STORMWATER MANAGEMENT PLAN

PIKE SOLAR
EL PASO COUNTY, CO

Prepared for:

Juwi, Inc.
1710 29th Street, Suite 1068
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Contact: Brian Vickers
Phone: (720) 838-2302

Prepared by:

CORE Consultants, Inc.
3473 S. Broadway
Englewood, CO 80113
Phone: 303-703-4444
Contact: David Bacci
CORE Project Number: 20-194

April 1, 2021

MAP LEGEND

Area of Interest (AOI)

Area of Interest (AOI)

Soils

Soil Rating Polygons

A

A/D

B

B/D

C

C/D

D

Not rated or not available

Soil Rating Lines

A

A/D

B

B/D

C

C/D

D

Not rated or not available

Soil Rating Points

A

A/D

B

B/D

C

C/D

D

Not rated or not available

Water Features

Streams and Canals

Transportation

Rails

Interstate Highways

US Routes

Major Roads

Local Roads

Background

Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

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

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

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

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

Soil Survey Area: El Paso County Area, Colorado
Survey Area Data: Version 18, Jun 5, 2020

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

Date(s) aerial images were photographed: Apr 12, 2017—May 26, 2019

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

Table—Hydrologic Soil Group

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
2	Ascalon sandy loam, 1 to 3 percent slopes	B	223.1	1.0%
3	Ascalon sandy loam, 3 to 9 percent slopes	B	48.3	0.2%
10	Blendon sandy loam, 0 to 3 percent slopes	B	28.3	0.1%
28	Ellicott loamy coarse sand, 0 to 5 percent slopes	A	138.9	0.6%
30	Fort Collins loam, 0 to 3 percent slopes	B	193.6	0.8%
31	Fort Collins loam, 3 to 8 percent slopes	B	122.2	0.5%
33	Heldt clay loam, 0 to 3 percent slopes	C	495.8	2.2%
39	Keith silt loam, 0 to 3 percent slopes	C	827.0	3.6%
52	Manzanst clay loam, 0 to 3 percent slopes	C	784.1	3.4%
54	Midway clay loam, 3 to 25 percent slopes	D	1,959.9	8.5%
56	Nelson-Tassel fine sandy loams, 3 to 18 percent slopes	B	3,416.0	14.9%
61	Olney sandy loam, 3 to 8 percent slopes	B	50.6	0.2%
70	Pits, gravel	A	0.8	0.0%
73	Razor clay loam, 3 to 9 percent slopes	D	200.9	0.9%
75	Razor-Midway complex	D	2,779.2	12.1%
78	Sampson loam, 0 to 3 percent slopes	B	123.9	0.5%
84	Stapleton sandy loam, 8 to 15 percent slopes	B	68.2	0.3%
86	Stoneham sandy loam, 3 to 8 percent slopes	B	280.8	1.2%
89	Tassel fine sandy loam, 3 to 18 percent slopes	D	30.5	0.1%
96	Truckton sandy loam, 0 to 3 percent slopes	A	35.1	0.2%
101	Ustic Torrifluvents, loamy	B	718.5	3.1%
102	Valent sand, 1 to 12 percent slopes, dry	A	73.7	0.3%
104	Vona sandy loam, warm, 0 to 3 percent slopes	A	841.6	3.7%

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
105	Vona sandy loam, warm, 3 to 6 percent slopes	A	960.4	4.2%
107	Wilid silt loam, 0 to 3 percent slopes	C	1,071.4	4.7%
108	Wiley silt loam, 3 to 9 percent slopes	B	4,642.7	20.2%
111	Water		4.6	0.0%
116	Udic Haplusterts	D	7.0	0.0%
118	Fort loam, 1 to 5 percent slopes, cool	C	471.3	2.1%
119	Fort sandy loam, 1 to 8 percent slopes, cool	B	938.2	4.1%
120	Fort sandy loam, 8 to 15 percent slopes, cool	B	44.7	0.2%
125	Olnest sandy loam, 3 to 8 percent slopes	B	574.6	2.5%
HeA	Chromic Haplotorrerts, 0 to 1 percent slopes, ponded	D	6.3	0.0%
MzA	Manzanola silty clay loam, saline, 0 to 2 percent slopes	C	778.6	3.4%
Totals for Area of Interest			**22,941.3**	**100.0%**

Rating Options—Hydrologic Soil Group

Aggregation Method: Dominant Condition

Component Percent Cutoff: None Specified

Tie-break Rule: Higher

APPROVAL BLOCKS

DESIGN 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.

_____ _____
[David Bacci, P.E. #42104] Date

OWNER/DEVELOPER'S STATEMENT:

I, the owner/developer have read and will comply with the requirements of the grading and erosion control plan.

_____ _____
[Brian Vickers] Date
[Juwi]
[1710 29th St., Suite 1068, Boulder, CO 80301]

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 the El Paso County Engineer. If construction has not started within those 2 years, the plans will need to be resubmitted for approval, including payment of review fees at the Planning and Community Development Directors discretion.

_____ _____
Jennifer Irvine, P.E. Date
County Engineer / ECM Administrator

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Project Description

The following grading and erosion control report details the hydrologic assessment conducted for the proposed Pike Solar Project (the "Project"). The Project will be a 175 megawatt (MW) photovoltaic solar facility and up to 50 MW battery energy storage system consisting of photovoltaic modules aligned in arrays and affixed to a single-axis tracking system that will be constructed on an approximately 1,240-acre site in El Paso County, Colorado.

There are 3 stream crossings for the project. The first crosses Williams Creek west of Area 2. The second crosses an unnamed tributary north of Area 1 and south of Area 2. The third crosses the unnamed tributary as well, east of Area 7 and west of Area 8. Each of the crossings will constructed of concrete and no fill material will be placed in any of the streams. Temporary stream crossings will be used during construction, and then removed once the low water crossings are constructed. Refer to the Erosion and Sediment Control Measures section of this report for more information on Temporary Stream Crossings.

As shown on the Vicinity and Effective FIRM Panel Map in Appendix B, the project site lies just to the southeast of the City of Fountain and is bound by Squirrel Creek Road to the north, Hammer Road to the east, Hanover Road to the south, and Old Pueblo Road to the west (the "Site"). Specifically, the proposed Pike Solar project is located in Sections 1, 11, 12, 13, 14 23, 24, 25, 26, 35, and 36, Township 16 South, Range 65 West of the 6th Principal Meridian and Sections 6, 7, 18, 30, and 31, Township 16 South, Range 64 West of the 6th Principal Meridian, El Paso County, Colorado.

Existing Site Conditions

The project is currently undeveloped with shortgrass prairies and rangelands covering the entire landscape. For this reason, the site has been primarily utilized for cattle grazing to date. Williams Creek and its tributaries weave in and out of the project boundary before exiting and flowing approximately 6 miles before ultimately reaching its confluence with Fountain Creek. Since the site is situated towards the central portion of the Williams Creek drainage basin, the natural slopes range from 0.0327 to 8.35 percent to include numerous ridges as well and more gently sloping overland flow paths.

The Project site is situated near the center of the Williams Creek subwatershed, and due to the configuration of the project, the majority of the on-site runoff enters Williams Creek before ultimately exiting the Project site. Still, the project site represents only a small portion of the total drainage area of Williams Creek, which ultimately discharges into Fountain Creek, with the total contributing area for runoff being approximately eight times greater than the total Project site area.

Soils

The soils within the site vary throughout and include Ascalon Sandy Loam, Blendon Sandy Loam, Heldt Clay Loam, Midway Clay Loam, Nelson-Tassel Fine Sandy Loam, Olney Sandy Loam, Razor-Midway Compled, Ustic Torrifluvents, Wilid Silt Loam, Wiley Silt Loam, Fort Loam, Fort Sandy Loam, and Manzanola Silty Clay Loam. These soil types encompass hydrologic soil groups (HSGs) B, C, and D. Additional detail regarding the on-site soils can be found in the USDA Web Soil Survey report included in Appendix B.

Earthwork Areas and Volumes

Earthwork for project will be split into eight different areas, each including grading activities for solar arrays, access roads, and channels. To minimize the area of disturbance grading for solar

arrays will only take place in areas where the existing grade cannot sufficiently meet the solar arrays structural needs. Other construction activities will include concrete laid for low water crossings and pipe installed to allow 10-year minor storm events to pass beneath access roads.

