SHEET INDEX TITLE SHEET SUMMARY OF QUANTITIES GENERAL NOTES ROCK ISLAND STA 08+00 TO STA 17+50 ROCK ISLAND STA 17+50 TO STA 21+50 ROCK ISLAND STA 21+50 TO STA 27+00 ROCK ISLAND STA 27+00 TO STA 32+50 ROCK ISLAND STA 32+50 TO STA 38+00 ROCK ISLAND STA 38+00 TO STA 43+50 ROCK ISLAND STA 43+50 TO STA 49+00 ROCK ISLAND STA 49+00 TO STA 54+50 ROCK ISLAND STA 54+50 TO STA 60+00 ROCK ISLAND STA 60+00 TO STA 65+50 ROCK ISLAND STA 65+50 TO STA 71+00 ROCK ISLAND STA 71+00 TO STA 76+50 ROCK ISLAND STA 76+50 TO STA 82+00 ROCK ISLAND STA 82+00 TO STA 87+50 ROCK ISLAND STA 87+50 TO STA 93+00 ROCK ISLAND STA 93+00 TO STA 98+50 ROCK ISLAND STA 98+50 TO STA 104+00 ROCK ISLAND STA 104+00 TO STA 109+50 ROCK ISLAND STA 109+50 TO STA 115+00 ROCK ISLAND STA 115+00 TO STA 117+50 PEDESTRIAN BRIDGE GENERAL INFORMATION PEDESTRIAN BRIDGE BORING LOG PEDESTRIAN BRIDGE HYDRAULICS PEDESTRIAN BRIDGE LAYOUT AND GRADING PLAN PEDESTRIAN BRIDGE SECTION PEDESTRIAN BRIDGE ABUTMENT DETAILS TYPICAL STANDARD DETAILS TYPICAL MISCELLANEOUS DETAILS TYPICAL HANDRAIL AND FENCE DETAILS SITE SPECIFIC DETAILS C511 SIGNAGE & STRIPING PLAN - PETERSON ROAD

BEGIN STATION ROCK ISLAND TRAIL END STATION ROCK ISLAND TRAIL 106+25 MAXIMUM GRADE 8.33% MINIMUM HORIZONTAL CURVE MINIMUM WIDTH 8' TYPICAL WIDTH CROSS-SLOPE LENGTH ROCK ISLAND TRAIL 10,906.62 LF AREA OF DISTURBANCE 18.2 ACRES CONSTRUCTION AREA 22.8 ACRES ANTICIPATED START 09/01/2024 ANTICIPATED CONSTRUCTION END 08/01/2024 10/01/2025 ANTICIPATED STABILIZATION

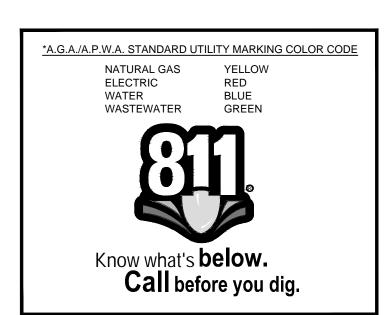
TRAIL DATA DESIGN

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.

SITE IS NATIVE GRASS AND WILL REMAIN NATIVE GRASS.

SAND CREEK

RECEIVING WATER



STATE OF COLORADO DEPARTMENT OF TRANSPORTATION CITY OF COLORADO SPRINGS

Parks, Recreation and Cultural Services Department CAPITAL IMPROVEMENT PROJECT

TRAIL IMPROVEMENT PROGRAM

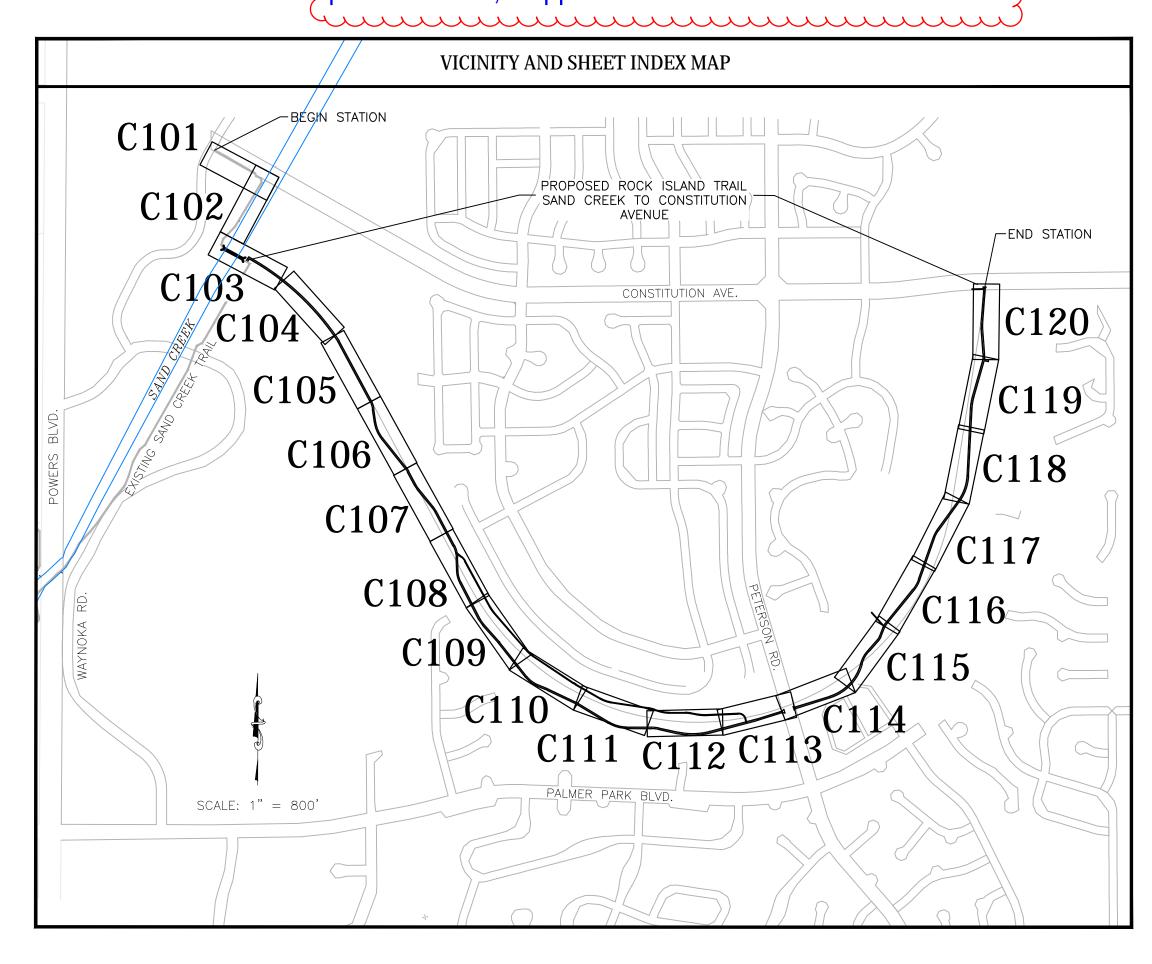
COMBINED FEDERAL AID PROJECT No. TAP M240-162, SubAccT. No.20391

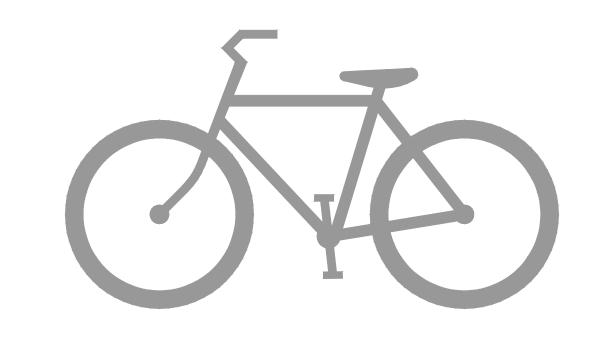
STREET IMPROVEMENTS

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

21 JULY 2024

All CSU comments for CDR193 have been addressed. Further comments will be provided at time of construction plan submittal, if applicable.





APPROVAL SIGNATURES			
TITLE	NAME	SIGNATURE	DATE
DIRECTOR, PARKS, REC. & CULT. SVS PARKS	BRITT HALEY		
OPERATION & DEVELOPMENT MANAGER			
CITY FORESTER			
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
Engineer's Statement:	
to the best of my knowledge and be established by the County for Stre	s prepared under my direction and supervision and is correct belief. Said Plan has been prepared according to the criteria bet Improvement Plans. I accept responsibility for any liability missions on my part in preparing this Plan.
Engineer of Record signature	Date
Owner's Statement: I the owner/developer have read	I and will comply with the requirements of this Street
Improvement Plan.	and win comply with the requirements of this street
Signature	Date
El Paso County:	
The County is not responsible for elevations which shall be confirmed	nly for general conformance with County Design Criteria. the accuracy and adequacy of the design, dimensions, and/or ed at the job site. The County through the approval of this lity for completeness and/or accuracy of this document.
	irements of the El Paso County Land Development Code, s 1 and 2, and Engineering Criteria Manual as amended.
construction for a period of 2 year construction has not started within	.12, these construction documents will be valid for rs from the date signed by the El Paso County Engineer. If ing those 2 years, the Plans will need to be resubmitted for view fees at the Planning and Community Development
County Engineer/ECM Administra	ator Date



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IN PROGRESS NOT FOR CONSTRUCTION
NOT FOR CONSTRUCTION

For and on Behalf of

Kiowa Engineering Corporation



Sheet Revisions	100% SET			Kiowa Proj. No. 1602
	No Revisions:		Constitution Avenue	TAP M240-162
	Revised:	Designer: TAC		SubAcct No. 20391
		Detailer: TEG		
	Void:	Date: 9/30/2024		Sheet Number C000

16028

	SUMMARY OF APPROXIMATE QUANTITIES				
CONTRACT ITEM NO.	CONTRACT ITEM	PROJECT 1	TOTALS		
Item No.	Description	Quantity	Units		
1.1	Construction staking	1	EA		
1.2	Construction zone traffic control signs 30" x 30"	1	LS		
1.3	Mobilization	1	EA		
2.1	Concrete wash out area	2	EA		
2.2	Erosion Control Blanket (ECB)	18,068	SF		
2.3	Sanitary facility	2	EA		
2.4	Seeding & Mulching	40,279	SY		
2.5	Silt Fencing	13,451	LF		
2.6	Stabilized staging area	1	EA		
2.7	Storm Drain/Inlet protection	2	EA		
2.8	Vehicle tracking control	3	EA		
3.1	Clearing and grubbing (Includes trees less than 10" DBH)	18.2	AC		
3.2 3.4	Remove and dispose concrete curb and gutter Remove all concrete rubble located near sta 39+50	54	LF LS		
3.4		1 144	SF		
3.6	Remove and dispose concrete sidewalk Remove and dispose trees (Includes trees 10" DBH or greater)	12	EA		
3.7	Remove and dispose trees (includes trees 10 DB11 of greater) Remove east concrete bridge abutment	1	EA EA		
3.7	Remove west concrete bridge abutment Remove west concrete bridge abutment	1	LS		
4.1	Topsoil	950	CY		
4.2	Excavation - cut to fill on site	2,000	CY		
4.3	Scarify, rake and revegetate existing trails, 5-foot avg width	9,742	LF		
5.1	Trail Section A - Concrete - 12' wide	9,518	LF		
5.2	Trail Section B - Concrete - 10' wide attached	300	LF		
5.3	Trail Section C - Concrete - 10' wide detached	619	LF		
5.4	Trail Section D - Concrete - 8' wide	114	LF		
5.5	Trail Section E - Concrete - 6' wide	140	LF		
5.6	Trail Section F - Breeze - 6' wide	2,675	LF		
6.1	Aggregate base course, Class 6	4,636	CY		
6.2	Smooth rail fence	7,876	LF		
6.3	Removable locking steel posts	3	EA		
7.1	Concrete - curb and gutter - COS Type 1	30	LF		
7.2	Concrete - curb and gutter - COS Type 3	176	LF		
7.3	Concrete - patterned - 4-inch thick	652	SF		
7.4	Concrete - pedestrian ramp - COS standard	4	EA		
7.5	Concrete - refuge island - 6-inch thick	144	SF		
7.6	Hot Mix Asphalt Pavement - 6-inch thick	65	SY		
7.7	Inlet - CDoT std. Type C	1	EA		
8.1	Bridge - 210' x 12' (inside)	1	EA		
8.2	MSE retaining wall	390	SF		
9.1	flared end section - HDPE - 18-inch	2	EA		
9.2	Pipe - HDPE - 18-inch	67	LF		
9.3	riprap - Type L 18-inch	88	CY		
10.1	pavement markings - Epoxy coated - 12'x18" Ped xing	6	EA		
10.2 10.3	pavement markings - Epoxy coated - stripe - 4" yellow dbl pavement markings - Epoxy coated - stripe - 4" yellow "island warning"	28 71	LF LF		
10.3	Signage - Traffic - R1-6 "Yield to Pedestrians", 12" x 36"	2	EA		
11.1	Signage - Traffic - R1-6	2	EA EA		
11.2	Signage - Traffic - K4-7 Keep Kight, 24 x 30 Signage - Traffic - W11-1 "Trail Crossing Ahead", 30" x 30"	2	EA EA		
11.3	Signage - Traffic - W11-1 Traff Crossing Affect 4, 50 x 50 Signage - Traffic - W11A-2 "Pedestrian Crossing", 24" x 24"	2	EA EA		
11.5	Signage - Traffic - W11A-2 Tedestrian Clossing, 24 X 24 Signage - Traffic - W16-7P Arrow, 12" x 18"	2	EA		
11.6	Signage - Trail - "Riders Dismount", 12" x 18"	2	EA		
11.7	Signage - Trail - "Stop Ahead", 12" x 18"	2	EA		

SWENT STANDARD GRADING AND EROSION CONTROL PLAN NOTES

- 1. 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.

 2. All land disturbing activities must be performed in accordance with and the approved GEC Plan and CSWMP.
- 3. 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
- 4. 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.
- 5. Stormwater discharges from construction sites shall not cause or threaten to cause pollution, contamination, or degradation of State Waters.
 6. All Construction Control Measures shall be maintained until permanent
- stabilization measures are implemented. Temporary Construction Control

 Measures must be removed prior to permit closeout.

 7. Concrete wash water shall not be discharged to or allowed to runoff to
- 7. 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.
- 8. 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.).
- 9. 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.
- 10. 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.
- 11. 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.
- 12. 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
- 13. 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.
- 14. 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.
 15. 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.

 16. 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.

 17. 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.

 18. 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.

KIOWA GENERAL NOTES

- 1. All materials and workmanship shall be in conformance with the latest version of Colorado Department of Transportation (CDOT) standard specifications for road and bridge construction and supplemented with the City of Colorado Springs standard specifications.
- 2. The contractor shall notify the owner (city) and engineer of any problem in conforming to the approved plans for any element of the proposed improvements prior to its construction.
- 3. The contractor shall protect all existing facilities in the general area of construction. The contractor shall repair any damage caused by construction operations at no cost to the project.
- 4. Utility lines as shown on these drawings are plotted from the best available information. The contractor shall call 811 for utility locations at least two working days prior to any digging. The contractor shall determine the exact location of all utilities prior to construction and shall protect them from damage during construction.
- 5. Surveying for this project shall be conducted in accordance with CDOT standards.
- 6. 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
- 7. All existing manholes to be marked with t-posts and caution tape prior to commencing with the construction.
- 8. water shall be used as a dust palliative where required. Locations shall be as directed by the engineer. Water will not be paid for separately, but will be subsidiary to the excavation item.
- 9. All removed asphalt will become the property of the contractor and will be disposed of outside project limits.
- 10. The soil to be placed as topsoil material shall be free of refuse, stumps, roots, rocks, brush, weeds, hard clods, toxic substances or other material which would be detrimental to its use on the project. It shall have a minimum p.l. Of 5 but shall not be such heavy clay as to preclude placement with a shoulder machine.
- 11. Salvageable material: material that can be saved or salvaged. Unless otherwise specified in the contract, all salvable material shall become the property of the contractor.
- 12. Topographic data indicated on these drawings was compiled from field surveys. Contractor must verify extent of work within these areas. Dimensions, elevations, and locations of existing structures, pipelines, and utilities are approximate. Where such dimensions or locations determine the limits of the work, such dimensions or locations shall be verified in the field prior to construction.
- 13. The locations of existing structures, pipelines, utilities, etc., shown on the drawings have been approximated. There may be other structures, pipelines, utilities, etc., not shown on the drawings which presently exist in the area of construction. The engineer and/or owner assumes no responsibility for the accuracy or completeness of the information shown. The contractor will be responsible for locating and protecting all impacted existing structures, pipelines, utilities, etc., in the project site.
- 14. The contractor shall carefully preserve all monuments, benchmarks, property markers, reference points, and stakes. In case of his destruction of these, the contractor will be responsible for resetting same, at no cost to the owner, and shall be responsible for any loss of time that may be caused.
- 15. The contractor shall notify the engineer where utilities conflict with the work in conformance with the specifications. Where field verification is noted noted on the plans, this shall require the contractor to determine the location of the facility in question prior to construction. A determination shall be made by the contractor if the current design will conflict with the existing facility and notify the engineer in writing.
- 16. All existing areas disturbed outside the limits of construction activities shall be re-vegetated in conformance with the specifications at no additional cost to the project. All existing roadways and sidewalks damaged during construction shall be repaired or reconstructed in conformance with the specifications.
- 17. Signage shall follow the "manual on uniform traffic control devices" latest edition and the city of Colorado Springs traffic engineering signage & pavement marking standards. Contractor shall submit to the county a traffic control plan prior to commencing with the work.
- 18. Contractor shall establish trail corridor with stakes. The owner will then mark all trees to be saved in a walkthrough of the trail corridor with the contractor.
- 19. All discharges to drainage courses and storm sewer systems must comply with the applicable provisions of the Colorado water quality control act and the Colorado discharge permit regulations, and are subject to inspection by El Paso county and CDPHE. El Paso has a ms-4 permit. Contractor shall devise and implement a permanent plan for periodic removal and disposal of sediment from erosion control facilities and for maintenance of erosion control facilities.
- 20. The contractor shall obtain construction stormwater discharge permit from CDPHE.



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Kiowa Engineering Corporation Date

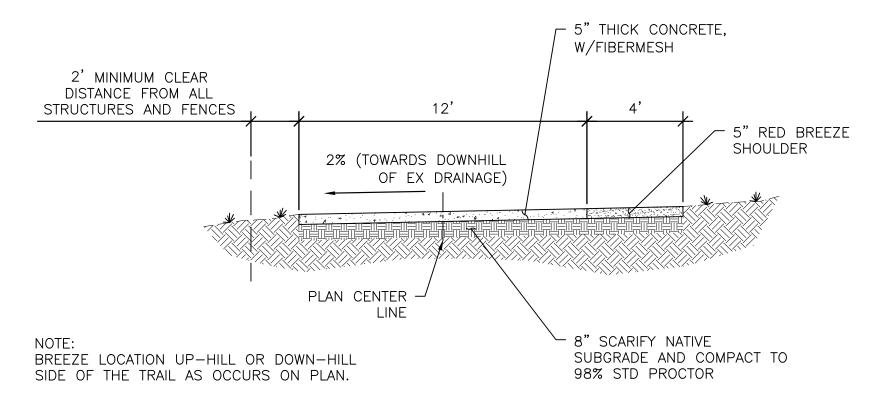
For and on Behalf of

Kiowa Engineering Corporation

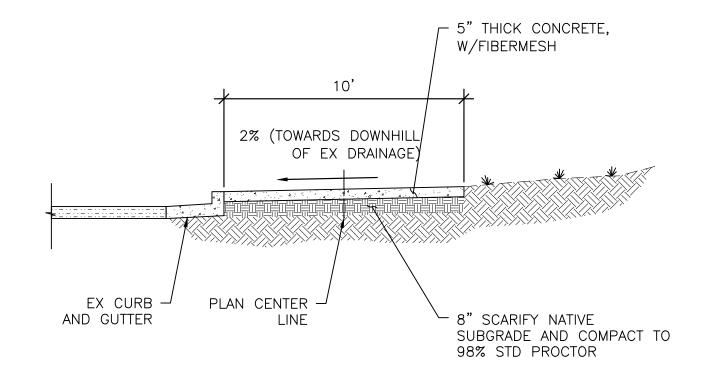
> 1604 South 21st Street Colorado Springs, Colorado 80904 (719) 630-7342

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Sheet Revisions	100% SET		Kiowa Proj. No. 16028
	No Revisions:	Creek to Constitution Avenue SUMMARY OF QUANTITIES	TAP M240-162
	Revised:	Designer: TAC	SubAcct No. 20391
		Detailer: TEG	
	Void:	Date: 9/30/2024	Sheet Number C001

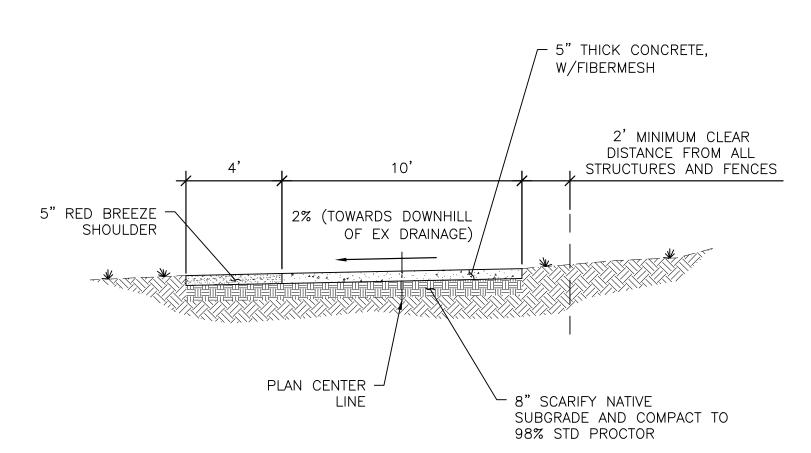


TRAIL SECTION A - 12' CONCRETE TRAIL **C002** Scale: 1" = 4'

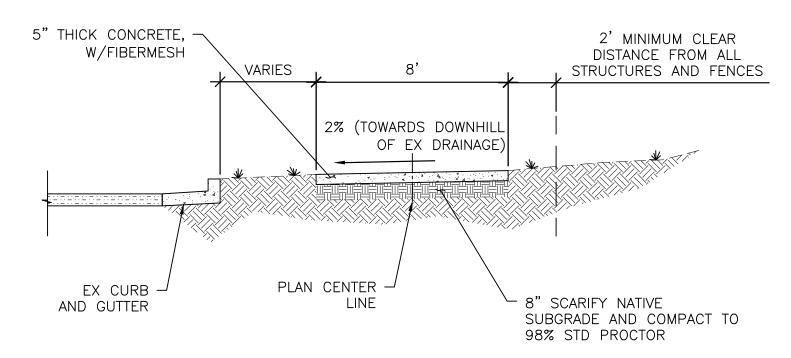


TRAIL SECTION B - 10' CONCRETE TRAIL

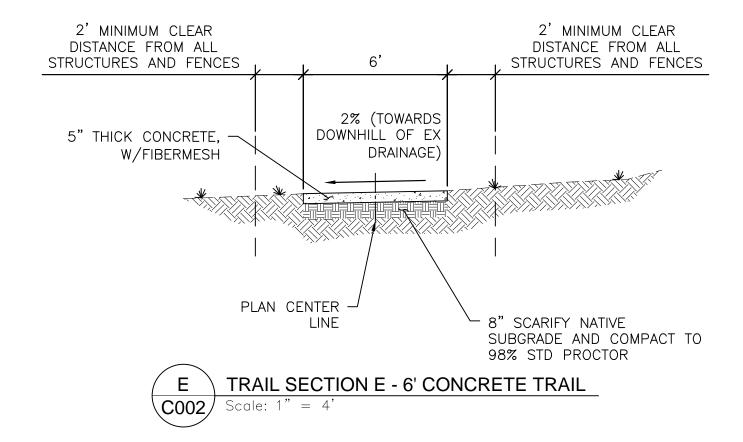
C002 | Scale: 1" = 4'

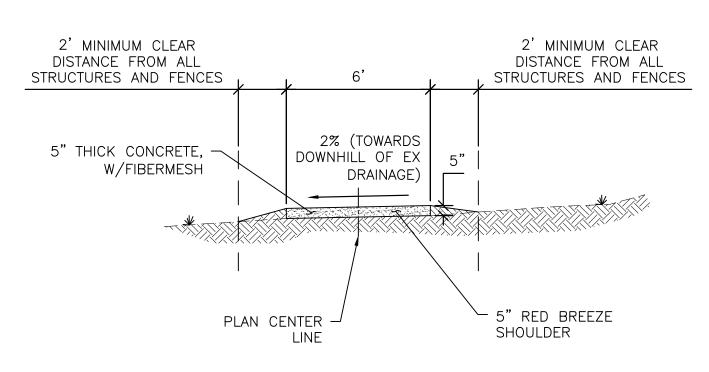


TRAIL SECTION C - 10' CONCRETE TRAIL DETACHED C002 | Scale: 1" = 4'



TRAIL SECTION D - 8' CONCRETE TRAIL DETACHED **C002** Scale: 1" = 4'





TRAIL SECTION F - 6' BREEZE TRAIL **C002** Scale: 1" = 4'

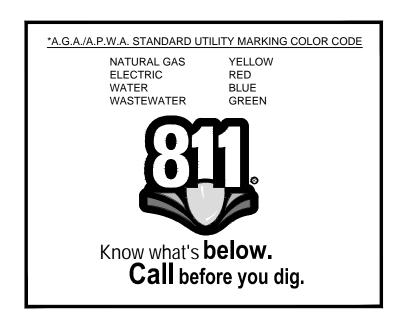
KNOWN UTILITIES WITHIN PROJECT LIMITS

CONTRACTOR MUST VERIFY ALL UTILITIES PRIOR TO EXCAVATION

- 1. COLORADO SPRINGS UTILITIES: ELECTRIC & GAS DIVISIONS
- 2. CENTURY LINK
- 3. LEVEL 3 COMMUNICATIONS
- 4. CIMARRON WATER AND SANITATION DISTRICT
- 5. CHEROKEE METRO DISTRICT

PRE-EXCAVATION CHECKLIST

- GAS AND OTHER UTILITY LINES OF RECORD SHOWN ON PLANS.
- ☐ UTILITIES CENTRAL LOCATING CALLED AT LEAST 2 BUSINESS DAYS AHEAD. (811)
- ☐ UTILITIES LOCATED AND MARKED.
- ☐ EMPLOYEES BRIEFED ON MARKING AND COLOR CODES.*
- ☐ EMPLOYEES TRAINED ON EXCAVATION AND SAFETY PROCEDURES FOR NATURAL GAS LINES.
- ☐ WHEN EXCAVATION APPROACHES GAS LINES, EMPLOYEES EXPOSE LINES BY CAREFUL PROBING AND HAND DIGGING.



