

# SADDLEHORN RANCH - FILING NO. 2

## A PARCEL OF LAND LOCATED IN THE SOUTH HALF OF SECTION 3 AND THE NORTH HALF OF SECTION 10 TOWNSHIP 13 SOUTH, RANGE 64 WEST OF THE 6TH P.M., EL PASO COUNTY, STATE OF COLORADO

### PRE-DEVELOPMENT GRADING AND EROSION CONTROL PLANS

EPC STORMWATER REVIEW COMMENTS ARE SHOWN IN ORANGE BOXES WITH BLACK TEXT

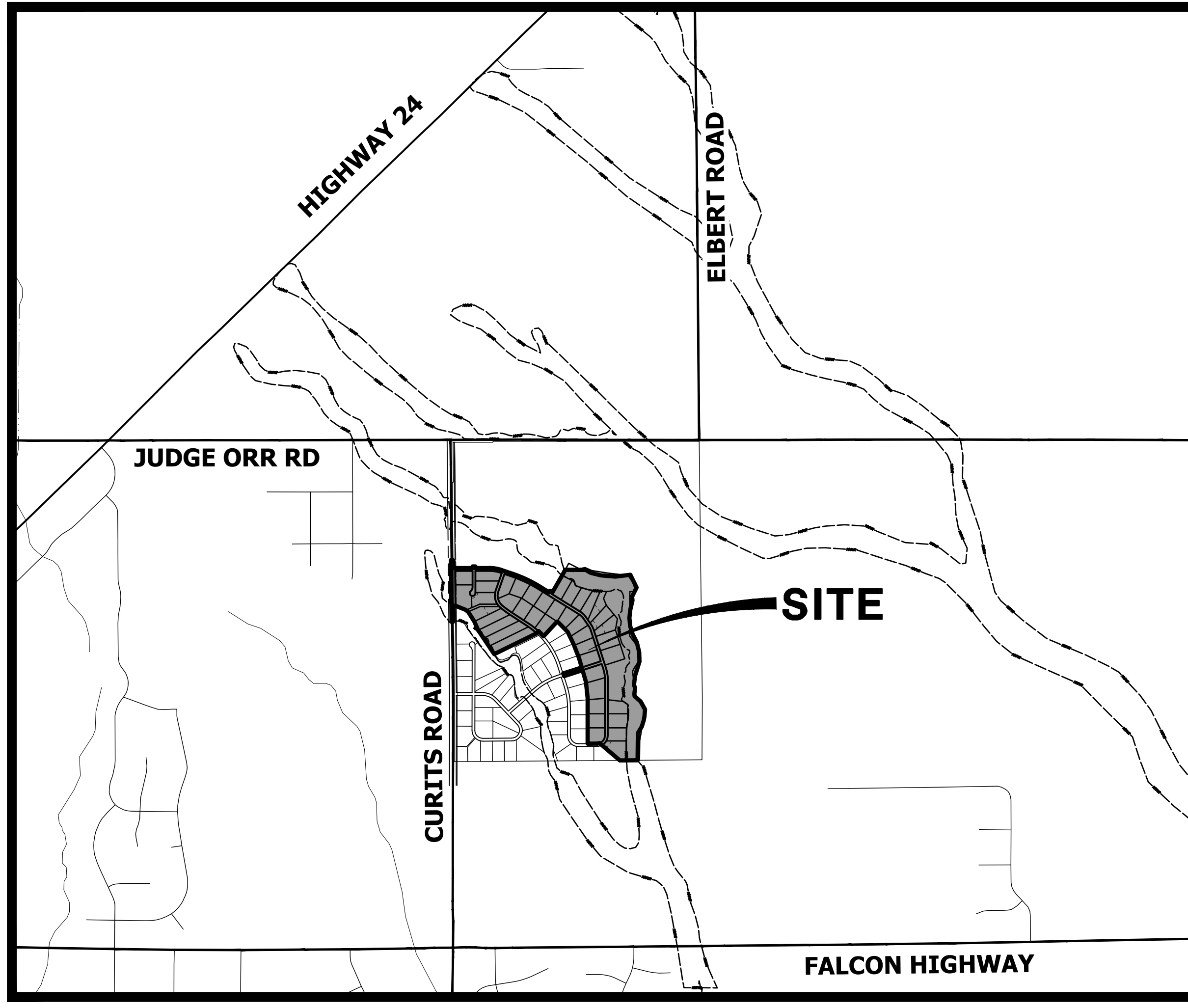


Know what's below.  
Call before you dig.

UNTIL SUCH TIME AS THESE DRAWINGS ARE APPROVED BY THE APPROPRIATE REVIEWING AGENCIES, JR ENGINEERING APPROVES THEIR USE. THESE DRAWINGS ARE DESIGNATED BY WRITTEN AUTHORIZATION.

#### ABBREVIATIONS

<p>AC ACRE AD ALGEBRAIC DIFFERENCE AH AHEAD ARCH ARCHITECT ASCE AMERICAN SOCIETY OF CIVIL ENGINEERS ASSY ASSEMBLY AVE AVENUE BB BOX BASE BK BACK BNDY BOUNDARY BOP BOTTOM OF PIPE BOV BLOW OFF VALVE BFV BUTTERFLY VALVE BLVD BOULEVARD BW BOTTOM OF WALL C&amp;G CURB &amp; GUTTER CATV CABLE TELEVISION CB CATCH BASIN CBC CONCRETE BOX CULVERT CDOT COLORADO DEPARTMENT OF TRANSPORTATION CDS CUL-DE-SAC CF CUBIC FOOT CFS CUBIC FEET PER SECOND CIP COMPLETE IN PLACE CL CENTER LINE CLOMR CONDITIONAL LETTER OF MAP REVISION CLR CLEAR CMP CORRUGATED METAL PIPE CO CLEAN OUT COCs CITY OF COLORADO SPRINGS CONC CONCRETE CR CIRCLE CSP CORRUGATED STEEL PIPE CSU COLORADO SPRINGS UTILITIES CT COURT CTRB CONCRETE THRUST REDUCER CY CUBIC YARD DBPS DRAINAGE BASIN PLANNING STUDY DE DRAINAGE EASEMENT DIA DIAMETER DIP DUCTILE IRON PIPE DR DRIVE DRC DESIGN REVIEW COMMITTEE DU DWELLING UNITS DY DAY E EAST EA EACH EGL ENERGY GRADE LINE EL ELEVATION ELEC ELECTRIC EOA EDGE OF ASPHALT EPC EL PASO COUNTY ERCP ELLIPTICAL RCP ESMT EASEMENT EST ESTIMATE EX EXISTING FDP FINAL DEVELOPMENT PLAN FDR FINAL DRAINAGE REPORT FES FLARED END SECTION FF FINISHED FLOOR ELEVATION FG FINISHED GRADE FH FIRE HYDRANT FL FLOWLINE FIL FILING FO FIBER OPTIC CABLE GB GRADE BREAK GE GAS EASEMENT GIS GEOGRAPHIC INFORMATION SYSTEM GL GAS LINE GPS GLOBAL POSITIONING SYSTEM GV GATE VALVE HBP HOT BITUMINOUS PAVEMENT HC HANDICAP HDC HIGH DEFLECTION COUPLING HDPE HIGH DENSITY POLYETHYLENE HGL HYDRAULIC GRADE LINE HMA HOT MIX ASPHALT HOA HOME OWNERS ASSOCIATION HP HIGH POINT HR HOUR I INLET IE IRRIGATION EASEMENT</p>	<p>INT INTERSECTION INV INVERT IRR IRRIGATION KB KICK (THRUST) BLOCK LB LBOUND LE LANDSCAPE EASEMENT LF LINEAR FOOT LN LANE LOMR LETTER OF MAP REVISION LP LOW POINT LS LUMP SUM LT LEFT MAX MAXIMUM M/D MOISTURE DENSITY MDDP MASTER DEVELOPMENT DRAINAGE PLAN MH MANHOLE MIN MINIMUM MS MOUNTABLE SIDEWALK N NORTH NRCP NON-REINFORCED CONCRETE PIPE ODP OFFICIAL DEVELOPMENT PLAN OHE OVERHEAD ELECTRIC OHU OVERHEAD UTILITY PC POINT OF CURVATURE PCC POINT OF COMPOUND CURVATURE PCR POINT OF CURB RETURN PDP PRELIMINARY DEVELOPMENT PLAN PE PROFESSIONAL ENGINEER PI POINT OF INTERSECTION PKWY PARKWAY PL PROPERTY LINE PR PROPOSED PRC POINT OF REVERSE CURVATURE PT POINT OF TANGENCY PV PLUG VALVE PVC POLYVINYL CHLORIDE R RADIUS RCBC REINFORCED CONCRETE BOX CULVERT RCP REINFORCED CONCRETE PIPE RD ROAD ROW RIGHT OF WAY RT RIGHT S SOUTH STE STEEL SAN SANITARY SEWER SF SQUARE FOOT ST STREET STA STATION STM STORM SEWER SY SQUARE YARD SY-IN SQUARE YARD INCH TB THRUST BLOCK TBC TOP BACK OF CURB TBW TOP BACK OF WALK TEL TELEPHONE TN TON TOA TOP OF ASPHALT TOB TOP OF BOX TOC TOP OF CURB OR CONCRETE TOP TOP OF FOUNDATION TOP TOP OF PIPE TW TOP OF WALL TYP TYPICAL UDFCD URBAN DRAINAGE AND FLOOD CONTROL DISTRICT UE UTILITY EASEMENT U&amp;DE UTILITY &amp; DRAINAGE EASEMENT UGE UNDERGROUND ELECTRIC VCP VITRIFIED CLAY PIPE VPC VERTICAL POINT OF CURVATURE VPI VERTICAL POINT OF INTERSECTION VPT VERTICAL POINT OF TANGENCY VTC VEHICLE TRACKING CONTROL W WEST WL WATER LINE WM WATER MAIN WRD WATER RESOURCES DEPARTMENT WS WATER SURFACE WSE WATER SURFACE ELEVATION WTR WATER YR YEAR</p>
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#### CONTACTS:

OWNER	GORILLA CAPITAL CO SADDLEHORN RANCH, LLC 1342 HIGH STREET EUGENE, OR 97401 P~541-393-9043
DEVELOPER	ROI PROPERTY GROUP, LLC 2495 RIGDON STREET NAPA, CALIFORNIA 94558 P~707-633-9700
ENGINEER/SURVEYOR	JR ENGINEERING, LLC ATTN: BRYAN LAW 5475 TECH CENTER DRIVE, SUITE 235 COLORADO SPRINGS, CO 80919 P~(303) 267-6254
FIRE PROTECTION DISTRICT	FALCON FIRE PROTECTION 12072 ROYAL COUNTY DOWN ROAD FALCON, CO 80831 P~(719) 495-4050
DISTRICT	SADDLEHORN RANCH METRO DISTRICT



#### BENCHMARK:

THE VERTICAL DATUM IS BASED OFF AN OPUS SOLUTION RAN ON CONTROL POINT #100 (NO. 4 REBAR) AND IS ADJUSTED TO NGVD 1929, ELEVATION 6754.61.

#### BASIS OF BEARINGS:

THE WEST LINE OF SECTION 3, T3S, R64W, 6TH P.M., MONUMENTED BY A 3-1/4" ALUMINUM CAP STAMPED "PLS 17496" IN A RANGE BOX AT THE NORTHWEST CORNER OF SECTION 3 AND A NO. 8 REBAR IN A RANGE BOX AT THE SOUTHWEST CORNER OF SECTION 3, BEARING N00°32'28"W AS REFERENCED TO COLORADO STATE PLANE CENTRAL ZONE.

#### VICINITY MAP

SCALE: 1" = 2000'

#### SHEET INDEX

1	- COVER SHEET
2	- LEGEND & NOTES
3	- TYPICAL SECTIONS
4	- GRADING & EROSION CONTROL SITE PLAN
4.1	- EARLY GRADING IMPROVEMENTS
5-7	- GRADING & EROSION CONTROL PLANS
8-14	- GRADING & EROSION CONTROL DETAILS

EARTHWORK SUMMARY TABLE	
NET CUT (CY)	50,633
NET FILL (CY)	46,469
NET EXPORT (CY)	4,164
* 1' ROAD CUT	
* 10% COMPACTION	

update the page numbers to match the actual number of pages submitted.

THE LOCATIONS OF EXISTING ABOVE GROUND AND UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE WAY ONLY. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK. THE CONTRACTOR SHALL BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE CAUSED BY HIS FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL ABOVE GROUND AND UNDERGROUND UTILITIES.

PCD FILE NO. EGP221

#### OWNER/DEVELOPER STATEMENT

I, THE OWNER/DEVELOPER HAVE READ AND WILL COMPLY WITH THE REQUIREMENTS OF THE GRADING AND EROSION CONTROL PLAN.

JOHN HELMICK \_\_\_\_\_ DATE \_\_\_\_\_  
GORILLA CAPITAL CO SADDLEHORN RANCH, LLC  
1342 HIGH STREET  
EUGENE, OR 97401

#### EL PASO COUNTY STATEMENT

COUNTY PLAN REVIEW IS PROVIDED ONLY FOR GENERAL CONFORMANCE WITH COUNTY DESIGN CRITERIA. THE COUNTY IS NOT RESPONSIBLE FOR THE ACCURACY AND ADEQUACY OF THE DESIGN, DIMENSIONS, AND/OR ELEVATIONS WHICH SHALL BE CONFIRMED AT THE JOB SITE. THE COUNTY THROUGH THE APPROVAL OF THIS DOCUMENT ASSUMES NO RESPONSIBILITY FOR COMPLETENESS AND/OR ACCURACY OF THIS DOCUMENT.

FILED IN ACCORDANCE WITH THE REQUIREMENTS OF THE EL PASO COUNTY LAND DEVELOPMENT CODE, DRAINAGE CRITERIA MANUAL, VOLUMES 1 AND 2, AND ENGINEERING CRITERIA MANUAL AS AMENDED.

IN ACCORDANCE WITH ECOM SECTION 1.12, THESE CONSTRUCTION DOCUMENTS WILL BE VALID FOR CONSTRUCTION FOR A PERIOD OF 2 YEARS FROM THE DATE SIGNED BY THE EL PASO COUNTY ENGINEER. IF CONSTRUCTION HAS NOT STARTED WITHIN THOSE 2 YEARS, THE PLANS WILL NEED TO BE RESUBMITTED FOR APPROVAL, INCLUDING PAYMENT OF REVIEW FEES AT THE PLANNING AND COMMUNITY DEVELOPMENT DIRECTORS DISCRETION.

JENNIFER IRVINE, P.E. \_\_\_\_\_ DATE \_\_\_\_\_  
COUNTY ENGINEER/ECM ADMINISTRATOR

#### ENGINEER'S STATEMENT

THIS GRADING AND EROSION CONTROL PLAN WAS PREPARED UNDER MY DIRECTION AND SUPERVISION AND IS CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF. SAID PLAN HAS BEEN PREPARED ACCORDING TO THE CRITERIA ESTABLISHED BY THE COUNTY FOR GRADING AND EROSION CONTROL PLANS. I ACCEPT RESPONSIBILITY FOR ANY LIABILITY CAUSED BY ANY NEGLIGENCE, ACTS, ERRORS OR OMISSIONS ON MY PART IN PREPARING THIS PLANS.

\_\_\_\_\_ DATE 5/2/22  
BRYAN T. LAW, P.E.  
25043  
COLORADO P.E. 25043  
FOR AND ON BEHALF OF JR ENGINEERING, LLC

PREPARED FOR  
ROI PROPERTY GROUP, LLC  
2495 RIGDON STREET  
NAPA, CALIFORNIA  
(707) 365-6891  
BRADY WILLIAMS

J-R ENGINEERING  
A WestPlan Company  
Central 303-740-9888 • Colorado Springs 719-588-2583  
Fort Collins 970-491-9888 • www.jrengineering.com

H-SCALE	V-SCALE	DATE	DESIGNED BY	DRAWN BY	CHECKED BY	REVISION	
						No.	DATE
1"=2000'	N/A	1/2/22	NQJ	NQJ			

SADDLEHORN RANCH - FILING NO. 2  
COVER SHEET

SHEET 1 OF 14  
JOB NO. 2514204

## GRADING AND EROSION CONTROL STANDARD NOTES

- CONSTRUCTION MAY NOT COMMENCE UNTIL A CONSTRUCTION PERMIT IS OBTAINED FROM PLANNING AND COMMUNITY DEVELOPMENT AND A PRECONSTRUCTION CONFERENCE IS HELD WITH PLANNING AND COMMUNITY DEVELOPMENT INSPECTIONS.
- STORMWATER DISCHARGES FROM CONSTRUCTION SITES SHALL NOT CAUSE OR THREATEN TO CAUSE POLLUTION, CONTAMINATION, OR DEGRADATION OF STATE WATERS. ALL WORK AND EARTH DISTURBANCE SHALL BE DONE IN A MANNER THAT MINIMIZES POLLUTION OF ANY ON-SITE OR OFF-SITE WATERS, INCLUDING WETLANDS.
- NOTWITHSTANDING ANYTHING DEPICTED IN THESE PLANS IN WORDS OR GRAPHIC REPRESENTATION, ALL DESIGN AND CONSTRUCTION RELATED TO ROADS, STORM DRAINAGE AND EROSION CONTROL SHALL CONFORM TO THE STANDARDS AND REQUIREMENTS OF THE MOST RECENT VERSION OF THE RELEVANT ADOPTED EL PASO COUNTY STANDARDS, INCLUDING THE LAND DEVELOPMENT CODE, THE ENGINEERING CRITERIA MANUAL, THE DRAINAGE CRITERIA MANUAL, AND THE DRAINAGE CRITERIA MANUAL VOLUME 2. ANY DEVIATIONS FROM REGULATIONS AND STANDARDS MUST BE REQUESTED, AND APPROVED, IN WRITING.
- A SEPARATE STORMWATER MANAGEMENT PLAN (SMWP) FOR THIS PROJECT SHALL BE COMPLETED AND AN EROSION AND STORMWATER QUALITY CONTROL PERMIT (ESQCP) ISSUED PRIOR TO COMMENCING CONSTRUCTION. MANAGEMENT OF THE SMWP DURING CONSTRUCTION IS THE RESPONSIBILITY OF THE DESIGNATED QUALIFIED STORMWATER MANAGER OR CERTIFIED EROSION CONTROL INSPECTOR. THE SMWP SHALL BE LOCATED ON SITE AT ALL TIMES DURING CONSTRUCTION AND SHALL BE KEPT UP TO DATE WITH WORK PROGRESS AND CHANGES IN THE FIELD.
- ONCE THE ESQCP IS APPROVED AND A "NOTICE TO PROCEED" HAS BEEN ISSUED, THE CONTRACTOR MAY INSTALL THE INITIAL STAGE EROSION AND SEDIMENT CONTROL MEASURES AS INDICATED ON THE APPROVED GEC. A PRECONSTRUCTION MEETING BETWEEN THE CONTRACTOR, ENGINEER, AND EL PASO COUNTY WILL BE HELD PRIOR TO ANY CONSTRUCTION. IT IS THE RESPONSIBILITY OF THE APPLICANT TO COORDINATE THE MEETING TIME AND PLACE WITH COUNTY STAFF.
- CONTROL MEASURES MUST BE INSTALLED PRIOR TO COMMENCEMENT OF ACTIVITIES THAT COULD CONTRIBUTE POLLUTANTS TO STORMWATER. CONTROL MEASURES FOR SLOPES, CHANNELS, DITCHES, AND DISTURBED LAND AREAS SHALL BE INSTALLED IMMEDIATELY UPON COMPLETION OF THE DISTURBANCE.
- ALL TEMPORARY SEDIMENT AND EROSION CONTROL MEASURES SHALL BE MAINTAINED AND REMAIN IN EFFECTIVE OPERATING CONDITION UNTIL PERMANENT SOIL EROSION CONTROL MEASURES ARE IMPLEMENTED AND FINAL STABILIZATION IS ESTABLISHED. ALL PERSONS ENGAGED IN LAND DISTURBANCE ACTIVITIES SHALL ASSESS THE ADEQUACY OF CONTROL MEASURES AT THE SITE AND IDENTIFY IF CHANGES TO THOSE CONTROL MEASURES ARE NEEDED TO ENSURE THE CONTINUED EFFECTIVE PERFORMANCE OF THE CONTROL MEASURES. ALL CHANGES TO TEMPORARY SEDIMENT AND EROSION CONTROL MEASURES MUST BE INCORPORATED INTO THE STORMWATER MANAGEMENT PLAN.
- TEMPORARY STABILIZATION SHALL BE IMPLEMENTED ON DISTURBED AREAS AND STOCKPILES WHERE GROUND DISTURBING CONSTRUCTION ACTIVITY HAS PERMANENTLY CEASED OR TEMPORARILY CEASED FOR LONGER THAN 14 DAYS.
- FINAL STABILIZATION MUST BE IMPLEMENTED AT ALL APPLICABLE CONSTRUCTION SITES. FINAL STABILIZATION IS ACHIEVED WHEN ALL GROUND DISTURBING ACTIVITIES ARE COMPLETE AND ALL DISTURBED AREAS EITHER HAVE A UNIFORM VEGETATIVE COVER WITH INDIVIDUAL PLANT DENSITY OF 70 PERCENT OF PRE-DISTURBANCE LEVELS ESTABLISHED OR EQUIVALENT PERMANENT ALTERNATIVE STABILIZATION METHOD IS IMPLEMENTED. ALL TEMPORARY SEDIMENT AND EROSION CONTROL MEASURES SHALL BE REMOVED UPON FINAL STABILIZATION AND BEFORE PERMIT CLOSURE.
- ALL PERMANENT STORMWATER MANAGEMENT FACILITIES SHALL BE INSTALLED AS DESIGNED IN THE APPROVED PLANS. ANY PROPOSED CHANGES THAT AFFECT THE DESIGN OR FUNCTION OF PERMANENT STORMWATER MANAGEMENT STRUCTURES MUST BE APPROVED BY THE ERM ADMINISTRATOR PRIOR TO IMPLEMENTATION.
- EARTH DISTURBANCES SHALL BE CONDUCTED IN SUCH A MANNER SO AS TO EFFECTIVELY MINIMIZE ACCELERATED SOIL EROSION AND RESULTING SEDIMENTATION. ALL DISTURBANCES SHALL BE DESIGNED, CONSTRUCTED, AND COMPLETED SO THAT THE EXPOSED AREA OF ANY DISTURBED LAND SHALL BE LIMITED TO THE SHORTEST PRACTICAL PERIOD OF TIME. PRE-EXISTING VEGETATION SHALL BE PROTECTED AND MAINTAINED WITHIN 50 HORIZONTAL FEET OF A WATERS OF THE STATE UNLESS SHOWN TO BE INFESIBLE AND SPECIFICALLY REQUESTED AND APPROVED.
- COMPACTION OF SOIL MUST BE PREVENTED IN AREAS DESIGNATED FOR INFILTRATION CONTROL MEASURES OR WHERE FINAL STABILIZATION WILL BE ACHIEVED BY VEGETATIVE COVER. AREAS DESIGNATED FOR INFILTRATION CONTROL MEASURES SHALL ALSO BE PROTECTED FROM SEDIMENTATION DURING CONSTRUCTION UNTIL FINAL STABILIZATION IS ACHIEVED. IF COMPACTION PREVENTION IS NOT FEASIBLE DUE TO SITE CONSTRAINTS, ALL AREAS DESIGNATED FOR INFILTRATION AND VEGETATION CONTROL MEASURES MUST BE LOOSENEED PRIOR TO INSTALLATION OF THE CONTROL MEASURE(S).
- ANY TEMPORARY OR PERMANENT FACILITY DESIGNED AND CONSTRUCTED FOR THE CONVEYANCE OF STORMWATER AROUND, THROUGH, OR FROM THE EARTH DISTURBANCE AREA SHALL BE A STABILIZED CONVEYANCE DESIGNED TO MINIMIZE EROSION AND THE DISCHARGE OF SEDIMENT OFF SITE.
- CONCRETE WASH WATER SHALL BE CONTAINED AND DISPOSED OF IN ACCORDANCE WITH THE SMWP. NO WASH WATER SHALL BE DISCHARGED TO OR ALLOWED TO ENTER STATE WATERS, INCLUDING ANY SURFACE OR SUBSURFACE STORM DRAINAGE SYSTEM OR FACILITIES. CONCRETE WASHOUTS SHALL NOT BE LOCATED IN AN AREA WHERE SHALLOW GROUNDWATER MAY BE PRESENT, OR WITHIN 50 FEET OF A SURFACE WATER BODY, CREEK OR STREAM.
- DURING DEWATERING OPERATIONS OF UNCONTAMINATED GROUND WATER MAY BE DISCHARGED ON SITE, BUT SHALL NOT LEAVE THE SITE IN THE FORM OF SURFACE RUNOFF UNLESS AN APPROVED STATE DEWATERING PERMIT IS IN PLACE.
- EROSION CONTROL BLANKETING OR OTHER PROTECTIVE COVERING SHALL BE USED ON SLOPES STEEPER THAN 3:1.
- CONTRACTOR SHALL BE RESPONSIBLE FOR THE REMOVAL OF ALL WASTES FROM THE CONSTRUCTION SITE FOR DISPOSAL IN ACCORDANCE WITH LOCAL AND STATE REGULATORY REQUIREMENTS. NO CONSTRUCTION DEBRIS, TREE SLASH, BUILDING MATERIAL WASTES OR UNUSED BUILDING MATERIALS SHALL BE BURIED, DUMPED, OR DISCHARGED AT THE SITE.
- WASTE MATERIALS SHALL NOT BE TEMPORARILY PLACED OR STORED IN THE STREET, ALLEY, OR OTHER PUBLIC WAY, UNLESS IN ACCORDANCE WITH AN APPROVED TRAFFIC CONTROL PLAN. CONTROL MEASURES MAY BE REQUIRED BY EL PASO COUNTY ENGINEERING IF DEEMED NECESSARY, BASED ON SPECIFIC CONDITIONS AND CIRCUMSTANCES.
- TRACKING OF SOILS AND CONSTRUCTION DEBRIS OFF-SITE SHALL BE MINIMIZED. MATERIALS TRACKED OFF-SITE SHALL BE CLEANED UP AND PROPERLY DISPOSED OF IMMEDIATELY.
- THE OWNER/DEVELOPER SHALL BE RESPONSIBLE FOR THE REMOVAL OF ALL CONSTRUCTION DEBRIS, DIRT, TRASH, ROCK, SEDIMENT, SOIL, AND SAND THAT MAY ACCUMULATE IN ROADS, STORM DRAINS AND OTHER DRAINAGE CONVEYANCE SYSTEMS AND STORMWATER APPURTENANCES AS A RESULT OF SITE DEVELOPMENT.
- THE QUANTITY OF MATERIALS STORED ON THE PROJECT SITE SHALL BE LIMITED, AS MUCH AS PRACTICAL, TO THAT QUANTITY REQUIRED TO PERFORM THE WORK IN AN ORDERLY MANNER. ALL MATERIALS STORED ON-SITE SHALL BE STORED IN A NEAT, ORDERLY MANNER, IN THEIR ORIGINAL CONTAINERS, WITH ORIGINAL MANUFACTURER'S LABELS.
- NO CHEMICAL(S) HAVING THE POTENTIAL TO BE RELEASED IN STORMWATER ARE TO BE STORED OR USED ONSITE UNLESS PERMISSION FOR THE USE OF SUCH CHEMICAL(S) IS GRANTED IN WRITING BY THE ERM ADMINISTRATOR. IN GRANTING APPROVAL FOR THE USE OF SUCH CHEMICAL(S), SPECIAL CONDITIONS AND MONITORING MAY BE REQUIRED.
- BULK STORAGE OF ALLOWED PETROLEUM PRODUCTS OR OTHER ALLOWED LIQUID CHEMICALS IN EXCESS OF 55 GALLONS SHALL REQUIRE ADEQUATE SECONDARY CONTAINMENT PROTECTION TO CONTAIN ALL SPILLS ONSITE AND TO PREVENT ANY SPILLED MATERIALS FROM ENTERING STATE WATERS, ANY SURFACE OR SUBSURFACE STORM DRAINAGE SYSTEM OR OTHER FACILITIES.
- NO PERSON SHALL CAUSE THE IMPEDIMENT OF STORMWATER FLOW IN THE CURB AND GUTTER OR DITCH EXCEPT WITH APPROVED SEDIMENT CONTROL MEASURES.
- OWNER/DEVELOPER AND THEIR AGENTS SHALL COMPLY WITH THE "COLORADO WATER QUALITY CONTROL ACT" (TITLE 25, ARTICLE 8, CRS), AND THE "CLEAN WATER ACT" (33 USC 1344), IN ADDITION TO THE REQUIREMENTS OF THE LAND DEVELOPMENT CODE, DCM VOLUME II AND THE ERM APPENDIX I. ALL APPROPRIATE PERMITS MUST BE OBTAINED BY THE CONTRACTOR PRIOR TO CONSTRUCTION (1041, NPDES, FLOODPLAIN, 404, FUGITIVE DUST, ETC.). IN THE EVENT OF CONFLICTS BETWEEN THESE REQUIREMENTS AND OTHER LAWS, RULES, OR REGULATIONS OF OTHER FEDERAL, STATE, LOCAL, OR COUNTY AGENCIES, THE MOST RESTRICTIVE LAWS, RULES, OR REGULATIONS SHALL APPLY.
- ALL CONSTRUCTION TRAFFIC MUST ENTER/EXIT THE SITE ONLY AT APPROVED CONSTRUCTION ACCESS POINTS.
- PRIOR TO CONSTRUCTION THE PERMITEE SHALL VERIFY THE LOCATION OF EXISTING UTILITIES.
- A WATER SOURCE SHALL BE AVAILABLE ON SITE DURING EARTHWORK OPERATIONS AND SHALL BE UTILIZED AS REQUIRED TO MINIMIZE DUST FROM EARTHWORK EQUIPMENT AND WIND.
- THE SOILS REPORT FOR THIS SITE HAS BEEN PREPARED BY ENTECH ENGINEERING, INC. ON APRIL 29, 2019 AND SHALL BE CONSIDERED A PART OF THESE PLANS.
- AT LEAST TEN (10) DAYS PRIOR TO THE ANTICIPATED START OF CONSTRUCTION, FOR PROJECTS THAT WILL DISTURB ONE (1) ACRE OR MORE, THE OWNER OR OPERATOR OF CONSTRUCTION ACTIVITY SHALL SUBMIT A PERMIT APPLICATION FOR STORMWATER DISCHARGE TO THE COLORADO DEPARTMENT OF PUBLIC HEALTH AND ENVIRONMENT, WATER QUALITY DIVISION. THE APPLICATION CONTAINS CERTIFICATION OF COMPLETION OF A STORMWATER MANAGEMENT PLAN (SMWP), OF WHICH THIS GRADING AND EROSION CONTROL PLAN MAY BE A PART. FOR INFORMATION OR APPLICATION MATERIALS CONTACT:  
COLORADO DEPARTMENT OF PUBLIC HEALTH AND ENVIRONMENT  
WATER QUALITY CONTROL DIVISION  
WOOD - PERMITS  
4300 CHERRY CREEK DRIVE SOUTH  
DENVER, CO 80246-1530  
ATTN: PERMITS UNIT

Upload a copy of the soils report.

