

Grazing Yak Solar

El Paso County, Colorado

Grading & Erosion Control Plan - Issued for Grading Permit & 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 _____

DESIGN ENGINEER'S STATEMENT:

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

Brendan Miller 6/26/2019
BRENDAN D. MILLER, P.E. #44186 DATE

OWNER/DEVELOPER'S STATEMENT:

I, THE OWNER/DEVELOPER HAVE READ AND WILL COMPLY WITH THE REQUIREMENTS OF THE GRADING AND EROSION CONTROL PLAN.

Alsey Davidson 6/27/2019
ALSEY DAVIDSON DATE
GRAZING YAK SOLAR, LLC
700 UNIVERSE BLVD, JUNO BEACH, FL 33408

EL PASO COUNTY:

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

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

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

JENNIFER IRVINE, P.E. DATE
COUNTY ENGINEER / ECM ADMINISTRATOR

STANDARD NOTES FOR EL PASO COUNTY GRADING AND EROSION CONTROL PLANS

- 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.
- 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.
- 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 (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.
- ONCE THE ESQCP HAS BEEN ISSUED, THE CONTRACTOR MAY INSTALL THE INITIAL STAGE EROSION AND SEDIMENT CONTROL BMP'S 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 PCB INSPECTIONS STAFF.
- 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 BMP'S SHALL BE MAINTAINED UNTIL PERMANENT SOIL EROSION CONTROL MEASURES ARE IMPLEMENTED AND ESTABLISHED.
- 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.
- ALL PERSONS ENGAGED IN EARTH DISTURBANCE SHALL IMPLEMENT AND MAINTAIN ACCEPTABLE SOIL EROSION AND SEDIMENT CONTROL MEASURES INCLUDING BMP'S 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).
- ALL TEMPORARY EROSION CONTROL FACILITIES INCLUDING BMP'S 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.
- 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.
- 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.
- 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.
- 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 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.
- NO PERSON SHALL CAUSE THE IMPEDIMENT OF STORMWATER FLOW IN THE FLOW LINE OF THE CURB AND GUTTER OR IN THE DITCHLINE.
- 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 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. 4300 CHERRY CREEK DRIVE SOUTH, DENVER, CO 80246-1530.

Westwood

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

Westwood Professional Services, Inc.



PREPARED FOR:



REVISIONS:		
#	DATE	COMMENT
B	04/22/19	Issued for Permit
C	04/26/19	Issued for Review (90%)
D	04/29/19	Issued for Grading Permit
E	06/04/19	Re-Issue for Permit
F	06/26/19	Re-Issue for Permit

Grazing Yak Solar

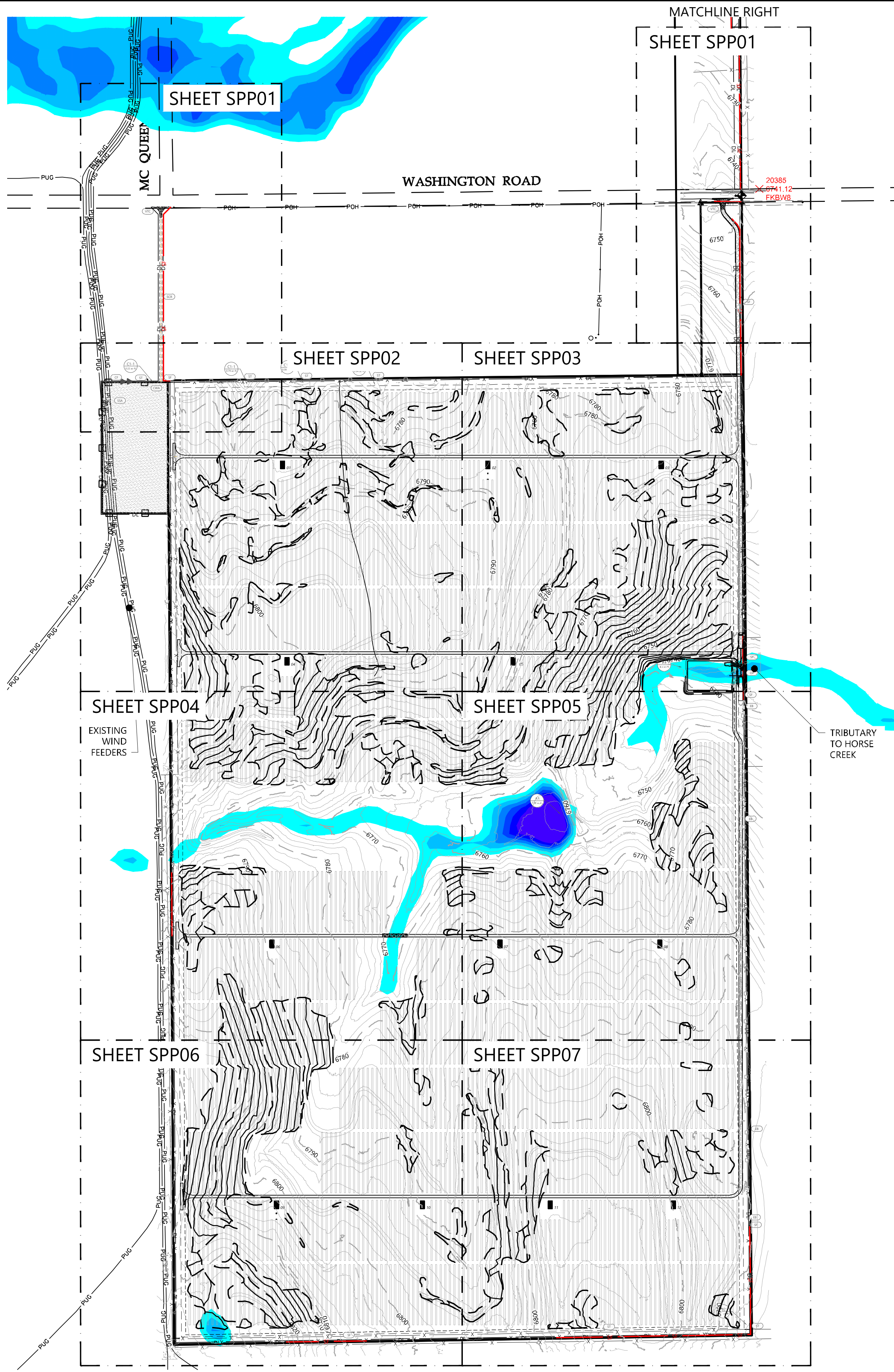
El Paso County, Colorado

Cover Sheet

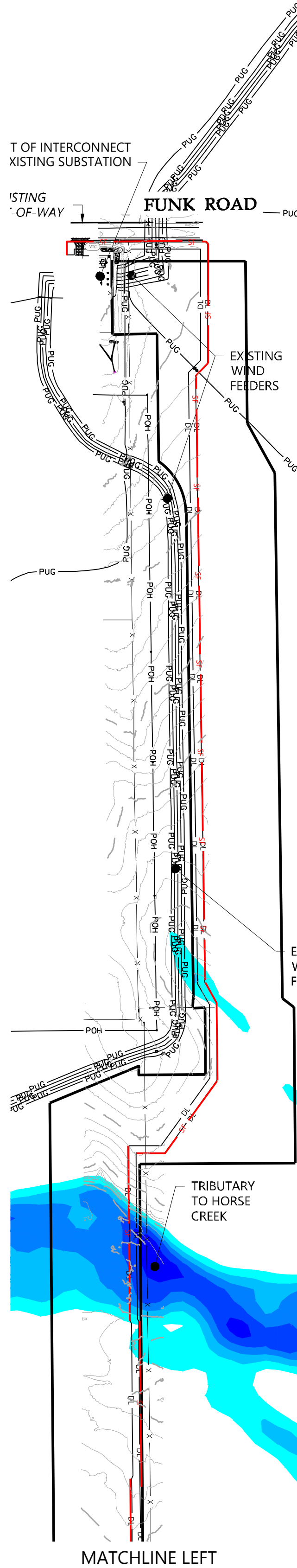
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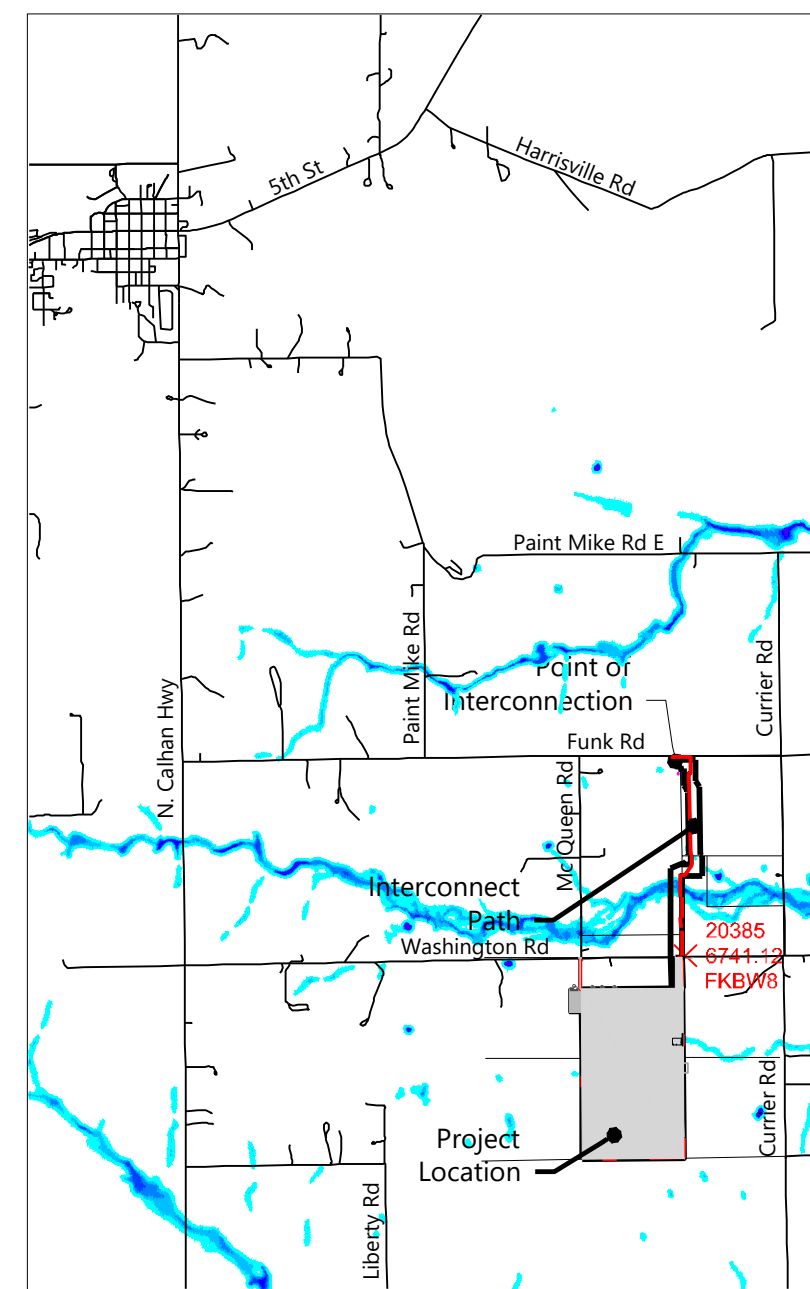
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LEGEND & ABBREVIATIONS

- 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
- 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

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'	



VICINITY MAP
Scale: 1" = 5000'

Westwood

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

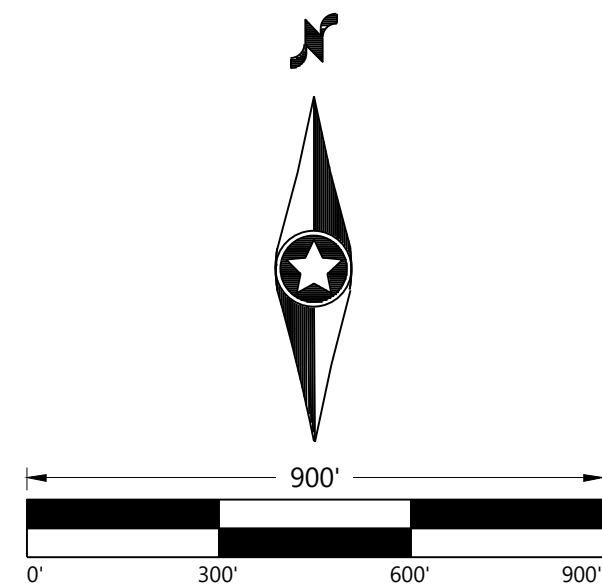
Westwood Professional Services, Inc.



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**Grazing Yak
Solar**

El Paso County, Colorado

Sheet Index

DATE: 06/04/2019

SHEET: INDX



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A diagram of a bridge with a total length of 900 feet. The bridge is divided into four segments of 300 feet each. The segments alternate in color: black, white, black, and white from left to right. The segments are labeled 0', 300', 600', and 900' at the bottom.

Grazing Yak Solar

El Paso County, Colorado

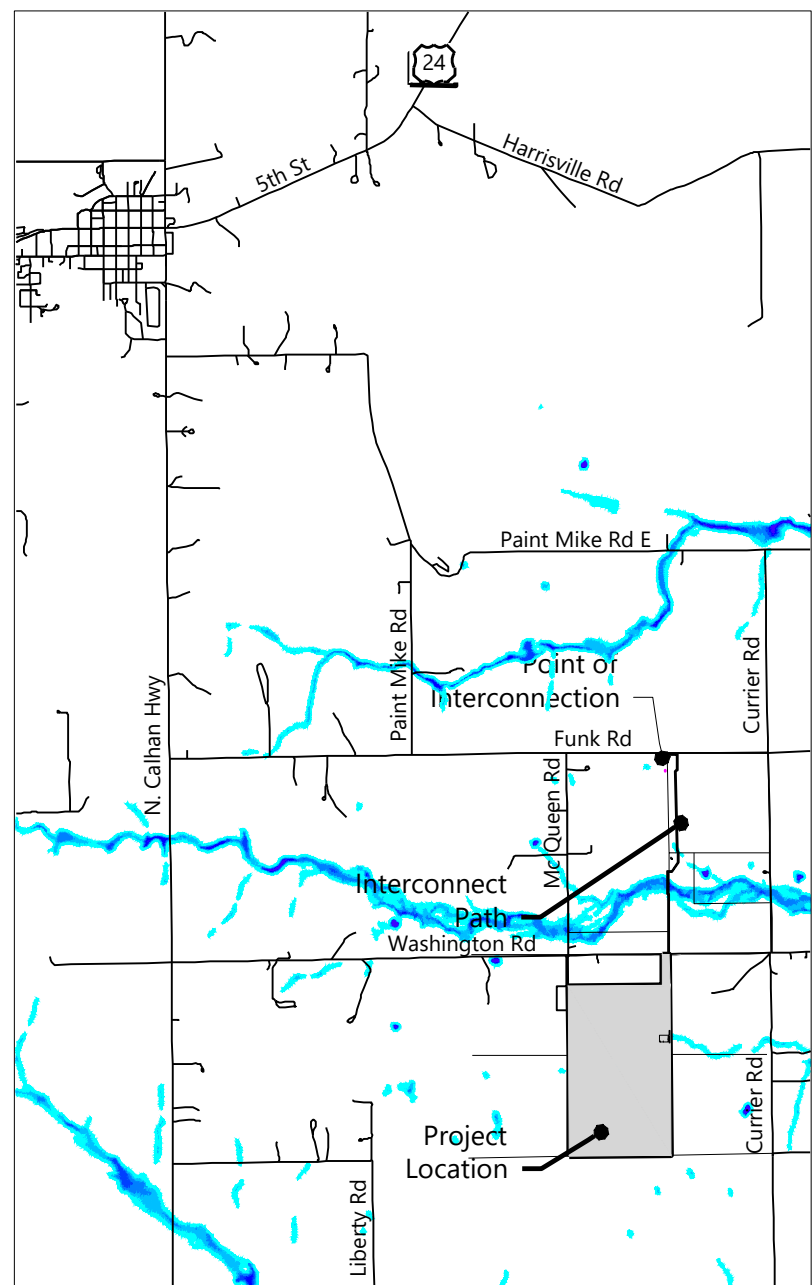
Overall Site Grading & Erosion Control Plan

DATE: 06/04/2019







SHEET: SPPOA

LEGEND & ABBREVIATIONS

	EX. PROJECT BOUNDARY LINE
	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'	
1.000'	1.500'	
1.500'	2.000'	
2.000'	2.500'	
2.500'	3.000'	
3.000'	5.000'	

See Plan View 2 (This Sheet)

See Plan View 1 (This Sheet)

See Plan View 2 (This Sheet)

