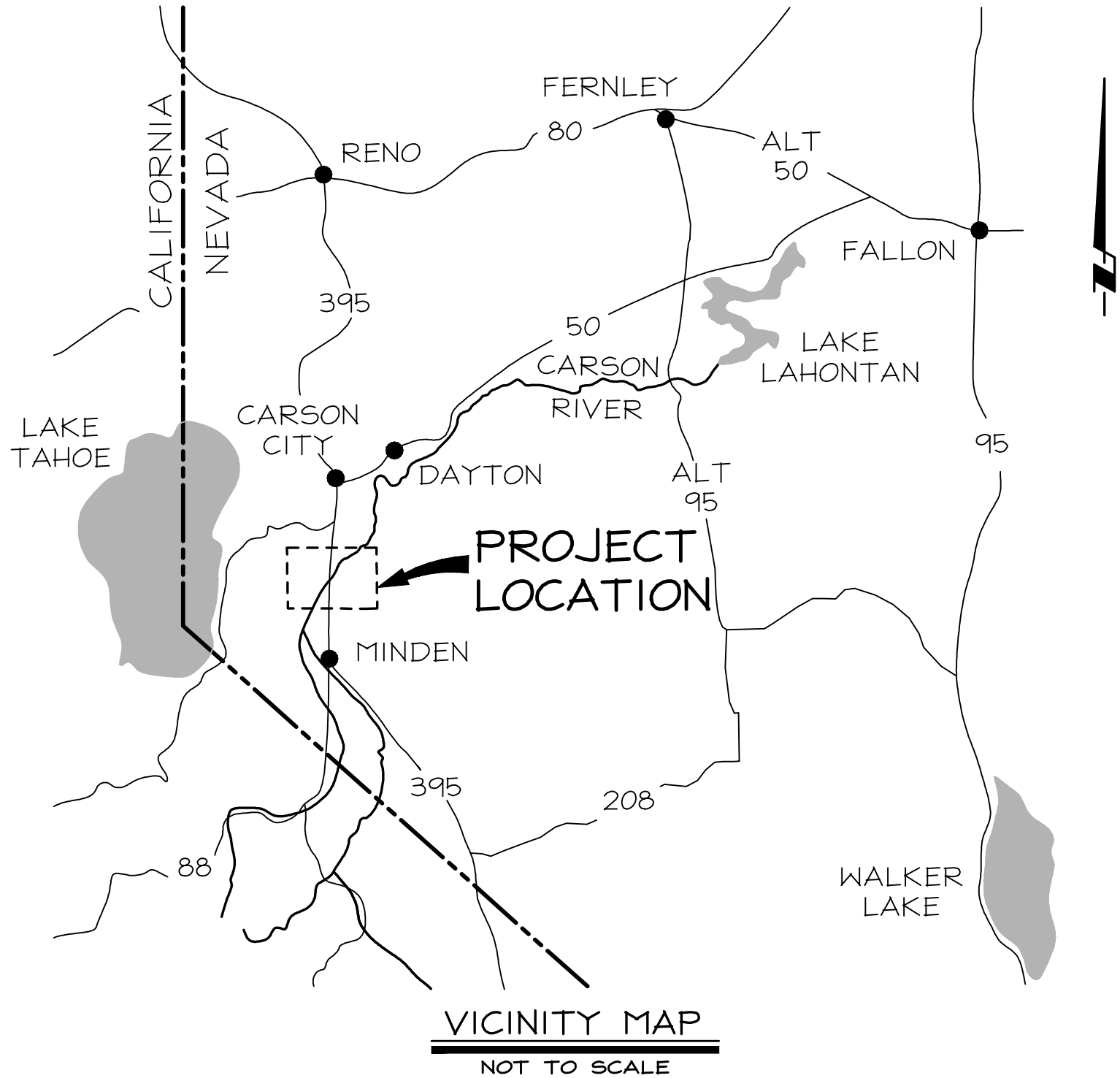


IMPROVEMENT PLANS FOR  
2022 CARSON RIVER BANK STABILIZATION PROJECTS  
CARSON VALLEY CONSERVATION DISTRICT



- SHEET INDEX**
- C1 COVER SHEET
  - C2 NOTES, LEGEND & ABBREVIATIONS
  - C3 FLYING J RANCH SITE PLAN - LOCATION 3
  - C4 CHARNEY RANCH SITE PLAN - LOCATION 3
  - C5 500 TWO RANCH SITE PLAN - LOCATION 1
  - C6 DETAILS
  - C7 DE-WATERING & TEMPORARY EROSION CONTROL PLAN

- AFFECTED PROPERTIES**
- APN: 1319-11-001-007 FRAAS, STEFAN TTEE
  - APN: 1319-11-002-017 ROEBUCK, KIMBERLY S
  - APN: 1319-02-000-001 FLYING J RANCH, LLC
  - APN: 1419-35-002-001 CHARNEY, HOWARD S & ALDIA C S
  - APN: 1419-35-002-003 CHARNEY, HOWARD S & ALDIA C S

**NOTE**

PROPERTY LINES SHOWN ARE APPROXIMATE ONLY  
AND DO NOT REPRESENT A BOUNDARY SURVEY.



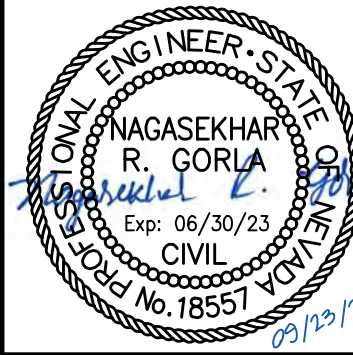
NO.	DATE	REVISION BLOCK	BY

**R/O Anderson**  
WWW.ROANDERSON.COM

MINDEN 9560 Double  
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Reno, NV 89521  
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2022 CARSON RIVER BANK STABILIZATION PROJECTS  
CARSON VALLEY CONSERVATION DISTRICT

COVER SHEET



DRAWN: JT/MAH	JOB: 1702-004
ENGINEER: NRG	DRAWING: SEE PLOT STAMP
SCALE: NOT TO SCALE	SHEET: C1
DATE: 09.23.2022	OF: 7 SHEETS

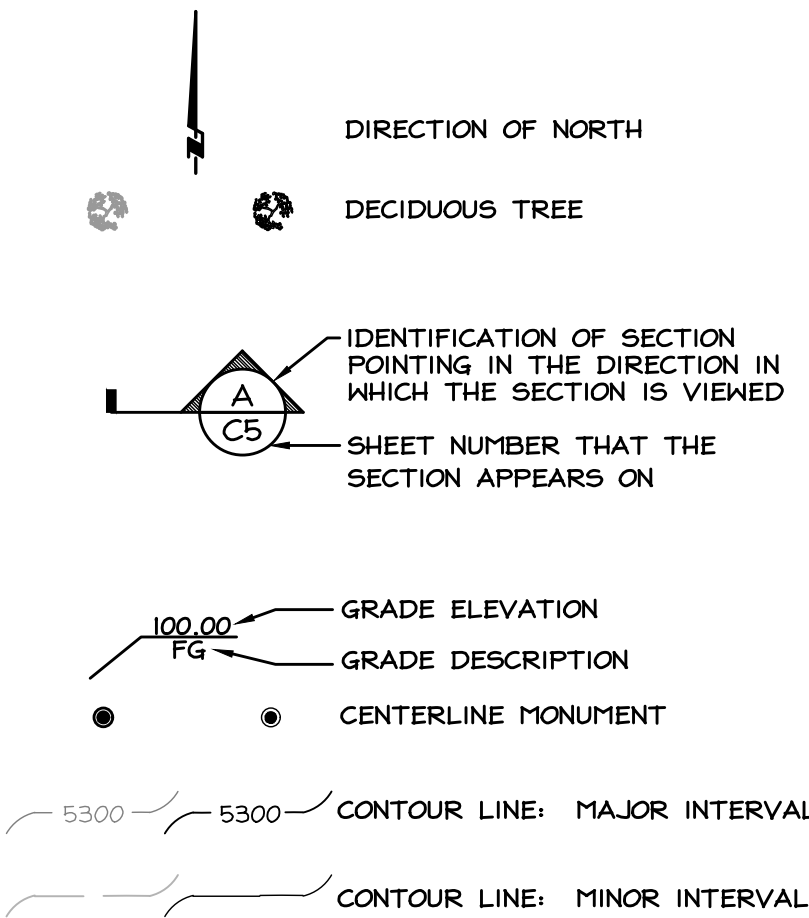
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SYMBOLS

