

Erosion and Sediment Control Plan

Limits of disturbance during building demo

Channel Capacity

Weir Equation:

$$Q = CLH^{3/2}$$

Q = Flow

C = 2.95

L = Length of weir

H = Height of Weir

Emergency Overflow

$$Q = 2.95 * 16 * 0.50^3$$

$$Q = 16.69 \text{ cfs} < Q = 15.83 \text{ cfs}$$

Notes:

- 814 Solutions did not make grading plan. 814 added limits of disturbance over plan created by Tierra West LLC.

- BMP legend located in top right corner

- Asbestos mitigation to take place prior to demolition.

LEGEND

- CURB & GUTTER
- BOUNDARY LINE
- EXISTING CURB & GUTTER
- TEMPORARY SILT FENCE
- TEMPORARY SEDIMENT TRAP
- INLET PROTECTION

NOTICE TO CONTRACTORS

- AN EXCAVATION/CONSTRUCTION PERMIT WILL BE REQUIRED BEFORE BEGINNING ANY WORK WITHIN CITY RIGHT-OF-WAY.
- ALL WORK DETAILED ON THESE PLANS TO BE PERFORMED, EXCEPT AS OTHERWISE STATED OR PROVIDED HERON, SHALL BE CONSTRUCTED IN ACCORDANCE WITH CITY OF ALBUQUERQUE INTERIM STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION, 1985.
- TWO WORKING DAYS PRIOR TO ANY EXCAVATION, CONTRACTOR MUST CONTACT LINE LOCATING SERVICE, 765-1234, FOR LOCATION OF EXISTING UTILITIES.
- PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL EXCAVATE AND VERIFY THE HORIZONTAL AND VERTICAL LOCATIONS OF ALL CONNECTIONS. SHOULD A CONFLICT EXIST, THE CONTRACTOR SHALL NOTIFY THE ENGINEER SO THAT THE CONFLICT CAN BE RESOLVED WITH A MINIMUM AMOUNT OF DELAY.
- BACKFILL COMPACTION SHALL BE ACCORDING TO TRAFFIC/STREET USE.
- MAINTENANCE OF THESE FACILITIES SHALL BE THE RESPONSIBILITY OF THE OWNER OF THE PROPERTY SERVED.
- WORK ON ARTERIAL STREETS SHALL BE PERFORMED ON A 24-HOUR BASIS.

EROSION CONTROL NOTES:

- CONTRACTOR IS RESPONSIBLE FOR OBTAINING A TOPSOIL DISTURBANCE PERMIT PRIOR TO BEGINNING WORK.
- CONTRACTOR IS RESPONSIBLE FOR MAINTAINING RUN-OFF ON SITE DURING CONSTRUCTION.
- CONTRACTOR IS RESPONSIBLE FOR CLEANING ALL SEDIMENT THAT GETS INTO EXISTING RIGHT-OF-WAY.
- REPAIR OF DAMAGED FACILITIES AND CLEANUP OF SEDIMENT ACCUMULATIONS ON ADJACENT PROPERTIES AND IN PUBLIC FACILITIES IS THE RESPONSIBILITY OF THE CONTRACTOR.
- ALL EXPOSED EARTH SURFACES MUST BE PROTECTED FROM WIND AND WATER EROSION PRIOR TO FINAL (CITY) ACCEPTANCE OF ANY PROJECT.
- ALL SLOPES NOT STABILIZED AT THE END OF THE PROJECT SHALL BE STABILIZED IN ACCORDANCE WITH COA SPECS OR $\frac{3}{4}$ " GRAVEL.

SEQUENCE OF CONSTRUCTION

THE DEVELOPMENT WILL BE SUBDIVIDED INTO 8 RETAIL PADS AND A 7 ACRE SINGLE FAMILY RESIDENTIAL PROJECT.

LOT #1 WILL BE A BUILD TO SUIT BY THE CURRENT OWNER. THE NEW NOI WILL BE INITIATED AND HELD BY THE CURRENT OWNER AND SELECTED GENERAL CONTRACTOR SPECIFIC FOR LOT #1 UNTIL SUCH TIME AS THE CONSTRUCTION IS COMPLETE AND AN NOI FILED.

LOT #2 WILL BE A STRAIGHT LAND SALE WITH THE CURRENT OWNER FILING AN NOI TO GRADE A SUPER PAD AND INSTALL UTILITIES SPECIFIC TO THAT END USER. THE NOI WILL BE TRANSFERRED TO THE NEW OWNER UPON COMPLETION OF THE WORK AND SALE OF THE PROPERTY.

LOT #3 WILL BE A STRAIGHT LAND SALE WITH THE CURRENT OWNER FILING AN NOI TO GRADE A SUPER PAD AND INSTALL UTILITIES SPECIFIC TO THAT END USER. THE NOI WILL BE TRANSFERRED TO THE NEW OWNER UPON COMPLETION OF THE WORK AND SALE OF THE PROPERTY.

