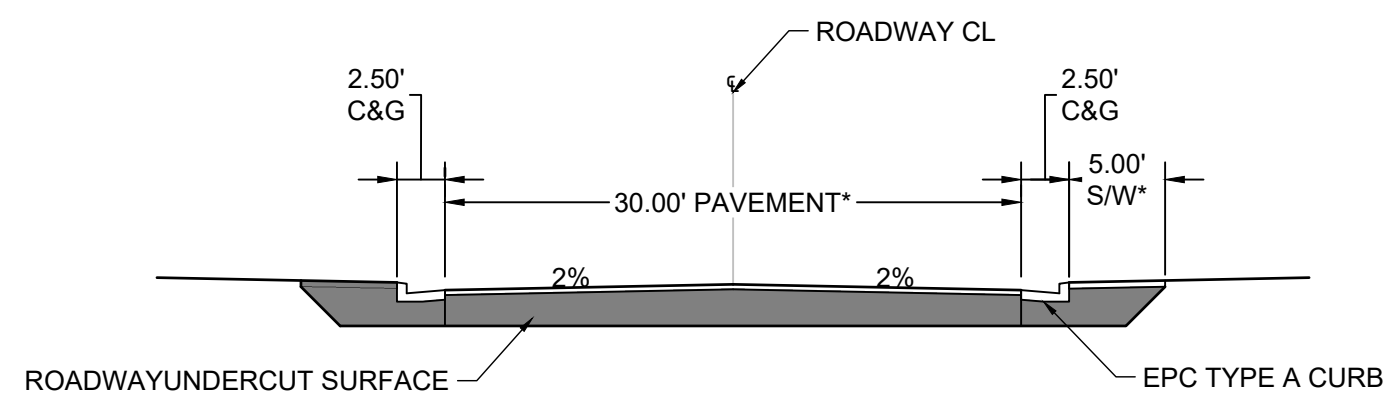




**LEGEND**

	EXISTING	PROPOSED		EXISTING	PROPOSED
MATCH LINE	---	---	STORM SEWER		
PHASE LINE	---	---	MANHOLE		
SECTION LINE	---	---	STORM INLET		
PROPERTY BOUNDARY	---	---	FLARED END SECTION		
PROPERTY LINE	---	---	RIPRAP		
EASEMENT LINE	---	---	SANITARY SEWER		
RIGHT OF WAY	---	---	CLEAN OUT		
CENTERLINE	---	---	MANHOLE		
CHAIN LINK FENCE	---	---	PLUG		
WOODEN FENCE	---	---	WATER		
SPLIT RAIL-SAFETY FENCE	---	---	FIRE HYDRANT		
GUARDRAIL	---	---	FIRE DEPT. CONNECTION		
CABLE TV	TV	TV	GATE VALVE		
U.G. ELECTRIC	UE	UE	MANHOLE		
OVERHEAD ELECTRIC	OE	OE	METER		
FIBER OPTIC	FO	FO	TEE		
GAS MAIN	SS	SS	REDUCER		
SANITARY SEWER	SS	SS	DRY UTILITIES		
STORM DRAIN	SD	SD	ELECTRIC METER		
TELEPHONE	UT	UT	ELECTRIC PEDESTAL		
WATER MAIN	W	W	ELECTRICAL CABINET		
SWALE	SW	SW	ELECTRICAL CABINET		
TRAIL	---	---	ELECTRIC VAULT		
CURB & GUTTER	---	---	FIBER OPTIC PULL BOX		
DRAINAGE BASIN	---	---	FIBER OPTIC MANHOLE		
INDEX CONTOUR	---	---	FIBER OPTIC PEDESTAL		
INTER. CONTOUR	---	---	FIBER OPTIC SIGN		
100-YR FLOODPLAIN	---	---	FIBER OPTIC VAULT		
FLOODWAY	---	---	GAS METER		
EDGE OF WETLANDS	---	---	GAS SIGN		
DRAINAGE			GAS VAULT		
DRAINAGE BASIN	---	---	TELEPHONE CABINET		
BASIN TAG			TELEPHONE MANHOLE		
DESIGN POINT			TELEPHONE SIGNAL/MAST		
			TELEPHONE SIGN		
			TELEPHONE PEDESTAL		
			TRANSFORMER		
			LIGHT POLE		
			FIBER OPTIC VAULT		
			MISCELLANEOUS		
			SIGN		
			BOLLARD		
			ACCESSIBLE PARKING		



**URBAN, LOCAL (PRIVATE)**

SCALE: 1"=10'  
DESIGN SPEED: 30MPH  
SPEED LIMIT: 25MPH

Verify that this is correct and with future expansion to the east, "throwaway" improvements are acceptable.

DRAWN BY: AXB	JOB DATE: 10/13/2023	BAR IS ONE INCH ON OFFICIAL DRAWINGS.
APPROVED: CM	JOB NUMBER: 2202654	0
CAD DATE: 10/13/2023		IF NOT ONE INCH, ADJUST SCALE ACCORDINGLY.
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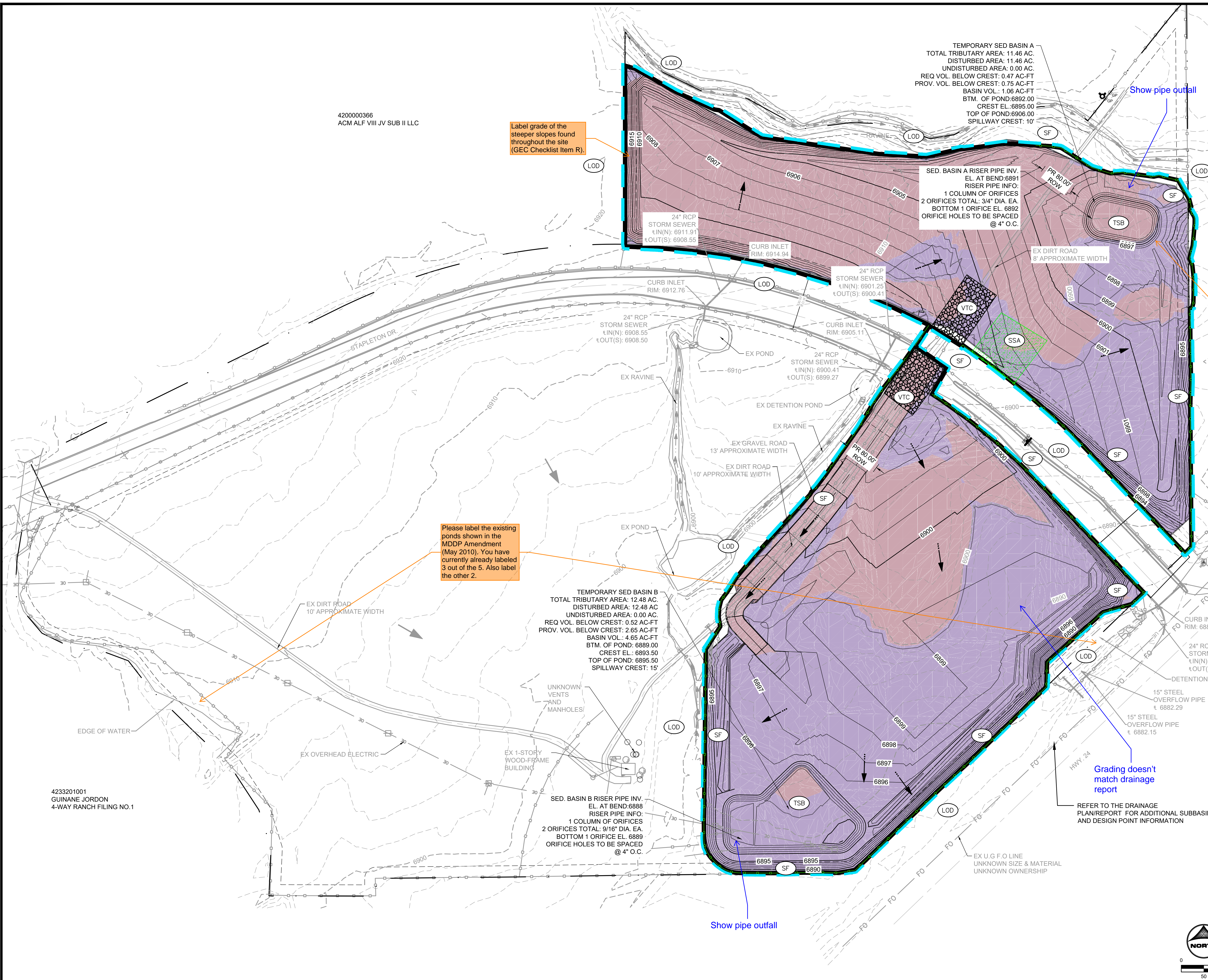
NO.	DATE	BY	REVISION DESCRIPTION

