

Grazing Yak

El Paso County, Colorado

Use the standard signature blocks per El Paso County PCD/Engineering Website.
<https://planningdevelopment.elpasoco.com/planning-community-development/engineering/#1519834362627-c268a2b9-61ec>

Westwood

Phone (720) 531-8350 10170 Church Ranch Way, Suite #100
 Westminster, CO 80021
westwoodps.com

Westwood Professional Services, Inc.

Grading & Erosion Control Plan - Issued for Grading Permit

AND Site
Development Plan

PROJECT CONTACT INFORMATION				
CONSULTANT	COMPANY	ADDRESS	NAME	PHONE NO.
APPLICANT (CONTRACTOR)	MORTENSON CONSTRUCTION	1621 18TH ST SUITE 400 DENVER, CO 80202	TRENT MOSTAERT	763-287-3439
CIVIL ENGINEER	WESTWOOD	10170 CHURCH RANCH WAY SUITE 100 WESTMINSTER, CO 80021	BRENDAN MILLER	720-531-8355
LAND OWNER	GRAZING YAK SOLAR, LLC	700 UNIVERSE BLVD JUNO BEACH, FL 33408	JOHN DIDONATO	561-814-7287

DATA SET INFORMATION			
BASE FILE	FILE NAME	PROVIDER	DATE
PV ARRAY	0021201E-EQUIP.dwg	WESTWOOD	3/21/2019
TOPO	0021201ECON.dwg	WESTWOOD	3/18/2019

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GENERAL NOTES:

- ALL PHOTOVOLTAIC (PV), ELECTRICAL OR STRUCTURAL EQUIPMENT LOCATIONS SHOWN ON THESE PLANS ARE APPROXIMATE AND SOLELY CONCEPTUAL AT THIS TIME AND MAY BE SUBJECT TO CHANGE PENDING FINAL FACILITY DESIGN AND/OR UTILITY INTERCONNECTION REQUIREMENTS. TREES ARE NOT OBSERVED WITHIN THE PV ARRAY AREAS. IF NECESSARY, TREES AND SHRUBS ARE TO BE REMOVED AS NECESSARY TO ALLOW FOR THE INSTALLATION OF THE ARRAYS AND TO ELIMINATE SHADING.
- SHADED AREAS OUTSIDE THE LIMITS OF CONSTRUCTION SHALL NOT BE DISTURBED. CONSTRUCTION FENCE OR CONSTRUCTION MARKERS TO DELINEATE LIMITS OF CONSTRUCTION SHALL BE INSTALLED PRIOR TO ANY WORK ON SITE.
- ANY AREAS DISTURBED WILL BE SEEDED WITH A MEADOW GRASS SEED MIX THAT WILL IMPROVE RUNOFF FROM THE EXISTING CONDITIONS, SLOWING DOWN THE RUNOFF AND ALLOWING FOR ADDITIONAL ONSITE INFILTRATION. SEE URBAN DRAINAGE VOLUME 3 FOR APPLICABLE SEED MIX AT TIME OF PLANTING.
- PRIOR TO DEMOBILIZATION FROM THE SITE, THE CONTRACTOR SHALL REMOVE AND PROPERLY DISPOSE INSTALLED BMP'S, INCLUDING BUT NOT LIMITED TO STRAW WATTLES. SITE BENCHMARK TO BE ESTABLISHED PRIOR TO CONSTRUCTION.

LANDOWNERS ACKNOWLEDGEMENT:

I HEREBY CERTIFY THAT THE GRADING, EROSION, AND SEDIMENT CONTROL MEASURES SHALL BE CONSTRUCTED ACCORDING TO THE DESIGN PRESENTED IN THIS DOCUMENT. I UNDERSTAND THAT ADDITIONAL EROSION CONTROL, SEDIMENT CONTROL AND WATER QUALITY ENHANCING MEASURES MAY BE REQUIRED OF THE OWNER AND HIS OR HER AGENTS DUE TO UNFORESEEN POLLUTANT DISCHARGES OR IF THE SUBMITTED PLAN DOES NOT FUNCTION AS INTENDED. THE REQUIREMENTS OF THE PLAN SHALL BE THE OBLIGATION OF THE LAND OWNER AND/OR HIS SUCCESSORS OR HEIRS; UNTIL SUCH TIME AS THE PLAN IS PROPERLY COMPLETED, MODIFIED OR VOIDED.

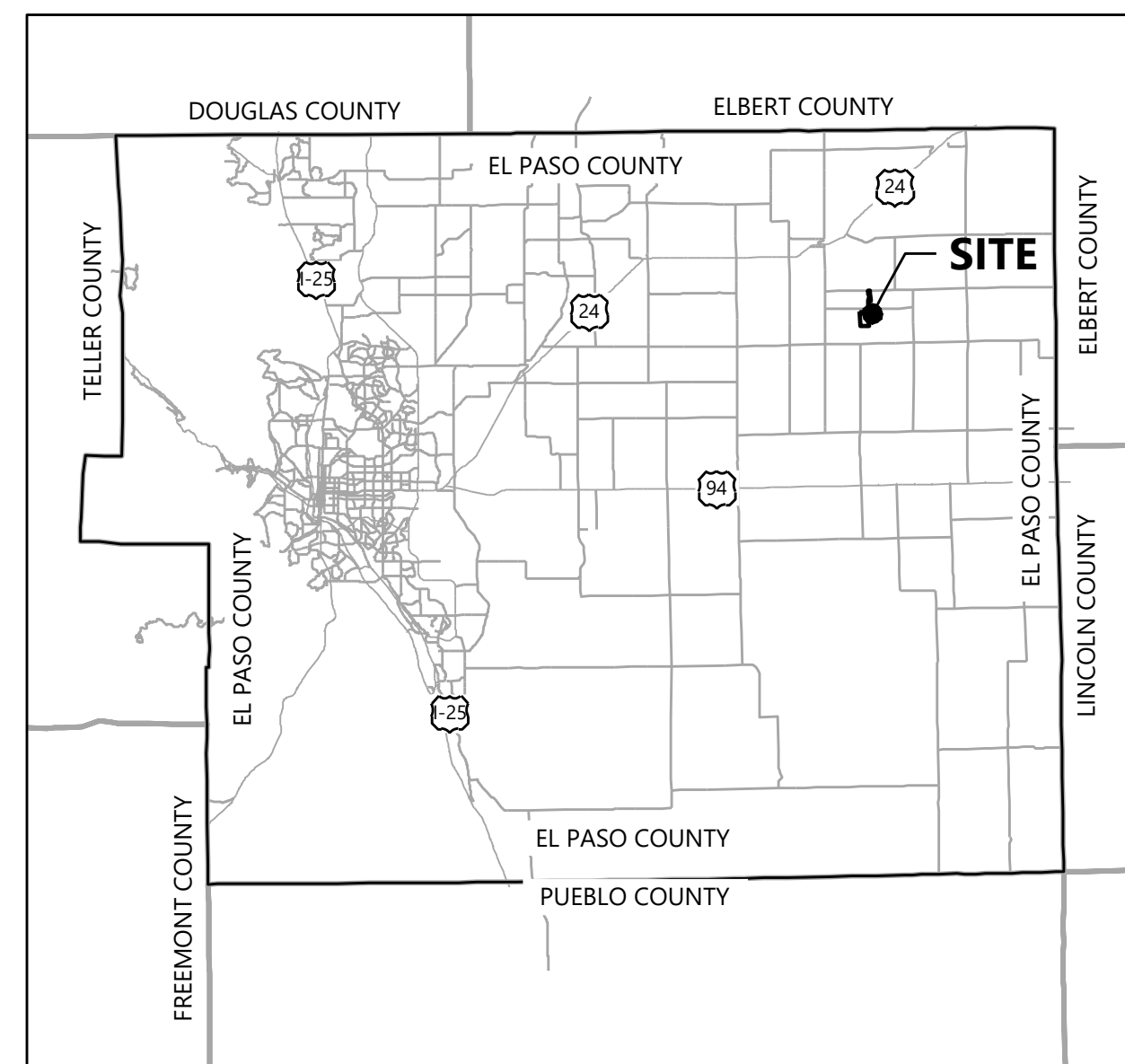
OWNER OR AUTHORIZED AGENT _____

AUTHORIZED SIGNATURE DATE _____

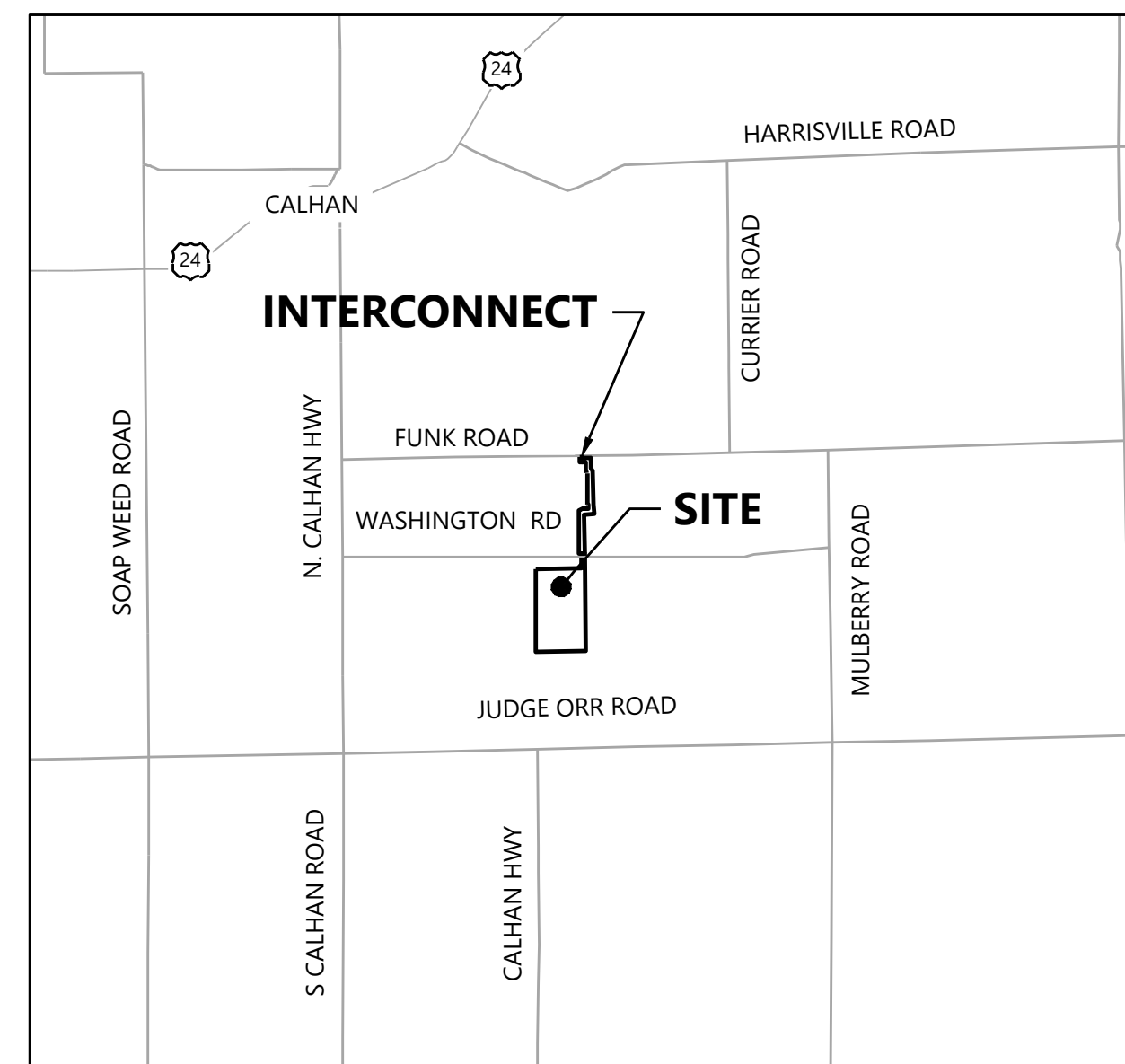
PROJECT DESCRIPTION

35 MW-AC SINGLE-AXIS TRACKER SOLAR PROJECT
 PROJECT AREA: ±280 ACRES INCLUDING "LIMITS OF CONSTRUCTION"

REGIONAL MAP



VICINITY MAP



ENGINEER'S SIGNATURE:

I HEREBY ATTEST THAT THIS GRADING, EROSION, AND SEDIMENT CONTROL (GESC) DOCUMENT FOR GRAZING YAK SOLAR HAS BEEN PREPARED BY ME OR UNDER MY DIRECT SUPERVISION, AND TO THE BEST OF MY KNOWLEDGE AND ABILITY HAS BEEN PREPARED IN ACCORDANCE WITH THE LATEST VERSION OF THE EL PASO COUNTY GESC MANUAL. THE SIGNATURE AND STAMP AFFIXED HEREON CERTIFIES THAT THIS GESC DOCUMENT WAS PREPARED IN ACCORDANCE WITH THE REQUIRED REGULATIONS AND CRITERIA; HOWEVER, THE STAMP AND SIGNATURE DOES NOT CERTIFY OR GUARANTEE FUTURE PERFORMANCE OF THE EXECUTION OF THE PLAN BY THE CONTRACTOR. THE CONTRACTOR IS RESPONSIBLE FOR EXECUTING THE CONSTRUCTION WORK ACCORDING TO THE INFORMATION SET FORTH IN THE PLAN AND IN ACCORDANCE WITH ALL APPLICABLE REQUIREMENTS.

REGISTERED PROFESSIONAL ENGINEER BRENDAN D. MILLER, P.E.

STATE OF COLORADO NO. 44186
 AFFIX SEAL W/DATE

Update the standard notes:
 See the last page of
 these plans.



EL PASO COUNTY GRADING AND EROSION CONTROL PLAN NOTES

- 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 OFFSITE WATERS, INCLUDING WETLANDS.
- NOTWITHSTANDING ANYTHING DEPICTED IN THESE PLANS IN WORDS OR GRAPHIC REPRESENTATION, ALL DESIGN AND CONSTRUCTION RELATED TO ROADS, STORM DRAINAGE AND EROSION CONTROL SHALL CONFORM TO THE STANDARDS AND REQUIREMENTS OF THE MOST RECENT VERSION OF THE RELEVANT ADOPTED EL PASO COUNTY STANDARDS, INCLUDING THE LAND DEVELOPMENT CODE, THE ENGINEERING CRITERIA MANUAL, THE DRAINAGE CRITERIA MANUAL, AND THE DRAINAGE CRITERIA MANUAL VOLUME 2. ANY DEVIATIONS TO REGULATIONS AND STANDARDS MUST BE REQUESTED, AND APPROVED, IN WRITING.
- 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. DURING CONSTRUCTION THE SWMP IS THE RESPONSIBILITY OF THE DESIGNATED QUALIFIED STORMWATER MANAGER OR CERTIFIED EROSION CONTROL INSPECTOR AND 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.
- 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.
- CONTROL MEASURES MUST BE INSTALLED PRIOR TO COMMENCEMENT OF ACTIVITIES THAT MAY CONTRIBUTE POLLUTANTS TO STORMWATER. TEMPORARY SEDIMENT AND EROSION CONTROL MEASURES FOR ALL SLOPES, CHANNELS, DITCHES, OR ANY DISTURBED LAND AREA SHALL BE COMPLETED IMMEDIATELY UPON COMPLETION OF THE DISTURBANCE.
- 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 IS 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 PRIOR TO IMPLEMENTATION.
- 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. AN AREA THAT IS GOING TO REMAIN IN AN INTERIM STATE FOR MORE THAN 60 DAYS SHALL ALSO BE STABILIZED.
- 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 PLAN 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.
- ALL PERMANENT STORMWATER MANAGEMENT FACILITIES SHALL BE INSTALLED AS DEFINED IN THE APPROVED PLANS. ANY PROPOSED CHANGES THAT EFFECT THE HYDROLOGY OR HYDRAULICS OF A PERMANENT STORMWATER MANAGEMENT STRUCTURES MUST BE APPROVED BY THE ECM ADMINISTRATOR PRIOR TO IMPLEMENTATION.
- ANY EARTH DISTURBANCE 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 INFEASIBLE.
- 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 SHALL ALSO BE PROTECTED FROM SEDIMENTATION DURING CONSTRUCTION UNTIL FINAL STABILIZATION IS ACHIEVED.
- 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.
- CONCRETE WASH WATER SHALL BE CONTAINED AND DISPOSED OF IN ACCORDANCE WITH THE SWMP. NO WASH WATER SHALL BE DISCHARGED TO OR ALLOWED TO RUNOFF TO STATE WATERS, INCLUDING ANY SURFACE OR SUBSURFACE STORM DRAINAGE SYSTEM OR FACILITIES. CONCRETE WASHOUT SHALL NOT BE LOCATED IN AN AREA WHERE SHALLOW GROUNDWATER MAY BE PRESENT, OR WITHIN 50 FEET OF A SURFACE WATER BODY.
- DEWATERING OPERATIONS: UNCONTAMINATED GROUND WATER MAY BE DISCHARGED ON SITE, BUT MAY NOT LEAVE THE SITE IN THE FORM OF SURFACE RUNOFF.
- EROSION CONTROL BLANKETING IS TO BE USED ON SLOPES STEEPER THAN 3:1.
- 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. BMP'S MAY BE REQUIRED BY EL PASO COUNTY ENGINEERING IF DEEMED NECESSARY, BASED ON SPECIFIC CONDITIONS AND CIRCUMSTANCES.
- VEHICLE TRACKING OF SOILS AND CONSTRUCTION DEBRIS OFF-SITE SHALL BE MINIMIZED. MATERIALS TRACKED OFFSITE SHALL BE CLEANED UP AND PROPERLY DISPOSED OF IMMEDIATELY.
- 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.
- THE OWNER, SITE DEVELOPER, CONTRACTOR, AND/OR THEIR AUTHORIZED AGENTS 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 STORMWATER APPURTENANCES AS A RESULT OF SITE DEVELOPMENT.
- 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.
- NO CHEMICALS ARE TO BE USED BY THE CONTRACTOR, WHICH HAVE THE POTENTIAL TO BE RELEASED IN STORMWATER 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.
- BULK STORAGE OF PETROLEUM PRODUCTS OR OTHER LIQUID CHEMICALS IN EXCESS OF 55 GALLONS SHALL HAVE ADEQUATE SECONDARY CONTAINMENT PROTECTION TO CONTAIN ALL SPILLS AND PREVENT ANY SPILLED MATERIAL FROM ENTERING STATE WATERS, INCLUDING ANY SURFACE OR SUBSURFACE STORM DRAINAGE SYSTEM OR FACILITIES.
- NO PERSON SHALL CAUSE THE IMPEDIMENT OF STORMWATER FLOW IN THE FLOW LINE OF THE CURB AND GUTTER OR IN THE DITCH FLOW LINE.
- INDIVIDUALS 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 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, 404, FUGITIVE 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.
- ALL CONSTRUCTION TRAFFIC MUST ENTER/EXIT THE SITE AT APPROVED CONSTRUCTION ACCESS POINTS.
- PRIOR TO ACTUAL CONSTRUCTION THE PERMITEE SHALL VERIFY THE LOCATION OF EXISTING UTILITIES.
- A WATER SOURCE SHALL BE AVAILABLE ON SITE DURING EARTHWORK OPERATIONS AND UTILIZED AS REQUIRED TO MINIMIZE DUST FROM EARTHWORK EQUIPMENT AND WIND.
- THE SOILS REPORT FOR THIS SITE HAS BEEN PREPARED BY TERRACON CONSULTANTS DATED SEPTEMBER 2018 AND SHALL BE CONSIDERED A PART OF THESE PLANS.
- AT LEAST TEN (10) DAYS PRIOR TO THE ANTICIPATED START OF CONSTRUCTION, FOR PROJECTS THAT WILL DISTURB 1 ACRE OR MORE, THE OWNER OR OPERATOR OF CONSTRUCTION ACTIVITY SHALL SUBMIT A PERMIT APPLICATION FOR STORMWATER DISCHARGE TO THE COLORADO DEPARTMENT OF PUBLIC HEALTH AND ENVIRONMENT, WATER QUALITY DIVISION. THE APPLICATION CONTAINS CERTIFICATION OF COMPLETION OF A STORMWATER MANAGEMENT PLAN (SWMP), OF WHICH THIS

PREPARED FOR:



REVISIONS:

#	DATE	COMMENT
A	03/27/19	Issued for 30% Design Review
B	04/22/19	Issued for Permit
C	04/26/19	Issued for Review (90%)
D	04/29/19	Issued for Grading Permit

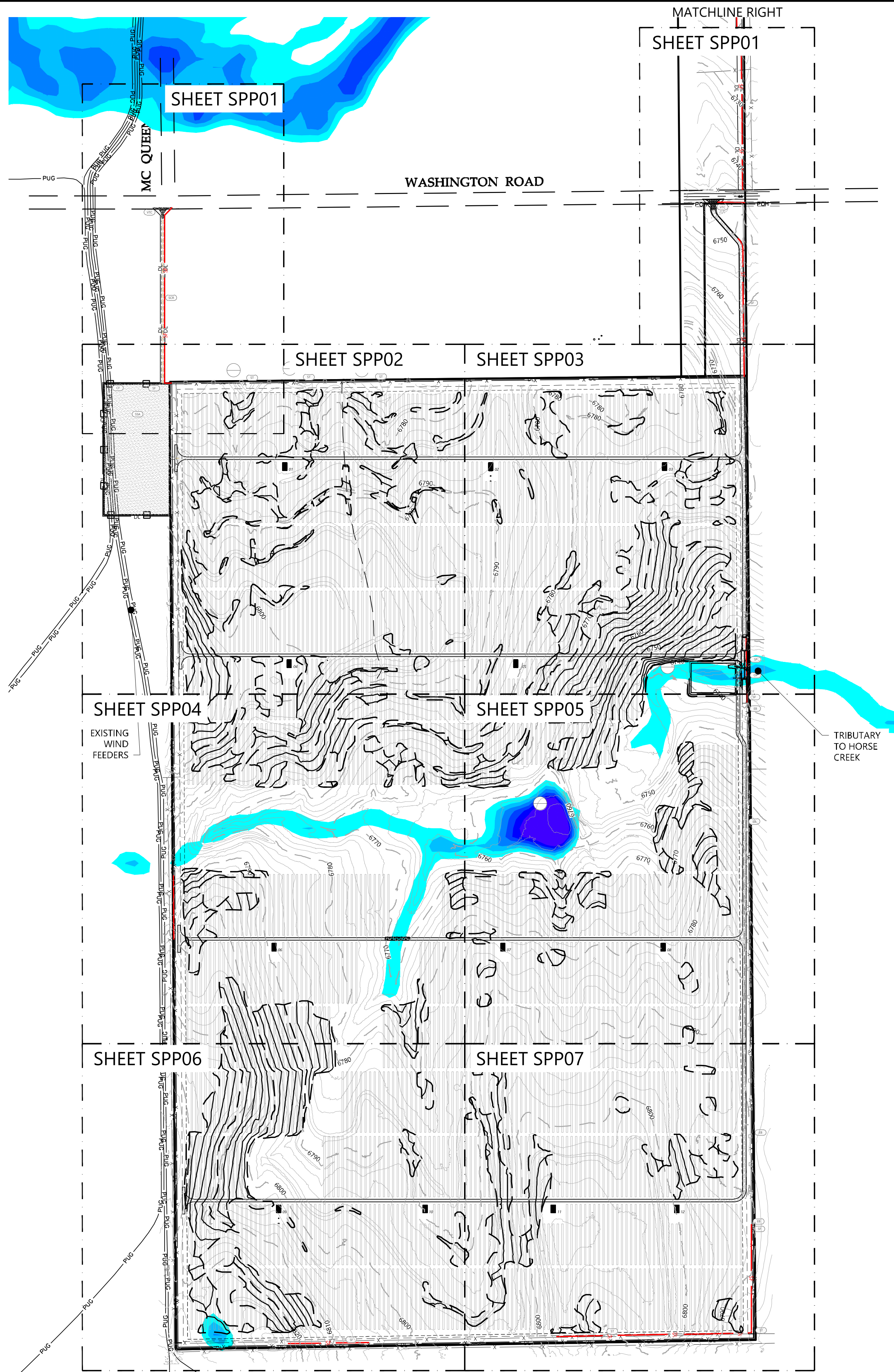
Grazing Yak Solar

El Paso County, Colorado

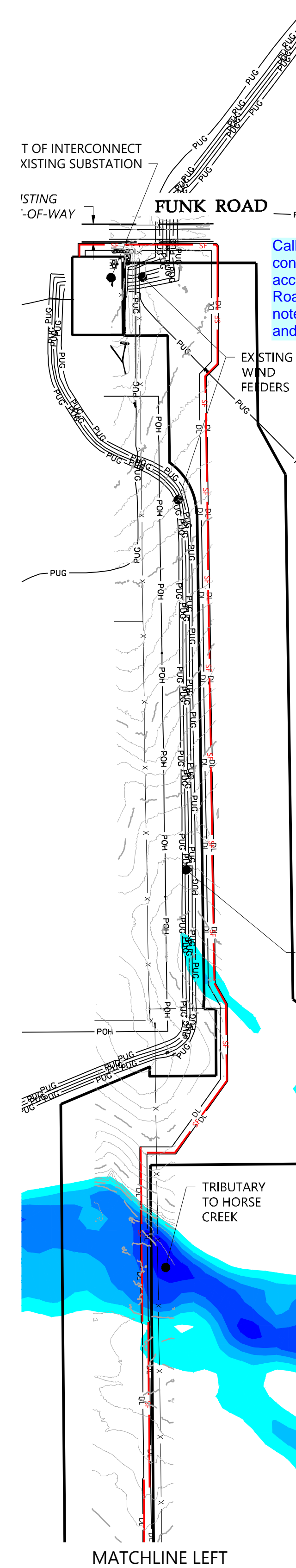
Cover Sheet

DATE: 04/29/2019

SHEET: CVP01



SHEET SPP08



LEGEND & ABBREVIATIONS

- PROJECT BOUNDARY LINE
- PROPOSED SOLAR TRACKER
- PROPOSED GRAVEL ACCESS RD.
- PROPOSED DIRT ACCESS RD.
- PROPOSED FENCE LINE
- PROPOSED PROTECTED CROSSING
- PROPOSED GRADING LIMITS
- PROPOSED INDEX CONTOUR LINE
- PROPOSED INTERVAL CONTOUR LINE
- EX. INDEX CONTOUR LINE
- EX. INTERVAL CONTOUR LINE
- EX. EASEMENT LINE
- SECTION BOUNDARY LINE
- EX. FENCE LINE
- EX. OVERHEAD POWERLINE
- EX. UNDERGROUND ELEC. LINE
- EX. FIBER OPTIC LINE
- EX. GRAVEL ROAD
- EDGE OF ASPHALT
- EX. ASPHALT PAVEMENT ROAD
- EX. BERM
- FLOW DIRECTION

Call out if contractor/construction access is allowed on Funk Road and if it is, provide notes for an access permit and for Vehicle Tracking.

