



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. DURING CONSTRUCTION THE SWMP 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. TEMPORARY SEDIMENT AND EROSION 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 PRIOR TO IMPLEMENTATION.
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. AN AREA THAT IS GOING TO REMAIN IN AN INTERIM STATE FOR MORE THAN 60 DAYS SHALL ALSO BE STABILIZED.
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 DEFINED IN THE APPROVED PLANS. ANY PROPOSED CHANGES THAT EFFECT THE HYDROLOGY OR HYDRAULICS OF A PERMANENT STORMWATER MANAGEMENT STRUCTURES MUST BE APPROVED BY THE ECM ADMINISTRATOR PRIOR TO IMPLEMENTATION.
10. ANY EARTH DISTURBANCE 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 INFEASIBLE.

- COUNTY AGENCIES, THE MOST RESTRICTIVE LAWS, RULES, OR REGULATIONS SHALL APPLY.

- 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

SOIL ID NO.	SOIL TYPE	HYDROLOGIC CLASSIFICATION
52	MANZANST CLAY LOAM (0%-3% SLOPES)	C
56	NELSON-TASSEL FINE SANDY LOAM (3%-18% SLOPES)	B
86	STONEHAM SANDY LOAM (3%-8% SLOPES)	B

ANTICIPATED STARTING AND COMPLETION TIME PERIOD OF SITE GRADING:
NOVEMBER 2021 THRU DECEMBER 2022

EXPECTED DATE ON WHICH THE FINAL STABILIZATION WILL BE COMPLETED:
DECEMBER 2022

TOTAL AREA: 21.13 ACRES

NAME OF RECEIVING WATERS
FOUNTAIN CREEK (ULTIMATE)

THE EXISTING VEGETATION CONSISTS OF NATIVE GRASSES AND SCRUB OAK. BASED ON SITE VISITS AND A REVIEW OF AERIAL PHOTOGRAPHY, THE VEGETATIVE COVER AT ASPEN RIDGE FILING NO. 4 IS APPROXIMATELY 100%.

BENCHMARK
 COLORADO SPRINGS UTILITIES (FIMS) MONUMENT F206
 A BERNTSEN TOP SECURITY MONUMENT SYSTEM WITH A 3.5-INCH DIAMETER ALUMINUM CAP IN A
 ROAD BOX, LOCATED ON THE NORTHWEST CORNER OF FONTAINE BOULEVARD AND POWERS
 BOULEVARD,
 ELEVATION - 5897.89' U.S. SURVEY FT

BASIS OF BEARING
BEARINGS ARE BASED ON THE NORTH LINE OF THE NORTHWEST QUARTER OF SECTION 9, TOWNSHIP 15 SOUTH, RANGE 65 WEST OF THE 6TH P.M. SAID LINE BEARS S89°51'23"R FROM THE NORTHWEST CORNER OF SAID SECTION 9 (2 1/2" AULM. CAP PLS 17664) TO THE N 1/4 CORNER OF SAID SECTION 9 (3 3/4" AULM. CAP PLS 10377)

PREPARED BY:



SEAI

PRELIMINARY
THIS DRAWING HAS NOT
BEEN APPROVED BY
GOVERNING AGENCIES AND
IS SUBJECT TO CHANGE

FOR AND ON BEHALF OF
MATRIX DESIGN GROUP, INC
PROJECT No. 21.886.038

DESIGNED BY:	BAS	SCALE	DATE ISSUED:	AUGUST 2021	DRAWING No. GN01
DRAWN BY:	BAS	HORIZ.	N/A	SHEET	
CHECKED BY:	NMS	VERT.	N/A		

TRAILS AT ASPEN RIDGE

FILING NO.4
GRADING & EROSION CONTROL PLANS

GENERAL NOTES

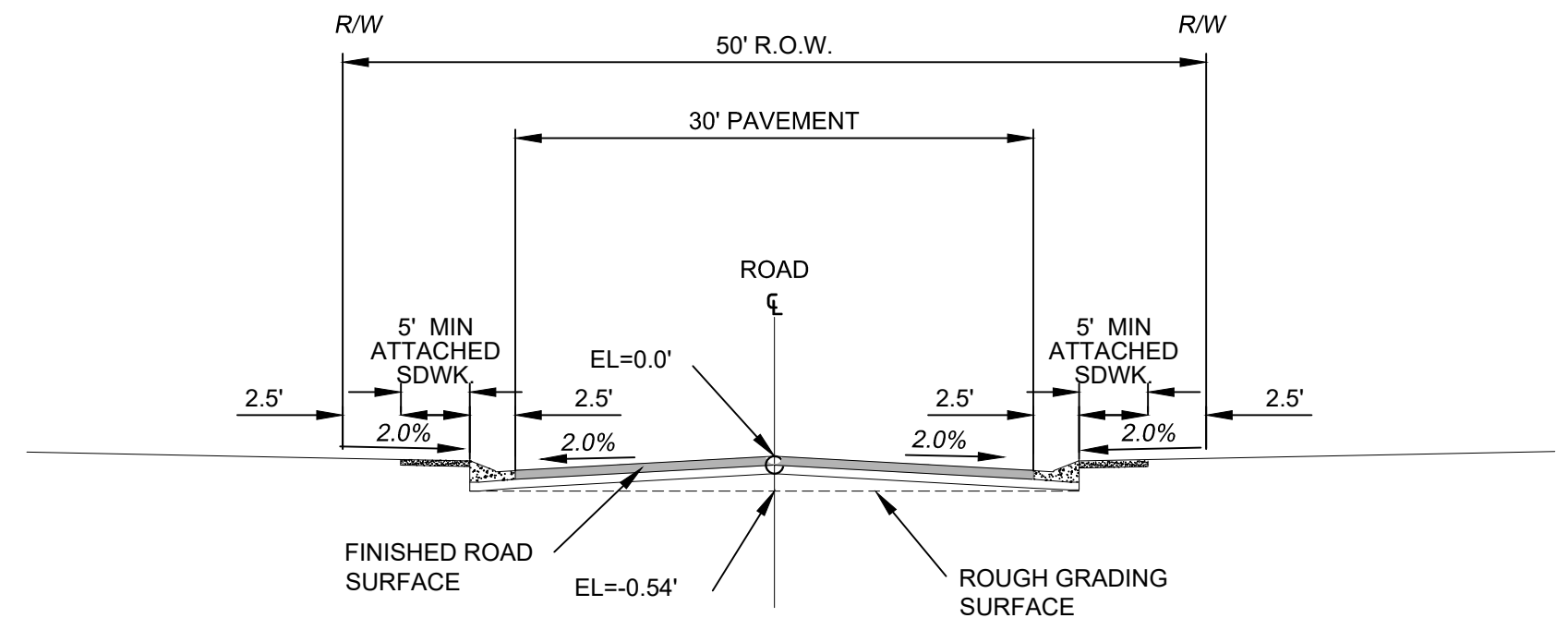


SYMBOLS

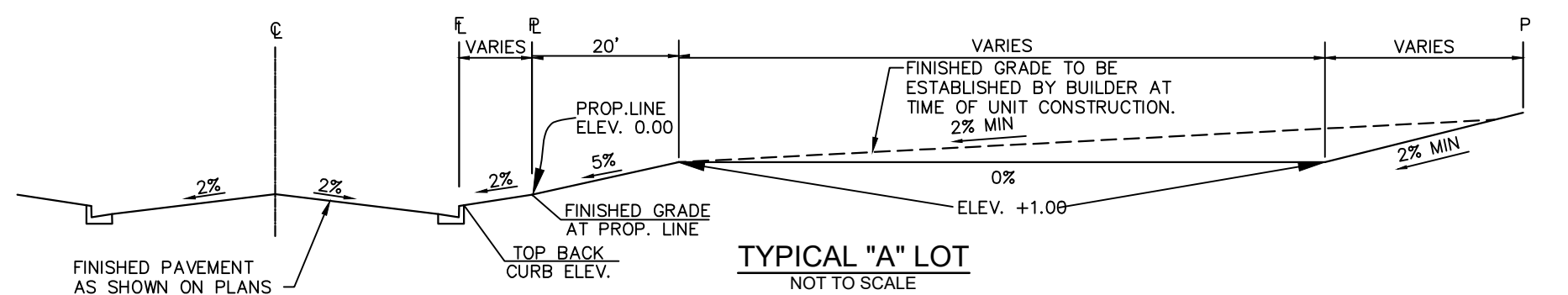
	PROPOSED WATER		PROPOSED CENTERLINE
	PROPOSED HYDRANT		EXISTING FENCE
	PROPOSED VALVE		PROPOSED FENCE
	PROPOSED THRUST BLOCK		RIGHT OF WAY
	EXISTING SANITARY		EASEMENT
	EXISTING SANITARY		PROPERTY BOUNDARY
	PROPOSED SANITARY		EXISTING CURB & GUTTER
	PROPOSED SANITARY MANHOLE		PROPOSED CURB & GUTTER
	PROPOSED WATER SERVICE WITH PLUG		EXISTING CONTOUR
	PROPOSED SANITARY SERVICE WITH PLUG		PROPOSED CONTOUR
	PROPOSED STORM		EXISTING UNDERGROUND UTILITY
	PROPOSED STORM MANHOLE		EXISTING WATER
	PROPOSED STORM INLET		EXISTING HYDRANT
	PROPOSED RETAINING WALL		EXISTING WATER VALVE

ABBREVIATIONS

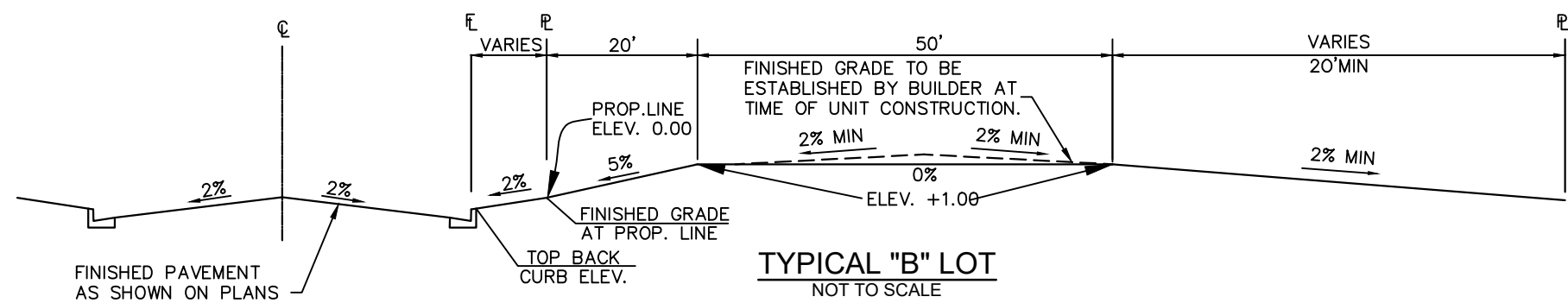
AD	ALGEBRAIC DIFFERENCE	NC	NORMAL CROWN
ASSY	ASSEMBLY	NIC	NOT IN CONTRACT
ASTM	AMERICAN SOCIETY OF TESTING AND MATERIALS	NO	NUMBER
APPROX	APPROXIMATE or APPROXIMATELY	NOM	NOMINAL
AVE	AVENUE	NTS	NOT TO SCALE
AVG	AVERAGE	OC	ON CENTER
		O/S	OFFSET
B/C	BACK OF CURB	P	PROPOSED
ℓ or B/L	BASELINE	PC	POINT OF CURVATURE
BLVD	BOULEVARD	PCC	POINT OF COMPOUND CURVE
BTM	BOTTOM	PCR	POINT OF CURB RETURN
		PE	PLAIN END
CI	CAST IRON	PIE	PUBLIC IMPROVEMENT EASEMENT
CEN	CENTER	PGL	PROFILE GRADE LINE
ℓ or CL	CENTERLINE	PL	PROPERTY LINE
CFS	CUBIC FEET PER SECOND	PRC	POINT OF REVERSE CURVE
CLR	CLEAR	PT	POINT OF TANGENCY
CMP	CORRUGATED METAL PIPE	PVC	POINT OF VERTICAL CURVE or POLYVINYL CHLORIDE
CONC	CONCRETE	PVI	POINT OF VERTICAL INTERSECTION
CONST	CONSTRUCTION	PVMT	PAVEMENT
CONT	CONTINUOUS	PVT	POINT OF VERTICAL TANGENT
DIA	DIAMETER	R OR RAD	RADIUS
DN	DOWN	RC	REVERSE CROWN
DWG	DRAWING	RCP	REINFORCED CONCRETE PIPE
		RED	REDUCER
EA	EACH	REF	REFERENCE
EGL	ENERGY GRADE LINE	REINF	REINFORCING
ELEV or EL	ELEVATION	REQ	REQUIRED
ELL	ELBOW	REV	REVISION
ESMT	EASEMENT	ROW	RIGHT-OF-WAY
EW	EACHWAY	RT	RIGHT
EX or EXIST	EXISTING		
FES	FLARED END SECTION	SCH	SCHEDULE
FIN	FINISHED	SD	STORM SEWER
ℓ or FL	FLOWLINE	SQ	SQUARE
FLG	FLANGE	ST	STREET
FT	FOOT / FEET	STA	STATION
FRP	FIBERGLASS REINFORCED PIPE	STD	STANDARD
		STL	STEEL
GAL	GALLON	SS OR SAN	SANITARY SEWER
GALV	GALVANIZED	SW OR SW	SIDEWALK
GAU	GAUGE (MATERIAL)		
GV	GATE VALVE	TAN	TANGENT
GW	GROUNDWATER	TB	THRUST BLOCK
		TBC	TOP BACK OF CURB
HBP	HOT BITUMINOUS PAVEMENT	TFC	TOP FACE OF CURB
HERCP	HORIZONTAL ELLIPTICAL REINFORCED CONCRETE PIPE	THD	THREADED
HGL	HYDRAULIC GRADE LINE	THK	THICKNESS
HP	HIGH POINT	TYP	TYPICAL
HORIZ	HORIZONTAL		
HCL	HORIZONTAL CONTROL LINE	UG	UNDERGROUND
HR	HOUR	UTIL	UTILITY
		VC	VERTICAL CURVE
INV	INVERT	VERT	VERTICAL
K	VERTICAL CURVE FACTOR	W	WIDTH
		W/	WITH
LBS	POUNDS		
LF	LINEAR FEET		
LN	LANE		
LP	LOW POINT		
LS	LANDSCAPING		
LT	LEFT		
MAX	MAXIMUM		
MFGR	MANUFACTURER		
MH	MANHOLE		
MID	MIDDLE or MIDPOINT		
MIN	MINIMUM		
MJ	MECHANICAL JOINT		
MSL	MEAN SEA LEVEL		



