PROSSER ROADS AND TRAILS DRAINAGE IMPROVEMENTS PROJECT NEVADA COUNTY, CALIFORNIA

LOCATION MAP



SHEET INDEX

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CLIENT TRUCKEE RIVER WATERSHED COUNCIL BETH CHRISTMAN P.O. BOX 8568 TRUCKEE, CALIFORNIA 96162 TEL. (530) 550-8760 x1 GEOMORPHOLOGIST/ SITE CIVIL ENGINEER BALANCE HYDROLOGICS BRIAN HASTINGS, P.G. PETER KULCHAWIK, P.E. 12020 DONNER PASS ROAD, SUITE B1 TRUCKEE, CALIFORNIA 96161 TEL. (530) 550-9776



LEGEND:

EXISTING MAJOR CONTOUR: 10 FT INTERVAL	
2 FT INTERVAL	
EXISTING FLOWLINE	$\cdots \longrightarrow \cdots \longrightarrow \cdots$
EXISTING CULVERT	
EXISTING EDGE OF ROAD	
PROPERTY LINE (APPROX)	
GRADING LIMIT	
ROAD RESURFACING	
ARIZONA CROSSING	
ROLLING DIP CROSSING	\blacklozenge
ROLLING DIP CROSSING WITH ROC	СК — — — — — — — — — — — — — — — — — — —
EXCAVATION	
FILL PLACEMENT	

ABBREVIATIONS:

	FEET	INV	INVERT
**	INCH	LF	LINEAR FT
AB	AGGREGATE BASE	MAX	MAXIMUM
APPROX	APPROXIMATE	MIN	MINIMUM
ASTM	AMERICAN SOCIETY FOR	Ν	NORTHING
	TESTING AND MATERIALS	NIC	NOT IN CONTRACT
CMP	CORRUGATED METAL PIPE	NTS	NOT TO SCALE
DBH	DIAMETER AT BREAST HEIGHT	OC	ON CENTER
	(4' FROM GROUND)	PROP	PROPOSED
DIA, Ø	DIAMETER	STA	STATION
EG	EXISTING GROUND	STR	STRUCTURE
ELEV	ELEVATION	TDA	TAHOE DONNER ASSOCIATION
EX	EXISTING	TDLT	TRUCKEE DONNER LAND
FG	FINISH GRADE		TRUST
FT	FEET	TYP	TYPICAL
Н	HORIZONTAL	V	VERTICAL
IN	INCHES		

GENERAL NOTES:

- 1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VISITING THE PROJECT SITE TO VERIFY SITE CONDITIONS AND FOR COMPLETELY UNDERSTANDING THE REQUIRED SCOPE OF WORK SHOWN ON THESE DRAWINGS AND CONTAINED IN THE PROJECT SPECIFICATIONS.
- 2. ALL PARTS OF THIS PROJECT INCLUDING SOIL PREPARATION, EARTHWORK, AND PLANTING ARE SUBJECT TO FIELD DESIGN BY THE ENGINEER'S REPRESENTATIVE. AT ANY TIME, THE CONTRACTOR'S OPERATIONS AND CONSTRUCTION MAY BE SUBJECT TO OBSERVATION BY THE ENGINEER'S REPRESENTATIVE. WHEN REQUESTING THE PRESENCE OF THE ENGINEER'S REPRESENTATIVE AT THE PROJECT SITE FOR DESIGN CLARIFICATION, STAGE ACCEPTANCE, OR OTHER APPROVALS, THE CONTRACTOR SHALL PROVIDE 48 HOURS ADVANCE NOTICE DIRECTLY TO THE ENGINEER'S REPRESENTATIVE.
- 3. THE CONTRACTOR IS RESPONSIBLE FOR FURNISHING ALL LABOR AND MATERIALS TO COMPLETE THE WORK DEPICTED HEREIN.
- 4. THE CONTRACTOR SHALL CONFIRM THE LOCATIONS OF UNDERGROUND UTILITIES BEFORE THE START OF ANY CONSTRUCTION OPERATIONS, INCLUDING AND NOT LIMITED TO EXCAVATION OR TRENCHING. THE CONTRACTOR SHALL CALL UNDERGROUND SERVICE ALERT (USA) AT 811/1-800-227-2600. THE CONTRACTOR SHALL PROVIDE A MINIMUM OF 48 HOURS ADVANCE NOTICE FOR LOCATING UTILITIES.
- 5. THE LOCATIONS AND EXTENTS OF FEATURES SHALL BE FLAGGED BY THE CONTRACTOR AND APPROVED BY THE ENGINEER'S REPRESENTATIVE PRIOR TO ANY GROUND DISTURBANCE.
- 6. THE CONTRACTOR SHALL CONTACT THE ENGINEER'S REPRESENTATIVE IMMEDIATELY UPON FINDING ANY FIELD CONDITIONS THAT WOULD CONFLICT WITH THE INFORMATION INDICATED ON THESE DRAWINGS OR THE PROJECT SPECIFICATIONS. ALL FIELD ADJUSTMENTS MUST BE APPROVED BY THE ENGINEER'S REPRESENTATIVE BEFORE CONSTRUCTION OF SAID ADJUSTMENTS; FAILURE TO DO SO SHALL RESULT IN THE CONTRACTOR ASSUMING FULL RESPONSIBILITY FOR ANY REQUIRED REVISIONS OR FIELD MODIFICATIONS, AS DIRECTED BY THE ENGINEER'S REPRESENTATIVE, AT NO ADDITIONAL COST.
- 7. CONFORM TO EXISTING GRADES AND CONDITIONS WHENEVER POSSIBLE, ANY ADJACENT OR OFFSET AREAS DISTURBED BY THE CONTRACTOR'S OPERATION MUST BE RESTORED BY THE CONTRACTOR TO THE

PRE-DISTURBANCE CONDITIONS TO THE SATISFACTION OF THE ENGINEER'S REPRESENTATIVE.

- ALL LUBRICATION, REFUELING, OR MAINTENANCE OF CONSTRUCTION VEHICLES SHALL BE CONDUCTED WITHIN APPROVED CONSTRUCTION STAGING AREAS. GIVEN THE PROJECT IS A LARGE LINEAR AREA, STAGING AREAS WILL CONSIST OF A SERIES OF PULLOUTS WHERE EQUIPMENT CAN BE STORED OVERNIGHT DURING THE PROJECT. THE ENGINEER'S REPRESENTATIVE SHALL APPROVE ALL STAGING PULLOUT LOCATIONS PRIOR TO MOBILIZATION.
- 9. PROPERTY LINES SHOWN HEREIN ARE APPROXIMATE.
- 10. STAGING AREAS MUST BE CONTAINED BY MEANS DESCRIBED IN THE EROSION CONTROL NOTES TO CONFINE THE AREA AND PREVENT CONTAMINANTS FROM ENTERING NEARBY CHANNELS AND WATER BODIES
- 11. ELEVATIONS ARE RELATIVE TO THE NAVD 88 DATUM, AND ARE BASED ON THE 2018-2019 USGS NORTHER CALIFORNIA WILDFILES LIDAR DATASET. SUPPLEMENTAL SURVEY DATA MAY BE REQUIRED
- 12. PRESERVE TREES AND VEGETATION OUTSIDE OF THE LIMITS OF WORK. ANY TREES OR VEGETATION DISTURBED OUTSIDE OF THE LIMITS OF WORK SHALL BE REPLACED AT THE CONTRACTOR'S EXPENSE. ANY TREES GREATER THAN 6" DBH THAT ARE OUTSIDE OF THE GRADING LIMITS AND INTERFERE WITH THE WORK MAY ONLY BE REMOVED WITH APPROVAL FROM THE ENGINEER'S REPRESENTATIVE.
- 13. SCALE SIZES INDICATED HEREIN ARE INTENDED FOR PLOTTING ON ANSI SIZE D SHEETS (22" BY 34")

