRONMENTAL MONITOR REPRESENTATIVE BEFORE THEY CAN BE REMOVED OR LIMBED.

5. AREAS OF DENSE RIPARIAN VEGETATION AS SHOWN ON THE PLANS SHALL BE AVOIDED AND NOT DISTURBED (VEGETATION REMOVAL) UNTIL AFTER AUGUST 15TH AND THRU NOVEMBER 30TH. LIMITED CLEARING MAY OCCUR IN THESE AREAS TO ACCOMMODATE IMPLEMENTATION OF THE DEWATERING SYSTEM AND UPON COMPLETION OF NESTING AND PRESENCE/ABSENCE SURVEYS THAT YIELD ABSENCE OF NESTING SENSITIVE BIRDS AND CONSULTATION WITH CDFG. FOR AREAS WITH LESS DENSE RIPARIAN VEGETATION, PRE-CONSTRUCTION SITE-SPECIFIC SURVEYS WILL BE CONDUCTED BY A QUALIFIED BIOLOGIST NO MORE THAN ONE WEEK PRIOR TO ANY DISTURBANCE AND AFTER JULY 1ST. IF SURVEYS IDENTIFY ACTIVE NESTS OR PRESENCE OF SENSITIVE BIRDS, THE CONTRACTOR SHALL COOPERATE WITH THE BIOLOGIST SUCH THAT THE FOLLOWING EXCLUSION ZONES ARE IMPLEMENTED AROUND THE NESTS AND MAINTAINED UNTIL NESTING HAS COMPLETED: COMMON MIGRATORY BIRD SPECIES: 100FT EXCLUSION ZONE, SPECIAL STATUS BIRDS: 300FT EXCLUSION ZONE, RAPTORS: 500FT EXCLUSION ZONE.

6. EXISTING VEGETATION SHALL BE PROTECTED AND LEFT UNDISTURBED AS MUCH AS PRACTICAL. EXISTING NATIVE VEGETATION IN AREAS TO BE DISTURBED SHALL BE REPLACED AFTER FINAL GRADING HAS OCCURRED AND IN CONFORMANCE WITH THE RE-VEGETATION PLANS.

7. EXISTING RIPARIAN VEGETATION TO BE REMOVED AND WITHIN THE LIMITS SHOWN ON THE PLANS CONSISTS PREDOMINATELY OF ARROYO WILLOW, SITKA WILLOW AND RED ALDER WITH TRUNK DIAMETERS PREDOMINATELY 10 INCHES OR LESS. OTHER WOODY SHRUB SPECIES INCLUDE CALIFORNIA BLACKBERRY, THIMBLEBERRY, RED ELDERBERRY, COYOTE BRUSH AND SALMONBERRY. SELECT BLACK COTTONWOOD AND LARGER TRESS WILL BE MARKED IN THE FIELD AND PROVIDED DURING CONSTRUCTION.

8. THE WOODY VEGETATION SHALL BE REMOVED AND STOCKPILED WITHIN THE LIMITS OF VEGETATION REMOVAL AREA SHOWN ON THE PLANS. IF VEGETATION IS REMOVED THE YEAR PRIOR TO CHANNEL EXCAVATION, THE STOCKPILES SHALL BE PLACED OUTSIDE THE EXISTING SALT RIVER CHANNEL HOWEVER WITHIN THE LIMITS OF VEGETATION REMOVAL AREA SHOWN ON THE PLANS.

9. LARGE STUMPS AND LARGE TREE TRUNKS REMOVED SHALL BE SEGREGATED AND REUSED AS GUIDE LOGS OR LARGE WOODY DEBRIS (LWD) IN THE RESTORED CHANNEL. SMALLER WOODY DEBRIS TO BE REMOVED SHALL BE SEGREGATED AND REUSED IN THE BIOENGINEERED STREAMBANK OF THE RESTORED ACTIVE CHANNEL AND AS SHOWN ON PLANS. EXISTING STANDS OF WILLOWS SUITABLE FOR LIVE STAKING AND PER THE BIOENGINEERED STREAMBANK PLANS, SHALL BE PRESERVED TO THE EXTENT PRACTICAL FOR REUSE. REMAINING REMOVED VEGETATION SHALL BE CHIPPED AND REUSED AS MULCH FOR GROUND COVER AND EROSION CONTROL WITHIN THE CORRIDOR OR HAULED OFFSITE.

10. EXISTING STANDS OF RIPARIAN VEGETATION ADJOINING THE VEGETATION REMOVAL AREA HAVE BEEN DESIGNATED ON THE PLANS AND SHALL REMAIN AND BE PROTECTED DURING CONSTRUCTION. LIMITED MANUAL HARVESTING OF NATIVE VEGETATION FOR PROPOGATION OR LIVE PLANTINGS SHALL BE ALLOWED IN THESE ADJOINING AREAS UNDER THE SUPERVISION OF THE ENVIRONMENTAL MONITOR AND CONSTRUCTION MANAGER AND SHALL BE CONDUCTED BY HAND CREWS ONLY. IF CUTTINGS ARE TAKEN FROM VEGETATION TO REMAIN, THEN NO MORE THAN 30% OF THE TREE CANOPY SHALL BE REMOVED IN A SINGLE SEASON.

11. CONSTRUCTION ACCESS ROUTES AND EQUIPMENT STAGING AREAS SHALL BE LIMITED WITHIN THE PROJECT DISTURBANCE AREA TO THE EXTENT FEASIBLE AND AS SHOWN ON THE PLANS. CONSTRUCTION ACTIVITIES SHALL BE PROHIBITED FROM UNNECESSARILY DISTURBING AQUATIC HABITAT AND WETLANDS. DISTURBANCE SUCH AS EXCAVATION, FILLING OR DEWATERING OF ANY EXISTING DITCHES, CHANNELS AND OTHER PONDED WATER AREAS SHALL OCCUR AFTER THE AREA HAS BEEN SEINED AND CLEARED BY A QUALIFIED BIOLOGIST. THE CONTRACTOR SHALL COOPERATE WITH THE BIOLOGIST IN THE COLLECTION AND RELOCATION EFFORTS.

12. THE CONTRACTOR SHALL RESTORE TEMPORARY HAUL ROADS AT THE CONCLUSION OF USE THROUGH BLADING, RIPPING OR OTHERWISE REMOVING RUTS, DE-COMPACTING AND NATURALIZING TO PRE-CONSTRUCTION CONDITIONS. THE CONSTRUCTION MANAGER AND ENVIRONMENTAL MONITOR RESERVE THE RIGHT TO REQUIRE THE CONTRACTOR TO REPAIR DAMAGE WHERE HAUL ROADS WERE CONSTRUCTED.

50% SUBMITTAL
NOT FOR CONSTRUCTION
MAY 2011

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		ISSUE

HUMBOLDT COUNTY RESOURCE CONSERVATION DISTRICT
SALT RIVER ECOSYSTEM RESTORATION PROJECT

SITE PREPARATION PLAN
SHEET INDEX & NOTES

PROJ NO: 10853-10-003
DRWN: pTJ CHKD: JS/SA

C-1

SHEET 7 OF 72

7 of 70

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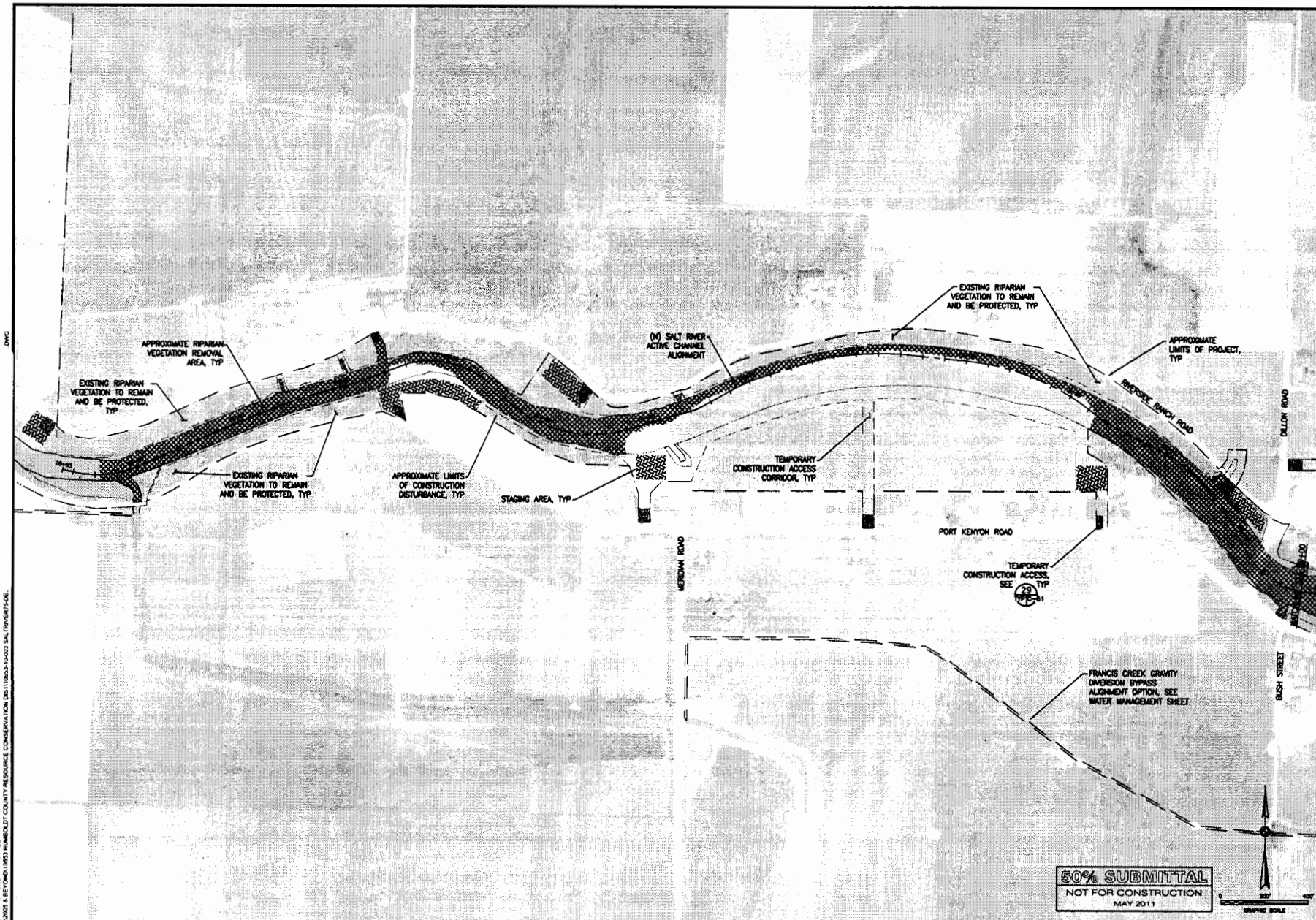

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HUMBOLDT COUNTY RESOURCE CONSERVATION DISTRICT

SALT RIVER ECOSYSTEM RESTORATION PROJECT

SITE PREPARATION PLAN 1 OF 4

PROJ NO: 10653-10-003
DRWN: pTJ CHKD: JS

C-2

SHEET 8 OF 72

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HUMBOLDT COUNTY RESOURCE CONSERVATION DISTRICT
SALT RIVER ECOSYSTEM RESTORATION PROJECT
SITE PREPARATION PLAN
2 OF 4
C-3
50% SUBMITTAL
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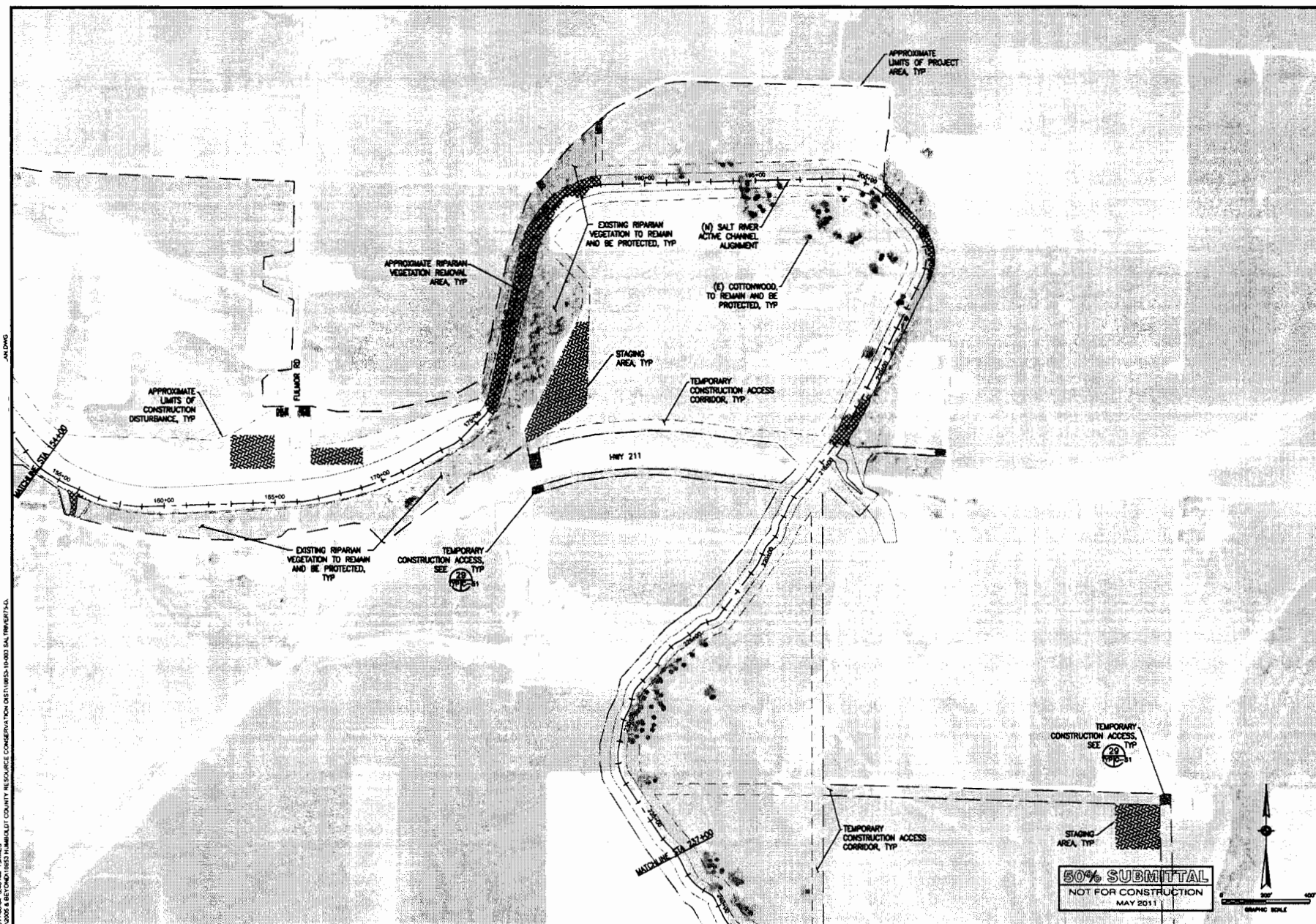
MAY 2011
WINZLER & KELLY
Michael Love & Associates
MARKET STREET
CALIFORNIA STREET
RASMUSSEN STREET
PORT KENYON ROAD
(N) FRANCIS CREEK ALIGNMENT
(N) SALT RIVER ACTIVE CHANNEL ALIGNMENT
(N) EASTSIDE DRAINAGE
EXISTING RIPARIAN VEGETATION TO REMAIN AND BE PROTECTED, TYP
TEMPORARY CONSTRUCTION ACCESS CORRIDOR, TYP
STAGING AREA, TYP.
RIPARIAN VEGETATION PREVIOUSLY REMOVED DURING OCTOBER 2010 COUNTY EMERGENCY OPENING
APPROX. LIMITS OF DISTURBANCE, TYP
TEMPORARY CONSTRUCTION ACCESS, SEE SHEET C-11
FRANCIS CREEK GRAVITY DIVERSION BYPASS AND PUMP OPTION, SEE WATER MANAGEMENT SHEET
APPROXIMATE LIMITS OF PROJECT, TYP
APPROXIMATE RIPARIAN VEGETATION REMOVAL AREA, TYP
HUMBOLDT BAY MUNICIPAL WATER DISTRICT



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HUMBOLDT COUNTY RESOURCE CONSERVATION DISTRICT

SALT RIVER ECOSYSTEM RESTORATION PROJECT

SITE PREPARATION PLAN
3 OF 4

PROJ NO: 10653-10-003
DRWN: pTJ CHKD: JS/SA

C-4

SHEET 10 OF 72

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JAN.DWG

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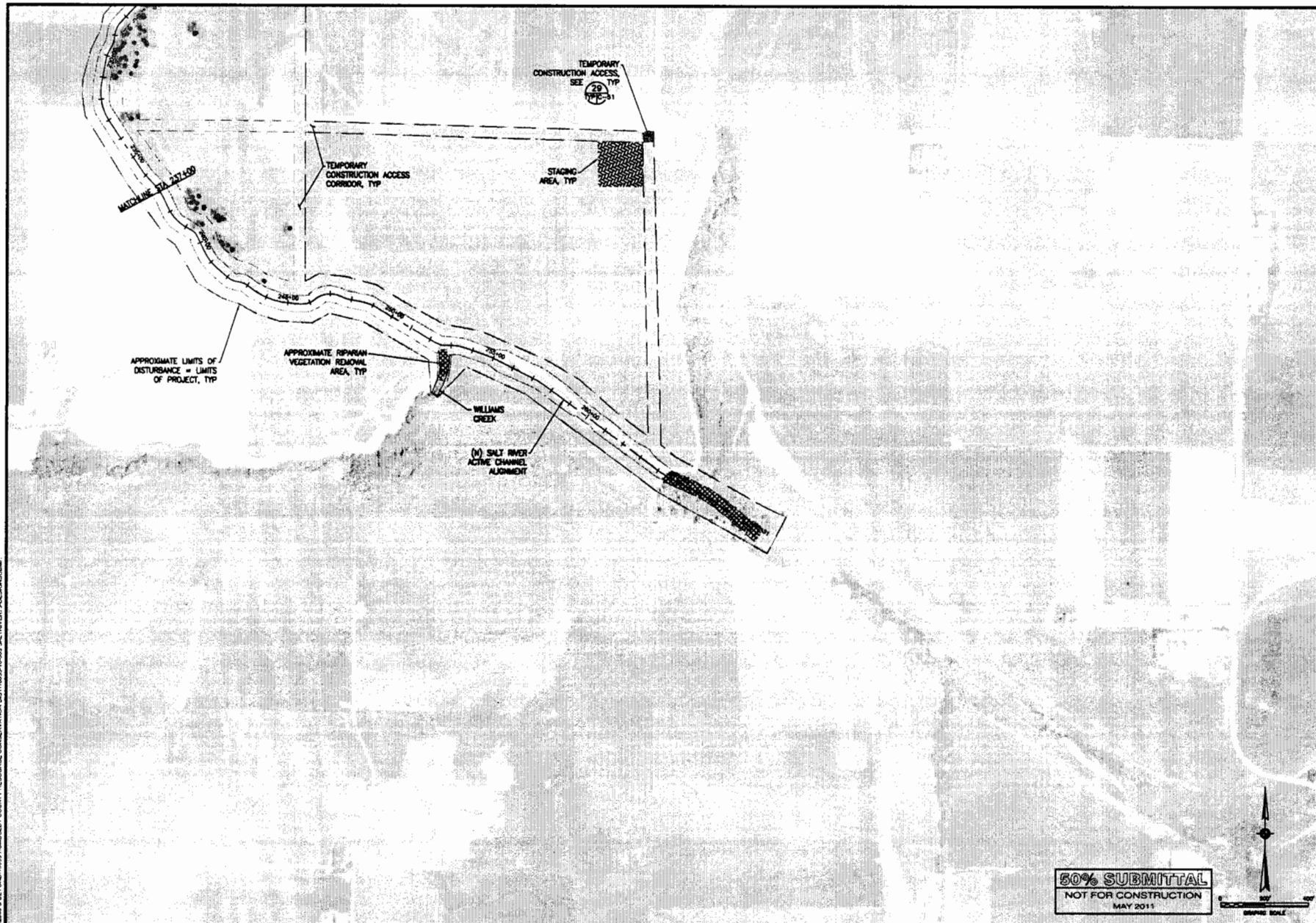

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HUMBOLDT COUNTY RESOURCE CONSERVATION DISTRICT
SALT RIVER ECOSYSTEM RESTORATION PROJECT

SITE PREPARATION PLAN
4 OF 4

PROJ NO: 10853-10-003
DRWN: pTJ CHKD: JS

C-5

SHEET 11 OF 72

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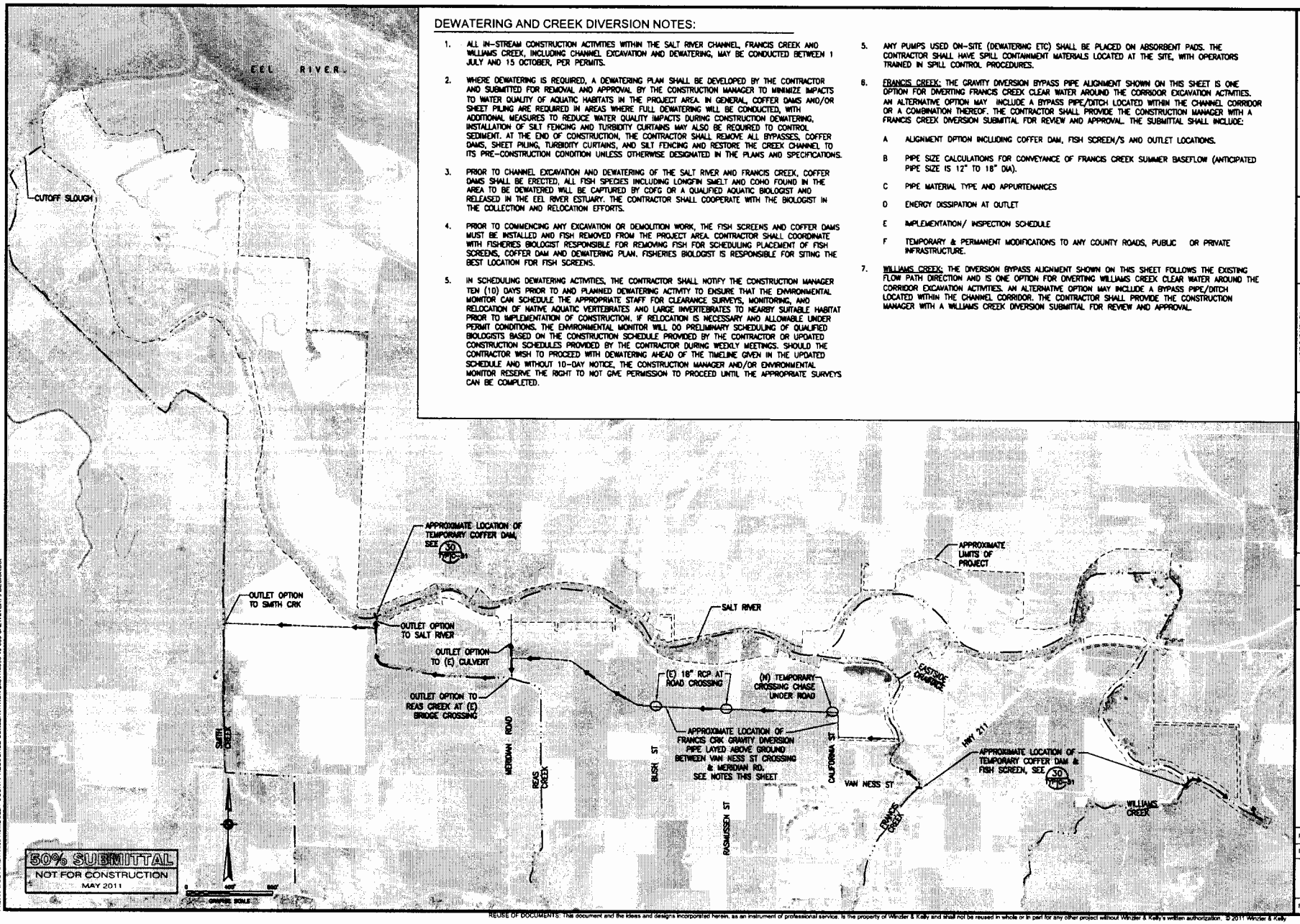
DEWATERING AND CREEK DIVERSION NOTES:

1. ALL IN-STREAM CONSTRUCTION ACTIVITIES WITHIN THE SALT RIVER CHANNEL, FRANCIS CREEK AND WILLIAMS CREEK, INCLUDING CHANNEL EXCAVATION AND DEWATERING, MAY BE CONDUCTED BETWEEN 1 JULY AND 15 OCTOBER, PER PERMITS.
2. WHERE DEWATERING IS REQUIRED, A DEWATERING PLAN SHALL BE DEVELOPED BY THE CONTRACTOR AND SUBMITTED FOR REMOVAL AND APPROVAL BY THE CONSTRUCTION MANAGER TO MINIMIZE IMPACTS TO WATER QUALITY OF AQUATIC HABITATS IN THE PROJECT AREA. IN GENERAL, COFFER DAMS AND/OR SHEET PILING ARE REQUIRED IN AREAS WHERE FULL DEWATERING WILL BE CONDUCTED, WITH ADDITIONAL MEASURES TO REDUCE WATER QUALITY IMPACTS DURING CONSTRUCTION DEWATERING, INSTALLATION OF SILT FENCING AND TURBIDITY CURTAINS MAY ALSO BE REQUIRED TO CONTROL SEDIMENT. AT THE END OF CONSTRUCTION, THE CONTRACTOR SHALL REMOVE ALL BYPASSES, COFFER DAMS, SHEET PILING, TURBIDITY CURTAINS, AND SILT FENCING AND RESTORE THE CREEK CHANNEL TO ITS PRE-CONSTRUCTION CONDITION UNLESS OTHERWISE DESIGNATED IN THE PLANS AND SPECIFICATIONS.
3. PRIOR TO CHANNEL EXCAVATION AND DEWATERING OF THE SALT RIVER AND FRANCIS CREEK, COFFER DAMS SHALL BE ERECTED, ALL FISH SPECIES INCLUDING LONGFIN SMELT AND COHO FOUND IN THE AREA TO BE DEWATERED WILL BE CAPTURED BY CDFG OR A QUALIFIED AQUATIC BIOLOGIST AND RELEASED IN THE EEL RIVER ESTUARY. THE CONTRACTOR SHALL COOPERATE WITH THE BIOLOGIST IN THE COLLECTION AND RELOCATION EFFORTS.
4. PRIOR TO COMMENCING ANY EXCAVATION OR DEMOLITION WORK, THE FISH SCREENS AND COFFER DAMS MUST BE INSTALLED AND FISH REMOVED FROM THE PROJECT AREA. CONTRACTOR SHALL COORDINATE WITH FISHERIES BIOLOGIST RESPONSIBLE FOR REMOVING FISH FOR SCHEDULING PLACEMENT OF FISH SCREENS, COFFER DAM AND DEWATERING PLAN. FISHERIES BIOLOGIST IS RESPONSIBLE FOR SITING THE BEST LOCATION FOR FISH SCREENS.
5. IN SCHEDULING DEWATERING ACTIVITIES, THE CONTRACTOR SHALL NOTIFY THE CONSTRUCTION MANAGER TEN (10) DAYS PRIOR TO AND PLANNED DEWATERING ACTIVITY TO ENSURE THAT THE ENVIRONMENTAL MONITOR CAN SCHEDULE THE APPROPRIATE STAFF FOR CLEARANCE SURVEYS, MONITORING, AND RELOCATION OF NATIVE AQUATIC VERTEBRATES AND LARGE INVERTEBRATES TO NEARBY SUITABLE HABITAT PRIOR TO IMPLEMENTATION OF CONSTRUCTION. IF RELOCATION IS NECESSARY AND ALLOWABLE UNDER PERMIT CONDITIONS, THE ENVIRONMENTAL MONITOR WILL DO PRELIMINARY SCHEDULING OF QUALIFIED BIOLOGISTS BASED ON THE CONSTRUCTION SCHEDULE PROVIDED BY THE CONTRACTOR OR UPDATED CONSTRUCTION SCHEDULES PROVIDED BY THE CONTRACTOR DURING WEEKLY MEETINGS. SHOULD THE CONTRACTOR WISH TO PROCEED WITH DEWATERING AHEAD OF THE TIMELINE GIVEN IN THE UPDATED SCHEDULE AND WITHOUT 10-DAY NOTICE, THE CONSTRUCTION MANAGER AND/OR ENVIRONMENTAL MONITOR RESERVE THE RIGHT TO NOT GIVE PERMISSION TO PROCEED UNTIL THE APPROPRIATE SURVEYS CAN BE COMPLETED.
5. ANY PUMPS USED ON-SITE (DEWATERING ETC) SHALL BE PLACED ON ABSORBENT PADS. THE CONTRACTOR SHALL HAVE SPILL CONTAINMENT MATERIALS LOCATED AT THE SITE, WITH OPERATORS TRAINED IN SPILL CONTROL PROCEDURES.
6. FRANCIS CREEK: THE GRAVITY DIVERSION BYPASS PIPE ALIGNMENT SHOWN ON THIS SHEET IS ONE OPTION FOR DIVERTING FRANCIS CREEK CLEAR WATER AROUND THE CORRIDOR EXCAVATION ACTIVITIES. AN ALTERNATIVE OPTION MAY INCLUDE A BYPASS PIPE/DITCH LOCATED WITHIN THE CHANNEL CORRIDOR OR A COMBINATION THEREOF. THE CONTRACTOR SHALL PROVIDE THE CONSTRUCTION MANAGER WITH A FRANCIS CREEK DIVERSION SUBMITTAL FOR REVIEW AND APPROVAL. THE SUBMITTAL SHALL INCLUDE:
   - A ALIGNMENT OPTION INCLUDING COFFER DAM, FISH SCREEN/S AND OUTLET LOCATIONS.
   - B PIPE SIZE CALCULATIONS FOR CONVEYANCE OF FRANCIS CREEK SUMMER BASEFLOW (ANTICIPATED PIPE SIZE IS 12" TO 18" DIA).
   - C PIPE MATERIAL TYPE AND APPURTENANCES
   - D ENERGY DISSIPATION AT OUTLET
   - E IMPLEMENTATION/ INSPECTION SCHEDULE
   - F TEMPORARY & PERMANENT MODIFICATIONS TO ANY COUNTY ROADS, PUBLIC OR PRIVATE INFRASTRUCTURE.
7. WILLIAMS CREEK: THE DIVERSION BYPASS ALIGNMENT SHOWN ON THIS SHEET FOLLOWS THE EXISTING FLOW PATH DIRECTION AND IS ONE OPTION FOR DIVERTING WILLIAMS CREEK CLEAR WATER AROUND THE CORRIDOR EXCAVATION ACTIVITIES. AN ALTERNATIVE OPTION MAY INCLUDE A BYPASS PIPE/DITCH LOCATED WITHIN THE CHANNEL CORRIDOR. THE CONTRACTOR SHALL PROVIDE THE CONSTRUCTION MANAGER WITH A WILLIAMS CREEK DIVERSION SUBMITTAL FOR REVIEW AND APPROVAL.



