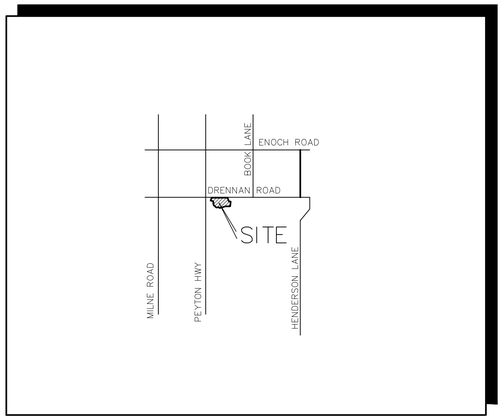
SILVERADO RANCH
FILING NO. 2
Grading & Erosion Control Plans
El Paso County, Colorado



VICINITY MAP
NOT TO SCALE

PREPARED FOR:

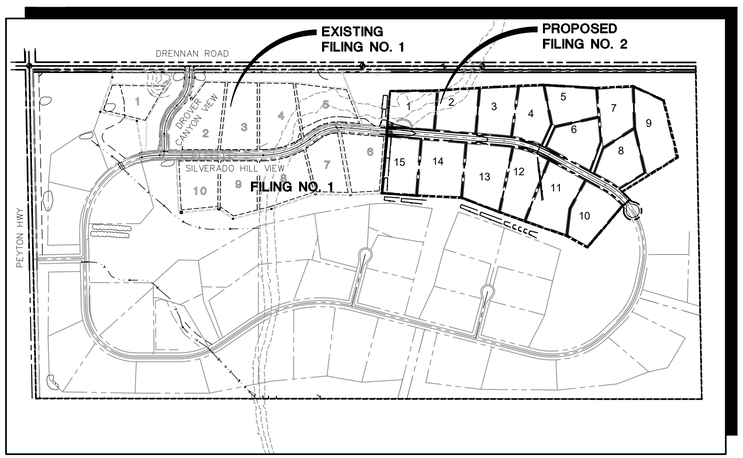
SILVERADO RANCH, INC.
18911 Cherry Springs Ranch Drive
Monument, Colorado 80132

PREPARED BY:

JPS ENGINEERING
19 East Willamette Avenue
Colorado Springs, Colorado 80903

January, 2024

SHEET INDEX



SITE MAP
NOT TO SCALE

NOTE: 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 TO BE ACCEPTABLE.

BASIS OF BEARING:
THE BASIS OF BEARING FOR THIS SUBDIVISION IS THE NORTH LINE OF SECTION 16, S89°58'39"E 5277.00' FROM THE NORTHWEST CORNER SECTION 16 TO THE NORTHEAST CORNER OF SECTION 16.

BENCHMARK:
USGS BRASS CAP 11 AJK 5752
LOCATED IN THE N.W. CORNER OF
THE INTERSECTION OF ELLICOTT
HIGHWAY AND DRENNAN ROAD
ELEV = 5755.00–NAVD 88

AGENCIES/CONTACTS

DEVELOPER:	SILVERADO RANCH, INC. 18911 CHERRY SPRINGS RANCH DRIVE MONUMENT, CO 80132 MR. STAN SEARLE (719) 481–3735
CIVIL ENGINEER:	JPS ENGINEERING, INC. 19 E. WILLAMETTE AVENUE COLORADO SPRINGS, CO 80903 MR. JOHN P. SCHWAB, P.E. (719) 477–9429
LOCAL ROADS & DRAINAGE:	EL PASO COUNTY PCD 2880 INTERNATIONAL CIRCLE COLORADO SPRINGS, CO 80910 (719) 520–7877
GAS DEPARTMENT:	BLACK HILLS ENERGY MR. SEBASTIAN SCHWENDER (719) 359–3176
ELECTRIC DEPARTMENT:	MOUNTAIN VIEW ELECTRIC ASSOCIATION 11140 E. WOODMEN ROAD COLORADO SPRINGS, CO 80908 MR. DAVE WALDNER (719) 495–2283
TELEPHONE COMPANY:	QWEST COMMUNICATIONS (LOCATORS) (800) 922–1987 A.T. & T. (LOCATORS) (719) 635–3674
FIRE DEPARTMENT:	ELLICOTT FIRE DISTRICT FIRE MARSHAL (719) 683–7323

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 LIABILITY CAUSED BY NEGLIGENT ACTS, ERRORS OR OMISSIONS ON MY PART IN PREPARATING THIS PLAN.

JOHN P. SCHWAB, P.E. #29891 — DATE

OWNER / DEVELOPER'S STATEMENT:

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

SILVERADO RANCH, INC.
18911 CHERRY SPRINGS RANCH DRIVE
MONUMENT, COLORADO 80132 — DATE

EL PASO COUNTY:

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 ECM SECTION 1.12, THESE CONSTRUCTION DOCUMENTS WILL BE VALID FOR CONSTRUCTION FOR A PERIOD OF 2 YEARS. 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 DEVELOPEMENT DIRECTORS DISCRETION.

JOSHUA PALMER, P.E. ,
COUNTY ENGINEER / ECM ADMINISTRATOR — DATE

PCD FILE NO. SF-XX

JPS ENGINEERING
19 E. Willamette Ave.
Colorado Springs, CO 80903
PH: 719-477-9429
FAX: 719-471-0766
www.jpsengr.com

CALL UTILITY NOTIFICATION CENTER OF COLORADO
1-800-922-1987
CALL 2 BUSINESS DAYS IN ADVANCE BEFORE YOU DIG, GRADE, OR EXCAVATE FOR THE MARKING OF UNDERGROUND MEMBER UTILITIES.

No.	REVISION	BY	DATE
1	FINAL PLAT SUBMITTAL	JPS	01/31/24

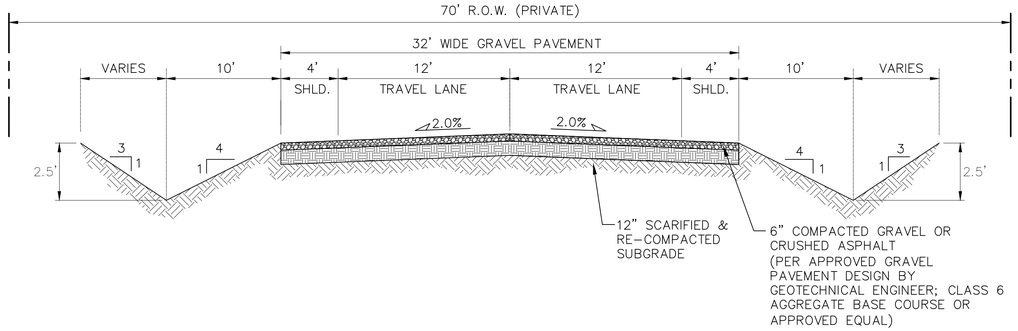
SILVERADO RANCH FILING NO. 2

GEC TITLE SHEET

HORZ. SCALE:	NA	DRAWN:	MSP
VERT. SCALE:	NA	DESIGNED:	JPS
SURVEYED:	LWA	CHECKED:	JPS
CREATED:	9/21/22	LAST MODIFIED:	01/31/24
PROJECT NO:	080603	MODIFIED BY:	PV

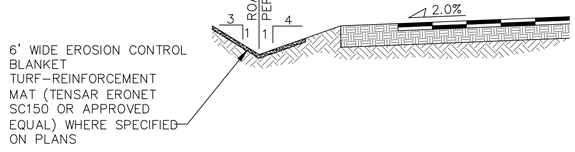
SHEET: C1.0

SF246



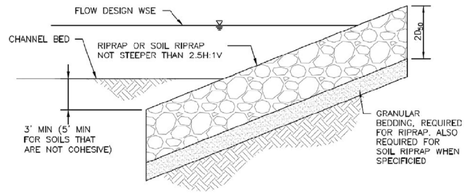
TYPICAL RURAL LOCAL ROADWAY SECTION (PRIVATE) (A)

SCALE: 1"=5'H
1"=2.5'V



TYPICAL DITCH SECTION WITH EROSION CONTROL BLANKET LINING (B)

SCALE : NTS



RIPRAP DESIGNATION	% SMALLER THAN GIVEN SIZE BY WEIGHT	INTERMEDIATE ROCK DIMENSION (INCHES)	D_{50}* (INCHES)
TYPE VL	70 – 100 50 – 70 35 – 50 2 – 10	12 9 6 2	6
TYPE L	70 – 100 50 – 70 35 – 50 2 – 10	15 12 9 3	9
TYPE M	70 – 100 50 – 70 35 – 50 2 – 10	21 18 12 4	12
TYPE H	70 – 100 50 – 70 35 – 50 2 – 10	30 24 18 6	18
*D_{50} = MEAN ROCK SIZE			

Figure 8-34. Riprap and soil riprap placement and gradation (part 1 of 3)

SOIL RIPRAP NOTES:

1. ELEVATION TOLERANCES FOR THE SOIL RIPRAP SHALL BE 0.10 FEET. THICKNESS OF SOIL RIPRAP SHALL BE NO LESS THAN THICKNESS SHOWN AND NO MORE THAN 2-INCHES GREATER THAN THE THICKNESS SHOWN.