Existing Topo Flood Depths		
0.500'	1.000'	
1.000'	1.500'	
1.500'	2.000'	
2.000'	2.500'	
2.500'	3.000'	
3.000'	5.000'	

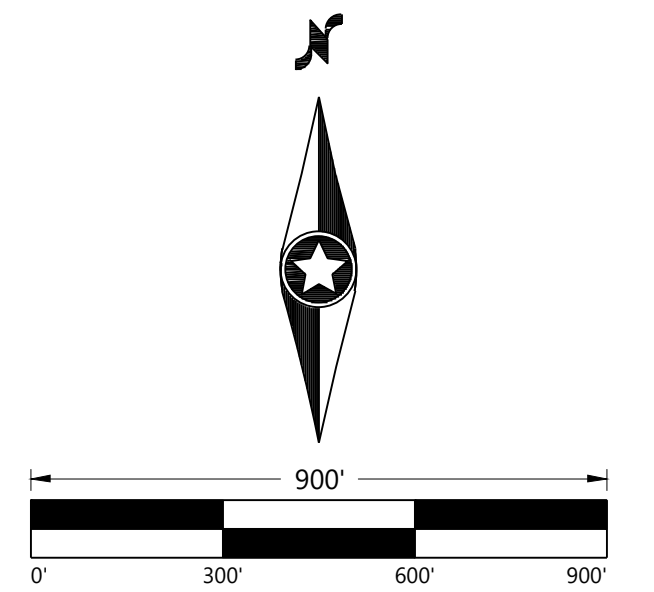


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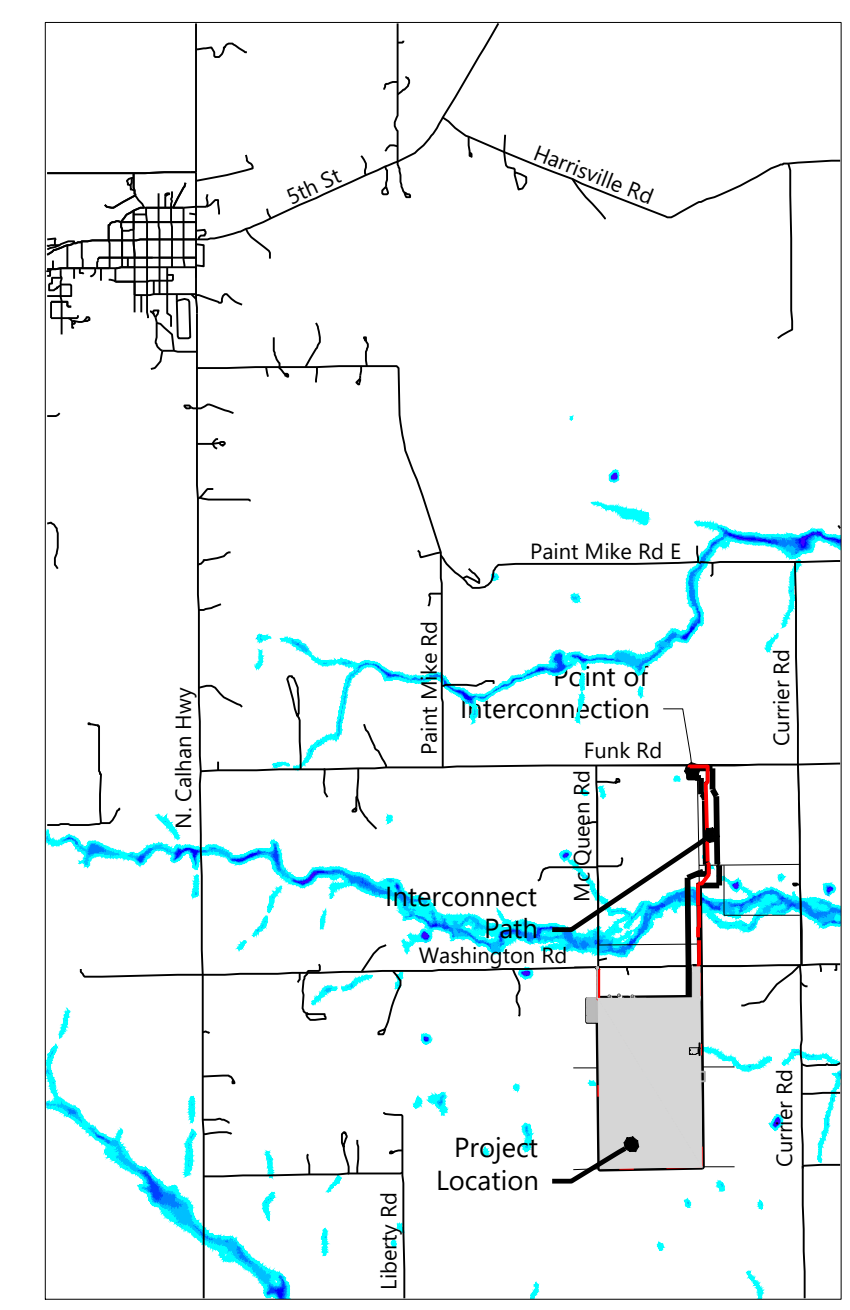
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Grazing Yak Solar
El Paso County, Colorado

Sheet Index



VICINITY MAP
Scale: 1" = 5000'

DATE: 04/29/2019

SHEET: **INDX**

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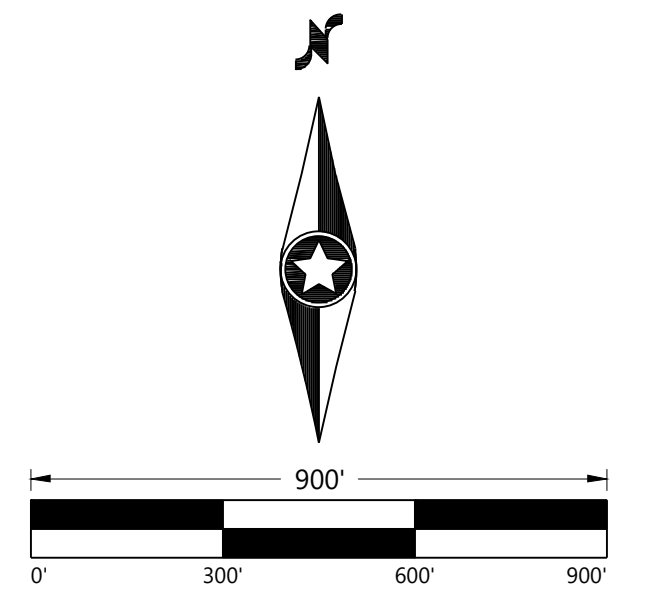


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Grazing Yak Solar

El Paso County, Colorado

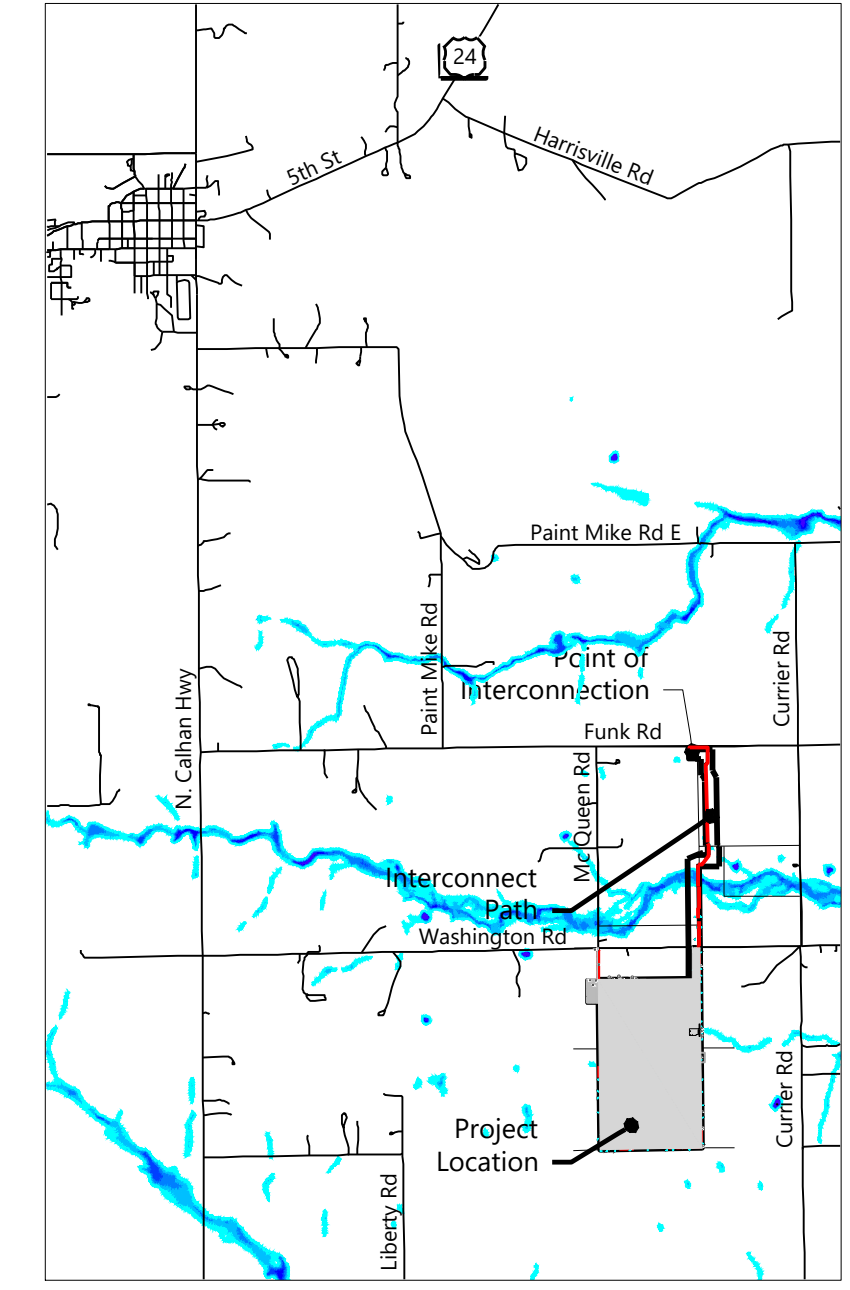
Overall Site Grading & Erosion Control Plan

DATE: 04/29/2019

SHEET: SPPOA

LEGEND & ABBREVIATIONS

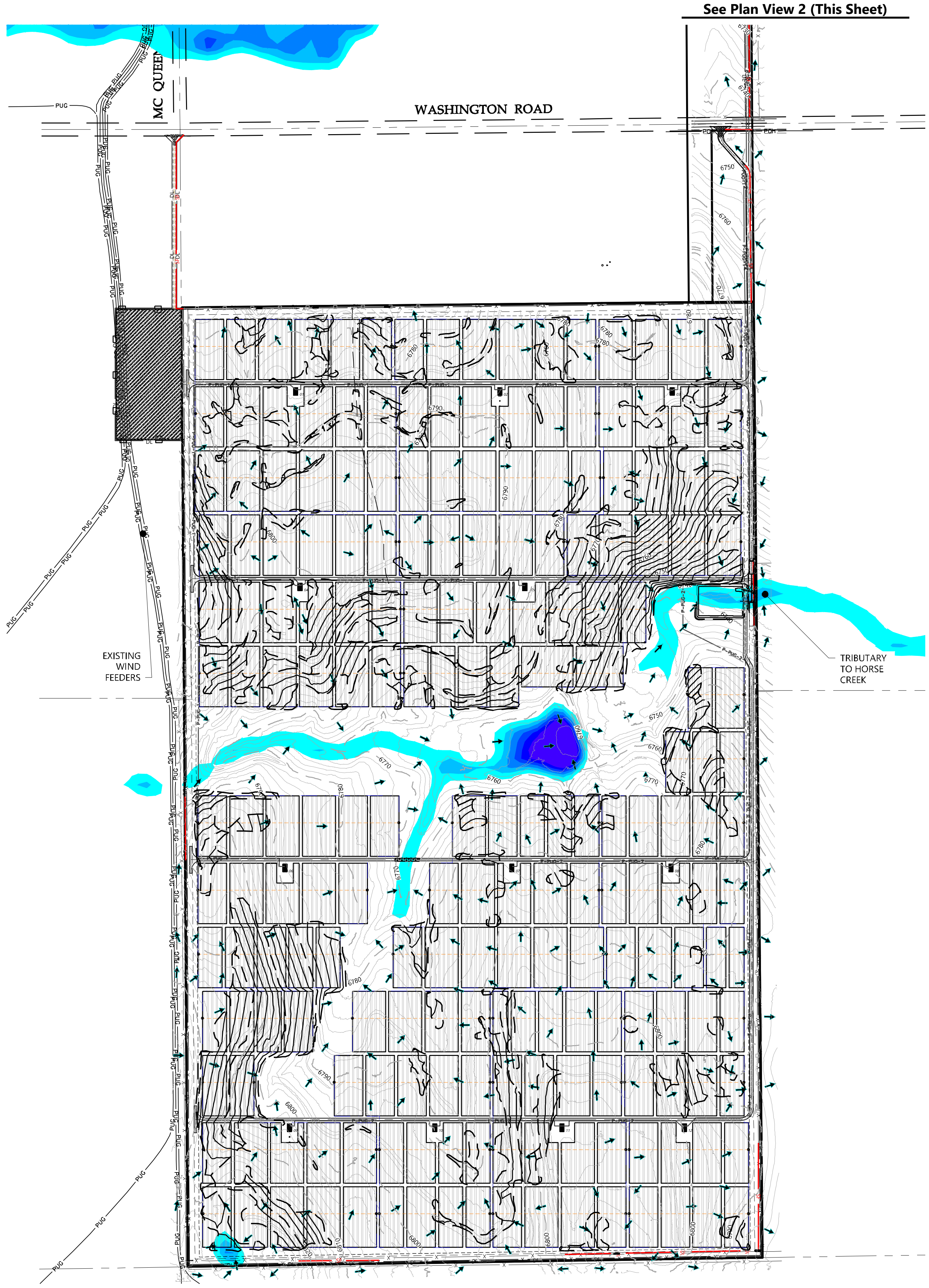
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	INVERTER BLOCK BOUNDARY
	PROPOSED UNDERGROUND CIRCUIT 1
	PROPOSED UNDERGROUND CIRCUIT 2
	EX. FENCE LINE
	PROPOSED SOLAR TRACKER
	BOUNDARY SET BACK LINE 10M
	BOUNDARY SET BACK LINE 15M
	PROPOSED GRAVEL ACCESS RD. (2500 FT.)
	PROPOSED DIRT ACCESS RD. (13,425 FT.)
	PROPOSED CAB
	PROPOSED SECONDARY CAB
	PROPOSED LAYDOWN AREA
	PROPOSED SILT FENCE LINE
	PROPOSED PROTECTED CROSSING
	PROPOSED VELOCITY DISSIPATER
	EX. INDEX CONTOUR LINE
	EX. INTERVAL CONTOUR LINE
	EX. SECTION LINE
	EX. EASEMENT LINE
	EX. FENCE LINE
	EX. OVERHEAD POWERLINE
	EX. FIBER OPTIC LINE
	EX. GRAVEL ROAD
	EX. ASPHALT PAVEMENT ROAD



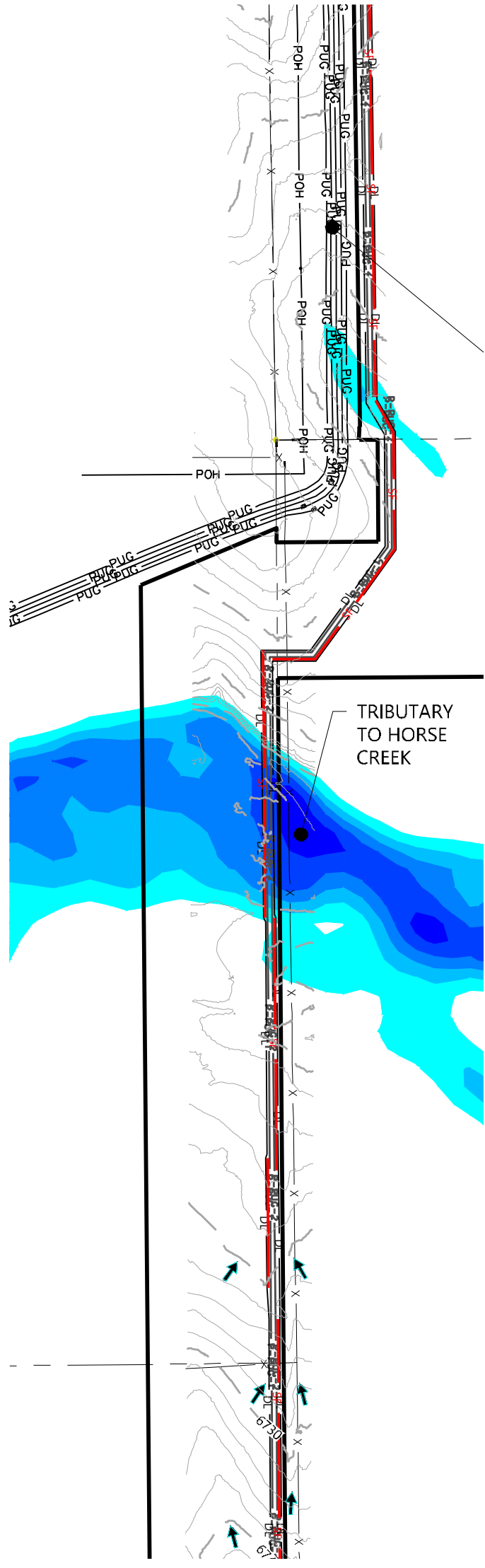
VICINITY MAP
Scale: 1" = 5000'

Existing Topo Flood Depths

0.500'	1.000'	
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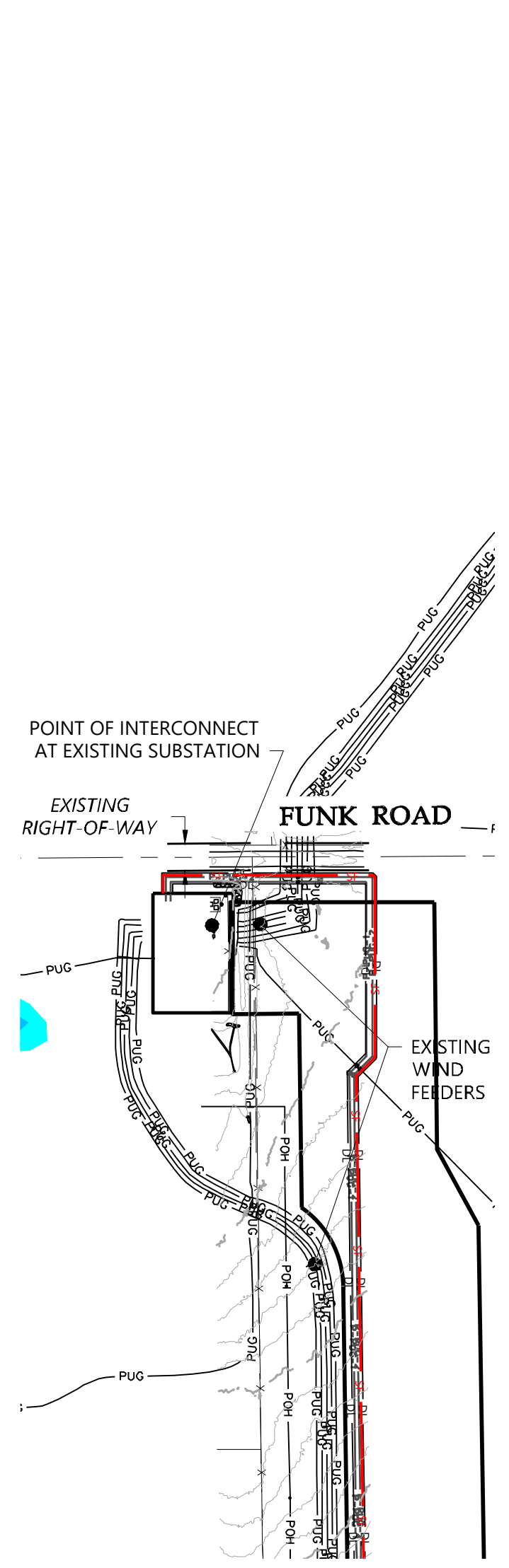
See Plan View 1 (This Sheet)



See Plan View 3 (This Sheet)

2 Plan View 2
1" = 300'

See Plan View 2 (This Sheet)



See Plan View 2 (This Sheet)

1 Plan View 1
1" = 300'

3 Plan View 3
1" = 300'

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PREPARED FOR:



REVISIONS:

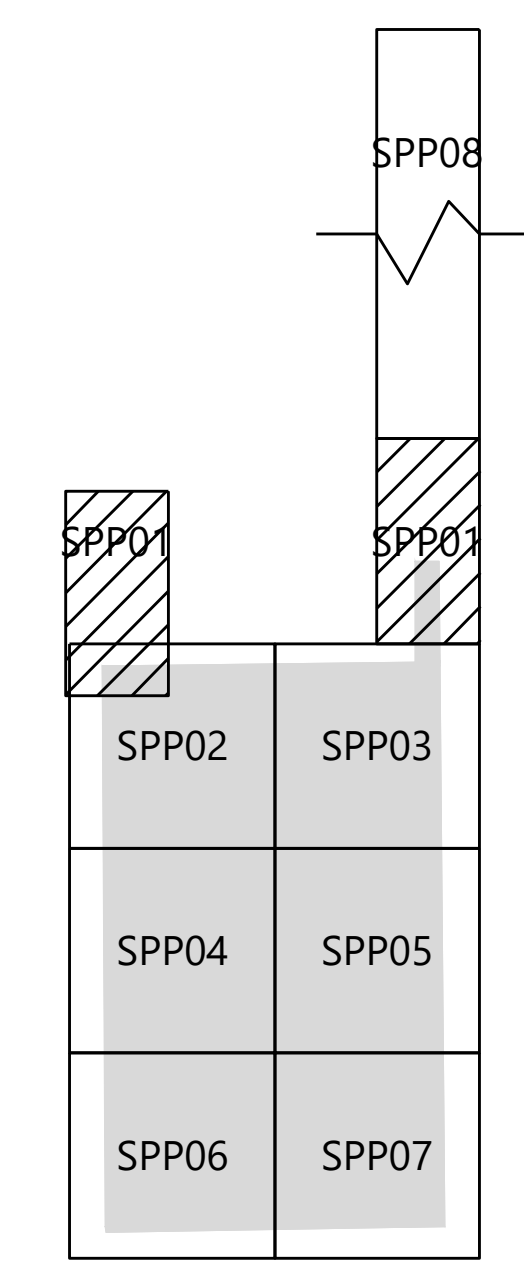
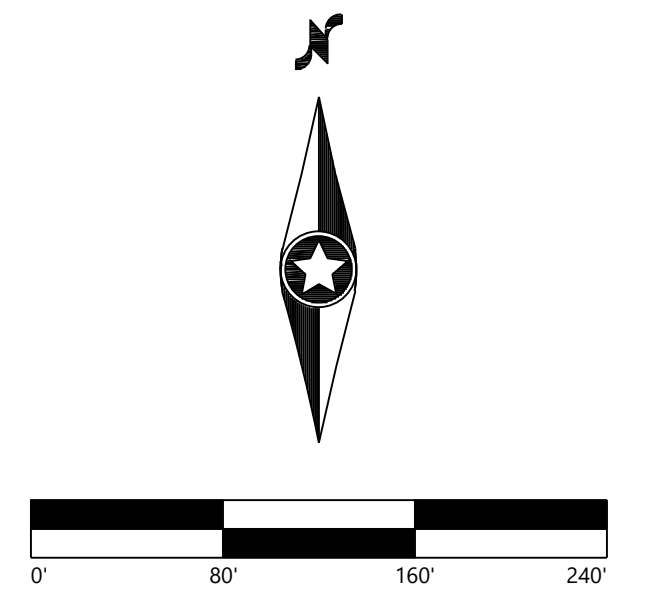
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- PROPOSED GRADING LIMITS BORDER
- PROPOSED CUT VALUE
- PROPOSED FILL VALUE
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- EDGE OF ASPHALT
- EX. ASPHALT PAVEMENT ROAD
- EX. BERM
- EX. WATERWAY
- FEMA FLOODPLAIN

EROSION CONTROL LEGEND

- FLOW DIRECTION ARROW
- TEMPORARY CONSTRUCTION FENCE (CF)
- SILT FENCE (SF)
- PROPOSED EARTHEN BERM (EB)
- STABILIZED STAGING AREA (SSA)
- VEHICLE TRACKING CONTROL (VTC)
- SEEDING AND MULCHING (INCLUDE AS REQUIRED) (SM)
- EROSION CONTROL BLANKET (ECB)
- SEDIMENT TRAP (ST)
- PROPOSED VELOCITY DISSIPATER
- TEMPORARY SEDIMENT BASINS (Contractor to determine grading limits to provide volume requirement stated in SWMP).



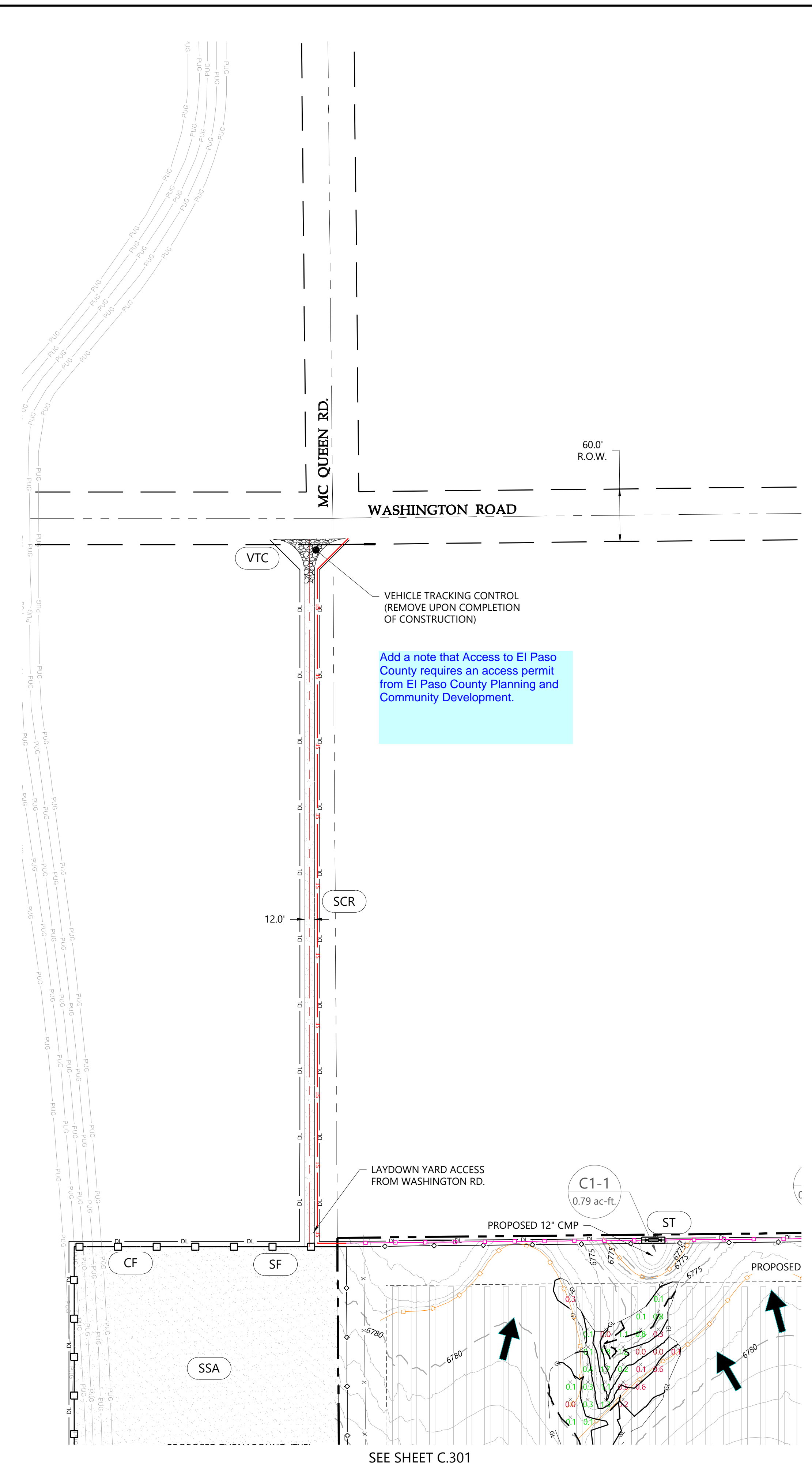
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Grazing Yak Solar
El Paso County, Colorado

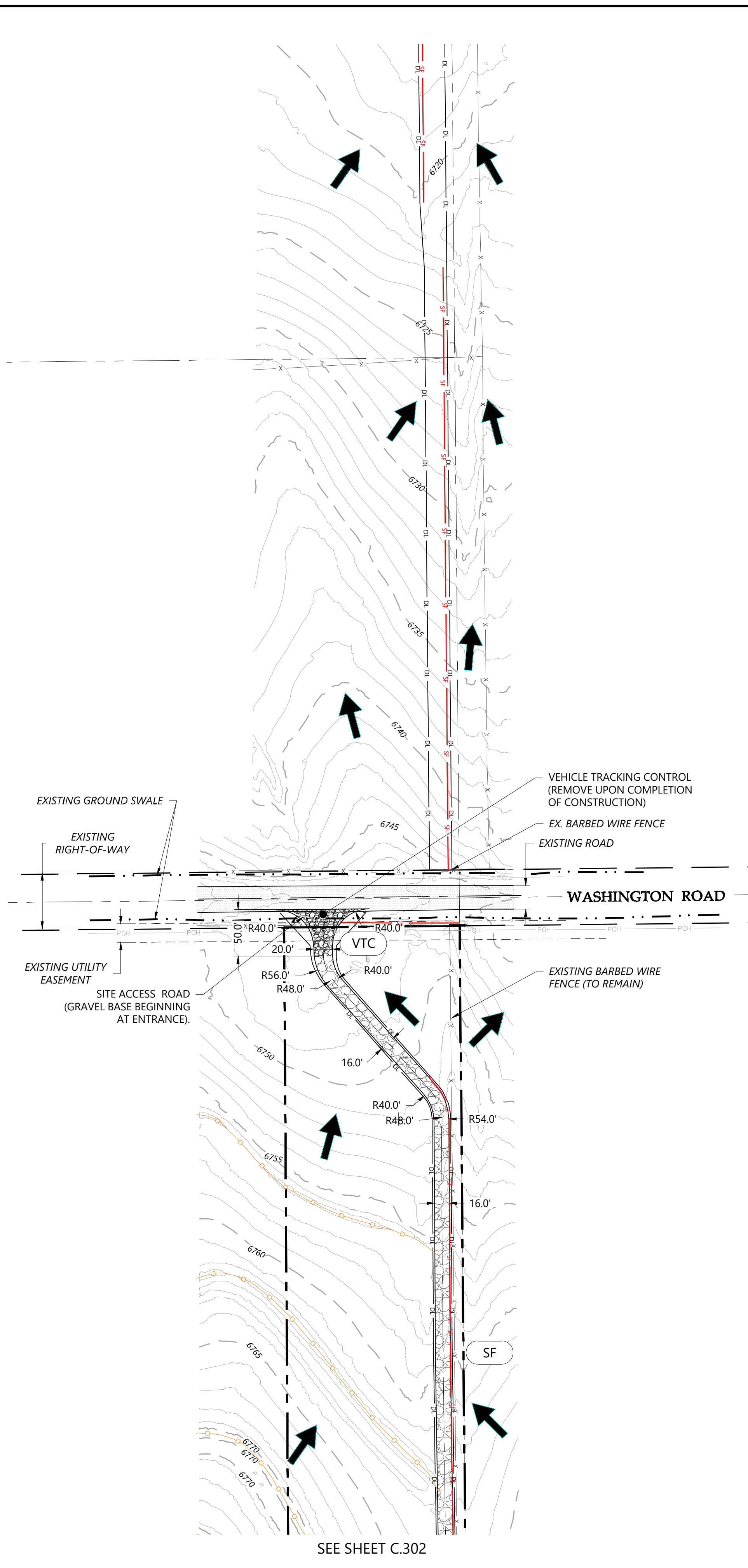
Grading & Erosion Control - Sheet 1

DATE: 04/29/2019

SHEET: SPP01



SEE SHEET C.301



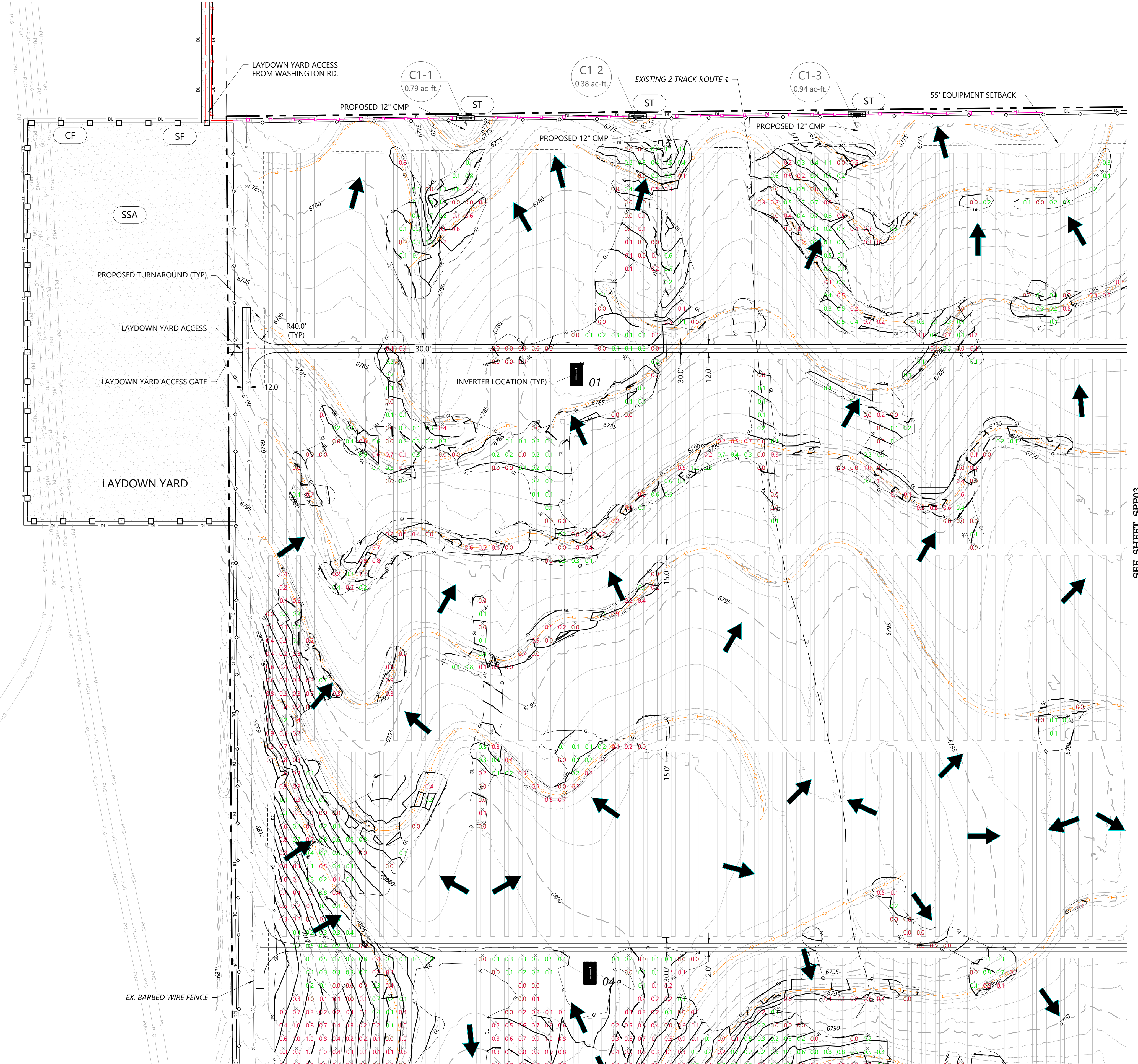
SEE SHEET C.302

Add a note that Access to El Paso County requires an access permit from El Paso County Planning and Community Development.

