SAND CREEK RESTORATION

A PORTION OF SAND CREEK CHANNEL STERLING RANCH

LOCATED IN SECTIONS 33, 28, TOWNSHIP 12S, RANGE 65W OF THE 6TH PRINCIPAL MERIDIAN

COUNTY OF EL PASO, STATE OF COLORADO

PCD PROJECT NUMBER: CDR-20-004

PUBLIC IMPROVEMENT CONSTRUCTION PLANS

AGENCIES

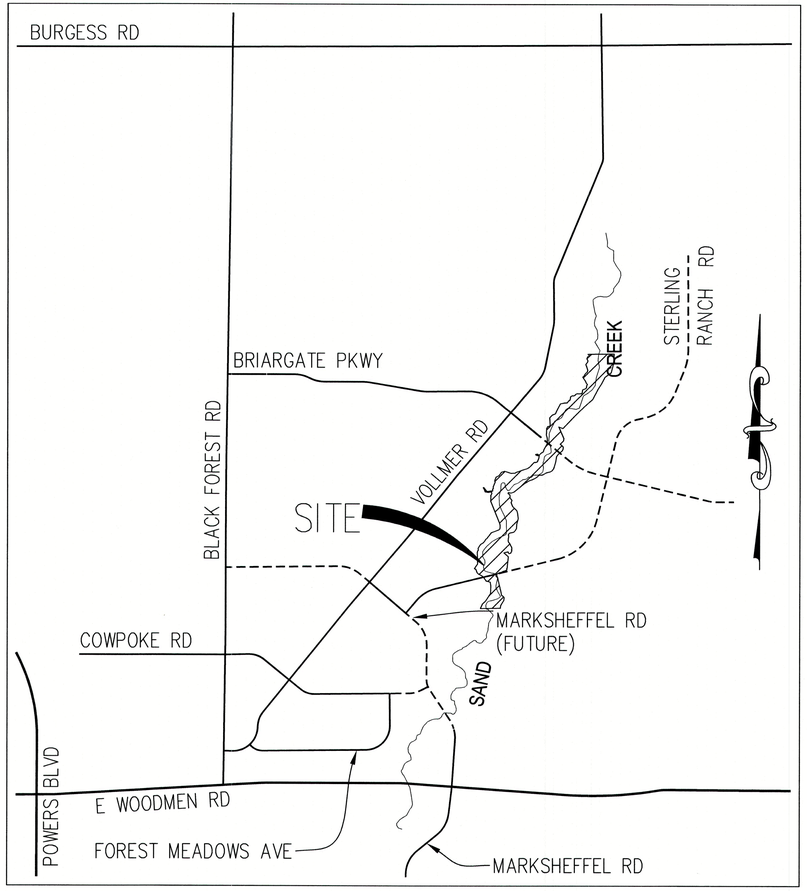
OWNER/DEVELOPER:	SR LAND, LLC 20 BOULDER CRESCENT, SUITE 201 COLORADO SPRINGS, CO 80903 JAMES F. MORLEY (719) 471-1742
CIVIL ENGINEER:	JR ENGINEERING, LLC 5475 TECH CENTER DRIVE COLORADO SPRINGS, CO 80919 MIKE BRAMLETT P.E. (303) 267-6240
COUNTY ENGINEERING:	EL PASO COUNTY PLANNING AND COMMUNITY DEVELOPMENT 2880 INTERNATIONAL CIRCLE, SUITE 110 COLORADO SPRINGS, CO 80910 JEFF RICE, P.E. (719) 520-6300
WATER RESOURCES:	STERLING RANCH METRO DISTRICT ENGINEERS JDS-HYDRO CONSULTANTS 545 E. PIKES PEAK AVE., SUITE 300 COLORADO SPRINGS, CO 80903 JOHN MCGINN (719) 668-8769
FIRE DISTRICT:	BLACK FOREST FIRE PROTECTION DISTRICT 11445 TEACHOUT ROAD COLORADO SPRINGS, CO 80908 CHIEF BRYAN JACK (719) 495-4300
GAS DEPARTMENT:	COLORADO SPRINGS UTILITIES 7710 DURANT DR. COLORADO SPRINGS, CO 80947 TIM WENDT (719) 668-3556
ELECTRIC DEPARTMENT:	MOUNTAIN VIEW ELECTRIC 11140 E. WOODMEN ROAD FALCON, CO 80831 (719) 495-2283
COMMUNICATIONS:	QWEST COMMUNICATIONS (U.N.C.C. LOCATORS) (800) 922-1987 AT&T (LOCATORS) (719) 635-3674
COMMUNICATIONS:	QWEST COMMUNICATIONS (U.N.C.C LOCATORS) (800) 922-1987 AT&T (LOCATORS) (719) 635-3674
GAS:	STEPHEN BACON SR. ROW AGENT II COLORADO INTERSTATE GAS CO. (KINDER MORGAN) 2 N. NEVADA AVE. COLORADO SPRINGS, CO 80903 719-659-5936
GAS:	CRAIG KEIRSEY REAL ESTATE | MAGELLAN MIDSTREAM PARTNERS, L.P. ONE WILLIAMS CENTER, OTC-8, TULSA, OK 74172 918-574-7986

BENCHMARK

1. THE TOP OF AN ALUMINUM SURVEYORS CAP, STAMPED "9853", AT THE SOUTHEAST BOUNDARY CORNER OF BARBARICK SUBDIVISION
   NORTHING = 411416.273
   EASTING = 235167.071
   ELEVATION = 7023.42
2. THE TOP OF A RED PLASTIC SURVEYORS CAP, ILLEGIBLE, AT THE NORTHWEST BOUNDARY CORNER OF PAWNEE RANCHEROS SUBDIVISION
   NORTHING = 410095.404
   EASTING = 235052.131
   ELEVATION = 7000.40
3. THE TOP OF A RED PLASTIC SURVEYORS CAP, STAMPED "38141", AT THE SOUTHWEST BOUNDARY CORNER OF BARBARICK SUBDISION
   NORTHING = 411399.962
   EASTING = 233849.817
   ELEVATION = 7030.82

BASIS OF BEARINGS

THE SOUTH LINE OF THE SOUTHWEST QUARTER OF SECTION 34, TOWNSHIP 12 SOUTH, RANGE 65 WEST OF THE 6TH P.M. AS MONUMENTED AT THE SOUTHWEST CORNER OF SAID BY A 2-1/2" ALUMINUM CAP STAMPED "LS 11624" AND AT THE SOUTEAST CORNER OF SAID SOUTHWEST QUARTER BY A 2-1/2" ALUMINUM CAP STAMPED "LS 11624", SAID LINE BEARS N89°14'14"E, A DISTANCE OF 2,722.69 FEET.



VICINITY MAP
1" = 1000'

PCD PROJECT NUMBER: CDR-20-004

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

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DISTRICT APPROVALS

THESE DOCUMENTS HAVE BEEN REVIEWED AND APPROVED FOR STORM DRAIN AND ASSOCIATED UTILITY SERVICE CONSTRUCTION.

FOR AND ON BEHALF OF THE STERLING RANCH METRO DISTRICT NO.3 — DATE 11/20/23

EL PASO COUNTY STATEMENT

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

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

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

JOSHUA PALMER, P.E. — DATE

COUNTY ENGINEER/ECM ADMINISTRATOR

OWNER/DEVELOPER STATEMENT

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

JAMES F. MORLEY — DATE 11/20/2023

SR LAND, LLC
20 BOULDER CRESCENT, SUITE 201
COLORADO SPRINGS, CO 80903

ENGINEER'S STATEMENT

THESE DETAILED PLANS AND SPECIFICATIONS WERE PREPARED UNDER MY DIRECTION AND SUPERVISION. SAID PLANS AND SPECIFICATIONS HAVE BEEN PREPARED ACCORDING TO THE CRITERIA ESTABLISHED BY THE COUNTY FOR DETAILED ROADWAY, DRAINAGE, GRADING AND EROSION CONTROL PLANS AND SPECIFICATIONS, AND SAID PLANS AND SPECIFICATIONS ARE IN CONFORMITY WITH APPLICABLE MASTER DRAINAGE PLANS AND MASTER TRANSPORTATION PLANS. SAID PLANS AND SPECIFICATIONS MEET THE PURPOSES FOR WHICH THE PARTICULAR ROADWAY AND DRAINAGE FACILITIES ARE DESIGNED AND ARE CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF. I ACCEPT RESPONSIBILITY FOR ANY LIABILITY CAUSED BY ANY NEGLIGENT ACTS, ERRORS OR OMISSIONS ON MY PART IN PREPARATION OF THESE DETAILED PLANS AND SPECIFICATIONS.

COLORADO REGISTERED MIKE A. BRAMLETT 32314 PROFESSIONAL ENGINEER

MIKE A. BRAMLETT, P.E. — DATE 11/20/23
COLORADO P.E. 32314
FOR AND ON BEHALF OF JR ENGINEERING, LLC

UNTIL SUCH TIME AS THESE DRAWINGS ARE APPROVED BY THE APPROPRIATE REVIEWING AGENCIES, JR ENGINEERING ONLY FOR THE PURPOSES DESIGNATED BY WRITTEN AUTHORIZATION.

PREPARED FOR
SR LAND, LLC
20 BOULDER CRESCENT
2ND FLOOR
COLORADO SPRINGS, CO 80903
JAMES F. MORLEY
(719) 419-3024

J.R ENGINEERING
A Westrian Company
Centennial 303-740-9393 • Colorado Springs 719-593-2593
Fort Collins 970-491-9888 • www.jrengineering.com

No.	REVISION	BY	DATE

H-SCALE	N/A	DESIGNED BY	SCH
V-SCALE	N/A	DRAWN BY	SCH
DATE	11/20/23	CHECKED BY	

SAND CREEK RESTORATION

COVER SHEET

SHEET 1 OF 121

JOB NO. 25188.04

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GENERAL/ CONSTRUCTION NOTES:

1. ALL MATERIALS AND INSTALLATION PROCEDURES SHALL BE IN COMPLIANCE WITH EL PASO COUNTY ENGINEERING CRITERIA MANUAL AND EL PASO COUNTY DRAINAGE CRITERIA MANUAL.
2. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY THE EXISTENCE AND LOCATION OF ALL UNDERGROUND UTILITIES ALONG THE ROUTE OF THE WORK. THE OMISSION FROM OR THE INCLUSION OF UTILITY LOCATIONS ON THE PLANS IS NOT TO BE CONSIDERED AS THE NONEXISTENCE OF OR A DEFINITE LOCATION OF EXISTING UNDERGROUND UTILITIES. ANY DAMAGE TO THE UTILITIES WILL BE REPAIRED AT THE CONTRACTOR'S EXPENSE, AND ANY SERVICE DISRUPTION WILL BE SETTLED BY THE CONTRACTOR.
3. CONTRACTOR SHALL KEEP A COPY OF THESE APPROVED PLANS, THE GRADING AND EROSION CONTROL PLAN, THE STORMWATER MANAGEMENT PLAN (SWMP), THE SOILS AND GEOTECHNICAL REPORT, AND THE APPROPRIATE DESIGN AND CONSTRUCTION STANDARDS AND SPECIFICATIONS AT THE JOB SITE AT ALL TIMES, INCLUDING THE FOLLOWING:
   3.1. EL PASO COUNTY ENGINEERING CRITERIA MANUAL (ECM)
   3.2. CITY OF COLORADO SPRINGS/EL PASO COUNTY DRAINAGE CRITERIA MANUAL VOLUMES 1&2
4. THE CONTRACTOR WILL HOLD A PRE-CONSTRUCTION MEETING WITH THE EL PASO COUNTY ENGINEERING DEPARTMENT REPRESENTATIVE AND THE ENGINEER PRIOR TO CONSTRUCTION OF PUBLIC IMPROVEMENTS.
5. 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.
6. IT IS THE CONTRACTOR'S RESPONSIBILITY TO UNDERSTAND THE REQUIREMENTS OF ALL JURISDICTIONAL AGENCIES AND TO OBTAIN ALL REQUIRED PERMITS, INCLUDING BUT NOT LIMITED TO EL PASO COUNTY EROSION AND STORMWATER QUALITY CONTROL PERMIT, REGIONAL BUILDING FLOODPLAIN DEVELOPMENT PERMIT, U.S. ARMY CORPS OF ENGINEERS-ISSUED 401 AND/OR 404 PERMITS, AND COUNTY AND STATE FUGITIVE DUST PERMITS.
7. CONTRACTOR SHALL NOT DEVIATE FROM THE PLANS WITHOUT FIRST OBTAINING WRITTEN APPROVAL FROM THE DESIGN ENGINEER AND EPC. CONTRACTOR SHALL NOTIFY THE DESIGN ENGINEER IMMEDIATELY UPON DISCOVERY OF ANY ERRORS OR INCONSISTENCIES.
8. CONTRACTOR SHALL COORDINATE GEOTECHNICAL TESTING PER ECM STANDARDS. PAVEMENT DESIGN SHALL BE APPROVED BY EL PASO COUNTY PRIOR TO PLACEMENT OF CURB AND GUTTER AND PAVEMENT.
9. ALL CONSTRUCTION TRAFFIC MUST ENTER/EXIT THE SITE AT APPROVED CONSTRUCTION ACCESS POINTS.
10. CONTRACTOR SHALL OBTAIN ANY PERMITS REQUIRED BY EL PASO COUNTY DOT, INCLUDING WORK WITHIN THE RIGHT-OF-WAY AND SPECIAL TRANSPORT PERMITS.
11. THE LIMITS OF CONSTRUCTION SHALL REMAIN WITHIN THE PROPERTY LINE UNLESS OTHERWISE NOTED. THE OWNER/DEVELOPER SHALL OBTAIN WRITTEN PERMISSION AND EASEMENTS, WHERE REQUIRED, FROM ADJOINING PROPERTY.
12. ALL MATERIALS AND WORKMANSHIP SHALL BE SUBJECT TO INSPECTION AND APPROVAL BY THE ENGINEER OR APPLICABLE ENTITY.
13. EL PASO COUNTY SHALL BE NOTIFIED 72 HOURS PRIOR TO THE COMMENCEMENT OF ANY CONSTRUCTION.
14. ALL WORK SHALL BE DONE TO THE LINES, GRADES, SECTIONS, AND ELEVATIONS SHOWN ON THE PLANS UNLESS OTHERWISE NOTED OR APPROVED BY THE ENGINEER.
15. ALL RANGE POINTS, TIES, BENCH MARKS, AND OTHER SURVEY CONTROL POINTS WHICH MAY BE ENCOUNTERED DURING CONSTRUCTION MUST BE PRESERVED.
16. THE CONTRACTOR SHALL LIMIT CONSTRUCTION ACTIVITIES TO THOSE AREAS WITHIN THE LIMITS OF DISTURBANCE AND/OR TOES OF SLOPE AS SHOWN ON THE PLANS AND CROSS SECTIONS. ANY DISTURBANCE BEYOND THESE LIMITS SHALL BE RESTORED TO ORIGINAL CONDITIONS AT THE CONTRACTOR'S EXPENSE. CONSTRUCTION ACTIVITIES, IN ADDITION TO NORMAL CONSTRUCTION PROCEDURES, SHALL INCLUDE THE PARKING OF VEHICLES OR EQUIPMENT, DISPOSAL OF LITTER AND ANY OTHER ACTION WHICH WOULD ALTER EXISTING CONDITIONS AS APPROVED.
17. CONSTRUCTION ACTIVITY SHALL BE SCHEDULED WITH MINIMUM IMPACT TO PEDESTRIAN AND VEHICULAR TRAFFIC. ALLOWABLE WORK HOURS SHALL BE AS SPECIFIED IN THE PROJECT SPECIAL PROVISIONS.
18. THE CONTRACTOR SHALL PROTECT AND MAINTAIN ALL UTILITIES AND STRUCTURES AFFECTED BY THE WORK AND ANY DAMAGE SHALL BE REPAIRED AND RESTORED TO THE SATISFACTION OF THE ENGINEER OR APPLICABLE ENTITY.
19. THE CONTRACTOR SHALL FURNISH, INSTALL, AND MAINTAIN TEMPORARY TRAFFIC CONTROL DEVICES NECESSARY THROUGHOUT THE DURATION OF CONSTRUCTION IN CONFORMANCE WITH TRAFFIC CONTROL PLANS. NO LANE CLOSURES WILL BE PERMITTED UNLESS OTHERWISE SPECIFIED IN THE PROJECT SPECIAL PROVISION "TRAFFIC CONTROL".
20. THE CONTRACTOR SHALL MAINTAIN PAVEMENT MARKINGS ON THE ROADWAYS DURING ALL PHASES OF CONSTRUCTION IN ACCORDANCE WITH MUTCD AND CDOT STANDARDS.
21. WATER SHALL BE USED AS A DUST PALLIATIVE WHERE REQUIRED. LOCATIONS SHALL BE AS ORDERED. WATER WILL NOT BE PAID FOR SEPARATELY.
22. THE CONTRACTOR SHALL OBTAIN A STATE CONSTRUCTION DEWATERING DISCHARGE PERMIT FOR DISCHARGES TO ANY ROADWAY DITCHES, STORM SEWER, CHANNEL, IRRIGATION DITCH, ANY STREAM THAT IS TRIBUTARY TO THE AFOREMENTIONED FACILITIES, OR ANY WATERS OF THE UNITED STATES.
23. DEWATERING OPERATIONS SHALL BE PERFORMED IN ACCORDANCE WITH SECTION 107 OF THE STANDARD SPECIFICATIONS AND SPECIAL PROVISIONS.
24. CONTRACTOR SHALL NOTIFY ALL BUSINESSES AND RESIDENTS, IN WRITING, PRIOR TO ANY INTERRUPTION IN UTILITY SERVICE. NOTICE MUST BEAR ALL APPROPRIATE CONTACT INFORMATION, AND AN EMERGENCY NUMBER FOR AFTER HOURS CALLS.
25. AT THE COMPLETION OF CONSTRUCTION AND PRIOR TO PROJECT CLOSEOUT, THE CONTRACTOR SHALL PROVIDE A COMPLETE SET OF PLANS MARKED "AS-BUILT". THE PLANS SHALL SHOW ANY AND ALL VARIATIONS FROM THE APPROVED PLAN SET.
26. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING A SITE SPECIFIC STAGING PLAN FOR ACCESS TO THE WORK AREAS AND FIELD FACILITIES TO THE ENGINEER FOR REVIEW AND APPROVAL PRIOR TO BEGINNING CONSTRUCTION. ALL COSTS ASSOCIATED WITH THE CONSTRUCTION OF TEMPORARY INGRESS/EGRESS SHALL BE PAID FOR UNDER THE LUMP SUM TRAFFIC CONTROL. EARTHWORK, DRAINAGE, AND OTHER ITEMS RELATED TO THE ACCESS SHALL BE SUBSIDIARY TO THE WORK INCLUDING EROSION CONTROL MEASURES FOR RESTORATION OF THE SITE TO ORIGINAL CONDITION.
27. THE CONTRACTOR SHALL PROTECT EXISTING WETLANDS WITH TEMPORARY FENCING BEFORE ANY GROUND DISTURBANCE BEGINS. WETLANDS AREAS TO BE PROTECTED ARE SHOWN ON THE PLANS.
28. ALL INFRASTRUCTURE WITHIN THE PROJECT IS PRIVATELY OWNED AND MAINTAINED BY STERLING RANCH METRO DISTRICT (SRMD) UNLESS LABELED OTHERWISE, OR CHANGED BY AN UPDATED CHANNEL MAINTENANCE AGREEMENT SIGNED BY BOTH SRMD AND EL PASO COUNTY.

GRADING NOTES:

1. SAND CREEK IS AN ACTIVE MAJOR DRAINAGEWAY WITH PERENNIAL BASE FLOWS. CONTRACTOR SHALL ANTICIPATE STORMWATER INFLOWS TO THE SITE DURING CONSTRUCTION AND PROVIDE A MEANS OF CONVEYANCE/REMOVAL OF ANY CONTINUOUS INFLOWS.
2. THERE IS A LIKELIHOOD FOR LARGE FLOW EVENTS IN SAND CREEK WHICH COULD JEOPARDIZE CONSTRUCTION. THE LIKELIHOOD OF THESE EVENTS CHANGES WITH THE SEASONS. THE CONTRACTOR SHOULD ACCOUNT FOR THE EVENTUALITY OF THESE LARGE FLOW EVENTS BASED ON THE TIMING OF CONSTRUCTION.
3. DEWATERING.
   3.a. DEWATERING/BYPASS PUMPING OF SAND CREEK SHALL OCCUR IN ADVANCE OF CONSTRUCTION ACTIVITIES.
   3.b. THE CONTRACTOR SHALL OBTAIN A CONSTRUCTION DEWATERING (CDW) PERMIT FROM CDPHE ANYTIME GROUNDWATER, INCLUDING GROUNDWATER THAT IS COMMINGLED WITH STORMWATER OR SURFACE WATER, IS ENCOUNTERED DURING CONSTRUCTION ACTIVITIES AND THE GROUNDWATER OR COMMINGLED WATER NEEDS TO BE DISCHARGED TO SURFACE WATER.
   3.c. WATER FROM DEWATERING OPERATIONS SHALL ONLY BE DISCHARGED INTO STATE WATERS IF ALLOWED BY A PERMIT.
4. MUCK EXCAVATION IS NOT ANTICIPATED FOR THIS PROJECT. IF ENCOUNTERED, CONTRACTOR SHALL REMOVE UNSUITABLE ORGANIC MATERIAL TO THE DEPTH AS DETERMINED BY THE ENGINEER AND REPLACE THE EXCAVATED VOLUME WITH SUITABLE APPROVED FILL MATERIAL PRIOR TO CONSTRUCTION OF THE PROPOSED IMPROVEMENTS.
5. THE MAXIMUM SLOPE FOR EXCAVATION AND PLACEMENT OF FILL IS 4:1 HORIZONTAL:VERTICAL, UNLESS OTHERWISE SHOWN IN THE PLANS.
6. THE EXISTING DROP STRUCTURE, ANY ASSOCIATED FEATURES, AND DEBRIS SHOULD BE REMOVED FROM THE PROPOSED CONSTRUCTION AREA. EXPOSED SURFACES SHOULD BE FREE OF MOUNDS AND DEPRESSIONS WHICH COULD PREVENT UNIFORM COMPACTION.
7. EXPOSED AREAS WHICH WILL RECEIVE FILL, ONCE PROPERLY CLEARED WHERE NECESSARY, SHOULD BE SCARIFIED TO A MINIMUM DEPTH OF 8 INCHES, CONDITIONED TO NEAR OPTIMUM WATER CONTENT, AND COMPACTED.
8. A GEOTECHNICAL ENGINEER SHALL BE PRESENT FOR OVER-EXCAVATION AND FILL OPERATIONS.
9. THE EARTHWORK EFFORTS SHOULD BE MONITORED UNDER THE DIRECTION OF THE GEOTECHNICAL ENGINEER. MONITORING SHOULD INCLUDE DOCUMENTATION OF ADEQUATE REMOVAL OF VEGETATION AND TOP SOIL, PROOF-ROLLING AND MITIGATION OF AREAS DELINEATED BY THE PROOF-ROLL TO REQUIRE MITIGATION.
10. EACH LIFT OF COMPACTED FILL SHOULD BE TESTED, EVALUATED, AND REWORKED AS NECESSARY UNTIL APPROVED BY THE GEOTECHNICAL ENGINEER PRIOR TO PLACEMENT OF ADDITIONAL LIFTS. EACH LIFT OF FILL SHOULD BE TESTED FOR DENSITY AND WATER CONTENT AT A FREQUENCY OF AT LEAST ONE TEST FOR EVERY 2,500 SQUARE FEET OF COMPACTED FILL PLACED BENEATH THE DROP STRUCTURE, OR WITHIN CONSTRUCTED SLOPES.
11. IN AREAS OF FOUNDATION EXCAVATIONS, THE BEARING SUBGRADE SHOULD BE EVALUATED UNDER THE DIRECTION OF THE GEOTECHNICAL ENGINEER. IN THE EVENT UNANTICIPATED CONDITIONS ARE ENCOUNTERED, THE GEOTECHNICAL ENGINEER SHOULD PRESCRIBE MITIGATION OPTIONS.
12. THE ON-SITE SOILS ARE GENERALLY CONSIDERED SUITABLE FOR REUSE AS STRUCTURAL AND/OR GENERAL FILL. IMPORTED SOILS SHALL BE APPROVED BY THE GEOTECHNICAL ENGINEER. ALL UNSUITABLE MATERIAL SHALL BE DISPOSED OF AS DIRECTED. PARTIAL REMOVAL OF THE FILL SOILS SHOULD INCLUDE OVER-EXCAVATING A MINIMUM OF 4 FEET OF THE FILL SOILS, PROCESSING AS REQUIRED, MOISTURE CONDITIONING, AND RECOMPACTING AS RECOMMENDED BY THE GEOTECHNICAL ENGINEER.
13. THE FILL SHALL BE PLACED IN THIN, LOOSE LIFTS OF 8 INCHES OR LESS (WHEN HEAVY SELF-PROPELLED COMPACTION EQUIPMENT IS USED) OR 4-6 INCHES (WHEN HAND-GUIDED EQUIPMENT IS USED). WATER CONTENT SHALL BE WITHIN 3 PERCENT OF OPTIMUM. FILL IS TO BE COMPACTED TO A MINIMUM OF:
   13.a. WITHIN 10 FEET OF STRUCTURES, OR IN CONSTRUCTED SLOPES: 95 PERCENT OF MAXIMUM DRY DENSITY
   13.b. GENERAL FILL OUTSIDE OF STRUCTURAL AREAS: 90 PERCENT OF MAXIMUM DRY DENSITY
14. A COLORADO DEPARTMENT OF PUBLIC HEALTH AND ENVIRONMENT (CDPHE) WATER QUALITY DIVISION STORMWATER DISCHARGE PERMIT SHALL BE OBTAINED AND A COPY SHALL BE SUBMITTED TO EL PASO COUNTY.
15. PROPOSED SPOT ELEVATIONS REFLECT MEAN FINISHED GROUND GRADES IRRESPECTIVE OF VARIATIONS DUE TO PROPOSED GROUT, BOULDER, AND RIPRAP.
16. EXISTING GRADES REFLECT CHANNEL CONDITIONS AS OF AUGUST 1, 2017. CHANNEL SCOUR MAY AFFECT SHOWN ELEVATIONS.
17. TOPSOIL SHALL BE STOCKPILED TO THE EXTENT PRACTICAL ON THE SITE FOR USE ON AREAS TO BE REVEGETATED. ANY AND ALL STOCKPILES SHALL BE LOCATED AND PROTECTED FROM EROSIVE ELEMENTS. THE MINIMUM THICKNESS OF TOPSOIL SHALL BE 4" AND SHALL BE OBTAINED BY STOCKPILING EXISTING TOPSOIL. THE TOPSOIL SHALL BE APPLIED TO ALL SURFACES REQUIRING SEEDING OR AS DIRECTED BY THE ENGINEER. THE CONTRACTOR SHALL DISPOSE OF EXCESS TOPSOIL IN A DESIGNATED AREA ON SITE.

STANDARD NOTES FOR EL PASO COUNTY GRADING AND 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.
2. NOTWITHSTANDING ANYTHING DEPICTED IN THESE PLANS IN WORDS OR GRAPHIC REPRESENTATION, ALL DESIGN AND CONSTRUCTION RELATED TO ROADS, STORM DRAINAGE AND EROSION CONTROL SHALL CONFORM TO THE STANDARDS AND REQUIREMENTS OF THE MOST RECENT VERSION OF THE RELEVANT ADOPTED EL PASO COUNTY STANDARDS, INCLUDING THE LAND DEVELOPMENT CODE, THE ENGINEERING CRITERIA MANUAL, THE DRAINAGE CRITERIA MANUAL, AND THE DRAINAGE CRITERIA MANUAL VOLUME 2. ANY DEVIATIONS FROM REGULATIONS AND STANDARDS MUST BE REQUESTED, AND APPROVED, IN WRITING
3. A SEPARATE STORMWATER MANAGEMENT PLAN (SMWP) FOR THIS PROJECT SHALL BE COMPLETED AND AN EROSION AND STORMWATER QUALITY CONTROL PERMIT (ESQCP) ISSUED PRIOR TO COMMENCING CONSTRUCTION MANAGEMENT OF THE SWMP DURING CONSTRUCTION IS THE RESPONSIBILITY OF THE DESIGNATED QUALIFIED STORMWATER MANAGER OR CERTIFIED EROSION CONTROL INSPECTOR. THE SWMP SHALL BE LOCATED ON-SITE AT ALL TIMES DURING CONSTRUCTION AND SHALL BE KEPT UP TO DATE WITH WORK PROGRESS AND CHANGES IN THE FIELD.
4. ONCE THE ESQCP IS APPROVED AND A "NOTICE TO PROCEED" HAS BEEN ISSUED, THE CONTRACTOR MAY INSTALL THE INITIAL STAGE EROSION AND SEDIMENT CONTROL MEASURES AS INDICATED ON THE APPROVED GEC. A PRECONSTRUCTION MEETING BETWEEN THE CONTRACTOR, ENGINEER, AND EL PASO COUNTY WILL BE HELD PRIOR TO ANY CONSTRUCTION. IT IS THE RESPONSIBILITY OF THE APPLICANT TO COORDINATE THE MEETING TIME AND PLACE WITH COUNTY STAFF
5. CONTROL MEASURES MUST BE INSTALLED PRIOR TO COMMENCEMENT OF ACTIVITIES THAT COULD CONTRIBUTE POLLUTANTS TO STORMWATER. CONTROL MEASURES FOR ALL SLOPES, CHANNELS, DITCHES, AND DISTURBED LAND AREAS SHALL BE INSTALLED IMMEDIATELY UPON COMPLETION OF THE DISTURBANCE.
6. ALL TEMPORARY SEDIMENT AND EROSION CONTROL MEASURES SHALL BE MAINTAINED AND REMAIN IN EFFECTIVE OPERATING CONDITION UNTIL PERMANENT SOIL EROSION CONTROL MEASURES ARE IMPLEMENTED AND FINAL STABILIZATION IS ESTABLISHED. ALL PERSONS ENGAGED IN LAND DISTURBANCE ACTIVITIES SHALL ASSESS THE ADEQUACY OF CONTROL MEASURES AT THE SITE AND IDENTIFY IF CHANGES TO THOSE CONTROL MEASURES ARE NEEDED TO ENSURE THE CONTINUED EFFECTIVE PERFORMANCE OF THE CONTROL MEASURES. ALL CHANGES TO TEMPORARY SEDIMENT AND EROSION CONTROL MEASURES MUST BE INCORPORATED INTO THE STORMWATER MANAGEMENT PLAN.
7. TEMPORARY STABILIZATION SHALL BE IMPLEMENTED ON DISTURBED AREAS AND STOCKPILES WHERE GROUND DISTURBING CONSTRUCTION ACTIVITY HAS PERMANENTLY CEASED OR TEMPORARILY CEASED FOR LONGER THAN 14 DAYS
8. FINAL STABILIZATION MUST BE IMPLEMENTED AT ALL APPLICABLE CONSTRUCTION SITES. FINAL STABILIZATION IS ACHIEVED WHEN ALL GROUND DISTURBING ACTIVITIES ARE COMPLETE AND ALL DISTURBED AREAS EITHER HAVE A UNIFORM VEGETATIVE COVER WITH INDIVIDUAL PLANAT DENSITY OF 70 PERCENT OF PRE-DISTRUBANCE LEVELS ESTABLISHED OR EQUIVALENT PERMANENT ALTERNATIVE STABILIZATION METHOD IS IMPLEMENTED. ALL TEMPORARY SEDIMENT AND EROSION CONTROL MEASURES SHALL BE REMOVED UPON FINAL STABILIZATION AND BEFORE PERMIT CLOSURE.
9. ALL PERMANENT STORMWATER MANAGEMENT FACILITIES SHALL BE INSTALLED AS DESIGNED IN THE APPROVED PLANS. ANY PROPOSED CHANGES THAT 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 STABILIZED CONVEYANCE DESIGNED TO MINIMIZE EROSION AND THE DISCHARGE OF SEDIMENT OFF-SITE
13. CONCRETE WASH WATER SHALL BE CONTAINED AND DISPOSED OF IN ACCORDANCE WITH THE SWMP. NO WASH WATER SHALL BE DISCHARGED TO OR ALLOWED TO ENTER STATE WATERS, INCLUDING ANY SURFACE OR SUBSURFACE STORM DRAINAGE SYSTEM OR FACILITIES. CONCRETE WASHOUTS SHALL NOT BE LOCATED IN AN AREA WHERE SHALLOW GROUNDWATER MAY BE PRESENT, OR WITHIN 50 FEET OF A SURFACE WATER BODY, CREEK OR STREAM.
14. DURING DEWATERING OPERATIONS, 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 THAN 3:1.
16. CONTRACTOR SHALL BE RESPONSIBLE FOR THE REMOVAL OF ALL WASTES FROM THE CONSTRUCTION SITE FOR DISPOSAL IN ACCORDANCE WITH LOCAL AND STATE REGULATORY REQUIREMENTS. NO CONSTRUCTION DEBRIS, TREE SLASH, BUILDING MATERIAL WASTES OR UNUSED BUILDING MATERIALS SHALL BE BURIED, DUMPED, OR DISCHARGED AT THE SITE.
17. WASTE MATERIALS SHALL NOT BE TEMPORARILY PLACED OR STORED IN THE STREET, ALLEY, OR OTHER PUBLIC WAY, UNLESS IN ACCORDANCE WITH AN APPROVED TRAFFIC CONTROL PLAN. CONTROL MEASURES MAY BE REQUIRED BY EL PASO COUNTY ENGINEERING IF DEEMED NECESSARY, BASED ON SPECIFIC CONDITIONS AND CIRCUMSTANCES.
18. TRACKING OF SOILS AND CONSTRUCTION DEBRIS OFF-SITE SHALL BE MINIMIZED. MATERIALS TRACKED OFF-SITE SHALL BE CLEANED UP AND PROPERLY DISPOSED OF IMMEDIATELY.
19. THE OWNER/DEVELOPER SHALL BE RESPONSIBLE FOR THE REMOVAL OF ALL CONSTRUCTION DEBRIS, DIRT, TRASH, ROCK, SEDIMENT, SOIL, AND SAND THAT MAY ACCUMULATE IN ROADS, STORM DRAINS AND OTHER DRAINAGE CONVEYANCE SYSTEMS AND STORMWATER APPURTENANCES AS A RESULT OF SITE DEVELOPMENT.
20. THE QUANTITY OF MATERIALS STORED ON THE PROJECT SITE SHALL BE LIMITED, AS MUCH AS PRACTICAL, TO THAT QUANTITY REQUIRED TO PERFORM THE WORK IN AN ORDERLY SEQUENCE. ALL MATERIALS STORED ON-SITE SHALL BE STORED IN A NEAT, ORDERLY MANNER, IN THEIR ORIGINAL CONTAINERS, WITH ORIGINAL MANUFACTURER'S LABELS.
21. NO CHEMICAL(S) HAVING THE POTENTIAL TO BE RELEASED IN STORMWATER ARE TO BE STORED OR USED 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 POINTS.
26. PRIOR TO CONSTRUCTION THE PERMITTEE SHALL VERIFY THE LOCATION OF EXISTING UTILITIES
27. A WATER SOURCE SHALL BE AVAILABLE ON-SITE DURING EARTHWORK OPERATIONS AND SHALL BE UTILIZED AS REQUIRED TO MINIMIZE DUST FROM EARTHWORK EQUIPMENT AND WIND.
28. THE SOILS REPORT FOR THIS SITE HAS BEEN PREPARED BY ENTECH ENGINEERING INC, JULY 2020 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), 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

ABBREVIATIONS

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

LAYER LINETYPE LEGEND

	EXISTING	PROPOSED
PHASE LINE		
MATCH LINE		
SECTION LINE		
BOUNDARY LINE		
PROPERTY LINE		
EASEMENT LINE		
RIGHT OF WAY		
R.O.W. A LINE	A	A
CENTERLINE		
CITY LIMITS		
WIRE FENCE		
CHAIN LINK FENCE		
WOOD FENCE		
MASONRY FENCE		
GUARDRAIL		
CONC. BARRIER		
CABLE TV	TV	TV
ELECTRIC	E	E
FIBER OPTIC	FO	FO
GAS MAIN	G	G
IRRIGATION MAIN	IRR	IRR
OIL/PETRO. MAIN	O	O
OVERHEAD UTILITY	OHU	OHU
SANITARY SEWER	S	S
STORM DRAIN		
TELEPHONE	T	T
WATER MAIN	W	W
RAW WATER LINE	RWL	RWL
SWALE/WATERWAY FLOWLINE		
DIVERSION DITCH		
DIVERSION CHANNEL		
MAJOR DRAINAGE BASIN		
MINOR DRAINAGE BASIN		
TOP OF SLOPE		
TOE OF SLOPE		
EDGE OF WATER		
INDEX CONTOUR	6100	6100
INTERMEDIATE CONTOUR		
DEPRESSION CONT. (INDEX)	6100	6100
DEPRESSION CONT. (INTER)		
TOP OF CUTS		
TOE OF FILLS		
CUT AND FILL LINE		C/F
SILT FENCE	SF	SF
100 YEAR FIS FLOODPLAIN	100YR	100YR
100 YEAR MDDP FLOODPLAIN	100YR	100YR
500 YEAR FLOODPLAIN	500YR	500YR
FLOODWAY	FLDWY	FLDWY
BASE FLOOD ELEVATION		
EDGE OF WETLANDS		

UTILITIES LEGEND

	EXISTING	PROPOSED
STORM SEWER		
MANHOLE		
STORM INLET		
AREA INLET – SQUARE		
AREA INLET – ROUND		
FLARED END SECTION		
RIPRAP		
SANITARY SEWER		
LINE MARKER	Mkr San	
SERVICE MARKER		
CLEAN–OUT		
MANHOLE W/ DIRECTIONAL FLOW ARROW		
WATER LINE		
LINE MARKER	Mkr W	
SERVICE MARKER		
FIRE HYDRANT		
FIRE CONNECTION		
MANHOLE		
BEND		
BLOW–OFF VALVE		
WELL	WELL	
METER		
VALVE		
REDUCER		
THRUST BLOCK		
CROSS		
PLUG W/ THRUST BLOCK		
TEE		
REVERSE ANCHOR		
ANODE		
AIR & VACUUM VALVE ASSEMBLY		
TRANSMISSION BLOW–OFF ASSEMBLY		
GAS LINE		
MARKER	Mkr G	
SERVICE MARKER		
METER		
VALVE		
PLUG		
TEE		
DRY UTILITIES		
CABLE TV MARKER	Mkr TV	
CABLE TELEVISION PEDESTAL		
ELECTRIC MARKER	Mkr E	
ELECTRIC SERVICE MARKER		
ELECTRICAL PEDESTAL		
ELECTRICAL METER		
ELECTRICAL MANHOLE		
FIBER–OPTIC MARKER	Mkr FO	
IRRIGATION PEDESTAL		
TELEPHONE MARKER	Mkr T	
TELEPHONE PEDESTAL		
TELEPHONE MANHOLE		
UTILITY POLE		
GUY ANCHOR		
GUY POLE		
MISC. UTILITIES		
VENT PIPE	VP	VP
TEST HOLE DESIGNATOR	TH# FIRM/AGENCY	

MONUMENTATION LEGEND

ALUMINUM CAP – FOUND	AC
BRASS CAP – FOUND	BC
BENCHMARK – FOUND	
CROSS – FOUND	
MONUMENT – SET	
MONUMENT – FOUND (DEFAULT)	
MONUMENT – FOUND (ALTERNATE 1)	
MONUMENT – FOUND (ALTERNATE 2)	
MONUMENT – FOUND (ALTERNATE 3)	
MONUMENT – FOUND (ALTERNATE 4)	
MONUMENT – FOUND (ALTERNATE 5)	
MONUMENT – FOUND (ALTERNATE 6)	
MONUMENT – FOUND (ALTERNATE 7)	
NAIL & WASHER – FOUND	NAIL & WASHER
PANEL – FOUND	
PK NAIL – FOUND	PK NAIL
ROW MONUMENT – FOUND	
ROW MARKER – FOUND	
SECTION CORNER – FOUND	
SECTION CORNER – SET	
QUARTER–SECTION CORNER – FOUND	
QUARTER–SECTION CORNER – SET	
SECTION CENTER – FOUND	
SECTION CENTER – FOUND	
CONTROL/TRAVERSE POINT – SET	

TRAFFIC LEGEND

	EXISTING	PROPOSED
PARKING METER		
TRAFFIC SIGNAL BOX		
TRAFFIC SIGNAL POLE		
TRAFFIC SIGNAL		
BARRICADE		
GUARD RAIL POST		
IMPACT ATTENUATOR		
BRIDGE STYLE HIGHWAY SIGN POST		
CANTILEVER STYLE HIGHWAY SIGN POST		
SIGN		
RAILROAD MARKER/SIGN		
STREET LIGHT		
STREET LIGHT – SINGLE		
STREET LIGHT – DOUBLE		
LUMINAIRE		
ALTERNATE LUMINAIRE		
SIGNAL MAST ARM W/ LUMINAIRE		
PEDESTAL POLE FOUNDATION		
TRAFFIC SIGNAL POLE		
ROUND PULL BOX		
MEDIUM PULL BOX		
LARGE PULL BOX (20X33X15)		
SIGNAL HEAD WITHOUT BACK PLATE		
SIGNAL HEAD WITH BACK PLATE		
PEDESTRIAN SIGNAL HEAD		
VIDEO IMAGE DETECTOR		
OPTICOM DETECTOR		
VEHICLE DETECTION ZONE		V

STORM WATER MANAGEMENT

	KEY	SYMBOL
CHECK DAM	CD	
CONSTRUCTION ROAD STABILIZATION	CRS	
CURB SOCK INLET PROTECTION	CS	
CONCRETE WASHOUT AREA	CWA	
DIVERSION DITCH AND DIKE, TEMPORARY	DD	
DIVERSION CHANNEL, TEMPORARY	DV	
DEWATERING	DW	
EROSION CONTROL BLANKET	ECB	
INLET FILTER	IF	
INLET PROTECTION	IP	
MULCHING	MU	
OUTLET PROTECTION	OP	
PAVED FLUME	PF	
PERMENENT SEEDING	PS	
REINFORCED CONCRETE DAM	RCD	
ROUGH CUT STREET CONTROL	RCS	
SEDIMENT BASIN	SB	
SEDIMENT CONTROL LOG	SCL	
SILT FENCE	SF	
SURFACE ROUGHENING	SR	
STABILIZED STAGING AREA	SSA	
SEDIMENT TRAP	ST	
STRAW BALE BARRIER	STB	
TERRACING	TER	
TEMPORARY SEEDING	TS	
TEMPORARY STREAM CROSSING CULVERT/BRIDGE	TSC C	
TEMPORARY STREAM CROSSING FORD TYPE	TSC F	
TEMPORARY SLOPE DRAIN	TSD	
VEHICLE TRACKING CONTROL	VTC	
VEHICLE TRACKING CONTROL WITH WASH RACK	WR	

LANDSCAPE LEGEND

	EXISTING
TREE – CONIFEROUS	
TREE – DECIDUOUS	
SHRUB/BUSH	
SHRUBS AND BUSHES	
IRRIGATION BOX	
IRRIGATION SPRINKLER	
IRRIGATION VALVE	
BOLLARD	
FLAGPOLE	FP

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

ENGINEER'S STATEMENT

STANDARD DETAILS SHOWN WERE REVIEWED ONLY AS TO THEIR APPLICATION ON THIS PROJECT.

