

**STORMWATER MANAGEMENT PLAN (SWMP)  
for  
MAYBERRY, COLORADO SPRINGS - FILING NO. 1  
(formerly known as “Ellicott Town Center”)**

**ACCEPTED for FILE  
Engineering Review**

*11/05/2020 1:10:24 PM*

*dsdnijkamp*

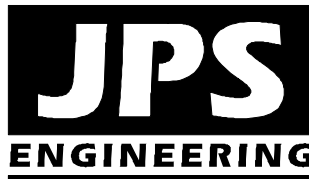
**EPC Planning & Community  
Development Department**

**Prepared for:**

**Colorado Springs Mayberry, LLC  
32823 Temecula Parkway  
Temecula, CA 92592**

October, 2020

**Prepared by:**



**19 East Willamette Avenue  
Colorado Springs, CO 80903  
(719)-477-9429  
[www.jpsengr.com](http://www.jpsengr.com)**

**JPS Project No. 030502  
EPC Project No. SF-18-025**

**MAYBERRY, COLORADO SPRINGS - FILING NO. 1**  
**STORMWATER MANAGEMENT PLAN (SWMP)**  
**TABLE OF CONTENTS**

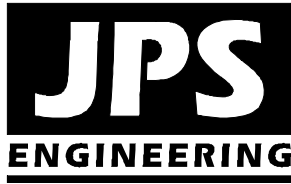
	<u>PAGE</u>
I. QUALIFIED STORMATER MANAGER.....	1
II. SPILL PREVENTION AND RESPONSE PLAN .....	1
III. MATERIALS HANDLING .....	2
IV. POTENTIAL SOURCES OF POLLUTION.....	4
V. IMPLEMENTATION OF CONTROL MEASURES.....	5
VI. SITE DESCRIPTION .....	7
VII. SITE MAP .....	8
VIII. FINAL STABILIZATION AND LONG-TERM STORMWATER MANAGEMENT .....	8
IX. INSPECTION REPORTS.....	9

**APPENDICES**

Appendix A	Standard BMP Details
Appendix B	Drawings
	Figure A1: Vicinity Map
	Grading & Erosion Control (GEC) Plans

**General SWMP Notes:**

1. There are no existing streams, wetlands, or other surface waters within 50 feet of the construction limits.
2. There are no dedicated asphalt / concrete batch plants proposed.
3. There are no anticipated allowable non-stormwater discharges from this site (no groundwater, springs, irrigation, discharge covered by CDPHE Low Risk Guidance, etc.).



**MAYBERRY, COLORADO SPRINGS - FILING NO. 1**  
**(formerly know as “Ellicott Town Center”)**  
**STORMWATER MANAGEMENT PLAN (SWMP)**

September, 2020

---

**I. QUALIFIED STORMWATER MANAGER**

**A. Qualified Stormwater Manager**

**Contractor:** Colorado Springs Mayberry, LLC  
3823 Temecula Parkway  
Temecula, CA 92592  
Attn: Rick Scott (951) 252-8133  
rick@cormanleigh.com

**B. Applicant / Contact Information**

**Owner/Developer:** Colorado Springs Mayberry, LLC  
3823 Temecula Parkway  
Temecula, CA 92592  
Attn: Rick Scott (951) 252-8133  
rick@cormanleigh.com

**Engineer:** JPS Engineering, Inc.  
19 E. Willamette Avenue  
Colorado Springs, CO 80903  
Attn: John P. Schwab, P.E. (719)-477-9429  
john@jpsengr.com

**II. SPILL PREVENTION AND RESPONSE PLAN**

**A. Spill Prevention and Response Procedures:**

- The primary objective in responding to a spill is to quickly contain the material(s) and prevent or minimize their migration into storm water runoff and conveyance systems. If the release has impacted on-site storm water, it is critical to contain the released materials on site and prevent their release into receiving waters.

- Spill Response Procedures:
  - Notify site superintendent immediately when a spill, or the threat of a spill, is observed. The superintendent shall assess the situation and determine the appropriate response.
  - If spills represent an imminent threat of escaping on-site facilities and entering the receiving waters, site personnel shall respond immediately to contain the release and notify the superintendent after the situation has stabilized.
  - The site superintendent, or his designee, shall be responsible for completing a spill reporting form and for reporting the spill to the appropriate agency.
  - Spill response equipment shall be inspected and maintained as necessary to replace any materials used in spill response activities.
- Spill kits shall be on-hand at all fueling sites. Spill kit location(s) shall be reported to the SWMP Administrator.
- Absorbent materials shall be on-hand at all fueling areas for use in containing inadvertent spills. Containers shall be on-hand at all fueling sites for disposal of used absorbents.
- Recommended components of spill kits include the following:
  - Oil absorbent pads (one bale)
  - Oil absorbent booms (40 feet)
  - 55-gallon drums (2)
  - 9-mil plastic bags (10)
  - Personal protective equipment including gloves and goggles
- B. Notification Procedures:
  - In the event of an accident or spill, the SWMP Administrator shall be notified as a minimum.
  - Depending on the nature of the spill material involved, the Colorado Department of Public Health and Environment (24-hour spill reporting line: 877-518-5608), downstream water users, or other agencies may also need to be notified.
  - Any spill of oil which 1) violates water quality standards, 2) produces a “sheen” on a surface water, or 3) causes a sludge or emulsion, or any hazardous substance release, or hazardous waste release which exceeds the reportable quantity, must be reported immediately by telephone to the National Response Center Hotline at (800)-424-8802.

### **III. MATERIALS HANDLING**

- A. General Materials Handling Practices:
  - Potential pollutants shall be stored and used in a manner consistent with the manufacturer’s instructions in a secure location. To the extent practical, material storage areas should not be located near storm drain inlets and should be equipped with covers, roofs, or secondary containment as required to prevent storm water from contacting stored materials.



- Chemicals that are not compatible shall be stored and segregated areas so that spilled materials cannot combine and react.
  - Disposal of materials shall be in accordance with the manufacturer's instructions and applicable local, state, and federal regulations.
  - Materials no longer required for construction shall be removed from the site as soon as possible.
- B. Adequate garbage, construction waste, and sanitary waste handling and disposal facilities shall be provided as necessary to keep the site clear of obstruction and BMPs clear and functional.
- C. Specific Materials Handling Practices:
- All pollutants, including waste materials and demolition debris, that occur on-site during construction shall be handled in a way that does not contaminate storm water.
  - All chemicals including liquid products, petroleum products, water treatment chemicals, and wastes stored on site shall be covered and contained and protected from vandalism.
  - Maintenance and repair of all equipment and vehicles involving oil changes, hydraulic system drain down, de-greasing operations, fuel tank drain down and removal, and other activities which may result in the accidental release of contaminants, shall be conducted under cover during wet weather and on an impervious surface to prevent release of contaminants onto the ground. Materials spilled during maintenance operations shall be cleaned up immediately and properly disposed of.
  - Wheel wash water shall be settled and discharged on site by infiltration. Wheel wash water shall not be discharged to the storm water system.
  - Application of agricultural chemicals, including fertilizers and pesticides, shall be conducted in a manner and at application rates that will not result in loss of chemical to storm water runoff. Follow manufacturer's recommendations for application rates and procedures.
  - pH-modifying sources shall be managed to prevent contamination of runoff and storm water collected on site. The most common sources of pH-modifying materials are bulk cement, cement kiln dust (CKD), fly ash, new concrete washing and curing waters, waste streams generated from concrete grinding and sawing, exposed aggregate processes, and concrete pumping and mixer washout waters.
- D. Equipment maintenance and fueling: Contractor shall implement appropriate spill prevention and response procedures
- E. Concrete Wash Water: Unless confined in a pre-defined, bermed containment area, the cleaning of concrete truck delivery chutes is prohibited at the job site. The discharge of water containing waste cement to the storm drainage system is prohibited.

#### IV. POTENTIAL SOURCES OF POLLUTION

Potential pollutant sources will be addressed as follows:

##### POTENTIAL POLLUTION SOURCES

Potential Pollution Sources	Possible Site Contributions of Pollutants to Stormwater Discharges	Location
All disturbed and stored soils	Stockpiles of fill from site excavations, topsoil stockpiles.	Stockpiles
Vehicle tracking of sediments	See GEC Plans for vehicle entrance and exits. Vehicle tracking control pads will be installed and maintained at all construction access points.	VTC (per GEC Plans)
Management of contaminated soils	No contaminated soils are expected to be encountered.	N/A
Loading and unloading operations	Loading and unloading of construction materials	TBD*
Outdoor storage activities (building material, fertilizers, chemicals, etc.)	Stockpiles and equipment storage areas (no fertilizers, petroleum or chemical products will be stored on-site).	TBD*
Vehicle and equipment maintenance and fueling	Fueling will occur on-site using mobile equipment (will not be stored on-site). Equipment maintenance will occur off-site.	TBD*
Significant dust or particulate-generating processes	Vehicle tracking, soil removed from excavation, stockpiles.	TBD*
Routine maintenance activities involving fertilizers, pesticides, detergents, fuels, solvents, oils, etc.	All equipment maintenance will occur off-site. No fertilizers, pesticides, detergents, and/or solvents will be used or stored on-site.	TBD*
On-site waste management practices (waste piles, liquid wastes, dumpsters, etc.)	All waste will be removed from site as soon as possible, and disposed of at a permitted off-site disposal site	TBD*
Concrete truck/equipment washing, including the concrete truck chute and associated fixtures and equipment	Properly contained concrete washout areas may be designated and maintained within the site, based on construction phasing.	CWA

<b>Potential Pollution Sources</b>	<b>Possible Site Contributions of Pollutants to Stormwater Discharges</b>	<b>Location</b>
Dedicated asphalt and concrete batch plants	No dedicated asphalt or concrete batch plants are planned on-site.	N/A
Non-industrial waste sources such as worker trash and portable toilets	Worker trash will be removed from the site as soon as possible. Portable toilets will be utilized and maintained as required based on construction phasing.	TBD*
Other areas or procedures where potential spills can occur	Petroleum releases from equipment are possible.	TBD*

\* Contractor to add locations of any items not specified at this time\*

## **V. IMPLEMENTATION OF CONTROL MEASURES**

### **Narrative Description of Appropriate Stormwater Controls and Measures**

#### **Construction Phasing**

##### ***Phase 1 – Mobilization, Clearing & Grubbing Operations***

Clearing and grubbing will be completed prior to initial overlot grading activities for this site. Perimeter control measures will be installed prior to the start of construction operations. These perimeter controls will include silt fencing and a vehicle tracking control pad.

##### ***Phase 2 – Earthwork, Road Grading, and Utility Installation***

Major earthwork activities will include overlot grading, foundation over-excavation, backfill, and compaction, utility construction, and rough and final grading for site improvements.

##### ***Phase 3 – Building Construction and Final Grading Activities***

This phase will include final grading of building sites and landscape areas. Appropriate temporary BMP's will be maintained until vegetation is re-established throughout the site.

##### ***Phase 4 – Stabilization***

All disturbed areas within the project will be revegetated. The specific revegetation requirements will include the following:

- Landscape plantings – per approved landscape plans
- Native seeding – all other disturbed areas

### ***Phase 5 – Removal of Temporary Control Measures***

Temporary sediment control measures shall remain in place until vegetation has been adequately established to prevent erosion from storm runoff. Once adequate vegetation has been established, the temporary erosion control measures will be removed and disposed of off-site.

### **BMP's for Stormwater Pollution Prevention (See GEC Plans):**

<u>Phase</u>	<u>BMP</u>
Clearing and Grubbing necessary for perimeter controls	VTC's
Initiation of perimeter controls	Silt Fence
Remaining clearing and grubbing	
Site Grading	IP / SCL
Extended detention basins (sediment ponds during construction)	EDB / SB
Stabilization	SM
Removal of erosion control measures	

### **Proposed Sequence of Major Activities / Timing Schedule**

The anticipated start and completion time period of the construction activities is from May, 2020 through December, 2020. The estimated schedule for erosion control activities is as follows:

- Install Initial BMP's: May, 2020
- Site Grading: May, 2020
- Seeding & Mulching: May, 2021
- Final Stabilization: August, 2022

### **Erosion and Sediment Controls:**

- 1) Structural Practices / Control Measures (all structural Control Measures shall conform to ECM / DCM standards and details):
  - a. Silt fence at toe of slope along downstream limits of disturbed areas (see detail on Sh. C1.4)
  - b. Sediment control logs (SCL) along drainage swales
  - c. Inlet protection (IP) at storm inlets (see detail on Sh. C1.4)
  - d. Sediment Basins (SB); (refer to UDFCD standard details)
  - e. Extended Detention Basins (EDB); (see details on Sh. C1.5-C1.6)
- 2) Non-Structural Practices:
  - Preserve existing vegetation beyond limits of work
  - Temporary seeding of areas to remain disturbed for significant periods of time
  - Permanent seeding/mulching (SM) upon completion of rough grading

**Other Controls:**

- Contractor shall dispose of all waste materials at a permitted off-site disposal site.
- Vehicle tracking pads will be installed at all access points to limit off-site soil tracking.
- Street Sweeping: Contractor shall perform street sweeping following storm events and as required to keep adjoining public streets clean.

**Control Measure / BMP Details:**

- Refer to Standard BMP Details in GEC Plans.
- Refer to additional Standard Details in MHFD Volume 3 where applicable.

**VI. SITE DESCRIPTION**

- A. Nature of Construction Activity
  - Mayberry, Colorado Springs (formerly known as “Ellicott Town Center”) Filing No. 1 is a new residential subdivision in eastern El Paso County, Colorado consisting of 98 single-family residential lots on 228.0 acres. The site is located along the south side of State Highway 94 (SH94) between Peyton Highway and Ellicott Highway. Site development activities will include site grading, utilities, roadways, and associated subdivision improvements.
- B. Proposed sequence of major activities:
  - Mobilization / implementation of BMP’s
  - Clearing and grubbing
  - Rough grading
  - Utility installation
  - Final grading
  - Roadway construction and paving
- C. Total site area = 228-acres; Projected disturbed area = 70-acres (approx.)
- D. Soil erosion potential and potential impacts upon discharge:
  - On-site soils are comprised primarily of “Blakeland series” soils, which are characterized as well-drained loamy sand with rapid permeability, slow surface runoff rates, and moderate hazard of erosion (Hydrologic Soils Group A).
  - Potential impacts upon discharge would include sedimentation adversely affecting downstream waterways and habitat.
- E. Existing vegetation on site:
  - Native meadow grasses and trees (approx. 70% coverage, based on site inspection)
- F. Allowable non-stormwater components of discharge: none anticipated
- G. Receiving water: Surface drainage from this site flows southeasterly into the existing downstream grass-lined drainage swales and channels which ultimately flow to Black Squirrel Creek (ultimate receiving water).
- H. Stream Crossings: There are no stream crossings located within the construction site boundary.

## **VII. SITE MAP**

- SWMP Maps are provided on attached GEC Plans – Sheets C1.1-C1.3
- Qualified Stormwater Manager shall update SWMP Maps as required based on field conditions throughout the project.
- Contractor shall update and annotate the SWMP Maps to show the location of the construction trailer, stabilized staging area, CWA, and other items as these locations are determined on site.

## **VIII. FINAL STABILIZATION AND LONG-TERM STORMWATER MANAGEMENT**

- A. Permanent seeding will be provided to achieve long-term stabilization of the site.
- B. Seed Mix: “Foothills Mix” or approved equal
- C. Seeding Application Rate: Drill seed 0.25” to 0.5” into the soil. In small areas not accessible to a drill, hand broadcast at double the rate and rake 0.25” to 0.5” into the soil. Apply seed at the following rates:
  - Dryland: 20-25 lbs/acre
  - Irrigated: 40 lbs/acre
- D. Soil Stabilization Practices:
  - Mulching Application: Apply 1-1/2 tons of certified weed free hay per acre mechanically crimped into the soil in combination with an organic mulch tackifier. On slopes and ditches requiring a blanket, the blanket shall be placed in lieu of much and mulch tackifier.
- E. Soil Conditioning and Fertilizer Requirements:
  - Soil conditioner, organic amendment shall be applied to all seeded areas at 3 CY / 1000 SF.
  - Fertilizer shall consist of 90% fungal biomass (mycelium) and 10% potassium-magnesia with a grade of 6-1-3 or approved equal. Fertilizer shall be applied as recommended by seed supplier.
- F. Final stabilization is reached when all soil-disturbing activities at the site have been completed, and uniform vegetative cover has been established with an individual plant density of at least 70 percent of pre-disturbance levels, or equivalent permanent, physical erosion reduction methods have been employed.
- G. Structural Control Measures:
  - Re-Seeding and Landscaping for site stabilization
  - Permanent Stormwater Detention & Water Quality Pond C1
  - Temporary Stormwater Detention & Water Quality Pond C2.8
- H. Non-Structural Control Measures:
  - Proper Housekeeping Procedures
  - Proper Spill Containment Procedures

## **IX. INSPECTION REPORTS**

A. Qualified Stormwater Manager: Designated Inspector shall be a Qualified Stormwater Manager per CDPHE criteria.

B. Inspection Frequency:

- Contractor shall inspect BMPs bi-weekly as a minimum, and immediately (within 24 hours) after any precipitation or snowmelt event that causes surface erosion (i.e. that results in stormwater running across the ground), to ensure that BMPs are maintained in effective operating condition.

C. Inspection Procedures:

Site Inspection / Observation Items:

- Construction site perimeter and discharge points (including discharges into a storm sewer system)
- All disturbed areas
- Areas used for material / waste storage that are exposed to precipitation
- Other areas having a significant potential for stormwater pollution, such as demolition areas or concrete washout locations, or locations where vehicles enter or leave the site
- Erosion and sediment control measures identified in the SWMP
- Any other structural BMPs that may require maintenance, such as secondary containment around fuel tanks, or the condition of spill response kits.

D. Inspection Requirements:

- Determine if there is any evidence of, or potential for, pollutants entering the drainage system.
- Review BMPs to determine if they still meet design and operational criteria in the SWMP, and if they continue to adequately control pollutants at the site.
- Upgrade and/or revise any BMPs not operating in accordance with the SWMP and update the SWMP to reflect any revisions.

BMP Maintenance / Replacement and Failed BMPs:

- Contractor shall remove sediment that has been collected by perimeter controls, such as silt fence and inlet protection, on a regular basis to prevent failure of BMPs, and remove potential of sediment from being discharged from the site in the event of BMP failure.
- Removed sediment must be moved to an appropriate location where it will not become an additional pollutant source, and should never be placed in ditches or streams.
- Contractor shall update Erosion Control Plans / SWMP Maps and SWMP Plan as required with any new BMPs added during the construction period.
- Contractor shall address BMPs that have failed or have the potential to fail without maintenance or modifications, as soon as possible, immediately in most cases, to prevent discharge of pollutants.

E. Inspection Reports:

- Contractor shall maintain records of all inspection reports, including signed inspection logs, at the project site. SWMP records shall be located in the project trailer.
- Inspection logs shall be signed by the Qualified Stormwater Manager.
- Permittee shall document inspection results and maintain a record of the results for a period of 3 years following expiration or inactivation of permit coverage.
- Site inspection records shall include the following:
  - Inspection date
  - Name and title of personnel making the inspection, along with Inspector's signature
  - Location of discharges of sediment or other pollutants from the site
  - Location(s) of BMPs that need to be maintained
  - Location(s) of BMPs that failed to operate as designed or proved inadequate for a particular location
  - Location(s) where additional BMPs are needed that were not in place at the time of inspection
  - Deviations from the minimum inspection schedule
  - Notations regarding updates and revisions to SWMP Maps based on field conditions



**APPENDIX A**

**STANDARD BMP DETAILS**

# Erosion Control Blankets

---

## What it is

Erosion control blankets are geotextiles or filter fabrics that are used to stabilize soils, steep slopes and drainage channels.

### TYPES OF EROSION CONTROL BLANKETS

- WOVEN OR BONDED SYNTHETIC MATERIALS SUCH AS POLYPROPYLENE, POLYESTER, POLYETHYLENE, NYLON, POLYVINYL CHLORIDE, GLASS AND VARIOUS MIXTURES OF THESE.
- MULCH MATTING MADE FROM JUTE OR OTHER WOOD FIBER THAT HAS BEEN FORMED INTO SHEETS.
- NETTING MADE FROM JUTE OR OTHER WOOD FIBER, PLASTIC, PAPER, OR COTTON USED TO HOLD MULCH AND MATTING TO THE GROUND.
- BLANKETS OF WOVEN STRAW MULCH WITH A SYNTHETIC LAYER OR NET.



## When and Where to use it

- In temporary and permanent swales.
- To protect recently seeded slopes.
- In drainageway channels.

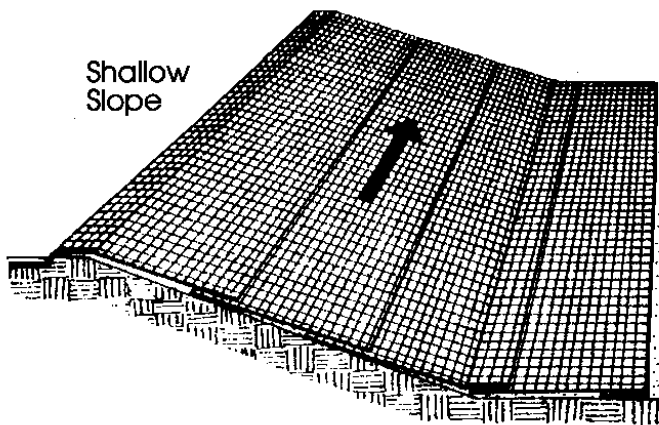
## When and Where NOT to use it

- In swales with slopes greater than 5 percent or with stormwater velocities > 8 feet per second.

## Installation and Maintenance Requirements

Installation requirements are provided in Figures ECB-1 and ECB-2.

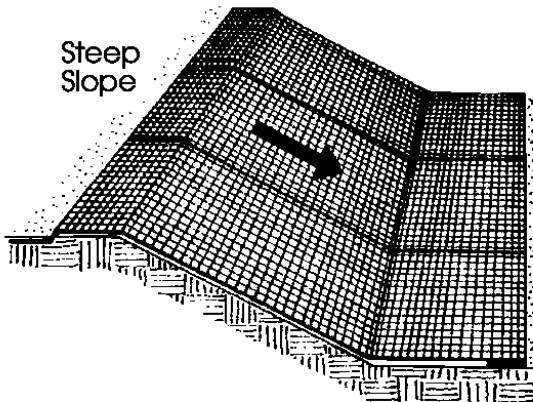
Maintenance requirements include regular inspections to determine if fabric is damaged or has come loose, and appropriate repairs or replacement of damaged materials.



Shallow  
Slope

On shallow slopes, strips of netting may be applied across the slope.

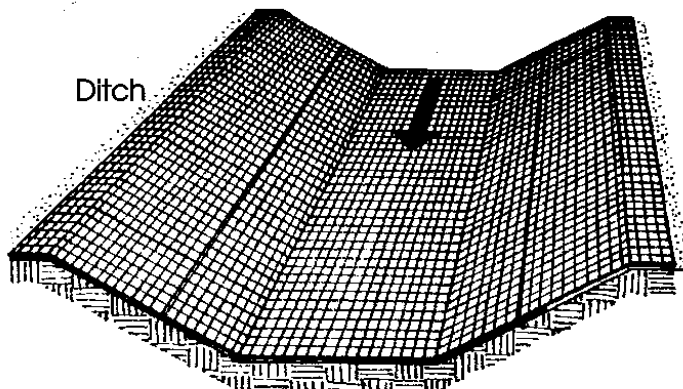
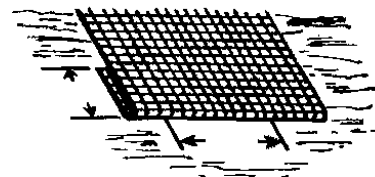
Where there is a berm at the top of the slope, bring the netting over the berm and anchor it behind the berm.



Steep  
Slope

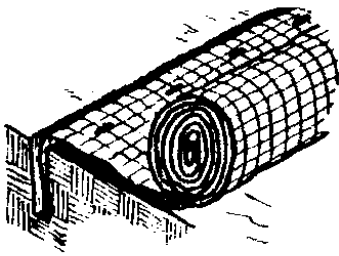
On steep slopes, apply strips of netting parallel to the direction of flow and anchor securely.

Bring netting down to a level area before terminating the installation. Turn the end under 6" and staple at 12" intervals.

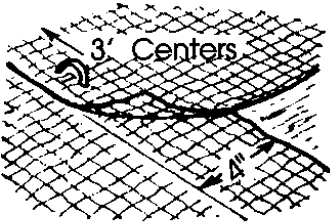


Ditch

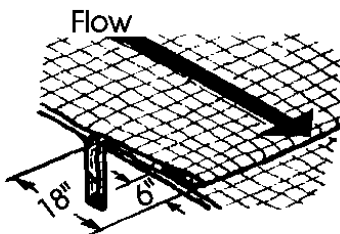
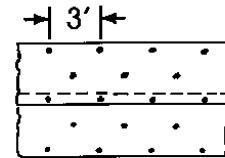
In ditches, apply netting parallel to the direction of flow. Use check slots every 15 feet. Do not join strips in the center of the ditch.



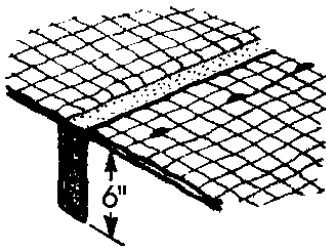
**Anchor Slot:** Bury the up-channel end of the net in a 6" deep trench. Tamp the soil firmly. Staple at 12" intervals across the net.



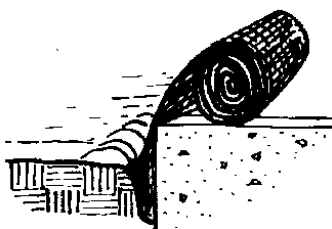
**Overlap:** Overlap edges of the strips at least 4". Staple every 3 feet down the center of the strip.



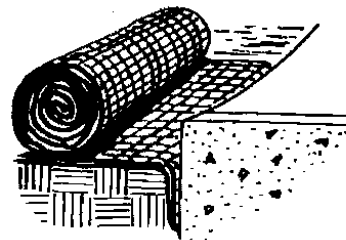
**Joining Strips:** Insert the new roll of net in a trench, as with the Anchor Slot. Overlap the up-channel end of the previous roll 18" and turn the end under 6". Staple the end of the previous roll just below the anchor slot and at the end at 12" intervals.



**Check Slots:** On erodible soils or steep slopes, check slots should be made every 15 feet. Insert a fold of the net into a 6" trench and tamp firmly. Staple at 12" intervals across the net. Lay the net smoothly on the surface of the soil - do not stretch the net, and do not allow wrinkles.



**Anchoring Ends At Structures:** Place the end of the net in a 6" slot on the up-channel side of the structure. Fill the trench and tamp firmly. Roll the net up the channel. Place staples at 12" intervals along the anchor end of the net.



# Inlet Protection

## What it is

Inlet protection is a sediment control barrier formed around a storm drain inlet. A number of alternative inlet protection designs are available, including:

- Silt Fence Inlet Protection.
- Straw Bale Barrier Inlet Protection.
- Block and Gravel Bag Inlet Protection.
- Curb Socks Inlet Protection.



## When and Where to use it

Application of inlet protection differs by design.

- Filter fabric and straw bale inlet protection are used for area inlets (not located within streets).
- Block and gravel bag curb inlet protection is used for street inlets in sumps.
- Curb sock protection is used for street inlets in sumps or on continuous grade.

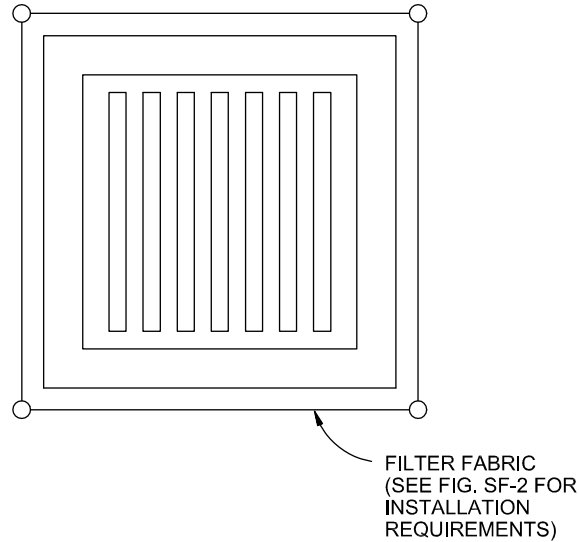


## When and Where NOT to use it

- Filter fabric and straw bale inlet protection cannot be used for drain inlets that are paved because these designs require excavation and/or staking of materials.
- Block and gravel bag inlet protection is not recommended for continuous grade inlets due to concerns about damage from bypassed flow.

## Construction Detail and Maintenance Requirements

Figures IP-1 through IP-4 provide a construction detail and maintenance requirements for each inlet protection design alternative.



## FILTER FABRIC INLET PROTECTION

NTS

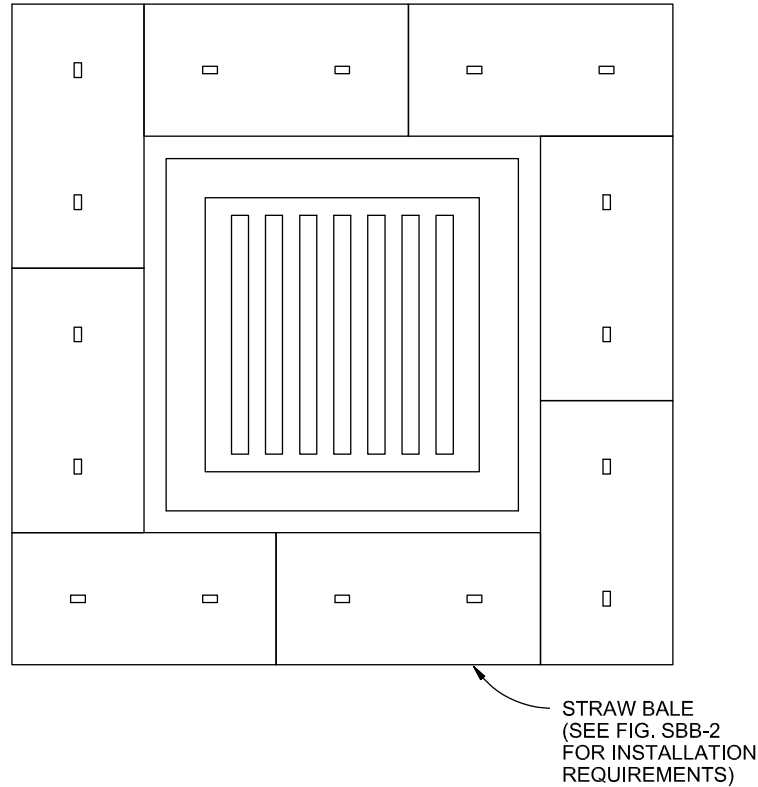
### FILTER FABRIC INLET PROTECTION NOTES

#### INSTALLATION REQUIREMENTS

1. INLET PROTECTION SHALL BE INSTALLED IMMEDIATELY AFTER CONSTRUCTION OF INLET.
2. SEE SILT FENCE FIGURE SF-2 FOR INSTALLATION REQUIREMENTS.
3. POSTS ARE TO BE PLACED AT EACH CORNER OF THE INLET AND AROUND THE EDGES AT A MAXIMUM SPACING OF 3 FEET.

