GRADING, EROSION, AND SEDIMENT CONTROL (GESC) GENERAL NOTES

1. *The Southeast Metro Stormwater Authority (SEMSWA) signature affixed to this document indicates SEMSWA has reviewed the document and found it in general compliance with the Grading, Erosion and Sediment Control (GESC) Manual. SEMSWA, through acceptance of this document, assumes no responsibility (other than as stated above) for the completeness and/or accuracy of these documents.*
2. The adequacy of the *GESC* plan lies with the Design Engineer. Changes to design intent that meet the definition of major modifications must be approved by the Design Engineer. See Note 10.
3. *The GESC/ESC Plan shall be considered valid for two (2) years from the date of plan acceptance by SEMSWA, after which time the plan shall be void and will be subject to re-review and re-acceptance by SEMSWA. Plans must conform to current requirements and shall meet good engineering, hydrologic and pollution control practices. Plans with issued GESC/ESC permits remain valid until GESC/ESC permit close out, except in cases when SEMSWA revokes the GESC/ESC permit.*
4. *Refer to Construction Plans for implementation of all permanent improvements, including post-construction Control Measures. Coordinate with SEMSWA for timing of installation of post-construction Control Measures.*
5. *All materials and workmanship shall be subject to inspection by SEMSWA. SEMSWA reserves the right to accept or reject any such materials and workmanship that does not conform to the GESC Manual, GESC/ESC Plan, GESC/ESC Permit, or good engineering, hydrologic and pollution control practices.*
6. *Appropriate Control Measures must be implemented prior to the start of a land disturbance activity, must control potential pollutants during each phase of construction, and must be continued through final stabilization. Appropriate structural and non-structural Control Measures must be maintained in operational condition.*
7. *Control Measures must be selected, designed, installed, implemented, and maintained to provide control of all potential pollutants.*
8. *The placement of Control Measures shall be in accordance with the accepted GESC/ESC Plan and GESC Manual.*
9. *Any variation in material, type or location of Control Measures from the SEMSWA-accepted GESC/ESC Plan will require acceptance from SEMSWA.*
10. The accepted *GESC* Plan may require changes or alterations after acceptance to meet the changing site or project conditions or to address insufficiencies in design or installation.
    - Minor modifications generally include modifications that do not increase the scope or change hydrology of the site, but modify/improve specific Control Measures in use at a site. Minor Modifications include Control Measure substitutions for other measures that are equivalent in performance and/or are more suitable to specific site conditions, relocation of previously accepted Control Measures within the Limits of Construction, or changes to Control Measures based on the phasing of the site. If alternative Control Measures will be used, Control Measure specifications must be submitted to and accepted by *SEMSWA*.

    The *GESC Permittee* shall obtain prior approval for major modifications from the Design Engineer and acceptance from *SEMSWA* for any proposed changes. Major modifications to a *GESC* Plan are those involving re-engineering or changes to site hydrology and are not considered minor modifications. Control Measures that may be classified as a major modification are indicated with a "box" surrounding the Control Measure acronym, as indicated on the Legend, (this sheet, right). The Permittee must update the *GESC* Plan as necessary to reflect site conditions for all modifications.
11. *After SEMSWA's signature and stamping of the GESC/ESC Plan, the contractor shall install non-earth disturbing initial-stage Control Measures indicated on the accepted GESC/ESC Plan. The Applicant shall refer to the legend for initial non-earth disturbing Control Measures to be installed prior to the pre-construction meeting and initial inspection. If the installation of the non-earth disturbing initial-stage Control Measures are not accepted by SEMSWA at the preconstruction meeting, the applicant may be required to pay a reinspection fee, address any problems with the Control Measure installation, and call to reschedule the preconstruction meeting and initial inspection. Construction activity may commence after permit issuance following a passing initial inspection.*
12. SEMSWA and GESC Manager are required to attend the preconstruction meeting. In addition, the following representatives should attend the preconstruction meeting: General Contractor, Owner or Owner's Representative, Alternate GESC Manger, Grading subcontractor, and Control Measure Contractor and/or Inspector.
13. *The Applicant shall refer to the legend for earth-disturbing initial-stage Control Measures, such as sediment basins, sediment traps, and diversion ditches. Earth-disturbing initial-stage Control Measures shall be installed as soon as feasible after permit issuance.*
14. *The GESC manager shall be on site as necessary to ensure the GESC Plan and GESC Permit requirements are being implemented and shall provide SEMSWA* with contact information, including email and phone. In the event the GESC Manager (or Alternate GESC Manager) cannot be reached within 24 hours, and a noncompliance has or may occur, a violation may be assessed. Notification shall be provided to *SEMSWA* if the GESC Manager or Alternate change.
15. *All construction traffic must exit the site through the SEMSWA-accepted access point. A vehicle tracking control pad or other stabilized surface accepted by SEMSWA is required at all exit points on the site. Additional stabilized construction entrances may be added if accepted by SEMSWA. It is the GESC/ESC Permittees responsibility to obtain any other approvals necessary to utilize additional access points.*
16. *No recycled asphalt or concrete shall be used as a part of a Control Measure or for new or improved access roads within the Limits of Construction.*
17. *The GESC/ESC Permittee is responsible for cleanup of sediment, mud, or construction materials tracked onto paved areas. Paved areas including streets, sidewalks, and other impervious areas are to be kept clean throughout construction activity and shall be cleaned immediately with a street sweeper or similar device. Street washing is not allowed. SEMSWA reserves the right to require additional Control Measures to ensure streets are kept free of sediment, mud, or construction materials. Tracking outside of the limits of construction is not acceptable, is a violation of the GESC Permit, and can be enforced by SEMSWA.*
18. *Accepted Control Measures shall be inspected and maintained in accordance with the GESC Manual, GESC/ESC plan, and GESC/ESC permit and kept in good repair for the duration of the project. All necessary maintenance and repair activities shall be completed immediately by the Permittee.*
19. *Straw bales are not permitted for use as a Control Measure.*
20. *Appropriately store, cover, and/or isolate onsite potential construction-associated waste pollutants to prevent runoff of pollutants and contamination of groundwater.*

    Portable toilets should be anchored or positioned in a manner to prevent spilling and runoff of pollutants.
21. *The GESC/ESC Permittee shall adhere to the accepted Limits of Construction. SEMSWA must accept any changes to the Limits of Construction, and at SEMSWA's discretion, additional Control Measures may be required in any additional areas of construction activity. The GESC/ESC permittee shall be held responsible for obtaining permission and restoration for work offsite.*
22. *Significant dust or particulate-generating processes shall be minimized. Wind erosion shall be minimized during earthwork operations and Control Measures utilized as necessary to minimize dust from earthwork equipment and wind.*
23. Soils that will be stockpiled and remain inactive for more than thirty (30) days shall be stabilized within fourteen (14) days of stockpile construction. The Permittee shall maximize the distance of active construction stockpiles from the floodplain. Active construction stockpiles shall not be placed within a floodplain unless accepted by *SEMSWA*. Reworking the disturbed area within the thirty (30) days for the sole purpose of avoiding the requirement to stabilize the exposed area shall not be considered an acceptable practice.
24. Topsoil shall be stripped and stockpiled in the location shown on the accepted GESC Plan and in accordance with the GESC Narrative Sheet, unless otherwise accepted by *SEMSWA*.
25. *For spills that are an emergency, call 911. It is the responsibility of the GESC/ESC Permittee to report any spills in accordance with federal, state, and local regulations. This includes any discharge of pollutants to Waters of the State which shall be reported to the CDPHE-WQCD at 1-877-518-5608. All spills that impact the MS4 and/or Waters of the State must be reported to SEMSWA at 303-858-8844. Failure to report spills to SEMSWA or failure to fully remediate any spills may result in enforcement.*
26. *The cleaning of concrete delivery truck chutes is restricted to accepted concrete washout locations. The discharge of water containing waste concrete offsite and/or to the MS4 is prohibited. All concrete waste shall be properly cleaned up and disposed of at an appropriate location.*
27. *All dewatering onsite is the responsibility of the GESC/ESC Permittee. All dewatering operations must not cause erosion or negatively impact the site. Any impacts that occur will be the responsibility of the GESC/ESC Permittee to repair.* For dewatering that requires a *CDPHE-WQCD* dewatering general permit, the Permittee is responsible for obtaining and complying with the applicable permits.
28. *For projects that have a Stormwater Public Improvement Permit (SPIP) and/or Floodplain permit, separate inspections will be conducted by SEMSWA to ensure compliance with applicable criteria outside of the GESC program.*
29. *Hydraulic seeding is not an acceptable method of seeding.*
30. *Importing or exporting excess fill dirt within the SEMSWA service area may require a GESC or ESC permit for the secondary site.*
31. *All areas disturbed by construction and soil stockpiles shall be stabilized as soon as possible to reduce the duration of soil exposure to runoff events and the potential for erosion. All disturbed areas which are either final graded or will remain inactive for a period of more than thirty (30) days, shall be required to be stabilized within fourteen (14) days of the completion of the grading activities. Acceptable Temporary Stabilization Control Measures are as follows:*
    - Surface Roughening
    - Seeding and Mulching (temporary seed mix may only be used if area is inactive for 6 months or less unless otherwise accepted by *SEMSWA*)
    - Erosion Control Blanket with or without seed
    - *Hydromulch*
    - Tarps (for stockpile areas)

Acceptable Final Stabilization Control Measures are as follows:

- Seeding and Mulching
- Erosion Control Blanket with seed
- *Hydromulch* with seed, as accepted by *SEMSWA*
- Permanent hardscape including but not limited to concrete and pavement
- Sod or landscaping according to accepted landscape plans

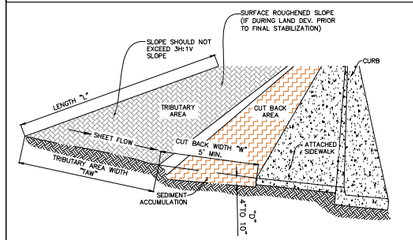
32. *Prior to the Initial Close-Out Inspection, the following must be completed:*
    - *All streets, sidewalks and flowlines must be cleaned and generally free of sediment or debris.*
    - *Clean all inlets, trickle channels and all other drainage features, as necessary.*
    - *Remove construction Control Measures (per the accepted GESC/ESC Plan) and install/maintain final stabilization Control Measures per the accepted GESC/ESC Plan.*
33. All stabilization Control Measures shall be installed and maintained in accordance with the accepted GESC plan and the GESC Manual. Final Stabilization is reached when construction activities at the site have been completed, permanent stabilization methods are complete, and temporary Control Measures are removed. Areas being stabilized with a vegetative cover must have evenly distributed perennial vegetation. The vegetation coverage must be, at a minimum, equal to 70 percent of what would have been provided by native vegetation in a local, undisturbed area or adequate reference site. Note that it is the Permittee's responsibility to control noxious weeds in accordance with local and state law, including List A Noxious Weeds which are required by the Colorado Department of Agriculture to be eradicated.
34. *A copy of the permit and accepted plans must be available upon request, within the timeframe specified within the request.*

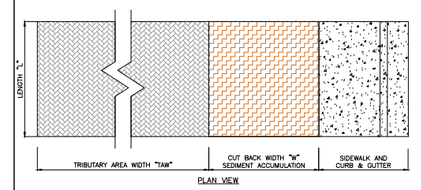
35. *For ESC permitted sites, refer to italicized notes.*