2. WHERE "SOIL RIPRAP" IS DESIGNATED ON THE CONTRACT DRAWINGS, RIPRAP VOIDS ARE TO BE FILLED WITH NATIVE SOIL. THE RIPRAP SHALL BE PRE-MIXED WITH THE NATIVE SOIL AT THE FOLLOWING PROPORTIONS BY VOLUME: 65PERCENT RIPRAP AND 35 PERCENT SOIL. THE SOIL USED FOR MIXING SHALL BE NATIVE TOPSOIL AND SHALL HAVE A MINIMUM FINES CONTENT OF 15 PERCENT. THE SOIL RIPRAP SHALL BE INSTALLED IN A MANNER THAT RESULTS IN A DENSE, INTERLOCKED LAYER OF RIPRAP WITH RIPRAP VOIDS FILLED COMPLETELY WITH SOIL. SEGREGATION OF MATERIALS SHALL BE AVOIDED AND IN NO CASE SHALL THE COMBINED MATERIAL CONSIST PRIMARILY OF SOIL; THE DENSITY AND INTERLOCKING NATURE OF RIPRAP IN THE MIXED MATERIAL SHALL ESSENTIALLY BE THE SAME AS IF THE RIPRAP WAS PLACED WITHOUT SOIL.

3. WHERE SPECIFIED (TYPICALLY AS "BURIED SOIL RIPRAP"), A SURFACE LAYER OF TOPSOIL SHALL BE PLACED OVER THE SOIL RIPRAP ACCORDING TO THE THICKNESS SPECIFIED ON THE CONTRACT DRAWINGS. THE TOPSOIL SURFACE LAYER SHALL BE COMPACTED TO APPROXIMATELY 85% OF MAXIMUM DENSITY AND WITHIN TWO PERCENTAGE POINTS OF OPTIMUM MOISTURE IN ACCORDANCE WITH ASTM D698. TOPSOIL SHALL BE ADDED TO ANY AREAS THAT SETTLE.

4. ALL SOIL RIPRAP THAT IS BURIED WITH TOPSOIL SHALL BE REVIEWED AND APPROVED BY THE ENGINEER PRIOR TO ANY TOPSOIL PLACEMENT.

GRADATION FOR GRANULAR BEDDING		
U.S. STANDARD SIEVE SIZE	PERCENT PASSING BY WEIGHT	
	TYPE I CDOT SECT. 703.01	TYPE II CDOT SECT. 703.09 CLASS A
3 INCHES	–	90 – 100
1½ INCHES	–	–
¾ INCHES	–	20 – 90
⅜ INCHES	100	–
#4	95 – 100	0 – 20
#16	45 – 80	–
#50	10 – 30	–
#100	2 – 10	–
#200	0 – 2	0 – 3

RIPRAP BEDDING

THICKNESS REQUIREMENTS FOR GRANULAR BEDDING			
RIPRAP DESIGNATION	MINIMUM BEDDING THICKNESS (INCHES)		
	FINE-GRAINED SOILS [1]		COARSE-GRAINED SOILS [2]
	TYPE I (LOWER LAYER)	TYPE II (UPPER LAYER)	TYPE II
VL (D_{50} = 6 IN)	4	4	6
L (D_{50} = 9 IN)	4	4	6
M (D_{50} = 12 IN)	4	4	6
H (D_{50} = 18 IN)	4	6	8
VH (D_{50} = 24 IN)	4	6	8

NOTES:
1. MAY SUBSTITUTE ONE 12-INCH LAYER OF TYPE II BEDDING. THE SUBSTITUTION OF ONE LAYER OF TYPE II BEDDING SHALL NOT BE PERMITTED AT DROP STRUCTURES. THE USE OF A COMBINATION OF FILTER FABRIC AND TYPE II BEDDING AT DROP STRUCTURES IS ACCEPTABLE.
2. FIFTY PERCENT OR MORE BY WEIGHT RETAINED ON THE #40 SIEVE.

Figure 8-34. Riprap and soil riprap placement and gradation (part 3 of 3)

RIPRAP DETAILS (D)

REFER TO GENERAL NOTES ON CD SH. G2

SILVERADO RANCH FILING NO. 2

TYPICAL SECTIONS AND DETAILS

JPS ENGINEERING
19 E. Willamette Ave.
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80903
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FAX: 719-471-0766
www.jpsengr.com

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1-800-922-1987
CALL 2 BUSINESS DAYS IN ADVANCE BEFORE YOU DIG, GRADE OR EXCAVATE FOR THE MARKING OF UNDERGROUND MEMBER UTILITIES.

No.	REVISION	BY	DATE
1	FINAL PLAT SUBMITTAL	JPS	01/31/24

HORZ. SCALE: AS SHOWN	DRAWN: PV
VERT. SCALE: AS SHOWN	DESIGNED: JPS
SURVEYED: LWA	CHECKED: JPS
CREATED: 9/16/20	LAST MODIFIED: 01/31/24
PROJECT NO: 180603	MODIFIED BY: PV
SHEET: TY1	

N

200' 0 100' 200' 400'

ORIGINAL SCALE: 1"=200'
CONTOUR INTERVAL=2'

Add drainage flow arrows onsite and offsite.

Plat shows 120' ROW

EXISTING 18"x41.0' CMP CULVERT OB1
INV IN=5830.30
INV OUT=5829.81

EXIST. 60' R.O.W.

DROVER CANYON VIEW (70' R.O.W.)

FUTURE 90' R.O.W. (45' EACH SIDE OF SECTION LINE)

15' ADDITIONAL R.O.W. PER PLAT

DRENNAN ROAD (MAJOR COLLECTOR)
DRENNAN SCHOOL

CHANNEL B1.1

NORTH LINE SECTION 16

Make boundary labels larger

EXISTING 20' ELECT. ESMT. BK 2174 PG 658

EXISTING 20' WATER LINE ESMT. REC. 205054353

EXISTING FILING NO. 1

RET. POND A
TRACT A
SILVERADO RANCH
FIL NO. 1

EXISTING CULVERT A6 (18" RCP)

FUTURE CULVERT A1 (2 EA. 48" RCP)

EXISTING CULVERT B1 (24" RCP)

Silverado Hill Loop per F1 plat

SILVERADO HILL VIEW (70' R.O.W.)

Not ROW as it's a private road.

PROPOSED CULVERT B1.1

REMOVE TEMPORARY CUL-DE-SAC

Label tract

PROPOSED FILING NO. 2

(P) CULVERT B4.1

FILING NO. 2 BOUNDARY

32' EOG

70' R.O.W.

20' (TYP.)

19'

50'R TRAVEL LANE

52'R EOG

70'R EASEMENT

Limits of disturbance needs to include this grading

PROPOSED TEMPORARY CUL-DE-SAC

1	2.60 AC	2	2.62 AC	3	2.65 AC	4	2.65 AC	5	2.59 AC
6	2.7 AC	7	2.62 AC	8	2.69 AC	9	2.65 AC	10	3.45 AC
11	3.34 AC	12	3.19 AC	13	3..84 AC	14	3.68 AC	15	2.91 AC

PEYTON HIGHWAY (MINOR ATERIAL)

EXISTING CHANNEL A1

INTERIM GRADED SPILLWAY

DRAINAGE EASEMENT

WEST LINE SECTION 16

FUTURE MILL IRON VIEW

EXIST. 60' R.O.W.

20' ADDITIONAL RO.W.

FUTURE 100' R.O.W. (50' EA. SIDE OF SECTION LINE)

EXISTING FILING NO. 1

Label existing tract

Retention Ponds have permanent pools. These are actually full-infiltration PLD facilities.

RETENTION POND B
TRACT C
SILVERADO RANCH
FIL NO. 1

FUTURE PHASE

FUTURE PHASE

Please label existing, private ponds.

Is there an engineered spillway and channel here like there is for the other pond? If so, show it. If there isn't one, we need to discuss the necessity for one given how much flow is designed to bypass.

Label overall Silverado Boundary

PCD File No. SF-23-XXX

SILVERADO RANCH FILING NO. 2

OVERALL SITE PLAN

JPS ENGINEERING
19 E. Willamette Ave.
Colorado Springs, CO
80903
PH: 719-477-9429
FAX: 719-471-0766

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CALL TWO BUSINESS DAYS IN ADVANCE BEFORE YOU DIG, GRADE, OR EXCAVATE FOR THE MARKING OF UNDERGROUND MEMBER UTILITIES.