<u>LEGEND</u>

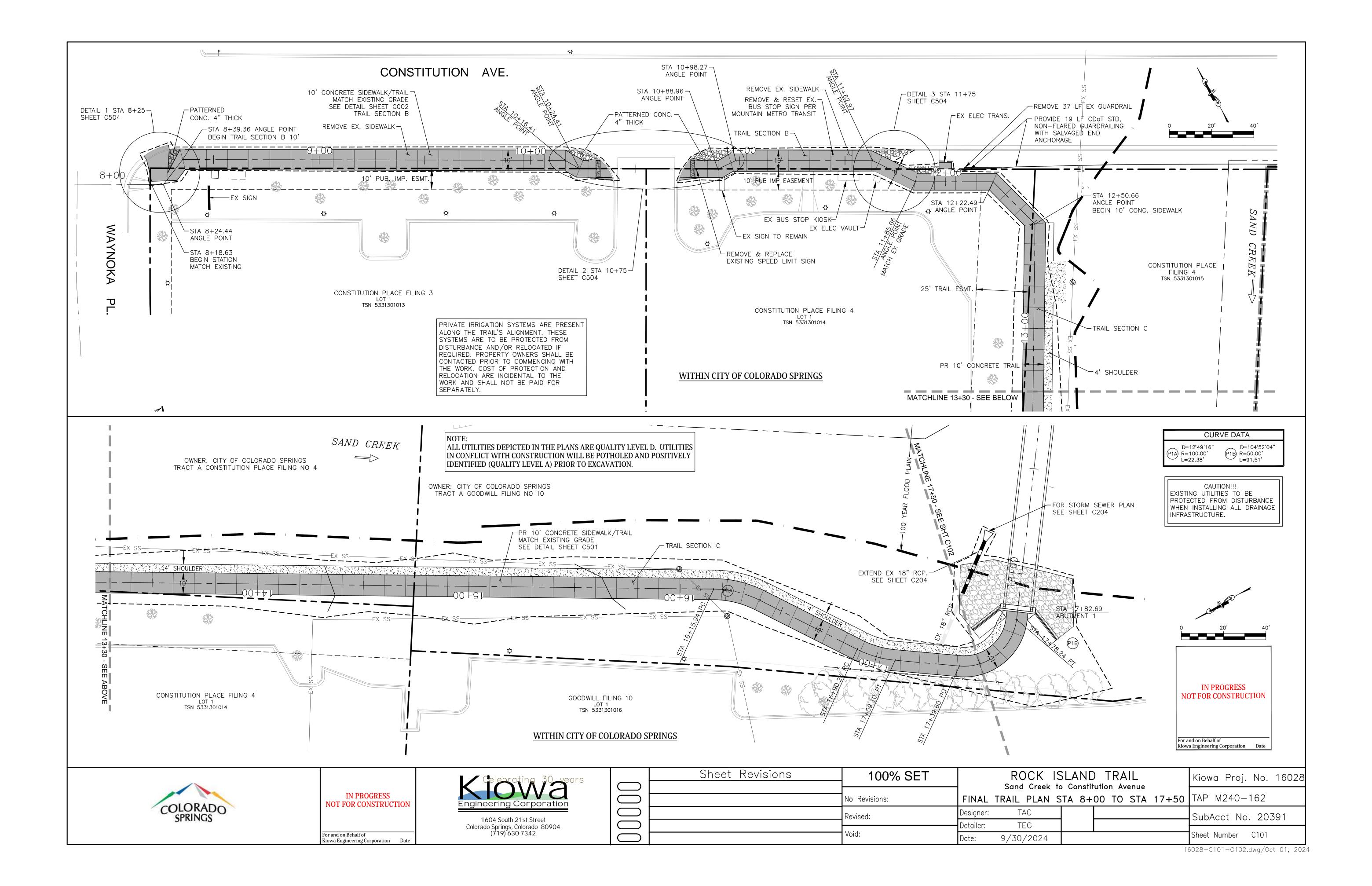
<u> </u>	BOLLARD FENCE GUARDRAIL
- 0	SIGN ELECTRIC POWER POLE
—— E ——— E	ELECTRIC LINE ELECTRIC VAULT
G	GAS MAIN GAS VENT
O T —	SANITARY SEWER MAIN SANITARY SEWER MANHOLE TELEPHONE MAIN
Φ	TELEPHONE MANHOLE TELEPHONE RISER
₩ ₩	WATER MAIN WATER VALVE

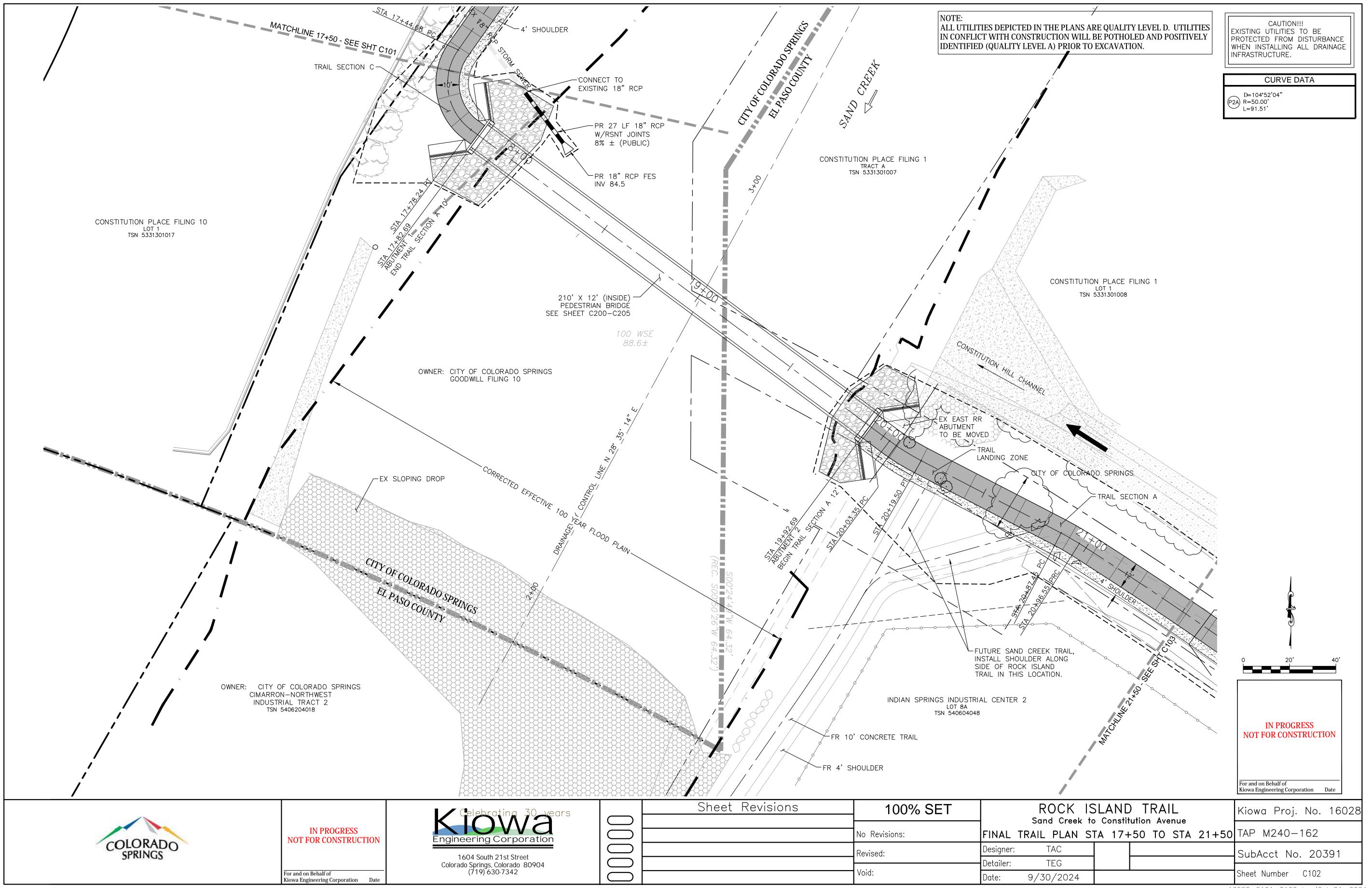


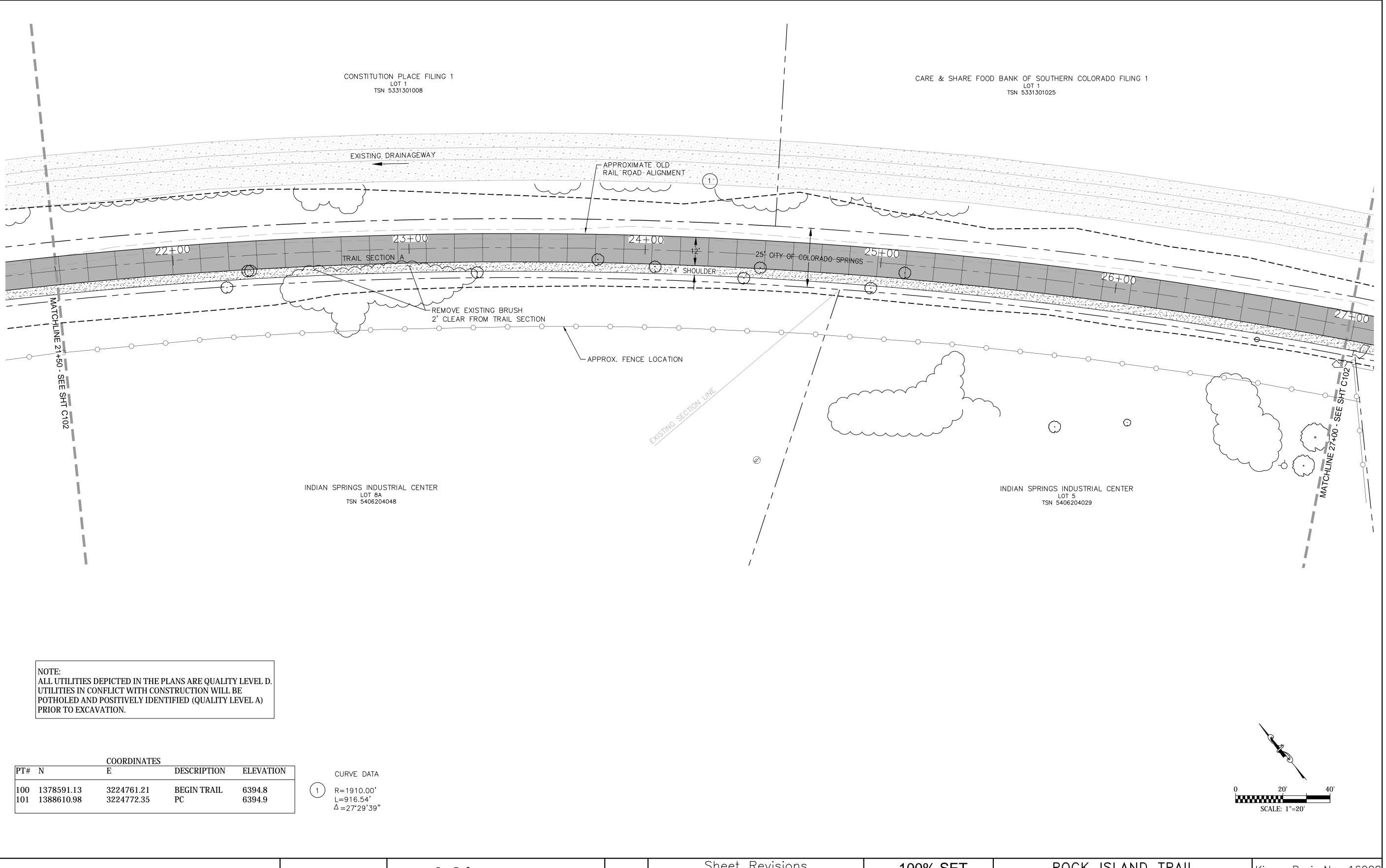
IN PROGRESS NOT FOR CONSTRUCTION For and on Behalf of

Kiowa Engineering Corporation Date

$\overline{}$	Sheet Revisions	100% SET	ROCK ISLAND TRAIL	Kiowa Proj. No. 16028
5 5		No Revisions:	Sand Creek to Constitution Avenue GENERAL NOTES	TAP M240-162
) [Revised:	Designer: TAC	SubAcct No. 20391
$\supset \lceil$			Detailer: TEG	
⊃ [Void:	Date: 9/30/2024	Sheet Number C002



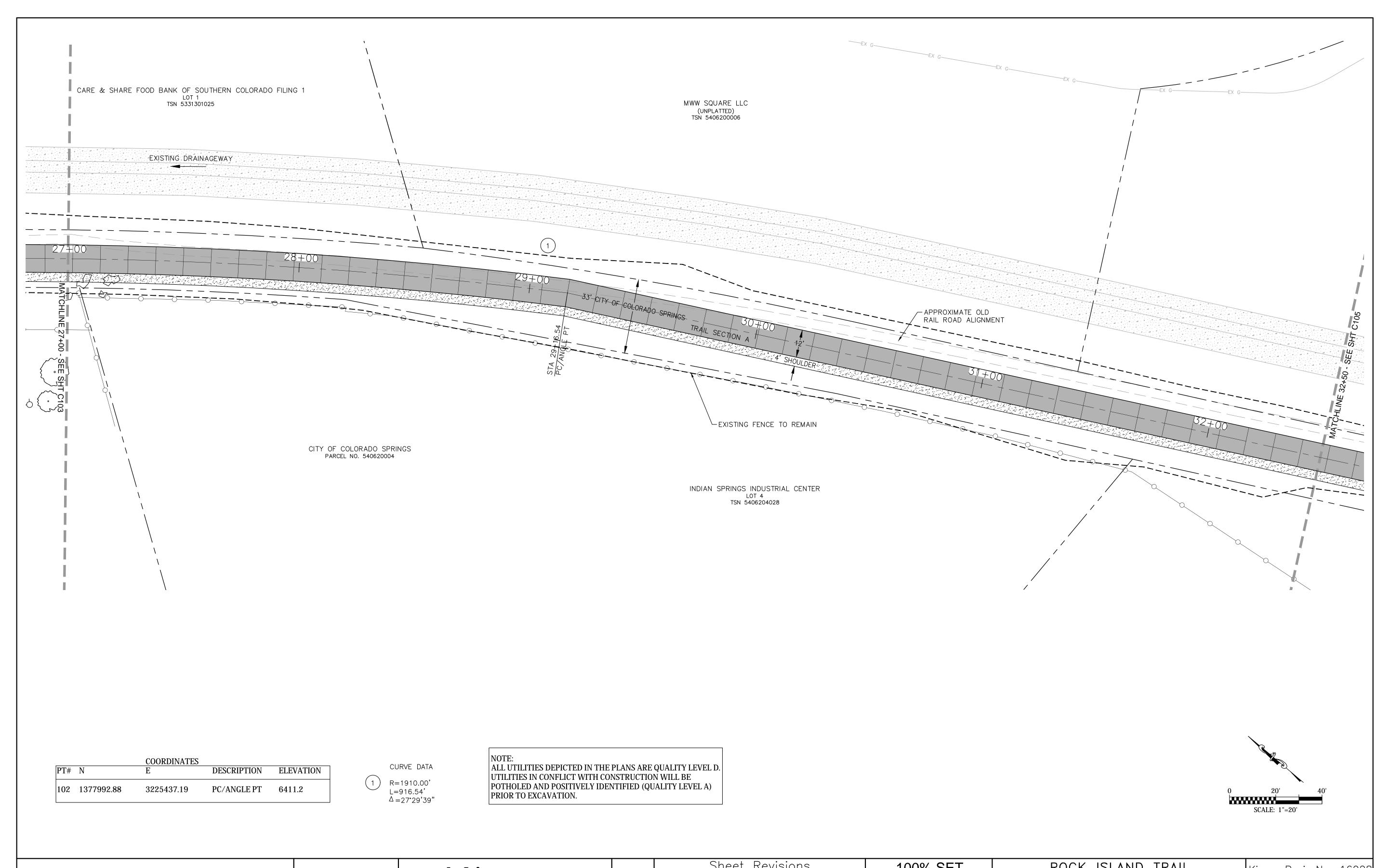






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ļ	Sheet Revisions	100% SET	ROCK ISLAND TRAIL Sand Creek to Constitution Avenue Kiowa Proj. No. 16028
ŀ		No Revisions:	FINAL TRAIL PLAN STA 21+50 TO STA 27+00 TAP M240-162
ļ		Revised:	Designer: TAC SubAcct No. 20391
		Void	Detailer: TEG Sheet Number C103



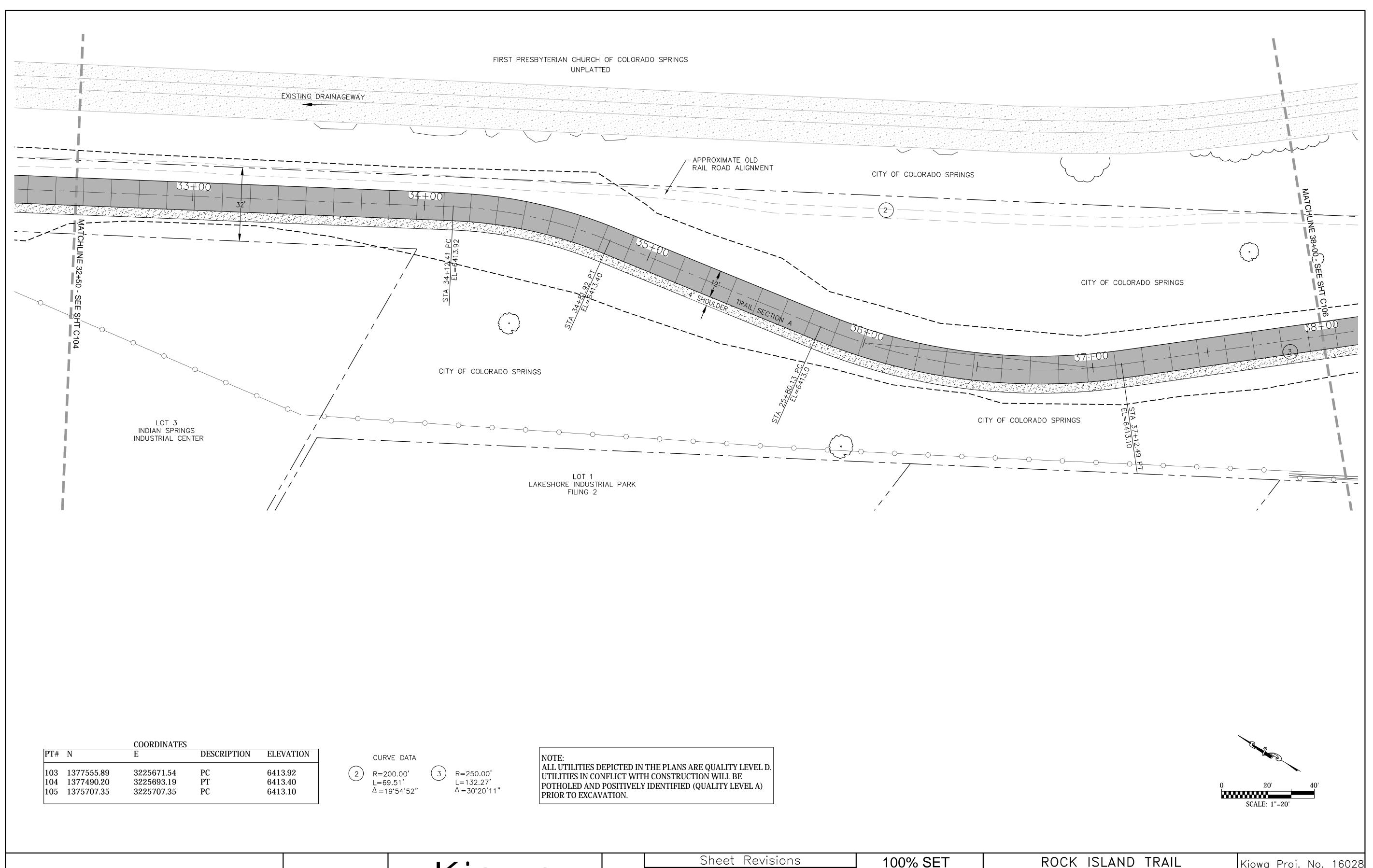


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For and on Behalf of Kiowa Engineering Corporation Date



_	Sheet Revisions	100% SET		Kiowa Proj. No. 16028
<u> </u>			Sand Creek to Constitution Avenue	
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\cap		Revised:	Designer: TAC	SubAcct No. 20391
\bigcap			Detailer: TEG	345/1001 110. 2000 1
\bigcap		Void:	Date: 9/30/2024 S	Sheet Number C104





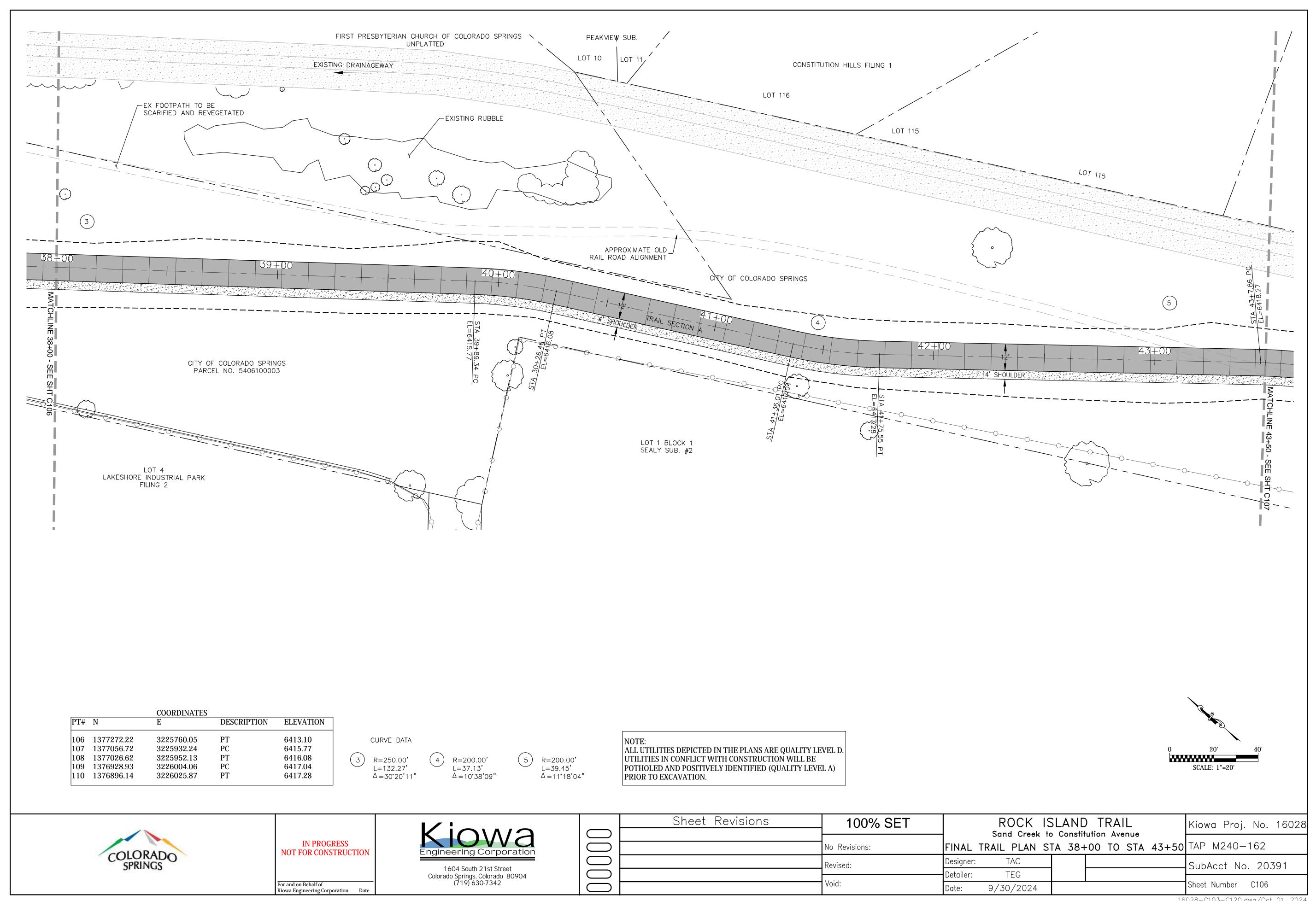
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For and on Behalf of Kiowa Engineering Corporation Date Engineering Corporation

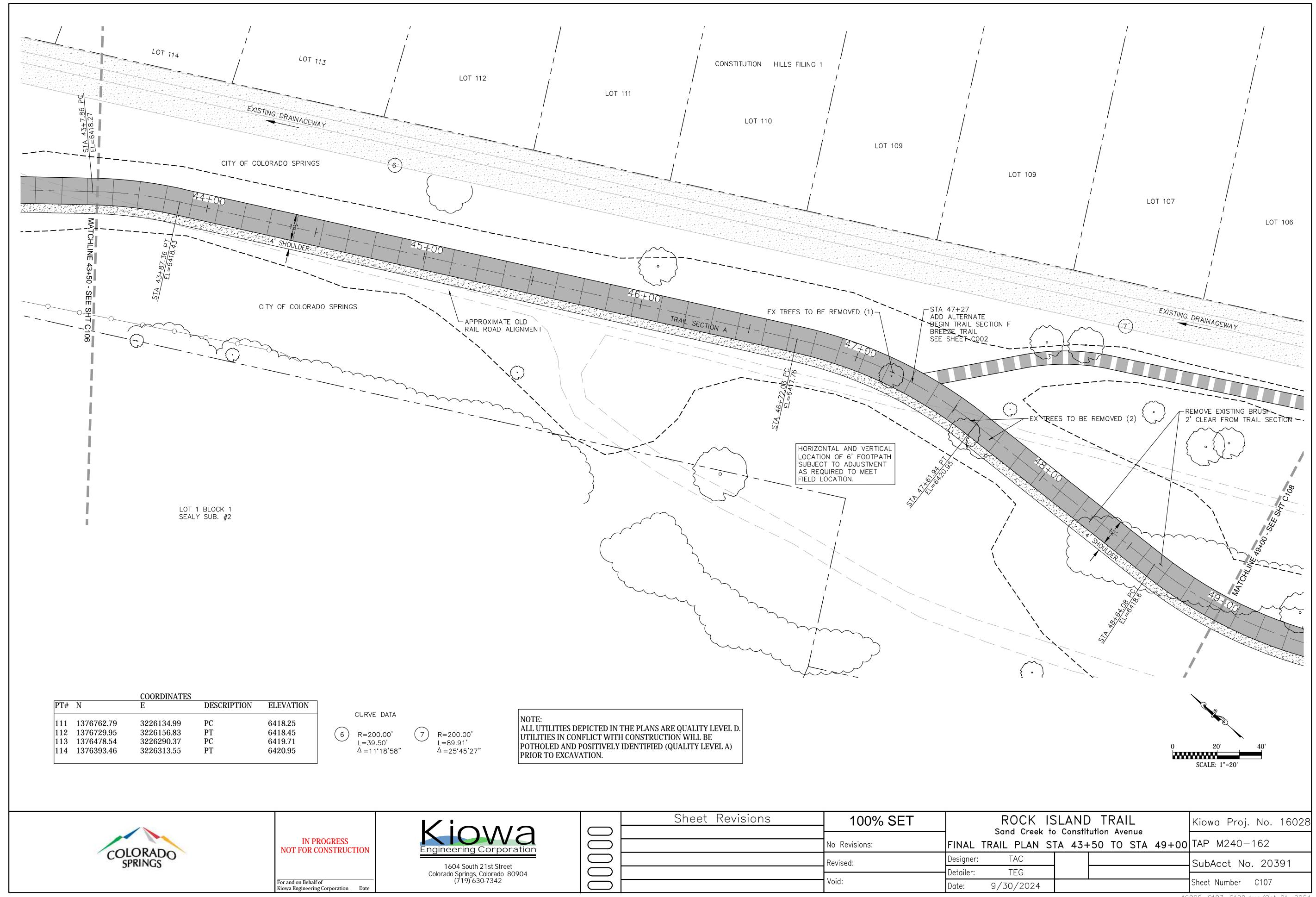
1604 South 21st Street
Colorado Springs, Colorado 80904
(719) 630-7342

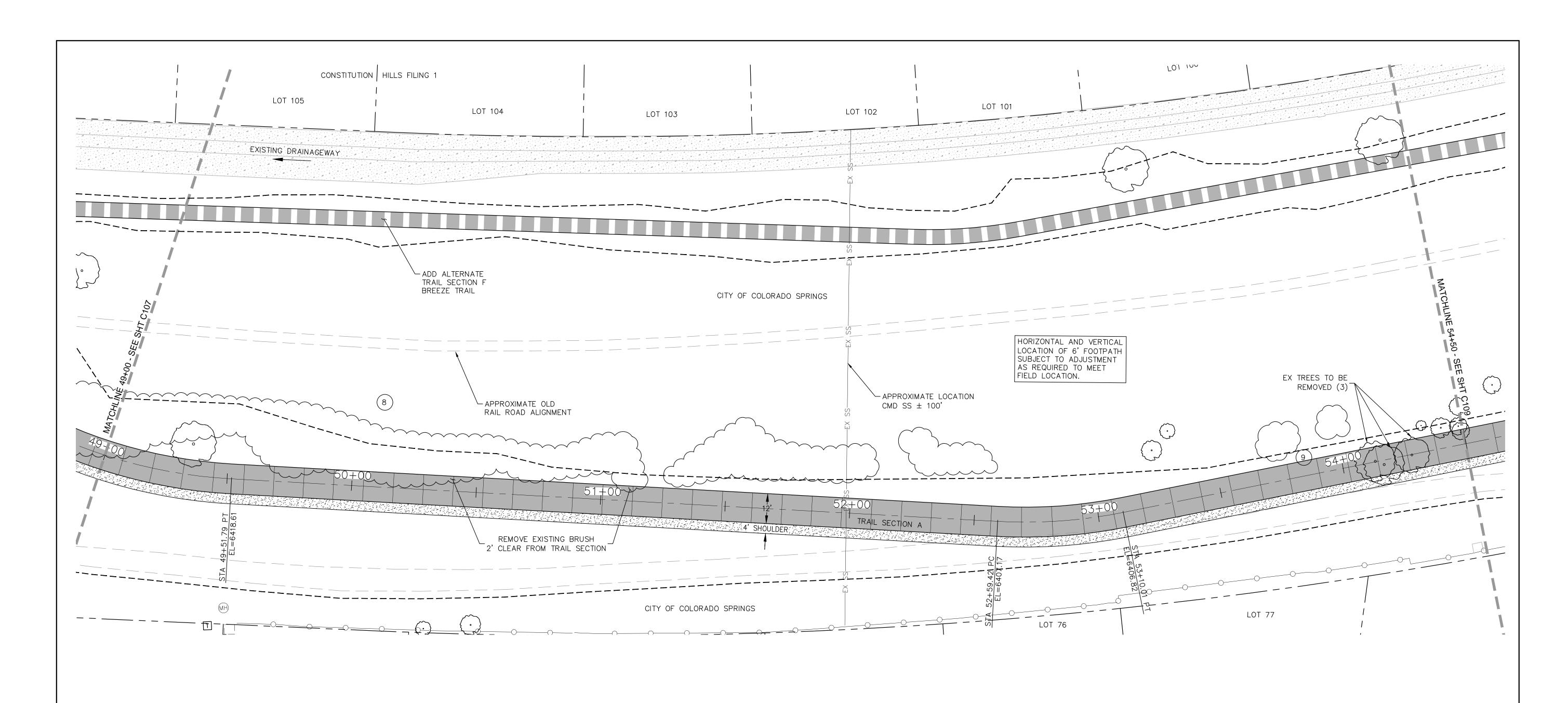
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100% SET		Kiowa Proj. No. 16028
No Revisions:	Sand Creek to Constitution Avenue FINAL TRAIL PLAN STA 32+50 TO STA 38+00	TAP M240-162
Revised:	Designer: TAC	SubAcct No. 20391
	Detailer: TEG	
Void:	Date: 9/30/2024	Sheet Number C105
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16028-C103-C120.dwg/Oct 01, 2024





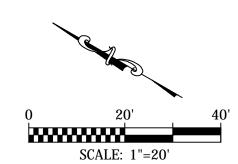
ALL UTILITIES DEPICTED IN THE PLANS ARE QUALITY LEVEL D. UTILITIES IN CONFLICT WITH CONSTRUCTION WILL BE POTHOLED AND POSITIVELY IDENTIFIED (QUALITY LEVEL A) PRIOR TO EXCAVATION.