#### MAINTENANCE REQUIREMENTS

1. CONTRACTOR SHALL INSPECT INLET PROTECTION IMMEDIATELY AFTER EACH RAINFALL, AT LEAST DAILY DURING PROLONGED RAINFALL, AND WEEKLY DURING PERIODS NO RAINFALL.
2. DAMAGED, COLLAPSED, UNENTRENCHED OR INEFFECTIVE INLET PROTECTION SHALL BE PROMPTLY REPAIRED OR REPLACED.
3. SEDIMENT SHALL BE REMOVED FROM BEHIND FILTER FABRIC WHEN IT ACCUMULATES TO HALF THE EXPOSED GEOTEXTILE HEIGHT.
4. FILTER FABRIC PROTECTION SHALL BE REMOVED WHEN ADEQUATE VEGETATIVE COVER IS ATTAINED IN THE DRAINAGE AREA AS APPROVED BY THE CITY.



## STRAW BALE INLET PROTECTION

NTS

### STRAW BALE INLET PROTECTION NOTES

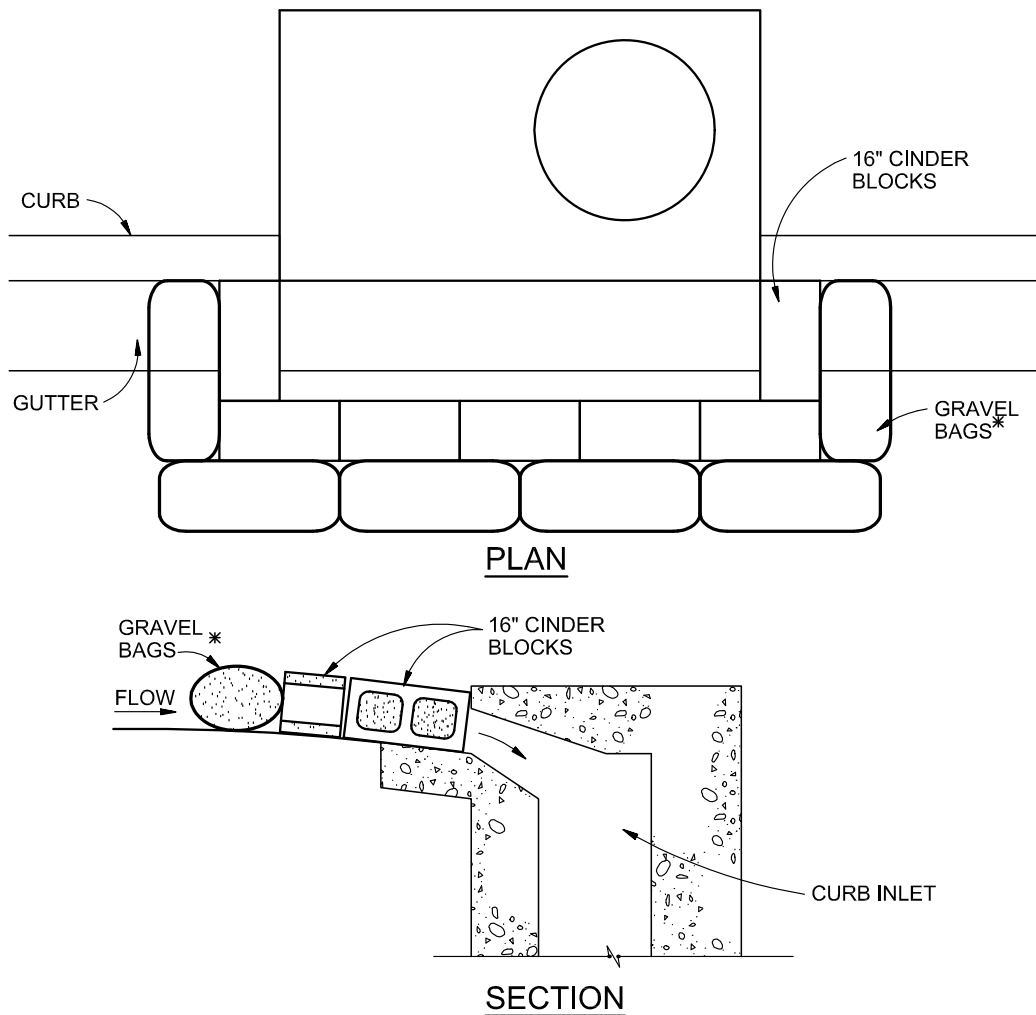
#### INSTALLATION REQUIREMENTS

1. INLET PROTECTION SHALL BE INSTALLED IMMEDIATELY AFTER CONSTRUCTION OF INLET.
2. BALES ARE TO BE PLACED IN A SINGLE ROW AROUND THE INLET WITH THE END OF THE BALES TIGHTLY ABUTTING ONE ANOTHER.
3. SEE STRAW BALE BARRIER FIGURE SBB-2 FOR INSTALLATION REQUIREMENTS.

#### MAINTENANCE REQUIREMENTS

1. CONTRACTOR SHALL INSPECT STRAW BALE INLET PROTECTION IMMEDIATELY AFTER EACH RAINFALL, AT LEAST DAILY DURING PROLONGED RAINFALL, AND WEEKLY DURING PERIODS NO RAINFALL.
2. DAMAGED OR INEFFECTIVE INLET PROTECTION SHALL PROMPTLY BE REPAIRED, REPLACING BALES IF NECESSARY, AND UNENTRENCHED BALES NEED TO BE REPAIRED WITH COMPACTED BACKFILL MATERIAL.
3. SEDIMENT SHALL BE REMOVED FROM BEHIND STRAW BALES WHEN IT ACCUMULATES TO APPROXIMATELY 1/3 THE HEIGHT OF THE BARRIER.
4. INLET PROTECTION SHALL BE REMOVED WHEN ADEQUATE VEGETATIVE COVER IS ATTAINED WITHIN THE DRAINAGE AREA AS APPROVED BY THE CITY.





## BLOCK AND GRAVEL BAG\*CURB INLET PROTECTION

NTS

## BLOCK AND GRAVEL BAG\*CURB INLET PROTECTION NOTES

### INSTALLATION REQUIREMENTS

1. INLET PROTECTION SHALL BE INSTALLED IMMEDIATELY AFTER CONSTRUCTION OF INLET.
2. CONCRETE BLOCKS ARE TO BE LAID AROUND THE INLET IN A SINGLE ROW ON THEIR SIDES, ABUTTING ONE ANOTHER WITH THE OPEN ENDS OF THE BLOCK FACING OUTWARD.
3. GRAVEL BAGS ARE TO BE PLACED AROUND THE CONCRETE BLOCKS CLOSELY ABUTTING ONE ANOTHER SO THERE ARE NO GAPS.
4. GRAVEL BAGS ARE TO CONTAIN WASHED SAND OR GRAVEL APPROXIMATELY 3/4 INCH IN DIAMETER.
5. BAGS ARE TO BE MADE OF 1/4" INCH WIRE MESH (USED WITH GRAVEL ONLY) OR GEOTEXTILE.

\* AN ALTERNATE 3/4" TO 1" GRAVEL FILTER OVER A WIRE SCREEN MAY BE USED IN PLACE OF GRAVEL BAGS. THE WIRE MESH SHALL EXTEND ABOVE THE TOP OF THE CONCRETE BLOCKS AND THE GRAVEL PLACED OVER THE WIRE SCREEN TO THE TOP OF THE CONCRETE BLOCKS.

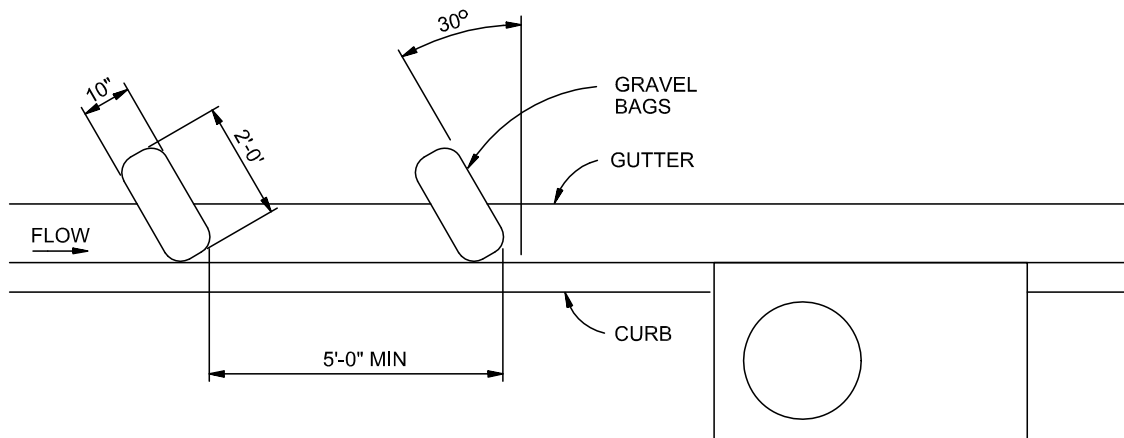
### MAINTENANCE REQUIREMENTS

1. CONTRACTOR SHALL INSPECT INLET PROTECTION IMMEDIATELY AFTER EACH RAINFALL, AT LEAST DAILY DURING PROLONGED RAINFALL, AND WEEKLY DURING PERIODS NO RAINFALL.
2. DAMAGED OR INEFFECTIVE INLET PROTECTION SHALL PROMPTLY BE REPAIRED OR REPLACED.
3. SEDIMENT SHALL BE REMOVED WHEN SEDIMENT HAS ACCUMULATED TO APPROXIMATELY 1/2 THE DESIGN DEPTH OF THE TRAP.
4. INLET PROTECTION SHALL BE REMOVED WHEN ADEQUATE VEGETATIVE COVER IS ATTAINED WITHIN THE DRAINAGE AREA AS APPROVED BY THE CITY.

City of Colorado Springs  
Stormwater Quality

Figure IP-3  
Block & Gravel Bag Curb Inlet Protection  
Construction Detail and Maintenance  
Requirements





## CURB SOCK INLET PROTECTION

NTS

### CURB SOCK INLET PROTECTION NOTES

#### INSTALLATION REQUIREMENTS

1. INLET PROTECTION SHALL BE INSTALLED IMMEDIATELY AFTER CONSTRUCTION OF INLET.
2. SOCK IS TO BE MADE OF 1/4 INCH WIRE MESH (USED WITH GRAVEL ONLY) OR GEOTEXTILE.
3. WASHED SAND OR GRAVEL 3/4 INCH TO 4 INCHES IN DIAMETER IS PLACED INSIDE THE SOCK.
4. PLACEMENT OF THE SOCK IS TO BE 30 DEGREES FROM PERPENDICULAR IN THE OPPOSITE DIRECTION OF FLOW.
5. SOCKS ARE TO BE FLUSH WITH THE CURB AND SPACED AT A MINIMUM 5 FEET APART.
6. AT LEAST 2 CURB SOCKS IN SERIES IS REQUIRED.

#### MAINTENANCE REQUIREMENTS

1. CONTRACTOR SHALL INSPECT INLET PROTECTION IMMEDIATELY AFTER EACH RAINFALL, AT LEAST DAILY DURING PROLONGED RAINFALL AND WEEKLY DURING PERIODS NO RAINFALL.
2. DAMAGED OR INEFFECTIVE INLET PROTECTION SHALL PROMPTLY BE REPAIRED OR REPLACED.
3. SEDIMENT SHALL BE REMOVED FROM BEHIND THE SOCK WHEN GUTTER WIDTH IS FILLED.
4. INLET PROTECTION SHALL BE REMOVED WHEN ADEQUATE VEGETATIVE COVER IS ATTAINED WITHIN THE DRAINAGE AREA AS APPROVED BY THE CITY.

# Mulching

---

## What it is

Mulching is used to temporarily stabilize soils by securely applying materials such as grass, hay, woodchips or wood fibers to the soil's surface.

Mulching protects the soil from raindrop impact and reduces the velocity of overland runoff. Mulch also aids in the growth of temporary seeding by holding seeds and topsoil in place, retaining moisture, and insulating against extreme temperatures.



## When and Where to use it

- All disturbed areas and stockpiles shall be mulched within 21 days after final grade is reached.
- Disturbed areas and stockpiles which are not at final grade but will remain dormant for longer than 30 days shall also be mulched within 21 days after interim grading.
- An area that is going to remain in an interim state for more than 60 days shall also be seeded.
- Mulching is always to be used when applying temporary or permanent seeding.
- Mulching is often used when temporary seeding cannot be used due to the season or climate.

## When and Where NOT to use it

- In areas that will involve paving, building, or utility construction within 21 days after final grade is reached.

## Application Techniques and Maintenance Requirements

Figure MU-1 provides application techniques and maintenance requirements for mulching.

## MULCHING NOTES

### INSTALLATION REQUIREMENTS

1. ALL DISTURBED AREAS MUST BE MULCHED WITHIN 21 DAYS AFTER FINAL GRADE AND SEEDED AREAS ARE TO BE MULCHED WITHIN 24 HOURS AFTER SEEDING.
2. MATERIAL USED FOR MULCH CAN BE CERTIFIED CLEAN, WEED- AND SEED-FREE LONG STEMMED FIELD OR MARSH HAY, OR STRAW OF OATS, BARLEY, WHEAT, RYE, OR TRITICALE CERTIFIED BY THE COLORADO DEPARTMENT OF AGRICULTURE WEED FREE FORAGE CERTIFICATION PROGRAM.
3. HYDRAULIC MULCHING MATERIAL SHALL CONSIST OF VIRGIN WOOD FIBER MANUFACTURED FROM CLEAN WHOLE WOOD CHIPS. WOOD CHIPS CANNOT CONTAIN ANY GROWTH OR GERMINATION INHIBITORS OR BE PRODUCED FROM RECYCLED MATERIAL. GRAVEL CAN ALSO BE USED.
4. MULCH IS TO BE APPLIED EVENLY AT A RATE OF 2 TONS PER ACRE.
5. MULCH IS TO BE ANCHORED EITHER BY CRIMPING (TUCKING MULCH FIBERS 4 INCHES INTO THE SOIL), USING NETTING (USED ON SMALL AREAS WITH STEEP SLOPES), OR WITH A TACKIFIER.
6. HYDRAULIC MULCHING AND TACKIFIERS ARE NOT TO BE USED IN THE PRESENCE OF FREE SURFACE WATER.

### MAINTENANCE REQUIREMENTS

1. REGULAR INSPECTIONS ARE TO BE MADE OF ALL MULCHED AREAS.
2. MULCH IS TO BE REPLACED IMMEDIATELY IN THOSE AREAS IT HAS BEEN REMOVED, AND IF NECESSARY THE AREA SHOULD BE RESEED.

# Sediment Basin

---

## What it is

A temporary sediment basin detains sediment-laden runoff long enough to allow much of the sediment to settle out. Sediment basins are constructed by excavation and/or by placing an earthen embankment across a low area or drainage swale. Basins can be designed to maintain a permanent pool or to drain completely dry through a controlled outlet structure.



## When and Where to use it

- Required in disturbed areas draining more than one acre.
- Where there is sufficient space and appropriate topography.
- In areas that allow access for maintenance and sediment removal.
- Positioned so that it captures sediment from the entire upstream disturbed area.
- Where a permanent detention basin is planned for the site.

## When and Where NOT to use it

- Sediment basins are not to be installed in active streams.

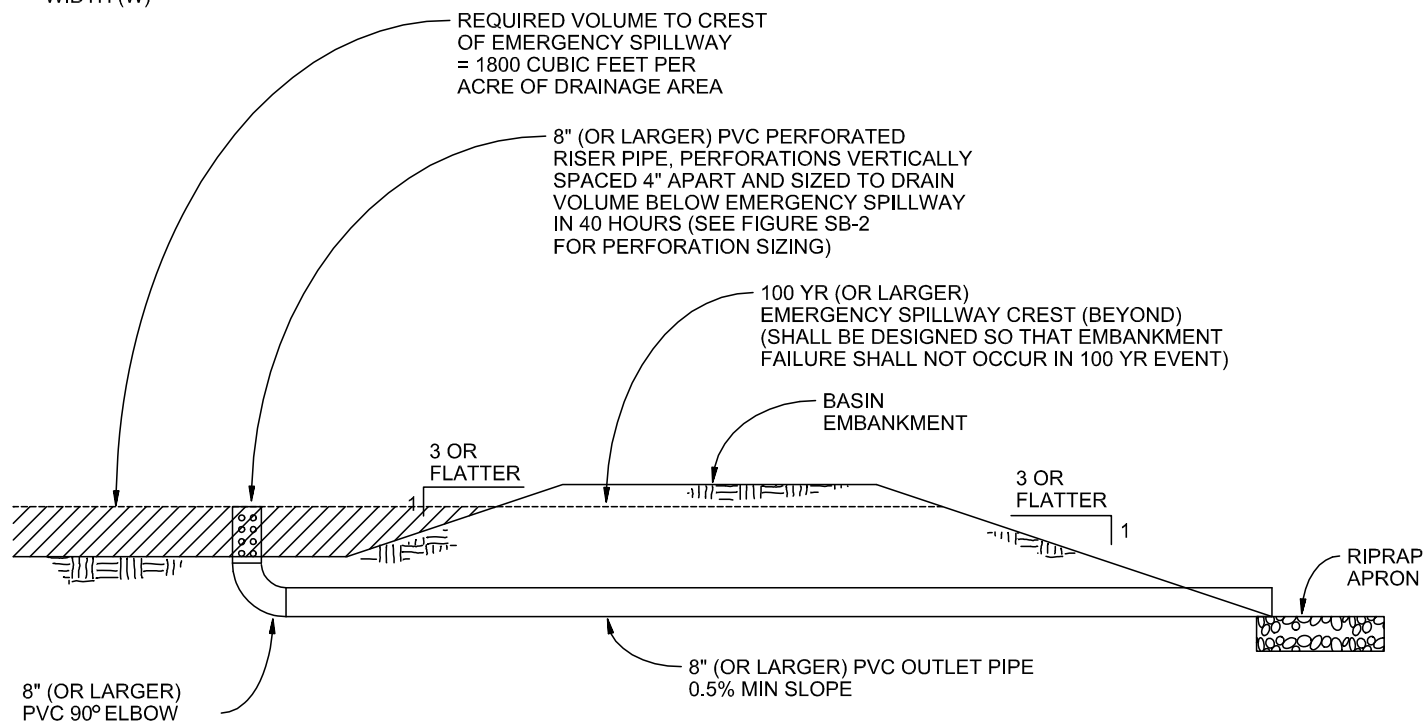


This low area will provide for some removal of sediment; however, it lacks a designed outlet structure.

## Construction Detail and Maintenance Requirements

Figure SB-1 provides a construction detail and maintenance requirements for a sediment basin.

BASIN GEOMETRY:  
 $\frac{\text{LENGTH (L)}}{\text{WIDTH (W)}} \geq 2$



## SEDIMENT BASIN

NTS

## SEDIMENT BASIN NOTES

### INSTALLATION REQUIREMENTS

1. SEDIMENT BASINS SHALL BE INSTALLED BEFORE ANY CLEARING AND/OR GRADING IS UNDERTAKEN.
2. THE AREA UNDER WHICH THE EMBANKMENT IS TO BE INSTALLED SHALL BE CLEARED, GRUBBED, AND STRIPPED OF ALL VEGETATION AND ROOT MAT.
3. THE OUTLET OF THE BASIN SHALL BE DESIGNED TO DRAIN ITS VOLUME IN 40 HOURS.
4. THE OUTLET IS TO BE LOCATED AT THE FURTHEST DISTANCE FROM THE INLET OF THE BASIN. BAFFLES MAY BE NEEDED TO INCREASE THE FLOW LENGTH AND SETTLING TIME.
5. EMBANKMENT MATERIAL SHALL CONSIST OF SOIL WITH A MINIMUM OF 15% PASSING A #200 SIEVE. EXCAVATED SOIL CAN BE USED IF IT MEETS THIS REQUIREMENT.
6. EMBANKMENT IS TO BE COMPACTED TO AT LEAST 90% OF MAXIMUM DENSITY AND WITHIN 2% OF OPTIMUM MOISTURE CONTENT ACCORDING TO ASTM D 698.
7. WHEN A BASIN IS INSTALLED NEAR A RESIDENTIAL AREA, FOR SAFETY REASONS, A SIGN SHALL BE POSTED AND THE AREA SECURED WITH A FENCE.

### MAINTENANCE REQUIREMENTS

1. CONTRACTOR SHALL INSPECT SEDIMENT BASINS AFTER EACH RAINFALL, AT LEAST DAILY DURING PROLONGED RAINFALL, AND WEEKLY DURING PERIODS NO RAINFALL.
2. SEDIMENT BASINS SHALL BE CLEANED OUT BEFORE SEDIMENT HAS FILLED HALF THE VOLUME OF THE BASIN.
3. SEDIMENT BASINS SHALL REMAIN OPERATIONAL AND PROPERLY MAINTAINED UNTIL THE SITE AREA IS PERMANENTLY STABILIZED WITH ADEQUATE VEGETATIVE COVER AND/OR OTHER PERMANENT STRUCTURE AS APPROVED BY THE CITY.

City of Colorado Springs  
 Stormwater Quality

Figure SB-1  
 Sediment Basin  
 Construction Detail and Maintenance  
 Requirements

Required Area per Row (in<sup>2</sup>)

		Depth at Outlet (ft)							
		1.0	1.5	2.0	2.5	3.0	3.5	4.0	4.5
Design Volume (acre-ft)	2	15.04	7.71	5.10	3.76	2.95	2.41	2.02	1.73
	1	7.52	3.86	2.55	1.88	1.48	1.21	1.01	0.87
	0.6	4.51	2.31	1.53	1.13	0.89	0.72	0.61	0.52
	0.4	3.01	1.54	1.02	0.75	0.59	0.48	0.40	0.35
	0.2	1.50	0.77	0.51	0.38	0.30	0.24	0.20	0.17
	0.1	0.75	0.39	0.26	0.19	0.15	0.12	0.10	0.09
	0.06	0.45	0.23	0.15	0.11	0.09	0.07	0.06	0.05
	0.04	0.30	0.15	0.10	0.08	0.06	0.05	0.04	0.03
	0.02	0.15	0.08	0.05	0.04	0.03	0.02	0.02	0.02
	0.01	0.08	0.04	0.03	0.02	0.01	0.01	0.01	0.01

TABLE SB-1

Circular Perforation Sizing

Hole Diameter (in)	Hole Diameter (in)	Area per Row (in <sup>2</sup> )		
		n = 1	n = 2	n = 3
1/4	0.250	0.05	0.10	0.15
5/16	0.313	0.08	0.15	0.23
3/8	0.375	0.11	0.22	0.33
7/16	0.438	0.15	0.30	0.45
1/2	0.500	0.20	0.39	0.59
9/16	0.563	0.25	0.50	0.75
5/8	0.625	0.31	0.61	0.92
11/16	0.688	0.37	0.74	1.11
3/4	0.750	0.44	0.88	1.33
7/8	0.875	0.60	1.20	1.80
1	1.000	0.79	1.57	2.36
1 1/8	1.125	0.99	1.99	2.98
1 1/4	1.250	1.23	2.45	3.68
1 3/8	1.375	1.48	2.97	4.45
1 1/2	1.500	1.77	3.53	5.30
1 5/8	1.625	2.07	4.15	6.22
1 3/4	1.750	2.41	4.81	7.22
1 7/8	1.875	2.76	5.52	8.28
2	2.000	3.14	6.28	9.42
n = Number of columns of perforations				
Minimum steel plate thickness		1/4"	5/16"	3/8"

TABLE SB-2



# Silt Fence

## What it is

A silt fence is a temporary sediment barrier constructed of filter fabric stretched across supporting posts. The bottom edge of the fabric is entrenched and covered with backfill.

## When and Where to use it

- On the down gradient perimeters of a construction site.
- On a contour to control overland sheet flow.
- At the top or toe of a steep slope.
- As a form of inlet protection (see inlet protection factsheet).



Figure SF-1 depicts five cases where the use of silt fence is appropriate.

## When and Where NOT to use it

- In areas of concentrated flows such as in ditches, swales or channels that drain areas greater than 1.0 acre.
- At the top of a slope or at high points which do not receive any drainage flows.



This photo reveals a silt fence that has become unentrenched because it was not securely installed.



This photo illustrates what will happen to a silt fence if it is installed in an area of concentrated flow.

## Construction Detail and Maintenance Requirements

Figure SF-2 provides a construction detail and maintenance requirements for a silt fence.

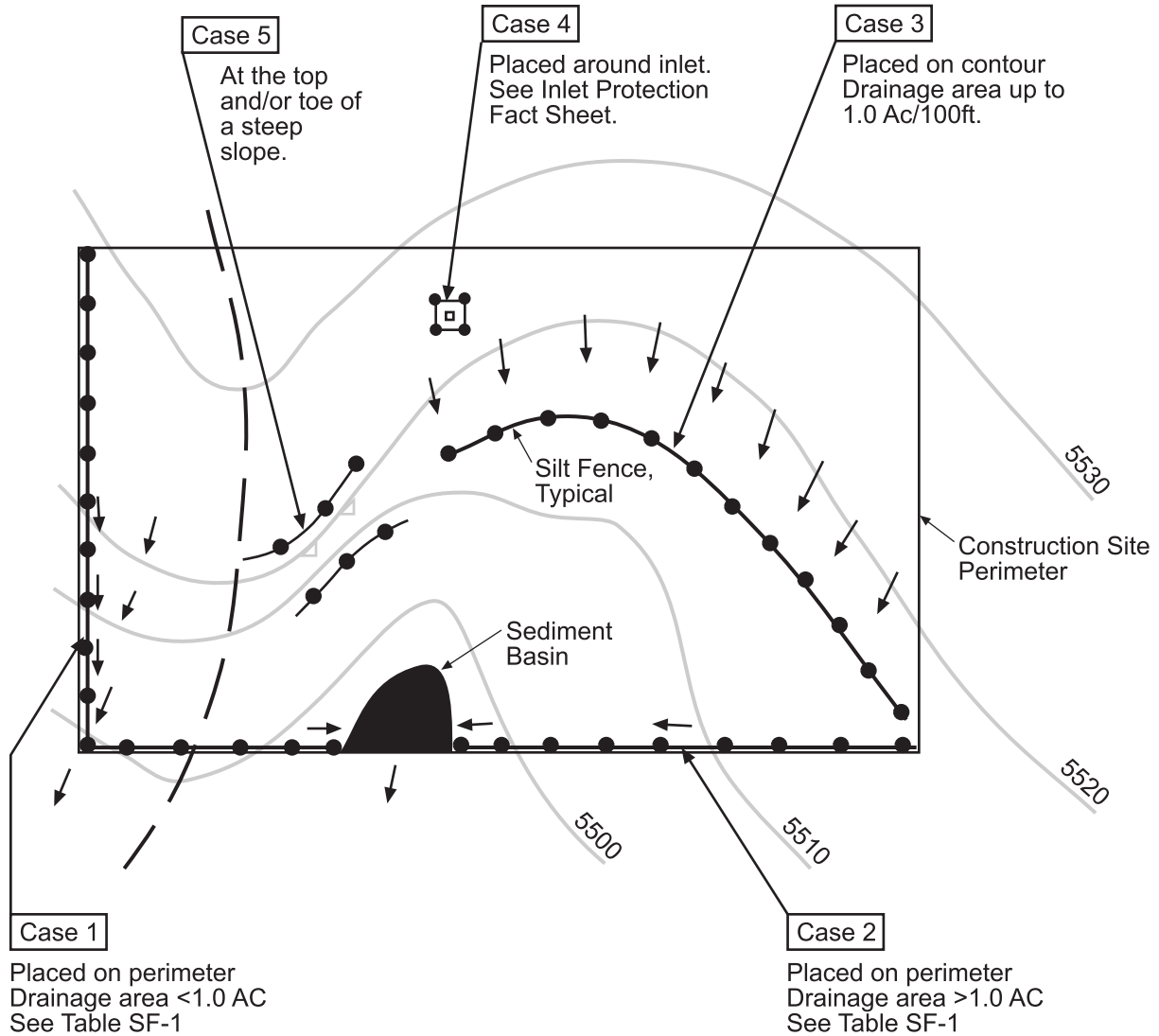


Table SF-1

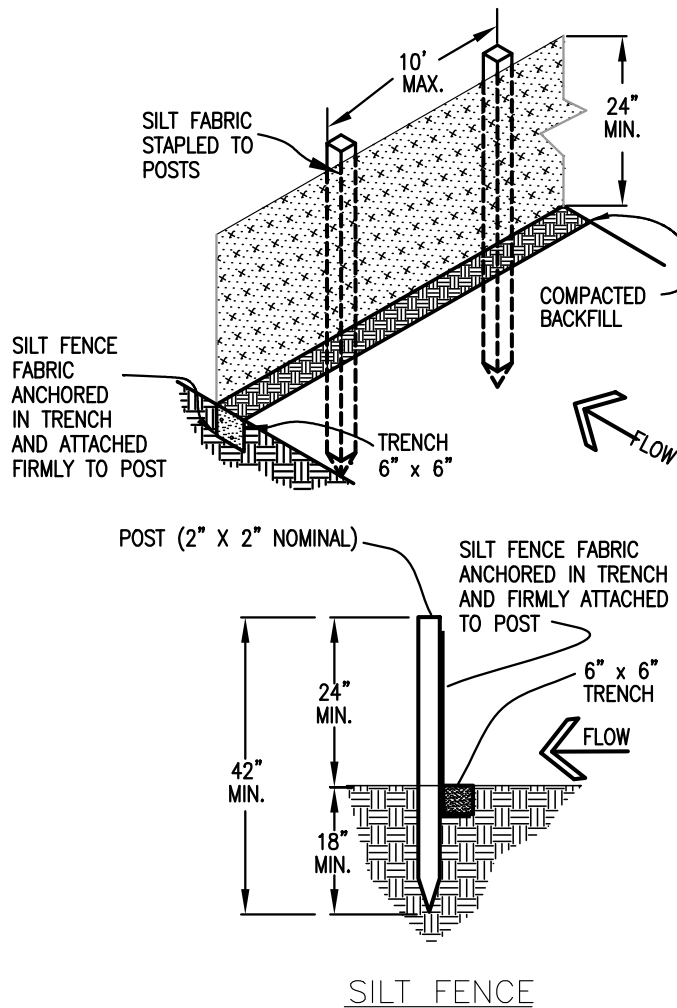
Silt Fence Used as Perimeter Control	Case 1		Case 2 DA > 1.0 AC
	DA < 0.25 AC	0.25 < DA < 1 AC	
Continuous Grade	OK <sup>(1)</sup>	OK <sup>(1)</sup>	OK <sup>(1)</sup>
Area of Concentrated Flow	OK	NO <sup>(2)</sup>	NO <sup>(3)</sup>

(1) Temporary Swale or Straw Bale Barrier may be used as alternative to a Silt Fence.

(2) Check Dam may also be used as alternative to Silt Fence at low point.

(3) Sediment Basin is required for concentrated flow from drainage areas > 1.0 AC.





SILT FENCE

## SILT FENCE NOTES

### INSTALLATION REQUIREMENTS

1. SILT FENCES SHALL BE INSTALLED PRIOR TO ANY LAND DISTURBING ACTIVITIES.
2. WHEN JOINTS ARE NECESSARY, SILT FENCE GEOTEXTILE SHALL BE SPLICED TOGETHER ONLY AT SUPPORT POST AND SECURELY SEALED.
3. METAL POSTS SHALL BE "STUDDED TEE" OR "U" TYPE WITH MINIMUM WEIGHT OF 1.33 POUNDS PER LINEAR FOOT. WOOD POSTS SHALL HAVE A MINIMUM DIAMETER OR CROSS SECTION DIMENSION OF 2 INCHES.
4. THE FILTER MATERIAL SHALL BE FASTENED SECURELY TO METAL OR WOOD POSTS USING WIRE TIES, OR TO WOOD POSTS WITH 3/4" LONG #9 HEAVY-DUTY STAPLES. THE SILT FENCE GEOTEXTILE SHALL NOT BE STAPLED TO EXISTING TREES.
5. WHILE NOT REQUIRED, WIRE MESH FENCE MAY BE USED TO SUPPORT THE GEOTEXTILE. WIRE FENCE SHALL BE FASTENED SECURELY TO THE UPSLOPE SIDE OF THE POSTS USING HEAVY-DUTY WIRE STAPLES AT LEAST 3/4" LONG, TIE WIRES OR HOG RINGS. THE WIRE SHALL EXTEND INTO THE TRENCH A MINIMUM OF 6" AND SHALL NOT EXTEND MORE THAN 3' ABOVE THE ORIGINAL GROUND SURFACE.

