

# JUDGE ORR ROAD RV PARK & STORAGE DEVELOPMENT

## GRADING, EROSION CONTROL AND STORMWATER QUALITY REPORT (SWMP)

Does not match the  
applicant in the  
ESQCP form.  
Revise one or the  
other.

Prepared For:

→ Prairie Stone, LLC

9476 Dakota Dunes Lane

Peyton, CO 80831-4138

Prepared By:

Associated Design Professionals, Inc.

3520 Austin Bluffs Parkway, Suite 102

Colorado Springs, CO 80918

719.266.5212

ADP Project No. 160301

May 18, 2018

Revise to "# PPR-16-040"

PCD Project #16-040



# Table of Contents

TABLE OF CONTENTS	i
VICINITY MAP	ii
PROJECT DESCRIPTION	1
General Location	1
SITE DESCRIPTION	1
Soils	1
EROSION AND SEDIMENT CONTROL CRITERIA	1
Areas and Volumes	1
Erosion and Sediment Control Measures	2
Initial Stage	2
Temporary Stabilization	2
Vehicle Tracking Control	2
Silt Fence	2
Outlet Protection	2
Non-Structural Practices	2
Construction Timing	2
Permanent Stabilization	3
Stormwater Management	4
Maintenance	4
Cost	4
STORMWATER MANAGEMENT	5
Stormwater Management	5
Potential Pollution Sources	5
CONCLUSION	6
Compliance with Standards	7
REFERENCES	7
APPENDIX A	
Grading and Erosion Control Plans	
APPENDIX C	
Inspection Checklist	

# PROJECT DESCRIPTION

## General Location

The Judge Orr Road RV Park & Storage project consists of 39.9 acres located along Judge Orr Road just east of US 24 and approximately two miles northeast of Falcon, Colorado. The project is located within the previously approved Meadowlake Commons Master Plan area. The site is further described as being located in central El Paso County within the Southwest Quarter of Section 33, Township 12 South, Range 64 West of the 6<sup>th</sup> Principal Meridian, El Paso County, Colorado.

The proposed development lies within the Haegler Ranch Drainage Basin Planning Study area, prepared by URS Corporation in 2007. It is also included in the Meadowlake Commons MDDP, prepared by Springs Engineering in 2008. For this report, the existing flows for this project utilize the findings of the Meadowlake Commons MDDP and flows into the middle fork of Black Squirrel Creek.

# SITE DESCRIPTION

## Existing Site Conditions

The existing site is mostly undeveloped with a residence and a barn. The remainder of the site is vacant and covered with rangeland grasses with about 90% coverage. The existing impervious value is approximately 2%. The site does not contain any springs or irrigation systems.

## Soils

The Soil Conservation Service (NRCS) soil survey for El Paso County has identified the soil type in this study area as follows:

Map Symbol No.	Soil Name	Hydrologic Soil Group
19	Columbine Gravelly Sandy Loam	A

The soil erosion potential of this soil is slight to moderate.

# EROSION AND SEDIMENT CONTROL CRITERIA

## Areas and Volumes

The proposed site development shall require the construction of approximately 7,150 lineal feet of private roadways, 120 RV pads, gravel RV storage area and associated utilities. The site will be overlot graded with two (2) connections to Judge Orr Road. This will increase the estimated imperviousness to 36.5%.

Improvements shall include the construction of a detention/water quality basin on the property to account for the areas of the most disturbances. The total area of disturbance shall be about 30 acres. Construction activities shall consist of clearing, grubbing and grading for the new development. Approximately 60,000 cubic yards of cut and fill shall be moved. Disturbed and exposed areas of the site shall be seeded and mulched if construction activities cease for more than 30 consecutive days. The site shall also require the sedimentation basins listed below to handle the potential erosion.

## **Erosion and Sediment Control Measures**

Erosion control and sediment prevention measures describe a wide range of management procedures, schedules of activities, prohibitions on practices, and other best management practices (BMP). BMPs also include operating procedures, treatment requirements and practices to control site runoff, drainage from materials storage, spills or leaks. Structural practices for this site include silt fences, straw bales, inlet protection, and vehicular tracking control. Erosion matting may be required on unstable slopes, if directed by the engineer. General descriptions of the BMPs to be used during the construction of this project are listed below. See the Erosion Control Plans for the specific type and location of each erosion and sediment control device required for this project.

### **Initial Stage**

These BMPs shall be installed at the outset of construction, prior to the initial pre-construction meeting and any other land-disturbing activities. Initial controls are to be placed on existing grades but shall be based in part on proposed grading operations. The initial stage includes clearing, grubbing, overlot grading, and utility and other construction prior to paving operations.

### **Temporary Stabilization**

Disturbed areas will be temporarily stabilized as soon as construction activities are completed. Seeding will be applied to completed areas within 14 days of completion.

### **Vehicle Tracking Control**

A vehicle tracking control device will be installed at the construction entrance where the construction entrance intersects an existing paved private roadway.

### **Silt Fence**

Prior to the start of construction, silt fence will be installed along the perimeter of all disturbed areas that are within the project site. Silt fence shall be placed as indicated on the plan drawing. Sediment shall be removed when depth exceeds one-fourth the height of the silt fence. The engineer may require additional silt fence as necessary to retard sediment transport on or off the project site.

### **Outlet Protection**

Outlet protection at the water quality basin on the site will be provided to prevent erosion and scour of the water quality basin area by the concentrated flows gathered by the storm sewer system both during and after construction.

### **Non-Structural Practices**

Upon completion of the grading, temporary seeding and mulching will be applied to all disturbed areas on and adjacent to the site. All seeding, fertilizers, and mulching shall conform to *El Paso County Engineering Criteria Manual*.

### **Construction Timing**

The site will be graded to accommodate the proposed redevelopment items delineated previously. This project will be constructed in a single phase. Once construction begins, it will continue until the project is complete; therefore, construction phasing will not be necessary. The construction process will consist of grading (excavation and fill) activities, installation of utilities, paving, concrete placement, landscaping, and building construction. The general sequence for major construction activities will be as follows:

- Establish limits of disturbance

- Install vehicle tracking control (VTC)
- Install silt fence
- Clear and grub the site
- Excavation and fill placement
- Install underground utilities
- Install inlet and outlet protection BMPs
- RV pad construction
- Paving
- Install permanent landscaping and irrigation
- Remove temporary sediment pond and reshape for water quality basin
- Remove BMPs

Identify in the sequence when the sediment pond is installed.

To be fully effective, erosion and sediment control measures must be installed and phased with the construction activities. The vehicular tracking control device shall be installed at the entrance prior to the mobilization of construction equipment on-site. Prior to the clearing and grubbing of the entire construction area, localized clearing shall be performed for the placement of perimeter erosion control measures. Site clearing shall commence only after the perimeter erosion control measures are in place. Erosion control devices must be in place to reduce the potential of eroded excavated material entering the storm drainage system. Protection devices shall be placed during grading activities, in the appropriate areas, as indicated on the plan drawing that is located in the Appendix.

Anticipated starting and completion date: July 2, 2018 to September 1, 2018

Expected date on which the final stabilization will be completed: December 1, 2018

### Permanent Stabilization

Disturbed areas shall be permanently stabilized as soon as construction activities are completed. Viable vegetative cover shall be established no later than one year from disturbance. Areas to be revegetated shall be treated with soil amendments to provide an adequate grown medium to sustain vegetation and shall match the existing 70 percent pre-disturbed vegetation cover.

The seedbed shall be well settled and firm, but friable enough that seed can be placed at the seeding depth specified. The seedbed shall be reasonably free of weeds. Soils that have been over-compacted by traffic or equipment, especially when wet, shall be tilled to break up rooting restrictive layers and then harrowed, rolled, or packed to prepare the required firm seedbed. Mulch shall be applied at a rate of two and one-half (2 ½) tons per acre and shall be spread uniformly, in a continuous blanket, after seeding is complete. Mulch shall be clean, weed and seed free, long-stemmed grass or hay, or long-stemmed straw of oats, wheat, or rye. At least 50 percent of mulch, by weight, shall be ten inches or longer. Mulch shall be spread by hand or blower-type mulch spreader. Mulching shall be started on the windward side of relatively flat areas or on the upper part of steep slope and continued uniformly until the area is covered. The mulch shall not be bunched. Immediately following spreading, the mulch shall be anchored to the soil by a v-type wheel land packer or scalloped-disk land packer designed to force mulch into the soil surface a minimum of three inches. All seeded areas shall be mulched after seeding on the same day as the seeding. The type of seed mix used for permanent vegetation shall utilize perennial grasses as delineated on the plans.

### Stormwater Management

All developed stormwater will be routed through the EDB facilities to provide stormwater quality as delineated on the drawings.

## Maintenance

All temporary and permanent erosion and sediment control practices shall be maintained and repaired as needed by the contractor throughout the duration of construction to assure that each BMP will function as intended. As required by the stormwater discharge permit, a weekly inspection of these items will be performed. In addition, all facilities must be inspected by the owner or the owner's representative following each heavy precipitation or snowmelt event that results in runoff, with maintenance occurring immediately after discovering a need.

Silt fence may require periodic replacement. All sediment accumulated behind the silt fence must be removed and disposed of properly when depth exceeds one-fourth the height of the silt fence. On-site construction traffic will be monitored to minimize the transport of sediment onto the proposed on-site streets, as well as onto adjacent city streets. The Owner, Site Developer, Contractor, and/or their authorized agents shall prevent loss of cut and fill material being transported to and from the site by taking appropriate measures. All mud and sediment tracked onto public streets shall be cleaned immediately. Road cleaning includes shoveling and sweeping activities.

Diversion ditches shall be kept clean and functional during construction. They shall be routinely checked on a weekly basis and cleaned if the height of sedimentation exceeds one-half its depth.

Inlet/outlet protection shall be inspected to ensure proper operation. Excess debris or sediment must be removed prior to final acceptance of the project.

The temporary sedimentation pond shall remain in place until such time as the major grading operations in the area are completed and the ground stabilized by either temporary or permanent measures. The ponds will be cleaned out periodically with depth of sediment at no time allowed to accumulate more than one-half the depth of the facility.

## Cost

An engineer's cost estimate for the anticipated erosion and sediment control items for the entire site are listed below:

Section 1 – Grading & Erosion Control BMPs	Quantity	Units	Price	Total
Earthwork*	60000	CY	\$5	\$300,000
Permanent Seeding*	5.0	AC	\$582	\$ 2,910
Mulching*	5.0	AC	\$507	\$ 2,535
Erosion Bales	22	EA	\$21	\$ 462
Inlet Protection	1	EA	\$153	\$ 153
Vehicle Tracking Control	1	EA	\$1,625	\$ 1,625
Sedimentation Basin	1	EA	\$1,625	\$ 1,625
Silt Fence	3725	LF	\$4	\$14,900
<b>TOTAL EROSION &amp; SEDIMENT CONTROL COST</b>				<b>\$324,210</b>

\*Private

# STORMWATER MANAGEMENT

## Stormwater Management

Stormwater quality shall be protected and preserved throughout the life of this development. During mass grading and construction, measures such as sediment fences, straw bales, and vehicle tracking control shall be used to minimize erosion and sedimentation on site. During construction, the proposed extended detention basin shall function as a temporary sediment basin to reduce the potential for sediment leaving this development. Temporary diversion dikes shall be constructed to transport runoff that may contain sediment to the temporary sediment basin located on site until a stormwater system is installed. After various stages of the construction, when applicable, temporary or permanent erosion control stabilization shall be installed and maintained (landscaping, seeding, mulching, etc.).

## Potential Pollution Sources

Materials are sometimes used at the construction site that present a potential for contamination of stormwater runoff. These include sediment, equipment/vehicle washing, vehicle maintenance and fueling, petroleum products, paint, solvents, treated wood products, asphalt (bituminous) paving, concrete, concrete-curing compounds, metal, waste storage and disposal and other liquid chemicals such as fertilizers, herbicides, and pesticides. Practices that can be used to prevent or minimize toxic materials in runoff from a construction site are described in this section.

Areas at the construction site that are used for storage of toxic materials and petroleum products shall be designed with an enclosure, container, or dike located around the perimeter of the storage area to prevent discharge of these materials in runoff from the construction site. These barriers shall also function to contain spilled materials from contact with surface runoff. Proposed locations for storage of toxic materials have not been determined at the time of this report. Locations shall depend upon construction phasing.

