

**STORMWATER MANAGEMENT PLAN
PARKER POINTE
PARKER, COLORADO**

**PREPARED FOR:
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JOB #2015-015

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SWMP ADMINISTRATOR AND IMPORTANT CONTACTS

Owner/Operator(s):

Parker & Stroh, LLC
975 Lincoln Street, Suite 204
Denver, CO 80203
Contact: Dan Yacovetta
303-699-3368

Project Manager(s) or Site Supervisor(s):

Waner Construction Company, Inc
Name: Bret Nolan
Address: 8950 Barrons Blvd. Unit 103, Highlands Ranch, CO 80129
Phone: 720-344-5472
24-hour phone: 720-371-7760
Email: Bret Nolan <bnolan@wanerconstruction.com >
Area of Control (if more than 1 operator at site): General Contractor

SWMP Administrator Contact(s):

Waner Construction Company, Inc
Name: Bret Nolan
Address: 8950 Barrons Blvd. Unit 103, Highlands Ranch, CO 80129
Phone: 720-344-5472
24-hour phone: 720-371-7760
Email: Bret Nolan <bnolan@wanerconstruction.com >
Area of Control (if more than 1 operator at site): General Contractor

Emergency 24-Hour Contact (for site, not 911):

Waner Construction Company, Inc
Name: Bret Nolan
Address: 8950 Barrons Blvd. Unit 103, Highlands Ranch, CO 80129
Phone: 720-344-5472
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I.C.1 SITE DESCRIPTION

This Storm Water Management Plan is prepared by Perception Design Group, Inc. as part of the Construction Plan submittal process for the Parker Pointe project proposed in Parker, Colorado. Parker Pointe, (Project / Site) is located on an unplatted parcel of situated in the southeast corner of South Parker Road and Stroh Road. An offsite area to the east is located in Douglas County. The County has indicated the erosion control permits will through the Town of Parker.

Locally the Site is located in moderately developed area. Commercial development is located to the west, northwest of the Site. Large Lot residential is located to the east. Open space is located to the south of the Site.

The Site occupies approximately 14.7 acres onsite and 16.2 acres offsite. Offsite areas include open space to the east and areas adjacent to the existing roadway of Parker Road and Stroh Road and a proposed sanitary sewer alignment on the west side of Parker Road. Total areas is approximately 30.9 acres. The Site lies within the southwest quarter of Section 3, Township 7 South, Range 66 West of the 6th Prime Meridian, Douglas County, State of Colorado.

The site is presently un-developed. As a part of this application, the site will be developed with graded pad sites for commercial and retail businesses, drives, and utilities. Lots 9 and 10 will be developed with parking lots and commercial buildings.

Site soils as shown by the USDA Web Soil Survey indicate that primarily Sampson Loam and Bresser Truckton Sandy Loam soil is present. This soil is sandy clay loam in nature. It is a type B hydrologic soil. Additionally Loamy Alluvial Land soils are present to a lesser extent. This soil is also clay loam in nature. It is a type C hydrologic soil. The site is currently vegetated with native grasses and weeds. Estimated vegetative coverage is 50%. Site topography slopes moderately north to south. A high point is located in the northern quarter of the site, which splits direct runoff to the north and south. Runoff to the south drains to Kinney Creek and runoff to the north drains to a road side ditch along Stroh Road. The site falls within the Cherry Creek basin.

The Grading and CBMP Plan sheet shows the proposed grading and erosion control activities. The proposed sequence of activities is as follows:

1. Install inlet and culvert protection on existing inlets and culverts, perimeter silt fence, stabilized staging area, vehicle tracking control, and sediment basin.
2. Over-excavate the building pad.

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3. Grade the site.
4. Begin construction of buildings and utilities and install utility BMPs.
5. Grade for and install curb and gutter.
6. Pave and landscape. After paving is complete, remove vehicle tracking control.
8. Complete building construction.
9. After final stabilization, remove sediment control logs, and inlet protections and clean sediment from paved surfaces and storm sewers.

