

HIGH NOTE REGIONAL PARK PHASE 1

GRADING EROSION AND SEDIMENT CONTROL (GESC) REPORT LONE TREE, COLORADO

Martin/Martin, Inc. Project No.: 24.1295

February 23, 2026

Prepared For: OJB Landscape Architecture
1899 Wynkoop Street, Suite 325
Denver, CO 80202
Attn: Jason Ferster
720.604.3385

Prepared By: Martin/Martin, Inc.
12499 West Colfax Avenue
Lakewood, Colorado 80215
303.431.6100

Principal-in-Charge: Scott E. Paling, PE
Project Manager: Brian A. Willems, PE
Design Engineer: Jayden Sanford, EIT



ENGINEER'S CERTIFICATION

I hereby affirm that this Erosion Control Report for the High Note Regional Park Phase 1 PROJECT was prepared by me, or under my direct supervision, for the owners thereof in accordance with the provisions of the Colorado Department of Public Health and Environment Water Quality Control Division Standards and Specifications and the Urban Drainage and Flood Control District Design Criteria Manual and approved variances and exceptions thereto.

Scott Paling, PE
Principal
Colorado Professional Engineer No. 37116

Date

NOTE

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

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I. PROJECT DESCRIPTION

This report represents a Grading, Erosion, and Sediment Control Plan for the High Note Regional Park Phase 1 project, located in a part of section 23 and 24, township 6 south, range 67 west of the 6th P.M. City of Lone Tree, County of Douglas, State of Colorado. This plan has been prepared to meet the regulatory requirements of the City of Lone Tree GESD Standards and Colorado Department of Health, Water Quality Control Division as well as appropriate provisions of the Colorado Water Control Act and the Federal Water Pollution Control Act.

The property is approximately 49.65 acres, an estimated 24.83 acres will be disturbed with this project. The proposed project will include vertical construction of one restroom, one restaurant, two soccer fields, one water feature, one playground, a surface parking lot with associated drive lanes, sidewalks, and landscaping. Construction tasks to be completed shall include the following sequential activities:

- Installation of erosion control measures
- Clearing and grubbing
- Overlot grading
- Utility Installation
- Building/Parking Lot/Drive Lane Construction
- Paving and Final Landscaping

II. EXISTING SITE CONDITIONS

The site is currently undeveloped and consists of native vegetation. The site has varying grades with most of the site sloping to the northwest and draining to the Happy Canyon Creek. The site grades vary from 0.5% to 25%. According to the FEMA FIRM panel 0803C0063H September 4, 2020, a portion of the site resides in Zone AO, a special flood hazard area. The northwest portion of this site was formerly located within zone AO with a flood depth of 2 feet. The Happy Canyon Creek Stream Improvements project by Merrick has removed this flood plain within the High Note Regional Park Phase 1 project area please refer to the updated FIRMette found in Appendix A.

III. ADJACENT AREAS

The property is bound to the north by RidgeGate Parkway, to the east by Lyric Street, to the west by Happy Canyon Creek, and to the south by the future High Note Avenue. Development of this site is not anticipated to have negative impacts on the adjacent areas. See the Appendix for a Vicinity Map.

IV. SOILS

The National Resources Conservation Services (NRCS) states that the soils in proximity to the development are Englewood clay loam and Newlin-Satanta complex. These soils are considered to be well-draining soils and are in Hydrologic Soil Group B and C. The NRCS soils map and soil resource report can be found in Appendix A.

V. AREAS AND VOLUMES

The development of the High Note Regional Park Phase 1 project property is approximately 49.65 acres and will disturb approximately 24.83 acres, this area will include staging and grading activities.

The site is anticipated to have approximately 48,000 CY of cut and 34,000 CY of fill for a net cut of approximately 14,000 CY. Excess cut material hauled offsite will be disposed of at an approved site. These soil volume estimates do not account for shrinkage, spoils, thickness of concrete/asphalt, etc.

VI. EROSION AND SEDIMENT CONTROL MEASURES

The Erosion Control narrative description within this report and the associated Erosion Control Plan are meant to satisfy the National Pollutant Discharge Elimination System (NPDES) construction permit requirement for a Storm Water Management Plan for the subject property, as well as the requirements set forth by The City of Lone Tree. Construction methods and materials will conform to those described in the City of Lone Tree standards, including the Best Management Practices (BMPs) to minimize soil erosion and sediment loads discharged off-site in storm water runoff.

Silt Fence

Prior to beginning any land-disturbing activities, silt fences will be installed around the construction site as designated on the plan. The silt fence will protect downstream property from receiving excessive sediment loads from the upgradient disturbed ground surfaces. The silt fence along the boundaries shall remain in place until the upstream disturbed area is stabilized and grass cover is approved by the City.

Vehicle Tracking Control

The entrance to the site shall be graveled for a minimum distance of 50 linear feet to retain mud and other potential pollutants on-site. A minimum thickness of 12 inches of 3-6" inch angular rock underlain by a woven geotextile fabric is required. If mud or soils are tracked onto the paved public roads, the roads shall be swept clean as soon as possible. No construction debris or soil deposits shall be allowed to impede the smooth flow of traffic on public roads.

Inlet Protection

On-site and existing off-site storm water inlets shall be protected with rock filters immediately after installation of the inlet. The filters will prevent construction-related sediment from being conveyed into the storm sewer system. The inlet protection shall remain in place until the upstream disturbed area is stabilized and grass cover is approved.

Sediment Control Log

Sediment control logs are to be utilized as part of inlet/outlet protection designs, perimeter control for stockpiles, as check dams in small diversion ditches with low velocities and flow, and on disturbed slopes to shorten flow lengths. The logs are to be installed as shown on the GESC Plans. The maximum tributary drainage area per 100 linear feet of logs is approximately 0.25 acres of land. Disturbed slope lengths are not to exceed 150 feet of the logs.

Curb Sock

Curb Socks are to be utilized within curb and gutter adjacent to the site as perimeter control for disturbed areas. When placed in the gutter, curb socks shall not extend more than two feet from the curb to allow traffic to pass safely. The curb socks are to be installed at a 30 degree angle toward the uphill side of the gutter. The maximum tributary drainage area per 100 linear feet of logs is approximately 0.25 acres of land. Disturbed slope lengths are not to exceed 150 feet of the curb socks.

Concrete Washout Area

The Concrete Washout Area (CWA) is to be installed prior to construction activities. The concrete washout area location on the Erosion Control Plans is for information only. Concrete washout areas may be lined or unlined excavated pits in the ground, commercially manufactured prefabricated washout containers, or above ground holding areas constructed of berms, sandbags or straw bales with a plastic liner.

Vegetation

Graded areas shall be vegetated or paved within 30 days following the completion of grading. Stockpiled soils that shall remain undisturbed for 30 or more days shall be temporarily vegetated with unirrigated native grass seed mix. Soil roughening in large, sloping areas is preferable to smooth grading for preventing sediment from being eroded and carried offsite. Soil roughening is understood to be included in the general earthwork and grading pay items to prevent excessive erosion, and no additional payments will be made for this work. Limited areas of native grass seeding are expected to be necessary.

Erosion Control Blanket

Erosion control blankets are a biodegradable material which provides erosion control and facilitates vegetation establishment, particularly on steep slopes. Erosion control blankets are required for all disturbed slopes greater than 4:1 (H:V). Erosion control blankets are to be left in place unless requested to be removed by the City.

Water Used to Control Dust

Dust control shall be implemented as needed once site grading has begun and during windy conditions (forecasted or actual wind conditions of 20 mph or greater) and/or at any time wind or construction activities creates significant visible dust carryover at/from the limits of the site.

VII. MATERIALS HANDLING AND SPILL PREVENTION

Vehicle maintenance and fueling area will be located within the construction staging area which will be determined by the contractor. All major equipment/vehicle fueling and maintenance will be performed off-site. This best management practice (BMP) applies to all construction projects. Spill control procedures are implemented anytime chemicals and/or hazardous substances are stored. Substances may include:

- Soil stabilizers/binders
- Dusts
- Herbicides
- Growth Inhibitors
- Fertilizers
- De-icing/anti-icing chemicals

- Fuels
- Lubricants
- Other petroleum distillates

To the extent that work can be accomplished safely, spills of oil, petroleum products, and sanitary and septic wastes shall be contained and cleaned up immediately.

No dedicated asphalt or concrete batch plants are anticipated to be located on-site.

VIII. SPILL PREVENTION AND CONTROL PLAN

A small, 20-gallon pickup bed fuel tank will be kept on-site in the combined staging area. When vehicle fueling must occur on-site, the fueling activity will occur in the staging area. Only minor equipment maintenance will occur on-site. All equipment fluids generated from maintenance activities will be disposed of into designated drums stored on spill pallets. Absorbent, spill-cleanup materials and spill kits will be available at the combined staging and materials storage area. Drip pans will be placed under all equipment receiving maintenance and vehicles and equipment parked overnight.

IX. SPILL RESPONSE AND NOTIFICATION

Document and record all spills, discharges, leaks, upsets, events, or overflows in the SWMP and Map. Include all pertinent information.

Minor Spills

Notify the Contractor's Superintendent, the Tri-County Health Department, and the City of Lone Tree Public Works Department immediately of an event that involves approximately 5 gallons or more and/or involves the following: 1) less than the reportable quantity, 2) stays within the permitted area, 3) does not threaten any stormwater conveyance.

Minor spills typically involve small quantities of oil, gasoline, paint, etc., which can be controlled by the first responder at the discovery of the spill.

Use absorbent material on small spills rather than hosing down or burying the spill.

Remove the absorbent materials promptly and dispose of properly.

The practice commonly followed for a small spill is:

- Contain the spread of the spill.
- Recover spilled materials.
- Clean the contaminated area and/or properly dispose of contaminated materials.

Semi-Significant Spills

Notify CDPHE, the Tri-County Health Department, and the City of Lone Tree Public Works Department within 24 hours and provide written documentation within 5 days of a spill that involves 1) reportable quantity, 2) any amount leaving the permitted area, 3) and/or threatens any stormwater conveyances. For larger spills, see the Spill Response reporting requirements at the back of this document.

Semi-significant spills still can be controlled by the first responder along with the aid of other personnel such as laborers and the foreman, etc. This response may require the cessation of all other activities.

Clean up spills immediately:

- a. Notify the Contractor's onsite foreman or superintendent immediately. The foreman or superintendent shall ensure the spill clean-up methods and procedures are followed.
- b. Contain the spread of the spill.
- c. If the spill occurs on paved or impermeable surfaces, clean up using "dry" methods (absorbent materials, cat litter, and/or rags). Contain the spill by encircling with absorbent materials and do not let the spill spread widely.
- d. If the spill occurs in dirt areas, immediately contain the spills by constructing an earthen dike. Dig up and dispose of contaminated soil.
- e. If the spill occurs during rain, cover the spill with tarps or other material to prevent contaminating runoff

Significant/Hazardous Spills

For significant or hazardous spills that cannot be controlled by personnel in the immediate vicinity, the following steps shall be taken:

- Notify CDPHE, the Tri-County Health Department, and the City of Lone Tree Public Works Department within 24 hours and provide written documentation within 5 days of discovering a spill and/or event that involves any substances requiring a MSDS response. Procedure should include, but not limited to 1) secure the area, 2) provide first aid, 3) and notify emergency response personnel.
- Notify Contractor's superintendent immediately and a follow up report shall be completed as soon as feasible.
- Notify the local emergency response by dialing 911. In addition to 911, the contractor will notify the proper County officials. It is the contractor's responsibility to have all emergency phone numbers at the construction site.
- For spills of federal reportable quantities, the contractor shall notify National Response Center at 1-800-424-8802.
- The services of a spills contractor or a Haz-Mat team shall be obtained immediately. Construction personnel shall not attempt to clean up the spill until the appropriate and qualified staff has arrived at the jobsite.
- Other agencies which may need to be consulted include, but are not limited to, the Fire Department, the Public Works Department, the Coast Guard, the Highway Patrol, the City/County Police Department, the Department of Toxic Substances, Federal OSHA, the State of Colorado CWQC Department.

*Report spills immediately to superintendent

*Check MSDS for proper spill response procedures

*Contain spill, start cleanup, report if over reportable quantity

* In case of reportable quantity release call: EPA National response Center (800) 424-8802

X. VEHICLE TRACKING CONTROL

Off-site vehicle tracking – Local streets

Paved surfaces which are adjacent to construction site or impacted by trucks hauling from the site must be swept by the close of each business day (and during the day as needed) when sediment and other materials are tracked or discharged onto them.

XI. WASTE MANAGEMENT AND DISPOSAL

Construction waste storage – Construction staging/storage area

All waste materials will be collected and disposed of into metal trash dumpsters in the materials storage area. Dumpsters will have a secure watertight lid, be placed away from stormwater conveyances and drains, and meet all federal, state, and municipal regulations. Only trash and construction debris from the site will be deposited in the dumpster. No construction materials will be buried on-site. All personnel will be instructed, during tailgate training sessions, regarding the correct disposal of trash and construction debris. Notices that state these practices will be posted in the office trailer and the individual who manages day-to-day site operations will be responsible for seeing that these practices are followed.

The cleaning of concrete delivery truck chutes is restricted to approved concrete wash out locations on the job site. The discharge of water containing waste concrete to the storm sewer system is prohibited. All concrete waste shall be properly cleaned up and disposed at an appropriate location.

Hazardous waste materials- Construction staging/storage area

All hazardous waste materials such as oil filters, petroleum products, paint, and equipment maintenance fluids will be stored in structurally sound and sealed shipping containers, within the hazardous materials storage area. Hazardous waste materials will be stored in appropriate and clearly marked containers and segregated from other non-waste materials. Secondary containment will be provided for all waste materials in the hazardous materials storage area and will consist of commercially available spill pallets. Additionally, all hazardous waste materials will be disposed of in accordance with federal, state, and municipal regulations. Hazardous waste materials will not be disposed of into the on-site dumpsters. All personnel will be instructed, during tailgate training sessions, regarding proper procedures for hazardous waste disposal. Notices that state these procedures will be posted in the office trailer and the individual who manages day-to-day site operations will be responsible for seeing that these procedures are followed.

XII. TIMING/PHASING SCHEDULE

Construction is expected to commence in April 2026 and end approximately in August 2027. Construction tasks to be completed shall include the following sequential activities.

- Installation of control measures
- Clearing and grubbing
- Overlot grading
- Utility Installation
- Installation of permanent storm sewer lines
- Construction of building, pavement, and drive lanes

Additional information regarding phasing and timing may be found in Appendix B of this report.

XIII. PERMANENT STABILIZATION

Permanent stabilization shall be achieved by installation of erosion control methods. Permanent erosion control for this project shall include one or more of the following methods:

- Landscaping
- Establishing dry land vegetation
- Paving

See the tables below for the City of Lone Tree seed mix. Refer to GESC plans and landscaping plans for installation location.

CITY OF LONE TREE PERMANENT DRILL SEEDING MIX

SPECIES	VARIETY	NOTES	% IN MIX	POUNDS OF PLS PER ACRE
BIG BLUESTEM	KAW	PNWS	10	1.1
YELLOW INDIANGRASS	CHEYENNE	PNWS	10	1
SWITCHGRASS	BLACKWELL	PNWS	10	0.4
SIDEOATS GRAMA	VAUGHN	PNWB	10	0.9
WESTERN WHEATGRASS	ARRIBA	PNCS	10	1.6
BLUE GRAMA	HACHITA	PNWB	10	0.3
THICKSPIKE WHEATGRASS	CRITANA	PNCS	10	1
PRAIRIE SANDREED	GOSHEN	PNWS	10	0.7
GREEN NEEDLEGRASS	LODORM	PNCB	10	1
SLENDER WHEATGRASS	PRYOR	PNCB	5	0.6
STREAMBANK WHEATGRASS	SODAR	PNCS	5	0.6
			TOTAL	9.2

CITY OF LONE TREE TEMPORARY DRILL SEEDING MIX

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

CITY OF LONE TREE LOW-GROWTH DRILL SEEDING MIX

SPECIES	VARIETY	NOTES	% IN MIX	POUNDS OF PLS PER ACRE
BUFFALOGRASS	TEXOKA	PNWS	20	3.2
BLUE GRAMA	HACHITA	PNWB	20	0.6
WESTERN WHEATGRASS	ARRIBA	PNCS	20	3.2
SIDEOATS GRAMA	VAUGHN	PNWB	20	1.8
THICKSPIKE WHEATGRASS	CRITANA	PNCS	10	1
STREAMBANK WHEATGRASS	SODAR	PNCS	10	1.2
			TOTAL	11.0

XIV. STORMWATER MANAGEMENT CONSIDERATIONS

Control of sediment throughout construction shall be accomplished in the following manner.

1. Before clearing and grubbing, sediment barriers shall be installed at strategic locations to intercept sheet flows that might deposit sediment onto off site properties.
2. During overlot grading, wind erosion control measures, such as silt fence, soil roughening and watering will be added.
3. After utilities are installed, erosion control shall be carried out by landscaping or planting with a designed temporary or perennial grass seed mixture. When necessary, additional erosion control shall be achieved by applying and anchoring straw/hay mulch.
4. Throughout all stages of construction, sediment and erosion control measures shall be inspected and maintained.
5. Sediment control measures shall be removed upon final stabilization of lands that contribute runoff waters to the structures.

The project is located in the Happy Canyon Creek Drainage Basin, which is tributary to the Cherry Creek. Runoff on the developed site is anticipated to be conveyed via proposed storm sewer to three proposed EURV ponds. Runoff from the site will ultimately drain to Happy Canyon Creek as indicated in the master drainage report titled "*Phase III Drainage Report for RidgeGate Southwest Village Filing 1,*" by JR Engineering, dated May 2021.

No springs, streams, wetlands, or other surface water are anticipated to be located on or near the site.

Additional information on sediment and erosion control tasks can be found in Appendix B

Anticipated allowable sources of non-stormwater discharge at the site may include runoff discharged during the use of the concrete washout area and construction dewatering. The location of the concrete washout area is shown on the GESC plans.

All dewatering on site shall be coordinated with a city of Lone Tree GESC Inspector and be free of sediment in accordance with the GESC Criteria Manual.

XV. MAINTENANCE

Inspections of sediment control measures shall occur after any significant wind, precipitation or snowmelt event that may cause erosion. As a minimum, inspection of all sediment and erosion control facilities shall be conducted at least every 7 days. Mitigation measures shall be inspected for at least the following:

- Accumulation of excess sediment and determination if the effectiveness of each structure is significantly reduced. Removal of accumulated sediment shall occur at the following limits: depth of 6" for silt fence, within 2.5" of the rock crest for inlet protection, and within ½ of the height of the crest of the log for sediment control logs.
- Damage to structures that need repairing to ensure their effectiveness.

- Addition or elimination of sediment and/or erosion control measures that are designed to control the movement of soil particles in a practical and effective manner.
- Immediate repair and/or replacement of necessary mitigation measures when total failures are found.
- Vehicle tracking control measures are to be inspected, repaired, and maintained to ensure it is acting as an effective sediment control measure.

Results of each inspection shall be recorded on the reporting form (see Appendix) that will be kept with the contractor or their representative. A copy of all inspection reports and plan markups of any changes to the approved GESC plan shall be maintained on-site and copies provided to the City upon request. Additional information on inspection and maintenance can be found in the Appendix.

REFERENCES

1. Douglas County Grading, Erosion, and Sediment Control Manual, March 2004/amended July 2019.
2. Douglas County Storm Drainage Design and Technical Criteria Manual, amended July 8, 2008
3. Urban Storm Drainage and Technical Criteria Manual (USDCM) Volumes 1, 2, and 3, dated September 1969, updated March 2024.
4. Master Drainage Plan for RidgeGate – Happy Canyon Creek and Badger Gulch Drainage Basins, prepared by Merrick & Company, dated February 2017.
5. Phase III Drainage Report for RidgeGate Southwest Village Filing 1, prepared by JR Engineering, LLC, dated May 2021.

APPENDIX A – VICINITY MAP, WEB SOIL SURVEY, FIRM MAP



RIDGEGATE PARKWAY

APPROXIMATE PROJECT
LOCATION

HAPPY CANYON CREEK
FLOODPLAIN

FUTURE HIGH
NOTE AVENUE

RIDGEGATE PARKWAY

LYRIC STREET

RIDGEGATE SOUTHWEST VILLAGE
REGIONAL INFRASTRUCTURE

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



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



January 13, 2026

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

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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

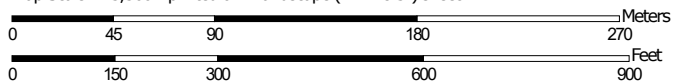
The soil map section includes the soil map for the defined area of interest, a list of soil map units on the map and extent of each map unit, and cartographic symbols displayed on the map. Also presented are various metadata about data used to produce the map, and a description of each soil map unit.

Custom Soil Resource Report Soil Map



Soil Map may not be valid at this scale.

Map Scale: 1:3,360 if printed on A landscape (11" x 8.5") sheet.



Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 13N WGS84

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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

 Spoil Area

 Stony Spot

 Very Stony Spot

 Wet Spot

 Other

 Special Line Features

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: Castle Rock Area, Colorado

Survey Area Data: Version 18, Aug 29, 2025

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

Date(s) aerial images were photographed: Mar 1, 2023—Sep 1, 2023

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	11.9	TYPE C 46.9%
Lo	Loamy alluvial land	0.9	TYPE C 3.6%
NsE	Newlin-Satanta complex, 5 to 20 percent slopes	12.6	TYPE B 49.5%
Totals for Area of Interest		25.4	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 delineation of such segments on the map provides sufficient information for the

Custom Soil Resource Report

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: Farmland of statewide importance

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

Lo—Loamy alluvial land

Map Unit Setting

National map unit symbol: jqzb

Elevation: 7,000 to 8,000 feet

Mean annual precipitation: 17 to 19 inches

Mean annual air temperature: 44 to 46 degrees F

Frost-free period: 115 to 120 days

Farmland classification: Not prime farmland

Map Unit Composition

Loamy alluvial land: 80 percent

Minor components: 20 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Loamy Alluvial Land

Setting

Landform: Flood plains, swales

Down-slope shape: Linear

Across-slope shape: Linear

Typical profile

H1 - 0 to 20 inches: sandy loam

H2 - 20 to 40 inches: stratified loamy sand to clay loam

H3 - 40 to 60 inches: sand and gravel

Properties and qualities

Slope: 1 to 5 percent

Drainage class: Well drained

Runoff class: Very low

Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high
(0.20 to 6.00 in/hr)

Depth to water table: About 48 to 72 inches

Frequency of flooding: Frequent

Calcium carbonate, maximum content: 5 percent

Maximum salinity: Nonsaline to slightly saline (0.0 to 4.0 mmhos/cm)

Available water supply, 0 to 60 inches: Moderate (about 6.0 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 4w

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Hydrologic Soil Group: C
Ecological site: R049XY036CO - Overflow
Hydric soil rating: No

Minor Components

Sampson

Percent of map unit: 7 percent
Hydric soil rating: No

Bresser

Percent of map unit: 7 percent
Hydric soil rating: No

Sandy alluvial land

Percent of map unit: 5 percent

Fluvaquentic haplustolls

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

NsE—Newlin-Satanta complex, 5 to 20 percent slopes

Map Unit Setting

National map unit symbol: jqzh
Elevation: 5,500 to 6,600 feet
Mean annual precipitation: 15 to 19 inches
Mean annual air temperature: 49 to 51 degrees F
Frost-free period: 120 to 135 days
Farmland classification: Not prime farmland

Map Unit Composition

Newlin and similar soils: 50 percent
Satanta and similar soils: 30 percent
Minor components: 20 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Newlin

Setting

Landform: Drainageways, knobs
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Unconformable sandy and gravelly and/or mixed source alluvium

Typical profile

H1 - 0 to 8 inches: gravelly sandy loam
H2 - 8 to 17 inches: gravelly sandy clay loam
H3 - 17 to 22 inches: gravelly sandy loam
H4 - 22 to 60 inches: very gravelly sand

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Properties and qualities

Slope: 5 to 20 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 high to high (0.20 to 2.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Low (about 3.8 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 6e
Hydrologic Soil Group: B
Ecological site: R049XC202CO - Loamy Foothill Palmer Divide
Hydric soil rating: No

Description of Satanta

Setting

Landform: Drainageways, knobs
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Eolian deposits derived from mixed

Typical profile

H1 - 0 to 9 inches: loam
H2 - 9 to 30 inches: clay loam
H3 - 30 to 60 inches: loam

Properties and qualities

Slope: 5 to 10 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 high to high (0.60 to 2.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 10 percent
Available water supply, 0 to 60 inches: High (about 10.2 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 4e
Hydrologic Soil Group: B
Ecological site: R049XY214CO - Gravelly Foothill
Hydric soil rating: No

Minor Components

Bresser

Percent of map unit: 6 percent
Hydric soil rating: No

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Buick

Percent of map unit: 6 percent

Hydric soil rating: No

Truckton

Percent of map unit: 6 percent

Hydric soil rating: No

Aquic haplustolls

Percent of map unit: 2 percent

Landform: Swales

Hydric soil rating: Yes

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FLOOD HAZARD INFORMATION

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR DRAFT FIRM PANEL LAYOUT

SPECIAL FLOOD HAZARD AREAS		Without Base Flood Elevation (BFE)
		With BFE or Depth Zone AE, AO, AH, VE, AR
		Regulatory Floodway
OTHER AREAS OF FLOOD HAZARD		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
		Area with Flood Risk due to Levee Zone D
OTHER AREAS		NO SCREEN Area of Minimal Flood Hazard Zone X
		Effective LOMRs
GENERAL STRUCTURES		Area of Undetermined Flood Hazard Zone D
		Channel, Culvert, or Storm Sewer
		Levee, Dike, or Floodwall
OTHER FEATURES		Cross Sections with 1% Annual Chance
		Water Surface Elevation
		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 (1-877-336-6627) 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.

