# GRADING, EROSION AND STORMWATER QUALITY CONTROL PLAN

for

#### **LATIGO TRAILS FILING No. 10**

Eastonville Road El Paso County, Colorado

September 2024 PCD File No.: #####

Prepared For: Qualified Stormwater Manager:

**TBD** 

TBD

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# GRADING, EROSION AND STORMWATER QUALITY CONTROL PLAN LATIGO TRAILS FILING No. 10

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#### 1.0 STORMWATER QUALITY STATEMENT & OBJECTIVES

Stormwater quality best management practices shall be implemented to minimize soil erosion, sedimentation, increased pollutant loads and changed water flow characteristics resulting from land disturbing activity, to the maximum extent practicable, so as to minimize pollution of receiving waters.

Per Appendix A of the Colorado Department of Health, Water Quality Control Division's (the Division) "General Permit Application for Stormwater Discharge Associated with Construction Activities", the goal of the Stormwater Management Plan (SWMP) is:

"To identify possible pollutant sources that may contribute pollutants to stormwater, and identify Best Management Practices (BMPs) that, when implemented, will reduce or eliminate any possible water quality impacts. The SWMP must be completed and implemented at the time the project breaks ground, and revised if necessary as construction proceeds to accurately reflect the conditions and practices at the site."

This document is not intended to address training, site specific operational procedures, logistics, or other "means and methods" required to construct this project.

This document must be kept at the construction site at all times. Inspections are to be made at least every 14 days and after any precipitation event. El Paso County requires that the inspector be contacted 48 hours prior to initial and final inspections. An inspection log entry shall be completed with each inspection performed. The inspection log shall be kept with the SWMP. The conditions of the SWMP and General Permit for Stormwater Discharges associated with the construction activity will remain in effect until final stabilization is achieved, and a notice of inactivation is sent to CDPHE Stormwater Quality Division. All pertinent records must be kept for at least 3 years from the date the site is stabilized.

Drexel, Barrell & Co. has been retained to provide civil engineering services for the design of this project. Drexel, Barrell & Co. is not responsible for implementation and maintenance of the Stormwater Management Plan.

#### 2.0 SITE DESCRIPTION

#### 2.1 DESCRIPTION OF CONSTRUCTION ACTIVITIES

The project involves the development of Latigo Trails Filing No. 10 in El Paso County, CO, a large lot residential subdivision. The proposed development consists of approximately 125.6 acres in total. The site work will include grading, utility and drainage infrastructure, and roadway construction as is consistent with a large-lot residential subdivision. The area to be disturbed is approximately 21.19 acres. The area of disturbance is required to be updated by the Contractor on the SWMP as changes occur.

ESQCP state 125.6 ac, verify and update so both match

#### 2.2 EXISTING SITE CONDITIONS

SWMP Checklist Item 9 - provide percent vegetative density The majority of the 125-acre site is currently an undeveloped property and is primarily covered by native grass and vegetation, as determined by visual inspection. It slopes at varying degrees to the southeast, across the site. There is an existing Extended Detention Basin located in southwest corner of the site which is used primarily for collecting runoff from offsite neighborhoods to the northwest. Runoff exits the site through a few areas, either sheet flowing to the south or being captured by an existing storm sewer and traveling

underneath Eastonville Road to the east.

SWMP Checklist Item 16 - Provide description of all stream crossings located within the project area or provide a statement that no streams cross the project area.

#### 2.3 ADJACENT AREAS

The site is bound on the east by Eastonville Road, on the south by 2 undeveloped properties, on the west by Buffalo River Trail Way and a portion of Latigo Trails Filing No. 11, and on the north by both Latigo Trails Filing No. 7A, 11 and 12. Latigo Trails Filing No. 7A is a residential development while 11 and 12 will remain undeveloped for the duration of this development. All the construction activities are to take place on the site. The surrounding areas should not be affected by the land disturbing and stabilization activities.

#### 2.4 SOILS

From the Natural Resources Conservation Service (NRCS), the soils on the site as mapped by the Soil Conservation Service (SCS) are entirely made up of the Stapleton sandy loam, which is a hydrologic soil group B soil. This soil has a moderate erosion potential. Hydrologic Soil Group B soils have a moderate infiltration rate when thoroughly wet. These consist mainly of deep to moderately deep, well drained to moderately well drained soils with moderately fine to moderately coarse textures. These soils have a moderate rate of water transmission. Potential effects of soil erosion include compaction, loss of soil structure, nutrient degradation, soil salinity and increased sediment load downstream.

#### 2.5 AREAS AND VOLUME STATEMENT

The project site consists of approximately 125.6 acres. Unadjusted overlot earthwork volumes within the construction site are approximately 16,000 CY of cut and 7,000 cy of fill.

#### 2.6 CONTROLS AND MEASURES DURING CONSTRUCTION

Stabilization activities are anticipated to begin in the spring of 2025. A construction schedule will be prepared by the contractor prior to land disturbing activities. Installation of stabilization measures will be completed in one phase. The general sequence of major construction activities is as follows:

- Temporary Erosion Control Measures Temporary erosion control measures, such as silt fence and construction of the vehicle tracking pad and staging area will be completed prior to any other large scale activity. The vehicle tracking pad will ensure a reduction of tracking of soil on and off the construction site. The staging area will house the materials, petroleum product storage (if any), trash dumpster, sanitary facilities and hazardous spill clean-up areas. These are all potential pollutants that are not sediment related.
- 2. <u>Trash and Debris Removal</u> Existing trash and debris shall be removed from the site and hauled to designated receiving facility.
- 3. <u>Site Clearing</u> The area to be disturbed for construction will be cleared and grubbed, as necessary to the perimeter of erosion control. The sequence of the areas to be cleared and grubbed are subject to the contractor's means and methods of construction of the site; however, the general plan is to work towards where the vehicle tracking pads are located in order to eliminate backtracking over areas that have already been completed.

- 4. Overlot Grading Overlot grading will occur to bring the site to the proposed subgrade elevations in paved areas, and to finished grade elevations in the landscape and detention areas. Spoils from the site will be removed from the site and hauled to a designated receiving facility or location.
- Utility Installation Utility installation will consist of water, electric, and telephone and natural gas service lines. Storm culverts will also be installed. Utility locations will be obtained prior to commencement of construction activities.
- 6. <u>Final Grading</u> The site will be brought to final elevations with the installation of the proposed paving and final blending to existing grades on the perimeter of the improvement area.
- 7. <u>Permanent Re-vegetation</u> Erosion control blanket will be installed at all areas graded to a 3:1 slope and greater. Areas not paved will be re-vegetated and/or landscaped by the contractor or owner on an as-needed basis. Vegetation and stabilization of soil will aid in the trapping of sediment and reducing soil erosion.
- 8. Removal of Temporary BMP's Temporary erosion control measures may be removed once the site has achieved final 70 percent of pre disturbance levels and vegetation cover is capable of reducing soil erosion. All permanent BMPs shall be cleaned and functioning before any temporary BMPs are removed.
- 9. Housekeeping The best BMP for a job site is good housekeeping around the site. Routine site trash pickup and routine BMP inspection and maintenance are paramount for keeping a job site clean and tidy. All petroleum storage areas in the staging area should be checked daily for leaks. Any leaks shall be reported to the site foreman for clean up. All personnel on site for both the contractor and subcontractors should be briefed on spill cleanup and containment procedures. Employees shall also be briefed as to where the spill cleanup materials can be found if a spill should occur. The spill plan shall be produced by the general contractor for the project and remain onsite for the duration of the project.

Contractor shall coordinate with the County to obtain the necessary contacts in the case that a spill occurs.

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

#### 2.7 POTENTIAL POLLUTION SOURCES

Any substances with the potential to contaminate either the ground or ground surface water shall be cleanup up immediately following discovery, or contained until appropriate cleanup methods can be employed. Manufacturer's recommended methods for cleanup shall be followed, along with proper disposal methods. All waste and debris created by construction at the site or removed from the site shall be disposed of in accordance with all laws, regulations and ordinances of the Federal, State and local agencies. The following is a summary of potential pollution sources and their associated measures intended to minimize the risk of pollution for this project.

- 1) Disturbed and stored soils: Straw waddles/fiber rolls, straw bale check dams and gravel bag check dams.
- 2) Vehicle tracking and sediments: VTC and Street Sweeping
- 3) Vehicle and equipment maintenance and fueling: Spill prevention procedures.
- 4) Dust or particulate generation from earthmoving activities and vehicle movement: water trucks for site watering.
- 5) On site waste management of solid wastes (construction debris): Waste container placement, covering and disposal.
- 6) Worker trash and portable toilets: Container placement, covering and disposal.
- 7) Equipment repair or maintenance beyond normal fueling operations: Spill prevention procedures.

The following items are not anticipated to be potential pollution sources for this project:

- 1) Management of contaminated soils.
- 2) Outdoor storage of fertilizers, chemicals or potentially polluting construction material.
- 3) Dedicated asphalt or concrete batch plants.

#### 2.8 NON-STORMWATER DISCHARGES

Non-stormwater discharges possibly encountered during construction may include: watering down of the site to minimize dust, construction staging area, and excess dirt storage during high winds to minimize wind erosion and water utilized in soil compaction efforts.

#### 2.9 RECEIVING WATER

Runoff generated by the proposed project will generally be conveyed to one of the three onsite detention ponds prior to discharging offsite at historical rates, or directly discharge offsite (in accordance with ECM criteria). Runoff with ultimately reach Gieck Ranch Creek to the southeast.

#### 3.0 SITE MAP

Attached as part of this plan is a Site Map (See Appendix C). The drawing identifies the following:

- 1) Project area boundary
- 2) Area used for staging area
- 3) Location of erosion control facilities or structures (BMP's)
- 4) Boundaries of 100-year floodplains (if applicable)

The following items may not be indicated on the attached drawings, but will be determined by the individual contractors prior to and during construction activities:

1) Areas used for storage of construction materials, soils, or wastes

- 2) Location of portable toilets and waste receptacles (required to be a minimum of 50 feet from state waters. They shall be adequately staked and cleaned on a weekly basis. They will be inspected daily for spills).
- Location of additional BMP's that may become necessary as work progresses

These items shall be added to the Site Map by the Contractor.

#### 4.0 BMP's FOR STORMWATER POLLUTION PREVENTION

Best management practices (BMPs) used throughout the site shall include: surface roughening, silt fence, inlet protection, vehicle tracking control, temporary sediment basins, straw bale check dams, mulching and reseeding and concrete washout.

#### 4.1 EROSION CONTROL – STRUCTURAL PRACTICES

A list of the Structural BMP's for erosion and sediment control implemented on the site to minimize erosion and sediment are as follows. Refer to the SWMP Drawings for installation and maintenance requirements and location for each structural BMP.

- a) Concrete Washout Area (CWA): A shallow excavation with a small perimeter berm to isolate concrete truck washout operations.
- b) Erosion Control Blanket (ECB): Slopes steeper than or equal to 3 (horizontal) to 1 (vertical) shall be protected with an erosion control blanket.
- c) Inlet Protection (IP): Installed to filter stormwater before entering any watercourses.
- d) Temporary Sediment Basin (TSB): An impoundment that captures sediment laden runoff and releases it slowly, providing prolonged settling times to capture coarse and fine grained soil particles.
- e) Straw Bale Check Dams (CD): Consists of straw bales designed to form a semiporous filter able to withstand overtopping.
- f) Seeding and Mulching (SM): Temporary seeding and mulching can be used to stabilize disturbed areas that will be inactive for an extended period of time. Permanent seeding should be used to stabilize areas at final grade that will not otherwise be stabilized.

g) Silt Fence (SF): A temporary sediment barrier constructed of woven fabric stretched across supporting posts.

h) Stabilized Staging Area (SSA): Consists of stripping the topsoil and spreading a layer of granular material in the area to be used for a trailer, parking, storage, unloading and loading.

 Temporary Stockpile Areas (SP): Temporary stockpiles of excess excavated material and stockpiles for imported materials. Slopes shall not be steeper than 3 to 1.

j) Vehicle Tracking Control (VTC): Consists of a rock pad that is intended to help strip mud from tires prior to vehicles leaving the construction site. Installed at all entrance/exit points to the site. The number of access points shall be minimized.

k) Full-spectrum Extended Detention Basin: There is an existing EDB on site, in the southeast corner of the site, that is designed to capture the flows produced by a rainfall event, then provide water quality before slowly releasing the flows to historic drainage paths. Three other detention basins are proposed for the site, which will provide the same treatment as the existing facility.

Minimal clearing and grubbing may be necessary prior to installing the initial erosion control features.

No clearing, grading, excavation, filling or other land disturbing activities shall be permitted until signoff and acceptance of the Grading and Erosion Control Plan is received from the County.

Once signoff and acceptance is received the approved erosion and sediment control measures must be installed before land-disturbing activities are initiated so that no adverse effect of site alteration will impact surrounding property.

#### 4.2 EROSION CONTROL – NON-STRUCTURAL PRACTICES

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

- a) Seeding and mulching and landscape installation in areas that will not be hard surfaced, while minimizing the amount of vegetation to be removed during construction, leaving native vegetation in place when possible.
- b) Street sweeping around the construction site and disturbed roadways will be utilized when tracking of mud occurs on paved streets. The sweeping will be required after any significant tracking has occurred; significant meaning any visible amount that cannot be completely cleaned by hand. The adjacent offsite paved drive surfaces will be cleaned at the end of each day of construction activities. Sweeping efforts will continue as necessary until construction operations are completed.

#### 4.3 MATERIALS HANDLING & SPILL PREVENTION

The SWMP administrator will inspect daily to ensure proper use and disposal of materials on site including building materials, paints, solvents, fertilizers, chemicals, waste materials and equipment maintenance or fueling procedures. All materials stored onsite will be stored in a neat and orderly manner in the original containers with the original manufacturer's label, and if possible under a roof or other enclosure to prevent contact with stormwater. Chemicals should be stored within berms or other secondary containment devices to prevent leaks and spills from contacting stormwater runoff. Before disposing of the container, all of a product will be used up whenever possible and manufacturer's recommendations for proper disposal will be followed according to state and local regulations.

Material and equipment necessary for spill cleanup will be kept in the material storage are on site. Manufacturer's recommendations for spill cleanup will be posted and site personnel will be made aware of the procedures along with the location of the information and cleanup supplies.

The contractor shall have spill prevention and response procedures that include the following:

a) Notification procedures to be used in the event of an accident. At the very least, the SWMP administrator should be notified. Depending on the nature of the spill and the material involved, the Colorado Department of Public Health and Environment (24-hour spill reporting line (877) 518-5608), downstream water users or other agencies may also need to be informed.

- b) Instructions for clean up procedures and identification of spill kit location(s).
- c) Provisions for absorbents to be made available for use in fuel areas and for containers to be available for used absorbents.
- d) Procedures for properly washing out concrete truck chutes and other equipment in a manner and location so that the materials and wash water cannot discharge from the site and never into a storm drain system or stream.

# 4.4 DEDICATED CONCRETE OR ASPHALT BATCH PLANTS No dedicated concrete or asphalt batch plants will be used.

#### 4.5 GROUNDWATER & STORMWATER DEWATERING

In the event that groundwater is encountered or stormwater enters an excavation and dewatering is necessary, a separate CDPHE construction discharge (dewatering) permit will be required for groundwater dewatering and shall be obtained by the SWMP administrator. During groundwater or stormwater dewatering, locations and practices to be implemented to control stormwater pollution from excavations, etc., must be noted on the SWMP. Construction dewatering cannot be discharged to surface water or to storm sewer systems without separate permit coverage. The discharge of Construction Dewatering water to the ground, under specific conditions, may be allowed by the Stormwater Construction Permit when appropriate BMP's are implemented. Refer to USDCM Volume III (UDFCD) for County acceptable means of dewatering.

#### 5.0 TIMING SCHEDULE

The project is anticipated to begin construction in the spring of 2025 and be completed by summer of 2026. The contractor shall be responsible for producing a schedule that will show at a minimum: start and completion times including site grading operations, utility construction and the removal of the temporary erosion and sediment control measures.

SWMP Checklist Item 6 - Project schedule should include expected date of final stabilization

#### 6.0 FINAL STABILIZATION AND LONG-TERM STORMWATER MANAGEMENT

Final stabilization shall not be considered complete until 70% of new vegetated cover is established on areas not to be hard-surfaced. Temporary sediment and erosion control

SWMP Checklist Item 22 - Discuss long-term stormwater management: discuss permanent water quality treatment facilities.

measures listed in Section 4.0 installed prior to the construction phase will remain in place until this time. Any sediment that collects within the site's drainage system is considered unstabilized soil and must be removed prior to the site being considered finally stabilized.

At final stabilization, stormwater pollutants will be controlled by on site landscaping and by the existing detention and water quality facilities.

The contractor will be responsible for any re-excavation of sediment and debris that collect in the detention facilities and are required to ensure that the basin meets the design grades following construction.

#### 7.0 INSPECTION AND MAINTENANCE

A site inspection of all erosion control facilities will be conducted by the Qualified Stormwater Manager every 14 days and within 24 hours after every precipitation event or snowmelt event that causes surface erosion. The entrance to the construction site shall be inspected daily and existing street cleaned, as necessary, of all materials tracked out of the site.

The construction site perimeter, disturbed areas, and areas used for material storage that are exposed to precipitation shall be inspected for evidence of, or the potential for, pollutants entering the drainage system. Erosion and sediment control measures identified in the SWMP shall be observed to ensure that they are operating correctly.

All temporary and permanent erosion and sediment control facilities shall be maintained and repaired per manufacturer's specifications to assure continued performance of their intended function. Repairs should be completed within 24 to 48 hours. Silt fences may require periodic replacement.

Based on the results of the inspection, the description of potential pollutant sources and the pollution prevention and control measures that are identified in this plan shall be revised and modified as appropriate as soon as practicable after such inspection. Modification to control measures shall be implemented in a timely manner, but in no case more than seven (7) calendar days after the inspection.

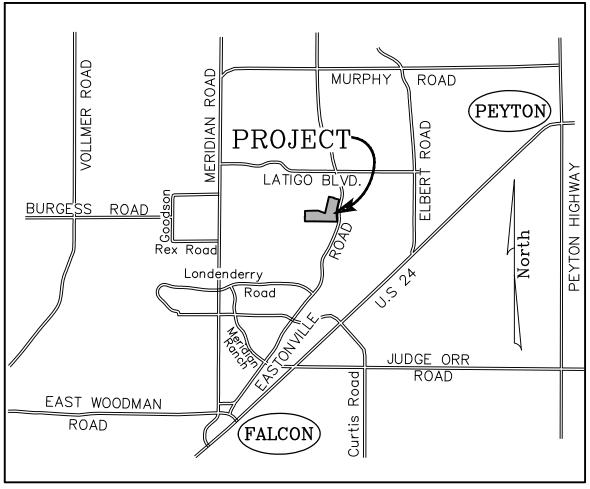
The Qualified Stormwater Manager shall be responsible for documenting inspections, maintaining records and signing the inspection logs. Uncontrolled releases of mud or muddy water or measurable quantities of sediment found off the site shall be recorded with a brief explanation as to the measures taken to prevent future releases as well as any measure taken to clean up the sediment that has left the site. All signed inspection record/logs should be kept on site and made available to the El Paso County or CDPHE personnel upon request. Per ECM Appendix I.5, all inspections will be performed by the Qualified Stormwater Manager. The Qualified Stormwater Manager shall have documentation of their credentials (PE, certified erosion control inspector/specialist, certified in a City-approved inspection training program, etc.), which will be provided and attached to the SWMP once the Qualified Stormwater Manager has been determined.

The inspection logs shall be kept with the SWMP onsite (the exact location is TBD). This document is to be viewed as a "living document" and shall be updated regularly and kept currently accurate. It is to be revised and maintained in order to evaluate and manage the ongoing stormwater quality issues at the site. The Qualified Stormwater Manager shall amend the SWMP when there is a change in design, construction, operation or maintenance of the site which would require the implementation of new or revised BMPs or if this document proves to be ineffective in achieving the general objectives of controlling pollutants in stormwater discharges associated with construction activity of when BMPs are no longer necessary and are removed.

#### 8.0 REFERENCES

- [1] <u>General Permit Application and Stormwater Management Plan Preparation Guidance</u> <u>for Stormwater Discharges Associated with Construction Activities</u>. Prepared by the Colorado Department of Health, Water Quality Control Division. Revised 7/2009.
- [2] <u>City of Colorado Springs</u>– Drainage Criteria Manual, Volume 2 "Stormwater Quality Procedures and Best Management Practices (BMPs). November 1, 2002, amended August 10, 2010.
- [3] NRCS Web Soil Survey, <u>www.websoilsurvey.nrcs.usda.gov</u>

#### **APPENDIX**



Vicinity Map
Not to scale





LATIGO TRAILS FILING NO. 10 VICINITY MAP

Drexel, Barrell & Co.
Engineers • Surveyors

DATE: DWG. NO.