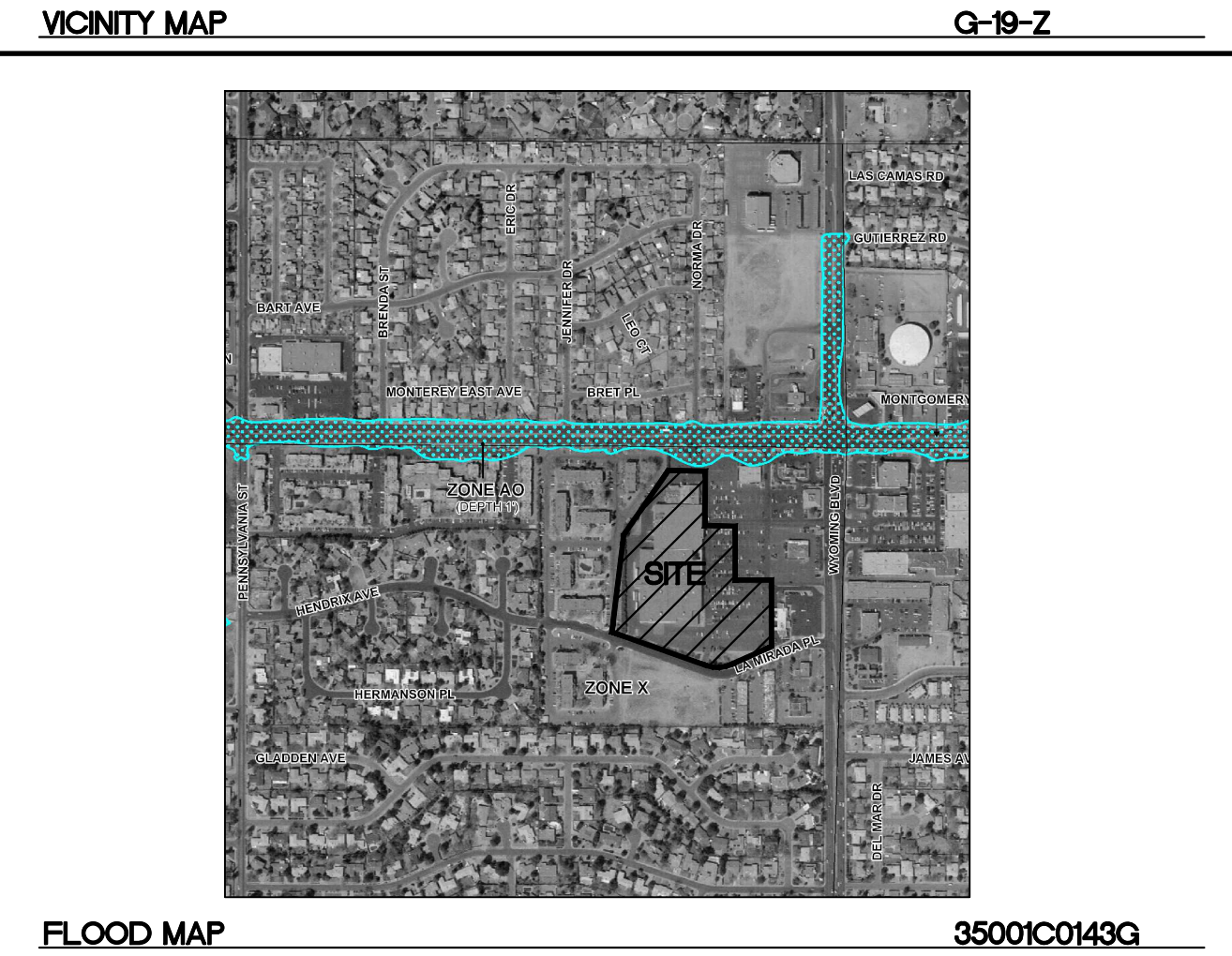
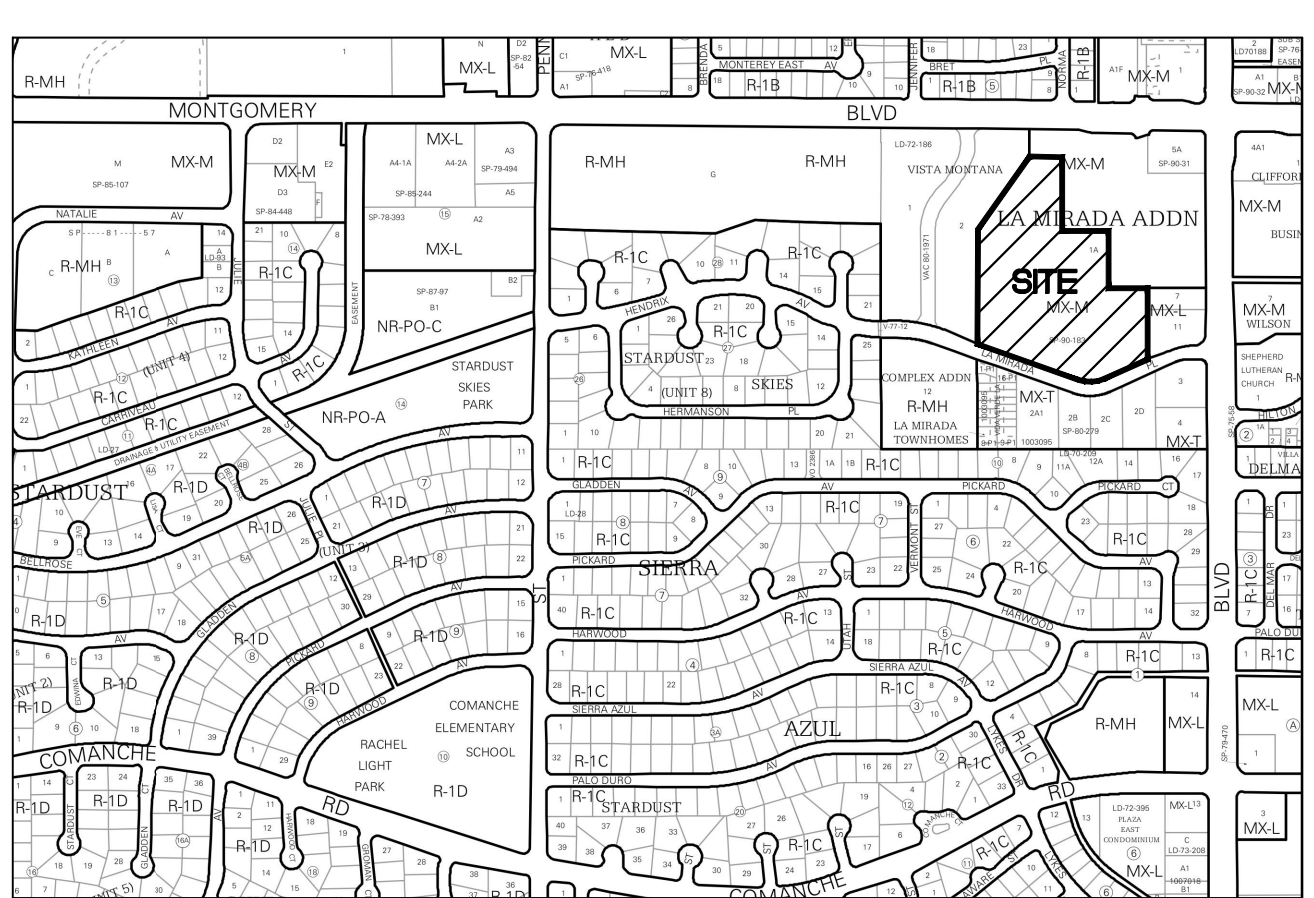
LOT #4 WILL BE A STRAIGHT LAND SALE WITH THE CURRENT OWNER FILING AN NOI TO GRADE A SUPER PAD AND INSTALL UTILITIES SPECIFIC TO THAT END USER. THE NOI WILL BE TRANSFERRED TO THE NEW OWNER UPON COMPLETION OF THE WORK AND SALE OF THE PROPERTY.

