

VILLAS AT ASPEN TRAILS

Stormwater Management Plan

(SWMP)

February 2023

Prepared for:

ROS Equity Holdings-Independence

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Colorado Springs, CO 80903

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EPC Project No.

**VILLAS AT ASPEN TRAILS
STORMWATER MANAGEMENT PLAN (SWMP)**

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**VILLAS AT ASPEN TRAILS
STORMWATER MANAGEMENT PLAN (SWMP)**

1. INTRODUCTION

This Stormwater Management Plan is being submitted on the behalf of ROS Equity Holdings-Independence, LLC for a tract of land known as:

A TRACT OF LAND LOCATED IN A PORTION OF SECTION 9, IN TOWNSHIP 15 SOUTH, RANGE 65 WEST OF THE 6TH P.M., EL PASO COUNTY, COLORADO, MORE PARTICULARLY DESCRIBED AS FOLLOWS:

COMMENCING AT THE NORTH 1/4 CORNER OF SAID SECTION 9;

THENCE S00°19'32"E, ALONG THE NORTH-SOUTH CENTERLINE OF SAID SECTION 9, A DISTANCE OF 1612.07 FEET TO A POINT ON THE SOUTHERLY R.O.W. LINE OF BRADLEY ROAD AS RECORDED IN BOOK 5307 AT PAGE 1472 OF THE RECORDS OF SAID EL PASO COUNTY:

THE FOLLOWING 3 COURSES ARE ALONG THE SAID SOUTHERLY R.O.W. LINE OF BRADLEY ROAD.

- 1) THENCE S89°30'29"W A DISTANCE OF 3.78 FEET TO A POINT OF CURVE TO THE LEFT;
- 2) THENCE ON SAID CURVE, HAVING A RADIUS OF 2759.79 FEET, AN ARC LENGTH OF 730.29 FEET, A DELTA ANGLE OF 15°09'41", WHOSE LONG CHORD BEARS S81°55'38"W A DISTANCE OF 728.16 FEET;
- 3) THENCE S74°20'48"W A DISTANCE OF 385.14 FEET TO THE POINT OF BEGINNING;

THENCE S15°39'12"E DEPARTING SAID RIGHT-OF-WAY LINE, A DISTANCE OF 449.99 FEET;

THENCE S74°20'48"W A DISTANCE OF 160.21 FEET;

THENCE N15°39'12"W A DISTANCE OF 20.00 FEET;

THENCE S74°20'48"W A DISTANCE OF 199.80 FEET TO A POINT OF CURVE TO THE RIGHT;

THENCE ON SAID CURVE, HAVING A RADIUS OF 75.00 FEET, AN ARC LENGTH OF 78.64 FEET, A DELTA ANGLE OF 60°04'25", WHOSE LONG CHORD BEARS N75°37'00"W A DISTANCE OF 75.08 FEET;

THENCE N15°39'12"W A DISTANCE OF 392.40 FEET, RETURNING TO SAID SOUTHERLY R.O.W. LINE OF BRADLEY ROAD;

THENCE S74°20'48"W, ALONG SAID SOUTHERLY R.O.W. LINE OF BRADLEY ROAD, A DISTANCE OF 425.01 FEET TO THE POINT OF BEGINNING.

The purpose of this report is to outline the SWMP Plan for the Villas at Aspen Trails development located at the southeast corner of Bradley Rd and Legacy Hill Dr, El Paso County, Colorado. This report identifies Best Management Practices (BMPs) that will reduce or eliminate any possible water quality impacts.

2. GENERAL LOCATION AND DESCRIPTION

The site lies in Section 9 of Township 15 South, Range 65 West. The proposed plat is south of Bradley Road, east of Legacy Hill Dr. The site is currently zoned RM-12.

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Other development in the area includes single family residential, multifamily, and commercial developments in the surrounding area.

The proposed site encompasses 4.32 acres. The topography of the site and surrounding area is typical of a high desert; short prairie grass and weeds with slopes generally ranging from 1% to 5%. The area generally drains to the south. This development is in the Jimmy Camp Creek Drainage Basin.

3. DESCRIPTION OF CONSTRUCTION

ROS Equity Holdings-Independence, LLC requests approval of site grading for 4.32 acres of property within the recently amended Waterview Sketch. The Villas at Aspen Trails proposed Land Uses consist of 41 residential lots on 4.32 acres.

The Pre-Subdivision Site Grading does not include authorization to install wet utilities. The request will be limited to over lot grading and balancing of the site prior while the final subdivision design is refined through the pending preliminary plan design, submittal, and review process.

A final plan will be submitted to approve a residential subdivision. This final plan may include requests for additional Site Grading to include installation of wet utilities after final site, lot, roadway, and stormwater designs are refined through the preliminary subdivision design and review processes. The addition of installation of wet utilities will require additional coordination with the respective utility service providers and approval by the CDPHE.

4. PHASING PLAN

Pre-subdivision site grading will be done on the entire site at one time. The contractor will manage the grading activities. Once the site is graded construction will be phased according to any internal phasing required for the subdivision. The general sequence of the related pre-subdivision site grading activities will occur according to the following anticipated sequence:

Phased BMP Implementation - Initial and Interim Phase

The initial phase shall consist of the temporary construction BMPs to minimize potential for erosion and sediment transfer while mobilizing and preparing the site for construction activities. The Contractor shall complete the anticipated initial and interim phase sequencing as follows:

1. Install vehicle tracking control (VTC) as indicated on the GEC plans or as necessitated by field conditions.
2. Install silt fence (SF) as shown on the GEC plans or as necessitated by field conditions.
3. Install rough cut street control (RC) as shown on the GEC plans or as necessitated by field conditions.
4. Upon completion of the initial BMP installation the operator shall schedule a pre-construction meeting with the owner and the city erosion control inspector to confirm BMPs installed are adequate prior to proceeding with additional land disturbing activities.

**VILLAS AT ASPEN TRAILS
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Phased BMP Implementation - Final Phase

The final phase shall consist of the temporary construction BMPs to minimize potential for erosion and sediment transfer during construction of the proposed sites and associated limited site improvements. The Contractor shall complete the anticipated final phase sequencing as follows:

1. Confirm existing BMPs from the initial phases, which are to be maintained throughout construction, are in working order and compliant with applicable regulations.
2. Repair and/or replace any existing BMPs which are deemed inadequate.
3. Temporarily stabilize (TS) all areas of the site which will remain inactive for a period greater than 30 days. Temporary stabilization shall be implemented within 14 days of disturbance.
4. Complete required grading operations necessary for construction of the proposed sites and associated site improvements.
5. Complete fine grading and proceed with temporary stabilization (TS) and permanent stabilization (PS) practices in accordance with approved plans.
6. Achieve permanent stabilization in accordance with the El Paso County (EPC) and owner requirements.
7. Remove remaining BMPs once permanent stabilization (PS) has been achieved. Repair and stabilize areas disturbed through BMP removal.
8. Notify the EPC of the intent to file the notice of inactivation and receive EPC field acceptance prior to proceeding with filing the notice of inactivation with the EPC.
9. Proceed with filing the notice of inactivation with the EPC.
10. Provide the owner with a copy of all stormwater documentation (permits, inspection reports, logs, etc.). Upon completion of project, file the notice of inactivation.

5. DESCRIPTION OF DRAINAGE CONVEYANCE

The site drains to the south; the drainage captured by the property is conveyed to a Type R inlet in a low point in Frontline Dr. This inlet joins a drainage system that discharges toward the Jimmy Camp Creek Drainage Basin. Stormwater facilities to be constructed with the early grading permit will consist of a permanent detention pond. Storm sewer facilities will be installed throughout the site and in the streets with future final plat approvals; these will eventually replace the swales and sedimentation basins to convey storm water runoff to the permanent detention facilities.

6. ESTIMATES OF EXCAVATION

The subject site is approximately 4.32 acres.

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Over site grading will be limited to the construction of the primary street sections and sloping the site toward the detention basin to meet minimum design requirements. As the lots are developed by private builder’s disturbance will be for building foundations, landscaping, roadways, and sidewalks. The earthwork volumes are as follows:

CUT 4,982 CY

FILL 4,624 CY (Adjusted for shrinkage)

NET 358 CY (Cut)

All volumes assume 2,269 CY of topsoil either useable on site or imported

7. CONSTRUCTION SCHEDULE

	<u>Estimated Start</u>	<u>Estimated End</u>
• Clearing and grubbing	June 1, 2023	July 1, 2023
• Rough grading for lots and roads	June 15, 2023	July 15, 2023
• Utility Installation	July 15, 2023	September 15, 2023
• Final grading, curb and gutter and paving	October 1, 2023	November 30, 2023
• Final Stabilization		January 1, 2024

8. VEGETATION

The existing Site is currently undeveloped consisting of on-site native vegetation; short prairie frass and weeds with slopes ranging from 5% to 15%. The estimated vegetative coverage is about 60% and unvegetated (40%), determined by observation from site visit. The sites surrounding this land is currently at varying stages of development.

9. SOILS

The site is composed of several different soil types. From the NRCS report, the site falls into the following soil types:

- 8 - Blakeland loamy sand (1-3%) – Type A Soil
- 31 - Fort Collins Loam (3-8%) – Type B Soil
- 56 - Nelson Tassel fine sandy loam (3-18%) – Nelson Type B, Tassel Type D Soil
- 86 - Stoneham sandy loam (3-8%) – Type B Soil
- 108 - Wiley silt loam (3-9%) – Type B Soil

Hydrologic soil groups are based on estimates of runoff potential. Soils are assigned to one of four groups according to the rate of water infiltration when the soils are not protected by vegetation, are thoroughly wet, and receive precipitation from long-duration storms.

The soils in the United States are assigned to four groups (A, B, C, and D) and three dual classes (A/D, B/D, and C/D). The groups are defined as follows:

**VILLAS AT ASPEN TRAILS
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Group A. Soils having a high infiltration rate (low runoff potential) when thoroughly wet. These consist mainly of deep, well drained to excessively drained sands or gravelly sands. These soils have a high rate of water transmission.

Group B. Soils having a moderate infiltration rate when thoroughly wet. These consist chiefly of moderately deep or deep, moderately well drained or well drained soils that have moderately fine texture to moderately coarse texture. These soils have a moderate rate of water transmission.

Group C. Soils having a slow infiltration rate when thoroughly wet. These consist chiefly of soils having a layer that impedes the downward movement of water or soils of moderately fine texture or fine texture. These soils have a slow rate of water transmission.

Group D. Soils having a very slow infiltration rate (high runoff potential) when thoroughly wet. These consist chiefly of clays that have a high shrink-swell potential, soils that have a high water table, soils that have a claypan or clay layer at or near the surface, and soils that are shallow over nearly impervious material. These soils have a very slow rate of water transmission.

If a soil is assigned to a dual hydrologic group (A/D, B/D, or C/D), the first letter is for drained areas and the second is for undrained areas. Only the soils that in their natural condition are in group D are assigned to dual classes.