JOB NO:
21820-01CSCV SHEET 1 OF 1



**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 El Paso County Area, Colorado



# **Preface**

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

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

Although soil survey information can be used for general farm, local, and wider area planning, onsite investigation is needed to supplement this information in some cases. Examples include soil quality assessments (http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/health/) and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center (https://offices.sc.egov.usda.gov/locator/app?agency=nrcs) or your NRCS State Soil Scientist (http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2 053951).

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

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

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

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# **How Soil Surveys Are Made**

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

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

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

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

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

#### Custom Soil Resource Report

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

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

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

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

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

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

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

#### Custom Soil Resource Report

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

# Soil Map

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



#### 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**

(0)

Blowout

 $\boxtimes$ 

Borrow Pit

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Clay Spot

 $\Diamond$ 

**Closed Depression** 

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Gravel Pit

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Gravelly Spot

(2)

Landfill Lava Flow

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Marsh or swamp

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Mine or Quarry

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Miscellaneous Water

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Perennial Water
Rock Outcrop

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Saline Spot

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Sandy Spot

0 0

Severely Eroded Spot

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Sinkhole

Ø

Sodic Spot

Slide or Slip

#### -

Spoil Area



Stony Spot



Very Stony Spot



Wet Spot Other



Special Line Features

#### Water Features

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Streams and Canals

#### Transportation

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Rails

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Interstate Highways

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US Routes

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Major Roads

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Local Roads

#### Background

Marie Contract

Aerial Photography

#### MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24.000.

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: El Paso County Area, Colorado Survey Area Data: Version 21, Aug 24, 2023

Soil map units are labeled (as space allows) for map scales 1:50.000 or larger.

Date(s) aerial images were photographed: Jun 9, 2021—Jun 12, 2021

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 |  |  |  |
|-----------------------------|---|--------------|----------------|--|--|--|
| 83                          | Stapleton sandy loam, 3 to 8 percent slopes | 118.6        | 100.0%         |  |  |  |
| Totals for Area of Interest |   | 118.6        | 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 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.

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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.

#### El Paso County Area, Colorado

#### 83—Stapleton sandy loam, 3 to 8 percent slopes

#### **Map Unit Setting**

National map unit symbol: 369z Elevation: 6,500 to 7,300 feet

Mean annual precipitation: 14 to 16 inches
Mean annual air temperature: 46 to 48 degrees F

Frost-free period: 125 to 145 days

Farmland classification: Not prime farmland

#### **Map Unit Composition**

Stapleton and similar soils: 97 percent

Minor components: 3 percent

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

#### **Description of Stapleton**

#### Setting

Landform: Hills

Landform position (three-dimensional): Side slope

Down-slope shape: Linear Across-slope shape: Linear

Parent material: Sandy alluvium derived from arkose

#### **Typical profile**

A - 0 to 11 inches: sandy loam

Bw - 11 to 17 inches: gravelly sandy loam C - 17 to 60 inches: gravelly loamy sand

#### **Properties and qualities**

Slope: 3 to 8 percent

Depth to restrictive feature: More than 80 inches

Drainage class: Well drained

Runoff class: Low

Capacity of the most limiting layer to transmit water (Ksat): High (2.00 to 6.00

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 4.7 inches)

#### Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 3e

Hydrologic Soil Group: B

Ecological site: R049XY214CO - Gravelly Foothill

Hydric soil rating: No

#### **Minor Components**

#### Fluvaquentic haplaquolls

Percent of map unit: 1 percent

Landform: Swales Hydric soil rating: Yes

#### Custom Soil Resource Report

#### Other soils

Percent of map unit: 1 percent Hydric soil rating: No

#### **Pleasant**

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

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# LATIGO TRAILS FILING NO. 10 EL PASO COUNTY, COLORADO

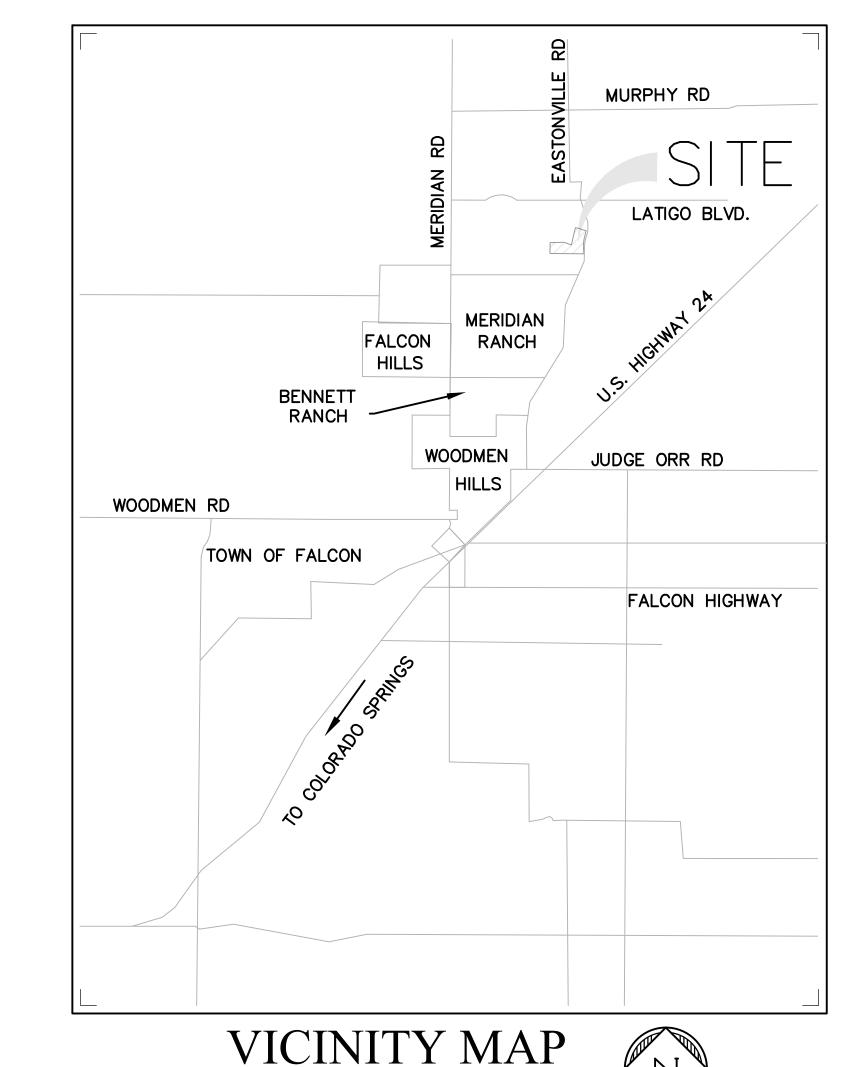
# GRADING AND EROSION CONTROL PLANS

# STANDARD NOTES FOR EL PASO COUNTY GRADING AND EROSION CONTROL PLANS

- 1. STORMWATER DISCHARGES FROM CONSTRUCTION SITES SHALL NOT CAUSE OR THREATEN TO CAUSE POLLUTION. CONTAMINATION. OR DEGRADATION OF STATE WATERS. ALL WORK AND EARTH DISTURBANCE SHALL BE DONE IN A MANNER THAT MINIMIZES POLLUTION OF ANY ON-SITE OR OFF SITE WATERS, INCLUDING WETLANDS.
- 2. NOTWITHSTANDING ANYTHING DEPICTED IN THESE PLANS IN WORDS OR GRAPHIC REPRESENTATION, ALL DESIGN AND CONSTRUCTION RELATED TO ROADS, STORM DRAINAGE AND EROSION CONTROL SHALL CONFORM TO THE STANDARDS AND REQUIREMENTS OF THE MOST RECENT VERSION OF THE RELEVANT ADOPTED EL PASO COUNTY STANDARDS, INCLUDING THE LAND DEVELOPMENT CODE, THE ENGINEERING CRITERIA MANUAL, THE DRAINAGE CRITERIA MANUAL, AND THE DRAINAGE CRITERIA MANUAL VOLUME 2. ANY DEVIATIONS TO REGULATIONS AND STANDARDS MUST BE REQUESTED, AND APPROVED, IN WRITING.
- 3. A SEPARATE STORMWATER MANAGEMENT PLAN (SMWP) FOR THIS PROJECT SHALL BE COMPLETED AND AN EROSION AND STORMWATER QUALITY CONTROL PERMIT (ESQCP) ISSUED PRIOR TO COMMENCING CONSTRUCTION. MANAGEMENT OF THE SWMP DURING CONSTRUCTION THE SWMP IS THE RESPON'SIBILITY OF THE DESIGNATED STORMWATER MANAGER OR CERTIFIED EROSION CONTROL INSPECTOR. THE SWMF SHALL BE LOCATED ON-SITE AT ALL TIMES DURING CONSTRUCTION AND SHALL BE KEPT UP TO DATE WITH WORK PROGRESS AND CHANGES IN THE FIELD.
- 4. ONCE THE ESQCP IS APPROVED AND A "NOTICE TO PROCEED" HAS BEEN ISSUED, THE CONTRACTOR MAY INSTALL THE INITIAL STAGE EROSION AND SEDIMENT CONTROL MEASURES AS INDICATED ON THE APPROVED GEC. A PRECONSTRUCTION MEETING BETWEEN THE CONTRACTOR, ENGINEER, AND EL PASO COUNTY WILL BE HELD PRIOR TO ANY CONSTRUCTION. IT IS THE RESPONSIBILITY OF THE APPLICANT TO COORDINATE THE MEETING TIME AND PLACE WITH COUNTY STAFF.
- 5. CONTROL MEASURES MUST BE INSTALLED PRIOR TO COMMENCEMENT OF ACTIVITIES THAT COULD CONTRIBUTE POLLUTANTS TO STORMWATER. CONTROL MEASURES FOR ALL SLOPES, CHANNELS, DITCHES, AND DISTURBED LAND AREAS SHALL BE INSTALLED IMMEDIATELY UPON COMPLETION OF THE DISTURBANCE.
- 6. ALL TEMPORARY SEDIMENT AND EROSION CONTROL MEASURES SHALL BE MAINTAINED AND REMAIN IN EFFECTIVE OPERATING CONDITION UNTIL PERMANENT SOIL EROSION CONTROL MEASURES ARE IMPLEMENTED AND FINAL STABILIZATION IS ESTABLISHED. ALL PERSONS ENGAGED IN LAND DISTURBANCE ACTIVITIES SHALL ASSESS THE ADEQUACY OF CONTROL MEASURES AT THE SITE AND IDENTIFY IF CHANGES TO THOSE CONTROL MEASURES ARE NEEDED TO ENSURE THE CONTINUED EFFECTIVE PERFORMANCE OF THE CONTROL MEASURES. ALL CHANGES TO TEMPORARY SEDIMENT AND EROSION CONTROL MEASURES MUST BE INCORPORATED INTO THE STORMWATER
- 7. TEMPORARY STABILIZATION SHALL BE IMPLEMENTED ON DISTURBED AREAS AND STOCKPILES WHERE GROUND DISTURBING CONSTRUCTION ACTIVITY HAS PERMANENTLY CEASED OR TEMPORARILY CEASED FOR LONGER THAN 14 DAYS.
- 8. FINAL STABILIZATION MUST BE IMPLEMENTED AT ALL APPLICABLE CONSTRUCTION SITES. FINAL STABILIZATION IS ACHIEVED WHEN ALL GROUND DISTURBING ACTIVITIES ARE COMPLETE AND ALL DISTURBED AREAS EITHER HAVE A UNIFORM VEGETATIVE COVER WITH INDIVIDUAL PLANT DENSITY OF 70 PERCENT OF PRE-DISTURBANCE LEVELS ESTABLISHED OR EQUIVALENT PERMANENT ALTERNATIVE STABILIZATION METHOD IS IMPLEMENTED. ALL TEMPORARY SEDIMENT AND EROSION CONTROL MEASURES SHALL BE REMOVED UPON FINAL STABILIZATION
- 9. ALL PERMANENT STORMWATER MANAGEMENT FACILITIES SHALL BE INSTALLED AS DESIGNED IN THE APPROVED PLANS. ANY PROPOSED CHANGES THAT EFFECT THE DESIGN OR FUNCTION OF PERMANENT STORMWATER MANAGEMENT STRUCTURES MUST BE APPROVED BY THE ECM ADMINISTRATOR PRIOR TO IMPLEMENTATION.
- 10. EARTH DISTURBANCES SHALL BE CONDUCTED IN SUCH A MANNER SO AS TO EFFECTIVELY MINIMIZE ACCELERATED SOIL EROSION AND RESULTING SEDIMENTATION. ALL DISTURBANCES SHALL BE DESIGNED, CONSTRUCTED, AND COMPLETED SO THAT THE EXPOSED AREA OF ANY DISTURBED LAND SHALL BE LIMITED TO THE SHORTEST PRACTICAL PERIOD OF TIME. PRE-EXISTING VEGETATION SHALL PROTECTED AND MAINTAINED WITHIN 50 HORIZONTAL FEET OF A WATERS OF THE STATE UNLESS SHOWN TO BE INFEASIBLE AND
- 11, COMPACTION OF SOIL MUST BE PREVENTED IN AREAS DESIGNATED FOR INFILTRATION CONTROL MEASURES OR WHERE FINAL STABILIZATION WILL BE ACHIEVED BY VEGETATIVE COVER. AREAS DESIGNATED FOR INFILTRATION CONTROL MEASURES SHALL ALSO BE PROTECTED FROM SEDIMENTATION DURING CONSTRUCTION UNTIL FINAL STABILIZATION IS ACHIEVED. IF COMPACTION PREVENTION IS NOT FEASIBLE DUE TO SITE CONSTRAINTS, ALL AREAS DESIGNATED FOR INFILTRATION AND VEGETATION CONTROL MEASURES MUST BE LOOSENED PRIOR TO INSTALLATION OF THE CONTROL MEASURE(S).
- 12. ANY TEMPORARY OR PERMANENT FACILITY DESIGNED AND CONSTRUCTED FOR THE CONVEYANCE OF STORMWATER AROUND, THROUGH, OR FROM THE EARTH DISTURBANCE AREA SHALL BE A STABILIZED CONVEYANCE DESIGNED TO MINIMIZE EROSION AND THE DISCHARGE OF
- 13. CONCRETE WASH WATER SHALL BE CONTAINED AND DISPOSED OF IN ACCORDANCE WITH THE SWMP. NO WASH WATER SHALL BE DISCHARGED TO OR ALLOWED TO ENTER STATE WATERS, INCLUDING ANY SURFACE OR SUBSURFACE STORM DRAINAGE SYSTEM OR FACILITIES. CONCRETE WASHOUTS SHALL NOT BE LOCATED IN AN AREA WHERE SHALLOW GROUNDWATER MAY BE PRESENT, OR WITHIN 50 FEET OF A SURFACE WATER BODY, CREEK OR STREAM.
- 14. DURING DEWATERING OPERATIONS, UNCONTAMINATED GROUNDWATER MAY BE DISCHARGED ON-SITE, BUT SHALL NOT LEAVE THE SITE IN THE FORM OF SURFACE RUNOFF UNLESS AN APPROVED STATE DEWATERING PERMIT IS IN PLACE.
- 15. EROSION CONTROL BLANKETING OR OTHER PROTECTIVE COVERING SHALL BE USED ON SLOPES STEEPER THAN 3:1.
- 16. CONTRACTOR SHALL BE RESPONSIBLE FOR THE REMOVAL OF ALL WASTES FROM THE CONSTRUCTION SITE FOR DISPOSAL IN ACCORDANCE WITH LOCAL AND STATE REGULATORY REQUIREMENTS. NO CONSTRUCTION DEBRIS, TREE SLASH, BUILDING MATERIAL WASTES OR UNUSED BUILDING MATERIALS SHALL BE BURIED, DUMPED, OR DISCHARGED AT THE SITE.
- 17. CONTRACTOR SHALL BE RESPONSIBLE FOR THE REMOVAL OF ALL WASTES FROM THE CONSTRUCTION SITE FOR DISPOSAL IN ACCORDANCE WITH LOCAL AND STATE REGULATORY REQUIREMENTS. NO CONSTRUCTION DEBRIS, TREE SLASH, BUILDING MATERIAL WASTES OR UNUSED BUILDING MATERIALS SHALL BE BURIED, DUMPED, OR DISCHARGED AT THE SITE.
- 18. TRACKING OF SOILS AND CONSTRUCTION DEBRIS OFF-SITE SHALL BE MINIMIZED. MATERIALS TRACKED OFF-SITE SHALL BE CLEANED UP AND PROPERLY DISPOSED OF IMMEDIATELY.
- 19. THE OWNER/DEVELOPER SHALL BE RESPONSIBLE FOR THE REMOVAL OF ALL CONSTRUCTION DEBRIS, DIRT, TRASH, ROCK, SEDIMENT, SOIL, AND SAND THAT MAY ACCUMULATE IN ROADS, STORM DRAINS AND OTHER DRAINAGE CONVEYANCE SYSTEMS AND STORMWATER
- 20. THE QUANTITY OF MATERIALS STORED ON THE PROJECT SITE SHALL BE LIMITED, AS MUCH AS PRACTICAL, TO THAT QUANTITY REQUIRED TO PERFORM THE WORK IN AN ORDERLY SEQUENCE. ALL MATERIALS STORED ON-SITE SHALL BE STORED IN A NEAT, ORDERLY MANNER, IN THEIR ORIGINAL CONTAINERS, WITH ORIGINAL MANUFACTURER'S LABELS.
- 21. NO CHEMICAL(S) HAVING THE POTENTIAL TO BE RELEASED IN STORMWATER ARE TO BE STORED OR USED ON-SITE UNLESS PERMISSION FOR THE USE OF SUCH CHEMICAL(S) IS GRANTED IN WRITING BY THE ECM ADMINISTRATOR. IN GRANTING APPROVAL FOR THE USE OF SUCH CHEMICAL(S), SPECIAL CONDITIONS AND MONITORING MAY BE REQUIRED.
- 22. BULK STORAGE OF ALLOWED PETROLEUM PRODUCTS OR OTHER ALLOWED LIQUID CHEMICALS IN EXCESS OF 55 GALLONS SHALL REQUIRE ADEQUATE SECONDARY CONTAINMENT PROTECTION TO CONTAIN ALL SPILLS ON-SITE AND TO PREVENT ANY SPILLED MATERIALS FROM ENTERING STATE WATERS, ANY SURFACE OR SUBSURFACE STORM DRAINAGE SYSTEM OR OTHER FACILITIES.
- 23. NO PERSON SHALL CAUSE THE IMPEDIMENT OF STORMWATER FLOW IN THE CURB AND GUTTER OR DITCH EXCEPT WITH APPROVED
- 24. OWNER/DEVELOPER AND THEIR AGENTS SHALL COMPLY WITH THE "COLORADO WATER QUALITY CONTROL ACT" (TITLE 25, ARTICLE 8, CRS), AND THE "CLEAN WATER ACT" (33 USC 1344), IN ADDITION TO THE REQUIREMENTS OF THE LAND DEVELOPMENT CODE, DCM VOLUME II AND THE ECM APPENDIX I. ALL APPROPRIATE PERMITS MUST BE OBTAINED BY THE CONTRACTOR PRIOR TO CONSTRUCTION (1041, NPDES, FLOODPLAIN, 404, FUGITIVE DUST, ETC.). IN THE EVENT OF CONFLICTS BETWEEN THESE REQUIREMENTS AND OTHER LAWS, RULES, OR REGULATIONS OF OTHER FEDERAL, STATE, LOCAL, OR COUNTY AGENCIES, THE MOST RESTRICTIVE LAWS, RULES, OR
- 25. ALL CONSTRUCTION TRAFFIC MUST ENTER/EXIT THE SITE ONLY AT APPROVED CONSTRUCTION ACCESS POINTS.
- 26. PRIOR TO CONSTRUCTION THE PERMITTEE SHALL VERIFY THE LOCATION OF EXISTING UTILITIES.
- 27. A WATER SOURCE SHALL BE AVAILABLE ON-SITE DURING EARTHWORK OPERATIONS AND SHALL BE UTILIZED AS REQUIRED TO MINIMIZE DUST FROM EARTHWORK EQUIPMENT AND WIND.
- 28. THE SOILS REPORT FOR THIS SITE HAS BEEN PREPARED BY ENTECH ENGINEERING, INCORPERATED, JANUARY 20, 2021 AND SHALL BE CONSIDERED A PART OF THESE PLANS.
- 29. AT LEAST TEN DAYS PRIOR TO THE ANTICIPATED START OF CONSTRUCTION, FOR PROJECTS THAT WILL DISTURB 1 ACRE OR MORE, THE OWNER OR OPERATOR OF CONSTRUCTION ACTIVITY SHALL SUBMIT A PERMIT APPLICATION FOR STORMWATER DISCHARGE TO THE COLORADO DEPARTMENT OF PUBLIC HEALTH AND ENVIRONMENT, WATER QUALITY DIVISION. THE APPLICATION CONTAINS CERTIFICATION OF COMPLETION OF A STORMWATER MANAGEMENT PLAN (SWMP), OF WHICH THIS GRADING AND EROSION CONTROL PLAN MAY BE A PART. FOR INFORMATION OR APPLICATION MATERIALS CONTACT:

COLORADO DEPARTMENT OF PUBLIC HEALTH AND ENVIRONMENT WATER QUALITY CONTROL DIVISION WOCD - PERMITS 4300 CHERRY CREEK DRIVE SOUTH DENVER, CO 80246-1530

ATTN: PERMITS UNIT



# LEGAL DESCRIPTION

# FLOODPLAIN STATEMENT

# BASIS OF BEARING

THE BASIS OF BEARINGS IS THE WESTERLY LINE OF TRACT, B, WOODMOOR PLACER, BEING MONUMENTED BY A 1-1/4" YELLOW PLASTIC CAP ILLEGIBLE AT BOTH ENDS. SAID LINE BEARING N26°20'33'E AS REFERENCED TO COLORADO STATE PLANE CENTRAL

# BENCHMARK

NGS MONUMENT T 294 BEING MONUMENTED BY A 3-1/4" BRASS DISC SET IN A 4'X4' BOULDER, LOCATED 1.8 MILES EAST ALONG HIGBY ROAD FROM ITS INTERSECTION WITH JACKSON CREEK PARKWAY, 40 FEET SOUTH OF THE CENTERLINE OF THE ROAD, 6 FEET SOUTH OF A FENCE, AND 6.2 FEET SOUTH OF A WITNESS POST. SAID MONUMENT HAVING A PUBLISHED ELEVATION OF 7247.10 FEET, NAVD88.