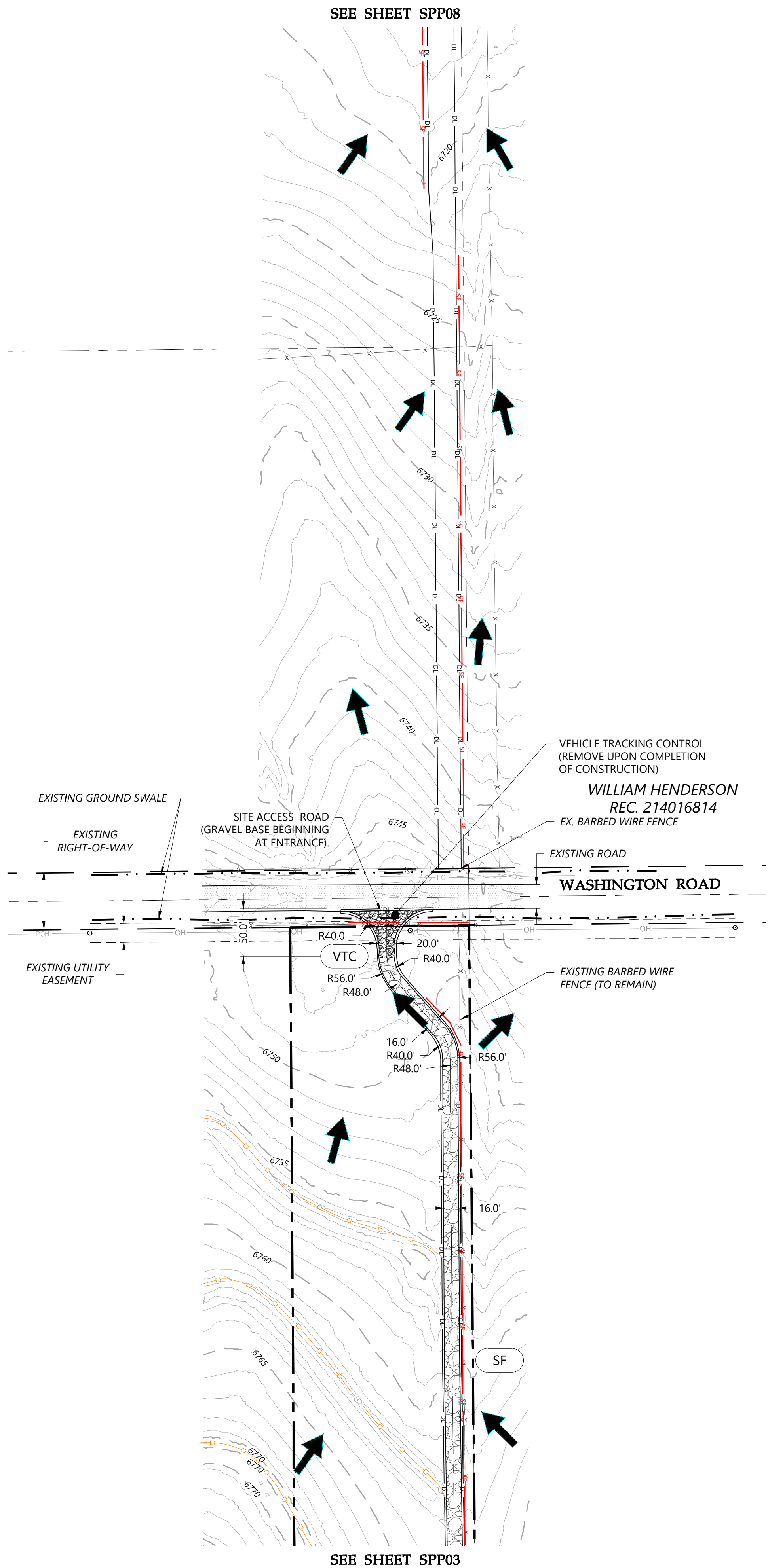
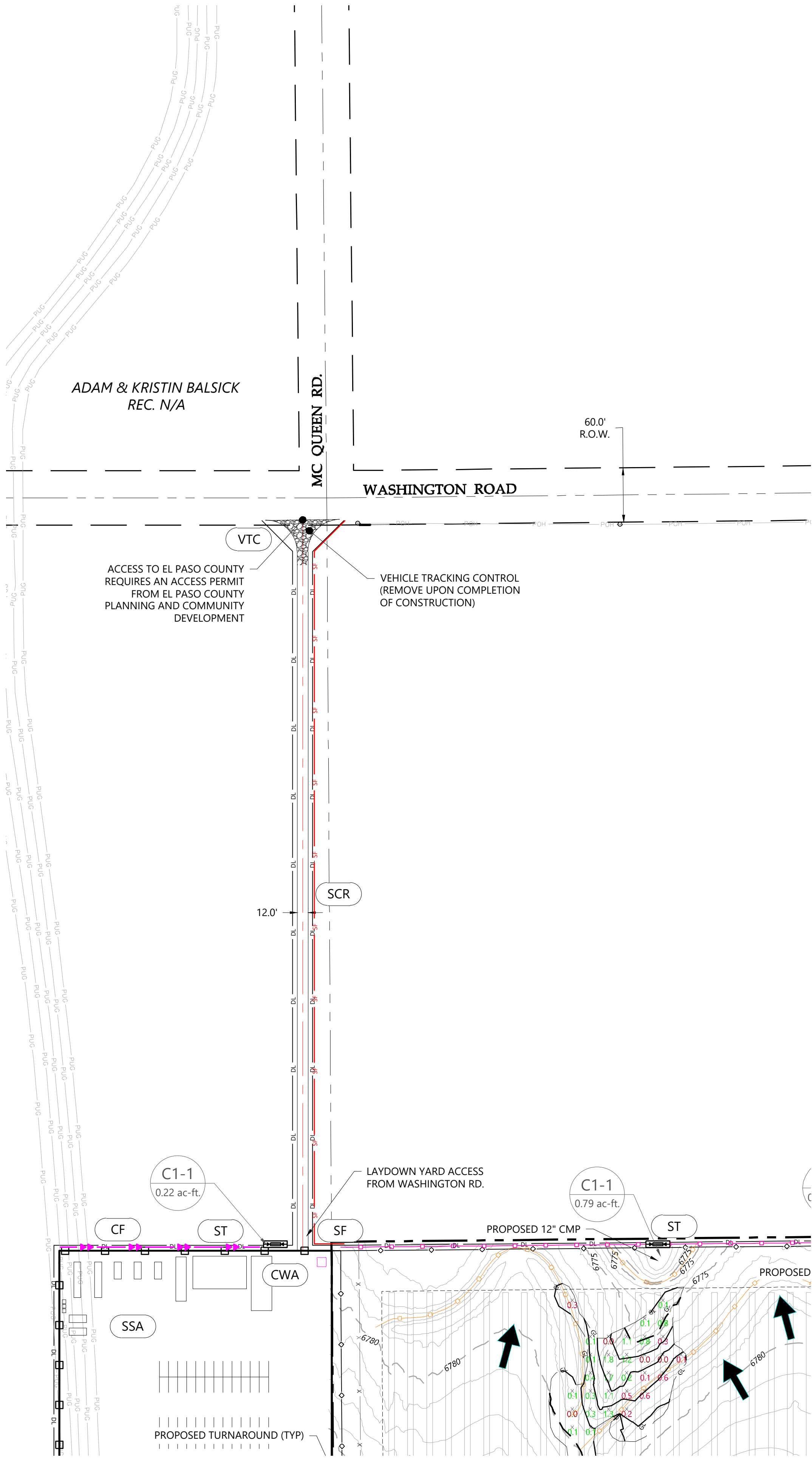
See Plan View 3 (This Sheet)

1 Plan View 1
1" = 300'

2 Plan View 2
1" = 300'

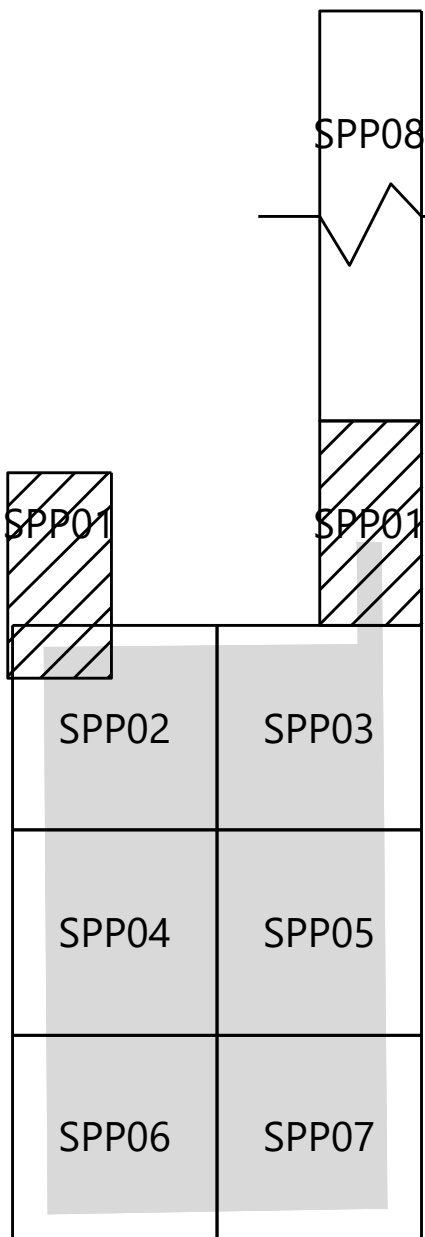
3 Plan View 3
1" = 300'

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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
 - 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

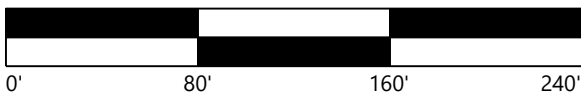
- EROSION CONTROL LEGEND**
- FLOW DIRECTION ARROW
 - CONSTRUCTION FENCE (INITIAL & INTERIM)
 - SILT FENCE (INITIAL & INTERIM)
 - PROPOSED EARTHEN BERM (INITIAL & INTERIM)
 - SWALE (INITIAL & INTERIM)
 - STABILIZED STAGING AREA (INITIAL & INTERIM)
 - VEHICLE TRACKING CONTROL (INITIAL & INTERIM)
 - SEEDING AND MULCHING (AS REQ'D) (FINAL PHASE)
 - EROSION CONTROL BLANKET (INTERIM & FINAL PHASE)
 - SEDIMENT TRAP (INITIAL & INTERIM)
 - CONCRETE WASHOUT AREA (INITIAL & INTERIM)
 - PROPOSED VELOCITY DISSIPATER (INTERIM & FINAL PHASE)
 - SEDIMENT BASINS (INITIAL & INTERIM) (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).



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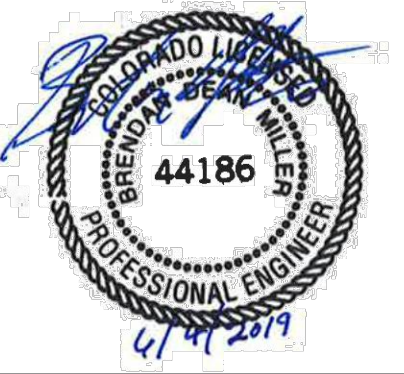
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El Paso County, Colorado

Grading & Erosion Control - Sheet 1

DATE: 06/04/2019

SHEET: SPP01

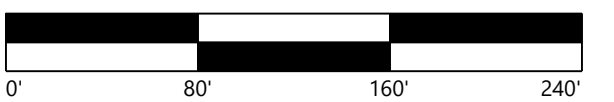


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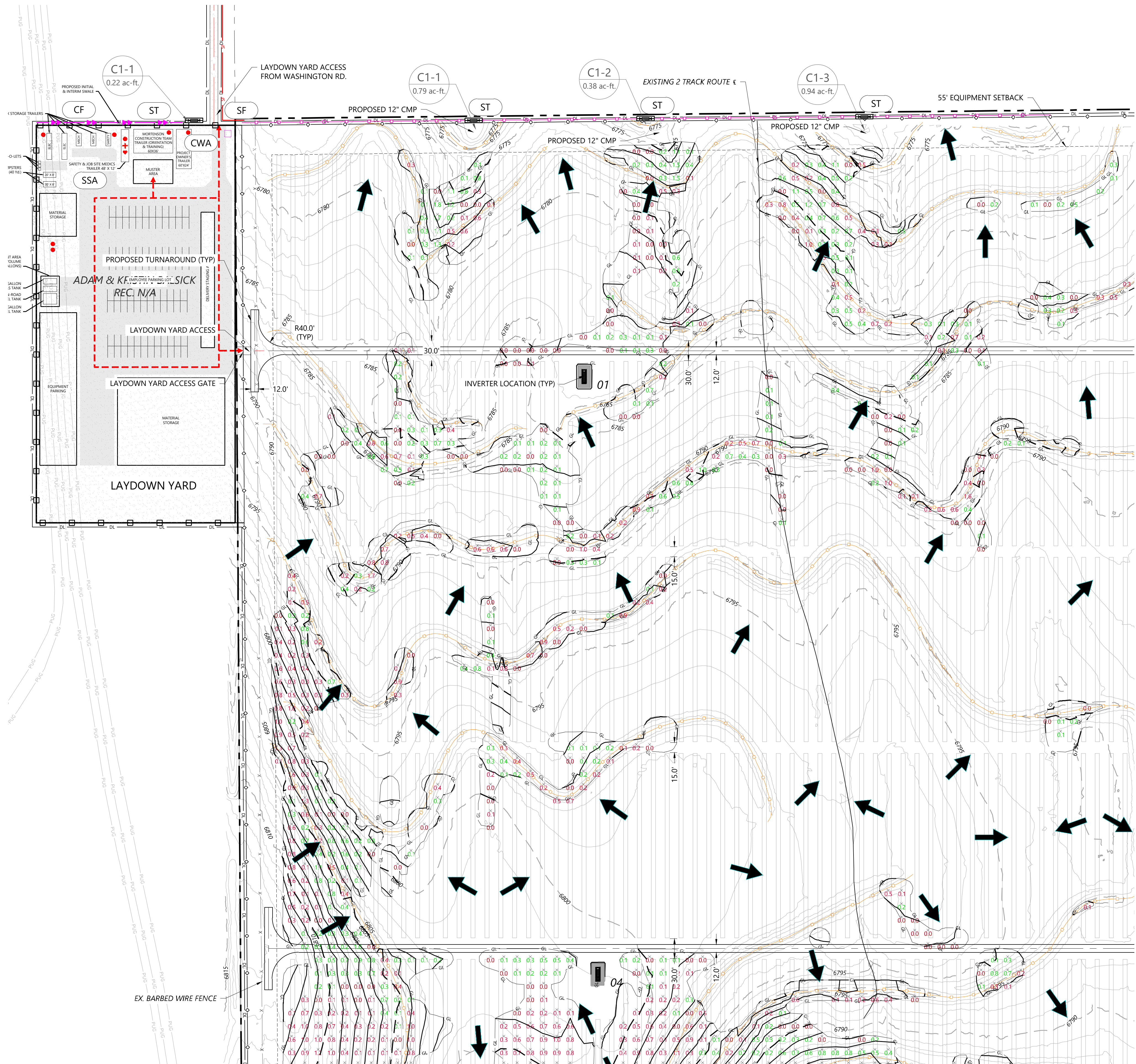
Grazing Yak Solar

El Paso County, Colorado




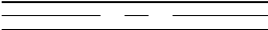

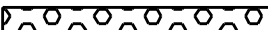







Grading & Erosion Control - Sheet 2

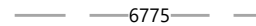







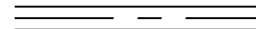





DATE: 06/04/2019

SHEET: SPP02





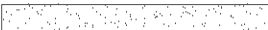
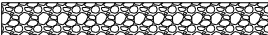
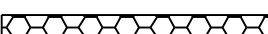