Total time of exposure from initial grading to final stabilization is estimated at 12 months. Of the approximate 14.7 and 16.2 acres onsite and offsite areas respectively, 30.9 acres will undergo grading and disturbance. This includes areas off-site to the east where grading will occur and along Parker and Stroh Road where a road widening will occur and on west side of Parker Road where a sanitary sewer will be installed.

During construction, vehicles may be fueled on-site. No on-site fuel tanks are proposed, with fueling occurring from a fuel truck. Care should be taken during fueling procedures. Drip pans shall be used to contain any leaking fluids. Should leaks be discovered, repairs shall be made to stop the leaks. Spill kits shall be available on-site. Should any spillage occur, the contaminated soil shall be immediately excavated and removed from the site to a disposal area licensed to handle the contaminated material. Appropriate governmental agencies shall also be notified immediately. Concrete trucks will also wash out on site. A concrete wash out pit shall be provided on site to prevent contaminated wash waters from leaving the site. The concrete washout may be a temporary or portable facility. Upon completion of the concrete work, the pit shall be excavated and materials disposed of at a disposal area licensed to handle the contaminated material. Paints, solvents, and other construction related contaminants may also be stored on site. Care should be taken to keep such materials in their original containers and storage should be indoors or inside an appropriate storage trailer.

Potential non-stormwater discharges include waterline flushing, irrigation return flow, and concrete washout.

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I.C.2 SITE MAP

The site map for this project includes the following plans prepared by Perception Design Group, Inc. and included as an attachment to this report.

Sheet C3.10 and C3.15	CBMP Plan
Sheet C3.90 thru C3.99	CBMP Details

I.C.3 STORMWATER MANAGEMENT CONTROLS

Erosion and Sediment Controls

Vehicle tracking control will be used to limit soils tracking from the site.

A staging area will be established with anchored portable toilets and solid waste collection dumpsters with lids. The staging area will be protected with rock socks.

Inlet protections to be placed on existing inlets.

A sediment basin and diversion ditch are to be graded.

Silt fence is to be placed as illustrated on the plan.

Prior to concrete placement, a concrete washout area will be established.

Sediment control logs will be placed around the interface of pavement, curb, and sidewalks and disturbed soils.

Inlet protection will be used at new inlets.

Street sweeping shall be employed.

Materials Handling and Spill Prevention

The following are the material management practices that will be used to reduce the risk of spills or other accidental exposure of materials and substances to stormwater runoff.

General:

1. An effort will be made to store only enough product required to do the job.
2. All materials stored on-site will be stored in a neat, orderly manner in their appropriate containers and, if possible, under a roof, tarp, or other enclosure.
3. Products will be kept in their original containers with the original manufacturer's label.

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4. Substances will not be mixed with one another unless recommended by the manufacturer.
5. Whenever possible, all of a product will be used up before disposing of the container.
6. Manufacturer's recommendations for proper use and disposal will be followed.
7. The site superintendent will inspect daily to ensure proper use and disposal of materials on-site.
8. The site superintendent will conduct regular meetings and training with sub-contractors to educate them on proper handling and spill prevention techniques as well as education on the procedures should a spill occur.

Hazardous Products:

1. Products will be kept in original containers unless they are not re-sealable.
2. Original labels and material safety data will be retained.
3. If surplus product must be disposed of, manufacturer's of local and state recommended methods for proper disposal will be followed.

Product Specific Practices

1. Petroleum Products - All on-site vehicles will be monitored for leaks and receive regular preventative maintenance to reduce the chance of leakage. Should leaks be observed, drip pans shall be used until repairs can be made. Petroleum products will be stored in tightly sealed containers which are clearly labeled. Any Asphalt substances used on-site will be applied according to the manufacturer's recommendations. Vehicle fueling will occur on paved level surfaces. Absorbant will be kept on hand for immediate use should a spill occur. No above ground fuel tanks are proposed.
2. Fertilizers - Fertilizers used will be applied only in the minimum amounts recommended by the manufacturer. Once applied, fertilizer will be worked into the soil to limit exposure to storm water. Storage will be in a covered shed. The contents of any partially used bags of fertilizer will be transferred to a sealable plastic bin to avoid spills.