The construction activities for Pike Solar will disturb approximately 169 acres. The project is divided into 8 areas. The cut/fill for each area is as follows:

- Area 1
    - Cut: 4,432 CY
    - Fill: 4,432 CY
    - Total: 0 CY (Balanced)
- Area 2
    - Cut: 15,990 CY
    - Fill: 15,990 CY
    - Total: 0 CY (Balanced)
- Area 3
    - Cut: 12,022 CY
    - Fill: 12,022 CY
    - Total: 0 CY (Balanced)
- Area 4
    - Cut: 9,484 CY
    - Fill: 9,484 CY
    - Total: 0 CY (Balanced)
- Area 5/BESS/SUBSTATION
    - Cut: 18,046 CY
    - Fill: 18,046 CY
    - Total: 0 CY (Balanced)
- Area 6
    - Cut: 4,232 CY
    - Fill: 4,232 CY
    - Total: 0 CY (Balanced)
- Area 7
    - Cut: 38,007 CY
    - Fill: 38,007 CY
    - Total: 0 CY (Balanced)
- Area 8
    - Cut: 4,308 CY
    - Fill: 4,308 CY
    - Total: 0 CY (Balanced)
- Total Site
    - Total Cut: 102,089 CY

- Total Fill: 102,089 CY
- Total: 0 CY (Balanced)

Final grades within the site will be stabilized once grading operations are complete. The Vicinity map is in Appendix A.

Erosion and Sediment Control Measures

Several erosion and sediment control measures are being implemented as part of the proposed construction activities for the site. The structural erosion and sediment control practices for the site include the use of diversion ditches, sediment traps, silt fence, stabilized staging area, vehicle tracking control, concrete washout areas, and temporary stream crossings. Non-structural erosion and sediment control practices for the site include surface roughening and seeding and mulching of all disturbed areas. Installation of the erosion control measures shall conform to El Paso County Grading and Erosion Control Criteria.

The contractor will be responsible for maintaining the erosion and sediment control measures and repairing or replacing one or all the items if they should fail to function as intended. The contractor shall be required to inspect all erosion and sediment control facilities after each rainfall or once every week, whichever is more frequent. Refer to the Grading and Erosion Control plans for Pike Solar for the location of all proposed grading and erosion control measures.

Diversion Ditch
Diversion ditches will be utilized throughout the site to divert runoff into different sediment basins. The contractor is responsible for removing excess sediment from the ditches.

Sediment Trap
Sediment Traps will be used in low points of silt fence. The sediment traps collect the sediment and water and release the water over a riprap berm.

Silt Fence
Silt fence barriers will be installed along the contour of slopes so that it intercepts sheet flow. Silt Fence installed for perimeter control should be installed in a way that will not produce concentrated flows. Silt fences will be staked into place at no more than 10-foot increments, with the stakes on the down-slope side of the fence fabric. The stakes will extend approximately 18 inches below the ground surface, depending on site conditions. The toe of the fence will be buried under soil or gravel to keep sediments from being washed under the silt fencing. In areas where silt fence runs along a slope greater than 5% J-hooks will be installed. Silt Fences shall be maintained and repaired on a regular schedule, and any silt collected shall be removed and reused in site grading activities.

Stabilized Staging Area
The Stabilized Staging Areas will be used for a parking, storage, unloading, loading and chemical storage, if necessary, during construction of the infrastructure and solar arrays. The stabilized staging areas will be used through construction of Pike Solar and will remain through the life of the project.

Vehicle Tracking Control
Vehicle tracking control facilities shall be installed at each entrance/exit from the site to remove loose soil from construction equipment tires, and to prevent the accumulation of soils onto existing

streets adjacent to the site. The control pads will consist of 3"-6" angular, dense, and durable stone. It shall be the responsibility of the contractor to remove any soil that is tracked onto the existing streets daily.

Concrete Washout Area
A Concrete Washout is an on-site area which is a shallow excavation with a small perimeter berm to isolate concrete truck washout operations. Concrete Washout Areas will be located within the stabilized staging area for each of the eight solar generation areas. Concrete Washout Area must be in place prior to commencement of concrete activities.

Temporary Stream Crossing
A temporary stream crossing consists of a riprap layer or culverts covered with riprap to allow construction equipment to cross a stream. In either case, excavation of the existing channel banks is not allowed and, in general, disturbance is to be kept to a minimum.

Seeding and Mulching
Seeding shall be applied to all disturbed areas after all grading activities have ended. A proper seed mix shall be used for the site. If newly seeded areas need to be temporarily protected, a cover of mulch can provide protection for areas that will not require temporary vegetation. All areas that have been seeded must be mulched. The mulch must be anchored by mechanical crimps, and crimp mulched area may also require an application of tackifier or other appropriate spray on product if windy conditions exist.

Potential Pollutant Sources

The following potential pollutant sources which may reasonably be expected to affect the quality of stormwater discharges have been evaluated for the project.

- All disturbed and stored soils (from grading, excavo-bating, stockpiling, etc.): See Erosion and Sediment Control Measures section of this report.
- Vehicle tracking of sediments (onto adjacent paved surfaces): See Erosion and Sediment Control Measures section of this report.
- Management of contaminated soils: Contaminated soils may occur during construction. Contaminated materials, soils, etc. shall be cleaned-up and placed in a sealed, leak-proof container and disposed of in accordance with local requirements.
- Loading and unloading operations: Designating areas (e.g., SSA) for loading and unloading; loading and unloading of materials in a manner to reduce the likelihood of spills; providing spill kits and determining appropriate measures to mitigate spills for the delivery of materials and supplies that cannot be made in the construction materials storage areas. In the event of a spill of discharge of any hazardous materials the contractor shall contact the GEC manager and if applicable contact the following agencies within twenty-four hours.
    - El Paso County Dispatch at 719-520-6460
    - Colorado Environmental Release and Incident Reporting Line (877) 518-5608
    - EPA Region 8 Emergency Response Spill Report Line (303) 293-178
    - National Response Center at (800) 424-8802
    - If the hazardous condition involves the release of an EPA regulated material or an oil as defined by the EPA, the release may also need to be reported to the National Response Center. Federal Reporting is required within 15 minutes of event occurrence

or discovery. Contact the National Response Center at (800) 424-8802. The NRC is staffed twenty-four hours a day. For more information reference the following website: https://www.epa.gov/emergency-respone/when-are-you-required-report-oil-spill-and-hazardous-substance-release

- Outdoor storage activities (erodible construction materials, fertilizers, chemicals, etc.): Storing fertilizers or chemicals on-site in the construction materials storage area; storing project materials in the construction materials storage area (i.e., SSA); containing the SSA (with, for example, silt fence and/or sediment control logs); etc.
    - Bulk (55 gallons or greater) storage for petroleum products and other liquid chemicals shall not occur on site.
- Vehicle and equipment maintenance and fueling: Construction equipment shall not have leaking fluid or hydraulic hoses; and fueling equipment shall have automatic shut-off valves to prevent overfilling and potential spills. Bulk storage of petroleum products and other liquid chemicals shall have secondary containment, or equivalent protection.
- Significant dust or particulate generating processes (e.g., saw cutting material, including dust): Periodically spraying stockpiles of stripped materials with water or a crusting agent to stabilize potentially wind-blown material; tarping trucks hauling import fill materials to control airborne dust; suspending or limiting construction activity during high wind events (20 to 30 MPH sustained) if dust cannot be controlled by wetting or similar means; etc.
- Routine maintenance activities involving fertilizers, pesticides, herbicides, detergents, fuels, solvents, oils, etc.: Designating areas (e.g., SSA) for maintenance activities involving potential pollutants that could spill; storing liquids and chemicals in secondary containment; training personnel in the proper use and storage of materials.
- On-site waste management practices (waste piles, liquid wastes, dumpsters, etc.)
- Concrete truck/equipment washing, including washing of the concrete truck chute and associated fixtures and equipment.: See Erosion and Sediment Control Measures section of this report.
- Dedicated asphalt, concrete batch plants and masonry mixing stations: No asphalt or concrete batch plants or masonry mixing stations are planned for use. If masonry mixing stations are used for retaining wall construction, they will be contained with silt fence, sediment control logs, or similar sediment control measures.