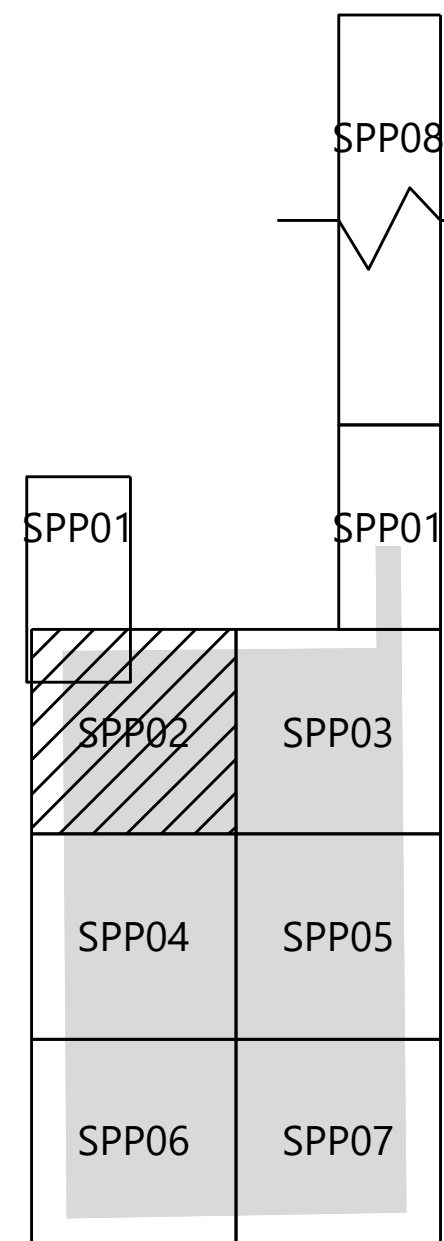
LEGEND & ABBREVIATIONS

	PROJECT BOUNDARY LINE
	PROPOSED SOLAR TRACKER
	PROPOSED GRAVEL ACCESS RD.
	PROPOSED DIRT ACCESS RD.
	PROPOSED FENCE LINE
	PROPOSED PROTECTED CROSSING
 GL	PROPOSED GRADING LIMITS
 340	PROPOSED INDEX CONTOUR LINE
	PROPOSED INTERVAL CONTOUR LINE
 GL	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

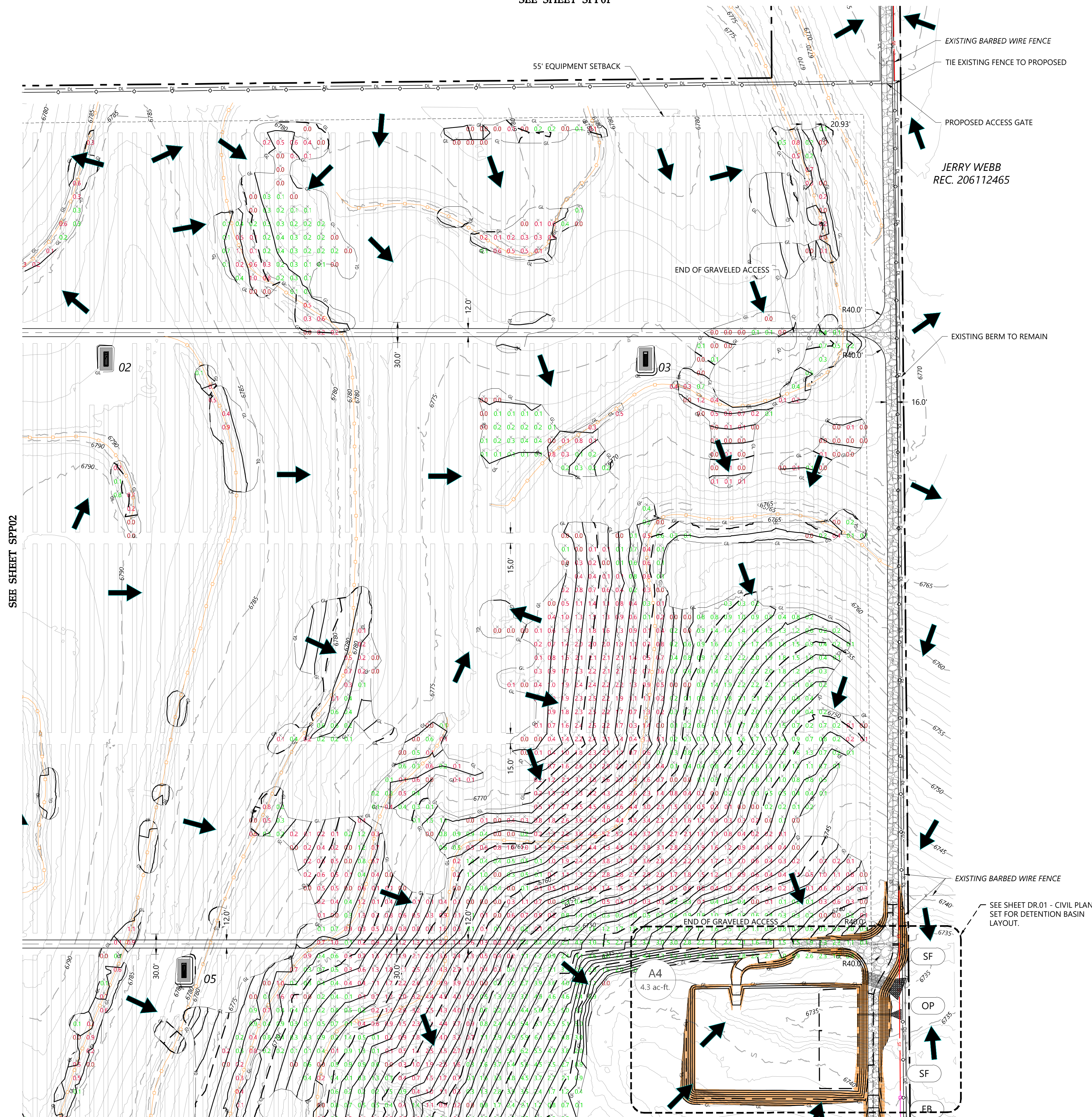
EROSION CONTROL LEGEND

	FLOW DIRECTION ARROW	
		CF
		SF
		EB
		
		SSA
		VTC
		SM
		ECB
		ST
		CWA
		
		



KEYMAP
Scale: 1"=1500'

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
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- EX. INDEX CONTOUR LINE
- EX. INTERVAL CONTOUR LINE
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- EDGE OF ASPHALT
- EX. ASPHALT PAVEMENT ROAD
- EX. BERM
- EX. WATERWAY
- FEMA FLOODPLAIN

EROSION CONTROL LEGEND

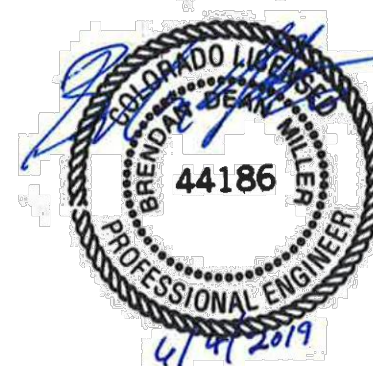
- FLOW DIRECTION ARROW
- CONSTRUCTION FENCE (INITIAL & INTERIM)
- SILT FENCE (INITIAL & INTERIM)
- PROPOSED EARTHEN BERM (INITIAL & INTERIM)
- SWALE (INITIAL & INTERIM)
- STABILIZED STAGING AREA (INITIAL & INTERIM)
- VEHICLE TRACKING CONTROL (INITIAL & INTERIM)
- SEEDING AND MULCHING (AS REQ'D) (FINAL PHASE)
- EROSION CONTROL BLANKET (INTERIM & FINAL PHASE)
- SEDIMENT TRAP (INITIAL & INTERIM)
- CONCRETE WASHOUT AREA (INITIAL & INTERIM)
- PROPOSED VELOCITY DISSIPATER (INTERIM & FINAL PHASE)
- SEDIMENT BASINS (INITIAL & INTERIM) (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).

- CF
- SF
- EB
- SSA
- VTC
- SM
- ECB
- ST
- CWA

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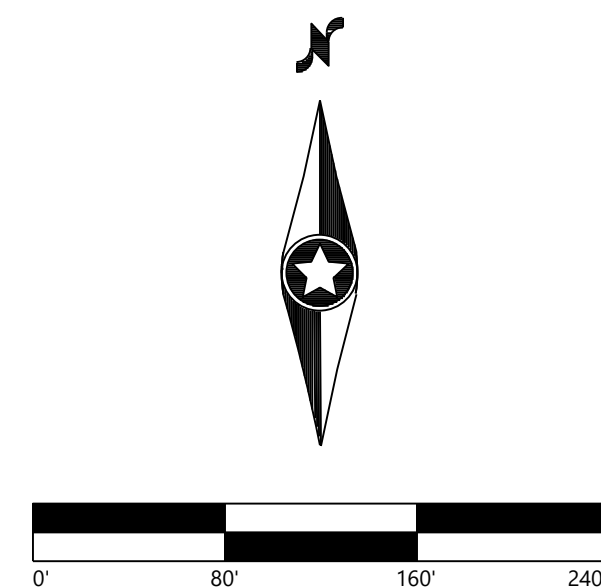
Westwood Professional Services, Inc.



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
E	06/04/19	Re-Issue for Permit



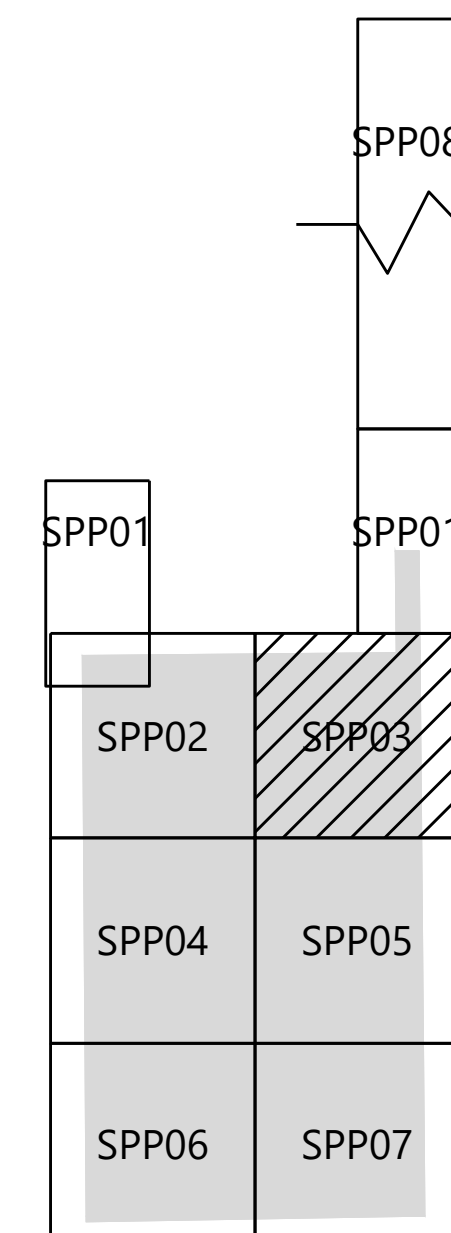
Grazing Yak Solar

El Paso County, Colorado

Grading & Erosion Control - Sheet 3

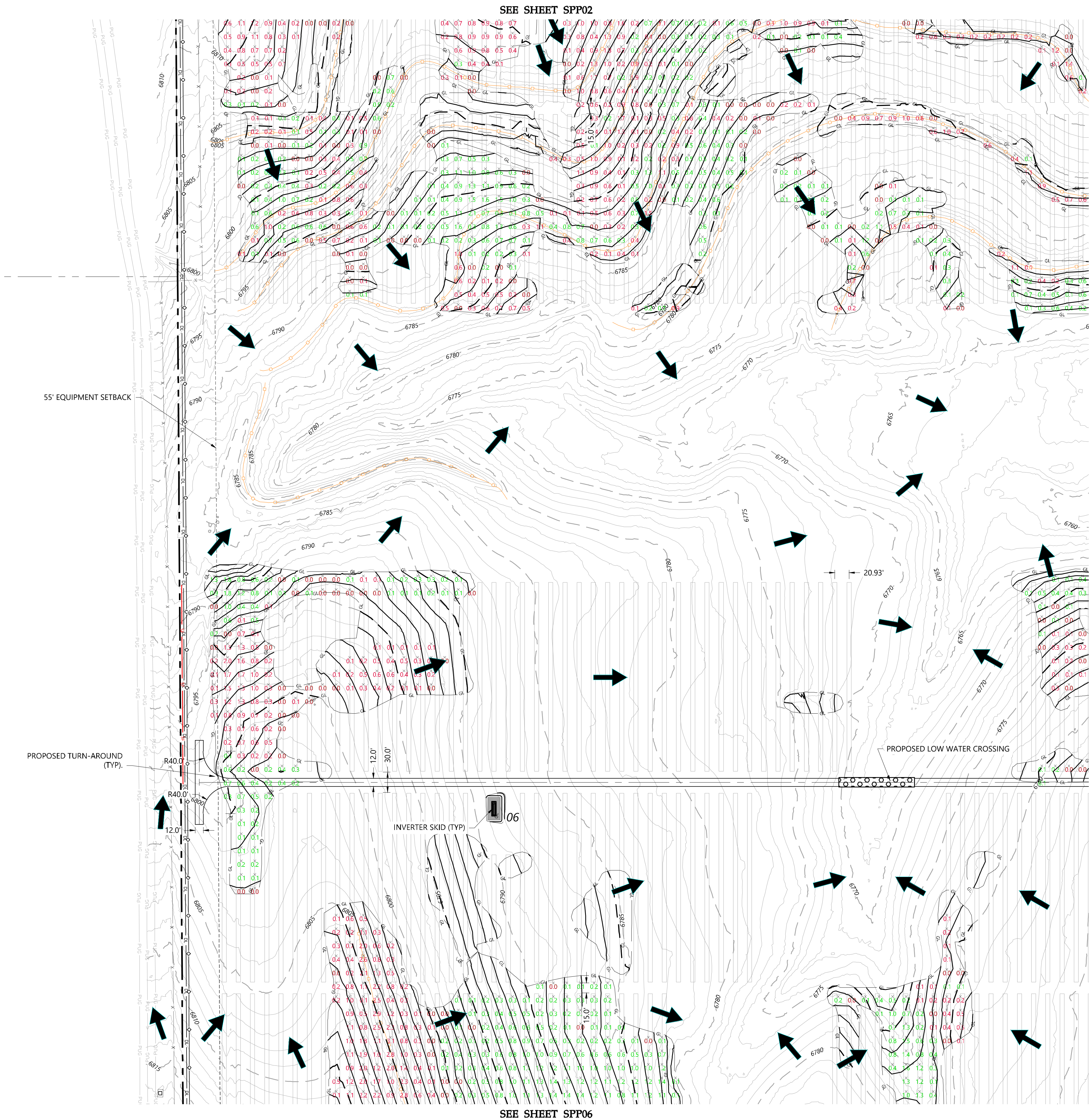
DATE: 06/04/2019

SHEET: SPP03



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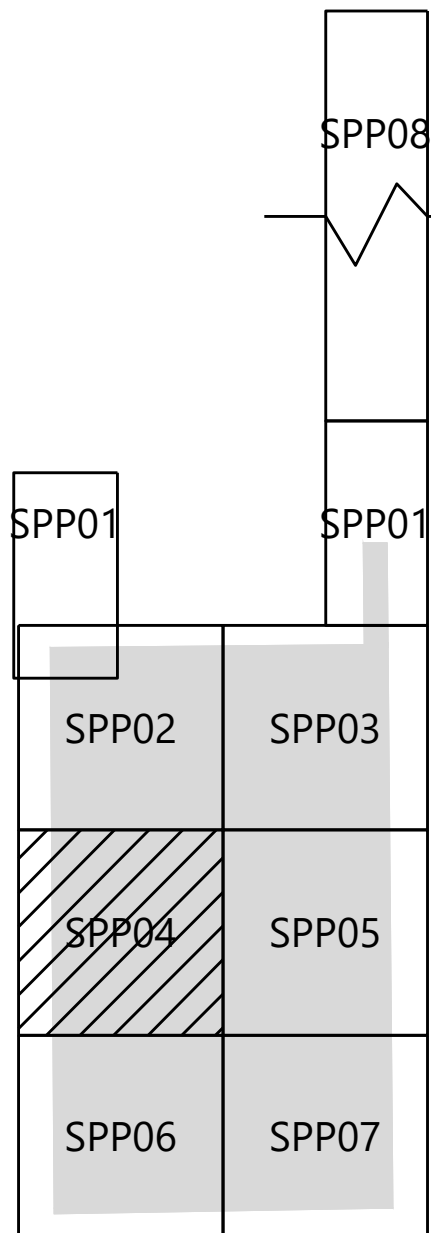
LEGEND & ABBREVIATIONS

- PROJECT BOUNDARY LINE
- PROPOSED SOLAR TRACKER
- PROPOSED GRAVEL ACCESS RD.
- PROPOSED DIRT ACCESS RD.
- PROPOSED FENCE LINE
- PROPOSED PROTECTED CROSSING
- PROPOSED GRADING LIMITS
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- PROPOSED GRADING LIMITS BORDER
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- 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
- CONSTRUCTION FENCE (INITIAL & INTERIM)
- SILT FENCE (INITIAL & INTERIM)
- PROPOSED EARTHEN BERM (INITIAL & INTERIM)
- SWALE (INITIAL & INTERIM)
- STABILIZED STAGING AREA (INITIAL & INTERIM)
- VEHICLE TRACKING CONTROL (INITIAL & INTERIM)
- SEEDING AND MULCHING (AS REQ'D) (FINAL PHASE)
- EROSION CONTROL BLANKET (INTERIM & FINAL PHASE)
- SEDIMENT TRAP (INITIAL & INTERIM)
- CONCRETE WASHOUT AREA (INITIAL & INTERIM)
- PROPOSED VELOCITY DISSIPATER (INTERIM & FINAL PHASE)
- SEDIMENT BASINS (INITIAL & INTERIM) (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).

