

**GRADING, EROSION AND SEDIMENT CONTROL PLAN
FOR
RIDGEGATE AMENITY CENTER**

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This *Grading, Erosion and Sediment Control Plan* has been placed in the Lone Tree file for this project and appears to fulfill the applicable Douglas County *Grading, Erosion and Sediment Control*, as amended. I understand that additional grading, erosion and sediment control measures may be required of the Permittees, due to unforeseen erosion problems or if the submitted plan does not function as intended. The requirements of this plan shall run with the land and be the obligation of the Permittees until such time as the plan is properly completed, modified or voided.

PROJECT OWNER/DEVELOPER SIGNATURE BLOCK

I have reviewed the information contained within this Grading, Erosion and Sediment Control Plan and accept responsibility for the requirements set forth.

Project Owner/Developer

Date

PLAN PREPARE SIGNATURE BLOCK

I hereby certify that this Grading, Erosion and Sediment Control Plan for Ridgeway Amenity Center was prepared by me (or under my direct supervision) in accordance with the provisions of the *Douglas County Grading, Erosion and Sediment Control Manual* for the owners thereof.

Aaron Clutter, P.E.

Date

State of Colorado No. 36742

For and on Behalf of JR Engineering, LLC

Introduction

This report represents the Grading, Erosion and Sediment Control Plan for Ridgeway Amenity Center. It was prepared to meet the regulatory requirements of the Douglas County *Grading, Erosion and Sediment Control Manual* as well as the Colorado Department of Health, Water Quality Control Division in compliance with the provisions of the Colorado Water Quality Control Act, and the Federal Water Pollution Control Act.

This plan serves as a consolidated document for information on water quality protection for the subject site and areas immediately adjacent. It should also be noted that **this plan is a living document that will need to be updated and maintained throughout the construction process**. The intent of this plan is to provide the contractor a tool to consolidate records, logs, permits, applications, etc. as well as guidance on water quality protection. The plan incorporates elements that can be found in the contract plans and specifications as well as the following:

- Douglas County Grading, Erosion and Sediment Control Manual
- Drainage Report for the Ridgeway Southwest Village

Ridgeway Amenity Center is located in a portion of the Ridgeway Southwest Village Filing 2, a part of section 14, section 22, section 23, and section 24 township 6 south, range 67 west of the 6th P.M. City of Lone Tree, County of Douglas, State of Colorado. The site is bound on the west by Lyric Street, on the east by Poetry Road, on the north by High note Avenue, and on the south by Alla Breve Circle. The site is approximately located at Latitude 39°30'59.4"N, Longitude 104°51'12.0"W. The site is shown on the Figure 1, Vicinity Map located within the Appendices. The total disturbance area created by the project is approximately 3.259 acres.

Part 1– Site Description

1-A. – Description of the Construction Activity

Ridgegate Amenity Center project includes construction of a portion of the Ridgegate Planned Development, the site is bound on the west by Lyric Street, on the east by Poetry Road, on the north by High note Avenue, and on the south by Alla Breve Circle. The scope of work includes installation of the Ridgegate Amenity Center structure including water, sanitary sewer, and storm sewer infrastructure, associated parking, drive aisles, and landscape areas. The site will be in both cut and fill.

1-B. – Proposed Sequence of Major Activities

The project will follow standard construction sequences for construction, i.e., clearing and grubbing, over excavation, overlot grading, utility installation, curb and gutter, and street paving. The contractor will be responsible for implementing and maintaining the erosion and sediment control measures described in this document and the accompanying design drawings. The Contractor may designate these tasks to certain subcontracts as they see fit, but the ultimate responsibility for implementing these controls and their proposer function at each phase of the project remains with the Contractor. The order of major activities will be as follows:

1. Install VTC, silt fence and other perimeter and initial soil erosion control measures.
2. Demolition, clearing and grubbing.
3. Complete over lot grading and over excavation.
4. Install temporary seeding and mulching and final stabilization.
5. Clean up.

1-C. – Estimated Total and Disturbance Areas of the Site

	CUT (C.Y)	FILL (C.Y)	NET (C.Y)		ACRES
AMENITY CENTER	670	4,680	4,010	FILL	3.259
TOTAL	670	4,680	4,010	FILL	3.259

The platted area of the plot for the Ridgegate Amenity Center is approximately 3.259 acres. The total disturbance area of the proposed construction activities associated with this report is 3.259

acres. The values shown in the table above are estimates of usable fill and cut materials to be moved within the site. These values were calculated by comparing the existing grade versus the proposed overlot grade using AutoCAD Civil3D surface analysis tools. In addition, these earthwork values make assumptions for roadway cut and compaction values.

1-D – Estimated Runoff Coefficient and Soil Classification

The estimated 5-year and 100-year developed runoff coefficients are 0.53 and 0.73, respectively. The Amenity Site was overlot graded as a part of Ridgeway Southwest Village Filing 1 and slopes in the existing condition range from 1%-25%. Currently, the site is vacant. Construction activities will take place on east of Lyric Street, west of Poetry Road, south of High note Avenue, and north of Alla Breve Circle. According to the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (FIRM) Community Panels No. 08035C0063H, dated September 4, 2020, the majority of the site lies within Zone X which is the flood insurance rate zone that corresponds to areas outside the one percent annual chance floodplain. The site soils are mostly described as Fondis clay loam, Fondis-Kutch association, and hilly gravelly land by the NRCS soil survey. The majority of soil in the proposed development is classified by the Natural Resource Conservation Service (NRCS) as Hydrologic Group C. Hydrologic Group C soils are described as “soils that have low infiltration rates when thoroughly wetted and consist chiefly of soils with a layer that impedes downward movement of water and soils with moderately fine to fine structure.”

1-E. – Existing Vegetation

The Amenity Site was overlot graded as a part of Ridgeway Southwest Village Filing 1 and slopes in the existing condition range from 1%-25%. Currently, the site is vacant.

1-F – Other Potential Pollution

While vehicle fueling is expected on-site, there is no designated area for fueling at this time. It will be the responsibility of the contractor to designate a fueling area and take the appropriate actions to insure that no pollution of the storm water occurs. Fueling areas shall be located a minimum of 100 feet from all drainage courses whenever possible. A 12-inch high compacted earthen ridge capable of retaining potential spills shall enclose fueling areas. If the fueling area is located on porous soil, the area shall be covered with a non-porous lining to prevent soil contamination. The

following is a list of other possible potential pollution sources and prevention measures that may occur during construction.

- Portable Toilets – should be kept a minimum of 50 feet from a storm drain inlet and secured to the ground
- Landscaping Materials – may be stored in the street until work is completed on each lot (which is usually less than 48 hours). If topsoil, mulch, or similar material is to be kept in the street or gutter over-night, containment measures should be taken to minimize any pollution discharge potential.
- Stockpiles – silt fence or similar barrier should be installed as needed around long-term stockpiles (30 days+), as well as Vehicle Tracking Control should be installed at the access point to minimize sediment from leaving the area.

1-G. – Non-stormwater Discharge

Non-stormwater discharges such as construction dewatering are not allowed under the general State permit. If groundwater is encountered during construction, a construction dewatering permit will need to be obtained through CDPHE.

1-H. – Receiving Waters

In the existing condition, as shown in the *Phase III Drainage Report for Ridgeway – Addendum I Memorandum*, the majority of the Amenity Site is denoted as Basin A2, and a small portion is included in Basin A26. Runoff from the site drains into curb and gutter in basins A25 and A26, where it is collected by inlets and routed to design points 2.6 and 3.0, respectively.

In the proposed condition, the minor and major storms are fully captured by the proposed and existing storm sewer. All runoff from the Amenity Center will be ultimately conveyed to Happy Canyon Creek via existing infrastructure in Ridgeway Southwest Village Filing 1.

Part 2. – Site Map

Refer to the erosion control drawing located within the map pockets for locations of best management practices (BMP).

Part 3. – Stormwater Management Controls

3-A. – Stormwater Management Plan (SWMP) Administrator

The SWMP administrator shall also be known as the erosion and sediment control manager (ESC manager). The ESC manager shall henceforth be the contractor to be named upon completion of the bidding process. The ESC manager shall be the individual(s), position, or title who is responsible for developing, implementing, maintaining, and revising the erosion and sediment control plans. The activities and responsibilities of the administrator shall address all aspects of the facility's SWMP.

3-B. – Identification of Potential Pollutant Sources

Potential pollution sources include debris, emissions from construction vehicles, possible refueling incidents and accidental materials or chemical spills. Specific pollution components and their solutions are listed below:

- All exposed and stored soils – all exposed soils will be seeded and mulched upon completion of construction within the vicinity. Silt fence will be utilized to contain sediment deposited by runoff until seeding can take. Silt fence or similar barrier should be installed as needed around long-term stockpiles (30 days+), as well as Vehicle Tracking Control should be installed at access points to minimize sediment from leaving the area.
- Vehicle tracking of sediments – if sediment is tracked onto the street, a reasonable attempt will be made to clean up any large deposits as soon as possible and if necessary, a street sweeper shall be used.
- Management of contaminated soils – appropriate measures will be taken to cleanup the cause of the contaminated soil. All contaminated soils must be disposed of in an appropriate manner off-site.
- Loading and unloading operations – should a spill occur during a loading or unloading operation it shall be cleaned up immediately and the on-site personnel should be contacted.
- Outdoor storage activities – materials with potential for contamination of stormwater

runoff will be stored so as to prevent/minimize the presence of toxic materials, and designated accordingly. The areas on the construction site used for material storage that are exposed to precipitation shall be inspected for evidence of, or the potential for, pollutants entering the drainage system.

- Vehicle and equipment maintenance and fueling – all designated fueling and maintenance areas shall be located a minimum of 100 feet from all drainage courses whenever possible. If the fueling area is located on porous soil, the area shall be covered with a non-porous lining to prevent soil contamination and any spillage shall be cleaned up immediately.
- Significant dust or particulate generating processes – dust-reducing measures will be taken during construction until appropriate seeding and mulching can be placed.
- Routine maintenance activities involving fertilizers, pesticides, detergents, fuels, solvents, oils, etc. – oil, grease, coolants, etc. that leak onto the soil or impervious surface should be cleaned up as soon as possible and on-site personnel should be contacted as well.
- On-site waste management practices (waste piles, liquid wastes, dumpsters, etc.) – dumpsters will be utilized as needed to remove trash from the site. Any waste material found on-site or generated by construction will be disposed of in a manner as to not cause pollutants in storm water discharges. In the event that waste is to be stored on-site, it shall be in an area located a minimum of 100 feet from all drainage courses whenever possible. Whenever waste is not stored in a non-porous container, it shall be in an area enclosed by a 12-inch high compacted earthen ridge. If the enclosed waste area is located on porous soil, the area shall be covered with a non-porous lining to prevent soil contamination. Whenever precipitation is predicted or the receptacle is not in use, the waste shall be covered with a non-porous cover, anchored on all sides to prevent its removal by wind, in order to prevent precipitation from leaching out potential pollutants from the waste.
- Non-industrial waste sources such as worker trash and portable toilets – all portable toilets should be kept a minimum of 50 feet from a storm drain inlet and secured to the ground.
- Other areas or procedures where potential spills can occur – no other areas have been identified at this time.
- General litter/construction debris – dumpsters will be utilized as needed to remove trash

from the site. Any waste material found on-site or generated by construction will be disposed of in a manner as to not cause pollutants in storm water discharges. In the event that waste is to be stored on-site, it shall be in an area located a minimum of 100 feet from all drainage courses whenever possible. Whenever waste is not stored in a non-porous container, it shall be in an area enclosed by a 12-inch high compacted earthen ridge. If the enclosed waste area is located on porous soil, the area shall be covered with a non-porous lining to prevent soil contamination. Whenever precipitation is predicted, the waste shall be covered with a non-porous cover, anchored on all sides to prevent its removal by wind, in order to prevent precipitation from leaching out potential pollutants from the waste.

3-C. – Structural Practices

Silt Fence

Purpose:

- To act as a barrier to interrupt runoff to allow sediment to settle out

Typical Applications:

- Perimeter control on lots or tracts
- Around dirt stockpiles

Vehicle Tracking Control

Purpose:

- To reduce the amount of sediment leaving an area via vehicle's tires

Typical Applications:

- Long-term stockpiles (30 days or more)
- Construction access points
- On-site trailer parking/access
- A barrier between destabilized and stabilized areas

Sediment Logs, Reinforced Rock Bag

Purpose:

- To act as a barrier to interrupt runoff and allow sediment to settle out

Typical Applications:

- In channels and swales
- Perimeter control on lots, tracts, and medians
- Slope protection
- As part of inlet protection

Temporary Sediment Basin

Purpose:

- To pond water and collect the sediment that falls out before being discharged into the storm system

Typical Applications:

- During overlot grading before onsite storm system is in place
- Located typically by outfall for the site

Check Dam, Reinforced Check Dam

Purpose:

- To act as a barrier to interrupt runoff, slow runoff, and allow sediment to settle out

Typical Applications:

- In channels and swales

Temporary Slope Drain

Purpose:

- To convey runoff over steep slopes with minimal erosion potential

Typical Applications:

- Steep slopes prone to erosion

Drainage Ditch

Purpose:

- To convey surface water to sediment basins

Typical Applications:

- Transport surface water
- Intercept surface water

Stabilized Staging Area

Purpose:

- To provide a stabilized area for construction vehicles and equipment to minimize erosion and disturbance areas

Typical Applications:

- Storage and stock pile location
- Vehicle parking and storage
- Staging area
- Construction trailer location

Construction Fence

Purpose:

- To control vehicle and foot traffic by creating physical barriers

Typical Applications:

- Site boundary
- Sensitive area protection

Surface Roughening

Purpose:

- To slow and limit erosion on destabilized areas

Typical Applications:

- Large destabilized areas that need temporary stabilization
- Sloped areas without established vegetation

3-C.2. – Non-Structural Practices

Temporary/Permanent Seeding

Purpose:

- To provide stabilization of disturbed soil

Typical Applications:

- Any disturbed areas
- Stockpiles
- Slopes

Mulch

Purpose:

- To reduce erosion from rain & wind
- To reduce raindrop impact (soil displacement)
- To protect seed from drying and vermin

Typical Applications:

- Any disturbed areas
- Stockpiles
- Slopes

Erosion Control Blanket

Purpose:

- To prevent erosion of the soil surface
- To promote seed germination & vegetation establishment
- To minimize rain drop impact

Typical Applications:

- Slopes greater than 4:1
- In swales (on lots)
- Fine grade stabilization

3-C.3. – Phased BMP Implementation

The site will be graded in three (3) phases. Plans for each phase have been created to stage the BMPs in order to aid the contractor in the implementation of BMPs as construction progresses.

3-C.4. – Materials Handling and Spill Prevention

There will be a designated individual on-site who will receive training on what to do when a hazardous spill occurs.

There will be a small spill kit on-site containing clean-up supplies, emergency contact information, and report(s) to document occurrences.

Spills must be cleaned up as soon as possible and contaminated soil/materials must be properly disposed of off-site.

3-C.5. – Dedicated Concrete or Asphalt Batch Plant

A dedicated asphalt or concrete batch plant will not be utilized. If at such time a batch plant is used it will be the responsibility of the contractor to update the GESC report and plans in addition to receiving/obtaining all necessary permits.

3-C.6. – Vehicle Tracking Control

The contractor will be responsible for placement of vehicle tracking control measures at the locations of major site entrances. Vehicle tracking control measures include, but are not limited to: minimizing site access; street sweeping or scraping; tracking pads; graveled parking areas; wash racks; and contractor education. As well, if sediment is tracked onto the street, a reasonable attempt will be made to clean up any large deposits as soon as possible and if necessary, a street sweeper may be used.

3-C.7. – Waste Management and Disposal

The contractor will be responsible for placement of concrete washout areas. They will be placed such that concrete washout activities do not result in the discharge of materials, or contribute pollutants to stormwater runoff.

3-C.8. – BMP Specifications

The contractor shall reference the Douglas County *Grading, Erosion and Sediment Control Manual* for information regarding the installation and implementation for each BMP identified in the erosion and sediment control plans.

Part 4. – Final Stabilization & Long-term Stormwater Management

Final Stabilization will be reached when construction activities have ceased and the site has reached 70% vegetative cover in comparison to pre-disturbance levels, or equivalent permanent erosion control measures have been used (pavement, concrete, etc.).

Part 5. – Inspection & Maintenance

Inspections of erosion & sediment control measures will occur every 7 days and within 24 hours of any wet weather event or snowmelt ‘event’ that incurs erosion. The operator shall keep a record of inspections. Uncontrolled releases of mud or muddy water or measurable quantities of sediment found off the site shall be recorded with a brief explanation as to the measures taken to prevent future releases as well as any measure taken to clean up the sediment that has left the site. Any items in need of correction will occur within 7 days of the inspection.

Based on the results of the inspection, the description of potential pollutant sources and the pollution prevention and control measures shall be revised and modified as appropriate as soon as practicable after such inspection. The GESD plan shall also be updated to reflect current conditions, installed BMP’s, disturbed areas, and design changes.

All temporary and permanent erosion and sediment control facilities shall be maintained, repaired, and inspected as detailed in the Douglas County Grading, Erosion, and Sediment Control Manual. Silt fences will require periodic replacement. Sediment traps and sediment basins shall be cleaned when accumulated sediments equal approximately one-half of trap storage capacity. Vehicle tracking pads will need to be maintained with fresh or cleaned aggregate on an as-need basis. Accumulated sediment at inlet protection, silt fence, rock socks, and check dams shall be removed

on an as needed basis. The result of each inspection will be recorded & be made available upon request.

5-A. – Inspection Reports

The General Contractor shall be responsible for the reporting of all BMP inspections. A report summarizing the scope of each inspection, the qualification of personnel performing the inspection, the date(s) of the inspection, major observation relating to the implementation of the GESC and action taken shall be made and retained at the site or be readily available at a designated alternate location until the Inactivation Notice has been submitted. All inspection reports shall be submitted to the owner when the Inactivation Notice is filed. A recommended inspection form has been included in the Appendices. A separate report shall be made to identify any incident of non-compliance.

The General Contractor shall also be responsible for ensuring the required Douglas County Inspections and pre-construction meetings are scheduled and requirements are fulfilled.

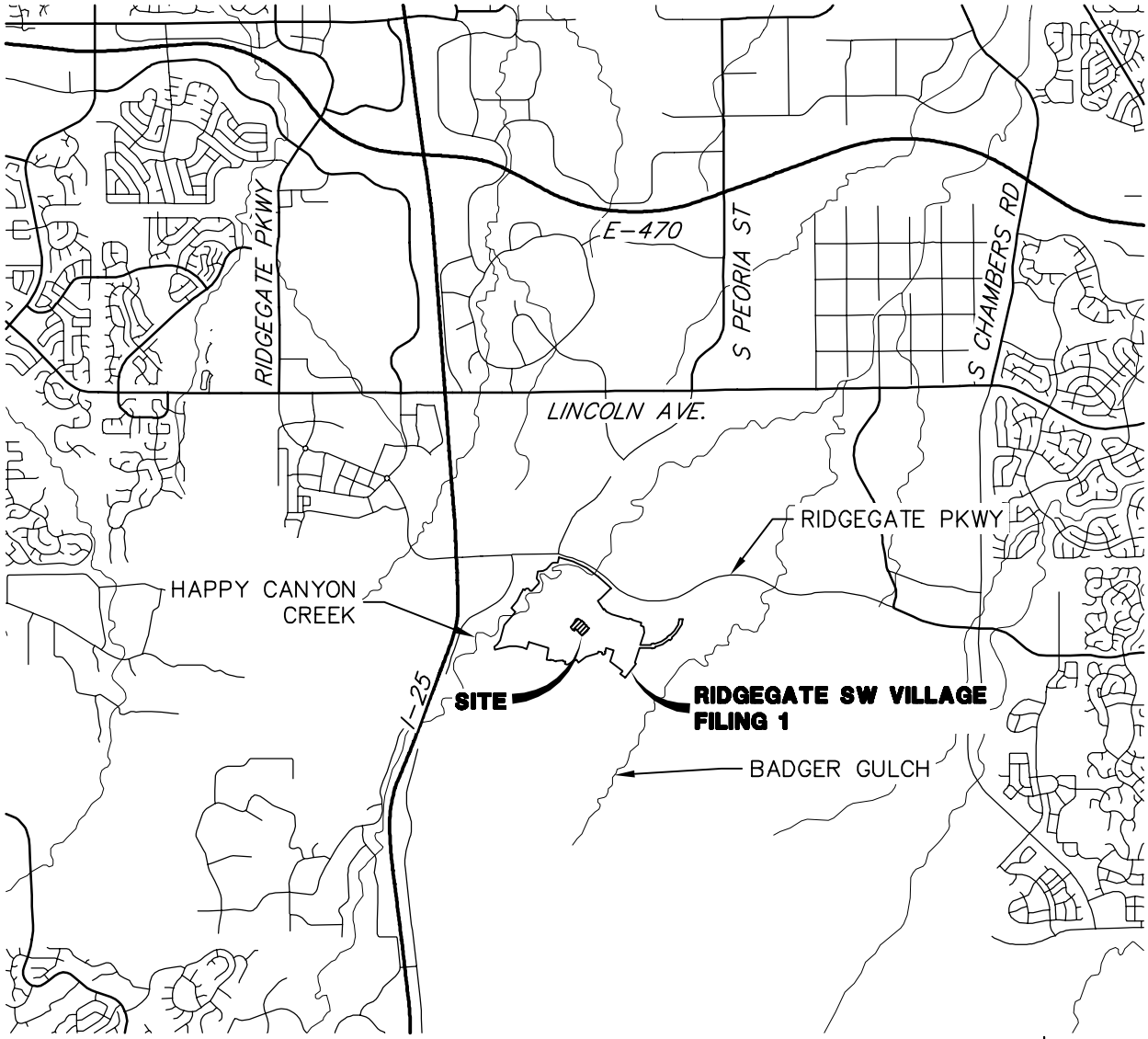
The operator shall keep a record of inspections onsite or a designated alternative location. Uncontrolled releases of mud or muddy water or measurable quantities of sediment found off the site shall be recorded with a brief explanation as to the measures taken to prevent future releases as well as any measure taken to clean up the sediment that has left the site. This record shall also include the following information:

- ❑ Dates
- ❑ Names of inspectors
- ❑ Purpose of inspection i.e. – routine, spill event, post wet weather, etc.
- ❑ An assessment of the entire property as related to erosion and sediment control issues
- ❑ An evaluation of onsite BMPs
- ❑ Action items needed to assure the site continually complies with the GESC guidelines
- ❑ Documentation of any suggested changes to the plan due to field conditions
- ❑ Training events
- ❑ All record related to this plan including inspection logs shall be maintained by the

administrator for a minimum of 3 years from the date that the site is finally stabilized

Appendices & Figures

Figure 1 – Vicinity Map



VICINITY MAP

SCALE 1"=5000'



15950.06
 3/25/2022
 SHEET 1 OF 1



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Figure 2 – Soils Map



United States
Department of
Agriculture

NRCS

Natural
Resources
Conservation
Service

A product of the National
Cooperative Soil Survey,
a joint effort of the United
States Department of
Agriculture and other
Federal agencies, State
agencies including the
Agricultural Experiment
Stations, and local
participants

Custom Soil Resource Report for Castle Rock Area, Colorado

Amenity Center at Ridgegate SW Village



Preface

Soil surveys contain information that affects land use planning in survey areas. They highlight soil limitations that affect various land uses and provide information about the properties of the soils in the survey areas. Soil surveys are designed for many different users, including farmers, ranchers, foresters, agronomists, urban planners, community officials, engineers, developers, builders, and home buyers. Also, conservationists, teachers, students, and specialists in recreation, waste disposal, and pollution control can use the surveys to help them understand, protect, or enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. Soil surveys identify soil properties that are used in making various land use or land treatment decisions. The information is intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Although soil survey information can be used for general farm, local, and wider area planning, onsite investigation is needed to supplement this information in some cases. Examples include soil quality assessments (<http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/health/>) and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center (<https://offices.sc.egov.usda.gov/locator/app?agency=nrcs>) or your NRCS State Soil Scientist (http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2_053951).