Non-industrial waste sources such as worker trash and portable toilets: Keeping the construction site clean and orderly; routine disposal of trash, construction site wastes, sanitary wastes, etc.; recycling or disposing of materials and/or fluids properly; providing waste disposal receptacles at the site and requiring that construction trash, debris, and wastes be disposed of in a proper manner; personnel training in good housekeeping practices; securing portable toilets to the ground to prevent tipping and locating away from waterways; etc.

Non-Stormwater Discharges

The following is a summary of non-stormwater discharges. They are allowable if they have appropriate control measures (CMs).

- Discharges from uncontaminated springs that do not originate from an area of land disturbance. **Not anticipated for the project.**
- Discharges to the ground of concrete washout water associated with the washing of concrete tools and concrete mixer chutes. Discharges of concrete washout water must not leave the

site as surface runoff or reach receiving waters as defined by the Permit. **Not anticipated for the project.**

- Discharges of landscape/agricultural irrigation return flow. **Not anticipated for the project.**
- Groundwater and/or stormwater dewatering practices. **Not anticipated for this project.**

Timing/Phasing Schedule

Prior to the start of the grading activities, all erosion and sediment control practices outlined on the initial GEC plans will be installed. All other erosion and sediment control practices will be installed as required after grading and construction has begun. Once the grading activities are complete, all applicable final BMP's will be installed. Construction will commence in October 2021 and end in October 2022 for the project only, and a revised or new GEC will be required for activities associated with other construction activities. Refer to the El Paso County GEC Manual for Initial and Final close-out information. Initial BMP's will be installed prior to the start of grading operations. Final BMP's will be installed after all site construction is installed.

After construction has been completed and proper vegetation has been established in accordance with the GEC plans, then all temporary BMPs shall be removed. The initial close-out inspection from the El Paso County GEC inspector shall be requested.

Permanent Stabilization

All disturbed areas that are inactive for more than 14 days must be either temporarily or permanently stabilized. Permanent stabilization of land disturbed by construction activities must be accomplished after completion of construction. All areas on-site will be seeded and mulched with permanent seed mix. Application of the approved seed mix will be performed by the approved methods in the El Paso County GEC Manual. All seeded areas shall be mulched after seeding on the same day.

Stormwater Management Considerations

Runoff will travel through the site by following the existing drainage patterns. Stormwater runoff velocities during construction must be controlled in areas of disturbed soil surface. Measures around the site are needed to control velocities such as: silt fence at the down slope of newly graded areas.

Maintenance

The GEC Manager shall plan, install, and maintain all erosion control measures as indicated on the GEC plan as necessary to prevent sediment deposition off-site. The GEC Manager is responsible for cleanup of sediment or construction debris tracked onto adjacent paved areas. Paved areas are to be kept clean throughout build-out and shall be cleaned with a street sweeper or a similar device at first notice of accidental tracking or at the discretion of the El Paso County GEC inspector. All erosion and sediment control measures will be cleaned and repaired as outlined in the standard notes and details, which can be found on the GEC plans. No special maintenance requirements are needed at this time.

Opinion of Probable Cost for Installation of BMP's

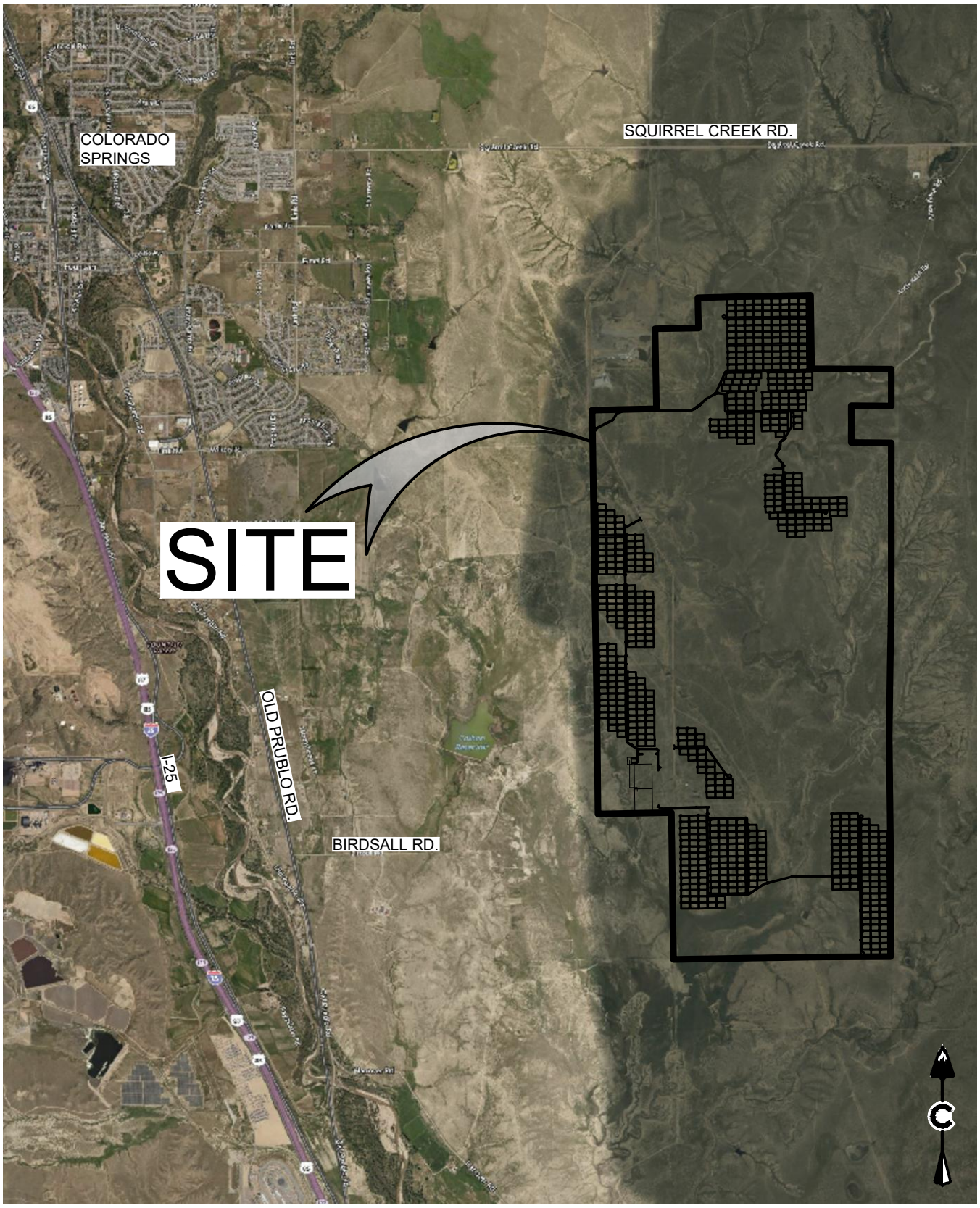
The estimated cost for the erosion control BMPs is $962,800.08. This estimate is included in Appendix B.

Appendix A

VICINITY MAP

FIRM MAP

SOILS MAP



CORE CONSULTANTS. INC.
LIVEYOURCORE.COM

0 5,000'

1 inch = 5,000 ft.