EARTHWORK NOTES:

- 1. EARTHWORK OPERATIONS SHALL BE EXECUTED ACCORDING TO THESE PLANS, THE GEOTECHNICAL ENGINEERING REPORT, AND THE RELEVANT PROJECT PERMITS.
- 2. EARTHWORK QUANTITIES FOR THE PROJECT ARE ANTICIPATED TO BALANCE ON SITE, HOWEVER, THE CONTRACTOR SHALL FURNISH ALL LABOR AND MATERIALS TO IMPORT MATERIAL, IF NEEDED, SHOULD THERE NOT BE SUFFICIENT AMOUNTS OF SUITABLE MATERIAL ONSITE FOR REUSE. THE CONTRACTOR SHALL FURNISH ALL LABOR AND MATERIALS TO OFF HAUL AND DISPOSE OF ALL EXCESS AND UNSUITABLE MATERIAL BY LEGAL MEANS.
- 3. THE CONTRACTOR SHALL CONSTRUCT FINISHED SURFACES TO ±0.2' OF THE ELEVATIONS INDICATED ON THE PLANS. THE ENGINEER'S REPRESENTATIVE SHALL APPROVE ALL FINISHED GRADES.
- 4. EXCAVATING, FILLING, AND GRADING WORK SHALL NOT BE PERFORMED DURING WEATHER CONDITIONS WHICH MIGHT DAMAGE OR BE DETRIMENTAL TO THE CONDITION OF EXISTING GROUND, IN-PROGRESS WORK, OR COMPLETED WORK, WHEN THE WORK IS INTERRUPTED BY RAIN; EXCAVATING FILLING, AND GRADING WORK SHALL NOT RESUME UNTIL THE SITE AND SOIL CONDITION (MOISTURE CONTENT) ARE SUITABLE FOR COMPACTION.
- 5. AREAS PROPOSED FOR FILL PLACEMENT SHALL BE CLEARED AND GRUBBED. CLEARING AND GRUBBING SHALL INCLUDE THE REMOVAL AND DISPOSAL OF ALL UNSUITABLE MATERIAL SPECIFIED IN THE EARTHWORK NOTES, INCLUDING TREES (LESS THAN 6 INCHES IN DIAMETER MEASURED 4 FEET FROM THE GROUND), SHRUBS, OTHER VEGETATION, AND DEBRIS AND RUBBISH OF ANY NATURE. MATERIAL GENERATED FROM CLEARING AND GRUBBING MAY NOT BE REUSED AS STRUCTURAL FILL. ALL ROCKS GREATER THAN 8 INCHES DIAMETER SHALL BE REMOVED FROM THE TOP 12 INCHES OF SOIL
- PRIOR TO PLACEMENT OF FILL, THE NEAR-SURFACE SOIL SHALL BE SCARIFIED TO A DEPTH OF ROUGHLY 12 6. INCHES AND THEN UNIFORMLY MOISTURE CONDITIONED TO WITHIN 2 PERCENT OF OPTIMUM MOISTURE CONTENT.
- 7. FILL SHALL CONSIST OF UNCONTAMINATED, PREDOMINANTLY GRANULAR, NON-EXPANSIVE NATIVE SOIL OR APPROVED IMPORT SOIL. STRUCTURAL FILL SHOULD CONSIST OF GRANULAR MATERIAL, NEARLY FREE OF ORGANIC DEBRIS, WITH A LIQUID LIMIT OF LESS THAN 40, A PLASTICITY INDEX LESS THAN 15, 100 PERCENT PASSING THE 8-INCH SIEVE, AND LESS THAN 30 PERCENT PASSING THE NO. 200 SIEVE. ROCK IN STRUCTURAL FILL SHOULD BE BROKEN INTO FRAGMENTS NO LARGER THAN 8 INCHES DIAMETER.