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3. Paints - All containers will be tightly sealed and stored when not required for use. Excess paint will not be discharged to the storm sewer system, but will be properly disposed of according to manufacturer's instructions and state and local regulations.

In addition to the material management practices discussed above, the following practices will be followed for spill prevention and cleanup.

SPILL RESPONSE -Cleanup and Removal Procedures

NOTE: IN CASE OF FIRE, EVACUATE ALL PERSONNEL FROM THE IMMEDIATE AREA, RENDER FIRST AID TO ANYONE WHO IS INJURED, AND DIAL 911 IMMEDIATELY. TAKE APPROPRIATE STEPS TO PROTECT HUMAN LIFE AND TO CONTROL FIRES FIRST. SPILL CONTROL IS SECONDARY.

Upon detection of any spill, the first action to be taken is to ensure personal safety. All possible ignition sources, including running engines, electrical equipment (including cellular telephones, etc.), or other hazards will be immediately turned off or removed from the area. The extent of the spill and the nature of the spilled material will be evaluated to determine if remedial actions could result in any health hazards, escalation of the spill, or further damage that would intensify the problem. If such conditions exist, a designated employee will oversee the area of the spill and the construction SWMP Administrator will be notified immediately.

- The source of the spill will be identified and if possible the flow of pollutants stopped if it can be done safely. However, no one should attend to the source or begin cleanup of the spill until **ALL** emergency priorities (fire, injuries, etc.) have been addressed.

Small Spills

Small spills (usually <5 gallons) consist of minor quantities of gasoline, oil, anti-freeze, or other materials that can be cleaned up by a single employee using readily available materials.

The following procedures should be used for clean-up of small spills:

- a. Ensure personal safety, evaluate the spill, and if possible, stop the flow of pollutants.
- b. Contain the spread of the spill using absorbents, portable berms, sandbags, or other available measures.
- c. Spread absorbent materials on the area to soak up as much of the liquid as possible and to prevent infiltration into the soil.
- d. Once the liquids have been absorbed, remove all absorbents from the spill and place the materials in a suitable storage container. On paved areas, wipe any remaining liquids from the surface and place the materials in a storage container. Do not spray or wash down the area using

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water. For open soil areas, excavate any contaminated soil as soon as possible and place the soil in a suitable storage container. All materials will then be transported off-site for disposal.

e. If immediate transfer and storage of the contaminated soil is not practical, excavate and place the contaminated soil on a double thickness sheet of 3-mil or higher polyethylene film and cover the contaminated material with 3-mil or higher polyethylene film. In addition, a small berm should be formed around the outer edges of the soil stockpile, underneath the polyethylene film, to ensure that contaminants are not washed from the site during precipitation events and that materials do not seep through the berm.

f. Record all significant facts and information about the spill, including the following:

- Type of pollutant
- Location
- Apparent source
- Estimated volume
- Time of discovery
- Actions taken to clean up spill

g. Notify the SWMP Administrator of the spill and provide the information from Item f. The SWMP Administrator will then contact the Town of Parker.

Medium to Large Spills

Medium to large spills consist of larger quantities of materials (usually >5 – 25 gallons) that are used on site that cannot be controlled by a single employee. Generally, a number of facility personnel will be needed to control the spill and a response may require the suspension of other facility activities.