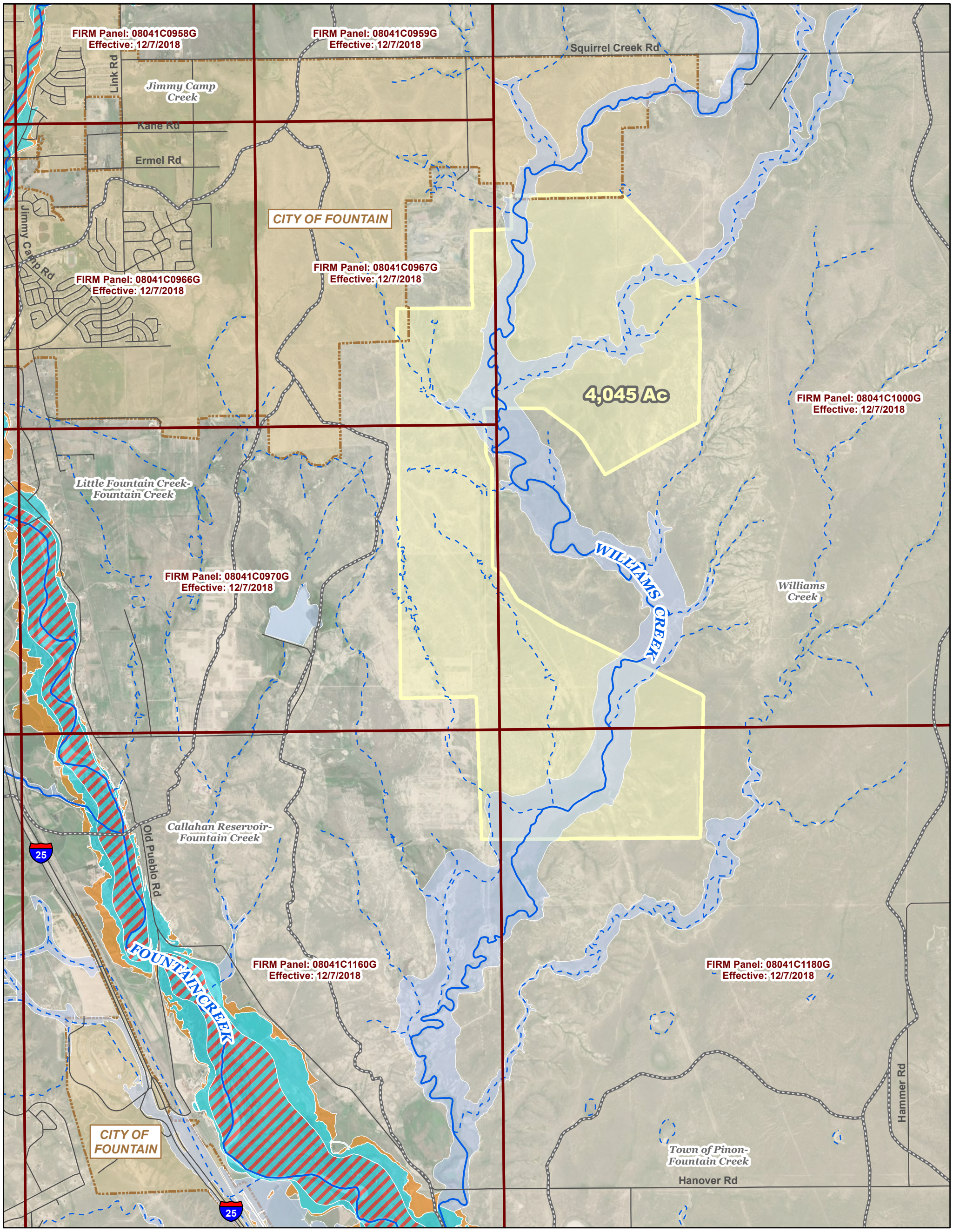
PIKE SOLAR
VICINITY MAP

CREATED BY: TP DATE: 03/29/21

SHEET NUMBER 1 OF 1 SHEETS

JOB NUMBER 21-194

3/29/2021 8:16 AM - X:\20-194 PIKE SOLAR\CIVIL\CAD\EXHIBITS\2021-03-29-VICINITY MAP\VICINITY MAP.DWG



Pike Solar Development

Vicinity and Effective FIRM Map

El Paso County, CO

0 2,500 5,000 10,000 Feet

1:40,000

Project #: 20-194
Date: 3/4/2021

CORE CONSULTANTS

Legend

- Project Site
- City Limits
- Road
- Watershed (12-digit HUC)

FEMA Flowline

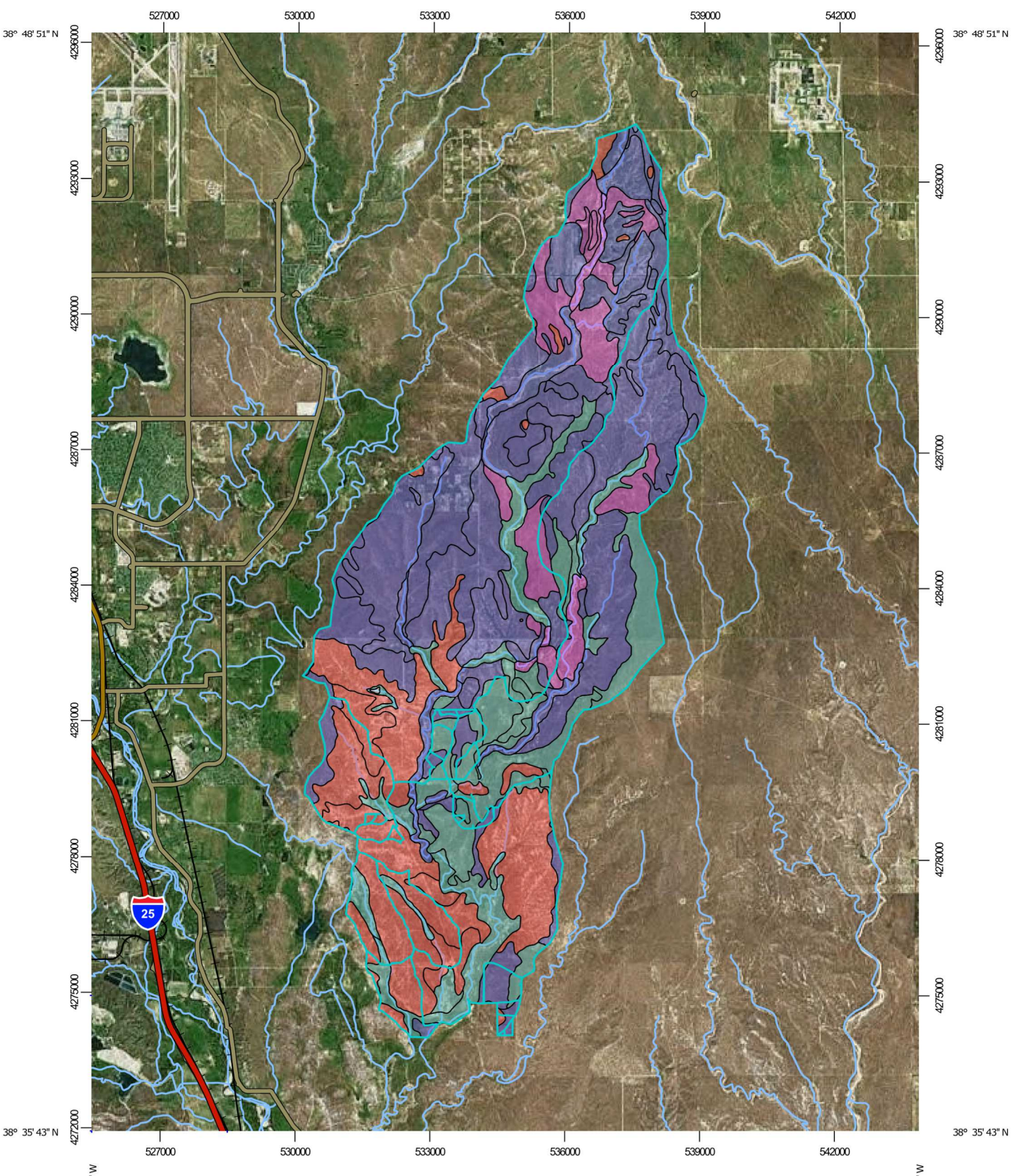
- Major Stream
- Minor Tributary

- FEMA FIRM Panel

FEMA Flood Hazard Area

- 0.2% Annual Chance Flood Hazard *(Zone X)*
- 1% Annual Chance Flood Hazard *(Zone A)*
- 1% Annual Chance Flood Hazard with BFEs *(Zone AE)*
- Regulatory Floodway

Custom Soil Resource Report
Map—Hydrologic Soil Group



Map Scale: 1:118,000 if printed on A portrait (8.5" x 11") sheet.