		COORDINATES		
PT#	N	E	DESCRIPTION	ELEVATION
115	1376290.41	3226317.15	PC	6418.82
116	1376206.27	3226339.74	PT	6415.40
117	1375933.01	3226481.05	PC	6407.15
118	1375891.41	3226509.75	PT	6406.82

CURVE DATA

(8) R=200.00' L=87.71' $\Delta = 25^{\circ}7'38''$

R=200.00' L=50.68' Δ=14'31'08"



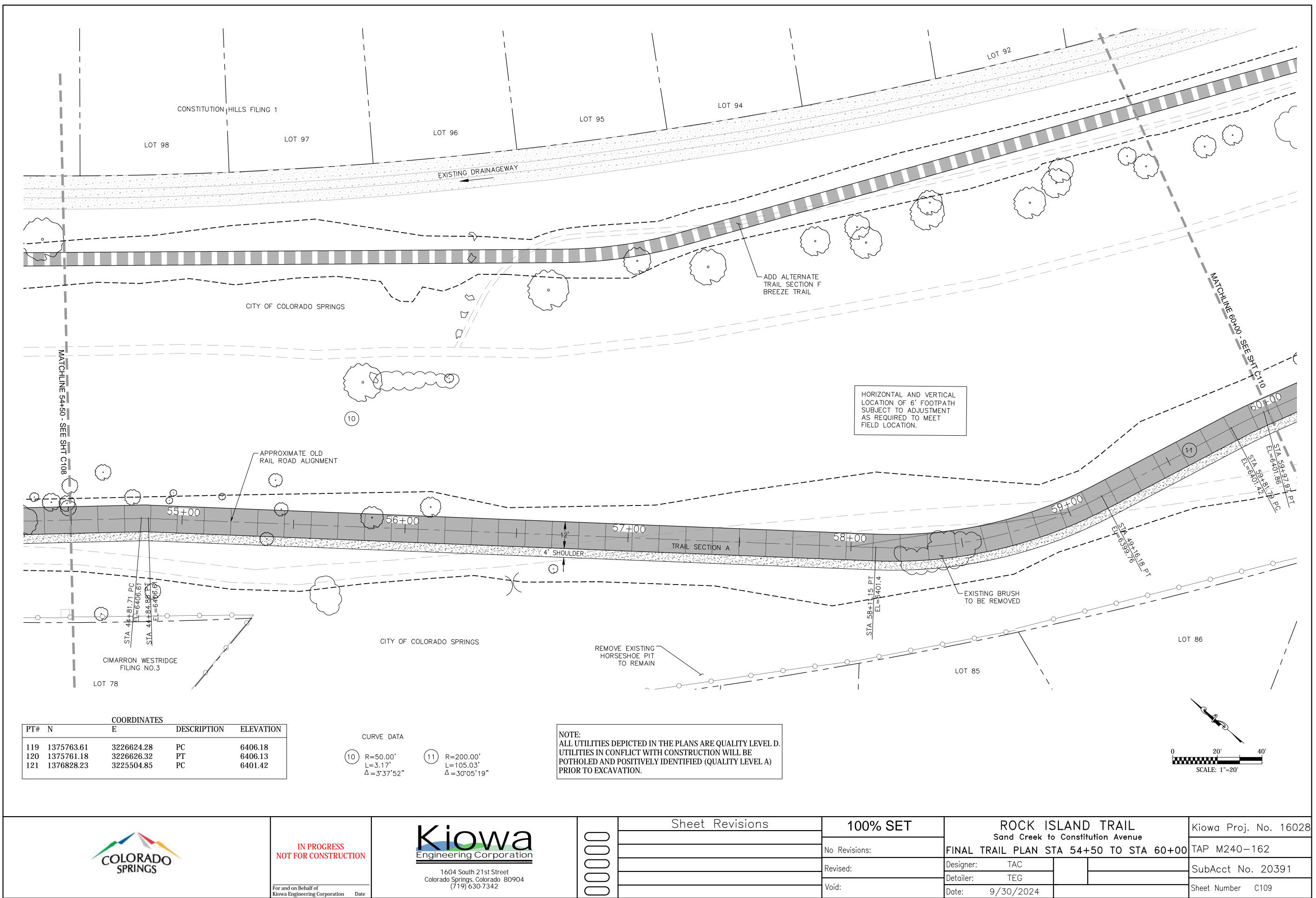


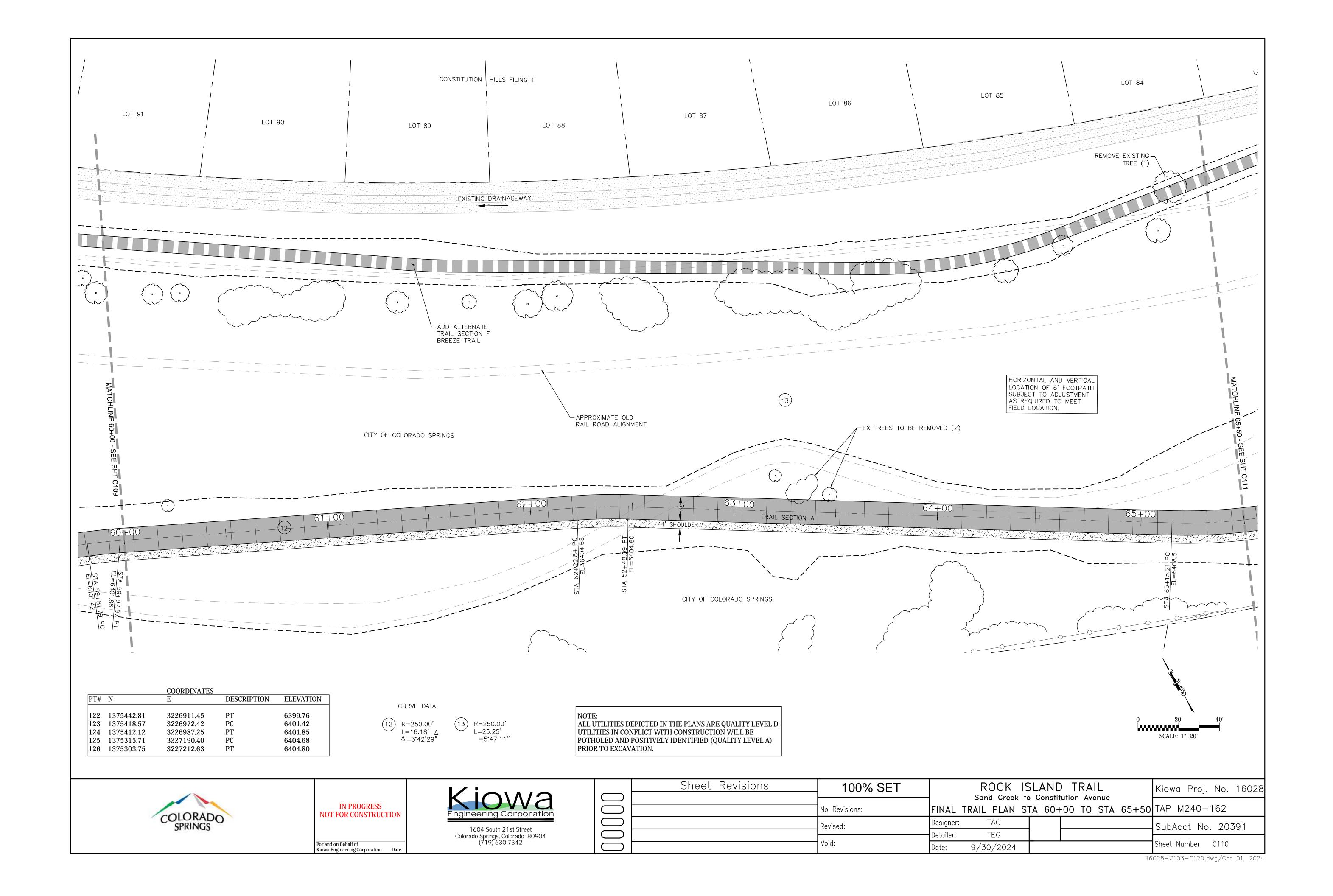
IN PROGRESS NOT FOR CONSTRUCTION

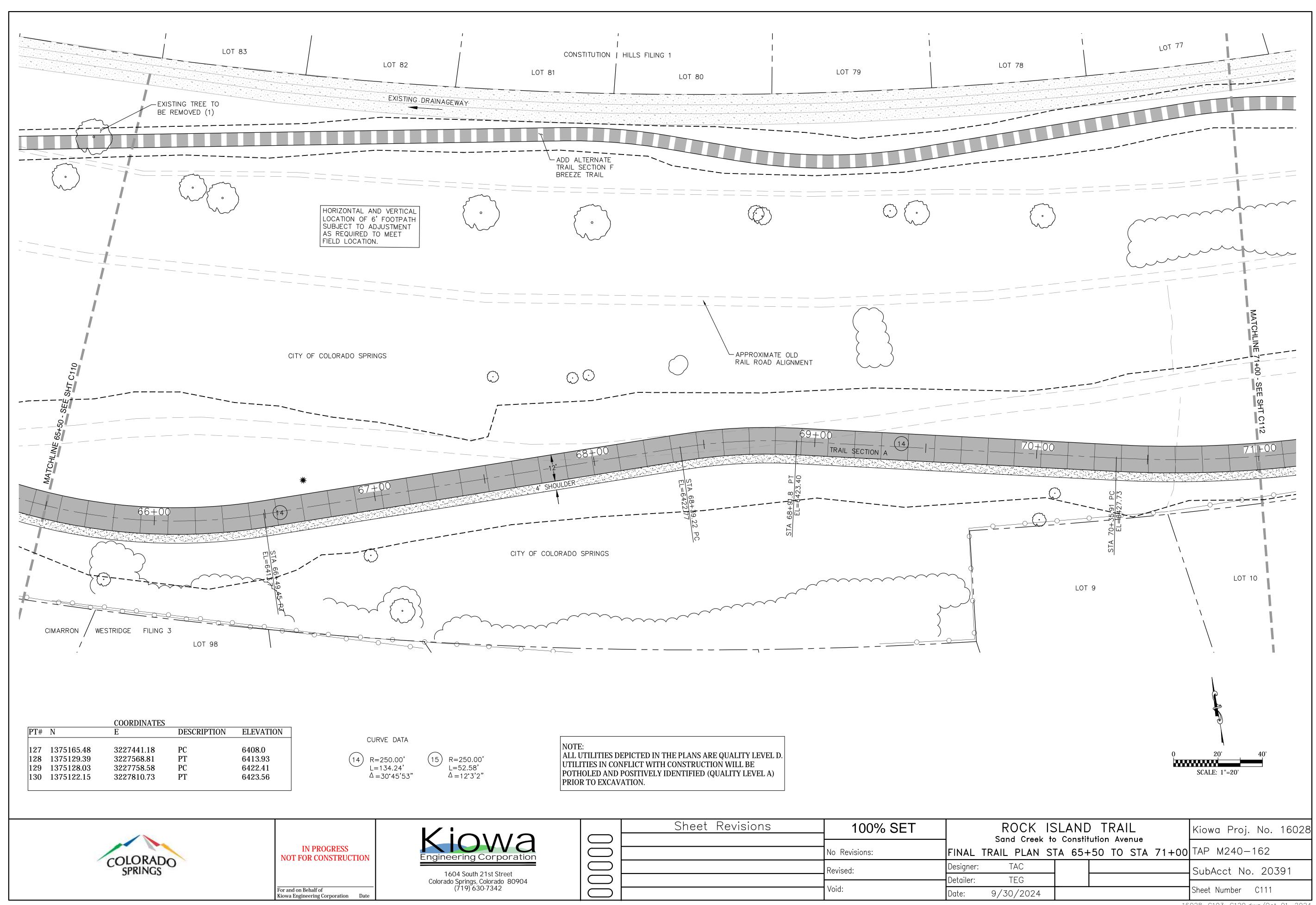
For and on Behalf of Kiowa Engineering Corporation Date

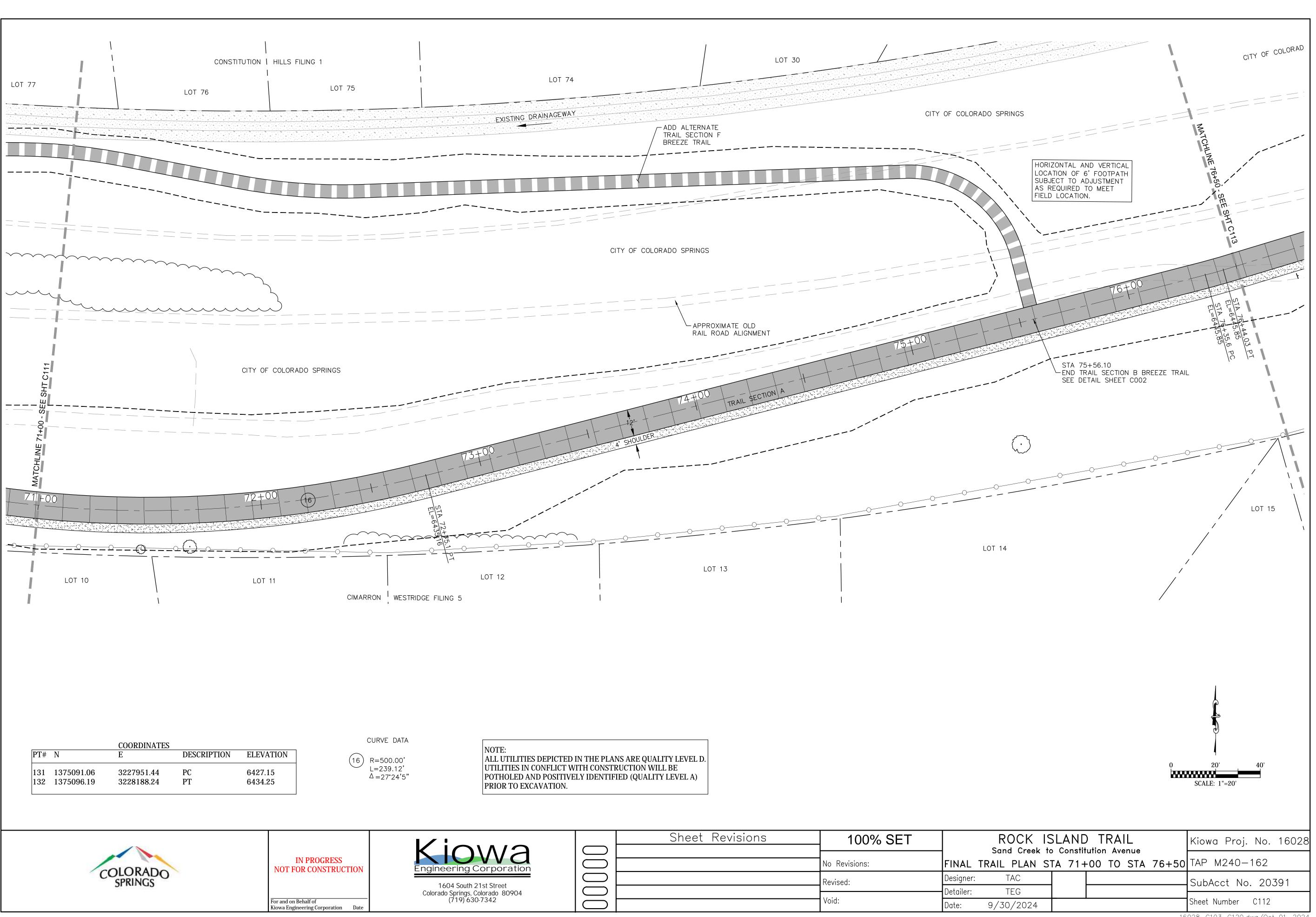


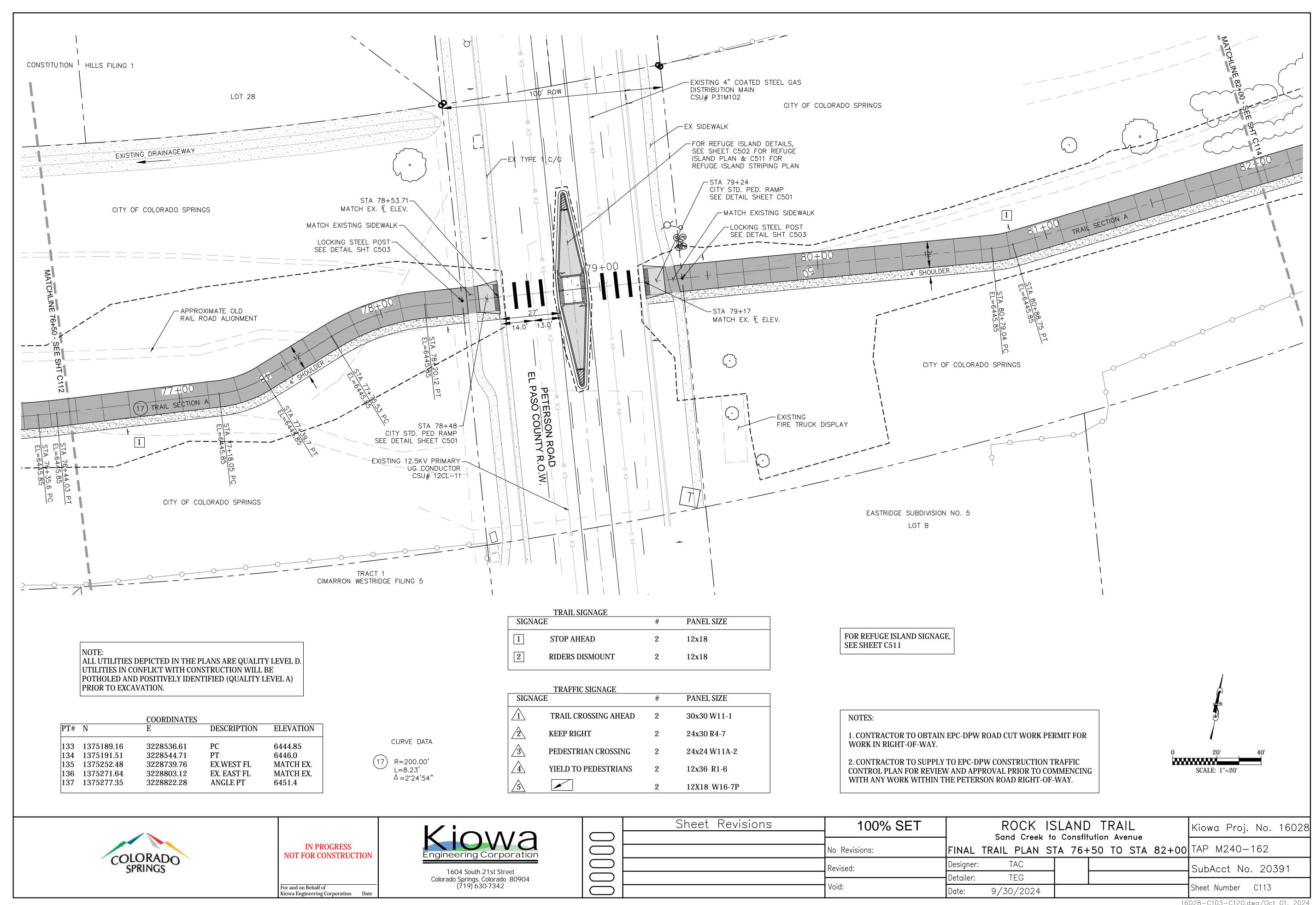
	Sheet Revisions	100% SET	ROCK ISLAND TRAIL Sand Creek to Constitution Avenue	Kiowa Proj. No. 16028
		No Revisions:	FINAL TRAIL PLAN STA 49+00 TO STA 54+50	TAP M240-162
		Revised:		SubAcct No. 20391
)(Void:	Detailer: TEG Date: 9/30/2024	Sheet Number C108