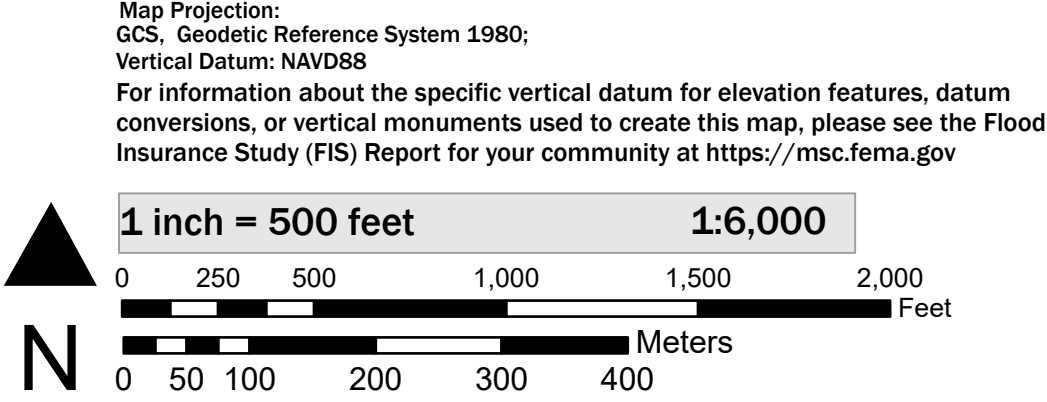
To determine if flood insurance is available in this community, contact your Insurance agent or call the National Flood Insurance Program at 1-800-638-6620.

Basemap information shown on this FIRM was provided in digital format by USDA, Farm Service Agency (FSA). This information was derived from NAIP, dated April 11, 2018.

This map was exported from FEMA's National Flood Hazard Layer (NFHL) on **1/13/2026 12:07 AM** and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time. For additional information, please see the Flood Hazard Mapping Updates Overview Fact Sheet at <https://www.fema.gov/media-library/assets/documents/118418>

This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards. This map image is void if the one or more of the following map elements do not appear: basemap imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date.

SCALE

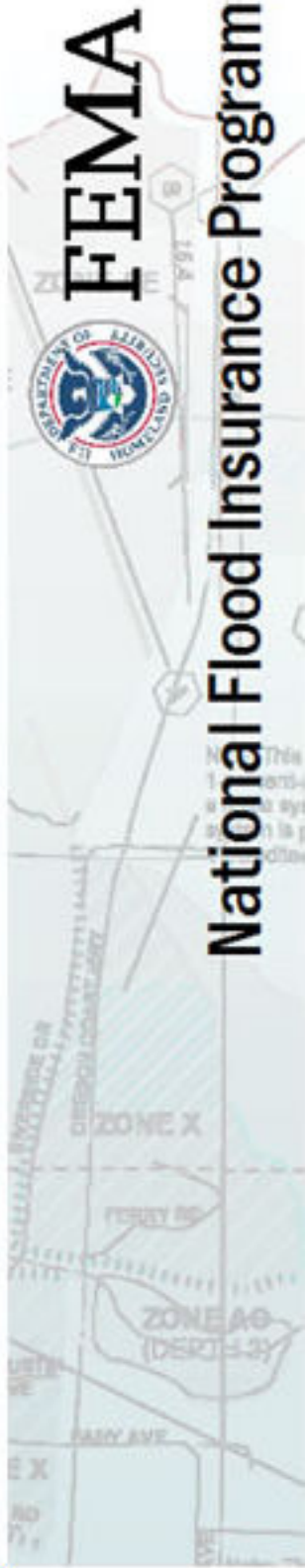


NATIONAL FLOOD INSURANCE PROGRAM
FLOOD INSURANCE RATE MAP

PANEL 63 OF 461

Panel Contains:

COMMUNITY	080319	0063
CITY OF LONE TREE	080049	0063
DOUGLAS COUNTY		



APPENDIX B – PHASE AND TASK OUTLINE FOR SEDIMENT AND EROSION CONTROL

PHASE I--BEFORE MAJOR OVERLOT GRADING ACTIVITIES COMMENCE

Site Entrances	Place vehicle traffic controls on the entrance.
Designated Areas on Plan	Install a silt fence barrier.
Designated Areas on Plan	Install construction fence
Curb Socks	Install curb socks
Inlet Protection	Install inlet protection

PHASE II--DURING INITIAL OVERLOT GRADING ACTIVITIES

Disturbed Lands That Contribute Runoff	It is recommended wind erosion control be implemented by water application ASAP on disturbed lands where construction shall not occur.
---	--

PHASE III--IMMEDIATELY AFTER OVERLOT GRADING IS COMPLETED

Disturbed Lands That Contribute Runoff	If construction is to be delayed for more than 30 days, stabilization is to be achieved by both planting perennial grass seed and applying straw/hay mulch or planting a temporary cover crop. After one growing season, perennial grass seed is to be planted amongst any temporary cover crop residue if continued delay in construction occurs. Erosion control blankets placed on all slopes greater than 4:1.
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SEDIMENT AND EROSION CONTROL INSPECTION CRITERIA

Throughout Construction	Inspect all sediment and erosion control measures whenever any significant wind, precipitation or snowmelt event occurs. Or Inspect all sediment and erosion control measures at least every 7 days.
-------------------------	--

Required Documentation	Complete and retain a written record of when inspections occurred.
Regulatory Requirements	Complete and retain inspection records and records on any corrective measures taken.

SEDIMENT AND EROSION CONTROL MAINTENANCE CRITERIA

Silt Fence Barriers or Continuous Berms	Immediately repair any obvious signs of failures (e.g., destruction of fence, crushed barriers, etc.).
Containment Systems Including Barriers	Barriers: Remove material when accumulated sediments are within six inches of the top. All sediment removed is to be placed upstream of a containment system and stabilized against erosion.
Erosion Control Practices	Mulched Areas: If grass has not become established, replace mulch that has been removed.
Regulatory Requirements	Include written comments with the inspection reports on any action that was completed.
Inlet Structures	Remove sediment from gravel. Maintain plywood on top of outlet structure.

APPENDIX C – INSPECTION FORM, COST ESTIMATE, CITY CHECKLIST

SWMP EVALUATION REPORTING FORM

Project: _____		By: _____		Date: / /	
Permit No. _____				G = GOOD, F = FAIR, P = POOR, Y = YES, N = NO	
		Overall Condition		Need Repair	
				Comments	
STRUCTURAL MEASURES					
Sediment Containment Systems		G F P	Y N		
Barriers for Sheet Flows					
Bale		G F P	Y N		
Silt Fence		G F P	Y N		
		G F P	Y N		
Drain/Inlet Protection					
Bale Barriers		G F P	Y N		
Rock Barriers		G F P	Y N		
Inserts		G F P	Y N		
		G F P	Y N		
Channel Check Structures					
Bale Barriers		G F P	Y N		
Rock Barriers		G F P	Y N		
		G F P	Y N		
Other BMPs					
Vehicle Tracking Pad		G F P	Y N		
		G F P	Y N		
NON-STRUCTURAL MEASURES					
Diversion Dikes and/or Swales		G F P	Y N		
Slope Drains		G F P	Y N		
Temporary Vegetation		G F P	Y N		
Perennial Vegetation		G F P	Y N		
Mulch and/or BFM Protection		G F P	Y N		
Soil Binder Protection		G F P	Y N		
Hillside RECPs		G F P	Y N		
Drainage Channel TRMs		G F P	Y N		
Riprap and/or Gabions		G F P	Y N		
		G F P	Y N		
		G F P	Y N		

SWMP EVALUATION REPORTING FORM

Will existing BMPs need to be modified or removed or additional BMPs installed? YES NO If yes, list the action items to be completed on the following table.

Actions to be Completed		Date Completed
1.		
2.		
3.		
4.		
5.		
6.		

Weather information since the last evaluation was held.

Event	Date Began	Duration (Hours)	Amount (Inches)		Event	Date Began	Duration (Hours)	Amount (Inches)
1					2			
3					4			
5					6			

Are uncontrolled releases of mud or muddy water from the site and/or deposits of sediment evident? YES NO If yes, where and what corrective actions are to occur?

Are non-compliance incidents evident? YES NO If no, sign the following statement: It is my belief that the facility is in compliance with the SWMP and this permit.

If yes, should the SWMP drawings be modified? YES NO If yes, the following drawing modifications are to be completed within seven days.

Comments:

Evaluation completed on: _____ by: _____
(Signature)

Owner's Representative: _____



CITY OF LONE TREE

GESC Permit Opinion of Probable Cost

Project: High Note Regional Park Phase 1	Date: February 23, 2026
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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	4,124	\$ 8,248.00
6	Construction Markers	CM	LF	\$ 0.20	0	\$ -
7	Curb Sock	CS	LF	\$ 8.00	11	\$ 88.00
8	Dewatering	DW	EA	\$ 600.00	0	\$ -
9	Diversion Ditch	DD	LF	\$ 1.60	1,980	\$ 3,168.00
10	Erosion Control Blanket	ECB	SY	\$ 5.00	4,711	\$ 23,555.00
11	Inlet Protection	IP	LF	\$ 20.00	13	\$ 260.00
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	20	\$ 180.00
15	Sediment Basin	SB	AC (1)	(2)	19.0	\$ 4,800.00
16	Sediment Control Log	SCL	LF	\$ 2.00	0	\$ -
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	12.5	\$ 9,367.50
19	Silt Fence	SF	LF	\$ 2.00	2,796	\$ 5,592.00
20	Stabilized Staging Area	SSA	SY	\$ 2.00	2,000	\$ 4,000.00
21	Surface Roughening	SR	AC	\$ 600.00	0.0	\$ -
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 \$ 61,358.50
(2) SB Cost = \$1000 +\$200(Upstream Tributary Acres)						15% CONTINGENCY \$ 9,203.78
						GESC SURETY TOTAL (1) \$ 70,562.28

NOTE: (1) **MINIMUM SURETY shall be \$2,500.00** (Per Section 16-31-110 of City Zoning Code) (Rev. 1-18-12)



Project:

Date:

All Plan Sheets

- | | | | |
|---|--|------------------------------|--|
| Yes ☒ | No ☐ | N/A ☐ | 1. Title Block (consistent on all sheets) |
| Yes ☐ | No ☒ | N/A ☐ | 2. Legal Name (Subdivision Name and Filing Number) |
| Yes ☒ | No ☐ | N/A ☐ | 3. Sheet Number |
| Yes ☒ | No ☐ | N/A ☐ | 4. Graphic and Written Scale |
| Yes ☒ | No ☐ | N/A ☐ | 5. North Arrow |
| Yes ☒ | No ☐ | N/A ☐ | 6. Current Date of Plan Preparation |
| Yes ☒ | No ☐ | N/A ☐ | 7. City Acceptance Block (available upon request) |

Cover Sheet

- | | | | |
|---|--|---|---|
| Yes ☒ | No ☐ | N/A ☐ | 1. Project name |
| Yes ☐ | No ☐ | N/A ☒ | 2. Project address |
| Yes ☒ | No ☐ | N/A ☐ | 3. Owner (and Applicant's if different) name and address |
| Yes ☒ | No ☐ | N/A ☐ | 4. Design firm's name and address |
| Yes ☒ | No ☐ | N/A ☐ | 5. Plan sheet index |
| Yes ☐ | No ☒ | N/A ☐ | 6. Original date of preparation and subsequent revisions |
| Yes ☒ | No ☐ | N/A ☐ | 7. The following note:

<p style="margin-left: 40px;">THE GRADING, EROSION AND SEDIMENT CONTROL PLAN INCLUDED HEREIN HAS BEEN PLACED IN THE CITY OF LONE TREE FILE FOR THIS PROJECT AND APPEARS TO FULFILL APPLICABLE LONE TREE GRADING, EROSION AND SEDIMENT CONTROL CRITERIA, AS AMENDED. 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.</p> |
| Yes ☒ | No ☐ | N/A ☐ | 8. GESC Plan Designer's signature block with name, date, and Professional Engineer registration number. Signature block shall include the following note:

<p style="margin-left: 40px;">THE GRADING, EROSION AND SEDIMENT CONTROL PLAN INCLUDED HEREIN HAS BEEN PREPARED UNDER MY DIRECT SUPERVISION IN ACCORDANCE WITH THE REQUIREMENTS OF THE GRADING, EROSION, AND SEDIMENT CONTROL (GESC) CRITERIA MANUAL OF DOUGLAS COUNTY AS AMENDED.</p> |
| Yes ☒ | No ☐ | N/A ☐ | 9. General Location Map (at a reasonable scale) indicating: <ul style="list-style-type: none"> a. general vicinity of the site location b. major roadway names c. north arrow and scale |

**GESC Drawing Index Sheet (if applicable)**

For projects that require multiple plan-view sheets to adequately show the project area (based on the specified scale ranges), a single plan-view sheet shall be provided at a scale appropriate to show the entire site on one sheet. Areas of coverage of the multiple blow-up sheets are to be indicated as rectangles on the index sheet.

Initial GESC Plan

Yes ☒	No ☐	N/A ☐	1.	Property Lines
Yes ☒	No ☐	N/A ☐	2.	Existing and proposed easements
Yes ☐	No ☒	N/A ☐	3.	Existing topography at one- or two-foot contour intervals, extending a minimum of 100 feet beyond the property line
Yes ☒	No ☐	N/A ☐	4.	Location of any existing structures or hydrologic features within the mapping limits
Yes ☒	No ☐	N/A ☐	5.	USGS Benchmark used for project
Yes ☒	No ☐	N/A ☐	6.	Limits of construction encompassing all areas of work, including: • Access points, storage and staging areas, borrow areas, stockpiles, and utility tie-in locations in on-site and off-site locations • Stream corridors and other resource areas to be preserved and all other areas outside the limits of construction shall be lightly shaded to clearly show area not to be disturbed.
Yes ☒	No ☐	N/A ☐	7.	Location of stockpiles, including topsoil, imported aggregates, and excess material
Yes ☒	No ☐	N/A ☐	8.	Location of storage and staging areas for equipment, fuel, lubricant, chemical (and other materials) and waste storage
Yes ☒	No ☐	N/A ☐	9.	Location of borrow or disposal areas
Yes ☐	No ☐	N/A ☒	10.	Location of temporary roads
Yes ☒	No ☐	N/A ☐	11.	Location, map symbol, and letter callouts of all initial erosion and sediment control BMPs
Yes ☒	No ☐	N/A ☐	12.	Information to be specified for each BMP, such as type and dimensions, as called for in the Standard Notes and Details
Yes ☒	No ☐	N/A ☐	13.	The following note: • SEE COVER SHEET OF LONE TREE STANDARD NOTES AND DETAILS (SHEET 1 OF 3) FOR LEGEND OF BMP NAMES AND SYMBOLS.
Yes ☐	No ☐	N/A ☒	14.	Other information as may be reasonably required by Lone Tree



Interim GESC Plan

Yes ☒	No ☐	N/A ☐	1.	Items 1, 2, and 4 through 10 from the Initial GESC Plan
Yes ☐	No ☒	N/A ☐	2.	Existing topography at one- or two-foot contour intervals extending a minimum of 100 feet beyond the property line, as shown on Initial GESC Plan. These contours shall be screened.
Yes ☒	No ☐	N/A ☐	2.	Location of all existing erosion and sediment control measures on site, as shown on the Initial GESC Plan Sheet. These control measures shall be screened. Dimension information for initial stage BMPs shall not be shown.
Yes ☒	No ☐	N/A ☐	3.	Proposed topography at one- or two-foot contour intervals, showing elevations, dimensions, locations, and slope of all proposed grading
Yes ☒	No ☐	N/A ☐	4.	Outlines of cut and fill areas
Yes ☒	No ☐	N/A ☐	5.	Location of all interim erosion and sediment controls, designed in conjunction with the proposed site topography, but also considering the controls designed for the existing topography.
Yes ☒	No ☐	N/A ☐	6.	Locations of all buildings, drainage features and facilities, paved areas, retaining walls, cribbing, water quality facilities, or other permanent features to be constructed in connection with, or as a part of, the proposed work, per approved plat, SIP, RSP, or other improvement plan.
Yes ☒	No ☐	N/A ☐	7.	The following notes: • SEE COVER SHEET OF LONE TREE STANDARD NOTES AND DETAILS (SHEET 1 OF 3) FOR LEGEND OF BMP NAMES AND SYMBOLS. • SHADED BMPS INSTALLED IN THE INITIAL STAGE SHALL BE LEFT IN PLACE IN THE INTERIM STAGE. • ALL INTERIM BMPS, INCLUDING SEEDING AND MULCHING OF DISTURBED AREAS, MUST BE COMPLETED PRIOR TO ISSUANCE OF ANY CURB AND GUTTER PERMITS. • SEE CONSTRUCTION PLANS FOR DETAILS OF PERMANENT DRAINAGE FACILITIES SUCH AS DETENTION FACILITIES, CULVERTS, STORM DRAINS, AND INLET AND OUTLET PROTECTION.
Yes ☒	No ☐	N/A ☐	8.	Summary of cut and fill volumes
Yes ☐	No ☐	N/A ☒	9.	Other information as may be reasonably required by Lone Tree



Final GESC Plan

Yes ☒	No ☐	N/A ☐	1.	Items 1, 2, and 5 from the Initial GESC Plan
Yes ☐	No ☒	N/A ☐	2.	Existing topography in areas of proposed contours shall not be shown.
Yes ☒	No ☐	N/A ☐	3.	Existing Initial and Interim BMPs shall be shown (screened). Dimension information shall not be shown.
Yes ☒	No ☐	N/A ☐	4.	Directional flow arrows on all drainage features
Yes ☒	No ☐	N/A ☐	5.	Any Initial or Interim BMPs that are to be removed and any resulting disturbed area to be stabilized
Yes ☒	No ☐	N/A ☐	6.	Location of all Final erosion and sediment control BMPs (including seeding and mulching of any areas not stabilized in the Interim Plan), permanent landscaping, and measures necessary to minimize the movement of sediment off site until permanent vegetation can be established.
Yes ☒	No ☐	N/A ☐	7.	Show area of buildings, pavement, sod, and permanent landscaping (define types) per accepted improvement plan.
Yes ☒	No ☐	N/A ☐	8.	Show seeding and mulching (SM) everywhere except within the limits of buildings and pavement areas.
Yes ☐	No ☐	N/A ☒	9.	Show other BMPs considered by the designer to be appropriate.
Yes ☒	No ☐	N/A ☐	10.	Show the following BMPs to be removed prior to end of construction: • Indicate dewatering (DW) to be removed. • Indicate temporary stream crossings (TSC) to be removed. • Indicate stabilized staging area (SSA) to be removed. • Indicate street inlet protection (IP) to be removed. • Indicate vehicle tracking control (VTC) to be removed. • Indicate construction fence (CF) to be removed.
Yes ☒	No ☐	N/A ☐	11.	Include the following notes: • SEE COVER SHEET OF LONE TREE STANDARD NOTES AND DETAILS (SHEET 1 OF 3) FOR LEGEND OF BMP NAMES AND SYMBOLS. • SHADED BMPs INSTALLED IN THE INITIAL AND INTERIM GESC PLANS, UNLESS OTHERWISE INDICATED, SHALL BE LEFT IN PLACE UNTIL REVEGETATION ESTABLISHMENT IS APPROVED BY THE CITY. • SEE CONSTRUCTION PLANS FOR DETAILS OF PERMANENT DRAINAGE FACILITIES SUCH AS DETENTION FACILITIES, CULVERTS, STORM DRAINS, AND INLET AND OUTLET PROTECTION.
Yes ☐	No ☐	N/A ☒	12.	Other information as may be reasonably required by Lone Tree



GESC Report

- | | | | | |
|---|-----------------------------|------------------------------|-----|---|
| Yes ☒ | No ☐ | N/A ☐ | 1. | <u>Name, Address, and Telephone Number of Applicant(s)</u> – The name, address, and telephone number of the Professional Engineer preparing (or supervising the preparation of) the GESC Plan shall also be included, if different from the Applicant's. |
| Yes ☒ | No ☐ | N/A ☐ | 2. | <u>Project Description</u> – A brief description of the nature and purpose of the land-disturbing activity, the total area of the site, the area of disturbance involved, and project location including township, range, section and quarter section, or the latitude and longitude, of the approximate center of the project. |
| Yes ☒ | No ☐ | N/A ☐ | 3. | <u>Existing Site Conditions</u> – A description of the existing topography, vegetation, and drainage; a description of any wetlands on the site; and any other unique features of the property. |
| Yes ☒ | No ☐ | N/A ☐ | 4. | <u>Adjacent Areas</u> – A description of neighboring areas such as streams, lakes, residential areas, roads, etc., which might be affected by the land disturbance. |
| Yes ☒ | No ☐ | N/A ☐ | 5. | <u>Soils</u> – A brief description of the soils on the site including information on soil type and names, mapping unit, erodibility, permeability, hydrologic soil group, depth, texture, and soil structure (this information may be obtained from the soil report for the site, for adjacent sites if acceptable to the County, or the applicable Soil Survey prepared by the Natural Resources Conservation Service). |
| Yes ☒ | No ☐ | N/A ☐ | 6. | <u>Areas and Volumes</u> – An estimate of the quantity (in cubic yards) of excavation and fill involved (indicating a balance onsite), and the surface area (in acres) of the proposed disturbance. |
| Yes ☒ | No ☐ | N/A ☐ | 7. | <u>Erosion and Sediment Control Measures</u> – A description of the methods presented in the GESC Criteria Manual that will be used to control erosion and sediment on the site. |
| Yes ☒ | No ☐ | N/A ☐ | 8. | <u>Timing/Phasing Schedule</u> – A schedule indicating the anticipated starting and completion time periods of the site grading and/or construction sequence, including the installation and removal of erosion and sediment control BMPs. Indicate the anticipated starting and completion time periods of individual project phases. |
| Yes ☒ | No ☐ | N/A ☐ | 9. | <u>Permanent Stabilization</u> – A brief description, including applicable specifications, of how the site will be stabilized after construction is completed. |
| Yes ☒ | No ☐ | N/A ☐ | 10. | <u>Stormwater Management Considerations</u> – Explain how stormwater runoff from and through the site will be handled during construction. |
| Yes ☒ | No ☐ | N/A ☐ | 11. | <u>Maintenance</u> – Any special maintenance requirements over and above what is identified in the standard notes and details. |
| Yes ☒ | No ☐ | N/A ☐ | 12. | <u>Opinion of Probable Cost (City Format)</u> – An opinion of probable costs for erosion and sediment control, including anticipated maintenance during the construction phase, shall be submitted with the GESC Plan. This will be reviewed by City staff and used as a basis for fiscal security. Electronic or paper copies of the spreadsheet to be used for preparing the opinion of probable costs for erosion and sediment control are available upon request. Unit costs used to develop probable erosion and sediment control costs shall be those shown in the spreadsheet. |



Yes ☐	No ☐	N/A ☒	13. <u>Calculations</u> – Any calculations made for the design of such items as sediment basins or erosion control blanket selection.
Yes ☐	No ☐	N/A ☒	14. <u>Other Information</u> – As may be reasonably required by Lone Tree.
Yes ☒	No ☐	N/A ☐	15. <u>The Following Note</u> – “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 Criteria, 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.”
Yes ☒	No ☐	N/A ☐	16. <u>Signature Page for Permittees</u> - Acknowledging the review and acceptance of responsibility, and a statement by the Professional Engineer acknowledging responsibility for the preparation of the GESC Plan (available upon request).

Preparer's Signature _____

Date _____

APPENDIX D – GESC PLANS

ABBREVIATIONS:

APPROX	APPROXIMATE
ARCH	ARCHITECT
BLDG	BUILDING
BM	BENCHMARK
BOC	BACK OF CURB
CIP	CAST IRON PIPE
CL	CENTERLINE
CMP	CORRUGATED METAL PIPE
CO	CLEANOUT
CONC	CONCRETE
CONT	CONTOUR
COR	CORNER
CU	COPPER
DEMO	DEMOLITION
DIA OR Ø	DIAMETER
DIM	DIMENSION
DIP	DUCTILE IRON PIPE
DTL.	DETAIL
EL	ELEVATION
ELEC	ELECTRICAL
ESMT	EASEMENT
EX	EXISTING
FDC	FIRE DEPARTMENT CONNECTION
FES	FLARED END SECTION
FFE	FINISHED FLOOR ELEVATION
FGW	FINISHED GRADE AT WALL
FHY	FIRE HYDRANT
FL	FLOW LINE
FT	FOOT
GB	GRADE BREAK
GR	GRATE (AREA OR VALLEY INLETS)
GV	GATE VALVE
HERCP	HORIZONTAL ELLIPTICAL REINFORCED CONCRETE PIPE
HDPE	HIGH DENSITY POLYETHYLENE PIPE
HGL	HYDRAULIC GRADE LINE
HORZ	HORIZONTAL
HP	HIGH POINT
INV	INVERT
LF	LINEAL FEET
LP	LOW POINT
LT	LEFT
MAX	MAXIMUM
MECH	MECHANICAL
MEP	MECHANICAL, ELECTRICAL AND PLUMBING
MH	MANHOLE
MIN	MINIMUM
N.I.C.	NOT IN CONTRACT
NTS	NOT TO SCALE
PC	POINT OF CURVE
PCC	POINT OF COMPOUND CURVE
PI	POINT OF INTERSECTION
PRC	POINT OF REVERSE CURVE
PT	POINT OF TANGENCY
PERF	PERFORATED
PERIM	PERIMETER
PERP	PERPENDICULAR
PIV	PRESSURE INDICATOR VALVE
PL	PROPERTY LINE
PLBG	PLUMBING
PRKG	PARKING
PRV	PRESSURE REDUCING VALVE
PVC	POLYVINYL CHLORIDE PIPE
PVMT	PAVEMENT
RCP	REINFORCED CONCRETE PIPE
RD	ROOF DRAIN
R.O.W.	RIGHT OF WAY
RT	RIGHT
SSWR	SANITARY SEWER
SF	SQUARE FOOT
STA	STATION
STRM	STORM SEWER
STRC	STRUCTURAL
SWLK	SIDEWALK
SY	SQUARE YARD
TELE	TELEPHONE
TB	THRUST BLOCK
TEMP	TEMPORARY
TOC	TOP OF CURB
TOW	TOP OF WALL (RE: NOTE BELOW)
TYP.	TYPICAL
UD	UNDER DRAIN
UG	UNDERGROUND
VERT	VERTICAL
VC	VERTICAL CURVE

NOTE: TOW SHALL BE TOP OF WATER ON UTILITY SHEETS ONLY AND TOP OF WALL ON ALL OTHER SHEETS.