N

Meters
0 1500 3000 6000 9000

Feet
0 5000 10000 20000 30000

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

Appendix B

FINANCIAL ASSURANCE
SAMPLE GEC CHECKLIST
GEC REVIEW CHECKLIST

2021 Financial Assurance Estimate Form
(with pre-plat construction)

Updated: 12/22/2020

PROJECT INFORMATION		
Project Name	**Date**	**PCD File No.**

Description	Quantity	Units	Unit Cost		Total	(with Pre-Plat Construction) % Complete	Remaining
SECTION 1 - GRADING AND EROSION CONTROL (Construction and Permanent BMPs)							
* Earthwork							*
less than 1,000; $5,300 min		CY	$ 8.00	=	$ -		$ - *
1,000-5,000; $8,000 min		CY	$ 6.00	=	$ -		$ - *
5,001-20,000; $30,000 min		CY	$ 5.00	=	$ -		$ - *
20,001-50,000; $100,000 min		CY	$ 3.50	=	$ -		$ - *
50,001-200,000; $175,000 min		CY	$ 2.50	=	$ -		$ - *
greater than 200,000; $500,000 min		CY	$ 2.00	=	$ -		$ - *
* Permanent Seeding (inc. noxious weed mgmnt.)	134	AC	$ 828.00	=	$ 110,952.00		$ 110,952.00 *
* Mulching		AC	$ 777.00	=	$ -		$ - *
* Permanent Erosion Control Blanket		SY	$ 6.00	=	$ -		$ - *
* Permanent Pond/BMP Construction		CY	$ 21.00	=	$ -		$ - *
* Permanent Pond/BMP (provide engineer's estimate)		EA		=	$ -		$ - *
		EA		=	$ -		$ - *
Safety Fence		LF	$ 3.00	=	$ -		$ -
Temporary Erosion Control Blanket		SY	$ 3.00	=	$ -		$ -
Vehicle Tracking Control	7	EA	$ 2,453.00	=	$ 17,171.00		$ 17,171.00
Silt Fence	50,510	LF	$ 2.60	=	$ 131,326.00		$ 131,326.00
Temporary Seeding		AC	$ 650.00	=	$ -		$ -
Temporary Mulch		AC	$ 777.00	=	$ -		$ -
Erosion Bales		EA	$ 26.00	=	$ -		$ -
Erosion Logs/Straw Waddle	396	LF	$ 5.00	=	$ 1,980.00		$ 1,980.00
Rock Check Dams	21	EA	$ 518.00	=	$ 10,878.00		$ 10,878.00
Inlet Protection		EA	$ 173.00	=	$ -		$ -
Sediment Basin	2	EA	$ 1,824.00	=	$ 3,648.00		$ 3,648.00
Concrete Washout Basin	3	EA	$ 932.00	=	$ 2,796.00		$ 2,796.00
				=	$ -		$ -
[insert items not listed but part of construction plans]				=	$ -		$ -
MAINTENANCE (35% of Construction BMPs)				=	$ 58,729.65		$ 58,729.65
* - Subject to defect warranty financial assurance. A minimum of 20% shall be retained until final acceptance (MAXIMUM OF 80% COMPLETE ALLOWED)		**Section 1 Subtotal**		**=**	**$ 337,480.65**		**$ 337,480.65**
SECTION 2 - PUBLIC IMPROVEMENTS *							
ROADWAY IMPROVEMENTS							*
Construction Traffic Control		LS		=	$ -		$ - *
Aggregate Base Course (135 lbs/cf)		Tons	$ 29.00	=	$ -		$ - *
Aggregate Base Course (135 lbs/cf)		CY	$ 52.00		$ -		$ - *
Asphalt Pavement (3" thick)		SY	$ 14.50		$ -		$ - *
Asphalt Pavement (4" thick)		SY	$ 20.00		$ -		$ - *
Asphalt Pavement (6" thick)		SY	$ 30.00		$ -		$ - *
Asphalt Pavement (147 lbs/cf) _" thick		Tons	$ 91.00	=	$ -		$ - *
Raised Median, Paved		SF	$ 8.30	=	$ -		$ - *
Regulatory Sign/Advisory Sign		EA	$ 311.00	=	$ -		$ - *
Guide/Street Name Sign		EA		=	$ -		$ - *
Epoxy Pavement Marking		SF	$ 14.00	=	$ -		$ - *
Thermoplastic Pavement Marking		SF	$ 24.00	=	$ -		$ - *
Barricade - Type 3		EA	$ 207.00	=	$ -		$ - *
Delineator - Type I		EA	$ 25.00	=	$ -		$ - *
Curb and Gutter, Type A (6" Vertical)		LF	$ 31.00	=	$ -		$ - *
Curb and Gutter, Type B (Median)		LF	$ 31.00	=	$ -		$ - *
Curb and Gutter, Type C (Ramp)		LF	$ 31.00	=	$ -		$ - *
4" Sidewalk (common areas only)		SY	$ 50.00	=	$ -		$ - *
5" Sidewalk		SY	$ 62.00	=	$ -		$ - *
6" Sidewalk		SY	$ 75.00	=	$ -		$ - *
8" Sidewalk		SY	$ 99.00		$ -		$ - *
Pedestrian Ramp		EA	$ 1,190.00	=	$ -		$ - *
Cross Pan, local (8" thick, 6' wide to include return)		LF	$ 63.00	=	$ -		$ - *
Cross Pan, collector (9" thick, 8' wide to include return)		LF	$ 95.00		$ -		$ - *
Curb Chase		EA	$ 1,532.00	=	$ -		$ - *
Guardrail Type 3 (W-Beam)		LF	$ 51.00	=	$ -		$ - *
Guardrail Type 7 (Concrete)		LF	$ 75.00	=	$ -		$ - *
Guardrail End Anchorage		EA	$ 2,172.00	=	$ -		$ - *
Guardrail Impact Attenuator		EA	$ 3,899.00	=	$ -		$ - *
Sound Barrier Fence (CMU block, 6' high)		LF	$ 81.00		$ -		$ - *
Sound Barrier Fence (panels, 6' high)		LF	$ 83.00	=	$ -		$ - *
Electrical Conduit, Size =		LF	$ 17.00	=	$ -		$ - *
Traffic Signal, complete intersection		EA	$ 439,875	=	$ -		$ - *