Estimated Runoff Coefficients

Average Prior to Construction	C5=0.08 and C100=0.35
Average After Buildout	C5=0.55 and C100=0.69

Potential for soil erosion during construction is minimal. The grading and erosion control plan includes measures to reduce this potential. Where the majority of the property drains to will be constructed to capture any sediment. The pond discharges to an existing storm drainage system south of the property.

10. POTENTIAL POLLUTANTS

During construction, the largest possible source of non-stormwater pollution will be during equipment refueling operations. Refueling of construction equipment will be completed in a designated area established by the contractor. The contractor shall be responsible for any spill cleanup while refueling, in accordance with applicable local, county and state regulations. The contractor will also be responsible for cleanup of any off-site vehicle tracking on paved roads. Tracking control will be provided at the entrances to the site. No other source of pollution such as vehicle washing, chemical storage or waste disposal is anticipated. No batch plants will be onsite. Any onsite facilities that could be identified as a source of pollutants will follow preventive measures found in the Material Handling and Spill Prevention section below.

A list of all potential sources of pollution which may reasonably be expected to affect the quality of stormwater discharges associated with construction activity from the site are as follows:

1. Disturbed and stored soils
2. Vehicle tracking of sediments

**VILLAS AT ASPEN TRAILS
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3. Loading and unloading operations
4. Outdoor storage activities
5. Vehicle and equipment maintenance and fueling
6. Significant dust or particulate generating processes
7. Routine maintenance activities involving fertilizers, pesticides, herbicides, detergents, fuels, solvents, oils, etc.
8. Non-industrial waste sources such as worker trash and portable toilets.

All construction waste will be removed along with contaminated soil and disposed of offsite at the end of the construction period. Construction debris will also be removed from the site as it is accumulated and disposed of properly offsite. After construction any pollutants will be captured in the detention pond; specifically in the fore bays and will be dealt with as part of regular maintenance by the owners of Villas at Aspen Trails.

11. MATERIAL HANDLING AND SPILL PREVENTION

The most probable source of non-stormwater pollution is refueling and daily maintenance operations. If mobile fuel trucks are used to service equipment, absorbent materials and containers for the storage of used absorbent material will be close by. If a fuel tank is left on site, berms will be built around the tank to capture any spilled fuel. Again, absorbent materials and their containers will be on hand.

If storage of chemicals on site is required the contractor shall be responsible for the construction of berms around the storage to capture any spilled material. Again, absorbent materials and their containers will be on hand

12. RECEIVING WATERS

The site is located within the Jimmy Camp Creek basin. Per the project's preliminary drainage report (November 2022, Kimley-Horn and Associates, LLC.) off-site basins sheet flow onto the site from the east and west. The offsite flow is within the same basin: the Jimmy Camp Creek Basin.

13. DISCHARGE

There are no anticipated non-stormwater components of the discharge. The receiving waters for this discharge are Jimmy Camp Creek which drains to Fountain Creek and ultimately the Arkansas River.

The site is mostly vacant land and has no springs, streams wetlands or any other surface waters on or crossing the site.

**VILLAS AT ASPEN TRAILS
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14. GRADING AND EROSION CONTROL PLAN

A map is provided with this SWMP application that details the site, limits of construction and erosion control measures. This map will be used by the contractor to track installation, maintenance and removal of BMP's during construction; including any field changes that are required during construction.

15. BEST MANAGEMENT PRACTICES

Construction operations including grading, hauling of soil, drainage, and final stabilization shall implement erosion and sediment control measures as described below and in the Phasing section found above. Additional measures shall be implemented as appropriate.

Structural BMP's:

SF - Silt fences will be installed prior to any grading occurring on the site. The silt fence will be installed in the areas shown on the provided map.

VC - Vehicle tracking control will be provided at the entrances to the site on Bradley Road.

DP- Detention pond will be constructed as show on the provided map.

Nonstructural BMP's:

Non-structure practices to control erosion and sedimentation will include reseeding of ground cover in disturbed areas according to the grading and erosion control plan. Seeding of bank slopes and mulching along steep embankments will be performed as required. Seeding of disturbed areas will be mitigated until growth has reached 70% of pre-disturbed levels: $0.6\% \times 0.7\% = 42\%$

Other BMP's:

There are several best management practices that can be employed to prevent or mitigate the source of pollutants and contamination of stormwater runoff. Some of these are:

- All dumpsters and receptacles shall be equipped with functional lids to prevent rain and snow from entering.
- Storage containers, drums and bags shall be stored away from direct traffic routes to prevent accidental spills.
- Empty drums shall be covered to prevent collection of precipitation.
- Containers shall be stored on pallets or other dunnage to prevent corrosion of containers, which can result when containers come in contact with moisture on the ground.
- Regularly scheduled removal of construction trash and debris.

The contractor is certainly not limited to these good housekeeping measures and may implement further controls as prudence and good judgement deem necessary.

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16. FINAL STABILIZATION AND LONG-TERM STORM WATER MANAGEMENT

Permanent stabilization will be achieved by seeding of disturbed areas. The silt fence installed on site will not be removed until the site is stabilized, and the entire site is established with vegetation growth of 70% of pre-disturbed levels: $0.6 \times 0.7 = 42\%$. Please reference the GEC plan standard notes for seeding of disturbed areas. Areas requiring seeding to provide stabilization to disturbed areas shall use the seed mix set forth in Chapter 14, Volume 1 of the Drainage Criteria Manual.

The site is subject to the NPDES permit program for both construction and post-construction activities. The owner shall obtain all pertinent permits required by controlling agencies including the El Paso County Health Department and the Colorado Department of Public Health & Environment

17. INSPECTIONS

The permit holder shall be responsible for implementation, inspection, and maintenance of all BMP's throughout the construction process to ensure functionality and conformance with all applicable permits and jurisdictional regulations.

A thorough inspection of the storm water management system shall be performed every 14 days as well as after any rain or snowmelt event that causes surface erosion:

- Erosion of channels and side slopes shall be repaired.
- Silt fences shall be cleaned whenever sediment has reached a depth of 6" at the fence, and broken wooden parts or torn fabric shall be repaired or replaced.
- Any accumulated trash or debris shall be removed from the site.

An Inspection and Maintenance Log follows this Storm Water Management Plan.

18. SWMP REVISIONS

Revisions to the SWMP will occur from time to time as construction proceeds. The contractor shall be responsible for revisions to the plan to include the following:

1. Changes to the plan will be tracked by marking changes on the plan with date and note of the responsible party requesting/requiring the change.
2. Dates and responsible party for addition or removal of BMP's will be noted on the plan.
3. If there are any changes the contractor deems to be a significant modification of the approved GEC plan he must contact the owner prior to proceeding.
4. The SWMP will be kept on site and up to date at all times.

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STORMWATER MANAGEMENT PLAN (SWMP)**

**INSPECTION AND MAINTENANCE LOG
STORMWATER MANAGEMENT PLAN
INSPECTION AND MAINTENANCE LOG**

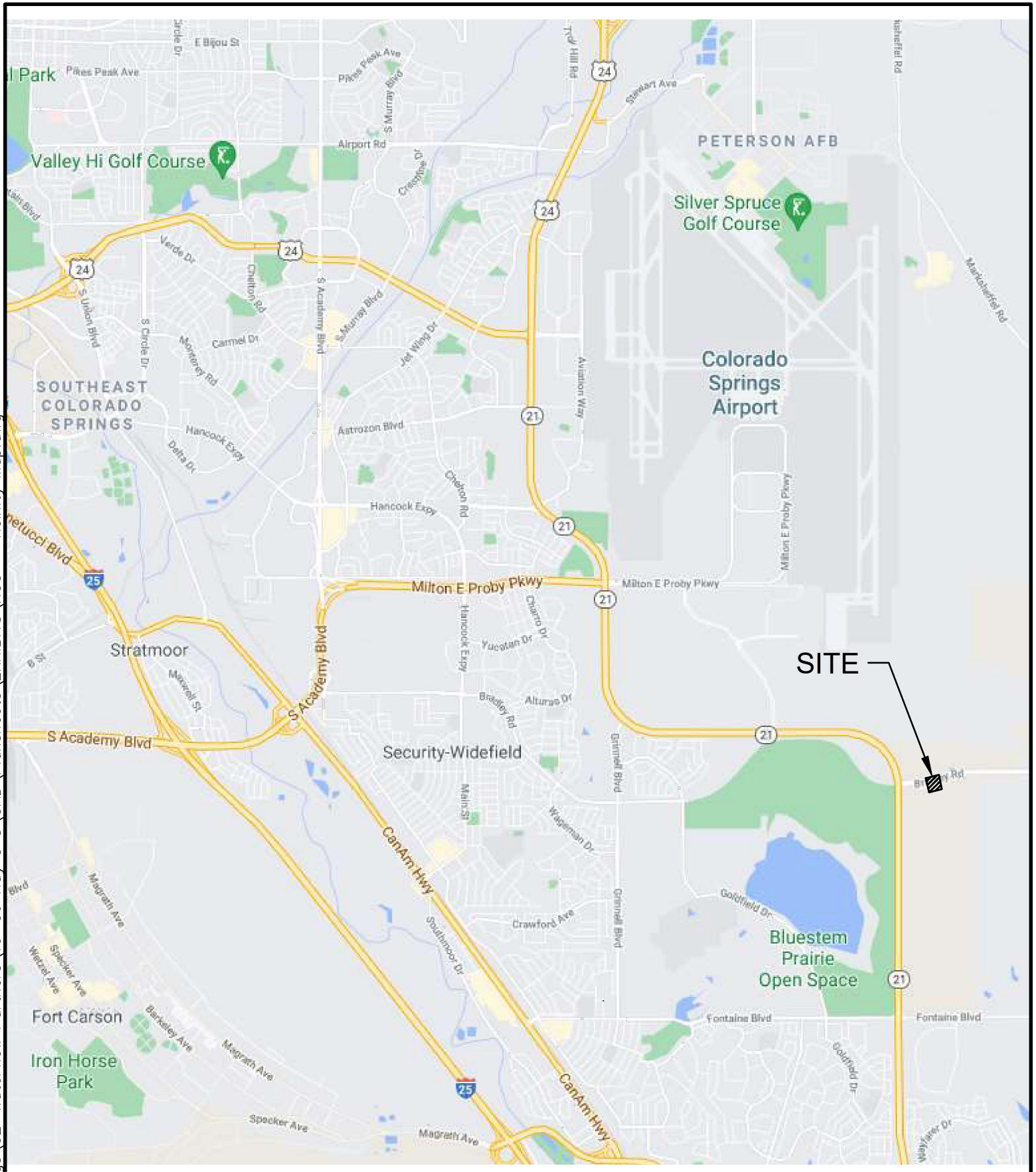
(Record inspections, items found maintenance and corrective actions taken. Also record any training received by Contractor personnel with regard to erosion control, materials handling and any inspections by outside agencies)