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

The National Cooperative Soil Survey is a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (NRCS) has leadership for the Federal part of the National Cooperative Soil Survey.

Information about soils is updated periodically. Updated information is available through the NRCS Web Soil Survey, the site for official soil survey information.

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How Soil Surveys Are Made

Soil surveys are made to provide information about the soils and miscellaneous areas in a specific area. They include a description of the soils and miscellaneous areas and their location on the landscape and tables that show soil properties and limitations affecting various uses. Soil scientists observed the steepness, length, and shape of the slopes; the general pattern of drainage; the kinds of crops and native plants; and the kinds of bedrock. They observed and described many soil profiles. A soil profile is the sequence of natural layers, or horizons, in a soil. The profile extends from the surface down into the unconsolidated material in which the soil formed or from the surface down to bedrock. The unconsolidated material is devoid of roots and other living organisms and has not been changed by other biological activity.

Currently, soils are mapped according to the boundaries of major land resource areas (MLRAs). MLRAs are geographically associated land resource units that share common characteristics related to physiography, geology, climate, water resources, soils, biological resources, and land uses (USDA, 2006). Soil survey areas typically consist of parts of one or more MLRA.

The soils and miscellaneous areas in a survey area occur in an orderly pattern that is related to the geology, landforms, relief, climate, and natural vegetation of the area. Each kind of soil and miscellaneous area is associated with a particular kind of landform or with a segment of the landform. By observing the soils and miscellaneous areas in the survey area and relating their position to specific segments of the landform, a soil scientist develops a concept, or model, of how they were formed. Thus, during mapping, this model enables the soil scientist to predict with a considerable degree of accuracy the kind of soil or miscellaneous area at a specific location on the landscape.

Commonly, individual soils on the landscape merge into one another as their characteristics gradually change. To construct an accurate soil map, however, soil scientists must determine the boundaries between the soils. They can observe only a limited number of soil profiles. Nevertheless, these observations, supplemented by an understanding of the soil-vegetation-landscape relationship, are sufficient to verify predictions of the kinds of soil in an area and to determine the boundaries.

Soil scientists recorded the characteristics of the soil profiles that they studied. They noted soil color, texture, size and shape of soil aggregates, kind and amount of rock fragments, distribution of plant roots, reaction, and other features that enable them to identify soils. After describing the soils in the survey area and determining their properties, the soil scientists assigned the soils to taxonomic classes (units). Taxonomic classes are concepts. Each taxonomic class has a set of soil characteristics with precisely defined limits. The classes are used as a basis for comparison to classify soils systematically. Soil taxonomy, the system of taxonomic classification used in the United States, is based mainly on the kind and character of soil properties and the arrangement of horizons within the profile. After the soil

Custom Soil Resource Report

scientists classified and named the soils in the survey area, they compared the individual soils with similar soils in the same taxonomic class in other areas so that they could confirm data and assemble additional data based on experience and research.

The objective of soil mapping is not to delineate pure map unit components; the objective is to separate the landscape into landforms or landform segments that have similar use and management requirements. Each map unit is defined by a unique combination of soil components and/or miscellaneous areas in predictable proportions. Some components may be highly contrasting to the other components of the map unit. The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The delineation of such landforms and landform segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, onsite investigation is needed to define and locate the soils and miscellaneous areas.

Soil scientists make many field observations in the process of producing a soil map. The frequency of observation is dependent upon several factors, including scale of mapping, intensity of mapping, design of map units, complexity of the landscape, and experience of the soil scientist. Observations are made to test and refine the soil-landscape model and predictions and to verify the classification of the soils at specific locations. Once the soil-landscape model is refined, a significantly smaller number of measurements of individual soil properties are made and recorded. These measurements may include field measurements, such as those for color, depth to bedrock, and texture, and laboratory measurements, such as those for content of sand, silt, clay, salt, and other components. Properties of each soil typically vary from one point to another across the landscape.

Observations for map unit components are aggregated to develop ranges of characteristics for the components. The aggregated values are presented. Direct measurements do not exist for every property presented for every map unit component. Values for some properties are estimated from combinations of other properties.

While a soil survey is in progress, samples of some of the soils in the area generally are collected for laboratory analyses and for engineering tests. Soil scientists interpret the data from these analyses and tests as well as the field-observed characteristics and the soil properties to determine the expected behavior of the soils under different uses. Interpretations for all of the soils are field tested through observation of the soils in different uses and under different levels of management. Some interpretations are modified to fit local conditions, and some new interpretations are developed to meet local needs. Data are assembled from other sources, such as research information, production records, and field experience of specialists. For example, data on crop yields under defined levels of management are assembled from farm records and from field or plot experiments on the same kinds of soil.

Predictions about soil behavior are based not only on soil properties but also on such variables as climate and biological activity. Soil conditions are predictable over long periods of time, but they are not predictable from year to year. For example, soil scientists can predict with a fairly high degree of accuracy that a given soil will have a high water table within certain depths in most years, but they cannot predict that a high water table will always be at a specific level in the soil on a specific date.

After soil scientists located and identified the significant natural bodies of soil in the survey area, they drew the boundaries of these bodies on aerial photographs and

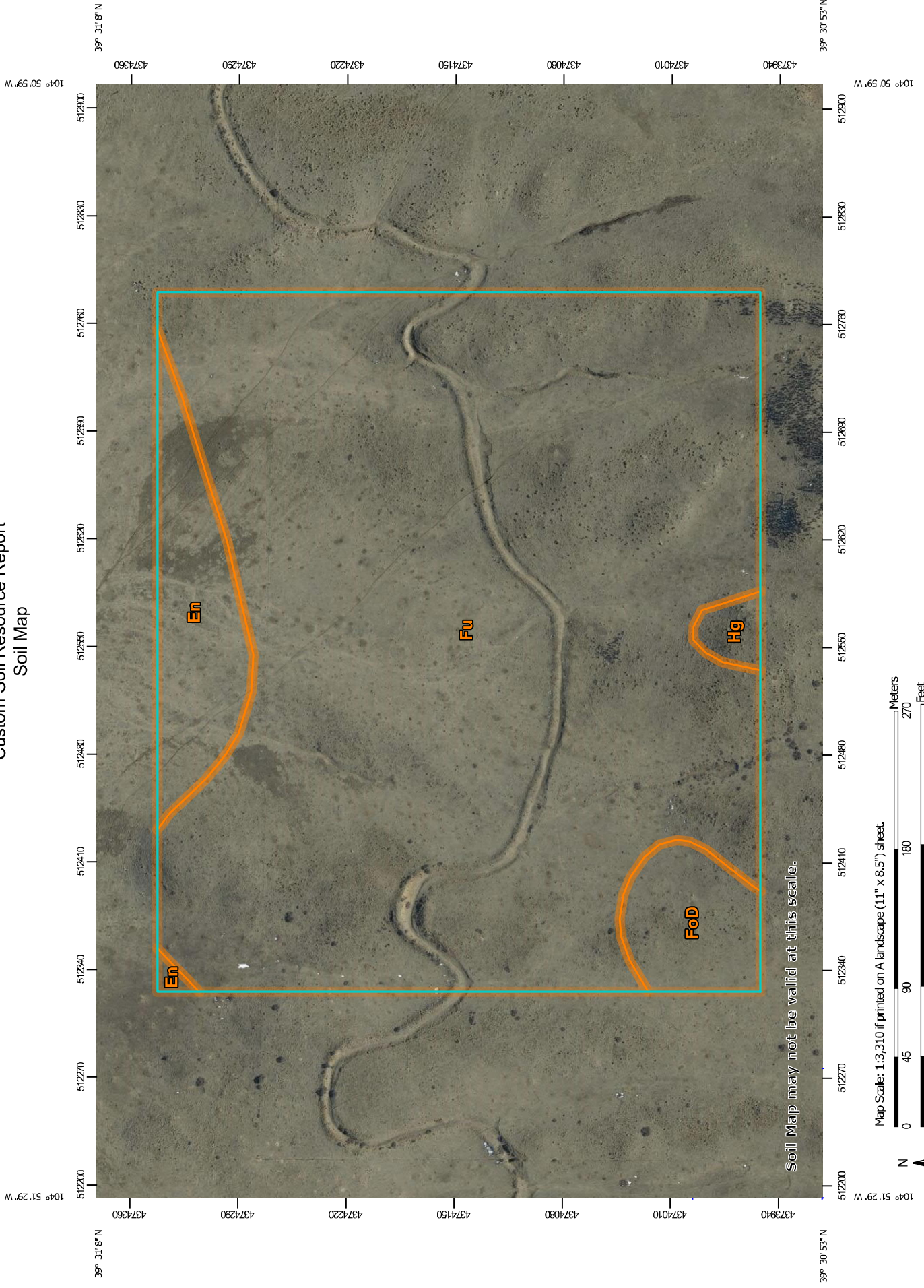
Custom Soil Resource Report

identified each as a specific map unit. Aerial photographs show trees, buildings, fields, roads, and rivers, all of which help in locating boundaries accurately.

Soil Map

The soil map section includes the soil map for the defined area of interest, a list of soil map units on the map and extent of each map unit, and cartographic symbols displayed on the map. Also presented are various metadata about data used to produce the map, and a description of each soil map unit.

Custom Soil Resource Report Soil Map



Soil Map may not be valid at this scale.

MAP LEGEND

- Area of Interest (AOI)**
 - Area of Interest (AOI)
- Soils**
 - Soil Map Unit Polygons
 - Soil Map Unit Lines
 - Soil Map Unit Points
- Special Point Features**
 - Blowout
 - Borrow Pit
 - Clay Spot
 - Closed Depression
 - Gravel Pit
 - Gravelly Spot
 - Landfill
 - Lava Flow
 - Marsh or swamp
 - Mine or Quarry
 - Miscellaneous Water
 - Perennial Water
 - Rock Outcrop
 - Saline Spot
 - Sandy Spot
 - Severely Eroded Spot
 - Sinkhole
 - Slide or Slip
 - Sodic Spot
- Water Features**
 - Streams and Canals
- Transportation**
 - Rails
 - Interstate Highways
 - US Routes
 - Major Roads
 - Local Roads
- Background**
 - Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:20,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
 Web Soil Survey URL:
 Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Casile Rock Area, Colorado
 Survey Area Data: Version 14, Aug 31, 2021

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Oct 3, 2018—Dec 4, 2018

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
En	Englewood clay loam	3.0	6.9%
FoD	Fondis clay loam, 3 to 9 percent slopes	1.8	4.2%
Fu	Fondis-Kutch association	38.7	88.0%
Hg	Hilly gravelly land	0.4	0.9%
Totals for Area of Interest		44.0	100.0%

Map Unit Descriptions

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The

Custom Soil Resource Report

delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however, onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

Castle Rock Area, Colorado

En—Englewood clay loam

Map Unit Setting

National map unit symbol: jqym
Elevation: 5,500 to 6,600 feet
Mean annual precipitation: 15 to 19 inches
Mean annual air temperature: 47 to 52 degrees F
Frost-free period: 120 to 135 days
Farmland classification: Prime farmland if irrigated

Map Unit Composition

Englewood and similar soils: 80 percent
Minor components: 20 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Englewood

Setting

Landform: Terraces, swales
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Weathered from alluvium derived from sedimentary rock

Typical profile

H1 - 0 to 10 inches: clay loam
H2 - 10 to 29 inches: clay
H3 - 29 to 60 inches: clay

Properties and qualities

Slope: 1 to 4 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: Medium
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.20 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 15 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water supply, 0 to 60 inches: High (about 9.7 inches)

Interpretive groups

Land capability classification (irrigated): 2e
Land capability classification (nonirrigated): 3e
Hydrologic Soil Group: C
Ecological site: R049XB208CO - Clayey Foothill
Hydric soil rating: No

Minor Components

Sampson

Percent of map unit: 10 percent
Hydric soil rating: No

Satanta

Percent of map unit: 9 percent
Hydric soil rating: No

Fluvaquentic haplustolls

Percent of map unit: 1 percent
Landform: Terraces
Hydric soil rating: Yes

FoD—Fondis clay loam, 3 to 9 percent slopes

Map Unit Setting

National map unit symbol: jqyp
Elevation: 5,500 to 6,800 feet
Mean annual precipitation: 15 to 19 inches
Mean annual air temperature: 47 to 50 degrees F
Frost-free period: 120 to 135 days
Farmland classification: Not prime farmland

Map Unit Composition

Fondis and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Fondis

Setting

Landform: Mesas, buttes, ridges
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Eolian deposits over coarse-silty outwash derived from arkose

Typical profile

H1 - 0 to 7 inches: clay loam
H2 - 7 to 24 inches: clay
H3 - 24 to 60 inches: sandy clay loam

Properties and qualities

Slope: 3 to 9 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: High
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.20 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 15 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water supply, 0 to 60 inches: High (about 9.4 inches)

Custom Soil Resource Report

Interpretive groups

Land capability classification (irrigated): 4e
Land capability classification (nonirrigated): 4e
Hydrologic Soil Group: C
Ecological site: R049XB208CO - Clayey Foothill
Hydric soil rating: No

Minor Components

Kutch

Percent of map unit: 5 percent
Hydric soil rating: No

Englewood

Percent of map unit: 5 percent
Hydric soil rating: No

Denver

Percent of map unit: 4 percent
Hydric soil rating: No

Aquic haplustolls

Percent of map unit: 1 percent
Landform: Swales
Hydric soil rating: Yes

Fu—Fondis-Kutch association

Map Unit Setting

National map unit symbol: jqyq
Elevation: 5,500 to 6,800 feet
Mean annual precipitation: 15 to 19 inches
Mean annual air temperature: 47 to 50 degrees F
Frost-free period: 120 to 135 days
Farmland classification: Not prime farmland

Map Unit Composition

Fondis and similar soils: 50 percent
Kutch and similar soils: 35 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Fondis

Setting

Landform: Valley sides, draws
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Eolian deposits over coarse-silty outwash derived from arkose

Custom Soil Resource Report

Typical profile

H1 - 0 to 7 inches: loam
H2 - 7 to 24 inches: clay
H3 - 24 to 60 inches: sandy clay loam

Properties and qualities

Slope: 5 to 15 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: High
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.20 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 15 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water supply, 0 to 60 inches: High (about 9.2 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 6e
Hydrologic Soil Group: C
Ecological site: R049XB208CO - Clayey Foothill
Hydric soil rating: No

Description of Kutch

Setting

Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Fine-textured residuum weathered from calcareous shale

Typical profile

H1 - 0 to 6 inches: sandy loam
H2 - 6 to 32 inches: clay
H3 - 32 to 36 inches: weathered bedrock

Properties and qualities

Slope: 5 to 40 percent
Depth to restrictive feature: 20 to 40 inches to paralithic bedrock
Drainage class: Well drained
Runoff class: Very high
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.20 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 15 percent
Gypsum, maximum content: 2 percent
Maximum salinity: Nonsaline to slightly saline (0.0 to 4.0 mmhos/cm)
Available water supply, 0 to 60 inches: Low (about 5.6 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 6e
Hydrologic Soil Group: D

Custom Soil Resource Report

Ecological site: R049XB208CO - Clayey Foothill
Hydric soil rating: No

Minor Components

Bresser

Percent of map unit: 5 percent
Hydric soil rating: No

Newlin

Percent of map unit: 5 percent
Hydric soil rating: No

Hilly gravelly land

Percent of map unit: 4 percent
Hydric soil rating: No

Aquic haplustolls

Percent of map unit: 1 percent
Landform: Swales
Hydric soil rating: Yes

Hg—Hilly gravelly land

Map Unit Setting

National map unit symbol: jqyw
Elevation: 5,500 to 6,600 feet
Mean annual precipitation: 15 to 18 inches
Mean annual air temperature: 48 to 51 degrees F
Frost-free period: 120 to 135 days
Farmland classification: Not prime farmland

Map Unit Composition

Hilly gravelly land: 80 percent
Minor components: 20 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Hilly Gravelly Land

Setting

Landform: Hills
Landform position (three-dimensional): Side slope, base slope, crest
Down-slope shape: Linear
Across-slope shape: Linear

Typical profile

H1 - 0 to 7 inches: cobbly sandy loam
H2 - 7 to 24 inches: cobbly clay loam
H3 - 24 to 28 inches: weathered bedrock

Custom Soil Resource Report

Properties and qualities

Slope: 5 to 50 percent

Depth to restrictive feature: 20 to 40 inches to paralithic bedrock

Drainage class: Well drained

Runoff class: Medium

Capacity of the most limiting layer to transmit water (Ksat): Moderately low to high
(0.06 to 2.00 in/hr)

Calcium carbonate, maximum content: 5 percent

Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)

Available water supply, 0 to 60 inches: Very low (about 2.7 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 7e

Hydrologic Soil Group: D

Ecological site: R049XY213CO - Cobbly Foothill

Hydric soil rating: No

Minor Components

Kutch

Percent of map unit: 4 percent

Hydric soil rating: No

Newlin

Percent of map unit: 4 percent

Hydric soil rating: No

Fondis

Percent of map unit: 4 percent

Hydric soil rating: No

Bresser

Percent of map unit: 4 percent

Hydric soil rating: No

Truckton

Percent of map unit: 3 percent

Hydric soil rating: No

Aquic haplustolls

Percent of map unit: 1 percent

Landform: Swales

Hydric soil rating: Yes

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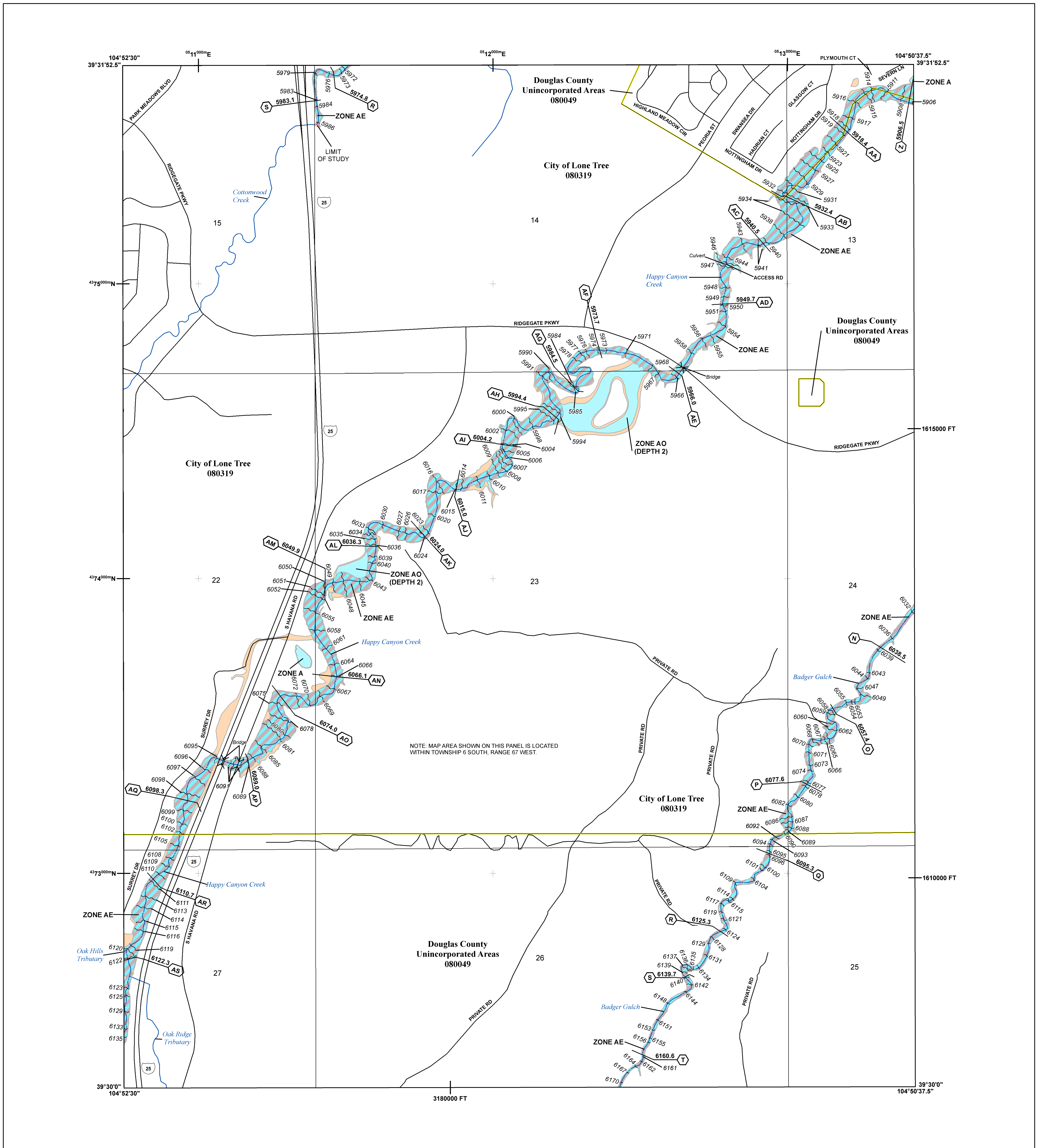
Custom Soil Resource Report

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Figure 3 – FIRM Map



FLOOD HAZARD INFORMATION

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT
THE INFORMATION DEPICTED ON THIS MAP AND SUPPORTING DOCUMENTATION ARE ALSO AVAILABLE IN DIGITAL FORMAT AT [HTTPS://MSC.FEMA.GOV](https://MSC.FEMA.GOV)

	Without Base Flood Elevation (BFE) Zone A, V, A99
	With BFE or Depth Zone AE, AO, AH, VE, AR
	Regulatory Floodway
	0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile Zone X
	Future Conditions 1% Annual Chance Flood Hazard Zone X
	Area with Reduced Flood Risk due to Levee See Notes, Zone X
	NO SCREEN Areas of Minimal Flood Hazard Zone X
	Area of Undetermined Flood Hazard Zone D
	Channel, Culvert, or Storm Sewer
	Accredited or Provisionally Accredited Levee, Dike, or Floodwall
	Non-accredited Levee, Dike, or Floodwall
	Cross Sections with 1% Annual Chance Water Surface Elevation (BFE)
	Coastal Transect
	Coastal Transect Baseline
	Profile Baseline
	Hydrographic Feature
	Base Flood Elevation Line (BFE)
	Limit of Study
	Jurisdiction Boundary

NOTES TO USERS

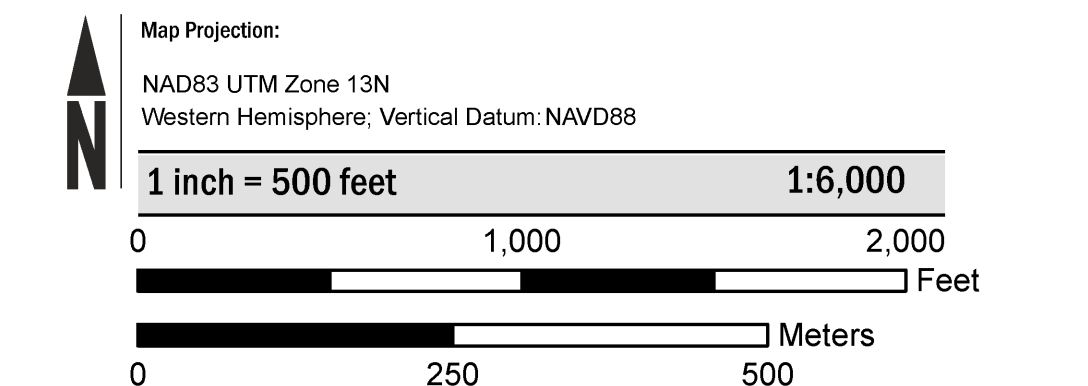
For information and questions about this Flood Insurance Rate Map (FIRM), available products associated with this FIRM, including historic versions, the current map date for each FIRM panel, how to order products, or the National Flood Insurance Program (NFIP) in general, please call the FEMA Map Information eXchange at 1-877-FEMA-MAP (1-877-336-2627) or visit the FEMA Flood Map Service Center website at <https://msc.fema.gov>. Available products may include previously issued Letters of Map Change, a Flood Insurance Study Report, and/or digital versions of this map. Many of these products can be ordered or obtained directly from the website.