Unresolved. Upload a copy on eDARP.

## LAYER LINETYPE LEGEND

	EXISTING	PROPOSED
PHASE LINE	- - - - -	- - - - -
MATCH LINE	---/---	---/---
SECTION LINE	- - - - -	- - - - -
BOUNDARY LINE	=====	=====
PROPERTY LINE	=====	=====
EASEMENT LINE	- - - - -	- - - - -
RIGHT OF WAY	=====	=====
R.O.W. A LINE	----- A -----	----- A -----
CENTERLINE	----- C -----	----- C -----
CITY LIMITS	=====	=====
WIRE FENCE	---x---x---	---x---x---
CHAIN LINK FENCE	-----x-----	-----x-----
WOOD FENCE	-----x-----	-----x-----
MASONRY FENCE	-----x-----	-----x-----
GUARDRAIL	---x---x---	---x---x---
CONC. BARRIER	---x---x---	---x---x---
CABLE TV	---TV---TV---	---TV---TV---
ELECTRIC	---E---E---	---E---E---
FIBER OPTIC	---FO---FO---	---FO---FO---
GAS MAIN	---G---G---	---G---G---
IRRIGATION MAIN	---IRR---IRR---	---IRR---IRR---
OIL/PETRO. MAIN	---O---O---	---O---O---
OVERHEAD UTILITY	---OHU---OHU---	---OHU---OHU---
SANITARY SEWER	---S---S---	---S---S---
STORM DRAIN	---T---T---	---T---T---
TELEPHONE	---W---W---	---W---W---
WATER MAIN	---W---W---	---W---W---
RAW WATER LINE	---RWL---RWL---	---RWL---RWL---
SWALE/WATERWAY FLOWLINE	~ ~ ~ ~ ~	~ ~ ~ ~ ~
DIVERSION DITCH	~ ~ ~ ~ ~	~ ~ ~ ~ ~
DIVERSION CHANNEL	~ ~ ~ ~ ~	~ ~ ~ ~ ~
MAJOR DRAINAGE BASIN	=====	=====
MINOR DRAINAGE BASIN	-----	-----
TOP OF SLOPE	~ ~ ~ ~ ~	~ ~ ~ ~ ~
TOE OF SLOPE	~ ~ ~ ~ ~	~ ~ ~ ~ ~
EDGE OF WATER	~ ~ ~ ~ ~	~ ~ ~ ~ ~
INDEX CONTOUR	~ ~ ~ ~ ~	~ ~ ~ ~ ~
INTERMEDIATE CONTOUR	~ ~ ~ ~ ~	~ ~ ~ ~ ~
DEPRESSION CONT. (INDEX)	~ ~ ~ ~ ~	~ ~ ~ ~ ~
DEPRESSION CONT. (INTER)	~ ~ ~ ~ ~	~ ~ ~ ~ ~
TOP OF CUTS	--- ---	--- ---
TOE OF FILLS	--- ---	--- ---
CUT AND FILL LINE	--- C/F --- C/F ---	--- C/F --- C/F ---
SILT FENCE	---SF---SF---	---SF---SF---
100 YEAR FLOODPLAIN	-----100YR-----	-----100YR-----
500 YEAR FLOODPLAIN	-----500YR-----	-----500YR-----
FLOODWAY	-----FLOWY-----	-----FLOWY-----
BASE FLOOD ELEVATION	~ ~ ~ ~ ~	~ ~ ~ ~ ~
EDGE OF WETLANDS	~ ~ ~ ~ ~	~ ~ ~ ~ ~
STONE WALL	~ ~ ~ ~ ~	~ ~ ~ ~ ~
STORMWATER FLOW ARROWS	~ ~ ~ ~ ~	~ ~ ~ ~ ~

## UTILITIES LEGEND

	EXISTING	PROPOSED
<b>STORM SEWER</b>		
MANHOLE	⊙	●
STORM INLET	■	■
AREA INLET - SQUARE	□	□
AREA INLET - ROUND	○	○
FLARED END SECTION	▷	▷
RIPRAP		
<b>SANITARY SEWER</b>		
LINE MARKER	Mkr San <sup>o</sup>	
SERVICE MARKER		
CLEAN-OUT	○	○
MANHOLE W/ DIRECTIONAL FLOW ARROW	⊙	●
<b>WATER LINE</b>		
LINE MARKER	Mkr W <sup>o</sup>	
SERVICE MARKER		
FIRE HYDRANT	⊙	●
FIRE CONNECTION	⊙	●
MANHOLE	⊙	●
BEND	⊙	●
BLOW-OFF VALVE	⊙	●
WELL	⊙	●
METER	⊙	●
VALVE	⊙	●
REDUCER	⊙	●
THRUST BLOCK	⊙	●
CROSS	⊙	●
PLUG W/ THRUST BLOCK	⊙	●
TEE	⊙	●
REVERSE ANCHOR	⊙	●
ANODE	⊙	●
AIR & VACUUM VALVE ASSEMBLY	⊙	●
TRANSMISSION BLOW-OFF ASSEMBLY	⊙	●
<b>GAS LINE</b>		
MARKER	Mkr G <sup>o</sup>	
SERVICE MARKER		
METER	⊙	●
VALVE	⊙	●
PLUG	⊙	●
TEE	⊙	●
<b>DRY UTILITIES</b>		
CABLE TV MARKER	Mkr TV <sup>o</sup>	
CABLE TELEVISION PEDESTAL	⊙	●
ELECTRIC MARKER	Mkr E <sup>o</sup>	
ELECTRIC SERVICE MARKER		
ELECTRICAL PEDESTAL	⊙	●
ELECTRICAL METER	⊙	●
ELECTRICAL MANHOLE	⊙	●
FIBER-OPTIC MARKER	Mkr FO <sup>o</sup>	
IRRIGATION PEDESTAL	⊙	●
TELEPHONE MARKER	Mkr T <sup>o</sup>	
TELEPHONE PEDESTAL	⊙	●
TELEPHONE MANHOLE	⊙	●
UTILITY POLE	⊙	●
GUY ANCHOR	⊙	●
GUY POLE	⊙	●

## STORM WATER MANAGEMENT

KEY	SYMBOL
CHECK DAM	⊙
CONSTRUCTION ROAD STABILIZATION	⊙
CURB SOCK INLET PROTECTION	⊙
CONCRETE WASHOUT AREA	⊙
DIVERSION DITCH AND DIKE, TEMPORARY	⊙
DIVERSION CHANNEL, TEMPORARY	⊙
DEWATERING	⊙
EROSION CONTROL BLANKET	⊙
INLET FILTER	⊙
INLET PROTECTION	⊙
MULCHING	⊙
OUTLET PROTECTION	⊙
PAVED FLUME	⊙
PERMENENT SEEDING	⊙
REINFORCED CONCRETE DAM	⊙
ROUGH CUT STREET CONTROL	⊙
SEDIMENT BASIN	⊙
SEDIMENT CONTROL LOG	⊙
SILT FENCE	⊙
SURFACE ROUGHENING	⊙
STABILIZED STAGING AREA	⊙
SEDIMENT TRAP	⊙
STRAW BALE BARRIER	⊙
TERRACING	⊙
TEMPORARY SEEDING	⊙
TEMPORARY STREAM CROSSING CULVERT/BRIDGE	⊙
TEMPORARY STREAM CROSSING FORD TYPE	⊙
TEMPORARY SLOPE DRAIN	⊙
VEHICLE TRACKING CONTROL	⊙
VEHICLE TRACKING CONTROL WITH WASH RACK	⊙
CONSTRUCTION MARKER	⊙
LIMITS OF CONSTRUCTION	⊙

UNTL SUCH TIME AS THESE DRAWINGS ARE APPROVED BY THE APPROPRIATE REVIEWING AGENCIES, OR ENGINEERING APPROVES THEIR USE. THESE DRAWINGS ARE DESIGNATED BY WRITTEN AUTHORIZATION.

PREPARED FOR:  
**ROI PROPERTY GROUP, LLC**  
2495 RIDGON STREET  
NAPA, CALIFORNIA  
(707) 365-6891  
BRADY WILLIAMS

**J.R. ENGINEERING**  
A Westman Company  
Central 300-740-9888 • Colorado Springs 719-583-2593  
Fort Collins 970-491-9888 • www.jrengineering.com

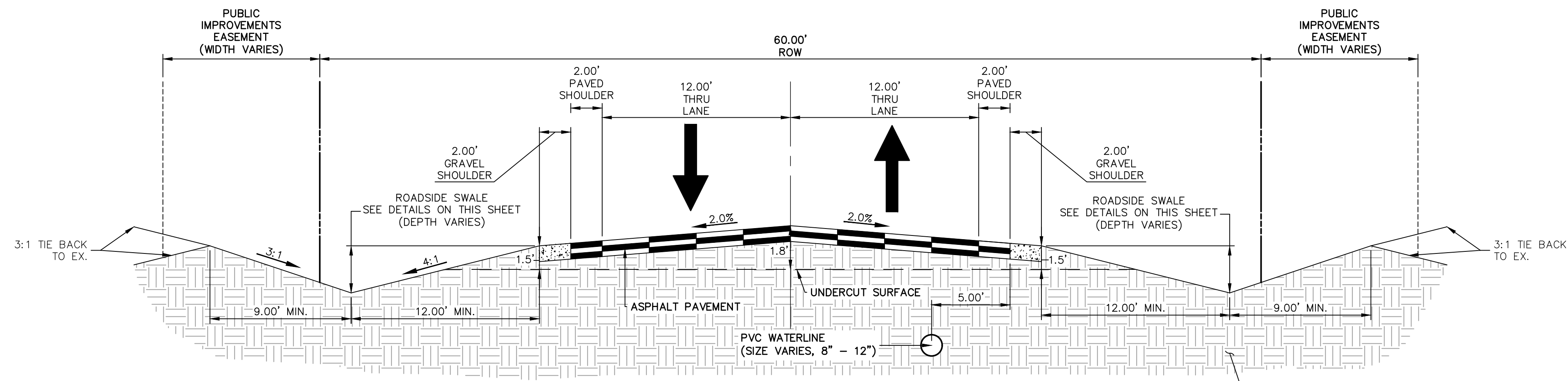
BY	DATE	REVISION	No.	N/A	N/A	1/2/22	N/Q	N/Q	DESIGNED BY	DRAWN BY	CHECKED BY

**SADDLEHORN RANCH - FILING NO. 2**  
**GRADING & EROSION CONTROL NOTES & LEGEND**

**ENGINEER'S STATEMENT**  
PREPARED UNDER MY DIRECT SUPERVISION AND ON BEHALF OF JR ENGINEERING  
  
BRYAN T. LAW, P.E.  
COLORADO P.E. 25043  
FOR AND ON BEHALF OF JR ENGINEERING, LLC

DATE: 5/2/22

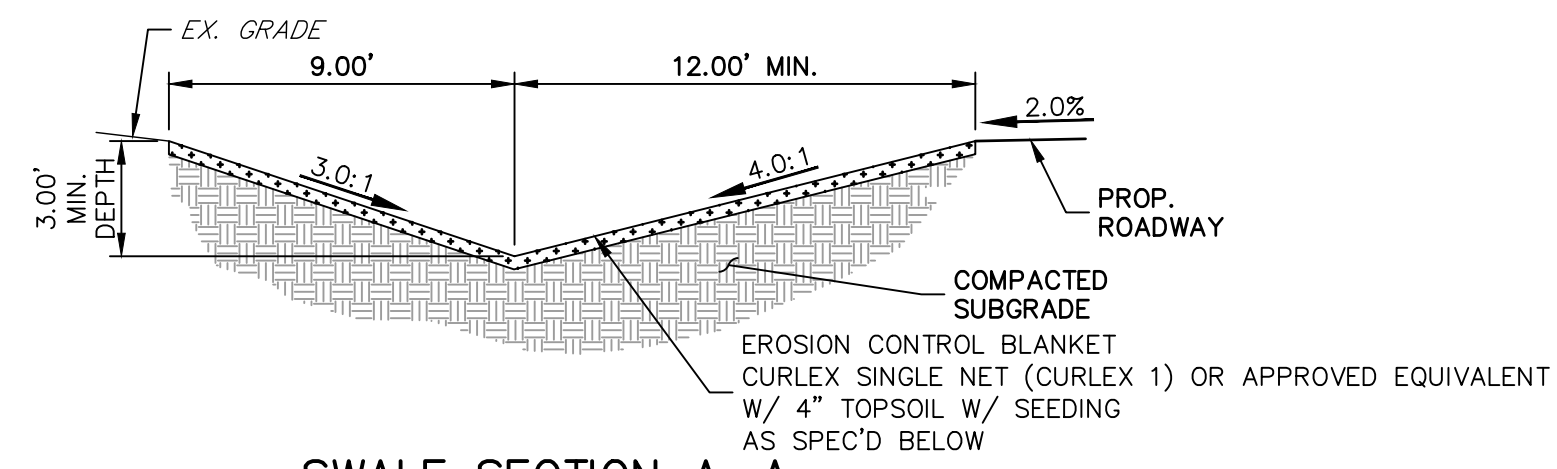
SHEET 2 OF 14  
JOB NO. 2514204



NOTE: SUBGRADE UNDERCUT GRADING ONLY IS PERMITTED WITH THIS PREDEVELOPMENT CONSTRUCTION PLANS. ASPHALT AND BASE COURSE SHALL NOT BE CONSTRUCTED WITH THIS PREDEVELOPMENT GRADING

**TYPICAL RURAL LOCAL**

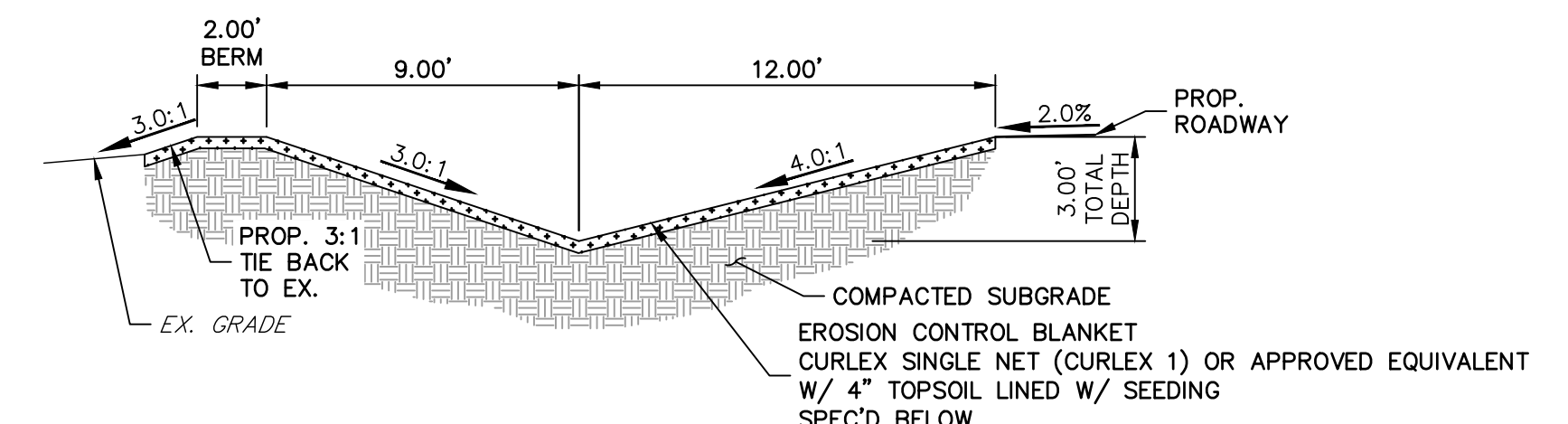
POSTED SPEED LIMIT = 30 MPH, DESIGN SPEED LIMIT = 30 MPH  
SCALE: 1" = 5'



**SWALE SECTION A-A**

SCALE: 1" = 5'

SWALE SEED MIX:  
EROSION CONTROL BLANKET WITH PAWNEE BUTTES SEED INC. - "LOW GROW NATIVE MIX"  
- IDAHO FESCUE  
- SANDBERG BLUEGRASS  
- ROCKY MOUNTAIN FESCUE  
- BIG BLUEGRASS



**SWALE SECTION B-B**

SCALE: 1" = 5'

SWALE SEED MIX:  
EROSION CONTROL BLANKET WITH PAWNEE BUTTES SEED INC. - "LOW GROW NATIVE MIX"  
- IDAHO FESCUE  
- SANDBERG BLUEGRASS  
- ROCKY MOUNTAIN FESCUE  
- BIG BLUEGRASS

**ROADSIDE SWALE NOTES**

- SWALE SECTION A-A PROVIDES MINIMUM SWALE DIMENSIONS. IN AREAS WHERE 3:1 TIE BACK TO EXISTING DOES NOT PROVIDE MINIMUM SWALE DEPTH, SWALE TO BE CUT DEEPER SUCH THAT 3' DEPTH IS PROVIDED RELATIVE TO EXISTING GRADE.
- SWALE SECTION B-B TO BE USED IN FILL AREAS OF ROADWAY WHERE CUTTING SWALE DEEPER TO ACHIEVE 3.0' DEPTH RELATIVE TO EXISTING GRADE CAN NOT BE ACHIEVED DUE TO DOWN STREAM GRADE REQUIREMENTS. 2.0' BERM MUST BE PROVIDED TO MITIGATE FUTURE EROSION.

**EARLY GRADING NOTES**

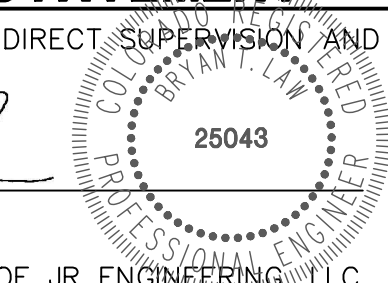
- NO PAVEMENT SHOWN IN THE ABOVE ROAD SECTION SHALL BE PROPOSED WITH ANY EARLY GRADING IMPROVEMENTS.
- ALL PROPOSED TEMPORARY CULVERTS SHALL BE 18" CMP. TEMPORARY CULVERT LOCATIONS CAN BE FOUND ON SHEET 4.1.
- ALL TEMPORARY SWALE CONNECTIONS SHALL MATCH FUTURE CULVERT GRADES. TEMPORARY SWALE CONNECTION LOCATIONS CAN BE FOUND ON SHEET 4.1.
- ALL INITIAL BMPS SHALL BE INSTALLED PRIOR TO ANY GRADING ONSITE.
- ALL CHECK DAMS AND INLET/OUTLET PROTECTIONS SHALL BE INSTALLED AND MAINTAINED UNTIL 70% VEGETATION HAS BEEN ACHIEVED AND REMOVAL IS APPROVED BY EPC.
- NO GRADING IMPROVEMENTS SHALL BE PERFORMED WITHIN THE CURTIS ROAD ROW AS PART OF THE EARLY GRADING IMPROVEMENTS FOR THIS SITE.



**ENGINEER'S STATEMENT**

PREPARED UNDER MY DIRECT SUPERVISION AND ON BEHALF OF JR ENGINEERING

*Bryan T. Law*  
BRYAN T. LAW, P.E.  
COLORADO P.E. 25043



5/2/22  
DATE

FOR AND ON BEHALF OF JR ENGINEERING, LLC

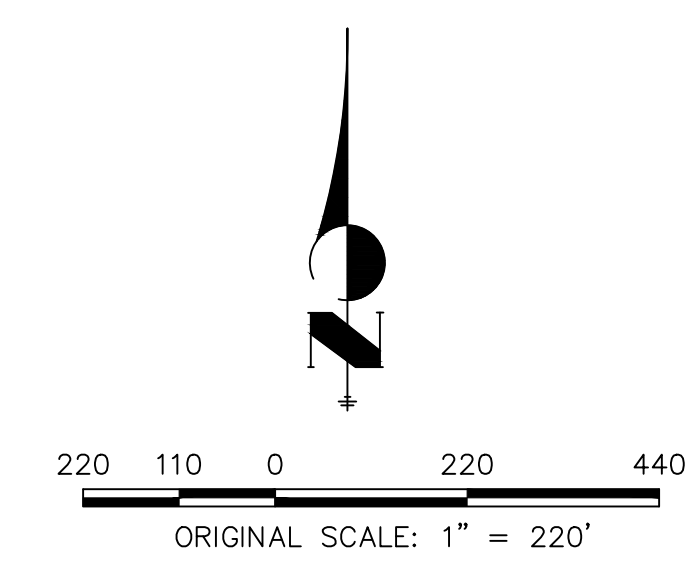
BY	DATE	No.	REVISION	H-SCALE	V-SCALE	DATE	DESIGNED BY	DRAWN BY	CHECKED BY
				1"=5'	N/A	1/2/22	NQJ	NQJ	

SADDLEHORN RANCH - FILING NO. 2  
TYPICAL SECTIONS

**J.R. ENGINEERING**  
A Westman Company  
Central 303-740-9383 • Colorado Springs 719-583-2583  
Fort Collins 970-491-9888 • www.jrengineering.com

PREPARED FOR  
**ROI PROPERTY GROUP, LLC**  
2495 RIGDON STREET  
NAPA, CALIFORNIA  
(707) 365-6891  
BRADY WILLIAMS

UNTIL SUCH TIME AS THESE DRAWINGS ARE APPROVED BY THE APPROPRIATE REVIEWING AGENCIES, OR ENGINEERING APPROVES THEIR USE, THESE DRAWINGS ARE DESIGNATED BY WRITTEN AUTHORIZATION.



**LEGEND**

OFF-SITE GRADING  
(CANNOT BE COMPLETED WITH  
EARLY GRADING PERMIT)

**ENGINEER'S STATEMENT**

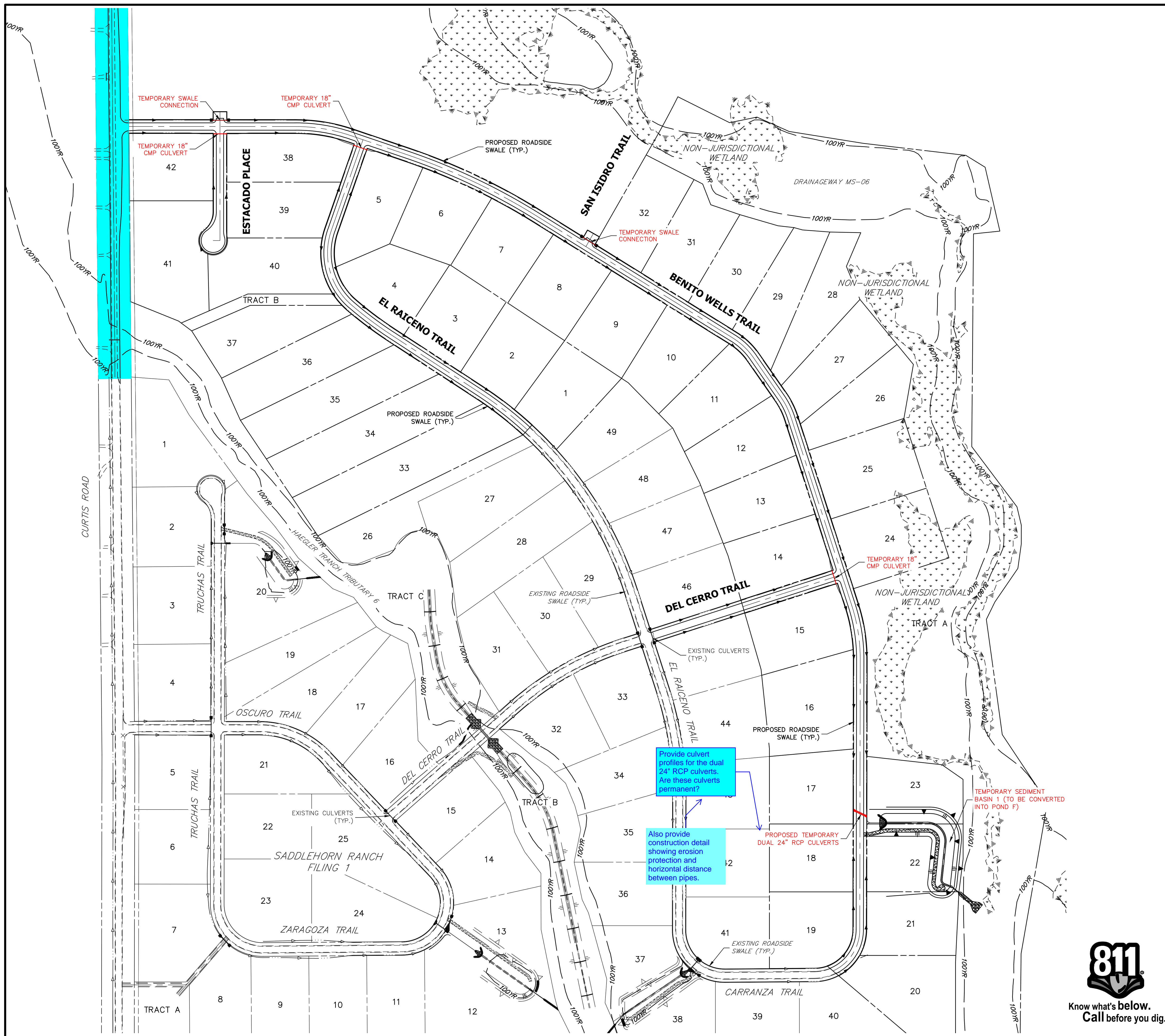
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BRYAN T. LAW, P.E.  
COLORADO P.E. 25043  
FOR AND ON BEHALF OF JR ENGINEERING, LLC

5/2/22  
DATE

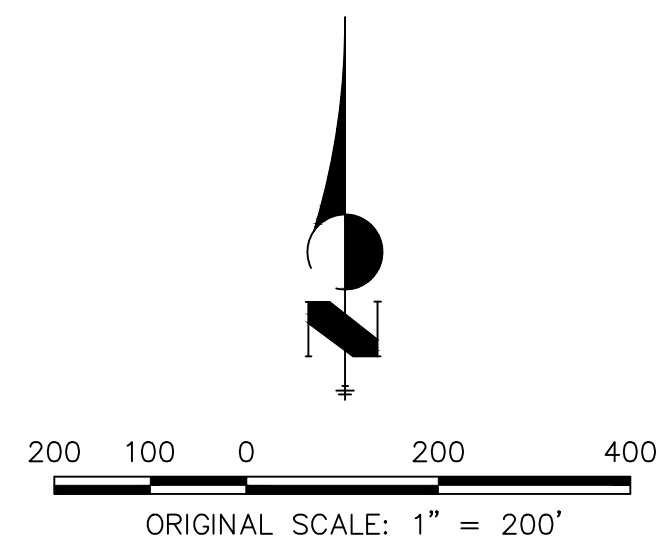
**811**  
Know what's below.  
Call before you dig.