DATE	ITEM	SIGNATURE OF PERSON MAKING ENTRY

**VILLAS AT ASPEN TRAILS
STORMWATER MANAGEMENT PLAN (SWMP)**

APPENDIX A – VICINITY MAP / SITE MAP

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VILLAS AT ASPEN TRAILS

VICINITY MAP



Dakota Springs Engineering
Engineering Consultants

31 N. TEJON, SUITE 518
 COLORADO SPRINGS, CO 80903
 P: (719) 227-7388 F: (719) 227-7392

SHEET
1 OF **1**

PROJECT NUMBER:
 0219-06

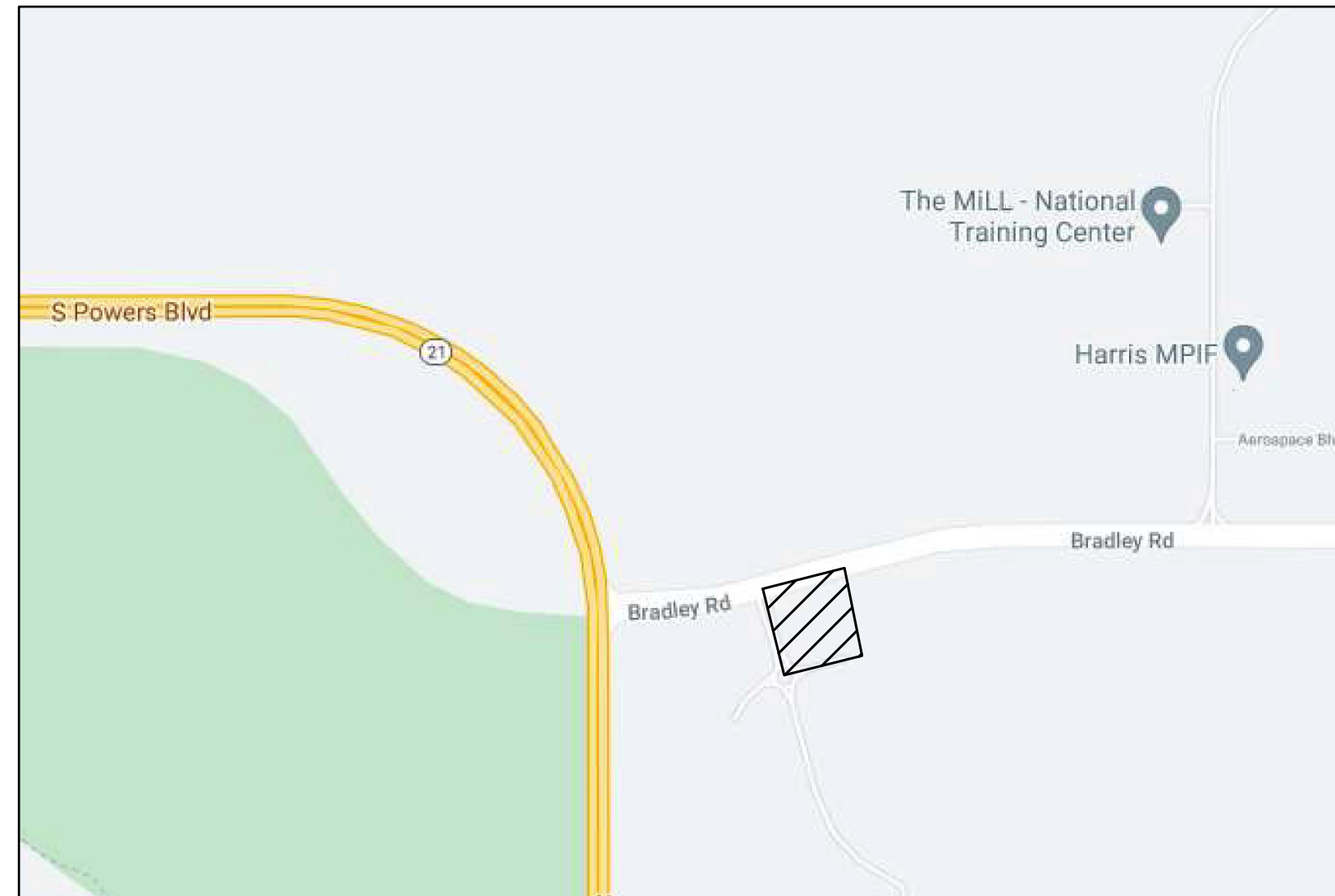


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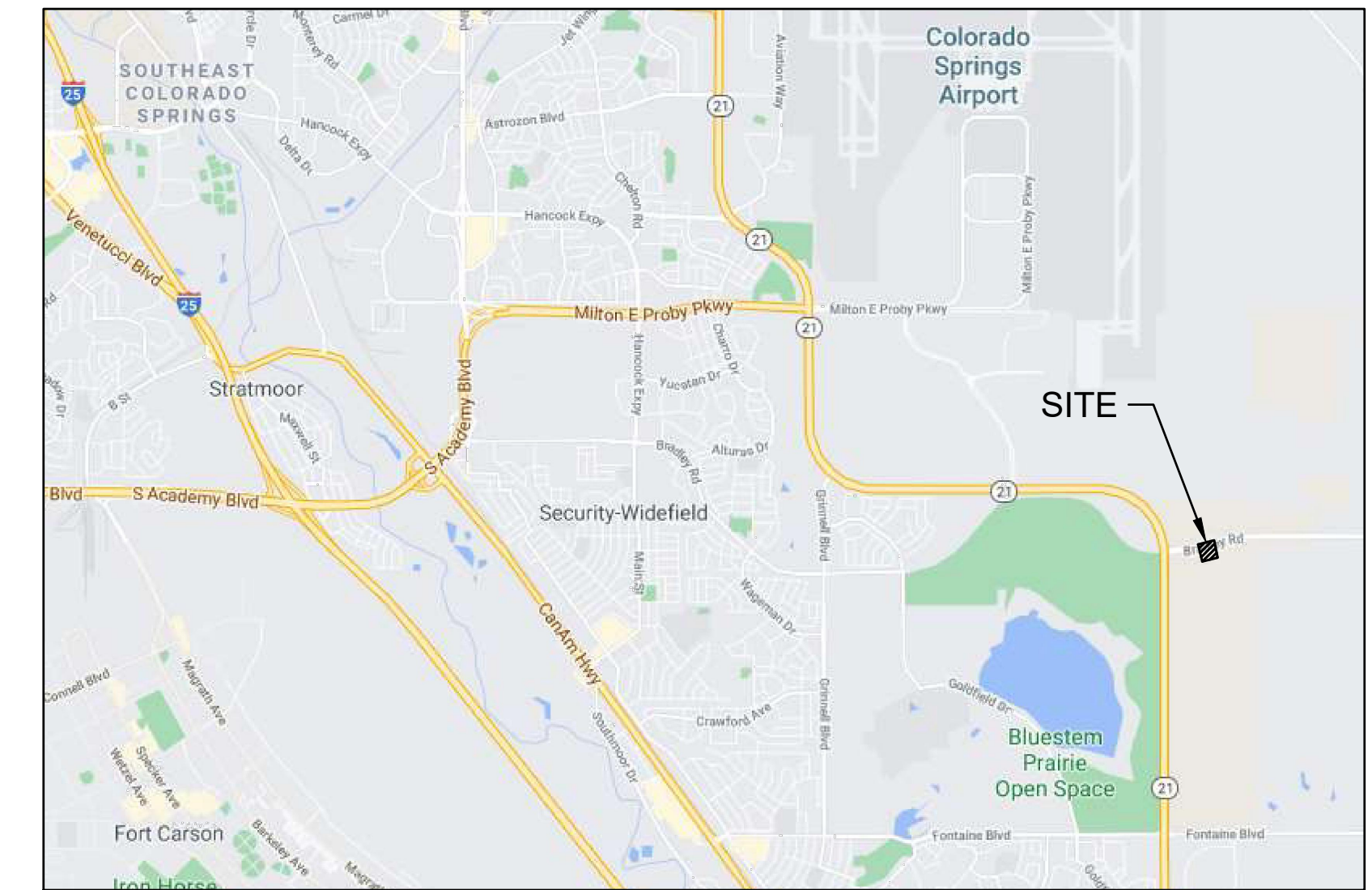
APPENDIX B– Grading and Erosion Control (GEC) Plan

VILLAS AT ASPEN TRAILS PRELIMINARY GRADING & EROSION CONTROL PLAN

LOCATED IN PORTION OF SECTION 9,
TOWNSHIP 15 S, RANGE 65 W, OF THE 6TH P.M.,
EL PASO COUNTY, STATE OF COLORADO



LOCATION MAP



VICINITY MAP

LEGAL DESCRIPTION

A TRACT OF LAND LOCATED IN A PORTION OF SECTION 9, IN TOWNSHIP 15 SOUTH, RANGE 65 WEST OF THE 6TH P.M., EL PASO COUNTY, COLORADO, MORE PARTICULARLY DESCRIBED AS FOLLOWS:

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2. THENCE ON SAID CURVE, HAVING A RADIUS OF 2759.79 FEET, AN ARC LENGTH OF 730.29 FEET, A DELTA ANGLE OF 15°09'41", WHOSE LONG CHORD BEARS S81°55'38"W A DISTANCE OF 728.16 FEET;
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PARCEL CONTAINS 1,852.42 SQUARE FEET OR 4.25 ACRES MORE OR LESS

TRAFFIC CONTROL NOTE

THE CONTRACTOR SHALL PROVIDE ALL TRAFFIC CONTROL DEVICES AND MONITORING NECESSARY TO SAFELY COMPLETE THE WORK SHOWN IN THESE CONSTRUCTION DOCUMENTS IN CONFORMANCE WITH M.U.T.C.D. GUIDELINES. THE CONTRACTOR SHALL COMPLETE ALL NECESSARY WORK FOR PLAN REVIEW, PERMITS AND PROCESSING. TRAFFIC CONTROL WILL NOT BE PAID FOR SEPARATELY BUT IS INCLUDED IN THE COST OF THE PROJECT.

SCHEDULE

BEGIN EARTHWORK JUNE 2023
FINAL STABILIZATION SEP 2023

OWNER/DEVELOPER

ROS EQUITY HOLDING – INDEPENDENCE, LLC
17 S WAHSATCH AVE
COLORADO SPRINGS, CO 80903
719-491-1590
CONTACT: RAYMOND O'SULLIVAN

ENGINEER/PLANNER

DAKOTA SPRINGS ENGINEERING, LLC
31 N. TEJON, SUITE 500
COLORADO SPRINGS, CO 80903
719-227-7388
CONTACT: CHARLES K. COTHERN, P.E.