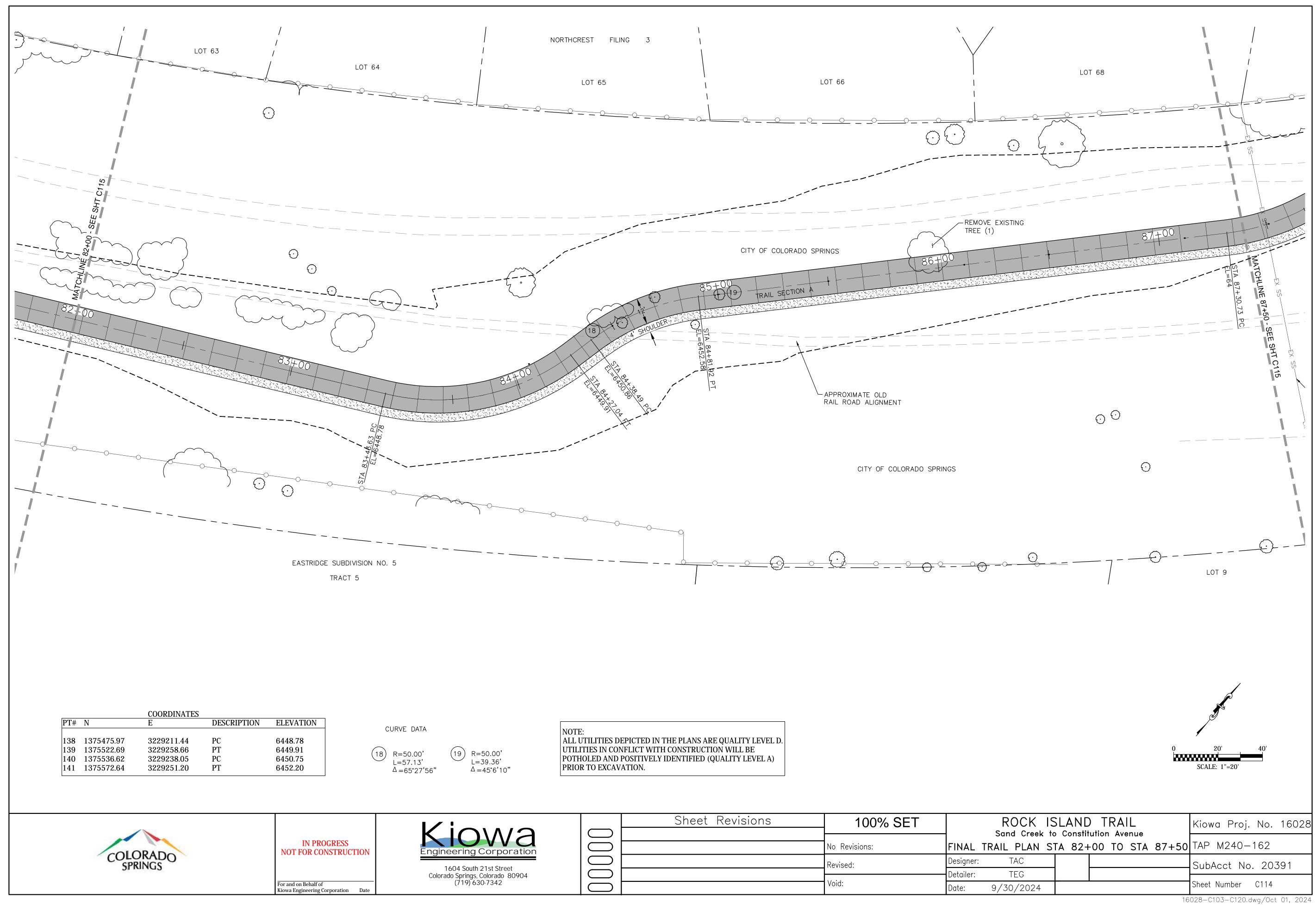


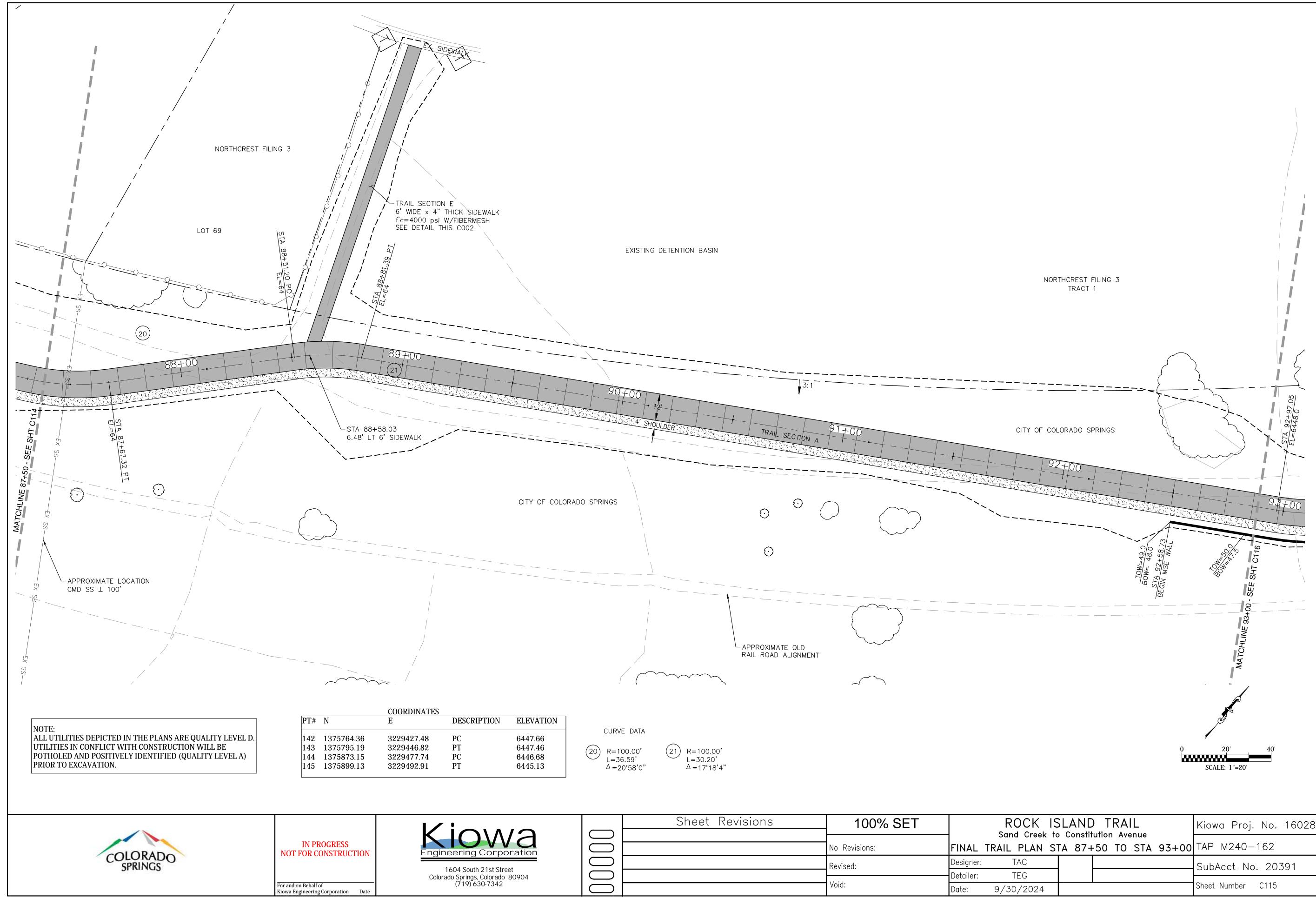


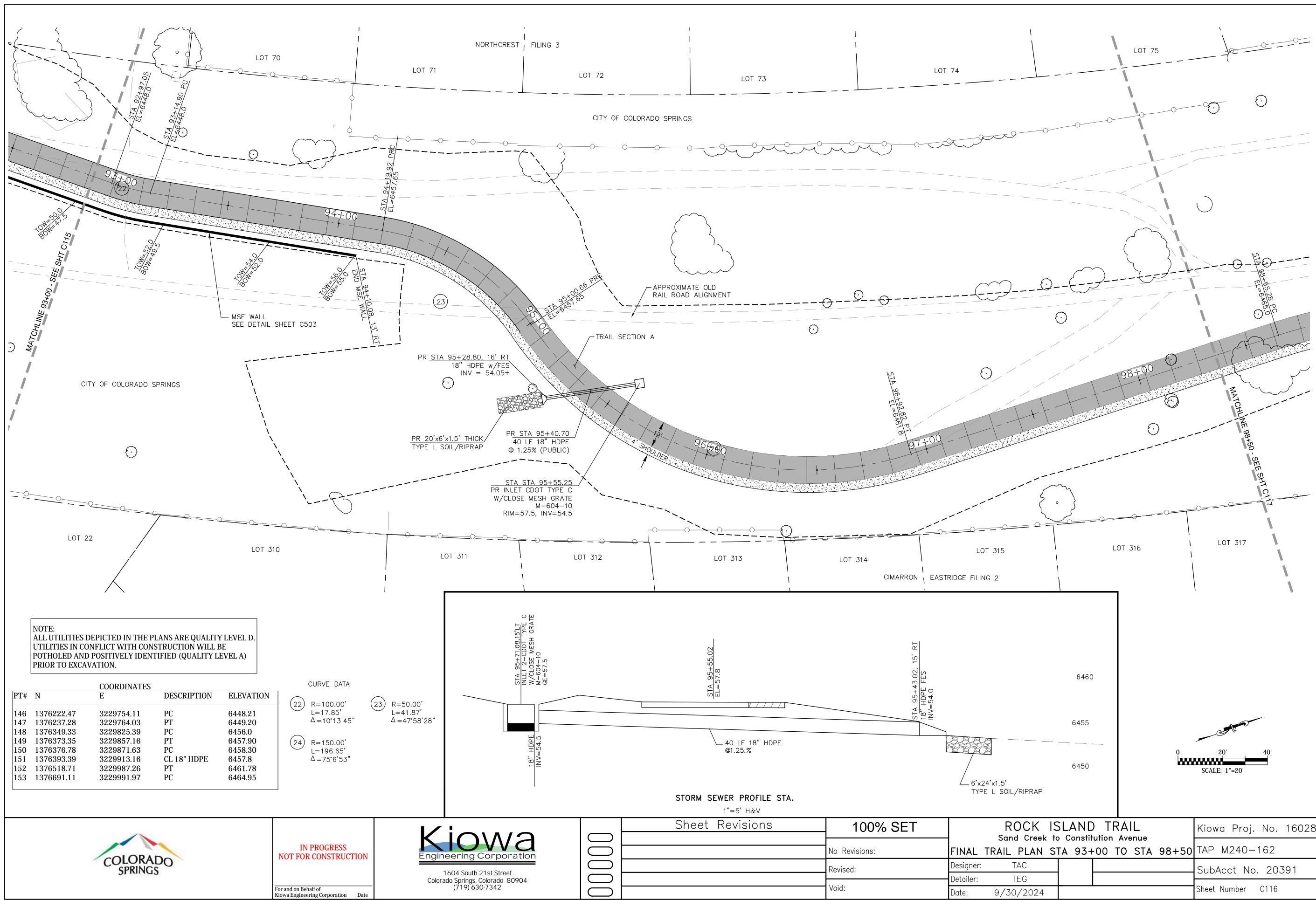


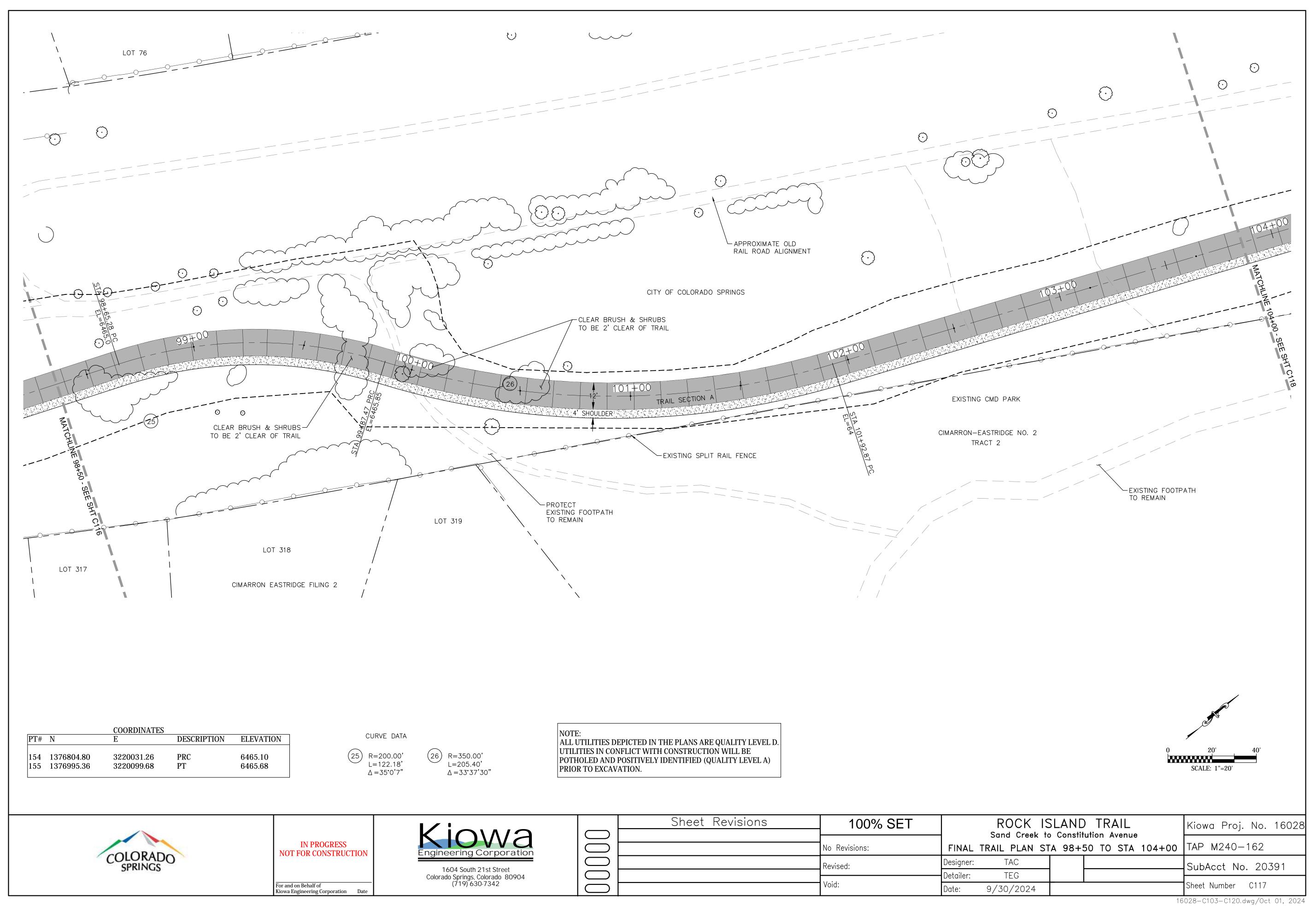


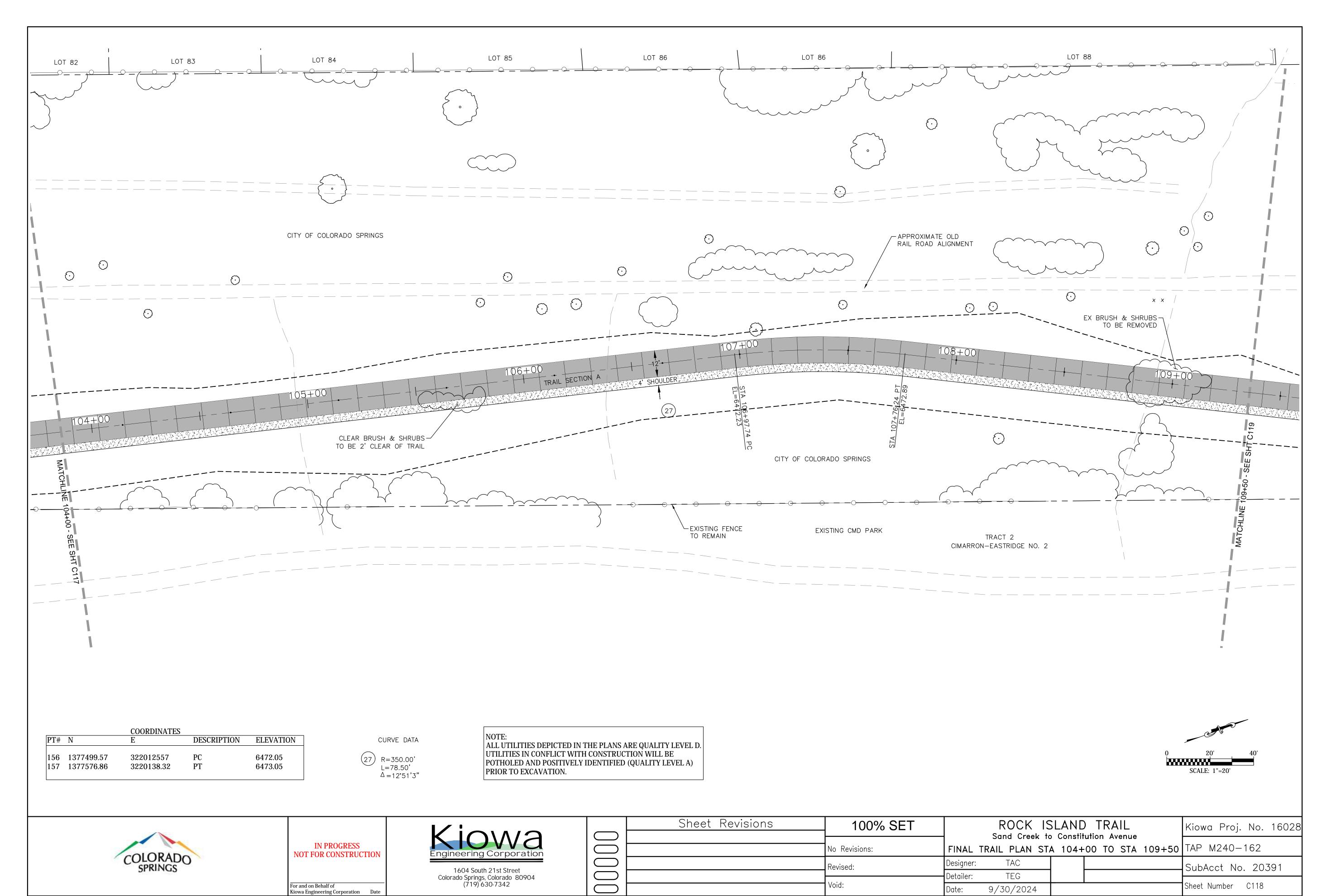




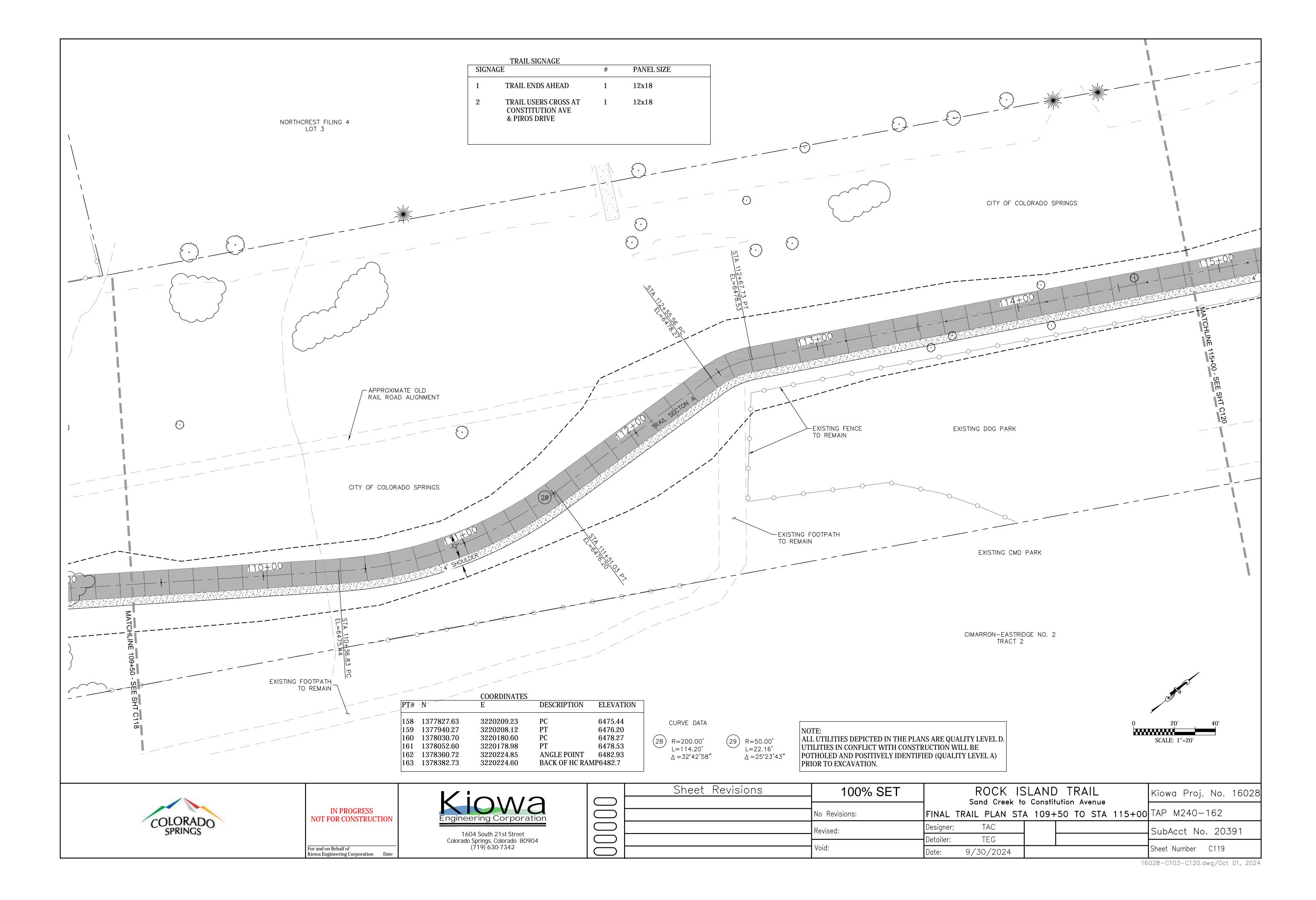








Sheet Number C118 16028-C103-C120.dwg/Oct 01, 2024



TRAIL SIGNAGE SIGNAGE PANEL SIZE TRAIL ENDS AHEAD 12x18 TRAIL USERS CROSS AT 12x18 CONSTITUTION AVE & PIROS DRIVE

MATCH EXISTING — SIDEWALK TRAIL SECTION D-8' WIDE, 4" THICK SIDEWALK f'c=4,000 psi w/FIBERMESH EXISTING TYPE 1-CURB AND GUTTER PROPOSED 30 LF — TYPE 1 CURB AND GUTTER LOCKING STEEL POST — SEE DETAIL SHEET C503

NOTE:
ALL UTILITIES DEPICTED IN THE PLANS ARE QUALITY LEVEL D.
UTILITIES IN CONFLICT WITH CONSTRUCTION WILL BE
POTHOLED AND POSITIVELY IDENTIFIED (QUALITY LEVEL A)
PRIOR TO EXCAVATION.

		COORDINATES		
PT#	N	E	DESCRIPTION	ELEVATION
158	1377827.63	3220209.23	PC	6475.44
159	1377940.27	3220208.12	PT	6476.20
160	1378030.70	3220180.60	PC	6478.27
161	1378052.60	3220178.98	PT	6478.53
162	1378360.72	3220224.85	ANGLE POINT	6482.93
163	1378382.73	3220224.60	BACK OF HC RAM	MP6482.7
163	1378382.73	3220224.60	BACK OF HC RAM	MP6482.7



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For and on Behalf of Kiowa Engineering Corporation Date



Sheet Revisions	100% SET	ROCK ISLAND TRAIL Sand Creek to Constitution Avenue	Kiowa Proj. No. 16028
	No Revisions:	FINAL TRAIL PLAN STA 115+00 TO STA 117+50	TAP M240-162
	Revised:	Designer: TAC	SubAcct No. 20391
	Void:	Detailer: TEG Date: 9/30/2024	Sheet Number C120

PEDESTRIAN BRIDGE GENERAL INFORMATION

SPECIFICATIONS FOR BRIDGE GIRDER AND DECK UNIT (ITEM 628)

<u>GENERAL</u>

IT IS THE CONTRACTOR'S RESPONSIBILITY TO INSTALL AND ERECT A FULLY ENGINEERED, PREFABRICATED BRIDGE GIRDER AND DECK UNIT. THIS WORK SHALL CONSIST OF ALL LABOR, MATERIALS, AND EQUIPMENT FOR INSTALLATION OF THE SUPERSTRUCTURE AS SHOWN ON THE PLANS. FABRICATION AND DELIVERY OF THE BRIDGE GIRDER AND DECK UNIT SHALL BE FURNISHED BY THE CITY OF COLORADO SPRINGS. FABRICATION AND CONSTRUCTION OF THE BRIDGE AND ITS COMPONENTS SHALL COMPLY WITH ALL APPLICABLE PROVISIONS OF AASHTO STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES. THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING ALL DIMENSIONS AND ELEVATIONS ON THE PLANS.

GEOMETRY

SPAN LENGTHS, DECK WIDTH AND ELEVATIONS SHALL BE IN ACCORDANCE WITH BRIDGE PLANS.

REQUIREMENTS FOR PEDESTRIAN AND BICYCLE RAILING SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF AASHTO STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES.

DESIGN DATA

THE SUPERSTRUCTURE SHALL BE DESIGNED FOR A MINIMUM PEDESTRIAN LOAD OF 90 psf The superstructure shall also be designed for a vehicle load of 20,000 pounds (H10 TRUCK).

OTHER LOADS FOR SUPERSTRUCTURE DESIGN SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF AASHTO GUIDE SPECIFICATIONS FOR DESIGN OF PEDESTRIAN BRIDGES.

MATERIALS

THE BRIDGE SHALL BE FABRICATED FROM HIGH STRENGTH, SELF-WEATHERING, LOW ALLOY, ATMOSPHERIC CORROSION RESISTANT ASTM A847 COLD-FORMED WELDED SQUARE AND RECTANGULAR TUBING AND ASTM A588, ASTM A606, OR ASTM A 242 PLATE AND STRUCTURAL STEEL SHAPES (fy=50,000 psi). ALL BOLTS SHALL BE ASTM A325 HIGH STRENGTH BOLTS. DECK SHALL BE 6" THICK CDOT CLASS D REINFORCED CONCRETE OVER 20 GAGE GALVANIZED STEEL FORM DECKING. REINFORCING STEEL SHALL BE GRADE 60 STEEL REBAR.

EXPANSION JOINT MATERIAL SHALL MEET AASHTO M-213.

SHOP DRAWINGS

THE CONTRACTOR SHALL SUBMIT SHOP FABRICATION DRAWINGS AND DESIGN CALCULATIONS TO THE CITY OF COLORADO SPRINGS FOR APPROVAL. ALL DRAWINGS AND CALCULATIONS THAT ARE SUBMITTED SHALL BE APPROVED, SIGNED, AND SEALED BY A PROFESSIONAL ENGINEER REGISTRATED IN THE STATE OF COLORADO.

DESIGN DATA

- ESIGN DATA
 UNIFORM PEDESTRIAN LOAD = 85 psf
- VEHICLE LOAD = 10,000 lbs (H5 TRUCK)
- REINFORCED CONCRETE CLASS BZ: fc=4,000psi
 ABUTMENT STRUCTURAL STEEL: AASHTO M-183 (ASTM A-36)

BRIDGE DESCRIPTION

- PRE-FABRICATED SINGLE SPAN PEDESTRIAN BRIDGE
- WITH SELF-WEATHERING STEEL AND WITH CONCRETE DECKING CDoT CLASS D
- · LENGTH = 210 FEET (STA 18+87)
- WIDTH = 12 FEET RAILING HEIGHT = 54 INCHES (MINIMUM)

SOILS LEGEND

LEGEND

TOPSOIL.

- FILL: POORLY TO WELL—GRADED SAND WITH SILT (SP—SM, SW—SM) WITH OCCASIONAL CLAYEY TO SILTY SAND LAYERS, SLIGHTLY MOIST TO MOIST, TAN TO BROWN. OCCASIONAL ASPHALT DEBRIS IN BORING 4.
- POORLY TO WELL-GRADED SAND WITH SILT (SP-SM, SW-SM) WITH OCCASIONAL POORLY GRADED SAND (SP) AND SILTY TO CLAYEY LAYERS, MEDIUM DENSE TO VERY DENSE, MOIST TO WET, TAN TO GRAY.
- CLAYSTONE BEDROCK, VERY HARD, MOIST, DARK GRAY.

DRIVE SAMPLE, 2—INCH I.D. CALIFORNIA LINER SAMPLE.

- 25/12 DRIVE SAMPLE BLOW COUNT. INDICATES THAT 25 BLOWS OF A 140-POUND HAMMER FALLING 30 INCHES WERE REQUIRED TO DRIVE THE SAMPLER 12 INCHES.
- $\stackrel{ op}{=}$ depth to water level and number of days after drilling measurement was made.
- → DEPTH AT WHICH BORING CAVED.

NOTE

- 1. THE EXPLORATORY BORINGS WERE DRILLED ON MARCH 17, 2011 WITH A 4-INCH DIAMETER CONTINUOUS FLIGHT POWER AUGER.
- 2. THE LOCATIONS OF THE EXPLORATORY BORINGS WERE MEASURED APPROXIMATELY BY TAPING FROM FEATURES SHOWN ON THE SITE PLAN PROVIDED.
- 3. THE ELEVATIONS OF THE EXPLORATORY BORINGS WERE OBTAINED BY INTERPOLATION BETWEEN CONTOURS ON THE SITE PLAN PROVIDED.
- 4. THE EXPLORATORY BORING LOCATIONS AND ELEVATIONS SHOULD BE CONSIDERED ACCURATE ONLY TO THE DEGREE IMPLIED BY THE METHOD USED.
- 5. THE LINES BETWEEN MATERIALS SHOWN ON THE EXPLORATORY BORING LOGS REPRESENT THE APPROXIMATE BOUNDARIES BETWEEN MATERIAL TYPES AND THE TRANSITIONS MAY BE GRADUAL.
- 6. GROUND WATER LEVELS SHOWN ON THE LOGS WERE MEASURED AT THE TIME AND UNDER CONDITIONS INDICATED. FLUCTUATIONS IN THE WATER LEVEL MAY OCCUR WITH TIME.
- 7. LABORATORY TEST RESULTS:

 WC = WATER CONTENT (%) (ASTM D 2216);

 DD = DRY DENSITY (pcf) (ASTM D 2216);

 +4 = PERCENTAGE RETAINED ON NO. 4 SIEVE (ASTM D 422);

 -200 = PERCENTAGE PASSING NO. 200 SIEVE (ASTM D 1140);

 LL = LIQUID LIMIT (ASTM D 4318);

 PI = PLASTICITY INDEX (ASTM D 4318);

 NP = NON-PLASTIC (ASTM D 4318);

 WSS = WATER SOLUBLE SULFATES (%) (AASHTO T 290).

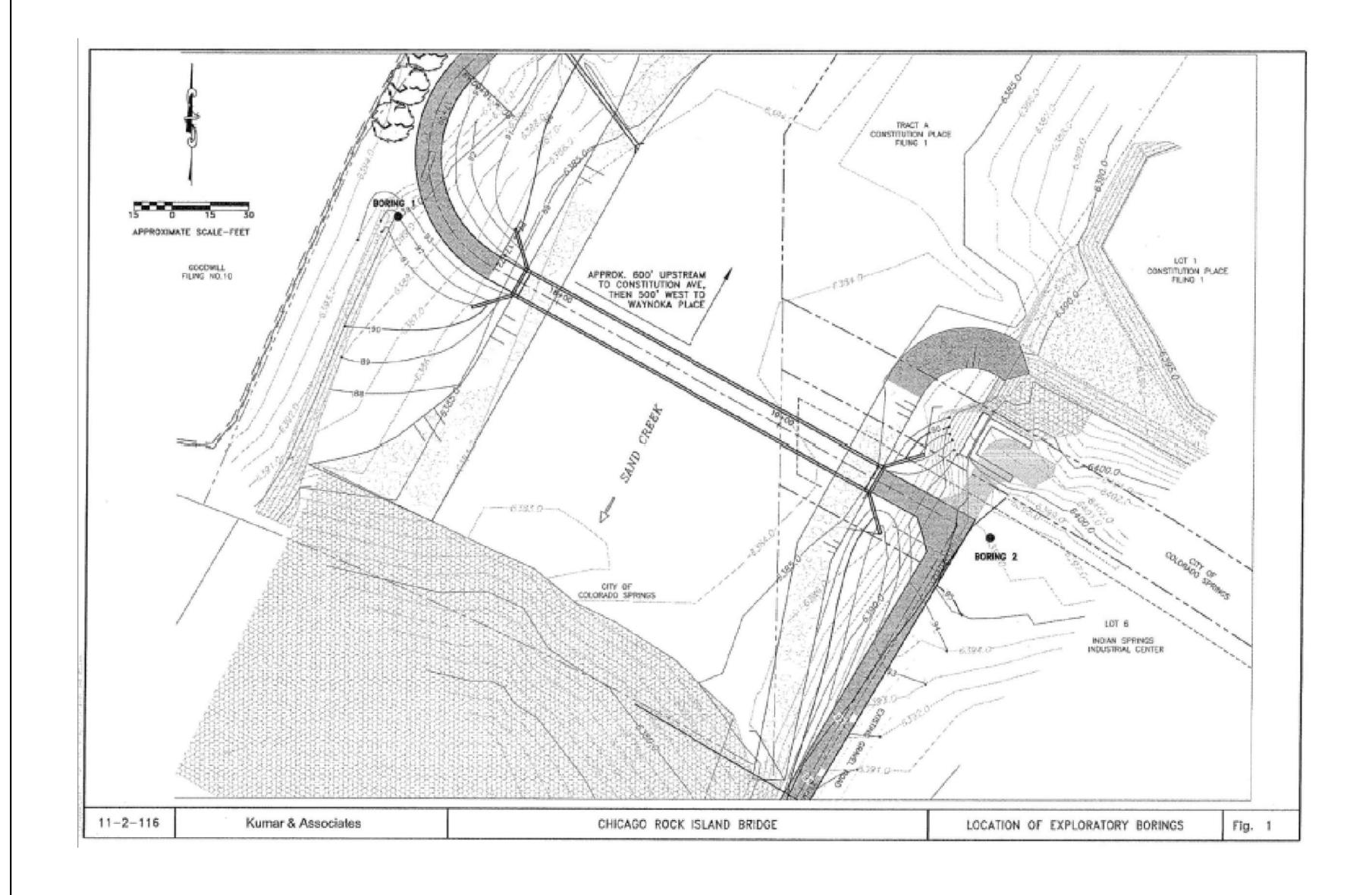


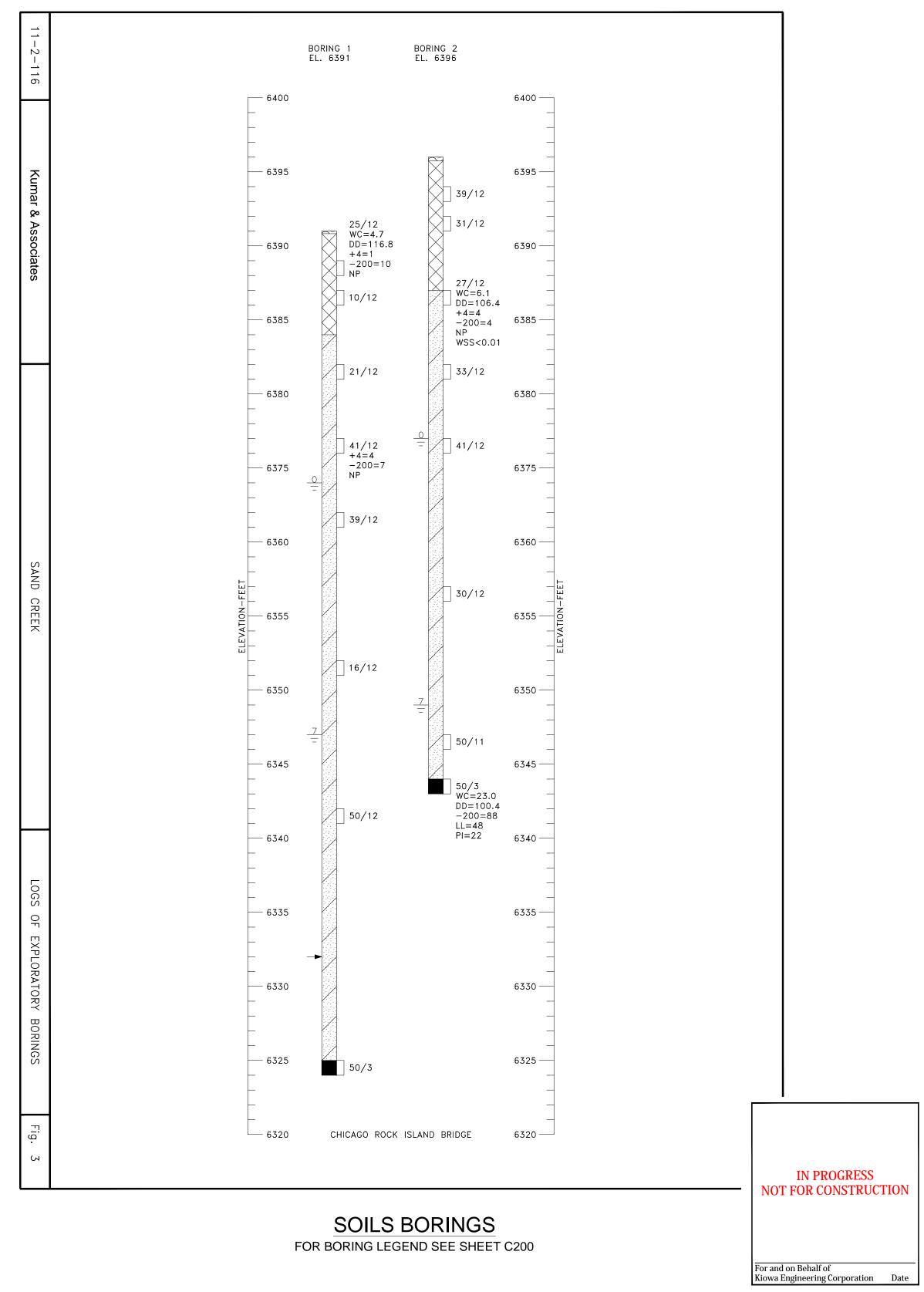


Colorado Springs, Colorado 80904 (719) 630-7342



Sheet Revisions	100% SET	ROCK ISLAND TRAIL	Kiowa Proj. No. 16028
	No Revisions:	Sand Creek to Constitution Avenue Pedestrian Bridge General Information	TAP M240-162
	Revised:	Designer: TAC	SubAcct No. 20391
	Void:	Detailer: TEG Date: 09/24/2024	Sheet Number C200