HIGH NOTE REGIONAL PARK PHASE 1 GRADING, EROSION, AND SEDIMENT CONTROL PLANS

RIDGEGATE SW VILLAGE, FILING NO. 1, AMENDMENT 1

A PART OF SECTION 23 AND 24, TOWNSHIP 6 SOUTH,

RANGE 67 WEST OF THE 6TH P.M.

CITY OF LONE TREE, DOUNTY OF DOUGLAS,

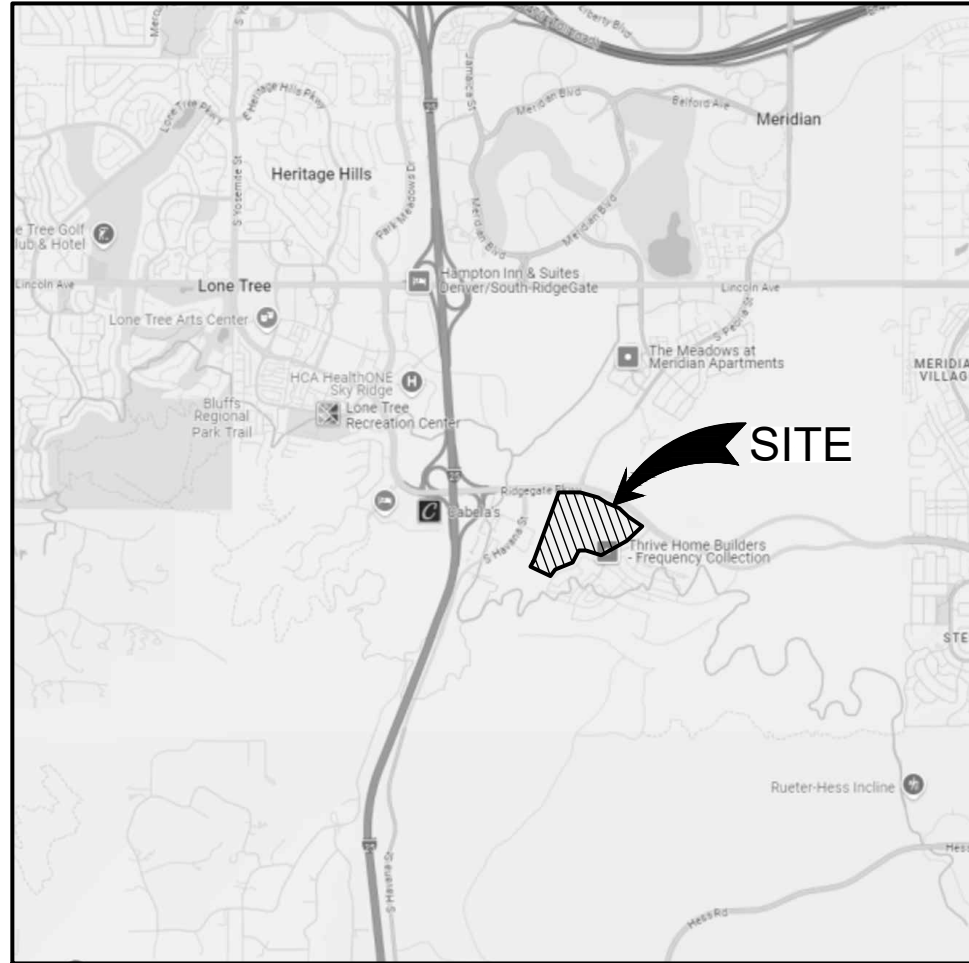
STATE OF COLORADO

CITY OF LONE TREE GENERAL NOTES:

1. THE GRADING, EROSION AND SEDIMENT CONTROL PLAN INCLUDED HEREIN HAS BEEN PLACED IN THE CITY OF LONE TREE FILE FOR THIS PROJECT AND APPEARS TO FULFILL APPLICABLE LONE TREE GRADING, EROSION AND SEDIMENT CONTROL CRITERIA, AS AMENDED. 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.

MARTIN/MARTIN EROSION CONTROL NOTES:

1. THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL REQUIRED PERMITS AND IMPLEMENTING AND MAINTAINING EROSION AND SEDIMENT CONTROL MEASURES AT ALL TIMES DURING CONSTRUCTION TO PREVENT DAMAGING FLOWS ON THE SITE AND IN THE WATERSHED BELOW THE SITE. CONTROL SYSTEMS SHALL BE INSTALLED PRIOR TO STRIPPING OF NATIVE VEGETATIVE COVER AND AS GRADING PROGRESSES. REFER TO SEDIMENT AND EROSION CONTROL PLANS AND STORM WATER MANAGEMENT PLAN. CONDITIONS IN THE FIELD MAY WARRANT EROSION CONTROL MEASURES IN ADDITION TO WHAT IS SHOWN ON THESE PLANS. THE PLAN MAY BE MODIFIED WITH APPROPRIATE APPROVALS AS FIELD CONDITIONS WARRANT.
2. NATURAL VEGETATION SHALL BE RETAINED AND PROTECTED WHEREVER POSSIBLE. EXPOSURE OF SOIL TO EROSION BY REMOVAL OR DISTURBANCE OF VEGETATION SHALL BE LIMITED TO THE AREA REQUIRED FOR IMMEDIATE CONSTRUCTION OPERATION AND FOR THE SHORTEST PRACTICAL PERIOD OF TIME.
3. TOPSOIL SHALL BE STOCKPILED TO THE EXTENT PRACTICABLE ON THE SITE FOR USE ON AREAS TO BE REVEGETATED. ANY AND ALL STOCKPILES SHALL BE LOCATED AND PROTECTED FROM EROSION ELEMENTS.
4. AT ALL TIMES, THE PROPERTY SHALL BE MAINTAINED AND/OR WATERED TO PREVENT WIND-CAUSED EROSION. EARTHWORK OPERATIONS SHALL BE DISCONTINUED WHEN FUGITIVE DUST SIGNIFICANTLY IMPACTS ADJACENT PROPERTY. IF EARTHWORK IS COMPLETE OR DISCONTINUED AND DUST FROM THE SITE CONTINUES TO CREATE PROBLEMS, THE CONTRACTOR SHALL IMMEDIATELY INSTITUTE MITIGATIVE MEASURES AND SHALL CORRECT DAMAGE TO ADJACENT PROPERTY.
5. PERMANENT OR TEMPORARY SOIL STABILIZATION MEASURES SHALL BE APPLIED TO DISTURBED AREAS WITHIN 30 DAYS AFTER FINAL GRADE IS REACHED ON ANY PORTION OF THE SITE. UNLESS SPECIFIED OTHERWISE, TEMPORARY VEGETATION SHALL BE INSTALLED ON ALL DISTURBED AREAS WHERE PERMANENT SURFACE IMPROVEMENTS ARE NOT SCHEDULED FOR INSTALLATION WITHIN THREE MONTHS. TEMPORARY VEGETATION SHALL BE A VIGOROUS, DROUGHT TOLERANT, NATIVE SPECIES MIX. PROJECT SCHEDULING SHOULD TAKE ADVANTAGE OF SPRING OR FALL PLANTING SEASONS FOR NATURAL GERMINATION, BUT SEEDED AREAS SHALL BE IRRIGATED, IF CONDITIONS MERIT. REFER TO THE LANDSCAPE PLAN FOR FINAL LANDSCAPING.
6. TEMPORARY FENCES SHALL BE INSTALLED ALONG ALL BOUNDARIES OF THE CONSTRUCTION LIMITS OR PROPERTY LINES AS SHOWN ON THE APPROVED EROSION CONTROL PLAN, TO PREVENT GRADING ON PROPERTY NOT OWNED BY THE OWNER/DEVELOPER. IN ADDITION, THE [LOCAL JURISDICTION] MAY REQUIRE ADDITIONAL TEMPORARY FENCES IF FIELD CONDITIONS WARRANT.
7. THE CONTRACTOR SHALL PREVENT SEDIMENT, DEBRIS AND ALL OTHER POLLUTANTS FROM ENTERING THE STORM SEWER SYSTEM DURING ALL DEMOLITION, EXCAVATION, TRENCHING, GRADING OR OTHER CONSTRUCTION OPERATIONS THAT ARE PART OF THIS PROJECT. THE CONTRACTOR SHALL BE HELD RESPONSIBLE FOR REMEDIATION OF ANY ADVERSE IMPACTS TO ADJACENT WATERWAYS, ROADWAYS, WETLANDS, ETC., RESULTING FROM WORK DONE AS PART OF THIS PROJECT.
8. THE CONTRACTOR AND/OR THEIR AUTHORIZED AGENTS SHALL REMOVE ALL SEDIMENT, MUD, CONSTRUCTION DEBRIS, OR OTHER POTENTIAL POLLUTANTS THAT MAY HAVE BEEN INADVERTENTLY DISCHARGED TO, OR ACCUMULATED IN, THE FLOWLINES AND PUBLIC RIGHT-OF-WAY AS A RESULT OF CONSTRUCTION ACTIVITIES ASSOCIATED WITH THIS SITE DEVELOPMENT OR CONSTRUCTION PROJECT.
9. THE GRADING CONTRACTOR AND/OR THEIR AUTHORIZED AGENTS SHALL ENSURE THAT ALL LOADS OF CUT AND FILL MATERIAL IMPORTED TO OR EXPORTED FROM THIS SITE SHALL BE PROPERLY COVERED TO PREVENT LOSS OF THE MATERIAL DURING TRANSPORT ON PUBLIC ROADWAYS.
10. APPROVED EROSION AND SEDIMENT CONTROL "BEST MANAGEMENT PRACTICES" [BMP] SHALL BE MAINTAINED AND KEPT IN GOOD REPAIR FOR THE DURATION OF THIS PROJECT. AT A MINIMUM, THE CONTRACTOR OR HIS AGENT SHALL INSPECT ALL BMPS WEEKLY AND AFTER SIGNIFICANT PRECIPITATION EVENTS. ALL NECESSARY MAINTENANCE AND REPAIR SHALL BE COMPLETED IN A TIMELY MANNER. ACCUMULATED SEDIMENT AND DEBRIS SHALL BE REMOVED FROM A BMP WHEN THE SEDIMENT LEVEL REACHES ONE HALF THE HEIGHT OF THE BMP OR, AT ANY TIME THAT SEDIMENT OR DEBRIS ADVERSELY IMPACTS THE FUNCTIONING OF THE BMP.
11. WATER USED IN THE CLEANING OF CONCRETE TRUCK DELIVERY CHUTES SHALL BE DISCHARGED INTO A PREDEFINED, BERMED CONTAINMENT AREA ON THE JOB SITE. THE REQUIRED CONTAINMENT AREA IS TO BE BERMED SO THAT WASH WATER IS TOTALLY CONTAINED. WASH WATER DISCHARGED INTO THE CONTAINMENT AREA SHALL BE ALLOWED TO INFILTRATE OR EVAPORATE. DRIED CONCRETE WASTE SHALL BE REMOVED FROM THE CONTAINMENT AREA AND PROPERLY DISPOSED OF. SHOULD A PREDEFINED BERMED CONTAINMENT AREA NOT BE AVAILABLE DUE TO THE PROJECT SIZE, OR LACK OF AN AREA WITH A SUITABLE GROUND SURFACE FOR ESTABLISHING A CONTAINMENT AREA, PROPER DISPOSAL OF READY MIX WASHOUT AND RINSE OFF WATER AT THE JOB SITE SHALL CONFORM TO THE APPROVED TECHNIQUES AND PRACTICES IDENTIFIED IN THE COLORADO DEPARTMENT OF PUBLIC HEALTH & ENVIRONMENT'S TRAINING VIDEO ENTITLED "BUILDING FOR A CLEANER ENVIRONMENT, READY MIX WASHOUT TRAINING", AND ITS ACCOMPANYING MANUAL ENTITLED, "READY MIX WASHOUT GUIDEBOOK, VEHICLE AND EQUIPMENT WASHOUT AT CONSTRUCTION SITES." THE DIRECT OR INDIRECT DISCHARGE OF WATER CONTAINING WASTE CONCRETE TO THE STORM SEWER SYSTEM IS PROHIBITED. INFORMATION ABOUT, OR COPIES OF THE VIDEO AND TRAINING MANUAL ARE AVAILABLE FROM THE WATER QUALITY CONTROL DIVISION, COLORADO DEPARTMENT OF PUBLIC HEALTH & ENVIRONMENT, 4300 CHERRY CREEK DRIVE SOUTH, DENVER, COLORADO 80222-1530, 303-692-3555
12. THE CONTRACTOR SHALL PROTECT ALL STORM SEWER FACILITIES ADJACENT TO ANY LOCATION WHERE PAVEMENT CUTTING OPERATIONS INVOLVING WHEEL CUTTING, SAW CUTTING OR ABRASIVE WATER JET CUTTING ARE TO TAKE PLACE. THE CONTRACTOR SHALL REMOVE AND PROPERLY DISPOSE OF ALL WASTE PRODUCTS GENERATED BY SAID CUTTING OPERATIONS ON A DAILY BASIS. THE DISCHARGE OF ANY WATER CONTAMINATED BY WASTE PRODUCTS FROM CUTTING OPERATIONS TO THE STORM SEWER SYSTEM IS PROHIBITED.
13. PAVED SURFACES WHICH ARE ADJACENT TO CONSTRUCTION SITES SHALL BE SWEEPED IN A TIMELY MANNER WHEN SEDIMENT AND OTHER MATERIALS ARE TRACKED OR DISCHARGED ON TO THEM. EITHER SWEEPING BY HAND OR USE OF STREET SWEEPERS IS ACCEPTABLE. STREET SWEEPERS USING WATER WHILE SWEEPING IS PREFERRED IN ORDER TO MINIMIZE DUST. FLUSHING OFF PAVED SURFACES WITH WATER IS PROHIBITED.



VICINITY MAP

SCALE: 1"=2000'

SHEET LIST	
SHEET #	SHEET TITLE
C0.00	EROSION CONTROL COVER SHEET
C1.00	INITIAL EROSION CONTROL PLAN
C1.01	INITIAL EROSION CONTROL PLAN
C2.00	INTERIM EROSION CONTROL PLAN
C2.01	INTERIM EROSION CONTROL PLAN
C3.00	FINAL EROSION CONTROL PLAN
C3.01	FINAL EROSION CONTROL PLAN
C4.00	EROSION CONTROL DETAILS
C4.01	EROSION CONTROL DETAILS
C4.02	EROSION CONTROL DETAILS

BASIS OF BEARINGS:

THE BEARINGS SHOWN ON THIS SURVEY ARE BASED ON A GPS SITE CALIBRATION OF POINTS REFERENCED ON THE HAPPY CANYON CREEK STREAM IMPROVEMENTS SURVEY CONTROL DIAGRAM PREPARED BY MERRICK DATED OCTOBER, 2022. BEARINGS ARE FURTHER DEFINED LOCALLY TO THE SITE BY THE WESTERLY LINE OF TRACT AQ, MONUMENTED AT THE NORTH END BY A #5 REBAR AND AT THE SOUTH LINE BY REBAR WITH A YELLOW PLASTIC CAP "LS 24673". SAID LINE BEARS NORTH 09°18'42" EAST.

BENCHMARK:

VERTICAL DATA SHOWN ON THIS SURVEY IS BASED ON POINT #558 SHOWN ON THE HAPPY CANYON CREEK STREAM IMPROVEMENTS SURVEY CONTROL DIAGRAM PREPARED BY MERRICK DATED OCTOBER, 2022, BEING A 3-1/2" RTD BRASS CAP "PLS 24942". ELEV=6074.44 NAVD 88.

ENGINEER'S CERTIFICATION

THE GRADING, EROSION AND SEDIMENT CONTROL PLAN INCLUDED HEREIN HAS BEEN PREPARED UNDER MY DIRECT SUPERVISION IN ACCORDANCE WITH THE REQUIREMENTS OF THE GRADING, EROSION, AND SEDIMENT CONTROL (GESC) CRITERIA MANUAL OF DOUGLAS COUNTY AS AMENDED.

Colorado Registered PE#

Date:
Project Design Engineer

CONTACTS:

ENGINEER:

MARTIN/MARTIN, INC.
12499 W. COLFAX AVE.
LAKEWOOD, CO 80215
ATTN: SCOTT E. PALING, P.E.
303-431-6100

SURVEYOR:

BAILEY PROFESSIONAL SOLUTIONS
ATTN: ALAN BAILEY, P.L.S.
303-587-1672

ARCHITECT:

OJB LANDSCAPE ARCHITECTURE
1732 WAZEE ST., SUITE 209
DENVER, CO 80202
ATTN: JASON FERSTER
720-604-3385

OWNER:

CITY OF LONE TREE
9220 KIMMER DR., SUITE 100
LONE TREE, CO 80124

LEGEND

	SILT FENCE	(SF)
	VEHICLE TRACKING CONTROL	(VTC)
	INLET PROTECTION	(IP)
	OUTLET PROTECTION	(OP)
	CULVERT INLET PROTECTION	(CIP)
	STABILIZED CONSTRUCTION ROADWAY	(SCR)
	STABILIZED STAGING AREA	(SSA)
	STOCKPILE MANAGEMENT W/ PROTECTION	(SP)
	CONCRETE WASHOUT AREA	(CWA)
	CONSTRUCTION FENCE	(CF)
	CURB SOCK	(CS)
	ROCK SOCK	(RS)
	SEDIMENT CONTROL LOG	(SCL)
	STRAW BALE BARRIER	(SBB)
	CHECK DAM	(CD)
	TEMP. SLOPE DRAIN	(TSD)
	ROUGH CUT STREET CONTROL	(RCS)
	DIVERSION DITCHES/ CHANNEL	(DD/DC)
	MULCHING	(MU)
	SURFACE ROUGHENING	(SR)
	TEMPORARY SEEDING	(TS)
	PERMANENT SEEDING	(PS)
	EROSION CONTROL BLANKET	(ECB)
	SEDIMENT BASIN	(SB)
	SEDIMENT TRAP	(ST)
	LIMITS OF CONSTRUCTION	(LOC)

Hi NOTE REGIONAL PARK

City of Lone Tree

9220 Kimmer Drive, Suite 100
Lone Tree, CO 80124
tel 303.708.1818

Park Operator
4810 E County Line Rd
Littleton, CO 80126
tel 303.786.5131

OJB

OJB Landscape Architecture

1732 Wazee Street, Suite 209
Denver, CO 80202
tel 720.604.3385

Tryba Architects

tel 303.831.4010

Martin/Martin

tel 303.871.6100

Thornton Tomasetti

tel 303.876.5700

Azure Engineering LLC

tel 970.980.8533

illume

tel 303.421.8655

ME Engineers

tel 303.421.6655

Shen Milson & Wilke (SM&W)

tel 720.482.0770

RSM Design

tel 949.492.9475

Peregrine Fire

tel 303.997.8875

Fountain Source

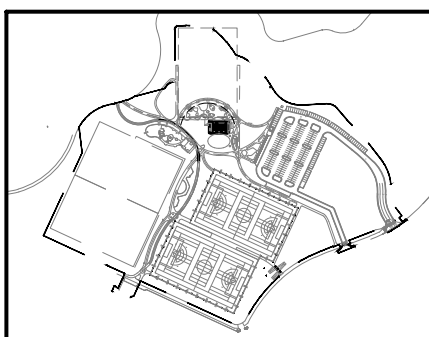
tel 303.937.8875

Roxbox

tel 303.997.8875



KEY MAP:



NOT FOR CONSTRUCTION

Rev	Date	Description
	2/23/2026	SIP SUBMITTAL

Sheet description

EROSION CONTROL COVER SHEET

Sheet number

C2.00

SIP Sheet number



CALL 811 3-BUSINESS DAYS IN ADVANCE BEFORE
YOU DIG, GRADE OR EXCAVATE FOR MARKING OF
UNDERGROUND MEMBER UTILITIES

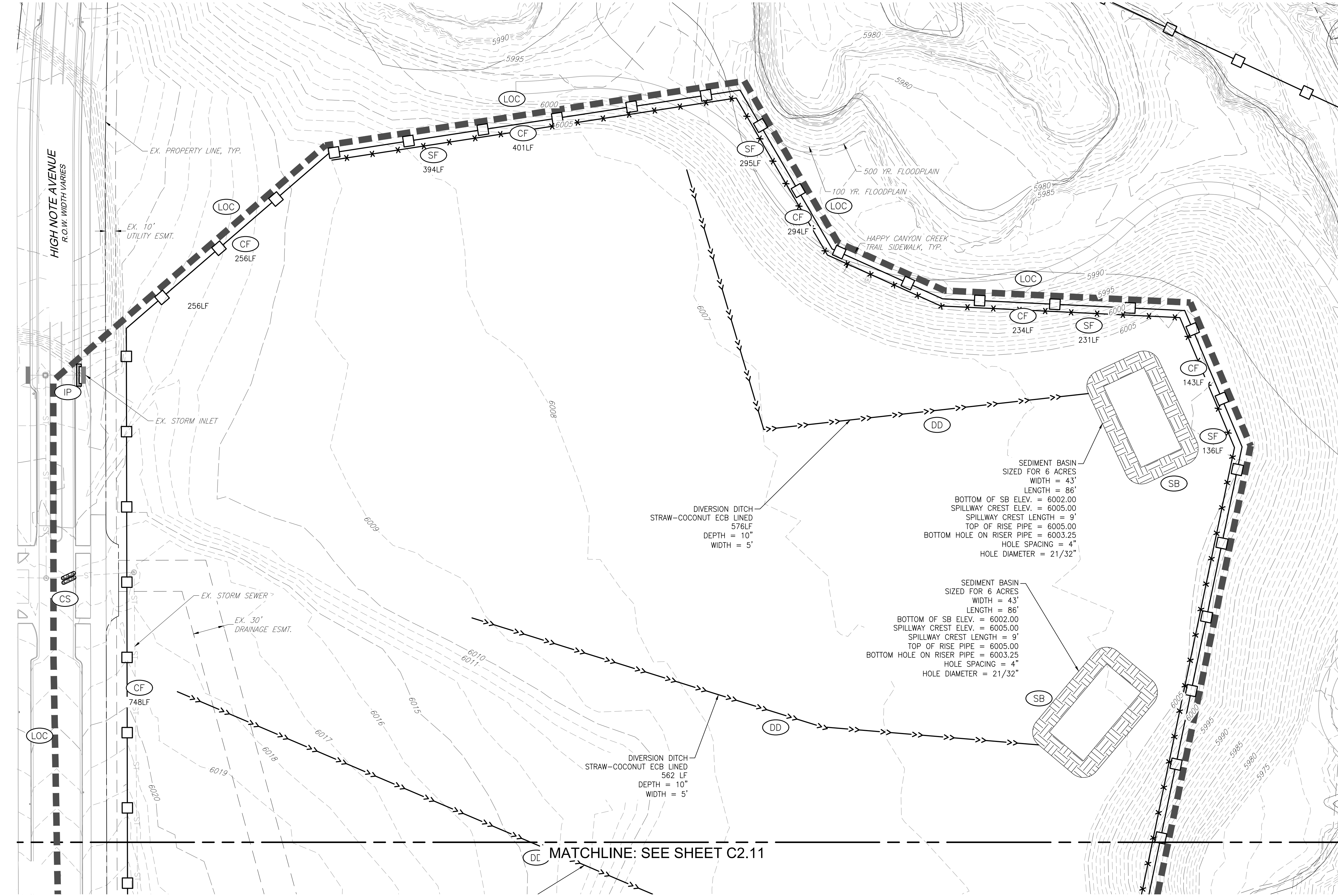
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CITY OF LONE TREE

DATE

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

ENGINEERING DIVISION ACCEPTANCE BLOCK.



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- NOTES:**
- SEE COVER SHEET OF LONE TREE STANDARD NOTES AND DETAILS (SHEET 1 OF 3) FOR LEGEND OF BMP NAMES AND SYMBOLS.