LAYDOWN YARD ACCESS FROM WASHINGTON RD.

C:\03022019\03022019\03022019_SPP01.dwg 4/29/2019 4:19:24 PM Paul C. Gier

SEE SHEET SPP01



SEE SHEET SPP04

LEGEND & ABBREVIATIONS

- PROJECT BOUNDARY LINE
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- PROPOSED CUT VALUE
- PROPOSED FILL VALUE
- EX. INDEX CONTOUR LINE
- EX. INTERVAL CONTOUR LINE
- EX. EASEMENT LINE
- SECTION BOUNDARY LINE
- EX. FENCE LINE
- EX. OVERHEAD POWERLINE
- EX. UNDERGROUND ELEC. LINE
- EX. FIBER OPTIC LINE
- EX. GRAVEL ROAD
- EDGE OF ASPHALT
- EX. ASPHALT PAVEMENT ROAD
- EX. BERM
- EX. WATERWAY
- FEMA FLOODPLAIN

EROSION CONTROL LEGEND

- FLOW DIRECTION ARROW
- TEMPORARY CONSTRUCTION FENCE (CF)
- SILT FENCE (SF)
- PROPOSED EARTHEN BERM (EB)
- STABILIZED STAGING AREA (SSA)
- VEHICLE TRACKING CONTROL (VTC)
- SEEDING AND MULCHING (INCLUDE AS REQUIRED) (SM)
- EROSION CONTROL BLANKET (ECB)
- SEDIMENT TRAP (ST)
- PROPOSED VELOCITY DISSIPATER

XX
X.XX ac-ft.

TEMPORARY SEDIMENT BASINS
(Contractor to determine grading limits to provide volume requirement stated in SWMP).

Grading limits exceeding those shown on this plan will require larger and/or more sediment traps than proposed.
Add to fill sheets with this Legend.

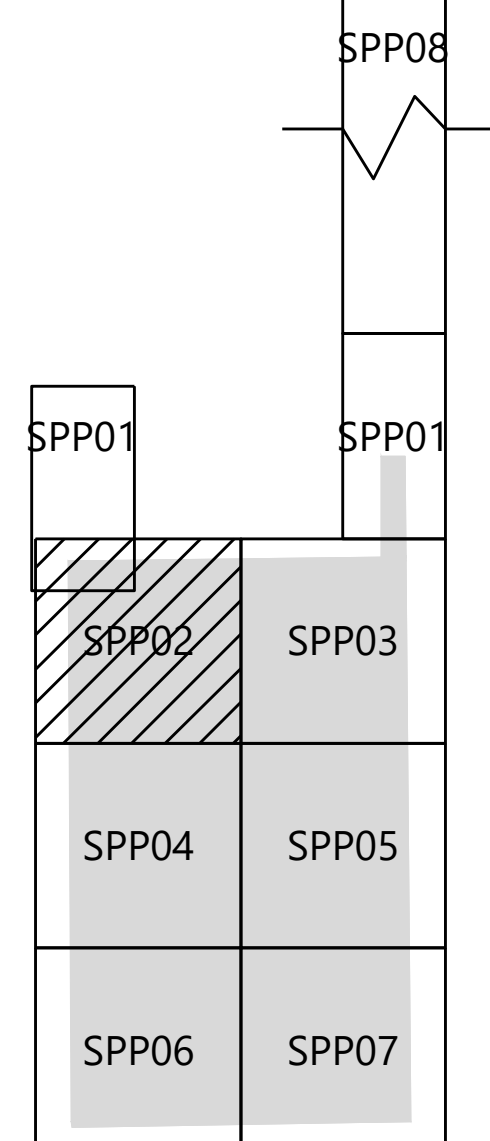
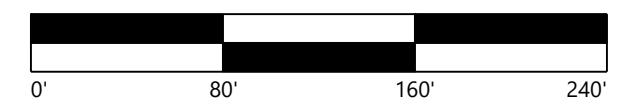


PREPARED FOR:



REVISIONS:

#	DATE	COMMENT
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B	04/22/19	Issued for Permit
C	04/26/19	Issued for Review (90%)
D	04/29/19	Issued for Grading Permit



KEYMAP
Scale: 1"=1500'

Grazing Yak Solar
El Paso County, Colorado

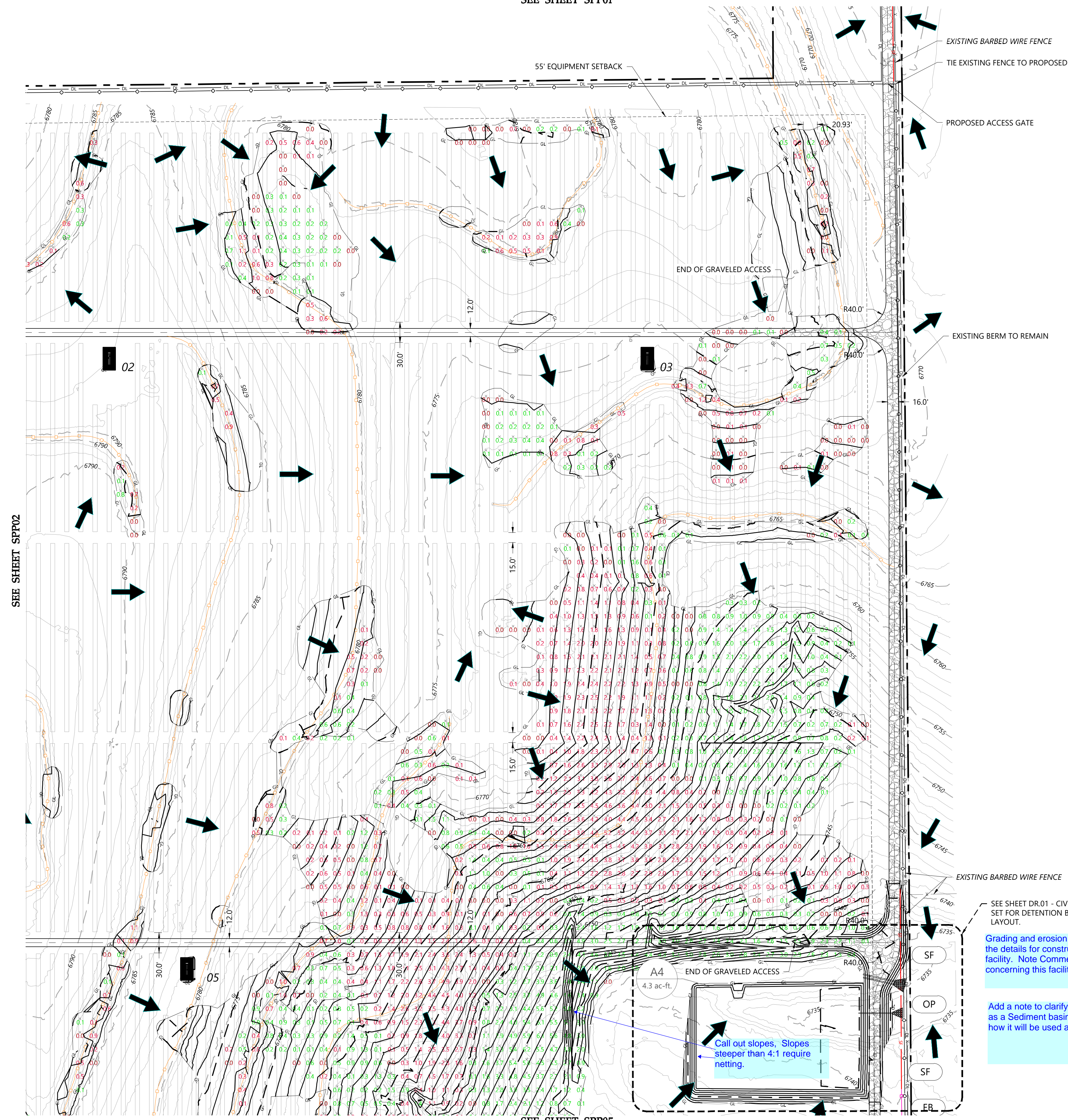
Grading & Erosion Control - Sheet 2

DATE: 04/29/2019

SHEET: SPP02

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SEE SHEET SPP01



LEGEND & ABBREVIATIONS

- PROJECT BOUNDARY LINE
- PROPOSED SOLAR TRACKER
- PROPOSED GRAVEL ACCESS RD.
- PROPOSED DIRT ACCESS RD.
- PROPOSED FENCE LINE
- PROPOSED PROTECTED CROSSING
- PROPOSED GRADING LIMITS
- PROPOSED INDEX CONTOUR LINE
- PROPOSED INTERVAL CONTOUR LINE
- PROPOSED GRADING LIMITS BORDER
- PROPOSED CUT VALUE
- PROPOSED FILL VALUE
- EX. INDEX CONTOUR LINE
- EX. INTERVAL CONTOUR LINE
- EX. EASEMENT LINE
- SECTION BOUNDARY LINE
- EX. FENCE LINE
- EX. OVERHEAD POWERLINE
- EX. UNDERGROUND ELEC. LINE
- EX. FIBER OPTIC LINE
- EX. GRAVEL ROAD
- EDGE OF ASPHALT
- EX. ASPHALT PAVEMENT ROAD
- EX. BERM
- EX. WATERWAY
- FEMA FLOODPLAIN

EROSION CONTROL LEGEND

- FLOW DIRECTION ARROW
- TEMPORARY CONSTRUCTION FENCE (CF)
- SILT FENCE (SF)
- PROPOSED EARTHEN BERM (EB)
- STABILIZED STAGING AREA (SSA)
- VEHICLE TRACKING CONTROL (VTC)
- SEEDING AND MULCHING (INCLUDE AS REQUIRED) (SM)
- EROSION CONTROL BLANKET (ECB)
- SEDIMENT TRAP (ST)
- PROPOSED VELOCITY DISSIPATER
- TEMPORARY SEDIMENT BASINS (Contractor to determine grading limits to provide volume requirement stated in SWMP). (XX ac-ft.)

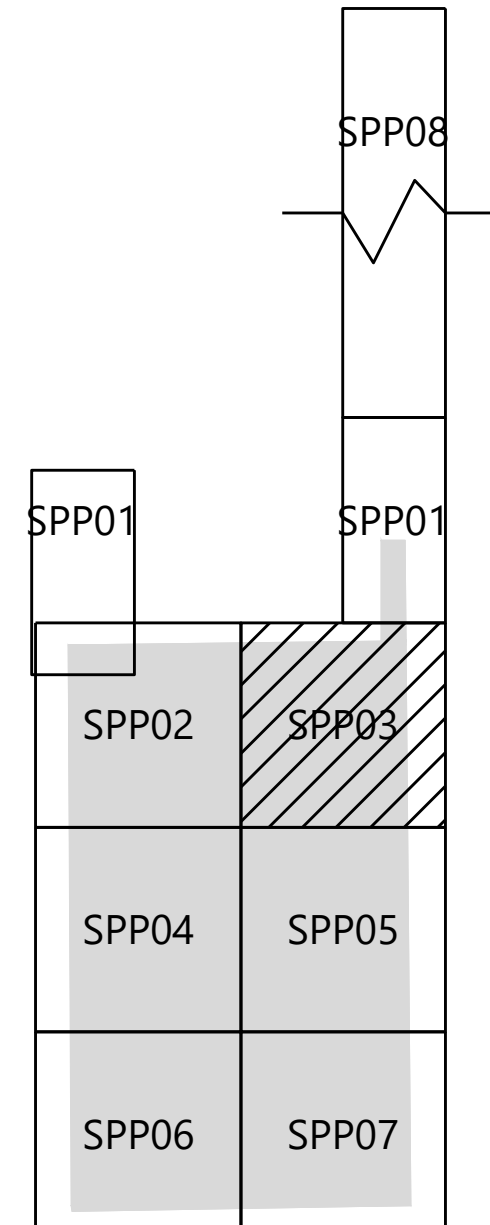
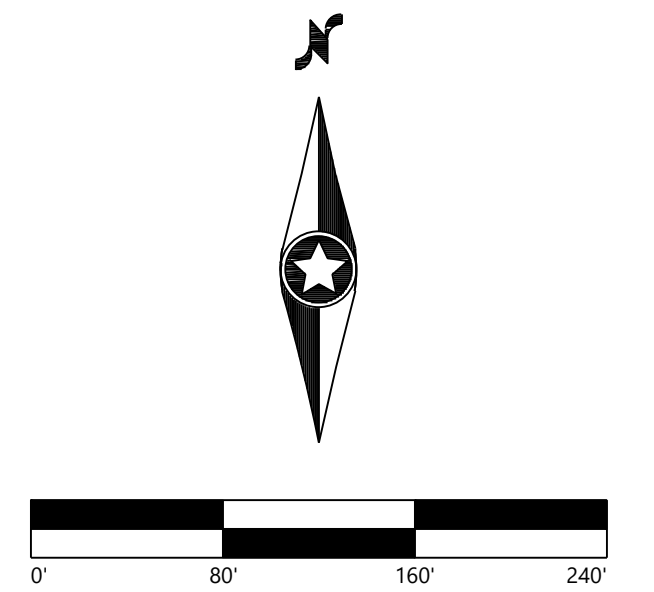


PREPARED FOR:



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KEYMAP
Scale: 1"=1500'

Grazing Yak Solar
 El Paso County, Colorado

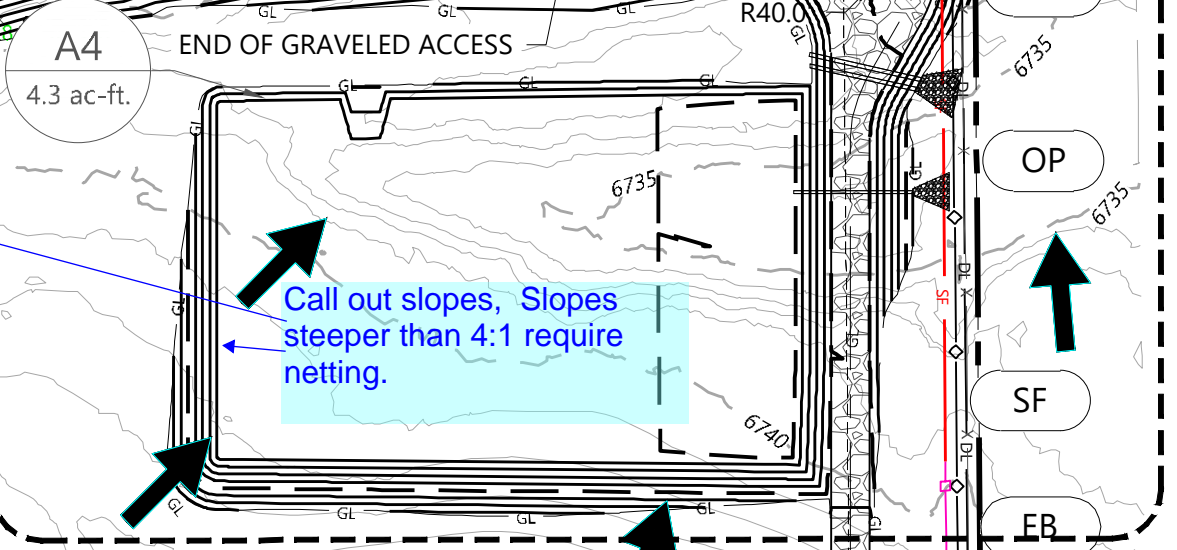
Grading & Erosion Control - Sheet 3

DATE: 04/29/2019

SHEET: SPP03

Grading and erosion control plans need to include the details for construction of this proposed facility. Note Comments on the Drainage report concerning this facility.

Add a note to clarify how this facility will be used as a Sediment basin during construction and how it will be used after the site re-vegetates.



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PREPARED FOR:



REVISIONS:

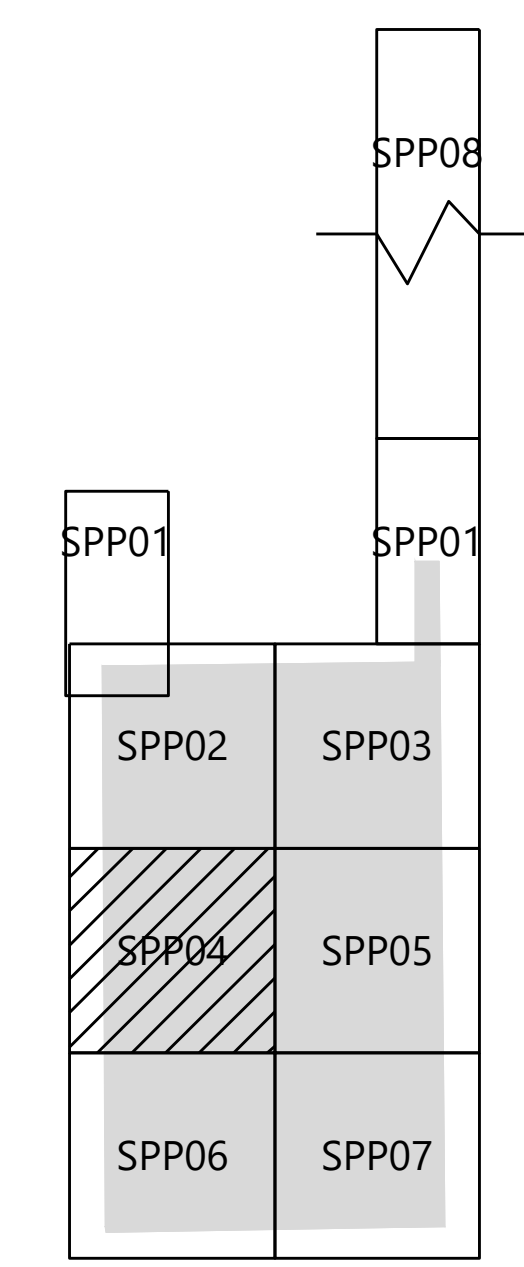
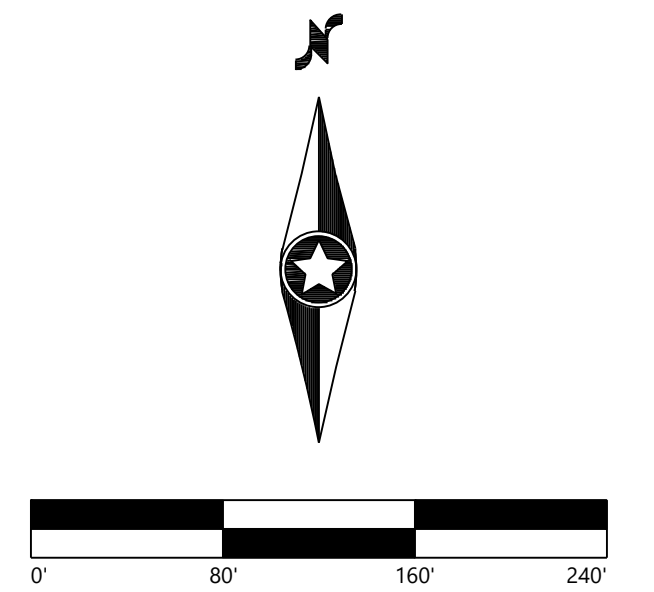
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LEGEND & ABBREVIATIONS

- PROJECT BOUNDARY LINE
- PROPOSED SOLAR TRACKER
- PROPOSED GRAVEL ACCESS RD.
- PROPOSED DIRT ACCESS RD.
- PROPOSED FENCE LINE
- PROPOSED PROTECTED CROSSING
- PROPOSED GRADING LIMITS
- PROPOSED INDEX CONTOUR LINE
- PROPOSED INTERVAL CONTOUR LINE
- PROPOSED GRADING LIMITS BORDER
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- EX. EASEMENT LINE
- SECTION BOUNDARY LINE
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- EX. UNDERGROUND ELEC. LINE
- EX. FIBER OPTIC LINE
- EX. GRAVEL ROAD
- EDGE OF ASPHALT
- EX. ASPHALT PAVEMENT ROAD
- EX. BERM
- EX. WATERWAY
- FEMA FLOODPLAIN

EROSION CONTROL LEGEND

- FLOW DIRECTION ARROW
- TEMPORARY CONSTRUCTION FENCE (CF)
- SILT FENCE (SF)
- PROPOSED EARTHEN BERM (EB)
- STABILIZED STAGING AREA (SSA)
- VEHICLE TRACKING CONTROL (VTC)
- SEEDING AND MULCHING (INCLUDE AS REQUIRED) (SM)
- EROSION CONTROL BLANKET (ECB)
- SEDIMENT TRAP (ST)
- PROPOSED VELOCITY DISSIPATER
- TEMPORARY SEDIMENT BASINS (Contractor to determine grading limits to provide volume requirement stated in SWMP).



KEYMAP
Scale: 1"=1500'

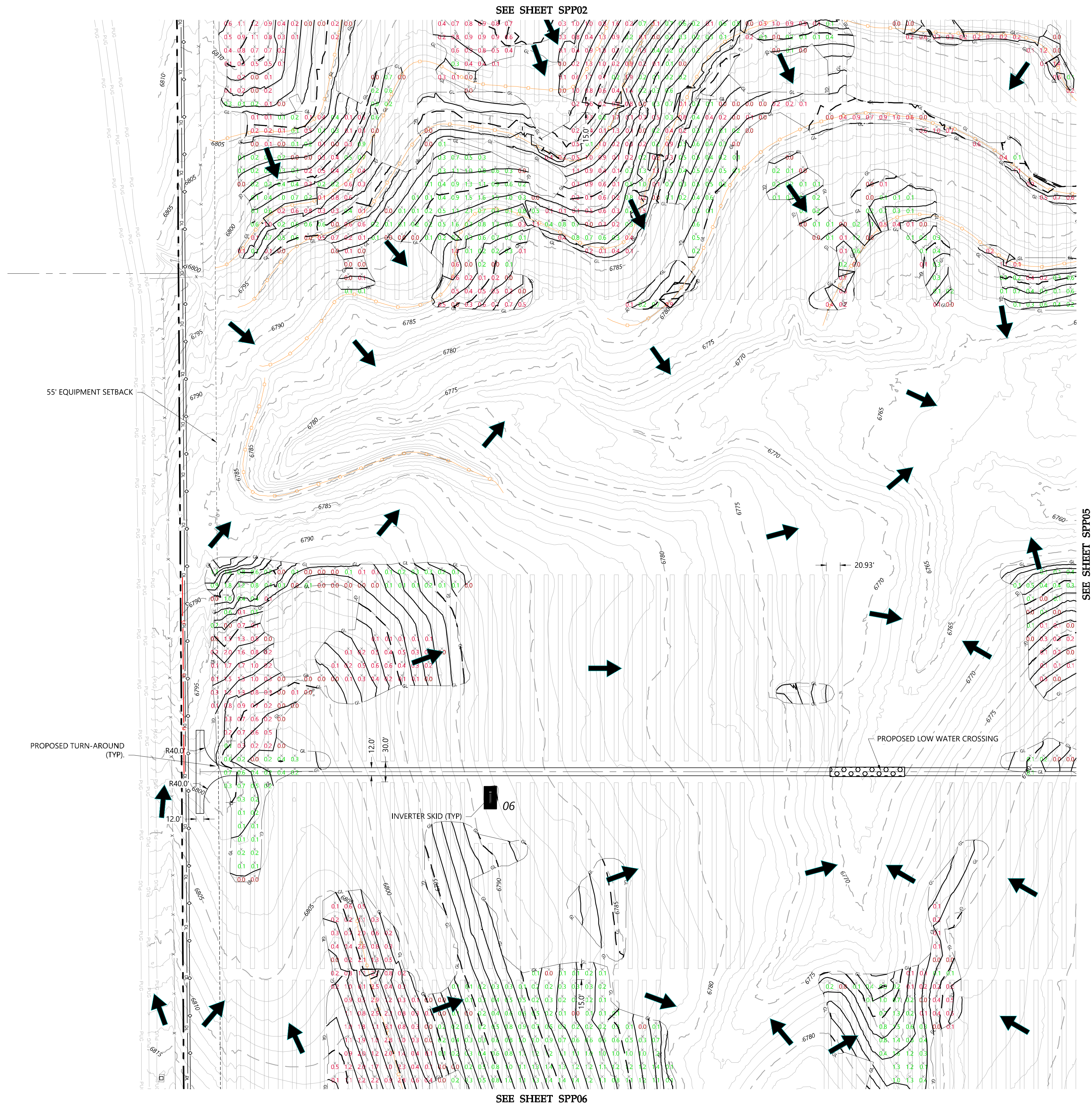
Grazing Yak Solar

El Paso County, Colorado

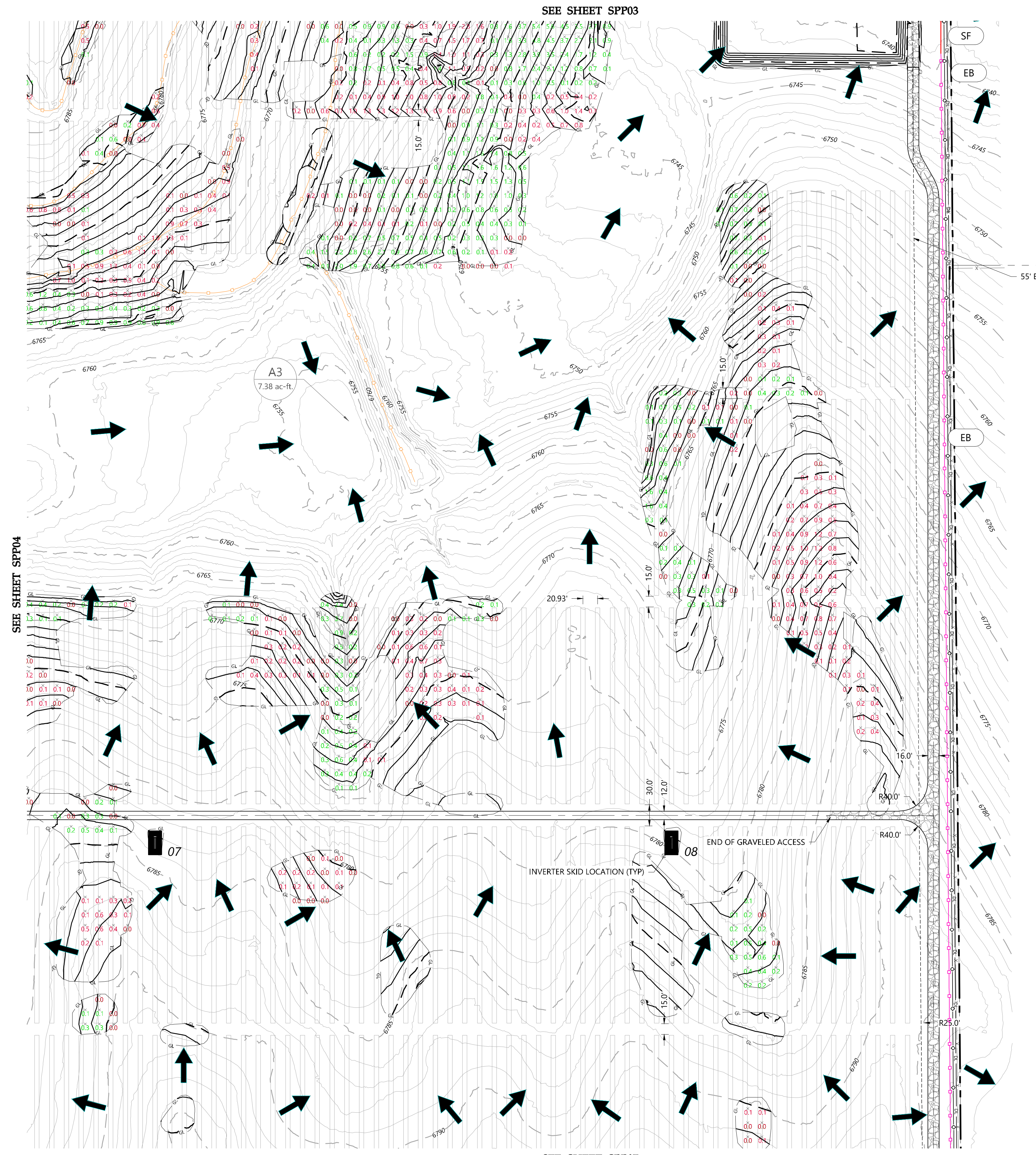
Grading & Erosion Control - Sheet 4

DATE: 04/29/2019

SHEET: SPP04



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SEE SHEET SPP03

SEE SHEET SPP04

SEE SHEET SPP07

LEGEND & ABBREVIATIONS

- PROJECT BOUNDARY LINE
- PROPOSED SOLAR TRACKER
- PROPOSED GRAVEL ACCESS RD.
- PROPOSED DIRT ACCESS RD.
- PROPOSED FENCE LINE
- PROPOSED PROTECTED CROSSING
- PROPOSED GRADING LIMITS
- PROPOSED INDEX CONTOUR LINE
- PROPOSED INTERVAL CONTOUR LINE
- PROPOSED GRADING LIMITS BORDER
- PROPOSED CUT VALUE
- PROPOSED FILL VALUE
- EX. INDEX CONTOUR LINE
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- EX. EASEMENT LINE
- SECTION BOUNDARY LINE
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- EDGE OF ASPHALT
- EX. ASPHALT PAVEMENT ROAD
- EX. BERM
- EX. WATERWAY
- FEMA FLOODPLAIN

EROSION CONTROL LEGEND

- FLOW DIRECTION ARROW
- TEMPORARY CONSTRUCTION FENCE (CF)
- SILT FENCE (SF)
- PROPOSED EARTHEN BERM (EB)
- STABILIZED STAGING AREA (SSA)
- VEHICLE TRACKING CONTROL (VTC)
- SEEDING AND MULCHING (INCLUDE AS REQUIRED) (SM)
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- SEDIMENT TRAP (ST)
- PROPOSED VELOCITY DISSIPATER
- TEMPORARY SEDIMENT BASINS (Contractor to determine grading limits to provide volume requirement stated in SWMP).