Mike Bramlett 11/20/23

MIKE A. BRAMLETT, P.E.
COLORADO P.E. 32314
FOR AND ON BEHALF OF JR ENGINEERING, LLC

COLORADO REGISTERED MIKE A. BRAMLETT 32314 PROFESSIONAL ENGINEER

DATE

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

PREPARED FOR
SR LAND, LLC
20 BOULDER CRESCENT
2ND FLOOR
COLORADO SPRINGS, CO 80903
JAMES F. MORLEY
(719) 419–3024

J·R ENGINEERING
A Westrian Company
Centennial 303–740–9393 • Colorado Springs 719–593–2593
Fort Collins 970–491–9888 • www.jrengineering.com

No.	REVISION	BY	DATE

H–SCALE	N/A	V–SCALE	N/A	DATE	11/20/23
DESIGNED BY	SCH	DRAWN BY	SCH	CHECKED BY	

SAND CREEK RESTORATION

LEGEND

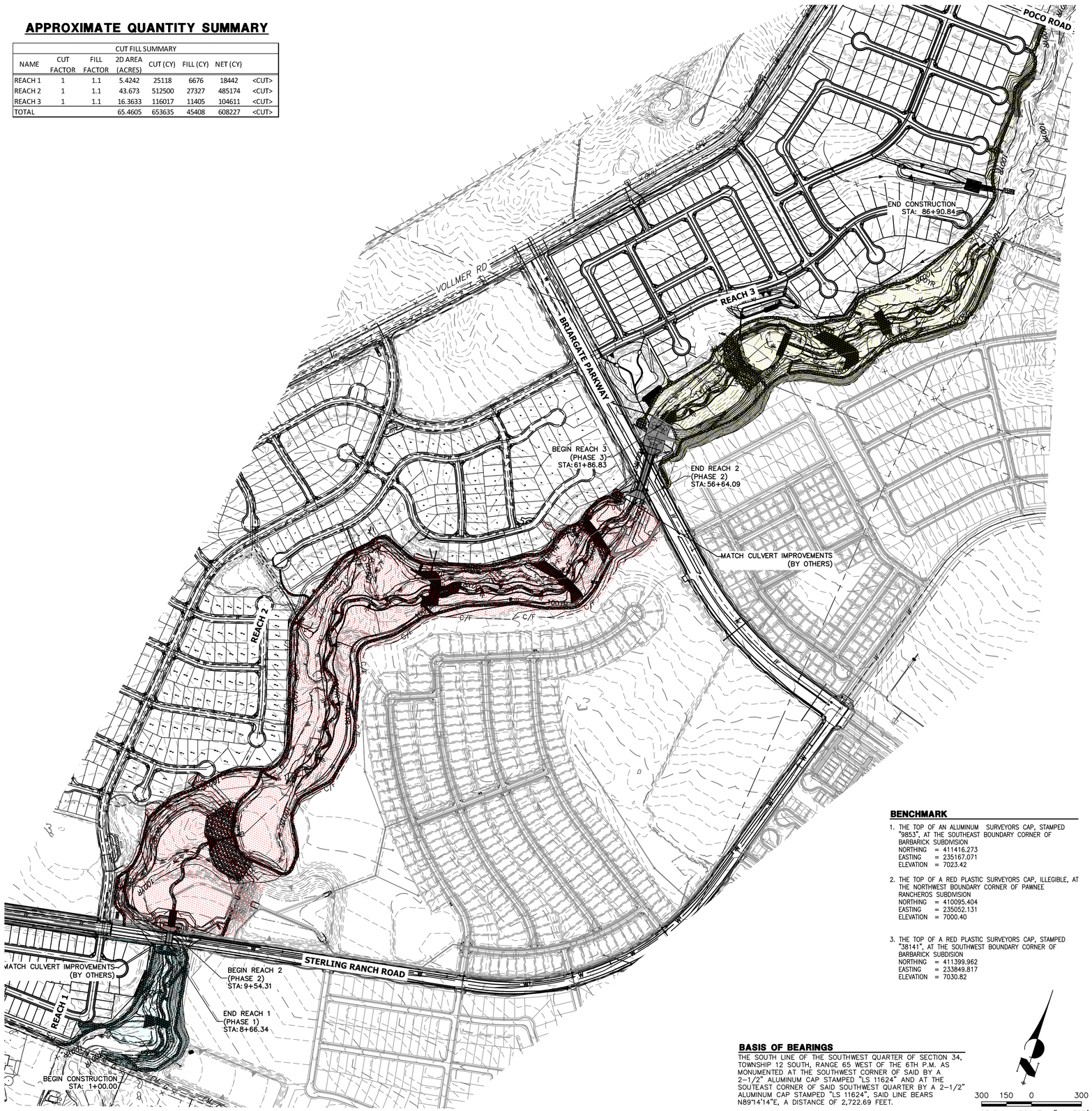
SHEET 3 OF 121

JOB NO. 25188.04

X:\2515000.all\25188.04\Drawings\Sheet Dwgs\Cover Sheet\25188.04CV101.dwg, LG01, 12/6/2023 4:04:30 PM, VaughtD

APPROXIMATE QUANTITY SUMMARY

CUT FILL SUMMARY							
NAME	CUT FACTOR	FILL FACTOR	2D AREA (ACRES)	CUT (CY)	FILL (CY)	NET (CY)	
REACH 1	1	1.1	5.4242	25118	6676	18442	<CUT>
REACH 2	1	1.1	43.673	512500	27327	485174	<CUT>
REACH 3	1	1.1	16.3633	116017	11405	104611	<CUT>
TOTAL			65.4605	653635	45408	608227	<CUT>



BENCHMARK

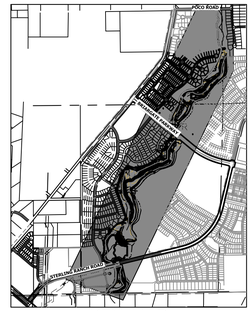
1. THE TOP OF AN ALUMINUM SURVEYORS CAP, STAMPED "9853", AT THE SOUTHEAST BOUNDARY CORNER OF BARBARICK SUBDIVISION
   NORTHING = 411416.273
   EASTING = 235167.071
   ELEVATION = 7023.42
2. THE TOP OF A RED PLASTIC SURVEYORS CAP, ILLEGIBLE, AT THE NORTHWEST BOUNDARY CORNER OF PAWNEE RANCHEROS SUBDIVISION
   NORTHING = 410095.404
   EASTING = 235052.131
   ELEVATION = 7000.40
3. THE TOP OF A RED PLASTIC SURVEYORS CAP, STAMPED "38141", AT THE SOUTHWEST BOUNDARY CORNER OF BARBARICK SUBDISION
   NORTHING = 411399.962
   EASTING = 233849.817
   ELEVATION = 7030.82

BASIS OF BEARINGS

THE SOUTH LINE OF THE SOUTHWEST QUARTER OF SECTION 34, TOWNSHIP 12 SOUTH, RANGE 65 WEST OF THE 6TH P.M. AS MONUMENTED AT THE SOUTHWEST CORNER OF SAID BY A 2-1/2" ALUMINUM CAP STAMPED "LS 11624" AND AT THE SOUTEAST CORNER OF SAID SOUTHWEST QUARTER BY A 2-1/2" ALUMINUM CAP STAMPED "LS 11624", SAID LINE BEARS N89°14'14"E, A DISTANCE OF 2,722.69 FEET.

300 150 0 300

ORIGINAL SCALE: 1" = 300'



KEY MAP
SCALE: 1"=2000'

LEGEND

- REACH 1 (PHASE 1)
- REACH 2 (PHASE 2)
- REACH 3 (PHASE 3)

GRADING NOTES:

1. SAND CREEK IS AN ACTIVE MAJOR DRAINAGEWAY WITH PERENNIAL BASE FLOWS. CONTRACTOR SHALL ANTICIPATE STORMWATER INFLOWS TO THE SITE DURING CONSTRUCTION AND PROVIDE A MEANS OF CONVEYANCE/REMOVAL OF ANY CONTINUOUS INFLOWS.
2. THERE IS A LIKELIHOOD FOR LARGE FLOW EVENTS IN SAND CREEK WHICH COULD JEOPARDIZE CONSTRUCTION. THE LIKELIHOOD OF THESE EVENTS CHANGES WITH THE SEASONS. THE CONTRACTOR SHOULD ACCOUNT FOR THE EVENTUALITY OF THESE LARGE FLOW EVENTS BASED ON THE TIMING OF CONSTRUCTION.
3. DEWATERING.
   3.a. DEWATERING/BYPASS PUMPING OF SAND CREEK SHALL OCCUR IN ADVANCE OF CONSTRUCTION ACTIVITIES.
   3.b. THE CONTRACTOR SHALL OBTAIN A CONSTRUCTION DEWATERING (CDW) PERMIT FROM CDPHE PRIOR TO GROUNDWATER, INCLUDING GROUNDWATER THAT IS COMMINGLED WITH STORMWATER OR SURFACE WATER, BEING ENCOUNTERED DURING CONSTRUCTION ACTIVITIES AND THE GROUNDWATER OR COMMINGLED WATER NEEDS TO BE DISCHARGED TO SURFACE WATER.
   3.c. WATER FROM DEWATERING OPERATIONS SHALL ONLY BE DISCHARGED INTO STATE WATERS IF ALLOWED BY A PERMIT.
4. MUCK EXCAVATION IS NOT ANTICIPATED FOR THIS PROJECT. IF ENCOUNTERED, CONTRACTOR SHALL REMOVE UNSUITABLE ORGANIC MATERIAL TO THE DEPTH AS DETERMINED BY THE ENGINEER AND REPLACE THE EXCAVATED VOLUME WITH SUITABLE APPROVED FILL MATERIAL PRIOR TO CONSTRUCTION OF THE PROPOSED IMPROVEMENTS.
5. THE MAXIMUM SLOPE FOR EXCAVATION AND PLACEMENT OF FILL IS 4:1 HORIZONTAL:VERTICAL, UNLESS OTHERWISE SHOWN IN THE PLANS.
6. THE EXISTING DROP STRUCTURE AT BRIARGATE PARKWAY, ANY ASSOCIATED FEATURES, AND DEBRIS SHOULD BE REMOVED FROM THE PROPOSED CONSTRUCTION AREA. EXPOSED SURFACES SHOULD BE FREE OF MOUNDS AND DEPRESSIONS WHICH COULD PREVENT UNIFORM COMPACTION.
7. EXPOSED AREAS WHICH WILL RECEIVE FILL, ONCE PROPERLY CLEARED WHERE NECESSARY, SHOULD BE SCARIFIED TO A MINIMUM DEPTH OF 8 INCHES, CONDITIONED TO NEAR OPTIMUM WATER CONTENT, AND COMPACTED.
8. A GEOTECHNICAL ENGINEER SHALL BE PRESENT FOR OVER-EXCAVATION AND FILL OPERATIONS.
9. THE EARTHWORK EFFORTS SHOULD BE MONITORED UNDER THE DIRECTION OF THE GEOTECHNICAL ENGINEER. MONITORING SHOULD INCLUDE DOCUMENTATION OF ADEQUATE REMOVAL OF VEGETATION AND TOP SOIL, PROOF-ROLLING AND MITIGATION OF AREAS DELINEATED BY THE PROOF-ROLL TO REQUIRE MITIGATION.
10. EACH LIFT OF COMPACTED FILL SHOULD BE TESTED, EVALUATED, AND REWORKED AS NECESSARY UNTIL APPROVED BY THE GEOTECHNICAL ENGINEER PRIOR TO PLACEMENT OF ADDITIONAL LIFTS. EACH LIFT OF FILL SHOULD BE TESTED FOR DENSITY AND WATER CONTENT AT A FREQUENCY OF AT LEAST ONE TEST FOR EVERY 2,500 SQUARE FEET OF COMPACTED FILL PLACED BENEATH THE DROP STRUCTURE, OR WITHIN CONSTRUCTED SLOPES.
11. IN AREAS OF FOUNDATION EXCAVATIONS, THE BEARING SUBGRADE SHOULD BE EVALUATED UNDER THE DIRECTION OF THE GEOTECHNICAL ENGINEER. IN THE EVENT UNANTICIPATED CONDITIONS ARE ENCOUNTERED, THE GEOTECHNICAL ENGINEER SHOULD PRESCRIBE MITIGATION OPTIONS.
12. THE ON-SITE SOILS ARE GENERALLY CONSIDERED SUITABLE FOR REUSE AS STRUCTURAL AND/OR GENERAL FILL. IMPORTED SOILS SHALL BE APPROVED BY THE GEOTECHNICAL ENGINEER. ALL UNSUITABLE MATERIAL SHALL BE DISPOSED OF AS DIRECTED. PARTIAL REMOVAL OF THE FILL SOILS SHOULD INCLUDE OVER-EXCAVATING A MINIMUM OF 4 FEET OF THE FILL SOILS, PROCESSING AS REQUIRED, MOISTURE CONDITIONING, AND RECOMPACTING AS RECOMMENDED BY THE GEOTECHNICAL ENGINEER.
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   13.b. GENERAL FILL OUTSIDE OF STRUCTURAL AREAS:
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811 Know what's below. Call before you dig.

ENGINEER'S STATEMENT

PREPARED UNDER MY DIRECT SUPERVISION.

Mike Bramlett

MIKE A. BRAMLETT, P.E.
COLORADO P.E. 32314
FOR AND ON BEHALF OF JR ENGINEERING, LLC

32314 — 11/20/23
DATE

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PREPARED FOR
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20 BOULDER CRESCENT
2ND FLOOR
COLORADO SPRINGS, CO 80903
JAMES F. MORLEY
(719) 419-3024

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No.	REVISION	BY	DATE

H-SCALE	1"=300'	DESIGNED BY	DJV
V-SCALE	N/A	DRAWN BY	NEO
DATE	11/20/23	CHECKED BY	

SAND CREEK RESTORATION

EARTHWORK & PHASING PLAN

SHEET 4 OF 121

JOB NO. 25188.04

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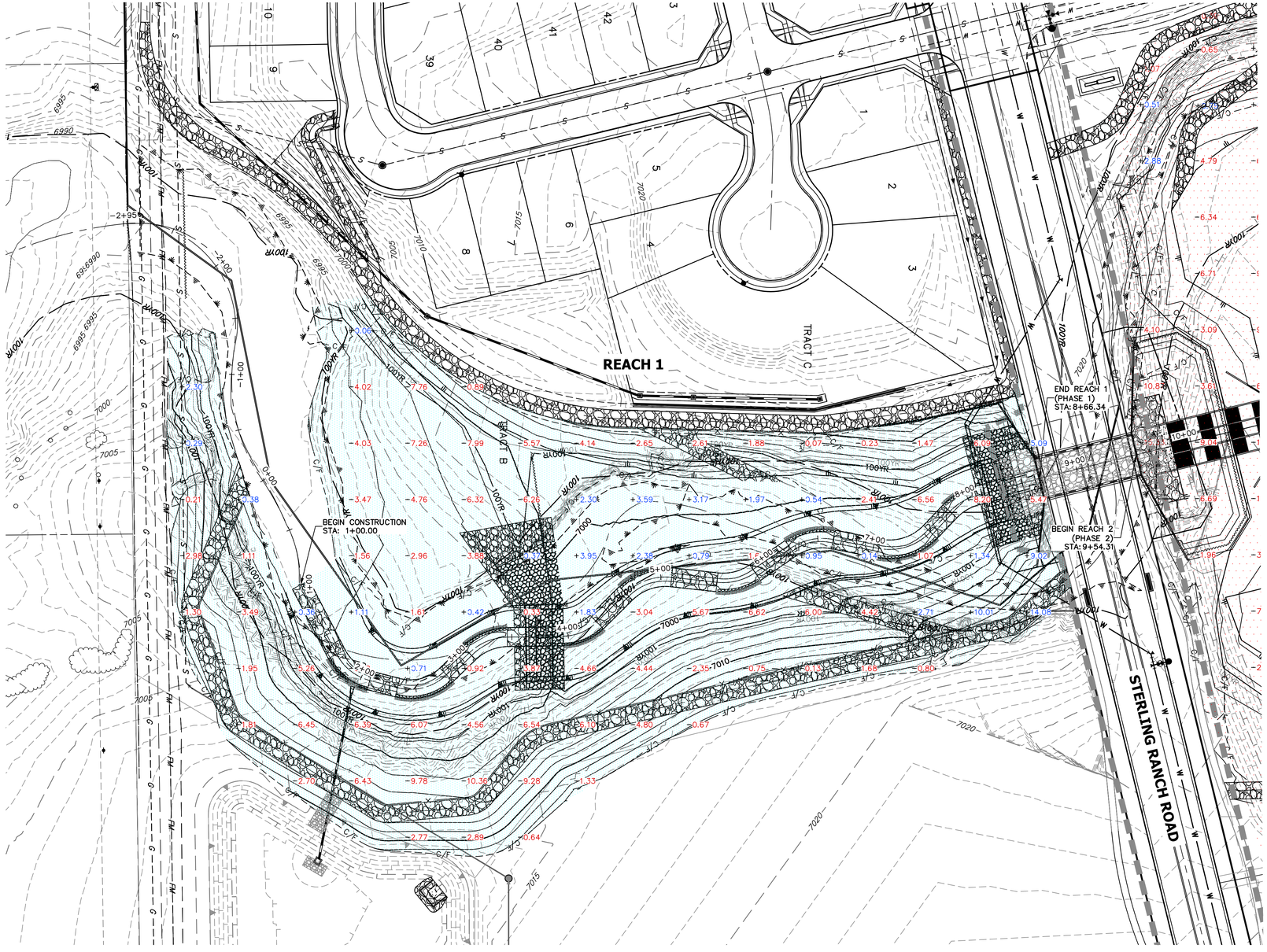

KEY MAP
SCALE: 1"=2000'

LEGEND

- REACH 1 (PHASE 1)
- REACH 2 (PHASE 2)
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   NORTHING = 411416.273
   EASTING = 235167.071
   ELEVATION = 7023.42
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   NORTHING = 410095.404
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   ELEVATION = 7000.40
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   NORTHING = 411399.962
   EASTING = 233849.817
   ELEVATION = 7030.82

BASIS OF BEARINGS

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CUT FILL SUMMARY							
NAME	CUT FACTOR	FILL FACTOR	2D AREA (ACRES)	CUT (CY)	FILL (CY)	NET (CY)	
REACH 1	1	1.1	5.4242	25118	6676	18442	<CUT>
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REACH 3	1	1.1	16.3633	116017	11405	104611	<CUT>
TOTAL			65.4605	653635	45408	608227	<CUT>

50 25 0 50
ORIGINAL SCALE: 1" = 50'

Know what's below. Call before you dig.

ENGINEER'S STATEMENT

PREPARED UNDER MY DIRECT SUPERVISION.

Mike Bramlett 11/20/23

MIKE A. BRAMLETT, P.E. DATE
COLORADO P.E. 32314
FOR AND ON BEHALF OF JR ENGINEERING, LLC

COLORADO REGISTERED MIKE A. BRAMLETT 32314 PROFESSIONAL ENGINEER

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No.	REVISION	BY	DATE

H−SCALE	1"=50'
V−SCALE	N/A
DATE	11/20/23
DESIGNED BY	DJV
DRAWN BY	NEO
CHECKED BY	

SAND CREEK RESTORATION

EARTHWORK & PHASING PLAN

SHEET 5 OF 121

JOB NO. 25188.04

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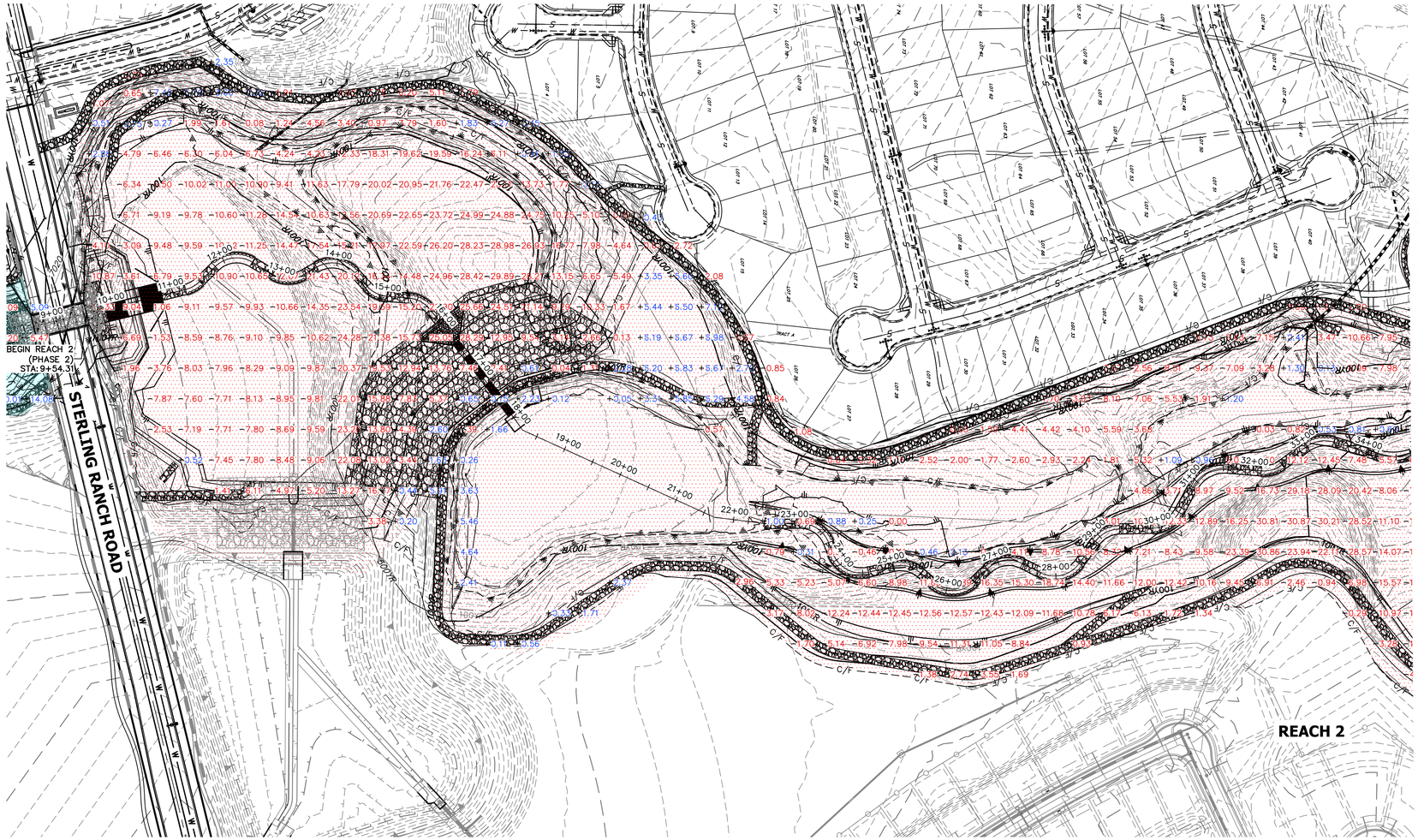

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32314

11/20/23

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SAND CREEK RESTORATION

EARTHWORK & PHASING PLAN

SHEET 6 OF 121

JOB NO. 25188.04

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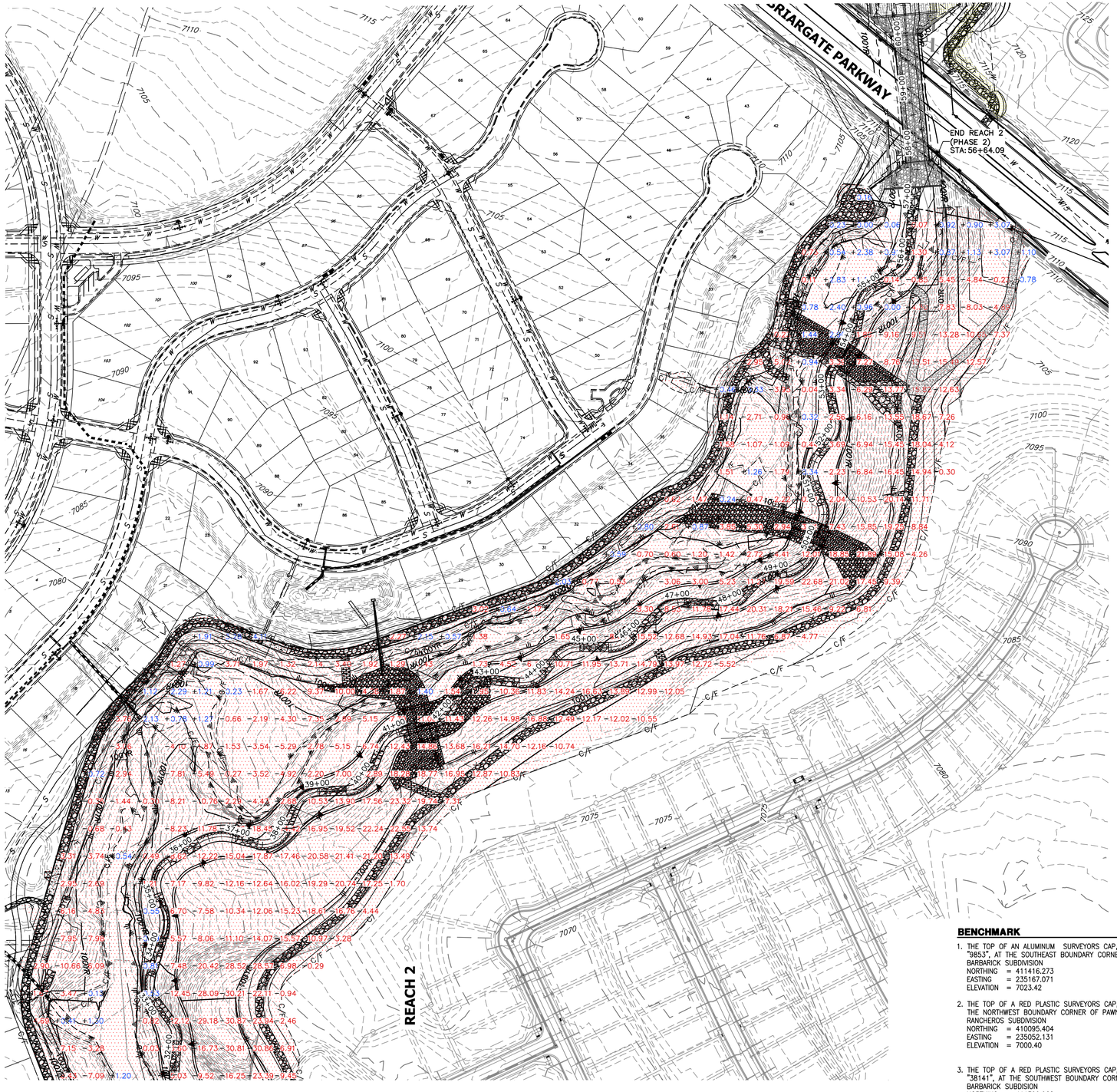

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7. EXPOSED AREAS WHICH WILL RECEIVE FILL, ONCE PROPERLY CLEARED WHERE NECESSARY, SHOULD BE SCARIFIED TO A MINIMUM DEPTH OF 8 INCHES, CONDITIONED TO NEAR OPTIMUM WATER CONTENT, AND COMPACTED.
8. A GEOTECHNICAL ENGINEER SHALL BE PRESENT FOR OVER-EXCAVATION AND FILL OPERATIONS.
9. THE EARTHWORK EFFORTS SHOULD BE MONITORED UNDER THE DIRECTION OF THE GEOTECHNICAL ENGINEER. MONITORING SHOULD INCLUDE DOCUMENTATION OF ADEQUATE REMOVAL OF VEGETATION AND TOP SOIL, PROOF-ROLLING AND MITIGATION OF AREAS DELINEATED BY THE PROOF-ROLL TO REQUIRE MITIGATION.
10. EACH LIFT OF COMPACTED FILL SHOULD BE TESTED, EVALUATED, AND REWORKED AS NECESSARY UNTIL APPROVED BY THE GEOTECHNICAL ENGINEER PRIOR TO PLACEMENT OF ADDITIONAL LIFTS. EACH LIFT OF FILL SHOULD BE TESTED FOR DENSITY AND WATER CONTENT AT A FREQUENCY OF AT LEAST ONE TEST FOR EVERY 2,500 SQUARE FEET OF COMPACTED FILL PLACED BENEATH THE DROP STRUCTURE, OR WITHIN CONSTRUCTED SLOPES.
11. IN AREAS OF FOUNDATION EXCAVATIONS, THE BEARING SUBGRADE SHOULD BE EVALUATED UNDER THE DIRECTION OF THE GEOTECHNICAL ENGINEER. IN THE EVENT UNANTICIPATED CONDITIONS ARE ENCOUNTERED, THE GEOTECHNICAL ENGINEER SHOULD PRESCRIBE MITIGATION OPTIONS.
12. THE ON-SITE SOILS ARE GENERALLY CONSIDERED SUITABLE FOR REUSE AS STRUCTURAL AND/OR GENERAL FILL. IMPORTED SOILS SHALL BE APPROVED BY THE GEOTECHNICAL ENGINEER. ALL UNSUITABLE MATERIAL SHALL BE DISPOSED OF AS DIRECTED. PARTIAL REMOVAL OF THE FILL SOILS SHOULD INCLUDE OVER-EXCAVATING A MINIMUM OF 4 FEET OF THE FILL SOILS, PROCESSING AS REQUIRED, MOISTURE CONDITIONING, AND RECOMPACTING AS RECOMMENDED BY THE GEOTECHNICAL ENGINEER.
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   - 13.a. WITHIN 10 FEET OF STRUCTURES, OR IN CONSTRUCTED SLOPES: 95 PERCENT OF MAXIMUM DRY DENSITY
   - 13.b. GENERAL FILL OUTSIDE OF STRUCTURAL AREAS: 90 PERCENT OF MAXIMUM DRY DENSITY
14. A COLORADO DEPARTMENT OF PUBLIC HEALTH AND ENVIRONMENT (CDPHE) WATER QUALITY DIVISION STORMWATER DISCHARGE PERMIT SHALL BE OBTAINED AND A COPY SHALL BE SUBMITTED TO EL PASO COUNTY.
15. PROPOSED SPOT ELEVATIONS REFLECT MEAN FINISHED GROUND GRADES IRRESPECTIVE OF VARIATIONS DUE TO PROPOSED GROUT, BOULDER, AND RIPRAP.
16. EXISTING GRADES REFLECT CHANNEL CONDITIONS AS OF AUGUST 1, 2017. CHANNEL SCOUR MAY AFFECT SHOWN ELEVATIONS.
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18. CONFLICTS OF PROPOSED GRADING WITHIN FUTURE LOTS EAST OF THE PROPOSED CHANNEL WILL BE ADDRESSED DURING DESIGN OF THE RESPECTIVE FILINGS. THESE LOTS ARE CURRENTLY UNPLATTED AND PLANNED FUTURE LOT LINES ARE SHOWN REFERENCE ONLY.

APPROXIMATE QUANTITY SUMMARY

CUT FILL SUMMARY							
NAME	CUT FACTOR	FILL FACTOR	2D AREA (ACRES)	CUT (CY)	FILL (CY)	NET (CY)	
REACH 1	1	1.1	5.4242	25118	6676	18442	<CUT>
REACH 2	1	1.1	43.673	512500	27327	485174	<CUT>
REACH 3	1	1.1	16.3633	116017	11405	104611	<CUT>
TOTAL			65.4605	653635	45408	608227	<CUT>

BENCHMARK

1. THE TOP OF AN ALUMINUM SURVEYORS CAP, STAMPED "9853", AT THE SOUTHEAST BOUNDARY CORNER OF BARBARICK SUBDIVISION
   NORTHING = 411416.273
   EASTING = 235167.071
   ELEVATION = 7023.42
2. THE TOP OF A RED PLASTIC SURVEYORS CAP, ILLEGIBLE, AT THE NORTHWEST BOUNDARY CORNER OF PAWNEE RANCHEROS SUBDIVISION
   NORTHING = 410095.404
   EASTING = 235052.131
   ELEVATION = 7000.40
3. THE TOP OF A RED PLASTIC SURVEYORS CAP, STAMPED "38141", AT THE SOUTHWEST BOUNDARY CORNER OF BARBARICK SUBDIVISION
   NORTHING = 411399.962
   EASTING = 233849.817
   ELEVATION = 7030.82

BASIS OF BEARINGS

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N

100 50 0 100
ORIGINAL SCALE: 1" = 100'

Know what's below. Call before you dig.

ENGINEER'S STATEMENT

PREPARED UNDER MY DIRECT SUPERVISION.