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HIGH NOTE
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Lone Tree, CO 80124
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Park Operator
4810 E County Line Rd
Littleton, CO 80126
tel 303.786.5131

OJB
OJB Landscape Architecture
Prime Consultant / Landscape Architect
1732 Wazee Street, Suite 209
Denver, CO 80202
tel 720.604.3385

Tryba Architects
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tel 303.831.4010
Martin/Martin
Civil Engineer
tel 303.431.6100

Thornton Tomasetti
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illum
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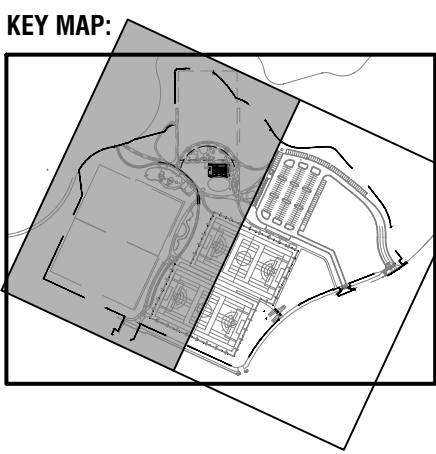
Shen Milson & Wilke (SM&W)
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Peregrine Fire
Fire Protection Consultant & Wildfire Mitigation
tel 303.997.8875

Fountain Source
Water Feature Consultant
tel 303.997.8875

Roxbox
Container Architect
tel 303.997.8875



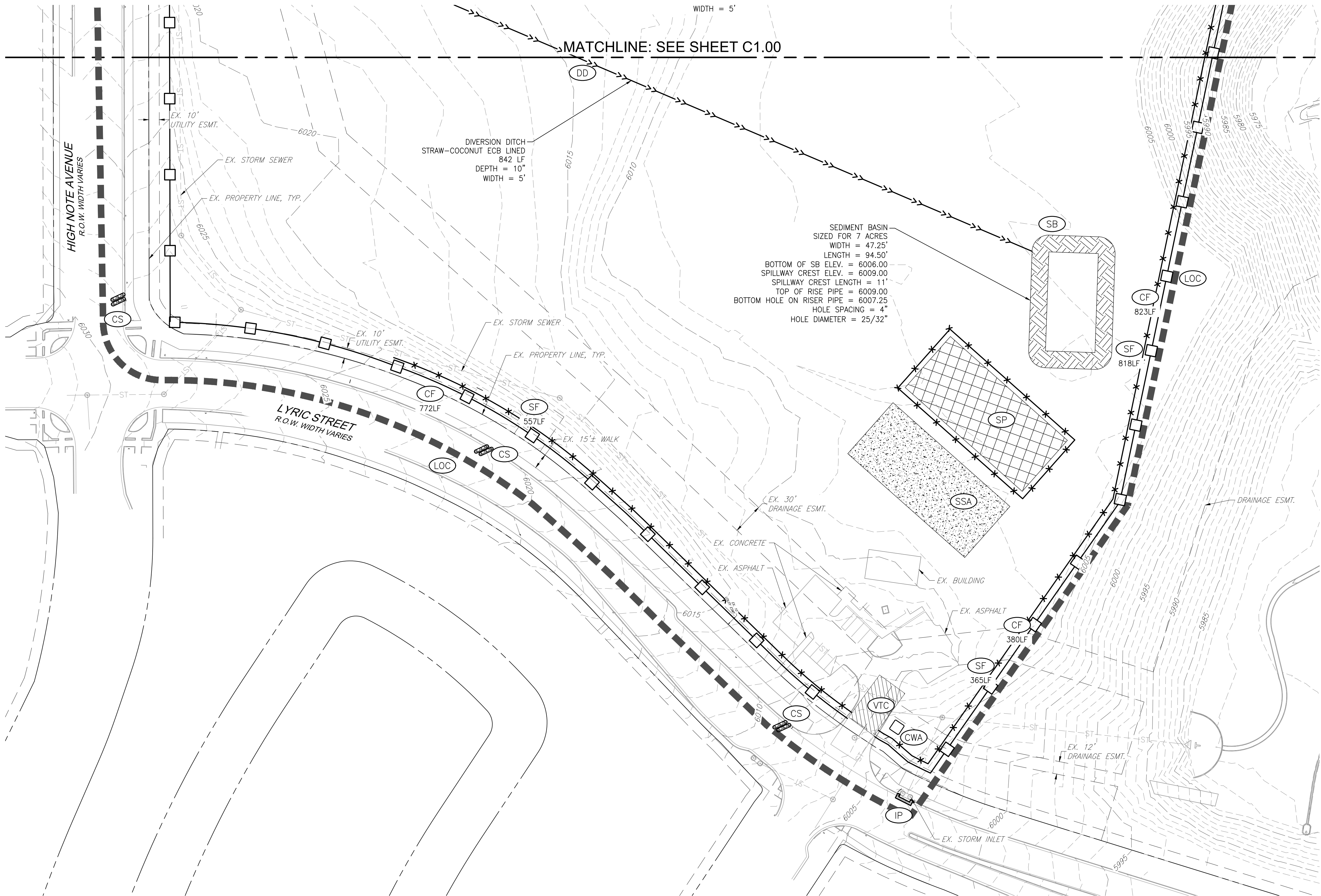
NOT FOR CONSTRUCTION

Rev	Date	Description
	2/23/2026	SIP SUBMITTAL

Sheet description
INITIAL EROSION CONTROL PLAN

Sheet number
C2.10

SIP Sheet number



BASIS OF BEARINGS:

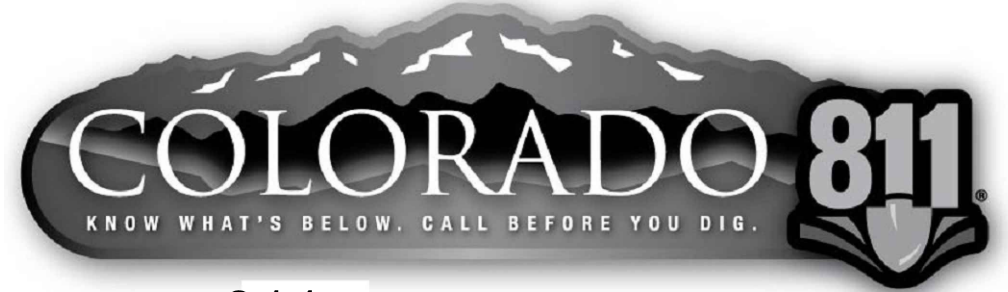
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1. SEE COVER SHEET OF LONE TREE STANDARD NOTES AND DETAILS (SHEET 1 OF 3) FOR LEGEND OF BMP NAMES AND SYMBOLS.



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CITY OF LONE TREE
DATE
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ENGINEERING DIVISION ACCEPTANCE BLOCK.

Hi NOTE

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Lone Tree, CO 80124
tel 303.708.1818

Park Operator
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OJB

OJB Landscape Architecture

1732 Wazee Street, Suite 209
Denver, CO 80202
tel 720.604.3385

Tryba Architects

tel 303.831.4010

Martin/Martin

tel 303.431.6100

Thornton Tomasetti

tel 303.876.5700

Azure Engineering LLC

tel 970.980.8533

illum

tel 303.421.8655

ME Engineers

tel 303.421.6655

Shen Milson & Wilke (SM&W)

tel 720.462.0770

RSM Design

tel 949.492.9475

Peregrine Fire

tel 303.997.8875

Fountain Source

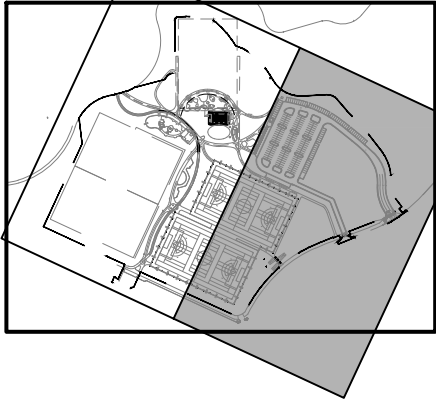
tel 303.997.8875

Roxbox

tel 303.997.8875



KEY MAP:



**NOT FOR
CONSTRUCTION**

Rev	Date	Description
	2/23/2026	SIP SUBMITTAL

Sheet description

**INITIAL EROSION CONTROL
PLAN**

Sheet number

C2.11

SIP Sheet number



BASIS OF BEARINGS:

THE BEARINGS SHOWN ON THIS SURVEY ARE BASED ON A GPS SITE CALIBRATION OF POINTS REFERENCED ON THE HAPPY CANYON CREEK STREAM IMPROVEMENTS SURVEY CONTROL DIAGRAM PREPARED BY MERRICK DATED OCTOBER, 2022. BEARINGS ARE FURTHER DEFINED LOCALLY TO THE SITE BY THE WESTERLY LINE OF TRACT AQ, MONUMENTED AT THE NORTH END BY A #5 REBAR AND AT THE SOUTH LINE BY REBAR WITH A YELLOW PLASTIC CAP "LS 24673". SAID LINE BEARS NORTH 09°18'42" EAST.

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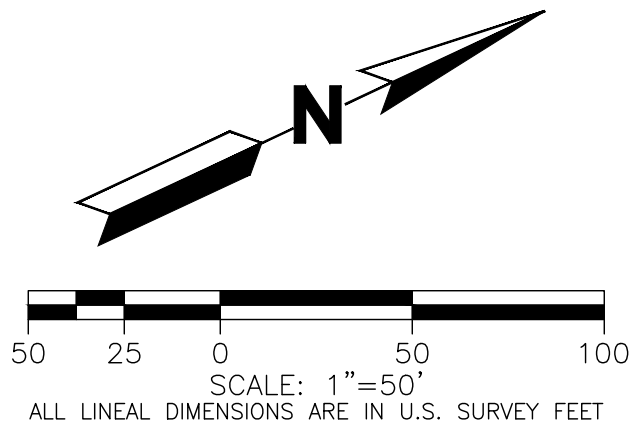
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CUT/FILL SUMMARY TABLE	
CUT	48,000 CY
FILL	34,000 CY

EARTHWORK DISCLAIMER:
EARTHWORK QUANTITIES ARE RAW NUMBERS AND HAVE NOT BEEN ADJUSTED TO ACCOUNT FOR SHRINK, SWELL, COMPACTION, PAVING, UTILITY SPOILS, ETC. IT IS THE CONTRACTORS RESPONSIBILITY TO VERIFY ALL EARTHWORK

NOTES:

- SEE COVER SHEET OF LONE TREE STANDARD NOTES AND DETAILS (SHEET 1 OF 3) FOR LEGEND OF BMP NAMES AND SYMBOLS.
- SHADED BMPs INSTALLED IN THE INITIAL STAGE SHALL BE LEFT IN PLACE IN THE INTERIM STAGE.
- ALL INTERIM BMPs, INCLUDING SEEDING AND MULCHING OF DISTURBED AREAS, MUST BE COMPLETED PRIOR TO ISSUANCE OF ANY CURB AND GUTTER PERMITS.
- SEE CONSTRUCTION PLANS FOR DETAILS OF PERMANENT DRAINAGE FACILITIES SUCH AS DETENTION FACILITIES, CULVERTS, STORM DRAINS, AND INLET AND OUTLET PROTECTION.



CALL **811** 3-BUSINESS DAYS IN ADVANCE BEFORE YOU DIG, GRADE OR EXCAVATE FOR MARKING OF UNDERGROUND MEMBER UTILITIES

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CITY OF LONE TREE

DATE

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ENGINEERING DIVISION ACCEPTANCE BLOCK.

HIGH NOTE
REGIONAL PARK

City of Lone Tree

9220 Kimmer Drive, Suite 100
Lone Tree, CO 80124
tel 303.708.1818

Park Operator
4810 E County Line Rd
Littleton, CO 80126
tel 303.786.5131

OJB

OJB Landscape Architecture

1732 Wazee Street, Suite 209
Denver, CO 80202
tel 720.604.3385

Tryba Architects

tel 303.831.4010

Martin/Martin

tel 303.431.6100

Thornton Tomasetti

tel 303.876.5700

Azure Engineering LLC

tel 970.980.8533

illum

tel 303.421.8655

ME Engineers

tel 303.421.6655

Shen Milson & Wilke (SM&W)

tel 720.482.0770

RSM Design

tel 949.492.9475

Peregrine Fire

tel 303.997.8875

Fountain Source

tel 303.997.8875

Roxbox

tel 303.997.8875



KEY MAP:



**NOT FOR
CONSTRUCTION**

Rev	Date	Description
	2/23/2026	SIP SUBMITTAL

Sheet description

**INTERIM EROSION CONTROL
PLAN**

Sheet number

C2.20

SIP Sheet number

City of Lone Tree
Client
9220 Kimmer Drive, Suite 100
Lone Tree, CO 80124
tel 303.708.1818

OJB
OJB Landscape Architecture
 Prime Consultant | Landscape Architect
 1732 Wazee Street, Suite 209
 Denver, CO 80202
 tel 720.604.3385

Martin/Martin
Civil Engineer
tel 303.431.6100

Azure Engineering LLC
Irrigation Consultant
tel 970.980.8533

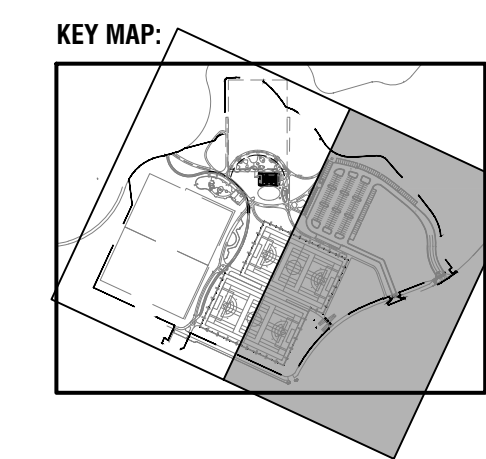
ME Engineers
Mechanical, Electrical & Plumbing
tel 303.421.6655

RSM Design
Branding, Signage & Wayfinding
tel 949.492.9479

Fountain Source
Water Feature Consultant
tel 303.997.8875



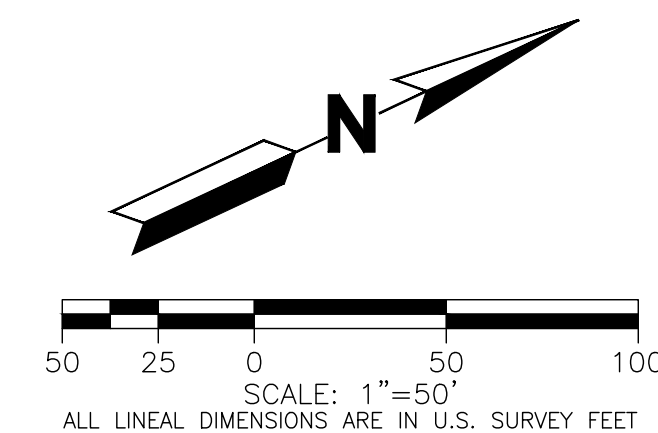
1309 West Colfax Avenue
DENVER, CO 80202

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INTERIM EROSION CONTROL PLAN

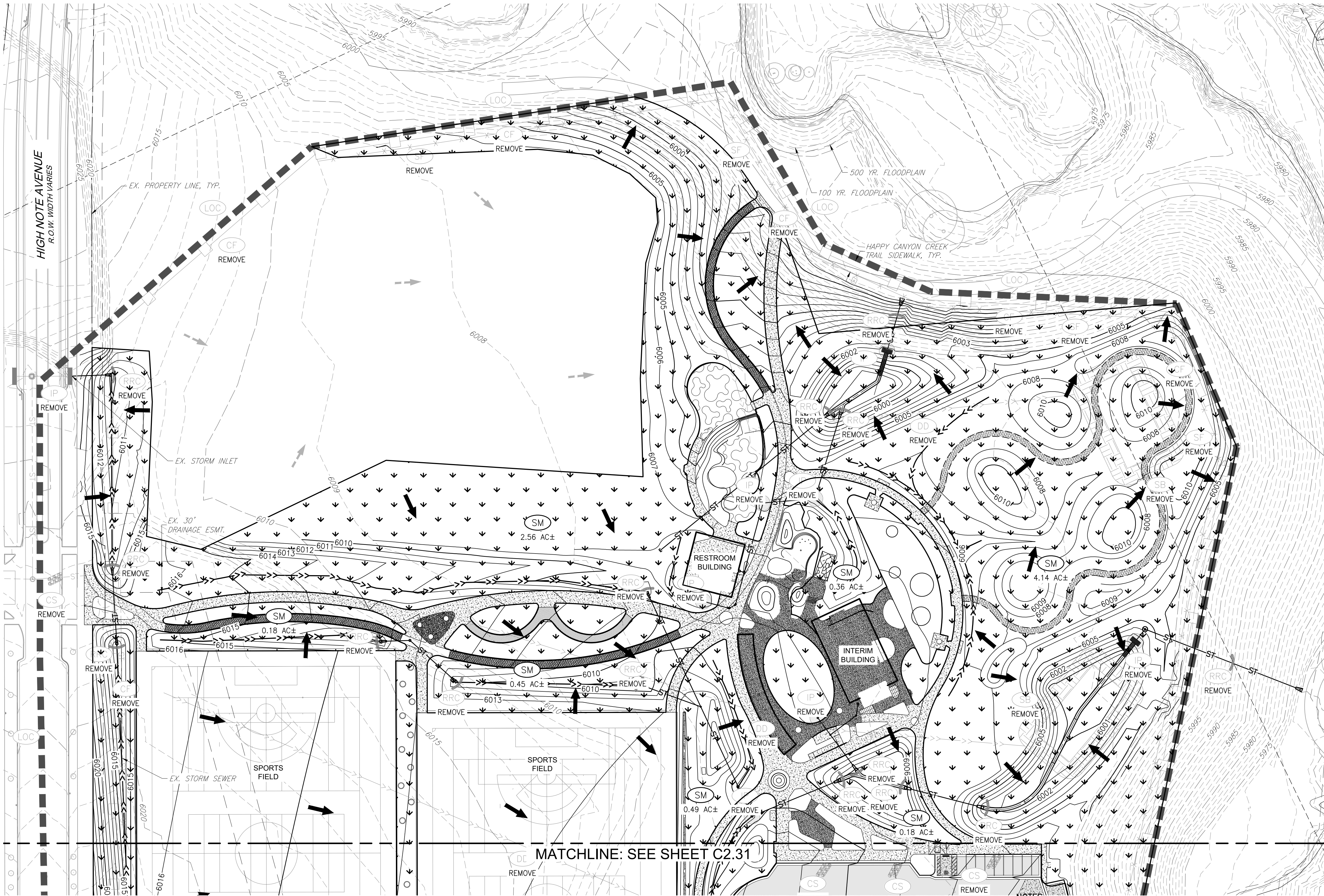
C2.21

SIP Sheet number



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24942". ELEV=6074.44 NAVD 88.



BASIS OF BEARINGS:

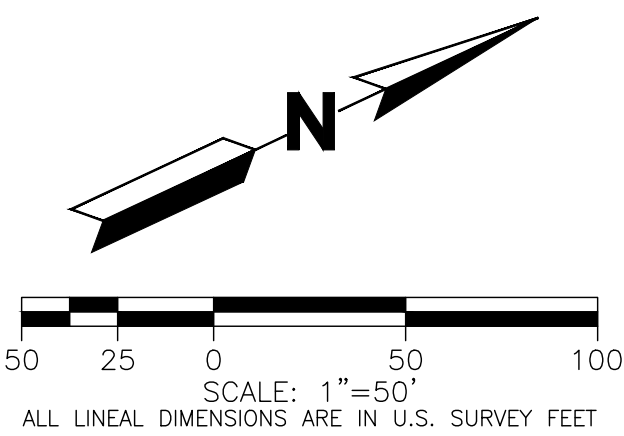
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NOTES:

1. SEE COVER SHEET OF LONE TREE STANDARD NOTES AND DETAILS (SHEET 1 OF 3) FOR LEGEND OF BMP NAMES AND SYMBOLS.
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CITY OF LONE TREE	
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Hi NOTE

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Fountain Source

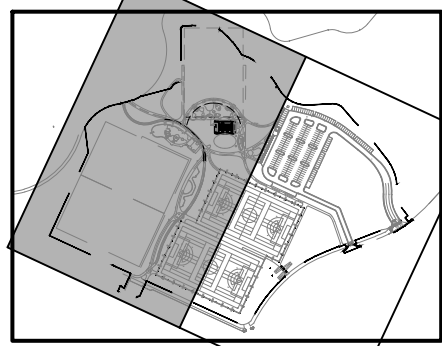
Water Feature Consultant
tel 303.997.8875

Roxbox

Container Architect
tel 303.997.8875



KEY MAP:



NOT FOR CONSTRUCTION

Rev	Date	Description
	2/23/2026	SIP SUBMITTAL

Sheet description

**FINAL EROSION CONTROL
PLAN**

Sheet number

C2.30

SIP Sheet number



BASIS OF BEARINGS:

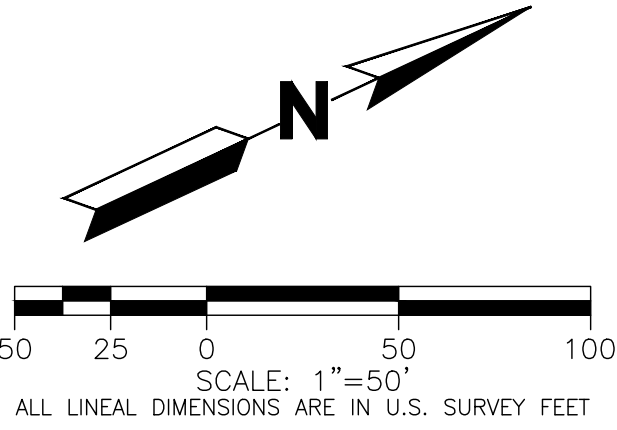
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- SEE COVER SHEET OF LONE TREE STANDARD NOTES AND DETAILS (SHEET 1 OF 3) FOR LEGEND OF BMP NAMES AND SYMBOLS.
- SHADED BMPs INSTALLED UNDER THE INITIAL AND INTERIM GESc PLANS, UNLESS OTHERWISE INDICATED, SHALL BE LEFT IN PLACE UNTIL REVEGETATION ESTABLISHMENT IS APPROVED BY THE CITY.
- SEE CONSTRUCTION PLANS FOR DETAILS OF PERMANENT DRAINAGE FACILITIES SUCH AS DETENTION FACILITIES, CULVERTS, STORM DRAINS, AND INLET AND OUTLET PROTECTION.



CALL **811** 3-BUSINESS DAYS IN ADVANCE BEFORE YOU DIG, GRADE OR EXCAVATE FOR MARKING OF UNDERGROUND MEMBER UTILITIES

MARTIN/MARTIN ASSUMES NO RESPONSIBILITY FOR UTILITY LOCATIONS, UNLESS OTHERWISE NOTED, THE UTILITIES SHOWN ON THIS DRAWING ARE BASED ON INFORMATION PROVIDED BY OTHERS AND DEPICTED AS ASCE (38) QUALITY LEVEL D, IN ACCORDANCE WITH THE PROVISIONS OF COLORADO REVISED STATUTE, TITLE 9, IT IS THE CONTRACTORS RESPONSIBILITY TO CALL COLORADO 811 UTILITY LOCATE SERVICE FOR UTILITY LOCATES BEFORE DIGGING, AND FIELD VERIFY THE SIZE, MATERIAL, HORIZONTAL AND VERTICAL LOCATION OF ALL EXISTING UTILITIES (DEPICTED OR NOT DEPICTED) PRIOR TO THE COMMENCEMENT OF ANY CONSTRUCTION.