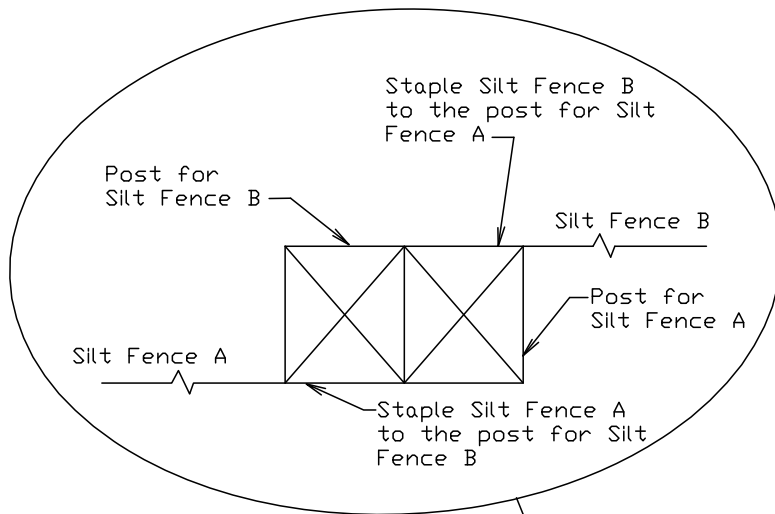
6. ALONG THE TOE OF FILLS, INSTALL THE SILT FENCE ALONG A LEVEL CONTOUR AND PROVIDE AN AREA BEHIND THE FENCE FOR RUNOFF TO POND AND SEDIMENT TO SETTLE. A MINIMUM DISTANCE OF 5 FEET FROM THE TOE OF THE FILL IS RECOMMENDED.

7. THE HEIGHT OF THE SILT FENCE FROM THE GROUND SURFACE SHALL BE MINIMUM OF 24 INCHES AND SHALL NOT EXCEED 36 INCHES; HIGHER FENCES MAY INPOUND VOLUMES OF WATER SUFFICIENT TO CAUSE FAILURE OF THE STRUCTURE.

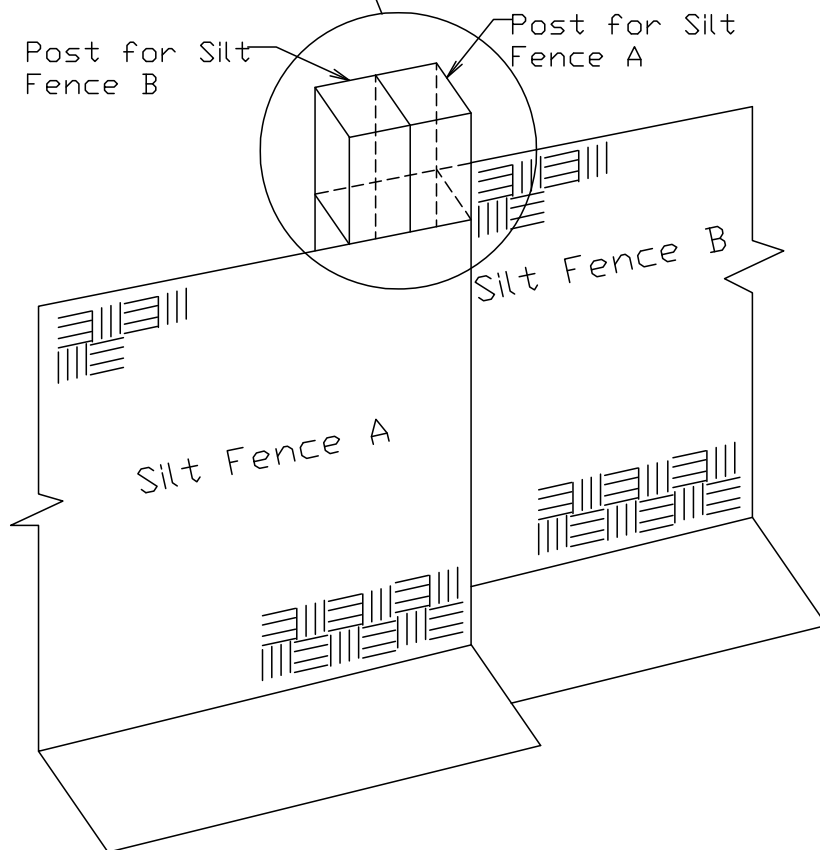
### MAINTENANCE REQUIREMENTS

1. CONTRACTOR SHALL INSPECT SILT FENCES IMMEDIATELY AFTER EACH RAINFALL, AT LEAST DAILY DURING PROLONGED RAINFALL, AND WEEKLY DURING PERIODS OF NO RAINFALL. DAMAGED, COLLAPSED, UNENTRENCHED OR INEFFECTIVE SILT FENCES SHALL BE PROMPTLY REPAIRED OR REPLACED.
2. SEDIMENT SHALL BE REMOVED FROM BEHIND SILT FENCE WHEN IT ACCUMULATES TO HALF THE EXPOSED GEOTEXTILE HEIGHT.
3. SILT FENCES SHALL BE REMOVED WHEN ADEQUATE VEGETATIVE COVER IS ATTAINED AS APPROVED BY THE CITY.

# Top View of Silt Fence Posts Detail



Refer to "Top View of Silt Fence Posts Detail"



# Straw Bale Barriers

## What it is

A straw bale barrier is a temporary sediment barrier consisting of a row of entrenched and anchored straw bales used to retain sediment from runoff in small drainage areas of disturbed soil.

## When and Where to use it

- At the base of a slope.
- On the down gradient perimeters of a construction site.
- On a contour to control overland sheet flow.
- As a form of check dam (see check dam factsheet).
- As a form of inlet protection (see inlet protection factsheet).



Figure SBB-1 depicts six cases where the use of Straw Bale Barriers is appropriate.

## When and Where NOT to use it

- In areas of concentrated flows such as in ditches, swales, or channels that drain areas greater than 1.0 acre (unless used as a form of check dam).
- At the top of a slope or at high points which do not receive any drainage flows.



This straw bale barrier was not installed properly because runoff is able to flow around the barrier.

## Construction Detail and Maintenance Requirements

Figure SBB-2 provides a construction detail and maintenance requirements for a straw bale barrier.

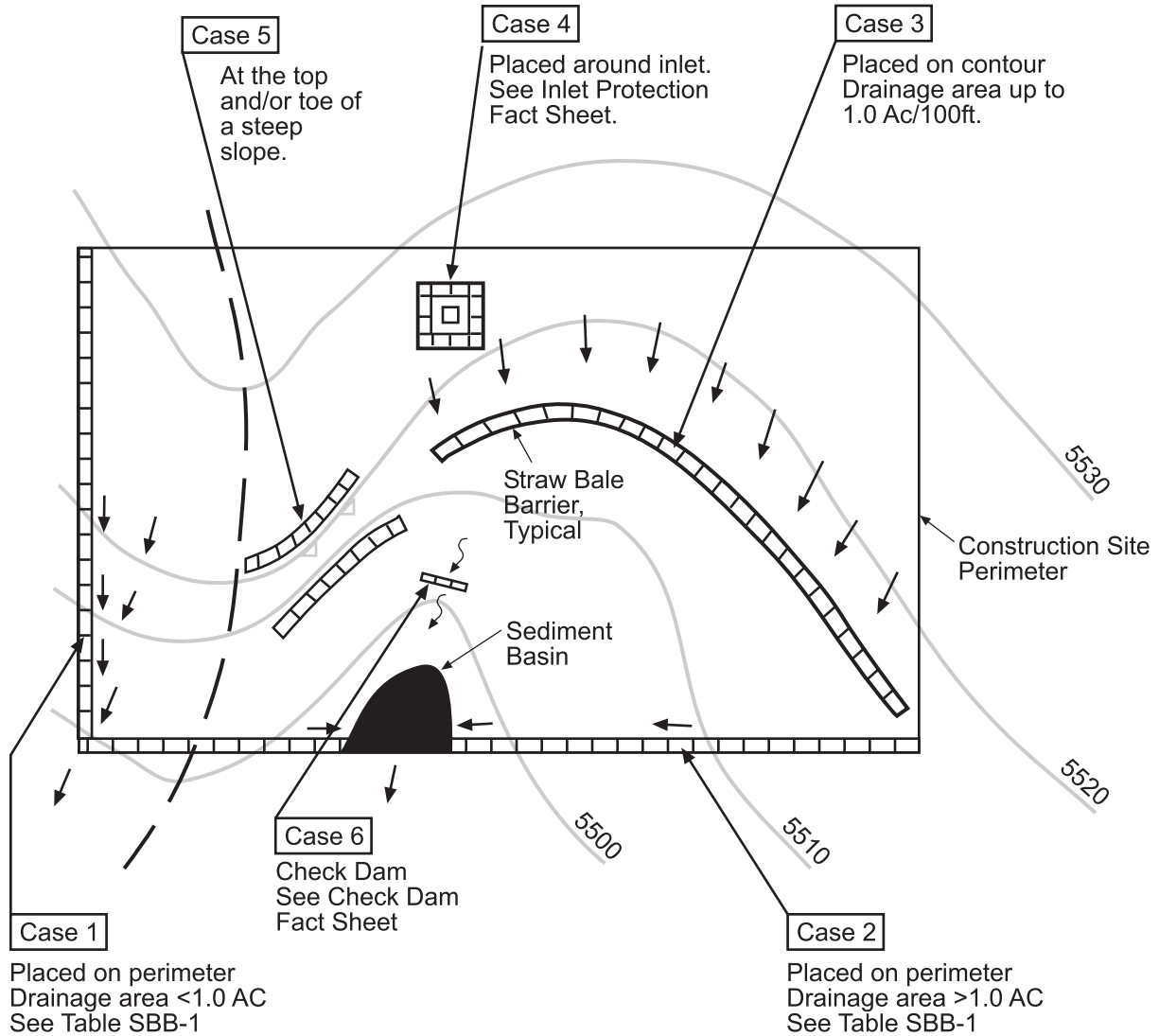


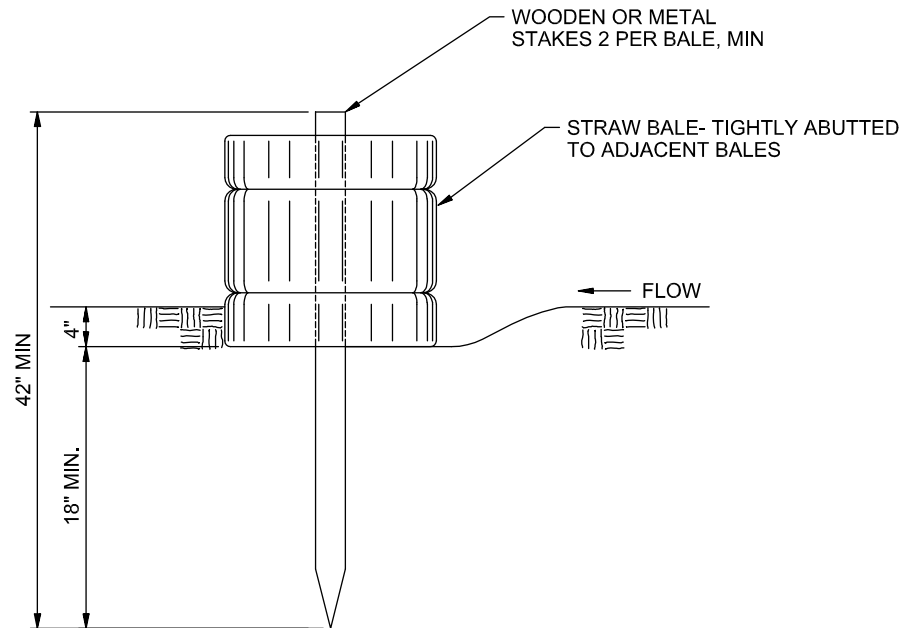
Table SBB-1

Straw Bale Barrier Used as Perimeter Control	Case 1 DA < 1.0 AC	Case 2 DA > 1.0 AC
Continuous Grade	OK <sup>(1)</sup>	OK <sup>(1)</sup>
Area of Concentrated Flow	OK <sup>(2)</sup>	NO <sup>(3)</sup>

(1) Temporary Swale or Silt Fence may be used as alternative to a Straw Bale Barrier.

(2) Straw Bale Check Dam may be used at low points.

(3) Sediment Basin is required for concentrated flow from drainage areas > 1.0 AC.



## STRAW BALE BARRIER

NTS

## STRAW BALE BARRIER NOTES

### INSTALLATION REQUIREMENTS

1. STRAW BALE BARRIERS SHALL BE INSTALLED PRIOR TO ANY LAND DISTURBING ACTIVITIES.
2. BALES SHALL CONSIST OF APPROXIMATELY 5 CUBIC FEET OF CERTIFIED WEED FREE HAY OR STRAW AND WEIGH NOT LESS THAN 35 POUNDS.
3. BALES ARE TO BE PLACED IN A SINGLE ROW WITH THE END OF THE BALES TIGHTLY ABUTTING ONE ANOTHER.
4. EACH BALE IS TO BE SECURELY ANCHORED WITH AT LEAST TWO STAKES AND THE FIRST STAKE IS TO BE DRIVEN TOWARD THE PREVIOUSLY LAID BALE TO FORCE THE BALES TOGETHER.
5. STAKES ARE TO BE A MINIMUM OF 42 INCHES LONG. METAL STAKES SHALL BE STANDARD "T" OR "U" TYPE WITH MINIMUM WEIGHT OF 1.33 POUNDS PER LINEAR FOOT. WOOD STAKES SHALL HAVE A MINIMUM DIAMETER OR CROSS SECTION DIMENSION OF 2 INCHES.
6. BALES ARE TO BE BOUND WITH EITHER WIRE OR STRING AND ORIENTED SUCH THAT THE BINDINGS ARE AROUND THE SIDES AND NOT ALONG THE TOPS AND BOTTOMS OF THE BALE.
7. GAPS BETWEEN BALES ARE TO BE CHINKED (FILLED BY WEDGING) WITH STRAW OR THE SAME MATERIAL OF THE BALE.
8. END BALES ARE TO EXTEND UPSLOPE SO THE TRAPPED RUNOFF CANNOT FLOW AROUND THE ENDS OF THE BARRIER.

### MAINTENANCE REQUIREMENTS

1. CONTRACTOR SHALL INSPECT STRAW BALE BARRIERS IMMEDIATELY AFTER EACH RAINFALL, AT LEAST DAILY DURING PROLONGED RAINFALL, AND WEEKLY DURING PERIODS NO RAINFALL.
2. DAMAGED OR INEFFECTIVE BARRIERS SHALL PROMPTLY BE REPAIRED, REPLACING BALES IF NECESSARY, AND UNENTRENCHED BALES NEED TO BE REPAIRED WITH COMPACTED BACKFILL MATERIAL.
3. SEDIMENT SHALL BE REMOVED FROM BEHIND STRAW BALE BARRIERS WHEN IT ACCUMULATES TO APPROXIMATELY 1/2 THE HEIGHT OF THE BARRIER.
4. STRAW BALE BARRIERS SHALL BE REMOVED WHEN ADEQUATE VEGETATIVE COVER IS ATTAINED AS APPROVED BY THE CITY.

City of Colorado Springs  
Stormwater Quality

Figure SBB-2  
Straw Bale Barrier  
Construction Detail and Maintenance  
Requirements

# Street Wash Water Associated with Construction Activities

---

The CDPS Municipal Stormwater Discharge Permit for the City of Colorado Springs calls for the development and implementation of best management practices to minimize the impacts from street wash water associated with construction activities. The proposed best management practices (BMPs) are listed below. The permit allows these discharges into State Waters without obtaining a permit providing BMPs are maintained.

## Activity

During construction, it is not uncommon for dirt to accumulate on roadways in the construction site and adjacent to the site. This occurs when BMPs have not been implemented on the site or from the vehicles tracking materials around the site. If the sediment is not removed from the roadways, it will be washed into the storm sewer or other drainage facilities during the next storm event. Therefore, it is necessary to clean the roadways within or adjacent to a construction site on a regular basis. There are several methods for doing this, which include sweeping the streets, scraping the streets and using water to wash down the street. The practice of washing with water, while not encouraged, may be necessary in some cases.

## Areas of Concern

The concern with construction street sweeping is that the water will carry sediment into the storm sewer and then into State Waters. The sediment can have a negative impact on the aquatic life in the stream.

While the water used to clean the street may be potable in some cases, it is believed that the act of spraying the water would dissipate the chlorine.

## BMPs

1. Prior to washing the street with water, efforts will first be made to scrape and sweep the dirt off the roadways. Scraped or swept material will not be deposited in the storm sewer or other drainage facility.
2. Inlet protection or other BMPs will be in place prior to the washing of the streets. Materials collected by the BMP will be removed and will not be disposed of in a manner that would result in it entering the storm sewer or other drainage system.
3. Where practical, high-pressure wash systems will be used on the hard to remove spots. Washing the entire area with a fire hose will be avoided wherever possible. Water will only be used as needed.

# Surface Roughening

---

## What it is

Surface roughening is a temporary erosion control practice where the soil surface is roughened by the creation of grooves, depressions, or steps that run parallel to the contour of the land.

## When and Where to use it

- Surface roughening is appropriate for all slopes and should be performed immediately after rough grades have been established in an area.
- Surface roughening can also be used to help establish vegetative cover by reducing runoff velocity and giving seed an opportunity to take hold and grow.
- Surface roughening can be used in combination with other erosion control measures such as mulching and seeding.

## When and Where NOT to use it

- Slopes that are not smooth-graded and are left sufficiently rough after final grading do not need further roughening to control erosion.
- Surface roughening alone is not sufficient to stabilize a slope for long periods of times, further stabilization measures should be implemented within two weeks of grading.
- Extremely sandy or rocky soils are not well suited for surface roughening.

## Application Techniques and Maintenance Requirements

Figure SR-1 provides application techniques and maintenance requirements for surface roughening.

# **SURFACE ROUGHENING NOTES**

## **APPLICATION TECHNIQUES**

1. STAIR STEP GRADING – USED ON SLOPES WITH GRADIENTS BETWEEN 3:1 AND 2:1 AND FOR SOIL CONTAINING A LARGE AMOUNT OF SMALL ROCKS. STAIRS ARE TO BE WIDE ENOUGH TO WORK WITH STANDARD EARTH MOVING EQUIPMENT.
2. GROOVE CUTTING – USED ON SLOPES WITH GRADIENTS BETWEEN 3:1 AND 2:1. GROOVES ARE TO BE AT LEAST 3 INCHES DEEP AND NO MORE THAN 15 INCHES APART.
3. TRACKING – USED ON SOILS WITH HIGHER SAND CONTENT DUE TO COMPACTION BY HEAVY MACHINERY.

## **MAINTENANCE REQUIREMENTS**

1. REGULAR INSPECTIONS ARE TO BE MADE OF ALL SURFACE ROUGHENED AREAS.
2. SURFACE ROUGHENING IS TO BE REPEATED AS OFTEN AS NECESSARY.
3. VEHICLES OR EQUIPMENT IS NOT TO BE DRIVEN OVER AREAS THAT HAVE BEEN ROUGHENED.
4. AS SURFACE ROUGHENING IS ONLY A TEMPORARY CONTROL, ADDITIONAL TREATMENTS MAY BE NECESSARY TO MAINTAIN THE SOIL SURFACE IN A ROUGHENED CONDITION.



# Temporary Seeding

---

## What it is

Temporary seeding is the use of quickly germinating vegetative cover on disturbed areas to stabilize soils and control erosion.

## When and Where to use it

- On any disturbed areas that are to remain in an interim state for more than 60 days, but less than one year.

## When and Where NOT to use it

- Temporary seeding shall not be used in areas that receive construction traffic; granular material shall be used to stabilize high traffic areas (see Vehicle Tracking Fact Sheet).
- Temporary seeding is not to be used on disturbed areas left in an interim state for more than 1 year. Permanent seeding is then required.



## Application Techniques and Maintenance Requirements

Figure TS-1 provides application techniques and maintenance requirements for temporary seeding.

## RECOMMENDED ANNUAL GRASSES

SPECIES (COMMON NAME)	GROWTH SEASON	SEEDING DATE	POUNDS OF PURE LIVE SEED (PLS) (PLS/ACRE)	PLANTING DEPTH (INCHES)
1. OATS	COOL	MARCH 16 - APRIL 30	35-50	1-2
2. SPRING WHEAT	COOL	MARCH 16 - APRIL 30	25-35	1-2
3. SPRING BARLEY	COOL	MARCH 16 - APRIL 30	25-35	1-2
4. ANNUAL RYEGRASS	COOL	MARCH 16 - JUNE 30	10-15	1/2
5. MILLET	WARM	MAY 16 - JULY 15	3-15	1/2-3/4
6. SUDANGRASS	WARM	MAY 16 - JULY 15	5-10	1/2-3/4
7. SORGHUM	WARM	MAY 16 - JULY 15	5-10	1/2-3/4
8. WINTER WHEAT	COOL	SEPTEMBER 1 - 30	20-35	1-2
9. WINTER BARLEY	COOL	SEPTEMBER 1 - 30	20-35	1-2
10. WINTER RYE	COOL	SEPTEMBER 1 - 30	20-35	1-2
11. TRITICALE	COOL	SEPTEMBER 1 - 30	25-40	1-2

THIS TABLE WAS TAKEN FROM UDFCD FOR RECOMMENDED ANNUAL GRASSES FOR THE DENVER METROPOLITAN AREA. THIS TABLE MAY BE USED UNLESS A SITE-SPECIFIC SEED MIX IS REQUESTED AND APPROVED.

TABLE TS-1

## TEMPORARY SEEDING NOTES

### INSTALLATION REQUIREMENTS

1. DISTURBED AREAS ARE TO BE SEEDED WITHIN 21 DAYS AFTER CONSTRUCTION ACTIVITY OR GRADING ENDS IF SEASON ALLOWS.
2. IF NECESSARY, SOIL IS TO BE CONDITIONED FOR PLANT GROWTH BY APPLYING TOPSOIL, FERTILIZER, OR LIME.
3. SOIL IS TO BE TILLED IMMEDIATELY PRIOR TO APPLYING SEEDS. COMPACT SOILS ESPECIALLY NEED TO BE LOOSENEED.
4. SEEDBED DEPTH IS TO BE 4 INCHES FOR SLOPES FLATTER THAN 2:1, AND 1 INCH FOR SLOPES STEEPER THAN 2:1.
5. ANNUAL GRASSES LISTED IN TABLE TS-1 ARE TO BE USED FOR TEMPORARY SEEDING. SEED MIXES ARE NOT TO CONTAIN ANY NOXIOUS WEED SEEDS INCLUDING RUSSIAN OR CANADIAN THISTLE, KNAPWEED, PURPLE LOOSESTRIPE, EUROPEAN BINDWEED, JOHNSON GRASS, AND LEAFY SPURGE.
6. TABLE TS-1 ALSO PROVIDES REQUIREMENTS FOR SEEDING RATES, SEEDING DATES, AND PLANTING DEPTHS FOR THE APPROVED TYPES OF ANNUAL GRASSES.
7. SEEDING IS TO BE APPLIED USING MECHANICAL TYPE DRILLS EXCEPT WHERE SLOPES ARE STEEP OR ACCESS IS LIMITED THEN HYDRAULIC SEEDING MAY BE USED.
8. ALL SEEDED AREAS ARE TO BE MULCHED (SEE FACTSHEET ON MULCHING).
9. IF HYDRAULIC SEEDING IS USED THEN HYDRAULIC MULCHING SHALL BE DONE SEPARATELY TO AVOID SEEDS BECOMING ENCAPSULATED IN THE MULCH.

### MAINTENANCE REQUIREMENTS

1. REGULAR INSPECTIONS ARE TO BE MADE OF ALL SEEDED AREAS TO ENSURE GROWTH.
2. AREAS WHERE GROWTH IS NOT OCCURRING QUICKLY OR THE MULCH HAS BEEN REMOVED SHALL BE RE-SEEDED AS SOON AS POSSIBLE AND RE-MULCHED IF NEEDED.
3. SEEDED AREAS ARE NOT TO BE DRIVEN OVER WITH CONSTRUCTION EQUIPMENT OR VEHICLES.

# Temporary Swale

---

## What it is

A temporary swale is an earth channel used to convey runoff. A temporary swale can be excavated or formed upslope from an earthen berm, and may be lined or unlined.



## When and Where to use it

- At the top of a slope to divert upland runoff away from the slope face.
- At the bottom of a slope to convey sediment-laden runoff to a sediment-trapping device such as a sediment basin.
- Along the perimeter of the construction site to keep runoff from leaving the site.

Figure TSW-1 illustrates cases where temporary swales are most effective.

## When and Where NOT to use it

- Where longitudinal slope exceeds 10 percent (lining is required where longitudinal slope exceeds 2 percent).
- In areas where concentrated flow will overtop the swale transversely.

## Construction Detail and Maintenance Requirements

Figure TSW-2 provides a construction detail and maintenance requirements for a temporary swale. Figure TSW-3 provides a construction detail and maintenance requirements for swale linings.

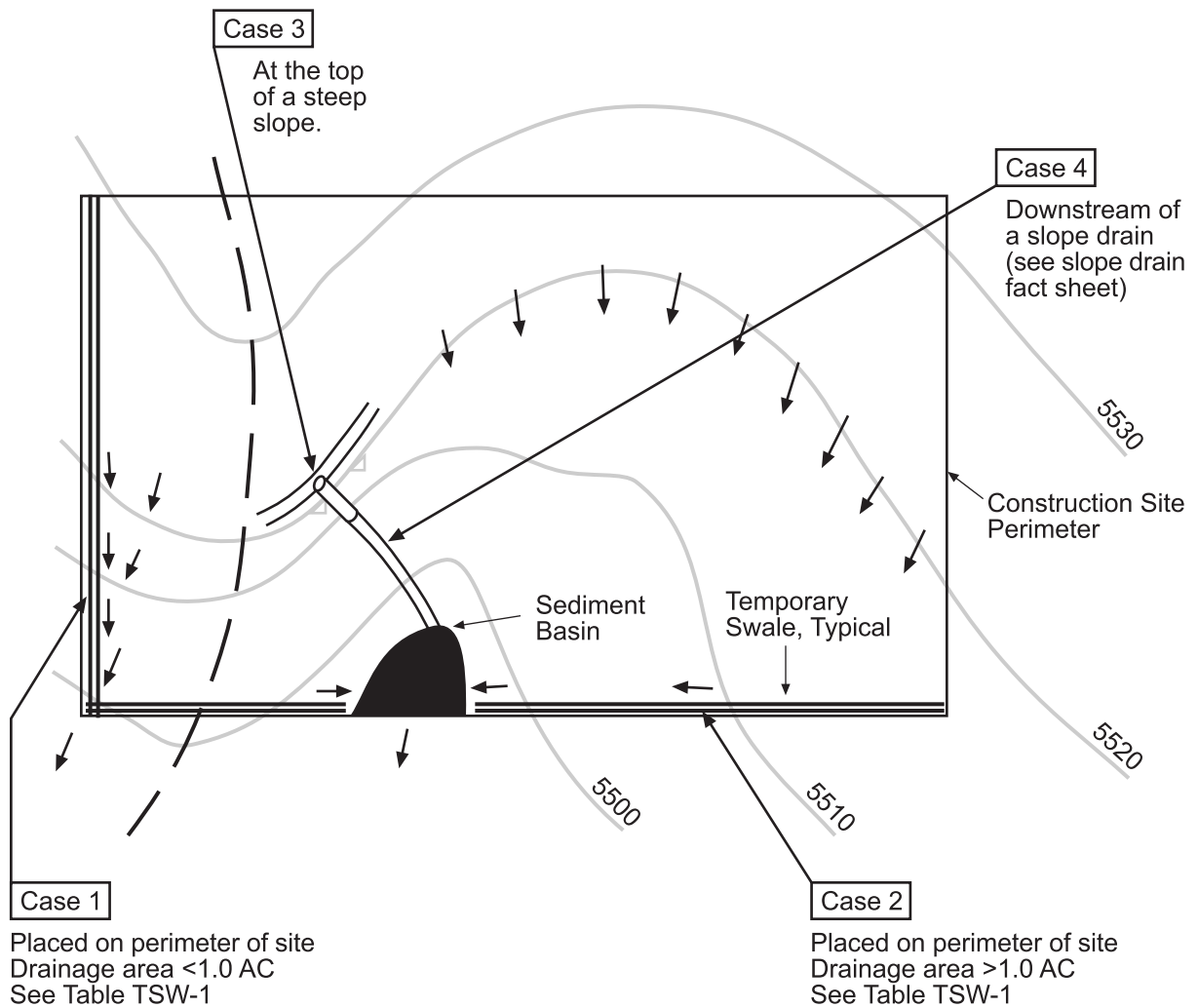


Table TSW-1

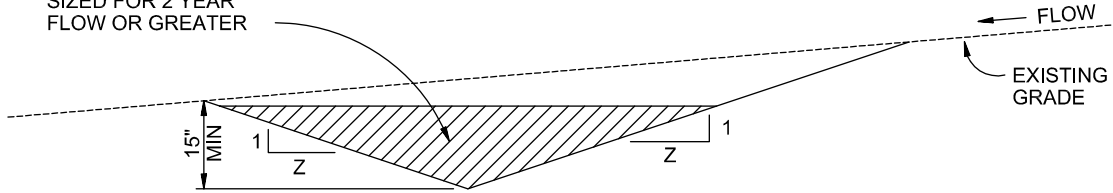
Temporary Swale Used as Perimeter Control	Case 1 DA < 1.0 AC	Case 2 DA > 1.0 AC
Continuous Grade	OK <sup>(1)</sup>	OK <sup>(1)</sup>
Area of Concentrated Flow	NO <sup>(3)</sup>	NO <sup>(2)</sup>

(1) Silt Fence or Straw Bale Barrier may be used as alternative to a Temporary Swale.

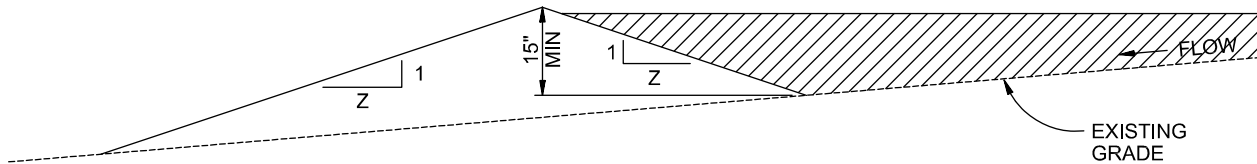
(2) With Temporary Swales Sediment Basin is required for concentrated flow from drainage areas > 1.0 AC.

(3) Check Dam is required at concentrated flow for drainage areas >1.0 acres.

