

**STORM WATER MANAGEMENT PLAN
FOR
PLATTE SELF STORAGE
6001 E PLATTE AVENUE, COLORADO SPRINGS**

MAY 2024

Prepared For:

RMG-ROCKY MOUNTAIN GROUP

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Prepared By:

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Job No. 2419.00

County Job No. **TBD**

CONTACT INFORMATION

SWMP APPLICANT:

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CONTRACTOR:

TBD

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dane@tnesinc.com

QUALIFIED STORMWATER MANAGER:

TBD

SWMP is to be maintained on site in the construction trailer whenever work is occurring. If construction trailer is not available, another alternative must be provided.

COLORADO DISCHARGE PERMIT SYSTEM (CDPS)

TO: Site Inspector Responsible For All CDPS Requirements

The following storm water pollution management plan (SWMP) is a detailed account of the requirements for the CDPS permit. The main objective of this plan is to prevent any contamination of the storm water while construction activity is taking place.

This document must be kept at the construction site at all times and be made available to the public and any representative of the Colorado Department of Health – Water Quality Control Division, if requested.

Enclosed are temporary erosion control details for the construction site and storm sewer outfall points (Detail A). The operation and maintenance inspection record should be used as a guideline for the inspection of permanent and temporary control devices. Items to be inspected are not limited to those listed. The inspections should be made at regular intervals and before and after storm events. The inspection records must be signed and kept in this binder for no less than three (3) years.

STORM WATER MANAGEMENT PLAN FOR Platte Self Storage

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GENERAL PERMIT APPLICATION
OPERATION AND MAINTENANCE INSPECTION FORM
OPERATION AND MAINTENANCE INSPECTION RECORD**

STORM WATER MANAGEMENT PLAN FOR Platte Self Storage

SITE DESCRIPTION & EXISTING CONDITIONS

This site is 17.22 acres of commercial land located at 6001 E Platte Avenue that is currently used to store landscape materials. Approximately 1/3 of the site is designated to be developed as mini storage, 1/5 of the site as outdoor vehicle parking, while the rest is reserved for a stormwater pond and possible future development. The site is in Section 18, Township 14 South, Range 65 West of the 6th Principal Meridian within El Paso County. The parcel is bounded to the north by Highway 94, to the east and south by E Platte Avenue Frontage Road, to the west and northwest by unplatted land, to the southwest by Lot 3 Colorado Springs Airport Filing No 1B, to the southeast by Lot 2 Colorado Springs Airport Filing No 1B, and to the east by unplatted land (See vicinity map in appendix).

The site lies within the Sand Creek Drainage Basin (Sand Creek is the receiving water), with storm runoff surface draining from the east to the west before flowing onto the neighboring property where Sand Creek East Fork is located. There is one culvert on the west side of the site that crosses North Franceville Coal Mine Road and drains to the neighboring property to the west.

Soils for this project are delineated by the map in the appendix as Blakeland loamy sand (8), 1 to 9 percent slopes. Soils in the study area are shown as mapped by NRCS in the “Soils Survey of El Paso County Area” and contains soils of Hydrologic Group A. Soil erosion potential for the site appears moderate based on a site visit.

The site is currently developed with mostly dirt surfaces, some gravel and asphalt areas, and minimal vegetation that is mostly native grasses around the perimeter. The site drains to the west, with an average slope of 6.6%.

There are multiple existing buildings, a weight scale, miles of retaining or freestanding walls being used to create material storage areas, and a pond (low area that doesn’t drain) on the site. Most of the west side of the site is bermed up before an embankment drops down, which results in little runoff leaving the site.

The existing pond area is said to be largely paved (unconfirmed), so most runoff would leave the site by evaporation. Existing ground cover appears to be very low, roughly 20% or less based on a site visit.

No known toxic materials have been treated, stored, disposed, spilled or leaked onto the site.

No stream crossings are located on the site.

No dewatering is anticipated.

This project does not rely on control measures owned or operated by another entity.

CONSTRUCTION ACTIVITY AND STORAGE

The proposed development is mini storage and outdoor vehicle parking. Proposed construction activities include regrading the site, installation of utilities, construction of the mini storage buildings, construction of the outdoor canopies for the parked vehicles, constructing a detention basin, installation of landscaping, and surfacing with asphalt millings. Potential pollutants at the site include suspended solids, fuels, and lubricants.

Practices to minimize contact of construction materials, equipment and vehicles with the storm water include installation of silt fencing and/or sediment control logs, silt fence or rock sock inlet protection, and sub-contractor cleaning and hauling of excess debris and material upon completion of work. Construction material loading and unloading, and access to such areas occur from gravel staging areas shown on the map. The concrete washout area will be removed and disposed of as required by this permit as well as the SWMP permit. Potential pollutants such as paints, adhesives, porta potty runoff, and oil spills will also be dealt with as required. All paints, adhesives, et. will be properly stored or disposed of as applicable. There will always be a spill kit onsite to deal with spill incidents and prevent damage to surrounding environment. The porta potty will be placed at least 10 feet from any vehicle right-of-way, storm drain inlet, or waterway, and a minimum of 50 feet from state waters. The porta potty will be staked to the ground or fastened in a way that will prevent a spill from tipping. The porta potty will be cleaned on a weekly basis and inspected daily for spills. Soils are not to be tracked offsite, and any soils tracked

offsite should be swept up.

There will be no on-site mobile fueling. Contractor shall have the Hazardous Material emergency response number posted on the site. No concrete or asphalt batch plants are planned for the construction site. The site will be considered stabilized when site vegetation is 70% of pre-disturbed levels and grading and building construction has been completed. There will be approximately 19.5 acres of disturbed soil area (this includes offsite disturbance). The estimate for cut on this site is 32,200 cy and for fill it is 101,550 cy for a net fill of 69,350 cy. Fill material will be taken from onsite.

No non-stormwater discharges are anticipated at the site.

CONSTRUCTION SCHEDULE AND SEQUENCE

Erosion control measures shall be implemented in a manner that will protect properties and public facilities from the adverse effects of erosion and sedimentation as a result of construction and earthwork activities.

Grading will begin in Spring 2026 and the site will be considered stabilized in the Fall 2026.

Grading will begin in Spring 2026 with completion of construction activities anticipated to be in the Fall of 2026. The construction sequence will be: clear and grub, utility construction, rough grading, pond construction, final grading, vertical construction, landscaping/paving, and cleanup.

Before clearing and grubbing may begin the first level of BMP'S are to be installed. These measures include silt fence (SF), vehicle tracking control (VTC) at all construction exit points onto a paved road, stockpile management (SP), concrete washout area (CWA), a sediment basin (SB) at the pond location, and inlet protection (IP). The Staging Area (SSA) also is setup with appropriate measures to protect downstream (i.e. silt fence).

The second level of BMP's shall be installed once the previous BMP's and construction are completed. These measures include mulching (MU) and permanent seeding (PS). All temporary soil erosion control measures and BMP's shall be maintained until permanent soil erosion control measures are implemented (seeding and mulching) and vegetation has been established to 70% of pre-disturbed levels on areas not to be covered with pavement or other finished products.

Erosion control measures shall be implemented in a manner that will protect properties and public facilities from the adverse effects of erosion and sedimentation as a result of construction and earthwork activities.

POTENTIAL SOURCES OF POLLUTION

The potential sources of pollution associated with this development are:

- Disturbed and stored soils
- Vehicle tracking of sediments
- Management of contaminated soils (if exist)
- Loading and unloading operations
- Outdoor storage activities (erodible building materials, fertilizers, chemicals, etc.)
- Vehicle and equipment maintenance and fueling
- Significant dust or particulate generating processes
- Routine maintenance activities involving fertilizers, pesticides, herbicides, fuels, solvents, etc.)
- Onsite waste management practices (waste piles, liquid wastes, dumpsters)
- Concrete truck / equipment washing
- Non-industrial waste sources such as worker trash and portable toilets

IMPLEMENTATION OF CONTROL MEASURES

BMP design specifications and implementation information can be found in the UDFCD BMP Description Sheets included in the Appendix. This project does not rely on control measures owned or operated by another entity.

MATERIALS HANDLING

All construction materials shall be handled in a manner to minimize the chance of stormwater contamination. Stockpile and material staging areas are shown on the Erosion Control Plan. Additional materials handling info is included in the Spill Prevention and Control Plan section.

WASTE MANAGEMENT AND DISPOSAL

All waste and debris created by construction activities at the site shall be disposed of in compliance with all laws, regulations, and ordinances of the federal, state and local agencies. Waste bins will be checked for leaks and remaining capacity each time they are used. Waste bins will be emptied when they are full (at a minimum).

SPILL PREVENTION AND CONTROL PLAN

The Site Superintendent will act as the point of contact for any spill that occurs at this jobsite. The Construction Manager will be responsible for implementation of prevention practices, spill containment / cleanup, worker training, reporting and complete documentation in the event of a spill. The Site Superintendent shall immediately notify the Owner, /Construction Manager, State and the Local Fire Department in addition to the legally required Federal, State, and Local reporting channels (including the National Response Center, 800.424.8802) if a reportable quantity is released to the environment.

SPILL PREVENTION BEST MANAGEMENT PRACTICES

This section describes spill prevention methods Best Management Practices (BMP) that will be practiced to eliminate spills before they happen.

Equipment Staging and Maintenance

- Store and maintain equipment in a designated area.
- Reduce the amount of hazardous materials and waste by substituting non-hazardous or less hazardous materials.
- Use secondary containment (drain pan) to catch spills when removing or changing fluids.
- Use proper equipment (pumps, funnels) to transfer fluids.
- Keep spill kits readily accessible.
- Check incoming vehicles for leaking oil and fluids.
- Transfer used fluids and oil filters to waste or recycling drums immediately following generation.
- Inspect equipment routinely for leaks and spills.

- Repair equipment immediately, if necessary implement a preventative maintenance schedule for equipment and vehicles.

Fueling Area

- Perform fueling in designated fueling area minimum 50' away from federal waters.
- Use secondary containment (drain pan) to catch spills.
- Use proper equipment (pumps, funnels) to transfer fluids.
- Keep spill kits readily accessible.
- Inspect fueling areas routinely for leaks and spills.
- Hazardous Material Storage Areas: Reduce the amount of hazardous materials by substituting non-hazardous or less hazardous materials.

Hazardous Material Storage Areas

- Minimize the quantity of hazardous materials brought onsite.
- Store hazardous materials in a designated area away from drainage points.

Unexpected Contaminated Soil and Water

- Investigate historical site use.
- Perform all excavation activities carefully and only after the Owner/Construction.
- Manager directs any activities.

SPILL CONTAINMENT METHODS

The following discussion identifies the types of secondary containment that will be used in the event of a spill. Table 1 summarizes the containment methods for each potential source.

- Equipment Staging and Maintenance Area: An equipment leak from a fuel tank, equipment seal, or hydraulic line will be contained within a spill containment cell placed beneath all stationary potential leak sources. An undetected leak from parked equipment will be cleaned up using hand

shovels and containerized in a 55-gallon steel drum for offsite disposal.

- **Fueling Area:** A small spill during fueling operations will be contained using fuel absorbent pads at the nozzle. The transfer of fuel into portable equipment will be performed using a funnel and/or hand pump and a spill pad used to absorb any incidental spills/drips. Any leaking tanks or drums will have fluids removed and transferred to another tank, drum, or container for the fluids. A spill response kit will be located near the fueling area or on the fuel truck for easy access. The spill response kit will include plastic sheeting, tarps, over pack drums, absorbent litter, and shovels.
- **Hazardous Material Storage Area:** A spill from containers or cans in a hazardous material storage area will be contained within the storage cabinet these materials are kept in.
- **Unexpected Contaminated Soil:** If contaminated soil is encountered during the project, the Owner/Construction Manager will be notified immediately. Small quantities of suspected contaminated soil will be placed on a 6-mil plastic liner and covered with 6-mil plastic. A soil berm or silt fence will be used to contain the stockpile and prevent migration of contaminated liquids in the soil.

Table 1: Spill Prevention and Containment Methods

Potential Spill Source	Containment Method(s)
Equipment staging and maintenance area	Spill containment pad, spill kit, pumps, funnels
Fueling area (site equipment only)	Spill containment pad, spill kit, pumps, funnels
Hazardous material staging area	Spill containment pad, spill kit, pumps, funnels
Unexpected contaminated soil	Plastic liner, plastic cover, soil berm, hay bales, lined super sacks

SPILL COUNTERMEASURES

Every preventative measure shall be taken to keep contaminated or hazardous materials contained. If a release occurs, the following actions shall be taken:

1. **Stop the Spill:** The severity of a spill at the site is anticipated to be minimal as large containers/quantities of Hazardous Materials are not anticipated. The type of spill would occur while dispensing material at the hazardous materials storage facility and would likely be contained in secondary containment. Thus, the use spill kits or other available absorbent materials should stop the spill.
2. **Warn Others:** Notify co-workers and supervisory personnel of the release. Notify emergency responders if appropriate. For site personnel, an alarm system will consist of three one second blasts on an air horn sounded by the person discovering a spill or fire. In the event of any spill, the Superintendent and Project Manager shall be notified if the spill is 5 gallons or more the STATE will be contacted along with the Fire Department.
3. **Isolate the Area:** Prevent public access to the area and continue to minimize the spread of the material. Minimize personal exposure throughout emergency response actions.
4. **Containment:** A spill shall only be contained by trained personnel and if it is safe to do so. DO NOT PLACE YOURSELF IN DANGER. Attempt to extinguish a fire only if it is in the incipient stage; trash can size or smaller. For larger spills, wait for the arrival of emergency response personnel and provide directions to the location of the emergency.
5. **Complete a Spill and Incident Report:** For each spill of a Hazardous Material a spill and incident report shall be completed and submitted to the Owner/Construction Manager and if applicable to the Engineer and the State of Colorado Department of Public Health and Environment.