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KO1515, LLC  
EL PASO COUNTY, CO

GEC PLANS  
LEGEND & TYP. SECTIONS

SHEET  
LE  
2



**GEC LEGEND:**

- INITIAL/INTERIM: [Symbol] SF SILT FENCE
- INITIAL/INTERIM: [Symbol] SSA STABILIZED STAGING AREA
- INITIAL/INTERIM: [Symbol] VTC VEHICLE TRACKING CONTROL
- FINAL: [Symbol] CD CHECK DAM
- FINAL: [Symbol] SM SEEDING AND MULCHING
- INITIAL/INTERIM: [Symbol] TSB TEMPORARY SEDIMENT BASIN
- FINAL: [Symbol] EDB EXTENDED DETENTION BASIN
- INTERIM/FINAL: [Symbol] IP INLET PROTECTION: IP-1 TO BE USED ON ALL INLETS
- FINAL: [Symbol] CWA CONCRETE WASH OUT
- [Symbol] LOD LIMITS OF CONSTRUCTION/ DISTURBANCE
- [Symbol] FLOW DIRECTION
- [Symbol] EX FLOW DIRECTION
- [Symbol] EX PROPERTY LINE
- [Symbol] EX RIGHT OF WAY
- [Symbol] CUT CONDITION
- [Symbol] FILL CONDITION

**GRADING & EROSION CONTROL PLAN NOTES:**

- SEE SHEETS 6 - 7 FOR EL PASO COUNTY GRADING AND EROSION CONTROL DETAILS.
- CONTRACTOR SHALL PROTECT ALL AREAS OUTSIDE OF THE CONSTRUCTION LIMITS WITH SILT FENCE OR OTHER METHOD TO PROTECT UNDISTURBED AREAS FROM EROSION.
- ALL TEMPORARY OR PERMANENT GRADING DISTURBANCES SHALL BE RE-SEEDED AND MULCHED PER EL PASO COUNTY CRITERIA AND SPECIFICATIONS.
- ONSITE VEGETATION IS NATIVE GRASSES AND WEEDS. THERE IS NO NOTABLE VEGETATION OTHERWISE
- THE WESTERLY PORTION OF THE OVERALL 4-WAY PROPERTY LIES WITHIN A DESIGNATED FEMA FLOODPLAIN AS DETERMINED BY THE FLOOD INSURANCE MAP PANEL '08041C0552G' EFFECTIVE DATE DECEMBER 7, 2018. THIS PART OF THE OVERALL 4-WAY PROPERTY WILL REMAIN UNDEVELOPED. THE REMAINDER OF THE OVERALL 4-WAY PROPERTY INCLUDING 'THE SITE' FOR EARLY GRADING IS LOCATED OUTSIDE OF THE FLOODPLAIN, IN ZONE X, AS SHOWN ON FLOOD INSURANCE MAP PANELS '08041C0552G' '08041C0556G' AND '08041C0558G' EFFECTIVE DATE DECEMBER 7, 2018. ZONE X ARE AREAS DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOOD
- THERE IS NO OFFSITE GRADING
- CONCLUSIONS FROM THE SOILS/GEOTECHNICAL REPORT AND GEOLOGIC HAZARDS REPORT HAVE BEEN INCORPORATED IN GRADING DESIGN.

**PROJECT INFO:**

CUT VOLUME: 79,553 CUBIC YARDS  
 FILL VOLUME: 79,023 CUBIC YARDS (ADJUSTED WITH 1.1 FACTOR)  
 NET: 530 (CUT) CUBIC YARDS

Remove most of the proposed grading from this Initial BMP plan, as Initial BMPs are installed prior to grading (besides TSBs)

Label grade of the steeper slopes found throughout the site (GEC Checklist Item R).

Please label the existing ponds shown in the MDDP Amendment (May 2010). You have currently already labeled 3 out of the 5. Also label the other 2.

Grading doesn't match drainage report

REFER TO THE DRAINAGE PLAN/REPORT FOR ADDITIONAL SUBBASIN AND DESIGN POINT INFORMATION

420000366  
ACM ALF VIII JV SUB II LLC

4233201001  
GUINANE JORDON  
4-WAY RANCH FILING NO.1

NO.	DATE	BY	REVISION DESCRIPTION

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4-WAY COMMERCIAL  
 KO1515, LLC  
 EL PASO COUNTY, CO

GEC PLANS  
 INITIAL GRADING & EROSION CONTROL

SHEET  
**GEC**  
 3

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 APPROVED: CM JOB NUMBER: 2202654  
 CAD DATE: 10/13/2023  
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BAR IS ONE INCH ON OFFICIAL DRAWINGS.  
 IF NOT ONE INCH, ADJUST SCALE ACCORDINGLY.



420000366  
ACM ALF VIII JV SUB II LLC

address rundowns  
for offsite flows(?)

labels to remain  
or to be removed  
after grading

Show pond easement  
and access road

clarify inlet  
protection shown  
on outfall ends

REFER TO THE DRAINAGE  
PLAN/REPORT FOR ADDITIONAL SUBBASIN  
AND DESIGN POINT INFORMATION

Just an FYI: all  
PCMs/PBMPs will need  
to be within easements

Provide details of EDB  
design and include all  
necessary components  
like forebay, trickle  
channel, outlet structure,  
maintenance road, etc.

GEC Checklist Item "O" - callout  
offsite grading. Need owner  
permission to grade offsite.  
Provide copy of owner  
permission to EPC.

show all property lines and  
label parcels, owners

**GEC LEGEND:**

INITIAL/INTERIM		SF	SILT FENCE
INITIAL/INTERIM		SSA	STABILIZED STAGING AREA
INITIAL/INTERIM		VTC	VEHICLE TRACKING CONTROL
FINAL		CD	CHECK DAM
FINAL		SM	SEEDING AND MULCHING
INITIAL/INTERIM		TSB	TEMPORARY SEDIMENT BASIN
FINAL		EDB	EXTENDED DETENTION BASIN
INTERIM/FINAL		IP	INLET PROTECTION: IP-1 TO BE USED ON ALL INLETS
FINAL		CWA	CONCRETE WASH OUT
		LOD	LIMITS OF CONSTRUCTION/ DISTURBANCE
			FLOW DIRECTION
			EX FLOW DIRECTION
			EX PROPERTY LINE
			EX RIGHT OF WAY
			CUT CONDITION
			FILL CONDITION

CWA, SF, and IP are not Final BMPs. But I think your intent is to show that this is the Final condition after overtop grading, and then these temp BMPs will remain in place during the vertical development of each lot, correct? If so, add a note below to clarify this and indicate who will be responsible for maintaining during vertical development and eventually removing these BMPs after the vertical development is completed.

**GRADING & EROSION CONTROL PLAN NOTES:**

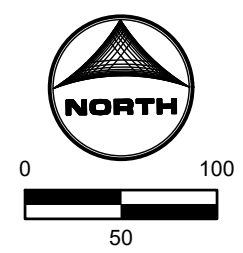
- SEE SHEETS 6 - 7 FOR EL PASO COUNTY GRADING AND EROSION CONTROL DETAILS.
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- THE WESTERLY PORTION OF THE OVERALL 4-WAY PROPERTY LIES WITHIN A DESIGNATED FEMA FLOODPLAIN AS DETERMINED BY THE FLOOD INSURANCE MAP PANEL '08041C0552G' EFFECTIVE DATE DECEMBER 7, 2018. THIS PART OF THE OVERALL 4-WAY PROPERTY WILL REMAIN UNDEVELOPED. THE REMAINDER OF THE OVERALL 4-WAY PROPERTY INCLUDING 'THE SITE' FOR EARLY GRADING IS LOCATED OUTSIDE OF THE FLOODPLAIN, IN ZONE X, AS SHOWN ON FLOOD INSURANCE MAP PANELS '08041C0552G', '08041C0556G' AND '08041C0558G' EFFECTIVE DATE DECEMBER 7, 2018. ZONE X AREAS DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOOD.
- THERE IS NO OFFSITE GRADING.
- CONCLUSIONS FROM THE SOILS/GEOTECHNICAL REPORT AND GEOLOGIC HAZARDS REPORT HAVE BEEN INCORPORATED IN GRADING DESIGN.