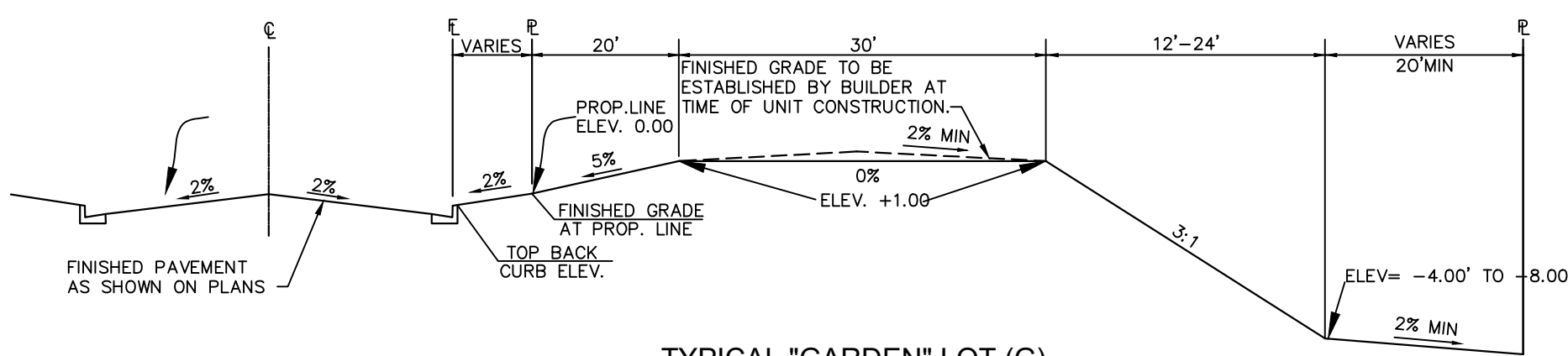
TYPICAL SECTION
(URBAN LOCAL ROADWAY)
SCALE : N.T.S.



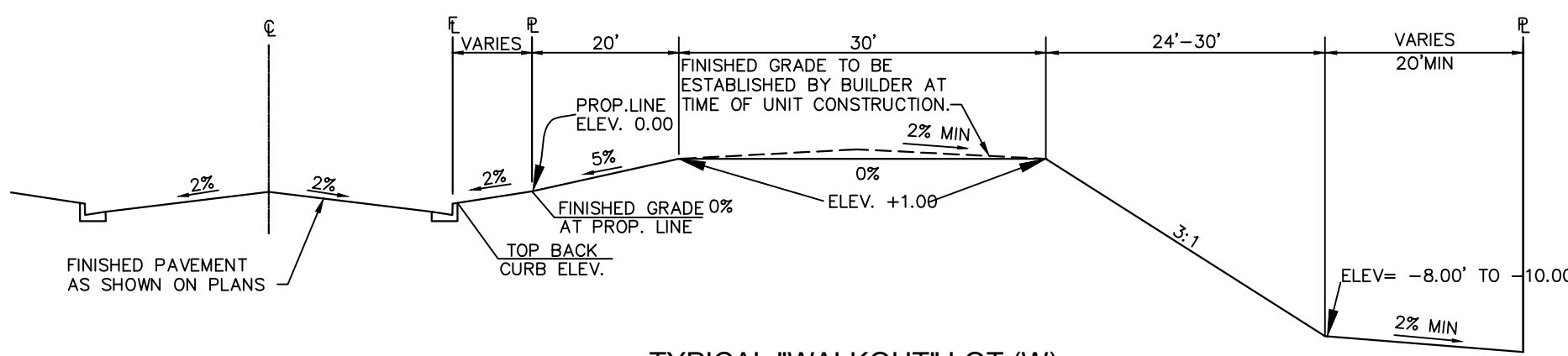
TYPICAL "A" LOT
NOT TO SCALE



TYPICAL "B" LOT
NOT TO SCALE



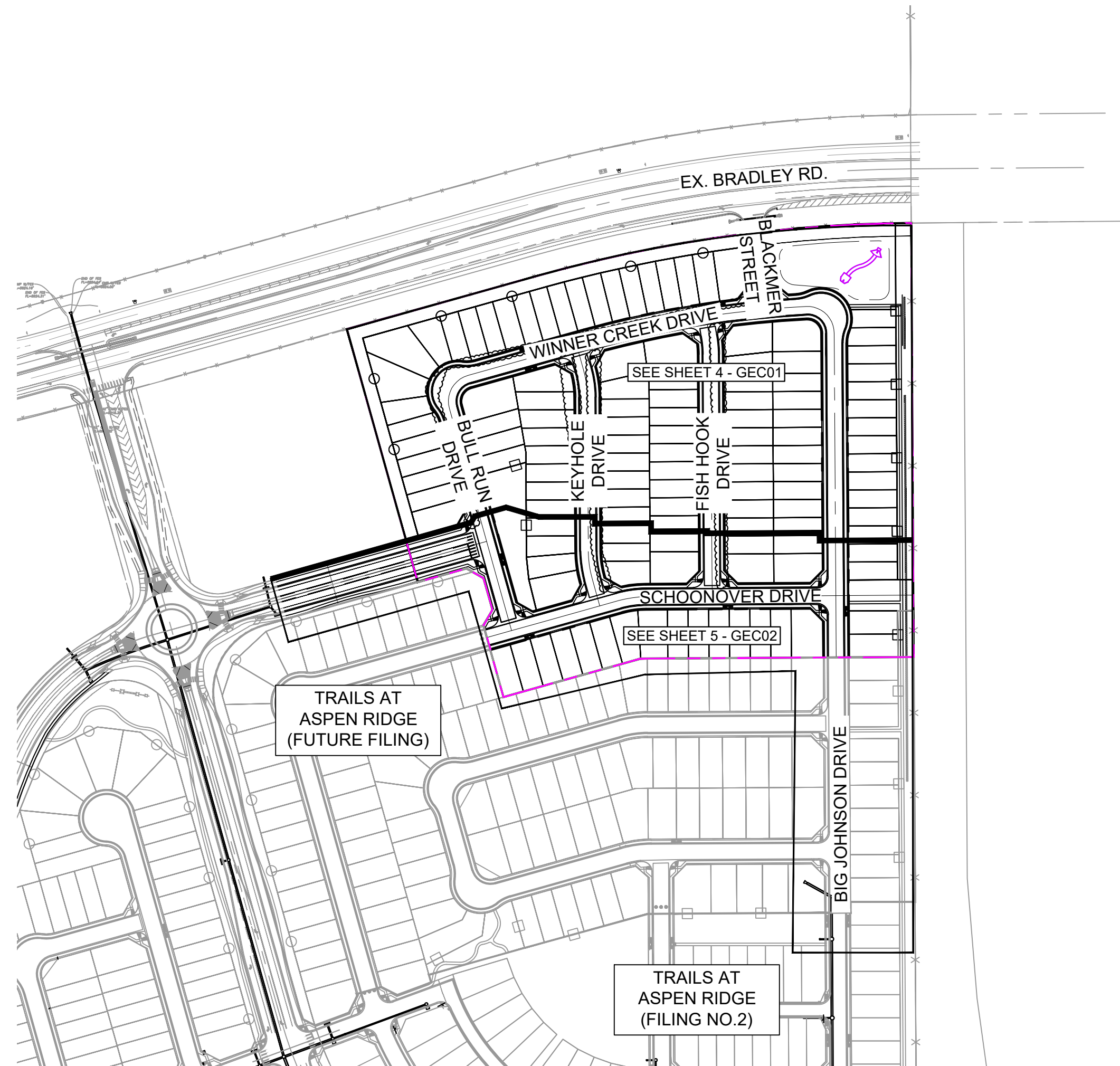
TYPICAL "GARDEN" LOT (G)
NOT TO SCALE



TYPICAL "WALKOUT" LOT (W)
NOT TO SCALE

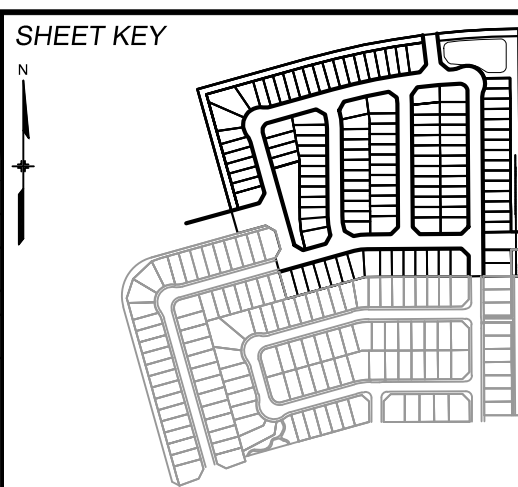
LOT TYPES

- A "A" LOT
- B "B" LOT
- G "GARDEN LEVEL" LOT
- W "WALKOUT" LOT
- T "TRANSITION" LOT



PCD FILING NO.: SF-21-024

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		REVISIONS			
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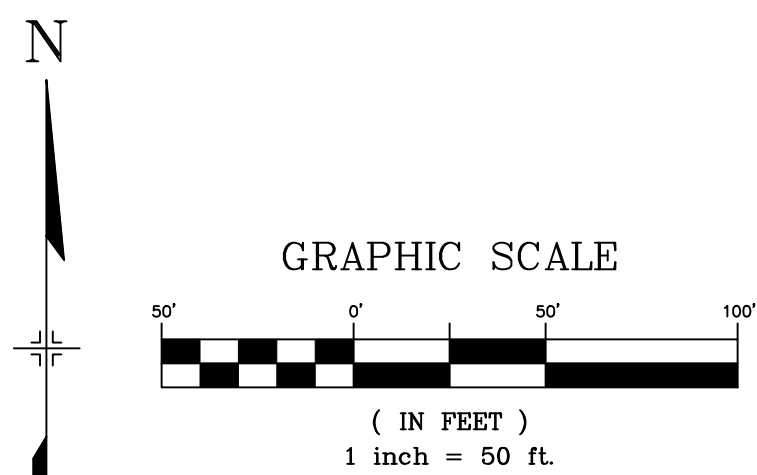