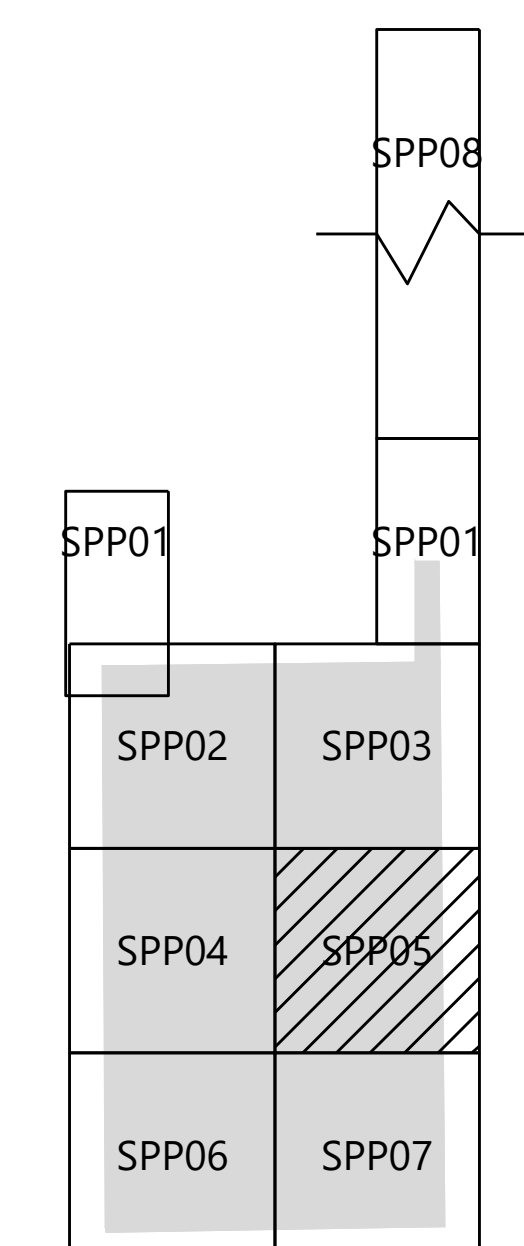
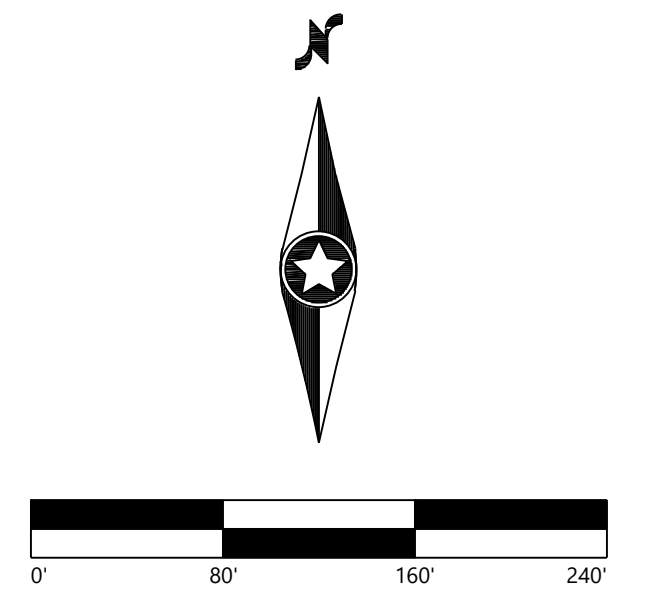


PREPARED FOR:



REVISIONS:

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KEYMAP
Scale: 1"=1500'

Grazing Yak Solar
El Paso County, Colorado

Grading & Erosion Control - Sheet 5

DATE: 04/29/2019

SHEET: SPP05

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SEE SHEET SPP04

LEGEND & ABBREVIATIONS

- PROJECT BOUNDARY LINE
- PROPOSED SOLAR TRACKER
- PROPOSED GRAVEL ACCESS RD.
- PROPOSED DIRT ACCESS RD.
- PROPOSED FENCE LINE
- PROPOSED PROTECTED CROSSING
- PROPOSED GRADING LIMITS
- PROPOSED INDEX CONTOUR LINE
- PROPOSED INTERVAL CONTOUR LINE
- PROPOSED GRADING LIMITS BORDER
- PROPOSED CUT VALUE
- PROPOSED FILL VALUE
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- EX. EASEMENT LINE
- SECTION BOUNDARY LINE
- EX. FENCE LINE
- EX. OVERHEAD POWERLINE
- EX. UNDERGROUND ELEC. LINE
- EX. FIBER OPTIC LINE
- EX. GRAVEL ROAD
- EDGE OF ASPHALT
- EX. ASPHALT PAVEMENT ROAD
- EX. BERM
- EX. WATERWAY
- FEMA FLOODPLAIN

EROSION CONTROL LEGEND

- FLOW DIRECTION ARROW
- TEMPORARY CONSTRUCTION FENCE (CF)
- SILT FENCE (SF)
- PROPOSED EARTHEN BERM (EB)
- STABILIZED STAGING AREA (SSA)
- VEHICLE TRACKING CONTROL (VTC)
- SEEDING AND MULCHING (INCLUDE AS REQUIRED) (SM)
- EROSION CONTROL BLANKET (ECB)
- SEDIMENT TRAP (ST)
- PROPOSED VELOCITY DISSIPATER
- TEMPORARY SEDIMENT BASINS (Contractor to determine grading limits to provide volume requirement stated in SWMP).

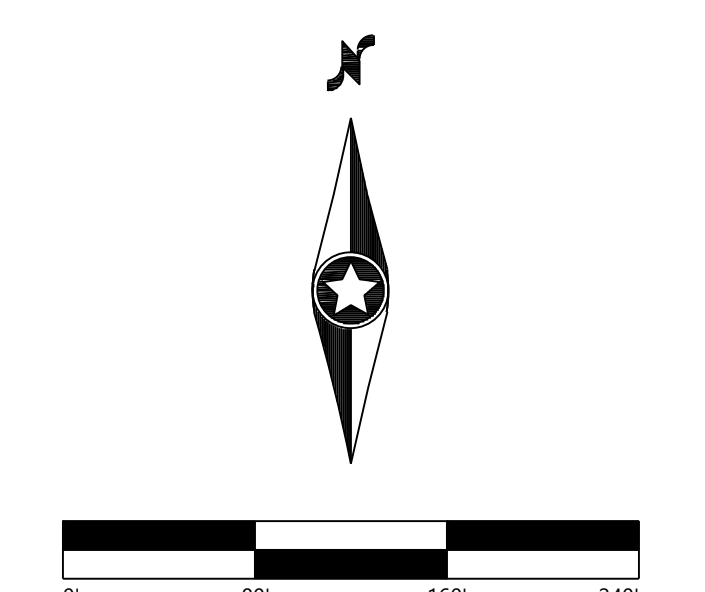


PREPARED FOR:



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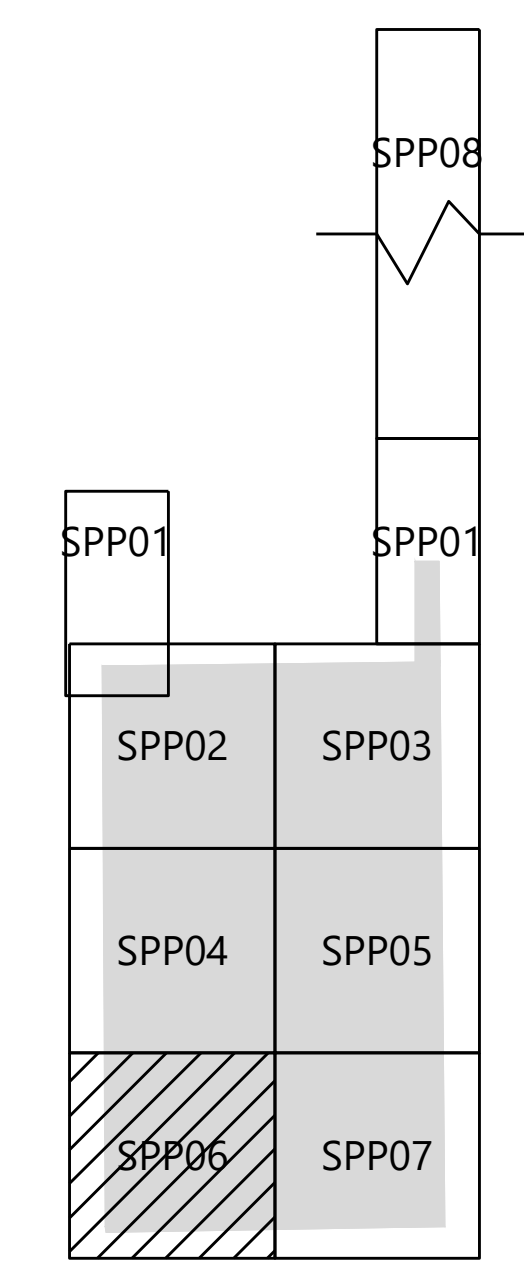
Grazing Yak Solar

El Paso County, Colorado

Grading & Erosion Control - Sheet 6

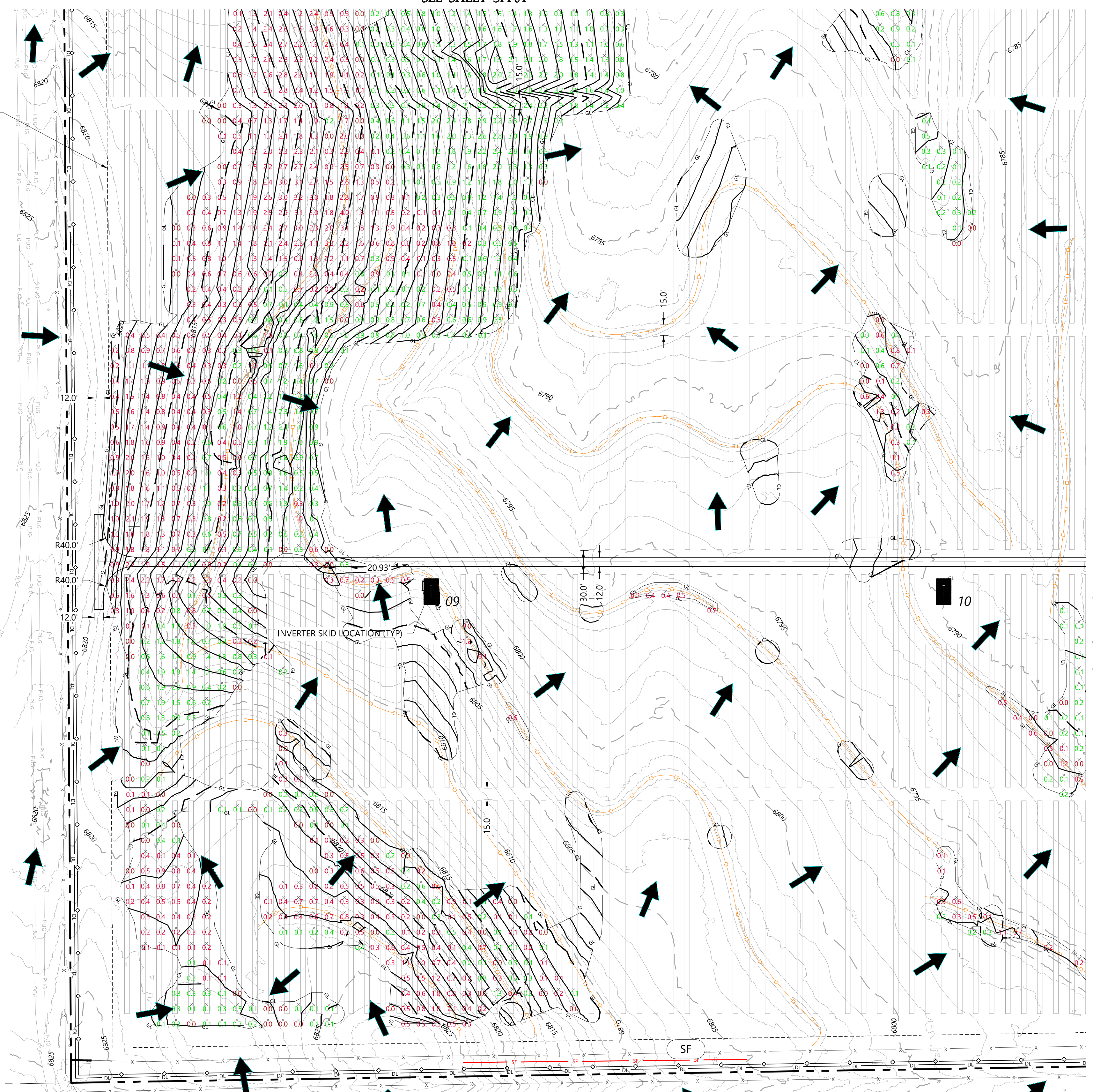
DATE: 04/29/2019

SHEET: **SPP06**



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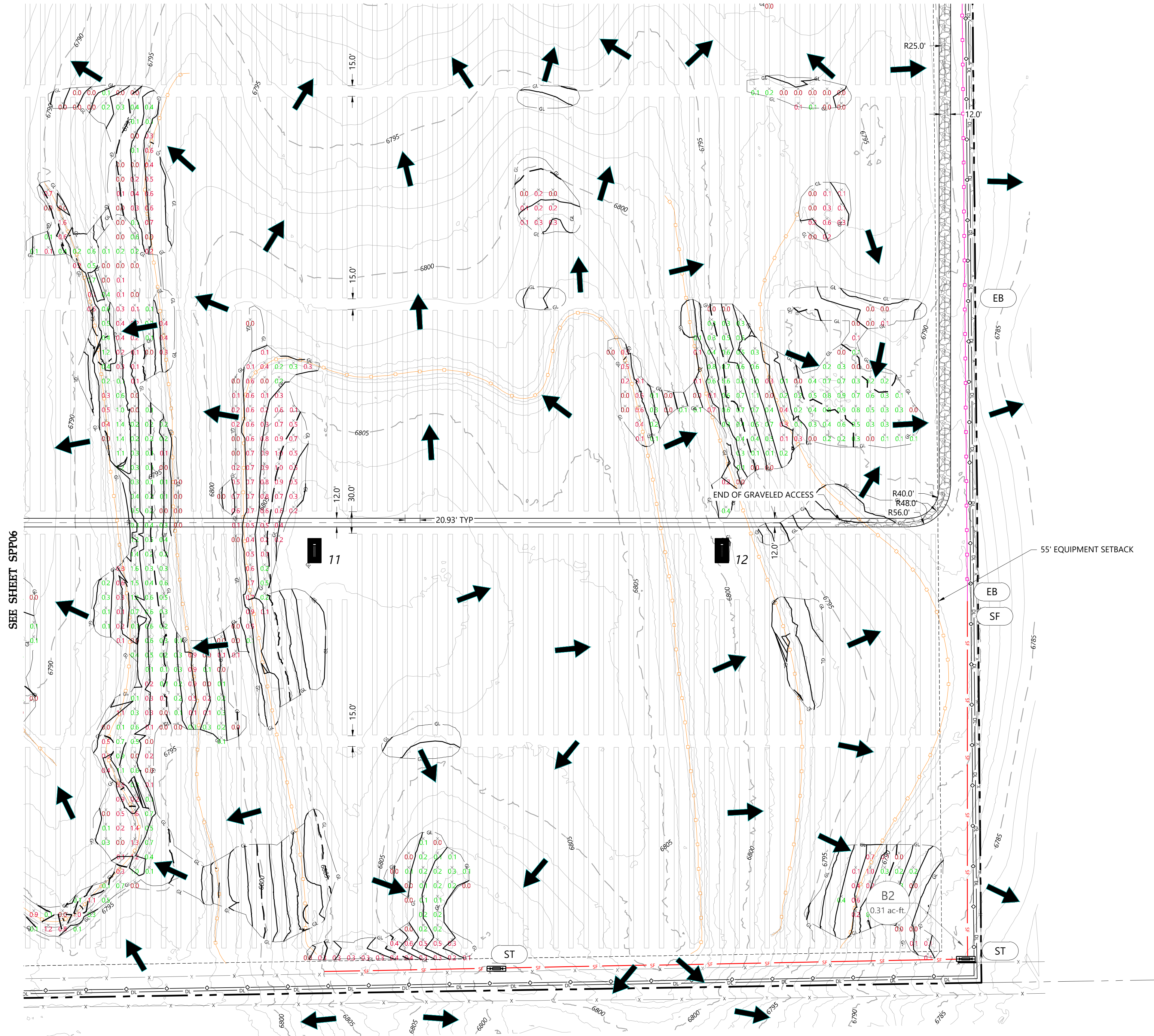
55' EQUIPMENT SETBACK



SEE SHEET SPP07

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SEE SHEET SPP05



LEGEND & ABBREVIATIONS

- PROJECT BOUNDARY LINE
- PROPOSED SOLAR TRACKER
- PROPOSED GRAVEL ACCESS RD.
- PROPOSED DIRT ACCESS RD.
- PROPOSED FENCE LINE
- PROPOSED PROTECTED CROSSING
- PROPOSED GRADING LIMITS
- PROPOSED INDEX CONTOUR LINE
- PROPOSED INTERVAL CONTOUR LINE
- PROPOSED GRADING LIMITS BORDER
- PROPOSED CUT VALUE
- PROPOSED FILL VALUE
- EX. INDEX CONTOUR LINE
- EX. INTERVAL CONTOUR LINE
- EX. EASEMENT LINE
- SECTION BOUNDARY LINE
- EX. FENCE LINE
- EX. OVERHEAD POWERLINE
- EX. UNDERGROUND ELEC. LINE
- EX. FIBER OPTIC LINE
- EX. GRAVEL ROAD
- EDGE OF ASPHALT
- EX. ASPHALT PAVEMENT ROAD
- EX. BERM
- EX. WATERWAY
- FEMA FLOODPLAIN

EROSION CONTROL LEGEND

- FLOW DIRECTION ARROW
- TEMPORARY CONSTRUCTION FENCE (CF)
- SILT FENCE (SF)
- PROPOSED EARTHEN BERM (EB)
- STABILIZED STAGING AREA (SSA)
- VEHICLE TRACKING CONTROL (VTC)
- SEEDING AND MULCHING (INCLUDE AS REQUIRED) (SM)
- EROSION CONTROL BLANKET (ECB)
- SEDIMENT TRAP (ST)
- PROPOSED VELOCITY DISSIPATER
- TEMPORARY SEDIMENT BASINS (Contractor to determine grading limits to provide volume requirement stated in SWMP).

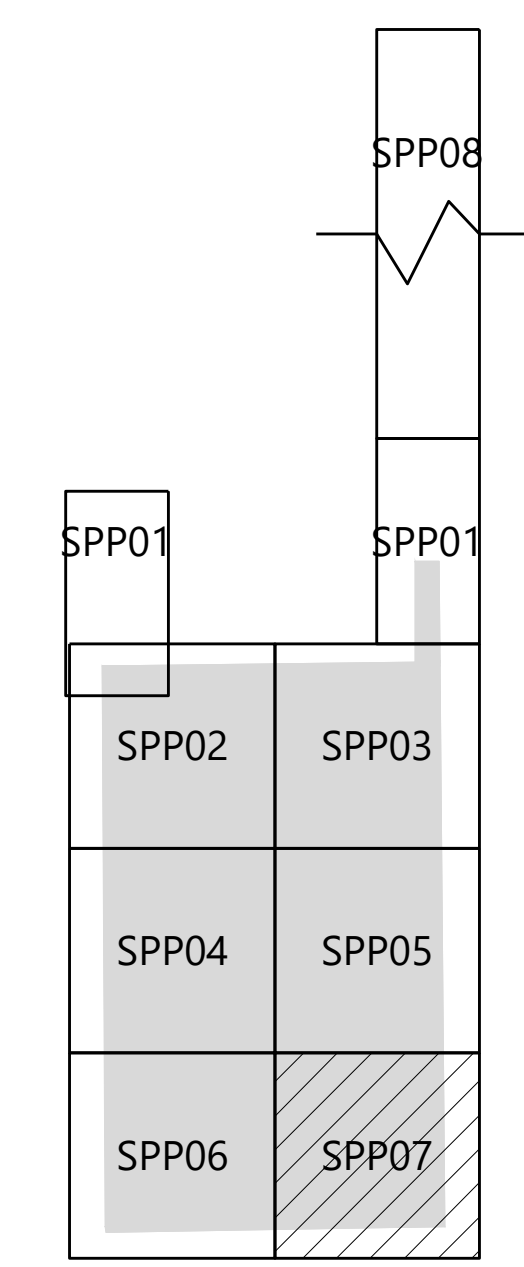
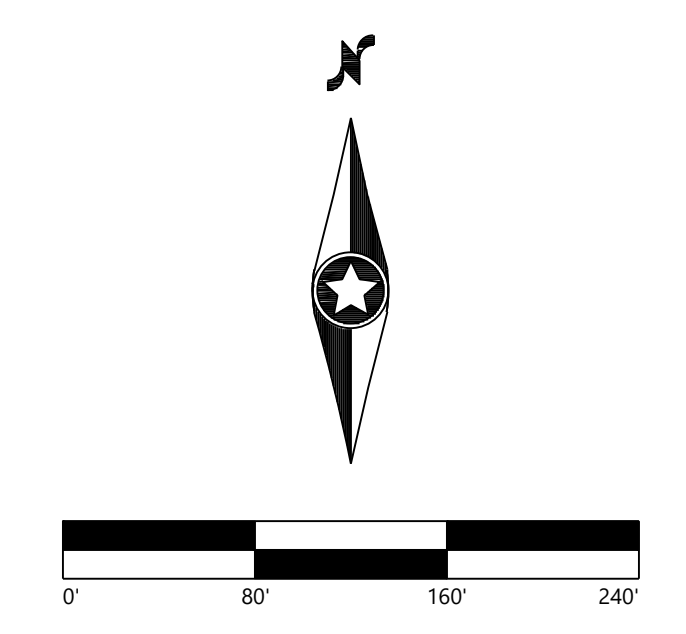


PREPARED FOR:



REVISIONS:

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C	04/26/19	Issued for Review (90%)
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KEYMAP
Scale: 1"=1500'

Grazing Yak Solar
El Paso County, Colorado

Grading & Erosion Control - Sheet 7

DATE: 04/29/2019

SHEET: **SPP07**

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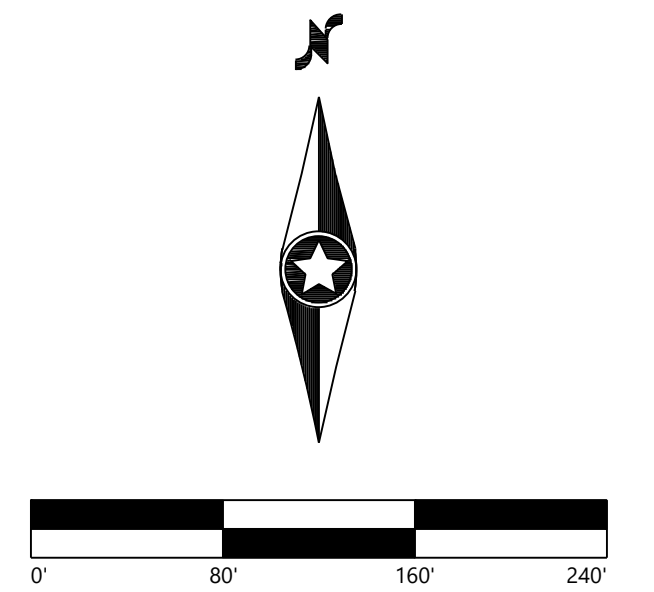


PREPARED FOR:



REVISIONS:

#	DATE	COMMENT
A	02/27/19	Issued for Review (30%)
B	04/22/19	Issued for Permit
C	04/26/19	Issued for Review (90%)
D	04/29/19	Issued for Grading Permit



Grazing Yak Solar

El Paso County, Colorado

Route to Interconnect
Erosion Control Plan-
Sheet 8

DATE: 04/29/2019

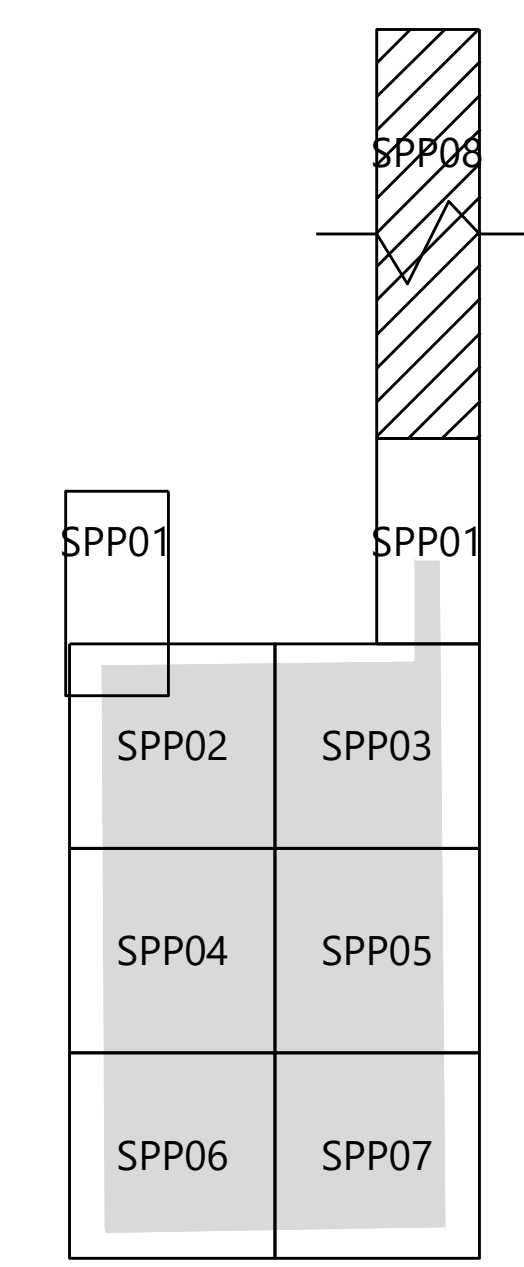
SHEET: **SPP08**

LEGEND & ABBREVIATIONS

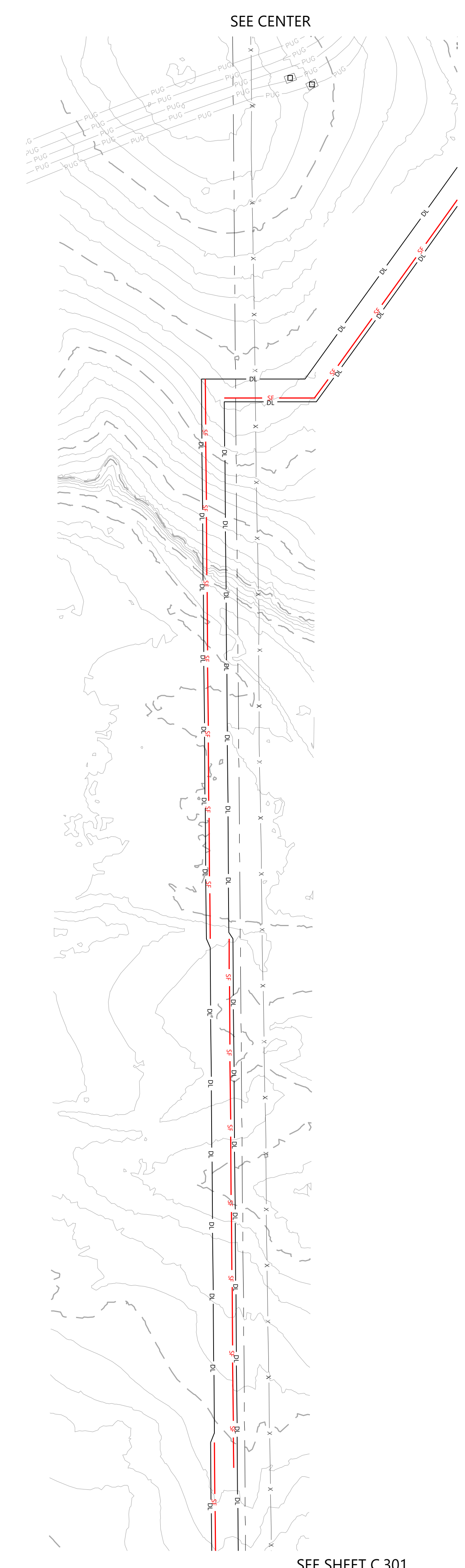
- PROJECT BOUNDARY LINE
- PROPOSED SOLAR TRACKER
- PROPOSED GRAVEL ACCESS RD.
- PROPOSED DIRT ACCESS RD.
- PROPOSED FENCE LINE
- PROPOSED PROTECTED CROSSING
- PROPOSED GRADING LIMITS
- PROPOSED INDEX CONTOUR LINE
- PROPOSED INTERVAL CONTOUR LINE
- PROPOSED GRADING LIMITS BORDER
- PROPOSED CUT VALUE
- PROPOSED FILL VALUE
- PROPOSED FILL VALUE
- EX. INDEX CONTOUR LINE
- EX. INTERVAL CONTOUR LINE
- EX. EASEMENT LINE
- SECTION BOUNDARY LINE
- EX. FENCE LINE
- EX. OVERHEAD POWERLINE
- EX. UNDERGROUND ELEC. LINE
- EX. FIBER OPTIC LINE
- EX. GRAVEL ROAD
- EX. ASPHALT PAVEMENT ROAD
- EX. BERM
- EX. WATERWAY
- FEMA FLOODPLAIN

EROSION CONTROL LEGEND

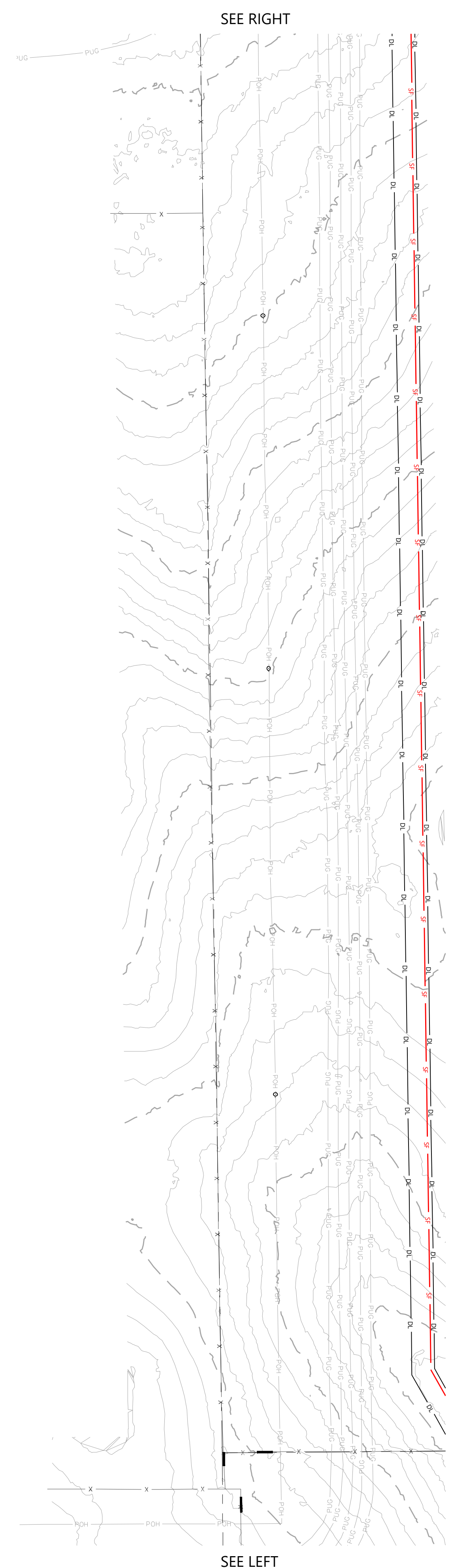
- FLOW DIRECTION ARROW
- TEMPORARY CONSTRUCTION FENCE (CF)
- SILT FENCE (SF)
- PROPOSED EARTHEN BERM (EB)
- STABILIZED STAGING AREA (SSA)
- VEHICLE TRACKING CONTROL (VTC)
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- SEDIMENT TRAP (ST)
- PROPOSED VELOCITY DISSIPATER
- TEMPORARY SEDIMENT BASINS (Contractor to determine grading limits to provide volume requirement stated in SWMP).