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HUMBOLDT COUNTY RESOURCE CONSERVATION DISTRICT

SALT RIVER ECOSYSTEM RESTORATION PROJECT

WATER MANAGEMENT

PROJ NO: 10853-10-003

DRWN: pTJ CHKD: JS/SA

C-6

SHEET 12 OF 72

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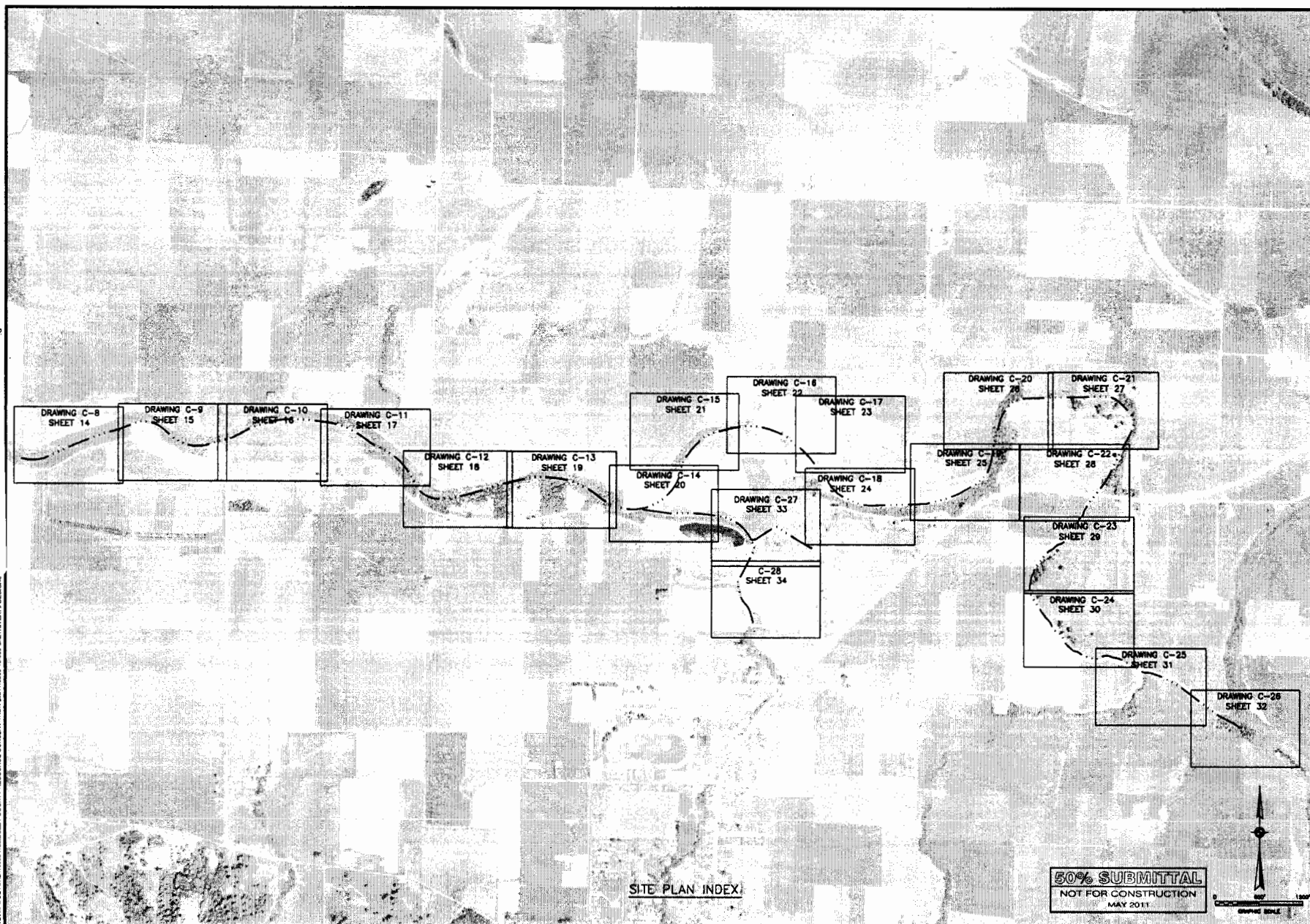

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HUMBOLDT COUNTY RESOURCE CONSERVATION DISTRICT
SALT RIVER ECOSYSTEM RESTORATION PROJECT

SITE PLAN INDEX SHEET

PROJ NO: 10853-10-003
DRWN: nTJ CHKD: JS/SA

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SHEET 13 OF 72

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HUMBOLDT COUNTY RESOURCE CONSERVATION DISTRICT
SALT RIVER ECOSYSTEM RESTORATION PROJECT
SITE PLAN
1 OF 21
C-8
50% SUBMITTAL
NOT FOR CONSTRUCTION
MAY 2011
WINZLER & KELLY
Michael Love & Associates
NOTE: LOCATION OF EXISTING UTILITIES & STRUCTURES ARE APPROXIMATE AND ARE NOT GUARANTEED. THE BIDDER SHALL VERIFY THE EXACT LOCATION AND COMPLETENESS ARE NOT GUARANTEED. CONTRACTOR SHALL NOTIFY UNDERGROUND SERVICES ALERT (800) 227-2600 A MIN. OF 48 HOURS PRIOR TO ANY EXCAVATION AND POTHOLE FOR EXACT LOCATION.
NOTE: MICRO-GRADING FEATURES NOT SHOWN, SEE DWGS C-4.2 & C-4.3 FOR TYPICAL DETAILS. LOCATION PLAN SHOWN ON DWGS 1-2 TO 1-10.
(E) 6" DIA PLASTIC DRAIN PIPE OUTLET, E=12.03'
(E) 6" DIA PLASTIC DRAIN PIPE OUTLET, E=10.64'
(E) 2" DIA TRIPE WATER PIPE TO BE REMOVED WITHIN LIMITS OF CHANNEL EXCAVATION
(E) 3" DIA W MAIN TO REMAIN & BE PROTECTED, TYP
(E) W & WV TO REMAIN & BE PROTECTED, TYP
APPROX LOCATION OF (E) 2" DIA W MAIN TO REMAIN & BE PROTECTED, TYP
APPROX LOCATION OF (E) ABANDONED 3/4" PVC W LINE DISCONNECTED AT WM
(E) CULVERT, TO REMAIN AND BE PROTECTED, TYP
(N) BOULDER WEIRS SPACED 20FT APART WITH 1FT DROPS, TYP.
CONFORM CHANNEL GRADING TO MATCH PHASE 1
ACTIVE CHANNEL ALIGNMENT, TYP.
APPROX LIMITS OF EXCAVATION, TYPICAL
APPROX LIMITS OF DISTURBANCE, TYPICAL
APPROX LIMITS OF PROJECT, TYPICAL
(E) UNK OHD TELL COM TO BE TEMPORARILY RAISED, CONTRACTOR TO COORDINATE WITH UTILITY
(N) ROCK LINED SWALE SEE DETAIL 20
(E) 3 OHD LINE TO REMAIN & BE PROTECTED, TYP
MITCHINE STA 41+00
MAD RIVER ROAD
ARCATA
REDWOOD CREEK
SCALE: 1" = 100'
SHEET 14 OF 72
PROJ NO 10653-13-003
DRWN PTJ CHKD JSSA
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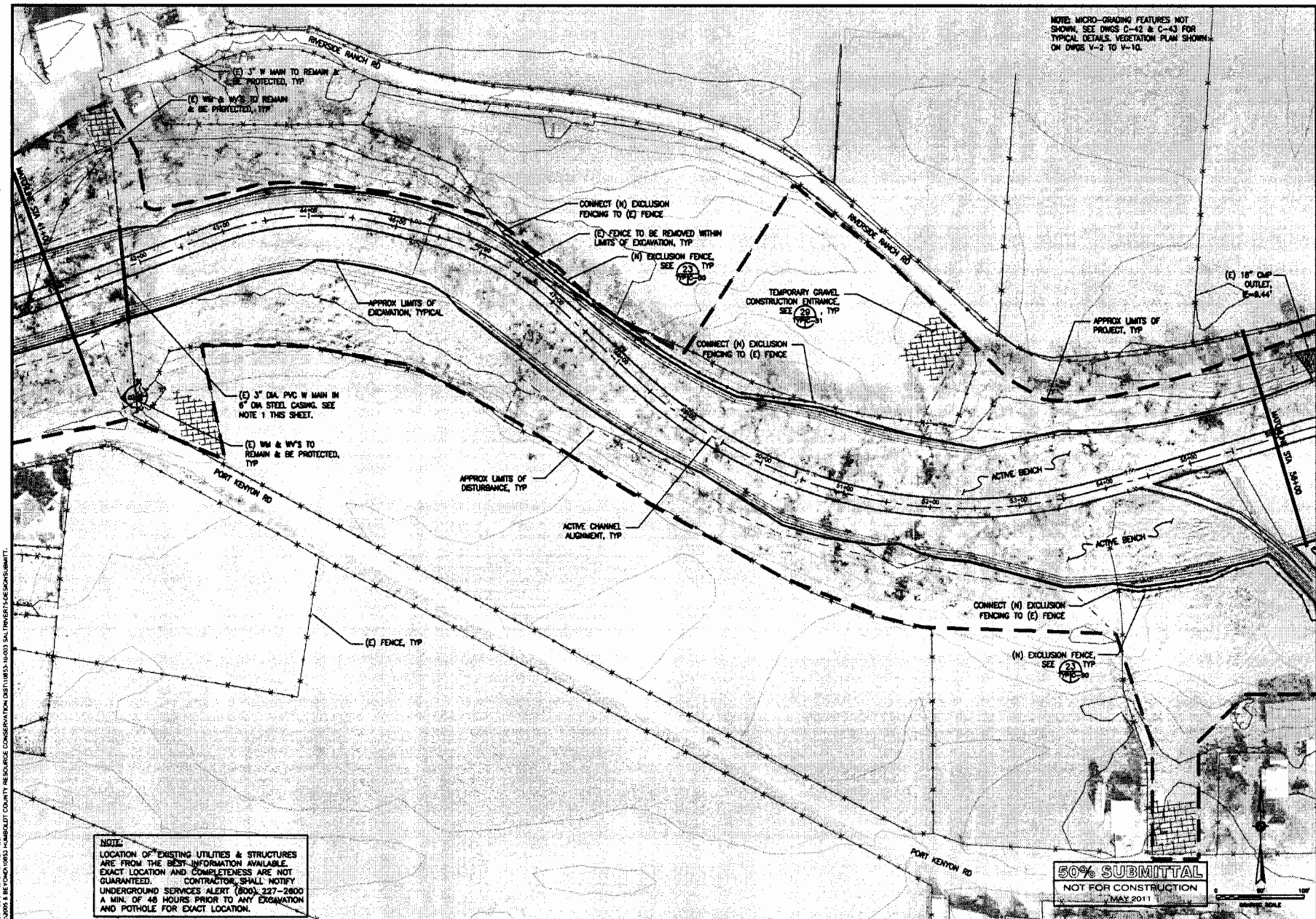

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HUMBOLDT COUNTY RESOURCE CONSERVATION DISTRICT
SALT RIVER ECOSYSTEM RESTORATION PROJECT

SITE PLAN
2 OF 21

PROJ NO: 10653-10-003
DRWN: pTJ CHKD: JS/SA

C-9

SHEET 15 OF 72

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HUMBOLDT COUNTY RESOURCE CONSERVATION DISTRICT
SALT RIVER ECOSYSTEM RESTORATION PROJECT
SITE PLAN
3 OF 21
C-10
WINZLER & KELLY
Michael Love & Associates
50% SUBMITTAL
NOT FOR CONSTRUCTION
MAY 2011
MATCHLINE STA 70+25
MATCHLINE STA 58+00
ACTIVE BENCH
(E) FENCE TO BE REMOVED WITHIN LIMITS OF EXCAVATION, TYP
CONNECT (N) EXCLUSION FENCING TO (E) FENCE
APPROX LIMITS OF DISTURBANCE, TYP
TEMPORARY GRAVEL CONSTRUCTION ACCESS, SEE
PORT KENYON RD
APPROX LIMITS OF EXCAVATION, TYP
APPROX LIMITS OF PROJECT, TYP
APPROX LOCATION OF (E) CULVERT
(N) VEGETATED SWALE WITH EROSION CONTROL FABRIC, SIZE
(E) CULVERT OUTLET W/ TIDE GATE
(N) EXCLUSION FENCE, SEE
ACTIVE CHANNEL ALIGNMENT, TYP
(E) 3" W MAIN TO REMAIN & BE PROTECTED, TYP
(N) ROCK LINED DITCH, SEE
(E) 18" CMP OUTLET, E=9.44'
NOTE: LOCATION OF EXISTING UTILITIES & STRUCTURES ARE FROM THE BEST INFORMATION AVAILABLE. EXACT LOCATION AND DEPTH TO BE DETERMINED BY CONTRACTOR. CONTRACTOR SHALL NOTIFY UNDERGROUND SERVICES ALERT (800) 227-2600 A MIN. OF 48 HOURS PRIOR TO ANY EXCAVATION AND POTHOLE FOR EXACT LOCATION.
NOTE: MINOR MICRO-GRADING FEATURES NOT SHOWN, SEE DWGS C-42 & C-43 FOR TYPICAL DETAILS. VEGETATION PLAN SHOWN ON DWGS V-2 TO V-10.
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HUMBOLDT COUNTY RESOURCE CONSERVATION DISTRICT
SALT RIVER ECOSYSTEM RESTORATION PROJECT
SITE PLAN
4 OF 21
C-11
50% SUBMITTAL
NOT FOR CONSTRUCTION
MAY 2011
WINZLER & KELLY
Michael Love & Associates
633 Third Street Eureka, CA 95501
PO Box 4417 Arcata, CA 95518

HUMBOLDT COUNTY RESOURCE CONSERVATION DISTRICT
BALT RIVER ECOSYSTEM RESTORATION PROJECT
SITE PLAN
5 OF 21
C-12
WINZLER & KELLY
Michael Love & Associates

HUMBOLDT COUNTY RESOURCE CONSERVATION DISTRICT
SALT RIVER ECOSYSTEM RESTORATION PROJECT
SITE PLAN
6 OF 21
C-13
WINZLER & KELLY
Michael Love & Associates
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NOTE: MICRO-GRADING FEATURES NOT SHOWN, SEE DWGS C-42 & C-43 FOR TYPICAL DETAILS. VEGETATION PLAN SHOWN ON DWGS V-2 TO V-10.
(E) FENCE TO BE REMOVED WITHIN LIMITS OF EXCAVATION, TYP
ACTIVE CHANNEL ALIGNMENT, TYP
CONNECT (N) EXCLUSION FENCING TO (E) FENCE
APPROX LIMITS OF DISTURBANCE, TYP
APPROX LIMITS OF PROJECT, TYP
(N) EXCLUSION FENCE, SEE 23, TYP
(N) VEGETATED SWALE WITH EROSION CONTROL FABRIC SEE 18
EXPOSE OUTLET OF (E) 15" CULVERT & GRADE SWALE FROM IE
(E) 15" CULVERT WITH BURIED INLET/OUTLET
TEMPORARY GRAVEL CONSTRUCTION ACCESS, SEE 28, TYP
APPROX LIMITS OF EXCAVATION, TYP
ACTIVE BENCH
MATCHLINE
STA 114+50
STA 99+50
POST ROAD
MASSASSEK LN
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HUMBOLDT COUNTY RESOURCE CONSERVATION DISTRICT
SALT RIVER ECOSYSTEM RESTORATION PROJECT
SITE PLAN
7 OF 21
C-14
50% SUBMITTAL
NOT FOR CONSTRUCTION
MAY 2011
WINZLER & KELLY
Michael Love & Associates
NOTE
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NOTE: MICRO-GRADING FEATURES NOT SHOWN, SEE DWGS C-42 & C-43 FOR TYPICAL DETAILS. VEGETATION PLAN SHOWN ON DWGS V-2 TO V-4A
(N) PERMANENT ACCESS RAMP
(N) PERMANENT ROAD, SEE
(N) PERMANENT MAINTENANCE ROAD GATE, SEE
EXTEND WWTP OUTFALL PIPE, SEE
(E) CULVERT
(E) 18" CULVERT
(E) 15" CULVERT
(N) ROCK LINED SWALE, SEE
(N) ROCK ENERGY DISSIPATER, TYP
(N) EXCLUSION FENCE, SEE
(E) FENCE TO BE REMOVED WITHIN LIMITS OF EXCAVATION, TYP
ACTIVE CHANNEL ALIGNMENT, TYP
APPROX LIMITS OF NRCS EASEMENT, TYP
APPROX LIMITS OF EXCAVATION, TYP
APPROXIMATE LIMITS OF NRCS EASEMENT, TYP
LIMITS OF DISTURBANCE = EASEMENT
(N) SMA LOWER CHUTE LOG SILL, SEE
LOWER CHUTE
UPPER CHUTE
(N) BOULDER WEIR, 0.5' VERTICAL DROP BETWEEN ADJACENT WEIRS, TYP
APPROX LIMITS OF EXCAVATION, TYP
APPROXIMATE LIMITS OF NRCS EASEMENT, LIMITS OF PROJECT & LIMITS OF DISTURBANCE = EASEMENT BETWEEN SMA & TREATMENT PLANT
FERNDALE WASTEWATER TREATMENT POND
FRANCIS CREEK ALIGNMENT
SEGMENT WITH NO CHANNEL MOD. (SMA)
MATCHLINE STA 1125+75
MATCHLINE STA 1140+50
MATCHLINE STA 0+50
CALIFORNIA ST
FORT KENYON RD
TEMPORARY GRAVEL CONSTRUCTION ACCESS, SEE TYP
APPROX LIMITS OF PROJECT, TYP
APPROX LIMITS OF DISTURBANCE, TYP
SCALE: 1" = 100'
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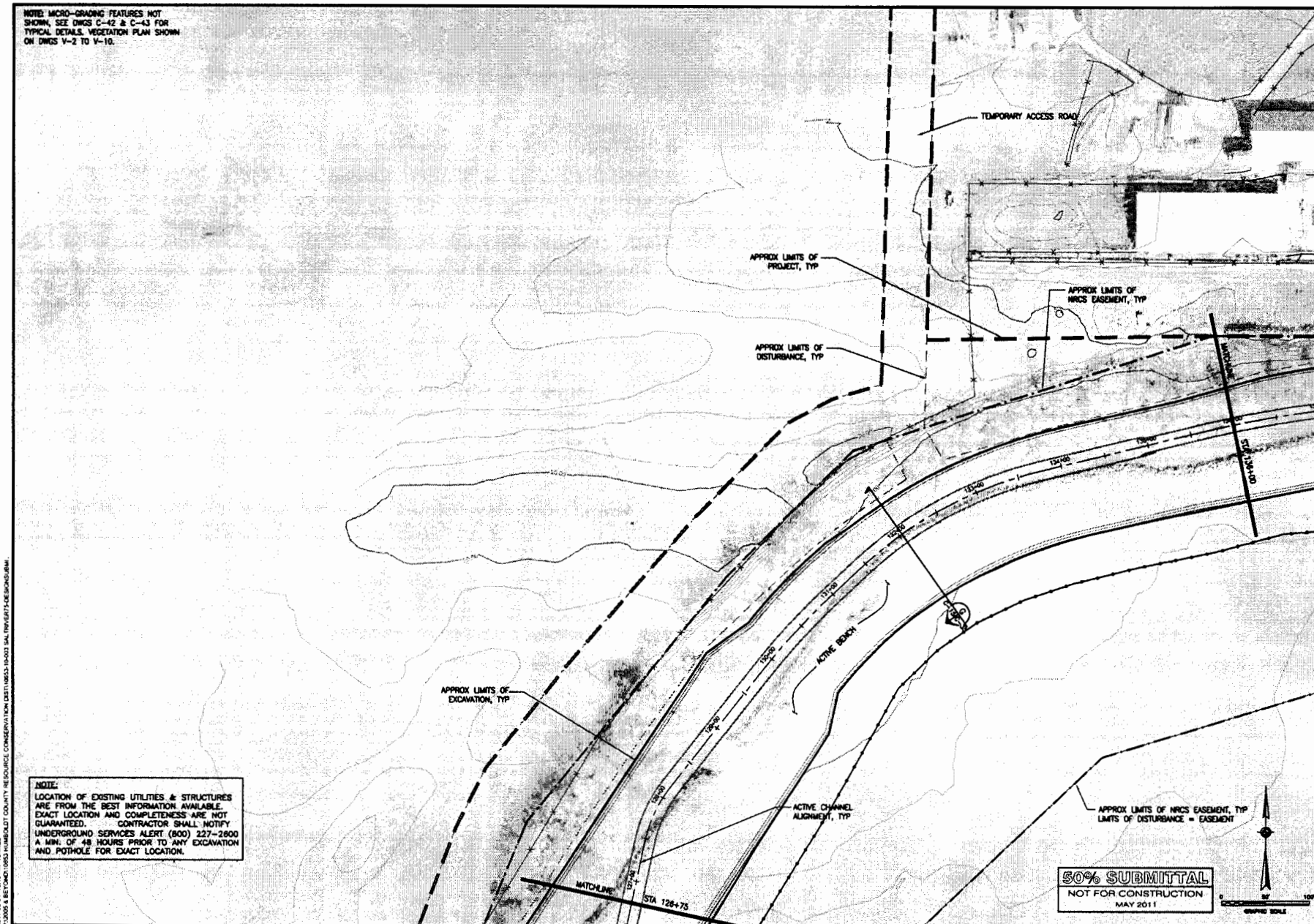

NOTE:
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ISSUE

HUMBOLDT COUNTY RESOURCE CONSERVATION DISTRICT
SALT RIVER ECOSYSTEM RESTORATION PROJECT

SITE PLAN
8 OF 21

PROJ NO: 10653-10-003
DRWN: pTJ CHKD: JS/SA

C-15

SHEET 21 OF 72

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HUMBOLDT COUNTY RESOURCE CONSERVATION DISTRICT
SALT RIVER ECOSYSTEM RESTORATION PROJECT
SITE PLAN
9 OF 21
C-16
WINZLER & KELLY
Michael Love & Associates
50% SUBMITTAL
NOT FOR CONSTRUCTION
MAY 2011
APPROX LIMITS OF DISTURBANCE, TYP
APPROX LIMITS OF NRCS EASEMENT, TYP
LIMITS OF DISTURBANCE = EASEMENT
APPROX LIMITS OF PROJECT, TYP
APPROX LIMITS OF DISTURBANCE, TYP
APPROXIMATE LIMITS OF DISTURBANCE & NRCS EASEMENT, TYPICAL
BACKWATER ALCOVE
ACTIVE CHANNEL ALIGNMENT, TYP
ACTIVE BENCH
WATCHLINE
STA 136+00
STA 146+50
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NOTE: WORK-ORDERING FEATURES NOT SHOWN, SEE DWGS C-12 & C-13 FOR TYPICAL DETAILS. VEGETATION PLAN SHOWN ON DWGS V-2 TO V-10.

HUMBOLDT COUNTY RESOURCE CONSERVATION DISTRICT
SALT RIVER ECOSYSTEM RESTORATION PROJECT
SITE PLAN
10 OF 21
C-17

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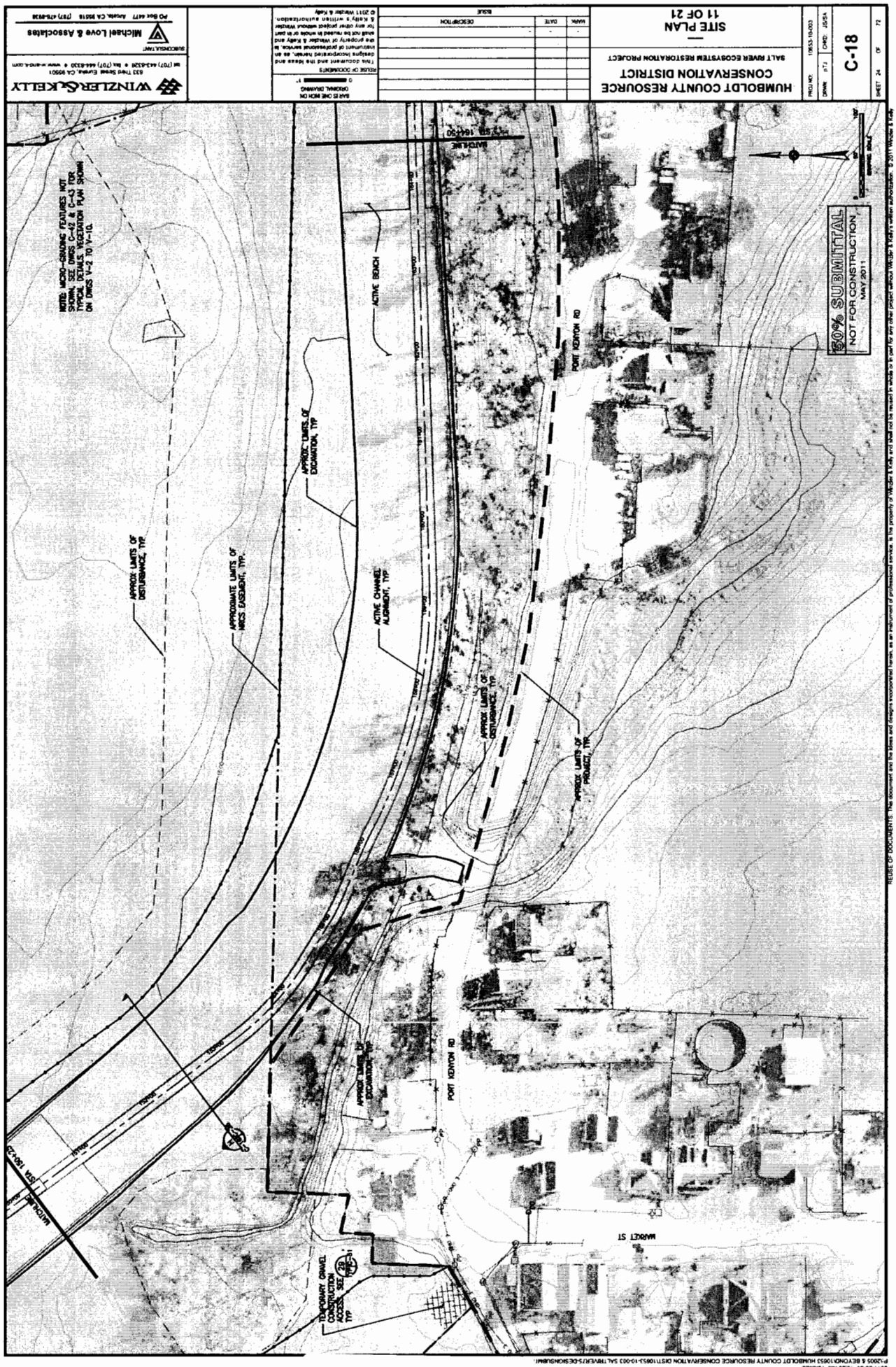
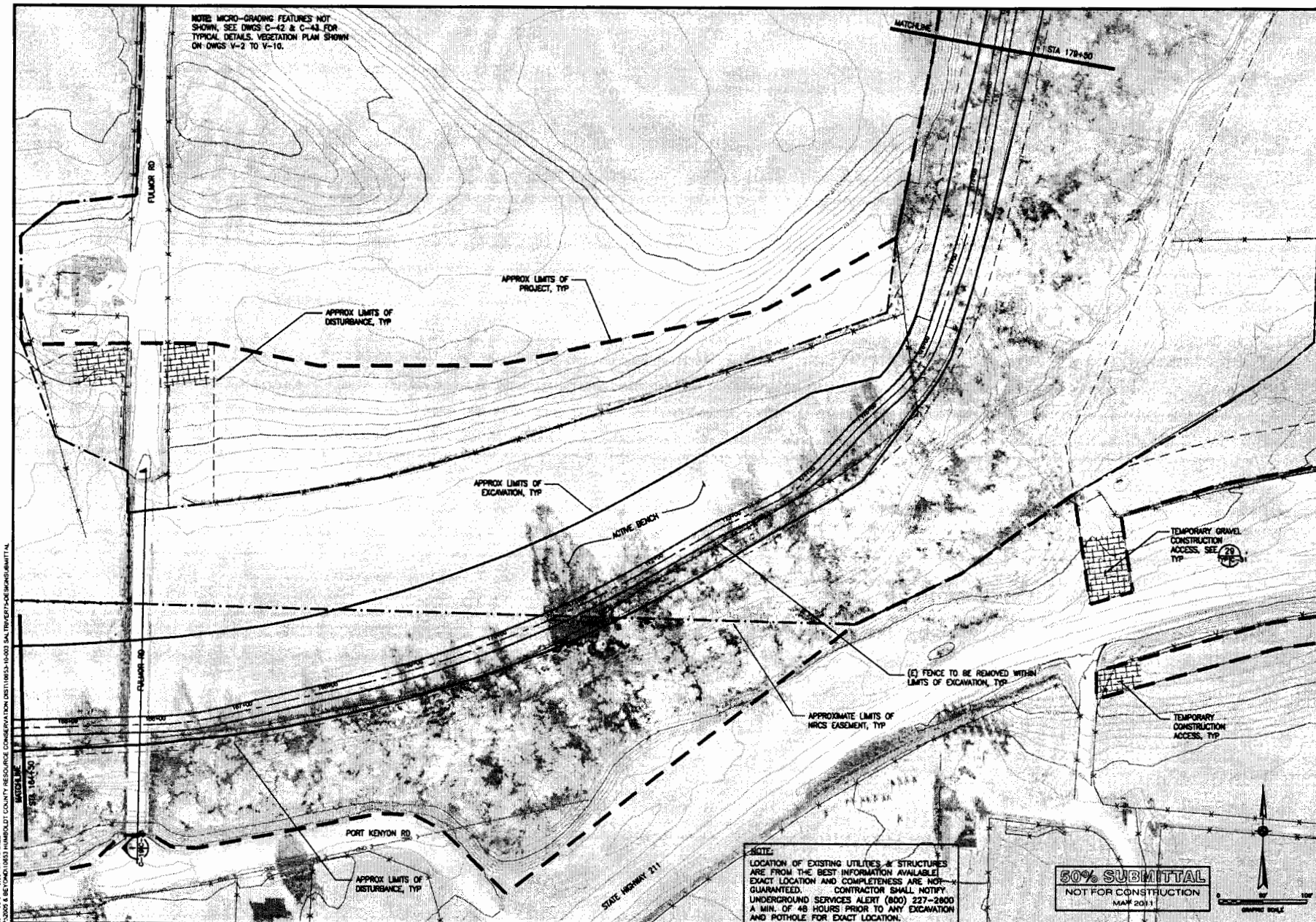