Mike Bramlett — 11/20/23

COLORADO REGISTERED MIKE A. BRAMLETT 32314 PROFESSIONAL ENGINEER

MIKE A. BRAMLETT, P.E. — 32314 — DATE
COLORADO P.E. 32314
FOR AND ON BEHALF OF JR ENGINEERING, LLC

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No.	REVISION	BY	DATE

H-SCALE	1"=100'
V-SCALE	N/A
DATE	11/20/23
DESIGNED BY	DJV
DRAWN BY	NEO
CHECKED BY	

SAND CREEK RESTORATION

EARTHWORK & PHASING PLAN

SHEET 7 OF 121

JOB NO. 25188.04

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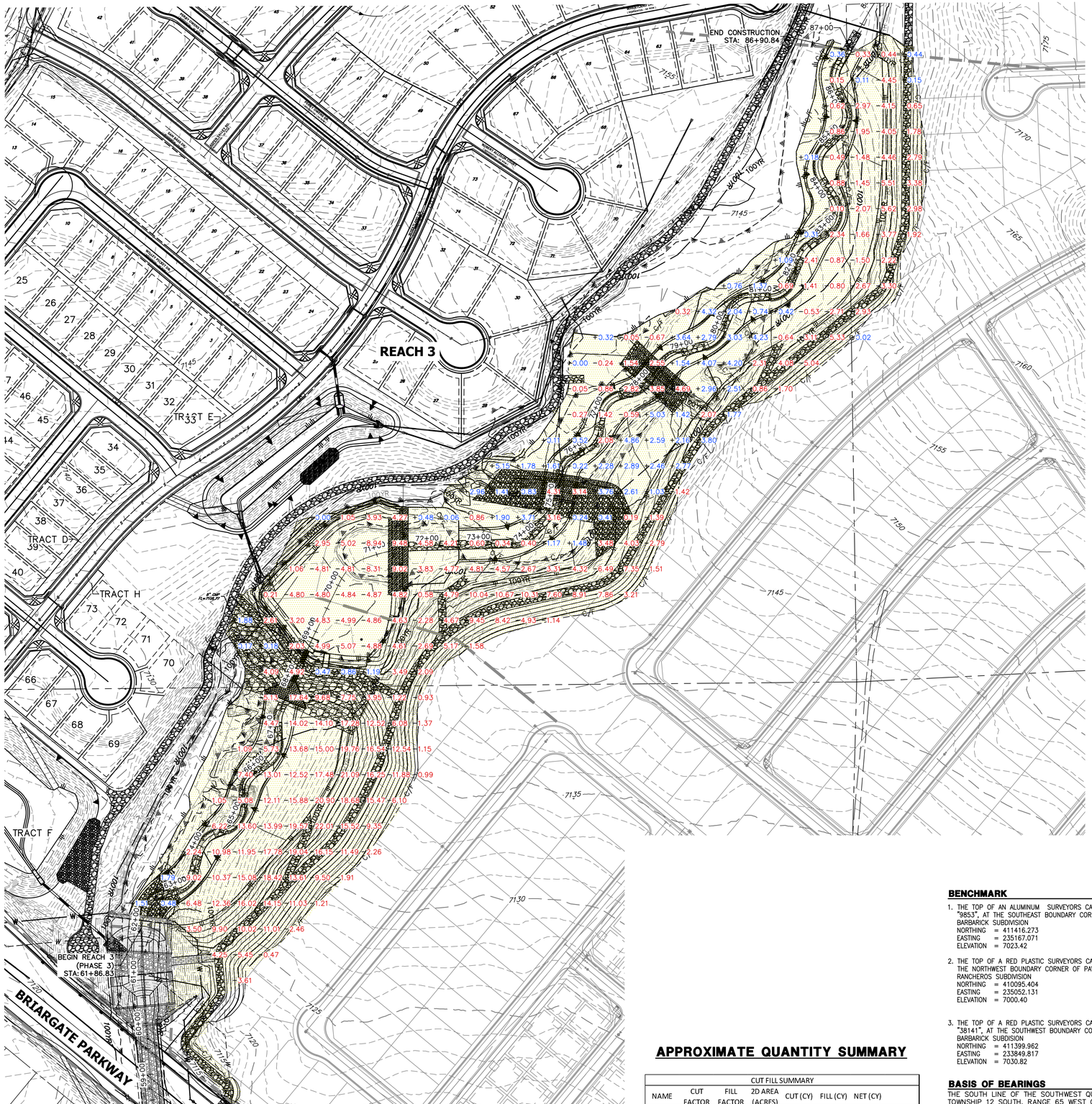

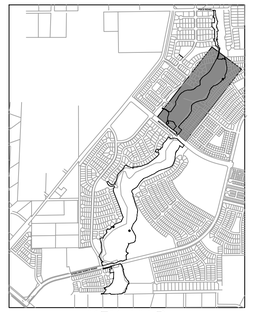

KEY MAP
SCALE: 1"=2000'

LEGEND

- REACH 1 (PHASE 1)
- REACH 2 (PHASE 2)
- REACH 3 (PHASE 3)
- −0.00 CUT HEIGHT (FEET)
- +0.00 FILL HEIGHT (FEET)

GRADING NOTES:

1. SAND CREEK IS AN ACTIVE MAJOR DRAINAGEWAY WITH PERENNIAL BASE FLOWS. CONTRACTOR SHALL ANTICIPATE STORMWATER INFLOWS TO THE SITE DURING CONSTRUCTION AND PROVIDE A MEANS OF CONVEYANCE/REMOVAL OF ANY CONTINUOUS INFLOWS.
2. THERE IS A LIKELIHOOD FOR LARGE FLOW EVENTS IN SAND CREEK WHICH COULD JEOPARDIZE CONSTRUCTION. THE LIKELIHOOD OF THESE EVENTS CHANGES WITH THE SEASONS. THE CONTRACTOR SHOULD ACCOUNT FOR THE EVENTUALITY OF THESE LARGE FLOW EVENTS BASED ON THE TIMING OF CONSTRUCTION.
3. DEWATERING.
   - 3.a. DEWATERING/BYPASS PUMPING OF SAND CREEK SHALL OCCUR IN ADVANCE OF CONSTRUCTION ACTIVITIES.
   - 3.b. THE CONTRACTOR SHALL OBTAIN A CONSTRUCTION DEWATERING (CDW) PERMIT FROM CDPHE PRIOR TO GROUNDWATER, INCLUDING GROUNDWATER THAT IS COMMINGLED WITH STORMWATER OR SURFACE WATER, BEING ENCOUNTERED DURING CONSTRUCTION ACTIVITIES AND THE GROUNDWATER OR COMMINGLED WATER NEEDS TO BE DISCHARGED TO SURFACE WATER.
   - 3.c. WATER FROM DEWATERING OPERATIONS SHALL ONLY BE DISCHARGED INTO STATE WATERS IF ALLOWED BY A PERMIT.
4. MUCK EXCAVATION IS NOT ANTICIPATED FOR THIS PROJECT. IF ENCOUNTERED, CONTRACTOR SHALL REMOVE UNSUITABLE ORGANIC MATERIAL TO THE DEPTH AS DETERMINED BY THE ENGINEER AND REPLACE THE EXCAVATED VOLUME WITH SUITABLE APPROVED FILL MATERIAL PRIOR TO CONSTRUCTION OF THE PROPOSED IMPROVEMENTS.
5. THE MAXIMUM SLOPE FOR EXCAVATION AND PLACEMENT OF FILL IS 4:1 HORIZONTAL: VERTICAL, UNLESS OTHERWISE SHOWN IN THE PLANS.
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100 50 0 100
ORIGINAL SCALE: 1" = 100'

Know what's below. Call before you dig.

ENGINEER'S STATEMENT

PREPARED UNDER MY DIRECT SUPERVISION

Mike Bramlett

COLORADO REGISTERED MIKE A. BRAMLETT 32314 PROFESSIONAL ENGINEER

11/20/23

MIKE A. BRAMLETT, P.E.
COLORADO P.E. 32314
FOR AND ON BEHALF OF JR ENGINEERING, LLC

DATE

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2ND FLOOR
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H−SCALE	1"=100'
V−SCALE	N/A
DATE	11/20/23
DESIGNED BY	DJV
DRAWN BY	NEO
CHECKED BY	

SAND CREEK RESTORATION

EARTHWORK & PHASING PLAN

SHEET 8 OF 121

JOB NO. 25188.04

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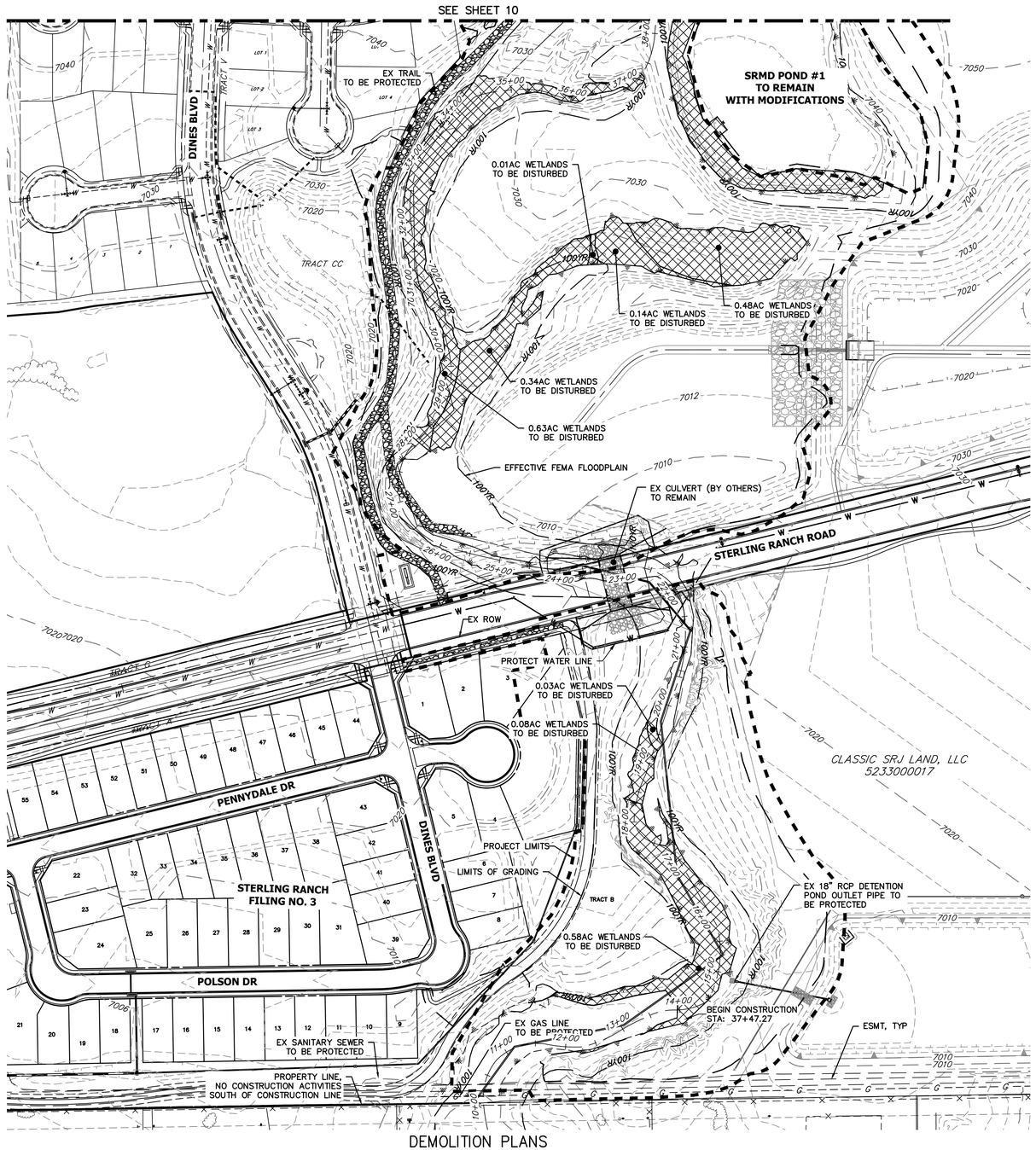


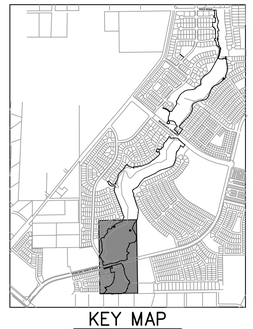
DEMOLITION PLANS
EX STA 11+00.00 TO 38+00.00
SCALE: 1"=100'

LEGEND

WETLAND: DISTURBED AREAS

LIMIT OF GRADING

LIMIT OF CONSTRUCTION



KEY MAP
SCALE: 1"=2000'

SAND CREEK APPROXIMATE WETLAND IMPACTS		
Totals	**Sq Ft**	**Acres**
Reach 1 Permanent Loss	32,636.00	0.74
Reach 2 Permanent Loss	159,695.00	4.28
Reach 3 Permanent Loss	184,711.00	5.44
Total Permanent Loss	**377,042.00**	**10.46**

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100 50 0 100
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DRAWN BY	NEO
CHECKED BY	

SAND CREEK RESTORATION

DEMOLITION PLAN

SHEET 9 OF 121

JOB NO. 25188.04

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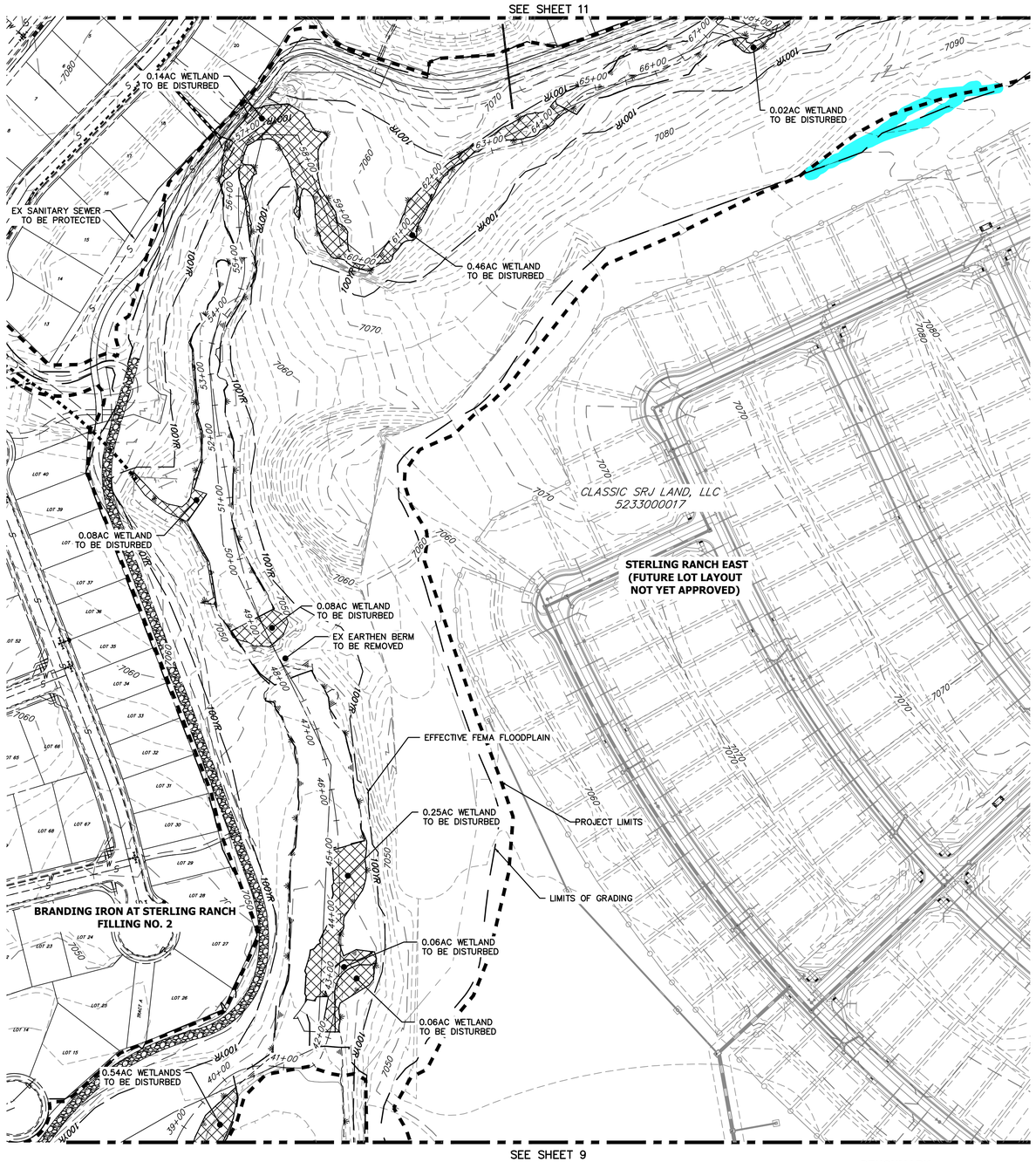

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WETLAND: DISTURBED AREAS

LIMIT OF GRADING

LIMIT OF CONSTRUCTION

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SAND CREEK RESTORATION

DEMOLITION PLAN

SHEET 10 OF 121

JOB NO. 25188.04

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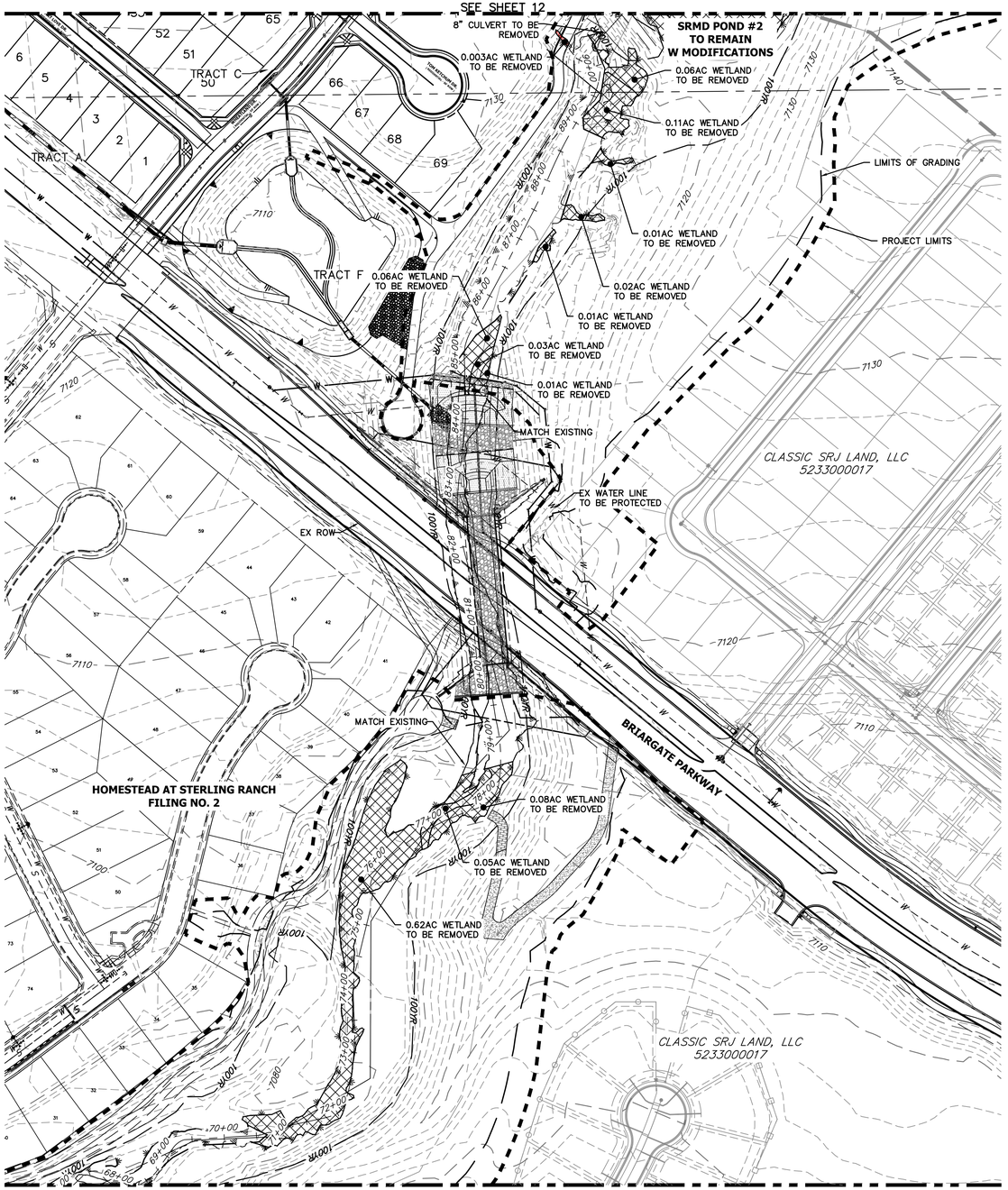

SEE SHEET 10

DEMOLITION PLANS
EX STA: 68+00.00 TO 91+00.00
SCALE: 1"=100'

SAND CREEK APPROXIMATE WETLAND IMPACTS		
Totals	**Sq Ft**	**Acres**
Reach 1 Permanent Loss	32,636.00	0.74
Reach 2 Permanent Loss	159,695.00	4.28
Reach 3 Permanent Loss	184,711.00	5.44
Total Permanent Loss	**377,042.00**	**10.46**

LEGEND

WETLAND: DISTURBED AREAS

LIMIT OF GRADING

LIMIT OF CONSTRUCTION

KEY MAP
SCALE: 1"=2000'

BENCHMARK

1. THE TOP OF AN ALUMINUM SURVEYORS CAP, STAMPED "9853", AT THE SOUTHEAST BOUNDARY CORNER OF BARBARICK SUBDIVISION
   NORTHING = 411416.273
   EASTING = 235167.071
   ELEVATION = 7023.42
2. THE TOP OF A RED PLASTIC SURVEYORS CAP, ILLEGIBLE, AT THE NORTHWEST BOUNDARY CORNER OF PAWNEE RANCHEROS SUBDIVISION
   NORTHING = 410095.404
   EASTING = 235052.131
   ELEVATION = 7000.40
3. THE TOP OF A RED PLASTIC SURVEYORS CAP, STAMPED "38141", AT THE SOUTHWEST BOUNDARY CORNER OF BARBARICK SUBDIVISION
   NORTHING = 411399.962
   EASTING = 233849.817
   ELEVATION = 7030.82

BASIS OF BEARINGS

THE SOUTH LINE OF THE SOUTHWEST QUARTER OF SECTION 34, TOWNSHIP 12 SOUTH, RANGE 65 WEST OF THE 6TH P.M. AS MONUMENTED AT THE SOUTHWEST CORNER OF SAID BY A 2-1/2" ALUMINUM CAP STAMPED "LS 11624" AND AT THE SOUTEAST CORNER OF SAID SOUTHWEST QUARTER BY A 2-1/2" ALUMINUM CAP STAMPED "LS 11624", SAID LINE BEARS N89°14'14"E, A DISTANCE OF 2,722.69 FEET.

100 50 0 100
ORIGINAL SCALE: 1" = 100'

Know what's below. Call before you dig.

ENGINEER'S STATEMENT

PREPARED UNDER MY DIRECT SUPERVISION

Mike Bramlett 11/20/23

MIKE A. BRAMLETT, P.E. DATE
COLORADO P.E. 32314
FOR AND ON BEHALF OF JR ENGINEERING, LLC

COLORADO REGISTERED MIKE A. BRAMLETT 32314 PROFESSIONAL ENGINEER

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PREPARED FOR
SR LAND, LLC
20 BOULDER CRESCENT
2ND FLOOR
COLORADO SPRINGS, CO 80903
JAMES F. MORLEY
(719) 419-3024

J·R ENGINEERING
A Westrian Company
Centennial 303-740-9393 • Colorado Springs 719-593-2593
Fort Collins 970-491-9888 • www.jrengineering.com

No.	REVISION	BY	DATE

H-SCALE	1"=100'
V-SCALE	N/A
DATE	11/20/23
DESIGNED BY	DJV
DRAWN BY	NEO
CHECKED BY	

SAND CREEK RESTORATION

DEMOLITION PLAN

SHEET 11 OF 121

JOB NO. 25188.04

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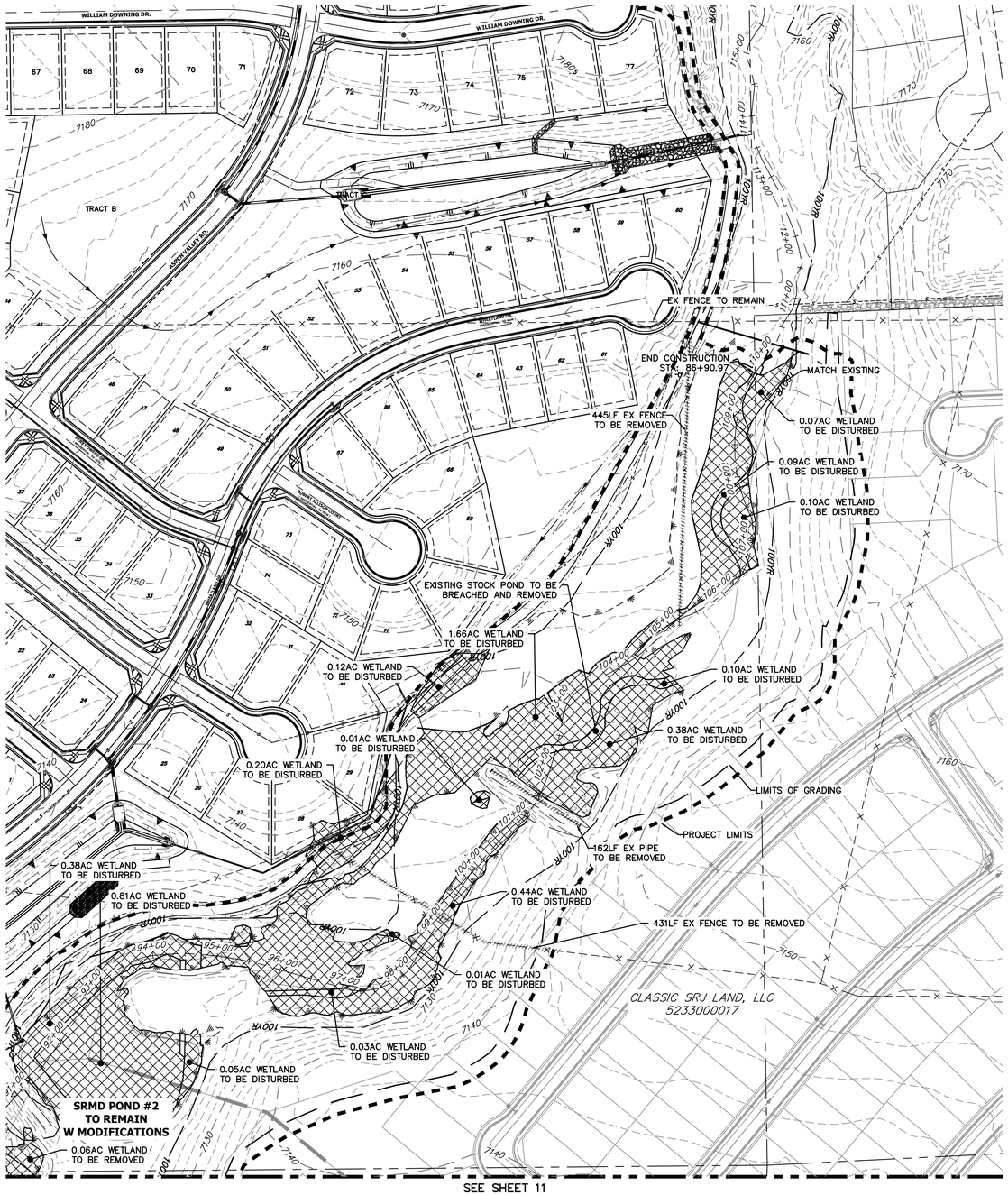
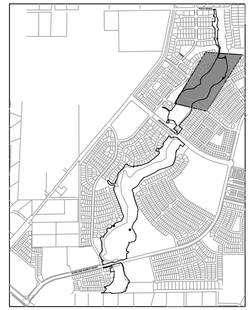


LEGEND

WETLAND: DISTURBED AREAS

LIMIT OF GRADING

LIMIT OF CONSTRUCTION



KEY MAP
SCALE: 1"=2000'

DEMOLITION PLANS
EX STA 91+00.00 TO 110+00.00
SCALE: 1"=100'

SAND CREEK APPROXIMATE WETLAND IMPACTS		
Totals	**Sq Ft**	**Acres**
Reach 1 Permanent Loss	32,636.00	0.74
Reach 2 Permanent Loss	159,695.00	4.28
Reach 3 Permanent Loss	184,711.00	5.44
Total Permanent Loss	**377,042.00**	**10.46**

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N

100 50 0 100
ORIGINAL SCALE: 1" = 100'

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

ENGINEER'S STATEMENT

PREPARED UNDER MY DIRECT SUPERVISION.

Mike Bramlett 11/20/23

COLORADO REGISTERED MIKE A. BRAMLETT 32314 PROFESSIONAL ENGINEER

MIKE A. BRAMLETT, P.E. DATE
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No.	REVISION	BY	DATE

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SAND CREEK RESTORATION

DEMOLITION PLAN

SHEET 12 OF 121

JOB NO. 25188.04

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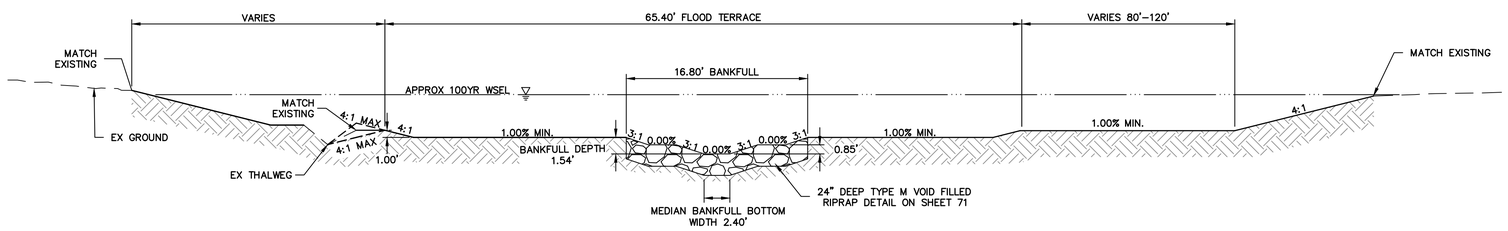
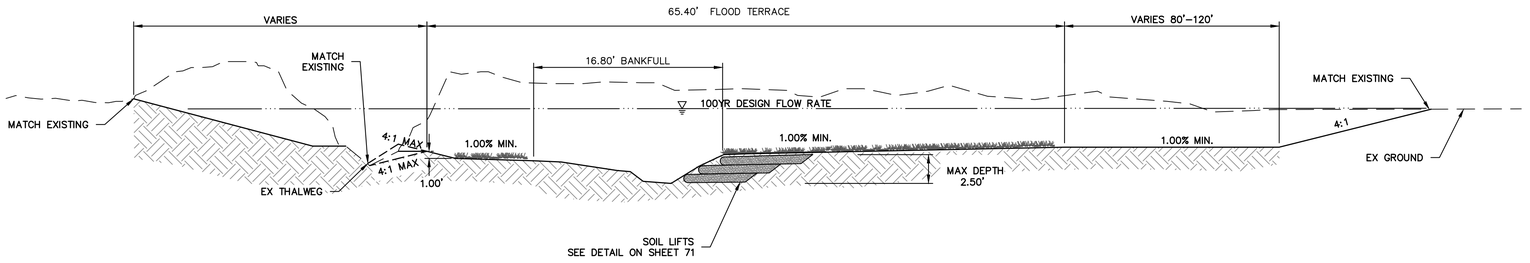


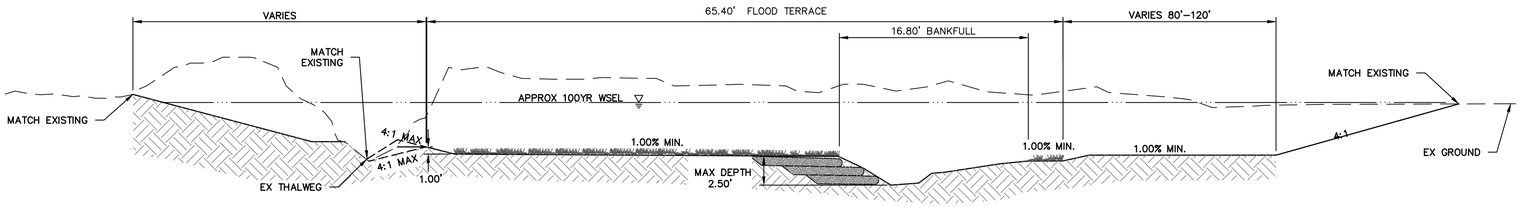
RIFFLE TYPICAL SECTION A-A

SCALE: N.T.S



LEFT POOL TYPICAL SECTION B-B

SCALE: N.T.S



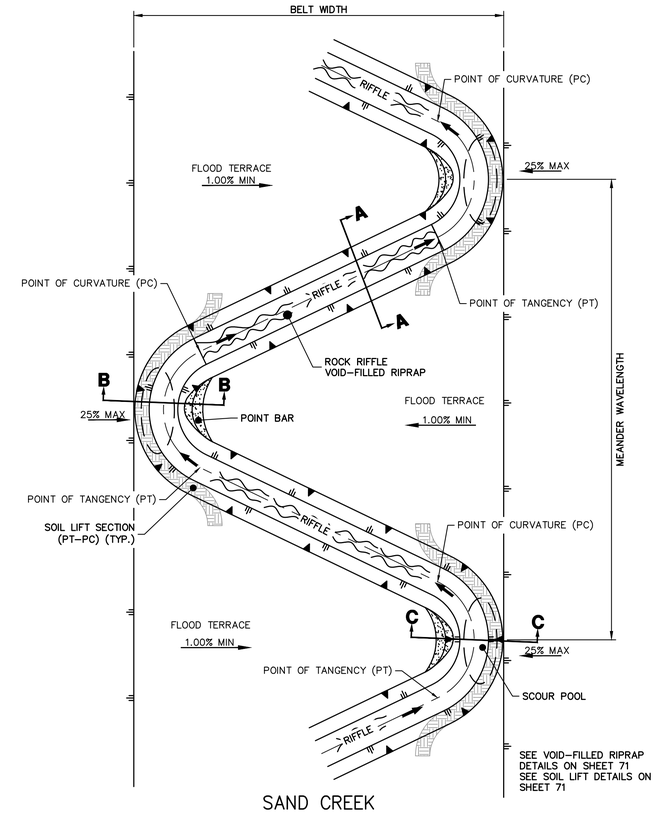
RIGHT POOL TYPICAL SECTION C-C

SCALE: N.T.S

SAND CREEK FLOW RATES				
Location	Station	MDDP DESIGN POINT	Flow Rate (cfs)	
			100-YR Design MDDP	100-YR FIS
Northern Bndy	STA: 87+10	DP-72	1644.1	2600
Stock Pond 2	STA:73+50	DP-71	1667.0	2600
Briargate Pkwy	STA:61+00	DP-70	1763.9	2600
	STA:36+05	DP-69	1880.4	2600
SRMD Pond 1	STA:16+80	DP 87	1848.8	2600
Sterling Ranch Road	STA:09+05	DP-68	1562.5	2600
Sterling Ranch Southern Bndy	STA:00+00	DP-63	1585.2	2600

SAND CREEK TYPICAL SECTIONS

REACH 1: STA: 1+00.00 TO 10+05.89
REACH 2: STA: 11+18.00 TO 59+27.25
REACH 3: STA: 61+54.83 TO 88+62.94



SAND CREEK
STREAM LAYOUT TYPICAL – PLAN

SCALE: N.T.S.

Sand Creek Design Matrix				
Bankfull Channel	Width; ft		16.8	
	Mean Depth; ft		0.85	
	Max Depth; ft			
	Area; sqft		14.0	
	Bend to Bend Spacing; ft	4.5 -6 times Bankfull Width	76	101
	Radius of Curvature (ROC); ft	2.5 - 3.5 times Bankfull Width	42	59
	Tangent Lengths; ft	1.5 - 2.5 times Bankfull Width	25	42
	Meander Wavelength; ft	9- 12 times Bankfull Width	151	202
	Meander Beltwidth; ft	2 - 3.5 times Bankfull Width	34	59
Flood Terrace	Width; ft		64.5	
	Area (300% of Bankfull Area); sqft			
	Bend to Bend Spacing; ft	Same as Bankfull Pattern	–	–
	Radius of Curvature; ft	2 - 4 times the Flood Terrace Width	129	258
	Tangent Riffle Lengths; ft	1 - 2 times the Bankfull Width	17	34
	Meander Beltwidth; ft	1.5 - 2 times the Flood Terrace Width	97	129
	Expansion and Contraction Ratios	greater than 10:1	–	–

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Mike Bramlett 11/20/23

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V-SCALE	N/A
DATE	11/20/23
DESIGNED BY	DJV
DRAWN BY	NEO
CHECKED BY	

SAND CREEK RESTORATION

TYPICAL SECTIONS

SHEET 13 OF 121

JOB NO. 25188.04

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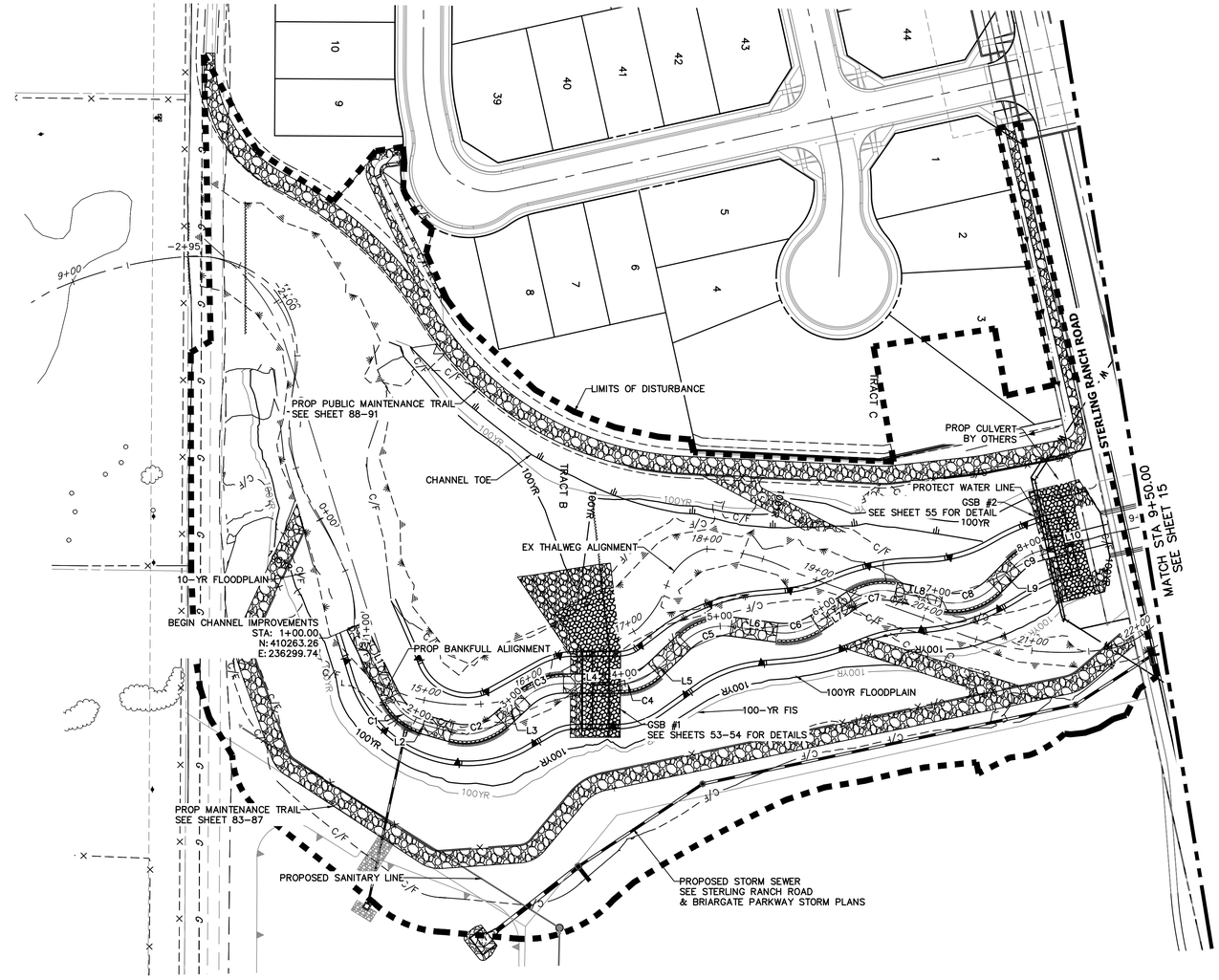

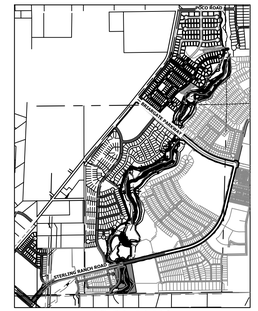

KEY MAP
SCALE: 1"=2000'

HORIZONTAL CONTROL PLAN - SAND CREEK CHANNEL

SCALE: 1"=60'

LINE AND CURVE TABLES - SAND CREEK FLOOD TERRACE CHANNEL

LINE TABLE		
LINE	BEARING	DISTANCE
L1	N62°37'57"E	69.39'
L2	N14°33'15"E	25.49'
L3	N43°57'43"W	28.06'
L4	N01°00'09"W	49.93'
L5	N44°46'46"W	36.31'
L6	N06°15'46"E	40.46'
L7	S34°33'06"E	38.16'
L8	N11°07'56"E	41.11'
L9	N46°25'49"W	25.24'
L10	N15°18'22"W	61.05'