MAINTENANCE, INSPECTION, AND REPAIR

The owner or his representative shall inspect and monitor all drainage facilities using the enclosed Inspection Forms in the appendix. In order to ensure that all graded surfaces, structures, vegetation,

erosion and sediment control measures and other protective devices identified in the erosion control plan are maintained in good and effective condition, an Operation and Maintenance Inspection Monitoring Program will be implemented by the permit holder during the construction phase. A systematic inspection of all the above mentioned protective devices will be performed by trained personnel using the operation and maintenance inspection record form in the appendix at least once every 14 days. Also, post-storm event inspections must be conducted within 24 hours after the end of any precipitation or snowmelt event that causes surface erosion. Provided the timing is appropriate, the post-storm inspections may be used to fulfill the 14-day routine inspection requirement. A more frequent inspection schedule than the minimum inspections described may be necessary to ensure that BMPs continue to operate as needed to comply with the plan. All monitoring records are to include the signature of the inspector and are to be kept with the SWMP for a period of no less than three (3) years. All maintenance of temporary and permanent erosion and sediment control facilities shall be per the details included in this report.

This lot will be considered stabilized when all construction activities have been completed and vegetation has been re-established. Erosion control measures, including silt fence, must be removed after final stabilization.

Any major revisions or modification to this Storm Water Management Plan will require a report addendum and erosion control map revision. Minor revisions may be made by the Stormwater Manager by redlining the Storm Water Management Plan or inserting additional pages. The SWMP should be viewed as a “living document” that is continuously being reviewed and modified as a part of the overall process of evaluating and managing stormwater quality issues at the site. The Qualified Stormwater Manager shall amend the SWMP when there is a change in design, construction, operation or maintenance of the site which would require the implementation of new or revised BMPs or if the SWMP proves to be ineffective in achieving the general objectives of controlling pollutants in stormwater discharges associated with construction activity or when BMPs are no longer necessary and are removed.

The onsite SWMP will be located at: _____

FINAL STABILIZATION AND LONG TERM STORMWATER MANAGEMENT

Permanent stabilization measures include landscaping per the approved landscaping plan, seeding, and mulching. These temporary BMPS's are to be removed once the 70% of pre-disturbed levels vegetation or permanent landscaping has been established. At this point in the construction process, all landscaping should be in place and maintained for a period of time that allows for its establishment on the site.

Long term stormwater management is provided by the onsite detention basin on the western portion of the site.

STATE REQUIREMENTS THAT ARE NOT APPLICABLE

The requirement for spill prevention and pollution controls for dedicated batch plants is not applicable as no batch plants are proposed.

The requirement to show the location of any dedicated asphalt / concrete batch plants is no applicable as no batch plants are proposed.

PREPARED BY:

Terra Nova Engineering, Inc.
Dane Frank, P.E.
Project Engineer

GENERAL LOCATION MAP

6001 E Platte Ave Subdivision - Location Map

Image Date Oct 2022



E Platte Ave / HWY 24

Motel Rd

Sand Creek

SITE

Google Earth



700 ft

EROSION CONTROL PLAN & DETAILS
(see back pocket)



PLATTE SELF STORAGE
GRADING AND EROSION CONTROL PLAN
INITIAL GRADING & EROSION CONTROL - NORTH SIDE
NOVEMBER 2024

BENCHMARKS
CDOT RIGHT OF WAY MONUMENT #3014 - ELEV=6232.52 (NAVD-1988) [NORTHEAST OF SITE ENTRANCE]

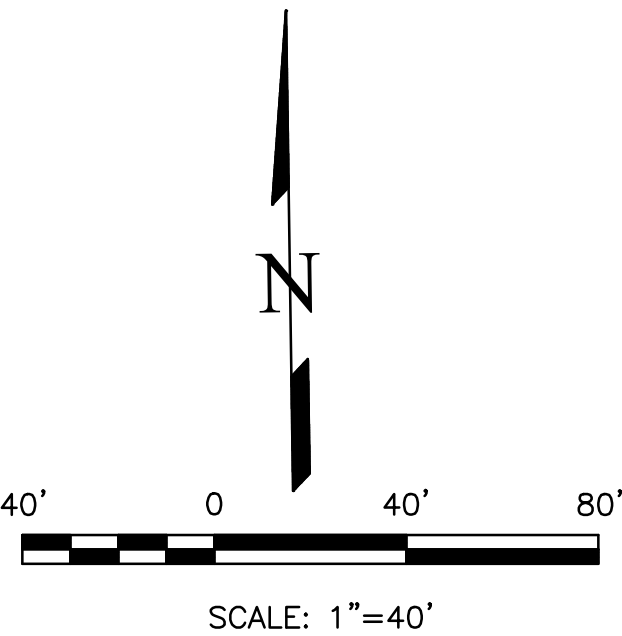
GRADING LEGEND

PROPOSED	PR	EXISTING CONTOURS - MINOR	---
EXISTING	EX	EXISTING CONTOURS - MAJOR	---
FINISHED SURFACE	FS	PROPOSED CONTOURS - 1'	---
FINISHED GROUND	FG	EXISTING PROPERTY LINE	---
TOP OF CURB	TC	PROPOSED RET WALL	---
FLOWLINE	FL	PROPOSED RIPRAP	---
FINISH GROUND AT TOP OF WALL	TW	WATER LINE	---
FINISHED GROUND AT BOTTOM OF WALL	BW	SANITARY SEWER LINE	---
LOW POINT	LP	GAS LINE	---
HIGH POINT	HP	UNDERGROUND ELECTRICAL LINE	---
FLOW ARROW	→	TELEPHONE LINE	---
EXISTING CONTOURS (LIDAR)	6130	FIBER OPTIC LINE	---
STORM MANHOLE	○	STORM SEWER LINE	---
STORM INLET	□	LIMIT OF CONSTRUCTION	---
		LIMIT OF SOIL DISTURBANCE	---
		PROPOSED FENCE	---
		FIRE HYDRANT	---
		PROPOSED CURB & GUTTER	---

- NOTES**
1. THERE IS LITTLE TO NO NOTABLE EXISTING VEGETATION LOCATED ON SITE.
 2. THERE WILL BE OFFSITE GRADING FOR THE PROPOSED UTILITIES AND GRADING WITHIN THE PLATTE AVENUE FRONTAGE ROAD RIGHT-OF-WAY.
 3. THE COUNTY HAS REQUIRED AN INITIAL GRADING PLAN. THIS INITIAL GRADING IS A POOR FIT FOR THE PROPOSED SITE DUE TO THE LARGE NUMBER OF TALL RETAINING WALLS PROPOSED. THE DESIGN ENGINEER DOES NOT CONSIDER MATCHING THE INITIAL GRADING PLAN TO BE CRITICAL AND RECOMMENDS THE CONTRACTOR PRIORITIZE CONSTRUCTION OF THE RETAINING WALLS AND THE VERTICAL GRADING PLAN OVER THE INITIAL GRADING PLAN.
 4. SEED AND MULCH DISTURBED AREAS ONLY.
 5. SEDIMENT CONTROL LOGS MAY BE SUBSTITUTED FOR SILT FENCE AND VICE VERSA.

EROSION CONTROL LEGEND

KEY	TITLE	SYMBOL	IMPLEMENTATION PHASE
8F	SILT FENCE	---	INITIAL
SSA	STABILIZED STAGING AREA	---	INITIAL
VTC	VEHICLE TRACKING CONTROL	---	INITIAL
SP	STOCKPILE MANAGEMENT WITH PROTECTION	---	INITIAL
CWA	CONCRETE WASHOUT AREA	---	INITIAL
SR	SURFACE ROUGHENING	---	INITIAL
TSE	TEMPORARY SEDIMENT BASIN	NONE	INITIAL
PT	PORTABLE TOILET	NONE	INITIAL



THIS DESIGN WAS PREPARED UNDER MY DIRECT SUPERVISION
FOR AND ON BEHALF OF TERRA NOVA ENGINEERING, INC.

DANE FRANK
COLORADO P.E. # 50207

DATE

DESCRIPTION

REVISIONS

NO.

UNTIL SUCH TIME AS THESE DRAWINGS ARE APPROVED BY THE REVIEWING AGENCIES, THE REVIEWING AGENCIES, TERRA NOVA ENGINEERING, INC. APPROVES THEIR USE ONLY FOR THE PROJECT AND FOR THE MOST PART, BY WRITTEN AUTHORIZATION.

PREPARED FOR:

RMG-ROCKY MOUNTAIN GROUP

ATTN:

5085 LIST DR, #200

COLORADO SPRINGS, CO 80919

719.548.0600

Terra Nova

Engineering, Inc.

Creative Civil Engineering

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PLATTE SELF STORAGE

GRADING AND EROSION CONTROL PLAN

INITIAL - NORTH SIDE

DESIGNED BY JF

DRAWN BY JF

CHECKED BY DF

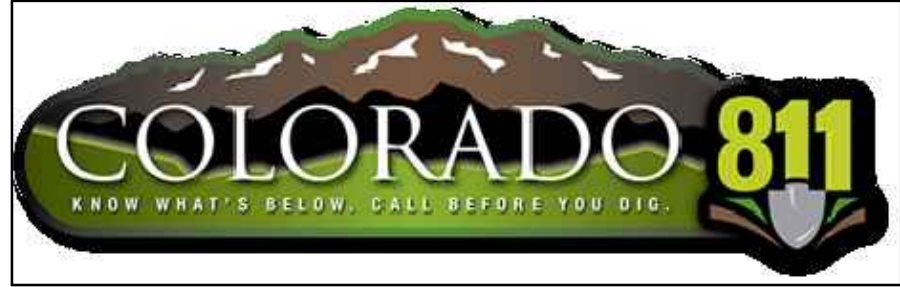
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V-SCALE N/A