- IMPORTED FILL MATERIAL (IF REQUIRED) SHOULD BE PREDOMINANTLY GRANULAR, NON-EXPANSIVE, AND FREE OF DELETERIOUS OR ORGANIC MATERIAL. IMPORTED MATERIAL THAT IS PROPOSED FOR USE ON SITE SHOULD BE SUBMITTED TO THE ENGINEER'S REPRESENTATIVE FOR APPROVAL AND LABORATORY ANALYSIS AT LEAST 72 HOURS PRIOR TO IMPORT.
- SOIL MATERIAL THAT IS TOO WET FOR COMPACTION SHALL BE LEFT TO DRAIN, THEN TO BE AERATED AND 9 DRIED BY DISKING AND HARROWING OR OTHER APPROVED METHODS UNTIL THE ENGINEER'S REPRESENTATIVE APPROVES THE DRIED MATERIAL
- 10. MATERIAL EXCAVATED FROM THE PROJECT SITE SHALL BE DEEMED UNSUITABLE FOR REUSE IF IT IS: OF SUCH NATURE AS TO BE INCAPABLE OF BEING COMPACTED TO SPECIFIED DENSITY USING ORDINARY METHODS, TOO WET TO BE PROPERLY COMPACTED AND CIRCUMSTANCES PREVENT SUITABLE DRYING PRIOR TO INCORPORATION INTO THE WORK, FOUND TO CONTAIN DEBRIS WASTE, VEGETATION OR OTHER DELETERIOUS MATTER, OR OTHERWISE DEEMED UNSUITABLE BY THE ENGINEER'S REPRESENTATIVE.
- 11. FILL SHALL BE UNIFORMLY MOISTURE CONDITIONED TO WITHIN 2 PERCENT OF THE OPTIMUM MOISTURE CONTENT AND PLACED IN MAXIMUM 8-INCH THICK LOOSE LIETS (LAYERS) PRIOR TO COMPACTING STRUCTURAL FILL SHALL BE COMPACTED TO AT LEAST 85 PERCENT OF THE MAXIMUM DRY DENSITY (PER ASTM D1557). MOISTURE CONTENT, DRY DENSITY, AND RELATIVE COMPACTION OF FILL SHOULD BE EVALUATED BY THE ENGINEER'S REPRESENTATIVE AT REGULAR INTERVALS DURING FILL PLACEMENT. THE CONTRACTOR IS RESPONSIBLE FOR ACHIEVEMENT OF PROPER COMPACTION DURING FILL AND BACKFILL PLACEMENT, INCLUDING PROVIDING ALL CONSTRUCTION WATER TO ACHIEVE OPTIMUM MOISTURE CONTENT DURING FILL OPERATIONS. THE UPPER 4 TO 8 INCHES OF STRUCTURAL FILL SLOPES MAY BE SCARIFIED TO PROMOTE REGEVETATION.
- 12. FILL SHALL BE PLACED IN HORIZONTAL LIFTS TO THE LINES AND GRADES SHOWN ON THE PROJECT PLANS. SLOPES SHALL BE CONSTRUCTED BY OVERBUILDING THE SLOPE FACE AND THEN CUTTING IT BACK TO DESIGN SLOPE GRADES. FILL SLOPES SHALL NOT BE CONSTRUCTED OR EXTENDED HORIZONTALLY BY