Communities annexing land on adjacent FIRM panels must obtain a current copy of the adjacent panel as well as the current FIRM index. These may be ordered directly from the Flood Map Service Center at the number listed above.

For community and countywide map dates refer to the Flood Insurance Study report for this jurisdiction. To determine if flood insurance is available in the community, contact your insurance agent or call the National Flood Insurance Program at 1-800-638-6620.

Base map information shown on this FIRM was provided by the Douglas County GIS Department and the Town of Castle Rock GIS Department. Additional input was provided by the City of Lone Tree and Town of Parker. These data are current as of 2010.

SCALE



PANEL LOCATOR



National Flood Insurance Program

NATIONAL FLOOD INSURANCE PROGRAM
 FLOOD INSURANCE RATE MAP

DOUGLAS COUNTY, COLORADO
 And Incorporated Areas

PANEL 63 OF 495

Panel Contains:

COMMUNITY	NUMBER	PANEL	SUFFIX
DOUGLAS COUNTY	080049	0063	H
LONE TREE, CITY	080319	0063	H

FEMA

VERSION NUMBER
2.3.3.2

MAP NUMBER
08035C0063H

MAP REVISED
SEPTEMBER 4, 2020

GESC Plans, Cost Estimate & Calculations

AMENITY SITE AT RIDGEGATE SW VILLAGE

A PORTION OF THE RIDGEGATE PLANNED DEVELOPMENT DISTRICT, EAST SIDE PROPERTY

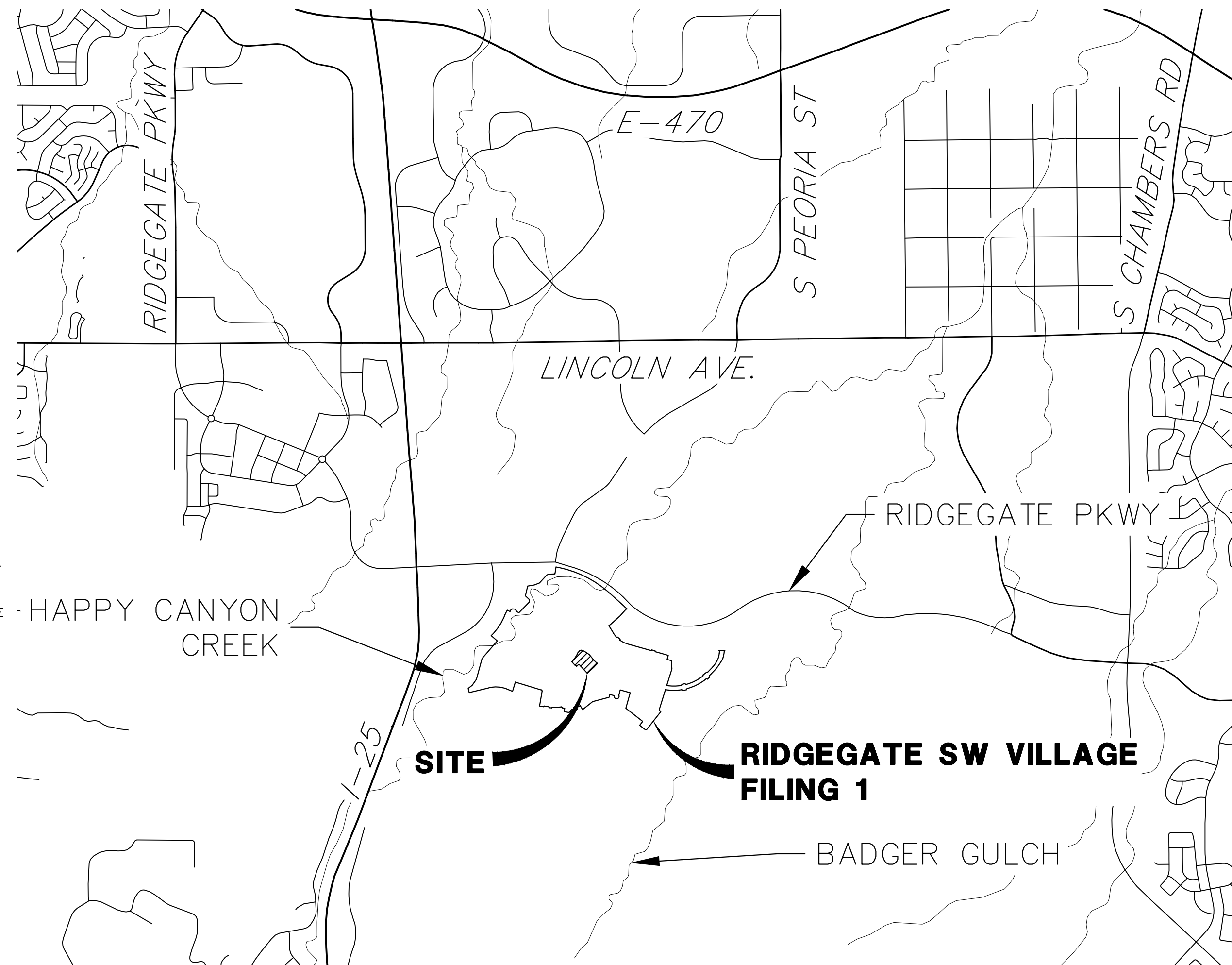
LOCATED IN THE NW QUARTER OF THE NE QUARTER OF SECTION 23, TOWNSHIP 6 SOUTH, RANGE 67 WEST OF THE 6TH P.M.

CITY OF LONE TREE, COUNTY OF DOUGLAS, STATE OF COLORADO

GESC PLANS

ABBREVIATIONS

AC	ACRE	FDP	FINAL DEVELOPMENT PLAN	PL	PROPERTY LINE
AD	ALGEBRAIC DIFFERENCE	FDR	FINAL DRAINAGE REPORT	PR	PROPOSED
AH	AHEAD	FES	FLARED END SECTION	PRC	POINT OF REVERSE CURVATURE
ARCH	ARCHITECT	FG	FINISHED GRADE	PT	POINT OF TANGENCY
ASCE	AMERICAN SOCIETY OF CIVIL ENGINEERS	FH	FIRE HYDRANT	PV	PLUG VALVE
ASSY	ASSEMBLY	FL	FILING	PVC	POLYVINYL CHLORIDE
AVE	AVENUE	FO	FIBER OPTIC CABLE	R	RADIUS
BB	BOX BASE	GB	GRADE BREAK	RCP	REINFORCED CONCRETE PIPE
BK	BACK	GE	GAS EASEMENT	RD	ROAD
BNDY	BOUNDARY	GIS	GEOGRAPHIC INFORMATION SYSTEM	ROW	RIGHT OF WAY
BOP	BOTTOM OF PIPE	GL	GAS LINE	RT	RIGHT
BOV	BLOW OFF VALVE	GPS	GLOBAL POSITIONING SYSTEM	S	SOUTH
BFV	BUTTERFLY VALVE	GV	GATE VALVE	STE	STEEL
BLVD	BOULEVARD	HO	HANDICAP	SAN	SANITARY SEWER
BW	BOTTOM OF WALL	HDC	HIGH DEFLECTION COUPLING	SF	SQUARE FEET
C&G	CURB & GUTTER	HDPE	HIGH DENSITY POLYETHYLENE	ST	STREET
CATV	CABLE TELEVISION	HGL	HYDRAULIC GRADE LINE	STA	STATION
CB	CATCH BASIN	HOA	HOME OWNERS ASSOCIATION	STM	STORM SEWER
CBC	CONCRETE BOX CULVERT	HP	HIGH POINT	SY	SQUARE YARD
CDOT	COLORADO DEPARTMENT OF TRANSPORTATION	IE	IRRIGATION EASEMENT	SY-IN	SQUARE YARD INCH
CDS	CUL-DE-SAC	INT	INTERSECTION	TB	THRUST BLOCK
CFS	CUBIC FEET PER SECOND	INV	INVERT	TBC	TOP BACK OF CURB
CL	CENTER LINE	IRR	IRRIGATION	TBW	TOP BACK OF WALK
CLOMR	CONDITIONAL LETTER OF MAP REVISION	KB	KICK (THRUST) BLOCK	TOC	TOP OF CURB OR CONCRETE
CLR	CLEAR	LE	LANDSCAPE EASEMENT	TOE	TOE OF SLOPE
CMP	CORRUGATED METAL PIPE	LF	LINEAR FEET	TOF	TOP OF FOUNDATION
CO	CLEAN OUT	LN	LANE	TOP	TOP OF PIPE
CONC	CONCRETE	LOMR	LETTER OF MAP REVISION	TS	TOP OF SLOPE
CR	CIRCLE	LP	LOW POINT	TW	TOP OF WALL
CSP	CORRUGATED STEEL PIPE	LS	LUMP SUM	TYP	TYPICAL
CT	COURT	LT	LEFT	UDFCD	URBAN DRAINAGE AND FLOOD CONTROL DISTRICT
CTRB	CONCRETE THRUST REDUCER	MAX	MAXIMUM	UE	UTILITY EASEMENT
BLOCK		MDP	MASTER DEVELOPMENT DRAINAGE PLAN	U&DE	UTILITY & DRAINAGE EASEMENT
CY	CUBIC YARD	MH	MANHOLE	UGE	UNDERGROUND ELECTRIC
DBPS	DRAINAGE BASIN PLANNING STUDY	MIN	MINIMUM	VCP	VITRIFIED CLAY PIPE
DE	DRAINAGE EASEMENT	N	NORTH	VPC	VERTICAL POINT OF CURVATURE
DIA	DIAMETER	NRCPC	NON-REINFORCED CONCRETE PIPE	VPI	VERTICAL POINT OF INTERSECTION
DIP	DUCTILE IRON PIPE	ODP	OFFICIAL DEVELOPMENT PLAN	VPT	VERTICAL POINT OF TANGENCY
DR	DRIVE	OHE	OVERHEAD ELECTRIC	VTC	VEHICLE TRACKING CONTROL
DRC	DESIGN REVIEW COMMITTEE DWELLING UNITS	OHU	OVERHEAD UTILITY	W	WEST
DU	DWELLING UNITS	PC	POINT OF CURVATURE	WL	WATER LINE
E	EACH	PCC	POINT OF COMPOUND CURVATURE	WM	WATER MAIN
EGL	ENERGY GRADE LINE	PCR	POINT OF CURB RETURN	WRD	WATER RESOURCES DEPARTMENT
EL	ELEVATION	PDP	PRELIMINARY DEVELOPMENT PLAN	WS	WATER SURFACE
ELEC	ELECTRIC	PE	PROFESSIONAL ENGINEER	WSE	WATER SURFACE ELEVATION
EOA	EDGE OF ASPHALT EASEMENT	PI	POINT OF INTERSECTION	WTR	WATER
ESMT	EASEMENT	PKWY	PARKWAY	YR	YEAR
EST	ESTIMATE				
EX	EXISTING				



VICINITY MAP
SCALE: 1"=2000'

SHEET INDEX

1	COVER SHEET
2	GENERAL NOTES
3	LEGEND
4	INITIAL GESC PLAN
5	INTERIM GESC PLAN
6	FINAL GESC PLAN
7-9	GESC NOTES AND DETAILS
TOTAL	9

APPLICANT/OWNER

SH LYRIC, LLC
9380 STATION ST.
SUITE 600
LONE TREE, CO 80124
P~303.791.8180

CIVIL ENGINEER

JR ENGINEERING
7200 SOUTH ALTON WAY, SUITE C400
CENTENNIAL, CO
P~303.267.6220

PLANNER

SAGE DESIGN GROUP
1500 SOUTH PEARL STREET, SUITE 200
DENVER, CO 80210
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TRAFFIC ENGINEER

JR ENGINEERING
7200 SOUTH ALTON WAY, SUITE C400
CENTENNIAL, CO
P~303.267.6183

GEOTECHNICAL ENGINEER

CTL THOMPSON, INC
1971 WEST 12TH VAE.
DENVER, CO 80204
P~303.825.0777

BASIS OF BEARING

BEARING SHOWN HEREON ARE GRID BEARINGS DERIVED FROM GPS OBSERVATION BASED UPON THE COLORADO COORDINATE SYSTEM OF 1983 CENTRAL ZONE (NAD 83, 2011) REFERENCED TO THE SOUTH LINE OF THE SOUTHEAST QUARTER OF SECTION 23, TOWNSHIP 6 SOUTH, RANGE 67 WEST, SIXTH PRINCIPAL MERIDIAN BEING MONUMENTED AS SHOWN HEREON, TAKEN TO BEAR NORTH 89°31'58" EAST, A DISTANCE OF 2635.13 FEET.

BENCHMARK

NCS CONTROL POINT UNBEWJST BEING A 3.5 INCH DIAMETER BRASS CAP, LOCATED ABOUT 3.2 MILES SOUTH OF INTERSTATE 25 AND COLORADO STATE HIGHWAY 470 INTERCHANGE, GO SOUTH ON INTERSTATE 25 FOR 2.9 MILES TO EXIT 191. PROCEED ON A PAVED ROAD TO THE SOUTHWEST FOR 0.2 MILES TO THE STATION ON THE LEFT. IN THE NORTHWEST CORNER OF A 24 FOOT BY 16 FOOT ROCK OUTCROP. IT IS 22.5 FEET EAST OF THE CENTERLINE OF THE PAVED ROAD, 123 FEET NORTH OF THE OUTLET OF A 3 FOOT CORRUGATED STEEL PIPE CULVERT AND APPROXIMATELY 350 FEET WEST OF THE WEST EDGE OF OIL OF SOUTHBOUND INTERSTATE 25, ELEVATION: 6125.32 (NAVD88).

SOIL PREPARATION NOTE:

SOIL PREPARATION SHALL BE PER RECOMMENDATIONS FROM THE GEOTECHNICAL REPORT PREPARED FOR THIS SITE.

GEOTECHNICAL ENGINEER: CTL THOMPSON, INC
PROJECT NUMBER: DN49.935.007-125-R1

THE CONTRACTOR IS TO REVIEW THIS REPORT IN FULL PRIOR TO BID. INFORMATION IN THE GEOTECHNICAL REPORT SUPERCEDES ANY CONFLICTING INFORMATION CONTAINED IN THE CONSTRUCTION PLANS AND SPECIFICATIONS.

CITY OF LONE TREE
DATE
THESE CONSTRUCTION PLANS HAVE BEEN REVIEWED BY THE CITY OF LONE TREE FOR GRADING AND EROSION CONTROL IMPROVEMENTS ONLY.
ENGINEERING DIVISION ACCEPTANCE BLOCK



Know what's below.
Call before you dig.

NOTICE TO CONTRACTOR:

- BY ACCEPTING AND UTILIZING THESE PLANS, THE CONTRACTOR AGREES THAT THEY SHALL ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THIS PROJECT, INCLUDING SAFETY OF ALL PERSON AND PROPERTY; THAT THIS REQUIREMENT SHALL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS; AND THAT THE CONTRACTOR SHALL DEFEND, INDEMNIFY, AND HOLD THE OWNER AND CIVIL ENGINEER HARMLESS FROM ANY AND ALL LIABILITY, REAL OR ALLEGED; IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT, EXCEPTING FOR LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF THE OWNER OR THE CIVIL ENGINEER.
- THE EXISTENCE AND LOCATION OF ANY UNDERGROUND UTILITIES, CONDUITS OR OTHER STRUCTURES SHOWN ON THESE PLANS WAS OBTAINED BY A SEARCH OF AVAILABLE RECORDS. THE ENGINEER ASSUMES NO LIABILITY WHATSOEVER FOR THE ACCURACY OR COMPLETENESS OF SUCH DATA. THE CONTRACTOR IS REQUIRED TO TAKE DUE PRECAUTIONARY MEASURES TO PROTECT ALL UTILITY LINES, CONDUITS OR STRUCTURES WHETHER OR NOT SHOWN ON THESE PLANS AND BY ACCEPTING AND UTILIZING THESE PLANS, ASSUMES ALL RESPONSIBILITY FOR THE PROTECTION AND/OR ANY DAMAGE TO SAID FACILITIES.

ENGINEER'S STATEMENT

THE GRADING, EROSION CONTROL AND EROSION CONTROL IMPROVEMENTS INCLUDED HEREIN ARE SUPERVISOR'S SUPERVISION IN THE CITY OF LONE TREE, COLORADO. CONTROL (GESC)

PRELIMINARY
NOT FOR
CONSTRUCTION

AARON L. CLUTTER, P.E.
COLORADO P.E. 36742
FOR AND ON BEHALF OF JR ENGINEERING, LLC

DATE

UNTIL SUCH TIME AS THESE DRAWINGS ARE APPROVED BY THE APPROPRIATE REVIEWING AGENCIES, JR ENGINEERING APPROVES THEIR USES DESIGNATED BY WRITTEN AUTHORIZATION.

PREPARED FOR
SH LYRIC, LLC
9380 STATION ST.
SUITE 600
LONE TREE, CO 80124
OFFICE PHONE
(303) 791-8180

J.R. ENGINEERING
A Westman Company



Centennial 303-740-9888 • Colorado Springs 719-583-2583
Fort Collins 970-491-9888 • www.jrengineering.com

H-SCALE	V-SCALE	DATE	DESIGNED BY	DRAWN BY	CHECKED BY	REVISION	
						No.	DATE
1"=2000'	N/A	2/16/24	MMC	MMC			

AMENITY SITE AT RIDGEGATE SW VILLAGE
COVER SHEET

SHEET 1 OF 9

JOB NO. 15950.06

GENERAL NOTES:

1. THE SITE SHALL BE STRIPPED OF ALL VEGETATIVE AND ORGANIC MATERIAL A MINIMUM OF 6" IN ALL AREAS. ALL STRIPPING MATERIALS SHALL BE STOCKPILED ON SITE TO BE USED IN LANDSCAPING.
2. THE CONTRACTOR SHALL PROTECT ALL ADJACENT PROPERTY TO THE PROJECT WORK SITE (SEE THE GESC PLAN APPROVED BY CITY OF LONE TREE).
3. ALL SILT FENCE SHALL BE INSTALLED ALONG THE CONTOUR.
4. THE MAXIMUM HEIGHT OF ALL STOCKPILES SHALL BE 20' FROM FINISHED GROUND.
5. ALL MATERIALS, WORKMANSHIP, AND CONSTRUCTION OF IMPROVEMENTS SHALL MEET OR EXCEED THE GOVERNING CITY, COUNTY, AND/OR STATE AND APPLICABLE UTILITY DISTRICT STANDARDS AND SPECIFICATIONS, AND APPLICABLE STATE AND FEDERAL REGULATIONS. WHERE THERE IS A CONFLICT BETWEEN THESE PLANS AND ANY APPLICABLE STANDARDS, THE HIGHER QUALITY STANDARD SHALL APPLY. ALL WORK SHALL BE INSPECTED AND APPROVED BY THE CITY AND APPLICABLE UTILITY DISTRICT(S).
6. THE SITE CONSTRUCTION PLANS LISTED WITHIN THIS PLAN SET ARE NOT FOR CONSTRUCTION UNLESS APPROVED BY THE APPROPRIATE GOVERNING JURISDICTION. THE CONTRACTOR SHALL CONFIRM SAID APPROVAL PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL KEEP ONE (1) SIGNED COPY OF THE APPROVED SET OF PLANS, APPROPRIATE SPECIFICATIONS AND STANDARDS, AND APPROVED PERMITS ONSITE AT ALL TIMES.
7. ALL REFERENCES TO ANY PUBLISHED STANDARDS SHALL REFER TO THE LATEST REVISION OF SAID STANDARDS, UNLESS SPECIFICALLY STATED OTHERWISE.
8. THE CONTRACTOR, AT HIS OWN EXPENSE, SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND LICENSES FOR WORK INCLUDING, BUT NOT LIMITED TO DEMOLITION, STREET CUTS, UTILITY INTERFERENCES, TRAFFIC CONTROL, GRADING, AND UTILITY FROM ALL APPLICABLE AGENCIES; AND FOR COMPLYING WITH ALL PROVISIONS INCLUDED THEREIN. THE CONTRACTOR SHALL BE RESPONSIBLE FOR SECURING ALL OTHER APPLICABLE PERMITS NOT SPECIFICALLY REQUIRED BY THE AUTHORITY HAVING JURISDICTION.
9. ANY DISRUPTION OF UTILITY SERVICE THAT IS REQUIRED TO ADJUST, EXTEND, RELOCATE OR OTHERWISE REARRANGE ANY UTILITY WITHIN THE PROJECT AREA SHALL BE COORDINATED IN ADVANCE WITH THE AFFECTED UTILITY ENTITY.
10. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL ASPECTS OF PROJECT SAFETY INCLUDING, BUT NOT LIMITED TO, EXCAVATION, TRENCHING, SHORING, TRAFFIC CONTROL, AND SECURITY.
11. THE CONTRACTOR SHALL SUBMIT A TRAFFIC CONTROL PLAN, IN ACCORDANCE WITH THE M.U.T.C.D. TO THE APPROPRIATE RIGHT-OF-WAY AUTHORITY (CITY, COUNTY, OR STATE) FOR APPROVAL, PRIOR TO ANY CONSTRUCTION ACTIVITIES WITHIN OR AFFECTING THE RIGHT-OF-WAY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING ANY AND ALL TRAFFIC CONTROL DEVICES AS MAY BE REQUIRED BY THE CONSTRUCTION ACTIVITIES. ALL WORK WITHIN THE RIGHT OF WAY SHALL BE DONE IN ACCORDANCE WITH THE GOVERNING AUTHORITY'S STANDARDS AND SPECIFICATIONS.
12. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE CLEANING AND RESTORATION OF ANY EXISTING IMPROVEMENTS INCLUDING, BUT NOT LIMITED TO STREET PAVEMENT, FENCES, SOD, LANDSCAPING, SPRINKLER SYSTEMS, AND UTILITIES DISTURBED DURING CONSTRUCTION TO THEIR ORIGINAL LOCATION AND CONDITION.
13. ALL DEMOLITION, REMOVAL, DISPOSAL, AND ABANDONMENT OF UTILITIES, STRUCTURES, SITE IMPROVEMENTS, AND SITE FURNISHINGS SHALL BE DONE IN ACCORDANCE WITH ALL APPLICABLE FEDERAL, STATE AND LOCAL STANDARDS AND SPECIFICATIONS, AND PERMIT REQUIREMENTS.
14. ALL DISTURBED SOIL, ON- OR OFF-SITE AND RELATED TO WORK AT THIS PROJECT SITE, IS REQUIRED TO BE PROTECTED FROM WIND AND STORM WATER EROSION. TO MITIGATE EROSION, THE CONTRACTOR SHALL USE STANDARD EROSION CONTROL TECHNIQUES DESCRIBED IN THESE PLANS.
15. ALL STRUCTURAL EROSION CONTROL MEASURES SHALL BE INSTALLED PRIOR TO ANY GROUND-DISTURBING ACTIVITY. ALL EROSION CONTROL MEASURES SHALL BE MAINTAINED IN GOOD REPAIR BY THE CONTRACTOR UNTIL SUCH TIME AS THE ENTIRE DISTURBED AREA IS STABILIZED WITH HARD SURFACE OR PERMANENT LANDSCAPING. THE CONTRACTOR IS RESPONSIBLE FOR REFERRING TO ANY EROSION AND SEDIMENT CONTROL, STORMWATER MANAGEMENT, STORMWATER POLLUTION PREVENTION, OR SIMILAR PLAN AND/OR NARRATIVE AND ASSOCIATED PERMITS INCLUDING, BUT NOT LIMITED TO GRADING PERMITS, AND COMPLYING WITH THE REQUIREMENTS THEREIN.
16. IF, DURING THE CONSTRUCTION PROCESS, CONDITIONS ARE ENCOUNTERED BY THE CONTRACTOR, HIS SUBCONTRACTORS, OR OTHER AFFECTED PARTIES, WHICH COULD INDICATE A SITUATION THAT IS NOT IDENTIFIED IN THE PLANS OR SPECIFICATIONS, THE CONTRACTOR SHALL CONTACT THE OWNER/DEVELOPER AND THE ENGINEER IMMEDIATELY.
17. **BENCHMARK VERIFICATION:** THE CONTRACTOR SHALL VERIFY THE EXISTING CONDITIONS AND THE PROPOSED ELEVATIONS IN THIS CONSTRUCTION PLAN SET AGAINST THE PROJECT BENCHMARK, IDENTIFIED HEREIN, PRIOR TO COMMENCING WORK.
18. IF DEWATERING IS REQUIRED, A STATE CONSTRUCTION DEWATERING DISCHARGE PERMIT IS REQUIRED FOR DISCHARGES TO A STORM SEWER, CHANNEL, IRRIGATION DITCH, ANY STREET THAT IS TRIBUTARY TO THE FOREMENTIONED FACILITIES OR ANY WATER OF THE UNITED STATES.
19. A STATE AIR QUALITY PERMIT IS REQUIRED FOR LAND DISTURBANCE ACTIVITIES THAT ARE MORE THAN 25 CONTIGUOUS ACRES OR MORE THAN 6 MONTHS IN DURATION. THE CONTRACTOR, AT HIS OWN EXPENSE, SHALL BE RESPONSIBLE FOR OBTAINING THE REQUIRED AIR QUALITY PERMIT AND FOR COMPLYING WITH ALL PROVISIONS INCLUDED THEREIN.
20. ALL ROADWAY OVER EXCAVATION TO BE DONE IN ACCORDANCE WITH GEOTECHNICAL RECOMMENDATIONS. FINAL PAVEMENT DESIGN TO BE PROVIDED BY GEOTECHNICAL ENGINEER AFTER OVERLOT GRADING IS COMPLETE. CONTRACTOR TO CONFIRM ROADWAY OVER EXCAVATION REQUIREMENTS WITH OWNER AND GEOTECHNICAL ENGINEER.