JOB NO. 2419.00

DATE ISSUED 11/13/24

SHEET NO. 8 OF 27



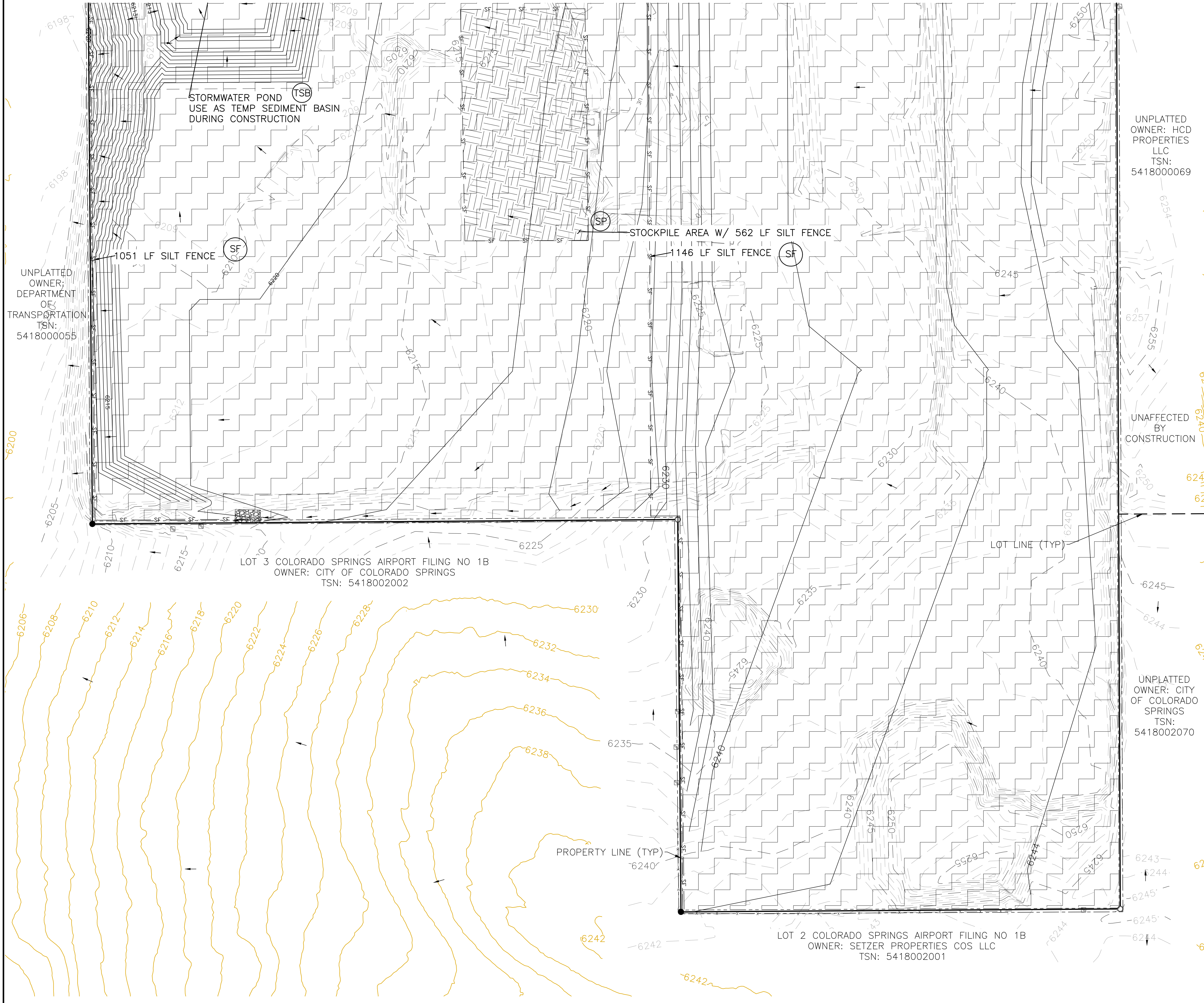
PLATTE SELF STORAGE

GRADING AND EROSION CONTROL PLAN

INITIAL GRADING & EROSION CONTROL PLAN - SOUTH SIDE

NOVEMBER 2024

BENCHMARKS
CDOT RIGHT OF WAY MONUMENT #3014 - ELEV=6232.52 (NAVD-1988) [NORTHEAST OF SITE ENTRANCE]



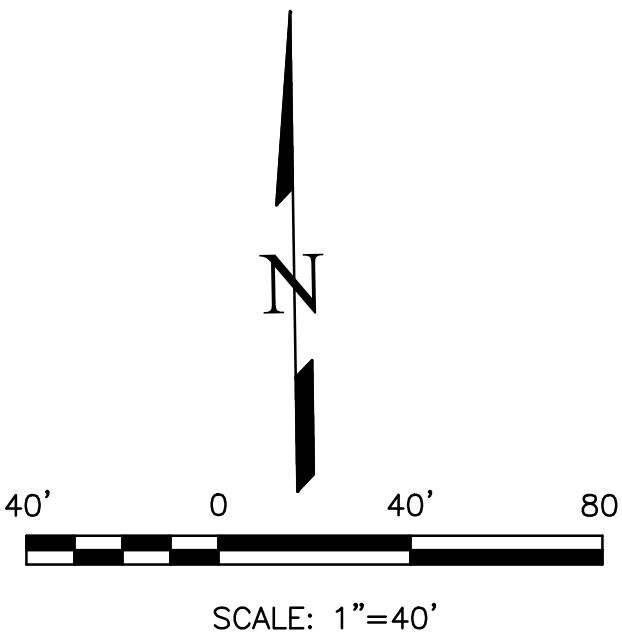
GRADING LEGEND

PROPOSED	PR	EXISTING CONTOURS - MINOR	---	6234	---
EXISTING	EX	EXISTING CONTOURS - MAJOR	---	6230	---
FINISHED SURFACE	FS	PROPOSED CONTOURS - 1'	---	6231	---
FINISHED GROUND	FG	EXISTING PROPERTY LINE	---		---
TOP OF CURB	TC	PROPOSED RET WALL	---		---
FLOWLINE	FL	PROPOSED RIPRAP	---		---
FINISH GROUND AT TOP OF WALL	TW	WATER LINE	---		---
FINISHED GROUND AT BOTTOM OF WALL	BW	SANITARY SEWER LINE	---		---
LOW POINT	LP	GAS LINE	---		---
HIGH POINT	HP	UNDERGROUND ELECTRICAL LINE	---		---
FLOW ARROW	---	TELEPHONE LINE	---		---
EXISTING CONTOURS (LIDAR)	---	FIBER OPTIC LINE	---		---
STORM MANHOLE	---	STORM SEWER LINE	---		---
STORM INLET	---	LIMIT OF CONSTRUCTION	---		---
	---	LIMIT OF SOIL DISTURBANCE	---		---
	---	PROPOSED FENCE	---		---
	---	FIRE HYDRANT	---		---
	---	PROPOSED CURB & GUTTER	---		---

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EROSION CONTROL LEGEND

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VTC	VEHICLE TRACKING CONTROL	VTC	INITIAL
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CWA	CONCRETE WASHOUT AREA	CWA	INITIAL
SR	SURFACE ROUGHENING	SR	INITIAL
TSS	TEMPORARY SEDIMENT BASIN	NONE	INITIAL
PT	PORTABLE TOILET	NONE	INITIAL



THIS DESIGN WAS PREPARED UNDER MY DIRECT SUPERVISION
FOR AND ON BEHALF OF TERRA NOVA ENGINEERING, INC.

DANE FRANK
COLORADO P.E. # 50207

REVISIONS

NO.	DESCRIPTION	DATE

UNTIL SUCH TIME AS THESE DRAWINGS ARE APPROVED BY THE COLORADO DEPARTMENT OF TRANSPORTATION, THE DESIGN ENGINEER DOES NOT CONSIDER MATCHING THE INITIAL GRADING PLAN TO BE CRITICAL AND RECOMMENDS THE CONTRACTOR PRIORITIZE CONSTRUCTION OF THE RETAINING WALLS AND THE VERTICAL GRADING PLAN OVER THE INITIAL GRADING PLAN.

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PLATTE SELF STORAGE

GRADING AND EROSION CONTROL PLAN
INITIAL - SOUTH SIDE

DESIGNED BY JF

DRAWN BY JF

CHECKED BY DF

H-SCALE AS SHOWN

V-SCALE N/A

JOB NO. 2419.00

DATE ISSUED 11/13/24

SHEET NO. 9 OF 27

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PLATTE SELF STORAGE
GRADING AND EROSION CONTROL PLAN
INTERIM EC PLAN - NORTH SIDE
NOVEMBER 2024

BENCHMARKS
CDOT RIGHT OF WAY MONUMENT #3014 - ELEV=6232.52 (NAVD-1988) [NORTHEAST OF SITE ENTRANCE]

GRADING LEGEND

PROPOSED	PR	EXISTING CONTOURS - MINOR	---
EXISTING	EX	EXISTING CONTOURS - MAJOR	---
FINISHED SURFACE	FS	PROPOSED CONTOURS - 1'	---
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		PROPOSED CURB & GUTTER	---

EROSION CONTROL LEGEND

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SP	STOCKPILE MANAGEMENT WITH PROTECTION	SP	INITIAL
CWA	CONCRETE WASHOUT AREA	CWA	INITIAL
TSE	TEMPORARY SEDIMENT BASIN	TSE	INITIAL
PT	PORTABLE TOILET	PT	INITIAL
SCL	SEDIMENT CONTROL LOG	SCL	INTERIM
IP	INLET PROTECTION	IP	INTERIM

NOTES
1. SEDIMENT CONTROL LOGS MAY BE SUBSTITUTED FOR SILT FENCE AND VICE VERSA.
2. SEED AND MULCH DISTURBED AREAS ONLY.
3. THERE IS LITTLE TO NO NOTABLE EXISTING VEGETATION LOCATED ON SITE.
4. THERE WILL BE OFFSITE GRADING FOR THE PROPOSED UTILITIES AND GRADING WITHIN THE PLATTE AVENUE FRONTAGE ROAD RIGHT-OF-WAY.

THIS DESIGN WAS PREPARED UNDER MY DIRECT SUPERVISION
FOR AND ON BEHALF OF TERRA NOVA ENGINEERING, INC.

DANE FRANK
COLORADO P.E. # 50207

REVISIONS

NO.	DESCRIPTION	DATE

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Creative Civil Engineering

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PLATTE SELF STORAGE

GRADING AND EROSION CONTROL PLAN
INTERIM EROSION CONTROL PLAN - NORTH SIDE

DESIGNED BY JF
DRAWN BY JF
CHECKED BY DF
H-SCALE AS SHOWN
V-SCALE N/A
JOB NO. 2419.00
DATE ISSUED 11/13/24
SHEET NO. 10 OF 27

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PLATTE SELF STORAGE
GRADING AND EROSION CONTROL PLAN
INTERIM EC PLAN - SOUTH SIDE
NOVEMBER 2024

BENCHMARKS
CDOT RIGHT OF WAY MONUMENT #3014 -- ELEV=6232.52 (NAVD--1988) [NORTHEAST OF SITE ENTRANCE]

GRADING LEGEND

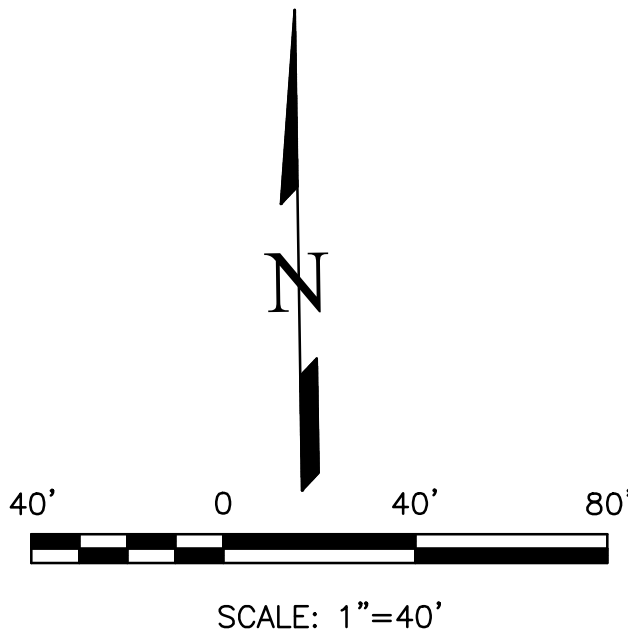
PROPOSED	PR	EXISTING CONTOURS -- MINOR	---	6231	---
EXISTING	EX	EXISTING CONTOURS -- MAJOR	---	6230	---
FINISHED SURFACE	FS	PROPOSED CONTOURS -- 1'	---	6231	---
FINISHED GROUND	FG	EXISTING PROPERTY LINE	---		---
TOP OF CURB	TC	PROPOSED RET WALL	---		---
FLOWLINE	FL	PROPOSED RIPRAP	---		---
FINISH GROUND AT TOP OF WALL	TW	WATER LINE	---		---
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FLOW ARROW		TELEPHONE LINE	---		---
EXISTING CONTOURS (LIDAR)		FIBER OPTIC LINE	---		---
STORM MANHOLE		STORM SEWER LINE	---		---
STORM INLET		LIMIT OF CONSTRUCTION	---		---
		LIMIT OF SOIL DISTURBANCE	---		---
		PROPOSED FENCE	---		---
		FIRE HYDRANT	---		---
		PROPOSED CURB & GUTTER	---		---

EROSION CONTROL LEGEND

KEY	TITLE	SYMBOL	IMPLEMENTATION PHASE
SF	SILT FENCE	SF	INITIAL
SSA	STABILIZED STAGING AREA		INITIAL
VTC	VEHICLE TRACKING CONTROL		INITIAL
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INTERIM EROSION CONTROL PLAN -- SOUTH SIDE

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FINAL EC PLAN - NORTH SIDE
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FINISH GROUND AT TOP OF WALL	TW	WATER LINE	---v---v---
FINISH GROUND AT BOTTOM OF WALL	BW	SANITARY SEWER LINE	---ss---ss---
LOW POINT	LP	GAS LINE	---ug---ug---
HIGH POINT	HP	UNDERGROUND ELECTRICAL LINE	---ue---ue---
FLOW ARROW	→	TELEPHONE LINE	---ut---ut---
EXISTING CONTOURS (LIDAR)	6130	FIBER OPTIC LINE	---fo---fo---
STORM MANHOLE	○	STORM SEWER LINE	---st---st---
STORM INLET	□	LIMIT OF CONSTRUCTION	---
		LIMIT OF SOIL DISTURBANCE	---
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SM	PERMANENT SEEDING AND MULCHING PS - DRILL SEED, HAND SEED, OR HYDROSEED; SEED MIX PER COLORADO SPRINGS STORMWATER CONSTRUCTION MANUAL (DECEMBER 2020), TABLE 5-2 MU - MECHANICALLY CRIMP MULCH OR HYDROMULCH	---	FINAL

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VERTICAL EROSION CONTROL PLAN - NORTH SIDE