No.	REVISION	BY	DATE
1	FINAL PLAT SUBMITTAL	JPS	02/01/24

HORZ. SCALE: 1"=200'	DRAWN: MSP
VERT. SCALE: N/A	DESIGNED: JPS
SURVEYED: LWA	CHECKED: JPS
CREATED: 9/21/22	LAST MODIFIED: 02/01/24
PROJECT NO: 080603	MODIFIED BY: PV
SHEET:	C1

GEC Checklist Item V. Label all proposed temporary construction BMPs by phase of implementation (initial, interim, final).

Did you intend to show SF somewhere on the GEC Plan? I don't see any.

EROSION CONTROL LEGEND:

- SILT FENCE
- STRAW BALES
- RIPRAP
- 6490 EXISTING CONTOURS
- 6490 PROPOSED CONTOURS
- 99.00 PROPOSED SPOT ELEVATION (FLOWLINE)
- SF SILT FENCE
- VTC VEHICLE TRACKING CONTROL PAD
- TM TEMPORARY SEED AND MULCH ON DISTURBED SLOPES
- STB STRAW BALE CHECK DAMS AT 300' SPACING UNLESS NOTED OTHERWISE
- SB SEDIMENT BASIN
- RR RIPRAP
- ECB EROSION CONTROL BLANKETS (REFER TO P&P SHEETS)
- LOD LIMITS OF DISTURBANCE

SM or TM? Revise to remove discrepancy.

ESTIMATED EARTHWORK QUANTITY:

UNCLASSIFIED EXCAVATION (TOTAL CUT) = 18,005 CY
∗ EMBANKMENT FILL = 6,593 CY
NET (CUT) = 10,423 CY

*(ASSUMES 15% COMPACTION FACTOR)

NOTE: THIS ESTIMATE IS PROVIDED FOR INFORMATION ONLY, REPRESENTING THE CALCULATED BULK EARTHWORK VOLUME NOT INCLUDING ANY ADJUSTMENTS FOR PAVEMENT DEPTHS. CONTRACTOR SHALL MAKE HIS OWN DETERMINATION OF EARTHWORK QUANTITIES AS BASIS FOR BID PRICING AND NOTIFY ENGINEER OF ANY DISCREPANCIES.

GEC Checklist Item "P" - identify areas of cut and fill.

GEC Checklist Items H and M. If "limits of disturbance" and "construction boundary" are the same, change to "limits of construction/disturbance" or otherwise show as separate line types for each on the legend and figure.

N

100' 0 100' 200'

Original Scale: 1"=100'
Contour Interval = 2 ft.

GENERAL DRAINAGE NOTES:

1. INDIVIDUAL BUILDERS SHALL PROVIDE POSITIVE DRAINAGE AWAY FROM STRUCTURES AND ACCOUNT FOR POTENTIAL CROSS-LOT DRAINAGE IMPACTS WITHIN EACH LOT.
2. BUILDERS AND PROPERTY OWNERS SHALL IMPLEMENT & MAINTAIN EROSION CONTROL BEST MANAGEMENT PRACTICES FOR PROTECTION OF DOWNSTREAM PROPERTIES AND FACILITIES INCLUDING PROTECTION OF EXISTING GRASS BUFFER STRIPS ALONG THE DOWNSTREAM PROPERTY BOUNDARIES.

Add a general note: all areas to be vegetated with seeding should also be temporarily stabilized via surface roughening or some other means.

KEYED NOTES:

1. CONTRACTOR MAY WASTE EXCESS CUT MATERIAL OR BORROW SUITABLE FILL MATERIAL FROM THIS AREA. MATCH INTO EXISTING GRADES WITH 3:1 MAX CUT AND FILL SLOPES AND MAINTAIN POSITIVE DRAINAGE IN ALL AREAS.
2. TOPSOIL STOCKPILE AREA

CONTROL MEASURE NOTES:

1. EXISTING VEGETATION CONSISTS OF NATIVE GRASSES
2. NO DEDICATED ASPHALT OR CONCRETE BATCH PLANTS ARE PLANNED ON SITE
3. CONTRACTOR SHALL UPDATE AND ANNOTATE THE SWMP MAPS TO SHOW THE LOCATION OF THE CONSTRUCTION TRAILER, STABILIZED STAGING AREA, CWA AND OTHER ITEMS AS THESE LOCATIONS ARE DETERMINED ON SITE.

CONTROL MEASURE (CM) PHASING

INITIAL CM'S
- INSTALL VTC
- INSTALL SILT FENCE

INTERIM CM'S
- STRAW BALE CHECK DAMS

FINAL CM'S
- RIPRAP APRONS
- SEEDING

DRIVEWAY CULVERT TABLE

LOT NO.	SIZE (DIA.)	MIN. SLOPE
1	18"	1.0%
2	18"	1.0%
3	18"	1.0%
4	18"	1.0%
5	18"	1.0%
6	18"	1.0%
7	18"	1.0%
8	18"	1.0%
9	18"	1.0%
10	18"	1.0%
11	18"	1.0%
12	18"	1.0%
13	18"	1.0%
14	18"	1.0%
15	18"	1.0%

GEC Checklist Item "S" - Add drainage flow arrows onsite and offsite.

B1.1 - CHANNEL B1.1 (B=12'; Z=: 4:1; D=3.0; SLOPE=0.5%)

NORTH LINE SECTION 16

DRENNAN ROAD (EXISTING GRAVEL ROAD)

EXISTING 20' ELECT. ESMT. BK 2174 PG 658

EXISTING LOW POINT (NO CULVERT)

EXISTING 20' WATER LINE ESMT. REC. 205054353

TRACT "B" 16.38 AC.

Per my comment on PDF pg 13 of the FDR, consider re-routing the offsite flows around the pond to prevent mixing of clean offsite flows with needs-to-be-treated roadway runoff.

EXISTING CULVERT

EXISTING FILING NO. 1

Add "CIP" to Legend above and provide a detail for it on the next sheet.

36" RCP INV IN=5816.9

REMOVE TEMPORARY GRAVEL CUL-DE-SAC (50' R) TEMPORARY ESMT. (75' R) (TO BE VACATED/REPLATTED W/ FILING NO. 2)

PROPOSED FILING NO. 2

24" RCP FES INV IN=5799.53

LOT 1 2.60 ac
LOT 2 2.62 ac
LOT 3 2.65 ac
LOT 4 2.65 ac
LOT 5 2.72 ac 2.59 NET ac
LOT 7 2.78 ac 2.62 NET ac
LOT 9 3.81 ac 2.65 NET ac
LOT 6 2.76 ac
LOT 8 2.69 ac
LOT 10 3.45 ac
LOT 11 3.34 ac
LOT 12 3.19 ac
LOT 13 3.84 ac
LOT 14 3.68 ac
LOT 15 2.91 ac
LOT 6 3.398 AC

(P)50'X50' DRAINAGE EASEMENT

Show a VTC.

36" RCP CULVERT B1.1 OUT IN=5816.2

Provide temp BMPs in roadside ditches.

SILVERADO HILL VIEW

PROPOSED 24" RCP CULVERT B4.1 W/ FES

24" RCP FES W/ RIPRAP APRON INV OUT=5797.13

Provide some form of temp BMP in this channel.

201,792 sf

(P) 50' DRAINAGE EASEMENT

(P) CHANNEL B1.1 @ 0.4% SLOPE

LIMIT OF DISTURBANCE AC= 10.7 AC.

B4.1 - PROPOSED CHANNEL B4.1 (GRASS-LINED DITCH; 2'D; 4:1 SIDE SLOPES) @ 0.45% SLOPE

(P) 30' DRAINAGE EASEMENT

PROPOSED DRAINAGE EASEMENT

MATCH INTO EXISTING GRADE (FL=5796.0)

PROPOSED TEMPORARY CUL-DE-SAC
50'R TRAVEL LANE
52'R EOG
70'R EASEMENT

FILING NO. 2 BOUNDARY 49 AC.)

Label existing tract

Straw Bales are only suitable for minor drainageways, not major. And if double rows to be used, must offset seams.

We have been seeing a lot of blow outs when using straw bales in ditches after a large rain event. Consider using straw wattles or rock checks in lieu of straw bales.

FUTURE FILING

PLD

EXISTING RETENTION POND B BOT EL=5790.0 TOP EL=5796.0

Forebay required when >1ac of imperviousness is tributary to a pond inflow point per MHFD Detail T-5.

This pond already has less capacity than required (at least per previous Retention Pond calcs). Without a forebay to easily remove sediment, the pond will slowly lose even more capacity over time. We can revisit this discussion once PLD calcs are provided in FDR.