PROJECT INFORMATION		
Project Name	**Date**	**PCD File No.**

Description	Quantity	Units	Unit Cost		Total	(with Pre-Plat Construction) % Complete	Remaining	
				=	$ -		$ -	
[insert items not listed but part of construction plans]				=	$ -		$ -	*
STORM DRAIN IMPROVEMENTS								*
Concrete Box Culvert (M Standard), Size (W x H)		LF		=	$ -		$ -	*
18" Reinforced Concrete Pipe		LF	$ 67.00	=	$ -		$ -	*
24" Reinforced Concrete Pipe		LF	$ 81.00	=	$ -		$ -	*
30" Reinforced Concrete Pipe		LF	$ 100.00	=	$ -		$ -	*
36" Reinforced Concrete Pipe		LF	$ 124.00	=	$ -		$ -	*
42" Reinforced Concrete Pipe		LF	$ 166.00	=	$ -		$ -	*
48" Reinforced Concrete Pipe		LF	$ 202.00	=	$ -		$ -	*
54" Reinforced Concrete Pipe		LF	$ 254.00	=	$ -		$ -	*
60" Reinforced Concrete Pipe		LF	$ 298.00	=	$ -		$ -	*
66" Reinforced Concrete Pipe		LF	$ 344.00	=	$ -		$ -	*
72" Reinforced Concrete Pipe		LF	$ 393.00	=	$ -		$ -	*
18" Corrugated Steel Pipe		LF	$ 87.00	=	$ -		$ -	*
24" Corrugated Steel Pipe		LF	$ 99.00	=	$ -		$ -	*
30" Corrugated Steel Pipe		LF	$ 126.00	=	$ -		$ -	*
36" Corrugated Steel Pipe		LF	$ 152.00	=	$ -		$ -	*
42" Corrugated Steel Pipe		LF	$ 174.00	=	$ -		$ -	*
48" Corrugated Steel Pipe		LF	$ 184.00	=	$ -		$ -	*
54" Corrugated Steel Pipe		LF	$ 269.00	=	$ -		$ -	*
60" Corrugated Steel Pipe		LF	$ 290.00	=	$ -		$ -	*
66" Corrugated Steel Pipe		LF	$ 352.00	=	$ -		$ -	*
72" Corrugated Steel Pipe		LF	$ 414.00	=	$ -		$ -	*
78" Corrugated Steel Pipe		LF	$ 476.00	=	$ -		$ -	*
84" Corrugated Steel Pipe		LF	$ 569.00	=	$ -		$ -	*
Flared End Section (FES) RCP Size = (unit cost = 6x pipe unit cost)		EA		=	$ -		$ -	*
Flared End Section (FES) CSP Size = (unit cost = 6x pipe unit cost)		EA		=	$ -		$ -	*
End Treatment- Headwall		EA		=	$ -		$ -	*
End Treatment- Wingwall		EA		=	$ -		$ -	*
End Treatment - Cutoff Wall		EA		=	$ -		$ -	*
Curb Inlet (Type R) L=5', Depth < 5'		EA	$ 5,736.00	=	$ -		$ -	*
Curb Inlet (Type R) L=5', 5' ≤ Depth < 10'		EA	$ 7,440.00	=	$ -		$ -	*
Curb Inlet (Type R) L =5', 10' ≤ Depth < 15'		EA	$ 8,637.00	=	$ -		$ -	*
Curb Inlet (Type R) L =10', Depth < 5'		EA	$ 7,894.00	=	$ -		$ -	*
Curb Inlet (Type R) L =10', 5' ≤ Depth < 10'		EA	$ 8,136.00	=	$ -		$ -	*
Curb Inlet (Type R) L =10', 10' ≤ Depth < 15'		EA	$ 10,185.00	=	$ -		$ -	*
Curb Inlet (Type R) L =15', Depth < 5'		EA	$ 10,265.00	=	$ -		$ -	*
Curb Inlet (Type R) L =15', 5' ≤ Depth < 10'		EA	$ 11,005.00	=	$ -		$ -	*
Curb Inlet (Type R) L =15', 10' ≤ Depth < 15'		EA	$ 12,034.00	=	$ -		$ -	*
Curb Inlet (Type R) L =20', Depth < 5'		EA	$ 10,940.00	=	$ -		$ -	*
Curb Inlet (Type R) L =20', 5' ≤ Depth < 10'		EA	$ 12,075.00	=	$ -		$ -	*
Grated Inlet (Type C), Depth < 5'		EA	$ 4,802.00	=	$ -		$ -	*
Grated Inlet (Type D), Depth < 5'		EA	$ 5,932.00	=	$ -		$ -	*
Storm Sewer Manhole, Box Base		EA	$ 12,034.00	=	$ -		$ -	*
Storm Sewer Manhole, Slab Base		EA	$ 6,619.00	=	$ -		$ -	*
Geotextile (Erosion Control)		SY	$ 6.20	=	$ -		$ -	*
Rip Rap, d50 size from 6" to 24"		Tons	$ 83.00	=	$ -		$ -	*
Rip Rap, Grouted		Tons	$ 98.00	=	$ -		$ -	*
Drainage Channel Construction, Size (W x H)		LF		=	$ -		$ -	*
Drainage Channel Lining, Concrete		CY	$ 590.00	=	$ -		$ -	*
Drainage Channel Lining, Rip Rap		CY	$ 116.00	=	$ -		$ -	*
Drainage Channel Lining, Grass		AC	$ 1,520.00	=	$ -		$ -	
Drainage Channel Lining, Other Stabilization				=	$ -		$ -	*
				=	$ -		$ -	
[insert items not listed but part of construction plans]				=	$ -		$ -	
* - Subject to defect warranty financial assurance. A minimum of 20% shall be retained until final acceptance (MAXIMUM OF 80% COMPLETE ALLOWED)			**Section 2 Subtotal**	**=**	**$ -**		**$ -**	

PROJECT INFORMATION		
Project Name	Date	PCD File No.

Description	Quantity	Units	Unit Cost		Total	(with Pre-Plat Construction) % Complete	(with Pre-Plat Construction) Remaining
SECTION 3 - COMMON DEVELOPMENT IMPROVEMENTS (Private or District and NOT Maintained by EPC)**							
ROADWAY IMPROVEMENTS							
				=	$ -		$ -
				=	$ -		$ -
				=	$ -		$ -
				=	$ -		$ -
				=	$ -		$ -
				=	$ -		$ -
STORM DRAIN IMPROVEMENTS	(Exception: Permanent Pond/BMP shall be itemized under Section 1)						
				=	$ -		$ -
				=	$ -		$ -
				=	$ -		$ -
				=	$ -		$ -
				=	$ -		$ -
				=	$ -		$ -
WATER SYSTEM IMPROVEMENTS							
Water Main Pipe (PVC), Size 8"		LF	$ 66.00	=	$ -		$ -
Water Main Pipe (Ductile Iron), Size 8"		LF	$ 78.00	=	$ -		$ -
Gate Valves, 8"		EA	$ 1,923.00	=	$ -		$ -
Fire Hydrant Assembly, w/ all valves		EA	$ 6,828.00	=	$ -		$ -
Water Service Line Installation, inc. tap and valves		EA	$ 1,370.00	=	$ -		$ -
Fire Cistern Installation, complete		EA		=	$ -		$ -
				=	$ -		$ -
[insert items not listed but part of construction plans]				=	$ -		$ -
SANITARY SEWER IMPROVEMENTS							
Sewer Main Pipe (PVC), Size 8"		LF	$ 66.00	=	$ -		$ -
Sanitary Sewer Manhole, Depth < 15 feet		EA	$ 4,540.00	=	$ -		$ -
Sanitary Service Line Installation, complete		EA	$ 1,451.00	=	$ -		$ -
Sanitary Sewer Lift Station, complete		EA		=	$ -		$ -
				=	$ -		$ -
[insert items not listed but part of construction plans]				=	$ -		$ -
LANDSCAPING IMPROVEMENTS	(For subdivision specific condition of approval, or PUD)						
		EA		=	$ -		$ -
		EA		=	$ -		$ -
		EA		=	$ -		$ -
		EA		=	$ -		$ -
		EA		=	$ -		$ -
** - Section 3 is not subject to defect warranty requirements		**Section 3 Subtotal**		**=**	**$ -**		**$ -**

PROJECT INFORMATION		
Project Name	**Date**	**PCD File No.**

Description	Quantity	Units	Unit Cost		Total	(with Pre-Plat Construction) % Complete	Remaining
AS-BUILT PLANS (Public Improvements inc. Permanent WQCV BMPs)		LS		=	$ -		$ -
POND/BMP CERTIFICATION (inc. elevations and volume calculations)		LS		=	$ -		$ -

Total Construction Financial Assurance **$ 337,480.65**
(Sum of all section subtotals plus as-builts and pond/BMP certification)

Total Remaining Construction Financial Assurance (with Pre-Plat Construction) **$ 337,480.65**
(Sum of all section totals less credit for items complete plus as-builts and pond/BMP certification)

Total Defect Warranty Financial Assurance **$ 22,190.40**
(20% of all items identified as (*). To be collateralized at time of preliminary acceptance)

Approvals

I hereby certify that this is an accurate and complete estimate of costs for the work as shown on the Grading and Erosion Control Plan and Construction Drawings associated with the Project.

Engineer (P.E. Seal Required)

Approved by Owner / Applicant — Date

Approved by El Paso County Engineer / ECM Administrator — Date

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EL PASO COUNTY
STORMWATER MANAGEMENT
PLAN CHECKLIST

EPC Project Number:

Revised: July 2019

		Applicant	EPC
1. STORMWATER MANAGEMENT PLAN			
1	Applicant (owner/designated operator), SWMP Preparer, Qualified Stormwater Manager, and Contractor Information. (On cover/title sheet)		
2	Table of Contents	X	
3	Site description and location to include: vicinity map with nearest street/crossroads description		
4	Narrative description of construction activities proposed (e.g., may include clearing and grubbing, temporary stabilization, road grading, utility / storm installation, final grading, final stabilization, and removal of temporary control measures)		
5	Phasing plan – may require separate drawings indicating initial, interim, and final site phases for larger projects. Provide "living maps" that can be revised in the field as conditions dictate		
6	Proposed sequence for major activities: Provide a construction schedule of anticipated starting and completion dates for each stage of land-disturbing activity depicting conservation measures anticipated, including the expected date on which the final stabilization will be completed		
7	Estimates of the total site area and area to undergo disturbance; current area of disturbance must be updated on the SWMP as changes occur	X	
8	Soil erosion potential and impacts on discharge that includes a summary of the data used to determine soil erosion potential		
9	A description of existing vegetation at the site and percent ground cover and method used to determine ground cover		
10	Location and description of all potential pollution sources including but not limited to: disturbed and stored soils; vehicle tracking; management of contaminated soils; loading and unloading operations; outdoor storage of materials; vehicle and equipment maintenance and fueling; significant dust generating process; routine maintenance activities involving fertilizers, pesticides, herbicides, detergents, fuels, solvents, oils, etc.; on-site waste management; concrete truck/equipment washing; dedicated asphalt, concrete batch plants and masonry mixing stations; non-industrial waste such as trash and portable toilets		
11	Material handling to include spill prevention and response plan and procedures		
12	Spill prevention and pollution controls for dedicated batch plants		
13	Other SW pollutant control measures to include waste disposal and off-site soil tracking		
14	Location and description of any anticipated allowable non-stormwater discharge (ground water, springs, irrigation, discharge covered by CDPHE Low Risk Guidance, etc.)		
15	Name(s) of ultimate receiving waters; size, type and location of stormwater outfall or storm sewer system discharge		
16	Description of all stream crossings located within the project area or statement that no streams cross the project area		