Measures to prevent spills or leaks of fuel, gear oil, lubricants, antifreeze, and other fluids from construction vehicles and heavy equipment shall be considered to protect groundwater and runoff quality. All equipment maintenance shall be performed in designated areas and shall use spill control measures, such as drip pans, to contain petroleum products. Spills of construction-related materials, such as paints, solvents, or other fluids and chemicals, shall be cleaned up immediately and disposed of properly. No batch plants will be located on this site.

Trash receptacles shall be provided and kept clean as required to keep the site clean of trash. In addition, portable toilets shall be provided for all workers on the site during construction. All portable toilet facilities shall be located at least three feet from curb flow lines and paved surfaces. The facilities shall be stationed on ground and secured down to prevent tipping.

Potable water is anticipated as a non-stormwater discharge. Potable water shall be used for grading, dust control, and irrigation of erosion control and permanent landscaping. An effort shall be made to use only the amount of potable water required for these operations.

## Owner Inspection and Maintenance of Constructed BMPs

All inspection logs will include signatures on the logs and be kept on site along with other SWWP records.

1. **Minimum Inspection Schedule.** The permittee shall, at a minimum, make a thorough inspection at least once every 14 calendar days. Also, post-storm event inspections shall be conducted within 24 hours after the end of any precipitation or snowmelt event that causes surface

erosion. Provided the timing is appropriate, the post-storm inspections shall be used to fulfill the 14-day routine inspection requirement. A more frequent inspection schedule than the minimum inspections described may be necessary to ensure that BMPs continue to operate as needed to comply with the permit.

- 1.1. **Post-Storm Event Inspections at Temporarily Idle Sites.** If no construction activities will occur following a storm event, post-storm event inspections shall be conducted prior to recommencing construction activities, but no later than 72 hours following the storm event. The occurrence of any such delayed inspection must be documented in the inspection record. Routine inspections still must be conducted at least every 14 calendar days.
- 1.2. **Inspections at Completed Sites/Areas.** For sites, or portions of sites, that meet the following criteria; but final stabilization has not been achieved due to a vegetative cover that has not become established, the permittee shall make a thorough inspection of their stormwater management system at least once every month. Post-storm event inspections are not required. This reduced inspection schedule is only allowed if:
  - 1.2.1.all construction activities that will result in surface ground disturbance are completed;
  - 1.2.2.all activities required for final stabilization in accordance with the Grading and Erosion Control/Stormwater Quality Plan have been completed, with the exception of the application of seed that has not occurred due to seasonal conditions or the necessity for additional seed application to augment previous efforts; and
  - 1.2.3.the Grading and Erosion Control/Stormwater Quality Plan has been amended to indicate those areas that will be inspected in accordance with the reduced schedule allowed for in this section.
- 1.3. **Winter Conditions Inspections Exclusion.** No changes are expected for winter work.

## CONCLUSION

This SWMP Report and the Best Management Practices (BMPs) specified on the Erosion Control Plans have been designed to reduce any adverse impacts the construction of this project might have on the surrounding properties. If properly installed and maintained, the design shall protect the quality of the stormwater runoff that is released from this development.

All temporary erosion and sediment control measures shall be removed and disposed of within thirty (30) days after final site stabilization is achieved, or after temporary measures are no longer needed, whichever occurs earliest, or as authorized by the local governing jurisdiction.

Temporary erosion control measures may be removed only after streets and drives are paved, and all disturbed areas have been stabilized. Trapped sediment and disturbed soil areas resulting from the disposal of temporary measures must be returned to final plan grades and permanently stabilized to prevent additional soil erosion.

Final stabilization is reached when all soil disturbing activities at the site have been completed, and uniform vegetative cover has been established with a density of at least 70 percent of pre-



disturbance levels; or equivalent permanent, physical erosion reduction methods have been employed.

### **Compliance with Standards**

This report was prepared in accordance with the procedures and concepts outlined in the *El Paso County Engineering Criteria Manual*.

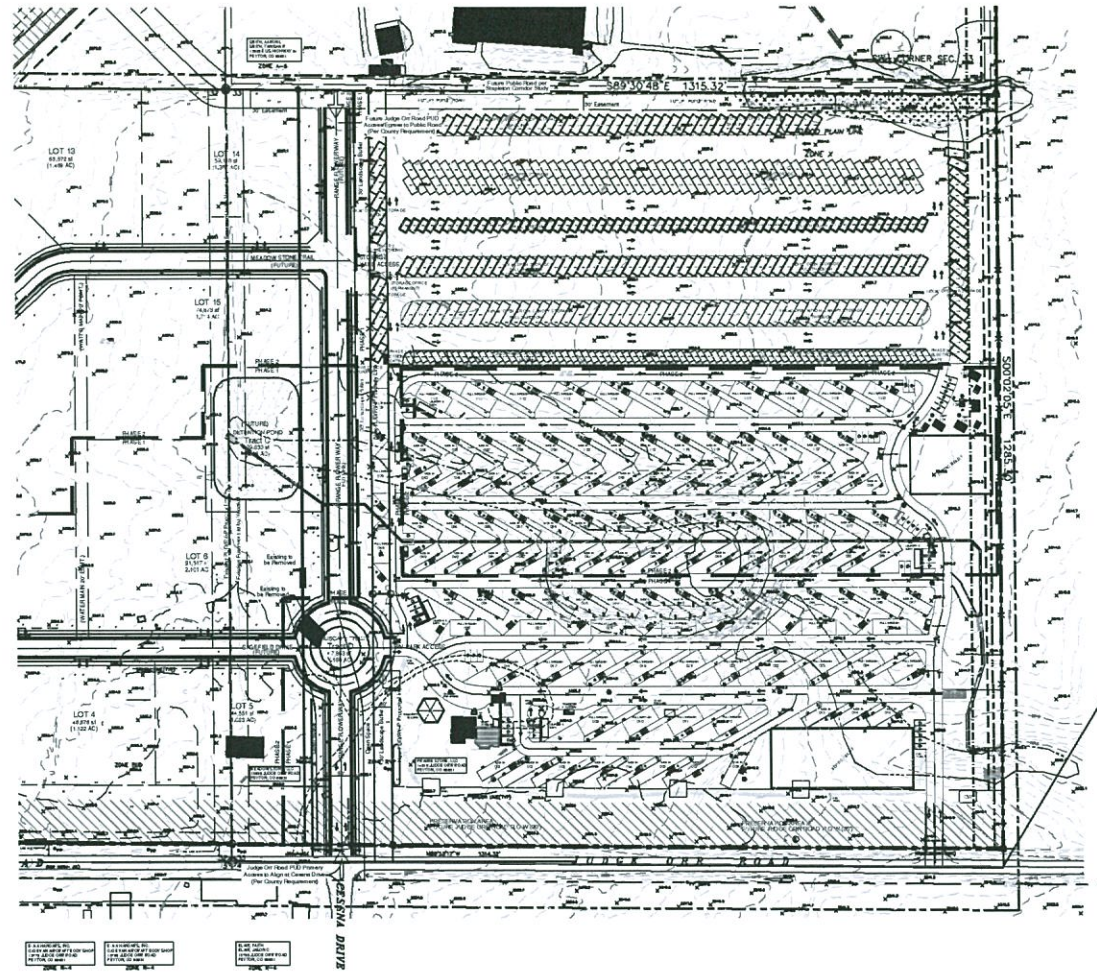
## **REFERENCES**

- *City of Colorado Springs Drainage Criteria Manual*, Volume 2, including Addendums I and II.
- *El Paso County Engineering Criteria Manual*.

## **APPENDIX A**

### Grading and Erosion Control Plans

**GRADING AND EROSION CONTROL PLAN**  
 JUDGE ORR ROAD RV PARK AND STORAGE  
 EL PASO COUNTY, COLORADO



**SITE MAP**

**VICINITY MAP:**



**OWNER'S STATEMENT:**

THE OWNER WILL COMPLY WITH THE REQUIREMENTS OF THE GRADING AND EROSION CONTROL PLAN.

PRAIRIE STONE, LLC \_\_\_\_\_ DATE  
 ANDREA MINNICH, MANAGER

**ENGINEER'S STATEMENT:**

These detailed plans were prepared under my direction and supervision. Said plans and specifications have been prepared in accordance with the criteria established by the County for 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 preparing these detailed plans and specifications.

Michael A. Bartusek, P.E. #23329

**DEVELOPER'S STATEMENT:**

I, the Developer, have read and will comply with all of the requirements specified on this plan.

By: ANDREA MINNICH  
 Title: MANAGER  
 Address: PRAIRIE STONE, LLC  
 9476 DAKOTA DUNES LANE  
 PEYTON, CO 8031-4138

Filed in accordance with the El Paso County Land Development Code, Drainage Criteria Manual Volumes 1 and 2, and the Engineering Criteria Manual, as amended.

Andrea Minnich, Manager \_\_\_\_\_ Date

**ENGINEER'S STATEMENT:**

THIS GRADING AND EROSION CONTROL PLAN WAS PREPARED UNDER MY DIRECTION AND SUPERVISION AND IS CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF. SAID PLAN HAS BEEN PREPARED ACCORDING TO THE CRITERIA ESTABLISHED BY THE COUNTY FOR GRADING AND EROSION CONTROL PLANS. I ACCEPT RESPONSIBILITY FOR ANY LIABILITY CAUSED BY ANY NEGLIGENT ACTS, ERRORS OR OMISSIONS ON MY PART IN PREPARING THIS PLAN.

MICHAEL BARTUSEK, COLORADO P.E. # 23329 \_\_\_\_\_ Date

ASSOCIATED DESIGN PROFESSIONALS, INC.

**EL PASO COUNTY:**

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

FILED IN ACCORDANCE WITH THE REQUIREMENTS OF THE EL PASO COUNTY LAND DEVELOPMENT CODE, DRAINAGE CRITERIA MANUAL, VOLUMES 1 AND 2, AND ENGINEERING CRITERIA MANUAL AS AMENDED.

IN ACCORDANCE WITH ECM SECTION 1.12, THESE CONSTRUCTION DOCUMENTS WILL BE VALID FOR CONSTRUCTION FOR A PERIOD OF 2 YEARS FROM THE DATE SIGNED BY 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 DIRECTORS DISCRETION.

JENIFER IRVINE P.E. \_\_\_\_\_ DATE  
 COUNTY ENGINEER/ECM ADMINISTRATOR

**LEGEND:**

- PROPOSED MAJOR CONTOUR
- PROPOSED MINOR CONTOUR
- - - - EXISTING MAJOR CONTOUR
- - - - EXISTING MINOR CONTOUR
- U/G PIPE (MATERIAL AND SIZE AS NOTED)
- ⊗ SF SILT FENCE
- LIMITS OF CONSTRUCTION
- CW CONCRETE WASHOUT
- ⊗ VEHICLE TRACKING CONTROL
- ⊗ STRAW BALE BARRIER
- ⊗ INLET PROTECTION
- TRAFFIC FLOW ARROWS

**DRAWING INDEX**

ABBR.	NAME	SHEET #S
DPC	GRADING AND EROSION CONTROL COVER	1 OF 7
DPC	DRAINAGE, GRADING & EROSION CONTROL PLAN	2 OF 7
DPC	DRAINAGE, GRADING & EROSION CONTROL DETAIL	3 OF 7
DPC	DRAINAGE, GRADING & EROSION CONTROL DETAIL	4 OF 7
DPC	EROSION CONTROL DETAILS	5 OF 7
DPC	STANDARD NOTES	6 OF 7
DPC	STORM SEWER PROFILES	7 OF 7

DESIGNED BY AND	PROJECT ENGINEER AND	PROJECT MANAGER AND	SCALE: 1" = 40'
DATE: 02/18/18	JOB NO. 160301	CAD FILE NO. 160301-000	DRAWN BY HAJ