HUMBOLDT COUNTY RESOURCE CONSERVATION DISTRICT
SALT RIVER ECOSYSTEM RESTORATION PROJECT
SITE PLAN
11 OF 21
C-18
WINZLER & KELLY
Michael Love & Associates
50% SUBMITTAL
NOT FOR CONSTRUCTION
MAY 2011
NOTE: MICRO-GRADING FEATURES NOT SHOWN, SEE DWGS C-42 & C-43 FOR TYPICAL DETAILS. VEGETATION PLAN SHOWN ON DWGS V-2 TO V-10.
APPROX. LIMITS OF EXCAVATION, TYP
APPROX. LIMITS OF DISTURBANCE, TYP
APPROXIMATE LIMITS OF NRCS EASEMENT, TYP.
ACTIVE CHANNEL ALIGNMENT, TYP
ACTIVE BENCH
PORT KENYON RD
MARKET ST
MATCHLINE
TEMPORARY GRAVEL CONSTRUCTION ACCESS, SEE DETAIL 1/C-41, TYP



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ISSUE

HUMBOLDT COUNTY RESOURCE CONSERVATION DISTRICT
SALT RIVER ECOSYSTEM RESTORATION PROJECT

SITE PLAN
12 OF 21

PROJ NO: 10653-10-003
DRWN: pTJ CHKD: JS/SA

C-19

SHEET 25 OF 72

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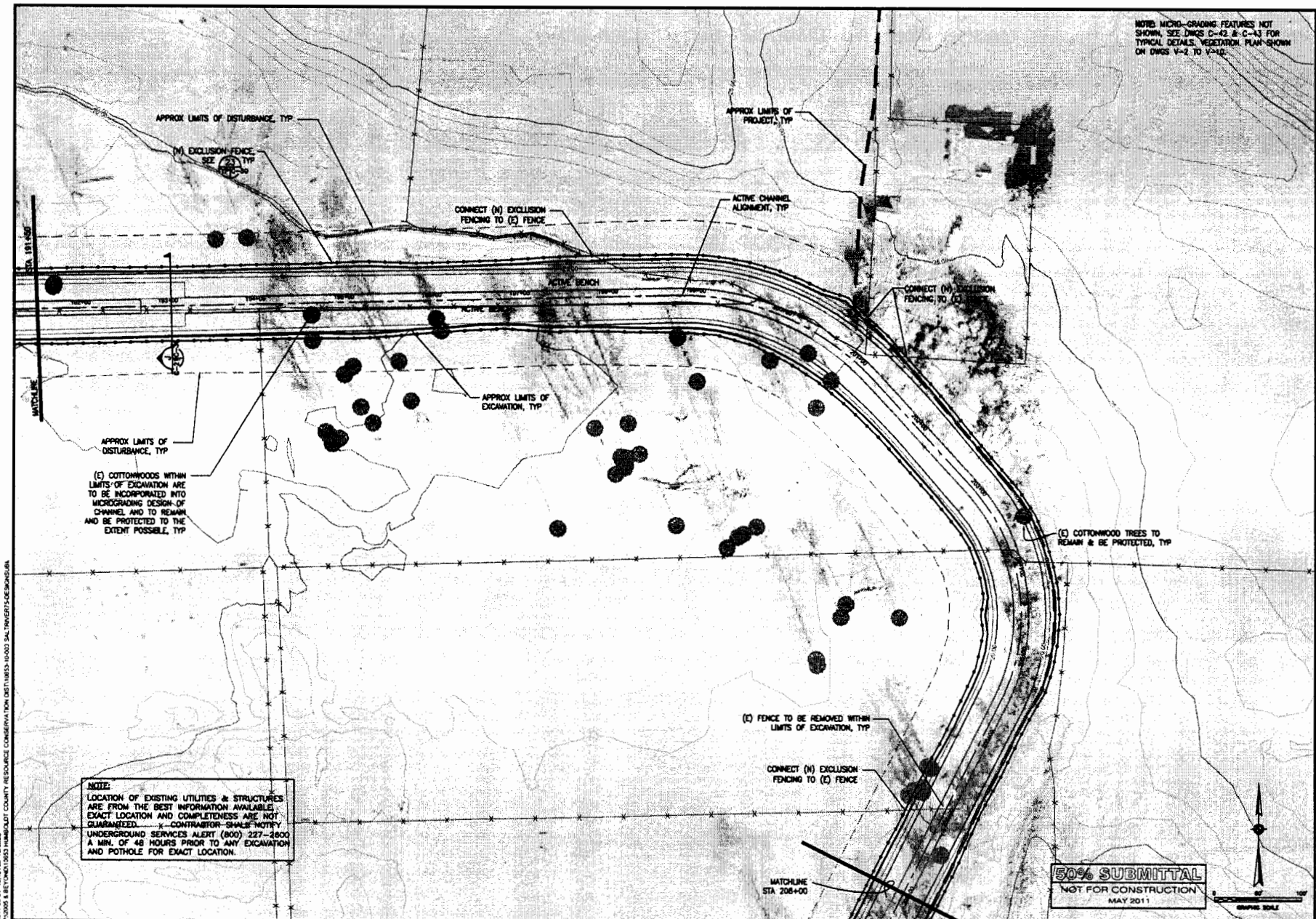
HUMBOLDT COUNTY RESOURCE CONSERVATION DISTRICT
SALT RIVER ECOSYSTEM RESTORATION PROJECT
SITE PLAN
13 OF 21
C-20
50% SUBMITTAL
NOT FOR CONSTRUCTION
MAY 2011
WINZLER & KELLY
Michael Love & Associates
APPROX LIMITS OF DISTURBANCE, TYP
APPROX LIMITS OF EXCAVATION, TYP
APPROXIMATE LIMITS OF NRCS EASEMENT AND (E) FENCE TO REMAIN AND BE PROTECTED, TYP.
ACTIVE CHANNEL ALIGNMENT, TYP
TEMPORARY CONSTRUCTION ACCESS, TYP
CONNECT (N) EXCLUSION FENCING TO (E) FENCE
APPROX LIMITS OF PROJECT, TYP
STA 181+50
STA 179+50
WATCHLINE
NOTE: HYDRO-GRADING FEATURES NOT SHOWN, SEE DWGS C-42 & C-43 FOR TYPICAL DETAILS. VEGETATION PLAN SHOWN ON DWGS V-2 TO V-10.



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-	-	-

ISSUE

HUMBOLDT COUNTY RESOURCE CONSERVATION DISTRICT
SALT RIVER ECOSYSTEM RESTORATION PROJECT

SITE PLAN
14 OF 21

PROJ NO: 10653-10-003
DRWN: pTJ CHKD: JS/SA

C-21

SHEET 27 OF 72

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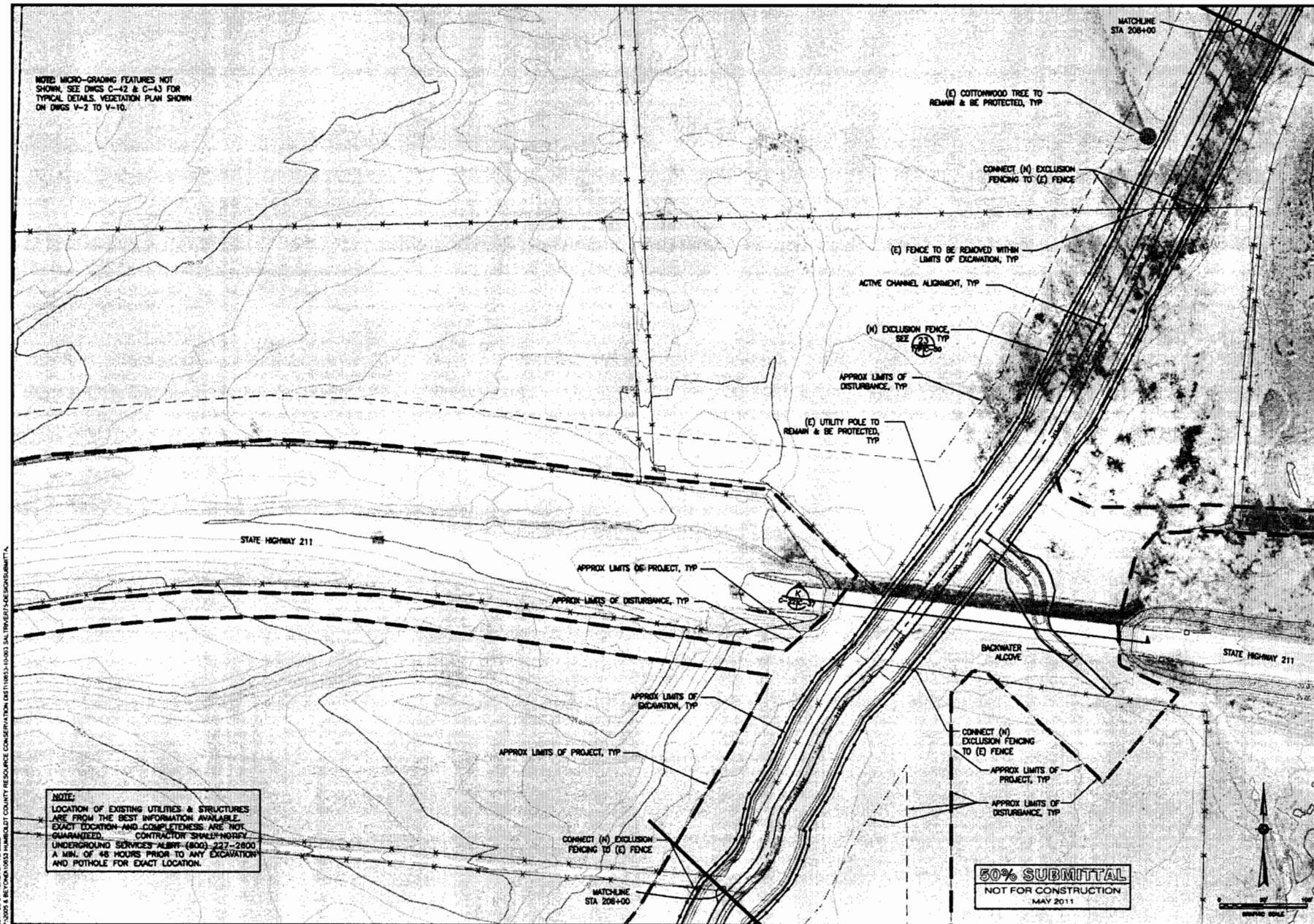

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HUMBOLDT COUNTY RESOURCE CONSERVATION DISTRICT
SALT RIVER ECOSYSTEM RESTORATION PROJECT

SITE PLAN
15 OF 21

PROJ NO: 10653-10-003
DRWN: pTJ CHKD: JS/SA

C-22

SHEET 28 OF 72

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HUMBOLDT COUNTY RESOURCE CONSERVATION DISTRICT
SALT RIVER ECOSYSTEM RESTORATION PROJECT
SITE PLAN
16 OF 21
C-23
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Michael LOVE & Associates
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NOTE: MICRO-GRADING FEATURES NOT SHOWN, SEE DWGS C-42 & C-43 FOR TYPICAL DETAILS. VEGETATION PLAN SHOWN ON DWGS V-2 TO V-10.
MATCHLINE STA 208+00
MATCHLINE STA 224+25
(N) EXCLUSION FENCE, SEE 23, TYP
(E) FENCE TO BE REMOVED WITHIN LIMITS OF EXCAVATION, TYP
CONNECT (N) EXCLUSION FENCING TO (E) FENCE
APPROX LIMITS OF EXCAVATION, TYP
ACTIVE CHANNEL ALIGNMENT, TYP
APPROX LIMITS OF PROJECT, TYP
APPROX LIMITS OF DISTURBANCE, TYP
(E) COTTONWOOD TREES TO REMAIN & BE PROTECTED, TYP
CONNECT (N) EXCLUSION FENCING TO (E) FENCE
CONNECT (N) EXCLUSION FENCING TO (E) FENCE
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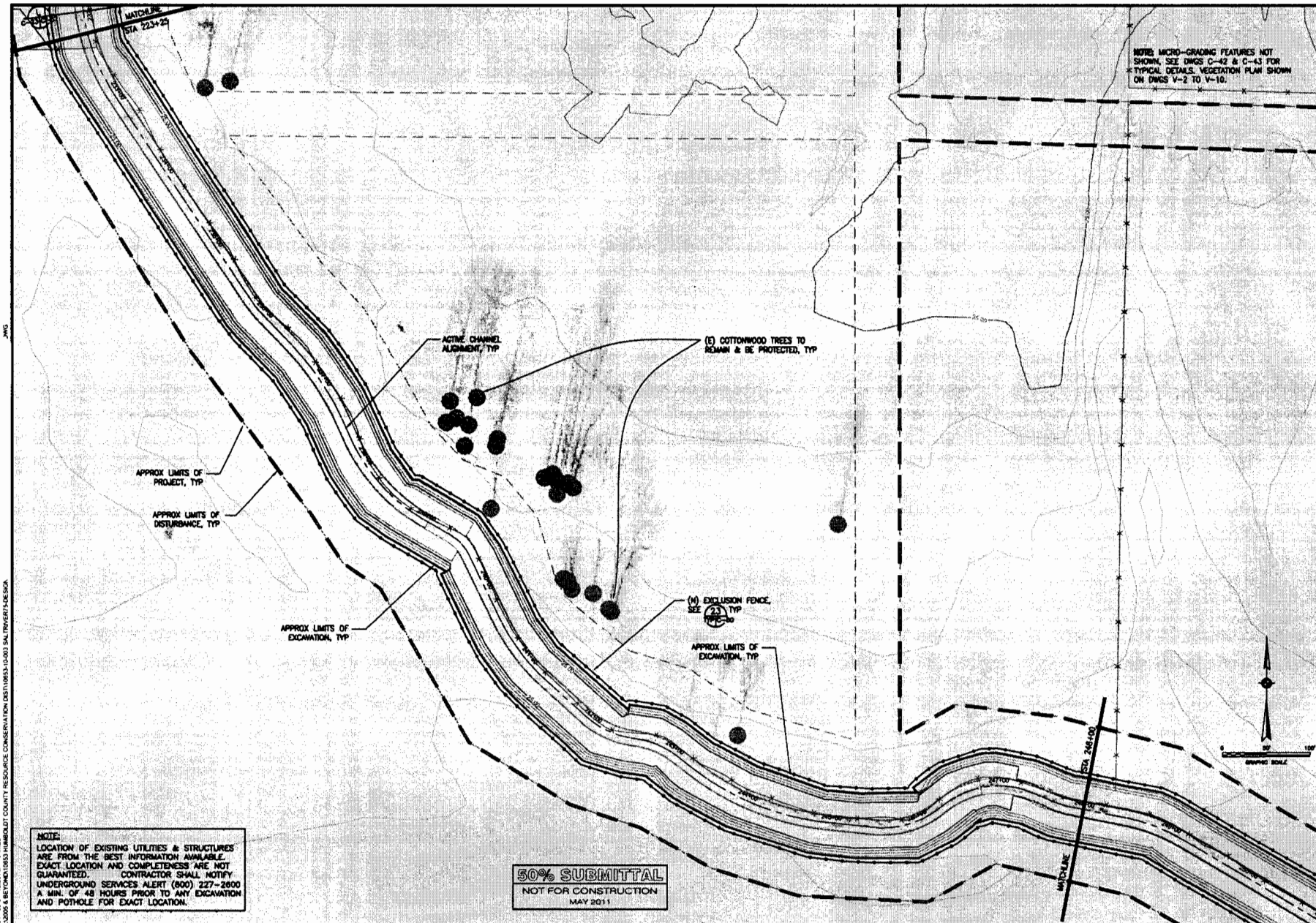

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ISSUE

HUMBOLDT COUNTY RESOURCE CONSERVATION DISTRICT
SALT RIVER ECOSYSTEM RESTORATION PROJECT

SITE PLAN
17 OF 21

PROJ NO: 10653-10-003
DRWN: pTJ CHKD: JS/SA

C-24

SHEET 30 OF 72

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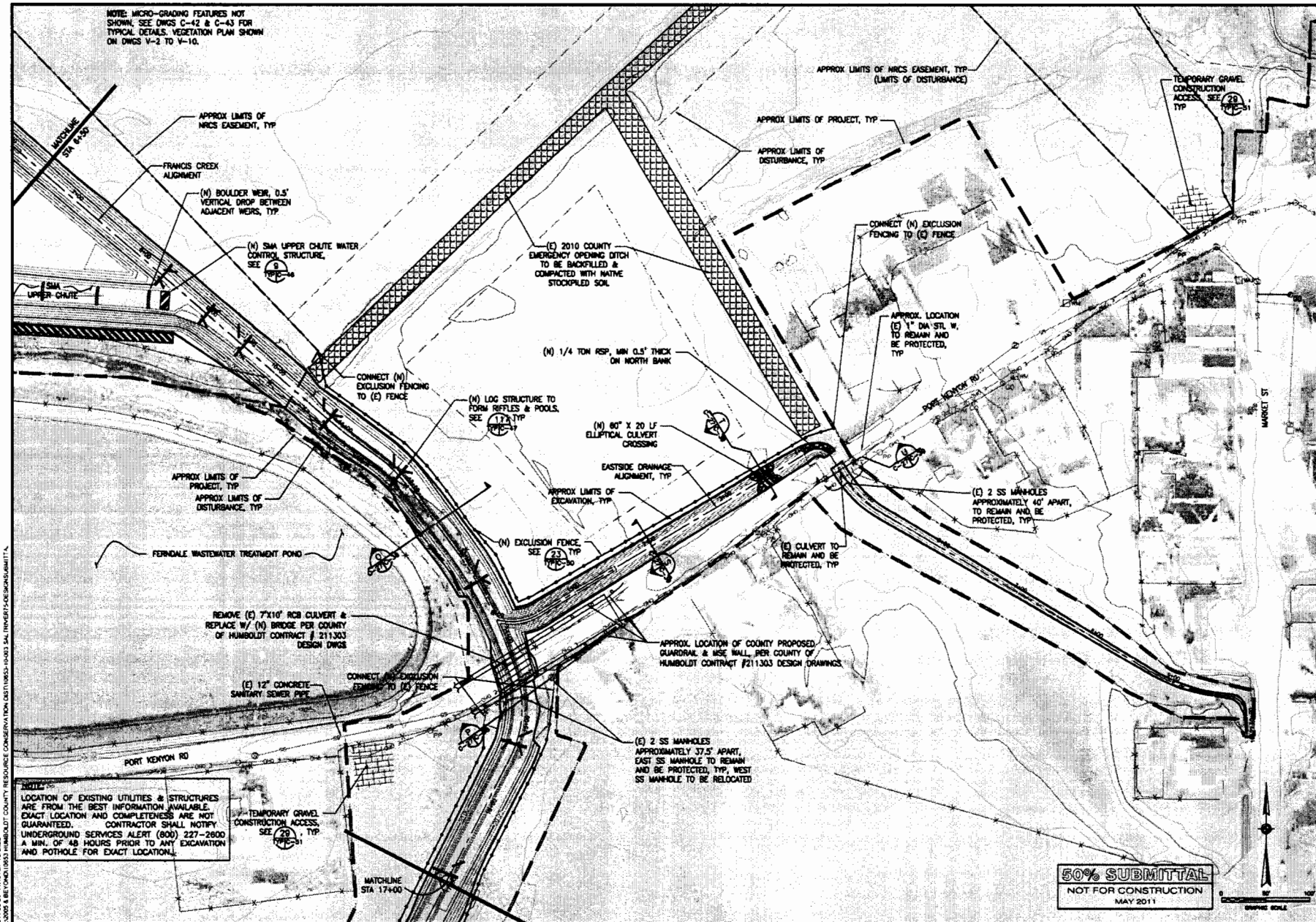
HUMBOLDT COUNTY RESOURCE CONSERVATION DISTRICT
SALT RIVER ECOSYSTEM RESTORATION PROJECT
SITE PLAN
18 OF 21
C-25
WINZLER & KELLY
Michael Love & Associates
50% SUBMITTAL
NOT FOR CONSTRUCTION
MAY 2011
STA 281+00
STA 266+00
MATCHLINE
APPROX LIMITS OF EXCAVATION, TYP
(N) EXCLUSION FENCE, SEE 23 TYP
APPROX LIMITS OF PROJECT, TYP
APPROX LIMITS OF DISTURBANCE, TYP
CONNECT (N) EXCLUSION FENCING TO (E) FENCE
(N) BOULDER WEIRS SPACED 25FT APART WITH 0.5FT DROPS, TYP. SEE 21
END WILLIAMS CREEK CHANNEL IMPROVEMENTS, CONFORM TO (E) CHANNEL
ACTIVE CHANNEL ALIGNMENT, TYP
(E) FENCE TO BE REMOVED WITHIN LIMITS OF EXCAVATION, TYP
WILLIAMS CREEK
NOTE: LOCATION OF EXISTING UTILITIES & STRUCTURES ARE FROM THE BEST INFORMATION AVAILABLE. EXACT LOCATION AND COMPLETENESS ARE NOT GUARANTEED. CONTRACTOR SHALL NOTIFY UNDERGROUND SERVICES ALERT (800) 227-2600 A MIN. OF 48 HOURS PRIOR TO ANY EXCAVATION AND POTHOLE FOR EXACT LOCATION.
NOTE: MICRO-GRADING FEATURES NOT SHOWN, SEE DWGS C-42 & C-43 FOR TYPICAL DETAILS. VEGETATION PLAN SHOWN ON DWGS V-2 TO V-10.

HUMBOLDT COUNTY RESOURCE CONSERVATION DISTRICT
SALT RIVER ECOSYSTEM RESTORATION PROJECT
SITE PLAN
19 OF 21
C-26
50% SUBMITTAL
NOT FOR CONSTRUCTION
MAY 2011
WINZLER & KELLY
Michael Love & Associates
NOTE: MICRO-GRADING FEATURES NOT SHOWN, SEE DWGS C-42 & C-43 FOR TYPICAL DETAILS. VEGETATION PLAN SHOWN ON DWGS V-2 TO V-10.
END SALT RIVER CHANNEL IMPROVEMENTS, CONFORM TO (E) CHANNEL
ACTIVE CHANNEL ALIGNMENT, TYP
APPROX LIMITS OF EXCAVATION, TYP
APPROX LIMITS OF PROJECT, TYP
APPROX LIMITS OF DISTURBANCE, TYP
(N) EXCLUSION FENCE SEE 4/C-43, TYP
APPROX LIMITS OF PROJECT, TYP
APPROX LIMITS OF DISTURBANCE, TYP
STA 251+00
MATCHLINE
NOTE: LOCATION OF EXISTING UTILITIES & STRUCTURES ARE FROM THE BEST INFORMATION AVAILABLE. EXACT LOCATION AND COMPLETENESS ARE NOT GUARANTEED. CONTRACTOR SHALL NOTIFY UNDERGROUND SERVICES ALERT (800) 227-2600 A MIN. OF 48 HOURS PRIOR TO ANY EXCAVATION AND POTHOLE FOR EXACT LOCATION.