EL PASO COUNTY

PLANNING AND COMMUNITY DEVELOPMENT
2880 INTERNATIONAL CIRCLE, SUITE 110
COLORADO SPRINGS, COLORADO 80910
719-520-6695

SECURITY FIRE PROTECTION DISTRICT

400 SECURITY BOULEVARD
SECURITY, COLORADO 80911
719-392-7121

WATER/SANITARY

WIDEFIELD WATER AND SANITATION DISTRICT
8495 FONTAINE BOULEVARD
COLORADO SPRINGS, COLORADO 80925
719-390-7111

GAS

COLORADO SPRINGS UTILITIES
1521 HANCOCK EXPRESSWAY
COLORADO SPRINGS, COLORADO 80903
719-668-8111

ELECTRIC

MOUNTAIN VIEW ELECTRIC ASSOCIATION
11140 E WOODMEN RD
FALCON, CO. 80831
(719)495-2283

TELEPHONE

CENTURYLINK
7925 INDUSTRY ROAD
COLORADO SPRINGS, COLORADO 80939
719-278-4651

CABLE

COMCAST
P.O. BOX 173838
DENVER, COLORADO 80217
970-641-4774

DEVELOPER'S STATEMENT

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

BUSINESS NAME: ROS EQUITY HOLDING – INDEPENDENCE, LLC

RAYMOND O'SULLIVAN
MANAGER
17 S WAHSATCH AVE
COLORADO SPRINGS, CO 80903

EL PASO COUNTY CONSTRUCTION APPROVAL

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 MANUALS VOL. 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.

JENNIFER IRVINE, P.E.
COUNTY ENGINEER/ECM ADMINISTRATOR

ENGINEER'S APPROVAL

THIS GRADING AND EROSION CONTROL PLAN WAS PREPARED UNDER MY DIRECTION AND SUPERVISION AND IS CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF SAID PLAN HAS BEEN PREPARED ACCORDING TO THE CRITERIA ESTABLISHED BY THE COUNTY FOR GRADING AND EROSION CONTROL PLANS. I ACCEPT RESPONSIBILITY FOR ANY NEGLIGENT ACTS, ERRORS, OR OMISSIONS ON MY PART IN PREPARING THIS PLAN.

CHARLES K. COTHERN, P.E. 24997
FOR OR ON BEHALF OF DAKOTA SPRINGS ENGINEERING

STANDARD NOTES FOR EL PASO COUNTY GRADING AND EROSION CONTROL PLANS

- 1. CONSTRUCTION MAY NOT COMMENCE UNTIL A CONSTRUCTION PERMIT IS OBTAINED FROM DEVELOPMENT SERVICES AND A PRECONSTRUCTION CONFERENCE IS HELD WITH DEVELOPMENT SERVICES INSPECTIONS.
2. STORMWATER DISCHARGES FROM CONSTRUCTION SITES SHALL NOT CAUSE OR THREATEN TO CAUSE POLLUTION, CONTAMINATION, OR DEGRADATION OF STATE WATERS.
3. 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.
4. A SEPARATE STORMWATER MANAGEMENT PLAN (SWMP) FOR THIS PROJECT SHALL BE COMPLETED AND AN EROSION AND STORMWATER QUALITY CONTROL PERMIT (ESQCP) ISSUED PRIOR TO COMMENCING CONSTRUCTION.
5. ONCE THE ESQCP HAS BEEN ISSUED, THE CONTRACTOR MAY INSTALL THE INITIAL STAGE EROSION AND SEDIMENT CONTROL BMPS AS INDICATED ON THE GEC.
6. SOIL EROSION CONTROL MEASURES FOR ALL SLOPES, CHANNELS, DITCHES, OR ANY DISTURBED LAND AREA SHALL BE COMPLETED WITHIN 21 CALENDAR DAYS AFTER FINAL GRADING, OR FINAL EARTH DISTURBANCE, HAS BEEN COMPLETED.
7. TEMPORARY SOIL EROSION CONTROL FACILITIES SHALL BE REMOVED AND EARTH DISTURBANCE AREAS GRADED AND STABILIZED WITH PERMANENT SOIL EROSION CONTROL MEASURES PURSUANT TO STANDARDS AND SPECIFICATION PRESCRIBED IN THE DCM VOLUME II AND THE ENGINEERING CRITERIA MANUAL (ECM) APPENDIX I.
8. ALL PERSONS ENGAGED IN EARTH DISTURBANCE SHALL IMPLEMENT AND MAINTAIN ACCEPTABLE SOIL EROSION AND SEDIMENT CONTROL MEASURES INCLUDING BMPS IN CONFORMANCE WITH THE EROSION CONTROL TECHNICAL STANDARDS OF THE DRAINAGE CRITERIA MANUAL (DCM) VOLUME II AND IN ACCORDANCE WITH THE STORMWATER MANAGEMENT PLAN (SWMP).
9. ALL TEMPORARY EROSION CONTROL FACILITIES INCLUDING BMPS AND ALL PERMANENT FACILITIES INTENDED TO CONTROL EROSION OF ANY EARTH DISTURBANCE OPERATIONS, SHALL BE INSTALLED AS DEFINED IN THE APPROVED PLANS, THE SWMP AND THE DCM VOLUME II AND MAINTAINED THROUGHOUT THE DURATION OF THE EARTH DISTURBANCE OPERATION.
10. ANY EARTH DISTURBANCE SHALL BE CONDUCTED IN SUCH A MANNER SO AS TO EFFECTIVELY REDUCE 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.
11. ANY TEMPORARY OR PERMANENT FACILITY DESIGNED AND CONSTRUCTED FOR THE CONVEYANCE OF STORMWATER AROUND, THROUGH, OR FROM THE EARTH DISTURBANCE AREA SHALL BE DESIGNED TO LIMIT THE DISCHARGE TO A NON-EROSIVE VELOCITY.
12. CONCRETE WASH WATER SHALL BE CONTAINED AND DISPOSED OF IN ACCORDANCE WITH THE SWMP. NO WASH WATER SHALL BE DISCHARGED TO OR ALLOWED TO RUNOFF TO STATE WATERS, INCLUDING ANY SURFACE OR SUBSURFACE STORM DRAINAGE SYSTEM OR FACILITIES.
13. EROSION CONTROL BLANKETING IS TO BE USED ON SLOPES STEEPER THAN 3:1.
14. BUILDING, CONSTRUCTION, EXCAVATION, OR OTHER WASTE MATERIALS SHALL NOT BE TEMPORARILY PLACED OR STORED IN THE STREET, ALLEY, OR OTHER PUBLIC WAY, UNLESS IN ACCORDANCE WITH AN APPROVED TRAFFIC CONTROL PLAN. BMP'S MAY BE REQUIRED BY EL PASO COUNTY ENGINEERING IF DEEMED NECESSARY, BASED ON SPECIFIC CONDITIONS AND CIRCUMSTANCES.
15. VEHICLE TRACKING OF SOILS AND CONSTRUCTION DEBRIS OFF-SITE SHALL BE MINIMIZED. MATERIALS TRACKED OFFSITE SHALL BE CLEANED UP AND PROPERLY DISPOSED OF IMMEDIATELY.
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.
17. THE OWNER, SITE DEVELOPER, CONTRACTOR, AND/OR THEIR AUTHORIZED AGENTS SHALL BE RESPONSIBLE FOR THE REMOVAL OF ALL CONSTRUCTION DEBRIS, DIRT, TRASH, ROCK, SEDIMENT, AND SAND THAT MAY ACCUMULATE IN THE STORM SEWER OR OTHER DRAINAGE CONVEYANCE SYSTEM AND STORMWATER APPURTENANCES AS A RESULT OF SITE DEVELOPMENT.
18. 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.
19. NO CHEMICALS ARE TO BE USED BY THE CONTRACTOR, WHICH HAVE THE POTENTIAL TO BE RELEASED IN STORMWATER UNLESS PERMISSION FOR THE USE OF A SPECIFIC CHEMICAL IS GRANTED IN WRITING BY THE ECM ADMINISTRATOR.
20. BULK STORAGE STRUCTURES FOR PETROLEUM PRODUCTS AND OTHER CHEMICALS SHALL HAVE ADEQUATE PROTECTION SO AS TO CONTAIN ALL SPILLS AND PREVENT ANY SPILLED MATERIAL FROM ENTERING STATE WATERS, INCLUDING ANY SURFACE OR SUBSURFACE STORM DRAINAGE SYSTEM OR FACILITIES.
21. NO PERSON SHALL CAUSE THE IMPEDIMENT OF STORMWATER FLOW IN THE FLOW LINE OF THE CURB AND GUTTER OR IN THE DITCHLINE.
22. INDIVIDUALS 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 INCLUDED IN THE DCM VOLUME II AND THE ECM APPENDIX I, AN APPROPRIATE PERMITS MUST BE OBTAINED BY THE CONTRACTOR PRIOR TO CONSTRUCTION (NPDES, FLOODPLAIN, 404, FUGITIVE DUST, ETC.). IN THE EVENT OF CONFLICTS BETWEEN THESE REQUIREMENTS AND LAWS, RULES, OR REGULATIONS OF OTHER FEDERAL, STATE, OR COUNTY AGENCIES, THE MORE RESTRICTIVE LAWS, RULES, OR REGULATIONS SHALL APPLY.
23. ALL CONSTRUCTION TRAFFIC MUST ENTER/EXIT THE SITE AT APPROVED CONSTRUCTION ACCESS POINTS.
24. PRIOR TO ACTUAL CONSTRUCTION THE PERMITEE SHALL VERIFY THE LOCATION OF EXISTING UTILITIES.
25. A WATER SOURCE SHALL BE AVAILABLE ON SITE DURING EARTHWORK OPERATIONS AND UTILIZED AS REQUIRED TO MINIMIZE DUST FROM EARTHWORK EQUIPMENT AND WIND.
26. THE SOILS REPORT FOR THIS SITE HAS BEEN PREPARED BY KUMAR AND ASSOCIATES AND SHALL BE CONSIDERED A PART OF THESE PLANS.
27. AT LEAST TEN DAYS PRIOR TO THE ANTICIPATED START OF CONSTRUCTION, FOR PROJECTS THAT WILL DISTURB 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
WOOD - PERMITS
4300 CHERRY CREEK DRIVE SOUTH
DENVER, CO 80246-1530
ATTN: PERMITS UNIT

