



Construction Activities
Stormwater Management Plan (SWMP)
Lot3 A Northcrest Center Filing No 1A Subdivision
(My Garage @ Northcrest Center)

2510 & 2522 CANADA DRIVE COLORADO SPRINGS, COLORADO 80922

Permittee:

LEISURE CONSTRUCTION
3442 Tampa Road, Suite B, Palm Harbor, FL 34684
(727) 242-5121

GEC Administrator:

Name: _____ Cell Phone: _____

Address: _____

Office Phone Number: _____

Prepared for:
LEISURE CONSTRUCTION
3442 Tampa Road, Suite B
Palm Harbor, FL 34684
(727) 242-5121



1604 South 21st Street
Colorado Springs, Colorado 80904
(719) 630-7342

Kiowa Project No. 23049

June 17, 2024

EPC FILE NO. PPR2412

Signature Page 1

Lot3 A Northcrest Center Filing No 1A Subdivision

Contractor's Statement

I will comply with the requirements of the SWMP including Construction Control Measure inspection requirements and final stabilization requirements. I acknowledge the responsibility to determine whether the construction activities on these plans require Colorado Discharge Permit System (CDPS) permitting for stormwater discharges associated with construction activity.

Name of Contractor: Leisure Construction

Authorized Signature: SL Edwards, Pres. 6-18-24
Date

Printed Name: Sean L. Edwards

Title: President

Phone Number: 727-242-5121

Address: 3442 Tampa Rd., Suite B, Palm Harbor, FL. 34684

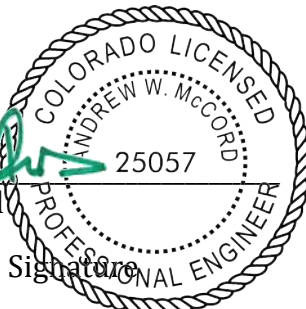
Email Address: Sean@leisureconstruction.com

Engineer's Statement

This Engineer of Record:

The Stormwater Management 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 and State for Stormwater Management Plans.

Andrew W. McCord
Andrew W. McCord
Engineer of Record Signature



Date: June 17, 2024

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SWMP Site Map - Figure 2	Error! Bookmark not defined.

STATE STORMWATER DISCHARGE PERMIT REQUIREMENTS

At least ten days prior to the anticipated start of construction activities (i.e. the initial disturbance of soils associated with clearing, grading, excavation activities, installation of structural Construction Control Measures, or other activities), for projects that will disturb one (1.0) acre or more, the owner or operator of the construction activity must submit an application as provided by the Colorado Department of Public Health and Environment, Water Quality Control Division (Division). This form may be reproduced and is also available from the Division's web site. Applications received by the Division are processed and a permit certification and other relevant materials will be sent to the attention of the legally responsible person. The application contains certification of completion of a storm water management plan (SWMP). Do not include a copy of the Stormwater Management Plan, unless requested by the Division.

For information or application materials contact:

Colorado Department of Public Health and Environment
Water Quality Control Division
WQCD-P-B2
4300 Cherry Creek Drive South
Denver, Colorado 80246-1530
<https://www.colorado.gov/pacific/cdphe/wq-construction-general-permits>

Electronic Application – CDPHE website:

<https://www.colorado.gov/pacific/cdphe/WQ%20permits%20construction%20electronic%20application>

STORMWATER PLAN OBJECTIVES

The objective of the Stormwater Management Plan (SWMP) is to define controls and measures to maintain water quality by eliminating or reducing pollutants in stormwater discharges during construction activities. A general schedule or phasing of Best Maintenance Practices (CCM) will be determined by construction schedule and ground disturbances necessitating required erosion control methods/CCM. Evaluations of and modifications to this plan may be necessary during the length of the construction project until the site is finally stabilized. This SWMP should be reviewed and modified as a part of the overall process of evaluating and managing stormwater quality issues on a regular basis. A copy of the Stormwater Discharge Permit, SWMP, SWMP Site Map (Figure 2) and inspection logs shall be kept on site by the SWMP Administrator as to be available to federal, state and local agencies for inspection.

A Construction Activities Stormwater Discharge Permit will be applied for on _____ from the Colorado Department of Public Health and Environment and is included in Appendix 1. The general conditions associated with this permit should be followed through the duration of the land disturbing activities at the site. For additional details or more specific information, consult CDPS General Permit No. COR040000 in Appendix 2.

I. SITE DESCRIPTION

A. Nature of the Construction Activity

Lot 3A Northcrest Center Filing No 1A is approximately 141,390 square feet combined (3.246 acres) and is located on the north side of Constitution Avenue, east side of Peterson Road, West of Canada Drive, and south of Bismark Road.

The property currently consists of undeveloped natural vegetation. There is existing curb and gutter along Bismark Drive, Canada Drive, and Constitution Avenue.

The existing topography consists of grades between 2 and 25 percent. Drainage patterns sheet flow across the parcel southeasterly to the corner of Canada Drive and Constitution Avenue.

The proposed development consists of 70 commercial storage units containing approximately 63,240 square feet overall along with concrete and asphalt pavement for drive accesses, sidewalks, and curb and gutter. Other on-site features include approximately 29,000 square feet of landscaping, 760 linear feet of retaining wall, and 2,800 square feet for a full spectrum detention pond.

There is no existing access point to the property. Two new curb cuts are proposed along Canada Drive.

B. Sequence of Major Activities

Construction activities for the project are expected to begin in the 2nd Quarter, 2024. Prior to the commencement of the majority of clearing and grubbing activities, minimal clearing and grubbing may be necessary prior to install the initial erosion control features such as temporary sediment basin, silt fencing, safety fencing and vehicle tracking control. Subsequent to the installation of the silt fences and vehicle control, clearing and grubbing will commence, and grading will proceed as shown on the SWMP Site Plan. When the finished grades are attained, building, utility, roadway and stormwater infrastructure will be installed. In general, the SWMP Administrator will identify the precise schedule to be used during the term of this project and include the schedule in this SWMP when available. Temporary erosion control measures are anticipated to be removed in the Winter 2024. Temporary Control Measures (TCMs) shall not be removed until Final Stabilization has been achieved. Final Stabilization is anticipated to occur in the Summer of 2025.

VICINITY MAP
NORTHCREST CENTER
TBD BISMARK ROAD
COLORADO SPRINGS, COLORADO 80922
EL PASO COUNTY

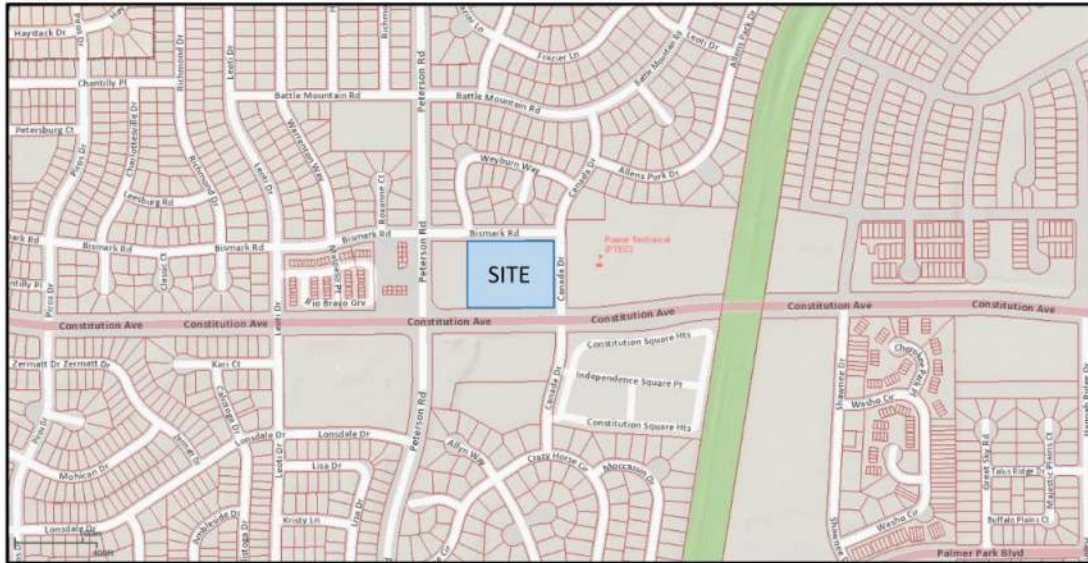


Figure 1

C. Estimate of Area and Volume Disturbed

The project area totals 3.25 acres of which approximately 3.25 acres will be subject to disturbance. The estimated acres of disturbance correspond to that necessary to install the roadways, sidewalks, subsurface utilities, landscaping, stormwater facilities, and an extended detention basin. Locations of disturbed areas are as shown on the SWMP Site Map (Figure 2). All other areas are to remain undisturbed.

Earthwork cut and fill operations are more than 500 cubic yards. Estimated earthwork is: Cut=20,135 cubic yards; Fill=1,265 cubic yards; Net Cut= 18,870 cubic yards.

D. Soil Data

The soils indicative to the site are classified as Truckton sandy loam by the USDA Soil Conservation Service and are listed as NRCS (National Resources Conservation Service) Hydrologic Soil Group A. A USDA Soil Map is provided in the Appendix.

A subsurface soils investigation was conducted for Commercial Development Site Constitution and Peterson, with a letter entitled *Geotechnical Report* by RMG – Rocky Mountain Group dated February 23, 2021. The investigation “revealed similar substance subsurface soil conditions across the site, being primarily silty sand extending from the ground surface to the extent of the test borings. Neither expansive clay soil nor bedrock were encountered in the borings.”

“Test Borings for structures and storage yards were advanced with a power-driven, continuous-flight auger drill rig to depths of 15 and 20-feet below the existing ground surface. Pavement Borings were advanced to 5 and 10-foot depths.”

The study found that “groundwater was not encountered in the test borings during field exploration.”

National Resources Conservation Service) Hydrologic Soil Group A. A USDA Soil Map is provided in the Appendix.

A subsurface soils investigation was conducted for Commercial Development Site Constitution and Peterson, with a letter entitled *Geotechnical Report* by RMG – Rocky Mountain Group dated February 23, 2021. The investigation “revealed similar substance subsurface transmission.

These soils are classified within Hydrologic Soil Group A. Erosion Potential is moderate to low depending on the granularity of the subsurface soil matrix, and must be actively contained during construction activities.

E. Existing Vegetation and Ground Cover

The total site is approximately 50% vegetated. The site slopes generally to the southeast at approximately 6%. The vegetation consists primarily of native grasses and weeds. The level of vegetative cover at the site was determined through a combination of site visits, photography, and published aerial data.

F. Potential Pollution Sources

The location of all potential pollution sources, including groundbreaking disturbing activities, vehicle fueling, storage of fertilizers or chemicals, concrete or asphalt batch plants, concrete washouts, among numerous other potential pollutants are enumerated in this SWMP. Further descriptions and locations can be found in Section III B 1 thru 13 of this report.

G. Non-stormwater Discharges

At this time, no non-stormwater components of discharge, such as springs, landscape irrigation return flows, construction dewatering or other discharges are known to exist. If any non-stormwater components of discharge are known to exist, these items will be addressed in Section

III C 8 of this report. If any non-stormwater discharges become apparent during the term of construction, the occurrence and mitigation shall be addressed in an addendum by the QSM Administrator (Qualified Stormwater Manager).

H. Receiving Waters

The project area will drain via surface flow and storm sewer facilities to a private full-spectrum detention facility situated at the southeast corner of the site. Runoff collected in the detention basin will be released at or below historic rates via an 18-inch RCP and will discharge to the rear side of an existing 15' type R Public Storm Inlet located at the northwest corner of the intersection of Canada Drive and Constitution Avenue. Flows continue in pipe and are released into East Fork Sand Creek approximately 1,000 feet east of the site.

II. SWMP SITE MAP

The Stormwater Management Plan Site Map (Figure 2) is included in Appendix 4 and identifies the following:

- A. Construction site boundaries;
- B. All areas of ground disturbance;
- C. Areas of cut and fill;
- D. Areas used for storage of building materials, equipment, soil, or waste;
- E. Locations of dedicated asphalt or concrete batch plants;
- F. Locations of all structural CCM;
- G. Locations of non-structural CCM where applicable;
- H. Locations of springs, streams, wetlands, detention basins, irrigation canals, roadside ditches and other surface waters.

The SWMP Site Map must be updated by the SWMP Administrator on a regular basis to reflect current conditions of the site at all times.

III. STORMWATER MANAGEMENT CONTROLS

A. QSM Administrator:

QSM Administrator: _____ Phone: (____)_____. The QSM Administrator will likely be the Contractor or his/her designated representative and is responsible for developing, implementing, maintaining and revising the SWMP. Should the QSM Administrator change for any reason, it shall be noted on this Plan.

B. Identification of Potential Pollutant Sources:

At a minimum, the following activities and sources shall be evaluated for the potential to contribute pollutants to stormwater discharges. The SWMP Administrator shall determine the need for and locations of each of the following potential pollutant sources during the course of the construction project. There are no stream crossings impacting or traversing the property.

The sources of any potential pollutants must be controlled through CCM selection and implementation:

1. All disturbed and stored soils;
2. Vehicle tracking of sediments;
3. Management of contaminated soils;
4. Loading and unloading operations;
5. Outdoor storage activities (building materials, fertilizers, chemicals, etc.);
6. Vehicle and equipment maintenance and fueling;
7. Significant dust or particulate generating processes shall be controlled by sprinkling with water and other appropriate means;
8. Routine maintenance activities involving fertilizers, pesticides, detergents, fuels, solvents, oils, etc.
9. On-site waste management practices such as waste piles, liquid wastes, dumpsters, etc.
10. Concrete truck/equipment washing, including the concrete truck chute and associated fixtures and equipment;
11. Dedicated asphalt and concrete batch plants;
12. Non-industrial waste sources such as worker trash and portable toilets; and
13. Any other areas or procedures where potential spills could occur.

C. Construction Control Measures (CCM) for Pollution Prevention

1. Structural practices for erosion and sediment control implemented on the site to minimize erosion and sediment are shown on sheet C301 to C303 and are as follows:

Structural practices to be used on-site are, silt fences, rock socks, inlet/outlet protection, concrete washout area, stabilized staging area, stockpile management, portable toilet, vehicle tracking control and a temporary sediment basin.

Minimal clearing and grubbing may be necessary prior to installing the initial erosion control features such as silt fences and vehicle tracking control. Prior to any construction activities, silt fences around proposed grading areas as shown on attached Sheet C301 will be installed. Vehicle tracking control will be installed to manage sedimentation from construction vehicles exiting the site. Inlet protection will be installed to filter stormwater before entering any watercourses. Final stabilization is anticipated to occur during Summer 2025.

2. Non-structural practices for erosion and sediment control to be used to minimize erosion and sediment transport are:

Temporary and permanent vegetation, mulching, geotextiles, sod stabilization, protection of trees and preservation of mature vegetation.

Minimize the amount of existing vegetation to be removed during construction, leaving native vegetation in place when possible. Only the existing vegetation that is specified or requiring removal shall be disturbed or removed. If possible, leave existing ground cover,

including asphalt in place or remove just prior to grading to minimize the length of soil exposure.

3. Phased CCM Implementation:

Minimal clearing and grubbing may be necessary prior to installing the initial erosion control features such as silt fences and vehicle tracking control. Prior to any construction activities, silt fences around proposed grading areas as shown on the SWMP Site Plan will be installed. Vehicle tracking control will be installed to manage sediment from construction vehicles exiting the site. Inlet protection and rock socks will be installed to filter stormwater before entering the storm sewer systems.

4. Materials handling and spill prevention:

The site superintendent will inspect daily to ensure proper use and disposal of materials on-site including building materials, paints, solvents, fertilizers, chemicals, waste materials and equipment maintenance or fueling procedures. All materials stored on-site will be stored in a neat and orderly manner in the original containers with the original manufacturer's label, and if possible, under a roof or other enclosure. Before disposing of the container, all of a product will be used up whenever possible and manufacturer's recommendations for proper disposal will be followed according to state and local regulations. Material and equipment necessary for spill cleanup will be kept in the material storage area on-site. Manufacturer's recommendations for spill cleanup will be posted and site personnel will be made aware of the procedures along with the location of the information and cleanup supplies.

Building Material Handling and Staging Areas: Paints, solvents, pesticides, fuels and oils, other hazardous materials or building materials that have the potential to contaminate stormwater should be stored indoors or under cover whenever possible or in areas with secondary containment. Secondary containment measures prevent a spill from spreading across the site and may include dikes, berms, curbing, or other containment methods. Secondary containment techniques should also ensure the protection of groundwater. Designate staging areas for activities such as fueling vehicles, mixing paints, plaster, mortar, and other potential pollutants. Designated staging areas enable easier monitoring of the use of materials and clean up of spills. Training employees and subcontractors is essential to the success of this pollution prevention principle. The following specific materials handling and staging practices should be used:

- a) Train employees and subcontractors in proper handling and storage practices.

- b) Clearly designate site areas for staging and storage with signs and on construction drawings. Staging areas should be located in areas central to the construction site. Segment the staging area into sub-areas designated for vehicles, equipment, or stockpiles. Construction entrances and exits should be clearly marked so that delivery vehicles enter/exit through stabilized areas with vehicle tracking controls (See Vehicle Tracking Control).
- c) Provide storage in accordance with Spill Protection, Control and Countermeasures (SPCC) requirements and plans and provide cover and impermeable perimeter control, as necessary, for hazardous materials and contaminated soils that must be stored on site.
- d) Ensure that storage containers are regularly inspected for leaks, corrosion, support or foundation failure, or other signs of deterioration and tested for soundness.
- e) Reuse and recycle construction materials when possible.

Vehicle Fueling and Maintenance Practices: Create a clearly designated on-site fueling and maintenance area that is clean and dry. The on-site fueling area should have a spill kit, and staff should know how to use it. If possible, conduct vehicle fueling and maintenance activities in a covered area. The following practices to help prevent the discharge of pollutants to stormwater from equipment/vehicle fueling and maintenance should be used:

- a) Train employees and subcontractors in proper fueling procedures (stay with vehicles during fueling, proper use of pumps, emergency shutoff valves, etc.).
- b) Inspect on-site vehicles and equipment regularly for leaks, equipment damage, and other service problems.
- c) Clearly designate vehicle/equipment service areas away from drainage facilities and watercourses to prevent stormwater run-on and runoff.
- d) Use drip pans, drip cloths, or absorbent pads when replacing spent fluids.
- e) Collect all spent fluids, store in appropriate labeled containers in the proper storage areas, and recycle fluids whenever possible.

Spill Prevention and Response: Representative procedures include identifying ways to reduce the chance of spills, stop the source of spills, contain and clean up spills, dispose of materials contaminated by spills, and train personnel responsible for spill prevention

and response. The following material handling procedures and storage requirements should be used to ensure that clear and concise spill cleanup procedures are provided and posted for areas in which spills may potentially occur:

- a) Note the locations of chemical storage areas, storm drains, tributary drainage areas, surface waterbodies on or near the site, and measures to stop spills from leaving the site.
- b) Provide proper handling and safety procedures for each type of waste. Keep Material Safety Data Sheets (MSDSs) for chemical used on site.
- c) Establish an education program for employees and subcontractors on the potential hazards to humans and the environment from spills and leaks.
- d) Specify how to notify appropriate authorities, such as police and fire departments, hospitals, or municipal sewage treatment facilities to request assistance. Emergency procedures and contact numbers should be provided and posted at storage locations.
- e) Use proper procedures, equipment and materials for immediate cleanup of spills and proper disposal.
- f) Identify personnel responsible for implementing the plan in the event of a spill. Update the spill prevention plan and clean up materials as changes occur to the types of chemicals stored and used at the facility.

5. Concrete and asphalt batch plants:

Dedicated concrete or asphalt batch plants are not anticipated to be used.

6. Vehicle tracking control:

Off-site vehicle tracking of sediment shall be minimized and is as shown on the CSWMP Site Map. Streets shall be kept clean and free of mud, soil and construction waste. Street sweeping or other acceptable methods shall be used to prevent sediment from being washed from the project site. Streets shall not be washed down with water. Street cleaning operations shall occur, if necessary or as directed by the County.

7. Waste management and disposal including concrete washout:

A concrete washout area shall be specified in a location near concrete work areas. Concrete wash water shall not be discharged to state waters or to storm sewer systems. The washout area shall be a shallow excavation with a small perimeter berm to isolate concrete truck washout operations. At the end of construction, all concrete shall be removed from the site

and disposed of at an approved waste site. Signs shall be placed at the washout to clearly indicate the concrete washout area to operators of concrete trucks and pump rigs.

All construction site waste both liquid and solid must be contained in approved waste containers and disposed of off-site according to state and local regulations. Locations are unknown at this time but will be shown on the SWMP Site Map when determined. Portable sanitary facilities shall be provided at the site throughout the construction phase.

Portable Toilets (PT) will be located a minimum of 10ft from stormwater inlets and 50ft from State Waters. They will be secured at all four corners to prevent overturning and cleaned on a weekly basis. They will be inspected daily for spills.

Waste Disposal Bins shall be inspected daily and emptied each week at a minimum. Full or overflowing waste bins shall not be left uncovered overnight.

8. Groundwater and stormwater dewatering:

Groundwater and/or stormwater dewatering is not anticipated on this site.

9. Self-Inspections:

The QSM Administrator is required to conduct self-inspections. The purpose of these inspections is to ensure that all Control Measures are installed according to the approved plans, appropriate as to the intended use, operating effectively, and being properly maintained. The GEC Administrator must be qualified according to Chapter 2, Section 5.0 of the Stormwater Construction Manual.

The QSM Administrator shall, at a minimum, make a thorough inspection at least once every 14 calendar days. Also, post-storm event inspections must be conducted within 24 hours following the end of any precipitation or snowmelt event that causes surface erosion. Provided the timing is appropriate, the post-storm inspections may be used to fulfill the 14-day routine inspection requirement. Alternatively, the QSM Administrator may choose to perform self-inspections every 7 calendar days and forego post-storm event inspections. The self-inspection schedule must be identified in the QSM Administrator's most recent self-inspection. A more frequent inspection schedule than the minimum described may be necessary to ensure that Control Measures continue to operate as needed to comply with the GEC Plan. Site conditions such as steep grades and close proximity to a state water are reasons for increasing the frequency of self-inspections.

The QSM Administrator shall submit documentation of the self-inspections by uploading the document to the County's Electronic Permitting Management System. **Completed self-inspection forms must be submitted electronically within 5 business days of the self-**

inspection. The self-inspections must also be available either physically or electronically at the construction site at all times throughout the duration of the project. Inspectors will review self-inspections during compliance inspections. The use of a third-party inspection program does not remove this requirement. Additionally, the use of a third-party inspection program does not relieve the Permittee of the requirement to comply with all compliance inspections.

For sites or portions of sites where construction activities have been completed and final stabilization measures installed but final stabilization has not yet been achieved, the QSM Administrator shall make a thorough inspection of their Control Measures at least once every month. Post-storm event inspections must be conducted within 72 hours following the end of any precipitation or snowmelt event that causes surface erosion. The GEC Plan must be amended to indicate those areas where construction activities have been completed but final stabilization has not yet been achieved that will be inspected once a month.

When site conditions make the schedule required in this section impractical, the permittee may petition the County to grant an alternate inspection schedule. The alternative inspection schedule may not be implemented prior to written approval by the County and incorporation into the SWMP.

The Permittee is responsible to confirm that the frequency of inspections is sufficient to ensure that Control Measures remain in good working condition at all times.

IV. FINAL STABILIZATION AND LONG-TERM STORMWATER MANAGEMENT

Final stabilization is anticipated to occur during Summer 2025. Final stabilization is reached when all soil disturbing activities at the site have been completed and uniform vegetative cover has been established with a density of at least 70 percent of pre-disturbance levels, or equivalent permanent, physical erosion reductions have been employed. For the purposes of the SWMP, establishment of a vegetative cover capable of providing erosion control equivalent to pre-existing conditions at the site can be considered final stabilization. The contractor will be responsible for providing the documentation to make this comparison to the State of Colorado, Water Quality Control Division.

The project site shall be seeded with the seed mix as shown on the SWMP CCM Details (Sheet C304), where the application methods and soil preparations are also found. All slopes greater (steeper) than three-to-one will be covered with erosion control blankets.

Management of storm water after completion of construction will be accomplished by utilizing the practices listed below.

- Upon completion of construction, the site shall be inspected to ensure that all equipment, waste materials and debris have been removed.
- The site will be inspected to make certain that all graded surfaces have been paved, landscaped, or seeded with an appropriate ground cover.
- All silt fence, inlet protection, sediment logs, curb socks and all other control practices and measures that are to remain after completion of construction will be inspected to ensure their proper functioning.
- The contractor shall remove erosion control measures that are not required to remain.

After all construction activities are completed on the site, but final stabilization has not been achieved, the contractor shall make a thorough inspection of the stormwater management system at least once every month.

The contractor shall be responsible for maintaining the storm water controls in good working order and shall also be responsible for the costs incurred until such time as final stabilization is reached. Once final stabilization has been achieved the contractor shall be responsible for removal of the erosion control measures.

Should any of the erosion control facilities come into disrepair prior to the establishment of the native or natural erosion control measures, the Contractor is responsible for the cost of such maintenance. The Contractor is also responsible for the clean up of offsite areas affected by any sediment that may leave the site. Control of erosion from areas disturbed by utility or building construction will be the responsibility of the respective contractor. All erosion control measures shown on the plan shall be installed and maintained in accordance with Construction Control Measures.

V. RECOMMENDED INSPECTION AND MAINTENANCE PROCEDURES

A. Self-Inspections

Self-inspections shall be conducted by the qualified QSM Administrator. These inspections are to ensure that all Control Measures are installed according to the approved plans, appropriate as to the intended use, operating effectively, and being properly maintained.

B. Minimum Inspection Schedule

- a) **Frequency.** Contractor should inspect Construction CCM's at the following times and intervals.
- (1) After installation of any Construction CCM;
 - (2) Post storm inspections -- within 24 hours after any runoff event (rainfall or snowmelt) that causes surface erosion;
 - (3) Routine inspections -- at a minimum once every 14 days, but a more frequent inspection schedule may be necessary to ensure that CCM continue to operate as needed to comply with the permit. Post storm inspections may be used to fulfill routine inspections.
 - (4) Alternate inspection schedule -- perform self-inspections every 7 calendar days and forego post-storm event inspections.
 - (5) A more frequent inspection schedule than the minimum described may be necessary to ensure that Control Measures continue to operate as needed to comply with the GEC Plan. Site conditions such as steep grades and close proximity to a state water are reasons for increasing the frequency of self-inspections.
 - (6) Construction activities have been completed and final stabilization measures installed but final stabilization has not yet been achieved -- the GEC Administrator shall make a thorough inspection of their Control Measures at least once every month. Post-storm event inspections must be conducted within 72 hours following the end of any precipitation or snowmelt event that causes surface erosion. The GEC Plan must be amended to indicate those areas where construction activities have been completed but final stabilization has not yet been achieved that will be inspected once a month.
 - (7) When site conditions make the schedule required in this section impractical, the permittee may petition the County to grant an alternate inspection schedule. The alternative inspection schedule may not be implemented prior to written approval by the County and incorporation into the SWMP.
 - (8) The Permittee is responsible to confirm that the frequency of inspections is sufficient to ensure that Control Measures remain in good working condition at all times.
 - (9) Consult Permit No. COR040000 for alternate inspection requirements at temporarily idle sites, at completed sites, or for winter conditions.
- b) **Inspection Log.** The QSM Administrator should record the inspection results on a site-specific standardized inspection log to be maintained and kept on the construction site, for review by agencies. The QSM Administrator shall submit documentation of the self-inspections by uploading the document to the County's Electronic Permitting Management System. Completed self-inspection forms must be submitted electronically within 5 business days of the self-inspection. The self-inspections must also be available either physically or electronically at the construction site at all times throughout the duration of the project. Inspectors will review self-inspections during compliance inspections. The use of a third-party inspection program does not remove this requirement. Additionally, the use of a third-party inspection program does not relieve the Permittee of the requirement to comply with all compliance inspections.

c) A template for the inspection log format is included in Appendix 3. The QSM Administrator should develop site-specific inspection logs that itemize the selected Construction CCM's for their site. At a minimum the following information from each inspection should be recorded on the site-specific log:

- (1) Date of Inspection;
- (2) Name and title and signature of inspector;
- (3) Self-inspection schedule;
- (4) Location(s) of discharges of sediment or other pollutants from the site;
- (5) Location(s) of CCM that need to be maintained;
- (6) Location(s) of CCM that failed to operate as designed or proved inadequate for a particular location;
- (7) Location(s) where additional CCM are needed that were not in place at the time of inspection;
- (8) Deviations from the minimum inspection schedule as provided in the permit;
- (9) Descriptions of corrective actions for any item above, date(s) of corrective actions taken, and measures taken to prevent future violations, including requisite changes to the SWMP, as necessary and
- (10) After corrective action(s) have been taken, or where a report does not identify any incidents requiring corrective actions, the report shall contain a signed statement indicating the site is in compliance with the permit to the best of the signer's knowledge and belief.

C. Correction of Deficiencies

The Permittee and QSM Administrator are responsible to ensure and document that Control Measures are maintained when and where deficiencies have been noted on self-inspections. When Control Measures have failed as determined by the QSM Administrator, they must be addressed as soon as possible, immediately in most cases, to minimize the discharge of pollutants. All issues must ultimately be resolved within 3 calendar days after the noncompliance issue is first identified.

D. CCM Operation and Maintenance.

The QSM Administrator is responsible for operation and maintenance of construction CCM. The QSM Administrator will inspect the site per inspection and monitoring protocol outlined above and make any necessary repairs to construction CCM immediately after a defect or other need for repair is discovered. The project site and the adjacent streets impacted by the construction shall be kept neat, clean, and free of debris. The erosion control measures and facilities will be maintained in good working order until final stabilization. Any items that are not functioning properly or are inadequate will be promptly repaired or upgraded. Records of inspections must be kept and be available for review by the State of Colorado Water Quality Control Division or the County.

The SWMP should be viewed as a 'living document' that is continuously being reviewed and modified as a part of the overall process of evaluating and managing Stormwater issues at the site. The QSM shall amend the SWMP when there is a change in design, construction, or Operating & Maintenance of the site which would require the implementation of new or revised BMPs or if the SWMP proves to be ineffective in achieving the general objectives of controlling pollutants in stormwater discharges associated with construction activities, or when BMPs are no longer necessary and could be removed.

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

REFERENCES

The following reports and plans were used in the process of preparing this Stormwater Management Plan:

1. *CDPS General Permit: Stormwater Discharges Associated with Construction Activity Permit No. COR040000*. Colorado Department of Public Health and Environment. January 21, 2021.
2. *Final Drainage Report – Peaceful Valley Subdivision Prepared by: Kiowa Engineering Corporation [No. 04092], July 20, 2006*
3. *West Fork Jimmy Camp Creek Drainage Basin Planning Study, prepared by Kiowa Engineering Corporation, dated October 17, 2003.*
4. *City of Colorado Springs and El Paso County Flood Insurance Study, prepared by the Federal Emergency Management Agency, dated March 1997.*
5. *El Paso County Drainage Criteria Manual (Volumes 1 and 2) and Engineering Criteria Manual, current editions.*
6. *Soil Survey of El Paso County Area, Colorado, prepared by United States Department of Agriculture Soil Conservation Service, dated June 1981.*

APPENDIX 1
SWMP Application

APPENDIX 2

Construction Activity Stormwater Permit



STATE OF COLORADO

COLORADO DEPARTMENT OF PUBLIC HEALTH AND ENVIRONMENT

Water Quality Control Division

CDPS GENERAL PERMIT STORMWATER DISCHARGES ASSOCIATED WITH
CONSTRUCTION ACTIVITY AUTHORIZATION TO DISCHARGE UNDER THE COLORADO DISCHARGE PERMIT SYSTEM (CDPS)
COR400000

In compliance with the provisions of the Colorado Water Quality Control Act, (25-8-101 et seq., CRS, 1973 as amended) and the Federal Water Pollution Control Act, as amended (33 U.S.C. 1251 et seq.; the "Act"), this permit authorizes the discharge of stormwater associated with construction activities (and specific allowable non-stormwater discharges in accordance with Part I.A.1. of the permit) certified under this permit, from those locations specified throughout the State of Colorado to specified waters of the State.

Such discharges shall be in accordance with the conditions of this permit. This permit specifically authorizes the facility listed on the certification to discharge in accordance with permit requirements and conditions set forth in Parts I and II hereof. All discharges authorized herein shall be consistent with the terms and conditions of this permit.

This permit becomes effective on April 1, 2019, and shall expire at midnight March 31, 2024.

Issued and signed this 28th day of January, 2021.

Meg Parish

Meg Parish, Permits Section Manager Water Quality Control Division

COLORADO DEPARTMENT OF PUBLIC HEALTH AND ENVIRONMENT

Permit History

Minor Modification Issued January 28, 2021 Effective February 1, 2021

Modification Issued December 31, 2020 Effective February 1, 2021

Originally signed and issued October 31, 2018; effective April 1, 2019

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Part I

Note: At the first mention of terminology that has a specific connotation for the purposes of this permit, the terminology is electronically linked to the definitions section of the permit in Part I.E.

A. COVERAGE UNDER THIS PERMIT

1. Authorized Discharges

This general permit authorizes permittee(s) to discharge the following to state waters: stormwater associated with construction activity and specified non-stormwater associated with construction activity. The following types of stormwater and non-stormwater discharges are authorized under this permit:

a. Allowable Stormwater Discharges

- i. Stormwater discharges associated with construction activity.
- ii. Stormwater discharges associated with producing earthen materials, such as soils, sand, and gravel dedicated to providing material to a single contiguous site, or within ¼ mile of a construction site (e.g. borrow or fill areas).
- iii. Stormwater discharges associated with [dedicated asphalt](#), [concrete batch plants](#) and [masonry mixing stations](#) (Coverage under this permit is not required if alternative coverage has been obtained.)

b. Allowable Non-Stormwater Discharges

The following non-stormwater discharges are allowable under this permit if the discharges are identified in the stormwater management plan in accordance with [Part I.C](#) and if they have appropriate [control measures](#) in accordance with [Part I.B.1](#).

- i. Discharges from uncontaminated springs that do not originate from an area of land disturbance.
- ii. Discharges to the ground of concrete washout water associated with the washing of concrete tools and concrete mixer chutes. Discharges of concrete washout water must not leave the site as surface runoff or reach [receiving waters](#) as defined by this permit. Concrete on-site waste disposal is not authorized by this permit except in accordance with [Part I.B.1.a.ii\(b\)](#).
- iii. Discharges of landscape irrigation return flow.
- iv. Discharges from [diversions](#) of state waters within the permitted site.

c. Emergency Fire Fighting

Discharges resulting from emergency firefighting activities during the active emergency response are authorized by this permit.

2. Limitations on Coverage

Discharges not authorized by this permit include, but are not limited to, the discharges and activities listed below. Permittees may seek individual or alternate general permit coverage for the discharges, as appropriate and available.

a. Discharges of Non-Stormwater

Discharges of non-stormwater, except the authorized non-stormwater discharges listed in Part

I.A.1.b., are not eligible for coverage under this permit.

- b. Discharges Currently Covered by another Individual or General Permit
- c. Discharges Currently Covered by a Water Quality Control Division (division) Low Risk Guidance Document

3. Permit Certification and Submittal Procedures

a. Duty to Apply

The following activities shall apply for coverage under this permit:

- i. Construction activity that will disturb one acre or more; or
- ii. Construction activity that is part of a [common plan of development or sale](#); or
- iii. Stormwater discharges that are designated by the division as needing a stormwater permit because the discharge:
 - (a) Contributes to a violation of a water quality standard; or
 - (b) Is a significant contributor of [pollutants](#) to state waters.

b. Application Requirements

To obtain authorization to discharge under this permit, applicants applying for coverage following the effective date of the renewal permit shall meet the following requirements:

- i. Owners and operators submitting an application for permit coverage will be co-permittees subject to the same benefits, duties, and obligations under this permit.
- ii. Signature requirements: Both the [owner](#) and [operator](#) (permittee) of the construction site, as defined in Part I.E., must agree to the terms and conditions of the permit and submit a completed application that includes the signature of both the owner and the operator. In cases where the duties of the owner and operator are managed by the owner, both application signatures may be completed by the owner. Both the owner and operator are responsible for ensuring compliance with all terms and conditions of the permit, including implementation of the stormwater management plan.
- iii. The applicant(s) must develop a stormwater management plan (SWMP) in accordance with the requirements of Part I.C. The applicant(s) must also certify that the SWMP is complete, or will be complete, prior to commencement of any construction activity.
- iv. In order to apply for certification under this general permit, the applicant(s) must submit a complete, accurate, and signed permit application form as provided by the division by electronic delivery at least 10 days prior to the commencement of construction activity, except those construction activities that are in response to a [public emergency related site](#); [public emergency related sites](#) shall apply for coverage no later than 14 days after the commencement of construction activities. The provisions of this part in no way remove a violation of the Colorado Water Quality Control Act if a [point source](#) discharge occurs prior to the issuance of a CDPS permit.
- v. The application in its entirety must be submitted via the division's online permitting system unless a waiver is granted by the division. If a waiver is granted, the application in its entirety, including signatures by both the owner and operator, must be submitted to:

Colorado Department of Public Health and Environment
Water Quality Control Division
Permits Section, WQCD-PS-B2
4300 Cherry Creek Drive South
Denver, CO 80246

- vi. The applicant(s) must receive written notification that the division granted permit coverage prior to conducting construction activities except for construction activities that are in response to a public emergency related site.

c. Division Review of Permit Application

Within 10 days of receipt of the application, and following review of the application, the division may:

- i. Issue a certification of coverage;
- ii. Request additional information necessary to evaluate the discharge;
- iii. Delay the authorization to discharge pending further review;
- iv. Notify the applicant that additional terms and conditions are necessary; or
- v. Deny the authorization to discharge under this general permit.

d. Alternative Permit Coverage

i. Division Required Alternative Permit Coverage:

The division may require an applicant or permittee to apply for an individual permit or an alternative general permit if it determines the discharge does not fall under the scope of this general permit, including if any additional terms and conditions are necessary in order to ensure that discharges authorized by this permit shall not cause, have the reasonable potential to cause, or measurably contribute to an exceedance of any applicable water quality standard, including narrative standards for water quality. In this case, the division will notify the applicant or permittee that an individual permit application is required.

ii. Permittee Request for Alternative Permit Coverage:

A permittee authorized to discharge stormwater under this permit may request to be excluded from coverage under this general permit by applying for an individual permit. In this case, the permittee must submit an individual application, with reasons supporting the request, to the division at least 180 days prior to any discharge. When an individual permit is issued, the permittee's authorization to discharge under this permit is terminated on the effective date of the individual permit.

e. Submittal Signature Requirements

Documents required for submittal to the division in accordance with this permit, including applications for permit coverage and other documents as requested by the division, must include signatures by **both** the owner and the operator, except for instances where the duties of the owner and operator are managed by the owner.

Signatures on all documents submitted to the division as required by this permit must meet the Standard Signatory Requirements in [Part II.K](#) of this permit in accordance with 40 C.F.R. 122.41(k).

i. Signature Certification

Any person(s) signing documents required for submittal to the division must make the following

certification:

“I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.”

f. Compliance Document Signature Requirements

Documents which are required for compliance with the permit, but for which submittal to the division is not required unless specifically requested by the division, must be signed by the individual(s) designated as the [Qualified Stormwater Manager](#), as defined in Part I.E.

- i. Any person(s) signing inspection documents required for compliance with the permit per [Part I.D.5.c.xiii](#) must make the following statement and provide the date of the statement:

“I verify that, to the best of my knowledge and belief, that if any corrective action items were identified during the inspection, those corrective actions are complete, and the site is currently in compliance with the permit.”

g. Field Wide Permit Coverage for Oil and Gas Construction

At the discretion of the division, a single permit certification may be issued to a single oil and gas permittee to cover construction activity related discharges from an oil and gas field at multiple locations that are not necessarily contiguous.

h. Permit Coverage without Application

Qualifying Local Program: When a small construction site is within the jurisdiction of a qualifying local program, the owner and operator of the construction activity are authorized to discharge stormwater associated with **small construction activity** under this general permit without the submittal of an application to the division. Sites covered by a qualifying local program are exempt from the following sections of this general permit: Part I.A.3.a.; Part I.A.3.b.; Part I.A.3.c.; Part I.A.3.d.; Part I.A.3.g.; Part I.A.3.i.; Part I.A.3.j.; Part I.A.3.k.

Sites covered by a qualifying local program are subject to the following requirements:

- i. **Local Agency Authority:** This permit does not pre-empt or supersede the authority of local agencies to prohibit, restrict, or control discharges of stormwater to storm drain systems or other water courses within their jurisdiction.
- ii. **Permit Coverage Termination:** When a site under a Qualifying Local Program is finally stabilized, coverage under this permit is automatically terminated.
- iii. **Compliance with Qualifying Local Program:** Qualifying Local Program requirements that are equivalent to the requirements of this permit are incorporated by reference. Permittees authorized to discharge under this permit, must comply with the equivalent requirements of the Qualifying Local Program that has jurisdiction over the site as a condition of this permit.
- iv. **Compliance with Remaining Permit Conditions.** Requirements of this permit that are in addition to or more stringent than the requirements of the Qualifying Local Program apply in addition to the requirements of the Qualifying Local Program.
- v. **Written Authorization of Coverage:** The division or local municipality may require any permittee within the jurisdiction of a Qualifying Local Program covered under this permit to

apply for, and obtain written authorization of coverage under this permit. The permittee must be notified in writing that an application for written authorization of coverage is required.

i. Permittee Initiated Permit Actions

Permittee initiated permit actions, including but not limited to modifications, contact changes, transfers, and terminations, shall be conducted following [Part II.L](#), division guidance and using appropriate division-provided forms.

j. Sale of Residence to Homeowner

Residential construction sites only: The permittee may remove residential lots from permit coverage once the lot meets the following criteria:

- i. The residential lot has been sold to the homeowner(s) for private residential use;
- ii. A certificate of occupancy, or equivalent, is maintained on-site and is available during division inspections;
- iii. The lot is less than one acre of disturbance;
- iv. All construction activity conducted on the lot by the permittee is complete;
- v. The permittee is not responsible for final stabilization of the lot; and
- vi. The SWMP was modified to indicate the lot is no longer part of the construction activity.