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ISSUE

HUMBOLDT COUNTY RESOURCE CONSERVATION DISTRICT
SALT RIVER ECOSYSTEM RESTORATION PROJECT

SITE PLAN
20 OF 21

PROJ NO: 10853-10-003
DRWN: pTJ CHKD: JS/SA

C-27

SHEET 33 OF 72

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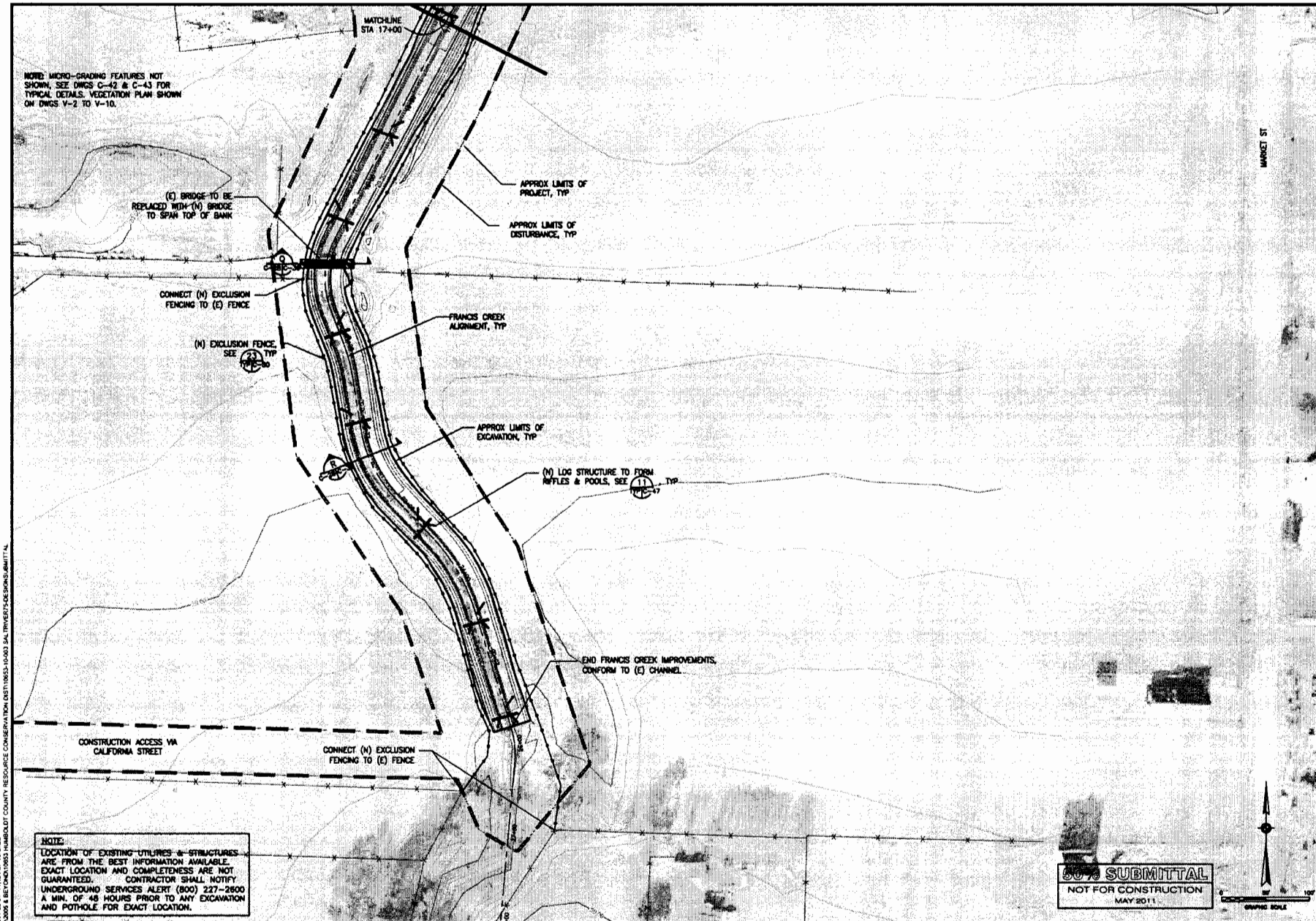

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HUMBOLDT COUNTY RESOURCE CONSERVATION DISTRICT
SALT RIVER ECOSYSTEM RESTORATION PROJECT

SITE PLAN
21 OF 21

PROJ NO: 10653-10-003
DRWN: pTJ CHKD: JS/SA

C-28

SHEET 34 OF 72

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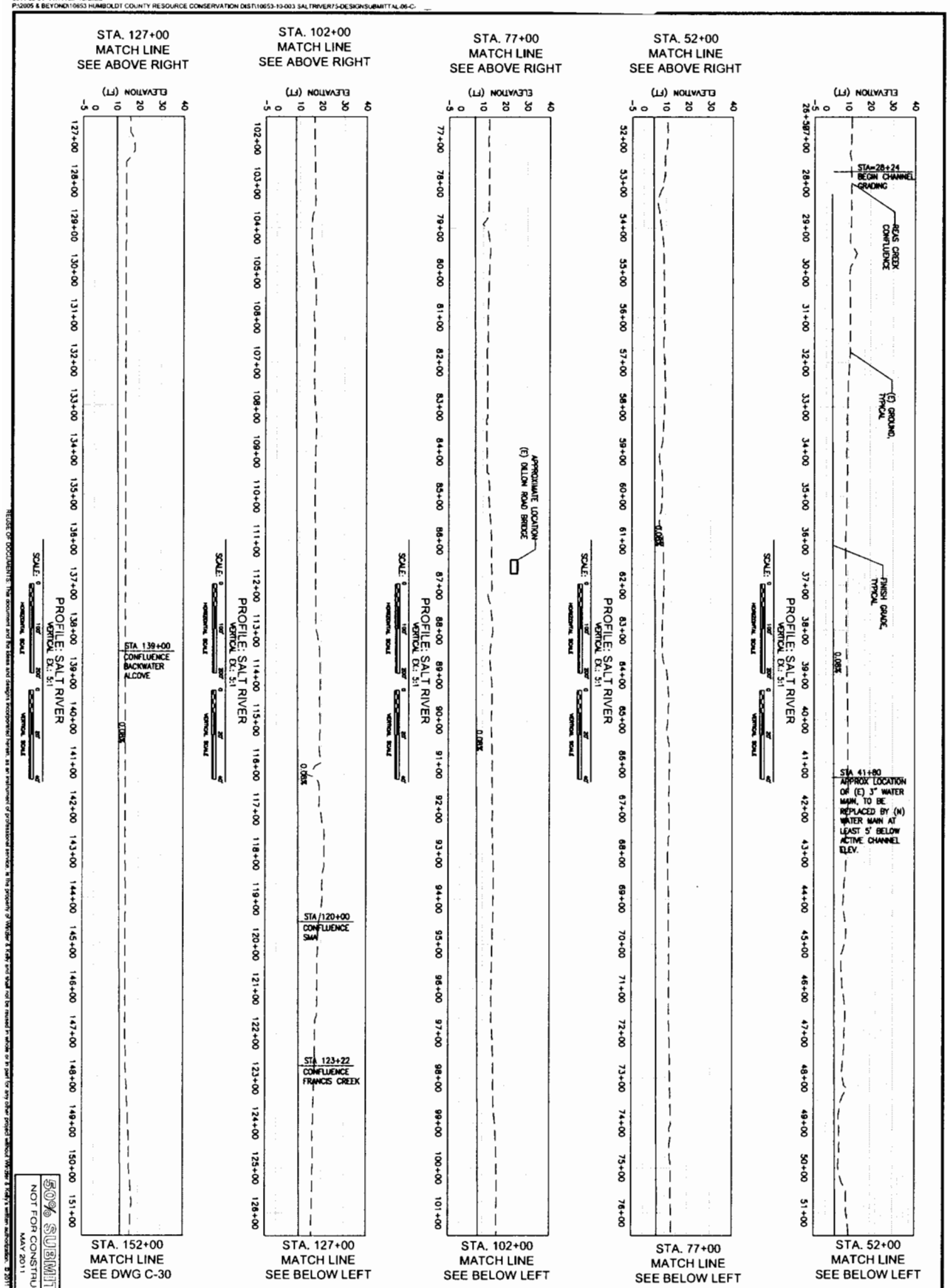

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HUMBOLDT COUNTY RESOURCE CONSERVATION DISTRICT

SALT RIVER ECOSYSTEM RESTORATION PROJECT

PROFILES 1 OF 3

PROJ NO: 10653-10-003
DRWN: PTJ
CHKD: JS/SA
SHEET 35 OF 72
C-29

MARK	DATE	DESCRIPTION

ISSUE

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SUBCONSULTANT
Michael Love & Associates
PO Box 4477 Arcata, CA 95518 (707) 476-8938

HUMBOLDT COUNTY RESOURCE CONSERVATION DISTRICT
SALT RIVER ECOSYSTEM RESTORATION PROJECT
PROFILES 2 OF 3
C-30
50% SUBMITTAL
NOT FOR CONSTRUCTION
MAY 2011
WINZLER & KELLY
Michael Love & Associates
STA. 152+00 MATCH LINE SEE DWG C-29
STA. 177+00 MATCH LINE SEE ABOVE RIGHT
STA. 202+00 MATCH LINE SEE ABOVE RIGHT
STA. 227+00 MATCH LINE SEE ABOVE RIGHT
STA. 252+00 MATCH LINE SEE ABOVE RIGHT
STA. 177+00 MATCH LINE SEE BELOW LEFT
STA. 202+00 MATCH LINE SEE BELOW LEFT
STA. 227+00 MATCH LINE SEE BELOW LEFT
STA. 252+00 MATCH LINE SEE BELOW LEFT
PROFILE: SALT RIVER
VERTICAL EX.: 5:1
HORIZONTAL SCALE
VERTICAL SCALE
ELEVATION (FT)
(E) GROUND, TYPICAL
FINISH GRADE, TYPICAL
APPROXIMATE LOCATION (E) FULMOR ROAD BRIDGE
APPROXIMATE LOCATION (E) HIGHWAY 211 BRIDGE
STA 214+00 CONFLUENCE BACKWATER ALCOVE
STA 214+00 CONFLUENCE WILLIAMS CREEK
STA=269+31 END CHANNEL GRADING CONFORM TO (E) CHANNEL
0.13%
NOTE:
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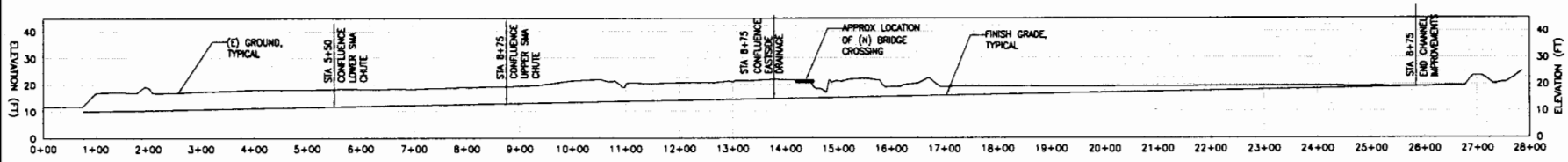
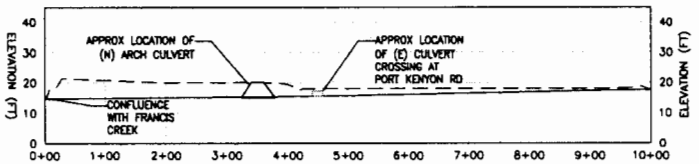
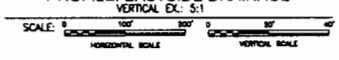
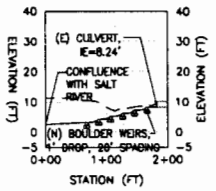


PROFILE: FRANCIS CREEK
VERTICAL EX.: 5:1

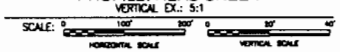


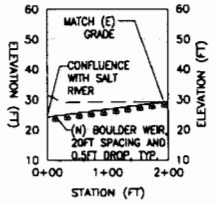
PROFILE: EASTSIDE DRAINAGE
VERTICAL EX.: 5:1





PROFILE: REAS CREEK
VERTICAL EX.: 5:1





PROFILE: WILLIAMS CREEK
VERTICAL EX.: 5:1

NOTE:
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MARK	DATE	DESCRIPTION
		ISSUE

HUMBOLDT COUNTY RESOURCE CONSERVATION DISTRICT
SALT RIVER ECOSYSTEM RESTORATION PROJECT

PROFILES
3 OF 3

PROJ NO: 10653-10-003
DRWN: DTJ CHKD: JS/SA

C-31

SHEET 37 OF 72

37 of 70

2011-06-13 1:42 PM TJAMES
P:\2005 & BEYOND\10953 HUMBOLDT COUNTY RESOURCE CONSERVATION DIST\10653-10-003 SALT\RIVER\73-G

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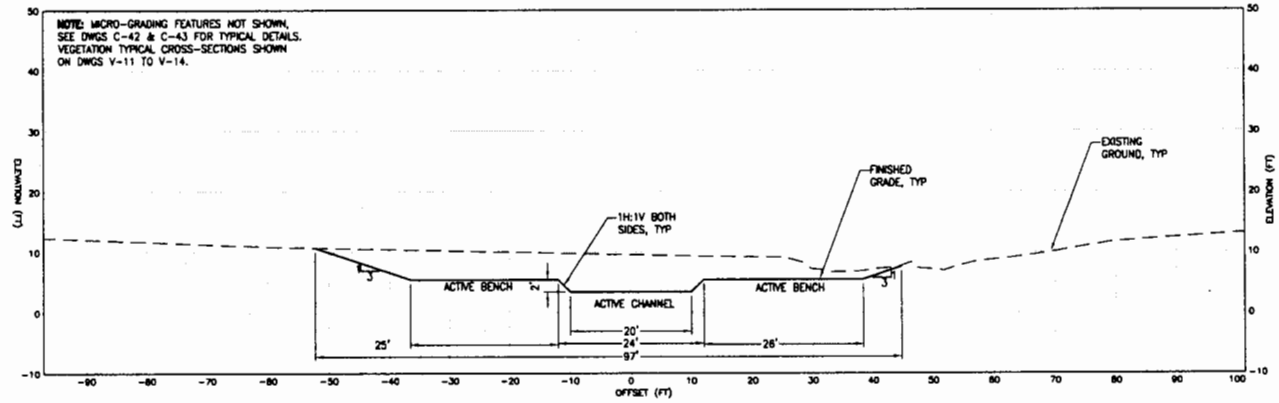
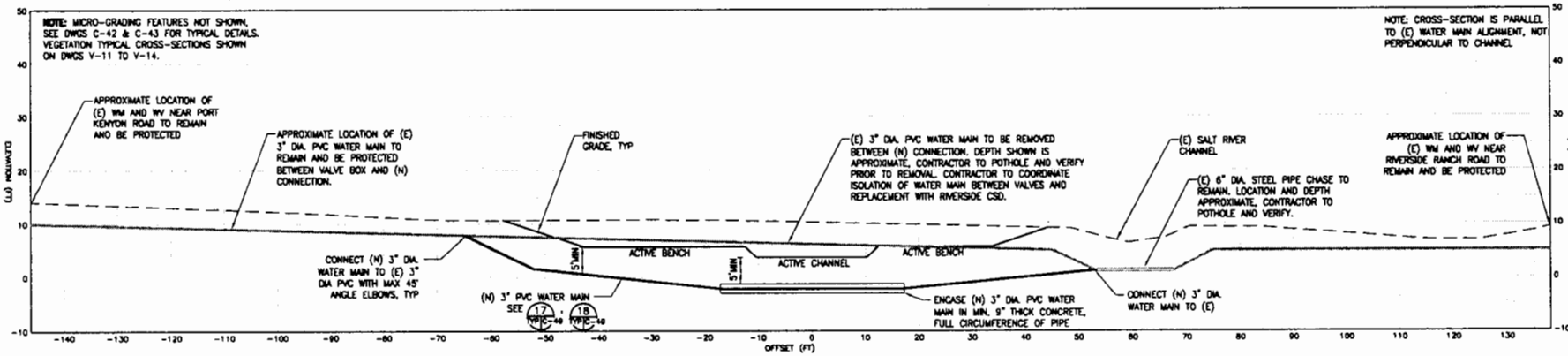


CHANNEL CROSS-SECTION
SALT RIVER STATION 39+00

A C-8 C-32 SCALE: 0 10' 20' GRAPHIC SCALE



PIPELINE CROSSING
SALT RIVER STATION 41+80

B C-9 C-32 SCALE: 0 10' 20' GRAPHIC SCALE

NOTE:
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MARK	DATE	DESCRIPTION

ISSUE

HUMBOLDT COUNTY RESOURCE CONSERVATION DISTRICT
SALT RIVER ECOSYSTEM RESTORATION PROJECT

CROSS-SECTIONS
1 OF 8

PROJ NO: 10853-10-003
DRWN: pTJ CHKD: JS/SA

C-32

SHEET 38 OF 72

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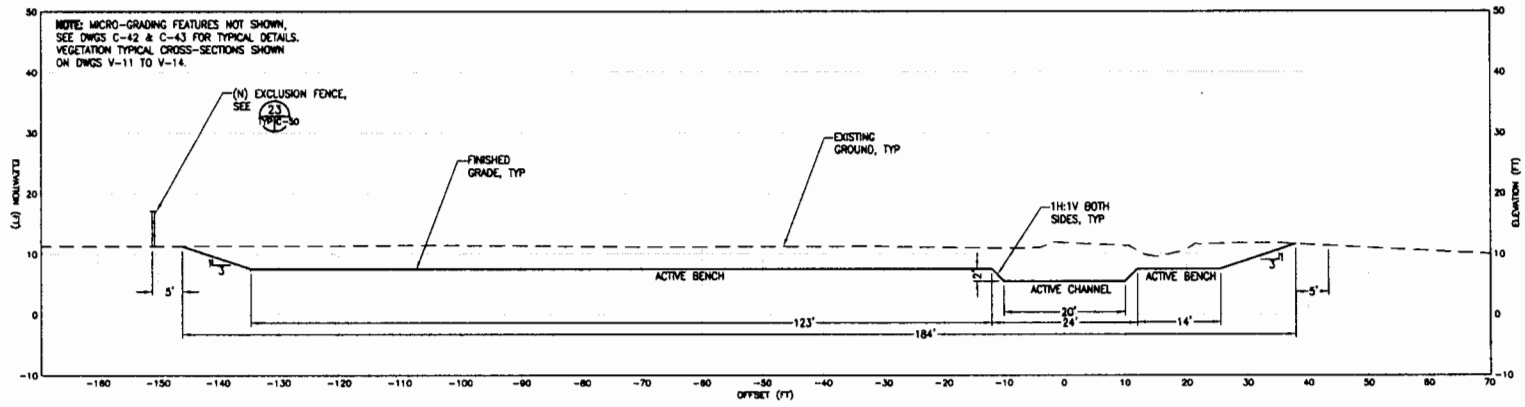
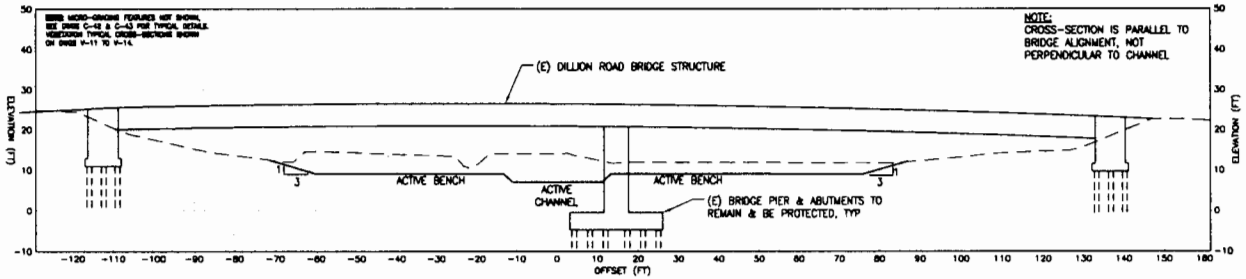


C
C-10 C-33

CHANNEL CROSS-SECTION
SALT RIVER STATION 66+00

SCALE: 0 10' 20'
GRAPHIC SCALE



D
C-12 C-33

DILLON ROAD CROSSING
SALT RIVER STATION 86+75

SCALE: 0 15' 30'
GRAPHIC SCALE

NOTE:
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MARK	DATE	DESCRIPTION
-	-	-

SCALE:

HUMBOLDT COUNTY RESOURCE CONSERVATION DISTRICT
SALT RIVER ECOSYSTEM RESTORATION PROJECT

CROSS-SECTIONS 2 OF 8

PROJ NO: 10653-10-003
DRWN: PTJ CHKD: JS/SA

C-33

SHEET 39 OF 72

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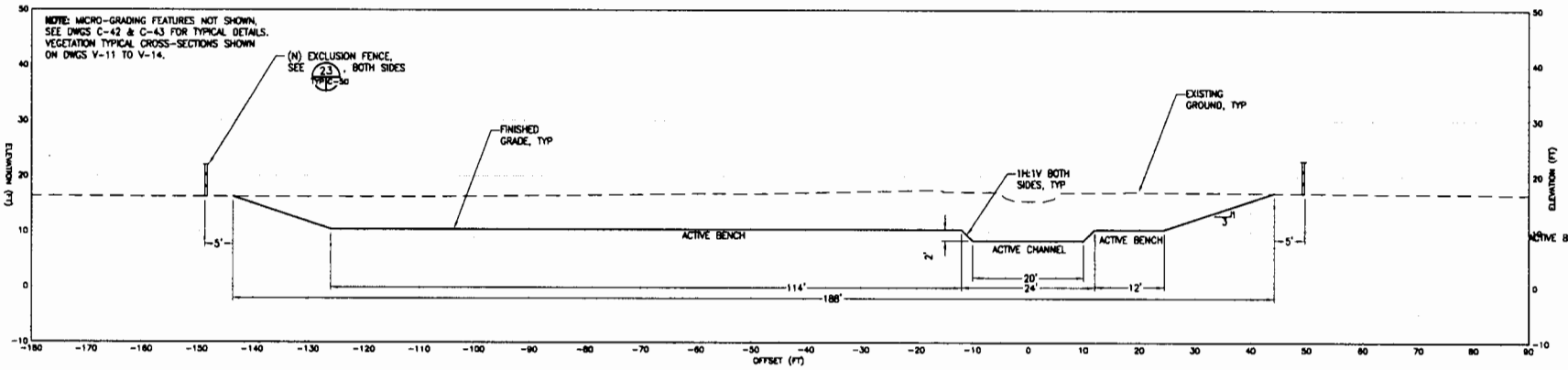
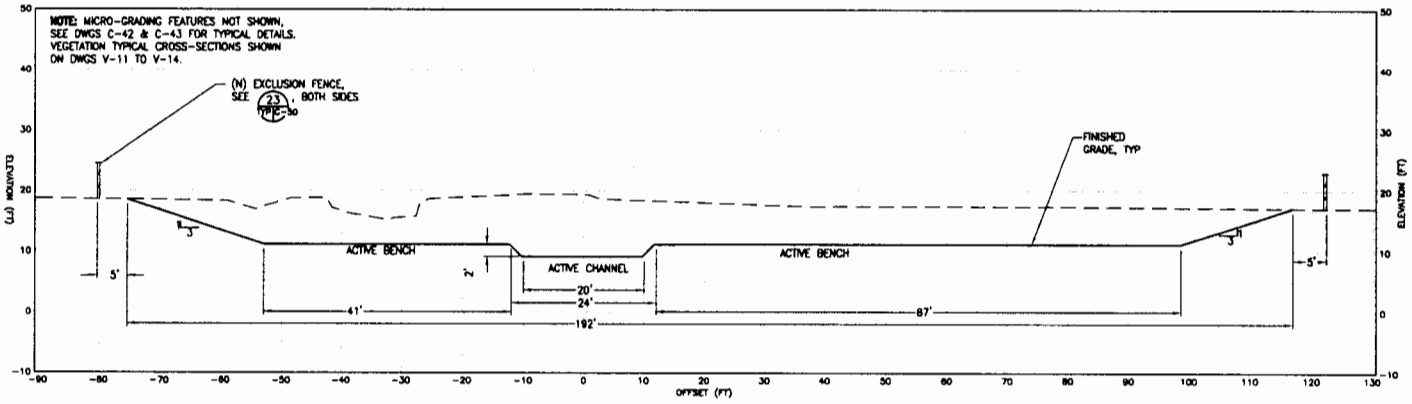


E
C-13 C-34
CHANNEL CROSS-SECTION
SALT RIVER STATION 104+00
SCALE: 0 10' 20'
GRAPHIC SCALE



F
C-13 C-34
CHANNEL CROSS-SECTION
SALT RIVER STATION 114+00
SCALE: 0 10' 20'
GRAPHIC SCALE

NOTE:
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MARK	DATE	DESCRIPTION
-	-	ISSUE

HUMBOLDT COUNTY RESOURCE CONSERVATION DISTRICT
SALT RIVER ECOSYSTEM RESTORATION PROJECT

CROSS-SECTIONS 3 OF 8

PROJ NO: 10653-10-003
DRWN: PTJ CHKD: JS/SA

C-34

SHEET 40 OF 72

40 of 70

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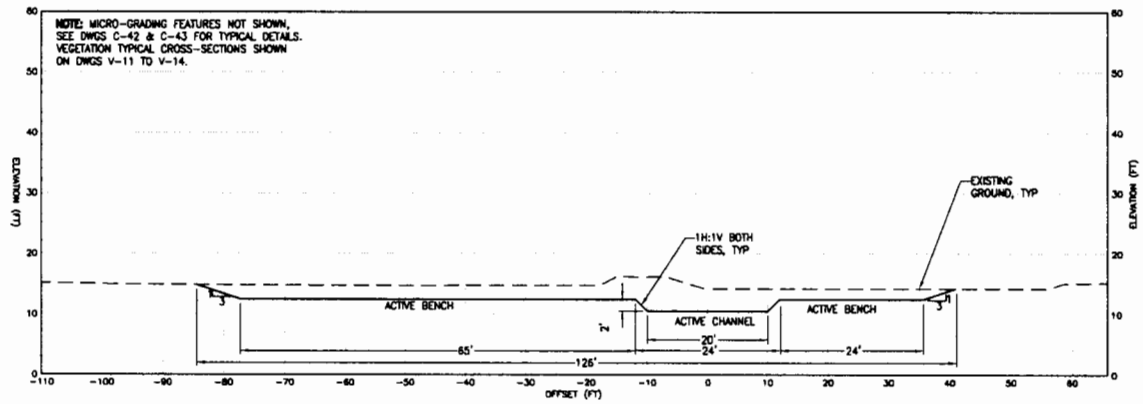
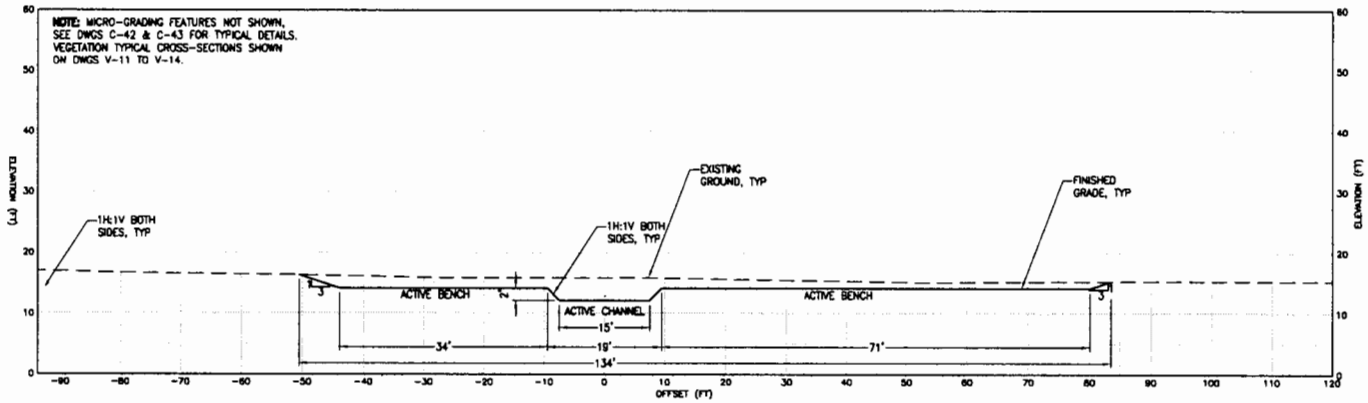


CHANNEL CROSS-SECTION
SALT RIVER STATION 132+00

G
C-25 | C-35

SCALE: 0 10' 20'
GRAPHIC SCALE



CHANNEL CROSS-SECTION
SALT RIVER STATION 152+50

H
C-18 | C-35

SCALE: 0 10' 20'
GRAPHIC SCALE

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MARK	DATE	DESCRIPTION
-	-	-

ISSUE

HUMBOLDT COUNTY RESOURCE CONSERVATION DISTRICT
SALT RIVER ECOSYSTEM RESTORATION PROJECT

CROSS-SECTIONS
4 OF 8

PROJ NO: 10653-10-003
DRWN: pTJ CHKD: JS/SA

C-35

SHEET 41 OF 72

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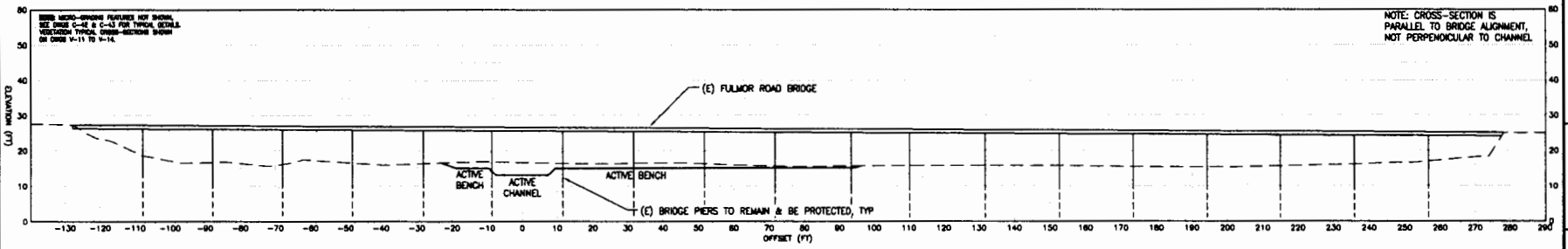
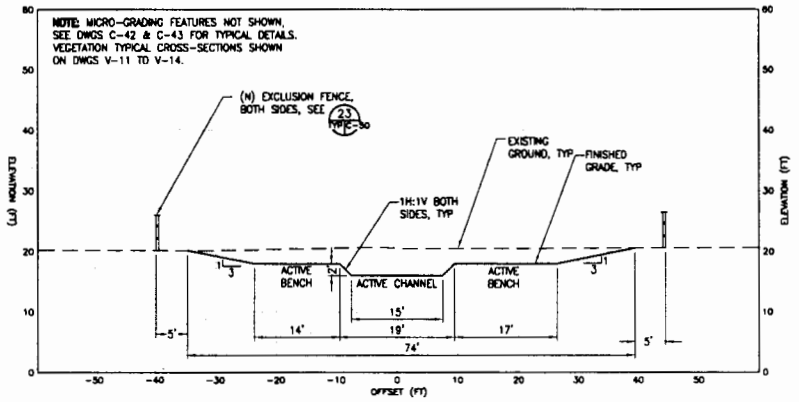


FULMOR ROAD CROSSING
SALT RIVER STATION 165+79

I C-19 C-36

SCALE: 0 15' 30'
GRAPHIC SCALE



CHANNEL CROSS-SECTION
SALT RIVER STATION 193+00

J C-21 C-36

SCALE: 0 10' 20'
GRAPHIC SCALE

NOTE:
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MARK	DATE	DESCRIPTION
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-	-	-
-	-	-
-	-	-
-	-	-