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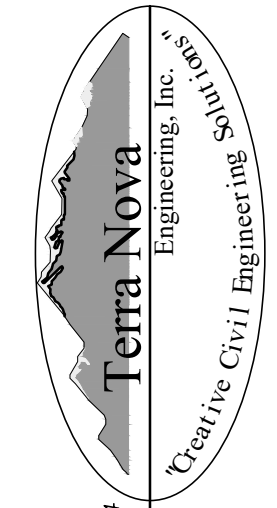
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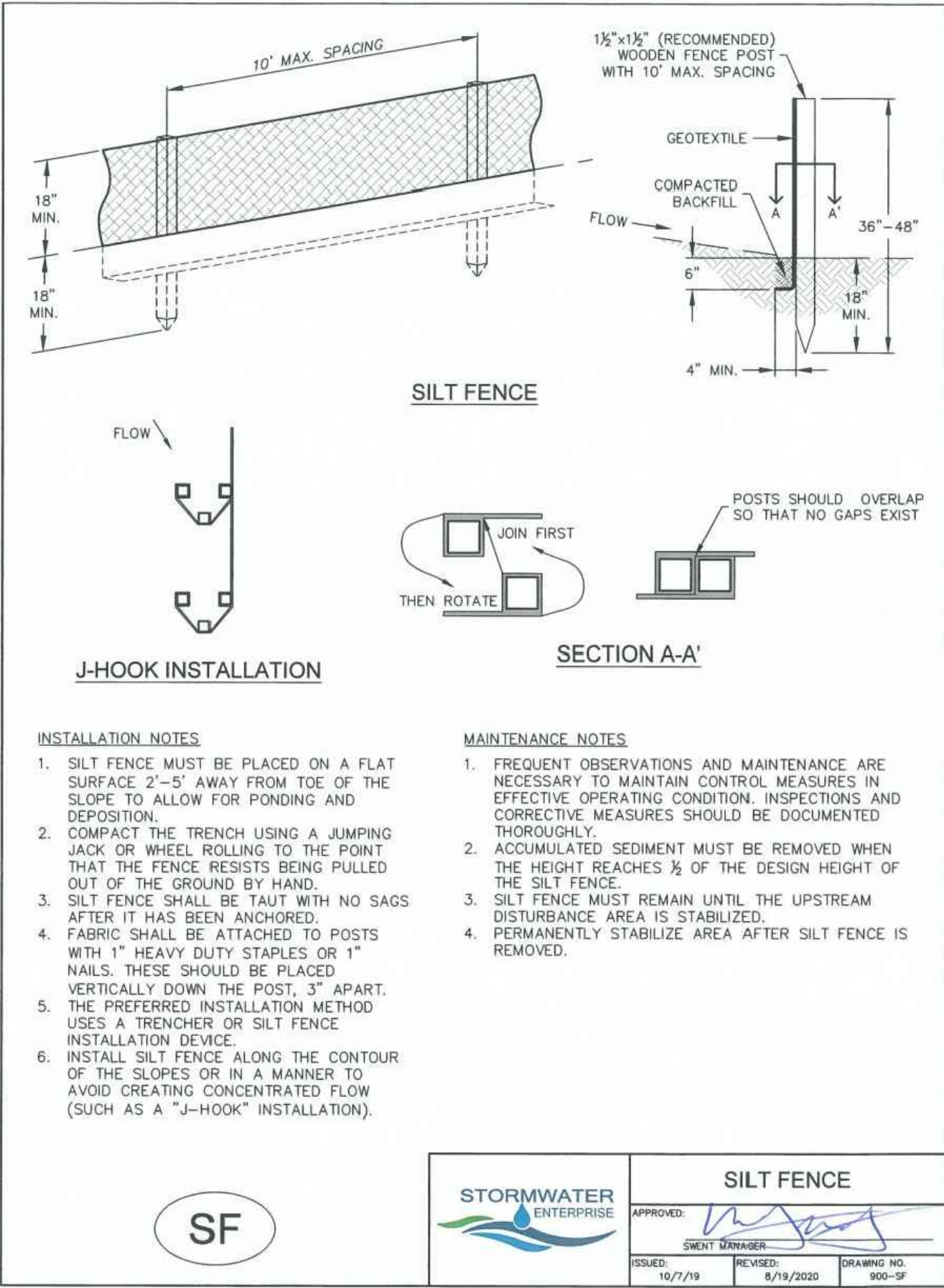
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VERTICAL EROSION CONTROL PLAN — SOUTH SIDE

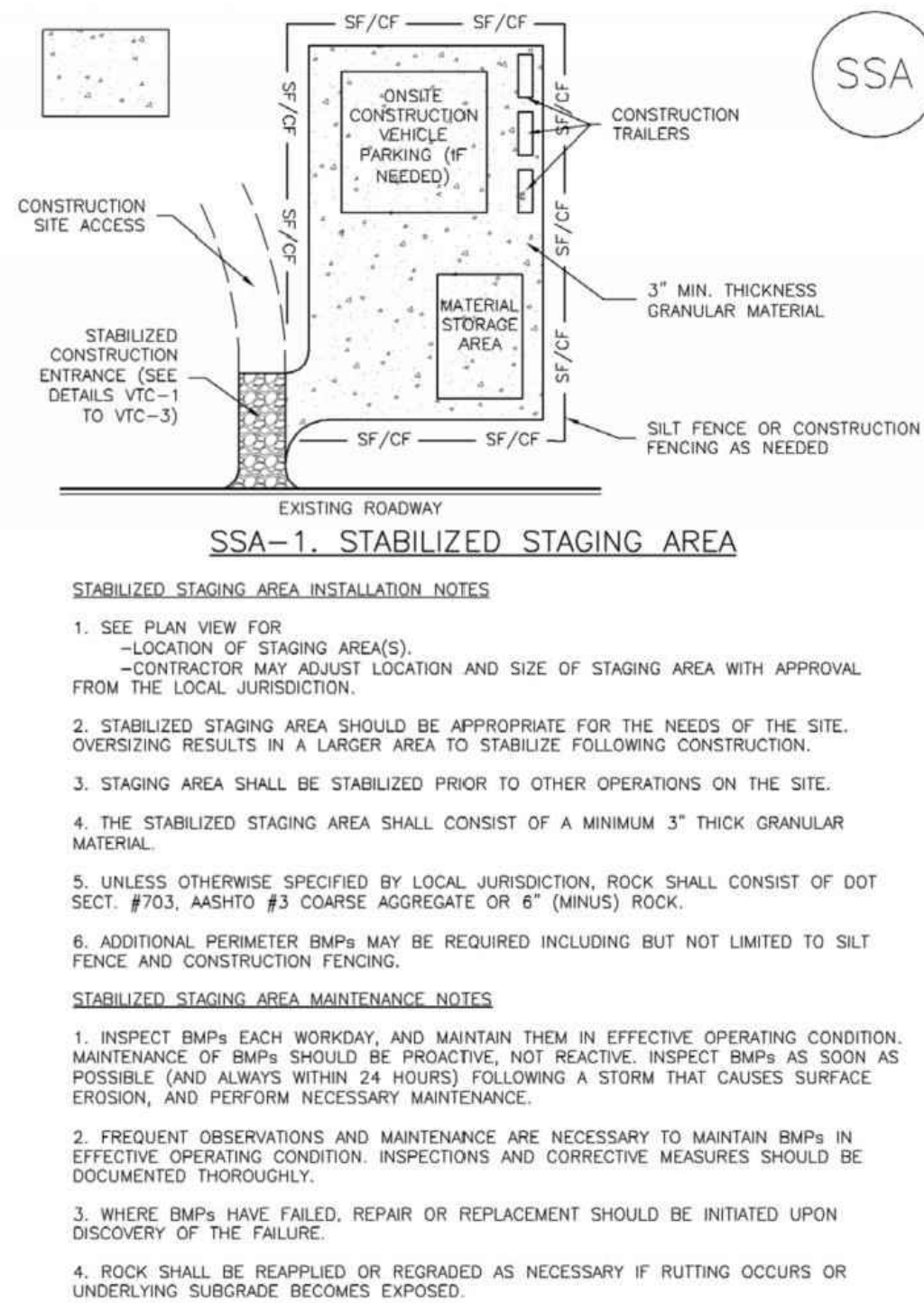
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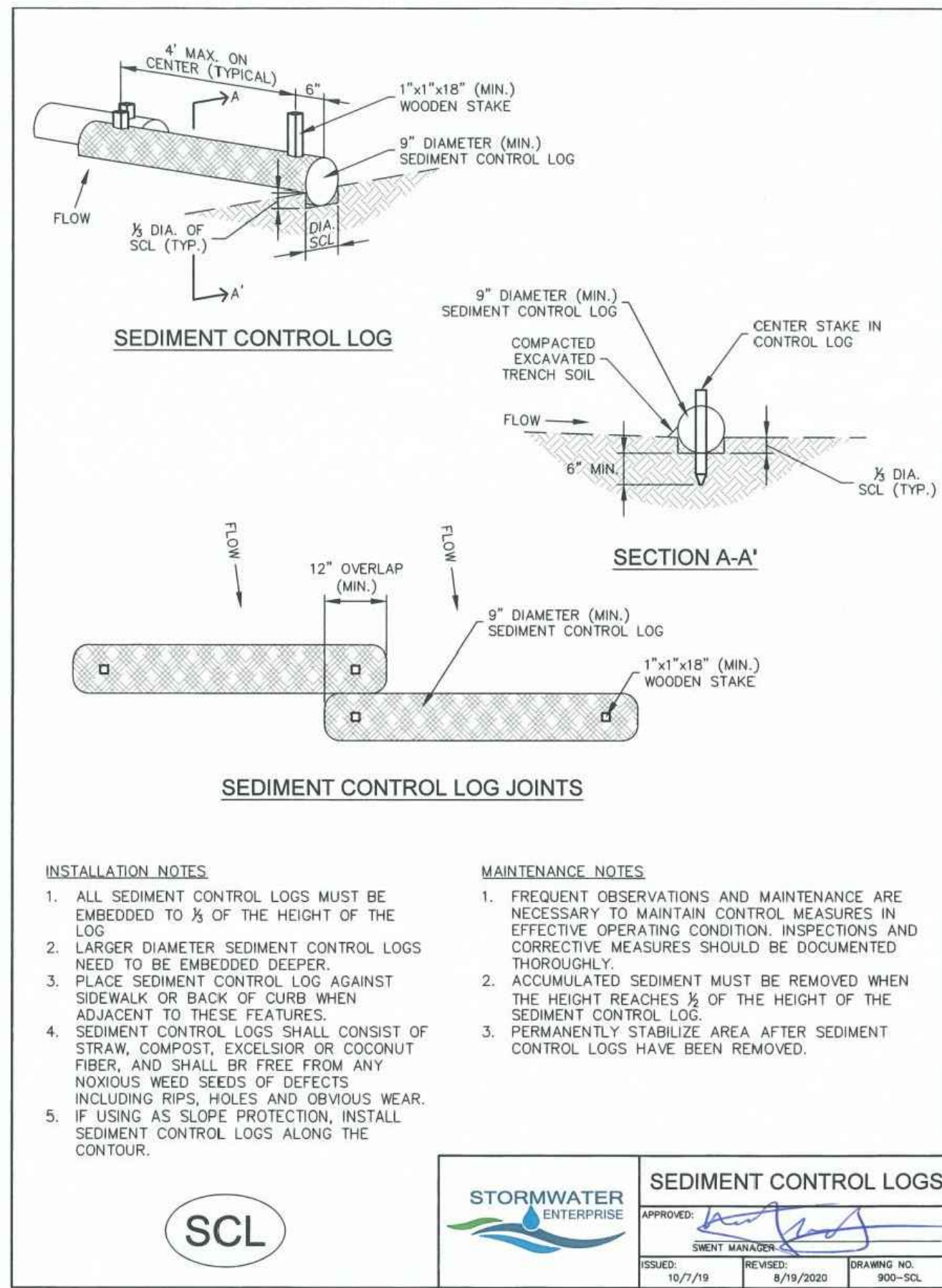
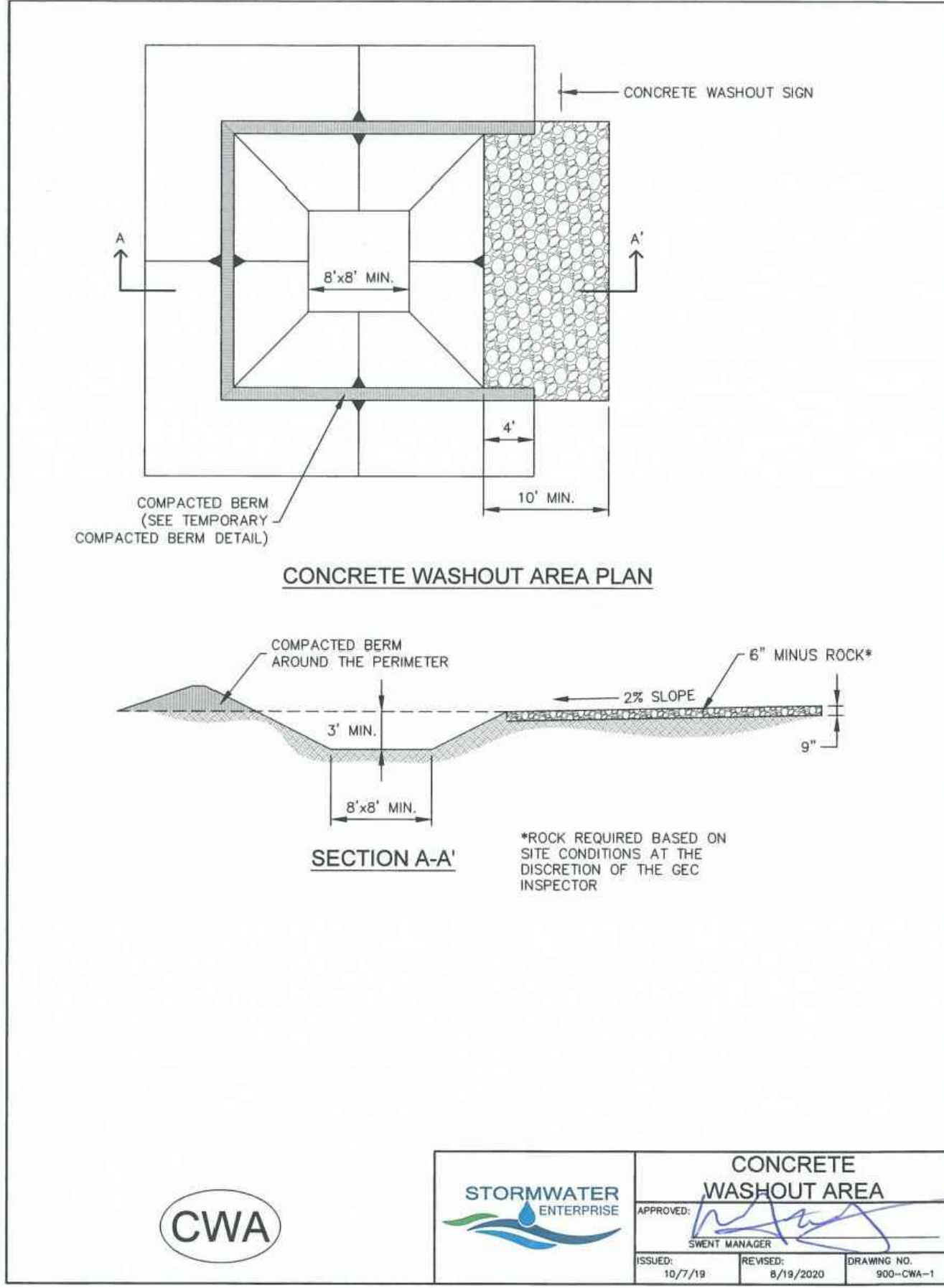
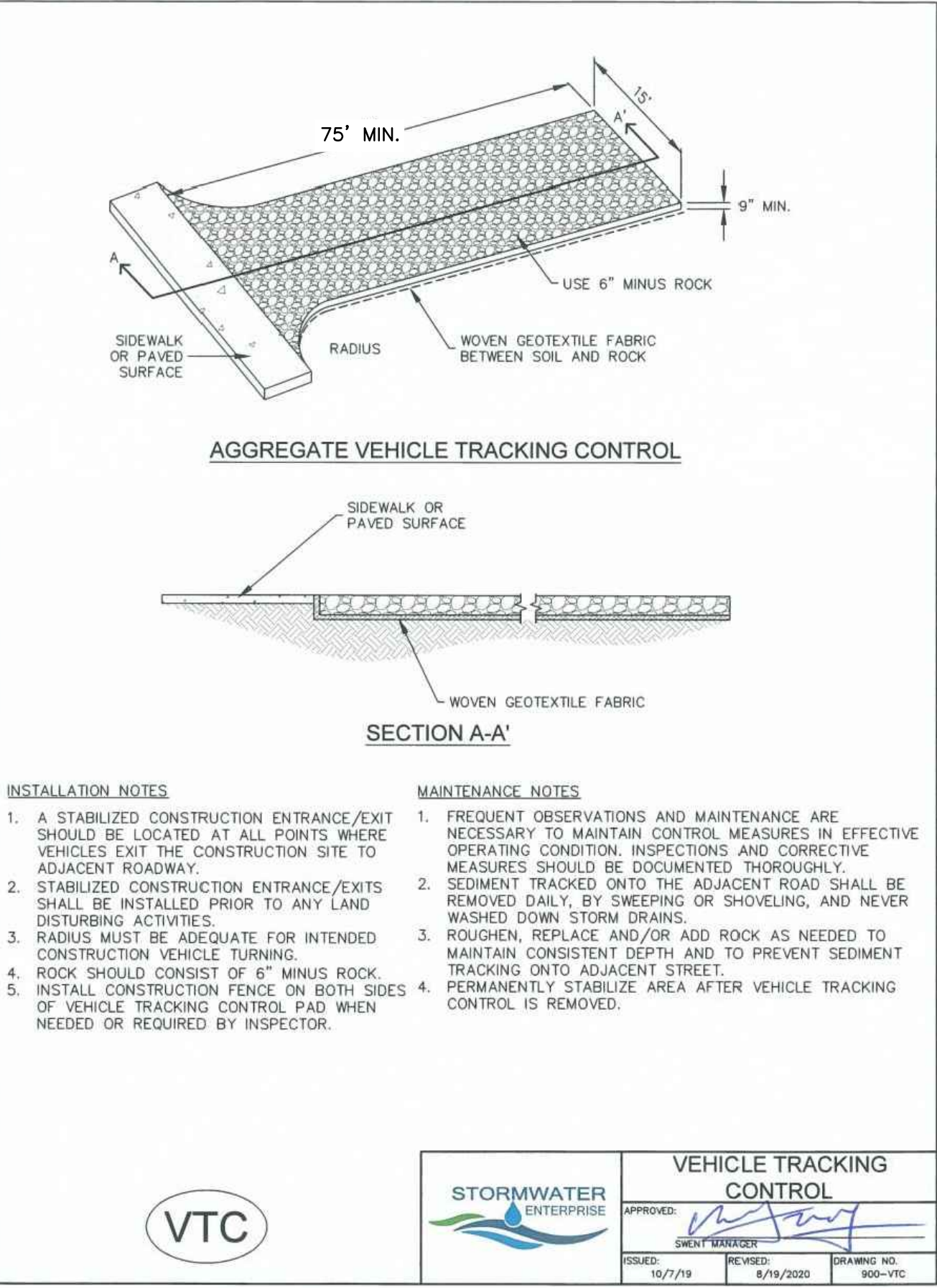
Stabilized Staging Area (SSA)