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		Applicant	EPC
17	SWMP Map to include:		
17a	construction site boundaries		
17b	flow arrows to depict stormwater flow directions		
17c	all areas of disturbance		
17d	areas of cut and fill		
17e	areas used for storage of building materials, soils (stockpiles) or wastes		
17f	location of any dedicated asphalt / concrete batch plants		
17g	location of all structural control measures		
17h	location of all non-structural control measures		
17i	springs, streams, wetlands and other surface waters, including areas that require maintenance of pre-existing vegetation within 50 feet of a receiving water		
18	Narrative description of all structural control measures to be used. Modifications to EPC standard control measures must meet or exceed County-approved details		
19	Description of all non-structural control measures to be used including seeding, mulching, protection of existing vegetation, site watering, sod placement, etc.		
20	Technical drawing details for all control measure installation and maintenance; custom or other jurisdiction's details used must meet or exceed EPC standards		
21	Procedure describing how the SWMP is to be revised		
22	Description of Final Stabilization and Long-term Stormwater Quality (describe nonstructural and structural measures to control SW pollutants after construction operations have been completed, including detention, water quality control measure etc.)		
23	Specification that final vegetative cover density is to be 70% of pre-disturbed levels		
24	Outline of permit holder inspection procedures to install, maintain, and effectively operate control measures to manage erosion and sediment		
25	Record keeping procedures identified to include signature on inspection logs and location of SWMP records on-site		
26	If this project relies on control measures owned or operated by another entity, a documented agreement must be included in the SWMP that identifies location, installation and design specifications, and maintenance requirements and responsibility of the control measure(s)		
	Please note: all items above must be addressed. If not applicable, explain why, simply identifying "not applicable" will not satisfy CDPHE requirement of explanation.		
2. ADDITIONAL REPORTS/PERMITS/DOCUMENTS			
a	Grading and Erosion Control Plan (signed)		
b	Erosion and Stormwater Quality Control Permit (ESQCP) (signed)		

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EL PASO COUNTY
STORMWATER MANAGEMENT
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EPC Project Number:

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		Applicant	EPC
3. APPLICANT COMMENTS			
a			
b			
c			
4. CHECKLIST REVIEW CERTIFICATIONS			
a	Engineer of Record: The Stormwater Management 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 and State for Stormwater Management Plans. _____ _____ Engineer of Record Signature Date		
b	Review Engineer: The Stormwater Management Plan was reviewed and found to meet the checklist requirements except where otherwise noted or allowed by an approved deviation request. _____ _____ Review Engineer Date		

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EL PASO COUNTY
GRADING AND EROSION CONTROL PLAN CHECKLIST

EPC Project Number:

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		Applicant	EPC
1. GRADING AND EROSION CONTROL PLAN			
a	Vicinity map		
b	Adjacent city/town/jurisdictional boundaries, subdivision names, and property parcel numbers labeled		
c	North arrow and acceptable scale (1"=20' to 1"=100')		
d	Legend for all symbols used in the plan		
e	Existing and proposed property lines. Proposed subdivision boundary for subdivision projects		
f	All existing structures		
g	All existing utilities		
h	Construction site boundaries		
i	Existing vegetation (notes are acceptable in cases where there is no notable vegetation, only grasses/weeds, or site has already been stripped)		
j	FEMA 100-yr floodplain		
k	Existing and proposed water courses including springs, streams, wetlands, detention ponds, stormwater quality structures, roadside ditches, irrigation ditches and other water surfaces. Show maintenance of pre-existing vegetation within 50 feet of a receiving water		
l	Existing and proposed contours 2 feet or less (except for hillside)		
m	Limits of disturbance delineating all anticipated areas of soil disturbance		
n	Identify and protect areas outside of the construction site boundary with existing fencing, construction fencing or other methods as appropriate		
o	Off-site grading clearly shown and called out		
p	Areas of cut and fill identified		
q	Conclusions from soils/geotechnical report and geologic hazards report incorporated in grading design (slopes, embankments, materials, mitigation, etc.)		
r	Proposed slopes steeper than 3:1 with top and toe of slope delineated. Erosion control blanketing or other protective covering required		
s	Stormwater flow direction arrows		
t	Location of any dedicated asphalt / concrete batch plants		
u	Areas used for staging, storage of building materials, soils (stockpiles) or wastes. The use of construction office trailers requires PCD permitting		
v	All proposed temporary construction control measures, structural and non-structural. Temporary construction control measures shall be identified by phase of implementation to include" "initial," "interim," and "final" or shown on separate phased maps identifying each phase		
w	Vehicle tracking provided at all construction entrances/exits. Construction fencing, barricades, and/or signage provided at access points not to be used for construction		
x	Temporary sediment ponds provided for disturbed drainage areas greater than 1 acre		

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GRADING AND EROSION CONTROL
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		Applicant	EPC
y	Dewatering operations to include locations of diversion, pump and discharge(s) as anticipated at time of design		
z	All proposed temporary construction control measure details. Custom or other jurisdiction's details used must meet or exceed EPC standards		
aa	Any off-site stormwater control measure proposed for use by the project and not under the direct control or ownership of the Owner or Operator		
bb	Existing and proposed permanent storm water management facilities, including areas proposed for stormwater infiltration or subsurface detention		
cc	Existing and proposed easements (permanent and construction) including required off-site easements		
dd	Retaining walls (not to be located in County ROW unless approved via license agreement). Design by P.E. and building permit from Regional Building Department required for walls greater than or equal to 4 feet in height, series of walls, or walls supporting a surcharge		
ee	Plan certified by a Colorado Registered P.E., with EPC standard signature blocks for Engineer, Owner and EPC		
ff	Engineer's Statement (for standalone GEC Plan): 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. _____ _____ Engineer of Record Signature Date		
gg	Engineer's Statement (for GEC Plan within Construction Drawing set): These detailed plans and specifications were prepared under my direction and supervision. Said plans and specifications have been prepared according to 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 preparation of these detailed plans and specifications. _____ _____ Engineer of Record Signature Date		
hh	Owner's Statement (for standalone GEC Plan): I, the owner/developer have read and will comply with the requirements of the Grading and Erosion Control Plan. _____ _____ Owner Signature Date		
ii	Owner's Statement (for GEC Plan within Construction Drawing set): I, the owner/developer have read and will comply with the requirements of the grading and erosion control plan and all of the requirements specified in these detailed plans and specifications. _____ _____ Owner Signature Date		

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GRADING AND EROSION CONTROL
PLAN CHECKLIST

EPC Project Number:

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		Applicant	EPC
jj	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 the El Paso County Engineer. If construction has not started within those 2 years, the plans will need to be resubmitted for approval, including payment of review fees at the Planning and Community Development Director's discretion. _____ _____ County Project Engineer Signature Date		
2. ADDITIONAL REPORTS/PERMITS/DOCUMENTS			
a	Soils report / geotechnical investigation as appropriate for grading/utilities/drainage/road construction.		
b	Use Agreement/easement between the Owner or Operator and other third party for use of all off-site grading or stormwater control measures, used by the owner or operator but not under their direct control or ownership.		
c	Floodplain Development Permit		
d	USACE 404/wetlands permit/mitigation plan		
e	FEMA CLOMR		
f	State Engineer's permit/Notice Of Intent to Construct		
g	Stormwater Management Plan (SWMP)		
h	Financial Assurance Estimate (FAE) (signed)		
i	Erosion and Stormwater Quality Control Permit (ESQCP) (signed)		
j	Pre-Development Site Grading Acknowledgement & Right of Access Form (signed)		
k	Conditions of Approval met?		