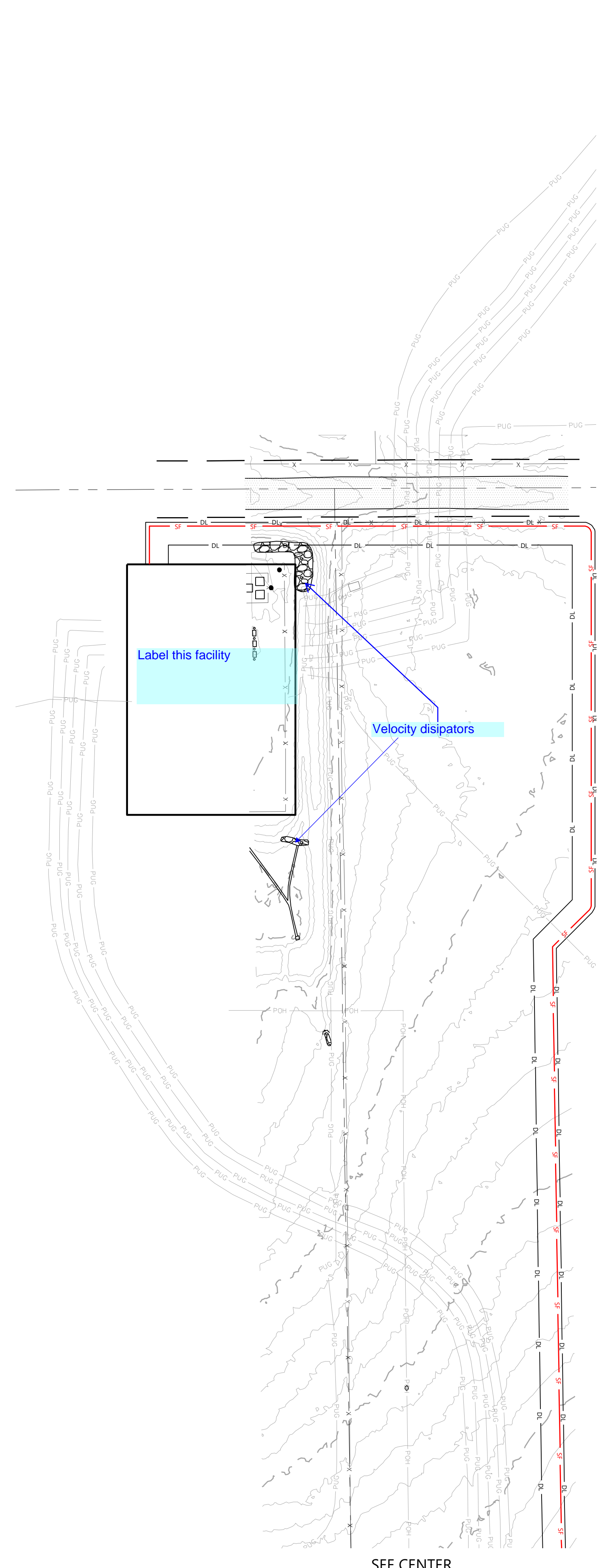
KEYMAP
Scale: 1"=1500'



SEE SHEET C.301



SEE LEFT



SEE CENTER

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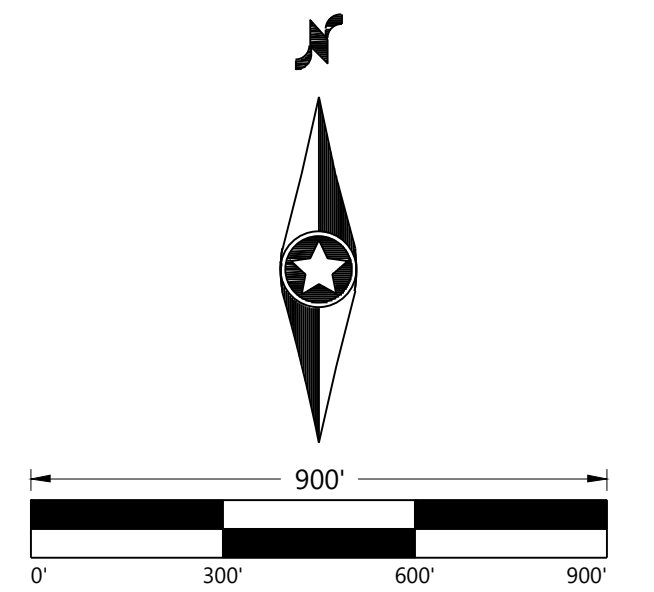


PREPARED FOR:



REVISIONS:

#	DATE	COMMENT
A	02/27/19	Issued for Review (30%)
B	03/27/19	Issued for Review (60%)
C	04/22/19	Permit Submittal Revisions
D	04/29/19	Issued for Grading Permit



Grazing Yak Solar

El Paso County, Colorado

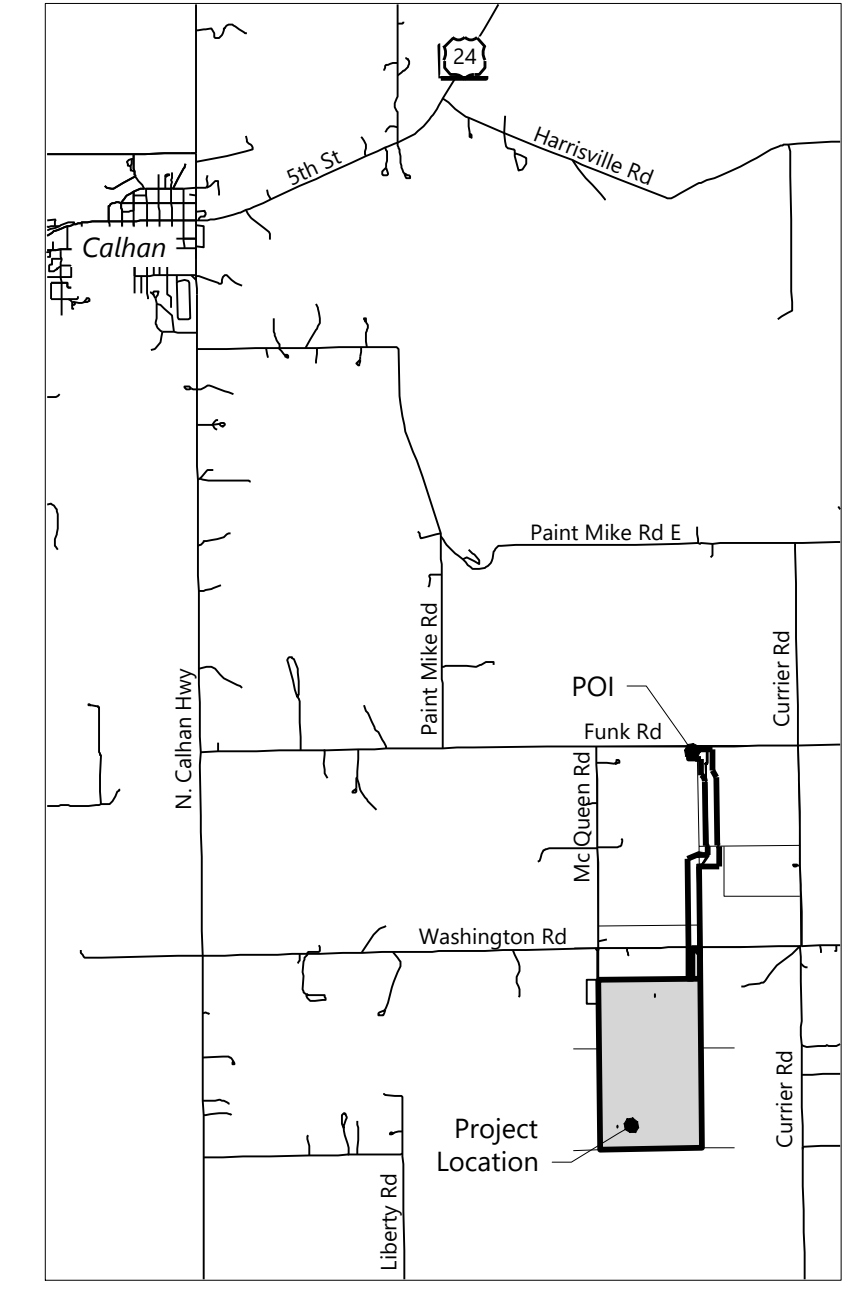
Re-Seeding Plan

DATE: 04/29/2019

SHEET: PL.01

LEGEND & ABBREVIATIONS

	EX. PROJECT BOUNDARY LINE
	INVERTER BLOCK BOUNDARY
	PROPOSED UNDERGROUND CIRCUIT 1
	PROPOSED UNDERGROUND CIRCUIT 2
	PROPOSED FENCE LINE
	PROPOSED SOLAR TRACKER
	BOUNDARY SET BACK LINE 10M
	BOUNDARY SET BACK LINE 15M
	PROPOSED GRAVEL ACCESS RD. (2500 FT.)
	PROPOSED DIRT ACCESS RD. (13,425 FT.)
	PROPOSED CAB
	PROPOSED LAYDOWN AREA
	PROPOSED PROTECTED CROSSING
	RE-SEEDING
	RE-SEEDING AS REQUIRED
	PROPOSED LIMITS OF DISTURBANCE
	PROPOSED INDEX CONTOUR LINE
	PROPOSED INTERVAL CONTOUR LINE
	EX. INDEX CONTOUR LINE
	EX. INTERVAL CONTOUR LINE
	EX. SECTION LINE
	EX. EASEMENT LINE
	EX. FENCE LINE
	EX. OVERHEAD POWERLINE
	EX. UNDERGROUND POWERLINE
	EX. FIBER OPTIC LINE
	EX. GRAVEL ROAD
	EX. ASPHALT PAVEMENT ROAD

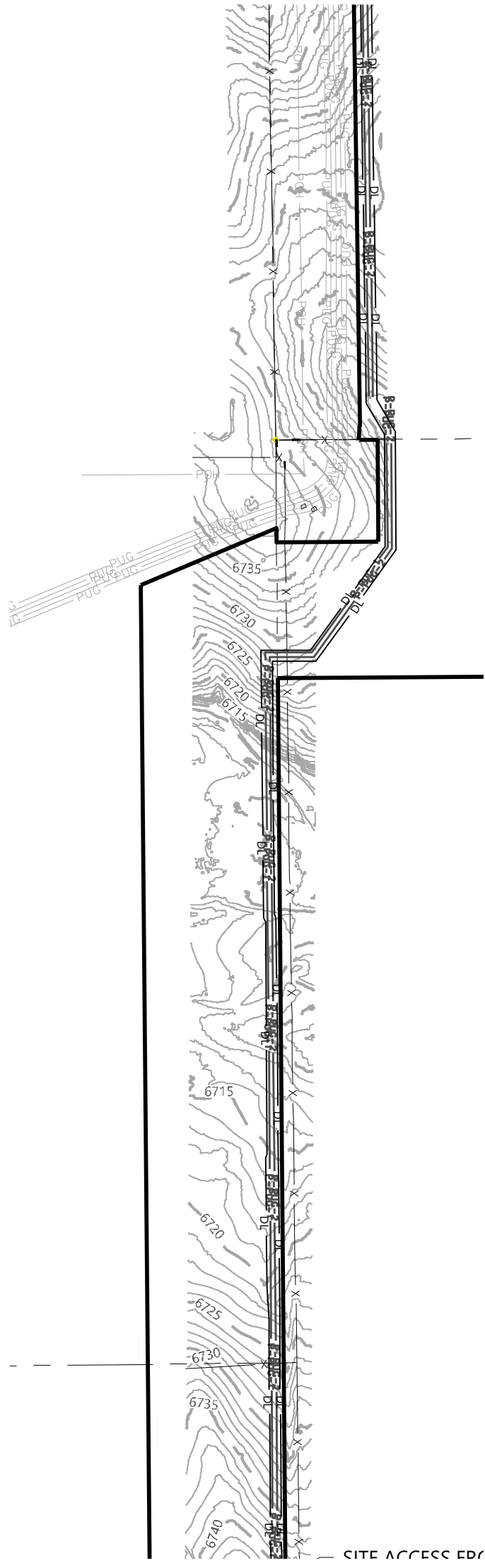


VICINITY MAP
Scale: 1" = 5000'

Provide a general note about the "preservation of existing vegetation", this is part of your plan on other documents, that the contractor may not be aware of.

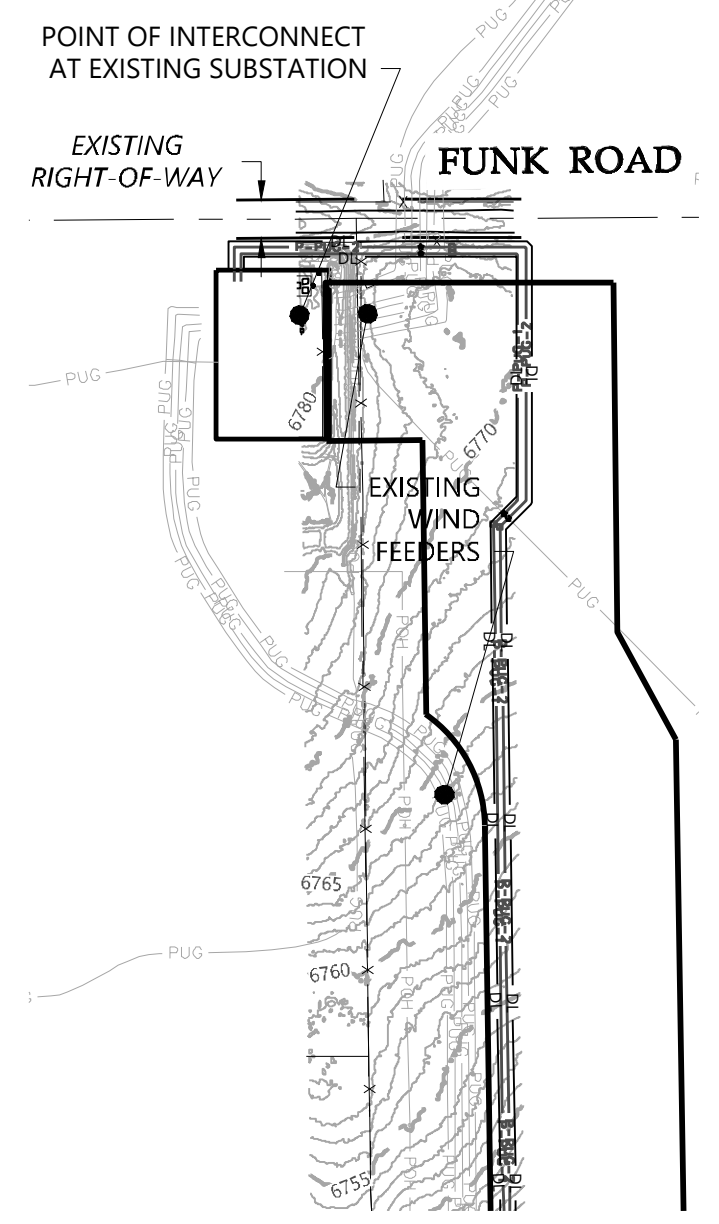


See Plan View 1 (This Sheet)



See Plan View 3 (This Sheet)

2 Plan View 2
1" = 300'

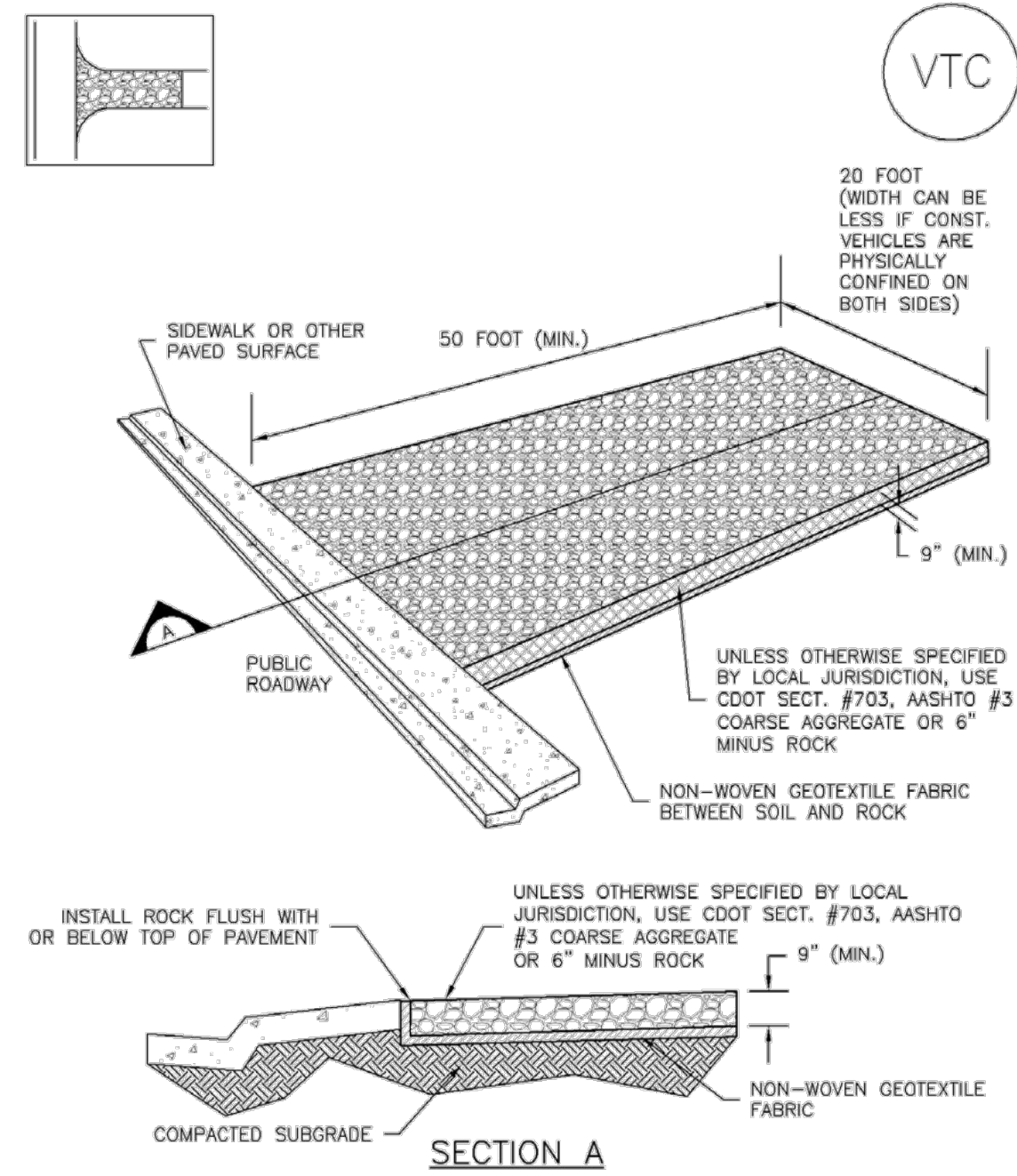


See Plan View 2 (This Sheet)

1 Plan View 1
1" = 300'

3 Plan View 3
1" = 300'

Vehicle Tracking Control (VTC) SM-4



VTC-1. AGGREGATE VEHICLE TRACKING CONTROL

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

SM-4 Vehicle Tracking Control (VTC)

STABILIZED CONSTRUCTION ENTRANCE/EXIT INSTALLATION NOTES

- SEE PLAN VIEW FOR
-LOCATION OF CONSTRUCTION ENTRANCE(S)/EXIT(S).
-TYPE OF CONSTRUCTION ENTRANCE(S)/EXITS(S) (WITH/WITHOUT WHEEL WASH, CONSTRUCTION MAT OR TRM).
- CONSTRUCTION MAT OR TRM STABILIZED CONSTRUCTION ENTRANCES ARE ONLY TO BE USED ON SHORT DURATION PROJECTS (TYPICALLY RANGING FROM A WEEK TO A MONTH) WHERE THERE WILL BE LIMITED VEHICULAR ACCESS.
- A STABILIZED CONSTRUCTION ENTRANCE/EXIT SHALL BE LOCATED AT ALL ACCESS POINTS WHERE VEHICLES ACCESS THE CONSTRUCTION SITE FROM PAVED RIGHT-OF-WAYS.
- STABILIZED CONSTRUCTION ENTRANCE/EXIT SHALL BE INSTALLED PRIOR TO ANY LAND DISTURBING ACTIVITIES.
- A NON-WOVEN GEOTEXTILE FABRIC SHALL BE PLACED UNDER THE STABILIZED CONSTRUCTION ENTRANCE/EXIT PRIOR TO THE PLACEMENT OF ROCK.
- UNLESS OTHERWISE SPECIFIED BY LOCAL JURISDICTION, ROCK SHALL CONSIST OF DOT SECT. #703, AASHTO #3 COARSE AGGREGATE OR 6" (MINUS) ROCK.

STABILIZED CONSTRUCTION ENTRANCE/EXIT MAINTENANCE NOTES

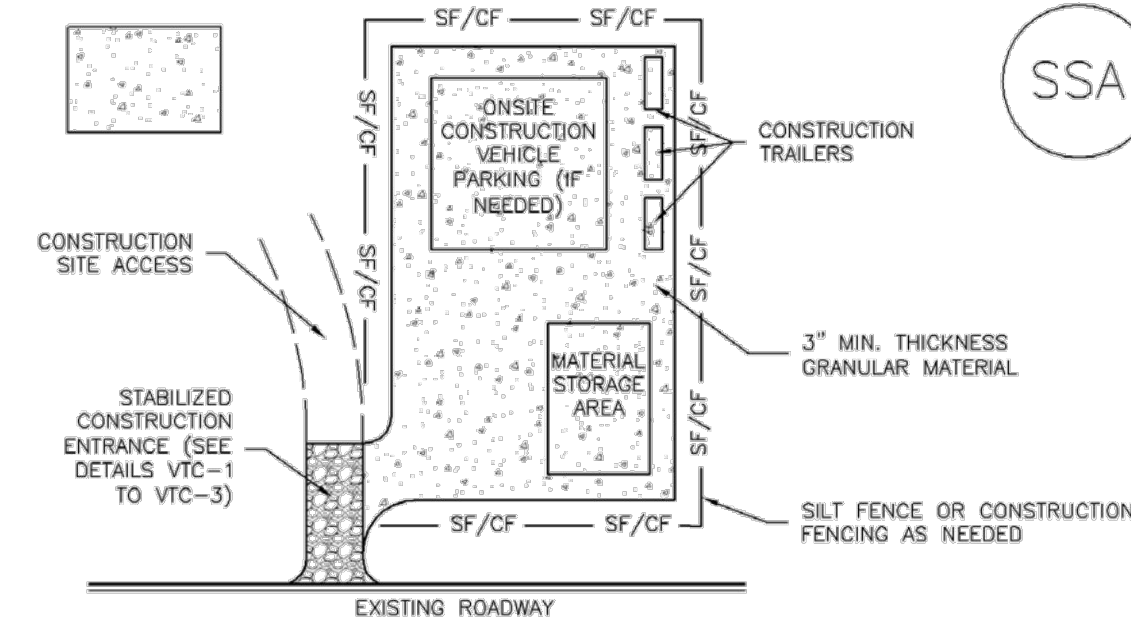
- INSPECT BMPs EACH WORKDAY, AND MAINTAIN THEM IN EFFECTIVE OPERATING CONDITION. MAINTENANCE OF BMPs SHOULD BE PROACTIVE, NOT REACTIVE. INSPECT BMPs AS SOON AS POSSIBLE (AND ALWAYS WITHIN 24 HOURS) FOLLOWING A STORM THAT CAUSES SURFACE EROSION, AND PERFORM NECESSARY MAINTENANCE.
- FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN BMPs IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.
- WHERE BMPs HAVE FAILED, REPAIR OR REPLACEMENT SHOULD BE INITIATED UPON DISCOVERY OF THE FAILURE.
- ROCK SHALL BE REAPPLIED OR REGRADED AS NECESSARY TO THE STABILIZED ENTRANCE/EXIT TO MAINTAIN A CONSISTENT DEPTH.
- SEDIMENT TRACKED ONTO PAVED ROADS IS TO BE REMOVED THROUGHOUT THE DAY AND AT THE END OF THE DAY BY SHOVELING OR SWEEPING. SEDIMENT MAY NOT BE WASHED DOWN STORM SEWER DRAINS.

NOTE: MANY JURISDICTIONS HAVE BMP DETAILS THAT VARY FROM UDFCD STANDARD DETAILS. CONSULT WITH LOCAL JURISDICTIONS AS TO WHICH DETAIL SHOULD BE USED WHEN DIFFERENCES ARE NOTED.

(DETAILS ADAPTED FROM CITY OF BROOMFIELD, COLORADO, NOT AVAILABLE IN AUTOCAD)

VTC-6 Urban Drainage and Flood Control District November 2010 Urban Storm Drainage Criteria Manual Volume 3

Stabilized Staging Area (SSA) SM-6



SSA-1. STABILIZED STAGING AREA

STABILIZED STAGING AREA INSTALLATION NOTES

- SEE PLAN VIEW FOR
-LOCATION OF STAGING AREA(S).
-CONTRACTOR MAY ADJUST LOCATION AND SIZE OF STAGING AREA WITH APPROVAL FROM THE LOCAL JURISDICTION.
- STABILIZED STAGING AREA SHOULD BE APPROPRIATE FOR THE NEEDS OF THE SITE. OVERSIZING RESULTS IN A LARGER AREA TO STABILIZE FOLLOWING CONSTRUCTION.
- STAGING AREA SHALL BE STABILIZED PRIOR TO OTHER OPERATIONS ON THE SITE.
- THE STABILIZED STAGING AREA SHALL CONSIST OF A MINIMUM 3" THICK GRANULAR MATERIAL.
- UNLESS OTHERWISE SPECIFIED BY LOCAL JURISDICTION, ROCK SHALL CONSIST OF DOT SECT. #703, AASHTO #3 COARSE AGGREGATE OR 6" (MINUS) ROCK.
- ADDITIONAL PERIMETER BMPs MAY BE REQUIRED INCLUDING BUT NOT LIMITED TO SILT FENCE AND CONSTRUCTION FENCING.

STABILIZED STAGING AREA MAINTENANCE NOTES

- INSPECT BMPs EACH WORKDAY, AND MAINTAIN THEM IN EFFECTIVE OPERATING CONDITION. MAINTENANCE OF BMPs SHOULD BE PROACTIVE, NOT REACTIVE. INSPECT BMPs AS SOON AS POSSIBLE (AND ALWAYS WITHIN 24 HOURS) FOLLOWING A STORM THAT CAUSES SURFACE EROSION, AND PERFORM NECESSARY MAINTENANCE.
- FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN BMPs IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.
- WHERE BMPs HAVE FAILED, REPAIR OR REPLACEMENT SHOULD BE INITIATED UPON DISCOVERY OF THE FAILURE.
- ROCK SHALL BE REAPPLIED OR REGRADED AS NECESSARY IF RUTTING OCCURS OR UNDERLYING SUBGRADE BECOMES EXPOSED.

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

SM-6 Stabilized Staging Area (SSA)

STABILIZED STAGING AREA MAINTENANCE NOTES

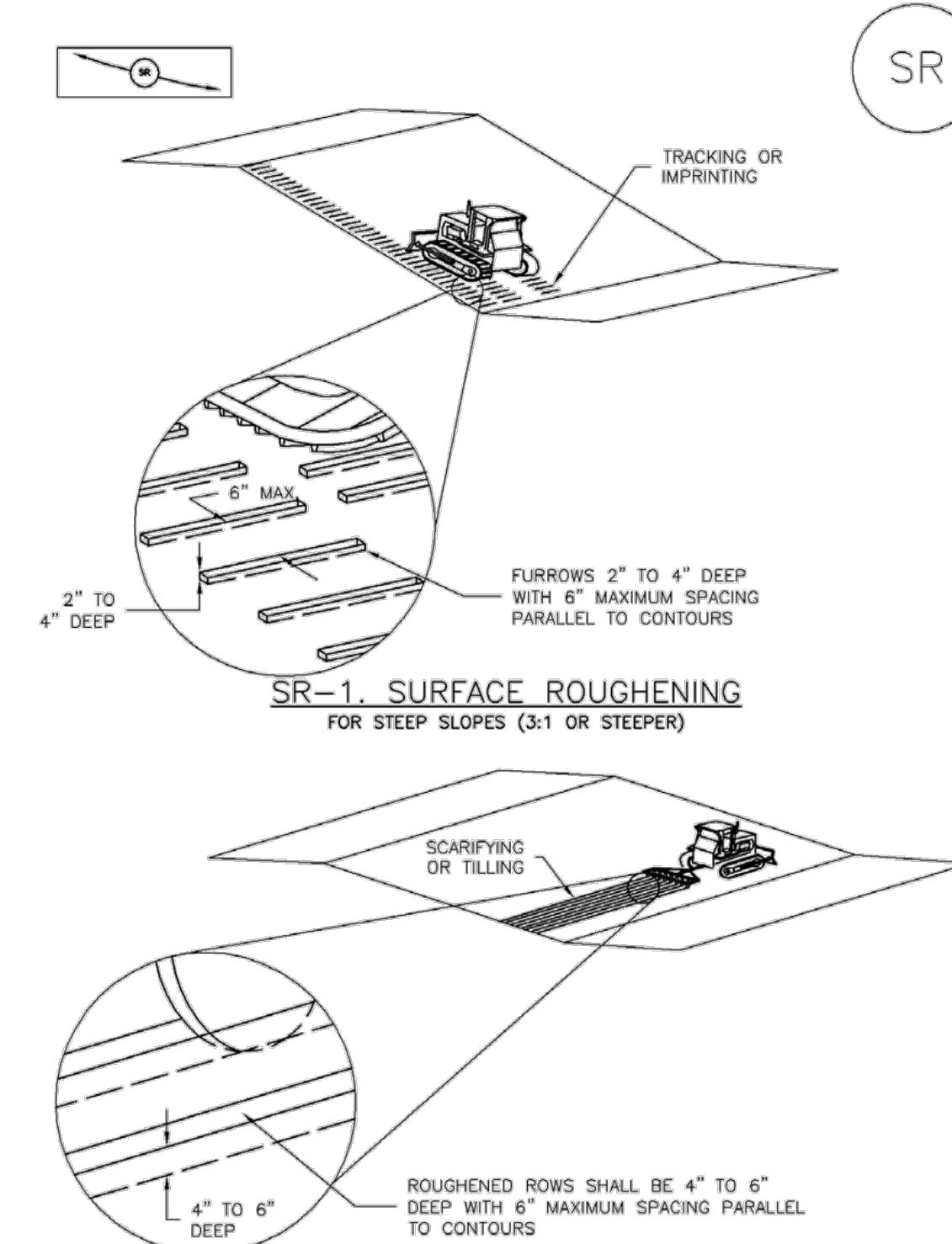
- STABILIZED STAGING AREA SHALL BE ENLARGED IF NECESSARY TO CONTAIN PARKING, STORAGE, AND UNLOADING/LOADING OPERATIONS.
- THE STABILIZED STAGING AREA SHALL BE REMOVED AT THE END OF CONSTRUCTION. THE GRANULAR MATERIAL SHALL BE REMOVED OR, IF APPROVED BY THE LOCAL JURISDICTION, USED ON SITE, AND THE AREA COVERED WITH TOPSOIL, SEEDED AND MULCHED OR OTHERWISE STABILIZED IN A MANNER APPROVED BY LOCAL JURISDICTION.

NOTE: MANY MUNICIPALITIES PROHIBIT THE USE OF RECYCLED CONCRETE AS GRANULAR MATERIAL FOR STABILIZED STAGING AREAS DUE TO DIFFICULTIES WITH RE-ESTABLISHMENT OF VEGETATION IN AREAS WHERE RECYCLED CONCRETE WAS PLACED.