If the residential lot meets the criteria listed above then activities occurring on the lot are no longer considered to be construction activities with a duty to apply and maintain permit coverage. Therefore, the permittee is not required to meet the final stabilization requirements and may terminate permit coverage for the lot.

k. Permit Expiration and Continuation of Permit Coverage

Authorization to discharge under this general permit shall expire at midnight on March 31, 2024. While Regulation 61.4 requires a permittee to submit an application for continuing permit coverage 180 days before the permit expires, the division is requiring that permittees desiring continued coverage under this general permit must reapply at least 90 days in advance of this permit expiration. The division will determine if the permittee may continue to discharge stormwater under the terms of the general permit. An individual permit may be required for any facility not reauthorized to discharge under the reissued general permit.

If this permit is not reissued or replaced prior to the expiration date, it will be administratively continued and remain in force and effect. For permittees that have applied for continued permit coverage, discharges authorized under this permit prior to the expiration date will automatically remain covered by this permit until the earliest of:

- i. An authorization to discharge under a reissued permit, or a replacement of this permit, following the timely and appropriate submittal of a complete application requesting authorization to discharge under the new permit and compliance with the requirements of the new permit; or
- ii. The issuance and effect of a termination issued by the division; or
- iii. The issuance or denial of an individual permit for the facility's discharges; or
- iv. A formal permit decision by the division not to reissue this general permit, at which time the division will identify a reasonable time period for covered dischargers to seek coverage under

an alternative general permit or an individual permit. Coverage under this permit will cease when coverage under another permit is granted/authorized; or

- v. The division has informed the permittee that discharges previously authorized under this permit are no longer covered under this permit.

B. EFFLUENT LIMITATIONS

1. Requirements for Control Measures Used to Meet Effluent Limitations

The permittee must implement control measures to [minimize](#) the discharge of pollutants from all potential pollutant sources at the site. Control measures must be installed prior to commencement of construction activities. Control measures must be selected, designed, installed and maintained in accordance with [good engineering, hydrologic and pollution control practices](#). Control measures implemented at the site must be designed to prevent pollution or degradation of state waters.

a. Stormwater Pollution Prevention

The permittee must implement structural and/or nonstructural control measures that effectively minimize erosion, sediment transport, and the release of other pollutants related to construction activity.

i. Control Measures for Erosion and Sediment Control

Control measures for erosion and sediment control may include, but are not limited to, wattles/sediment control logs, silt fences, earthen dikes, drainage swales, sediment traps, subsurface drains, pipe slope drains, inlet protection, outlet protection, gabions, sediment basins, temporary vegetation, permanent vegetation, mulching, geotextiles, sod stabilization, slope roughening, maintaining existing vegetation, protection of trees, and preservation of mature vegetation.

Specific control measures must meet the requirements listed below.

- (a) Structural and nonstructural vehicle tracking controls shall be implemented to minimize vehicle tracking of sediment from disturbed areas and may include tracking pads, minimizing site access, wash racks, graveled parking areas, maintaining vehicle traffic to paved areas, street sweeping and sediment control measures.
- (b) Stormwater runoff from all disturbed areas and soil storage areas must utilize or flow to one or more control measures to minimize erosion or sediment in the discharge. The control measure(s) must be selected, designed, installed and adequately sized in accordance with good engineering, hydrologic and pollution control practices for the intended application. The control measure(s) must contain or filter flows in order to prevent the [bypass](#) of flows without treatment and must be appropriate for stormwater runoff from disturbed areas and for the expected flow rate, duration, and flow conditions (e.g. sheet or concentrated flow).
- (c) Selection of control measures should prioritize the use of structural and nonstructural control measures that minimize the potential for erosion (i.e. covering materials). Selection should also prioritize phasing construction activities to minimize the amount of soil disturbance at any point in time throughout the duration of construction.
- (d) Outlets that withdraw water from or near the surface shall be installed when discharging from basins and impoundments, unless [infeasible](#).
- (e) Maintain pre-existing vegetation or equivalent control measures for areas within 50 horizontal feet of receiving waters as defined by this permit, unless infeasible.

- (f) Soil compaction must be minimized for areas where infiltration control measures will occur or where [final stabilization](#) will be achieved through vegetative cover.
 - (g) Unless infeasible, topsoil shall be preserved for those areas of a site that will utilize vegetative final stabilization.
 - (h) Minimize the amount of soil exposed during construction activity, including the disturbance of [steep slopes](#).
 - (i) Diversion control measures must minimize soil transport and erosion within the entire diversion, minimize erosion during discharge, and minimize run-on into the diversion. The permittee must minimize the discharge of pollutants throughout the installation, implementation and removal of the diversion. Diversions must meet one or more of the following conditions:
 - (1) Lined or piped structures that result in no erosion in all flow conditions.
 - (2) Diversion channels, berms, and coffer dams must be lined or composed of a material that minimizes potential for soil loss in the entire wetted perimeter during anticipated flow conditions (e.g. vegetated swale, non-erosive soil substrate). The entire length of the diversion channel must be designed with all of the following considerations: maximum flow velocity for the type of material(s) exposed to the anticipated flows to ensure that the calculated maximum shear stress of flows in the channel is not expected to result in physical damage to the channel or liner and result in discharge of pollutants. Additionally, the conditions relied on to minimize soil loss must be maintained for the projected life of the diversion (i.e. a vegetated swale must be limited to a period of time that ensures vegetative growth, minimizes erosion and maintains stable conditions).
 - (3) An alternative diversion criteria, approved by the division prior to implementation. The diversion method must be designed to minimize the discharge of pollutants and to prevent the potential for pollution or degradation to state waters as a result of the diverted flow through the diversion structure. In addition, the alternative diversion method must minimize the discharge of pollutants throughout the installation, implementation and removal of the diversion.
- ii. Practices for Other Common Pollutants
- (a) Bulk storage, individual containers of 55 gallons or greater, for petroleum products and other liquid chemicals must have secondary containment, or equivalent protection, in order to contain [spills](#) and to prevent spilled material from entering state waters.
 - (b) Control measures designed for concrete washout waste must be implemented. This includes washout waste discharged to the ground as authorized under this permit and washout waste from concrete trucks and masonry operations contained on site. The permittee must ensure the washing activities do not contribute pollutants to stormwater runoff, or receiving waters in accordance [Part I.A.1.b.ii](#). Discharges that may reach groundwater must flow through soil that has buffering capacity prior to reaching groundwater, as necessary to meet the effluent limits in this permit, including [Part I.B.3.a](#). The concrete washout location must not be located in an area where shallow groundwater may be present and would result in buffering capacity not being adequate, such as near natural drainages, springs, or wetlands. This permit authorizes discharges to the ground of concrete washout waste, but does not authorize on-site waste disposal per [Part I.B.3.d](#).
 - (c) In the event that water remains onsite and contains pollutants either from the

firefighting activities or picked up from the site (i.e. in a gutter, sediment basin, etc.) after active emergency response is complete, the permittee must ensure the remaining water containing pollutants is properly removed and disposed of in order to minimize pollutants from discharging from the site, unless infeasible.

iii. Stabilization Requirements

The following requirements must be implemented for each site.

- (a) Temporary stabilization must be implemented for earth disturbing activities on any portion of the site where ground disturbing construction activity has permanently ceased, or temporarily ceased for more than 14 calendar days. Temporary stabilization methods may include, but are not limited to, tarps, soil tackifier, and hydroseed. The permittee may exceed the 14-day schedule when either the function of the specific area of the site requires it to remain disturbed or physical characteristics of the terrain and climate prevent stabilization. The SWMP must document the constraints necessitating the alternative schedule, provide the alternate stabilization schedule, and identify all locations where the alternative schedule is applicable on the site map. Minimum inspection frequency and scope, as directed in Part I.D., must be followed for temporarily stabilized areas.
- (b) Final stabilization must be implemented for all construction sites covered under this permit. Final stabilization is reached when (1), (2), and (3) below are complete:
 - (1) All construction activities are complete.
 - (2) Permanent stabilization methods are complete. Permanent stabilization methods include, but are not limited to, permanent pavement or concrete, hardscape, xeriscape, stabilized driving surfaces, vegetative cover, or equivalent permanent alternative stabilization methods. The division may approve alternative final stabilization criteria for specific operations. Vegetative cover must meet the following criteria:
 - a. Evenly distributed perennial vegetation, and
 - b. Coverage, 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, and
 - (3) The permittee must ensure all temporary control measures are removed from the construction site once final stabilization is achieved, except when the control measure specifications allow the control measure to be left in place (i.e. bio-degradable control measures).
- (c) Final stabilization must be designed and installed as a permanent feature. Final stabilization measures for obtaining a vegetative cover or alternative stabilization methods include, but are not limited to, the following as appropriate:
 - (1) Seed mix selection and application methods;
 - (2) Soil preparation and amendments;
 - (3) Soil stabilization methods to provide adequate protection to minimize erosion (e.g. crimped straw, hydro mulch or rolled erosion control products);
 - (4) Appropriate sediment control measures as needed until final stabilization is achieved;

(5) Permanent pavement, hardscape, xeriscape, stabilized driving surfaces;

(d) Other alternative stabilization practices as applicable.

b. Maintenance

The permittee must ensure that all control measures remain in effective operating condition and are protected from activities that would reduce their effectiveness. Control measures must be maintained in accordance with good engineering, hydrologic and pollution control practices. Observations leading to the required maintenance of control measures can be made during a site inspection, or during general observations of site conditions. The necessary repairs or modifications to a [control measure requiring routine maintenance](#), as defined in Part I.E., must be conducted to maintain an effective operating condition. This section is not subject to the requirements in [Part I.B.1.c](#) below.

c. Corrective Actions

The permittee must assess the adequacy of control measures at the site, and the need for changes to those control measures, to ensure continued effective performance.

When an [inadequate control measure](#), as defined in Part I.E., is identified (i.e., new or replacement control measures become necessary), the following corrective action requirements apply. The permittee is in noncompliance with the permit until the inadequate control measure is replaced or corrected and returned to effective operating condition in compliance with [Part I.B.1](#) and the general requirements in [Part I.B.3](#). If the inadequate control measure results in noncompliance that meets the conditions of Part II.L., the permittee must also meet the requirements of that section.

i. The permittee must take all necessary steps to minimize or prevent the discharge of pollutants from the permitted area and manage any stormwater run-on onto the site until a control measure is implemented and made operational and/or an inadequate control measure is replaced or corrected and returned to effective operating condition. If it is infeasible to install or repair the control measure immediately after discovering the deficiency, the following must be documented in the SWMP in [Part I.D.5.c](#) and kept on record in accordance with the recordkeeping requirements in Part II.

(a) Describe why it is infeasible to initiate the installation or repair immediately; and

(b) Provide a schedule for installing or repairing the control measure and returning it to an effective operating condition as soon as possible.

ii. If applicable, the permittee must remove and properly dispose of any unauthorized release or discharge within and from the permitted area (e.g., discharge of non-stormwater, untreated stormwater containing pollutants, spill, or leak not authorized by this permit.) The permittee must also clean up any contaminated surfaces, if feasible, to minimize discharges of the material in subsequent storm events, including water remaining from the response that contains pollutants after active emergency firefighting response is complete.

2. Discharges to an Impaired Waterbody

a. [Total Maximum Daily Load](#) (TMDL)

If the discharge from the site of permit coverage flows to or could reasonably be expected to flow to any water body for which a TMDL has been approved, and stormwater discharges associated with construction activity were assigned a pollutant-specific Wasteload Allocation (WLA) under the TMDL, the division may:

i. Ensure the WLA is implemented properly through alternative local requirements, such as by a

municipal stormwater permit; or

- ii. Notify the permittee of the WLA and amend the permittee's certification to add specific effluent limits and other requirements, as appropriate. The permittee may be required to do the following:
 - (a) Under the permittee's SWMP, implement specific control measures based on requirements of the WLA, and evaluate whether the requirements are met through implementation of existing stormwater control measures or if additional control measures are necessary. Document the calculations or other evidence demonstrating that the requirements are expected to be met; and
 - (b) If the evaluation shows that additional or modified control measures are necessary, describe the type and schedule for the control measure additions or modifications.
- iii. Discharge monitoring may also be required. The permittee may maintain coverage under the general permit provided they comply with the applicable requirements outlined above. The division reserves the right to require individual or alternate general permit coverage.

3. General Requirements

- a. Discharges authorized by this permit shall not cause, have the reasonable potential to cause, or measurably contribute to an exceedance of any applicable water quality standard, including narrative standards for water quality.
- b. The division may require sampling and testing, on a case-by-case basis, in the event that there is reason to suspect that the SWMP is not adequately minimizing pollutants in stormwater or in order to measure the effectiveness of the control measures in removing pollutants in the effluent. Such monitoring may include Whole Effluent Toxicity testing.
- c. The permittee must comply with the lawful requirements of federal agencies, municipalities, counties, drainage districts and other local agencies including applicable requirements in [Municipal Stormwater Management Programs](#) developed to comply with CDPS permits. The permittee must comply with local stormwater management requirements, policies and guidelines including those for erosion and sediment control.
- d. All construction site wastes must be properly managed to prevent potential pollution of state waters. This permit does not authorize on-site waste disposal.
- e. This permit does not relieve the permittee of the reporting requirements in 40 CFR 110, 40 CFR 117 or 40 CFR 302. Any discharge of hazardous material must be handled in accordance with the division's Noncompliance Notification Requirements (see [Part II.L](#) of the permit).

C. STORMWATER MANAGEMENT PLAN (SWMP) REQUIREMENTS

1. SWMP General Requirements

- a. A SWMP shall be developed for each construction site listed under [Part I.A.3.a](#), including but not limited to, construction activity that will disturb one acre or more and/or are part of a common plan of development or sale covered by this permit. The SWMP must be prepared in accordance with good engineering, hydrologic and pollution control practices.
 - i. For public emergency related sites, a SWMP shall be created no later than 14 days after the commencement of construction activities.
- b. The permittee must implement the provisions of the SWMP as written and updated, from commencement of construction activity until final stabilization is complete. The division may review the SWMP.

- c. A copy of the SWMP must be retained onsite or be onsite when construction activities are occurring at the site unless the permittee specifies another location and obtains approval from the division.

2. SWMP Content

- a. The SWMP, at a minimum, must include the following elements.
 - i. Qualified Stormwater Manager. The SWMP must list individual(s) by title and name who are designated as responsible for implementing the SWMP in its entirety and meet the definition of a Qualified Stormwater Manager. This role may be filled by more than one individual.
 - ii. Spill Prevention and Response Plan. The SWMP must have a spill prevention and response plan. The plan may incorporate by reference any part of a Spill Prevention Control and Countermeasure (SPCC) plan under section 311 of the Clean Water Act (CWA) or a Spill Prevention Plan required by a separate CDPS permit. The relevant sections of any referenced plans must be available as part of the SWMP consistent with Part I.C.4.
 - iii. Other CDPS Permits. The SWMP must list the applicable CDPS permits associated with the permitted site and the activities occurring on the permitted site (e.g. a CDPS Dewatering Permit).
 - iv. Materials Handling. The SWMP must describe handling procedures of all control measures implemented at the site to minimize impacts from handling significant materials that could contribute pollutants to runoff. These handling procedures can include control measures for pollutants and activities such as, exposed storage of building materials, paints and solvents, landscape materials, fertilizers or chemicals, sanitary waste material, trash and equipment maintenance or fueling procedures.
 - v. Potential Sources of Pollution. The SWMP must list all potential sources of pollution which may reasonably be expected to affect the quality of stormwater discharges associated with construction activity from the site. This may include, but is not limited to, the following pollutant sources:
 - (a) Disturbed and stored soils;
 - (b) Vehicle tracking of sediments;
 - (c) Management of contaminated soils, if known to be present, or if contaminated soils are found during construction;
 - (d) Loading and unloading operations;
 - (e) Outdoor storage activities (erodible building materials, fertilizers, chemicals, etc.);
 - (f) Vehicle and equipment maintenance and fueling;
 - (g) Significant dust or particulate generating processes (e.g., saw cutting material, including dust);
 - (h) Routine maintenance activities involving fertilizers, pesticides, herbicides, detergents, fuels, solvents, oils, etc.;
 - (i) On-site waste management practices (waste piles, liquid wastes, dumpsters);
 - (j) Concrete truck/equipment washing, including washing of the concrete truck chute and associated fixtures and equipment;
 - (k) Dedicated asphalt, concrete batch plants and masonry mixing stations;

(l) Non-industrial waste sources such as worker trash and portable toilets.

- vi. Implementation of Control Measures. The SWMP must include design specifications that contain information on the implementation of all the structural and nonstructural control measures in use on the site in accordance with good engineering, hydrologic and pollution control practices; including, as applicable, drawings, dimensions, installation information, materials, implementation processes, control measure-specific inspection expectations, and maintenance requirements.

The SWMP must include a documented use agreement between the permittee and the owner or operator of any control measures located outside of the permitted area, that are utilized by the permittee's construction site for compliance with this permit, but not under the direct control of the permittee. The permittee is responsible for ensuring that all control measures located outside of their permitted area, that are being utilized by the permittee's construction site, are properly maintained and in compliance with all terms and conditions of the permit. The SWMP must include all information required of and relevant to any such control measures located outside the permitted area, including location, installation specifications, design specifications and maintenance requirements.

- vii. Site Description. The SWMP must include a site description which includes, at a minimum, the following:
- (a) The nature of the construction activity at the site;
 - (b) The proposed schedule for the sequence for major construction activities and the planned implementation of control measures for each phase. (e.g. clearing, grading, utilities, vertical, etc.);
 - (c) Estimates of the total acreage of the site, and the acreage expected to be disturbed by clearing, excavation, grading, or any other construction activities;
 - (d) A summary of any existing data and sources used in the development of the construction site plans or SWMP that describe the soil types found in the permitted area and the erodibility of the identified soil types;
 - (e) A description of the percent cover of native vegetation on the site if the site is undisturbed, or the percent cover of native vegetation in a similar, local undisturbed area or adequate reference area if the site is disturbed. Include the source or methodology for determining the percentage. If a percent cover is not appropriate for the site location (i.e. arid), describe the technique and justification for the identified cover of native vegetation;
 - (f) A description of any allowable non-stormwater discharges at the site, including those being discharged under a separate CDPS permit or a division low risk discharge guidance policy, and applicable control measures installed;
 - (g) A description of the drainage patterns from the site, including a description of the immediate source receiving the discharge and the receiving water(s) of the discharge, if different than the immediate source. If the stormwater discharge is to a [municipal separate storm sewer system](#), include the name of the entity owning that system, the location(s) of the stormwater discharge, and the receiving water(s);
 - (h) A description of all stream crossings located within the construction site boundary; and
 - (i) A description of the alternate temporary stabilization schedule, if applicable ([Part I.B.1.a.iii\(a\)](#)).

- (j) A description of the alternative diversion criteria as approved by the division, if applicable ([Part I.B.1.a.i\(i\)\(3\)](#)).

viii. Site Map. The SWMP must include a site map which includes, at a minimum, the following:

- (a) Construction site boundaries;
- (b) Flow arrows that depict stormwater flow directions on-site and runoff direction;
- (c) All areas of ground disturbance including areas of borrow and fill;
- (d) Areas used for storage of soil;
- (e) Locations of all waste accumulation areas, including areas for liquid, concrete, masonry, and asphalt;
- (f) Locations of dedicated asphalt, concrete batch plants and masonry mixing stations;
- (g) Locations of all structural control measures;
- (h) Locations of all non-structural control measures (e.g. temporary stabilization);
- (i) Locations of springs, streams, wetlands, diversions and other state waters, including areas that require pre-existing vegetation be maintained within 50 feet of a receiving water, where determined feasible in accordance with [Part I.B.1.a.i\(e\)](#);
- (j) Locations of all stream crossings located within the construction site boundary; and
- (k) Locations where alternative temporary stabilization schedules apply.

ix. Temporary Stabilization, Final Stabilization and Long Term Stormwater Management.

- (a) The SWMP must document the constraints necessitating an alternative temporary stabilization schedule, as referenced in [Part I.B.1.a.iii\(a\)](#), provide the alternate stabilization schedule, and identify all locations where the alternative schedule is applicable on the site map.
- (b) The SWMP must describe and locate the methods used to achieve final stabilization of all disturbed areas at the site, as listed in [Part I.B.1.a.iii\(b\)](#).
- (c) The SWMP must describe the measures used to establish final stabilization through vegetative cover or alternative stabilization method, as referenced in [Part I.B.1.a.iii\(c\)](#), and describe and locate any temporary control measures in place during the process of final stabilization.
- (d) The SWMP must describe and locate any planned permanent control measures to control pollutants in stormwater discharges that will occur after construction operations are completed, including but not limited to, detention/retention ponds, rain gardens, stormwater vaults, etc.

x. Inspection Reports. The SWMP must include documented inspection reports in accordance with [Part I.D.5.c](#).

3. SWMP Review and Revisions

Permittees must keep a record of SWMP changes made that includes the date and identification of the changes. The SWMP must be amended when the following occurs:

- a. A change in design, construction, operation, or maintenance of the site requiring implementation

of new or revised control measures;

- b. The SWMP proves ineffective in controlling pollutants in stormwater runoff in compliance with the permit conditions;
- c. Control measures identified in the SWMP are no longer necessary and are removed; and
- d. Corrective actions are taken onsite that result in a change to the SWMP.
- e. The site or areas of the site qualifying for reduced frequency inspections under [Part I.D.4](#).

For SWMP revisions made prior to or following a change(s) onsite, including revisions to sections addressing site conditions and control measures, a notation must be included in the SWMP that identifies the date of the site change, the control measure removed, or modified, the location(s) of those control measures, and any changes to the control measure(s). The permittee must ensure the site changes are reflected in the SWMP. The permittee is noncompliant with the permit until the SWMP revisions have been made.

4. SWMP Availability

A copy of the SWMP must be provided upon request to the division, EPA, and any local agency with authority for approving sediment and erosion plans, grading plans or stormwater management plans within the time frame specified in the request. If the SWMP is required to be submitted to any of these entities, the submission must include a signed certification in accordance with [Part I.A.3.e](#), certifying that the SWMP is complete and compliant with all terms and conditions of the permit.

All SWMPs required under this permit are considered reports that must be available to the public under Section 308(b) of the CWA and Section 61.5(4) of the CDPS regulations. The permittee must make plans available to members of the public upon request. However, the permittee may claim any portion of a SWMP as confidential in accordance with 40 CFR Part 2.

D. SITE INSPECTIONS

Site inspections must be conducted in accordance with the following requirements. The required inspection schedules are a minimum frequency and do not affect the permittee's responsibility to implement control measures in effective operating condition as prescribed in the SWMP, [Part I.C.2.a.vi](#), as proper maintenance of control measures may require more frequent inspections. Site inspections shall start within 7 calendar days of the commencement of construction activities on site.

1. Person Responsible for Conducting Inspections

The person(s) inspecting the site may be on the permittee's staff or a third party hired to conduct stormwater inspections under the direction of the permittee(s). The permittee is responsible for ensuring that the inspector meets the definition of a Qualified Stormwater Manager. The inspector may be different than the individual(s) listed in [Part I.C.2.a.i](#).

2. Inspection Frequency

Permittees must conduct site inspections in accordance with on the following minimum frequencies, unless the site meets the requirements of [Part I.D.3](#). All inspections must be recorded per [Part I.D.5.c](#).

- a. At least one inspection every 7 calendar days; or
- b. At least one inspection every 14 calendar days, if post-storm event inspections are conducted within 24 hours after the end of any precipitation or snowmelt event that causes surface erosion. Post-storm inspections may be used to fulfill the 14-day routine inspection requirement.
- c. When site conditions make the schedule required in this section impractical, the permittee may

petition the division to grant an alternate inspection schedule. The alternative inspection schedule must not be implemented prior to written approval by the division and incorporation into the SWMP.

3. Inspection Frequency for Discharges to Outstanding Waters

Permittees must conduct site inspections at least once every 7 calendar days for sites that discharge to a water body designated as an Outstanding Water by the Water Quality Control Commission.

4. Reduced Inspection Frequency

The permittee may perform site inspections at the following reduced frequencies when one of the following conditions exists:

a. Post-Storm Inspections at Temporarily Idle Sites

For permittees choosing an inspection frequency pursuant to [Part I.D.2.b](#) and if no construction activities will occur following a storm event, post-storm event inspections must be conducted prior to re-commencing construction activities, and no later than 72 hours following the storm event. If the post-storm event inspection qualifies under this section, the inspection delay must be documented in the inspection record per [Part I.D.5.c](#). Routine inspections must still be conducted at least every 14 calendar days.

b. Inspections at Completed Sites/Areas

When the site, or portions of a site, are awaiting establishment of a vegetative ground cover and final stabilization, the permittee must conduct a thorough inspection of the stormwater management system at least once every 30 days. Post-storm event inspections are not required under this schedule. This reduced inspection schedule is allowed if all of the following criteria are met:

- i. All construction activities resulting in ground disturbance are complete;
- ii. All activities required for final stabilization, in accordance with [Part I.B.1.a.iii\(b\) & \(c\)](#) and with the SWMP, have been completed, with the exception of the application of seed that has not occurred due to seasonal conditions or the necessity for additional seed application to augment previous efforts; and
- iii. The SWMP has been amended to locate those areas to be inspected in accordance with the reduced schedule allowed for in this paragraph.

c. Winter Conditions Inspections Exclusion

Inspections are not required for sites that meet all of the following conditions: construction activities are temporarily halted, snow cover exists over the entire site for an extended period, and melting conditions posing a risk of surface erosion do not exist. This inspection exception is applicable only during the period where melting conditions do not exist, and applies to the routine 7-day, 14-day and monthly inspections, as well as the post-storm-event inspections. When this inspection exclusion is implemented, the following information must be documented in accordance with the requirements in [Part I.C.3](#) and [Part I.D.5.c](#):

- i. Dates when snow cover existed;
- ii. Date when construction activities ceased; and
- iii. Date melting conditions began.

5. Inspection Scope

a. Areas to Be Inspected

When conducting a site inspection the following areas, if applicable, must be inspected for evidence of, or the potential for, pollutants leaving the construction site boundaries, entering the stormwater drainage system or discharging to state waters:

- i. Construction site perimeter;
- ii. All disturbed areas;
- iii. Locations of installed control measures;
- iv. Designated haul routes;
- v. Material and waste storage areas exposed to precipitation;
- vi. Locations where stormwater has the potential to discharge offsite; and
- vii. Locations where vehicles exit the site.

b. Inspection Requirements

- i. Visually verify whether all implemented control measures are in effective operational condition and are working as designed in their specifications to minimize pollutant discharges.
- ii. Determine if there are new potential sources of pollutants.
- iii. Assess the adequacy of control measures at the site to identify areas requiring new or modified control measures to minimize pollutant discharges.
- iv. Identify all areas of non-compliance with the permit requirements and, if necessary, implement corrective action(s) in accordance with [Part I.B.1.c.](#)

c. Inspection Reports

The permittee must keep a record of all inspections conducted for each permitted site. Inspection reports must identify any incidents of noncompliance with the terms and conditions of this permit. All inspection reports must be signed and dated in accordance with [Part I.A.3.f.](#) Inspection records must be retained in accordance with [Part II.O.](#) At a minimum, the inspection report must include:

- i. The inspection date;
- ii. Name(s) and title(s) of personnel conducting the inspection;
- iii. Weather conditions at the time of inspection;
- iv. Phase of construction at the time of inspection;
- v. Estimated acreage of disturbance at the time of inspection;
- vi. Location(s) and identification of control measures requiring routine maintenance;
- vii. Location(s) and identification of discharges of sediment or other pollutants from the site;
- viii. Location(s) and identification of inadequate control measures;
- ix. Location(s) and identification of additional control measures needed that were not in place at the time of inspection;

- x. Description of corrective action(s) for items vii, viii, ix, above, dates corrective action(s) were completed, including requisite changes to the SWMP, as necessary;
- xi. Description of the minimum inspection frequency (either in accordance with [Part I.D.2](#), [Part I.D.3](#) or [Part I.D.4.](#)) utilized when conducting each inspection.
- xii. Deviations from the minimum inspection schedule as required in [Part I.D.2](#). This would include documentation of division approval for an alternate inspection schedule outlined in [Part I.D.2.c](#);
- xiii. After adequate corrective action(s) have been taken, or where a report does not identify any incidents requiring corrective action, the report shall contain a statement as required in [Part I.A.3.f](#).

E. DEFINITIONS

For the purposes of this permit:

- (1) Bypass the intentional diversion of waste streams from any portion of a treatment facility in accordance with 40 CFR 122.41(m)(1)(i) and Regulation 61.2(12).
- (2) Common Plan of Development or Sale - A contiguous area where multiple separate and distinct construction activities may be taking place at different times on different schedules, but remain related. The division has determined that “contiguous” means construction activities located in close proximity to each other (within ¼ mile). Construction activities are considered to be “related” if they share the same development plan, builder or contractor, equipment, storage areas, etc. “Common plan of development or sale” includes construction activities that are associated with the construction of field wide oil and gas permits for facilities that are related.
- (3) Construction Activity - Ground surface disturbing and associated activities (land disturbance), which include, but are not limited to, clearing, grading, excavation, demolition, installation of new or improved haul roads and access roads, staging areas, stockpiling of fill materials, and borrow areas. Construction does not include routine maintenance to maintain the original line and grade, hydraulic capacity, or original purpose of the facility. Activities to conduct repairs that are not part of routine maintenance or for replacement are construction activities and are not routine maintenance. Repaving activities where underlying and/or surrounding soil is exposed as part of the repaving operation are considered construction activities. Construction activity is from initial ground breaking to final stabilization regardless of ownership of the construction activities.
- (4) Control Measure - Any best management practice or other method used to prevent or reduce the discharge of pollutants to state waters. Control measures include, but are not limited to, best management practices. Control measures can include other methods such as the installation, operation, and maintenance of structural controls and treatment devices.
- (5) Control Measure Requiring Routine Maintenance - Any control measure that is still operating in accordance with its design and the requirements of this permit, but requires maintenance to prevent a breach of the control measure. See also inadequate control measure.
- (6) Dedicated Asphalt, Concrete Batch Plants and Masonry Mixing Stations - Are batch plants or mixing stations located on, or within ¼ mile of, a construction site and that provide materials only to that specific construction site.
- (7) Diversion - Discharges of state waters that are temporarily routed through channels or structures (e.g. in-stream, uncontaminated springs, non-pumped groundwater, temporary rerouting of surface waters).
- (8) Final Stabilization - The condition 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.
- (9) Good Engineering, Hydrologic and Pollution Control Practices: are methods, procedures, and practices that:
- a. Are based on basic scientific fact(s).
 - b. Reflect best industry practices and standards.
 - c. Are appropriate for the conditions and pollutant sources.
 - d. Provide appropriate solutions to meet the associated permit requirements, including practice based effluent limits.
- (10) Inadequate Control Measure - Any control measure that is not designed or implemented in accordance with the requirements of the permit and/or any control measure that is not implemented to operate in accordance with its design. See also Control Measure Requiring Routine Maintenance.
- (11) Infeasible - Not technologically possible, or not economically practicable and achievable in light of best industry practices.
- (12) Minimize - reduce or eliminate to the extent achievable using control measures that are technologically available and economically practicable and achievable in light of best industry practice.
- (13) Municipality - A city, town, county, district, association, or other public body created by, or under, State law and having jurisdiction over disposal of sewage, industrial wastes, or other wastes, or a designated and approved management agency under section 208 of CWA (1987).
- (14) Municipal Separate Storm Sewer System (MS4) - A conveyance or system of conveyances (including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, man-made channels, or storm drains):
- a. Owned or operated by a State, city, town, county, district, association, or other public body (created by or pursuant to State law) having jurisdiction over disposal of sewage, industrial wastes, stormwater, or other wastes, including special districts under State law such as a sewer district, flood control district or drainage district, or similar entity, or a designated and approved management agency under section 208 of the CWA that discharges to state waters;
 - i. Designed or used for collecting or conveying stormwater;
 - ii. Are not a combined sewer; and
 - iii. Are not part of a Publicly Owned Treatment Works (POTW). See 5 CCR 1002-61.2(62).
- (15) Municipal Stormwater Management Program - A stormwater program operated by a municipality, typically to meet the requirements of the municipalities MS4 discharge certification.
- (16) Operator - The party that has operational control over day-to-day activities at a project site which are necessary to ensure compliance with the permit. This party is authorized to direct individuals at a site to carry out activities required by the permit (i.e. the general contractor).

- (17) Outstanding Waters - Waters designated as outstanding waters pursuant to Regulation 31, Section 31.8(2)(a). The highest level of water quality protection applies to certain waters that constitute an outstanding state or national resource.
- (18) Owner - The party that has overall control of the activities and that has funded the implementation of the construction plans and specifications. This is the party that may have ownership of, a long term lease of, or easements on the property on which the construction activity is occurring (e.g. the developer).
- (19) Permittee(s) - The owner and operator named in the discharge certification issued under this permit for the construction site specified in the certification.
- (20) Point Source - Any discernible, confined, and discrete conveyance, including, but not limited to, any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operation, or vessel or other floating craft, from which pollutants are or may be discharged. Point source does not include irrigation return flow. See 5 CCR 102-61.2(75).
- (21) Pollutant - Dredged spoil, dirt, slurry, solid waste, incinerator residue, sewage, sewage sludge, garbage, trash, chemical waste, biological nutrient, biological material, radioactive material, heat, wrecked or discarded equipment, rock, sand, or any industrial, municipal or agricultural waste. See 5 CCR 1002-61.2(76).
- (22) Presentation of credentials - a government issued form of identification, if in person; or (ii) providing name, position and purpose of inspection if request to enter is made via telephone, email or other form of electronic communication. A Permittee's non-response to a request to enter upon presentation of credentials constitutes a denial to such request, and may result in violation of the Permit.
- (23) Process Water - Any water which, during manufacturing or processing, comes into contact with or results from the production of any raw material, intermediate product, finished product, by product or waste product.
- (24) Public Emergency Related Site - a project initiated in response to an unanticipated emergency (e.g., mud slides, earthquake, extreme flooding conditions, disruption in essential public services), for which the related work requires immediate authorization to avoid imminent endangerment to human health or the environment, or to reestablish essential public services.
- (25) Qualified Stormwater Manager - An individual knowledgeable in the principles and practices of erosion and sediment control and pollution prevention, and with the skills to assess conditions at construction sites that could impact stormwater quality and to assess the effectiveness of stormwater controls implemented to meet the requirements of this permit.
- (26) Qualifying Local Program - A municipal program for stormwater discharges associated with small construction activity that was formally approved by the division as a qualifying local program.
- (27) Receiving Water - Any classified or unclassified surface water segment (including tributaries) in the State of Colorado into which stormwater associated with construction activities discharges. This definition includes all water courses, even if they are usually dry, such as borrow ditches, arroyos, and other unnamed waterways.
- (28) Severe Property Damage - substantial physical damage to property, damage to the treatment facilities which causes them to become inoperable, or substantial and permanent loss of natural resources which can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production. See 40 CFR 122.41(m)(1)(ii).
- (29) Significant Materials - Include, but not limited to, raw materials; fuels; materials such as solvents, detergents, and plastic pellets; finished materials such as metallic products; raw materials used in

- food processing or production; hazardous substances designated under section 101(14) of CERCLA; any chemical the permittee is required to report under section 313 of Title III of the Superfund Amendments and Reauthorization Act (SARA); fertilizers; pesticides; and waste products such as ashes, slag and sludge that have the potential to be released with stormwater discharges.
- (30) Small Construction Activity - The discharge of stormwater from construction activities that result in land disturbance of equal to, or greater than, one acre and less than five acres. Small construction activity also includes the disturbance of less than one acre of total land area that is part of a larger common plan of development or sale, if the larger common plan ultimately disturbs equal to, or greater than, one acre and less than five acres.
- (31) Spill - An unintentional release of solid or liquid material which may pollute state waters.
- (32) State Waters - means any and all surface and subsurface waters which are contained in or flow in or through this state, but does not include waters in sewage systems, waters in treatment works of disposal systems, waters in potable water distribution systems, and all water withdrawn for use until use and treatment have been completed.
- (33) Steep Slopes: where a local government, or industry technical manual (e.g. stormwater BMP manual) has defined what is to be considered a “steep slope”, this permit’s definition automatically adopts that definition. Where no such definition exists, steep slopes are automatically defined as those that are 3:1 or greater.
- (34) Stormwater - Precipitation runoff, snow melt runoff, and surface runoff and drainage. See 5 CCR 1002-61.2(103).
- (35) Total Maximum Daily Loads (TMDLs) -The sum of the individual wasteload allocations (WLA) for point sources and load allocations (LA) for nonpoint sources and natural background. For the purposes of this permit, a TMDL is a calculation of the maximum amount of a pollutant that a waterbody can receive and still meet water quality standards, and an allocation of that amount to the pollutant’s sources. A TMDL includes WLAs, LAs, and must include a margin of safety (MOS), and account for seasonal variations. See section 303(d) of the CWA and 40 C.F.R. 130.2 and 130.7.
- (36) Upset - an exceptional incident in which there is unintentional and temporary noncompliance with permit effluent limitations because of factors beyond the reasonable control of the permittee. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventative maintenance, or careless or improper operation in accordance with 40 CFR 122.41(n) and Regulation 61.2(114).

F. MONITORING

The division may require sampling and testing, on a case-by-case basis. If the division requires sampling and testing, the division will send a notification to the permittee. Reporting procedures for any monitoring data collected will be included in the notification.

If monitoring is required, the following applies:

1. The thirty (30) day average must be determined by the arithmetic mean of all samples collected during a thirty (30) consecutive-day period; and
2. A grab sample, for monitoring requirements, is a single “dip and take” sample.

G. OIL AND GAS CONSTRUCTION

Stormwater discharges associated with construction activities directly related to oil and gas exploration, production, processing, and treatment operations or transmission facilities are regulated under the Colorado Discharge Permit System Regulations (5 CCR 1002-61), and require coverage under this permit in accordance with that regulation. However, references in this permit to specific authority under the CWA do not apply to

stormwater discharges associated with these oil and gas related construction activities, to the extent that the references are limited by the federal Energy Policy Act of 2005.

Part II: Standard Permit Conditions

A. DUTY TO COMPLY

The permittee must comply with all conditions of this permit. Any permit noncompliance constitutes a violation of the Water Quality Control Act and is grounds for:

1. Enforcement action;
2. Permit termination, revocation and reissuance, or modification; or
3. Denial of a permit renewal application.

B. DUTY TO REAPPLY

If the permittee wishes to continue an activity regulated by this permit after the expiration date of this permit, the permittee must apply for and obtain authorization as required by Part I.A.3.k. of the permit.

C. NEED TO HALT OR REDUCE ACTIVITY NOT A DEFENSE

It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.

D. DUTY TO MITIGATE

A permittee must take all reasonable steps to minimize or prevent any discharge in violation of this permit which has a reasonable likelihood of adversely affecting human health or the environment.

E. PROPER OPERATION AND MAINTENANCE

A permittee must at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) that are installed or used by the permittee to achieve compliance with the conditions of this permit. Proper operation and maintenance also includes adequate laboratory controls and appropriate quality assurance procedures. This provision requires the operation of backup or auxiliary facilities or similar systems which are installed by the permittee only when the operation is necessary to achieve compliance with the conditions of this permit. This requirement can be met by meeting the requirements for Part I.B., I.C., and I.D. above. See also 40 C.F.R. § 122.41(e).

F. PERMIT ACTIONS

This permit may be modified, revoked and reissued, or terminated for cause. The permittee request for a permit modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance does not stay any permit condition. Any request for modification, revocation, reissuance, or termination under this permit must comply with all terms and conditions of Regulation 61.8(8).

G. PROPERTY RIGHTS

In accordance with 40 CFR 122.41(g) and 5 CCR 1002-61, 61.8(9):

1. The issuance of a permit does not convey any property or water rights in either real or personal property, or stream flows or any exclusive privilege.
2. The issuance of a permit does not authorize any injury to person or property or any invasion of personal rights, nor does it authorize the infringement of federal, state, or local laws or regulations.
3. Except for any toxic effluent standard or prohibition imposed under Section 307 of the Federal act or any standard for sewage sludge use or disposal under Section 405(d) of the Federal act, compliance with a permit during its term constitutes compliance, for purposes of enforcement, with Sections 301,

302, 306, 318, 403, and 405(a) and (b) of the Federal act. However, a permit may be modified, revoked and reissued, or terminated during its term for cause as set forth in Section 61.8(8) of the Colorado Discharge Permit System Regulations.

H. DUTY TO PROVIDE INFORMATION

The permittee shall furnish to the division, within a reasonable time, any information which the division may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit, or to determine compliance with this permit. The permittee shall also furnish to the division, upon request, copies of records required to be kept by this permit in accordance with 40 CFR 122.41(h) and/or Regulation 61.8(3)(q).

I. INSPECTION AND ENTRY

The permittee shall allow the division and the authorized representative, upon the [presentation of credentials](#) as required by law, to allow for inspections to be conducted in accordance with 40 CFR 122.41(i), Regulation 61.8(3), and Regulation 61.8(4):

1. To enter upon the permittee's premises where a regulated facility or activity is located or in which any records are required to be kept under the terms and conditions of this permit;
2. At reasonable times to have access to and copy any records required to be kept under the terms and conditions of this permit;
3. At reasonable times, inspect any monitoring equipment or monitoring method required in the permit; and
4. To enter upon the permittee's premises in a reasonable manner and at a reasonable time to inspect or investigate, any actual, suspected, or potential source of water pollution, or any violation of the Colorado Water Quality Control Act. The investigation may include: sampling of any discharges, stormwater or [process water](#), taking of photographs, interviewing site staff on alleged violations and other matters related to the permit, and assessing any and all facilities or areas within the site that may affect discharges, the permit, or an alleged violation.