EXISTING NEW



ABBREVIATIONS

AASHTO.....AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS	M.....METER
AB.....AGGREGATE BASE	MGD.....MILLION GALLONS PER DAY
AC.....ASPHALT CONCRETE	MH.....MANHOLE
ADA.....AMERICANS WITH DISABILITIES ACT OF 1990	MI.....MILE
ADT.....AVERAGE DAILY TRAFFIC	MIN.....MINIMUM
ALT.....ALTITUDE	MISC.....MISCELLANEOUS
ANSI.....AMERICAN NATIONAL STANDARDS INSTITUTE	MIX.....MIXED
APN.....ASSESSOR'S PARCEL NUMBER	MPH.....MILES PER HOUR
APPROX.....APPROXIMATELY	MUTCD.....MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES
APWA.....AMERICAN PUBLIC WORKS ASSOCIATION	
ARV.....AIR RELEASE VALVE	N.....NORTH
ASCE.....AMERICAN SOCIETY OF CIVIL ENGINEERS	NAC.....NEVADA ADMINISTRATIVE CODE
ASTM.....AMERICAN SOCIETY OF TESTING AND MATERIALS	NDEP.....NEVADA DIVISION OF ENVIRONMENTAL PROTECTION
@.....AT	NDOT.....NEVADA DEPARTMENT OF TRANSPORTATION
	NE.....NORTHEAST
BC.....BEGIN CURVE	NEC.....NATIONAL ELECTRIC CODE
BCR.....BEGINNING OF CURB RETURN	NFIP.....NATIONAL FLOOD INSURANCE PROGRAM
BFE.....BASE FLOOD ELEVATION	NSF.....NATIONAL SANITATION FOUNDATION
BLD.....BUILDING	NO.....NUMBER
BOM.....BOTTOM OF WALL	NOAA.....NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
BS.....BOTH SIDES	NOI.....NOTICE OF INTENT
BW.....BACK OF WALK	NRCS.....NATIONAL RESOURCE CONSERVATION SERVICE
BW.....BARBED WIRE	NRS.....NEVADA REVISED STATUTES
CAP.....CORRUGATED ALUMINUM PIPE	NTS.....NOT TO SCALE
CAPA.....CORRUGATED ALUMINUM PIPE ARCH	NW.....NORTHWEST
CBS.....CURBS AND GUTTER	NWS.....NATIONAL WEATHER SERVICE
CB.....CATCH BASIN	OC.....ON CENTER
CC.....CARSON CITY	OD.....OUTER DIAMETER
CF.....CUBIC FOOT	OSHA.....OCCUPATIONAL SAFETY AND HEALTH ACT OF 1970
CHL.....CHAIN LINK	O/H.....OVERHEAD
CI.....CURB INLET(THROUGH)	
CL.....CENTER LINE	±.....PLUS OR MINUS
CMP.....CORRUGATED METAL PIPE	P.....POWER
CO.....CLEAN OUT	PC.....POINT OF CURVATURE
COMP.....COMPACTION	PDDL.....PADDLE
CON.....CONIFEROUS	PE.....PROFESSIONAL ENGINEER LICENSED BY THE STATE OF NEVADA
CRN.....CROWN OF ROAD	PE.....POLY ETHYLENE
CSP.....CORRUGATED STEEL PIPE	PED.....PEDESTAL
CSPA.....CORRUGATED STEEL PIPE ARCH	PEDX.....PEDESTRIAN CROSSING
CUL.....CULVERT INVERT	PK.....PARKING
CT.....CUBIC YARD	P.....PERCENT
	P/L.....PROPERTY LINE
*.....DEGREES	PMF.....PROBABLE MAXIMUM FLOOD
D.....DIRT	PNT.....POINT
DEC.....DECIDUOUS	PNT.....PAINT MARK
DF.....DEEPEND FOOTING	PO.....PUSH ON
DG.....DECOMPOSED GRANITE	PSI.....POUNDS PER SQUARE INCH
DI.....DROP INLET	PT.....POINT OF TANGENCY
DIA(Φ).....DIAMETER	PUE.....PUBLIC UTILITY EASEMENT
	PVC.....POLYVINYL CHLORIDE
E.....EAST	
EA.....EACH	R.....RADIUS
EC.....END CURVE	R.....ROCK
ECR.....END OF CURB RETURN	R.....RISER
ED.....EDGE	RB.....RIVER BED
EGL.....ENERGY GRADE LINE	RCBC.....REINFORCED CONCRETE BOXED CULVERT
ELEG.....ELECTRICAL	RCF.....REINFORCED CONCRETE PIPE
ELEV.....ELEVATION	RO.....RIGHT OF WAY
EP.....EDGE OF PAVEMENT	RTC.....REGIONAL TRANSPORTATION COMMISSION OF DOUGLAS COUNTY
EPA.....ENVIRONMENTAL PROTECTION AGENCY	
EVC.....END VERTICAL CURVE	S.....SIGN
EW.....EDGE OF WATER	S.....SLOPE
EX.....EXISTING	S.....SOUTH
	SAD.....SURFACE AREA DISTURBANCE
F.....FAHRENHEIT	SD.....STORM DRAIN
FC.....FACE OF CURB	SDPH.....STORM DRAIN MANHOLE
FC.....FIRE CONNECTION	SDR.....STANDARD DIMENSION RATIO
FEMA.....FEDERAL EMERGENCY MANAGEMENT AGENCY	SE.....SOUTHEAST
FF.....FINISHED FLOOR	SET.....SET MONUMENT, CORNER OR CONTROL POINT
FG.....FINISHED GRADE	SF.....SQUARE FOOT(FEET)
FH.....FIRE HYDRANT	SPP.....STRUCTURAL PLATE PIPE
FL.....FLOWLINE	SPPA.....STRUCTURAL PLATE PIPE ARCH
FENCE.....FENCE	SRV.....SERVICE
FND.....FOUND MONUMENT, CORNER OR CONTROL POINT	SS.....SANITARY SENER
FS.....FIRE STUB	SSMH.....SANITARY SEWER MANHOLE
FT(').....FOOT(FEET)	STA.....STATION
	STB.....STUB
G.....GAS	STD.....STANDARD
G.....GATE	SW.....SOUTHWEST
GA.....GUY ANCHOR	S/W.....SIDEWALK
GB.....GRADE BREAK	SWPPP.....STORMWATER POLLUTION PREVENTION PLAN
GID.....GENERAL IMPROVEMENT DISTRICT	
GP.....GUY POLE	T.....TELEPHONE
GPM.....GALLONS PER MINUTE	TBC.....TOP BACK OF CURB
GR.....GRAVEL	TC.....TOP OF CURB
GS.....GROUND SHOT	TRB.....TRANSPORTATION RESEARCH BOARD
	TOE.....TOE OF SLOPE
H/C.....HANDICAP	TOP.....TOP OF SLOPE
HDPE.....HIGH DENSITY POLYETHYLENE	TOW.....TOP OF WALL
HDS.....HYDRAULIC DESIGN SERIES	TR.....TREE
HEC.....HYDRAULIC ENGINEERING CIRCULAR	TRF.....TRAFFIC CONTROL
HERCP.....HORIZONTAL ELLIPTICAL REINFORCED CONCRETE PIPE	TV.....TELEVISION
HGL.....HYDRAULIC GRADE LINE	TYP.....TYPICAL
HH.....HAND HOLE	
HORIZ.....HORIZONTAL	U.....UTILITY
HW.....HOG WIRE	UBC.....UNIFORM BUILDING CODE
	UG.....UNDERGROUND
ID.....INNER DIAMETER	UMC.....UNIFORM MECHANICAL CODE
IE.....INVERT ELEVATION	UNO.....UNLESS NOTED OTHERWISE
IN(').....INCH	UPC.....UNIFORM PLUMBING CODE
INC.....INCORPORATED	USACE.....UNITED STATES ARMY CORPS OF ENGINEERS
INTX.....INTERSECTION	USBR.....UNITED STATES BUREAU OF RECLAMATION
IRRIG.....IRRIGATION	USGS.....UNITED STATES GEOLOGICAL SURVEY
ITE.....INSTITUTE OF TRANSPORTATION ENGINEERS	
	V.....VALVE
LAT.....LATERAL	VA.....VAULT
LOS.....LEVEL OF SERVICE	VC.....VERTICAL CURVE
LS.....LUMP SUM	VG.....VALLEY GUTTER
LT.....LIGHT	VERT.....VERTICAL
	VPC.....VERTICAL POINT OF CURVATURE
M.....METER	VPT.....VERTICAL POINT OF TANGENCY
MAX.....MAXIMUM	
MGD.....MILLION GALLONS PER DAY	N.....WEST
MGSD.....MINDEN GARDNERVILLE SANITATION DISTRICT	W.....WITH
MH.....MANHOLE	WEF.....WATER ENVIRONMENT FEDERATION
	WL.....WALL
	WK.....WALKWAY
	WV.....WATER GATE VALVE
	YR.....YEAR