LEGEND

1	1	CBC	CUT BACK CURB	
2	1	CD	CHECK DAM	
3	1	CWA	CONCRETE WASHOUT AREA	
4	1	CF	CONSTRUCTION FENCE	
5	1	CM	CONSTRUCTION MARKERS	
6	1	CC	CURB CHECK	
7	1	DW	DEWATERING	
8	2	DD	DIVERSION DITCH	EARTH DISTURBING CONTROL MEASURES MUST BE INSTALLED AS SOON AS FEASIBLE AFTER PERMIT ISSUANCE
9	2	ECB	EROSION CONTROL BLANKET	
10	2	GMS	GROUT MIXING STATION	
11	2	IP	INLET PROTECTION	
12	2	RRB	REINFORCED ROCK BERM	
13	2	RRC	RRB FOR CULVERT PROTECTION	
14	3	SB	SEDIMENT BASIN	EARTH DISTURBING CONTROL MEASURES MUST BE INSTALLED AS SOON AS FEASIBLE AFTER PERMIT ISSUANCE
15	3	SCL	SEDIMENT CONTROL LOG	
16	3	ST	SEDIMENT TRAP	EARTH DISTURBING CONTROL MEASURES MUST BE INSTALLED AS SOON AS FEASIBLE AFTER PERMIT ISSUANCE
17	3	SM	SEEDING AND MULCHING	
18	3	SF	SILT FENCE	
19	3	SFR	SILT FENCE REINFORCED	
20	4	SID	SLOPE INTERCEPT DITCH	
21	4	SSA	STABILIZED STAGING AREA	
22	4	SR	SURFACE ROUGHENING	
23	4	TSD	TEMPORARY SLOPE DRAIN	
24	4	TSC	TEMPORARY STREAM CROSSING	
25	4	VTC	VEHICLE TRACKING CONTROL	
26	4	WW	VTC WITH WHEEL WASH	
		LOC	LIMITS OF CONSTRUCTION	
		*EG	MAY MEET MAJOR MODIFICATION REQUIREMENTS	

INITIAL CONTROL MEASURE
(NON-EARTH DISTURBING CONTROL MEASURES MUST BE INSTALLED PRIOR TO PERMIT ISSUANCE)





PLAN VIEW

INSTALLATION

1. SEE PLAN VIEW FOR:
   - LOCATIONS OF CUT BACK CURB.
   - LENGTH, "L", WIDTH, "W", AND DEPTH, "D".
2. USE SURFACE ROUGHENING ON UPGRADIENT SLOPES IF DURING LAND DEVELOPMENT (IF PRIOR TO FINAL STABILIZATION).
3. CUT BACK CURB SIZED TO PROVIDE STORAGE VOLUME EQUAL TO 1800 CUBIC FEET PER UPSTREAM ACRE.
4. 5' WIDTH (W) AND 6" DEPTH (D) IS ACCEPTABLE FOR TRIBUTARY AREA WIDTHS UP TO 60'.

INSPECTION AND MAINTENANCE

1. THE GESC PERMITTEE SHALL INSPECT AS NECESSARY TO ENSURE THE ADEQUACY AND FUNCTIONALITY OF THE CONTROL MEASURE
2. REMOVE ACCUMULATED SEDIMENT WHEN 1/2 CAPACITY. DO NOT ALLOW SEDIMENT TO OVERFLOW ONTO CURB OR SIDEWALK.
3. IMPLEMENT ADDITIONAL CONTROL MEASURES SUCH AS DOWNGRADIENT SEDIMENT CONTROL LOGS, CURB CHECKS, OR OTHER BARRIERS AS ON-SITE CONDITIONS REQUIRE.

CBC CUT BACK CURB 1

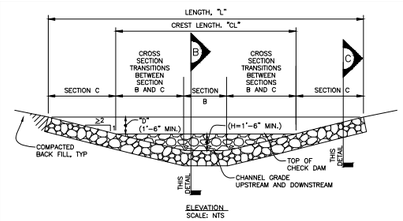
ROCK AND RIPRAP GRADATIONS

TABLE 1. RIPRAP GRADATIONS

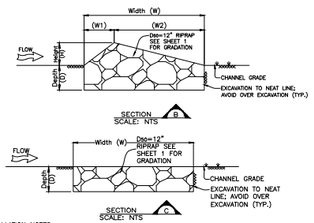
D50 MEDIAN STONE SIZE (INCHES)	% OF MATERIAL SMALLER THAN TYPICAL STONE	TYPICAL STONE EQUIVALENT DIAMETER (INCHES)	TYPICAL STONE WEIGHT (POUNDS)
6	70 – 100 50 – 70 35 – 50 2 – 10	12 9 6 2	85 35 10 0.4
9	70 – 100 50 – 70 35 – 50 2 – 10	15 12 9 3	160 85 35 1.3
12	70 – 100 50 – 70 35 – 50 2 – 10	21 18 12 4	440 275 85 3
18	100 50 – 70 35 – 50 2 – 10	30 24 18 6	1280 650 275 10
24	100 50 – 70 35 – 50 2 – 10	42 33 24 9	3500 1700 600 35

TABLE 2. RIPRAP BEDDING

SIEVE SIZE	MASS PERCENT PASSING SQUARE MESH SIEVES
	CLASS A
3" 1 1/2" NO. 4 NO. 200	100 20 – 90 0 – 20 0 – 3
MATCHES SPECIFICATIONS FOR CDOT CLASS A FILTER MATERIAL AND MILE HIGH FLOOD DISTRICT TYPE I BEDDING. ALL ROCK SHALL BE FRACTURED FACE, ALL SIDES.	



ELEVATION
SCALE: NTS



CHECK DAM INSTALLATION NOTES

1. SEE PLAN VIEW FOR:
   - LOCATIONS OF CHECK DAMS.
   - LENGTH, "L", CREST LENGTH, "CL", HEIGHT, "H", AND DEPTH, "D".
2. CHECK DAMS INDICATED ON INITIAL GESC PLAN SHALL BE INSTALLED PRIOR TO ANY UPSTREAM LAND-DISTURBING ACTIVITIES.
3. VL RIPRAP SHALL BE UTILIZED FOR CHECK DAMS.
4. RIP RAP SHALL BE TRENCHED INTO THE CHANNEL BANKS TO ADEQUATELY ANCHOR WITH CENTER OF THE CHECK DAM LOWER TO ALLOW FOR OVERTOPPING AT THE CREST.

CHECK DAM MAINTENANCE NOTES

1. SEDIMENT ACCUMULATED UPSTREAM OF CHECK DAMS SHALL BE REMOVED WHEN THE SEDIMENT DEPTH UPSTREAM OF CHECK DAM IS WITHIN 1/2 OF THE HEIGHT OF THE CREST.
2. CHECK DAMS ARE TO REMAIN IN PLACE UNTIL THE UPSTREAM DISTURBED AREA IS STABILIZED.
3. WHEN CHECK DAMS ARE REMOVED, EXCAVATIONS SHALL BE FILLED WITH SUITABLE COMPACTED BACK FILL. ANY DISTURBED AREA SHALL BE SEEDED AND MULCHED AND COVERED WITH EROSION CONTROL BLANKET OR OTHERWISE STABILIZED IN A MANNER APPROVED BY SEMSWA.

CD CHECK DAM 2

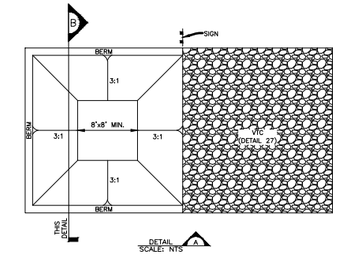
UTILITY NOTIFICATION CENTER OF COLORADO
CALL BEFORE YOU DIG
811
Call 2 days prior to any digging, grading or excavating for the marking of underground member utilities

SOUTHEAST METRO STORMWATER AUTHORITY
7437 SOUTH FAIRPLAY STREET
CENTENNIAL COLORADO
80112-4486
(303) 858-8844 - INSPECTION DIVISION

SOUTHEAST METRO Stormwater Authority

GRADING EROSION AND SEDIMENT CONTROL STANDARD NOTES AND DETAILS REVISED JUNE 2025

GESC SHEET 1 OF 4



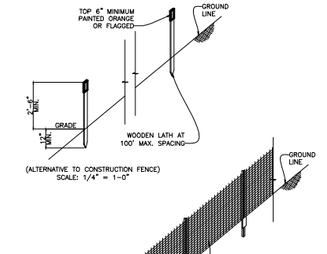
CONCRETE WASHOUT AREA INSTALLATION NOTES

1. THE CONCRETE WASHOUT AREA (CWA) AND/OR GROUT WASHOUT AREA (GWA) SHALL BE INSTALLED PRIOR TO ANY CONCRETE PLACEMENT ON SITE.
2. VEHICLE TRACKING CONTROL (VTC) (DETAIL 27) IS REQUIRED AT THE ACCESS POINT. THE VTC CAN BE REMOVED AT THE DISCRETION OF THE SEMSWA.
3. SIGNAGE SHALL BE PLACED AT THE WASHOUT AREA, AND MAY BE ELSEWHERE AS NECESSARY TO CLEARLY INDICATE THE LOCATION OF THE CONCRETE WASHOUT AREA TO OPERATORS OF CONCRETE TRUCKS AND PUMP RIGS.
4. COMPACTED EXCAVATED MATERIAL MAY BE UTILIZED IN PERIMETER BERM CONSTRUCTION.
5. THE CWA/GWA SHALL BE LOCATED A MINIMUM OF 50 FEET FROM STORM DRAIN INLETS, OPEN CONVEYANCE CHANNELS, DRAINAGE FACILITIES AND WATERWAYS, UNLESS UNFEASIBLE.
6. THE CWA/GWA MUST BE LINED IN AREAS WITH HIGH GROUNDWATER. LINERS MUST BE 30 MIL OR GREATER.
7. THE CWA/GWA MUST BE LOCATED WITHIN THE LIMITS OF CONSTRUCTION.

CONCRETE WASHOUT AREA MAINTENANCE NOTES

1. THE CONCRETE WASHOUT AREA SHALL BE REPAIRED AND ENLARGED OR CLEANED OUT AS NECESSARY TO MAINTAIN CAPACITY FOR WASTED CONCRETE.
2. AS NEEDED DURING CONSTRUCTION, AND AT THE END OF CONSTRUCTION, ALL CONCRETE SHALL BE REMOVED FROM THE SITE AND DISPOSED OF AT AN APPROVED WASTE SITE.
3. WHEN THE CONCRETE WASHOUT AREA IS REMOVED, THE DISTURBED AREA SHALL BE DRILL SEEDED AND CRIMP MULCHED OR OTHERWISE STABILIZED IN A MANNER APPROVED BY SEMSWA.
4. CONCRETE WASHOUT AREA MUST BE EMPTIED OUT ONCE STORAGE AREA BECOMES 2/3 FULL, OR AS DETERMINED BY SEMSWA INSPECTOR.

CWA — CONCRETE WASHOUT AREA — 3



CONSTRUCTION FENCE INSTALLATION NOTES

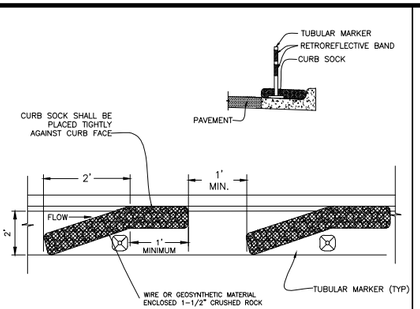
1. SEE PLAN VIEW FOR:
   - TYPE OF CONSTRUCTION LIMIT INDICATOR (FENCE OR MARKERS).
   - LOCATION AND LENGTH OF FENCE OR LINE OF MARKERS.
2. CONSTRUCTION FENCE OR MARKERS INDICATED ON INITIAL GESC PLAN SHALL BE INSTALLED PRIOR TO OTHER CONTROL MEASURES AND ANY LAND-DISTURBING ACTIVITIES.
3. STEEL TEE POSTS SHALL BE UTILIZED FOR SUPPORT OF CONSTRUCTION FENCE. SPACING OF TEE POSTS SHALL BE APPROPRIATE TO SITE CONDITIONS.

CONSTRUCTION FENCE MAINTENANCE NOTES

1. FENCE OR MARKERS SHALL BE REMOVED AT THE END OF CONSTRUCTION, IF ANY DISTURBED AREA EXISTS AFTER FENCE REMOVAL, IT SHALL BE DRILL SEEDED AND CRIMP MULCHED OR OTHERWISE STABILIZED IN A MANNER APPROVED BY SEMSWA.