MIN. 50' DRAINAGE EASEMENT OR TRACT

4:1 4:1 12' 4:1 4:1 3'

NATIVE GRASS

CHANNEL SECTION B1.1
N.T.S.

16' NATIVE SEED 4 4 2'

GRASS-LINED DITCH SECTION B4.1
NTS

PCD File No. SF-23-XXX

SILVERADO RANCH FILING NO. 2

GRADING AND EROSION CONTROL PLAN

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No.	REVISION	BY	DATE
	FINAL PLAT SUBMITTAL	JPS	02/01/24

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VERT. SCALE: AS SHOWN	DESIGNED: JPS
SURVEYED: LWA	CHECKED: JPS
CREATED: 9/25/22	LAST MODIFIED: 02/01/24
PROJECT NO. 080603	MODIFIED BY: PV
SHEET: C1.1	

STANDARD NOTES FOR EL PASO COUNTY GRADING AND EROSION CONTROL PLANS:

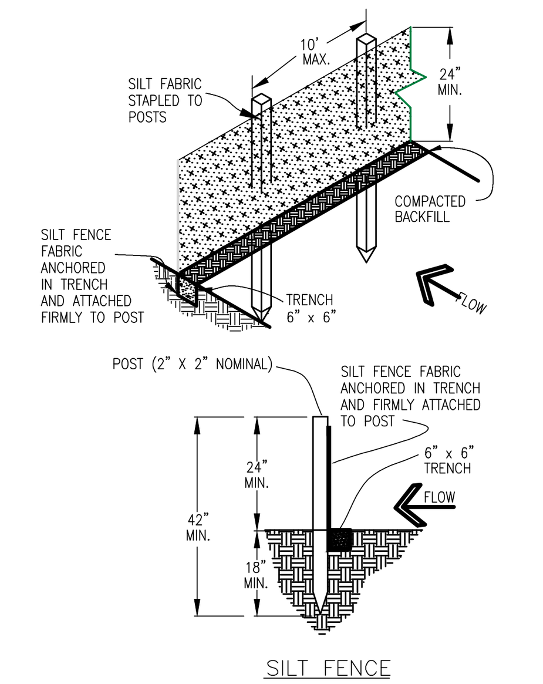
REVISED 7/02/19

1. 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.
2. 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.
3. 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 SWMP DURING CONSTRUCTION IS THE RESPONSIBILITY OF THE DESIGNATED QUALIFIED STORMWATER MANAGER OR CERTIFIED EROSION CONTROL INSPECTOR. THE SWMP 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.
4. 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.
5. CONTROL MEASURES MUST BE INSTALLED PRIOR TO COMMENCEMENT OF ACTIVITIES THAT COULD CONTRIBUTE POLLUTANTS TO STORMWATER. CONTROL MEASURES FOR ALL SLOPES, CHANNELS, DITCHES, AND DISTURBED LAND AREAS SHALL BE INSTALLED IMMEDIATELY UPON COMPLETION OF THE DISTURBANCE.
6. 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.
7. 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.
8. 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.
9. 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 ECM ADMINISTRATOR PRIOR TO IMPLEMENTATION.
10. 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 INFEASIBLE AND SPECIFICALLY REQUESTED AND APPROVED.
11. 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 LOOSENED PRIOR TO INSTALLATION OF THE CONTROL MEASURE(S).
12. 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.
13. CONCRETE WASH WATER SHALL BE CONTAINED AND DISPOSED OF IN ACCORDANCE WITH THE SWMP. 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.
14. 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.
15. EROSION CONTROL BLANKETING OR OTHER PROTECTIVE COVERING SHALL BE USED ON SLOPES STEEPER THAN 3:1.
16. 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.
17. 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.
18. TRACKING OF SOILS AND CONSTRUCTION DEBRIS OFF-SITE SHALL BE MINIMIZED. MATERIALS TRACKED OFF-SITE SHALL BE CLEANED UP AND PROPERLY DISPOSED OF IMMEDIATELY.
19. 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.
20. 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 SEQUENCE. ALL MATERIALS STORED ON-SITE SHALL BE STORED IN A NEAT, ORDERLY MANNER, IN THEIR ORIGINAL CONTAINERS, WITH ORIGINAL MANUFACTURER'S LABELS.
21. 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 ECM ADMINISTRATOR. IN GRANTING APPROVAL FOR THE USE OF SUCH CHEMICAL(S), SPECIAL CONDITIONS AND MONITORING MAY BE REQUIRED.
22. 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.
23. NO PERSON SHALL CAUSE THE IMPEDIMENT OF STORMWATER FLOW IN THE CURB AND GUTTER OR DITCH EXCEPT WITH APPROVED SEDIMENT CONTROL MEASURES.
24. 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 ECM 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.
25. ALL CONSTRUCTION TRAFFIC MUST ENTER/EXIT THE SITE ONLY AT APPROVED CONSTRUCTION ACCESS POINTS.
26. PRIOR TO CONSTRUCTION THE PERMITTEE SHALL VERIFY THE LOCATION OF EXISTING UTILITIES.
27. 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.
28. THE SOILS REPORT FOR THIS SITE SHALL BE CONSIDERED A PART OF THESE PLANS.
29. 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 (SWMP), OF WHICH THIS GRADING AND EROSION CONTROL PLAN MAY BE A PART. FOR INFORMATION OR APPLICATION MATERIALS CONTACT:

Update to match GEC Checklist Item 28.

COLORADO DEPARTMENT OF PUBLIC HEALTH AND ENVIRONMENT
WATER QUALITY CONTROL DIVISION
WQCD – PERMITS
4300 CHERRY CREEK DRIVE SOUTH
DENVER, CO 80246-1530
ATTN: PERMITS UNIT

NOTE:
NOTWITHSTANDING ANY DETAILS, NOTES OR PLANS SHOWN ON THESE DRAWINGS, ALL EROSION CONTROL DESIGNS AND INSTALLATIONS SHALL CONFORM TO EL PASO COUNTY STANDARDS AND POLICIES UNLESS OTHERWISE APPROVED IN WRITING.



SILT FENCE

SILT FENCE NOTES

INSTALLATION REQUIREMENTS

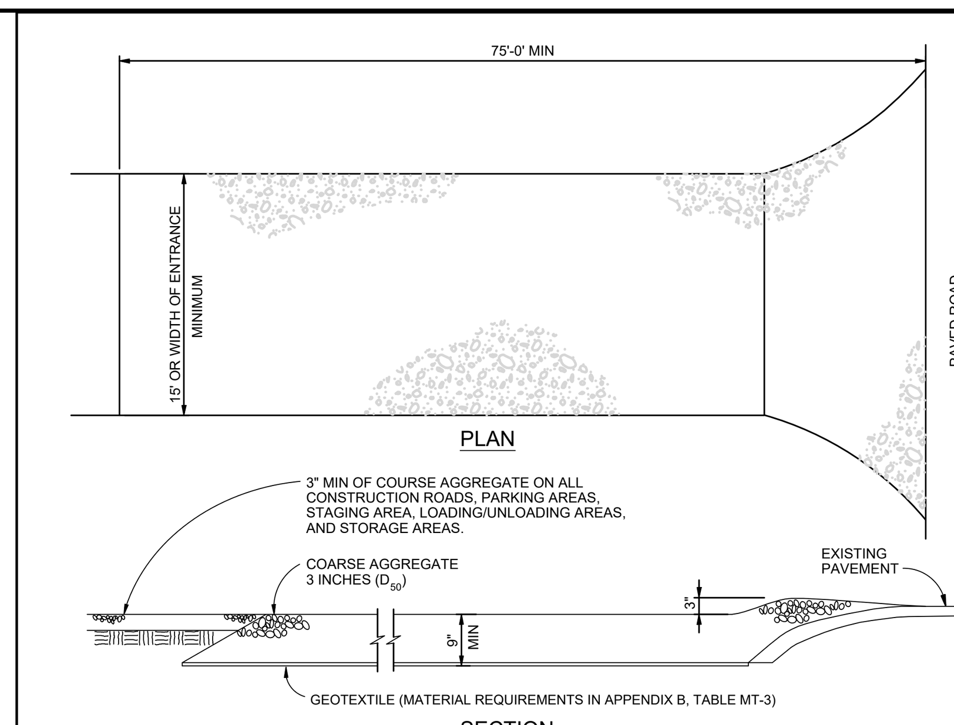
1. SILT FENCES SHALL BE INSTALLED PRIOR TO ANY LAND DISTURBING ACTIVITIES.
2. WHEN JOINTS ARE NECESSARY, SILT FENCE GEOTEXTILE SHALL BE SPLICED TOGETHER ONLY AT SUPPORT POST AND SECURELY SEALED.
3. METAL POSTS SHALL BE "STUDDED TEE" OR "U" TYPE WITH MINIMUM WEIGHT OF 1.33 POUNDS PER LINEAR FOOT. WOOD POSTS SHALL HAVE A MINIMUM DIAMETER OR CROSS SECTION DIMENSION OF 2 INCHES.
4. THE FILTER MATERIAL SHALL BE FASTENED SECURELY TO METAL OR WOOD POSTS USING WIRE TIES, OR TO WOOD POSTS WITH 3/4" LONG #9 HEAVY-DUTY STAPLES. THE SILT FENCE GEOTEXTILE SHALL NOT BE STAPLED TO EXISTING TREES.
5. 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, TIE 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.
6. 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.
7. 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