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PREPARED FOR	ROI PROPERTY GROUP, LLC 2495 RIGDON STREET NAPA, CALIFORNIA (707) 365-6891 BRADY WILLIAMS
<b>J.R. ENGINEERING</b> A Westman Company Central 303-740-9888 • Colorado Springs 719-588-2583 Fort Collins 970-491-9888 • www.jrengineering.com	
BY	DATE
No. REVISION	
H-SCALE	1"=220'
V-SCALE	N/A
DATE	1/2/22
DESIGNED BY	GVT
DRAWN BY	GVT
CHECKED BY	
SADDLEHORN RANCH - FILING NO. 2	
GRADING & EROSION CONTROL SITE PLAN	
SHEET	4 OF 14
JOB NO.	2514204



**LEGEND**

- EARLY GRADING TEMPORARY IMPROVEMENTS
- EARLY GRADING EXCLUDED AREAS



**OWNER/DEVELOPER STATEMENT**

I, THE OWNER/DEVELOPER HAVE READ AND WILL COMPLY WITH THE REQUIREMENTS OF THE GRADING AND EROSION CONTROL PLAN.

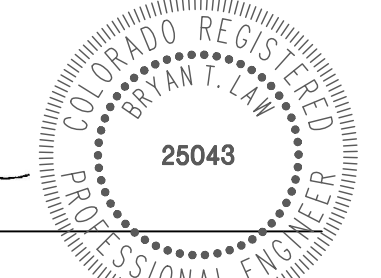
JOHN HELMICK \_\_\_\_\_ DATE \_\_\_\_\_

GORILLA CAPITAL CO SADDLEHORN RANCH, LLC  
1342 HIGH STREET  
EUGENE, OR 97401

**ENGINEER'S STATEMENT**

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*Bryan T. Law*  
BRYAN T. LAW, P.E.  
COLORADO P.E. 25043  
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5/2/22  
DATE



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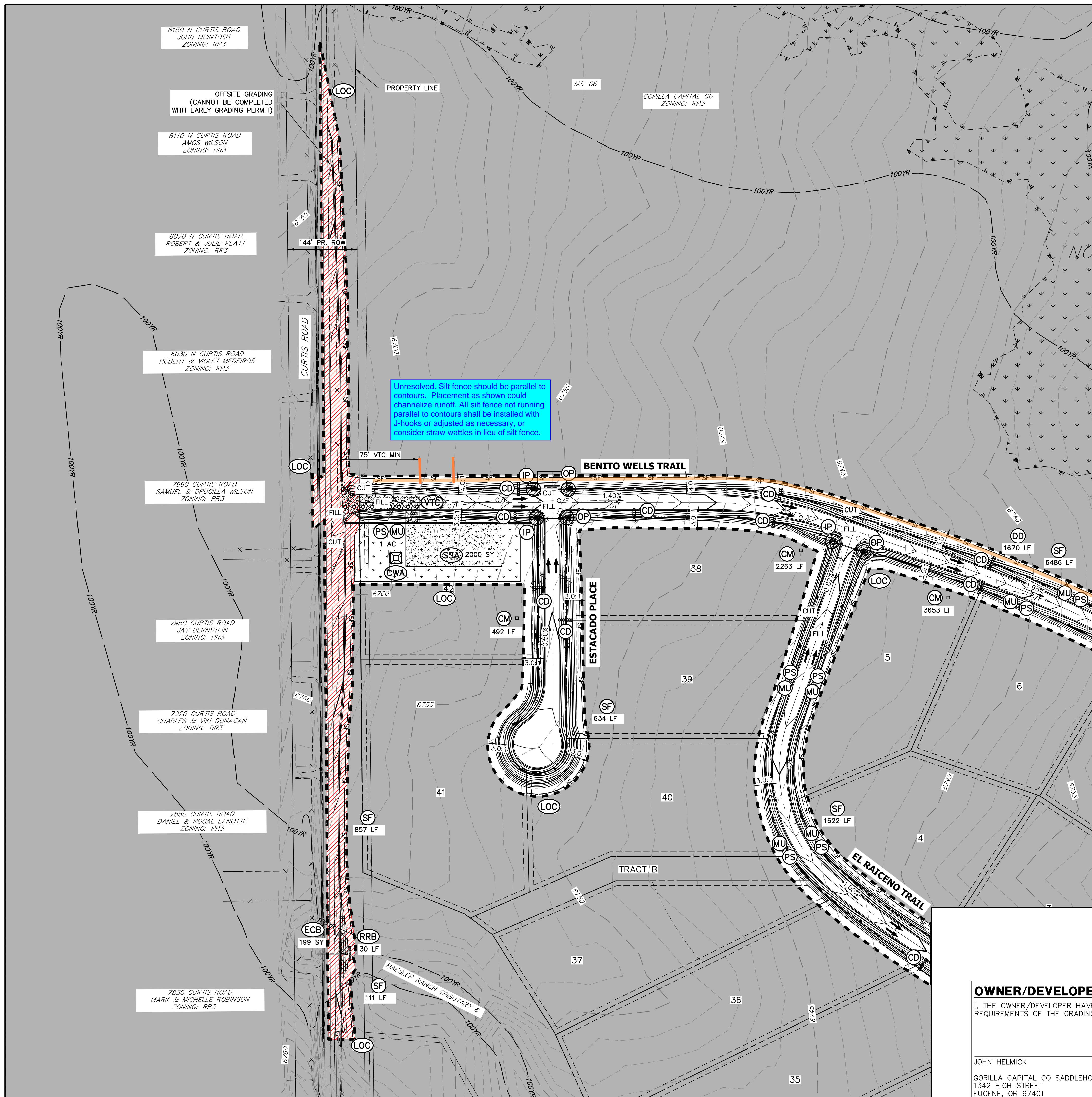
PREPARED FOR  
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2495 RIDGON STREET  
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(707) 365-6891  
BRADY WILLIAMS

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BY	DATE	No.	REVISION

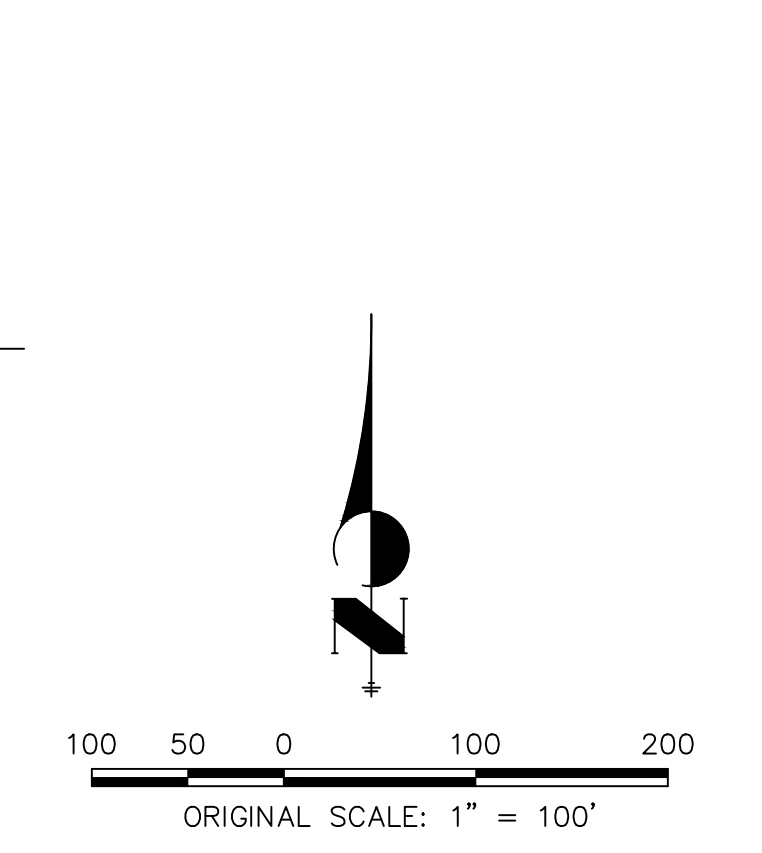
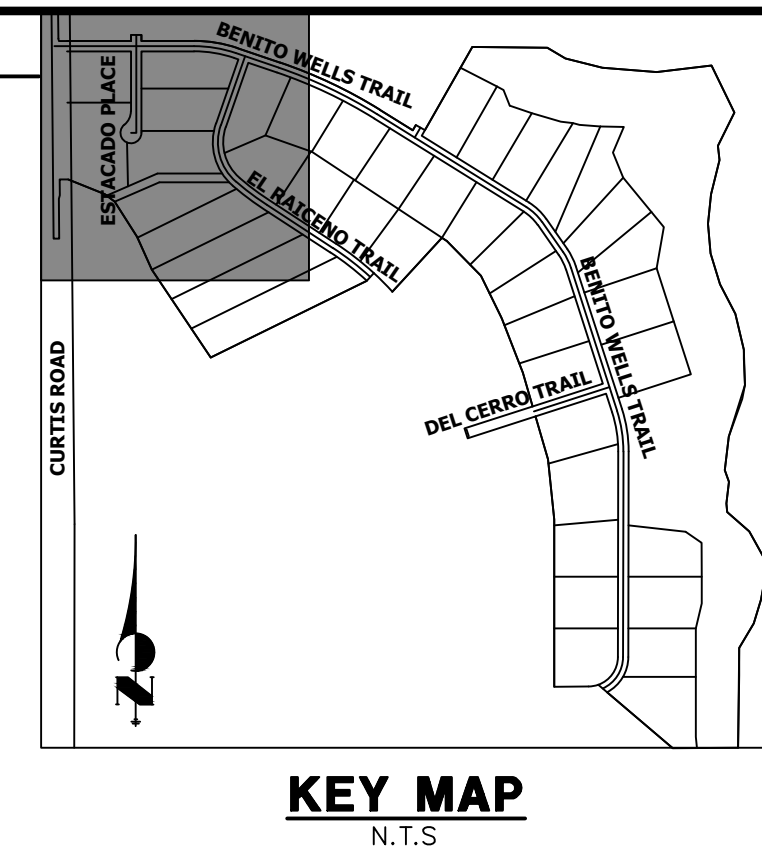
H-SCALE	V-SCALE	DATE	DESIGNED BY	DRAWN BY	CHECKED BY
1"=220'	N/A	1/2/22	GVT	GVT	

SADDLEHORN RANCH - FILING NO. 2  
EARLY GRADING IMPROVEMENTS  
SHEET 4.1 OF 14  
JOB NO. 2514204



**LEGEND**

- SEDIMENT BASIN (SB) [Symbol]
- SILT FENCE (SF) [Symbol]
- STABILIZED STAGING AREA (SSA) [Symbol]
- CONSTRUCTION MARKER (CM) [Symbol]
- VEHICLE TRACKING CONTROL (VTC) [Symbol]
- TEMPORARY STOCK PILE (TSP) [Symbol]
- EROSION CONTROL BLANKET (ECB) [Symbol]
- INLET PROTECTION (IP) [Symbol]
- OUTLET PROTECTION (OP) [Symbol]
- DIVERSION DITCH AND DIKE, TEMPORARY (DD) [Symbol]
- CUT AND FILL LINE (C/F) [Symbol]
- LIMITS OF CONSTRUCTION/DISTURBANCE (LOC) [Symbol]
- CONCRETE WASHOUT AREA (CWA) [Symbol]
- MULCHING & PERMANENT SEEDING (MU, PS) [Symbol]
- TEMPORARY SLOPE DRAIN (TSD) [Symbol]
- REINFORCED ROCK BERM (RRB) [Symbol]
- CHECK DAM (CD) [Symbol]
- ROCK SOCK (RS) [Symbol]
- CONSTRUCTION MARKERS (CM) [Symbol]
- OFF-SITE GRADING (CANNOT BE COMPLETED WITH EARLY GRADING PERMIT) [Symbol]



**NOTES**

1. REFER TO THE STORMWATER MANAGEMENT PLAN (SWMP) FOR A DETAILED DESCRIPTION OF THE MAINTENANCE PROGRAMS FOR EROSION CONTROL FACILITIES.
2. SEE SHEET 3 FOR SWALE TYPICAL CROSS SECTIONS THAT INCLUDES SWALE LINING DETAIL.
3. ALL DISTURBED AREAS NOT TO BE PAVED SHALL BE PERMANENTLY SEEDING PER THE FAWNIE BUTTES SEED INC - "LOW GROW NATIVE MIX" OR APPROVED EQUAL. SEE SHEET 3 FOR SEED MIX DETAILS. 12.7 TOTAL ACRES OF SEEDING ESTIMATED.
4. P.I.E = PUBLIC IMPROVEMENTS EASEMENT
5. EXISTING VEGETATION CONSISTS OF NATIVE MEADOW GRASSES (APPROX. 70% COVERAGE) DETERMINED THROUGH A COMBINATION OF FIELD VERIFICATION AND AERIAL INSPECTION.
6. NO BATCH PLANTS WILL BE UTILIZED ON SITE.
7. NO OFF-SITE GRADING SHALL BE CONDUCTED WITH THE EARLY GRADING PERMIT.
8. SILT FENCES THAT ARE NOT PARALLEL TO CONTOURS MUST BE INSTALLED WITH J-HOOKS.

**BMP PHASING**

- INITIAL (06/2022 - 7/2022):**
- 1) INSTALL VTC
  - 2) INSTALL CWA
  - 3) ESTABLISH SSA
  - 4) INSTALL CONSTRUCTION MARKERS
  - 5) INSTALL SILT FENCE
  - 6) INSTALL SEDIMENT BASINS
  - 7) INSTALL DIVERSION DITCHES
- INTERIM (7/2022 - 10/2022):**
- 1) LOCATE/INSTALL TEMPORARY STOCKPILE
  - 2) MAINTAIN ALL BMPs
  - 3) INSTALL RRBs
  - 4) INSTALL INLET AND OUTLET PROTECTION
  - 5) INSTALL EROSION CONTROL BLANKETS
- FINAL (10/2022 - 12/2022):**
- 1) INSTALL MULCH AND PERMANENT SEEDING IN ALL DISTURBED AREAS
  - 2) REMOVE SILT FENCE AFTER STABILIZED, INLET & OUTLET PROTECTION, RRBs, EROSION CONTROL BLANKETS, VTC, CWA, CONSTRUCTION MARKERS, SEDIMENT BASINS, DIVERSION DITCHES, SSA, AND TEMPORARY STOCKPILES
- FINAL STABILIZATION ANTICIPATED 05/2023.

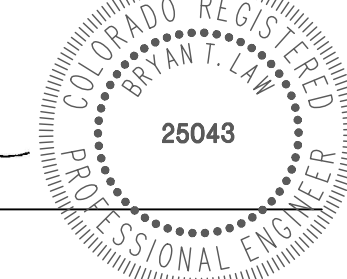


Know what's below.  
Call before you dig.

**ENGINEER'S STATEMENT**

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*Bryan T. Law*  
BRYAN T. LAW, P.E.  
COLORADO P.E. 25043  
FOR AND ON BEHALF OF JR ENGINEERING, LLC



5/2/22  
DATE

**OWNER/DEVELOPER STATEMENT**

I, THE OWNER/DEVELOPER HAVE READ AND WILL COMPLY WITH THE REQUIREMENTS OF THE GRADING AND EROSION CONTROL PLAN.

JOHN HELMICK  
GORILLA CAPITAL CO SADDLEHORN RANCH, LLC  
1342 HIGH STREET  
EUGENE, OR 97401

DATE

UNTIL SUCH TIME AS THESE DRAWINGS ARE APPROVED BY THE APPROPRIATE REVIEWING AGENCIES, OR ENGINEERING APPROVES THEIR USE, THESE DRAWINGS ARE DESIGNATED BY WRITTEN AUTHORIZATION.

PREPARED FOR  
**ROI PROPERTY GROUP, LLC**  
2495 RIDGON STREET  
NAPA, CALIFORNIA  
(707) 365-6891  
BRADY WILLIAMS

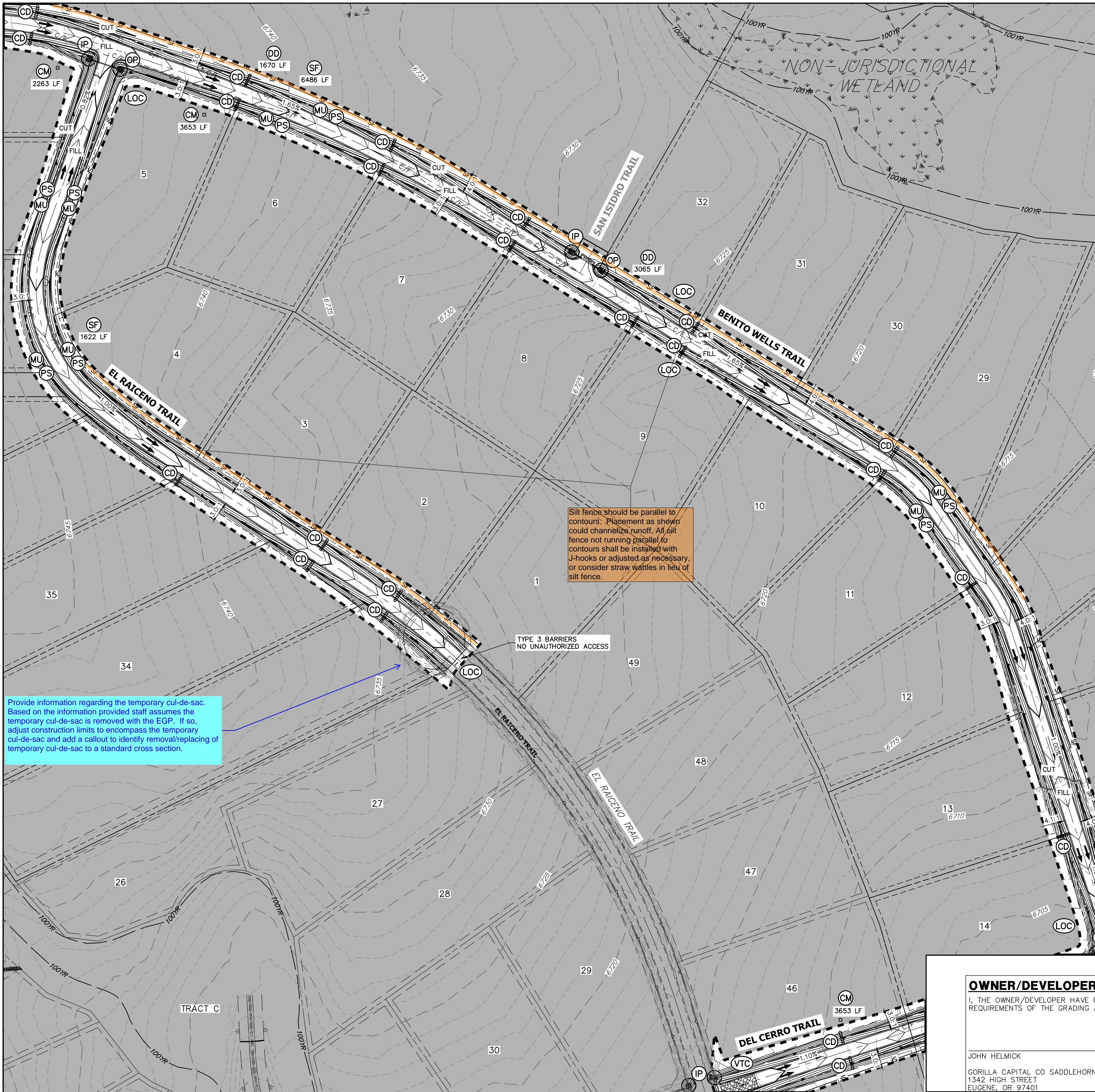
**J.R. ENGINEERING**  
A Westman Company  
Central 303-740-9888 • Colorado Springs 719-588-2583  
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BY	DATE	REVISION

H-SCALE: 1"=100'  
V-SCALE: N/A  
DATE: 1/2/22  
DESIGNED BY: GVT  
DRAWN BY: GVT  
CHECKED BY: GVT

**SADDLEHORN RANCH - FILING NO. 2**  
**GRADING & EROSION CONTROL PLANS**

SHEET 5 OF 14  
JOB NO. 2514204



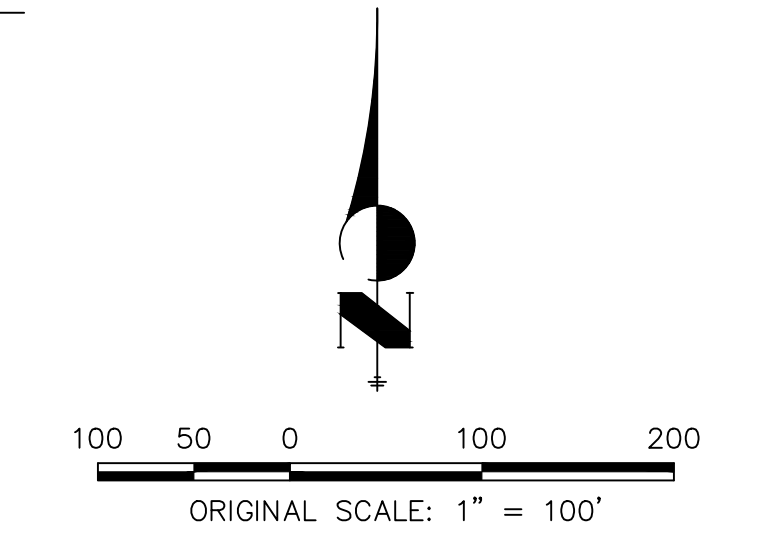
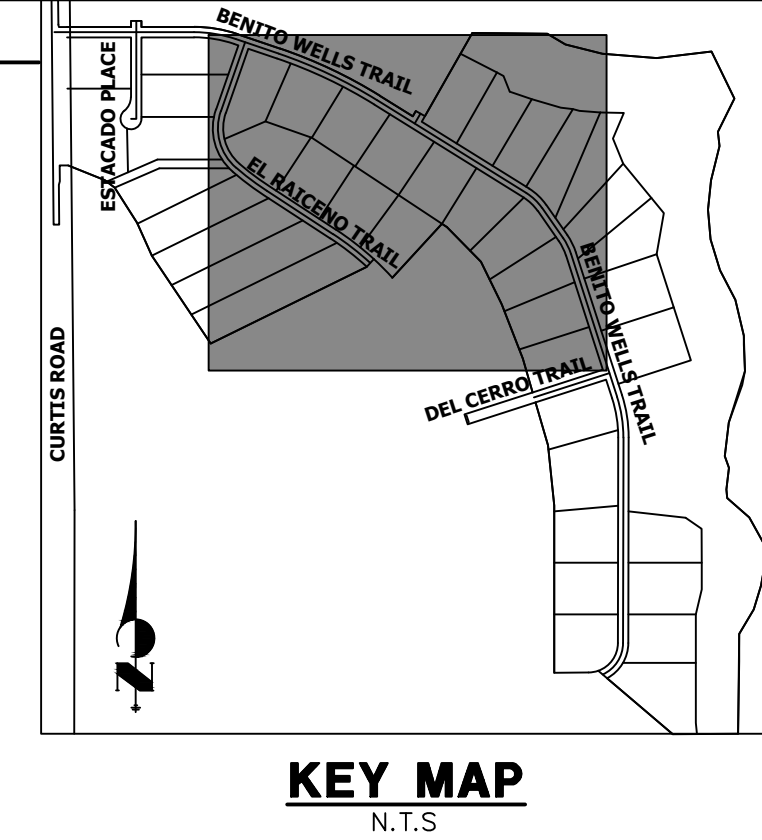
Silt fence should be parallel to contours. Placement as shown could channelize runoff. All silt fence not running parallel to contours shall be installed with J-hooks or adjusted as necessary, or consider straw wattles in lieu of silt fence.

Provide information regarding the temporary cul-de-sac. Based on the information provided staff assumes the temporary cul-de-sac is removed with the EGP. If so, adjust construction limits to encompass the temporary cul-de-sac and add a callout to identify removal/replacing of temporary cul-de-sac to a standard cross section.

TYPE 3 BARRIERS  
NO UNAUTHORIZED ACCESS

**LEGEND**

- SEDIMENT BASIN (SB)
- SILT FENCE (SF)
- STABILIZED STAGING AREA (SSA)
- CONSTRUCTION MARKER (CM)
- VEHICLE TRACKING CONTROL (VTC)
- TEMPORARY STOCK PILE (TSP)
- EROSION CONTROL BLANKET (ECB)
- INLET PROTECTION (IP)
- OUTLET PROTECTION (OP)
- DIVERSION DITCH AND DIKE, TEMPORARY (DD)
- CUT AND FILL LINE (C/F)
- LIMITS OF CONSTRUCTION/DISTURBANCE (LOC)
- CONCRETE WASHOUT AREA (CWA)
- MULCHING & PERMANENT SEEDING (MU, PS)
- TEMPORARY SLOPE DRAIN (TSD)
- REINFORCED ROCK BERM (RRB)
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- ROCK SOCK (RS)
- CONSTRUCTION MARKERS (CM)
- OFF-SITE GRADING (CANNOT BE COMPLETED WITH EARLY GRADING PERMIT)



**NOTES**

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- FINAL STABILIZATION ANTICIPATED 05/2023.



Know what's below.  
Call before you dig.