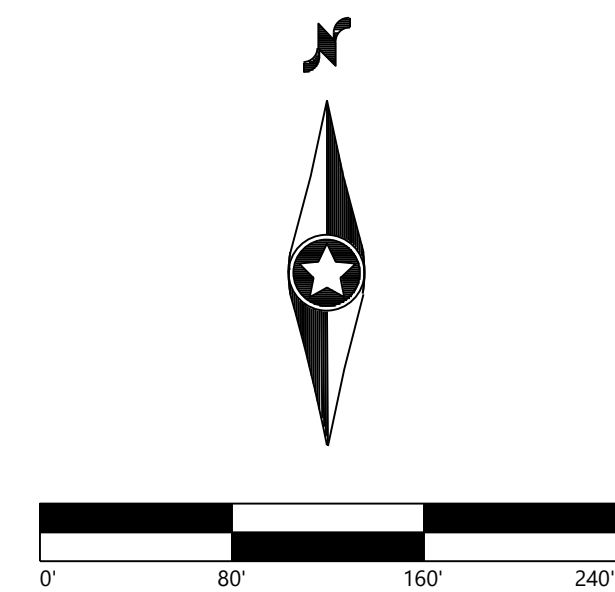
- CF
- SF
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- SSA
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PREPARED FOR:



REVISIONS:		
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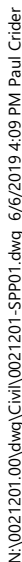
Grazing Yak Solar

El Paso County, Colorado

Grading & Erosion Control - Sheet 4

DATE: 06/04/2019

SHEET: SPP04



55' EQUIPMENT SETBACK

WILSON FARM LLLP
REC. 98085330

SEE SHEET SPP04

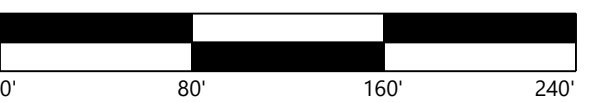
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Scale: 1"=1500'

SHEET: SPP06



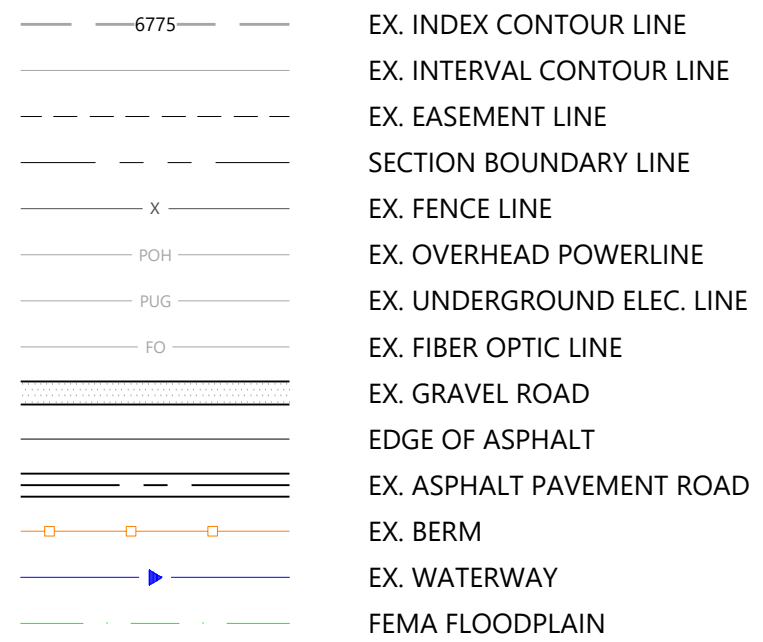
REVISIONS:

	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
E	06/04/19	Re-Issue for Permit

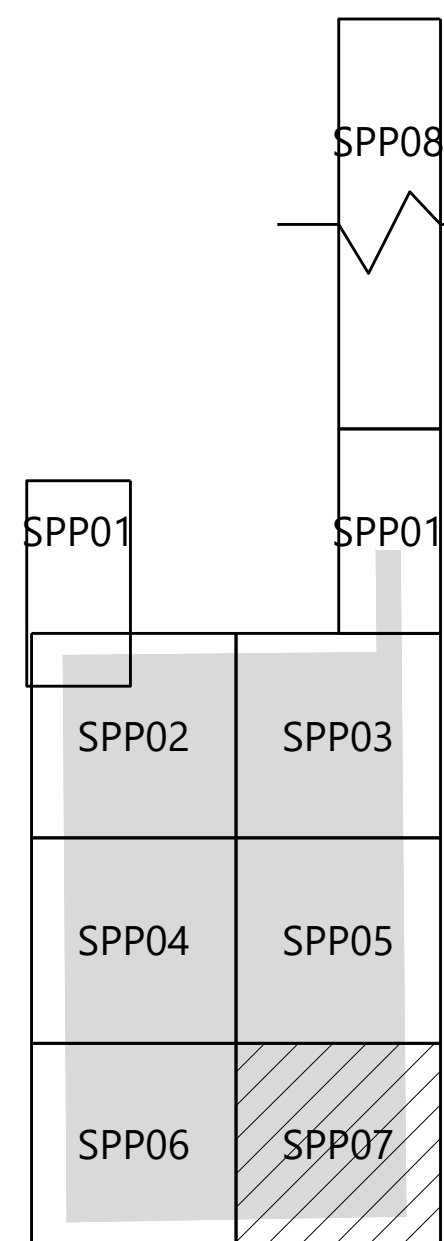
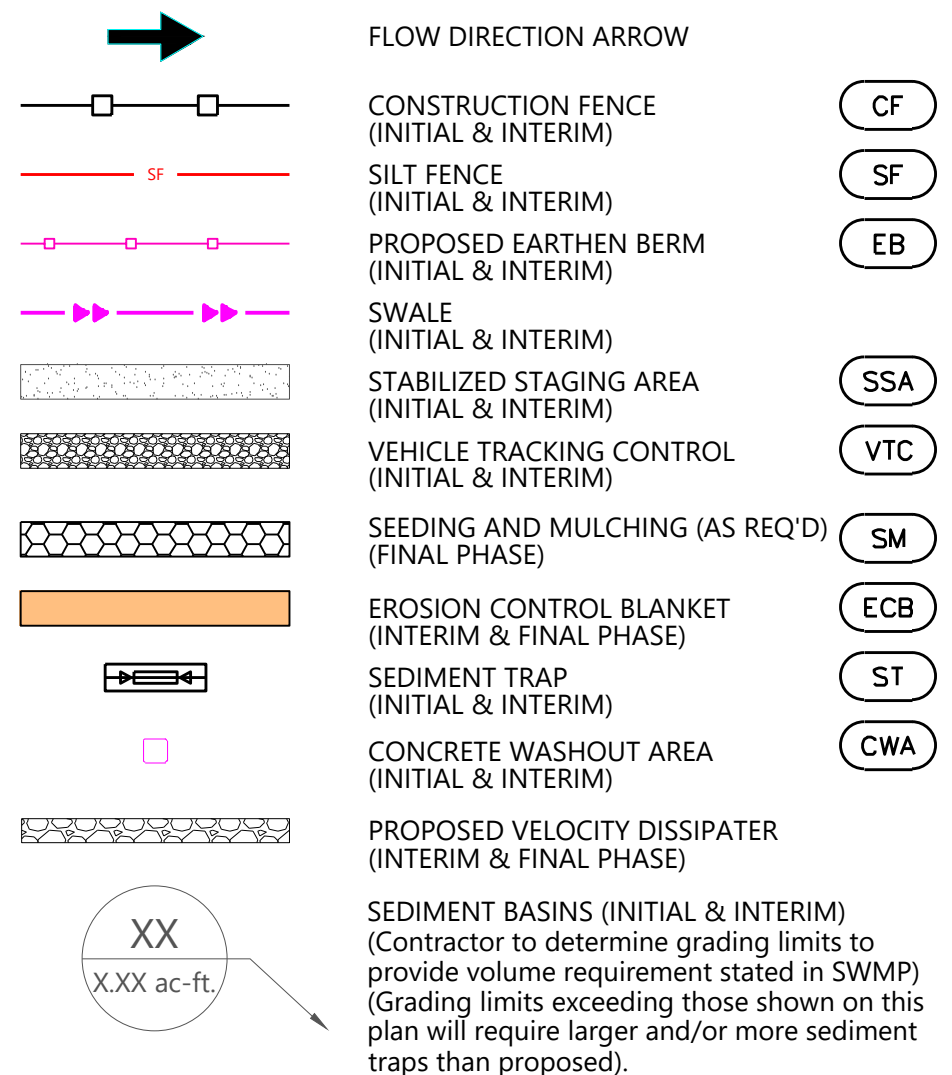


El Paso County, Colorado

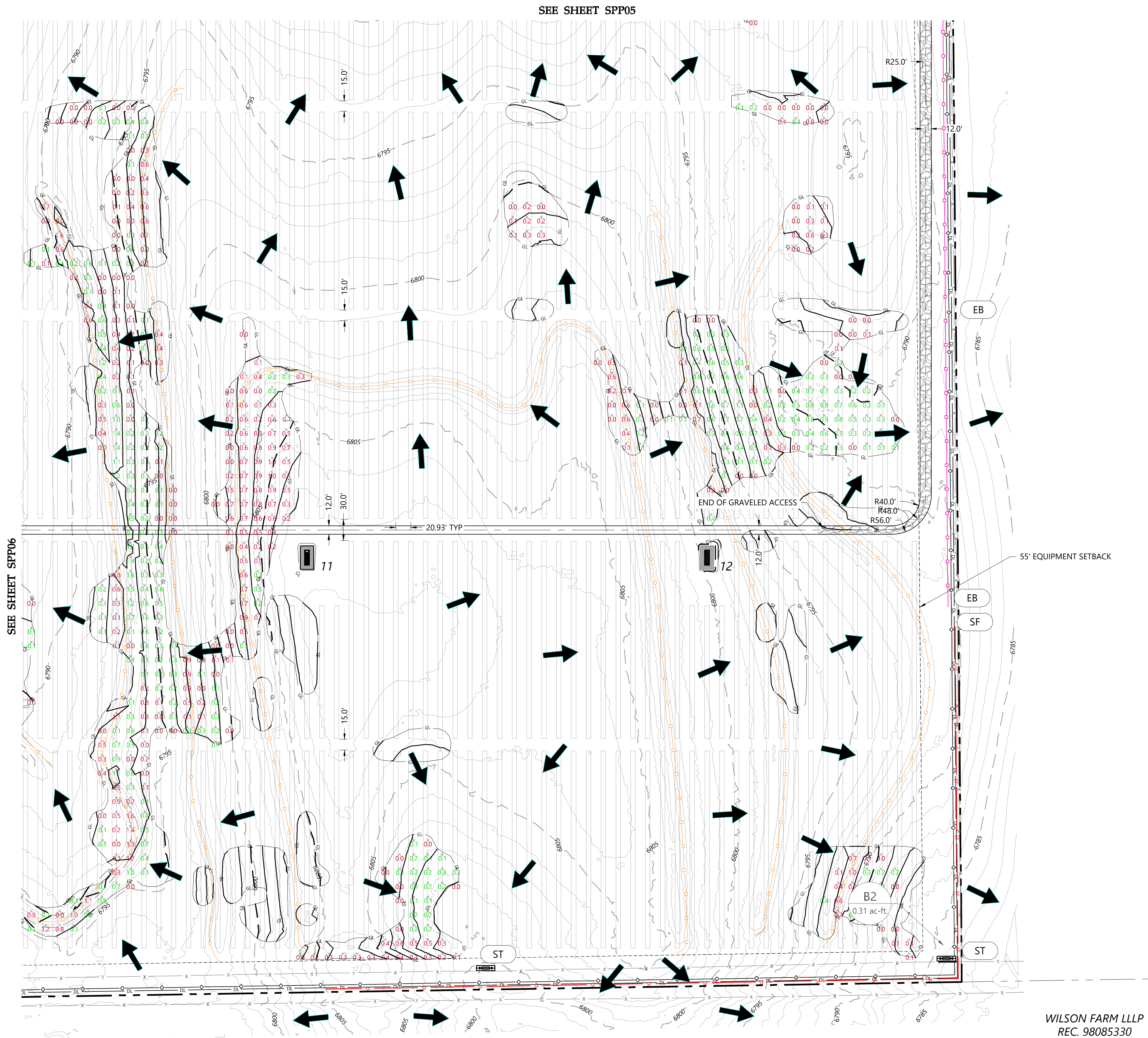
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EROSION CONTROL LEGEND



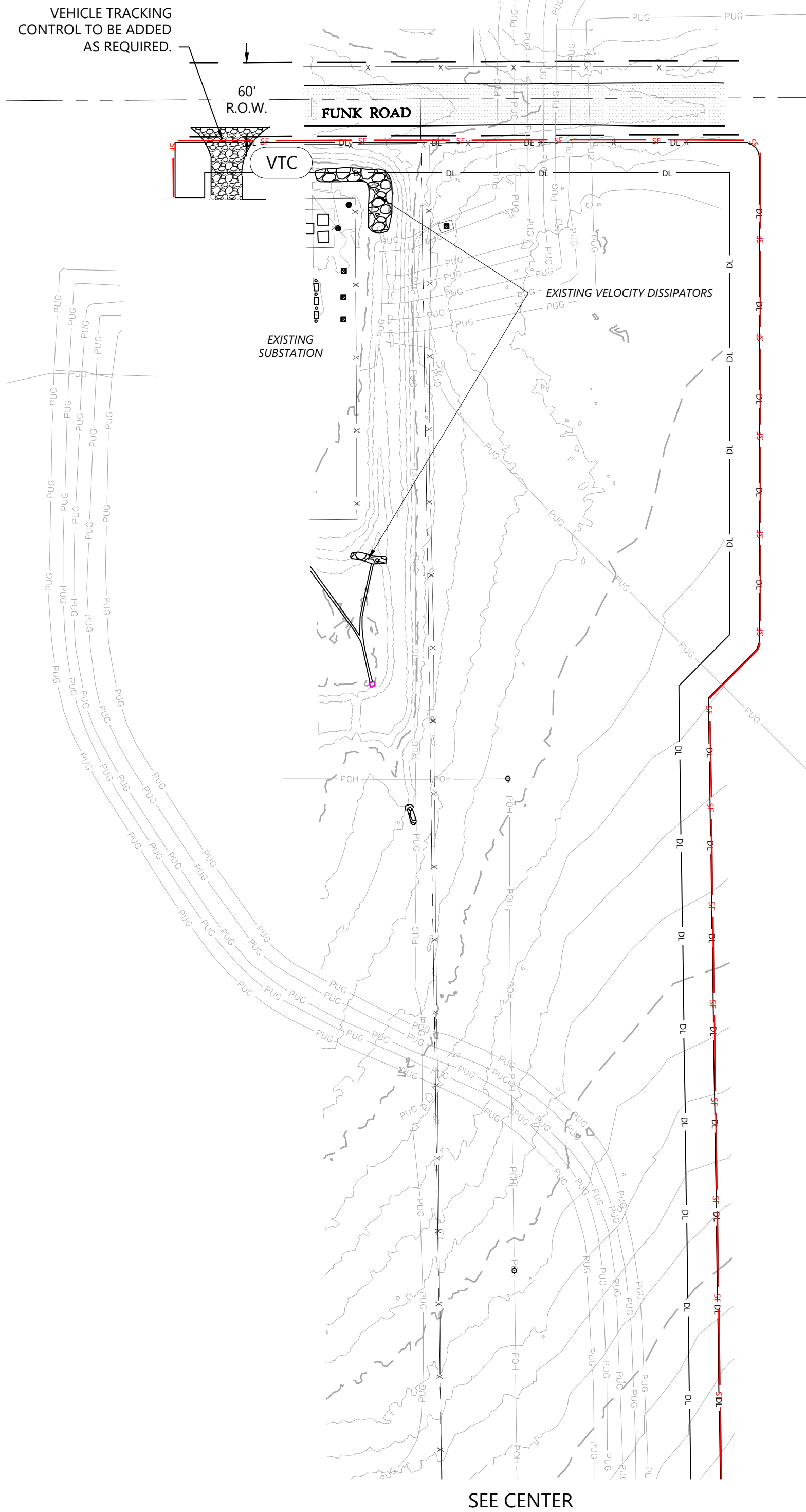
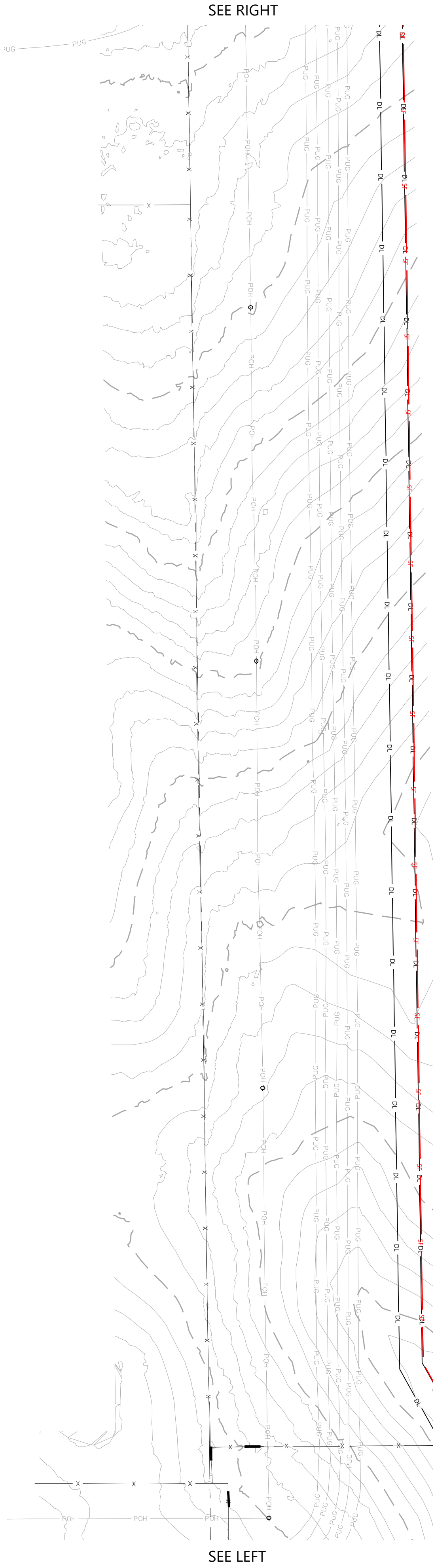
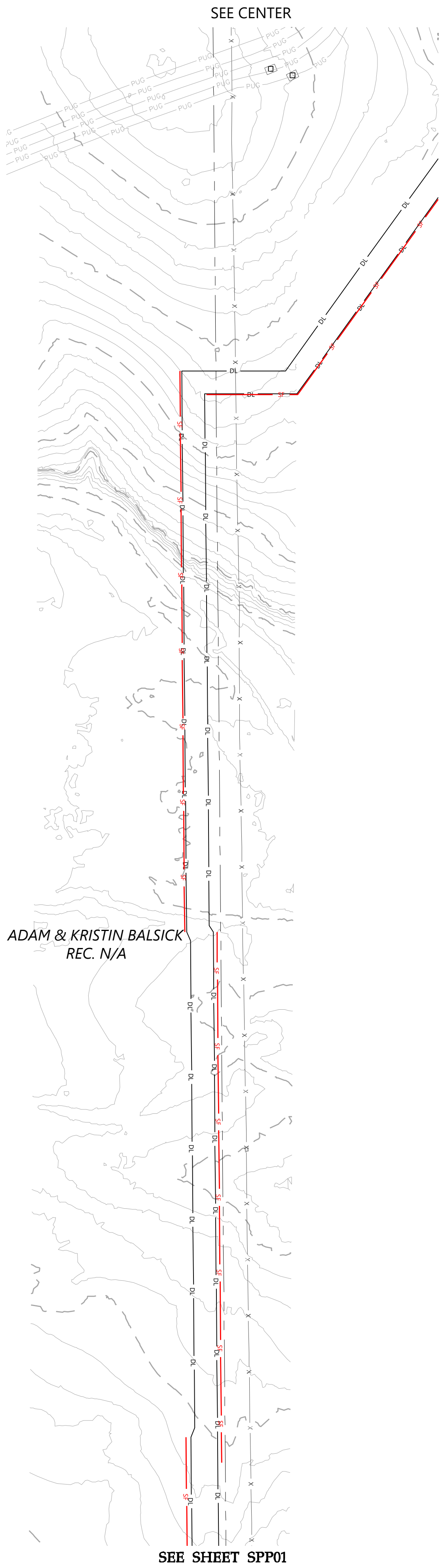
KEYMAP
Scale: 1"=1500'