The following procedure shall be used for the cleanup of medium to large spills:

- a. Ensure personal safety, evaluate the spill, and if possible, stop the flow of pollutants.
- b. Immediately dispatch a front-end loader or similar equipment to the spill and construct a berm or berms down gradient of the spill to minimize the spread of potential pollutants. On paved surfaces, portable berms, sandbags, booms, or other measures will be used to control the lateral spread of the pollutants.
- c. When the spread of the spill has been laterally contained, contact the SWMP Administrator or designated facility employee and provide them information on the location, type, and amount of spilled material, and a briefing on the extent of the spread and measures undertaken to contain the contaminants.
- d. Depending on the nature of the spill, mobilize additional resources as needed to contain the contaminants.
- e. Cleanup will commence when the lateral spread has been contained and the notification to the SWMP Administrator has been made.
- f. Freestanding liquid will be bailed or pumped into 55-gallon storage drums, steel tanks, or other suitable storage containers. When all the liquid has been removed from the pavement or soil

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layer, absorbents will be applied to the surface and transferred to the storage containers when they have soaked up as much of the spill as possible.

g. On paved surfaces, the remaining contaminants will be removed to the extent possible, with rags, sweeping, or similar measures. The area of the spill will not be sprayed or washed down using water. Any contaminant soaked materials will be placed into the storage containers with the other absorbents.

h. The remaining contaminated soils will be excavated and loaded into a dump truck(s) for disposal off-site at a designated facility. If transport off-site is not immediately available, the remaining soils will be stockpiled on a double thickness sheet of 3-mil or higher polyethylene film and also covered with 3-mil or higher polyethylene film. In addition, a small berm will be formed around the outer edges of the soil stockpile, underneath the polyethylene film, to ensure that contaminants are not washed from the site during precipitation and do not seep through the berm.

i. Record all significant facts and information about the spill, including the following:

- Type of pollutant
- Location
- Apparent source
- Estimated volume
- Time of discovery
- Actions taken to clean up spill

j. Provide the SWMP Administrator (or designated employee) with the information from Item

i. The SWMP Administrator will then contact the Town of Parker.

NOTIFICATION

Notification to the Colorado Department of Public Health & Environment (CDPHE) and the Town of Parker is required if there is any release or suspected release of any substance, including oil or other substances that spill into or threaten State waters. Unless otherwise noted, notifications are to be made by the SWMP Administrator and only after emergency responses related to the release have been implemented. This will prevent misinformation and assures that notifications are properly conducted.

The notification requirements are as follows:

1. Spills into/or Threatens State Waters: Immediate notification is required for releases that occur beneath the surface of the land or impact or threaten waters of the State or threaten the public health and welfare.

Notifications that will be made are:

a. For any substance, regardless of quantity, contact CDPHE at 1-877-518-5608. State as follows:

a) Give your name.

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- b) Give location of spill (name of city).
- c) Describe the nature of the spill, type of products, and estimate size of spill.
- d) Describe type of action taken thus far, type of assistance or equipment needed.
- b. For any quantity of oil or other fluids, call the National Response Center at 1-800-424-8802. State as follows:
 - a) Give your name.
 - b) Give location of spill (name of city and state).
 - c) Describe the nature of the spill, type of product, and estimate size of spill.
 - d) Describe type of action taken thus far, type of assistance or equipment needed.
 - e) Call Town of Parker

2. Reportable Quantity Spill on Land Surface: Immediate notification is required of a release upon the land surface of an oil in quantity that exceeds 25 gallons, or of a hazardous substance that equals or exceeds 10 pounds or its reportable quantity under Section 101(14) of the Comprehensive Environmental Response, Compensation Liability Act (CERCLA) of 1980 as amended (40 CFR Part 302) and Section 329 (3) of the Emergency Planning and Community Right to Know Act of 1986 (40 CFR Part 355) whichever is less. This requirement does apply at a minimum to the substances listed in Table A below.

TABLE A

Substances Requiring Notification

SUBSTANCE REPORTABLE QUANTITY

Motor Oil 25 Gallons

Hydraulic Oil 25 Gallons

Gasoline/Diesel Fuel 25 Gallons

The notification procedures to be followed are:

- a) Give your name.
- b) Give location of spill (name of city and state).
- c) Describe nature of the spill, type of product, and estimate size of spill.
- d) Describe type of action taken thus far, type of assistance or equipment needed.