**PROJECT INFO:**

CUT VOLUME: 79,553 CUBIC YARDS

FILL VOLUME: 79,023 CUBIC YARDS (ADJUSTED WITH 1.1 FACTOR)

NET: 530 (CUT) CUBIC YARDS



4233201001  
GUINANE JORDON  
4-WAY RANCH FILING NO.1

DRAWN BY: AXB	JOB DATE: ---	BAR IS ONE INCH ON OFFICIAL DRAWINGS.
APPROVED: CM	JOB NUMBER: 2202654	0" = 1"
CAD DATE: 10/13/2023		IF NOT ONE INCH, ADJUST SCALE ACCORDINGLY.
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NO.	DATE	BY	REVISION DESCRIPTION

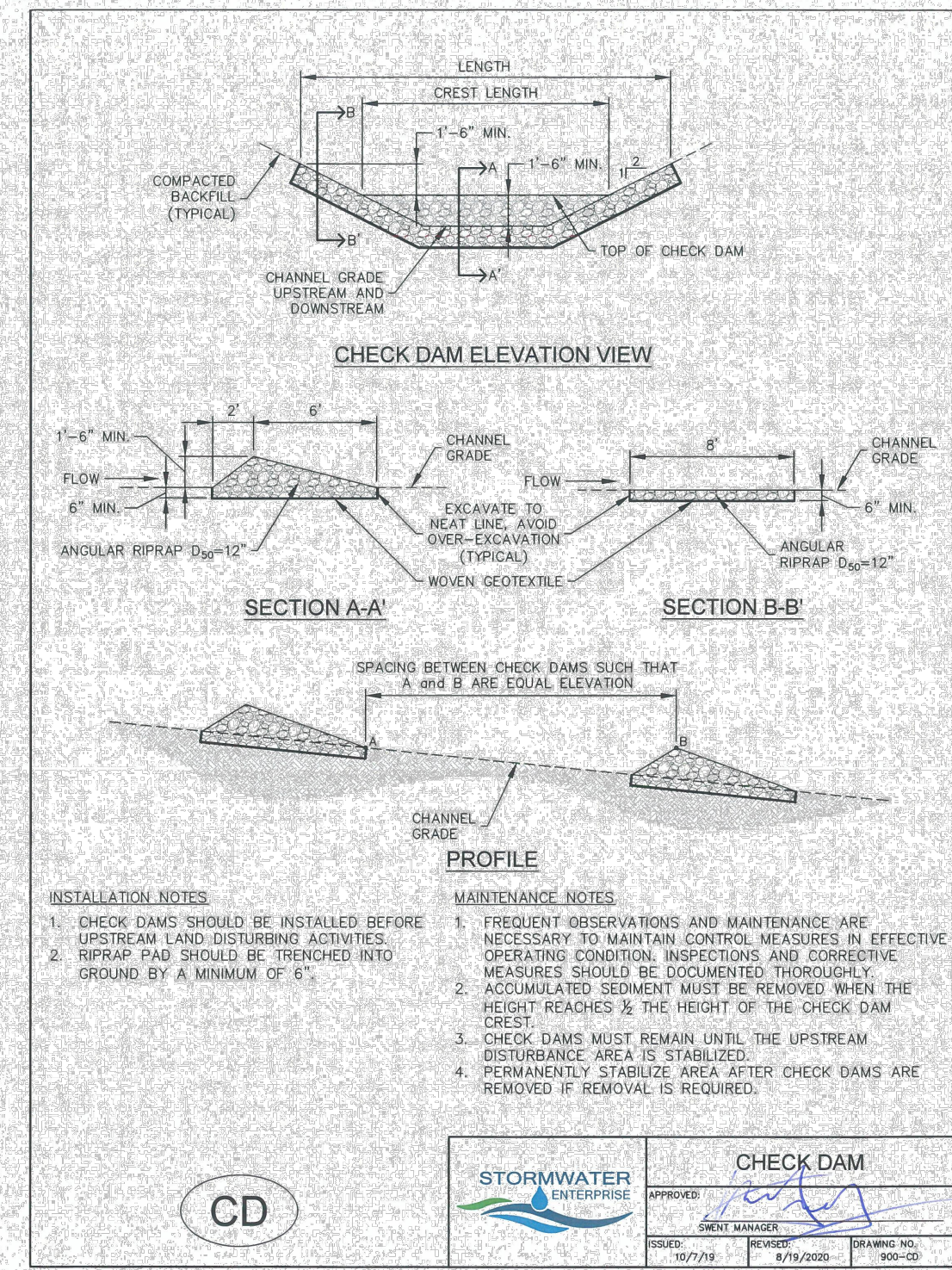
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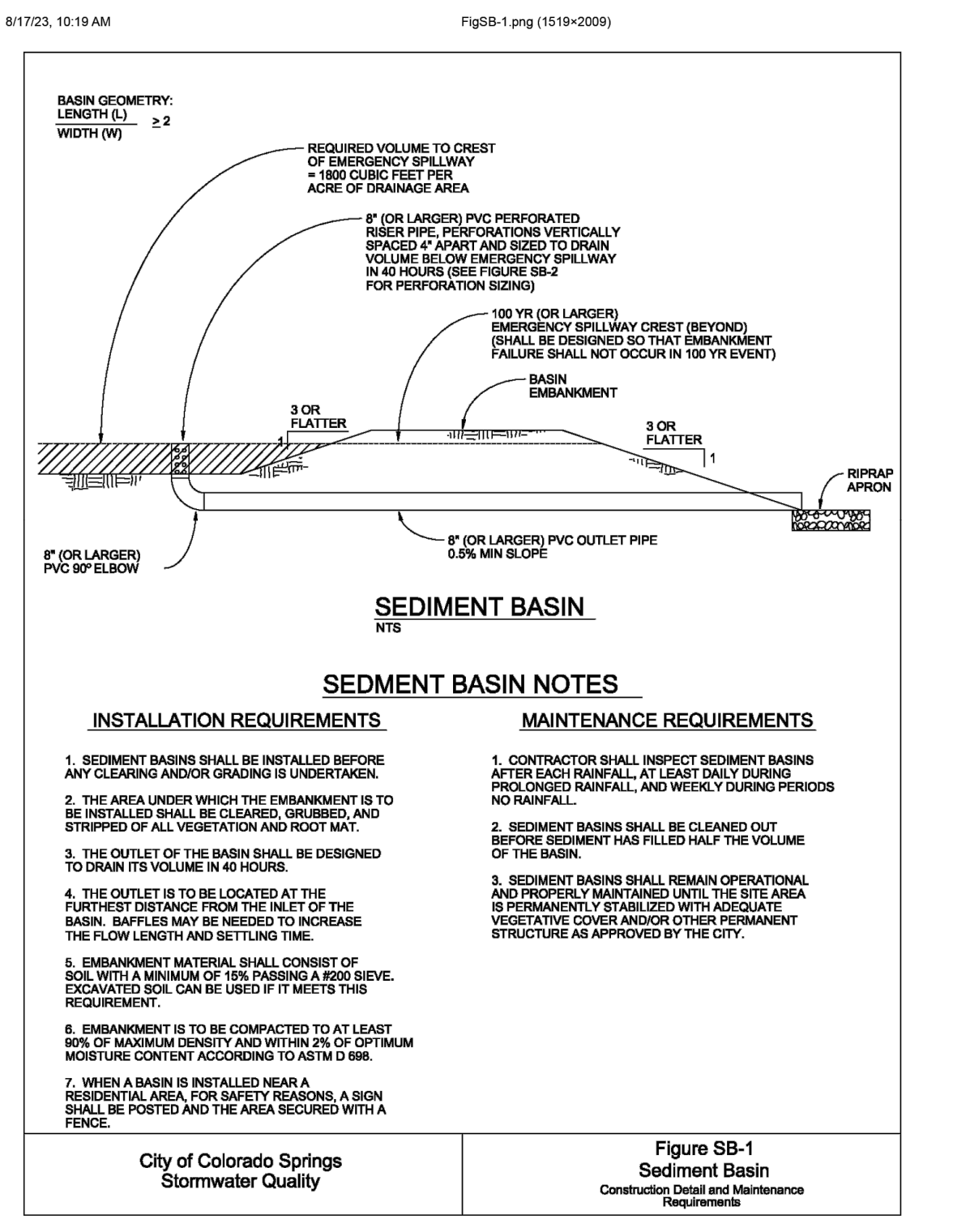
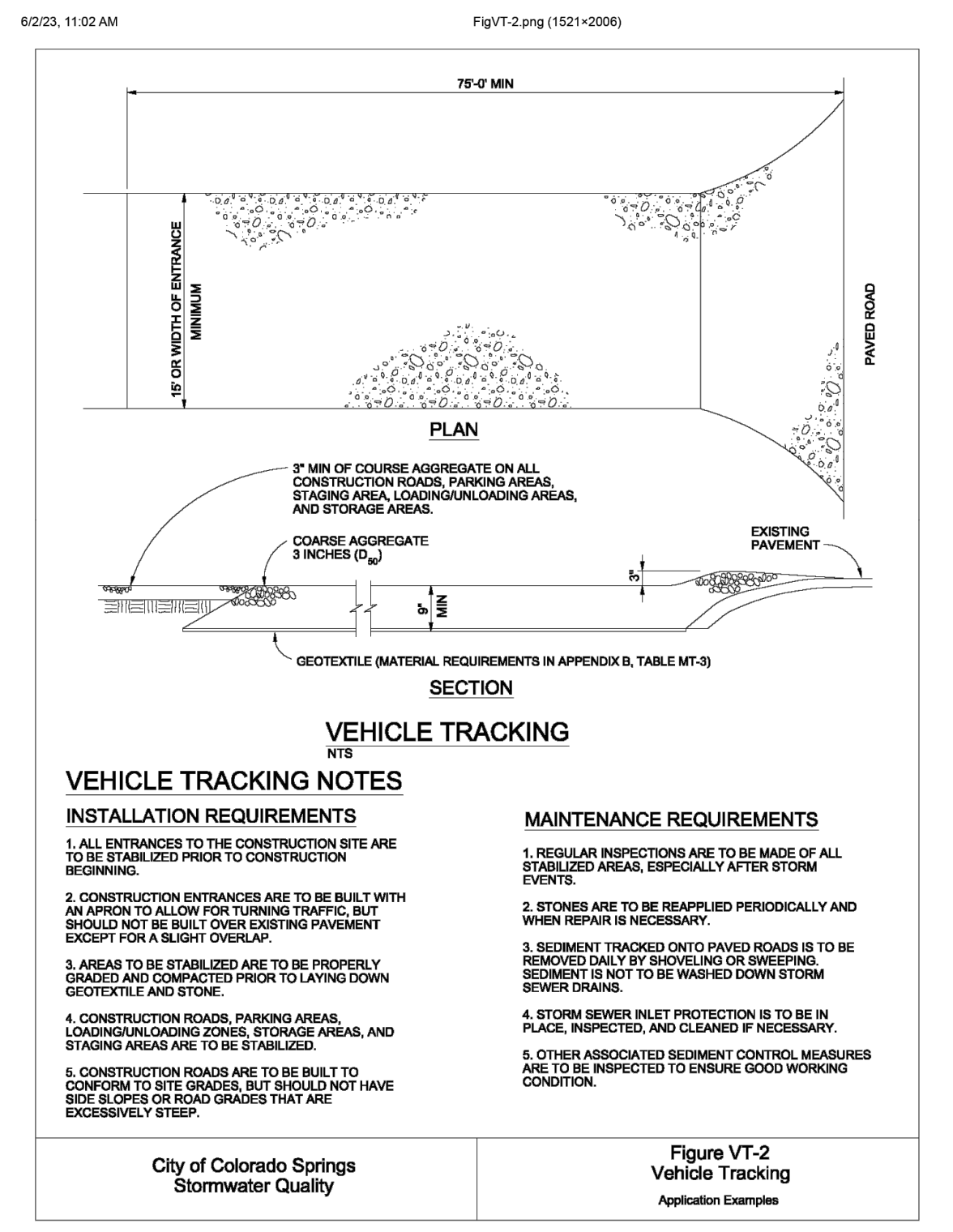
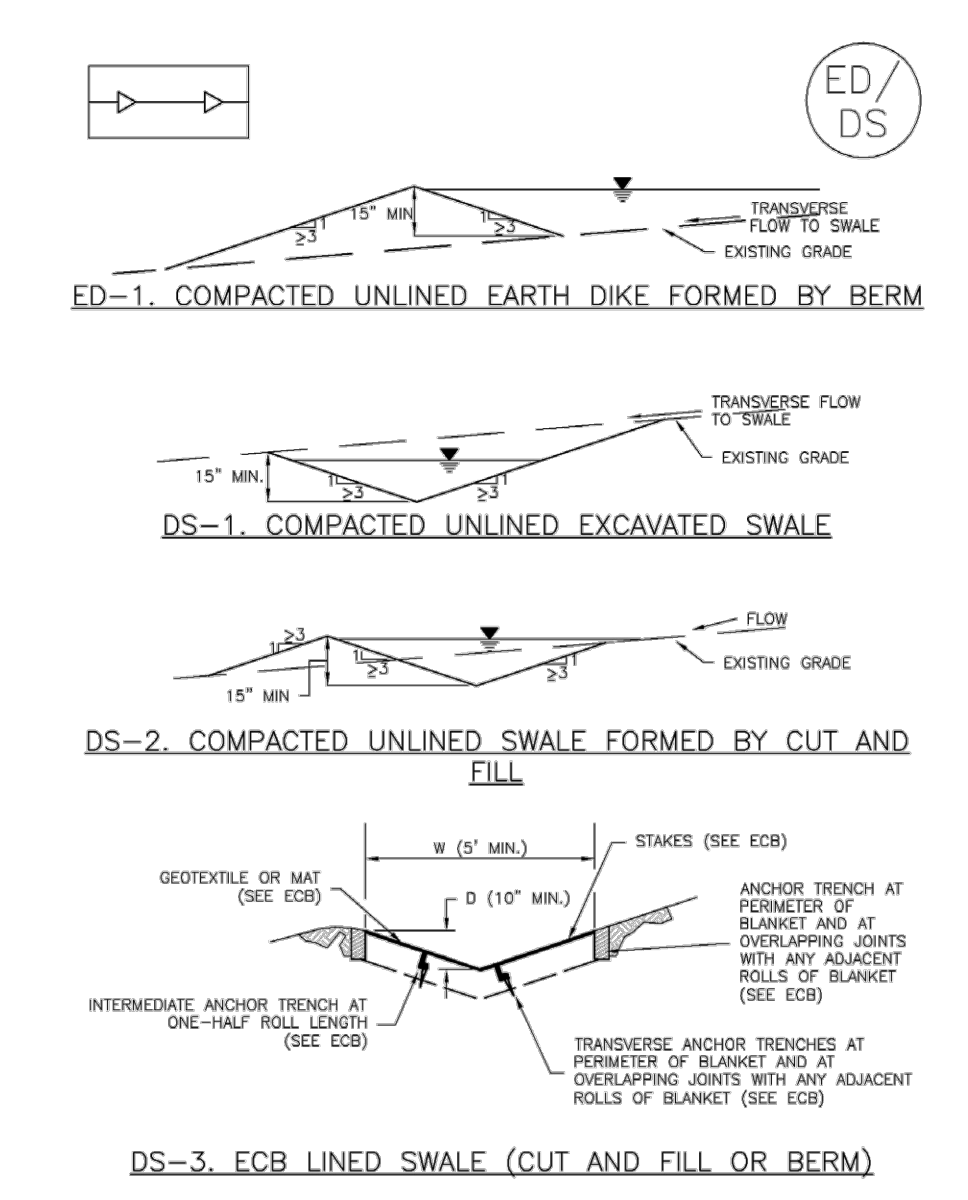
**4-WAY COMMERCIAL**  
KO1515, LLC  
EL PASO COUNTY, CO