WILSON FARM LLLP
REC. 98085330

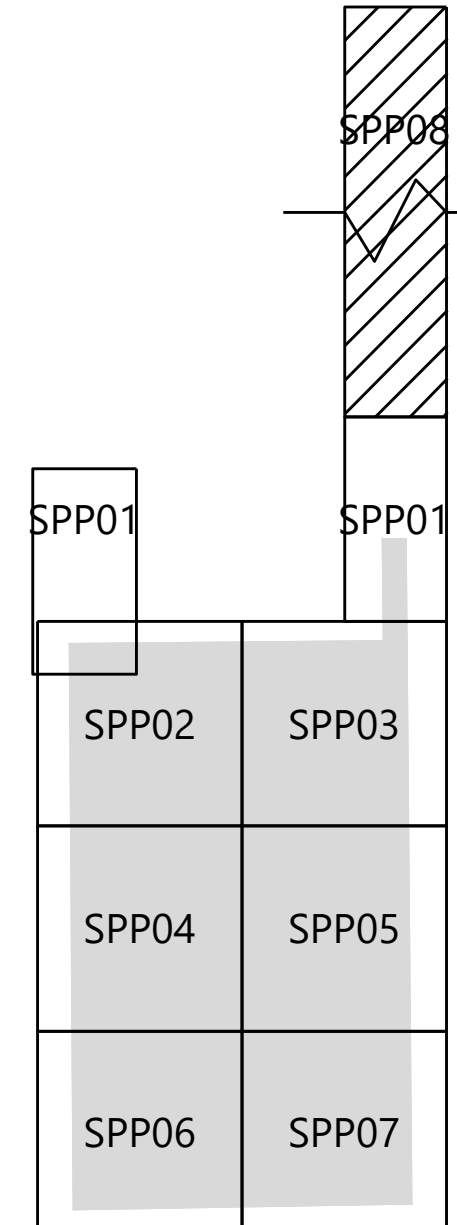
WILSON FARM LLLP
REC. 98085330

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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
 - PROPOSED CUT VALUE
 - PROPOSED FILL VALUE
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 - 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
 - CONSTRUCTION FENCE (INITIAL & INTERIM)
 - SILT FENCE (INITIAL & INTERIM)
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- CWA



Westwood

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Westwood Professional Services, Inc.

BRENDAN J. WILSON
44186
PROFESSIONAL ENGINEER
4/17/2019

PREPARED FOR:

Mortenson
NEXTera
ENERGY

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
E	06/04/19	Re-Issue for Permit

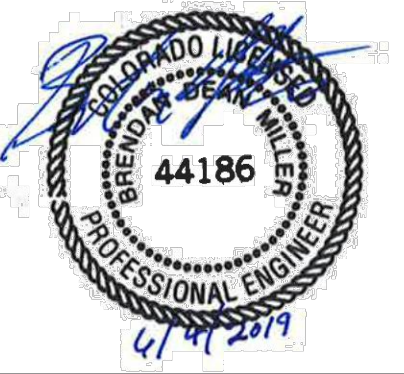
Grazing Yak Solar

El Paso County, Colorado

Route to Interconnect
Erosion Control Plan-Sheet 8

DATE: 06/04/2019

SHEET: SPP08

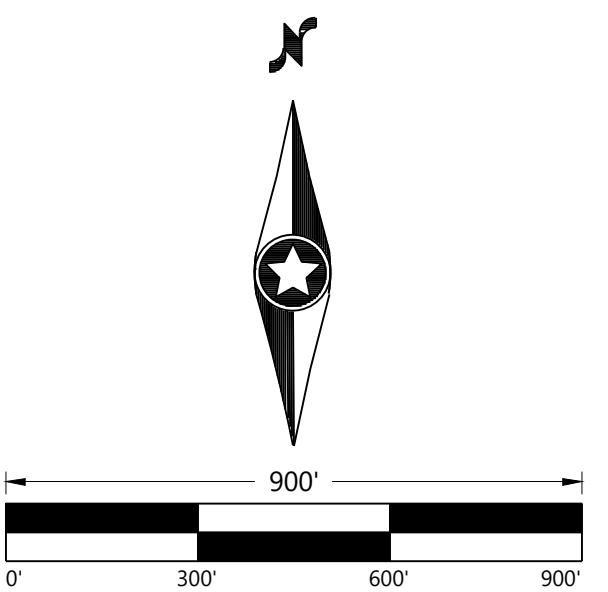


PREPARED FOR:



REVISIONS:

	DATE	COMMENT
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B	03/27/19	Issued for Review (60%)
C	04/22/19	Permit Submittal Revisions
D	04/29/19	Issued for Grading Permit
E	06/04/19	Re-Issue for Permit



Grazing Yak Solar

El Paso County, Colorado

Re-Seeding Plan

DATE: 06/04/2019

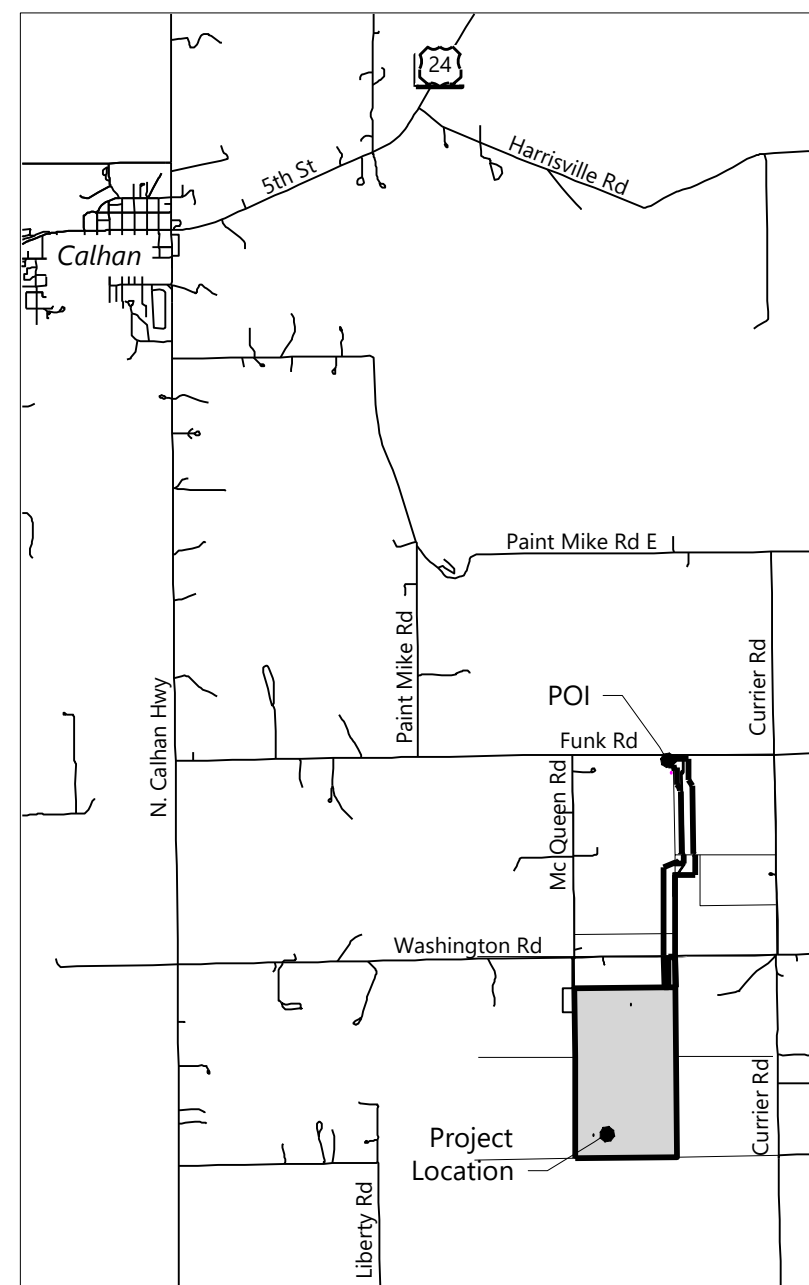
SHEET: PL.01

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 LAYDOWN AREA
	PROPOSED PROTECTED CROSSING
	RE-SEEDING
	RE-SEEDING AS REQUIRED (SEE NOTE 2).
	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

NOTES:

1. PRIOR TO GRADING AND DURING CLEARING AND GRUBBING, THE AREAS OF VEGETATION PRESERVATION, BUFFERS AND OTHER AREAS OF NO-DISTURBANCE SHOULD BE FLAGGED, STAKED OR OTHERWISE DELINEATED.
2. EXISTING VEGETATION TO BE MAINTAINED TO THE GREATEST DEGREE POSSIBLE.



VICINITY MAP
Scale: 1" = 5000'

See Plan View 2 (This Sheet)

See Plan View 1 (This Sheet)

See Plan View 2 (This Sheet)

See Plan View 3 (This Sheet)

Plan View 3

$$1'' = 300'$$

Plan View 1

$$1'' = 300'$$

Plan View 2

$$1'' = 300'$$

SM-4



November 2010	Urban Drainage and Flood Control District Urban Storm Drainage Criteria Manual Volume 3	VTC-3
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Vehicle Tracking Control (VTC)

STABILIZED CONSTRUCTION ENTRANCE/EXIT INSTALLATION NOTES

1. SEE PLAN VIEW FOR
-LOCATION OF CONSTRUCTION ENTRANCE(S)/EXIT(S).
-TYPE OF CONSTRUCTION ENTRANCE(S)/EXIT(S) (WITH/WITHOUT WHEEL WASH, CONSTRUCTION MAT OR TRM).
2. 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.
3. A STABILIZED CONSTRUCTION ENTRANCE/EXIT SHALL BE LOCATED AT ALL ACCESS POINTS WHERE VEHICLES ACCESS THE CONSTRUCTION SITE FROM PAVED RIGHT-OF-WAYS.
4. STABILIZED CONSTRUCTION ENTRANCE/EXIT SHALL BE INSTALLED PRIOR TO ANY LAND DISTURBING ACTIVITIES.
5. A NON-WOVEN GEOTEXTILE FABRIC SHALL BE PLACED UNDER THE STABILIZED CONSTRUCTION ENTRANCE/EXIT PRIOR TO THE PLACEMENT OF ROCK.
6. UNLESS OTHERWISE SPECIFIED BY LOCAL JURISDICTION, ROCK SHALL CONSIST OF DOT SECT. #703, ASHTO #3 COARSE AGGREGATE OR 6" (MINUS) ROCK.

STABILIZED CONSTRUCTION ENTRANCE/EXIT MAINTENANCE NOTES

1. INSPECT BMPs EACH WORKDAY, AND MAINTAIN THEM IN EFFECTIVE OPERATING CONDITION. DISCOVERY 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. ROCK SHALL BE REAPPLIED OR REGRADED AS NECESSARY TO THE STABILIZED ENTRANCE/EXIT TO MAINTAIN A CONSISTENT DEPTH.
5. 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 Urban Storm Drainage Criteria Manual Volume 3	November 2010
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SM-6



STABILIZED STAGING AREA INSTALLATION NOTES

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

STABILIZED STAGING AREA 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 WATER FLOW. REPAIR OR REPLACE BMPs AS NECESSARY TO MAINTAIN EFFECTIVE OPERATION.
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. 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
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Stabilized Staging Area (SSA)

STABILIZED STAGING AREA MAINTENANCE NOTES

6. 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)

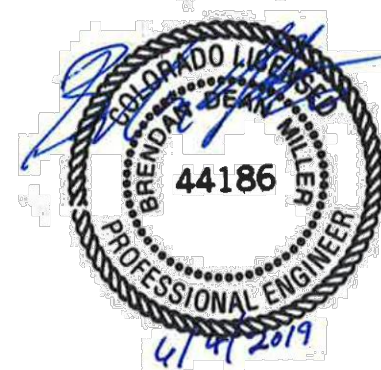
EC-1



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

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Westminster, CO 80021
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Westwood Professional Services, Inc.