STANDARD NOTES FOR EL PASO COUNTY CONSTRUCTION

- 1. ALL DRAINAGE AND ROADWAY CONSTRUCTION SHALL MEET THE STANDARDS AND SPECIFICATIONS OF THE CITY OF COLORADO SPRINGS/EL PASO COUNTY DRAINAGE CRITERIA MANUAL, VOLUMES 1 AND 2, AND THE EL PASO COUNTY ENGINEERING CRITERIA MANUAL.
2. CONTRACTOR SHALL BE RESPONSIBLE FOR THE NOTIFICATION AND FIELD LOCATIONS OF ALL EXISTING UTILITIES, WHETHER SHOWN ON THE PLANS OR NOT, BEFORE BEGINNING CONSTRUCTION.
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.
4. 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 EL PASO COUNTY STANDARDS.
5. IT IS THE DESIGN ENGINEER'S RESPONSIBILITY TO ACCURATELY SHOW EXISTING CONDITIONS, BOTH ONSITE AND OFFSITE, ON THE CONSTRUCTION PLANS. ANY MODIFICATIONS NECESSARY DUE TO CONFLICTS, OMISSIONS, OR CHANGED CONDITIONS WILL BE ENTIRELY THE DEVELOPER'S RESPONSIBILITY TO RECTIFY.
6. CONTRACTOR SHALL SCHEDULE A PRE-CONSTRUCTION MEETING WITH EL PASO COUNTY PLANNING AND COMMUNITY DEVELOPMENT (PCD) - INSPECTIONS, PRIOR TO STARTING CONSTRUCTION.
7. 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 (ESQCP), REGIONAL BUILDING FLOODPLAIN DEVELOPMENT PERMIT, U.S. ARMY CORPS OF ENGINEERS-ISSUED 401 AND/OR 404 PERMITS, AND COUNTY AND STATE FUGITIVE DUST PERMITS.
8. CONTRACTOR SHALL NOT DEVIATE FROM THE PLANS WITHOUT FIRST OBTAINING WRITTEN APPROVAL FROM THE DESIGN ENGINEER AND PCD.
9. ALL STORM DRAIN PIPE SHALL BE CLASS III RCP UNLESS OTHERWISE NOTED AND APPROVED BY PCD.
10. CONTRACTOR SHALL COORDINATE GEOTECHNICAL TESTING PER ECM STANDARDS. PAVEMENT DESIGN SHALL BE APPROVED BY EL PASO COUNTY PCD PRIOR TO PLACEMENT OF CURB AND GUTTER AND PAVEMENT.
11. ALL CONSTRUCTION TRAFFIC MUST ENTER/EXIT THE SITE AT APPROVED CONSTRUCTION ACCESS POINTS.
12. SIGHT VISIBILITY TRIANGLES AS IDENTIFIED IN THE PLANS SHALL BE PROVIDED AT ALL INTERSECTIONS. OBSTRUCTIONS GREATER THAN 18 INCHES ABOVE FLOWLINE ARE NOT ALLOWED WITHIN SIGHT TRIANGLES.
13. SIGNING AND STRIPING SHALL COMPLY WITH EL PASO COUNTY DOT AND MUTCD CRITERIA.
14. CONTRACTOR SHALL OBTAIN ANY PERMITS REQUIRED BY EL PASO COUNTY PUBLIC SERVICES DEPARTMENT, INCLUDING WORK WITHIN THE RIGHT-OF-WAY AND SPECIAL TRANSPORT PERMITS.
15. THE LIMITS OF CONSTRUCTION SHALL REMAIN WITHIN THE PROPERTY LINE UNLESS OTHERWISE NOTED.

CONSTRUCTION NOTES

- 1. ALL WORK SHALL COMPLY WITH THE CODES AND POLICIES FOR EL PASO COUNTY.
2. EXISTING TOPOGRAPHIC INFORMATION SHOWN ON THIS GRADING PLAN WAS OBTAINED FROM A TOPOGRAPHIC SURVEY AND PREVIOUS CONSTRUCTION DOCUMENTS.
3. DEPTH OF MOISTURE-DENSITY CONTROL FOR THIS PROJECT SHALL BE AS DICTATED BY THE GEOLOGIC HAZARD STUDY PREPARED BY ENTECH ENGINEERING CONSULTANTS, INC. DATED _____.
4. THE CONTRACTOR IS RESPONSIBLE FOR THE RE-ESTABLISHMENT OF ALL SURVEY MONUMENTS DISTURBED WITHIN THE PROJECT LIMITS.
5. THE CONTRACTOR SHALL PROTECT ALL WORK AREAS AND FACILITIES FROM FLOODING AT ALL TIMES.
6. PRIOR TO PAVING OPERATIONS, THE ENTIRE SUBGRADE SHALL BE INSPECTED IN ACCORDANCE WITH THE GEOLOGIC HAZARD STUDY PREPARED BY ENTECH ENGINEERING CONSULTANTS, INC. DATED _____.
7. SUBGRADE MATERIALS DEEMED UNSUITABLE BY THE GEOLOGIC HAZARD STUDY PREPARED BY ENTECH ENGINEERING CONSULTANTS, INC. DATED _____ SHALL BE EXCAVATED, DISPOSED OF AND REPLACED WITH APPROVED MATERIALS.
8. FILL SHALL BE PLACED IN ACCORDANCE WITH THE GEOLOGIC HAZARD STUDY PREPARED BY ENTECH ENGINEERING CONSULTANTS, INC. DATED _____.
9. THE CONTRACTOR IS RESPONSIBLE FOR PREVENTING AND CONTROLLING EROSION DURING CONSTRUCTION ACTIVITIES AT ALL TIMES DURING GRADING AND CONSTRUCTION.
10. FINISHED CONTOURS/SPOT ELEVATIONS HEREON REPRESENT FINISHED GRADES.
11. ALL GRADING SHALL CONFORM TO THE GEOTECHNICAL RECOMMENDATIONS FOR TRAILS AT ASPEN TRAILS PREPARED BY ENTECH ENGINEERING CONSULTANTS, INC. DATED _____.
12. THERE MAY BE SOME TOPSOIL WITHIN TRAILS AT ASPEN TRAILS THAT IS NOT SUITABLE FOR RE-USE.

SEED MIX

Table with columns: COMMON NAME, SCIENTIFIC NAME, GROWTH SEASON / FORM, % OF MIX, IRRIGATED BROADCAST, IRRIGATED HYDROSEEDDED, NON-IRRIGATED BROADCAST, NON-IRRIGATED HYDROSEEDDED, IRRIGATED DRILLED, IRRIGATED DRILLED.

EROSION CONTROL COST ESTIMATE (INFORMATION ONLY)

Table with columns: PAY ITEM, UNIT, UNIT COST, QUANTITY, COST. Includes rows for SEEDING (NATIVE), SILT FENCE (SF), INLET PROTECTION, VEHICLE TRACKING CONTROL (VTC), and TOTAL.