BENCHMARK
COLORADO SPRINGS UTILITIES (FIMS) MONUMENT F206
A BERNTSEN TOP SECURITY MONUMENT SYSTEM WITH A 3.5-INCH DIAMETER ALUMINUM CAP IN A ROAD BOX, LOCATED ON THE NORTHWEST CORNER OF FONTAINE BOULEVARD AND POWERS BOULEVARD.
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SEAL	TRAILS AT ASPEN RIDGE			
<div>PRELIMINARY THIS DRAWING HAS NOT BEEN APPROVED BY GOVERNING AGENCIES AND IS SUBJECT TO CHANGE</div>	FILING NO.4 GRADING & EROSION CONTROL PLANS			
	LEGEND & ABBREVIATION NOTES			
FOR AND ON BEHALF OF MATRIX DESIGN GROUP, INC. PROJECT No. 21.886.038	DESIGNED BY: BAS	SCALE	DATE ISSUED:	AUGUST 2021
CHECKED BY: NMS	HORIZ	N/A	SHEET	3 OF 8
	VERT	N/A		GEN01

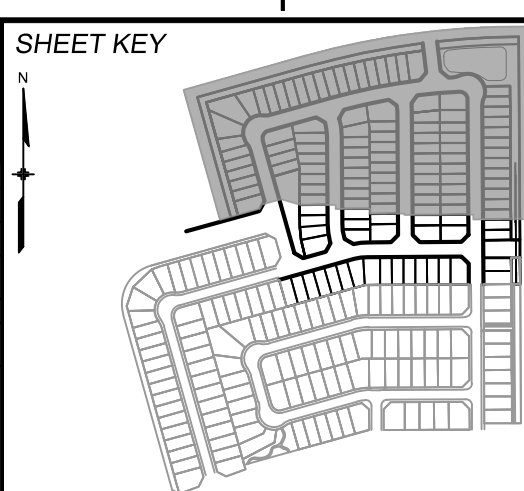
Know what's below.
Call before you dig.

- (RCS) ROUGH CUT STREET
- (HP) (LP) HIGH POINT/LOW POINT
- (ECB) EROSION CONTROL BLANKET
- (TM) TEMPORARY MULCHING AND SEEDING
- (SCL) SEDIMENT CONTROL LOG
- (VTC) VEHICLE TRACKING CONTROL
- (SB) SEDIMENT BASIN
- (SP) (CWA) CONTRACTOR TO COORDINATE LOCATIONS OF CONCRETE WASHOUTS, STOCKPILES, AND STAGING AREAS WITH ADJACENT FILINGS
- (IP) INLET PROTECTION
- (OP) OUTLET PROTECTION
- (SF) SILT FENCE
- PROPOSED CONTOURS
- EXISTING CONTOURS
- SLOPE DIRECTION
- DRAINAGE FLOW ARROW
- DRAINAGE SWALE
- CUT/FILL LINE
- PROPERTY BOUNDARY
- LIMITS TO CONSTRUCTION/DISTURBANCE
- (A) LOT DRAINS TO STREET
- (B) LOT DRAINS TO STREET/REAR OF LOT
- (T) LOT DRAINAGE VARIES
- (G) GARDEN LEVEL BASEMENT
- (W) WALK OUT BASEMENT

BMP SEQUENCING	
INITIAL	SILT FENCE, CONSTRUCTION FENCE, VEHICLE TRACKING, TEMP SEDIMENT BASINS, ROUGH CUT STREET CONTROL
INTERIM	FLOW LINE SEDIMENT CONTROL LOGS, SEDIMENT CONTROL LOGS, CHECK DAMS, INLET PROTECTION, STOCKPILES, STAGING
FINAL	EROSION CONTROL BLANKETS, SEEDING & MULCHING

PCD FILING NO.: SF-21-024

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BENCHMARK
COLORADO SPRINGS UTILITIES (FIMS) MONUMENT F206
A BERNTSEN TOP SECURITY MONUMENT SYSTEM WITH A 3.5-INCH DIAMETER ALUMINUM CAP IN A ROAD BOX, LOCATED ON THE NORTHWEST CORNER OF FONTAINE BOULEVARD AND POWERS BOULEVARD.
ELEVATION - 5897.89' U.S. SURVEY FT

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PREPARED BY:



SEAL

PRELIMINARY
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FOR AND ON BEHALF OF
MATRIX DESIGN GROUP, INC.
PROJECT No. 21.886.038

DESIGNED BY: BAS SCALE DATE ISSUED: AUGUST 2021 DRAWING No. GEC01
CHECKED BY: NMS HORIZ. 1" = 50' VERT. N/A SHEET 4 OF 8

TRAILS AT ASPEN RIDGE

FILING NO.4
GRADING & EROSION CONTROL PLANS

GRADING & EROSION CONTROL PLAN

Know what's below.
Call before you dig.

GRAPHIC SCALE

(IN FEET)
1 inch = 50 ft.

- LEGEND**
- RCS** ROUGH CUT STREET
 - HP** **LP** HIGH POINT/LOW POINT
 - ECB** EROSION CONTROL BLANKET
 - TM** TEMPORARY MULCHING AND SEEDING
 - SCL** SEDIMENT CONTROL LOG
 - VTC** VEHICLE TRACKING CONTROL
 - ST** SEDIMENT TRAP
 - SB** SEDIMENT BASIN
 - CWA** CONTRACTOR TO COORDINATE LOCATIONS OF CONCRETE WASHOUTS, STOCKPILES, AND STAGING AREAS WITH ADJACENT FILINGS
 - IP** INLET PROTECTION
 - OP** OUTLET PROTECTION
 - SF** SILT FENCE
 - PROPOSED CONTOURS**
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BMP SEQUENCING	
INITIAL	SILT FENCE, CONSTRUCTION FENCE, VEHICLE TRACKING, TEMP SEDIMENT BASINS, ROUGH CUT STREET CONTROL
INTERIM	FLOW LINE SEDIMENT CONTROL LOGS, SEDIMENT CONTROL LOGS, CHECK DAMS, INLET PROTECTION, STOCKPILES, STAGING
FINAL	EROSION CONTROL BLANKETS, SEEDING & MULCHING

PCD FILING NO.: SF-21-024

TRAILS AT ASPEN RIDGE

FILING NO.4
GRADING & EROSION CONTROL PLANS

GRADING & EROSION CONTROL PLAN

DESIGNED BY:	BAS	SCALE	DATE ISSUED:	AUGUST 2021	DRAWING No.
DRAWN BY:	BAS	HORIZ. 1" = 50'			GEC02
CHECKED BY:	NMS	VERT. N/A	SHEET	5 OF 8	

SEAL

PRELIMINARY

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MATRIX DESIGN GROUP, INC.
PROJECT No. 21.886.038

PREPARED BY:



BENCHMARK

COLORADO SPRINGS UTILITIES (FIMS) MONUMENT F206
A BERNTSEN TOP SECURITY MONUMENT SYSTEM WITH A 3.5-INCH DIAMETER ALUMINUM CAP IN A
ROAD BOX, LOCATED ON THE NORTHWEST CORNER OF FONTAINE BOULEVARD AND POWERS
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SECTION 9 (3 1/4' AULM. CAP PLS 10377)

SHEET KEY

PROPOSED REDI-ROCK
RETAINING WALL

12'

MAX HEIGHT = 9'

PROPOSED SWALE
3:1 SIDE SLOPES
MIN DEPTH = 1.5'

PROPOSED SURFACE

PROPOSED SIDEWALK

CROSS SECTION B-B
NTS

NOTE:

1. RETAINING WALLS GREATER THAN 4' IN HEIGHT WILL REQUIRE PIKES PEAK REGIONAL BUILDING DEPARTMENT PERMIT AND ADDITIONAL STRUCTURAL DESIGN.
2. MAX RETAINING WALL HEIGHT = 9'

REFERENCE
DRAWINGS

No.	DATE	DESCRIPTION	BY
REVISIONS			

COMPUTER FILE MANAGEMENT

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Know what's below.
Call before you dig.

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 RESEEDING.

City of Colorado Springs
Stormwater Quality

Figure MU-1
Mulching
Construction Detail and Maintenance
Requirements

Table 14-10. Recommended Seed Mix for Transition Areas¹

Common Name (Variety)	Scientific Name	Growth Season	Growth Form	Seeds/Lb	Lbs PLS/Acre Drilled	Lbs Broadcast or Hydroseeded
Sheep fescue (Duras)	<i>Festuca ovina</i>	Cool	Bunch	680,000	1.3	2.6
Western wheatgrass (Arriba)	<i>Pascopyrum smithii</i>	Cool	Sod	110,000	7.9	15.8
Alkali sacaton	<i>Spolobolus airoides</i>	Warm	Bunch	1,758,000	0.5	1.0
Slender wheatgrass	<i>Elymus trachycalus</i>	Cool	Bunch	159,000	5.5	11.0
Canadian bluegrass (Ruebens) ¹	<i>Poa compressa</i>	Cool	Sod	2,500,000	0.3	0.6
Switchgrass (Pathfinder)	<i>Panicum virgatum</i>	Warm	Sod/Bunch	389,000	1.3	2.6
Annual rye	<i>Lolium multiflorum</i>	Cool	Cover crop	227,000	10.0	20.0
				TOTAL	26.8	53.6
Wildflowers						
Blanket flower	<i>Faillardia aristata</i>	---	---	132,000	0.25	0.50
Prairie coneflower	<i>Ratibida columnaris</i>	---	---	1,230,000	0.20	0.40
Purple prairie clover	<i>Petalostemum purpurea</i>	---	---	210,000	0.20	0.40
Gayfeather	<i>Liatris punctata</i>	---	---	138,000	0.06	0.12
Flax	<i>Linum lewisii</i>	---	---	293,000	0.20	0.40
Penstemon	<i>Penstemon strictus</i>	---	---	592,000	0.20	0.40
Yarrow	<i>Achillea millefolium</i>	---	---	2,770,000	0.03	0.06
				TOTAL	1.14	2.28

¹For side slopes or between wet and dry areas.

²Substitute 1.7 lbs PLS/acre of inland saltgrass (*Distichlis spicata*) in salty soils.

SEED MIX NOTES:

A MIXTURE DEVELOPED FOR ELEVATIONS 3,000 TO 8,000 FEET TO PROVIDE NATURAL COVER UNDER DRYLAND CONDITIONS. CONTAINS BOTH COOL AND WARM SEASON GRASSES ADAPTED TO THE WESTERN GREAT PLAINS AND SOUTHWESTERN REGION. HAS EXCELLENT COLD AND DROUGHT TOLERANCE. GOOD FOR SOIL STABILIZATION ON POOR SOILS.

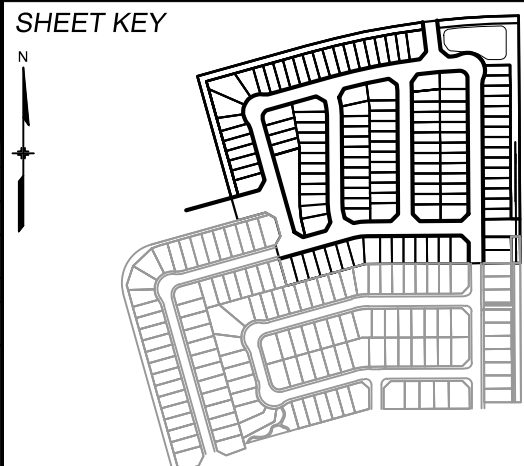
CHARACTERISTICS:
GROWS 30-60 INCHES WITH AVERAGE RAINFALL.