SM-6



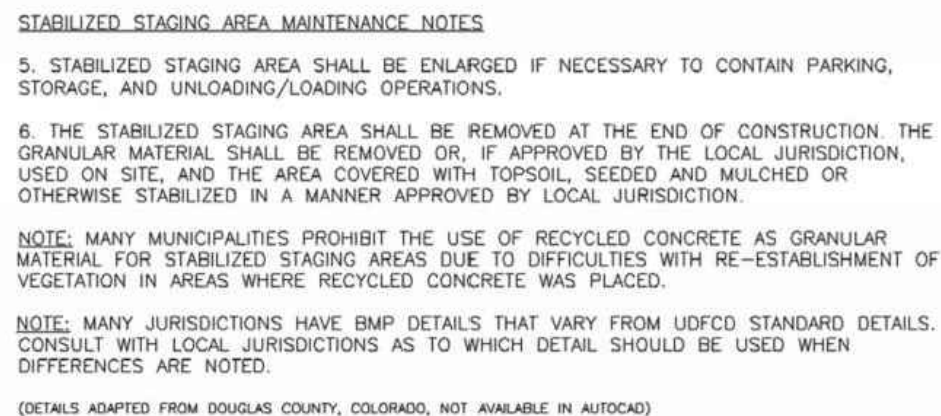
November 2010 Urban Drainage and Flood Control District
Urban Storm Drainage Criteria Manual Volume 3

SSA-3



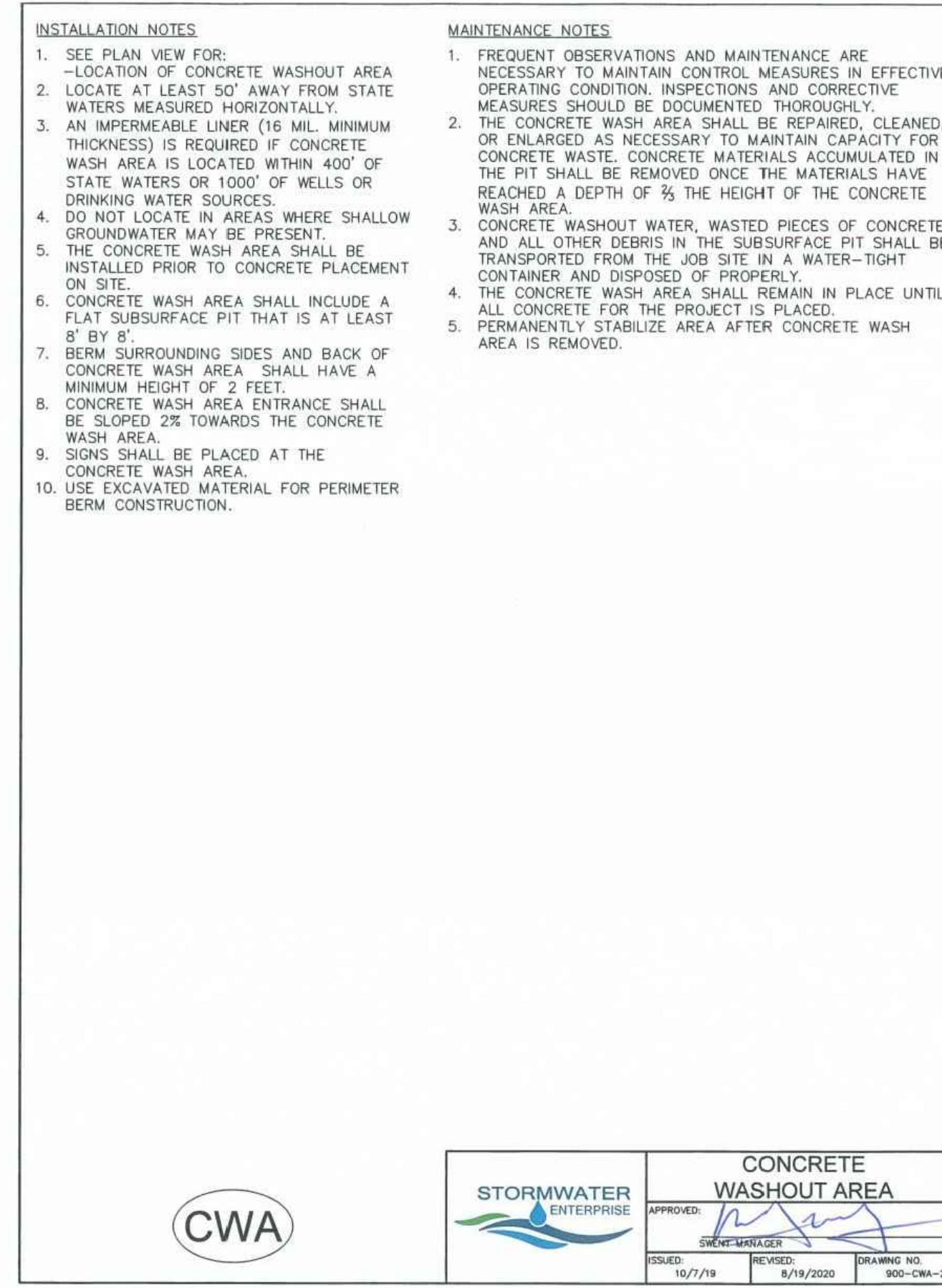
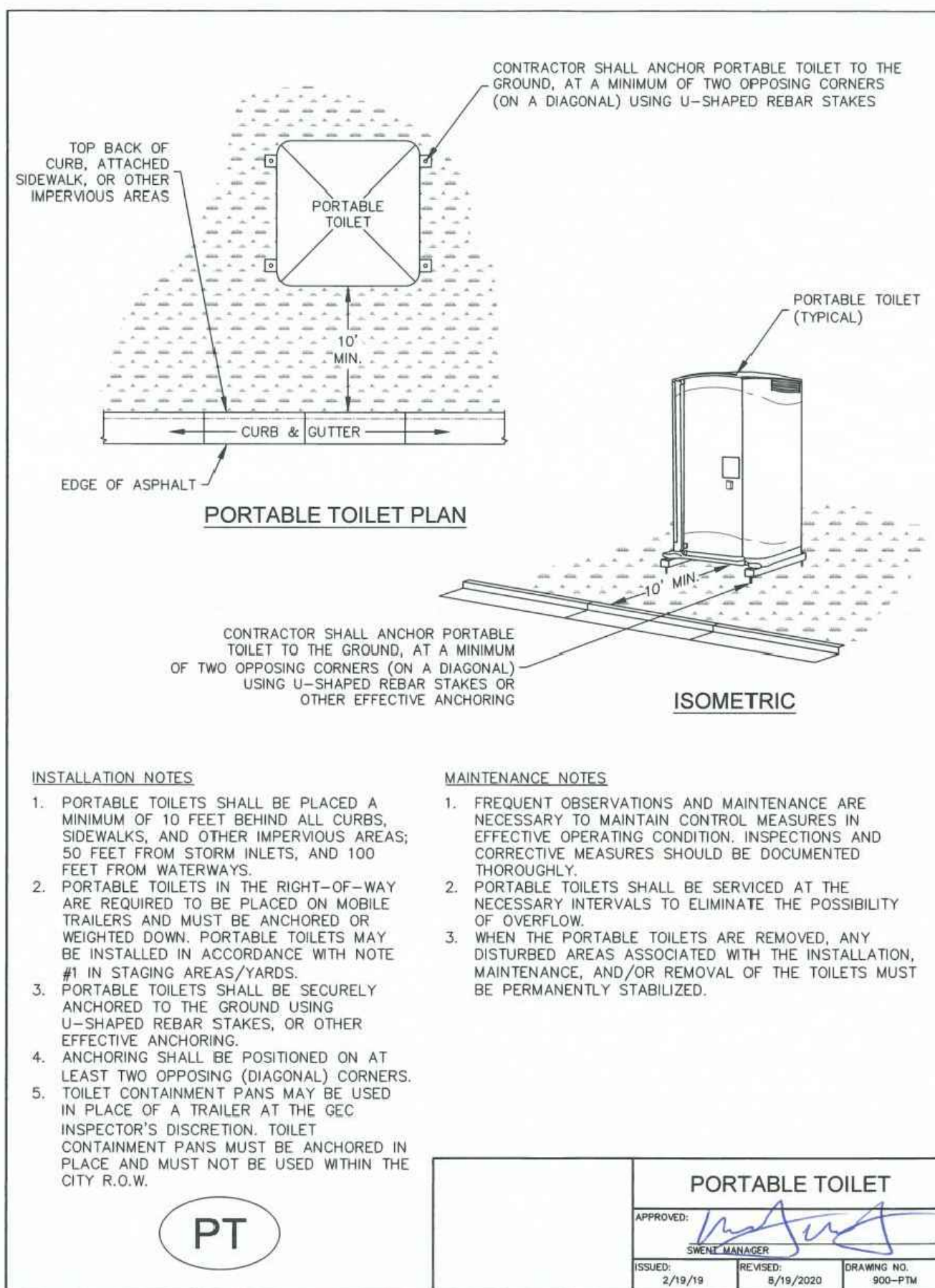
Stabilized Staging Area (SSA)