LOT #5 WILL BE MASS GRADED TO COMPLY WITH THE OVERALL GRADING AND DRAINAGE PLAN. THE CURRENT OWNER WILL FILE AN NOI FOR THIS PROPERTY AND STABILIZE AS NEEDED.

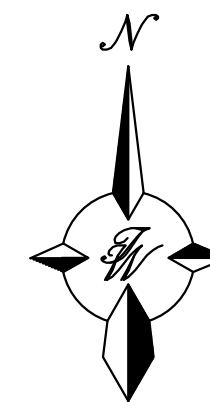
LOT #6 WILL BE A STRAIGHT LAND SALE WITH THE CURRENT OWNER FILING AN NOI TO GRADE A SUPER PAD AND INSTALL UTILITIES SPECIFIC TO THAT END USER. THE NOI WILL BE TRANSFERRED TO THE NEW OWNER UPON COMPLETION OF THE WORK AND SALE OF THE PROPERTY.

LOT #7 WILL BE A STRAIGHT LAND SALE WITH THE CURRENT OWNER FILING AN NOI TO REMOVE AND REPLACE THE CURRENT ASPHALT. THE NOI WILL BE TRANSFERRED TO THE NEW OWNER UPON COMPLETION OF THE WORK AND SALE OF THE PROPERTY.

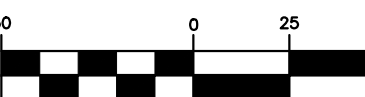
LOT #8 WILL BE MASS GRADED TO COMPLY WITH THE OVERALL GRADING AND DRAINAGE PLAN. THE CURRENT OWNER WILL FILE AN NOI FOR THIS PROPERTY AND STABILIZE AS NEEDED. TOWNHOME PARCEL WILL BE BUILT BY THE CURRENT OWNER. THE NEW NOI WILL BE INITIATED BY THE CURRENT OWNER AND HELD UNTIL ALL LOTS ARE SOLD TO THE SELECTED HOMEBUILDER. ONCE THE LAST LOT IS SOLD THE NOI WILL BE TRANSFERRED TO THE HOMEBUILDER SELECTED FOR THE PROJECT. IT IS ANTICIPATED THAT A SINGLE HOMEBUILDER WILL BUILD OUT THE ENTIRETY OF THE PROJECT.