NOTE: MANY JURISDICTIONS HAVE BMP DETAILS THAT VARY FROM UDFCD STANDARD DETAILS. CONSULT WITH LOCAL JURISDICTIONS AS TO WHICH DETAIL SHOULD BE USED WHEN DIFFERENCES ARE NOTED.

(DETAILS ADAPTED FROM DOUGLAS COUNTY, COLORADO, NOT AVAILABLE IN AUTOCAD)

Surface Roughening (SR) EC-1



SR-1. SURFACE ROUGHENING FOR STEEP SLOPES (3:1 OR STEEPER)

SR-2. SURFACE ROUGHENING FOR LOW SLOPES (LESS THAN 3:1)

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



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Grazing Yak Solar

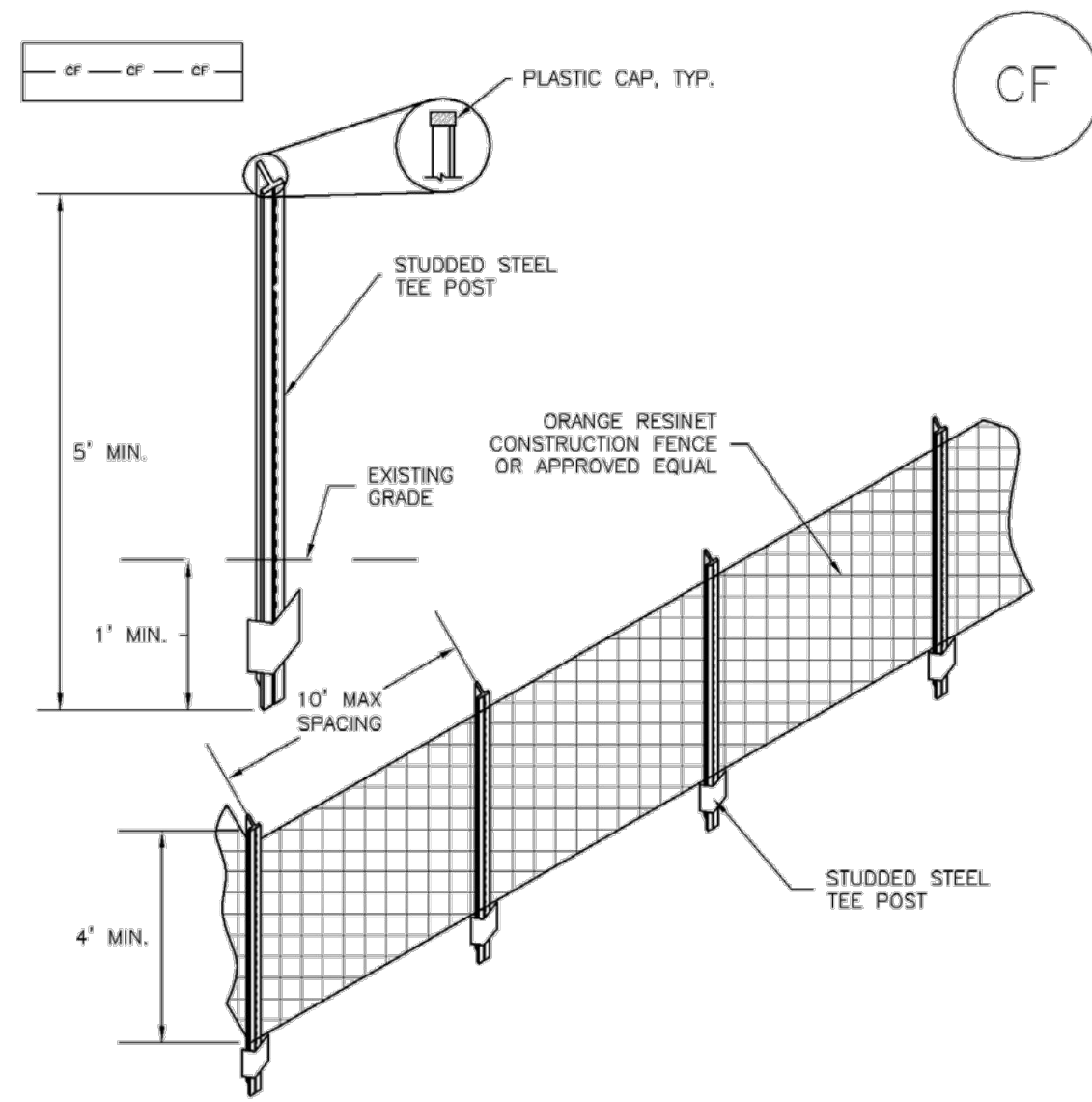
El Paso County, Colorado

Notes and Details - Sheet 1

DATE: 04/29/2019

SHEET: ND01

SM-3 Construction Fence (CF)



CF-1. PLASTIC MESH CONSTRUCTION FENCE

CONSTRUCTION FENCE INSTALLATION NOTES

1. SEE PLAN VIEW FOR:
 - LOCATION OF CONSTRUCTION FENCE.
2. CONSTRUCTION FENCE SHOWN SHALL BE INSTALLED PRIOR TO ANY LAND DISTURBING ACTIVITIES.
3. CONSTRUCTION FENCE SHALL BE COMPOSED OF ORANGE, CONTRACTOR-GRADE MATERIAL THAT IS AT LEAST 4' HIGH. METAL POSTS SHOULD HAVE A PLASTIC CAP FOR SAFETY.
4. STUDDED STEEL TEE POSTS SHALL BE UTILIZED TO SUPPORT THE CONSTRUCTION FENCE. MAXIMUM SPACING FOR STEEL TEE POSTS SHALL BE 10'.
5. CONSTRUCTION FENCE SHALL BE SECURELY FASTENED TO THE TOP, MIDDLE, AND BOTTOM OF EACH POST.

Construction Fence (CF) SM-3

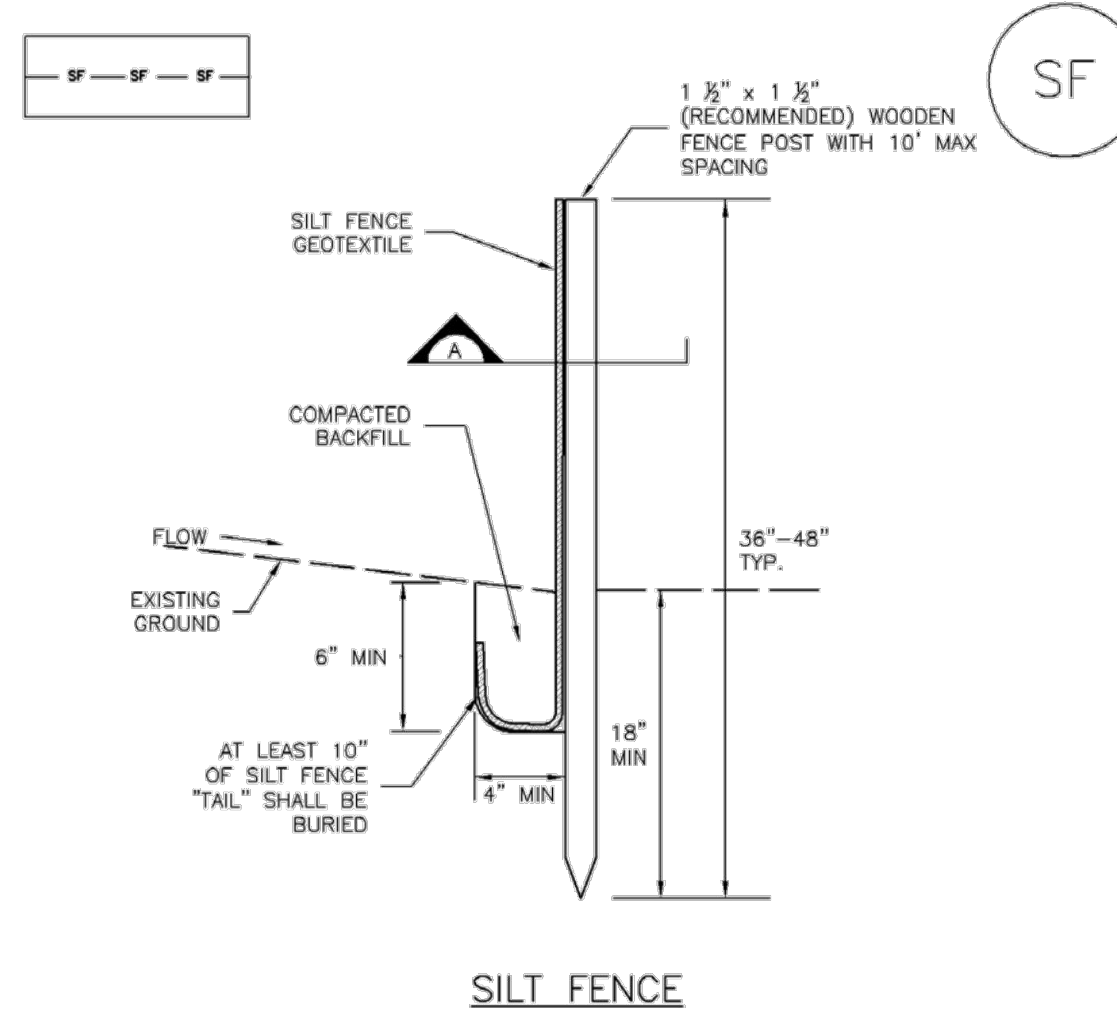
CONSTRUCTION FENCE MAINTENANCE NOTES

1. INSPECT BMPs EACH WORKDAY, AND MAINTAIN THEM IN EFFECTIVE OPERATING CONDITION. MAINTENANCE OF BMPs SHOULD BE PROACTIVE, NOT REACTIVE. INSPECT BMPs 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 BMPs IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.
3. WHERE BMPs HAVE FAILED, REPAIR OR REPLACEMENT SHOULD BE INITIATED UPON DISCOVERY OF THE FAILURE.
4. CONSTRUCTION FENCE SHALL BE REPAIRED OR REPLACED WHEN THERE ARE SIGNS OF DAMAGE SUCH AS RIPS OR SAGS. CONSTRUCTION FENCE IS TO REMAIN IN PLACE UNTIL THE UPSTREAM DISTURBED AREA IS STABILIZED AND APPROVED BY THE LOCAL JURISDICTION.
5. WHEN CONSTRUCTION FENCES ARE REMOVED, ALL DISTURBED AREAS ASSOCIATED WITH THE INSTALLATION, MAINTENANCE, AND/OR REMOVAL OF THE FENCE SHALL BE COVERED WITH TOPSOIL, SEEDED AND MULCHED, OR OTHERWISE STABILIZED AS APPROVED BY LOCAL JURISDICTION.

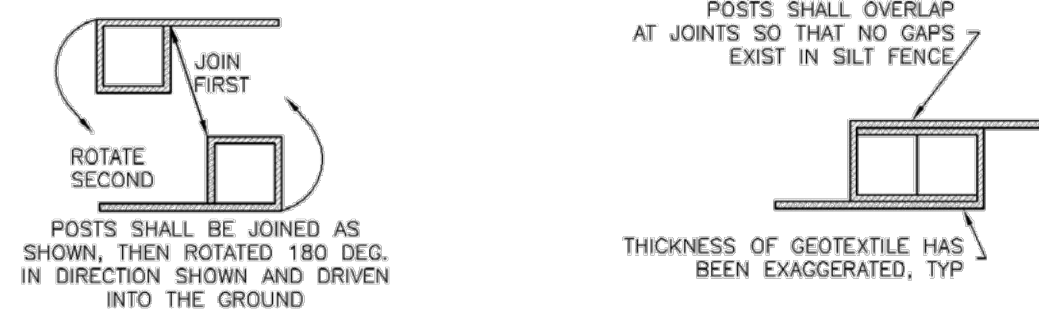
NOTE: MANY JURISDICTIONS HAVE BMP DETAILS THAT VARY FROM UDFCD STANDARD DETAILS. CONSULT WITH LOCAL JURISDICTIONS AS TO WHICH DETAIL SHOULD BE USED WHEN DIFFERENCES ARE NOTED.

(DETAIL ADAPTED FROM TOWN OF PARKER, COLORADO, NOT AVAILABLE IN AUTOCAD)

Silt Fence (SF) SC-1



SILT FENCE



SECTION A

SF-1. SILT FENCE

SC-1 Silt Fence (SF)

SILT FENCE INSTALLATION NOTES

1. SILT FENCE MUST BE PLACED AWAY FROM THE TOE OF THE SLOPE TO ALLOW FOR WATER PONDING. SILT FENCE AT THE TOE OF A SLOPE SHOULD BE INSTALLED IN A FLAT LOCATION AT LEAST SEVERAL FEET (2-5 FT) FROM THE TOE OF THE SLOPE TO ALLOW ROOM FOR PONDING AND DEPOSITION.
2. A UNIFORM 6" X 4" ANCHOR TRENCH SHALL BE EXCAVATED USING TRENCHER OR SILT FENCE INSTALLATION DEVICE. NO ROAD GRADERS, BACKHOES, OR SIMILAR EQUIPMENT SHALL BE USED.
3. COMPACT ANCHOR TRENCH BY HAND WITH A "JUMPING JACK" OR BY WHEEL ROLLING. COMPACTION SHALL BE SUCH THAT SILT FENCE RESISTS BEING PULLED OUT OF ANCHOR TRENCH BY HAND.
4. SILT FENCE SHALL BE PULLED TIGHT AS IT IS ANCHORED TO THE STAKES. THERE SHOULD BE NO NOTICEABLE SAG BETWEEN STAKES AFTER IT HAS BEEN ANCHORED TO THE STAKES.
5. SILT FENCE FABRIC SHALL BE ANCHORED TO THE STAKES USING 1" HEAVY DUTY STAPLES OR NAILS WITH 1" HEADS. STAPLES AND NAILS 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 RUNOFF FROM FLOWING AROUND THE END OF THE SILT FENCE (TYPICALLY 10' - 20').
7. SILT FENCE SHALL BE INSTALLED PRIOR TO ANY LAND DISTURBING ACTIVITIES.

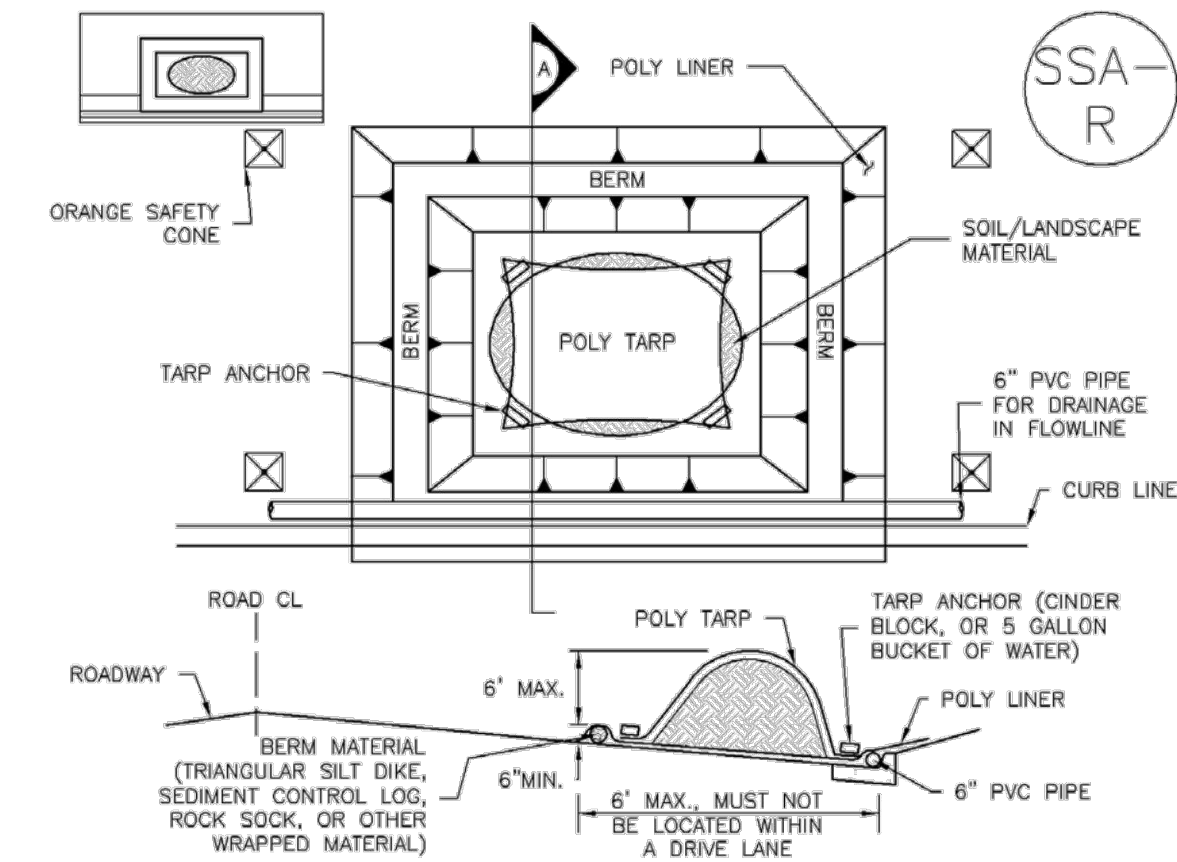
SILT FENCE MAINTENANCE NOTES

1. INSPECT BMPs EACH WORKDAY, AND MAINTAIN THEM IN EFFECTIVE OPERATING CONDITION. MAINTENANCE OF BMPs SHOULD BE PROACTIVE, NOT REACTIVE. INSPECT BMPs 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 BMPs IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.
3. WHERE BMPs 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 FUNCTIONALITY OF THE BMP, TYPICALLY WHEN DEPTH OF ACCUMULATED SEDIMENTS IS APPROXIMATELY 6".
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, OR IS REPLACED BY AN EQUIVALENT PERIMETER SEDIMENT CONTROL BMP.
7. WHEN SILT FENCE IS REMOVED, ALL DISTURBED AREAS SHALL BE COVERED WITH TOPSOIL, SEEDED AND MULCHED OR OTHERWISE STABILIZED AS APPROVED BY LOCAL JURISDICTION.

(DETAIL ADAPTED FROM TOWN OF PARKER, COLORADO AND CITY OF AURORA, NOT AVAILABLE IN AUTOCAD)

NOTE: MANY JURISDICTIONS HAVE BMP DETAILS THAT VARY FROM UDFCD STANDARD DETAILS. CONSULT WITH LOCAL JURISDICTIONS AS TO WHICH DETAIL SHOULD BE USED WHEN DIFFERENCES ARE NOTED.

Stockpile Management (SP) MM-2



SP-2. MATERIALS STAGING IN ROADWAY

MATERIALS STAGING IN ROADWAYS INSTALLATION NOTES

1. SEE PLAN VIEW FOR:
 - LOCATION OF MATERIAL STAGING AREA(S).
 - CONTRACTOR MAY ADJUST LOCATION AND SIZE OF STAGING AREA WITH APPROVAL FROM THE LOCAL JURISDICTION.
2. FEATURE MUST BE INSTALLED PRIOR TO EXCAVATION, EARTHWORK OR DELIVERY OF MATERIALS.
3. MATERIALS MUST BE STATIONED ON THE POLY LINER. ANY INCIDENTAL MATERIALS DEPOSITED ON PAVED SECTION OR ALONG CURB LINE MUST BE CLEANED UP PROMPTLY.
4. POLY LINER AND TARP COVER SHOULD BE OF SIGNIFICANT THICKNESS TO PREVENT DAMAGE OR LOSS OF INTEGRITY.
5. SAND BAGS MAY BE SUBSTITUTED TO ANCHOR THE COVER TARP OR PROVIDE BERMING UNDER THE BASE LINER.
6. FEATURE IS NOT INTENDED FOR USE WITH WET MATERIAL THAT WILL BE DRAINING AND/OR SPREADING OUT ON THE POLY LINER OR FOR DEMOLITION MATERIALS.
7. THIS FEATURE CAN BE USED FOR:
 - UTILITY REPAIRS.
 - WHEN OTHER STAGING LOCATIONS AND OPTIONS ARE LIMITED.
 - OTHER LIMITED APPLICATION AND SHORT DURATION STAGING.

MATERIALS STAGING IN ROADWAY MAINTENANCE NOTES

1. INSPECT BMPs EACH WORKDAY, AND MAINTAIN THEM IN EFFECTIVE OPERATING CONDITION. MAINTENANCE OF BMPs SHOULD BE PROACTIVE, NOT REACTIVE. INSPECT BMPs 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 BMPs IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.
3. WHERE BMPs HAVE FAILED, REPAIR OR REPLACEMENT SHOULD BE INITIATED UPON DISCOVERY OF THE FAILURE.
4. INSPECT PVC PIPE ALONG CURB LINE FOR CLOGGING AND DEBRIS. REMOVE OBSTRUCTIONS PROMPTLY.
5. CLEAN MATERIAL FROM PAVED SURFACES BY SWEEPING OR VACUUMING.

(DETAILS ADAPTED FROM AURORA, COLORADO)

MM-2 Stockpile Management (SM)



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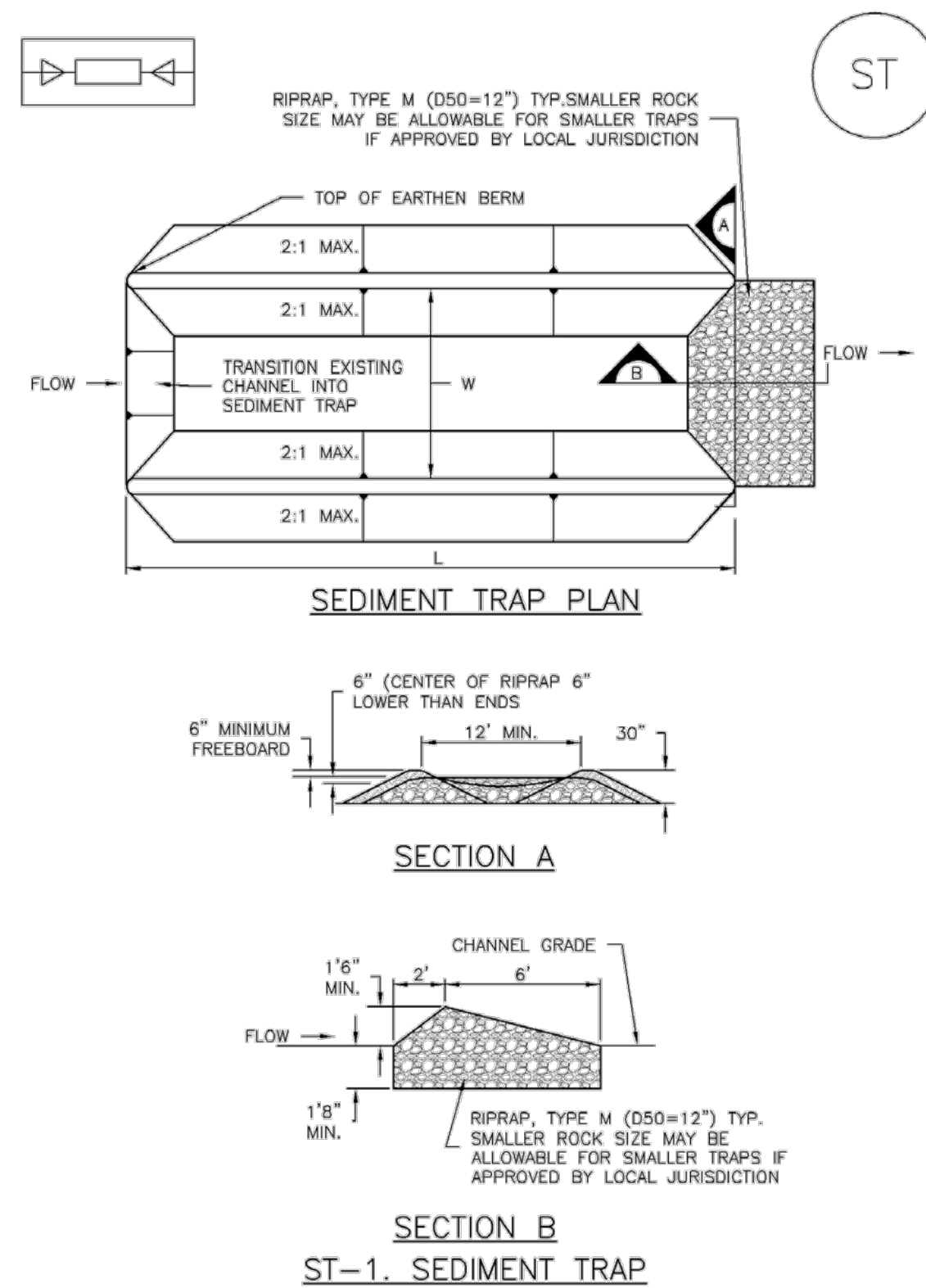
Grazing Yak Solar

El Paso County, Colorado

Notes and Details -
Sheet 2

DATE: 04/29/2019

SHEET: ND02



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

Sediment Trap (ST) SC-8

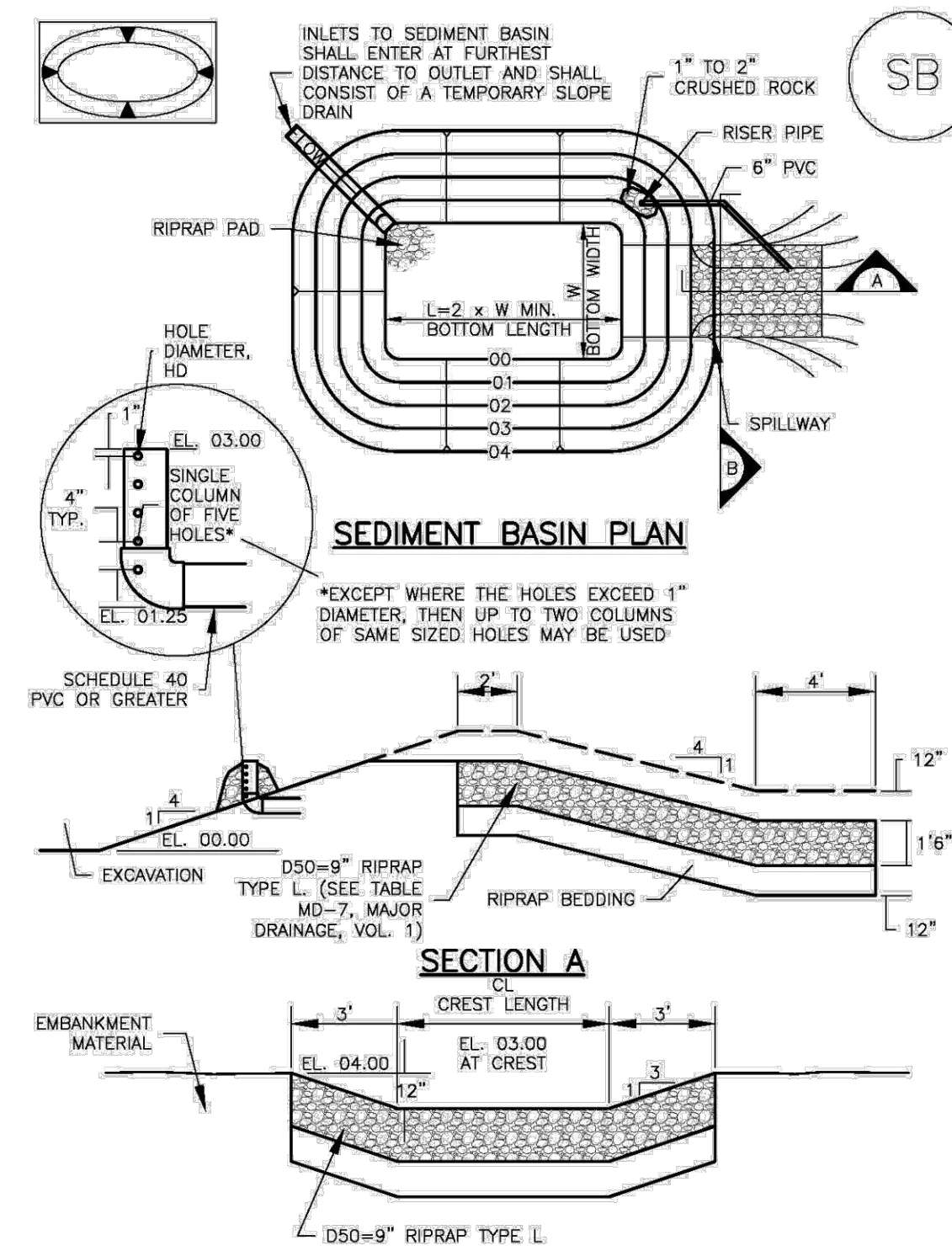
SEDIMENT TRAP INSTALLATION NOTES

- SEE PLAN VIEW FOR:
-LOCATION, LENGTH AND WIDTH OF SEDIMENT TRAP.
- ONLY USE FOR DRAINAGE AREAS LESS THAN 1 ACRE.
- SEDIMENT TRAPS SHALL BE INSTALLED PRIOR TO ANY UPGRADIENT LAND-DISTURBING ACTIVITIES.
- SEDIMENT TRAP BERM SHALL BE CONSTRUCTED FROM MATERIAL FROM EXCAVATION. THE BERM SHALL BE COMPACTED TO 95% OF THE MAXIMUM DENSITY IN ACCORDANCE WITH ASTM D698.
- SEDIMENT TRAP OUTLET TO BE CONSTRUCTED OF RIPRAP, TYPE M (D50=12") TYP. SMALLER ROCK SIZE MAY BE ALLOWABLE FOR SMALLER TRAPS IF APPROVED BY LOCAL JURISDICTION.
- THE TOP OF THE EARTHEN BERM SHALL BE A MINIMUM OF 6" HIGHER THAN THE TOP OF THE RIPRAP OUTLET STRUCTURE.
- THE ENDS OF THE RIPRAP OUTLET STRUCTURE SHALL BE A MINIMUM OF 6" HIGHER THAN THE CENTER OF THE OUTLET STRUCTURE.

SEDIMENT TRAP MAINTENANCE NOTES

- INSPECT BMPs EACH WORKDAY, AND MAINTAIN THEM IN EFFECTIVE OPERATING CONDITION. MAINTENANCE OF BMPs SHOULD BE PROACTIVE, NOT REACTIVE. INSPECT BMPs AS SOON AS POSSIBLE (AND ALWAYS WITHIN 24 HOURS) FOLLOWING A STORM THAT CAUSES SURFACE EROSION, AND PERFORM NECESSARY MAINTENANCE.
- FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN BMPs IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.
- WHERE BMPs HAVE FAILED, REPAIR OR REPLACEMENT SHOULD BE INITIATED UPON DISCOVERY OF THE FAILURE.
- REMOVE SEDIMENT ACCUMULATED IN TRAP AS NEEDED TO MAINTAIN THE FUNCTIONALITY OF THE BMP, TYPICALLY WHEN THE SEDIMENT DEPTH REACHES 1/2 THE HEIGHT OF THE RIPRAP OUTLET.
- SEDIMENT TRAPS SHALL REMAIN IN PLACE UNTIL THE UPSTREAM DISTURBED AREA IS STABILIZED AND APPROVED BY THE LOCAL JURISDICTION.
- WHEN SEDIMENT TRAPS ARE REMOVED, THE DISTURBED AREA SHALL BE COVERED WITH TOPSOIL, SEEDED AND MULCHED OR OTHERWISE STABILIZED IN A MANNER APPROVED BY THE LOCAL JURISDICTION.