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GRADING AND EROSION CONTROL
PLAN CHECKLIST

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		Applicant	EPC
3. STANDARD NOTES FOR EL PASO COUNTY GRADING AND EROSION CONTROL PLANS			
1	Stormwater discharges from construction sites shall not cause or threaten to cause pollution, contamination, or degradation of State Waters. All work and earth disturbance shall be done in a manner that minimizes pollution of any on-site or off-site waters, including wetlands.		
2	Notwithstanding anything depicted in these plans in words or graphic representation, all design and construction related to roads, storm drainage and erosion control shall conform to the standards and requirements of the most recent version of the relevant adopted El Paso County standards, including the Land Development Code, the Engineering Criteria Manual, the Drainage Criteria Manual, and the Drainage Criteria Manual Volume 2. Any deviations from regulations and standards must be requested, and approved, in writing.		
3	A separate Stormwater Management Plan (SMWP) for this project shall be completed and an Erosion and Stormwater Quality Control Permit (ESQCP) issued prior to commencing construction. Management of the SWMP during construction is the responsibility of the designated Qualified Stormwater Manager or Certified Erosion Control Inspector. The SWMP shall be located on-site at all times during construction and shall be kept up to date with work progress and changes in the field.		
4	Once the ESQCP is approved and a “Notice to Proceed” has been issued, the contractor may install the initial stage erosion and sediment control measures as indicated on the approved GEC. A Preconstruction Meeting between the contractor, engineer, and El Paso County will be held prior to any construction. It is the responsibility of the applicant to coordinate the meeting time and place with County staff.		
5	Control measures must be installed prior to commencement of activities that could contribute pollutants to stormwater. Control measures for all slopes, channels, ditches, and disturbed land areas shall be installed immediately upon completion of the disturbance.		
6	All temporary sediment and erosion control measures shall be maintained and remain in effective operating condition until permanent soil erosion control measures are implemented and final stabilization is established. All persons engaged in land disturbance activities shall assess the adequacy of control measures at the site and identify if changes to those control measures are needed to ensure the continued effective performance of the control measures. All changes to temporary sediment and erosion control measures must be incorporated into the Stormwater Management Plan.		
7	Temporary stabilization shall be implemented on disturbed areas and stockpiles where ground disturbing construction activity has permanently ceased or temporarily ceased for longer than 14 days.		
8	Final stabilization must be implemented at all applicable construction sites. Final stabilization is achieved when all ground disturbing activities are complete and all disturbed areas either have a uniform vegetative cover with individual plant density of 70 percent of pre-disturbance levels established or equivalent permanent alternative stabilization method is implemented. All temporary sediment and erosion control measures shall be removed upon final stabilization and before permit closure.		
9	All permanent stormwater management facilities shall be installed as designed in the approved plans. Any proposed changes that effect the design or function of permanent stormwater management structures must be approved by the ECM Administrator prior to implementation.		

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GRADING AND EROSION CONTROL
PLAN CHECKLIST

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		Applicant	EPC
10	Earth disturbances shall be conducted in such a manner so as to effectively minimize accelerated soil erosion and resulting sedimentation. All disturbances shall be designed, constructed, and completed so that the exposed area of any disturbed land shall be limited to the shortest practical period of time. Pre-existing vegetation shall be protected and maintained within 50 horizontal feet of a waters of the state unless shown to be infeasible and specifically requested and approved.		
11	Compaction of soil must be prevented in areas designated for infiltration control measures or where final stabilization will be achieved by vegetative cover. Areas designated for infiltration control measures shall also be protected from sedimentation during construction until final stabilization is achieved. If compaction prevention is not feasible due to site constraints, all areas designated for infiltration and vegetation control measures must be loosened prior to installation of the control measure(s).		
12	Any temporary or permanent facility designed and constructed for the conveyance of stormwater around, through, or from the earth disturbance area shall be a stabilized conveyance designed to minimize erosion and the discharge of sediment off-site.		
13	Concrete wash water shall be contained and disposed of in accordance with the SWMP. No wash water shall be discharged to or allowed to enter State Waters, including any surface or subsurface storm drainage system or facilities. Concrete washouts shall not be located in an area where shallow groundwater may be present, or within 50 feet of a surface water body, creek or stream.		
14	During dewatering operations, uncontaminated groundwater may be discharged on-site, but shall not leave the site in the form of surface runoff unless an approved State dewatering permit is in place.		
15	Erosion control blanketing or other protective covering shall be used on slopes steeper than 3:1.		
16	Contractor shall be responsible for the removal of all wastes from the construction site for disposal in accordance with local and State regulatory requirements. No construction debris, tree slash, building material wastes or unused building materials shall be buried, dumped, or discharged at the site.		
17	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. Control measures may be required by El Paso County Engineering if deemed necessary, based on specific conditions and circumstances.		
18	Tracking of soils and construction debris off-site shall be minimized. Materials tracked off-site shall be cleaned up and properly disposed of immediately.		
19	The owner/developer shall be responsible for the removal of all construction debris, dirt, trash, rock, sediment, soil, and sand that may accumulate in roads, storm drains and other drainage conveyance systems and stormwater appurtenances as a result of site development.		
20	The quantity of materials stored on the project site shall be limited, as much as practical, to that quantity required to perform the work in an orderly sequence. All materials stored on-site shall be stored in a neat, orderly manner, in their original containers, with original manufacturer's labels.		
21	No chemical(s) having the potential to be released in stormwater are to be stored or used on-site unless permission for the use of such chemical(s) is granted in writing by the ECM Administrator. In granting approval for the use of such chemical(s), special conditions and monitoring may be required.		
22	Bulk storage of allowed petroleum products or other allowed liquid chemicals in excess of 55 gallons shall require adequate secondary containment protection to contain all spills on-site and to prevent any spilled materials from entering State Waters, any surface or subsurface storm drainage system or other facilities.		

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EL PASO COUNTY
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PLAN CHECKLIST

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23	No person shall cause the impediment of stormwater flow in the curb and gutter or ditch except with approved sediment control measures.		
24	Owner/developer and their agents shall comply with the "Colorado Water Quality Control Act" (Title 25, Article 8, CRS), and the "Clean Water Act" (33 USC 1344), in addition to the requirements of the Land Development Code, DCM Volume II and the ECM Appendix I. All appropriate permits must be obtained by the contractor prior to construction (1041, NPDES, Floodplain, 404, fugitive dust, etc.). In the event of conflicts between these requirements and other laws, rules, or regulations of other Federal, State, local, or County agencies, the most restrictive laws, rules, or regulations shall apply.		
25	All construction traffic must enter/exit the site only at approved construction access points.		
26	Prior to construction the permittee shall verify the location of existing utilities.		
27	A water source shall be available on-site during earthwork operations and shall be utilized as required to minimize dust from earthwork equipment and wind.		
28	The soils report for this site has been prepared by [Company Name, Date of Report] and shall be considered a part of these plans.		
29	At least ten (10) days prior to the anticipated start of construction, for projects that will disturb one (1) acre or more, the owner or operator of construction activity shall submit a permit application for stormwater discharge to the Colorado Department of Public Health and Environment, Water Quality Division. The application contains certification of completion of a stormwater management plan (SWMP), of which this Grading and Erosion Control Plan may be a part. For information or application materials contact: Colorado Department of Public Health and Environment Water Quality Control Division WQCD – Permits 4300 Cherry Creek Drive South Denver, CO 80246-1530 Attn: Permits Unit		
4. APPLICANT COMMENTS			
a			
b			
c			

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5. CHECKLIST REVIEW CERTIFICATIONS			
a	Engineer of Record: The Grading and Erosion Control Plan was prepared under my direction and supervision and is complete and 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. _____ _____ Engineer of Record Signature Date		
b	Review Engineer: The Grading and Erosion Control Plan was reviewed and found to meet the checklist requirements except where otherwise noted or allowed by an approved deviation request. _____ _____ Review Engineer Date		