

STATE OF COLORADO
DEPARTMENT OF TRANSPORTATION
CITY OF COLORADO SPRINGS
Parks, Recreation and Cultural Services Department
CAPITAL IMPROVEMENT PROJECT
TRAIL IMPROVEMENT PROGRAM
COMBINED FEDERAL AID PROJECT No. TAP M240-162, SubAcct. No.20391

GRADING AND EROSION CONTROL

PLAN of the ROCK ISLAND MULTI-USE TRAIL
SAND CREEK TO CONSTITUTION AVENUE COLORADO
SPRINGS & EL PASO COUNTY, COLORADO

8 March 2024

INDEX OF SHEETS

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APPROVAL SIGNATURES

TITLE	NAME	SIGNATURE	DATE
DIRECTOR, PARKS, REC. & CULT. SVS	BRITT HALEY	_____	_____
PARKS OPERATION & DEVELOPMENT MANAGER		_____	_____
CITY FORESTER	JAY HEIN	_____	_____
REG. SUPERVISOR, PARKS, TRAILS & OPEN SPACE	SCOTT ABBOTT	_____	_____
CONSTRUCTION PROJECT MANAGER	EMILY DUNCAN	_____	_____
COLORADO DEPARTMENT OF TRANSPORTATION		_____	_____
EL PASO COUNTY DEPARTMENT OF PUBLIC WORKS	JENNIFER IRVINE, PE	_____	_____

STATEMENTS

Design Engineer's Statement:

This {Grading and Erosion Control Plan or CSWMP} was prepared under my direction and supervision and is correct to the best of my knowledge and belief. If such work is performed in accordance with the {Grading and Erosion Control Plan or CSWMP}, the work will not become a hazard to life and limb, endanger property, or adversely affect the safety, use, or stability of a public way, drainage channel, or other property.

Printed Name: Todd Cartwright Date: (see seal)

Phone Number: 719.694.0012

For and on behalf of Kiowa Engineering Corp.

City Project Manager's Statement:

I hereby certify that the drainage, grading, and erosion control for {Rock Island Multi-Use Trail} shall be constructed according to the design presented in this {grading and erosion control plan or cswmp}. I further understand that field changes must be reviewed by the swent review engineer to ensure conformance with the original design intent. I am employed by and perform engineering services solely for the city of Colorado Springs, and therefore am exempt from Colorado Revised Statute Title 12, Article 25, Part 1 according to § 12-25-103(1), C.R.S.

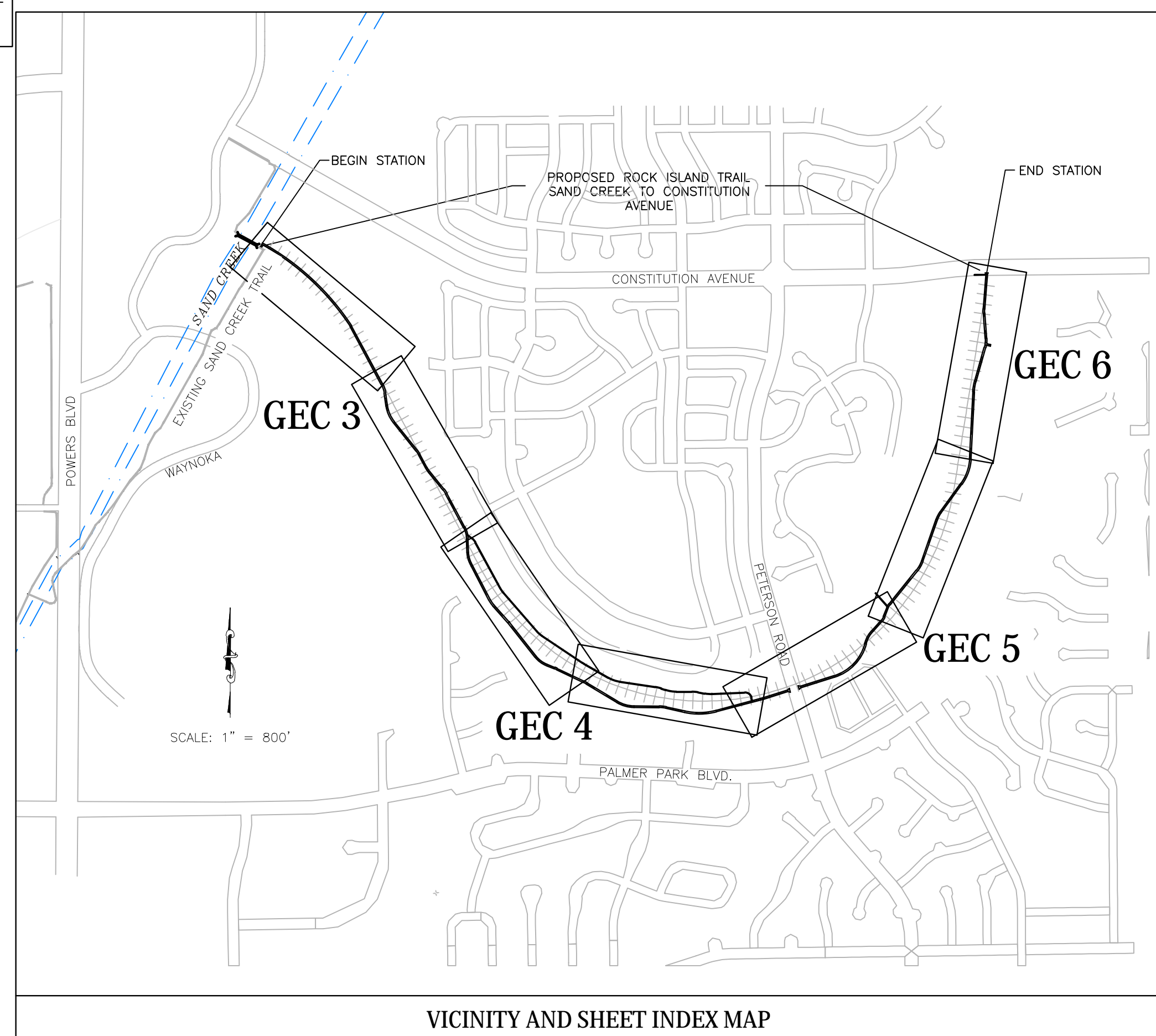
Name of City Project Manager: Emily Duncan

Signature: _____ Date: _____

City of Colorado Springs Grading and Erosion Control Review:

This {Grading and Erosion Control Plan or CSWMP} is filed in accordance with city code. This plan is reviewed in accordance with the stormwater construction manual; latest revisions.

Date: _____
For the SWENT Manager
Notes:



TRAIL DESIGN DATA

BEGIN STATION ROCK ISLAND TRAIL	10+00
END STATION ROCK ISLAND TRAIL	106+25
MAXIMUM GRADE	8.33%
MINIMUM HORIZONTAL CURVE	25'
MINIMUM WIDTH	8'
TYPICAL WIDTH	10'
CROSS-SLOPE	2%
LENGTH SAND CREEK TRAIL	9449 LF

BENCHMARK: FIMS MONUMENT SR10 IS A 2-INCH DIAMETER ALUMINUM CAP STAMPED "CSU FIMS CONTROL SR10" ON TOP OF THE NORTH CURB OF CONSTITUTION AVENUE AT THE NORTHWEST CORNER OF THE BRIDGE OVER SAND CREEK.