3. Notification is not required for release of oil upon the land surface of 25 gallons or less that will not constitute a threat to public health and welfare, the environment or a threat of entering the waters of the State.

4. Notification, as required in paragraphs 1 and 2 above, will be made to the CDPHE using the 24-hour telephone number to report environmental spills. All information known about the release at the time of discovery is to be included, such as the time of occurrence, quantity and type of material, location and any corrective or clean-up actions presently being taken. Table B lists these phone numbers.

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SPILL RESPONSE CONTACTS

TABLE B

Emergency Notification Contacts

Name/Agency Number

South Metro Fire and Rescue 720-989-2244

Town of Parker Department 911

Ambulance 911

Hospital 911

National Response Center 1-800-424-8802

CDPHE – Report Environmental Spills (24 hrs/day) 1-877-518-5608

Town of Parker – Police Department Dispatch

Also contact SWMP Administrator and Owner

It is the responsibility of the SWMP Administrator to contact the Town of Parker, CDPHE, and/or the National Response Center.

☐ **The National Response Center** is to be contacted when a release containing a hazardous substance or oil in an amount equal to or in excess of a reportable quantity established under either 40 CFR 110, 4- DFR 117, or 40 CFR 302 occurs during a 24-hour period.

☐ Notification to the **CDPHE** and **Town of Parker** is required if there is any release or suspected release of any material, including oil or hazardous substances that spill into or threaten state waters.

REPORTS

The CDPHE and Town of Parker require written notification of a spill or discharge of oil or other substance that may cause pollution of the waters of the State of Colorado. A written report must be submitted to the Water Quality Control District (WQCD) and the Town of Parker Environmental Services Section within five days after becoming aware of the spill or discharge. The CDPHE and Town of Parker require a written final report within 15 days for all releases of an oil or hazardous substance that require implementation of a contingency plan. The CDPHE and Town of Parker may also require additional reports on the status of the clean up until any required remedial action has been complete.

Written notification of reports must contain at a minimum:

1. Date, time, and duration of the release.
2. Location of the release.
3. Person or persons causing and responsible for the release.
4. Type and amount of oil or substance released.
5. Cause of the release.

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6. Environmental damage caused by the release.
7. Actions taken to respond, contain, and clean up the release.
8. Location and method of ultimate disposal of the oil or other fluids.
9. Actions taken to prevent a reoccurrence of the release.
10. Any known or anticipated acute or chronic health risks associated with the release.
11. When appropriate advice regarding medical attention necessary for exposed individuals.

Identification of Potential Pollutant Sources

1. Disturbed and stored soils. Disturbed soils will be contained with perimeter SCL, silt fence, and inlet protection.
2. Vehicle tracking of sediment. A VTC will be installed to limit vehicle tracking.
3. Management of contaminated soils. No contaminated soils have been identified on site. If contamination occurs during construction follow spill prevention and management discussion above.
4. Loading and unloading operations. Loading operations shall occur in the staging area with protection provided by rock socks.
5. Outdoor storage. Outdoor storage to occur in staging area with rock sock protection.
6. Vehicle and equipment maintenance. These operations to occur in the staging area with rock sock protection and drip pans.
7. Dust and particulate generation. A water truck should be available on windy days to limit dust.
8. Routine maintenance involving fertilizers, pesticides, detergents, fuels, solvents and oils. Fertilizers and pesticides will only be applied at rates specified by the manufacturer. Other spills shall be handled in accordance with the spill prevention and material handling section above.
9. On site waste management. Trash and debris shall be collected and secured in covered dumpsters at the end of each work day.
10. Concrete washout. Concrete trucks shall washout in the designated concrete washout area provided on site.
11. Asphalt and concrete batch plants will not be used on this project.
12. Non industrial trash. Worker trash shall be collected in enclosed dumpsters at the end of each day. Portable toilets shall be placed and anchored in the staging area and emptied regularly.
13. Groundwater and construction dewatering are not anticipated on site. However, should groundwater be encountered and dewatering be required, appropriate BMP's shall be installed as required by the Town of Parker prior to pumping.
14. No other areas of potential spills are known.