PLACING SOIL ON AN EXISTING SLOPE FACE AND/OR COMPACTED BY TRACK WALKING

- NON-NATIVE PLANTS
- CONDITIONS.
- 17. THE ENGINEER'S REPRESENTATIVE SHALL APPROVE FINISH GRADE ELEVATIONS

TEMPORARY DIVERSION AND DEWATERING NOTES:

- CONSISTENT WITH ALL FEDERAL, STATE, AND LOCAL REGULATIONS.
- ANTICIPATED RANGE
- POLLUTION REDUCTION REQUIREMENTS.
- OTHER DELETERIOUS MATERIALS
- SHALL MONITOR PUMPED WATER TO ENSURE IT DOES NOT CAUSE EROSION.
- TO FACILITATE COMPLETION OF THE WORK.
- NATIVE MATERIAL.





13. MAINTAIN SLOPES AND EMBANKMENTS UNTIL SUBSTANTIAL COMPLETION AND ACCEPTANCE OF THE WORK. PROMPTLY REPAIR SLIDES, SLIPOUTS, WASHOUTS, SETTLEMENTS, AND SUBSIDENCES THAT OCCUR FOR ANY REASON, AND REFINISH THE SLOPE OR EMBANKMENT TO THE INDICATED LINES AND GRADES. COMPLY WITH APPLICABLE REQUIREMENTS OF CCR, TITLE 8, TRENCH CONSTRUCTION SAFETY ORDERS.

14. THE CONTRACTOR SHALL TAKE ALL MEANS NECESSARY TO PREVENT THE INTRODUCTION AND SPREAD OF

15. ENSURE THAT THE TOP 2" OF SOIL IN PLACED FILL IS FREE OF CONCRETE, RUBBLE, DEBRIS, BRANCHES, ROOTS, STUMPS, WIRE, OR OTHER DELETERIOUS MATTER 1" IN DIAMETER AND LARGER, DISPOSE OF DEBRIS OFFSITE ACCORDING TO STATE AND LOCAL REGULATIONS AT NO ADDITIONAL COST

16. THE CONTRACTOR SHALL PROVIDE ADEQUATE DUST CONTROL MEASURES DURING EARTHWORK OPERATIONS THAT ARE IN ACCORDANCE WITH LOCAL AND STATE REQUIREMENTS. ALONG WITH PERMIT

1. THESE DIVERSION AND DEWATERING NOTES HAVE BEEN PREPARED TO HELP THE CONTRACTOR UNDERSTAND THE SCOPE OF THE DIVERSION AND DEWATERING WORK. THE CONTRACTOR SHALL SUBMIT A DIVERSION AND DEWATERING PLAN FOR APPROVAL BY THE ENGINEER'S REPRESENTATIVE NO LATER THAN 10 DAYS BEFORE MOBILIZATION. THE PLAN MAY INCLUDE ALTERNATE DEWATERING AND DIVERSION METHODS IF, IN THE OPINION OF THE CONTRACTOR, THE WORK WOULD BE BETTER COMPLETED BY OTHER MEANS. ANY ALTERNATE PLAN MUST BE APPROVED BY THE ENGINEER'S REPRESENTATIVE. ULTIMATELY, IT IS THE CONTRACTOR'S RESPONSIBILITY TO EXECUTE A DIVERSION AND DEWATERING PLAN THAT REASONABLY PREPARES THE SITE TO COMPLETE THE WORK DEPICTED IN THESE DRAWINGS AND IS

2. THERE IS ONE KNOWN LOCATION WHERE A TEMPORARY DIVERSION WILL BE REQUIRED (SEE SHEET 2.0). HOWEVER, LOCATION IS APPROXIMATE AND SHOULD NOT BE CONSIDERED PRESCRIPTIVE

3. THE DIVERSION SYSTEM SHALL BE DESIGNED TO DIVERT UP TO 100 GPM. PRIOR TO INSTALLATION OF THE DIVERSION SYSTEM, THE ENGINEER'S REPRESENTATIVE SHALL CONFIRM THAT FLOW LEVELS ARE WITHIN THE

4. THE CONTRACTOR SHALL FURNISH ALL LABOR, MATERIALS, TOOLS, EQUIPMENT, AND SERVICES AS REQUIRED TO INSTALL, OPERATE, AND REMOVE THE TEMPORARY DIVERSION SYSTEMS, INCLUDING BACK-UP EQUIPMENT AS NECESSARY FOR REPLACEMENT AND FOR UNANTICIPATED EMERGENCIES.