(DETAILS ADAPTED FROM DOUGLAS COUNTY, COLORADO, NOT AVAILABLE IN AUTOCAD)
NOTE: MANY JURISDICTIONS HAVE BMP DETAILS THAT VARY FROM UDFCD STANDARD DETAILS. CONSULT WITH LOCAL JURISDICTIONS AS TO WHICH DETAIL SHOULD BE USED WHEN DIFFERENCES ARE NOTED.



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

SC-7 Sediment Basin (SB)

TABLE SB-1. SIZING INFORMATION FOR STANDARD SEDIMENT BASIN

Upstream Drainage Area (rounded to nearest acre), (ac)	Basin Bottom Width (W), (ft)	Spillway Crest Length (CL), (ft)	Hole Diameter (HD), (in)
1	12 1/2	2	3/32
2	21	3	1/16
3	28	3	1/8
4	33 1/2	6	3/16
5	38 1/2	8	1/4
6	43	9	5/16
7	47 1/4	11	3/8
8	51	12	7/16
9	55	13	1/2
10	58 1/4	15	9/16
11	61	16	5/8
12	64	18	1
13	67 1/2	19	1 1/16
14	70 1/2	21	1 1/8
15	73 1/4	22	1 3/16

SEDIMENT BASIN INSTALLATION NOTES

- SEE PLAN VIEW FOR:
-LOCATION OF SEDIMENT BASIN.
-TYPE OF BASIN (STANDARD BASIN OR NONSTANDARD BASIN).
-FOR STANDARD BASIN, BOTTOM WIDTH W, CREST LENGTH CL, AND HOLE DIAMETER, HD.
-FOR NONSTANDARD BASIN, SEE CONSTRUCTION DRAWINGS FOR DESIGN OF BASIN INCLUDING RISER HEIGHT H, NUMBER OF COLUMNS N, HOLE DIAMETER HD AND PIPE DIAMETER D.
- FOR STANDARD BASIN, BOTTOM DIMENSION MAY BE MODIFIED AS LONG AS BOTTOM AREA IS NOT REDUCED.
- SEDIMENT BASINS SHALL BE INSTALLED PRIOR TO ANY OTHER LAND-DISTURBING ACTIVITY THAT RELIES ON BASINS AS A STORMWATER CONTROL.
- EMBANKMENT MATERIAL SHALL CONSIST OF SOIL FREE OF DEBRIS, ORGANIC MATERIAL, AND ROCKS OR CONCRETE GREATER THAN 3 INCHES AND SHALL HAVE A MINIMUM OF 15 PERCENT BY WEIGHT PASSING THE NO. 200 SIEVE.
- EMBANKMENT MATERIAL SHALL BE COMPACTED TO AT LEAST 95 PERCENT OF MAXIMUM DENSITY IN ACCORDANCE WITH ASTM D698.
- PIPE SCH 40 OR GREATER SHALL BE USED.
- THE DETAILS SHOWN ON THESE SHEETS PERTAIN TO STANDARD SEDIMENT BASIN(S) FOR DRAINAGE AREAS LESS THAN 15 ACRES. SEE CONSTRUCTION DRAWINGS FOR EMBANKMENT, STORAGE VOLUME, SPILLWAY, OUTLET, AND OUTLET PROTECTION DETAILS FOR ANY SEDIMENT BASIN(S) THAT HAVE BEEN INDIVIDUALLY DESIGNED FOR DRAINAGE AREAS LARGER THAN 15 ACRES.

SEDIMENT BASIN MAINTENANCE NOTES

- INSPECT BMPs EACH WORKDAY, AND MAINTAIN THEM IN EFFECTIVE OPERATING CONDITION. MAINTENANCE OF BMPs SHOULD BE PROACTIVE, NOT REACTIVE. INSPECT BMPs AS SOON AS POSSIBLE (AND ALWAYS WITHIN 24 HOURS) FOLLOWING A STORM THAT CAUSES SURFACE EROSION, AND PERFORM NECESSARY MAINTENANCE.
 - FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN BMPs IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.
 - WHERE BMPs HAVE FAILED, REPAIR OR REPLACEMENT SHOULD BE INITIATED UPON DISCOVERY OF THE FAILURE.
 - SEDIMENT ACCUMULATED IN BASIN SHALL BE REMOVED AS NEEDED TO MAINTAIN BMP EFFECTIVENESS, TYPICALLY WHEN SEDIMENT DEPTH REACHES ONE FOOT (I.E., TWO FEET BELOW THE SPILLWAY CREST).
 - SEDIMENT BASINS ARE TO REMAIN IN PLACE UNTIL THE UPSTREAM DISTURBED AREA IS STABILIZED AND GRASS COVER IS ACCEPTED BY THE LOCAL JURISDICTION.
 - WHEN SEDIMENT BASINS ARE REMOVED, ALL DISTURBED AREAS SHALL BE COVERED WITH TOPSOIL, SEEDED AND MULCHED OR OTHERWISE STABILIZED AS APPROVED BY LOCAL JURISDICTION.
- (DETAILS ADAPTED FROM DOUGLAS COUNTY, COLORADO)
NOTE: MANY JURISDICTIONS HAVE BMP DETAILS THAT VARY FROM UDFCD STANDARD DETAILS. CONSULT WITH LOCAL JURISDICTIONS AS TO WHICH DETAIL SHOULD BE USED WHEN DIFFERENCES ARE NOTED.

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

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Westwood Professional Services, Inc.



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Grazing Yak Solar

El Paso County, Colorado

Notes and Details - Sheet 3

DATE: 04/29/2019

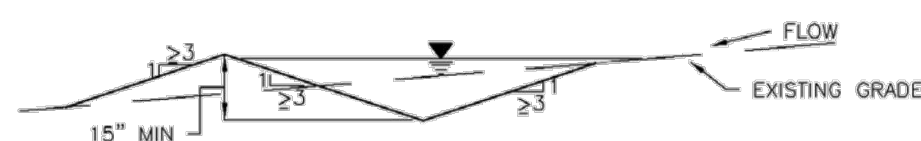
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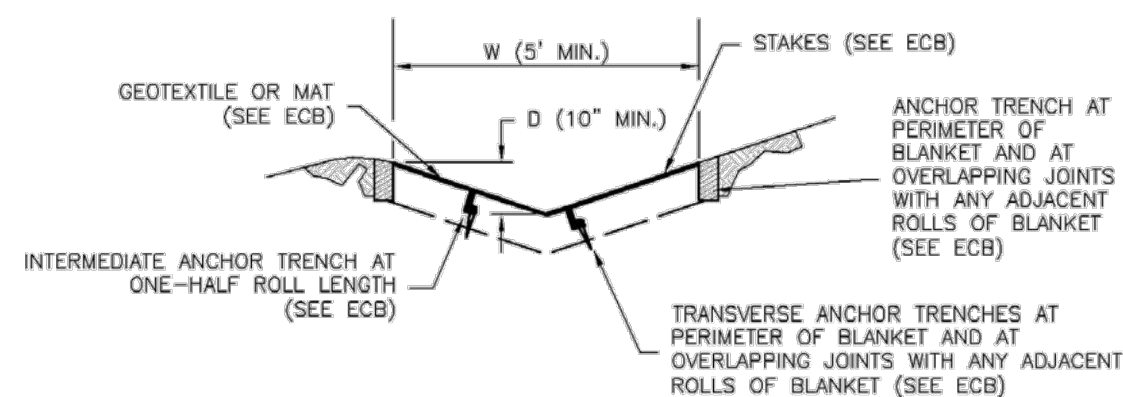
ED-1. COMPACTED UNLINED EARTH DIKE FORMED BY BERM



DS-1. COMPACTED UNLINED EXCAVATED SWALE

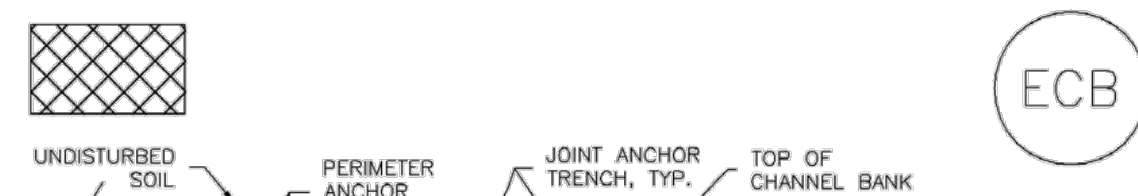


DS-2. COMPACTED UNLINED SWALE FORMED BY CUT AND FILL

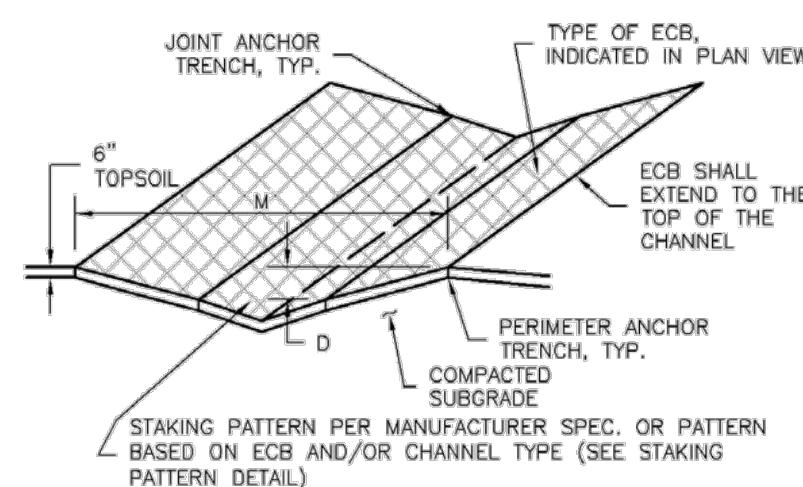


DS-3. ECB LINED SWALE (CUT AND FILL OR BERM)

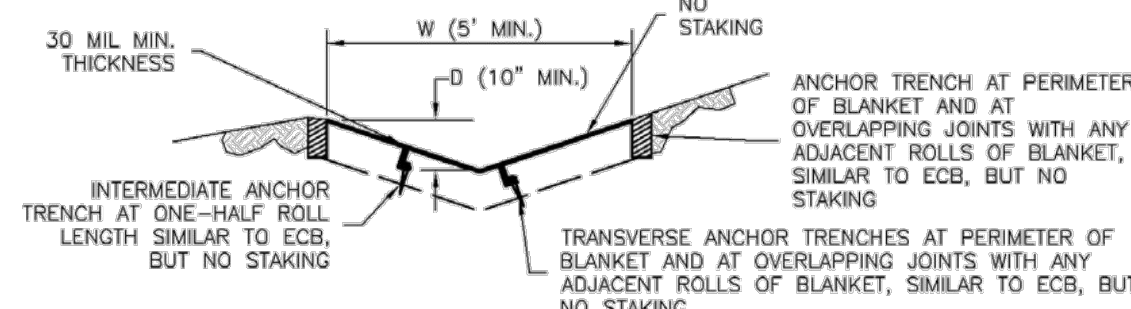
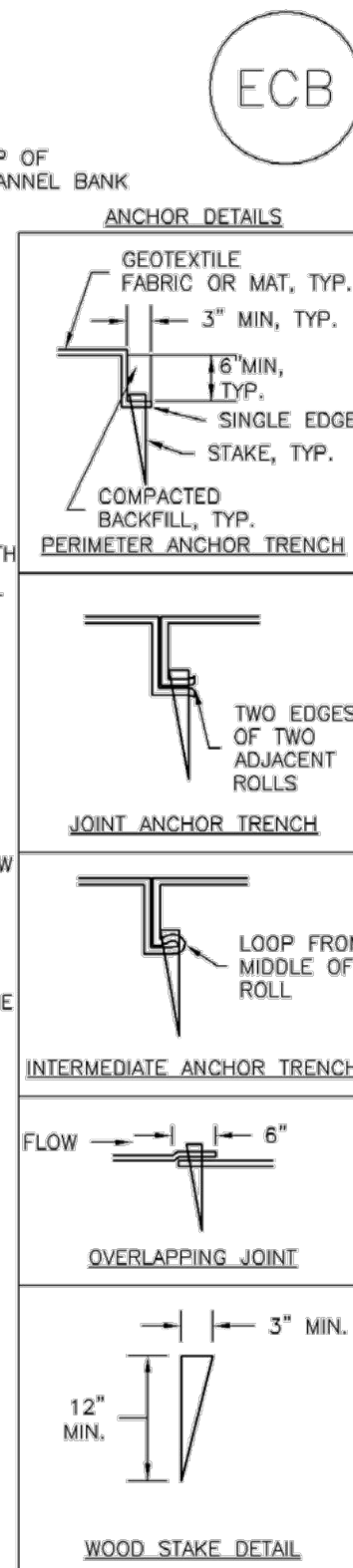
EC-6 Rolled Erosion Control Products (RECP)



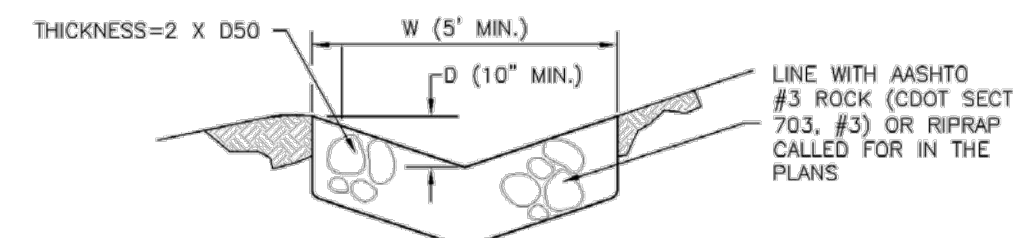
ECB-1. PIPE OUTLET TO DRAINAGWAY



ECB-2. SMALL DITCH OR DRAINAGWAY



DS-4. SYNTHETIC LINED SWALE

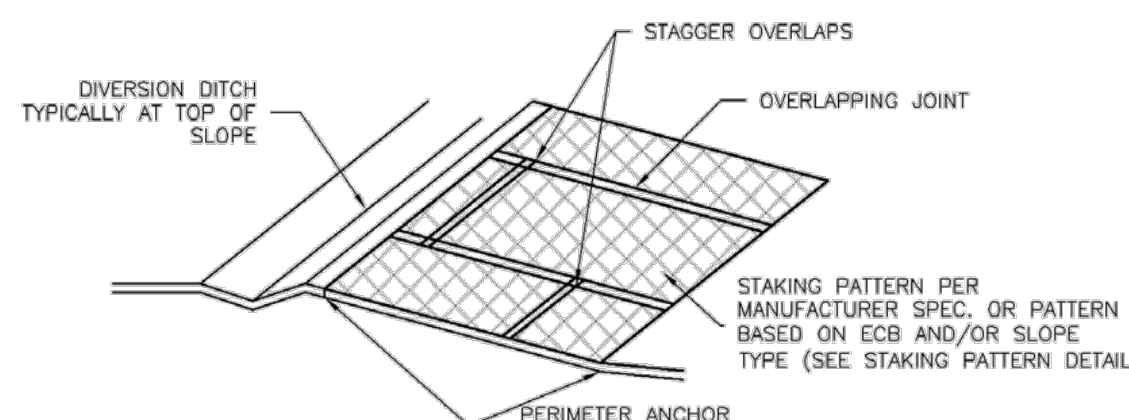


DS-5. RIPRAP LINED SWALE

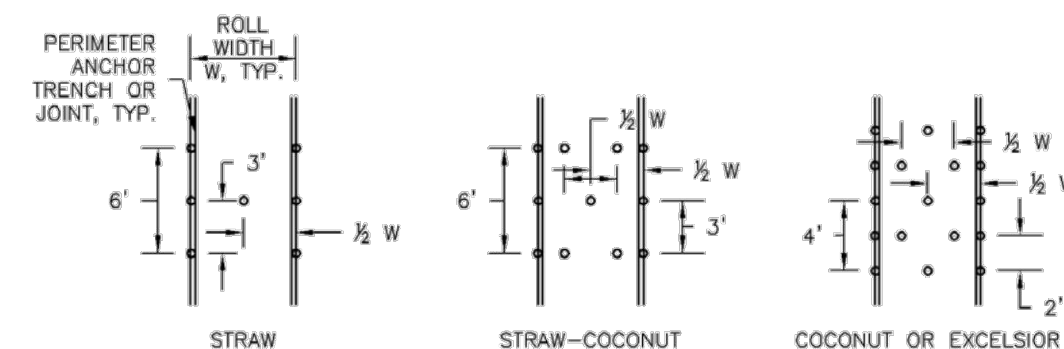
EARTH DIKE AND DRAINAGE SWALE INSTALLATION NOTES

- SEE SITE PLAN FOR:
 - LOCATION OF DIVERSION SWALE
 - TYPE OF SWALE (UNLINED, COMPACTED AND/OR LINED).
 - LENGTH OF EACH SWALE.
 - DEPTH, D, AND WIDTH, W DIMENSIONS.
 - FOR ECB/TRM LINED DITCH, SEE ECB DETAIL.
 - FOR RIPRAP LINED DITCH, SIZE OF RIPRAP, D50.
- SEE DRAINAGE PLANS FOR DETAILS OF PERMANENT CONVEYANCE FACILITIES AND/OR DIVERSION SWALES EXCEEDING 2-YEAR FLOW RATE OR 10 CFS.
- EARTH DIKES AND SWALES INDICATED ON SWMP PLAN SHALL BE INSTALLED PRIOR TO LAND-DISTURBING ACTIVITIES IN PROXIMITY.
- EMBANKMENT IS TO BE COMPACTED TO 90% OF MAXIMUM DENSITY AND WITHIN 2% OF OPTIMUM MOISTURE CONTENT ACCORDING TO ASTM D698.
- SWALES ARE TO DRAIN TO A SEDIMENT CONTROL BMP.
- FOR LINED DITCHES, INSTALLATION OF ECB/TRM SHALL CONFORM TO THE REQUIREMENTS OF THE ECB DETAIL.
- WHEN CONSTRUCTION TRAFFIC MUST CROSS A DIVERSION SWALE, INSTALL A TEMPORARY CULVERT WITH A MINIMUM DIAMETER OF 12 INCHES.

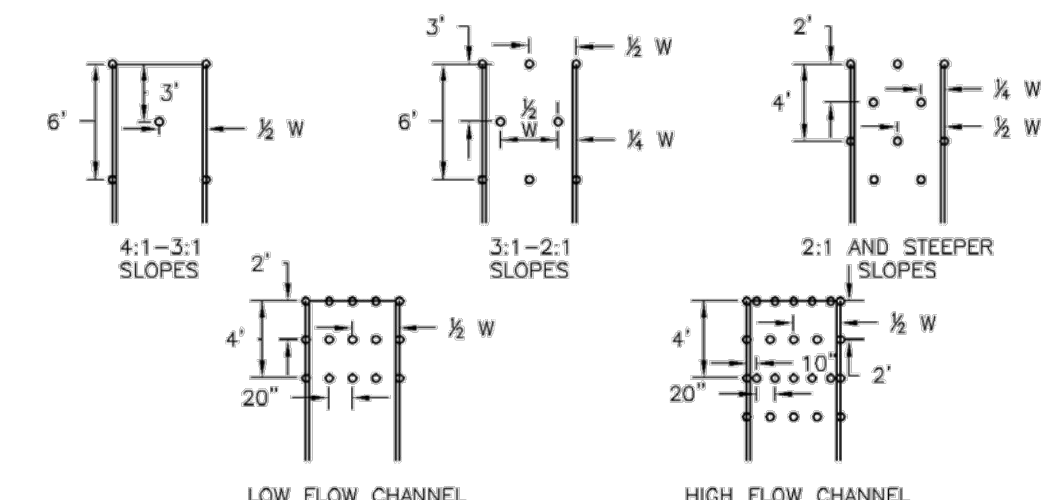
EC-6 Rolled Erosion Control Products (RECP)



ECB-3. OUTSIDE OF DRAINAGWAY



STAKING PATTERNS BY ECB TYPE



STAKING PATTERNS BY SLOPE OR CHANNEL TYPE

EARTH DIKE AND DRAINAGE SWALE MAINTENANCE NOTES

- INSPECT BMPs EACH WORKDAY, AND MAINTAIN THEM IN EFFECTIVE OPERATING CONDITION. MAINTENANCE OF BMPs SHOULD BE PROACTIVE, NOT REACTIVE. INSPECT BMPs AS SOON AS POSSIBLE (AND ALWAYS WITHIN 24 HOURS) FOLLOWING A STORM THAT CAUSES SURFACE EROSION, AND PERFORM NECESSARY MAINTENANCE.
 - FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN BMPs IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.
 - WHERE BMPs HAVE FAILED, REPAIR OR REPLACEMENT SHOULD BE INITIATED UPON DISCOVERY OF THE FAILURE.
 - SWALES SHALL REMAIN IN PLACE UNTIL THE END OF CONSTRUCTION; IF APPROVED BY LOCAL JURISDICTION, SWALES MAY BE LEFT IN PLACE.
 - WHEN A SWALE IS REMOVED, THE DISTURBED AREA SHALL BE COVERED WITH TOPSOIL, SEEDED AND MULCHED OR OTHERWISE STABILIZED IN A MANNER APPROVED BY LOCAL JURISDICTION.
- (DETAIL ADAPTED FROM DOUGLAS COUNTY, COLORADO AND THE CITY OF COLORADO SPRINGS, COLORADO, NOT AVAILABLE IN AUTOCAD)
- NOTE: MANY JURISDICTIONS HAVE BMP DETAILS THAT VARY FROM UDFCD STANDARD DETAILS. CONSULT WITH LOCAL JURISDICTIONS AS TO WHICH DETAIL SHOULD BE USED WHEN DIFFERENCES ARE NOTED.

EC-6 Rolled Erosion Control Products (RECP)

EROSION CONTROL BLANKET INSTALLATION NOTES

- SEE PLAN VIEW FOR:
 - LOCATION OF ECB.
 - TYPE OF ECB (STRAW, STRAW-COCOONUT, COCONUT, OR EXCELSIOR).
 - AREA, A, IN SQUARE YARDS OF EACH TYPE OF ECB.
- 100% NATURAL AND BIODEGRADABLE MATERIALS ARE PREFERRED FOR RECPs, ALTHOUGH SOME JURISDICTIONS MAY ALLOW OTHER MATERIALS IN SOME APPLICATIONS.
- IN AREAS WHERE ECBs ARE SHOWN ON THE PLANS, THE PERMITTEE SHALL PLACE TOPSOIL AND PERFORM FINAL GRADING, SURFACE PREPARATION, AND SEEDING AND MULCHING. SUBGRADE SHALL BE SMOOTH AND MOIST PRIOR TO ECB INSTALLATION AND THE ECB SHALL BE IN FULL CONTACT WITH SUBGRADE. NO GAPS OR VOIDS SHALL EXIST UNDER THE BLANKET.
- PERIMETER ANCHOR TRENCH SHALL BE USED ALONG THE OUTSIDE PERIMETER OF ALL BLANKET AREAS.
- JOINT ANCHOR TRENCH SHALL BE USED TO JOIN ROLLS OF ECBs TOGETHER (LONGITUDINALLY AND TRANSVERSELY) FOR ALL ECBs EXCEPT STRAW WHICH MAY USE AN OVERLAPPING JOINT.
- INTERMEDIATE ANCHOR TRENCH SHALL BE USED AT SPACING OF ONE-HALF ROLL LENGTH FOR COCONUT AND EXCELSIOR ECBs.
- OVERLAPPING JOINT DETAIL SHALL BE USED TO JOIN ROLLS OF ECBs TOGETHER FOR ECBs ON SLOPES.
- MATERIAL SPECIFICATIONS OF ECBs SHALL CONFORM TO TABLE ECB-1.
- ANY AREAS OF SEEDING AND MULCHING DISTURBED IN THE PROCESS OF INSTALLING ECBs SHALL BE RESEEDED AND MULCHED.
- DETAILS ON DESIGN PLANS FOR MAJOR DRAINAGWAY STABILIZATION WILL GOVERN IF DIFFERENT FROM THOSE SHOWN HERE.

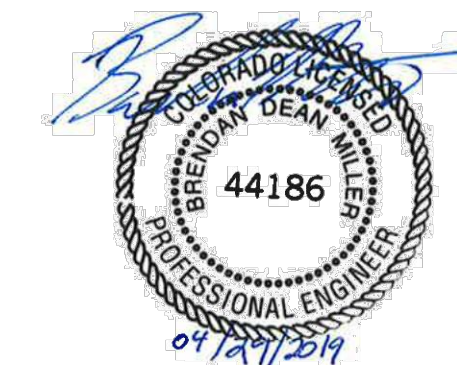
TABLE ECB-1. ECB MATERIAL SPECIFICATIONS				
TYPE	COCONUT CONTENT	STRAW CONTENT	EXCELSIOR CONTENT	RECOMMENDED NETTING**
STRAW*	-	100%	-	DOUBLE/NATURAL
STRAW-COCOONUT	30% MIN	70% MAX	-	DOUBLE/NATURAL
COCONUT	100%	-	-	DOUBLE/NATURAL
EXCELSIOR	-	-	100%	DOUBLE/NATURAL

*STRAW ECBs MAY ONLY BE USED OUTSIDE OF STREAMS AND DRAINAGE CHANNELS.
**ALTERNATE NETTING MAY BE ACCEPTABLE IN SOME JURISDICTIONS.

EC-6 Rolled Erosion Control Products (RECP)

EROSION CONTROL BLANKET MAINTENANCE NOTES

- INSPECT BMPs EACH WORKDAY, AND MAINTAIN THEM IN EFFECTIVE OPERATING CONDITION. MAINTENANCE OF BMPs SHOULD BE PROACTIVE, NOT REACTIVE. INSPECT BMPs AS SOON AS POSSIBLE (AND ALWAYS WITHIN 24 HOURS) FOLLOWING A STORM THAT CAUSES SURFACE EROSION, AND PERFORM NECESSARY MAINTENANCE.
 - FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN BMPs IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.
 - WHERE BMPs HAVE FAILED, REPAIR OR REPLACEMENT SHOULD BE INITIATED UPON DISCOVERY OF THE FAILURE.
 - ECBs SHALL BE LEFT IN PLACE TO EVENTUALLY BIODEGRADE, UNLESS REQUESTED TO BE REMOVED BY THE LOCAL JURISDICTION.
 - ANY ECB PULLED OUT, TORN, OR OTHERWISE DAMAGED SHALL BE REPAIRED OR REINSTALLED. ANY SUBGRADE AREAS BELOW THE GEOTEXTILE THAT HAVE ERODED TO CREATE A VOID UNDER THE BLANKET, OR THAT REMAIN DEVOID OF GRASS SHALL BE REPAIRED, RESEEDED AND MULCHED AND THE ECB REINSTALLED.
- NOTE: MANY JURISDICTIONS HAVE BMP DETAILS THAT VARY FROM UDFCD STANDARD DETAILS. CONSULT WITH LOCAL JURISDICTIONS AS TO WHICH DETAIL SHOULD BE USED WHEN DIFFERENCES ARE NOTED.
- (DETAILS ADAPTED FROM DOUGLAS COUNTY, COLORADO AND TOWN OF PARKER COLORADO, NOT AVAILABLE IN AUTOCAD)



PREPARED FOR:



REVISIONS:

#	DATE	COMMENT
A	03/27/19	Issued for 30% Design Review
B	04/22/19	Issued for Permit
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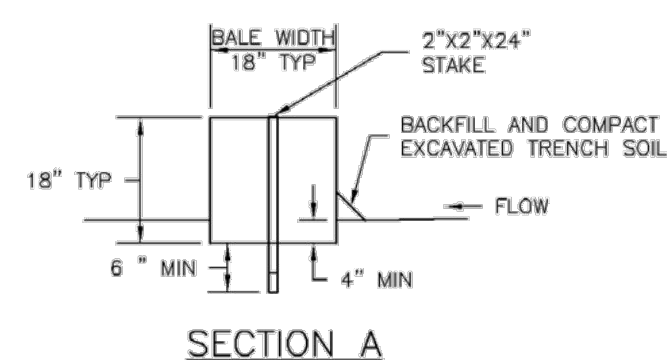
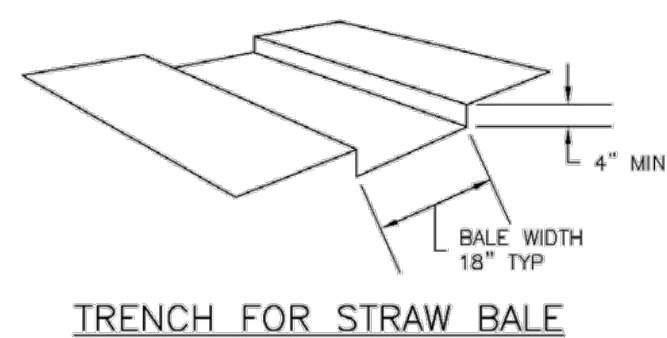
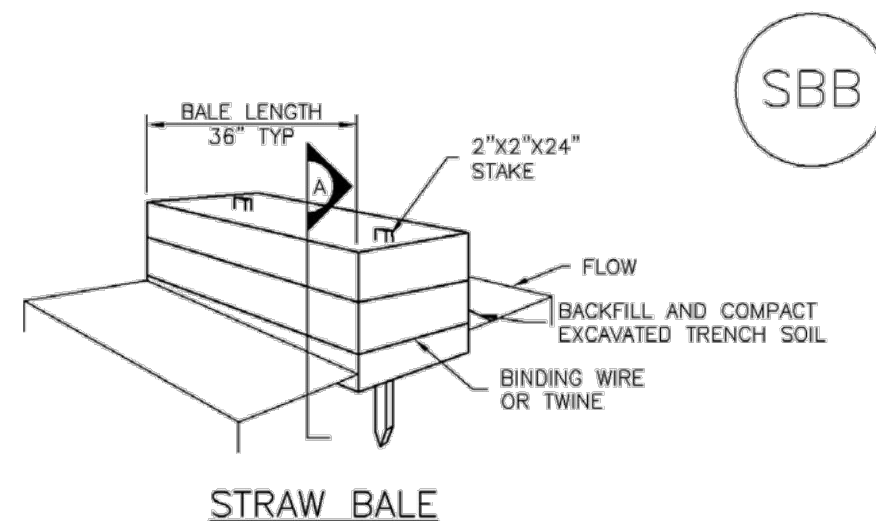
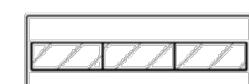
Grazing Yak Solar

El Paso County, Colorado

Notes and Details - Sheet 4

DATE: 04/29/2019

SHEET: ND04



SBB-1. STRAW BALE

STRAW BALE INSTALLATION NOTES

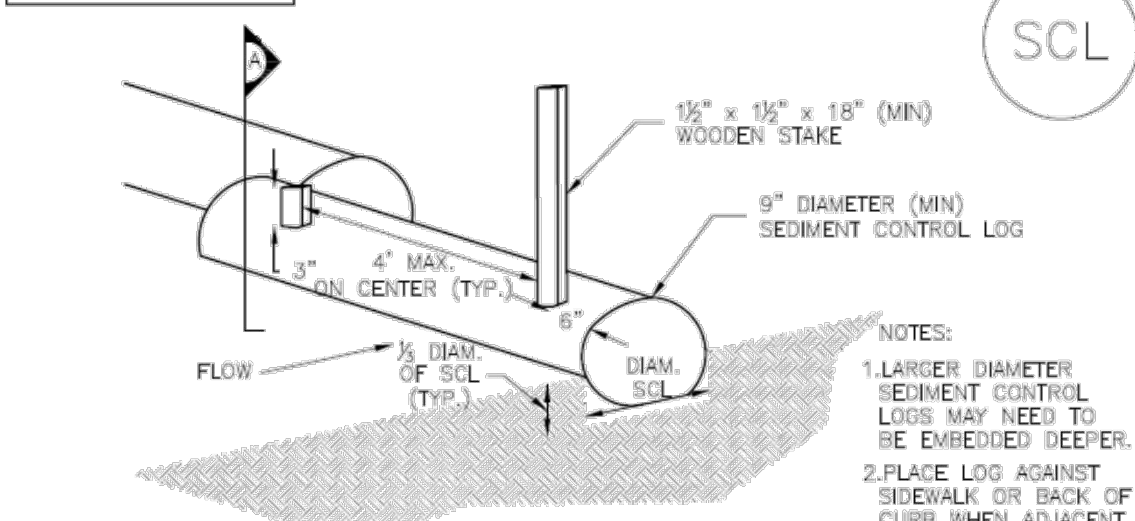
- 1. SEE PLAN VIEW FOR -LOCATION(S) OF STRAW BALES.
2. STRAW BALES SHALL CONSIST OF CERTIFIED WEED FREE STRAW OR HAY.
3. STRAW BALES SHALL CONSIST OF APPROXIMATELY 5 CUBIC FEET OF STRAW OR HAY AND WEIGH NOT LESS THAN 35 POUNDS.
4. WHEN STRAW BALES ARE USED IN SERIES AS A BARRIER, THE END OF EACH BALE SHALL BE TIGHTLY ABUTTING ONE ANOTHER.
5. STRAW BALE DIMENSIONS SHALL BE APPROXIMATELY 36"X18"X18".
6. A UNIFORM ANCHOR TRENCH SHALL BE EXCAVATED TO A DEPTH OF 4".
7. TWO (2) WOODEN STAKES SHALL BE USED TO HOLD EACH BALE IN PLACE.