*A.G.A./A.P.W.A. STANDARD UTILITY MARKING COLOR CODE

NATURAL GAS	YELLOW
ELECTRIC	RED
WATER	BLUE
WASTEWATER	GREEN

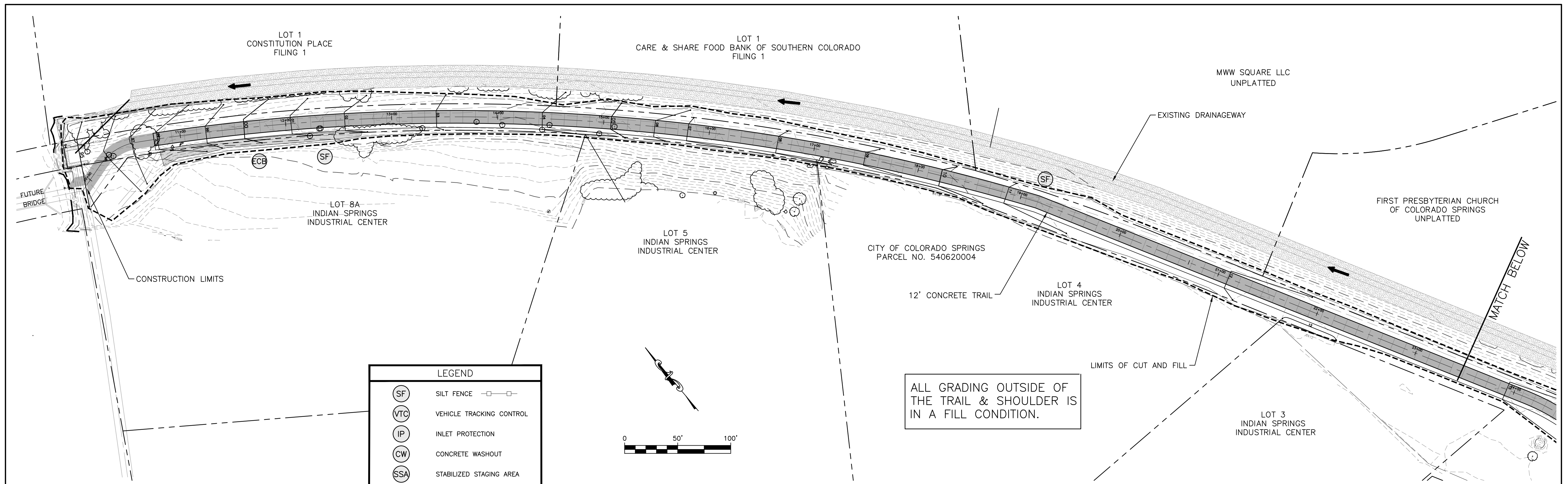
811
Know what's below.
Call before you dig.



Sheet Revisions	90% BID SET
	No Revisions:
	Revised:
	Void:

Cover Sheet	
Designer:	RNW
Detailer:	RNW
Date:	3/8/2024

Kiowa Proj. No. 16028
TAP M240-162
SubAcct No. 20391
Sheet Number GEC1

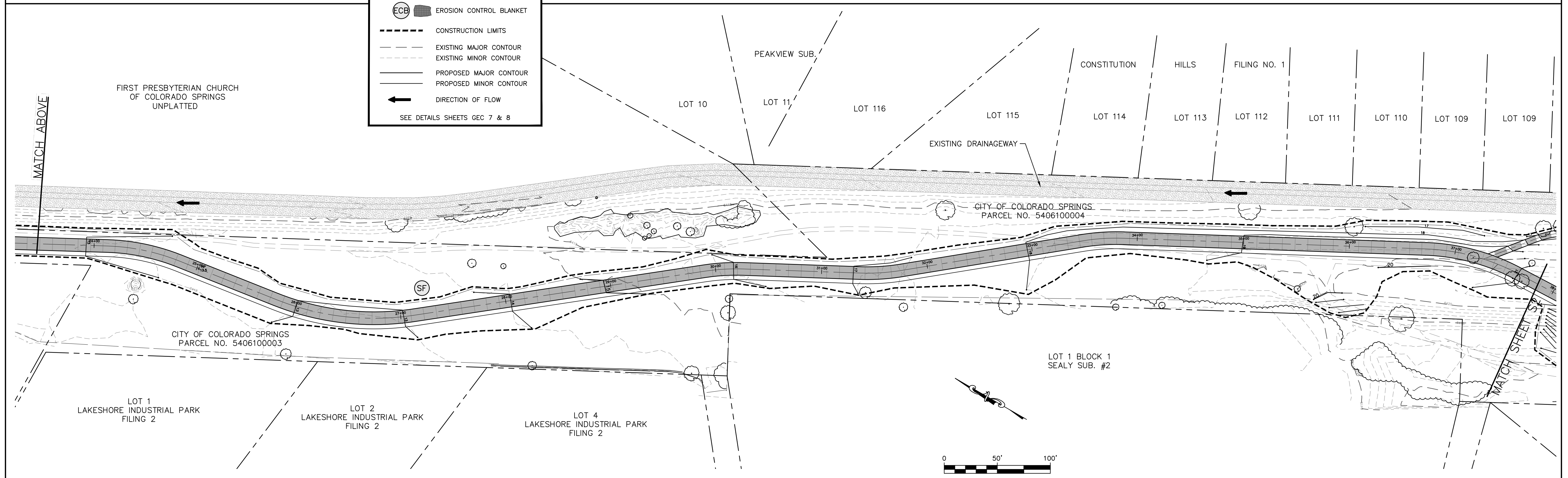


LEGEND

- (SF) SILT FENCE
- (VTC) VEHICLE TRACKING CONTROL
- (IP) INLET PROTECTION
- (CW) CONCRETE WASHOUT
- (SSA) STABILIZED STAGING AREA
- (ECB) EROSION CONTROL BLANKET
- CONSTRUCTION LIMITS
- - - EXISTING MAJOR CONTOUR
- - - EXISTING MINOR CONTOUR
- PROPOSED MAJOR CONTOUR
- PROPOSED MINOR CONTOUR
- ← DIRECTION OF FLOW

SEE DETAILS SHEETS GEC 7 & 8

ALL GRADING OUTSIDE OF THE TRAIL & SHOULDER IS IN A FILL CONDITION.