	Sheet Revisions 100% SE		ROCK ISLAND TRAIL	Kiowa Proj. No. 16028
		No Revisions:	Sand Creek to Constitution Avenue Pedestrian Bridge Boring Log	TAP M240-162
		Revised:	Designer: TAC	SubAcct No. 20391
			Detailer: TEG	
		Void:	Date: 09/24/2024	Sheet Number C201

RECURRENCE INTERVAL IN YEARS

SOURCE: FINAL AS—BUILT
HYDROLOGY SAND CREEK
DETENTION BASIN NO. 1
PREPARED BY KIOWA ENGINEERING

CHANNEL DESCRIPTION

BOTTOM MATERIAL — COHESIVE | NON—COHESIVE | BOTTOM MATERIAL SIZE — CLAY | SILT | SAND | GRAVEL | COBBLES | OTHER | STREAM FORM — STRAIGHT | MEANDERING | BRAIDED | MANNINGS 'n' FOR DESIGN — CHANNEL .03 OVERBANK .04 DEBRIS — BRUSH | TREES/LOGS | ICE | OTHER |

COMPARISON OF HYDRAULICS (100-YEAR)

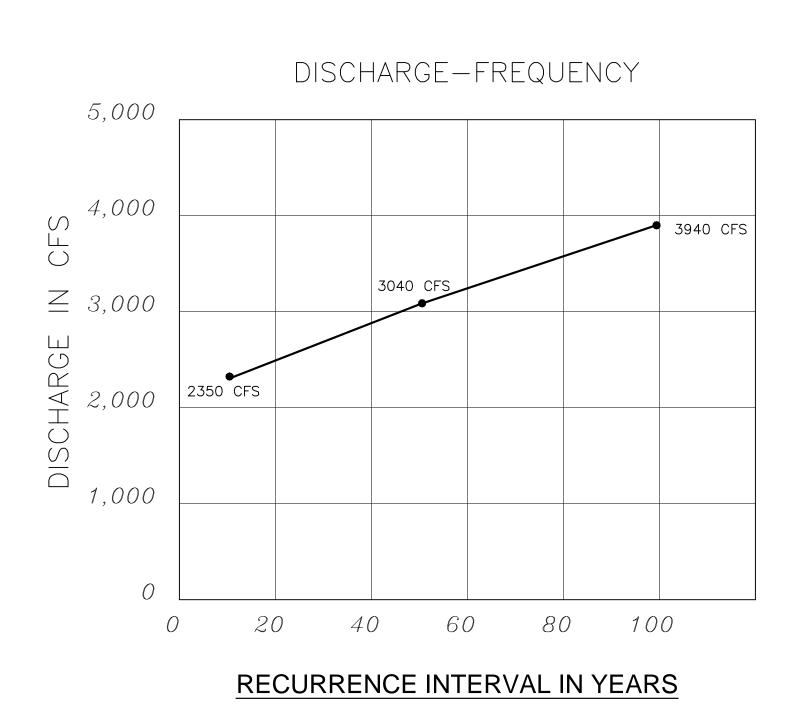
VELOCITY FREEBOARD MAX. BACKWATER

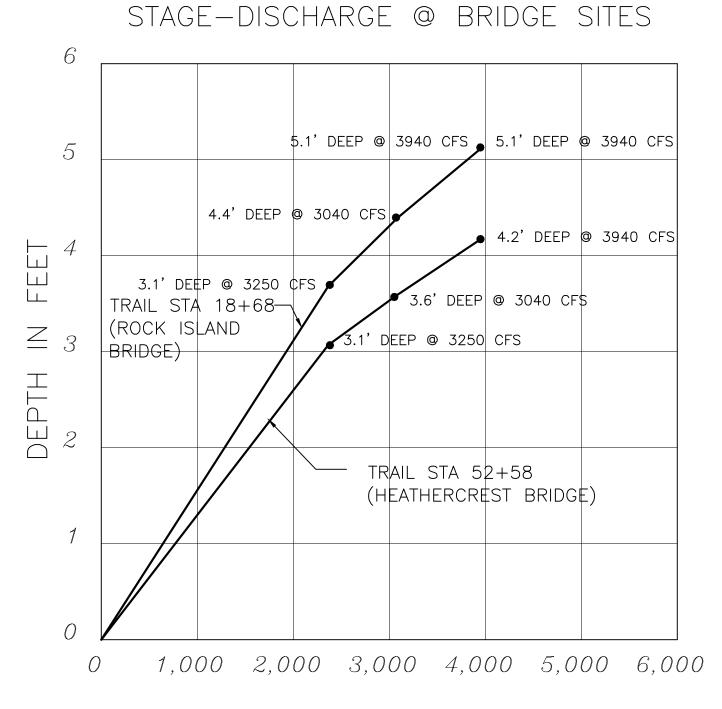
CHICAGO ROCK ISLAND BRIDGE

① EXISTING __ 6.2 _ fps __ 3.2 _ ft __ 0.0 _ ft ② PROPOSED __ 6.5 _ fps __ __ 2.5 _ ft(1) __ 0.0 _ ft

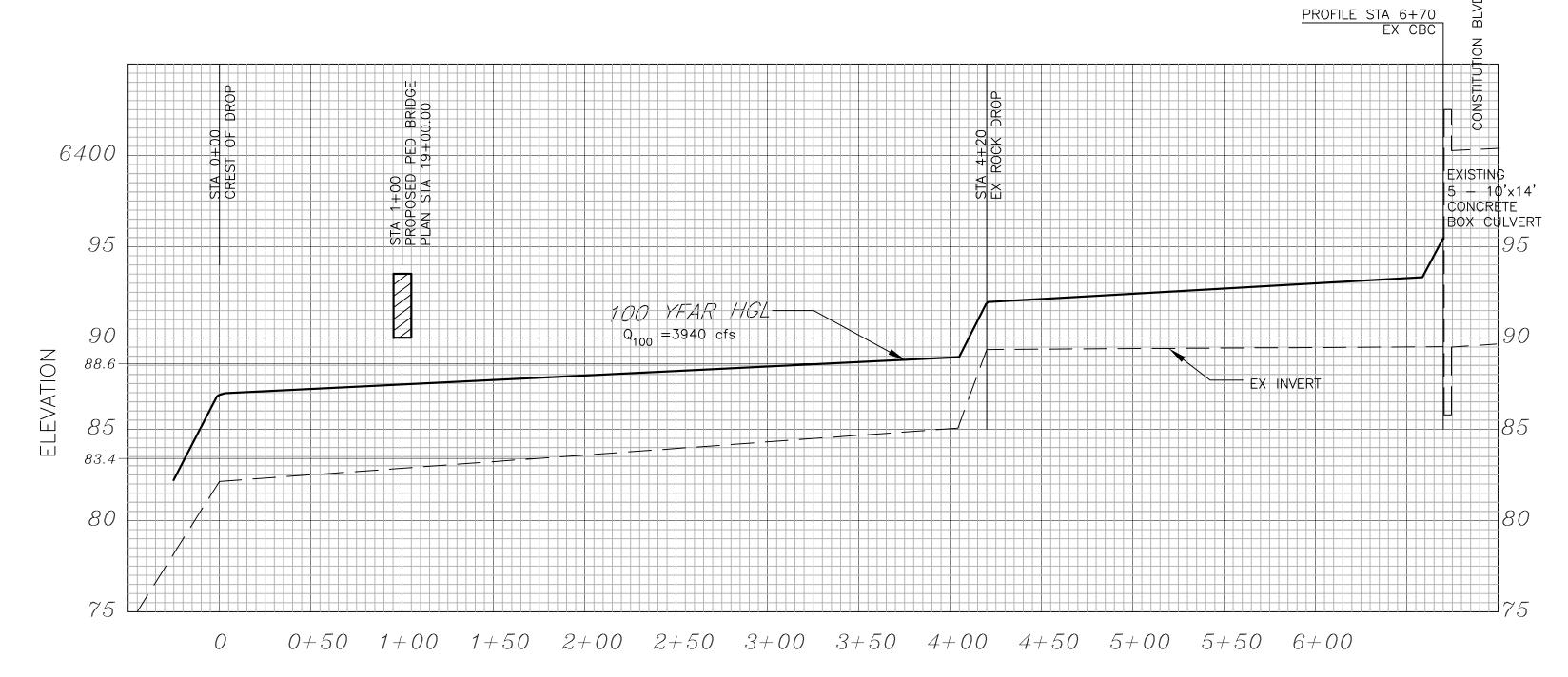
COMMENTS

- (1) DISTANCE TO LOW STEEL OF BRIDGE
- (2) CURRENT RBD 100 WSE IS 6392.3 BASED ON ALTERNATE DATUM





DISCHARGE IN CFS



PROFILE OF WATER SURFACE (DISTANCE IN FEET ABOVE DROP) SAND CREEK AT ROCK ISLAND BRIDGE



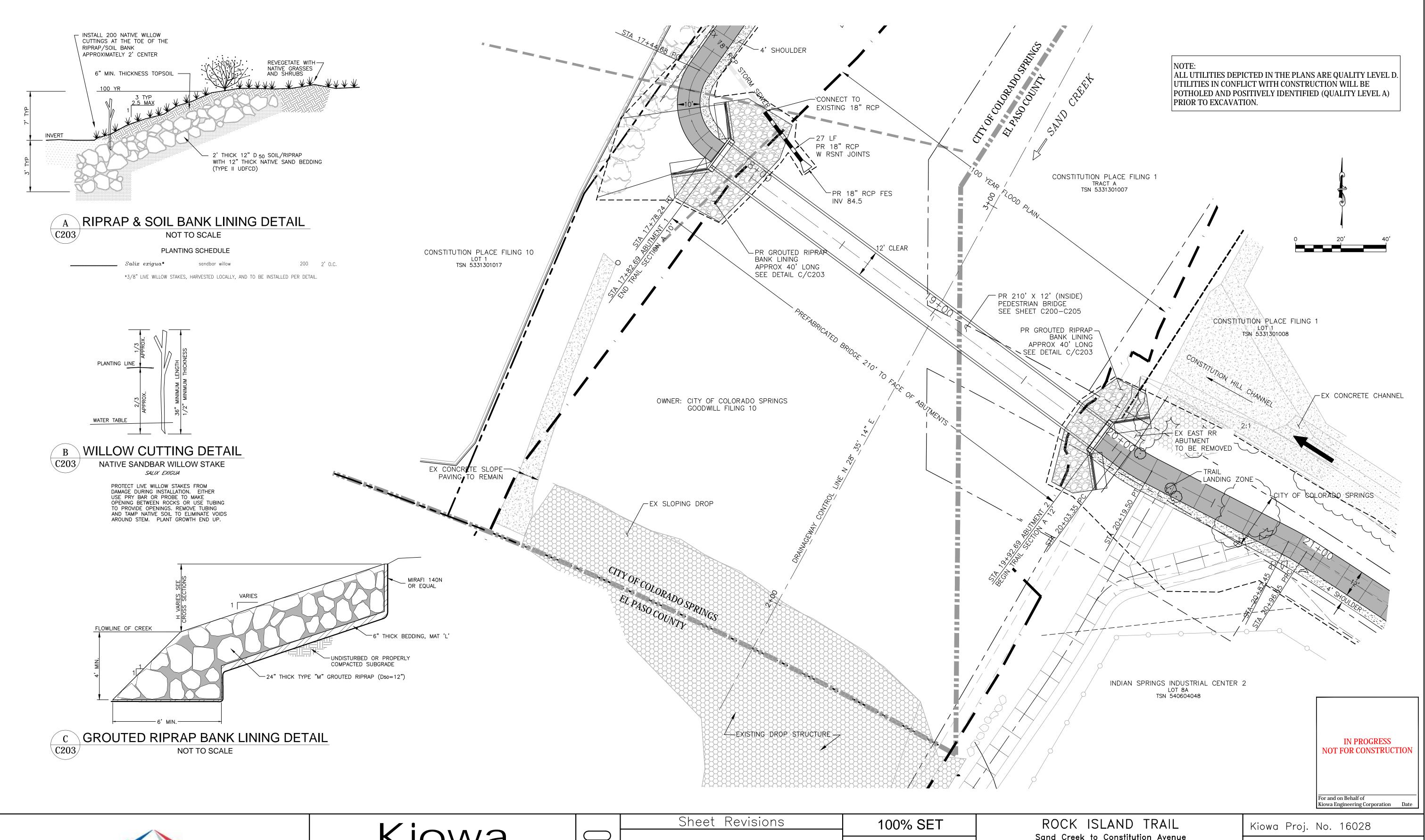


Sheet Revisions	100% SET	ROCK ISLA Sand Creek to Co	Kiowa Proj. No. 16028
	No Revisions:	Pedestrian Bric	TAP M240-162
	Revised:	Designer: TAC	SubAcct No. 20391
	Void:	Detailer: TEG Date: 09/24/2024	Sheet Number C202

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Kiowa Engineering Corporation Date

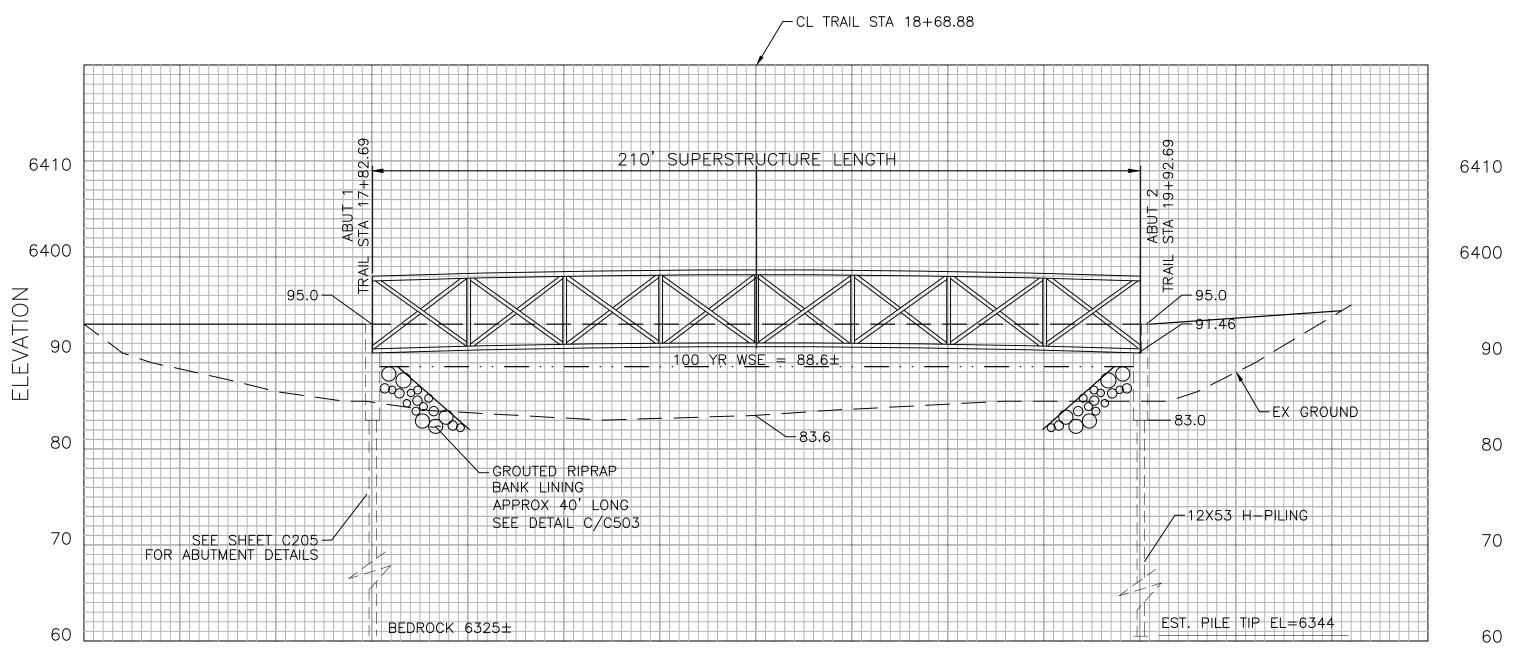
For and on Behalf of





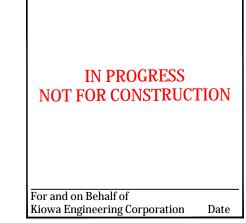


Sheet Revisions	100% SET	ROCK ISLAND TRAIL	Kiowa Proj. No. 16028
	No Revisions:	Sand Creek to Constitution Avenue Pedestrian Bridge Layout & Grading Plan	TAP M240-162
	Revised:	Designer: TAC	SubAcct No. 20391
		Detailer: TEG	
	Void:	Date: 09/24/2024	Sheet Number C203



CHICAGO, ROCK ISLAND & PACIFIC PEDESTRIAN BRIDGE LONGITUDINAL SECTION LOOKING NORTHEAST SCALE: 1" = 20' (H) & 1" = 10' (V)

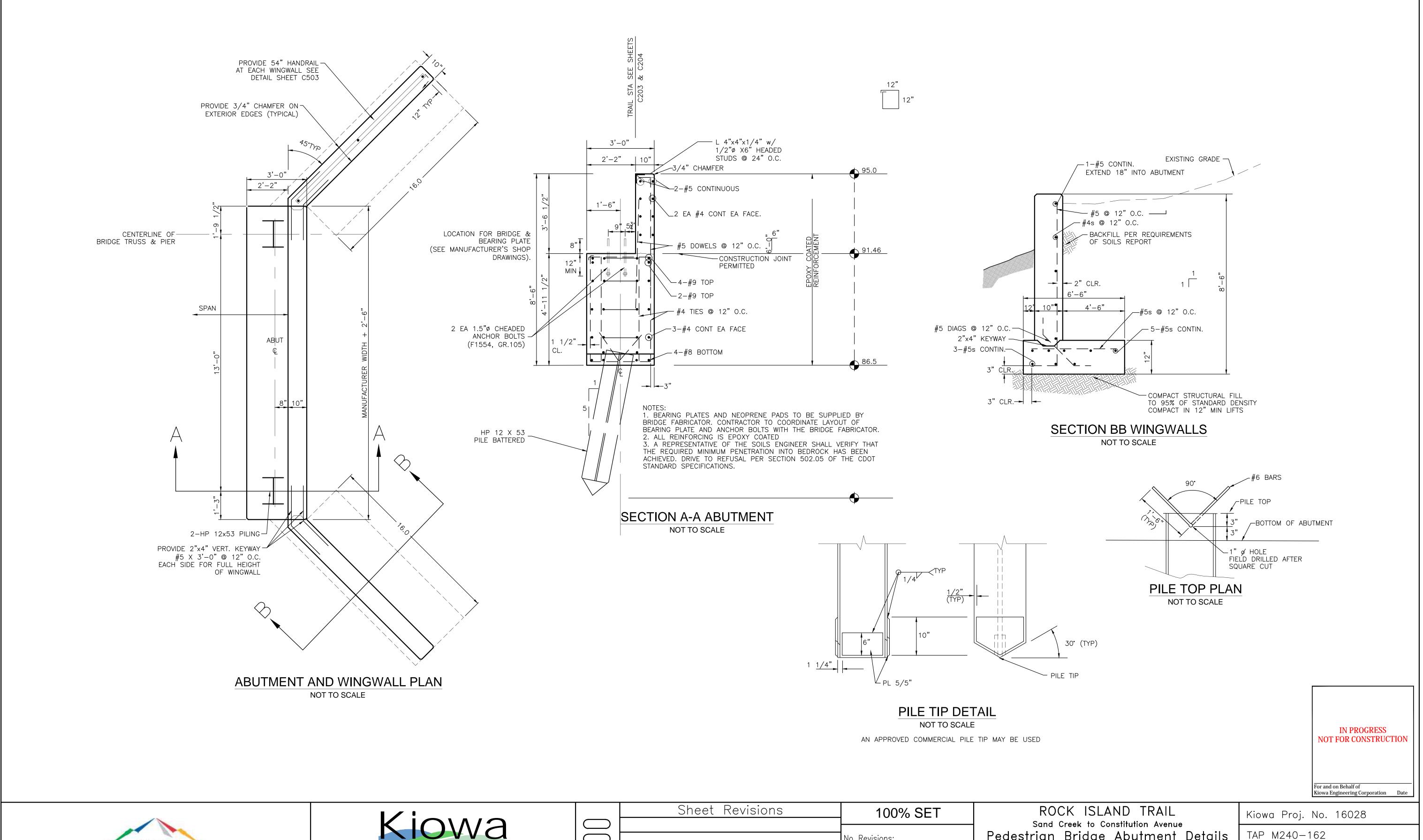
PAY ITEM 628 SHALL INCLUDE THE INSTALLATION OF THE BRIDGE GIRDER, DECK UNIT, BEARING PLATES AND BEARING PADS. FABRICATION AND DELIVERY OF THE BRIDGE, DECK UNIT, BEARING PLATE AND BEARING PADS SHALL BE PROVIDED BY THE CITY OF COLORADO SPRINGS.







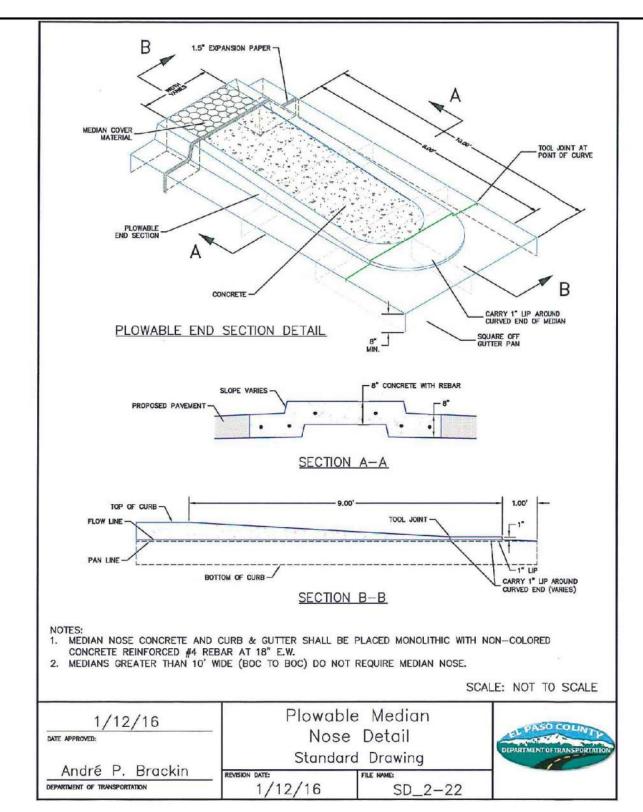
Sheet Revisions	100% SET	ROCK ISLAND TRAIL Sand Creek to Constitution Avenue	Kiowa Proj. No. 16028
	No Revisions:	Pedestrian Bridge Section	TAP M240-162
	Revised:	Designer: TAC	SubAcct No. 20391
		Detailer: TEG	
	Void:	Date: 09/24/2024	Sheet Number C204

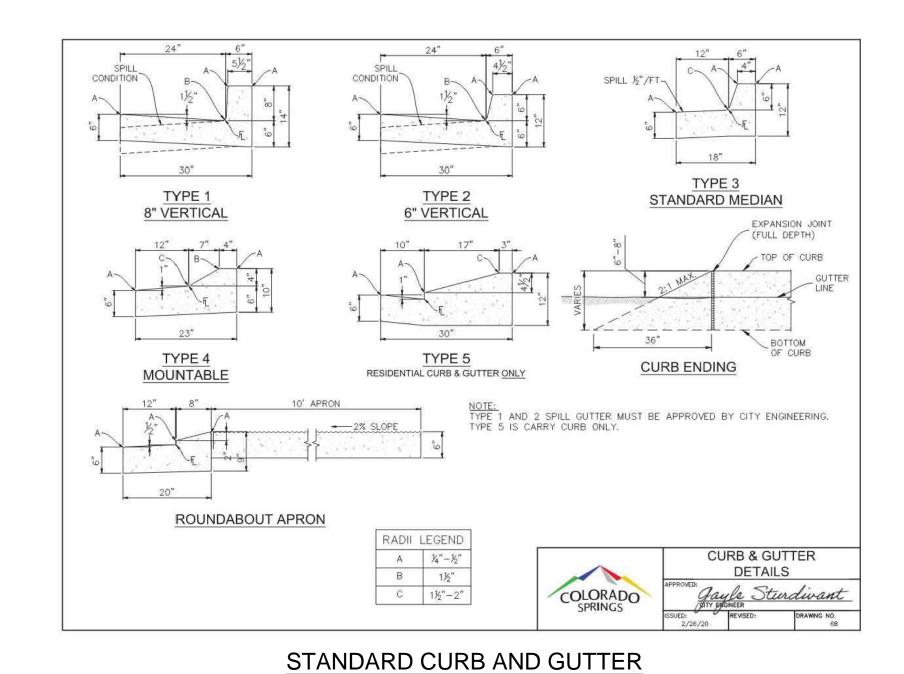


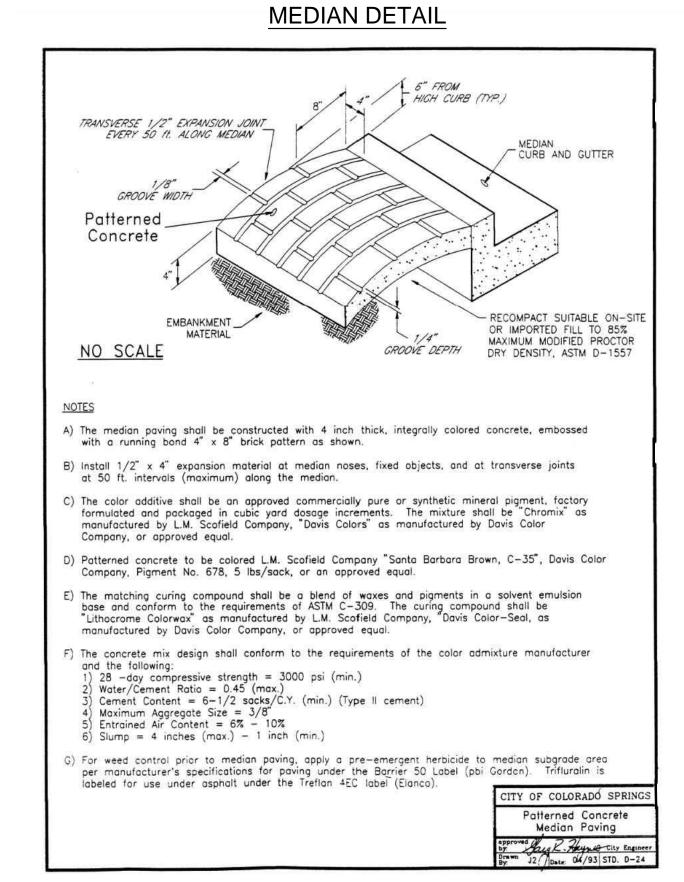


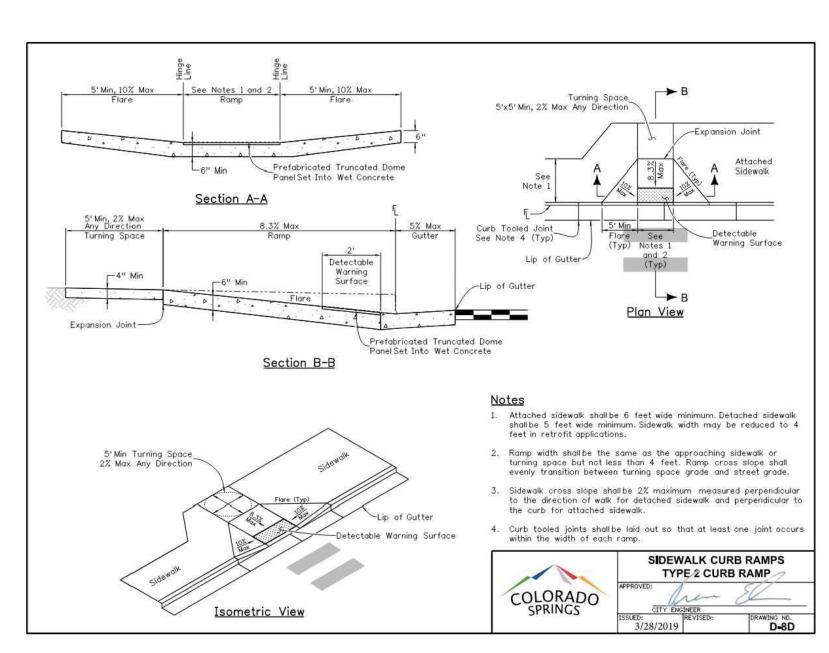


Sheet Revisions	100% SET	ROCK ISLAND TRAIL Sand Creek to Constitution Avenue	Kiowa Proj. No. 16028
	No Revisions:		TAP M240-162
	Revised:	Designer: TAC	SubAcct No. 20391
	Void:	Detailer: TEG Date: 09/24/2024	Sheet Number C205