STRAW BALE MAINTENANCE NOTES

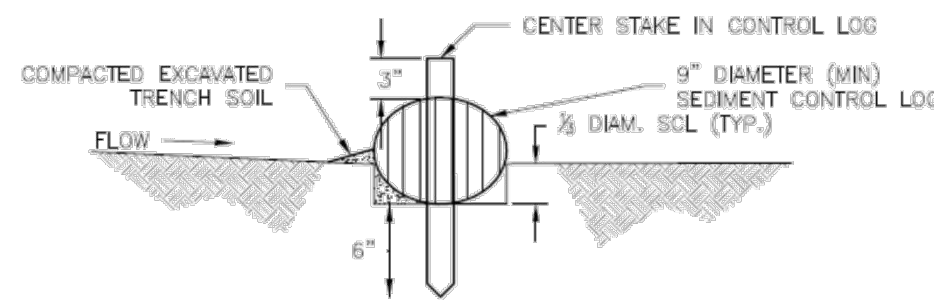
- 1. INSPECT BMPs EACH WORKDAY, AND MAINTAIN THEM IN EFFECTIVE OPERATING CONDITION.
2. FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN BMPs IN EFFECTIVE OPERATING CONDITION.
3. WHERE BMPs HAVE FAILED, REPAIR OR REPLACEMENT SHOULD BE INITIATED UPON DISCOVERY OF THE FAILURE.
4. STRAW BALES SHALL BE REPLACED IF THEY BECOME HEAVILY SOILED, ROTTEN, OR DAMAGED BEYOND REPAIR.
5. SEDIMENT ACCUMULATED UPSTREAM OF STRAW BALE BARRIER SHALL BE REMOVED AS NEEDED.
6. STRAW BALES ARE TO REMAIN IN PLACE UNTIL THE UPSTREAM DISTURBED AREA IS STABILIZED AND APPROVED BY THE LOCAL JURISDICTION.
7. WHEN STRAW BALES ARE REMOVED, ALL DISTURBED AREAS SHALL BE COVERED WITH TOPSOIL, SEEDDED AND MULCHED OR OTHERWISE STABILIZED AS APPROVED BY LOCAL JURISDICTION.

(DETAILS ADAPTED FROM TOWN OF PARKER, COLORADO, NOT AVAILABLE IN AUTOCAD)

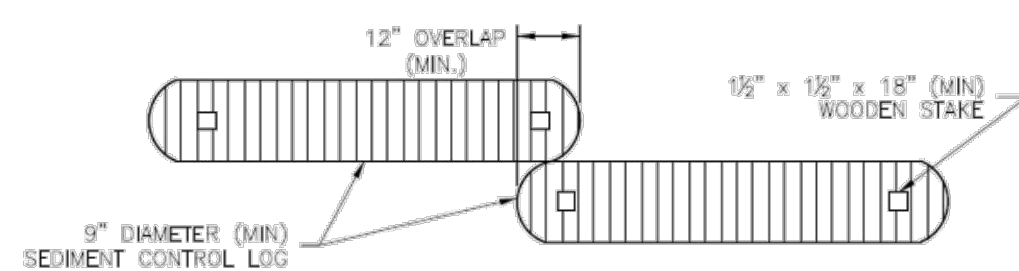
NOTE: MANY JURISDICTIONS HAVE BMP DETAILS THAT VARY FROM UDFCD STANDARD DETAILS. CONSULT WITH LOCAL JURISDICTIONS AS TO WHICH DETAIL SHOULD BE USED WHEN DIFFERENCES ARE NOTED.



TRENCHED SEDIMENT CONTROL LOG

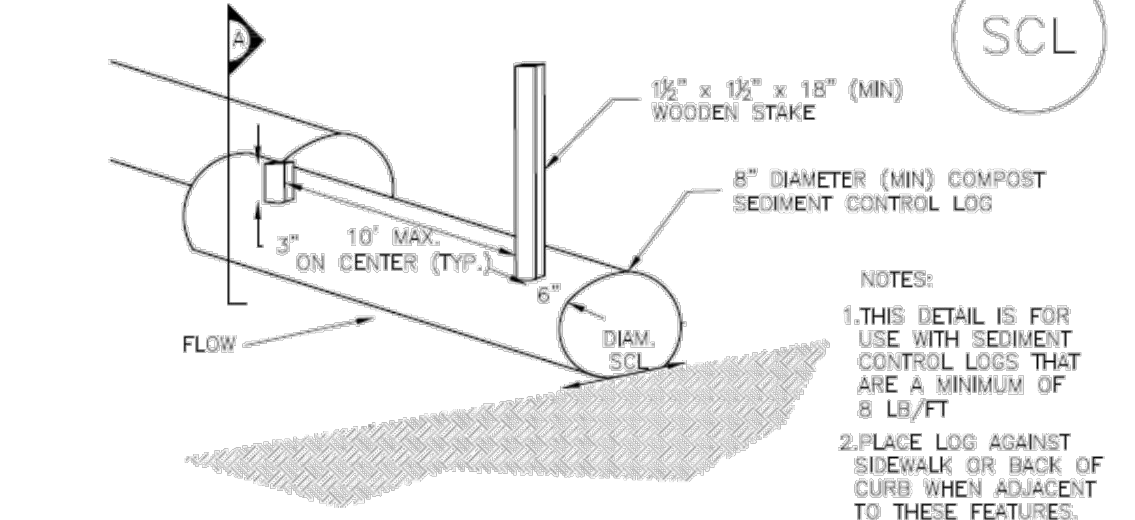


SECTION A TRENCHED SEDIMENT CONTROL LOG

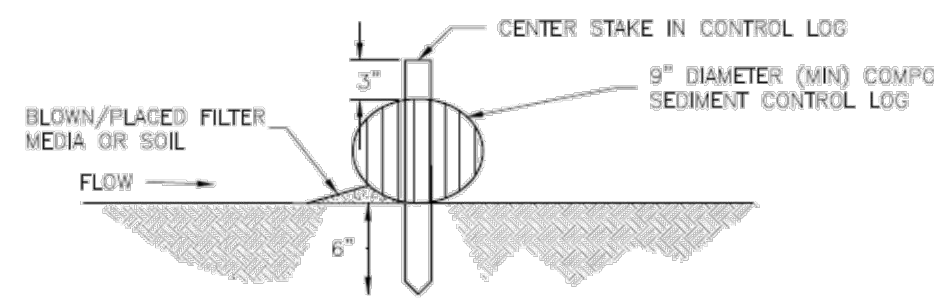


LOG JOINTS

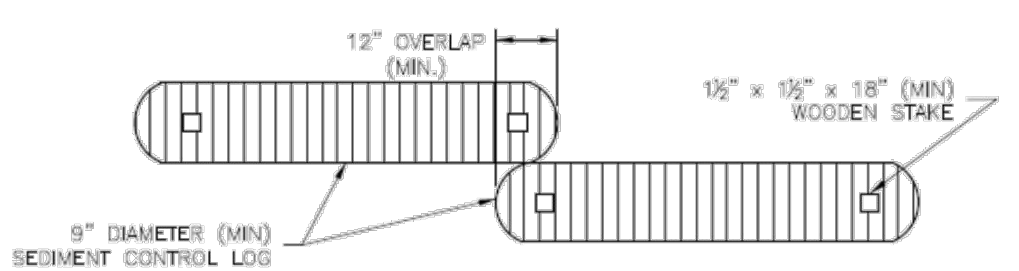
SCL-1. TRENCHED SEDIMENT CONTROL LOG



COMPOST SEDIMENT CONTROL LOG (WEIGHTED)

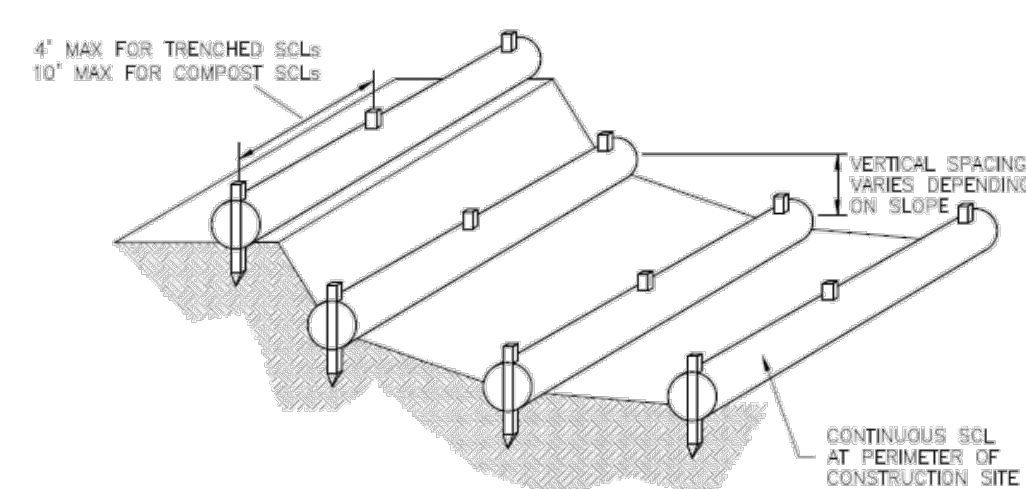


SECTION A COMPOST SEDIMENT CONTROL LOG



LOG JOINTS

SCL-2. COMPOST SEDIMENT CONTROL LOG (WEIGHTED)



SCL-3. SEDIMENT CONTROL LOGS TO CONTROL SLOPE LENGTH

SEDIMENT CONTROL LOG INSTALLATION NOTES

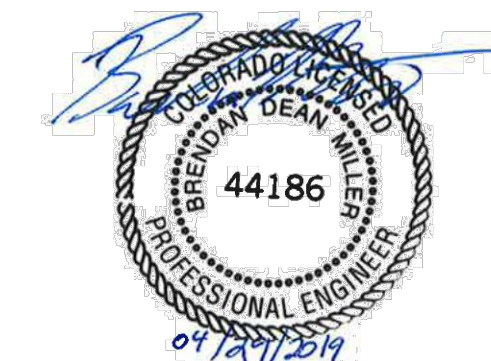
- 1. SEE PLAN VIEW FOR LOCATION AND LENGTH OF SEDIMENT CONTROL LOGS.
2. SEDIMENT CONTROL LOGS THAT ACT AS A PERIMETER CONTROL SHALL BE INSTALLED PRIOR TO ANY UPGRADIENT LAND-DISTURBING ACTIVITIES.
3. SEDIMENT CONTROL LOGS SHALL CONSIST OF STRAW, COMPOST, EXCELSIOR OR COCONUT FIBER, AND SHALL BE FREE OF ANY NOXIOUS WEED SEEDS OR DEFECTS INCLUDING RIPS, HOLES AND OBVIOUS WEAR.
4. SEDIMENT CONTROL LOGS MAY BE USED AS SMALL CHECK DAMS IN DITCHES AND SWALES. HOWEVER, THEY SHOULD NOT BE USED IN PERENNIAL STREAMS.
5. IT IS RECOMMENDED THAT SEDIMENT CONTROL LOGS BE TRENCHED INTO THE GROUND TO A DEPTH OF APPROXIMATELY 1/3 OF THE DIAMETER OF THE LOG.
6. THE UPHILL SIDE OF THE SEDIMENT CONTROL LOG SHALL BE BACKFILLED WITH SOIL OR FILTER MATERIAL THAT IS FREE OF ROCKS AND DEBRIS.
7. FOLLOW MANUFACTURERS' GUIDANCE FOR STAKING. IF MANUFACTURERS' INSTRUCTIONS DO NOT SPECIFY SPACING, STAKES SHALL BE PLACED ON 4' CENTERS.

SEDIMENT CONTROL LOG MAINTENANCE NOTES

- 1. INSPECT BMPs EACH WORKDAY, AND MAINTAIN THEM IN EFFECTIVE OPERATING CONDITION. MAINTENANCE OF BMPs SHOULD BE PROACTIVE, NOT REACTIVE.
2. FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN BMPs IN EFFECTIVE OPERATING CONDITION.
3. WHERE BMPs HAVE FAILED, REPAIR OR REPLACEMENT SHOULD BE INITIATED UPON DISCOVERY OF THE FAILURE.
4. SEDIMENT ACCUMULATED UPSTREAM OF SEDIMENT CONTROL LOG SHALL BE REMOVED AS NEEDED TO MAINTAIN FUNCTIONALITY OF THE BMP.
5. SEDIMENT CONTROL LOG SHALL BE REMOVED AT THE END OF CONSTRUCTION.

(DETAILS ADAPTED FROM TOWN OF PARKER, COLORADO, JEFFERSON COUNTY, COLORADO, DOUGLAS COUNTY, COLORADO, AND CITY OF AURORA, COLORADO, NOT AVAILABLE IN AUTOCAD)

NOTE: MANY JURISDICTIONS HAVE BMP DETAILS THAT VARY FROM UDFCD STANDARD DETAILS. CONSULT WITH LOCAL JURISDICTIONS AS TO WHICH DETAIL SHOULD BE USED WHEN DIFFERENCES ARE NOTED.



PREPARED FOR:



Table with 3 columns: #, DATE, COMMENT. Rows A through D detailing design review and permit dates.

Grazing Yak Solar
El Paso County, Colorado

Notes and Details - Sheet 5

Compost Blanket and Filter Berm (CB) EC-5

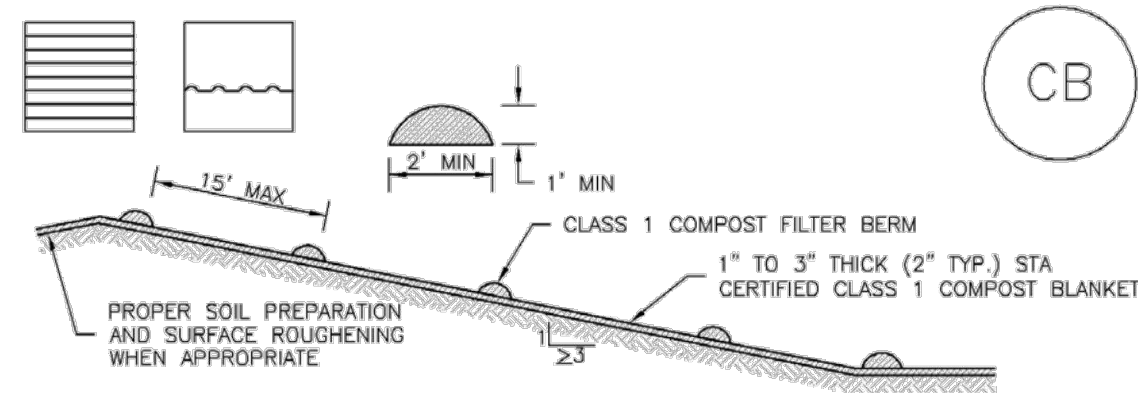


TABLE CB-1. CLASS 1 COMPOST	
PARAMETERS	CHARACTERISTIC
MINIMUM STABILITY INDICATOR	STABLE TO VERY STABLE
SOLUBLE SALTS	MAXIMUM 5 mmhos/cm
PH	6.0 - 8.0
AG INDEX	> 10
MATURITY INDICATOR EXPRESSED AS PERCENTAGE OF GERMINATION/VIGOR	80+/80+
MATURITY INDICATOR EXPRESSED AS AMMONIA N/ NITRATE N RATIO	< 4
MATURITY INDEX AS CARBON TO NITROGEN RATIO	20:1
TESTED FOR CLOPYRALID	YES/NEGATIVE RESULT
MOISTURE CONTENT	30-60%
ORGANIC MATTER CONTENT	25-45% OF DRY WEIGHT
PARTICLE SIZE DISTRIBUTION	3" (75mm) 100% PASSING
PRIMARY, SECONDARY NUTRIENTS; TRACE ELEMENTS	MUST BE REPORTED
TESTING AND TEST REPORT SUBMITTAL REQUIREMENTS	STA + CLOPYRALID
ORGANIC MATTER PER CUBIC YARD	MUST REPORT
CHEMICAL CONTAMINANTS	COMPLY WITH US EPA CLASS A STANDARD, 40 CFR 503.1 TABLES 1 & 3 LEVELS
MINIMUM MANUFACTURING/PRODUCTION REQUIREMENT	FULLY PERMITTED UNDER COLORADO DEPARTMENT OF PUBLIC HEALTH AND ENVIRONMENT, HAZARDOUS MATERIALS AND WASTE MANAGEMENT DIVISION
RISK FACTOR RELATING TO PLANT GERMINATION AND HEALTH	LOW

CB-1. COMPOST BLANKET AND COMPOST FILTER BERM

EC-5 Compost Blanket and Filter Berm (CB)

COMPOST FILTER BERM AND COMPOST BLANKET INSTALLATION NOTES

- SEE PLAN VIEW FOR
-LOCATION OF COMPOST FILTER BERM(S).
-LENGTH OF COMPOST FILTER BERM(S).
- COMPOST BERMS AND BLANKETS MAY BE USED IN PLACE OF STRAW MULCH OR GEOTEXTILE FABRIC IN AREAS WHERE ACCESS TO LANDSCAPING IS DIFFICULT DUE TO LANDSCAPING OR OTHER OBJECTS OR IN AREAS WHERE A SMOOTH TURF GRASS FINISH IS DESIRED.
- FILTER BERMS SHALL RUN PARALLEL TO THE CONTOUR.
- FILTER BERMS SHALL BE A MINIMUM OF 1 FEET HIGH AND 2 FEET WIDE.
- FILTER BERMS SHALL BE APPLIED BY PNEUMATIC BLOWER OR BY HAND.
- FILTER BERMS SHALL ONLY BE UTILIZED IN AREAS WHERE SHEET FLOW CONDITIONS PREVAIL AND NOT IN AREAS OF CONCENTRATED FLOW.
- COMPOST BLANKETS SHALL BE APPLIED AT A DEPTH OF 1 -3 INCHES (TYPICALLY 2 INCHES). FOR AREAS WITH EXISTING VEGETATION THAT ARE TO BE SUPPLEMENTED BY COMPOST, A THIN 0.5-INCH LAYER MAY BE USED.
- SEEDING SHALL BE PERFORMED PRIOR TO THE APPLICATION OF COMPOST. ALTERNATIVELY, SEED MAY BE COMBINED WITH COMPOST AND BLOWN WITH THE PNEUMATIC BLOWER.
- WHEN TURF GRASS FINISH IS NOT DESIRED, SURFACE ROUGHENING ON SLOPES SHALL TAKE PLACE PRIOR TO COMPOST APPLICATION.
- COMPOST SHALL BE A CLASS 1 COMPOST AS DEFINED BY TABLE CB-1.

COMPOST FILTER BERM MAINTENANCE NOTES

- INSPECT BMPs EACH WORKDAY, AND MAINTAIN THEM IN EFFECTIVE OPERATING CONDITION. MAINTENANCE OF BMPs SHOULD BE PROACTIVE, NOT REACTIVE. INSPECT BMPs AS SOON AS POSSIBLE (AND ALWAYS WITHIN 24 HOURS) FOLLOWING A STORM THAT CAUSES SURFACE EROSION, AND PERFORM NECESSARY MAINTENANCE.
 - FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN BMPs IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.
 - WHERE BMPs HAVE FAILED, REPAIR OR REPLACEMENT SHOULD BE INITIATED UPON DISCOVERY OF THE FAILURE.
 - COMPOST BERMS AND BLANKETS SHALL BE REAPPLIED OR REGRADED AS NECESSARY IF RILLING IN THE COMPOST SURFACE OCCURS.
- (DETAILS ADAPTED FROM ARAPAHOE COUNTY, COLORADO, NOT AVAILABLE IN AUTOCAD)
- NOTE: MANY JURISDICTIONS HAVE BMP DETAILS THAT VARY FROM UDFCO STANDARD DETAILS. CONSULT WITH LOCAL JURISDICTIONS AS TO WHICH DETAIL SHOULD BE USED WHEN DIFFERENCES ARE NOTED.

Standard Notes for El Paso County Grading and Erosion Control Plans

Revised 8/24/16

1. Construction may not commence until a Construction Permit is obtained from Planning and Community Development and a Preconstruction Conference is held with Planning and Community Development Inspections.

2. 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.

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 version of the relevant adopted El Paso County standards, including the Land Development Code, the Engineering Criteria Manual, the Drainage Criteria Manual, and the Drainage Criteria Manual Volume 2. Any deviations to regulations and standards must be requested, and approved, in writing.

4. A separate Stormwater Management Plan (SWMP) for this project shall be completed and an Erosion and Stormwater Quality Control Permit (ESQCP) issued prior to commencing construction. During construction the SWMP is the responsibility of the designated Stormwater Manager, shall be located on site at all times and shall be kept up to date with work progress and changes in the field.

5. Once the ESQCP has been issued, the contractor may install the initial stage erosion and sediment control BMPs as indicated on the 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 PCD inspections staff.

6. 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 60 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.

7. Temporary soil erosion control facilities shall be removed and earth disturbance areas graded and stabilized with permanent soil erosion control measures pursuant to standards and specification prescribed in the DCM Volume II and the Engineering Criteria Manual (ECM) appendix I.

8. 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 Stormwater Management Plan (SWMP).

9. 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.

10. Any earth disturbance shall be conducted in such a manner so 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.

11. Any temporary or permanent facility designed and constructed for the conveyance of stormwater around, through, or from the earth disturbance area shall be designed to limit the discharge to a non-erosive velocity.

12. Concrete wash water shall be contained and disposed of in accordance with the SWMP. No wash water shall be discharged to or allowed to runoff to State Waters, including any surface or subsurface storm drainage system or facilities.

13. Erosion control blanketing is to be used on slopes steeper than 3:1.

14. 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. BMP's may be required by El Paso County Engineering if deemed necessary, based on specific conditions and circumstances.

15. Vehicle tracking of soils and construction debris off-site shall be minimized. Materials tracked offsite shall be cleaned up and properly disposed of immediately.

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. The owner, site developer, contractor, and/or their authorized agents 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 stormwater appurtenances as a result of site development.

18. 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.

19. No chemicals are to be used by the contractor, which have the potential to be released in stormwater 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.

20. 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.

21. No person shall cause the impediment of stormwater flow in the flow line of the curb and gutter or in the ditchline.

22. Individuals 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 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, 404, fugitive 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.

23. All construction traffic must enter/exit the site at approved construction access points.

24. Prior to actual construction the permittee shall verify the location of existing utilities.

25. A water source shall be available on site during earthwork operations and utilized as required to minimize dust from earthwork equipment and wind.

26. The soils report for this site has been prepared by _____ and shall be considered a part of these plans.

27. At least ten days prior to the anticipated start of construction, for projects that will disturb 1 acre or more, the owner or operator of construction activity shall submit a permit application for stormwater discharge to the Colorado Department of Public Health and Environment, Water Quality Division. The application contains certification of completion of a stormwater management plan (SWMP), of which this grading and erosion control plan may be a part. For information or application materials contact:

Colorado Department of Public Health and Environment
Water Quality Control Division
WQCD - Permits
4300 Cherry Creek Drive South
Denver, CO 80246-1530
Attn: Permits Unit



PREPARED FOR:



REVISIONS:

#	DATE	COMMENT
A	03/27/19	Issued for 30% Design Review
B	04/22/19	Issued for Permit
C	04/26/19	Issued for Review (90%)
D	04/29/19	Issued for Grading Permit

Grazing Yak Solar

El Paso County, Colorado

Notes and Details - Sheet 6

DATE: 04/29/2019

SHEET: ND06

Markup Summary

dsdparsons (1)

 Grading Permit

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Subject: Callout

Page Label: [3] SPPOA Overall Site Grading & Erosion Control Plan

AND Site Development Plan

Author: dsdparsons

Date: 5/28/2019 12:21:34 PM

Color: ■



Subject: text box
Page Label: [18] ND06 Notes and Details - Sheet 6
Author: Steve Kuehster
Date: 5/24/2019 10:27:17 AM
Color: ■

Standard Notes for El Paso County Grading and Erosion Control Plans

Revised 8/24/16

1. Construction may not commence until a Construction Permit is obtained from Planning and Community Development and a Preconstruction Conference is held with Planning and Community Development Inspections.

2. 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.

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 version of the relevant adopted El Paso County standards, including the Land Development Code, the Engineering Criteria Manual, the Drainage Criteria Manual, and the Drainage Criteria Manual Volume 2. Any deviations to regulations and standards must be requested, and approved, in writing.

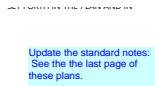
4. A separate Stormwater Management Plan (SWMP) for this project shall be completed and an Erosion and Stormwater Quality Control Permit (ESQCP) issued prior to commencing construction. During construction the SWMP is the responsibility of the designated Stormwater Manager, shall be located on site at all times and shall be kept up to date with work progress and changes in the field.

5. Once the ESQCP has been issued, the contractor may install the initial stage erosion and sediment control BMPs as indicated on the 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 PCD inspections staff.

6. 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 60 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.

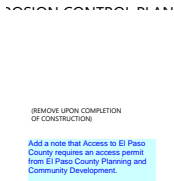
7. Temporary soil erosion control facilities shall be removed and earth disturbance areas graded and stabilized with permanent soil erosion control measures pursuant to standards and specification prescribed in the DCM Volume II and the Engineering Criteria Manual (ECM) appendix I.

8. All persons engaged in earth disturbance shall



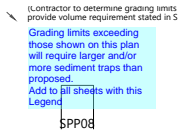
Subject: text box
Page Label: [3] SPPOA Overall Site Grading & Erosion Control Plan
Author: Steve Kuehster
Date: 5/24/2019 10:29:27 AM
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Update the standard notes: See the the last page of these plans.



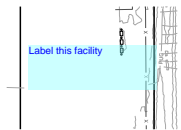
Subject: text box
Page Label: [6] SPP03 Grading & Erosion Control - Sheet 3
Author: Steve Kuehster
Date: 5/24/2019 10:34:13 AM
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Add a note that Access to El Paso County requires an access permit from El Paso County Planning and Community Development.



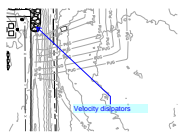
Subject: text box
Page Label: [7] SPP04 Grading & Erosion Control - Sheet 4
Author: Steve Kuehster
Date: 5/24/2019 10:41:38 AM
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Grading limits exceeding those shown on this plan will require larger and/or more sediment traps than proposed.
 Add to all sheets with this Legend



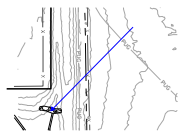
Subject: text box
Page Label: [13] ND01 Notes and Details - Sheet 1
Author: Steve Kuehster
Date: 5/24/2019 10:54:52 AM
Color: ■

Label this facility

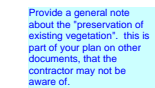


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Page Label: [13] ND01 Notes and Details - Sheet 1
Author: Steve Kuehster
Date: 5/24/2019 10:55:31 AM
Color: ■

Velocity dissipators

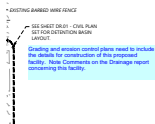


Subject: Arrow
Page Label: [13] ND01 Notes and Details - Sheet 1
Author: Steve Kuehster
Date: 5/24/2019 10:55:38 AM
Color: ■



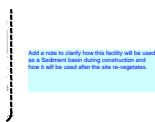
Subject: text box
Page Label: [14] ND02 Notes and Details - Sheet 2
Author: Steve Kuehster
Date: 5/24/2019 10:58:39 AM
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Provide a general note about the "preservation of existing vegetation". this is part of your plan on other documents, that the contractor may not be aware of.



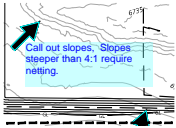
Subject: text box
Page Label: [8] SPP05 Grading & Erosion Control - Sheet 5
Author: Steve Kuehster
Date: 5/24/2019 11:23:48 AM
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Grading and erosion control plans need to include the details for construction of this proposed facility. Note Comments on the Drainage report concerning this facility.



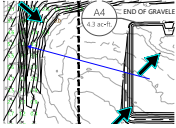
Subject: text box
Page Label: [8] SPP05 Grading & Erosion Control - Sheet 5
Author: Steve Kuehster
Date: 5/24/2019 11:26:28 AM
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Add a note to clarify how this facility will be used as a Sediment basin during construction and how it will be used after the site re-vegetates.

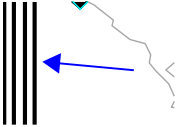


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Page Label: [8] SPP05 Grading & Erosion Control - Sheet 5
Author: Steve Kuehster
Date: 5/24/2019 11:27:05 AM
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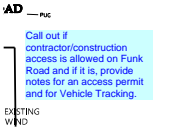
Call out slopes, Slopes steeper than 4:1 require netting.



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Page Label: [8] SPP05 Grading & Erosion Control - Sheet 5
Author: Steve Kuehster
Date: 5/24/2019 11:27:08 AM
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Subject: Arrow
Page Label: [8] SPP05 Grading & Erosion Control - Sheet 5
Author: Steve Kuehster
Date: 5/24/2019 11:27:15 AM
Color: ■



Subject: text box
Page Label: [4] SPP01 Grading & Erosion Control - Sheet 1
Author: Steve Kuehster
Date: 5/24/2019 11:30:47 AM
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Call out if contractor/construction access is allowed on Funk Road and if it is, provide notes for an access permit and for Vehicle Tracking.



Subject: text box
Page Label: [3] SPPOA Overall Site Grading & Erosion Control Plan
Author: Steve Kuehster
Date: 5/24/2019 9:56:07 AM
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Use the standard signature blocks per El Paso County PCD/Engineering Website.
<https://planningdevelopment.elpasoco.com/planning-community-development/engineering/#1519834362627-c268a2b9-61ec>