Celebrating 30 years
Kiowa
 Engineering Corporation
 1604 South 21st Street
 Colorado Springs, Colorado 80904
 (719) 630-7342

Sheet Revisions	

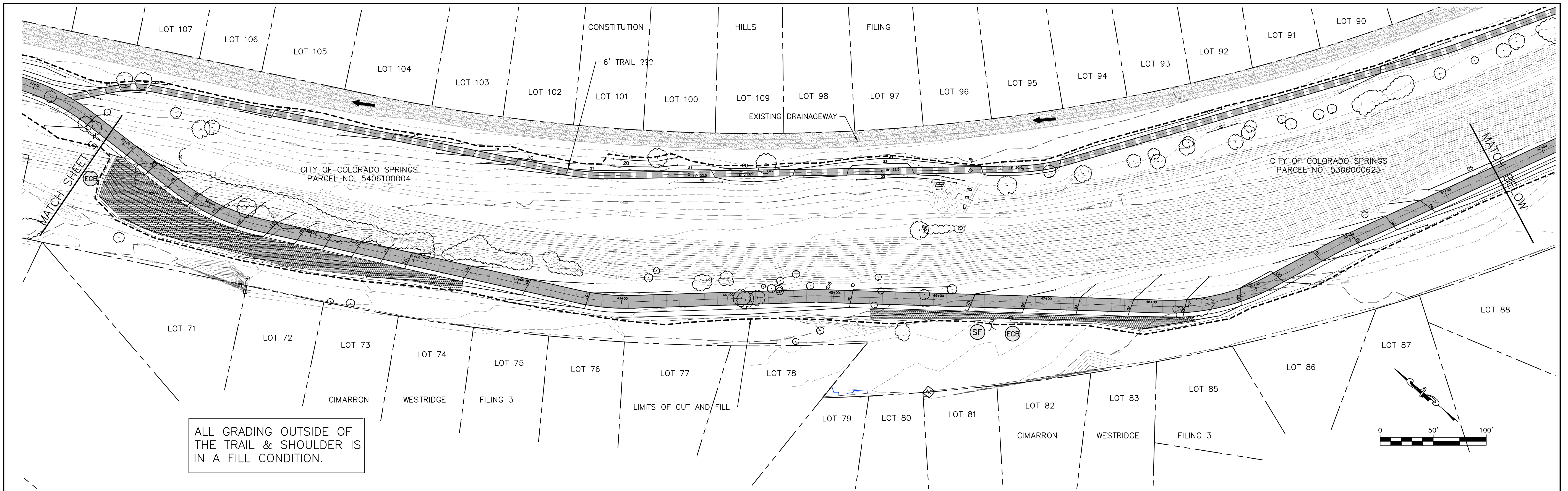
ROCK ISLAND TRAIL
 Sand Creek to Constitution Avenue
GRADING AND EROSION CONTROL PLAN

No Revisions: _____
 Revised: _____
 Void: _____

Designer: RNW
 Detailer: RNW
 Date: 3/8/2024

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 TAP M240-162
 SubAcct No.20391
 Sheet Number **GEC3**

16028-GEC3-GEC9.dwg/Mar 08, 2024



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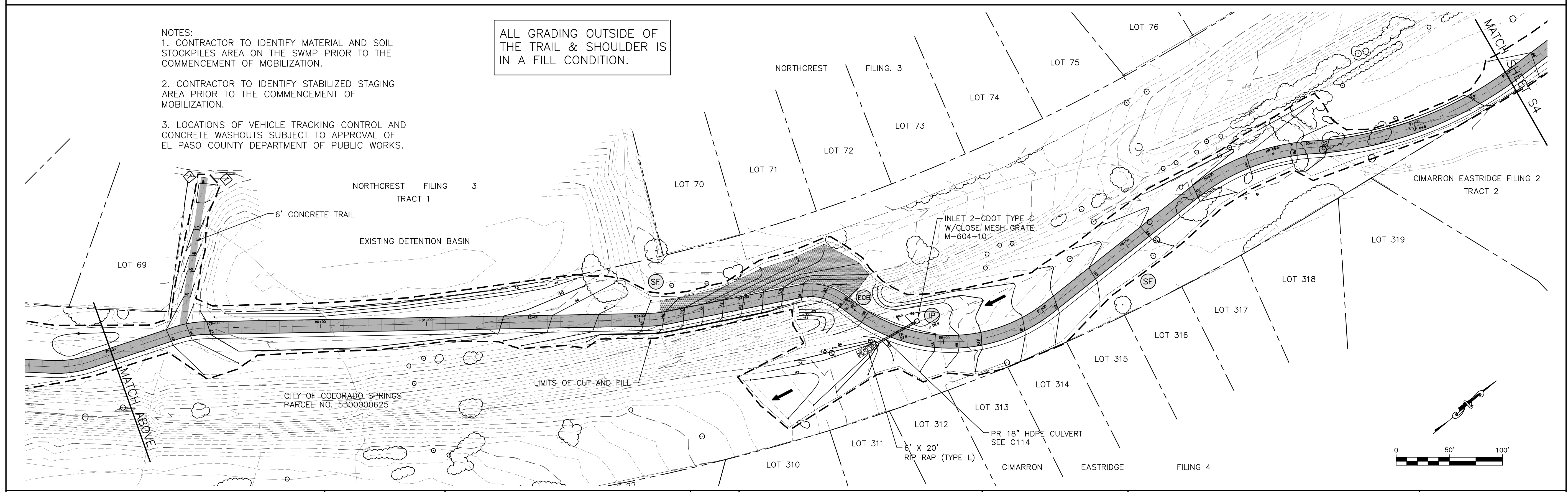
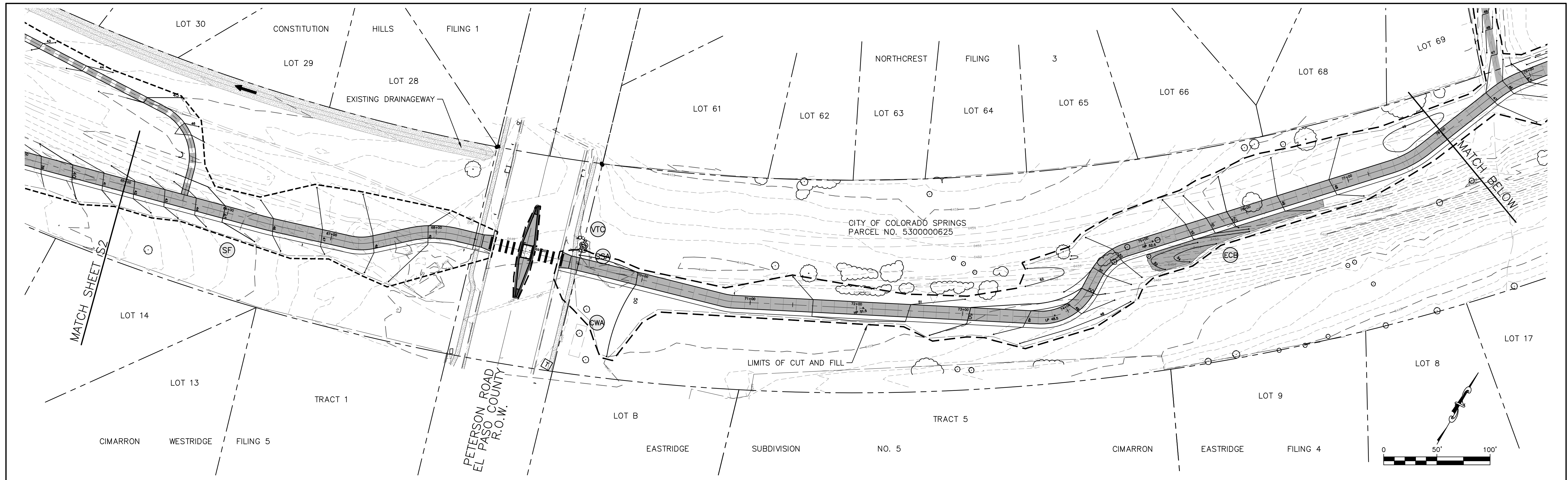
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ROCK ISLAND TRAIL
 Sand Creek to Constitution Avenue
GRADING AND EROSION CONTROL PLAN