NOTES

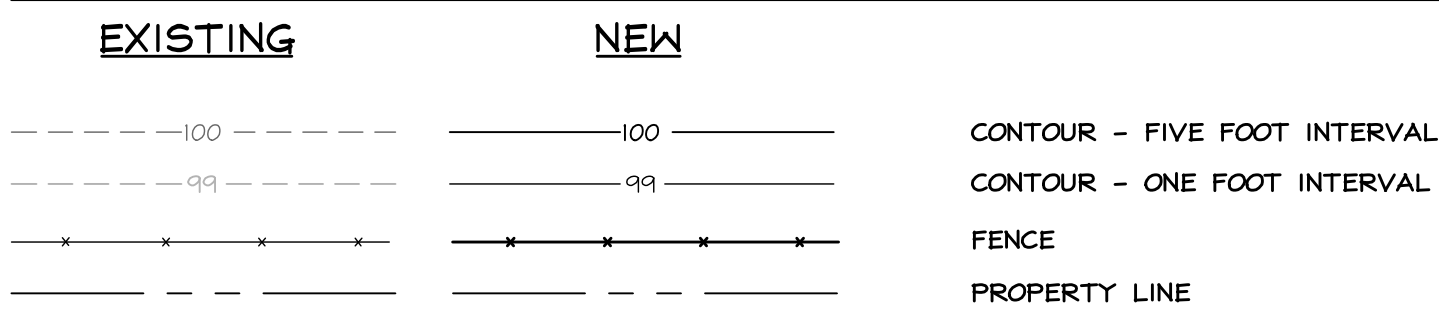
GENERAL

1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE GENERAL SAFETY DURING CONSTRUCTION AND ALL WORK SHALL CONFORM TO PERTINENT SAFETY REGULATIONS AND CODES.
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE LOCATION AND/OR PROTECTION OF ALL EXISTING UTILITIES AND/OR STRUCTURES ADJACENT TO IMPROVEMENTS DURING CONSTRUCTION.
3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL EXCAVATION AND SHORING PROCEDURES.
4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR NOTIFYING THE ENGINEER OF ANY DISCREPANCIES IN THE IMPROVEMENT PLANS.
5. CONTRACTOR SHALL OBTAIN A SWPPP AND NOI WITH THE STATE OF NEVADA, PRIOR TO CONSTRUCTION.
6. THE CONTRACTOR SHALL MAINTAIN A CLEAN PROJECT SITE, REMOVING CONSTRUCTION DEBRIS AT THE END OF EACH ACTIVITY. THE CONTRACTOR SHALL MAINTAIN DEBRIS FREE CONSTRUCTION ROUTES, ADJACENT STREETS AND STORM DRAIN SYSTEMS.

SITE & GRADING

1. ALL WORK SHALL BE DONE IN ACCORDANCE WITH THE OSHA REQUIREMENTS FOR EXCAVATION, THE "STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION" 2012 EDITION, DOUGLAS COUNTY STANDARDS, AND SPECIAL REQUIREMENTS OF THE PERMIT. VIOLATIONS WILL RESULT IN THE STOPPAGE OF ALL WORK UNTIL THE VIOLATION IS CORRECTED.
2. NO WORK SHALL BE STARTED WITHOUT FIRST NOTIFYING THE DISTRICT MANAGER, ENGINEER AND AFFECTED PROPERTY OWNER(S) AT LEAST 2 WORKING DAYS BEFORE WORK IS COMMENCED.
3. SLOPES SHALL BE NO STEEPER THAN 3 HORIZONTAL TO 1 VERTICAL.
4. FILLS SHALL BE PLACED IN ACCORDANCE WITH THE REQUIREMENTS OF THE "STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION, 2012 EDITION".
5. FILL AREAS SHALL BE CLEARED OF VEGETATION AND DEBRIS, SCARIFIED, AND BE APPROVED BY THE ENGINEER OF RECORD PRIOR TO THE PLACING OF FILL.
6. PROTECTIVE MEASURES AND TEMPORARY DRAINAGE PROVISIONS SHALL BE USED TO PREVENT EXCESSIVE PONDING AND PROTECT ADJOINING PROPERTIES DURING CONSTRUCTION OF IMPROVEMENTS.
7. DUST SHALL BE CONTROLLED BY THE CONTRACTOR TO THE SATISFACTION OF THE ENGINEER, AND IN ACCORDANCE WITH THE AIR QUALITY PERMIT FROM THE NEVADA DIVISION OF ENVIRONMENTAL PROTECTION WHEN REQUIRED. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING THE PERMITS WHEN REQUIRED.
8. ALL STREETS SHALL BE MAINTAINED FREE OF DUST AND MUD CAUSED BY GRADING OPERATIONS. ALL OPERATIONS SHALL COMPLY WITH THE REQUIREMENTS OF THE STORMWATER DISCHARGE PERMIT FROM THE NEVADA DIVISION OF ENVIRONMENTAL PROTECTION WHEN REQUIRED. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING THE PERMITS WHEN REQUIRED.
9. THE OWNER'S ENGINEER OR SURVEYOR SHALL SET GRADE STAKES FOR ALL GRADING.
10. THE ENGINEER SHALL APPROVE ALL GRADING INCLUDING COMPACTION REQUIREMENTS AND THE STABILITY OF SLOPES CREATED, OR REMAINING.
11. IN THE EVENT OF CHANGES ARISING DURING CONSTRUCTION, THE CONTRACTOR SHALL BE RESPONSIBLE FOR NOTIFYING THE ENGINEER WHO WILL DETERMINE AN ACCEPTABLE SOLUTION AND REVISING THE PLANS FOR REVIEW AND APPROVAL BY THE OWNER. NO CHANGES IN THE DESIGN WILL BE PERMITTED UNLESS WRITTEN APPROVAL IS GIVEN BY THE ENGINEER.
12. EXISTING BANKS SHALL BE RE-GRADED AT 3:1 UNLESS OTHERWISE NOTED.
13. ROCK TOE PROTECTION SHALL BE INSTALLED IN ACCORDANCE WITH APPROVED DETAIL IN AREAS AS SHOWN ON SITE SPECIFIC PLAN. ROCK TOE PROTECTION SHALL BE PLACED WITHIN 5 DAYS OF FINAL BANK GRADING.
14. ALL DISTURBED AREAS SHALL BE RE-SEEDED BY OWNER WITH NATIVE SEED MIX. RE-SEEDING SHALL BE FURNISHED AND INSTALLED BY OWNER.
15. OWNER SHALL FURNISH AND INSTALL BIO-ENGINEERING TREATMENTS. CONTRACTOR SHALL BE RESPONSIBLE WITH ASSISTING OWNER BY EXCAVATING TO ALLOW FOR INSTALLATION AND BACKFILLING ONCE TREATMENT IS INSTALLED.
16. PROTECT EXISTING TREES AND RIPARIAN VEGETATION TO EXTENT POSSIBLE THROUGHOUT CONSTRUCTION. REMOVAL OF 6" DIAMETER TREES OR LARGER PROHIBITED WITHOUT OWNER APPROVAL UNLESS OTHERWISE NOTED.
17. NATIVE MATERIAL GENERATED FROM CHANNEL CLEARING OPERATIONS SHALL BE USED TO SHAPE FAILING BANKS TO CONTOURS AS SHOWN. EXCAVATE ONLY ENOUGH MATERIAL NECESSARY TO CONSTRUCT FAILING BANKS.
18. WORK SHALL BE PERFORMED WITHIN THE MEAN-HIGH WATER LEVEL WHICH IS COMMONLY REFEREED TO AS THE "CHANNEL BED". THIS INCLUDES STOCKPILING OF MATERIAL. CONTRACTOR SHALL ENSURE DE-WATERING PLAN ALLOWS FOR PROPER PROTECTION OF STOCKPILES AND EQUIPMENT.
19. RIVERINE ENVIRONMENTS ARE DYNAMIC SYSTEMS & SUBJECT TO CHANGE. THESE PLANS ARE BASED UPON A TOPOGRAPHIC SURVEYED PERFORMED IN JUNE, 2018. PRIOR TO COMMENCING CONSTRUCTION THE CONTRACTOR SHALL INVESTIGATE THE SITE & SATISFY HIMSELF THAT CURRENT CONDITIONS GENERALLY MATCH THE PLANS. IF CURRENT SITE CONDITIONS ARE SIGNIFICANTLY DIFFERENT TO WARRANT A CHANGE IN CONTRACT PRICE OR SCHEDULE, THE CHANGE ORDER SHALL BE AGREED TO PRIOR TO COMMENCING CONSTRUCTION.
20. REMOVE & REPLACE EXISTING FENCES AS NECESSARY TO FACILITATE CONSTRUCTION. COORDINATE WITH OWNER PRIOR TO CONSTRUCTION. TEMPORARY FENCING MAY BE REQUIRED.