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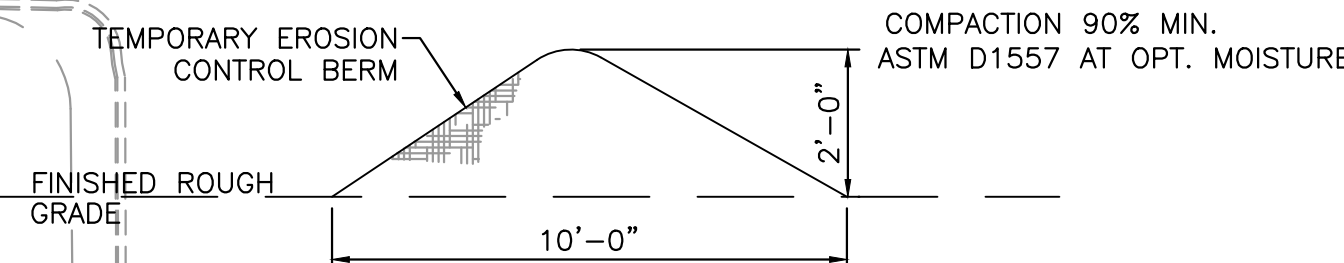


GRAPHIC SCALE



(IN FEET)
1 inch = 50 ft.

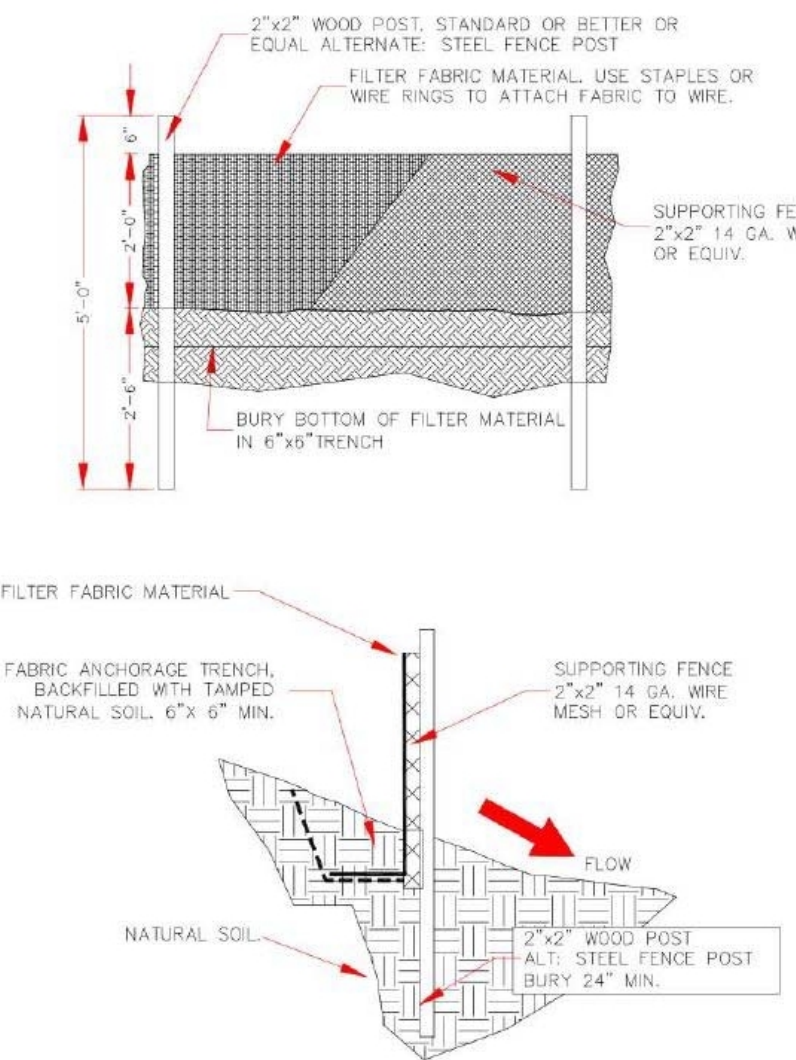
ENGINEER'S SEAL RONALD R. BOHANNAN NEW MEXICO 7868 8-5-21 RONALD R. BOHANNAN P.E. #7868	THE WYMONT ALBUQUERQUE, NM INTERIM GRADING AND DRAINAGE PLAN	DRAWN BY pm
		DATE 8-5-21 DRAWING
TIERRA WEST, LLC 5571 MIDWAY PARK PL NE ALBUQUERQUE, NEW MEXICO 87109 (505) 858-3100 www.tierrawestllc.com	SHEET # GR-1	JOB # 2021008