COMPACTION REQUIREMENTS

SOIL COMPACTION SHALL BE PER RECOMMENDATIONS FROM THE GEOTECHNICAL REPORT PREPARED FOR THIS SITE:

- PRIOR TO FILL PLACEMENT, THE GROUND SURFACE IN AREAS TO BE FILLED SHOULD BE STRIPPED OF DEBRIS, VEGETATION/ORGANICS AND OTHER DELETERIOUS MATERIAS, SCARIFIED AND MOISTURE CONDITIONED TO BETWEEN 1 AND 4 PERCENT ABOVE OPTIMUM MOISTURE CONTENT FOR CLAY OR WITHIN 2 PERCENT OF OPTIMUM FOR SAND AND GRAVEL, AND COMPACTED TO AT LEAST 95 PERCENT OF STANDARD PROCTOR MAXIMUM DRY DENSITY (ASTM D 698)
- UTILITY TRENCH BACKFILL SHOULD BE MOISTENED BETWEEN OPTIMUM AND 4 PERCENT WETTER AND COMPACTED TO AT LEAST 95 PERCENT OF STANDARD PROCTOR MAXIMUM DRY DENSITY FOR CLAY AND MOISTENED WITHIN 2 PERCENT OF OPTIMUM AND COMPACTED TO 100 PERCENT OF STANDARD PROCTOR FOR SAND.
- SUB-EXCAVATION FILL SHOULD BE MOISTURE-CONDITIONED BETWEEN OPTIMUM AND 4 PERCENT ABOVE OPTIMUM MOISTURE CONTENT FOR CLAY OR WITHIN 2 PERCENT OF OPTIMUM FOR SAND. FILL SHOULD BE COMPACTED AT LEAST 95 PERCENT OF STANDARD PROCTOR MAXIMUM DRY DENSITY.

EXCAVATION SCOPE OF WORK:

THE SCOPE OF WORK

A. SITE PREPARATION

1. PRIOR TO COMMENCEMENT OF EXCAVATION, THE SITE SHALL BE STRIPPED IN CONFORMANCE WITH THE REQUIREMENTS OF THE SOILS ENGINEER AND APPROVED PLANS. REMOVAL OF STRIPPINGS SHALL EXTEND 5 FEET AT ALL TIMES BEYOND THE BOUNDARIES OF THE AREAS RECEIVING FILL. THE DEPTH OF THE STRIPPING SHALL BE AT THE SOLE DISCRETION OF AND DIRECTED BY THE SOILS ENGINEER. ALL STRIPPINGS SHALL BE STORED ON SITE AND PLACED AT THE DIRECTION OF THE BUILDER.
2. WITHIN THE GRADING LIMITS, ALL EXISTING STRUCTURES SUCH AS FENCES, DRAINAGE DEVICES, ASPHALT, ETC., SHALL BE REMOVED, EXCEPT AS OTHERWISE DIRECTED BY THE BUILDER OR CONSTRUCTION PLANS. NO PROCESSING OF THIS MATERIAL WILL BE ALLOWED, UNLESS APPROVED BY SOILS ENGINEER OR BY BUILDER. NO ONSITE BURNING WILL BE PERMITTED.
3. ONCE THE VEGETATION HAS BEEN REMOVED TO THE SATISFACTION OF THE SOILS ENGINEER, THE AREA OF THE SITE TO RECEIVE THE FILL SHALL BE SCARIFIED AND RE-COMPACTED TO A DEPTH OF AT LEAST 12 INCHES OR AS DIRECTED BY THE SOILS ENGINEER. THE CONTRACTOR SHALL NOT PLACE FILL UNTIL THE SOILS ENGINEER HAS RELEASED THE AREA FOR FILL PLACEMENT WITH VERBAL APPROVAL.
4. DURING ALL CLEARING, GRUBBING, STRIPPING, SITE PREPARATION, EXCAVATION AND GRADING, DUST CONTROL SHALL BE MAINTAINED BY THE CONTRACTOR TO THE SPECIFICATIONS OF THE BUILDER, SOILS ENGINEER, LOCAL GOVERNING JURISDICTION, TRI-COUNTY HEALTH AND CDPHE. DUST CONTROL SHALL BE REQUIRED UNTIL THE BUILDER HAS ACCEPTED THE SITE.
5. ALL VEGETATION, WITH THE EXCEPTION OF TOPSOIL, AND DEBRIS RESULTING FROM CLEARING AND GRUBBING SHALL BE REMOVED FROM THE SITE AND HAULED TO AN APPROPRIATE WASTE DISPOSAL FACILITY, UNLESS OTHERWISE DIRECTED BY BUILDER.

B. EXCAVATION AND GRADING

1. THE WORK SHALL CONSIST OF ALL LABOR, FUEL, EQUIPMENT AND MATERIALS, NECESSARY TO COMPLETE THE EXCAVATION AND EMBANKMENT (MASS GRADING) IN CONFORMANCE WITH THE APPROVED GRADING PLANS, TO A TOLERANCE OF TWO TENTHS OF ONE FOOT.
2. THE CONTRACTOR SHALL HAVE SUITABLE AND SUFFICIENT EQUIPMENT ON THE JOB SITE TO PROCESS AND COMPACT THE AMOUNT OF FILL BEING PLACED, IN CONFORMANCE WITH THE SPECIFICATIONS DEFINED BY THE PROJECT SOILS REPORT AND THE SITE SOILS ENGINEER.
3. COMPACTION OF EACH LAYER SHALL BE CONTINUOUS OVER ITS ENTIRE AREA AND THE COMPACTION EQUIPMENT SHALL MAKE SUFFICIENT TRIPS TO ENSURE THAT THE REQUIRED DENSITY HAS BEEN OBTAINED, PER SOILS ENGINEERS TESTING AND APPROVALS.
4. COMPACTION, MOISTURE-DENSITY TESTING SHALL BE PROVIDED BY THE BUILDER IN THE LOCATIONS AND FREQUENCY DIRECTED BY THE SOILS ENGINEER. THIS TESTING SHALL BE CONDUCTED BY THE SOILS ENGINEER TO ENSURE THAT THE FILL CONFORMS TO THE REQUIREMENTS OF THE PROJECT SOILS REPORT. THE CONTRACTOR AND HIS EMPLOYEES SHALL PROVIDE ASSISTANCE TO THE SOILS ENGINEER AS REQUESTED. TO FACILITATE FIELD COMPACTION AND MOISTURE-DENSITY TESTING, THE CONTRACTOR SHALL EXCAVATE TEST PITS IN LOCATIONS AND AT DEPTHS REQUESTED BY THE SOILS ENGINEER. IN THE EVENT OF A FAILED COMPACTION TEST, AS DETERMINED BY THE SOILS ENGINEER, THE CONTRACTOR SHALL REWORK THE MATERIAL UNTIL IT CONFORMS TO THE SPECIFICATIONS OF THE PROJECT SOILS REPORT TO THE SATISFACTION OF THE SOILS ENGINEER. THE COST OF ANY REWORKING SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR AND NO ADDITIONAL COMPENSATION SHALL BE CONSIDERED. ALL REWORK SHALL BE AT THE SOLE EXPENSE OF THE CONTRACTOR.
5. CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING AND TRANSPORTING ALL CONSTRUCTION WATER NECESSARY TO COMPLETE THE WORK AT THEIR SOLE EXPENSE.
6. ALL STOCKPILING AND WASTING OF MATERIAL WILL BE CONSIDERED INCIDENTAL TO THE CONTRACTOR'S PRICING, AND NO COMPENSATION WILL BE MADE FOR STOCKPILING OR RETURNING THE STOCKPILED MATERIAL TO THE PROJECT AS COMPACTED FILL OR OTHERWISE. STOCKPILE LOCATIONS SHALL BE APPROVED BY THE BUILDER.
7. ROCK ENCOUNTERED, BOTH RIPPABLE AND NON-RIPPABLE, SHALL BE REMOVED FROM THE SITE AT THE DISCRETION OF THE SOILS ENGINEER AND BUILDER AND SHALL BE INCLUDED AS A CONTRACTOR'S UNIT BID PRICE.

C. COMPACTED FILLS

1. DELETERIOUS MATERIAL NOT DISPOSED OF DURING CLEARING OR DEMOLITION SHALL BE REMOVED FROM THE FILL AS DIRECTED BY THE SOILS ENGINEER.
2. MATERIAL THAT IS CONSIDERED UNSUITABLE BY THE SOILS ENGINEER SHALL NOT BE USED IN THE COMPACTED FILL.
3. WHERE THE SLOPE RECEIVING FILL EXCEEDS A RATIO OF FIVE-HORIZONTAL TO ONE VERTICAL, THE FILL SHALL BE KEYED WITH A MINIMUM KEY WIDTH OF 6 FEET AND BENCHED THROUGH ALL UNSUITABLE TOPSOIL, COLLUVIUM, ALLUVIUM OR CREEP MATERIAL INTO SOUND BEDROCK OR FIRM MATERIAL OR AS DIRECTED BY THE SOILS ENGINEER. ALL NECESSARY EXCAVATION PROCESSES MUST CONFORM TO ALL OSHA REGULATIONS AND GUIDELINES.
4. NO FILL MATERIAL SHALL BE PLACED UPON FROZEN SUB-GRADE, SPREAD OR ROLLED WHILE IT IS FROZEN OR THAWING OR DURING UNFAVORABLE WEATHER CONDITIONS.

D. CERTIFICATION

1. CERTIFICATION OF THE GRADING SHALL BE DONE IN A TIMELY MANNER. CONTRACTOR SHALL PROVIDE NOTICE TO BUILDER WHEN AN AREA IS READY TO BE CERTIFIED. CONTRACTOR SHALL HAVE 2 DAYS FROM THE TIME THE GRADE CERTIFICATION STAKING IS COMPLETE TO REGRADE ALL AREAS GREATER THAN 0.20' VARIANCE FROM THE APPROVED PLAN GRADES. UNTIL THE SITE IS ACCEPTED BY BUILDER, IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO DRAIN AND/OR PUMP ALL AREAS WHERE WATER HAS COLLECTED AND PROTECT THE WORK SITE FROM DAMAGE AS A RESULT OF RAIN, SNOW, SLEET, HAIL OR ANY OTHER FORM OF PRECIPITATION, AT CONTRACTOR'S SOLE EXPENSE.


ADDITIONAL PROVISIONS

- UPON COMPLETION OF THE WORK, THE SITE SHALL BE RIPPED OR SURFACE RUFFENED PERPENDICULAR TO SLOPE AS DIRECTED BY BUILDER, AND ALL TRASH REMOVED, TO THE SATISFACTION OF THE BUILDER.
- ALL HAUL ROADS OR OTHER AREAS OUTSIDE OF THE PROJECT THAT HAVE BEEN DISTURBED BY THE GRADING OPERATION SHALL BE RETURNED TO THEIR ORIGINAL GRADE, BLADED SMOOTH AND/OR RIPPED TO THE SATISFACTION OF THE BUILDER.
- THE CONTRACTOR, AT HIS EXPENSE, SHALL REMOVE SPILLAGE AND/OR TRACKING RESULTING FROM HAULING OR CONSTRUCTION OPERATIONS ALONG OR ACROSS ANY PUBLICLY TRAVELED ROADWAYS, IMMEDIATELY.
- CONTRACTOR SHALL COMPLY WITH THE APPROVED EROSION CONTROL PLAN. CONTRACTOR SHALL REPAIR/REPLACE ANY DAMAGE CAUSED BY THE CONTRACTOR DURING THE PERFORMANCE OF THEIR WORK. THE COST OF REPAIR OR REPLACEMENT SHALL BE BORNE BY THE CONTRACTOR AND INCLUDED IN THEIR SCOPE OF WORK.
- CONTROL OF NUISANCE WATER OR CONSTRUCTION WATER SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR AND INCLUDED IN THE SCOPE OF WORK. CONTRACTOR SHALL CONTROL SURFACE RUNOFF WATER TO AVOID DAMAGE TO ADJOINING PROPERTIES OR TO FINISHED WORK ON THE SITE. THE CONTRACTOR SHALL EMPLOY APPROPRIATE MEASURES TO PREVENT EROSION OF GRADED AREAS UNTIL SUCH TIME AS PERMANENT DRAINAGE AND EROSION CONTROL MEASURES HAVE BEEN INSTALLED OR UNTIL ROUGH GRADE ACCEPTANCE. ALL MEASURES SHALL BE IN CONFORMANCE WITH GESC AND SWMP PLANS FOR THE SITE.
- ALL ON-SITE MATERIALS, HAZARDOUS MATERIALS, SHALL BE MAINTAINED, CONTROLLED, STORED AND CONTAINED IN ACCORDANCE WITH ALL LOCAL, STATE, AND FEDERAL RULES AND REGULATIONS. ALL COSTS ASSOCIATED SHALL BE THE CONTRACTORS RESPONSIBILITY.
- EXCAVATION OF SUBSURFACE MATERIAL WHICH CANNOT BE REMOVED BY RIPPING WITH DB DOZER SHALL BE APPROVED BY THE BUILDER IN ADVANCE AND SHALL BE PAID AT STANDARD EQUIPMENT RATES. NO PAYMENT SHALL BE MADE FOR LOSS TIME AND CONTRACTOR SHALL SUBMIT EXTRA WORK TIME SHEET EACH DAY FOR SIGNATURE BY THE BUILDER. PAYMENT SHALL BE LIMITED TO RIPPING EQUIPMENT ONLY.

UNTIL SUCH TIME AS THESE DRAWINGS ARE APPROVED BY THE APPROPRIATE REVIEWING AGENCIES, OR ENGINEERING APPROVES THEIR USE, THESE DRAWINGS ARE DESIGNATED BY WRITTEN AUTHORIZATION.

PREPARED FOR
SH LYRIC, LLC
 9380 STATION ST.
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 (303) 791-8180

J.R. ENGINEERING
 A Westman Company



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 Fort Collins 970-491-9888 • www.jrengineering.com

BY	DATE	No.	REVISION	H-SCALE	N/A	V-SCALE	N/A	DATE	2/16/24	DESIGNED BY	GC	DRAWN BY	GC	CHECKED BY

AMENITY SITE AT RIDGEGATE SW VILLAGE

GENERAL NOTES

SHEET 2 OF 9

JOB NO. 15950.06



ENGINEER'S STATEMENT

THE GRADING, EROSION CONTROL, AND DRAINAGE PLAN INCLUDED HEREIN WAS PREPARED UNDER MY SUPERVISION IN ACCORDANCE WITH THE CITY OF LONE TREE, COLORADO GESC CONTROL (GESC).

PRELIMINARY NOT FOR CONSTRUCTION

AARON L. CLUTTER, P.E.
 COLORADO P.E. 36742
 FOR AND ON BEHALF OF JR ENGINEERING, LLC

DATE

LAYER LINETYPE LEGEND

Table with columns 'EXISTING' and 'PROPOSED'. Rows include PHASE LINE, MATCH LINE, SECTION LINE, BOUNDARY LINE, PROPERTY LINE, EASEMENT LINE, RIGHT OF WAY, R.O.W. A LINE, CENTERLINE, CITY LIMITS, WIRE FENCE, CHAIN LINK FENCE, WOOD FENCE, MASONRY FENCE, GUARDRAIL, CONC. BARRIER, CABLE TV, ELECTRIC, FIBER OPTIC, GAS MAIN, IRRIGATION MAIN, OIL/PETRO. MAIN, OVERHEAD UTILITY, SANITARY SEWER, STORM DRAIN, TELEPHONE, WATER MAIN, RAW WATER LINE, SWALE/WATERWAY FLOWLINE, DIVERSION DITCH, DIVERSION CHANNEL, MAJOR DRAINAGE BASIN, MINOR DRAINAGE BASIN, TOP OF SLOPE, TOE OF SLOPE, EDGE OF WATER, INDEX CONTOUR, INTERMEDIATE CONTOUR, DEPRESSION CONT. (INDEX), DEPRESSION CONT. (INTER), TOP OF CUTS, TOE OF FILLS, CUT AND FILL LINE, SILT FENCE, 100 YEAR FLOODPLAIN, 500 YEAR FLOODPLAIN, FLOODWAY, BASE FLOOD ELEVATION, EDGE OF WETLANDS, STONE WALL, PROPOSED FLOW ARROW, EXISTING FLOW ARROW.

UTILITIES LEGEND

Table with columns 'EXISTING' and 'PROPOSED'. Rows include STORM SEWER (MANHOLE, STORM INLET, AREA INLET - SQUARE, AREA INLET - ROUND, FLARED END SECTION, RIPRAP), SANITARY SEWER (LINE MARKER, SERVICE MARKER, CLEAN-OUT, MANHOLE W/ DIRECTIONAL FLOW ARROW), WATER LINE (LINE MARKER, SERVICE MARKER, FIRE HYDRANT, FIRE CONNECTION, MANHOLE, BEND, BLOW-OFF VALVE, WELL, METER, VALVE, REDUCER, THRUST BLOCK, CROSS, PLUG W/ THRUST BLOCK, TEE, REVERSE ANCHOR, ANODE, AIR & VACUUM VALVE ASSEMBLY, TRANSMISSION BLOW-OFF ASSEMBLY), GAS LINE (MARKER, SERVICE MARKER, METER, VALVE, PLUG, TEE), DRY UTILITIES (CABLE TV MARKER, CABLE TELEVISION PEDESTAL, ELECTRIC MARKER, ELECTRIC SERVICE MARKER, ELECTRICAL PEDESTAL, ELECTRICAL METER, ELECTRICAL MANHOLE, FIBER-OPTIC MARKER, IRRIGATION PEDESTAL, TELEPHONE MARKER, TELEPHONE PEDESTAL, TELEPHONE MANHOLE, UTILITY POLE, GUY ANCHOR, GUY POLE), MISC. UTILITIES (VENT PIPE, TEST HOLE DESIGNATOR).

MONUMENTATION LEGEND

Table with columns 'EXISTING' and 'PROPOSED'. Rows include ALUMINUM CAP - FOUND, BRASS CAP - FOUND, BENCHMARK - FOUND, CROSS - FOUND, MONUMENT - SET, MONUMENT - FOUND (DEFAULT), MONUMENT - FOUND (ALTERNATE 1), MONUMENT - FOUND (ALTERNATE 2), MONUMENT - FOUND (ALTERNATE 3), MONUMENT - FOUND (ALTERNATE 4), MONUMENT - FOUND (ALTERNATE 5), MONUMENT - FOUND (ALTERNATE 6), MONUMENT - FOUND (ALTERNATE 7), NAIL & WASHER - FOUND, PANEL - FOUND, PK NAIL - FOUND, ROW MONUMENT - FOUND, ROW MARKER - FOUND, SECTION CORNER - FOUND, SECTION CORNER - SET, QUARTER-SECTION CORNER - FOUND, QUARTER-SECTION CORNER - SET, SECTION CENTER - FOUND, SECTION CENTER - SET, CONTROL/TRVERSE POINT - SET.

TRAFFIC LEGEND

Table with columns 'EXISTING' and 'PROPOSED'. Rows include PARKING METER, TRAFFIC SIGNAL BOX, TRAFFIC SIGNAL POLE, TRAFFIC SIGNAL BARRICADE, GUARD RAIL POST, IMPACT ATTENUATOR, BRIDGE STYLE HIGHWAY SIGN POST, CANTILEVER STYLE HIGHWAY SIGN POST, RAILROAD MARKER/SIGN, STREET LIGHT - SINGLE, STREET LIGHT - DOUBLE, LUMINAIRE, ALTERNATE LUMINAIRE, SIGNAL MAST ARM W/ LUMINAIRE, PEDESTAL POLE FOUNDATION, TRAFFIC SIGNAL POLE, ROUND PULL BOX, MEDIUM PULL BOX, LARGE PULL BOX (20X33X15), SIGNAL HEAD WITHOUT BACK PLATE, SIGNAL HEAD WITH BACK PLATE, PEDESTRIAN SIGNAL HEAD, VIDEO IMAGE DETECTOR, OPTICOM DETECTOR, VEHICLE DETECTION ZONE.

STORM WATER MANAGEMENT

Table with columns 'KEY' and 'SYMBOL'. Rows include CHECK DAM, CONSTRUCTION MARKER, CONSTRUCTION ROAD STABILIZATION, CURB SOCK INLET PROTECTION, CONCRETE WASHOUT AREA, DIVERSION DITCH AND DIKE, TEMPORARY, DIVERSION CHANNEL, TEMPORARY, DEWATERING, EROSION CONTROL BLANKET, INLET FILTER, INLET PROTECTION, SUMP INLET PROTECTION, MULCHING, OUTLET PROTECTION, PAVED FLUME, PERMANENT SEEDING, REINFORCED CONCRETE DAM, ROUGH CUT STREET CONTROL, RRB, SEDIMENT BASIN, SEDIMENT CONTROL LOG, SILT FENCE, SURFACE ROUGHENING, STABILIZED STAGING AREA, SEDIMENT TRAP, STRAW BALE BARRIER, TERRACING, TEMPORARY SEEDING, TEMPORARY STREAM CROSSING CULVERT/BRIDGE, TEMPORARY STREAM CROSSING FORD TYPE, TEMPORARY SLOPE DRAIN, VEHICLE TRACKING CONTROL WITH WASH RACK.

LANDSCAPE LEGEND

Table with columns 'EXISTING' and 'PROPOSED'. Rows include TREE - CONIFEROUS, TREE - DECIDUOUS, SHRUB/BUSH, SHRUBS AND BUSHES, IRRIGATION BOX, IRRIGATION SPRINKLER, IRRIGATION VALVE, BOLLARD, FLAGPOLE.

ENGINEER'S STATEMENT

PRELIMINARY NOT FOR CONSTRUCTION

AARON L. CLUTTER, P.E. COLORADO P.E. #36742 FOR AND ON BEHALF OF JR ENGINEERING, LLC

DATE

UNTIL SUCH TIME AS THESE DRAWINGS ARE APPROVED BY THE APPROPRIATE REVIEWING AGENCIES, JR ENGINEERING APPROVES THEIR USE AS DESIGNATED BY WRITTEN AUTHORIZATION.