CURVE TABLE			
CURVE	DELTA	RADIUS	LENGTH
C1	48°04'42"	46.00'	38.60'
C2	58°30'58"	46.00'	46.98'
C3	42°57'35"	50.00'	37.49'
C4	43°46'38"	43.00'	32.85'
C5	51°02'32"	50.00'	44.54'
C6	40°48'52"	50.00'	35.62'
C7	45°41'02"	50.00'	39.87'
C8	57°33'46"	50.00'	50.23'
C9	31°07'27"	50.00'	27.16'

60 30 0 60
ORIGINAL SCALE: 1" = 60'

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Mike Bramlett 11/20/23
MIKE A. BRAMLETT, P.E. DATE
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SAND CREEK RESTORATION
HORIZONTAL CONTROL PLAN

SHEET 14 OF 121
JOB NO. 25188.04

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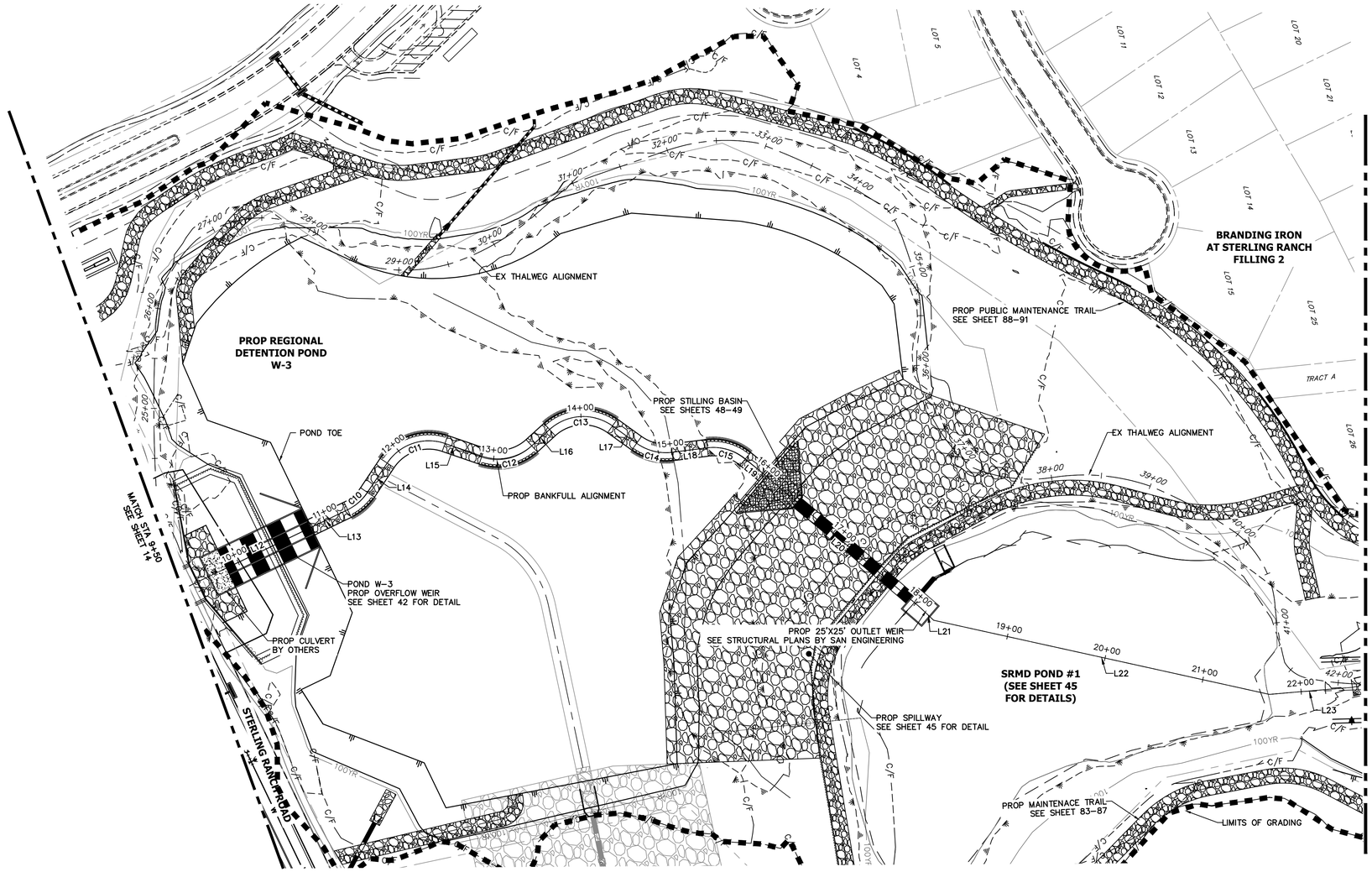
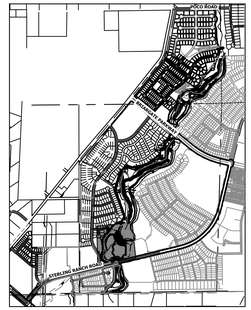


HORIZONTAL CONTROL PLAN - SAND CREEK CHANNEL

SCALE: 1"=60'



SCALE: 1"=2000'

LINE AND CURVE TABLES - SAND CREEK FLOOD TERRACE CHANNEL

LINE TABLE		
LINE	BEARING	DISTANCE
L12	N13°40'36"W	112.14'
L13	N13°44'44"W	41.29'
L14	N44°17'13"W	35.34'
L15	N30°54'11"E	38.94'
L16	N30°18'24"W	24.14'
L17	N47°41'02"E	29.75'
L18	N04°47'34"E	35.38'
L19	N51°32'30"E	23.98'
L20	N52°27'37"E	205.18'
L21	N55°27'43"E	18.57'
L22	N24°26'44"E	343.60'
L23	N07°07'50"E	83.24'

CURVE TABLE			
CURVE	DELTA	RADIUS	LENGTH
C10	30°32'29"	50.00'	26.65'
C11	75°11'23"	50.00'	65.62'
C12	61°12'35"	50.00'	53.42'
C13	77°59'26"	50.00'	68.06'
C14	42°53'28"	50.00'	37.43'
C15	46°44'56"	50.00'	40.80'

60 30 0 60

ORIGINAL SCALE: 1" = 60'

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

ENGINEER'S STATEMENT

PREPARED UNDER MY DIRECT SUPERVISION

Mike Bramlett 11/20/23

32314

MIKE A. BRAMLETT, P.E. DATE

COLORADO P.E. 32314

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V-SCALE	N/A
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DRAWN BY	NEO
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SAND CREEK RESTORATION

HORIZONTAL CONTROL PLAN

SHEET 15 OF 121

JOB NO. 25188.04

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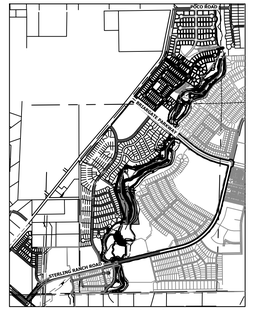
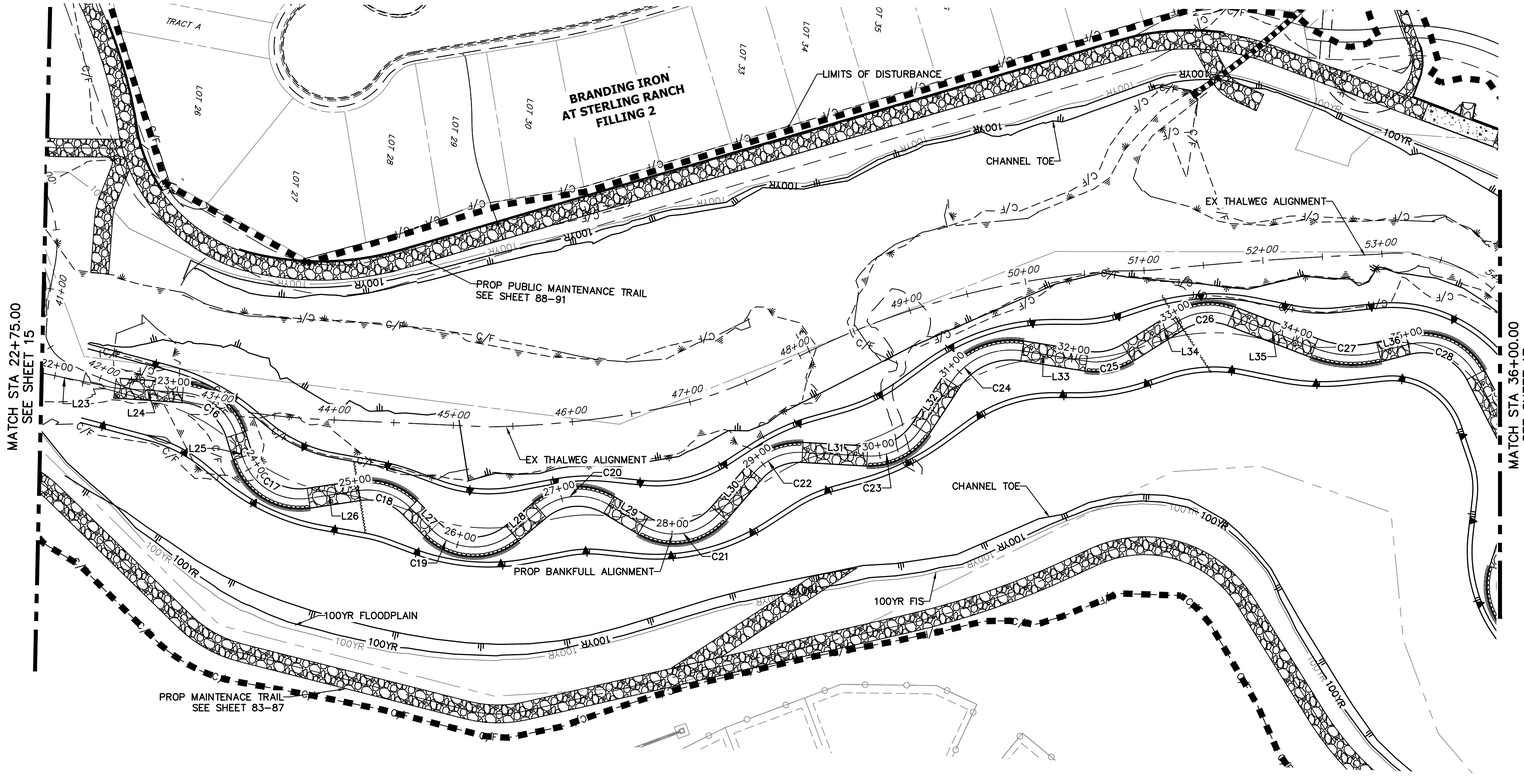


KEY MAP
SCALE: 1"=2000'



HORIZONTAL CONTROL PLAN - SAND CREEK CHANNEL

SCALE: 1"=60'

LINE AND CURVE TABLES - SAND CREEK FLOOD TERRACE CHANNEL

LINE TABLE		
LINE	BEARING	DISTANCE
L23	N07°07'50"E	83.24'
L24	N00°39'45"W	57.02'
L25	N68°26'27"E	35.05'
L26	N13°07'27"W	51.07'
L27	N40°46'05"E	34.86'
L28	N44°15'32"W	39.48'
L29	N26°36'38"E	33.54'
L30	N53°36'32"W	44.94'
L31	N01°16'36"W	54.35'
L32	N61°14'53"W	46.99'
L33	N04°37'48"E	54.56'
L34	N36°27'31"W	50.02'
L35	N16°27'51"E	74.39'
L36	N18°40'48"W	25.12'

CURVE TABLE			
CURVE	DELTA	RADIUS	LENGTH
C16	69°37'36"	49.66'	60.35'
C17	81°38'38"	49.95'	71.18'
C18	53°53'33"	50.00'	47.03'
C19	85°03'54"	49.97'	74.20'
C20	70°52'11"	50.00'	61.85'
C21	80°13'10"	50.00'	70.00'
C22	52°19'56"	50.00'	45.67'
C23	59°58'18"	50.00'	52.34'
C24	65°52'41"	60.00'	68.99'
C25	41°05'20"	50.00'	35.86'
C26	53°16'13"	50.02'	46.50'
C27	35°08'56"	90.00'	55.21'
C28	76°55'41"	50.00'	67.13'

60 30 0 60
ORIGINAL SCALE: 1" = 60'

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V-SCALE	N/A
DATE	11/20/23
DESIGNED BY	DJV
DRAWN BY	NEO
CHECKED BY	

SAND CREEK RESTORATION

HORIZONTAL CONTROL PLAN

SHEET 16 OF 121

JOB NO. 25188.04

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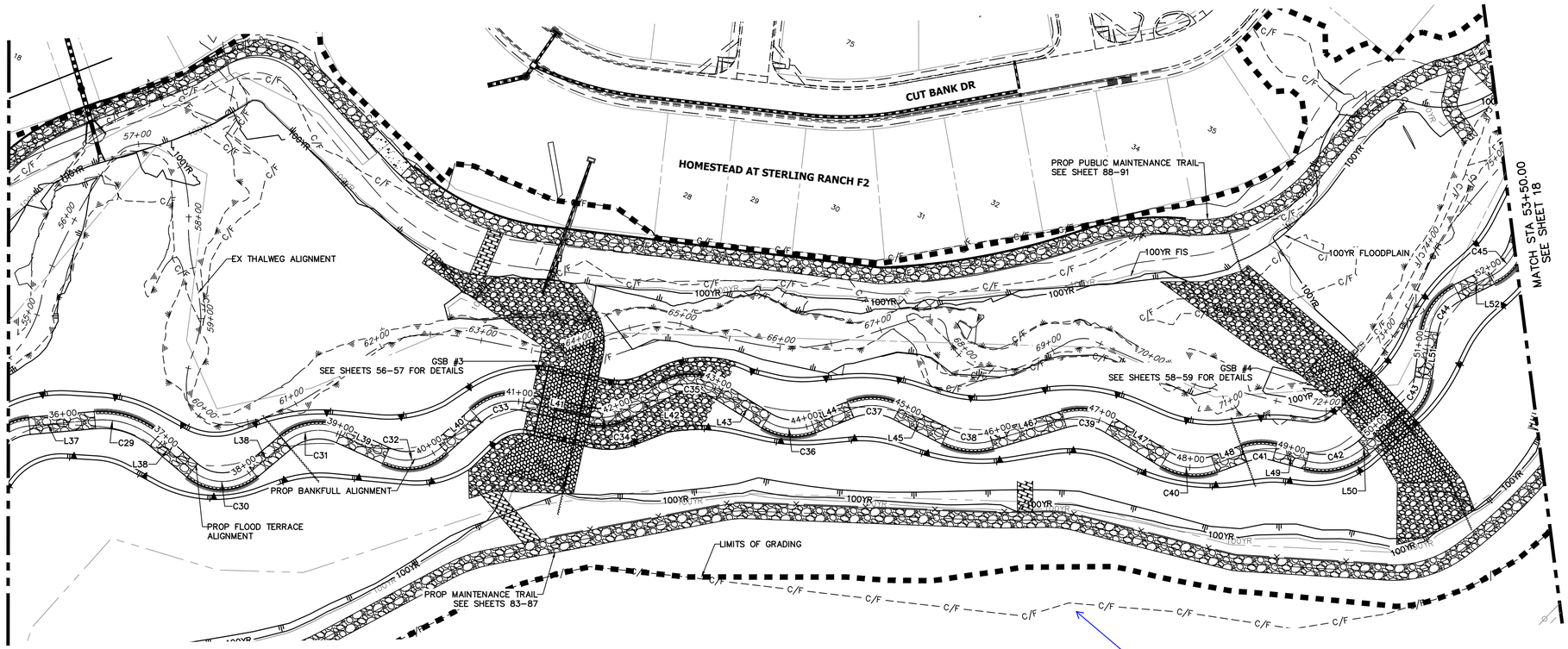
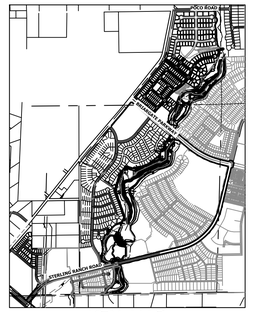


HORIZONTAL CONTROL PLAN - SAND CREEK CHANNEL

SCALE: 1"=60'



SCALE: 1"=2000'

LINE AND CURVE TABLES - SAND CREEK FLOOD TERRACE CHANNEL

LINE TABLE		
LINE	BEARING	DISTANCE
L37	N58°14'53"E	63.95'
L38	N23°17'02"E	42.76'
L38	S76°25'16"E	47.01'
L39	N87°41'41"E	45.75'
L40	N21°13'33"E	44.40'
L41	N75°25'05"E	64.51'
L42	N34°33'05"E	42.89'
L43	S84°42'53"E	55.35'
L44	N41°26'25"E	39.80'
L45	S89°25'20"E	52.47'
L46	N46°45'21"E	73.56'
L47	S85°00'28"E	63.14'
L48	N43°19'47"E	30.76'
L49	N78°33'01"E	31.87'
L50	N21°39'45"E	55.35'
L51	N19°00'37"W	45.47'
L52	N37°01'40"E	38.30'

CURVE TABLE			
CURVE	DELTA	RADIUS	LENGTH
C29	45°19'51"	80.00'	63.29'
C30	80°20'28"	44.98'	63.07'
C31	64°24'39"	50.00'	56.21'
C32	66°28'33"	50.00'	58.01'
C33	54°11'32"	50.00'	47.29'
C34	40°52'03"	50.00'	35.66'
C35	54°22'21"	55.35'	52.53'
C36	53°55'33"	50.00'	47.06'
C37	49°08'15"	55.00'	47.17'
C38	43°49'19"	60.00'	45.89'
C39	48°14'11"	55.00'	46.30'
C40	51°39'45"	55.00'	49.59'
C41	35°13'13"	50.00'	30.74'
C42	58°17'59"	58.67'	59.70'
C43	40°40'23"	50.00'	35.49'
C44	56°02'17"	50.00'	48.90'
C45	48°10'16"	49.86'	41.92'

60 30 0 60

ORIGINAL SCALE: 1" = 60'

Know what's below. Call before you dig.

ENGINEER'S STATEMENT

PREPARED UNDER MY DIRECT SUPERVISION

Mike Bramlett 11/20/23

MIKE A. BRAMLETT, P.E. DATE
COLORADO P.E. 32314
FOR AND ON BEHALF OF JR ENGINEERING, LLC

COLORADO REGISTERED MIKE A. BRAMLETT 32314 PROFESSIONAL ENGINEER

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

PREPARED FOR
SR LAND, LLC
20 BOULDER CRESCENT
2ND FLOOR
COLORADO SPRINGS, CO 80903
JAMES F. MORLEY
(719) 419-3024

J·R ENGINEERING
A Westrian Company
Centennial 303-740-9393 • Colorado Springs 719-593-2593
Fort Collins 970-491-9888 • www.jrengineering.com

No.	REVISION	BY	DATE

H-SCALE	1"=60'
V-SCALE	N/A
DATE	11/20/23
DESIGNED BY	DJV
DRAWN BY	NEO
CHECKED BY	

SAND CREEK RESTORATION

HORIZONTAL CONTROL PLAN

SHEET 17 OF 121

JOB NO. 25188.04

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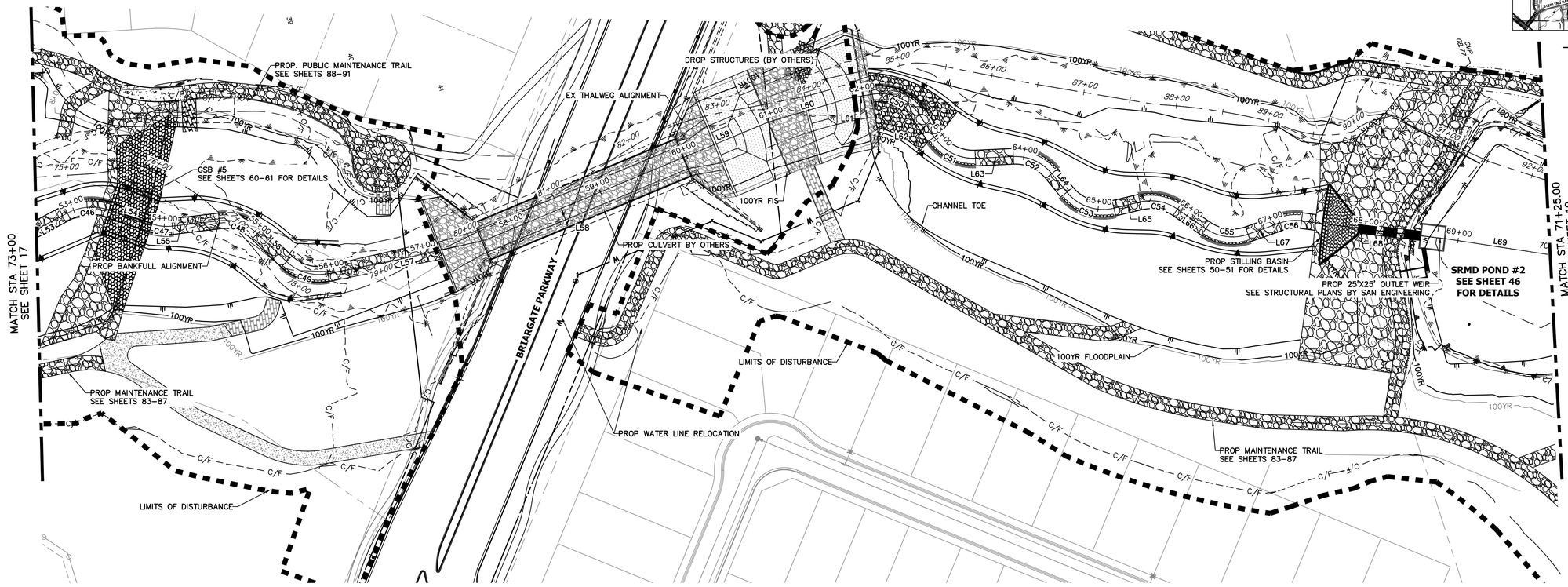

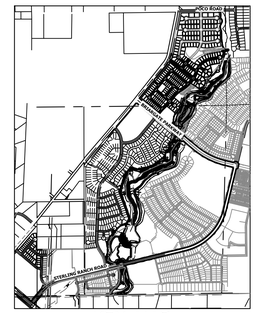

HORIZONTAL CONTROL PLAN - SAND CREEK CHANNEL

SCALE: 1"=60'

LINE AND CURVE TABLES - SAND CREEK FLOOD TERRACE CHANNEL

LINE TABLE		
LINE	BEARING	DISTANCE
L53	N10°26'39"W	52.51'
L54	N35°00'03"E	50.07'
L55	N10°44'45"E	50.63'
L56	N60°54'10"E	43.33'
L57	N05°12'24"E	171.36'
L58	N05°23'49"W	227.79'
L59	N05°23'49"W	100.46'
L60	N00°44'30"E	91.02'
L61	N07°39'00"E	24.57'
L62	N73°38'46"E	29.14'
L63	N14°36'29"E	40.64'
L64	N68°08'38"E	25.60'
L65	N03°58'14"E	28.73'
L66	N51°56'37"E	36.80'
L67	N02°24'18"W	36.29'
L68	N24°19'33"E	149.34'
L69	N25°56'53"E	128.38'

CURVE TABLE			
CURVE	DELTA	RADIUS	LENGTH
C46	45°46'29"	55.01'	43.95'
C47	25°20'29"	50.22'	22.21'
C48	50°37'31"	50.00'	44.18'
C49	54°19'17"	50.00'	47.40'
C50	65°59'46"	50.00'	57.59'
C51	58°56'29"	50.19'	51.63'
C52	53°32'09"	50.00'	46.72'
C53	64°10'24"	50.00'	56.00'
C54	47°58'23"	50.00'	41.86'
C55	54°20'55"	50.00'	47.43'
C56	26°43'51"	50.00'	23.33'

60 30 0 60
ORIGINAL SCALE: 1" = 60'

Know what's below. Call before you dig.

ENGINEER'S STATEMENT
PREPARED UNDER MY DIRECT SUPERVISION

Mike Bramlett 11/20/23

MIKE A. BRAMLETT, P.E. DATE
COLORADO P.E. 32314
FOR AND ON BEHALF OF JR ENGINEERING, LLC

COLORADO REGISTERED MIKE A. BRAMLETT 32314 PROFESSIONAL ENGINEER

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20 BOULDER CRESCENT
2ND FLOOR
COLORADO SPRINGS, CO 80903
JAMES F. MORLEY
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Fort Collins 970-491-9888 • www.jrengineering.com

No.	REVISION	BY	DATE

H-SCALE	1"=60'
V-SCALE	N/A
DATE	11/20/23
DESIGNED BY	DJV
DRAWN BY	NEO
CHECKED BY	

SAND CREEK RESTORATION

HORIZONTAL CONTROL PLAN

SHEET 18 OF 121

JOB NO. 25188.04

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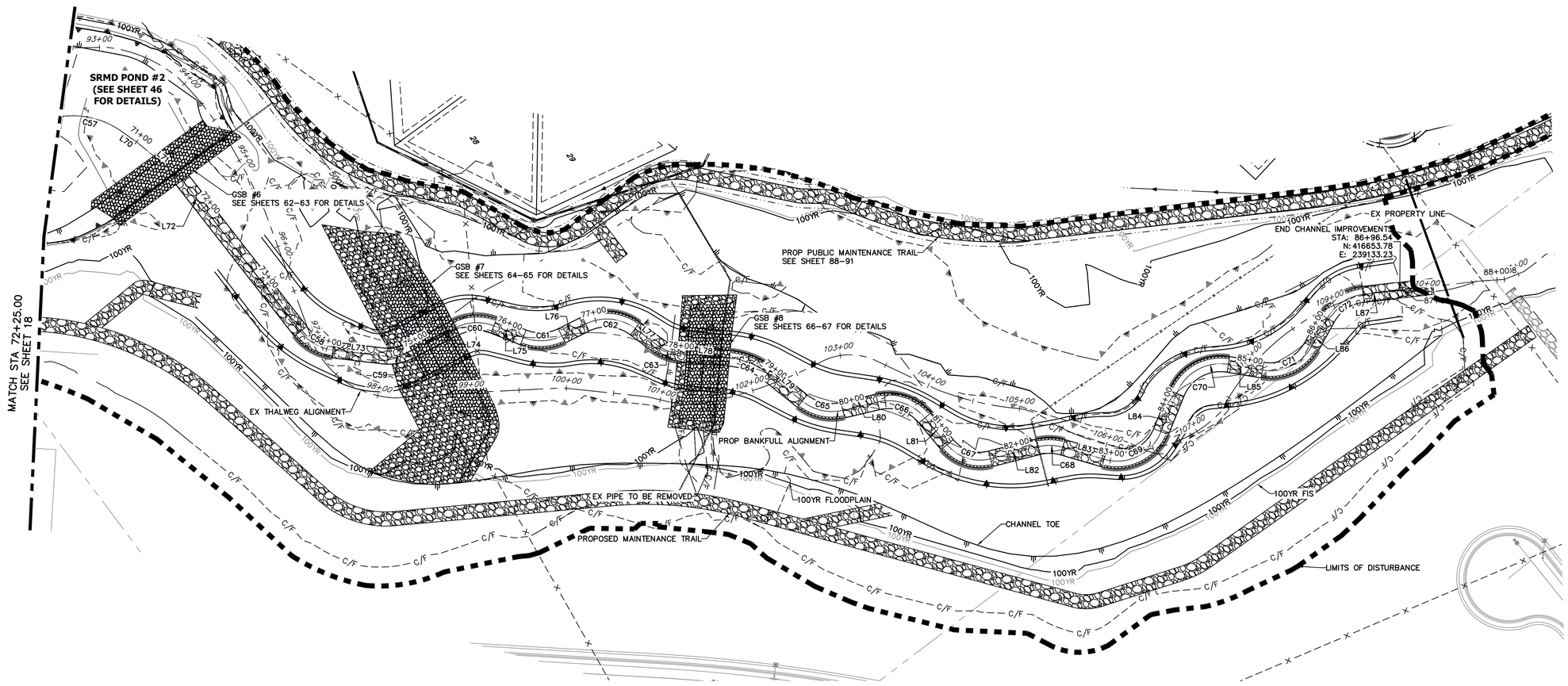

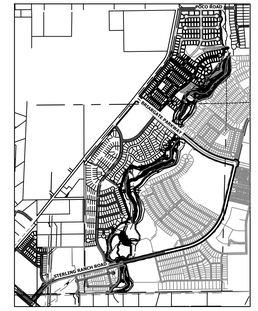

HORIZONTAL CONTROL PLAN - SAND CREEK CHANNEL

SCALE: 1"=50'

LINE AND CURVE TABLES - SAND CREEK FLOOD TERRACE CHANNEL

LINE TABLE		
LINE	BEARING	DISTANCE
L70	N71°47'03"E	19.62'
L71	N75°44'54"E	61.12'
L72	N88°15'33"E	204.10'
L73	N43°02'34"E	52.87'
L74	N09°08'25"E	54.02'
L75	N57°53'21"E	33.46'
L76	N09°48'06"E	28.21'
L77	N73°17'31"E	27.67'
L78	N41°18'28"E	51.56'
L79	N74°55'24"E	46.84'
L80	N22°53'04"E	37.83'
L81	N86°42'25"E	36.83'
L82	N22°00'31"E	51.65'
L83	N52°26'30"E	45.59'
L84	N31°41'54"W	43.63'
L85	N45°44'54"E	36.65'
L86	N24°37'06"W	34.08'
L87	N29°45'43"E	33.26'

CURVE TABLE			
CURVE	DELTA	RADIUS	LENGTH
C57	45°50'10"	90.00'	72.00'
C58	46°32'33"	50.08'	40.68'
C59	34°22'46"	50.02'	30.02'
C60	47°43'06"	50.03'	41.67'
C61	48°17'05"	49.81'	41.98'
C62	63°30'09"	49.99'	55.41'
C63	32°34'55"	50.22'	28.56'
C64	33°32'59"	75.28'	44.08'
C65	52°02'18"	50.00'	45.41'
C66	63°49'22"	50.00'	55.70'
C67	64°37'45"	45.04'	50.81'
C68	30°26'04"	50.00'	26.56'
C69	83°48'51"	50.22'	73.47'
C70	77°26'48"	50.00'	67.59'
C71	70°22'00"	50.00'	61.41'
C72	54°22'49"	50.00'	47.46'

60 30 0 60
ORIGINAL SCALE: 1" = 60'

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

ENGINEER'S STATEMENT

PREPARED UNDER MY DIRECT SUPERVISION

Mike Bramlett 11/20/23

MIKE A. BRAMLETT, P.E. — DATE
COLORADO P.E. 32314
FOR AND ON BEHALF OF JR ENGINEERING, LLC

COLORADO REGISTERED MIKE A. BRAMLETT 32314 PROFESSIONAL ENGINEER

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PREPARED FOR
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2ND FLOOR
COLORADO SPRINGS, CO 80903
JAMES F. MORLEY
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Fort Collins 970-491-9888 • www.jrengineering.com

No.	REVISION	BY	DATE

H-SCALE	1"=60'
V-SCALE	N/A
DATE	11/20/23
DESIGNED BY	NEO
DRAWN BY	NEO
CHECKED BY	

SAND CREEK RESTORATION

HORIZONTAL CONTROL PLAN

SHEET 19 OF 121

JOB NO. 25188.04

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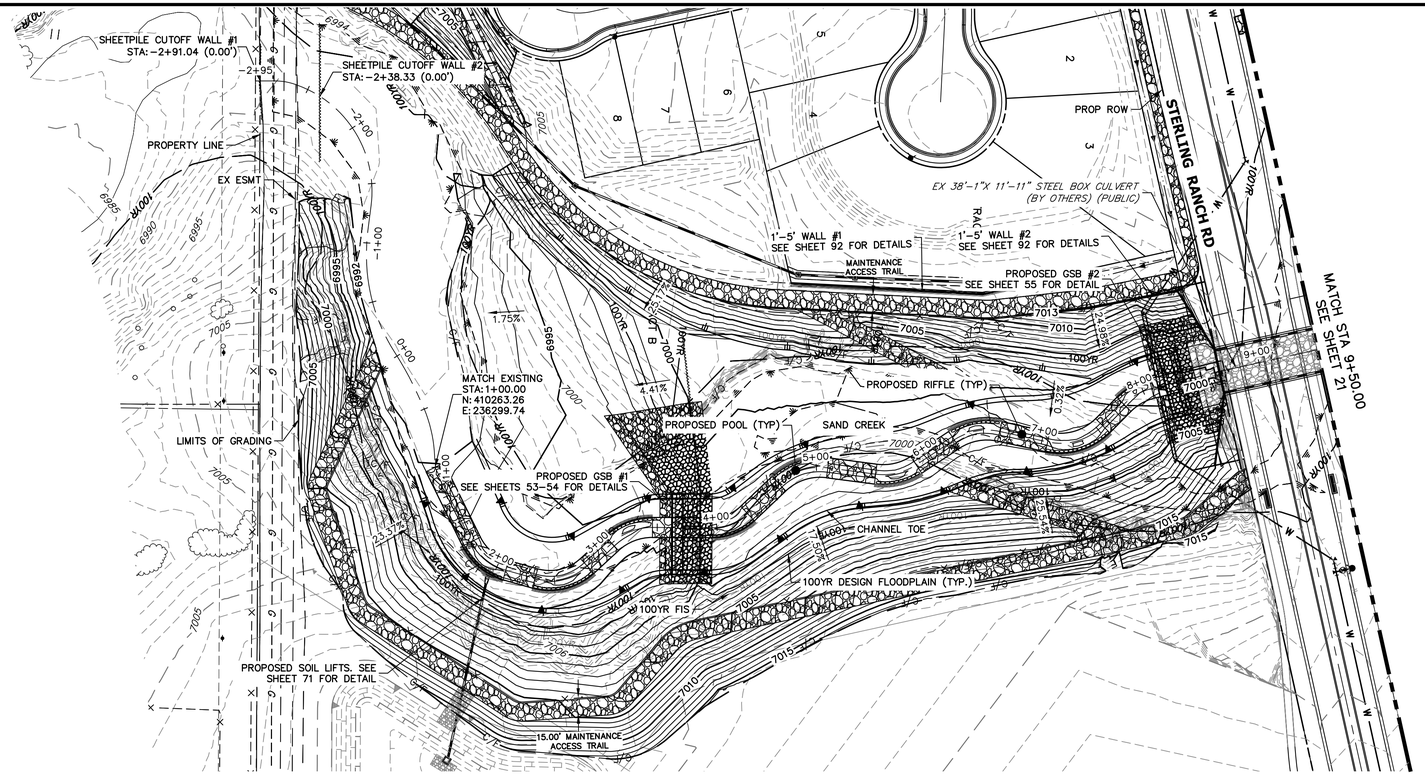
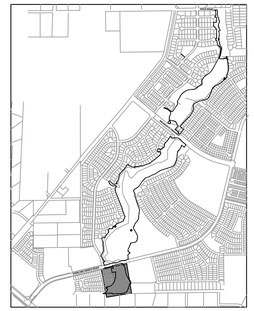




KEY MAP
SCALE: 1"=2000'

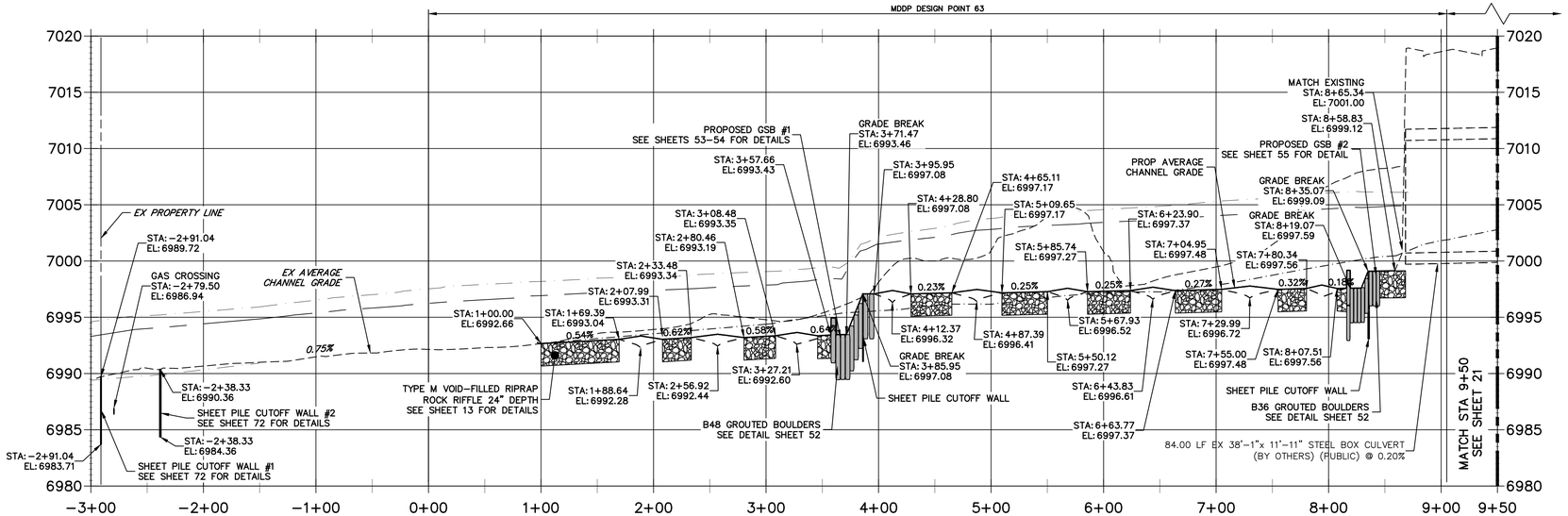
PROFILE LEGEND

- EXISTING GRADE PROFILE @ CHANNEL ℄
- FINISHED GRADE PROFILE @ CHANNEL ℄
- EXISTING THALWEG PROFILE
- THALWEG PROFILE
- 100-YR FIS WSEL PROFILE
- 100-YR MDDP WSEL PROFILE

SAND CREEK FLOW RATES

Location	Station	MDDP DESIGN POINT	Flow Rate (cfs)	
			100-YR Design MDDP	100-YR FIS
Northern Bndy	STA: 87+10	DP-72	1644.1	2600
Stock Pond 2	STA: 73+50	DP-71	1667.0	2600
Briargate Pkwy	STA: 61+00	DP-70	1763.9	2600
	STA: 36+05	DP-69	1880.4	2600
SRMD Pond 1	STA: 16+80	DP 87	1848.8	2600
Sterling Ranch Road	STA: 09+05	DP-68	1562.5	2600
Sterling Ranch Southern Bndy	STA: 00+00	DP-63	1585.2	2600

SAND CREEK - BANKFULL PROFILE 1
STA -3+00.00 TO 9+50.00



NOTE

1. NO GRADING OR CONSTRUCTION ACTIVITIES ON PRIVATE PROPERTY.
2. DRIVE SHEET PILE THROUGH BEDROCK OR MINIMUM OF 6 FEET.
3. SEE SHEETS 26-31 FOR STABLE GRADE PROFILES.