**PREPARED BY:**

**ADPCIVIL**  
 ENGINEERING FOR THE FUTURE

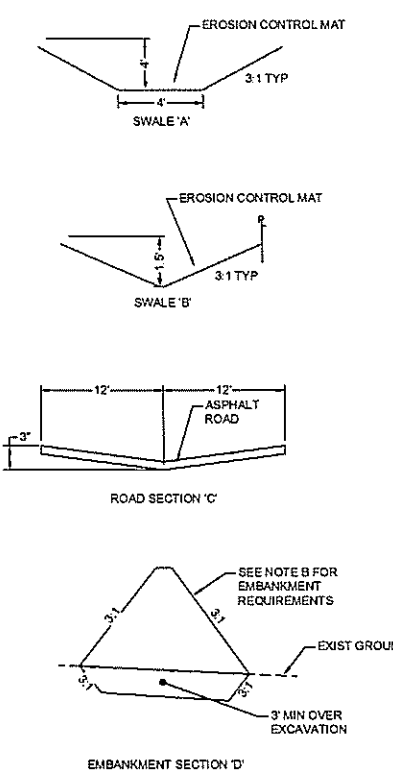
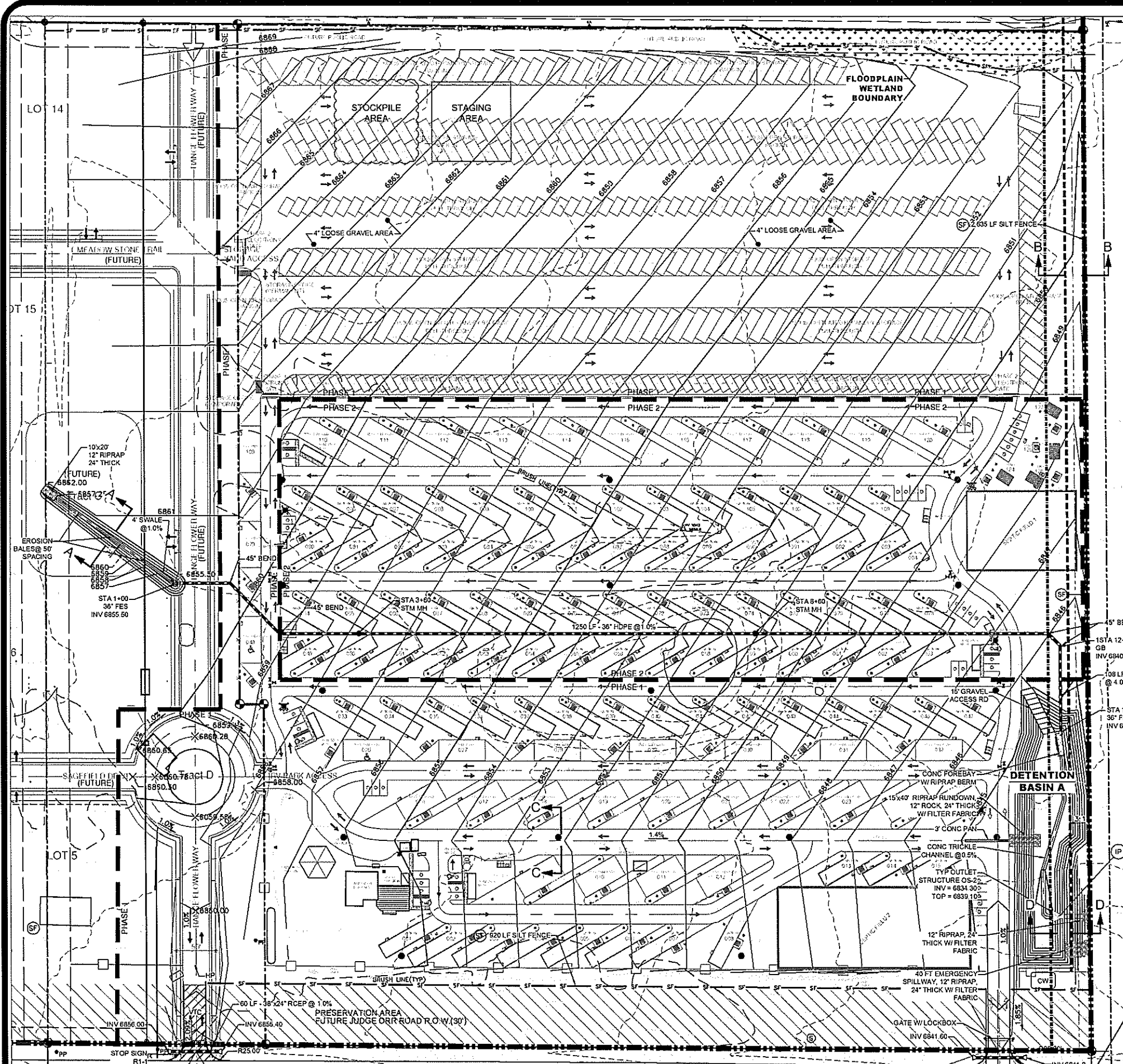
3530 Austin Bluffs Parkway  
 Suite 102  
 Colorado Springs, CO 80918  
 (719) 266-5212  
 fax: (719) 266-5341

BY	NO.	DATE
REVISION		

**JUDGE ORR ROAD RV PARK & STORAGE**  
**COLORADO SPRINGS, COLORADO**  
**DRAINAGE, GRADING & EROSION CONTROL COVER**

**SHEET**

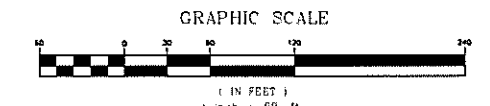
PLAN PROJECTS\2016\10291-Judge Orr Road RV Park\DWG\160101-DRAINAGE, GRADING & EROSION CONTROL PLAN.dwg, 02/17/16, 9:15 AM



**NOTES:**

- A. DETENTION POND AREA TO BE UTILIZED AS A SEDIMENTATION BASIN UNTIL EARTH MOVING IS COMPLETED AND THE GROUND STABILIZED AT WHICH TIME IT WILL BE CLEANED OUT, THE SEDIMENT BASIN OUTLET PIPE REMOVED AND THE DETENTION POND STRUCTURE OS2 ADDED. SEE SEDIMENT BASIN DETAIL SB ON SHEET 6 OF 7.
- B. EMBANKMENT COMPACTION SHALL FOLLOW THE REQUIREMENTS OF SEC 5.9 OF THE SUBSURFACE SOIL INVESTIGATION REPORT INCLUDING 92% COMPACTION OF ASTM D-1557 MAXIMUM DRY DENSITY. GEOTECHNICAL ENGINEER SHALL BE PRESENT DURING CONSTRUCTION OF THE EMBANKMENT TO PROVIDE TESTING OF MATERIALS.

- LEGEND:**
- PROPOSED MAJOR CONTOUR
  - PROPOSED MINOR CONTOUR
  - EXISTING MAJOR CONTOUR
  - EXISTING MINOR CONTOUR
  - U/G PIPE (MATERIAL AND SIZE AS NOTED)
  - SF - SILT FENCE
  - LIMITS OF CONSTRUCTION
  - CONCRETE WASHOUT
  - VEHICLE TRACKING CONTROL
  - STRAW BALE BARRIER
  - INLET PROTECTION
  - TRAFFIC FLOW ARROWS



DESIGNED BY: [Blank]  
 PROJECT ENGINEER: [Blank]  
 AND: [Blank]  
 PROJECT MANAGER: [Blank]  
 AND: [Blank]  
 CAD FILE NO: [Blank]  
 160101-DRG  
 DRAWN BY: [Blank]  
 HJG  
 SCALE: 1" = 60'  
 DATE: 02/17/16

PREPARED BY:

**ADPCIVIL**  
 ENGINEERING FOR THE FUTURE

3530 Austin Blvd Parkway  
 Suite 102  
 Colorado Springs, CO 80918  
 (719) 269-0212  
 Fax: (719) 269-0241

NO.	DATE	REVISION

**JUDGE ORR ROAD RV PARK & STORAGE**  
**COLORADO SPRINGS, COLORADO**  
**DRAINAGE, GRADING & EROSION CONTROL PLAN**

NOTE:  
ALL TRASH RACKS SHOULD BE  
SIZED PER FIGURE OS-1

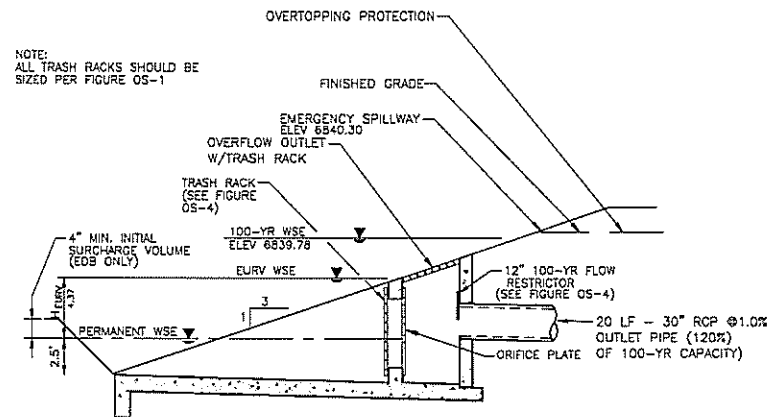
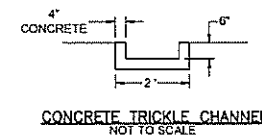
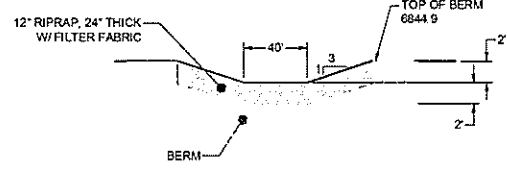


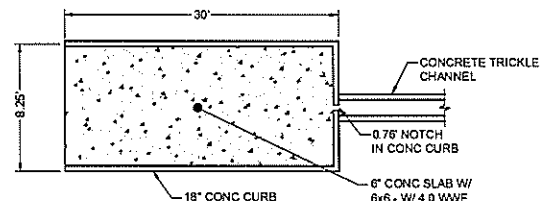
FIGURE OS-2 TYPICAL OUTLET STRUCTURE  
FOR FULL SPECTRUM DETENTION  
**OUTLET STRUCTURES DETAILS**  
NOT TO SCALE



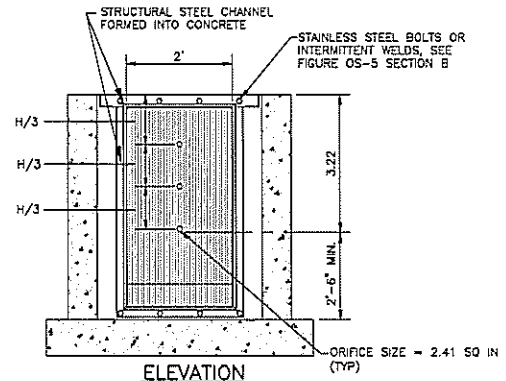
CONCRETE TRICKLE CHANNEL  
NOT TO SCALE



EMERGENCY SPILLWAY DETAIL  
NOT TO SCALE



CONCRETE FOREBAY DETAIL  
NOT TO SCALE



ELEVATION

ORIFICE PLATE NOTES:

1. PROVIDE CONTINUOUS NEOPRENE GASKET MATERIAL BETWEEN THE ORIFICE PLATE AND CONCRETE.
2. BOLT PLATE TO CONCRETE 12\"/>

EURY AND WQCV TRASH RACKS:

1. WELL-SCREEN TRASH RACKS SHALL BE STAINLESS STEEL AND SHALL BE ATTACHED BY INTERMITTENT WELDS ALONG THE EDGE OF THE MOUNTING FRAME.
2. BAR GATE TRASH RACKS SHALL BE ALUMINUM AND SHALL BE BOLTED USING STAINLESS STEEL HARDWARE.
3. TRASH RACK OPEN AREAS ARE FOR SPECIFIED TRASH RACK MATERIALS. TOTAL TRASH RACK SIZE MAY NEED TO BE ADJUSTED FOR MATERIALS HAVING DIFFERENT OPEN AREA/GROSS AREA RATIO R VALUE).
4. STRUCTURAL DESIGN OF TRASH RACKS SHALL BE BASED ON FULL HYDROSTATIC HEAD WITH ZERO HEAD DOWNSTREAM OF THE RACK.