**OWNER/DEVELOPER STATEMENT**

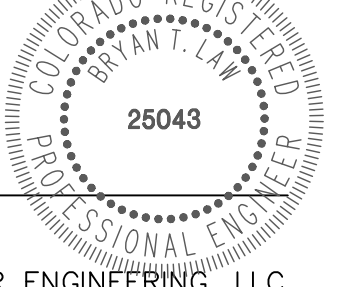
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JOHN HELMICK  
GORILLA CAPITAL CO SADDLEHORN RANCH, LLC  
1342 HIGH STREET  
EUGENE, OR 97401

**ENGINEER'S STATEMENT**

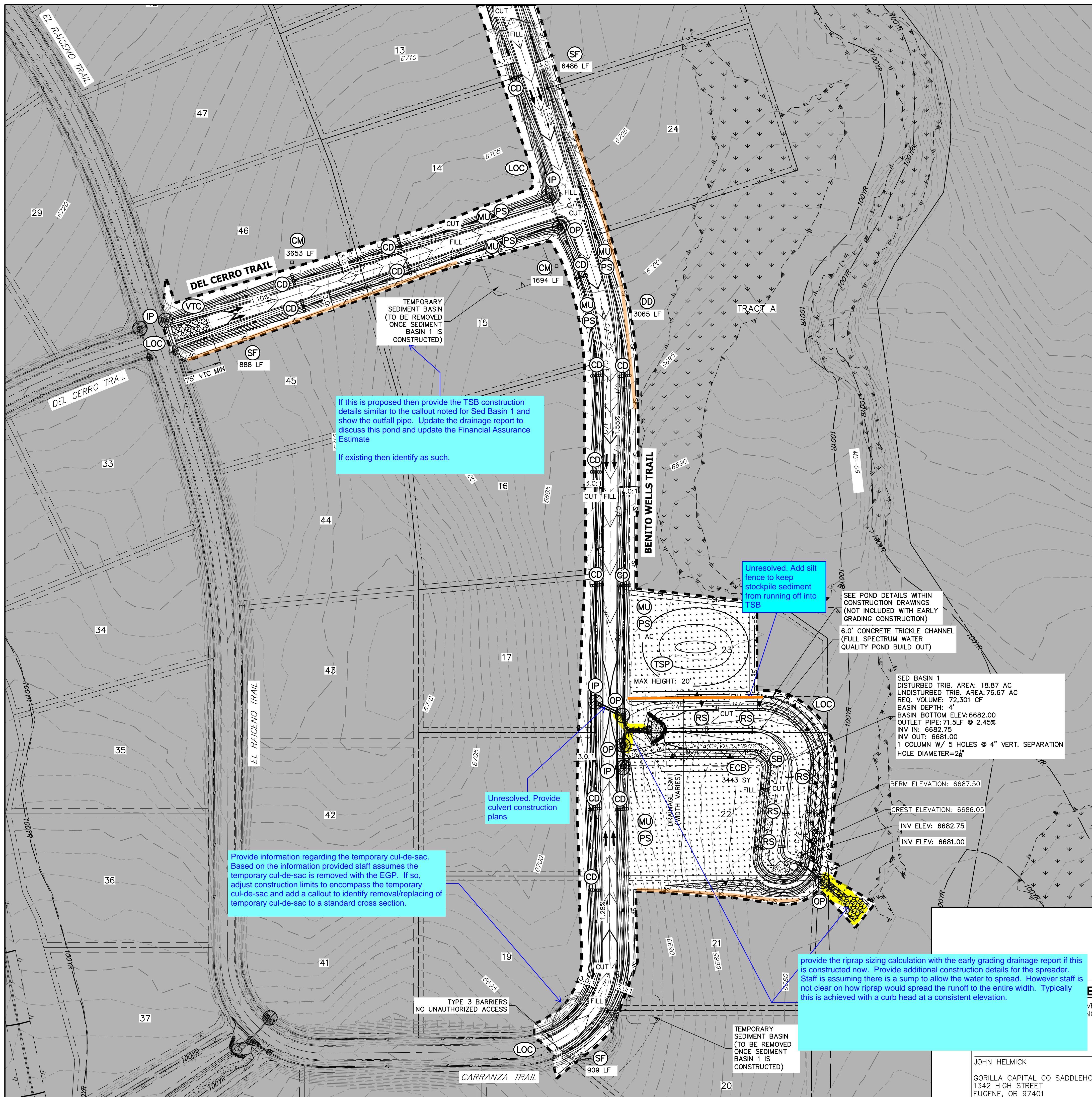
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BRYAN T. LAW, P.E.  
COLORADO P.E. 25043  
FOR AND ON BEHALF OF JR ENGINEERING, LLC



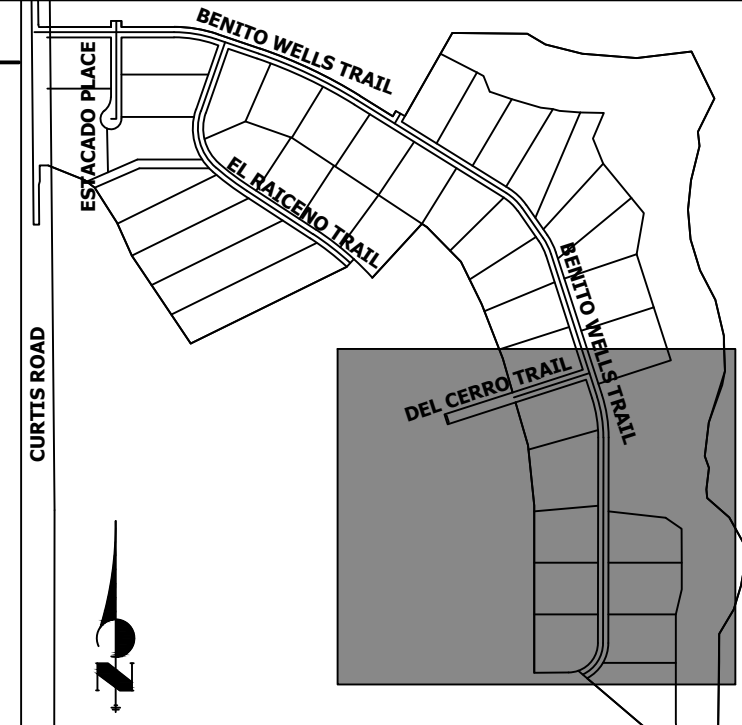
5/2/22  
DATE

<p>UNLIT SUCH TIME AS THESE DRAWINGS ARE APPROVED BY THE APPROPRIATE REVIEWING AGENCIES, OR ENGINEERING APPROVES THEIR USES DESIGNATED BY WRITTEN AUTHORIZATION.</p> <p>PREPARED FOR <b>ROI PROPERTY GROUP, LLC</b> 2495 RIDGON STREET NAPA, CALIFORNIA (707) 365-6891 BRADY WILLIAMS</p>	<p><b>J.R. ENGINEERING</b> A Westman Company Central 303-740-8888 • Colorado Springs 719-588-2583 Fort Collins 970-491-9888 • www.jrengineering.com</p>
<p>BY DATE</p>	<p>REVISION</p>
<p>H-SCALE 1"=100'</p>	<p>V-SCALE N/A</p>
<p>DESIGNED BY</p>	<p>GVT</p>
<p>DRAWN BY</p>	<p>GVT</p>
<p>CHECKED BY</p>	<p>GVT</p>
<p><b>SADDLEHORN RANCH - FILING NO. 2</b></p>	<p><b>GRADING &amp; EROSION CONTROL PLANS</b></p>
<p>SHEET 6 OF 14</p>	<p>JOB NO. 2514204</p>

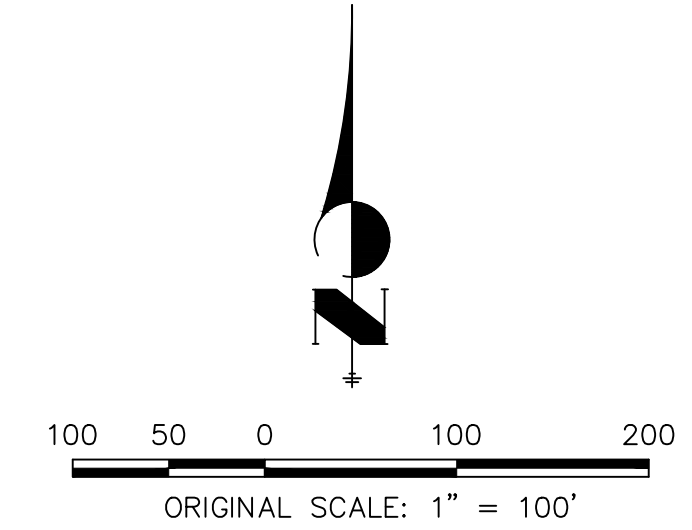


**LEGEND**

SEDIMENT BASIN	(SB)	
SILT FENCE	(SF)	
STABILIZED STAGING AREA	(SSA)	
CONSTRUCTION MARKER	(CM)	
VEHICLE TRACKING CONTROL	(VTC)	
TEMPORARY STOCK PILE	(TSP)	
EROSION CONTROL BLANKET	(ECB)	
INLET PROTECTION	(IP)	
OUTLET PROTECTION	(OP)	
DIVERSION DITCH AND DIKE, TEMPORARY	(DD)	
CUT AND FILL LINE		C/F
LIMITS OF CONSTRUCTION/DISTURBANCE	(LOC)	
CONCRETE WASHOUT AREA	(CWA)	
MULCHING & PERMANENT SEEDING	(MU) (PS)	
TEMPORARY SLOPE DRAIN	(TSD)	
REINFORCED ROCK BERM	(RRB)	
CHECK DAM	(CD)	
ROCK SOCK	(RS)	
CONSTRUCTION MARKERS	(CM)	
OFF-SITE GRADING (CANNOT BE COMPLETED WITH EARLY GRADING PERMIT)		



**KEY MAP**  
N.T.S.



TEMPORARY SEDIMENT BASIN (TO BE REMOVED ONCE SEDIMENT BASIN 1 IS CONSTRUCTED)

If this is proposed then provide the TSB construction details similar to the callout noted for Sed Basin 1 and show the outfall pipe. Update the drainage report to discuss this pond and update the Financial Assurance Estimate

If existing then identify as such.

Unresolved. Add silt fence to keep stockpile sediment from running off into TSB

SEE POND DETAILS WITHIN CONSTRUCTION DRAWINGS (NOT INCLUDED WITH EARLY GRADING CONSTRUCTION)

6.0" CONCRETE TRICKLE CHANNEL (FULL SPECTRUM WATER QUALITY POND BUILD OUT)

SED BASIN 1  
DISTURBED TRIB. AREA: 18.87 AC  
UNDISTURBED TRIB. AREA: 76.67 AC  
REQ. VOLUME: 72,301 CF  
BASIN DEPTH: 4'  
BASIN BOTTOM ELEV: 6682.00  
OUTLET PIPE: 71.5LF @ 2.45%  
INV IN: 6682.75  
INV OUT: 6681.00  
1 COLUMN W/ 5 HOLES @ 4" VERT. SEPARATION  
HOLE DIAMETER=24"

BERM ELEVATION: 6687.50  
CREST ELEVATION: 6686.05  
INV ELEV: 6682.75  
INV ELEV: 6681.00

Unresolved. Provide culvert construction plans

Provide information regarding the temporary cul-de-sac. Based on the information provided staff assumes the temporary cul-de-sac is removed with the EGP. If so, adjust construction limits to encompass the temporary cul-de-sac and add a callout to identify removal/replacing of temporary cul-de-sac to a standard cross section.

provide the riprap sizing calculation with the early grading drainage report if this is constructed now. Provide additional construction details for the spreader. Staff is assuming there is a sump to allow the water to spread. However staff is not clear on how riprap would spread the runoff to the entire width. Typically this is achieved with a curb head at a consistent elevation.

TYPE 3 BARRIERS  
NO UNAUTHORIZED ACCESS

TEMPORARY SEDIMENT BASIN (TO BE REMOVED ONCE SEDIMENT BASIN 1 IS CONSTRUCTED)

**NOTES**

- REFER TO THE STORMWATER MANAGEMENT PLAN (SWMP) FOR A DETAILED DESCRIPTION OF THE MAINTENANCE PROGRAMS FOR EROSION CONTROL FACILITIES.
- SEE SHEET 3 FOR SWALE TYPICAL CROSS SECTIONS THAT INCLUDES SWALE LINING DETAIL.
- ALL DISTURBED AREAS NOT TO BE PAVED SHALL BE PERMANENTLY SEEDED PER THE PAWNEE BUTTES SEED INC - "LOW GROW NATIVE MIX" OR APPROVED EQUAL. SEE SHEET 3 FOR SEED MIX DETAILS. 12.7 TOTAL ACRES OF SEEDING ESTIMATED.
- P.I.E = PUBLIC IMPROVEMENTS EASEMENT
- EXISTING VEGETATION CONSISTS OF NATIVE MEADOW GRASSES (APPROX. 70% COVERAGE) DETERMINED THROUGH A COMBINATION OF FIELD VERIFICATION AND AERIAL INSPECTION.
- NO BATCH PLANTS WILL BE UTILIZED ON SITE.
- NO OFF-SITE GRADING SHALL BE CONDUCTED WITH THE EARLY GRADING PERMIT.
- SILT FENCES THAT ARE NOT PARALLEL TO CONTOURS MUST BE INSTALLED WITH J-HOOKS.

**BMP PHASING**

- INITIAL (06/2022 - 7/2022):**
- INSTALL VTC
  - INSTALL CWA
  - ESTABLISH SSA
  - INSTALL CONSTRUCTION MARKERS
  - INSTALL SILT FENCE
  - INSTALL SEDIMENT BASINS
  - INSTALL DIVERSION DITCHES
- INTERIM (7/2022 - 10/2022):**
- LOCATE/INSTALL TEMPORARY STOCKPILE
  - MAINTAIN ALL BMPS
  - INSTALL RRBs
  - INSTALL INLET AND OUTLET PROTECTION
  - INSTALL EROSION CONTROL BLANKETS
- FINAL (10/2022 - 12/2022):**
- INSTALL MULCH AND PERMANENT SEEDING IN ALL DISTURBED AREAS
  - REMOVE SILT FENCE AFTER STABILIZED, INLET & OUTLET PROTECTION, RRBs, EROSION CONTROL BLANKETS, VTC, CWA, CONSTRUCTION MARKERS, SEDIMENT BASINS, DIVERSION DITCHES, SSA, AND TEMPORARY STOCKPILES
- FINAL STABILIZATION ANTICIPATED 05/2023.



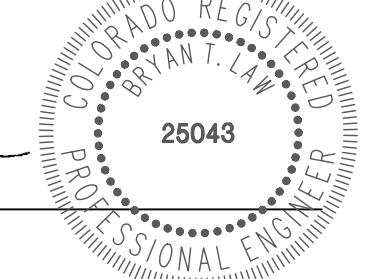
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**ENGINEER'S STATEMENT**

I HAVE READ AND WILL COMPLY WITH THE GRADING AND EROSION CONTROL PLAN.

THIS GRADING AND EROSION CONTROL PLAN WAS PREPARED UNDER MY DIRECTION AND SUPERVISION AND IS CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF. SAID PLAN HAS BEEN PREPARED ACCORDING TO THE CRITERIA ESTABLISHED BY THE COUNTY FOR GRADING AND EROSION CONTROL PLANS. I ACCEPT RESPONSIBILITY FOR ANY LIABILITY CAUSED BY ANY NEGLIGENT ACTS, ERRORS OR OMISSIONS ON MY PART IN PREPARING THIS PLANS.

*Bryan T. Law*  
BRYAN T. LAW, P.E.  
COLORADO P.E. 25043  
FOR AND ON BEHALF OF JR ENGINEERING, LLC



5/2/22  
DATE

JOHN HELMICK  
GORILLA CAPITAL CO SADDLEHORN RANCH, LLC  
1342 HIGH STREET  
EUGENE, OR 97401

DATE

UNTIL SUCH TIME AS THESE DRAWINGS ARE APPROVED BY THE APPROPRIATE REVIEWING AGENCIES, OR ENGINEERING APPROVES THEIR USE, THESE DRAWINGS ARE DESIGNATED BY WRITTEN AUTHORIZATION.

PREPARED FOR  
**ROI PROPERTY GROUP, LLC**  
2495 RIDGON STREET  
NAPA, CALIFORNIA  
(707) 365-6891  
BRADY WILLIAMS

**J.R. ENGINEERING**  
A Westman Company  
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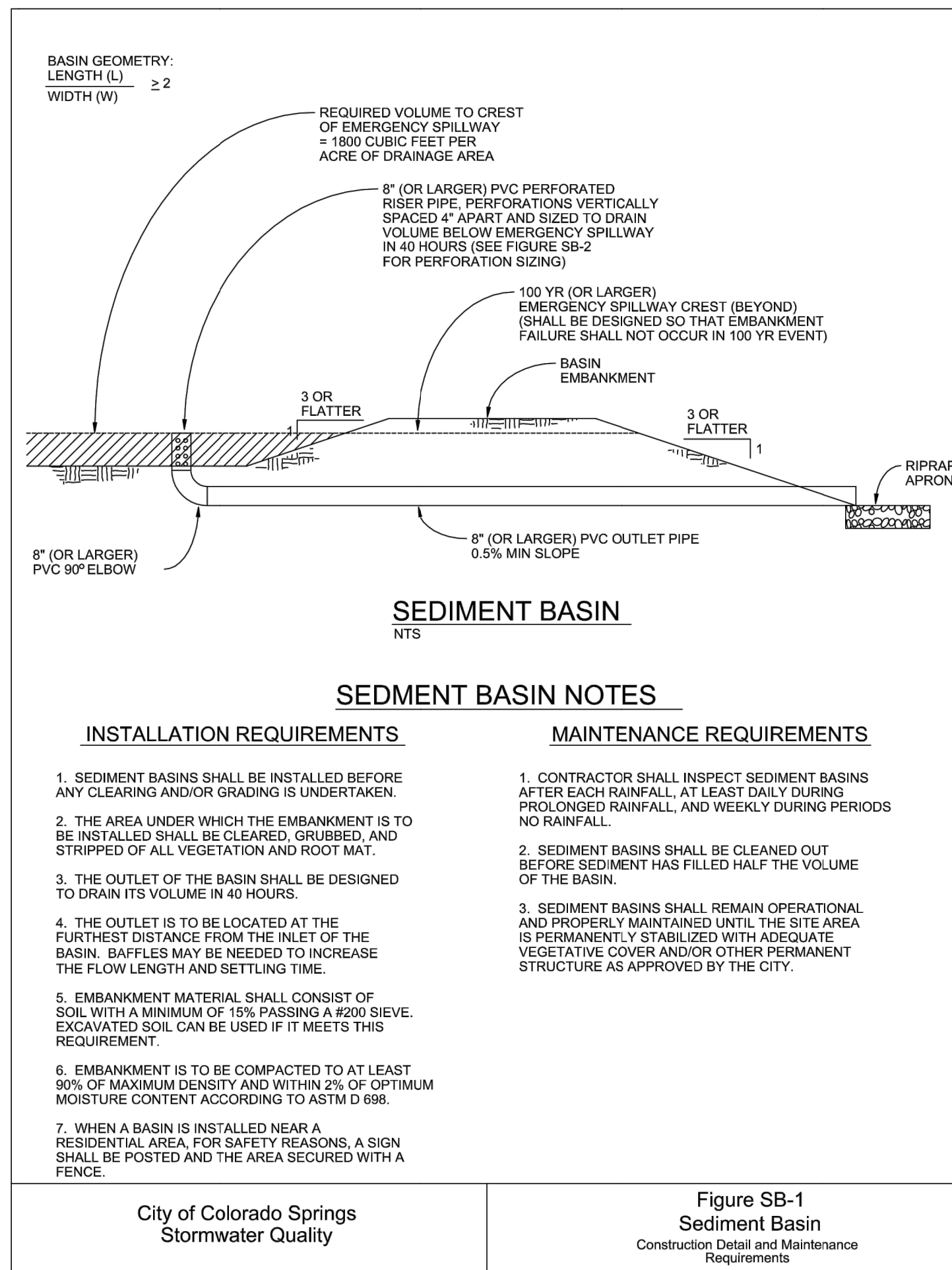
BY	DATE	NO.	REVISION

H-SCALE: 1"=100'  
V-SCALE: N/A  
DATE: 1/2/22  
DESIGNED BY: GVT  
DRAWN BY: GVT  
CHECKED BY:

**SADDLEHORN RANCH - FILING NO. 2 GRADING & EROSION CONTROL PLANS**

SHEET 7 OF 14  
JOB NO. 2514204





Required Area per Row (in<sup>2</sup>)

Design Volume (acre-ft)	Depth at Outlet (ft)							
	1.0	1.5	2.0	2.5	3.0	3.5	4.0	4.5
2	15.04	7.71	5.10	3.76	2.95	2.41	2.02	1.73
1	7.52	3.86	2.55	1.88	1.48	1.21	1.01	0.87
0.6	4.51	2.31	1.53	1.13	0.89	0.72	0.61	0.52
0.4	3.01	1.54	1.02	0.75	0.59	0.48	0.40	0.35
0.2	1.50	0.77	0.51	0.38	0.30	0.24	0.20	0.17
0.1	0.75	0.39	0.26	0.19	0.15	0.12	0.10	0.09
0.08	0.45	0.23	0.15	0.11	0.09	0.07	0.06	0.05
0.04	0.20	0.10	0.06	0.04	0.03	0.02	0.02	0.02
0.02	0.10	0.05	0.03	0.02	0.01	0.01	0.01	0.01
0.01	0.08	0.04	0.03	0.02	0.01	0.01	0.01	0.01

TABLE SB-1

Circular Perforation Sizing

Hole Diameter (in)	Hole Diameter (in)	Area per Row (in <sup>2</sup> )		
		n = 1	n = 2	n = 3
1/4	0.250	0.05	0.10	0.15
5/16	0.313	0.08	0.15	0.23
3/8	0.375	0.11	0.22	0.33
7/16	0.438	0.15	0.30	0.45
1/2	0.500	0.20	0.39	0.59
9/16	0.563	0.25	0.50	0.75
5/8	0.625	0.31	0.61	0.92
11/16	0.688	0.37	0.74	1.11
3/4	0.750	0.44	0.88	1.33
7/8	0.875	0.60	1.20	1.80
1	1.000	0.79	1.57	2.36
1 1/8	1.125	0.99	1.99	2.98
1 1/4	1.250	1.23	2.45	3.68
1 3/8	1.375	1.48	2.97	4.45
1 1/2	1.500	1.77	3.53	5.30
1 5/8	1.625	2.07	4.15	6.22
1 3/4	1.750	2.41	4.81	7.22
1 7/8	1.875	2.76	5.52	8.28
2	2.000	3.14	6.28	9.42

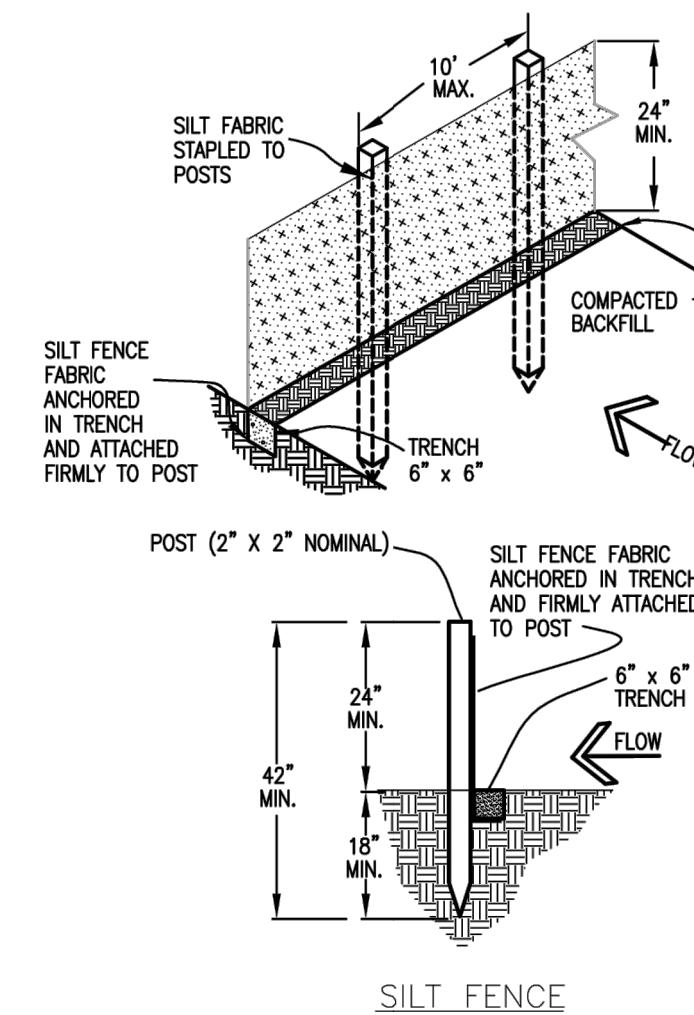
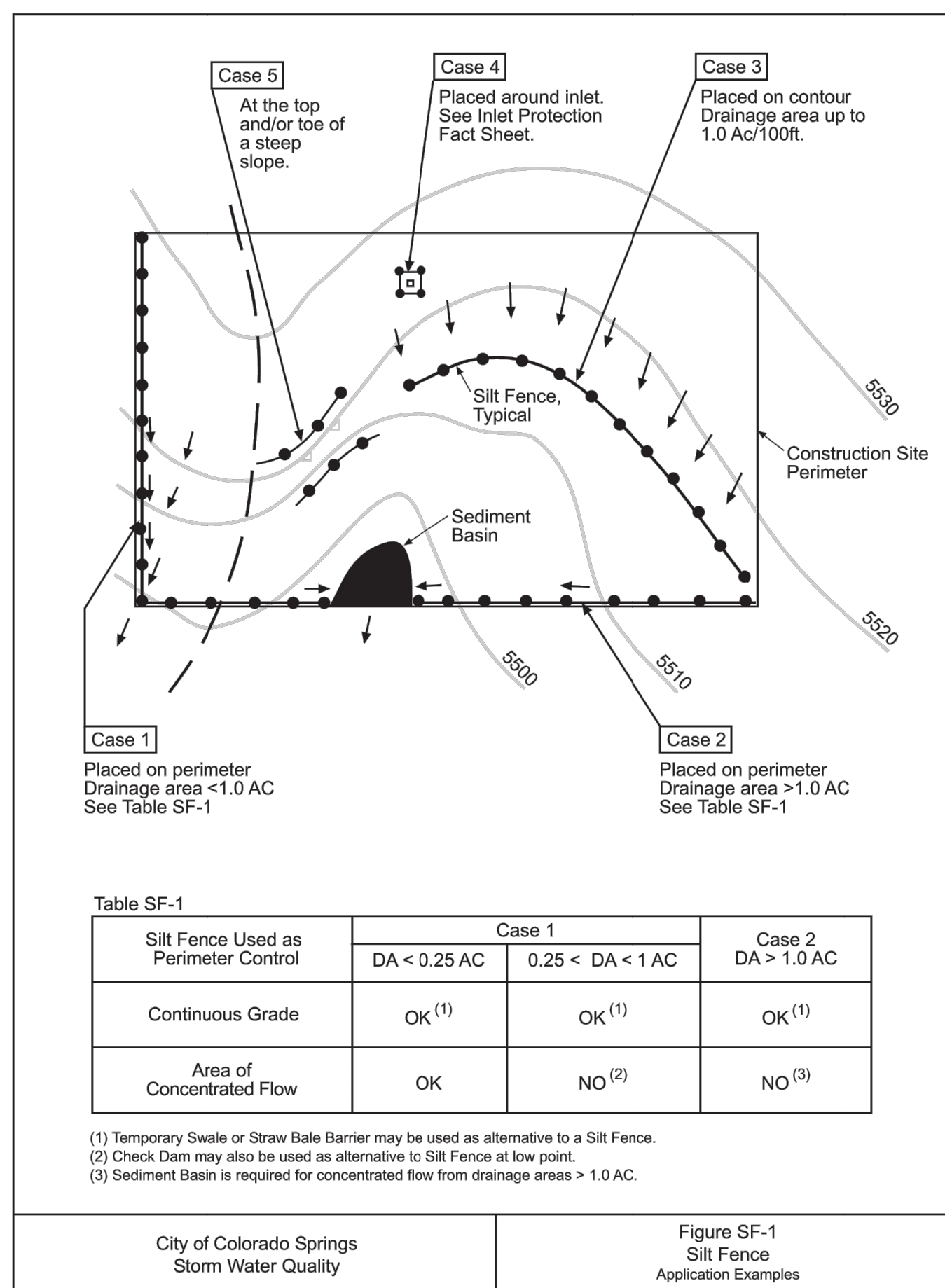
n = Number of columns of perforations

Minimum steel plate thickness: 1/4", 5/16", 3/8"

TABLE SB-2

City of Colorado Springs Stormwater Quality

Figure SB-2 Outlet Sizing Application Techniques and Maintenance Requirements



**SILT FENCE NOTES**

**INSTALLATION REQUIREMENTS**

- SILT FENCES SHALL BE INSTALLED PRIOR TO ANY LAND DISTURBING ACTIVITIES.
  - WHEN JOINTS ARE NECESSARY, SILT FENCE GEOTEXTILE SHALL BE SPICED TOGETHER ONLY AT SUPPORT POST AND SECURELY SEALED.
  - METAL POSTS SHALL BE "STUDDED TEE" OR "U" TYPE WITH MINIMUM WEIGHT OF 1.33 POUNDS PER LINEAR FOOT. WOOD POSTS SHALL HAVE A MINIMUM DIAMETER OR CROSS SECTION DIMENSION OF 2 INCHES.
  - THE FILTER MATERIAL SHALL BE FASTENED SECURELY TO METAL OR WOOD POSTS USING WIRE TIES, OR TO WOOD POSTS WITH 3/4" LONG #8 HEAVY-DUTY STAPLES. THE SILT FENCE GEOTEXTILE SHALL NOT BE STAPLED TO EXISTING TREES.
  - WHILE NOT REQUIRED, WIRE MESH FENCE MAY BE USED TO SUPPORT THE GEOTEXTILE. WIRE FENCE SHALL BE FASTENED SECURELY TO THE UPSLOPE SIDE OF THE POSTS USING HEAVY-DUTY WIRE STAPLES AT LEAST 3/4" LONG. THE WIRES OR HOG RINGS, THE WIRE SHALL EXTEND INTO THE TRENCH A MINIMUM OF 6" AND SHALL NOT EXTEND MORE THAN 3" ABOVE THE ORIGINAL GROUND SURFACE.
  - ALONG THE TOE OF FILLS, INSTALL THE SILT FENCE ALONG A LEVEL CONTOUR AND PROVIDE AN AREA BEHIND THE FENCE FOR RUNOFF TO POND AND SEDIMENT TO SETTLE. A MINIMUM DISTANCE OF 5 FEET FROM THE TOE OF THE FILL IS RECOMMENDED.
  - THE HEIGHT OF THE SILT FENCE FROM THE GROUND SURFACE SHALL BE MINIMUM OF 24 INCHES AND SHALL NOT EXCEED 36 INCHES. HIGHER FENCES MAY INPOUND VOLUMES OF WATER SUFFICIENT TO CAUSE FAILURE OF THE STRUCTURE.
- MAINTENANCE REQUIREMENTS**
- CONTRACTOR SHALL INSPECT SILT FENCES IMMEDIATELY AFTER EACH RAINFALL, AT LEAST DAILY DURING PROLONGED RAINFALL, AND WEEKLY DURING PERIODS OF NO RAINFALL. DAMAGED, COLLAPSED, UNINTRENCHED OR INEFFECTIVE SILT FENCES SHALL BE PROMPTLY REPAIRED OR REPLACED.
  - SEDIMENT SHALL BE REMOVED FROM BEHIND SILT FENCE WHEN IT ACCUMULATES TO HALF THE EXPOSED GEOTEXTILE HEIGHT.
  - SILT FENCES SHALL BE REMOVED WHEN ADEQUATE VEGETATIVE COVER IS ATTAINED AS APPROVED BY THE CITY.