BENCHMARK

1. THE TOP OF AN ALUMINUM SURVEYORS CAP, STAMPED "38537, AT THE SOUTHEAST BOUNDARY CORNER OF BARBARICK SUBDIVISION
   NORTHING = 411416.273
   EASTING = 235167.071
   ELEVATION = 7023.42
2. THE TOP OF A RED PLASTIC SURVEYORS CAP, ILLEGIBLE, AT THE NORTHWEST BOUNDARY CORNER OF PAWNEE RANCHEROS SUBDIVISION
   NORTHING = 410095.404
   EASTING = 235052.131
   ELEVATION = 7000.40
3. THE TOP OF A RED PLASTIC SURVEYORS CAP, STAMPED "38141", AT THE SOUTHWEST BOUNDARY CORNER OF BARBARICK SUBDISION
   NORTHING = 411399.962
   EASTING = 233849.817
   ELEVATION = 7030.82

BASIS OF BEARINGS

THE SOUTH LINE OF THE SOUTHWEST QUARTER OF SECTION 34, TOWNSHIP 12 SOUTH, RANGE 65 WEST OF THE 6TH P.M. AS MONUMENTED AT THE SOUTHWEST CORNER OF SAID BY A 2-1/2" ALUMINUM CAP STAMPED "LS 11624" AND AT THE SOUTEAST CORNER OF SAID SOUTHWEST QUARTER BY A 2-1/2" ALUMINUM CAP STAMPED "LS 11624", SAID LINE BEARS N89°14'14"E, A DISTANCE OF 2,722.69 FEET.

60 30 0 60
HORIZONTAL
ORIGINAL SCALE: 1" = 60'
VERTICAL
ORIGINAL SCALE: 1" = 6'

Know what's below. Call before you dig.

ENGINEER'S STATEMENT

PREPARED UNDER MY DIRECT SUPERVISION

Mike Bramlett 11/20/23

MIKE A. BRAMLETT, P.E. DATE
COLORADO P.E. 32314
FOR AND ON BEHALF OF JR ENGINEERING, LLC

COLORADO REGISTERED MIKE A. BRAMLETT 32314 PROFESSIONAL ENGINEER

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20 BOULDER CRESCENT
2ND FLOOR
COLORADO SPRINGS, CO 80903
JAMES F. MORLEY
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No.	REVISION	BY	DATE

H-SCALE	1"=60'
V-SCALE	1"=6'
DATE	11/20/23
DESIGNED BY	DJV
DRAWN BY	NEO
CHECKED BY	

SAND CREEK RESTORATION
CHANNEL PLAN & PROFILE

SHEET 20 OF 121
JOB NO. 25188.04

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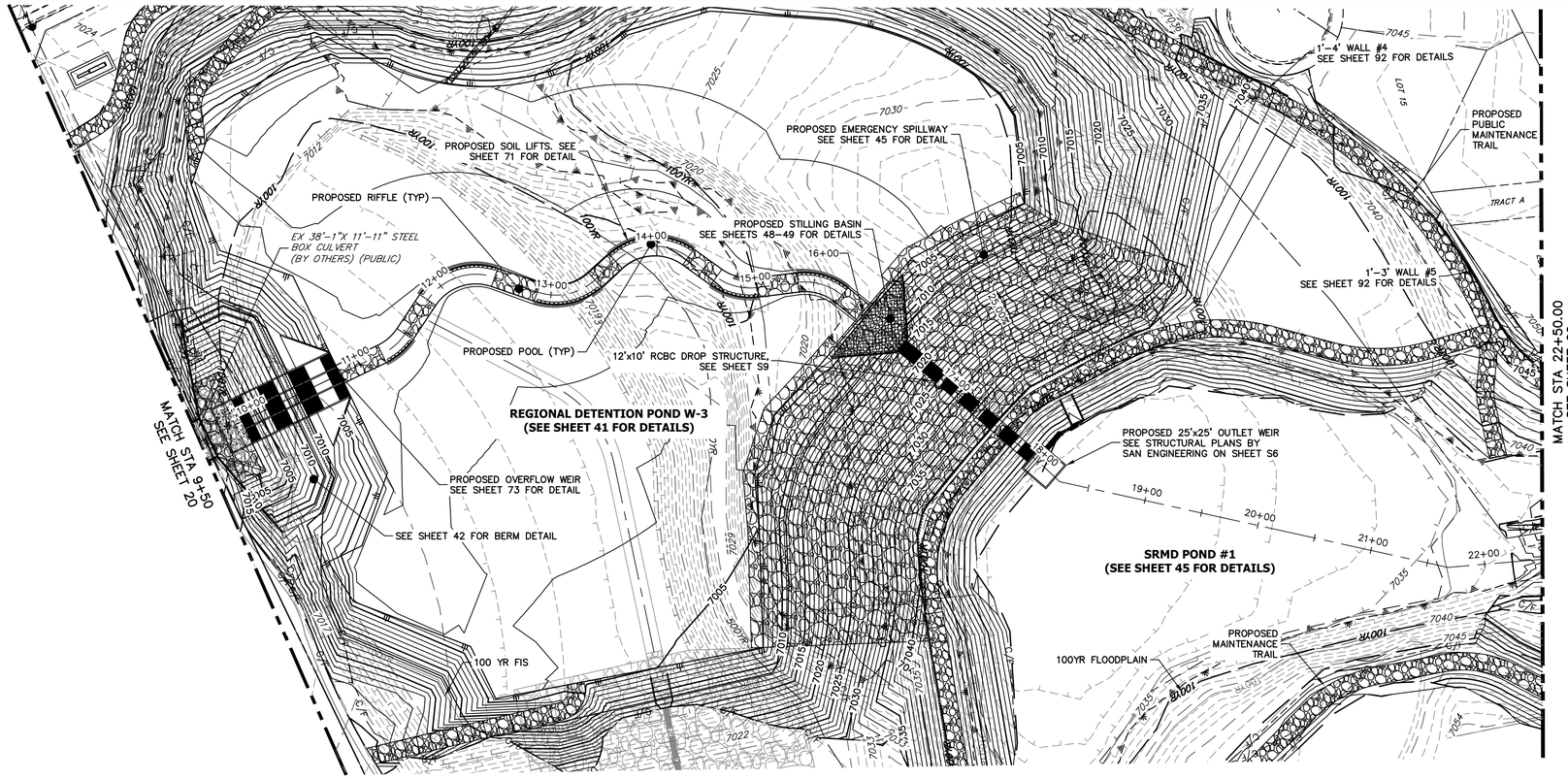
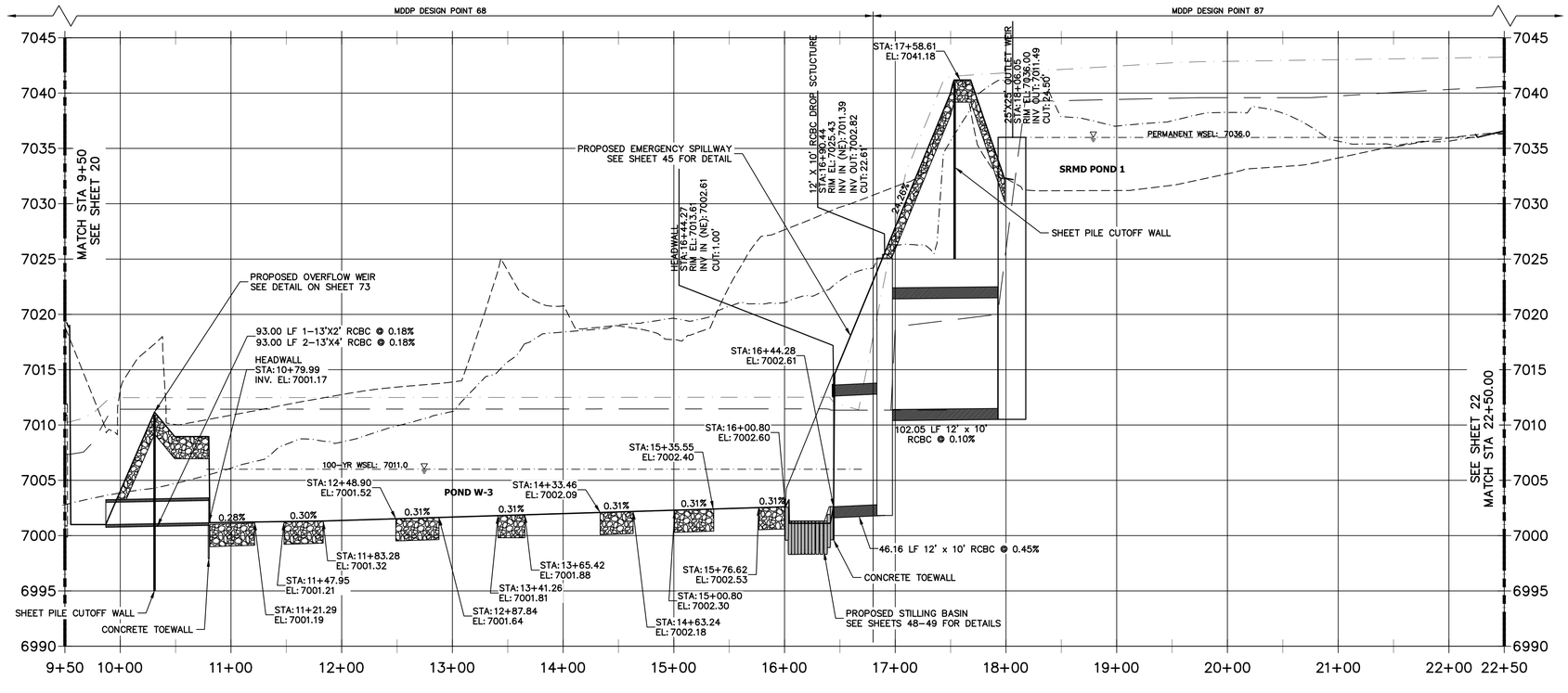


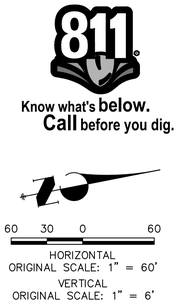
PROFILE LEGEND

- EXISTING GRADE PROFILE @ CHANNEL ℄
- FINISHED GRADE PROFILE @ CHANNEL ℄
- EXISTING THALWEG PROFILE
- THALWEG PROFILE
- 100-YR FIS WSEL PROFILE
- 100-YR MDDP WSEL PROFILE

SAND CREEK FLOW RATES				
Location	Station	MDDP DESIGN POINT	Flow Rate (cfs)	
			100-YR Design MDDP	100-YR FIS
Northern Bndy	STA: 87+10	DP-72	1644.1	2600
Stock Pond 2	STA: 73+50	DP-71	1667.0	2600
Briargate Pkwy	STA:61+00	DP-70	1763.9	2600
	STA:36+05	DP-69	1880.4	2600
SRMD Pond 1	STA:16+80	DP 87	1848.8	2600
Sterling Ranch Road	STA:09+05	DP-68	1562.5	2600
Sterling Ranch Southern Bndy	STA:00+00	DP-63	1585.2	2600

SAND CREEK - BANKFULL PROFILE 2
STA 9+50.00 TO 22+50.00





ENGINEER'S STATEMENT

PREPARED UNDER MY DIRECT SUPERVISION

Mike Bramlett 11/20/23

COLORADO REGISTERED MIKE A. BRAMLETT 32314 PROFESSIONAL ENGINEER

MIKE A. BRAMLETT, P.E.
COLORADO P.E. 32314
FOR AND ON BEHALF OF JR ENGINEERING, LLC

DATE

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No.	REVISION	BY	DATE

H-SCALE	1"=60'
V-SCALE	1"=6'
DATE	11/20/23
DESIGNED BY	DJV
DRAWN BY	NEO
CHECKED BY	

SAND CREEK RESTORATION

CHANNEL PLAN & PROFILE

SHEET 21 OF 121

JOB NO. 25188.04

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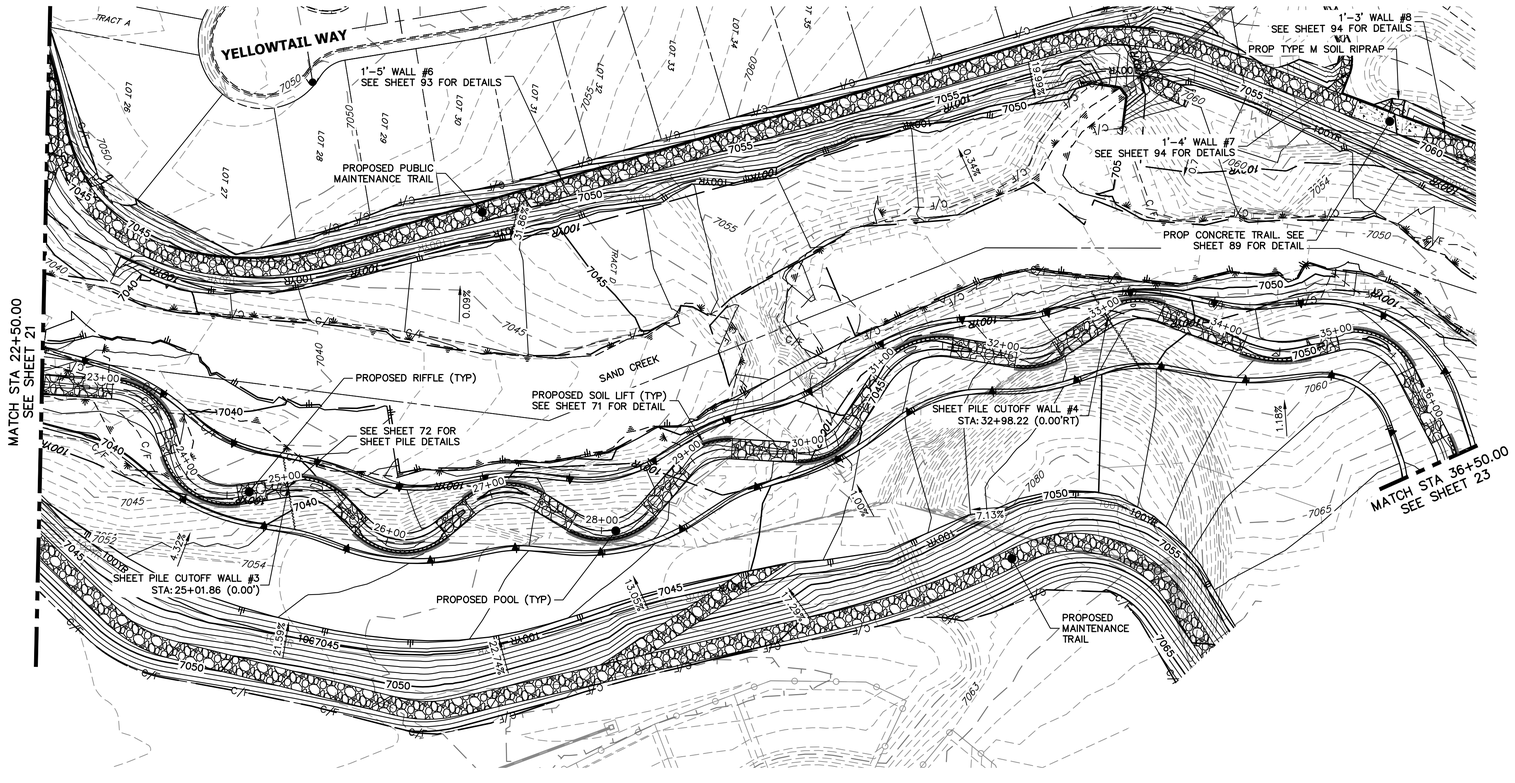
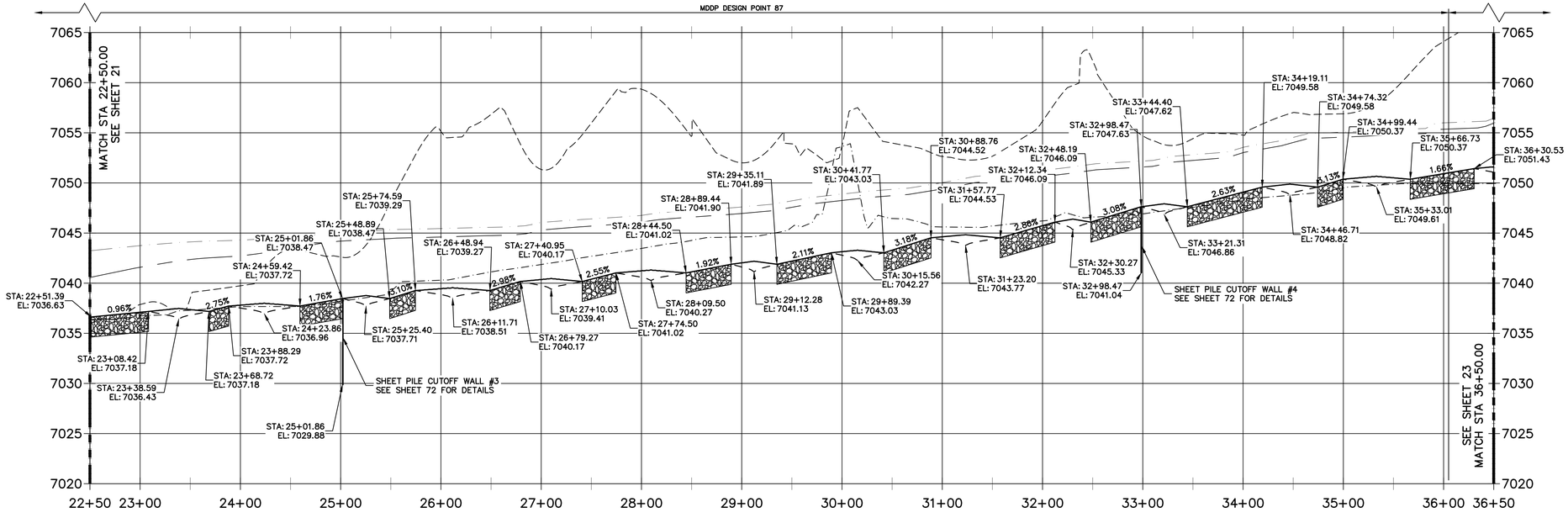


PROFILE LEGEND

- EXISTING GRADE PROFILE @ CHANNEL ℄
- FINISHED GRADE PROFILE @ CHANNEL ℄
- EXISTING THALWEG PROFILE
- THALWEG PROFILE
- 100-YR FIS WSEL PROFILE
- 100-YR MDDP WSEL PROFILE

SAND CREEK FLOW RATES				
Location	Station	MDDP DESIGN POINT	Flow Rate (cfs) 100-YR Design MDDP	Flow Rate (cfs) 100-YR FIS
Northern Bndy	STA: 87+10	DP-72	1644.1	2600
Stock Pond 2	STA: 73+50	DP-71	1667.0	2600
Briargate Pkwy	STA:61+00	DP-70	1763.9	2600
	STA:36+05	DP-69	1880.4	2600
SRMD Pond 1	STA:16+80	DP 87	1848.8	2600
Sterling Ranch Road	STA:09+05	DP-68	1562.5	2600
Sterling Ranch Southern Bndy	STA:00+00	DP-63	1585.2	2600

SAND CREEK - BANKFULL PROFILE 3
STA 22+50.00 TO 36+50.00



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

ENGINEER'S STATEMENT

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Mike Bramlett 11/20/23

COLORADO REGISTERED MIKE A. BRAMLETT 32314 PROFESSIONAL ENGINEER

MIKE A. BRAMLETT, P.E. DATE
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J·R ENGINEERING
A Westrian Company
Centennial 303-740-9393 • Colorado Springs 719-593-2593
Fort Collins 970-491-9888 • www.jrengineering.com

No.	REVISION	BY	DATE

H-SCALE	1"=60'
V-SCALE	1"=6'
DATE	11/20/23
DESIGNED BY	DJV
DRAWN BY	NEO
CHECKED BY	

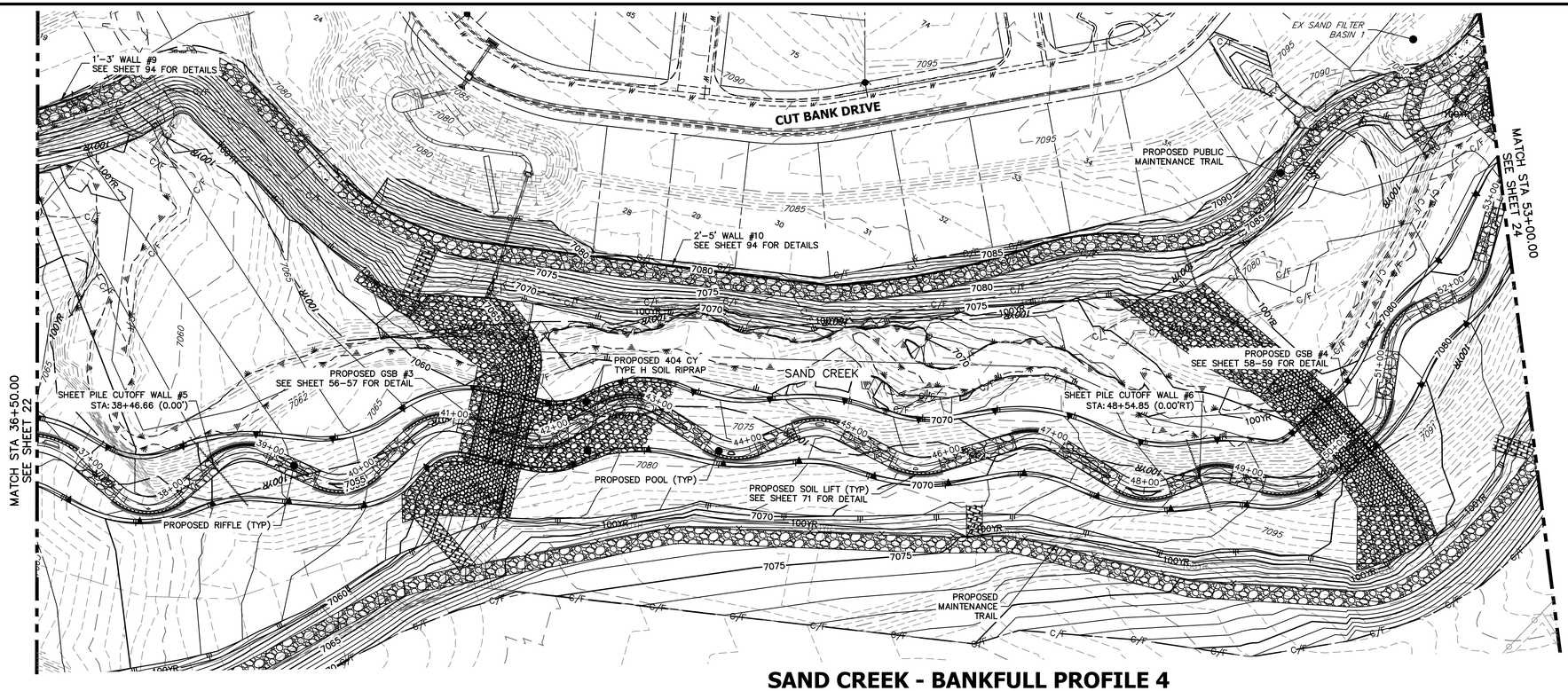
SAND CREEK RESTORATION

CHANNEL PLAN & PROFILE

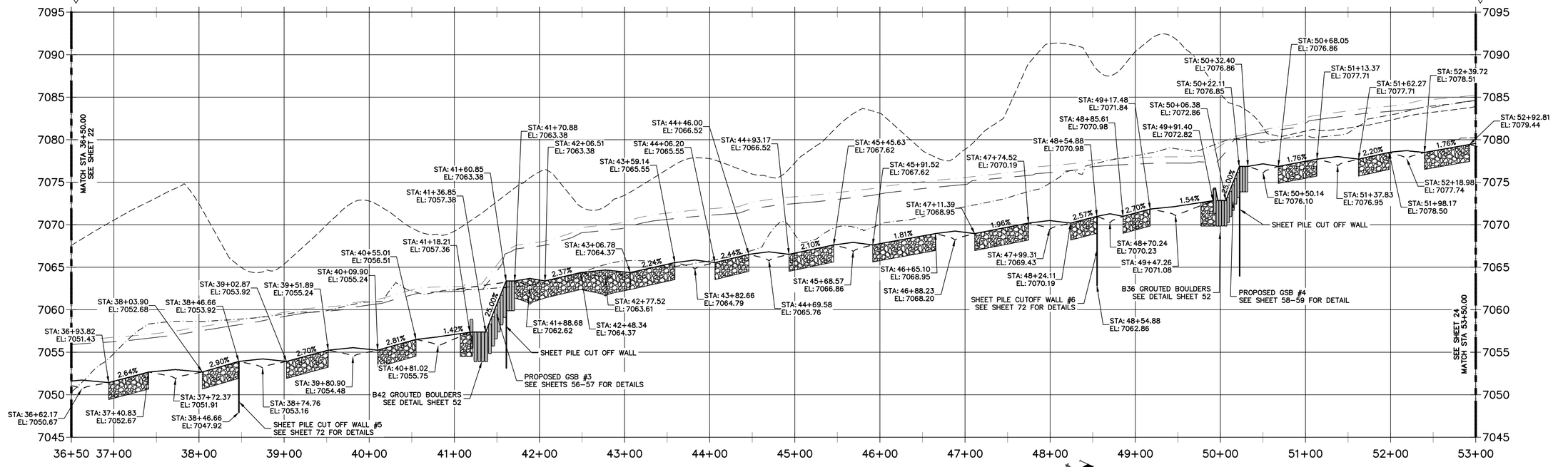
SHEET 22 OF 121

JOB NO. 25188.04

X:\25\10000_all\25188\04\Drawings\Sheet Dwgs\Second Creek Plan&Profile\25188d4 CH01.dwg, 24 CH03, 12/7/2023 5:25:19 PM, VaughD



SAND CREEK - BANKFULL PROFILE 4
STA 36+50.00 TO 53+00.00



KEY MAP
SCALE: 1"=2000'

PROFILE LEGEND

- EXISTING GRADE PROFILE @ CHANNEL ℄
- FINISHED GRADE PROFILE @ CHANNEL ℄
- EXISTING THALWEG PROFILE
- THALWEG PROFILE
- 100-YR FIS WSEL PROFILE
- 100-YR MDDP WSEL PROFILE

SAND CREEK FLOW RATES				
Location	Station	MDDP DESIGN POINT	Flow Rate (cfs)	
			100-YR Design MDDP	100-YR FIS
Northern Bndy	STA: 87+10	DP-72	1644.1	2600
Stock Pond 2	STA: 73+50	DP-71	1667.0	2600
Briargate Pkwy	STA: 61+00	DP-70	1763.9	2600
	STA: 36+05	DP-69	1880.4	2600
SRMD Pond 1	STA: 16+80	DP 87	1848.8	2600
Sterling Ranch Road	STA: 09+05	DP-68	1562.5	2600
Sterling Ranch Southern Bndy	STA: 00+00	DP-63	1585.2	2600

HORIZONTAL
ORIGINAL SCALE: 1" = 60'
VERTICAL
ORIGINAL SCALE: 1" = 6'

Know what's below. Call before you dig.

ENGINEER'S STATEMENT

PREPARED UNDER MY DIRECT SUPERVISION

Mike Bramlett

MIKE A. BRAMLETT, P.E.
COLORADO P.E. 32314
FOR AND ON BEHALF OF JR ENGINEERING, LLC

COLORADO REGISTERED MIKE A. BRAMLETT 32314 PROFESSIONAL ENGINEER

11/20/23
DATE

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

PREPARED FOR
SR LAND, LLC
20 BOULDER CRESCENT
2ND FLOOR
COLORADO SPRINGS, CO 80903
JAMES F. MORLEY
(719) 419-3024

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No.	REVISION	BY	DATE

H-SCALE	1"=60'	DESIGNED BY	DJV
V-SCALE	1"=6'	DRAWN BY	NEO
DATE	11/20/23	CHECKED BY	

SAND CREEK RESTORATION
CHANNEL PLAN & PROFILE

SHEET 23 OF 121
JOB NO. 25188.04

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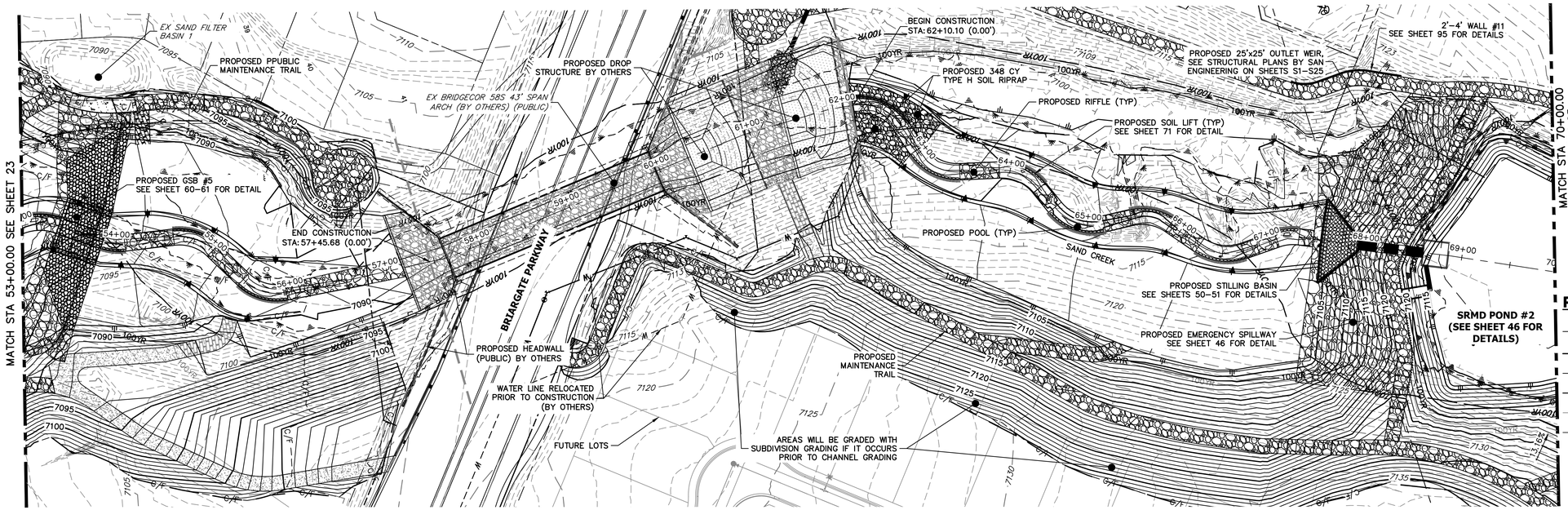
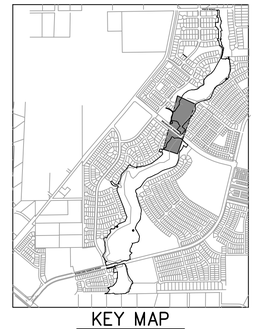
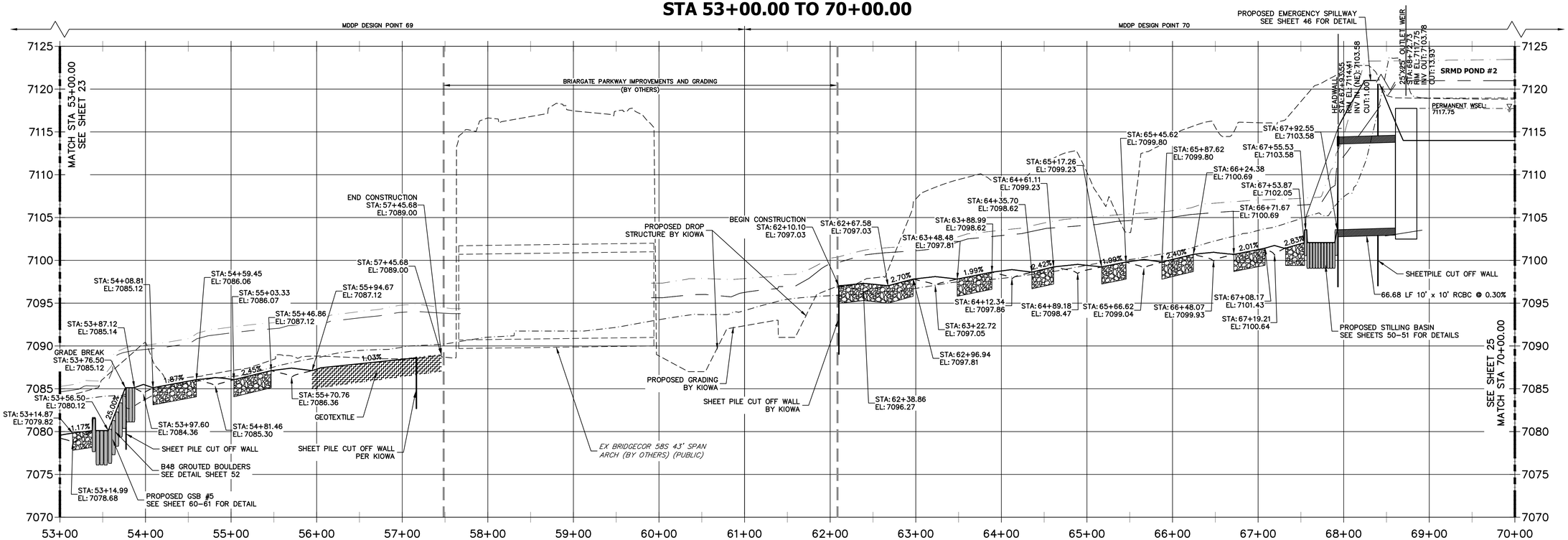




PROFILE LEGEND

- EXISTING GRADE PROFILE @ CHANNEL ℄
- FINISHED GRADE PROFILE @ CHANNEL ℄
- EXISTING THALWEG PROFILE
- THALWEG PROFILE
- 100-YR FIS WSEL PROFILE
- 100-YR MDDP WSEL PROFILE

SAND CREEK - BANKFULL PROFILE 5
STA 53+00.00 TO 70+00.00



SAND CREEK FLOW RATES				
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Sterling Ranch Road	STA:09+05	DP-68	1562.5	2600
Sterling Ranch Southern Bndy	STA:00+00	DP-63	1585.2	2600

60 30 0 60
HORIZONTAL ORIGINAL SCALE: 1" = 60'
VERTICAL ORIGINAL SCALE: 1" = 6'

Know what's below. Call before you dig.

ENGINEER'S STATEMENT

PREPARED UNDER MY DIRECT SUPERVISION

Mike Bramlett 11/20/23

MIKE A. BRAMLETT, P.E. DATE
COLORADO P.E. 32314
FOR AND ON BEHALF OF JR ENGINEERING, LLC

COLORADO REGISTERED MIKE A. BRAMLETT 32314 PROFESSIONAL ENGINEER

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No.	REVISION	BY	DATE

H-SCALE 1"=60'
V-SCALE 1"=6'
DATE 11/20/23
DESIGNED BY DJV
DRAWN BY NEO
CHECKED BY

SAND CREEK RESTORATION
CHANNEL PLAN & PROFILE

SHEET 24 OF 121
JOB NO. 25188.04

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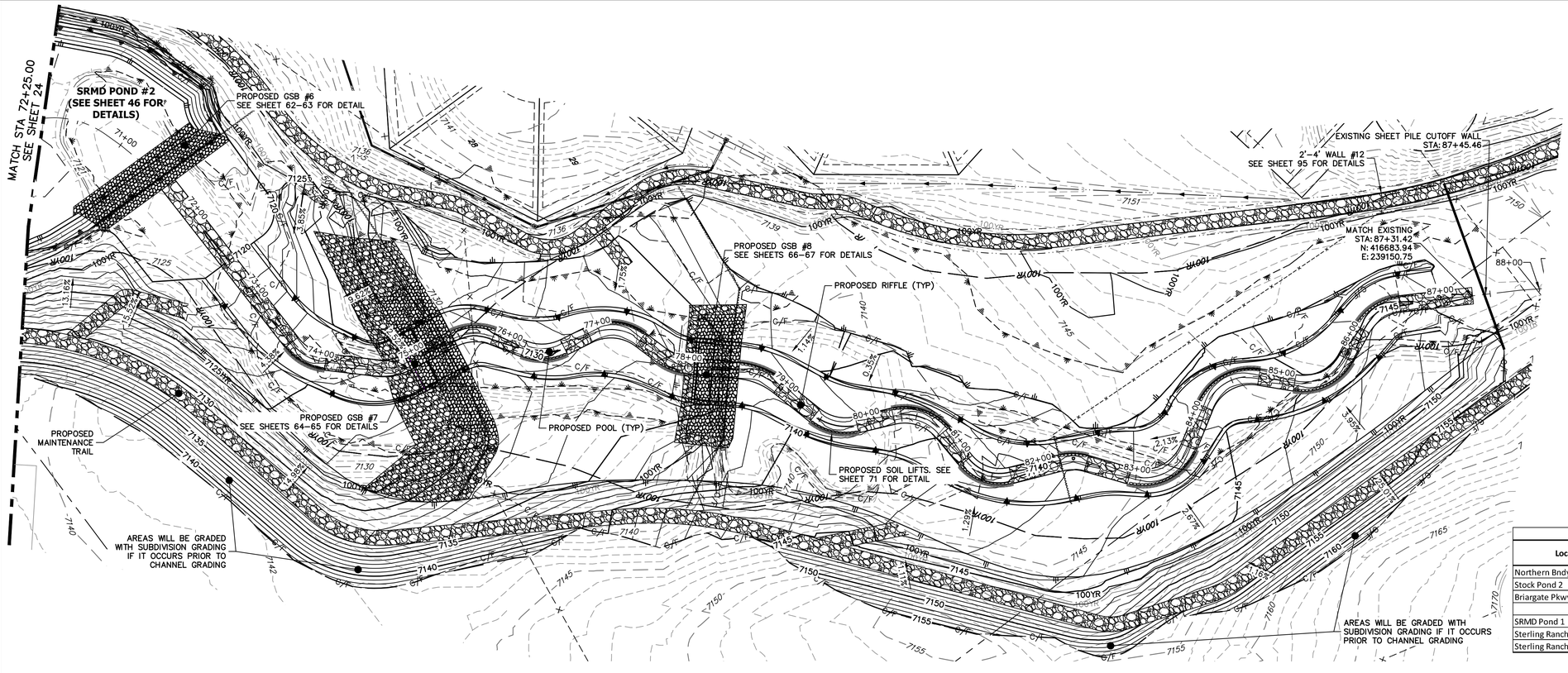

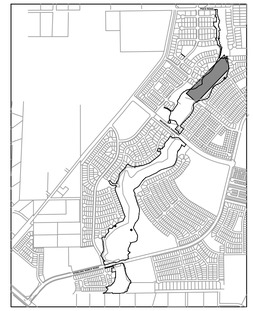

PROFILE LEGEND

- EXISTING GRADE PROFILE @ CHANNEL ℄
- FINISHED GRADE PROFILE @ CHANNEL ℄
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- 100-YR FIS WSEL PROFILE
- 100-YR MDDP WSEL PROFILE

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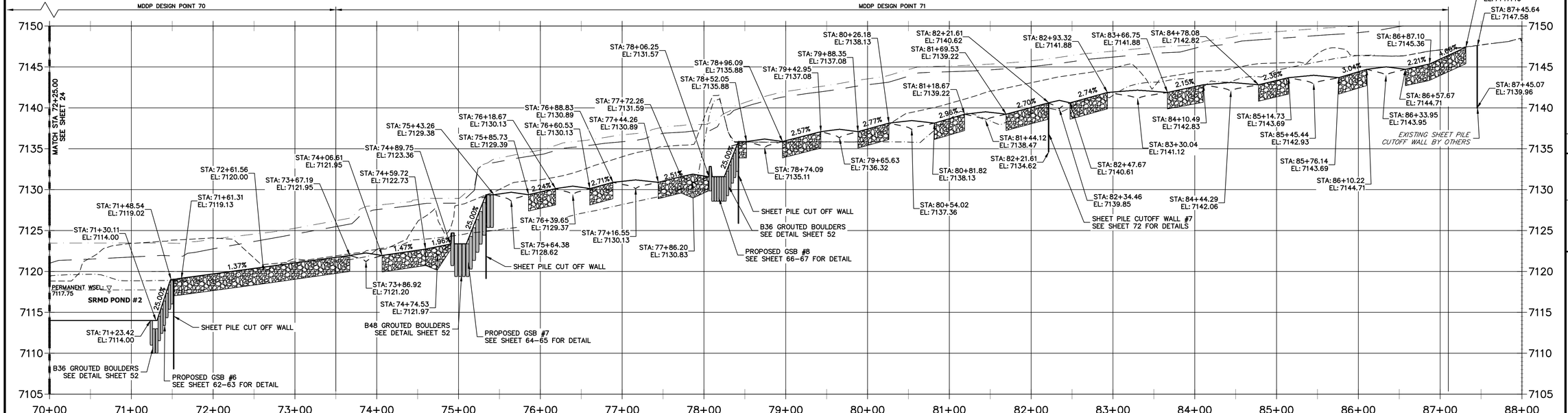
Sterling Ranch Southern Bndy	STA:00+00	DP-63	1585.2	2600

SAND CREEK - BANKFULL PROFILE 6
STA 70+00.00 TO 88+00.00



60 30 0 60
HORIZONTAL
ORIGINAL SCALE: 1" = 60'
VERTICAL
ORIGINAL SCALE: 1" = 6'

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

ENGINEER'S STATEMENT

PREPARED UNDER MY DIRECT SUPERVISION.