CF — CONSTRUCTION FENCE — 4

CM — CONSTRUCTION MARKERS — 5



CURB SOCK ON CONTINUOUS GRADE
SCALE: NTS

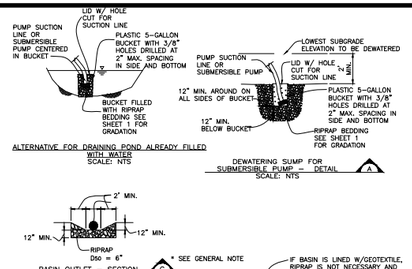
CURB SOCK INSTALLATION NOTES

1. ADDITIONAL CURB SOCKS MAY BE REQUIRED AS DIRECTED BY SEMSWA.
2. CURB SOCKS IN STREETS SHALL BE INSTALLED WITHIN 48-HOURS OF POURING CURBS. CURB SOCKS (AFTER PAVEMENT) SHALL BE INSTALLED WITHIN 48 HOURS AFTER PAVING IS PLACED.
3. CRUSHED ROCK SHALL BE FRACTURED FACE ON ALL SIDES.
4. WIRE MESH SHALL BE FABRICATED OF WIRE TWISTED INTO A MESH WITH A MAXIMUM OPENING OF 1.0 INCH (COMMONLY TERMED "CHICKEN WIRE"). ROLL WIDTH SHALL BE 48-INCHES.
5. WIRE MESH SHALL BE SECURED USING "HOG RINGS" OR WIRE TIES AT APPROXIMATELY 6-INCH CENTERS ALONG ALL JOINTS AND AT APPROXIMATELY 2-INCH CENTERS ON ENDS OF CURB SOCK.
6. REINFORCED ROCK BERM SHALL BE CONSTRUCTED IN ONE PIECE OR SHALL BE CONSTRUCTED USING JOINT DETAIL.
7. THE TOP OF REINFORCED ROCK BERM SHALL BE 1/2"-1" BELOW TOP OF CURB.

CURB SOCK MAINTENANCE NOTES

1. SEDIMENT ACCUMULATED UPSTREAM OF CURB SOCK SHALL BE REMOVED WHEN THERE IS EVIDENCE OF SEDIMENT BUILDUP.
2. CURB PROTECTION IS TO REMAIN IN PLACE UNTIL THE UPSTREAM DISTURBED AREA IS STABILIZED UNLESS SEMSWA APPROVES EARLIER REMOVAL OF CURB PROTECTION IN STREETS.

CS — CURB SOCK — 6



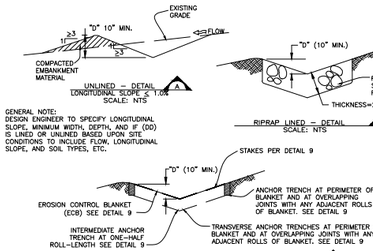
DEWATERING INSTALLATION NOTES

1. THIS DETAIL APPLIES TO STORMWATER DEWATERING ONLY. FOR DEWATERING THAT REQUIRES A CDPHE DEWATERING GENERAL PERMIT, THIS DETAIL SHALL NOT APPLY. IN THOSE INSTANCES, REFER TO APPLICABLE DEWATERING REQUIREMENTS.
2. THE GESC PERMITTEE SHALL PROVIDE, OPERATE, AND MAINTAIN DEWATERING SYSTEMS OF SUFFICIENT SIZE AND CAPACITY.
3. DEWATERING OPERATIONS SHALL USE ONE OR MORE OF THE DEWATERING SUMPS SHOWN ABOVE OR OTHER MEANS APPROVED BY SEMSWA TO MINIMIZE THE PUMPING OF SEDIMENT.
4. DISCHARGE POINT(S) SHALL BE A STABILIZED AREA.
5. THE DISCHARGE END OF THE LINE SHALL BE STAKED IN PLACES TO PREVENT MOVEMENT OF THE LINE OFF THE STABILIZED DISCHARGE POINT.
6. USE OF A SEDIMENT FILTER BAG MAY BE SUBSTITUTED FOR USE OF THE RIPRAP PAD AND SUMP DISCHARGE SETTLING BASIN. FILTER BAG TO SET ON RELATIVELY FLAT STABLE GROUND.

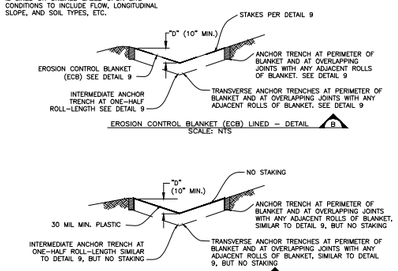
DEWATERING MAINTENANCE NOTES

1. TEMPORARY SETTLING BASINS AS APPLICABLE SHALL BE REMOVED WHEN NO LONGER NEEDED FOR DEWATERING OPERATIONS. ANY DISTURBED AREA SHALL BE DRILL SEEDED AND CRIMP MULCHED OR OTHERWISE STABILIZED IN A MANNER APPROVED BY SEMSWA.

DW — STORMWATER DEWATERING — 7



GENERAL NOTE:
DESIGN ENGINEER TO SPECIFY LONGITUDINAL SLOPE, MINIMUM WIDTH, DEPTH, AND IF (DD) IS LINED OR UNLINED BASED UPON SITE CONDITIONS TO INCLUDE FLOW, LONGITUDINAL SLOPE, AND SOIL TYPES, ETC.



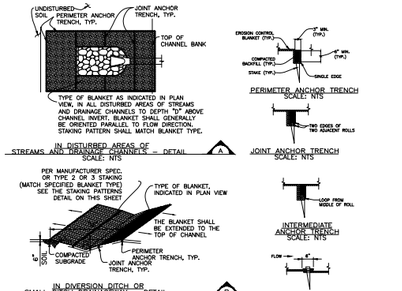
DIVERSION DITCH INSTALLATION NOTES

1. SEE PLAN VIEW FOR:
   - LOCATION OF DIVERSION DITCH.
   - TYPE OF DITCH (UNLINED, ECB LINED, PLASTIC LINED OR RIPRAP LINED).
   - LENGTH OF EACH TYPE OF DITCH.
   - DEPTH, "D", AND WIDTH, "W" DIMENSIONS.
   - FOR ECB LINED DITCH, EROSION CONTROL BLANKET TYPE (SEE DETAIL 9).
   - FOR RIPRAP LINED DITCH, SIZE OF RIPRAP, "Dso".
2. DIVERSION DITCHES INDICATED ON INITIAL GESC PLAN SHALL BE INSTALLED PRIOR TO ANY OTHER LAND-DISTURBING ACTIVITIES.
3. MINIMIZE AREAS WHERE VEHICULAR CROSSINGS OF DD WILL OCCUR. WHERE NOT FEASIBLE, THE GESC PERMITTEE SHALL INSTALL AN APPROPRIATELY SIZED TEMPORARY CULVERT OR SEMSWA APPROVED EQUIVALENT.

DIVERSION DITCH MAINTENANCE NOTES

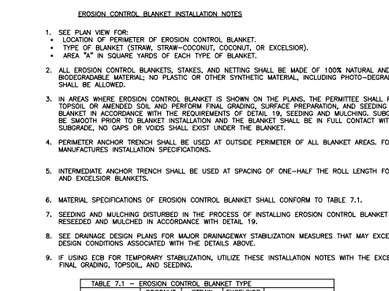
1. DIVERSION DITCHES ARE TO REMAIN IN PLACE UNTIL PERMANENT STORMWATER CONVEYANCE IS CONSTRUCTED OR ADEQUATE ALTERNATIVE CMs ARE IMPLEMENTED, AS APPROVED BY SEMSWA.

DD — DIVERSION DITCH — 8



SHALL BE IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATION. IF NO MANUFACTURER'S SPECIFICATION IS AVAILABLE USE THE ACCEPTABLE STAKING PATTERN (AS SHOWN ABOVE)

ECB — EROSION CONTROL BLANKET SHEET 1 — 9



EROSION CONTROL BLANKET INSTALLATION NOTES

1. SEE PLAN VIEW FOR:
   - LOCATION OF PERIMETER OF EROSION CONTROL BLANKET.
   - TYPE OF BLANKET (STRAW, STRAW-COCONUT, COCONUT, OR EXCELSIOR).
   - AREA "A" IN SQUARE YARDS OF EACH TYPE OF BLANKET.
2. ALL EROSION CONTROL BLANKETS, STAKES, AND NETTING SHALL BE MADE OF 100% NATURAL AND BIODEGRADABLE MATERIAL; NO PLASTIC OR OTHER SYNTHETIC MATERIAL, INCLUDING PHOTO-DEGRADABLE, SHALL BE ALLOWED.
3. IN AREAS WHERE EROSION CONTROL BLANKET IS SHOWN ON THE PLANS, THE PERMITTEE SHALL PLACE TOPSOIL OR AMENDED SOIL AND PERFORM FINAL GRADING, SURFACE PREPARATION, AND SEEDING BELOW THE BLANKET IN ACCORDANCE WITH THE REQUIREMENTS OF DETAIL 19, SEEDING AND MULCHING. SUBGRADE SHALL BE SMOOTH PRIOR TO BLANKET INSTALLATION AND THE BLANKET SHALL BE IN FULL CONTACT WITH SUBGRADE, NO GAPS OR VOIDS SHALL EXIST UNDER THE BLANKET.
4. PERIMETER ANCHOR TRENCH SHALL BE USED AT OUTSIDE PERIMETER OF ALL BLANKET AREAS. FOLLOW ALL MANUFACTURES INSTALLATION SPECIFICATIONS.
5. INTERMEDIATE ANCHOR TRENCH SHALL BE USED AT SPACING OF ONE-HALF THE ROLL LENGTH FOR COCONUT AND EXCELSIOR BLANKETS.
6. MATERIAL SPECIFICATIONS OF EROSION CONTROL BLANKET SHALL CONFORM TO TABLE 7.1.
7. SEEDING AND MULCHING DISTURBED IN THE PROCESS OF INSTALLING EROSION CONTROL BLANKET SHALL BE RESEEDED AND MULCHED IN ACCORDANCE WITH DETAIL 19.
8. SEE DRAINAGE DESIGN PLANS FOR MAJOR DRAINAGEWAY STABILIZATION MEASURES THAT MAY EXCEED THE DESIGN CONDITIONS ASSOCIATED WITH THE DETAILS ABOVE.
9. IF USING ECB FOR TEMPORARY STABILIZATION, UTILIZE THESE INSTALLATION NOTES WITH THE EXCEPTION OF FINAL GRADING, TOPSOIL, AND SEEDING.

TABLE 7.1 — EROSION CONTROL BLANKET TYPE

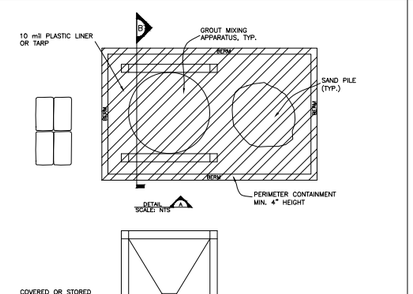
TYPE	COCONUT CONTENT	STRAW CONTENT	EXCELSIOR CONTENT	NETTING MIN.
STRAW*	–	100%	–	DOUBLE/NATURAL
STRAW–COCONUT	30% MIN.	70% MAX.	–	DOUBLE/NATURAL
COCONUT	100%	–	–	DOUBLE/NATURAL
EXCELSIOR	–	–	100%	DOUBLE/NATURAL

* FOR OUTSIDE OF STREAMS AND DRAINAGE CHANNELS

EROSION CONTROL BLANKET MAINTENANCE NOTES

1. THE GESC PERMITTEE SHALL INSPECT AS NECESSARY TO ENSURE THE ADEQUACY AND FUNCTIONALITY OF THE CONTROL MEASURE.
2. EROSION CONTROL BLANKET IS TO BE LEFT IN PLACE UNLESS REQUESTED TO BE ACCEPTED FOR REMOVAL BY SEMSWA.
3. ANY EROSION CONTROL BLANKET PULLED OUT, TORN, OR OTHERWISE DAMAGED SHALL BE RE-INSTALLED. ANY SUBGRADE AREAS BELOW THE BLANKET THAT HAVE ERODED TO CREATE A VOID UNDER THE BLANKET, OR THAT REMAIN DEVOID OF GRASS SHALL BE REPAIRED, RESEEDED AND MULCHED AND THE EROSION CONTROL BLANKET REINSTALLED.
4. REMOVAL OF 2X4 WEDGE STAKES SHALL BE REQUIRED PRIOR TO FINAL CLOSE OUT OF THE GESC PERMIT.
5. ECO-STAKES MAY BE USED IN AREAS ABOVE ORDINARY HIGH WATER MARK.