LINE TYPES



BASIS OF COORDINATES

HORIZONTAL: NAD 83, NSPC WEST ZONE PER OPUS AT ROA NO. 103

DATUM

VERTICAL: NAVD88 PER OPUS AT ROA NO. 103

SITE BENCHMARK SHOWN ON SHEET C1.

ELEVATION: 4663.64

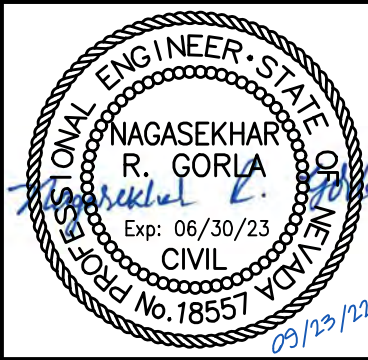
NO.	DATE	REVISION BLOCK	BY



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P 775.782.2522 F 775.782.7084  
Diamond Placery, Units 1B  
Reno, NV 89521  
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2022 CARSON RIVER BANK STABILIZATION PROJECTS  
CARSON VALLEY CONSERVATION DISTRICT

NOTES, LEGEND &  
ABBREVIATIONS



DRAWN: JT	JOB: 1702-004
ENGINEER: NRG	DRAWING: SEE PLOT STAMP
SCALE:	SHEET: C2
DATE: 09.23.2022	OF: 7 SHEETS







SCALE: 1" = 40'

CONSTRUCTION NOTE

1. REGRADE FAILED RIVER BANKS BY CUTTING FROM PROPOSED CREST LINE AT THE SLOPE NOTED ON PLANS. USE MATERIAL GENERATED FROM THE CUT AS FILL IN CONJUNCTION WITH ADDITIONAL FILL MATERIAL FROM THE BORROW AREAS AS NECESSARY. SEE RIVER BANK REGRADE DETAIL ON C6.
2. INSTALL 5,854 S.F. RIP-RAP TOE PROTECTION TO A HEIGHT OF 3' PER DETAIL ON SHEET C6.
3. INSTALL LOG VEIN (OR APPROVED ALTERNATE) ±5' FROM TOP OF NEW BANK AND ROTATE UPSTREAM ±30°. SPACE ±150' TO ±175'. EXTEND LOG VEIN A MINIMUM OF 10' BEYOND TOE OF NEW SLOPE. SEE SHEET C6 FOR DETAIL. FIELD ADJUSTMENT OF ANGLE AND LENGTH MAY BE NECESSARY DUE TO THE DYNAMIC NATURE OF THE SITE.
4. DEPTH OF EXCAVATION IN BORROW AREA SHALL NOT EXCEED ELEVATION OF ADJACENT PROPOSED TOE IN PROJECT AREA. TRANSITION FROM BORROW AREA TO EX. UNDISTURBED GROUND SHALL BE MADE AT 5:1 (MAX.) IN A SMOOTH & WORKMAN-LIKE MANNER.
5. PROTECT EXISTING TREES AND RIPARIAN VEGETATION TO THE EXTENT POSSIBLE THROUGHOUT CONSTRUCTION. REMOVAL OF TREES IN EXCESS OF 6" IN DIAMETER IS PROHIBITED WITHOUT OWNER APPROVAL UNLESS OTHERWISE NOTED.

LEGEND

- ROCK TOE PROTECTION, ROCK REFUSAL TRENCH
- LOG VEIN SEE DETAIL ON SHEET C6

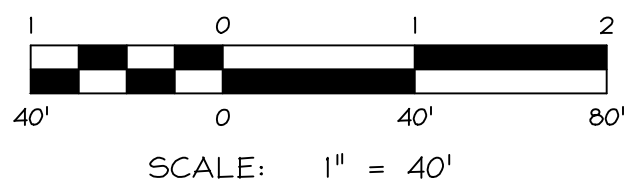
ESTIMATED QUANTITIES

EARTH WORK: ±693 L.F. 14,391 S.F.  
CUT = 48 CYS  
FILL = 1,205 CYS  
NET FILL = 1,157 CYS  
TOTAL OF 4 LOG VEINS THIS SHEET.  
NOTE: NO GUARANTEE IS MADE CONCERNING THE ACCURACY OF THE ESTIMATED QUANTITIES. THE CONTRACTOR SHALL DETERMINE ACTUAL QUANTITIES OF WORK ASSOCIATED WITH THE PROJECT.

LOG VEIN LOCATION		
NAME	NORTHING	EASTING
LOG VEIN 1	14,682,155.95	2,273,512.13
LOG VEIN 2	14,682,144.47	2,273,653.06
LOG VEIN 3	14,682,202.97	2,273,769.57
LOG VEIN 4	14,682,276.84	2,273,920.91

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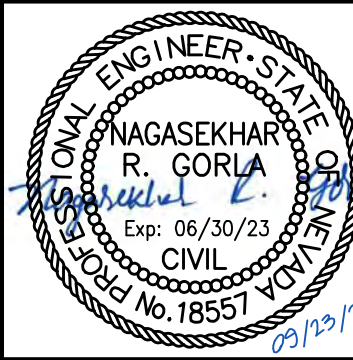
NO.	DATE	REVISION BLOCK	BY



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RENO 9560 Double  
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2022 CARSON RIVER BANK STABILIZATION PROJECTS  
CARSON VALLEY CONSERVATION DISTRICT

FLYING J RANCH  
SITE PLAN - LOCATION 3

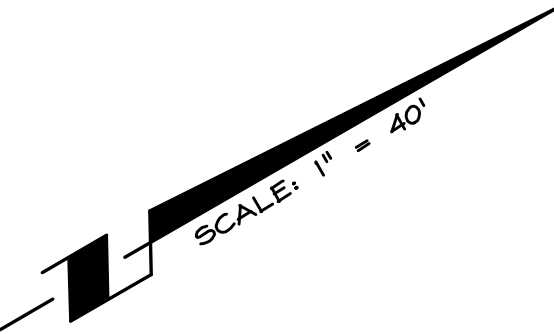
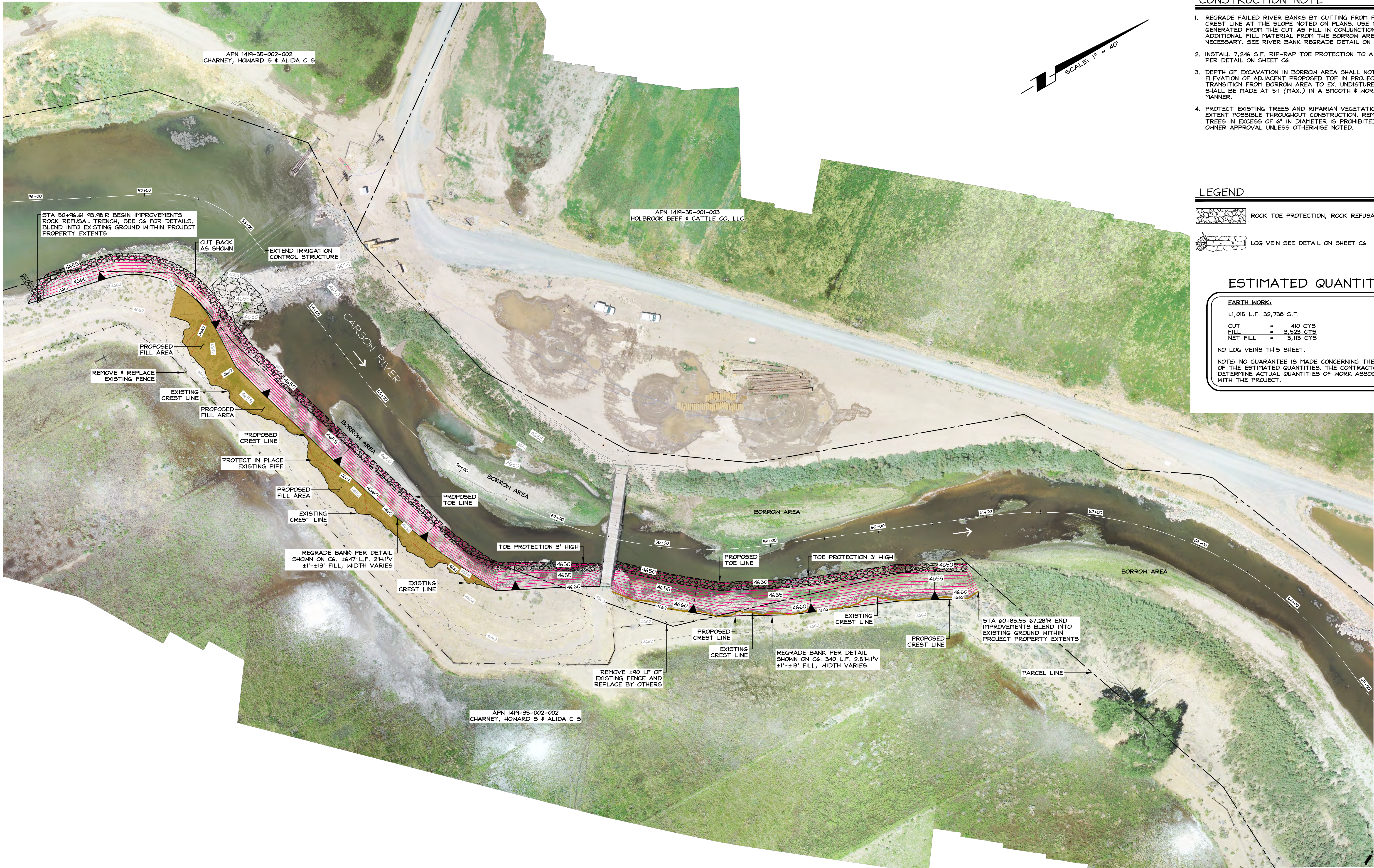