The permittee shall provide access to the division or other authorized representatives upon presentation of proper credentials. A permittee's non-response to a request to enter upon presentation of credentials constitutes a denial of such request, and may result in a violation of the permit.

J. MONITORING AND RECORDS

1. Samples and measurements taken for the purpose of monitoring must be representative of the volume and nature of the monitored activity.
2. The permittee must retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by this permit, and records of all data used to complete the application for this permit, for a period of at least three years from the date the permit expires or the date the permittee's authorization is terminated. This period may be extended by request of the division at any time.
3. Records of monitoring information must include:
 - a. The date, exact place, and time of sampling or measurements;
 - b. The individual(s) who performed the sampling or measurements;
 - c. The date(s) analyses were performed

- d. The individual(s) who performed the analyses;
 - e. The analytical techniques or methods used; and
 - f. The results of such analyses.
4. Monitoring must be conducted according to test procedures approved under 40 CFR Part 136, unless other test procedures have been specified in the permit.

K. SIGNATORY REQUIREMENTS

1. Authorization to Sign:

All documents required to be submitted to the division by the permit must be signed in accordance with the following criteria:

- a. For a corporation: by a responsible corporate officer. For the purpose of this subsection, a responsible corporate officer means:
 - i. A president, secretary, treasurer, or vice president of the corporation in charge of a principal business function, or any other person who performs similar policy- or decision-making functions for the corporation, or
 - ii. The manager of one or more manufacturing, production, or operating facilities, provided, the manager is authorized to make management decisions which govern the operation of the regulated facility including having the explicit or implicit duty of making major capital investment recommendations, and initiating and directing other comprehensive measures to assure long term environmental compliance with environmental laws and regulations; the manager can ensure that the necessary systems are established or actions taken to gather complete and accurate information for permit application requirements; and where authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures.
- b. For a partnership or sole proprietorship: by a general partner or the proprietor, respectively; or
- c. For a [municipality](#), state, federal, or other public agency: By either a principal executive officer or ranking elected official. For purposes of this subsection, a principal executive officer of a federal agency includes
 - i. The chief executive officer of the agency, or
 - ii. A senior executive officer having responsibility for the overall operations of a principal geographic unit of the agency. (e.g. Regional Administrator of EPA)

2. Electronic Signatures

For persons signing applications for coverage under this permit electronically, in addition to meeting other applicable requirements stated above, such signatures must meet the same signature, authentication, and identity-proofing standards set forth at 40 CFR § 3.2000(b) for electronic reports (including robust second-factor authentication). Compliance with this requirement can be achieved by submitting the application using the Colorado Environmental Online Service (CEOS) system.

3. Change in Authorization to Sign

If an authorization is no longer accurate because a different individual or position has responsibility for the overall operation of the facility, a new authorization must be submitted to the division, prior to the re-authorization, or together with any reports, information, or applications to be signed by an authorized representative.

L. REPORTING REQUIREMENTS

1. Planned Changes

The permittee shall give advance notice to the division, in writing, of any planned physical alterations or additions to the permitted facility in accordance with 40 CFR 122.41(l) and Regulation 61.8(5)(a). Notice is required only when:

- a. The alteration or addition to a permitted facility may meet one of the criteria for determining whether a facility is a new source in 40 CFR 122.29(b); or
- b. The alteration or addition could significantly change the nature or increase the quantity of pollutants discharged. This notification applies to pollutants which are subject neither to effluent limitations in the permit, nor to notification requirements under 40 CFR 122.41(a)(1).

2. Anticipated Non-Compliance

The permittee shall give advance notice to the division, in writing, of any planned changes in the permitted facility or activity that may result in noncompliance with permit requirements. The timing of notification requirements differs based on the type of non-compliance as described in subparagraphs 5, 6, 7, and 8 below.

3. Transfer of Ownership or Control

The permittee shall notify the division, in writing, ten (10) calendar days in advance of a proposed transfer of the permit. This permit is not transferable to any person except after notice is given to the division.

- a. Where a facility wants to change the name of the permittee, the original permittee (the first owner or operators) must submit a Notice of Termination.
- b. The new owner or operator must submit an application. See also signature requirements in Part II.K, above.
- c. A permit may be automatically transferred to a new permittee if:
 - i. The current permittee notifies the division in writing 30 calendar days in advance of the proposed transfer date; and
 - ii. The notice includes a written agreement between the existing and new permittee(s) containing a specific date for transfer of permit responsibility, coverage and liability between them; and
 - iii. The division does not notify the existing permittee and the proposed new permittee of its intent to modify, or revoke and reissue the permit.
 - iv. Fee requirements of the Colorado Discharge Permit System Regulations, Section 61.15, have been met.

4. Monitoring reports

Monitoring results must be reported at the intervals specified in this permit per the requirements of 40 CFR 122.41(l)(4).

5. Compliance Schedules

Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule in the permit, shall be submitted on the date listed

in the compliance schedule section. The fourteen (14) calendar day provision in Regulation 61.8(4)(n)(i) has been incorporated into the due date.

6. Twenty-four Hour Reporting

In addition to the reports required elsewhere in this permit, the permittee shall report the following circumstances orally within twenty-four (24) hours from the time the permittee becomes aware of the circumstances, and shall mail to the division a written report containing the information requested within five (5) working days after becoming aware of the following circumstances:

- a. Circumstances leading to any noncompliance which may endanger health or the environment regardless of the cause of the incident;
- b. Circumstances leading to any unanticipated bypass which exceeds any effluent limitations in the permit;
- c. Circumstances leading to any upset which causes an exceedance of any effluent limitation in the permit;
- d. Daily maximum violations for any of the pollutants limited by Part I of this permit. This includes any toxic pollutant or hazardous substance or any pollutant specifically identified as the method to control any toxic pollutant or hazardous substance.
- e. The division may waive the written report required under subparagraph 6 of this section if the oral report has been received within 24 hours.

7. Other Non-Compliance

A permittee must report all instances of noncompliance at the time monitoring reports are due. If no monitoring reports are required, these reports are due at least annually in accordance with Regulation 61.8(4)(p). The annual report must contain all instances of non-compliance required under either subparagraph 5 or subparagraph 6 of this subsection.

8. Other Information

Where a permittee becomes aware that it failed to submit any relevant facts in a permit application, or submitted incorrect information in a permit application, or in any report to the Permitting Authority, it has a duty to promptly submit such facts or information.

M. BYPASS

1. Bypass Not Exceeding Limitations

The permittees may allow any bypass to occur which does not cause effluent limitations to be exceeded, but only if it also is for essential maintenance to assure efficient operation. These bypasses are not subject to the provisions of Part II.M.2 of this permit. See 40 CFR 122.41(m)(2).

2. Notice of Bypass

- a. Anticipated bypass. If the permittee knows in advance of the need for a bypass, the permittee must submit prior notice, if possible at least ten days before the date of the bypass. See 40 CFR §122.41(m)(3)(i) and/or Regulation 61.9(5)(c).
- b. Unanticipated bypass. The permittee must submit notice of an unanticipated bypass in accordance with Part II.L.6. See 40 CFR §122.41(m)(3)(ii).

3. Prohibition of Bypass

Bypasses are prohibited and the division may take enforcement action against the permittee for bypass, unless:

- a. The bypass is unavoidable to prevent loss of life, personal injury, or severe property damage;
- b. There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate backup equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass which occurred during normal periods of equipment downtime or preventive maintenance; and
- c. Proper notices were submitted to the division.

N. UPSET

1. Effect of an upset

An upset constitutes an affirmative defense to an action brought for noncompliance with permit effluent limitations if the requirements of Part II.N.2. of this permit are met. No determination made during administrative review of claims that noncompliance was caused by upset, and before an action for noncompliance, is final administrative action subject to judicial review in accordance with Regulation 61.8(3)(j).

2. Conditions Necessary for Demonstration of an Upset

A permittee who wishes to establish the affirmative defense of upset shall demonstrate through properly signed contemporaneous operating logs, or other relevant evidence that:

- a. An upset occurred and the permittee can identify the specific cause(s) of the upset;
- b. The permitted facility was at the time being properly operated and maintained; and
- c. The permittee submitted proper notice of the upset as required in Part II.L.6. (24- hour notice); and
- d. The permittee complied with any remedial measure necessary to minimize or prevent any discharge or sludge use or disposal in violation of this permit which has a reasonable likelihood of adversely affecting human health or the environment. In addition to the demonstration required above, a permittee who wishes to establish the affirmative defense of upset for a violation of effluent limitations based upon water quality standards shall also demonstrate through monitoring, modeling or other methods that the relevant standards were achieved in the receiving water.

3. Burden of Proof

In any enforcement proceeding, the permittee seeking to establish the occurrence of an upset has the burden of proof.

O. RETENTION OF RECORDS

1. Post-Expiration or Termination Retention

Copies of documentation required by this permit, including records of all data used to complete the application for permit coverage to be covered by this permit, must be retained for at least three years from the date that permit coverage expires or is terminated. This period may be extended by request of EPA at any time.

2. On-site Retention

The permittee must retain an electronic version or hardcopy of the SWMP at the construction site from

the date of the initiation of construction activities to the date of expiration or inactivation of permit coverage; unless another location, specified by the permittee, is approved by the division.

P. REOPENER CLAUSE

1. Procedures for Modification or Revocation

Permit modification or revocation of this permit or coverage under this permit will be conducted according to Regulation 61.8(8).

2. Water Quality Protection

If there is evidence indicating that the stormwater discharges authorized by this permit cause, have the reasonable potential to cause or contribute to an excursion above any applicable water quality standard, the permittee may be required to obtain an individual permit, or the permit may be modified to include different limitations and/or requirements.

Q. SEVERABILITY

The provisions of this permit are severable. If any provisions or the application of any provision of this permit to any circumstances, is held invalid, the application of such provision to other circumstances and the application of the remainder of this permit shall not be affected.

R. NOTIFICATION REQUIREMENTS

1. Notification to Parties

All notification requirements, excluding information submitted using the CEOS portal, shall be directed as follows:

- a. Oral Notifications, during normal business hours shall be to:
Clean Water Compliance Section
Water Quality Control Division
Telephone: (303) 692-3500
- b. Written notification shall be to:
Clean Water Compliance Section
Water Quality Control Division
Colorado Department of Public Health and Environment
WQCD-WQP-B2
4300 Cherry Creek Drive South
Denver, CO 80246-1530

S. RESPONSIBILITIES

1. Reduction, Loss, or Failure of Treatment Facility

The permittee has the duty to halt or reduce any activity if necessary to maintain compliance with the effluent limitations of the permit. It shall not be a defense for a permittee in an enforcement action that it would be necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.

T. OIL AND HAZARDOUS SUBSTANCE LIABILITY

Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the permittee from any responsibilities, liabilities, or penalties to which the permittee is or may be subject to under Section 311 (Oil and Hazardous Substance Liability) of the CWA.

U. EMERGENCY POWERS

Nothing in this permit shall be construed to prevent or limit application of any emergency power of the division.

V. CONFIDENTIALITY

Any information relating to any secret process, method of manufacture or production, or sales or marketing data which has been declared confidential by the permittee, and which may be acquired, ascertained, or discovered, whether in any sampling investigation, emergency investigation, or otherwise, shall not be publicly disclosed by any member, officer, or employee of the Water Quality Control Commission or the division, but shall be kept confidential. Any person seeking to invoke the protection of this section shall bear the burden of proving its applicability. This section shall never be interpreted as preventing full disclosure of effluent data.

W. FEES

The permittee is required to submit payment of an annual fee as set forth in the 2016 amendments to the Water Quality Control Act. Section 25-8-502 (1.1) (b), and the Colorado Discharge Permit System Regulations 5 CCR 1002-61, Section 61.15 as amended. Failure to submit the required fee when due and payable is a violation of the permit and will result in enforcement action pursuant to Section 25-8-601 et. seq., C.R.S.1973 as amended.

X. DURATION OF PERMIT

The duration of a permit shall be for a fixed term and shall not exceed five (5) years. If the permittee desires to continue to discharge, a permit renewal application shall be submitted at least ninety (90) calendar days before this permit expires. Filing of a timely and complete application shall cause the expired permit to continue in force to the effective date of the new permit. The permit's duration may be extended only through administrative extensions and not through interim modifications. If the permittee anticipates there will be no discharge after the expiration date of this permit, the division should be promptly notified so that it can terminate the permit in accordance with Part I.A.3.i.

Y. SECTION 307 TOXICS

If a toxic effluent standard or prohibition, including any applicable schedule of compliance specified, is established by regulation pursuant to Section 307 of the Federal Act for a toxic pollutant which is present in the permittee's discharge and such standard or prohibition is more stringent than any limitation upon such pollutant in the discharge permit, the division shall institute proceedings to modify or revoke and reissue the permit to conform to the toxic effluent standard or prohibition

APPENDIX 3

Exhibit A - Erosion and Sediment Control Field Inspection Report

Exhibit B - Corrective Action Report

**Exhibit A
Erosion and Sediment Control Field Inspection Report**

Project Name:	Date of Inspection:
Project Address/Location:	Time of Inspection:
Contractor:	Name of Inspector:

Reason for Inspection:

BMP for Erosion Control	Practice Used		Maintenance or Sediment Removal Required		Explain Required Action
	Yes	No	Yes	No	
Check Dams					
Concrete Washout Area					
Construction Fence					
Diversion Ditch/Swales/Berms					
Erosion Control Blankets					
Inlet Protection					
Reinforced Rock Berms					
Reinforced Rock Berms - Culvert					
Sediment Basin					
Sediment Control Log					
Seed & Mulch (Temp. or Permanent)					
Silt Fence					
Sodding					
Stabilized Staging Area					
Straw Bale Barrier					
Surface Roughening					
Vehicle Tracking Control Pad					

Contractor's Comments:

Inspector's Comments:

I certify this Erosion and Sediment Control Field Inspection Report is complete and accurate, to my knowledge and belief.

Inspector Signature and Date:	Reviewed By:
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Exhibit B
Corrective Action Report

Site: _____

Inspector: _____

Date: _____

.....
Erosion Control Measure/Facility Requiring Attention:

Recommended Corrective Action:

Scheduled Completion Date: _____ Date Completed: _____

.....
Erosion Control Measure/Facility Requiring Attention:

Recommended Corrective Action:

Scheduled Completion Date: _____ Date Completed: _____

.....
Erosion Control Measure/Facility Requiring Attention:

Recommended Corrective Action:

Scheduled Completion Date: _____ Date Completed: _____

APPENDIX 4

SWMP Site Plan - Cover Sheet - C300

SWMP Site Plan - Initial Condition - C301

SWMP Site Plan - Interim Condition - C302

SWMP Site Plan - Final Condition - C303

Details of Construction CCMs - Exhibits C304, C305 & C306

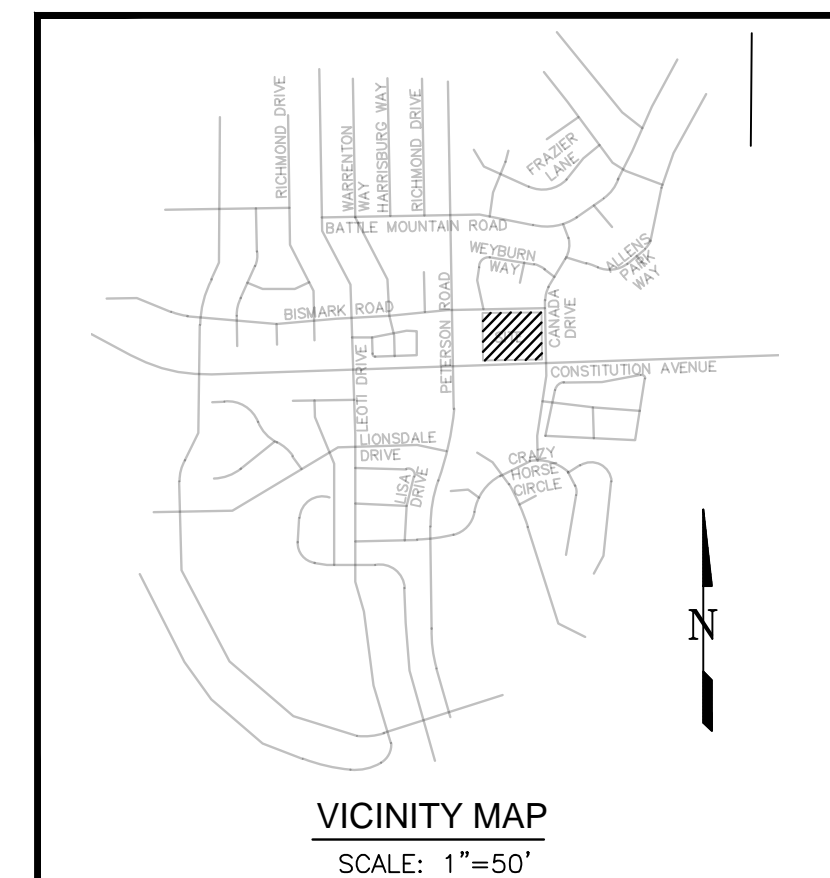
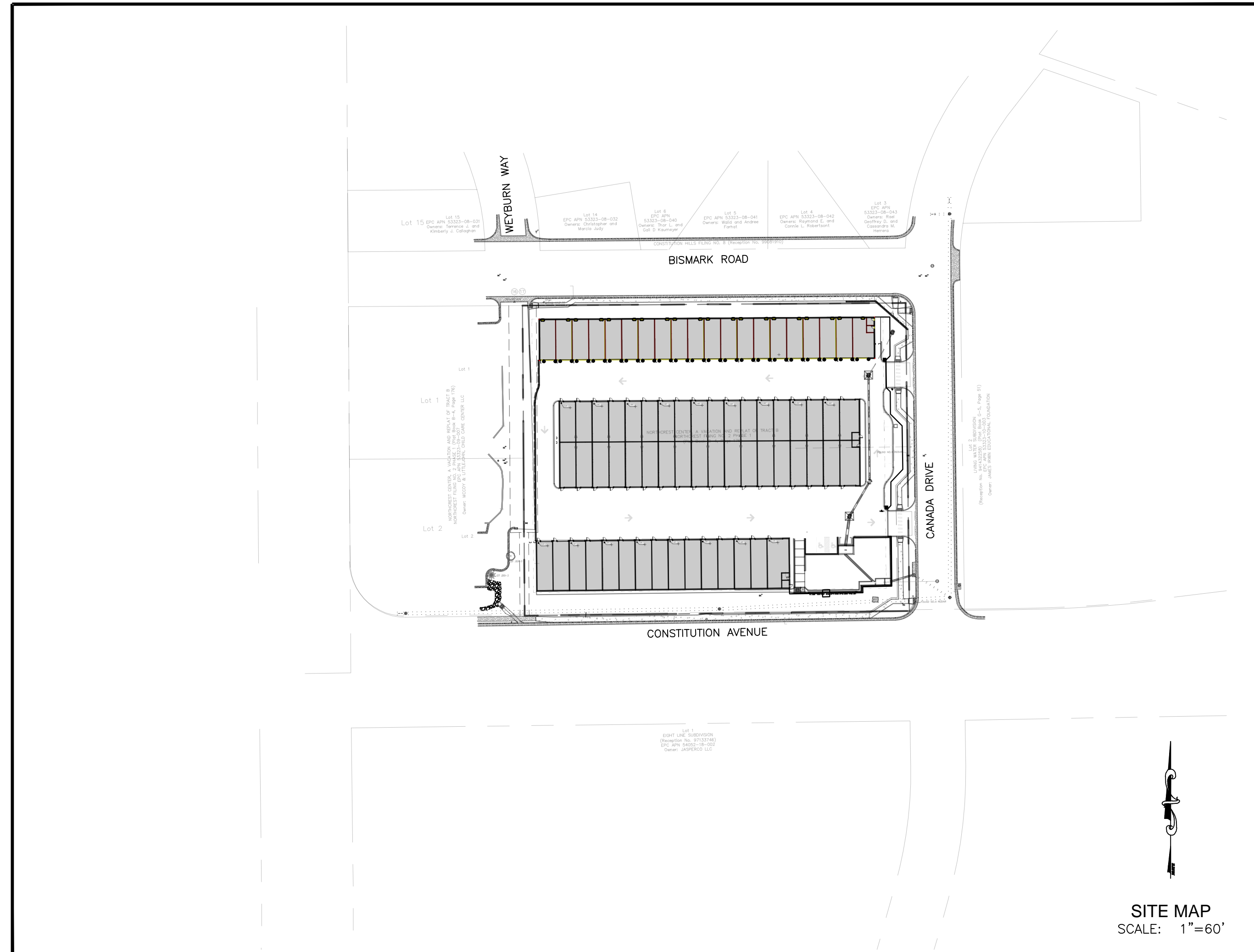
MY GARAGE @ NORTHCREST

GRADING AND EROSION CONTROL PLANS

PREPARED FOR K&S DEVELOPMENT, LLC

PROJECT SPECIFIC GRADING AND EROSION CONTROL NOTES

- 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.
- 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.
- 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.
- 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.
- 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.
- 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.
- 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.
- 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.
- 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.
- 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.
- 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 loosened prior to installation of the control measure(s).
- 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.
- 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.
- 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.
- Erosion control blanketing or other protective covering shall be used on slopes steeper than 3:1.
- 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.
- 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.
- Tracking of soils and construction debris off-site shall be minimized. Materials tracked off-site shall be cleaned up and properly disposed of immediately.
- 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.
- 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.
- 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.
- 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.
- No person shall cause the impediment of stormwater flow in the curb and gutter or ditch except with approved sediment control measures.
- 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.
- All construction traffic must enter/exit the site only at approved construction access points.
- Prior to construction the permittee shall verify the location of existing utilities.
- 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.
- The soils report for this site has been prepared by RMG Engineers/Architects, Inc (Dated: March 11, 2024) and shall be considered a part of these plans.
- 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
- Base mapping was provided by Land Development Consultants. The date of the last survey update was July 27, 2021.
- Proposed Construction Schedule:
Begin Construction: Summer 2024
End Construction: Winter 2024
Total Site Area = 3.25 Acres
Area to be disturbed = 3.26 Acres.
Existing 100-year runoff coefficient = 0.37
Proposed 100-year runoff coefficient = 0.70
Existing Hydrologic Soil Groups: A
(A-1-Truckon sandy loam)
- Site is currently undeveloped and covered with native grasses on moderate to steep slopes (2%-25%).
- Site is located in the West Fork Jimmy Camp Creek Drainage Basin.
- No Asphalt Batch Plants will be utilized at the site.



EROSION CONTROL INSPECTION AND MAINTENANCE

A Thorough Inspection of the Erosion Control Plan/Stormwater Management System shall be performed every 14 days as well as after any rain or snowmelt event that causes Surface Erosion:

- When Silt Fences have silted up to half their height, the silt shall be removed, final grade re-established and slopes re-seeded, if necessary. Any silt fence that has shifted or decayed shall be repaired or replaced.
- Any Accumulated Trash or debris shall be removed from outlets.

An inspection and maintenance log shall be kept.

SEED MIX

AREAS DISTURBED BY THE EARTHWORK ACTIVITIES AND NOT RECEIVING OTHER TREATMENT SHALL BE PERMANENTLY REVEGETATED WITH THE FOLLOWING SEED MIX.

SPECIES	VARIETY	plg/acre
SUDGRASS GRAMA	<i>Bl. Reno</i>	3.0
WESTERN WHEAT GRASS	<i>Barton</i>	2.5
SLENDER WHEAT GRASS	<i>Native</i>	2.0
LITTLE BLUESTEM	<i>Pastura</i>	2.0
SAND DROPSPEED	<i>Native</i>	0.5
SWITCH GRASS	<i>Nebraska 28</i>	3.0
WEeping LOVE GRASS	<i>Morpha</i>	1.0
		14.0 lbs

SEEDING APPLICATION: DRILL SEED 1/4" TO 1/2" INTO TOPSOIL. IN AREAS INACCESSIBLE TO A DRILL, HAND BROADCAST AT DOUBLE THE RATE AND RAKE 1/4" TO 1/2" INTO THE TOPSOIL. MULCHING APPLICATION: 1-1/2 TONS NATIVE HAY PER ACRE, MECHANICALLY CRIMPED INTO THE TOPSOIL.

INDEX OF SHEETS

C300	COVER SHEET
C301	INITIAL CONDITIONS
C302	INTERIM CONDITIONS
C303	FINAL CONDITIONS
C304	GEC DETAILS
C305	GEC DETAILS
C306	GEC DETAILS
C601	POND CONSTRUCTION
C602	POND DETAILS
C603	POND DETAILS
C604	POND DETAILS

OPINION OF COST FOR EROSION CONTROL REQUIREMENTS

ITEM	QUANTITY	UNIT	UNIT COST	AMOUNT
VEHICLE TRACKING CONTROL	2	EA	\$3,085.00	\$6,170.00
SILT FENCE	6,320	LF	\$3.00	\$18,960.00
STRAW BALES	18	EA	\$33.00	\$594.00
INLET PROTECTION	6	EA	\$217.00	\$1,302.00
CONCRETE WASH OUT	2	EA	\$1,172.00	\$2,344.00
ROCK SOCKS	100	EA	\$24.00	\$2,400.00
SURFACE ROUGHENING	1.0	AC	\$269.00	\$269.00
TEMPORARY SEEDING AND MULCH	0.5	AC	\$1793.00	\$1,255.00
MAINTENANCE (25% OF EROSION CONTROL)	1	LS	\$8,323.50	\$8,323.50
			TOTAL	\$41,023.50

STANDARD NOTES FOR EL PASO COUNTY CONSTRUCTION PLANS

- All drainage and roadway construction shall meet the standards and specifications of the City of Colorado Springs/El Paso County Drainage Criteria Manual, Volumes 1 and 2, and the El Paso County Engineering Criteria Manual.
- Contractor shall be responsible for the notification and field notification 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 construction. Call 811 to contact the Utility Notification Center of Colorado (UNCC).
- Contractor shall keep a copy of these approved plans, the Grading and Erosion Control Plan, the Stormwater Management Plan (SWMP), the soils and geotechnical report, and the appropriate design and construction standards and specifications at the job site at all times, including the following:
 - El Paso County Engineering Criteria Manual (ECM)
 - City of Colorado Springs/El Paso County Drainage Criteria Manual, Volumes 1 and 2
 - Colorado Department of Transportation (CDOT) Standard Specifications for Road and Bridge Construction
 - CDOT M & S Standards
- 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. Any modifications necessary to meet criteria after-the-fact will be entirely the developer's responsibility to rectify.
- It is the design engineer's responsibility to accurately show existing conditions, both onsite and offsite, on the construction plans. Any modifications necessary due to conflicts, omissions, or changed conditions will be entirely the developer's responsibility to rectify.
- Contractor shall schedule a pre-construction meeting with El Paso County Planning and Community Development (PCD) - Inspections, prior to starting construction.
- It is the contractor's responsibility to understand the requirements of all jurisdictional agencies and to obtain all required permits, including but not limited to El Paso County Erosion and Stormwater Quality Control Permit (ESQCP), Regional Building Floodplain Development Permit, U.S. Army Corps of Engineers-issued 401 and/or 404 permits, and county and state fugitive dust permits.
- Contractor shall not deviate from the plans without first obtaining written approval from the design engineer and PCD. Contractor shall notify the design engineer immediately upon discovery of any errors or inconsistencies.
- All public storm drain pipe shall be Class III RCP unless otherwise noted and approved by PCD.
- Contractor shall coordinate geotechnical testing per ECM standards. Pavement design shall be approved by El Paso County PCD prior to construction of curb and gutter and pavement.
- All construction traffic must enter/exit the site at approved construction access points.
- Signing and striping shall comply with El Paso County DOT and MUTCD criteria. [If applicable, additional signing and striping notes will be provided.]
- Contractor shall obtain any permits required by El Paso County DOT, including Work Within the Right-of-Way and Special Transport permits.
- The limits of construction shall remain within the property line unless otherwise noted. The owner/developer shall obtain written permission and easements, where required, from adjoining property owner(s) prior to any off-site disturbance, grading, or construction.

DEVELOPER:
LEISURE CONSTRUCTION 3443
TAMPA ROAD, SUITE B PALM
HARBOR, FL 34684 (727) 242-5121

PREPARED BY:

Kiowa
Engineering Corporation

1604 South 21st Street
Colorado Springs, Colorado 80904
(719) 630-7342

"A.G.A./A.P.W.A. STANDARD UTILITY MARKING COLOR CODE"

NATURAL GAS	YELLOW
ELECTRIC	RED
WATER	BLUE
WASTEWATER	GREEN

CALL BEFORE YOU DIG... 48 HOURS BEFORE YOU DIG, CALL UTILITY LOCATORS FOR LOCATING AND MARKING GAS, ELECTRIC, WATER AND WASTEWATER

1-800-922-1987

El Paso County (standalone GEC Plan):
County plan review is provided only for general conformance with County Design Criteria. The County is not responsible for the accuracy and adequacy of the design, dimensions, and/or elevations which shall be confirmed at the job site. The County through the approval of this document assumes no responsibility for completeness and/or accuracy of this document. Filed in accordance with the requirements of the El Paso County Land Development Code, Drainage Criteria Manuals 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 _____
Joshua Palmer, P.E.

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 any liability caused by any negligent acts, errors or omissions on my part in preparing this plan.

Engineer of Record Signature _____ Date _____
ANDREW W. McCORD P.E. 25057

Owner's Statement:
I, the owner/developer have read and will comply with the requirements of the Grading and Erosion Control Plan.

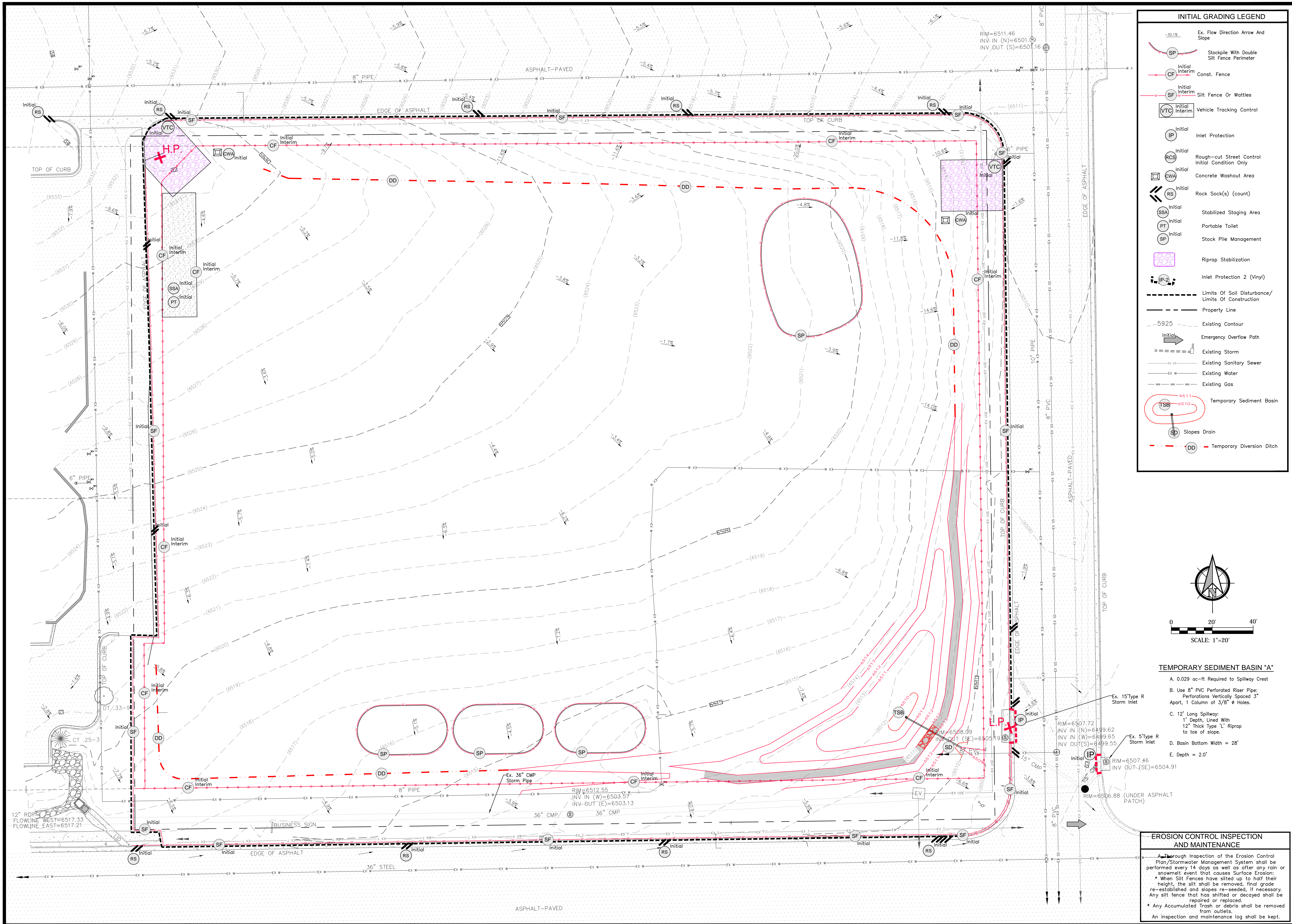
Owner Signature _____ Date _____
Sean Edwards, President
ADDRESS: LEISURE CONSTRUCTION
3443 TAMPA ROAD, SUITE B PALM
HARBOR, FL 34684

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My Garage @ Northcrest
Grading Erosion Control Plan
COVER SHEET
El Paso County, Colorado

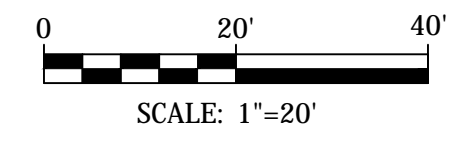
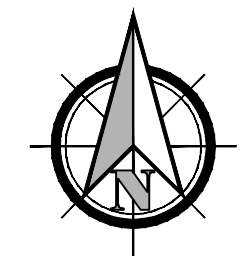
Project No:	23049
Date:	06/17/2024
Design:	MJK
Drawn:	MJK
Check:	AMcC
Revisions:	

Sheet PCD File No. CDR-24-
C300
2 of 21 Sheets



INITIAL GRADING LEGEND

- Ex. Flow Direction Arrow And Slope
- Stockpile With Double Silt Fence Perimeter
- Const. Fence
- Silt Fence Or Wattles
- Vehicle Tracking Control
- Inlet Protection
- Rough-cut Street Control Initial Condition Only
- Concrete Washout Area
- Rock Sock(s) (count)
- Stabilized Staging Area
- Portable Toilet
- Stock Pile Management
- Riprap Stabilization
- Inlet Protection 2 (Vinyl)
- Limits of Soil Disturbance/Limits of Construction
- Property Line
- Existing Contour
- Emergency Overflow Path
- Existing Storm
- Existing Sanitary Sewer
- Existing Water
- Existing Gas
- Temporary Sediment Basin
- Slopes Drain
- Temporary Diversion Ditch



- #### TEMPORARY SEDIMENT BASIN "A"
- A. 0.029 ac-ft Required to Spillway Crest
 - B. Use 8" PVC Perforated Riser Pipe; Perforations Vertically Spaced 3" Apart, 1 Column of 3/8" Holes.
 - C. 12' Long Spillway; 1' Depth, Lined With 12" thick Type "L" Riprap to toe of slope.
 - D. Basin Bottom Width = 28'
 - E. Depth = 2.0'

EROSION CONTROL INSPECTION AND MAINTENANCE

A thorough inspection of the Erosion Control Plan/Stormwater Management System shall be performed every 14 days as well as after any rain or snowmelt event that causes Surface Erosion:

- * When Silt Fences have silted up to half their height, the silt shall be removed, final grade re-established and slopes re-seeded, if necessary. Any silt fence that has shifted or decayed shall be repaired or replaced.
- * Any Accumulated Trash or debris shall be removed from outlets.

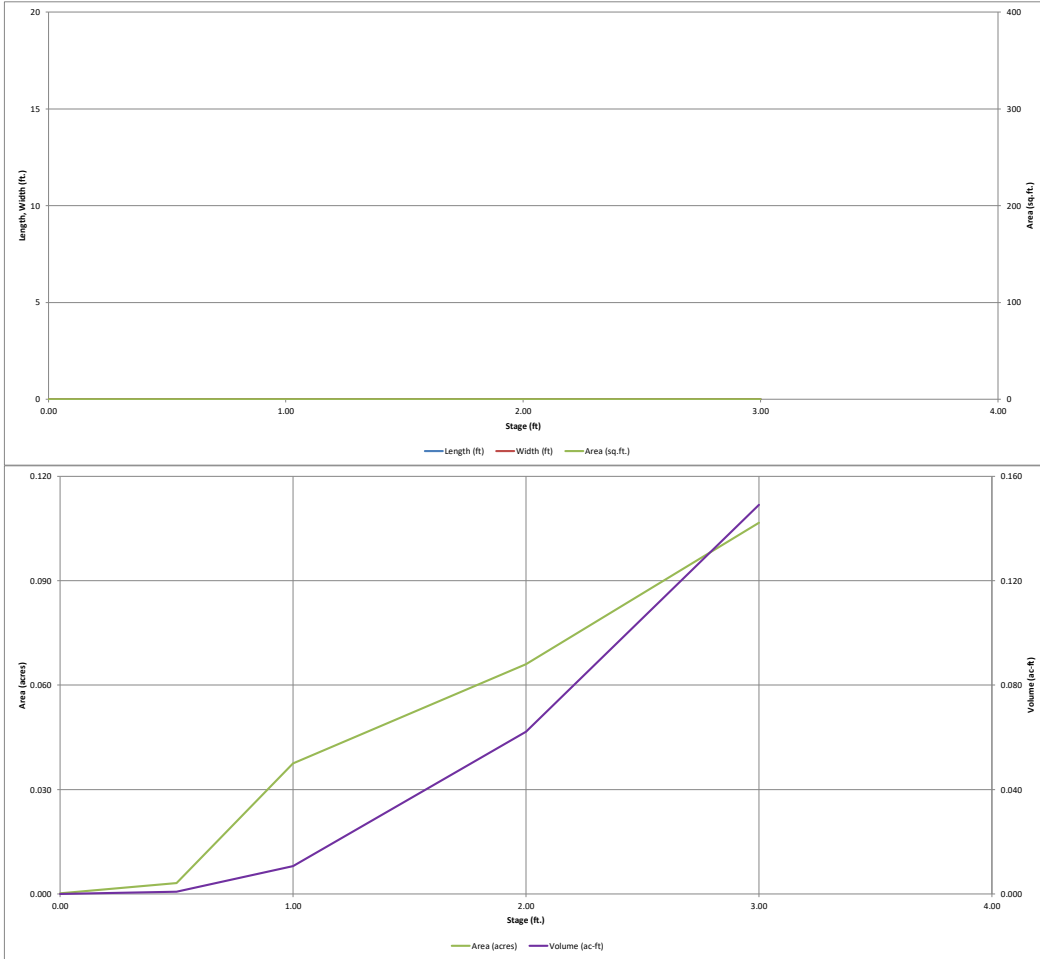
An inspection and maintenance log shall be kept.