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

Hi NOTE

REGIONAL PARK

City of Lone Tree

9220 Kimmer Drive, Suite 100
Lone Tree, CO 80124
tel 303.708.1818

Park Operator
4810 E County Line Rd
Littleton, CO 80126
tel 303.786.5131

OJB

OJB Landscape Architecture

1732 Wazee Street, Suite 209
Denver, CO 80202
tel 720.604.3385

Tryba Architects

tel 303.831.4010

Martin/Martin

tel 303.431.6100

Thornton Tomasetti

tel 303.876.5700

Azure Engineering LLC

tel 970.980.8533

illum

tel 303.421.8655

ME Engineers

tel 303.421.6655

Shen Milson & Wilke (SM&W)

tel 720.462.0770

RSM Design

tel 949.492.9475

Peregrine Fire

tel 303.997.8875

Fountain Source

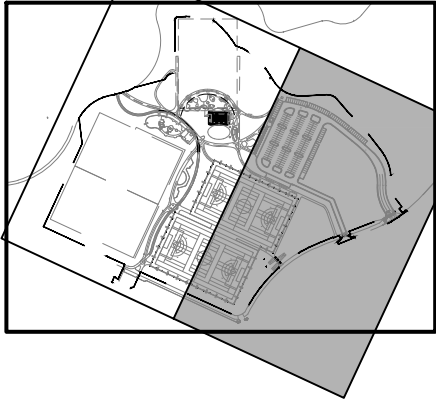
tel 303.997.8875

Roxbox

tel 303.997.8875



KEY MAP:



**NOT FOR
CONSTRUCTION**

Rev	Date	Description
	2/23/2026	SIP SUBMITTAL

Sheet description

**FINAL EROSION CONTROL
PLAN**

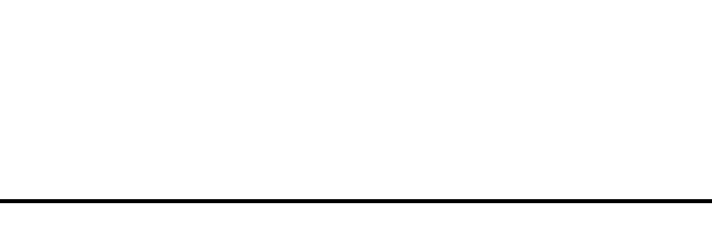
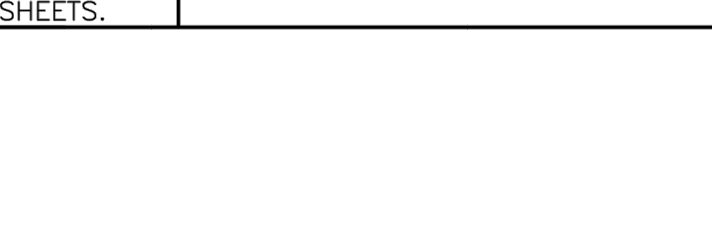
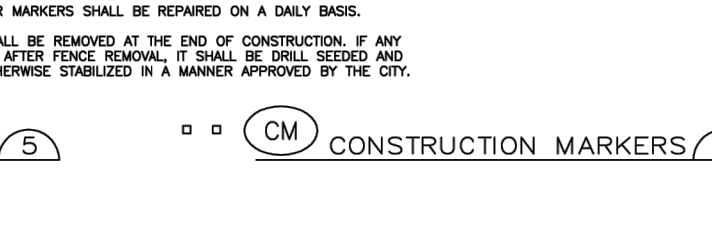
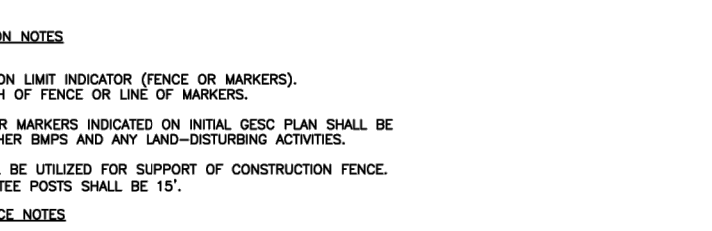
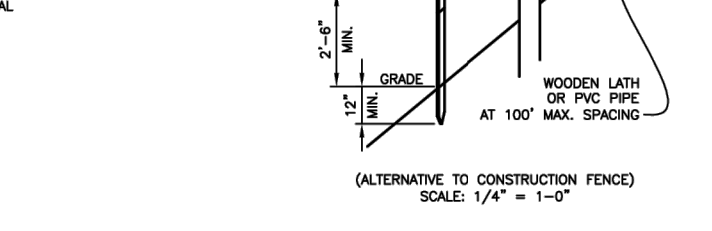
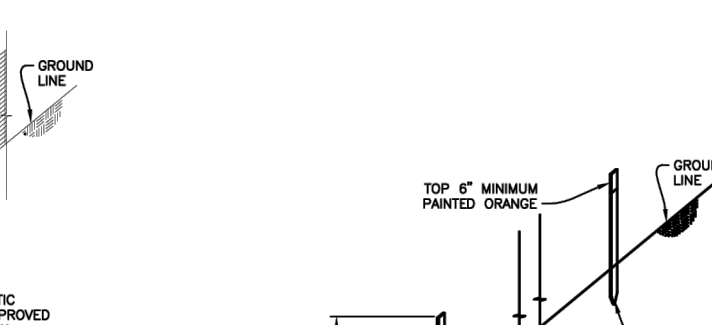
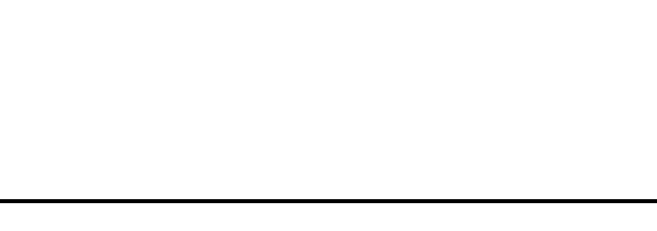
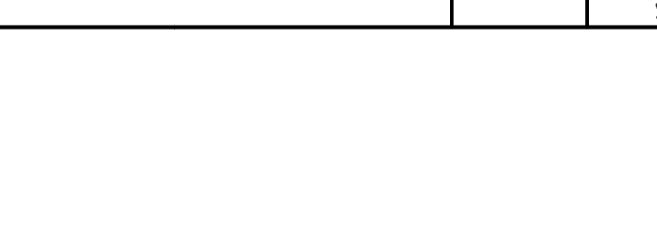
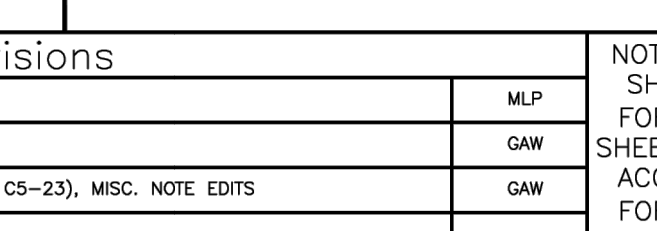
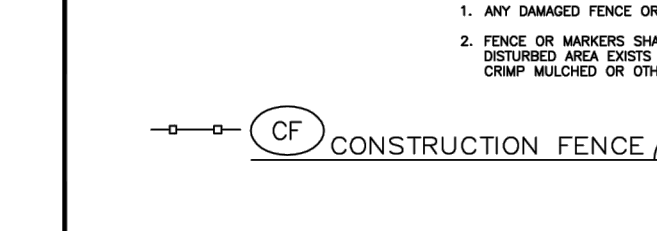
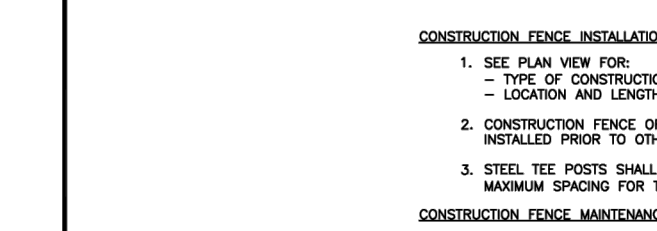
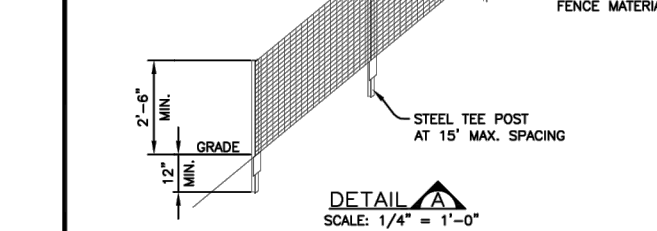
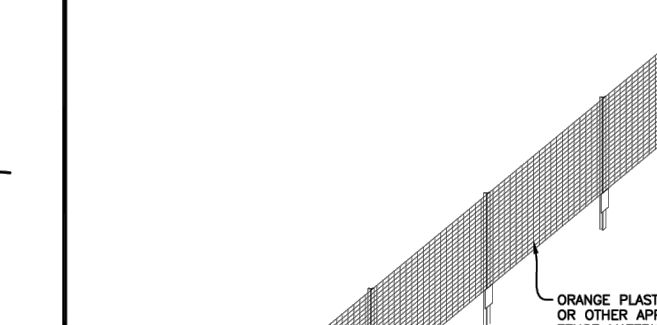
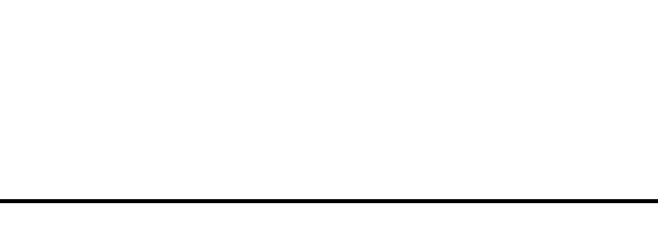
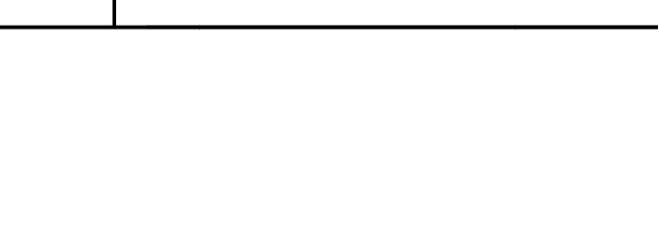
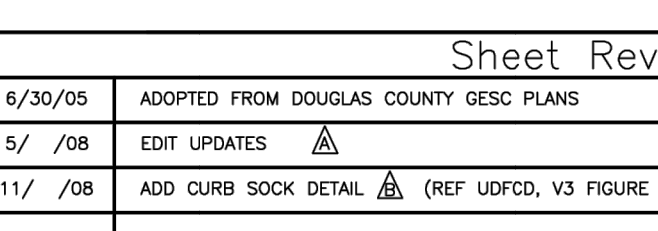
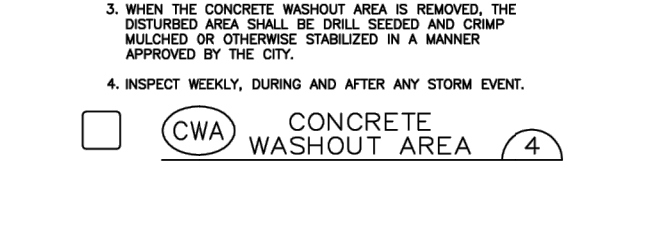
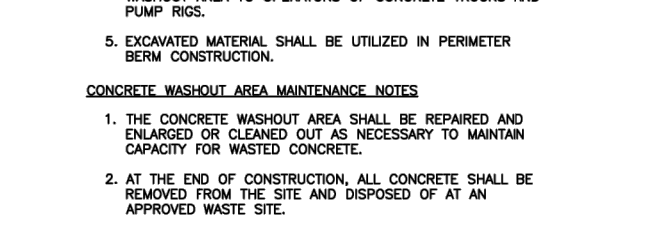
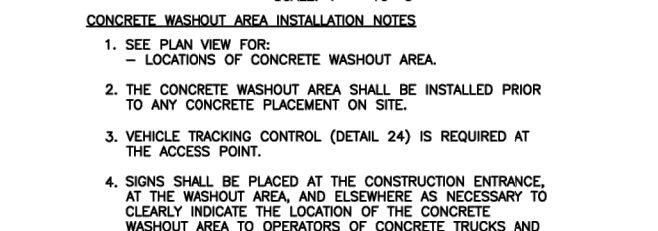
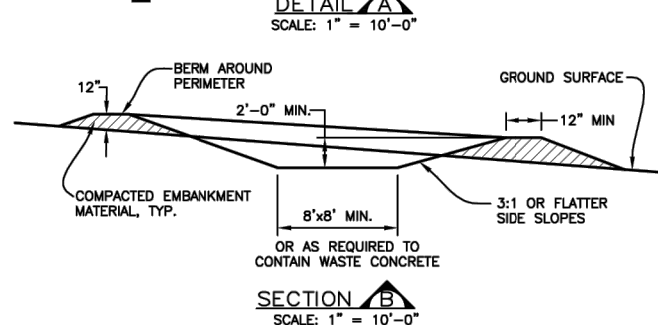
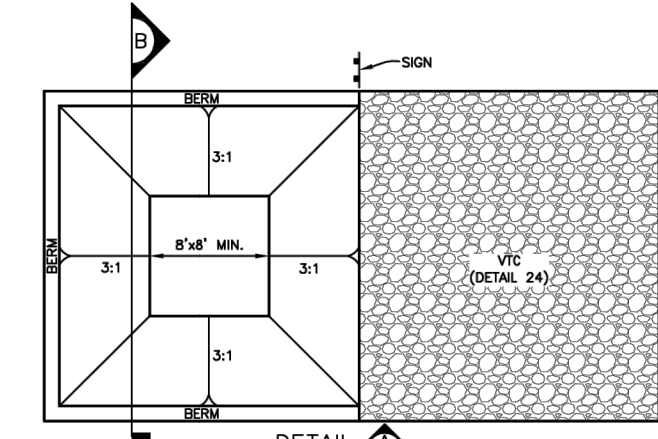
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SIP Sheet number

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 SUBDIVISION 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.
2. THE ADEQUACY OF THIS GESC PLAN LIES WITH THE ORIGINAL DESIGN ENGINEER.
3. THE GESC PLAN SHALL BE CONSIDERED VALID FOR TWO (2) YEARS FROM THE DATE OF ACCEPTANCE BY THE CITY OF LONE TREE. AFTER WHICH TIME THE PLAN SHALL BE VOID AND WILL BE SUBJECT TO RE-REVIEW AND RE-ACCEPTANCE BY THE CITY OF LONE TREE.
4. ALL MATERIALS AND WORKSMANSHIP SHALL BE SUBJECT TO INSPECTION BY THE CITY OF LONE TREE ENGINEERING DIVISION. THE CITY OF LONE TREE RESERVES THE RIGHT TO ACCEPT OR REJECT ANY SUCH MATERIALS AND WORKSMANSHIP THAT DOES NOT CONFORM TO THE GESC MANUAL, GESC PLAN OR GESC PERMIT.
5. THE PLACEMENT OF EROSION AND SEDIMENT CONTROL, BEST MANAGEMENT PRACTICES (BMPs) SHALL BE IN ACCORDANCE WITH THE CITY OF LONE TREE - ACCEPTED GESC PLAN AND THE CITY OF LONE TREE GESC MANUAL.
6. ANY VARIATION IN MATERIAL, TYPE OR LOCATION OF EROSION AND SEDIMENT CONTROL, BMPs FROM THE CITY OF LONE TREE - ACCEPTED GESC PLAN WILL REQUIRE APPROVAL FROM AN ACCOUNTABLE REPRESENTATIVE OF THE CITY OF LONE TREE ENGINEERING DIVISION.
7. AFTER THE GESC PLAN HAS BEEN ACCEPTED, THE GESC PERMIT APPLIED FOR, FEES AND FISCAL SCHEDULE SUBMITTED TO THE CITY AND THE GESC FIELD MANUAL OBTAINED AND REVIEWED, THE CONTRACTOR MAY INSTALL THE INITIAL-STAGE EROSION AND SEDIMENT CONTROL, BMPs INDICATED ON THE ACCEPTED GESC PLAN.
8. THE FIRST BMP TO BE INSTALLED ON THE SITE SHALL BE CONSTRUCTION FENCE, MARKERS, OR OTHER APPROVED MEANS OF DEFINING THE LIMITS OF CONSTRUCTION, INCLUDING CONSTRUCTION LIMITS ADJACENT TO STREAM CORRIDORS AND OTHER AREAS TO BE PRESERVED.
9. AFTER INSTALLATION OF THE INITIAL-STAGE EROSION AND SEDIMENT CONTROL, BMPs, THE PERMITTEE SHALL CALL THE CITY OF LONE TREE CONSTRUCTION INSPECTOR AT (303) 662-8112 TO SCHEDULE A PRECONSTRUCTION MEETING AT THE PROJECT SITE. THE REQUEST SHALL BE MADE A MINIMUM OF THREE BUSINESS DAYS PRIOR TO THE REQUESTED MEETING. NO CONSTRUCTION ACTIVITIES SHALL BE PLANNED WITHIN 24 HOURS AFTER THE PRECONSTRUCTION MEETING.
10. THE OWNER OR OWNER'S REPRESENTATIVE, THE GESC MANAGER, THE GENERAL CONTRACTOR, AND THE GRADING SUBCONTRACTOR, IF DIFFERENT FROM THE GENERAL CONTRACTOR, MUST ATTEND THE PRECONSTRUCTION MEETING. IF ANY OF THE REQUIRED PARTICIPANTS FAIL TO ATTEND THE PRECONSTRUCTION MEETING, OR IF THE GESC FIELD MANUAL IS NOT ON SITE, OR IF THE INSTALLATION OF THE INITIAL BMPs ARE NOT APPROVED BY THE CITY OF LONE TREE GESC INSPECTOR, THE APPLICANT WILL HAVE TO PAY A REINSPECTION FEE. ADDRESS ANY PROBLEMS WITH BMP INSTALLATION, AND CALL TO RESCHEDULE THE MEETING, WITH A CORRESPONDING DELAY IN THE START OF CONSTRUCTION. THE CITY OF LONE TREE STRONGLY DISCOURAGES THE APPLICANT TO HAVE THE ENGINEER OF RECORD, THE CONSTRUCTION INSPECTOR, FAILURE OF THE ENGINEER OF RECORD TO ATTEND MAY RESULT IN A DELAY OF THE START OF CONSTRUCTION.
11. CONSTRUCTION SHALL NOT BEGIN UNTIL THE CITY OF LONE TREE GESC INSPECTOR APPROVES THE INSTALLATION OF THE INITIAL BMPs. THE INITIAL GESC PERMIT IS PICKED UP FROM THE CITY AND IS A HAND ON THE SITE. THE COMPLETED PERMIT WILL BE AVAILABLE WITHIN 24-HOURS AFTER THE INSTALLATION OF THE INITIAL BMPs ARE APPROVED.
12. THE GESC MANAGER SHALL STRICTLY ADHERE TO THE CITY OF LONE TREE-APPROVED LIMITS OF CONSTRUCTION AT ALL TIMES. THE CITY OF LONE TREE ENGINEERING DIVISION MUST APPROVE ANY CHANGES TO THE LIMITS OF CONSTRUCTION AND THE DISCRETION OF THE ENGINEERING DIVISION, ADDITIONAL EROSION/SEDIMENT CONTROLS MAY BE REQUIRED IN ANY ADDITIONAL AREAS OF CONSTRUCTION.
13. THE MAXIMUM AREA OF CONSTRUCTION SHALL BE LIMITED TO 40 ACRES (70 ACRES IF APPROVED FOR SOIL MITIGATION OPERATIONS) TO REDUCE THE AMOUNT OF LAND DISTURBED AT ANY ONE TIME. LARGER SITES SHALL BE DIVIDED INTO PHASES THAT ARE EACH 40 (OR 70) ACRES OR LESS IN SIZE. THESE PROJECTS SHALL CONDUCT CHANGING ACTIVITIES IN ACCORDANCE WITH THE ACCEPTED GESC PLAN. BMP INSTALLATION AND APPROVAL BY THE CITY OF LONE TREE AT THE START AND COMPLETION OF EACH PHASE SHALL BE CONDUCTED IN ACCORDANCE WITH THE PROCEDURES OUTLINED IN THE CITY OF LONE TREE-APPROVED GESC FIELD MANUAL.
14. PRIOR TO ACTUAL CONSTRUCTION, THE PERMITTEE SHALL VERIFY THE LOCATION OF DISTINGUISH UTILITIES FOR INFORMATION. CONTACT THE SOWER INTER-UTILITY GROUP AT 1-800-422-1987 OR FAX AT (303) 534-6700.
15. NATURAL VEGETATION SHALL BE RETAINED AND PROTECTED WHEREVER POSSIBLE. EXPOSURE OF SOIL TO EROSION BY CONSTRUCTION ACTIVITIES OR EXPOSURE OF VEGETATION SHALL BE LIMITED TO THE AREA REQUIRED FOR IMMEDIATE CONSTRUCTION OPERATIONS.
16. THE GESC PERMIT SHALL BE VALID FOR A PERIOD OF ONE (1) YEAR, UNLESS EXTENDED.
17. A COPY OF THE GESC PERMIT, ACCEPTED GESC PLANS AND THE GESC FIELD MANUAL SHALL BE ON SITE AT ALL TIMES.
18. THE GESC MANAGER SHALL BE RESPONSIBLE FOR ENSURING THAT THE SITE REMAINS IN COMPLIANCE WITH THE GESC PERMIT AND SHALL BE THE PERMITTEE'S CONTACT PERSON WITH THE CITY FOR ALL MATTERS PERTAINING TO THE GESC PERMIT. THE GESC MANAGER SHALL BE PRESENT AT THE SITE THE MAJORITY OF THE TIME AND SHALL BE AVAILABLE THROUGH A 24-HOUR CONTACT NUMBER. IN THE EVENT THAT THE CONTRACTOR'S GESC MANAGER IS NOT ON SITE AND CONTACT NUMBER IS NOT AVAILABLE, THE ALTERNATE GESC MANAGER SHALL BE CONTACTED. IF NEITHER THE GESC MANAGER NOR ALTERNATE GESC MANAGER CAN BE CONTACTED DURING ANY VIOLATION, A STOP WORK ORDER SHALL BE ISSUED.
19. ALL CONSTRUCTION TRAFFIC MUST ENTER/EXIT THE SITE THROUGH THE CITY OF LONE TREE-APPROVED ACCESS POINT. A VEHICLE TRACKING CONTROL PAD IS REQUIRED AT ALL ACCESS POINTS ON THE SITE. ADDITIONAL STABILIZED CONSTRUCTION ENTRANCES MAY BE ADDED WITH AUTHORIZATION FROM THE CITY OF LONE TREE ENGINEERING DIVISION.
20. THE GESC MANAGER IS RESPONSIBLE FOR CLEANUP OF SEDIMENT OR CONSTRUCTION DEBRIS TRACKED ONTO ADJACENT PAVED AREAS. PAVED AREAS SHOULD BE KEPT CLEAN THROUGHOUT BUILD-OUT AND SHALL BE CLEANED WITH A STREET SWEEPER OR SIMILAR DEVICE, AT FIRST NOTICE OF ACCIDENTAL TRACKING OR AT THE DISCRETION OF THE CITY OF LONE TREE GESC INSPECTOR. STREET MOWING IS NOT ALLOWED. THE CITY OF LONE TREE RESERVES THE RIGHT TO REQUIRE ADDITIONAL MEASURES TO ENSURE AREA STREETS ARE KEPT FREE OF SEDIMENT AND/OR CONSTRUCTION DEBRIS.
21. EROSION EROSION AND SEDIMENT CONTROL BMPs SHALL BE MAINTAINED AND KEPT IN GOOD REPAIR FOR THE DURATION OF THIS PROJECT. AT A MINIMUM, THE GESC MANAGER SHALL INSPECT ALL BMPs IN ACCORDANCE WITH THE ACCEPTED GESC PLAN AND THE GESC MANUAL. ALL NECESSARY MAINTENANCE AND REPAIR MEASURES SHALL BE COMPLETED WITHIN 48 HOURS FOR LEVEL VI VIOLATIONS, AND IMMEDIATELY FOR LEVEL I VIOLATIONS, OR AS DIRECTED BY A CITY OF LONE TREE GESC INSPECTOR. ACCUMULATED SEDIMENT AND CONSTRUCTION DEBRIS SHALL BE REMOVED AND PROPERLY DISPOSED.
22. STRAW BALES ARE NOT A GESC-ACCEPTED SEDIMENT CONTROL BMP.
23. TOPSOIL SHALL BE STRIPPED AND STOCKPILED IN THE LOCATION SHOWN ON THE ACCEPTED GESC PLAN. THE GESC MANAGER SHALL SCHEDULE AN INSPECTION WITH THE CITY OF LONE TREE GESC INSPECTOR AS SOON AS TOPSOIL STRIPPING IS COMPLETED. FAILURE TO SCHEDULE SUCH INSPECTION OR FAILURE TO STOCKPILE TOPSOIL SHALL RESULT IN ISSUANCE OF A STOP WORK ORDER. THE STOP WORK ORDER SHALL REMAIN IN PLACE UNTIL TOPSOIL IS STOCKPILED ON SITE OR APPROPRIATE SOIL AMENDMENTS ARE STOCKPILED ON SITE.
24. FOR THE ACCEPTED GESC PLAN, MAJOR ACQUIREMENTS OR ALTERATIONS AFTER APPROVAL, TO MEET CHANGING SITE OR PROJECT CONDITIONS OR TO ADDRESS INEFFICIENCIES IN DESIGN OR INSTALLATION, THE GESC MANAGER SHALL REQUEST APPROVAL FROM THE DESIGN ENGINEER AND THE CITY OF LONE TREE ENGINEERING FOR ANY PROPOSED CHANGES.
25. LINING OF TEMPORARY SWALES AND DITCHES SHALL BE IN ACCORDANCE WITH THE GESC CRITERIA MANUAL.
26. NO PERMANENT EARTH SLOPES GREATER THAN 3:1 SHALL BE ALLOWED.
27. ANY SETTLEMENT OR SOIL ACCUMULATIONS BEYOND THE LIMITS OF CONSTRUCTION DUE TO GRADING OR EROSION SHALL BE REPAIRED IMMEDIATELY BY THE GESC MANAGER. THE GESC MANAGER SHALL BE HELD RESPONSIBLE FOR OBTAINING ACCESS RIGHTS TO ADJACENT PROPERTY, IF NEEDED, AND REMEDIATING ANY ADVERSE IMPACTS TO ADJACENT WATERWAYS, WETLANDS, PROPERTIES, ETC. RESULTING FROM WORK DONE AS PART OF THIS PROJECT.
28. A WATER SOURCE SHALL BE AVAILABLE ON SITE DURING EARTHWORK OPERATIONS AND UTILIZED AS REQUIRED TO MINIMIZE DUST FROM EARTHWORK EQUIPMENT AND WIND.
29. SOILS THAT WILL BE STOCKPILED FOR MORE THAN THIRTY (30) DAYS SHALL BE SEEDED AND MULCHED WITHIN FOURTEEN (14) DAYS OF STOCKPILE CONSTRUCTION. NO STOCKPILES SHALL BE PLACED WITHIN ONE HUNDRED (100) FEET OF A DRAINAGE WAY UNLESS APPROVED BY THE CITY OF LONE TREE ENGINEERING DIVISION.
30. ALL CHEMICAL OR HAZARDOUS MATERIAL SPILLS WHICH MAY ENTER WATERS OF THE STATE OF COLORADO, WHICH INCLUDE BUT ARE NOT LIMITED TO SURFACE WATER, GROUND WATER AND DRY CULLETS ON STORM SEWERS LEADING TO SURFACE WATER, SHALL BE IMMEDIATELY REPORTED TO THE COPEL PER OPS 25-8-801, AND THE CITY OF LONE TREE RELEASES OF PETROLEUM PRODUCTS AND CERTAIN HAZARDOUS SUBSTANCES LISTED UNDER THE FEDERAL CLEAN WATER ACT (40 CFR PART 115) MUST BE REPORTED TO THE NATIONAL RESPONSE CENTER AS WELL AS THE COPEL. THE APPLICABLE CONTACT INFORMATION (SEE APPENDIX A DOUGLAS COUNTY GESC MANUAL - SUBJECT TO CHANGE) IS DOUGLAS COUNTY DEPARTMENT OF PUBLIC HEALTH AND ENVIRONMENT TOLL-FREE 24-HOUR ENVIRONMENTAL EMERGENCY SERVICE REPORTING LINE: 1-877-318-5068. NATIONAL RESPONSE CENTER (24-HOUR NATIONAL SPILL RESPONSE) 1-800-424-6862. CITY OF LONE TREE PUBLIC WORKS (303) 662-8112. SPILLS THAT POSE AN IMMEDIATE RISK TO HUMAN LIFE SHALL BE REPORTED TO 911. FAILURE TO REPORT AND CLEAN UP ANY SPILL SHALL RESULT IN ISSUANCE OF A STOP WORK ORDER.
31. ALL WORK ON SITE SHALL STAY A MINIMUM OF ONE HUNDRED (100) FEET AWAY FROM ANY DRAINAGE WAY, WETLAND, ETC. UNLESS OTHERWISE NOTED ON AN ACCEPTED CITY OF LONE TREE GESC PLAN.
32. ALL PROJECTS SHALL BALANCE EARTHWORK QUANTITIES ON SITE. IN THE EVENT A VARIANCE IS GRANTED BY THE CITY ENGINEER TO ALLOW IMPORT OR EXPORT OF MATERIAL, THE PERMITTEE SHALL HAVE A GESC PERMIT IN HAND. THE PERMITTEE SHALL NOT EXPORT MATERIAL FROM THE PROJECT SITE PRIOR TO THE CITY OF LONE TREE GESC INSPECTOR OF THE LOCATION AND GESC PERMIT NUMBERS OF BOTH THE EXPORTING AND IMPORTING SITES PRIOR TO ANY IMPORT/EXPORT OPERATIONS.
33. THE USE OF REBAR, STEEL STAKES OR STEEL FENCE POSTS FOR STAKING OR SUPPORT OF ANY EROSION OR SEDIMENT CONTROL, BMP IS PROHIBITED EXCEPT STEEL FENCE POSTS FOR USE IN SUPPORTING CONSTRUCTION FENCE.
34. THE CLEANING OF CONCRETE DELIVERY TRUCK CHUTES IS RESTRICTED TO APPROVED CONCRETE WASH OUT LOCATIONS ON THE JOB SITE. THE DISCHARGE OF WATER CONTAINING WASTE CONCRETE TO THE STORM SEWER SYSTEM IS PROHIBITED. ALL CONCRETE WASTE SHALL BE PROPERLY CLEANED UP AND DISPOSED AT AN APPROPRIATE LOCATION.
35. ALL DEMARKERS ON SITE SHALL BE COORDINATED WITH A CITY OF LONE TREE GESC INSPECTOR AND BE FREE OF SEDIMENT IN ACCORDANCE WITH THE GESC CRITERIA MANUAL.
36. ALL PERMANENT INSTALLATIONS OF PIPES FOR STORM SEWERS, SLOPE DRAINS, AND CULVERTS, TOGETHER WITH RIPRAP ARRAYS OR OTHER INLET AND OUTLET PROTECTION, REQUIRE INSPECTION BY THE CITY OF LONE TREE ENGINEERING (SEPARATE FROM GESC INSPECTIONS).
37. ALL DISTURBED AREAS SHALL BE DRILL SEEDING AND CRIMP MULCHED IN ACCORDANCE WITH THE DOUGLAS COUNTY GESC MANUAL, CRITERIA AND THE CITY OF LONE TREE SEEDING AND MULCHING DETAIL (117) INCLUDED HEREIN WITHIN THIRTY DAYS OF INITIAL EXPOSURE OR WITHIN SEVEN DAYS OF SUBSTANTIAL COMPLETION (AS DEFINED BY THE CITY OF LONE TREE) OF AN AREA, WHICHEVER IS LESS. THIS MAY REQUIRE MULTIPLE MOBILIZATIONS FOR SEEDING AND MULCHING.
38. HYDRAULIC SEEDING AND HYDRAULIC MULCHING ARE NOT AN ACCEPTABLE METHOD OF SEEDING OR MULCHING IN THE CITY OF LONE TREE.
39. NO CURB AND GUTTER PERMITS SHALL BE ISSUED UNTIL ALL DISTURBED AREAS ARE DRILL SEEDING AND CRIMP MULCHED.
40. NO PAVING PERMITS SHALL BE ISSUED UNTIL ALL INTERIM INLET PROTECTION IS INSTALLED AND APPROVED BY THE GESC INSPECTOR.
41. A FINAL GESC INSPECTION SHALL BE CONDUCTED A MINIMUM OF TWO WEEKS PRIOR TO THE ANTICIPATED REQUEST FOR CERTIFICATE OR TEMPORARY CERTIFICATE OF OCCUPANCY OR INITIAL ACCEPTANCE.