SCALE

HUMBOLDT COUNTY RESOURCE CONSERVATION DISTRICT
SALT RIVER ECOSYSTEM RESTORATION PROJECT

CROSS-SECTIONS
5 OF 8

PROJ NO: 10653-10-003
DRWN: DTJ CHKD: JS/SA

C-36

SHEET 42 OF 72

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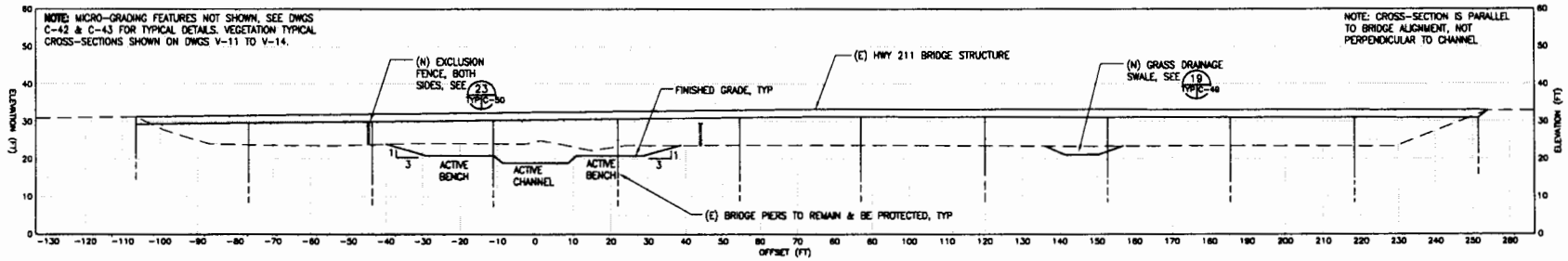
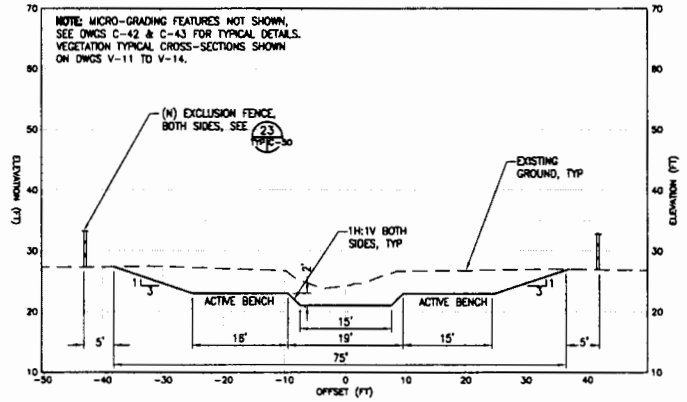


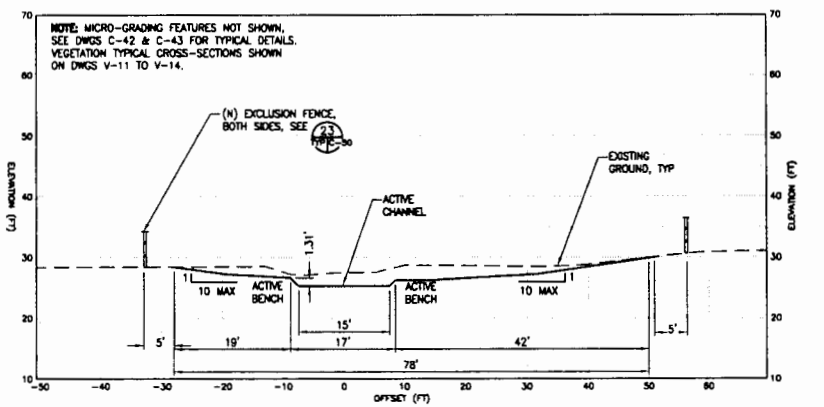
HWY 211 CROSSING
SALT RIVER STATION 215+59

K C-22 C-37 SCALE: 0 15' 30' GRAPHIC SCALE



CHANNEL CROSS-SECTION
SALT RIVER STATION 232+00

L C-23 C-37 SCALE: 0 10' 20' GRAPHIC SCALE



CHANNEL CROSS-SECTION
SALT RIVER STATION 263+00

M C-26 C-37 SCALE: 0 10' 20' GRAPHIC SCALE

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MARK	DATE	DESCRIPTION

ISSUE

HUMBOLDT COUNTY RESOURCE CONSERVATION DISTRICT
SALT RIVER ECOSYSTEM RESTORATION PROJECT

CROSS-SECTIONS
6 OF 8

PROJ NO: 10653-10-003
DRWN: pTJ CHKD: JS/SA

C-37

SHEET 43 OF 72

2011-06-04 11:17 AM TJAMES
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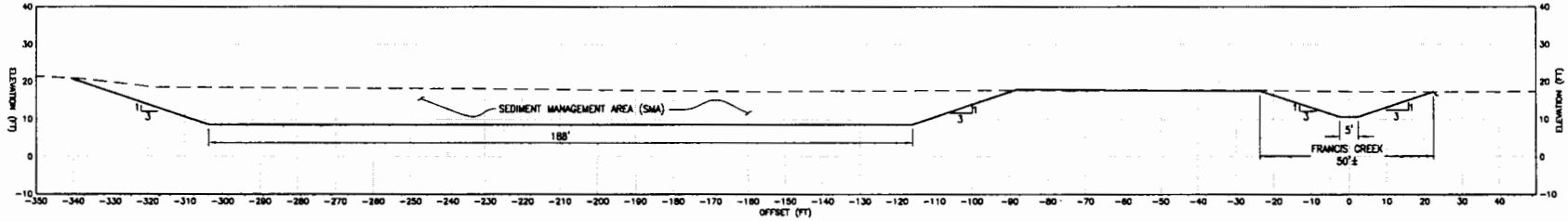
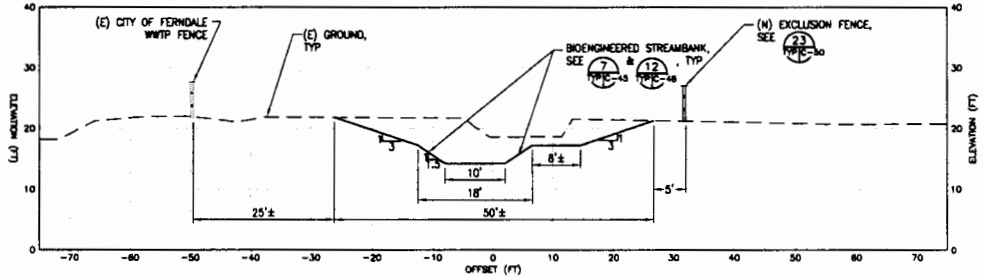


CHANNEL/SMA CROSS-SECTION
FRANCIS CREEK STATION 2+50

N
C-14 C-38

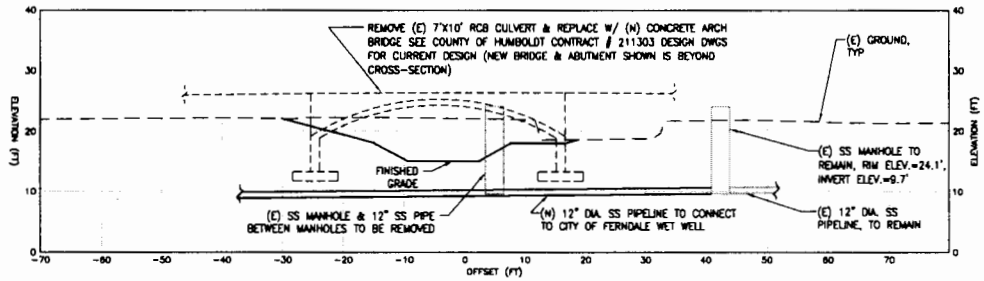
SCALE: 0 15' 30'
GRAPHIC SCALE



CHANNEL CROSS-SECTION
FRANCIS CREEK STATION 12+50

O
C-27 C-38

SCALE: 0 10' 20'
GRAPHIC SCALE



CHANNEL CROSS-SECTION
FRANCIS CREEK STATION 14+73

P
C-27 C-38

SCALE: 0 10' 20'
GRAPHIC SCALE

NOTE:
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MAY 2011

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MARK	DATE	DESCRIPTION
		ISSUE

HUMBOLDT COUNTY RESOURCE CONSERVATION DISTRICT
SALT RIVER ECOSYSTEM RESTORATION PROJECT

CROSS-SECTIONS
7 OF 8

PROJ NO: 10653-10-003
DRWN: pTJ CHKD: JS/SA

C-38

SHEET 44 OF 72

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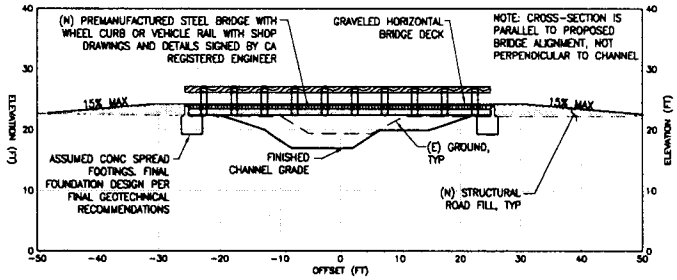
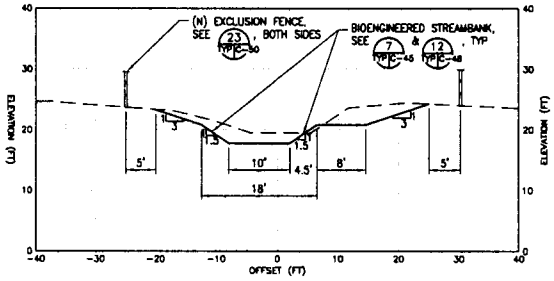
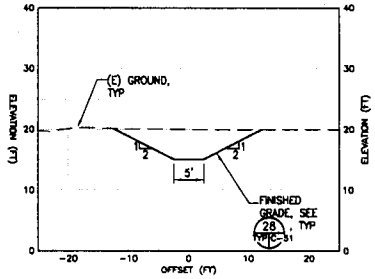


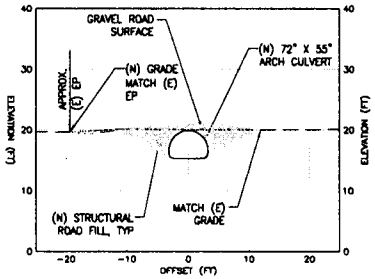
Q
C-28 C-39
CHANNEL CROSS-SECTION
FRANCIS CREEK STATION 20+05
SCALE: GRAPHIC SCALE



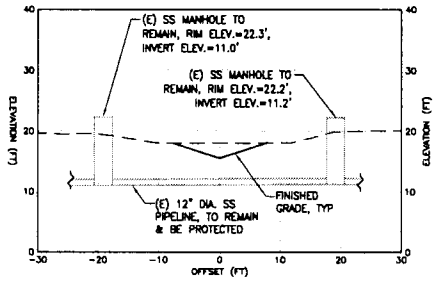
R
C-28 C-39
CHANNEL CROSS-SECTION
FRANCIS CREEK STATION 22+29
SCALE: GRAPHIC SCALE



S
C-27 C-39
CHANNEL CROSS-SECTION
EASTSIDE DRAINAGE STATION 2+00
SCALE: GRAPHIC SCALE



T
C-27 C-39
CHANNEL CROSS-SECTION
EASTSIDE DRAINAGE STATION 3+50
SCALE: GRAPHIC SCALE



U
C-27 C-39
CHANNEL CROSS-SECTION
EASTSIDE DRAINAGE STATION 4+55
SCALE: GRAPHIC SCALE

NOTE:
LOCATION OF EXISTING UTILITIES & STRUCTURES ARE FROM THE BEST INFORMATION AVAILABLE. EXACT LOCATION AND COMPLETENESS ARE NOT GUARANTEED. CONTRACTOR SHALL NOTIFY UNDERGROUND SERVICES ALERT (800) 227-2600 A MIN. OF 48 HOURS PRIOR TO ANY EXCAVATION AND POTHOLE FOR EXACT LOCATION.

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HUMBOLDT COUNTY RESOURCE CONSERVATION DISTRICT
SALT RIVER ECOSYSTEM RESTORATION PROJECT
CROSS-SECTIONS
8 OF 8

PROJ NO: 10653-10-003
DRWN: PTJ CHKD: JS/SA

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SHEET 45 OF 72

45 of 70

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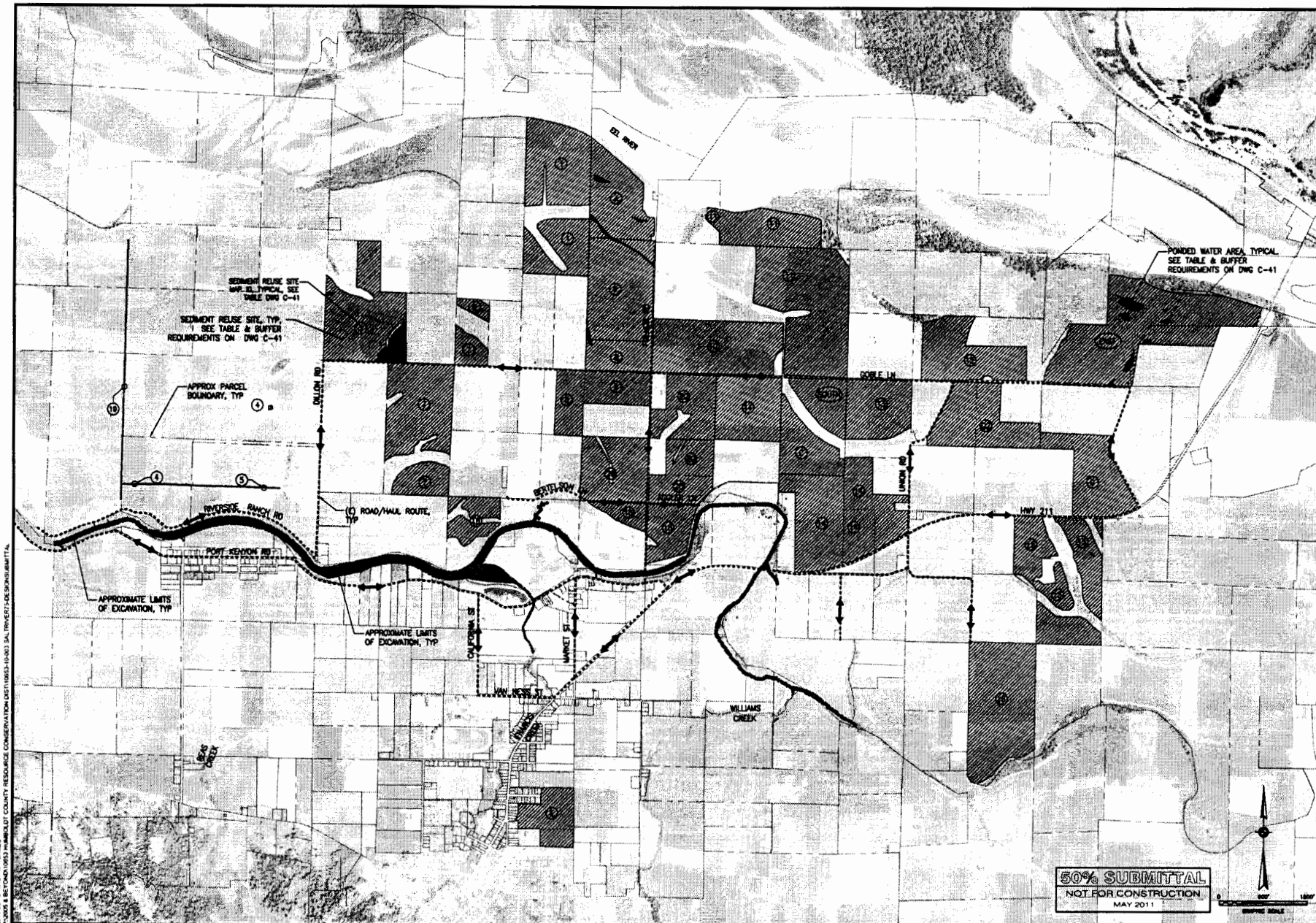

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MARK	DATE	DESCRIPTION

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HUMBOLDT COUNTY RESOURCE CONSERVATION DISTRICT

SALT RIVER ECOSYSTEM RESTORATION PROJECT

SEDIMENT MANAGEMENT PLAN

PROJ NO: 10653-10-003
DRWN: pTJ CHKD: JS/SA

C-40

SHEET 46 OF 72

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Sediment Reuse Sites

Owner ID	Map ID	Sediment Application Description and Area (AC)		Upland Sediment Application Volume (CY)*	Upland Delineation Reference (see below)	Sediment Application Buffers** (see below)	APN
Alexandre	12	Pasture	40.1	16,160	1	A, B, C, E	10601124
Alexandre	East	Pasture	105.4	42,530	2, 4	A, B, C, E	10601124, 10603101, 10601120
Alexandre	1	Pasture	59.2	23,880	1	A, B, C, D	100110210
Alexandre	13	Pasture	32.4	13,090	1, 4	A, B, C, D	10602113
Alexandre	South	Pasture	17.6	7,110	2, 4	A, B, C, E	10602111
Alexandre (Manzi)	9	Pasture	53.7	21,670	1, 4	A, B, C, D	106301101
Alexandre (Hailey)	10	Pasture	52.7	21,250	1, 4	A, B, C, D	10601103
Alexandre (Trutalli)	14	Pasture	80.5	32,480	1, 4	A, B, C, D	10602150
Rocha (Harpham)	20	Pasture	96.4	38,880	3, 4	A, B, E	106021002, 106021003, 106021007, 106021062
Cahill	11	Pasture	106.9	43,140	1, 4	A, B, C, D	10601104
McCanless	16	Pasture	74.2	29,930	1, 4	A, B, C, D	10602139
Becker	19	Existing Cattle Lane	1.8	2,940	NA	NA	10011102
Ferndale Fairgrounds	NA	Existing Stalls	NA	500	NA	NA	2007101
Schoenhofer	7	Pasture	54.8	22,120	1, 4	A, B, C, D	10011207
Boynton (Rocha)	3	Pasture	49.0	19,790	1, 4	A, B, C, D	10010216
Ladonna Head	8	Pasture	33.1	13,360	1, 4	A, B, C, D	10011211, 10602101
Nelson	15 (East Only)	Pasture	42.9	17,320	1, 4	A, B, C, D	10602137
Alexandre	A	Pasture	32.3	13,040	NA, 4	F	10601101
Alexandre	B	Pasture	20.0	8,060	NA, 4	F	10601102
Alexandre	C	Pasture	23.0	9,290	NA, 4	F	10602111
Alexandre	D	Pasture	40.7	16,430	NA	F	10602156
Alexandre	D2	Pasture	20.3	8,210	NA	F	10602132, 10602130
Alexandre (Town)	E	Pasture	23.1	9,320	NA	F	03021108, 03117117, 03117122
Cahill	2	Pasture	8.6	3,460	NA, 4	NA	10010214
Boynton	4	Existing Cattle Lane/Facility	0.2	250	NA, 4	NA	10011109
M. Boynton	4/5	Existing Cattle Lane	1.1	1,790	NA, 4	NA	10011114, 10011113
Vevoda	18	Pasture	30.3	12,230	1	A, B, C, D	10001214, 10602176, 10302177

TOTAL AVAILABLE SEDIMENT APPLICATION/REUSE (CY):	448,230	(FILL)
TOTAL PHASE II EXCAVATION (CY):	426,700	(CUT)
EXCESS AVAILABLE APPLICATION/REUSE (CY):	21,530	(NET)

* Volume calculated based on 3" application depth on existing pastures and 12" application depth on existing cattle lanes

Upland Delineation Reference

1 - Uplands Delineation for Various Agricultural Fields, Salt River Sediment Reuse Plan, Ferndale, California, ACOE, HCRCD, Winzler & Kelly, November 2010

2 - Revised Wet and Delineation for Alexandre Sediment Reuse Plan, Ferndale, California, ACOE, HCRCD, Winzler & Kelly, April 2011

3 - Revised Wet and Delineation and Supplemental Data for Rocha Sediment Reuse Plan, Ferndale, California, Winzler & Kelly, August 2011

4 - Surveyed to confirm presence/absence of ponding water areas during Winter 2013

NA - Upland delineation not completed for parcel and pending

Sediment Application Buffers

** Prior to sediment application, all wetlands previously delineated shall be flagged, avoided, and the following application buffers shall be applied:

A - 10 FT buffer from fence liners unless C or D or E exist on adjoining parcel (whichever buffer is greater)

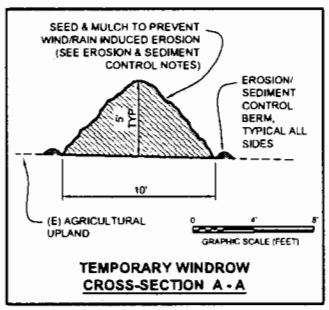
B - 0 FT buffer from uplands on adjoining parcels, existing roads, cattle lanes and agricultural structures and facilities

C - 25 FT buffer from 2011 mapped ponded water areas

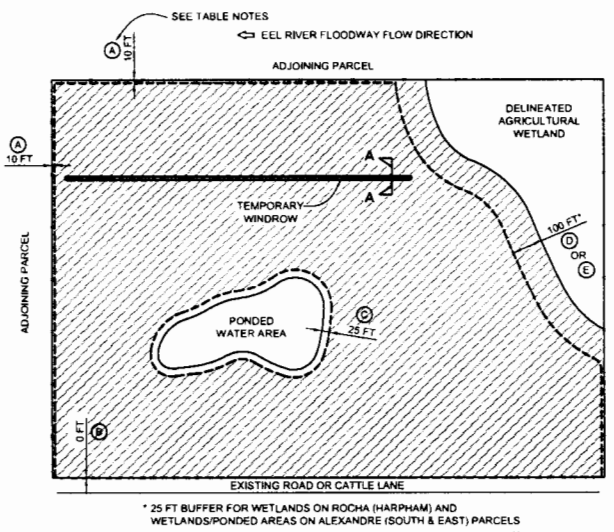
D - 100 FT buffer from wetlands delineated in Reference 1

E - 25 FT buffer from wetlands delineated in References 2 and 3

F - Upland Delineation not completed for parcel. Assumes sediment application over cattle parcel



TEMPORARY WINDROW CROSS-SECTION A - A



* 25 FT BUFFER FOR WETLANDS ON ROCHA (HARPHAM) AND WETLANDS/PONDED AREAS ON ALEXANDRE (SOUTH & EAST) PARCELS

PLAN VIEW

0 200' 400'
GRAPHIC SCALE (FEET)

LEGEND:

- DELINEATED AGRICULTURAL WETLAND OR PONDED WATER AREA
- DELINEATED AGRICULTURAL UPLAND
- SEDIMENT APPLICATION LIMITS SEE SEDIMENT APPLICATION BUFFER NOTES, THIS SHEET
- PARCEL/PROPERTY BOUNDARY/FENCE
- TEMPORARY WINDROW PLACED WITHIN SEDIMENT APPLICATION LIMITS. SEE CROSS-SECTION A - A. NUMBER & SPACING OF WINDROWS TO BE DETERMINED BASED ON CROP & GRAZING ROTATION

SEDIMENT REUSE AND APPLICATION NOTES:

1. THE APPLICATION OF EXCAVATED SEDIMENT ON AGRICULTURAL UPLANDS LOCATED ON PARCELS ZONED AGRICULTURAL EXCLUSIVE PER HUMBOLDT COUNTY ZONING REGULATIONS: 314-170.1 AND AS SHOWN ON THE PLANS IS A PRINCIPALLY PERMITTED USE AND THEREFORE THIS PRACTICE IS EXEMPT FROM THE COUNTY OF HUMBOLDT CONDITIONAL USE PERMIT.
2. PER SECTION II,C,1,b OF THE STATE WATER RESOURCES CONTROL BOARD NPDES GENERAL PERMIT FOR STORM WATER DISCHARGES ASSOCIATED WITH CONSTRUCTION AND LAND DISTURBANCE ACTIVITIES (ORDER No. 2009-0009-DWQ, NPDES No. CA000002), DISTURBANCE TO LAND SURFACES SOLELY RELATED TO AGRICULTURAL OPERATIONS SUCH AS DISKING, HARROWING, TERRACING AND LEVELING, AND SOIL PREPARATION ARE NOT COVERED UNDER THE GENERAL PERMIT AND THEREFORE A STORMWATER POLLUTION PREVENTION PLAN (SWPPP) IS NOT ANTICIPATED TO BE REQUIRED FOR THE SEDIMENT APPLICATION ACTIVITIES ON AGRICULTURAL UPLANDS.
3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DELIVERING AND WINDROWING THE EXCAVATED SEDIMENT ON THE AGRICULTURAL UPLANDS SHOWN ON THE PLANS. THE CONTRACTOR SHALL NOTIFY THE CONSTRUCTION MANAGER A MINIMUM 14-DAYS IN ADVANCE OF SEDIMENT DELIVERY TO EACH PARCEL.
4. DESIGNATED INGRESS/EGRESS LOCATIONS AND WETLAND AVOIDANCE AREAS WILL BE FLAGGED BY THE CONSTRUCTION MANAGER AND IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO ENSURE ALL DELIVERY AND WINDROWING ACTIVITIES ARE CONDUCTED WITHIN THE DESIGNATED AGRICULTURAL UPLAND AREAS.
5. SEDIMENT DELIVERED AND WINDROWED BY THE CONTRACTOR SHALL BE SPREAD/APPLIED ON AGRICULTURAL UPLANDS WITHIN 18-MONTHS BY THE LANDOWNER. IT SHALL BE THE RESPONSIBILITY OF THE LANDOWNER AND HCRCD TO ENSURE THE SPREADING/APPLICATION IS WITHIN THE DESIGNATED AGRICULTURAL UPLAND AREAS. SPREADING/APPLICATION TECHNIQUES WILL BE PER THE LANDOWNER'S GRAZING AND CROP ROTATION AND MONITORED BY THE HCRCD.
6. BEST MANAGEMENT PRACTICES TO PREVENT WIND AND RAIN INDUCED EROSION SHALL BE IMPLEMENTED DURING THE WINDROWING AND APPLICATION OF SEDIMENT ON AGRICULTURAL UPLANDS.
7. SEDIMENT THAT WILL REMAIN WINDROWED DURING THE WINTER MONTHS SHALL BE SEEDED AND MULCHED AND APPROPRIATE BMPS SHALL BE IMPLEMENTED BY THE LANDOWNER AND MONITORED BY THE HCRCD UNTIL SPREADING/APPLICATION HAS OCCURED.