# **CONTACTS**

OWNER / DEVELOPER: BRJM, LLC CONTACT: BOB IRWIN

101 N. CASCADE, SUITE 200 COLORADO SPRINGS, CO 80903 (719) 475-7474

CIVIL ENGINEER: DREXEL BARRELL & CO. CONTACT: TIM D. McCONNELL, P.E. 101 SAHWATCH STREET, #100 COLORADO SPRINGS, CO 80903

EL PASO COUNTY: PLANNING AND COUNTY DEVELOPMENT 2880 INTERNATIONAL CIRCLE, SUITE 110 COLORADO SPRINGS, COLORADO 80910 (719) 520-6819

(719) 260-0887

DEPARTMENT OF PUBLIC WORKS 3257 AKERS DR COLORADO SPRINGS, CO 80910 (719) 529-6460

DISTRICT: MERIDIAN SERVICE METROPOLITAN DISTRICT 11886 STAPLETON DR PEYTON, CO 80831

(719) 495-6567 FIRE PROTECTION DISTRICT: FALCON FIRE FPD

> ELECTRIC: MOUNTAIN VIEW ELECTRIC ASSOC., INC. 11140 EAST WOODMEN ROAD FALCON, COLORADO 80831 (719)495-2283

7030 N MERIDIAN RD

**FALCON, CO 80831** 

(719) 494-4050

PREPARED BY:

DREXEL, BARRELL & CC Engineers • Surveyors 101 SAHWATCH ST. #100 OLORADO SPGS, COLORADO 809 CONTACT: TIM D. McCONNELL, P. (719)260-0887

CLIENT:

COLORADO SPRINGS • LAFAYETTE

FALCON LATIGO, LLC 5350 S. ROSLYN ST. STE #400 ENGLEWOOD, CO 80111-2125 (303) 694-0862

TRAILS NO. 10

I, THE OWNER/DEVELOPER HAVE READ AND WILL COMPLY WITH THE REQUIREMENTS SPECIFIED IN THESE DETAILED PLANS AND SPECIFICATIONS.

ROBERT C. IRWIN DATE

# DESIGN ENGINEER'S STATEMENT

OWNER'S STATEMENT

THESE DETAILED PLANS AND SPECIFICATIONS WERE PREPARED UNDER MY DIRECTION AND SUPERVISION. SAID PLANS AND SPECIFICATIONS HAVE BEEN PREPARED ACCORDING TO CRITERIA ESTABLISHED BY THE COUNTY FOR THE DETAILED ROADWAY, DRAINAGE, GRADING AND EROSION CONTROL PLANS AND SPECIFICATIONS, AND SAID PLANS AND SPECIFICATIONS ARE IN CONFORMITY WITH APPLICABLE MASTER DRAINAGE PLANS AND MASTER TRANSPORTATION PLANS. SAID PLANS AND SPECIFICATIONS MEET THE PURPOSES FOR WHICH THE PARTICULAR ROADWAY AND DRAINAGE FACILITIES ARE DESIGNED AND ARE CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF. I ACCEPT RESPONSIBILITY FOR ANY LIABILITY CAUSED BY ANY NEGLIGENT ACTS, ERRORS OR OMISSIONS ON MY PART IN PREPARATION OF THESE DETAILED PLANS AND SPECIFICATIONS.

TIM D. MCCONNELL DATE P.E.# 33797

# EL PASO COUNTY

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COVER SHEET

INITIAL EROSION CONTROL PLAN

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POND G18 FOREBAY DETAILS

POND G18 OUTLET STRUCTURE

POND G19 FOREBAY DETAILS

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EROSION CONTROL DETAILS **EROSION CONTROL DETAILS** 

POND G14B DETAILS

POND G18 DETAILS

POND G19 DETAILS

COUNTY PLAN REVIEW IS PROVIDED ONLY FOR GENERAL CONFORMANCE WITH COUNTY DESIGN CRITERIA. THE COUNTY IS NOT RESPONSIBLE FOR THE ACCURACY AND ADEQUACY OF THE DESIGN, DIMENSIONS, AND/OR ELEVATIONS WHICH SHALL BE CONFIRMED AT THE JOB SITE. THE COUNTY THROUGH THE APPROVAL OF THIS DOCUMENT ASSUMES NO RESPONSIBILITY FOR THE COMPLETENESS AND/OR ACCURACY OF THIS DOCUMENT.

FILED IN ACCORDANCE WITH THE REQUIREMENTS OF THE EL PASO COUNTY LAND DEVELOPMENT CODE, DRAINAGE CRITERIA MANUAL, AND ENGINEERING CRITERIA MANUAL AS AMENDED.

IN ACCORDANCE WITH ECM SECTION 1.12, THESE CONSTRUCTION DOCUMENTS WILL BE VALID FOR CONSTRUCTION FOR A PERIOD OF 2 YEARS FROM THE DATE SIGNED BY THE EL PASO COUNTY ENGINEER. IF CONSTRUCTION HAS NOT STARTED WITHIN THOSE 2 YEARS, THE PLANS WILL NEED TO BE RESUBMITTED FOR APPROVAL, INCLUDING PAYMENT OF REVIEW FEES AT THE PLANNING AND COMMUNITY DEVELOPMENT DIRECTOR'S DISCRETION.

JENNIFER IRVINE, P.E. COUNTY ENGINEER

INITIAL ISSUE 9/17/24 DESIGNED BY: SBN DRAWN BY: CHECKED BY: FILE NAME: | 21820-01CV3

DATE

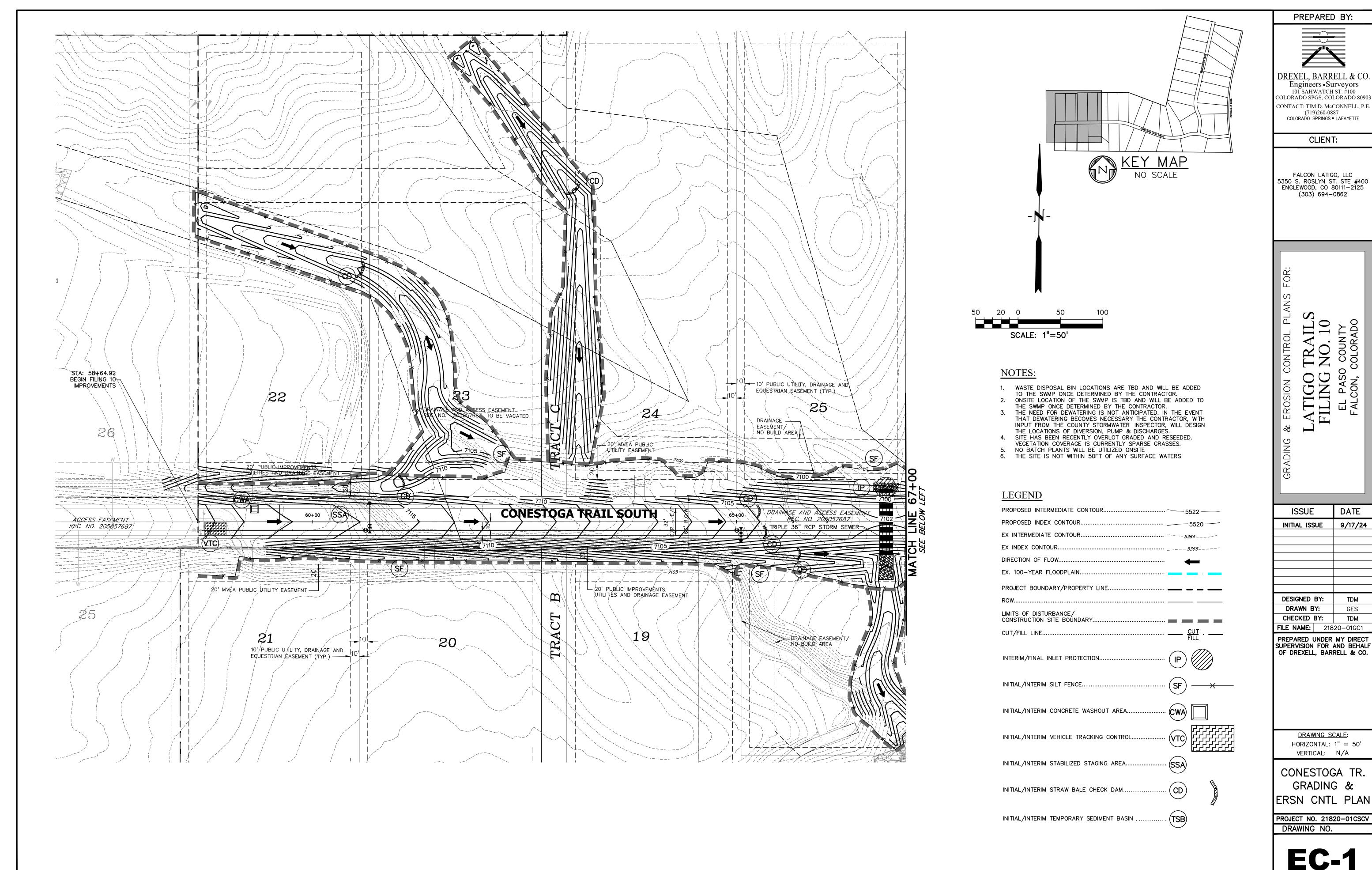
PREPARED UNDER MY DIRECT SUPERVISION FOR AND BEHALF OF DREXELL, BARRELL & CO.

> DRAWING SCALE: HORIZONTAL: N/A VERTICAL: N/A

> > COVER SHEET

PROJECT NO. 21820-01CSCV DRAWING NO.

SHEET: 1 OF 17

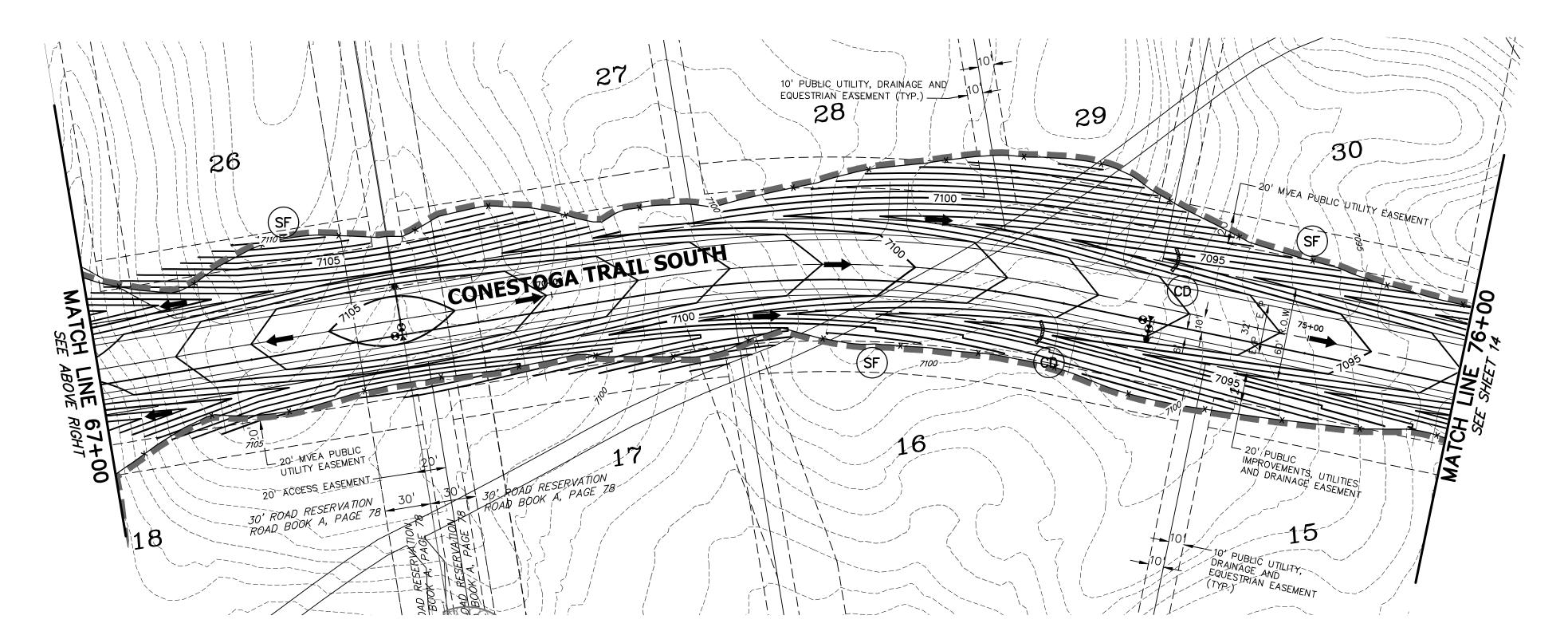


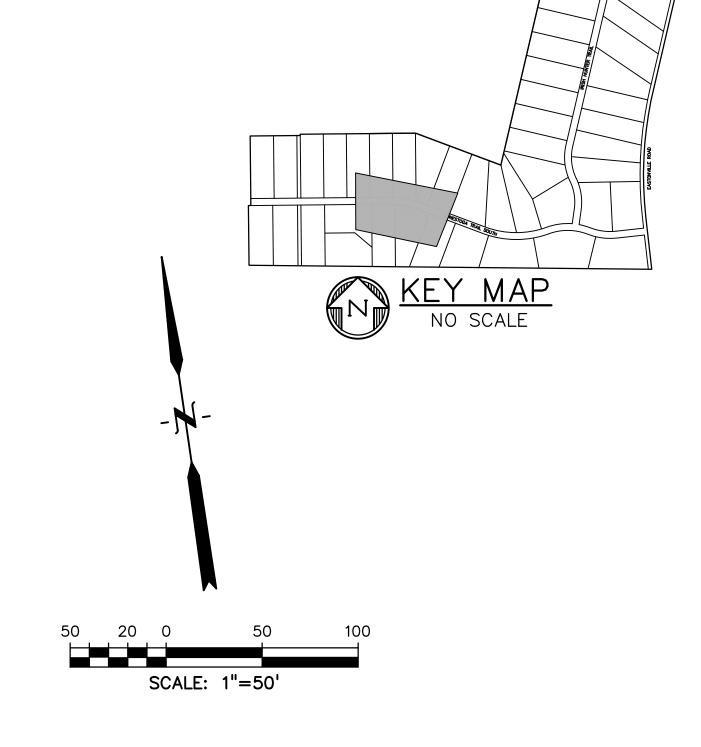
COLORADO SPGS, COLORADO 8090 CONTACT: TIM D. McCONNELL, P.E (719)260-0887

9/17/24

CONESTOGA TR.

SHEET: 2 OF 17

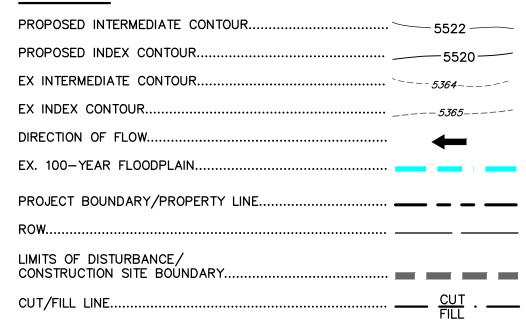


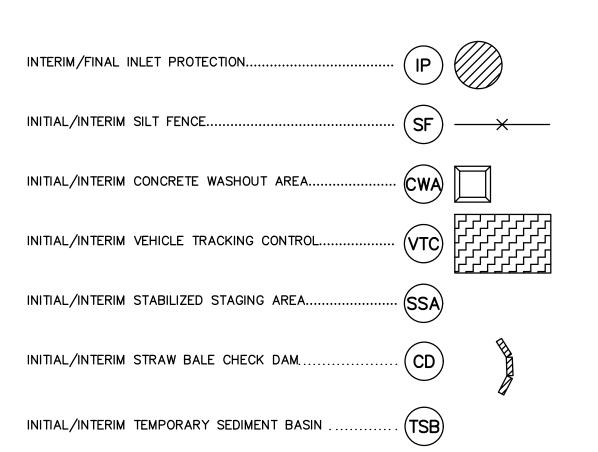


# NOTES:

- WASTE DISPOSAL BIN LOCATIONS ARE TBD AND WILL BE ADDED TO THE SWMP ONCE DETERMINED BY THE CONTRACTOR. ONSITE LOCATION OF THE SWMP IS TBD AND WILL BE ADDED TO THE SWMP ONCE DETERMINED BY THE CONTRACTOR.
- 3. THE NEED FOR DEWATERING IS NOT ANTICIPATED. IN THE EVENT THAT DEWATERING BECOMES NECESSARY THE CONTRACTOR, WITH
- INPUT FROM THE COUNTY STORMWATER INSPECTOR, WILL DESIGN THE LOCATIONS OF DIVERSION, PUMP & DISCHARGES.