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Detailer: RNW	
Date: 3/8/2024	

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Sheet Number	GEC4

16028-GEC3-GEC9.dwg/Mar 08, 2024



- NOTES:
1. CONTRACTOR TO IDENTIFY MATERIAL AND SOIL STOCKPILES AREA ON THE SWMP PRIOR TO THE COMMENCEMENT OF MOBILIZATION.
 2. CONTRACTOR TO IDENTIFY STABILIZED STAGING AREA PRIOR TO THE COMMENCEMENT OF MOBILIZATION.
 3. LOCATIONS OF VEHICLE TRACKING CONTROL AND CONCRETE WASHOUTS SUBJECT TO APPROVAL OF EL PASO COUNTY DEPARTMENT OF PUBLIC WORKS.

ALL GRADING OUTSIDE OF THE TRAIL & SHOULDER IS IN A FILL CONDITION.



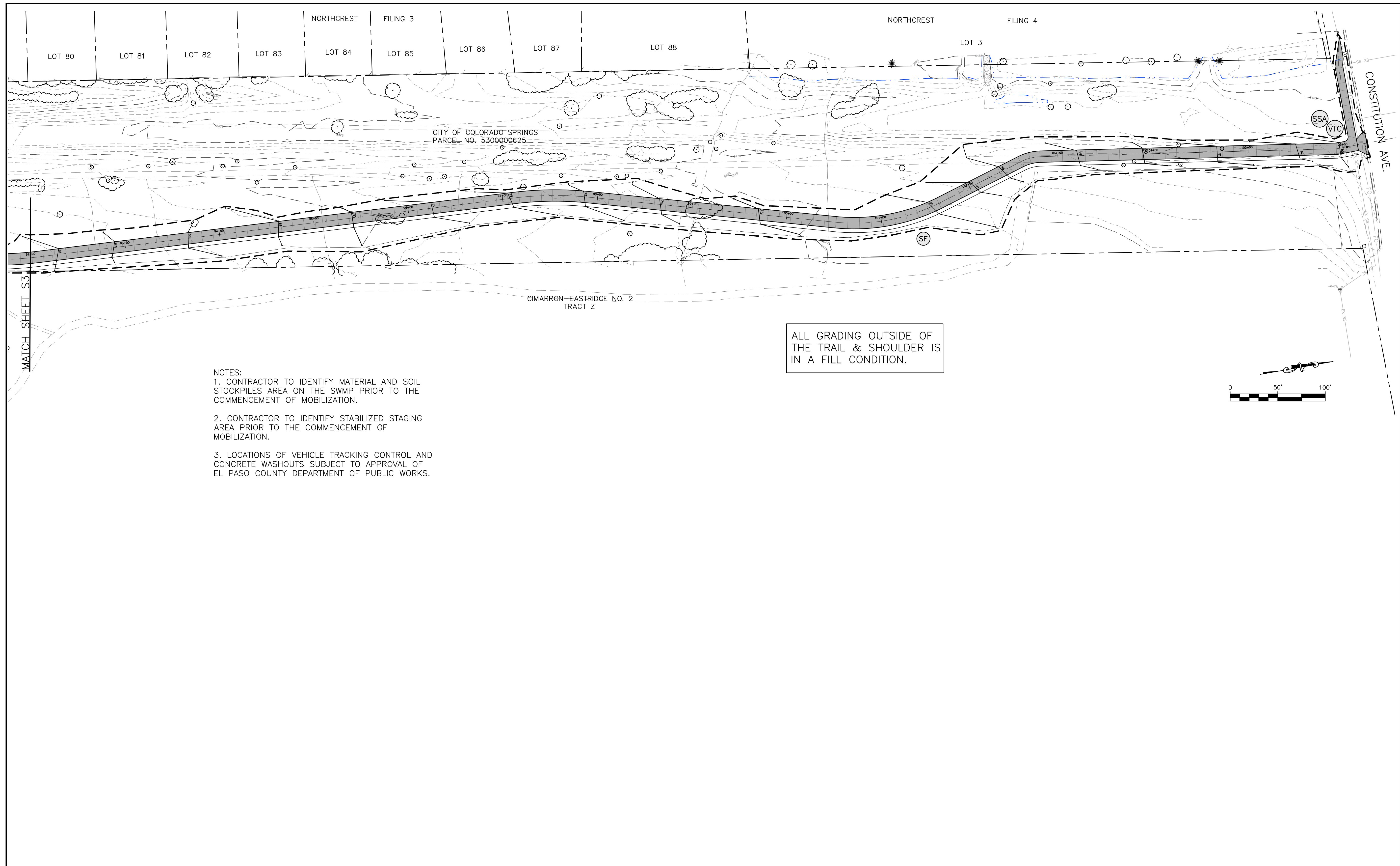
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Sheet Revisions	
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	Revised:
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ROCK ISLAND TRAIL
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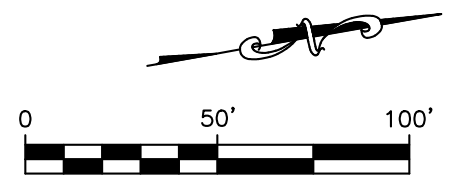
Designer: RNW
 Detailer: RNW
 Date: 3/8/2024



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 TAP M240-162
 SubAcct No.20391
 Sheet Number **GEC5**