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TYPICAL SEDIMENT APPLICATION AND REUSE DETAIL

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HUMBOLDT COUNTY RESOURCE CONSERVATION DISTRICT
SALT RIVER ECOSYSTEM RESTORATION PROJECT

SEDIMENT MANAGEMENT NOTES & DETAILS

PROJ NO: 10653-10-003
DRWN: pTJ CHKD: JS/SA

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SHEET 47 OF 72

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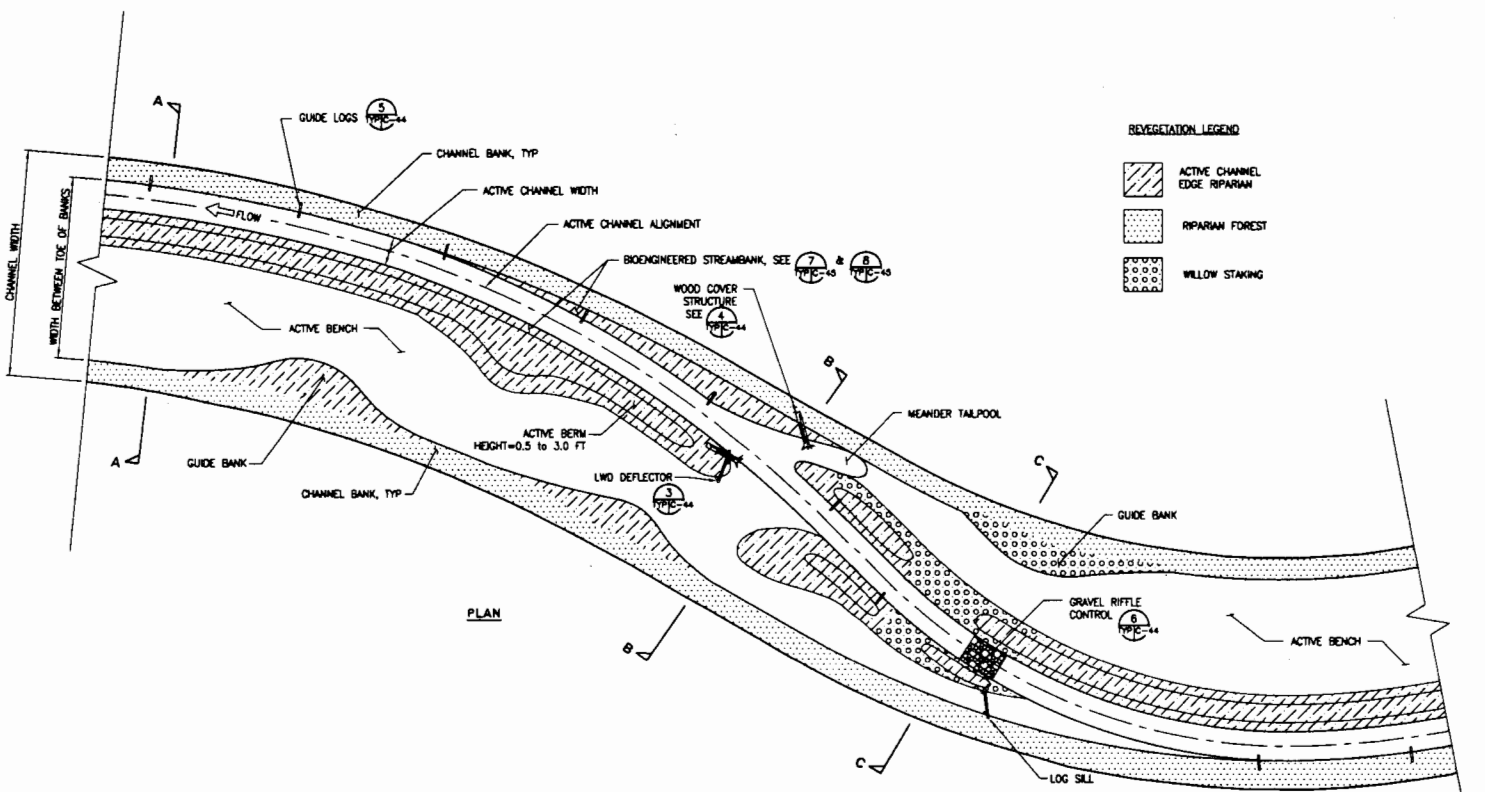
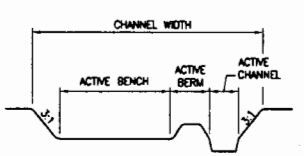
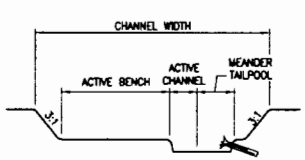
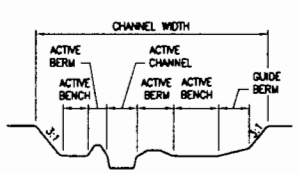




SECTION A-A
VERT EX 5:1



SECTION B-B
VERT EX 5:1



SECTION C-C
VERT EX 5:1

1 SALT RIVER TYPICAL CROSS OVER REACH

0 30' 100'
GRAPHIC SCALE

50% SUBMITTAL
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SALT RIVER ECOSYSTEM RESTORATION PROJECT

TYPICAL DETAILS
1 OF 10

PROJ NO: 10653-10-003
DRWN: TL CHKD: JS/SA

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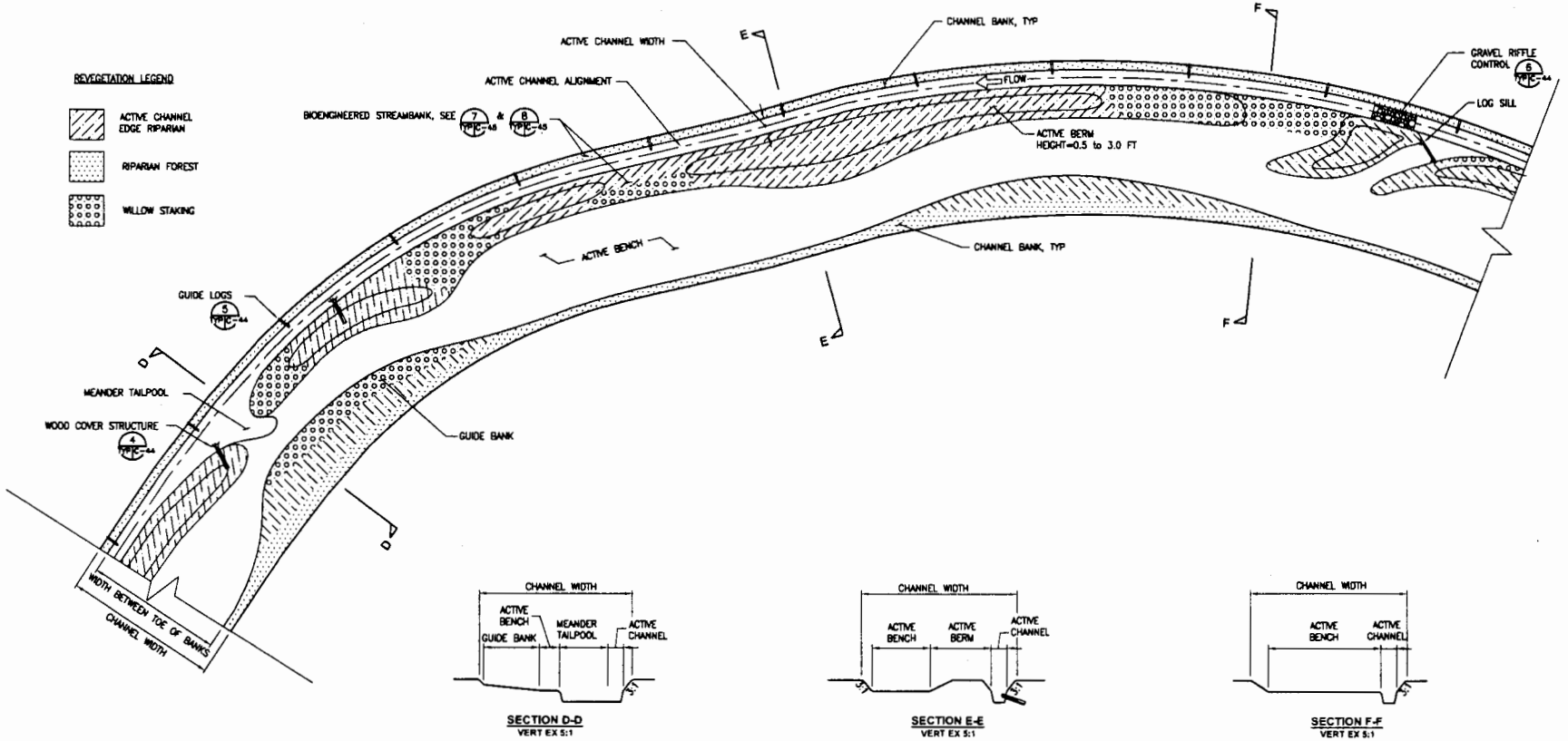

2 SALT RIVER TYPICAL MEANDER REACH

GRAPHIC SCALE 0 50' 100'

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SCALE:

HUMBOLDT COUNTY RESOURCE CONSERVATION DISTRICT
SALT RIVER ECOSYSTEM RESTORATION PROJECT

TYPICAL DETAILS
2 OF 10

PROJ NO: 10653-10-003
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SHEET 49 OF 72

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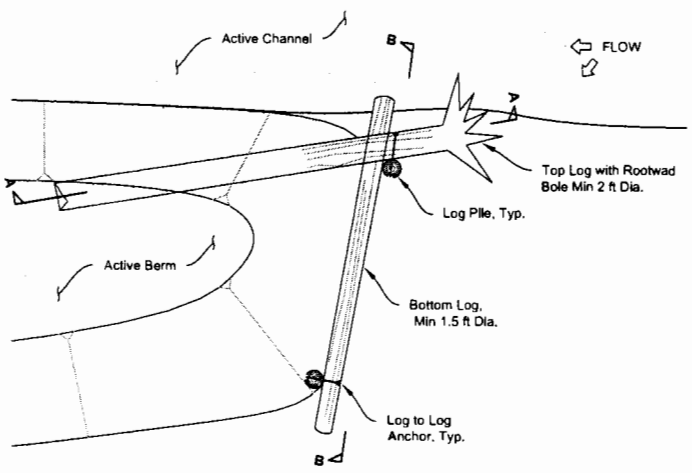
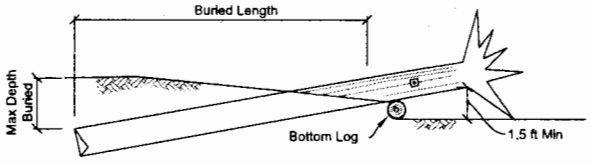
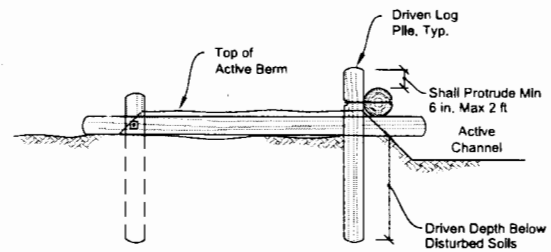


PLAN

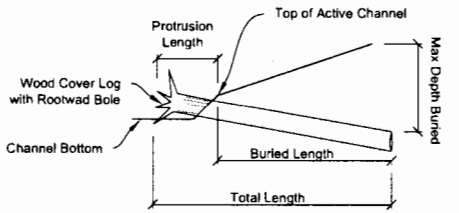


SECTION A-A

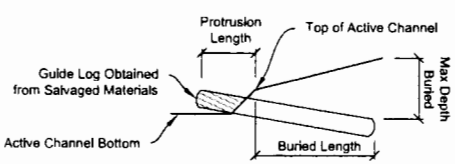


SECTION B-B

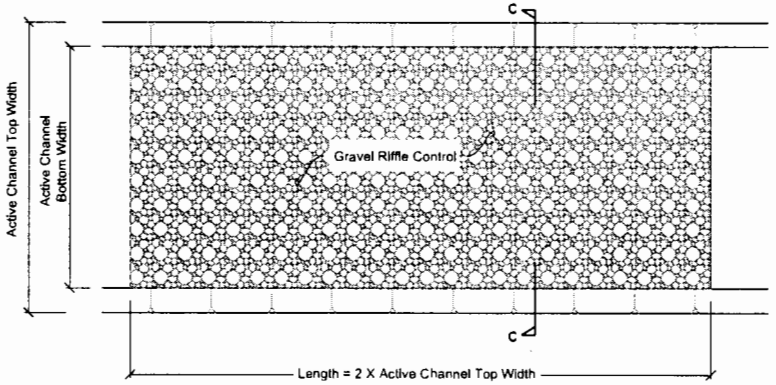
3 **TYPICAL LWD DEFLECTOR**
NTS



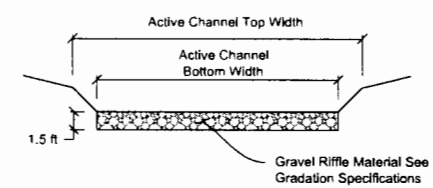
4 **TYPICAL WOOD COVER STRUCTURE**
NTS



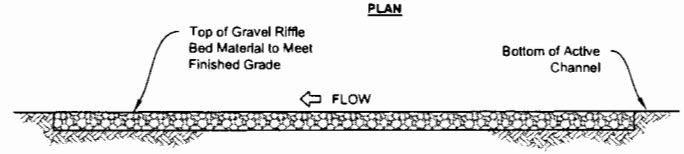
5 **TYPICAL GUIDE LOG**
NTS



PLAN



SECTION C-C



PROFILE

6 **SALT RIVER TYPICAL GRAVEL RIFFLE CONTROL**
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HUMBOLDT COUNTY RESOURCE CONSERVATION DISTRICT
SALT RIVER ECOSYSTEM RESTORATION PROJECT

TYPICAL DETAILS
3 OF 10

PROJ NO: 10653-10-003
DRWN: TL CHKD: JS/SA

C-44

SHEET 50 OF 72

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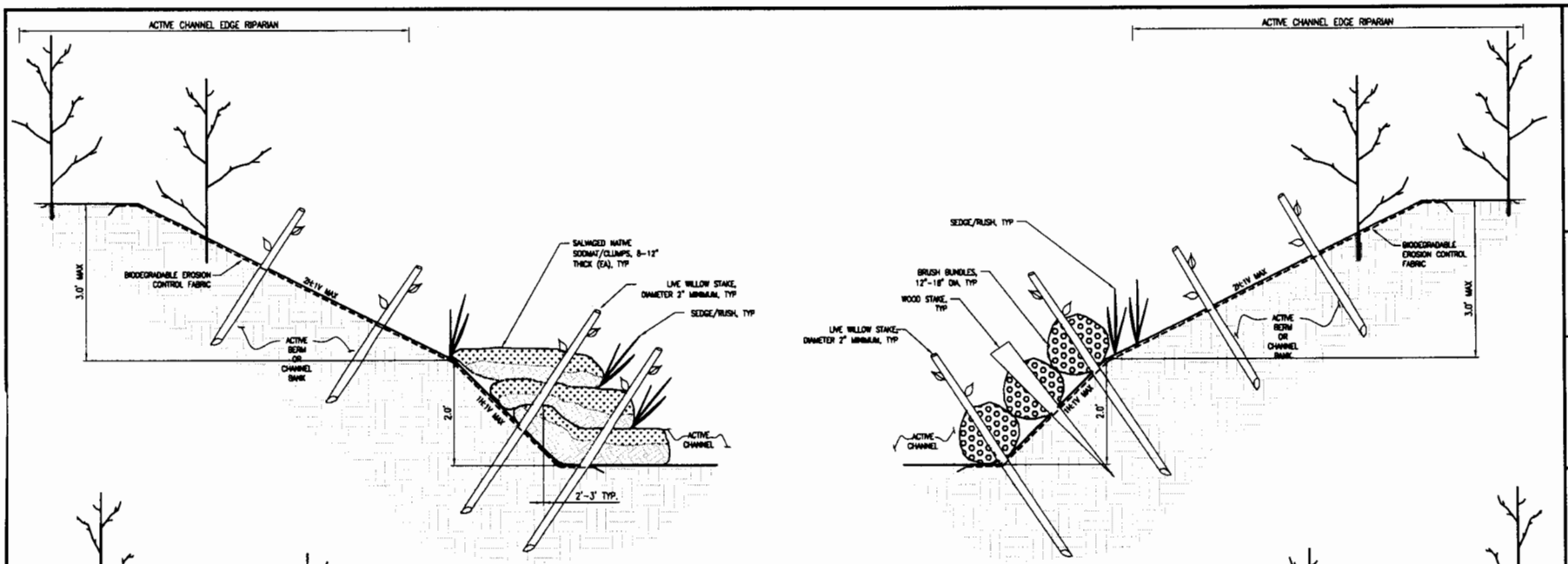
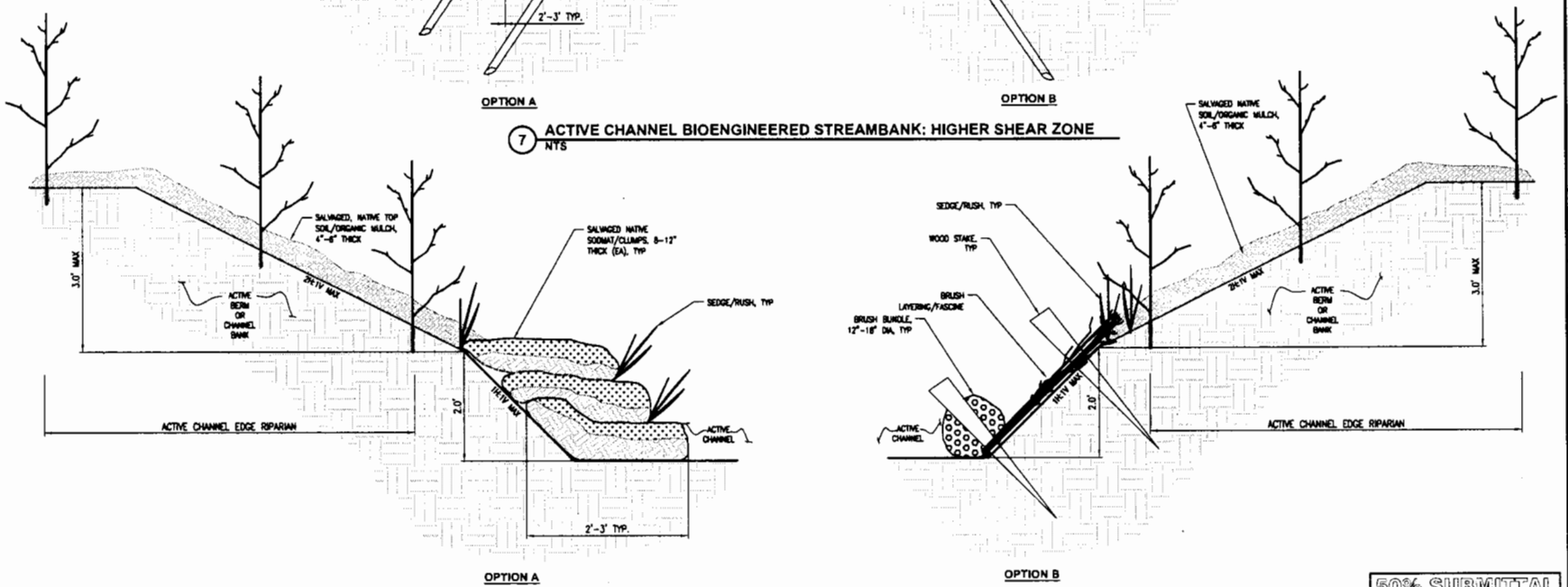


OPTION A

OPTION B

7 ACTIVE CHANNEL BIOENGINEERED STREAMBANK: HIGHER SHEAR ZONE
NTS



OPTION A

OPTION B

8 ACTIVE CHANNEL BIOENGINEERED STREAMBANK: LOWER SHEAR ZONE
NTS

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MAY 2011

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HUMBOLDT COUNTY RESOURCE CONSERVATION DISTRICT
SALT RIVER ECOSYSTEM RESTORATION PROJECT

TYPICAL DETAILS
4 OF 10

PROJ NO: 10653-10-003
DRWN: pTJ CHKD: JS/SA

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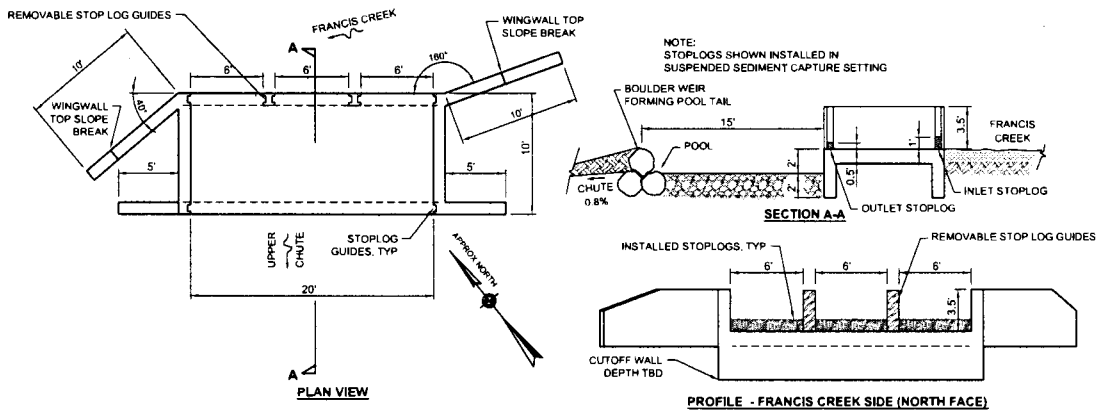


ADAPTIVE MANAGEMENT OPERATIONAL SETTINGS TABLE

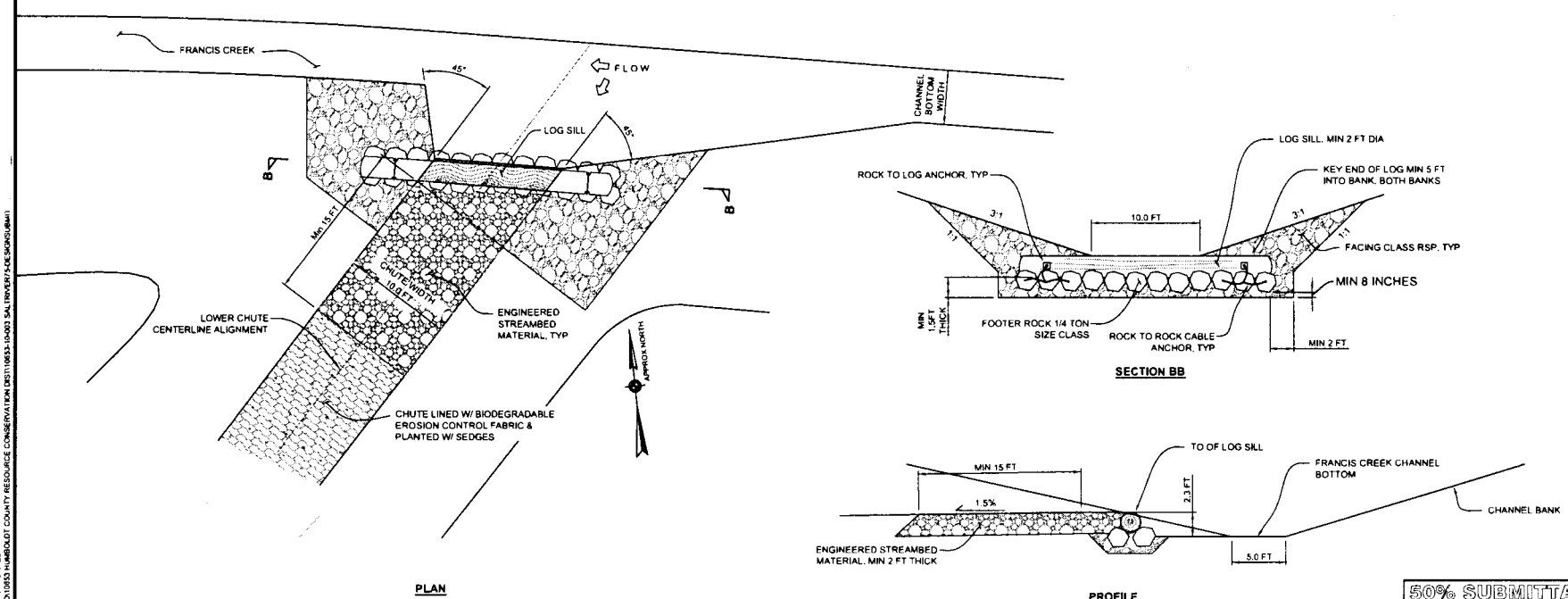
SUSPENDED SEDIMENT CAPTURE ONLY

STOPLOG	SETTING	SEASON
INLET HEIGHT	= 1.0 FT	YEAR ROUND
OUTLET HEIGHT	= 0.5 FT	

BEDLOAD AND SUSPENDED SEDIMENT CAPTURE

STOPLOG	SETTING	SEASON
NO STOPLOGS		WET
INLET CLOSED		SUMMER CLEANOUT

9 SEDIMENT MANAGMENT AREA UPPER CHUTE WATER CONTROL STRUCTURE DETAILS
NTS



10 SEDIMENT MANAGEMENT AREA LOWER CHUTE LOG SILL DETAILS
NTS

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HUMBOLDT COUNTY RESOURCE CONSERVATION DISTRICT
SALT RIVER ECOSYSTEM RESTORATION PROJECT

TYPICAL DETAILS
5 OF 10

PROJ NO: 10653-10-003
DRWN: TL CHKD: JS/SA

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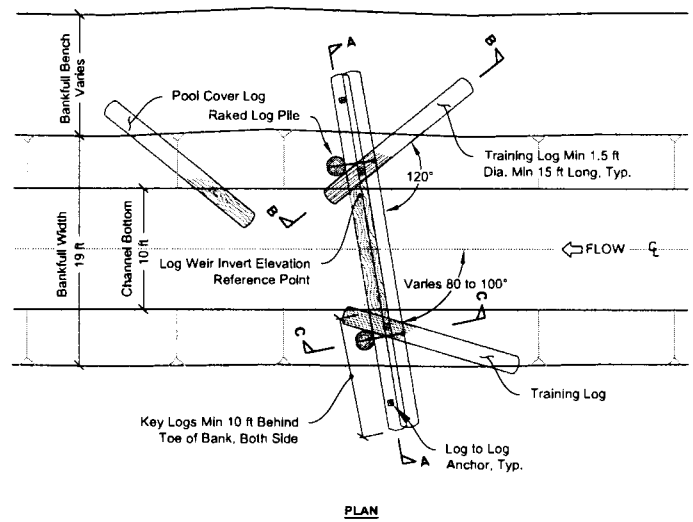
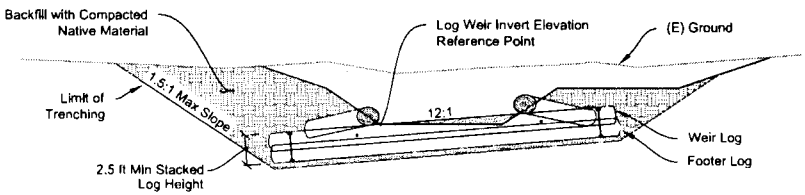
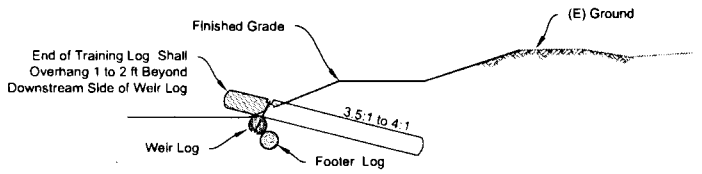


PLAN



SECTION A-A



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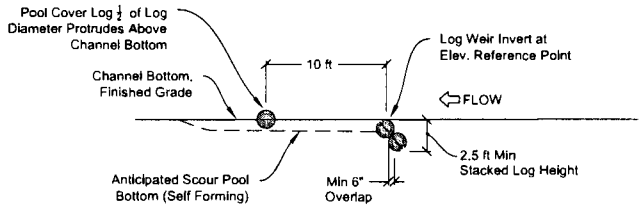
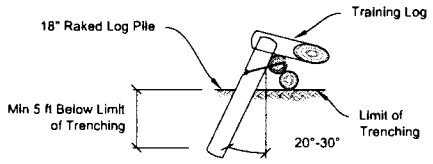


PROFILE



SECTION C-C

Note:
For Channel Profile Stations and Elevations See Sheets

11 FRANCIS CREEK TYPICAL LOG WEIR STRUCTURE
NTS

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HUMBOLDT COUNTY RESOURCE CONSERVATION DISTRICT
SALT RIVER ECOSYSTEM RESTORATION PROJECT

TYPICAL DETAILS
6 OF 10

PROJ NO: 10653-10-003
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SHEET 53 OF 72

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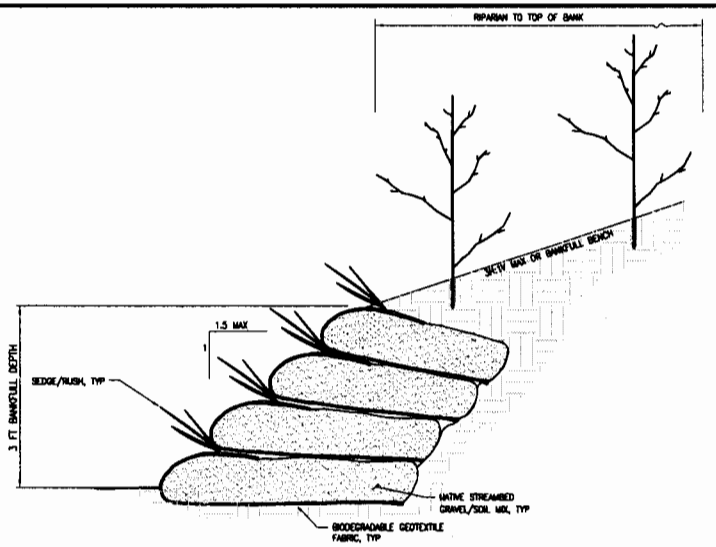

(12) ENCAPSULATED SOIL LIFT - FRANCIS CREEK

(13) RESERVED FOR FUTURE SUBMITTALS

(14) RESERVED FOR FUTURE SUBMITTALS

(15) RESERVED FOR FUTURE SUBMITTALS

(16) RESERVED FOR FUTURE SUBMITTALS

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BASIS ONE INCH BAR ON ORIGINAL DRAWING IS 1" IF NOT ONE INCH ADJUST SCALE ACCORDINGLY

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SALT RIVER ECOSYSTEM RESTORATION PROJECT

TYPICAL DETAILS
7 OF 10

PROJ NO: 10653-10-003
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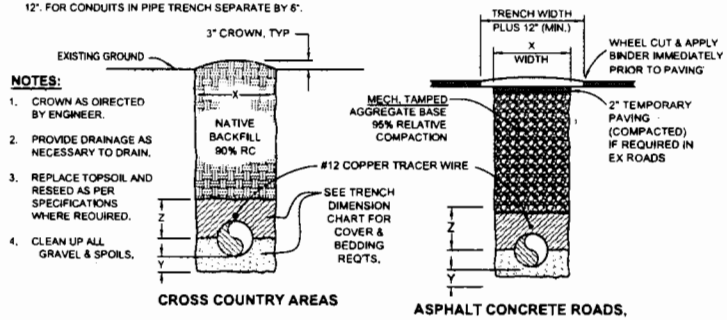
TRENCH DIMENSION CHART				
	(X)		(Y)	(Z)
PIPE SIZE	TRENCH WIDTH MIN.	TRENCH WIDTH MAX.	BEDDING (MIN)	COVER (MIN)
1"	6"	18"	3"	18"
3"	15"	21"	3"	16"
6"	18"	24"	6"	16"
8"	20"	26"	6"	16"
10"	22"	28"	6"	16"
12"	24"	30"	6"	16"
15"	27"	33"	6"	16"

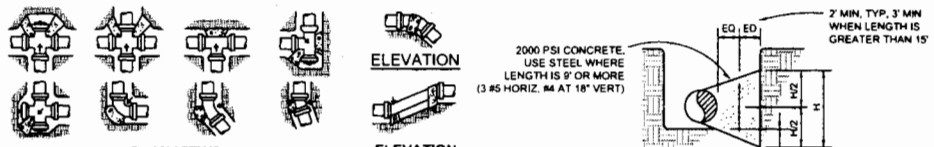
FOR MULTIPLE PIPE TRENCHES SEPARATE PIPES BY 12". FOR CONDUITS IN PIPE TRENCH SEPARATE BY 6".