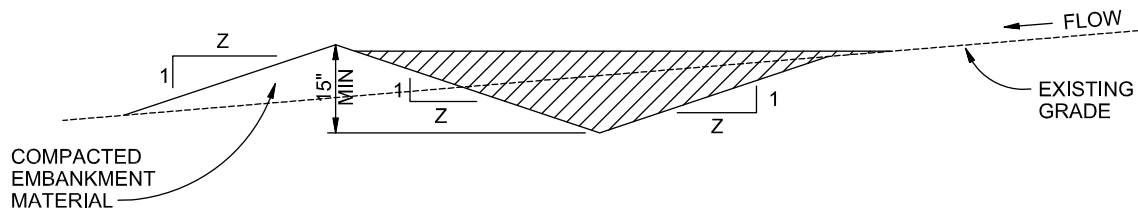
CONVEYANCE  
SIZED FOR 2 YEAR  
FLOW OR GREATER



A. EXCAVATED SWALE



B. SWALE FORMED BY BERM



C. SWALE FORMED BY CUT AND FILL

## TEMPORARY SWALE

NTS

## TEMPORARY SWALE NOTES

### INSTALLATION REQUIREMENTS

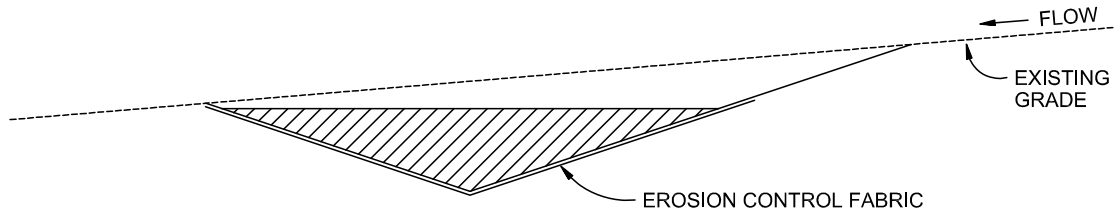
1. TEMPORARY SWALES SHALL BE INSTALLED PRIOR TO ANY LAND DISTURBING ACTIVITIES.
2. THE AREA UNDER WHICH THE EMBANKMENT IS TO BE INSTALLED SHALL BE CLEARED, GRUBBED, AND STRIPPED OF ALL VEGETATION AND ROOT MAT.
3. EMBANKMENT MATERIAL SHALL CONSIST OF SOIL WITH A MINIMUM OF 15% PASSING A #200 SIEVE. EXCAVATED SOIL CAN BE USED IF IT MEETS THIS REQUIREMENT.
4. EMBANKMENT IS TO BE COMPACTED TO AT LEAST 90% OF MAXIMUM DENSITY AND WITHIN 2% OF OPTIMUM MOISTURE CONTENT ACCORDING TO ASTM D 698.
5. SWALES WITH SLOPE > 2% SHALL BE LINED, SEE FIGURE TSW-3.
6. SWALES ARE TO DRAIN INTO A SEDIMENT BASIN OR OTHER STABILIZED OUTLET.
7. Z SHALL BE 3 OR GREATER.

### MAINTENANCE REQUIREMENTS

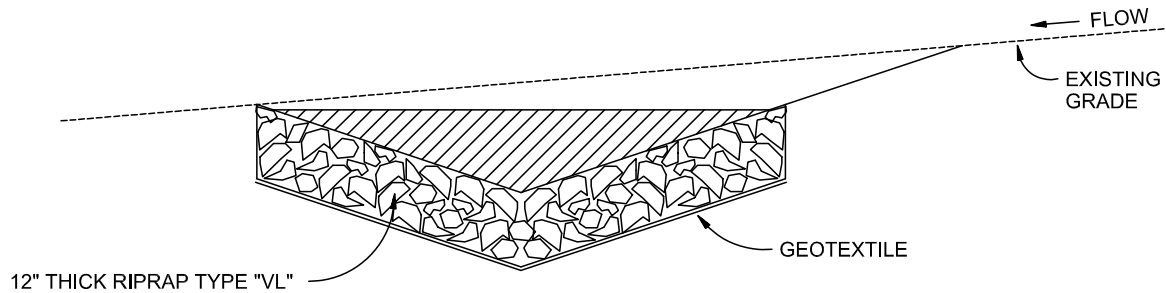
1. CONTRACTOR SHALL INSPECT SWALES AFTER EACH RAINFALL, AT LEAST DAILY DURING PROLONGED RAINFALL, AND WEEKLY DURING PERIODS OF NO RAINFALL.
2. SWALES SHALL BE ROUTINELY CLEARED OF ANY DEBRIS OR ACCUMULATION OF SEDIMENT.
3. ERODED SLOPES OR DAMAGED LININGS SHALL IMMEDIATELY BE REPAIRED.
4. TEMPORARY SWALES SHALL REMAIN OPERATIONAL AND PROPERLY MAINTAINED UNTIL THE SITE AREA IS PERMANENTLY STABILIZED WITH ADEQUATE VEGETATIVE COVER AND/OR OTHER PERMANENT STRUCTURE AS APPROVED BY THE CITY.

City of Colorado Springs  
Stormwater Quality

Figure TSW-2  
Temporary Swale  
Construction Detail and Maintenance  
Requirements



**A. EROSION CONTROL FABRIC**  
 $2\% \leq \text{SLOPE} \leq 5\%$  AND VELOCITY  $\leq 8$  FPS



**B. RIPRAP**  
 SLOPE  $> 5\%$  OR VELOCITY  $> 8$  FPS

## **SWALE LINING**

NTS

### **SWALE LINING NOTES**

#### **INSTALLATION REQUIREMENTS**

1. REFER TO THE EROSION CONTROL BLANKETS FACTSHEET FOR PROPER INSTALLATION OF EROSION CONTROL FABRIC LINING.
2. SWALES WITH EASILY EROSIVE SOILS AND SLOPES LESS THAN 2%, SHALL BE LINED WITH EROSION CONTROL FABRIC.
3. VELOCITIES FOR EROSION CONTROL FABRICS SHALL NOT EXCEED 8 FPS. SWALES WITH VELOCITIES GREATER THAN 8 FPS SHALL BE LINED WITH RIP RAP.

#### **MAINTENANCE REQUIREMENTS**

1. CONTRACTOR SHALL INSPECT SWALE LININGS AFTER EACH RAINFALL, AT LEAST DAILY DURING PROLONGED RAINFALL AND WEEKLY DURING PERIODS OF NO RAINFALL.
2. DAMAGED LININGS SHALL IMMEDIATELY BE REPAIRED.
3. REFER TO THE EROSION CONTROL BLANKETS FACTSHEET FOR PROPER MAINTENANCE.
4. DISPLACED RIPRAP OR COARSE AGGREGATE IS TO BE REPLACED AS SOON AS POSSIBLE.
5. SWALE LININGS ARE TO REMAIN IN PLACE AND BE PROPERLY MAINTAINED UNTIL THE TEMPORARY SWALE IS REMOVED.

# Vehicle Tracking

---

## What it is

Vehicle tracking refers to the stabilization of construction entrances, roads, parking areas, and staging areas to prevent the tracking of sediment from the construction site.



## When and Where to use it

- All points where vehicles exit the construction site onto a public road.
- Construction entrance/exit should be located at permanent access locations if at all possible.
- Construction roads and parking areas.
- Loading and unloading areas.
- Storage and staging areas.
- Where trailers are parked.
- Any construction area that receives high vehicular traffic.

## When and Where NOT to use it

- The vehicle tracking area should not be located in areas that are wet or where soils erode easily.



This picture shows an unstabilized entrance where dirt is being tracked onto a public road.

## Construction Details and Maintenance Requirements

Figure VT-1 and VT-2 provide construction details and maintenance requirements for vehicle tracking.



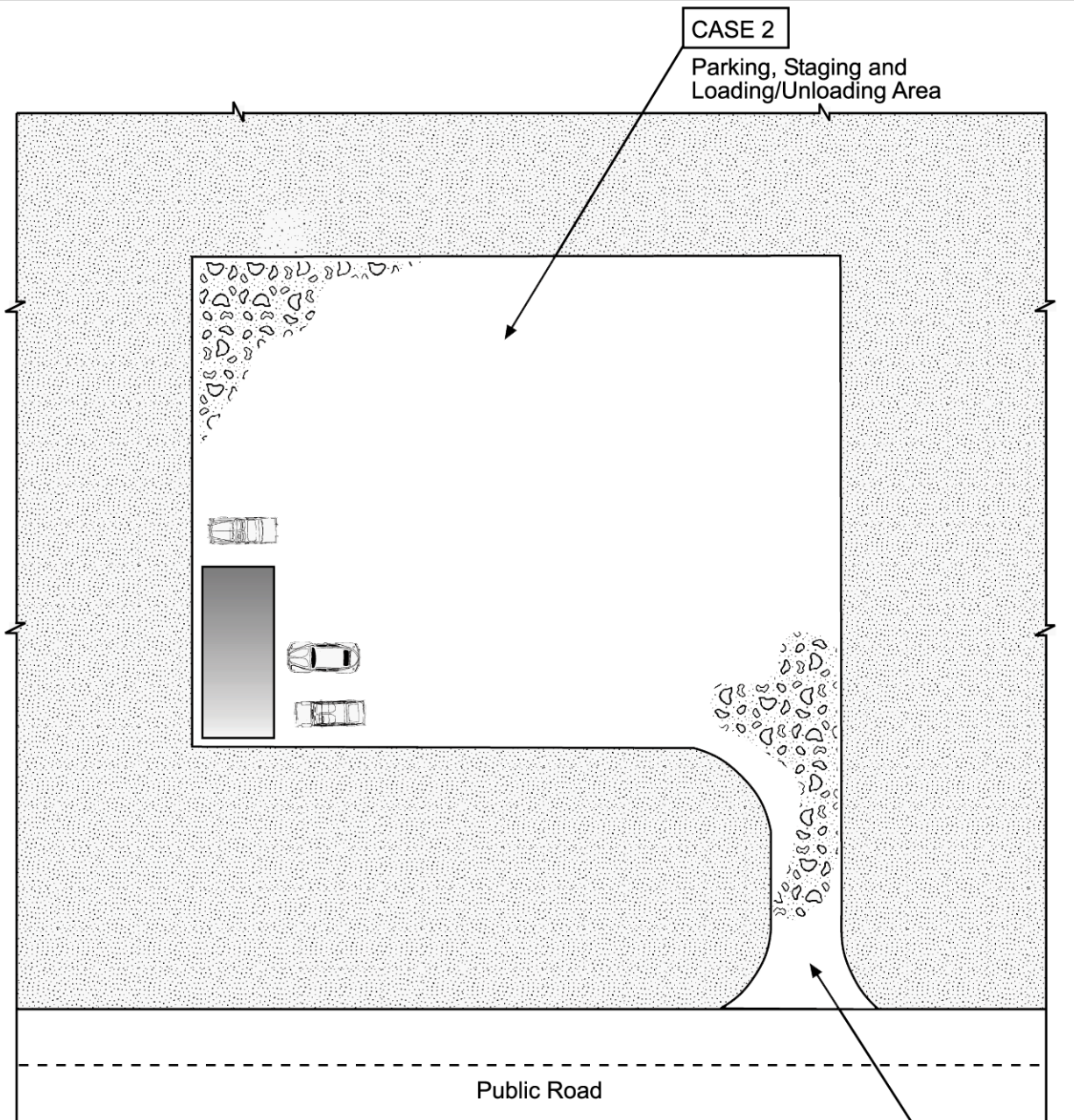


Table VT-1

	Case 1	Case 2
Gravel Thickness	9"	3"
Filter Fabric	YES	NO

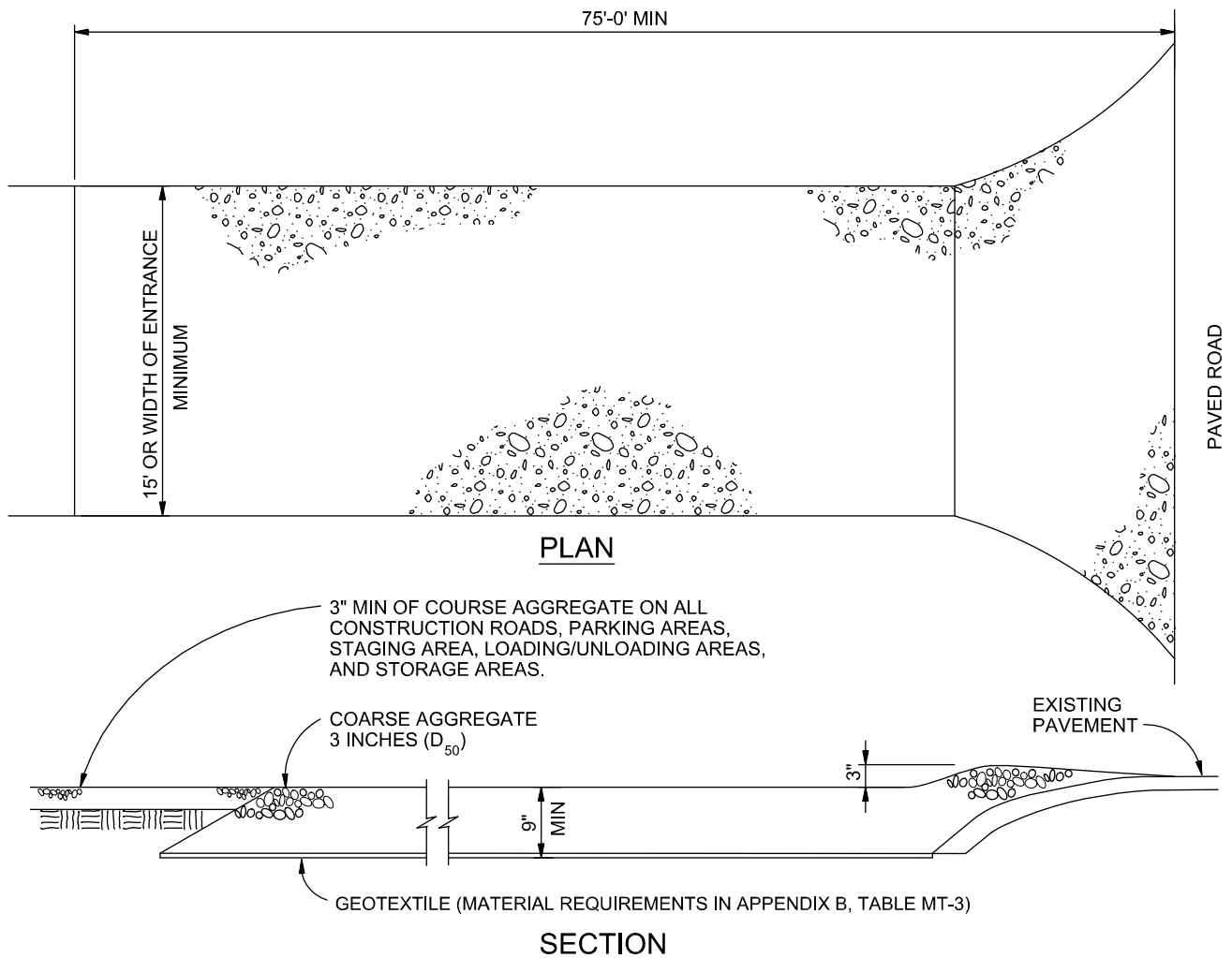
CASE 1

Construction Entrance

City of Colorado Springs  
Storm Water Quality

Figure VT-1  
Vehicle Tracking  
Application Examples





## VEHICLE TRACKING

NTS

### VEHICLE TRACKING NOTES

#### INSTALLATION REQUIREMENTS

1. ALL ENTRANCES TO THE CONSTRUCTION SITE ARE TO BE STABILIZED PRIOR TO CONSTRUCTION BEGINNING.
2. CONSTRUCTION ENTRANCES ARE TO BE BUILT WITH AN APRON TO ALLOW FOR TURNING TRAFFIC, BUT SHOULD NOT BE BUILT OVER EXISTING PAVEMENT EXCEPT FOR A SLIGHT OVERLAP.
3. AREAS TO BE STABILIZED ARE TO BE PROPERLY GRADED AND COMPACTED PRIOR TO LAYING DOWN GEOTEXTILE AND STONE.
4. CONSTRUCTION ROADS, PARKING AREAS, LOADING/UNLOADING ZONES, STORAGE AREAS, AND STAGING AREAS ARE TO BE STABILIZED.
5. CONSTRUCTION ROADS ARE TO BE BUILT TO CONFORM TO SITE GRADES, BUT SHOULD NOT HAVE SIDE SLOPES OR ROAD GRADES THAT ARE EXCESSIVELY STEEP.

#### MAINTENANCE REQUIREMENTS

1. REGULAR INSPECTIONS ARE TO BE MADE OF ALL STABILIZED AREAS, ESPECIALLY AFTER STORM EVENTS.
2. STONES ARE TO BE REAPPLIED PERIODICALLY AND WHEN REPAIR IS NECESSARY.
3. SEDIMENT TRACKED ONTO PAVED ROADS IS TO BE REMOVED DAILY BY SHOVELING OR SWEEPING. SEDIMENT IS NOT TO BE WASHED DOWN STORM SEWER DRAINS.
4. STORM SEWER INLET PROTECTION IS TO BE IN PLACE, INSPECTED, AND CLEANED IF NECESSARY.
5. OTHER ASSOCIATED SEDIMENT CONTROL MEASURES ARE TO BE INSPECTED TO ENSURE GOOD WORKING CONDITION.

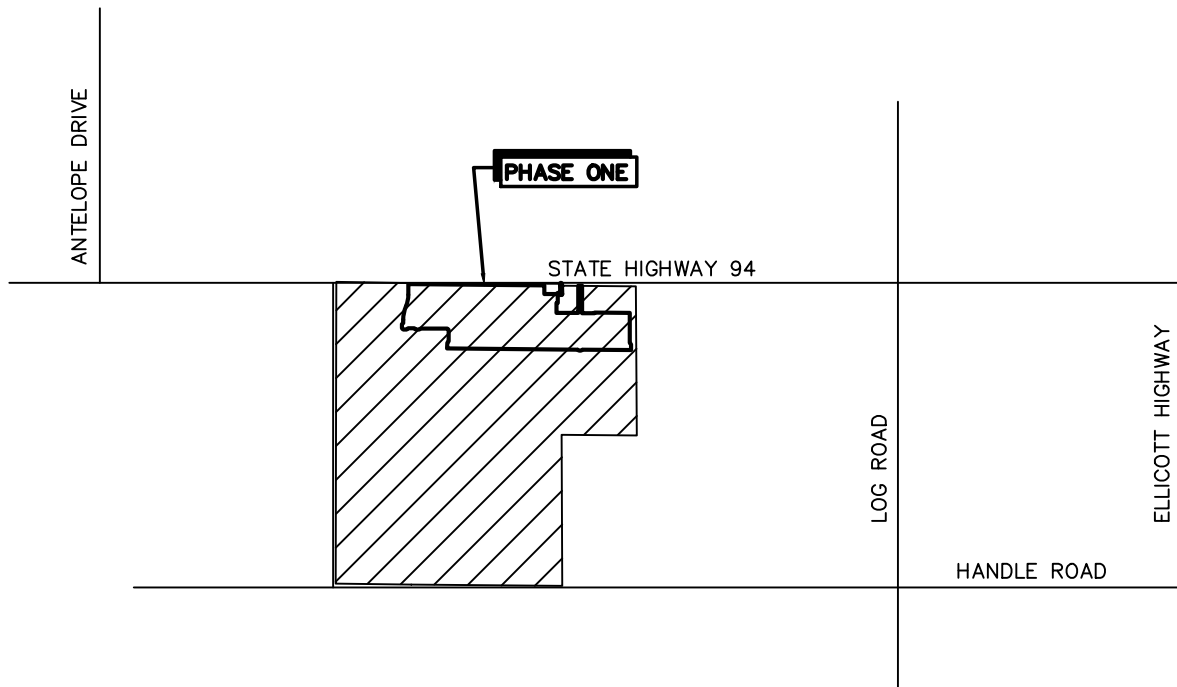
City of Colorado Springs  
Stormwater Quality

Figure VT-2  
Vehicle Tracking  
Application Examples

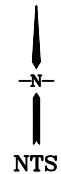
## **APPENDIX B**

### **FIGURES**

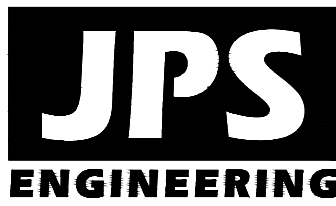
J:\jpsprojects\090001.EllicottTC\dwg\Civil\A1.dwg Aug 26, 2018 - 2:59pm



VICINITY MAP  
NTS



**VICINITY  
MAP**



**ELLICOTT  
TOWN CENTER**

**FIGURE A1**  
JPS PROJ NO. 090001

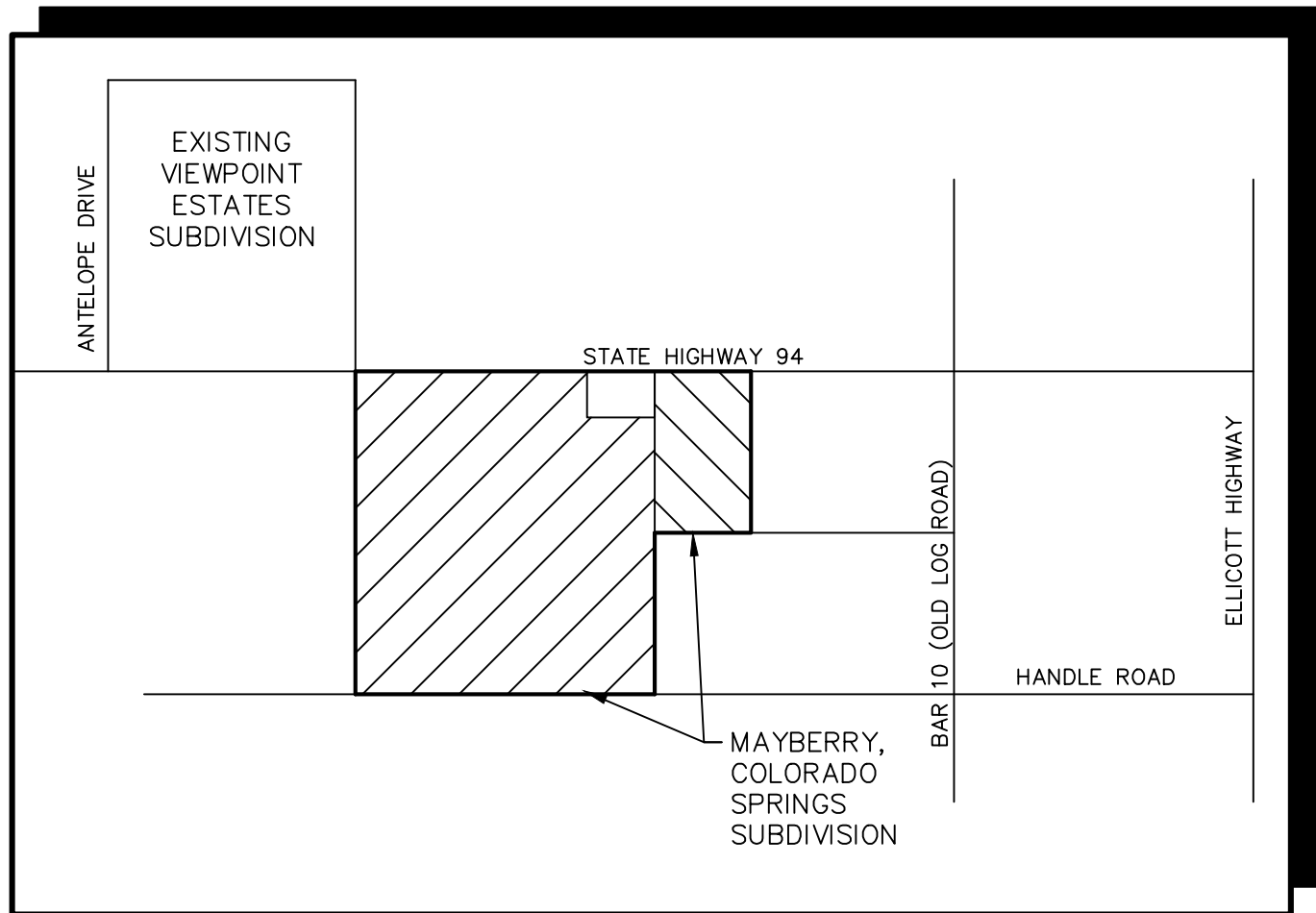
# Mayberry, Colorado Springs

## Filing No. 1

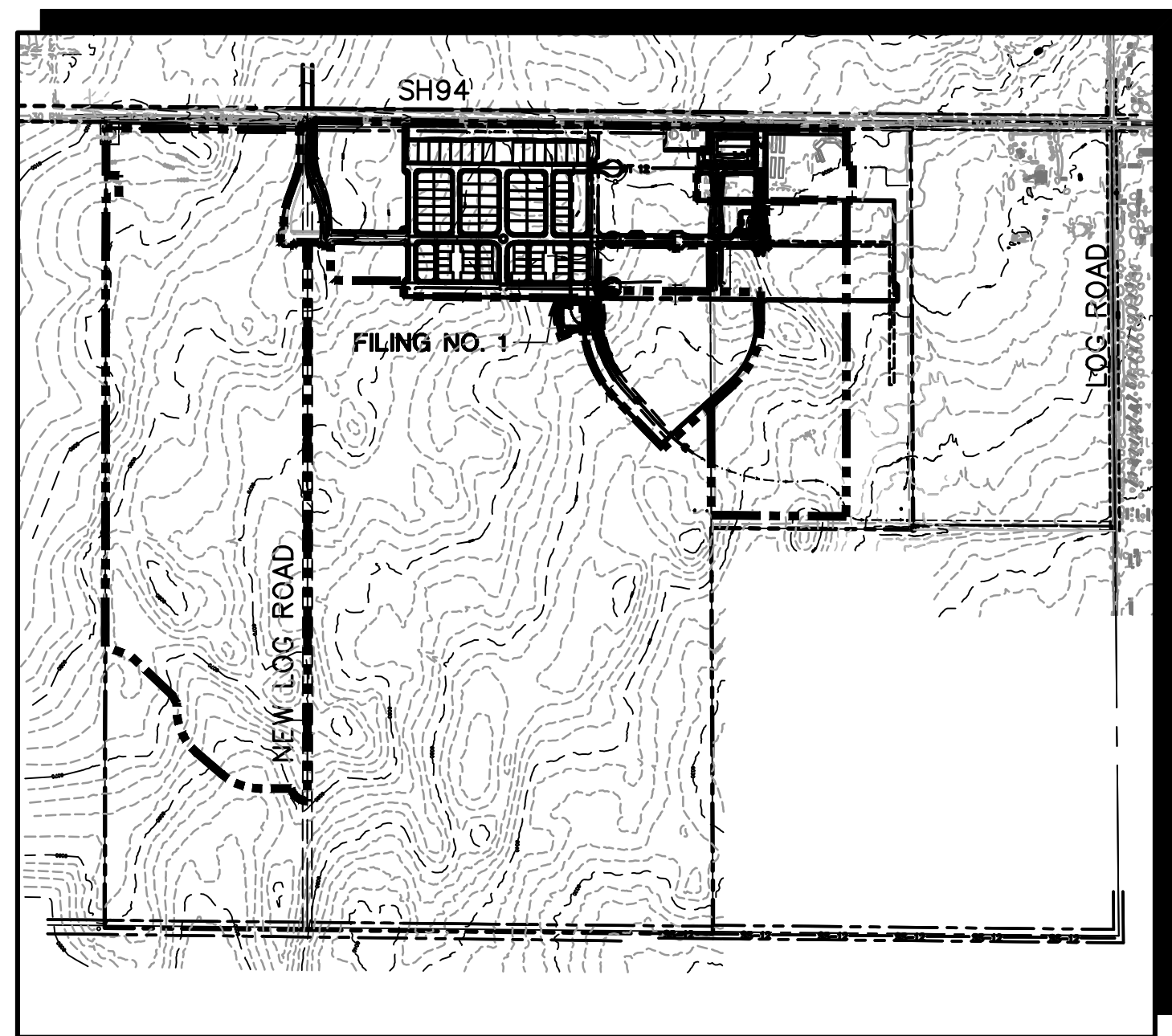
### Grading & Erosion Control Plans

### El Paso County, Colorado

CALL UTILITY NOTIFICATION  
CENTER OF COLORADO  
**1-800-922-1987**  
CALL 2-BUSINESS DAYS IN ADVANCE  
BEFORE YOU DIG, GRADE, OR EXCAVATE  
FOR THE MARKING OF UNDERGROUND  
MEMBER UTILITIES.



VICINITY MAP  
NOT TO SCALE

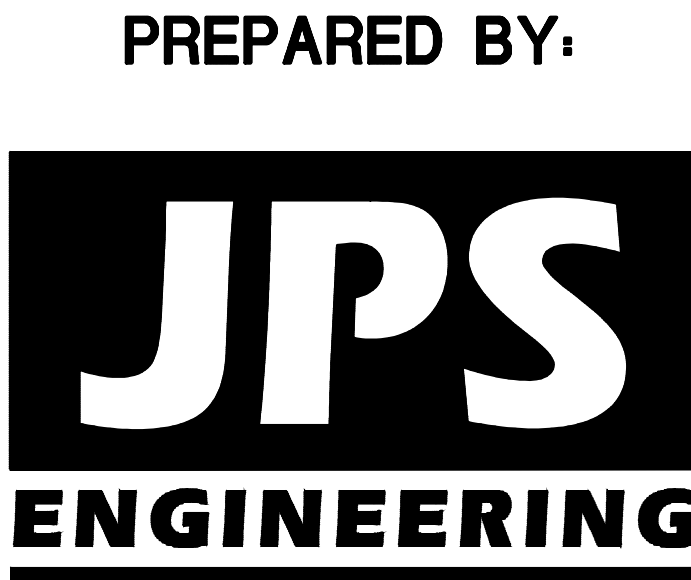


SITE MAP  
NOT TO SCALE

**BENCHMARK:**  
A # 5 REBAR LOCATED AT THE NORTH 1/4 CORNER OF SECTION 14. AIR PHOTO PANEL NEAR NORTH 1/4 CORNER, SECTION 14 NO. 5 REBAR EL=6058.55.

**BASIS OF BEARINGS:**  
THE BASIS OF BEARING FOR THIS SURVEY IS THE NORTH LINE OF SECTION 14, T.14S., R.63W. ASSUMED AS S 89-44-49 E FROM REBAR & 3-1/2" ALUM. CAP NW CORNER SEC 14, T14S, R63W TO REBAR & 2" ALUM. CAP IN RANGE BOX, N 1/4 CORNER SEC. 14.

PREPARED FOR:  
**Colorado Springs Mayberry, LLC**  
32823 Temecula Parkway  
Temecula, CA 92592



PREPARED BY:  
**19 East Willamette Avenue**  
**Colorado Springs, Colorado 80903**  
**October, 2020**

AGENCIES/CONTACTS

DEVELOPER:	COLORADO SPRINGS MAYBERRY, LLC 32823 TEMECULA PARKWAY TEMECULA, CA 92592 MR. RANDY GOODSON (858) 692-6262	WATER/WASTEWATER:	ELLCOTT UTILITIES COMPANY, LLC MR. RANDY GOODSON (858) 692-6262
CIVIL ENGINEER:	JPS ENGINEERING, INC. 19 E. WILLAMETTE AVENUE COLORADO SPRINGS, CO 80903 MR. JOHN P. SCHWAB, P.E. (719)477-9429	GAS DEPARTMENT:	BLACK HILLS ENERGY MR. SEBASTIAN SCHWENDER (719) 359-3176
SURVEYOR:	RAMPART SURVEYS P.O. BOX 5101 WOODLAND PARK, CO 80866 MR. KEVIN LLOYD, PLS (719) 687-0920	ELECTRIC DEPARTMENT:	MOUNTAIN VIEW ELECTRIC ASSOCIATION 11140 E. WOODMEN ROAD COLORADO SPRINGS, CO 80908 MR. DAVE WALDNER (719)495-2283
COUNTY ENGINEERING:	EL PASO COUNTY DEVELOPMENT SERVICES 2880 INTERNATIONAL CIRCLE COLORADO SPRINGS, CO 80922 MR. JEFF RICE, P.E. (719) 520-7877	TELEPHONE COMPANY:	QWEST COMMUNICATIONS (LOCATORS) (800)922-1987  A.T. & T. (LOCATORS) (719)635-3674
STATE HIGHWAY	COLORADO DEPARTMENT OF TRANSPORTATION REGION 2 5615 WILLS BLVD. PUEBLO, CO 81008 MS. VALERIE SWORD (719)546-5407		

SHEET INDEX

G1	TITLE SHEET/VICINITY MAP/LOCATION MAP
G2	GENERAL NOTES & LEGEND
C1	OVERALL SITE PLAN & GENERAL NOTES
C1.1	MASTER GRADING PLAN
C1.2	FILING 1 GRADING & EROSION CONTROL PLAN
C1.3	EAST SITE GRADING & EROSION CONTROL PLAN
C1.4A	EROSION CONTROL NOTES
C1.4B	EROSION CONTROL DETAILS
C1.5	DETENTION POND C1 PLAN & DETAILS
C1.6	DETENTION POND C2.8 PLAN & DETAILS
C2.1	LOT GRADING NOTES & DETAILS
CH1	CHANNEL C1 PLAN & PROFILE
CH2	CHANNEL C4 PLAN & PROFILE

ENGINEER'S STATEMENT:

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 LIABILITY CAUSED BY NEGLIGENT ACTS, ERRORS OR OMISSIONS ON MY PART IN PREPARING THIS PLAN.