  4. SITE HAS BEEN RECENTLY OVERLOT GRADED AND RESEEDED. VEGETATION COVERAGE IS CURRENTLY SHOULD SHARE GRASSES.
- 5. NO BATCH PLANTS WILL BE UTILIZED ONSITE6. THE SITE IS NOT WITHIN 50FT OF ANY SURFACE WATERS





PREPARED BY:

DREXEL, BARRELL & CO.
Engineers • Surveyors
101 SAHWATCH ST. #100
COLORADO SPGS, COLORADO 80903 CONTACT: TIM D. McCONNELL, P.F (719)260-0887 COLORADO SPRINGS • LAFAYETTE

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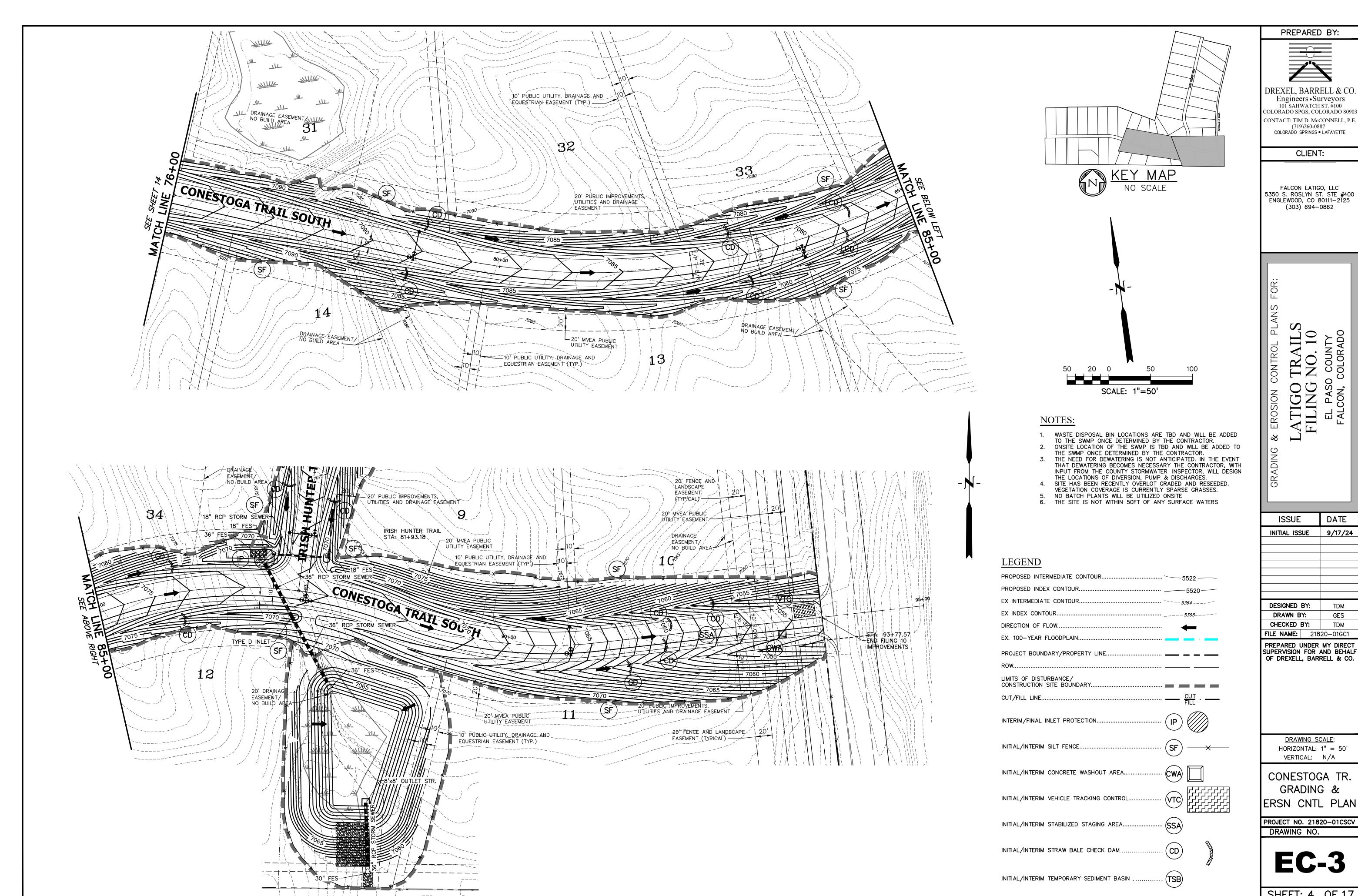
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| INITIAL ISSUE  | 9/17/24     |  |
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| DESIGNED BY:   | TDM         |  |
| DRAWN BY:  | GES         |  |
| CHECKED BY:  | TDM         |  |
| FILE NAME: 218                                       | 21820-01GC1 |  |
| PREPARED UNDER<br>SUPERVISION FOR<br>OF DREXELL, BAR | AND BEHAL   |  |

**DRAWING SCALE:** HORIZONTAL: 1'' = 50'VERTICAL: N/A

CONESTOGA TR. GRADING & ERSN CNTL PLAN

PROJECT NO. 21820-01CSCV DRAWING NO.

SHEET: 3 OF 17

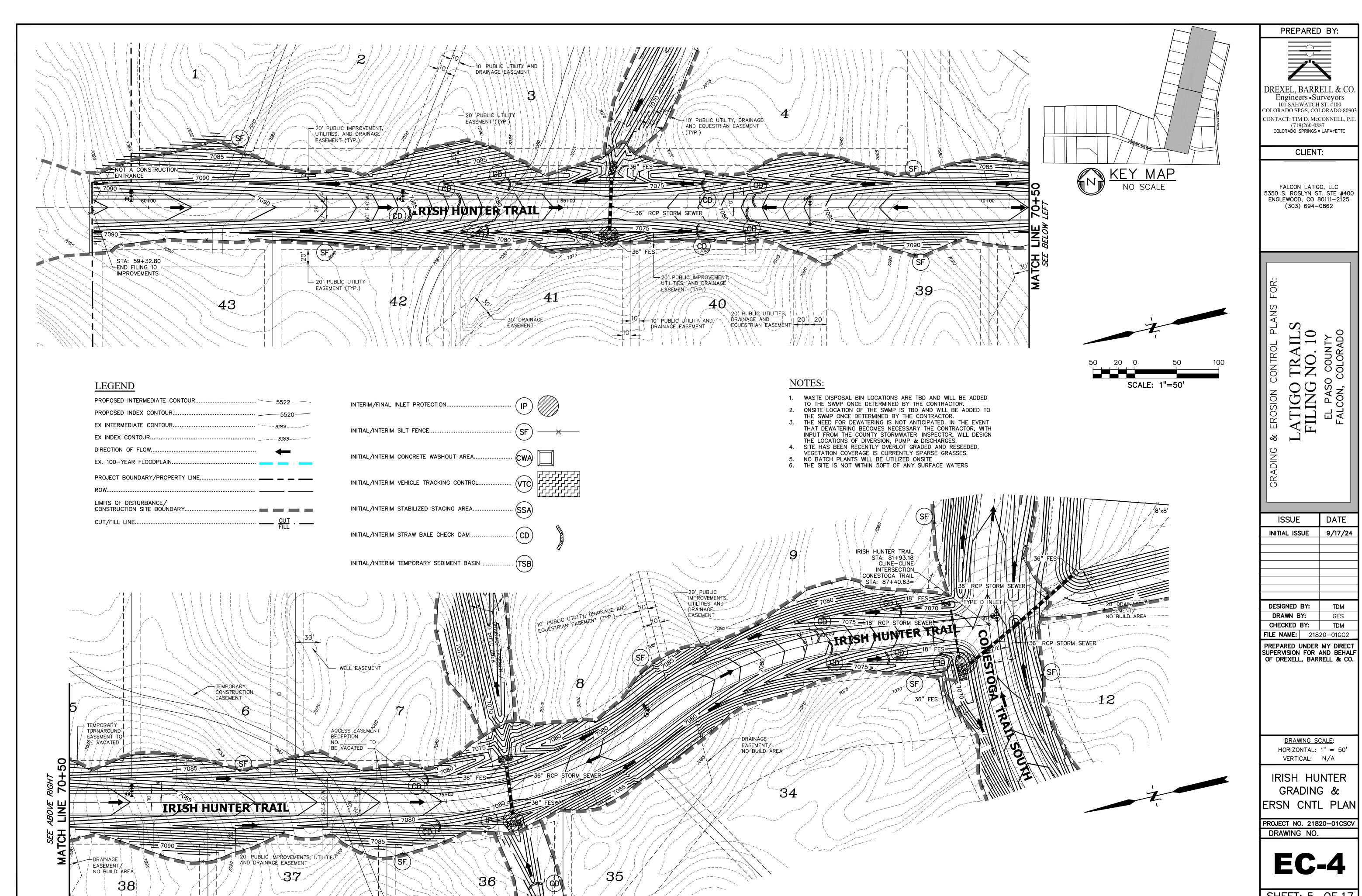


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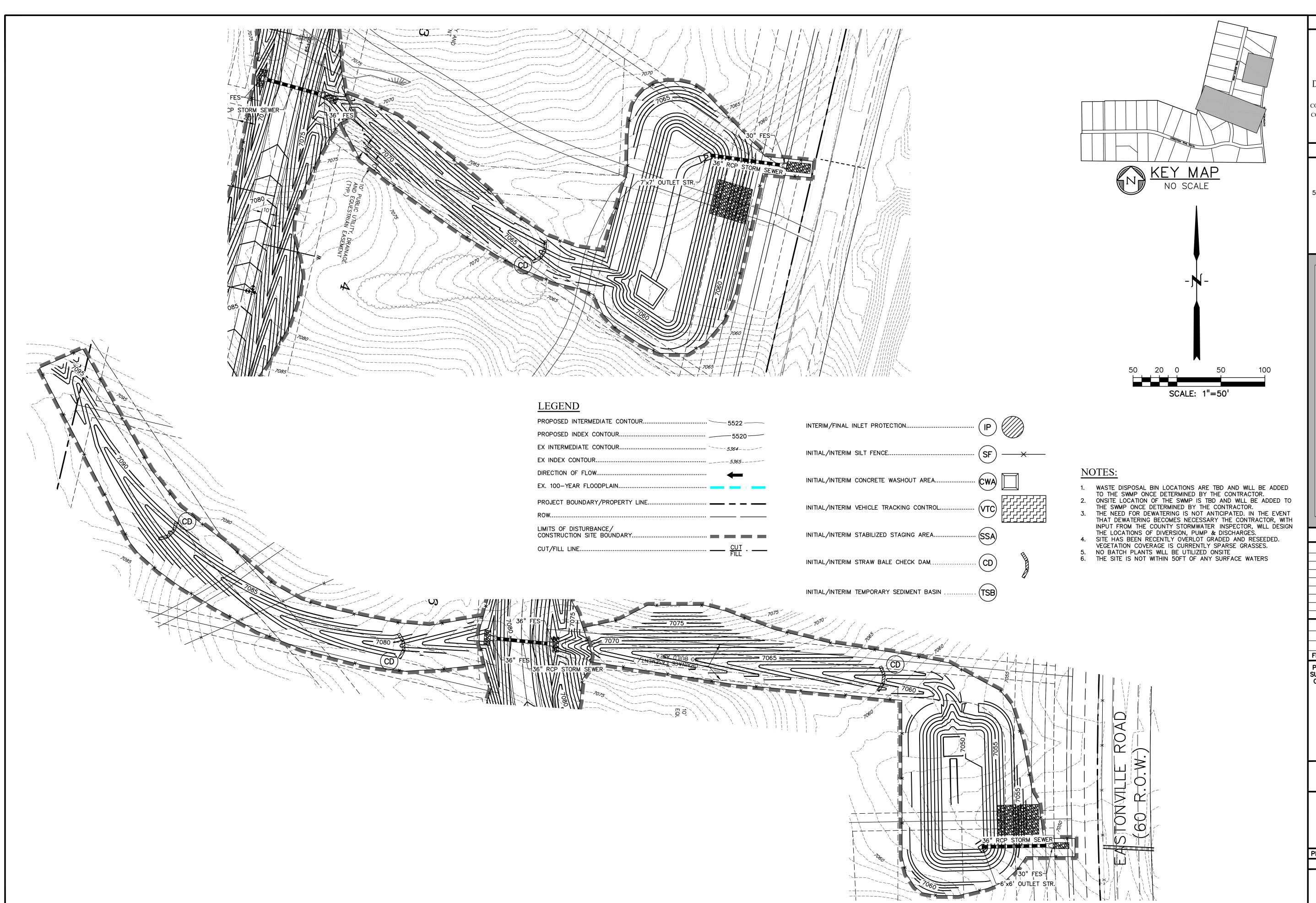
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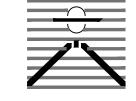
CONESTOGA TR. ERSN CNTL PLAN

SHEET: 4 OF 17



SHEET: 5 OF 17





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| DESIGNED BY:   | TDM |
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| DRAWN BY:  | GES |
| CHECKED BY:  | TDM |
| <b>ILE NAME:</b> 21820-01GC2   |     |
| PREPARED UNDER MY DIRECT JPERVISION FOR AND BEHALF DF DREXELL, BARRELL & CO. |     |

DRAWING SCALE:

HORIZONTAL: 1" = 50'

VERTICAL: N/A

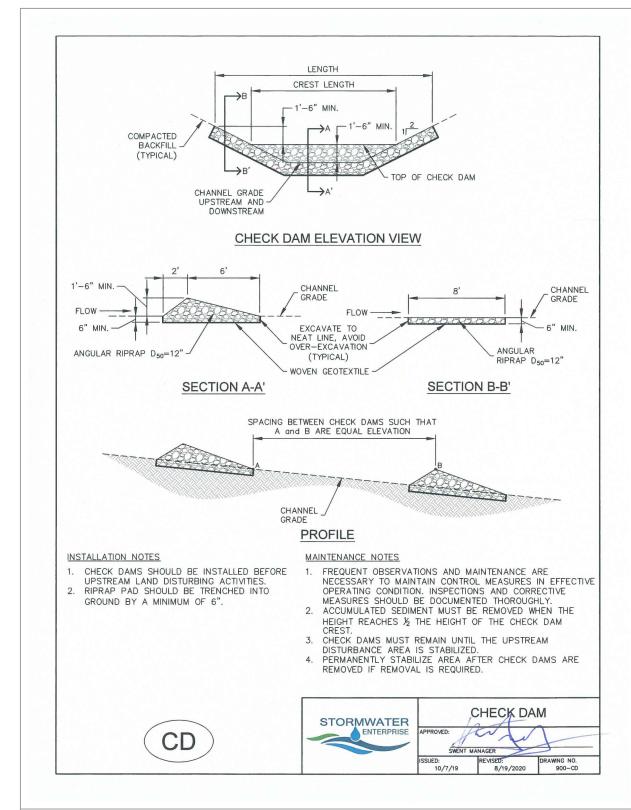
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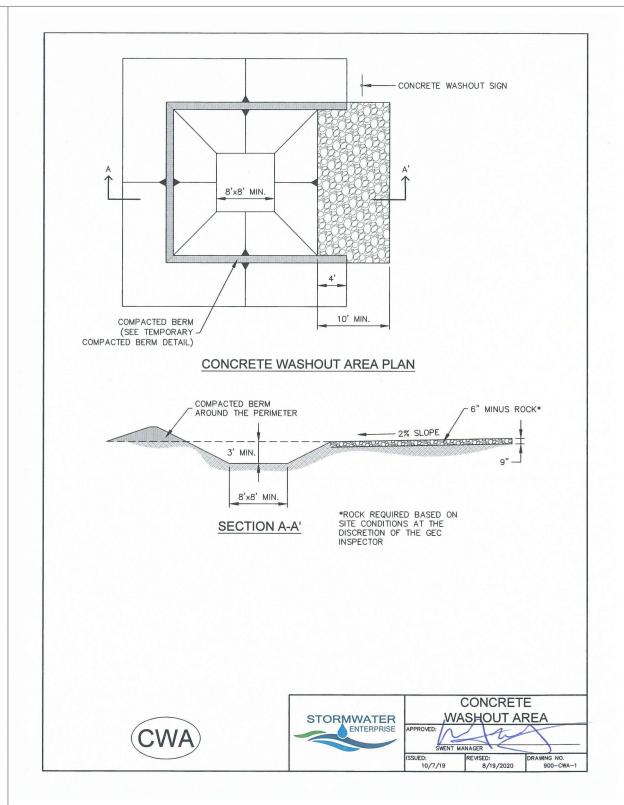
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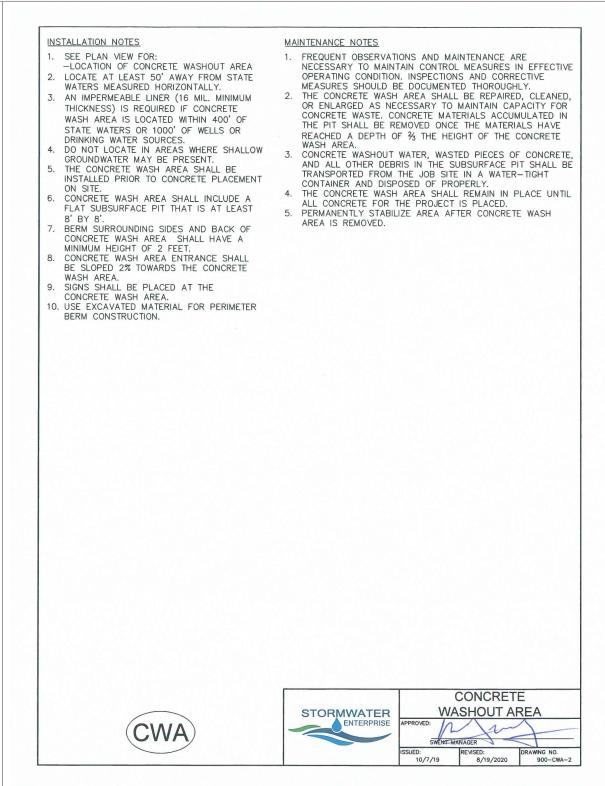
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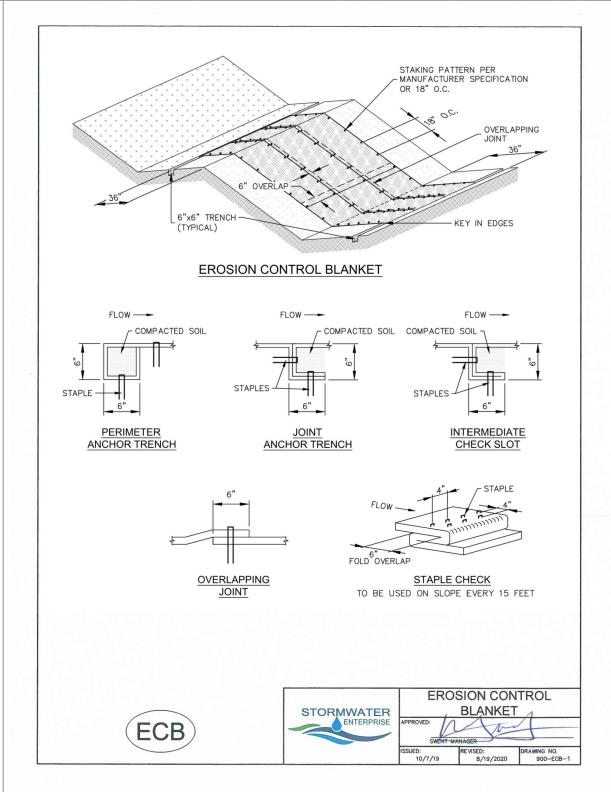
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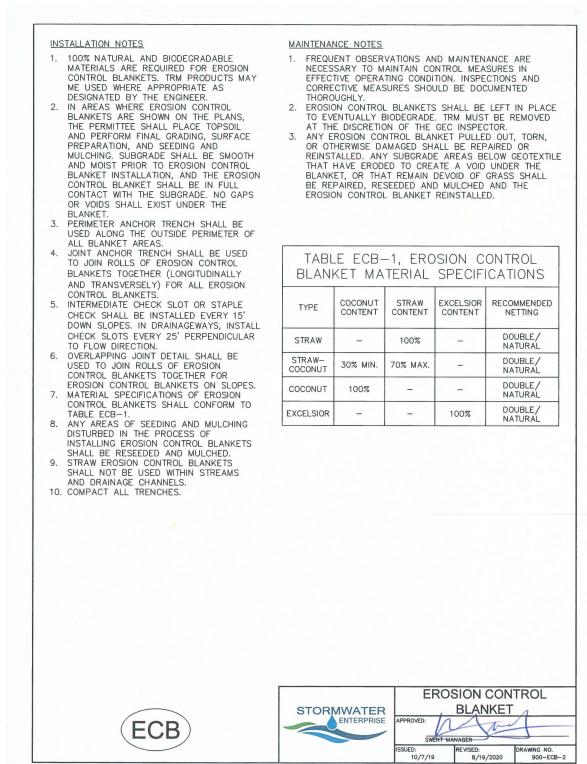