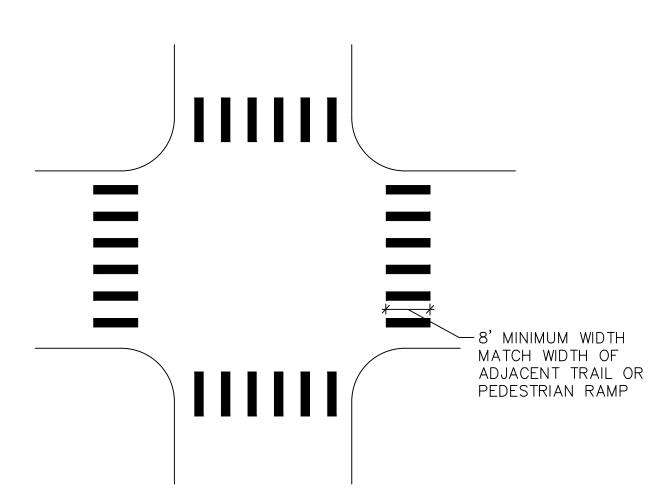








EPC STANDARD RAMP DETAIL



CROSSWALK MARKING DETAIL

NOT TO SCALE

NOTES: CENTER CROSSWALK MARKINGS ON PEDESTRIAN RAMPS. CROSSWALK MARKINGS SHALL BE 24" WIDE AND SPACED 12" TO 24" APART. MARKINGS SHALL BE MADE WITH EPOXY PAINT. REFER TO CDoT STANDARD S-627-1 FOR LAYOUT OF

MEDIAN DETAIL



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Engineering Corporatior 1604 South 21st Street Colorado Springs, Colorado 80904 (719) 630-7342 For and on Behalf of Kiowa Engineering Corporation Date



Sheet Revisions	100% SET	ROCK ISLAND TRAIL Sand Creek to Constitution Avenue STANDARD DETAILS			Kiowa Proj. No. 16028
	No Revisions:				TAP M240-162
	Revised:	Designer: TAC			SubAcct No. 20391
		Detailer: TEG			2007
	Void:	Date: 9/30/2024			Sheet Number C501

SOIL RIPRAP

THE SOIL MATERIAL SHALL BE NATIVE OR TOPSOIL AND MIXED WITH SIXTY FIVE PERCENT (65%) RIPRAP AND THIRTY FIVE PERCENT (35%) SOIL BY VOLUME.

SOIL RIPRAP SHALL CONSIST OF A UNIFORM MIXTURE OF SOIL AND RIPRAP WITHOUT VOIDS.

CONTRACTOR SHALL COOPERATE WITH ENGINEER IN OBTAINING AND PROVIDING SAMPLES OF ALL SPECIFIED MATERIALS.

CONTRACTOR SHALL SUBMIT CERTIFIED LABORATORY TEST CERTIFICATES FOR ALL ITEMS REQUIRED FOR SOIL RIPRAP.

RIPRAP USED SHALL BE THE TYPE DESIGNATED ON THE DRAWINGS AND SHALL CONFORM TO TABLE SHOWN TO THE RIGHT.

THE RIPRAP DESIGNATION AND TOTAL THICKNESS OF RIPRAP SHALL BE AS SHOWN ON THE DRAWINGS. THE MAXIMUM STONE SIZE SHALL NOT LARGER THAN THE THICKNESS OF THE RIPRAP.

NEITHER WIDTH NOR THICKNESS OF A SINGLE STONE OF RIPRAP SHALL BE LESS THAN ONE-THIRD (1/3) OF ITS LENGTH.

THE SPECIFIC GRAVITY OF THE RIPRAP SHALL BE TWO AND ONE-HALF (2.5) OR GREATER.

MINIMUM DENSITY FOR ACCEPTABLE RIPRAP SHALL BE ONE HUNDRED AND SIXTY FIVE (165) POUNDS PER CUBIC FOOT.

RIPRAP SPECIFIC GRAVITY SHALL BE ACCORDING TO THE BULK-SATURATED, SURFACE-DRY BASIS, IN ACCORDANCE WITH AASHTO T85.

THE RIPRAP SHALL HAVE A PERCENTAGE LOSS OF NOT MORE THAN FORTY PERCENT (40%) AFTER FIVE HUNDRED (500) REVOLUTIONS WHEN TESTED IN ACCORDANCE WITH AASHTO T96.

THE RIPRAP SHALL HAVE A PERCENTAGE LOSS OF NOT MORE THAN TEN (10%) AFTER FIVE (5) CYCLES WHEN TESTED IN ACCORDANCE WITH AASHTO T104 FOR LEDGE ROCK USING SODIUM SULFATE.

THE RIPRAP SHALL HAVE A PERCENTAGE LOSS OF NOT MORE THAN TEN PERCENT (10%) AFTER TWELVE (12) CYCLES OF FREEZING AND THAWING WHEN TESTED IN ACCORDANCE WITH AASHTO T103 FOR LEDGE ROCK, PROCEDURE A. ROCK SHALL BE FREE FROM CALCITE INTRUSIONS.

RUBBLE FOR USE AS SOIL/RIPRAP SHALL BE GRADED TO MEET THE EQUIVALENT ROCK RIPRAP GRADATION. RUBBLE PROPOSED FOR USE IN PLACE OF ROCK RIPRAP SHALL BE STOCKPILED FOR OBSERVATION BY THE ENGINEER PRIOR TO THE COMMENCEMENT OF THE WORK

A. EACH LOAD OF RIPRAP SHALL BE REASONABLY WELL GRADED FROM THE SMALLEST TO THE LARGEST SIZE SPECIFIED.
B. STONES SMALLER THAN THE TWO TO TEN PERCENT (2%-10%) SIZE WILL NOT BE PERMITTED IN AN AMOUNT EXCEEDING TEN PERCENT (10%) BY WEIGHT OF EACH LOAD. C. CONTROL OF GRADATION SHALL BE BY VISUAL INSPECTION. HOWEVER IN THE EVENT THE ENGINEER DETERMINES THE RIPRAP TO BE UNACCEPTABLE, THE ENGINEER SHALL PICK TWO

(2) RANDOM TRUCKLOADS TO BE DUMPED AND CHECKED FOR GRADATION.

1) MECHANICAL EQUIPMENT AND LABOR NEEDED TO ASSIST IN CHECKING GRADATION SHALL BE PROVIDED BY THE CONTRACTOR AT NO ADDITIONAL COST.

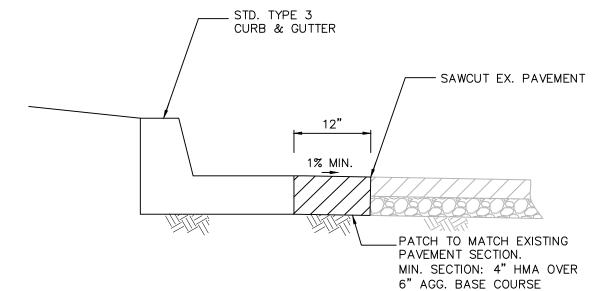
BROKEN ASPHALT PAVEMENT SHALL NOT BE ACCEPTABLE FOR USE IN THE WORK.

ROUNDED RIPRAP (RIVER ROCK) IS NOT ACCEPTABLE, UNLESS SPECIFICALLY DESIGNATED ON THE DRAWINGS.

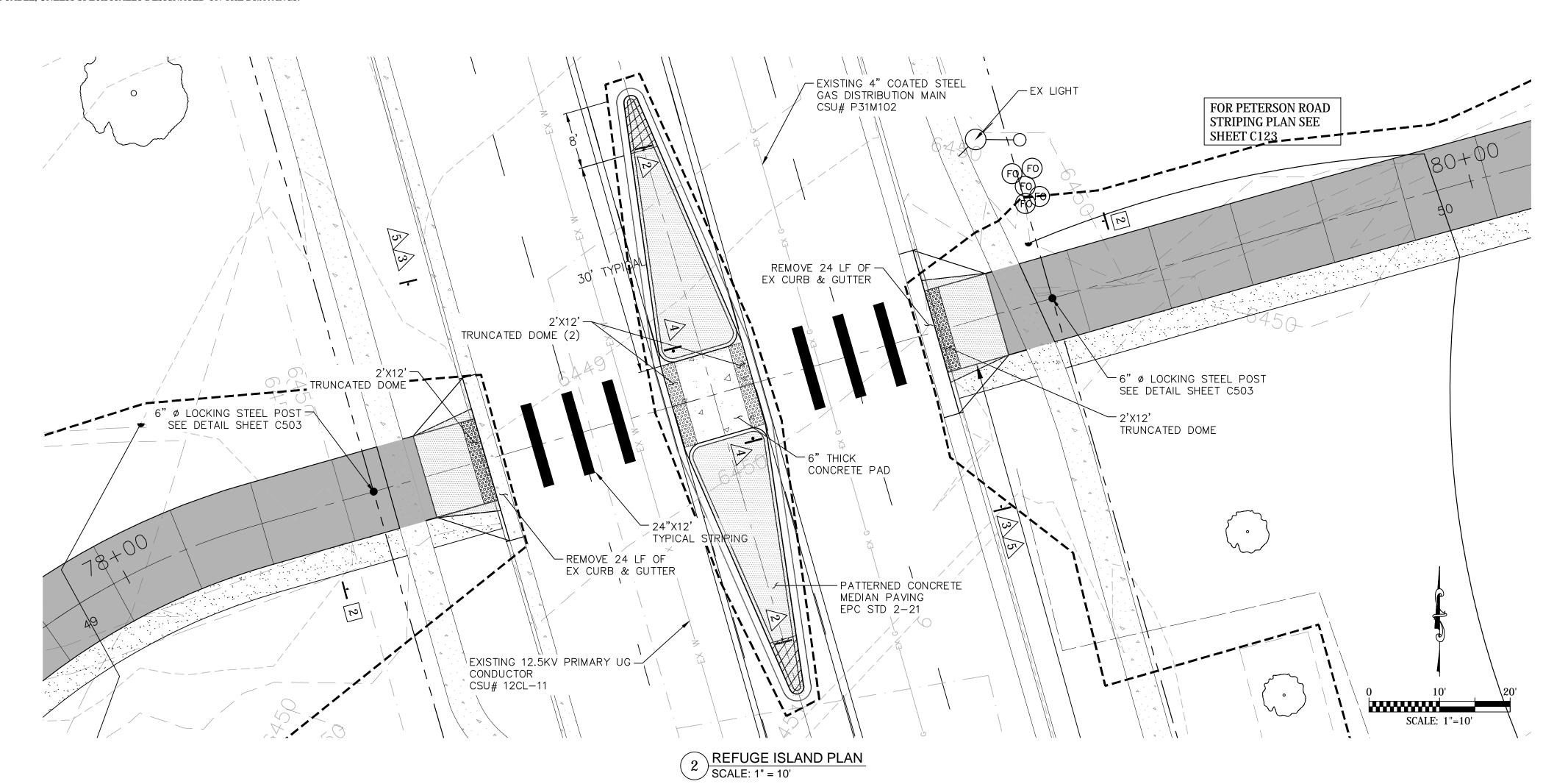
CLASSIFIC	ation and gi	RADATION OF	RIPRAP
RIPRAP DESIGNATION	% SMALLER THAN GIVEN SIZE BY WEIGHT	INTERMEDIATE ROCK DIMENSION (INCHES)	d50* (INCHES)
TYPE VL	70-100 50-70 35-50 2-10	12 9 6 2	6**
TYPE L	70-100 50-70 35-50 2-10	15 12 9 3	9**
TYPE M	70-100 50-70 35-50 2-10	21 18 12 4	12**
TYPE H	100 50-70 35-50 2-10	30 24 18 6	18
TYPE VH	100 50-70 35-50 2-10	42 33 24 9	24
* d50=MFAN PAR	RTICLE SIZE (INTERMED	HATE DIMENSION) BY	WFIGHT

d50=MEAN PARTICLE SIZE (INTERMEDIATE DIMENSION) BY WEIGHT. ** MIX VL, L AND M RIPRAP WITH 35% TOPSOIL (BY VOLUME) AND BURY WITH 4-6 INCHES OF TOPSOIL, ALL VIBRATION COMPACTED &

(TABLE MD-7: CLASSIFICATION AND GRADATION OF ORDINARY RIPRAP. UDFCD, DRAINAGE CRITERIA MANUAL, VOL. 1)



REFUGE ISLAND CURB CUT



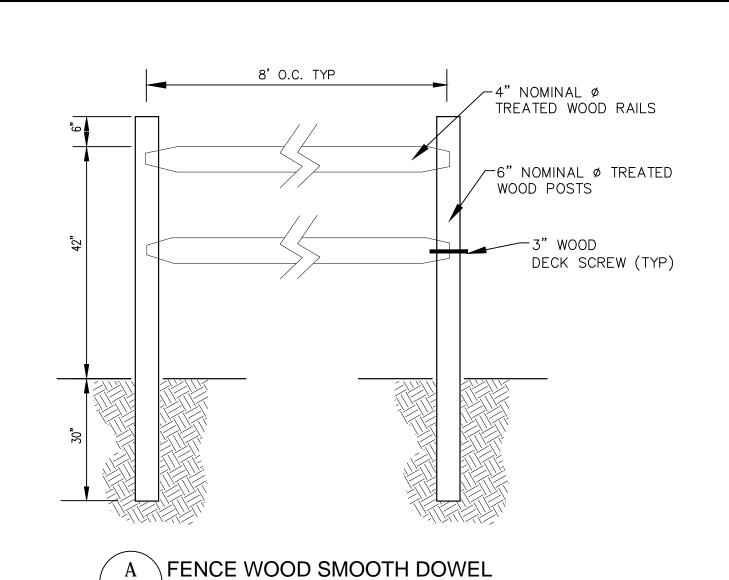


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Kiowa Engineering Corporation Date

For and on Behalf of

Sheet Revisions	100% SET	ROCK ISLAND TRAIL	Kiowa Proj. No. 16028
	No Revisions:	Sand Creek to Constitution Avenue TYPICAL MISCELLANEOUS DETAILS	TAP M240-162
	Revised:	Designer: TAC	SubAcct No. 20391
		Detailer: TEG	345/1001 110. 20031
	Void:	Date: 9/30/2024	Sheet Number C502



_4"x1/4" REMOVABLE STEEL POST

─2" Ø FOR CHAIN SPANNING

POST-TO-POST. ONE END OF

CHAIN TO BE WELDED TO LOCKING

-8"x1/4" STEEL LINK

CHAIN TO BE WELDED TO BASE OF POST.

-CITY TO PROVIDE LOCK. PUBLIC WORKS & WATER RESOURCES DIV. TO BE PROVIDED KEYS.

TO BE FINISHED SAME AS

__1/4"x4" DIA. WELDED

STEEL LID

→ 4" O.D.

42"

2-1/2" DRAIN-HOLES

HANDRAILS (OXFORD BROWN).

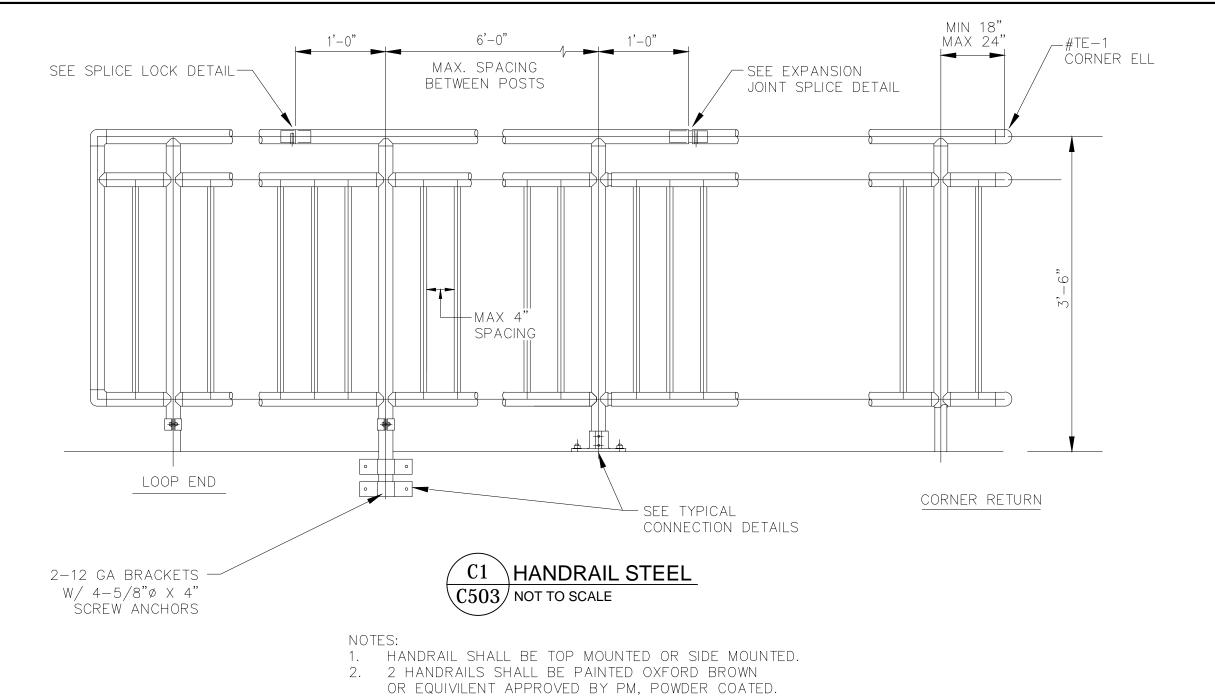
-SINGLE LINK OF CHAIN

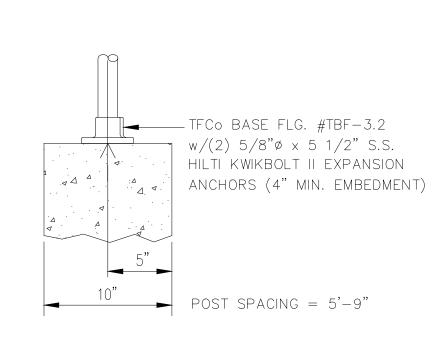
TO BE WELDED TO MOVABLE POST

_27"x5" I.D. SLEEVE

-CONC. 6" THK. MIN.

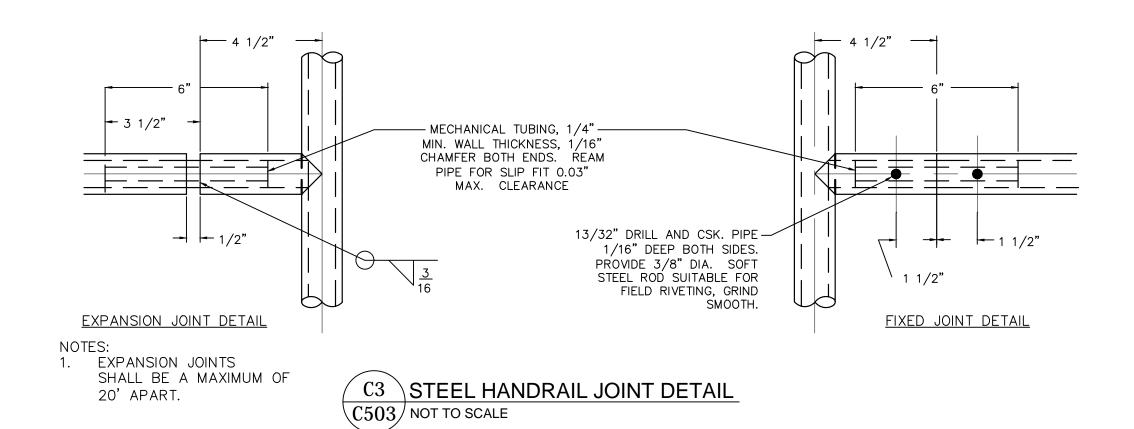
C503 NOT TO SCALE

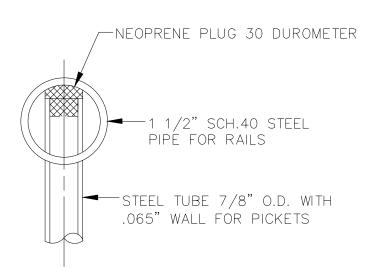




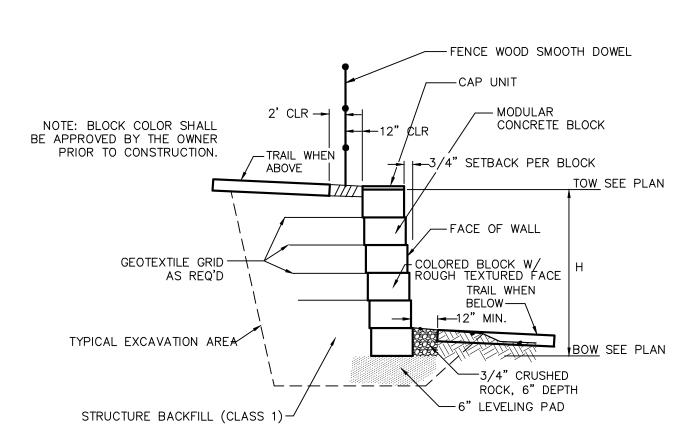
TYPICAL TOP MOUNT CONNECTION TO CONCRETE WALL

 $^{\prime}$ C2 $^{\setminus}$ STEEL HANDRAIL CONNECTION DETAIL C503 NOT TO SCALE





C4 STEEL HAND RAIL CONNECTION C503 NOT TO SCALE

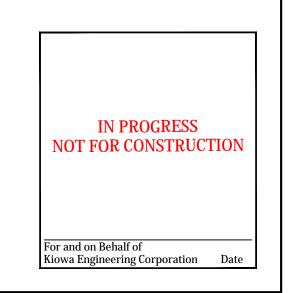


WALL NOTES: SHOP DRAWINGS DEPICTING THE DESIGN OF BLOCK WALL SHALL BE SUBMITTED TO ENGINEER PRIOR TO CONSTRUCTION PER THE PROJECT SPECIFICATIONS. DESIGN SHALL BE COMPLETED UNDER THE DIRCT SUPERVISION OF A PROPERLY REGISTERED PROFESSIONAL ENGINEER WITH THE STATE OF COLORADO. FINAL

2. CONTRACTOR TO OBTAIN EPC-DPW ROAD CUT WORK PERMIT FOR WORK IN RIGHT-OF-WAY.

CONSTRUCTION DRAWINGS SHALL BEAR HIS/HER SEAL AND SIGNATURE.