GEC PLANS  
FINAL GRADING & EROSION CONTROL

SHEET  
GEC  
5



Earth Dikes and Drainage Swales (ED/DS) EC-10



**TABLE SB-1**

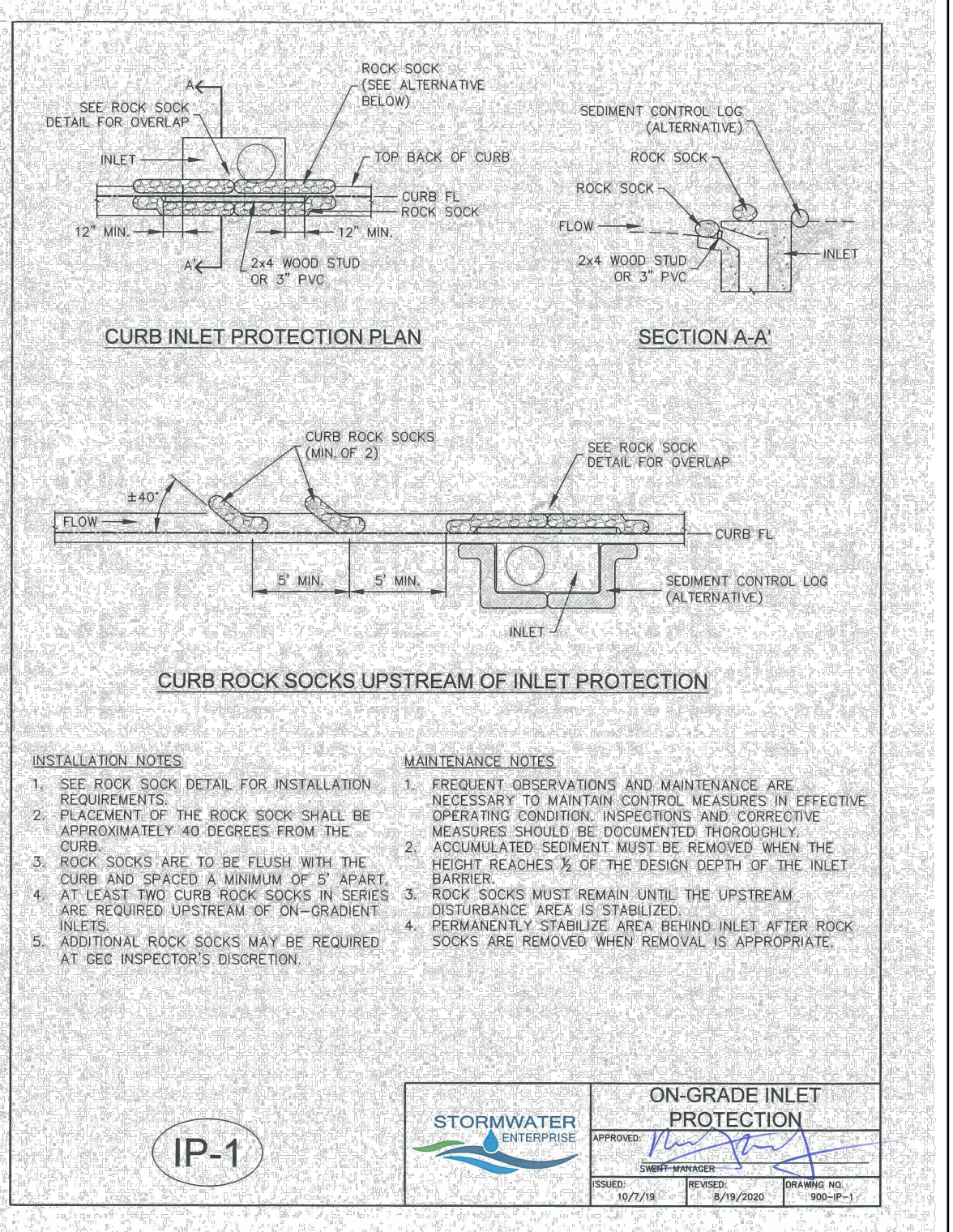
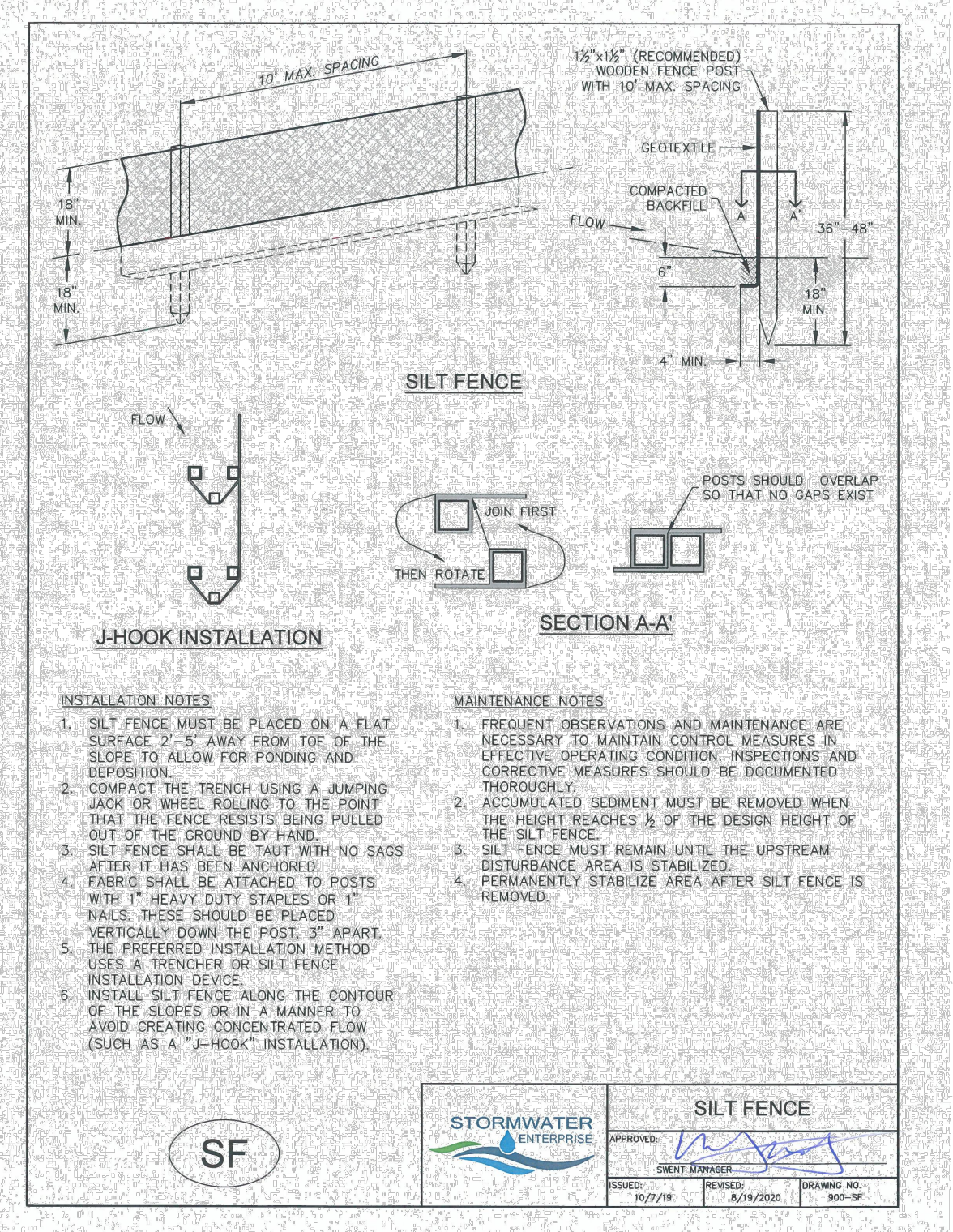
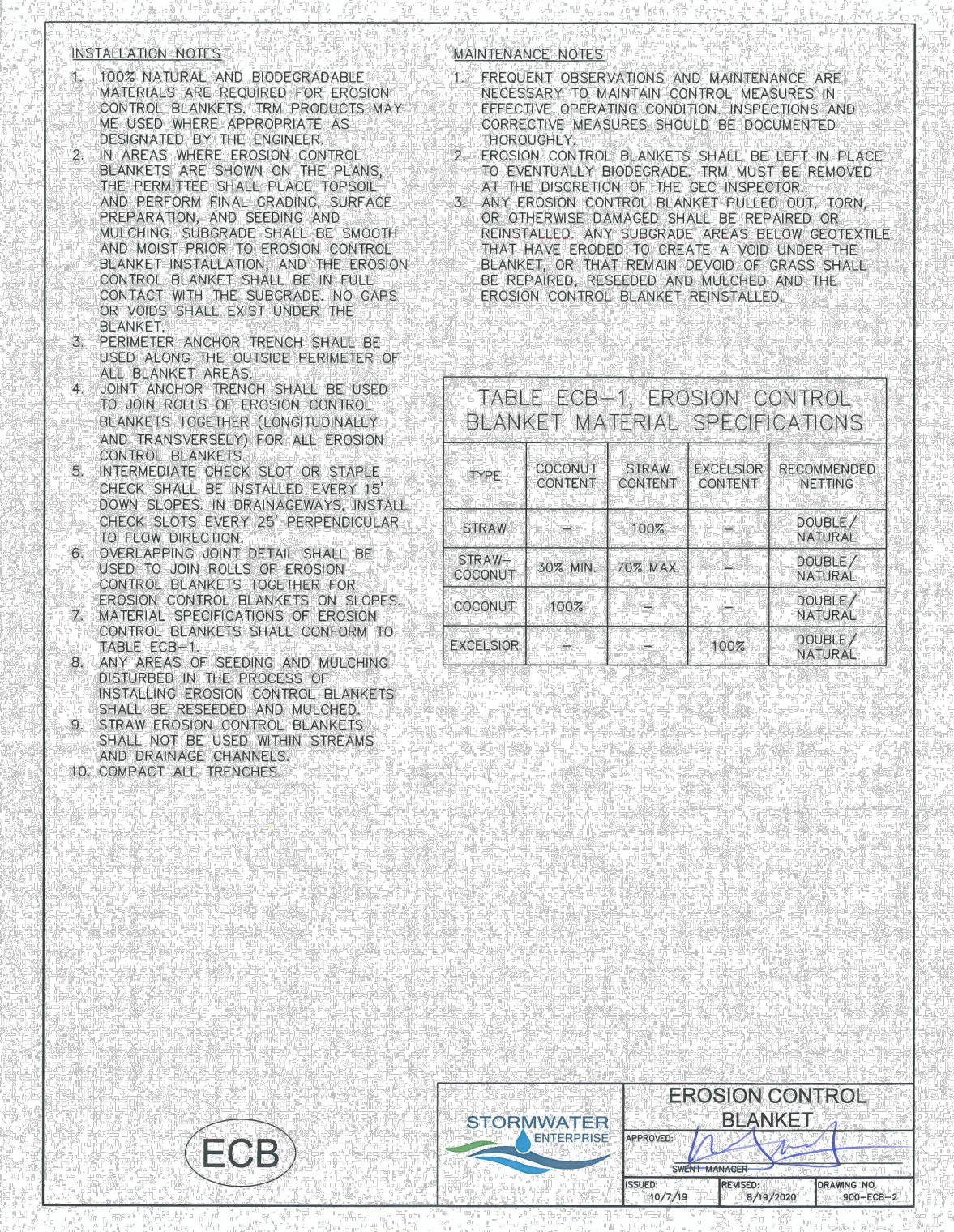
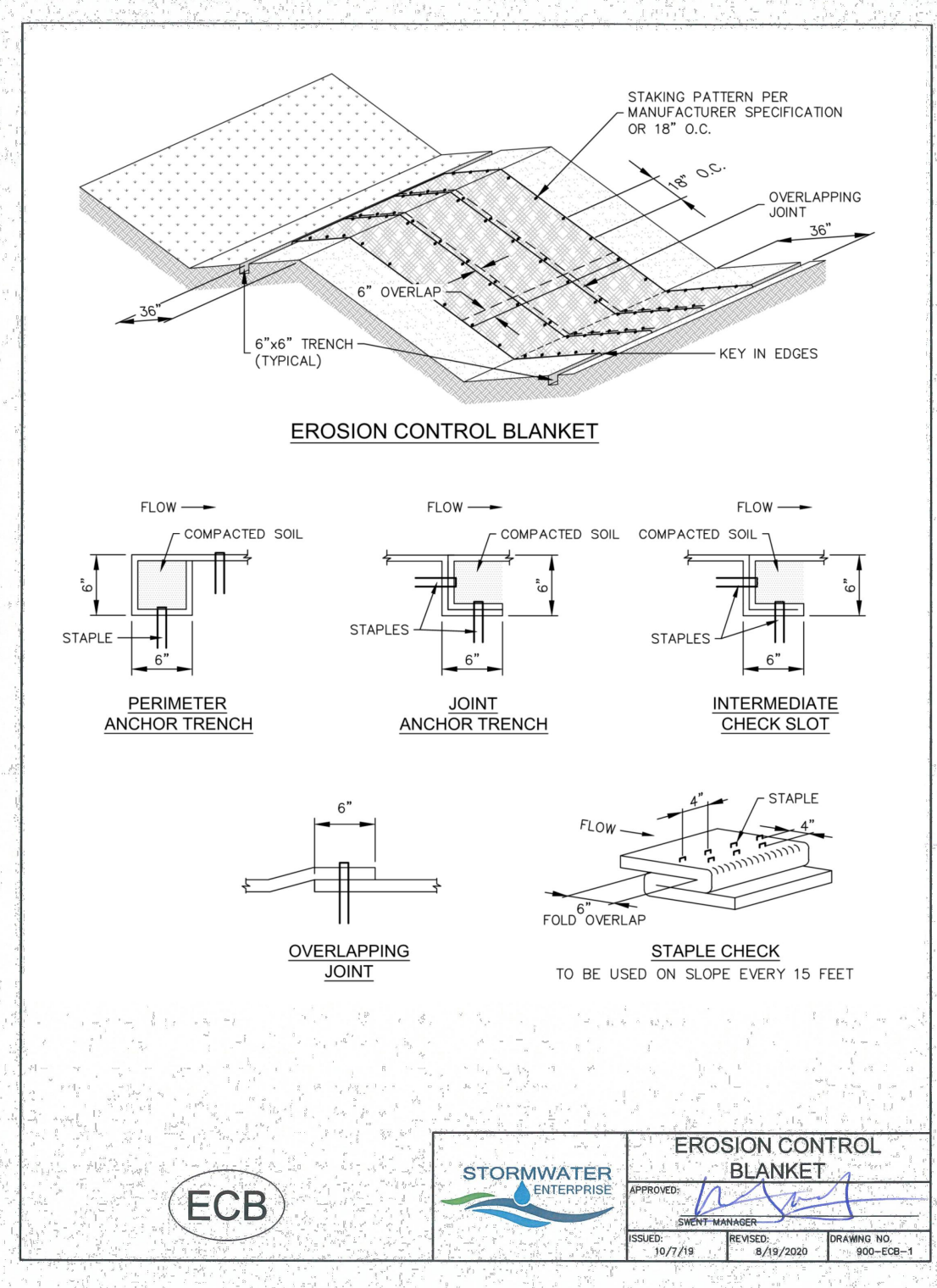
Required Area per Row (ft <sup>2</sup> )	Depth of Outlet (ft)								
	1.0	1.5	2.0	2.5	3.0	3.5	4.0	4.5	5.0
2	16.04	7.71	5.10	3.76	2.86	2.41	2.02	1.73	1.51
1	7.52	3.86	2.65	1.98	1.48	1.21	1.01	0.87	0.77
0.8	4.81	2.31	1.63	1.13	0.89	0.72	0.61	0.52	0.46
0.6	3.01	1.54	1.02	0.75	0.59	0.48	0.40	0.35	0.31
0.4	1.90	0.77	0.51	0.38	0.30	0.24	0.20	0.17	0.15
0.3	1.18	0.50	0.34	0.26	0.21	0.17	0.14	0.12	0.10
0.2	0.69	0.29	0.20	0.15	0.12	0.09	0.07	0.06	0.05
0.1	0.38	0.16	0.10	0.08	0.06	0.05	0.04	0.03	0.03
0.08	0.18	0.08	0.06	0.04	0.03	0.03	0.02	0.02	0.02
0.01	0.08	0.04	0.03	0.02	0.01	0.01	0.01	0.01	0.01