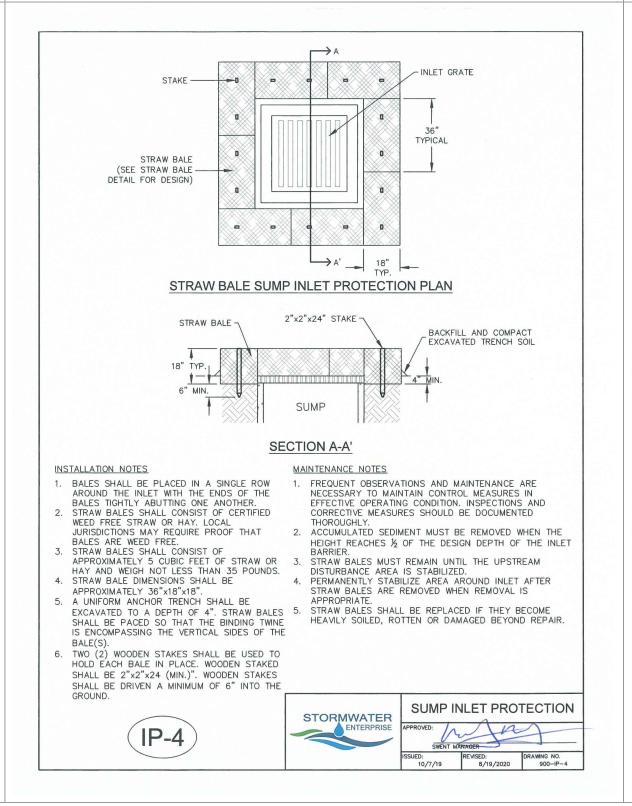


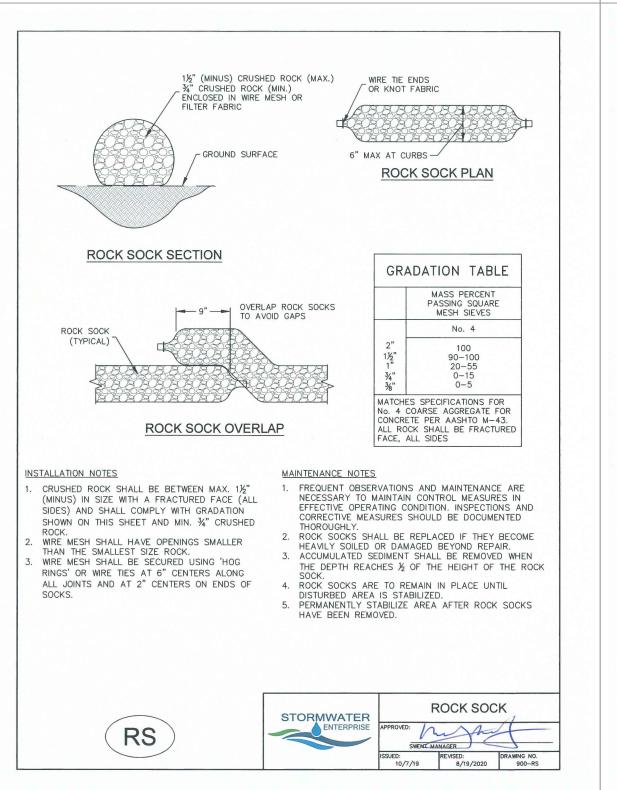


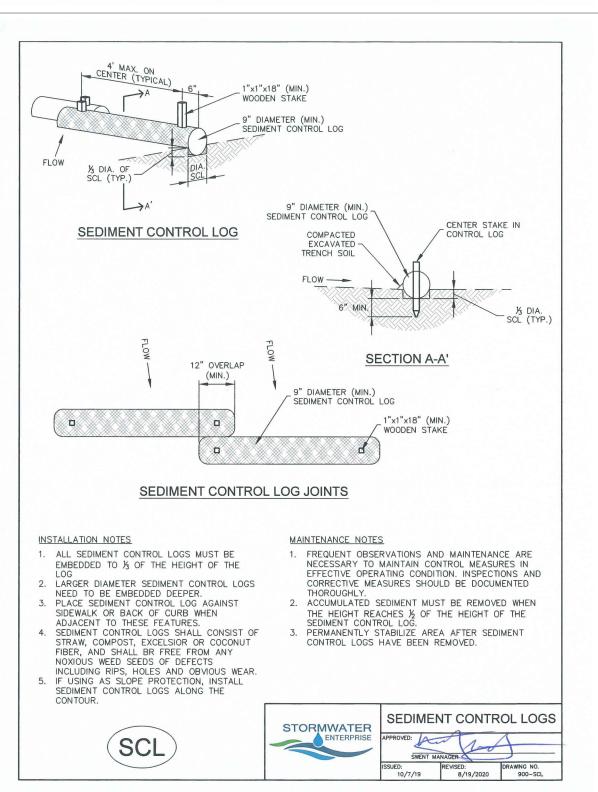












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DRAWING SCALE:
HORIZONTAL: N/A
VERTICAL: N/A

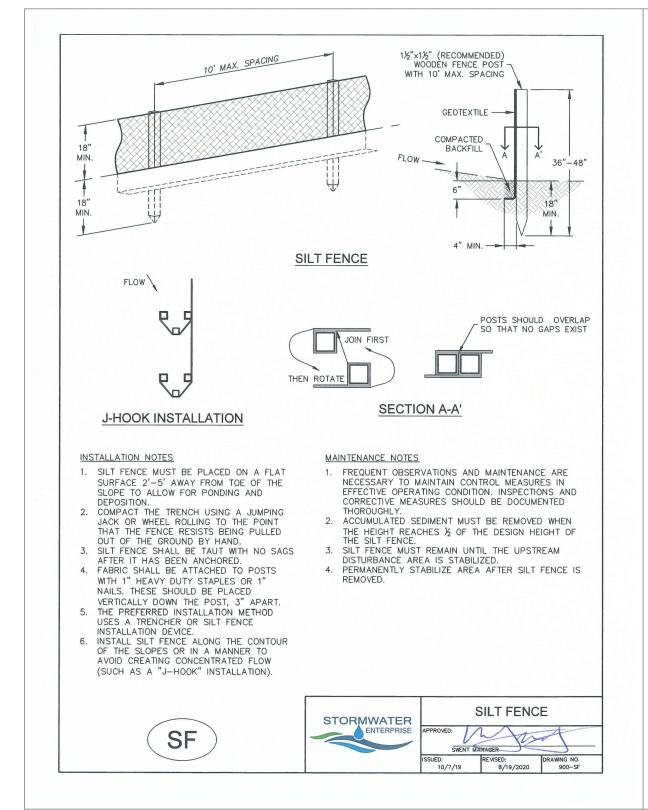
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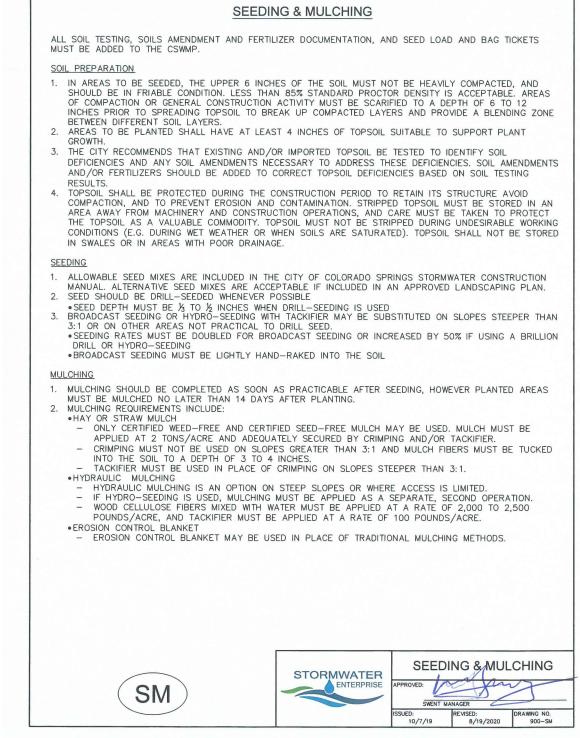
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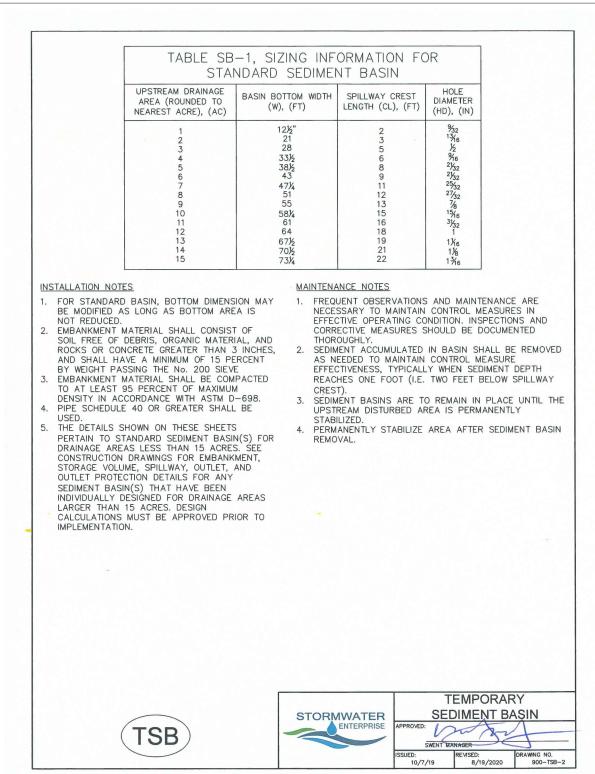
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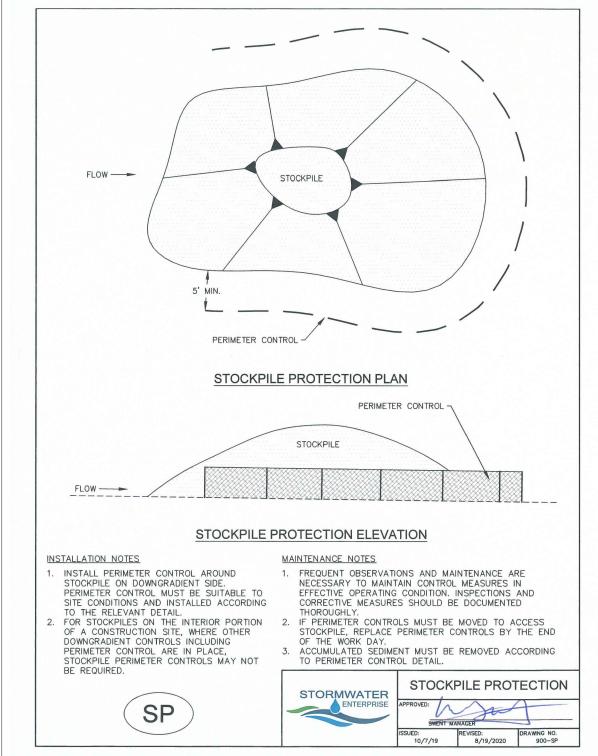
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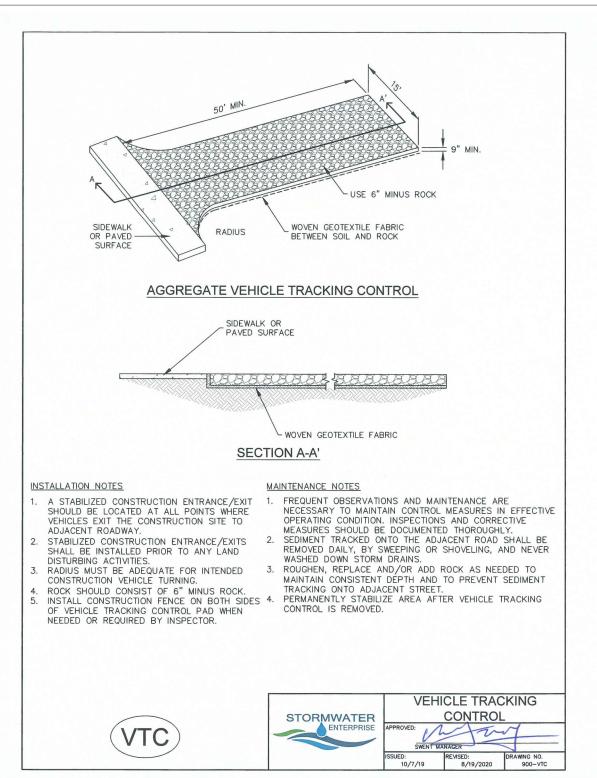


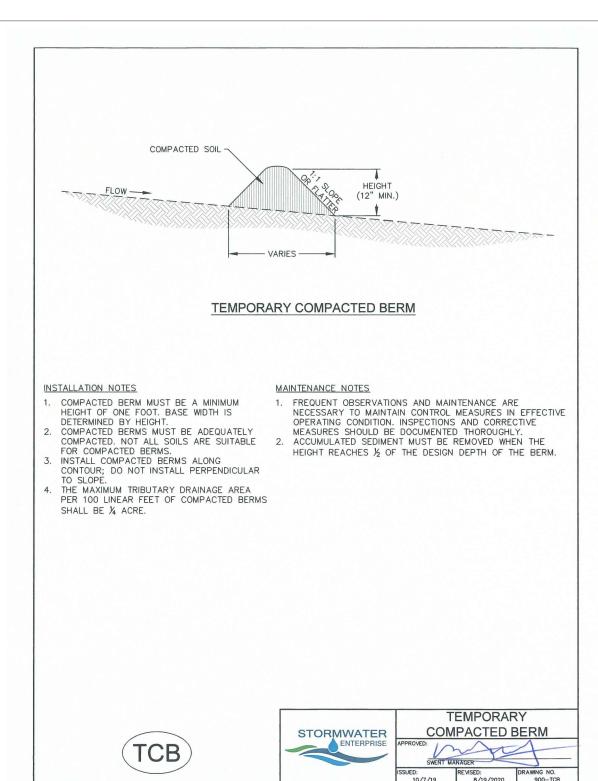














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TRAILS NO. 10 ATIGO

**ISSUE** DATE INITIAL ISSUE 9/17/24 DESIGNED BY: TDM DRAWN BY:

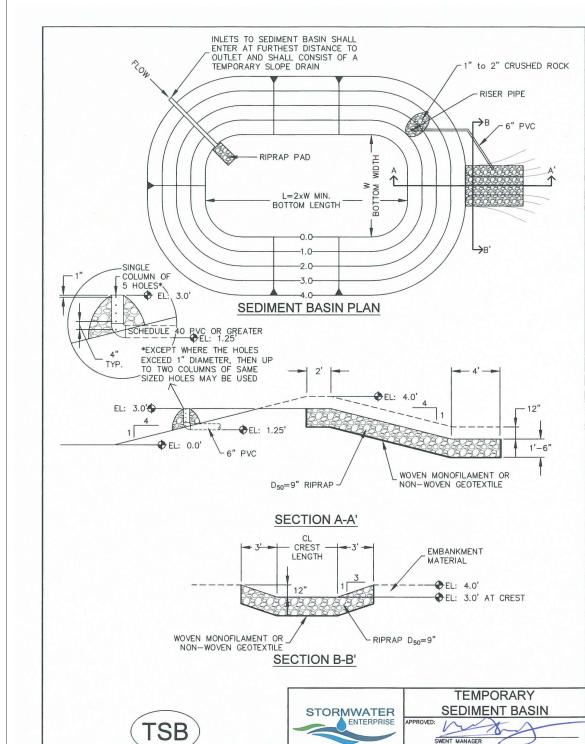
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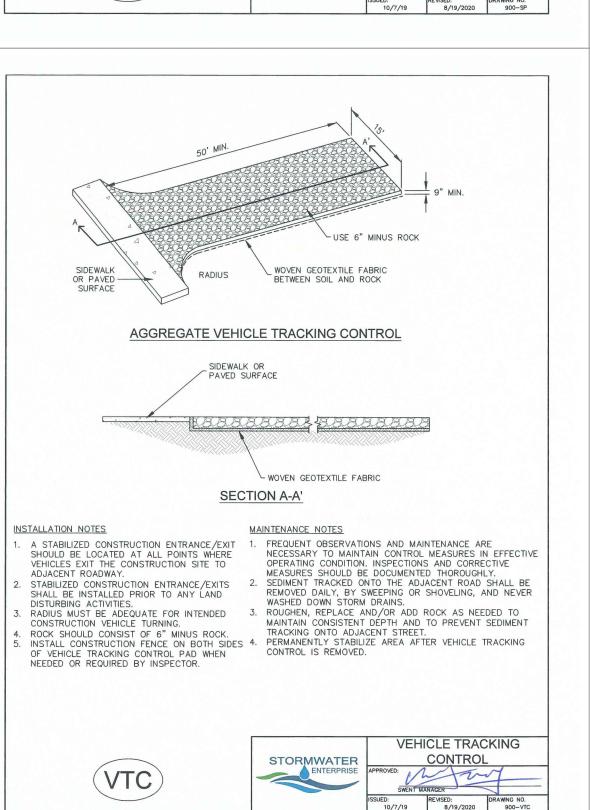
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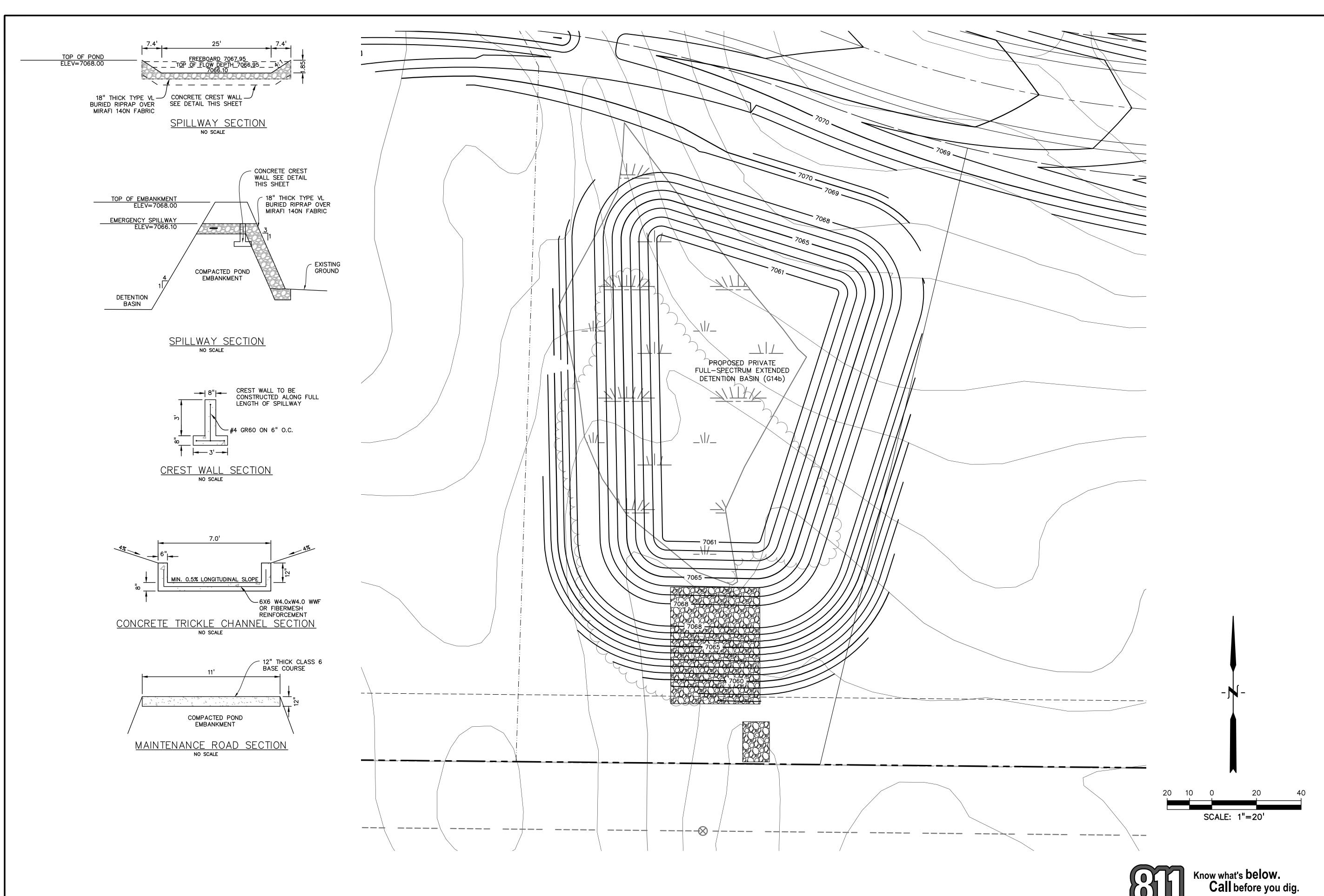
**EROSION** CONTROL **DETAILS** 

PROJECT NO. 21820-01CSCV DRAWING NO.

SHEET: 8 OF 17







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ISSUE DATE
INITIAL ISSUE 9/17/24

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DRAWN BY: SBN

CHECKED BY: KGV

FILE NAME: 21820-01PD

PREPARED UNDER MY DIREC

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DRAWING SCALE:
HORIZONTAL: 1" = 20'
VERTICAL: N/A

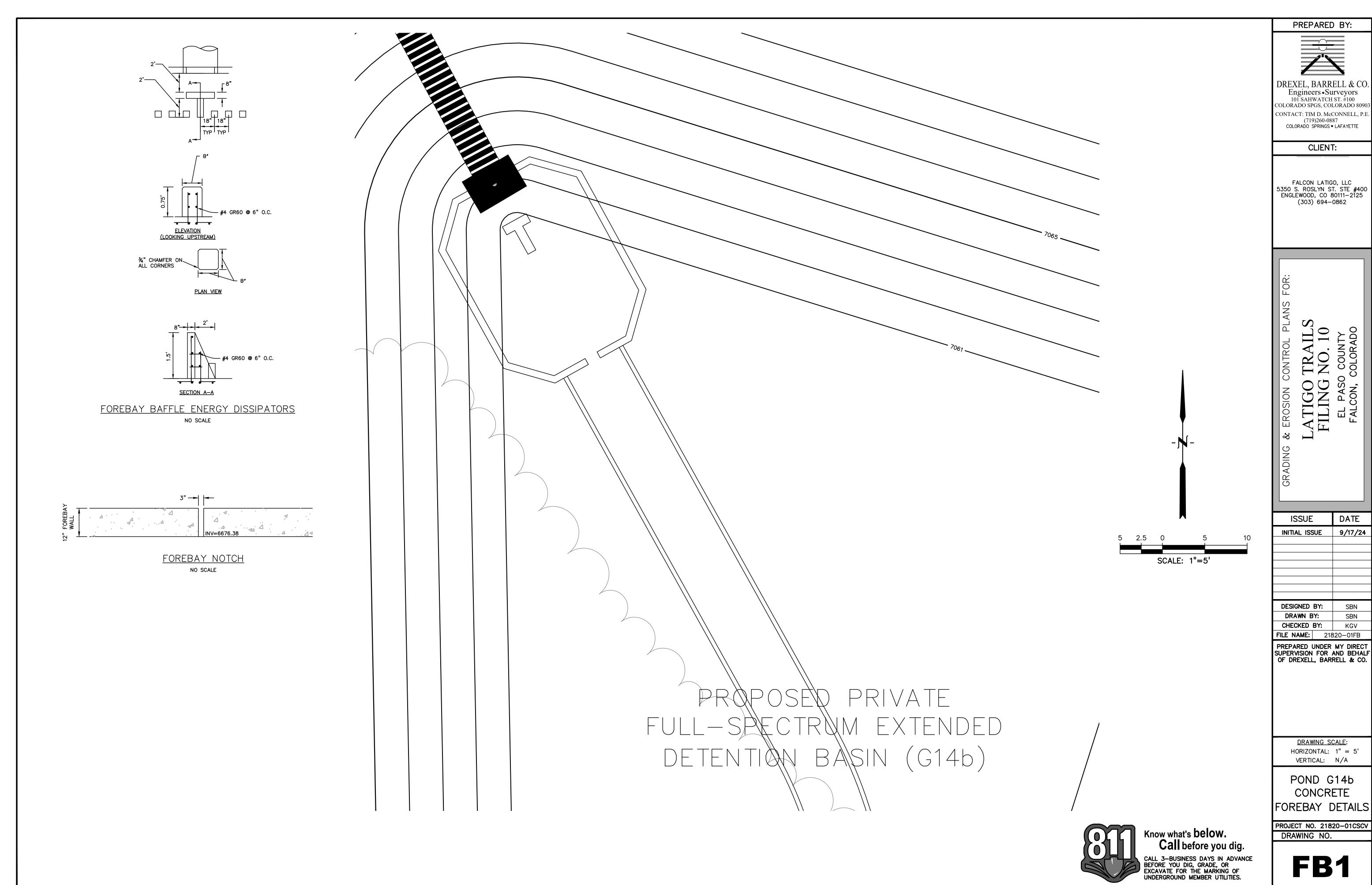
POND G14b DETAILS

PROJECT NO. 21820-01CSCV
DRAWING NO.