CONTRACTOR TO SUPPLY TO EPC-DPW CONSTRUCTION TRAFFIC CONTROL PLAN FOR REVIEW AND APPROVAL PRIOR TO COMMENCING WITH ANY WORK WITHIN THE PETERSON ROAD



Kiowa Proj. No. 16028

lacksquare B lack LOCKING STEEL POST DETAIL $\backslash \text{C503} /$ NOT TO SCALE

D \CONCRETE BLOCK FACING MSE WALL CROSS SECTION (C503) NOT TO SCALE

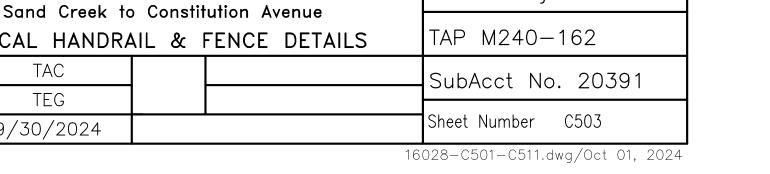


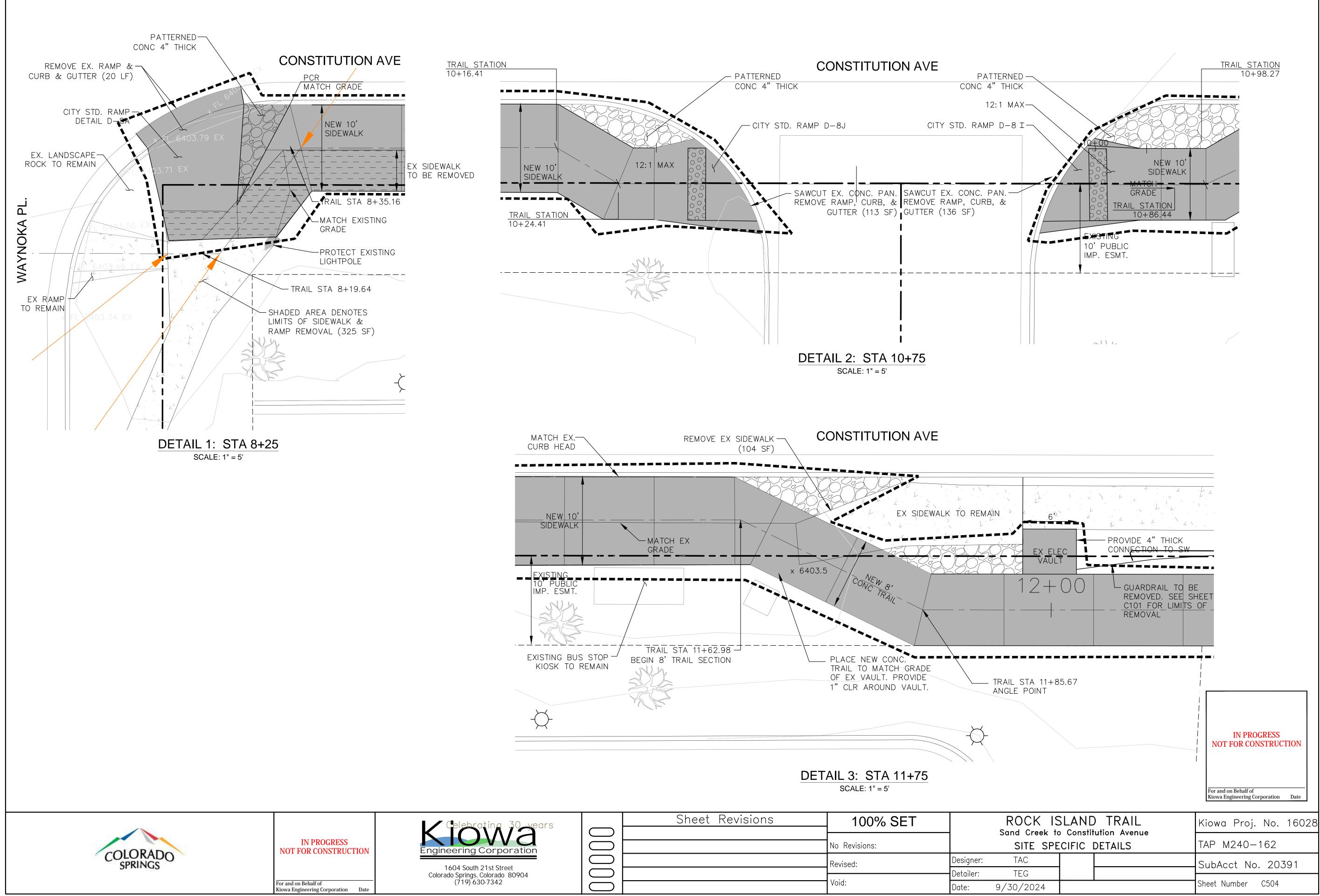
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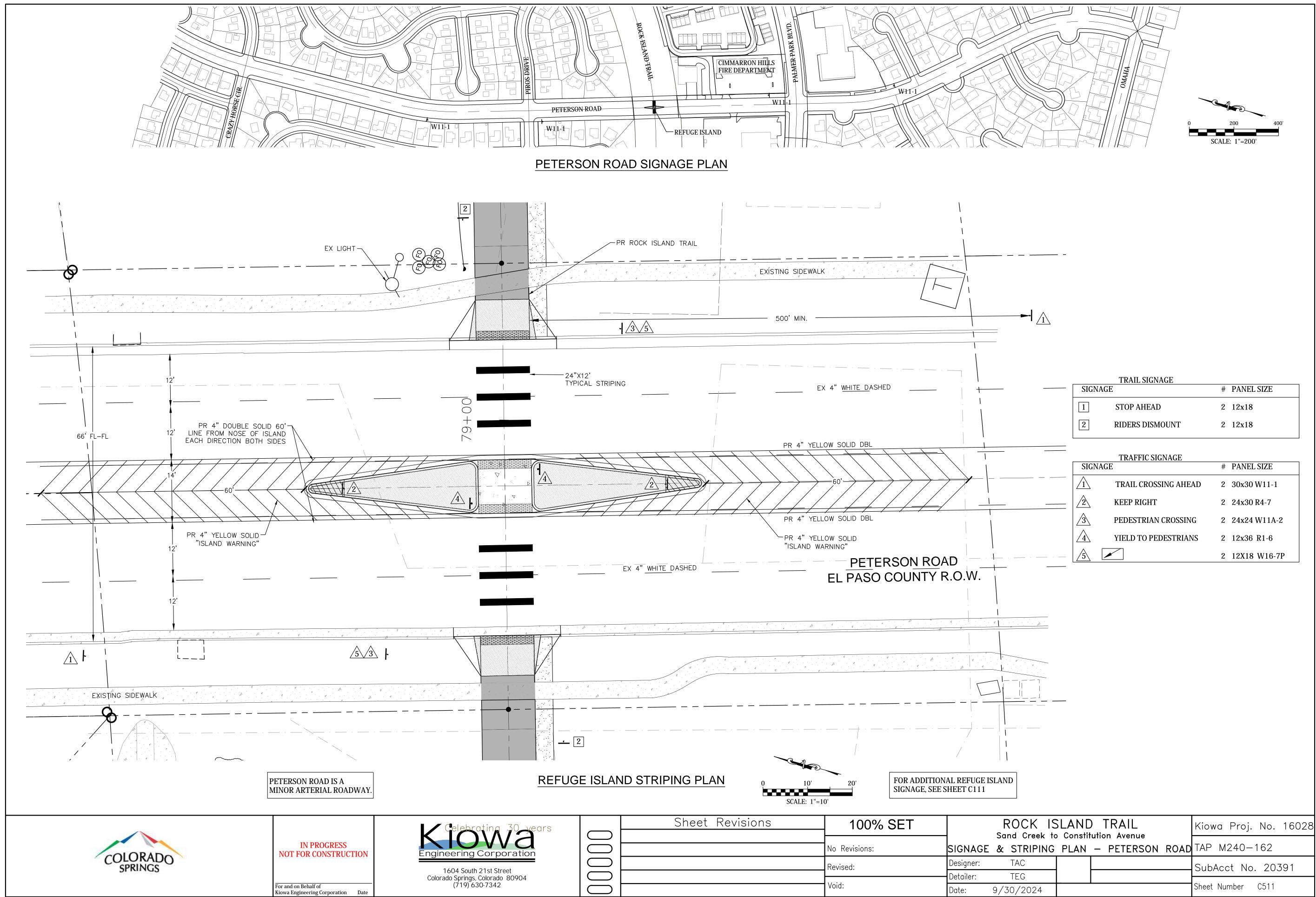
For and on Behalf of

Kiowa Engineering Corporation Date

 Sheet Revisions	100% SET	ROCK ISLAND TR	≀AIL
		Sand Creek to Constitution	Avenue
	No Revisions:	TYPICAL HANDRAIL & FENC	E DET
	Revised:	Designer: TAC	
		Detailer: TEG	
	Void:	Date: 9/30/2024	







STATE OF COLORADO DEPARTMENT OF TRANSPORTATION CITY OF COLORADO SPRINGS

Parks, Recreation and Cultural Services Department

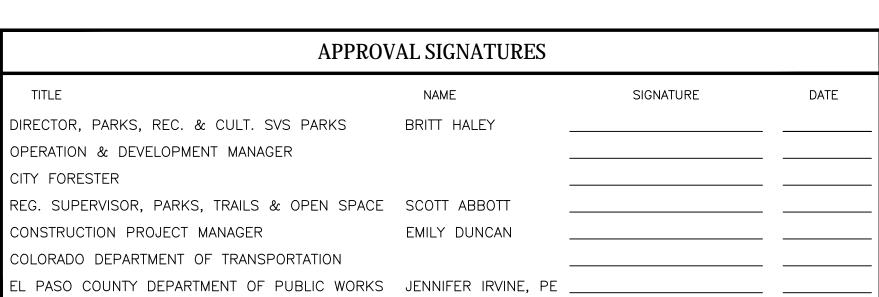
CAPITAL IMPROVEMENT PROJECT TRAIL IMPROVEMENT PROGRAM

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

21 JULY 2024



TRAIL DATA DESIGN BEGIN STATION ROCK ISLAND TRAIL END STATION ROCK ISLAND TRAIL 106+15 MAXIMUM GRADE 8.33% MINIMUM HORIZONTAL CURVE MINIMUM WIDTH 10' (+ 2' Shoulder) TYPICAL WIDTH MAXIMUM WIDTH 12' (+ 2' Shoulder) CROSS-SLOPE 2% (towards drainage) LENGTH SAND CREEK TRAIL 10,900 LF 36.8 ACRES SITE AREA AREA OF DISTURBANCE 18.2 ACRES CONSTRUCTION AREA 18.2 ACRES

SHEET INDEX

STANDARD NOTES & DETAILS

STA 08+00 TO STA 17+50

STA 21+50 TO STA 47+50

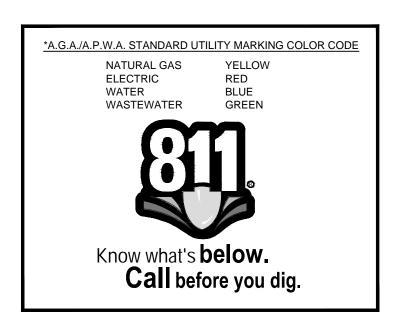
STA 75+00 TO STA 102+00

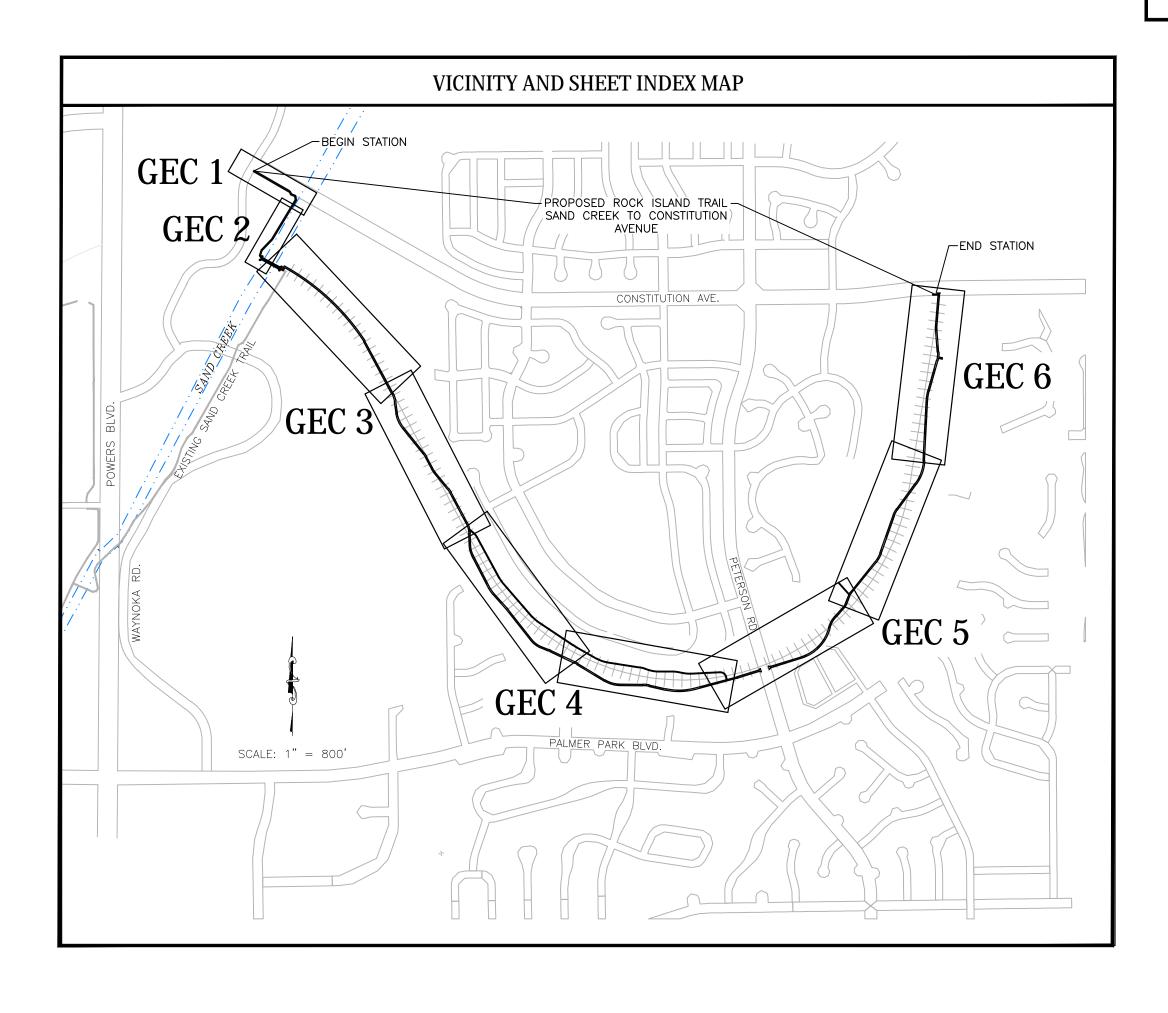
EROSION CONTROL DETAILS

COVER SHEET

GEC 8 EROSION CONTROL DETAILS

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.





STATEMENTS			
Engineer's Statement:			
correct to the best of my knowledge and bel criteria established by the County for Gradin	prepared under my direction and supervision and is lief. Said Plan has been prepared according to the ng and Erosion Control Plans. I accept responsibility s or omissions on my part in preparing this Plan.		
Engineer of Record signature	Date		
Owner's Statement:			
I, the owner/developer have read and will defension Control Plan.	comply with the requirements of this Grading and		
Signature	Date		
El Paso County:			
The County is not responsible for the accurace elevations which shall be confirmed at the joint of the confirmed at the confi	neral conformance with County Design Criteria. acy and adequacy of the design, dimensions, and/or ob site. The County through the approval of this mpleteness and/or accuracy of this document.		
	of the El Paso County Land Development Code, and Engineering Criteria Manual as amended.		
construction has not started withing those 2	construction documents will be valid for e date signed by the El Paso County Engineer. If 2 years, the Plans will need to be resubmitted for at the Planning and Community Development		
County Engineer/ECM Administrator	 Date		



IN PROGRESS NOT FOR CONSTRUCT	ΓΙΟΝ
For and on Behalf of	
Kiowa Engineering Corporation	Date

K	owa
Engine	ering Corporation
	04 South 21st Street Springs, Colorado 80904 (719) 630-7342

Sheet Revisions	90% BID SET	ROCK ISLAN	Kiowa Proj. No. 160
	No Revisions:	grading and erosion COVER S	TAP M240-162
	Revised:	Designer: RNW	SubAcct No. 20391
		Detailer: RNW	
	Void:	Date: 08/06/2024	Sheet Number G1

EL PASO COUNTY STANDARD NOTES FOR GRADING & EROSION CONTROL PLANS

- 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.
- Notwithstanding anything depicted in these plans in words or graphic representation, all design and construction related to roads, storm drainage and erosion control shall conform to the standards and requirements of the most recent version of the relevant adopted El Paso County standards, including the Land Development Code, the Engineering Criteria Manual, the Drainage Criteria Manual, and the Drainage Criteria Manual Volume 2. Any deviations from regulations and standards must be requested and approved, in writing.
- A separate Stormwater Management Plan (SMWP) for this project shall be completed and an Erosion and Stormwater Quality Control Permit (ESQCP) issued prior to commencing construction. Management of the SWMP / CSWMP during construction is the responsibility of the designated Qualified Stormwater Manager or Certified Erosion Control Inspector. The SWMP / CSWMP shall be located on-site at all times during construction and shall be kept up to date with work progress and changes in the field.
- Once the ESQCP is approved and a "Notice to Proceed" has been issued, the contractor may install the initial stage erosion and sediment control measures as indicated on the approved GEC. A preconstruction meeting between the contractor, engineer, and El Paso County will be held prior to any construction. It is the responsibility of the applicant to coordinate the meeting time and place with County staff.
- Control measures must be installed prior to commencement of activities that could contribute pollutants to stormwater. Control measures for all slopes, channels, ditches, and disturbed land areas shall be installed immediately upon completion of the disturbance.
- All temporary sediment and erosion control measures shall be maintained and remain in effective operating condition until permanent soil erosion control measures are implemented and final stabilization is established. All persons engaged in land disturbance activities shall assess the adequacy of control measures at the site and identify if changes to those control measures are needed to ensure the continued effective performance of the control measures. All changes to temporary sediment and erosion control measures must be incorporated into the stormwater management plan.
- 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.
- All permanent stormwater management facilities shall be installed as designed in the approved plans. Any proposed changes that effect 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 / CSWMP. 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, uncontaminated groundwater 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
- 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 the original manufacturer's labels.

EL PASO COUNTY STANDARD

NOTES FOR GRADING & EROSION CONTROL PLANS (cont)

- 21. No chemical(s) having the potential to be released in stormwater are to be stored or used on-site 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 on-site 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
- 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 has been prepared by Kumar & Assoc., 3/29/11 and 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 / CSWMP), of which this Grading And Erosion Control Plan may be a part. For information or application materials contact:

Colorado Department of Public Health and Environment

Water Quality Control Division WQCD - permits 4300 Cherry Creek Drive South Denver, CO 80246-1530 Attn: permits unit

PROJECT SPECIFIC NOTES

- Where El Paso County and Colorado Springs notes contradict, El Paso County notes shall supersede.
- 2. The SWMP and CSWMP are the same document, one document.
- 3. Anticipated start: 10/01/2024
- 4. Anticipated Construction End: 10/31/2025
- 5. Anticipated Stabilization: 8/01/2025
- 6. Recieving water: Sand Creek
- 7. Site is Native Grass and will remain Native Grass.
- 8. There are no on site asphalt or concrete batch plants anticipated.

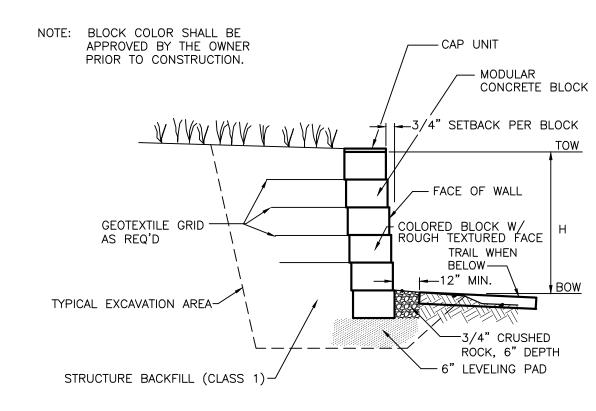
SITE SPECIFIC NOTES

1. Notes

COLORADO SPRINGS STANDARD GRADING & 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
- 10. 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.
- 11. 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.
- 12. 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.
- 13. 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.
- 14. 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.
- 15. 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.
- 16. 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.
- 17. 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.
- 18. 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.



CONCRETE BLOCK FACING MSE WALL CROSS SECTION NOT TO SCALE

WALL NOTES:

- 1. SHOP DRAWINGS DEPICTING THE DESIGN OF BLOCK WALL SHALL BE SUBMITTED TO ENGINEER PRIOR TO CONSTRUCTION PER THE PROJECT SPECIFICATIONS. DESIGN SHALL BE COMPLETED UNDER THE DIRCT SUPERVISION OF A PROPERLY REGISTERED PROFESSIONAL ENGINEER WITH THE STATE OF COLORADO. FINAL CONSTRUCTION DRAWINGS SHALL BEAR HIS/HER SEAL AND SIGNATURE.
- 2. BUILDING PERMITS FOR THE INSTALLATION OF THE MSE WALL MAY BE REQUIRED THROUGH THE PIKES PEAK REGIONAL BUILDING DEPARTMENT.
- 3. CONTRACTOR TO OBTAIN EPC-DPW ROAD CUT WORK PERMIT FOR WORK IN RIGHT-OF-WAY.
- 4. CONTRACTOR TO SUPPLY TO EPC-DPW CONSTRUCTION TRAFFIC CONTROL PLAN FOR REVIEW AND APPROVAL PRIOR TO COMMENCING WITH ANY WORK WITHIN THE PETERSON ROAD RIGHT-OF-WAY.

DETAILS



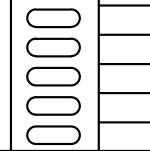


For and on Behalf of

Kiowa Engineering Corporation



Colorado Springs, Colorado 80904 (719) 630-7342



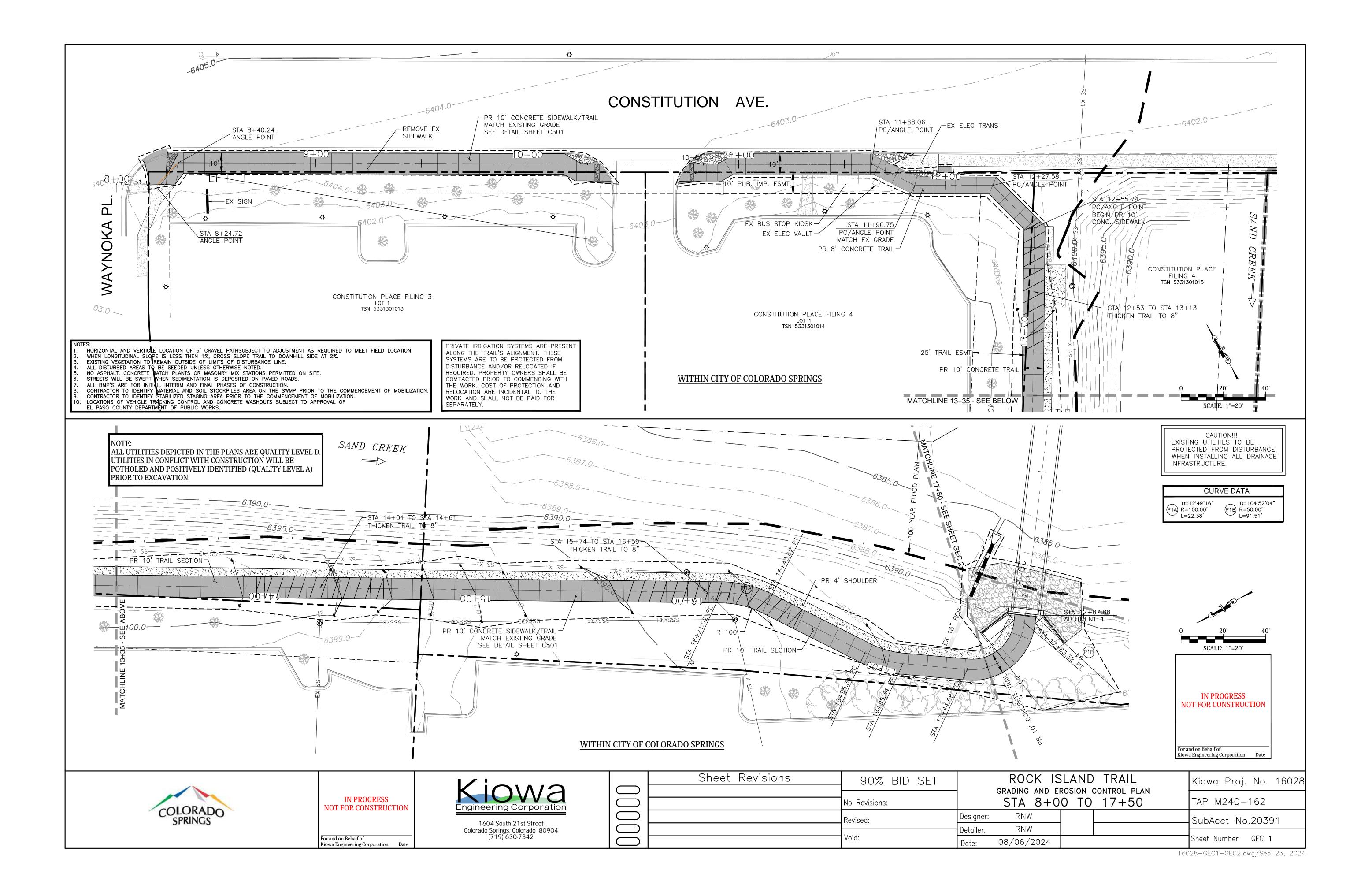
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\supset		Revised:			Designer:	RNW			
\supset					Detailer:	RNW			
\supset		Void:			Date:	08/06/2024	-		