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



DETAIL SHEET

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BMP LEGEND

CD CHECK DAM

CB COMPOST BLANKET

CFB COMPOST FILTER BERM

CWA CONCRETE WASHOUT AREA

CF CONSTRUCTION FENCE

CM CONSTRUCTION MARKERS

DW DEWATERING

DD DIVERSION DITCH

ECB EROSION CONTROL BLANKET

IP INLET PROTECTION

RCD REINFORCED CHECK DAM

RRB REINFORCED ROCK BERM

RRR RRR FOR CULVERT PROTECTION

SB SEDIMENT BASIN

SCL SEDIMENT CONTROL LOG

ST SEDIMENT TRAP

SM SEEDING AND MULCHING

SF SILENT FENCE

SSA STABILIZED STAGING AREA

SR SURFACE ROUGHENING

TSD TEMPORARY STREAM CROSSING

TSC TEMPORARY STREAM CROSSING

TER TERRACING

VTC VEHICLE TRACKING CONTROL

WW VTC WITH WHEEL WASH

CS CURB SOCK

ROCK AND RIPRAP GRADATIONS

LOC LIMITS OF CONSTRUCTION

CD CHECK DAM

CB COMPOST BLANKET

CFB COMPOST FILTER BERM

CWA CONCRETE WASHOUT AREA

CF CONSTRUCTION FENCE

CM CONSTRUCTION MARKERS

DW DEWATERING

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VTC VEHICLE TRACKING CONTROL

WW VTC WITH WHEEL WASH

CS CURB SOCK

ROCK AND RIPRAP GRADATIONS

LOC LIMITS OF CONSTRUCTION

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CS CURB SOCK

ROCK AND RIPRAP GRADATIONS

LOC LIMITS OF CONSTRUCTION

CD CHECK DAM

CB COMPOST BLANKET

CFB COMPOST FILTER BERM

<

HiNOTE

REGIONAL PARK

City of Lone Tree
City Engineer
9220 Kimmer Drive, Suite 100
Lone Tree, CO 80124
tel 303.708.1818

Park Operator
4810 E County Line Rd
Littleton, CO 80126
tel 303.786.5131

OJB
OJB Landscape Architecture
Principal
1732 Wazee Street, Suite 209
Denver, CO 80202
tel 303.604.3385

Tryba Architects
Architect
tel 303.831.4010

Martin/Martin
Civil Engineer
tel 303.431.6100

Thornton Tomasetti
Structural Engineer
tel 303.876.5700

Azure Engineering LLC
Professional Engineer
tel 970.980.8533

illume
Architectural Lighting
tel 303.421.6655

ME Engineers
Mechanical, Electrical & Plumbing
tel 303.421.6655

Shen Milson & Wilke (SM&W)
Acoustics, Audiology, Information Technology & Security
tel 720.462.0770

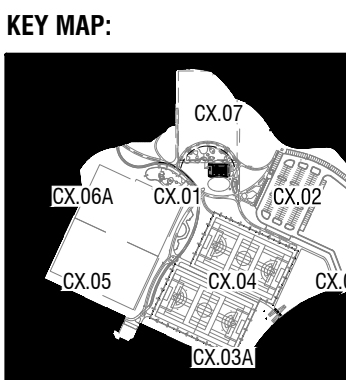
RSM Design
Branding, Signage & Wayfinding
tel 949.492.9475

Peregrine Fire
Fire Protection Consultant & Wildfire Mitigation
tel 303.997.8875

Fountain Source
Water Feature Consultant
tel 303.997.8875

Roxbox
Container Architect
tel 303.997.8875

MARTIN/MARTIN
CONSULTING ENGINEERS
1800 North Lincoln Avenue
Denver, CO 80202
tel 303.431.6100



NOT FOR
CONSTRUCTION

Rev	Date	Description
223	2006	SIP SUBMITTAL

Sheet description
**EROSION CONTROL
DETAILS**

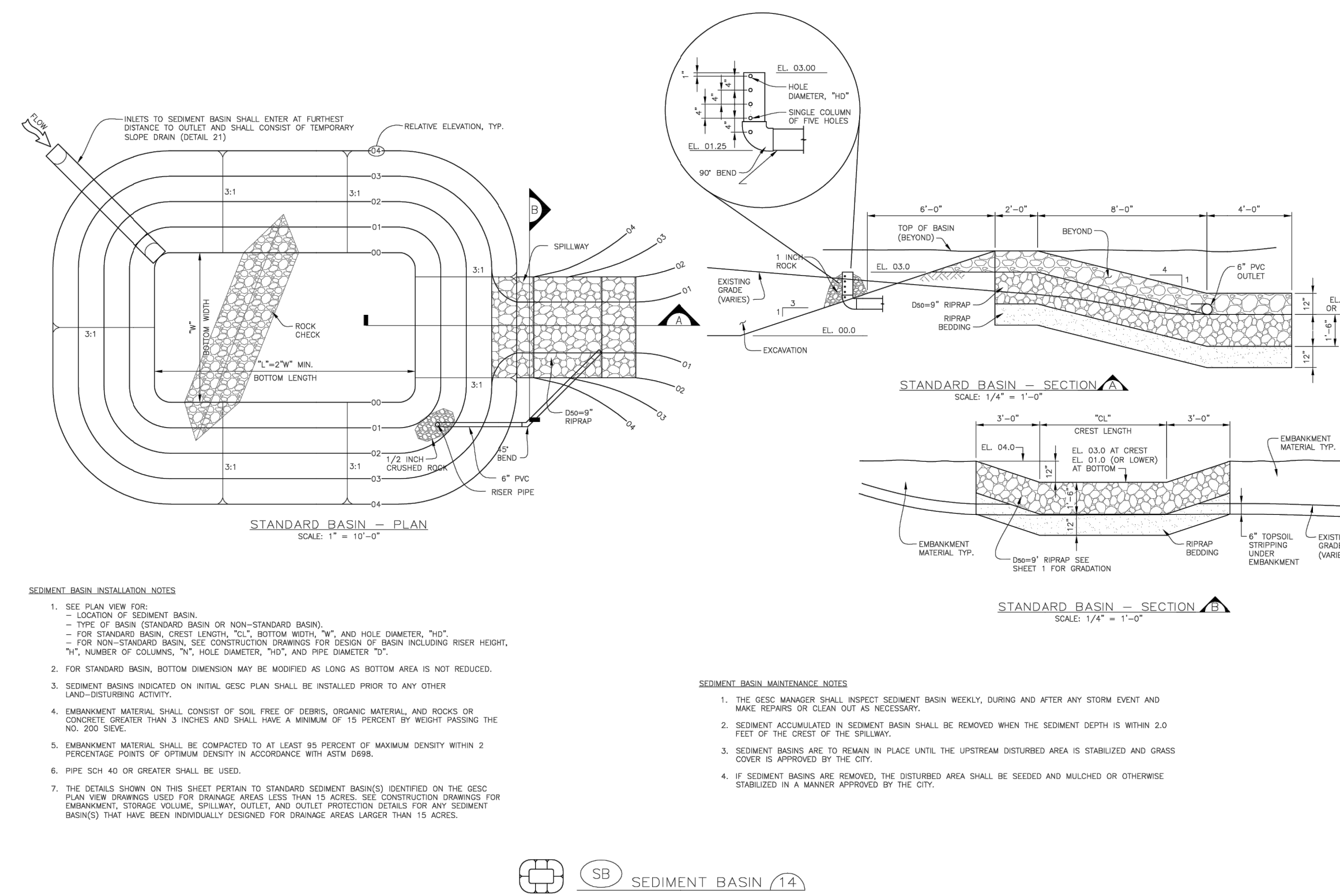
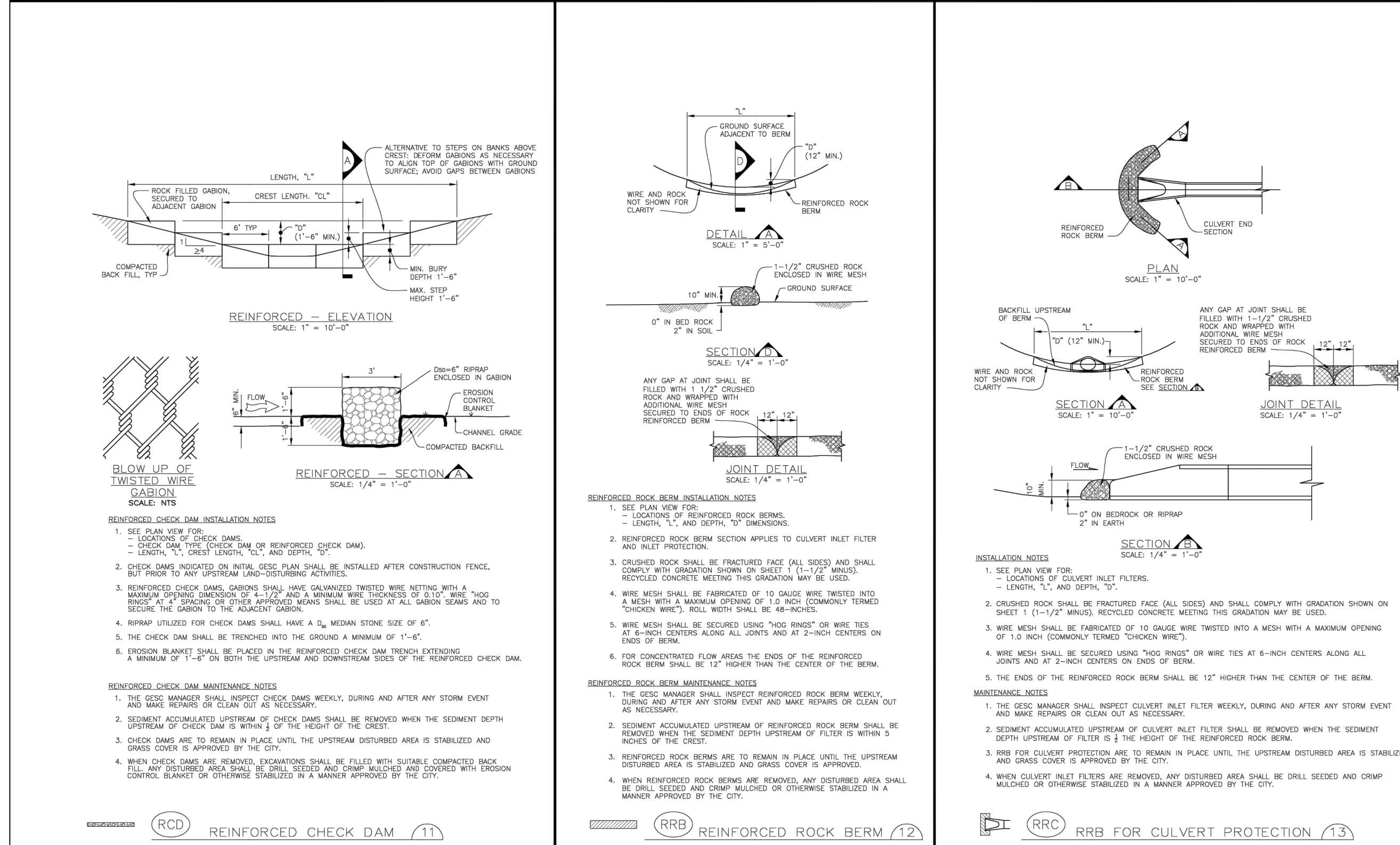
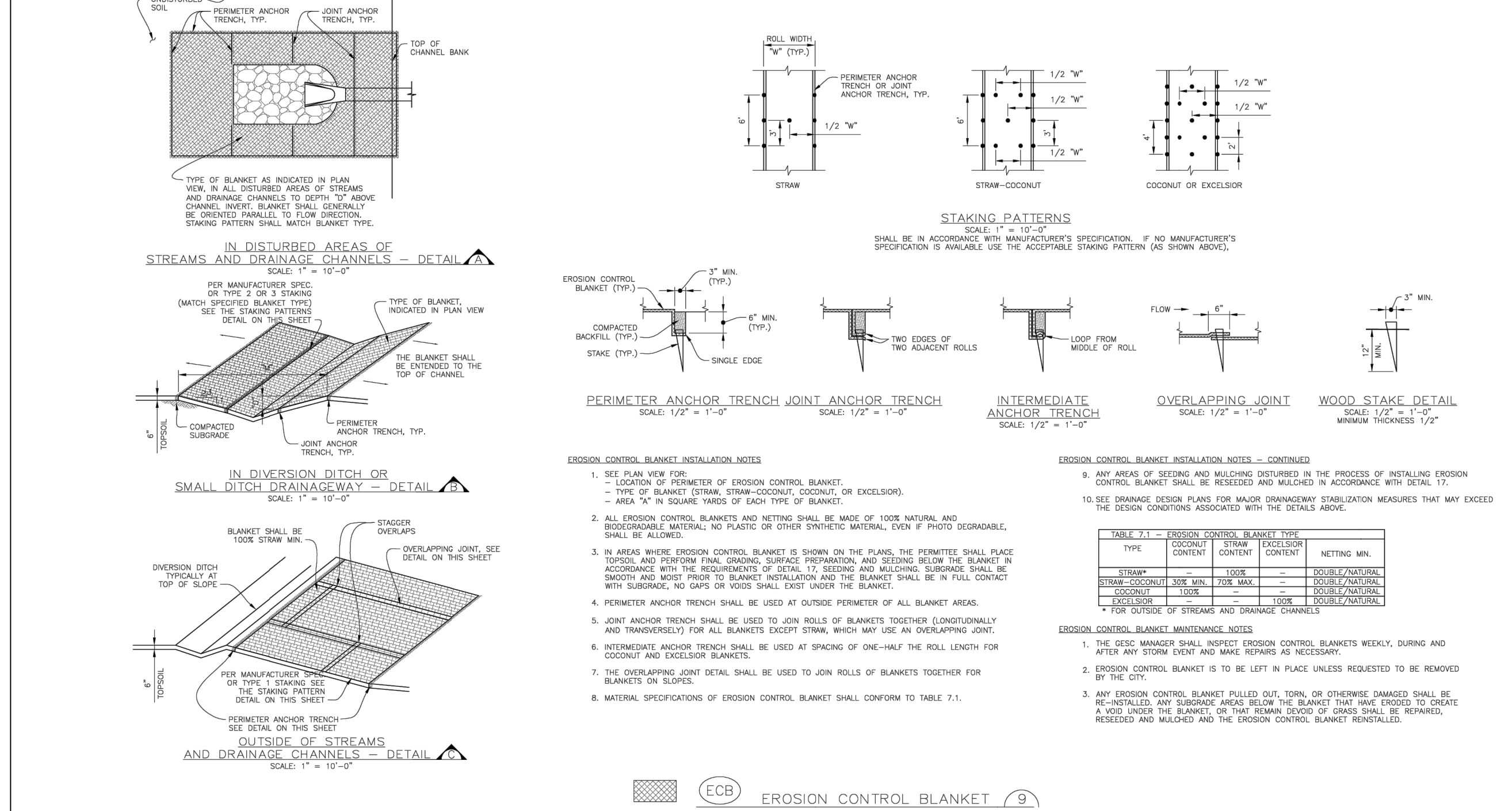
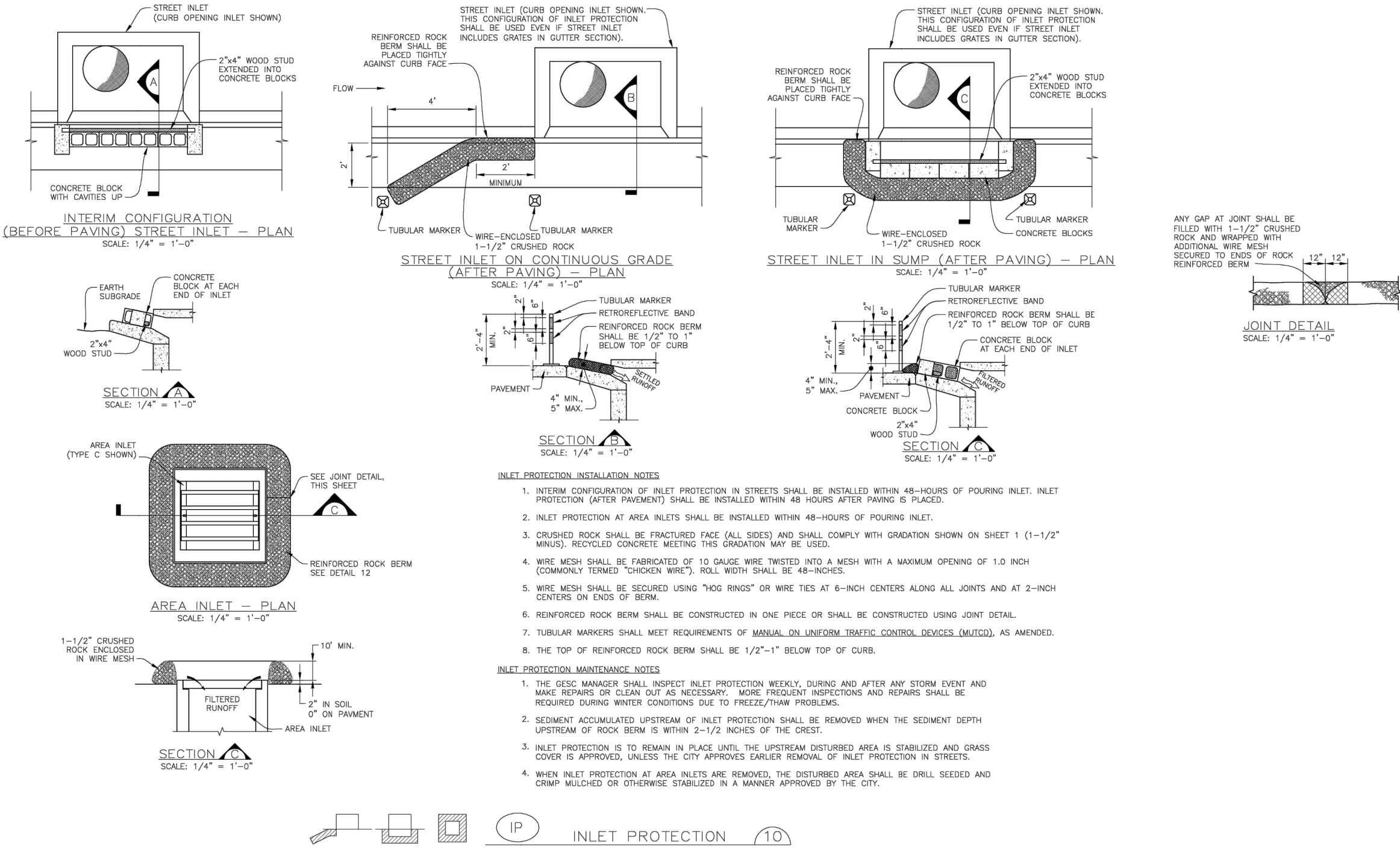
Sheet number
C2.51
SIP Sheet number

CITY OF LONE TREE

DATE

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

ENGINEERING DIVISION ACCEPTANCE BLOCK.