I.C.4 FINAL STABILIZATION AND LONG-TERM STORMWATER MANAGEMENT

The fully developed site will be covered by buildings, asphalt or concrete pavement, and irrigated landscaping. These permanent, physical conditions act as erosion reduction methods. Pollutants typically associated with commercial development such as parking lot debris, sand, and oils are

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anticipated on this site. A sand filter basin is provided to provide permanent long term water quality treatment for an area of the site.

I.C.5 INSPECTION and MAINTENANCE

These are the inspection and maintenance practices that will be used to maintain erosion and sediment controls.

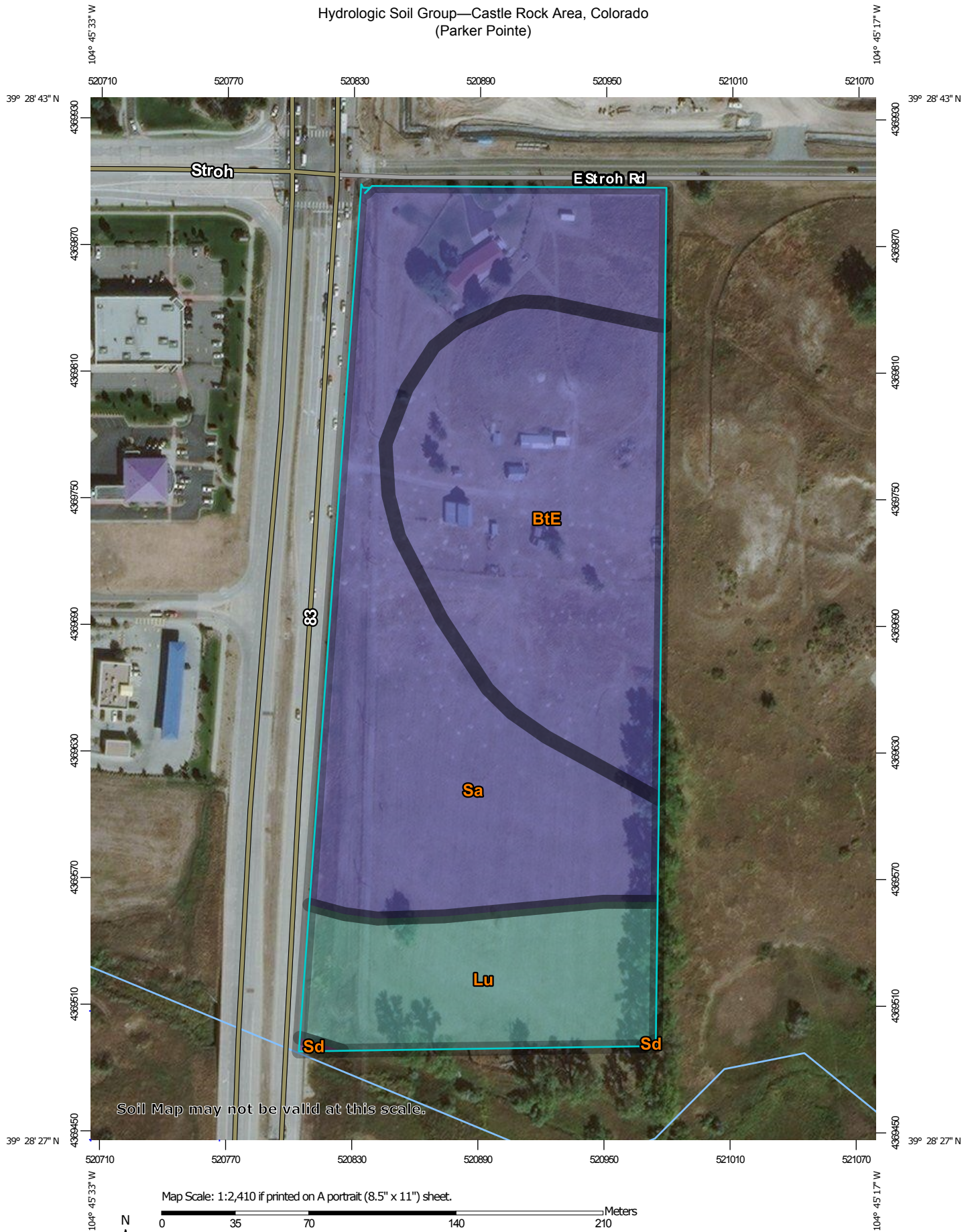
1. All control measures will be inspected, cleaned and maintained at least once each week and following a runoff producing rainfall event.
2. All measures will be maintained in good working order. If a repair is necessary, it will be initiated within 24 hours of inspection.
3. Built up sediment will be removed from sediment control logs when it has reached a depth of $\frac{1}{2}$ the diameter of the log.
4. Built up sediment will be removed from inlet protection and rock socks when it has reached a depth of $\frac{1}{2}$ the diameter of the rock sock.
5. Temporary and permanent seeding and planting will be inspected for bare spots, washouts, and healthy growth.
6. A maintenance inspection report will be completed after each inspection and emailed or faxed to the Town of Parker construction inspector.