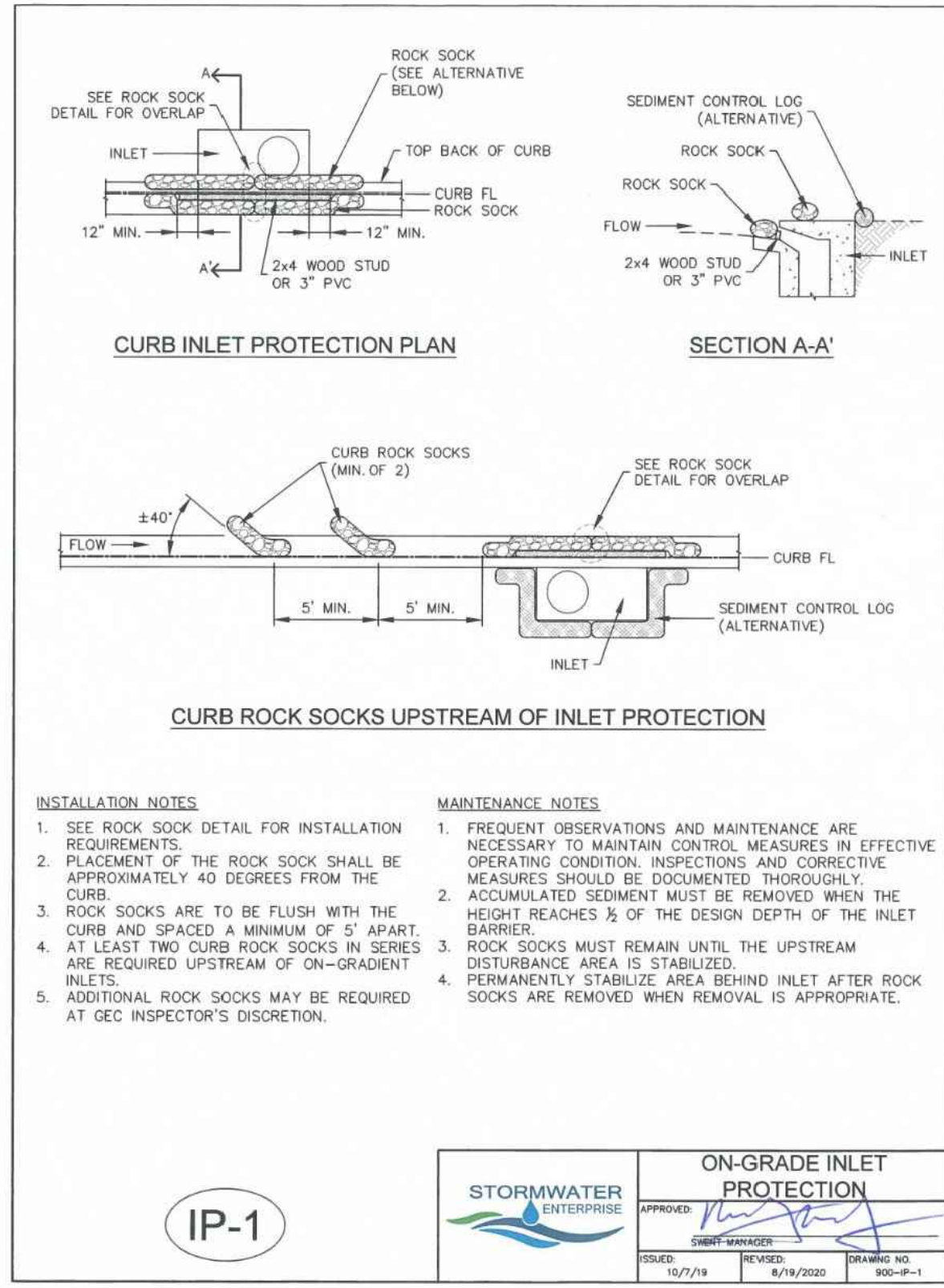
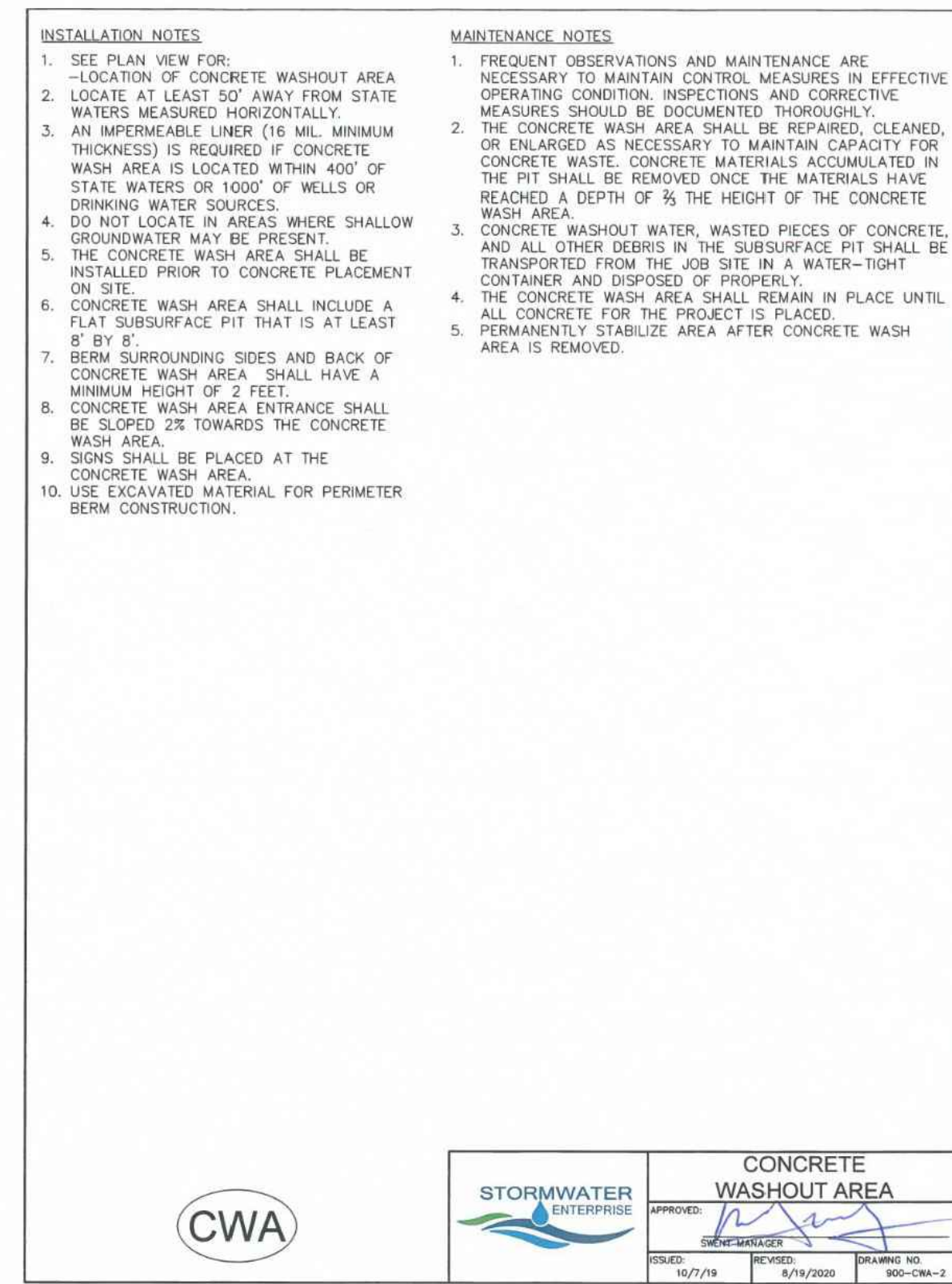
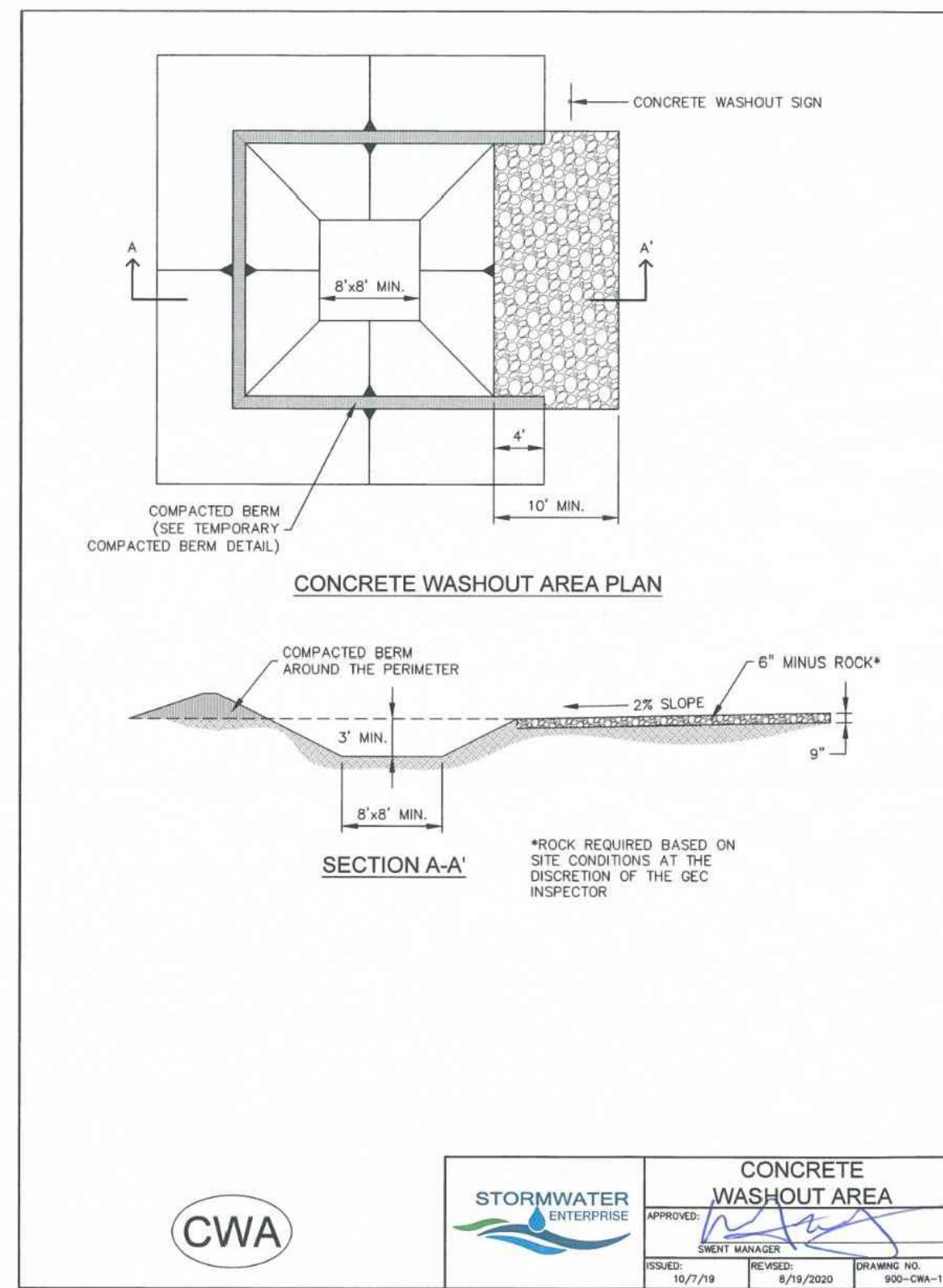
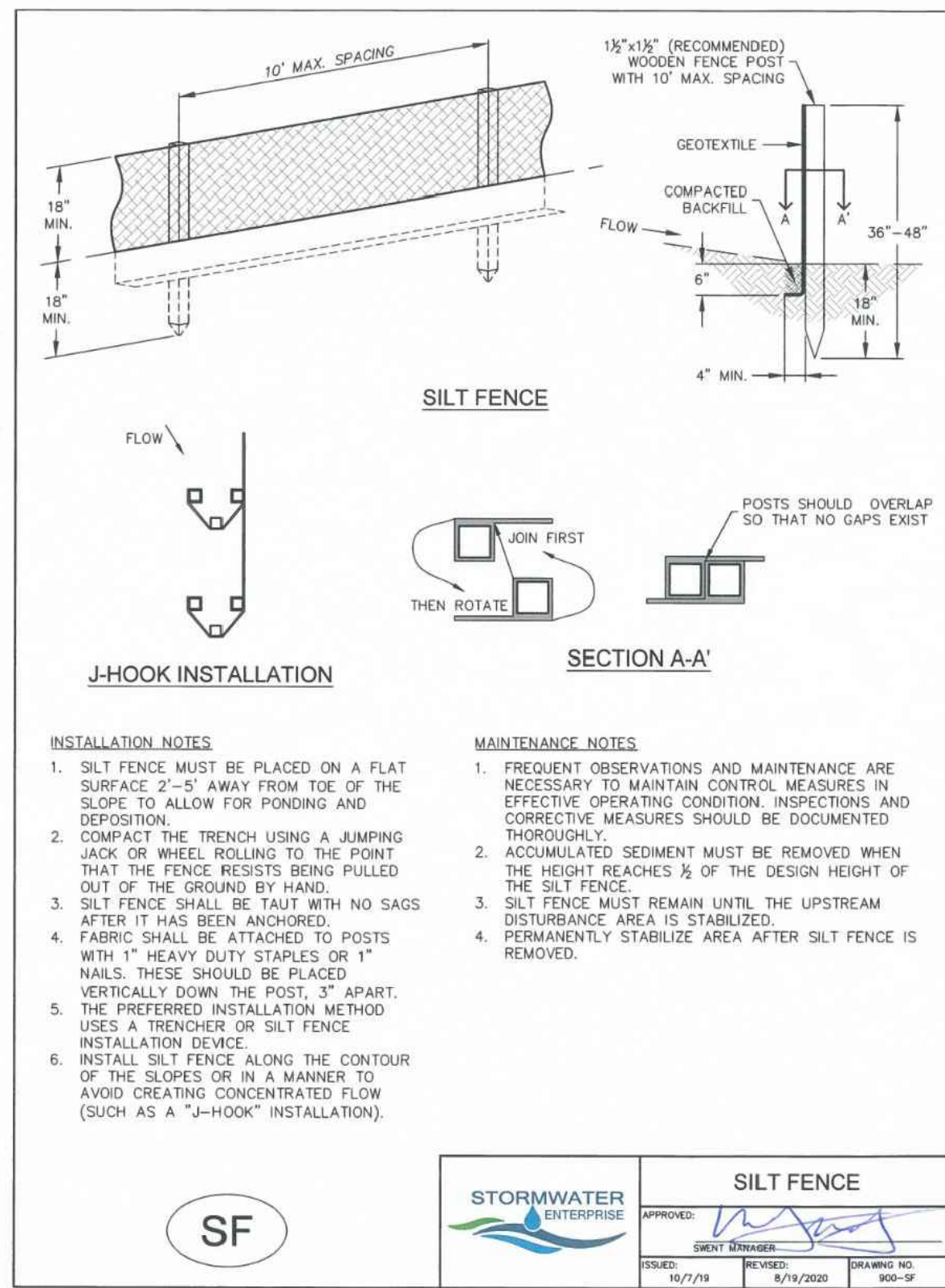