1. CONTRACTOR SHALL INSPECT SILT FENCES IMMEDIATELY AFTER EACH RAINFALL, AT LEAST DAILY DURING PROLONGED RAINFALL, AND WEEKLY DURING PERIODS OF NO RAINFALL. DAMAGED, COLLAPSED, UNENTRENCHED OR INEFFECTIVE SILT FENCES SHALL BE PROMPTLY REPAIRED OR REPLACED.
2. SEDIMENT SHALL BE REMOVED FROM BEHIND SILT FENCE WHEN IT ACCUMULATES TO HALF THE EXPOSED GEOTEXTILE HEIGHT.
3. 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

3-36



VEHICLE TRACKING
NTS

VEHICLE TRACKING NOTES

INSTALLATION REQUIREMENTS

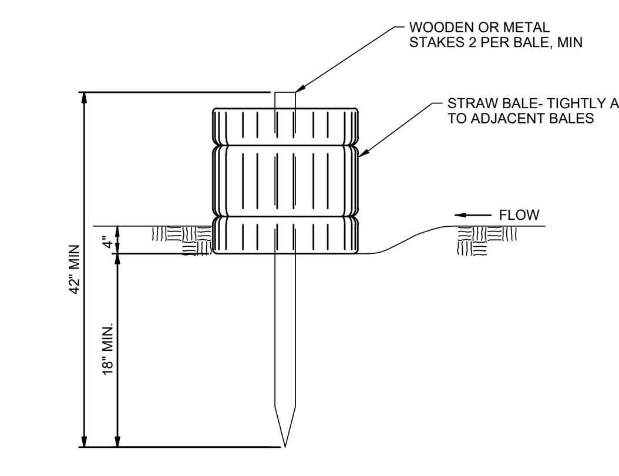
1. ALL ENTRANCES TO THE CONSTRUCTION SITE ARE TO BE STABILIZED PRIOR TO CONSTRUCTION BEGINNING.
2. CONSTRUCTION ENTRANCES ARE TO BE BUILT WITH AN APRON TO ALLOW FOR TURNING TRAFFIC, BUT SHOULD NOT BE BUILT OVER EXISTING PAVEMENT EXCEPT FOR A SLIGHT OVERLAP.
3. AREAS TO BE STABILIZED ARE TO BE PROPERLY GRADED AND COMPACTED PRIOR TO LAYING DOWN GEOTEXTILE AND STONE.
4. CONSTRUCTION ROADS, PARKING AREAS, LOADING/UNLOADING ZONES, STORAGE AREAS, AND STAGING AREAS ARE TO BE STABILIZED.
5. CONSTRUCTION ROADS ARE TO BE BUILT TO CONFORM TO SITE GRADES, BUT SHOULD NOT HAVE SIDE SLOPES OR ROAD GRADES THAT ARE EXCESSIVELY STEEP.

MAINTENANCE REQUIREMENTS

1. REGULAR INSPECTIONS ARE TO BE MADE OF ALL STABILIZED AREAS, ESPECIALLY AFTER STORM EVENTS.
2. STONES ARE TO BE REAPPLIED PERIODICALLY AND WHEN REPAIR IS NECESSARY.
3. SEDIMENT TRACKED ONTO PAVED ROADS IS TO BE REMOVED DAILY BY SHOVELING OR SWEEPING. SEDIMENT IS NOT TO BE WASHED DOWN STORM SEWER DRAINS.
4. STORM SEWER INLET PROTECTION IS TO BE IN PLACE, INSPECTED, AND CLEANED IF NECESSARY.
5. OTHER ASSOCIATED SEDIMENT CONTROL MEASURES ARE TO BE INSPECTED TO ENSURE GOOD WORKING CONDITION.

City of Colorado Springs Stormwater Quality	Figure VT-2 Vehicle Tracking Application Examples

3-54



STRAW BALE BARRIER
NTS

STRAW BALE BARRIER NOTES

INSTALLATION REQUIREMENTS

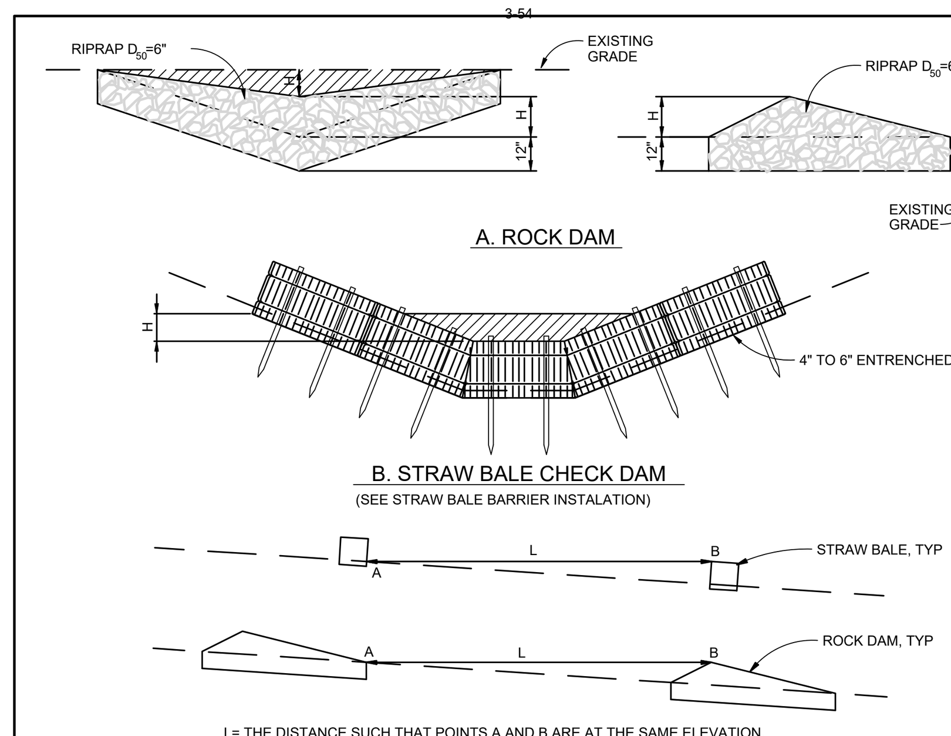
1. STRAW BALE BARRIERS SHALL BE INSTALLED PRIOR TO ANY LAND DISTURBING ACTIVITIES.
2. BALES SHALL CONSIST OF APPROXIMATELY 5 CUBIC FEET OF CERTIFIED WEED FREE HAY OR STRAW AND WEIGH NOT LESS THAN 35 POUNDS.
3. BALES ARE TO BE PLACED IN A SINGLE ROW WITH THE END OF THE BALES TIGHTLY ABUTTING ONE ANOTHER.
4. EACH BALE IS TO BE SECURELY ANCHORED WITH AT LEAST TWO STAKES AND THE FIRST STAKE IS TO BE DRIVEN TOWARD THE PREVIOUSLY LAID BALE TO FORCE THE BALES TOGETHER.
5. STAKES ARE TO BE A MINIMUM OF 42 INCHES LONG. METAL STAKES SHALL BE STANDARD "T" OR "U" TYPE WITH MINIMUM WEIGHT OF 1.33 POUNDS PER LINEAR FOOT. WOOD STAKES SHALL HAVE A MINIMUM DIAMETER OR CROSS SECTION DIMENSION OF 2 INCHES.
6. BALES ARE TO BE BOUND WITH EITHER WIRE OR STRING AND ORIENTED SUCH THAT THE BINDINGS ARE AROUND THE SIDES AND NOT ALONG THE TOPS AND BOTTOMS OF THE BALE.
7. GAPS BETWEEN BALES ARE TO BE CHINKED (FILLED BY WEDGING) WITH STRAW OR THE SAME MATERIAL OF THE BALE.
8. END BALES ARE TO EXTEND UPSLOPE SO THE TRAPPED RUNOFF CANNOT FLOW AROUND THE ENDS OF THE BARRIER.