DRAWN: JT	JOB: 1702-004
ENGINEER: NRG	DRAWING: SEE PLOT STAMP
SCALE: 1" = 40'	SHEET: C3
DATE: 09.23.2022	OF: 7 SHEETS



BID SET - 09.23.2022





CONSTRUCTION NOTE

1. REGRADE FAILED RIVER BANKS BY CUTTING FROM PROPOSED CREST LINE AT THE SLOPE NOTED ON PLANS. USE MATERIAL GENERATED FROM THE CUT AS FILL IN CONJUNCTION WITH ADDITIONAL FILL MATERIAL FROM THE BORROW AREAS AS NECESSARY. SEE RIVER BANK REGRADE DETAIL ON C6.
2. INSTALL 7,246 S.F. RIP-RAP TOE PROTECTION TO A HEIGHT OF 3' PER DETAIL ON SHEET C6.
3. DEPTH OF EXCAVATION IN BORROW AREA SHALL NOT EXCEED ELEVATION OF ADJACENT PROPOSED TOE IN PROJECT AREA. TRANSITION FROM BORROW AREA TO EX. UNDISTURBED GROUND SHALL BE MADE AT 5:1 (MAX.) IN A SMOOTH & WORKMAN-LIKE MANNER.
4. PROTECT EXISTING TREES AND RIPARIAN VEGETATION TO THE EXTENT POSSIBLE THROUGHOUT CONSTRUCTION. REMOVAL OF TREES IN EXCESS OF 6" IN DIAMETER IS PROHIBITED WITHOUT OWNER APPROVAL UNLESS OTHERWISE NOTED.

LEGEND

- ROCK TOE PROTECTION, ROCK REFUSAL TRENCH
- LOG VEIN SEE DETAIL ON SHEET C6

ESTIMATED QUANTITIES

EARTH WORK:

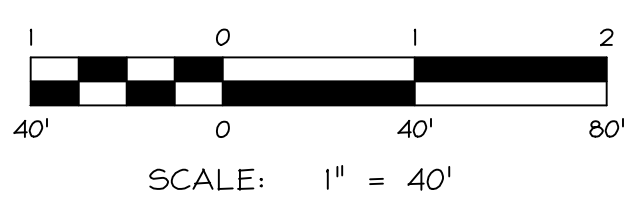
±1,015 L.F. 32,730 S.F.

CUT = 410 CYS  
FILL = 3,523 CYS  
NET FILL = 3,113 CYS

NO LOG VEINS THIS SHEET.  
NOTE: NO GUARANTEE IS MADE CONCERNING THE ACCURACY OF THE ESTIMATED QUANTITIES. THE CONTRACTOR SHALL DETERMINE ACTUAL QUANTITIES OF WORK ASSOCIATED WITH THE PROJECT.

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NO.	DATE	REVISION BLOCK	BY



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2022 CARSON RIVER BANK STABILIZATION PROJECTS  
CARSON VALLEY CONSERVATION DISTRICT

CHARNEY RANCH  
SITE PLAN - LOCATION 3

**Professional Engineer Seal**  
NAGASEKHAR R. GORLA  
Exp: 06/30/23  
Nevada State Board of Civil Engineers  
No. 18551

DRAWN: JT	JOB: 1702-004
ENGINEER: NRG	DRAWING: SEE PLOT STAMP
SCALE: 1" = 40'	SHEET: C4
DATE: 09.23.2022	OF: 7 SHEETS



BID SET - 09.23.2022





CONSTRUCTION NOTE

1. REGRADE FAILED RIVER BANKS BY CUTTING FROM PROPOSED CREST LINE AT THE SLOPE NOTED ON PLANS. USE MATERIAL GENERATED FROM THE CUT AS FILL IN CONJUNCTION WITH ADDITIONAL FILL MATERIAL FROM THE BORROW AREAS AS NECESSARY. SEE RIVER BANK REGRADE DETAIL ON C6.
2. INSTALL 4,474 S.F. RIP-RAP TOE PROTECTION TO A HEIGHT OF 3' PER DETAIL ON SHEET C6.
3. INSTALL LOG VEIN (OR APPROVED ALTERNATE) ±5' FROM TOP OF NEW BANK AND ROTATE UPSTREAM ±30°. SPACE ±150' TO ±175'. EXTEND LOG VEIN A MINIMUM OF 10' BEYOND TOE OF NEW SLOPE. SEE SHEET C6 FOR DETAIL. FIELD ADJUSTMENT OF ANGLE AND LENGTH MAY BE NECESSARY DUE TO THE DYNAMIC NATURE OF THE SITE.
4. DEPTH OF EXCAVATION IN BORROW AREA SHALL NOT EXCEED ELEVATION OF ADJACENT PROPOSED TOE IN PROJECT AREA. TRANSITION FROM BORROW AREA TO EX. UNDISTURBED GROUND SHALL BE MADE AT 5:1 (MAX.) IN A SMOOTH & WORKMAN-LIKE MANNER.
5. PROTECT EXISTING TREES AND RIPARIAN VEGETATION TO THE EXTENT POSSIBLE THROUGHOUT CONSTRUCTION. REMOVAL OF TREES IN EXCESS OF 6" IN DIAMETER IS PROHIBITED WITHOUT OWNER APPROVAL UNLESS OTHERWISE NOTED.

LEGEND

- ROCK TOE PROTECTION, ROCK REFUSAL TRENCH
- ROCK STREAM BARB SEE DETAIL ON SHEET C6

ESTIMATED QUANTITIES

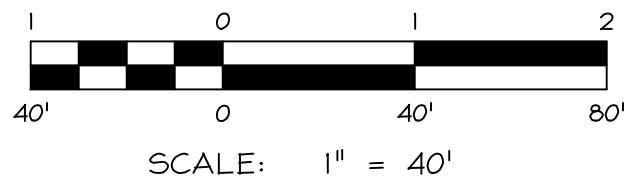
EARTH WORK: ±1,462 L.F. 34,554 S.F.  
CUT = 715 CYS  
FILL = 3,321 CYS  
NET FILL = 2,606 CYS

TOTAL OF 4 ROCK STREAM BARBS THIS SHEET.

NOTE: NO GUARANTEE IS MADE CONCERNING THE ACCURACY OF THE ESTIMATED QUANTITIES. THE CONTRACTOR SHALL DETERMINE ACTUAL QUANTITIES OF WORK ASSOCIATED WITH THE PROJECT.

STREAM BARB LOCATION		
NAME	NORTHING	EASTING
STREAM BARB 1	14,674,669.12	2,272,717.50
STREAM BARB 2	14,674,848.32	2,272,753.77
STREAM BARB 3	14,675,001.80	2,272,686.47
STREAM BARB 4	14,675,115.44	2,272,551.59

NO.	DATE	REVISION BLOCK	BY



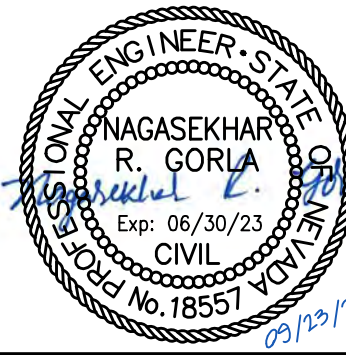
**R/O Anderson**  
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MINDEN 9360 Double  
R.O. Box 2223 Reno, NV 89501  
775.782.2522 F 775.782.7084

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2022 CARSON RIVER BANK STABILIZATION PROJECTS  
CARSON VALLEY CONSERVATION DISTRICT