ECB — EROSION CONTROL BLANKET SHEET 2 — 9



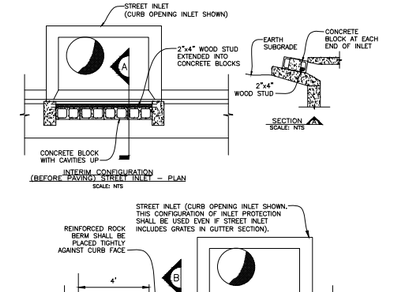
GROUT MIXING STATION INSTALLATION NOTES

1. THE GROUT MIXING STATION (GMS) SHALL BE INSTALLED PRIOR TO ANY GROUT/MORTAR MIXING, SHALL BE SITUATED A MINIMUM OF 50' FROM STORM DRAIN INLETS, OPEN DRAINAGE FACILITIES AND WATER COURSES UNLESS INFEASIBLE.
2. AREA TO BE LARGE ENOUGH TO PROVIDE ADEQUATE CONTAINMENT OF ALL MIXING OPERATIONS.
3. MIXING AREA TO HAVE PERIMETER CONTAINMENT, A MINIMUM OF 4" IN HEIGHT. CONTAINMENT CAN BE CONSTRUCTED OF AN EARTHEN BERM, CONCRETE BLOCKS, WOOD FRAME SECURELY FASTENED AROUND PERIMETER AREA OR OTHER APPROVED METHOD.
4. EXCAVATED MATERIAL MAY BE USED IN PERIMETER BERM CONSTRUCTION.
5. MINIMUM 10 MIL PLASTIC LINER OR TARP SHALL COVER THE ENTIRE MIXING AREA SECURELY FASTENED TO THE RAISED CONTAINMENT DEVICE.
6. GROUT MIXING STATION (GMS) MUST BE LOCATED WITHIN THE LIMITS OF CONSTRUCTION.

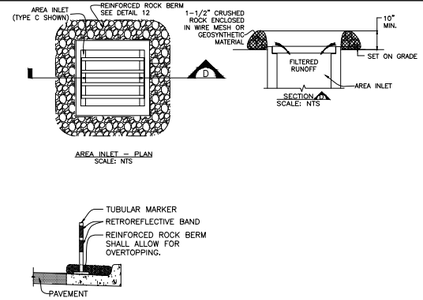
GROUT MIXING STATION MAINTENANCE NOTES

1. ALL GROUT / MORTAR WASHOUT SHALL BE IN AN APPROVED CONCRETE WASHOUT AREA (CWA).
2. LINER AND ALL GROUT / MORTAR WASTE RESIDUE SHALL BE PROPERLY DISPOSED OF AT THE END OF MIXING OPERATION.
3. ALL MATERIALS SHALL BE STORED AND COVERED ON PALLETS ADJACENT TO THE MIXING AREA.

GMS — GROUT MIXING STATION — 10



IP — INLET PROTECTION SHEET 1 — 11



INLET PROTECTION INSTALLATION NOTES

1. INTERIM CONFIGURATION OF INLET PROTECTIONS SHALL BE INSTALLED WITHIN 48 HOURS OF POURING INLET. INLET PROTECTION (AFTER PAVEMENT) SHALL BE INSTALLED WITHIN 48 HOURS AFTER PAVING IS PLACED.
2. INLET PROTECTION AT AREA INLETS SHALL BE INSTALLED WITHIN 48 HOURS AFTER POURING INLET.
3. 1-1/2" CRUSHED ROCK SHALL BE FRACTURED FACE ON ALL SIDES.
4. WIRE MESH SHALL BE FABRICATED OF WIRE TWISTED INTO A MESH WITH A MAXIMUM OPENING OF 1.0 INCH (COMMONLY TERMED "CHICKEN WIRE").
5. WIRE MESH SHALL BE SECURED USING "HOG RINGS" OR WIRE TIES AT APPROXIMATELY 6-INCH CENTERS ALONG ALL JOINTS AND AT APPROXIMATELY 2-INCH CENTERS ON ENDS OF BERM.
6. EXAMPLES OF ACCEPTABLE GEOSYNTHETIC MATERIAL: TENCATE MIRAFI "MIRAGRID 2XT"; STRATA GLOBAL SOLUTIONS "STRATAGRID SG 150". SOLID FABRIC OPTIONAL.
7. TUBULAR MARKERS SHALL BE PLACED ON EACH END OF THE INLET PROTECTION LOCATED ON STREETS WHERE PUBLIC ACCESS CAN OCCUR.
8. THE TOP OF REINFORCED ROCK BERM SHALL ALLOW FOR OVERTOPPING INTO THE INLET.
9. CRUSHED ROCK SHALL BE FRACTURED FACE (ALL SIDES) (1-1/2" MINUS). RECYCLED CONCRETE MAY NOT BE USED. NO GAPS SHALL EXIST BETWEEN SECTIONS OF REINFORCED ROCK BERMS. REINFORCED ROCK BERM OR CINDER BLOCK ENDS SHALL BE PLACED TIGHTLY AGAINST CURB FACE.

INLET PROTECTION MAINTENANCE NOTES

1. SEDIMENT ACCUMULATED UPSTREAM OF INLET PROTECTION SHALL BE REMOVED WHEN THERE IS A DEPTH OF NO MORE THAN 1/2 THE STORAGE CAPACITY OF THE IP.
2. INLET PROTECTION IS TO REMAIN IN PLACE UNTIL THE UPSTREAM DISTURBED AREA IS STABILIZED UNLESS SEMSWA APPROVES EARLIER REMOVAL OF INLET PROTECTION IN STREETS.
3. WHEN INLET PROTECTION AT AREA INLETS ARE REMOVED, THE DISTURBED AREA SHALL BE DRILL SEEDED AND CRIMP MULCHED OR OTHERWISE STABILIZED IN A MANNER APPROVED BY SEMSWA.

IP — INLET PROTECTION SHEET 2 — 11

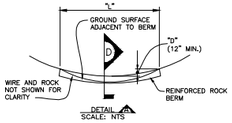
UTILITY NOTIFICATION CENTER OF COLORADO
CALL BEFORE YOU DIG
811
Call 2 days prior to any digging, grading or excavating for the marking of underground member utilities

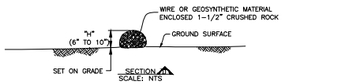
SOUTHEAST METRO STORMWATER AUTHORITY
7437 SOUTH FAIRPLAY STREET
CENTENNIAL COLORADO
80112-4486
(303) 858-8844 - INSPECTION DIVISION

SOUTHEAST METRO Stormwater Authority

GRADING EROSION AND SEDIMENT CONTROL
STANDARD NOTES AND DETAILS
REVISED JUNE 2025

GESC SHEET 2 OF 4





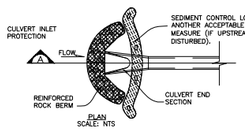
REINFORCED ROCK BERM INSTALLATION NOTES

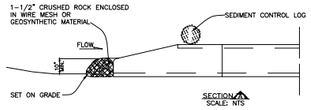
1. SEE PLAN VIEW FOR:
   - LOCATIONS OF REINFORCED ROCK BERMS.
   - LENGTH, "L", DEPTH, "D", AND HEIGHT, "H", DIMENSIONS.
2. REINFORCED ROCK BERM SECTION APPLIES TO CULVERT AND INLET PROTECTION.
3. IF LENGTH REQUIRED EXCEEDS LENGTH OF ROCK BERM, TWO OR MORE ROCK BERM SEGMENTS MAY BE REQUIRED AND NEED TO BE LAPPED BY AT LEST 12" (SIMILAR TO SED LOG)
4. WIRE MESH SHALL BE FABRICATED OF 10 GAUGE WIRE TWISTED INTO A MESH WITH A MAXIMUM OPENING OF 1.0 INCH (COMMONLY TERMED "CHICKEN WIRE").
5. WIRE MESH SHALL BE SECURED USING "HOG RINGS" OR WIRE TIES AT 6-INCH CENTERS ALONG ALL JOINTS AND AT APPROXIMATELY 2-INCH CENTERS ON ENDS OF BERM.
6. FOR CONCENTRATED FLOW AREAS THE ENDS OF THE REINFORCED ROCK BERM SHALL BE 12" HIGHER THAN THE CENTER OF THE BERM.
7. CRUSHED ROCK SHALL BE FRACTURED FACE (ALL SIDES) (1-1/2" MINUS). RECYCLED CONCRETE CANNOT BE USED.
8. REINFORCED ROCK BERM TO PROVIDE STORAGE VOLUME EQUAL TO 1800 CUBIC FEET PER UPSTREAM ACRE.
9. IF LENGTH REQUIRED EXCEEDS THE LENGTH OF THE ROCK BERM, TWO OR MORE ROCK BERM SEGMENTS MAY REQUIRED AND SHALL BE OVERLAPPED A MINIMUM OF 12".

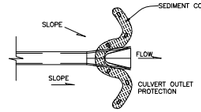
REINFORCED ROCK BERM MAINTENANCE NOTES

1. THE GESC PERMITTEE SHALL INSPECT AS NECESSARY TO ENSURE THE ADEQUACY AND FUNCTIONALITY OF THE CONTROL MEASURE.
2. SEDIMENT ACCUMULATED UPSTREAM OF REINFORCED ROCK BERM SHALL BE REMOVED WHEN THE SEDIMENT DEPTH UPSTREAM OF FILTER IS WITHIN APPROXIMATELY 1/2 OF THE HEIGHT OF THE CREST.
3. REINFORCED ROCK BERMS ARE TO REMAIN IN PLACE UNTIL THE UPSTREAM DISTURBED AREA IS STABILIZED.
4. WHEN REINFORCED ROCK BERMS ARE REMOVED, ANY DISTURBED AREA SHALL BE DRILL SEEDED AND CRIMP MULCHED OR OTHERWISE STABILIZED IN A MANNER APPROVED BY SEMSWA.

RRB REINFORCED ROCK BERM 12







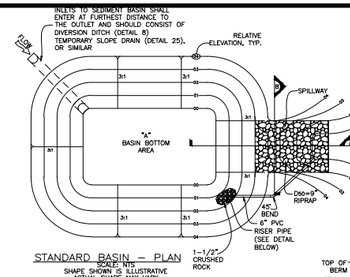
INSTALLATION NOTES

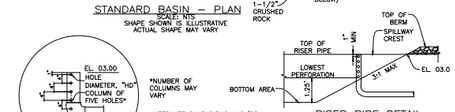
1. SEE PLAN VIEW FOR:
   - LOCATIONS OF CULVERT PROTECTION.
2. 1-1/2" CRUSHED ROCK SHALL BE FRACTURED FACE ON ALL SIDES.
3. WIRE MESH SHALL BE FABRICATED OF WIRE TWISTED INTO A MESH WITH A MAXIMUM OPENING OF 1.0 INCH (COMMONLY TERMED "CHICKEN WIRE").
4. WIRE MESH SHALL BE SECURED USING "HOG RINGS" OR WIRE TIES AT APPROXIMATELY 6-INCH CENTERS ALONG ALL JOINTS AND AT APPROXIMATELY 2-INCH CENTERS ON ENDS OF BERM.
5. THE ENDS OF THE REINFORCED ROCK BERM SHALL BE HIGHER THAN THE CENTER OF THE BERM AND ALLOW FOR ADEQUATE OVERTOPPING CAPACITY IN THE CENTER.
6. CRUSHED ROCK SHALL BE FRACTURED FACE (ALL SIDES) (1-1/2" MINUS). RECYCLED CONCRETE CANNOT BE USED.

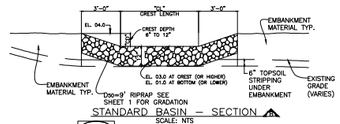
MAINTENANCE NOTES

1. SEDIMENT ACCUMULATED UPSTREAM OF CULVERT INLET FILTER SHALL BE REMOVED WHEN THE SEDIMENT DEPTH UPSTREAM OF FILTER IS 1/2 THE HEIGHT OF THE REINFORCED ROCK BERM.
2. RRB FOR CULVERT PROTECTION ARE TO REMAIN IN PLACE UNTIL THE UPSTREAM DISTURBED AREA IS STABILIZED.
3. WHEN CULVERT INLET FILTERS ARE REMOVED, ANY DISTURBED AREA SHALL BE SEEDED OR OTHERWISE STABILIZED IN A MANNER APPROVED BY SEMSWA.