MAINTENANCE REQUIREMENTS

1. CONTRACTOR SHALL INSPECT STRAW BALE BARRIERS IMMEDIATELY AFTER EACH RAINFALL, AT LEAST DAILY DURING PROLONGED RAINFALL, AND WEEKLY DURING PERIODS NO RAINFALL.
2. DAMAGED OR INEFFECTIVE BARRIERS SHALL PROMPTLY BE REPAIRED, REPLACING BALES IF NECESSARY, AND UNENTRENCHED BALES NEED TO BE REPAIRED WITH COMPACTED BACKFILL MATERIAL.
3. SEDIMENT SHALL BE REMOVED FROM BEHIND STRAW BALE BARRIERS WHEN IT ACCUMULATES TO APPROXIMATELY 1/2 THE HEIGHT OF THE BARRIER.
4. STRAW BALE BARRIERS SHALL BE REMOVED WHEN ADEQUATE VEGETATIVE COVER IS ATTAINED AS APPROVED BY THE CITY.

City of Colorado Springs Stormwater Quality	Figure SBB-2 Straw Bale Barrier Construction Detail and Maintenance Requirements

3-42



CHECK DAM
NTS

CHECK DAM NOTES

INSTALLATION REQUIREMENTS

1. STRAW BALES USED AS CHECK DAMS ARE TO MEET THE REQUIREMENTS STATED IN FIGURE SBB-2.
2. THE "H" DIMENSION SHALL BE SELECTED TO PROVIDE WEIR FLOW CONVEYANCE FOR 2-YEAR FLOW OR GREATER.

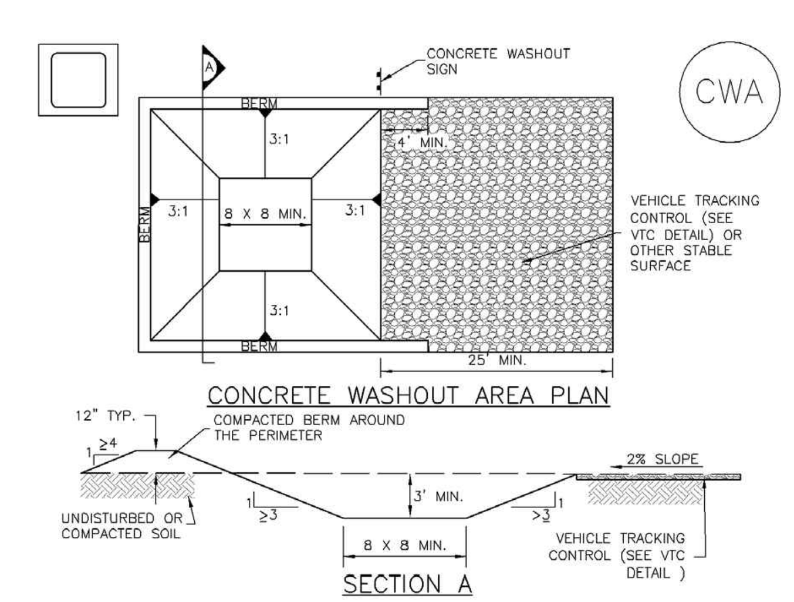
MAINTENANCE REQUIREMENTS

1. REGULAR INSPECTIONS ARE TO BE MADE OF ALL CHECK DAMS, ESPECIALLY AFTER STORM EVENTS.
2. REPLACE STONE AS NECESSARY TO MAINTAIN THE CORRECT HEIGHT OF THE DAM.
3. ACCUMULATED SEDIMENT AND DEBRIS IS TO BE REMOVED FROM BEHIND THE DAMS AFTER EACH STORM OR WHEN 1/2 OF THE ORIGINAL HEIGHT OF THE DAM IS REACHED.
3. CHECK DAMS ARE TO REMAIN IN PLACE AND OPERATIONAL UNTIL THE DRAINAGE AREA AND CHANNEL ARE PERMANENTLY STABILIZED.
4. WHEN CHECK DAMS ARE REMOVED THE CHANNEL LINING OR VEGETATION IS TO BE RESTORED.

City of Colorado Springs Stormwater Quality	Figure CD-1 Check Dam Construction Detail and Maintenance Requirements

3-20

Concrete Washout Area (CWA) — MM-1



CWA-1. CONCRETE WASHOUT AREA

CWA INSTALLATION NOTES

1. SEE PLAN VIEW FOR:
   –CWA INSTALLATION LOCATION.
2. 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 (16 MIL MIN. THICKNESS) OR SURFACE STORAGE ALTERNATIVES USING PREFABRICATED CONCRETE WASHOUT DEVICES OR A LINED ABOVE GROUND STORAGE ARE SHOULD BE USED.
3. THE CWA SHALL BE INSTALLED PRIOR TO CONCRETE PLACEMENT ON SITE.
4. 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.
5. BERM SURROUNDING SIDES AND BACK OF THE CWA SHALL HAVE MINIMUM HEIGHT OF 1'.
6. VEHICLE TRACKING PAD SHALL BE SLOPED 2% TOWARDS THE CWA.
7. 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.
8. USE EXCAVATED MATERIAL FOR PERIMETER BERM CONSTRUCTION.

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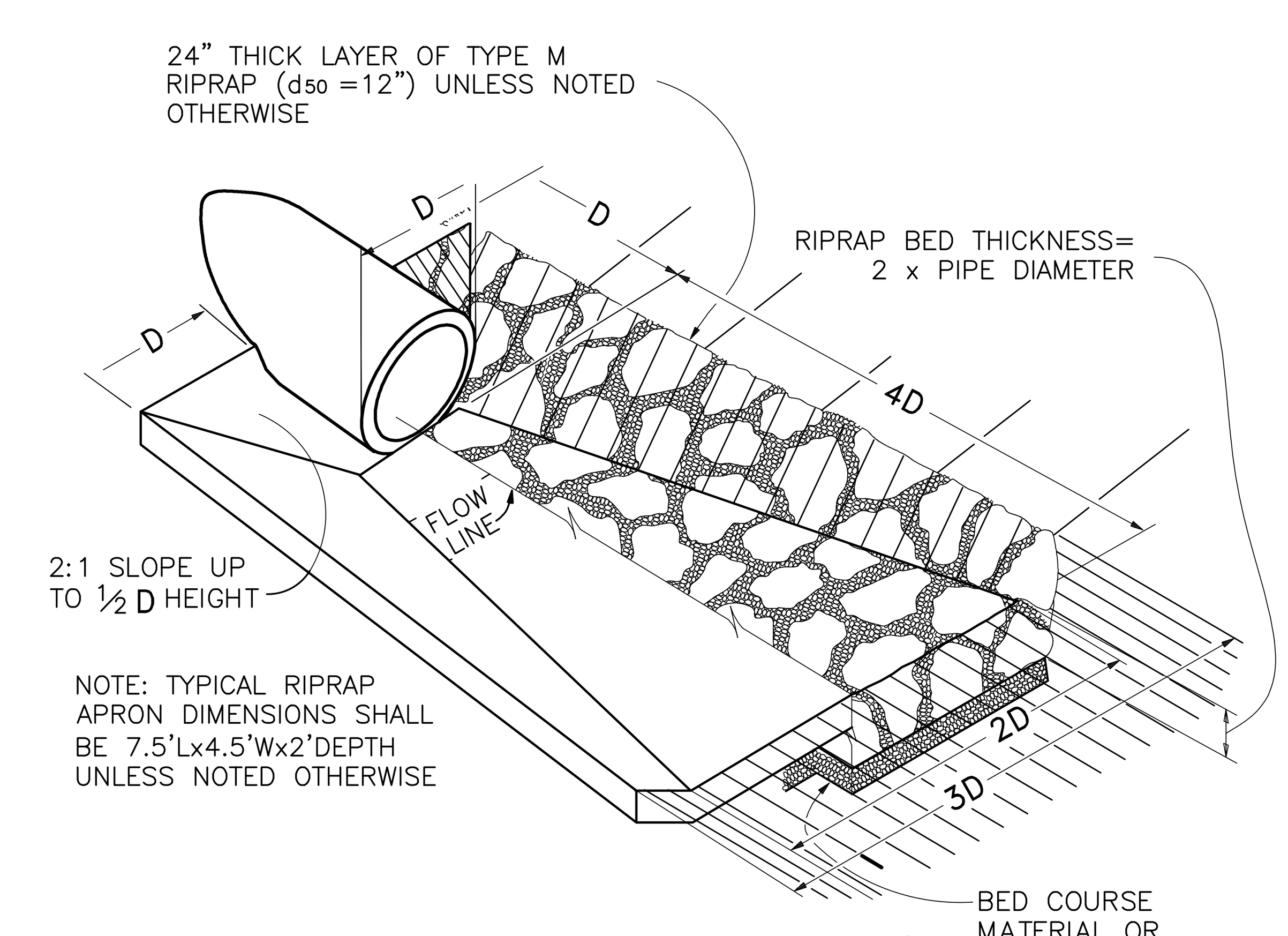


TYPICAL RIPRAP APRON/ CULVERT OUTLET PAVING (1)
N.T.S.