A complete written record of inspection and maintenance activities shall be kept in a log on site at all times.

References:

Urban Drainage and Flood Control District Drainage Criteria Manual, Current addition.
Town of Parker Storm Drainage Criteria Manual
Town of Parker Construction Best Management Practices
USDA Web Soil Survey

Hydrologic Soil Group—Castle Rock Area, Colorado (Parker Pointe)



Hydrologic Soil Group

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
BtE	Bresser-Truckton sandy loams, 5 to 25 percent slopes	B	5.7	35.6%
Lu	Loamy alluvial land, dark surface	C	2.7	17.0%
Sa	Sampson loam	B	7.5	47.2%
Sd	Sandy alluvial land	A	0.0	0.1%
Totals for Area of Interest			16.0	100.0%

Description

Hydrologic soil groups are based on estimates of runoff potential. Soils are assigned to one of four groups according to the rate of water infiltration when the soils are not protected by vegetation, are thoroughly wet, and receive precipitation from long-duration storms.

The soils in the United States are assigned to four groups (A, B, C, and D) and three dual classes (A/D, B/D, and C/D). The groups are defined as follows:

Group A. Soils having a high infiltration rate (low runoff potential) when thoroughly wet. These consist mainly of deep, well drained to excessively drained sands or gravelly sands. These soils have a high rate of water transmission.

Group B. Soils having a moderate infiltration rate when thoroughly wet. These consist chiefly of moderately deep or deep, moderately well drained or well drained soils that have moderately fine texture to moderately coarse texture. These soils have a moderate rate of water transmission.

Group C. Soils having a slow infiltration rate when thoroughly wet. These consist chiefly of soils having a layer that impedes the downward movement of water or soils of moderately fine texture or fine texture. These soils have a slow rate of water transmission.

Group D. Soils having a very slow infiltration rate (high runoff potential) when thoroughly wet. These consist chiefly of clays that have a high shrink-swell potential, soils that have a high water table, soils that have a claypan or clay layer at or near the surface, and soils that are shallow over nearly impervious material. These soils have a very slow rate of water transmission.

If a soil is assigned to a dual hydrologic group (A/D, B/D, or C/D), the first letter is for drained areas and the second is for undrained areas. Only the soils that in their natural condition are in group D are assigned to dual classes.