5. THE PUMPS AND PUMPING APPARATUS USED FOR THE DIVERSION SHALL BE OF THE SUBMERSIBLE TYPE WITH SUFFICIENT CAPACITY TO CONTROL SUMP WATER LEVELS AS DESCRIBED HEREIN. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO PROVIDE POWER TO OPERATE THE DIVERSION SYSTEMS, INCLUDING THE PUMPING EQUIPMENT, AS NEEDED TO ASSURE THAT DEWATERING IS EFFECTIVE DURING ALL WORK WITHIN THE BANKS OF THE CREEK. THE CONTRACTOR SHALL PROVIDE BACK-UP POWER AS NEEDED TO ASSURE THAT POWER INTERRUPTIONS DO NOT LEAD TO DAMAGE TO FINISHED OR IN-PROCESS WORK OF DELAYS IN COMPLETING THE WORK, ALL EQUIPMENT, INCLUDING ANY GENERATORS USED FOR PRIMARY OR BACK-UP POWER SUPPLY, SHALL BE OPERATED IN COMPLIANCE WITH ALL PERTINENT NOISE AND AIR

6. THE CONTRACTOR SHALL SUBMIT A PRODUCT SHEET FOR COFFERDAM MATERIALS (IF USED). GRAVEL BAG FILL MATERIAL SHALL BE CLEAN GRAVEL FREE FROM SILT, CLAY, ORGANIC MATTER, WEEDS, AND

7. THE DIVERSION PLAN SHALL INCLUDE AN ENERGY DISSIPATION FEATURE TO BE INSTALLED AT THE OUTLET END OF THE DIVERSION. THE ENERGY DISSIPATION FEATURE SHALL BE CAPABLE OF RETURNING FLOW FROM THE DIVERSION PIPE TO THE NATURAL CHANNEL WITHOUT CAUSING EROSION. THE CONTRACTOR

8. INSPECT THE DIVERSION PIPE AND COFFERDAMS DAILY DURING THE CONSTRUCTION PERIOD TO ENSURE THEY ARE EFFECTIVELY CONVEYING FLOW. PERFORM CORRECTIVE MAINTENANCE AS NEEDED.

9. PUMP INCIDENTAL GROUNDWATER ENCOUNTERED DURING EXCAVATION (AT ALL LOCATIONS WHERE WORK IS PROPOSED AND NOT LIMITED TO THE LOCATION OF THE TEMPORARY DIVERSION) AS NEEDED

10 WHEN ALL WORK HAS BEEN COMPLETED, REMOVE THE DIVERSION SYSTEM AND RESTORE ANY EXISTING FEATURES THAT WERE ADVERSELY AFFECTED TO PRE-PROJECT CONDITIONS. BACKFILL THE SUMP WITH

RTED CHANNEL SEGMENT	
OFFERDAMS (IF NEEDED CONTROL FLOWS)	

Inc. Hydrologics, Balance ₽X BY DBY ß IN CHAF BK rering TRAILS DRAINAC AND EWATI TES ER ROADS AND T IMPROVEMENT ÖZ \Box SYMBOLS, I DIVERSION/I PROSSE PROJECT NUMBER 223135 SCALE (AT 22" x 34") SHEET

TYPICAL DIVERSION SYSTEM CONFIGURATION























GRADE OUTLET TO PROVIDE

NO

POSITIVE DRAINAGE.

VARIES 10' TO 25'

T

12" MIN

2 ARIZONA CROSSING SCALE: NTS



- 3 - 4" ANGULAR ROCK, DEPTH = 18" COMPACT WITH TRACKED EQUIPMENT UNTIL SURFACE IS NON-YIELDING



	Balance Hydrologics, Inc. P.O. Box 1077 1202 Donner Pass Road Truckee. CA 98161 tel and fax (530) 550-9776 www.balancehydro.com									•
	SUBMITTALS / REVISIONS	K CONCEPTUAL DESIGN								
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	4.0									