PD1

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

SHEET: 9 OF 17



DREXEL, BARRELL & CO. Engineers • Surveyors 101 SAHWATCH ST. #100 COLORADO SPGS, COLORADO 80903

DATE 9/17/24

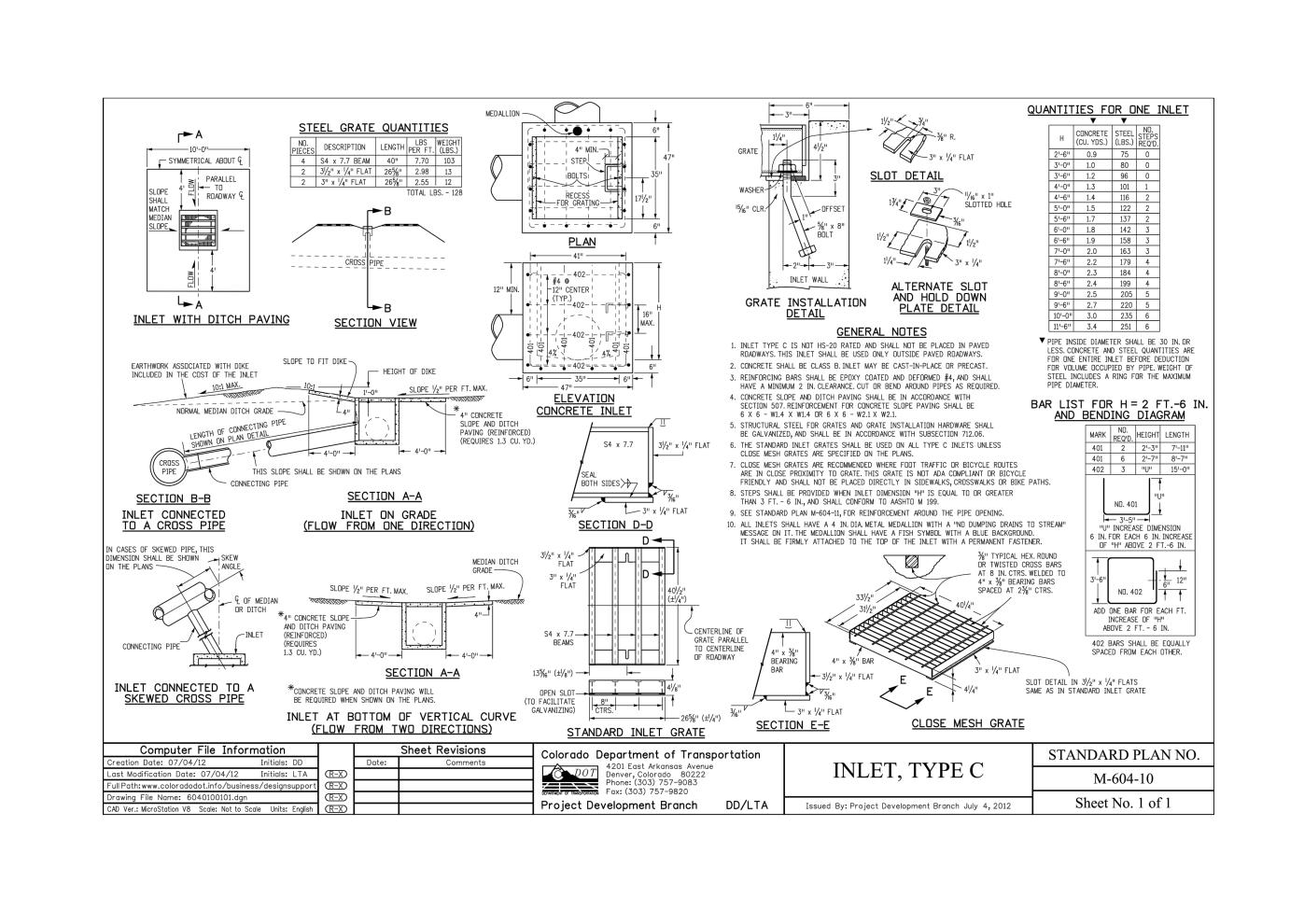
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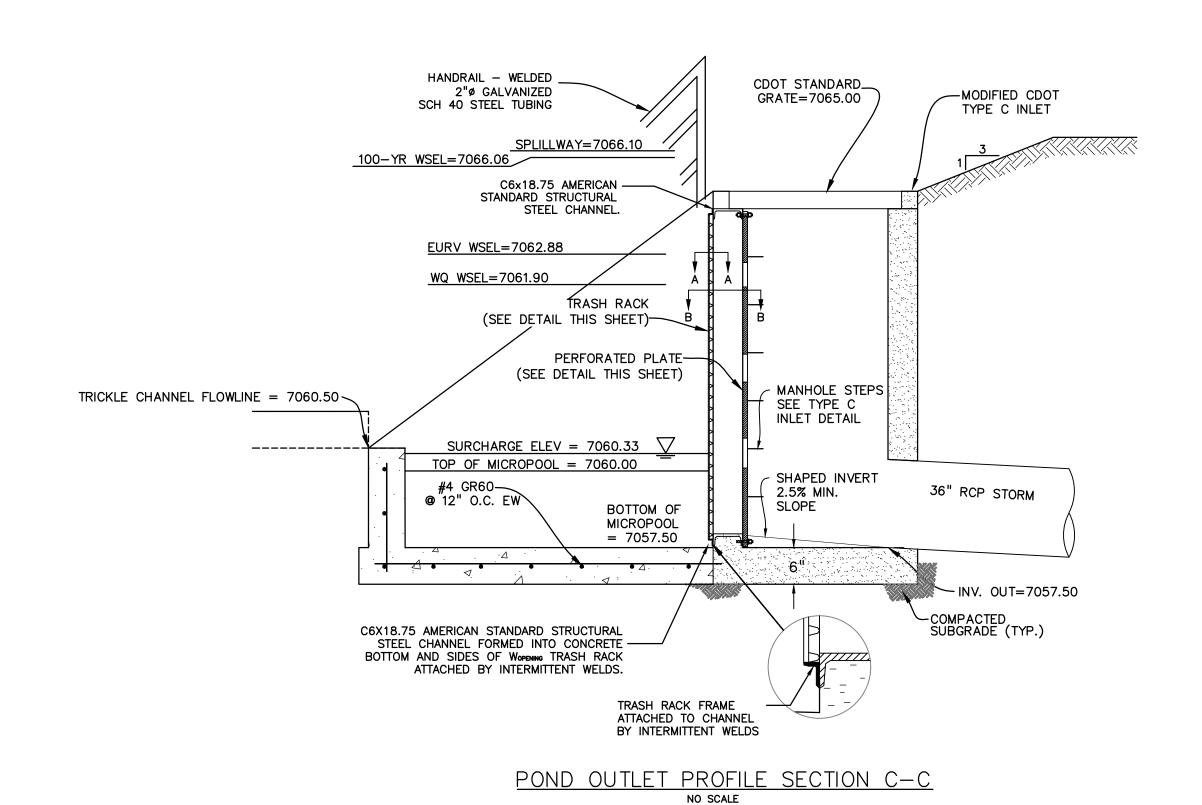
HORIZONTAL: 1'' = 5'

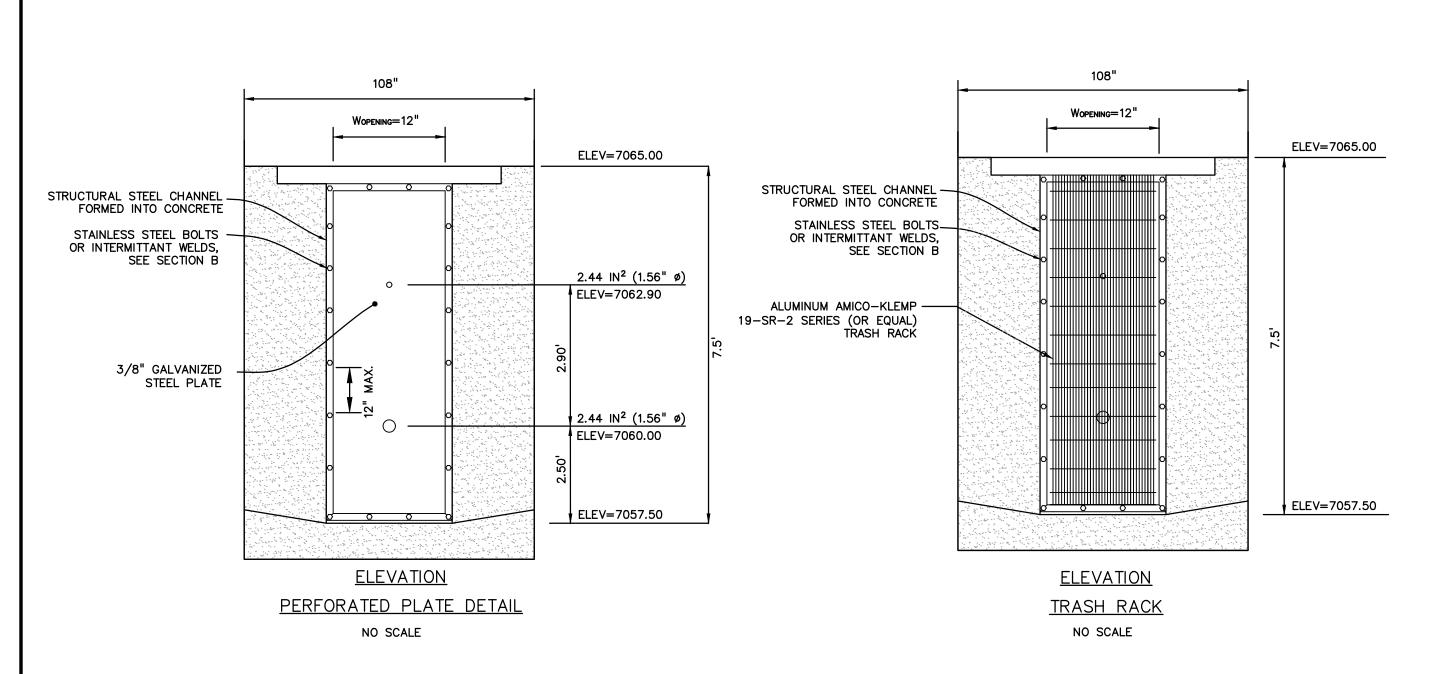
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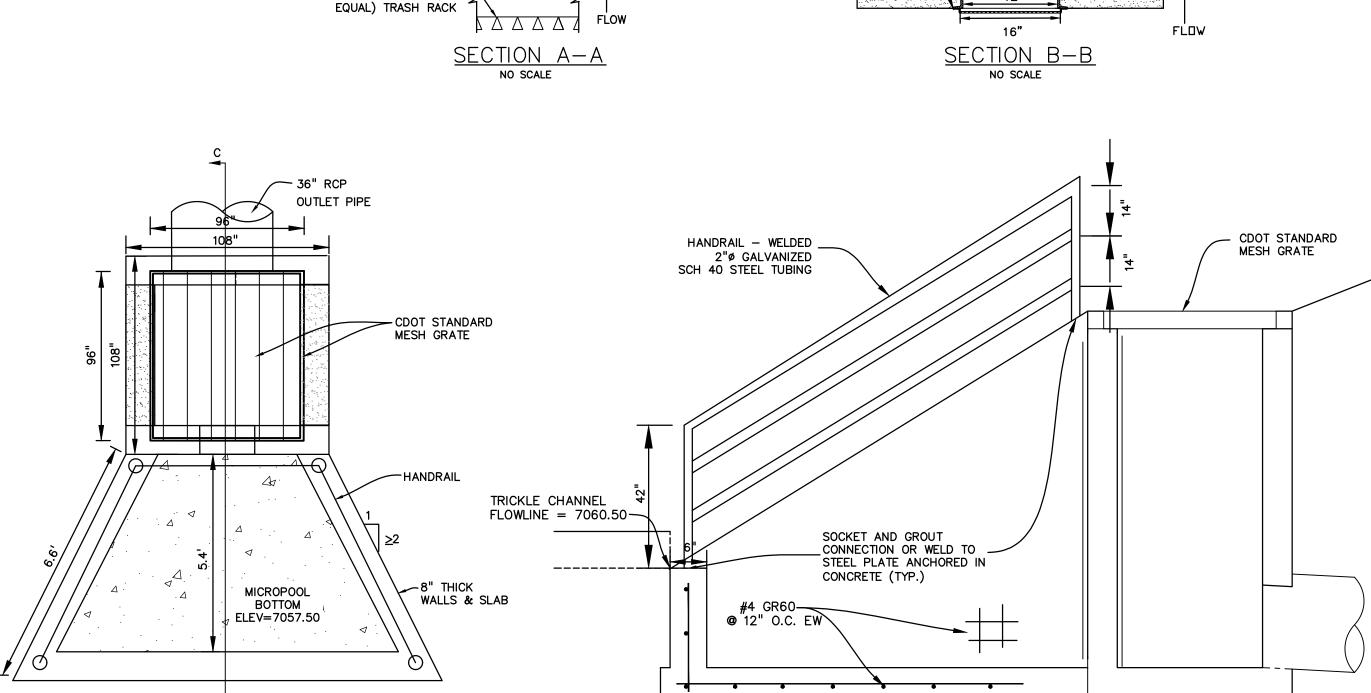
PROJECT NO. 21820-01CSCV

SHEET:10 OF 17









TRASH RACK FRAME -ATTACHED TO CHANNEL BY INTERMITTENT WELDS

STAINLESS STEEL SUPPORT BARS

ALUMINUM AMICO-KLEMP -

11.0'

MICROPOOL PLAN

NO SCALE

19-SR-2 SERIES (OR

PERFORATED PLATE NOTES:

- 1. PROVIDE GASKET MATERIAL OR GROUT BETWEEN THE ORIFICE PLATE AND CONCRETE.
- 2. BOLT PLATE TO CONCRETE @ 12" MAX. ON CENTER. ORIFICE PLATE IS TO BE REMOVABLE.
- 3. ALL STEEL SURFACES ARE TO BE COATED WITH ZRC COLD GALVANIZING COMPOUND.

  WQCV TRASH RACKS:
- 1. TRASH RACKS SHALL BE STAINLESS STEEL OR ALUMINUM AND SHALL BE ATTACHED BY INTERMITTENT WELDS ALONG THE EDGE OF THE MOUNTING FRAME.
- GENERAL NOTES:

## GENERAL NOTES:

1. ALL EXTERIOR STEEL SHALL BE EITHER STAINLESS OR HOT DIPPED GALVANIZED



DREXEL, BARRELL & CO.
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COLORADO SPGS, COLORADO 80903
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COLORADO SPRINGS • LAFAYETTE

CLIENT:

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> LATIGO TRAILS FILING NO. 10 EL PASO COUNTY

ISSUE DATE
INITIAL ISSUE 9/17/24

3/8" GALVANIZED - STEEL ORIFICE PLATE

~8" THICK

SECTION C-C

NO SCALE

WALLS & SLAB

DESIGNED BY: SBN

DRAWN BY: SBN

CHECKED BY: TDM

FILE NAME: 21820-010UT

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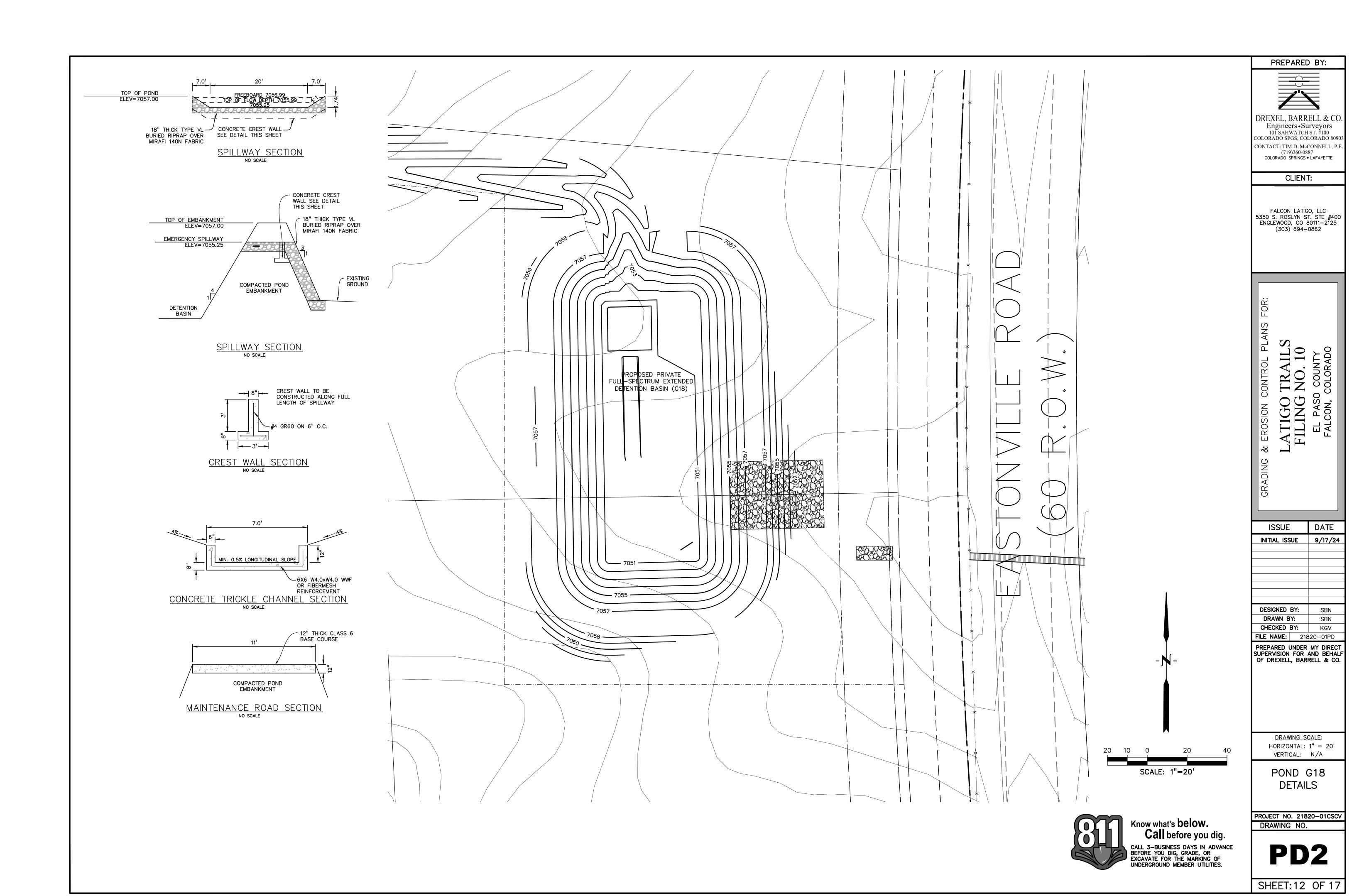
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VERTICAL: N/A