500 TWO RANCH  
SITE PLAN - LOCATION 1



DRAWN: JT	JOB: 1702-004
ENGINEER: NRG	DRAWING: SEE PLOT STAMP
SCALE: 1" = 40'	SHEET: C5
DATE: 09.23.2022	OF: 7 SHEETS



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BID SET - 09.23.2022

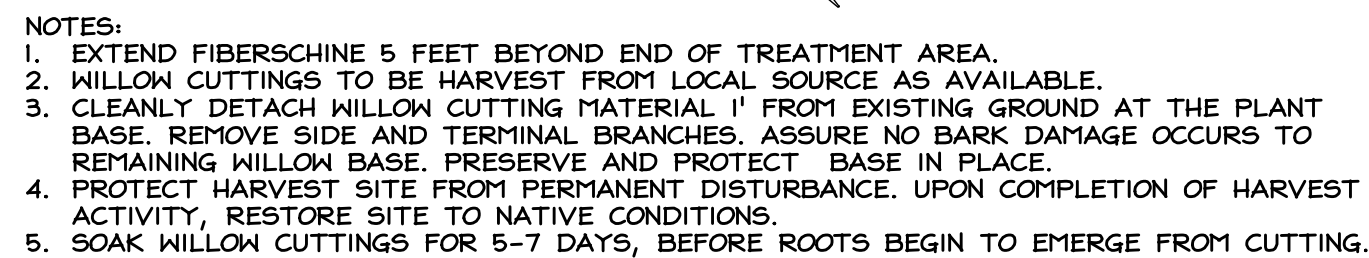


1. MEAN STONE SIZE.		
TABLE 200.07.04-2		
Test	Test Method	Requirements
Resistance to Wear (percent)	ASTM C 535 (1)	45 Maximum
Absorption (percent)	ASTM C 127	4.2 Maximum
Apparent Specific Gravity	ASTM C 97	2.5 Minimum (2)
Durability	ASTM D 3744	52 Minimum

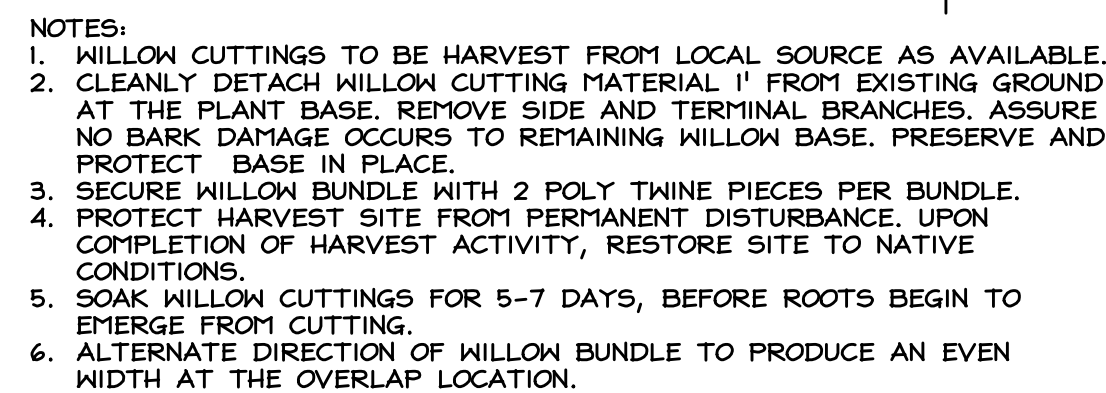
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## NO SCALE