NOTES:

1. WIDER TRENCHES MAY REQUIRE HIGHER STRENGTH PIPE AND/OR SPECIAL BEDDING.
2. DIFFERING TRENCH WIDTHS REQUIRE PRIOR APPROVAL OF ENGINEER.
3. IN UNSTABLE SOILS INCREASE THE TRENCH WIDTH TO 5 PIPE DIAMETERS FOR PVC PIPE.
4. IN MAKING EXCAVATIONS FOR THIS PROJECT, THE CONTRACTOR SHALL BE FULLY RESPONSIBLE FOR PROVIDING & INSTALLING ADEQUATE SHEETING, SHORING & BRACING AS MAY BE NECESSARY AS A PRECAUTION AGAINST SLIDES OR CAVE-INS, AND TO PROTECT ALL (E) IMPROVEMENTS OF ANY KIND, EITHER ON PUBLIC OR PRIVATE PROPERTY, FULLY FROM DAMAGE.
5. PLACE LEAN CONCRETE BACKFILL IN TRENCH WHEN MINIMUM PIPE COVER NOT POSSIBLE UNDER ROADWAYS, DRIVEWAYS, SIDEWALKS OR ACCESSIBILITY RAMPS.



17 TYPICAL TRENCH DETAIL



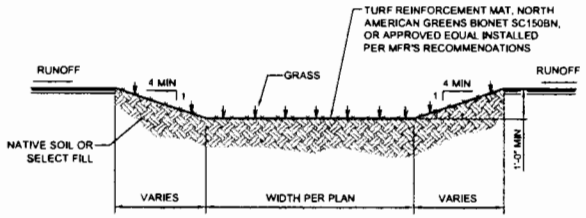
NOTES:

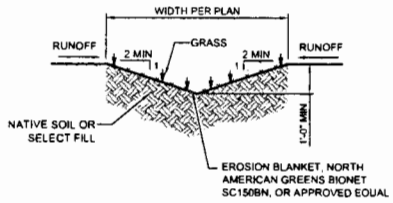
1. CONCRETE THRUST BLOCKS ARE TO BE POURED AGAINST UNDISTURBED EARTH OR STRUCTURAL BACKFILL.
2. KEEP CONCRETE CLEAR OF JOINTS AND ACCESSORIES.
3. VOLUMES AND SPECIAL BLOCKING DETAILS SHOWN ON THE PLANS TAKE PRECEDENCE OVER VOLUMES AND BLOCKING DETAILS SHOWN ON THIS STANDARD DETAIL.
4. ALL BURIED PIPE EXCEPT FLANGED, SCREWED, SOLVENT WELDED PVC OR WELDED STEEL PIPE SPECIFIED TO BE PRESSURE TESTED SHALL BE PROVIDED WITH CONCRETE THRUST BLOCKS AT ALL DIRECTIONAL CHANGES UNLESS OTHERWISE NOTED.
5. THRUST BLOCKS SHALL NOT BE LOCATED OR SIZED TO ENCASE ADJACENT PIPES OR FITTINGS.
6. THE SIZE AND WEIGHT OF ALL UPLIFT THRUST BLOCKS SHALL BE AS DETERMINED BY ENGINEER.
7. A FRICTION COEFFICIENT OF 0.20 SHALL BE USED BETWEEN THE BEDDING MATERIAL AND PIPE.
8. THE BEARING AREAS ARE BASED ON TEST PRESSURE OF 150 PSI AND ALLOWABLE SOIL BEARING STRESS OF 1000 POUNDS PER SQUARE FOOT. TO COMPUTE BEARING AREAS FOR DIFFERENT TEST PRESSURES AND SOIL BEARING STRESSES, USE THE FOLLOWING EQUATION:
   BEARING AREA = (TEST PRESSURE / 150) x (1000 / SOIL BEARING STRESS) x (TABLE VALUE)

BEARING AREA OF THRUST BLOCK IN SQ. FT.

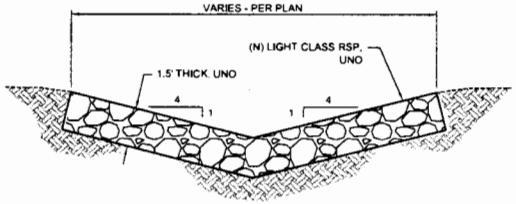
PIPE SIZE	TEE, WYE, PLUG OR CAP	90° BEND PLUGGED CROSS	TEE PLUGGED A1	TEE PLUGGED A2	45° BEND	22 ½° BEND	11 ¼° BEND
3	1.5	2	2	1.5	1.5	1	1
4	1.5	2	2	1.5	1.5	1	1
6	3	4.5	4.5	3	2.5	1.5	1
8	5	7	7	5	4	2	1
10	8	12	12	8	7	3	2
12	12	17	17	12	10	5	3

18 TYPICAL THRUST BLOCK DETAILS

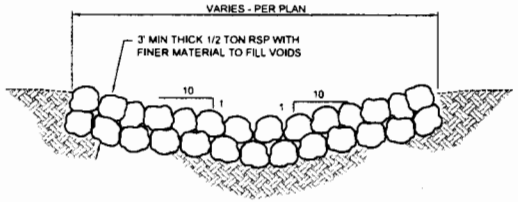




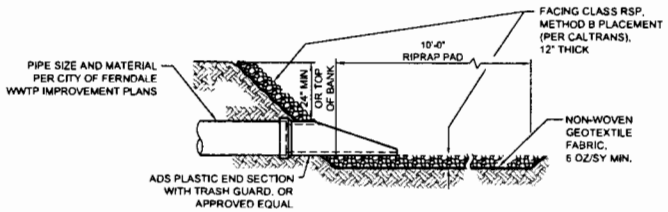
19 TYPICAL VEGETATED SWALE WITH EROSION CONTROL FABRIC



20 TYPICAL ROCK-LINED SWALE



21 TYPICAL BOULDER WEIR



22 TYPICAL ROCK ENERGY DISSIPATOR

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SAVE DRAWING ON SECOND DRAWING 1"
0 1" 2"

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SALT RIVER ECOSYSTEM RESTORATION PROJECT

TYPICAL DETAILS
8 OF 10

PROJ NO: 10853-10-003
DRWN: nTJ CHKD: JS/SA

C-49

SHEET 55 OF 72

2011-06-13 1:50 PM TJAMES
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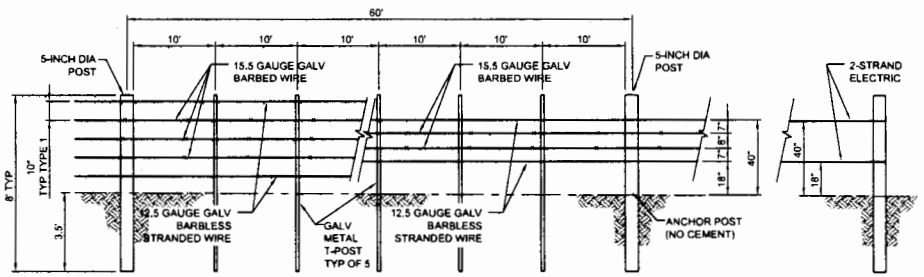
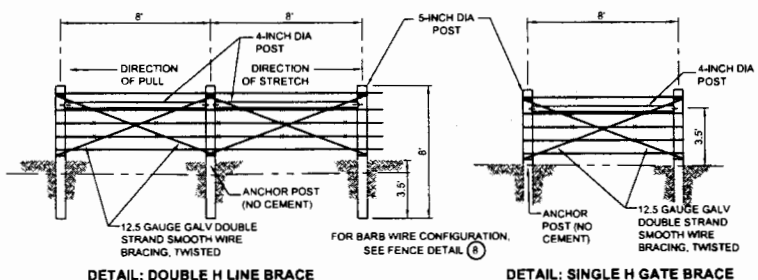


TYPE 1 TYPE 2 TYPE 3

NOTES:

1. TEMPORARY FENCE INSTALLATION ENTAILS CONSTRUCTING A HIGH TENSILE BARBED WIRE FENCE, FIVE WIRE, FOUR AND ONE-HALF FEET HIGH, USING METAL T-POSTS AT 10-FOOT SPACING WITH A WOODEN POST EVERY SIXTH POST (INLINE POSTS).
2. THE TOP AND BOTTOM WIRE SHALL BE 12.5 GAUGE GALVANIZED BARBLESS STRANDED WIRE.
3. THE MIDDLE THREE WIRES SHALL BE 15.5 GAUGE GALVANIZED BARBED WIRE.
4. THE HEIGHT TO THE TOP WIRE SHALL BE 50 INCHES AND WIRE SPACING FROM THE GROUND UP SHALL BE IN INCHES: 10",10", 10", 10", AND 10".
5. WIRE GATES NEED TO BE INSTALLED TO ALLOW ACCESS THROUGH THE FENCED AREA. WIRE GATES ARE COMPRISED OF FIVE STRANDS OF BARBED WIRE CONNECTING TO WOODEN ENDPOSTS (4 FOOT LENGTH) WITH WOODEN POSTS A MINIMUM OF EVERY FOUR FEET BETWEEN THE ENDPOSTS. AT LEAST ONE WIRE GATE PER FENCELINE SHALL BE INSTALLED IN MOST INSTANCES. THE WIDTH OF THE GATE IS PROJECT DEPENDENT BUT SHALL TYPICALLY BE 10'.
6. THE FOLLOWING MATERIALS SHALL BE USED IN ALL FENCE CONSTRUCTION:
   - 5-INCH (DIAMETER) BY 8-FOOT (LENGTH) POSTS (FOR H BRACE, IN-LINE, AND RISE AND DIP POSTS)
   - 4 INCH (DIAMETER) BY 8-FOOT (LENGTH) JUNIPER POSTS (FOR HORIZONTAL BRACES)
   - 6.5-FOOT GALVANIZED T-POSTS #133
   - 15.5 GAUGE GALVANIZED 4 PT. BARBED WIRE
   - 12.5 GAUGE GALVANIZED BARBLESS STRANDED WIRE
   - 1.5-INCH DOUBLE HOT DIPPED GALVANIZED FENCE STAPLES
   - DOUBLE HOT DIPPED T-POST WIRE CLIPS

23 BARB WIRE FENCE INSTALLATION DETAIL



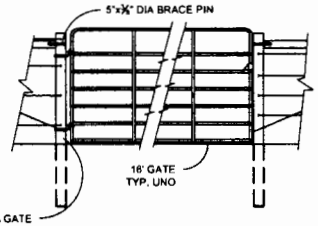
DETAIL: DOUBLE H LINE BRACE

DETAIL: SINGLE H GATE BRACE & LINE BRACE

NOTES:

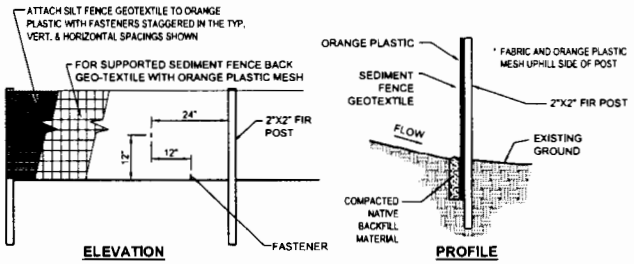
1. SINGLE H BRACES SHALL BE INSTALLED AT ENDS, BOTH SIDES OF GATES, AND AT A MAXIMUM OF 300-FOOT INTERVALS.
2. DOUBLE H BRACES SHALL BE INSTALLED AT DIRECTION CHANGES AND MAJOR SLOPE CHANGES.
3. WOODEN RISE AND DIP POSTS SHALL BE INSTALLED AS NEEDED.
4. ALL WOODEN POSTS (H BRACE POST, INLINE POST, AND RISE AND DIP POSTS) SHALL BE SOLIDLY SET OR DRIVEN IN COMPACTED SOIL TO A DEPTH OF 3.5 FEET. THE HEIGHT OF ALL POSTS AFTER INSTALLATION SHALL BE 4.5 FEET.
5. WHEN CONSTRUCTING H BRACES, HORIZONTAL BRACES SHALL BE INSTALLED AT A MINIMUM OF 3.5 FEET FROM THE GROUND. A TENSION MEMBER COMPOSED OF TWO COMPLETE LOOPS OF NUMBER 12.5 GAUGE GALVANIZED DOUBLE STRAND SMOOTH WIRE SHALL EXTEND FROM A POINT APPROXIMATELY SIX INCHES BELOW THE TOP OF THE BRACE POST TO GROUND LEVEL OF THE POST BEING BRACED. THE BRACE WIRE SHALL BE TWISTED TO SECURE THE BRACE AND PROVIDE NEEDED RIGIDITY. IN-LINE H BRACES SHALL BE CONSTRUCTED WITH 2 TENSION WIRES PER BRACE.
6. NEW UTILITY TUBE GATES ARE TO BE INSTALLED AT THE PROJECT ENTRANCES OFF SIR FRANCIS DRAKE BLVD, FROM THE NDOC FACILITY, AND THROUGH THE NEW BARBED WIRE FENCE AT THE PRIMARY STAGING AREA. UTILITY TUBE GATES ARE TO BE CONSTRUCTED AS FOLLOWS: MINIMUM OF 12-FEET LONG; 50-INCHES HIGH; 6-RAIL DESIGN; 1 VERTICAL "Z" BRACES; 20-GAUGE STEEL WITH GALVANIZED FINISH; 1-5/8 INCH DIAMETER TUBING; PROTECTED SEAMS AND WELDS; CONTINUOUSLY WELDED SADDLE; JOINTS AND BOLT HOOKS; ROUNDED CORNERS; INCLUDES SCREW HOOKS; ADJUSTABLE 10-GAUGE HINGES; AND CHAIN LATCH. CONTRACTING OFFICER TO APPROVE EACH GATE PRIOR TO INSTALLATION. ALTERNATE GATE TYPES PERMITTED WITH PRIOR APPROVAL OF CONTRACTING OFFICER.

24 SINGLE/DOUBLE BARB WIRE FENCE H GATE & LINE BRACE DETAIL



GATE INSTALLATION

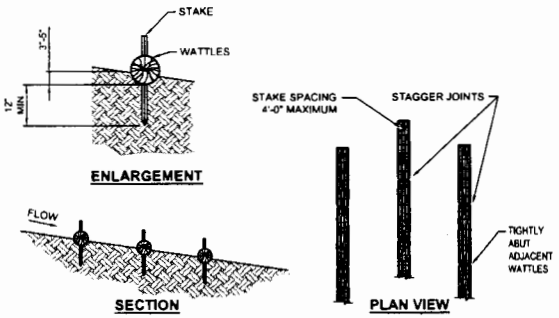
25 TYPICAL ACCESS ROAD GATE



NOTES:

1. FILTER FABRIC SHALL BE INSTALLED IN A CONTINUOUS ROLL TO AVOID THE USE OF JOINTS. WHERE JOINTS ARE NECESSARY SPLICE FABRIC TOGETHER ONLY AT A SUPPORT POST WITH A MINIMUM 6" OVERLAP, SECURELY FASTEN BOTH ENDS TO THE POST.
2. POSTS SHALL BE SPACED A MAXIMUM OF 6' APART AND DRIVEN SECURELY INTO THE GROUND A MINIMUM OF 12".
3. A TRENCH SHALL BE EXCAVATED APPROXIMATELY 4" WIDE AND 8" DEEP ALONG THE LINE OF POSTS UPHILL FROM THE BARRIER. TRENCH SHALL FOLLOW THE CONTOUR.
4. TRENCH SHALL BE BACKFILLED WITH NATIVE MATERIAL.
5. INSPECT AND REPAIR AFTER EACH RAINFALL. INSPECT DAILY DURING PROLONGED RAINFALL.
6. REMOVE SEDIMENT WHEN IT REACHES APPROXIMATELY ONE THIRD THE HEIGHT ABOVE GROUND PORTION OF THE FENCE.
7. ANY SEDIMENT DEPOSITS REMAINING IN PLACE AFTER THE FILTER FENCE IS NO LONGER REQUIRED SHALL BE DRESSED TO CONFORM WITH THE EXISTING GRADE AND SEEDED.

26 SILT FENCE DETAIL



NOTES:

1. CONTRACTOR SHALL INSPECT WATTLES WEEKLY AND AFTER EACH RAINFALL. REPLACE WATTLES WHEN THEY HAVE DECOMPOSED, COLLAPSED, OR BEEN DAMAGED. REMOVE SEDIMENT FROM BEHIND THE WATTLE WHEN IT REACHES ONE INCH OF DEPTH.
2. WATTLES SHOULD BE PLACED ON THE CONTOUR AND IN A ROW WITH ENDS TIGHTLY ABUTTING THE ADJACENT WATTLE.
3. THE DIRECTION OF RUNOFF FLOW TO THE WATTLES SHOULD BE PERPENDICULAR TO THE STAKED WATTLE LOCATION.
4. REMOVE UPON COMPLETION OF CONSTRUCTION SO AS NOT TO BLOCK OR IMPEDE STORM FLOW OR DRAINAGE.

27 STRAW WATTLES/FIBER ROLL SEDIMENT BARRIER

50% SUBMITTAL
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MARK	DATE	DESCRIPTION
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HUMBOLDT COUNTY RESOURCE CONSERVATION DISTRICT
SALT RIVER ECOSYSTEM RESTORATION PROJECT

TYPICAL DETAILS
9 OF 10

PROJ NO: 10653-10-003
DRWN: pTJ CHKD: JS/SA

C-50

SHEET 58 OF 72

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P:\2010\10653-10-003\HUMBOLDT COUNTY RESOURCE CONSERVATION DIST\10653-10-003 SALT RIVER\FIGS\NEW.DWG

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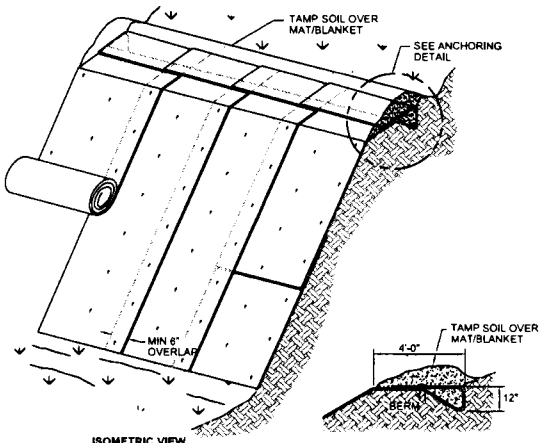


ISOMETRIC VIEW

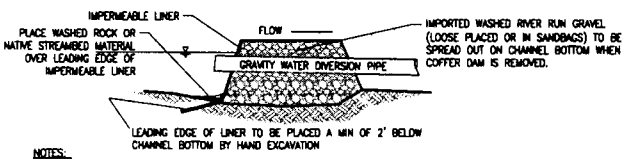
ANCHORING DETAIL

TYPICAL SLOPE SOIL STABILIZATION

NOTES:

1. MATS/BLANKETS SHALL BE NORTH AMERICAN GREEN'S BIONET S150BN OR APPROVED EQUAL.
2. MATS/BLANKETS SHOULD BE INSTALLED VERTICALLY DOWNSLOPE.
3. SLOPE SURFACE SHALL BE FREE OF ROCKS, CLODS, STICKS AND GRASS. MATS/BLANKETS SHALL HAVE GOOD SOIL CONTACT.
4. APPLY PERMANENT SEEDING BEFORE PLACING MATS/BLANKETS.
5. LAY MATS/BLANKETS LOOSELY AND STAKE OR STAPLE PER MANUFACTURERS RECOMMENDATIONS TO MAINTAIN DIRECT CONTACT WITH THE SOIL. DO NOT STRETCH.

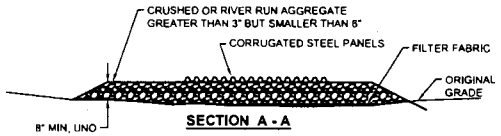
28 EROSION BLANKETS/TURF REINFORCEMENT MATS



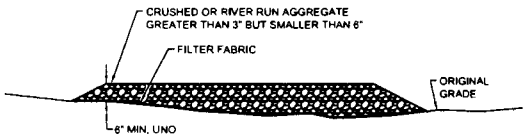
NOTES:

1. OUTLET OF WATER DIVERSION PIPE TO BE PLACED ON A WASHED COBBLE ENERGY DISSAPATOR AT LEAST 3'x3' IN SIZE PLACED IN CHANNEL UPSTREAM OF THE DOWNSTREAM FISH SCREEN.
2. USE GRAVITY LINE AS MUCH AS PRACTICAL.
3. WATER MANAGEMENT PLAN CAN PROPOSE AN ALTERNATIVE COFFER DAM FOR APPROVAL.

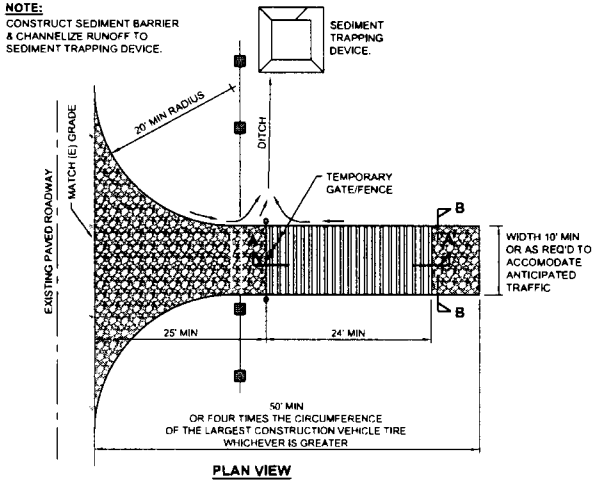
30 TEMPORARY COFFER DAM



SECTION A - A

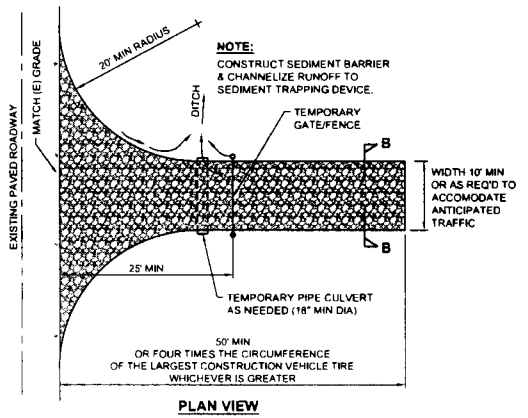


SECTION B - B



PLAN VIEW

TYPE 1



PLAN VIEW

TYPE 2

NOTES:

1. ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOW OF MUD ONTO PUBLIC ROADWAY.
2. ALL MATERIALS SPILLED, DROPPED, WASHED OR TRACKED FROM VEHICLES ONTO ROADWAYS MUST BE REMOVED IMMEDIATELY.
3. ACCESSES SHALL BE INSPECTED MONTHLY AND AFTER EACH RAINFALL WITH MAINTENANCE PROVIDED AS NECESSARY.
4. ALL TEMPOTRARY CONSTRUCTION ENTRANCES SHALL BE REMOVED AND FENCES RESTORED TO PRE-PROJECT CONDITIONS. THE LAND SHALL BE NATURALIZED/DE-COMPACTED TO PRE-PROJECT CONDITIONS.

29 TEMPORARY GRAVEL CONSTRUCTION ENTRANCE

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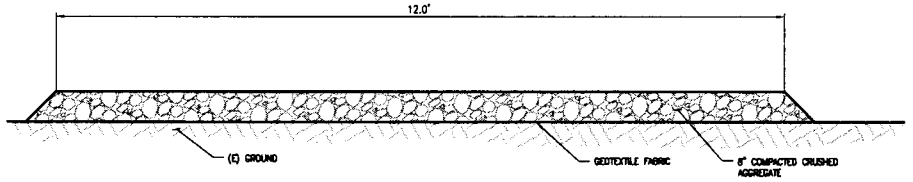

31 PERMANENT ACCESS ROAD SECTION

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HUMBOLDT COUNTY RESOURCE CONSERVATION DISTRICT
SALT RIVER ECOSYSTEM RESTORATION PROJECT

TYPICAL DETAILS
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PROJ NO: 10653-10-003
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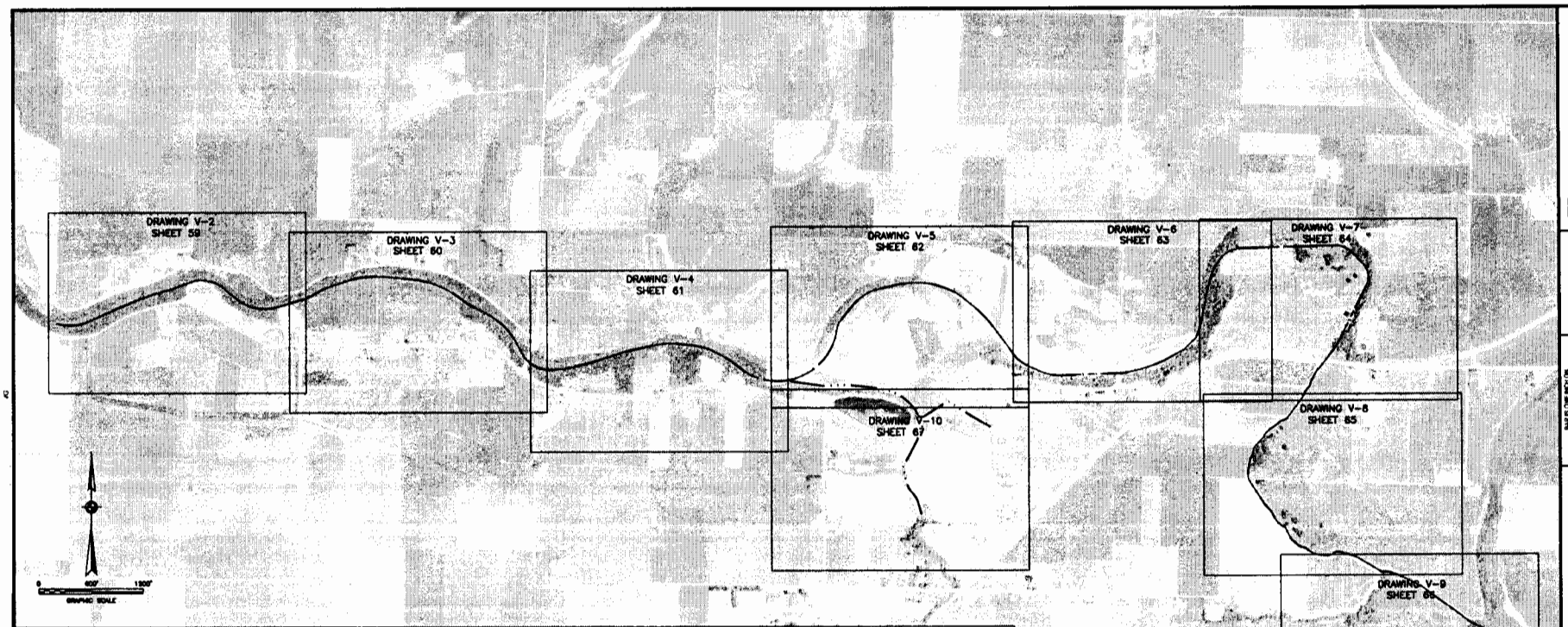

REVEGETATION PLAN INDEX

REVEGETATION NOTES:

1. REVEGETATION SHALL BE IN ACCORDANCE WITH THE HABITAT MITIGATION AND MONITORING PLAN (HMMP) AND THE FINAL REVEGETATION PLANTING PLANS.

3. NATIVE TOPSOIL, ORGANICS AND MULCH SEGREGATED DURING THE EARTHWORK SHALL BE RE-DISTRIBUTED ONTO ALL BARE SOILS/DISTURBED SURFACES EXCEPT THE ACTIVE CHANNEL AND TIDAL INFLUENCED AREAS. ALTERNATIVELY, THE DISTURBED SURFACES CAN BE COVERED WITH A MAXIMUM 3" OF STERILE RICE STRAW OR WOOD CHIPS FROM ONSITE WOODY DEBRIS. IF STRAW IS UTILIZED, THE STRAW SHALL BE CRIMPED TO ANCHOR THE MULCH.

4. SEEDING (BROADCAST OR DRILL SEEDING): ALL SOILS THAT ARE DISTURBED BY PROJECT CONSTRUCTION ON THE FLOODPLAINS, ADJACENT SLOPES, ACCESS ROUTES, STOCKPILE AREAS, ETC. WILL BE SEEDED WITH THE SPECIFIED SEED MIX. SEEDING SHALL BE CONDUCTED IN OR AFTER SEPTEMBER OR OCTOBER AND PRIOR TO THE ONSET OF THE RAINY SEASON.

   4.1. THE ACTIVE BENCHES AND BANKS ABOVE THE ACTIVE BENCH SHALL BE SEEDED WITH THE SPECIFIED SEED MIX SHOWN IN THESE PLANS WHICH COMPRISES REGIONALLY NATIVE SPECIES ADAPTED TO WET FLOODPLAIN CONDITIONS. THIS SEEDING WILL THUS BE CONDUCTED ONLY IN THE BRACKISH AND FRESHWATER REACHES, NOT IN THE TIDALLY INFLUENCED SALINE REACH OF THE CHANNEL.

   4.2. AREAS DISTURBED DURING CONSTRUCTION THAT ARE OUTSIDE OF THE CHANNEL SHALL BE SEEDED WITH THE SPECIFIED EROSION AND SEDIMENT CONTROL MIX.