SM-6



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

November 2010



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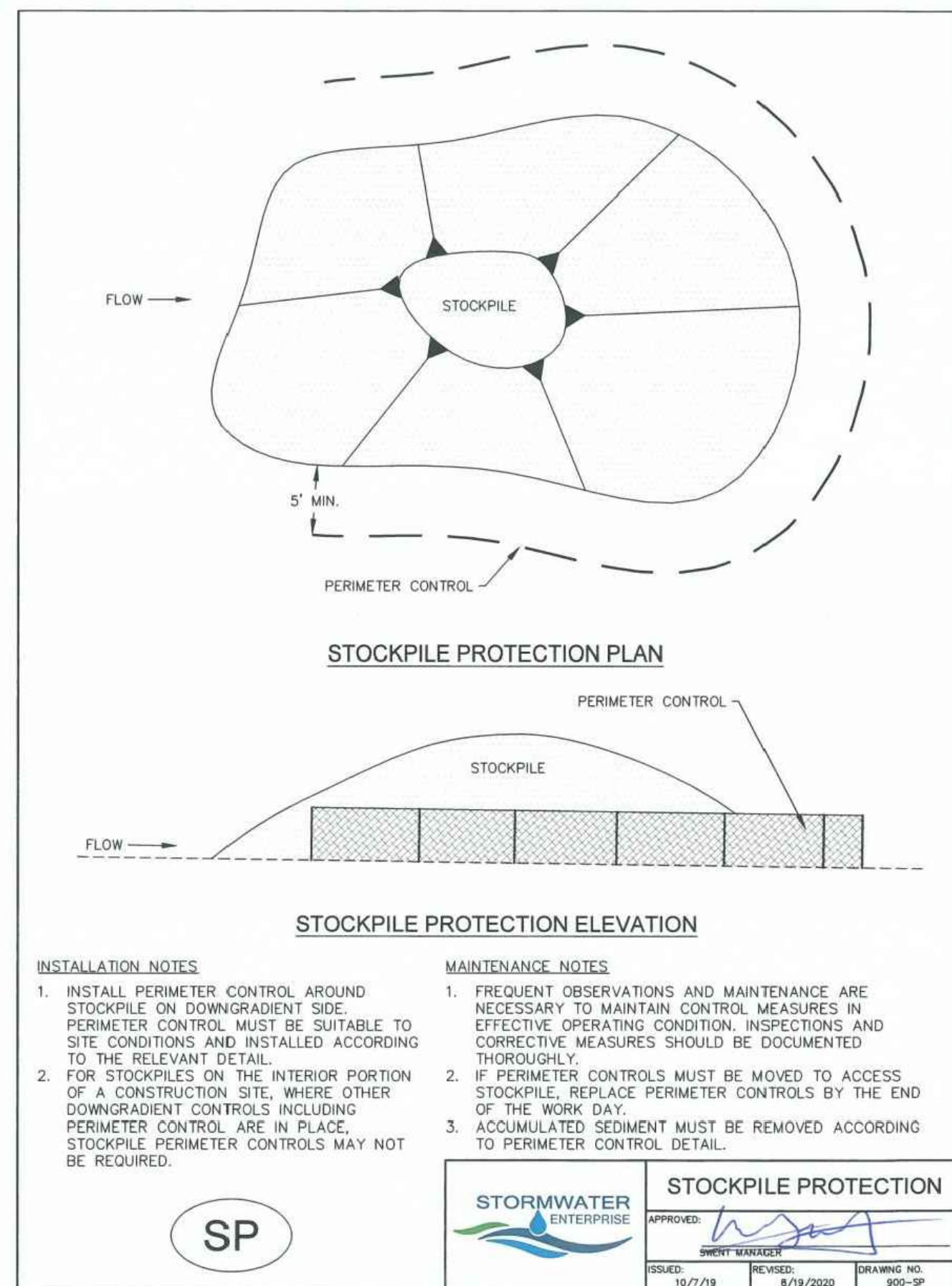
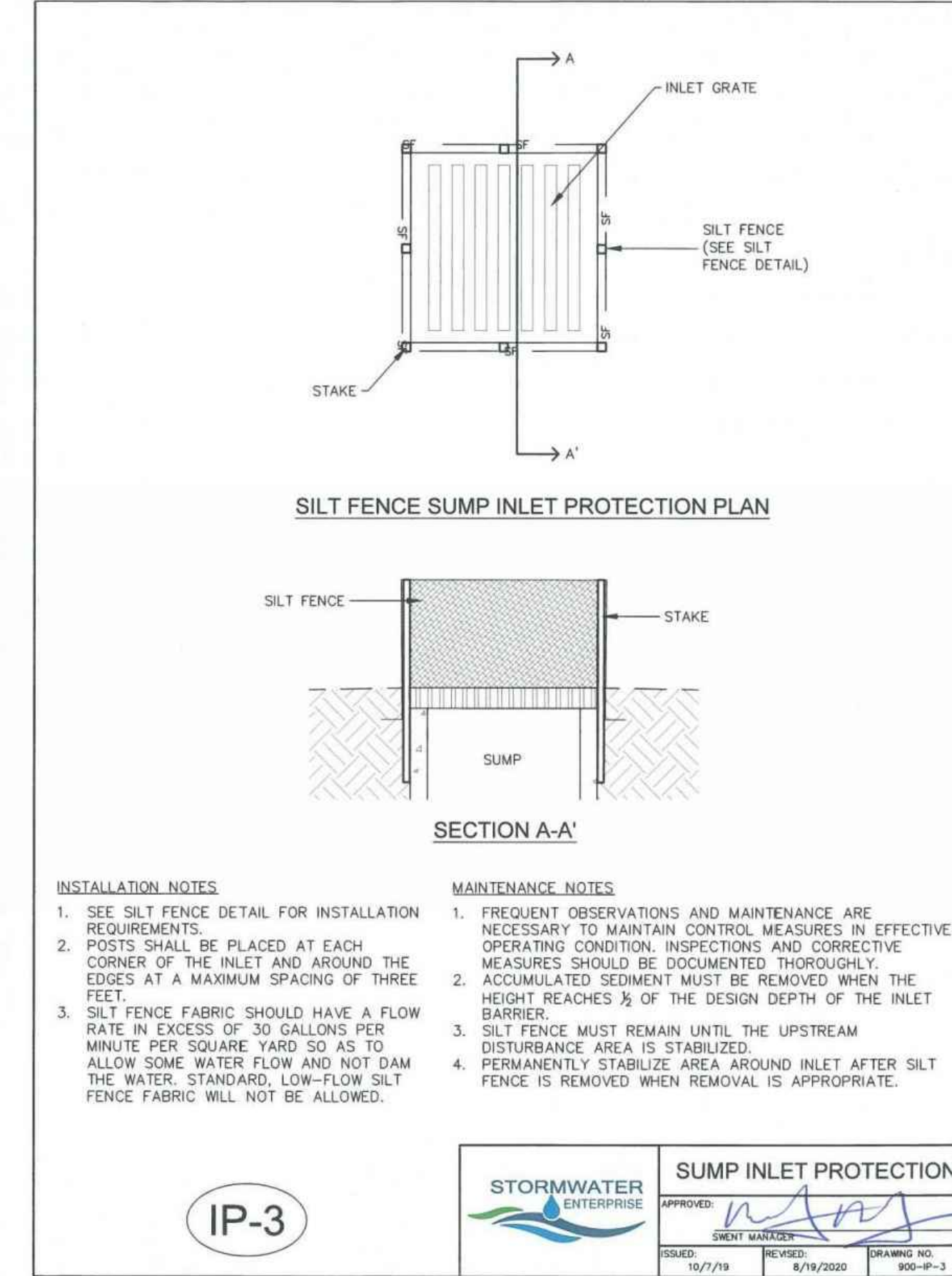
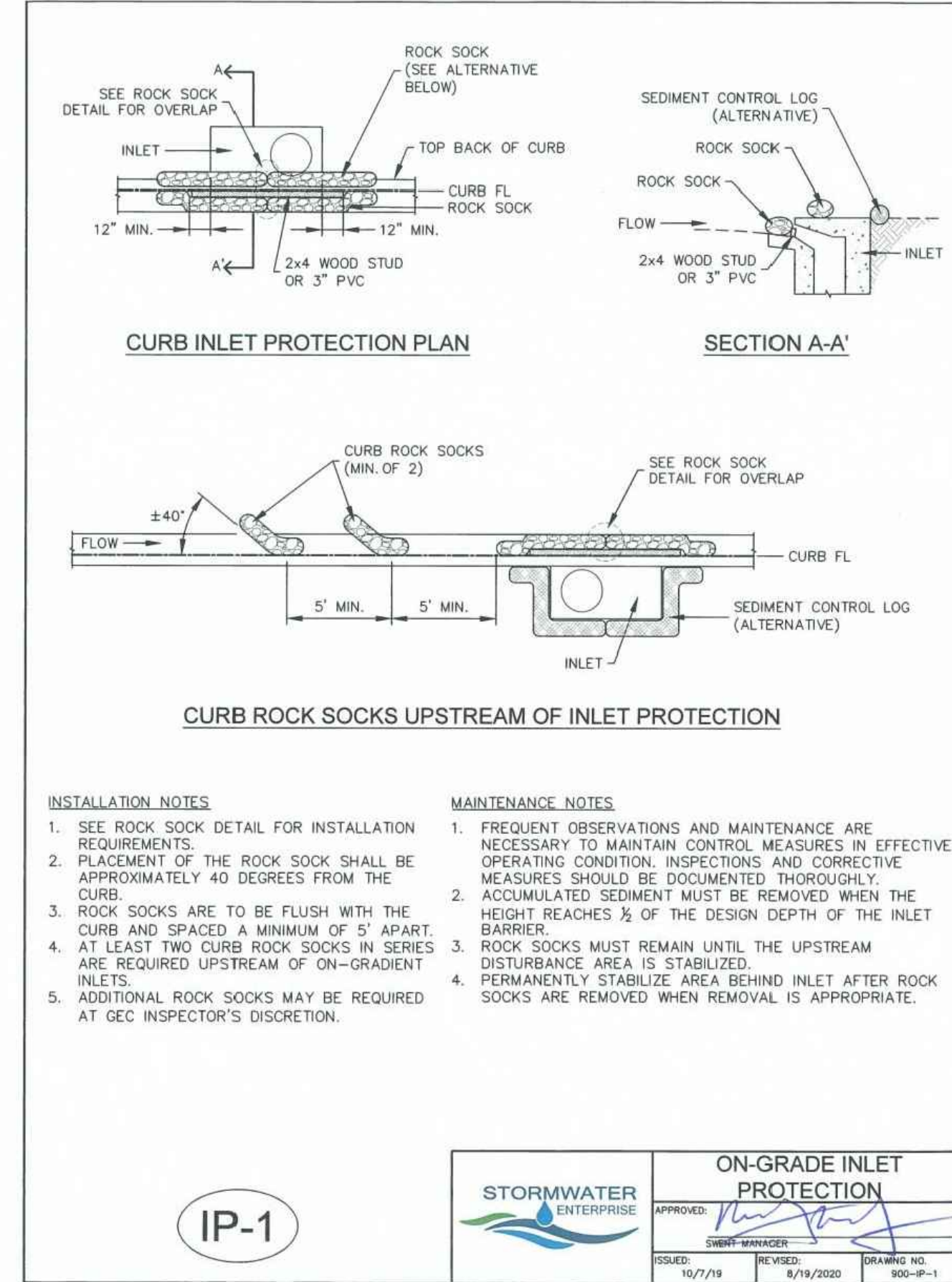
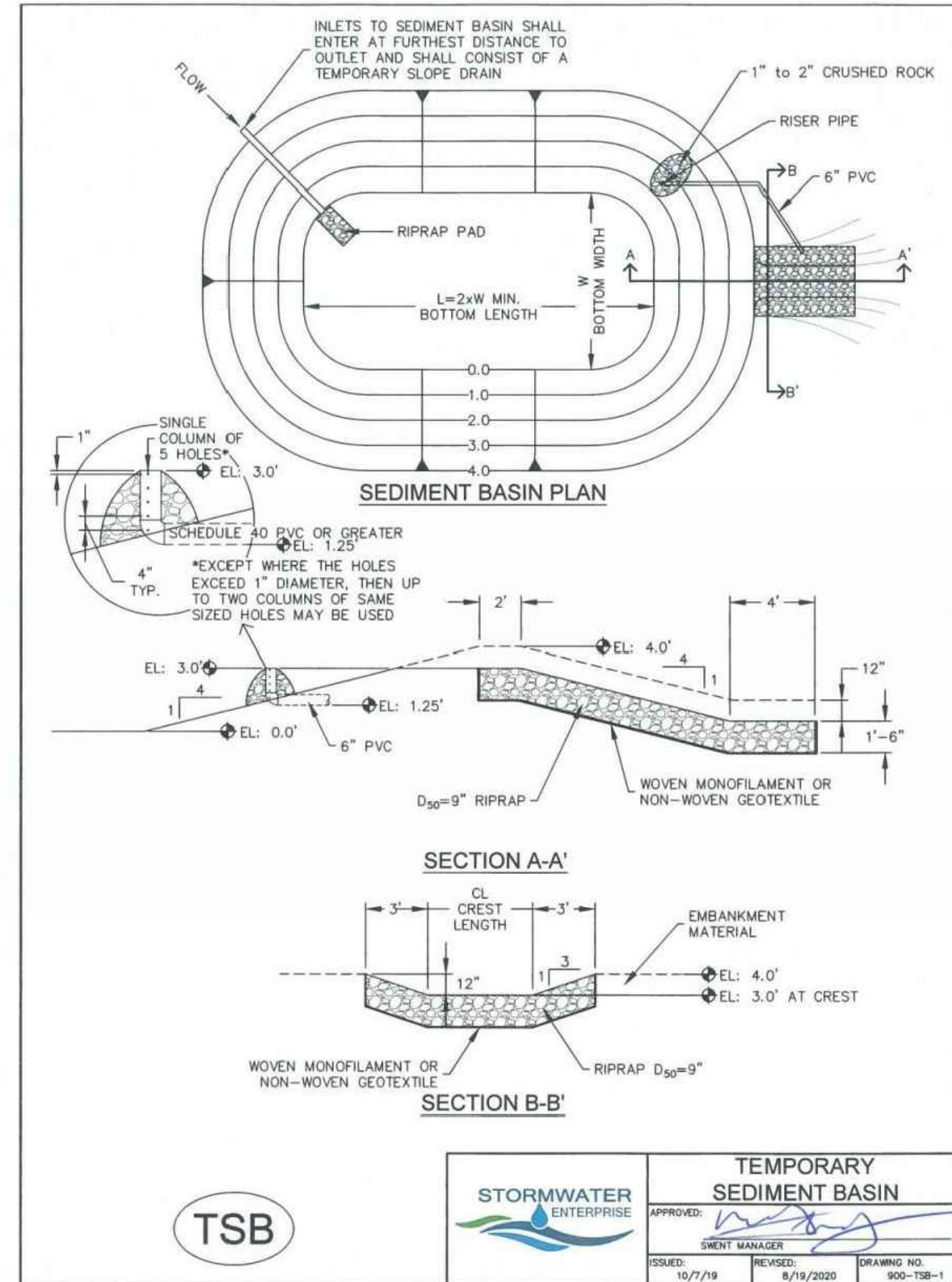
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**TABLE SB-1, SIZING INFORMATION FOR
STANDARD SEDIMENT BASIN**