OVERFLOW SAFETY GRATES:

1. ALL SAFETY GRATES SHALL BE MOUNTED USING STAINLESS STEEL HARDWARE AND PROVIDED WITH HINGED AND LOCKABLE OR BOLTABLE ACCESS PANELS.
2. SAFETY GRATES SHALL BE STAINLESS STEEL, ALUMINUM, OR STEEL. STEEL GRATES SHALL BE HOT DIP GALVANIZED AND MAY BE HOT POWDER COATED AFTER GALVANIZING.
3. SAFETY GRATES SHALL BE DESIGNED SUCH THAT THE DIAGONAL DIMENSION OF EACH OPENING IS SMALLER THAN THE DIAMETER OF THE OUTLET PIPE.
4. STRUCTURAL DESIGN OF SAFETY GRATES SHALL BE BASED ON FULL HYDROSTATIC HEAD WITH ZERO HEAD DOWNSTREAM OF THE RACK.

FIGURE OS-4 ORIFICE PLATE AND TRASH RACK DETAILS AND NOTES  
NTS

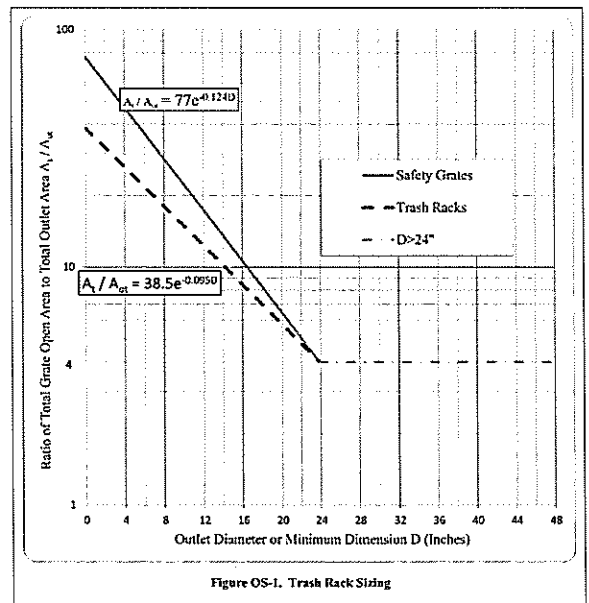
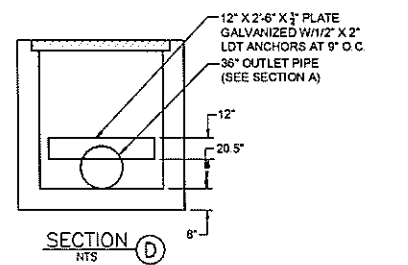
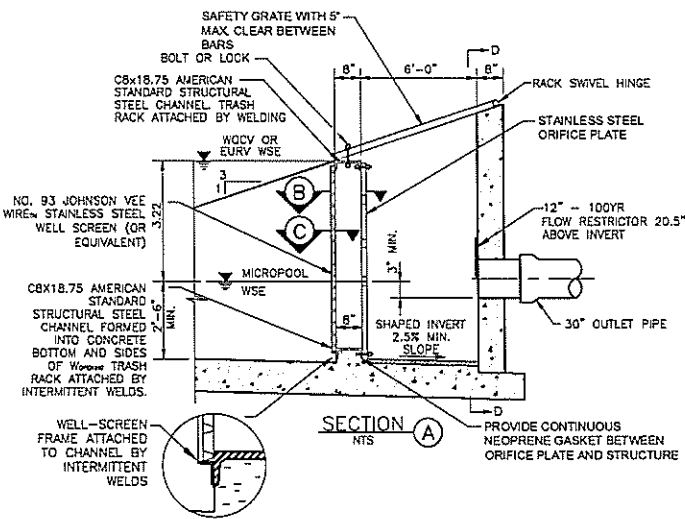


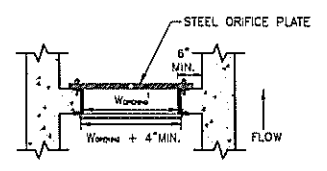
FIGURE OS-1. TRASH RACK SIZING



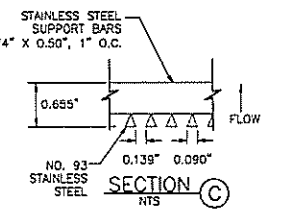
SECTION D  
NTS



SECTION A  
NTS



SECTION B  
NTS



SECTION C  
NTS

FIGURE OS-5 TYPICAL OUTLET STRUCTURE  
WITH WELL SCREEN TRASH RACK

1. ALL CONSTRUCTION AND MATERIALS SHALL BE IN ACCORDANCE WITH THE EL PASO COUNTY ENGINEERING SPECIFICATIONS.
2. THE CONTRACTOR SHALL NOTIFY COLORADO STATE UTILITIES CENTRAL LOCATING (1-800-922-1987) AT LEAST 48 HOURS PRIOR TO ANY EXCAVATION SO THAT THEY MAY LOCATE THEIR FACILITIES. THE LOCATION OF FACILITIES SHOWN ON THE DRAWINGS IS FROM AVAILABLE RECORDS AND IS APPROXIMATE.
3. ALL EXISTING UTILITY LOCATIONS SHOWN ON THE DRAWINGS REFLECT THE AVAILABLE INFORMATION AND DO NOT NECESSARILY INDICATE THE ACTUAL LOCATIONS. PRIOR TO ANY CONSTRUCTION THE CONTRACTOR SHALL VERIFY THE HORIZONTAL AND VERTICAL LOCATIONS OF ALL UTILITIES THAT MAY CONFLICT WITH OR OBSTRUCT THE NEW CONSTRUCTION. ANY REQUIRED RELOCATIONS THAT ARE NOT SPECIFICALLY SHOWN ON THE DRAWINGS SHALL BE COORDINATED WITH AND HAVE PRIOR APPROVAL OF EL PASO COUNTY UTILITIES.
4. ALL DIMENSIONS ARE TO FACE OF CURB, EDGE OF ASPHALT & FLOWLINE OF PAN.
5. ALL ELEVATIONS ARE TO TOP/ASPHALT & FLOWLINE/CURB UNLESS OTHERWISE NOTED.

ALL STORM SEWER PIPE AND SANITARY SEWER PIPE LENGTHS AND SLOPES ARE SHOWN FROM CENTER OF STRUCTURE TO CENTER OF STRUCTURE

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

1. CONSTRUCTION MAY NOT COMMENCE UNTIL A CONSTRUCTION PERMIT IS OBTAINED FROM DEVELOPMENT SERVICES AND A PRE-CONSTRUCTION CONFERENCE IS HELD WITH PLANNING AND COMMUNITY DEVELOPMENT.
2. STORM-WATER 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.
3. 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 EDITION 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.
4. A SEPARATE STORM-WATER MANAGEMENT PLAN (SWMP) FOR THIS PROJECT SHALL BE COMPLETED AND AN EROSION AND STORM-WATER QUALITY CONTROL PERMIT (ESQCP) ISSUED PRIOR TO CONSTRUCTION OF THE RELEVANT FACILITIES. DURING CONSTRUCTION THE SWMP IS THE RESPONSIBILITY OF THE DESIGNATED STORM-WATER MANAGER, SHALL BE LOCATED ON SITE AT ALL TIMES AND SHALL BE KEPT UP TO DATE WITH WORK PROGRESS AND CHANGES IN THE FIELD. ONCE THE ESQCP HAS BEEN ISSUED, THE CONTRACTOR MAY INSTALL THE INITIAL STAGE EROSION AND SEDIMENT CONTROL BMPs AS INDICATED ON THE GEC. A PRE-CONSTRUCTION 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 PCD INSPECTIONS STAFF.
5. SOIL EROSION CONTROL MEASURES FOR ALL SLOPES, CHANNELS, DITCHES, OR ANY DISTURBED LAND AREA SHALL BE COMPLETED WITHIN 21 CALENDAR DAYS AFTER FINAL GRADING, OR FINAL EARTH DISTURBANCE, HAS BEEN COMPLETED. DISTURBED AREAS AND STOCKPILES WHICH ARE NOT AT FINAL GRADE BUT WILL REMAIN DORMANT FOR LONGER THAN 30 DAYS SHALL ALSO BE MULCHED WITHIN 21 DAYS AFTER INTERIM GRADING. AN AREA THAT IS GOING TO REMAIN IN AN INTERIM STATE FOR MORE THAN 90 DAYS SHALL ALSO BE SEEDED. ALL TEMPORARY SOIL EROSION CONTROL MEASURES AND BMPs SHALL BE MAINTAINED UNTIL PERMANENT SOIL EROSION CONTROL MEASURES ARE IMPLEMENTED AND ESTABLISHED.
6. TEMPORARY SOIL EROSION CONTROL FACILITIES SHALL BE REMOVED AND EARTH DISTURBANCE AREAS GRADED AND STABILIZED PERMANENT SOIL EROSION CONTROL MEASURES PURSUANT TO STANDARDS AND SPECIFICATION PRESCRIBED IN THE DCM VOLUME II AND THE ENGINEERING CRITERIA MANUAL (ECM) APPENDIX I.
7. ALL PERSONS ENGAGED IN EARTH DISTURBANCE SHALL IMPLEMENT AND MAINTAIN ACCEPTABLE SOIL EROSION AND SEDIMENT CONTROL MEASURES INCLUDING BMPs IN CONFORMANCE WITH THE EROSION CONTROL TECHNICAL STANDARDS OF THE DRAINAGE CRITERIA MANUAL (DCM) VOLUME II AND IN ACCORDANCE WITH THE STORM-WATER MANAGEMENT PLAN (SWMP).
8. ALL TEMPORARY EROSION CONTROL FACILITIES INCLUDING BMPs AND ALL PERMANENT FACILITIES INTENDED TO CONTROL EROSION OF ANY EARTH DISTURBANCE OPERATIONS, SHALL BE INSTALLED AS DEFINED IN THE APPROVED PLANS, THE SWMP AND THE DCM VOLUME II AND MAINTAINED THROUGHOUT THE DURATION OF THE EARTH DISTURBANCE OPERATION.
9. ANY EARTH DISTURBANCE SHALL BE CONDUCTED IN SUCH A MANNER AS TO EFFECTIVELY REDUCE 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.
10. ANY TEMPORARY OR PERMANENT FACILITY DESIGNED AND CONSTRUCTED FOR THE CONVEYANCE OF STORM-WATER AROUND, THROUGH, OR FROM THE EARTH DISTURBANCE AREA SHALL BE DESIGNED TO LIMIT THE DISCHARGE TO A MINIMUM OF 2.5% MIN. SLOPE.
11. CONCRETE WASH WATER SHALL BE CONTAINED AND DISPOSED OF IN ACCORDANCE WITH THE SWMP. NO WASH WATER SHALL BE DISCHARGED TO OR ALLOWED TO RUN OFF TO STATE WATERS, INCLUDING ANY SURFACE OR SUBSURFACE STORM DRAINAGE SYSTEM OR FACILITIES.
12. EROSION CONTROL BLANKETING IS TO BE USED ON SLOPES STEEPER THAN 3:1.
13. BUILDING, CONSTRUCTION, EXCAVATION, OR OTHER WASTE MATERIALS SHALL NOT BE TEMPORARILY PLACED OR STORED IN THE STREET, ALLEY, OR OTHER PUBLIC WAY, UNLESS IN ACCORDANCE WITH AN APPROVED TRAFFIC CONTROL PLAN. BMPs MAY BE REQUIRED BY EL PASO COUNTY ENGINEERING IF DEEMED NECESSARY, BASED ON SPECIFIC CONDITIONS AND CIRCUMSTANCES.
14. VEHICLE TRACKING OF SOILS AND CONSTRUCTION DEBRIS OFF-SITE SHALL BE MINIMIZED. MATERIALS TRACKED OFF-SITE SHALL BE CLEANED UP AND PROPERLY DISPOSED OF IMMEDIATELY.
15. 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.
16. THE OWNER, SITE DEVELOPER, CONTRACTOR, AND/OR THEIR AUTHORIZED AGENT SHALL BE RESPONSIBLE FOR THE REMOVAL OF ALL CONSTRUCTION DEBRIS, DIRT, TRASH, ROCK, SEDIMENT, AND SAND THAT MAY ACCUMULATE IN THE STORM SEWER OR OTHER DRAINAGE CONVEYANCE SYSTEM AND STORM-WATER APPURTENANCES AS A RESULT OF SITE DEVELOPMENT.
17. 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.
18. NO CHEMICALS ARE TO BE USED BY THE CONTRACTOR, WHICH HAVE THE POTENTIAL TO BE RELEASED IN STORM-WATER UNLESS PERMISSION FOR THE USE OF A SPECIFIC CHEMICAL IS GRANTED IN WRITING BY THE ECM ADMINISTRATOR. IN GRANTING THE USE OF SUCH CHEMICALS, SPECIAL CONDITIONS AND MONITORING MAY BE REQUIRED.
19. BULK STORAGE STRUCTURES FOR PETROLEUM PRODUCTS AND OTHER CHEMICALS SHALL HAVE ADEQUATE PROTECTION SO AS TO CONTAIN ALL SPILLS AND PREVENT ANY SPILLED MATERIAL FROM ENTERING STATE WATERS, INCLUDING ANY SURFACE OR SUBSURFACE STORM DRAINAGE SYSTEM OR FACILITIES.
20. NO PERSON SHALL CAUSE THE IMPEDIMENT OF STORM-WATER FLOW IN THE FLOW LINE OF THE CURB AND GUTTER OR IN THE DITCH LINE.
21. INDIVIDUALS SHALL COMPLY WITH THE "COLORADO WATER QUALITY CONTROL ACT" (TITLE 25, ARTICLE 6, CRS), AND THE "CLEAN WATER ACT" (33 USC 1344), IN ADDITION TO THE REQUIREMENTS INCLUDED IN THE DCM VOLUME II AND THE ECM APPENDIX I. ALL APPROPRIATE PERMITS MUST BE OBTAINED BY THE CONTRACTOR PRIOR TO CONSTRUCTION (NPDES, FLOODPLAIN, AND FLOODING DUST, ETC.) IN THE EVENT OF CONFLICTS BETWEEN THESE REQUIREMENTS AND LAWS, RULES, OR REGULATIONS OF OTHER FEDERAL, STATE, OR COUNTY AGENCIES, THE MORE RESTRICTIVE LAWS, RULES, OR REGULATIONS SHALL APPLY.
22. ALL CONSTRUCTION TRAFFIC MUST ENTER/EXIT THE SITE AT APPROVED CONSTRUCTION ACCESS POINTS.
23. PRIOR TO ACTUAL CONSTRUCTION THE PERMITEE SHALL VERIFY THE LOCATION OF EXISTING UTILITIES.
24. A WATER SOURCE SHALL BE AVAILABLE ON SITE DURING EARTHWORK OPERATIONS AND UTILIZED AS REQUIRED TO MINIMIZE DUST FROM EARTHWORK EQUIPMENT AND WIND.
25. THE SOILS REPORT FOR THIS SITE HAS BEEN PREPARED BY RMG INC AND SHALL BE CONSIDERED A PART OF THESE PLANS.
26. 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 STORM-WATER DISCHARGE TO THE COLORADO DEPARTMENT OF PUBLIC HEALTH AND ENVIRONMENT, WATER QUALITY DIVISION. THE APPLICATION CONTAINS CERTIFICATION OF COMPLETION OF A STORM-WATER MANAGEMENT PLAN (SWMP), OF WHICH THIS GRADING AND EROSION CONTROL PLAN MAY BE A PART. FOR INFORMATION OR APPLICATION MATERIALS CONTACT: CDPHE, 4300 CHERRY CREEK DR. S., DENVER, CO 80246-1530, PH. 303-692-3500