EROSION CONTROL BERM DETAIL

NTS

Discharge from site will be diverted to two sediment ponds



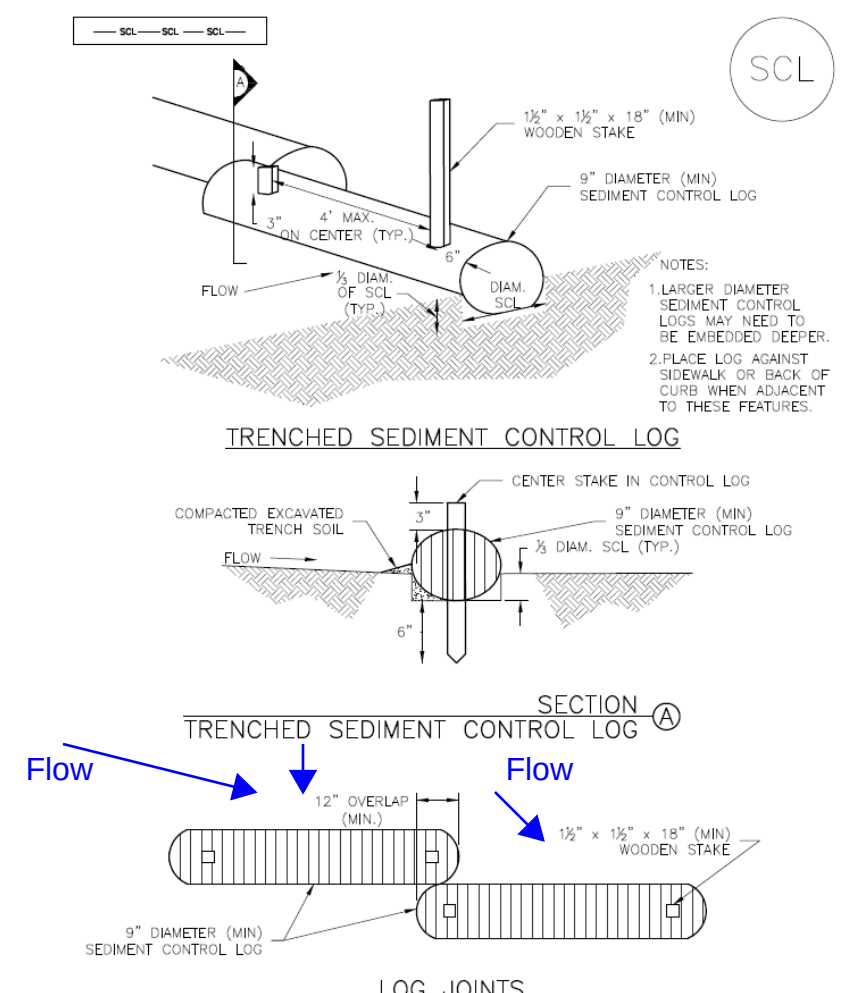
Notes:

1. Wire mesh is not required, but it is recommended as it will help prevent tearing due to increased wind speed or sediment/water load.
2. Pole spacing is not to exceed 10 feet between poles in straight-run sheet flow areas.
3. Pole spacing in a site's lower corners should be spaced approximately 6 feet apart or closer.
4. Silt fence is not created for use in high velocity situations, where flow is heavily concentrated. If concentrated flow does drain toward silt fence, then use additional BMPs to reduce the flow's velocity.
5. Silt fence fabric transition points should have posts interlocked with no gaps in the silt fence coverage.

Silt Fence

Source: City of Albuquerque
Construction Site Manual 2018

Sediment Control Log (SCL) SC-2



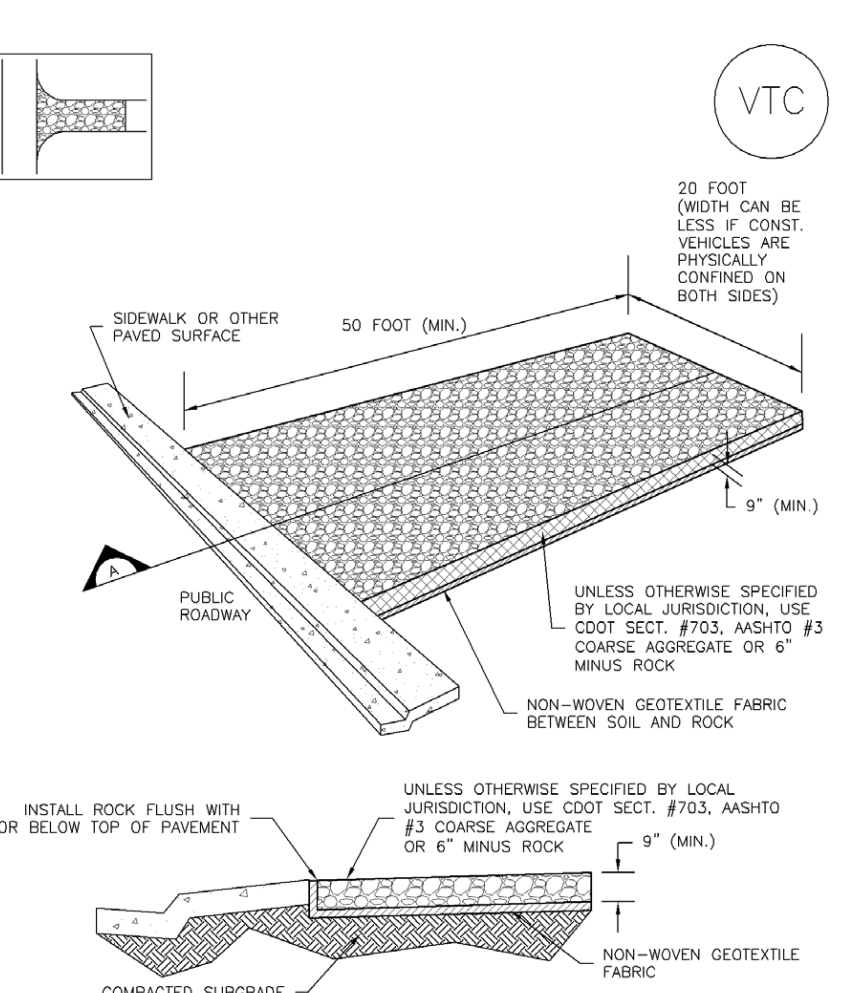
Notes:

1. It is recommended that wattles be trenched into the ground to a depth of approximately 1/3 of the diameter of the log. If trenching to this depth is not feasible or desirable, then a lesser trenching depth may be acceptable with more robust staking. Sandbags may be used on impervious surfaces.
2. Wattles that are 8 lb/ft or more do not need to be trenched.
3. Remove sediment from the upstream side of wattle when sediment accumulation is 1/2 the height of the wattle.
4. For parallel flow past the wattle joints, make sure the upstream wattle is on the interior side of the downstream wattle
5. Place wattle around stockpiles that are not being worked on or that are on impervious surfaces.

Wattle/ Filter Sock/
Sediment Control Log

Source: Urban Storm Drainage
Criteria Manual Volume 3

Vehicle Tracking Control (VTC) SM-4



Notes:

1. A stabilized construction entrance/exit shall be located at all access points where vehicles access the construction site from paved right-of-ways.
2. Sediment tracked onto paved roads is to be removed throughout the day and at the end of the day by shoveling or sweeping. Sediment may not be washed down storm sewer drains.
3. Some Vehicle Tracking Controls may need a wheel wash station. When a wheel wash is available, make sure to direct wash water to a sediment trap prior to discharge from the site. Wash water may not contain soaps or chemicals, unless a separate permit is acquired.
4. A metal grate can be used in conjunction with an aggregate track-out pad. The grate should be regularly cleared of sediment, and help prevent track-out.
5. Make sure the Vehicle Tracking Control is not bypassed by the construction traffic.

Vehicle Tracking Control

Source: Urban Storm Drainage
Criteria Manual Volume 3



Notes:

1. The preferred method to access a site is to cut the curb, so a ramp is not required. Placing curb cut in the same place as future entrance/exit can minimize work.
2. When cutting the curb, the cutting machine uses water, and the byproduct of the process is similar to concrete wash-out. Place byproduct in wash-out container.



Notes:

3. Laying lumber parallel to curb is an alternative, but this method is not to be used on high speed (35 MPH and greater) roads due to it being a road hazard.
4. Adding cold-mix asphalt with a pipe in the gutter is acceptable, but do not extend asphalt past the gutter into the paved portion of the roadway.
5. Vehicle Tracking Controls are still needed if using a ramp over a curb.

Access onto Curbed Sites

Source: City of Albuquerque
Construction Site Manual 2018

Good Housekeeping

Notes:

1. Regularly collect and dispose of garbage and waste material into designated collection areas.
2. Cover and maintain dumpsters and waste receptacles. Add additional dumpster or increase frequency of waste collection if overflowing conditions occur. Consider secondary containment around waste collection areas to minimize the likelihood of contaminated discharges.
3. Routinely inspect containers and equipment to ensure that it is functioning properly without leaking.
4. Promptly clean up leaks, drips, and other spills. Train employees on proper clean up and spill response procedures.
5. Store containers, drums, and bags away from direct traffic routes to reduce container damage.
6. Store materials in accordance with directions in Material Safety Data Sheets (MSDSs).
7. Store container s on pallets or similar devices to prevent corrosion of containers that results from containers coming into contact with moisture on the ground.
8. Store toxic or hazardous liquids within curbed areas or secondary containments.
9. Frequent and proper training in good housekeeping techniques reduces the likelihood that chemicals or equipment will be mishandled.
10. Segregate and provide proper disposal options for hazardous material wastes.
11. Make sure the site has a Spill Protection Plan, Spill kit, and individuals trained on the location and workings of the plan and kit.
12. Create a designated on-site fueling and maintenance area that is clean and dry, has a spill kit, and ideally in a covered area.
13. Locate toilet facilities away from storm drain inlets and waterways to prevent accidental contamination of stormwater.
14. or outdoor painting and sanding; conduct these operations in designated areas that are paved or have a secondary containment in place. Clean up and dispose of excess paint, paint chips, protective coatings, grit waste, etc.
15. Provide tie-downs or stake downs for portable toilets.
16. For vehicle and equipment washing: ensure there is no discharge of soaps, solvents, or detergents in equipment and vehicle wash water. -(CGP 2017)
17. Recycle materials whenever possible (e.g. paper, wood, concrete, oil).