5. ALL PLANT MATERIALS, WITH THE EXCEPTION OF SEED MIXES, SHALL BE COLLECTED EITHER ON THE PROJECT SITE OR FROM LOCATIONS WITHIN THE EEL AND SALT RIVER WATERSHEDS WITHIN 10 MI OF THE PROJECT AREA OR OBTAINED FROM A NATIVE PLANT NURSERY. NATIVE PLANT SEED SHALL BE PROVIDED BY A NURSERY APPROVED BY THE HCRCD WHO WILL VERIFY THAT SEEDS ARE OF LOCAL WATERSHED ORIGIN. IF SUFFICIENT EXISTING COLLECTION SOURCES ARE NOT FOUND WITHIN 10 MI, THEN THE COLLECTION PERIMETER CAN BE EXPANDED WITH PRIOR APPROVAL BY THE HCRCD IN CONSULTATION WITH THE PROJECT BIOLOGISTS TO OTHER AREAS WITHIN THE EEL AND SALT RIVER WATERSHED.

6. WETLAND PLUGS: WETLAND PLUGS, BOTH NURSERY GROWN IN TREEBANDS OR SALVAGED DURING GRADING, SHALL BE INSTALLED BY HAND IN HOLES AT LEAST 8 INCHES DEEP AND 3 INCHES WIDE IN SELECTED PARTS OF THE ACTIVE BENCH SUCH AS SIDE CHANNEL, ALCOVES AND BACKWATER AREAS (THE SALT MARSH PLAIN WILL BE REVEGETATED BY NATURAL RECRUITMENT WITH NO ACTIVE WETLAND PLANT INSTALLATION). THE SOIL EXCAVATED FROM THE PLANTING HOLE WILL BE FIRMLY TAMPED BACK AROUND THE INSTALLED PLANT SUCH THAT LARGE AIR GAPS IN THE SOIL ARE AVOIDED, BUT CARE MUST BE TAKEN TO AVOID OVERCOMPACTING THE SOIL PARTICULARLY IF IT IS DAMP. THE ROOT CROWN OF THE PLUG SHOULD BE SLIGHTLY HIGHER (APPROX. 0.5 INCH) THAN THE SURROUNDING SOIL SURFACE. PLANT INSTALLATION WILL TAKE PLACE TOWARDS THE END OF THE FLOOD SEASON IN APRIL/MAY/JUNE. CONTRACTORS SHOULD BE PREPARED FOR POSSIBLE FLOODED SITE CONDITIONS; PLANTS WILL ONLY BE INSTALLED WHEN FLOOD WATERS HAVE RECEDED.

7. CONTAINER AND CUTTING PLANTING: CONTAINER PLANTS AND LIVE CUTTINGS SHALL BE INSTALLED BETWEEN OCTOBER AND NOVEMBER BEFORE THE ONSET OF THE TIME WHEN THE SITE IS MOST LIKELY TO FLOOD, BUT WHEN RAINFALL HAS LIKELY SATURATED THE SITE'S SOILS. PLANTING HOLES FOR TREES WILL BE 2 FT WIDE AND 2 FT DEEP, AND FOR SHRUBS WILL BE 1 FT WIDE AND 1.5 FT DEEP. ALL PLANTS WILL BE INSTALLED SO THAT THEIR ROOT CROWNS ARE AT OR SLIGHTLY ABOVE (0.5 INCHES) THE SOIL SURFACE FOLLOWING PLANTING, SOIL SETTLEMENT, AND INITIAL IRRIGATION. CUTTINGS WILL BE INSTALLED BY CREATING A PILOT HOLE AT EACH PLANTING LOCATION AND INSERTING A SINGLE CUTTING INTO THE HOLE SUCH THAT APPROXIMATELY 2/3 OF THE CUTTING IS BELOW GROUND AND 1/3 IS ABOVEGROUND. CONTAINER PLANTS SHALL BE MANUALLY IRRIGATED ONCE IMMEDIATELY FOLLOWING PLANTING.

5. THE RESTORED SALINE TIDAL AREAS WILL NOT BE SEEDED AS NATURAL SALT MARSH VEGETATION RECRUITMENT IS EXPECTED TO BE RELATIVELY RAPID AND THE MAJORITY OF THIS AREA WILL BE STABILIZED BY THE EXISTING GRASSLANDS.

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MAY 2011

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MARK	DATE	DESCRIPTION
		ISSUE

HUMBOLDT COUNTY RESOURCE CONSERVATION DISTRICT
SALT RIVER ECOSYSTEM RESTORATION PROJECT

REVEGETATION PLAN
SHEET INDEX

PROJ NO: 10853-10-003
DRWN: pTJ CHKD: JS/SA

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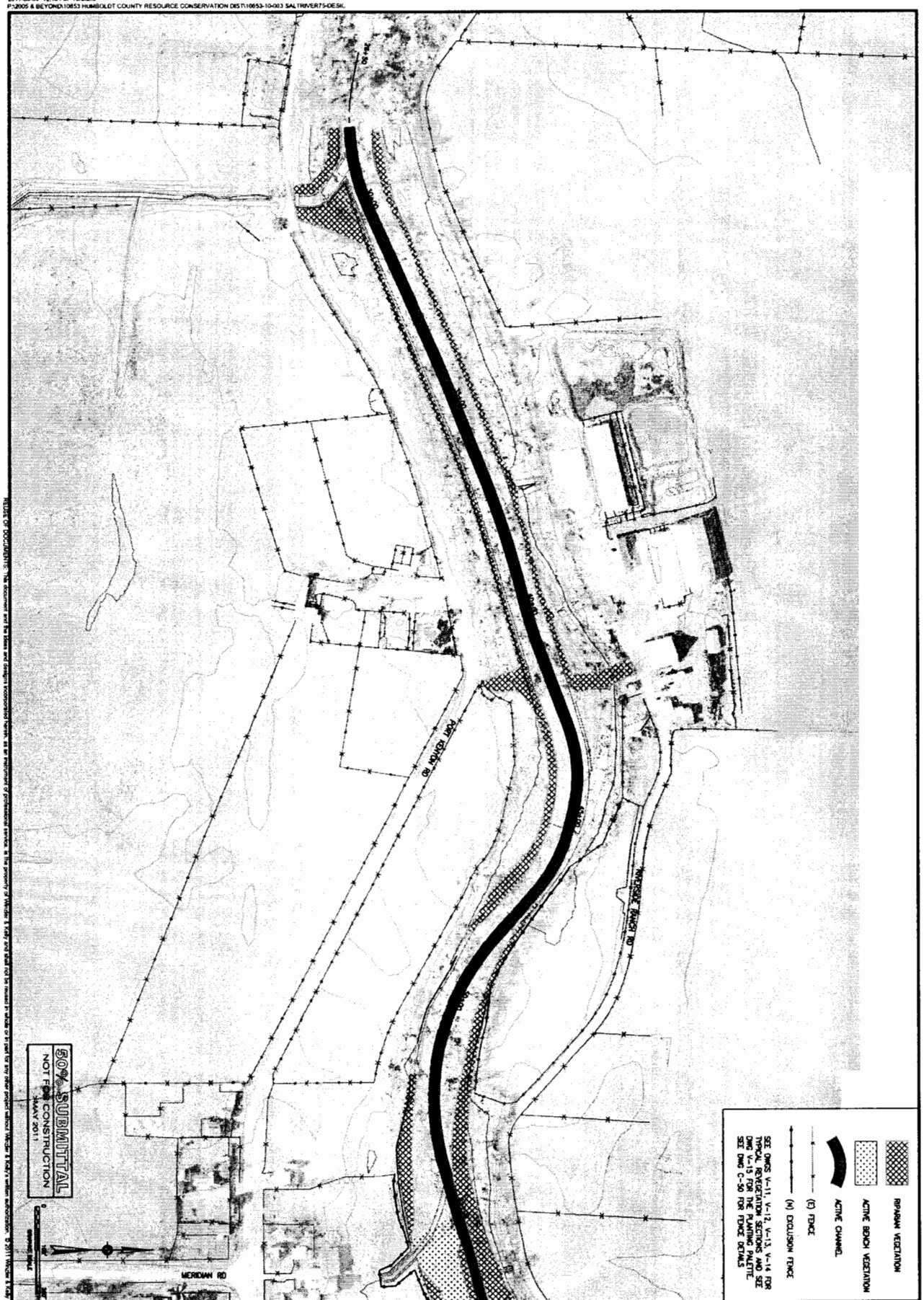

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PROJ NO: 10653-10-003	HUMBOLDT COUNTY RESOURCE CONSERVATION DISTRICT SALT RIVER ECOSYSTEM RESTORATION PROJECT		BAR IS ONE INCH ON ORIGINAL DRAWING 0 1"
DRWN: pTJ CHKD: JS/SA	REVEGETATION PLAN VIEW 1 OF 9	MARK / DATE / DESCRIPTION / ISSUE	REUSE OF DOCUMENTS This document and the ideas and designs incorporated herein, as an instrument of professional service, is the property of Winzler & Kelly and shall not be reused in whole or in part for any other project without Winzler & Kelly's written authorization. © 2011 Winzler & Kelly
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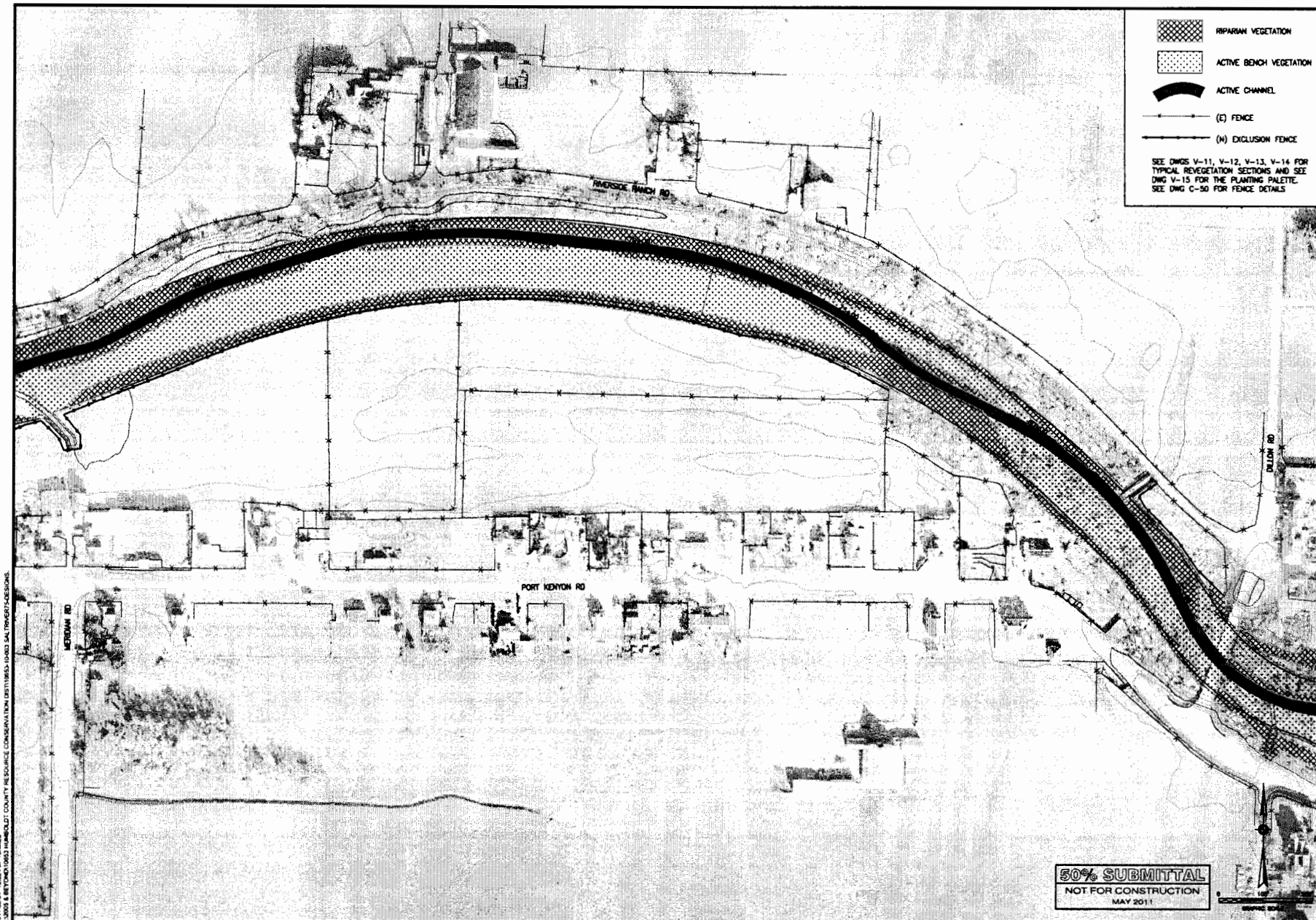

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ISSUE

HUMBOLDT COUNTY RESOURCE CONSERVATION DISTRICT
SALT RIVER ECOSYSTEM RESTORATION PROJECT

REVEGETATION PLAN VIEW 2 OF 9

PROJ NO: 10853-10-003
DRWN: pTJ CHKD: JS/SA

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HUMBOLDT COUNTY RESOURCE CONSERVATION DISTRICT
SALT RIVER ECOSYSTEM RESTORATION PROJECT
REVEGETATION PLAN VIEW 3 OF 9
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WINZLER & KELLY
Michael Love & Associates
RIPARIAN VEGETATION
ACTIVE BENCH VEGETATION
ACTIVE CHANNEL
(E) FENCE
(N) EXCLUSION FENCE
SEE DWGS V-11, V-12, V-13, V-14 FOR TYPICAL REVEGETATION SECTIONS AND SEE DWG V-15 FOR THE PLANTING PALETTE.
SEE DWG C-50 FOR FENCE DETAILS
50% SUBMITTAL
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MAY 2011
FORT KENYON RD
DILLON RD

HUMBOLDT COUNTY RESOURCE CONSERVATION DISTRICT
SALT RIVER ECOSYSTEM RESTORATION PROJECT
REVEGETATION PLAN VIEW
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NOT FOR CONSTRUCTION
MAY 2011
PORT KENYON RD
SEE DWGS V-11, V-12, V-13, V-14 FOR TYPICAL REVEGETATION SECTIONS AND SEE DWG V-15 FOR THE PLANTING PALETTE. SEE DWG C-50 FOR FENCE DETAILS
RIPARIAN VEGETATION
ACTIVE BENCH VEGETATION
ACTIVE CHANNEL
(E) FENCE
(N) EXCLUSION FENCE
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HUMBOLDT COUNTY RESOURCE CONSERVATION DISTRICT
SALT RIVER ECOSYSTEM RESTORATION PROJECT
REVEGETATION PLAN VIEW
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50% SUBMITTAL
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MAY 2011
WINZLER & KELLY
Michael Love & Associates
FULMOR RD
PORT KENYON RD
NORMAN 211
RIPARIAN VEGETATION
ACTIVE BENCH VEGETATION
ACTIVE CHANNEL
(E) FENCE
(N) EXCLUSION FENCE
SEE DWGS V-11, V-12, V-13, V-14 FOR TYPICAL REVEGETATION SECTIONS AND SEE DWG V-15 FOR THE PLANTING PALETTE. SEE DWG C-50 FOR FENCE DETAILS

HUMBOLDT COUNTY RESOURCE CONSERVATION DISTRICT
SALT RIVER ECOSYSTEM RESTORATION PROJECT
REVEGETATION PLAN VIEW
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WINZLER & KELLY
Michael Love & Associates
RIPARIAN VEGETATION
ACTIVE BENCH VEGETATION
ACTIVE CHANNEL
(E) FENCE
(N) EXCLUSION FENCE
SEE DWGS V-11, V-12, V-13, V-14 FOR TYPICAL REVEGETATION SECTIONS AND SEE DWG V-15 FOR THE PLANTING PALETTE. SEE DWG C-50 FOR FENCE DETAILS
50% SUBMITTAL
NOT FOR CONSTRUCTION
MAY 2011
HIGHWAY 211

HUMBOLDT COUNTY RESOURCE CONSERVATION DISTRICT
SALT RIVER ECOSYSTEM RESTORATION PROJECT
REVEGETATION PLAN VIEW
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WINZLER & KELLY
Michael Love & Associates
RIPARIAN VEGETATION
ACTIVE BENCH VEGETATION
ACTIVE CHANNEL
(E) FENCE
(N) EXCLUSION FENCE
SEE DWGS V-11, V-12, V-13, V-14 FOR TYPICAL REVEGETATION SECTIONS AND SEE DWG V-15 FOR THE PLANTING PALETTE. SEE DWG C-50 FOR FENCE DETAILS
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HUMBOLDT COUNTY RESOURCE CONSERVATION DISTRICT
SALT RIVER ECOSYSTEM RESTORATION PROJECT
REVEGETATION PLAN VIEW
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MAY 2011
RIPARIAN VEGETATION
ACTIVE BENCH VEGETATION
ACTIVE CHANNEL
(E) FENCE
(N) EXCLUSION FENCE
SEE DWGS V-11, V-12, V-13, V-14 FOR TYPICAL REVEGETATION SECTIONS AND SEE DWG V-15 FOR THE PLANTING PALETTE
SEE DWG C-50 FOR FENCE DETAILS

HUMBOLDT COUNTY RESOURCE CONSERVATION DISTRICT
SALT RIVER ECOSYSTEM RESTORATION PROJECT
REVEGETATION PLAN VIEW
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WINZLER & KELLY
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RIPARIAN VEGETATION
ACTIVE BENCH VEGETATION
ACTIVE CHANNEL
(E) FENCE
(N) EXCLUSION FENCE
SEE DWGS V-11, V-12, V-13, V-14 FOR TYPICAL REVEGETATION DETAILS AND SPECIFICATIONS
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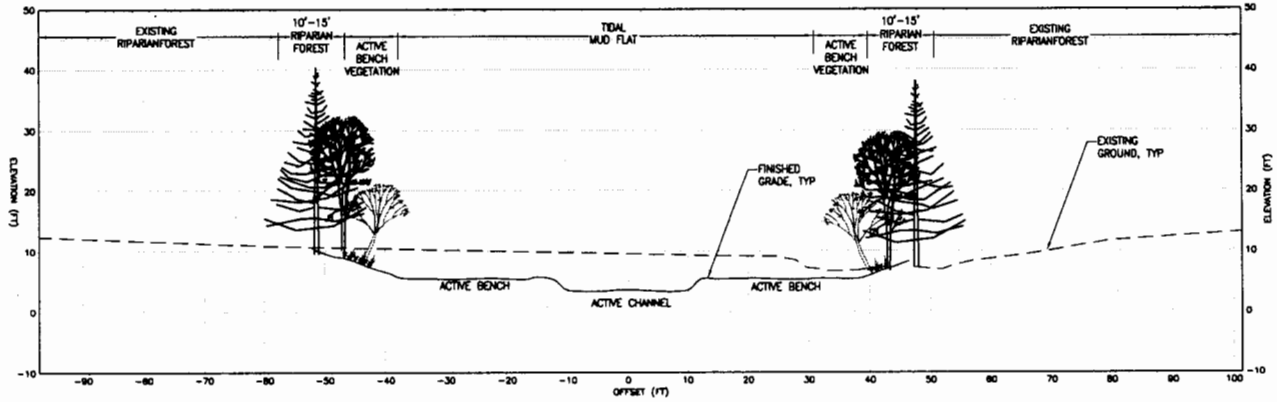
MARKET STREET
PORT KENYON RD
PORT KENYON RD
PORT KENYON RD



SPRUCE DOMINATED FOREST WITH BRACKISH MARSH
TYPICAL FROM SALT RIVER STATION 28+00 TO 55+00

SCALE: 0 10' 20'
GRAPHIC SCALE

Riparian Forest Trees

Sitka spruce *(Picea sitchensis)* (75%)
Red alder *(Alnus rubra)* (10%)
Sitka willow *(Salix sitchensis)* (15%)

Riparian Forest Shrubs/ Ferns

California wax myrtle *(Myrica californica)* (40%)
Twinberry *(Lonicera involucrata)* (30%)
Coyote brush *(Baccharis pilularis)* (30%)

Active Bench Vegetation

Tufted hairgrass *(Deschampsia cespitosa)* (30%)
Lyngbye's sedge *(Carex lyngbyei)* (natural recruitment)
Alkali bulrush *(Bolboschoenus maritimus)* (30%)
Salvaged plugs *(native plants only)* (40%)

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SALT RIVER ECOSYSTEM RESTORATION PROJECT

REVEGETATION
TYPICAL SECTIONS
1 OF 4

PROJ NO: 10653-10-003
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V-11

SHEET 68 OF 72

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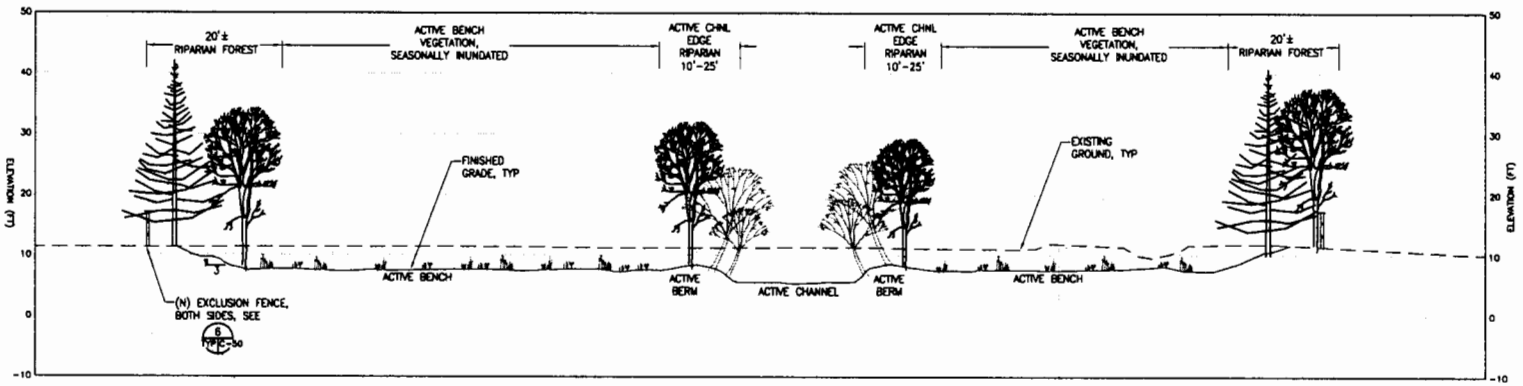

SPRUCE/ COTTONWOOD RIPARIAN FOREST WITH TIDAL FRESHWATER MARSH
TYPICAL FROM SALT RIVER STATION 55+00 TO 86+00

SCALE: 0 10' 20'

Riparian Forest Trees

Sitka spruce *(Picea sitchensis)* (50%)
Black cottonwood *(Populus balsamifera* ssp. *trichocarpa)* (30%)
Coast redwood *(Sequoia sempervirens)* (5%)
Grand fir *(Abies grandis)* (5%)
Red alder *(Alnus rubra)* (5%)
Bigleaf maple *(Acer macrophyllum)* (5%)

Riparian Forest Shrubs/ Ferns

Red currant *(Ribes sanguineum)* (15%)
Twinberry *(Lonicera involucrata)* (15%)
Cascara buckthorn *(Rhamnus purshiana)* (15%)
California wax myrtle *(Myrica californica)* (5%)
Thimbleberry *(Rubus parviflorus)* (10%)
Salmonberry *(Rubus spectabilis)* (10%)
Red elderberry *(Sambucus racemosa)* (20%)
Mosquito fern *(Azolla filiculoides)* (2%)
Giant chain fern *(Woodwardia fimbriata)* (2%)
Sword fern *(Polystichum munitum)* (4%)
Spreading wood fern *(Dryopteris expansa)* (2%)

Active Channel Edge Riparian Trees*

Sitka willow *(Salix sitchensis)* (25%)
Hooker's willow *(Salix hookeriana)* (25%)
Arroyo willow *(Salix lasiolepis)* (25%)
Red Alder (Alnus rubra) (25%)

*Active channel edge riparian tree species will vary through the reach based on bioengineering approach for higher and lower shear zones.

Active Bench Vegetation**

Slough sedge *(Carex obnupta)*
Common spike rush *(Eleocharis macrostachya)*
Salvaged plugs *(native plants only)*

**Species planted in isolated areas compatible with active bench habitat elements, such as side channels, alcoves, and backwater areas.

50% SUBMITTAL
NOT FOR CONSTRUCTION
MAY 2011

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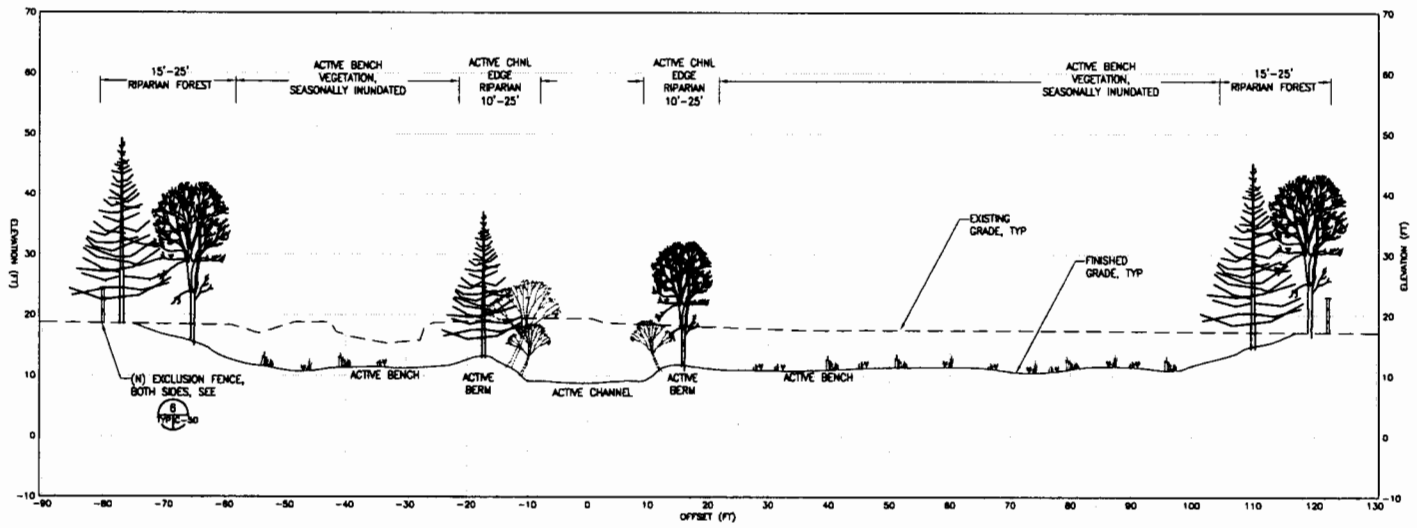
HUMBOLDT COUNTY RESOURCE CONSERVATION DISTRICT
SALT RIVER ECOSYSTEM RESTORATION PROJECT
REVEGETATION TYPCIAL SECTIONS 2 OF 3

PROJ NO: 10653-10-003
DRWN: PTJ CHKD: JS/SA
V-12
SHEET 68 OF 72



SPRUCE/ COTTONWOOD RIPARIAN FOREST WITH FRESHWATER MARSH
TYPICAL FROM SALT RIVER STATION 86+00 TO 124+00

SCALE: 0 10' 20'
GRAPHIC SCALE

Riparian Forest Trees

Sitka spruce *(Picea sitchensis)* (50%)
Black cottonwood *(Populus balsamifera* ssp. *trichocarpa)* (30%)
Coast redwood *(Sequoia sempervirens)* (5%)
Grand fir *(Abies grandis)* (5%)
Red alder *(Alnus rubra)* (5%)
Bigleaf maple *(Acer macrophyllum)* (5%)

Riparian Forest Shrubs/ Ferns

Twinberry *(Lonicera involucrata)* (15%)
Cascara buckthorn *(Rhamnus purshiana)* (10%)
California wax myrtle *(Myrica californica)* (15%)
Thimbleberry *(Rubus parviflorus)* (15%)
Salmonberry *(Rubus spectabilis)* (15%)
Red elderberry *(Sambucus racemosa)* (20%)
Mosquito fern *(Azolla filiculoides)* (2%)
Giant chain fern *(Woodwardia fimbriata)* (2%)
Sword fern *(Polystichum munitum)* (4%)
Spreading wood fern *(Dryopteris expansa)* (2%)

Active Channel Edge Riparian Trees *

Pacific willow *(Salix lasiandra)* (10%)
Arroyo willow *(Salix lasiolepis)* (10%)
Sitka willow *(Salix sitchensis)* (10%)
Sitka spruce *(Picea sitchensis)* (30%)
Black cottonwood *(Populus balsamifera* ssp. *trichocarpa)* (20%)
Red alder *(Alnus rubra)* (30%)

*Active channel edge riparian tree species will vary through the reach based on bioengineering approach for higher and lower shear zones.

Active Bench Vegetation*

Slough sedge *(Carex obnupta)*
Common spike rush *(Eleocharis macrostachya)*
Salvaged plugs *(native plants only)*

*species planted in isolated areas compatible with active bench habitat elements, such as side channels, alcoves, and backwater areas

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HUMBOLDT COUNTY RESOURCE CONSERVATION DISTRICT
SALT RIVER ECOSYSTEM RESTORATION PROJECT

REVEGETATION
TYPICAL SECTIONS
3 OF 4

PROJ NO: 10853-10-003
DRWN: pTJ CHKD: JS/SA

V-13

SHEET 70 OF 72

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