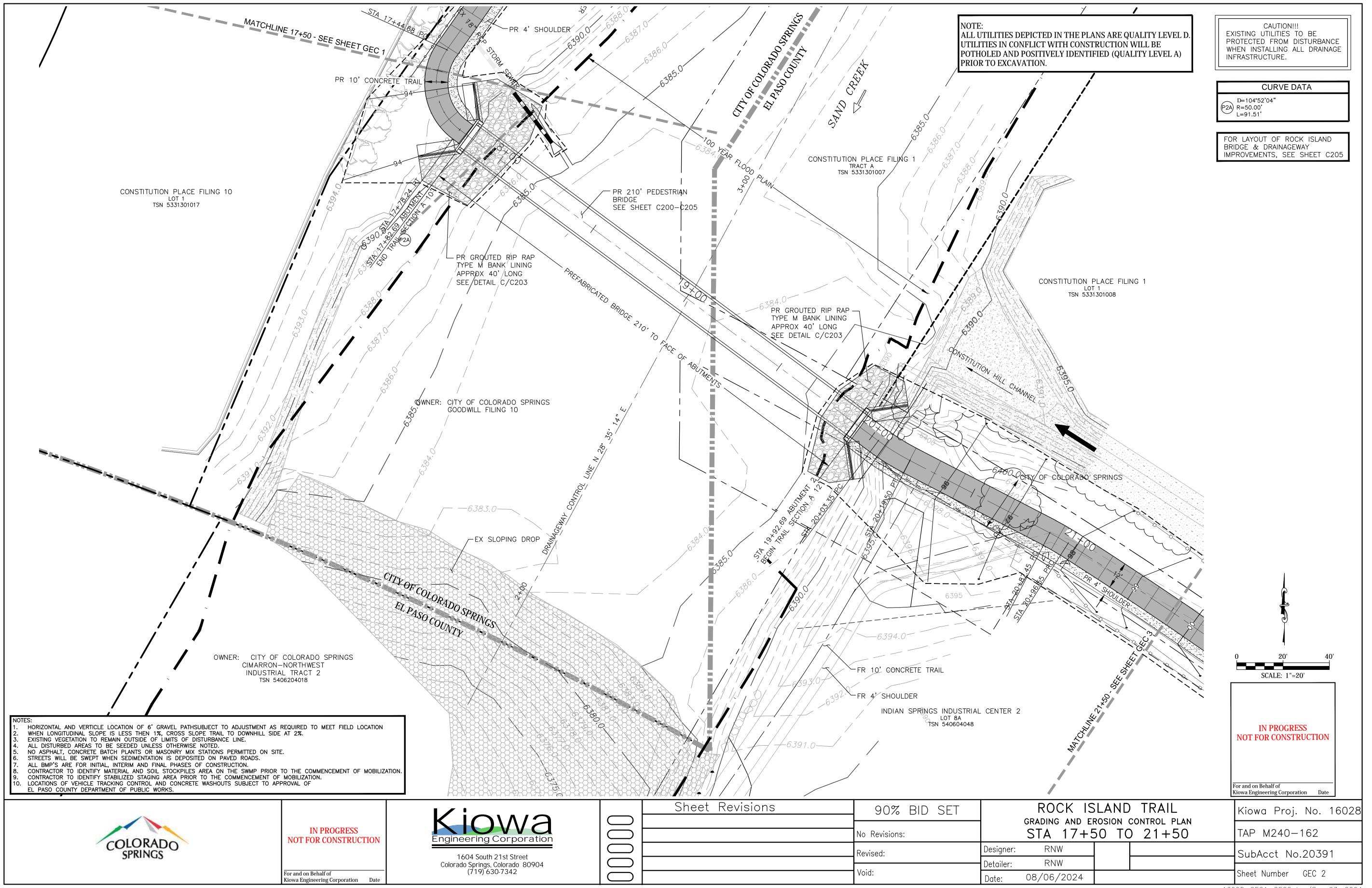
Kiowa Proj. No. 16028

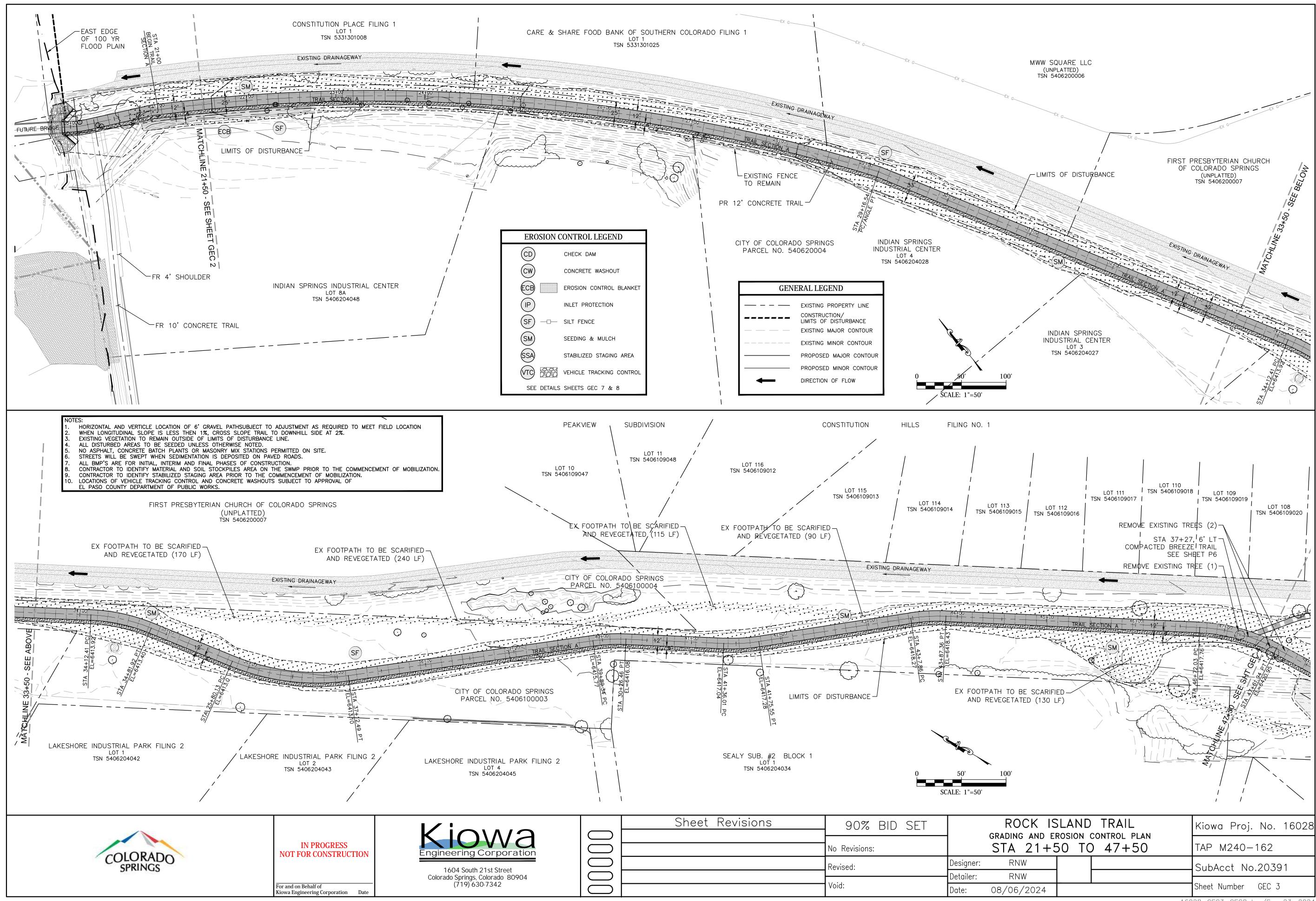
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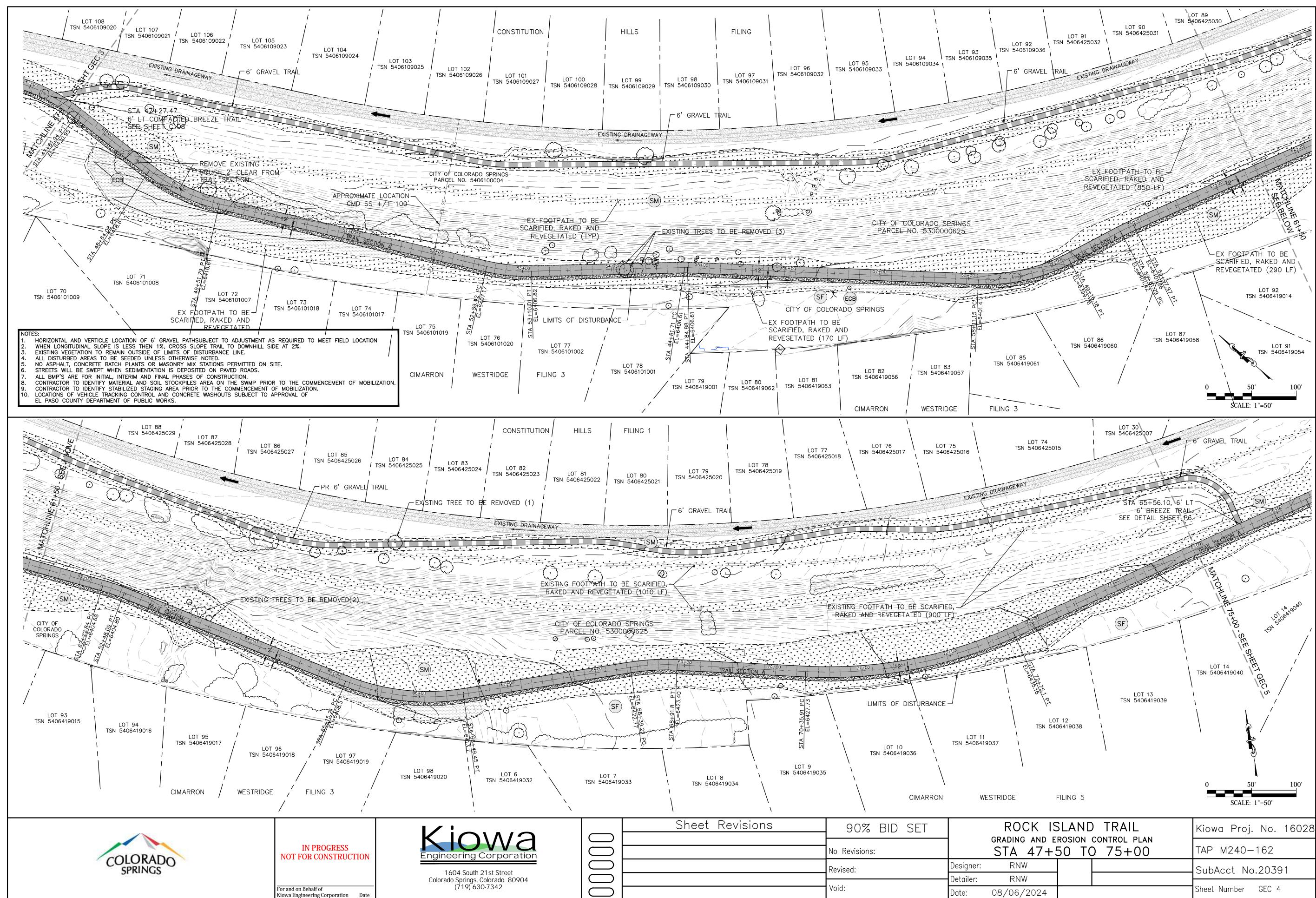
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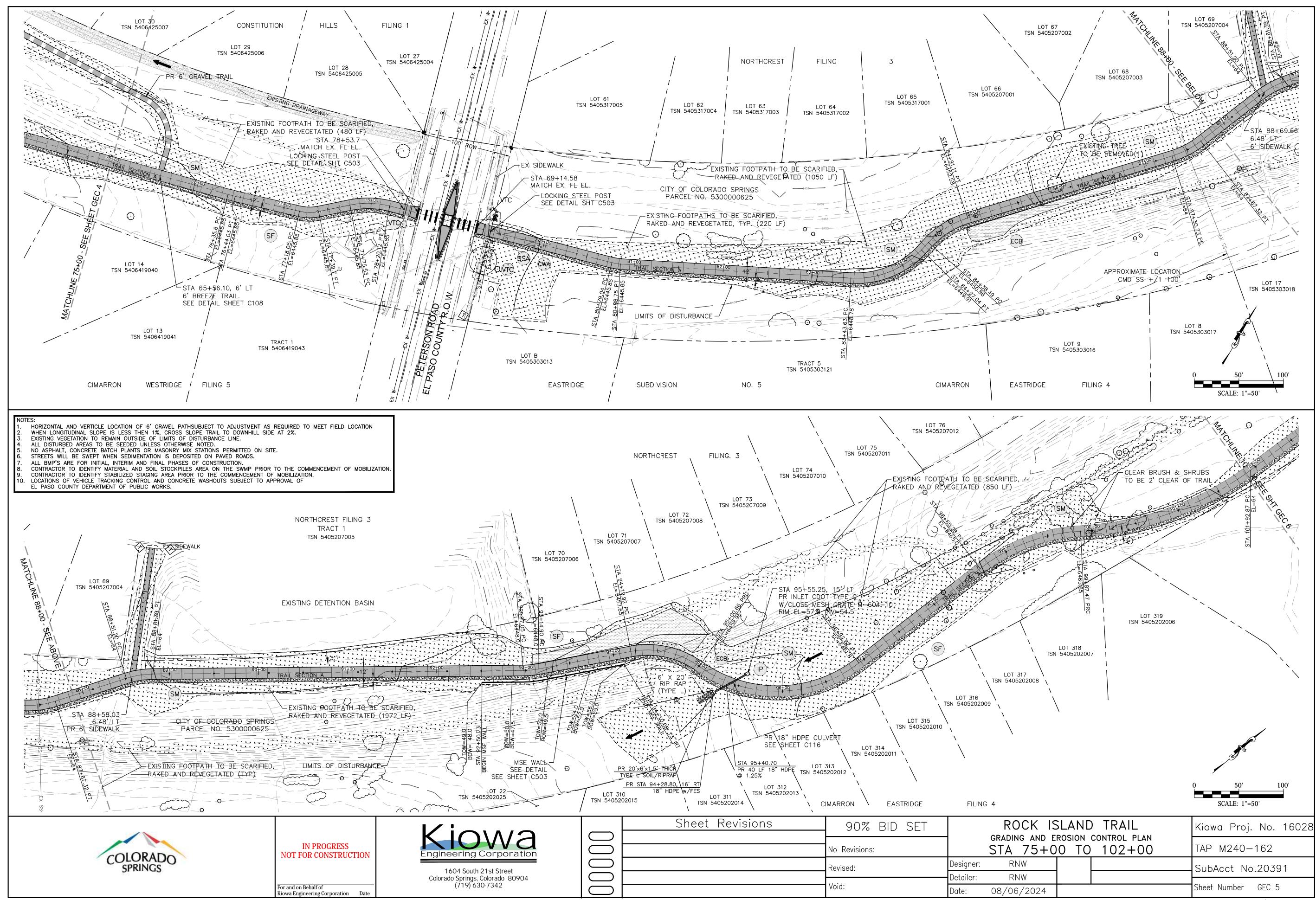
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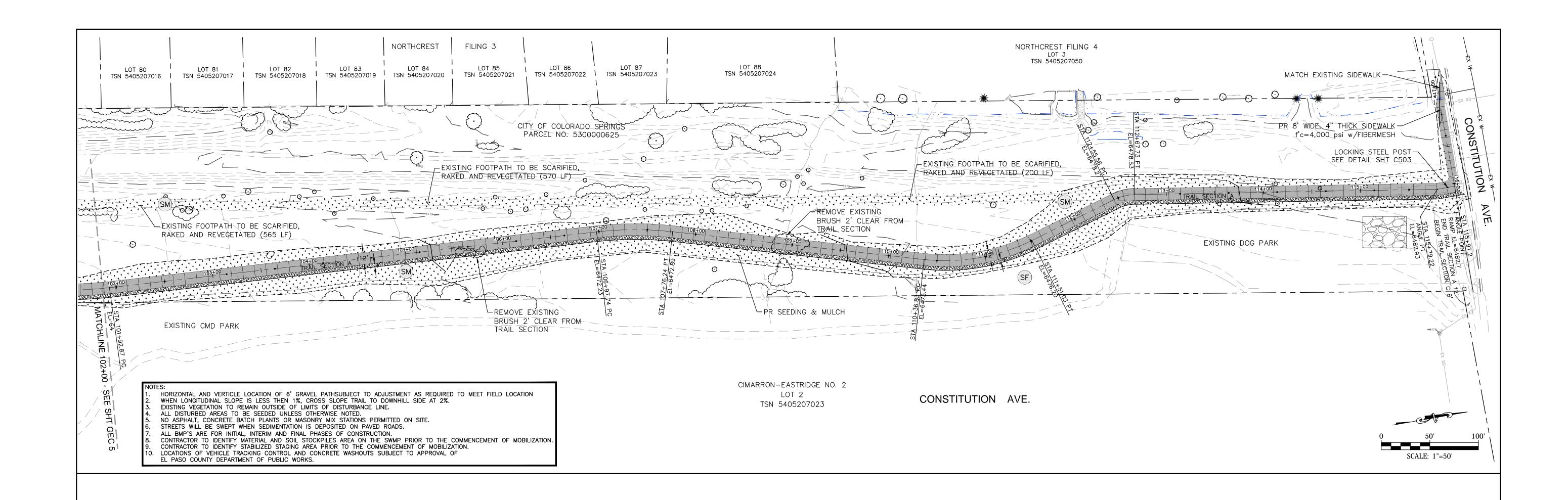










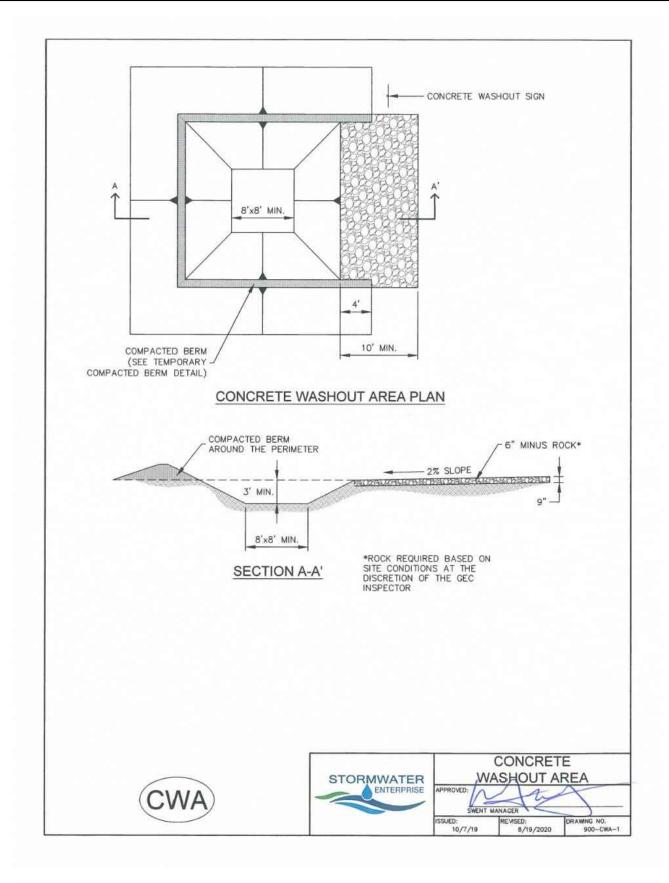


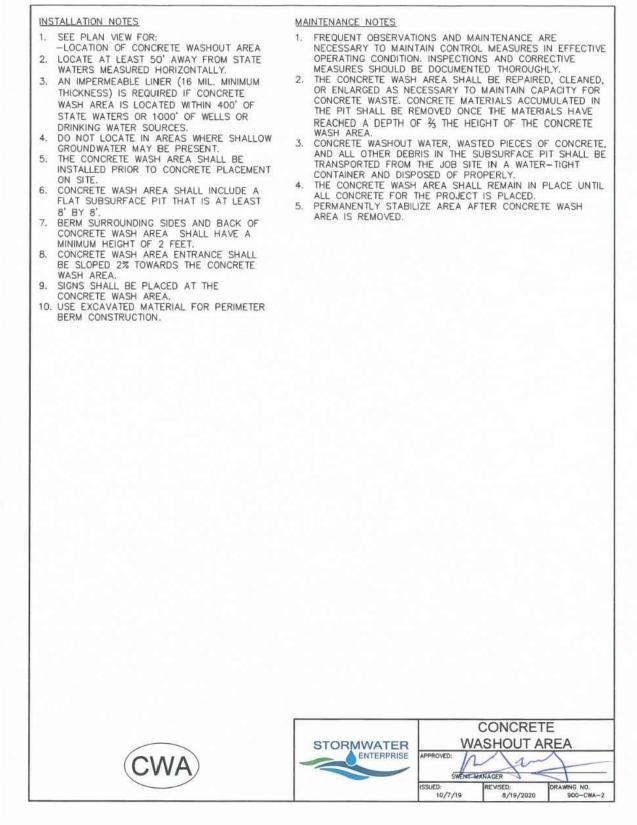


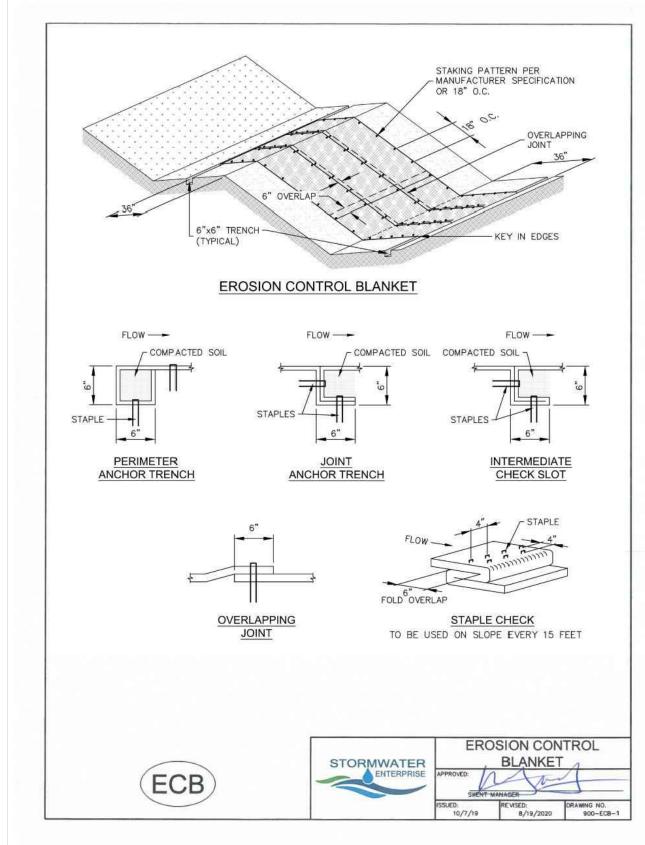
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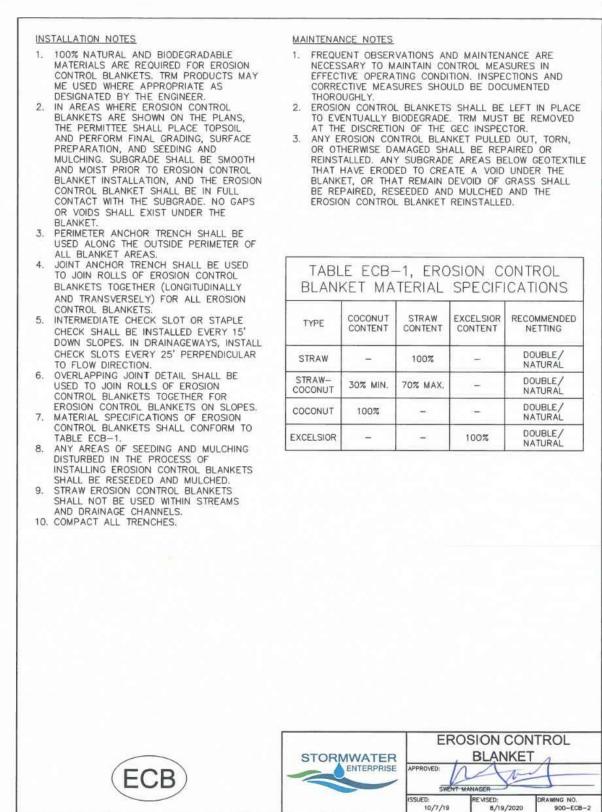
For and on Behalf of Kiowa Engineering Corporation Date

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	Revised.	Designer: RNW	SubAcct No.20391
	Void	Detailer: RNW Date: 08/06/2024	Sheet Number GEC 6





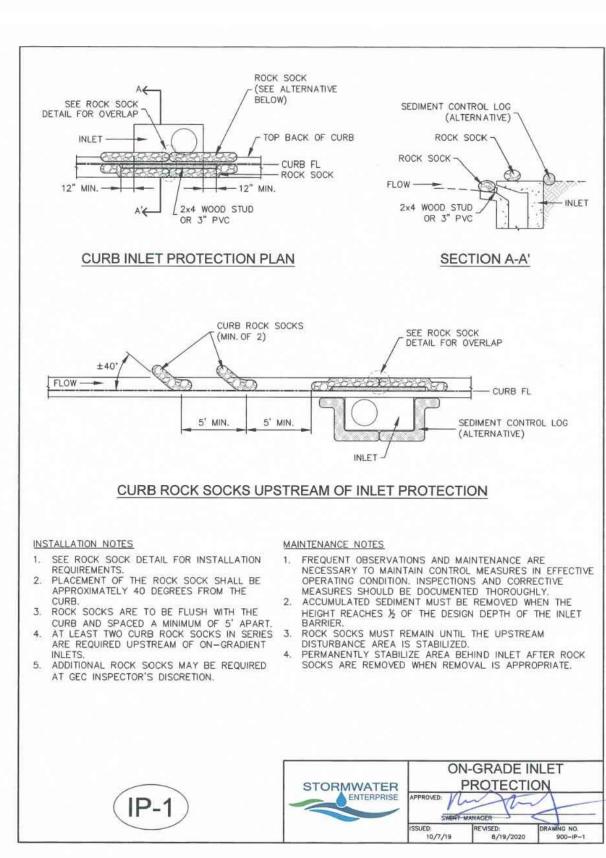


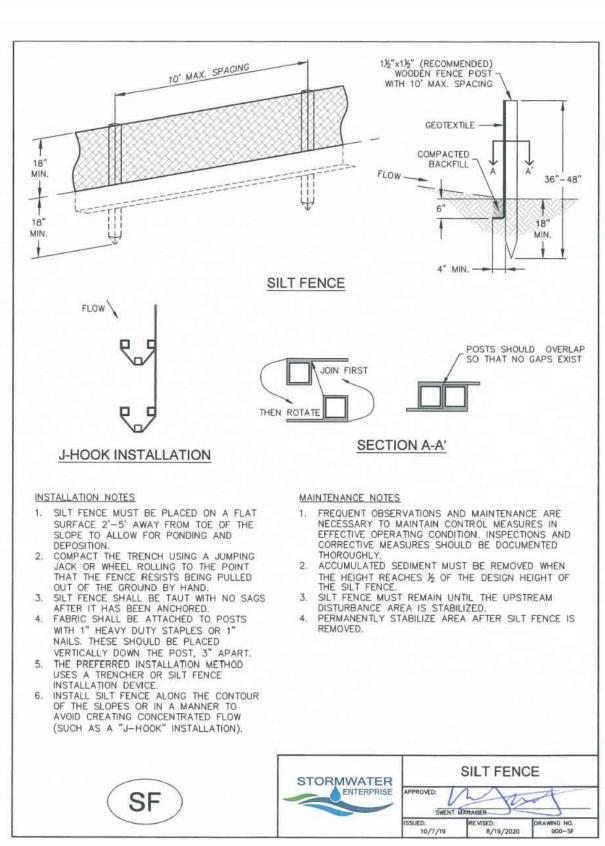


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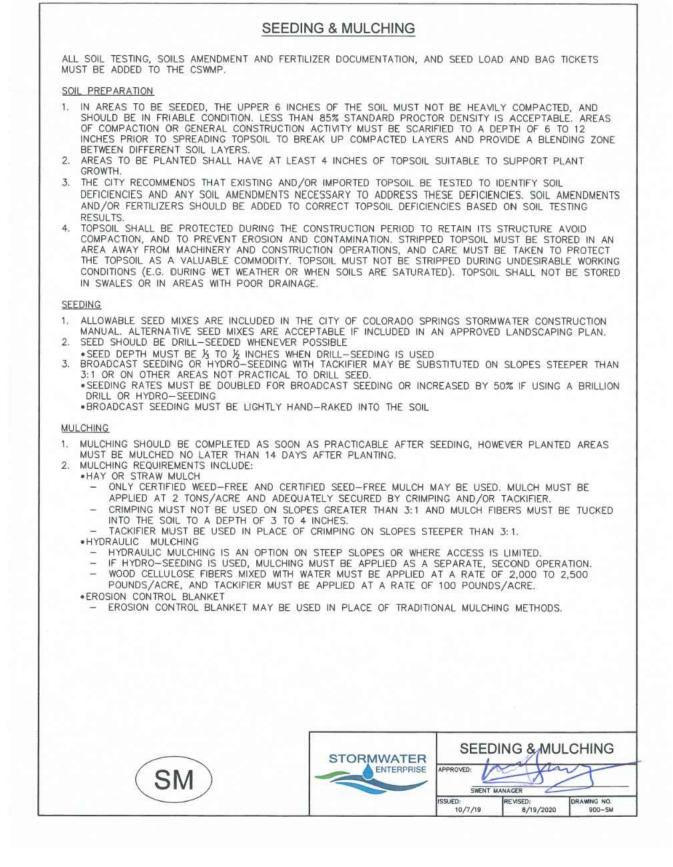


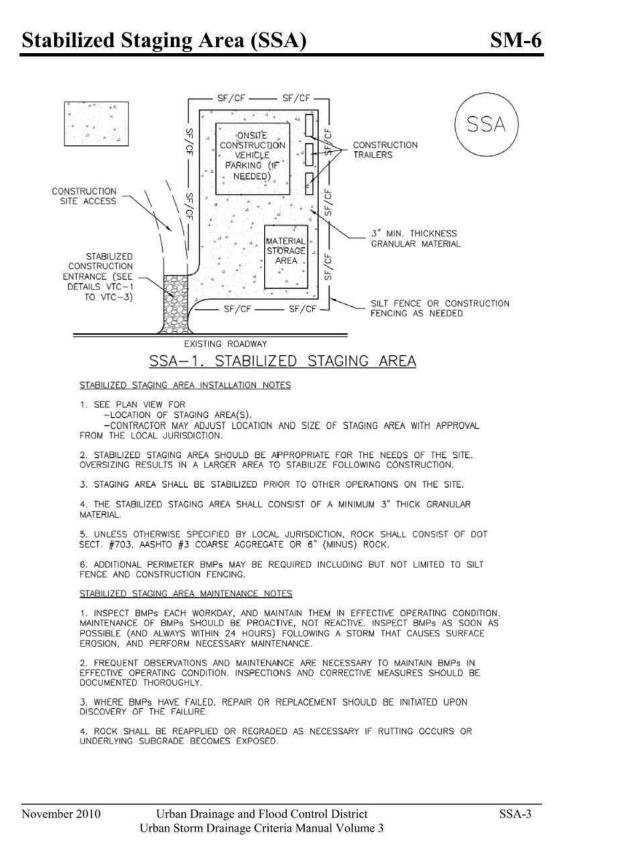
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ngineering Corporation 1604 South 21st Street Colorado Springs, Colorado 80904

(719) 630-7342

Sheet Revisions	90% BID SET	ROCK ISLAND TRAIL GRADING AND EROSION CONTROL PLAN	Kiowa Proj. No. 16028
	No Revisions:	EROSION CONTROL DETAILS	TAP M240-162
	Revised:	Designer: RNW	SubAcct No.20391
		Detailer: RNW	
	Void:	Date: 08/06/2024	Sheet Number GEC 7





SM-6

STABILIZED STAGING AREA MAINTENANCE NOTES

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

OTHERWISE STABILIZED IN A MANNER APPROVED BY LOCAL JURISDICTION.

Urban Drainage and Flood Control District

Urban Storm Drainage Criteria Manual Volume 3

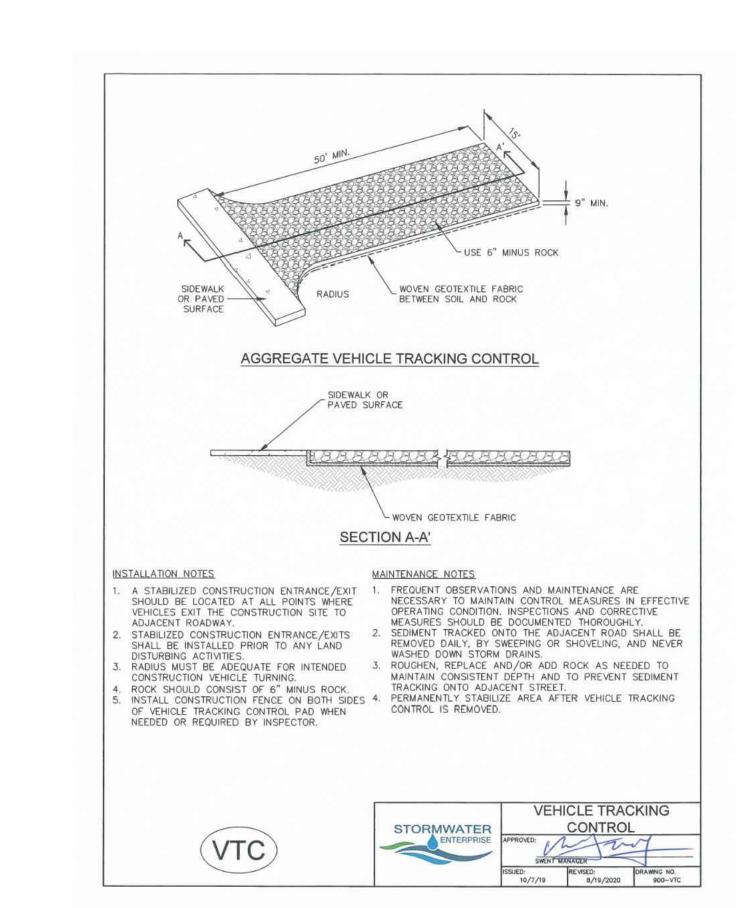
(DETAILS ADAPTED FROM DOUGLAS COUNTY, COLORADO, NOT AVAILABLE IN AUTOCAD)

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

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.

Stabilized Staging Area (SSA)







IN PROGRESS

NOT FOR CONSTRUCTION

Kiowa Engineering Corporation Date

For and on Behalf of



(719) 630-7342

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Sheet Revisions	90% BID SET	ROCK ISLAND TRAIL	Kiowa Proj. No. 1602
	No Revisions:	GRADING AND EROSION CONTROL PLAN EROSION CONTROL DETAILS	TAP M240-162
	Revised:	Designer: RNW	SubAcct No.20391
		Detailer: RNW	
	Void:	Date: 08/06/2024	Sheet Number GEC 8

November 2010