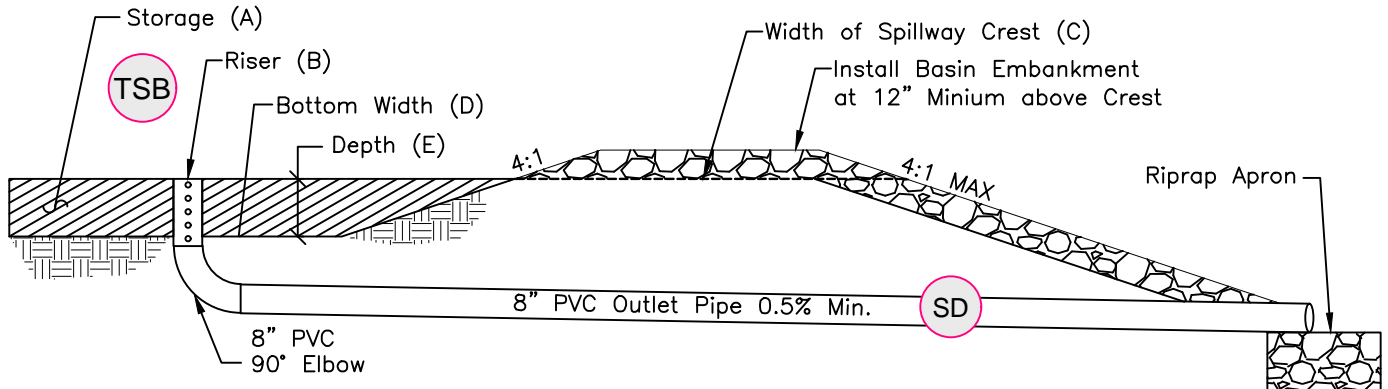
My Garage @ Northcrest Grading Erosion Control Plan Initial Conditions Plan El Paso County, Colorado

Project No.:	23049
Date:	06/14/2024
Design:	MJK
Drawn:	MJK
Check:	AMcC
Revisions:	

DETENTION BASIN STAGE-STORAGE TABLE BUILDER

UD-Detention, Version 3.07 (February 2017)



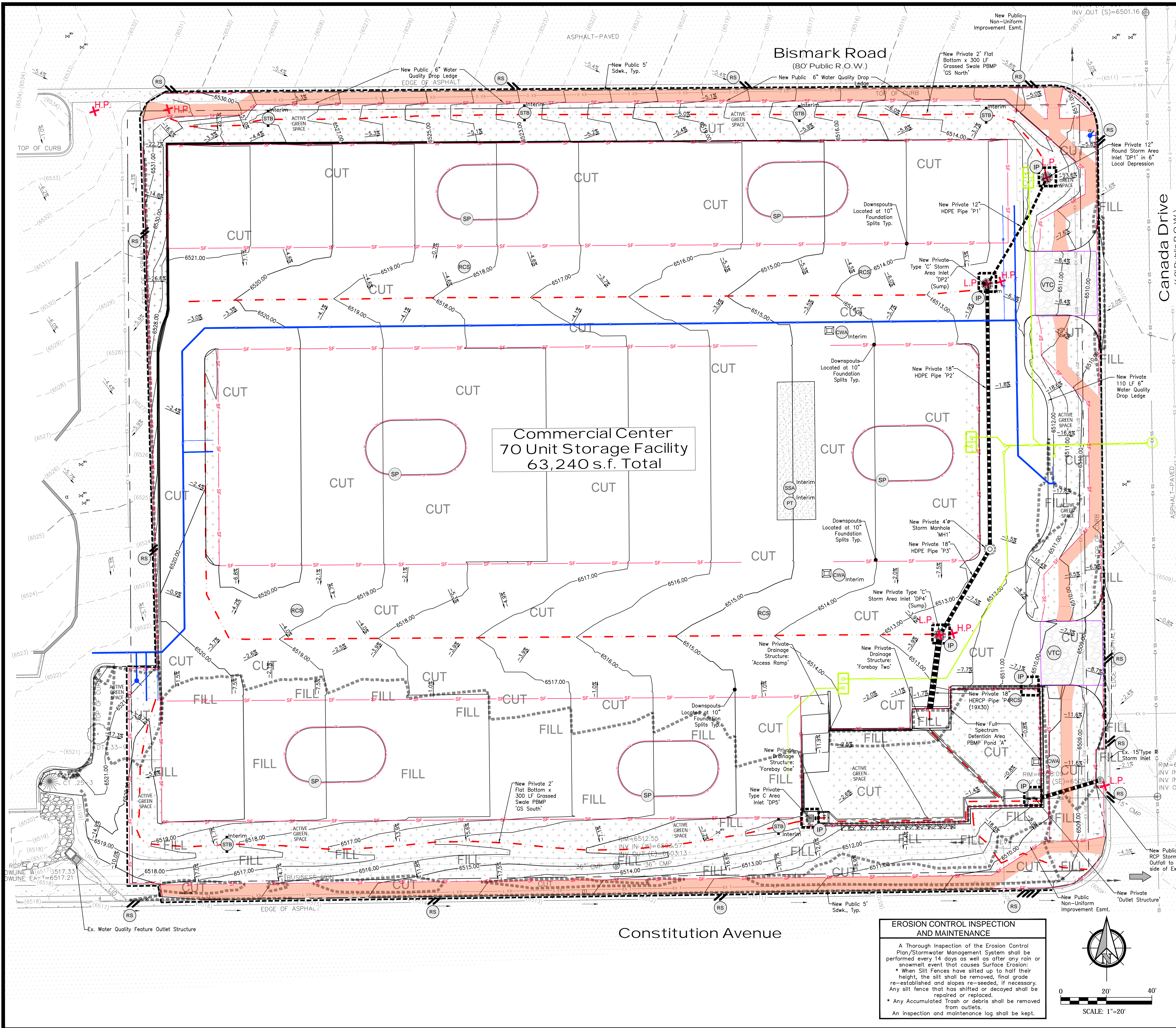


TEMPORARY SEDIMENT BASIN "A"

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Perforations Vertically Spaced 3"
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1' Depth, Lined With
12" Thick Type 'L' Riprap
to toe of slope.
- D. Basin Bottom Width = 28'
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TEMPORARY SEDIMENT BASIN CALCULATIONS

NTS



**Commercial Center
70 Unit Storage Facility
63,240 s.f. Total**

INTERIM GRADING LEGEND

CUT (dashed line) / **FILL** (solid line) - Cut/Fill Delineation

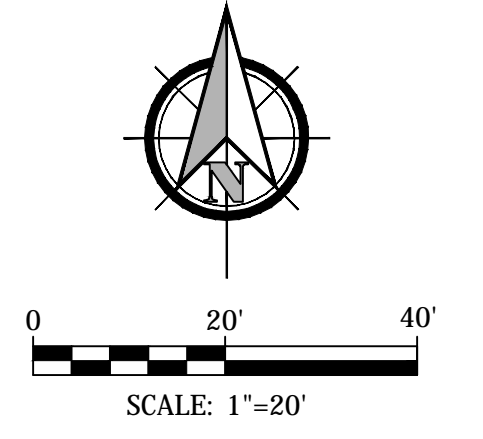
- CF - Const. Fence
- SP - Stockpile With Double Silt Fence Perimeter
- SF - Silt Fence Or Approved Alt.
- VTC - Vehicle Tracking Control
- IP - Inlet Protection
- STB - Straw Bale Barrier / Dyke
- CWA - Concrete Washout Area
- RS - Rock Sock(s) (count)
- SSA - Stabilized Staging Area
- PT - Portable Toilet
- SP - Stock Pile Management
- RCS - Rough-cut Street Control Interim Condition Only
- Final - Permanent Seeding And Landscaping
- - Limits Of Soil Disturbance/ Limits Of Construction
- - Property Line
- 5925 - Existing Contour
- 5925 - Proposed Contour
- - Emergency Overflow Path
- - Existing Sanitary Sewer
- - Existing Water
- - Existing Gas
- - Channel Flowline
- - Proposed Water Elements
- - Proposed Sanitary Elements
- 15" CMP - Existing or Proposed Storm Pipe
- H.P. - Spot Elev. High Point
- L.P. - Spot Elev. Low Point
- - Ex. or Proposed Flow Direction
- - Lot or Property Boundary
- (6220) - Existing Intermediate Contour
- 6219 - Existing Intermediate Contour
- 6220 - Existing Index Contour
- - Existing Tree
- CT .25-3 DT .33-9 - Existing 6" Vertical Curb Brocaded Building Area
- - Ex. or Proposed Concrete
- - Ex. Asphalt
- - Concrete Paving

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- Any silt fence that has shifted or decayed shall be repaired or replaced.
- Any Accumulated Trash or debris shall be removed from outlets.

An inspection and maintenance log shall be kept.



SEED MIX

AREAS DISTURBED BY THE EARTHWORK ACTIVITIES AND NOT RECEIVING OTHER TREATMENT SHALL BE PERMANENTLY REVEGETATED WITH THE FOLLOWING SEED MIX.

SPECIES	VARIETY	lbs./acre
SIDEOTS GRAMA	El Reno	3.0
WESTERN WHEAT GRASS	Barton	2.5
SLENDER WHEAT GRASS	Native	2.0
LITTLE BLUESTEM	Pastura	2.0
SAND DROPSEED	Native	0.5
SWITCH GRASS	Nebraska 28	3.0
WEeping LOVE GRASS	Morpria	1.0
TOTAL		14.0 lbs

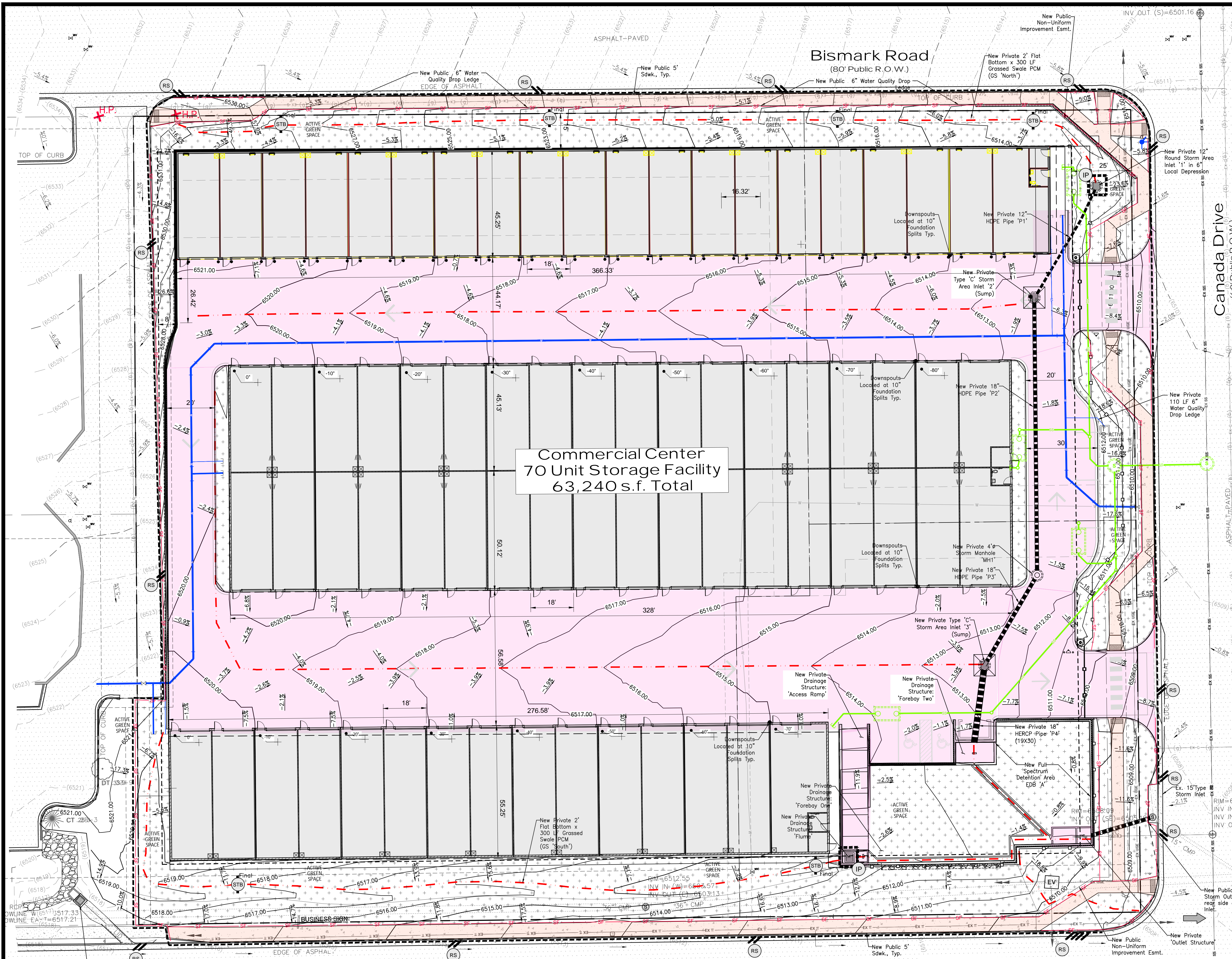
SEEDING APPLICATION: DRILL SEED 1/4" TO 1/2" INTO TOPSOIL. IN AREAS INACCESSIBLE TO A DRILL, HAND BROADCAST AT DOUBLE THE RATE AND RAKE 1/4" TO 1/2" INTO THE TOPSOIL. MULCHING APPLICATION: 1-1/2 TONS NATIVE HAY PER ACRE, MECHANICALLY CRIMPED INTO THE TOPSOIL.

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My Garage @ Northcrest
Grading Erosion Control Plan
Interim Conditions Plan
El Paso County, Colorado

Project No.: 23049
Date: 06/14/2024
Design: MKJ
Drawn: MKJ
Check: AMcC
Revisions:

Sheet
C302
4 of 21 Sheets



**Commercial Center
70 Unit Storage Facility
63,240 s.f. Total**

FINAL GRADING LEGEND

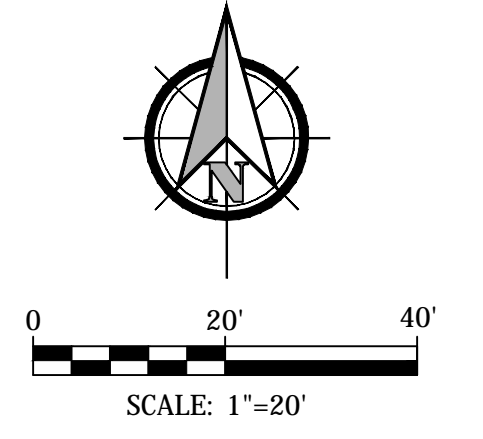
- IP Interim/Final Inlet Protection
- RS Interim/Final Rock Sock(s) (count)
- STB Interim/Final Straw Bale Barrier / Dyke
- Final Permanent Seeding And Landscaping
- Limits Of Soil Disturbance/ Limits Of Construction
- - - Property Line
- 5925 Existing Contour
- 5925 Proposed Contour
- Emergency Overflow Path
- Existing Sanitary Sewer
- Existing Water
- Existing Gas
- Channel Flowline
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- 15" CMP Existing or Proposed Storm Pipe
- Spot Elev. High Point
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- Flow Direction
- - - Lot or Property Boundary
- - - Existing Intermediate Contour
- (6220) Existing Index Contour
- 6219 Existing Intermediate Contour
- 6220 Existing Index Contour
- Existing Tree
- CT .25-3 DT .33-9
- Existing 6" Vertical Curb & Gutter
- Proposed Building Area
- Ex. or Proposed Conc Sdkw
- Concrete Paving
- Seeding & Mulching

EROSION CONTROL INSPECTION AND MAINTENANCE

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SIDEOTS GRAMA	El Reno	3.0
WESTERN WHEAT GRASS	Barton	2.5
SLENDER WHEAT GRASS	Native	2.0
LITTLE BLUESTEM	Pastura	2.0
SAND DROPSEED	Native	0.5
SWITCH GRASS	Nebraska 28	3.0
WEeping LOVE GRASS	Morpis	1.0
		14.0 lbs

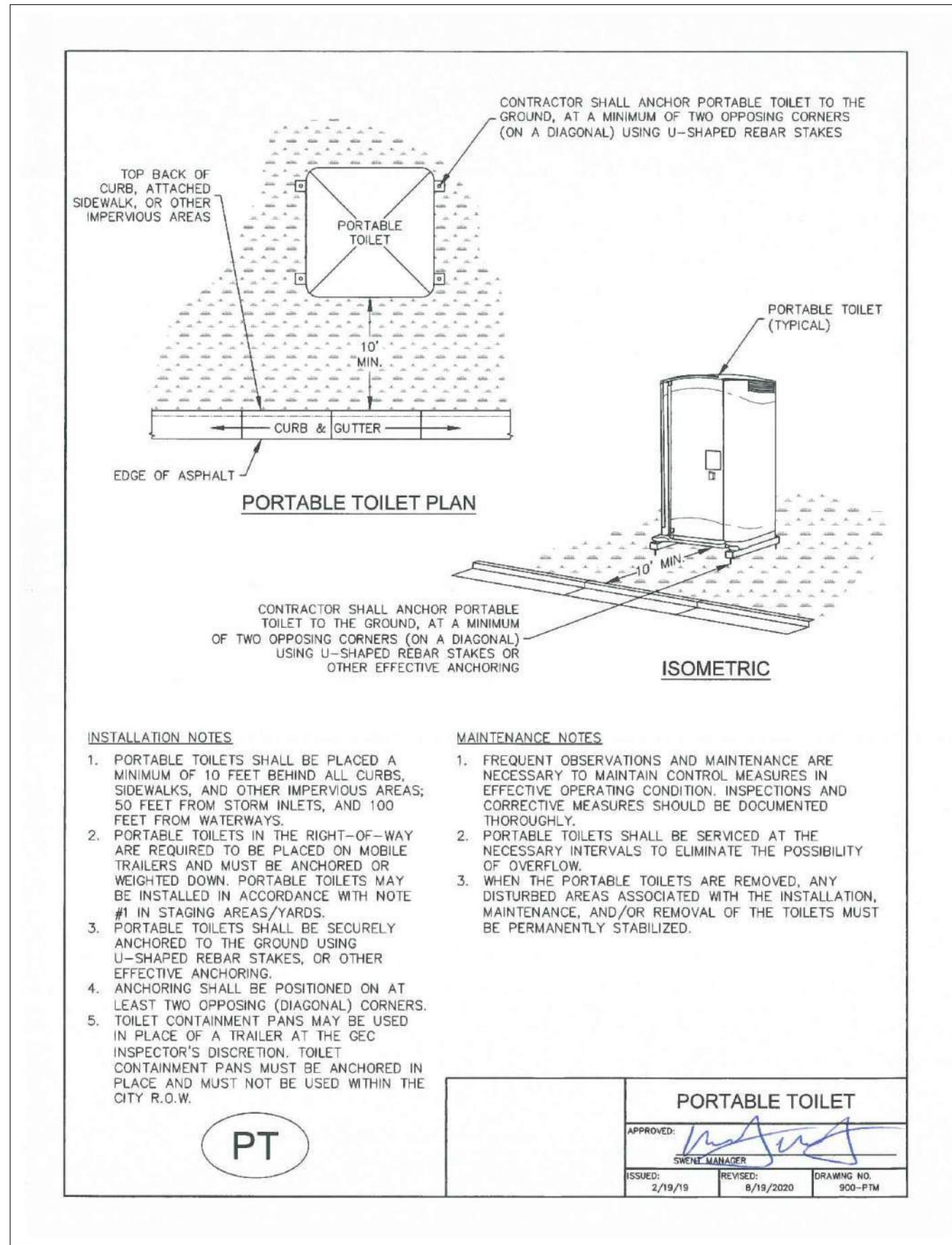
SEEDING APPLICATION: DRILL SEED 1/4" TO 1/2" INTO TOPSOIL. IN AREAS INACCESSIBLE TO A DRILL, HAND BROADCAST AT DOUBLE THE RATE AND RAKE 1/4" TO 1/2" INTO THE TOPSOIL. MULCHING APPLICATION: 1-1/2 TONS NATIVE HAY PER ACRE, MECHANICALLY CRIMPED INTO THE TOPSOIL.

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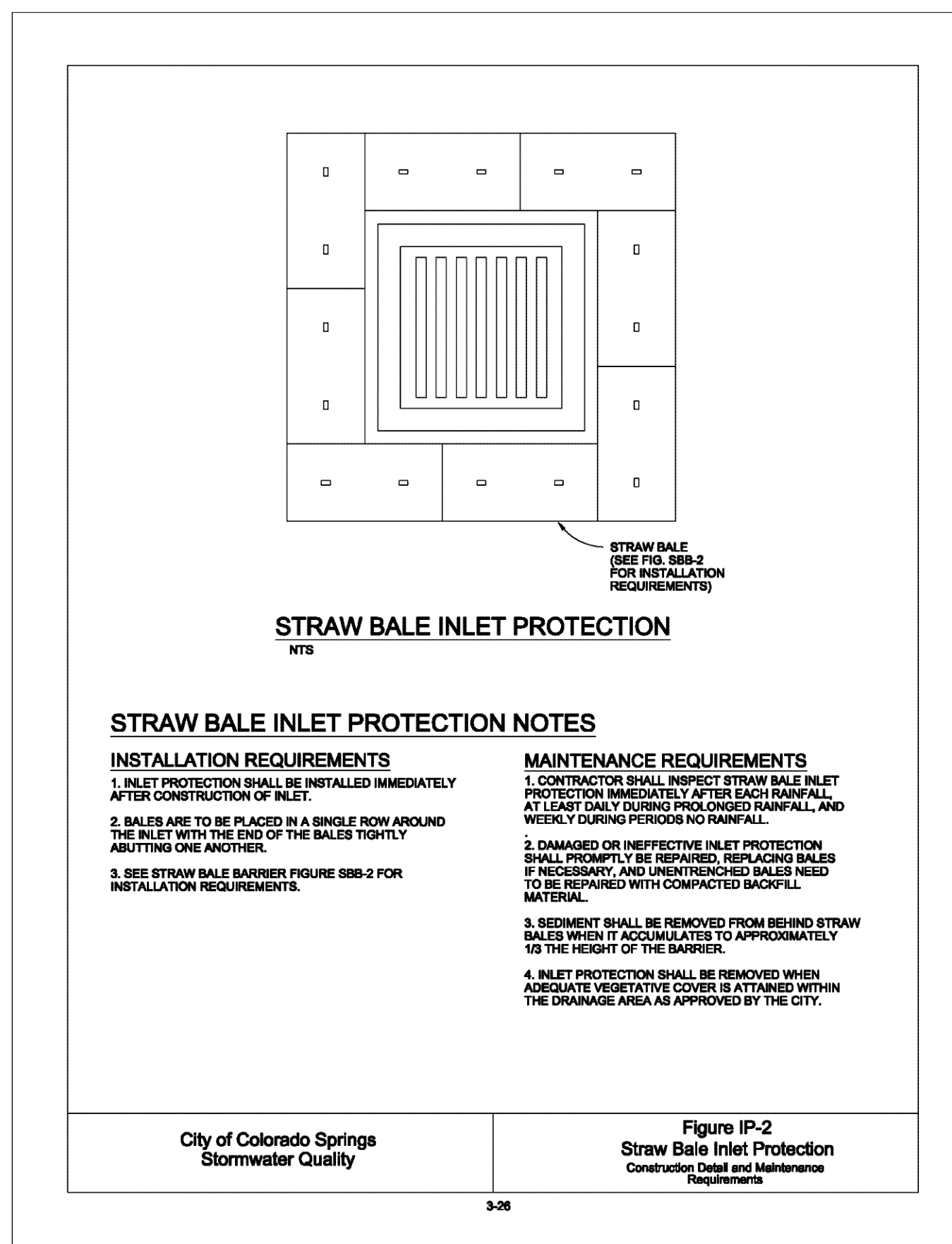
My Garage @ Northcrest
Grading Erosion Control Plan
Final Conditions Plan
El Paso County, Colorado

Project No.: 23049
Date: 05/27/2024
Design: MKJ
Drawn: MKJ
Check: AMcC
Revisions:

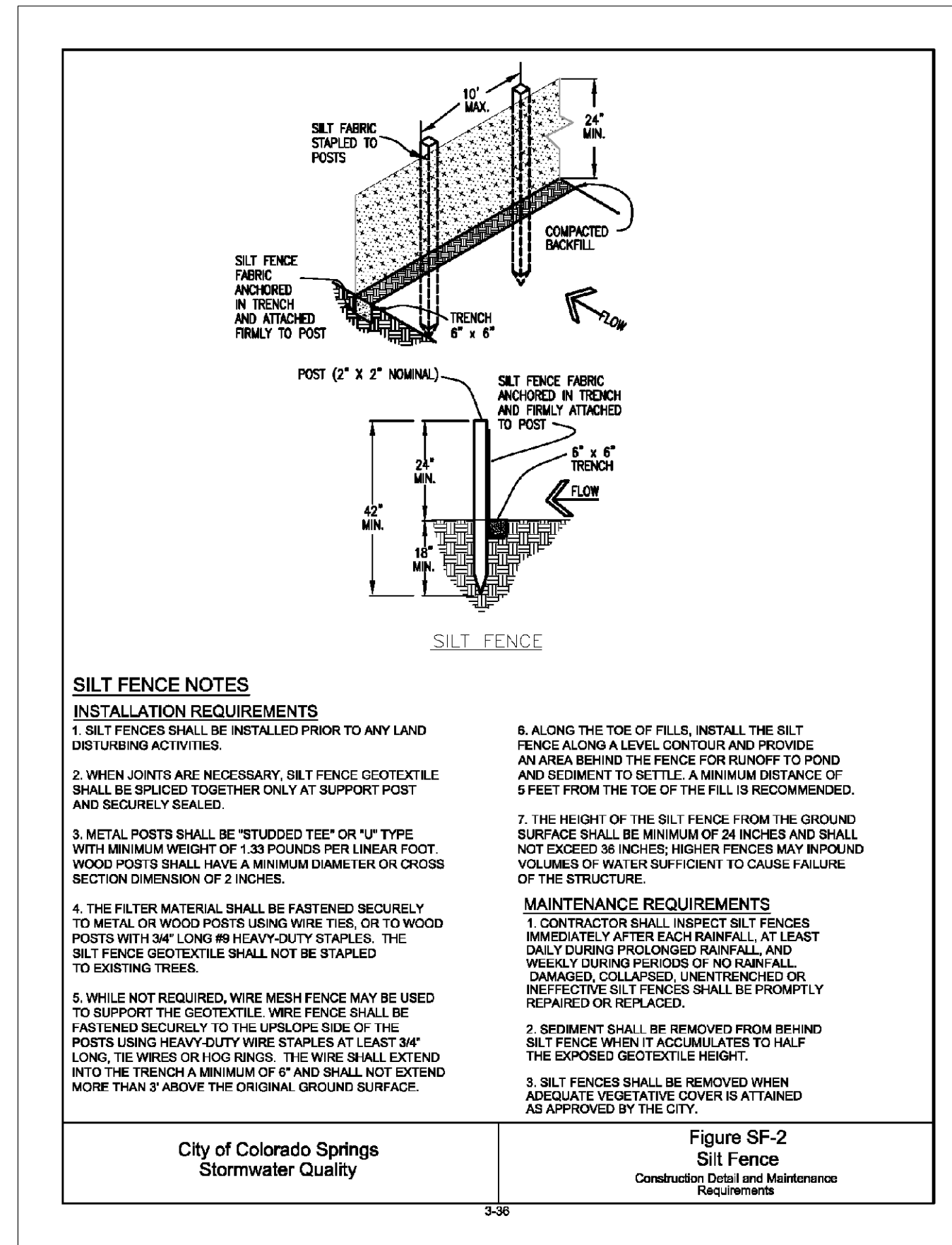
Sheet
C303
4 of 6 Sheets



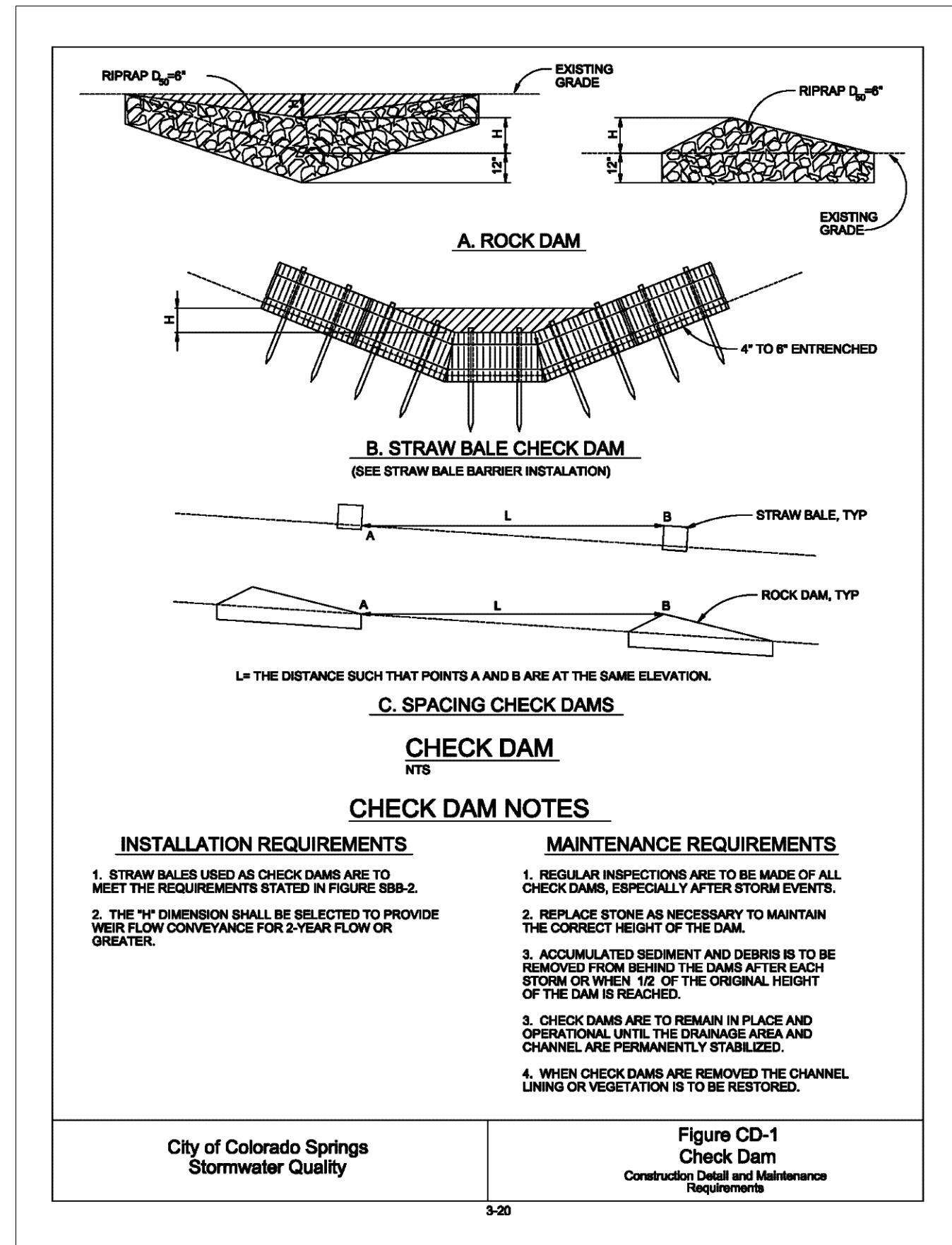
PORTABLE TOILET (PT)
NOT TO SCALE



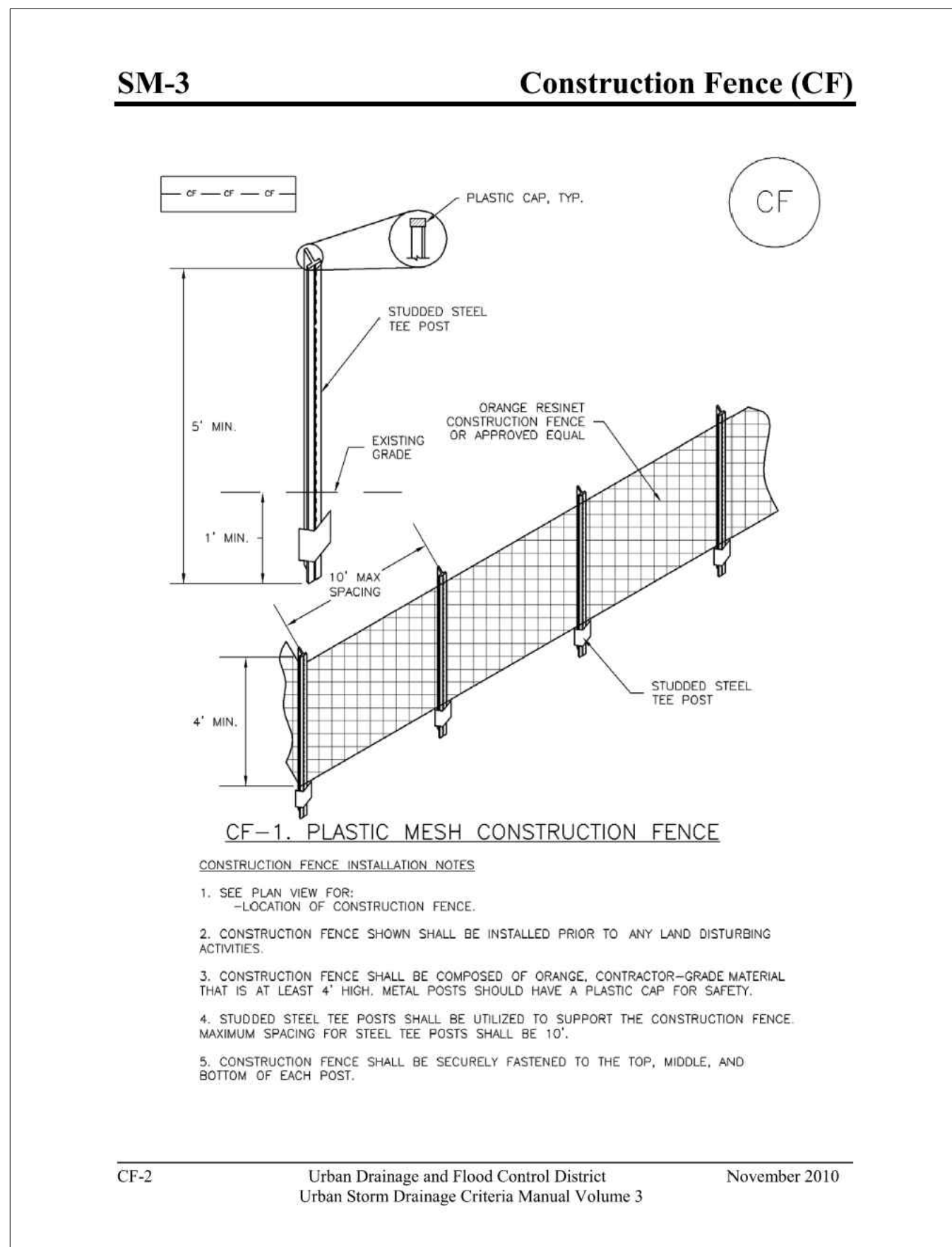
INLET PROTECTION - 2 (IP-2)
NOT TO SCALE