SEEDING MIX:

GRASS	VARIETY	AMOUNT IN PLS LBS. PER ACRE
CRESTED WHEAT GRASS	EPHRAIM OR HYCREST	4.0 LBS.
PERENIAL RYE	LINN	2.0 LBS.
WESTERN WHEATGRASS	SARTON	3.0 LBS.
SMOOTH BROME GRASS	LINCOLN OR MANCHAR	5.0 LBS.
SIDEOATS GRAMA	EPHRAIM	2.5 LBS.
	TOTAL:	16.5 LBS.

SEEDING & FERTILIZER APPLICATION: DRILL SEED OR HYDRO-SEED PER CDOT SPEC. SECTION 212.

MULCHING APPLICATION: CONFORM TO CDOT SPEC-SECTION 213.

SEDIMENT CONTROL MAINTENANCE PROGRAM:

	FREQUENCY
PERIODIC SITE INSPECTIONS	BI-WEEKLY
RE-VEGETATION OF EXPOSED SOILS	WITHIN 21 DAYS OF GRADING
SEDIMENT REMOVAL FROM BMP'S	MONTHLY
REMOVAL OF BMP'S	AFTER STABILIZATION ACHIEVED

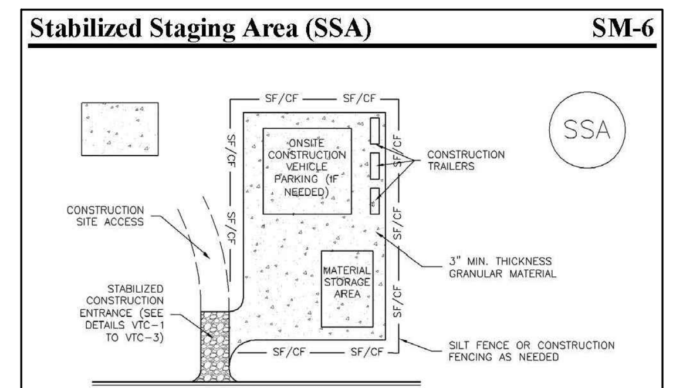
1 AND AFTER ANY PRECIPITATION OR SNOW MELT EVENT THAT CAUSES SURFACE EROSION.

2 ACCUMULATED SEDIMENT AND DEBRIS SHALL BE REMOVED WHEN THE SEDIMENT LEVEL REACHES ONE HALF THE HEIGHT OF THE BMP OR AT ANY TIME THAT SEDIMENT OR DEBRIS ADVERSELY IMPACTS THE FUNCTION OF THE BMP.

ESTIMATED TIME SCHEDULE:

INSTALL BMP'S	JUNE 2024
ROADWAY GRADING	JUNE 2024
SEEDING & MULCHING	MAY 2025
STABILIZATION	SEPTEMBER 2026

Stabilized Staging Area (SSA) — SM-6



SSA-1. STABILIZED STAGING AREA

STABILIZED STAGING AREA INSTALLATION NOTES

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

STABILIZED STAGING AREA MAINTENANCE NOTES

1. 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.
2. FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN BMPs IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.
3. WHERE BMPs HAVE FAILED, REPAIR OR REPLACEMENT SHOULD BE INITIATED UPON DISCOVERY OF THE FAILURE.
4. ROCK SHALL BE REAPPLIED OR REGRADED AS NECESSARY IF RUTTING OCCURS OR UNDERLYING SUBGRADE BECOMES EXPOSED.

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SM-6 — Stabilized Staging Area (SSA)

STABILIZED STAGING AREA MAINTENANCE NOTES

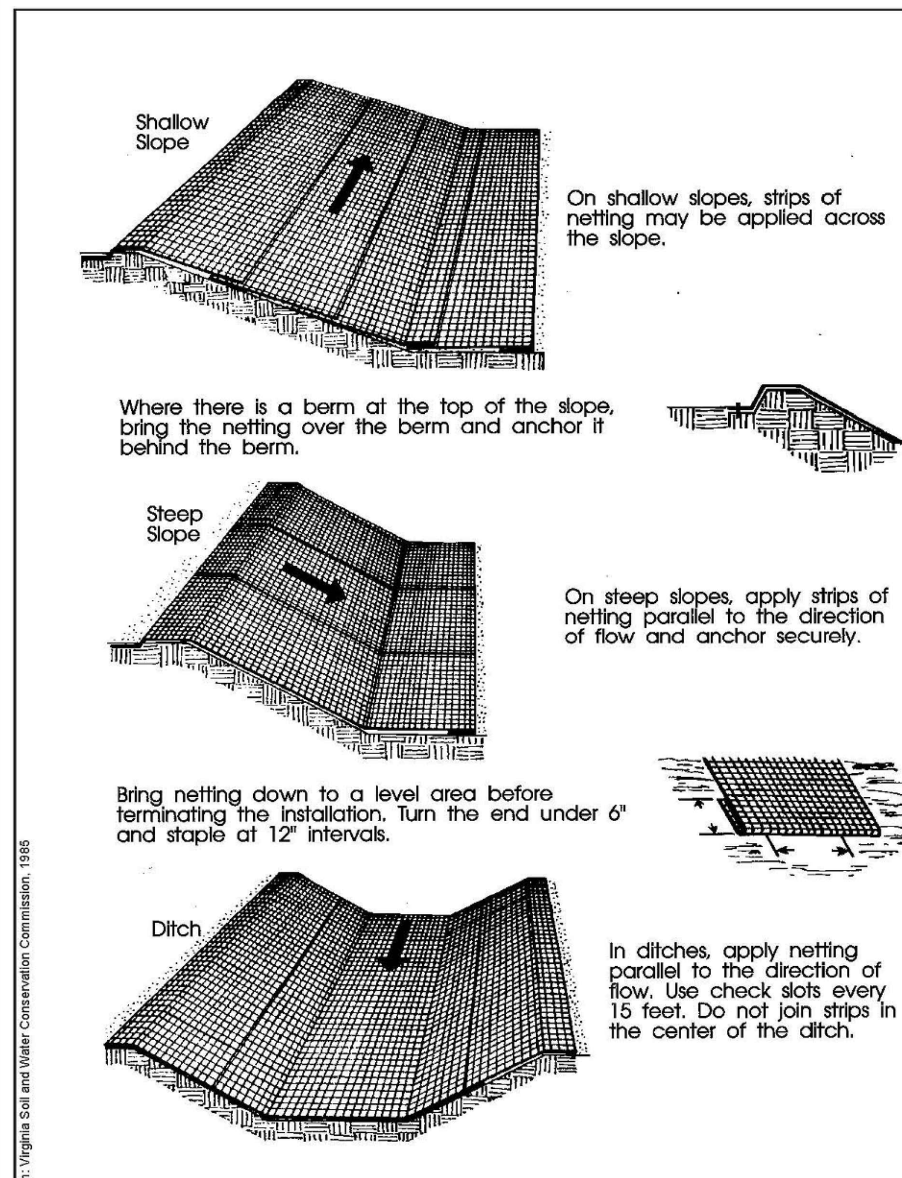
5. STABILIZED STAGING AREA SHALL BE ENLARGED IF NECESSARY TO CONTAIN PARKING, STORAGE, AND UNLOADING/LOADING OPERATIONS.
6. THE STABILIZED STAGING AREA SHALL BE REMOVED AT THE END OF CONSTRUCTION. THE GRANULAR MATERIAL SHALL BE REMOVED OR, IF APPROVED BY THE LOCAL JURISDICTION, USED ON SITE, AND THE AREA COVERED WITH TOPSOIL, SEEDED 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)

SSA-4 — Urban Drainage and Flood Control District, Urban Storm Drainage Criteria Manual Volume 3 — November 2010



City of Colorado Springs Storm Water Quality	Figure ECB-1 Erosion Control Blanket Application Examples

DEN/M/153722.CS.CB/FigECB-1/9-99

SILVERADO RANCH FILING NO. 2

EROSION CONTROL NOTES AND DETAILS

JPS ENGINEERING
19 E. Willamette Ave.
Colorado Springs, CO 80903
PH: 719-477-9429
FAX: 719-471-0766
www.jpsengr.com

CALL UTILITY NOTIFICATION CENTER OF COLORADO
1-800-922-1987
CALL 2-BUSINESS DAYS IN ADVANCE BEFORE YOU DIG, GRADE, OR EXCAVATE FOR THE MARKING OF UNDERGROUND MEMBER UTILITIES.