SEEDING RATE:
BROADCAST: 20-25 LBS/ACRE
DRILLED: 15-20 LBS/ACRE
OVERSEEDING
BROADCAST: 10-15 LBS/ACRE
DRILLED: 5-10 LBS/ACRE

MIX CONTAINS:

KIND AND VARIETY:	PURE	GERM	ORIGIN
ANNUAL RYEGRASS	15.72	97	OR
SLENDER WHEATGRASS	14.75	98	WA
CRESTED WHEATGRASS	10.91	96	SD
MOUNTAIN BROME	9.91	97	WY
CANADA BLUEGRASS	8.60	87	WA
HARD FESCUE	9.78	86	MT
SIDEOATS GRAMA	5.78	80	TX
SWITCHGRASS	4.99	93	MN
BIG BLUESTEM	4.55	95	KS
BLUE GRAMA	2.37	95	MN
SAND DROPSEED	0.99	95	CO

SHEET KEY



BENCHMARK

COLORADO SPRINGS UTILITIES (FIMS) MONUMENT F206
A BERTSEN TOP SECURITY MONUMENT SYSTEM WITH A 3.5-INCH DIAMETER ALUMINUM CAP IN A ROAD BOX, LOCATED ON THE NORTHWEST CORNER OF FONTAINE BOULEVARD AND POWERS BOULEVARD.
ELEVATION - 5897.89' U.S. SURVEY FT

BASIS OF BEARING

BEARINGS ARE BASED ON THE NORTH LINE OF THE NORTHWEST QUARTER OF SECTION 9, TOWNSHIP 15 SOUTH, RANGE 65 WEST OF THE 6TH P.M. SAID LINE BEARS S89°51'23"E FROM THE NORTHWEST CORNER OF SAID SECTION 9 (2 1/2' AULM. CAP PLS 17664) TO THE N 1/4 CORNER OF SAID SECTION 9 (3 1/2' AULM. CAP PLS 10377)

PREPARED BY:



SEAL

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BEEN APPROVED BY
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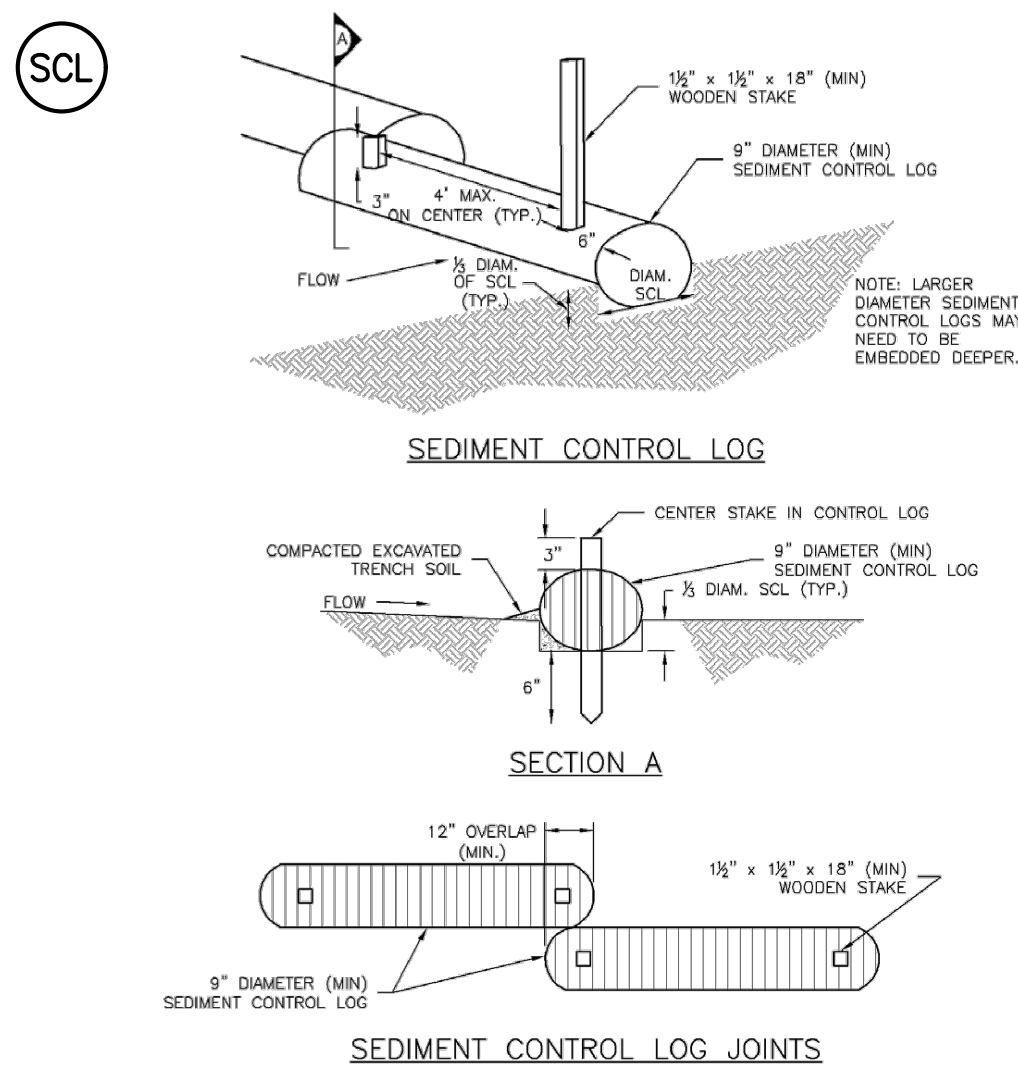
FOR AND ON BEHALF OF
MATRIX DESIGN GROUP, INC.
PROJECT No. 21.886.038

DESIGNED BY: BAS SCALE: DATE ISSUED: AUGUST 2021 DRAWING No. ECN01
DRAWN BY: BAS HORIZ. N/A
CHECKED BY: NMS VERT. N/A SHEET 6 OF 8

TRAILS AT ASPEN RIDGE

FILING NO.4
GRADING & EROSION CONTROL PLANS

EROSION CONTROL NOTES



INSTALLATION NOTES:

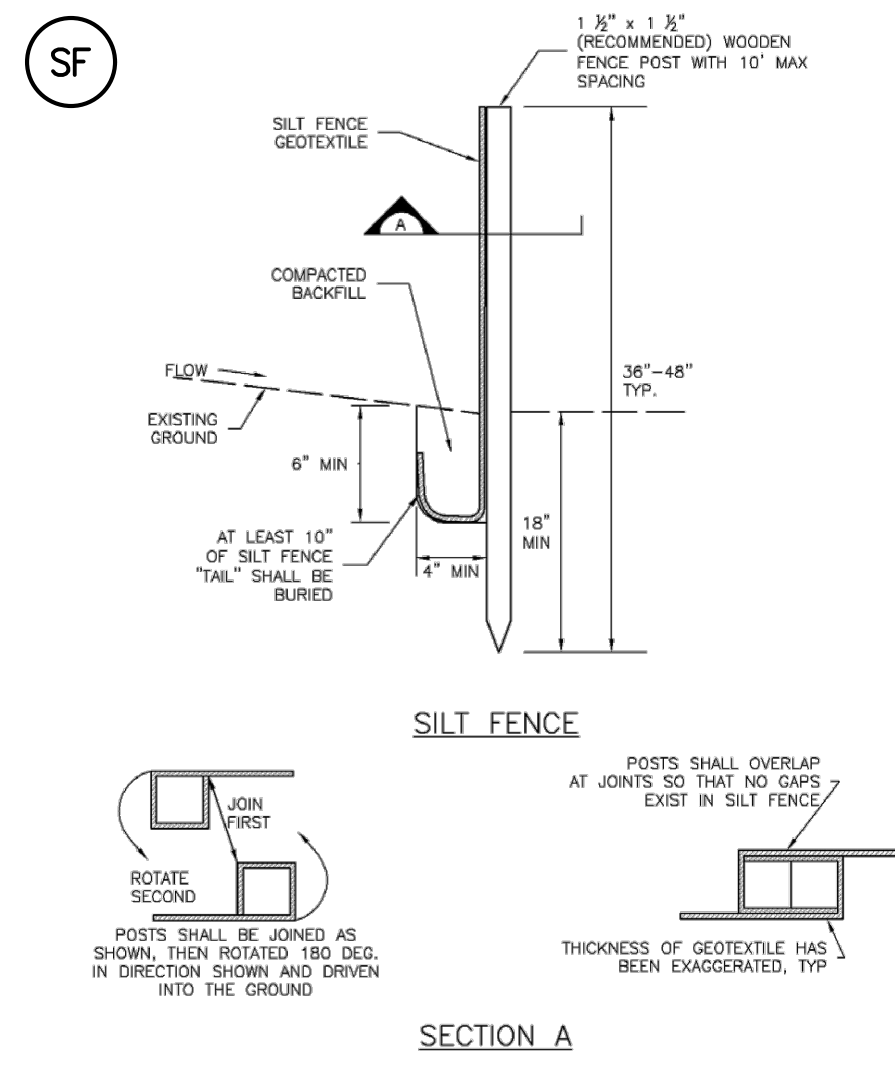
- SEE PLAN VIEW FOR LOCATION AND LENGTH OF SEDIMENT CONTROL LOGS.
- SEDIMENT CONTROL LOGS THAT ACT AS PERIMETER CONTROL SHALL BE INSTALLED PRIOR TO ANY UPGRADIENT LAND-DISTURBING ACTIVITIES.
- SEDIMENT CONTROL LOGS SHALL CONSIST OF STRAW, COMPOST, EXCELSIOR OR COCONUT FIBER, AND SHALL BE FREE OF ANY NOXIOUS WEED SEEDS OR DEFECTS INCLUDING RIPS, HOLES AND OBVIOUS WEAR.
- SEDIMENT CONTROL LOGS MAY BE USED AS SMALL CHECK DAMS IN DITCHES AND SWALES. HOWEVER, THEY SHOULD NOT BE USED IN PERENNIAL STREAMS OR HIGH VELOCITY DRAINAGE WAYS.
- IT IS RECOMMENDED THAT SEDIMENT CONTROL LOGS BE TRENCHED INTO THE GROUND TO A DEPTH OF APPROXIMATELY 1/3 THE DIAMETER OF THE LOG. IF TRENCHING TO THIS DEPTH IS NOT FEASIBLE AND/OR DESIRABLE (SHORT TERM INSTALLATION WITH DESIRE NOT TO DAMAGE LANDSCAPE) A LESSER TRENCHING DEPTH MAY BE ACCEPTABLE WITH MORE ROBUST STAKING.
- THE UPHILL SIDE OF THE SEDIMENT CONTROL LOG SHALL BE BACKFILLED WITH SOIL THAT IS FREE OF ROCKS AND DEBRIS. THE SOIL SHALL BE TIGHTLY COMPACTED INTO THE SHAPE OF A RIGHT TRIANGLE USING A SHOVEL OR WEIGHTED LAWN ROLLER.
- FOLLOW MANUFACTURERS' GUIDANCE FOR STAKING. IF MANUFACTURERS' INSTRUCTIONS DO NOT SPECIFY SPACING, STAKES SHALL BE PLACED ON 4' CENTERS AND EMBEDDED A MINIMUM OF 6" INTO THE GROUND. 3" OF THE STAKE SHALL PROTRUDE FROM THE TOP OF THE LOG. STAKES THAT ARE BROKEN PRIOR TO INSTALLATION SHALL BE REPLACED.

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 SEDIMENT CONTROL LOG SHALL BE REMOVED AS NEEDED TO MAINTAIN FUNCTIONALITY OF THE BMP. TYPICALLY WHEN DEPTH OF ACCUMULATED SEDIMENTS IS APPROXIMATELY 1/2 OF THE HEIGHT OF THE SEDIMENT CONTROL LOG.
- SEDIMENT CONTROL LOG SHALL BE REMOVED AT THE END OF CONSTRUCTION. IF DISTURBED AREAS EXIST AFTER REMOVAL, THEY SHALL BE COVERED WITH TOP SOIL, SEEDED AND MULCHED OR OTHERWISE STABILIZED IN A MANNER APPROVED BY THE LOCAL JURISDICTION.