RRC RRB FOR CULVERT PROTECTION 13







SB SEDIMENT BASIN SHEET 1 14

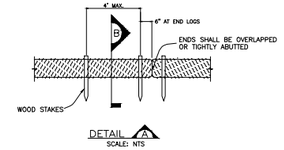
SEDIMENT BASIN INSTALLATION NOTES

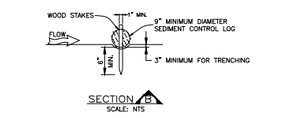
1. MAXIMIZE THE DISTANCE BETWEEN INFLOW POINT AND OUTLET, AS FEASIBLE.
2. SEE PLAN VIEW FOR:
   - LOCATION OF SEDIMENT BASIN.
   - TYPE OF BASIN (STANDARD BASIN OR NON-STANDARD BASIN).
   - FOR STANDARD BASIN, CREST LENGTH, "CL", CREST DEPTH, "CD", BOTTOM AREA, "A", AND HOLE DIAMETER, "HD".
   - FOR NON-STANDARD BASIN, SEE CONSTRUCTION DRAWINGS FOR DESIGN OF BASIN INCLUDING RISER HEIGHT, "H", NUMBER OF COLUMNS, "N", HOLE DIAMETER, "HD", AND PIPE DIAMETER "D".
3. FOR STANDARD BASIN, BOTTOM DIMENSIONS MAY BE MODIFIED AS LONG AS BOTTOM AREA IS NOT REDUCED.
4. SEDIMENT BASINS MUST BE INSTALLED AS INDICATED ON INITIAL GESC PLAN, AS SOON AS FEASIBLE AFTER PERMIT ISSUANCE.
5. PERMITTEE IS RESPONSIBLE FOR ADEQUATE PHASING OF SEDIMENT BASIN IF ALL COMPONENTS CANNOT BE INSTALLED IMMEDIATELY.
6. EMBANKMENT MATERIAL SHALL BE COMPACTED
7. PIPE SCH 40 OR GREATER SHALL BE USED.
8. CRUSHED ROCK SHALL BE FRACTURED FACE (ALL SIDES) (1-1/2" MINUS). RECYCLED CONCRETE CANNOT BE USED.
9. THE DETAILS SHOWN ON THIS SHEET PERTAIN TO STANDARD SEDIMENT BASIN(S) IDENTIFIED ON THE GESC PLAN VIEW DRAWINGS USED FOR DRAINAGE AREAS LESS THAN 15 ACRES. SEE CONSTRUCTION DRAWINGS FOR EMBANKMENT, STORAGE VOLUME, SPILLWAY, OUTLET, AND OUTLET PROTECTION DETAILS FOR ANY SEDIMENT BASIN(S) THAT HAVE BEEN INDIVIDUALLY DESIGNED FOR DRAINAGE AREAS LARGER THAN 15 ACRES.

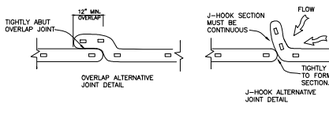
SEDIMENT BASIN MAINTENANCE NOTES

1. THE GESC PERMITTEE SHALL INSPECT AS NECESSARY TO ENSURE THE ADEQUACY AND FUNCTIONALITY OF THE CONTROL MEASURE.
2. SEDIMENT SHALL BE REMOVED FROM THE SEDIMENT BASIN WHEN DESIGNED STORAGE VOLUME IS NO MORE THAN ONE-THIRD FILLED WITH SEDIMENT, OR AS OTHERWISE SPECIFIED BY SEMSWA.
3. SEDIMENT BASINS ARE TO REMAIN IN PLACE AND KEPT IN MAINTAINED CONDITION UNTIL THE UPSTREAM DISTURBED AREA IS STABILIZED.
4. THE DISTURBED AREA SHALL BE SEEDED AND MULCHED OR OTHERWISE STABILIZED IN A MANNER APPROVED BY SEMSWA.
5. TRASH AND DEBRIS SHALL BE REMOVED FROM THE SEDIMENT BASIN AS NEEDED TO PREVENT CLOGGING AT THE OUTLET.

SB SEDIMENT BASIN SHEET 2 14







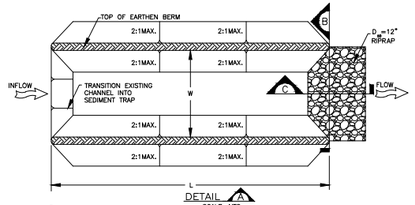
SEDIMENT CONTROL LOG INSTALLATION NOTES

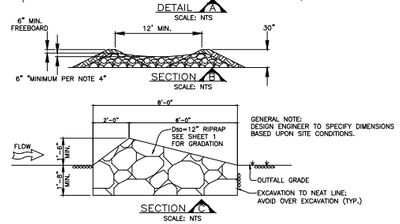
1. SEE PLAN VIEW FOR:
   - LOCATION AND LENGTH OF SEDIMENT CONTROL LOG.
2. SEDIMENT CONTROL LOGS INDICATED ON INITIAL GESC PLAN SHALL BE INSTALLED PRIOR TO ANY LAND-DISTURBING ACTIVITIES.
3. SEDIMENT CONTROL LOGS SHALL CONSIST OF STRAW, COMPOST, EXCELSIOR, OR COCONUT FIBER.
4. SEDIMENT CONTROL LOGS SHALL BE STAKED INTO THE GROUND TO PROMOTE SEDIMENT DEPOSITION ON THE UPSTREAM SIDE AND A REDUCTION OF FLOW VELOCITIES.
5. NOT FOR USE IN CONCENTRATED FLOW AREAS EXCEPT IN CASES WHERE SEMSWA MAY ALLOW USE OF SEDIMENT CONTROL LOG AS A CHECK STRUCTURE.
6. THE SEDIMENT CONTROL LOG SHALL BE TRENCHED IN A MINIMUM OF 3".
7. 9" DIAMETER SEDIMENT CONTROL LOGS ARE THE MINIMUM BUT A LARGER DIAMETER MAY BE REQUIRED BY THE SEMSWA INSPECTOR.

SEDIMENT CONTROL LOG MAINTENANCE NOTES

1. SEDIMENT ACCUMULATED UPSTREAM OF SEDIMENT CONTROL LOGS SHALL BE REMOVED WHEN THE UPSTREAM SEDIMENT DEPTH IS WITHIN 1/2 THE HEIGHT OF THE CREST OF LOG.
2. IF ANY DISTURBED AREA EXISTS AFTER REMOVAL, IT SHALL BE STABILIZED IN A MANNER APPROVED BY SEMSWA.

SCL SEDIMENT CONTROL LOG 15





SEDIMENT TRAP INSTALLATION NOTES

1. SEE PLAN VIEW FOR:
   - LOCATION, LENGTH AND WIDTH OF SEDIMENT TRAP.
2. SEDIMENT TRAPS INDICATED ON INITIAL GESC PLAN SHALL BE INSTALLED PRIOR TO ANY OTHER LAND-DISTURBING ACTIVITIES OR AS SOON AS FEASIBLE.
3. SEDIMENT TRAP BERM SHALL BE CONSTRUCTED FROM MATERIAL FROM EXCAVATION. THE BERM SHALL BE COMPACTED.
4. RIPRAP OUTLET SHALL BE CONSTRUCTED WITH D_{50} =12" RIPRAP WITH A MINIMUM OVERFLOW OF 6".
5. THE TOP OF THE EARTHEN BERM SHALL ALLOW FOR OVERTOPPING.
6. THE ENDS OF THE RIPRAP OUTLET STRUCTURE SHALL ALLOW FOR OVERTOPPING.
7. OVERTOPPING MUST OCCUR ON A STABILIZED SURFACE TO INCLUDE WELL VEGETATED AREAS, RIP RAP, OR PAVEMENT.
8. SEDIMENT TRAP SIZED TO PROVIDE STORAGE VOLUME EQUAL TO 1800 CUBIC FEET PER UPSTREAM ACRE.

SEDIMENT TRAP MAINTENANCE NOTES

1. THE GESC PERMITTEE SHALL INSPECT AS NECESSARY TO ENSURE THE ADEQUACY AND FUNCTIONALITY OF THE CONTROL MEASURE.
2. SEDIMENT ACCUMULATED UPSTREAM OF RIPRAP SHALL BE REMOVED WHEN THE UPSTREAM SEDIMENT DEPTH IS WITHIN 1/2 THE HEIGHT OF THE RIPRAP OUTLET STRUCTURE.
3. SEDIMENT TRAPS SHALL REMAIN IN PLACE UNTIL THE UPSTREAM DISTURBED AREA IS STABILIZED.
4. WHEN SEDIMENT TRAPS ARE REMOVED THE DISTURBED AREA SHALL BE DRILLED SEEDED AND CRIMP MULCHED OR STABILIZED IN A MANNER APPROVED BY SEMSWA.

ST SEDIMENT TRAP 16

SEEDING AND MULCHING INSTALLATION NOTES

1. SEE PLAN VIEW FOR:
   - – AREA OF SEEDING AND MULCHING.
   - – TYPE OF SEED MIX.
2. ALL BRANDS FURNISHED SHALL BE FREE FROM SUCH NOXIOUS WEED SEEDS TO INCLUDE BUT NOT LIMITED TO RUSSIAN OR CANADIAN THISTLE, COARSE FESCUE, EUROPEAN BINDWEED, JOHNSON GRASS, KNAP WEED, LEAFY SPURGE AND FREE FROM COLORADO LIST A, B, & C WEEDS.
3. SEED WHICH HAS BECOME WET, MOLDY, OR OTHERWISE DAMAGED IN TRANSIT OR IN STORAGE WILL NOT BE ACCEPTABLE. SEED TICKETS SHALL BE PROVIDED TO SEMSWA UPON REQUEST.
4. DRILL SEEDING MIX SHALL CONFORM TO THE TABLE BELOW UNLESS OTHERWISE APPROVED BY SEMSWA.
5. IF THE SEED AVAILABLE ON THE MARKET DOES NOT MEET THE MINIMUM PURITY AND GERMINATION PERCENTAGES SPECIFIED, THE CONTRACTOR MUST COMPENSATE FOR A LESSER PERCENTAGE OF PURITY OR GERMINATION BY FURNISHING SUFFICIENT ADDITIONAL SEED TO EQUAL THE SPECIFIED PRODUCT. THE TAGS FROM THE SEED MIXES MUST BE SUPPLIED TO CONTRACTOR AND FORWARDED TO THE SEMSWA GESC INSPECTOR.
6. THE FORMULA USED FOR DETERMINING THE QUANTITY OF PURE LIVE SEED (PLS) SHALL BE (POUNDS OF SEED) x (PURITY) x (GERMINATION) = POUNDS OF PURE LIVE SEED (PLS).
7. PERMANENT SEED MIX SHALL BE USED UNLESS OTHERWISE APPROVED BY SEMSWA.
8. ALL AREAS TO BE SEEDED AND MULCHED SHALL HAVE NATIVE TOPSOIL OR APPROVED SOIL AMENDMENTS SPREAD TO A DEPTH OF AT LEAST 6 INCHES (LOOSE DEPTH). ALL DISTURBED AREAS SHALL BE TILLED TO A DEPTH OF 6 INCHES PRIOR TO SPREADING TOPSOIL. THE TOP 6 INCHES OF THE SEED BED SHALL BE GENERALLY FREE OF ROCKS GREATER THAN 4 INCHES AND SOIL CLODS GREATER THAN 2 INCHES AND WOODY DEBRIS. SEEDING OVER ANY COMPACTED AREAS THAT HAVEN'T BEEN THOROUGHLY TILLED SHALL BE REJECTED.
9. SEED IS TO BE APPLIED USING A MECHANICAL DRILL TO A DEPTH OF 1/4 INCH AND NOT MORE THAN 3/4 INCH, ROW SPACING SHALL BE NO MORE THAN 6 INCHES.
10. WEED FREE AND SEED FREE LONG STEMMED STRAW MULCH SHALL BE APPLIED AT A RATE OF 4,000 POUNDS PER ACRE AND MECHANICALLY CRIMPED INTO THE SOIL. MULCH SHALL BE APPLIED AND MECHANICALLY ANCHORED TO A DEPTH OF AT LEAST 3 INCHES.
11. IF THE PERMITTEE DEMONSTRATES TO SEMSWA THAT IT IS NOT POSSIBLE TO DRILL SEED, SEED IS TO BE UNIFORMLY BROADCAST AT TWO TIMES THE DRILLED RATE, THEN LIGHTLY RAKED TO PROVIDE A SEED DEPTH OF APPROXIMATELY 1/4 INCH, THEN ROLLED TO COMPACT, THEN MULCHED AS SPECIFIED ABOVE.
12. MULCH SHALL BE APPLIED WITHIN 24-HOURS OF SEEDING.
13. TACKIFIER SHOULD BE UTILIZED TO REDUCE STRAW DISPLACEMENT.