PREPARED FOR SH LYRIC, LLC 9380 STATION ST. SUITE 600 LONE TREE, CO 80124 OFFICE PHONE (303) 791-8180

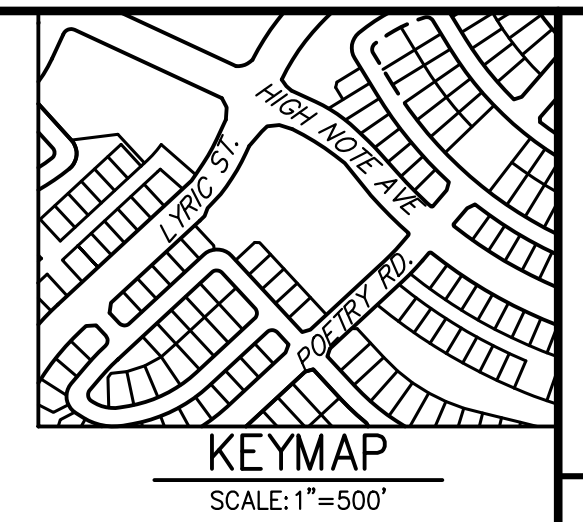
J.R. ENGINEERING logo and contact information: A Westman Company, Centennial 303-740-9888, Colorado Springs 719-583-2583, Fort Collins 970-491-9888, www.jrengineering.com

Table with columns 'BY' and 'DATE' for revision tracking.

Table with columns 'No.', 'REVISION', 'H-SCALE', 'V-SCALE', 'DATE', 'DESIGNED BY', 'DRAWN BY', 'CHECKED BY'.

AMENITY SITE AT RIDGEGATE SW VILLAGE LEGEND



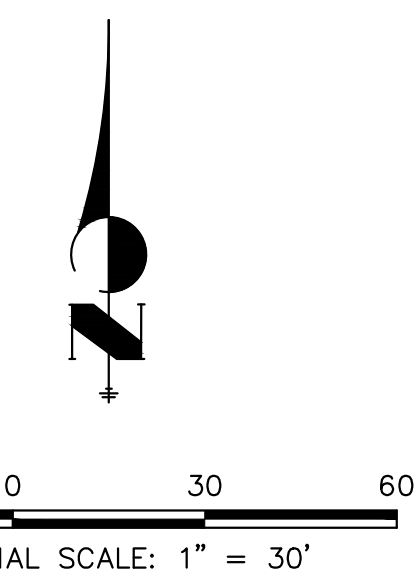


PROPOSED LIMITS OF DISTURBANCE.

TOTAL SITE AREA: 3.26 ACRES WITHIN TRACT AS, RIDGEGATE SW VILLAGE FILING 1
 TOTAL DISTURBED AREA: 3.26 ACRES

NOTES:

1. SEE SHEET 1 FOR BENCHMARK AND SHEET 3 FOR LEGEND.
2. SEE SHEET 2 FOR STANDARD GESC NOTES.
3. SEE SHEETS 7 - 9 FOR STANDARD GESC DETAILS.
4. NO GRADING OPERATIONS SHALL OCCUR WITHIN 20' OF OVERHEAD TRANSMISSION TOWERS.
5. CONSTRUCTION MARKERS TO BE PLACED 100' APART.
6. CONTRACTOR SHALL HAVE ADEQUATE DUST SUPPRESSION CONTROL MEASURES ONSITE AT ALL TIMES. EXCESS DUST GENERATED FROM OPERATIONS AS DETERMINED BY THE CITY IS GROUNDS FOR STOPPING ALL WORK UNTIL DUST CAN BE CONTROLLED.
7. PORTABLE TOILET SHALL BE PLACED ON A PERVIOUS SURFACE AND STAKED DOWN ON ALL FOUR SIDES.
8. ADJACENT ROADWAYS SHALL BE KEPT CLEAR OF DEBRIS AND SOIL TRACKOUT AT ALL TIMES AND SHALL BE CLEANED IMMEDIATELY USING DRY METHODS ONLY.



CITY OF LONE TREE	
DATE	
THESE CONSTRUCTION PLANS HAVE BEEN REVIEWED BY THE CITY OF LONE TREE FOR GRADING AND EROSION CONTROL IMPROVEMENTS ONLY.	
ENGINEERING DIVISION ACCEPTANCE BLOCK	

ENGINEER'S STATEMENT

THE GRADING, EROSION, AND SEDIMENT CONTROL PLAN INCLUDED HEREIN HAS BEEN PREPARED UNDER MY DIRECT SUPERVISION IN ACCORDANCE WITH THE REQUIREMENTS OF CITY OF LONE TREE GRADING, EROSION, AND SEDIMENT CONTROL (GESC) CRITERIA

AARON L. CLUTTER, P.E.
 COLORADO P.E. 36742
 FOR AND ON BEHALF OF JR ENGINEERING, LLC

DATE _____

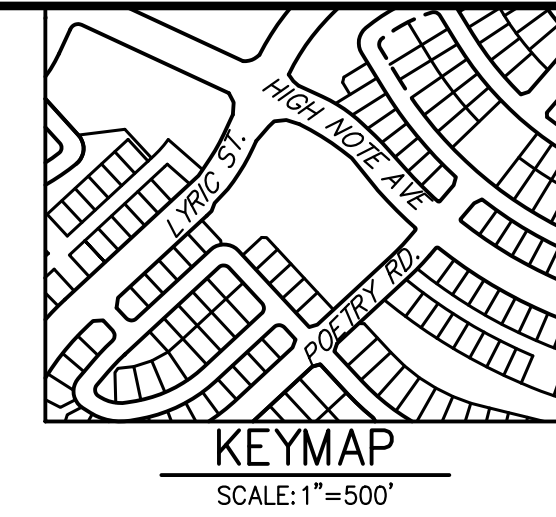


UNTIL SUCH TIME AS THESE DRAWINGS ARE APPROVED BY THE AGENCIES, OR ENGINEERING APPROVES THEIR USE, DESIGNATED BY WRITTEN AUTHORIZATION.

PREPARED FOR
SH LYRIC, LLC
 9380 STATION ST.
 SUITE 600
 LONE TREE, CO 80124
 OFFICE PHONE
 (303) 791-8180

J.R. ENGINEERING
 A Westman Company
 Centennial 303-740-9888 • Colorado Springs 719-588-2583
 Fort Collins 970-491-9888 • www.jrengineering.com

BY	DATE	No.	REVISION	H-SCALE	V-SCALE	DATE	DESIGNED BY	DRAWN BY	CHECKED BY
				1"=30'	N/A	2/16/24	MMC	MMC	



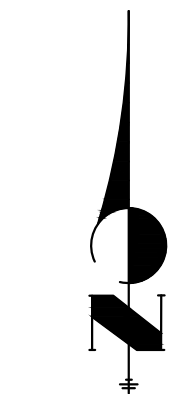
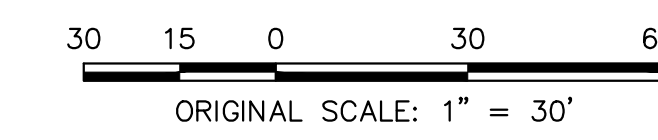
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J.R. ENGINEERING
 A Westman Company
 Centennial 303-740-8888 • Colorado Springs 719-588-2683
 Fort Collins 970-491-9888 • www.jrengineering.com

NOTES:

- SEE SHEET 1 FOR BENCHMARK AND SHEET 3 FOR LEGEND.
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ENGINEER'S STATEMENT

THE GRADING, EROSION, AND SEDIMENT CONTROL PLAN INCLUDED HEREIN HAS BEEN PREPARED UNDER MY DIRECT SUPERVISION IN ACCORDANCE WITH THE REQUIREMENTS OF CITY OF LONE TREE GRADING, EROSION, AND SEDIMENT CONTROL (GESC) CRITERIA

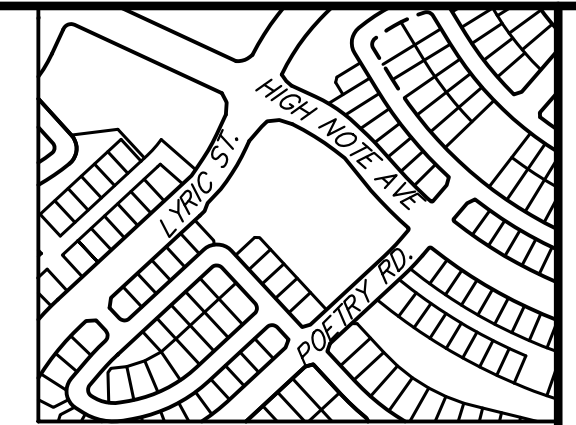
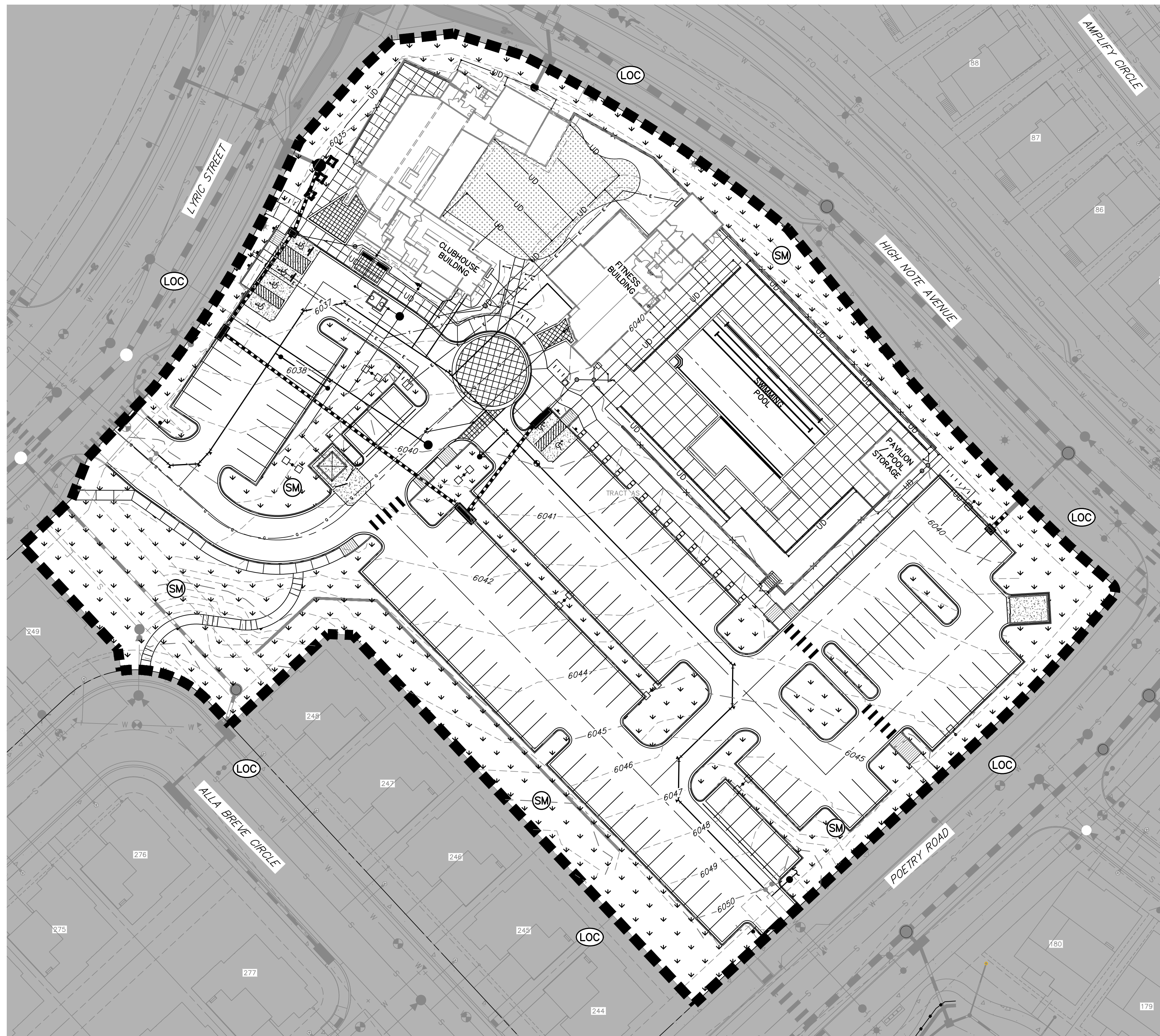
AARON L. CLUTTER, P.E.
 COLORADO P.E. 36742
 FOR AND ON BEHALF OF JR ENGINEERING, LLC

DATE _____



H-SCALE	V-SCALE	DATE	DESIGNED BY	DRAWN BY	CHECKED BY
1"=30'	N/A	2/16/24	MMC	MMC	

No.	REVISION	BY	DATE



UNTIL SUCH TIME AS THESE DRAWINGS ARE APPROVED BY THE APPROPRIATE REVIEWING AGENCIES, JR ENGINEERING APPROVES THEIR USE. THESE DRAWINGS ARE DESIGNATED BY WRITTEN AUTHORIZATION.

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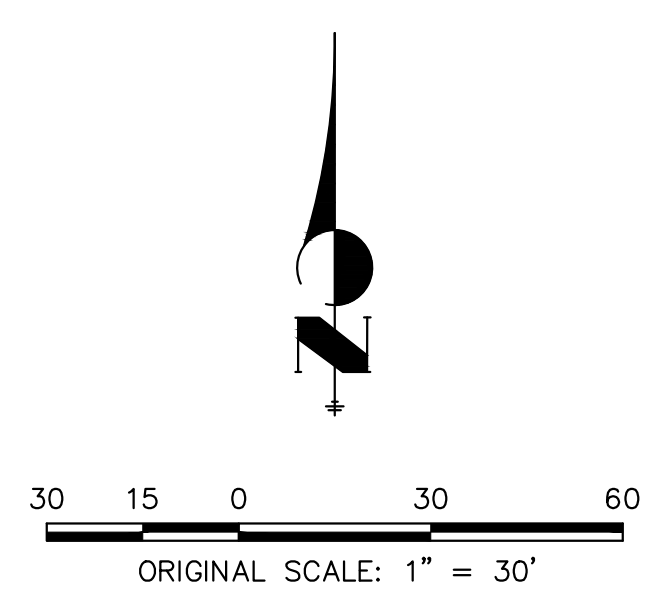
J.R. ENGINEERING
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 Fort Collins 970-491-9888 • www.jrengineering.com

LANDSCAPING LEGEND:

(SM) SEED, SOD, OR PERMANENT LANDSCAPING. REF. LANDSCAPING PLANS FOR FINAL SITE STABILIZATION

NOTES:

- SEE SHEET 1 FOR BENCHMARK AND SHEET 3 FOR LEGEND.
- SEE SHEET 2 FOR STANDARD GESC NOTES.
- SEE SHEETS 7 - 9 FOR STANDARD GESC DETAILS.
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- ADJACENT ROADWAYS SHALL BE KEPT CLEAR OF DEBRIS AND SOIL TRACKOUT AT ALL TIMES AND SHALL BE CLEANED IMMEDIATELY USING DRY METHODS ONLY.
- ALL DISTURBED AREAS SHALL BE STABILIZED PRIOR TO ISSUANCE OF CERTIFICATE OF OCCUPANCY. LANDSCAPED AREAS THAT CANNOT BE COMPLETED DUE TO SEASONAL CONSTRAINTS MUST BE COVERED WITH EROSION CONTROL BLANKET UNTIL LANDSCAPING CAN BE COMPLETED.



CITY OF LONE TREE

DATE

THESE CONSTRUCTION PLANS HAVE BEEN REVIEWED BY THE CITY OF LONE TREE FOR GRADING AND EROSION CONTROL IMPROVEMENTS ONLY.

ENGINEERING DIVISION ACCEPTANCE BLOCK

ENGINEER'S STATEMENT

THE GRADING, EROSION, AND SEDIMENT CONTROL PLAN INCLUDED HEREIN HAS BEEN PREPARED UNDER MY DIRECT SUPERVISION IN ACCORDANCE WITH THE REQUIREMENTS OF CITY OF LONE TREE GRADING, EROSION, AND SEDIMENT CONTROL (GESC) CRITERIA



AARON L. CLUTTER, P.E.
 COLORADO P.E. 36742
 FOR AND ON BEHALF OF JR ENGINEERING, LLC

DATE

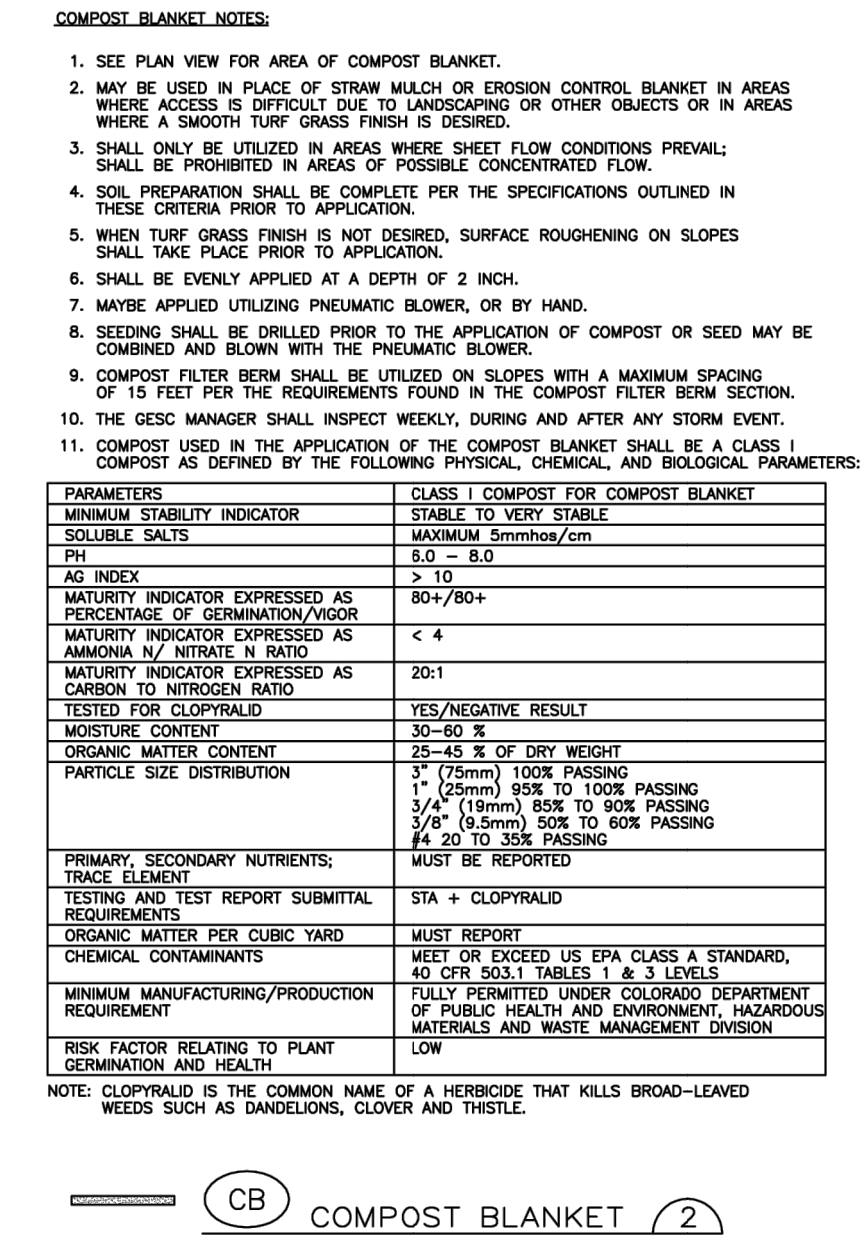
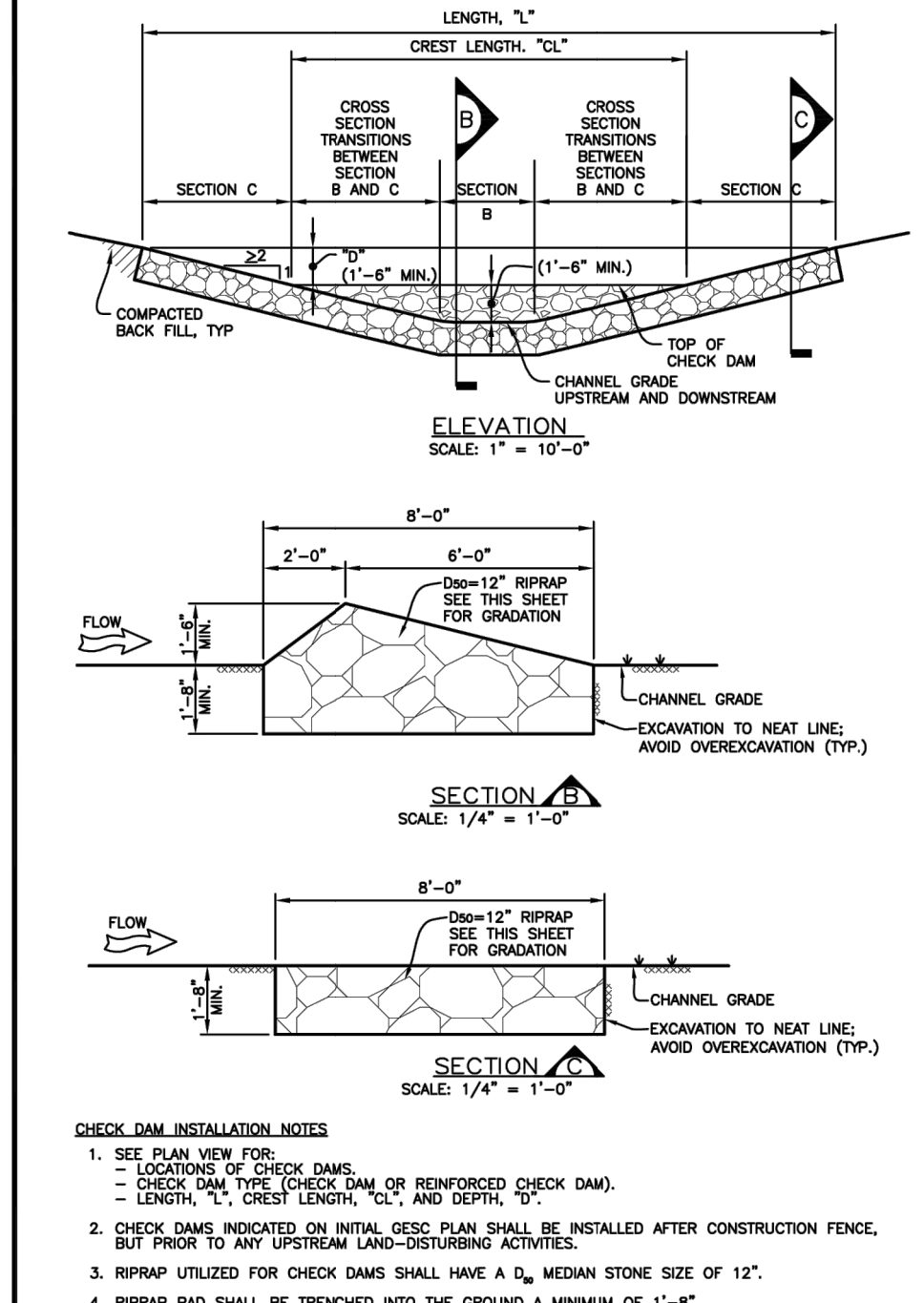
No.	REVISION	BY	DATE

AMENITY SITE AT RIDGEGATE SW VILLAGE	H-SCALE	1" = 30'
	V-SCALE	N/A
FINAL GESC PLAN	DATE	2/16/24
	DESIGNED BY	MMC
SHEET 6 OF 9	DRAWN BY	MMC
	CHECKED BY	
JOB NO. 15950.06		

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

- 1. THE CITY OF LONE TREE ENGINEER'S SIGNATURE AFFIXED TO THIS DOCUMENT INDICATES THE CITY OF LONE TREE PUBLIC WORKS DEPARTMENT, ENGINEERING DIVISION, HAS REVIEWED THE DOCUMENT AND FOUND IT IN GENERAL COMPLIANCE WITH THE CITY OF LONE TREE SUBVERSION REGULATIONS AND/OR THE GRADING, EROSION AND SEDIMENT CONTROL (GESC) CRITERIA MANUAL. THE CITY OF LONE TREE ENGINEER, THROUGH ACCEPTANCE OF THIS DOCUMENT ASSUMES NO RESPONSIBILITY (OTHER THAN AS STATED ABOVE) FOR THE COMPLETENESS AND/OR ACCURACY OF THESE DOCUMENTS.