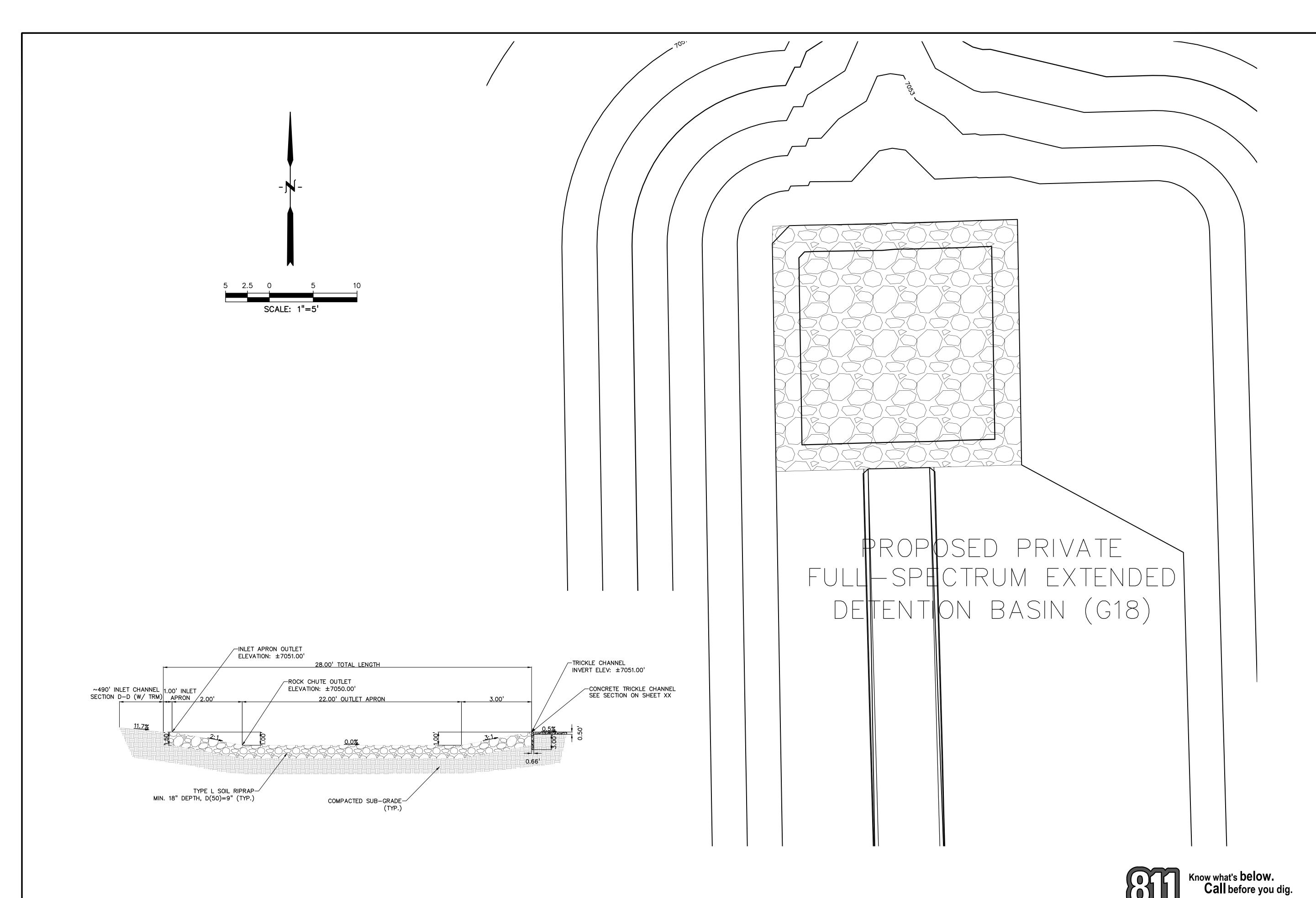
POND G14b OUTLET STRUCTURE

PROJECT NO. 21820-01CSCV DRAWING NO.

OUT

SHEET: 11 OF 17





DREXEL, BARRELL & CO.
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CLIENT:

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> GO TRAILS NG NO. 10

GRADING & FR

DESIGNED BY: SBN

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CHECKED BY: KGV
FILE NAME: 21820-01FB
PREPARED UNDER MY DIRECT
SUPERVISION FOR AND BEHALF
OF DREXELL, BARRELL & CO.

DRAWING SCALE:
HORIZONTAL: 1" = 5'

VERTICAL: N/A

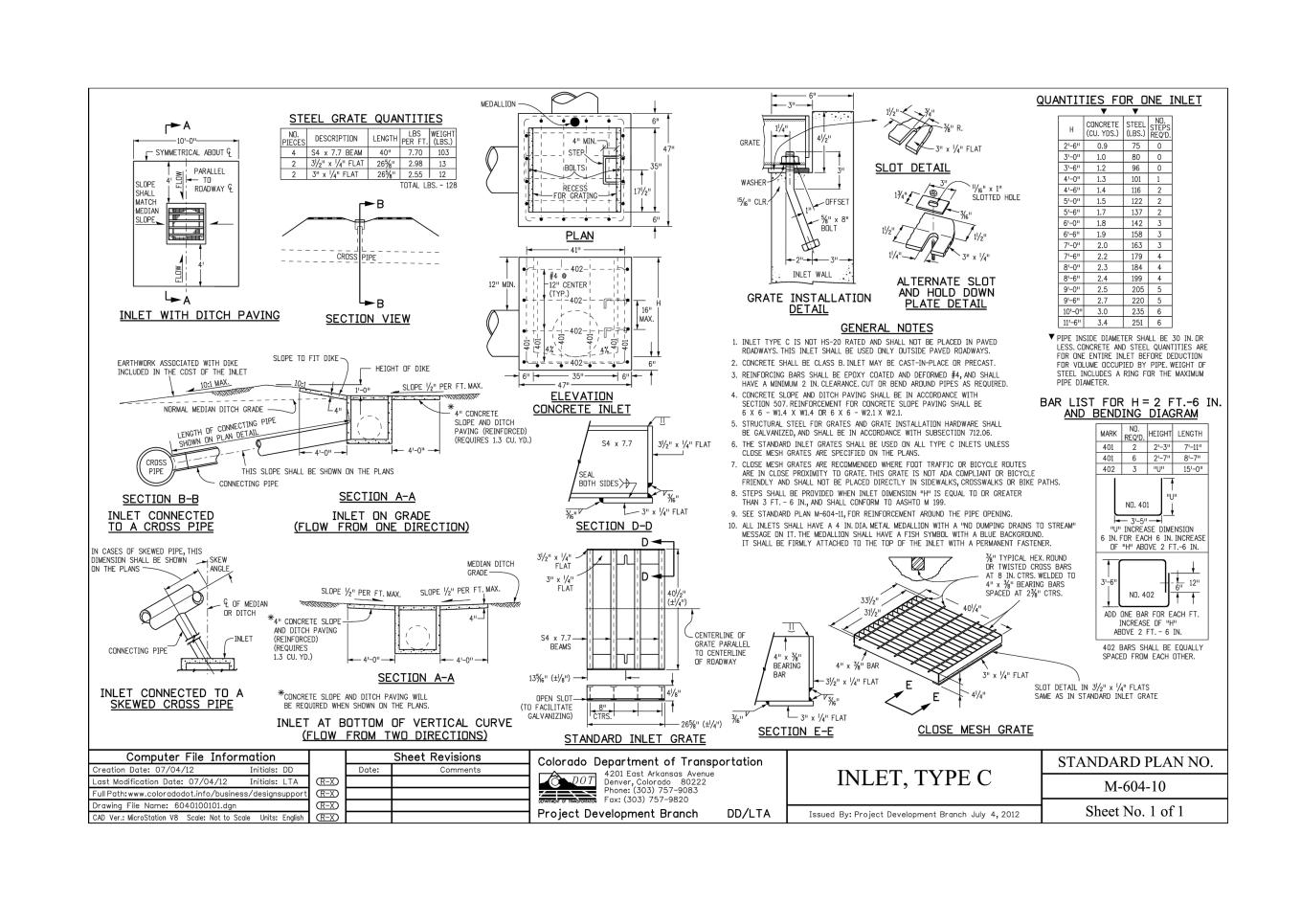
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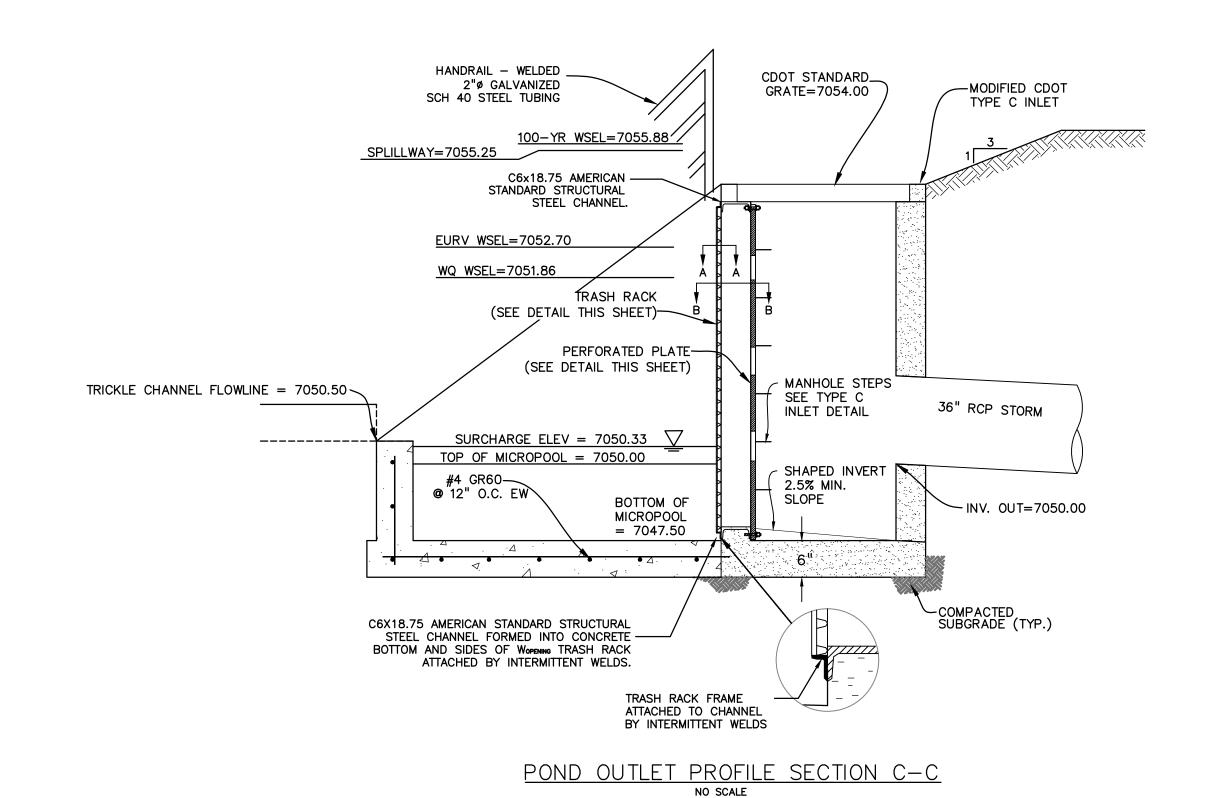
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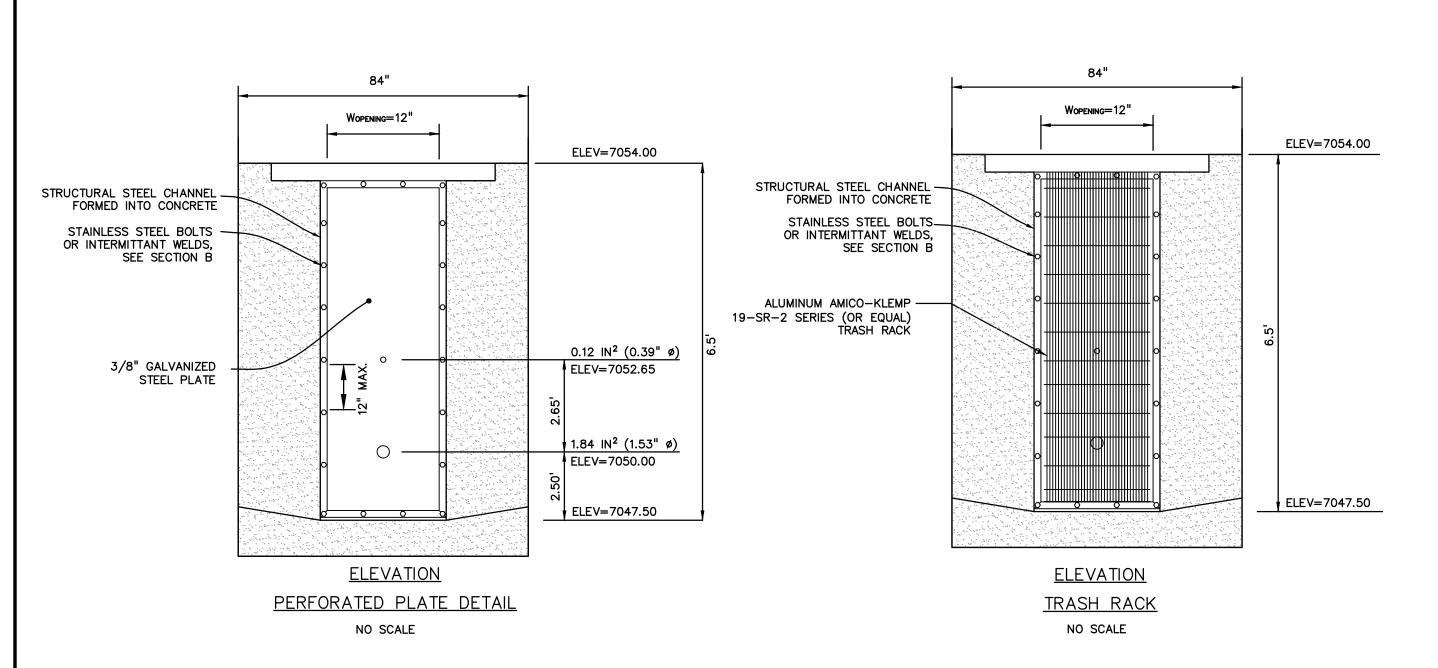
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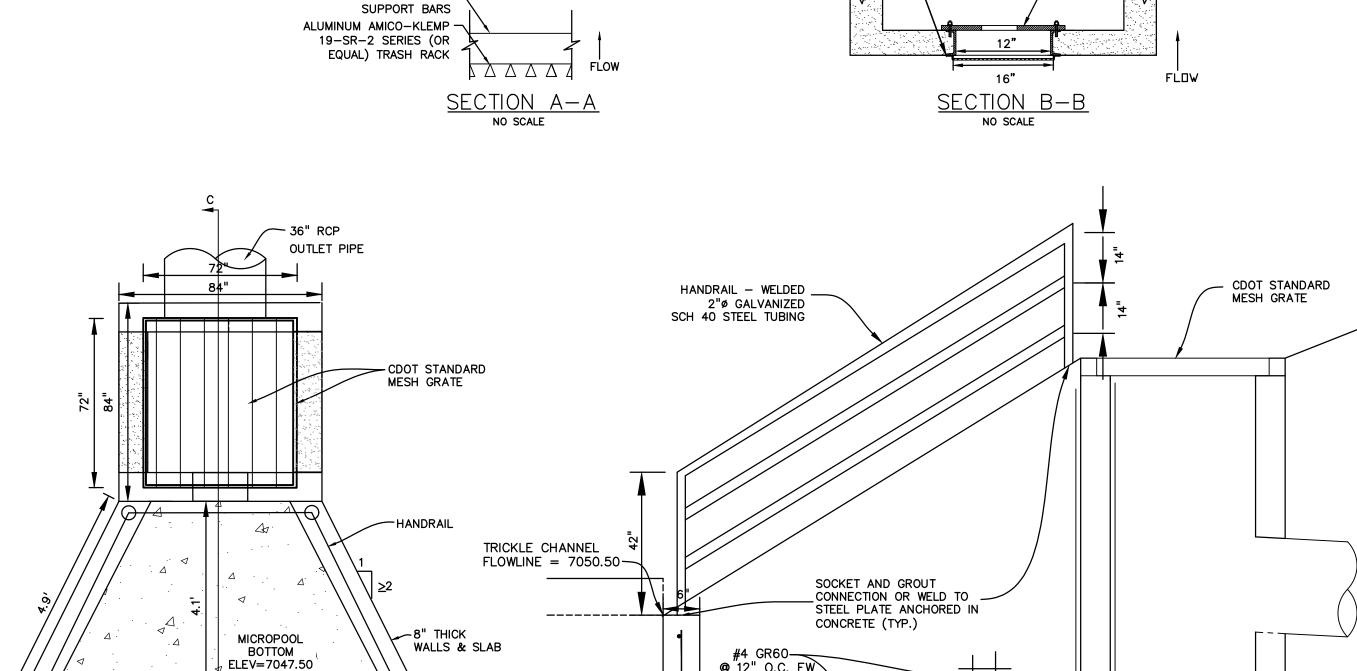
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SHEET:13 OF 17









TRASH RACK FRAME -ATTACHED TO CHANNEL BY INTERMITTENT WELDS

STAINLESS STEEL

9.7

MICROPOOL PLAN

NO SCALE

PERFORATED PLATE NOTES:

- 1. PROVIDE GASKET MATERIAL OR GROUT BETWEEN THE ORIFICE PLATE AND CONCRETE.
- 2. BOLT PLATE TO CONCRETE @ 12" MAX. ON CENTER. ORIFICE PLATE IS TO BE REMOVABLE.
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EL PASO COUNTY

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3/8" GALVANIZED - STEEL ORIFICE PLATE

~8" THICK

SECTION C-C

NO SCALE

WALLS & SLAB

DESIGNED BY: SBN
DRAWN BY: SBN
CHECKED BY: TDM
FILE NAME: 21820-010UT
PREPARED UNDER MY DIRECT
SUPERVISION FOR AND BEHALF

OF DREXELL, BARRELL & CO.