DESIGNED BY	MAB	DATE	5/21/18
PROJECT ENGINEER	MAB	JOB NO	160201
PROJECT MANAGER	MAB	CAD FILE NO	160201.Bak
SCALE	N/A	DATE BY	MAB
CHECKED BY	N/A	SCALE	HORZ
DATE	N/A	SCALE	VERT

PREPARED BY:

**ADPCIVIL**  
ENGINEERING FOR THE FUTURE

3520 Acadia Blvd Parkway Suite 102  
Colorado Springs, CO 80918  
(719) 255-0112  
Fax (719) 255-0341

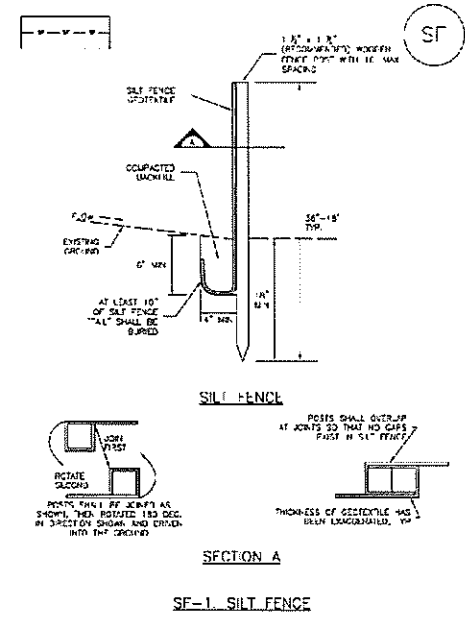
NO.	DATE	REVISION

**JUDGE ORR ROAD RV PARK & STORAGE**  
**COLORADO SPRINGS, COLORADO**  
**DRAINAGE, GRADING & EROSION CONTROL DETAIL**



Silt Fence (SF)

SC-1



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

SC-1

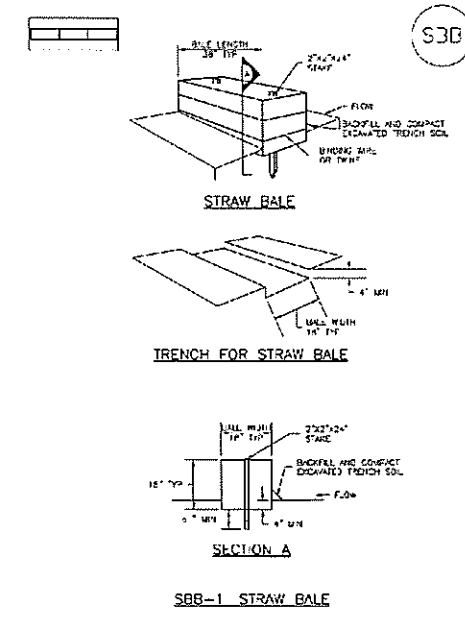
Silt Fence (SF)

- INSTALLATION NOTES**
1. SILT FENCE MUST BE PLACED AWAY FROM THE TOE OF THE SLOPE TO ALLOW FOR WATER FLOWING. SILT FENCE AS THE TOE OF A SLOPE SHOULD BE INSTALLED IN A PLACE. LOCATED AT LEAST SEVERAL FEET (2.5 FT) FROM THE TOE OF THE SLOPE TO ALLOW ROOM FOR FLOWING AND DEPOSITION.
  2. A UNIFORM 6" x 4" ANCHOR FRANCH SHALL BE EXCAVATED USING PILING UP OF SOIL. LOCAL JURISDICTIONS SHALL BE CONSULTED REGARDING LOCAL REQUIREMENTS FOR SILT FENCE INSTALLATION SHALL BE USED.
  3. COMPACT ANCHOR FRANCH BY HAND WITH A "RAMMING BACK" OF 10Y. SMALL SOILS. CLAYMAY BE SOFT. SOILS SHALL BE TAMPED. LOCAL JURISDICTIONS SHALL BE CONSULTED REGARDING LOCAL REQUIREMENTS FOR SILT FENCE INSTALLATION SHALL BE USED.
  4. SILT FENCE SHALL BE TIGHTLY TIGHT AS IT IS ANCHORED TO THE STAKES. THERE SHOULD BE NO AIRSPACE AND BETWEEN STAKES AFTER IT HAS BEEN ANCHORED TO THE STAKES.
  5. SILT FENCE FABRIC SHALL BE ANCHORED TO THE STAKES USING "HEAVY DUTY STAPLES OR TACKS WITH 1" HEADS. STAPLES AND TACKS SHOULD BE PLACED 3" ALONG THE FABRIC DOWN THE STAKE.
  6. AT THE END OF A RUN OF SILT FENCE ALONG A CONTOUR, THE SILT FENCE SHOULD BE TURNED PERPENDICULAR TO THE CONTOUR TO CREATE A "J" HOOK. THE "J" HOOK EXTENDING PERPENDICULAR TO THE CONTOUR SHOULD BE OF SUFFICIENT LENGTH TO KEEP SILT FENCE FROM FLOWING AROUND THE END OF THE SILT FENCE (TYPICALLY 10' - 20').
  7. SILT FENCE SHALL BE INSTALLED PRIOR TO ANY LAND DISTURBING ACTIVITIES.
- SILT FENCE MAINTENANCE NOTES**
1. INSPECT BUMP EACH WEEKLY AND MAINTAIN THEM IN EFFECTIVE OPERATING CONDITION. MAINTENANCE OF BUMP SHOULD BE PROACTIVE, NOT REACTIVE. INSPECT BUMP AS SOON AS POSSIBLE (AND ALWAYS WITHIN 24 HOURS) FOLLOWING A STORM THAT CAUSES SURFACE EROSION, AND PERFORM NECESSARY MAINTENANCE.
  2. FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN BUMP IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.
  3. WHERE BUMP HAVE FAILED, REPAIR OR REPLACEMENT SHOULD BE INITIATED UPON DISCOVERY OF THE FAILURE.
  4. SEDIMENT ACCUMULATED UPSTREAM OF THE SILT FENCE SHALL BE REMOVED AS NEEDED TO MAINTAIN THE "J" HOOK. TYPICALLY WITHIN SEVEN (7) DAYS OF ACCUMULATED SEDIMENT EXCEEDING 18" DEPTH.
  5. REPAIR OR REPLACE SILT FENCE WHEN THERE ARE SIGNS OF WEAR, SUCH AS SAGGING, TEARING, OR COLLAPSE.
  6. SILT FENCE IS TO REMAIN IN PLACE UNTIL THE UPSTREAM DISTURBED AREA IS STABILIZED AND APPROVED BY THE LOCAL JURISDICTION. IT IS REPLACED BY AN EQUIVALENT PERMANENT SEDIMENT CONTROL MEASURE.
  7. WHEN SILT FENCE IS REMOVED, ALL DISTURBED AREAS SHALL BE COVERED WITH TOPSOIL, SEEDS AND MULCH OR OTHERWISE STABILIZED AS APPROVED BY LOCAL JURISDICTION.
- DETAILS SHOWN ON THESE SHEETS PERTAIN TO STANDARD SILT FENCE DETAILS. CONSULT WITH LOCAL JURISDICTIONS AS TO WHICH DETAIL SHOULD BE USED WHEN DIFFERENCES ARE NOTED.

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

SC-3

Straw Bale Barrier (SBB)



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

Straw Bale Barrier (SBB)