City of Colorado Springs Stormwater Quality

Figure SF-2 Silt Fence Construction Detail and Maintenance Requirements

**ENGINEER'S STATEMENT**

PREPARED UNDER MY DIRECT SUPERVISION AND ON BEHALF OF JR ENGINEERING

BRYAN T. LAW, P.E.  
 COLORADO P.E. 25043  
 FOR AND ON BEHALF OF JR ENGINEERING, LLC

25043

5/2/22

DATE



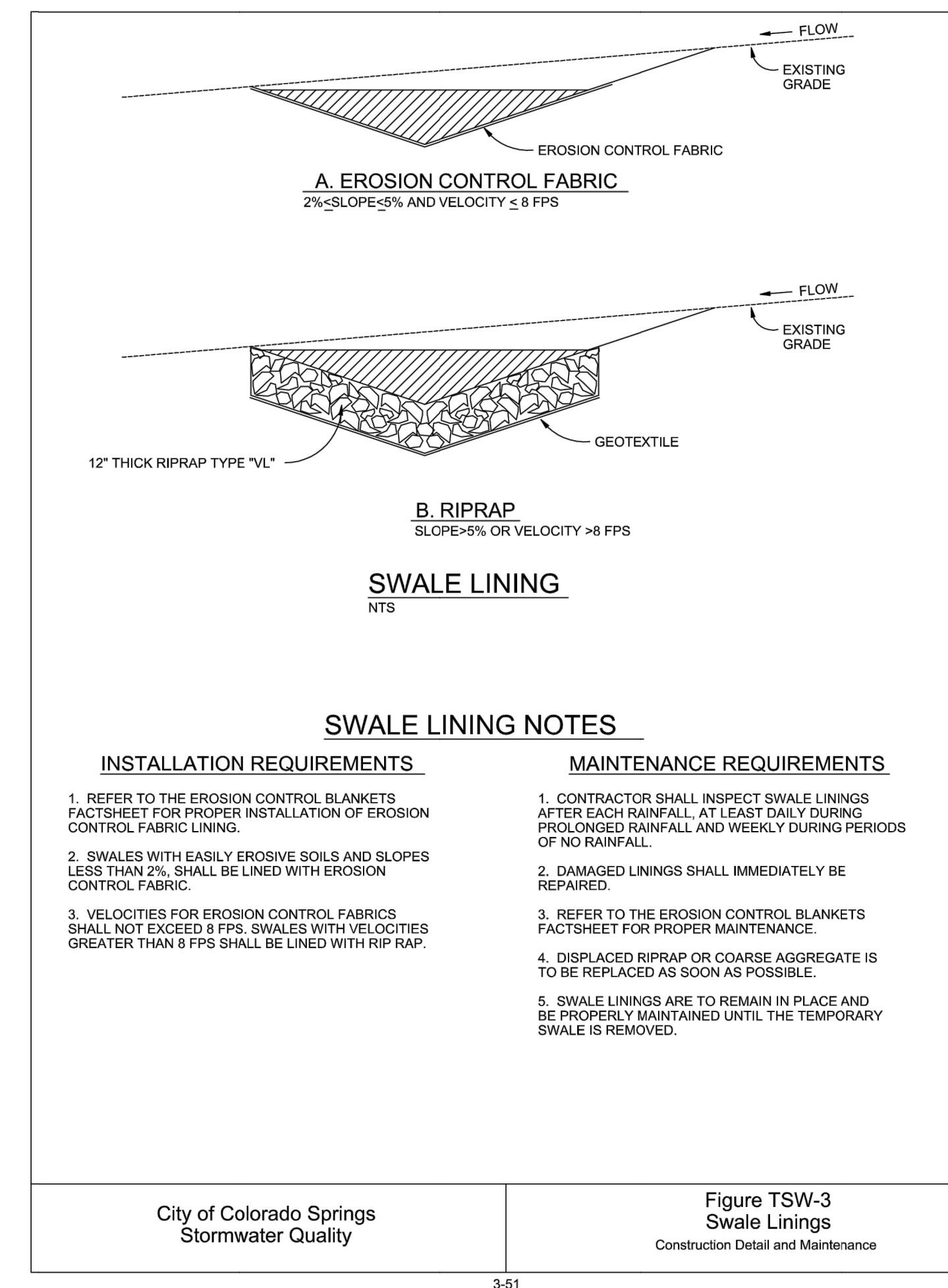
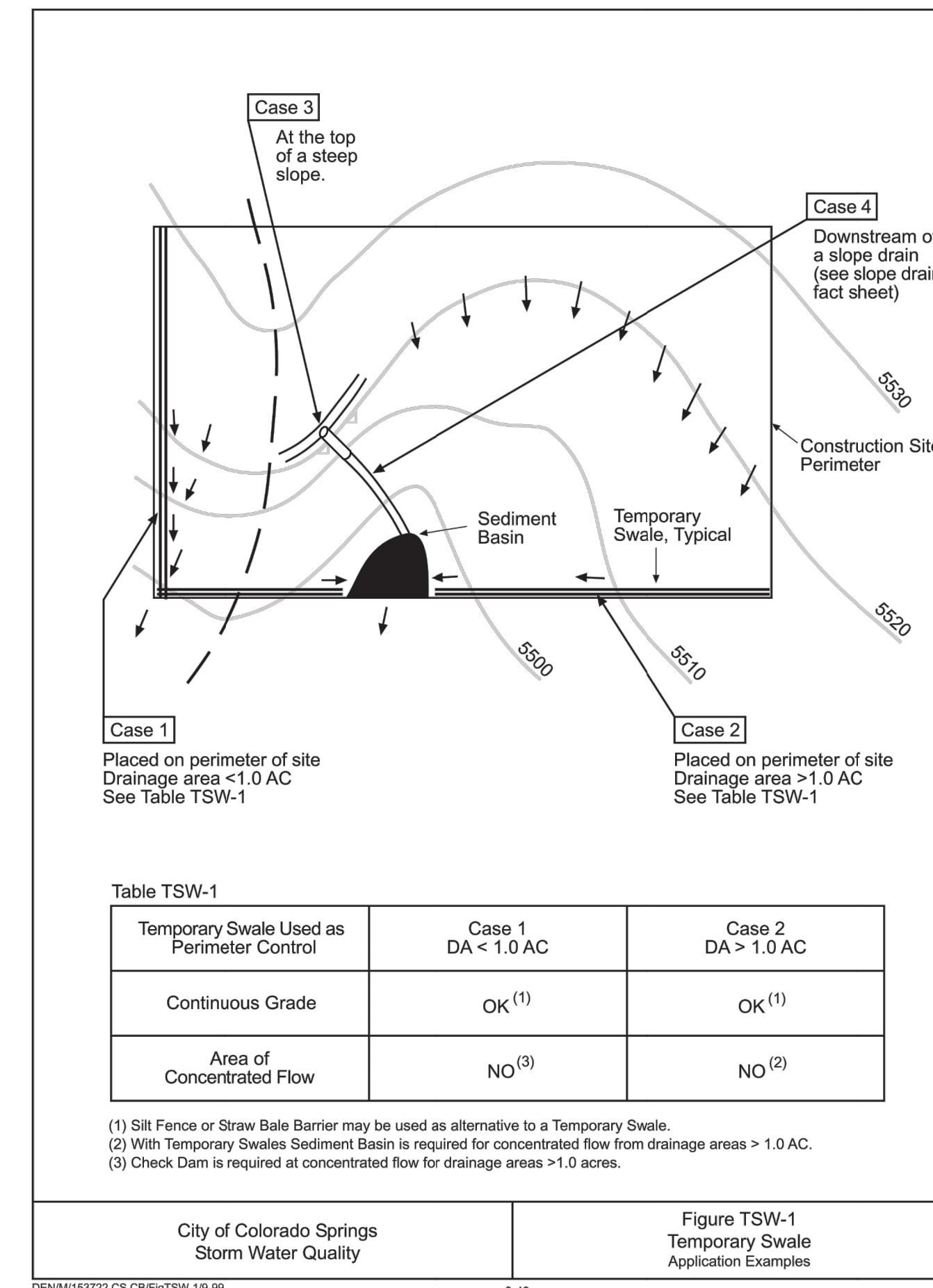
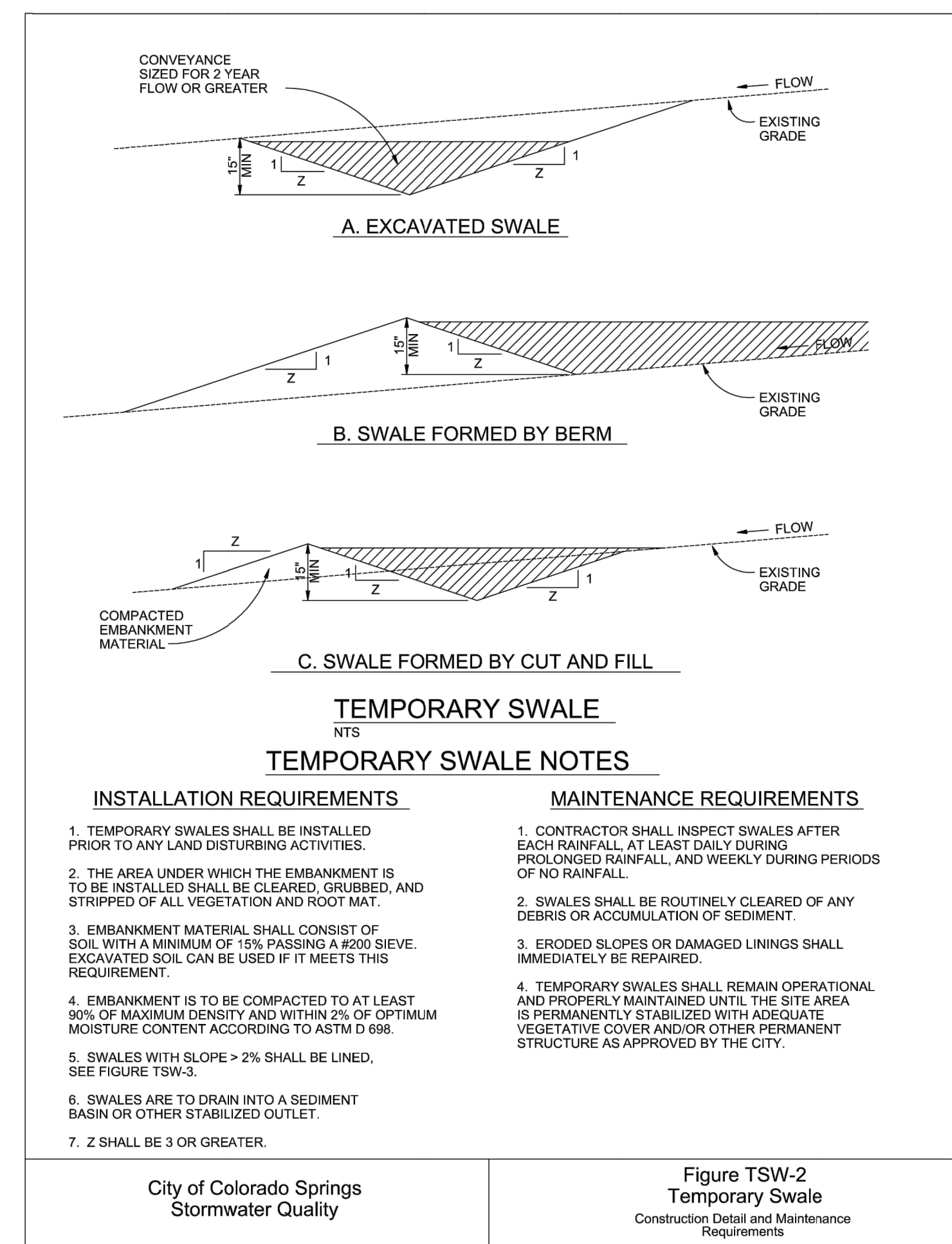
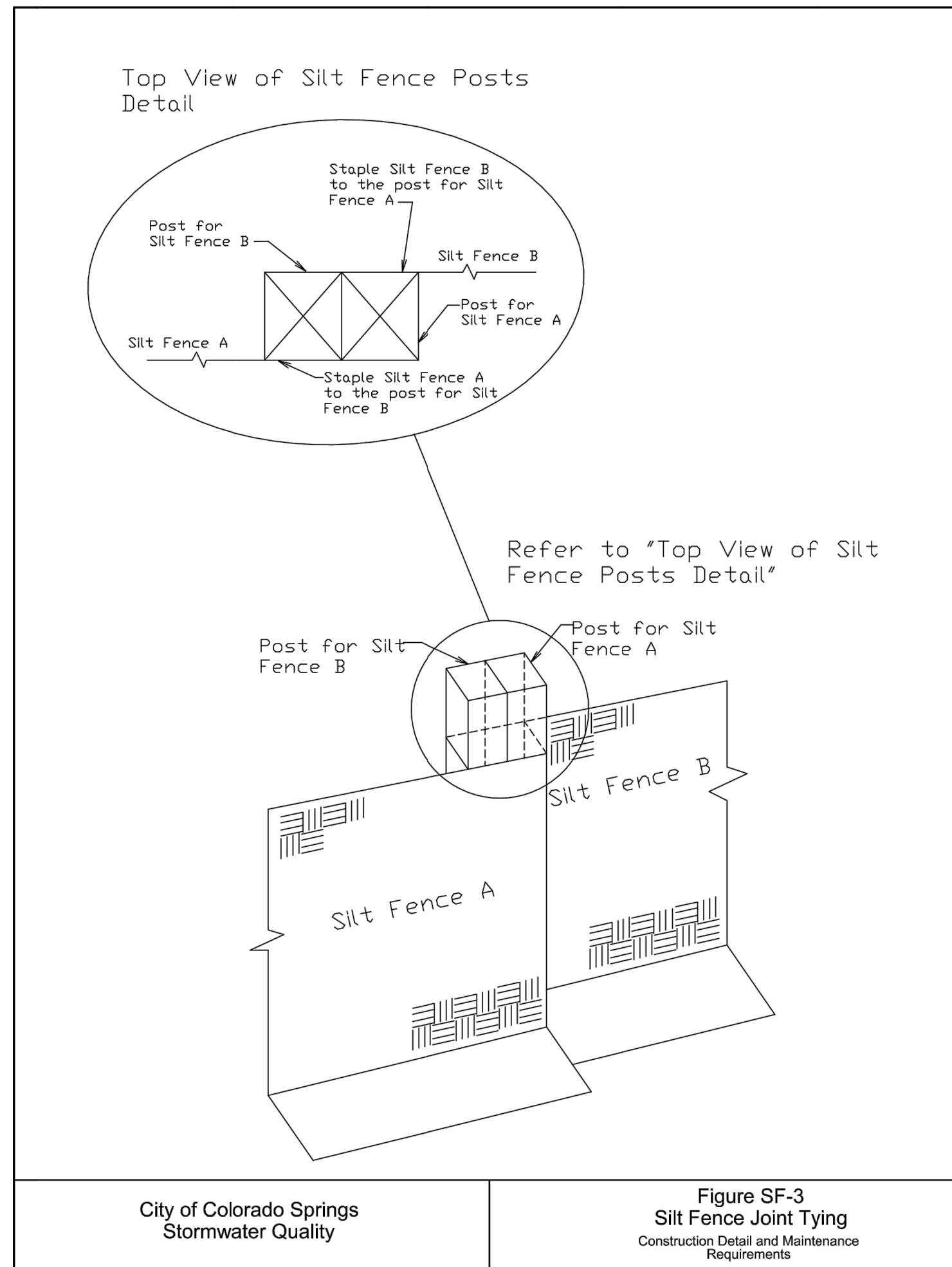
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 NAPA, CALIFORNIA  
 (707) 365-6891  
 BRADY WILLIAMS

**J.R. ENGINEERING**  
 A Westlin Company  
 Centennial 303-740-9888 • Colorado Springs 719-588-2583  
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COLORADO P.E. 25043  
FOR AND ON BEHALF OF JR ENGINEERING, LLC

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GRADING AND EROSION  
CONTROL DETAILS

SHEET 9 OF 14

JOB NO. 2514204

BY DATE

No. REVISION

H-SCALE	N/A	V-SCALE	N/A	DATE	DESIGNED BY	DRAWN BY	CHECKED BY
				1/2/22	NQJ	NQJ	

PREPARED FOR

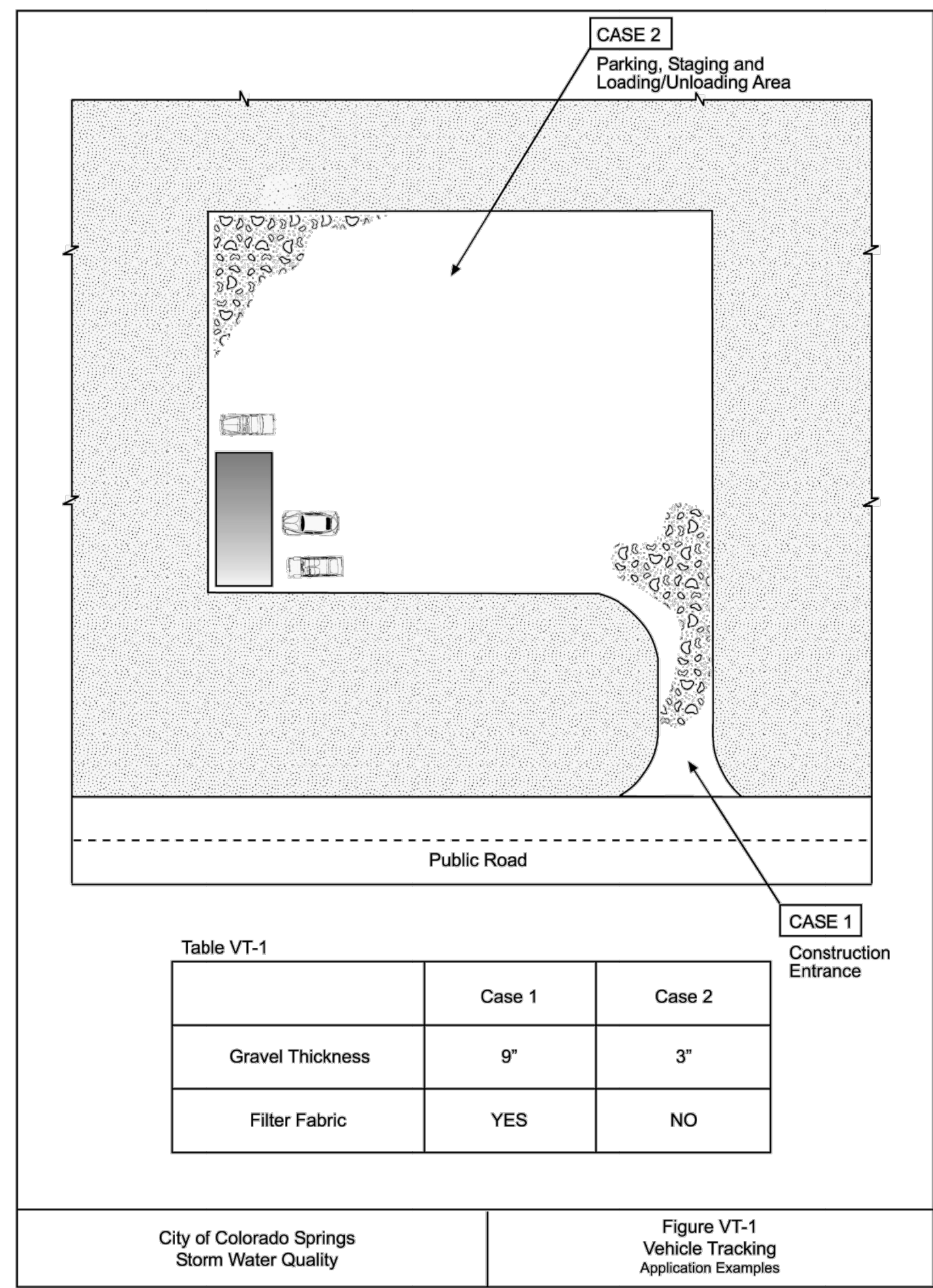
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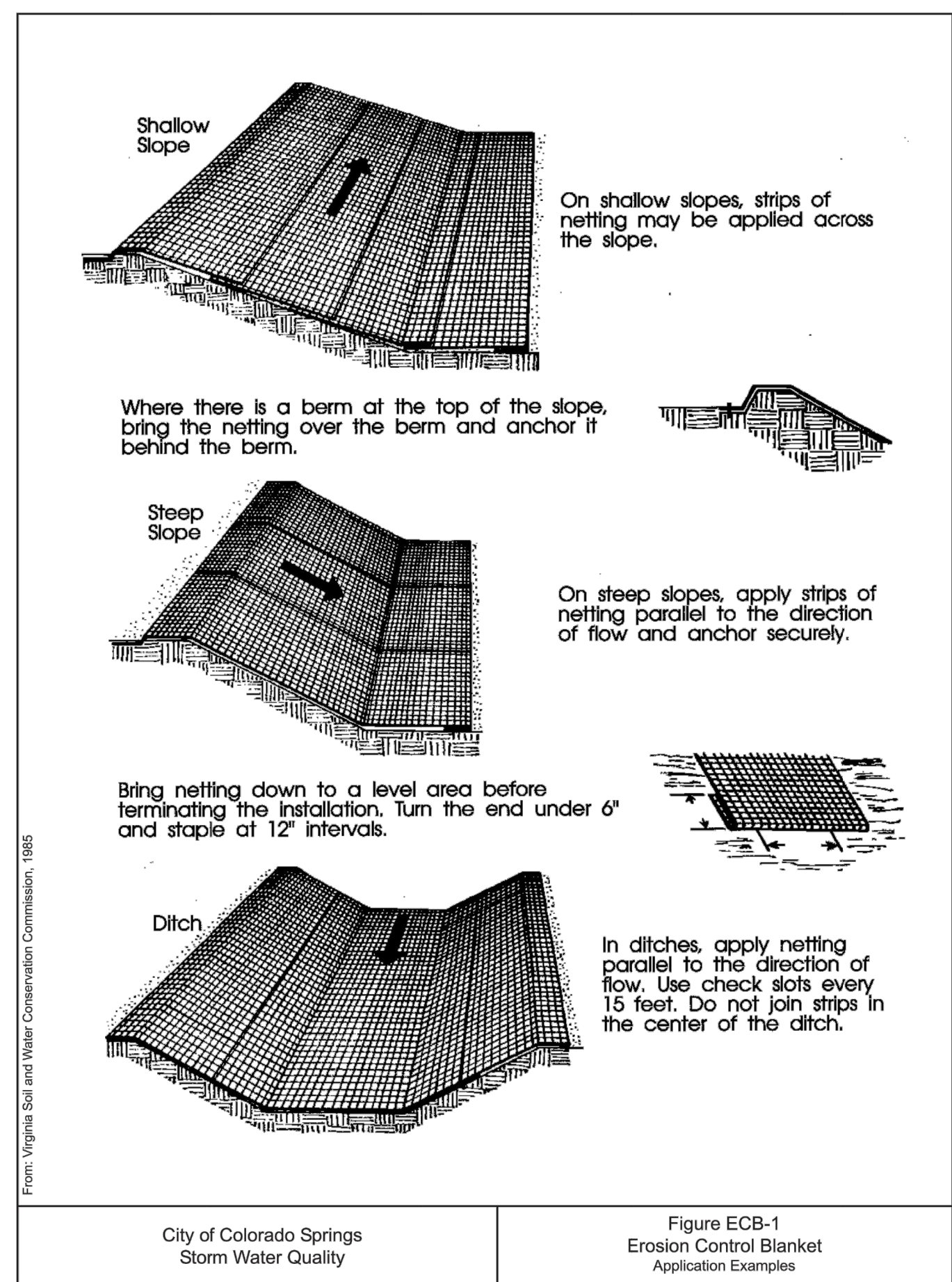
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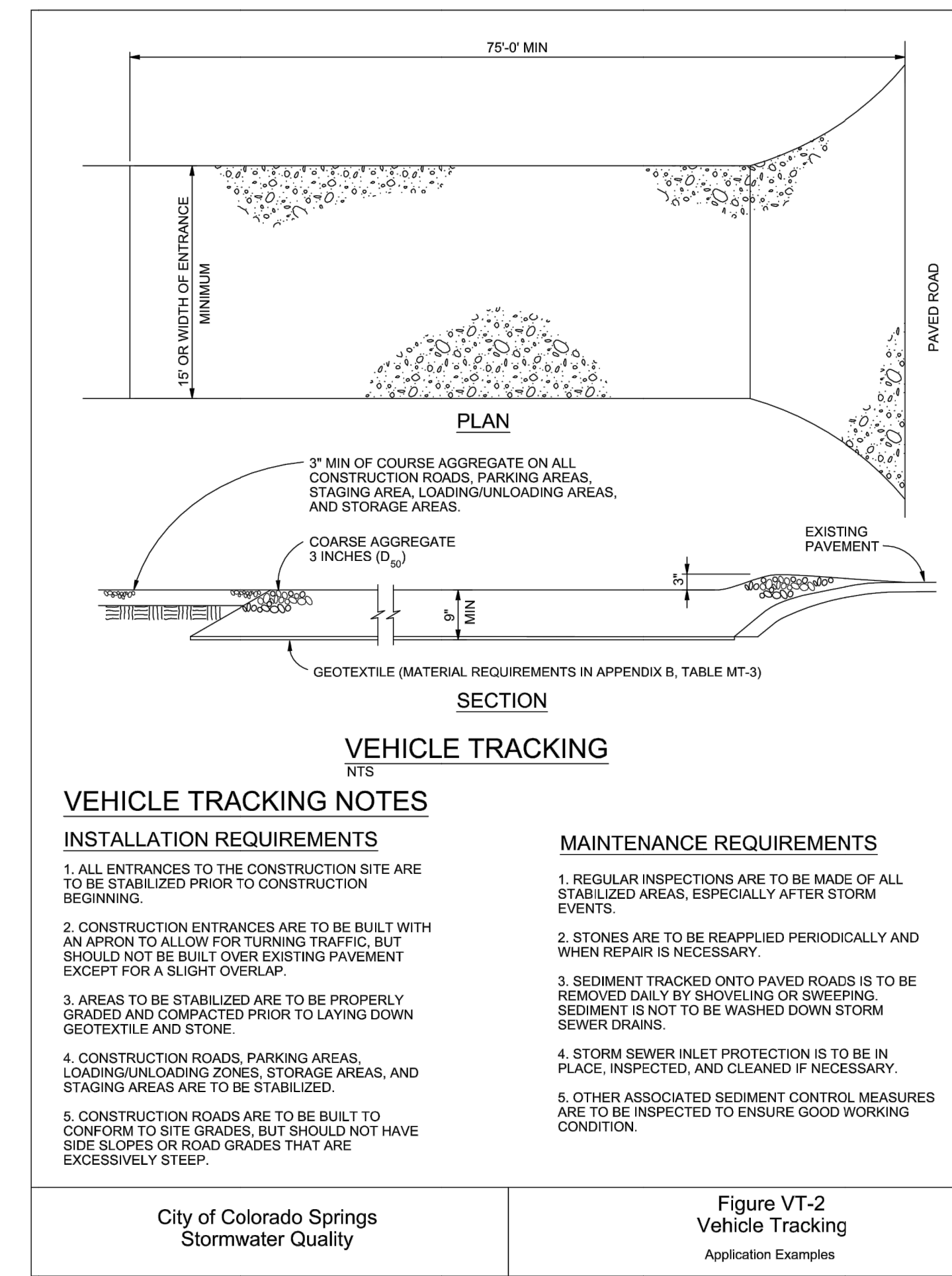
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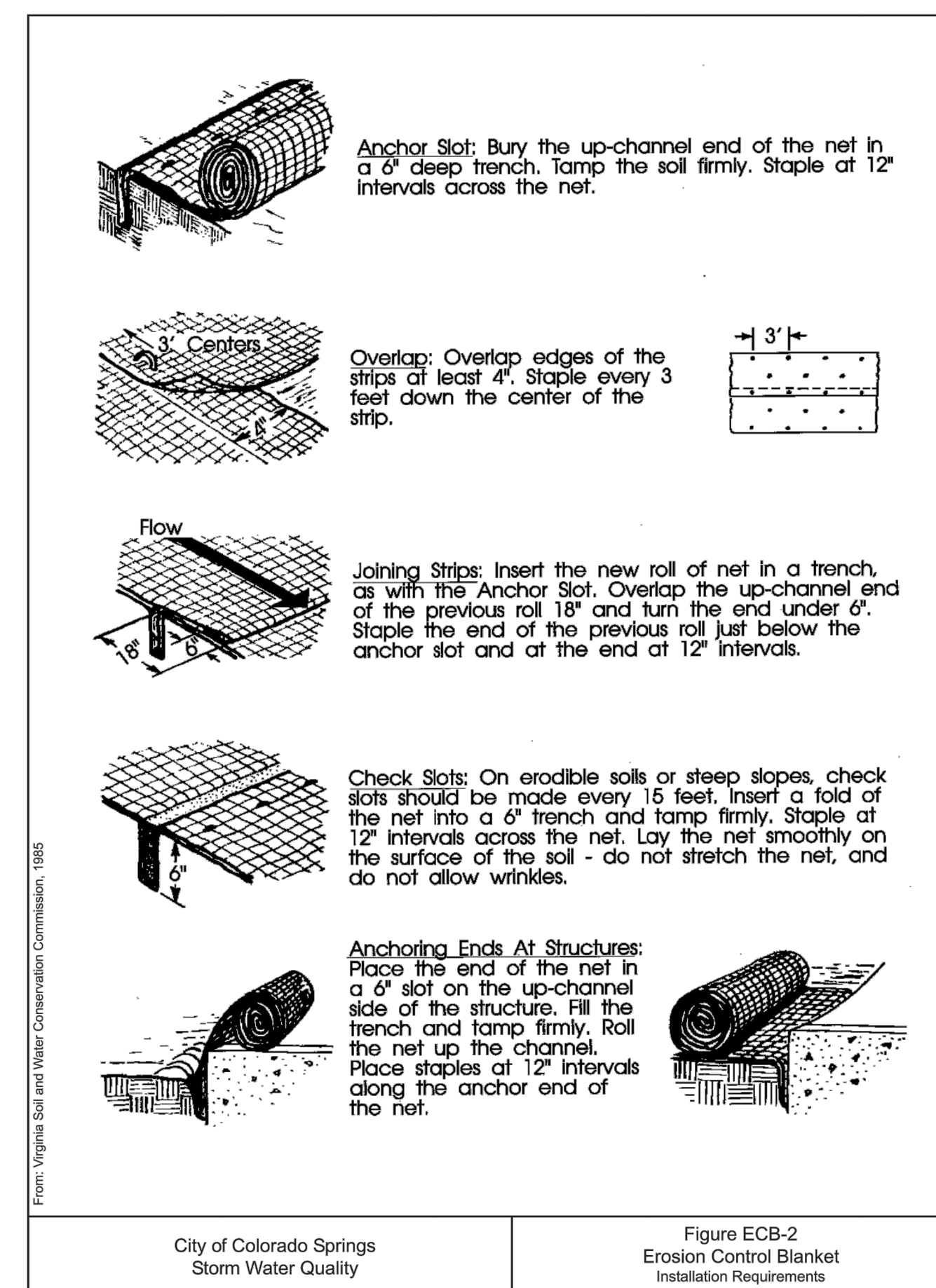
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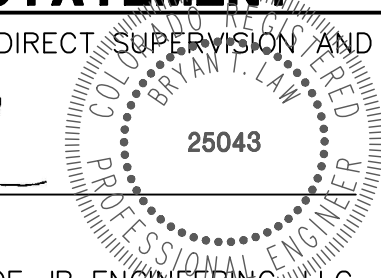
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3-23