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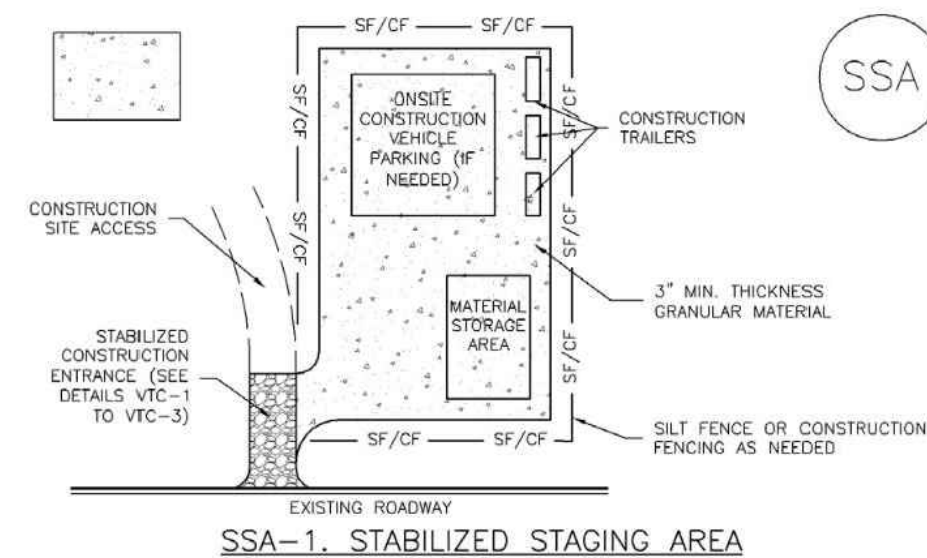
ALL GRADING OUTSIDE OF THE TRAIL & SHOULDER IS IN A FILL CONDITION.