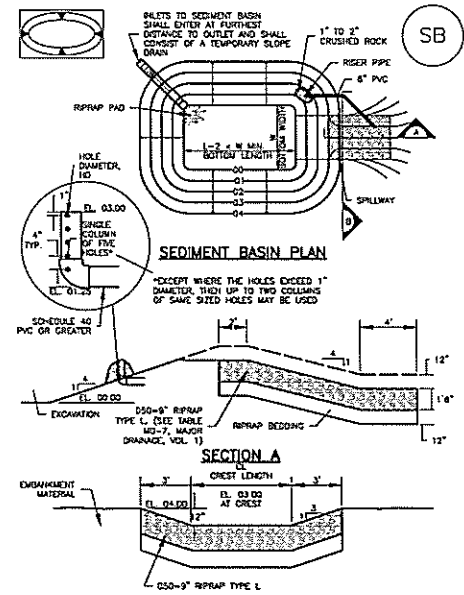
SC-3

- INSTALLATION NOTES**
1. SEE PLAN VIEW FOR DIMENSIONS OF STRAW BALES.
  2. STRAW BALES SHALL CONSIST OF CERTIFIED WEED FREE STRAW OR RYE. LOCAL JURISDICTIONS MAY REQUIRE PROOF THAT BALES ARE WEED FREE.
  3. STRAW BALES SHALL CONSIST OF APPROXIMATELY 3 CUBIC FEET OF STRAW OR RYE AND WEIGH NOT LESS THAN 25 POUNDS.
  4. WHEN STRAW BALES ARE LINED UP TO FORM A BARRIER, THE END OF EACH BALE SHALL BE TOED AND TIED TOGETHER.
  5. STRAW BALE DIMENSIONS SHALL BE APPROXIMATELY 24"x18"x18".
  6. A UNIFORM ANCHOR TRENCH SHALL BE EXCAVATED TO A DEPTH OF 4" STRAW BALES SHALL BE PLACED TO THIS FRENCH. THERE IS NO COMPACTING OF FILL UNDER ANY OF THE BALES. ALL EXCAVATED SOIL SHALL BE PLACED ON THE UP-HILL SIDE OF THE STRAW BALE(S) AND COMPACTED.
  7. TWO (2) WOODEN STAKES SHALL BE USED TO HOLD EACH BALE IN PLACE. WOODEN STAKES SHALL BE 2"x2"x4" WOODEN STAKES SHALL BE 3"x4"x4" WITH THE GRAIN PERPENDICULAR TO THE FABRIC.
- STRAW BALE MAINTENANCE NOTES**
1. INSPECT BUMP EACH WEEKLY AND MAINTAIN THEM IN EFFECTIVE OPERATING CONDITION. MAINTENANCE OF BUMP SHOULD BE PROACTIVE, NOT REACTIVE. INSPECT BUMP AS SOON AS POSSIBLE (AND ALWAYS WITHIN 24 HOURS) FOLLOWING A STORM THAT CAUSES SURFACE EROSION, AND PERFORM NECESSARY MAINTENANCE.
  2. FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN BUMP IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.
  3. WHERE BUMP HAVE FAILED, REPAIR OR REPLACEMENT SHOULD BE INITIATED UPON DISCOVERY OF THE FAILURE.
  4. SEDIMENT ACCUMULATED UPSTREAM OF STRAW BALE BARRIER SHALL BE REMOVED AS NEEDED TO MAINTAIN FUNCTIONALITY OF THE BUMP. TYPICALLY WITHIN SEVEN (7) DAYS OF ACCUMULATED SEDIMENT EXCEEDING 18" DEPTH.
  5. REPAIR OR REPLACE STRAW BALE WHEN THERE ARE SIGNS OF WEAR, SUCH AS SAGGING, TEARING, OR COLLAPSE.
  6. STRAW BALE IS TO REMAIN IN PLACE UNTIL THE UPSTREAM DISTURBED AREA IS STABILIZED AND APPROVED BY THE LOCAL JURISDICTION. IT IS REPLACED BY AN EQUIVALENT PERMANENT SEDIMENT CONTROL MEASURE.
  7. WHEN STRAW BALE IS REMOVED, ALL DISTURBED AREAS SHALL BE COVERED WITH TOPSOIL, SEEDS AND MULCH OR OTHERWISE STABILIZED AS APPROVED BY LOCAL JURISDICTION.
- DETAILS SHOWN ON THESE SHEETS PERTAIN TO STANDARD SBB DETAILS. CONSULT WITH LOCAL JURISDICTIONS AS TO WHICH DETAIL SHOULD BE USED WHEN DIFFERENCES ARE NOTED.

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

Sediment Basin (SB)

SC-7



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

SC-7

Sediment Basin (SB)

TABLE SB-1. SIZING INFORMATION FOR STANDARD SEDIMENT BASIN

Urban Drainage Area (Acres) (A)	Basin Bottom Width (ft) (B)	Sediment Catchment (ft) (C)	Basin Diameter (ft) (D)
1	12	1	12
2	15	2	18
3	18	3	24
4	20	4	28
5	22	5	32
6	24	6	36
7	25	7	38
8	26	8	40
9	27	9	42
10	28	10	44
11	28	11	46
12	29	12	48
13	29	13	50
14	30	14	52
15	30	15	54

- SEDIMENT BASIN MAINTENANCE NOTES**
1. SEE PLAN VIEW FOR LOCATION OF SEDIMENT BASIN. TYPE OF BASIN (STANDARD BASIN OR NONSTANDARD BASIN). FOR STANDARD BASIN, BOTTOM WIDTH, IN FEET, LENGTH, IN FEET, AND HOLE DIAMETER, IN FEET. FOR NONSTANDARD BASIN, SEE CONSTRUCTION DETAILS FOR LOCATION OF BASIN INCLUDING Riser Height, Number of Columns, Hole Diameter and Pipe Diameter.
  2. FOR STANDARD BASIN, BOTTOM WIDTH MAY BE MODIFIED AS LONG AS BOTTOM AREA IS NOT REDUCED.
  3. SEDIMENT BASINS SHALL BE INSTALLED PRIOR TO ANY OTHER LAND-DISTURBING ACTIVITY THAT RESULTS IN SOIL EROSION AS A TEMPORARY CONTROL.
  4. ENHANCEMENT MATERIAL SHALL CONSIST OF SOIL FREE OF DEBRIS, ORGANIC MATERIAL AND ROCKS OF CONTENT. GRAVELS SHALL BE 3/8" AND SHALL HAVE A MINIMUM OF 15 PERCENT BY WEIGHT PASSING THE NO. 200 SIEVE.
  5. ENHANCEMENT MATERIAL SHALL BE COMPACTED TO AT LEAST 95 PERCENT OF MAXIMUM DENSITY AS ACCORDANCE WITH ASTM D698.
  6. P.V.C. 40 OR GREATER SHALL BE USED.
  7. THE DETAILS SHOWN ON THESE SHEETS PERTAIN TO STANDARD SEDIMENT BASIN(S) FOR DRAINAGE AREAS LESS THAN 15 ACRES. SEE CONSTRUCTION DETAILS FOR ENHANCED SEDIMENT BASIN(S) INCLUDING WETLANDS, BATTERED, AND SLOPE PROTECTION DETAILS WITH AN "EROSION" FACILITY THAT HAVE BEEN INSTALLED BY APPROVED FEED DRAMAER AREAS LARGER THAN 15 ACRES.

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

Sediment Basin (SB)

SC-7

- SEDIMENT BASIN MAINTENANCE NOTES**
1. INSPECT BUMP EACH WEEKLY AND MAINTAIN THEM IN EFFECTIVE OPERATING CONDITION. MAINTENANCE OF BUMP SHOULD BE PROACTIVE, NOT REACTIVE. INSPECT BUMP AS SOON AS POSSIBLE (AND ALWAYS WITHIN 24 HOURS) FOLLOWING A STORM THAT CAUSES SURFACE EROSION, AND PERFORM NECESSARY MAINTENANCE.
  2. FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN BUMP IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.
  3. WHERE BUMP HAVE FAILED, REPAIR OR REPLACEMENT SHOULD BE INITIATED UPON DISCOVERY OF THE FAILURE.
  4. SEDIMENT ACCUMULATED IN BASIN SHALL BE REMOVED AS NEEDED TO MAINTAIN BUMP FUNCTIONALITY. TYPICALLY WITHIN SEVEN (7) DAYS OF ACCUMULATED SEDIMENT EXCEEDING 18" DEPTH.
  5. SEDIMENT BASINS ARE TO REMAIN IN PLACE UNTIL THE UPSTREAM DISTURBED AREA IS STABILIZED AND APPROVED BY THE LOCAL JURISDICTION.
  6. WHEN SEDIMENT BASINS ARE REMOVED, ALL DISTURBED AREAS SHALL BE COVERED WITH TOPSOIL, SEEDS AND MULCH OR OTHERWISE STABILIZED AS APPROVED BY LOCAL JURISDICTION.
- DETAILS SHOWN ON THESE SHEETS PERTAIN TO STANDARD SBB DETAILS. CONSULT WITH LOCAL JURISDICTIONS AS TO WHICH DETAIL SHOULD BE USED WHEN DIFFERENCES ARE NOTED.

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

DESIGNED BY: MJB  
PROJECT ENGINEER: MJB  
PROJECT MANAGER: MJB  
SCALE: AS SHOWN  
DATE: 11/10/10

PREPARED BY:

**ADPCIVIL**  
ENGINEERING FOR THE FUTURE  
3520 Aspen Blvd Parkway, Suite 102  
Colorado Springs, CO 80918  
(719) 269-9212  
Fax: (719) 269-9241

NO.	DATE	REVISION

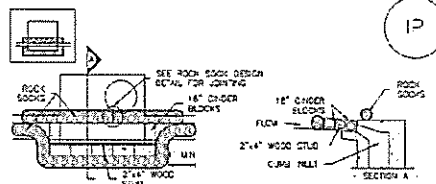
JUDGE ORR ROAD RV PARK & STORAGE  
COLORADO SPRINGS, COLORADO  
EROSION CONTROL DETAILS

SC-6

Inlet Protection (IP)

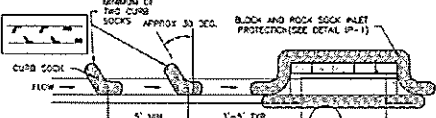
SC-6

Inlet Protection (IP)



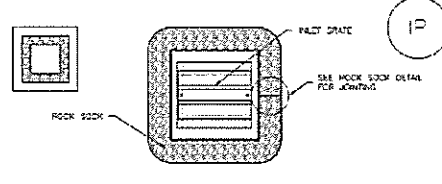
IP-1. BLOCK AND ROCK SOCK SUMP OR ON GRADE INLET PROTECTION

- Block and Rock Sock Inlet Protection Installation Notes
1. See rock sock design detail for installation requirements.
2. Concrete 'choker' blocks shall be laid on their sides around the inlet in a single row...



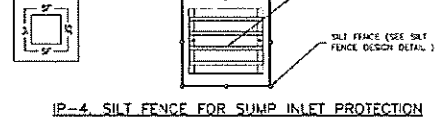
IP-2. CURB ROCK SOCKS UPSTREAM OF INLET PROTECTION

- Curb Rock Sock Inlet Protection Installation Notes
1. See rock sock design detail for installation requirements.
2. Placement of the sock shall be approximately 30 degrees from perpendicular in the opposite direction of flow.



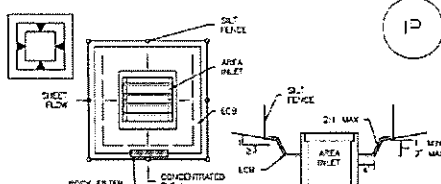
IP-3. ROCK SOCK SUMP/AREA INLET PROTECTION

- Rock Sock Sump/Area Inlet Protection Installation Notes
1. See rock sock design detail for installation requirements.
2. Strain wattles/sediment control logs may be used in place of rock socks for inlets in pervious areas...



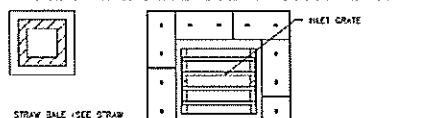
IP-4. SILT FENCE FOR SUMP INLET PROTECTION

- Silt Fence Inlet Protection Installation Notes
1. See silt fence design detail for installation requirements.
2. Silt fences shall be placed at each corner of the inlet and around the edges at a maximum spacing of 3 feet.



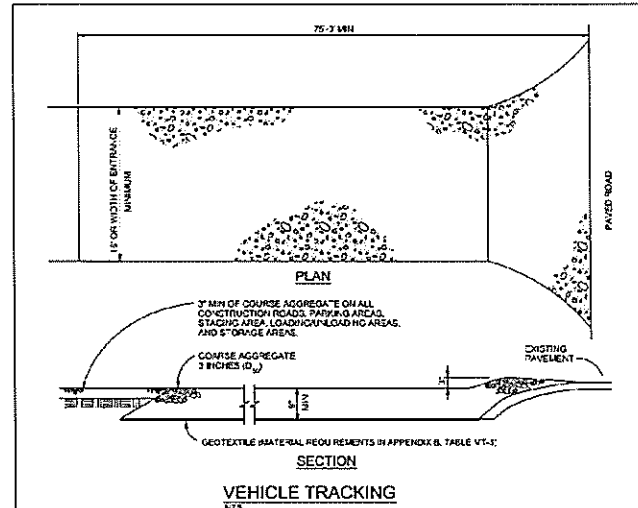
IP-5. OVEREXCAVATION INLET PROTECTION

- Overexcavation Inlet Protection Installation Notes
1. This form of inlet protection is primarily applicable for sites that have not yet reached final grade and should be used only for inlets with a relatively small contributing drainage area.



IP-6. STRAW BALE FOR SUMP INLET PROTECTION

- Straw Bale Sump Inlet Protection Installation Notes
1. See straw bale design detail for installation requirements.
2. Bales shall be placed in a single row around the inlet with ends of bales tightly abutting one another.



- Vehicle Tracking Notes
INSTALLATION REQUIREMENTS
1. All entrances to the construction site are to be stabilized prior to construction beginning.
2. Construction haul roads are to be built with an apron to allow for turning traffic...