UPSTREAM DRAINAGE AREA (ROUNDED TO NEAREST ACRE), (AC)	BASIN BOTTOM WIDTH (W), (FT)	SPILLWAY CREST LENGTH (CL), (FT)	HOLE DIAMETER (HD), (IN)
1	125"	2	3/32
2	21	3	1/16
3	28	5	1/8
4	33 1/2	6	9/16
5	38 1/2	8	7/16
6	43	9	29/32
7	47 1/2	11	29/32
8	51	12	29/32
9	55	13	3/4
10	58 1/2	15	15/16
11	61	16	29/16
12	64	18	1
13	67 1/2	19	1 1/16
14	70 1/2	21	1 1/8
15	73 1/2	22	1 1/4

FOR 33 AC DRAINAGE AREAS USE:

16:1

4:8

2:8

INSTALLATION NOTES:

1. FOR STANDARD BASIN, BOTTOM DIMENSION MAY BE MODIFIED AS LONG AS BOTTOM AREA IS NOT REDUCED.
2. EMBANKMENT MATERIAL SHALL CONSIST OF SOIL FREE OF DEBRIS, ORGANIC MATERIAL, AND ROCKS OR CONCRETE GREATER THAN 3 INCHES, AND SHALL HAVE A MINIMUM OF 15 PERCENT BY WEIGHT PASSING THE No. 200 SIEVE.
3. EMBANKMENT MATERIAL SHALL BE COMPACTED TO AT LEAST 95 PERCENT OF MAXIMUM DENSITY IN ACCORDANCE WITH ASTM D-698.
4. PIPE SCHEDULE 40 OR GREATER SHALL BE USED.
5. THE DETAILS SHOWN ON THESE SHEETS PERTAIN TO STANDARD SEDIMENT BASIN(S) FOR DRAINAGE AREAS LESS THAN 15 ACRES. SEE CONSTRUCTION DRAWINGS FOR EMBANKMENT, STORAGE VOLUME, SPILLWAY, OUTLET, AND OUTLET PROTECTION DETAILS FOR ANY SEDIMENT BASIN(S) THAT HAVE BEEN INDIVIDUALLY DESIGNED FOR DRAINAGE AREAS LARGER THAN 15 ACRES. DESIGN CALCULATIONS MUST BE APPROVED PRIOR TO IMPLEMENTATION.

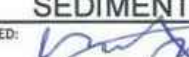
MAINTENANCE NOTES:

1. FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN CULVERT MEASURES IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.
2. SEDIMENT ACCUMULATED IN BASIN SHALL BE REMOVED AS NEEDED TO MAINTAIN CULVERT MEASURE EFFECTIVENESS, TYPICALLY WHEN SEDIMENT DEPTH REACHES ONE FOOT (I.E. TWO FEET BELOW SPILLWAY CREST).
3. SEDIMENT BASINS ARE TO REMAIN IN PLACE UNTIL THE UPSTREAM DISTURBED AREA IS PERMANENTLY STABILIZED.
4. PERMANENTLY STABILIZE AREA AFTER SEDIMENT BASIN REMOVAL.

TSB

**STORMWATER
ENTERPRISE**

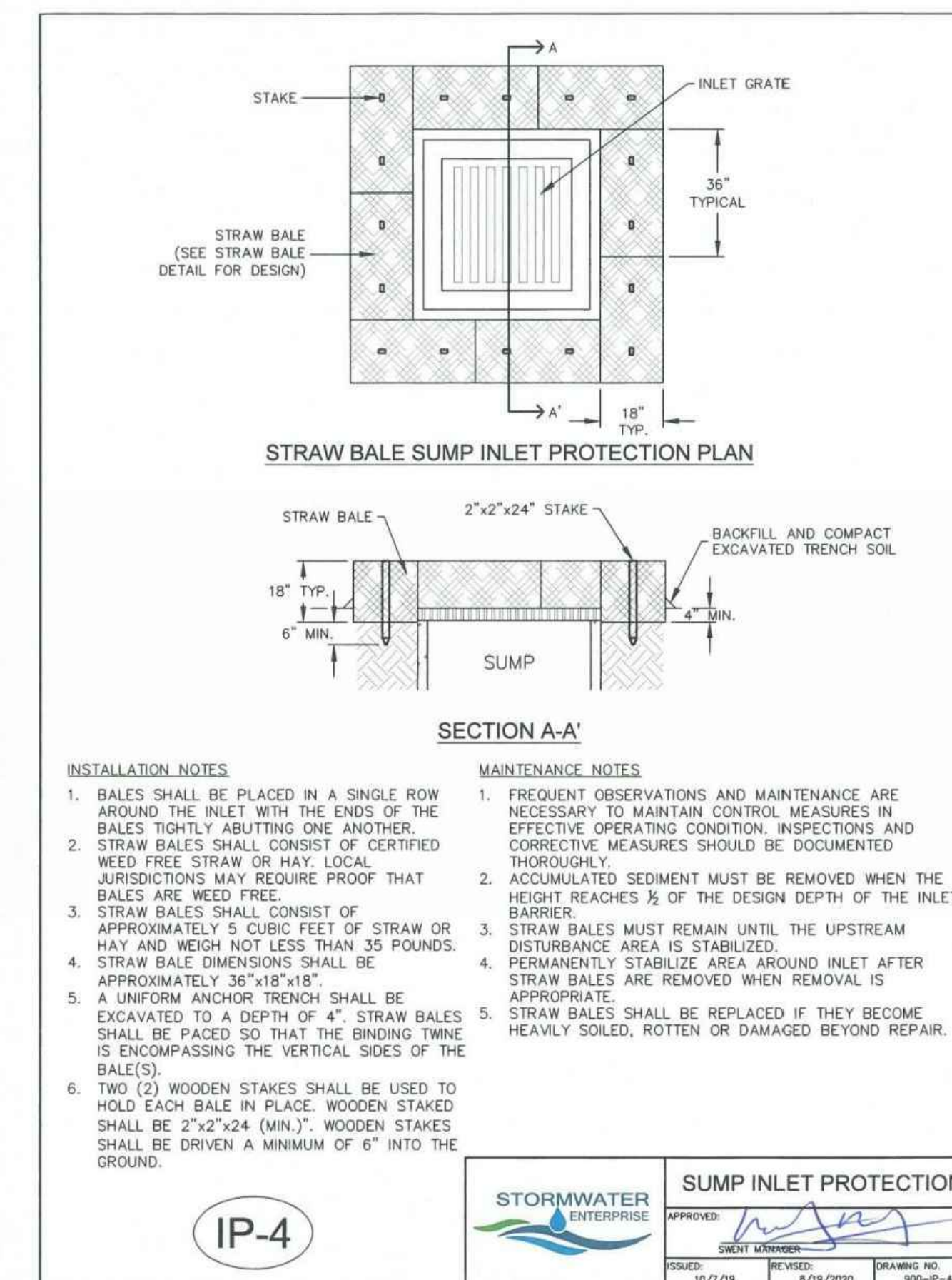
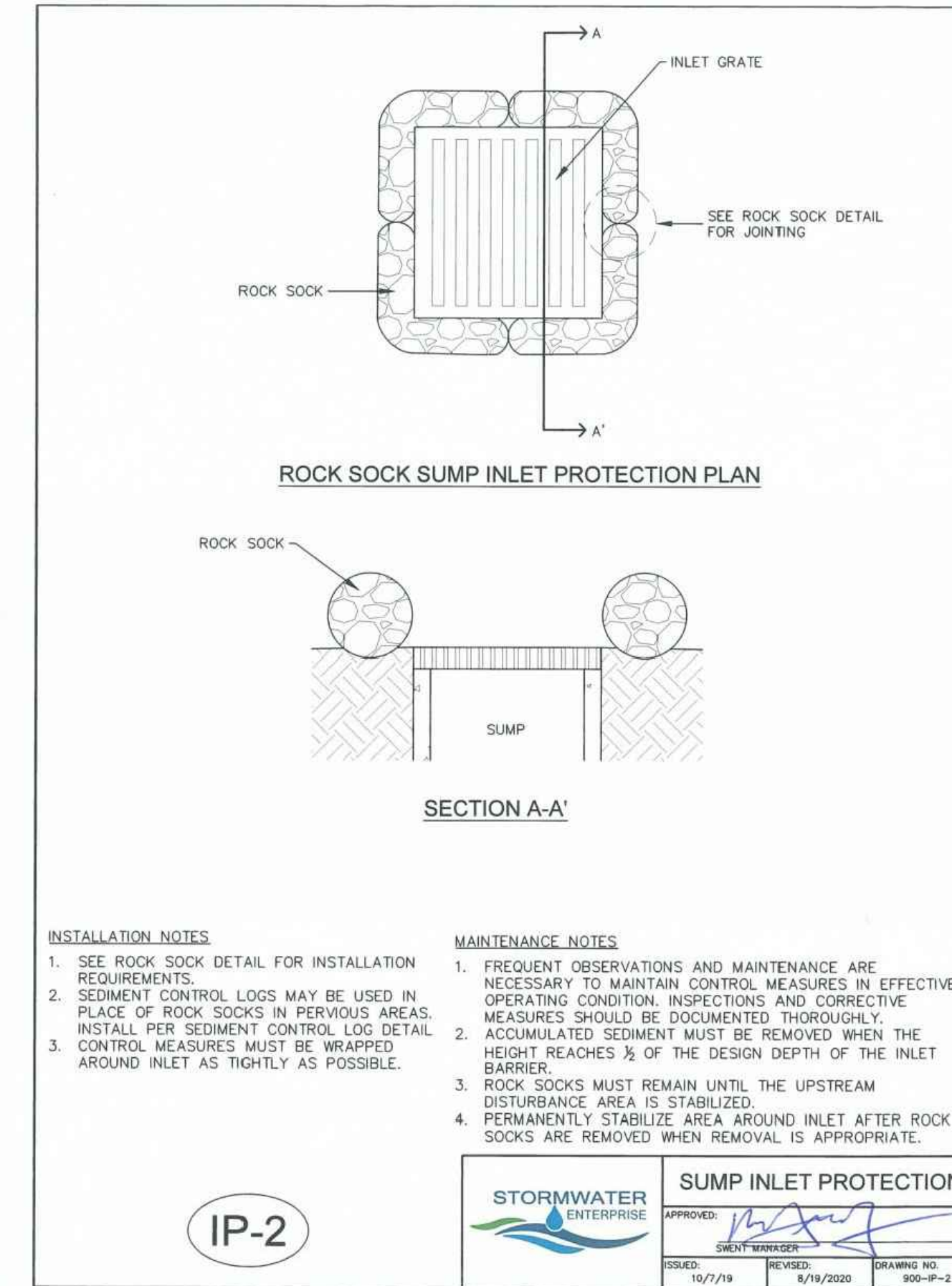
**TEMPORARY
SEDIMENT BASIN**