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BRYAN T. LAW, P.E.  
COLORADO P.E. 25043  
FOR AND ON BEHALF OF JR ENGINEERING, LLC



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SHEET 10 OF 14  
JOB NO. 2514204

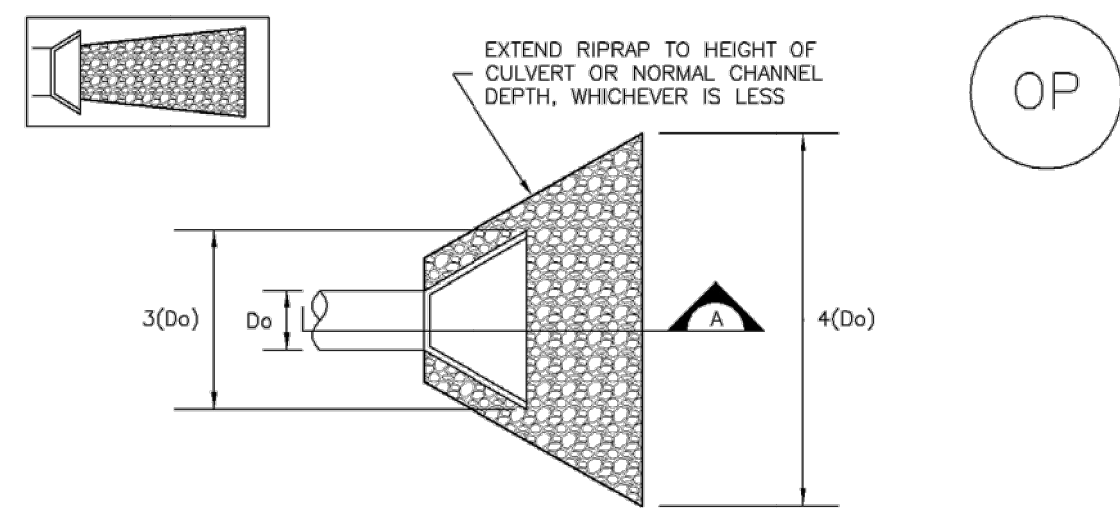
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EC-8 Temporary Outlet Protection (TOP)



TEMPORARY OUTLET PROTECTION PLAN

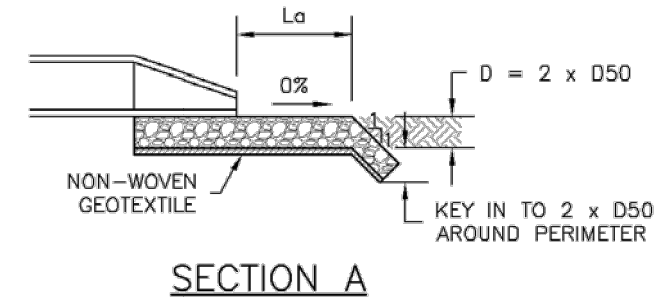


TABLE OP-1. TEMPORARY OUTLET PROTECTION SIZING TABLE

PIPE DIAMETER, Do (INCHES)	DISCHARGE, Q (CFS)	APRON LENGTH, La (FT)	RIPRAP D50 DIAMETER MIN (INCHES)
8	2.5 5	5 10	4 6
12	5 10	5 13	4 6
18	10 20 30 40	10 16 23 26	6 9 12 16
24	30 40 50 60	16 26 26 30	9 9 12 16

OP-1. TEMPORARY OUTLET PROTECTION

TOP-2 Urban Drainage and Flood Control District November 2010  
Urban Storm Drainage Criteria Manual Volume 3

Temporary Outlet Protection (TOP) EC-8

TEMPORARY OUTLET PROTECTION INSTALLATION NOTES

- SEE PLAN VIEW FOR:  
-LOCATION OF OUTLET PROTECTION.  
-DIMENSIONS OF OUTLET PROTECTION.
- DETAIL IS INTENDED FOR PIPES WITH SLOPE  $\leq 10\%$ . ADDITIONAL EVALUATION OF RIPRAP SIZING AND OUTLET PROTECTION DIMENSIONS REQUIRED FOR STEEPER SLOPES.
- TEMPORARY OUTLET PROTECTION INFORMATION IS FOR OUTLETS INTENDED TO BE UTILIZED LESS THAN 2 YEARS.

TEMPORARY OUTLET PROTECTION INSPECTION AND MAINTENANCE NOTES

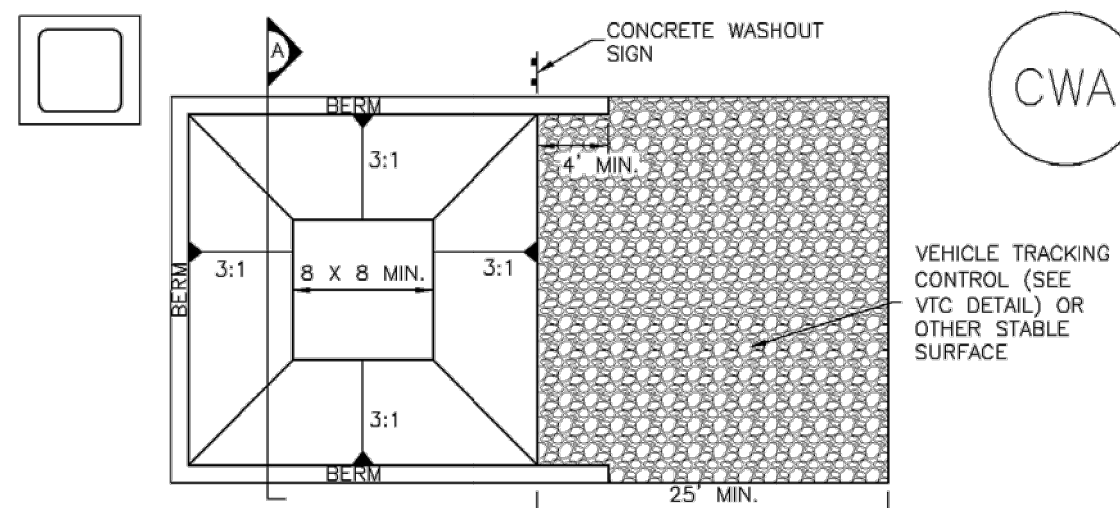
- INSPECT BMPs EACH WORKDAY, AND MAINTAIN THEM IN EFFECTIVE OPERATING CONDITION. MAINTENANCE OF BMPs SHOULD BE PROACTIVE, NOT REACTIVE. INSPECT BMPs AS SOON AS POSSIBLE (AND ALWAYS WITHIN 24 HOURS) FOLLOWING A STORM THAT CAUSES SURFACE EROSION, AND PERFORM NECESSARY MAINTENANCE.
- FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN BMPs IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.
- WHERE BMPs HAVE FAILED, REPAIR OR REPLACEMENT SHOULD BE INITIATED UPON DISCOVERY OF THE FAILURE.

NOTE: MANY JURISDICTIONS HAVE BMP DETAILS THAT VARY FROM UDFCD STANDARD DETAILS. CONSULT WITH LOCAL JURISDICTIONS AS TO WHICH DETAIL SHOULD BE USED WHEN DIFFERENCES ARE NOTED.

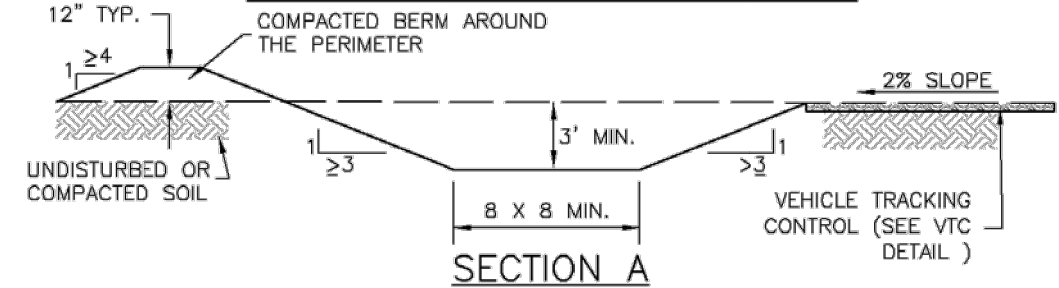
(DETAILS ADAPTED FROM AURORA, COLORADO AND PREVIOUS VERSION OF VOLUME 3, NOT AVAILABLE IN AUTOCAD)

November 2010 Urban Drainage and Flood Control District TOP-3  
Urban Storm Drainage Criteria Manual Volume 3

Concrete Washout Area (CWA) MM-1



CONCRETE WASHOUT AREA PLAN



CWA-1. CONCRETE WASHOUT AREA

CWA INSTALLATION NOTES

- SEE PLAN VIEW FOR:  
-CWA INSTALLATION LOCATION.
- DO NOT LOCATE AN UNLINED CWA WITHIN 400' OF ANY NATURAL DRAINAGE PATHWAY OR WATERBODY. DO NOT LOCATE WITHIN 1,000' OF ANY WELLS OR DRINKING WATER SOURCES. IF SITE CONSTRAINTS MAKE THIS INFEASIBLE, OR IF HIGHLY PERMEABLE SOILS EXIST ON SITE, THE CWA MUST BE INSTALLED WITH AN IMPERMEABLE LINER (1/8 MIL MIN. THICKNESS) OR SURFACE STORAGE ALTERNATIVES USING PREFABRICATED CONCRETE WASHOUT DEVICES OR A LINED ABOVE GROUND STORAGE ARE SHOULD BE USED.
- THE CWA SHALL BE INSTALLED PRIOR TO CONCRETE PLACEMENT ON SITE.
- CWA SHALL INCLUDE A FLAT SUBSURFACE PIT THAT IS AT LEAST 8' BY 8' SLOPES LEADING OUT OF THE SUBSURFACE PIT SHALL BE 3:1 OR FLATTER. THE PIT SHALL BE AT LEAST 3' DEEP.
- BERM SURROUNDING SIDES AND BACK OF THE CWA SHALL HAVE MINIMUM HEIGHT OF 1'.
- VEHICLE TRACKING PAD SHALL BE SLOPED 2% TOWARDS THE CWA.
- SIGNS SHALL BE PLACED AT THE CONSTRUCTION ENTRANCE, AT THE CWA, AND ELSEWHERE AS NECESSARY TO CLEARLY INDICATE THE LOCATION OF THE CWA TO OPERATORS OF CONCRETE TRUCKS AND PUMP RIGS.
- USE EXCAVATED MATERIAL FOR PERIMETER BERM CONSTRUCTION.

November 2010 Urban Drainage and Flood Control District CWA-3  
Urban Storm Drainage Criteria Manual Volume 3

MM-1 Concrete Washout Area (CWA)

CWA MAINTENANCE NOTES

- INSPECT BMPs EACH WORKDAY, AND MAINTAIN THEM IN EFFECTIVE OPERATING CONDITION. MAINTENANCE OF BMPs SHOULD BE PROACTIVE, NOT REACTIVE. INSPECT BMPs AS SOON AS POSSIBLE (AND ALWAYS WITHIN 24 HOURS) FOLLOWING A STORM THAT CAUSES SURFACE EROSION, AND PERFORM NECESSARY MAINTENANCE.
- FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN BMPs IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.
- WHERE BMPs HAVE FAILED, REPAIR OR REPLACEMENT SHOULD BE INITIATED UPON DISCOVERY OF THE FAILURE.
- THE CWA SHALL BE REPAIRED, CLEANED, OR ENLARGED AS NECESSARY TO MAINTAIN CAPACITY FOR CONCRETE WASTE. CONCRETE MATERIALS, ACCUMULATED IN PIT, SHALL BE REMOVED ONCE THE MATERIALS HAVE REACHED A DEPTH OF 2'.
- CONCRETE WASHOUT WATER, WASTED PIECES OF CONCRETE AND ALL OTHER DEBRIS IN THE SUBSURFACE PIT SHALL BE TRANSPORTED FROM THE JOB SITE IN A WATER-TIGHT CONTAINER AND DISPOSED OF PROPERLY.
- THE CWA SHALL REMAIN IN PLACE UNTIL ALL CONCRETE FOR THE PROJECT IS PLACED.
- WHEN THE CWA IS REMOVED, COVER THE DISTURBED AREA WITH TOP SOIL, SEED AND MULCH OR OTHERWISE STABILIZED IN A MANNER APPROVED BY THE LOCAL JURISDICTION.

(DETAIL ADAPTED FROM DOUGLAS COUNTY, COLORADO AND THE CITY OF PARKER, COLORADO, NOT AVAILABLE IN AUTOCAD).  
NOTE: MANY JURISDICTIONS HAVE BMP DETAILS THAT VARY FROM UDFCD STANDARD DETAILS. CONSULT WITH LOCAL JURISDICTIONS AS TO WHICH DETAIL SHOULD BE USED WHEN DIFFERENCES ARE NOTED.

CWA-4 Urban Drainage and Flood Control District November 2010  
Urban Storm Drainage Criteria Manual Volume 3



Know what's below.  
Call before you dig.

ENGINEER'S STATEMENT

PREPARED UNDER MY DIRECT SUPERVISION AND ON BEHALF OF JR ENGINEERING

BRYAN T. LAW, P.E.  
COLORADO P.E. 25043



5/2/22  
DATE

FOR AND ON BEHALF OF JR ENGINEERING, LLC

UNTIL SUCH TIME AS THESE DRAWINGS ARE APPROVED BY THE APPROPRIATE REVIEWING AGENCIES, OR ENGINEERING APPROVES THEIR USE, THESE DRAWINGS ARE DESIGNATED BY WRITTEN AUTHORIZATION.

PREPARED FOR  
ROI PROPERTY GROUP, LLC  
2495 RIGDON STREET  
NAPA, CALIFORNIA  
(707) 365-6891  
BRADY WILLIAMS

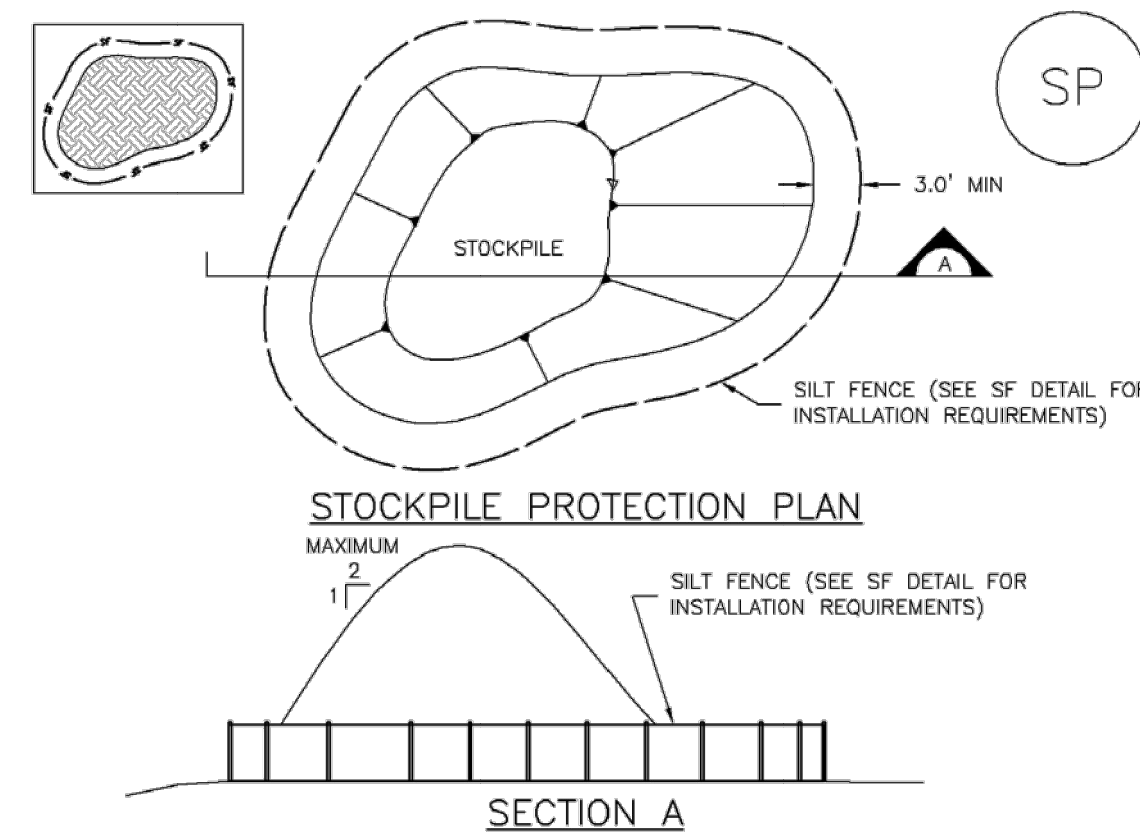
J.R. ENGINEERING  
A Westman Company  
Centennial 303-740-9888 • Colorado Springs 719-588-2583  
Fort Collins 970-491-9888 • www.jrengineering.com

BY	DATE	No.	REVISION

H-SCALE	N/A	N/A	N/A
V-SCALE	N/A	1/2"/22'	NQJ
DESIGNED BY	NQJ	DRAWN BY	NQJ
CHECKED BY			

SADDLEHORN RANCH - FILING NO. 2  
GRADING AND EROSION CONTROL DETAILS

**Stockpile Management (SP) MM-2**



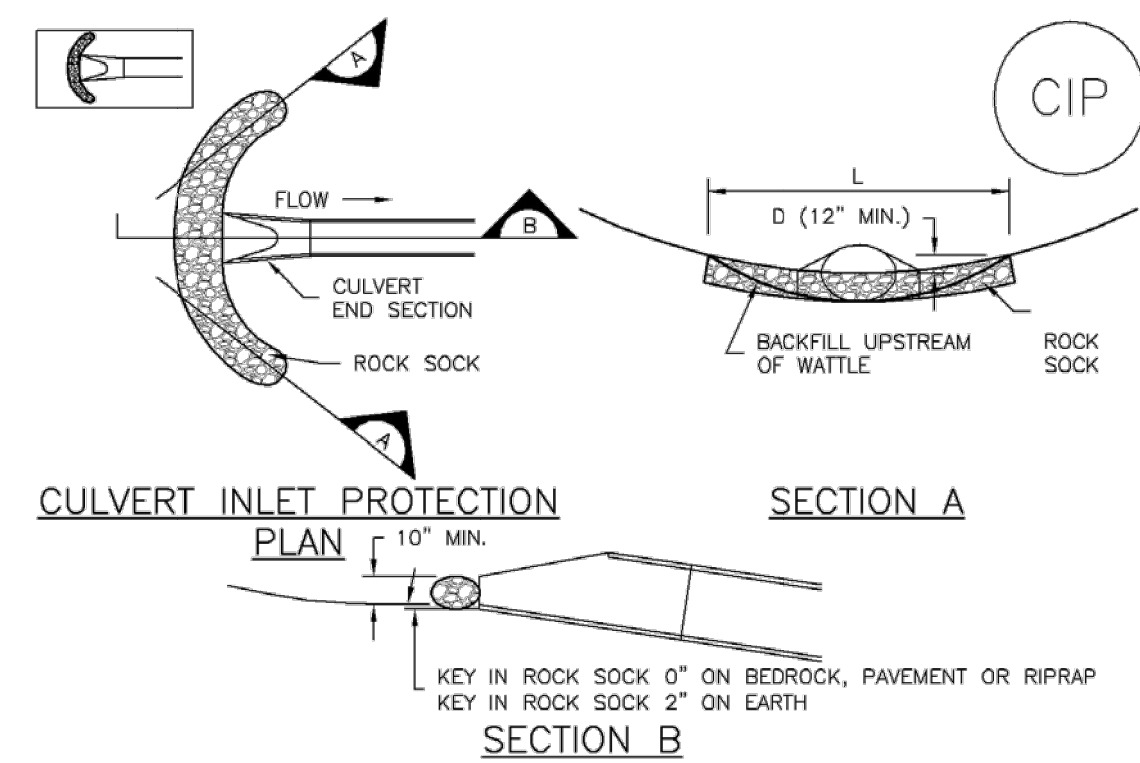
**SP-1. STOCKPILE PROTECTION**

**STOCKPILE PROTECTION INSTALLATION NOTES**

- SEE PLAN VIEW FOR:
  - LOCATION OF STOCKPILES.
  - TYPE OF STOCKPILE PROTECTION.
- INSTALL PERIMETER CONTROLS IN ACCORDANCE WITH THEIR RESPECTIVE DESIGN DETAILS. SILT FENCE IS SHOWN IN THE STOCKPILE PROTECTION DETAILS; HOWEVER, OTHER TYPES OF PERIMETER CONTROLS INCLUDING SEDIMENT CONTROL LOGS OR ROCK SOCKS MAY BE SUITABLE IN SOME CIRCUMSTANCES. CONSIDERATIONS FOR DETERMINING THE APPROPRIATE TYPE OF PERIMETER CONTROL FOR A STOCKPILE INCLUDE WHETHER THE STOCKPILE IS LOCATED ON A PERVIOUS OR IMPERVIOUS SURFACE, THE RELATIVE HEIGHTS OF THE PERIMETER CONTROL AND STOCKPILE, THE ABILITY OF THE PERIMETER CONTROL TO CONTAIN THE STOCKPILE WITHOUT FAILING IN THE EVENT THAT MATERIAL FROM THE STOCKPILE SHIFTS OR SLUMPS AGAINST THE PERIMETER, AND OTHER FACTORS.
- STABILIZE THE STOCKPILE SURFACE WITH SURFACE ROUGHENING, TEMPORARY SEEDING AND MULCHING, EROSION CONTROL BLANKETS, OR SOIL BINDERS. SOILS STOCKPILED FOR AN EXTENDED PERIOD (TYPICALLY FOR MORE THAN 60 DAYS) SHOULD BE SEEDED AND MULCHED WITH A TEMPORARY GRASS COVER ONCE THE STOCKPILE IS PLACED (TYPICALLY WITHIN 14 DAYS). USE OF MULCH ONLY OR A SOIL BINDER IS ACCEPTABLE IF THE STOCKPILE WILL BE IN PLACE FOR A MORE LIMITED TIME PERIOD (TYPICALLY 30-60 DAYS).
- FOR TEMPORARY STOCKPILES ON THE INTERIOR PORTION OF A CONSTRUCTION SITE, WHERE OTHER DOWNGRADIENT CONTROLS, INCLUDING PERIMETER CONTROL, ARE IN PLACE, STOCKPILE PERIMETER CONTROLS MAY NOT BE REQUIRED.

November 2010 Urban Drainage and Flood Control District SP-3  
Urban Storm Drainage Criteria Manual Volume 3

**Inlet Protection (IP) SC-6**



**CIP-1. CULVERT INLET PROTECTION**

**CULVERT INLET PROTECTION INSTALLATION NOTES**

- SEE PLAN VIEW FOR:
  - LOCATION OF CULVERT INLET PROTECTION.
- SEE ROCK SOCK DESIGN DETAIL FOR ROCK GRADATION REQUIREMENTS AND JOINTING DETAIL.