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

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

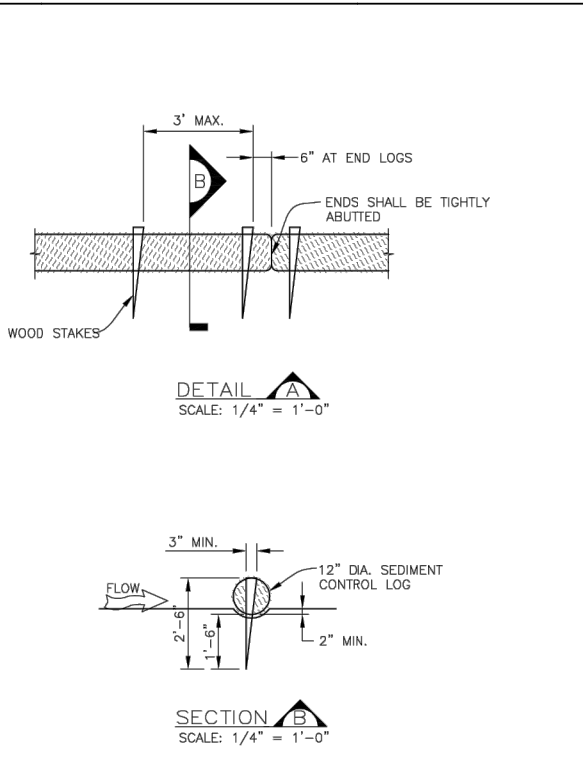


CITY OF LONE TREE
DEPARTMENT OF PUBLIC WORKS
Engineering Division

GESC GRADING, EROSION, AND
SEDIMENT CONTROL

**GESC PLAN
STANDARD NOTES
AND DETAILS**

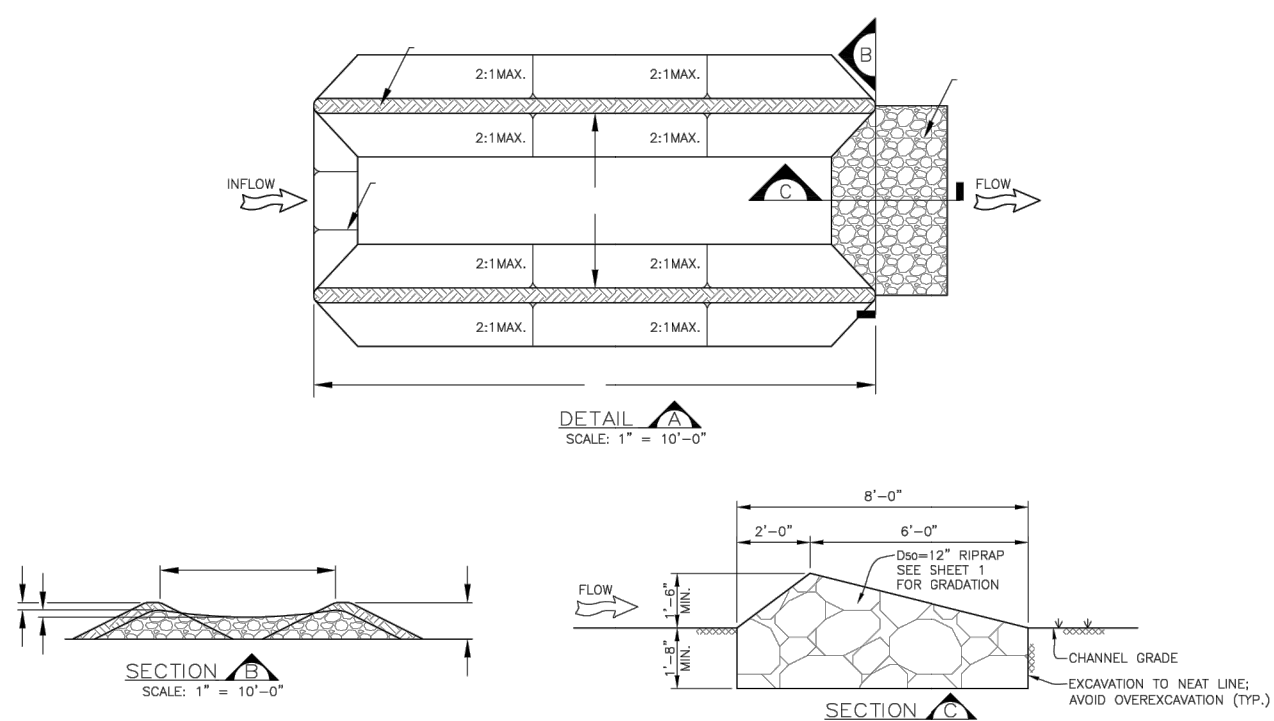
**SHEET
2 OF 3**



- SEDIMENT CONTROL LOG INSTALLATION NOTES**
1. SEE PLAN VIEW FOR LOCATION AND LENGTH OF SEDIMENT CONTROL LOG.
 2. SEDIMENT CONTROL LOGS INDICATED ON INITIAL GESC PLAN SHALL BE INSTALLED PRIOR TO ANY LAND-DESTRUCTING ACTIVITIES.
 3. SEDIMENT CONTROL LOGS SHALL CONSIST OF STRAW, COIR, OR EXCESS OF COCOON FIBER.
 4. NOT FOR USE IN CONCENTRATED FLOW AREAS.
 5. THE SEDIMENT CONTROL LOG SHALL BE TRENCHED INTO THE GROUND A MINIMUM OF 2".

- SEDIMENT CONTROL LOG MAINTENANCE NOTES**
1. THE GESC MANAGER SHALL INSPECT SEDIMENT CONTROL LOGS DAILY, DURING AND AFTER ANY STORM EVENT AND MAKE REPAIRS OR CLEAN OUT UPSTREAM SEGMENT AS NECESSARY.
 2. SEDIMENT ACCUMULATED UPSTREAM OF SEDIMENT CONTROL LOGS SHALL BE REMOVED WHEN THE UPSTREAM SEGMENT DEPTH IS WITHIN 8" OF THE HEIGHT OF THE LOG.
 3. SEDIMENT CONTROL LOGS SHALL BE REMOVED AT THE END OF CONSTRUCTION, IF NOT DESTROYED AREA EVENTS AFTER REMOVAL, THE LOGS SHALL BE REMOVED OR OTHERWISE STABILIZED IN A MANNER APPROVED BY THE CITY.

SEDIMENT CONTROL LOG (15)



- SEDIMENT TRAP INSTALLATION NOTES**
1. SEE PLAN VIEW FOR LOCATION, LENGTH AND WIDTH OF SEDIMENT TRAP.
 2. SEDIMENT TRAPS INDICATED ON INITIAL GESC PLAN SHALL BE INSTALLED PRIOR TO ANY LAND-DESTRUCTING ACTIVITIES.
 3. SEDIMENT TRAP BERM SHALL BE CONSTRUCTED FROM MATERIAL FROM EXCAVATION. THE BERM SHALL BE COMPACTED TO 90% OF THE MAXIMUM DENSITY IN ACCORDANCE WITH ASTM D698.
 4. RIPRAP OUTLET SHALL BE CONSTRUCTED WITH D=12" RIPRAP WITH A MINIMUM OVERFLOW OF 6".
 5. THE TOP OF THE OUTLET BERM SHALL BE A MINIMUM OF 6" HIGHER THAN THE TOP OF THE RIPRAP OUTLET STRUCTURE.
 6. THE END OF THE RIPRAP OUTLET STRUCTURE SHALL BE MINIMUM OF 6" HIGHER THAN THE CENTER OF THE OUTLET STRUCTURE.

- SEDIMENT TRAP MAINTENANCE NOTES**
1. THE GESC MANAGER SHALL INSPECT SEDIMENT TRAPS WEEKLY, DURING AND AFTER ANY STORM EVENT AND MAKE REPAIRS OR CLEAN OUT UPSTREAM SEGMENT AS NECESSARY.
 2. SEDIMENT ACCUMULATED UPSTREAM OF RIPRAP SHALL BE REMOVED WHEN THE UPSTREAM SEGMENT DEPTH IS WITHIN 8" OF THE HEIGHT OF THE RIPRAP OUTLET STRUCTURE.
 3. SEDIMENT TRAPS SHALL REMAIN IN PLACE UNTIL THE UPSTREAM DISTURBED AREA IS STABILIZED AND GRASS COVERAGE IS APPROVED BY THE CITY.
 4. WHEN SEDIMENT TRAPS ARE REMOVED, THE DISTURBED AREA SHALL BE DRILLED SEEDING AND CRIMP MULCHED OR STABILIZED IN A MANNER APPROVED BY THE CITY.

SEDIMENT TRAP (16)

SEEDING AND MULCHING INSTALLATION NOTES

1. SEE PLAN VIEW FOR:
 - AREA OF SEEDING AND MULCHING
 - TYPE OF SEED MIX (PERMANENT, TEMPORARY, OR LOW-GROWTH)
2. ALL BRANDS FURNISHED SHALL BE FREE FROM SUCH NOXIOUS WEEDS AS RUSSIAN OR CANADIAN THISTLE, CORN FUSC, LUPULIN BRANCHED, JOHNSON GRASS, KRAV WEED AND LEAFY SPURGE.
3. THE SEEDER SHALL FURNISH TO THE CONTRACTOR A WRITTEN STATEMENT CERTIFYING THAT THE SEED FURNISHED IS FROM A LOT THAT HAS BEEN TESTED BY A RECOGNIZED LABORATORY. SEED WHICH HAS BECOME WEAK, MOIST, OR OTHERWISE DAMAGED IN TRANSIT OR IN STORAGE, WILL NOT BE ACCEPTABLE. SEED TICKETS SHALL BE PROVIDED TO CITY OF LONE TREE UPON REQUEST.
4. DRILL SEEDING MIX SHALL CONFORM TO THE TABLE ON THE RIGHT.
5. IF THE SEED AVAILABLE ON THE MARKET DOES NOT MEET THE MINIMUM PURITY AND GERMINATION PERCENTAGES SPECIFIED, THE SUBCONTRACTOR MUST COMPENSATE FOR A LABORATORY TEST TO DETERMINE THE SEED QUALITY. SEED WHICH DOES NOT MEET THE MINIMUM PURITY AND GERMINATION PERCENTAGES SPECIFIED, THE SUBCONTRACTOR MUST COMPENSATE FOR A LABORATORY TEST TO DETERMINE THE SEED QUALITY. SEED WHICH DOES NOT MEET THE MINIMUM PURITY AND GERMINATION PERCENTAGES SPECIFIED, THE SUBCONTRACTOR MUST COMPENSATE FOR A LABORATORY TEST TO DETERMINE THE SEED QUALITY.
6. THE FORMULA USED FOR DETERMINING THE QUANTITY OF PURE LIVE SEED (PLS) SHALL BE: $PLS = \frac{SEEDS}{100} \times \frac{GERMINATION}{100}$
7. PERMANENT SEED MIX SHALL BE USED UNLESS OTHERWISE APPROVED BY THE CITY.
8. ALL AREAS TO BE SEEDING AND MULCHED SHALL HAVE NATIVE TOPSOIL OR APPROVED SOIL APPLIED TO A DEPTH OF AT LEAST 6 INCHES. SEEDING OVER ANY COMPACTED AREAS THAT HAVE BEEN THOROUGHLY LOOSENED SHALL BE REJECTED.
9. SOIL IS TO BE THOROUGHLY LOOSENED, FILLED TO A DEPTH OF AT LEAST 6 INCHES PRIOR TO SEEDING. THE TOP 6 INCHES OF THE SEED MIX SHALL BE FREE OF ROCKS GREATER THAN 4 INCHES AND SOIL CLOSURE GREATER THAN 2 INCHES. SEEDING OVER ANY COMPACTED AREAS THAT HAVE BEEN THOROUGHLY LOOSENED SHALL BE REJECTED.
10. SEED IS TO BE APPLIED USING A MECHANICAL DRILL TO A DEPTH OF 1/4 INCH. ROW SPACING SHALL BE NO MORE THAN 4 INCHES. MATERIAL USED FOR MULCH SHALL CONSIST OF LONG-STEMMED STRAW, AT LEAST 50 PERCENT BY WEIGHT, SHALL BE 10 INCHES OR MORE IN LENGTH. MULCH SHALL BE APPLIED AND MECHANICALLY INCORPORATED TO A DEPTH OF AT LEAST 2 INCHES. MULCH SHALL BE APPLIED AT A RATE OF 4000 LB. OF STRAW PER ACRE.
11. IF THE PERMITTEE DEMONSTRATES TO THE CITY THAT IT IS NOT POSSIBLE TO DRILL SEED, SEED IS TO BE HAND-APPLIED TO THE CITY THAT IT IS NOT POSSIBLE TO DRILL SEED.
12. SEEDING AND MULCHING SHALL BE COMPLETED WITHIN 30 DAYS OF INITIAL EXPOSURE OR 7 DAYS OF THE CITY OF LONE TREE APPROVED MAX.
13. MULCH SHALL BE APPLIED WITHIN 24 HOURS OF SEEDING.
14. MULCH SHOULD BE UTILIZED TO HELP WITH STORM DISPLACEMENT.

- SEEDING AND MULCHING MAINTENANCE NOTES**
1. SEEDING AND MULCHED AREAS SHALL BE INSPECTED FOR REQUIRED COVERAGE MONTHLY. SEEDING AND MULCHING SHALL BE UNDERTAKEN AFTER THE FIRST GROWING SEASON FOR ANY AREAS PLANNED TO MEET THE REQUIRED COVERAGE.
 2. REQUIRED COVERAGE FOR STANDING, OPEN SPACE AND LOW GROWING SEED MIXES SHALL BE:
 - 3" PLANTS PER SQUARE FOOT SHALL BE A MINIMUM HEIGHT OF 3 INCHES.
 - 3" PLANTS PER SQUARE FOOT SHALL BE THE MINIMUM HEIGHT OF 3 INCHES.
 3. FREE OF ERODED AREAS.
 4. FREE FROM INTERFERENCE OF NOXIOUS WEEDS IN ACCORDANCE WITH SECTION 6.4 OF THE GESC CRITERIA MANUAL.
 5. REQUIRED COVERAGE FOR TURF GRASS AREAS SHALL BE DETERMINED AS FOLLOWS:
 - 1. AT LEAST 80% VEGETATIVE COVER OF GRASS SPECIES PLANTED.
 - 2. NO BARE AREAS LARGER THAN 4 SQUARE FEET (TWO-FEET BY TWO-FEET OR EQUIVALENT).
 - 3. FREE OF ERODED AREAS.
 - 4. FREE FROM INTERFERENCE OF NOXIOUS WEEDS IN ACCORDANCE WITH SECTION 6.4 OF THE GESC CRITERIA MANUAL.
 6. ALL BARE AND ERODED AREAS SHALL BE FILLED WITH TOPSOIL PRIOR TO RESEEDING. THE RESEEDING METHOD SHALL BE APPROVED BY THE CITY.

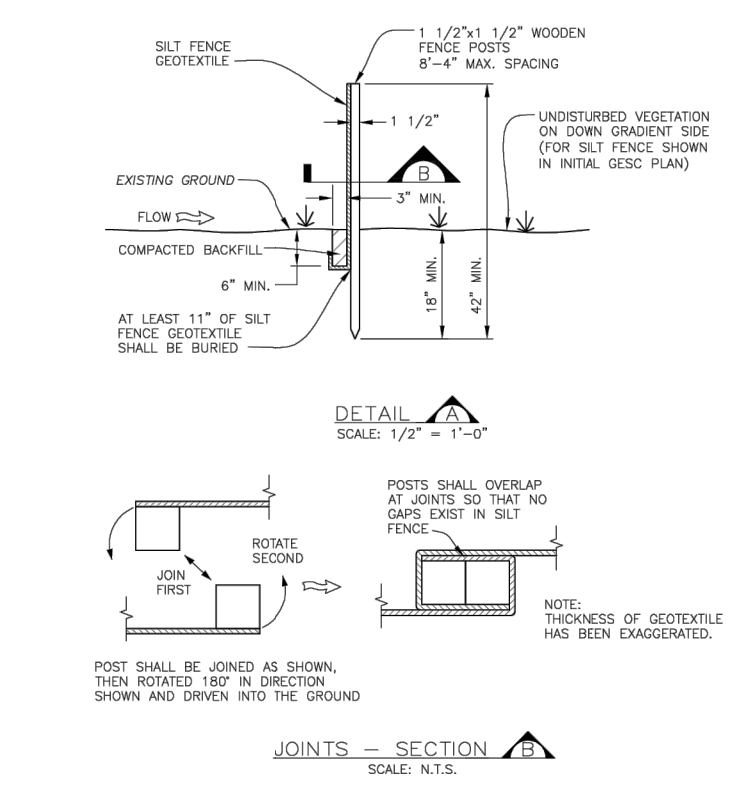
SEEDING AND MULCHING (17)

SPECIES	VARIETY	NOTES	S.L. IN MIX	POUNDS PER ACRE
BIG BLUESTEM	NAW	PMWS	10	1.1
YELLOW PARNASSIA	CHRYSENE	PMWS	10	1
SWITCHGRASS	BLACKWELL	PMWS	10	0.4
SECOATS GRAMA	VAUGHN	PMWS	10	0.9
WESTERN WHEATGRASS	ARRISA	PMWS	10	1.6
BLUE GRAMA	HACHTA	PMWS	10	0.3
THICKSKIN WHEATGRASS	CRITANA	PMWS	10	1
PRANKE SANDREED	GOSEHN	PMWS	10	0.7
GREEN NEEDLEGRASS	LODRUM	PMWS	10	1
SLICED WHEATGRASS	PRYOR	PMWS	5	0.6
STROMBERRY WHEATGRASS	SCAR	PMWS	5	0.6
TOTAL				9.2

SPECIES	VARIETY	NOTES	S.L. IN MIX	POUNDS PER ACRE
SMOOTH BROMERGRASS	LINCOLN	PMCS	30	3.9
INTERMEDIATE WHEATGRASS	DAHE	PMCS	30	4.5
PLUESCENT WHEATGRASS	LUNA	PMCS	30	4.2
ANNUAL RYEGRASS	N/A	ACR	10	0.8
TOTAL				13.4

SPECIES	VARIETY	NOTES	S.L. IN MIX	POUNDS PER ACRE
BUFTALOGRASS	TECKA	PMCS	20	3.2
BLUE GRAMA	HACHTA	PMWS	20	0.6
WESTERN WHEATGRASS	ARRISA	PMCS	20	3.2
SECOATS GRAMA	VAUGHN	PMWS	20	1.8
THICKSKIN WHEATGRASS	CRITANA	PMWS	10	1
STROMBERRY WHEATGRASS	SCAR	PMCS	10	1.2
TOTAL				11.0

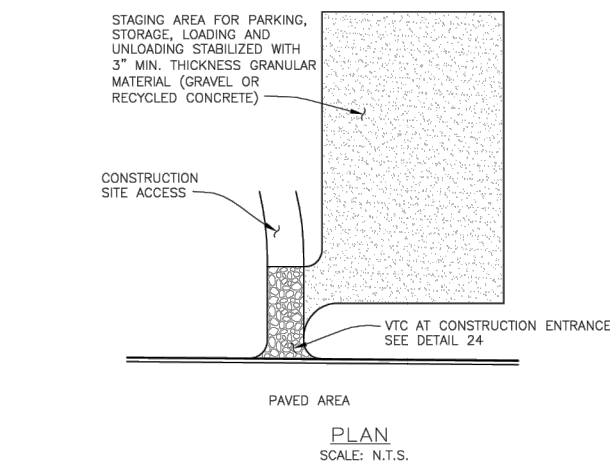
SEEDING AND MULCHING (17)



- SILT FENCE INSTALLATION NOTES**
1. SEE PLAN VIEW FOR LOCATION AND LENGTH OF FENCE.
 2. ANCHOR TRENCH SHALL BE DECATED WITH TREACHER, OR WITH SILT FENCE INSTALLATION MACHINE. NO SHARP GRADERS, BACKHOES, ETC. SHALL BE USED. TRENCH SHALL BE COMPACTED BY HAND WITH TAMING JOLT, OR BY POWER ROLLING COMPACTOR. SHALL BE SUCH THAT SILT FENCE RESISTS BEING PULLED OUT OF ANCHOR TRENCH BY HAND.
 3. SILT FENCE GEOTEXTILE SHALL MEET THE FOLLOWING REQUIREMENTS:
 - 4-TO 10-CHALLENGE PER MINUTE PER SQUARE FOOT FLOW CAPACITY.
 - 90 LB. TENSILE STRENGTH PER ASTM D4252.
 - 1/4" OPEN AT 200 MESH MIN. FOR STRENGTH RETAINED PER ASTM D 4355.
 4. SILT FENCE INDICATED ON INITIAL GESC PLAN SHALL BE INSTALLED PRIOR TO ANY LAND-DESTRUCTING ACTIVITIES.

- SILT FENCE MAINTENANCE NOTES**
1. THE GESC MANAGER SHALL INSPECT SILT FENCE DAILY, DURING AND AFTER ANY STORM EVENT AND MAKE REPAIRS OR CLEAN OUT UPSTREAM SEGMENT AS NECESSARY.
 2. SEDIMENT ACCUMULATED UPSTREAM OF SILT FENCE SHALL BE REMOVED WHEN THE UPSTREAM SEGMENT REACHED A DEPTH OF 8-INCHES.
 3. SILT FENCE SHALL BE REMOVED WHEN THE UPSTREAM DISTURBED AREA IS STABILIZED AND GRASS COVER IS APPROVED BY THE CITY. IF ANY DISTURBED AREA EXISTS AFTER REMOVAL, IT SHALL BE SEEDING AND MULCHED OR OTHERWISE STABILIZED IN A MANNER APPROVED BY THE CITY.

SILT FENCE (18)



- STABILIZED STAGING AREA INSTALLATION NOTES**
1. SEE PLAN VIEW FOR GENERAL LOCATION OF STAGING AREA. STAGING AREA MUST BE LOCATED AND SIZE OF STABILIZED STAGING AREA WITH CITY APPROVAL.
 2. STAGING AREA SHALL BE LARGE ENOUGH TO FULLY CONTAIN PARKING, STORAGE, AND UNLOADING AND LOADING.
 3. IF REQUIRED BY THE CITY, SITE ACCESS ROADS SHALL BE STABILIZED IN THE SAME MANNER AS THE STAGING AREA.
 4. STAGING AREA SHALL BE STABILIZED PRIOR TO ANY OTHER OPERATIONS ON THE SITE.
 5. THE STABILIZED STAGING AREA SHALL CONSIST OF A MINIMUM OF 2" OF GRANULAR MATERIAL (GRADE OR RECYCLED CONCRETE).

- STABILIZED STAGING AREA MAINTENANCE NOTES**
1. THE GESC MANAGER SHALL INSPECT THE STABILIZED STAGING AREA DAILY, DURING AND AFTER ANY STORM EVENT AND MAKE REPAIRS OR CLEAN OUT UPSTREAM SEGMENT AS NECESSARY.
 2. GESC MANAGER SHALL PROVIDE ADDITIONAL THICKNESS OF GRANULAR MATERIAL, FILLING, AND/OR REPAIRS OF UNLOADING.
 3. STABILIZED STAGING AREA SHALL BE ENLARGED IF NECESSARY TO CONTAIN PARKING, STORAGE, AND UNLOADING AND LOADING.
 4. ANY ACCUMULATED DEBRIS OR WASTE SHALL BE REMOVED FROM THE SURFACE OF THE STABILIZED STAGING AREA.
 5. THE STABILIZED STAGING AREA SHALL BE REMOVED AT THE END OF CONSTRUCTION, IF NOT DESTROYED AREA EVENTS AFTER REMOVAL, THE LOGS SHALL BE REMOVED OR OTHERWISE STABILIZED IN A MANNER APPROVED BY THE CITY.

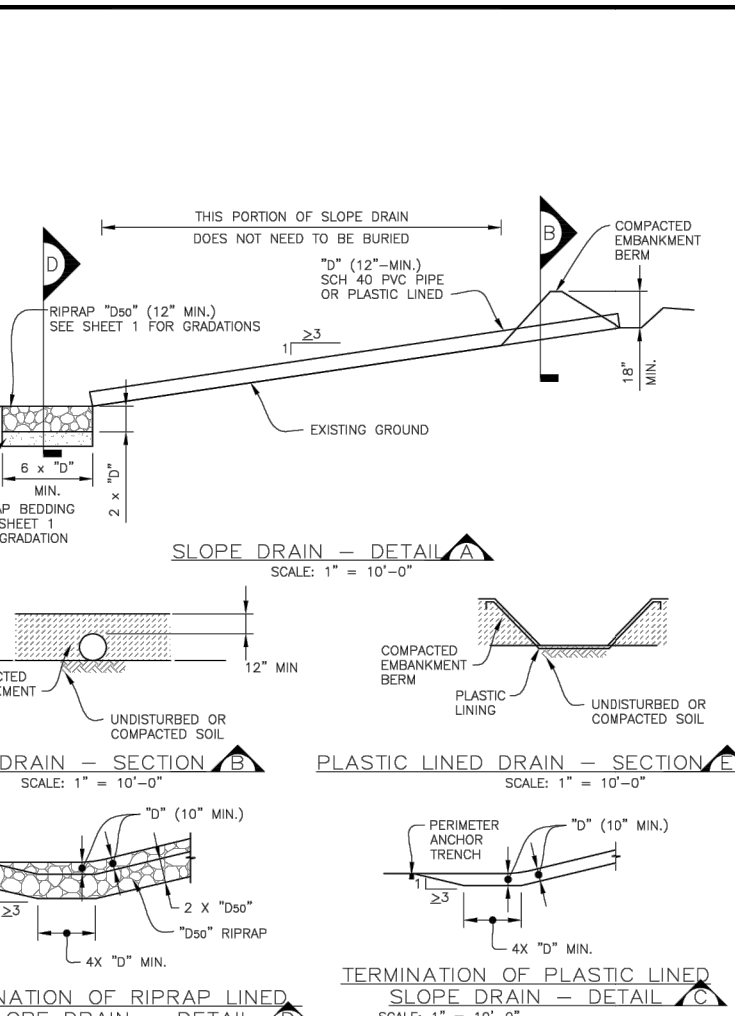
STABILIZED STAGING AREA (19)



- SURFACE ROUGHENING INSTALLATION NOTES**
1. SURFACE ROUGHENING SHALL BE PROVIDED ON ALL FINISHED GRADES (CUTS AND "FILL") AREAS WITHIN 2 DAYS OF COMPLETION OF FINISHED GRADE (FOR AREAS NOT RECEIVING TOPSOIL) OR WITHIN 2 DAYS OF TOPSOIL PLACEMENT.
 2. AREAS WHERE BUILDING FOUNDATIONS, PAVEMENT, OR SOIL IS TO BE PLACED WITHIN 7-DAYS OF FINISHED GRADING OR NOT NEED TO BE SURFACE ROUGHENED.
 3. DISTURBED SURFACES SHALL BE RECOVERED USING RIPRAP OR TILING EQUIPMENT ON THE CONTOUR OR TRACKING UP AND DOWN A SLOPE USING EQUIPMENT TRUCKS.