NOT TO SCALE



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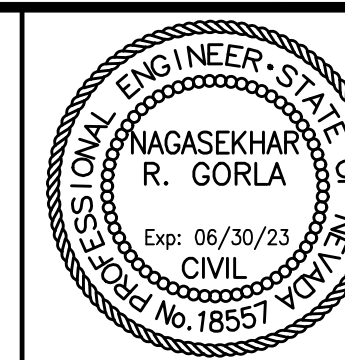
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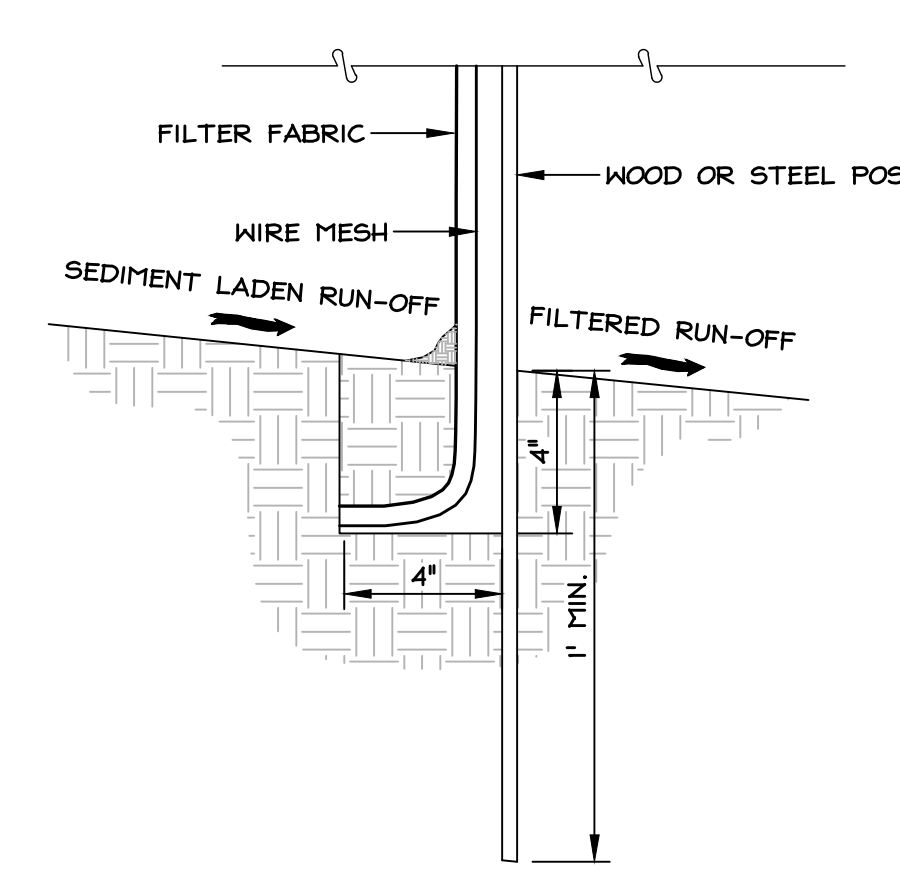
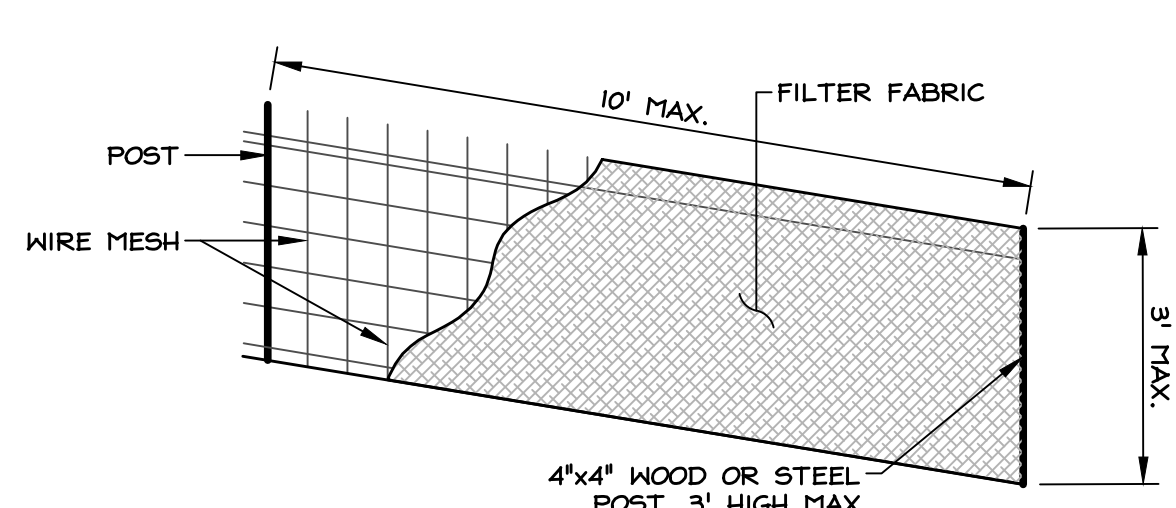
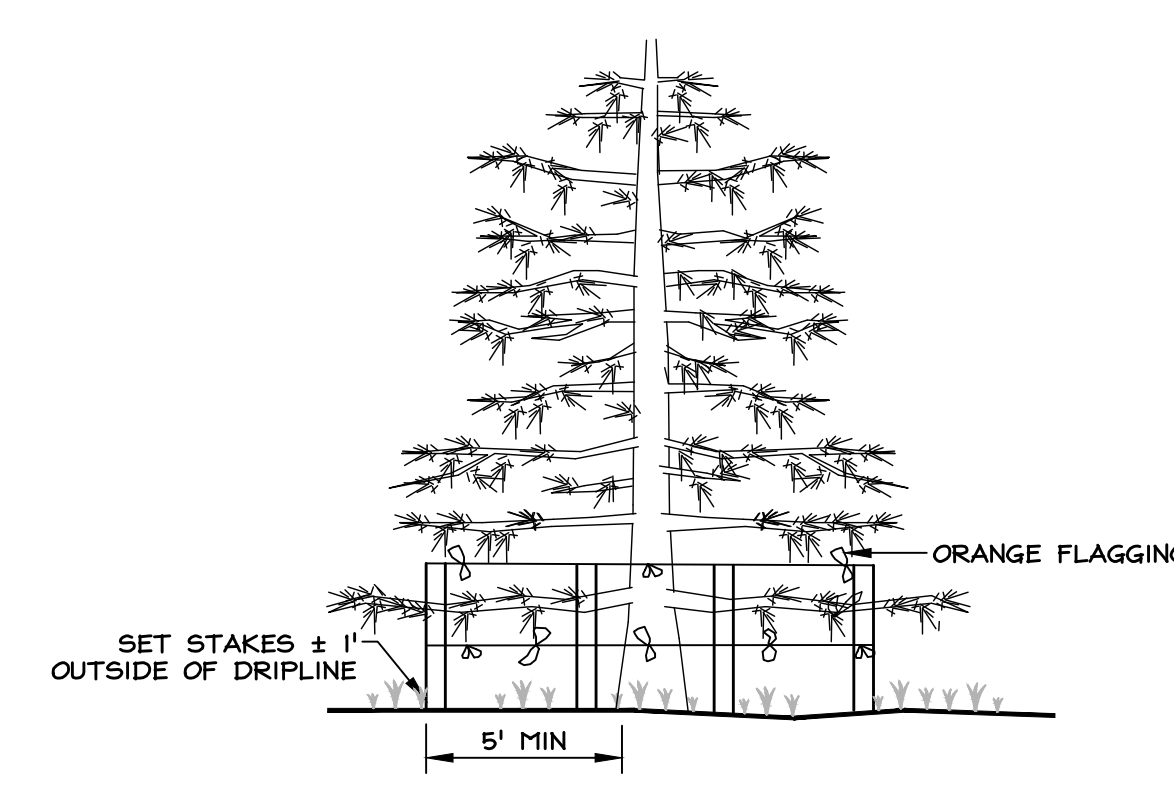
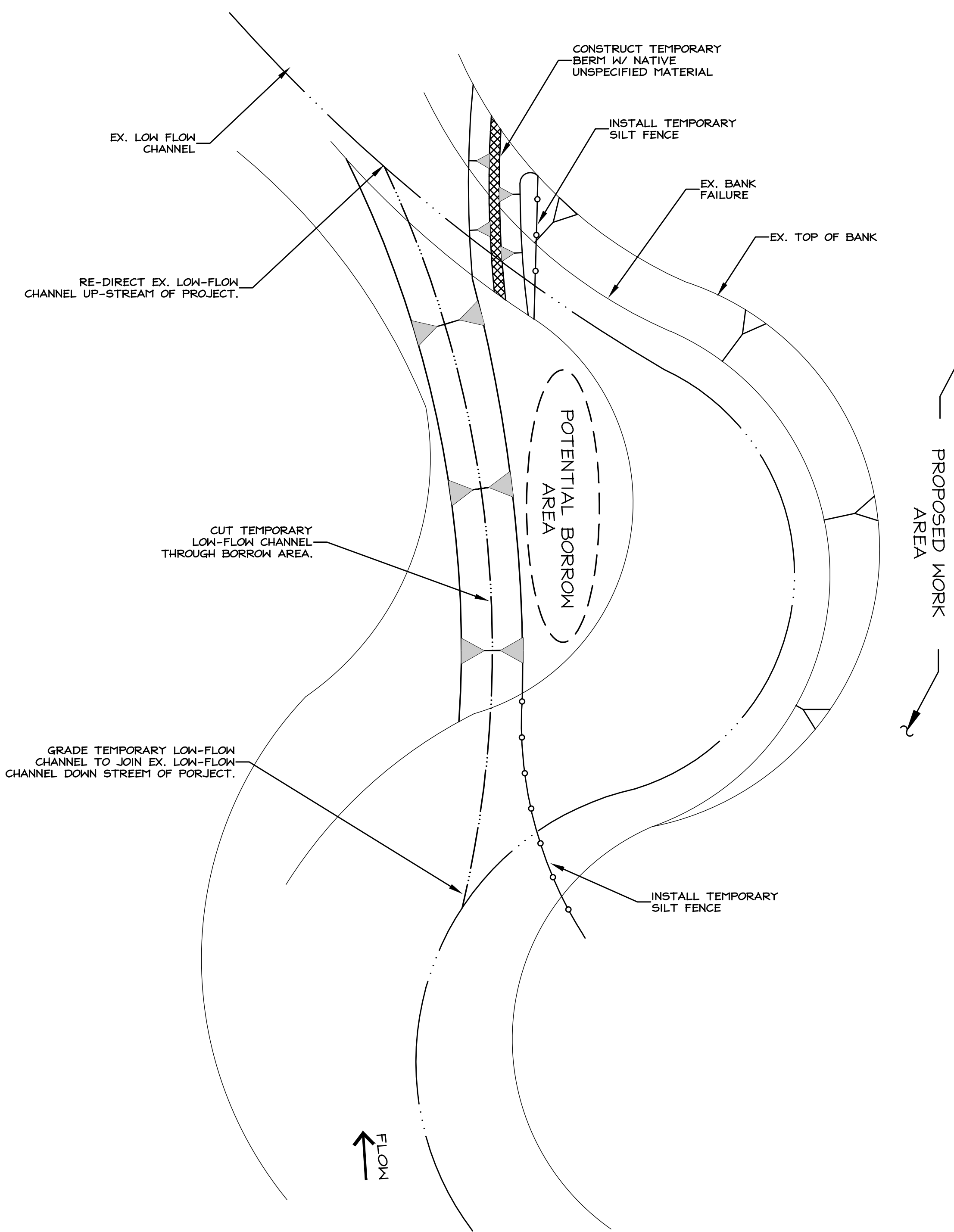
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p 775.782.2322 p 775.782.2322  
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## DETAILS



DRAWN:	JT	JOB:	1702-004
ENGINEER:	NRG	DRAWING:	SEE PLOT STAMP
SCALE:	AS NOTED	SHEET:	C6
DATE:	09.23.2022	OF:	7 SHEETS





- GENERAL NOTES:**
- SOME TYPES OF FILTER FABRIC FENCE HAVE STAKES INCLUDED AND DO NOT REQUIRE THE MATERIALS LISTED.
  - THE FABRIC SHOULD NOT EXCEED MORE THAN 3' ABOVE THE GROUND. CUT FILTER FABRIC FROM A CONTINUOUS ROLL TO AVOID HAVING JOINTS. WHERE JOINTS ARE NECESSARY, SPLICE THE FABRIC ONLY AT A POST, WITH AT LEAST 6" OF OVERLAP, AND FASTEN BOTH ENDS SECURELY TO THE POST.
  - INSPECT PERIODICALLY AND AFTER EACH STORM. REPLACE DAMAGED FENCE.
  - CLEAN OUT THE SEDIMENT BEFORE IT REACHES 1/3 FENCE HEIGHT. DEPOSIT THE SEDIMENT WHERE IT WILL NOT ENTER A DRAINAGEWAY.
- SILT FENCE INSTALLATION INSTRUCTIONS:**
- SPACE POSTS NO MORE THAN 10' APART AND DRIVE THEM AT LEAST 1' INTO THE GROUND. ALIGN THE FENCE ALONG THE SLOPE CONTOUR, CURVING IT SLIGHTLY UPHILL TO AVOID END RUNS.
  - DIG A 4"x4" TRENCH ALONG THE UPHILL SIDE OF THE POSTS.
  - FASTEN WIRE MESH TO UPHILL SIDE OF POST WITH STAPLES (ON WOOD POSTS) OR WIRE (ON STEEL POSTS). EXTEND MESH TO BOTTOM OF TRENCH. (DO NOT ATTACH MESH OR FABRIC TO TREES).
  - FASTEN FILTER FABRIC TO UPHILL SIDE OF POSTS WITH STAPLES OR WIRE. EXTEND FABRIC 8" INTO TRENCH.
  - BACKFILL TRENCH AND COMPACT THE SOIL.
- MATERIALS:**
- SILT FENCE:
    - FILTER FABRIC SHALL BE 42" WIDE, TENSILE STRENGTH 120 LBS., EQUIVALENT OPENING SIZE 70.
    - POSTS SHALL BE 5' LONG (MIN.), 4"x4" WOOD OR 1.3 LBS./FT STEEL.
    - WIRE MESH SHALL BE 42" WIDE, 6" MESH, 16 GAUGE WIRE (MINIMUM).
    - STAPLES (FOR WOOD POSTS) SHALL BE HEAVY DUTY 1" LONG, 14 GAUGE (MINIMUM).
    - WIRE (FOR STEEL POSTS).