<u>DRAWING SCALE</u>: HORIZONTAL: N/A

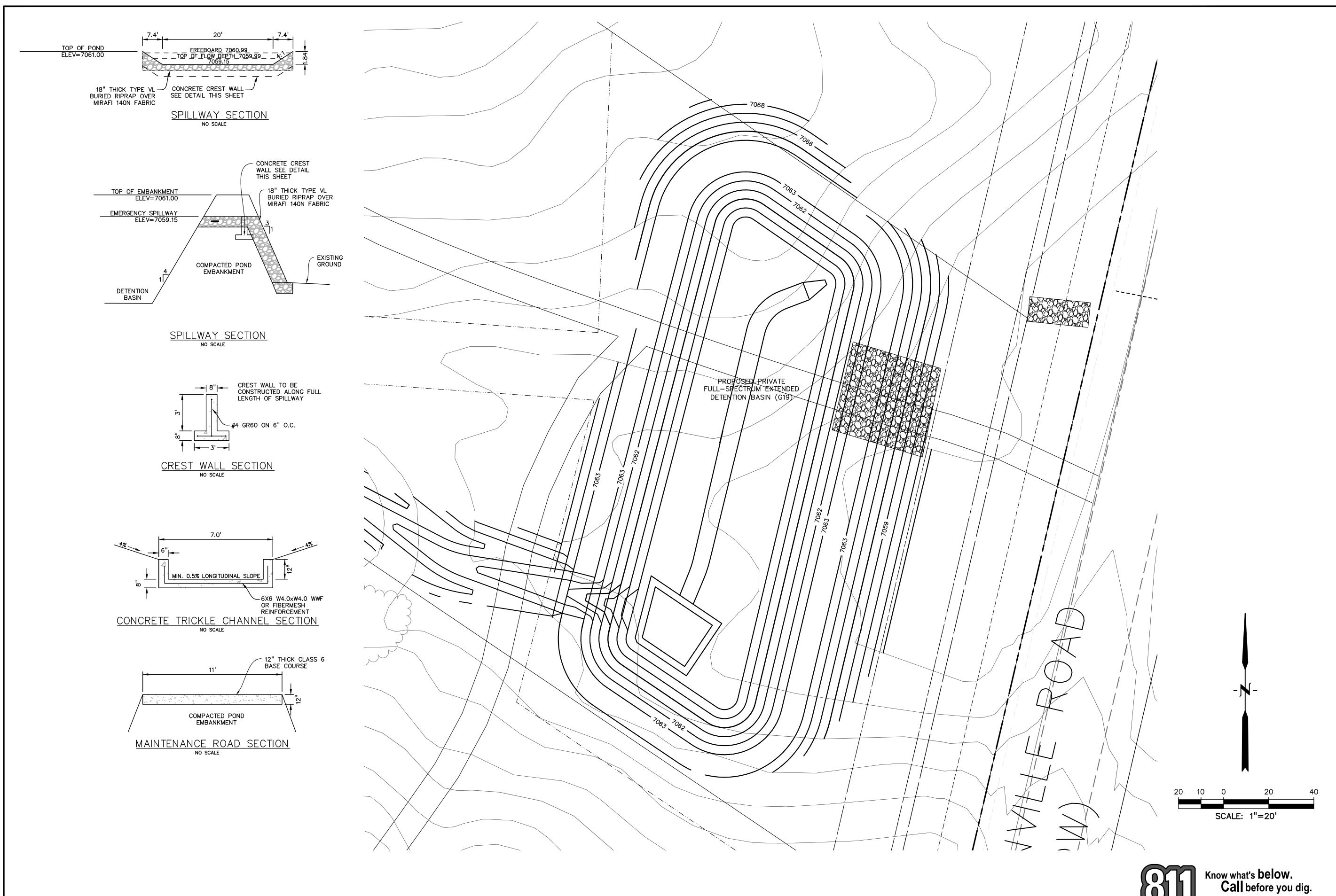
VERTICAL: N/A

POND G18 OUTLET STRUCTURE

PROJECT NO. 21820-01CSCV

OUT2

SHEET:14 OF 17



DREXEL, BARRELL & CO.
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DRAWN BY: SBN

CHECKED BY: KGV

FILE NAME: 21820-01PD

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DRAWING SCALE:
HORIZONTAL: 1" = 20'
VERTICAL: N/A

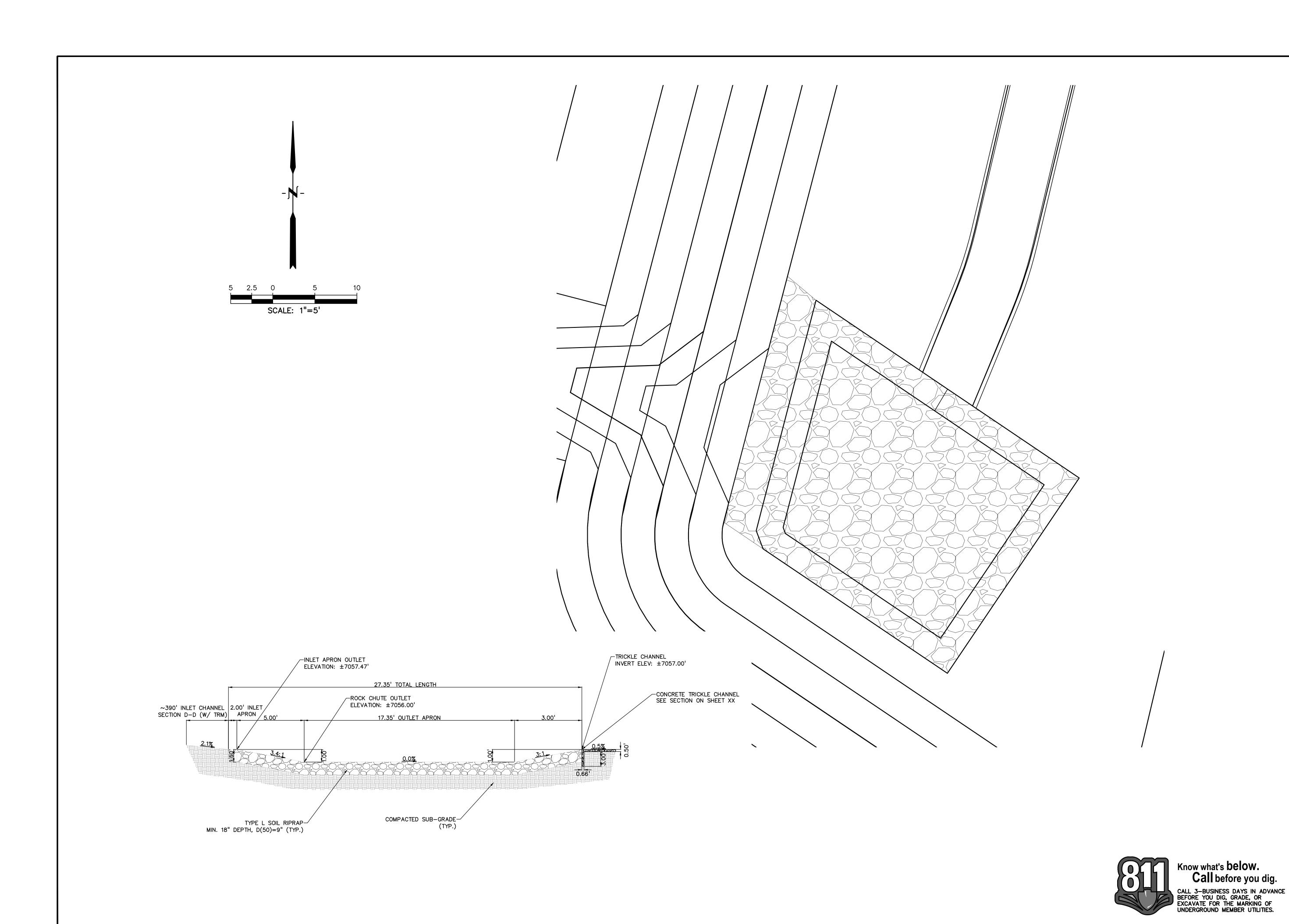
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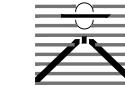
PROJECT NO. 21820-01CSCV DRAWING NO.

PD3

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

SHEET:15 OF 17





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(719)260-0887
COLORADO SPRINGS • LAFAYETTE

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LING NO. 10
EL PASO COUNTY

ISSUE DATE
INITIAL ISSUE 9/17/24

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DRAWN BY: SBN
CHECKED BY: KGV
FILE NAME: 21820-01FB

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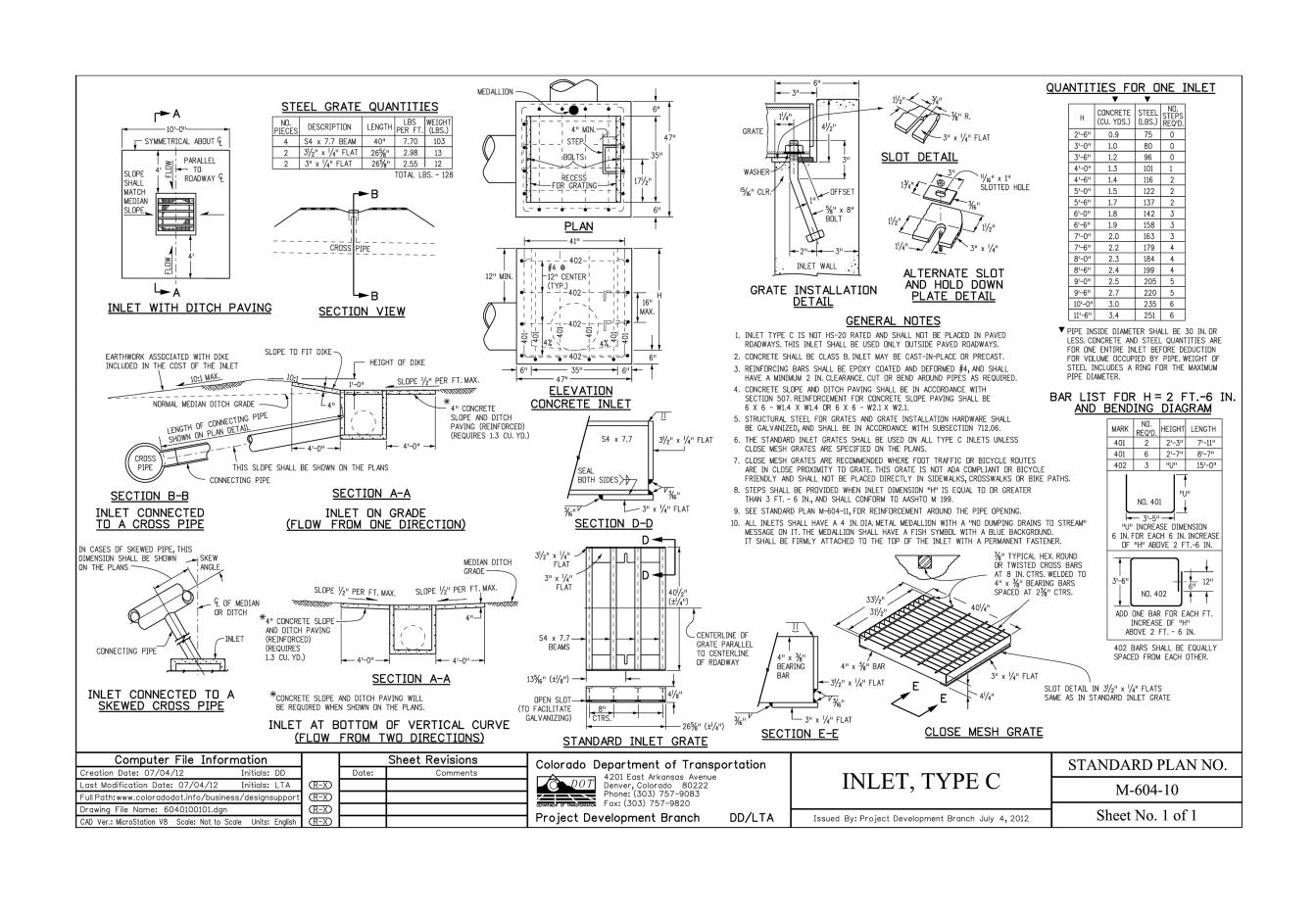
DRAWING SCALE:
HORIZONTAL: 1" = 5'
VERTICAL: N/A

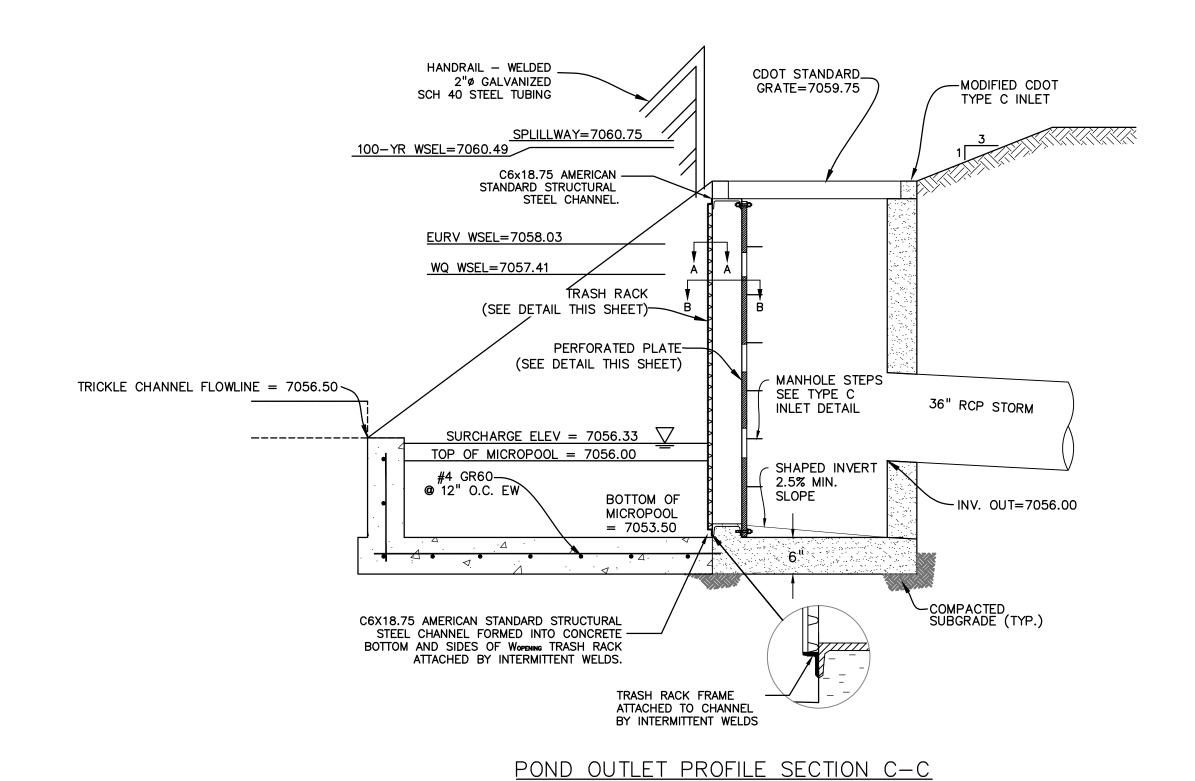
POND G19 LOW-TAIL WATER BASIN DETAILS

PROJECT NO. 21820-01CSCV DRAWING NO.

FB3

SHEET:16 OF 17





NO SCALE

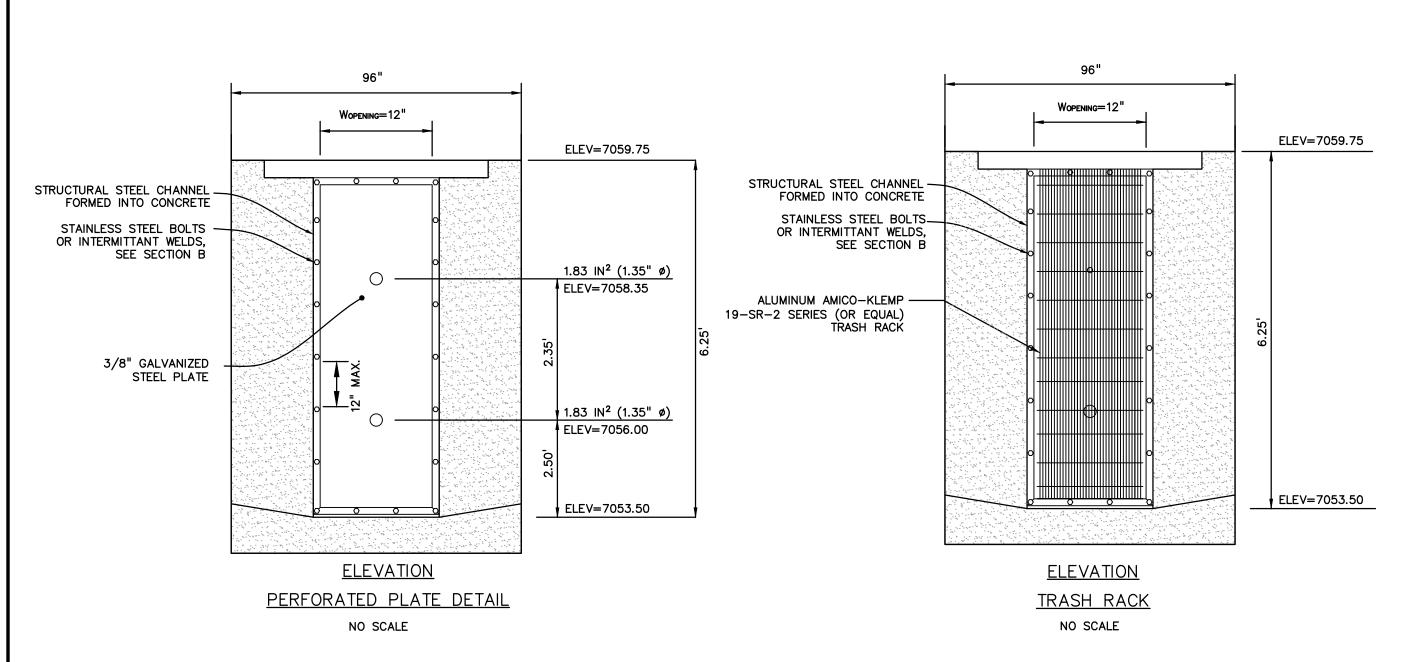
TRASH RACK FRAME -ATTACHED TO CHANNEL BY INTERMITTENT WELDS 3/8" GALVANIZED - STEEL ORIFICE PLATE

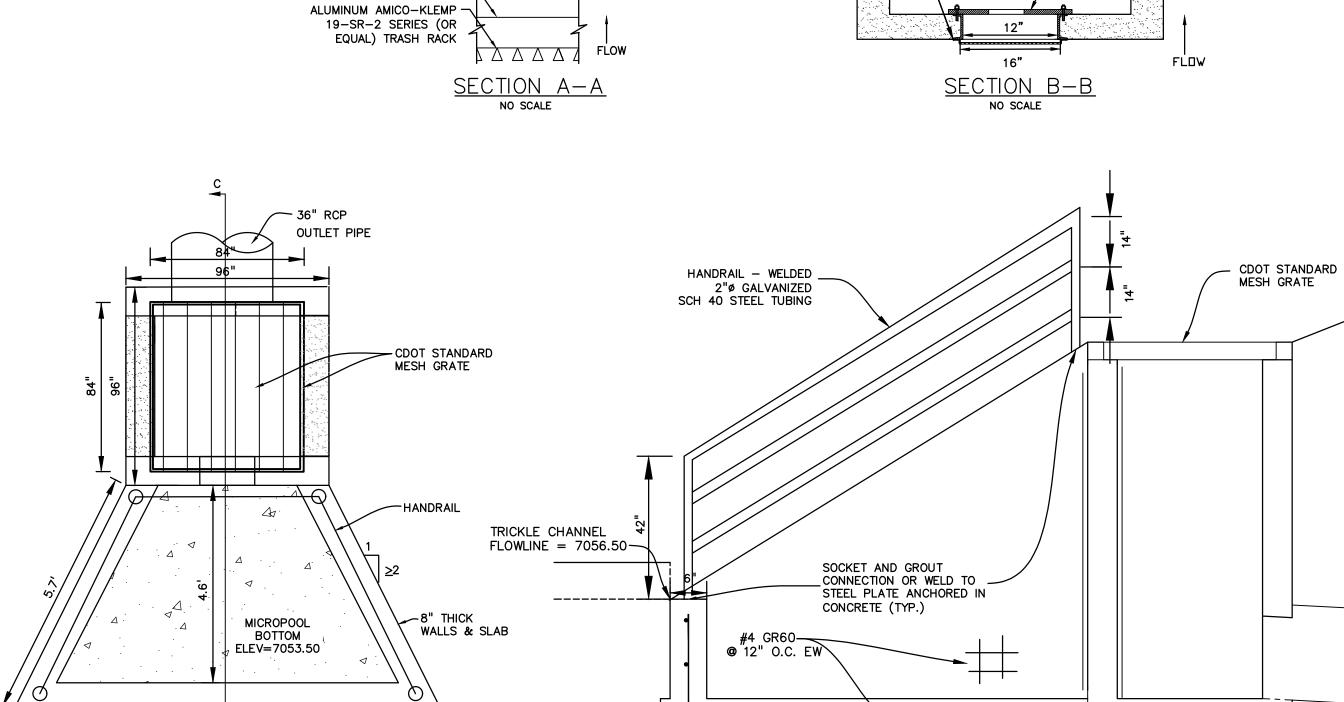
~8" THICK

SECTION C-C

NO SCALE

WALLS & SLAB





STAINLESS STEEL SUPPORT BARS

10.2'

MICROPOOL PLAN

NO SCALE

## PERFORATED PLATE NOTES:

- 1. PROVIDE GASKET MATERIAL OR GROUT BETWEEN THE ORIFICE PLATE AND CONCRETE.
- 2. BOLT PLATE TO CONCRETE @ 12" MAX. ON CENTER. ORIFICE PLATE IS TO BE REMOVABLE.
- 3. ALL STEEL SURFACES ARE TO BE COATED WITH ZRC COLD GALVANIZING COMPOUND.

  WQCV TRASH RACKS:
- 1. TRASH RACKS SHALL BE STAINLESS STEEL OR ALUMINUM AND SHALL BE ATTACHED BY INTERMITTENT WELDS ALONG THE EDGE OF THE MOUNTING FRAME.

  GENERAL NOTES:
- 1. ALL EXTERIOR STEEL SHALL BE EITHER STAINLESS OR HOT DIPPED GALVANIZED



DREXEL, BARRELL & CO.
Engineers • Surveyors
101 SAHWATCH ST. #100
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(719)260-0887
COLORADO SPRINGS • LAFAYETTE

CLIENT:

FALCON LATIGO, LLC 5350 S. ROSLYN ST. STE #400 ENGLEWOOD, CO 80111-2125 (303) 694-0862

> RAILS IO. 10 SOUNTY

LATIGO TRAILS
FILING NO. 10
EL PASO COUNTY

DESIGNED BY: SBN
DRAWN BY: SBN
CHECKED BY: TDM
FILE NAME: 21820-010UT

PREPARED UNDER MY DIRECT

OF DREXELL, BARRELL & CO.

SUPERVISION FOR AND BEHALF

DATE

**ISSUE** 

DRAWING SCALE:
HORIZONTAL: N/A
VERTICAL: N/A

POND G19 OUTLET STRUCTURE

PROJECT NO. 21820-01CSCV
DRAWING NO.

OUT3

SHEET:17 OF 17