- SURFACE ROUGHENING MAINTENANCE NOTES**
1. THE GESC MANAGER SHALL INSPECT THE SURFACE ROUGHENING WEEKLY, DURING AND AFTER ANY STORM EVENT AND MAKE REPAIRS OR CLEAN OUT UPSTREAM SEGMENT AS NECESSARY.
 2. VEHICLES AND EQUIPMENT SHALL BE CONFINED TO ACCESS DRIVES AND SHALL NOT BE DRIVEN OVER AREAS THAT HAVE BEEN SURFACE ROUGHENED.
 3. IN NON-TURF GRASS FINISHED AREAS, SEEDING AND MULCHING SHALL BE PLACED DIRECTLY OVER SURFACE ROUGHENED AREAS WITHOUT FIRST STABILIZING THE SURFACE.
 4. IN AREAS NOT SEEDING AND MULCHED AFTER SEEDING, SURFACES SHALL BE RE-ROUGHENED AS NECESSARY TO MAINTAIN SLOPE DEPTH AND SMOOTH OVER ANY RILL EROSION.

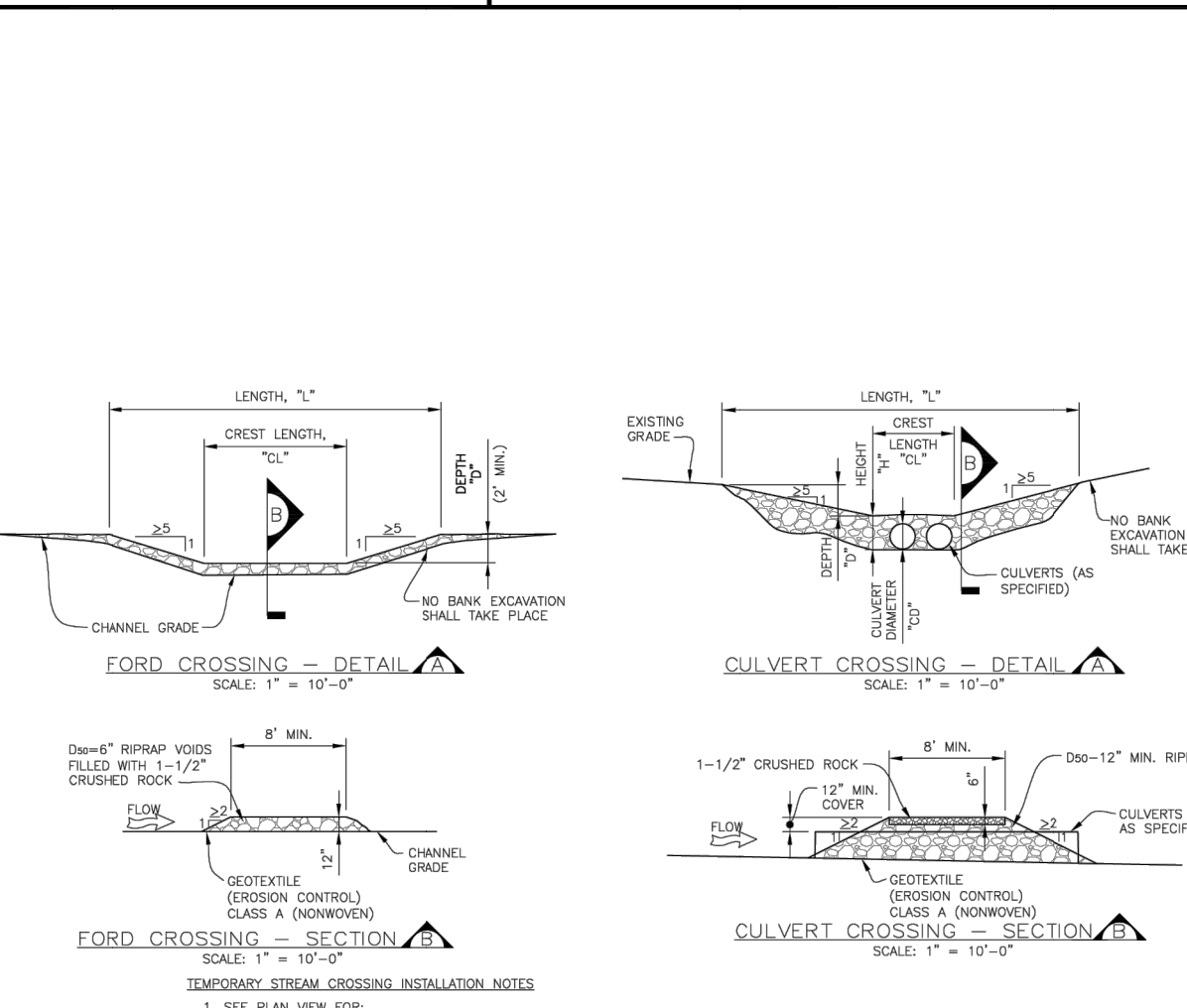
SURFACE ROUGHENING (20)



- TEMPORARY SLOPE DRAIN INSTALLATION NOTES**
1. SEE PLAN VIEW FOR LOCATION AND LENGTH OF SLOPE DRAIN.
 - LOCATION OF TEMPORARY SLOPE DRAIN
 - STREAM CROSSING TYPE (FORD OR CULVERT)
 - FOR FORD CROSSING: LENGTH, "L", CREST LENGTH, "L", CREST HEIGHT, "H", DEPTH, "D", CULVERT DIAMETER, "D", AND NUMBER, TYPE AND CLASS OF GAUGE OR GAUGE OF CULVERT.
 2. TEMPORARY SLOPE DRAIN DIMENSIONS, DOD, AND NUMBER OF CULVERTS INDICATED FOR CULVERT CROSSING SHALL BE CONSIDERED MINIMUM DIMENSIONS. CONTRACTOR MAY SELECT TO INSTALL LARGER FACILITIES. ANY CHANGE TO STREAM CROSSING OR EXISTING STREAM CHANNEL DURING BASEFLOW OR FLOOD EVENTS SHALL BE THE CONTRACTOR'S RESPONSIBILITY.
 3. SEE SHEET 1 FOR RIPRAP AND 1-1/2" CRUSHED ROCK GRADATIONS.
 4. FOR A TEMPORARY STREAM CROSSING THAT WILL CARRY LOADS, THE TEMPORARY STREAM CROSSING MUST BE DESIGNED BY THE DESIGN ENGINEER.

- TEMPORARY SLOPE DRAIN MAINTENANCE NOTES**
1. THE GESC MANAGER SHALL INSPECT SLOPE DRAINS WEEKLY, DURING AND AFTER ANY STORM EVENT AND MAKE REPAIRS OR CLEAN OUT UPSTREAM SEGMENT AS NECESSARY.
 2. SEDIMENT ACCUMULATED UPSTREAM OF SLOPE DRAINS SHALL BE REMOVED WHEN THE SEDIMENT DEPTH UPSTREAM OF CROSSING IS WITHIN 4-INCHES OF THE CREST (FOR CROSSING) OR GREATER THAN AN AVERAGE DEPTH OF 12-INCHES (CULVERT CROSSING).
 3. SLOPE DRAINS ARE TO REMAIN IN PLACE UNTIL NO LONGER NEEDED, BUT SHALL BE REMOVED PRIOR TO THE END OF CONSTRUCTION.
 4. WHEN SLOPE DRAINS ARE REMOVED, THE DISTURBED AREA SHALL BE DRILL SEEDING AND CRIMP MULCHED OR OTHERWISE STABILIZED IN A MANNER APPROVED BY THE CITY.

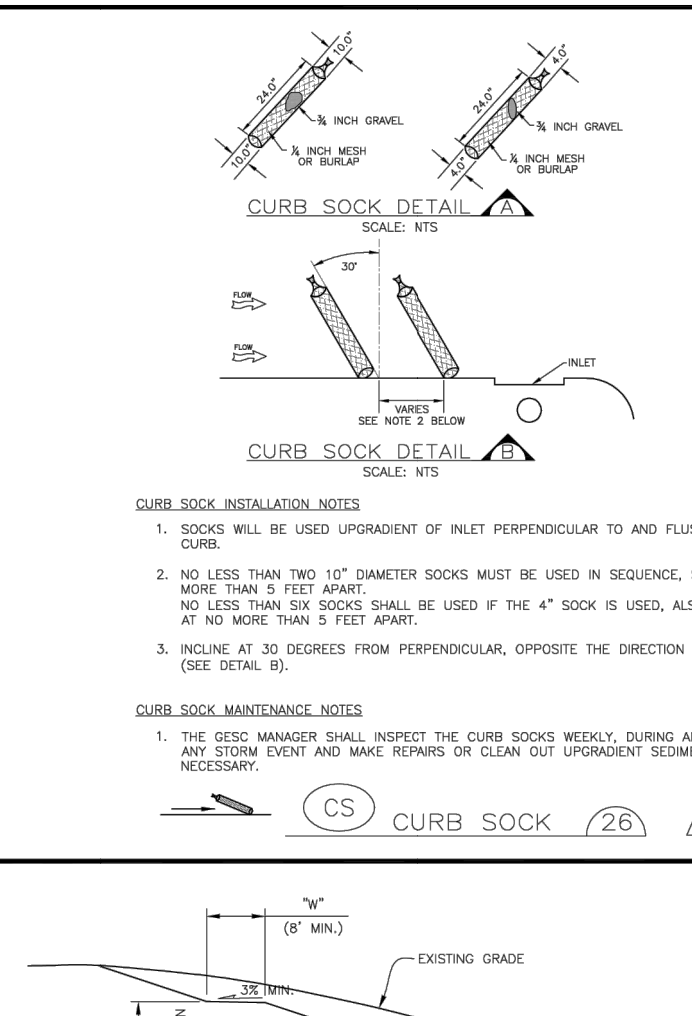
TEMPORARY SLOPE DRAIN (21)



- TEMPORARY STREAM CROSSING INSTALLATION NOTES**
1. SEE PLAN VIEW FOR:
 - LOCATION OF TEMPORARY STREAM CROSSING
 - STREAM CROSSING TYPE (FORD OR CULVERT)
 - FOR FORD CROSSING: LENGTH, "L", CREST LENGTH, "L", CREST HEIGHT, "H", DEPTH, "D", CULVERT DIAMETER, "D", AND NUMBER, TYPE AND CLASS OF GAUGE OR GAUGE OF CULVERT.
 2. TEMPORARY STREAM CROSSING DIMENSIONS, DOD, AND NUMBER OF CULVERTS INDICATED FOR CULVERT CROSSING SHALL BE CONSIDERED MINIMUM DIMENSIONS. ENGINEER MAY SELECT TO INSTALL LARGER FACILITIES. ANY CHANGE TO STREAM CROSSING OR EXISTING STREAM CHANNEL DURING BASEFLOW OR FLOOD EVENTS SHALL BE THE CONTRACTOR'S RESPONSIBILITY.
 3. SEE SHEET 1 FOR RIPRAP AND 1-1/2" CRUSHED ROCK GRADATIONS.
 4. FOR A TEMPORARY STREAM CROSSING THAT WILL CARRY LOADS, THE TEMPORARY STREAM CROSSING MUST BE DESIGNED BY THE DESIGN ENGINEER.

- TEMPORARY STREAM CROSSING MAINTENANCE NOTES**
1. THE GESC MANAGER SHALL INSPECT STREAM CROSSINGS WEEKLY, DURING AND AFTER ANY STORM EVENT AND MAKE REPAIRS OR CLEAN OUT UPSTREAM SEGMENT AS NECESSARY.
 2. SEDIMENT ACCUMULATED UPSTREAM OF STREAM CROSSINGS SHALL BE REMOVED WHEN THE SEDIMENT DEPTH UPSTREAM OF CROSSING IS WITHIN 4-INCHES OF THE CREST (FOR CROSSING) OR GREATER THAN AN AVERAGE DEPTH OF 12-INCHES (CULVERT CROSSING).
 3. STREAM CROSSINGS ARE TO REMAIN IN PLACE UNTIL NO LONGER NEEDED, BUT SHALL BE REMOVED PRIOR TO THE END OF CONSTRUCTION.
 4. WHEN STREAM CROSSINGS ARE REMOVED, THE DISTURBED AREA SHALL BE DRILL SEEDING AND CRIMP MULCHED AND COVERED WITH EROSION CONTROL BLANKET OR OTHERWISE STABILIZED IN A MANNER APPROVED BY THE CITY.

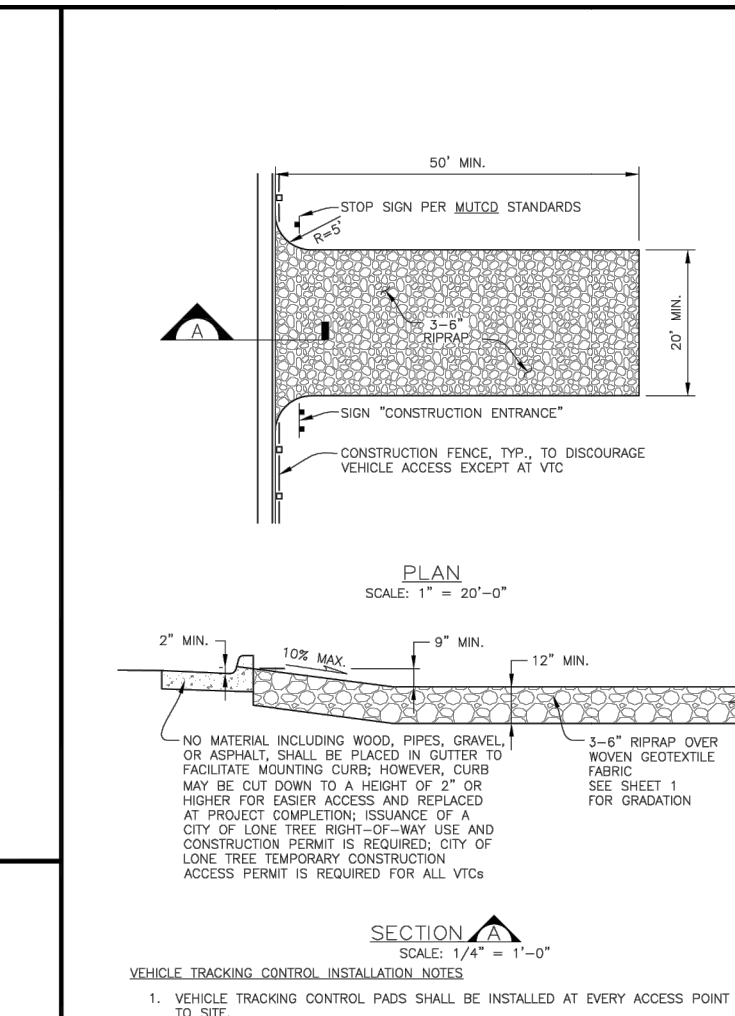
TEMPORARY STREAM CROSSING (22)



- CURB SOCK INSTALLATION NOTES**
1. SOCKS WILL BE USED UPSTREAM OF INLET PERPENDICULAR TO AND FLUSH WITH CURB.
 2. NO LESS THAN TWO 10" DIAMETER SOCKS MUST BE USED IN SEQUENCE, SPACED NO MORE THAN 5 FEET APART.
 3. NO LESS THAN SIX SOCKS SHALL BE USED IF THE 4" SOCK IS USED, ALSO SPACED AT NO MORE THAN 5 FEET APART.
 3. INCLINE AT 30 DEGREES FROM PERPENDICULAR, OPPOSITE THE DIRECTION OF FLOW (SEE DETAIL B).

- CURB SOCK MAINTENANCE NOTES**
1. THE GESC MANAGER SHALL INSPECT THE CURB SOCKS WEEKLY, DURING AND AFTER ANY STORM EVENT AND MAKE REPAIRS OR CLEAN OUT UPSTREAM SEGMENT AS NECESSARY.
 2. SEDIMENT ACCUMULATED UPSTREAM OF CURB SOCKS SHALL BE REMOVED WHEN THE UPSTREAM SEGMENT REACHED A DEPTH OF 8-INCHES.
 3. CURB SOCKS SHALL BE REMOVED WHEN THE UPSTREAM DISTURBED AREA IS STABILIZED AND GRASS COVER IS APPROVED BY THE CITY. IF ANY DISTURBED AREA EXISTS AFTER REMOVAL, IT SHALL BE SEEDING AND MULCHED OR OTHERWISE STABILIZED IN A MANNER APPROVED BY THE CITY.

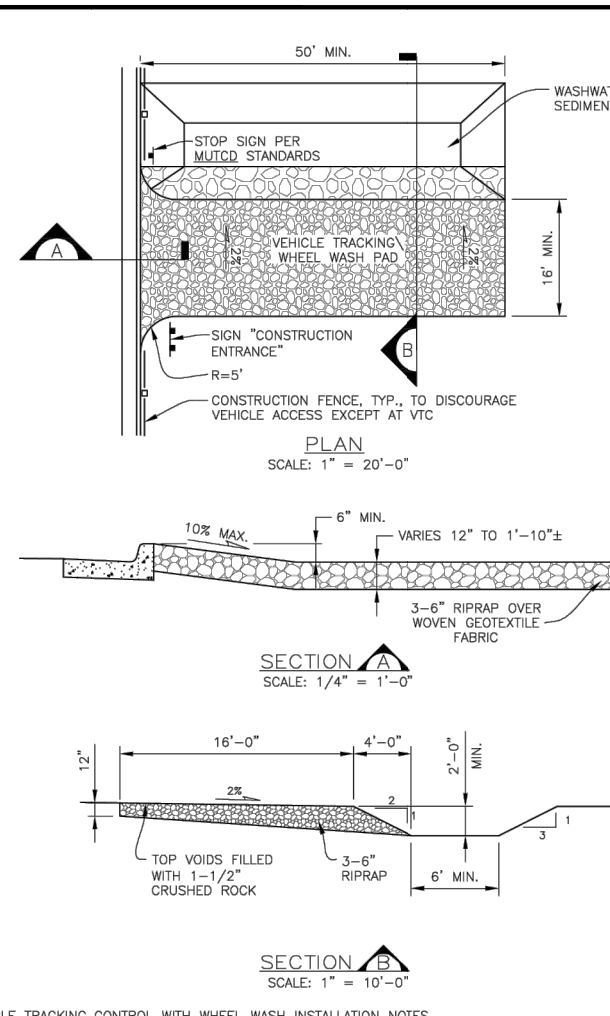
CURB SOCK (26)



- VEHICLE TRACKING CONTROL INSTALLATION NOTES**
1. VEHICLE TRACKING CONTROL PADS SHALL BE INSTALLED AT EVERY ACCESS POINT TO SITE.
 2. VEHICLE TRACKING CONTROL PADS SHALL CONSIST OF HARD, DENSE, DURABLE STONE, ANGLULAR IN SHAPE AND RESISTANT TO WEATHERING. ROUNDED STONE OR Boulders WILL NOT BE ACCEPTABLE. THE STONES SHALL BE 2" WITH A MAXIMUM SIZE OF 3/4" STONE SHALL HAVE A SPECIFIC GRAVITY OF AT LEAST 2.4. CONTROL OF GRADATION WILL BE BY VISUAL INSPECTION.
 3. WOODEN GEOTEXTILE FABRIC SHALL BE PLACED UNDER THE VTC STONE TO HELP MINIMIZE WEAR OF THE STONE INTO THE UNDERLYING MATERIAL.
 4. ANY DAMAGED OR DAMAGED CURB AND GUTTER AND SIDEWALK SHALL BE REPLACED BY PERMITTEE.
 5. A CITY OF LONE TREE TEMPORARY CONSTRUCTION ACCESS POINT IS REQUIRED FOR EACH ACCESS/EXIT FROM THE SITE.
 6. A STOP SIGN INSTALLED IN ACCORDANCE WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD), AS AMENDED, SHALL BE INSTALLED FOR EXITING TRAFFIC AT THE VTC.

- VEHICLE TRACKING CONTROL MAINTENANCE NOTES**
1. GESC MANAGER SHALL INSPECT VEHICLE TRACKING CONTROL PADS DAILY. ACCUMULATED SEDIMENT SHALL BE REMOVED FROM PAD SURFACE. STONE SURFACE SHALL BE CLEAN AND STONE SHOULD BE REPLACED TO MAINTAIN ADEQUATE STONE SURFACE. STONE SURFACE SHALL BE REPLACED TO MAINTAIN ADEQUATE STONE SURFACE. STONE SURFACE SHALL BE REPLACED TO MAINTAIN ADEQUATE STONE SURFACE.
 2. VEHICLE TRACKING CONTROL SHALL BE REMOVED AT THE END OF CONSTRUCTION, IF NOT DESTROYED AREA EVENTS AFTER REMOVAL, THE LOGS SHALL BE REMOVED OR OTHERWISE STABILIZED IN A MANNER APPROVED BY THE CITY.

VEHICLE TRACKING CONTROL (24)



- VEHICLE TRACKING CONTROL WITH WHEEL WASH INSTALLATION NOTES**
1. ALTHOUGH NOT NORMALLY USED, THE CITY RESERVES THE RIGHT TO REQUIRE VEHICLE TRACKING CONTROL WITH WHEEL WASH FACILITIES AT SITES WHERE TRACKING INTO PADDED AREAS BECOMES A COMPLICATED PROBLEM.
 2. IF VEHICLE TRACKING CONTROL WITH WHEEL WASH FACILITIES ARE REQUIRED, ALL WHEELS ON EVERY VEHICLE LEAVING THE SITE SHALL BE CLEANED OF MUD OR OTHER MATERIAL. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OPERATING A WATER SOURCE.
 3. VEHICLE TRACKING CONTROL PADS SHALL CONSIST OF HARD, DENSE, DURABLE STONE ANGLULAR IN SHAPE AND RESISTANT TO WEATHERING. ROUNDED STONE OR Boulders WILL NOT BE ACCEPTABLE. THE STONES SHALL BE 2" WITH A MAXIMUM SIZE OF 3/4" STONE SHALL HAVE A SPECIFIC GRAVITY OF AT LEAST 2.4. CONTROL OF GRADATION WILL BE BY VISUAL INSPECTION.
 4. ANY DAMAGED OR DAMAGED CURB AND GUTTER AND SIDEWALK SHALL BE REPLACED BY PERMITTEE.
 5. A CITY OF LONE TREE TEMPORARY CONSTRUCTION ACCESS POINT IS REQUIRED FOR EACH ACCESS/EXIT FROM THE SITE.
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VTC WITH WHEEL WASH (25)

Rev	Date	Description
6/30/05		ADOPTED FROM DOUGLAS COUNTY GESC PLANS
5/ /08		EDIT UPDATES
11/ /08		ADD CURB SOCK DETAIL (REF. UDFCD, V3 FIGURE C5-23), MISC. NOTE EDITS
12/ /09		UPDATE VTC & WW

CITY OF LONE TREE
DEPARTMENT OF PUBLIC WORKS
Engineering Division

GESC GRADING, EROSION, AND SEDIMENT CONTROL
STANDARD PLAN NOTES AND DETAILS
SHEET 3 OF 3

CITY OF LONE TREE

DATE

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

ENGINEERING DIVISION ACCEPTANCE BLOCK.

Hi
NOTE
REGIONAL PARK

City of Lone Tree
9220 Kimmer Drive, Suite 100
Lone Tree, CO 80124
tel 303.708.1818

Park Operator
4810 E County Line Rd
Littleton, CO 80126
tel 303.786.5131

OJB
OJB Landscape Architecture
11111 E. Hampden Ave.
1732 Wazee Street, Suite 209
Denver, CO 80202
tel 720.604.3385

Tryba Architects
Architects
tel 303.831.4010
Martin/Martin
Civil Engineers
tel 303.431.6100

Thornton Tomasetti
Structural Engineers
tel 303.875.5700

Azure Engineering LLC
Civil Engineers
tel 970.985.6333

illume
Acoustic Consulting
tel 303.421.6655

ME Engineers
Mechanical, Electrical & Plumbing
tel 303.421.6655

Shen Milson & Wilke (SM&W)
Acoustics, Automation, Information Technology & Security
tel 720.482.0770

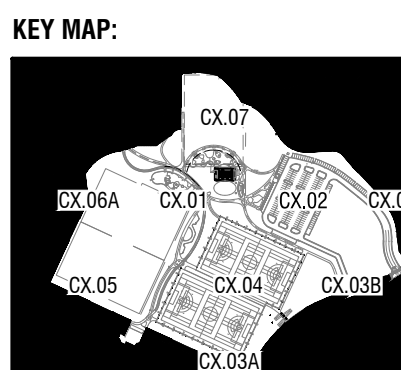
RSM Design
Branding, Signage & Wayfinding
tel 949.492.9478

Peregrine Fire
Fire Protection Consultant & Wildfire Mitigation
tel 303.997.8875

Fountain Source
Water Feature Consultant
tel 303.997.8875

Roxbox
Contract Architect
tel 303.997.8875

MARTIN/MARTIN
CONSTRUCTIVE ENGINEERS
1801 ALABAMA
tel 303.431.6100



NOT FOR CONSTRUCTION

Rev	Date	Description
2/23/2006		SIP SUBMITTAL

Sheet description

EROSION CONTROL DETAILS