- GENERAL NOTES**
- PLAN SHOWN IS GENERIC & WILL REQUIRE ADJUSTMENT IN FIELD BY CONTRACTOR.
  - PLAN ASSUMES WORK IS CONDUCTED AT EXTREMELY LOW FLOW CONDITIONS.
  - CONTRACTOR SHALL SATISFY HIMSELF THAT LOCATION WHERE TEMPORARY LOW-FLOW CHANNEL IS CUT WILL ALLOW ENOUGH BORROW AREA TO SATISFY FILL REQUIREMENTS OF PROJECT.
  - LOW-FLOW CHANNEL WILL BE FILLED & RESTORED TO EX. CONDITIONS.

- SPILL PREVENTION AND RESPONSE**
- CONTRACTOR SHALL STEAM CLEAN ALL EQUIPMENT THAT WILL BE WORKING IN RIVER BED AT SHOP PRIOR TO COMMENCING CONSTRUCTION.
  - ALL EQUIPMENT SHALL BE CHECKED FOR LEAKS AND REPAIRED PRIOR TO COMMENCING CONSTRUCTION.
  - CONTRACTOR SHALL INSURE INTEGRITY OF SILT FENCE AND STRAW BALE BARRIERS DURING THE COURSE OF CONSTRUCTION.
  - CONTRACTOR SHALL USE DRIP PANS OR ABSORBENT MATS DURING FUELING AND MAINTENANCE TO PROTECT AGAINST SPILLS.
  - SPILLED PETROLEUM PRODUCTS, CONTAMINATED SOILS OR WATER, AND ACCUMULATED SEDIMENTS SHALL BE CLEANED UP AND PROPERLY DISPOSED OF AT A LICENSED LANDFILL. DISCHARGE OF SUCH MATERIALS TO THE RIVER CHANNEL OR DITCHES IS PROHIBITED.

- REVEGETATION**
- ALL DISTURBED AREAS, CUT & FILL SLOPES SHALL BE RE-SEEDDED. THE SEED MIX, APPLICATION RATE ETC. SHALL BE SPECIFIED BY THE CVCD.
  - REVEGETATED AREAS WILL BE INSPECTED AT COMPLETION OF INSTALLATION & ACCEPTANCE SUBJECT TO COMPLIANCE WITH SPECIFIED MATERIALS & INSTALLATION REQUIREMENTS. FOR ONE FULL GROWING SEASON AFTER PLANTING, CONTRACTOR SHALL GUARANTEE 30% COVERAGE BY SEEDING SPECIES & MULCH SUCH THAT THERE IS NO SIGNIFICANT EVIDENCE OF RILLS, GULLIES OR OTHER EVIDENCE OF EROSION. IF ADEQUATE COVERAGE IS NOT ACHIEVED, THE CONTRACTOR SHALL RE-SOIL, AMEND, RE-SEED OR RE-MULCH. THE ENGINEER, UPON CONTRACTOR'S REQUEST, WILL MAKE FINAL INSPECTION & ACCEPTANCE ONE FULL YEAR FOLLOWING COMPLETION OF SEEDING(THE MAINTENANCE PERIOD). PROVIDE NOTIFICATION AT LEAST 10 WORKING DAYS BEFORE REQUESTED INSPECTION DATE.

- GENERAL DE-WATERING & TEMPORARY EROSION CONTROL PLAN NOTES**
- IN CASE OF EMERGENCY CALL CARSON VALLEY CONSERVATION DISTRICT (RICH WILKINSON, @ 775-782-3661 X 3830 OR ENGINEER @ 775-782-2322).
  - CONTRACTOR MAY SUBMIT ALTERNATE DE-WATERING & EROSION CONTROL PLAN TO ENGINEER. SUBMITTAL SHALL BE MADE IN ADVANCE OF CONSTRUCTION ACTIVITIES FOR REVIEW & APPROVAL.
  - CONSTRUCTION SHALL BE SCHEDULED TO COINCIDE WITH PERIODS OF LOW FLOW IN THE RIVER.
  - RESTORE AREAS DISTURBED BY DE-WATERING ACTIVITIES TO PRE-CONSTRUCTION CONDITIONS.
  - ANY PASTURE FENCES DAMAGED, FAILING OR RELOCATED FOR CONSTRUCTION ACTIVITIES SHALL BE RESTORED TO EXISTING CONDITIONS AT TOP OF BANK.
  - DUST SHALL BE CONTROLLED BY THE CONTRACTOR TO THE SATISFACTION OF THE ENGINEER AND OWNER.
  - THE CONTRACTOR SHALL MAINTAIN A CLEAN PROJECT SITE, REMOVING CONSTRUCTION DEBRIS AT THE END OF EACH ACTIVITY DAY. TRASH WILL BE HAULED TO A LICENSED DISPOSAL FACILITY. NO CONSTRUCTION WASTE MATERIALS SHALL BE BURIED ON SITE.
  - THE CONTRACTOR SHALL MAINTAIN DEBRIS FREE CONSTRUCTION ROUTES, ADJACENT STREETS AND STORM DRAIN SYSTEMS.
  - A STANDBY CREW FOR EMERGENCY WORK SHALL BE AVAILABLE AT ALL TIMES. NECESSARY MATERIALS SHALL BE AVAILABLE ON-SITE AND STOCKPILED AT APPROVED LOCATIONS TO FACILITATE RAPID CONSTRUCTION OF TEMPORARY DEVICES OR TO REPAIR DAMAGED EROSION CONTROL MEASURES. CONTRACTOR SHALL PROVIDE OWNER WITH THE NAME & PHONE NUMBER OF EMERGENCY CONTACT AT THE PRE-CONSTRUCTION MEETING.
  - AFTER A RAINSTORM, ALL BMP'S AND GRADED SLOPE SURFACE PROTECTION MEASURES SHALL BE INSPECTED TO VERIFY CONTINUED SATISFACTORY OPERATION AND REPAIRED OR REPLACED IF NECESSARY.
  - ALL EROSION CONTROL MEASURES SHALL BE MAINTAINED IN GOOD WORKING ORDER. IF A REPAIR IS NECESSARY IT SHALL BE INITIATED WITHIN 24 HOURS OF REPORT.
  - FILL SLOPES AT THE PROJECT PERIMETER MUST DRAIN AWAY FROM THE TOP OF THE SLOPE AT THE CONCLUSION OF EACH WORKING DAY.
  - BUILT UP SEDIMENT SHALL BE REMOVED AS NECESSARY TO MAINTAIN PROPER FUNCTIONING OF THE BMP'S
  - ALL CONTROL MEASURES SHALL BE INSPECTED AT LEAST ONCE PER WEEK AND FOLLOWING ANY STORM EVENT OF 0.5 INCHES OR GREATER.
  - A MAINTENANCE INSPECTION REPORT WILL BE MADE AFTER EACH INSPECTION. THE REPORT WILL CONTAIN THE NAME OF THE INSPECTOR, MEASURES, AREAS INSPECTED, OBSERVED CONDITIONS, AND NOTE CHANGES NECESSARY.
  - REPORT RELEASES OF REPORTABLE QUANTITIES OF OIL OR HAZARDOUS MATERIALS (IF THEY OCCUR) TO NDEP AND THE OWNER WITHIN 24 HOURS.
  - FILTER FABRIC FENCES. IF THE FABRIC BECOMES CLOGGED, TORN, OR DEGRADES, IT SHOULD BE REPLACED. MAKE SURE THE STAKES ARE SECURELY DRIVEN IN THE GROUND AND ARE IN GOOD SHAPE (IE., NOT BENT, CRACKED, OR SPLINTERED, AND ARE REASONABLY PERPENDICULAR TO THE GROUND.) REPLACE DAMAGED STAKES.
  - SEDIMENT THAT ACCUMULATES IN THE BMP MUST BE PERIODICALLY REMOVED IN ORDER TO MAINTAIN BMP EFFECTIVENESS. SEDIMENT SHOULD BE REMOVED WHEN THE SEDIMENT ACCUMULATION REACHES ONE-THIRD OF THE BARRIER HEIGHT. SEDIMENT REMOVED DURING MAINTENANCE MAY BE INCORPORATED INTO EARTHWORK ON THE SITE OR DISPOSED AT AN APPROPRIATE LOCATION.
  - NO DE-WATERING UNTIL FLOWS EXCEED 400 CFS AS READ AT THE CARSON CITY GAUGE.



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