DETAIL SHEET NO. 1-26. BMP LEGEND: 1 CD CHECK DAM, 2 CB COMPOST BLANKET, 3 CFB COMPOST FILTER BERM, 4 CWA CONCRETE WASHOUT AREA, 5 CF CONSTRUCTION FENCE, 6 CM CONSTRUCTION MARKERS, 7 DW DEWATERING, 8 DD DIVERSION DITCH, 9 ECD ERROSION CONTROL BLANKET, 10 IP INLET PROTECTION, 11 RCD REINFORCED CHECK DAM, 12 RRB REINFORCED ROCK BERM, 13 RRC RRB FOR CULVERT PROTECTION, 14 SB SEDIMENT BASIN, 15 SCL SEDIMENT CONTROL LOG, 16 ST SEDIMENT TRAP, 17 SM SEEDING AND MULCHING, 18 SF SILT FENCE, 19 SSA SURFACED STAGING AREA, 20 SR SURFACE ROUGHENING, 21 TSD TEMPORARY SLOPE DRAIN, 22 TSC TEMPORARY STREAM CROSSING, 23 TER TERRACING, 24 VTC VEHICLE TRACKING CONTROL, 25 WW VTC WITH WHEEL WASH, 26 CS CURB SOCK, LOC LIMITS OF CONSTRUCTION



COMPOST FILTER BERM NOTES and TABLE 1. RIPRAP GRADATIONS. Table with columns: GSD MEDIAN STONE SIZE (INCHES), % OF MATERIAL SMALLER THAN, TYPICAL STONE EQUIVALENT DIAMETER (INCHES), TYPICAL STONE WEIGHT (POUNDS).

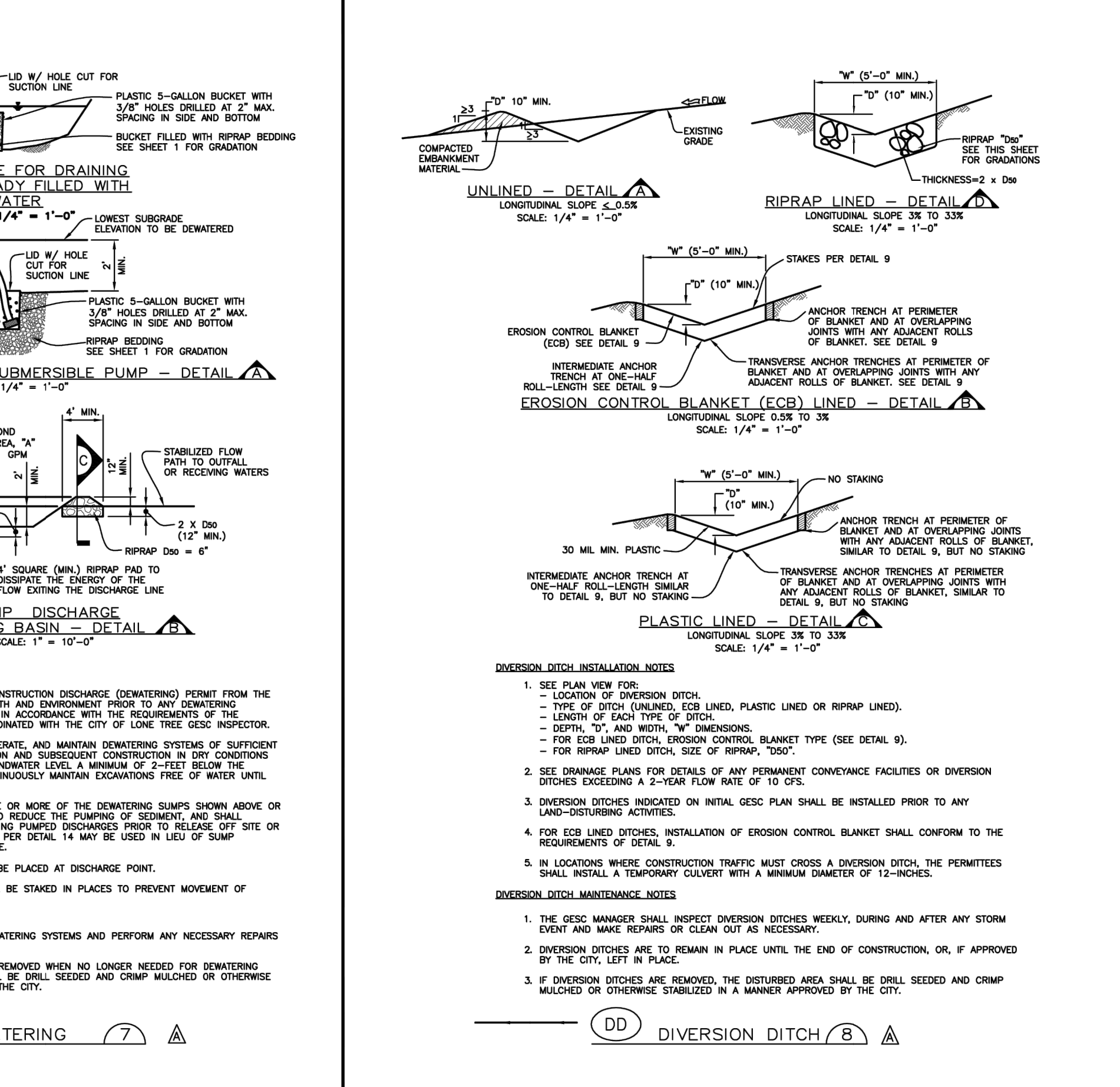
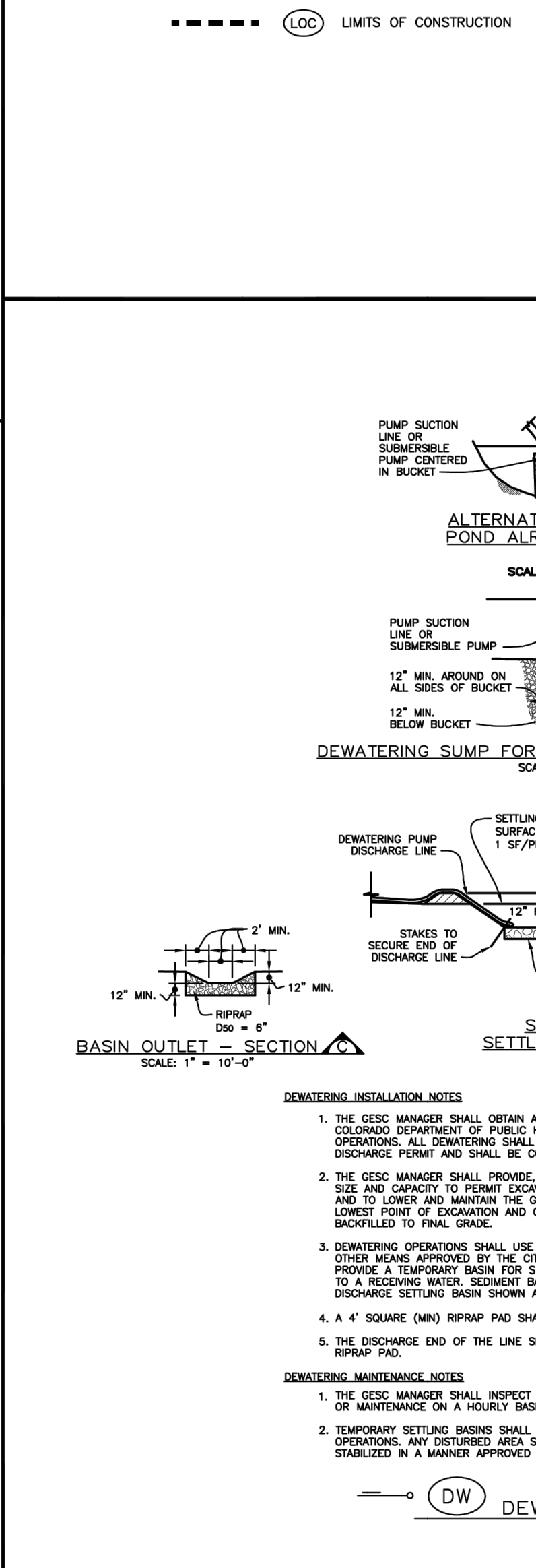
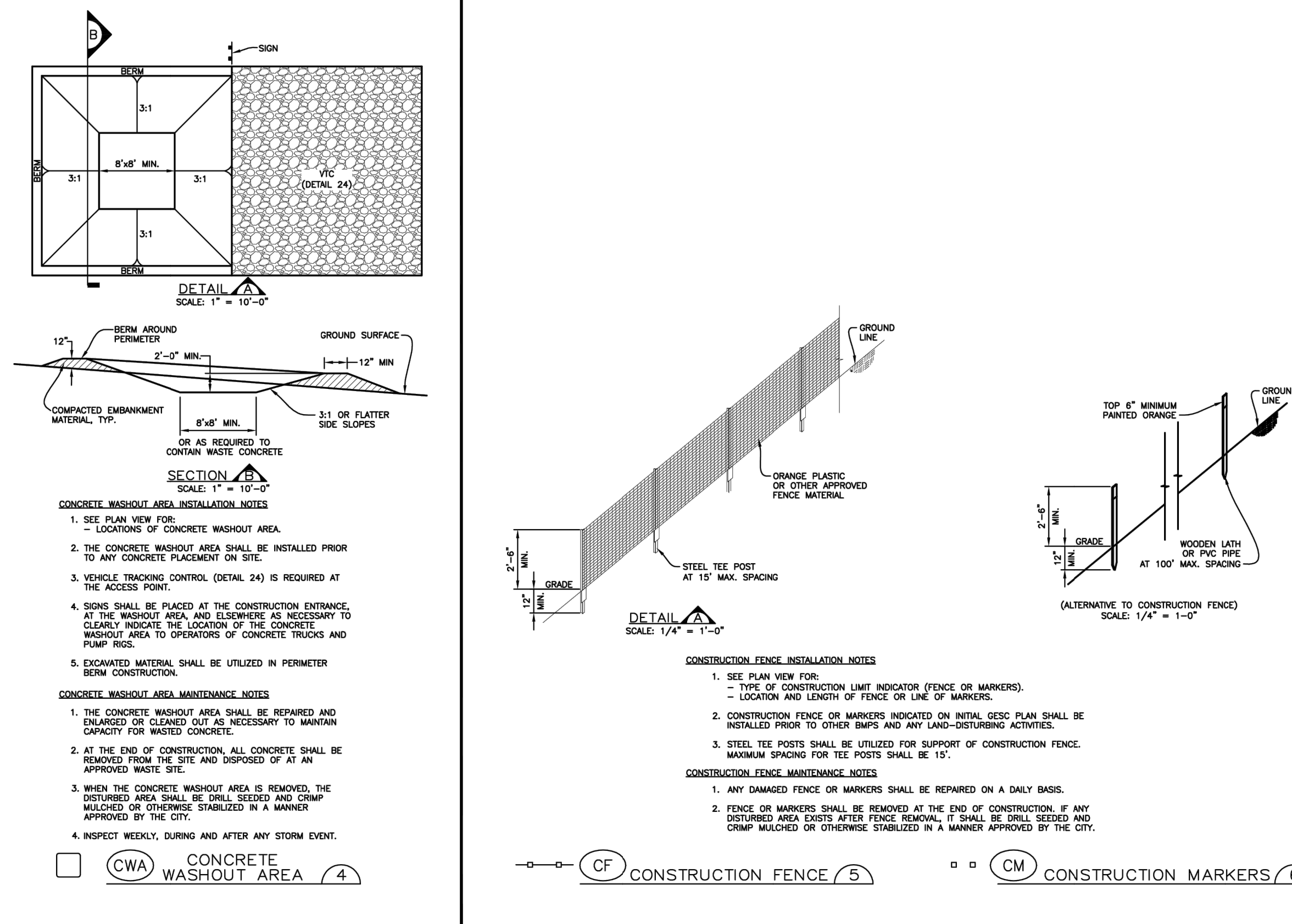


TABLE 2. RIPRAP BEDDING and TABLE 3. 1 1/2" CRUSHED ROCK. Table with columns: SIEVE SIZE, MASS PERCENT PASSING SQUARE MESH SIEVES, CLASS A.

Sheet Revisions table with columns: DATE, DESCRIPTION, BY, CHECKED BY.

NOTE: SCALES SHOWN ARE FOR 24"x36" SHEETS; ADJUST ACCORDINGLY FOR 11"x17" SHEETS.

CITY OF LONE TREE DEPARTMENT OF PUBLIC WORKS Engineering Division GESC GRADING, EROSION, AND SEDIMENT CONTROL SHEET 1 OF 3

AMENITY SITE AT RIDGEGATE SW VILLAGE GESC NOTES AND DETAILS SHEET 7 OF 9 JOB NO. 15950.06. Includes contact information for J.R. ENGINEERING and J.R. LYRIC, LLC.