No.	REVISION	BY	DATE
1	EPC SUBMITTAL	JPS	01/31/24

HORZ. SCALE:	N/A	DRAWN:	MSP
VERT. SCALE:	N/A	DESIGNED:	JPS
SURVEYED:	N/A	CHECKED:	JPS
CREATED:	11/29/21	LAST MODIFIED:	01/31/24
PROJECT NO:	080603	MODIFIED BY:	PV

SHEET: C2.1

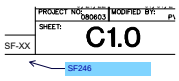
V1_Grading & Erosion Control Plan.pdf Markup Summary

Area Measurement (1)

Subject: Area Measurement
Page Label: [1] C1.1
Author: Glenn Reese - EPC Stormwater
Date: 3/29/2024 3:51:30 PM
Status:
Color:
Layer:
Space:

201,792 sf

Callout (9)



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Page Label: [1] C1.0
Author: HaoVo
Date: 3/15/2024 3:41:03 PM
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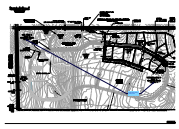
SF246



Subject: Callout
Page Label: [1] C1
Author: HaoVo
Date: 4/1/2024 2:35:55 PM
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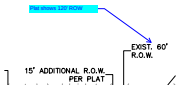
Please label existing, private ponds.



Subject: Callout
Page Label: [1] C1
Author: CDurham
Date: 4/1/2024 1:52:29 PM
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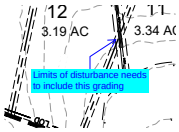
Plat shows 120' ROW



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Page Label: [1] C1
Author: CDurham
Date: 4/1/2024 1:59:31 PM
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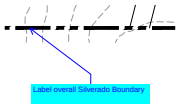
Limits of disturbance needs to include this grading



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Date: 4/1/2024 2:01:06 PM
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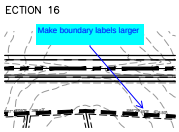
Label overall Silverado Boundary



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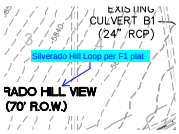
Make boundary labels larger



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Page Label: [1] C1
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Date: 4/1/2024 5:35:14 PM
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Color:
Layer:
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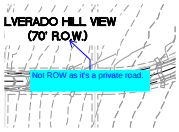
Silverado Hill Loop per F1 plat



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Page Label: [1] C1
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Date: 4/1/2024 5:36:03 PM
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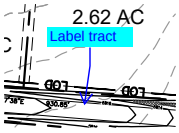
Not ROW as it's a private road.



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Date: 4/1/2024 5:38:09 PM
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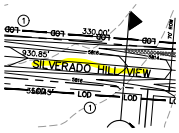
Label tract

Highlight (1)



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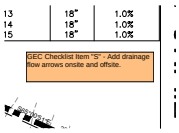
SW - Textbox (3)



Subject: SW - Textbox
Page Label: [1] C1.1
Author: Glenn Reese - EPC Stormwater
Date: 4/1/2024 10:17:26 AM
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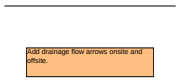
GEC Checklist Item "S" - Add drainage flow arrows onsite and offsite.



Subject: SW - Textbox
Page Label: [1] C1
Author: Glenn Reese - EPC Stormwater
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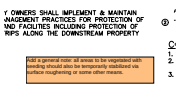
Add drainage flow arrows onsite and offsite.



Subject: SW - Textbox
Page Label: [1] C1.1
Author: Glenn Reese - EPC Stormwater
Date: 4/1/2024 9:18:40 AM
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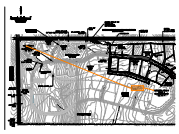
Add a general note: all areas to be vegetated with seeding should also be temporarily stabilized via surface roughening or some other means.

SW - Textbox with Arrow (16)



Subject: SW - Textbox with Arrow
Page Label: [1] C1
Author: Glenn Reese - EPC Stormwater
Date: 3/29/2024 4:12:37 PM
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Color:
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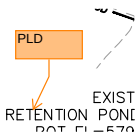
Space:

Retention Ponds have permanent pools. These are actually full-infiltration PLD facilities.



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Page Label: [1] C1.1
Author: Glenn Reese - EPC Stormwater
Date: 3/29/2024 3:50:24 PM
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PLD

Subject: SW - Textbox with Arrow
Page Label: [1] C1.1
Author: Glenn Reese - EPC Stormwater
Date: 4/1/2024 12:15:49 PM
Status:
Color:
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Space:

Forebay required when >1ac of imperviousness is tributary to a pond inflow point per MHFD Detail T-5.

This pond already has less capacity than required (at least per previous Retention Pond calcs). Without a forebay to easily remove sediment, the pond will slowly lose even more capacity over time. We can revisit this discussion once PLD calcs are provided in FDR.

Subject: SW - Textbox with Arrow
Page Label: [1] C1.1
Author: Glenn Reese - EPC Stormwater
Date: 4/1/2024 9:12:16 AM
Status:
Color:
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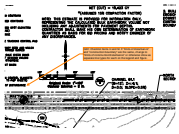
Space:

Straw Bales are only suitable for minor drainageways, not major. And if double rows to be used, must offset seams.

We have been seeing a lot of blow outs when using straw bales in ditches after a large rain event. Consider using straw wattles or rock checks in lieu of straw bales.



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Page Label: [1] C1.1
Author: Glenn Reese - EPC Stormwater
Date: 4/1/2024 9:09:39 AM
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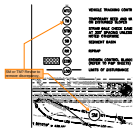
GEC Checklist Items H and M. If "limits of disturbance" and "construction boundary" are the same, change to "limits of construction/disturbance" or otherwise show as separate line types for each on the legend and figure.



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Page Label: [1] C1.1
Author: Glenn Reese - EPC Stormwater
Date: 4/1/2024 11:20:02 AM
Status:
Color:
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Space:

SM or TM? Revise to remove discrepancy.

Subject: SW - Textbox with Arrow
Page Label: [1] C1.1
Author: Glenn Reese - EPC Stormwater
Date: 4/1/2024 9:12:10 AM
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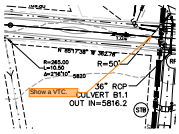
Add "CIP" to Legend above and provide a detail for it on the next sheet.



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Page Label: [1] C1.1
Author: Glenn Reese - EPC Stormwater
Date: 4/1/2024 9:13:24 AM
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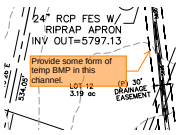
Show a VTC.



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Page Label: [1] C1.1
Author: Glenn Reese - EPC Stormwater
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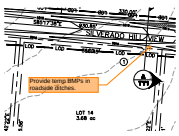
Provide some form of temp BMP in this channel.



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Page Label: [1] C1.1
Author: Glenn Reese - EPC Stormwater
Date: 4/1/2024 9:15:57 AM
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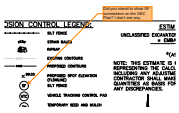
Provide temp BMPs in roadside ditches.



Subject: SW - Textbox with Arrow
Page Label: [1] C1.1
Author: Glenn Reese - EPC Stormwater
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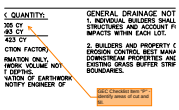
Did you intend to show SF somewhere on the GEC Plan? I don't see any.



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Page Label: [1] C1.1
Author: Glenn Reese - EPC Stormwater
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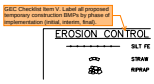
GEC Checklist Item "P" - identify areas of cut and fill.



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Page Label: [1] C1.1
Author: Glenn Reese - EPC Stormwater
Date: 4/1/2024 10:19:39 AM
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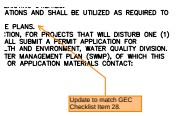
GEC Checklist Item V. Label all proposed temporary construction BMPs by phase of implementation (initial, interim, final).



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Page Label: [1] C2.1
Author: Glenn Reese - EPC Stormwater
Date: 4/1/2024 10:34:09 AM
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Update to match GEC Checklist Item 28.

Subject: SW - Textbox with Arrow
Page Label: [1] C1
Author: Glenn Reese - EPC Stormwater
Date: 4/1/2024 11:24:49 AM
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Is there an engineered spillway and channel here like there is for the other pond? If so, show it. If there isn't one, we need to discuss the necessity for one given how much flow is designed to bypass.

Subject: SW - Textbox with Arrow
Page Label: [1] C1.1
Author: Glenn Reese - EPC Stormwater
Date: 4/1/2024 11:21:54 AM
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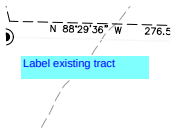
Per my comment on PDF pg 13 of the FDR, consider re-routing the offsite flows around the pond to prevent mixing of clean offsite flows with needs-to-be-treated roadway runoff.

Text Box (2)



Subject: Text Box
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Author: CDurham
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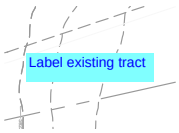
Label existing tract



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Label existing tract