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

IP-4

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

August 2013

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

IP-5

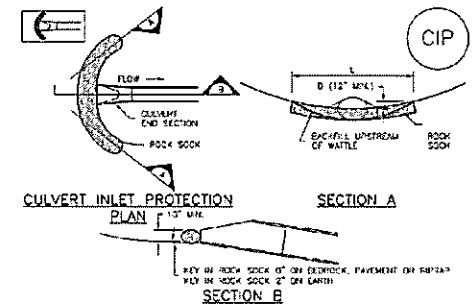
IP-6

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

Inlet Protection (IP)

SC-6 SC-6

Inlet Protection (IP)



CIP-1. CULVERT INLET PROTECTION

- Culvert Inlet Protection Installation Notes
1. See plan view for location of culvert inlet protection.
2. See rock sock design detail for rock sock design requirements and jointing details.

- Culvert Inlet Protection Maintenance Notes
1. Inspect bays each morning and maintain them in effective operating condition.
2. Frequent observations and maintenance are necessary to maintain bays in effective operating condition...

- General Inlet Protection Installation Notes
1. See plan view for location of inlet protection.
2. Inlet protection shall be installed promptly after inlet construction or paving is complete.
3. Many jurisdictions have BMP details that vary from listed standard details...

August 2013

Urban Drainage and Flood Control District Urban Storm Drainage Criteria Manual Volume 3

IP-7

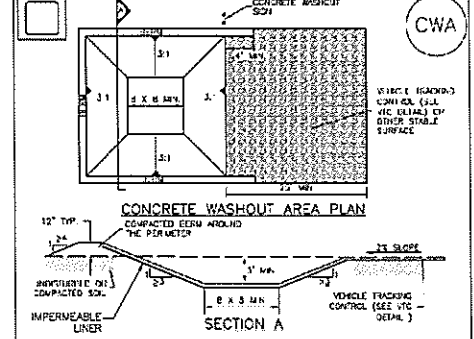
IP-8

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

August 2013

INLET PROTECTION - NOT TO SCALE

MM-1 Concrete Washout Area (CWA)



CWA-1. CONCRETE WASHOUT AREA

- Concrete Washout Area Installation Notes
1. See plan view for CWA installation location.
2. Do not locate an unlined CWA within 100' of any natural drainage pathway or waterbody.
3. The CWA shall be installed prior to concrete placement on site.

GENERAL NOTES

- 1. Do not prepare or seed frozen soils.
2. Do not seed when wind exceeds 5 mph.
3. Perform seeding only after preceding work affecting ground surface is completed.

BED PREPARATION

- 1. Prepare to a minimum depth of 4" with disc harrows or chiseling tools.
2. Uproot all competitive vegetation.
3. Work soil uniformly to a smooth surface free of clods, stones over 2" in any dimension...

Table with columns: SPECIES, LBS/ACRE DRILLED. Lists various grass species and their recommended seeding rates.

EROSION CONTROL PLAN NOTES

- 1. All disturbed areas are to be reseeded.
2. Schedule of Grading - approximate time frame of one month to complete grading and installation of erosion control measures.

DESIGNED BY: JWB PROJECT ENGINEER

DATE: 08/13/13 JOB NO: 16001001 CAD FILE NO: 16001001.DWG

PREPARED BY: HUG



3533 Aurora Blvd Parkway Suite 102 Colorado Springs, CO 80918 (719) 295-5212 fax (719) 295-5341

Table with columns: NO., DATE, REVISION. Contains revision history information.

JUDGE ORR ROAD RV PARK & STORAGE COLORADO SPRINGS, COLORADO EROSION CONTROL DETAILS

**Standard Notes for El Paso County Construction Plans**

ALL DRAINAGE AND ROADWAY CONSTRUCTION SHALL MEET THE STANDARDS AND SPECIFICATIONS OF THE CITY OF COLORADO SPRINGS/EL PASO COUNTY DRAINAGE CRITERIA MANUAL, VOLUMES 1 AND 2, AND THE EL PASO COUNTY ENGINEERING CRITERIA MANUAL.

1. CONTRACTOR SHALL BE RESPONSIBLE FOR THE NOTIFICATION AND FIELD NOTIFICATION OF ALL EXISTING UTILITIES, WHETHER SHOWN ON THE PLANS OR NOT, BEFORE BEGINNING CONSTRUCTION. LOCATION OF EXISTING UTILITIES SHALL BE VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION. CALL 811 TO CONTACT THE UTILITY NOTIFICATION CENTER OF COLORADO (UNCC).
2. CONTRACTOR SHALL KEEP A COPY OF THESE APPROVED PLANS, THE GRADING AND EROSION CONTROL PLAN, THE STORMWATER MANAGEMENT PLAN (SWMP), THE SOILS AND GEOTECHNICAL REPORT, AND THE APPROPRIATE DESIGN AND CONSTRUCTION STANDARDS AND SPECIFICATIONS AT THE JOB SITE AT ALL TIMES, INCLUDING THE FOLLOWING:
  - a. EL PASO COUNTY ENGINEERING CRITERIA MANUAL (ECM)
  - b. CITY OF COLORADO SPRINGS/EL PASO COUNTY DRAINAGE CRITERIA MANUAL, VOLUMES 1 AND 2
  - c. COLORADO DEPARTMENT OF TRANSPORTATION (CDOT) STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION
  - d. CDOT M & S STANDARDS
4. NOTWITHSTANDING ANYTHING DEPICTED IN THESE PLANS IN WORDS OR GRAPHIC REPRESENTATION, ALL DESIGN AND CONSTRUCTION RELATED TO ROADS, STORM DRAINAGE AND EROSION CONTROL SHALL CONFORM TO THE STANDARDS AND REQUIREMENTS OF THE MOST RECENT VERSION OF THE RELEVANT ADOPTED EL PASO COUNTY STANDARDS, INCLUDING THE LAND DEVELOPMENT CODE, THE ENGINEERING CRITERIA MANUAL, THE DRAINAGE CRITERIA MANUAL, AND THE DRAINAGE CRITERIA MANUAL VOLUME 2. ANY DEVIATIONS FROM REGULATIONS AND STANDARDS MUST BE REQUESTED, AND APPROVED, IN WRITING. ANY MODIFICATIONS NECESSARY TO MEET CRITERIA AFTER-THE-FACT WILL BE ENTIRELY THE DEVELOPER'S RESPONSIBILITY TO RECTIFY.
5. IT IS THE DESIGN ENGINEER'S RESPONSIBILITY TO ACCURATELY SHOW EXISTING CONDITIONS, BOTH ONSITE AND OFFSITE, ON THE CONSTRUCTION PLANS. ANY MODIFICATIONS NECESSARY DUE TO CONFLICTS, OMISSIONS, OR CHANGED CONDITIONS WILL BE ENTIRELY THE DEVELOPER'S RESPONSIBILITY TO RECTIFY.
6. CONTRACTOR SHALL SCHEDULE A PRE-CONSTRUCTION MEETING WITH EL PASO COUNTY DEVELOPMENT SERVICES DEPARTMENT (DSD) - INSPECTIONS, PRIOR TO STARTING CONSTRUCTION.
7. IT IS THE CONTRACTOR'S RESPONSIBILITY TO UNDERSTAND THE REQUIREMENTS OF ALL JURISDICTIONAL AGENCIES AND TO OBTAIN ALL REQUIRED PERMITS, INCLUDING BUT NOT LIMITED TO EL PASO COUNTY EROSION AND STORMWATER QUALITY CONTROL PERMIT (ESQCP), REGIONAL BUILDING FLOODPLAIN DEVELOPMENT PERMIT, U.S. ARMY CORPS OF ENGINEERS-ISSUED 401 AND/OR 404 PERMITS, AND COUNTY AND STATE FUGITIVE DUST PERMITS.
8. CONTRACTOR SHALL NOT DEVIATE FROM THE PLANS WITHOUT FIRST OBTAINING WRITTEN APPROVAL FROM THE DESIGN ENGINEER AND DSD. CONTRACTOR SHALL NOTIFY THE DESIGN ENGINEER IMMEDIATELY UPON DISCOVERY OF ANY ERRORS OR INCONSISTENCIES.
9. ALL STORM DRAIN PIPE SHALL BE CLASS III RCP UNLESS OTHERWISE NOTED AND APPROVED BY DSD.
10. CONTRACTOR SHALL COORDINATE GEOTECHNICAL TESTING PER ECM STANDARDS. PAVEMENT DESIGN SHALL BE APPROVED BY EL PASO COUNTY DSD PRIOR TO PLACEMENT OF CURB AND GUTTER AND PAVEMENT.
11. ALL CONSTRUCTION TRAFFIC MUST ENTER/EXIT THE SITE AT APPROVED CONSTRUCTION ACCESS POINTS.
12. SIGHT VISIBILITY TRIANGLES AS IDENTIFIED IN THE PLANS SHALL BE PROVIDED AT ALL INTERSECTIONS. OBSTRUCTIONS GREATER THAN 18 INCHES ABOVE FLOWLINE ARE NOT ALLOWED WITHIN SIGHT TRIANGLES.
13. SIGNING AND STRIPING SHALL COMPLY WITH EL PASO COUNTY DOT AND MUTCD CRITERIA. [IF APPLICABLE, ADDITIONAL SIGNING AND STRIPING NOTES WILL BE PROVIDED.]
14. CONTRACTOR SHALL OBTAIN ANY PERMITS REQUIRED BY EL PASO COUNTY DOT, INCLUDING WORK WITHIN THE RIGHT-OF-WAY AND SPECIAL TRANSPORT PERMITS.
15. THE LIMITS OF DISTURBANCE SHALL REMAIN WITHIN THE PROPERTY LINE UNLESS OTHERWISE NOTED. THE OWNER/DEVELOPER SHALL OBTAIN WRITTEN PERMISSION AND EASEMENTS, WHERE REQUIRED, FROM ADJOINING PROPERTY OWNER(S) PRIOR TO ANY OFF-SITE DISTURBANCE, GRADING, OR CONSTRUCTION.

**NOTES:**

1. CONTRACTOR SHALL VERIFY LOCATION OF UTILITIES PRIOR TO ANY CONSTRUCTION.
2. CONTRACTOR SHALL NOTIFY EL PASO COUNTY DEPARTMENT OF TRANSPORTATION FOR A PRE-CONSTRUCTION CONFERENCE PRIOR TO COMMENCEMENT OF CONSTRUCTION.
3. CONTRACTOR SHALL OBTAIN NECESSARY CONSTRUCTION PERMITS PRIOR TO CONSTRUCTION.
4. ALL ROAD AND DRAINAGE CONSTRUCTION SHALL CONFORM TO EL PASO COUNTY STANDARD SPECIFICATIONS.

**NOTE:**

AT LEAST 10 DAYS PRIOR TO THE ANTICIPATED START OF CONSTRUCTION, FOR PROJECTS THAT WILL DISTURB ONE ACRE OR MORE, THE OWNER OR OPERATOR OF THE CONSTRUCTION ACTIVITY SHALL SUBMIT A PERMIT APPLICATION FOR STORMWATER DISCHARGE TO THE COLORADO DEPARTMENT OF PUBLIC HEALTH AND ENVIRONMENT, WATER QUALITY CONTROL 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.