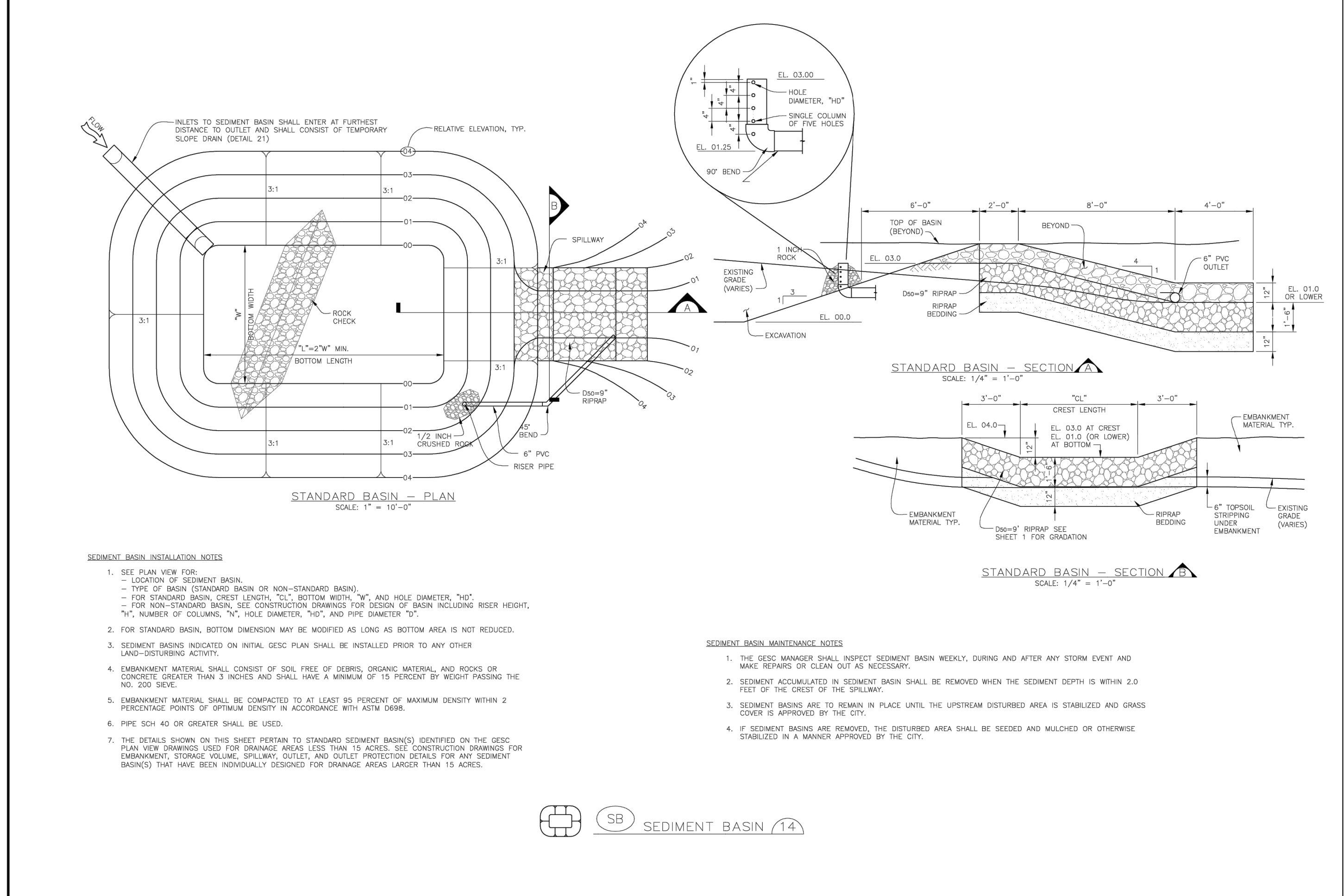
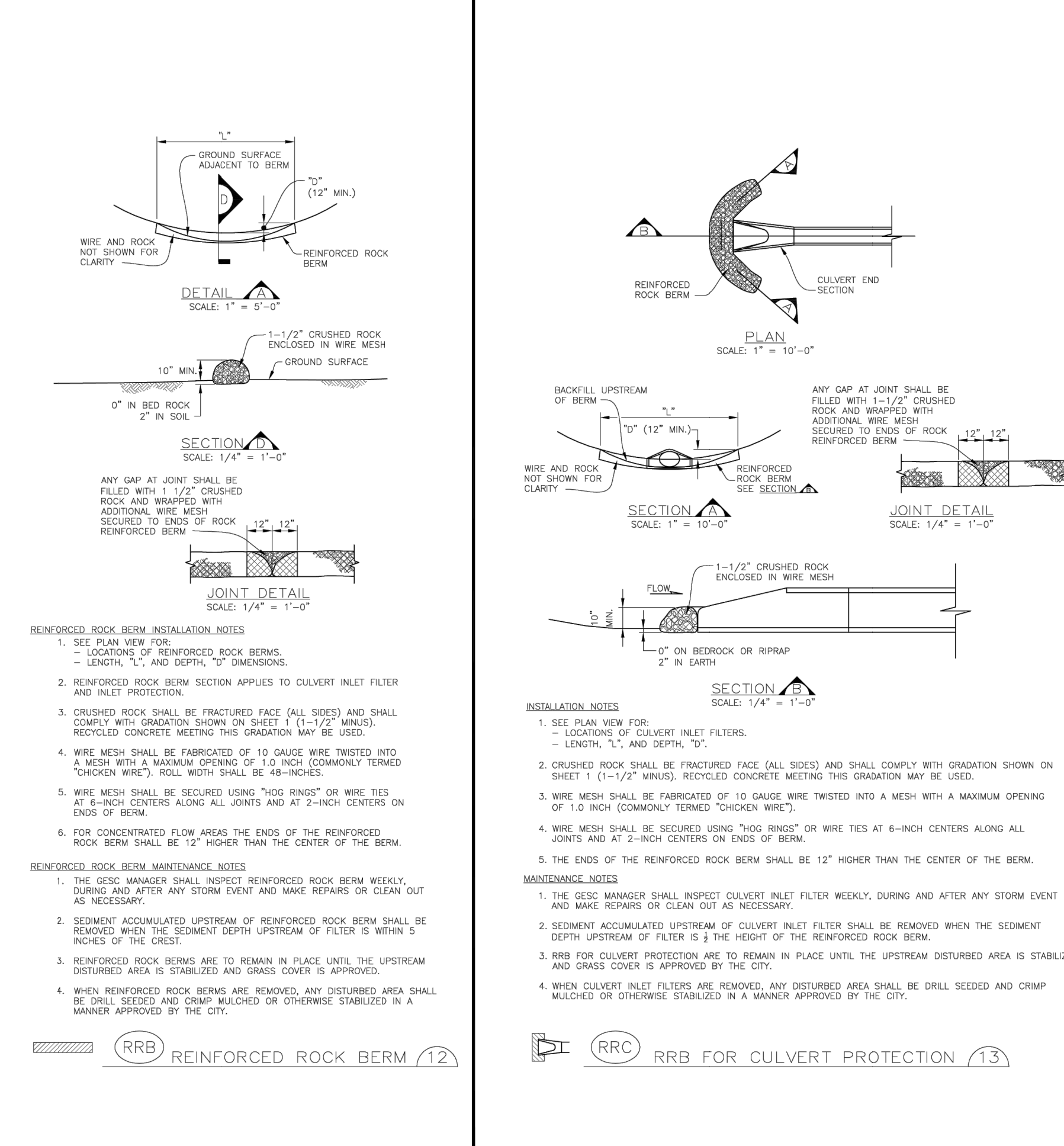
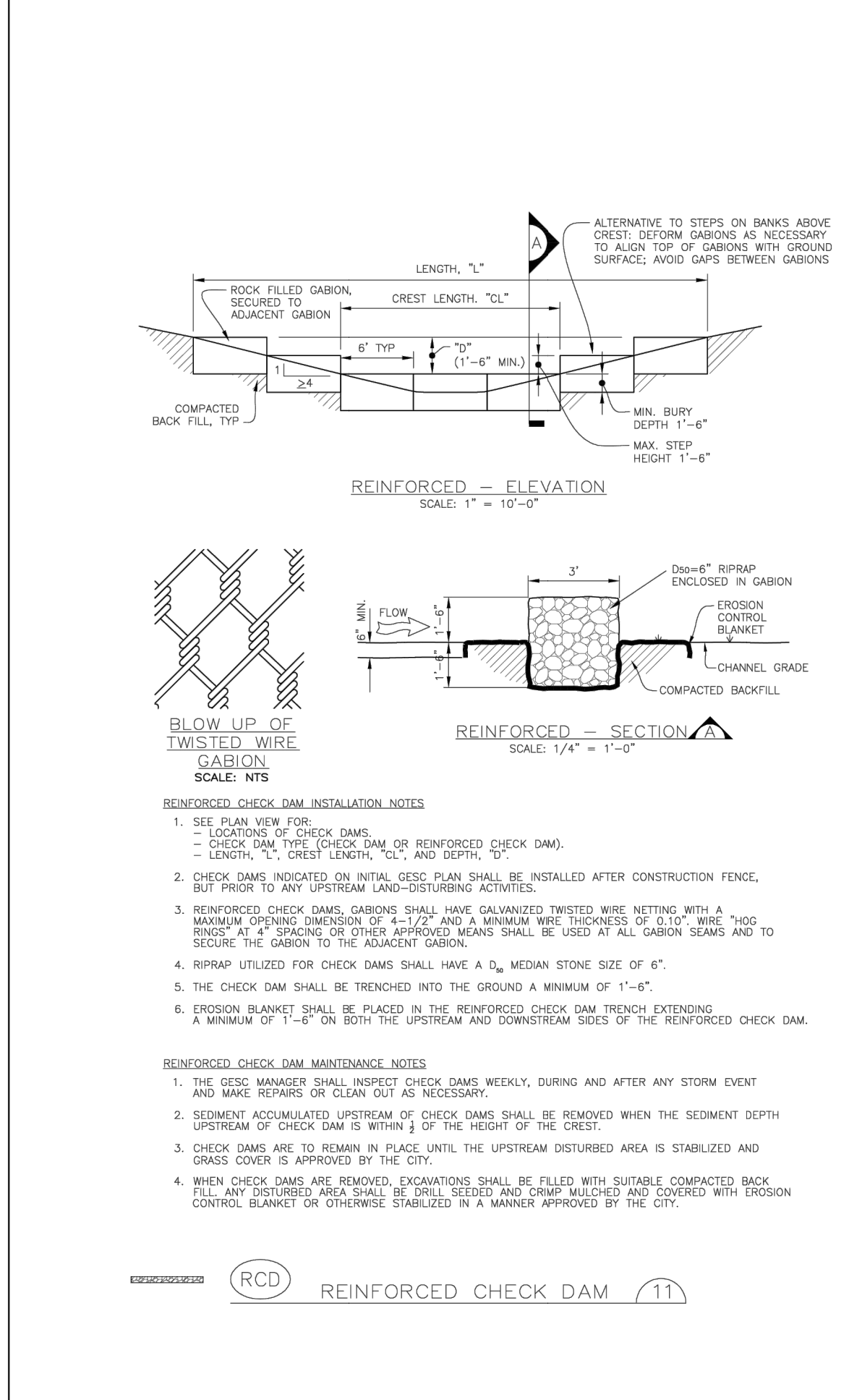
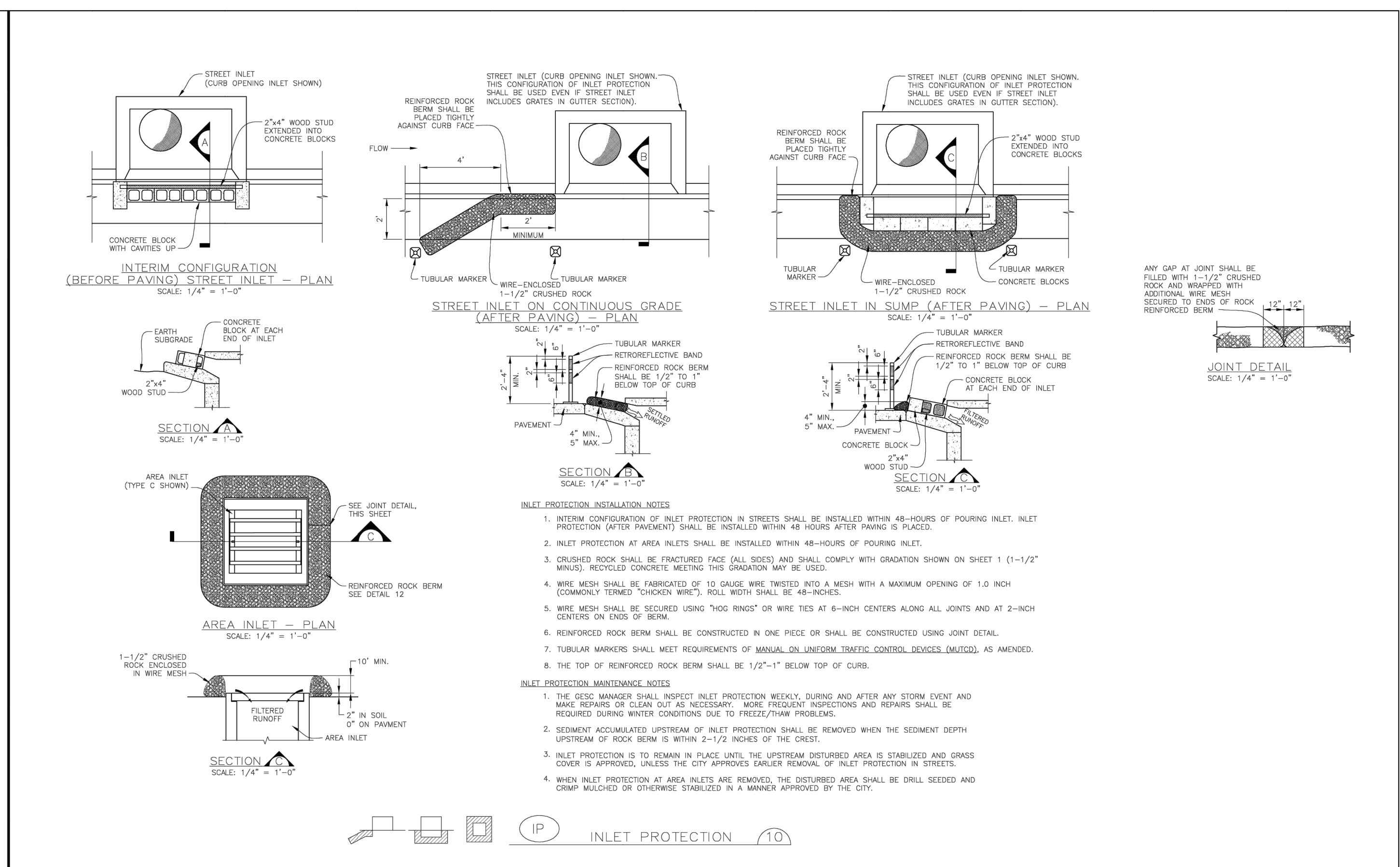
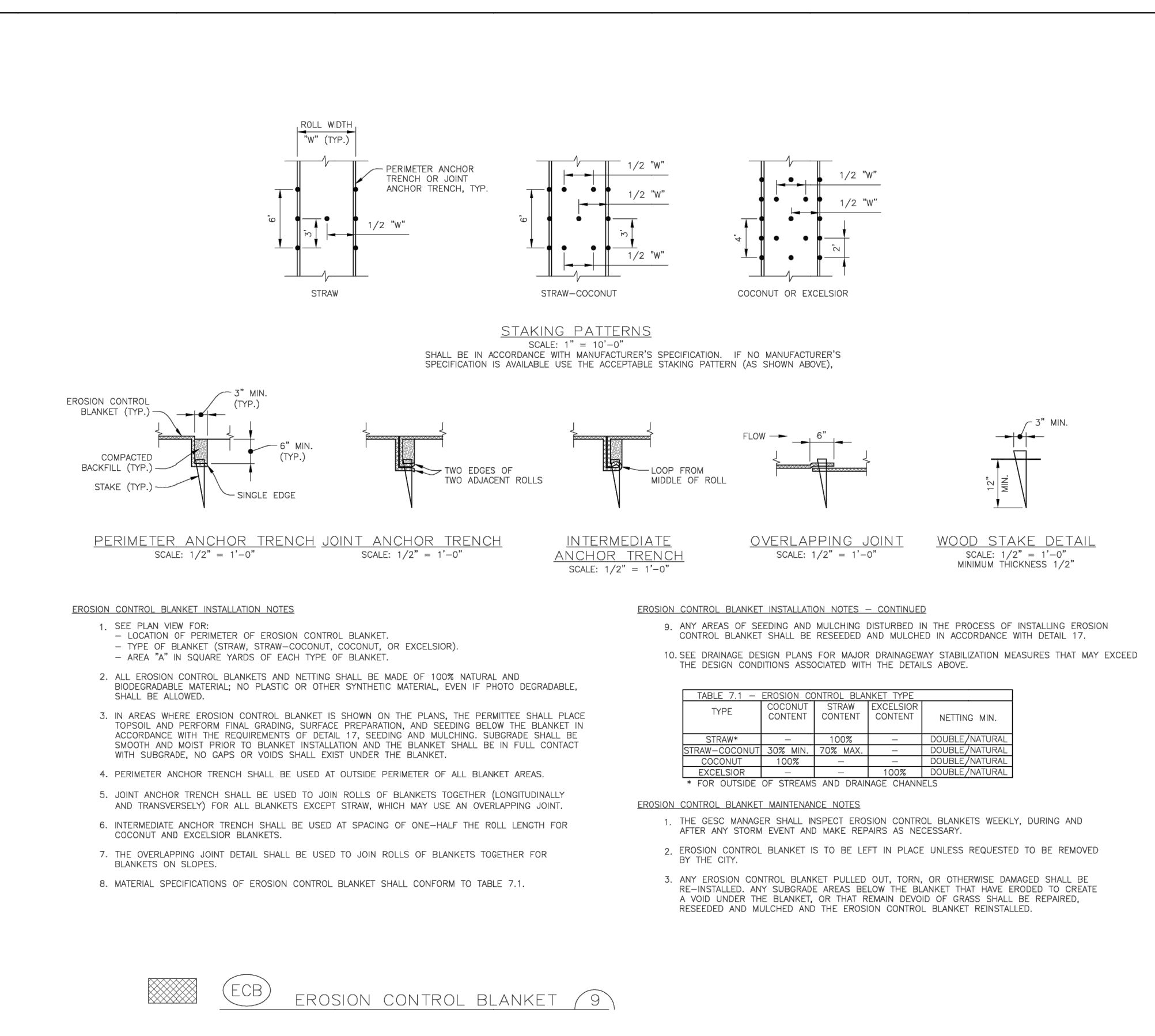
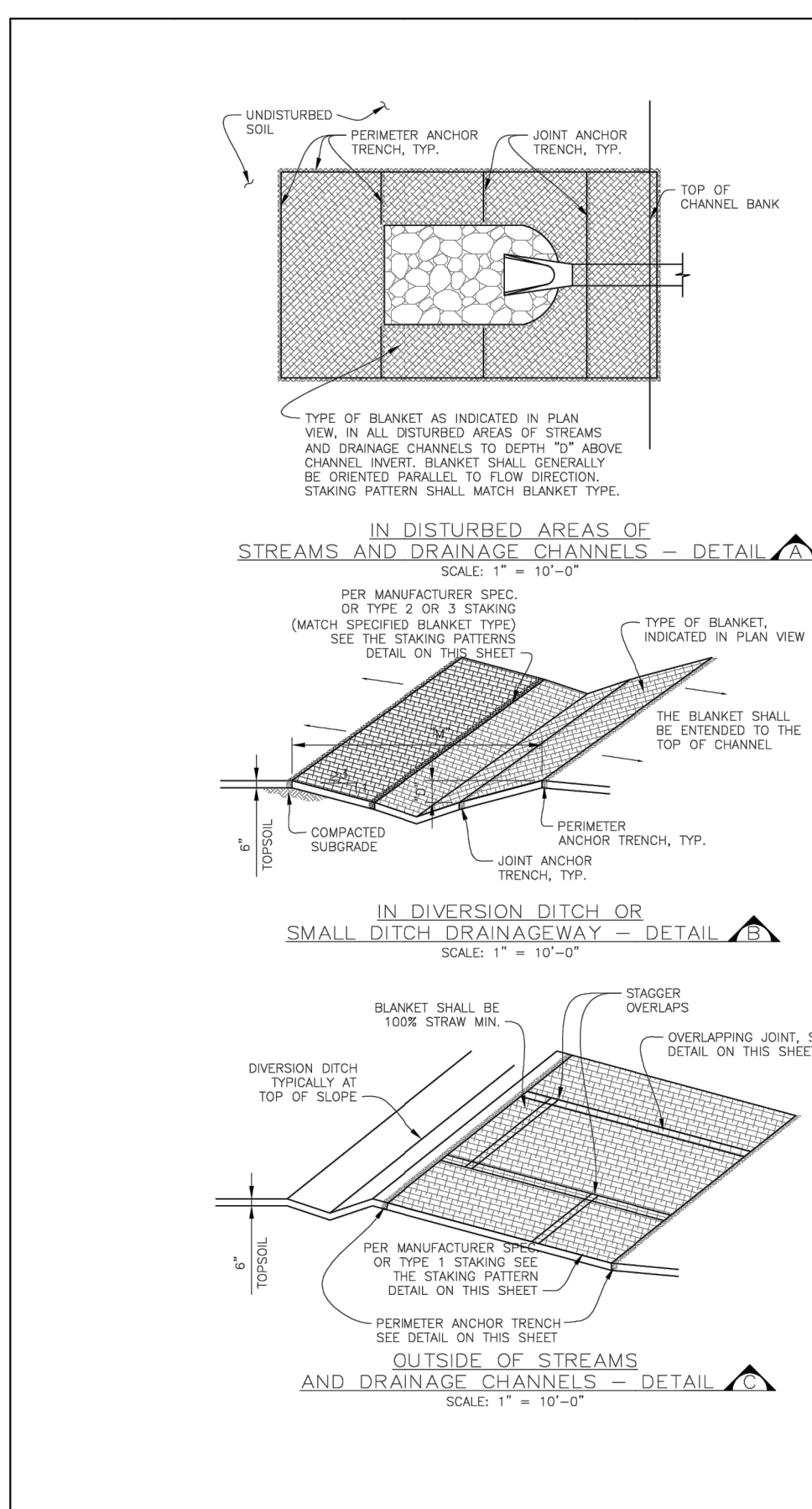
UNTIL SUCH TIME AS THESE DRAWINGS ARE APPROVED BY THE APPROPRIATE REVIEWING AGENCIES, OR ENGINEERING APPROVES THEIR USE, THESE DRAWINGS ARE DESIGNATED BY WRITTEN AUTHORIZATION.

PREPARED FOR
SH LYRIC, LLC
 9380 STATION ST.
 SUITE 600
 LONE TREE, CO 80124
 OFFICE PHONE
 (303) 791-8180

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 Central 303-740-9383 • Colorado Springs 719-583-2583
 Fort Collins 970-491-9888 • www.jrengineering.com

BY	DATE	No.	REVISION	H-SCALE	V-SCALE	DATE	DESIGNED BY	DRAWN BY	CHECKED BY

AMENITY SITE AT RIDGEGATE SW VILLAGE
GESC PLAN
 STANDARD NOTES AND DETAILS



Sheet Revisions

DATE	DESCRIPTION	BY
6/30/05	ADOPTED FROM DOUGLAS COUNTY GESC PLANS	MLP
5/ /08	EDIT UPDATES	GAW
11/ /08	ADD CURB SOCK DETAIL (REF UDFCD, V3 FIGURE C5-23), MISC. NOTE EDITS	GAW

NOTE: SCALES SHOWN ARE FOR 24"x36" SHEETS. ADJUST ACCORDINGLY FOR 11"x17" SHEETS.

CITY OF LONE TREE
 DEPARTMENT OF PUBLIC WORKS
 Engineering Division

GESC GRADING, EROSION, AND SEDIMENT CONTROL

GESC PLAN STANDARD NOTES AND DETAILS
 SHEET 2 OF 3



**CITY OF
LONE TREE**

**GESC Permit
Opinion of Probable Cost**

Project: Ridgeway Amenity Center	Date: October 12, 2022
---	-------------------------------

BMP No.	BMP	ID	Unit	Installation Unit Cost	Quantity	Cost
1	Check Dam	CD	LF	\$ 24.00	0	\$ -
2	Compost Blanket	CB	SF	\$0.36	0	\$ -
3	Compost Filter Berm	CFB	LF	\$ 2.00	0	\$ -
4	Concrete Washout Area	CWA	EA	\$ 100.00	1	\$ 100.00
5	Construction Fence	CF	LF	\$ 2.00	0	\$ -
6	Construction Markers	CM	LF	\$ 0.20	0	\$ -
7	Curb Sock	CS	LF	\$ 8.00	0	\$ -
8	Dewatering	DW	EA	\$ 600.00	0	\$ -
9	Diversion Ditch	DD	LF	\$ 1.60	0	\$ -
10	Erosion Control Blanket	ECB	SY	\$ 5.00	0	\$ -
11	Inlet Protection	IP	LF	\$ 20.00	10	\$ 200.00
12	Reinforced Check Dam	RCD	LF	\$ 36.00	0	\$ -
13	Reinforced Rock Berm	RRB	LF	\$ 9.00	0	\$ -
14	RRB for Culvert Protection	RRC	LF	\$ 9.00	0	\$ -
15	Sediment Basin	SB	AC (1)	(2)	0.0	\$ -
16	Sediment Control Log	SCL	LF	\$ 2.00	385	\$ 769.00
17	Sediment Trap	ST	EA	\$ 600.00	0	\$ -
18A	Seeding and Mulching - Mobilization	SM	EA	\$ 1,000.00	1	\$ 1,000.00
18B	Seeding and Mulching - Installation	SM	AC	\$ 750.00	1.0	\$ 750.00
19	Silt Fence	SF	LF	\$ 2.00	1,470	\$ 2,940.00
20	Stabilized Staging Area	SSA	SY	\$ 2.00	1,065	\$ 2,129.78
21	Surface Roughening	SR	AC	\$ 600.00	1.0	\$ 600.00
22	Temporary Slope Drain	TSD	LF	\$ 30.00	0	\$ -
23	Temporary Stream Crossing	TSC	EA	\$ 1,000.00	0	\$ -
24	Terracing	TER	AC	\$ 600.00	0.0	\$ -
25	Vehicle Tracking Control	VTC	EA	\$ 1,000.00	1	\$ 1,000.00
26	VTC with Wheel Wash	WW	EA	\$ 1,500.00	0	\$ -
27	Temporary Batch Plant Restoration		AC	\$ 5,000.00	0.0	\$ -

(1) Upstream Tributary Acre	SUB-TOTAL	\$ 9,488.78
(2) SB Cost = \$1000 +\$200(Upstream Tributary Acres)	15% CONTINGENCY	\$ 1,423.32
	GESC SURETY TOTAL (1)	\$ 10,912.10

NOTE: (1) **MINIMUM SURETY shall be \$2,500.00** (Per Section 16-31-110 of City Zoning Code)

CDPS Permit Application



COLORADO

Department of Public Health & Environment

Dedicated to protecting and improving the health and environment of the people of Colorado

ASSIGNED PERMIT NUMBER

Date Received ____/____/____
MM DD YYYY
Revised: 3-2016

STORMWATER DISCHARGE ASSOCIATED WITH CONSTRUCTION ACTIVITIES APPLICATION COLORADO DISCHARGE PERMIT SYSTEM (CDPS)

PHOTO COPIES, FAXED COPIES, PDF COPIES OR EMAILS WILL NOT BE ACCEPTED.

For Applications submitted on paper - Please print or type. Original signatures are required.

All items must be completed accurately and in their entirety for the application to be deemed complete. Incomplete applications will not be processed until all information is received which will ultimately delay the issuance of a permit. If more space is required to answer any question, please attach additional sheets to the application form. Applications or signature pages for the application may be submitted by mail or hand delivered to:

Colorado Department of Public Health and Environment, 4300 Cherry Creek Drive South, WQCD-P-B2, Denver, CO 80246-1530

For Applications submitted electronically

Please note that you can ONLY complete the feedback form by downloading it to a PC or Mac/Apple computer and opening the Application with Adobe Reader or a similar PDF reader. The form will NOT work with web browsers, Google preview, Mac preview software or on mobile devices using iOS or Android operating systems.

If application is submitted electronically, processing of the application will begin at that time and not be delayed for receipt of the signed document.

Any additional information that you would like the Division to consider in developing the permit should be provided with the application. Examples include effluent data and/or modeling and planned pollutant removal strategies.

Beginning July 1, 2016, invoices will be based on acres disturbed.

DO NOT PAY THE FEES NOW - Invoices will be sent after the receipt of the application.

Disturbed Acreage for this application (see page 4)

- Less than 1 acre (\$83 initial fee, \$165 annual fee)
- 1-30 acres (\$175 initial fee, \$350 annual fee)
- Greater than 30 acres (\$270 initial fee, \$540 annual fee)

PERMIT INFORMATION

Reason for Application: NEW CERT RENEW CERT EXISTING CERT# _____

Applicant is: Property Owner Contractor/Operator

A. CONTACT INFORMATION - *indicates required

* PERMITTED ORGANIZATION FORMAL NAME: _____

1) * PERMIT OPERATOR - the party that has operational control over day to day activities - may be the same as owner.

Responsible Person (Title): _____

Currently Held By (Person): FirstName: _____ LastName: _____

Telephone: _____ Email Address: _____

Organization: _____

Mailing Address: _____

City: _____ State: _____ Zip Code: _____

Per Regulation 61 : All reports required by permits, and other information requested by the Division shall be signed by the permittee or by a duly authorized representative of that person. A person is a duly authorized representative only if:

- (i) The authorization is made in writing by the permittee
- (ii) The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity such as the position of plant manager, operator of a well or a well field, superintendent, position of equivalent responsibility, or an individual or position having overall responsibility for environmental matters for the company. (A duly authorized representative may thus be either a named individual or any individual occupying a named position); and
- (iii) The written authorization is submitted to the Division

2) **OWNER - party has ownership or long term lease of property - may be the same as the operator.**

Same as 1) Permit Operator

Responsible Person (Title): _____

Currently Held By (Person): FirstName: _____ LastName: _____

Telephone: _____ Email Address: _____

Organization: _____

Mailing Address: _____

City: _____ State: _____ Zip Code: _____

Per Regulation 61 : All reports required by permits, and other information requested by the Division shall be signed by the permittee or by a duly authorized representative of that person. A person is a duly authorized representative only if:

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- iii. The written authorization is submitted to the Division.

3) ***SITE CONTACT** local contact for questions relating to the facility & discharge authorized by this permit for the facility

Same as 1) Permit Operator

Responsible Person (Title): _____

Currently Held By (Person): FirstName: _____ LastName: _____

Telephone: _____ Email Address: _____

Organization: _____

Mailing Address: _____

City: _____ State: _____ Zip Code: _____

4) ***BILLING CONTACT** if different than the permittee.

Same as 1) Permit Operator

Responsible Person (Title): _____

Currently Held By (Person): FirstName: _____ LastName: _____

Telephone: _____ Email Address: _____

Organization: _____

Mailing Address: _____

City: _____ State: _____ Zip Code: _____

5) **OTHER CONTACT TYPES (check below) Add pages if necessary:**

Responsible Person (Title): _____

Currently Held By (Person): FirstName: _____ LastName: _____

Telephone: _____ Email Address: _____

Organization: _____

Mailing Address: _____

City: _____ State: _____ Zip Code: _____

Environmental Contact

Consultant

Stormwater MS4 Responsible Person

Inspection Facility Contact

Compliance Contact

Stormwater Authorized Representative

B) PERMITTED PROJECT/FACILITY INFORMATION

Project/Facility Name _____

Street Address or Cross Streets _____

(e.g., Park St and 5 Ave; CR 21 and Hwy 10; 44 Ave and Clear Creek) ; A street name without an address, intersection, mile marker, or other identifying information describing the location of the project is not adequate. For **linear projects**, the route of the project should be described as best as possible using the starting point for the address and latitude and longitude - more clearly defined in the required map)

City: _____ County: _____ Zip Code: _____

Facility Latitude/Longitude - List the latitude and longitude of the excavation(s) resulting in the discharge(s). If the exact soil disturbing location(s) are not known, list the latitude and longitude of the center point of the construction project. If using the center point, be sure to specify that it is the center point of construction activity. The preferred method is GPS and Decimal Degrees.

Latitude _____ . _____ Longitude _____ . _____ (e.g., 39.70312°, 104.93348°)
Decimal Degrees (to 5 decimal places) Decimal Degrees (to 5 decimal places)

This information may be obtained from a variety of sources, including:

- **Surveyors or engineers** for the project should have, or be able to calculate, this information.
- **U.S. Geological Survey topographical map(s)**, available at area map stores.
- Using a **Global Positioning System (GPS) unit** to obtain a direct reading.
- **Google** - enter address in search engine, select the map, right click on location, and select "what's here".

Note: the latitude/longitude required above is not the directional degrees, minutes, and seconds provided on a site legal description to define property boundaries.

C) MAP (Attachment) If no map is submitted, the application cannot be submitted.

Map: Attach a map that indicates the site location and that CLEARLY shows the boundaries of the area that will be disturbed. A vicinity map is not adequate for this purpose.

D) LEGAL DESCRIPTION - only for Subdivisions

Legal description: If subdivided, provide the legal description below, or indicate that it is not applicable (**do not** supply Township/Range/Section or metes and bounds description of site)

Subdivision(s): _____ Lot(s): _____ Block(s) _____

OR Not applicable (site has not been subdivided)

E) AREA OF CONSTRUCTION SITE - SEE PAGE 1 - WILL DETERMINE FEE

Provide both the total area of the construction site, and the area that will undergo disturbance, in acres.

Total area of project disturbance site (acres): _____

Note: aside from clearing, grading and excavation activities, disturbed areas also include areas receiving overburden (e.g., stockpiles), demolition areas, and areas with heavy equipment/vehicle traffic and storage that disturb existing vegetative cover.

Part of Larger Common Plan of Development or Sale, (i.e., total, including all phases, filings, lots, and infrastructure not covered by this application)

F) NATURE OF CONSTRUCTION ACTIVITY

Check the appropriate box(es) or provide a brief description that indicates the general nature of the construction activities. (The full description of activities must be included in the Stormwater Management Plan.)

Commercial Development

Residential Development

Highway and Transportation Development

Pipeline and Utilities (including natural gas, electricity, water, and communications)

Oil and Gas Exploration and Well Pad Development

Non-structural and other development (i.e. parks, trails, stream realignment, bank stabilization, demolition, etc.)

G) ANTICIPATED CONSTRUCTION SCHEDULE

Construction Start Date: _____ Final Stabilization Date: _____

- *Construction Start Date* - This is the day you expect to begin ground disturbing activities, including grubbing, stockpiling, excavating, demolition, and grading activities.
- *Final Stabilization Date* - in terms of permit coverage, this is when the site is finally stabilized. This means that all ground surface disturbing activities at the site have been completed, and all disturbed areas have been either built on, paved, or a uniform vegetative cover has been established with an individual plant density of at least 70 percent of pre-disturbance levels. **Permit coverage must be maintained until the site is finally stabilized. Even if you are only doing one part of the project, the estimated final stabilization date must be for the overall project.** If permit coverage is still required once your part is completed, the permit certification may be transferred or reassigned to a new responsible entity(s).