Good Housekeeping

Source: Urban Storm Drainage
Criteria Manual Volume 3

Note that BMP descriptions are for informational purposes only. Actual specifications used on project may differ.



Notes:

1. The proper inlet protection shall be used and maintained to prevent sediment and wastes from entering a stormwater drainage system and shall minimize the risk of flooding.
2. The type of inlet protection utilized shall depend on the inlet type, slope, and volume of flow.



Notes:

3. For inlets with a throat opening and a grate, the inlet shall be protected with a BMP that covers the throat and the grate.
4. For throat type of inlet protection, sediment shall not be higher than halfway up the BMP.
5. For mat type and one-piece style of BMP, more than 50% of the inlet protection must be clear of sediment and debris.

Inlet Protection Part 1

Source: City of Albuquerque
Construction Site Manual 2018



Notes:

9. In residential subdivisions where there are inlets internal to the construction site, the style should change as the site is developed. When the site is mostly dirt, use a BMP that protects throat and grate. When the site has built more and less dirt is exposed, then a less restrictive style can be used to catch sediment in the gutter.



Notes:

10. Inlet protection constructed of silt fence surrounding the inlet may be used when the inlet is surrounded by stake-able dirt.
11. Inlet protection should be used for inlets/storm drains within the construction site/disturbed area, AND any inlets/storm drains outside the project area that may receive stormwater discharges from the construction site/disturbed area.



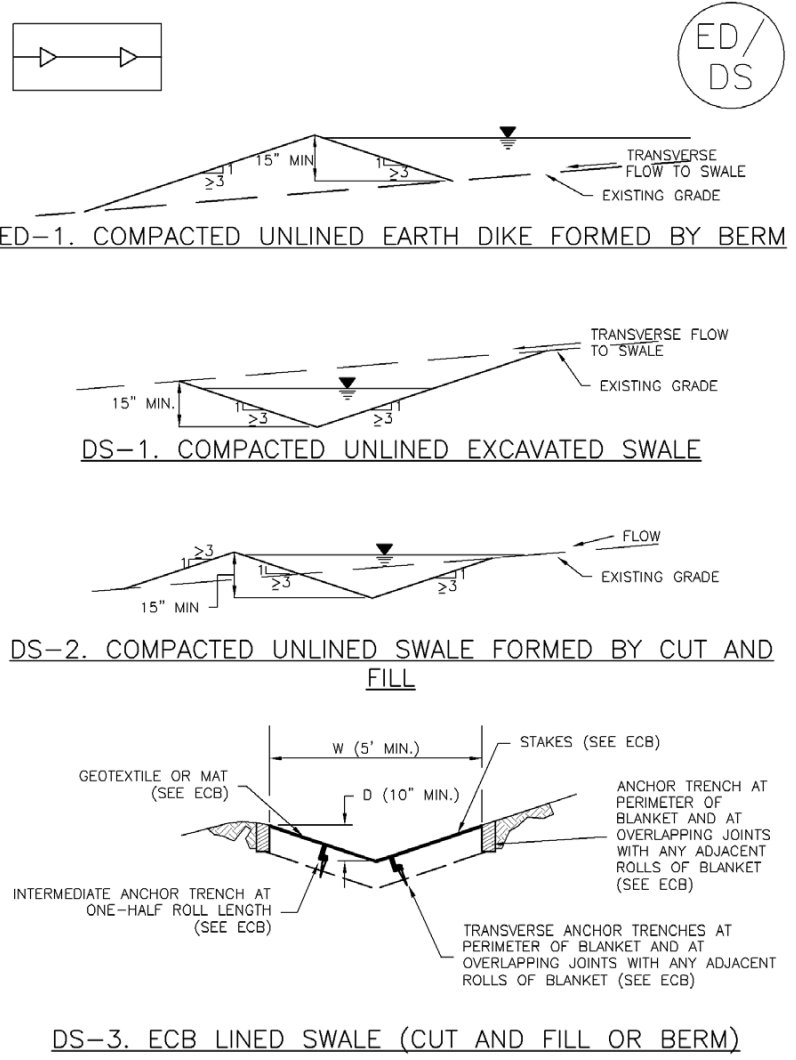
Notes:

12. Open storm drains are considered an inlet and require protection. This also includes drains that are not actively being worked on.

Inlet Protection Part 2

Source: City of Albuquerque
Construction Site Manual 2018

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



Notes:

1. Earth dikes and drainage swales are typically used for controlling the flow path of runoff at a constructions site; sometimes by diverting water away from sensitive areas, or by conveying water to treatment BMPs (sediment traps or basins).
2. Unlined berms/dikes or swales need to be compacted, and should only be used for intercepting sheet flow runoff (not intended for diversion of concentrated flows).
3. If there is reoccurring damage, consider installing rock check dams or lining with riprap.
4. If berms/dikes or swales are not permanent, then remove berms/dikes and fill channels when upstream area is stabilized. Immediately stabilize the disturbed area after the BMP removal.