Figure SC-2
Sediment Control Log

Urban Drainage and Flood Control District
Urban Storm Drainage Criteria Manual Volume 3



SECTION A

SILT FENCE NOTES

SILT FENCE INSTALLATION NOTES:

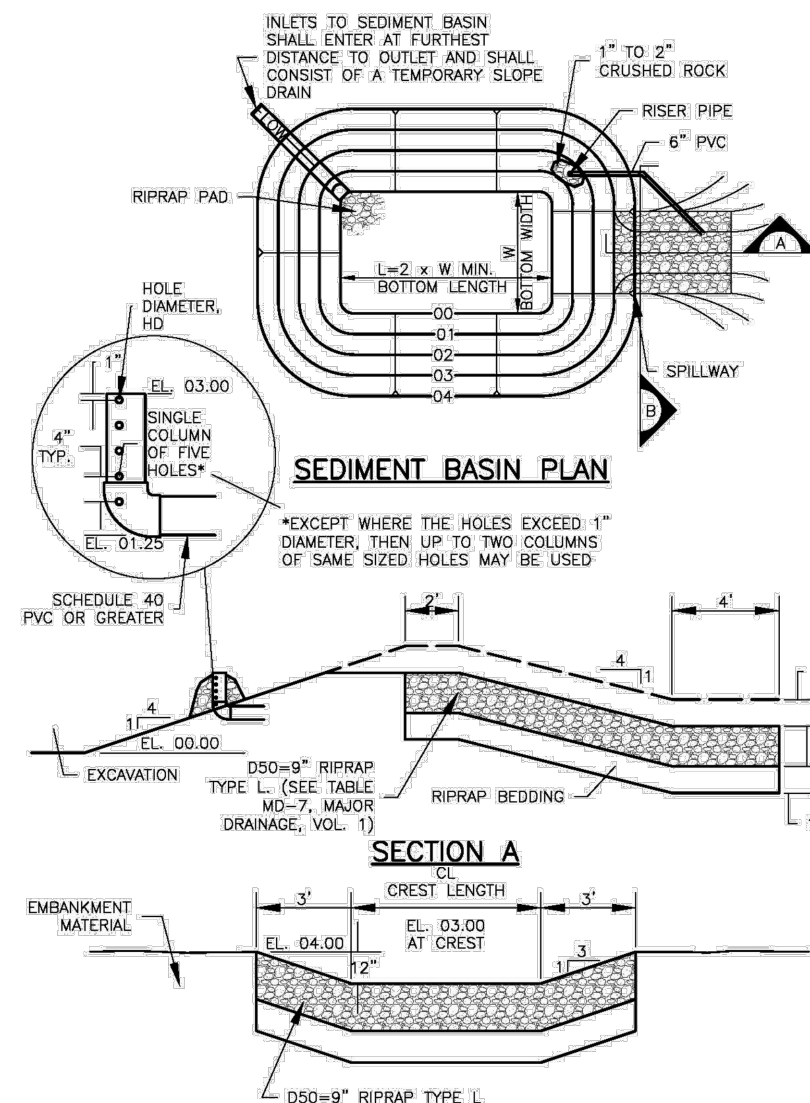
- SILT FENCE MUST BE PLACED AWAY FROM THE TOE OF THE SLOPE TO ALLOW FOR WATER PONDING. SILT FENCE AT TOP OF A SLOPE SHOULD BE INSTALLED IN A FLAT LOCATION AT LEAST SEVERAL FEET (2-5 FT) FROM THE TOE OF THE SLOPE TO ALLOW ROOM FOR PONDING AND DEPOSITION.
- A UNIFORM 6" x 4" ANCHOR TRENCH SHALL BE EXCAVATED USING TRENCHER OR SILT FENCE INSTALLATION DEVICE. NO ROAD GRADERS, BACKHOES, OR SIMILAR EQUIPMENT SHALL BE USED.
- COMPACT ANCHOR TRENCH BY HAND OR WITH A "JUMPING JACK" OR BY WHEEL ROLLING. COMPACTION SHALL BE SUCH THAT SILT FENCE RESISTS BEING PULLED OUT OF ANCHOR TRENCH BY HAND.
- SILT FENCE SHALL BE PULLED TIGHT AS IT IS ANCHORED TO THE STAKES. THERE SHOULD BE NO NOTICEABLE SAG BETWEEN STAKES AFTER IT HAS BEEN ANCHORED TO THE STAKES.
- SILT FENCE FABRIC SHALL BE ANCHORED TO THE STAKES USING 1" HEAVY DUTY STAPLES OR NAILS WITH 1" HEADS. STAPLES AND NAILS SHOULD BE PLACED 3" ALONG THE FABRIC DOWN THE STAKE.
- AT THE END OF A RUN OF SILT FENCE ALONG A CONTOUR, THE SILT FENCE SHOULD BE TURNED PERPENDICULAR TO THE CONTOUR TO CREATE A "J-HOOK". THE "J-HOOK" EXTENDING PERPENDICULAR TO THE CONTOUR SHOULD BE OF SUFFICIENT LENGTH TO KEEP RUNOFF FROM FLOWING AROUND THE END OF THE SILT FENCE (TYPICALLY 10' - 20').
- SILT FENCE SHALL BE IN STALLED PRIOR TO ANY LAND DISTURBING ACTIVITIES.

Figure SC-1
Silt Fence

Urban Drainage and Flood Control District
Urban Storm Drainage Criteria Manual Volume 3

SILT FENCE 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 SILT FENCE SHALL BE REMOVED AS NEEDED TO MAINTAIN FUNCTIONALITY OF THE BMP. TYPICALLY WHEN DEPTH OF ACCUMULATED SEDIMENTS IS APPROXIMATELY 6".
- REPAIR OR REPLACE SILT FENCE WHEN THERE ARE SIGN OF WEAR, SUCH AS SAGGING, TEARING, OR COLLAPSE.
- SILT FENCE IS TO REMAIN IN PLACE UNTIL THE UPSTREAM DISTURBED AREA IS STABILIZED AND APPROVED BY THE LOCAL JURISDICTION, OR IS REPLACED BY AN EQUIVALENT PERIMETER SEDIMENT CONTROL BMP.
- WHEN SILT FENCE IS REMOVED, ALL DISTURBED AREAS SHALL BE COVERED WITH TOP SOIL, SEEDED AND MULCHED OR OTHERWISE STABILIZED AS APPROVED BY LOCAL JURISDICTION.



Upstream Drainage area (rounded to nearest acre), (ac)	Basin Bottom Width (w), (ft)	Spillway Crest Length (CL), (ft)	Hole Diameter (HD), (in)
2	21	3	1 1/2
3	28	5	2
4	33 1/2	6	2 1/2
5	38 1/2	8	3
6	43	9	3 1/2
7	47 1/2	11	4
8	51	12	4 1/2
9	55	13	5
10	58 1/2	15	5 1/2
11	61	16	6
12	64	18	6 1/2
13	67 1/2	19	7
14	70 1/2	21	7 1/2
15	73 1/2	22	8

SEDIMENT BASIN

SEDIMENT BASIN INSTALLATION NOTES:

- SEE PLAN VIEW FOR:
-LOCATION OF SEDIMENT BASIN.
-TYPE OF BASIN (STANDARD BASIN OR NONSTANDARD BASIN).
-FOR STANDARD BASIN, BOTTOM WIDTH W, CREST LENGTH CL, AND HOLE DIAMETER, HD.
-FOR NONSTANDARD BASIN, SEE CONSTRUCTION DRAWINGS FOR DESIGN OF BASIN INCLUDING RISER HEIGHT H, NUMBER OF COLUMNS N, HOLE DIAMETER HD AND PIPE DIAMETER D.
- FOR STANDARD BASIN, BOTTOM DIMENSION MAY BE MODIFIED AS LONG AS BOTTOM AREA IS NOT REDUCED.
- SEDIMENT BASINS INSTALLED PRIOR TO ANY OTHER LAND-DISTURBING ACTIVITY THAT RELIES ON BASINS AS A STORMWATER CONTROL.
- EMBANKMENT MATERIAL SHALL CONSIST OF SOIL FREE OF DEBRIS, ORGANIC MATERIAL AND ROCKS OR CONCRETE. GREATER THAN 3 INCHES AND SHALL HAVE A MINIMUM OF 15 PERCENT BY WEIGHT PASSING THE NO. 200 SIEVE.
- EMBANKMENT MATERIAL SHALL BE COMPACTED TO AT LEAST 95 PERCENT OF MAXIMUM DENSITY IN ACCORDANCE WITH ASTM D698.
- PIPE SCH 40 OR GREATER SHALL BE USED.
- THE DETAILS SHOWN ON THESE SHEETS PERTAIN TO STANDARD SEDIMENT BASINS FOR DRAINAGE AREAS LESS THAN 15 ACRES. SEE CONSTRUCTION DRAWINGS FOR EMBANKMENT, STORAGE VOLUME, SPILLWAY, OUTLET, AND OUTLET PROTECTION DETAILS FOR ANY SEDIMENT BASINS THAT HAVE BEEN INDIVIDUALLY DESIGNED FOR DRAINAGE AREAS.

Figure SC-7
Sediment Basin

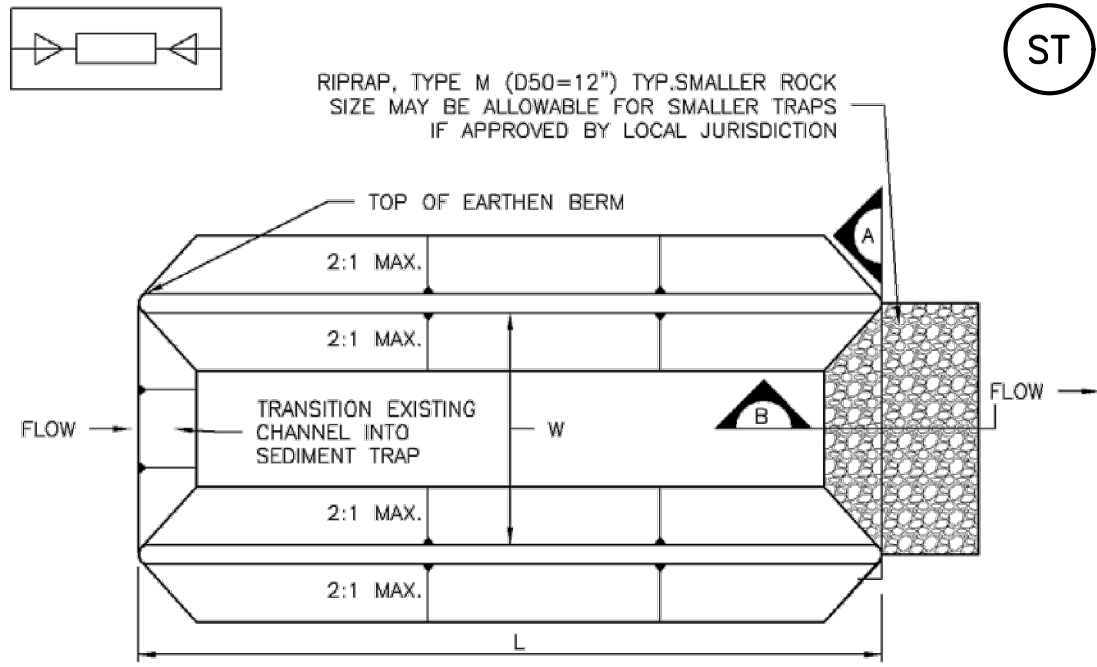
Urban Drainage and Flood Control District
Urban Storm Drainage Criteria Manual Volume 3

PCD FILING NO.: SF-21-024

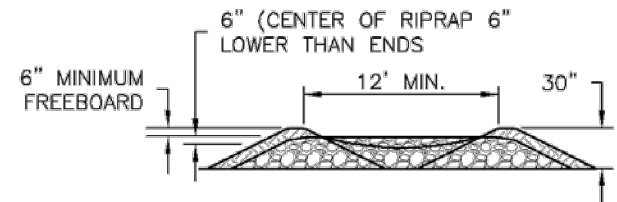


Know what's below.
Call before you dig.