PREPARED FOR:



REVISIONS:

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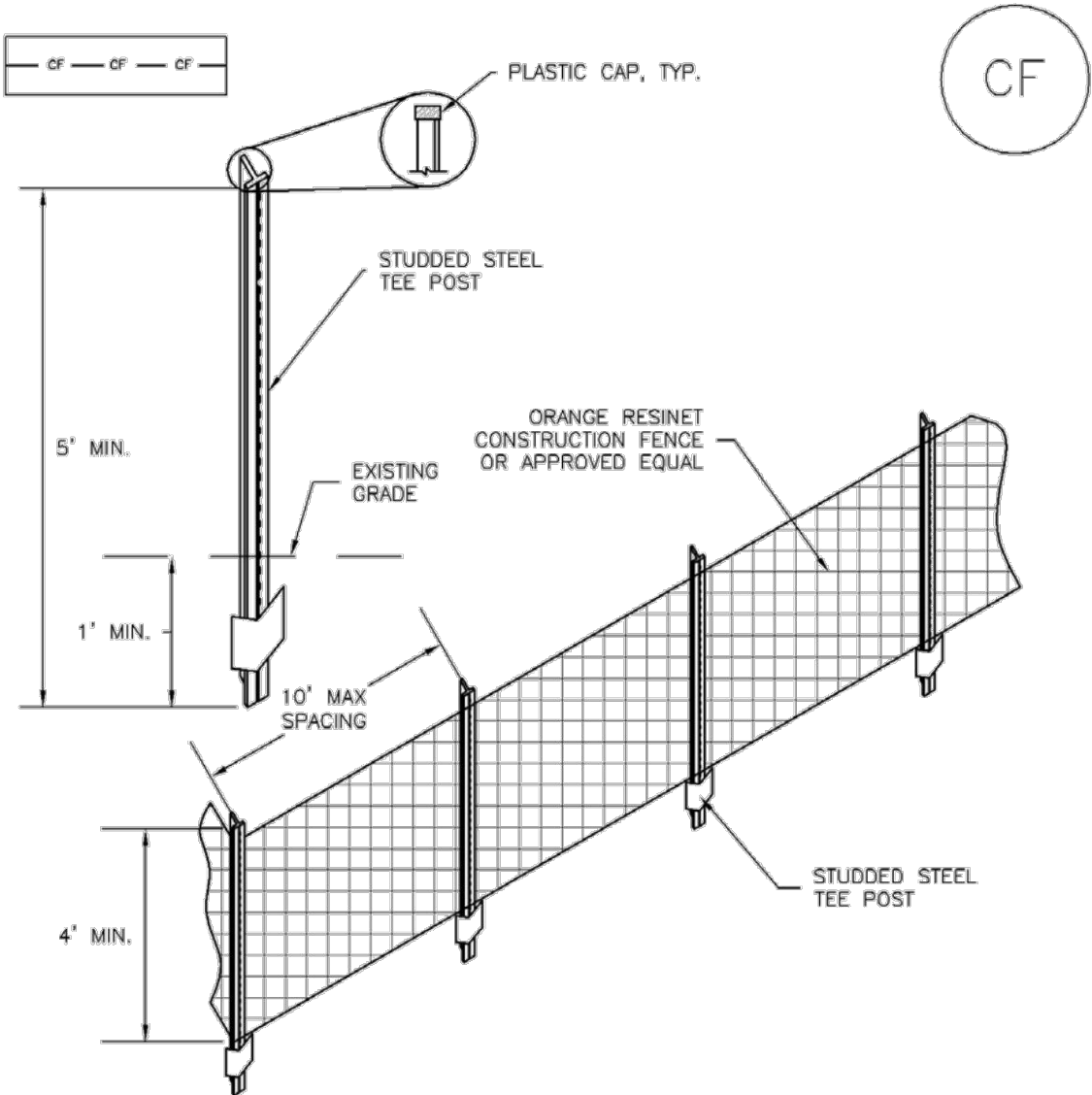
Grazing Yak Solar

El Paso County, Colorado

Notes and Details - Sheet 1

DATE: 06/04/2019

SHEET: ND01



CF-1. PLASTIC MESH CONSTRUCTION FENCE

CONSTRUCTION FENCE INSTALLATION NOTES

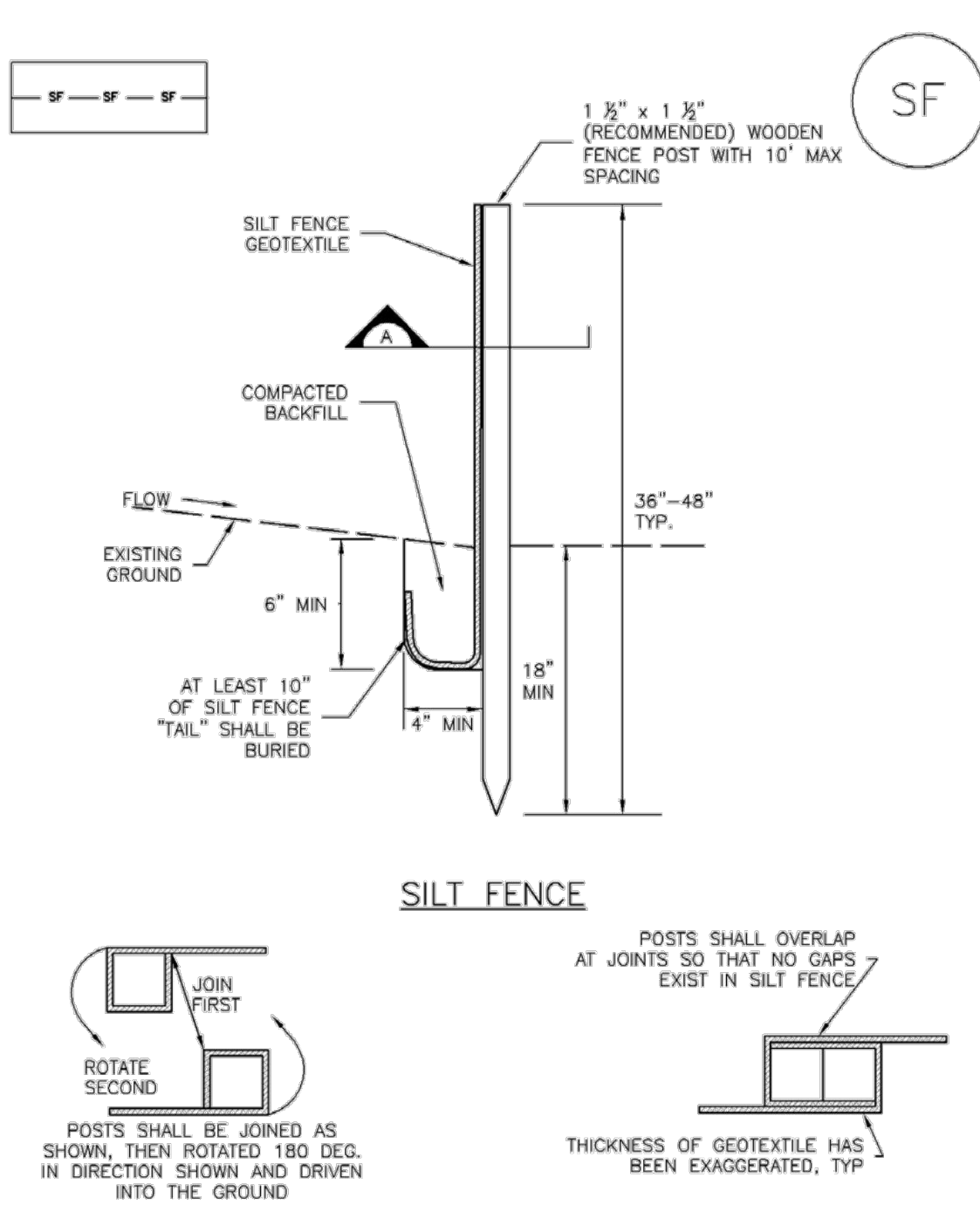
1. SEE PLAN VIEW FOR:
-LOCATION OF CONSTRUCTION FENCE.
2. CONSTRUCTION FENCE SHOWN SHALL BE INSTALLED PRIOR TO ANY LAND DISTURBING ACTIVITIES.
3. CONSTRUCTION FENCE SHALL BE COMPOSED OF ORANGE, CONTRACTOR-GRADE MATERIAL THAT IS AT LEAST 4' HIGH. METAL POSTS SHOULD HAVE A PLASTIC CAP FOR SAFETY.
4. STUDDED 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 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

POSTS SHALL OVERLAP AT JOINTS SO THAT NO GAPS EXIST IN SILT FENCE.

SECTION A

SF-1. SILT FENCE

SILT FENCE INSTALLATION NOTES

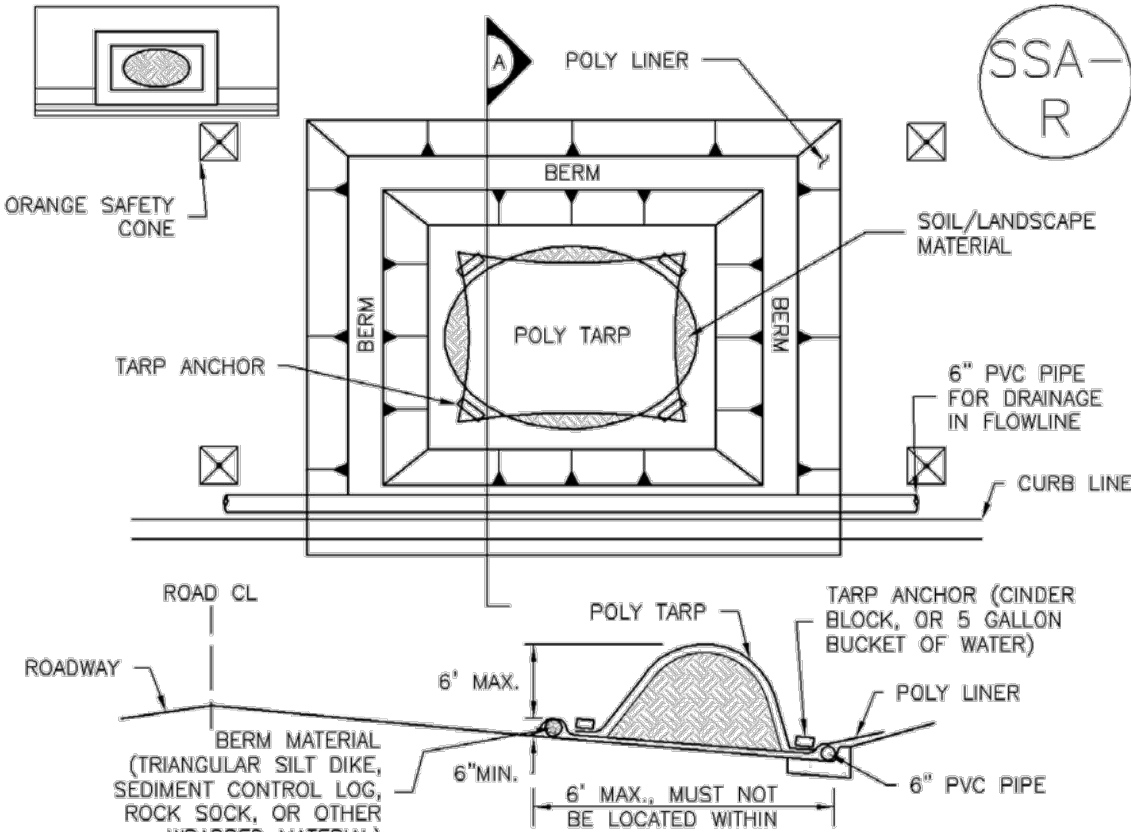
1. SILT FENCE MUST BE PLACED AWAY FROM THE TOE OF THE SLOPE TO ALLOW FOR WATER PONDING. SILT FENCE AT THE TOE OF A SLOPE SHOULD BE INSTALLED IN A FLAT LOCATION AT LEAST SEVERAL FEET (2-5 FT) FROM THE TOE OF THE SLOPE TO ALLOW ROOM FOR PONDING AND DEPOSITION.
2. A UNIFORM 6" x 4" ANCHOR TRENCH SHALL BE 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.



SP-2. MATERIALS STAGING IN ROADWAY

MATERIALS STAGING IN ROADWAYS INSTALLATION NOTES

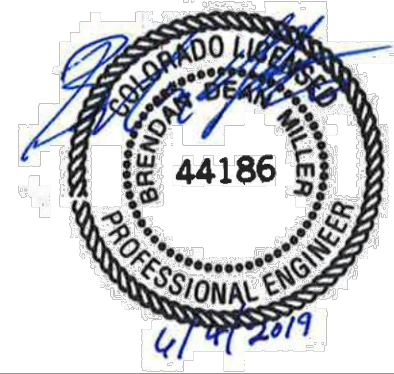
1. SEE PLAN VIEW FOR:
-LOCATION OF MATERIAL STAGING AREA(S).
-CONTRACTOR MAY ADJUST LOCATION AND SIZE OF STAGING AREA WITH APPROVAL FROM THE LOCAL JURISDICTION.
2. FEATURE MUST BE INSTALLED PRIOR TO EXCAVATION, EARTHWORK OR DELIVERY OF MATERIALS.
3. MATERIALS MUST BE STATIONED ON THE POLY LINER. ANY 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.

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 AURORA, COLORADO)



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
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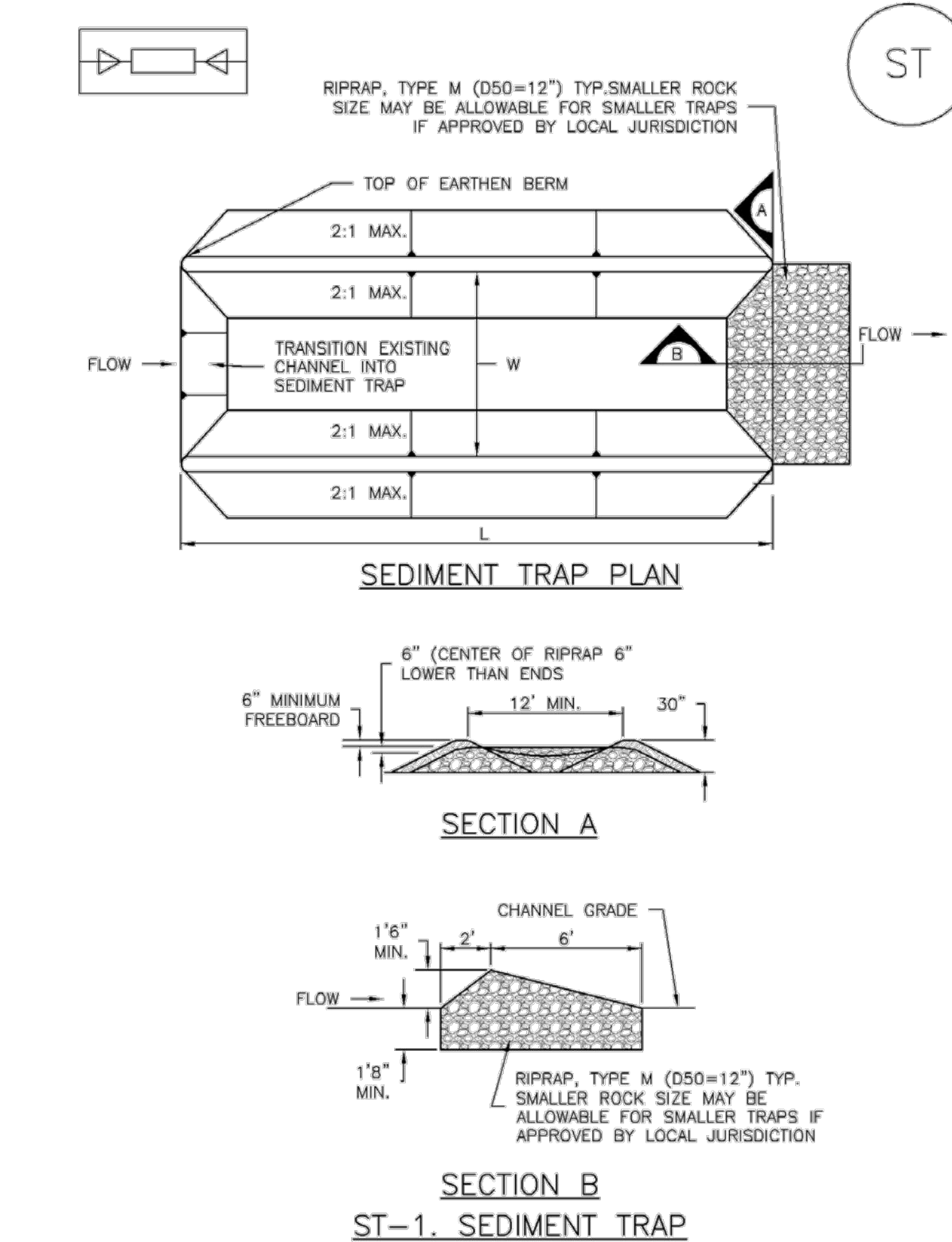
Grazing Yak Solar

El Paso County, Colorado

Notes and Details - Sheet 2

DATE: 06/04/2019

SHEET: ND02



SEDIMENT TRAP INSTALLATION NOTES

1. SEE PLAN VIEW FOR:
-LOCATION, LENGTH AND WIDTH OF SEDIMENT TRAP.
2. ONLY USE FOR DRAINAGE AREAS LESS THAN 1 ACRE.
3. SEDIMENT TRAPS SHALL BE INSTALLED PRIOR TO ANY UPGRADE LAND-DISTURBING ACTIVITIES.
4. 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.
5. 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.
6. THE TOP OF THE EARTHEN BERM SHALL BE A MINIMUM OF 6" HIGHER THAN THE TOP OF THE RIPRAP OUTLET STRUCTURE.
7. 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

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. REMOVE SEDIMENT ACCUMULATED IN TRAP AS NEEDED TO MAINTAIN THE FUNCTIONALITY OF THE BMP, TYPICALLY WHEN THE SEDIMENT DEPTH REACHES $\frac{1}{2}$ THE HEIGHT OF THE RIPRAP OUTLET.
5. SEDIMENT TRAPS SHALL REMAIN IN PLACE UNTIL THE UPSTREAM DISTURBED AREA IS STABILIZED AND APPROVED BY THE LOCAL JURISDICTION.
6. WHEN SEDIMENT TRAPS ARE REMOVED, THE DISTURBED AREA SHALL BE COVERED WITH TOPSOIL, SEEDS 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.