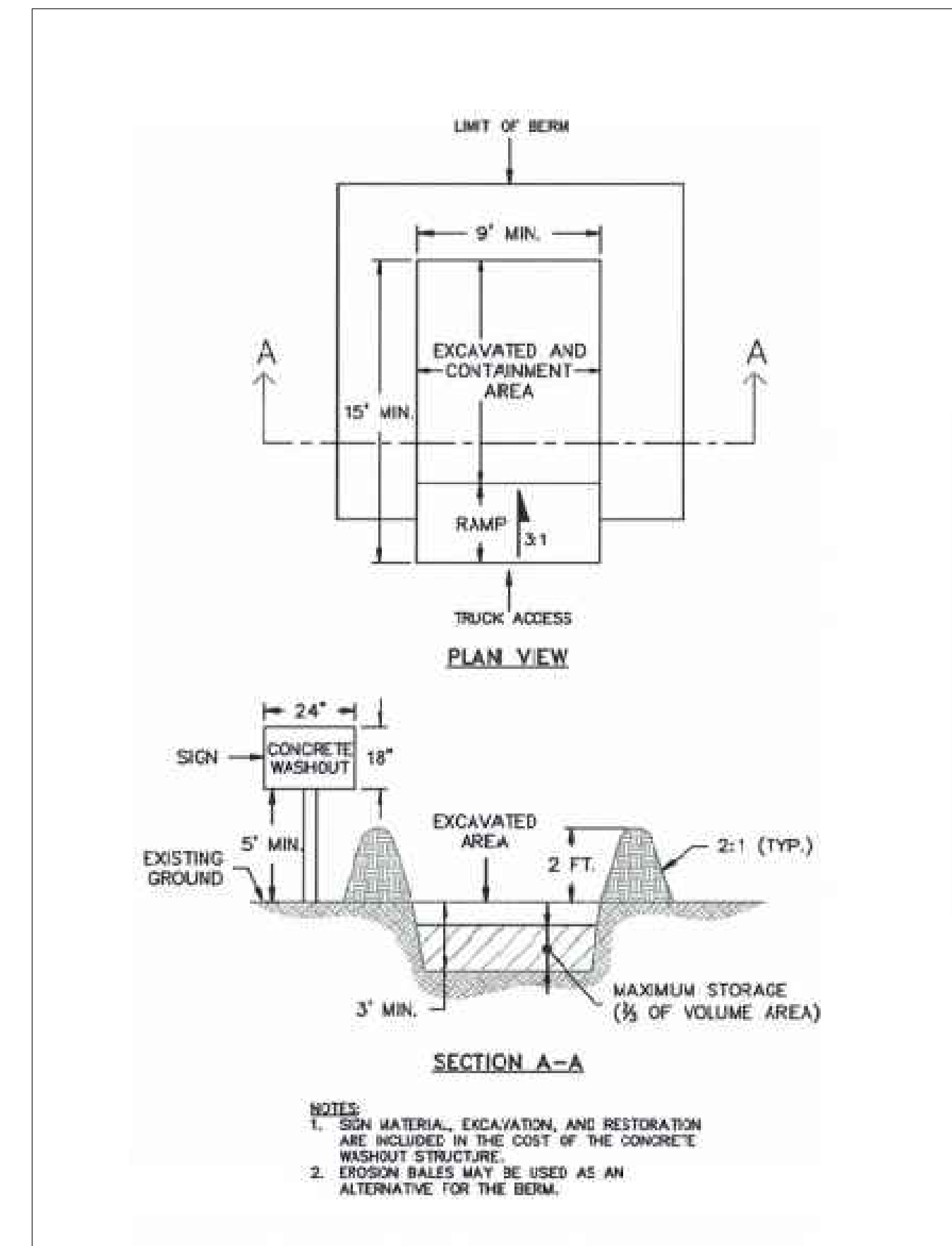
SILT FENCE (SF)
NOT TO SCALE



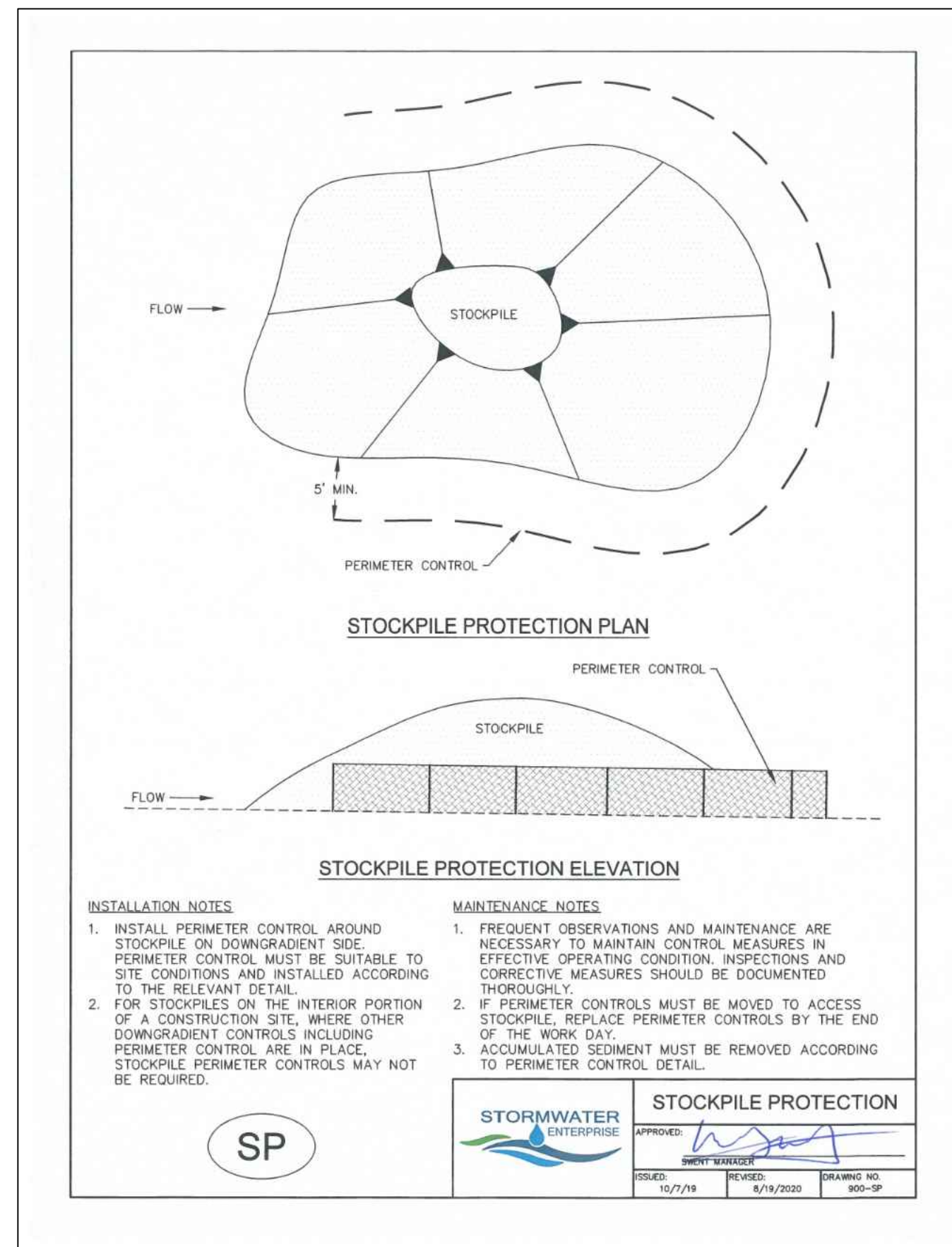
CHECK DAM (CD1)
NOT TO SCALE



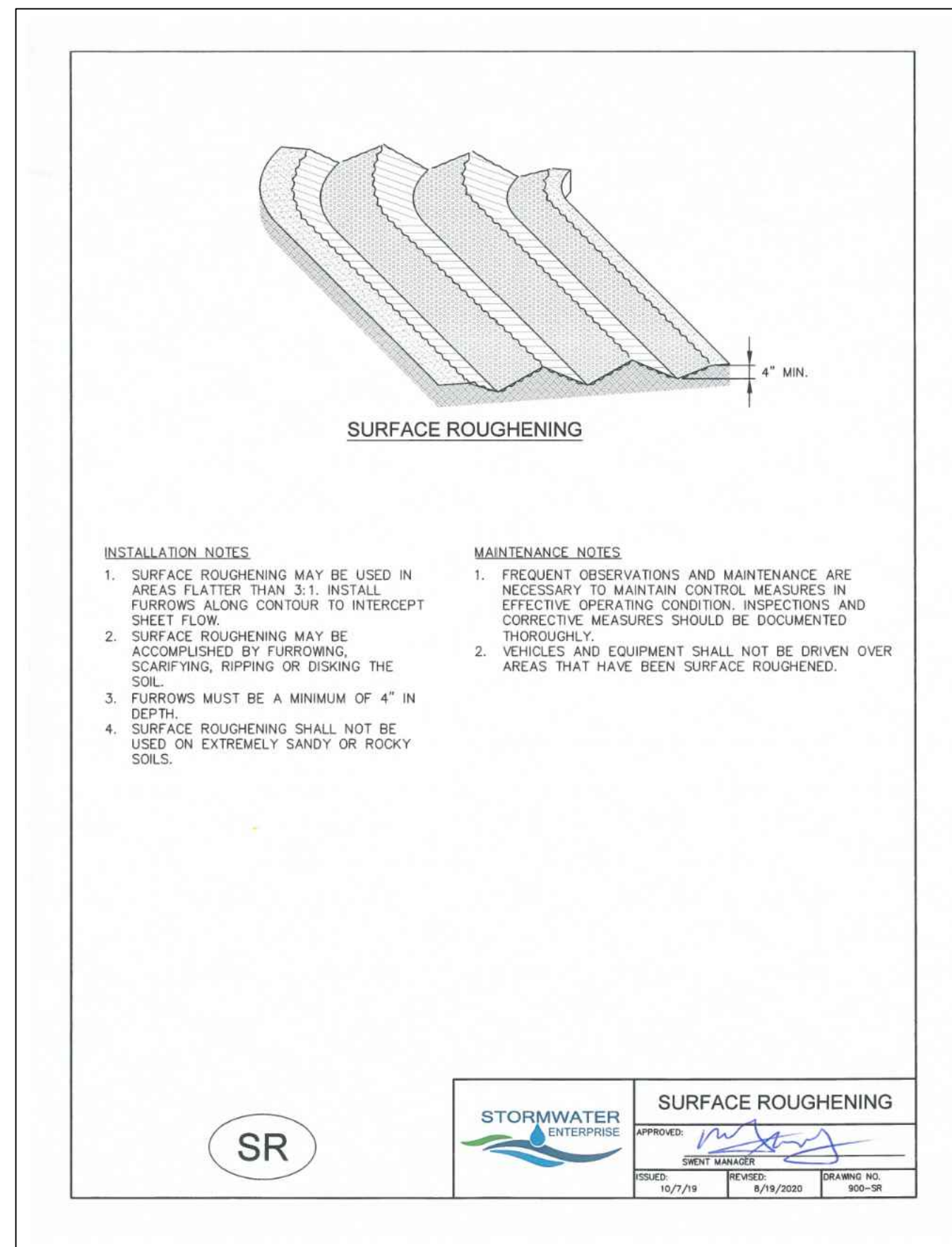
CONSTRUCTION FENCE (CF)
NOT TO SCALE



CONCRETE WASHOUT AREA (CWA)
NOT TO SCALE

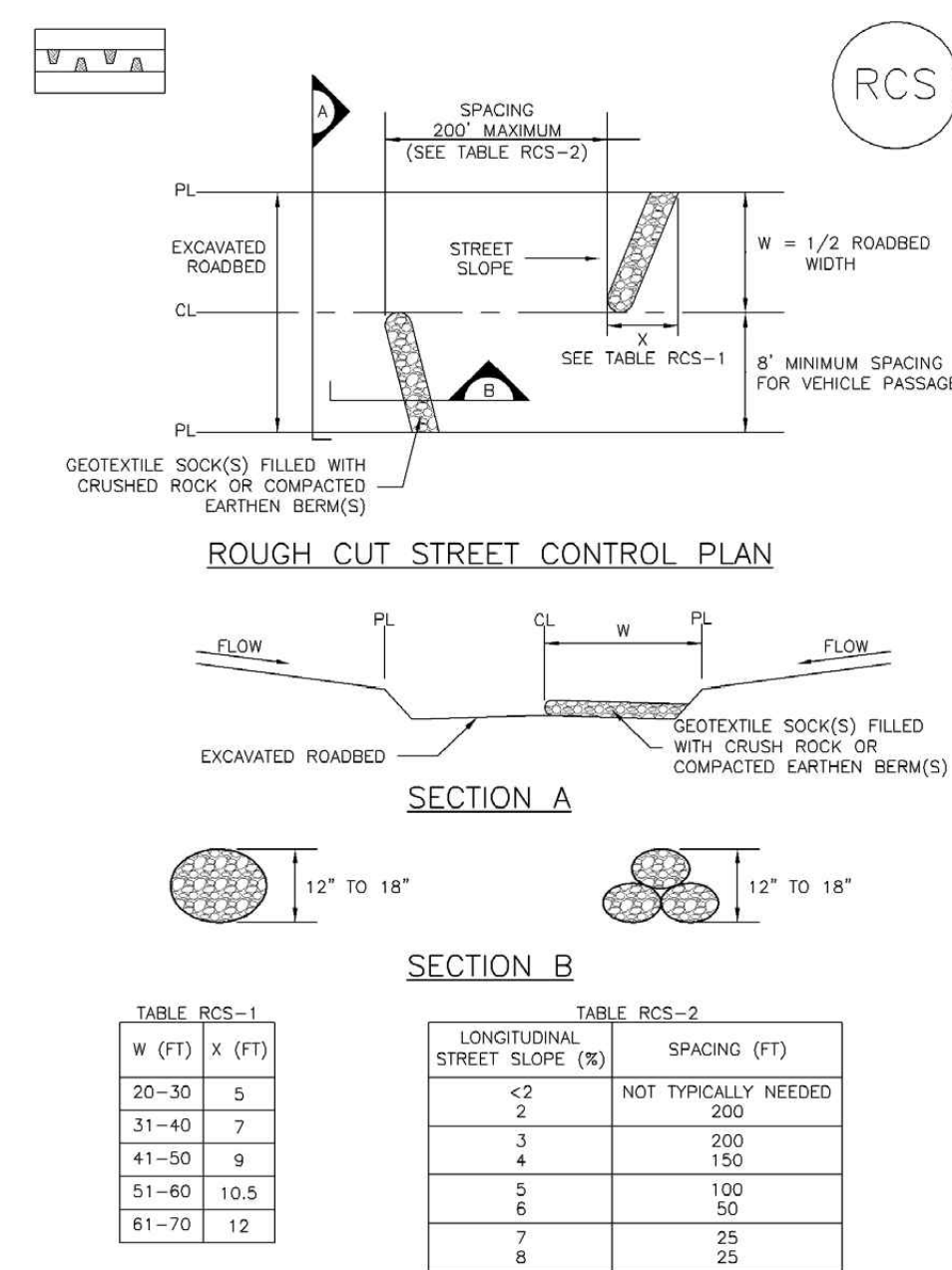


STOCKPILE PROTECTION (SP)
NOT TO SCALE



SURFACE ROUGHENING (SR)
NOT TO SCALE

EC-9 Rough Cut Street Control (RCS)



RCS-2 Urban Drainage and Flood Control District Urban Storm Drainage Criteria Manual Volume 3 November 2010

ROUGH-CUT STREET CONTROL (RCS)
NOT TO SCALE

Rough Cut Street Control (RCS) EC-9

ROUGH CUT STREET CONTROL INSTALLATION NOTES

1. SEE PLAN VIEW FOR LOCATION OF ROUGH CUT STREET CONTROL MEASURES.
2. ROUGH CUT STREET CONTROL SHALL BE INSTALLED AFTER A ROAD HAS BEEN CUT IN AND WILL NOT BE PAVED FOR MORE THAN 14 DAYS OR FOR TEMPORARY CONSTRUCTION ROADS THAT HAVE NOT RECEIVED ROAD BASE.

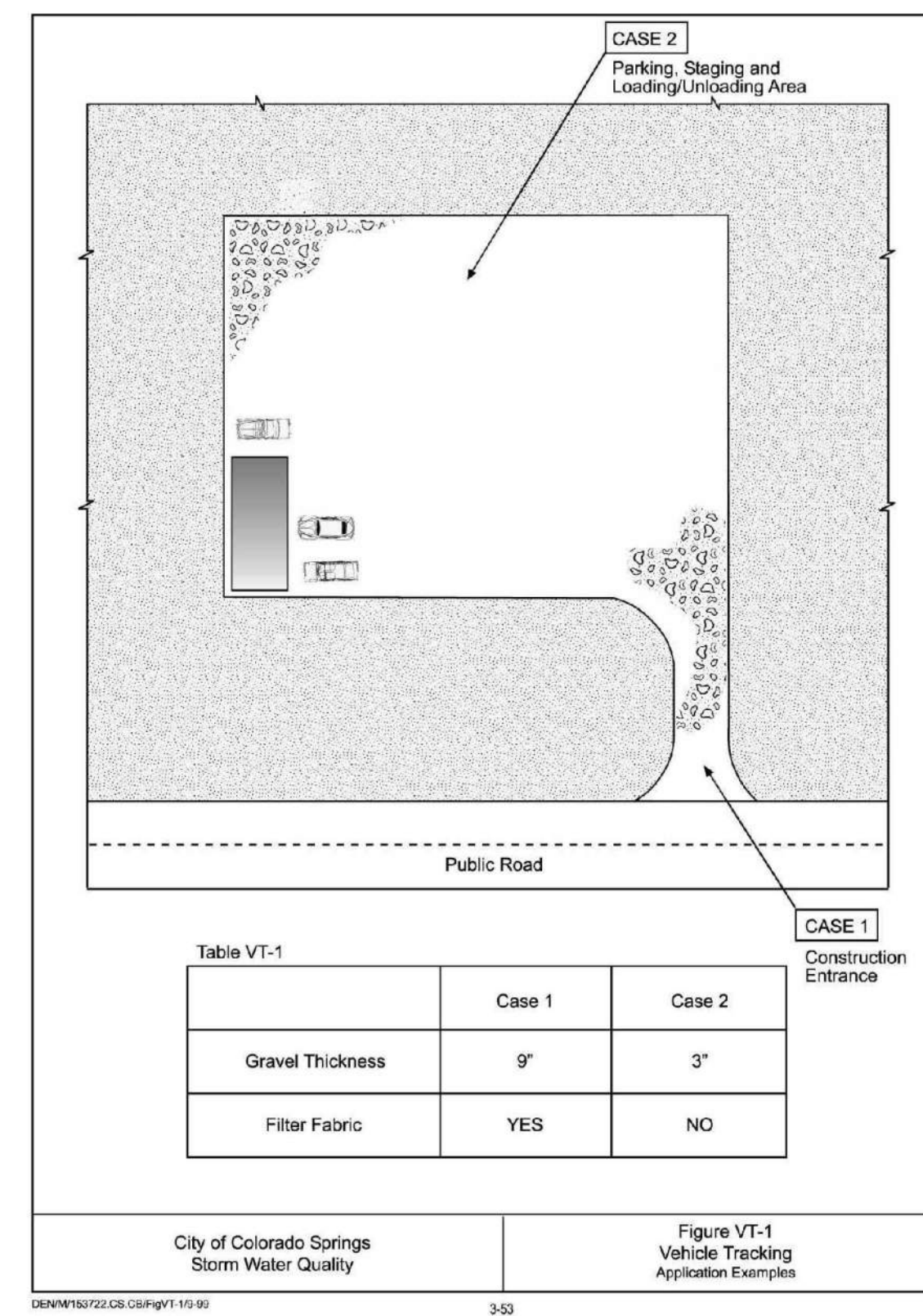
ROUGH CUT STREET CONTROL INSPECTION AND MAINTENANCE NOTES

1. INSPECT BMPs EACH WORKDAY, AND MAINTAIN THEM IN EFFECTIVE OPERATING CONDITION. MAINTENANCE OF BMPs SHOULD BE PROACTIVE, NOT REACTIVE. INSPECT BMPs AS SOON AS POSSIBLE (AND ALWAYS WITHIN 24 HOURS) FOLLOWING A STORM THAT CAUSES SURFACE EROSION, AND PERFORM NECESSARY MAINTENANCE.
2. FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN BMPs IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.
3. WHERE BMPs HAVE FAILED, REPAIR OR REPLACEMENT SHOULD BE INITIATED UPON DISCOVERY OF THE FAILURE.

(DETAILS ADAPTED FROM AURORA, COLORADO, NOT AVAILABLE IN AUTOCAD)

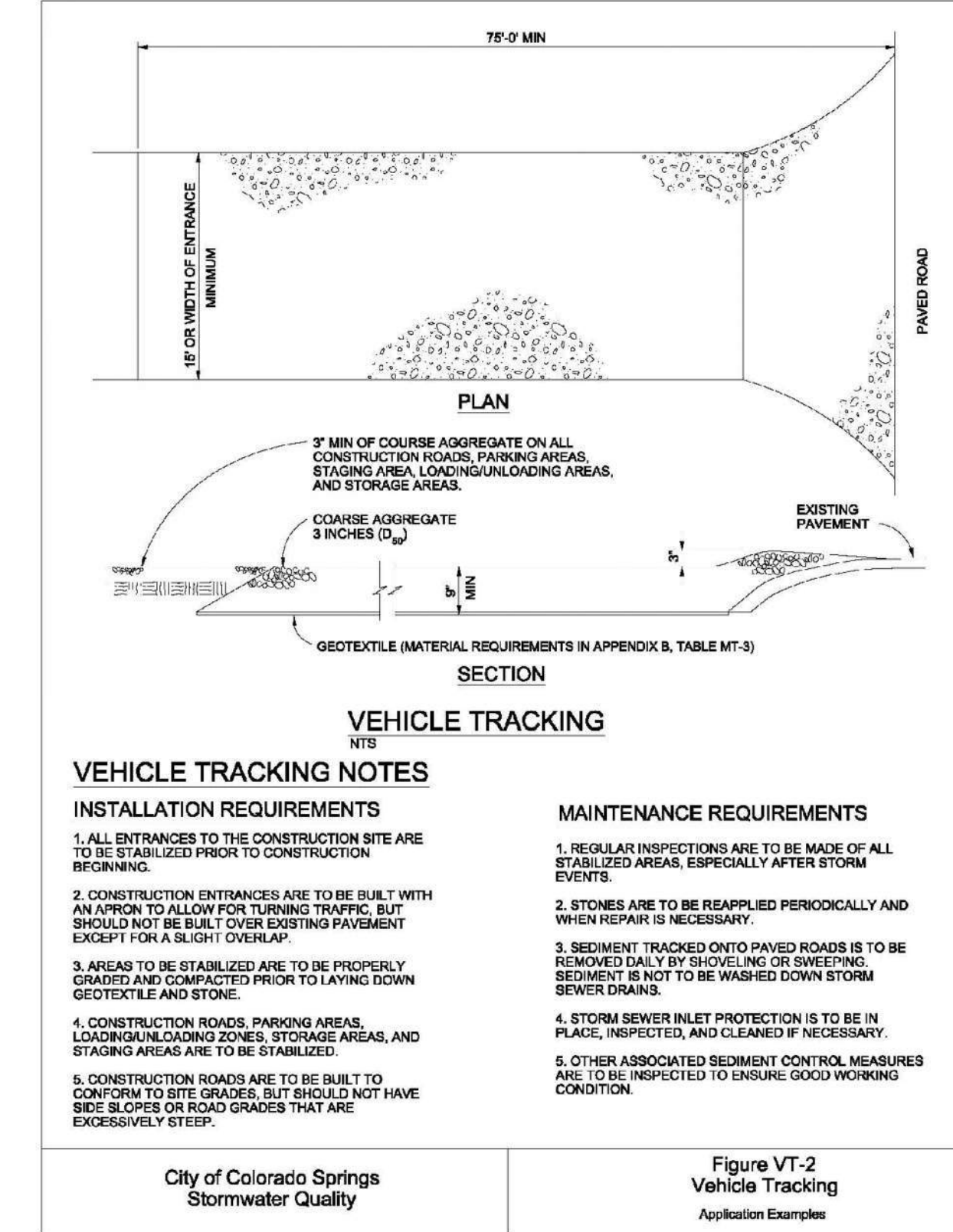
NOTE: MANY JURISDICTIONS HAVE BMP DETAILS THAT VARY FROM UDFCD STANDARD DETAILS. CONSULT WITH LOCAL JURISDICTIONS AS TO WHICH DETAIL SHOULD BE USED WHEN DIFFERENCES ARE NOTED.

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



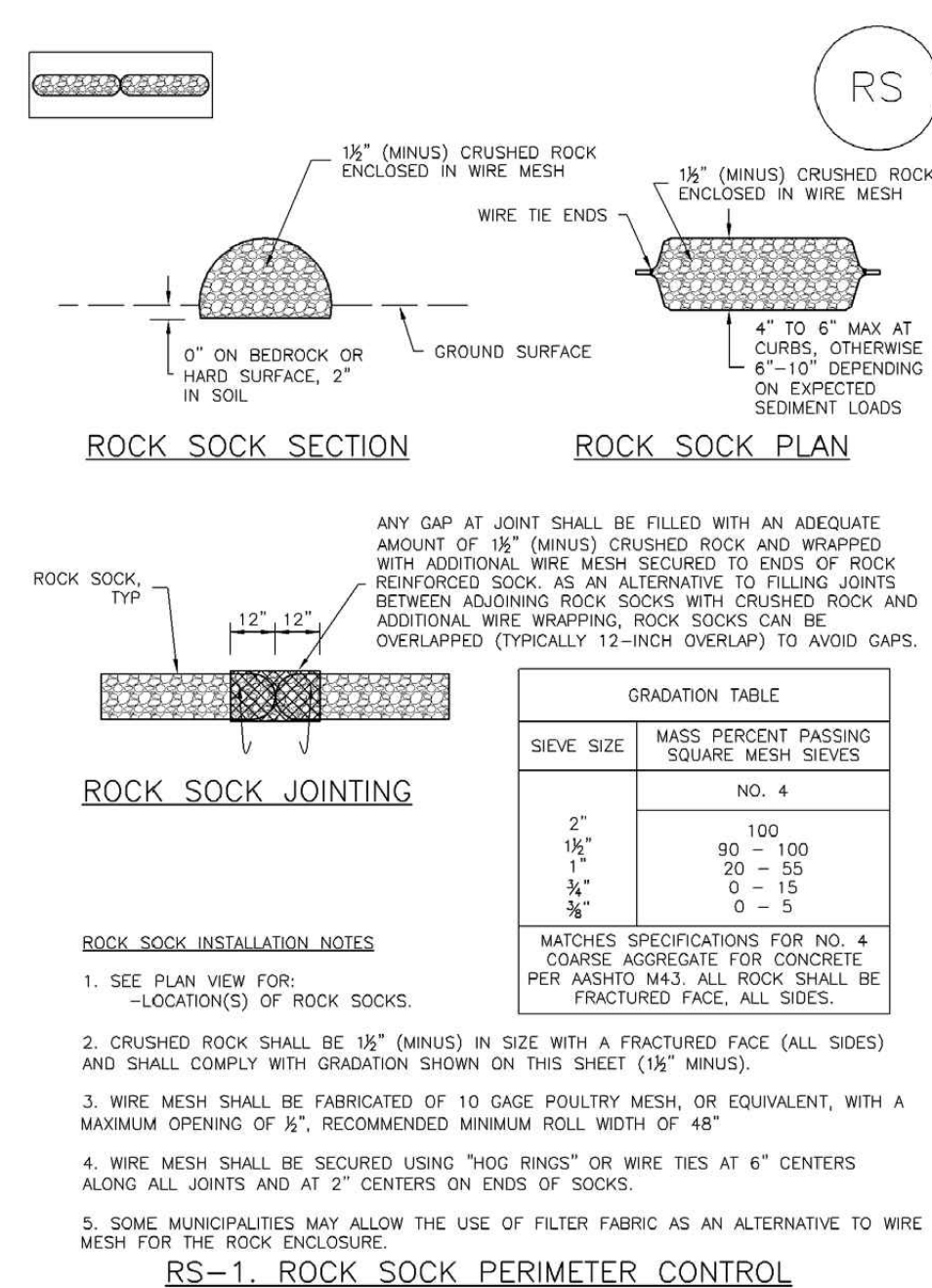
City of Colorado Springs Storm Water Quality Figure VT-1 Vehicle Tracking Application Examples

VEHICLE TRACKING CONTROL (VTC)
NOT TO SCALE



City of Colorado Springs Stormwater Quality Figure VT-2 Vehicle Tracking Application Examples

SC-5 Rock Sock (RS)



RS-2 Urban Drainage and Flood Control District Urban Storm Drainage Criteria Manual Volume 3 November 2010

Rock Sock (RS) SC-5

ROCK SOCK MAINTENANCE NOTES

1. INSPECT BMPs EACH WORKDAY, AND MAINTAIN THEM IN EFFECTIVE OPERATING CONDITION. MAINTENANCE OF BMPs SHOULD BE PROACTIVE, NOT REACTIVE. INSPECT BMPs AS SOON AS POSSIBLE (AND ALWAYS WITHIN 24 HOURS) FOLLOWING A STORM THAT CAUSES SURFACE EROSION, AND PERFORM NECESSARY MAINTENANCE.
2. FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN BMPs IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.
3. WHERE BMPs HAVE FAILED, REPAIR OR REPLACEMENT SHOULD BE INITIATED UPON DISCOVERY OF THE FAILURE.
4. ROCK SOCKS SHALL BE REPLACED IF THEY BECOME HEAVILY SOILED, OR DAMAGED BEYOND REPAIR.
5. SEDIMENT ACCUMULATED UPSTREAM OF ROCK SOCKS SHALL BE REMOVED AS NEEDED TO MAINTAIN FUNCTIONALITY OF THE BMP. TYPICALLY WHEN DEPTH OF ACCUMULATED SEDIMENTS IS APPROXIMATELY 1/2 OF THE HEIGHT OF THE ROCK SOCK.
6. ROCK SOCKS ARE TO REMAIN IN PLACE UNTIL THE UPSTREAM DISTURBED AREA IS STABILIZED AND APPROVED BY THE LOCAL JURISDICTION.
7. WHEN ROCK SOCKS ARE REMOVED, ALL DISTURBED AREAS SHALL BE COVERED WITH TOPSOIL, SEEDED AND MULCHED OR OTHERWISE STABILIZED AS APPROVED BY LOCAL JURISDICTION.

(DETAILS ADAPTED FROM TOWN OF PARKER, COLORADO AND CITY OF AURORA, COLORADO, NOT AVAILABLE IN AUTOCAD)

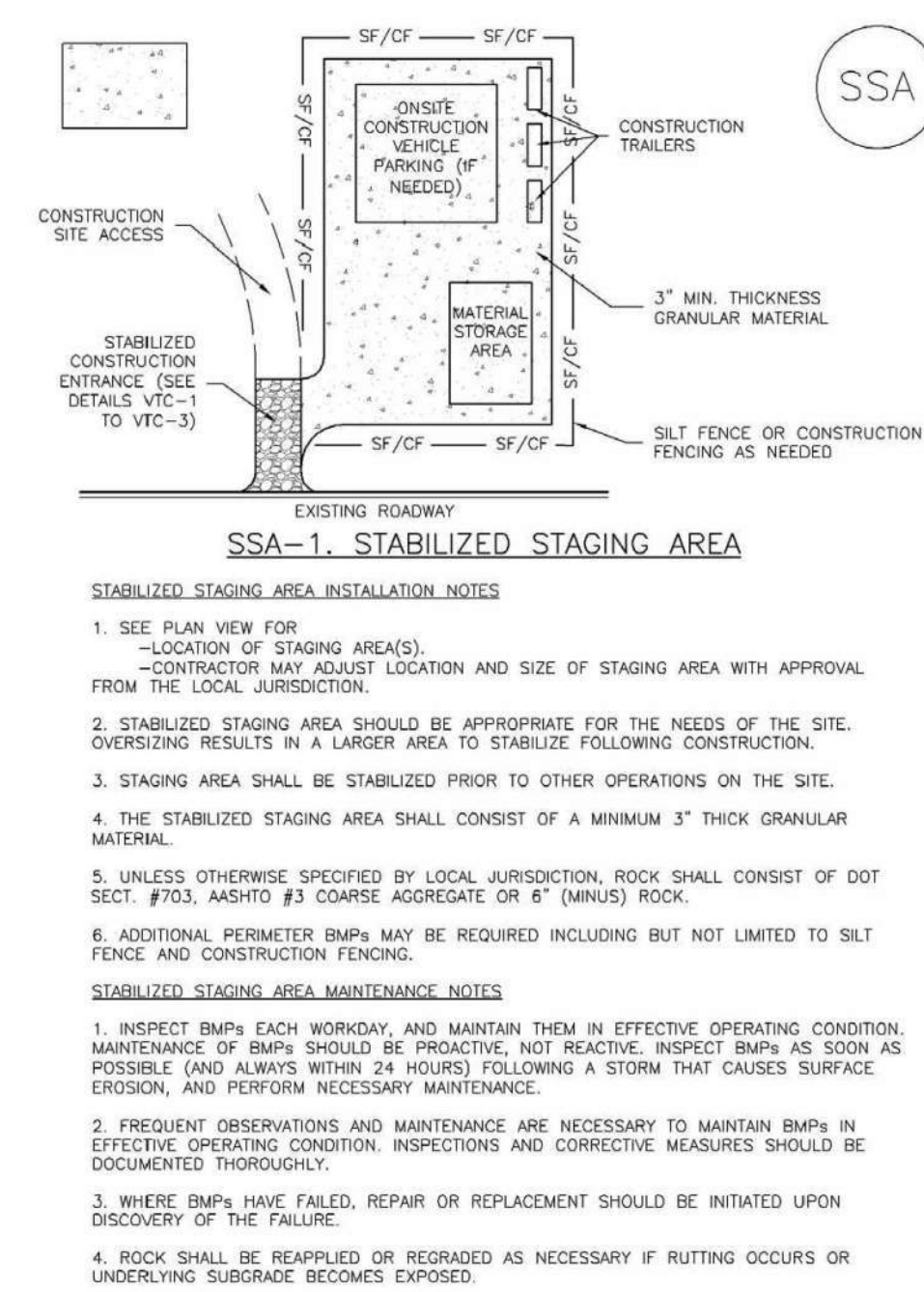
NOTE: MANY JURISDICTIONS HAVE BMP DETAILS THAT VARY FROM UDFCD STANDARD DETAILS. CONSULT WITH LOCAL JURISDICTIONS AS TO WHICH DETAIL SHOULD BE USED WHEN DIFFERENCES ARE NOTED.

NOTE: THE DETAILS INCLUDED WITH THIS FACT SHEET SHOW COMMONLY USED CONVENTIONAL METHODS OF ROCK SOCK INSTALLATION IN THE DENVER METROPOLITAN AREA. THERE ARE MANY OTHER SIMILAR PROPRIETARY PRODUCTS ON THE MARKET. UDFCD NEITHER ENDORSES NOR DISCOURAGES USE OF PROPRIETARY PROTECTION PRODUCTS; HOWEVER, IN THE EVENT PROPRIETARY METHODS ARE USED, THE APPROPRIATE DETAIL FROM THE MANUFACTURER MUST BE INCLUDED IN THE SWMP AND THE BMP MUST BE INSTALLED AND MAINTAINED AS SHOWN IN THE MANUFACTURER'S DETAILS.

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

ROCK SOCK (RS)
NOT TO SCALE

Stabilized Staging Area (SSA) SM-6



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

STABILIZED STAGING AREA (SSA)
NOT TO SCALE

SM-6 Stabilized Staging Area (SSA)

STABILIZED STAGING AREA MAINTENANCE NOTES

5. STABILIZED STAGING AREA SHALL BE ENLARGED IF NECESSARY TO CONTAIN PARKING, STORAGE, AND UNLOADING/LOADING OPERATIONS.
6. THE STABILIZED STAGING AREA SHALL BE REMOVED AT THE END OF CONSTRUCTION. THE GRANULAR MATERIAL SHALL BE REMOVED OR, IF APPROVED BY THE LOCAL JURISDICTION, USED ON SITE, AND THE AREA COVERED WITH TOPSOIL, SEEDED AND MULCHED OR OTHERWISE STABILIZED IN A MANNER APPROVED BY LOCAL JURISDICTION.

NOTE: MANY MUNICIPALITIES PROHIBIT THE USE OF RECYCLED CONCRETE AS GRANULAR MATERIAL FOR STABILIZED STAGING AREAS DUE TO DIFFICULTIES WITH RE-ESTABLISHMENT OF VEGETATION IN AREAS WHERE RECYCLED CONCRETE WAS PLACED.

NOTE: MANY JURISDICTIONS HAVE BMP DETAILS THAT VARY FROM UDFCD STANDARD DETAILS. CONSULT WITH LOCAL JURISDICTIONS AS TO WHICH DETAIL SHOULD BE USED WHEN DIFFERENCES ARE NOTED.

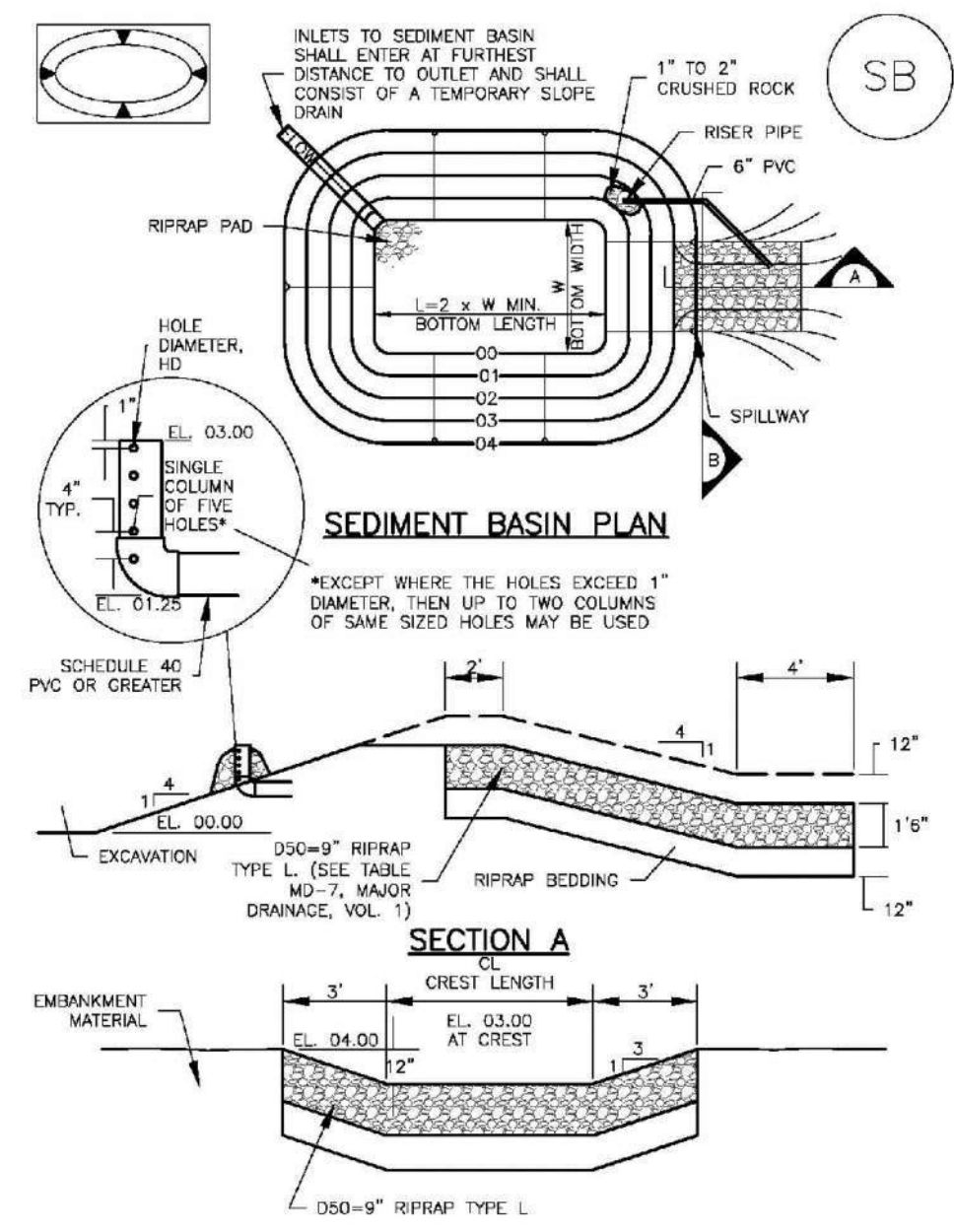
(DETAILS ADAPTED FROM DOUGLAS COUNTY, COLORADO, NOT AVAILABLE IN AUTOCAD)

SSA-4 Urban Drainage and Flood Control District Urban Storm Drainage Criteria Manual Volume 3 November 2010

Project No.:	23049
Date:	06/14/2024
Design:	MJK
Drawn:	MJK
Check:	AMcC
Revisions:	

Sediment Basin (SB)

SC-7



August 2013 Urban Drainage and Flood Control District Urban Storm Drainage Criteria Manual Volume 3 SB-5

SC-7

Sediment Basin (SB)

TABLE SB-1. SIZING INFORMATION FOR STANDARD SEDIMENT BASIN

Upstream Drainage Area (rounded to nearest acre), (ac)	Basin Bottom Width (W), (ft)	Spillway Crest Length (CL), (ft)	Hole Diameter (HD), (in)
1	12 1/2	2	3/8
2	21	3	1/2
3	28	4	3/4
4	33 1/2	5	7/8
5	38 1/2	6	1
6	43	7	1 1/8
7	47 1/2	8	1 1/4
8	51	9	1 1/2
9	55	10	1 5/8
10	58 1/2	11	1 3/4
11	61	12	1 7/8
12	64	13	2
13	67 1/2	14	2 1/8
14	70 1/2	15	2 1/4
15	73 1/2	16	2 1/2

- SEDIMENT BASIN INSTALLATION NOTES
- SEE PLAN VIEW FOR:
 - LOCATION OF SEDIMENT BASIN.
 - TYPE OF BASIN (STANDARD BASIN OR NONSTANDARD BASIN).
 - FOR STANDARD BASIN, BOTTOM WIDTH W, CREST LENGTH CL, AND HOLE DIAMETER, HD.
 - FOR NONSTANDARD BASIN, SEE CONSTRUCTION DRAWINGS FOR DESIGN OF BASIN INCLUDING RISER HEIGHT H, NUMBER OF COLUMNS N, HOLE DIAMETER HD AND PIPE DIAMETER D.
 - FOR STANDARD BASIN, BOTTOM DIMENSION MAY BE MODIFIED AS LONG AS BOTTOM AREA IS NOT REDUCED.
 - SEDIMENT BASINS SHALL BE INSTALLED PRIOR TO ANY OTHER LAND-DISTURBING ACTIVITY THAT RELIES ON GN BASINS AS A STORMWATER CONTROL.
 - EMBANKMENT MATERIAL SHALL CONSIST OF SOIL FREE OF DEBRIS, ORGANIC MATERIAL, AND ROCKS OR CONCRETE GREATER THAN 3 INCHES AND SHALL HAVE A MINIMUM OF 15 PERCENT BY WEIGHT PASSING THE NO. 200 SIEVE.
 - EMBANKMENT MATERIAL SHALL BE COMPACTED TO AT LEAST 95 PERCENT OF MAXIMUM DENSITY IN ACCORDANCE WITH ASTM D698.
 - PIPE SCH 40 OR GREATER SHALL BE USED.
 - THE DETAILS SHOWN ON THESE SHEETS PERTAIN TO STANDARD SEDIMENT BASINS FOR DRAINAGE AREAS LESS THAN 15 ACRES. SEE CONSTRUCTION DRAWINGS FOR EMBANKMENT, STORAGE VOLUME, SPILLWAY, OUTLET, AND OUTLET PROTECTION DETAILS FOR ANY SEDIMENT BASINS THAT HAVE BEEN INDIVIDUALLY DESIGNED FOR DRAINAGE AREAS LARGER THAN 15 ACRES.

SB-6 Urban Drainage and Flood Control District Urban Storm Drainage Criteria Manual Volume 3 August 2013

TEMPORARY SEDIMENT BASIN (TSB) NOT TO SCALE

Sediment Basin (SB)

SC-7

- SEDIMENT BASIN MAINTENANCE NOTES
- INSPECT BMPs EACH WORKDAY, AND MAINTAIN THEM IN EFFECTIVE OPERATING CONDITION. MAINTENANCE OF BMPs SHOULD BE PROACTIVE, NOT REACTIVE. INSPECT BMPs AS SOON AS POSSIBLE (AND ALWAYS WITHIN 24 HOURS) FOLLOWING A STORM THAT CAUSES SURFACE EROSION, AND PERFORM NECESSARY MAINTENANCE.
 - FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN BMPs IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.
 - WHEN BMPs HAVE FAILED, REPAIR OR REPLACEMENT SHOULD BE INITIATED UPON DISCOVERY OF THE FAILURE.
 - SEDIMENT ACCUMULATED IN BASIN SHALL BE REMOVED AS NEEDED TO MAINTAIN BMP EFFECTIVENESS, TYPICALLY WHEN SEDIMENT DEPTH REACHES ONE FOOT (I.E., TWO FEET BELOW THE SPILLWAY CREST).
 - SEDIMENT BASINS ARE TO REMAIN IN PLACE UNTIL THE UPSTREAM DISTURBED AREA IS STABILIZED AND GRASS COVER IS ACCEPTED BY THE LOCAL JURISDICTION.
 - WHEN SEDIMENT BASINS ARE REMOVED, ALL DISTURBED AREAS SHALL BE COVERED WITH TOPSOIL, SEEDED AND MULCHED OR OTHERWISE STABILIZED AS APPROVED BY LOCAL JURISDICTION.
- (DETAILS ADAPTED FROM DOUGLAS COUNTY, COLORADO)
- NOTE: MANY JURISDICTIONS HAVE BMP DETAILS THAT VARY FROM UDFCD STANDARD DETAILS. CONSULT WITH LOCAL JURISDICTIONS AS TO WHICH DETAIL SHOULD BE USED WHEN DIFFERENCES ARE NOTED.

August 2013 Urban Drainage and Flood Control District Urban Storm Drainage Criteria Manual Volume 3 SB-7

SEEDING & MULCHING

- ALL SOIL TESTING, SOILS AMENDMENT AND FERTILIZER DOCUMENTATION, AND SEED LOAD AND BAG TICKETS MUST BE ADDED TO THE CSWMP.
- SOIL PREPARATION
- IN AREAS TO BE SEEDDED, THE UPPER 6 INCHES OF THE SOIL MUST NOT BE HEAVILY COMPACTED, AND SHOULD BE IN FRABLE CONDITION. LESS THAN 80% STANDARD PROCTOR DENSITY IS ACCEPTABLE. AREAS OF COMPACTION OR GENERAL CONSTRUCTION ACTIVITY MUST BE SCARIFIED TO A DEPTH OF 6 TO 12 INCHES PRIOR TO SPREADING TOPSOIL TO BREAK UP COMPACTED LAYERS AND PROVIDE A BLENDING ZONE BETWEEN DIFFERENT SOIL LAYERS.
 - AREAS TO BE PLANTED SHALL HAVE AT LEAST 4 INCHES OF TOPSOIL SUITABLE TO SUPPORT PLANT GROWTH.
 - THE CITY RECOMMENDS THAT EXISTING AND/OR IMPORTED TOPSOIL BE TESTED TO IDENTIFY SOIL DEFICIENCIES AND ANY SOIL AMENDMENTS NECESSARY TO ADDRESS THESE DEFICIENCIES. SOIL AMENDMENTS AND/OR FERTILIZERS SHOULD BE ADDED TO CORRECT TOPSOIL DEFICIENCIES BASED ON SOIL TESTING RESULTS.
 - TOPSOIL SHALL BE PROTECTED DURING THE CONSTRUCTION PERIOD TO RETAIN ITS STRUCTURE AVOID COMPACTION, AND TO PREVENT EROSION AND CONTAMINATION. STRIPPED TOPSOIL MUST BE STORED IN AN AREA AWAY FROM MACHINERY AND CONSTRUCTION OPERATIONS, AND CARE MUST BE TAKEN TO PROTECT THE TOPSOIL AS A VALUABLE COMMODITY. TOPSOIL MUST NOT BE STRIPPED DURING UNDESIRABLE WORKING CONDITIONS (E.G. DURING WET WEATHER OR WHEN SOILS ARE SATURATED). TOPSOIL SHALL NOT BE STORED IN SWALES OR IN AREAS WITH POOR DRAINAGE.
- SEEDING
- ALLOWABLE SEED MIXES ARE INCLUDED IN THE CITY OF COLORADO SPRINGS STORMWATER CONSTRUCTION MANUAL. ALTERNATIVE SEED MIXES ARE ACCEPTABLE IF INCLUDED IN AN APPROVED LANDSCAPING PLAN.
 - SEED SHOULD BE DRILL-SEEDED WHENEVER POSSIBLE.
 - SEED DEPTH MUST BE 3/8 TO 3/4 INCHES WHEN DRILL-SEEDED IS USED.
 - BROADCAST SEEDING OR HYDRO-SEEDED WITH TACKIFIER MAY BE SUBSTITUTED ON SLOPES STEEPER THAN 3:1 OR ON OTHER AREAS NOT PRACTICAL TO DRILL SEED.
 - SEEDING RATES MUST BE DOUBLED FOR BROADCAST SEEDING OR INCREASED BY 50% IF USING A BRILLION DRILL OR HYDRO-SEEDED.
 - BROADCAST SEEDING MUST BE LIGHTLY HAND-RAKED INTO THE SOIL.
- MULCHING
- MULCHING SHOULD BE COMPLETED AS SOON AS PRACTICABLE AFTER SEEDING, HOWEVER PLANTED AREAS MUST BE MULCHED NO LATER THAN 14 DAYS AFTER PLANTING.
 - MULCHING REQUIREMENTS INCLUDE:
 - HAY OR STRAW MULCH
 - ONLY CERTIFIED WEED-FREE AND CERTIFIED SEED-FREE MULCH MAY BE USED. MULCH MUST BE APPLIED AT 2 TONS/ACRE AND ADEQUATELY SECURED BY CRIMPING AND/OR TACKIFIER.
 - CRIMPING MUST NOT BE USED ON SLOPES GREATER THAN 3:1 AND MULCH FIBERS MUST BE TUCKED INTO THE SOIL TO A DEPTH OF 3 TO 4 INCHES.
 - TACKIFIER MUST BE USED IN PLACE OF CRIMPING ON SLOPES STEEPER THAN 3:1.
 - HYDRAULIC MULCHING
 - HYDRAULIC MULCHING IS AN OPTION ON STEEP SLOPES OR WHERE ACCESS IS LIMITED.
 - IF HYDRO-SEEDED IS USED, MULCHING MUST BE APPLIED AS A SEPARATE, SECOND OPERATION.
 - WOOD CELLULOSE FIBERS MIXED WITH WATER MUST BE APPLIED AT A RATE OF 2,000 TO 2,500 POUNDS/ACRE, AND TACKIFIER MUST BE APPLIED AT A RATE OF 100 POUNDS/ACRE.
 - EROSION CONTROL BLANKET
 - EROSION CONTROL BLANKET MAY BE USED IN PLACE OF TRADITIONAL MULCHING METHODS.