	 <p>1604 South 21st Street Colorado Springs, Colorado 80904 (719) 630-7342</p>	<p>Sheet Revisions</p> <table border="1"> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> </table>										<p>ROCK ISLAND TRAIL Sand Creek to Constitution Avenue GRADING AND EROSION CONTROL PLAN</p>		<p>Kiowa Proj. No. 16028</p>
<p>No Revisions:</p> <p>Revised:</p> <p>Void:</p>	<p>Designer: RNW</p> <p>Detailer: RNW</p> <p>Date: 3/8/2024</p>	<p>TAP M240-162</p> <p>SubAcct No.20391</p> <p>Sheet Number GEC6</p>												



Stabilized Staging Area (SSA) SM-6



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

SM-6 Stabilized Staging Area (SSA)

STABILIZED STAGING AREA MAINTENANCE NOTES

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

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



Sheet Revisions	

ROCK ISLAND TRAIL Sand Creek to Constitution Avenue GRADING AND EROSION CONTROL DETAILS	
Designer:	RNW
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Date:	3/8/2024

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Sheet Number GEC7

STANDARD GRADING AND EROSION CONTROL PLAN NOTES

- No clearing, grading, excavation, or other land disturbing activities shall be allowed (except for work directly related to the installation of Initial Control Measures) until a City GEC Permit has been issued.
- All land disturbing activities must be performed in accordance with and the approved GEC Plan and CSWMP.
- Initial Control Measures shall be installed and inspected prior to any land disturbance activities taking place. An initial site inspection will not be scheduled until a City GEC Permit has been "conditionally approved." Call City Stormwater Inspections, 385-5980, at least 48 hours prior to construction to schedule an initial inspection and obtain full permit approval.
- Individuals shall comply with the "Colorado Water Quality Control Act" (Title 25, Article 8, CRS) and the "Clean Water Act" (33 USC 1344), including regulations promulgated and certifications or permits issued, in addition to the requirements included in the City's MS4 Permit, Stormwater Construction Manual. In the event of conflicts between these requirements and water quality control laws, rules, or regulations of other Federal or State agencies, the more restrictive laws, rules, or regulations shall apply.
- Stormwater discharges from construction sites shall not cause or threaten to cause pollution, contamination, or degradation of State Waters.
- All Construction Control Measures shall be maintained until permanent stabilization measures are implemented. Temporary Construction Control Measures must be removed prior to permit closeout.
- Concrete wash water shall not be discharged to or allowed to runoff to State Waters or any surface or subsurface storm drainage system or facilities.
- Building, construction, excavation, or other 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. Construction Control Measures may be required by the GEC Inspector if deemed necessary based on specific conditions and circumstances (e.g., estimated time of exposure, season of the year, etc.).
- All wastes composed of building materials must be removed from the construction site for disposal in accordance with local and state regulatory requirements. No building material wastes or unused building materials shall be buried, dumped, or discharged at the site.
- The permittee shall be responsible for the removal of all construction debris, dirt, trash, rock, sediment, and sand that may accumulate in the storm sewer or other drainage conveyance system as a result of construction activities.
- 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. Materials shall not be stored in a location where they may be carried by stormwater runoff into the storm sewer system at any time.
- Spill prevention and containment measures shall be used at all storage, equipment fueling, and equipment servicing areas so as to contain all spills and prevent any spilled material from entering the MS4, including any surface or subsurface storm drainage system or facility. Bulk storage structures for petroleum products and other chemicals shall have secondary containment or equivalent adequate protection. All spills shall be cleaned up immediately after discovery, or contained until appropriate cleanup methods can be employed. Manufacturer's recommended methods for spill cleanup shall be followed, along with proper disposal methods.
- Sediment (mud and dirt) transported onto a public road, regardless of the size of the site, shall be cleaned as soon as possible after discovery.
- No chemicals are to be added to the discharge unless permission for the use of a specific chemical is granted by the State. In granting the use of such chemicals, special conditions and monitoring may be required.
- Control Measures for all slopes, channels, ditches, or any disturbed land area shall be completed within fourteen (14) calendar days after final grading or final land disturbance has been completed. Disturbed areas which are not at final grade but will remain dormant for longer than fourteen (14) days shall be roughened, mulched, tackified, or stabilized with tarps within fourteen (14) days after interim grading. An area that is going to remain in an interim state for more than sixty (60) days shall also be seeded, unless an alternative stabilization measure is accepted at the inspector's discretion. All temporary Construction Control Measures shall be maintained until final stabilization is achieved.
- The GEC Plan will be subject to re-review and re-acceptance by the Stormwater Enterprise should any of the following occur: grading does not commence within twelve (12) months of the City's acceptance of the plan, the construction site is idle for twelve (12) consecutive months, a change in property ownership occurs, the planned development changes, or any other major modifications are proposed as defined in the Stormwater Construction Manual.
- It is not permissible for any person to modify the grade of the earth on any utility easement or utility right-of-way without written approval from the utility owner. City acceptance of the GEC Plan and CSWMP does not satisfy this requirement. The plan shall not increase or divert water towards utility facilities. Any changes to existing utility facilities to accommodate the plan must be approved by the affected utility owner prior to implementing the plan. The cost to relocate or protect existing utilities or to provide interim access shall be at the applicant's expense.
- Applicant represents and warrants that they have the legal authority to grade and/or construct improvements on adjacent property. The City has not reviewed the developer's authority to modify adjacent property. An approved GEC Permit does not provide approval for the Applicant to perform work on adjacent property.