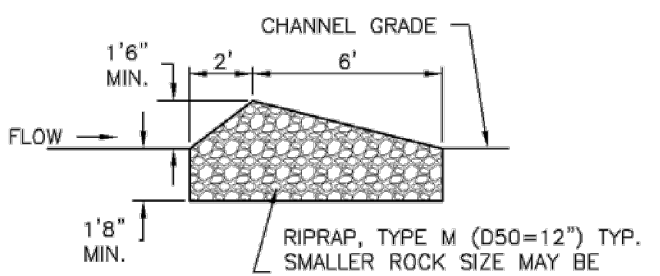
SC-8 Sediment Trap (ST)



SEDIMENT TRAP PLAN



SECTION A



SECTION B
ST-1. SEDIMENT TRAP

SEDIMENT TRAP INSTALLATION NOTES

1. SEE PLAN VIEW FOR:
-LOCATION, LENGTH AND WIDTH OF SEDIMENT TRAP.
2. ONLY USE FOR DRAINAGE AREAS LESS THAN 1 ACRE.
3. SEDIMENT TRAPS SHALL BE INSTALLED PRIOR TO ANY UPGRADIENT LAND-DISTURBING ACTIVITIES.
4. SEDIMENT TRAP BERM SHALL BE CONSTRUCTED FROM MATERIAL FROM EXCAVATION. THE BERM SHALL BE COMPACTED TO 95% OF THE MAXIMUM DENSITY IN ACCORDANCE WITH ASTM D698.
5. SEDIMENT TRAP OUTLET TO BE CONSTRUCTED OF RIPRAP, TYPE M (D50=12") TYP. SMALLER ROCK SIZE MAY BE ALLOWABLE FOR SMALLER TRAPS IF APPROVED BY LOCAL JURISDICTION.
6. THE TOP OF THE EARTHEN BERM SHALL BE A MINIMUM OF 6" HIGHER THAN THE TOP OF THE RIPRAP OUTLET STRUCTURE.
7. THE ENDS OF THE RIPRAP OUTLET STRUCTURE SHALL BE A MINIMUM OF 6" HIGHER THAN THE CENTER OF THE OUTLET STRUCTURE.

SEDIMENT TRAP 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. REMOVE SEDIMENT ACCUMULATED IN TRAP AS NEEDED TO MAINTAIN THE FUNCTIONALITY OF THE BMP, TYPICALLY WHEN THE SEDIMENT DEPTH REACHES 1/2 THE HEIGHT OF THE RIPRAP OUTLET.
5. SEDIMENT TRAPS SHALL REMAIN IN PLACE UNTIL THE UPSTREAM DISTURBED AREA IS STABILIZED AND APPROVED BY THE LOCAL JURISDICTION.
6. WHEN SEDIMENT TRAPS ARE REMOVED, THE DISTURBED AREA SHALL BE COVERED WITH TOPSOIL, SEEDED AND MULCHED OR OTHERWISE STABILIZED IN A MANNER APPROVED BY THE LOCAL JURISDICTION.

(DETAILS ADAPTED FROM DOUGLAS COUNTY, 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.

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

ST-3

PCD FILING NO.: SF-21-024

TRAILS AT ASPEN RIDGE

FILING NO.4
GRADING & EROSION CONTROL PLANS

EROSION CONTROL NOTES

DESIGNED BY: BAS SCALE: DATE ISSUED: AUGUST 2021 DRAWING No. ECN02
CHECKED BY: NMS HORIZ. VERT. N/A SHEET 7 OF 8

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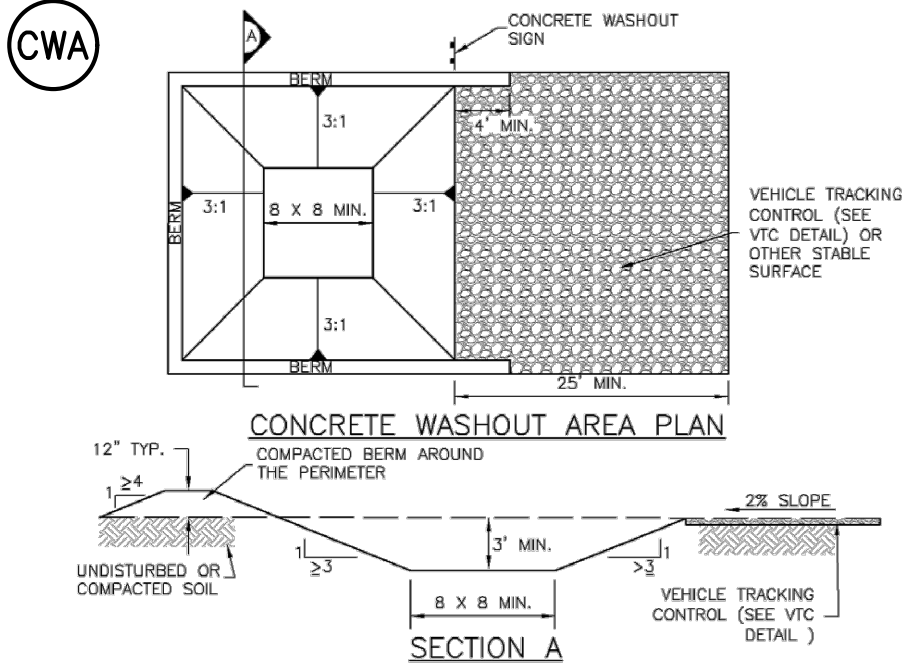
FOR AND ON BEHALF OF
MATRIX DESIGN GROUP, INC.
PROJECT No. 21.886.038

PREPARED BY:



BENCHMARK
COLORADO SPRINGS UTILITIES (FIMS) MONUMENT F206
A BERNTSEN TOP SECURITY MONUMENT SYSTEM WITH A 3.5-INCH DIAMETER ALUMINUM CAP IN A ROAD BOX, LOCATED ON THE NORTHWEST CORNER OF FONTAINE BOULEVARD AND POWERS BOULEVARD.
ELEVATION - 5897.89' U.S. SURVEY FT

BASIS OF BEARING
BEARINGS ARE BASED ON THE NORTH LINE OF THE NORTHWEST QUARTER OF SECTION 9, TOWNSHIP 15 SOUTH, RANGE 65 WEST OF THE 6TH P.M. SAID LINE BEARS S89°51'23"E FROM THE NORTHWEST CORNER OF SAID SECTION 9 (2 1/2' AULM. CAP PLS 17664) TO THE N 1/4 CORNER OF SAID SECTION 9 (3 1/2' AULM. CAP PLS 10377)



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 WATER BODY. DO NOT LOCATE WITHIN 1000' 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 AREA SHOULD BE USED.
3. THE CWA SHALL BE INSTALLED PRIOR TO CONCRETE PLACEMENT ON SITE.
4. THE 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 A 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.

Figure CWA-3
Concrete Washout Area
Urban Drainage and Flood Control District
Urban Storm Drainage Criteria Manual Volume 3

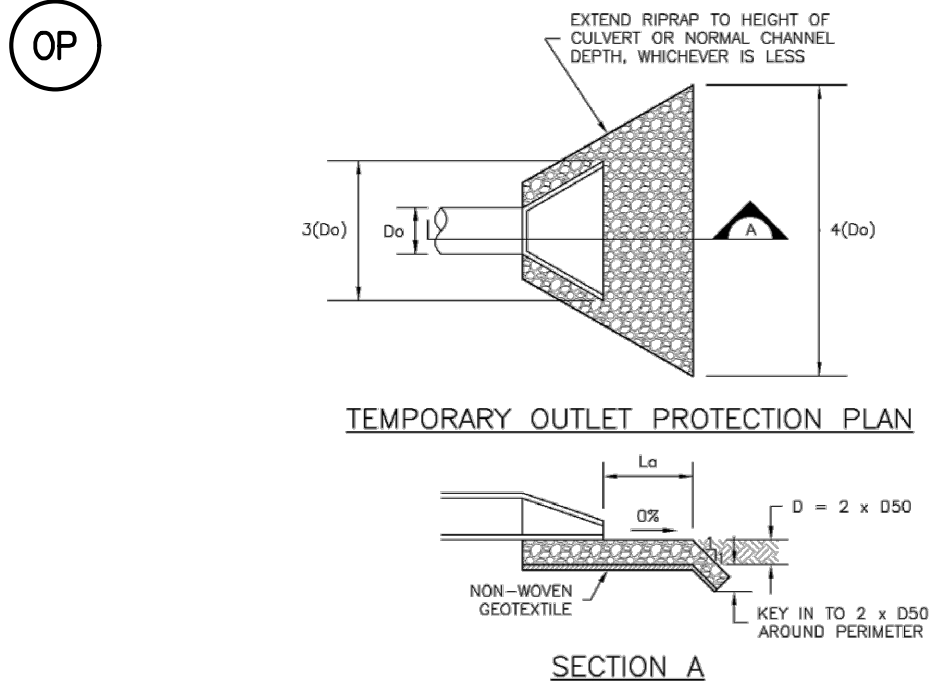


TABLE OP-1. TEMPORARY OUTLET PROTECTION SIZING TABLE				
PIPE DIAMETER, D _o (INCHES)	DISCHARGE, Q (CFS)	APRON LENGTH, L _a (FT)	RIPRAP D ₅₀ DIAMETER MIN (INCHES)	
8	2.5	5	4	
	3	10	6	
	10	13	6	
12	5	10	4	
	10	13	6	
	10	10	6	
18	20	16	9	
	30	16	12	
	40	26	16	
24	30	16	9	
	40	26	9	
	50	26	12	
	60	30	16	

OP-1. TEMPORARY OUTLET PROTECTION

TEMPORARY OUTLET PROTECTION

INSTALLATION NOTES:

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

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.

Figure EC-8
Temporary Outlet Protection
Urban Drainage and Flood Control District
Urban Storm Drainage Criteria Manual Volume 3

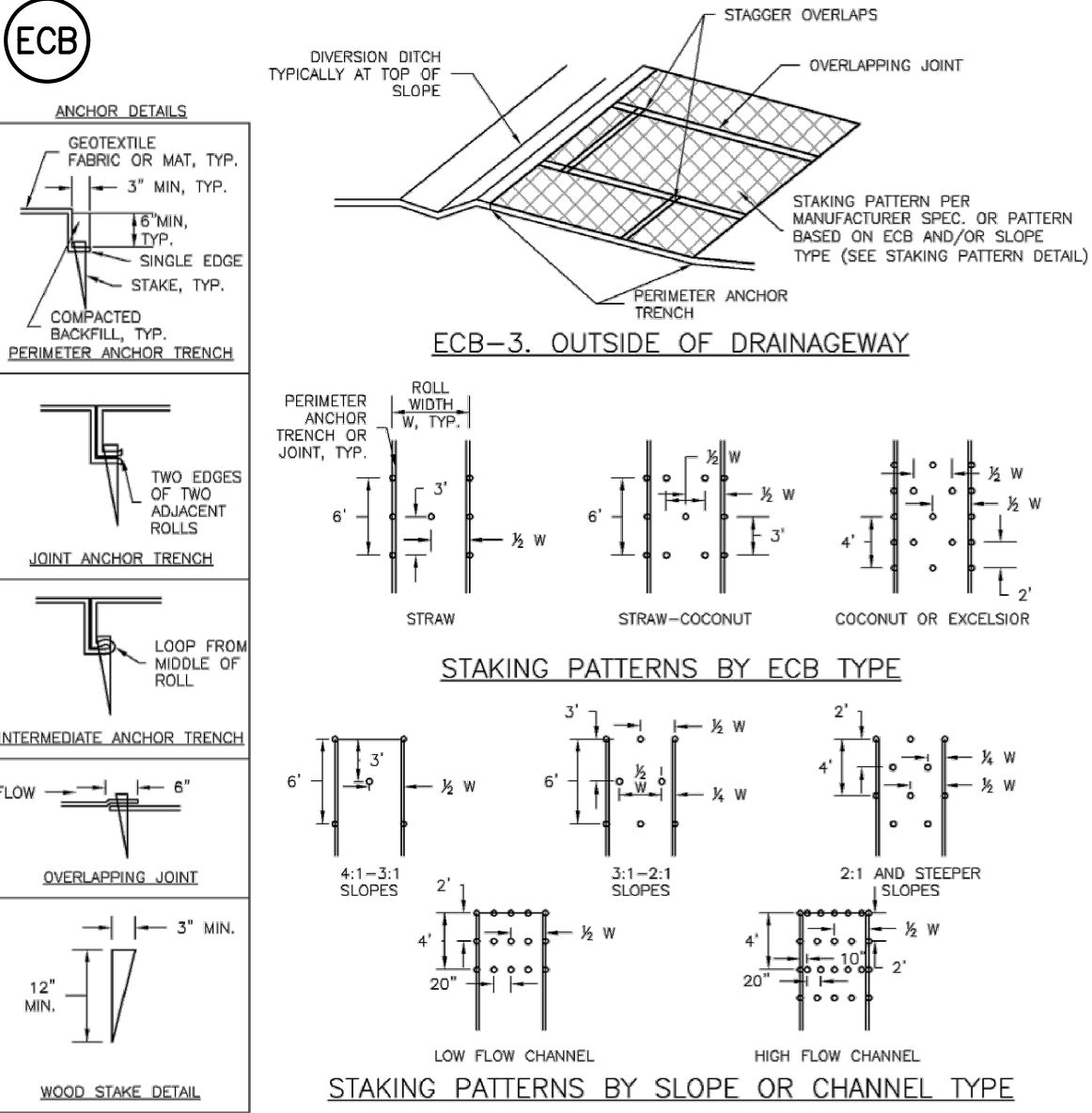


TABLE ECB-1. ECB MATERIAL SPECIFICATIONS				
TYPE	COCONUT CONTENT	STRAW CONTENT	EXCELSIOR CONTENT	RECOMMENDED NETTING **
STRAW *	-	100%	-	DOUBLE/ NATURAL
STRAW-COCONUT	30% MIN	70% MAX	-	DOUBLE/ NATURAL
COCONUT	100%	-	-	DOUBLE/ NATURAL
EXCELSIOR	-	-	100%	DOUBLE/ NATURAL

* STRAW ECBs MAY ONLY BE USED OUTSIDE OF STREAMS AND DRAINAGE CHANNELS.
** ALTERNATE NETTING MAY BE ACCEPTABLE IN SOME JURISDICTIONS.