SM

STORMWATER ENTERPRISE

SEEDING & MULCHING

APPROVED: [Signature]

DATE: 10/7/19

REVISION: 8/15/2020

DRAWING NO. 900-S4

SEEDING & MULCHING (SM) NOT TO SCALE

Kiowa
Engineering Corporation

1604 South 21st Street
Colorado Springs, Colorado 80904
(719) 630-7342

My Garage @ Northcrest
Grading Erosion Control Plan
Details
El Paso County, Colorado

Project No.:	23049
Date:	06/14/2024
Design:	MJK
Drawn:	MJK
Check:	AMcC
Revisions:	

Sheet

C306

8 of 21 Sheets

MY GARAGE @ NORTHCREST

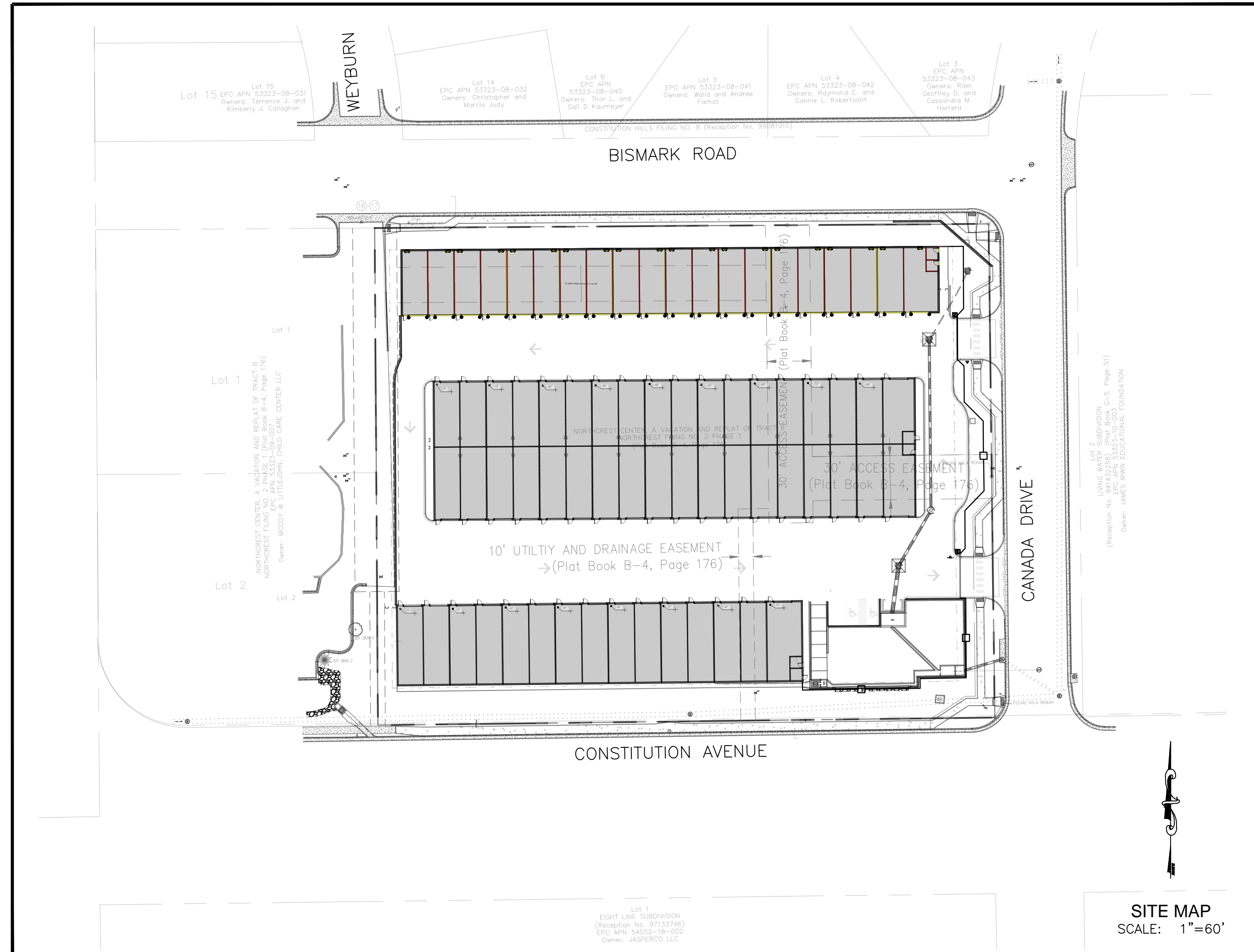
GRADING AND EROSION CONTROL PLANS

PREPARED FOR K&S DEVELOPMENT, LLC

Kiowa
Engineering Corporation
1604 South 21st Street
Colorado Springs, Colorado 80904
(719) 630-7342

PROJECT SPECIFIC GRADING AND EROSION CONTROL NOTES

- 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.
- 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.
- 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.
- 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.
- Control measures must be installed prior to commencement of activities that could introduce pollutants to stormwater. Control measures for all slopes, channels, ditches, and disturbed land areas shall be installed immediately upon completion of the disturbance.
- 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.
- 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.
- 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.
- 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.
- 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.
- 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 loosened prior to installation of the control measure(s).
- 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.
- 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.
- 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.
- Erosion control blanketing or other protective covering shall be used on slopes steeper than 3:1.
- 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.
- 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.
- Tracking of soils and construction debris off-site shall be minimized. Materials tracked off-site shall be cleaned up and properly disposed of immediately.
- 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 appearances as a result of site development.
- 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.
- 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.
- 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.
- No person shall cause the impediment of stormwater flow in the curb and gutter or ditch except with approved sediment control measures.
- 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.
- All construction traffic must enter/exit the site only at approved construction access points.
- Prior to construction the permittee shall verify the location of existing utilities.
- 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.
- The soils report for this site has been prepared by RMG Engineers/Architects, Inc. (Dated: March 11, 2024) and shall be considered a part of these plans.
- 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
- Base mapping was provided by Land Development Consultants. The date of the last survey update was July 27, 2021.
- Proposed Construction Schedule:
Begin Construction: Summer 2024
End Construction: Winter 2024
Total Site Area = 3.25 Acres
Area to be disturbed = 3.26 Acres.
Existing 100-year runoff coefficient = 0.37
Proposed 100-year runoff coefficient = 0.70
Existing Hydrologic Soil Groups: A
(A-1-Truckon sandy loam)
- Site is currently undeveloped and covered with native grasses on moderate to steep slopes (2%-25%).
- Site is located in the West Fork Jimmy Camp Creek Drainage Basin.
- No Asphalt Batch Plants will be utilized at the site.



STANDARD NOTES FOR EL PASO COUNTY CONSTRUCTION PLANS

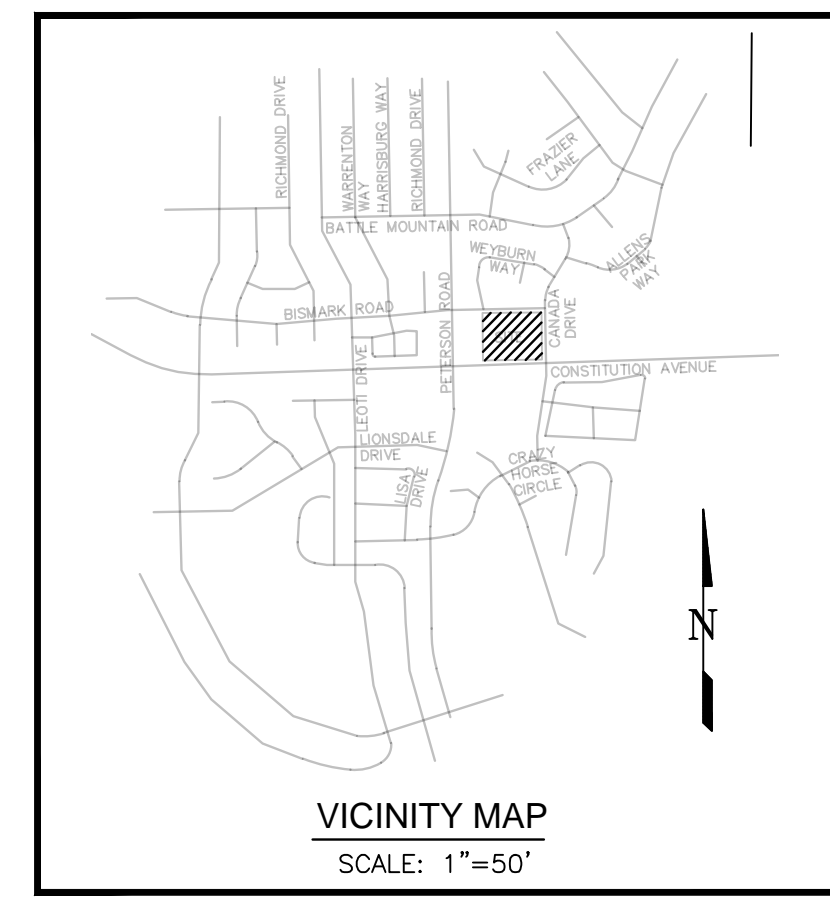
- All drainage and roadway construction shall meet the standards and specifications of the City of Colorado Springs/El Paso County Drainage Criteria Manual, Volumes 1 and 2, and the El Paso County Engineering Criteria Manual.
- Contractor shall be responsible for the notification and field notification 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 construction. Call 811 to contact the Utility Notification Center of Colorado (UNCC).
- Contractor shall keep a copy of these approved plans, the Grading and Erosion Control Plan, the Stormwater Management Plan (SWMP), the soils and geotechnical report, and the appropriate design and construction standards and specifications at the job site at all times, including the following:
 - El Paso County Engineering Criteria Manual (ECM)
 - City of Colorado Springs/El Paso County Drainage Criteria Manual, Volumes 1 and 2
 - Colorado Department of Transportation (CDOT) Standard Specifications for Road and Bridge Construction
 - CDOT M & S Standards
- 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. Any modifications necessary to meet criteria after-the-fact will be entirely the developer's responsibility to rectify.
- It is the design engineer's responsibility to accurately show existing conditions, both onsite and offsite, on the construction plans. Any modifications necessary due to conflicts, omissions, or changed conditions will be entirely the developer's responsibility to rectify.
- Contractor shall schedule a pre-construction meeting with El Paso County Planning and Community Development (PCD) - Inspections, prior to starting construction.
- It is the contractor's responsibility to understand the requirements of all jurisdictional agencies and to obtain all required permits, including but not limited to El Paso County Erosion and Stormwater Quality Control Permit (ESQCP), Regional Building Floodplain Development Permit, U.S. Army Corps of Engineers-issued 401 and/or 404 permits, and county and state fugitive dust permits.
- Contractor shall not deviate from the plans without first obtaining written approval from the design engineer and PCD. Contractor shall notify the design engineer immediately upon discovery of any errors or inconsistencies.
- All public storm drain pipe shall be Class III RCP unless otherwise noted and approved by PCD.
- Contractor shall coordinate geotechnical testing per ECM standards. Pavement design shall be approved by El Paso County PCD prior to construction of curb and gutter and pavement.
- All construction traffic must enter/exit the site at approved construction access points.
- Signaling and striping shall comply with El Paso County DOT and MUTCD criteria. [If applicable, additional signaling and striping notes will be provided.]
- Contractor shall obtain any permits required by El Paso County DOT, including Work Within the Right-of-Way and Special Transport permits.
- The limits of construction shall remain within the property line unless otherwise noted. The owner/developer shall obtain written permission and easements, where required, from adjoining property owner(s) prior to any off-site disturbance, grading, or construction.

EROSION CONTROL INSPECTION AND MAINTENANCE

A Thorough Inspection of the Erosion Control Plan/Stormwater Management System shall be performed every 14 days as well as after any rain or snowmelt event that causes Surface Erosion:

- When Silt Fences have silted up to half their height, the silt shall be removed, final grade re-established and slopes re-seeded, if necessary. Any silt fence that has shifted or decayed shall be repaired or replaced.
- Any Accumulated Trash or debris shall be removed from outlets.

An inspection and maintenance log shall be kept.



INDEX OF SHEETS

C300	COVER SHEET
C301	INITIAL CONDITIONS
C302	INTERIM CONDITIONS
C303	FINAL CONDITIONS
C304	GEC DETAILS
C305	GEC DETAILS
C306	GEC DETAILS
C601	POND CONSTRUCTION
C602	POND DETAILS
C603	POND DETAILS
C604	POND DETAILS

SEED MIX

AREAS DISTURBED BY THE EARTHWORK ACTIVITIES AND NOT RECEIVING OTHER TREATMENT SHALL BE PERMANENTLY REVEGETATED WITH THE FOLLOWING SEED MIX.

SPECIES	VARIETY	plts/acre
SUDGRASS GRAMA	Bl. Reno	3.0
WESTERN WHEAT GRASS	Barton	2.0
SLENDER WHEAT GRASS	Native	2.0
LITTLE BLUESTEM	Pastura	2.0
SAND DROPSSEED	Native	0.5
SWITCH GRASS	Nebraska 28	3.0
WEeping LOVE GRASS	Morpha	1.0
		14.0 lbs

SEEDING APPLICATION: DRILL SEED 1/4" TO 1/2" INTO TOPSOIL. IN AREAS INACCESSIBLE TO A DRILL, HAND BROADCAST AT DOUBLE THE RATE AND RAKE 1/4" TO 1/2" INTO THE TOPSOIL. MULCHING APPLICATION: 1-1/2 TONS NATIVE HAY PER ACRE, MECHANICALLY CRIMPED INTO THE TOPSOIL.

OPINION OF COST FOR EROSION CONTROL REQUIREMENTS

ITEM	QUANTITY	UNIT	UNIT COST	AMOUNT
VEHICLE TRACKING CONTROL	2	EA	\$3,085.00	\$6,170.00
SILT FENCE	6,320	LF	\$3.00	\$18,960.00
STRAW BALES	18	EA	\$33.00	\$594.00
INLET PROTECTION	6	EA	\$217.00	\$1,302.00
CONCRETE WASH OUT	2	EA	\$1,172.00	\$2,344.00
ROCK SOCKS	100	EA	\$24.00	\$2,400.00
SURFACE ROUGHENING	1.0	AC	\$269.00	\$269.00
TEMPORARY SEEDING AND MULCH	0.5	AC	\$1793.00	\$1,255.00
MAINTENANCE (25% OF EROSION CONTROL)	1	LS	\$8,323.50	\$8,323.50
TOTAL				\$41,023.50

El Paso County (standalone GEC Plan):
County plan review is provided only for general conformance with County Design Criteria. The County is not responsible for the accuracy and adequacy of the design, dimensions, and/or elevations which shall be confirmed at the job site. The County through the approval of this document assumes no responsibility for completeness and/or accuracy of this document. Filed in accordance with the requirements of the El Paso County Land Development Code, Drainage Criteria Manuals 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 _____
Joshua Palmer, P.E.

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 any liability caused by any negligent acts, errors or omissions on my part in preparing this plan.

Engineer of Record Signature _____ Date _____
ANDREW W. McCORD P.E. 25057

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 _____
Sean Edwards, President
ADDRESS: LEISURE CONSTRUCTION
3443 TAMPA ROAD, SUITE B PALM HARBOR, FL 34684

DEVELOPER:
LEISURE CONSTRUCTION 3443 TAMPA ROAD, SUITE B PALM HARBOR, FL 34684 (727) 242-5121

PREPARED BY:
Kiowa
Engineering Corporation

1604 South 21st Street
Colorado Springs, Colorado 80904
(719) 630-7342

"A.G.A./A.P.W.A. STANDARD UTILITY MARKING COLOR CODE

NATURAL GAS	YELLOW
ELECTRIC	RED
WATER	BLUE
WASTEWATER	GREEN

CALL BEFORE YOU DIG...
48 HOURS BEFORE YOU DIG, CALL UTILITY LOCATORS FOR LOCATING AND MARKING GAS, ELECTRIC, WATER AND WASTEWATER

1-800-922-1987

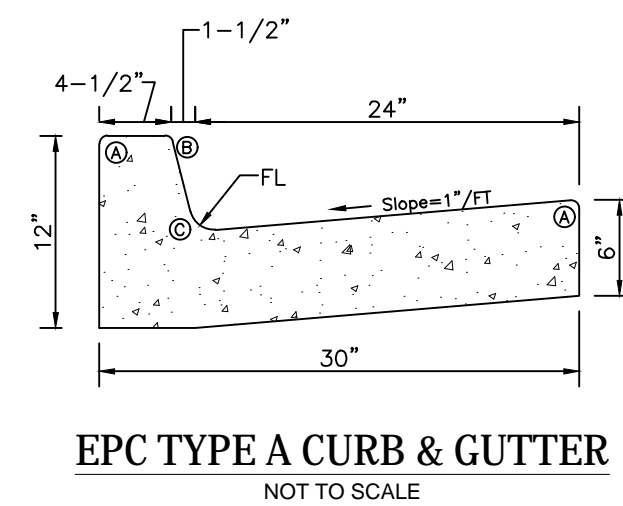
My Garage @ Northcrest
Grading Erosion Control Plan
COVER SHEET
El Paso County, Colorado

Project No.: 23049
Date: 06/17/2024
Design: MKJ
Drawn: MKJ
Check: AMcC
Revisions:

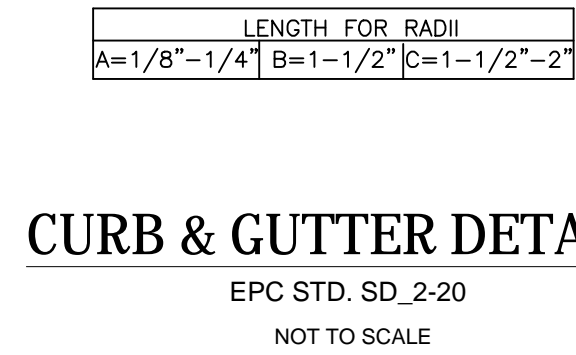
Sheet PCD File No. CDR-24-
C300
2 of 21 Sheets

GENERAL NOTES

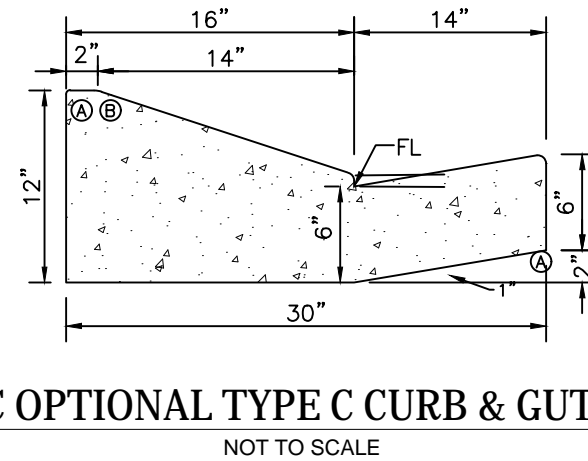
- All work shall be done in accordance with current Engineering Manual and ADA requirements.
- Contractor to notify Engineering Division inspection staff 48 hours prior to concrete placement.
- Pedestrian ramp construction shall be a minimum 4,500 psi concrete, minimum 4" thick, non-colored, non-scored, coarse broom finish.
- Ramp location and length may require modification to maintain the 12:1 maximum running ramp slope and 20:1 detectable warning area due to street intersection grades and / or alignment.
- Detectable warning area shall start a minimum of 6" but not more than 8" from the flow line of the curb at any point.
- Detectable warning area shall be prefabricated reddish integrally colored truncated-dome surfaced thermoplastic.
- The detectable warning area shall be 24" in length and the full width of the ramp.
- Ramp width required is the same as approaching sidewalk, 4' minimum.
- all ramps will be perpendicular to traffic with the exception of mid-block or terminal ramps which may be parallel subject to approval.
- Avoid palcing drainage structures, traffic signal / signage, utilities / junction boxes, or other obstructions within proposed ramp areas.
- Where the 1'-6" flared side(s) of a perpendicular curb ramp is (are) contiguous with a pedestrian or hard surface area, the flare width shall be increased to 8" minimum and the maximum flare slope shall not exceed 10:1.
- Pedestrian walkway and / or location of existing or future pedestrian ramps on opposite corners shall be reviewed before construction new ramps. New ramps shall align with existing ramps and pedestrian walkway.
- At marked pedestrian crossings, the bottom of the ramps, exclusive of the flare sides, shall be totally contained within the markings.
- Sidewalk cross-slope: 1/4"/ft.
- Concrete mix design shall conform to the requirements of the color admixture manufacturer and the following:
 - 28-day compressive strength = 4,500 PSI (min.)
 - Water/cement ratio = 0.45 (max.)
 - Cement content = 6-1/2 sacks/C.Y. (min.) (Type II cement)
 - Maximum aggregate size = 3/4"
 - Entrained air content = 6% - 10%
 - Slump = 1 inch (min.) - 4 inches (max.)



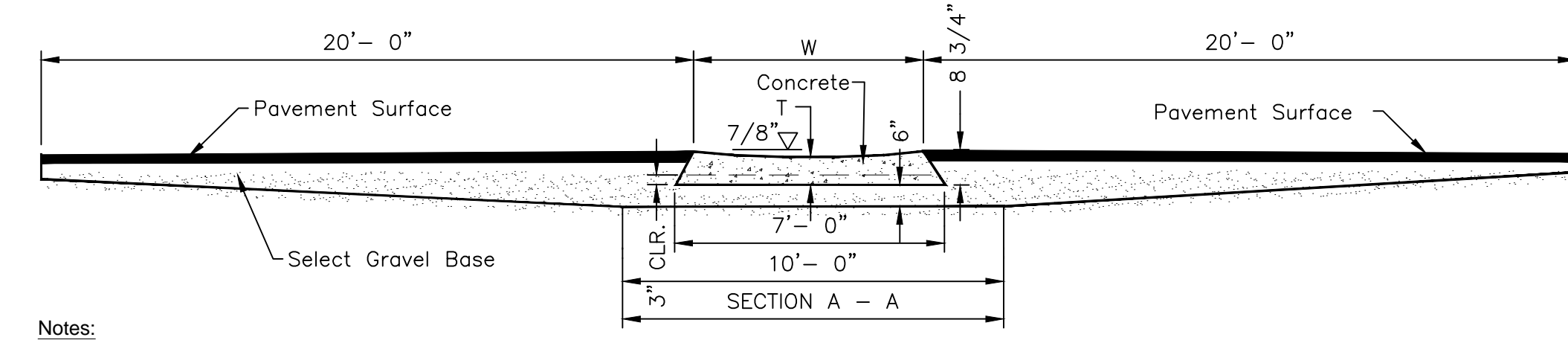
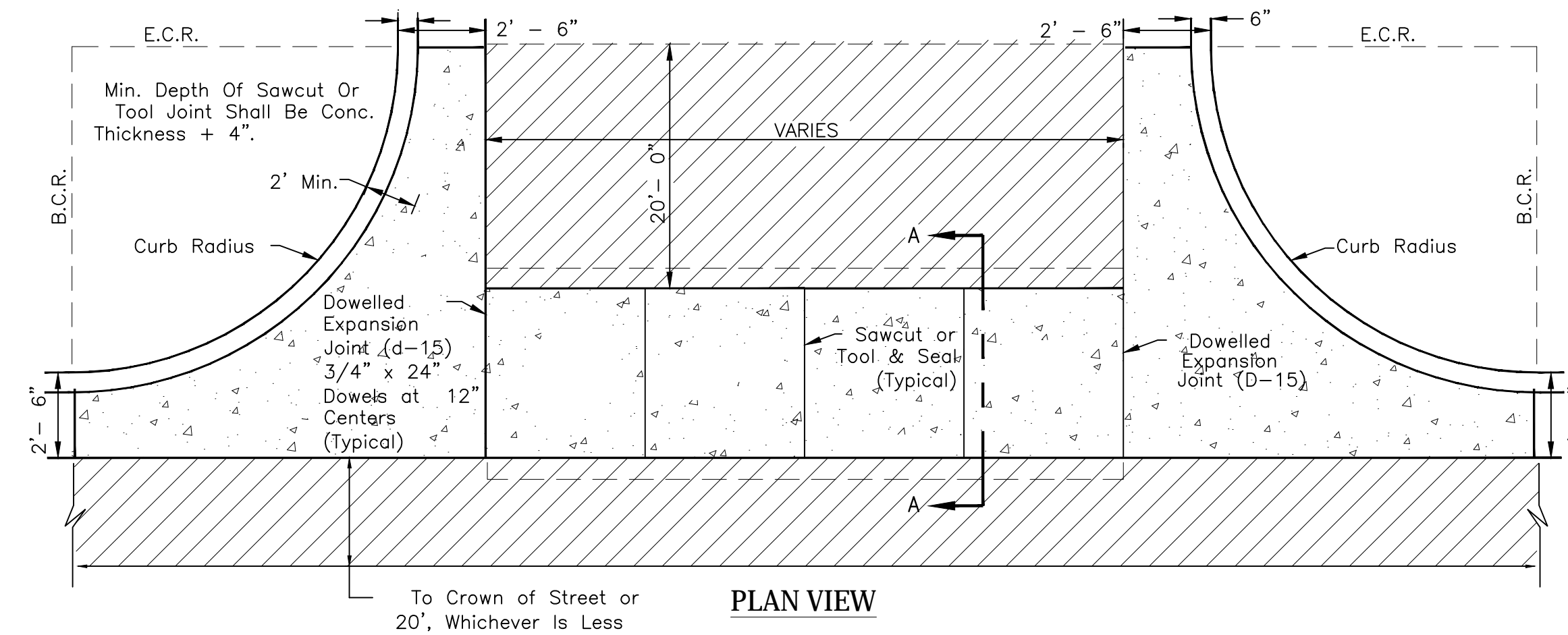
EPC TYPE A CURB & GUTTER
NOT TO SCALE



CURB & GUTTER DETAILS
EPC STD. SD. 2-20
NOT TO SCALE

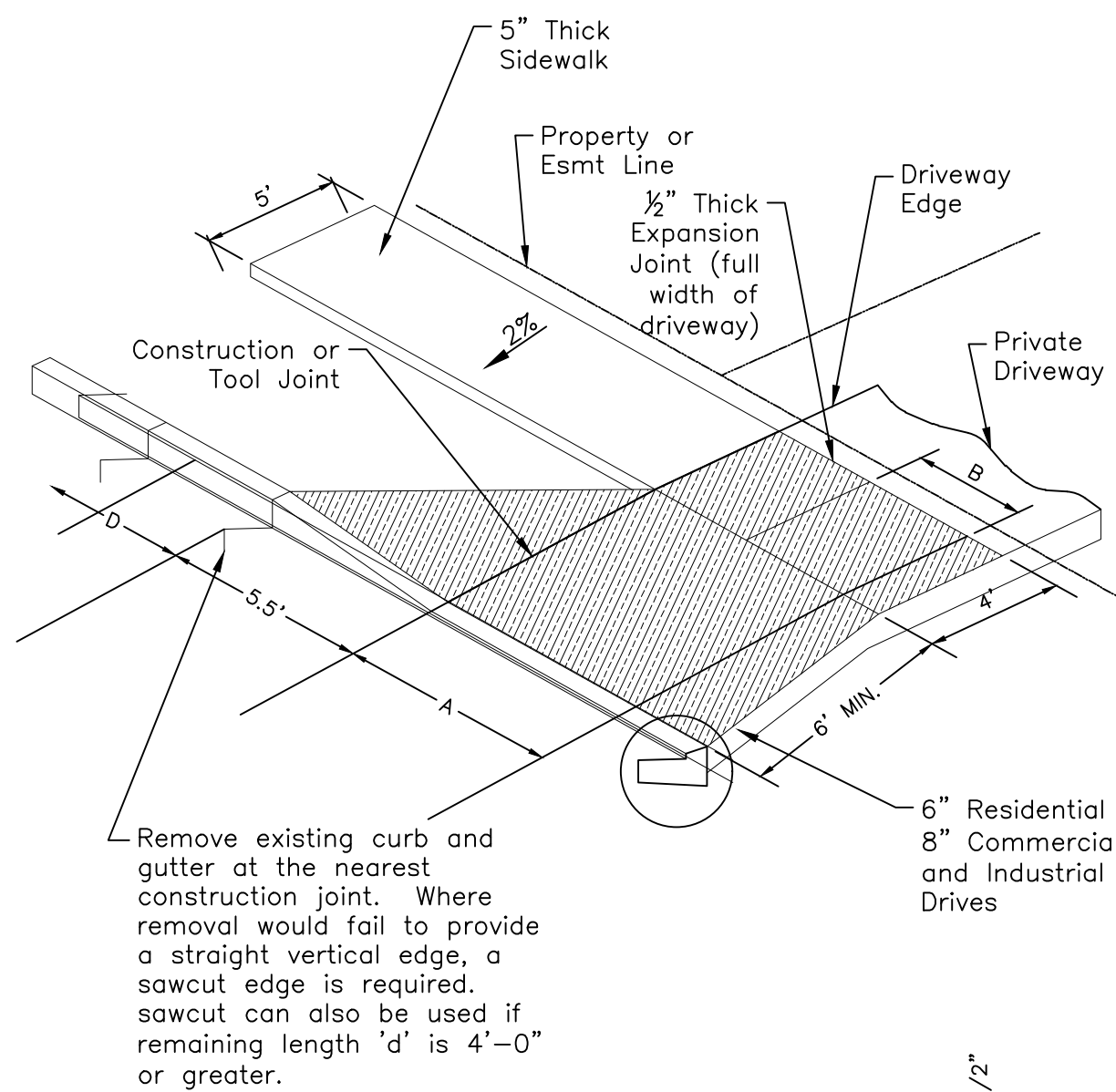


EPC OPTIONAL TYPE C CURB & GUTTER
NOT TO SCALE



- Notes:**
- W - Width shall be 6' for local, 8' for collectors, And 10' for Arterial Roads.
 - T - Squared-off Return to be poured Monolithic 8" P.C.C. Minimum with 6x6 - 4.4 W.W.F. Or #4 @ 18" E.W.
 - [Symbol] = 3" minimum asphalt depth (2 lifts).
 - Design to specify elevations at pi and pcr
 - Flow Capture Depth (Depression) shall be 7/8" for Local, 1-1/8" for Collectors, And 1-1/2" for arterial roads.
 - Flowline Grade shall be minimum 0.5%

CROSS PAN DETAIL
EPC STD. SD. 2-26
NOT TO SCALE



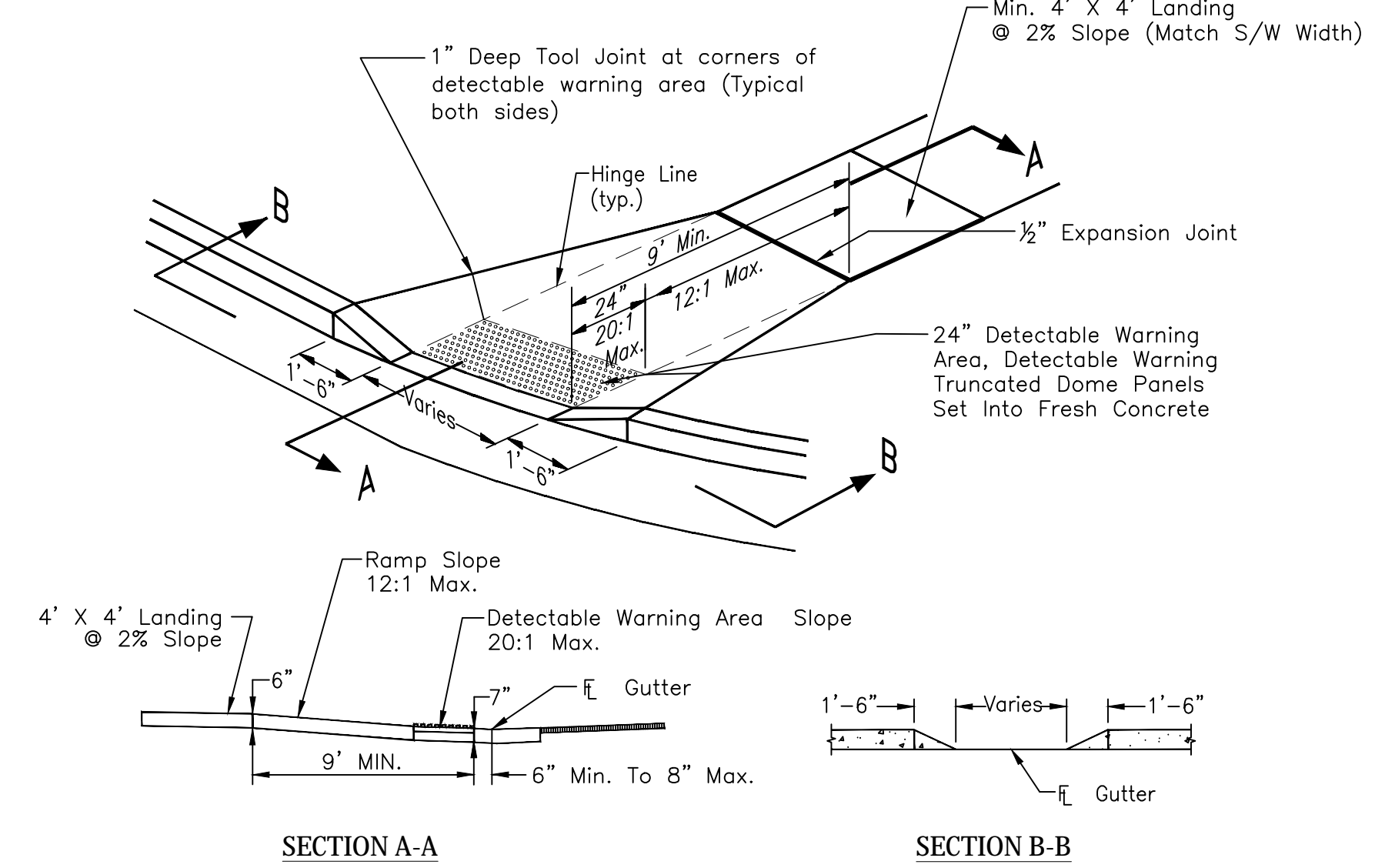
DRIVEWAY WIDTH	A	B
12'	6'	3'
14'	7'	3'-6"
16'	8'	4'
18'	9'	4'-6"
20'	10'	5'
22'	11'	5'-6"
24'	8'	4'
26'	8'-8"	4'-4"
28'	9'-4"	4'-8"
30'	10'	5'

DRIVEWAY DETAIL WITH DETACHED SIDEWALK
EPC STD. SD. 2-25
NOT TO SCALE

- Notes:**
- Provide Centerline Construction or tool joint when driveway width (edge to edge) is 14' or greater.
 - All Tool Joints shall be a minimum of 1-1/2" deep.
 - When replacing existing curb and gutter with new driveway, entire curb and gutter section shall be removed and replaced with curb and gutter (variable-curb-height) as shown. Do not break curb from gutter section.
 - Flared portion of driveway shall be poured monolithic with main rectangular portion of driveway.
 - Where there is more than one driveway on a lot, the spacing of the driveways shall meet requirements in ECM.
 - Where an existing sidewalk is in place, and its thickness is less than 6" (residential) or 8" (commercial and industrial) the sidewalk through the driveway shall be removed and replaced with Portland Cement Concrete at the required thickness.
 - When a driveway is to be taken out of service, the entire length of curb and gutter shall be removed and replaced with new curb and gutter matching the abutting sections.
 - All Provisions in the Land Development Code shall be met, with regard to minimum setback from intersection and side property lines, minimum spacing, maximum width, etc.

GENERAL NOTES:

- Expansion Joints shall be installed when abutting existing concrete or fixed structure. Expansion Joint Material shall be 1/2" thick and shall extend the full depth of contact surface.
- Concrete Shall be per El Paso County Engineering Division Specifications.