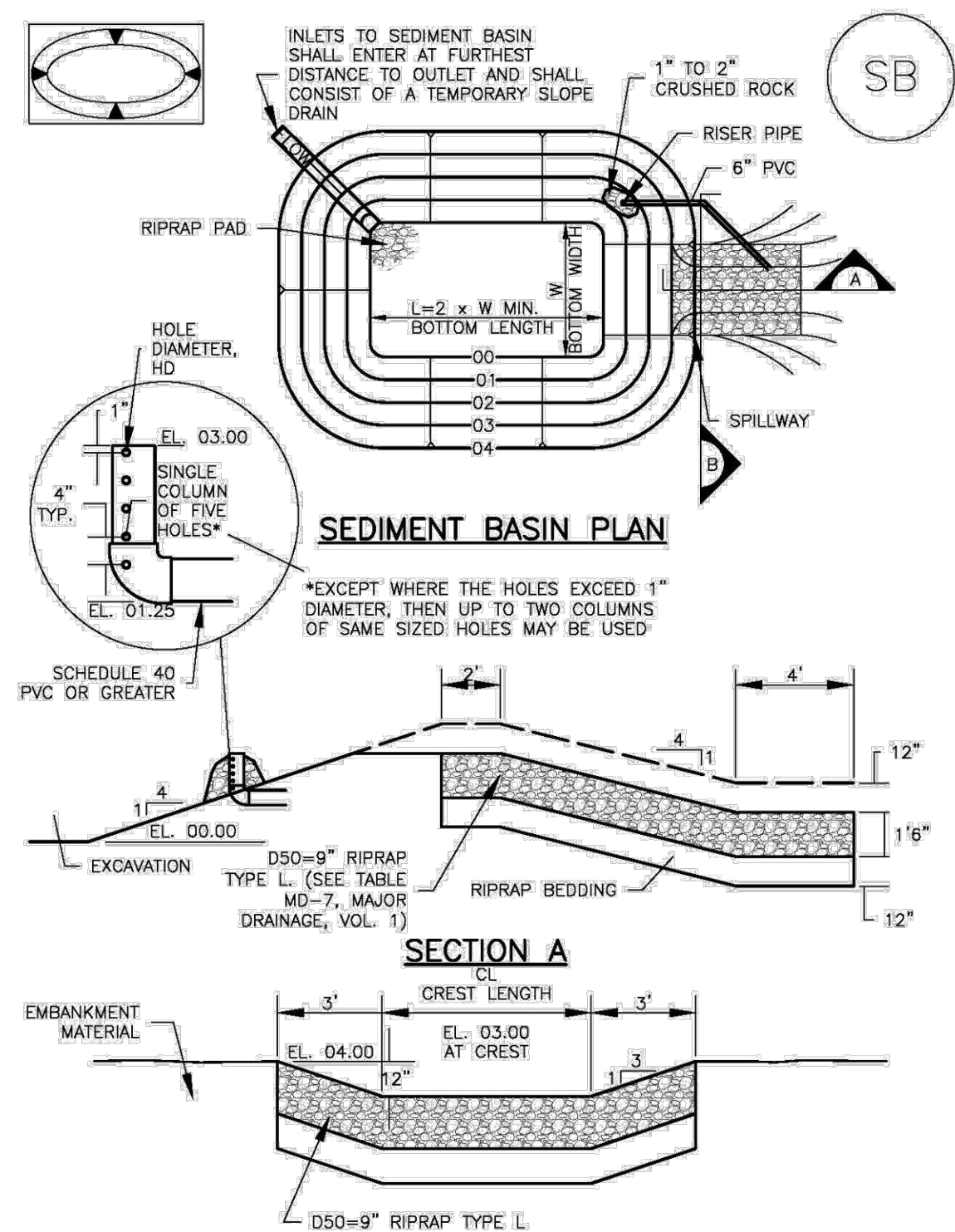


TABLE SB-1. SIZING INFORMATION FOR STANDARD SEDIMENT BASIN

Upstream Drainage Area (rounded to nearest acre), (ac)	Basin Bottom Width (W), (ft)	Spillway Crest Length (CL), (ft)	Hole Diameter (D), (in)
1	12 ½	2	¾
2	21	3	1 ½
3	28	5	2 ½
4	33 ½	6	¾
5	38 ½	8	2 ½
6	43	9	2 ½
7	47 ½	11	2 ½
8	51	12	2 ½
9	55	13	¾
10	58 ½	15	1 ½
11	61	16	3 ½
12	64	18	1
13	67 ½	19	1 ½
14	70 ½	21	1 ½
15	73 ½	22	2

SEDIMENT BASIN INSTALLATION NOTES

1. SEE PLAN VIEW FOR:
 - LOCATION OF SEDIMENT BASIN.
 - TYPE OF BASIN (STANDARD BASIN OR NONSTANDARD BASIN).
 - FOR STANDARD BASIN, BOTTOM WIDTH W, GREST 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.
2. FOR STANDARD BASIN, BOTTOM DIMENSION MAY BE MODIFIED AS LONG AS BOTTOM AREA IS NOT REDUCED.
3. SEDIMENT BASINS SHALL BE INSTALLED PRIOR TO ANY OTHER LAND-DISTURBING ACTIVITY THAT RELIES ON BASINS AS A STORMWATER CONTROL.
4. 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.
5. EMBANKMENT MATERIAL SHALL BE COMPACTED TO AT LEAST 95 PERCENT OF MAXIMUM DENSITY IN ACCORDANCE WITH ASTM D698.
6. PIPE CCH 40 OR GREATER SHALL BE USED.
7. THE DETAILS SHOWN ON THESE SHEETS PERTAIN TO STANDARD SEDIMENT BASIN(S) FOR DRAINAGE AREAS LESS THAN 15 ACRES. SEE CONSTRUCTION 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

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 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).
5. SEDIMENT BASINS ARE TO REMAIN IN PLACE UNTIL THE UPSTREAM DISTURBED AREA IS STABILIZED AND GRASS COVER IS ACCEPTED BY THE LOCAL JURISDICTION.
6. WHEN SEDIMENT BASINS ARE REMOVED, ALL DISTURBED AREAS SHALL BE COVERED WITH TOPSOIL, SEEDS 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.

Grazing Yak Solar

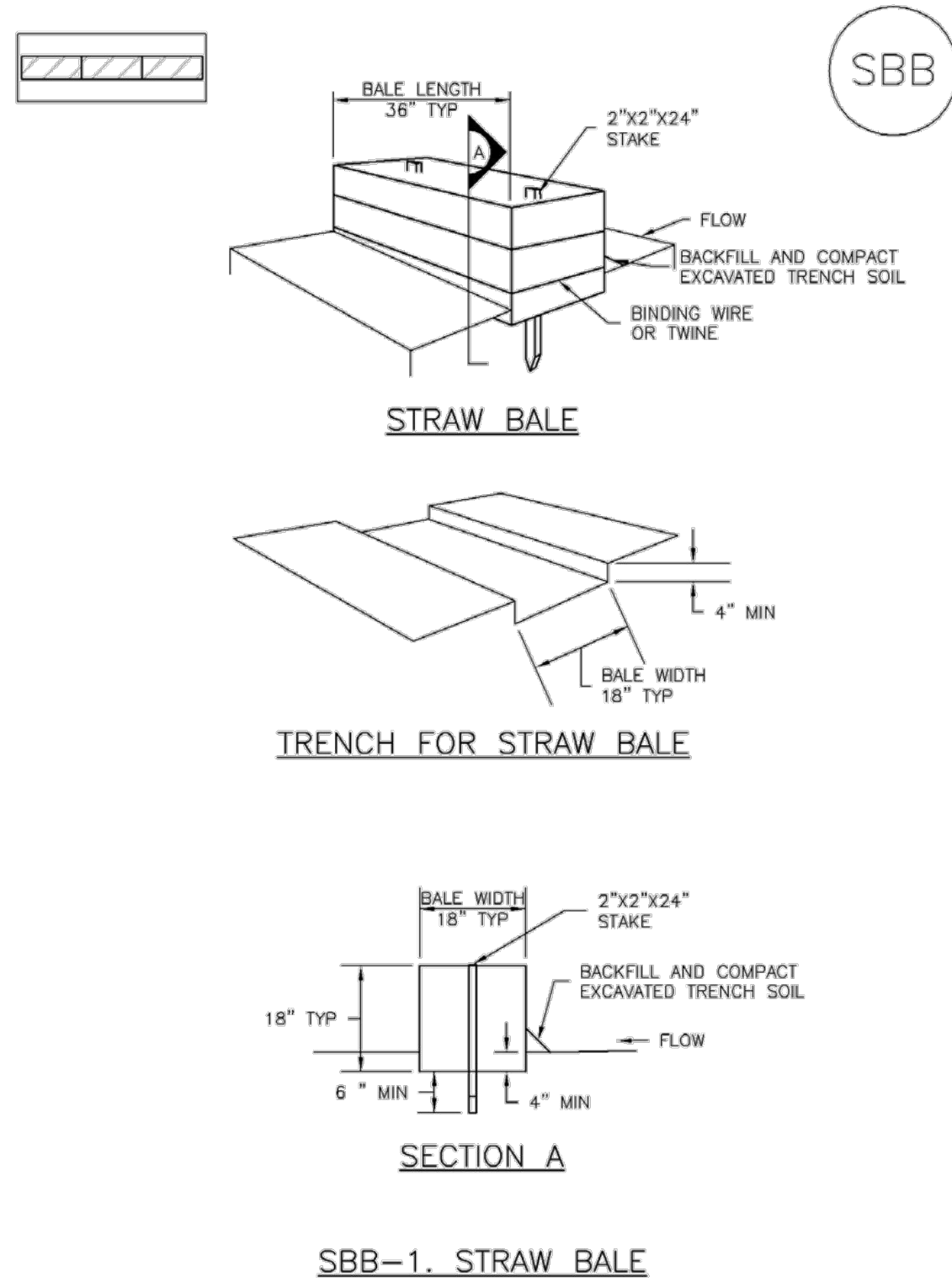
El Paso County, Colorado

Notes and Details -
Sheet 3

DATE: 06/04/2019

SHEET: ND03

SC-3 Straw Bale Barrier (SBB)



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

Straw Bale Barrier (SBB)

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. LOCAL JURISDICTIONS MAY REQUIRE PROOF THAT BALES ARE WEED FREE.
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 BUTTING 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". STRAW BALES SHALL BE PLACED SO THAT BINDING TWINE IS ENCOMPASSING THE VERTICAL SIDES OF THE BALE(S). ALL EXCAVATED SOIL SHALL BE PLACED ON THE UPHILL SIDE OF THE STRAW BALE(S) AND COMPACTED.
7. TWO (2) WOODEN STAKES SHALL BE USED TO HOLD EACH BALE IN PLACE. WOODEN STAKES SHALL BE 2"x2"x24". WOODEN STAKES SHALL BE DRIVEN 6" INTO THE GROUND.

STRAW BALE MAINTENANCE NOTES

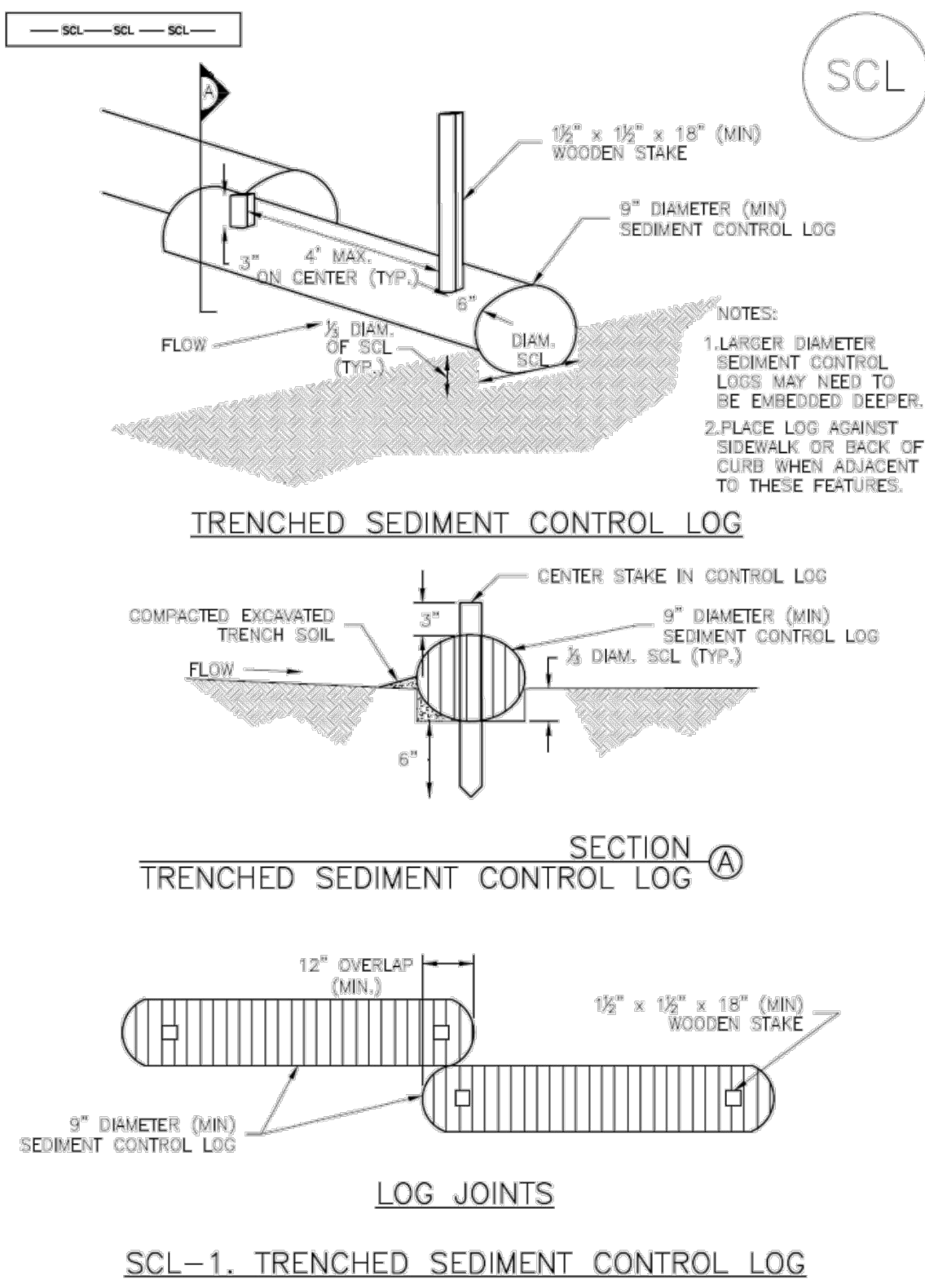
1. INSPECT BMPs EACH WORKDAY, AND MAINTAIN THEM IN EFFECTIVE OPERATING CONDITION. MAINTENANCE OF BMPs SHOULD BE PROACTIVE, NOT REACTIVE. INSPECT BMPs AS SOON AS POSSIBLE (AND ALWAYS WITHIN 24 HOURS) FOLLOWING A STORM THAT CAUSES SURFACE EROSION, AND PERFORM NECESSARY MAINTENANCE.
2. FREQUENT OBSERVATIONS 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. 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 TO MAINTAIN FUNCTIONALITY OF THE BMP. TYPICALLY WHEN DEPTH OF ACCUMULATED SEDIMENTS IS APPROXIMATELY $\frac{1}{2}$ OF THE HEIGHT OF THE STRAW BALE BARRIER.
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, SEEDING 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.