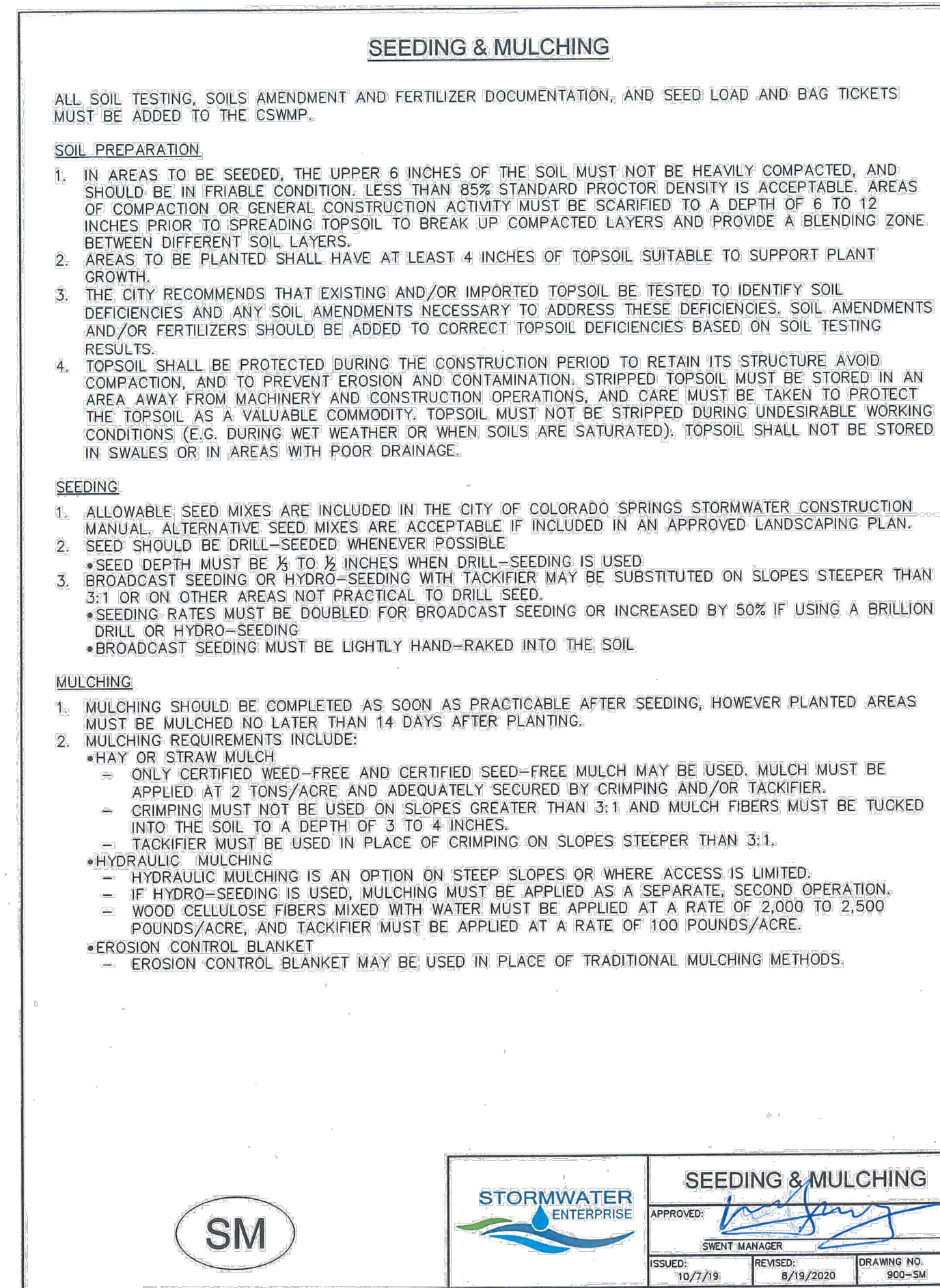
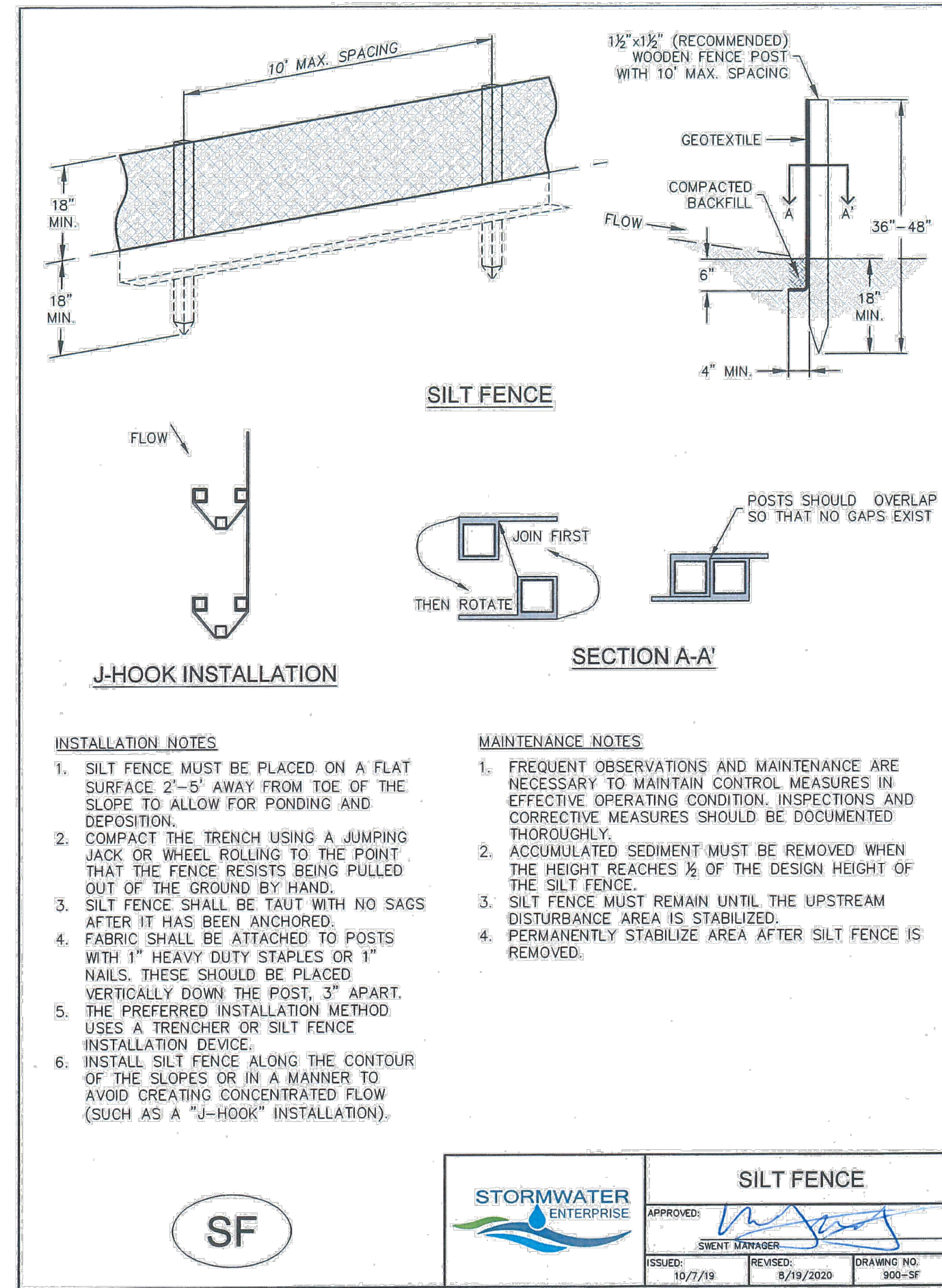
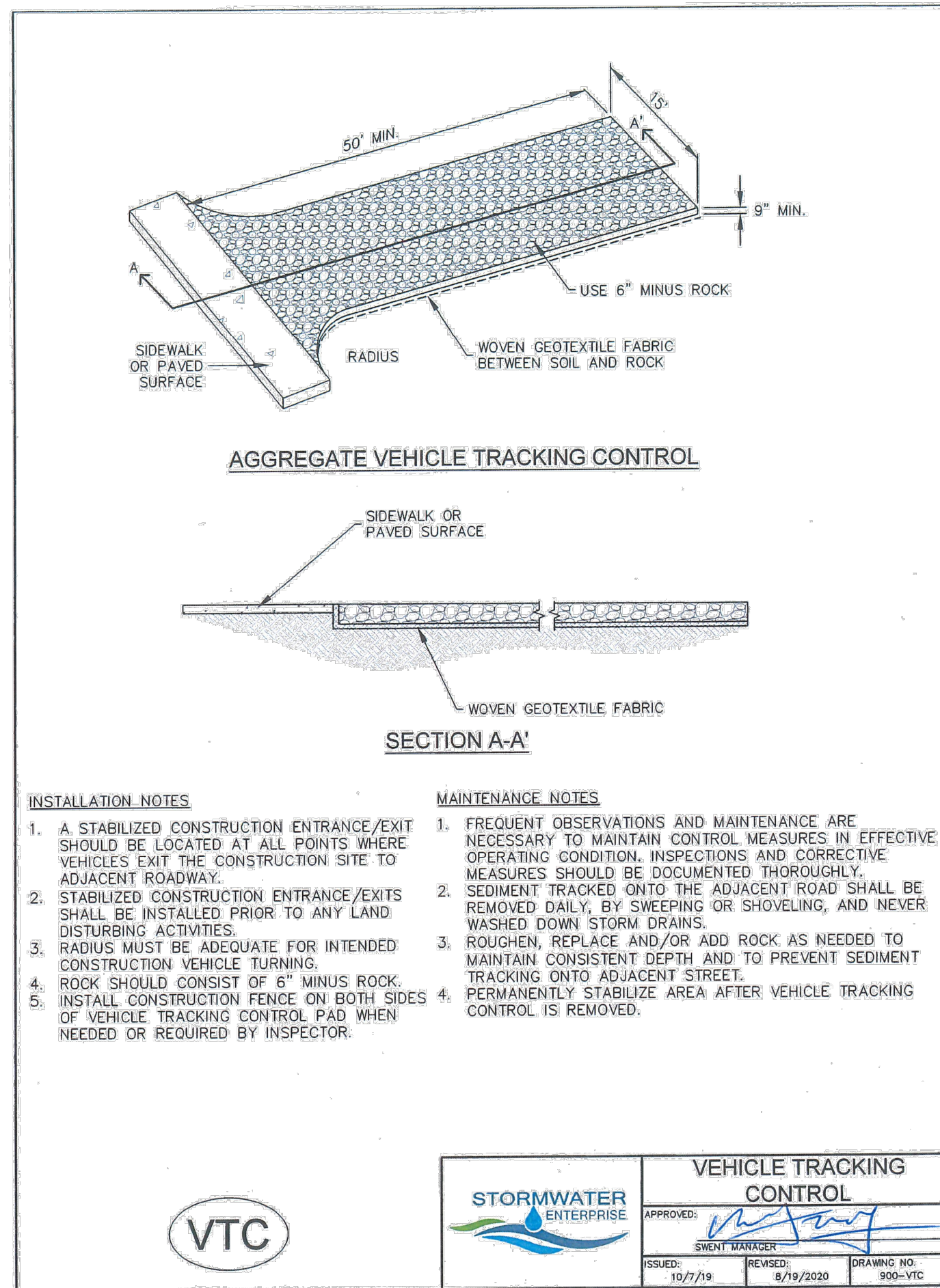
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JCAD logo with text: Know what's below. Call 811 before you dig. 811 logo.

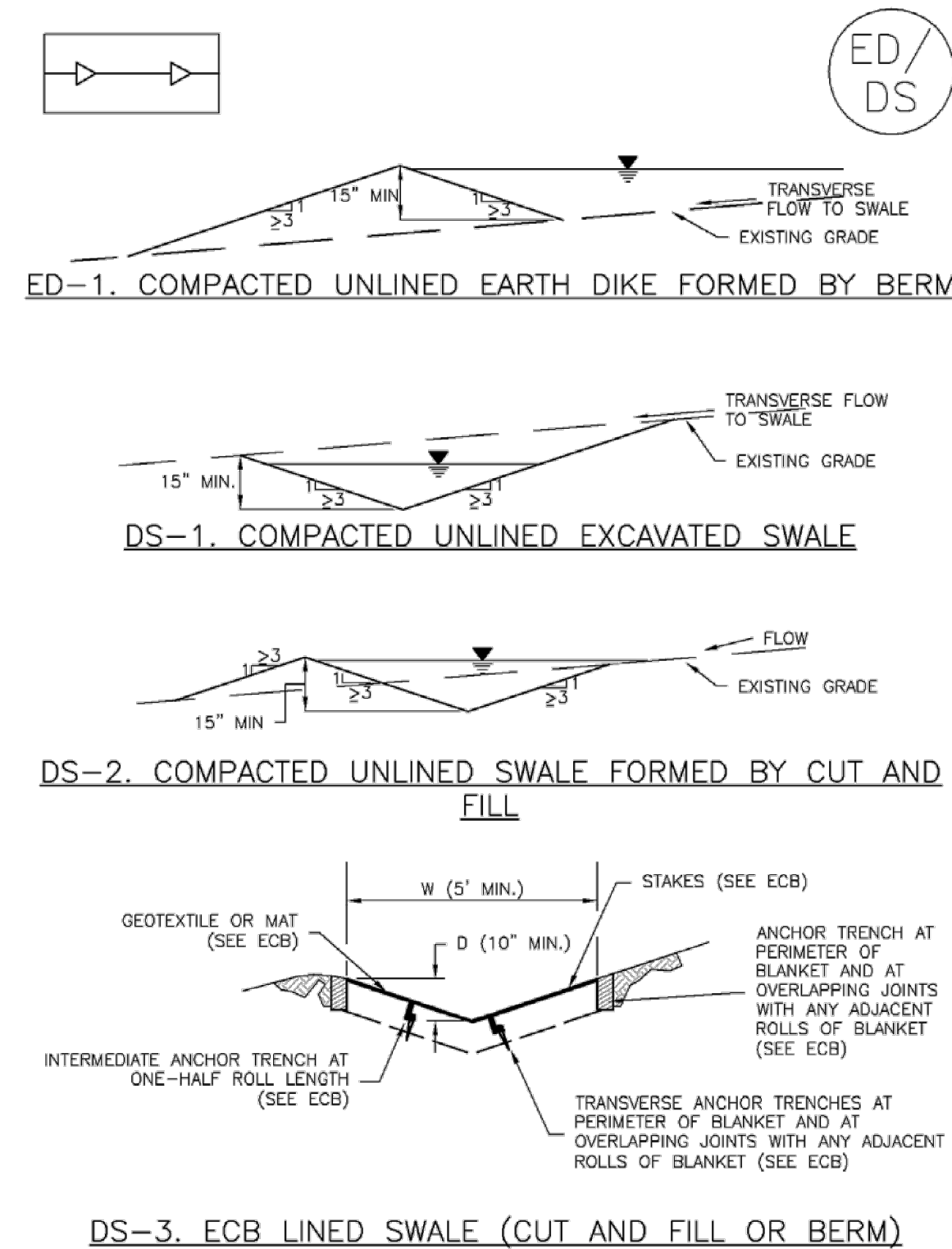
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VILLAS AT ASPEN TRAILS
PRELIMINARY GRADING & EROSION CONTROL PLAN
NOTES