Mike Bramlett — 11/20/23

MIKE A. BRAMLETT, P.E. — DATE
COLORADO P.E. 32314
FOR AND ON BEHALF OF JR ENGINEERING, LLC

COLORADO REGISTERED PROFESSIONAL ENGINEER — MIKE A. BRAMLETT — 32314

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No.	REVISION	BY	DATE

H-SCALE	1"=60'
V-SCALE	1"=6'
DATE	11/20/23
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DRAWN BY	NEO
CHECKED BY	

SAND CREEK RESTORATION

CHANNEL PLAN & PROFILE

SHEET 25 OF 121

JOB NO. 25188.04

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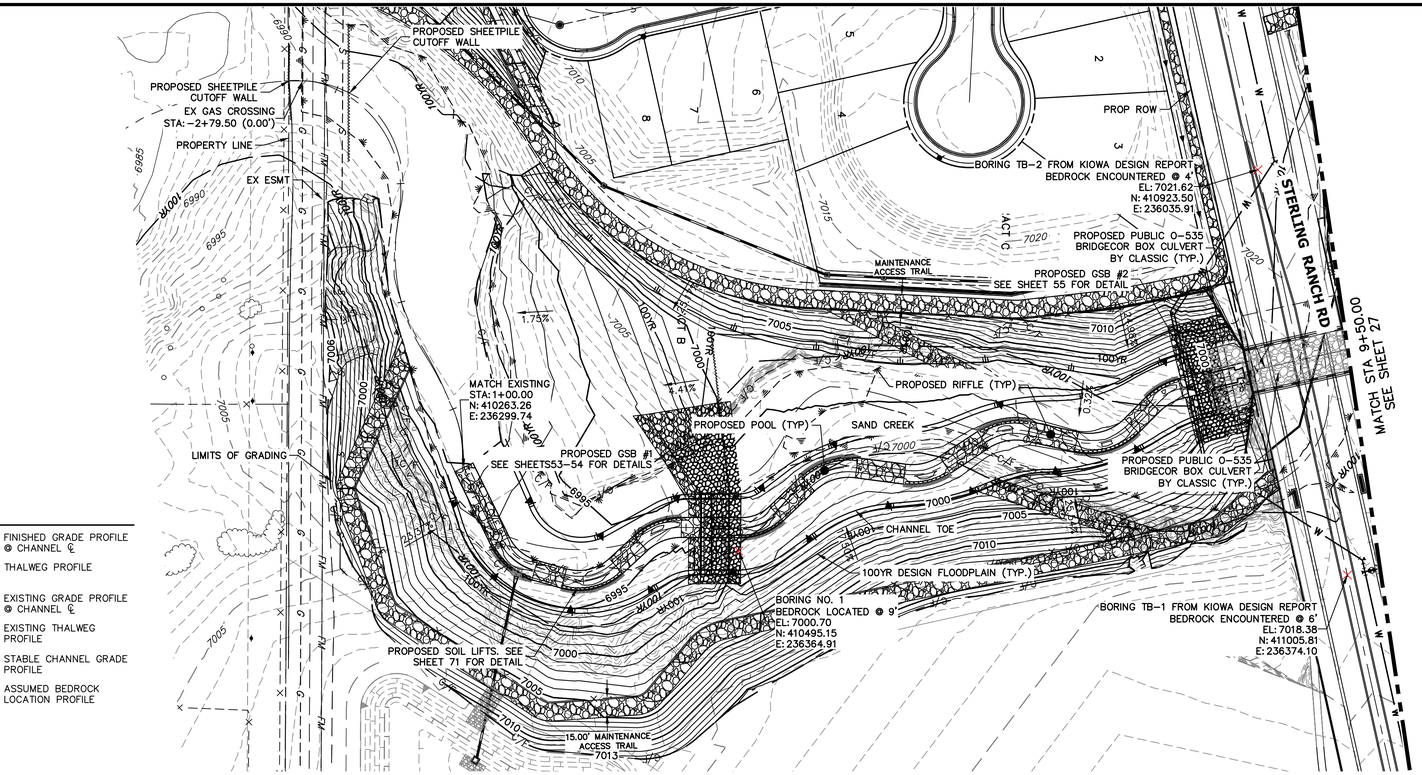
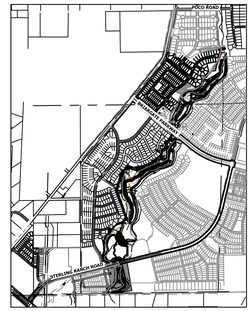




KEY MAP
SCALE: 1"=2000'

LEGEND

- FINISHED GRADE PROFILE @ CHANNEL ℄
- THALWEG PROFILE
- EXISTING GRADE PROFILE @ CHANNEL ℄
- EXISTING THALWEG PROFILE
- STABLE CHANNEL GRADE PROFILE
- ASSUMED BEDROCK LOCATION PROFILE

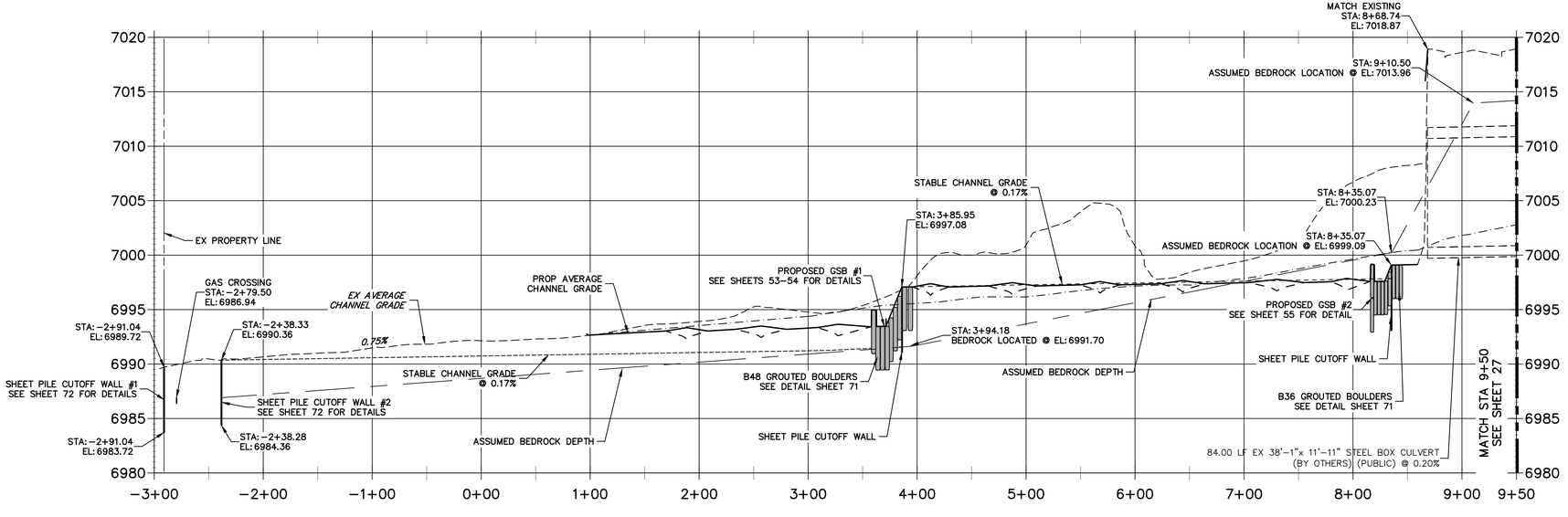
BENCHMARK

1. THE TOP OF AN ALUMINUM SURVEYORS CAP, STAMPED "9853", AT THE SOUTHEAST BOUNDARY CORNER OF BARBARICK SUBDIVISION
   NORTHING = 411416.273
   EASTING = 235167.071
   ELEVATION = 7023.42
2. THE TOP OF A RED PLASTIC SURVEYORS CAP, ILLEGIBLE, AT THE NORTHWEST BOUNDARY CORNER OF PAWNEE RANCHEROS SUBDIVISION
   NORTHING = 410095.404
   EASTING = 235052.131
   ELEVATION = 7000.40
3. THE TOP OF A RED PLASTIC SURVEYORS CAP, STAMPED "38141", AT THE SOUTHWEST BOUNDARY CORNER OF BARBARICK SUBDISION
   NORTHING = 411399.962
   EASTING = 233849.817
   ELEVATION = 7030.82

BASIS OF BEARINGS

THE SOUTH LINE OF THE SOUTHWEST QUARTER OF SECTION 34, TOWNSHIP 12 SOUTH, RANGE 65 WEST OF THE 6TH P.M. AS MONUMENTED AT THE SOUTHWEST CORNER OF SAID BY A 2-1/2" ALUMINUM CAP STAMPED "LS 11624" AND AT THE SOUTEAST CORNER OF SAID SOUTHWEST QUARTER BY A 2-1/2" ALUMINUM CAP STAMPED "LS 11624", SAID LINE BEARS N89°14'14"E, A DISTANCE OF 2,722.69 FEET.

SAND CREEK -STABLE CHANNEL GRADE BANKFULL PROFILE 1
STA -3+00.00 TO 9+50.00



NOTE

1. NO GRADING OR CONSTRUCTION ACTIVITIES ON PRIVATE PROPERTY
2. DRIVE SHEET PILE THROUGH BEDROCK OR MINIMUM OF 6 FEET.

60 30 0 60
HORIZONTAL
ORIGINAL SCALE: 1" = 60'
VERTICAL
ORIGINAL SCALE: 1" = 6'

Know what's below. Call before you dig.

ENGINEER'S STATEMENT

PREPARED UNDER MY DIRECT SUPERVISION

Mike Bramlett 11/20/23

MIKE A. BRAMLETT, P.E. DATE
COLORADO P.E. 32314
FOR AND ON BEHALF OF JR ENGINEERING, LLC

COLORADO REGISTERED MIKE A. BRAMLETT 32314 PROFESSIONAL ENGINEER

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

PREPARED FOR
SR LAND, LLC
20 BOULDER CRESCENT
2ND FLOOR
COLORADO SPRINGS, CO 80903
JAMES F. MORLEY
(719) 419-3024

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No.	REVISION	BY	DATE

H-SCALE	1"=60'
V-SCALE	1"=6'
DATE	11/20/23
DESIGNED BY	DJV
DRAWN BY	NEO
CHECKED BY	

SAND CREEK RESTORATION

CHANNEL STABLE GRADE PLAN AND PROFILE

SHEET 26 OF 121

JOB NO. 25188.04

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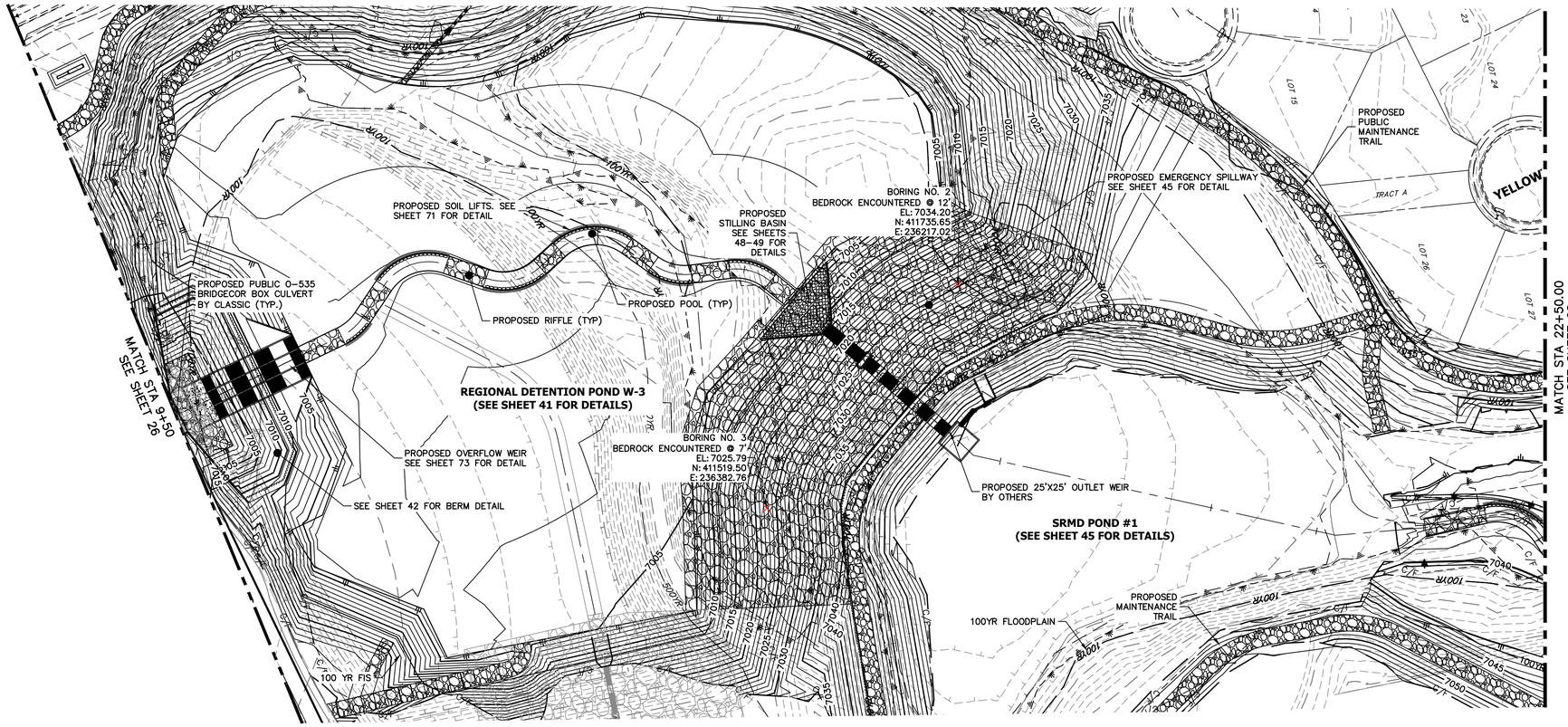
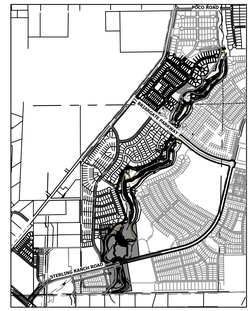




KEY MAP
SCALE: 1"=2000'

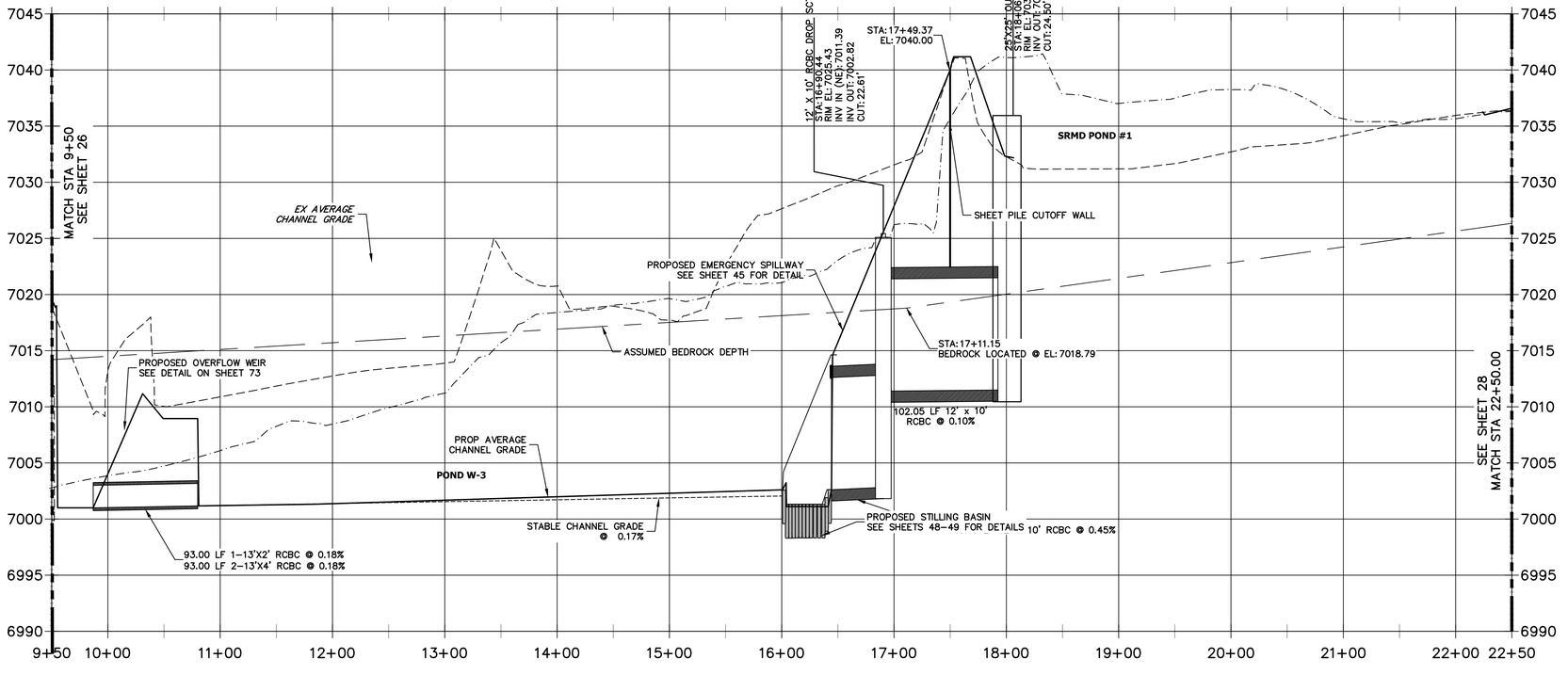
LEGEND

- FINISHED GRADE PROFILE @ CHANNEL ℄
- THALWEG PROFILE
- EXISTING GRADE PROFILE @ CHANNEL ℄
- EXISTING THALWEG PROFILE
- STABLE CHANNEL GRADE PROFILE
- ASSUMED BEDROCK LOCATION PROFILE

NOTE

1. NO GRADING OR CONSTRUCTION ACTIVITIES ON PRIVATE PROPERTY
2. DRIVE SHEET PILE THROUGH BEDROCK OR MINIMUM OF 6 FEET.

SAND CREEK - STABLE CHANNEL GRADE BANKFULL PROFILE 2
STA 9+50.00 TO 22+50.00



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

60 30 0 60
HORIZONTAL
ORIGINAL SCALE: 1" = 60'
VERTICAL
ORIGINAL SCALE: 1" = 6'

ENGINEER'S STATEMENT

PREPARED UNDER MY DIRECT SUPERVISION.

Mike Bramlett 11/20/23

MIKE A. BRAMLETT, P.E.
COLORADO P.E. 32314
FOR AND ON BEHALF OF JR ENGINEERING, LLC

DATE

COLORADO REGISTERED MIKE A. BRAMLETT 32314 PROFESSIONAL ENGINEER

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V-SCALE	1"=6'
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DRAWN BY	NEO
CHECKED BY	

SAND CREEK RESTORATION

CHANNEL STABLE GRADE PLAN AND PROFILE

SHEET 27 OF 121

JOB NO. 25188.04

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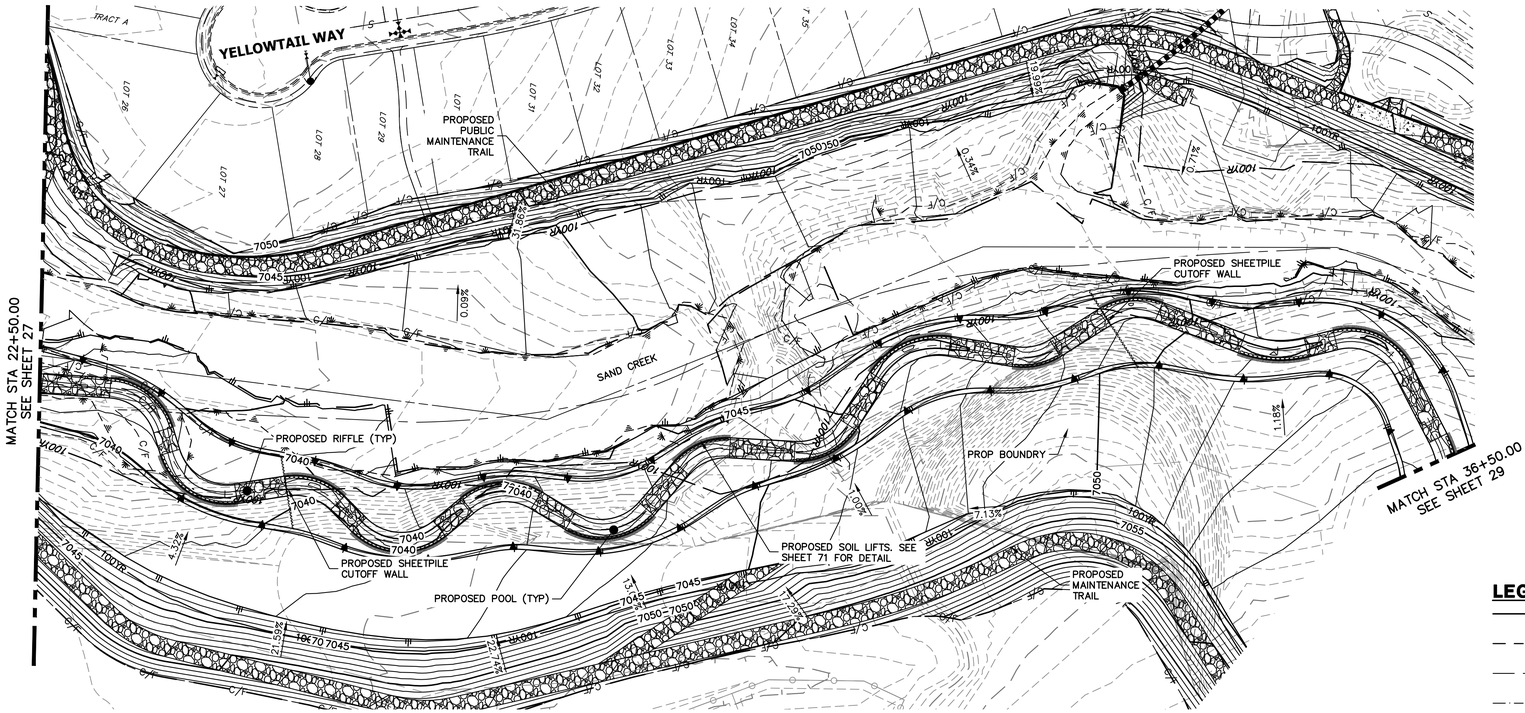

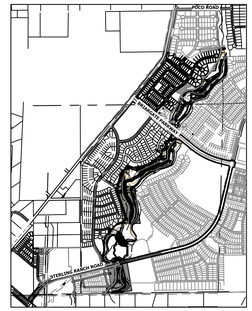

KEY MAP
SCALE: 1"=2000'

LEGEND

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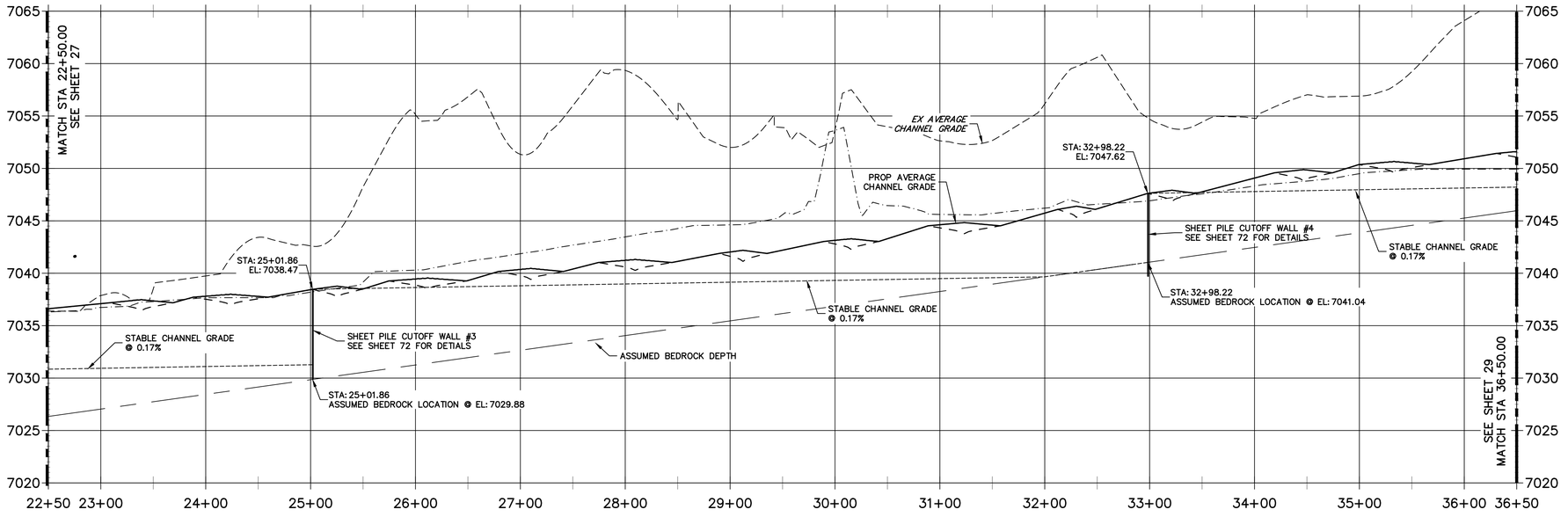
- THALWEG PROFILE
- EXISTING GRADE PROFILE @ CHANNEL ℄
- EXISTING THALWEG PROFILE
- STABLE CHANNEL GRADE PROFILE
- ASSUMED BEDROCK LOCATION PROFILE

SAND CREEK - STABLE CHANNEL GRADE BANKFULL PROFILE 3
STA 22+50.00 TO 36+50.00



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

60 30 0 60
HORIZONTAL ORIGINAL SCALE: 1" = 60'
VERTICAL ORIGINAL SCALE: 1" = 6'

NOTE
1. NO GRADING OR CONSTRUCTION ACTIVITIES ON PRIVATE PROPERTY
2. DRIVE SHEET PILE THROUGH BEDROCK OR MINIMUM OF 6 FEET.

ENGINEER'S STATEMENT
PREPARED UNDER MY DIRECT SUPERVISION

COLORADO REGISTERED MIKE A. BRAMLETT 32314 PROFESSIONAL ENGINEER

Mike Bramlett 11/20/23

MIKE A. BRAMLETT, P.E. DATE
COLORADO P.E. 32314
FOR AND ON BEHALF OF JR ENGINEERING, LLC

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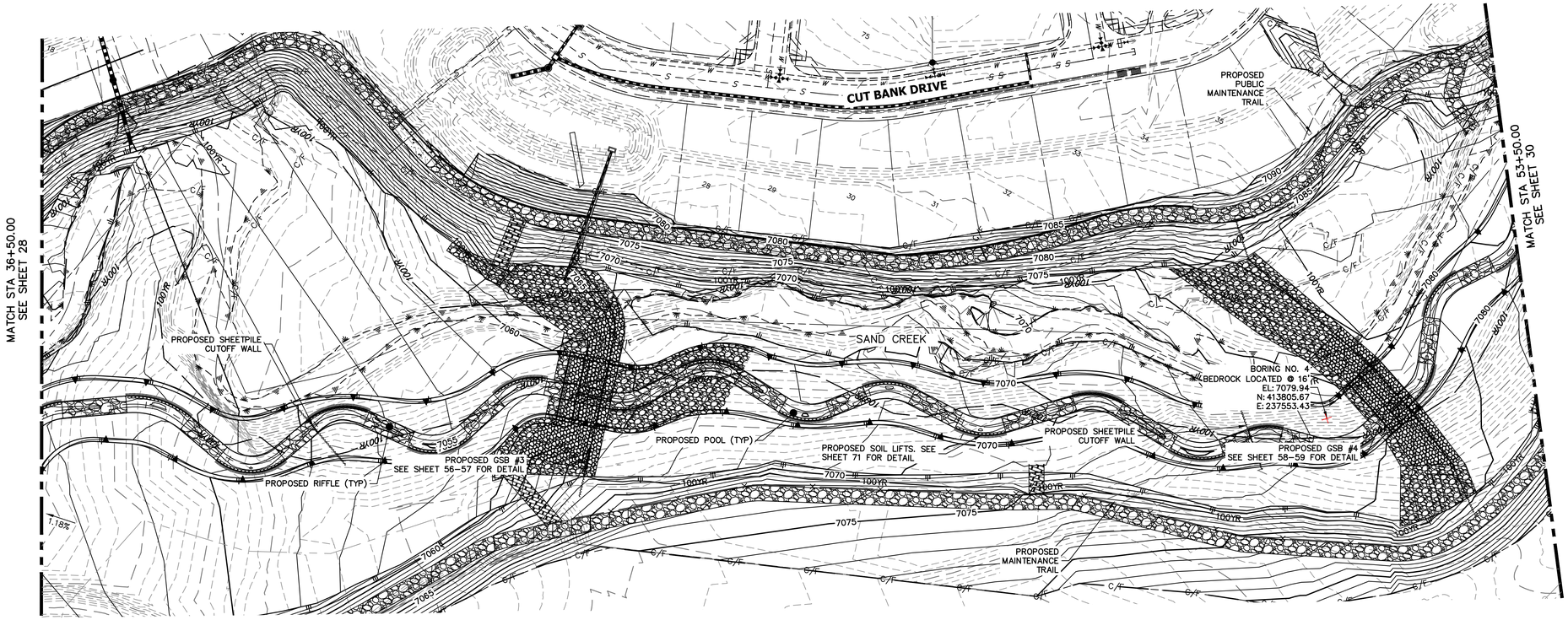
CHECKED BY	

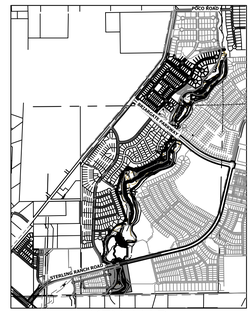
SAND CREEK RESTORATION

CHANNEL STABLE GRADE PLAN AND PROFILE

SHEET 28 OF 121
JOB NO. 25188.04

X:\25\10000_all\25188\04\Drawings\Sheet Dwgs\Second Creek Plan&Profile\25188d4 Stable Grade CH02.dwg, SG03, 12/7/2023 5:30:54 PM, VaughnD





KEY MAP
SCALE: 1"=2000'

LEGEND

- FINISHED GRADE PROFILE @ CHANNEL ℄
- THALWEG PROFILE
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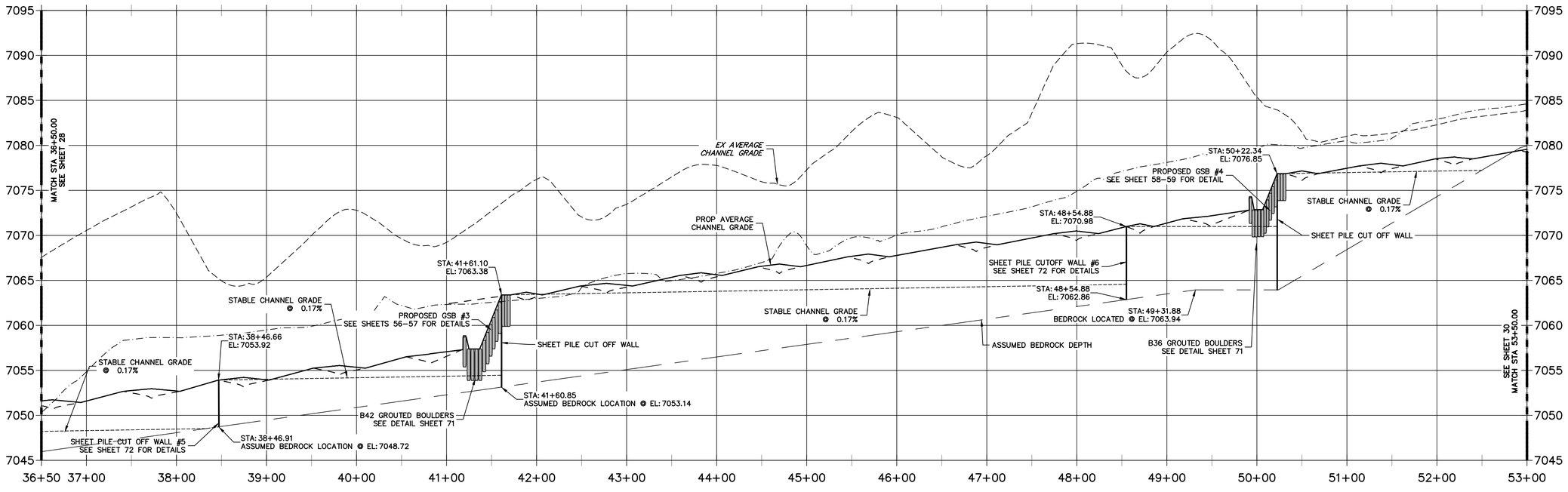
- EXISTING THALWEG PROFILE
- STABLE CHANNEL GRADE PROFILE
- ASSUMED BEDROCK LOCATION PROFILE

60 30 0 60

HORIZONTAL
ORIGINAL SCALE: 1" = 60'
VERTICAL
ORIGINAL SCALE: 1" = 6'

SAND CREEK - STABLE CHANNEL GRADE BANKFULL PROFILE 4
STA 36+50.00 TO 53+00.00



NOTE

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ENGINEER'S STATEMENT

PREPARED UNDER MY DIRECT SUPERVISION.

Mike Bramlett 11/20/23

MIKE A. BRAMLETT, P.E. DATE
COLORADO P.E. 32314
FOR AND ON BEHALF OF JR ENGINEERING, LLC

COLORADO REGISTERED MIKE A. BRAMLETT 32314 PROFESSIONAL ENGINEER

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

PREPARED FOR
SR LAND, LLC
20 BOULDER CRESCENT
2ND FLOOR
COLORADO SPRINGS, CO 80903
JAMES F. MORLEY
(719) 419-3024

J·R ENGINEERING
A Westrian Company
Centennial 303-740-9393 • Colorado Springs 719-593-2593
Fort Collins 970-491-9888 • www.jrengineering.com

No.	REVISION	BY	DATE

H-SCALE	1"=60'
V-SCALE	1"=6'
DATE	11/20/23
DESIGNED BY	DJV
DRAWN BY	NEO
CHECKED BY	

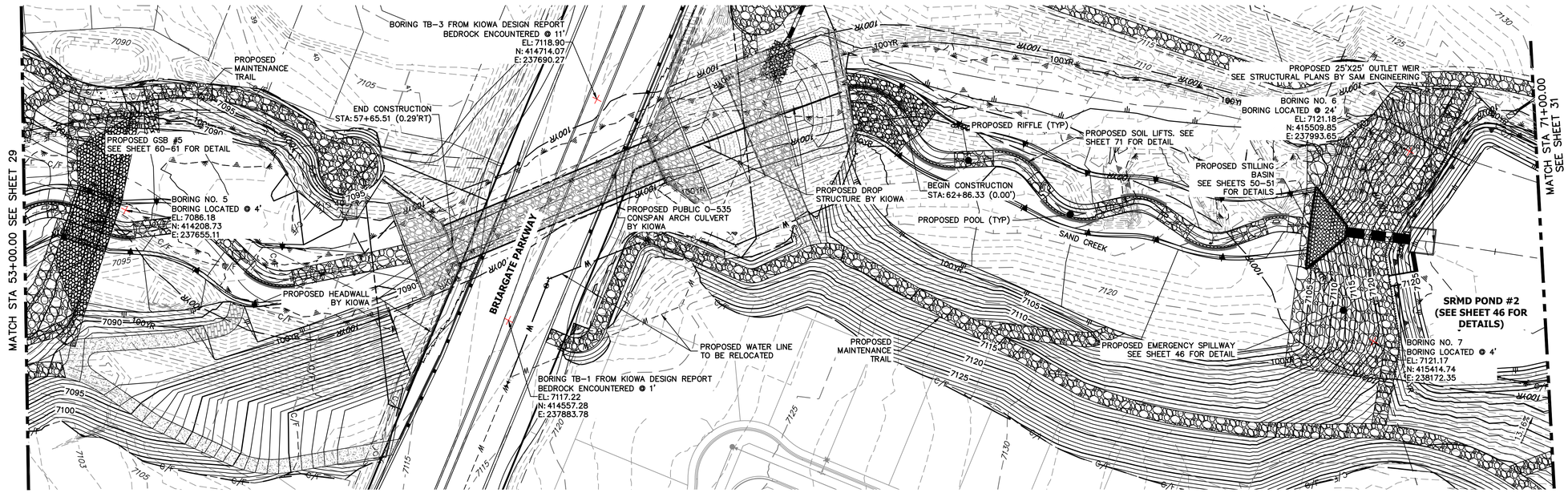
SAND CREEK RESTORATION

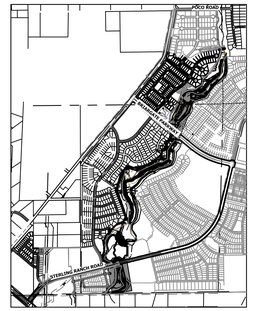
CHANNEL STABLE GRADE PLAN AND PROFILE

SHEET 29 OF 121

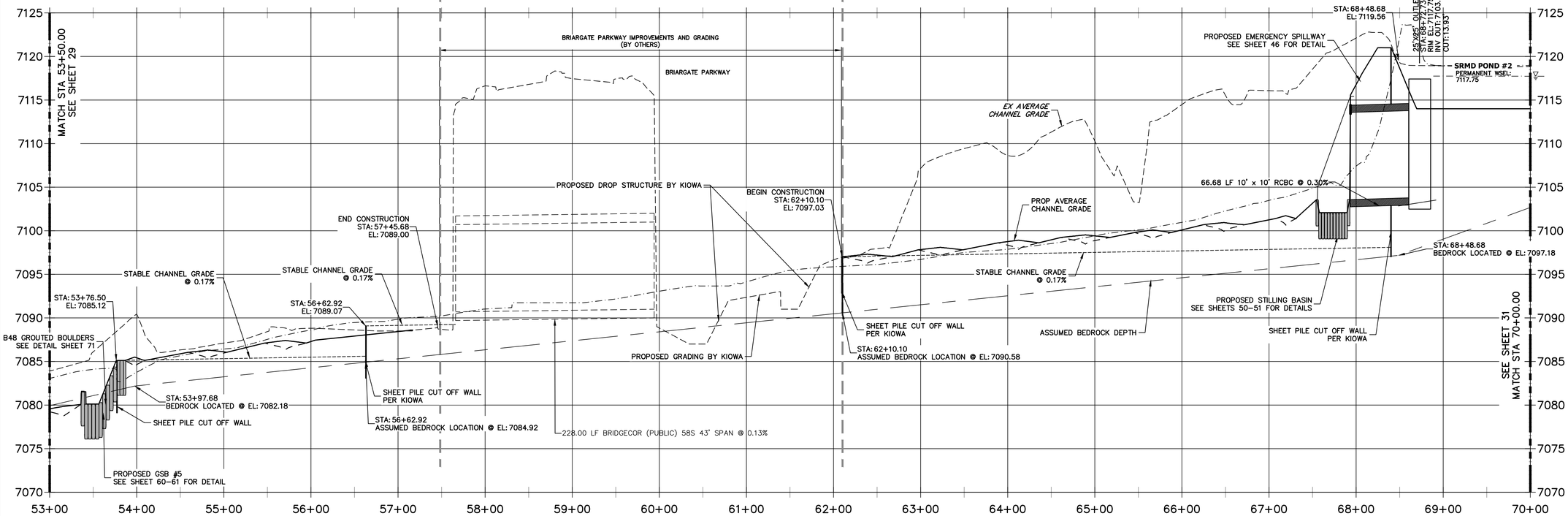
JOB NO. 25188.04

X:\25\10000.all\25188\04\Drawings\Sheet Dwgs\Second Creek Plan&Profile\25188\04 Stable Grade CH02.dwg, SG04, 12/7/2023 5:31:24 PM, VaughnD





SAND CREEK -STABLE CHANNEL GRADE BANKFULL PROFILE 5
STA 53+00.00 TO 70+00.00



LEGEND

- FINISHED GRADE PROFILE @ CHANNEL ℄
- THALWEG PROFILE
- EXISTING GRADE PROFILE @ CHANNEL ℄
- EXISTING THALWEG PROFILE
- STABLE CHANNEL GRADE PROFILE
- ASSUMED BEDROCK LOCATION PROFILE

NOTE

1. NO GRADING OR CONSTRUCTION ACTIVITIES ON PRIVATE PROPERTY
2. DRIVE SHEET PILE THROUGH BEDROCK OR MINIMUM OF 6 FEET.

60 30 0 60
HORIZONTAL ORIGINAL SCALE: 1" = 60'
VERTICAL ORIGINAL SCALE: 1" = 6'

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

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PREPARED UNDER MY DIRECT SUPERVISION.