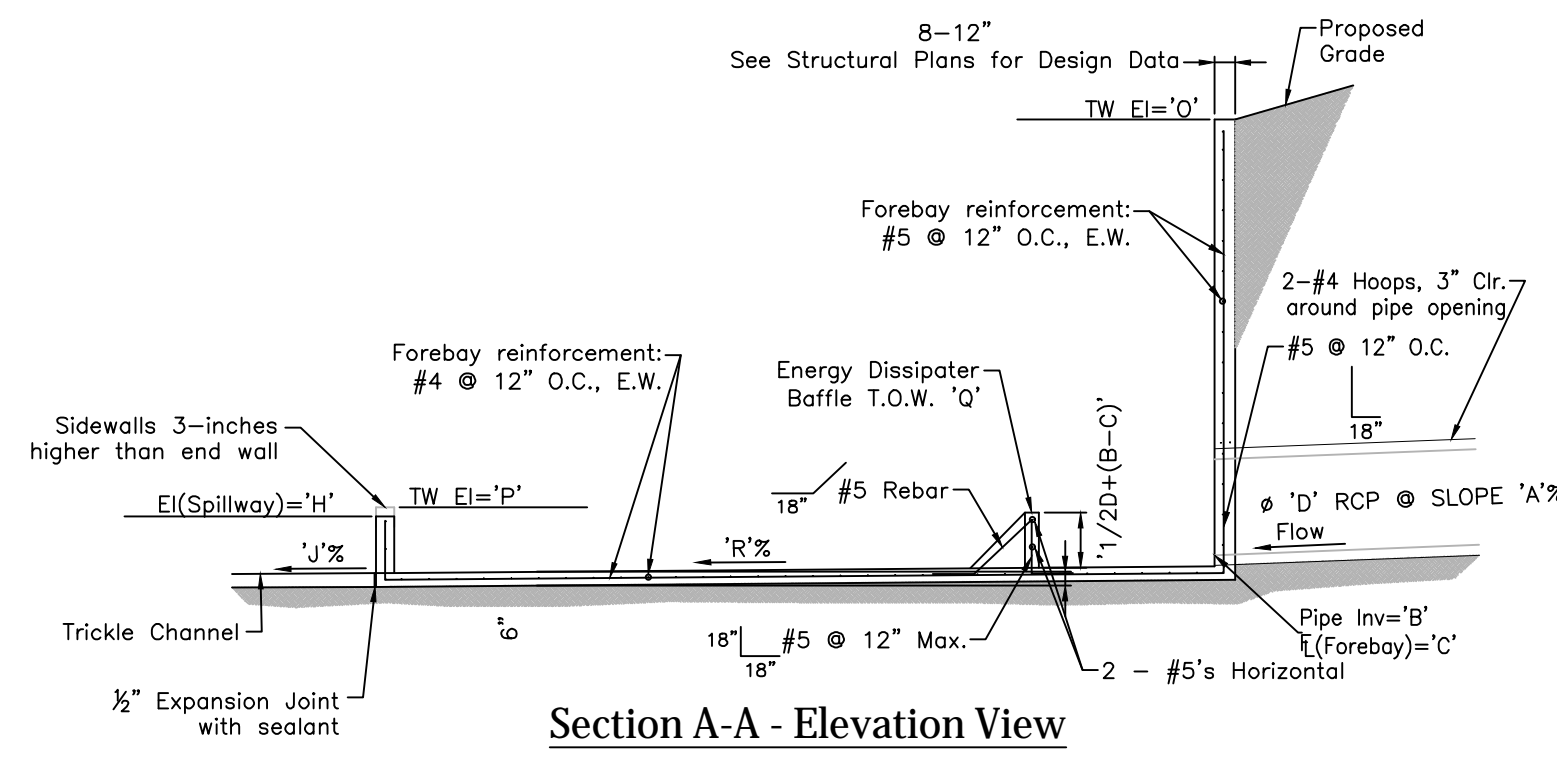
PEDESTRIAN RAMP DETAILS
EPC STD. SD. 2-40
NOT TO SCALE

My Garage @ Northcrest
Site Detail Plan
Site Details
El Paso County, Colorado

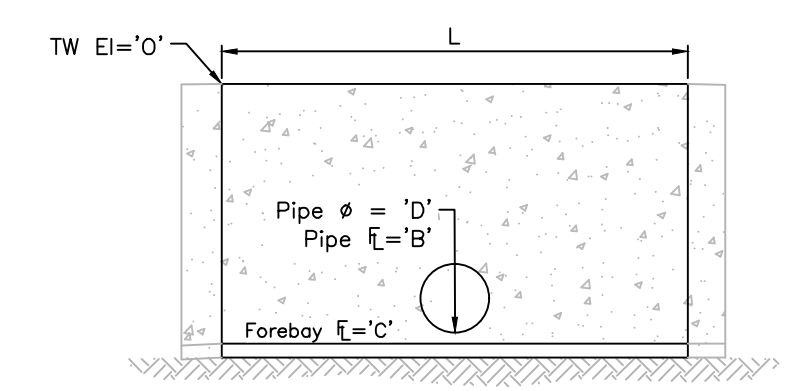
Project No.: 23049
Date: 06/14/2024
Design: MJK
Drawn: MJK
Check: AMcC
Revisions:

Sheet
C601

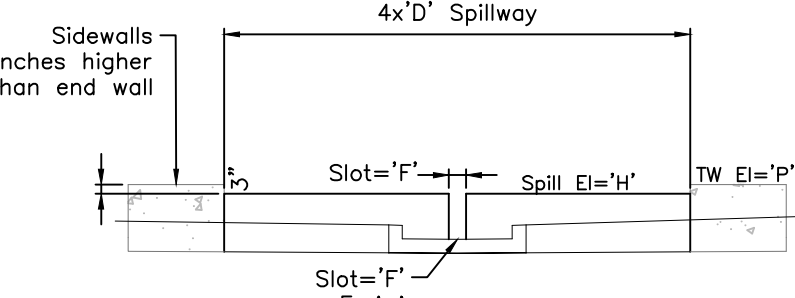
Kiowa
Engineering Corporation
1604 South 21st Street
Colorado Springs, Colorado 80904
(719) 630-7342



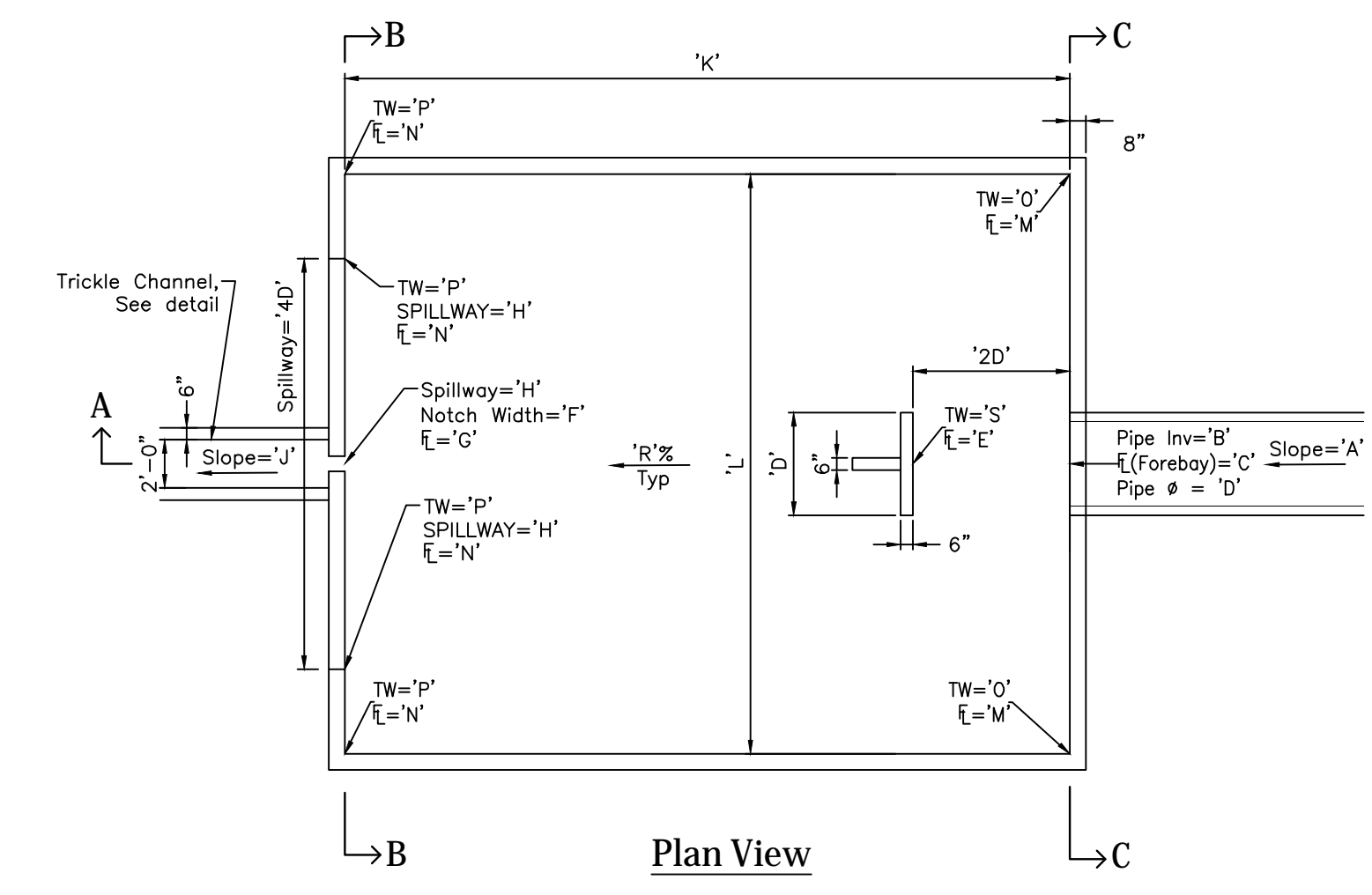
Section A-A - Elevation View



Section B-B



Section C-C

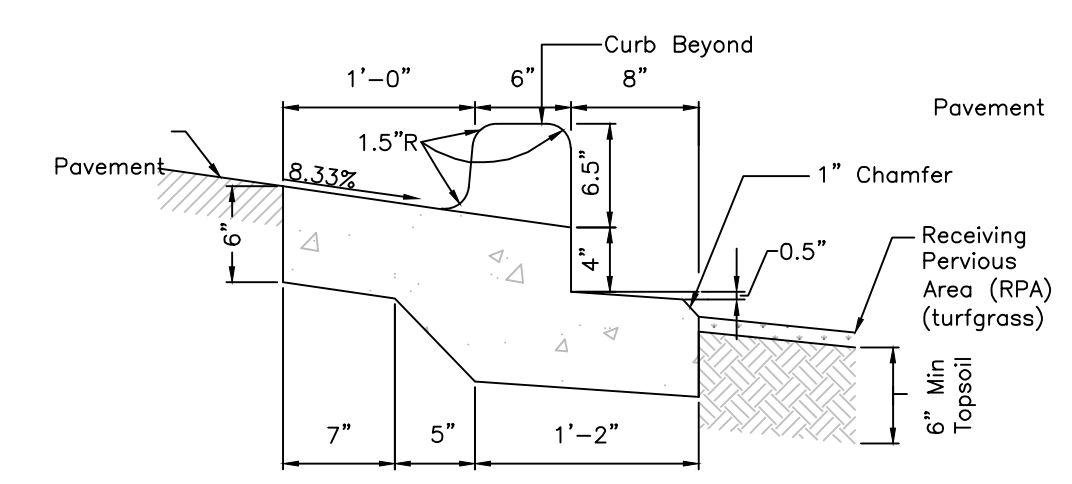


Plan View

1 Forebay Details
C602 NOT TO SCALE

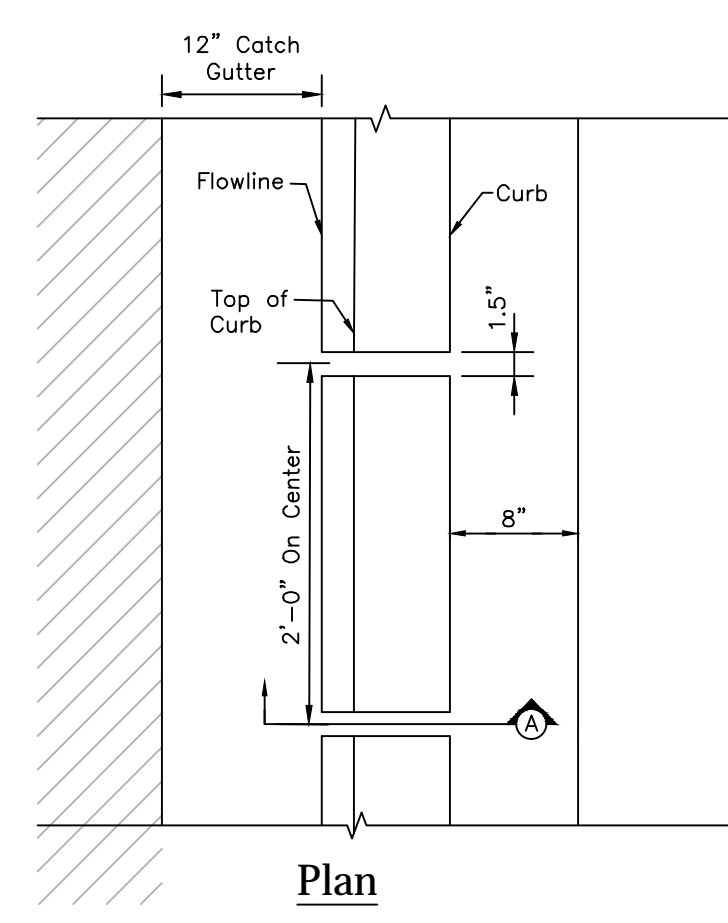
- STRUCTURE NOTES:**
- Prior to construction, Contractor to provide Shop Drawings for all components of outlet structure, forebays and overflow wall.
 - Grade 60 reinforcing steel required. See table for the minimum lap splice length for reinforcing bars. All reinforcing steel shall have 2-inch minimum clearance from edge of concrete and 3-inch min. clearance to the edge of concrete placed against soil, unless otherwise noted.
 - Concrete for the outlet structure and forebays shall be C602 Class D Concrete.
 - Expansion joint material shall meet AASHTO specification M-213. Expansion joint material shall be 1/2" thick, shall extend the full depth of contact surface and the joint shall be sealed, refer to details.
 - All exposed concrete corners shall have a 3/4-inch chamfer, unless otherwise noted.
 - Backfilling against walls shall not commence until concrete has obtained its full seven day strength.
 - Subgrade to be 12" thick clean fill compacted to 95% Standard Proctor Density per ASTM M698 under structures.
 - Outlet structure steps shall conform to AASHTO M199.
 - Forebay: Construction joints shall be installed at 10' O.C. maximum. The joints shall be sealed with a joint sealant.

Variable	Predetermination	Inflow	
		One (D5)	Two (D6)
A	Pipe Slope%	2.00	0.60
B	Pipe Inv In	6510.00	6508.40
C	Forebay Inv In	6509.50	6508.07
D	Pipe Size (ft)	0.67	2.00
E	Baffle Face Inv	6509.49	6508.03
F	Slot Width	2.50	3.00
G	Forebay Inv Out	6509.46	6508.00
H	Spillway Inv	6510.21	6508.75
I	Spillway Top	6510.46	6509.00
J	Trickle Pan Slope	2.00	0.55
K	Forebay Length	4.00	8.50
L	Forebay Width	4.50	8.50
M	Toe of Wall	6509.50	6508.07
N	Toe of Wall	6509.46	6508.00
O	Top of Wall	6513.75	6513.83
P	Top of Wall	6510.46	6509.00
Q	Baffle Wall Top	6513.50	6513.58
R	Forebay Slope %	1.00	0.60



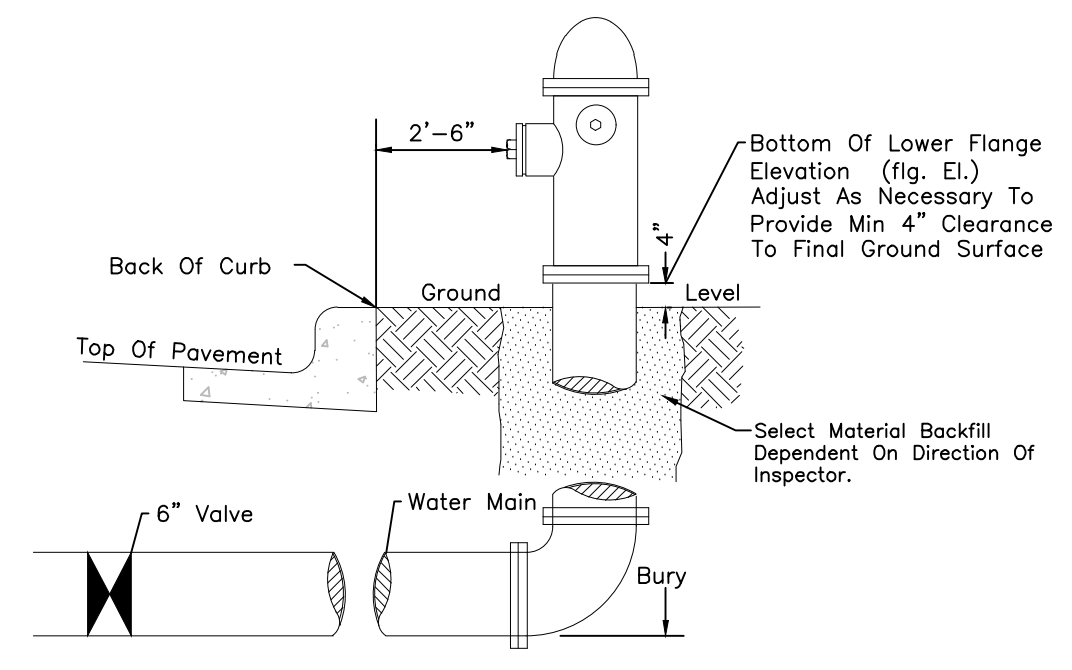
Section

2 Slotted Curb
C602 NOT TO SCALE



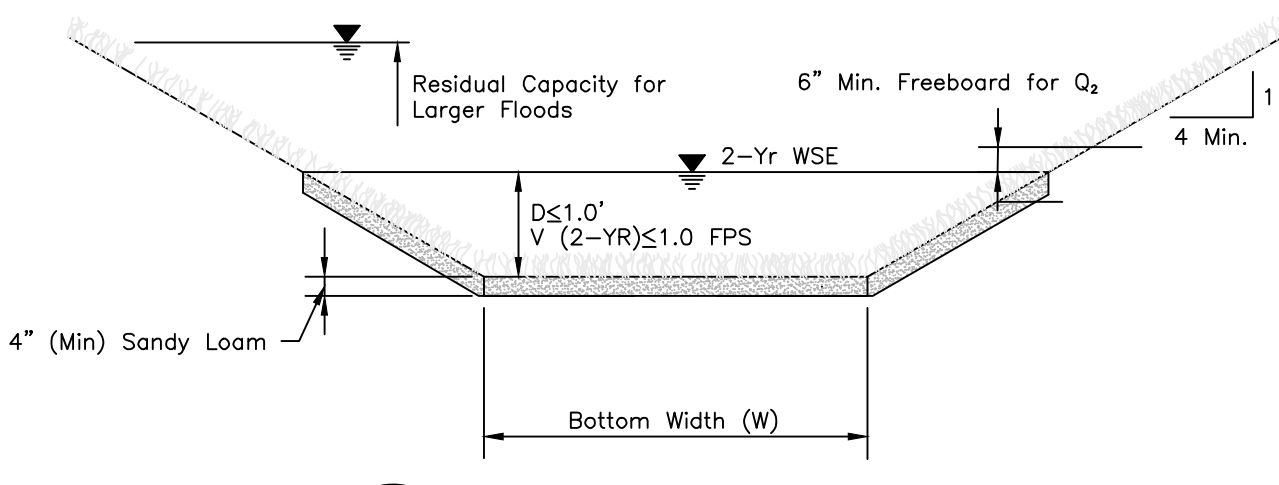
Plan

3 Slotted Curb
C602 NOT TO SCALE



Fire Hydrant Detail
NOT TO SCALE

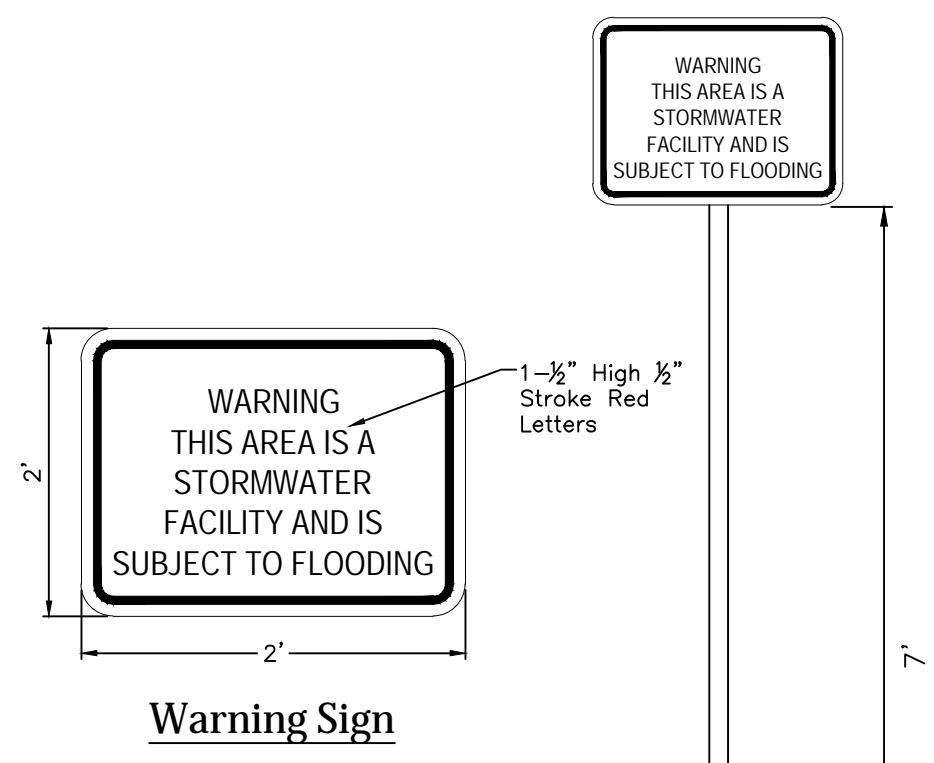
- GENERAL NOTES:**
- Hydrant nozzles shall be positioned at right angles to curb. If no curb or sidewalk exists, nozzles shall be placed at right angle to street or alley.
 - Hydrants shall be placed a minimum of 5.0 feet from any utility or drainage structure.
 - Any hydrant being installed with conditions other than those mentioned and/or detailed below will require signed approval from the Widefield Water District and Security Fire District.
 - See Site Utility Plan for hydrant locations and flange elevations.
 - The upper exposed section of the hydrant above ground shall be painted rustoleum 659 yellow or equal. The buried portion of the hydrant shall be given a bituminous coating in accordance with Section 10-8.1 of AWWA Standard C110.



6 Trapezoidal Typical Swale Section
C602 NOT TO SCALE

Subsequent To Stripping And Grubbing The Following Overlot/pipe Installation Procedures Are Anticipated For The Sanitary Sewer Located On Proposed Embankments:

- The Removal And Replacement Of Metastable Soil.
- Testing Of The Fill Subsequent To The Penetration Of The Metastable Soil Will Continue Until A Minimum Of 7 Feet Of Structural Fill Has Been Placed Above The Proposed Sewer Line Elevation.
- Utility Trenches Shall Be Excavated And Sanitary Sewer Line Installed. The Pipe Shall Be Properly Bedded And Structural Fill Placed And Tested To The Previous Grade.
- The Overlot And Embankment Fill Can Be Completed.
- Where The Sanitary Sewer Is Placed In Embankment Fill During The Overlot Process, Site Shall Monitor and Test All Work Associated with the Affected Portions.

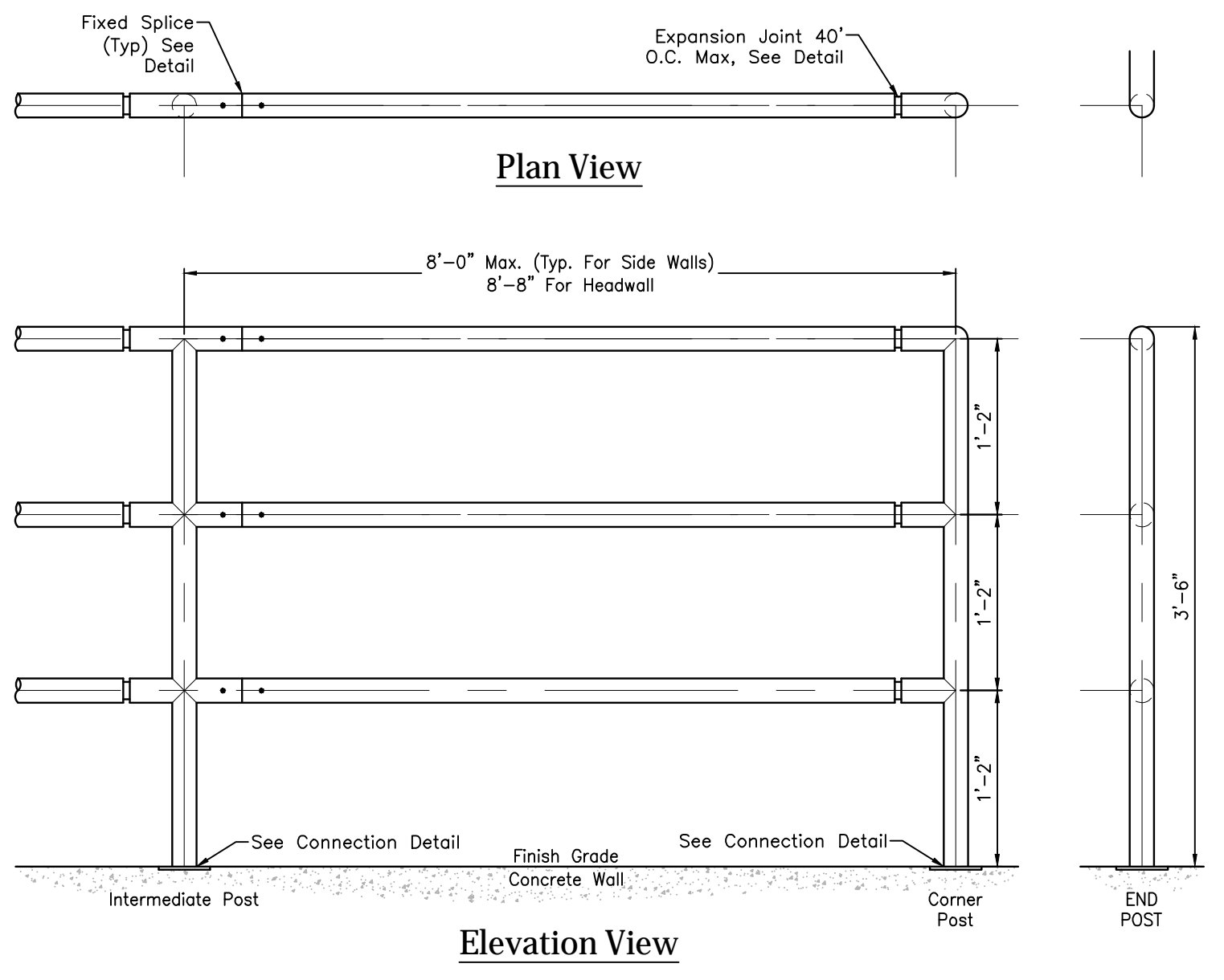


Warning Sign

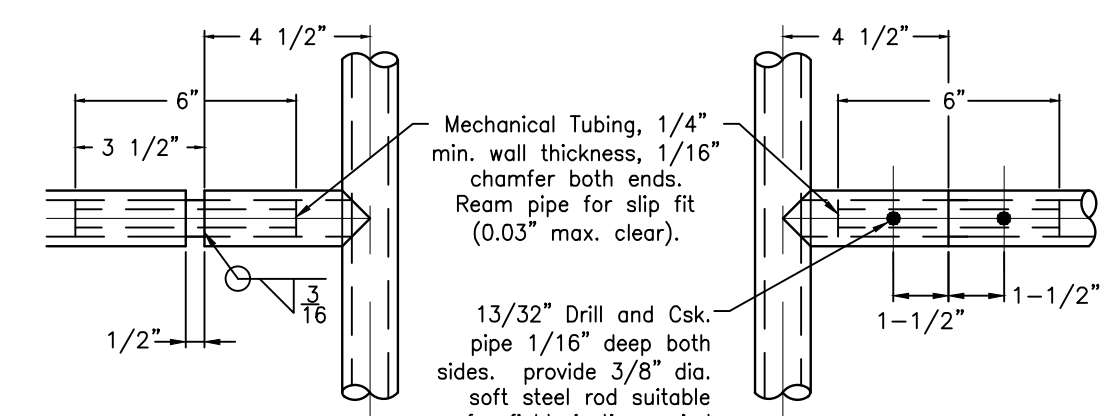
Sign posts shall be installed with a minimum of 1-3/4"x10" square perforated steel tubing with sleeve per City of Colorado Springs Standard. Refer to Detail 3/C501.

4 Detention Warning Sign
C602 NOT TO SCALE

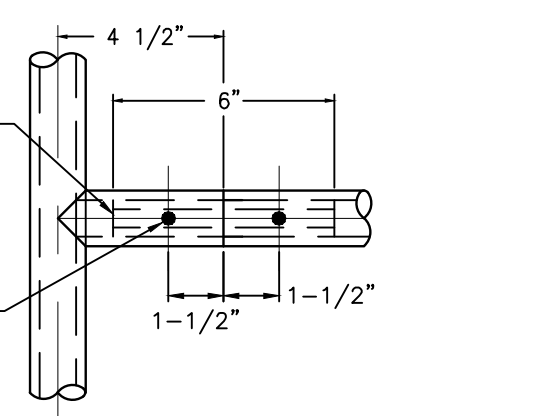
- Pedestrian Railing/Handrail Notes:**
- All handrail shall be fabricated with new 1-1/2" (1-7/8" od) diameter standard weight steel pipe.
 - Weld all pipe joints with 1/8" reinforced welds and dress smooth.
 - Corners and edges of all bars, plates and pipe ends shall be sanded smooth and free of burrs.
 - All handrail material required for complete installation shall be provided.
 - Handrail finish shall be one coat metal primer and two coats Sherwin Williams bridge green. color shall be verified by County.
 - Contractor to field verify dimensions prior to fabrication.



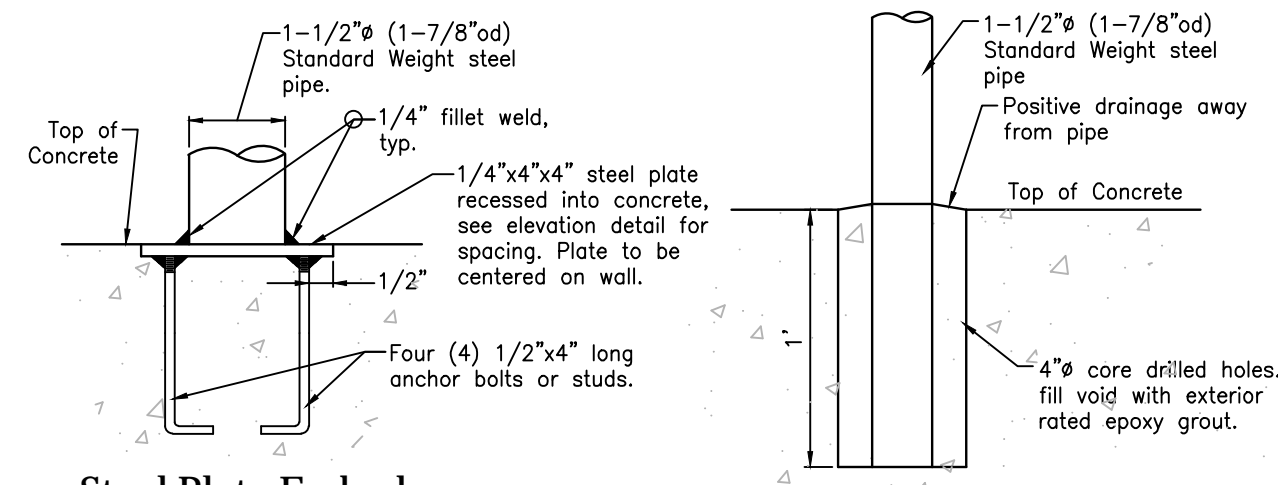
5 Pedestrian Railing/Handrail
602 NOT TO SCALE



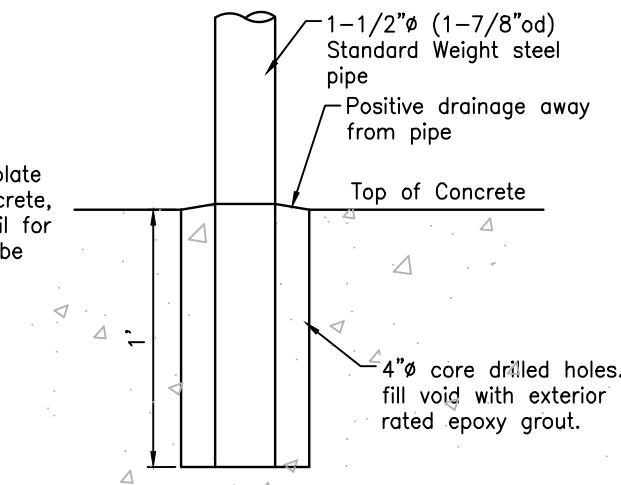
Expansion Joint Detail



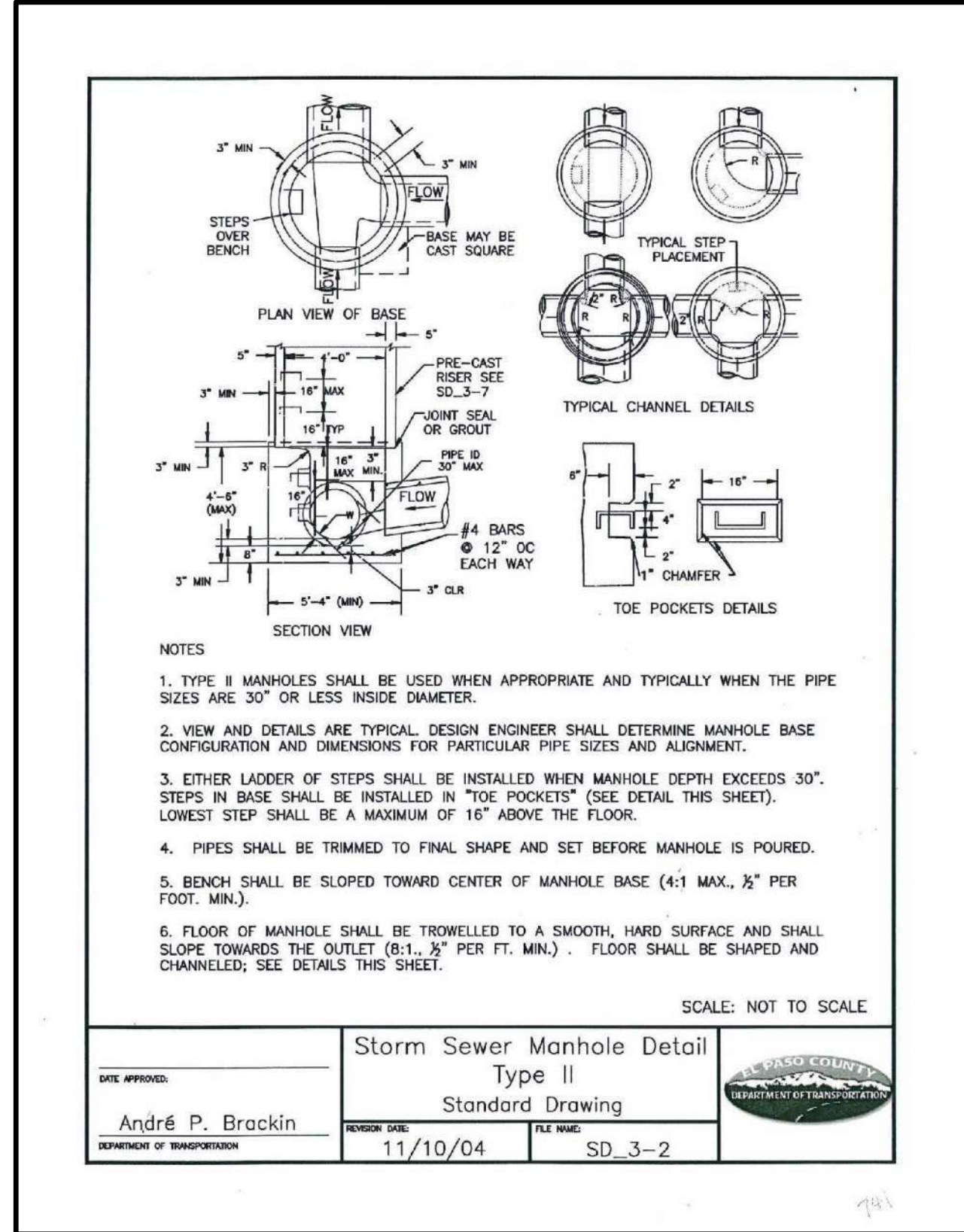
Fixed Joint Detail



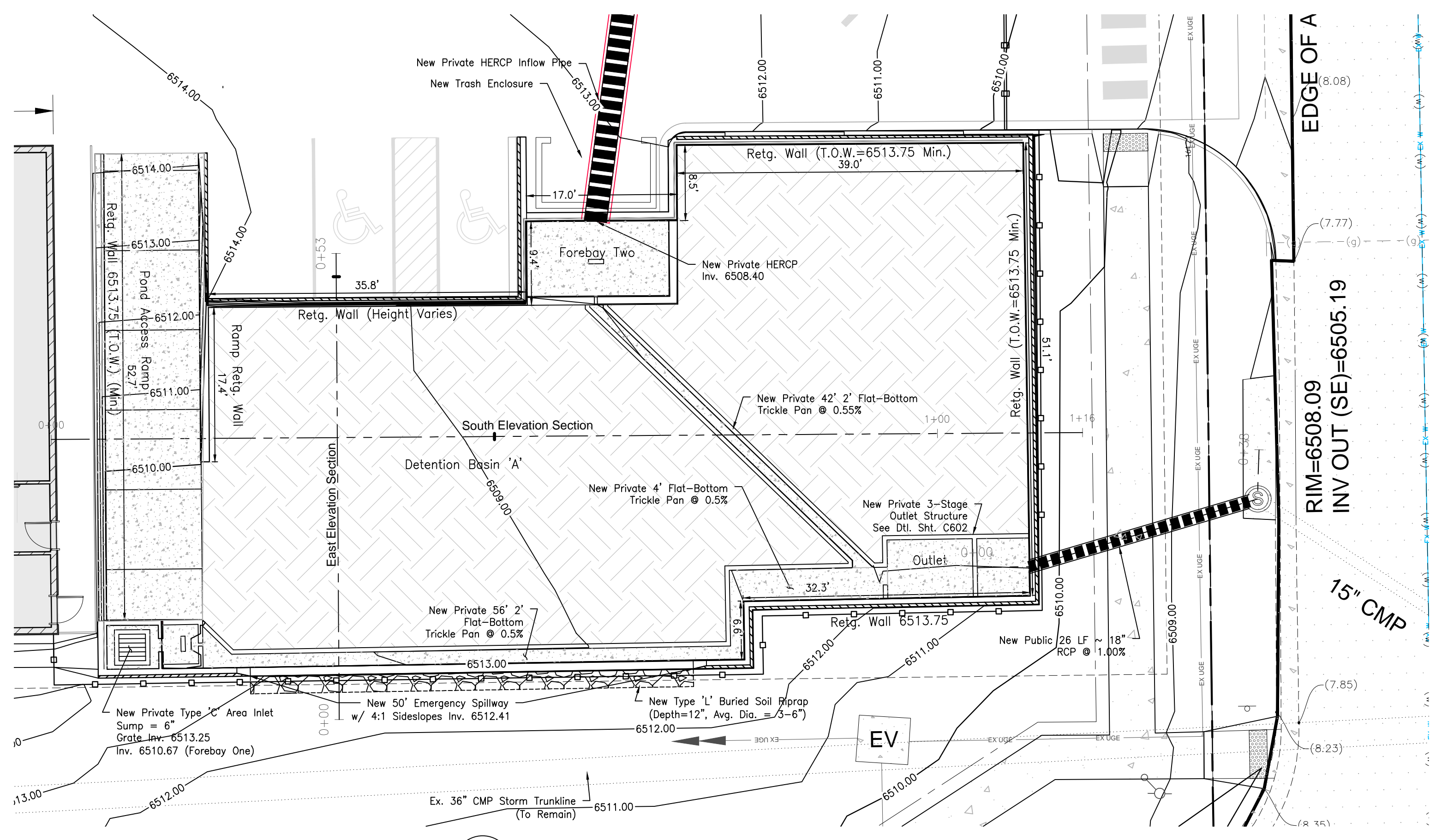
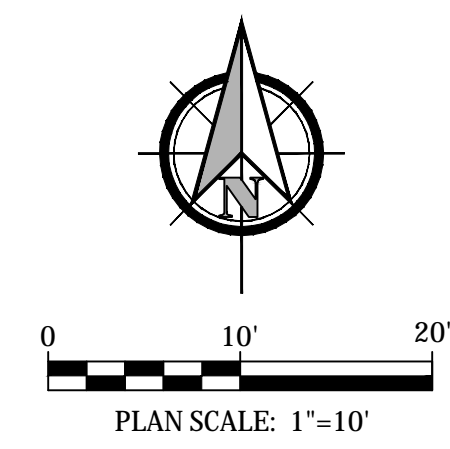
Steel Plate Embed Railing Connection Detail



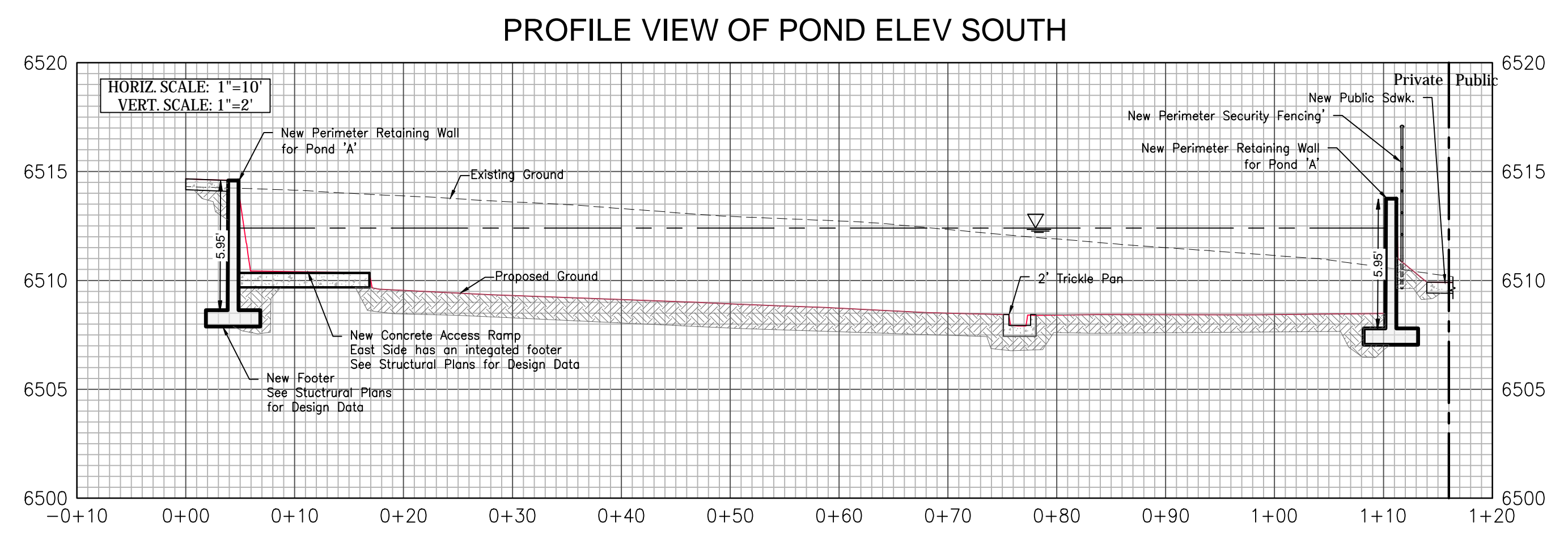
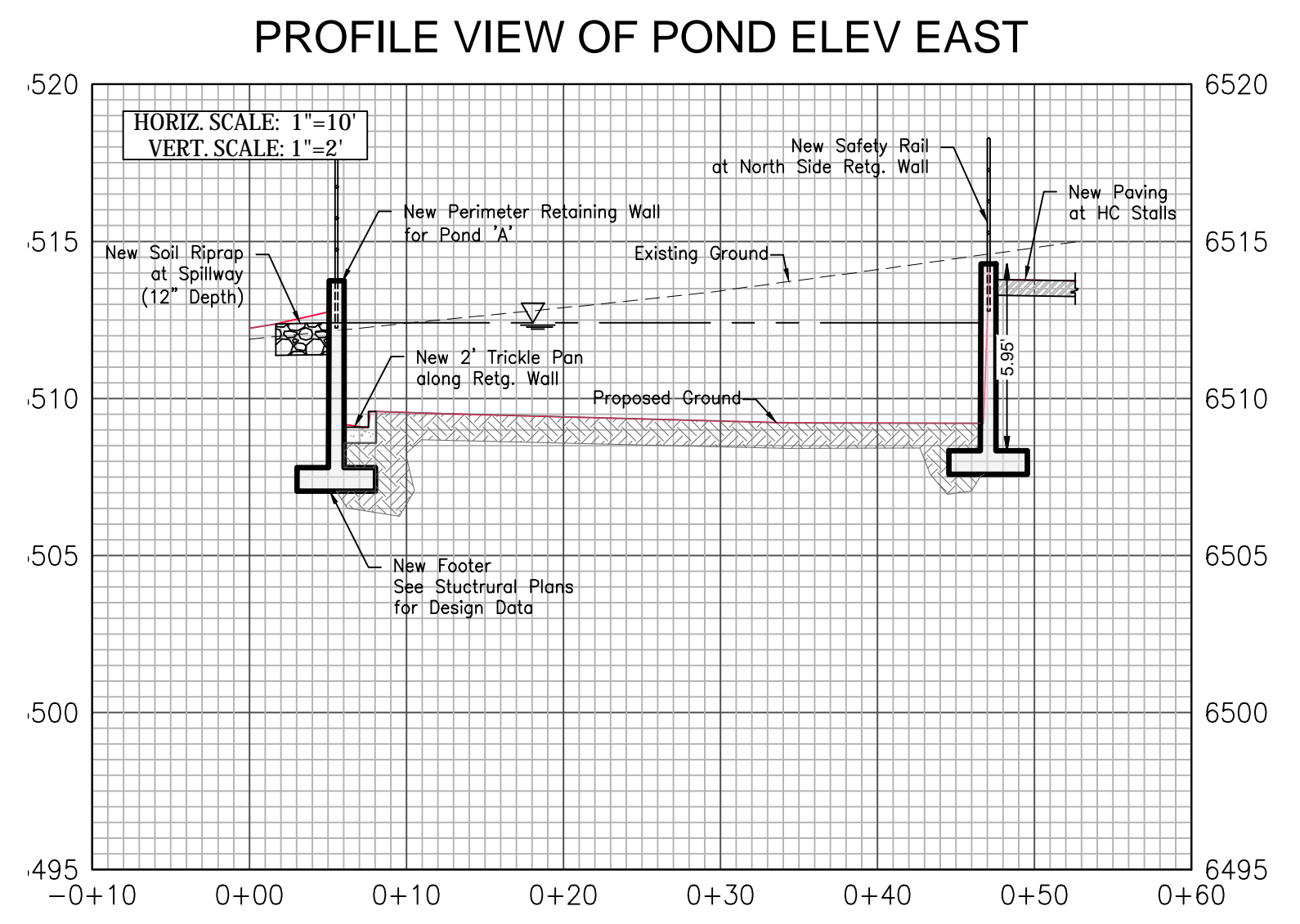
Alternate Connection Detail