APPROVED: 

DATE: 10/7/18

REVISION: 8/18/2020

DRAWING NO. 800-TSB-2

[illegible]

SEEDING & MULCHING

ALL SOIL TESTING, SOILS AMENDMENT AND FERTILIZER DOCUMENTATION, AND SEED LOAD AND BAG TICKETS MUST BE ADDED TO THE CSWMP.

SOIL PREPARATION

1. IN AREAS TO BE SEEDED, THE UPPER 6 INCHES OF THE SOIL MUST NOT BE HEAVILY COMPACTED, AND SHOULD BE IN FRABLE CONDITION: LESS THAN 85% STANDARD PROCTOR DENSITY IS ACCEPTABLE. AREAS OF COMPACTION OR GENERAL CONSTRUCTION ACTIVITY MUST BE SCARIFIED TO A DEPTH OF 6 TO 12 INCHES PRIOR TO SPREADING TOPSOIL TO BREAK UP COMPACTED LAYERS AND PROVIDE A BLENDING ZONE BETWEEN DIFFERENT SOIL LAYERS.

2. AREAS TO BE PLANTED SHALL HAVE AT LEAST 4 INCHES OF TOPSOIL SUITABLE TO SUPPORT PLANT GROWTH.

3. THE CITY RECOMMENDS THAT EXISTING AND/OR IMPORTED TOPSOIL BE TESTED TO IDENTIFY SOIL DEFICIENCIES AND ANY SOIL AMENDMENTS NECESSARY TO ADDRESS THESE DEFICIENCIES. SOIL AMENDMENTS AND/OR FERTILIZERS SHOULD BE ADDED TO CORRECT TOPSOIL DEFICIENCIES BASED ON SOIL TESTING RESULTS.

4. TOPSOIL SHALL BE PROTECTED DURING THE CONSTRUCTION PERIOD TO RETAIN ITS STRUCTURE. AVOID COMPACTION, AND TO PREVENT EROSION AND CONTAMINATION. STRIPPED TOPSOIL MUST BE STORED IN AN AREA AWAY FROM MACHINERY AND CONSTRUCTION OPERATIONS, AND CARE MUST BE TAKEN TO PROTECT THE TOPSOIL AS A VALUABLE COMMODITY. TOPSOIL MUST NOT BE STRIPPED DURING UNDESIRABLE WORKING CONDITIONS (E.G. DURING WET WEATHER OR WHEN SOILS ARE SATURATED). TOPSOIL SHALL NOT BE STORED IN SWALES OR IN AREAS WITH POOR DRAINAGE.

SEEDING

1. ALLOWABLE SEED MIXES ARE INCLUDED IN THE CITY OF COLORADO SPRINGS STORMWATER CONSTRUCTION MANUAL. ALTERNATIVE SEED MIXES ARE ACCEPTABLE IF INCLUDED IN AN APPROVED LANDSCAPING PLAN.

2. SEED SHOULD BE DRILL-SEEDED WHENEVER POSSIBLE.

•SEED DEPTH MUST BE ¼ TO ½ INCHES WHEN DRILL-SEEDING IS USED

3. BROADCAST SEEDING OR HYDRO-SEEDING WITH TACKIFIER MAY BE SUBSTITUTED ON SLOPES STEEPER THAN 3:1 OR ON OTHER AREAS NOT PRACTICAL TO DRILL SEED.

•SEEDING RATES MUST BE DOUBLED FOR BROADCAST SEEDING OR INCREASED BY 50% IF USING A BRILLION DRILL OR HYDRO-SEEDING

•BROADCAST SEEDING MUST BE LIGHTLY HAND-RAKED INTO THE SOIL.

MULCHING

1. MULCHING SHOULD BE COMPLETED AS SOON AS PRACTICABLE AFTER SEEDING, HOWEVER PLANTED AREAS MUST BE MULCHED NO LATER THAN 14 DAYS AFTER PLANTING.

2. MULCHING REQUIREMENTS INCLUDE:

•HAY OR STRAW MULCH

– ONLY CERTIFIED WEED-FREE AND CERTIFIED SEED-FREE MULCH MAY BE USED. MULCH MUST BE APPLIED AT 2 TONS/ACRE AND ADEQUATELY SECURED BY CRIMPING AND/OR TACKIFIER.

– CRIMPING MUST NOT BE USED ON SLOPES GREATER THAN 3:1 AND MULCH FIBERS MUST BE TUCKED INTO THE SOIL TO A DEPTH OF 3 TO 4 INCHES.

– TACKIFIER MUST BE USED IN PLACE OF CRIMPING ON SLOPES STEEPER THAN 3:1.

•HYDRAULIC MULCHING

– HYDRAULIC MULCHING IS AN OPTION ON STEEP SLOPES OR WHERE ACCESS IS LIMITED.

– IF HYDRO-SEEDING IS USED, MULCHING MUST BE APPLIED AS A SEPARATE, SECOND OPERATION.

– WOOD CELLULOSE FIBERS MIXED WITH WATER MUST BE APPLIED AT A RATE OF 2,000 TO 2,500 POUNDS/ACRE, AND TACKIFIER MUST BE APPLIED AT A RATE OF 100 POUNDS/ACRE.

•EROSION CONTROL BLANKET

– EROSION CONTROL BLANKET MAY BE USED IN PLACE OF TRADITIONAL MULCHING METHODS.

SM

STORMWATER ENTERPRISE

SEEDING & MULCHING

ISSUED: 10/7/19

REVIEWED: 8/19/2020

DRAWING NO. 900-SM

Chapter 5
Native Vegetation Requirements and Guidelines

Table 5-1. El Paso County Conservation District All-Purpose Mix for Upland, Transition and Permanent Control Measure Areas

Common Name	Scientific Name	Growth Season / Form	% of Mix	Pounds PLS		
				• Irrigated broadcast • Irrigated hydroseeded 80 seeds/sq ft	• Non-irrigated broadcast • Non-irrigated hydroseeded • Irrigated drilled 40 seeds/sq ft	• Non-irrigated drilled 20 seeds/sq ft
Bluestem, big	<i>Andropogon gerardii</i>	Warm, sod	20	4.4	2.2	1.1
Gramma, blue	<i>Bouteloua gracilis</i>	Warm, bunch	10	0.5	0.25	0.13
Green needlegrass ²	<i>Nassella viridula</i>	Cool, bunch	10	2	1	0.5
Wheatgrass, western ²	<i>Pascopyrum smithii</i>	Cool, sod	20	6.4	3.2	1.6
Gramma, sideoats	<i>Bouteloua curtipendula</i>	Warm, bunch	10	2	1	0.5
Switchgrass ²	<i>Panicum virgatum</i>	Warm, bunch/sod	10	0.8	0.4	0.2
Prairie sandreed	<i>Calamovilfa longifolia</i>	Warm, sod	10	1.2	0.6	0.3
Yellow indiagrass ²	<i>Sorghastrum nutans</i>	Warm, sod	10	2	1	0.5
Seed rate (lbs PLS/acre)				19.3	9.7	4.8

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Chapter 5
Native Vegetation Requirements and Guidelines

Table 5-2. El Paso County All-Purpose Low Grow Mix for Upland and Transition Areas

Common Name	Scientific Name	Growth Season / Form	% of Mix	Pounds PLS		
				• Irrigated broadcast • Irrigated hydroseeded 80 seeds/sq ft	• Non-irrigated broadcast • Non-irrigated hydroseeded • Irrigated drilled 40 seeds/sq ft	• Non-irrigated drilled 20 seeds/sq ft
Buffalograss	<i>Buchloe dactyloides</i>	Warm, sod	25	9.6	4.8	2.4
Gramma, blue	<i>Bouteloua gracilis</i>	Warm, bunch	20	10.8	5.4	2.7
Gramma, sideoats	<i>Bouteloua curtipendula</i>	Warm, bunch	29	5.6	2.8	1.4
Green needlegrass	<i>Nassella viridula</i>	Cool, bunch	5	3.2	1.6	0.8
Wheatgrass, western	<i>Pascopyrum smithii</i>	Cool, sod	20	12	6	3
Dropseed, sand	<i>Sporobolus cryptandrus</i>	Warm, bunch	1	0.8	0.4	0.2
Seed rate (lbs PLS/acre)				42	21	10.3

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REVISIONS

NO.	DESCRIPTION	DATE

UNTIL SUCH TIME AS THESE DRAWINGS ARE APPROVED BY THE REVIEWING AGENCIES, THE REVIEWING AGENCIES HAVE NO LIABILITY FOR THE DESIGN OR CONSTRUCTION OF THE PROJECT. ONLY THE DESIGNER'S WRITTEN AUTHORIZATION.

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PLATTE SELF STORAGE

GRADING AND EROSION CONTROL PLAN
EROSION CONTROL DETAILS

DESIGNED BY JF
DRAWN BY JF
CHECKED BY DF

H-SCALE AS SHOWN
V-SCALE N/A

JOB NO. 2419.00
DATE ISSUED 11/13/24
SHEET NO. 16 OF 27

GENERAL PERMIT APPLICATION

OPERATION AND MAINTENANCE INSPECTION FORM

The following inspection records are to be used at each bi-monthly stormwater management system inspection and after any precipitation or snowmelt event that causes surface runoff. As a result of these inspections, the SWMP may need to be revised. The inspection records and revised SWMP shall be made available to the division upon request. If the construction activity lasts more than 12 months, a copy of the inspection records and revised SWMP shall be sent to the division by May 1 of each year covering April 1 to March 31.

OPERATION AND MAINTENANCE INSPECTION RECORD