**TABLE SB-2**

Circular Perforation Sizing	Hole Diameter (in)	Hole Diameter (mm)	Area per Row (ft <sup>2</sup> )		
			n = 1	n = 2	n = 3
1/4"	0.25	6.35	0.05	0.10	0.15
3/8"	0.375	9.53	0.08	0.15	0.23
1/2"	0.50	12.70	0.15	0.30	0.45
5/8"	0.625	15.88	0.25	0.50	0.75
3/4"	0.75	19.05	0.31	0.61	0.92
7/8"	0.875	22.23	0.37	0.74	1.11
1"	1.00	25.40	0.44	0.88	1.33
1 1/8"	1.125	28.58	0.50	1.00	1.50
1 1/4"	1.250	31.75	0.57	1.14	1.71
1 3/8"	1.375	34.93	0.63	1.26	1.89
1 1/2"	1.500	38.10	0.71	1.42	2.13
1 5/8"	1.625	41.28	0.79	1.57	2.36
1 3/4"	1.750	44.45	0.87	1.74	2.61
1 7/8"	1.875	47.63	0.95	1.92	2.87
2"	2.000	50.80	1.04	2.08	3.12

**City of Colorado Springs Stormwater Quality**

Figure SB-2 Outlet Sizing Application Techniques and Maintenance Requirements



NO.	DATE	BY	REVISION DESCRIPTION

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**KO1515, LLC**  
 EL PASO COUNTY, CO

GEC PLANS  
 DETAILS I

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**INSTALLATION REQUIREMENTS**

1. STRAW BALES USED AS CHECK DAMS ARE TO MEET THE REQUIREMENTS STATED IN FIGURE 88B-2.
2. THE #4 DIMENSION SHALL BE SELECTED TO PROVIDE WEB FLOW CONVEYANCE FOR 2-YEAR FLOW OR GREATER.
3. CHECK DAMS ARE TO REMAIN IN PLACE AND OPERATIONAL UNTIL THE DRAINAGE AREA AND CHANNEL ARE PERMANENTLY STABILIZED.
4. WHEN CHECK DAMS ARE REMOVED THE CHANNEL LINING OR VEGETATION IS TO BE RESTORED.