EROSION CONTROL BLANKET

INSTALLATION NOTES:

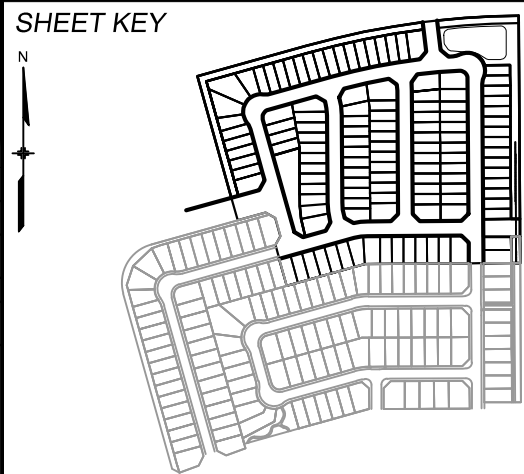
1. SEE PLAN VIEW FOR:
- LOCATION OF ECB.
- TYPE OF ECB (STRAW, STRAW-COCONUT, COCONUT, EXCELSIOR).
- AREA, A, IN SQUARE YARDS OF EACH TYPE OF ECB.
2. 100% NATURAL AND BIODEGRADABLE MATERIALS ARE PREFERRED FOR RECPs. ALTHOUGH SOME JURISDICTIONS MAY ALLOW OTHER MATERIALS IN SOME APPLICATIONS.
3. IN AREAS WHERE ECBs ARE SHOWN ON THE PLANS, THE PERMITTEE SHALL PLACE TOPSOIL AND PERFORM FINAL GRADING, SURFACE PREPARATION, AND SEEDING AND MULCHING. SUBGRADE SHALL BE SMOOTH AND MOIST PRIOR TO ECB INSTALLATION AND THE ECB SHALL BE IN FULL CONTACT WITH SUBGRADE. NO GAPS OR VOIDS SHALL EXIST UNDER THE BLANKET.
4. PERIMETER ANCHOR TRENCH SHALL BE USED ALONG THE OUTSIDE PERIMETER OF ALL BLANKET AREAS.
5. JOINT ANCHOR TRENCH SHALL BE USED TO JOIN ROLLS OF ECBs TOGETHER (LONGITUDINALLY AND TRANSVERSELY) FOR ALL ECBs EXCEPT STRAW WHICH MAY USE AN OVERLAPPING JOINT.
6. INTERMEDIATE ANCHOR TRENCH SHALL BE USED AT SPACING OF ONE-HALF ROLL LENGTH FOR COCONUT AND EXCELSIOR ECBs.
7. OVERLAPPING JOINT DETAIL SHALL BE USED TO JOIN ROLLS OF ECBs TOGETHER FOR ECBs ON SLOPES.
8. MATERIAL SPECIFICATIONS OF ECBs SHALL CONFORM TO TABLE ECB-1.
9. ANY AREAS OF SEEDING AND MULCHING DISTURBED IN THE PROCESS OF INSTALLING ECBs SHALL BE RESEEDING AND MULCHED.
10. DETAILS ON DESIGN PLAND FOR MAJOR DRAINAGEWAY STABILIZATION WILL GOVERN IF DIFFERENT FROM THOSE SHOWN HERE.

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. ECBs SHALL BE LEFT IN PLACE TO EVENTUALLY BIODEGRADE, UNLESS REQUESTED TO BE REMOVED BY THE LOCAL JURISDICTION.
5. ANY ECB PULLED OUT, TORN, OR OTHERWISE DAMAGED SHALL BE REPAIRED OR REINSTALLED. ANY SUBGRADE AREAS BELOW THE GEOTEXTILE THAT HAVE ERODED TO CREATED A VOID UNDER THE BLANKET, OR THAT REMAIN DEVOID OF GRASS SHALL BE REPAIRED, RESEEDING AND MULCHED AND THE ECB REINSTALLED.

Figure EC-6
Rolled Erosion Control Product
Urban Drainage and Flood Control District
Urban Storm Drainage Criteria Manual Volume 3

REFERENCE DRAWINGS					
	No.	DATE	DESCRIPTION		BY
REVISIONS					
COMPUTER FILE MANAGEMENT					
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BENCHMARK
COLORADO SPRINGS UTILITIES (FIMS) MONUMENT F206
A BERNTSEN TOP SECURITY MONUMENT SYSTEM WITH A 3.5-INCH DIAMETER ALUMINUM CAP IN A ROAD BOX, LOCATED ON THE NORTHWEST CORNER OF FONTAINE BOULEVARD AND POWERS BOULEVARD.
ELEVATION - 5897.89' U.S. SURVEY FT

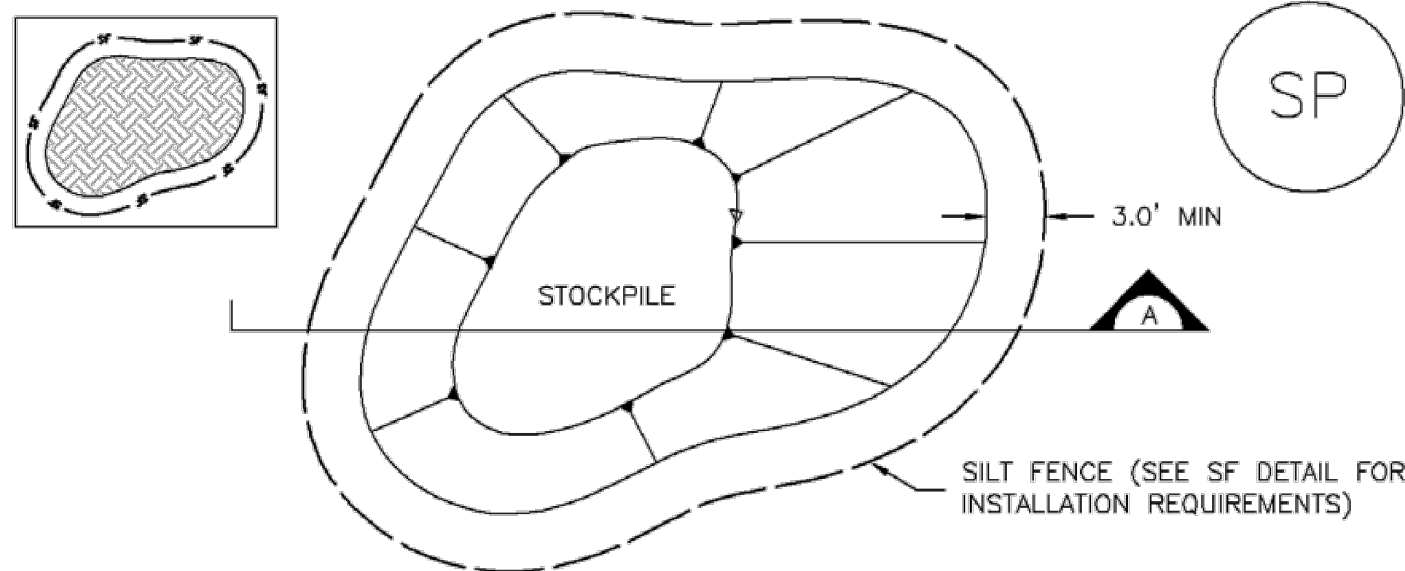
BASIS OF BEARING
BEARINGS ARE BASED ON THE NORTH LINE OF THE NORTHWEST QUARTER OF SECTION 9, TOWNSHIP 15 SOUTH, RANGE 65 WEST OF THE 6TH P.M. SAID LINE BEARS S89°51'23"E FROM THE NORTHWEST CORNER OF SAID SECTION 9 (2 1/2' AULM. CAP PLS 17664) TO THE N 1/4 CORNER OF SAID SECTION 9 (3 1/2' AULM. CAP PLS 10377)



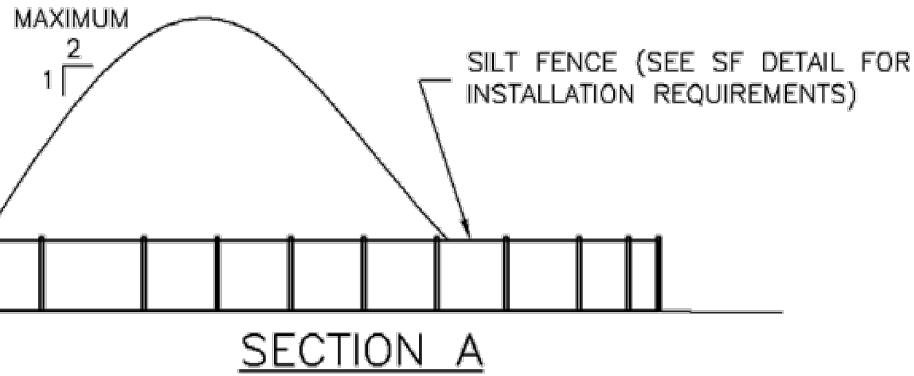
Know what's below.
Call before you dig.

Stockpile Management (SP)

MM-2



STOCKPILE PROTECTION PLAN



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.