H) RECEIVING WATERS (If discharge is to a ditch or storm sewer, include the name of the ultimate receiving waters)

Immediate Receiving Water(s): _____

Ultimate Receiving Water(s): _____

Identify the receiving water of the stormwater from your site. Receiving waters are any waters of the State of Colorado. This includes all water courses, even if they are usually dry. If stormwater from the construction site enters a ditch or storm sewer system, identify that system and indicate the ultimate receiving water for the ditch or storm sewer. **Note:** a stormwater discharge permit does not allow a discharge into a ditch or storm sewer system without the approval of the owner/operator of that system.

I) SIGNATURE PAGE

1. You may print and sign this document and mail the hard copy to the State along with required documents (address on page one).

2. Electronic Submission Signature

You may choose to submit your application electronically, along with required attachments. To do so, click the SUBMIT button below which will direct you, via e-mail, to sign the document electronically using the DocuSign Electronic Signature process. Once complete, you will receive via e-mail, an electronically stamped Adobe pdf of this application. Print the signature page from the electronically stamped pdf, sign it and mail it to the WQCD Permits Section to complete the application process (address is on page one of the application).

- The Division encourages use of the electronic submission of the application and electronic signature. This method meets signature requirements as required by the State of Colorado.
- The ink signed copy of the electronically stamped pdf signature page is also required to meet Federal EPA Requirements.
- Processing of the application will begin with the receipt of the valid electronic signature.

STORMWATER MANAGEMENT PLAN CERTIFICATION

By checking this box "I certify under penalty of law that a complete Stormwater Management Plan, as described in the stormwater management plan guidance, has been pre-pared for my activity. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the Stormwater Management Plan is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for falsely certifying the completion of said SWMP, including the possibility of fine and imprisonment for knowing violations."

"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."

"I understand that submittal of this application is for coverage under the State of Colorado General Permit for Stormwater Discharges Associated with Construction Activity for the entirety of the construction site/project described and applied for, until such time as the application is amended or the certification is transferred, inactivated, or expired." [Reg 61.4(1)(h)]

For DocuSign
Electronic Signature _____ Ink Signature _____ Date: _____

Signature of Legally Responsible Person or Authorized Agent (submission must include original signature)

Name (printed) Title

Signature: The applicant must be either the owner and operator of the construction site. Refer to Part B of the instructions for additional information.

The application must be signed by the applicant to be considered complete. In all cases, it shall be signed as follows:
(Regulation 61.4 (1e))

- In the case of corporations, by the responsible corporate officer is responsible for the overall operation of the facility from which the discharge described in the form originates
- In the case of a partnership, by a general partner.
- In the case of a sole proprietorship, by the proprietor.
- In the case of a municipal, state, or other public facility, by either a principal executive officer, ranking elected official, (a principal executive officer has responsibility for the overall operation of the facility from which the discharge originates).

3rd Party Preparer: If this form was prepared by an authorized agent on behalf of the Permittee, please complete the field below.

Preparer Name (printed) Email Address

**DO NOT INCLUDE A COPY OF THE STORMWATER MANAGEMENT PLAN
DO NOT INCLUDE PAYMENT—AN INVOICE WILL BE SENT AFTER THE CERTIFICATION IS ISSUED.**

<input type="text"/>	Attach Map
<input type="text"/>	Attach File
<input type="text"/>	Attach File
<input type="text"/>	Attach File
<input type="text"/>	Attach File

Inspection Form

COLORADO DEPARTMENT OF TRANSPORTATION STORMWATER FIELD INSPECTION REPORT - ACTIVE CONSTRUCTION

(1) Project Name: Lincoln Creek	(2) Project Contractor:	(3) Erosion Control Supervisor/SWMP Administrator:	
(4) CDOT Project Engineer/Representative: N/A	(5) Inspector(s) (Name and Title):	(6) CDOT Project Number: N/A	
(7) Project Code (Sub Account #): 1000-5916.00	(8) CDPS-SCP Certification#:	(9) CDOT Region:	(10) Date of Project Inspection:
(11) Weather at Time of Inspection:			

(12) REASON FOR INSPECTION / EXCLUSION

Routine Inspection: (minimum every 7 Calendar Days)

Runoff Event: (Post-storm event inspections must be conducted within 24 hours after the end of any precipitation or snowmelt event that causes surface erosion. If no construction activities will occur following a storm event, post-storm event inspections shall be conducted prior to re-commencing construction activities, but no later than 72 hours following the storm event. The occurrence of any such delayed inspection must be documented in the inspection record.) Routine inspections still must be conducted every 7 calendar days.
 Storm Start Date: _____ Approximate End Time of Storm (hrs): _____

Third Party Request:

Winter Conditions Inspections Exclusion: Inspections are not required at sites where 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 exception is applicable **only** during the period where **melting conditions do not exist**, and applies to the routine 7-day inspections, as well as the post-storm-event inspections. If **visual inspection** of the site verifies that all of these conditions are satisfied, document the conditions in section 18 (General Notes) and proceed to section 19 (Inspection Certification). Documentation must include: dates when snow cover occurred, date when construction activities ceased, and date when melting conditions began.

Other:

(13) SWMP MANAGEMENT

(14) CURRENT CONSTRUCTION ACTIVITIES:

	Yes	No	NA	
(a) Is the SWMP notebook located on site?				Estimate of disturbed area at the time of the inspection: _____ Acres
(b) Are changes to the SWMP documents noted and approved?				
(c) Are the inspection reports retained in the SWMP notebook?				
(d) Are corrective actions from the last inspection completed?				
(e) Is a Spill Prevention Control and Countermeasure Plan retained at the project site?				
(f) Is a list of potential pollutants retained at the site?				

(15) BMPs ON SITE AT TIME OF INSPECTION

*See Inspection Report Instructions for more detail.

	In SWMP	Used	Not Needed at this time		In SWMP	Used	Not Needed at this time
(a) EROSION CONTROL BMPs ON SITE				(b) SEDIMENT CONTROL BMPs ON SITE			
Seeding	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Stabilized Const. Entrance	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Mulching/Mulch Tackifier	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Sediment Trap	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Soil Binder	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Inlet Protection*	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Soil Retention Blankets	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Sediment Basin	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Embankment Protector*	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Perimeter Control*	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Grading Techniques*	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Other:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Berm/Diversion	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	(d) MATERIALS HANDLING, SPILL PREVENTION, WASTE MANAGEMENT AND GENERAL POLLUTION PREVENTION			
Check Dams*	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Stockpile Management*	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Outlet Protection*	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Materials Management*	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Concrete Waste Management*	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(c) BMPs FOR SPECIAL CONDITIONS				Saw Water Management*	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Dewatering Structure	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Solid Waste/Trash Management	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Temp. Stream Crossing	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Street Sweeping	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Clear Water Diversion	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Sanitary Facility*	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sensitive Area Fencing	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Vehicle and Equip. Management	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Other:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

(16) CONSTRUCTION SITE ASSESSMENT & CORRECTIVE ACTIONS **Off site Pollutant Discharges are a Violation of the Permit and Reason for Immediate Project Suspension**

The construction site perimeter, all disturbed areas, material and/or waste storage areas that are exposed to precipitation, discharge locations, and locations where vehicles access the site shall 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. If there is evidence of sediment or other pollutants discharging from the site, see section 17 (Construction Site Assessment).

All erosion and sediment control practices identified in the SWMP shall be evaluated to ensure that they are maintained and operating correctly. Identify the condition of the BMP, using more than one letter if necessary: **(I)** Incorrect Installation; **(M)** Maintenance is needed; **(F)** BMP failed to operate; **(A)** Additional BMP is needed; **(R)** Remove BMP. Keep copies of this blank page for additional room if needed.

Continuous maintenance is required on all BMPs. **BMPs that are not operating effectively, have proven to be inadequate, or have failed must be addressed as soon as possible, immediately in most cases.**

Location	BMP	Condition	Comments:		Date Completed & Initials
			Description of Corrective Action and Preventative Measure Taken		

(17) CONSTRUCTION SITE ASSESSMENT:OFF SITE POLLUTANT DISCHARGES ARE A VIOLATION OF THE PERMIT AND REASON FOR IMMEDIATE PROJECT SUSPENSION****

- (a) Is there evidence of discharge of sediment or other pollutants from the site? Yes No
*If yes, explain the discharge and the corrective actions in section 16 (Construction Site Assessment & Corrective Actions) or section 18 (General Notes).
- (b) Has sediment or other pollutants discharging from the site reached state waters? Yes No
*If yes, see subsection 208.03(c) and Part II A.2 and 3 of the permit for reporting requirements.

(18) GENERAL NOTES

(19) INSPECTION 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.

Contractor's Erosion Control Supervisor/SWMP Administrator (Signature Required)	Date:
CDOT Project Engineer/CDOT Designee (Signature Required)	Date:

(20) COMPLIANCE CERTIFICATION

Corrective action(s) has been taken, or where a report does not identify any incidents requiring corrective action, 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.

Contractor's Erosion Control Supervisor/SWMP Administrator (Signature Required)	Date:
CDOT Project Engineer/CDOT Designee (Signature Required)	Date:

Stormwater Management Field Inspection Report Instructions

State waters are defined to be any and all surface and subsurface waters which are contained in or flow through the state, including, streams, rivers, lakes, drainage ditches, storm drains, ground water, and wetlands, but not including waters in sewage systems, waters in treatment works or disposal systems, waters in potable water distribution systems, and all water withdrawn for use until use and treatment have been completed. (Per subsection 107.25 and 25-8-103 (19) CRS)

(3) Erosion Control Supervisor/SWMP Administrator: Indicate the name of the individual responsible for implementing, maintaining and revising the SWMP.

(4) CDOT Project Engineer/Representative: Indicate the name of the CDOT representative performing the inspection with the ECS/SWMP Administrator. This person should be the Project Engineer or an authorized representative.

(9) CDPS-SCP Certification #: Indicate the Colorado Discharge Permit System (CDPS) Stormwater Construction Permit (SCP) (for Stormwater Discharges Associated with Construction Activities) certification number, issued by CDPHE, for the project which the report is being completed. Certification number can be found on the first page of the SCP.

(12) Reason(s) for Inspection / Exclusion: Indicate the purpose for the inspection or exclusion. These inspections are required to comply with the CDOT Specifications and the CDPS-SCP.

Routine Inspections. These inspections are required at least every 7 calendar days during active construction. Suspended projects require the 7 calendar day inspection unless snow cover exists over the entire site for an extended period of time, and melting conditions do not exist (see, Winter Conditions Inspections Exclusions).

Runoff Event Inspection for Active Sites. See page 1 for definition.

Third Party Request. Indicate the name of the third party requesting the inspection and, if known, the reason the request was made.

Winter Conditions Inspections Exclusions. See page 1 for definition. An inspection does not need to be completed, but use this form to document the conditions that meet the Exclusion.

Other. Specify any other reason(s) that resulted in the inspection.

(13) SWMP Management: Review the SWMP records and documents and use a ✓ to answer the question. To comply with CDOT Standard Specifications and the CDPS-SCP, all of the items identified must be adhered to. If No is checked, document the reason and indicate the necessary corrective action in section 16 (Construction Site Assessment & Corrective Actions). If NA is checked, indicate why in the space provided or indicate in section 18 (General Notes).

(a) Is the SWMP notebook located on site? A copy of the SWMP notebook must be retained on site, unless another location, specified by the permit, is approved by the Division.

(b) Are changes to the SWMP documents noted and approved? Indicate all changes that have been made to any portion of the SWMP notebook documents during construction. Changes shall be dated and signed at the time of occurrence. Amendments may include items listed in subsection 208.03(c).

(c) Are the inspection reports retained in the SWMP notebook? The ECS/Engineer shall keep a record of inspections. Inspection reports must identify any incidents of non-compliance with the terms and conditions of the CDOT specifications or the CDPS-SCP. Inspection records must be retained for three years from expiration or inactivation of permit coverage.

(d) Are corrective actions from the last inspection completed? Have corrective actions from the last inspection been addressed? Is a description of the corrective action(s), the date(s) of the corrective action(s), and the measure(s) taken to prevent future violations (including changes to the SWMP, as necessary) documented?

(e) Is a Spill Prevention Control and Countermeasure (SPCC) Plan retained in the SWMP notebook? Subsection 208.06(c) requires that a SPCC plan be developed and implemented to establish operating procedures and that the necessary employee training be provided to minimize accidental releases of pollutants that can contaminate stormwater runoff. Records of spills, leaks or overflows that result in the discharge of pollutants must be documented and maintained. Information that should be recorded for all occurrences include the time and date, weather conditions, reasons for spill, etc. Some spills may need to be reported to the Water Quality Control Division immediately.

(f) Is a list of potential pollutants retained at the site? Subsection 107.25(b)6 requires the Erosion Control Supervisor to identify and describe all potential pollutant sources, including materials and activities, and evaluate them for the potential to contribute pollutants to stormwater discharge.

(14) Current Construction Activities: Provide a short description of the current construction activities/phase at the project site; include summary of grading activities, installation of utilities, paving, excavation, landscaping, etc.

- Estimate the acres of disturbed area at the time of the inspection. Include clearing, grading, excavation activities, areas receiving overburden (e.g. stockpiles), demolition areas and areas with heavy equipment/vehicle traffic, installation of new or improved haul roads and access roads, staging areas, borrow areas and storage that will disturb existing vegetative cover.

(15) BMPs On Site at Time of Inspection: Indicate the BMPs that are installed on-site at the time of inspection. All BMP details (e.g., Standard Plan M-208-1) shall be included with the SWMP documents.

Stormwater Management Field Inspection Report Instructions (continued)

BMPs In SWMP/Used/Not Needed at this Time. This section can be used as follows:

- If the BMP is required by the SWMP and implemented, indicate by placing a ✓ in both the “In SWMP” and “Used” columns.
- If the BMP is required by the SWMP, but not implemented, indicate by placing a ✓ in the “In SWMP” and “Not Needed at this Time” columns.

(a) Erosion Control BMPs On Site

- Embankment Protector (e.g., temporary slope drains, open-chute drains, etc.)
- Grading Techniques (e.g., vertical tracking, scarifying, or disking the surface on the contour, etc.)
- Check Dams (e.g., rock check, erosion logs, erosion bales, silt berms, etc.)
- Outlet Protection (e.g., riprap, erosion log around top of headwall, etc.)

(b) Sediment Control BMPs On Site

- Inlet Protection (e.g., erosion logs, erosion bales, sand bags, gravel bags, etc.)
- Perimeter Control (e.g., silt fence, erosion logs, berms, etc.)

(d) Materials Handling, Spill Prevention, Waste Management and General Pollution Prevention

- Stockpile Management. Stockpiles shall be located away from sensitive areas. All erodible stockpiles (including topsoil) shall be contained by silt fence, berms or other sediment control devices throughout construction (also see subsection 208.07).
- Materials Management. Material that could contribute pollutants to stormwater shall have secondary containment or other equivalent protection (also see subsection 208.06(a)).
- Concrete Waste Management. All concrete residue shall be contained in a signed structure as designed per subsection 208.02(j) and subsection 208.05(n). It shall be located a minimum of 50 feet from state waters.
- Saw Water Containment (e.g., pick-up broom or vacuum). Street washing is *not* allowed.
- Sanitary Facility. Temporary sanitary facilities shall be located 50 feet away from drainage ways, inlets, receiving waters, and located away from areas of high traffic, and areas susceptible to flooding or damage by construction equipment.

(16) Construction Site Assessment & Corrective Actions: Inspect the construction site and indicate where BMP feature(s) identified in section 15 (BMPs On Site at Time of Inspection), require corrective action. Erosion and sediment control practices identified in the SWMP shall be evaluated to ensure that they are operating correctly.

- Location. Site location (e.g., project station number, mile marker, intersection quadrant, etc.).
- BMP. Indicate the type of BMP at this location that requires corrective action (e.g., silt fence, erosion logs, soil retention blankets, etc.).
- Condition. Identify the condition of the BMP, using more than one letter (identified in section 16) if necessary.
- Description of Corrective Action and Preventative Measure Taken. Provide the proposed corrective action needed to bring the area or BMP into compliance. Once corrective actions are completed, state the measures taken to prevent future violations and ensure that the BMPs are operating correctly, including the required changes made to the SWMP.
- Date Completed & Initials. Date and initial when the corrective action was completed and the preventative measure statement finished.

(17) Construction Site Assessment: Was there any off site discharge of sediment at this site since the last inspection?

(a) Is there evidence of discharge of sediment or other pollutants from the site? **Off site pollutant discharges are a violation of the permit.** The construction site perimeter, all disturbed areas, material and/or waste storage areas that are exposed to precipitation, discharge locations, and locations where vehicles access the site shall be inspected for evidence of, or the **potential** for, pollutants leaving the construction site boundaries, entering the stormwater drainage system, or discharging to state water.

(b) Has sediment or other pollutants discharging from the site reached state waters? **Off site pollutant discharges are a violation of the permit.** If off site discharge has occurred, explain the discharge and the corrective actions in section 16 (Construction Site Assessment & Corrective Actions) or section 18 (General Notes).

(18) General Notes: Indicate any additional notes that add detail to the inspection; this may include positive practices noted on the project.

(19) Inspection Certification: In accordance with Part I, F.1.c of the CDPS-SCP, all reports for submittal shall be signed and certified for accuracy.

(20) Compliance Certification: In accordance with Part I, D.6.b.2.viii of the CDPS-SCP, compliance shall be certified through signature.

Inactivation Form



Dedicated to protecting and improving the health
 and environment of the people of Colorado

Effective date _____

COLORADO WATER QUALITY CONTROL DIVISION TERMINATION APPLICATION

Print or type all information. Mail original form with ink signature to the following address. Emailed and Faxed forms will not be accepted. All items must be filled out completely and correctly. If the form is not complete, you will be asked to resubmit it.

Colorado Dept of Public Health and Environment
 Water Quality Control Division WQCD-P-B2
 4300 Cherry Creek Drive South
 Denver CO 80246-1530

PART A. IDENTIFICATION OF PERMIT OR AUTHORIZATION - Please limit submission to one permit, certification, or authorization per form. All permit termination dates are effective on the date approved by the division. Processing times vary by type of discharge. Some discharge types require onsite inspections to verify information in this application.

PERMIT, CERTIFICATION, OR AUTHORIZATION NUMBER (DOES NOT END IN 0000) _____

PART B. PERMITTEE INFORMATION

Company Name _____

Legal Contact First Name _____ Last Name _____

Title Permits_SWConstruction

Mailing Address _____

City _____ State _____ Zip Code _____

Phone _____ Email address _____

PART C. FACILITY OR PROJECT INFORMATION

Facility/Project name _____

Location/Address _____

City _____ County _____

Local contact name _____ Title _____

Phone _____ Email address _____

PART D. TERMINATION INFORMATION QUESTIONS Provide information for Part D that applies to your facility and termination request. Not all questions need to be answered- only the part that applies to your facility.

Part D1 covers facilities no longer in operation.

Part D2 covers mining facilities no longer in operation

Part D3 covers facilities in operation but no longer discharging or needing permit coverage.

Part D4 covers Stormwater Construction facilities where construction is complete and the site is stabilized.

Please answer questions as completely as possible to assist in timely approval of this termination request.

D1. FACILITY IS NO LONGER IN OPERATION AT THIS LOCATION

All activities and discharges at the identified site have ceased; all potential pollutant sources have been removed; all industrial wastes have been disposed of properly; all DMR's, Annual Reports, and other reports have been submitted; and all elements of a Stormwater Management Plan have been completed (if this applies).

[FOR LAGOONS: please reference "information regarding Domestic Treatment Works Closure at Wastewater Treatment Facilities"](#)

D2. MINING FACILITY IS NO LONGER IN OPERATION AT THIS LOCATION.

Sand and Gravel, Coal or Hard Rock Mining

A. Mining operation is no longer discharging process/treated water. Bond has not been released by DRMS. A stormwater only permit is requested at this time. Attach application for Stormwater Only permit.

B. Reclamation of mining site is completed. Bond has been released by DRMS.
 YES Attach a copy of the Bond release letter. NO Explain below:

C. Reclamation of mining site is complete. Is there any continued mine drainage? Eg. Adits or unreclaimed waste piles? YES , Please explain, attach additional pages as necessary.

D3. FACILITY IS STILL IN OPERATION BUT IS NO LONGER DISCHARGING OR NO LONGER NEEDS A PERMIT

A. Facility continues to operate, however the activity producing the discharge has ceased (including changes in SIC Code resulting in change in duty to apply).

B. Termination is based on alternate disposal of discharges (discharge is being disposed of in another way)
a. Solid waste disposal unit (e.g. evaporative ponds)
b. No Exposure Exclusion (for industrial stormwater facilities only.) NOX Number _____
c. Combined with another authorized discharge. Permit Number _____
d. Permit is not required (includes coverage by low risk policy, etc.) - please explain, attach additional pages if necessary

C. PERMITTEE IS NO LONGER THE OWNER/OPERATOR OF THE SITE and all efforts have been made to transfer the permit to appropriate parties. Please attach copies of registered mail receipts, letters, etc.

D4. STORMWATER CONSTRUCTION FACILITIES WHERE CONSTRUCTION IS COMPLETE (Select A, B, or C)

A. SITE IS FINALLY STABILIZED OR CONSTRUCTION WAS NOT STARTED
a. The permitted activities meet the requirements for FINAL stabilization in accordance with the permit, the Stormwater Management Plan, and as described in item b. (explanation can be construction activities were not started).
b. Describe the methods used to meet final stabilization. (Required)

*Final Stabilization defined on page 3

D4. STORMWATER CONSTRUCTION FACILITIES WHERE CONSTRUCTION IS COMPLETE (Continued)

- B. ALTERNATIVE PERMIT COVERAGE OR FULL REASSIGNMENT
 - a. All ongoing construction activities including all disturbed areas, covered under the permit certification listed in Part B have coverage under a separate CDPS Stormwater Construction permit. The Division’s Reassignment form was used by the permittee to reassign all areas and activities.
 - b. Permit certification number covering the ongoing activities (Required)_____

- C. PERMITTEE IS NO LONGER THE OWNER OR OPERATOR OF THE FACILITY
 - All efforts have been made to transfer the permit to appropriate parties.
 - Please attach copies of registered mail receipt, letters, etc.

***Final stabilization is reached when:** all ground surface disturbing activities at the site have been completed including removal of all temporary erosion and sediment control measure, and uniform vegetative cover has been established with an individual plant density of at least 70 percent of predisturbance levels, or equivalent permanent, physical erosion reduction methods have been employed.

PART E. CERTIFICATION SIGNATURE REQUIRED FOR ALL TERMINATION REQUESTS

I certify under penalty of law that this document and all attachments were prepared under my direction and/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 individuals immediately 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. “ (See 18 USC 1001 and 33 USC 1319)

I certify that I am the legal representative of the above named company (PART B page 1).

- Applies to Stormwater Construction terminations:**
I understand that by submitting this notice of termination, I am no longer authorized to discharge stormwater associated with construction activity by the general permit. I understand that discharging pollutants in stormwater associated with construction activities to the waters of the State of Colorado, where such discharges are not authorized by a CDPS permit, is unlawful under the Colorado Water Quality Control Act and the Clean Water Act.

Signature of Legally Responsible Party

Date Signed

Name (printed)

Title

Signatory requirements: This termination request shall be signed, dated, and certified for accuracy by the permittee in accord with the following criteria:

1. In the case of a corporation, by a principal executive officer of at least the level of vice-president, or his or her duly authorized representative, if such representative is responsible for the overall operation of the operation from which the discharge described herein originates;
2. In the case of a partnership, by a general partner;
3. In the case of a sole proprietorship, by the proprietor;
4. In the case of a municipal, state, or other public operation, by either a principal executive officer, ranking elected official, or other duly authorized employee.