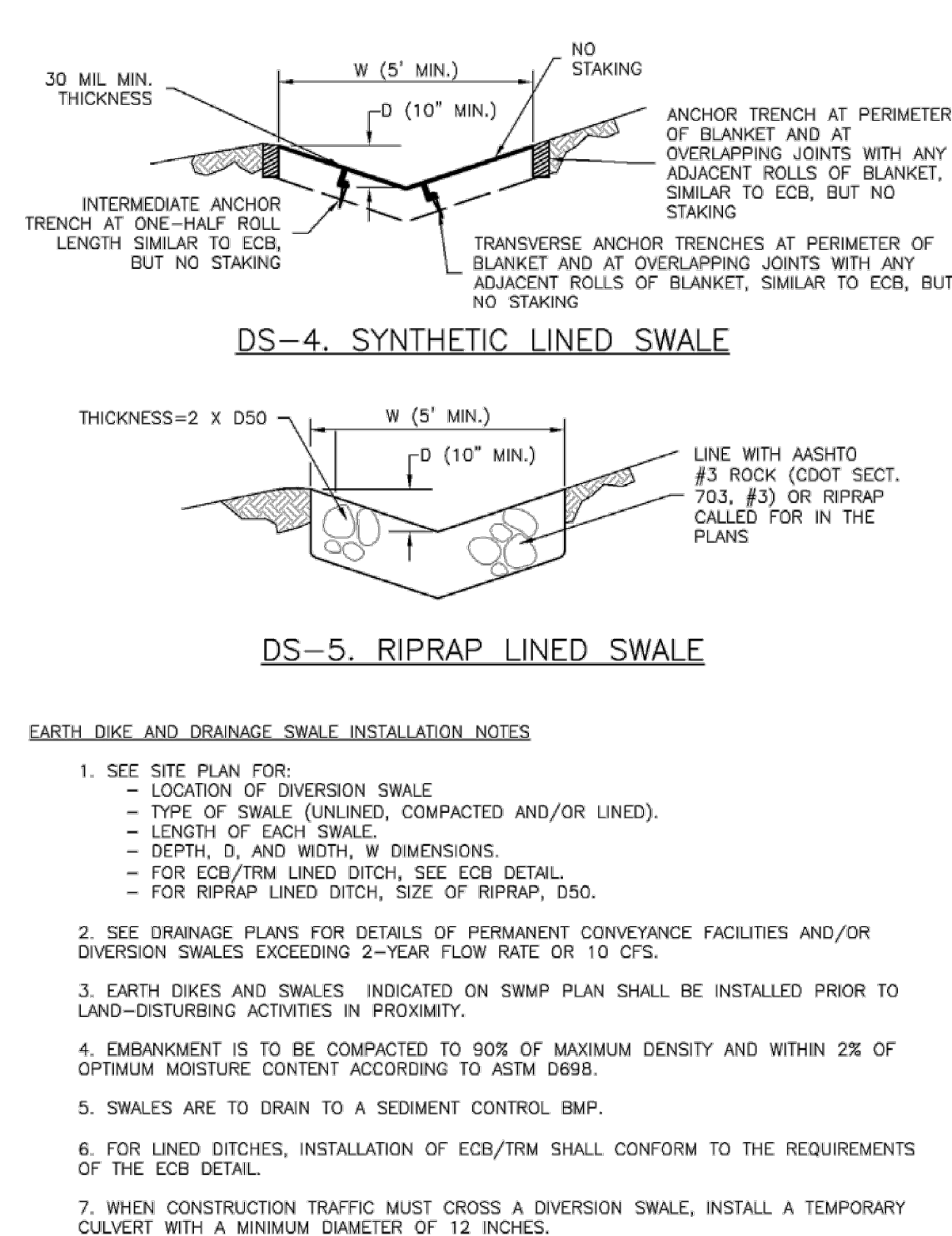
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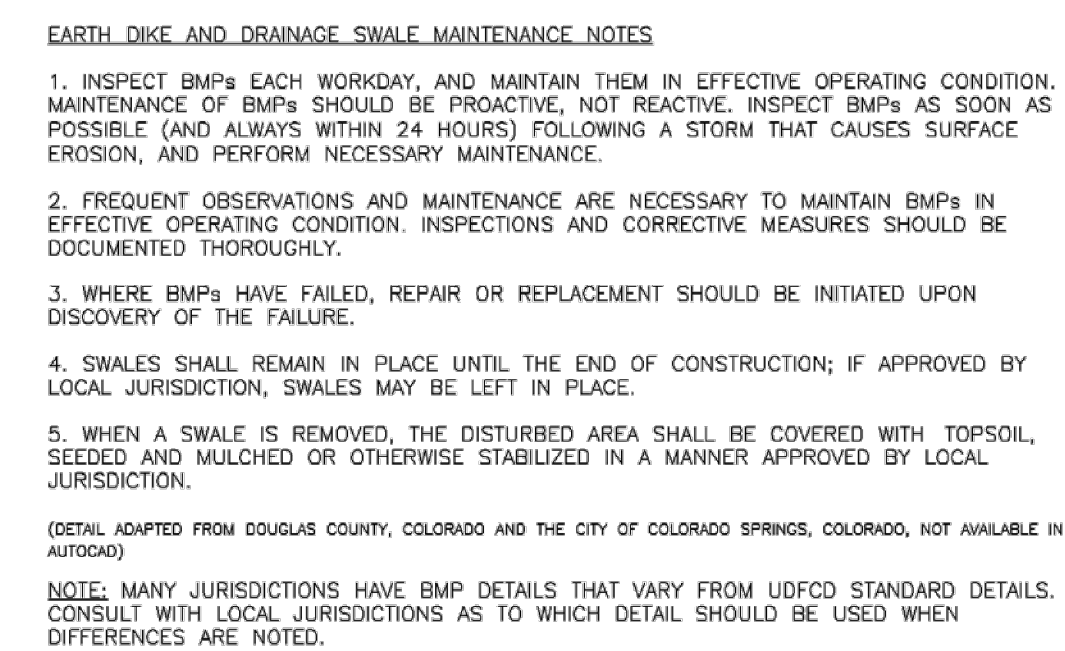
Earth Dikes and Drainage Swales (ED/DS) EC-10



EC-10 Earth Dikes and Drainage Swales (ED/DS)



Earth Dikes and Drainage Swales (ED/DS) EC-10



Dakota Springs Engineering
Engineering Consultants
 31 N. TEJON, SUITE 518
 COLORADO SPRINGS, CO 80903
 P: (719) 447-7388 F: (719) 447-7392

JCAD
 719-377-0002

DESIGNED BY: **JJM** DATE: **2.14.22**
 DRAWN BY: **JJM** DATE: **2.14.22**
 CHECKED BY: _____ DATE: _____

811
 Know what's below.
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SCALE: _____ VERT: _____
 STATION: _____ FROM: _____ TO: _____