**CULVERT INLET PROTECTION MAINTENANCE NOTES**

- INSPECT BMPs EACH WORKDAY, AND MAINTAIN THEM IN EFFECTIVE OPERATING CONDITION. MAINTENANCE OF BMPs SHOULD BE PROACTIVE, NOT REACTIVE. INSPECT BMPs AS SOON AS POSSIBLE (AND ALWAYS WITHIN 24 HOURS) FOLLOWING A STORM THAT CAUSES SURFACE EROSION, AND PERFORM NECESSARY MAINTENANCE.
- FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN BMPs IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.
- WHERE BMPs HAVE FAILED, REPAIR OR REPLACEMENT SHOULD BE INITIATED UPON DISCOVERY OF THE FAILURE.
- SEDIMENT ACCUMULATED UPSTREAM OF THE CULVERT SHALL BE REMOVED WHEN THE SEDIMENT DEPTH IS  $\frac{1}{2}$  THE HEIGHT OF THE ROCK SOCK.
- CULVERT INLET PROTECTION SHALL REMAIN IN PLACE UNTIL THE UPSTREAM DISTURBED AREA IS PERMANENTLY STABILIZED AND APPROVED BY THE LOCAL JURISDICTION.

(DETAILS ADAPTED FROM JURISA, COLORADO, NOT AVAILABLE IN AUTOCAD)

NOTE: MANY JURISDICTIONS HAVE BMP DETAILS THAT VARY FROM UFCD STANDARD DETAILS. CONSULT WITH LOCAL JURISDICTIONS AS TO WHICH DETAIL SHOULD BE USED WHEN DIFFERENCES ARE NOTED.

August 2013 Urban Drainage and Flood Control District IP-7  
Urban Storm Drainage Criteria Manual Volume 3

**MM-2 Stockpile Management (SM)**

**STOCKPILE PROTECTION MAINTENANCE NOTES**

- INSPECT BMPs EACH WORKDAY, AND MAINTAIN THEM IN EFFECTIVE OPERATING CONDITION. MAINTENANCE OF BMPs SHOULD BE PROACTIVE, NOT REACTIVE. INSPECT BMPs AS SOON AS POSSIBLE (AND ALWAYS WITHIN 24 HOURS) FOLLOWING A STORM THAT CAUSES SURFACE EROSION, AND PERFORM NECESSARY MAINTENANCE.
- FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN BMPs IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.
- WHERE BMPs HAVE FAILED, REPAIR OR REPLACEMENT SHOULD BE INITIATED UPON DISCOVERY OF THE FAILURE.

**STOCKPILE PROTECTION MAINTENANCE NOTES**

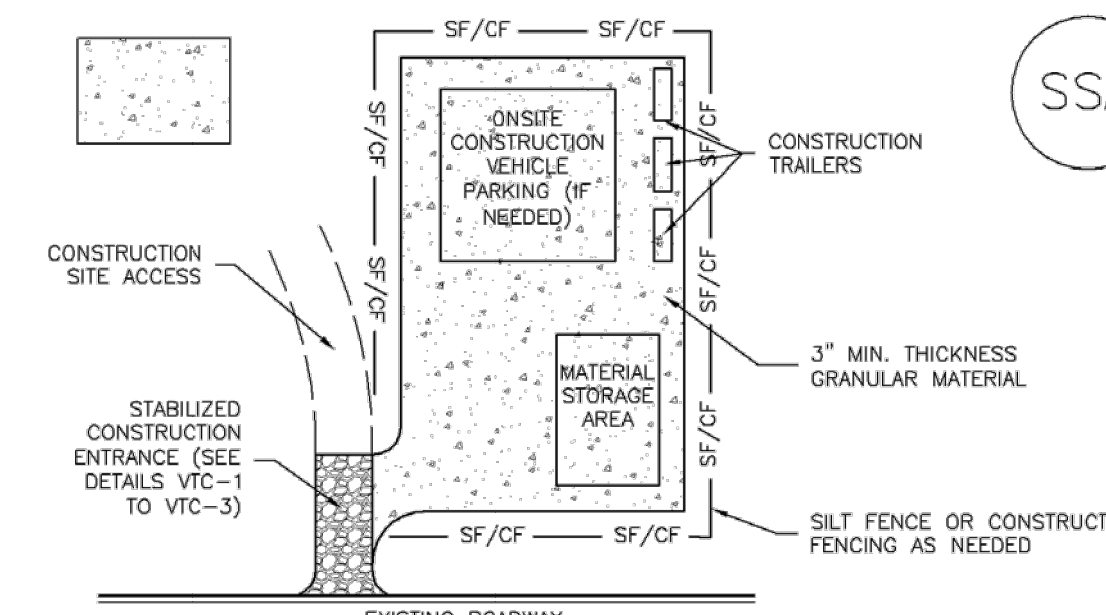
- IF PERIMETER PROTECTION MUST BE MOVED TO ACCESS SOIL STOCKPILE, REPLACE PERIMETER CONTROLS BY THE END OF THE WORKDAY.
- STOCKPILE PERIMETER CONTROLS CAN BE REMOVED ONCE ALL THE MATERIAL FROM THE STOCKPILE HAS BEEN USED.

(DETAILS ADAPTED FROM PARKER, COLORADO, NOT AVAILABLE IN AUTOCAD)

NOTE: MANY JURISDICTIONS HAVE BMP DETAILS THAT VARY FROM UFCD STANDARD DETAILS. CONSULT WITH LOCAL JURISDICTIONS AS TO WHICH DETAIL SHOULD BE USED WHEN DIFFERENCES ARE NOTED.

SP-4 Urban Drainage and Flood Control District November 2010  
Urban Storm Drainage Criteria Manual Volume 3

**Stabilized Staging Area (SSA) SM-6**



**SSA-1. STABILIZED STAGING AREA**

**STABILIZED STAGING AREA INSTALLATION NOTES**

- SEE PLAN VIEW FOR:
  - LOCATION OF STAGING AREA(S).
  - CONTRACTOR MAY ADJUST LOCATION AND SIZE OF STAGING AREA WITH APPROVAL FROM THE LOCAL JURISDICTION.
- STABILIZED STAGING AREA SHOULD BE APPROPRIATE FOR THE NEEDS OF THE SITE. OVERSIZING RESULTS IN A LARGER AREA TO STABILIZE FOLLOWING CONSTRUCTION.
- STAGING AREA SHALL BE STABILIZED PRIOR TO OTHER OPERATIONS ON THE SITE.
- THE STABILIZED STAGING AREA SHALL CONSIST OF A MINIMUM 3" THICK GRANULAR MATERIAL.
- UNLESS OTHERWISE SPECIFIED BY LOCAL JURISDICTION, ROCK SHALL CONSIST OF DOT SECT. #703, AASHTO #3 COARSE AGGREGATE OR 6" (MINUS) ROCK.
- ADDITIONAL PERIMETER BMPs MAY BE REQUIRED INCLUDING BUT NOT LIMITED TO SILT FENCE AND CONSTRUCTION FENCING.

**STABILIZED STAGING AREA MAINTENANCE NOTES**

- INSPECT BMPs EACH WORKDAY, AND MAINTAIN THEM IN EFFECTIVE OPERATING CONDITION. MAINTENANCE OF BMPs SHOULD BE PROACTIVE, NOT REACTIVE. INSPECT BMPs AS SOON AS POSSIBLE (AND ALWAYS WITHIN 24 HOURS) FOLLOWING A STORM THAT CAUSES SURFACE EROSION, AND PERFORM NECESSARY MAINTENANCE.
- FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN BMPs IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.
- WHERE BMPs HAVE FAILED, REPAIR OR REPLACEMENT SHOULD BE INITIATED UPON DISCOVERY OF THE FAILURE.
- ROCK SHALL BE REAPPLIED OR REGRADED AS NECESSARY IF RUTTING OCCURS OR UNDERLYING SUBGRADE BECOMES EXPOSED.

November 2010 Urban Drainage and Flood Control District SSA-3  
Urban Storm Drainage Criteria Manual Volume 3

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A Westman Company  
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BY	DATE	REVISION

H-SCALE	N/A	N/A	DATE	DESIGNED BY	DRAWN BY	CHECKED BY
			1/2/22	NQJ	NQJ	

**SADDLEHORN RANCH - FILING NO. 2**  
GRADING AND EROSION CONTROL DETAILS



**ENGINEER'S STATEMENT**  
PREPARED UNDER MY DIRECT SUPERVISION AND ON BEHALF OF JR ENGINEERING  
BRYAN T. LAW, P.E.  
COLORADO P.E. 25043  
FOR AND ON BEHALF OF JR ENGINEERING, LLC

25043  
5/2/22  
DATE

STABILIZED STAGING AREA MAINTENANCE NOTES

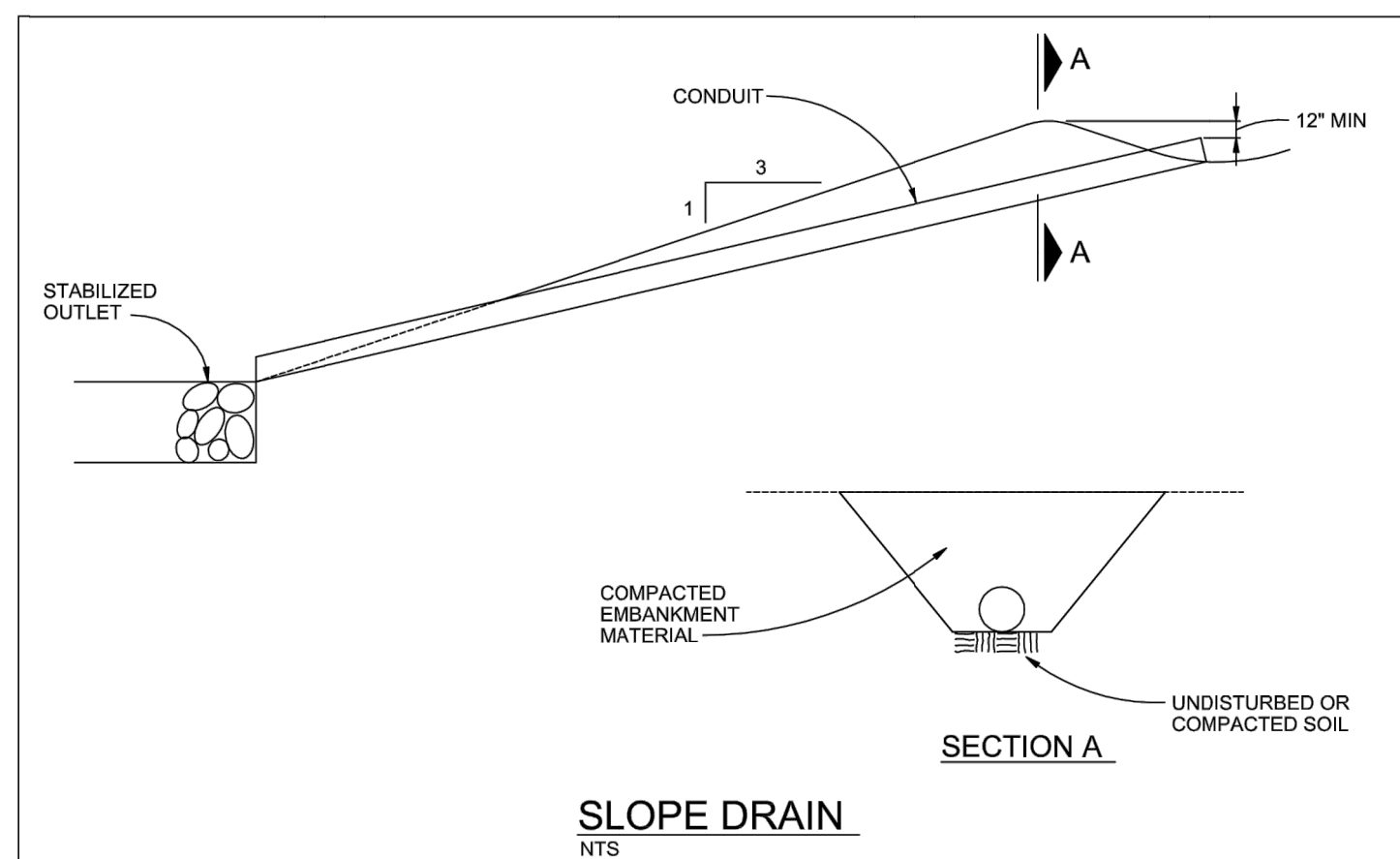
5. STABILIZED STAGING AREA SHALL BE ENLARGED IF NECESSARY TO CONTAIN PARKING, STORAGE, AND UNLOADING/LOADING OPERATIONS.

6. THE STABILIZED STAGING AREA SHALL BE REMOVED AT THE END OF CONSTRUCTION. THE GRANULAR MATERIAL SHALL BE REMOVED OR, IF APPROVED BY THE LOCAL JURISDICTION, USED ON SITE, AND THE AREA COVERED WITH TOPSOIL, SEEDING AND MULCHED OR OTHERWISE STABILIZED IN A MANNER APPROVED BY LOCAL JURISDICTION.

NOTE: MANY MUNICIPALITIES PROHIBIT THE USE OF RECYCLED CONCRETE AS GRANULAR MATERIAL FOR STABILIZED STAGING AREAS DUE TO DIFFICULTIES WITH RE-ESTABLISHMENT OF VEGETATION IN AREAS WHERE RECYCLED CONCRETE WAS PLACED.

NOTE: MANY JURISDICTIONS HAVE BMP DETAILS THAT VARY FROM UDFCD STANDARD DETAILS. CONSULT WITH LOCAL JURISDICTIONS AS TO WHICH DETAIL SHOULD BE USED WHEN DIFFERENCES ARE NOTED.

(DETAILS ADAPTED FROM DOUGLAS COUNTY, COLORADO, NOT AVAILABLE IN AUTOCAD)



SLOPE DRAIN NOTES

INSTALLATION REQUIREMENTS

1. THE SLOPE DRAIN IS TO BE DESIGNED TO CONVEY THE PEAK RUNOFF FOR THE 2-YEAR STORM.
2. PIPE MATERIAL MAY INCLUDE CORRUGATED METAL, OR RIGID OR FLEXIBLE PLASTIC.
3. EMBANKMENT MATERIAL SHALL CONSIST OF SOIL WITH A MINIMUM OF 15% PASSING A #200 SIEVE. EXCAVATED SOIL CAN BE USED IF IT MEETS THIS REQUIREMENT.
4. EMBANKMENT IS TO BE COMPACTED TO AT LEAST 90% OF MAXIMUM DENSITY AND WITHIN 2% OF OPTIMUM MOISTURE CONTENT ACCORDING TO ASTM D 698.
5. SLOPE DRAIN SECTIONS ARE TO BE SECURELY FASTENED TOGETHER AND HAVE WATERTIGHT FITTINGS.
6. THE OUTLET IS TO BE STABILIZED AND, UNLESS THE DRAIN DISCHARGES DIRECTLY TO A SEDIMENT BASIN, A TEMPORARY SURFACE IS TO BE PROVIDED TO CONVEY FLOWS DOWN STREAM.
7. IMMEDIATELY STABILIZE ALL AREAS DISTURBED BY INSTALLATION OR REMOVAL OF THE PIPE SLOPE DRAIN.

MAINTENANCE REQUIREMENTS

1. INLET AND OUTLET POINTS ARE TO BE CHECKED REGULARLY, AND AFTER HEAVY STORMS FOR CLOGGING AND OVERCHARGING. ANY BREAKS IN THE PIPE ARE TO BE PROMPTLY REPAIRED, AND CLOGS REMOVED AS NEEDED.
2. WATER IS NOT TO BYPASS OR UNDERCUT THE INLET OR PIPE. IF THESE PROBLEMS DO EXIST, THE HEADWALL NEEDS TO BE REINFORCED WITH COMPACT EARTH OR SANDBAGS.
3. THE OUTLET POINT IS TO BE FREE OF EROSION, AND, IF NECESSARY, ADDITIONAL OUTLET PROTECTION SHOULD BE INSTALLED.
4. CONSTRUCTION TRAFFIC IS NOT TO CROSS THE SLOPE DRAIN AND MATERIALS ARE NOT TO BE PLACED ON IT.
5. THE SLOPE DRAIN IS TO REMAIN IN PLACE UNTIL THE SLOPE HAS BEEN COMPLETELY STABILIZED OR UP TO 30 DAYS AFTER PERMANENT SLOPE STABILIZATION.

MULCHING NOTES

INSTALLATION REQUIREMENTS

1. ALL DISTURBED AREAS MUST BE MULCHED WITHIN 21 DAYS AFTER FINAL GRADE AND SEEDING AREAS ARE TO BE MULCHED WITHIN 24 HOURS AFTER SEEDING.
2. MATERIAL USED FOR MULCH CAN BE CERTIFIED CLEAN, WEED- AND SEED-FREE LONG STEMMED FIELD OR MARSH HAY, OR STRAW OF OATS, BARLEY, WHEAT, RYE, OR TRITICALE CERTIFIED BY THE COLORADO DEPARTMENT OF AGRICULTURE WEED-FREE FORAGE CERTIFICATION PROGRAM.
3. HYDRAULIC MULCHING MATERIAL SHALL CONSIST OF VIRGIN WOOD FIBER MANUFACTURED FROM CLEAN WHOLE WOOD CHIPS. WOOD CHIPS CANNOT CONTAIN ANY GROWTH OR GERMINATION INHIBITORS OR BE PRODUCED FROM RECYCLED MATERIAL. GRAVEL CAN ALSO BE USED.
4. MULCH IS TO BE APPLIED EVENLY AT A RATE OF 2 TONS PER ACRE.
5. MULCH IS TO BE ANCHORED EITHER BY CRIMPING (TUCKING MULCH FIBERS 4 INCHES INTO THE SOIL), USING NETTING (USED ON SMALL AREAS WITH STEEP SLOPES), OR WITH A TACKIFIER.
6. HYDRAULIC MULCHING AND TACKIFIERS ARE NOT TO BE USED IN THE PRESENCE OF FREE SURFACE WATER.

MAINTENANCE REQUIREMENTS

1. REGULAR INSPECTIONS ARE TO BE MADE OF ALL MULCHED AREAS.
2. MULCH IS TO BE REPLACED IMMEDIATELY IN THOSE AREAS IT HAS BEEN REMOVED, AND IF NECESSARY THE AREA SHOULD BE RESEEDED.

Check Dams (CD)

EC-12

Description

Check dams are temporary grade control structures placed in drainage channels to limit the erosivity of stormwater by reducing flow velocity. Check dams are typically constructed from rock, gravel bags, sand bags, or sometimes, proprietary devices. Reinforced check dams are typically constructed from rock and wire gabion. Although the primary function of check dams is to reduce the velocity of concentrated flows, a secondary benefit is sediment trapping upstream of the structure.



Photograph CD-1. Rock check dams in a roadside ditch. Photo courtesy of W.W.E.

Appropriate Uses

Use as a grade control for temporary drainage ditches or swales until final soil stabilization measures are established upstream and downstream. Check dams can be used on mild or moderately steep slopes. Check dams may be used under the following conditions:

- As temporary grade control facilities along waterways until final stabilization is established.
- Along permanent swales that need protection prior to installation of a non-erodible lining.
- Along temporary channels, ditches or swales that need protection where construction of a non-erodible lining is not practicable.
- Reinforced check dams should be used in areas subject to high flow velocities.

Design and Installation

Place check dams at regularly spaced intervals along the drainage swale or ditch. Check dam heights should allow for pools to develop upstream of each check dam, extending to the downstream toe of the check dam immediately upstream.

When rock is used for the check dam, place rock mechanically or by hand. Do not dump rocks into the drainage channel. Where multiple check dams are used, the top of the lower dam should be at the same elevation as the toe of the upper dam.

When reinforced check dams are used, install erosion control fabric under and around the check dam to prevent erosion on the upstream and downstream sides. Each section of the dam should be keyed in to reduce the potential for washout or undermining. A rock apron upstream and downstream of the dam may be necessary to further control erosion.

Check Dams	
Functions	
Erosion Control	Yes
Sediment Control	Moderate
Site/Material Management	No

UNTIL SUCH TIME AS THESE DRAWINGS ARE APPROVED BY THE APPROPRIATE REVIEWING AGENCIES, OR ENGINEERING APPROVES THEIR USE, THESE DRAWINGS ARE DESIGNATED BY WRITTEN AUTHORIZATION.

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2495 RIGDON STREET  
NAPA, CALIFORNIA  
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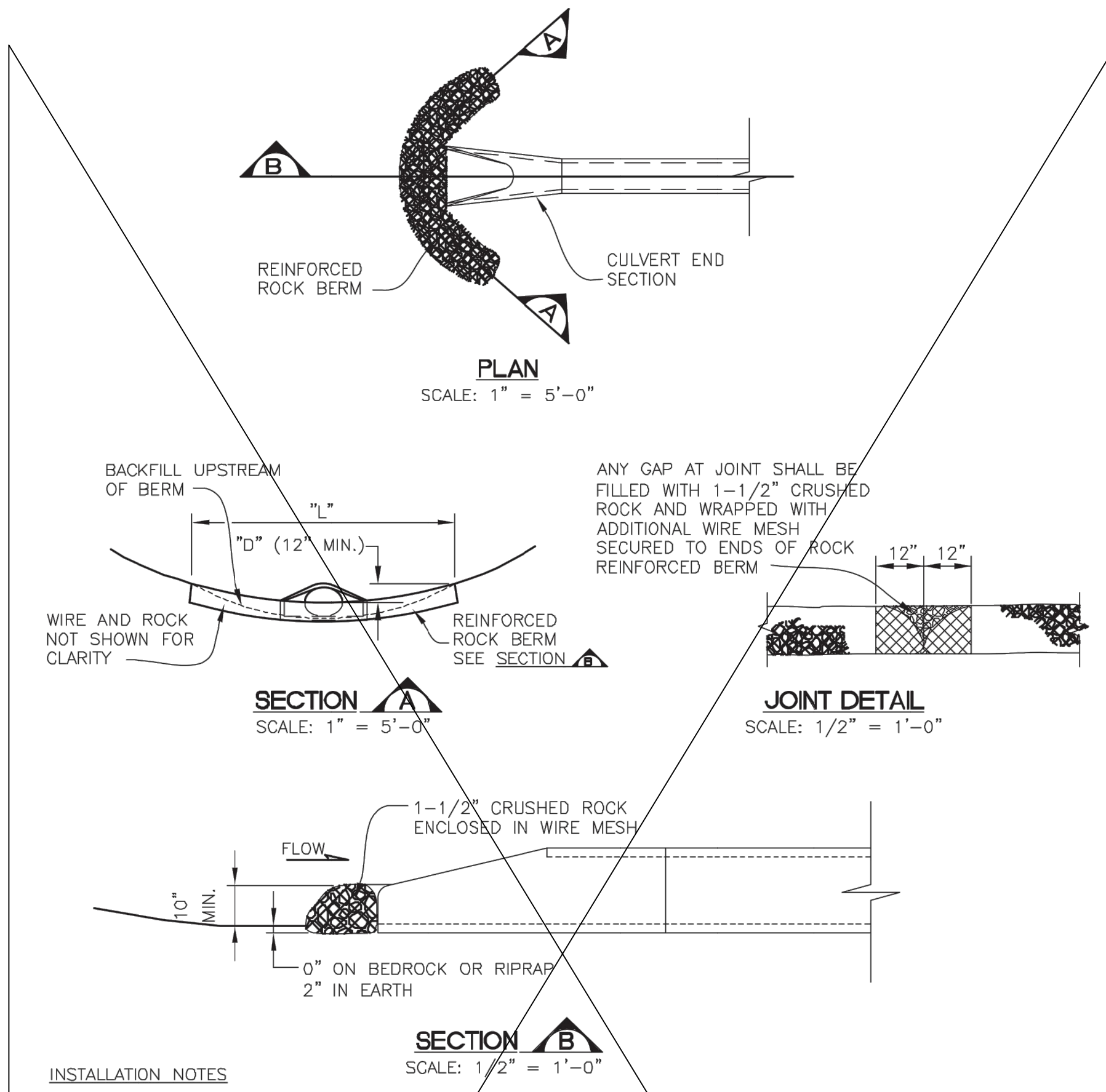
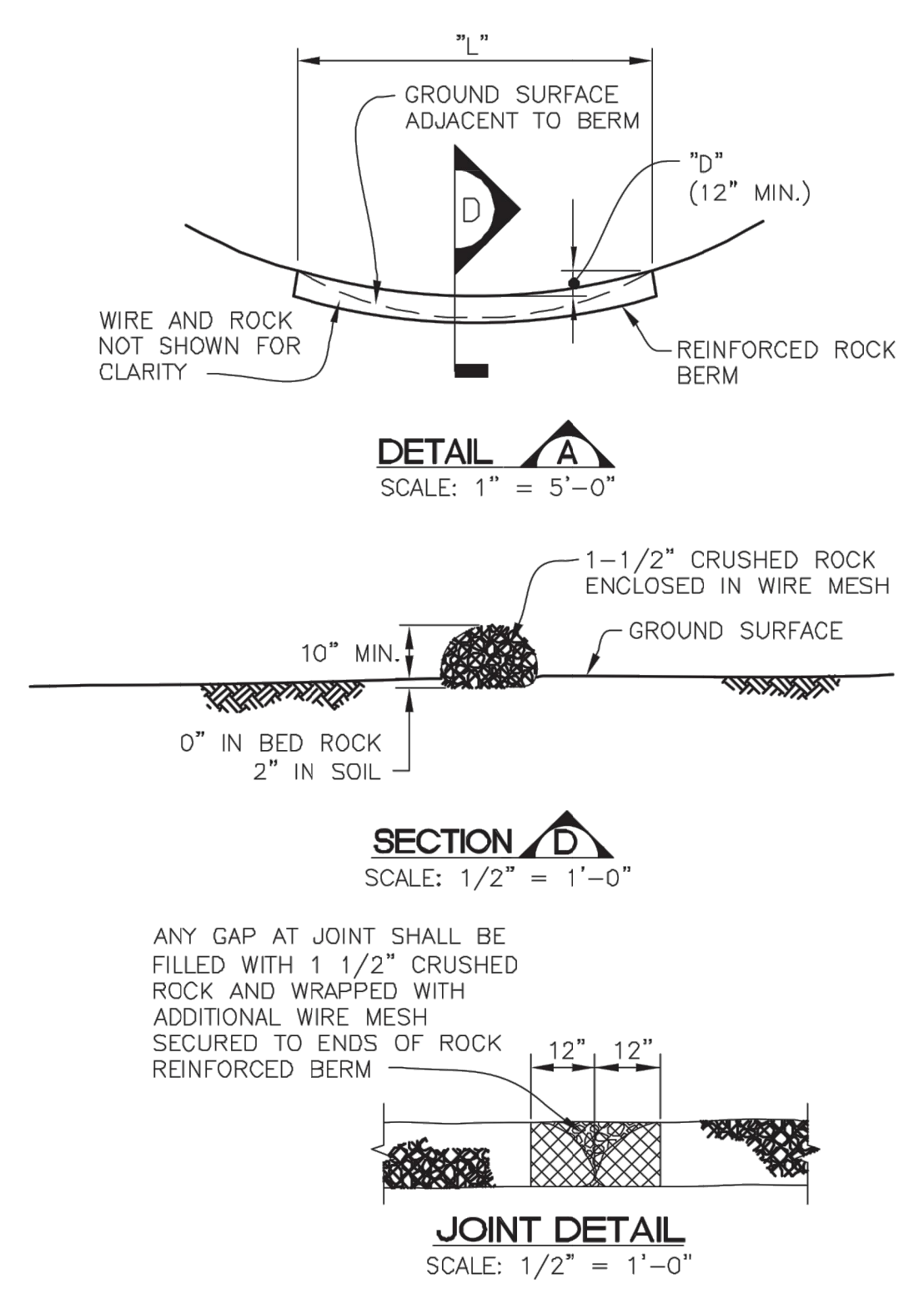
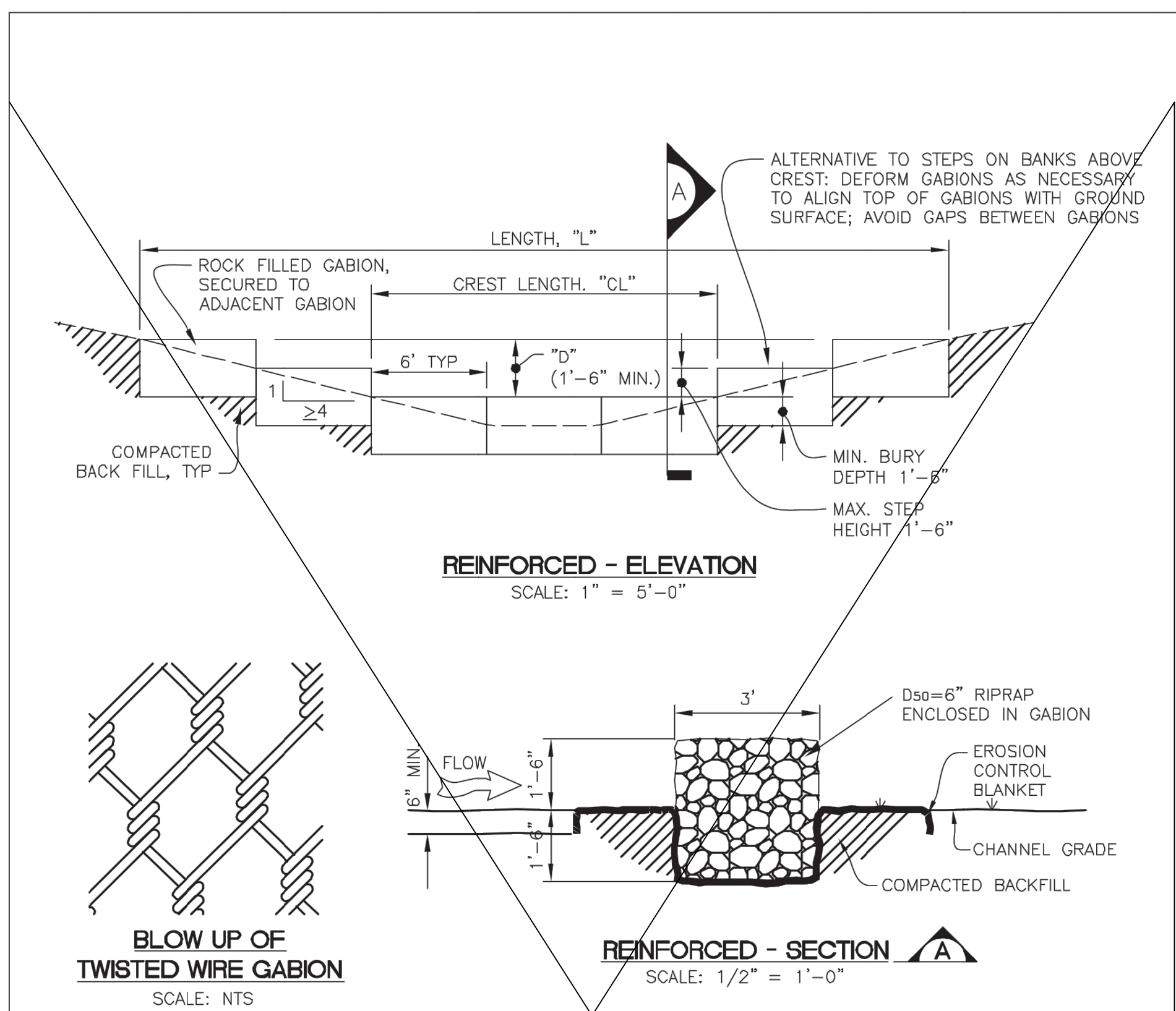
BY	DATE	No.	REVISION	H-SCALE	N/A	V-SCALE	N/A	DATE	DESIGNED BY	DRAWN BY	CHECKED BY
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SADDLEHORN RANCH -  
FILING NO. 2  
GRADING AND EROSION  
CONTROL DETAILS