Earth Berms/ Dikes/
Drainage Swales

Source: Urban Storm Drainage
Criteria Manual Volume 3



Notes:

1. When working in or adjacent to an arroyo or concrete channel, loose soil shall not be stockpiled or left in the low-flow area of the arroyo or channel. A berm or a similar BMP is to be constructed to divert flow into a low-flow area.
2. When working in or adjacent to an arroyo or concrete channel, pollutants (chemicals, debris, waste, etc.) shall not be left in the low-flow area of the arroyo or channel.
3. If there are active storm drains in the work zone, an energy dissipator is to be constructed at the pipe outfall to slow the velocity of the stormwater to less than 3 ft/sec at the end of the dissipater. A plunge pool constructed of large aggregate is the most common energy dissipator.
4. If there is an arroyo or channel draining into the work zone, and energy dissipator is to be constructed upstream of the confluence to slow the velocity of the stormwater to less than 3 ft/sec at the end of the dissipator. There are equations provided by the United States Bureau of Reclamation (USBR) and the Federal Highway Administration (FHWA) for sizing the energy dissipator and the aggregate.
5. If working adjacent to an arroyo or concrete channel, install BMPs to protect against or filter stormwater entering the drainage.

Arroyo and Channel Construction

Source: City of Albuquerque
Construction Site Manual 2018



Notes:

1. Designated wash-out areas should be provided for any concrete, stucco, mortar, or paint operations. Wash-outs should be as far away as possible from waters of the U.S., stormwater inlets, or conveyances.
2. "Wash-out should be directed to leak-proof containers or leak proof and lined pit designed so that no overflows can occur due to inadequate sizing or precipitation." -CGP 2017



Notes:

3. If the concrete/stucco/mortar is firm when it contacts the soil, then it is not considered wash-out (not wet enough to infiltrate into the soil).
4. A centralized wash-out may be effective for concrete trucks. For stucco, mortar, and paint wash-outs, a local wash-out and wash-out education has been more successful in avoiding improper wash-outs.



Notes:

5. Mortar towers shall have a plastic liner beneath them to prevent the wet mortar from contacting the soil. If wet stucco or mortar contacts the ground due to mixing, it would be a compliance issue.
6. If a wash-out occurs on bare soil, the Operator is expected to remove it same day. The wash-out material, as well as the wetted soil, are to be removed and disposed of appropriately.

Wash-outs

Source: City of Albuquerque
Construction Site Manual 2018

BMP Information Sheet



Project Name:
Owner:
Operator:

NPDES Permit #:
Date:
Sheet:

ESC Plan Standard Notes (2021-03-24)

1. All Erosion and Sediment Control (ESC) work on these plans, except as otherwise stated or provided hereon shall be permitted, constructed, inspected, and maintained in accordance with:
 - a. The City Ordinance § 14-5-2-11, the ESC Ordinance,
 - b. The EPA's 2017 Construction General Permit (CGP), and
 - c. The City Of Albuquerque Construction BMP Manual.
2. All BMP's must be installed prior to beginning any earth moving activities except as specified hereon in the Phasing Plan. Construction of earthen BMP's such as sediment traps, sediment basins, and diversion berms shall be completed and inspected prior to any other construction or earthwork. Self-inspection is required after installation of the BMPs and prior to beginning construction.
3. Self-inspections - At a minimum a routine compliance self-inspection is required to review the project for compliance with the Construction General Permit once every 14 days and after any precipitation event of 1/4 inch or greater until the site construction has been completed and the site determined as stabilized by the city. Reports of these inspections shall be kept by the person or entity authorized to direct the construction activities on the site and made available upon request.
4. Corrective action reports must be kept by the person or entity authorized to direct the construction activities on the site and made available upon request.
5. Stabilization reports must be kept by the person or entity authorized to direct the construction activities on the site and made available upon request. Reports should include records of weed removal per City Ordinance (§ 9-8-1), sterilization, soil test results and recommendation, materials and manufacturer's specifications for application rates, estimated functional longevity, methods of application, inspection and maintenance. The reduced self-inspection schedule in CGP 4.4.1 applies to stabilized area and any damaged or worn stabilization must be identified in the reports along with weed problems. Corrective actions for stabilization shall be documented in a stabilization report including actual rates and dates of stabilization, and the materials and manufacturer's specifications used.
6. BMPs shall be inspected and maintained until all disturbed areas are stabilized in accordance with the Final Stabilization Criteria (CGP 2.2.14.b). Generally, all disturbed areas, other than structures and impervious surfaces, must have uniform perennial vegetation that provides 70 percent or more of the cover provided by native vegetation or seed the disturbed area and provide non-vegetative mulch that provides cover for at least three years without active maintenance. Final stabilization must be approved by the City of Albuquerque prior to removal of BMPs and discontinuation of inspections.