ENGINEER OF RECORD SIGNATURE \_\_\_\_\_ DATE \_\_\_\_\_

OWNER'S STATEMENT:

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

OWNER SIGNATURE \_\_\_\_\_ DATE \_\_\_\_\_

COUNTY:

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 DIRECTOR'S DISCRETION.

COUNTY ENGINEER/ECM ADMINISTRATOR \_\_\_\_\_ DATE \_\_\_\_\_

C:\Users\Owner\Dropbox\jsprojects\090001.EllicottTC\dwg\Civil\GEC\G2.DWG Apr 17, 2020 - 1:05pm

1. INDIVIDUAL BUILDERS SHALL PROVIDE POSITIVE DRAINAGE AWAY FROM STRUCTURES AND ACCOUNT FOR POTENTIAL CROSS-LOT DRAINAGE IMPACTS WITHIN EACH LOT.
2. BUILDERS AND PROPERTY OWNERS SHALL IMPLEMENT & MAINTAIN EROSION CONTROL BEST MANAGEMENT PRACTICES FOR PROTECTION OF DOWNSTREAM PROPERTIES AND FACTORS INCLUDING PROTECTION OF EXISTING GRASS BUFFER STRIPS ALONG THE DOWNSTREAM PROPERTY BOUNDARIES.
3. GRADING AND DRAINAGE WITHIN LOTS IS THE RESPONSIBILITY OF THE INDIVIDUAL BUILDERS AND PROPERTY OWNERS.

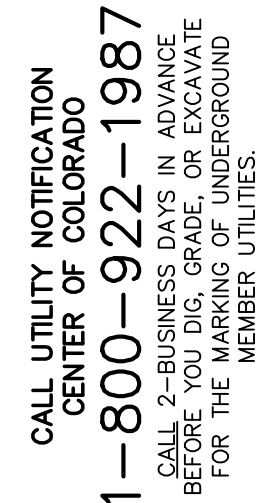
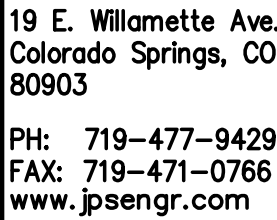
1. ALL SIGNS AND PAVEMENT MARKINGS SHALL BE IN COMPLIANCE WITH THE CURRENT MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD).
2. REMOVAL OF EXISTING PAVEMENT MARKINGS SHALL BE ACCOMPLISHED BY A METHOD THAT DOES NOT MATERIALLY DAMAGE THE PAVEMENT. THE PAVEMENT MARKINGS SHALL BE REMOVED TO THE EXTENT THAT THEY WILL NOT BE VISIBLE UNDER DAY OR NIGHT CONDITIONS. AT NO TIME WILL IT BE ACCEPTABLE TO PAINT OVER EXISTING PAVEMENT MARKINGS.
3. ANY DEVIATION FROM THE STRIPING AND SIGNING PLAN SHALL BE APPROVED BY EL PASO COUNTY DEPARTMENT OF PUBLIC WORKS.
4. ALL SIGNS SHOWN ON THE SIGNING AND STRIPING PLAN SHALL BE NEW SIGNS. EXISTING SIGNS MAY REMAIN OR BE REUSED IF THEY MEET CURRENT EL PASO COUNTY AND MUTCD STANDARDS.
5. STREET NAME AND REGULATORY STOP SIGNS SHALL BE ON THE SAME POST AT INTERSECTIONS.
6. ALL REMOVED SIGNS SHALL BE DISPOSED OF IN A PROPER MANNER BY THE CONTRACTOR.
7. ALL STREET NAME SIGNS SHALL HAVE "D" SERIES LETTERS, WITH LOCAL ROADWAY SIGNS BEING 4" UPPER-LOWER CASE LETTERING ON 8" BLANK AND NON-LOCAL ROADWAY SIGNS BEING 6" LETTERING, UPPER-LOWER CASE ON 12" BLANK, WITH WHITE BORDER THAT IS NOT RECESSED. MULTI-LANE ROADWAYS WITH SPEED LIMITS OF 40 MPH OR HIGHER SHALL HAVE 8" UPPER-LOWER CASE LETTERING ON 18" BLANK WITH A WHITE BORDER THAT IS NOT RECESSED. THE WIDTH OF THE NON-RECESSED WHITE BORDERS SHALL MATCH PAGE 255 OF THE 2012 MUTCD "STANDARD HIGHWAY SIGNS".
8. ALL TRAFFIC SIGNS SHALL HAVE A MINIMUM HIGH INTENSITY PRISMATIC GRADE SHEETING.
9. ALL LOCAL RESIDENTIAL STREET SIGNS SHALL BE MOUNTED ON A 1.75" X 1.75" SQUARE TUBE SIGN POST AND STUB POST BASE. FOR OTHER APPLICATIONS, REFER TO THE CDOT STANDARD S-614-8 REGARDING USE OF THE P2 TUBULAR STEEL POST SLIPBASE DESIGN.
10. ALL SIGNS SHALL BE SINGLE SHEET ALUMINUM WITH 0.100" MINIMUM THICKNESS.
11. ALL LIMIT LINES/STOP LINES, CROSSWALK LINES, PAVEMENT LEGENDS, AND ARROWS SHALL BE A MINIMUM 125 MIL THICKNESS PREFORMED THERMOPLASTIC PAVEMENT MARKINGS WITH TAPERED LEADING EDGES PER CDOT STANDARD S-627-1. WORD AND SYMBOL MARKINGS SHALL BE THE NARROW TYPE. STOP BARS SHALL BE 24" IN WIDTH. CROSSWALKS LINES SHALL BE 12" WIDE AND 8' LONG PER CDOT S-627-1.
12. ALL LONGITUDINAL LINES SHALL BE A MINIMUM 15MIL THICKNESS EPOXY PAINT. ALL NON-LOCAL RESIDENTIAL ROADWAYS SHALL INCLUDE BOTH RIGHT AND LEFT EDGE LINE STRIPING AND ANY ADDITIONAL STRIPING AS REQUIRED BY CDOT S-627-1.
13. THE CONTRACTOR SHALL NOTIFY EL PASO COUNTY DEPARTMENT OF PUBLIC WORKS (719) 520-6819 PRIOR TO AND UPON COMPLETION OF SIGNING AND STRIPING.
14. THE CONTRACTOR SHALL OBTAIN A WORK IN THE RIGHT OF WAY PERMIT FROM THE EL PASO COUNTY PUBLIC WORKS DEPARTMENT PRIOR TO ANY SIGNAGE OR STRIPING WORK WITHIN AN EXISTING EL PASO COUNTY ROADWAY.

- CONSTRUCTION. LOCATION OF EXISTING UTILITIES SHALL BE VERIFIED BY THE CONTRACTOR PRIOR TO ACTUAL CONSTRUCTION.
2. EXISTING CONTOUR DATA PROVIDED BY OWNER GENERALLY CONSISTS OF AERIAL MAPPING FROM UNITED PLANNING & ENGINEERING. JPS ENGINEERING TAKES NO RESPONSIBILITY FOR THE ACCURACY OF EXISTING TOPOGRAPHIC MAPPING.
3. THE CONTRACTOR SHALL HAVE ONE (1) SIGNED COPY OF THESE APPROVED PLANS AND ONE (1) COPY OF THE APPROPRIATE DESIGN AND CONSTRUCTION STANDARDS AND SPECIFICATIONS AT THE JOB SITE AT ALL TIMES:
  - A. EL PASO COUNTY ENGINEERING CRITERIA MANUAL
  - B. CDOT STANDARD SPECIFICATIONS FOR ROAD & BRIDGE CONSTRUCTION
  - C. ELLICOTT UTILITIES STANDARDS SPECIFICATIONS (REFER TO CSU STANDARDS IN THE ABSENCE OF PUBLISHED SPECIFICATIONS)
4. STORM DRAIN PIPE SHALL BE RCP CLASS III WITH CLASS C BEDDING UNLESS OTHERWISE NOTED. PROVIDE WATER-TIGHT JOINTS ON STORM SEWER PIPE.
5. STATIONING IS AT CENTERLINE UNLESS OTHERWISE NOTED. ALL ELEVATIONS ARE AT FLOWLINE UNLESS OTHERWISE NOTED. ALL DIMENSIONS ARE FROM FACE OF CURB UNLESS OTHERWISE NOTED.
6. PROPOSED CONTOURS SHOWN ARE TO FINISHED GRADE.
7. LENGTHS SHOWN FOR STORM SEWER PIPES ARE TO CENTER OF MANHOLE.
8. CONTRACTOR SHALL REMOVE AND DISPOSE OF ALL EXISTING STRUCTURES, DEBRIS, WASTE AND OTHER UNSUITABLE FILL MATERIAL FOUND WITHIN THE LIMITS OF EXCAVATION.
9. MATCH INTO EXISTING GRADES AT 3:1 MAX CUT AND FILL SLOPES.
10. REVEGETATION OF ALL DISTURBED AREAS SHALL BE DONE WITH SPECIFIED SEED MIX WITHIN 30 DAYS AFTER FINE GRADING IS COMPLETE.
11. EROSION CONTROL SHALL CONSIST OF SILT FENCE AND OTHER BMP'S AS SHOWN ON THE DRAWINGS, AND TOPSOIL WITH GRASS SEED, WHICH WILL BE WATERED UNTIL VEGETATION HAS BEEN REESTABLISHED.
12. THE EROSION CONTROL MEASURES OUTLINED ON THIS PLAN ARE THE RESPONSIBILITY OF THE DEVELOPER TO MONITOR AND REPLACE, REGRADE, AND REBUILD AS NECESSARY UNTIL VEGETATION IS REESTABLISHED.
13. EROSION CONTROL MEASURES SHALL BE IMPLEMENTED IN A MANNER THAT WILL PROTECT ADJACENT PROPERTIES AND PUBLIC FACILITIES FROM THE ADVERSE EFFECTS OF EROSION AND SEDIMENTATION AS A RESULT OF CONSTRUCTION AND EARTHWORK ACTIVITIES WITHIN THE PROJECT SITE.
14. ADDITIONAL EROSION CONTROL MEASURES MAY BE REQUIRED AS DETERMINED BY SITE CONDITIONS.
15. THE CONTRACTOR WILL TAKE THE NECESSARY PRECAUTIONS TO PROTECT EXISTING UTILITIES FROM DAMAGE DUE TO THIS OPERATION. ANY DAMAGE TO THE UTILITIES WILL BE REPAIRED AT THE CONTRACTOR'S EXPENSE, AND ANY SERVICE DISRUPTION WILL BE SETTLED BY THE CONTRACTOR
16. PEDESTRIAN RAMPS SHALL BE INSTALLED AT ALL INTERSECTIONS AND CONFORM TO COUNTY ENGINEERING STANDARDS AND SPECIFICATIONS.
17. ALL FINISHED GRADES SHALL HAVE A MINIMUM 0.5% SLOPE TO PROVIDE POSITIVE DRAINAGE.
18. WHERE PROPOSED SLOPES CONFLICT WITH PROPOSED SPOT ELEVATIONS, SPOT ELEVATIONS SHALL GOVERN.
19. CONTRACTOR SHALL OBTAIN ALL REQUIRED PERMITS PRIOR TO BEGINNING WORK.
20. ALL RESIDENTIAL STREET CURB RETURN RADII ARE 20- FEET AT FLOWLINE UNLESS OTHERWISE NOTED. ARTERIAL STREET CURB RETURN RADII ARE 35' UNLESS NOTED OTHERWISE.
21. 25-FOOT SIGHT VISIBILITY TRIANGLES SHALL BE PROVIDED AT ALL RESIDENTIAL STREET INTERSECTIONS. 50-FOOT SIGHT TRIANGLES SHALL BE PROVIDED AT ARTERIAL STREET INTERSECTIONS. NO OBSTRUCTIONS TALLER THAN 18" ARE PERMITTED WITHIN THESE TRIANGLES.
22. CONTRACTOR SHALL SCHEDULE A PRE-CONSTRUCTION MEETING WITH EL PASO COUNTY AND ALL UTILITIES INVOLVED IN PROJECT PRIOR TO MOBILIZING ON SITE.
23. TYPE C STORM INLETS SHALL HAVE CLOSE-MESH GRATES.
24. PROVIDE 10' TRANSITION FROM RAMP CURB TO VERTICAL CURB ON EACH SIDE OF STORM INLETS.
25. ALL BACKFILL, SUB-BASE, AND/OR BASE COURSE MATERIAL SHALL BE COMPACTED PER EL PASO COUNTY AND CDOT STANDARDS AND SPECIFICATIONS AND PROJECT GEOTECHNICAL REPORT. CONTRACTOR SHALL STABILIZE ALL SUBGRADE AREAS PER GEOTECHNICAL ENGINEER'S RECOMMENDATIONS.

1. PRELIMINARY PLAN WAS APPROVED WITH 2004 VERSION OF ECM.

The diagram shows a horizontal line representing a section line. On the left side, there is a small black triangle. On the right side, there is a larger black triangle. A circle is drawn around the intersection of the line and the right triangle. Inside the circle, the number '1' is written above the letters 'P1'. Two arrows point from the text labels to the circle: one from 'SECTION NUMBER' and one from 'SHEET ON WHICH SECTION IS SHOWN'.

MAYBERRY, COLORADO SPRINGS - FILING NO. 1



	No.	REVISION	BY	DATE
<b>A</b>		2018 SUBMITTAL	JPS	8/22/18
<b>B</b>		EPC COMMENTS	JPS	1/15/19
<b>C</b>		EPC COMMENTS	JPS	9/12/19
<b>D</b>		EPC COMMENTS	JPS	1/31/20
<b>E</b>		EPC COMMENTS	JPS	4/17/20

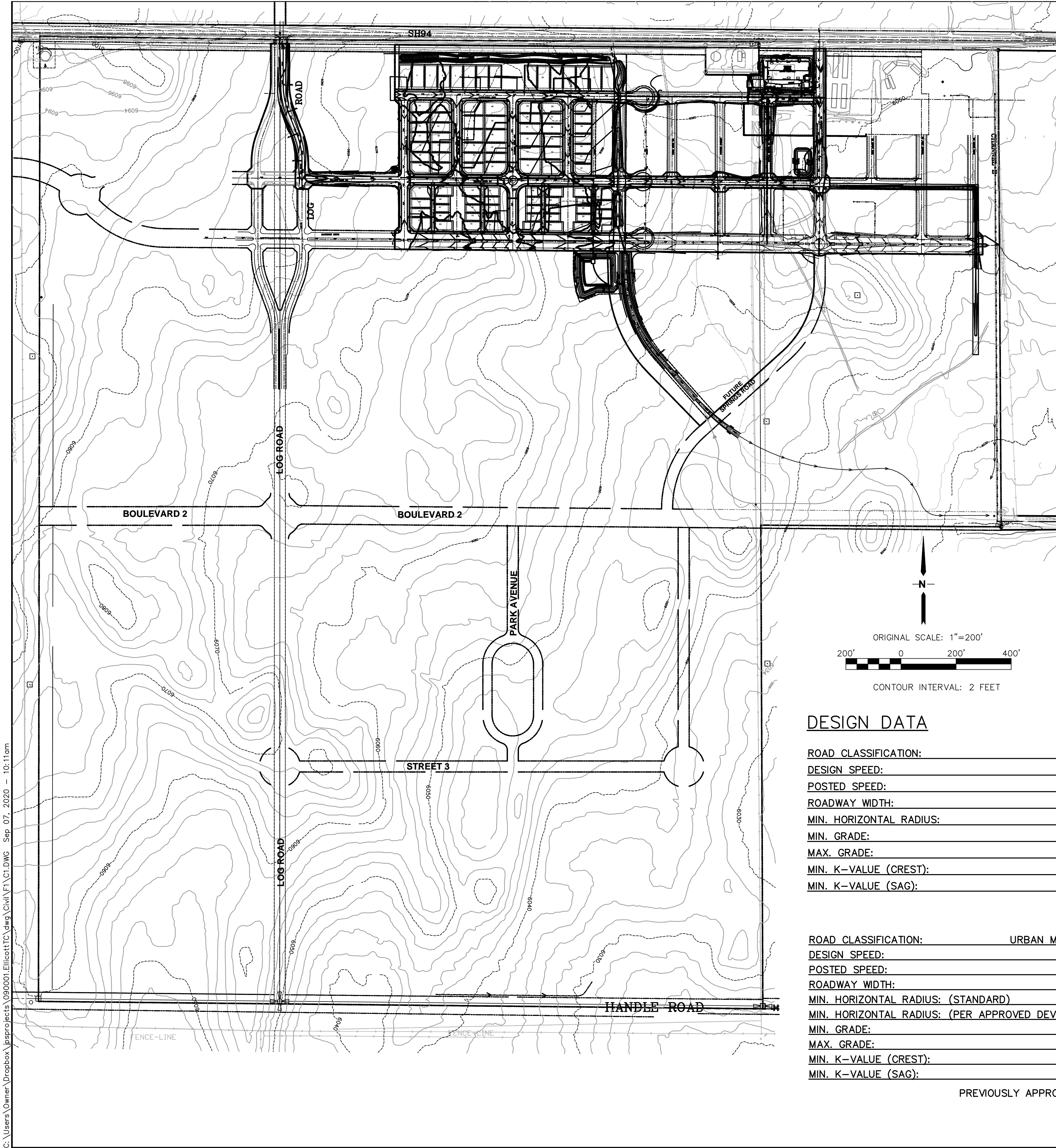
## GENERAL NOTES

HORZ. SCALE:	1"=200'	DRAWN:	RMD
VERT. SCALE:	N/A	DESIGNED:	JPS
SURVEYED:	UP&E	CHECKED:	JPS
CREATED:	1/11/19	LAST MODIFIED:	4/17/20
PROJECT NO:	090001	MODIFIED BY:	BJJ

## G2



G:\Users\Owner\Dropbox\psprojects\090001\Ellicott\TTC.dwg\Civil\T1\C1.DWG Sep 07, 2020 -- 10:11am



### DESIGN DATA

ROAD CLASSIFICATION:	URBAN/LOCAL
DESIGN SPEED:	25 MPH
POSTED SPEED:	25 MPH
ROADWAY WIDTH:	30'
MIN. HORIZONTAL RADIUS:	200'
MIN. GRADE:	0.5%
MAX. GRADE:	8.0%
MIN. K-VALUE (CREST):	12
MIN. K-VALUE (SAG):	26

ROAD CLASSIFICATION:	URBAN MINOR ARTERIAL
DESIGN SPEED:	40 MPH
POSTED SPEED:	35 MPH
ROADWAY WIDTH:	24' EACH SIDE*
MIN. HORIZONTAL RADIUS: (STANDARD)	565'
MIN. HORIZONTAL RADIUS: (PER APPROVED DEVIATION)	400'*
MIN. GRADE:	0.5%
MAX. GRADE:	6.0%
MIN. K-VALUE (CREST):	44
MIN. K-VALUE (SAG):	64

PREVIOUSLY APPROVED DEVIATION\*

### GENERAL NOTES:

- 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 TO REGULATIONS AND STANDARDS MUST BE REQUESTED, AND APPROVED, IN WRITING TO BE ACCEPTABLE.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE NOTIFICATION AND FIELD LOCATION OF ALL EXISTING UTILITIES, WHETHER SHOWN ON THE PLANS OR NOT, BEFORE BEGINNING CONSTRUCTION. LOCATION OF EXISTING UTILITIES SHALL BE VERIFIED BY THE CONTRACTOR PRIOR TO ACTUAL CONSTRUCTION.
- EXISTING CONTOUR DATA PROVIDED BY OWNER GENERALLY CONSISTS OF CSU FIMS MAPPING SUPPLEMENTED BY LIMITED FIELD SURVEY. JPS ENGINEERING TAKES NO RESPONSIBILITY FOR THE ACCURACY OF EXISTING TOPOGRAPHIC MAPPING.
- THE CONTRACTOR SHALL HAVE ONE (1) SIGNED COPY OF THESE APPROVED PLANS AND ONE (1) COPY OF THE APPROPRIATE DESIGN AND CONSTRUCTION STANDARDS AND SPECIFICATIONS AT THE JOB SITE AT ALL TIMES:
  - EL PASO COUNTY ENGINEERING CRITERIA MANUAL (ECM, 2006 VERSION)
  - CDOT STANDARD SPECIFICATIONS FOR ROAD & BRIDGE CONSTRUCTION
  - PUBLIC UTILITY DESIGN AND CONSTRUCTION SPECIFICATIONS OF THE DONALA WATER AND SANITATION DISTRICT
- STORM DRAIN PIPE SHALL BE RCP CLASS III WITH CLASS C BEDDING UNLESS OTHERWISE NOTED.
- STATIONING IS AT CENTERLINE UNLESS OTHERWISE NOTED. ALL ELEVATIONS ARE AT FLOWLINE UNLESS OTHERWISE NOTED. ALL DIMENSIONS ARE FROM FACE OF CURB UNLESS OTHERWISE NOTED.
- PROPOSED CONTOURS SHOWN ARE TO FINISHED GRADE.
- LENGTHS SHOWN FOR STORM SEWER PIPES ARE TO CENTER OF MANHOLE.
- CONTRACTOR SHALL REMOVE AND DISPOSE OF ALL EXISTING STRUCTURES, DEBRIS, WASTE AND OTHER UNSUITABLE FILL MATERIAL FOUND WITHIN THE LIMITS OF EXCAVATION.
- MATCH INTO EXISTING GRADES AT 3:1 MAX CUT AND FILL SLOPES.
- REVEGETATION OF ALL DISTURBED AREAS SHALL BE DONE WITH SPECIFIED SEED MIX WITHIN 30 DAYS AFTER FINE GRADING IS COMPLETE.
- THE EROSION CONTROL MEASURES OUTLINED ON THIS PLAN ARE THE RESPONSIBILITY OF THE DEVELOPER TO MONITOR AND REPLACE, REGRADE, AND REBUILD AS NECESSARY UNTIL VEGETATION IS REESTABLISHED.
- EROSION CONTROL MEASURES SHALL BE IMPLEMENTED IN A MANNER THAT WILL PROTECT ADJACENT PROPERTIES AND PUBLIC FACILITIES FROM THE ADVERSE EFFECTS OF EROSION AND SEDIMENTATION AS A RESULT OF CONSTRUCTION AND EARTHWORK ACTIVITIES WITHIN THE PROJECT SITE.
- ADDITIONAL EROSION CONTROL MEASURES MAY BE REQUIRED AS DETERMINED BY SITE CONDITIONS.
- THE CONTRACTOR WILL TAKE THE NECESSARY PRECAUTIONS TO PROTECT EXISTING UTILITIES FROM DAMAGE DUE TO THIS OPERATION. ANY DAMAGE TO THE UTILITIES WILL BE REPAIRED AT THE CONTRACTOR'S EXPENSE, AND ANY SERVICE DISRUPTION WILL BE SETTLED BY THE CONTRACTOR
- PEDESTRIAN RAMPS SHALL BE INSTALLED AT ALL INTERSECTIONS AND CONFORM TO EL PASO COUNTY ENGINEERING STANDARDS AND SPECIFICATIONS.
- ALL FINISHED GRADES SHALL HAVE A MINIMUM 0.5% SLOPE TO PROVIDE POSITIVE DRAINAGE.
- WHERE PROPOSED SLOPES CONFLICT WITH PROPOSED SPOT ELEVATIONS, SPOT ELEVATIONS SHALL GOVERN.
- CONTRACTOR SHALL OBTAIN ALL REQUIRED PERMITS PRIOR TO BEGINNING WORK.
- ALL RESIDENTIAL STREET CURB RETURN RADII ARE 20- FEET AT FLOWLINE UNLESS OTHERWISE NOTED. ARTERIAL STREET CURB RETURN RADII ARE 35' UNLESS NOTED OTHERWISE.
- 25-FOOT SIGHT VISIBILITY TRIANGLES SHALL BE PROVIDED AT ALL RESIDENTIAL STREET INTERSECTIONS. 50-FOOT SIGHT TRIANGLES SHALL BE PROVIDED AT ARTERIAL STREET INTERSECTIONS. NO OBSTRUCTIONS TALLER THAN 18" ARE PERMITTED WITHIN THESE TRIANGLES.
- ELECTRONIC FILE OF SITE DRAWING IS AVAILABLE FROM ENGINEER FOR CONSTRUCTION STAKING PURPOSES.
- CONTRACTOR SHALL SCHEDULE A PRE-CONSTRUCTION MEETING WITH EL PASO COUNTY AND ALL UTILITIES INVOLVED IN PROJECT PRIOR TO MOBILIZING ON SITE.
- CONTRACTOR SHALL COMPLY WITH ALL PROVISIONS OF APPROVED HABITAT CONSERVATION PLAN AND 404 PERMIT. CONTRACTOR SHALL HAVE COPIES OF ALL REQUIRED PERMITS AT JOB SITE AT ALL TIMES.
- TYPE C STORM INLETS SHALL HAVE CLOSE-MESH GRATES.
- PROVIDE 10' TRANSITION FROM RAMP CURB TO VERTICAL CURB ON EACH SIDE OF STORM INLETS.
- ALL BACKFILL, SUB-BASE, AND/OR BASE COURSE MATERIAL SHALL BE COMPACTED PER EL PASO COUNTY AND CDOT STANDARDS AND SPECIFICATIONS. CONTRACTOR SHALL STABILIZE ALL SUBGRADE AREAS PER GEOTECHNICAL ENGINEER'S RECOMMENDATIONS.

### APPROVAL NOTES:

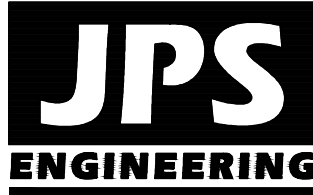
- PRELIMINARY PLAN WAS APPROVED WITH 2004 VERSION OF ECM.
- REFER TO FILE FOR APPROVED DEVIATIONS.