Mike Bramlett 11/20/23

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V-SCALE	1"=6'
DATE	11/20/23
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DRAWN BY	NEO
CHECKED BY	

SAND CREEK RESTORATION

CHANNEL STABLE GRADE PLAN AND PROFILE

SHEET 30 OF 121

JOB NO. 25188.04

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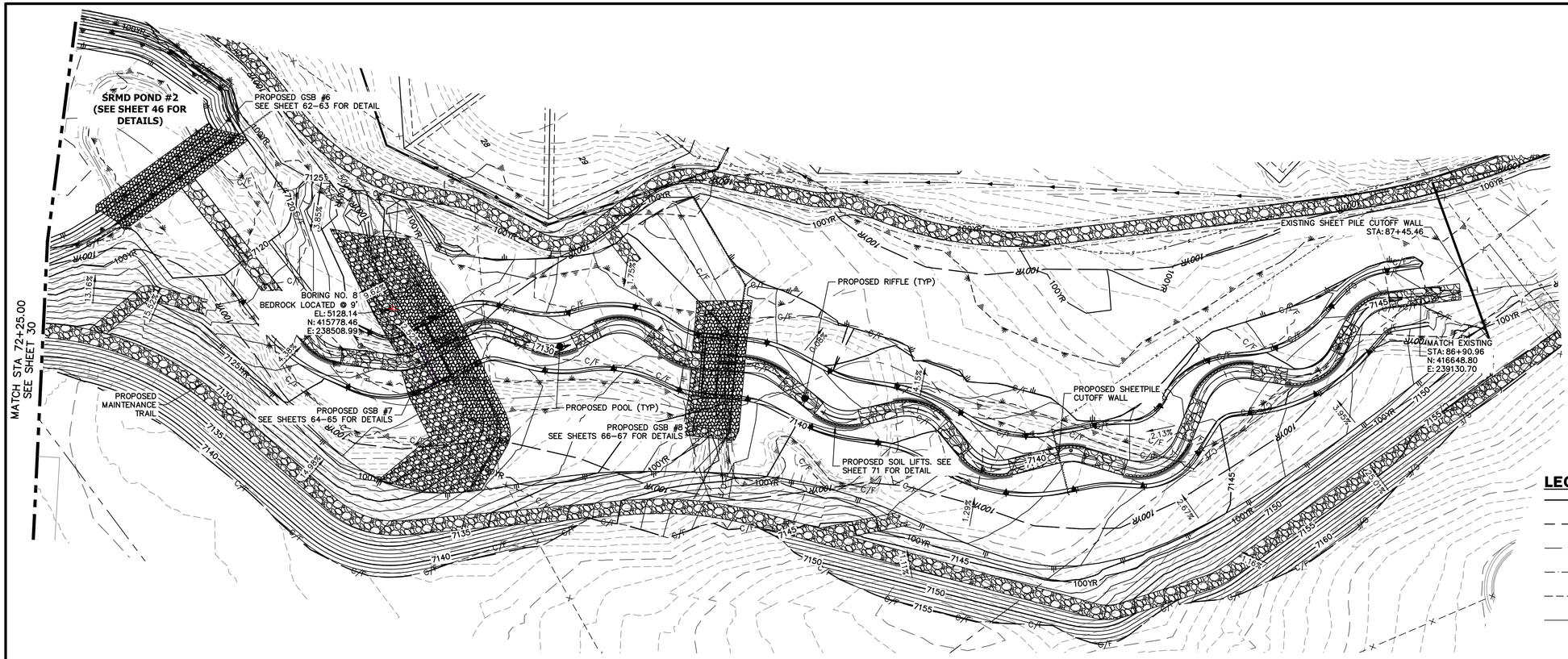
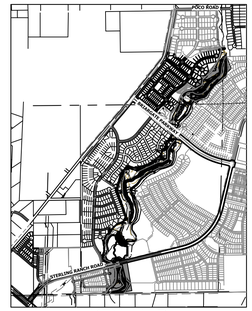
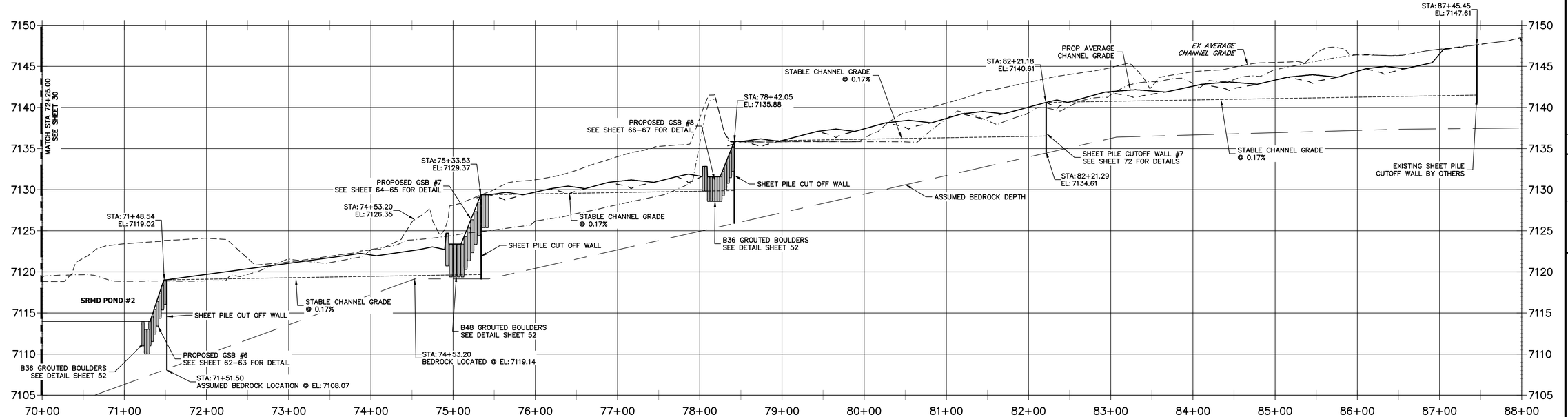




LEGEND

- FINISHED GRADE PROFILE @ CHANNEL ℄
- THALWEG PROFILE
- EXISTING GRADE PROFILE @ CHANNEL ℄
- EXISTING THALWEG PROFILE
- STABLE CHANNEL GRADE PROFILE
- ASSUMED BEDROCK LOCATION PROFILE

SAND CREEK - STABLE CHANNEL GRADE BANKFULL PROFILE 6
STA 70+00.00 TO 88+00.00



NOTE

1. NO GRADING OR CONSTRUCTION ACTIVITIES ON PRIVATE PROPERTY
2. DRIVE SHEET PILE THROUGH BEDROCK OR MINIMUM OF 6 FEET.

60 30 0 60

HORIZONTAL
ORIGINAL SCALE: 1" = 60'
VERTICAL
ORIGINAL SCALE: 1" = 6'

Know what's below. Call before you dig.

ENGINEER'S STATEMENT

PREPARED UNDER MY DIRECT SUPERVISION

Mike Bramlett 11/20/23

MIKE A. BRAMLETT, P.E. DATE
COLORADO P.E. 32314
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No.	REVISION	BY	DATE

H-SCALE	1"=60'
V-SCALE	1"=6'
DATE	11/20/23
DESIGNED BY	DJV
DRAWN BY	NEO
CHECKED BY	

SAND CREEK RESTORATION

CHANNEL STABLE GRADE PLAN AND PROFILE

SHEET 31 OF 121

JOB NO. 25188.04

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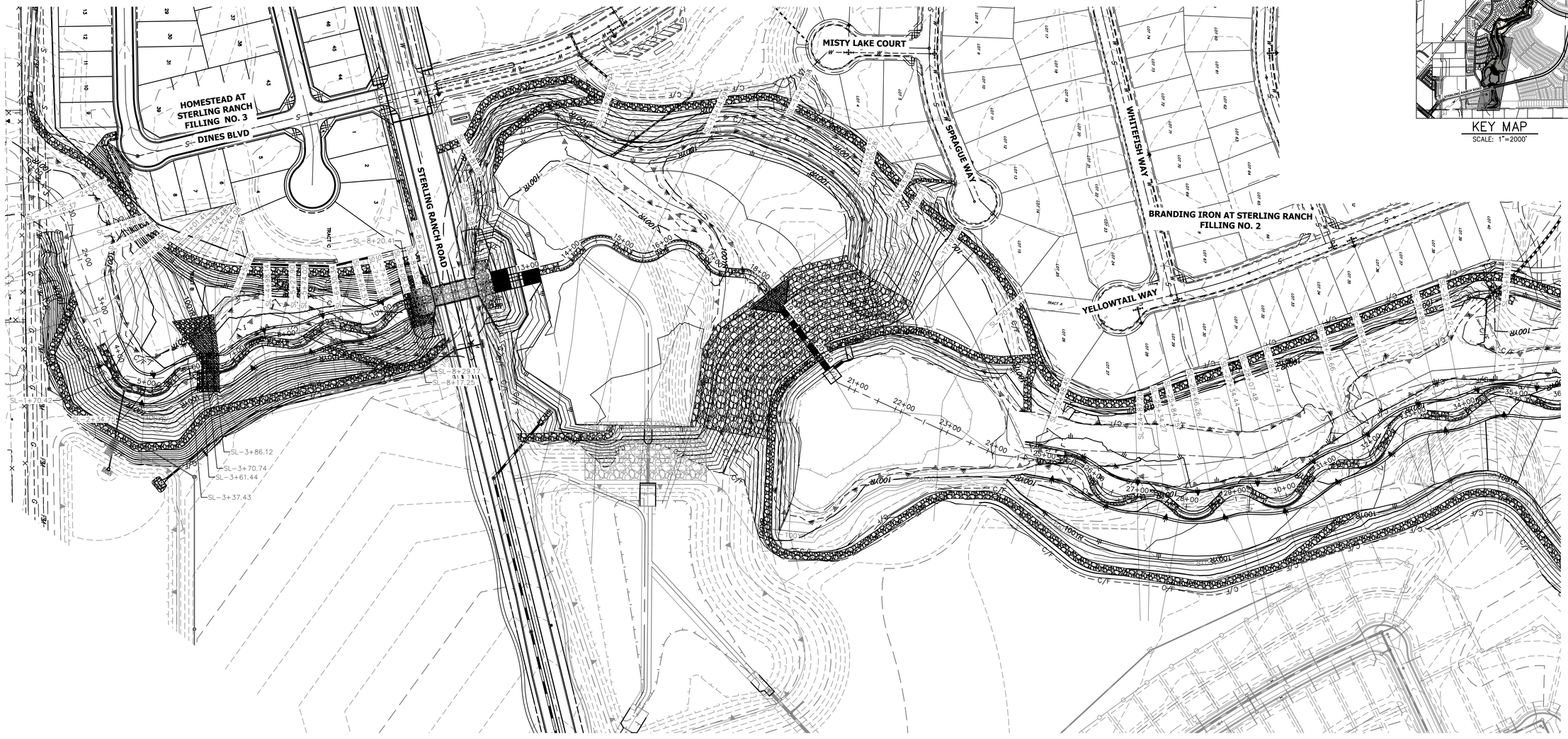

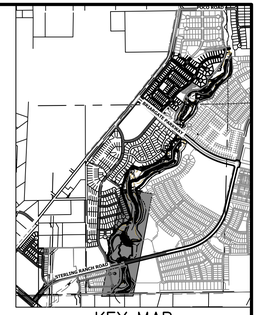

BANKFULL CROSS SECTION – SAND CREEK
STA: 1+00 TO 35+00
SCALE: 1"=100'

BENCHMARK

1. THE TOP OF AN ALUMINUM SURVEYORS CAP, STAMPED "9853", AT THE SOUTHEAST BOUNDARY CORNER OF BARBARICK SUBDIVISION
   NORTHING = 411416.273
   EASTING = 235167.071
   ELEVATION = 7023.42
2. THE TOP OF A RED PLASTIC SURVEYORS CAP, ILLEGIBLE, AT THE NORTHWEST BOUNDARY CORNER OF PAWNEE RANCHEROS SUBDIVISION
   NORTHING = 410095.404
   EASTING = 235052.131
   ELEVATION = 7000.40
3. THE TOP OF A RED PLASTIC SURVEYORS CAP, STAMPED "38141", AT THE SOUTHWEST BOUNDARY CORNER OF BARBARICK SUBDISION
   NORTHING = 411399.962
   EASTING = 233849.817
   ELEVATION = 7030.82

NOTE

SEE SHEETS 35–40 FOR CROSS SECTIONS

BASIS OF BEARINGS

THE SOUTH LINE OF THE SOUTHWEST QUARTER OF SECTION 34, TOWNSHIP 12 SOUTH, RANGE 65 WEST OF THE 6TH P.M. AS MONUMENTED AT THE SOUTHWEST CORNER OF SAID BY A 2–1/2" ALUMINUM CAP STAMPED "LS 11624" AND AT THE SOUTEAST CORNER OF SAID SOUTHWEST QUARTER BY A 2–1/2" ALUMINUM CAP STAMPED "LS 11624", SAID LINE BEARS N89°14'14"E, A DISTANCE OF 2,722.69 FEET.

100 50 0 100
ORIGINAL SCALE: 1" = 100'

Know what's below. Call before you dig.

ENGINEER'S STATEMENT

PREPARED UNDER MY DIRECT SUPERVISION.

Mike Bramlett — 11/20/23

COLORADO REGISTERED MIKE A. BRAMLETT P.E. 32314 PROFESSIONAL ENGINEER

MIKE A. BRAMLETT, P.E. — DATE
COLORADO P.E. 32314
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No.	REVISION	BY	DATE

H–SCALE	1"=100'
V–SCALE	N/A
DATE	11/20/23
DESIGNED BY	DJV
DRAWN BY	NEO
CHECKED BY	

SAND CREEK RESTORATION

CROSS SECTIONS

SHEET 32 OF 121

JOB NO. 25188.04

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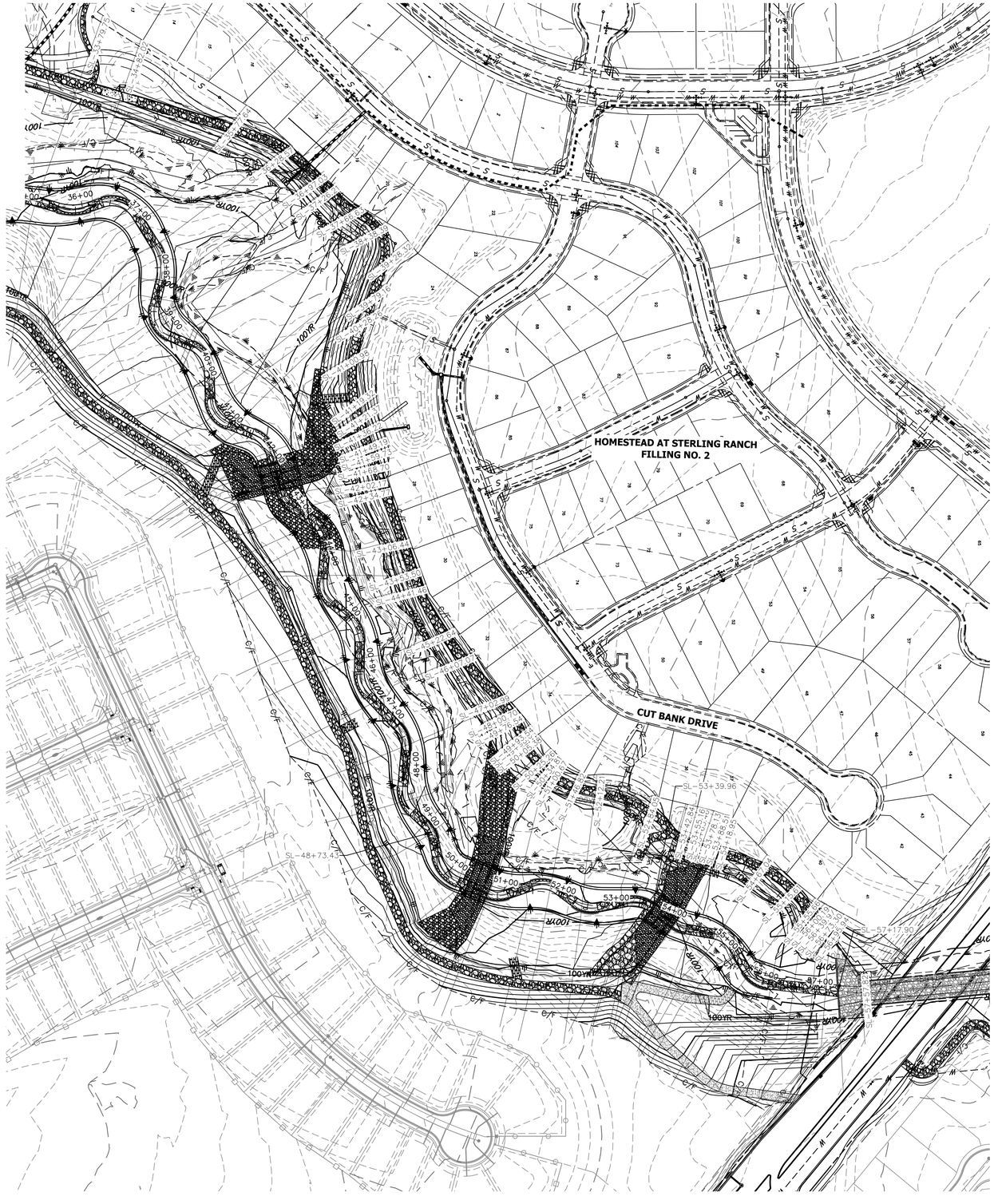
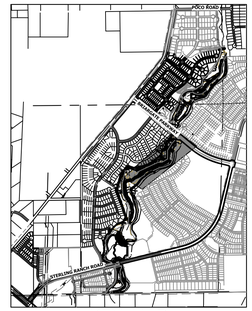


BANKFULL CROSS SECTION – SAND CREEK
STA: 35+00 TO 60+00
SCALE: 1"=100'



KEY MAP
SCALE: 1"=2000'

BENCHMARK

1. THE TOP OF AN ALUMINUM SURVEYORS CAP, STAMPED "9853", AT THE SOUTHEAST BOUNDARY CORNER OF BARBARICK SUBDIVISION
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   EASTING = 233849.817
   ELEVATION = 7030.82

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100 50 0 100
ORIGINAL SCALE: 1" = 100'

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BY	DATE	No.	REVISION

H-SCALE	1"=100'
V-SCALE	N/A
DATE	11/20/23
DESIGNED BY	DJV
DRAWN BY	NEO
CHECKED BY	

SAND CREEK RESTORATION

CROSS SECTIONS

SHEET 33 OF 121

JOB NO. 25188.04

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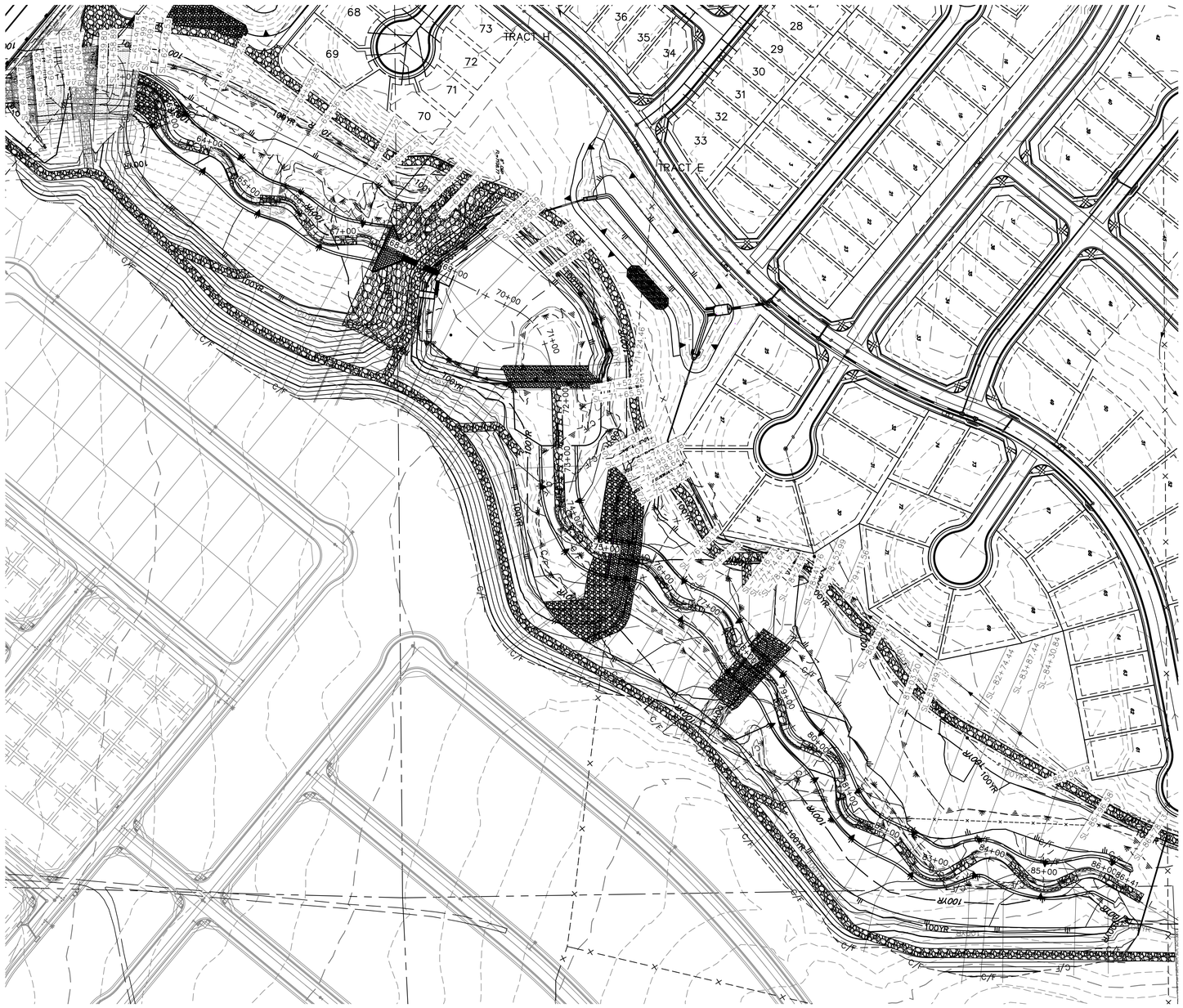
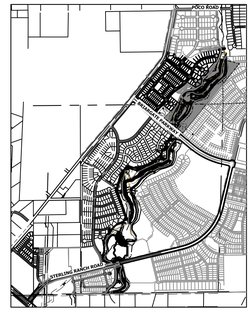


BANKFULL CROSS SECTION – SAND CREEK
STA: 60+00 TO 88+60
SCALE: 1"=100'



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Mike Bramlett

COLORADO REGISTERED MIKE A. BRAMLETT 32314 PROFESSIONAL ENGINEER

11/20/23

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No.	REVISION	BY	DATE

H–SCALE 1"=100' | V–SCALE N/A | DATE 11/20/23 | DESIGNED BY DJV | DRAWN BY NEO | CHECKED BY

SAND CREEK RESTORATION

CROSS SECTIONS

SHEET 34 OF 121

JOB NO. 25188.04

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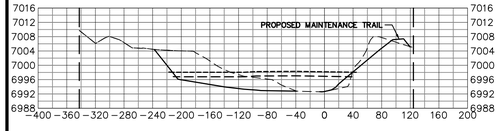

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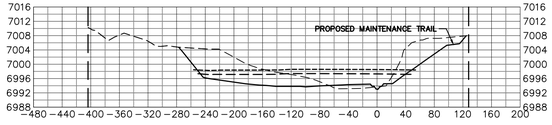

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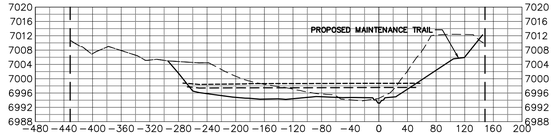

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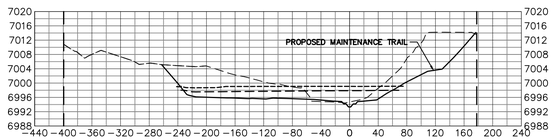

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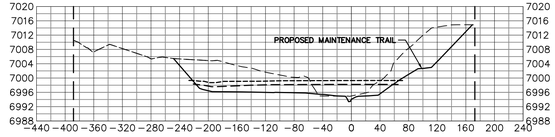

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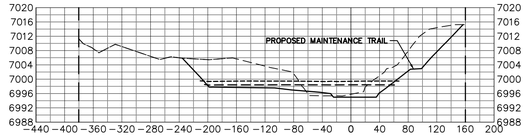

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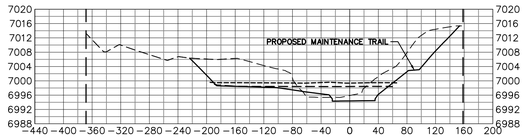

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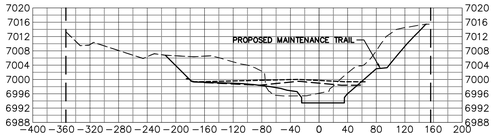

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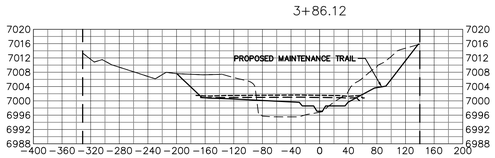

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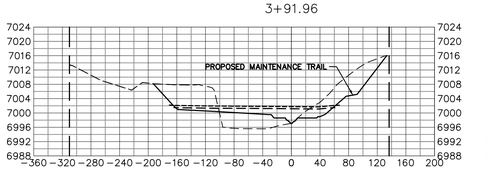

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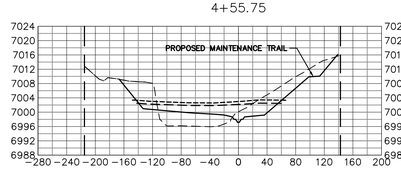

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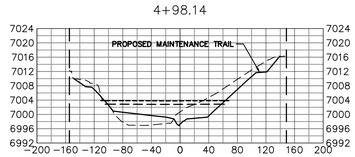
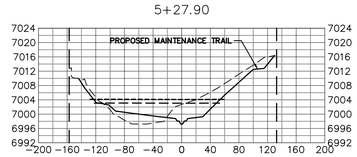
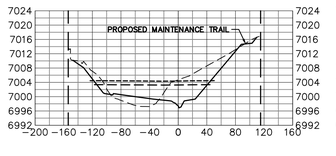


5+27.90



5+74.02



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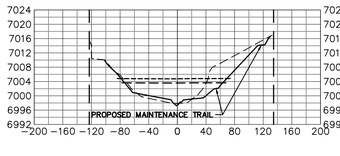

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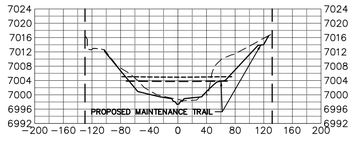

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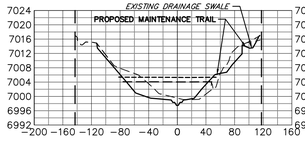

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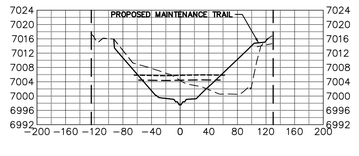

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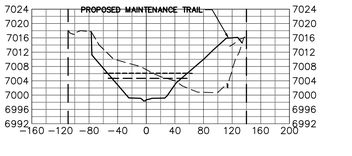

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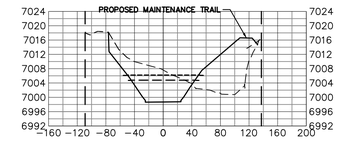
8+20.41



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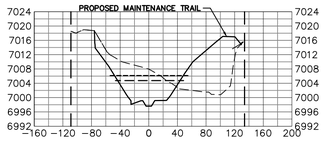

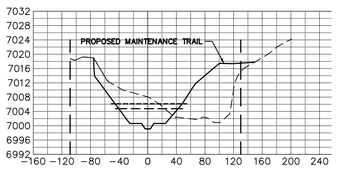

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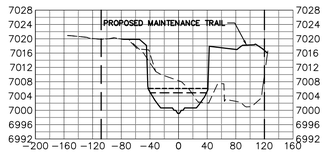
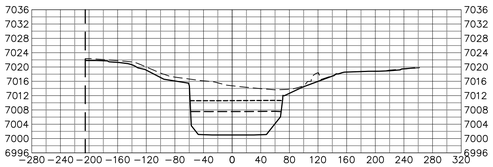


9+66.58



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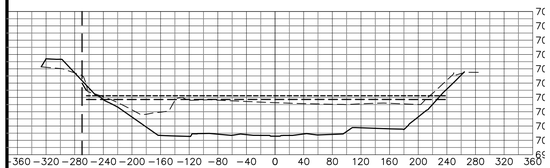

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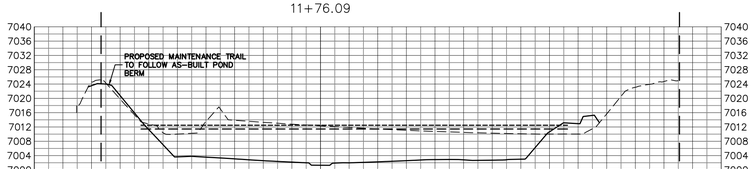

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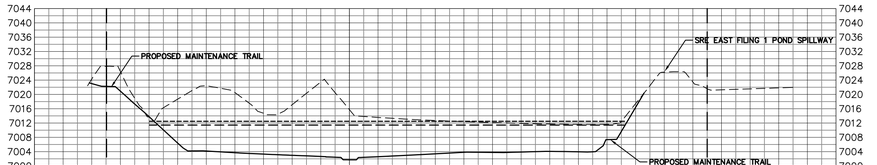

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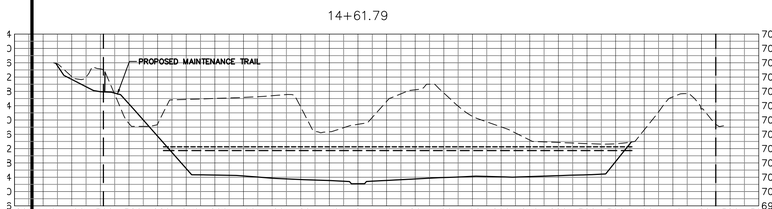

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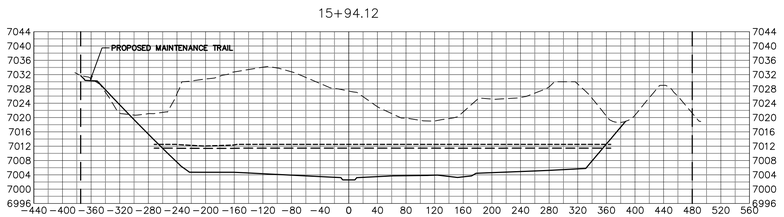

BENCHMARK

1. THE TOP OF AN ALUMINUM SURVEYORS CAP, STAMPED "9853", AT THE SOUTHEAST BOUNDARY CORNER OF BARBARICK SUBDIVISION
   NORTHING = 411416.273
   EASTING = 235167.071
   ELEVATION = 7023.42

2. THE TOP OF A RED PLASTIC SURVEYORS CAP, ILLEGIBLE, AT THE NORTHWEST BOUNDARY CORNER OF PAWNEE RANCHEROS SUBDIVISION
   NORTHING = 410095.404
   EASTING = 235052.131
   ELEVATION = 7000.40

3. THE TOP OF A RED PLASTIC SURVEYORS CAP, STAMPED "38141", AT THE SOUTHWEST BOUNDARY CORNER OF BARBARICK SUBDIVISION
   NORTHING = 411399.962
   EASTING = 233849.817
   ELEVATION = 7030.82

BASIS OF BEARINGS

THE SOUTH LINE OF THE SOUTHWEST QUARTER OF SECTION 34, TOWNSHIP 12 SOUTH, RANGE 65 WEST OF THE 6TH P.M. AS MONUMENTED AT THE SOUTHWEST CORNER OF SAID BY A 2-1/2" ALUMINUM CAP STAMPED "LS 11624" AND AT THE SOUTEAST CORNER OF SAID SOUTHWEST QUARTER BY A 2-1/2" ALUMINUM CAP STAMPED "LS 11624", SAID LINE BEARS N89°14'14"E, A DISTANCE OF 2,722.69 FEET.