SEEDING AND MULCHING MAINTENANCE NOTES

1. SEEDED AND MULCHED AREAS SHALL BE INSPECTED FOR REQUIRED COVERAGE UNTIL FINAL CLOSE OUT IS ISSUED. REPAIRS AND RE-SEEDING AND MULCHING SHALL BE UNDERTAKEN AFTER THE FIRST GROWING SEASON FOR ANY AREAS FAILING TO MEET THE REQUIRED COVERAGE.
2. RILL AND GULLY EROSION SHALL BE FILLED WITH TOPSOIL PRIOR TO RESEEDING. THE RESEEDING METHOD SHALL BE APPROVED BY SEMSWA.

TEMPORARY DRILL SEEDING MIX

SPECIES	VARIETY	NOTES	% IN MIX	POUNDS OF PLS PER ACRE
SMOOTH BROMEGRASS	LINCOLN	PICS	30	3.9
INTERMEDIATE WHEATGRASS	OAHE	PICS	30	4.5
PUBESCENT WHEATGRASS	LUNA	PICS	30	4.2
ANNUAL RYEGRASS	N/A	AICB	10	0.8
		TOTAL	100	13.4

NOTES: P=PERENNIAL A=ANNUAL I=INTRODUCED C=COOL SEASON S=SOD FORMER B=BUNCHGRASS

SM SEEDING AND MULCHING SHEET 1 17

UPLAND SEED MIX – WITH FORBS[1,2]

SPECIES	SCIENTIFIC NAME	SEASON	% IN MIX	SEEDS/LB.	LBS PLS[3]/AC
NATIVE GRASSES					
BIG BLUESTEM	ANDROPOGON GERARDII	WARM	8	130,000	1.6
SIDEOATS GRAMA	BOUTELOUA CURTIPENDULA	WARM	8	191,000	1.1
BLUE GRAMA	BOUTELOUA GRACILIS	WARM	8	825,000	0.3
CANADA WILDRYE	ELYMUS CANADENSIS	COOL	8	115,000	1.8
THICKSPIKE WHEATGRASS	ELYMUS LANCEOLATUS SPP. LANCEOLATUS	COOL	5	154,000	0.8
STREAMBANK WHEATGRASS	ELYMUS LANCEOLATUS SPP. PSAMMOPHILUS	COOL	5	156,000	0.8
SLENDER WHEAT GRASS	ELYMUS TRACHYCAULUS	WARM	10	159,000	1.6
NEEDLE AND THREAD	HESPEROSTIPA COMATA	COOL	8	115,000	1.8
WESTERN WHEATGRASS	PASCOPYRUM SMITHII	COOL	10	110,000	2.4
INDIAN GRASS	SORGHASTRUM NUTANS	WARM	10	170,000	1.5
SAND DROPSEED	SPOROBOLUS CRYPTANDRUS	WARM	10	5,298,000	0.1
NATIVE WILDFLOWERS					
BLACK-EYED SUSAN	RUDBECKIA HIRTA	SUMMER-FALL	1	1,710,000	0.1
SULFUR FLOWER	ERIOGONUM UMBELLATUM	FALL	2	209,000	0.3
PRAIRIE ASTER	MACHAERANTHERA TANACETIFOLIA	SUMMER	1	408,000	0.1
PURPLE PRAIRIE CLOVER	DALEA PURPUREUM	SUMMER	1	210,000	0.1
WESTERN YARROW	ACHILLEA MILLEFOLIUM VAR. OCCIDENTALIS	SUMMER-FALL	2	2,770,000	0.1
PLAINS COREOPSIS	COREOPSIS TINCTORIA	SUMMER-FALL	1	1,400,000	0.1
INDIAN BLANKET FLOWER	GAILLARDIA ARISTATA	SUMMER-FALL	1	132,000	0.2
PURPLE CONEFLOWER	ECHINACEA PURPUREA	SUMMER	1	117,000	0.2
TOTAL			100	15 LBS PLS[3]/AC	

[1] TO BE INSTALLED AT APPROXIMATELY 24" ABOVE WATER LINE.
[2] PLS = PURE LIVE SEED PER POUND BASED 60 SEEDS PER SQUARE FOOT. IF BROADCAST SEEDING, DOUBLE THE RATE APPLIED.
[3] IF DESIRED, TREES AND SHRUBS FROM THE COTTONWOOD SHRUB WOODLAND COMPOSITION SCHEDULE CAN BE INSTALLED IN THIS ZONE.

SM SEEDING AND MULCHING SHEET 2 17

PERMANENT DRILL SEEDING – WETLAND SEED MIX[1]

SPECIES	SCIENTIFIC NAME	SEASON	% IN MIX	SEEDS/LB.	LBS PLS[2]/AC
SLOUGH GRASS	BECKMANNIA SYZIGACHNE	COOL	20	1,150,000	0.5
CANADIAN REED GRASS	CALAMAGROSTIS CANADENSIS	COOL	20	2,270,000	0.2
TUFTED HAIR GRASS	DESCHAMPSIA CESPITOSA	COOL	10	2,500,000	0.1
COMMON SPIKE RUSH	ELEOCHARIS PALUSTRIS	COOL	15	620,000	0.6
BALTIC RUSH	JUNCUS BALTICUS	COOL	15	10,900,000	0.4
KNOTTED RUSH	JUNCUS NODOSUS	COOL	10	12,300,000	0.1
TORREY'S RUSH	JUNCUS TORREYI	COOL	10	12,300,000	0.1
TOTAL			100	2 LBS PLS[2]/AC	

[1] TO BE INSTALLED AT APPROXIMATELY 0" TO 6" ABOVE WATER LINE.
[2] PLS = PURE LIVE SEED PER POUND BASED 60 SEEDS PER SQUARE FOOT. IF BROADCAST SEEDING, DOUBLE THE RATE APPLIED.

PERMANENT DRILL SEEDING[1] – TRANSITION SEED MIX – WITHOUT FORBS

SPECIES	SCIENTIFIC NAME	SEASON	% IN MIX	SEEDS/LB.	LBS PLS[2]/AC
CANADA WILDRYE	ELYMUS CANADENSIS	COOL	15	115,000	3.4
STREAMBANK WHEATGRASS	ELYMUS LANCEOLATUS SPP. PSAMMOPHILUS	COOL	15	156,000	2.5
SLENDER WHEAT GRASS	ELYMUS TRACHYCAULUS	WARM	10	159,000	1.6
BALTIC RUSH	JUNCUS BALTICUS	COOL	15	10,900,000	0.1
SWITCHGRASS	PANICUM VIRGATUM	WARM	15	389,000	1.0
WESTERN WHEATGRASS	PASCOPYRUM SMITHII	COOL	15	110,000	3.6
SAND DROPSEED	SPOROBOLUS AIROIDES	WARM	15	1,758,000	0.2
TOTAL			100	12.4 LBS PLS[2]/AC	

[1] TO BE INSTALLED AT APPROXIMATELY 6" TO 24" ABOVE WATER LINE.
[2] PLS = PURE LIVE SEED PER POUND BASED 60 SEEDS PER SQUARE FOOT. IF BROADCAST SEEDING, DOUBLE THE RATE APPLIED.
[3] IF DESIRED, SHRUBS FROM THE WILLOW SHRUBLAND PLANT COMPOSITION SCHEDULE CAN BE INSTALLED IN THIS ZONE.

PERMANENT DRILL SEEDING[1] – TRANSITION SEED MIX – WITH FORBS

SPECIES	SCIENTIFIC NAME	SEASON	% IN MIX	SEEDS/LB.	LBS PLS[2]/AC
NATIVE GRASSES					
CANADA WILDRYE	ELYMUS CANADENSIS	COOL	15	115,000	3.4
STREAMBANK WHEATGRASS	ELYMUS LANCEOLATUS SPP. PSAMMOPHILUS	COOL	15	156,000	2.5
SLENDER WHEAT GRASS	ELYMUS TRACHYCAULUS	WARM	10	159,000	1.6
BALTIC RUSH	JUNCUS BALTICUS	COOL	15	10,900,000	0.1
SWITCHGRASS	PANICUM VIRGATUM	WARM	15	389,000	1.0
WESTERN WHEATGRASS	PASCOPYRUM SMITHII	COOL	15	110,000	3.6
SAND DROPSEED	SPOROBOLUS AIROIDES	WARM	15	1,758,000	0.2

SM SEEDING AND MULCHING SHEET 3 17

PERMANENT DRILL SEEDING[2,3] – TRANSITION SEED MIX – WITH FORBS

SPECIES	SCIENTIFIC NAME	SEASON	% IN MIX	SEEDS/LB.	LBS PLS[2]/AC
NATIVE WILDFLOWERS					
INDIAN BLANKET FLOWER	GAILLARDIA ARISTATA	SUMMER-FALL	1	132,000	0.2
ROCKY MOUNTAIN IRIS	IRIS MISSOURIENSIS	SPRING-SUMMER	2	368,000	0.1
EVENING PRIMROSE	DENETHERA ELATA	SUMMER	2	1,300,000	0.1
GOLDEN BANNER	THERMOPSIS MONTANA	SPRING	2	15,000	3.5
MEXICAN HAT	RATIBIDA COLUMNIFERA	SUMMER-FALL	1	1,230,000	0.1
SAND DROPSEED	SPOROBOLUS AIROIDES	WARM	15	1,758,000	0.2
TOTAL			100	14.4 LBS PLS[2]/AC	

[1] TO BE INSTALLED AT APPROXIMATELY 6" TO 24" ABOVE WATER LINE.
[2] PLS = PURE LIVE SEED PER POUND BASED 60 SEEDS PER SQUARE FOOT. IF BROADCAST SEEDING, DOUBLE THE RATE APPLIED.
[3] IF DESIRED, SHRUBS FROM THE WILLOW SHRUBLAND PLANT COMPOSITION SCHEDULE CAN BE INSTALLED IN THIS ZONE.

PERMANENT DRILL SEEDING – UPLAND SEED[3] MIX – WITHOUT FORBS

SPECIES	SCIENTIFIC NAME	SEASON	% IN MIX	SEEDS/LB.	LBS PLS[2]/AC
BIG BLUESTEM	ANDROPOGON GERARDII	WARM	10	130,000	2.0
SIDEOATS GRAMA	BOUTELOUA CURTIPENDULA	WARM	10	191,000	1.4
BLUE GRAMA	BOUTELOUA GRACILIS	WARM	10	825,000	0.3
CANADA WILDRYE	ELYMUS CANADENSIS	COOL	10	115,000	2.3
THICKSPIKE WHEATGRASS	ELYMUS LANCEOLATUS SPP. LANCEOLATUS	COOL	5	154,000	0.8
STREAMBANK WHEATGRASS	ELYMUS LANCEOLATUS SPP. PSAMMOPHILUS	COOL	5	156,000	0.8
SLENDER WHEAT GRASS	ELYMUS TRACHYCAULUS	WARM	10	159,000	1.6
NEEDLE AND THREAD	HESPEROSTIPA COMATA	COOL	10	115,000	2.3
WESTERN WHEATGRASS	PASCOPYRUM SMITHII	COOL	10	110,000	2.4
INDIAN GRASS	SORGHASTRUM NUTANS	WARM	10	170,000	1.5
SAND DROPSEED	SPOROBOLUS CRYPTANDRUS	WARM	10	5,298,000	0.1
TOTAL			100	15.5 LBS PLS[2]/AC	

[1] TO BE INSTALLED AT APPROXIMATELY 24" ABOVE WATER LINE.
[2] PLS = PURE LIVE SEED PER POUND BASED 60 SEEDS PER SQUARE FOOT. IF BROADCAST SEEDING, DOUBLE THE RATE APPLIED.
[3] IF DESIRED, TREES AND SHRUBS FROM THE COTTONWOOD SHRUB WOODLAND COMPOSITION SCHEDULE CAN BE INSTALLED IN THIS ZONE.