**SIGNING AND STRIPING NOTES:**

1. ALL SIGNS AND PAVEMENT MARKINGS SHALL BE IN COMPLIANCE WITH THE CURRENT MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD).
2. REMOVAL OF EXISTING PAVEMENT MARKINGS SHALL BE ACCOMPLISHED BY A METHOD THAT DOES NOT MATERIALLY DAMAGE THE PAVEMENT. THE PAVEMENT MARKINGS SHALL BE REMOVED TO THE EXTENT THAT THEY WILL NOT BE VISIBLE UNDER DAY OR NIGHT CONDITIONS. AT NO TIME WILL IT BE ACCEPTABLE TO PAINT OVER EXISTING PAVEMENT MARKINGS.
3. ANY DEVIATION FROM THE STRIPING AND SIGNING PLAN SHALL BE APPROVED BY EL PASO COUNTY PLANNING AND COMMUNITY DEVELOPMENT.
4. ALL SIGNS SHOWN ON THE SIGNING AND STRIPING PLAN SHALL BE NEW SIGNS. EXISTING SIGNS MAY REMAIN OR BE REUSED IF THEY MEET CURRENT EL PASO COUNTY AND MUTCD STANDARDS.
5. STREET NAME AND REGULATORY STOP SIGNS SHALL BE ON THE SAME POST AT INTERSECTIONS.
6. ALL REMOVED SIGNS SHALL BE DISPOSED OF IN A PROPER MANNER BY THE CONTRACTOR.
7. ALL STREET NAME SIGNS SHALL HAVE "D" SERIES LETTERS, WITH LOCAL ROADWAY SIGNS BEING 4" UPPER-LOWER CASE LETTERING ON 8" BLANK AND NON-LOCAL ROADWAY SIGNS BEING 6" LETTERING, UPPER-LOWER CASE ON 12" BLANK WITH A WHITE BORDER THAT IS NOT RECESSED. MULTI-LANE ROADWAYS WITH SPEED LIMITS OF 40 MPH OR HIGHER SHALL HAVE 8" UPPER-LOWER CASE LETTERING ON 18" BLANK WITH A WHITE BORDER THAT IS NOT RECESSED. THE WIDTH OF THE NON-RECESSED WHITE BORDERS SHALL MATCH PAGE 235 OF THE 2012 MUTCD "STANDARD HIGHWAY SIGNS".
8. ALL TRAFFIC SIGNS SHALL HAVE A MINIMUM HIGH INTENSITY PRISMATIC GRADE SHEETING.
9. ALL LOCAL RESIDENTIAL STREET SIGNS SHALL BE MOUNTED ON A 1.75' X 1.75' SQUARE TUBE SIGN POST AND STUB POST BASE. FOR OTHER APPLICATIONS, REFER TO THE CDOT STANDARD S-614-8 REGARDING USE OF THE P2 TUBULAR STEEL POST SLIPBASE DESIGN.
10. ALL SIGNS SHALL BE SINGLE SHEET ALUMINUM WITH 0.100" MINIMUM THICKNESS.
11. ALL LIMIT LINES/STOP LINES, CROSSWALK LINES, PAVEMENT LEGENDS, AND ARROWS SHALL BE A MINIMUM 125 MIL THICKNESS PREFORMED THERMOPLASTIC PAVEMENT MARKINGS WITH TAPERED LEADING EDGES PER CDOT STANDARD S-627-1. WORD AND SYMBOL MARKINGS SHALL BE THE NARROW TYPE. STOP BARS SHALL BE 24" IN WIDTH. CROSSWALK LINES SHALL BE 12" WIDE AND 8' LONG PER CDOT S-627-1.
12. ALL LONGITUDINAL LINES SHALL BE A MINIMUM 15 MIL THICKNESS EPOXY PAINT. ALL NON-LOCAL RESIDENTIAL ROADWAYS SHALL INCLUDE BOTH RIGHT AND LEFT EDGE LINE STRIPING AND ANY ADDITIONAL STRIPING AS REQUIRED BY CDOT S-627-1.
13. THE CONTRACTOR SHALL NOTIFY EL PASO COUNTY PLANNING AND COMMUNITY DEVELOPMENT (719) 520-6819 PRIOR TO AND UPON COMPLETION OF SIGNING AND STRIPING.
14. THE CONTRACTOR SHALL OBTAIN A WORK IN THE RIGHT OF WAY PERMIT FROM THE EL PASO COUNTY DEPARTMENT OF PUBLIC WORKS (DPW) PRIOR TO ANY SIGNAGE OR STRIPING WORK WITHIN AN EXISTING EL PASO COUNTY ROADWAY.

DESIGNED BY:	DATE:	SCALE:
HAB	5/21/15	HPKZ
PROJECT ENGINEER	JOB NO:	VERT
HAB	100001	
PROJECT MANAGER	CAD FILE NO:	
HAB	10001-1000	
SCALE:	DRAWN BY:	
N/A	HJO	

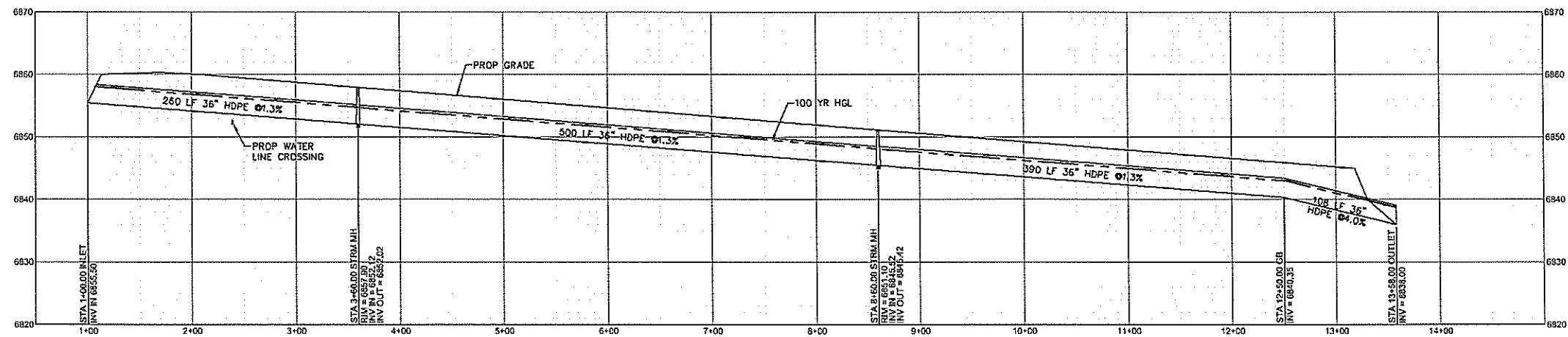
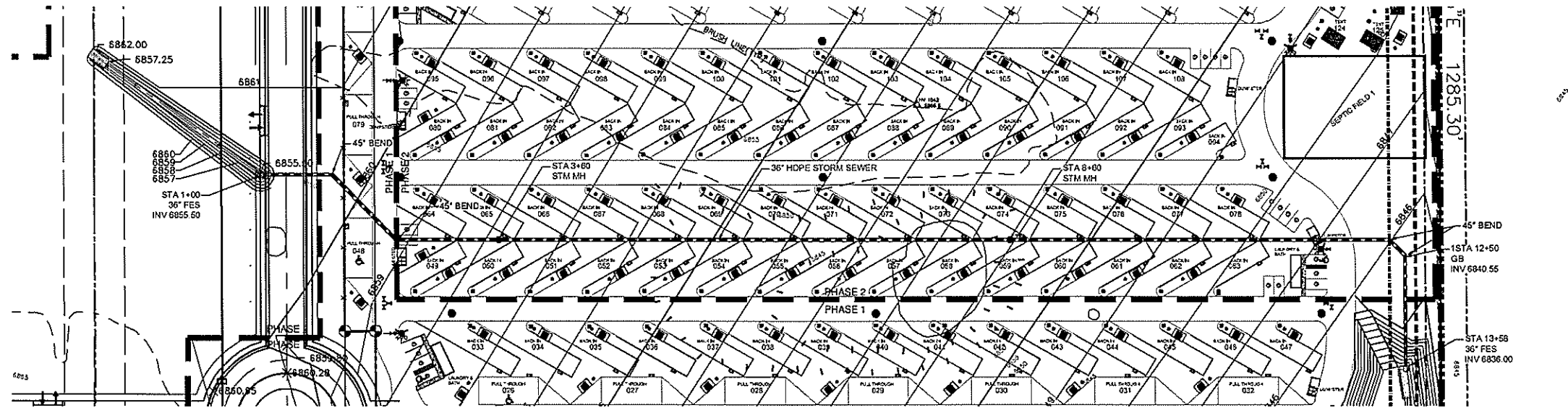
PREPARED BY:



NO.	DATE	REVISION

JUDGE ORR ROAD RV PARK & STORAGE  
 COLORADO SPRINGS, COLORADO  
 STANDARD NOTES





36" HDPE STORM SEWER PROFILE  
SCALES HORIZONTAL 1"=60' VERTICAL 1"=10'

DESIGNED BY: AMJ  
PROJECT ENGINEER: AMJ  
DATE: 5/21/18  
JOB NO: 160301  
JOB FILE NO: 160301.dwg  
DRAWN BY: HUS  
SCALE: N/A  
PROJECT: N/A  
REV: 1/1

PREPARED BY:



3520 Alamos Blvd, Parkway  
Suite 102  
Colorado Springs, CO 80918  
(719) 205-2112  
Fax: (719) 205-0241

NO.	DATE	REVISION	BY

**JUDGE ORR ROAD RV PARK & STORAGE  
COLORADO SPRINGS, COLORADO  
STORM SEWER PROFILE**

SHEET

7 of 7

**APPENDIX C**  
Inspection Checklist

## EXTENDED DETENTION BASIN (EDB) MAINTENANCE FORM

Subdivision/Business Name: \_\_\_\_\_ Completion Date: \_\_\_\_\_  
 Subdivision/Business Address: \_\_\_\_\_ Contact Name: \_\_\_\_\_

**Maintenance Category:**                      Routine                      Restoration                      Rehabilitation  
 (Circle All That Apply)

### MAINTENANCE ACTIVITIES PERFORMED

#### ROUTINE WORK

- \_\_\_ MOWING
- \_\_\_ TRASH/DEBRIS REMOVAL
- \_\_\_ OUTLET WORKS CLEANING (TRASH RACK/WELL SCREEN)
- \_\_\_ WEED CONTROL (HERBICIDE APPLICATION)
- \_\_\_ MOSQUITO TREATMENT
- \_\_\_ ALGAE TREATMENT

#### RESTORATION WORK

- \_\_\_ SEDIMENT REMOVAL
  - \_\_\_ FOREBAY
  - \_\_\_ TRICKLE CHANNEL
  - \_\_\_ INFLOW
- \_\_\_ EROSION REPAIR
  - \_\_\_ INFLOW POINT
  - \_\_\_ TRICKLE CHANNEL
- \_\_\_ VEGETATION REMOVAL/TREE THINNING
  - \_\_\_ INFLOW(S)
  - \_\_\_ TRICKLE CHANNEL
  - \_\_\_ UPPER STAGE
  - \_\_\_ BOTTOM STAGE
- \_\_\_ REVEGETATION
- \_\_\_ JET-VAC/CLEARING DRAINS
  - \_\_\_ FOREBAY
  - \_\_\_ OUTLET WORKS
  - \_\_\_ INFLOWS

#### REHABILITATION WORK

- \_\_\_ SEDIMENT REMOVAL (DREDGING)
  - \_\_\_ BOTTOM STAGE
  - \_\_\_ UPPER STAGE
- \_\_\_ EROSION REPAIR
  - \_\_\_ OUTLET WORKS
  - \_\_\_ UPPER STAGE
  - \_\_\_ BOTTOM STAGE
  - \_\_\_ SPILLWAY
- \_\_\_ STRUCTURAL REPAIR
  - \_\_\_ INFLOW
  - \_\_\_ OUTLET WORKS
  - \_\_\_ FOREBAY
  - \_\_\_ TRICKLE CHANNEL

OTHER \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

ESTIMATED TOTAL MANHOURS: \_\_\_\_\_

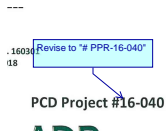
COSTS INCURRED (include description of costs): \_\_\_\_\_

EQUIPMENT/MATERIAL USED (include hours of equipment usage and quantity of material used):  
 \_\_\_\_\_  
 \_\_\_\_\_

COMMENTS/ADDITIONAL INFO:  
 \_\_\_\_\_  
 \_\_\_\_\_

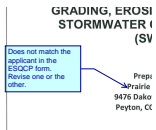
# Markup Summary

dsdlaforce (3)



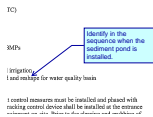
**Subject:** Callout  
**Page Label:** 1  
**Author:** dsdlaforce  
**Date:** 6/28/2018 1:04:12 PM  
**Color:** ■

Revise to "# PPR-16-040"



**Subject:** Callout  
**Page Label:** 1  
**Author:** dsdlaforce  
**Date:** 6/28/2018 1:14:41 PM  
**Color:** ■

Does not match the applicant in the ESQCP form. Revise one or the other.



**Subject:** Callout  
**Page Label:** 5  
**Author:** dsdlaforce  
**Date:** 6/28/2018 2:28:11 PM  
**Color:** ■

Identify in the sequence when the sediment pond is installed.