**MAINTENANCE REQUIREMENTS**

1. REGULAR INSPECTIONS ARE TO BE MADE OF ALL CHECK DAMS, ESPECIALLY AFTER STORM EVENTS.
2. REPLACE STONE AS NECESSARY TO MAINTAIN THE CORRECT HEIGHT OF THE DAM.
3. ACCUMULATED SEDIMENT AND DEBRIS IS TO BE REMOVED FROM BEHIND THE DAMS AFTER EACH STORM OR WHEN 1/2 OF THE ORIGINAL HEIGHT OF THE DAM IS REACHED.
4. WHEN CHECK DAMS ARE REMOVED THE CHANNEL LINING OR VEGETATION IS TO BE RESTORED.

City of Colorado Springs Stormwater Quality Figure CD-1 Check Dam Construction Detail and Maintenance Requirements

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**Stabilized Staging Area (SSA) SM-6**

**SSA-1. STABILIZED STAGING AREA**

**STABILIZED STAGING AREA INSTALLATION NOTES**

1. SEE PLAN VIEW FOR:
  - LOCATION OF STAGING AREA(S).
  - CONTRIBUTION 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, MSHTD #3 COARSE AGGREGATE OR 6" (MINUS) ROCK.

**STABILIZED STAGING AREA MAINTENANCE NOTES**

1. INSPECT BMPs EACH WORKDAY, AND MAINTAIN THEM IN EFFECTIVE OPERATING CONDITION. MAINTENANCE OF BMPs SHOULD BE PROMPT, 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 REPLACED OR REGRADED AS NECESSARY IF FITTING OCCURS OR UNDERLYING SUBGRADE BECOMES EXPOSED.

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

**SM-6 Stabilized Staging Area (SSA)**

**STABILIZED STAGING AREA MAINTENANCE NOTES**

5. STABILIZED STAGING AREA SHALL BE ENLARGED IF NECESSARY TO CONTAIN PARKING, STORAGE, AND UNLOADING/LOADING OPERATIONS.
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 UFGCD 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)

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

**SP STOCKPILE PROTECTION**

**INSTALLATION NOTES**

1. INSTALL PERIMETER CONTROL AROUND STOCKPILE ON DOWNWIND SIDE.
2. PERIMETER CONTROLS MUST BE SUITABLE TO SITE CONDITIONS AND INSTALLED ACCORDING TO THE RELEVANT DETAIL.
3. PERIMETER CONTROLS ON THE INTERIOR PORTION OF A CONSTRUCTION SITE WHERE OTHER DOWNWIND CONTROLS INCLUDING STOCKPILE PERIMETER CONTROLS MAY NOT BE REQUIRED.

**MAINTENANCE NOTES**

1. FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN CONTROL MEASURES IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.
2. STOCKPILE REPLACE PERIMETER CONTROLS BY THE END OF THE WORK DAY.
3. ACCUMULATED SEDIMENT MUST BE REMOVED ACCORDING TO PERIMETER CONTROL DETAIL.

City of Colorado Springs Stormwater Quality Figure SP-1 Stockpile Protection Construction Detail and Maintenance Requirements

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**PT PORTABLE TOILET**

**INSTALLATION NOTES**

1. PORTABLE TOILETS SHALL BE PLACED A MINIMUM OF 10 FEET BEHIND ALL CURBS, SIDEWALKS AND OTHER IMPERVIOUS AREAS AND 50 FEET FROM STORM INLETS, AND 100 FEET FROM WATERWAYS.
2. PORTABLE TOILETS IN THE RIGHT-OF-WAY ARE REQUIRED TO BE PLACED ON MOBILE TRAILERS AND MUST BE ANCHORED OR WEIGHTED DOWN. PORTABLE TOILETS MAY BE INSTALLED IN ACCORDANCE WITH NOTE #1 IN STAGING AREAS/YARDS.
3. PORTABLE TOILETS SHALL BE SECURELY ANCHORED TO THE GROUND USING U-SHAPED REBAR STAKES OR OTHER EFFECTIVE ANCHORING.
4. ANCHORING SHALL BE POSITIONED ON AT LEAST TWO OPPOSING (DIAGONAL) CORNERS.
5. TOILET CONTAINMENT PANS MAY BE USED IN PLACE OF A TRAILER AT THE DISCRETION OF THE INSPECTOR. TOILET CONTAINMENT PANS MUST BE ANCHORED IN PLACE AND MUST NOT BE USED WITHIN THE CITY BLOCK.

**MAINTENANCE NOTES**

1. FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN CONTROL MEASURES IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.
2. PORTABLE TOILETS SHALL BE SERVICED AT REGULAR INTERVALS TO ELIMINATE THE POSSIBILITY OF OVERFLOW.
3. WHEN THE PORTABLE TOILETS ARE REMOVED, ANY DISTURBED AREAS ASSOCIATED WITH THE INSTALLATION, MAINTENANCE, AND/OR REMOVAL OF THE TOILETS MUST BE PERMANENTLY STABILIZED.

City of Colorado Springs Stormwater Quality Figure PT-1 Portable Toilet Construction Detail and Maintenance Requirements

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**MULCHING NOTES**

**INSTALLATION REQUIREMENTS**

1. ALL DISTURBED AREAS MUST BE MULCHED WITHIN 31 DAYS AFTER FINAL GRADE AND SEEDING AREAS ARE TO BE MULCHED WITHIN 24 HOURS AFTER SEEDING.
2. MATERIAL USED FOR MULCH CAN BE CERTIFIED CLEAN, WEED- AND SEED-FREE LONG STEMMED FIELD OR MARSH HAY, OR STRAW OF OATS, BARLEY, WHEAT, RYE, OR TRITICALE CERTIFIED BY THE COLORADO DEPARTMENT OF AGRICULTURE WEED-FREE FORAGE CERTIFICATION PROGRAM.
3. HYDRAULIC MULCHING MATERIAL SHALL CONSIST OF VIRGIN WOOD CHIPS MANUFACTURED FROM CLEAN HWS 2" WOOD CHIPS. WOOD CHIPS CANNOT CONTAIN ANY GROWTH OR GERMINATION INHIBITORS OR BE PRODUCED FROM RECYCLED MATERIAL. GRAVEL CAN ALSO BE USED.
4. MULCH IS TO BE APPLIED EVENLY AT A RATE OF 2 TONS PER ACRE.
5. MULCH IS TO BE ANCHORED EITHER BY CRIMPING (LACING MULCH FIBERS 6 INCHES INTO THE SOIL USING NETTING BASED ON SMALL AREAS WITH STEEP SLOPES), OR WITH A TACKLER.
6. HYDRAULIC MULCHING AND TACKLERS ARE NOT TO BE USED IN THE PRESENCE OF FREE SURFACE WATER.

**MAINTENANCE REQUIREMENTS**

1. REGULAR INSPECTIONS ARE TO BE MADE OF ALL MULCHED AREAS.
2. MULCH IS TO BE REPLACED IMMEDIATELY IN THOSE AREAS IT HAS BEEN REMOVED, AND IF NECESSARY THE AREA SHOULD BE RESEED.

City of Colorado Springs Stormwater Quality Figure MU-1 Mulching Construction Detail and Maintenance Requirements

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**RECOMMENDED ANNUAL GRASSES**

SPECIES (COMMON NAME)	GROWTH SEASON	SEEDING DATE	FOUNDER OF FURFE LIVE SEED (PLS) (PLS/ACRE)	PLANTING DEPTH (INCHES)
1. OATS	COOL	MARCH 16 - APRIL 30	35-60	1-2
2. SPRING WHEAT	COOL	MARCH 16 - APRIL 30	25-35	1-2
3. SPRING BARLEY	COOL	MARCH 16 - APRIL 30	25-35	1-2
4. ANNUAL PERGRASS	COOL	MARCH 16 - JUNE 30	10-15	1/2
5. MILLET	WARM	MAY 16 - JULY 15	3-15	1/2-3/4
6. BUDWIGSS	WARM	MAY 16 - JULY 15	5-10	1/2-3/4
7. BORGHUM	WARM	MAY 16 - JULY 15	5-10	1/2-3/4
8. WINTER WHEAT	COOL	SEPTEMBER 1 - 30	20-35	1-2
9. WINTER BARLEY	COOL	SEPTEMBER 1 - 30	20-35	1-2
10. WINTER RYE	COOL	SEPTEMBER 1 - 30	20-35	1-2
11. TRITICALE	COOL	SEPTEMBER 1 - 30	25-40	1-2

THIS TABLE WAS TAKEN FROM UFGCD FOR RECOMMENDED ANNUAL GRASSES FOR THE DENVER METROPOLITAN AREA. THIS TABLE MAY BE USED UNLESS A SITE-SPECIFIC SEED MIX IS REQUESTED AND APPROVED.