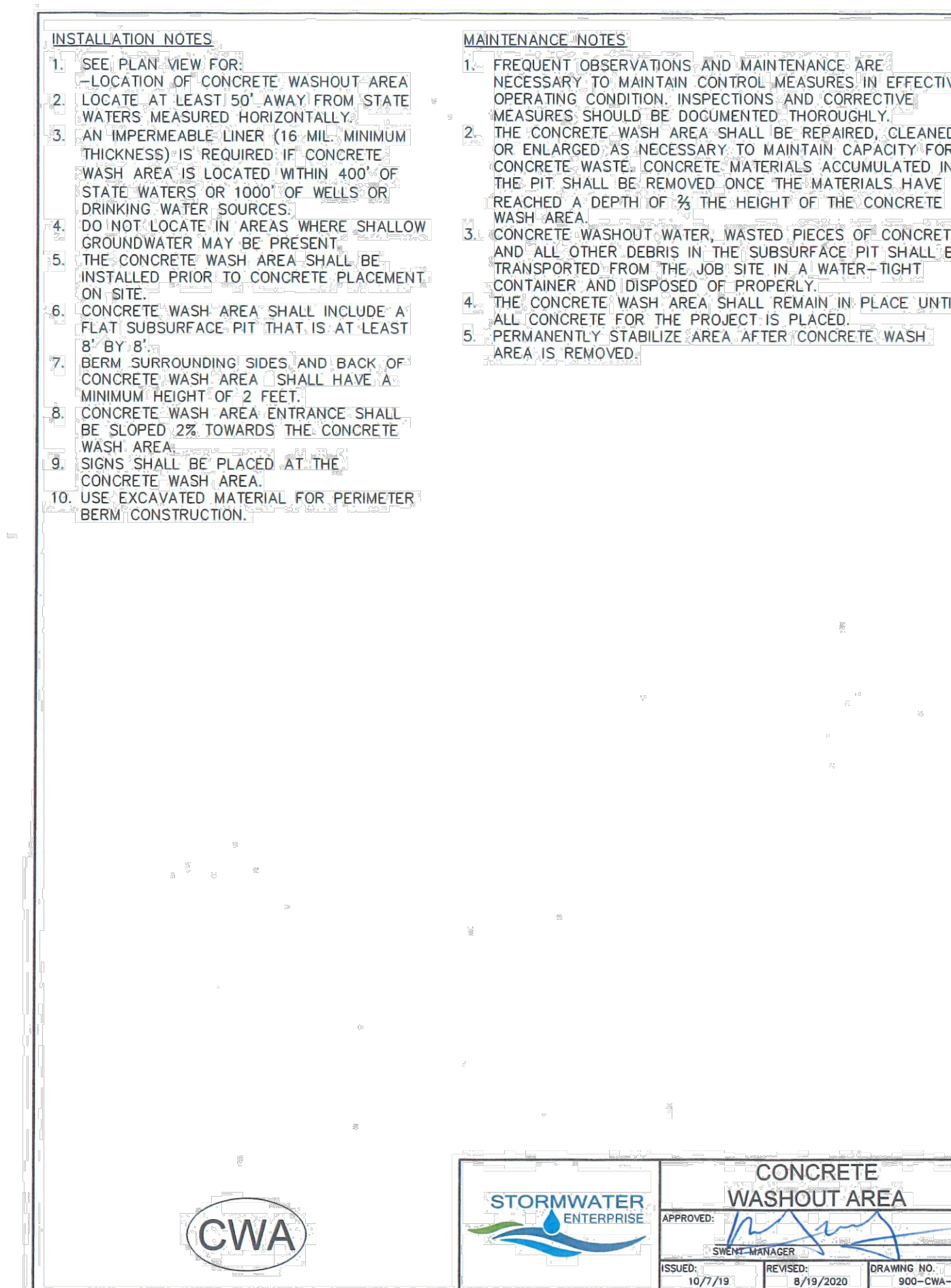
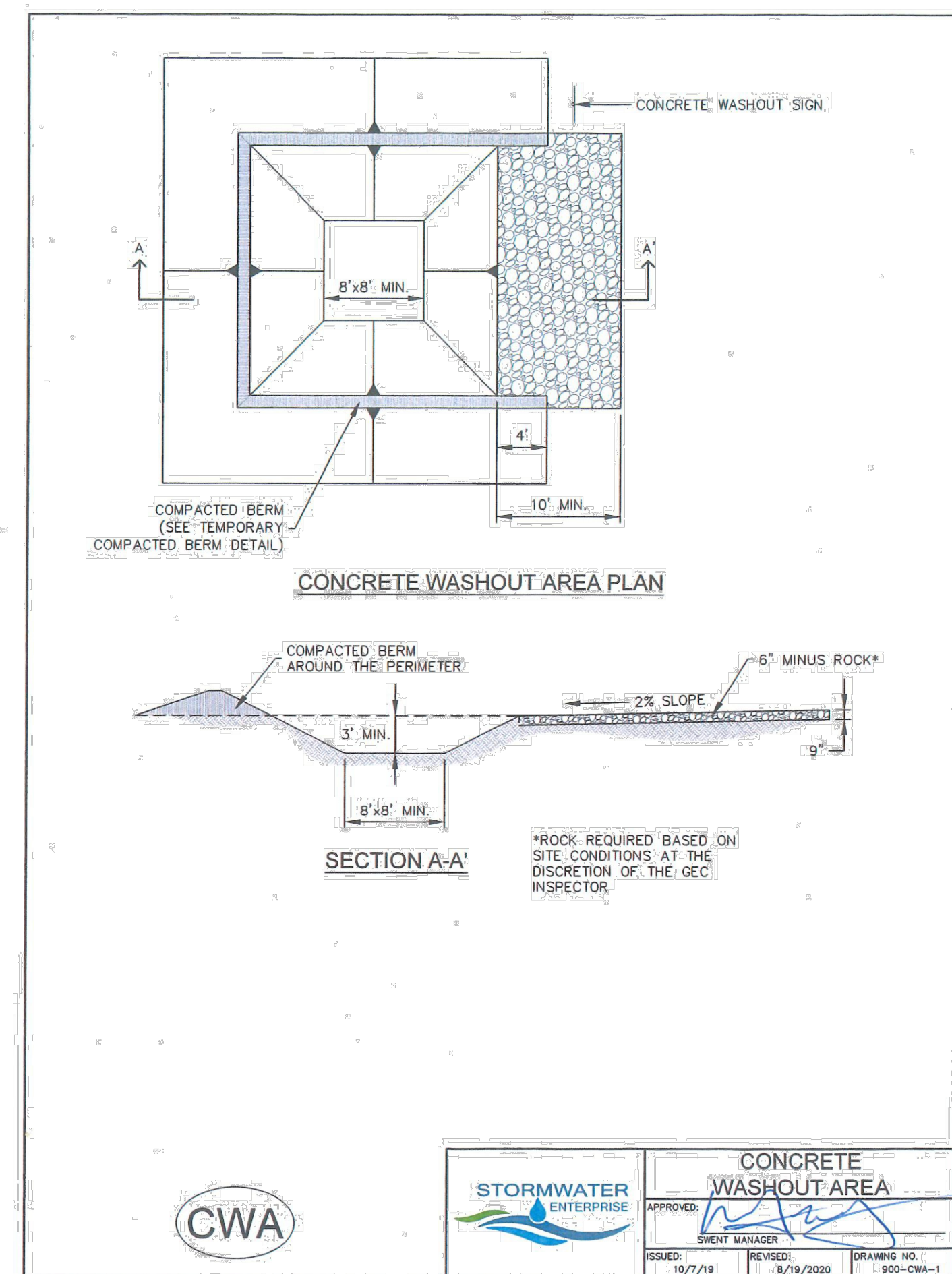
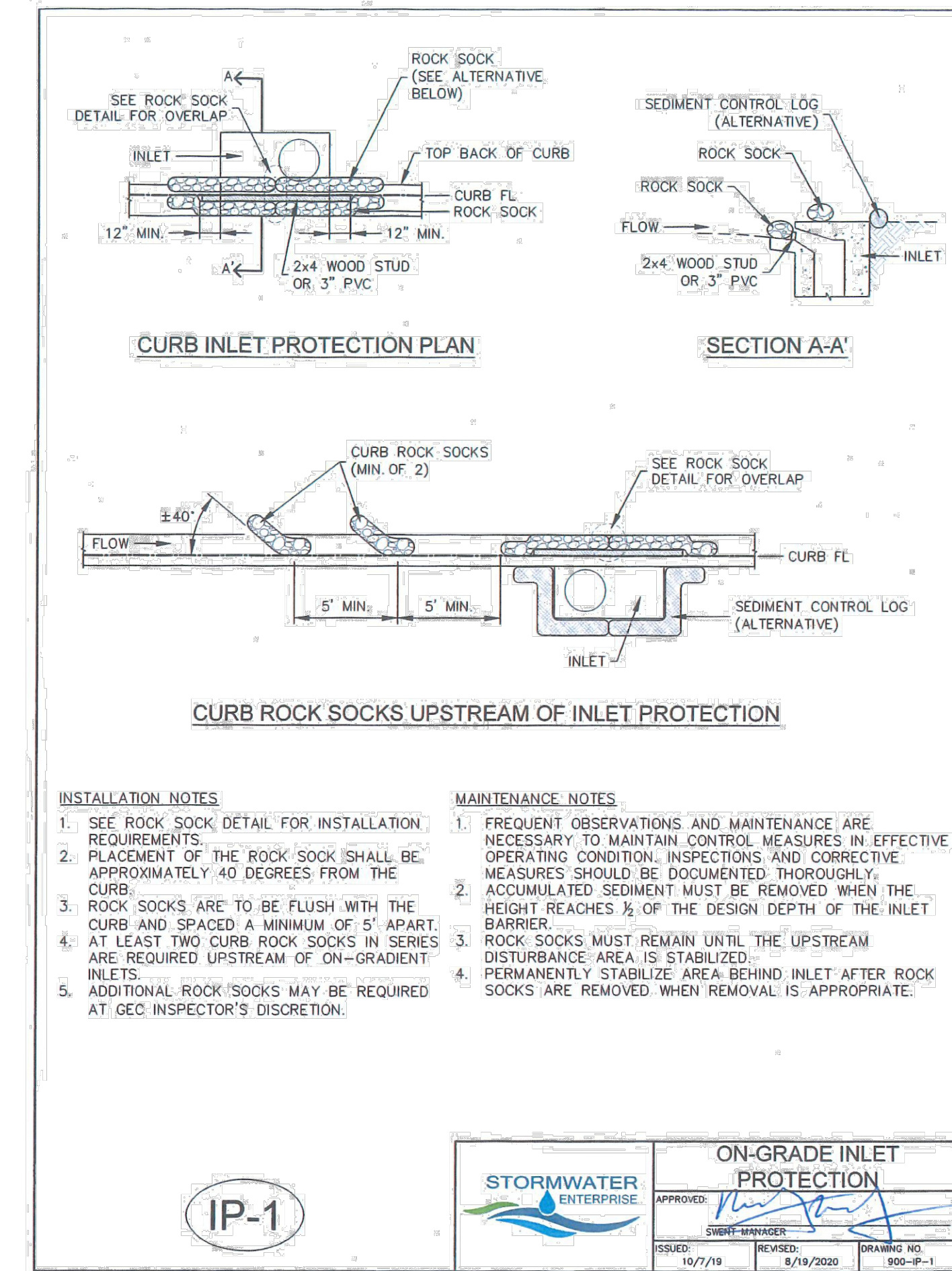
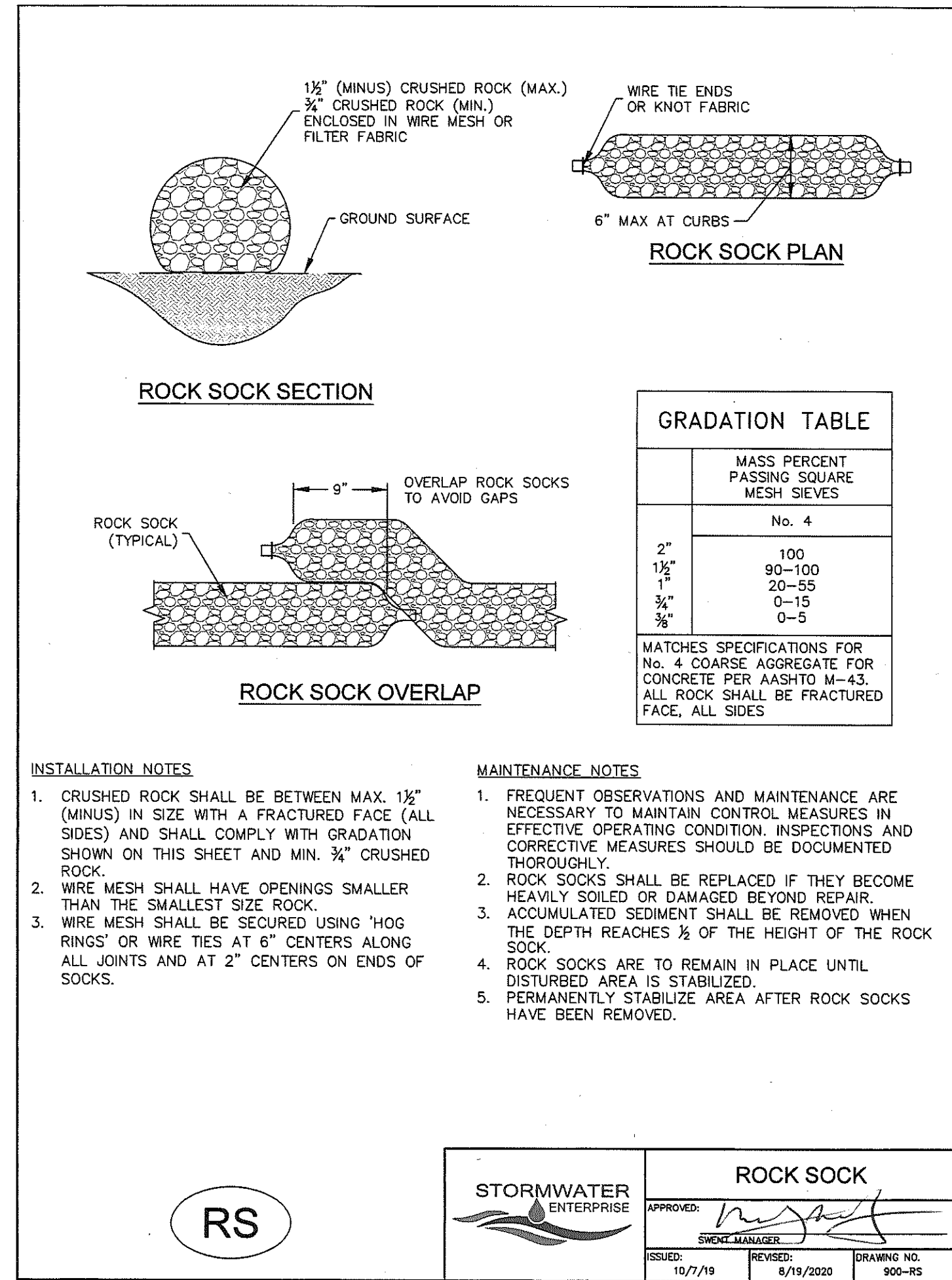
VILLAS AT ASPEN TRAILS

PRELIMINARY GRADING & EROSION CONTROL PLAN
DETAILS 1 OF 2

REVISIONS:
 NO. DESCRIPTION DATE

PROJECT NUMBER: **0219-06**

SHEET **5** OF **6**



**VILLAS AT ASPEN TRAILS
STORMWATER MANAGEMENT PLAN (SWMP)**

APPENDIX C– EROSION AND STORMWATER QUALITY CONTROL PERMIT