## MAYBERRY, COLORADO SPRINGS - FILING NO. 1

HORZ. SCALE:	1"=200'	DRAWN:	RMD
VERT. SCALE:	N/A	DESIGNED:	JPS
SURVEYED:	UP&E	CHECKED:	JPS
CREATED:	3/8/05	LAST MODIFIED:	9/07/20
PROJECT NO:	090001	MODIFIED BY:	BJJ

SHEET:

C1



19 E. Willamette Ave.  
Colorado Springs, CO  
80903

PH: 719-477-9429  
FAX: 719-471-0766  
www.jpsengr.com

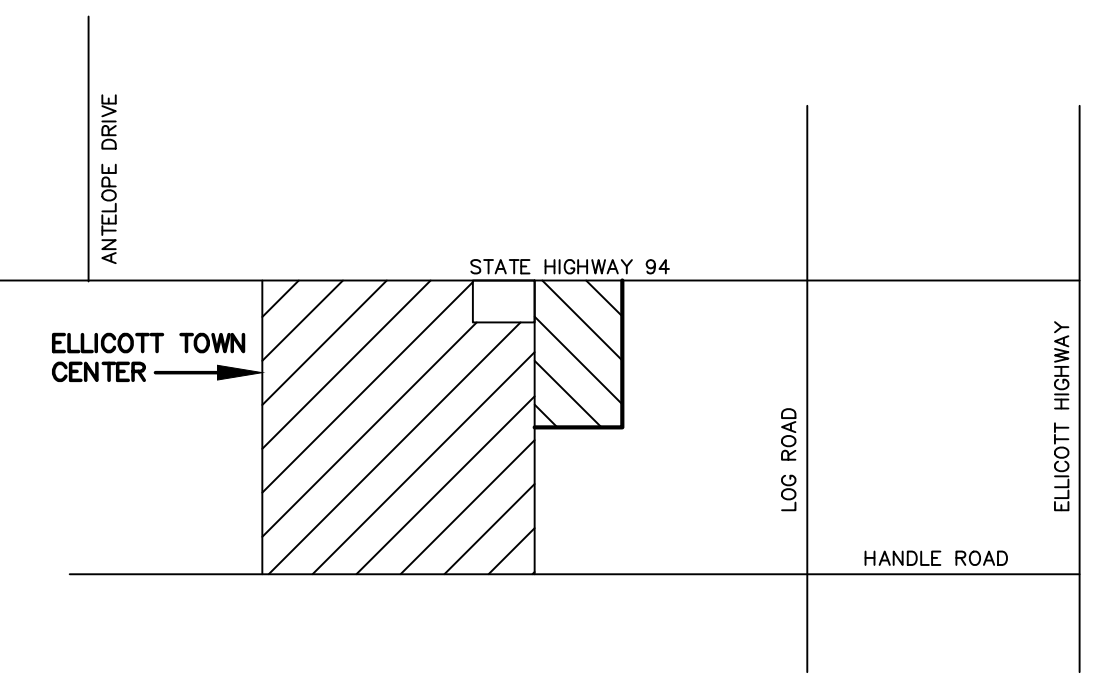
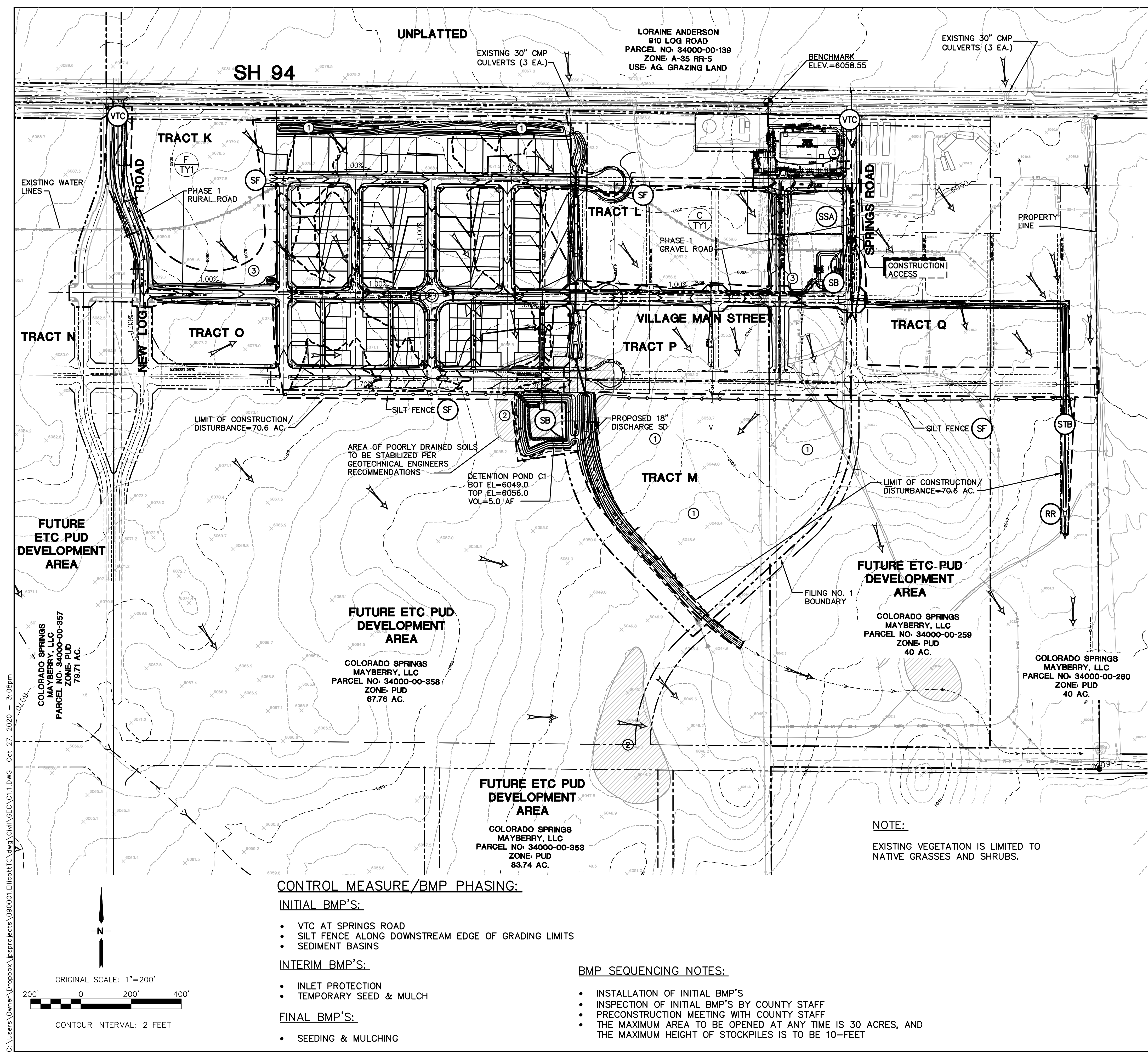


CALL UTILITY NOTIFICATION  
CENTER OF COLORADO  
1-800-922-1987  
CALL 3 DAYS BEFORE IN ADVANCE  
BEFORE YOU DIG, GRADE, OR EXCAVATE  
FOR THE MARKING OF UNDERGROUND  
MEMBER UTILITIES

No.	REVISION	BY	DATE
A	EPC COMMENTS	JPS	7/25/06
B	EPC COMMENTS	JPS	1/15/07
C	2018 SUBMITTAL	JPS	3/28/18
D	2018 SUBMITTAL	JPS	1/31/20
E	EPC COMMENTS	JPS	4/17/20

### OVERALL SITE PLAN & GENERAL NOTES





ESTIMATED EARTHWORK QUANTITY:

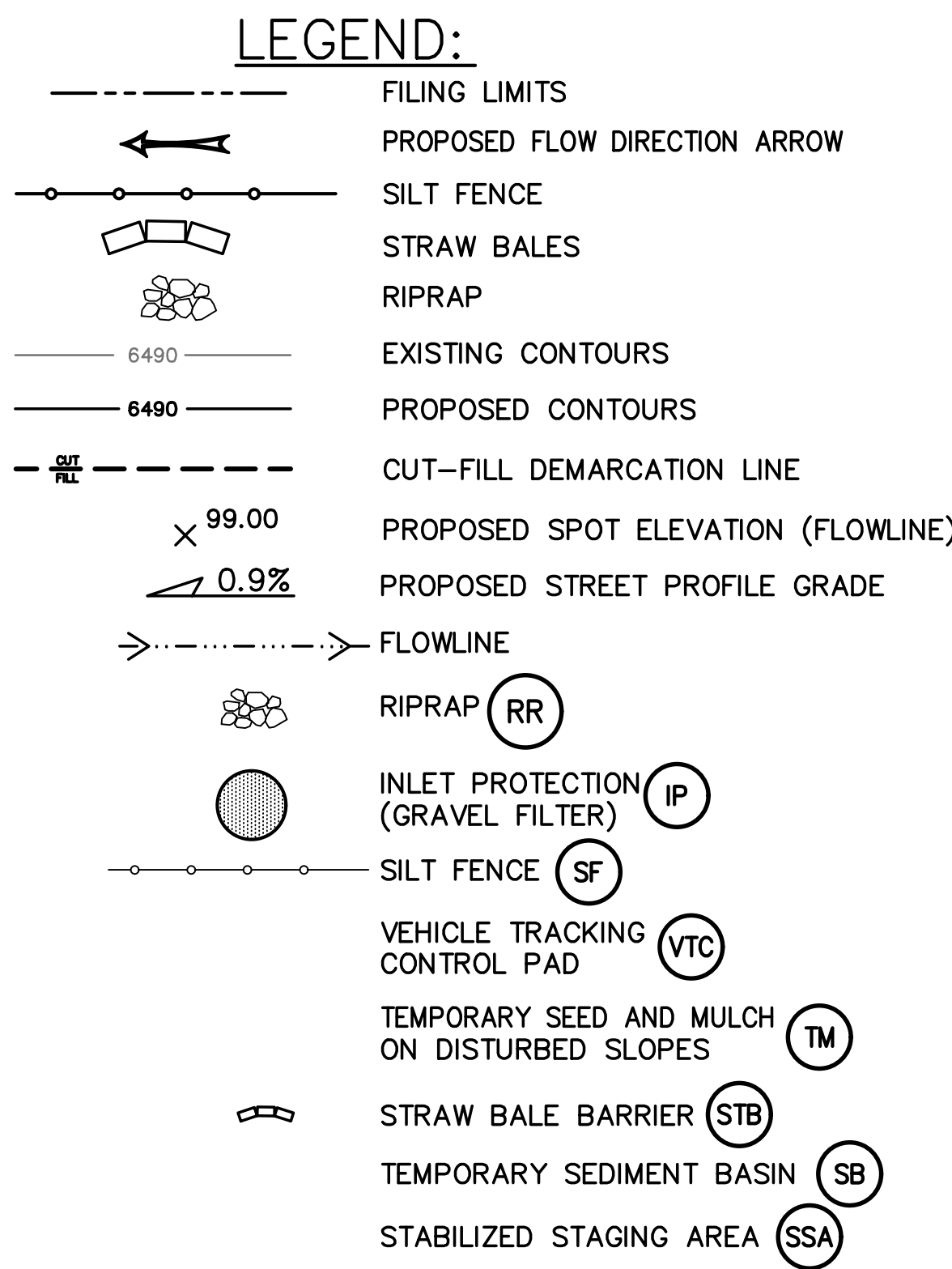
	EXCAVATION (TOTAL CUT)	EMBANKMENT FILL <sup>A</sup>	NET
FILING No. 1	61,967	88,199 CY	26,232 CY (FILL)

(ASSUMES 15% COMPACTION FACTOR)

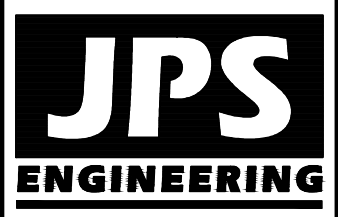
NOTE: THIS ESTIMATE IS PROVIDED FOR INFORMATION ONLY, REPRESENTING THE CALCULATED BULK EARTHWORK VOLUME TO FINISHED GRADE, EXCLUDING ANY ADJUSTMENT FOR PAVEMENT DEPTHS, ETC. CONTRACTOR SHALL MAKE HIS OWN DETERMINATION OF EARTHWORK QUANTITIES AS BASIS FOR BID PRICING AND NOTIFY ENGINEER OF ANY DISCREPANCIES.

KEYED NOTES:

- CONTRACTOR MAY WASTE EXCESS CUT MATERIAL OR BORROW SUITABLE FILL MATERIAL FROM THIS AREA. MATCH INTO EXISTING GRADES WITH 3:1 MAX CUT AND FILL SLOPES AND MAINTAIN POSITIVE DRAINAGE IN ALL AREAS.
- POTENTIALLY UNSTABLE SOIL AREAS TO BE STABILIZED PER GEOTECHNICAL ENGINEERS RECOMMENDATIONS
- CONTRACTOR EQUIPMENT / OFFICE AREA



MAYBERRY, COLORADO SPRINGS - FILING NO. 1



19 E. Willamette Ave.  
Colorado Springs, CO  
80903  
PH: 719-477-9429  
FAX: 719-471-0766  
www.jpsengr.com



CALL UTILITY NOTIFICATION  
CENTER OF COLORADO  
1-800-922-1987  
CALL 3 DAYS BEFORE ANY EXCAVATE  
BEFORE YOU DIG GRADE, OR EXCAVATE  
FOR THE MARKING OF UNDERGROUND  
MEMBER UTILITIES

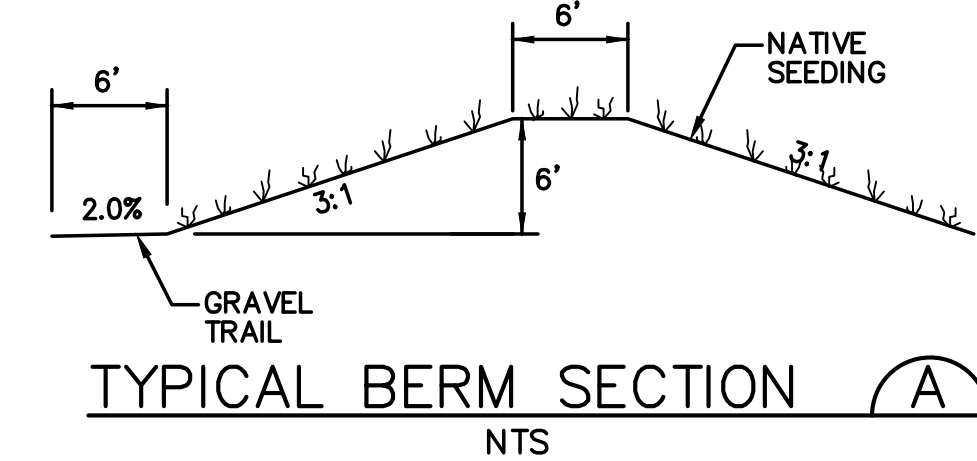
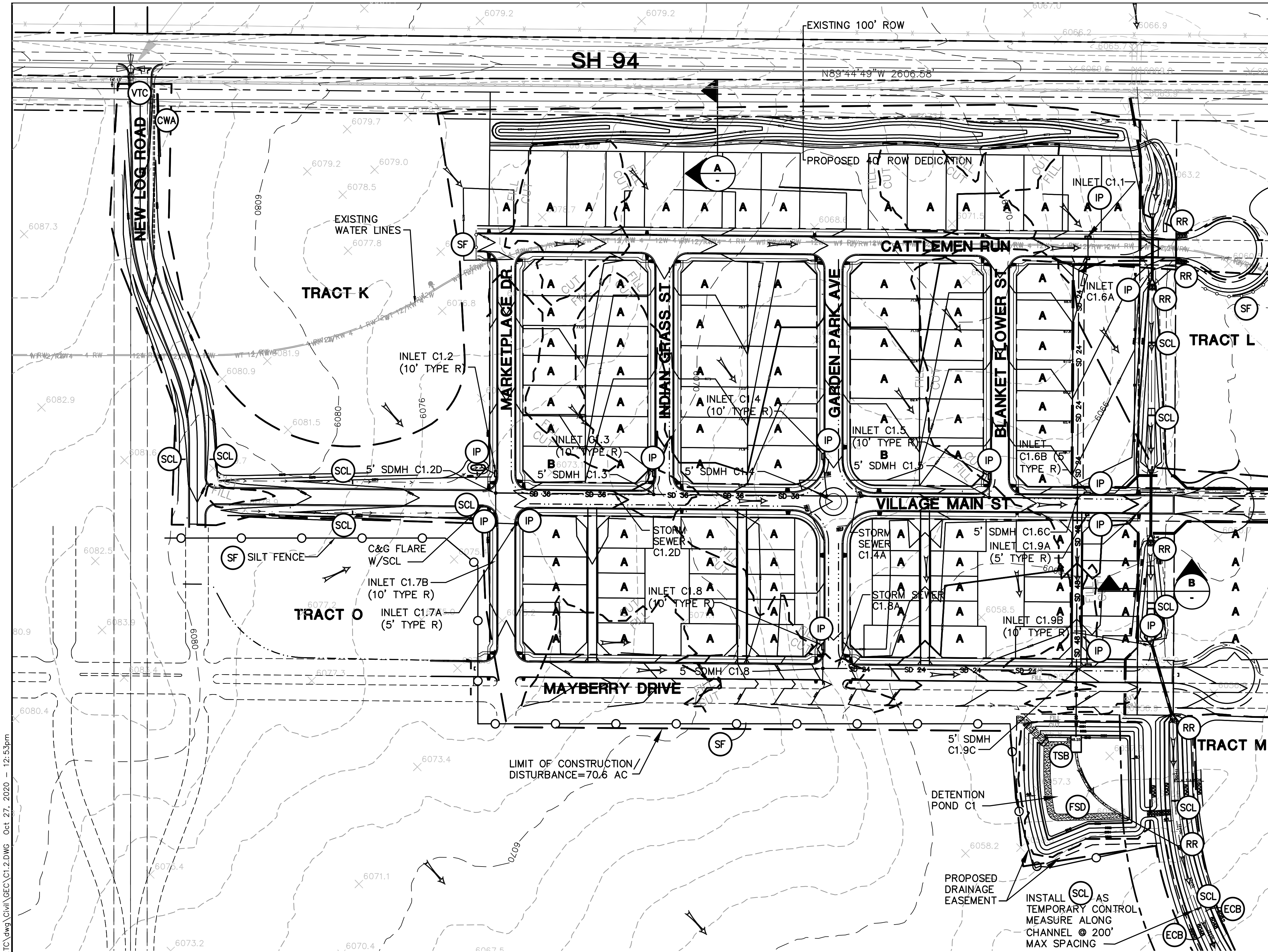
REVISION	DATE	BY
EPC COMMENTS	9/12/19	JPS
EPC COMMENTS	1/31/20	JPS
EPC COMMENTS	4/17/20	JPS
EPC COMMENTS	9/22/20	JPS
EPC COMMENTS	10/27/20	JPS

PHASE 1  
MASTER GRADING PLAN

HORZ. SCALE: 1"=200'	DRAWN: RMD
VERT. SCALE: N/A	DESIGNED: JPS
SURVEYED: UP&E	CHECKED: JPS
CREATED: 12/03/00	LAST MODIFIED: 07/27/20
PROJECT NO: 090001	MODIFIED BY: BJJ
SHEET:	C1.1



G:\Users\Owner\Dropbox\jpsprojects\090001\Ellicott\TC.dwg Oct 27, 2020 - 12:53pm

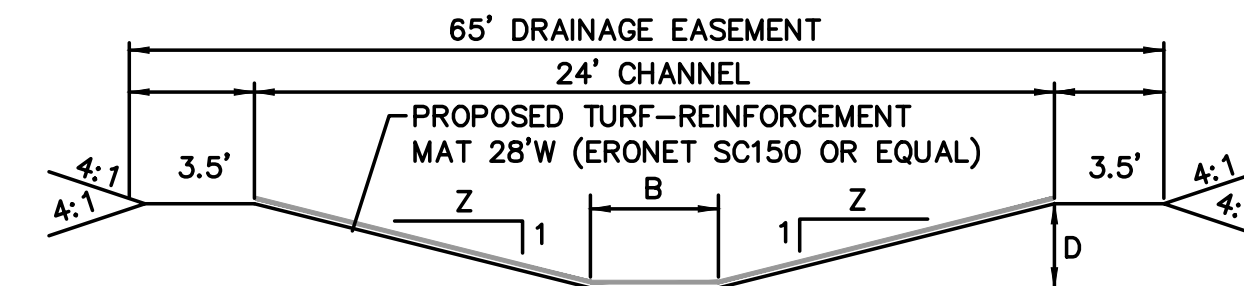
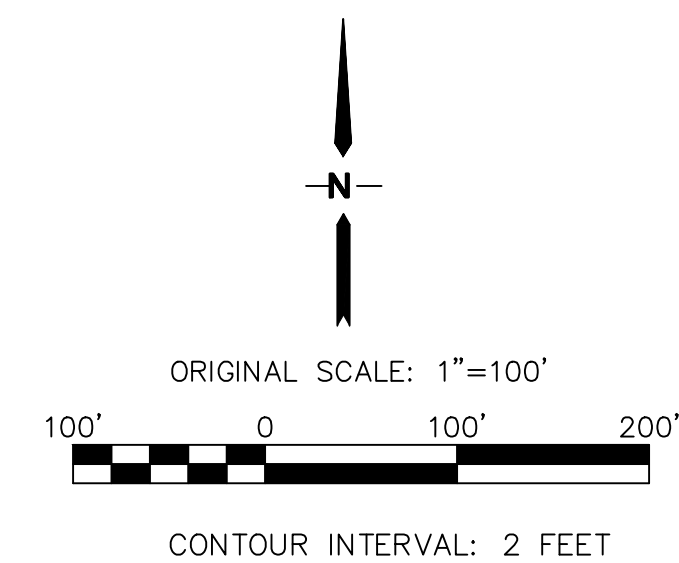


#### LEGEND:

- FILING LIMITS
- EXISTING CONTOURS
- PROPOSED CONTOURS
- × 99.00 PROPOSED SPOT ELEVATION (FLOWLINE)
- PROPOSED STREET PROFILE GRADE
- A / B OVERLOT GRADING LOT TYPE (SEE SH. C2.1)

#### EROSION CONTROL LEGEND:

- IP INLET PROTECTION (GRAVEL FILTER)
- SF SILT FENCE
- VTC VEHICLE TRACKING CONTROL PAD
- TM TEMPORARY SEED AND MULCH ON DISTURBED SLOPES
- STB STRAW BALE BARRIER
- TSB TEMPORARY SEDIMENT BASIN
- RR RIPRAP
- FSD FULL-SPECTRUM DETENTION BASIN
- SCL SEDIMENT CONTROL LOG
- ECB EROSION CONTROL BLANKETS
- CWA CONCRETE WASHOUT AREA

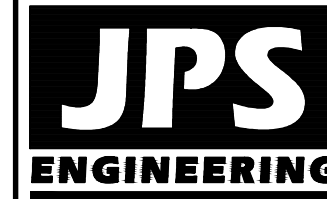


NOTE: B=12'; Z=4:1; D=2.5'  
UNLESS OTHERWISE NOTED

CHANNEL SECTION (B)  
SCALE : NTS

# MAYBERRY, COLORADO SPRINGS - FILING NO. 1

## FILING 1 GRADING & EROSION CONTROL PLAN



19 E. Willamette Ave.  
Colorado Springs, CO  
80903  
PH: 719-477-9429  
FAX: 719-471-0766  
www.jpsengr.com



CALL UTILITY NOTIFICATION  
CENTER OF COLORADO  
1-800-922-1987  
CALL 24 HOURS BEFORE YOU DIG, GRADE, OR EXCAVATE  
FOR THE MARKING OF UNDERGROUND MEMBER UTILITIES

BY	DATE	REVISION
JPS	9/12/19	EPC COMMENTS
JPS	1/31/20	EPC COMMENTS
JPS	4/17/20	EPC COMMENTS
JPS	9/22/20	EPC COMMENTS
JPS	10/27/20	EPC COMMENTS

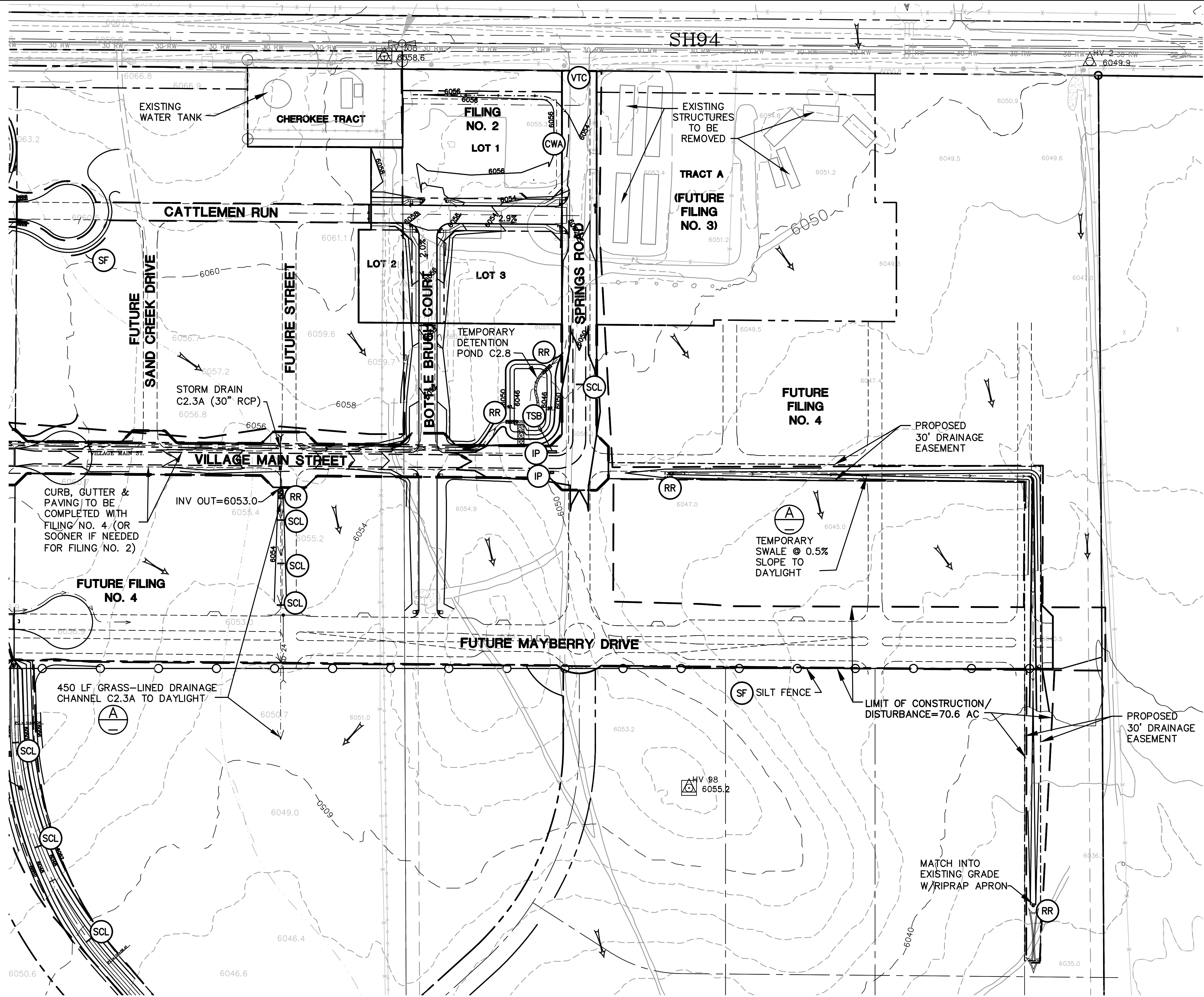
HORZ. SCALE: 1"=100'	DRAWN: RMD
VERT. SCALE: N/A	DESIGNED: JPS
SURVEYED: UP&E	CHECKED: JPS
CREATED: 12/03/00	LAST MODIFIED: 10/27/20
PROJECT NO: 090001	MODIFIED BY: BJJ

SHEET:

C1.2

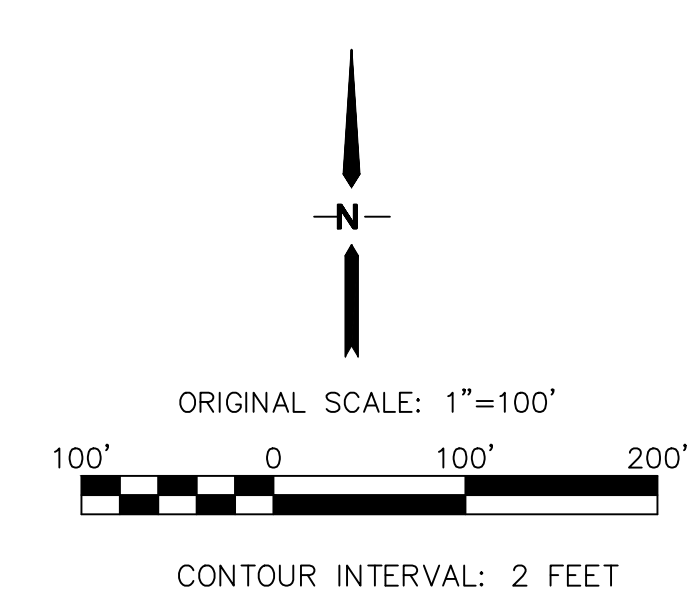
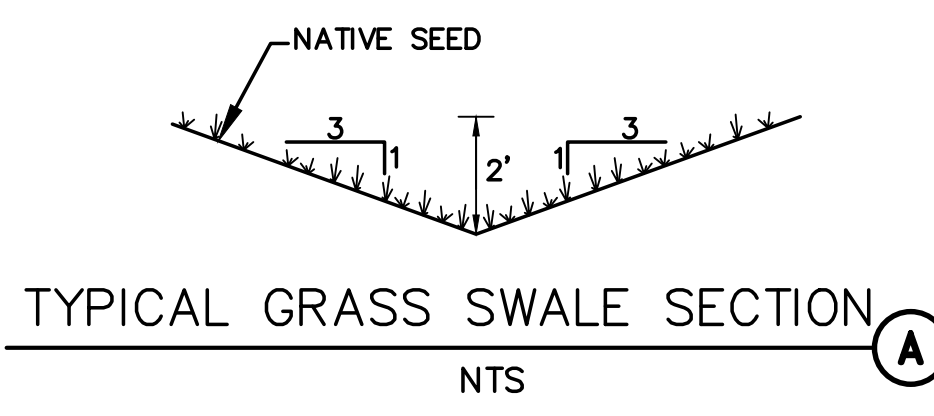


G:\Users\Owner\Dropbox\psprojects\090001\Ellicott\TC.dwg Civil\GEC\CL1.3.DWG Oct 27, 2020 - 1:04pm



- LEGEND:**
- FILING LIMITS
  - 6490 EXISTING CONTOURS
  - 6490 PROPOSED CONTOURS
  - X 99.00 PROPOSED SPOT ELEVATION (FLOWLINE)
  - PROPOSED STREET PROFILE GRADE
  - LIMITS OF DISTURBANCE/CONSTRUCTION

- EROSION CONTROL LEGEND:**
- IP INLET PROTECTION (GRAVEL FILTER)
  - SF SILT FENCE
  - VTC VEHICLE TRACKING CONTROL PAD
  - TM TEMPORARY SEED AND MULCH ON DISTURBED SLOPES
  - STB STRAW BALE BARRIER
  - TSB TEMPORARY SEDIMENT BASIN
  - RR RIPRAP
  - CWA CONCRETE WASHOUT AREA
  - SCL SEDIMENT CONTROL LOGS

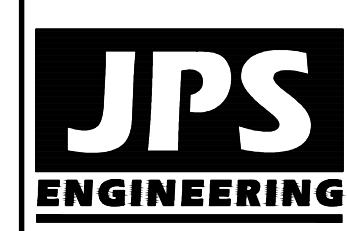


# MAYBERRY, COLORADO SPRINGS - FILING NO. 1

## EAST SITE GRADING & EROSION CONTROL PLAN

HORZ. SCALE: 1"=100'	DRAWN: BJJ
VERT. SCALE: N/A	DESIGNED: JPS
SURVEYED: UP&E	CHECKED: JPS
CREATED: 12/03/00	LAST MODIFIED: 07/27/20
PROJECT NO: 090001	MODIFIED BY: BJJ

SHEET: **C1.3**



19 E. Willamette Ave.  
Colorado Springs, CO 80903  
PH: 719-477-9429  
FAX: 719-471-0766



CALL UTILITY NOTIFICATION  
CENTER OF COLORADO  
1-800-922-1987  
CALL 2-48 HOURS BEFORE ANY EXCAVATION  
BEFORE YOU DIG GRADE, OR EXCAVATE  
FOR THE MARKING OF UNDERGROUND  
MEMBER UTILITIES

No.	REVISION	DATE
1	EPC COMMENTS	JPS 9/12/19
2	EPC COMMENTS	JPS 1/31/20
3	EPC COMMENTS	JPS 4/17/20
4	EPC COMMENTS	JPS 9/15/20
5	EPC COMMENTS	JPS 10/27/20

C:\Users\Owner\Dropbox\psprojects\090001\Elliot\T1C1.dwg Civil\GEC\CT.4.dwg Apr 23, 2020 -- 6:52am

REVISED 7/02/19

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 PLANT DENSITY OF 70 PERCENT OF PRE-DISTURBANCE LEVELS ESTABLISHED OR EQUIVALENT PERMANENT ALTERNATIVE STABILIZATION METHOD IS IMPLEMENTED. ALL TEMPORARY SEDIMENT AND EROSION CONTROL MEASURES SHALL BE REMOVED UPON FINAL STABILIZATION AND BEFORE PERMIT CLOSURE.
9. ALL PERMANENT STORMWATER MANAGEMENT FACILITIES SHALL BE INSTALLED AS DESIGNED IN THE APPROVED PLANS. ANY PROPOSED CHANGES THAT AFFECT 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 LOOSENEED PRIOR TO INSTALLATION OF THE CONTROL MEASURE(S).
12. ANY TEMPORARY OR PERMANENT FACILITY DESIGNED AND CONSTRUCTED FOR THE CONVEYANCE OF STORMWATER AROUND, THROUGH, OR FROM THE EARTH DISTURBANCE AREA SHALL BE A STABILIZED CONVEYANCE DESIGNED TO MINIMIZE EROSION AND THE DISCHARGE OF SEDIMENT OFF SITE.
13. CONCRETE WASH WATER SHALL BE CONTAINED AND DISPOSED OF IN ACCORDANCE WITH THE SWMP. 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 OF UNCONTAMINATED GROUND WATER 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 ONSITE 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 ONSITE 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 CTL THOMPSON, DATED JULY 13, 2006 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

EXISTING VEGETATION:  
NATIVE GRASSES (APPROXIMATELY 70 PERCENT COVERAGE)

SEEDING MIX:		
GRASS	VARIETY	AMOUNT IN PLS LBS. PER ACRE
CRESTED WHEAT GRASS	EPHRAIM OR HYCREST	4.0 LBS.
PERENIAL RYE	LINN	2.0 LBS.
WESTERN WHEATGRASS	SARTON	3.0 LBS.
SMOOTH BROME GRASS	LINCOLN OR MANCHAR	5.0 LBS.
SIDEOATS GRAMA	EPHRAIM	2.5 LBS.
TOTAL:		16.5 LBS.

SEEDING & FERTILIZER APPLICATION: DRILL SEED OR  
HYDRO-SEED PER  
CDOT SPEC. SECTION 212.

MULCHING APPLICATION: CONFORM TO CDOT  
SPEC-SECTION 213.

SEEDING MIX:

SEEDING MIX:		
GRASS	VARIETY	AMOUNT IN PLS LBS. PER ACRE
CRESTED WHEAT GRASS	EPHRAIM OR HYCREST	4.0 LBS.
PERENIAL RYE	LINN	2.0 LBS.
WESTERN WHEATGRASS	SARTON	3.0 LBS.
SMOOTH BROME GRASS	LINCOLN OR MANCHAR	5.0 LBS.
SIDEOATS GRAMA	EPHRAIM	2.5 LBS.
TOTAL:		16.5 LBS.

SEEDING & FERTILIZER APPLICATION: DRILL SEED OR  
HYDRO-SEED PER  
CDOT SPEC. SECTION 212.