**TEMPORARY SEEDING NOTES**

**INSTALLATION REQUIREMENTS**

1. DISTURBED AREAS ARE TO BE SEEDING WITHIN 21 DAYS AFTER CONSTRUCTION ACTIVITY OR GRADING ENDS IF SEASON ALLOWS.
2. IF NECESSARY, SOIL IS TO BE CONDITIONED FOR PLANT GROWTH BY APPLYING TOPSOIL, FERTILIZER, OR LIME.
3. SOIL IS TO BE TILLED IMMEDIATELY PRIOR TO APPLYING SEEDS. COMPACT SOIL ESPECIALLY NEED TO BE LOOSENED.
4. SEEDING DEPTH IS TO BE 4 INCHES FOR SLOPES FLATTER THAN 2:1 AND 1 INCH FOR SLOPES STEEPER THAN 2:1.
5. ANNUAL GRASSES LISTED IN TABLE TS-1 ARE TO BE USED FOR TEMPORARY SEEDING. SEED MIXES ARE NOT TO CONTAIN ANY WOODS-NONE SEEDS INCLUDING RUSSIAN OR CANADIAN THISTLE, UNKNOWNED PURSLE, COCKLEBUR, EUROPEAN BINDWEED, JOHNSON GRASS, AND LEAFY SPURGE.
6. TABLE TS-1 ALSO PROVIDES REQUIREMENTS FOR SEEDING RATES, SEEDING DATES, AND PLANTING DEPTHS FOR THE APPROVED TYPES OF ANNUAL GRASSES.
7. SEEDING IS TO BE APPLIED USING MECHANICAL TYPE DRILLS EXCEPT WHERE SLOPES ARE STEEP OR ACCESS IS LIMITED THEN HYDRAULIC SEEDING MAY BE USED.
8. ALL SEEDING AREAS ARE TO BE MULCHED (SEE FACTSHEET ON MULCHING).
9. IF HYDRAULIC SEEDING IS USED THEN HYDRAULIC MULCHING SHALL BE DONE SEPARATELY TO AVOID SEEDS BECOMING ENCAPSULATED IN THE MULCH.

**MAINTENANCE REQUIREMENTS**

1. REGULAR INSPECTIONS ARE TO BE MADE OF ALL SEEDING AREAS TO ENSURE GROWTH.
2. AREAS WHERE GROWTH IS NOT OCCURRING QUICKLY OR THE MULCH HAS BEEN REMOVED SHALL BE RESEED AS SOON AS POSSIBLE AND RE-MULCHED IF NEEDED.
3. SEEDING AREAS ARE NOT TO BE DRIVEN OVER WITH CONSTRUCTION EQUIPMENT OR VEHICLES.

City of Colorado Springs Stormwater Quality Figure TS-1 Temporary Seeding Construction Detail and Maintenance Requirements

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**CWA CONCRETE WASHOUT AREA**

**INSTALLATION NOTES**

1. SEE PLAN VIEW FOR:
  - LOCATION OF CONCRETE WASHOUT AREA
  - LOCATE AT LEAST 50' AWAY FROM STATE WATERS MEASURED HORIZONTALLY.
  - AN IMPERMEABLE LINER (16 MIL. MINIMUM THICKNESS) IS REQUIRED IF CONCRETE WASH AREA IS LOCATED WITHIN 400' OF STATE WATERS OR 1000' OF WELLS OR DRINKING WATER SOURCES.
  - DO NOT LOCATE IN AREAS WHERE SHALLOW GROUNDWATER MAY BE PRESENT.
2. THE CONCRETE WASH AREA SHALL BE INSTALLED PRIOR TO CONCRETE PLACEMENT ON SITE.
3. CONCRETE WASH AREA SHALL INCLUDE A FLAT SUBSURFACE PIT THAT IS AT LEAST 4' BY 7'.
4. CONCRETE WASH AREA SHALL HAVE A MINIMUM HEIGHT OF 2 FEET.
5. CONCRETE WASH AREA ENTRANCE SHALL BE SLOPED 2% TOWARDS THE CONCRETE WASH AREA.
6. SIGNS SHALL BE PLACED AT THE CONCRETE WASH AREA.
7. BERM SURROUNDING SIDES AND BACK OF CONCRETE WASH AREA SHALL HAVE A MINIMUM HEIGHT OF 2 FEET.
8. CONCRETE WASH AREA SHALL BE PERMANENTLY STABILIZED AFTER CONCRETE WASH AREA IS REMOVED.

**MAINTENANCE NOTES**

1. FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN CONTROL MEASURES IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.
2. THE CONCRETE WASH AREA SHALL BE REPAIRED, CLEANED, OR ENLARGED AS NECESSARY TO MAINTAIN CAPACITY FOR CONCRETE WASTE. CONCRETE MATERIALS ACCUMULATED IN THE PIT SHALL BE REMOVED ONCE THE MATERIALS HAVE REACHED A DEPTH OF 3/4 THE HEIGHT OF THE CONCRETE WASH AREA.
3. 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.
4. THE CONCRETE WASH AREA SHALL REMAIN IN PLACE UNTIL ALL CONCRETE FOR THE PROJECT IS PLACED.
5. PERMANENTLY STABILIZE AREA AFTER CONCRETE WASH AREA IS REMOVED.

City of Colorado Springs Stormwater Quality Figure CWA-1 Concrete Washout Area Construction Detail and Maintenance Requirements

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**CWA CONCRETE WASHOUT AREA**

**INSTALLATION NOTES**

1. SEE PLAN VIEW FOR:
  - LOCATION OF CONCRETE WASHOUT AREA
  - LOCATE AT LEAST 50' AWAY FROM STATE WATERS MEASURED HORIZONTALLY.
  - AN IMPERMEABLE LINER (16 MIL. MINIMUM THICKNESS) IS REQUIRED IF CONCRETE WASH AREA IS LOCATED WITHIN 400' OF STATE WATERS OR 1000' OF WELLS OR DRINKING WATER SOURCES.
  - DO NOT LOCATE IN AREAS WHERE SHALLOW GROUNDWATER MAY BE PRESENT.
2. THE CONCRETE WASH AREA SHALL BE INSTALLED PRIOR TO CONCRETE PLACEMENT ON SITE.
3. CONCRETE WASH AREA SHALL INCLUDE A FLAT SUBSURFACE PIT THAT IS AT LEAST 4' BY 7'.
4. CONCRETE WASH AREA SHALL HAVE A MINIMUM HEIGHT OF 2 FEET.
5. CONCRETE WASH AREA ENTRANCE SHALL BE SLOPED 2% TOWARDS THE CONCRETE WASH AREA.
6. SIGNS SHALL BE PLACED AT THE CONCRETE WASH AREA.
7. BERM SURROUNDING SIDES AND BACK OF CONCRETE WASH AREA SHALL HAVE A MINIMUM HEIGHT OF 2 FEET.
8. CONCRETE WASH AREA SHALL BE PERMANENTLY STABILIZED AFTER CONCRETE WASH AREA IS REMOVED.

**MAINTENANCE NOTES**

1. FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN CONTROL MEASURES IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.
2. THE CONCRETE WASH AREA SHALL BE REPAIRED, CLEANED, OR ENLARGED AS NECESSARY TO MAINTAIN CAPACITY FOR CONCRETE WASTE. CONCRETE MATERIALS ACCUMULATED IN THE PIT SHALL BE REMOVED ONCE THE MATERIALS HAVE REACHED A DEPTH OF 3/4 THE HEIGHT OF THE CONCRETE WASH AREA.
3. 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.
4. THE CONCRETE WASH AREA SHALL REMAIN IN PLACE UNTIL ALL CONCRETE FOR THE PROJECT IS PLACED.
5. PERMANENTLY STABILIZE AREA AFTER CONCRETE WASH AREA IS REMOVED.

City of Colorado Springs Stormwater Quality Figure CWA-1 Concrete Washout Area Construction Detail and Maintenance Requirements

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NO.	DATE	BY	REVISION DESCRIPTION

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