SM SEEDING AND MULCHING SHEET 4 17

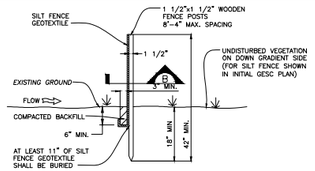
UTILITY NOTIFICATION CENTER OF COLORADO
CALL BEFORE YOU DIG
811
Call 2 days prior to any digging, grading or excavating for the marking of underground member utilities

SOUTHEAST METRO STORMWATER AUTHORITY
7437 SOUTH FAIRPLAY STREET
CENTENNIAL COLORADO
80112-4486
(303) 858-8844 - INSPECTION DIVISION

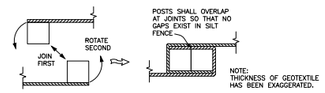
SOUTHEAST METRO Stormwater Authority

GRADING EROSION AND SEDIMENT CONTROL
STANDARD NOTES AND DETAILS
REVISED JUNE 2025

GESC SHEET 3 OF 4



DETAIL A
SCALE: NTS



POST SHALL BE JOINED AS SHOWN, THEN ROTATED 180° IN DIRECTION SHOWN AND DRIVEN INTO THE GROUND

JOINTS – SECTION B
SCALE: N.T.S.

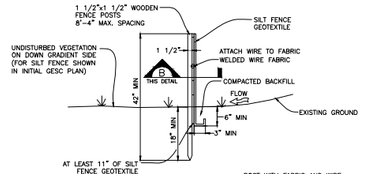
SILT FENCE INSTALLATION NOTES

1. SEE PLAN VIEW FOR:
   - LOCATION AND LENGTH OF FENCE.
2. ANCHOR TRENCH SHALL BE EXCAVATED WITH TRENCHER, OR WITH SILT FENCE INSTALLATION MACHINE AT A 6" MINIMUM; NO ROAD GRADERS, BACKHOES, ETC. SHALL BE USED. TRENCH SHALL BE COMPACTED BY HAND, WITH "JUMPING JACK", OR BY WHEEL ROLLING. COMPACTION SHALL BE SUCH THAT SILT FENCE RESISTS BEING PULLED OUT OF ANCHOR TRENCH BY HAND.
3. SILT FENCE GEOTEXTILE SHALL MEET THE FOLLOWING REQUIREMENTS:
   - 6-TO 12-GALLONS PER MINUTE PER SQUARE FOOT FLOW CAPACITY.
   - 90 LB. TENSILE STRENGTH PER ASTM D4622.
   - UV DESIGN AT 500 HRS MIN. 70% STRENGTH RETAINED PER ASTM D 4355.
4. SILT FENCE INDICATED ON INITIAL GESC PLAN SHALL BE INSTALLED PRIOR TO ANY LAND-DISTURBING ACTIVITIES.

SILT FENCE MAINTENANCE NOTES

1. SEDIMENT ACCUMULATED UPSTREAM OF SILT FENCE SHALL BE REMOVED WHEN THE UPSTREAM SEDIMENT REACHES 25%.
2. SILT FENCE SHALL BE REMOVED WHEN THE UPSTREAM DISTURBED AREA IS STABILIZED. IF ANY DISTURBED AREA EXISTS AFTER REMOVAL, IT SHALL BE SEEDED AND MULCHED OR OTHERWISE STABILIZED IN A MANNER APPROVED BY SEMSWA.
3. SILT FENCE (SF) NEAR ROADWAY IS THE RESPONSIBILITY OF THE PERMITTEE/CONTRACTOR TO MAINTAIN, EVEN IF DAMAGES BY PUBLIC SNOW REMOVAL OR STREET SWEEPING OPERATIONS.

SF SILT FENCE 18



DETAIL A
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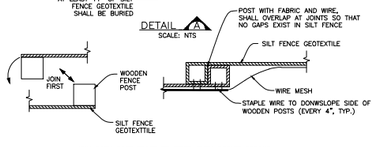


JOIN BOTH POST TOGETHER FIRST, THEN ROTATE SECOND. POSTS SHALL BE JOINED AS SHOWN (FABRIC ONLY, EXCLUDING WELD WIRE) THEN ROTATED 180 DEGREES IN DIRECTION SHOWN AND THEN DRIVEN INTO GROUND.

JOINTS – SECTION B
SCALE: N.T.S.

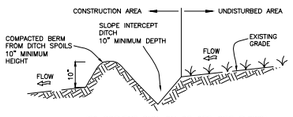
SILT FENCE INSTALLATION NOTES

1. SEE PLAN VIEW FOR:
   - LOCATION AND LENGTH OF FENCE.
2. ANCHOR TRENCH SHALL BE EXCAVATED WITH TRENCHER, OR WITH SILT FENCE INSTALLATION MACHINE; NO ROAD GRADERS, BACKHOES, ETC. SHALL BE USED. TRENCH SHALL BE COMPACTED BY HAND, WITH "JUMPING JACK", OR BY WHEEL ROLLING. COMPACTION SHALL BE SUCH THAT SILT FENCE RESISTS BEING PULLED OUT OF ANCHOR TRENCH BY HAND.
3. SILT FENCE GEOTEXTILE SHALL MEET THE FOLLOWING REQUIREMENTS:
   - 6-TO 12-GALLONS PER MINUTE PER SQUARE FOOT FLOW CAPACITY.
   - 90 LB. TENSILE STRENGTH PER ASTM D4622.
   - UV DESIGN AT 500 HRS MIN. 70% STRENGTH RETAINED PER ASTM D 4355.
4. SILT FENCE INDICATED ON INITIAL GESC PLAN SHALL BE INSTALLED PRIOR TO ANY LAND-DISTURBING ACTIVITIES.

SILT FENCE MAINTENANCE NOTES

1. SEDIMENT ACCUMULATED UPSTREAM OF SILT FENCE SHALL BE REMOVED WHEN THE UPSTREAM SEDIMENT REACHES 25%.
2. SILT FENCE SHALL BE REMOVED WHEN THE UPSTREAM DISTURBED AREA IS STABILIZED. IF ANY DISTURBED AREA EXISTS AFTER REMOVAL, IT SHALL BE SEEDED AND MULCHED OR OTHERWISE STABILIZED IN A MANNER APPROVED BY SEMSWA.
3. SILT FENCE (SF) NEAR ROADWAY IS THE RESPONSIBILITY OF THE PERMITTEE/CONTRACTOR TO MAINTAIN, EVEN IF DAMAGED BY PUBLIC SNOW REMOVAL OR STREET SWEEPING OPERATIONS.

SFR SILT FENCE REINFORCED 19



(TO PREVENT RUN-ON OF OFF-SITE FLOWS)
SCALE: NTS

GENERAL NOTE:
DESIGN ENGINEER TO SPECIFY LONGITUDINAL SLOPE, MINIMUM WIDTH, AND IF SLOPE INTERCEPT DITCH IS LINED OR UNLINED BASED UPON SITE CONDITIONS TO INCLUDE FLOW, LONGITUDINAL SLOPE, AND SOIL TYPES, ETC.

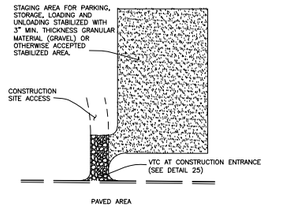
SLOPE INTERCEPT DITCH INSTALLATION NOTES

1. MATERIALS CUT OUT OF DITCH TO FORM A COMPACTED BERM ADJACENT TO AND ON THE CONSTRUCTION AREA SIDE OF DITCH.
2. SLOPE INTERCEPT DITCH SHALL HAVE A MINIMUM DEPTH OF 10".
3. COMPACTED BERM SHALL HAVE A MINIMUM HEIGHT OF 10".
4. SLOPE INTERCEPT DITCH SHALL BE CUT IN ON THE CONTOUR.
5. SLOPE INTERCEPT DITCH CAN BE USED IN PLACE OF SILT FENCE (SF) AND SEDIMENT CONTROL LOGS (SCL).
6. SEE PLAN VIEW FOR LOCATION.

SLOPE INTERCEPT DITCH MAINTENANCE NOTES

1. SEDIMENT ACCUMULATED IN DITCH SHALL BE REMOVED WHEN DITCH BECOMES 1/2 FULL. REMOVED SEDIMENT SHALL BE PLACED ON AND COMPACTED WITH THE ADJACENT BERM.
2. BERM MATERIAL TO FILL DITCH UPON COMPLETION OF CONSTRUCTION. ALL DISTURBED AREAS TO BE SEEDED AND MULCHED PER DETAIL 19.

SID SLOPE INTERCEPT DITCH 20



PLAN
SCALE: N.T.S.

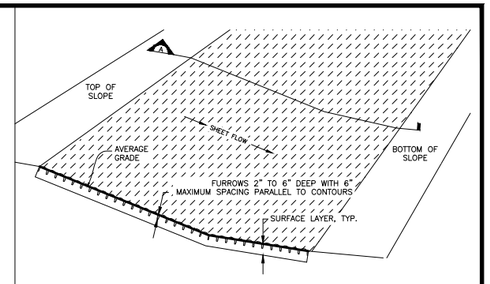
STABILIZED STAGING AREA INSTALLATION NOTES

1. SEE PLAN VIEW FOR GENERAL LOCATION AND APPROXIMATE AREA IN SQUARE YARDS OF STAGING AREA. CONTRACTOR MAY MODIFY LOCATION AND SIZE OF STABILIZED STAGING AREA WITH SEMSWA ACCEPTANCE.
2. IF REQUIRED BY SEMSWA, SITE ACCESS ROADS SHALL BE STABILIZED IN THE SAME MANNER AS THE STAGING AREA.
3. STAGING AREA SHALL BE STABILIZED PRIOR TO EARTHWORK OCCURRING ON SITE.
4. THE STABILIZED STAGING AREA SHALL CONSIST OF A MINIMUM OF 3" OF GRANULAR MATERIAL (GRAVEL).
5. THE USE OF RECYCLED CONCRETE OR ASPHALT AS GRANULAR MATERIAL IS NOT ALLOWED.
6. AN SSA SHALL BE PROVIDED NEAR THE MAIN ACCESS POINT AND SHALL BE CONNECTED TO THE VEHICLE TRACKING CONTROL, UNLESS INFEASIBLE.

STABILIZED STAGING AREA MAINTENANCE NOTES

1. GESC MANAGER SHALL PROVIDE ADDITIONAL THICKNESS OF GRANULAR MATERIAL IF ANY RUTTING OCCURS OR UNDERLYING SUBGRADE BECOMES EXPOSED.
2. STABILIZED STAGING AREA SHALL BE ENLARGED IF NECESSARY TO CONTAIN PARKING, STORAGE, AND UNLOADING AND LOADING OPERATIONS.
3. ANY ACCUMULATED DIRT OR MUD SHALL BE REMOVED FROM THE SURFACE OF THE STABILIZED STAGING AREA.
4. STABILIZED STAGING AREA SHOULD BE REFRESHED (ADDITIONAL GRANULAR MATERIAL ADDED) AS NEEDED WHEN THERE IS ACCUMULATION OF DIRT AND MUD.
5. THE STABILIZED STAGING AREA SHALL BE REMOVED AT THE END OF CONSTRUCTION. THE GRANULAR MATERIAL SHALL BE REMOVED OR, IF APPROVED BY SEMSWA, USED ON SITE, AND THE AREA TOPSOILED, DRILL SEEDED AND CRIMP MULCHED OR OTHERWISE STABILIZED.