MULCHING APPLICATION: CONFORM TO CDOT  
SPEC-SECTION 213.

EROSION CONTROL NOTES:

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 THE CONSTRUCTION ACTIVITY SHALL SUBMIT A PERMIT APPLICATION FOR STORMWATER DISCHARGE TO THE COLORADO DEPARTMENT OF PUBLIC HEALTH AND ENVIRONMENT, WATER QUALITY CONTROL 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, COLORADO 80246-1530  
ATTN.: PERMITS UNIT

ESTIMATED TIME SCHEDULE:

INSTALL BMP'S MAY, 2020  
GRADING START MAY, 2020  
GRADING COMPLETION MAY, 2021  
SEEDING & MULCHING AUGUST, 2021  
STABILIZATION AUGUST, 2022

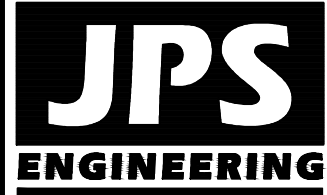
SEDIMENT CONTROL MAINTENANCE PROGRAM:

PERIODIC SITE INSPECTIONS BI-WEEKLY <sup>1</sup>  
RE-VEGETATION OF EXPOSED SOILS WITHIN 21 DAYS OF GRADING  
SEDIMENT REMOVAL FROM BMP'S MONTHLY <sup>2</sup>  
REMOVAL OF BMP'S AFTER STABILIZATION ACHIEVED

<sup>1</sup> AND AFTER ANY PRECIPITATION OR SNOW MELT EVENT THAT CAUSES SURFACE EROSION.

<sup>2</sup> ACCUMULATED SEDIMENT AND DEBRIS SHALL BE REMOVED WHEN THE SEDIMENT LEVEL REACHES ONE HALF THE HEIGHT OF THE BMP OR AT ANY TIME THAT SEDIMENT OR DEBRIS ADVERSELY IMPACTS THE FUNCTION OF THE BMP.

MAYBERRY, COLORADO SPRINGS - FILING NO. 1



19 E. Willamette Ave.  
Colorado Springs, CO  
80903  
PH: 719-477-9429  
FAX: 719-471-0766  
www.jpsengr.com



CALL UTILITY NOTIFICATION  
CENTER OF COLORADO  
1-800-922-1987  
OR 800-922-1987  
CALL 24 HOURS BEFORE YOU DIG, GRADE, OR EXCAVATE  
FOR THE MARKING OF UNDERGROUND MEMBER UTILITIES.

No.	REVISION	BY	DATE
△	EPC COMMENTS	JPS	1/15/07
△	2018 SUBMITTAL	JPS	8/22/18
△	EPC COMMENTS	JPS	9/12/19
△	EPC COMMENTS	JPS	1/31/20
△	EPC COMMENTS	JPS	4/17/20

EROSION CONTROL  
NOTES

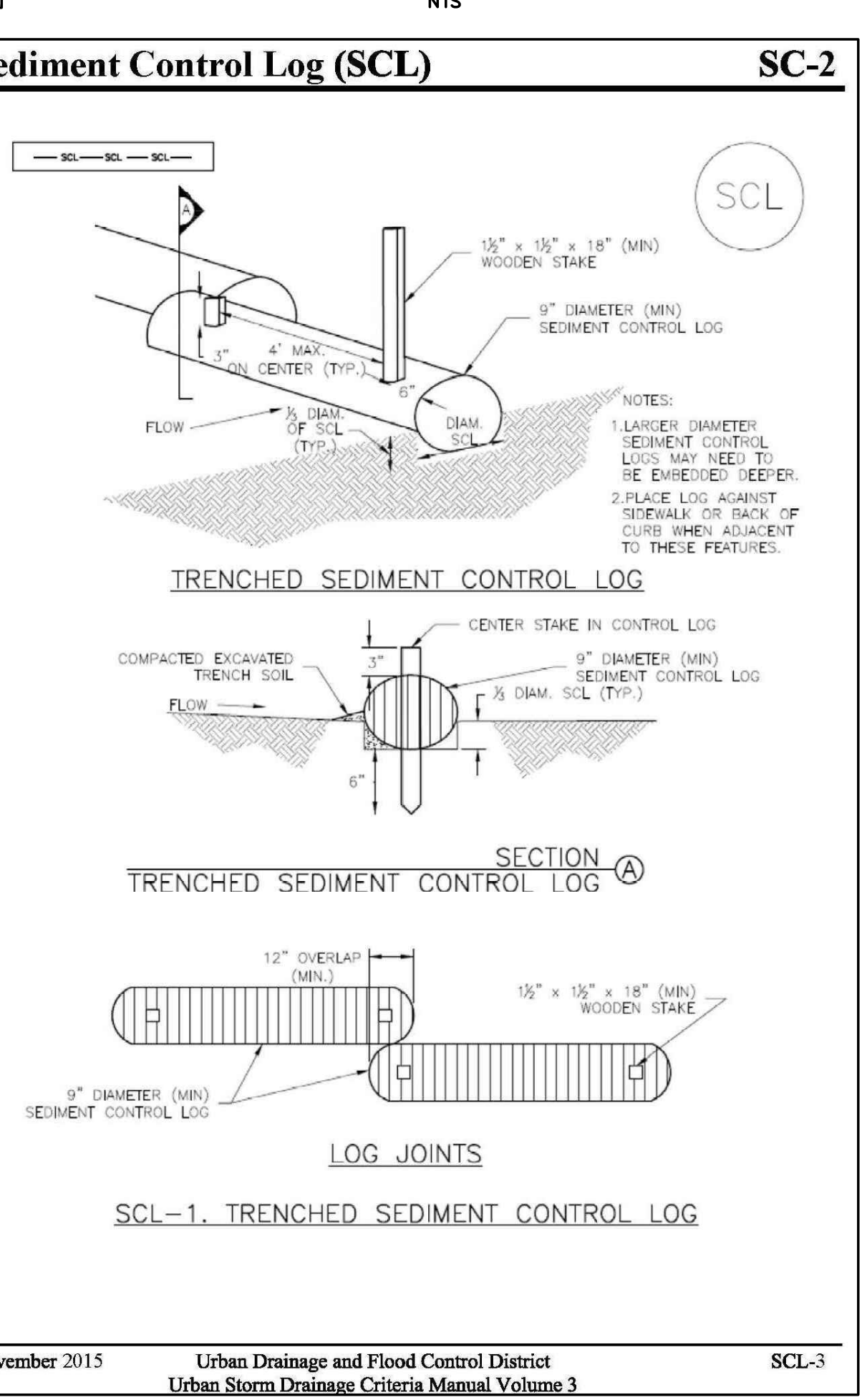
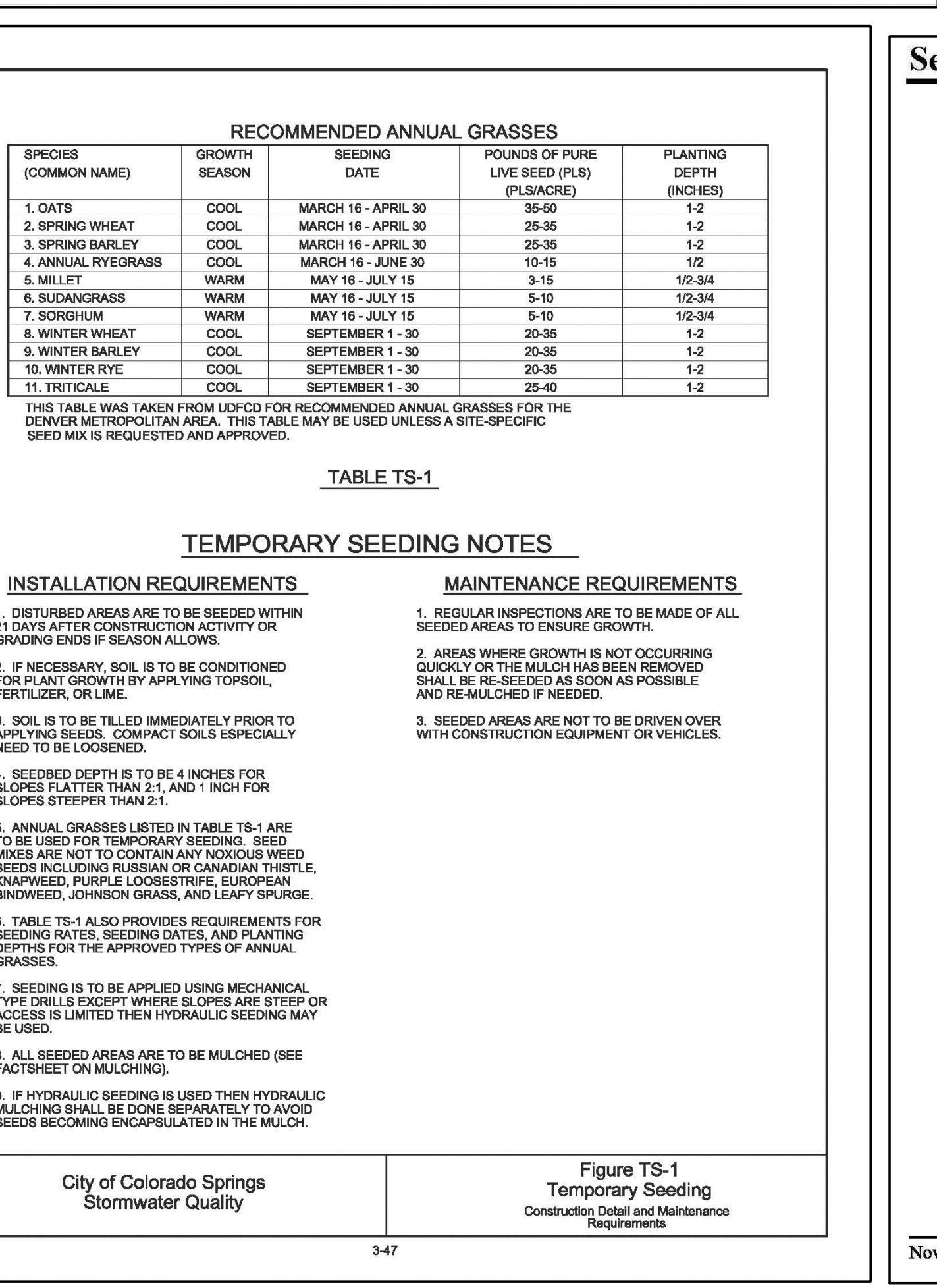
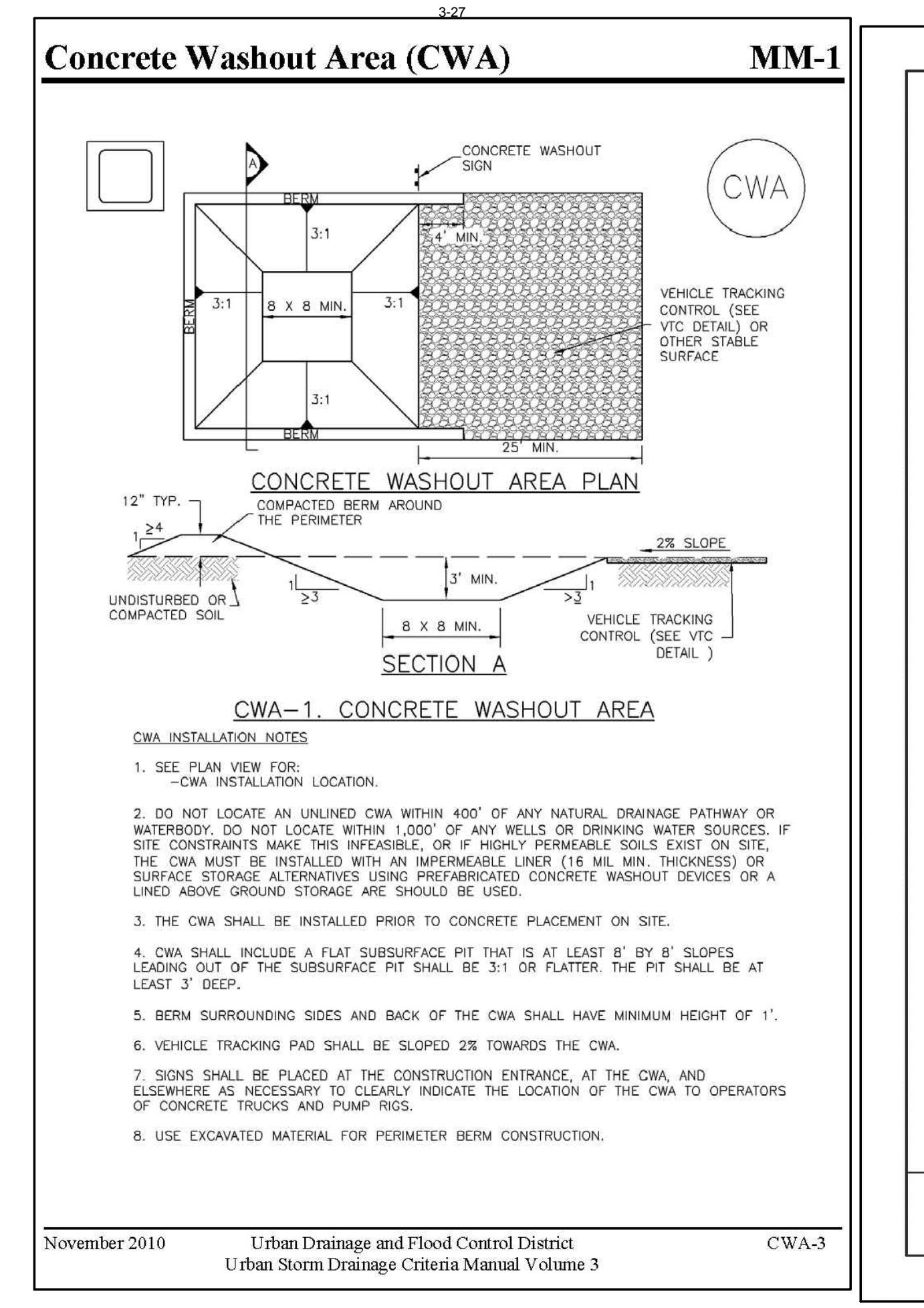
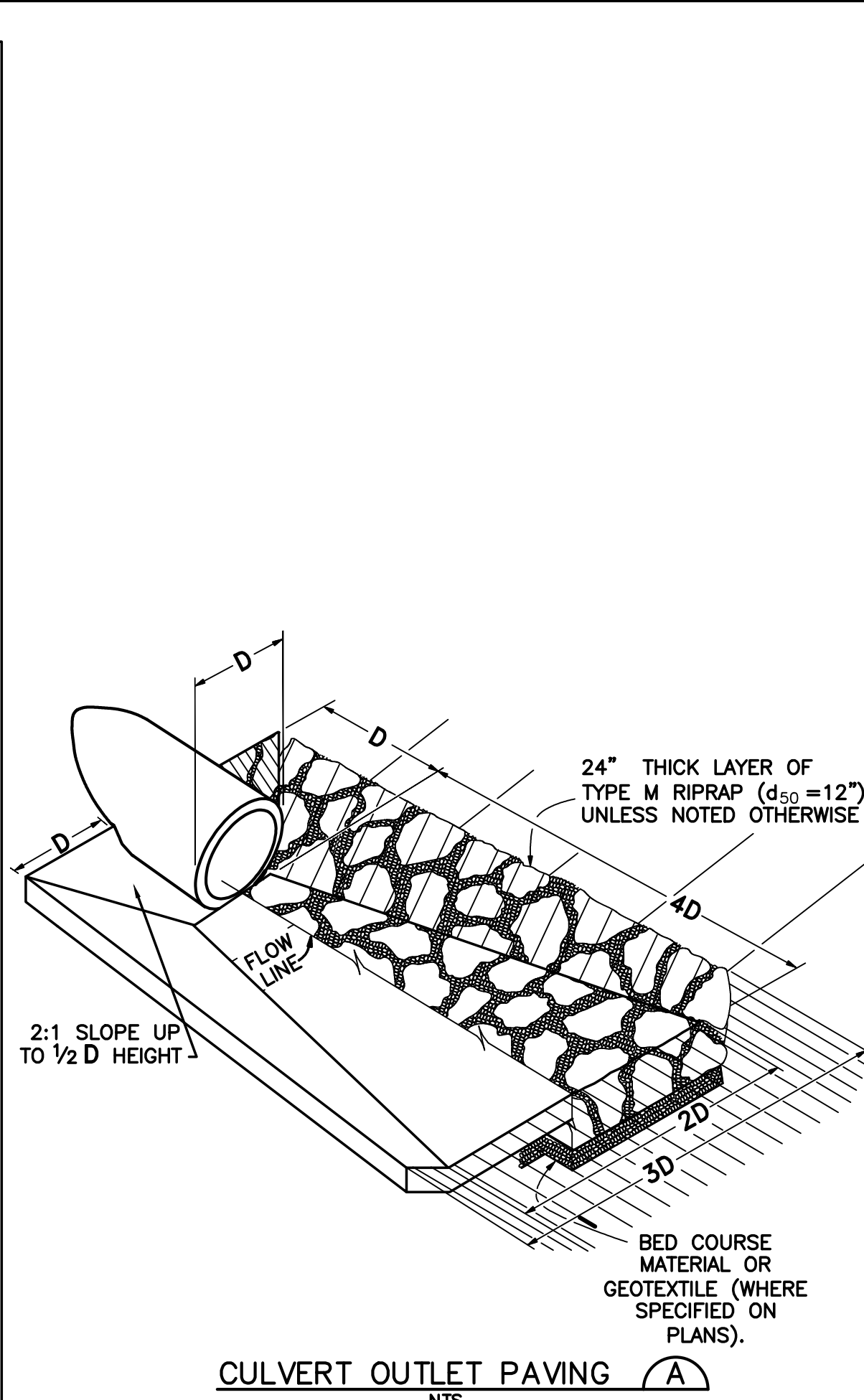
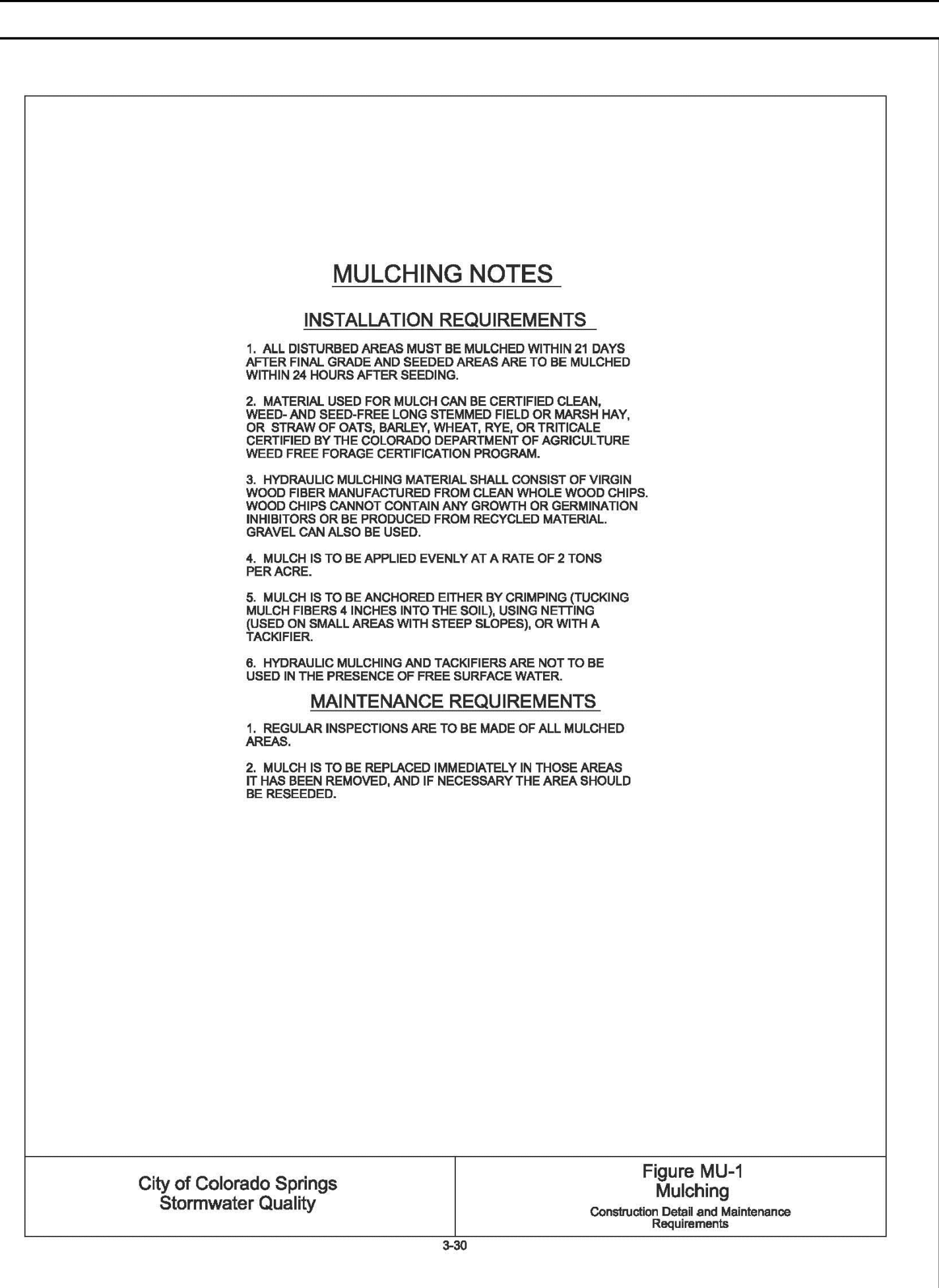
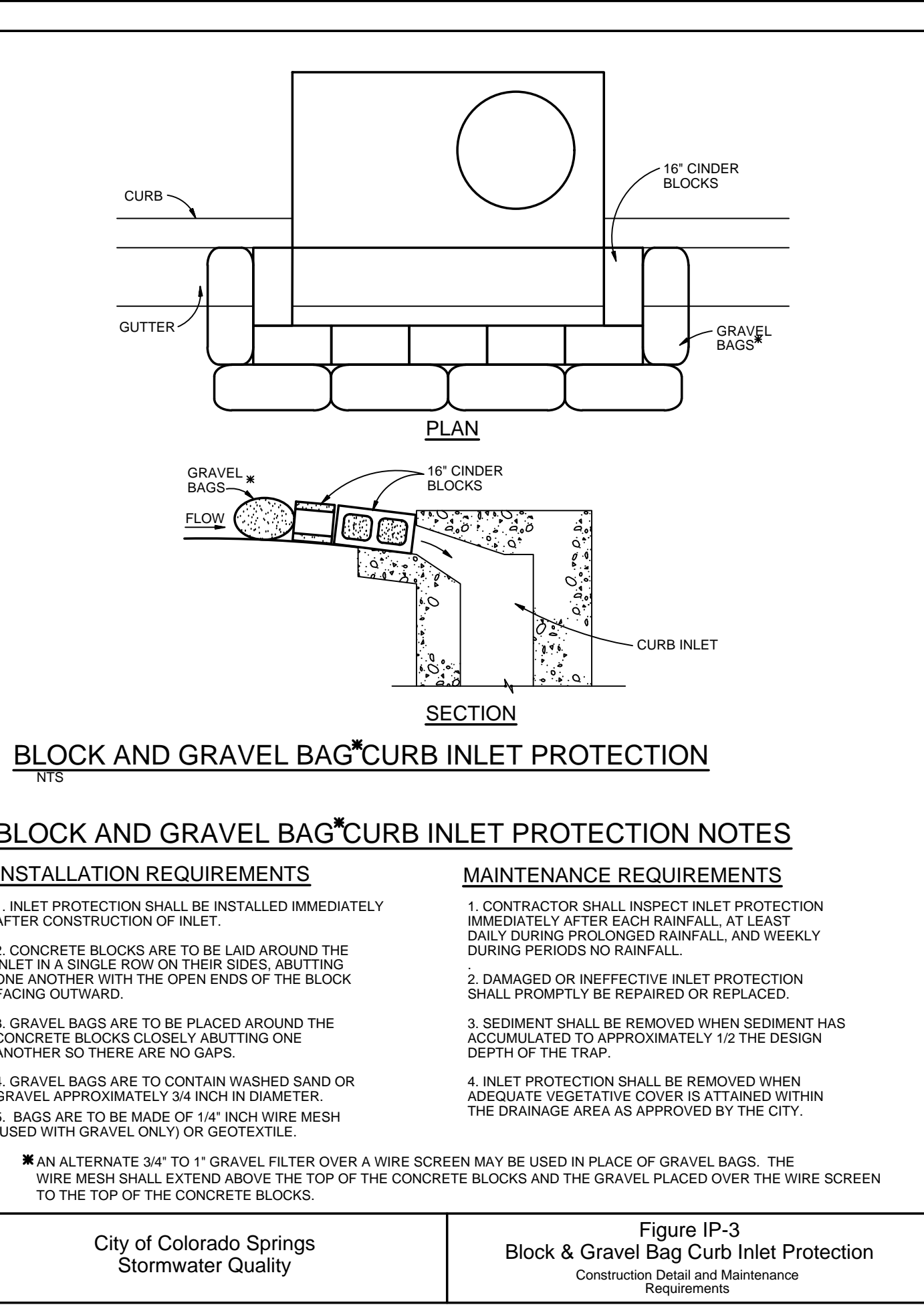
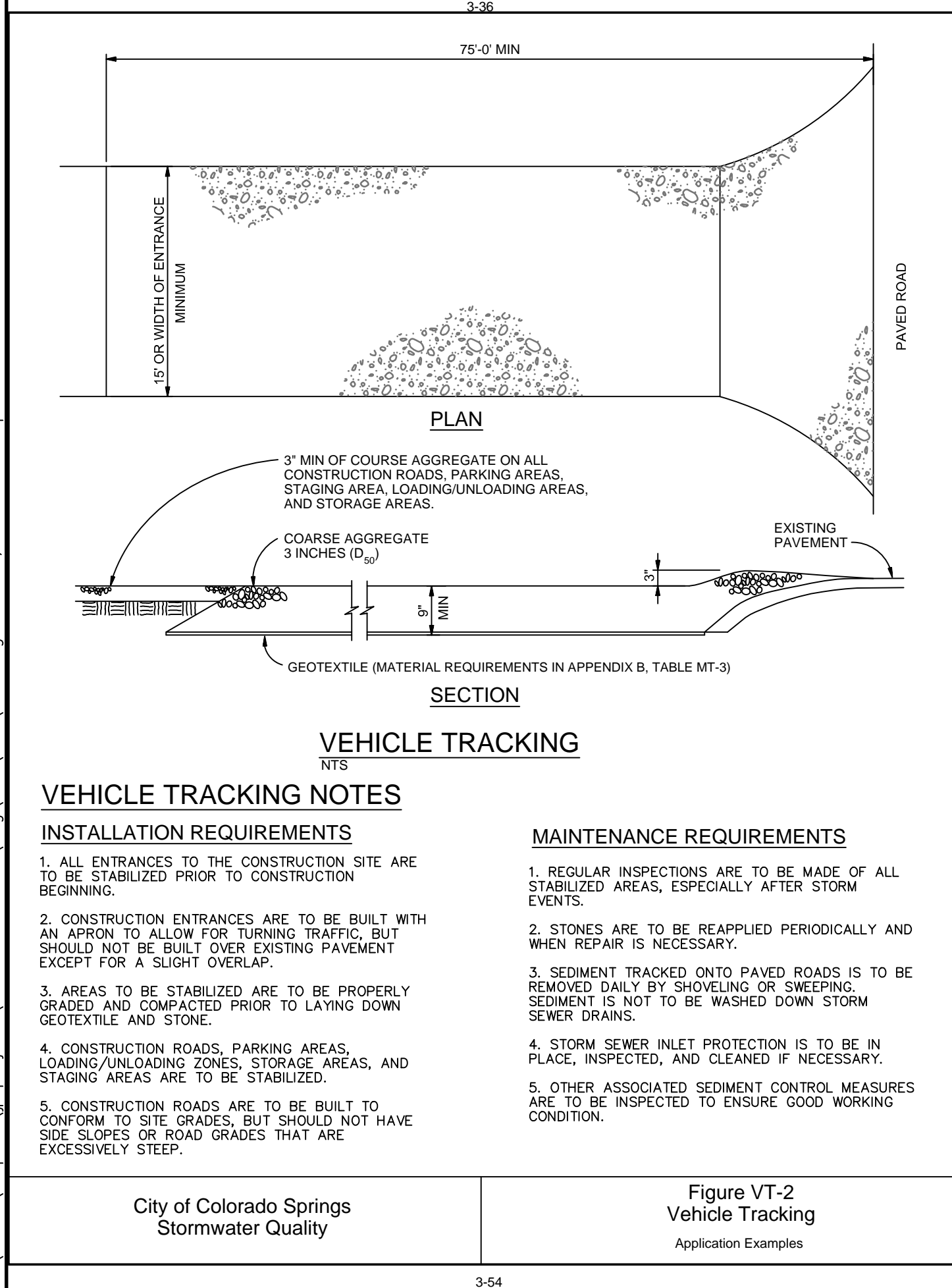
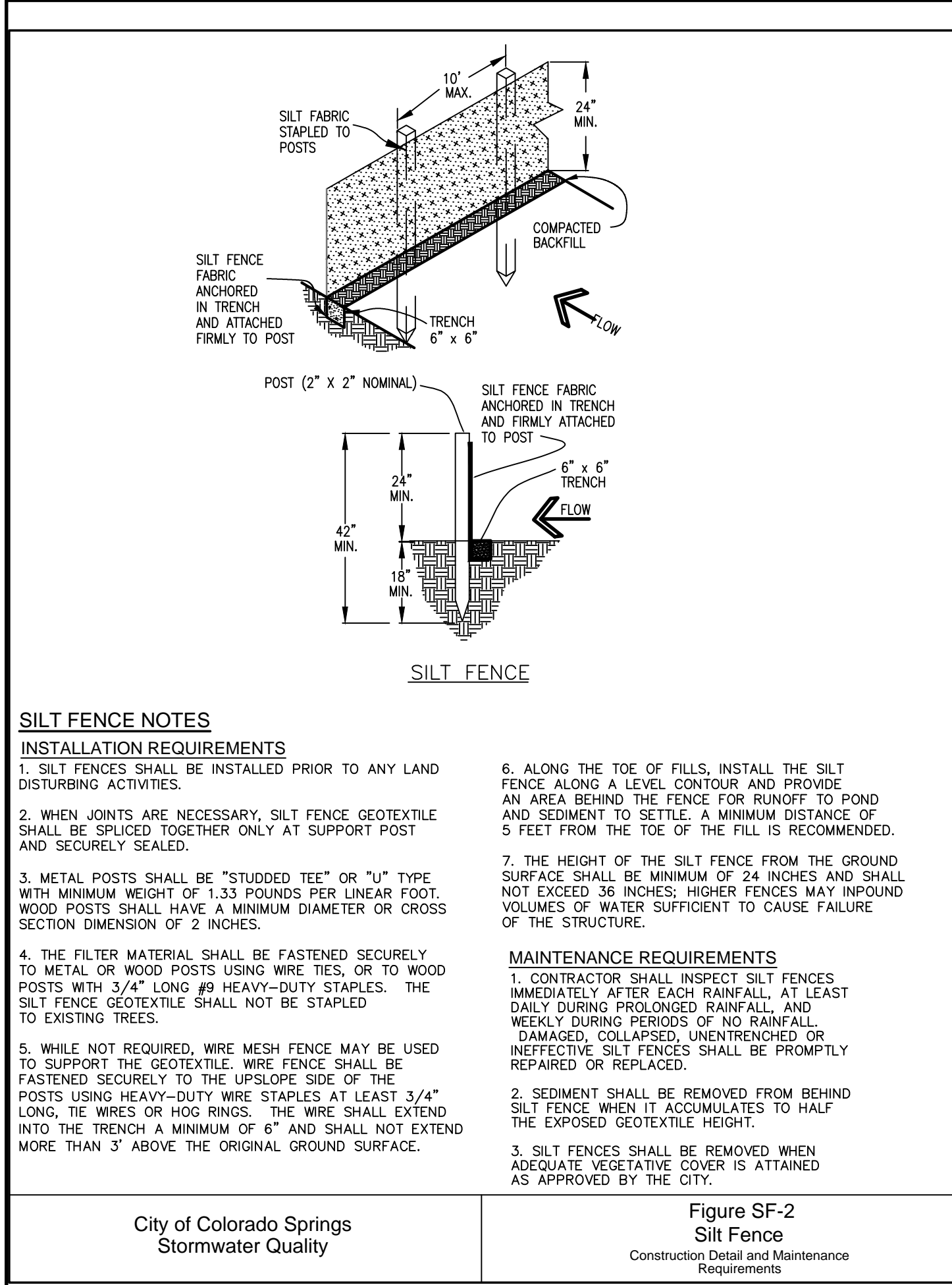
HORZ. SCALE:	NTS	DRAWN:	RMD
VERT. SCALE:	N/A	DESIGNED:	JPS
SURVEYED:	UP&E	CHECKED:	JPS
CREATED:	4/14/20	LAST MODIFIED:	4/17/20
PROJECT NO:	090001	MODIFIED BY:	BJJ

SHEET:

C1.4A



C:\Users\Owner\Desktop\psproj\projects\090001\Ellicott\TTC\dwg\Civil\GEC\C1.4.dwg Jun 24, 2020 - 3:04pm



**MAYBERRY, COLORADO SPRINGS - FILING NO. 1**

**EROSION CONTROL DETAILS**

**JPS ENGINEERING**

19 E. Willamette Ave.  
Colorado Springs, CO 80903

PH: 719-477-9429  
FAX: 719-471-0766  
www.jspsengr.com

CALL UTILITY NOTIFICATION CENTER OF COLORADO  
1-800-922-1987

BEFORE ANY GRADE OR EXCAVATE FOR THE MARKING OF UNDERGROUND MEMBER UTILITIES.