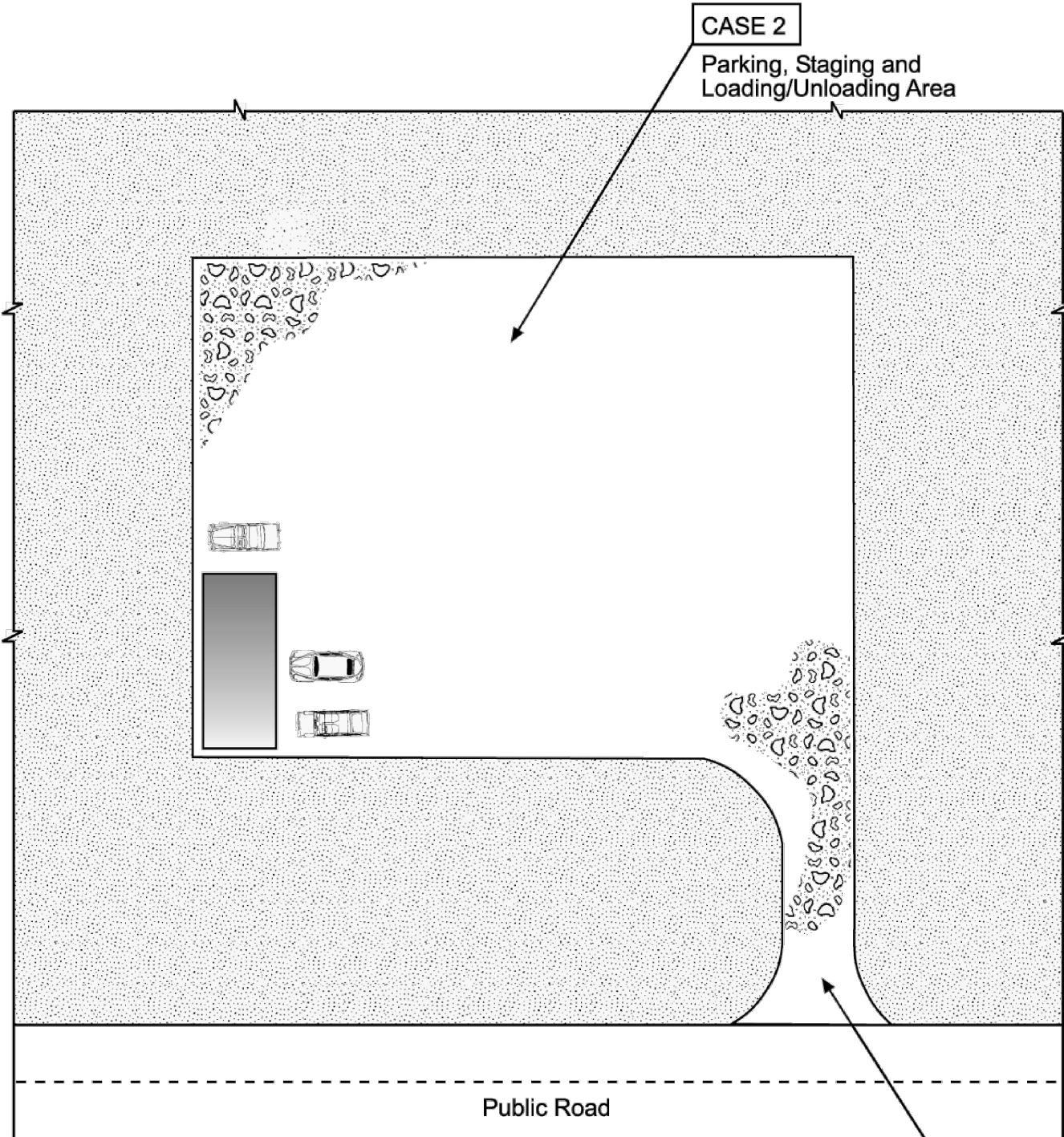


Table VT-1

	Case 1	Case 2
Gravel Thickness	9"	3"
Filter Fabric	YES	NO

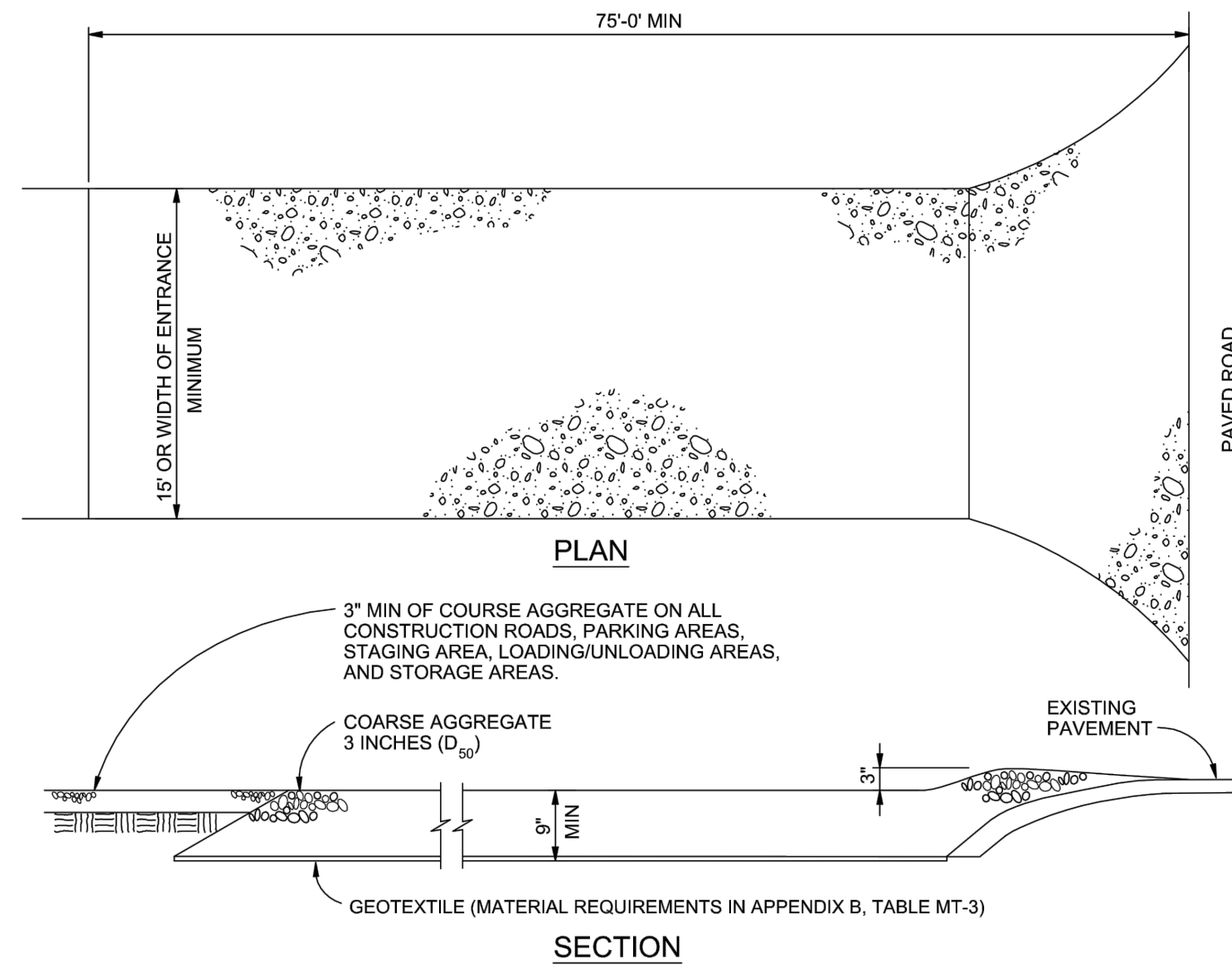
Construction Entrance

City of Colorado Springs
Storm Water Quality

Figure VT-1
Vehicle Tracking
Application Examples

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3-53



VEHICLE TRACKING

VEHICLE TRACKING NOTES

INSTALLATION REQUIREMENTS

- ALL ENTRANCES TO THE CONSTRUCTION SITE ARE TO BE STABILIZED PRIOR TO CONSTRUCTION BEGINNING.
- 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.
- AREAS TO BE STABILIZED ARE TO BE PROPERLY GRADED AND COMPACTED PRIOR TO LAYING DOWN GEOTEXTILE AND STONE.
- CONSTRUCTION ROADS, PARKING AREAS, LOADING/UNLOADING ZONES, STORAGE AREAS, AND STAGING AREAS ARE TO BE STABILIZED.
- 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

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

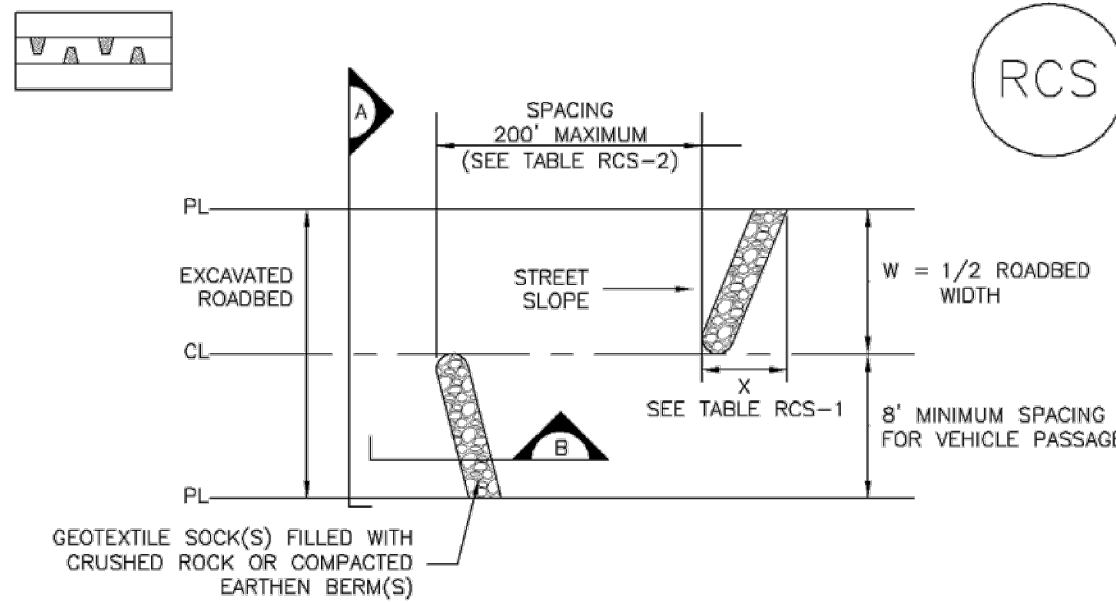
City of Colorado Springs
Stormwater Quality

Figure VT-2
Vehicle Tracking
Application Examples

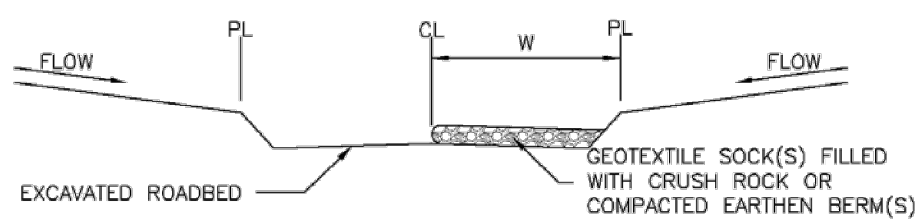
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EC-9

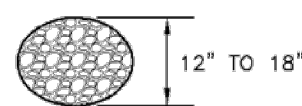
Rough Cut Street Control (RCS)



ROUGH CUT STREET CONTROL PLAN



SECTION A



SECTION B

W (FT)	X (FT)
20-30	5
31-40	7
41-50	9
51-60	10.5
61-70	12

LONGITUDINAL STREET SLOPE (%)	SPACING (FT)
<2	NOT TYPICALLY NEEDED
2	200
3	200
4	150
5	100
6	50
7	25
8	25

RCS-1. ROUGH CUT STREET CONTROL

ROUGH CUT STREET CONTROL INSTALLATION NOTES

- SEE PLAN VIEW FOR:
 - LOCATION OF ROUGH CUT STREET CONTROL MEASURES.
- ROUGH CUT STREET CONTROL SHALL BE INSTALLED AFTER A ROAD HAS BEEN CUT IN, AND WILL NOT BE PAVED FOR MORE THAN 14 DAYS OR FOR TEMPORARY CONSTRUCTION ROADS THAT HAVE NOT RECEIVED ROAD BASE.

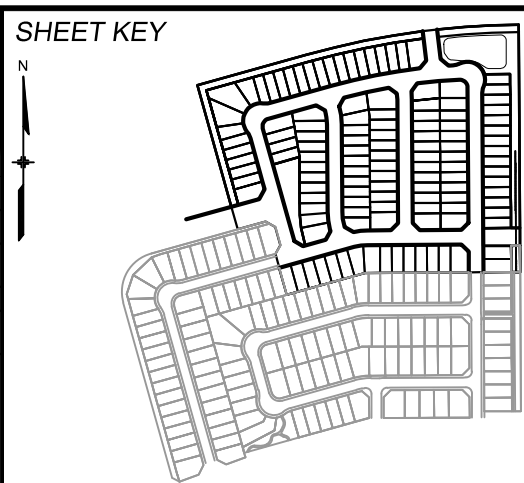
ROUGH CUT STREET CONTROL INSPECTION AND MAINTENANCE NOTES

- 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.

(DETAILS ADAPTED FROM AURORA, 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.

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PREPARED BY:



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TRAILS AT ASPEN RIDGE

FILING NO.4
GRADING & EROSION CONTROL PLANS

EROSION CONTROL NOTES

FOR AND ON BEHALF OF
MATRIX DESIGN GROUP, INC.
PROJECT No. 21.886.038

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