AGGREGATE VEHICLE TRACKING CONTROL

50' MIN. 15' 9" MIN. USE 6" MINUS ROCK

SIDEWALK OR PAVED SURFACE RADIUS WOVEN GEOTEXTILE FABRIC BETWEEN SOIL AND ROCK

SECTION A-A'

WOVEN GEOTEXTILE FABRIC

INSTALLATION NOTES

- A STABILIZED CONSTRUCTION ENTRANCE/EXIT SHOULD BE LOCATED AT ALL POINTS WHERE VEHICLES EXIT THE CONSTRUCTION SITE TO ADJACENT ROADWAY.
- STABILIZED CONSTRUCTION ENTRANCE/EXITS SHALL BE INSTALLED PRIOR TO ANY LAND DISTURBING ACTIVITIES.
- RADIUS MUST BE ADEQUATE FOR INTENDED CONSTRUCTION VEHICLE TURNING.
- ROCK SHOULD CONSIST OF 6" MINUS ROCK.
- INSTALL CONSTRUCTION FENCE ON BOTH SIDES OF VEHICLE TRACKING CONTROL PAD WHEN NEEDED OR REQUIRED BY INSPECTOR.

MAINTENANCE NOTES

- FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN CONTROL MEASURES IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.
- SEDIMENT TRACKED ONTO THE ADJACENT ROAD SHALL BE REMOVED DAILY, BY SWEEPING OR SHOVELING, AND NEVER WASHED DOWN STORM DRAINS.
- ROUGHEN, REPLACE AND/OR ADD ROCK AS NEEDED TO MAINTAIN CONSISTENT DEPTH AND TO PREVENT SEDIMENT TRACKING ONTO ADJACENT STREET.
- PERMANENTLY STABILIZE AREA AFTER VEHICLE TRACKING CONTROL IS REMOVED.

VEHICLE TRACKING CONTROL

STORMWATER ENTERPRISE APPROVED: [Signature]

ISSUED: 10/7/19 DESIGNED: 8/19/2020 DRAWING NO. 900-VTC

EROSION CONTROL BLANKET

STAKING PATTERN PER MANUFACTURER SPECIFICATION OR 18" O.C. 16" O.C. 36" 6" OVERLAP 6"x6" TRENCH (TYPICAL) KEY IN EDGES

FLOW COMPACTED SOIL STAPLES 6" PERIMETER ANCHOR TRENCH

FLOW COMPACTED SOIL STAPLES 6" JOINT ANCHOR TRENCH

FLOW COMPACTED SOIL STAPLES 6" INTERMEDIATE CHECK SLOT

FLOW 4" STAPLE 6" FOLD OVERLAP STAPLE CHECK TO BE USED ON SLOPE EVERY 15 FEET

EROSION CONTROL BLANKET

STORMWATER ENTERPRISE APPROVED: [Signature]

ISSUED: 10/7/19 DESIGNED: 8/19/2020 DRAWING NO. 900-ECB-1

INSTALLATION NOTES

- 100% NATURAL AND BIODEGRADABLE MATERIALS ARE REQUIRED FOR EROSION CONTROL BLANKETS. TRM PRODUCTS MAY BE USED WHERE APPROPRIATE AS DESIGNATED BY THE ENGINEER.
- IN AREAS WHERE EROSION CONTROL BLANKETS 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 EROSION CONTROL BLANKET INSTALLATION, AND THE EROSION CONTROL BLANKET SHALL BE IN FULL CONTACT WITH THE SUBGRADE. NO GAPS OR VOIDS SHALL EXIST UNDER THE BLANKET.
- PERIMETER ANCHOR TRENCH SHALL BE USED ALONG THE OUTSIDE PERIMETER OF ALL BLANKET AREAS.
- JOINT ANCHOR TRENCH SHALL BE USED TO JOIN ROLLS OF EROSION CONTROL BLANKETS TOGETHER (LONGITUDINALLY AND TRANSVERSELY) FOR ALL EROSION CONTROL BLANKETS.
- INTERMEDIATE CHECK SLOT OR STAPLE CHECK SHALL BE INSTALLED EVERY 15' DOWN SLOPES. IN DRAINAGEWAYS, INSTALL CHECK SLOTS EVERY 25' PERPENDICULAR TO FLOW DIRECTION.
- OVERLAPPING JOINT DETAIL SHALL BE USED TO JOIN ROLLS OF EROSION CONTROL BLANKETS ON SLOPES.
- MATERIAL SPECIFICATIONS OF EROSION CONTROL BLANKETS SHALL CONFORM TO TABLE ECB-1.
- ANY AREAS OF SEEDING AND MULCHING DISTURBED IN THE PROCESS OF INSTALLING EROSION CONTROL BLANKETS SHALL BE RESEEDED AND MULCHED.
- STRAW EROSION CONTROL BLANKETS SHALL NOT BE USED WITHIN STREAMS AND DRAINAGE CHANNELS.
- COMPACT ALL TRENCHES.

MAINTENANCE NOTES

- FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN CONTROL MEASURES IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.
- EROSION CONTROL BLANKETS SHALL BE LEFT IN PLACE TO EVENTUALLY BIODEGRADE. TRM MUST BE REMOVED AT THE DISCRETION OF THE GEC INSPECTOR.
- ANY EROSION CONTROL BLANKET PULLED OUT, TORN, OR OTHERWISE DAMAGED SHALL BE REPAIRED OR REINSTALLED. ANY SUBGRADE AREAS BELOW GEOTEXTILE THAT HAVE ERODED TO CREATE A VOID UNDER THE BLANKET, OR THAT REMAIN DEVOID OF GRASS SHALL BE REPAIRED, RESEEDED AND MULCHED AND THE EROSION CONTROL BLANKET REINSTALLED.

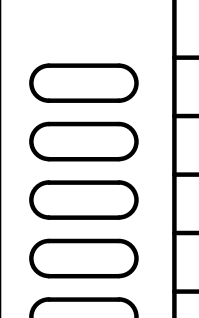
TABLE ECB-1, EROSION CONTROL BLANKET MATERIAL SPECIFICATIONS

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

EROSION CONTROL BLANKET

STORMWATER ENTERPRISE APPROVED: [Signature]

ISSUED: 10/7/19 DESIGNED: 8/19/2020 DRAWING NO. 900-ECB-2



Sheet Revisions

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ROCK ISLAND TRAIL
Sand Creek to Constitution Avenue
GRADING AND EROSION CONTROL DETAILS

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Detailer: RNW
Date: 3/8/2024

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Sheet Number **GEC8**