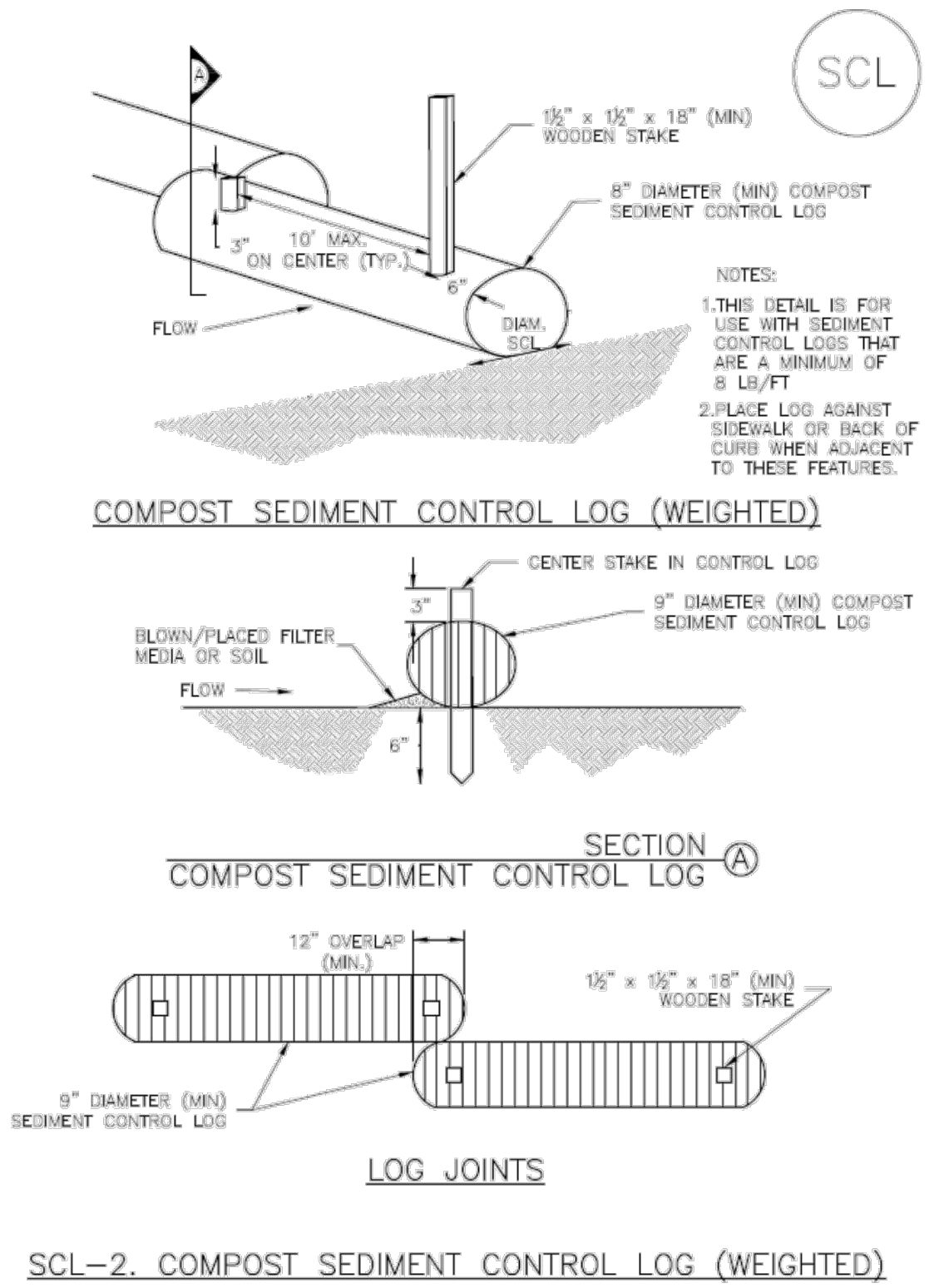
SBB-3

Sediment Control Log (SCL) SC-2



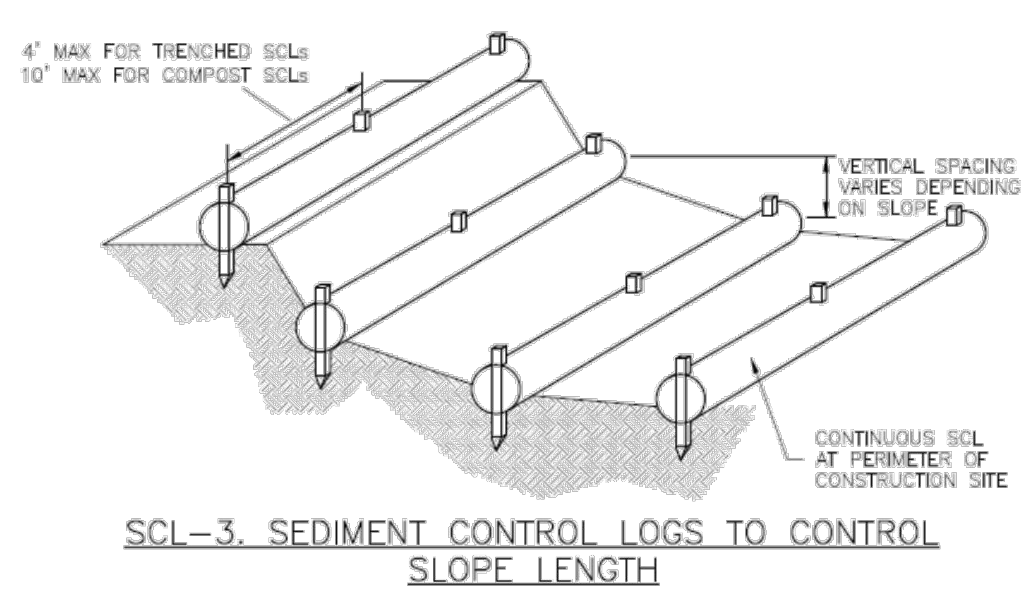
November 2015	Urban Drainage and Flood Control District Urban Storm Drainage Criteria Manual Volume 3	SCL-3
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SC-2 Sediment Control Log (SCL)



SCL-4	Urban Drainage and Flood Control District Urban Storm Drainage Criteria Manual Volume 3	November 2015
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Sediment Control Log (SCL) SC-2



November 2015	Urban Drainage and Flood Control District Urban Storm Drainage Criteria Manual Volume 3	SCL-5
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SC-2 Sediment Control Log (SCL)

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 UPGRADE/ 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 1/2 OF THE DIAMETER OF THE LOG. IF TRENCHING TO THIS DEPTH IS NOT FEASIBLE AND/OR DESIRABLE (SHORT TERM INSTALLATION WITH DESIRE NOT TO DAMAGE LANDSCAPE) A LESSER TRENCHING DEPTH MAY BE ACCEPTABLE WITH MORE ROBUST STAKING. COMPOST LOGS THAT ARE 8 LB/FT DO NOT NEED TO BE TRENCHED.
6. THE UPHILL SIDE OF THE SEDIMENT CONTROL LOG SHALL BE BACKFILLED WITH SOIL OR FILTER MATERIAL THAT IS FREE OF ROCKS AND DEBRIS. THE SOIL SHALL BE TIGHTLY COMPACTED INTO THE SHAPE OF A RIGHT TRIANGLE USING A SHOVEL OR WEIGHTED LAWN ROLLER OR BLOWN IN PLACE.

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. 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 SEDIMENT CONTROL LOG SHALL BE REMOVED AS NEEDED TO MAINTAIN FUNCTIONALITY OF THE BMP. TYPICALLY WHEN DEPTH OF ACCUMULATED SEDIMENTS IS APPROXIMATELY $\frac{1}{2}$ OF THE HEIGHT OF THE SEDIMENT CONTROL LOG.
5. SEDIMENT CONTROL LOG SHALL BE REMOVED AT THE END OF CONSTRUCTION. COMPOST FROM COMPOST LOGS MAY BE LEFT IN PLACE AS LONG AS BAGS ARE REMOVED AND THE AREA SURROUNDING BAGS EXIST AFTER REMOVAL. THEY SHALL BE COVERED WITH TOP SOIL, SEEDED AND MULCHED OR OTHERWISE STABILIZED IN A MANNER APPROVED BY THE LOCAL JURISDICTION.

(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.

SCL-6	Urban Drainage and Flood Control District Urban Storm Drainage Criteria Manual Volume 3	November 2015
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Phone (720) 531-8350 10170 Church Ranch Way, Suite #100
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Westwood Professional Services, Inc.



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
E	06/04/19	Re-Issue for Permit

Grazing Yak Solar

El Paso County, Colorado

Notes and Details - Sheet 5

DATE: 06/04/2019

SHEET: ND05

Compost Blanket and Filter Berm (CB) EC-5

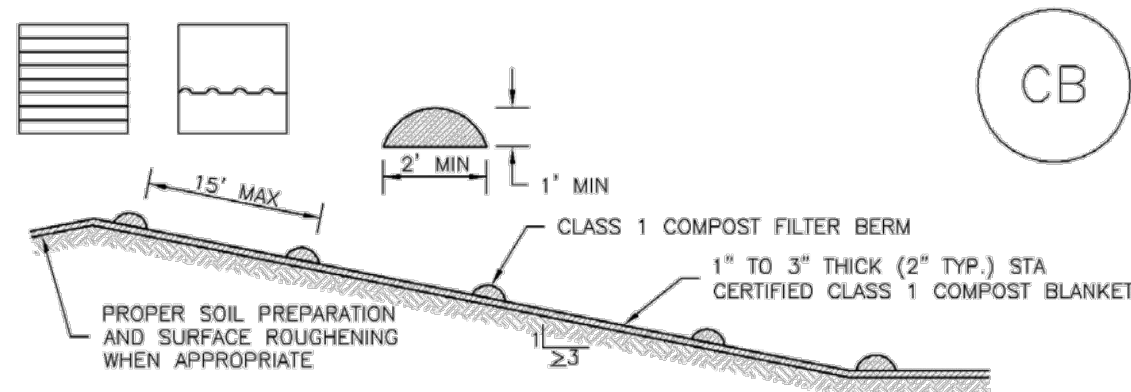


TABLE CB-1. CLASS 1 COMPOST	
PARAMETERS	CHARACTERISTIC
MINIMUM STABILITY INDICATOR	STABLE TO VERY STABLE
SOLUBLE SALTS	MAXIMUM 5 mmhos/cm
PH	6.0 – 8.0
AG INDEX	> 10
MATURITY INDICATOR EXPRESSED AS PERCENTAGE OF GERMINATION/VIGOR	80+/80+
MATURITY INDICATOR EXPRESSED AS AMMONIA N/ NITRATE N RATIO	< 4
MATURITY 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)

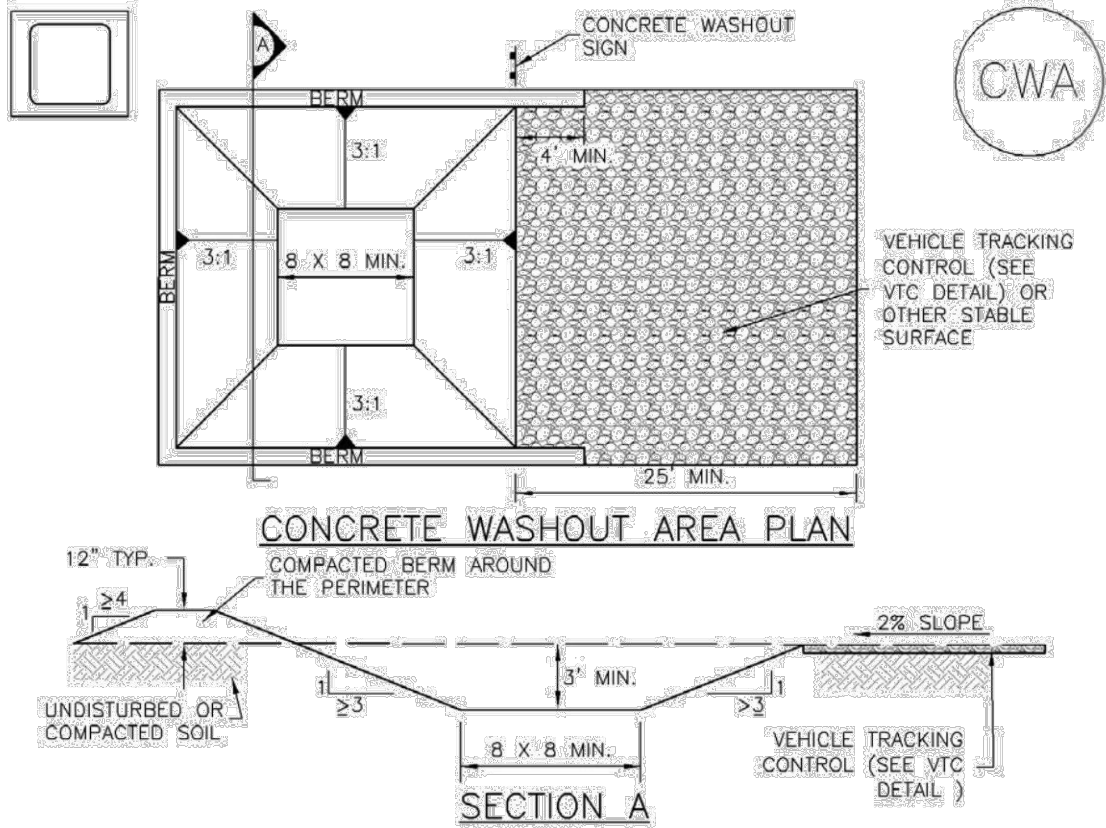
COMPOST FILTER BERM AND COMPOST BLANKET INSTALLATION NOTES

- 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 UDFCD STANDARD DETAILS. CONSULT WITH LOCAL JURISDICTIONS AS TO WHICH DETAIL SHOULD BE USED WHEN DIFFERENCES ARE NOTED.

Concrete Washout Area (CWA) MM-1



CWA-1. CONCRETE WASHOUT AREA

CWA INSTALLATION NOTES

- SEE PLAN VIEW FOR:
 - CWA INSTALLATION LOCATION.
- DO NOT LOCATE AN UNLINED CWA WITHIN 400' OF ANY NATURAL DRAINAGE PATHWAY OR WATERBODY. DO NOT LOCATE WITHIN 1,000' OF ANY WELLS OR DRINKING WATER SOURCES. IF SITE CONSTRAINTS MAKE THIS INFESIBLE, OR IF HIGHLY PERMEABLE SOILS EXIST ON SITE, THE CWA MUST BE INSTALLED WITH AN IMPERMEABLE LINER (15 MIL MIN. THICKNESS) OR SURFACE STORAGE ALTERNATIVES USING PREFABRICATED CONCRETE WASHOUT DEVICES OR A LINED ABOVE GROUND STORAGE ARE SHOULD BE USED.
- THE CWA SHALL BE INSTALLED PRIOR TO CONCRETE PLACEMENT ON SITE.
- CWA SHALL INCLUDE A FLAT SUBSURFACE PIT THAT IS AT LEAST 8' BY 8' SLOPES LEADING OUT OF THE SUBSURFACE PIT SHALL BE 3:1 OR FLATTER. THE PIT SHALL BE AT LEAST 3' DEEP.
- BERM SURROUNDING SIDES AND BACK OF THE CWA SHALL HAVE MINIMUM HEIGHT OF 1'.
- VEHICLE TRACKING PAD SHALL BE SLOPED 2% TOWARDS THE CWA.
- SIGNS SHALL BE PLACED AT THE CONSTRUCTION ENTRANCE, AT THE CWA, AND ELSEWHERE AS NECESSARY TO CLEARLY INDICATE THE LOCATION OF THE CWA TO OPERATORS OF CONCRETE TRUCKS AND PUMP RIGS.
- USE EXCAVATED MATERIAL FOR PERIMETER BERM CONSTRUCTION.

MM-1 Concrete Washout Area (CWA)

CWA 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.
 - THE CWA SHALL BE REPAIRED, CLEANED, OR ENLARGED AS NECESSARY TO MAINTAIN CAPACITY FOR CONCRETE WASTE. CONCRETE MATERIALS ACCUMULATED IN PIT, SHALL BE REMOVED ONCE THE MATERIALS HAVE REACHED A DEPTH OF 2'.
 - CONCRETE WASHOUT WATER, WASTED PIECES OF CONCRETE AND ALL OTHER DEBRIS IN THE SUBSURFACE PIT SHALL BE TRANSPORTED FROM THE JOB SITE IN A WATER-TIGHT CONTAINER AND DISPOSED OF PROPERLY.
 - THE CWA SHALL REMAIN IN PLACE UNTIL ALL CONCRETE FOR THE PROJECT IS PLACED.
 - WHEN THE CWA IS REMOVED, COVER THE DISTURBED AREA WITH TOP SOIL, SEED AND MULCH OR OTHERWISE STABILIZED IN A MANNER APPROVED BY THE LOCAL JURISDICTION.
- (DETAIL ADAPTED FROM DOUGLAS COUNTY, COLORADO AND THE CITY 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.



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
E	06/04/19	Re-Issue for Permit

Grazing Yak Solar

El Paso County, Colorado

Notes and Details - Sheet 6

DATE: 06/04/2019

SHEET: ND06