100 50 0 100

HORIZONTAL
ORIGINAL SCALE: 1" = 100'
VERTICAL
ORIGINAL SCALE: 1" = 10'

LEGEND

- PROP GROUND SURFACE
- EX GROUND SURFACE
- 100YR FIS WSEL
- 100YR DESIGN WSEL
- PROPERTY LINE

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

ENGINEER'S STATEMENT

PREPARED UNDER MY DIRECT SUPERVISION

Mike Bramlett

COLORADO REGISTERED MIKE A. BRAMLETT 32314 PROFESSIONAL ENGINEER

11/20/23

MIKE A. BRAMLETT, P.E. — DATE
COLORADO P.E. 32314
FOR AND ON BEHALF OF JR ENGINEERING, LLC

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

PREPARED FOR
SR LAND, LLC
20 BOULDER CRESCENT
2ND FLOOR
COLORADO SPRINGS, CO 80903
JAMES F. MORLEY
(719) 419-3024

J·R ENGINEERING
A Westrian Company
Centennial 303-740-9393 • Colorado Springs 719-593-2593
Fort Collins 970-491-9888 • www.jrengineering.com

No.	REVISION	BY	DATE

H-SCALE	1"=100'
V-SCALE	1"=10'
DATE	12/18/23
DESIGNED BY	DJV
DRAWN BY	NEO
CHECKED BY	

SAND CREEK RESTORATION

CROSS SECTIONS

SHEET 35 OF 121

JOB NO. 25188.04

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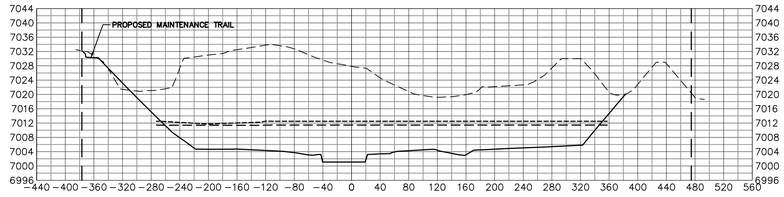

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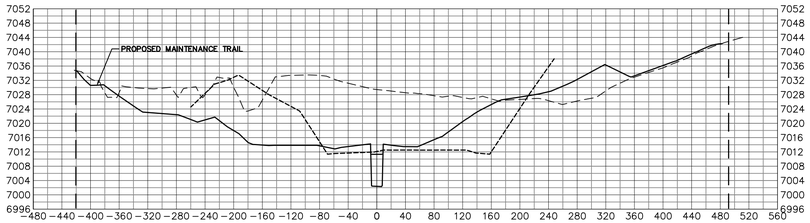

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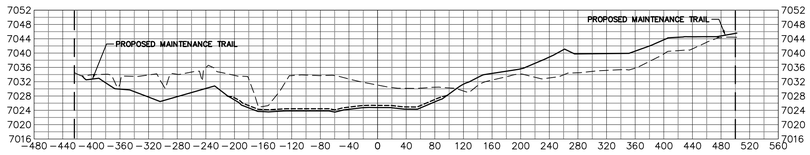

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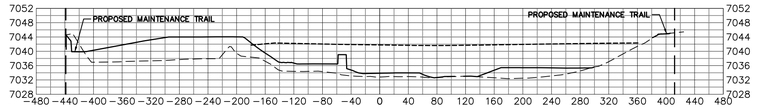

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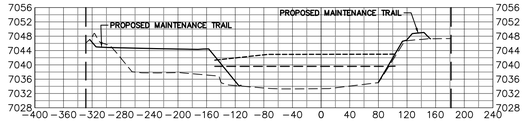

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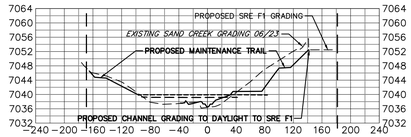

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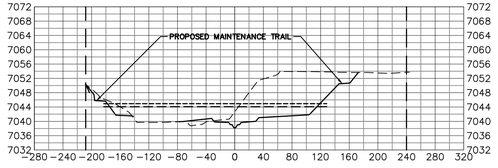

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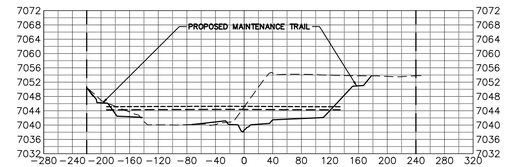

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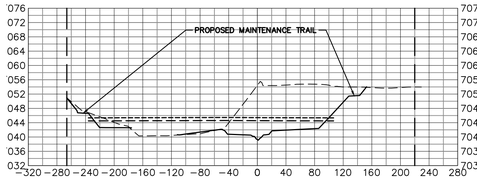
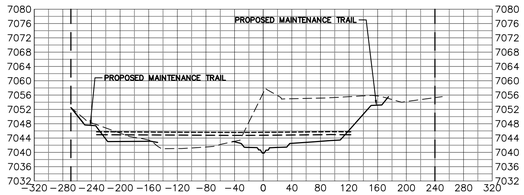


26+66.26



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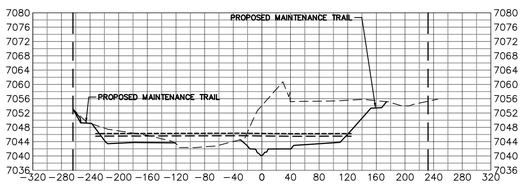

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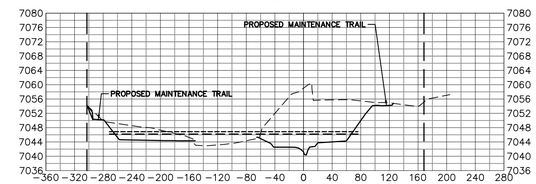

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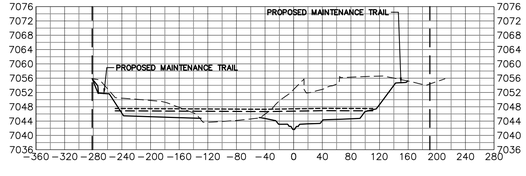

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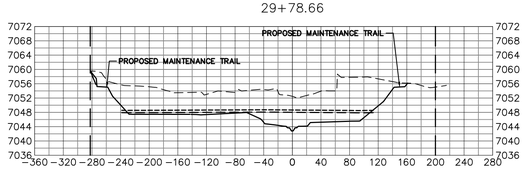

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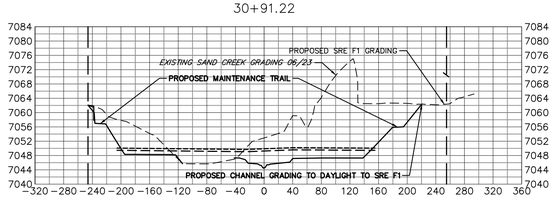

BENCHMARK

1. THE TOP OF AN ALUMINUM SURVEYORS CAP, STAMPED "9853", AT THE SOUTHEAST BOUNDARY CORNER OF BARBARICK SUBDIVISION
   NORTHING = 411416.273
   EASTING = 235167.071
   ELEVATION = 7023.42

2. THE TOP OF A RED PLASTIC SURVEYORS CAP, ILLEGIBLE, AT THE NORTHWEST BOUNDARY CORNER OF PAWNEE RANCHEROS SUBDIVISION
   NORTHING = 410095.404
   EASTING = 235052.131
   ELEVATION = 7000.40

3. THE TOP OF A RED PLASTIC SURVEYORS CAP, STAMPED "38141", AT THE SOUTHWEST BOUNDARY CORNER OF BARBARICK SUBDISION
   NORTHING = 411399.962
   EASTING = 233849.817
   ELEVATION = 7030.82

LEGEND

- PROP GROUND SURFACE
- EX GROUND SURFACE
- 100YR FIS WSEL
- 100YR DESIGN WSEL
- PROPERTY LINE

BASIS OF BEARINGS

THE SOUTH LINE OF THE SOUTHWEST QUARTER OF SECTION 34, TOWNSHIP 12 SOUTH, RANGE 65 WEST OF THE 6TH P.M. AS MONUMENTED AT THE SOUTHWEST CORNER OF SAID BY A 2-1/2" ALUMINUM CAP STAMPED "LS 11624" AND AT THE SOUTEAST CORNER OF SAID SOUTHWEST QUARTER BY A 2-1/2" ALUMINUM CAP STAMPED "LS 11624", SAID LINE BEARS N89°14'14"E, A DISTANCE OF 2,722.69 FEET.

100 50 0 100

HORIZONTAL
ORIGINAL SCALE: 1" = 100'
VERTICAL
ORIGINAL SCALE: 1" = 10'

Know what's below. Call before you dig.

ENGINEER'S STATEMENT

PREPARED UNDER MY DIRECT SUPERVISION

Mike Bramlett 11/20/23

MIKE A. BRAMLETT, P.E.
COLORADO P.E. 32314
FOR AND ON BEHALF OF JR ENGINEERING, LLC

COLORADO REGISTERED MIKE A. BRAMLETT 32314 PROFESSIONAL ENGINEER

DATE

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

PREPARED FOR
SR LAND, LLC
20 BOULDER CRESCENT
2ND FLOOR
COLORADO SPRINGS, CO 80903
JAMES F. MORLEY
(719) 419-3024

J·R ENGINEERING
A Westrian Company
Centennial 303-740-9393 • Colorado Springs 719-593-2593
Fort Collins 970-491-9888 • www.jrengineering.com

No.	REVISION	BY	DATE

H-SCALE	1"=100'
V-SCALE	1"=10'
DATE	11/20/23
DESIGNED BY	DJV
DRAWN BY	NEO
CHECKED BY	

SAND CREEK RESTORATION

CROSS SECTIONS

SHEET 36 OF 121

JOB NO. 25188.04

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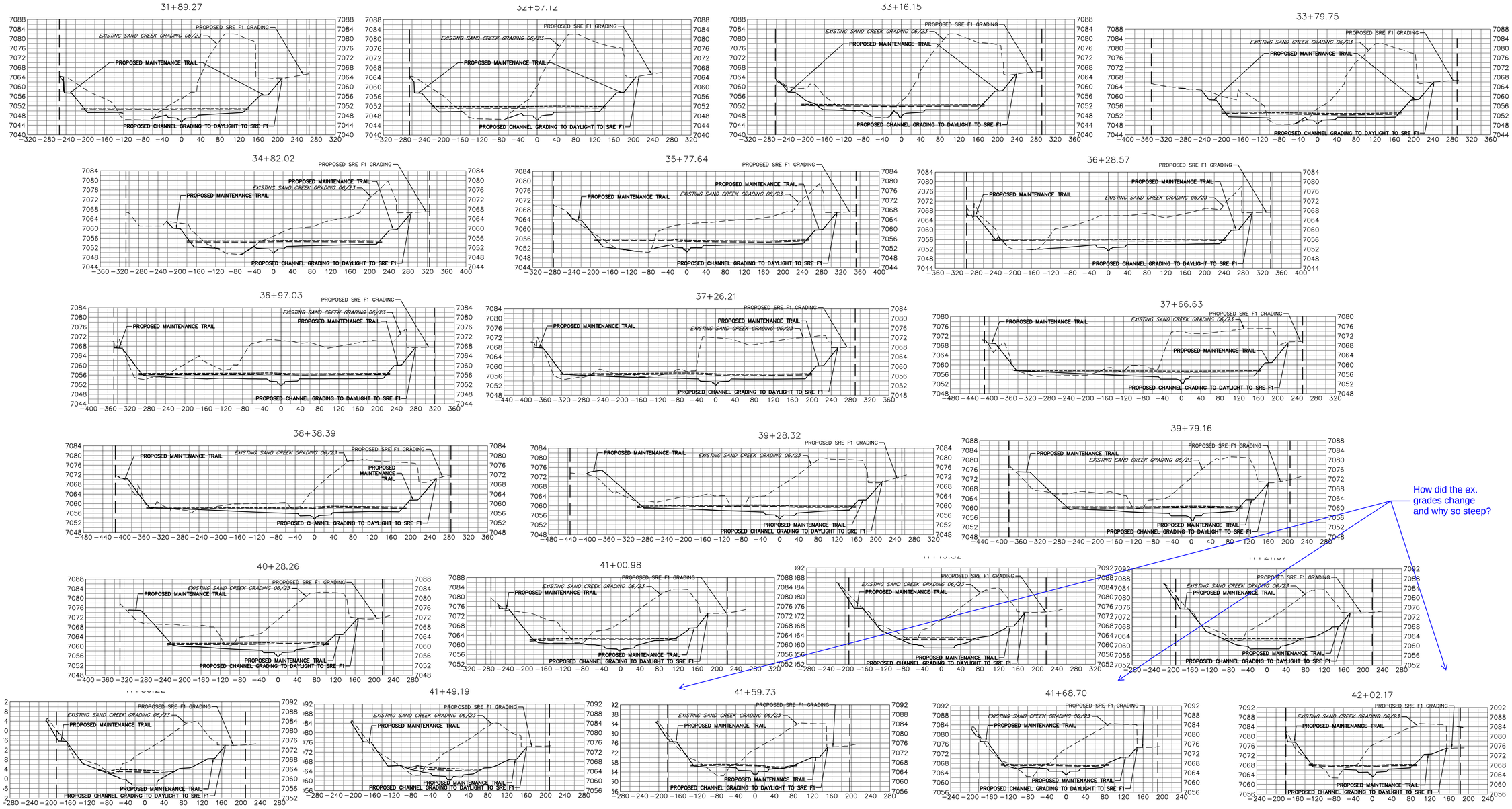

LEGEND

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- EX GROUND SURFACE
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BASIS OF BEARINGS

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100 50 0 100

HORIZONTAL
ORIGINAL SCALE: 1" = 100'
VERTICAL
ORIGINAL SCALE: 1" = 10'

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

BENCHMARK

1. THE TOP OF AN ALUMINUM SURVEYORS CAP, STAMPED "9853", AT THE SOUTHEAST BOUNDARY CORNER OF BARBARICK SUBDIVISION
   NORTHING = 411416.273
   EASTING = 235167.071
   ELEVATION = 7023.42
2. THE TOP OF A RED PLASTIC SURVEYORS CAP, ILLEGIBLE, AT THE NORTHWEST BOUNDARY CORNER OF PAWNEE RANCHEROS SUBDIVISION
   NORTHING = 410095.404
   EASTING = 235052.131
   ELEVATION = 7000.40
3. THE TOP OF A RED PLASTIC SURVEYORS CAP, STAMPED "38141", AT THE SOUTHWEST BOUNDARY CORNER OF BARBARICK SUBDIVISION
   NORTHING = 411399.962
   EASTING = 233849.817
   ELEVATION = 7030.82

ENGINEER'S STATEMENT

PREPARED UNDER MY DIRECT SUPERVISION

Mike Bramlett — 11/20/23

COLORADO REGISTERED MIKE A. BRAMLETT PROFESSIONAL ENGINEER 32314

MIKE A. BRAMLETT, P.E. — DATE
COLORADO P.E. 32314
FOR AND ON BEHALF OF JR ENGINEERING, LLC

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20 BOULDER CRESCENT
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COLORADO SPRINGS, CO 80903
JAMES F. MORLEY
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No.	REVISION	BY	DATE

H-SCALE	1"=100'
V-SCALE	1"=10'
DATE	11/20/23
DESIGNED BY	DJV
DRAWN BY	NEO
CHECKED BY	

SAND CREEK RESTORATION
CROSS SECTIONS

SHEET 37 OF 121

JOB NO. 25188.04

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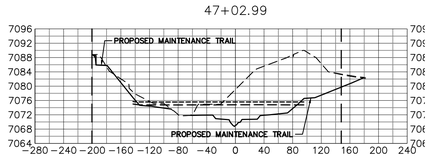
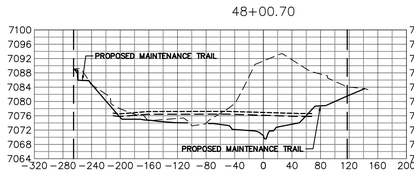
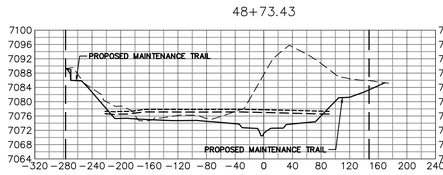
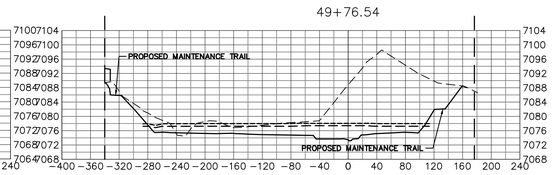
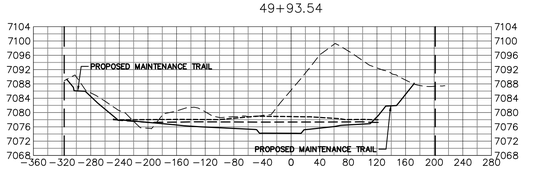
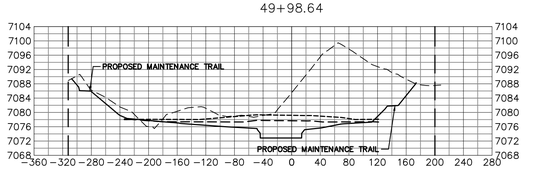


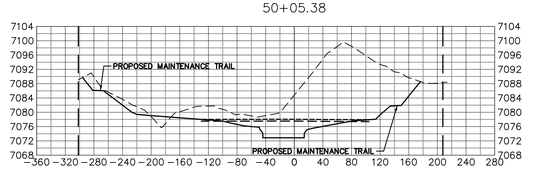


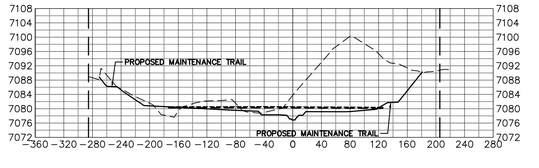


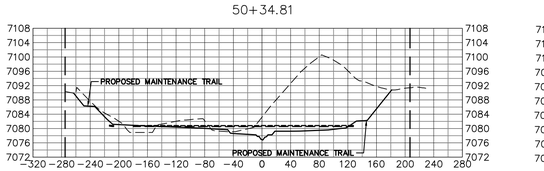


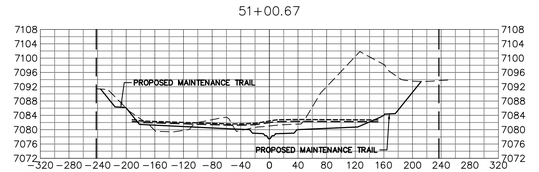


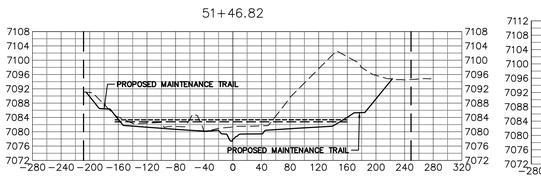


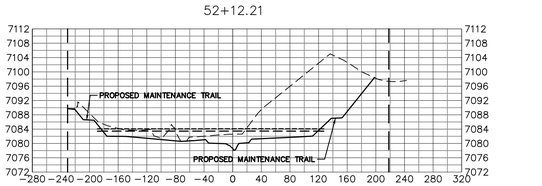


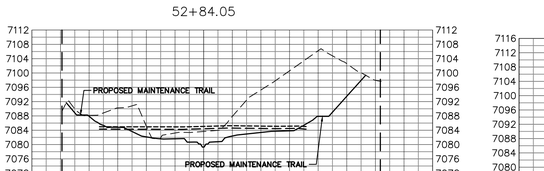


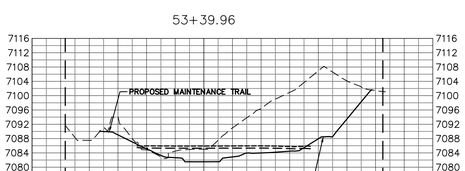


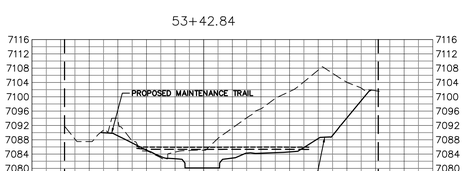


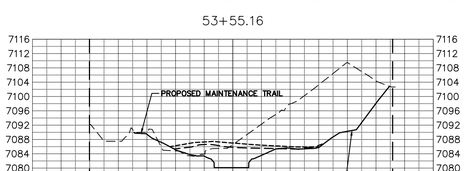


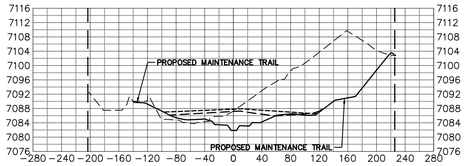


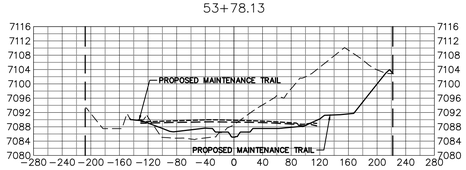


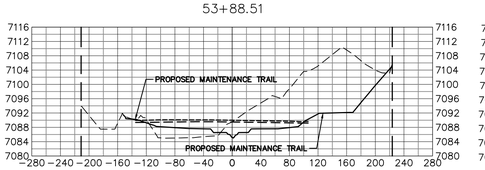


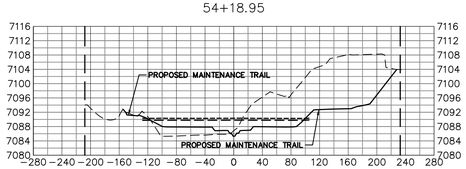


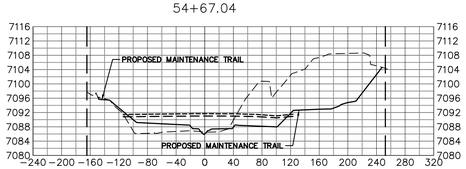


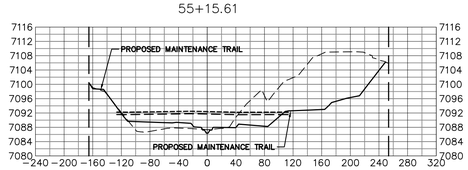


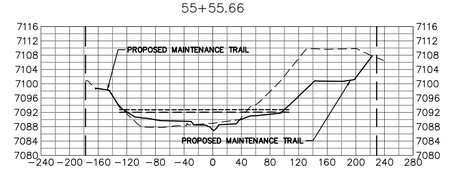


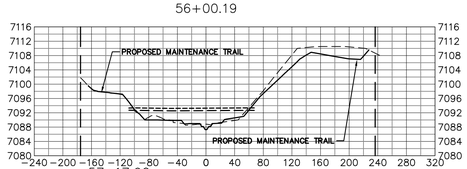


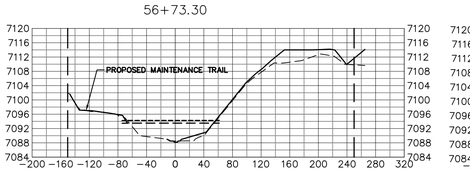


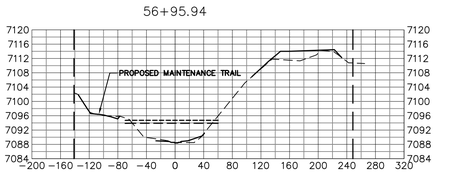


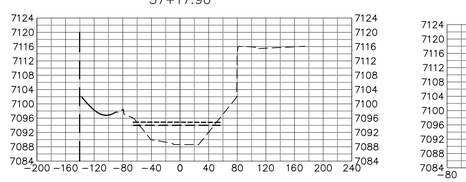


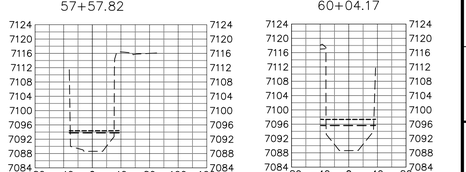


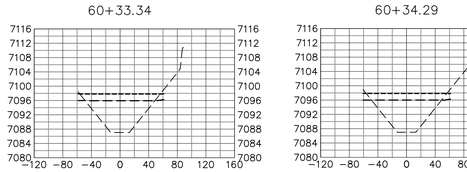


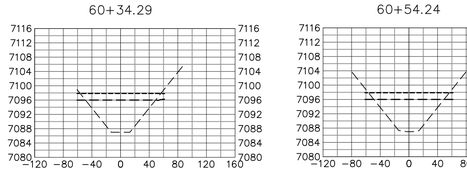


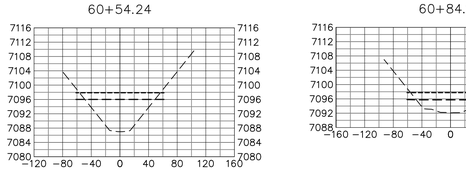


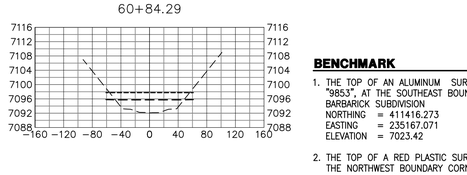


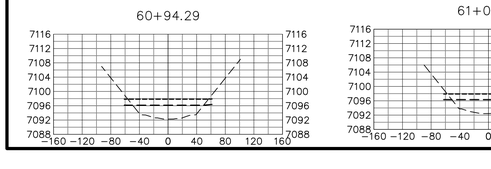


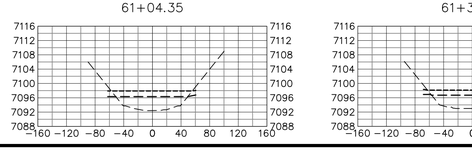


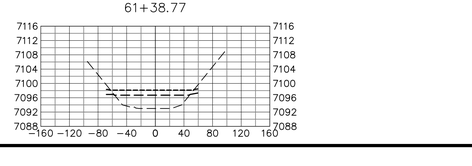












BENCHMARK

1. THE TOP OF AN ALUMINUM SURVEYORS CAP, STAMPED "9853", AT THE SOUTHEAST BOUNDARY CORNER OF BARBARICK SUBDIVISION
   NORTHING = 411416.273
   EASTING = 235167.071
   ELEVATION = 7023.42
2. THE TOP OF A RED PLASTIC SURVEYORS CAP, ILLEGIBLE, AT THE NORTHWEST BOUNDARY CORNER OF PAWNEE RANCHEROS SUBDIVISION
   NORTHING = 410095.404
   EASTING = 235052.131
   ELEVATION = 7000.40
3. THE TOP OF A RED PLASTIC SURVEYORS CAP, STAMPED "38141", AT THE SOUTHWEST BOUNDARY CORNER OF BARBARICK SUBDIVISION
   NORTHING = 411399.962
   EASTING = 233849.817
   ELEVATION = 7030.82

LEGEND

- PROP GROUND SURFACE
- EX GROUND SURFACE
- 100YR FIS WSEL
- 100YR DESIGN WSEL
- PROPERTY LINE

HORIZONTAL
ORIGINAL SCALE: 1" = 100'
VERTICAL
ORIGINAL SCALE: 1" = 10'

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

BASIS OF BEARINGS

THE SOUTH LINE OF THE SOUTHWEST QUARTER OF SECTION 34, TOWNSHIP 12 SOUTH, RANGE 65 WEST OF THE 6TH P.M. AS MONUMENTED AT THE SOUTHWEST CORNER OF SAID BY A 2-1/2" ALUMINUM CAP STAMPED "LS 11624" AND AT THE SOUTEAST CORNER OF SAID SOUTHWEST QUARTER BY A 2-1/2" ALUMINUM CAP STAMPED "LS 11624", SAID LINE BEARS N89°14'14"E, A DISTANCE OF 2,722.69 FEET.

ENGINEER'S STATEMENT

PREPARED UNDER MY DIRECT SUPERVISION

COLORADO REGISTERED MIKE A. BRAMLETT P.E. 32314 PROFESSIONAL ENGINEER

11/20/23

MIKE A. BRAMLETT, P.E. DATE
COLORADO P.E. 32314
FOR AND ON BEHALF OF JR ENGINEERING, LLC

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

PREPARED FOR
SR LAND, LLC
20 BOULDER CRESCENT
2ND FLOOR
COLORADO SPRINGS, CO 80903
JAMES F. MORLEY
(719) 419-3024

J·R ENGINEERING
A Westrian Company
Centennial 303-740-9393 • Colorado Springs 719-593-2593
Fort Collins 970-491-9888 • www.jrengineering.com

No.	REVISION	BY	DATE

H-SCALE	1"=100'	DESIGNED BY	DJV
V-SCALE	1"=10'	DRAWN BY	NEO
DATE	11/20/23	CHECKED BY	

SAND CREEK RESTORATION

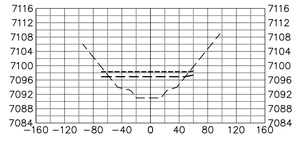
CROSS SECTIONS

SHEET 38 OF 121

JOB NO. 25188.04

X:\25\10000.all\25188\04\Drawings\Sheet Dwgs\Cross Sections\25188_XS01.dwg, 34 XS07 - 12/18/2023 6:55:31 PM, VaughtD

61+39.80



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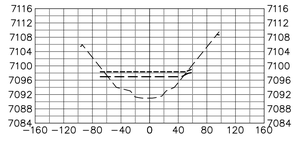

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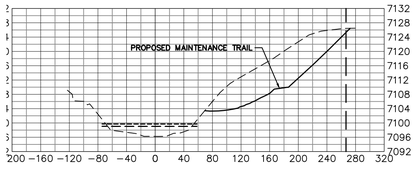

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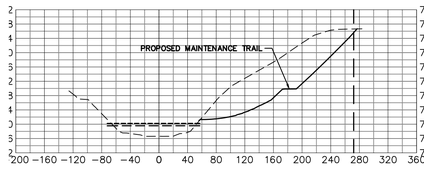

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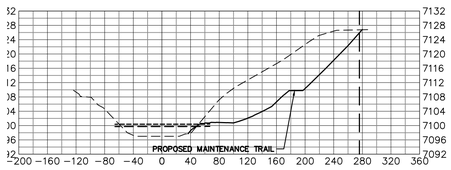

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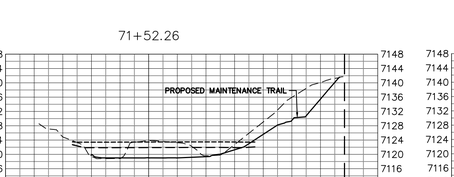
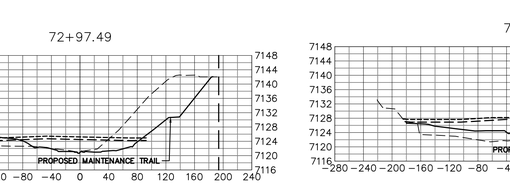
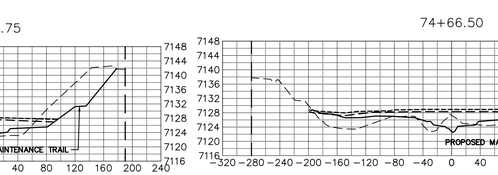


63+72.64

64+55.28



65+36.14



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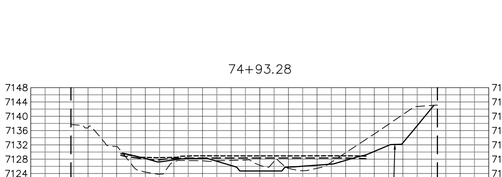

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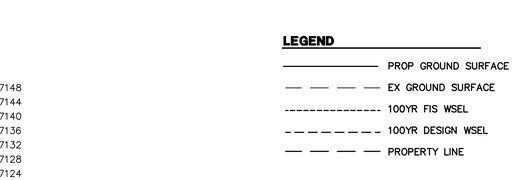

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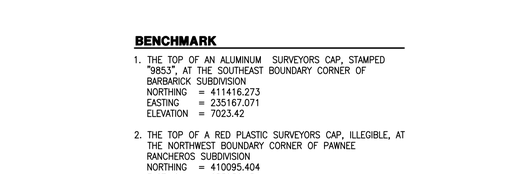

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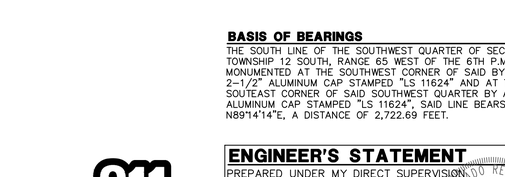

67+90.02

67+92.12

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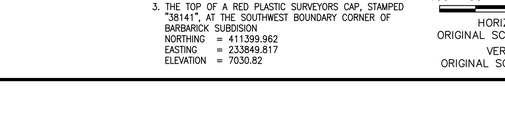

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68+90.26

69+43.89

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71+24.46

71+52.26

71+65.51

72+97.49

74+07.75

74+66.50

74+93.28

LEGEND

- PROP GROUND SURFACE
- EX GROUND SURFACE
- 100YR FIS WSEL
- 100YR DESIGN WSEL
- PROPERTY LINE

BENCHMARK

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   EASTING = 235167.071
   ELEVATION = 7023.42
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   EASTING = 235052.131
   ELEVATION = 7000.40
3. THE TOP OF A RED PLASTIC SURVEYORS CAP, STAMPED "38141", AT THE SOUTHWEST BOUNDARY CORNER OF BARBARICK SUBDIVISION
   NORTHING = 411399.962
   EASTING = 233849.817
   ELEVATION = 7030.82

100 50 0 100

HORIZONTAL
ORIGINAL SCALE: 1" = 100'

VERTICAL
ORIGINAL SCALE: 1" = 10'

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

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THE SOUTH LINE OF THE SOUTHWEST QUARTER OF SECTION 34, TOWNSHIP 12 SOUTH, RANGE 65 WEST OF THE 6TH P.M. AS MONUMENTED AT THE SOUTHWEST CORNER OF SAID BY A 2−1/2" ALUMINUM CAP STAMPED "LS 11624" AND AT THE SOUTEAST CORNER OF SAID SOUTHWEST QUARTER BY A 2−1/2" ALUMINUM CAP STAMPED "LS 11624", SAID LINE BEARS N89°14'14"E, A DISTANCE OF 2,722.69 FEET.

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PREPARED UNDER MY DIRECT SUPERVISION.

Mike Bramlett 11/20/23

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MIKE A. BRAMLETT, P.E. DATE
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PREPARED FOR
SR LAND, LLC
20 BOULDER CRESCENT
2ND FLOOR
COLORADO SPRINGS, CO 80903
JAMES F. MORLEY
(719) 419−3024

J·R ENGINEERING
A Westrian Company
Centennial 303−740−9393 • Colorado Springs 719−593−2593
Fort Collins 970−491−9888 • www.jrengineering.com

No.	REVISION	BY	DATE

H−SCALE	1"=100'
V−SCALE	1"=10'
DATE	11/20/23
DESIGNED BY	DJV
DRAWN BY	NEO
CHECKED BY	

SAND CREEK RESTORATION

CROSS SECTIONS

SHEET 39 OF 121

JOB NO. 25188.04

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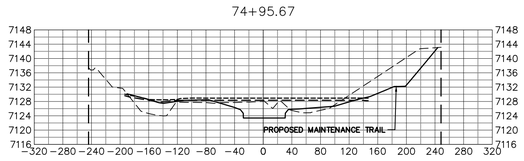

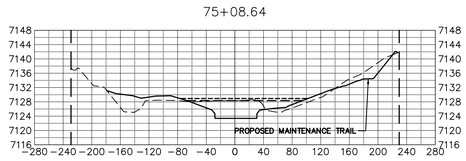

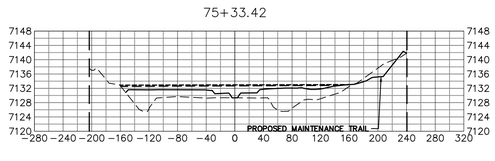

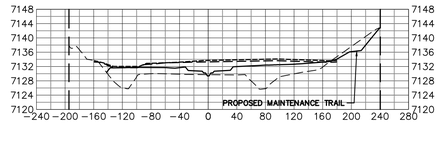

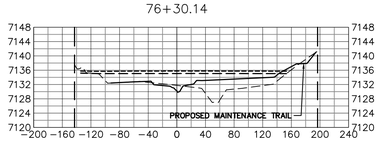

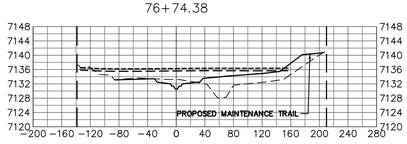

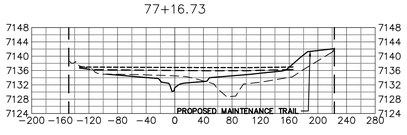

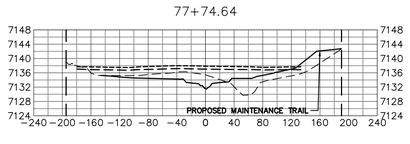

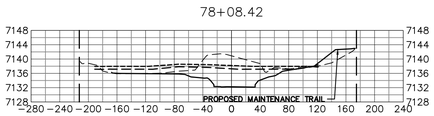

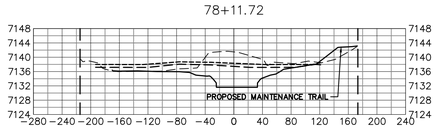

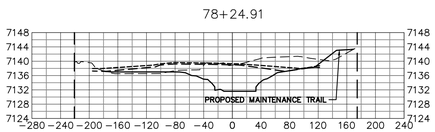

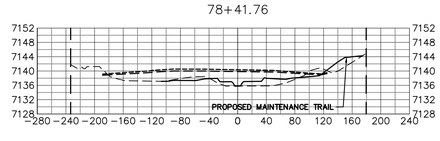

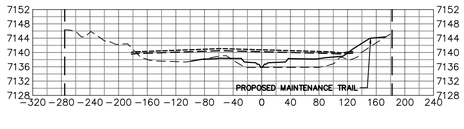

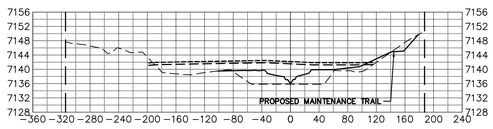

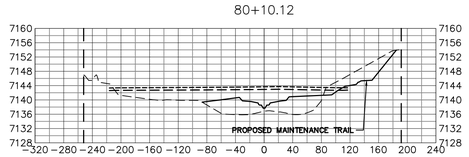

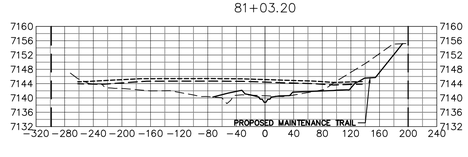

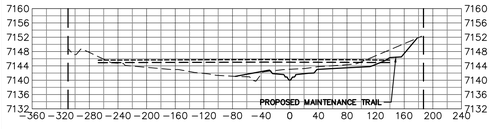

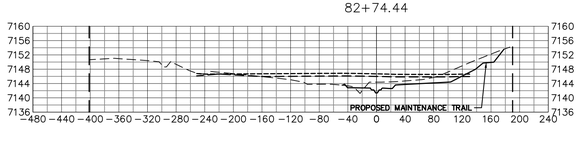

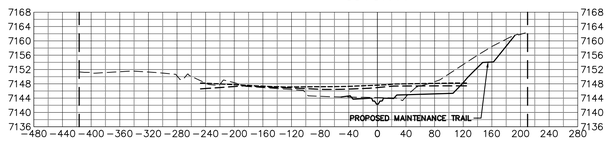

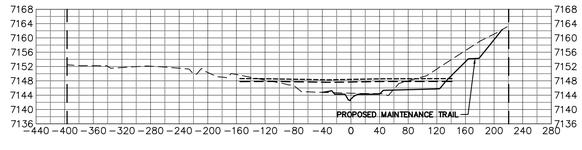

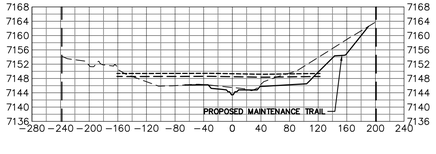

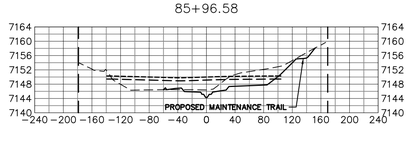

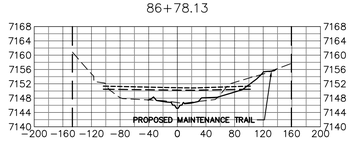

LEGEND

- PROP GROUND SURFACE
- EX GROUND SURFACE
- 100YR FIS WSEL
- 100YR DESIGN WSEL
- PROPERTY LINE

BENCHMARK

1. THE TOP OF AN ALUMINUM SURVEYORS CAP, STAMPED "9853", AT THE SOUTHEAST BOUNDARY CORNER OF BARBARICK SUBDIVISION
   NORTHING = 411416.273
   EASTING = 235167.071
   ELEVATION = 7023.42
2. THE TOP OF A RED PLASTIC SURVEYORS CAP, ILLEGIBLE, AT THE NORTHWEST BOUNDARY CORNER OF PAWNEE RANCHEROS SUBDIVISION
   NORTHING = 410095.404
   EASTING = 235052.131
   ELEVATION = 7000.40
3. THE TOP OF A RED PLASTIC SURVEYORS CAP, STAMPED "38141", AT THE SOUTHWEST BOUNDARY CORNER OF BARBARICK SUBDISION
   NORTHING = 411399.962
   EASTING = 233849.817
   ELEVATION = 7030.82

100 50 0 100

HORIZONTAL
ORIGINAL SCALE: 1" = 100'
VERTICAL
ORIGINAL SCALE: 1" = 10'

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

BASIS OF BEARINGS

THE SOUTH LINE OF THE SOUTHWEST QUARTER OF SECTION 34, TOWNSHIP 12 SOUTH, RANGE 65 WEST OF THE 6TH P.M. AS MONUMENTED AT THE SOUTHWEST CORNER OF SAID BY A 2-1/2" ALUMINUM CAP STAMPED "LS 11624" AND AT THE SOUTEAST CORNER OF SAID SOUTHWEST QUARTER BY A 2-1/2" ALUMINUM CAP STAMPED "LS 11624", SAID LINE BEARS N89°14'14"E, A DISTANCE OF 2,722.69 FEET.

ENGINEER'S STATEMENT

PREPARED UNDER MY DIRECT SUPERVISION

Mike Bramlett 11/20/23

COLORADO REGISTERED MIKE A. BRAMLETT 32314 PROFESSIONAL ENGINEER

MIKE A. BRAMLETT, P.E. DATE
COLORADO P.E. 32314
FOR AND ON BEHALF OF JR ENGINEERING, LLC

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

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V-SCALE	1"=10'
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SAND CREEK RESTORATION
CROSS SECTIONS

SHEET 40 OF 121

JOB NO. 25188.04

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