SSA STABILIZED STAGING AREA 21



SECTION A
SCALE: NTS

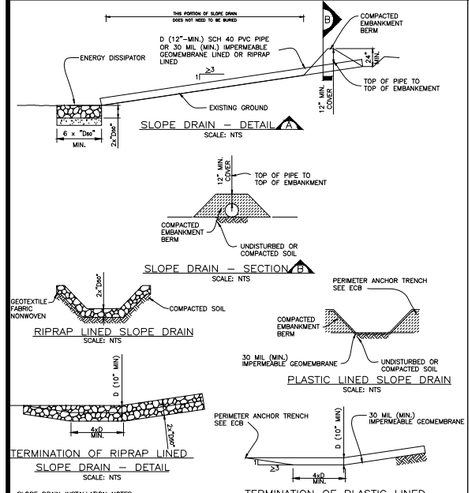
SURFACE ROUGHENING INSTALLATION NOTES

1. SURFACE ROUGHENING SHALL BE PROVIDED ON ALL APPLICABLE DISTURBED AREAS (SLOPES AND "FLAT" AREAS) THROUGHOUT CONSTRUCTION, AND ON ALL FINISHED GRADES WITHIN 2 DAYS OF COMPLETION OF FINISHED GRADE (FOR AREAS NOT RECEIVING TOPSOIL) OR WITHIN 2 DAYS OF TOPSOIL PLACEMENT.
2. AREAS WHERE BUILDING FOUNDATIONS, PAVEMENT, OR SOD IS TO BE PLACED WITHIN 7-DAYS OF FINISHED GRADING DO NOT NEED TO BE SURFACE ROUGHENED.
3. DISTURBED SURFACES SHALL BE ROUGHENED USING RIPPING OR TILLING EQUIPMENT ON THE CONTOUR OR TRACKING UP AND DOWN A SLOPE USING EQUIPMENT TREADS.

SURFACE ROUGHENING MAINTENANCE NOTES

1. VEHICLES AND EQUIPMENT SHALL GENERALLY BE CONFINED TO ACCESS DRIVES AND SHALL NOT BE DRIVEN OVER AREAS THAT HAVE BEEN SURFACE ROUGHENED.
2. IN NON-TURF GRASS FINISHED AREAS, SEEDING AND MULCHING SHALL TAKE PLACE DIRECTLY OVER SURFACE ROUGHENED AREAS WITHOUT FIRST SMOOTHING OUT THE SURFACE.
3. IN AREAS NOT SEEDED AND MULCHED AFTER SURFACE ROUGHENING, SURFACES SHALL BE RE-ROUGHENED AS NECESSARY TO MAINTAIN GROOVE DEPTH AND SMOOTH OVER ANY RILL EROSION.

SR SURFACE ROUGHING 22



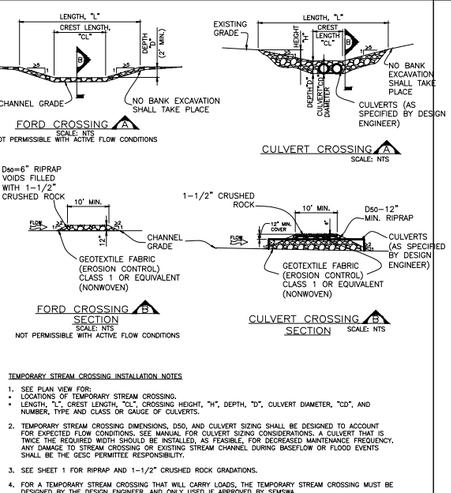
SLOPE DRAIN INSTALLATION NOTES

1. SEE PLAN VIEW FOR:
   - LOCATION AND LENGTH OF SLOPE DRAIN.
   - PIPE DIAMETER OR DEPTH, "D", AND RIPRAP SIZE, "Dse".
2. SLOPE DRAIN DIMENSIONS SHALL BE CONSIDERED MINIMUM DIMENSIONS.
3. SLOPE DRAINS INDICATED ON INITIAL GESC PLAN SHALL BE INSTALLED PRIOR TO ANY UPSTREAM LAND-DISTURBING ACTIVITIES.
4. FOR TEMPORARY SLOPE DRAINS, PIPE MAY BE INSTALLED ON TOP OF SLOPE; HOWEVER, 12" MIN. COVER AT TOP OF SLOPE SHALL BE PROVIDED.
5. AN ENERGY DISSIPATOR SHALL BE PLACED AT THE OUTFALL OF THE SLOPE DRAIN.

SLOPE DRAIN MAINTENANCE NOTES

1. TEMPORARY SLOPE DRAINS ARE TO REMAIN IN PLACE UNTIL NO LONGER NEEDED, BUT SHALL BE REMOVED PRIOR TO THE END OF CONSTRUCTION. WHEN SLOPE DRAINS ARE REMOVED, THE DISTURBED AREA SHALL BE DRILL SEEDED AND CRIMP MULCHED OR OTHERWISE STABILIZED IN A MANNER APPROVED BY SEMSWA.

TSD TEMPORARY SLOPE DRAIN 23



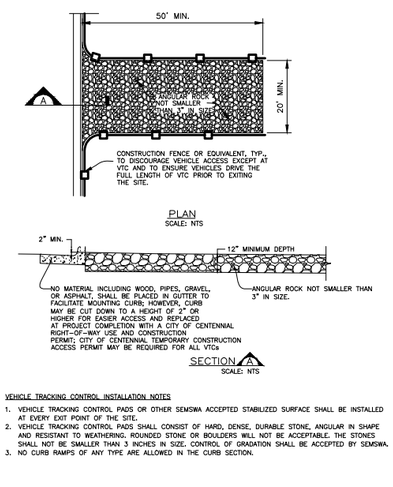
TEMPORARY STREAM CROSSING INSTALLATION NOTES

1. SEE PLAN VIEW FOR:
   - LOCATIONS OF TEMPORARY STREAM CROSSING.
   - LENGTH, "L", CREST LENGTH, "CL", CROSSING HEIGHT, "H", DEPTH, "D", CULVERT DIAMETER, "CD", AND NUMBER, TYPE AND CLASS OR GAUGE OF CULVERTS.
2. TEMPORARY STREAM CROSSING DIMENSIONS, DSO, AND CULVERT SIZING SHALL BE DESIGNED TO ACCOUNT FOR EXPECTED FLOW CONDITIONS. SEE MANUAL FOR CULVERT SIZING CONSIDERATIONS. A CULVERT THAT IS TWICE THE REQUIRED WIDTH SHOULD BE INSTALLED, AS FEASIBLE, FOR DECREASED MAINTENANCE FREQUENCY. ANY DAMAGE TO STREAM CROSSING OR EXISTING STREAM CHANNEL DURING BASEFLOW OR FLOOD EVENTS SHALL BE THE GESC PERMITTEE RESPONSIBILITY.
3. SEE SHEET 1 FOR RIPRAP AND 1-1/2" CRUSHED ROCK GRADATIONS.
4. FOR A TEMPORARY STREAM CROSSING THAT WILL CARRY LOADS, THE TEMPORARY STREAM CROSSING MUST BE DESIGNED BY THE DESIGN ENGINEER, AND ONLY USED IF APPROVED BY SEMSWA.

TEMPORARY STREAM CROSSING MAINTENANCE NOTES

1. SEDIMENT ACCUMULATED UPSTREAM OF STREAM CROSSINGS SHALL BE REMOVED WHEN THE SEDIMENT DEPTH UPSTREAM OF CROSSING IS WITHIN 50% OF THE CREST (FORD CROSSING) OR GREATER THAN AN AVERAGE DEPTH OF 50% (CULVERT CROSSING).
2. STREAM CROSSINGS ARE TO REMAIN IN PLACE UNTIL NO LONGER NEEDED, BUT SHALL BE REMOVED AS SOON AS FEASIBLE, PRIOR TO THE END OF CONSTRUCTION.
3. AS STREAM CROSSINGS ARE REMOVED, THE DISTURBED AREA SHALL BE DRILL SEEDED AND COVERED WITH EROSION CONTROL BLANKET OR OTHERWISE STABILIZED IN A MANNER APPROVED BY SEMSWA.

TSC TEMPORARY STREAM CROSSING 24



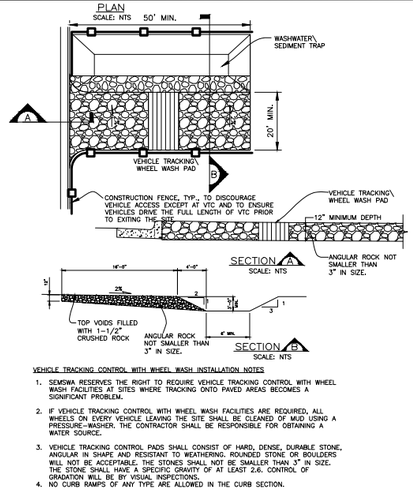
VEHICLE TRACKING CONTROL INSTALLATION NOTES

1. VEHICLE TRACKING CONTROL PADS OR OTHER SEMSWA ACCEPTED STABILIZED SURFACE SHALL BE INSTALLED AT EVERY EXIT POINT OF THE SITE.
2. VEHICLE TRACKING CONTROL PADS SHALL CONSIST OF HARD, DENSE, DURABLE STONE, ANGULAR IN SHAPE AND RESISTANT TO WEATHERING. ROUNDED STONE OR BOULDERS WILL NOT BE ACCEPTABLE. THE STONES SHALL NOT BE SMALLER THAN 3 INCHES IN SIZE. CONTROL OF GRADATION SHALL BE ACCEPTED BY SEMSWA.
3. NO CURB RAMPS OF ANY TYPE ARE ALLOWED IN THE CURB SECTION.

VEHICLE TRACKING CONTROL MAINTENANCE NOTES

1. VEHICLE TRACKING CONTROL SHALL BE REMOVED AT THE END OF CONSTRUCTION. THE ROCK MATERIAL REMOVED OR, IF APPROVED BY SEMSWA, USED ON SITE, AND THE AREA TOPSOILED, DRILL SEEDED AND CRIMP MULCHED OR OTHERWISE STABILIZED.
2. ANY CRACKED OR DAMAGED CURB AND GUTTER AND SIDEWALK IN THE VICINITY OF THE VTC SHALL BE REPLACED BY THE PERMITTEE.

VTC VEHICLE TRACKING CONTROL 25



VEHICLE TRACKING CONTROL WITH WHEEL WASH INSTALLATION NOTES

1. SEMSWA RESERVES THE RIGHT TO REQUIRE VEHICLE TRACKING CONTROL WITH WHEEL WASH FACILITIES AT SITES WHERE TRACKING ONTO PAVED AREAS BECOMES A SIGNIFICANT PROBLEM.
2. IF VEHICLE TRACKING CONTROL WITH WHEEL WASH FACILITIES ARE REQUIRED, ALL WHEELS ON EVERY VEHICLE LEAVING THE SITE SHALL BE CLEANED OF MUD USING A PRESSURE-WASHER. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING A WATER SOURCE.
3. VEHICLE TRACKING CONTROL PADS SHALL CONSIST OF HARD, DENSE, DURABLE STONE, ANGULAR IN SHAPE AND RESISTANT TO WEATHERING. ROUNDED STONE OR BOULDERS WILL NOT BE ACCEPTABLE. THE STONES SHALL NOT BE SMALLER THAN 3" IN SIZE. THE STONE SHALL HAVE A SPECIFIC GRAVITY OF AT LEAST 2.6. CONTROL OF GRADATION WILL BE BY VISUAL INSPECTIONS.
4. NO CURB RAMPS OF ANY TYPE ARE ALLOWED IN THE CURB SECTION.

VEHICLE TRACKING CONTROL WITH WHEEL WASH MAINTENANCE NOTES

1. ACCUMULATED SEDIMENT IN THE WASHWATER/SEDIMENT TRAP SHALL BE REMOVED WHEN THE SEDIMENT DEPTH REACHES AN AVERAGE OF 12-INCHES.
2. VEHICLE TRACKING CONTROL WITH WHEEL WASH FACILITY SHALL BE REMOVED AT THE END OF CONSTRUCTION. THE RIPRAP MATERIAL REMOVED OR, IF APPROVED BY SEMSWA, USED ON SITE, AND THE AREA TOPSOILED, DRILL SEEDED AND CRIMP MULCHED OR OTHERWISE STABILIZED.
3. ANY CRACKED OR DAMAGED CURB AND GUTTER AND SIDEWALK IN THE VICINITY OF THE VTC SHALL BE REPLACED BY PERMITTEE.

WW VTC WITH WHEEL WASH 26

UTILITY NOTIFICATION CENTER OF COLORADO
CALL BEFORE YOU DIG
811
Call 2 days prior to any digging, grading or excavating for the marking of underground member utilities

SOUTHEAST METRO STORMWATER AUTHORITY
7437 SOUTH FAIRPLAY STREET
CENTENNIAL COLORADO
80112-4486
(303) 858-8844 - INSPECTION DIVISION

SOUTHEAST METRO Stormwater Authority

GRADING EROSION AND SEDIMENT CONTROL
STANDARD NOTES AND DETAILS
REVISED JUNE 2025

GESC SHEET 4 OF 4