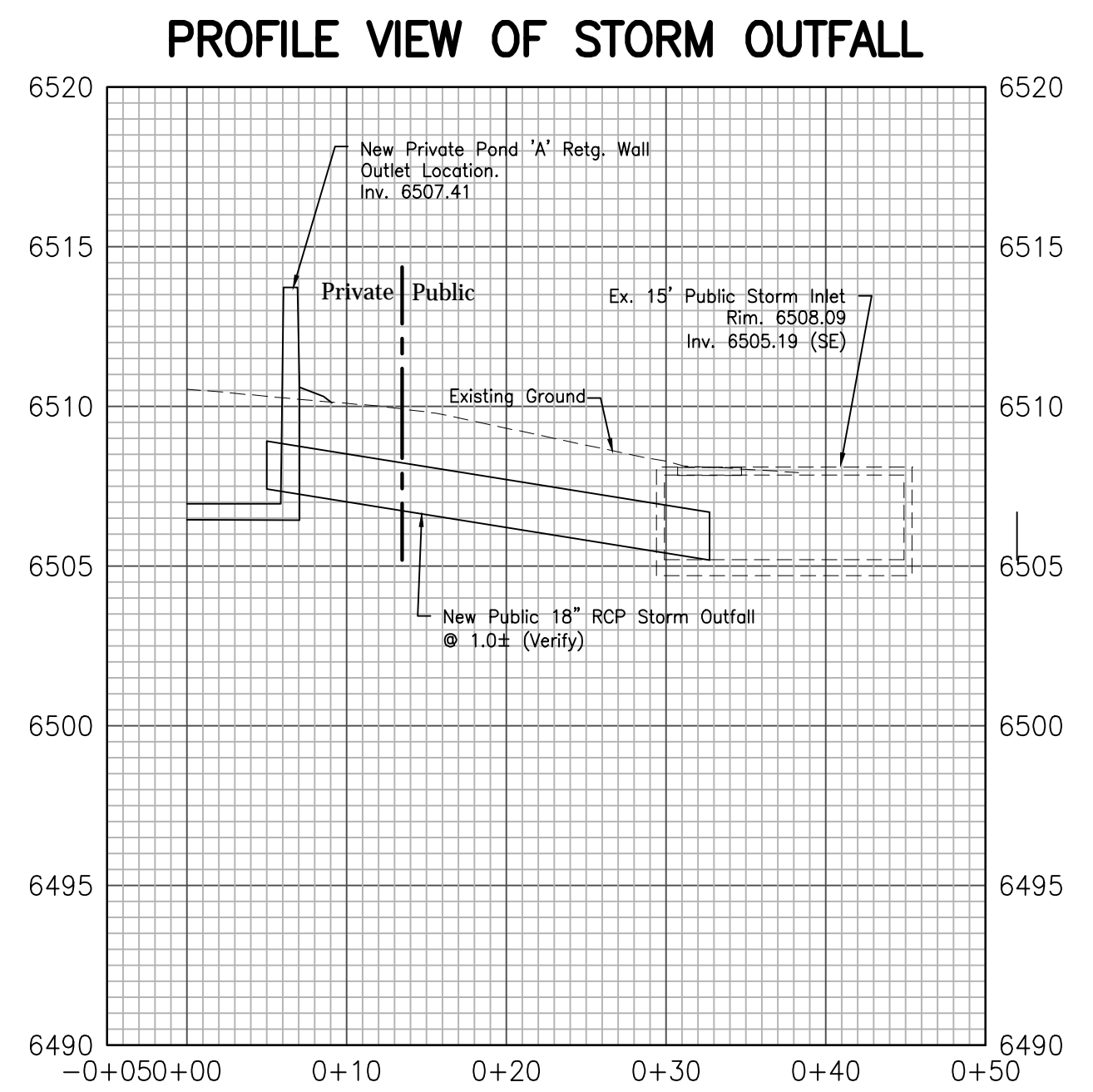
7 Storm Sewer Manhole Detail Type II
C602 EPC STD. SD 3-2 NOT TO SCALE



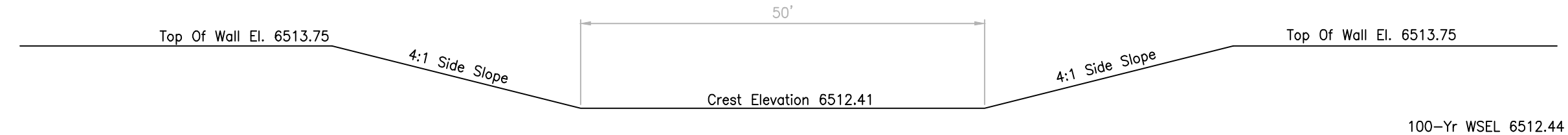
1
C601 Detention Basin Cross Sections
NOT TO SCALE



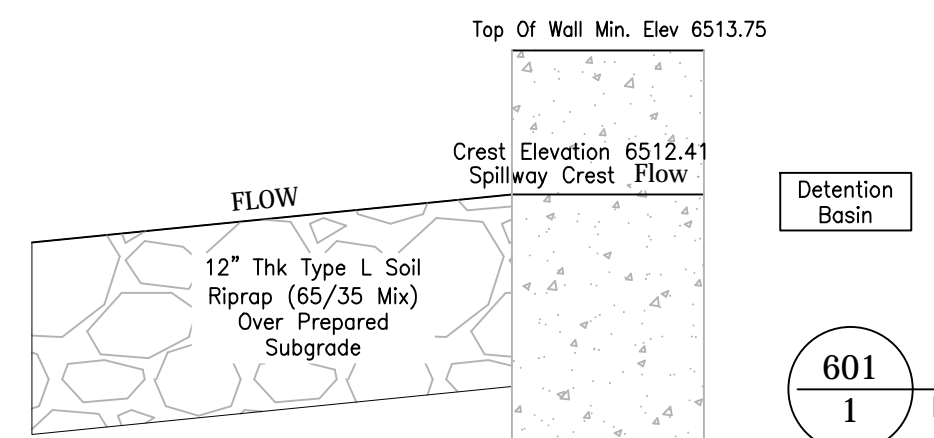
1
C601 PROFILE VIEW OF POND ELEV SOUTH



1
C601 PROFILE VIEW OF STORM OUTFALL



ELEVATION VIEW



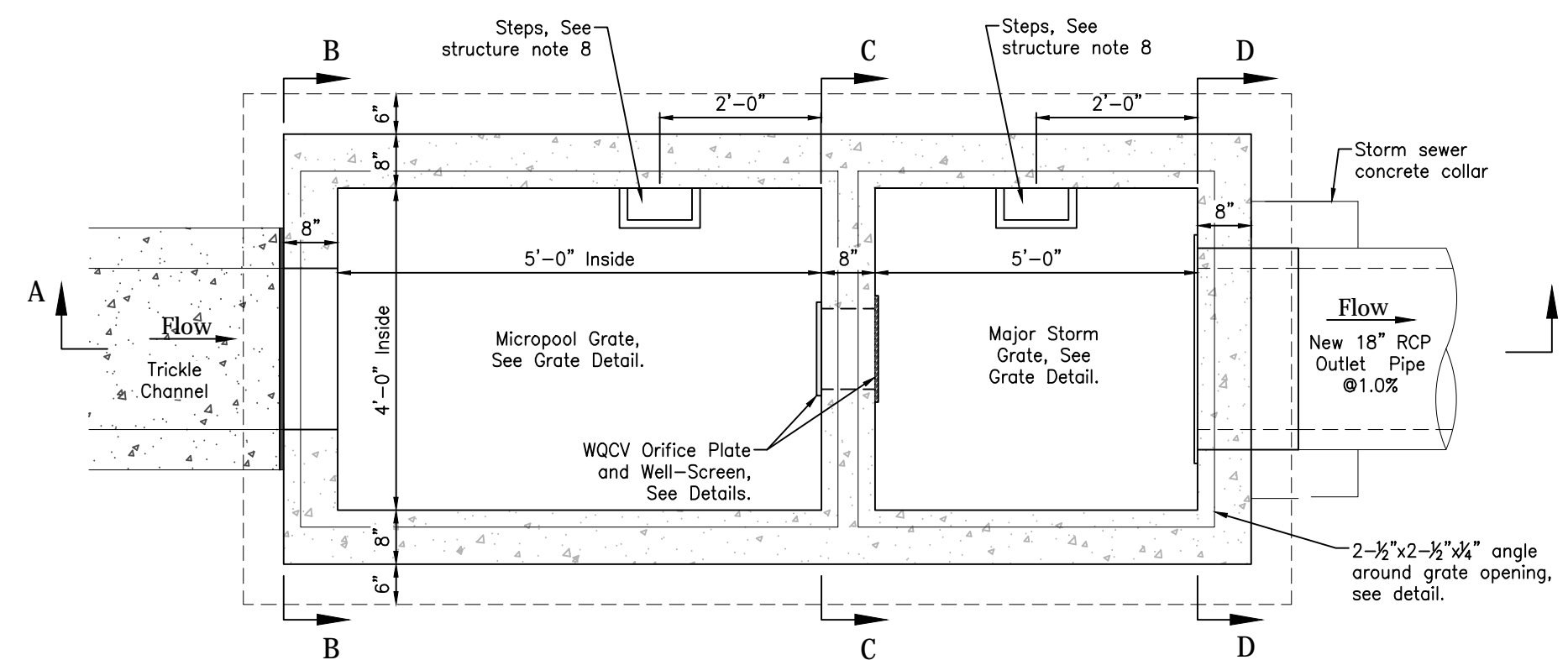
SECTION A-A

601
1 Emergency Spillway
NOT TO SCALE

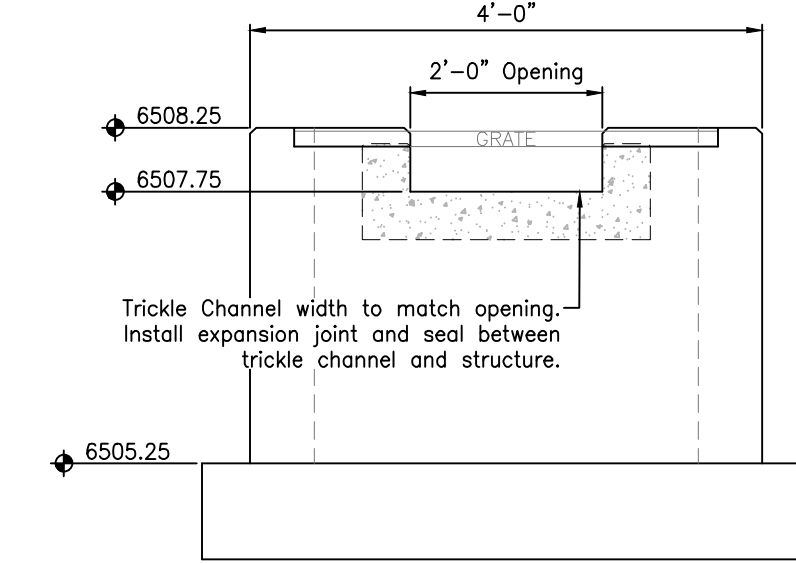
My Garage @ Northcrest
Stormwater Plan
Detention Facility
El Paso County, Colorado

Project No.:	23049
Date:	06/14/2024
Design:	MJK
Drawn:	MJK
Check:	AMcC
Revisions:	

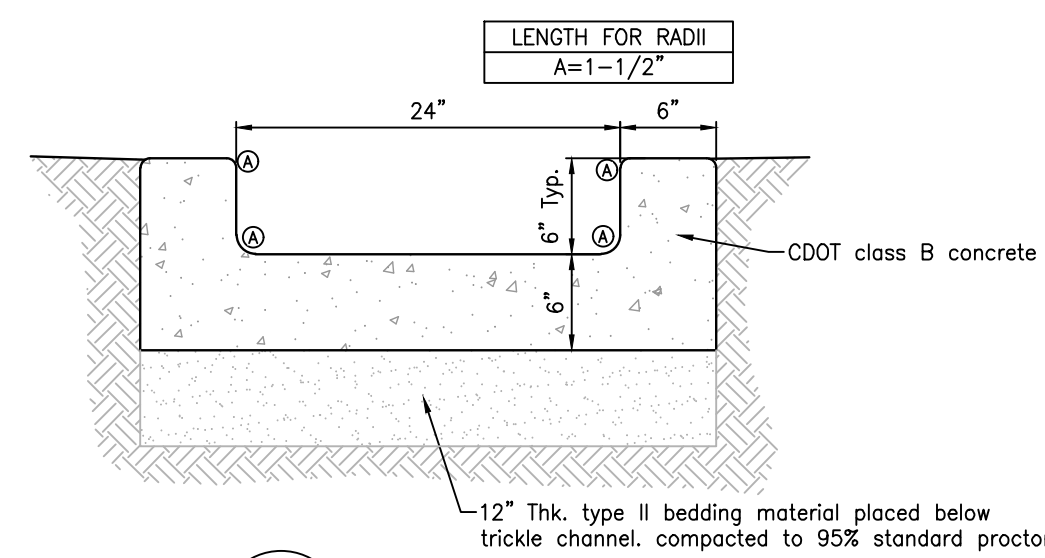
Sheet
C603



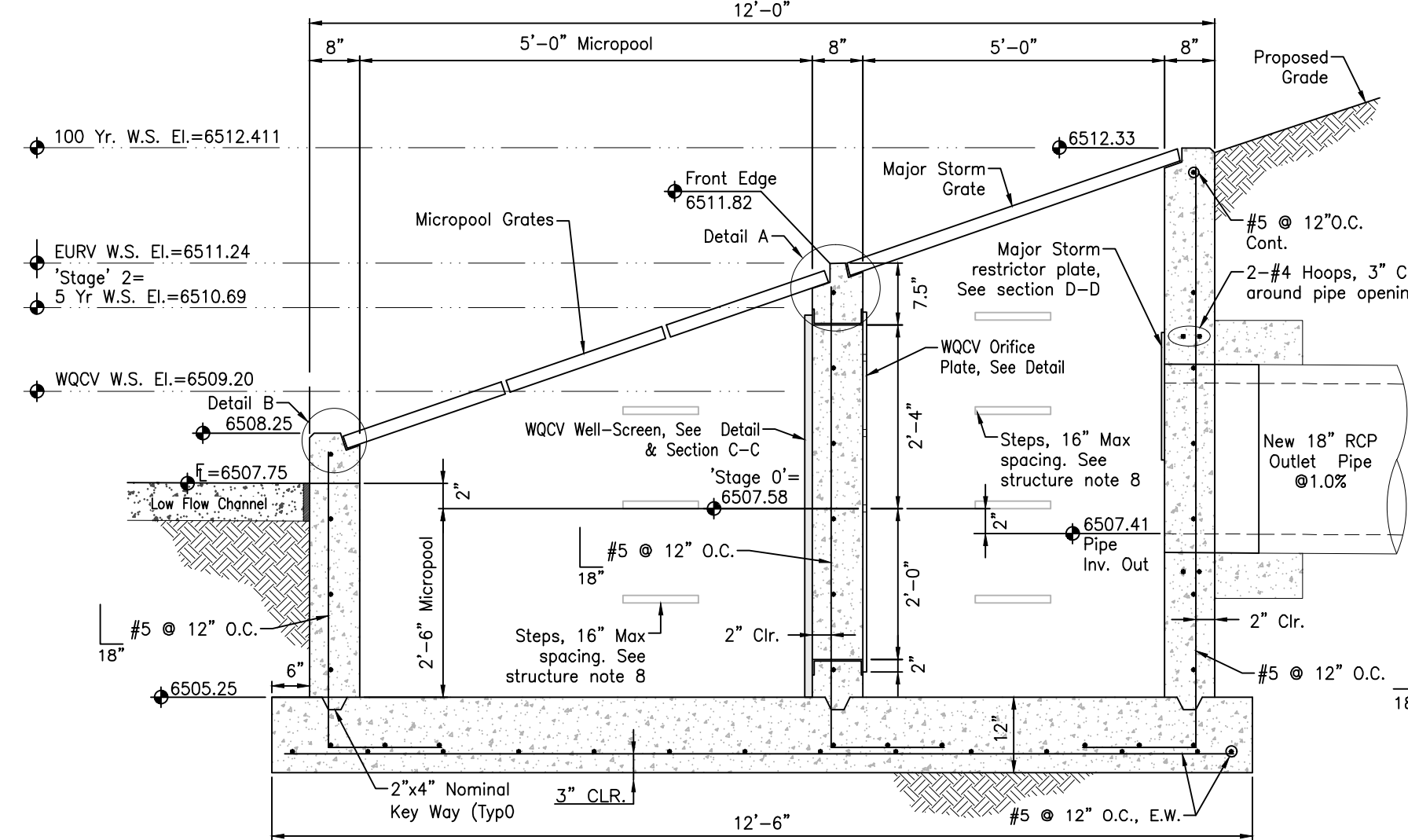
2 Outlet Structure Detail
C602 PLAN VIEW
NOT TO SCALE



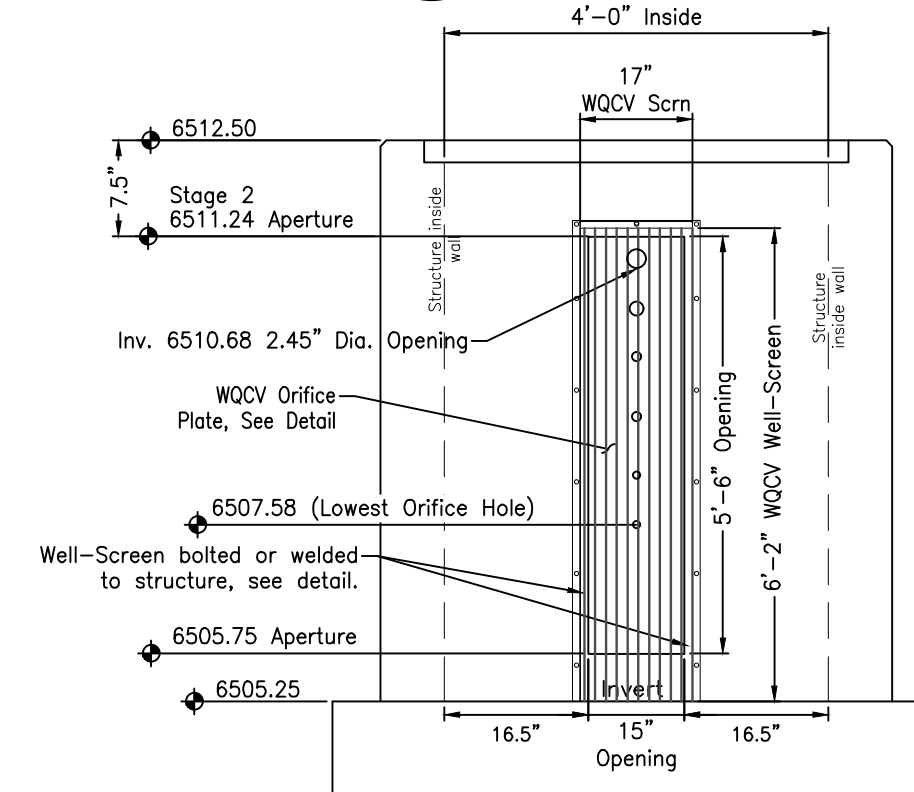
4 Section B-B
C602 NOT TO SCALE



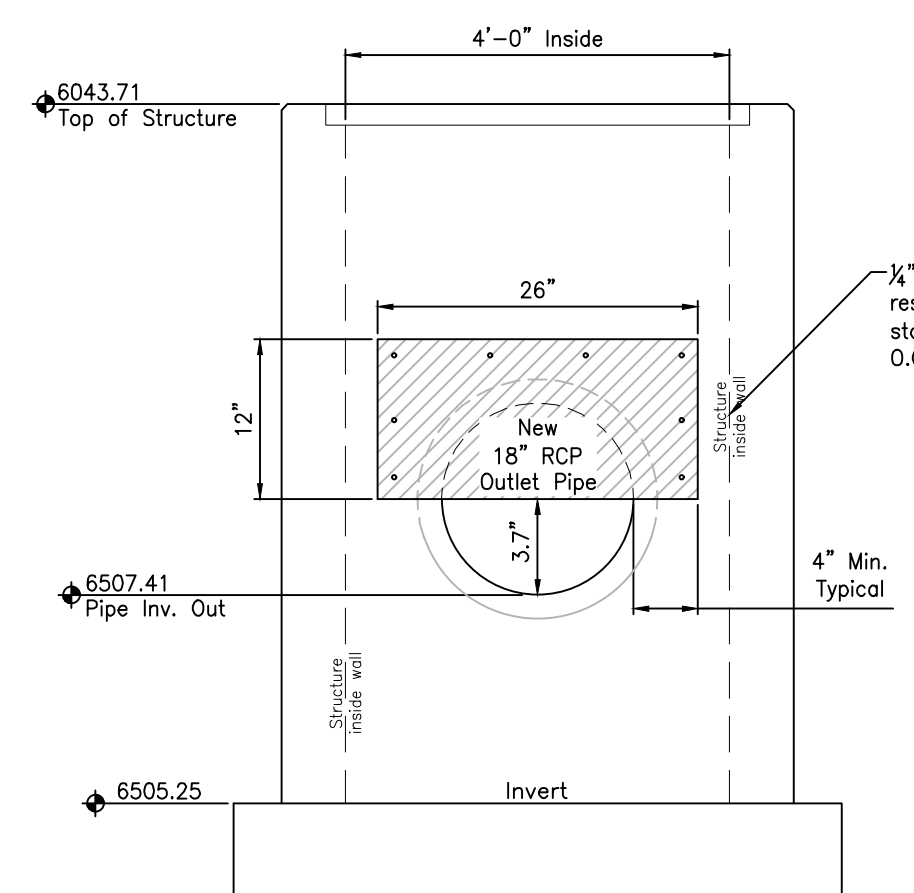
1 Trickle Channel
C602 NOT TO SCALE



3 Section A-A
C602 NOT TO SCALE

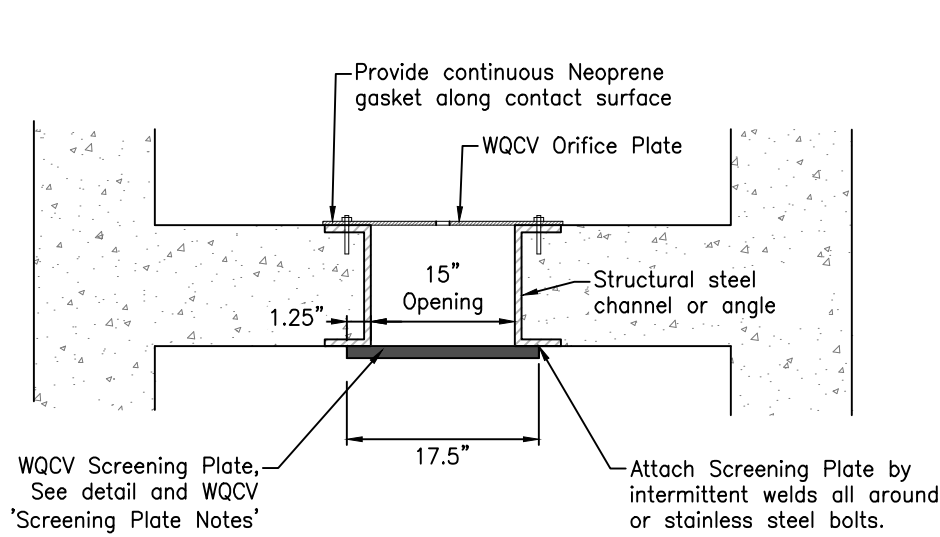


5 Section C-C
C602 NOT TO SCALE



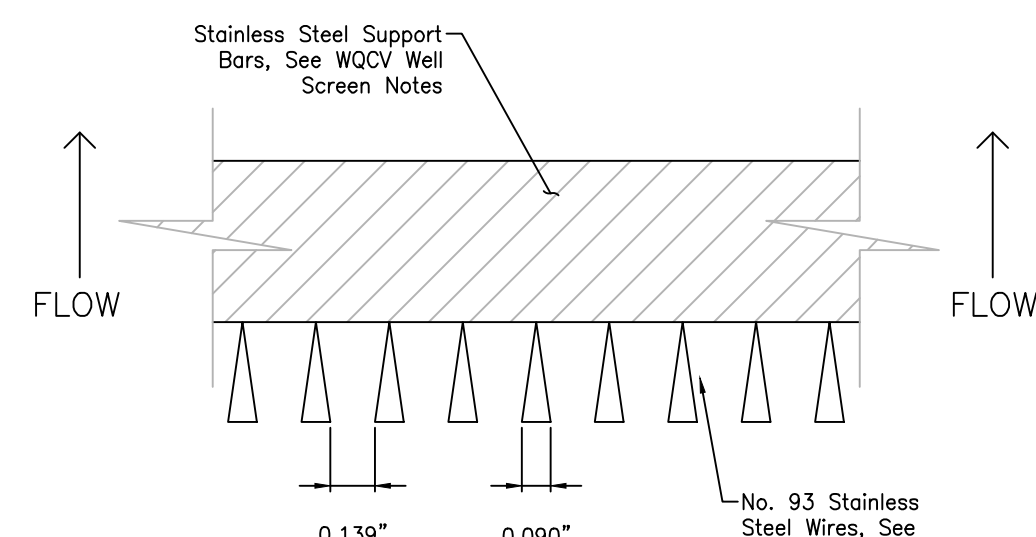
6 Section D-D
C602 NOT TO SCALE

- WQCV Well-Screen Notes:**
- Well-Screen shall be stainless steel and attached by intermittent welds or stainless steel bolts along edge of the mounting frame.
 - WQCV well screen
 - Type of Screen: Stainless Steel #93 Vee Wire (Johnson Vee Wire TM Stainless Steel Screen or equivalent with 60% Open Area)
 - Screen Slot Opening Dimension: 0.139" (Screen #93 Vee Wire Slot Opening)
 - Type and Size of Support Rod: TE 0.074"x0.50"
 - Spacing of Support Rod (O.C.): 1.0 inch
 - Total Screen Thickness: 0.655"
 - Carbon Steel Holding Frame Type: 3/4" x 1.0" Angle



Top View

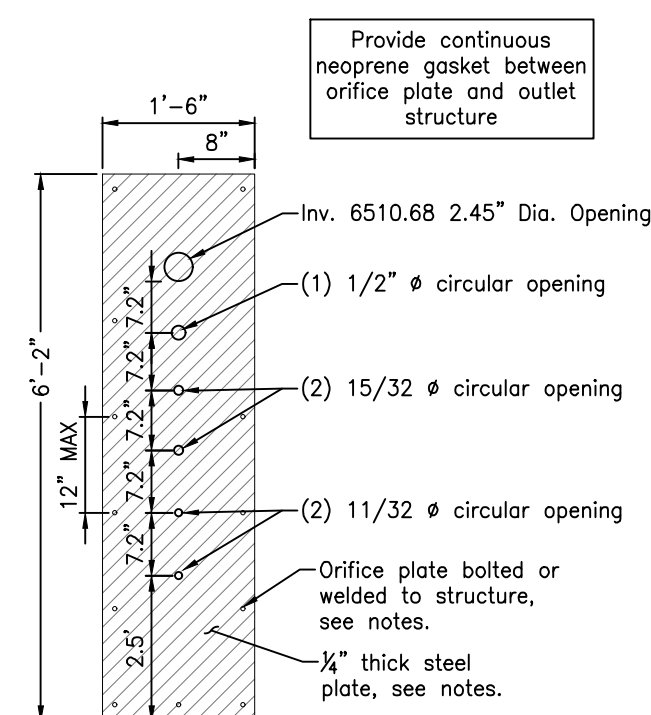
7 WQCV Orifice Plate and Screening Plate
C602 NOT TO SCALE



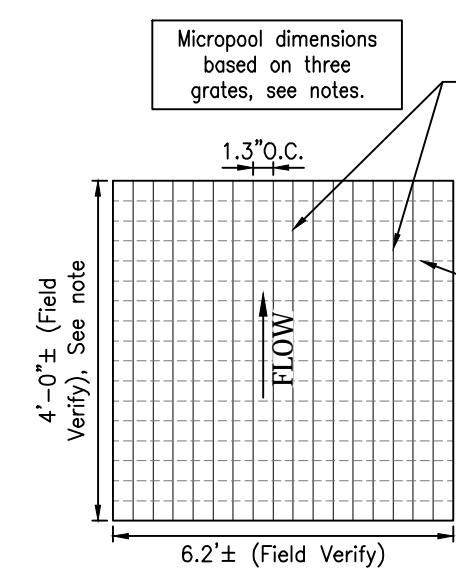
Well-Screen Detail

8 WQCV Well-Screen
C602 NOT TO SCALE

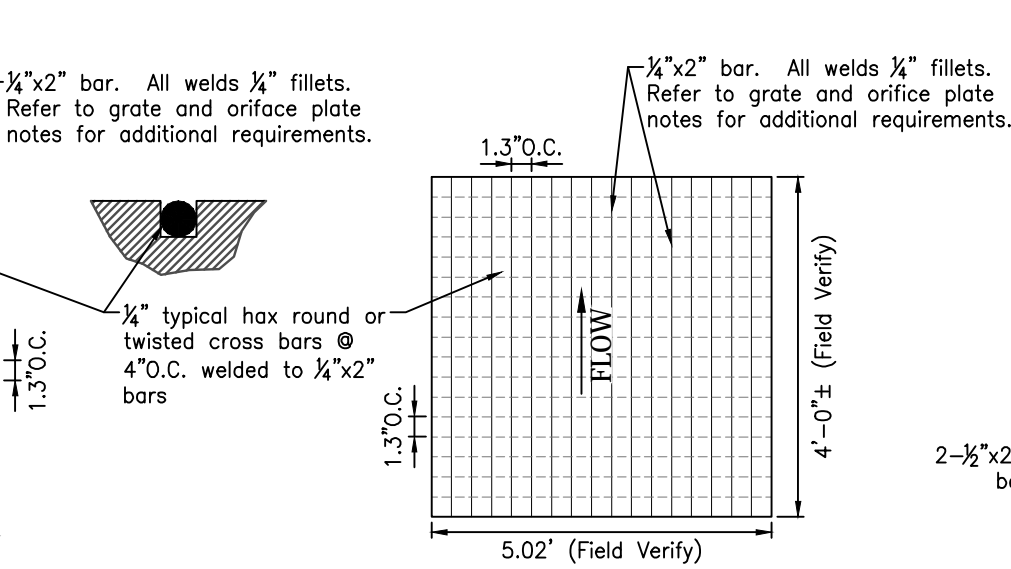
- STRUCTURE NOTES:**
- Prior to construction, Contractor to provide Shop Drawings for all components of the outlet structure.
 - Grade 60 reinforcing steel required. See table for the minimum lap splice length for reinforcing bars. All reinforcing steel shall have 2-inch minimum clearance from edge of concrete and 3-inch min. clearance to the edge of concrete placed against soil, unless otherwise noted.
 - Concrete for the outlet structure and forebays shall be CDOT Class D Concrete.
 - Expansion joint material shall meet AASHTO specification M-213. Expansion joint material shall be 1/2" thick, shall extend the full depth of contact surface and the joint shall be sealed, refer to details.
 - All exposed concrete corners shall have a 3/8-inch chamfer, unless otherwise noted.
 - Backfilling against walls shall not commence until concrete has obtained its full seven day strength.
 - Subgrade to be 12" thick clean fill compacted to 95% Standard Proctor Density per ASTM M698 under structures.
 - Outlet structure steps shall conform to AASHTO M199.
 - Forebay: Construction joints shall be installed at 10' O.C. maximum. The joints shall be sealed with a joint sealant.
- | Bar Size | #4 | #5 | #6 |
|--------------------|-------|-------|-------|
| Min. Splice Length | 1'-3" | 1'-7" | 2'-0" |



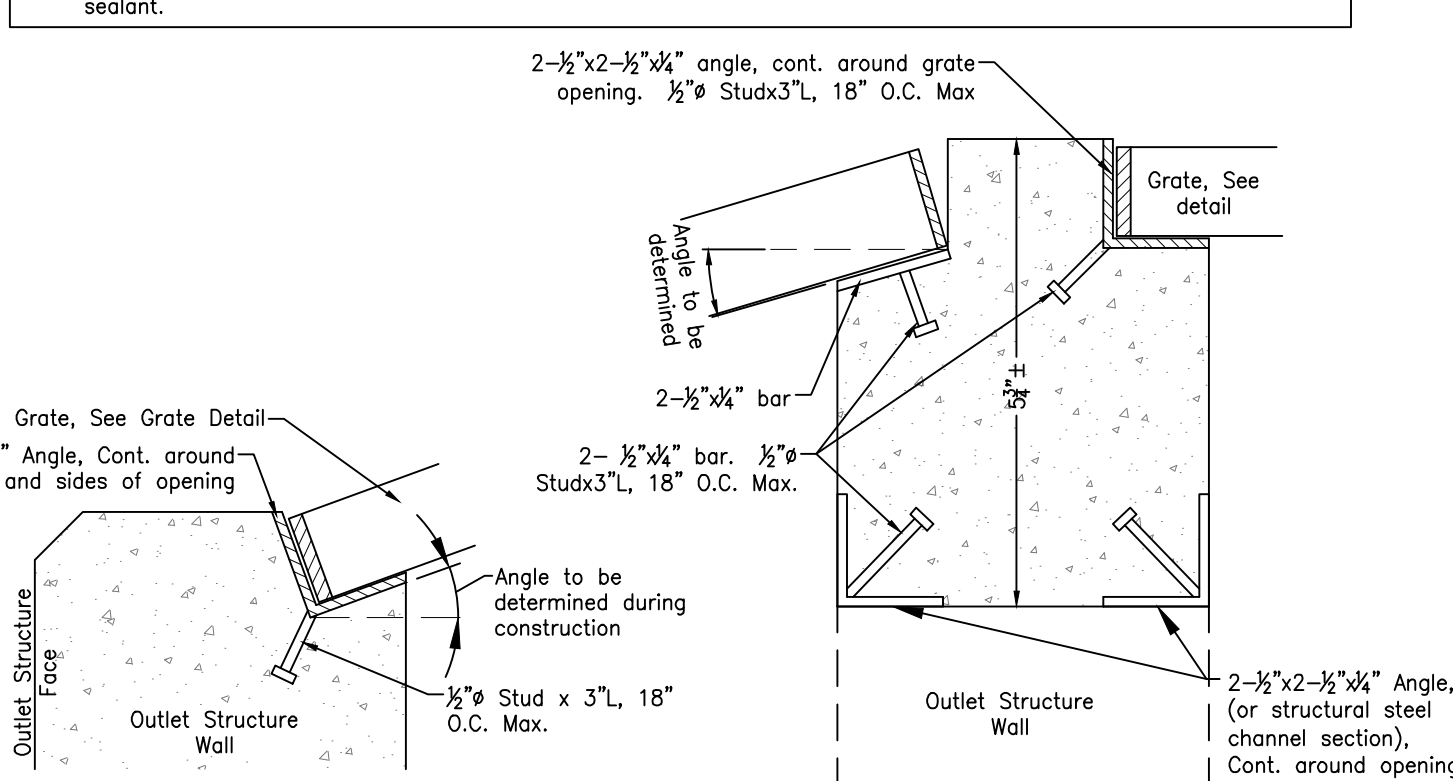
9 WQCV Orifice Plate
C602 NOT TO SCALE



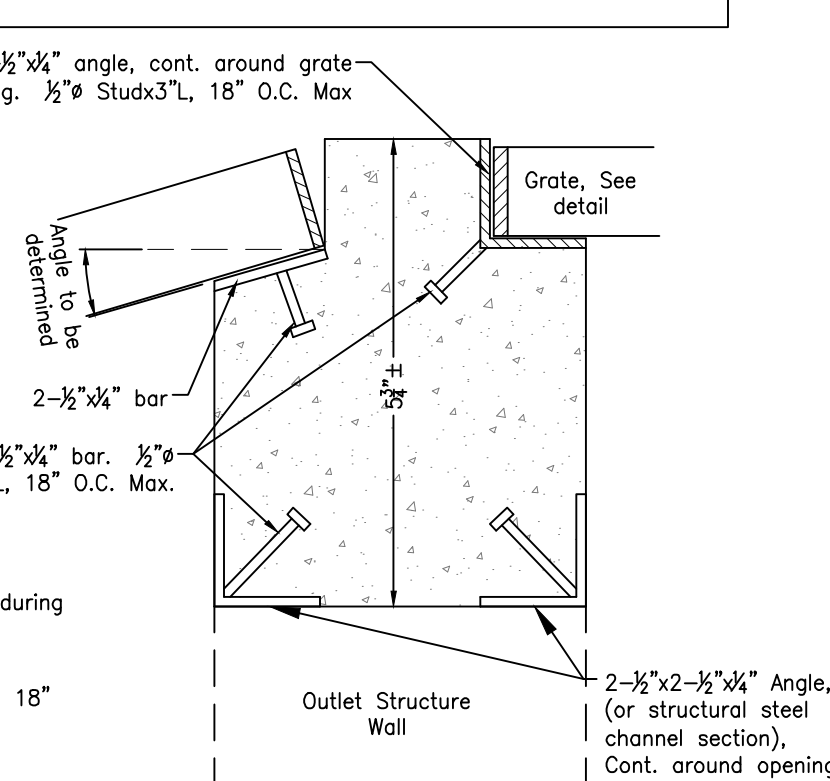
10 Micropool Grates Detail
C602 NOT TO SCALE



11 Major Storm Grate Detail
C602 NOT TO SCALE



12 Detail B
C602 NOT TO SCALE



13 Detail A
C602 NOT TO SCALE

Riprap Designation	CLASSIFICATION AND GRADATION OF RIPRAP		d ₅₀ [*] (Inches)
	% Smaller than Given Size by Weight	Intermediate Rock Dimension (Inches)	
Type VL	70-100	12	6**
	50-70	9	
	35-50	6	
Type L	70-100	15	9**
	50-70	12	
	35-50	9	
Type M	70-100	21	12
	50-70	18	
	35-50	12	
	2-10	4	

* d₅₀=Mean Particle Size (Intermediate Dimension) by weight, 12"
** Max. VL, L AND M Riprap with 35% Topsoil (by Volume) and bury with 4-6 inches of Topsoil, all vibration compacted & revegetate.
(Table MD-7: Classification and Gradation of Ordinary Riprap. UDFCD, Drainage Criteria Manual, Vol. 7)

- SOIL RIPRAP:**
- The soil material shall be native or topsoil and mixed with Sixty-Five Percent (65%) riprap and Thirty-Five Percent (35%) soil by volume. Soil Riprap shall consist of a uniform mixture of soil and riprap without voids.
 - Contractor shall cooperate with Engineer in obtaining and providing samples of all specified materials.
 - Contractor shall submit certified laboratory test certificates for all items required for Soil Riprap.
 - Riprap used shall be the type designated on the drawings and shall conform to the Table shown.
 - The riprap designation and total thickness of riprap shall be as shown on the drawings. The maximum stone size shall not be larger than the thickness of the riprap.
 - Neither width nor thickness of a single stone of riprap shall be less than One-Third (1/3) of its length.
 - The specific gravity of the riprap shall be two and one-half (2.5) or greater.
 - Minimum density for acceptable riprap shall be One-Hundred and Sixty-Five (165) pounds per cubic foot.
 - Riprap specific gravity shall be according to the Bulk-Saturated, Surface-Dry basis, in accordance with AASHTO T85.
 - The riprap shall have a percentage loss of not more than Forty Percent (40%) after Five-Hundred (500) revolutions when tested in accordance with AASHTO T96.
 - The riprap shall have a percentage loss of not more than Ten (10%) after Five (5) cycles when tested in accordance with AASHTO T104 for Ledge rock using sodium sulfate.
 - The riprap shall have a percentage loss of not more than Ten Percent (10%) after Twelve (12) cycles of freezing and thawing when tested in accordance with AASHTO T103 for Ledge rock. A Rock shall be free from calcite intrusions.
 - Gradation: Each load of riprap shall be reasonably well-graded from the smallest to the largest size specified.
 - Stones smaller than the Two to Ten Percent (2%-10%) size will not be permitted in an amount exceeding Ten Percent (10%) by weight of each load.
 - Control of gradation shall be by visual inspection. However in the event the Engineer determines the riprap to be unacceptable, he shall pick Two (2) random truckloads to be dumped and checked for gradation. Mechanical equipment and labor needed to assist in checking gradation shall be provided by the Contractor at no additional cost.