**ENGINEER'S STATEMENT**  
PREPARED UNDER MY DIRECT SUPERVISION AND ON BEHALF OF JR ENGINEERING  
BRYAN T. LAW, P.E.  
COLORADO P.E. 25043  
FOR AND ON BEHALF OF JR ENGINEERING, LLC

25043  
5/2/22  
DATE



- REINFORCED CHECK DAM INSTALLATION NOTES**
- SEE PLAN VIEW FOR:
    - LOCATIONS OF CHECK DAMS.
    - CHECK DAM TYPE (CHECK DAM OR REINFORCED CHECK DAM).
    - LENGTH, "L", CREST LENGTH, "CL", AND DEPTH, "D".
  - CHECK DAMS INDICATED ON INITIAL GESC PLAN SHALL BE INSTALLED AFTER CONSTRUCTION FENCE, BUT PRIOR TO ANY UPSTREAM LAND-DISTURBING ACTIVITIES.
  - REINFORCED CHECK DAMS, GABIONS SHALL HAVE GALVANIZED TWISTED WIRE NETTING WITH A MAXIMUM OPENING DIMENSION OF 4-1/2" AND A MINIMUM WIRE THICKNESS OF 0.10". WIRE "HOG RINGS" AT 4" SPACING OR OTHER APPROVED MEANS SHALL BE USED AT ALL GABION SEAMS AND TO SECURE THE GABION TO THE ADJACENT GABION.
  - RIPRAP UTILIZED FOR CHECK DAMS SHALL HAVE A D<sub>50</sub> MEDIAN STONE SIZE OF 6".
  - THE CHECK DAM SHALL BE TRENCHED INTO THE GROUND A MINIMUM OF 1'-6".
  - EROSION BLANKET SHALL BE PLACED IN THE REINFORCED CHECK DAM TRENCH EXTENDING A MINIMUM OF 1'-6" ON BOTH THE UPSTREAM AND DOWNSTREAM SIDES OF THE REINFORCED CHECK DAM.

- REINFORCED CHECK DAM MAINTENANCE NOTES**
- THE GESC MANAGER SHALL INSPECT CHECK DAMS WEEKLY, DURING AND AFTER ANY STORM EVENT AND MAKE REPAIRS OR CLEAN OUT AS NECESSARY.
  - SEDIMENT ACCUMULATED UPSTREAM OF CHECK DAMS SHALL BE REMOVED WHEN THE SEDIMENT DEPTH UPSTREAM OF CHECK DAM IS WITHIN 1/2 OF THE HEIGHT OF THE CREST.
  - CHECK DAMS ARE TO REMAIN IN PLACE UNTIL THE UPSTREAM DISTURBED AREA IS STABILIZED AND GRASS COVER IS APPROVED BY THE TOWN.
  - WHEN CHECK DAMS ARE REMOVED, EXCAVATIONS SHALL BE FILLED WITH SUITABLE COMPACTED BACK FILL. ANY DISTURBED AREA SHALL BE DRILL SEEDED AND CRIMP MULCHED AND COVERED WITH EROSION CONTROL BLANKET OR OTHERWISE STABILIZED IN A MANNER APPROVED BY THE TOWN.

- REINFORCED ROCK BERM INSTALLATION NOTES**
- SEE PLAN VIEW FOR:
    - LOCATIONS OF REINFORCED ROCK BERMS.
    - LENGTH, "L", AND DEPTH, "D" DIMENSIONS.
  - REINFORCED ROCK BERM SECTION APPLIES TO CULVERT INLET FILTER AND INLET PROTECTION.
  - CRUSHED ROCK SHALL BE FRACTURED FACE (ALL SIDES) AND SHALL COMPLY WITH GRADATION SHOWN ON SHEET 14 (1-1/2" MINUS). RECYCLED CONCRETE MEETING THIS GRADATION MAY BE USED.
  - WIRE MESH SHALL BE FABRICATED OF 10 GAUGE WIRE TWISTED INTO A MESH WITH A MAXIMUM OPENING OF 1.0 INCH (COMMONLY TERMED "CHICKEN WIRE"). ROLL WIDTH SHALL BE 48-INCHES.
  - WIRE MESH SHALL BE SECURED USING "HOG RINGS" OR WIRE TIES AT 6-INCH CENTERS ALONG ALL JOINTS AND AT 2-INCH CENTERS ON ENDS OF BERM.
  - FOR CONCENTRATED FLOW AREAS THE ENDS OF THE REINFORCED ROCK BERM SHALL BE 12" HIGHER THAN THE CENTER OF THE BERM.

- REINFORCED ROCK BERM MAINTENANCE NOTES**
- THE GESC MANAGER SHALL INSPECT REINFORCED ROCK BERM WEEKLY, DURING AND AFTER ANY STORM EVENT AND MAKE REPAIRS OR CLEAN OUT AS NECESSARY.
  - SEDIMENT ACCUMULATED UPSTREAM OF REINFORCED ROCK BERM SHALL BE REMOVED WHEN THE SEDIMENT DEPTH UPSTREAM OF FILTER IS WITHIN 5 INCHES OF THE CREST.
  - REINFORCED ROCK BERMS ARE TO REMAIN IN PLACE UNTIL THE UPSTREAM DISTURBED AREA IS STABILIZED AND GRASS COVER IS APPROVED.
  - WHEN REINFORCED ROCK BERMS ARE REMOVED, ANY DISTURBED AREA SHALL BE DRILL SEEDED AND CRIMP MULCHED OR OTHERWISE STABILIZED IN A MANNER APPROVED BY THE TOWN.

- INSTALLATION NOTES**
- SEE PLAN VIEW FOR:
    - LOCATIONS OF CULVERT INLET FILTERS.
    - LENGTH, "L", AND DEPTH, "D".
  - CRUSHED ROCK SHALL BE FRACTURED FACE (ALL SIDES) AND SHALL COMPLY WITH GRADATION SHOWN ON SHEET 14 (1-1/2" MINUS). RECYCLED CONCRETE MEETING THIS GRADATION MAY BE USED.
  - WIRE MESH SHALL BE FABRICATED OF 10 GAUGE WIRE TWISTED INTO A MESH WITH A MAXIMUM OPENING OF 1.0 INCH (COMMONLY TERMED "CHICKEN WIRE").
  - WIRE MESH SHALL BE SECURED USING "HOG RINGS" OR WIRE TIES AT 6-INCH CENTERS ALONG ALL JOINTS AND AT 2-INCH CENTERS ON ENDS OF BERM.
  - THE ENDS OF THE REINFORCED ROCK BERM SHALL BE 12" HIGHER THAN THE CENTER OF THE BERM.
- MAINTENANCE NOTES**
- THE GESC MANAGER SHALL INSPECT CULVERT INLET FILTER WEEKLY, DURING AND AFTER ANY STORM EVENT AND MAKE REPAIRS OR CLEAN OUT AS NECESSARY.
  - SEDIMENT ACCUMULATED UPSTREAM OF CULVERT INLET FILTER SHALL BE REMOVED WHEN THE SEDIMENT DEPTH UPSTREAM OF FILTER IS 1/2 THE HEIGHT OF THE REINFORCED ROCK BERM.
  - RRB FOR CULVERT PROTECTION ARE TO REMAIN IN PLACE UNTIL THE UPSTREAM DISTURBED AREA IS STABILIZED AND GRASS COVER IS APPROVED BY THE TOWN.
  - WHEN CULVERT INLET FILTERS ARE REMOVED, ANY DISTURBED AREA SHALL BE DRILL SEEDED AND CRIMP MULCHED OR OTHERWISE STABILIZED IN A MANNER APPROVED BY THE TOWN.

<b>RCD</b> REINFORCED CHECK DAM		11
<b>RRB</b> REINFORCED ROCK BERM		12
<b>RRC</b> RRB FOR CULVERT PROTECTION		13

**Sheet Revisions**

REV	DATE	DESCRIPTION	BY
R1	3/11	GESC MANUAL UPDATES	DVD
R2	5/15	GESC MANUAL UPDATES	DVD

NOTE: SCALES SHOWN ARE FOR 22"x34" SHEETS; ADJUST ACCORDINGLY FOR 11"x17" SHEETS.

UTILITIES DEPARTMENT  
Stormwater Engineering Division

**GESC** GRADING, EROSION, AND SEDIMENT CONTROL

GESC PLAN STANDARD NOTES AND DETAILS

SHEET 7 OF 14



**ENGINEER'S STATEMENT**

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COLORADO P.E. 25043

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BY	DATE	REVISION

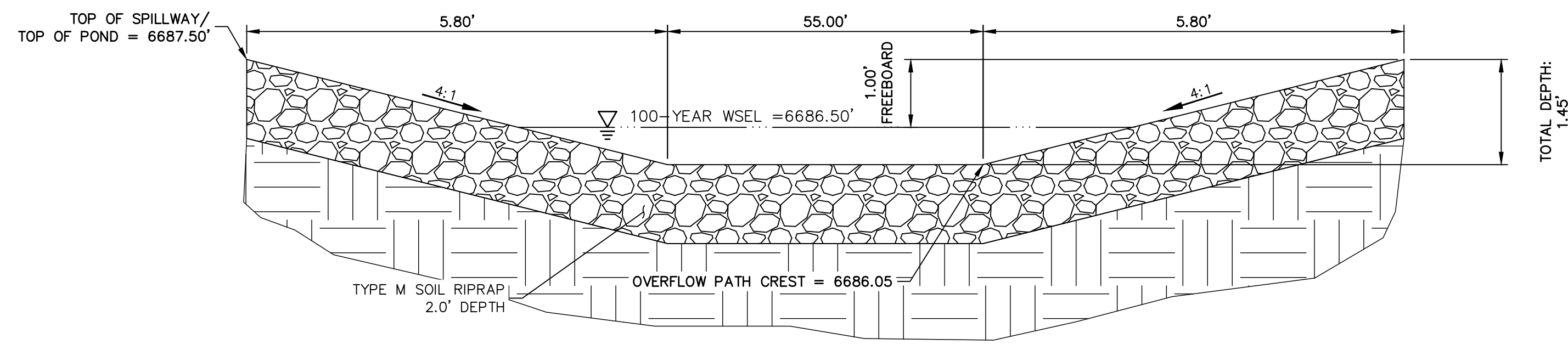
H-SCALE	V-SCALE	DATE	DESIGNED BY	DRAWN BY	CHECKED BY
N/A	N/A	1/2/22	NQJ	NQJ	

SADDLEHORN RANCH - FILING NO. 2

GRADING AND EROSION CONTROL DETAILS

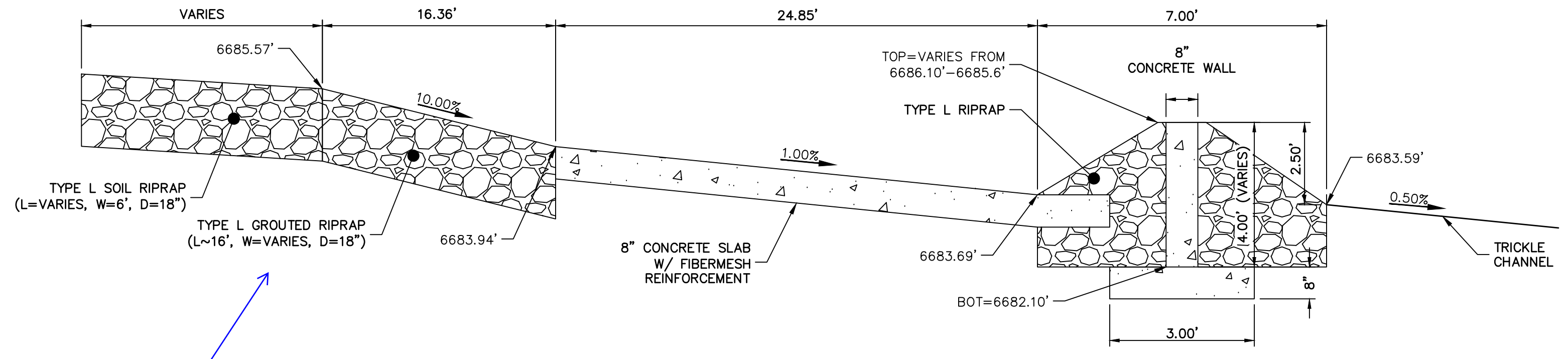
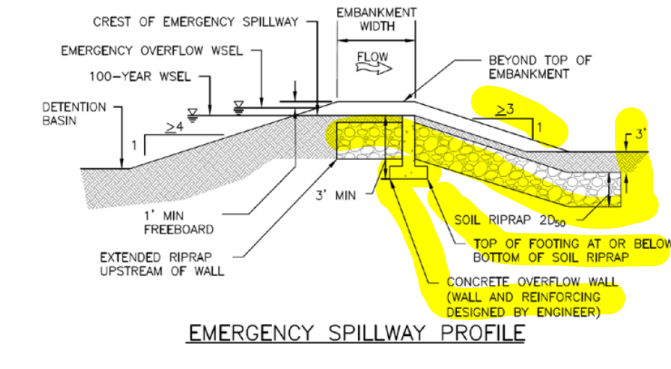
SHEET 14 OF 14

JOB NO. 2514204



**POND F EMERGENCY SPILLWAY**  
SCALE: N.T.S.

Update the plan view and provide spillway profile section to show the full extent of riprap installed. Staff is assuming this is being constructed to buildout condition. See example below

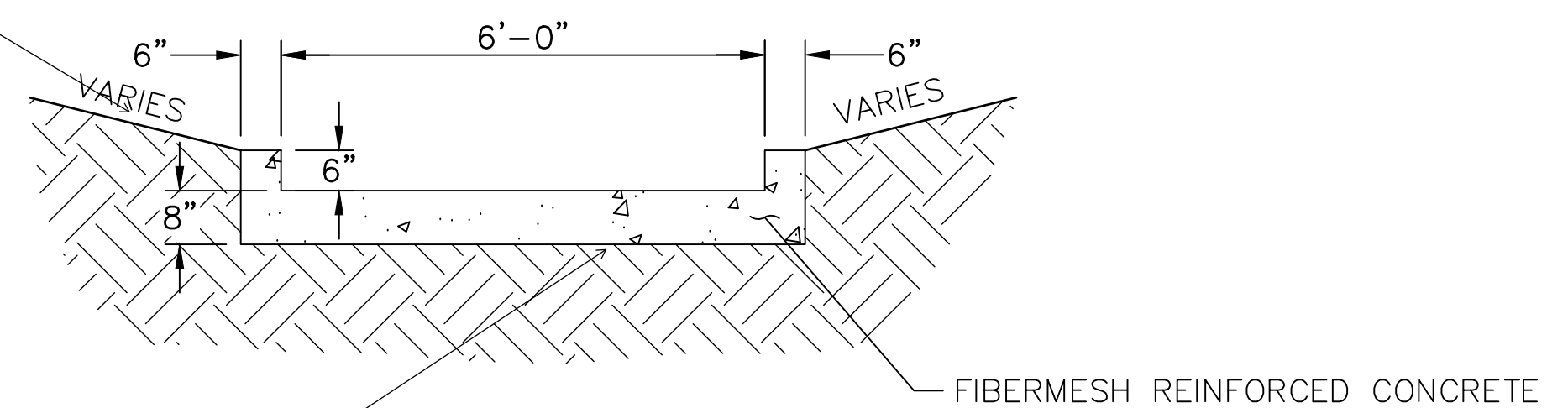


**POND F FOREBAY**  
N.T.S.

Provide the supporting riprap sizing calculation in the early grading final drainage report since this is constructed with the early grading.

Pond bottom should have a minimum slope of 3% to the trickle channel and micropool (USDCM Vol 3, detail T-5).

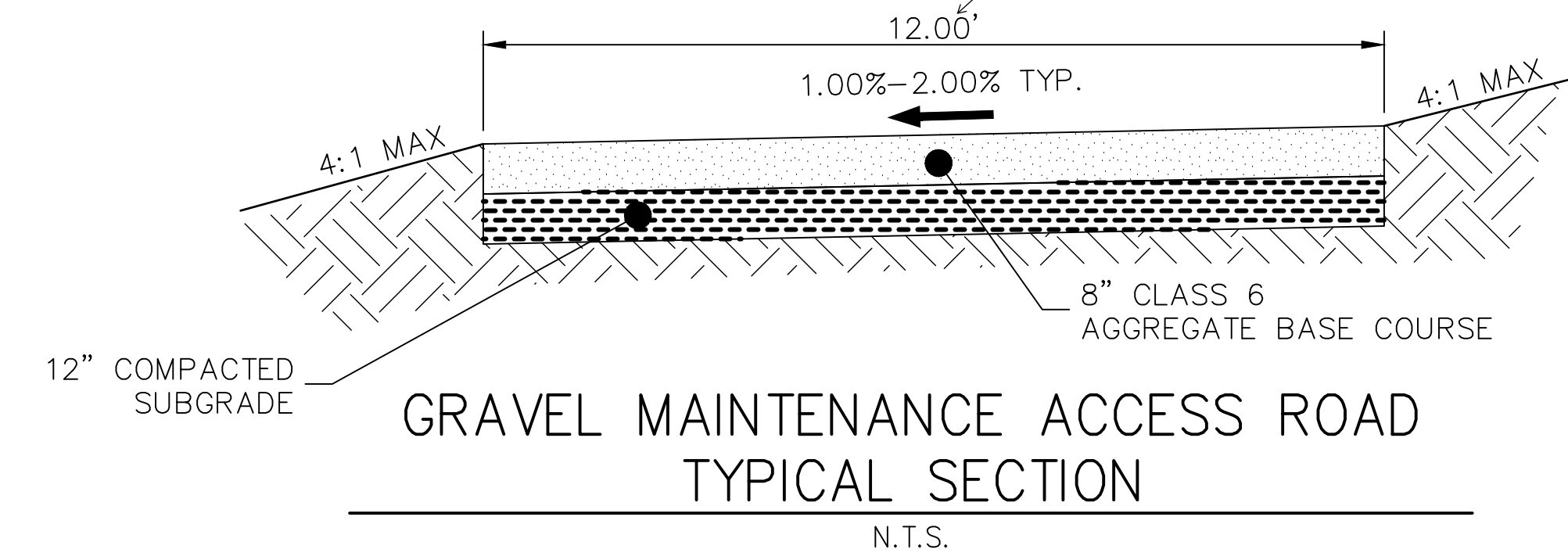
Stabilized access ramp shall be a minimum of 15ft wide and no greater than 12% slope, in accordance with DCMv1, Chap 11.2.2.



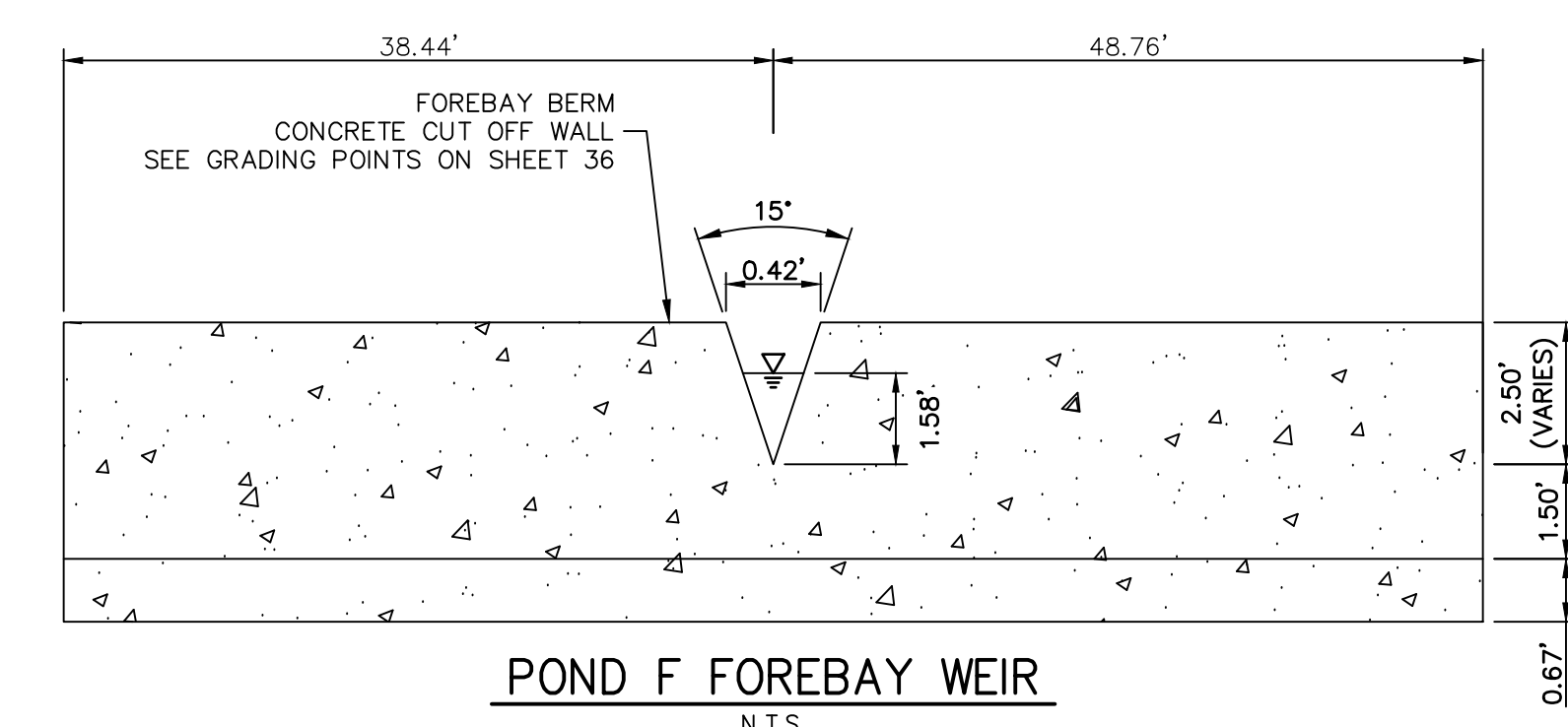
**POND F TRICKLE CHANNEL**  
N.T.S.

Consider having control joints every ~10ft.

Show rock socks along top of curb or within trickle channel (perpendicular to curbs), instead of placing straw wattles along edge of trickle channel curb. This will save time with re-vegetation effort later because once the straw wattles are removed, backfill and re-vegetation is needed behind back of curbs. Whereas with rock socks in or along trickle channel, the extra effort after removing temp BMPs would not be necessary.



**GRAVEL MAINTENANCE ACCESS ROAD**  
TYPICAL SECTION  
N.T.S.



**POND F FOREBAY WEIR**  
N.T.S.



Know what's below.  
Call before you dig.

**ENGINEER'S STATEMENT**

PREPARED UNDER MY DIRECT SUPERVISION AND ON BEHALF OF JR ENGINEERING  
 BRYAN T. LAW, P.E.  
 COLORADO P.E. 25043  
 FOR AND ON BEHALF OF JR ENGINEERING, LLC  
 DATE: 5/2/22

UNTIL SUCH TIME AS THESE DRAWINGS ARE APPROVED BY THE AGENCIES, OR ENGINEERS APPROVE THEIR USE, THESE DRAWINGS ARE DESIGNATED BY WRITTEN AUTHORIZATION.

PREPARED FOR  
**ROI PROPERTY GROUP, LLC**  
 2495 RIGDON STREET  
 NAPA, CALIFORNIA  
 (707) 365-6891  
 BRADY WILLIAMS

**J.R. ENGINEERING**  
 A Westman Company  
 Centennial 300-740-9888 • Colorado Springs 719-588-2583  
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BY	DATE	No.	REVISION

H-SCALE 1"=XX'  
 V-SCALE 1"=X'  
 DATE 1/2/22  
 DESIGNED BY XXX  
 DRAWN BY XXX  
 CHECKED BY

SADDLEHORN RANCH - FILING NO. 2  
 POND DETAILS (DON'T PLOT)

SHEET 15 OF 14  
 JOB NO. 2514204



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**ENGINEER'S STATEMENT**

PREPARED UNDER MY DIRECT SUPERVISION AND ON BEHALF OF JR ENGINEERING

*Bryan T. Law*  
 BRYAN T. LAW, P.E.  
 COLORADO P.E. 25043

25043

5/2/22  
 DATE

FOR AND ON BEHALF OF JR ENGINEERING, LLC

SADDLEHORN RANCH -  
 FILING NO. 2

POND DETAILS (DON'T PLOT)

H-SCALE	1"=XX'	No. REVISION	BY	DATE
V-SCALE	1"=X'			
DATE	1/2/22			
DESIGNED BY	XXX			
DRAWN BY	XXX			
CHECKED BY				

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BRYAN T. LAW, P.E.  
COLORADO P.E. 25043

25043

5/2/22  
DATE

FOR AND ON BEHALF OF JR ENGINEERING, LLC

SADDEHORN RANCH -  
FILING NO. 2

POND DETAILS (DON'T PLOT)

SHEET 17 OF 14

JOB NO. 2514204

H-SCALE	1"=XX'	No. REVISION	BY	DATE
V-SCALE	1"=X'			
DESIGNED BY	DATE			
DRAWN BY	XXX			
CHECKED BY	XXX			

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