NO.	REVISION	BY	DATE
1	EPC COMMENTS	JPS	1/15/07
2	2018 SUBMITTAL	JPS	8/22/18
3	EPC COMMENTS	JPS	9/12/19
4	EPC COMMENTS	JPS	1/31/20
5	EPC COMMENTS	JPS	4/17/20

HORZ. SCALE: NTS  
VERT. SCALE: N/A  
SURVEYED: UP&E  
CREATED: 4/14/20  
PROJECT NO: 090001

DRAWN: RMD  
DESIGNED: JPS  
CHECKED: JPS  
LAST MODIFIED: 6/24/20  
MODIFIED BY: BJJ

SHEET: C1.4B





- ORIFICE PLATE NOTES:

1. MINIMIZE THE NUMBER OF COLUMNS.
2. PROVIDE GASKET MATERIAL BETWEEN THE ORIFICE PLATE AND CONCRETE.
3. BOLT PLATE TO CONCRETE 12" MAX. ON CENTER.

- EURV AND WQCV TRASH RACKS:

1. WELL-SCREEN TRASH RACKS (FOR CIRCULAR ORIFICES) SHALL BE ATTACHED BY INTERMITTENT WELDS ALONG THE EDGE OF THE MOUNTING FRAME.
2. STRUCTURAL DESIGN OF TRASH RACKS SHALL BE BASED ON FULL HYDROSTATIC HEAD WITH ZERO HEAD DOWNSTREAM OF THE RACK.

- OVERFLOW TRASH RACKS:

1. ALL TRASH RACKS SHALL BE MOUNTED USING STAINLESS STEEL HARDWARE AND PROVIDED WITH HINGED AND LOCKABLE OR BOLTABLE ACCESS PANELS.

2. TRASH RACKS SHALL BE STAINLESS STEEL, ALUMINUM, OR STEEL. STEEL TRASH RACKS SHALL BE HOT DIP GALVANIZED AND MAY BE HOT POWDER COATED AFTER GALVANIZING.
3. TRASH RACKS SHALL BE DESIGNED SUCH THAT THE DIAGONAL DIMENSION OF EACH OPENING IS SMALLER THAN THE DIAMETER OF THE OUTLET PIPE.

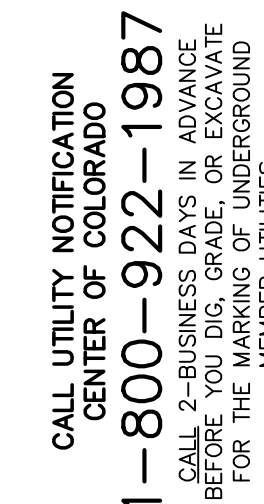
4. STRUCTURAL DESIGN OF TRASH RACKS SHALL BE BASED ON FULL HYDROSTATIC HEAD WITH ZERO HEAD DOWNSTREAM OF THE RACK.

## NTS

**POND C1**  
**PLAN & DETAILS**



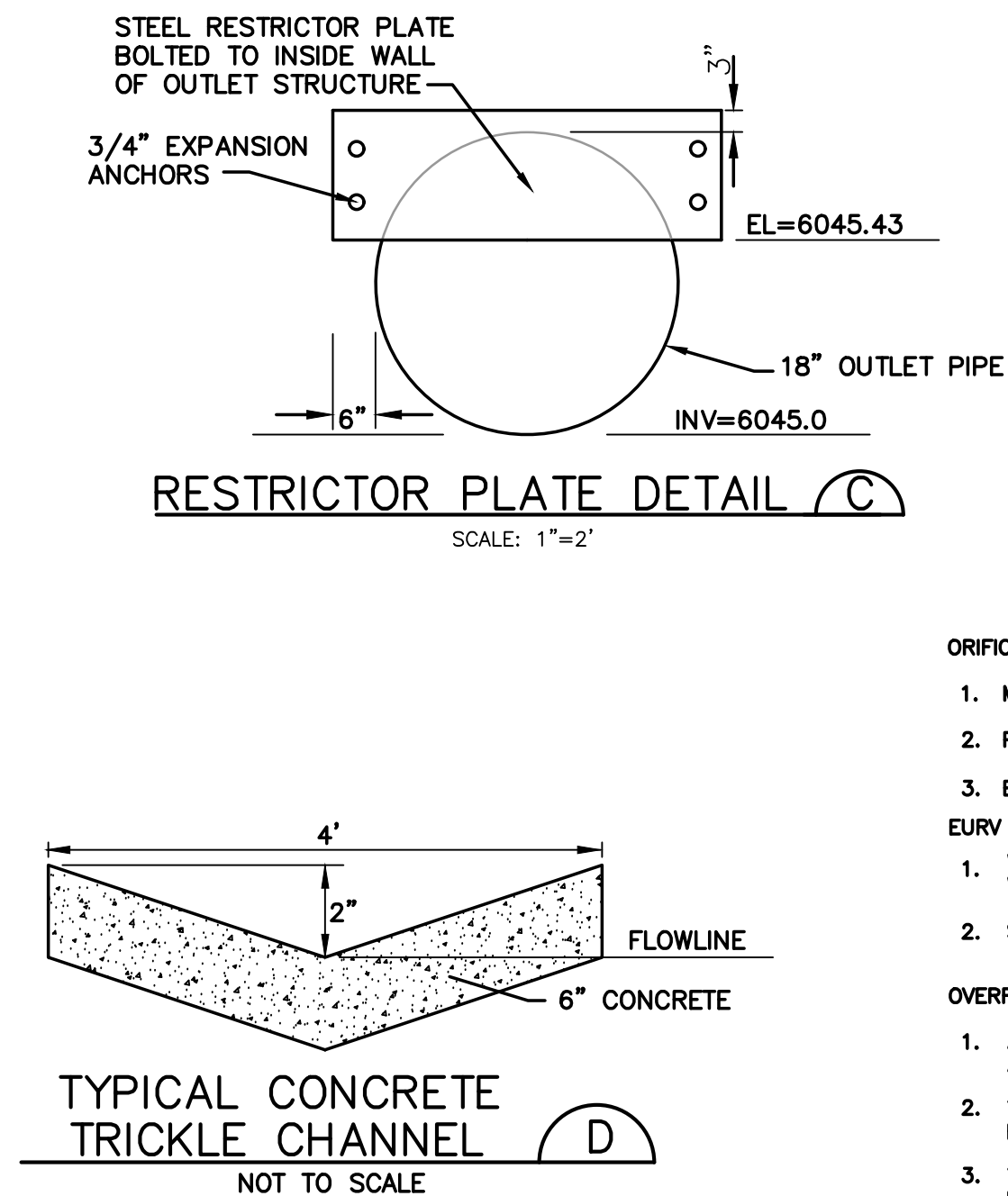
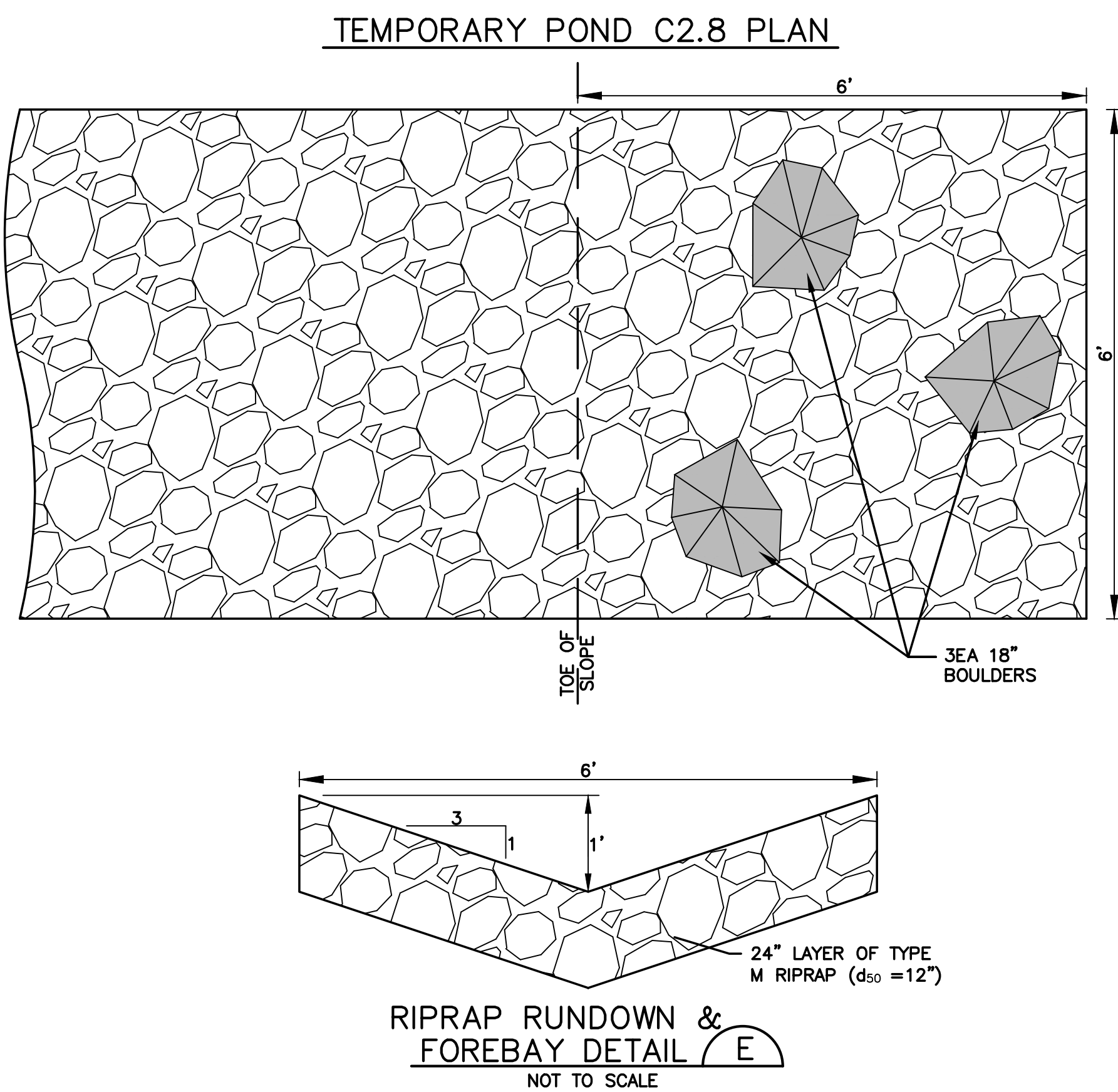
PH: 719-477-9429  
FAX: 719-471-0766  
www.jpsengr.com



No.	A	B	C	D	E
-----	---	---	---	---	---

HORIZ. SCALE:	1"=50'	DRAWN:	B.
VERT. SCALE:	N/A	DESIGNED:	JP
SURVEYED:	UP&E	CHECKED:	JP
CREATED:	4/4/06	LAST MODIFIED:	4/17/2
PROJECT NO:	090001	MODIFIED BY:	B.

## C1.5



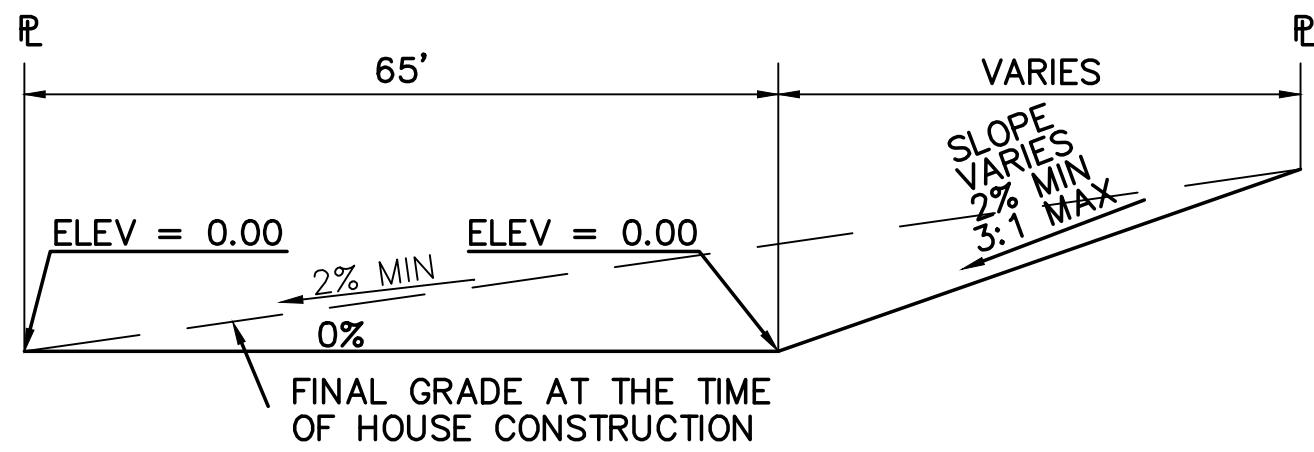
ORIFICE PLATE AND TRASH RACK  
DETAILS AND NOTES B  
NTS

## POND C2.8 PLAN & DETAILS

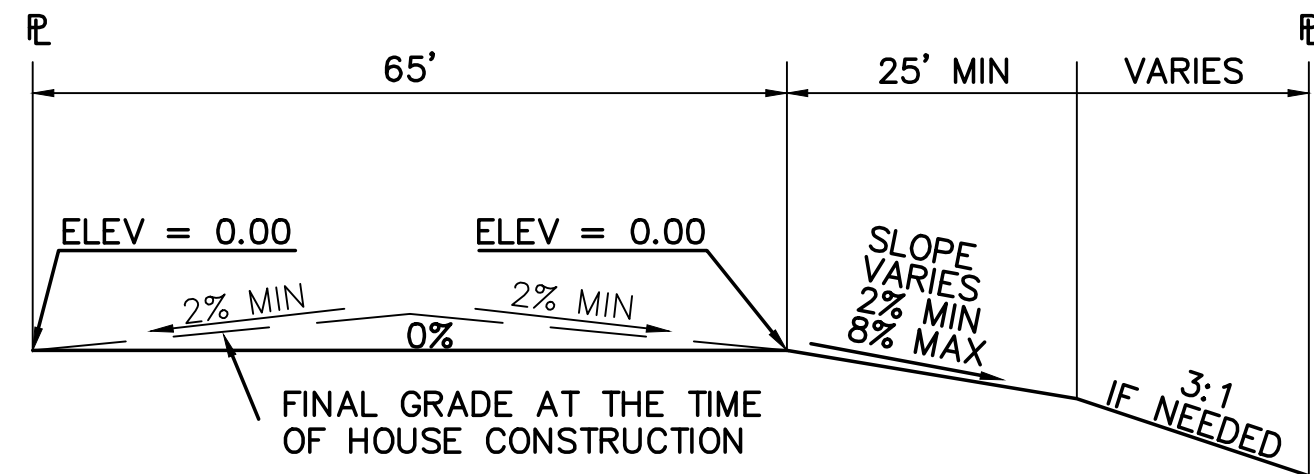
HORZ. SCALE:	1"=50'	DRAWN:	RMD
VERT. SCALE:	N/A	DESIGNED:	JPS
SURVEYED:	UP&E	CHECKED:	JPS
CREATED:	1/15/19	LAST MODIFIED:	9/17/20
PROJECT NO:	090001	MODIFIED BY:	BJJ

## C1.6

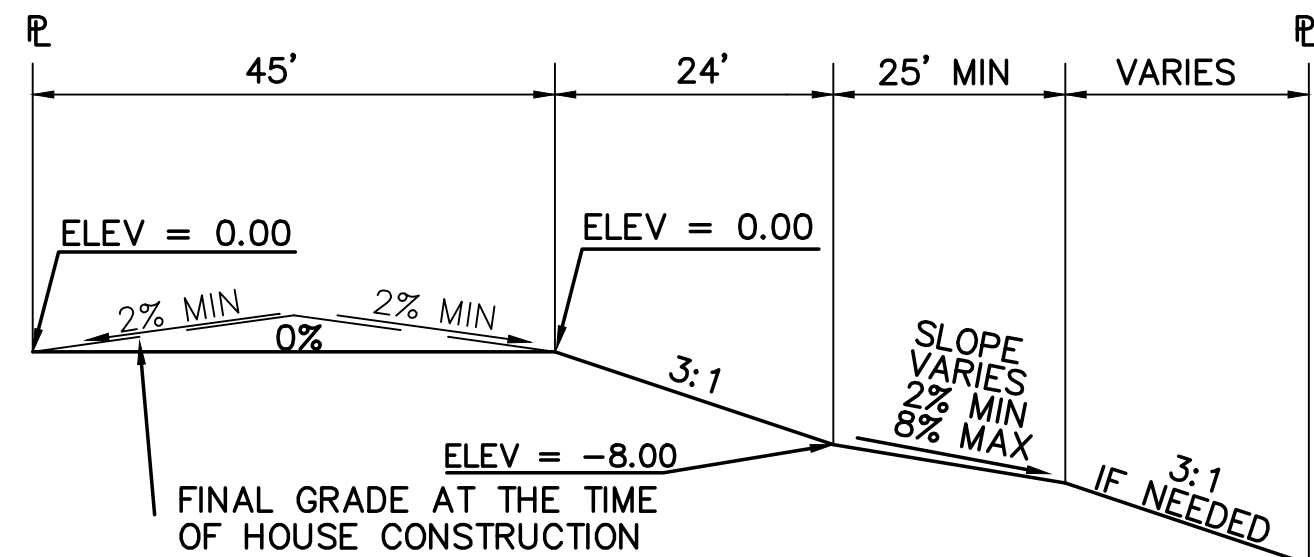
G:\Users\Owner\Dropbox\jpsprojects\090001.Elliot\TTC\dwg\Civil\GEC\C2.1.dwg Oct 27, 2020 - 12:55pm



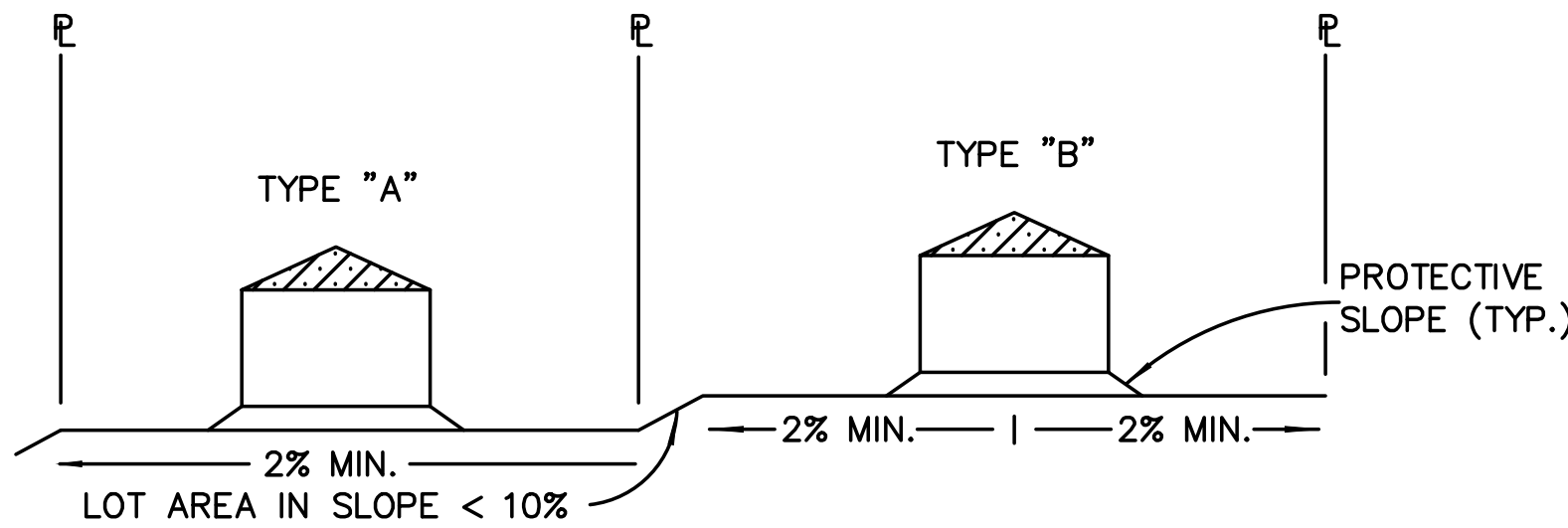
TYPICAL "A" LOT  
SCALE: 1"=20'



TYPICAL "B" LOT  
SCALE: 1"=20'

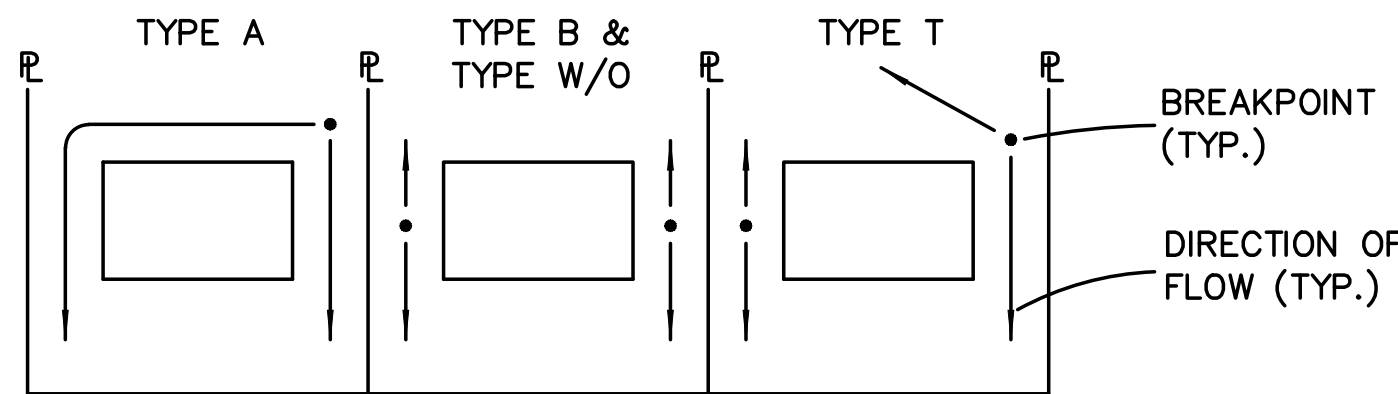


TYPICAL "WALK-OUT" LOT - "C" LOT  
SCALE: 1"=20'



TYPICAL LOT SECTION DETAIL  
N.T.S.

NOTE:  
FINAL GRADING TO COMPLY WITH H.U.D. STANDARDS CONTAINED IN SECTION 310 AND 602 OF THE MINIMUM PROPERTY STANDARDS (MPS) 4900.1, HANDBOOK 4140.3 CHG (DATA SHEET 79g), IF APPLICABLE, AND ALL LEGAL STANDARDS.

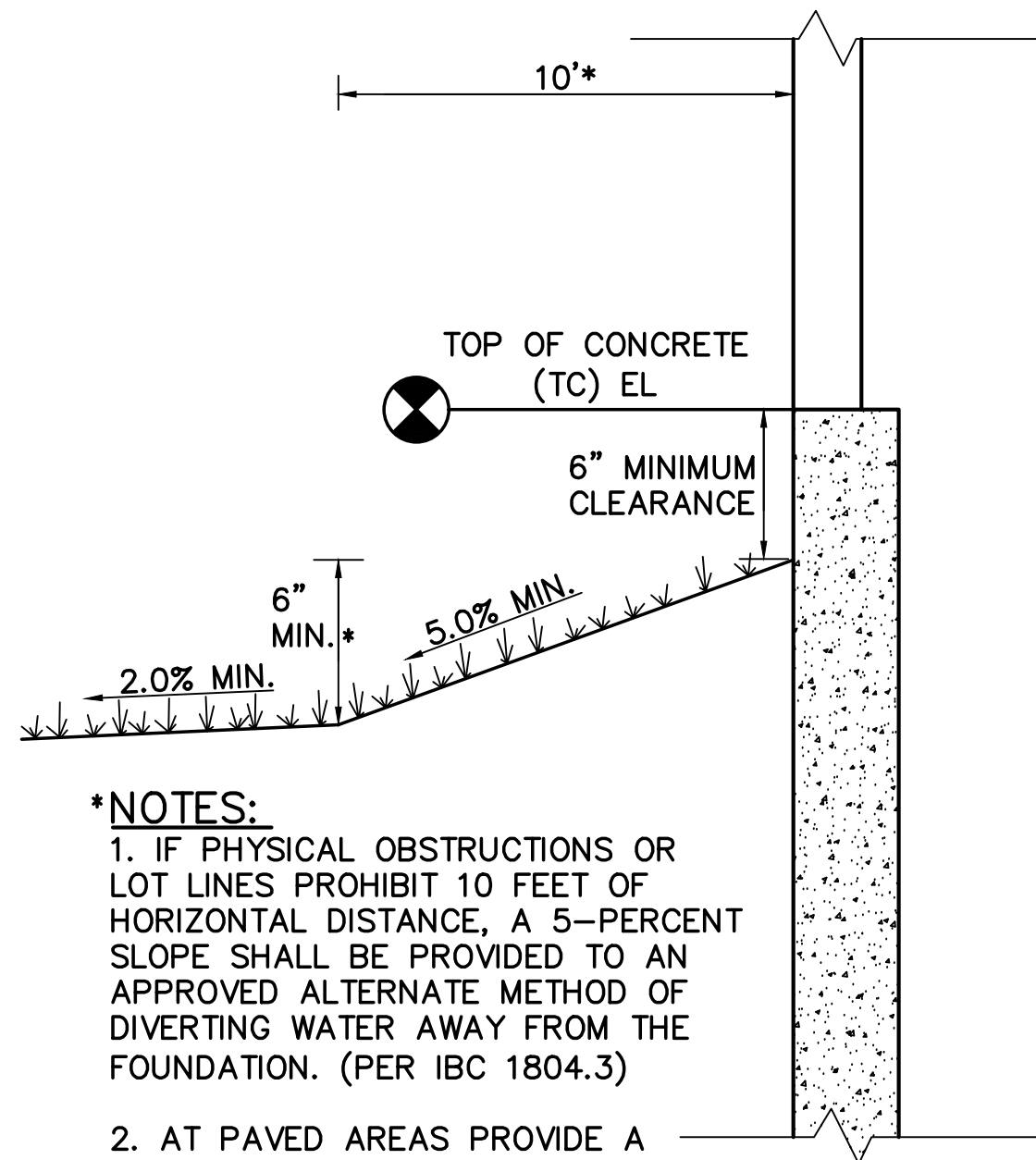


LOT DRAINAGE TYPES  
N.T.S.



TYPICAL SIDE/REAR LOT SWALE (A)  
N.T.S.

NOTE: BUILDERS AND OWNERS SHALL MAINTAIN PROPER PROTECTIVE SLOPES & SIDE/REAR LOT SWALES DURING AND AFTER HOME CONSTRUCTION.



\*NOTES:  
1. IF PHYSICAL OBSTRUCTIONS OR LOT LINES PROHIBIT 10 FEET OF HORIZONTAL DISTANCE, A 5-PERCENT SLOPE SHALL BE PROVIDED TO AN APPROVED ALTERNATE METHOD OF DIVERTING WATER AWAY FROM THE FOUNDATION. (PER IBC 1804.3)

2. AT PAVED AREAS PROVIDE A MINIMUM 2.0% SLOPE AWAY FROM THE BUILDING FOR THE FIRST 10 FEET OF HORIZONTAL DISTANCE.

TYPICAL BUILDING DRAINAGE DETAIL (B)  
N.T.S.

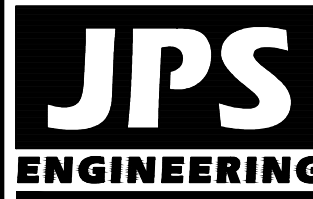
NOTES:

1. LOT GRADING & DRAINAGE IS THE RESPONSIBILITY OF THE INDIVIDUAL LOT BUILDERS & OWNERS.

2. INDIVIDUAL BUILDERS SHALL PROVIDE POSITIVE DRAINAGE WITHIN EACH LOT AND ACCOUNT FOR POTENTIAL CROSS-LOT DRAINAGE ON DOWNGRADIENT LOTS.

3. FINAL GRADING TO COMPLY WITH H.U.D. STANDARDS CONTAINED IN SECTION 310 AND 602 OF THE MINIMUM PROPERTY STANDARDS (MPS) 4900.1, HANDBOOK 4140.3 CHG (DATA SHEET 79g), IF APPLICABLE, AND ALL LEGAL STANDARDS.

MAYBERRY, COLORADO SPRINGS - FILING NO. 1



19 E. Willamette Ave.  
Colorado Springs, CO  
80903

PH: 719-477-9429  
FAX: 719-471-0766  
www.jpsengr.com



CALL UTILITY NOTIFICATION  
CENTER OF COLORADO  
1-800-922-1987  
CALL OR VISIT US IN ADVANCE  
BEFORE YOU DIG, GRADE, OR EXCAVATE  
FOR THE MARKING OF UNDERGROUND  
MEMBER UTILITIES

No.	REVISION	BY	DATE
1	FINAL PLAT SUBMITTAL	JPS	4/19/06
2	EPC COMMENTS	JPS	1/15/19
3	EPC COMMENTS	JPS	1/31/20

LOT GRADING NOTES  
& DETAILS

HORZ. SCALE:	N/A	DRAWN:	BJJ
VERT. SCALE:	N/A	DESIGNED:	JPS
SURVEYED:	UP&E	CHECKED:	JPS
CREATED:	1/14/19	LAST MODIFIED:	07/27/20
PROJECT NO:	090001	MODIFIED BY:	BJJ

SHEET:

C2.1





