

CLOVERLEAF FILING NO. 2
A PARCEL OF LAND LOCATED IN THE NE QUARTER OF SECTION 23
AND THE NW QUARTER OF SECTION 24, TOWNSHIP 11 S,
RANGE 67 WEST OF THE 6TH P.M., EL PASO COUNTY, COLORADO
GRADING AND EROSION CONTROL PLANS



Know what's below.
Call before you dig.

UNTIL SUCH TIME AS
THESE DRAWINGS ARE
APPROVED BY THE
APPROPRIATE REVIEWING
AGENCIES, OR ENGINEERING
APPROVES THEIR USE,
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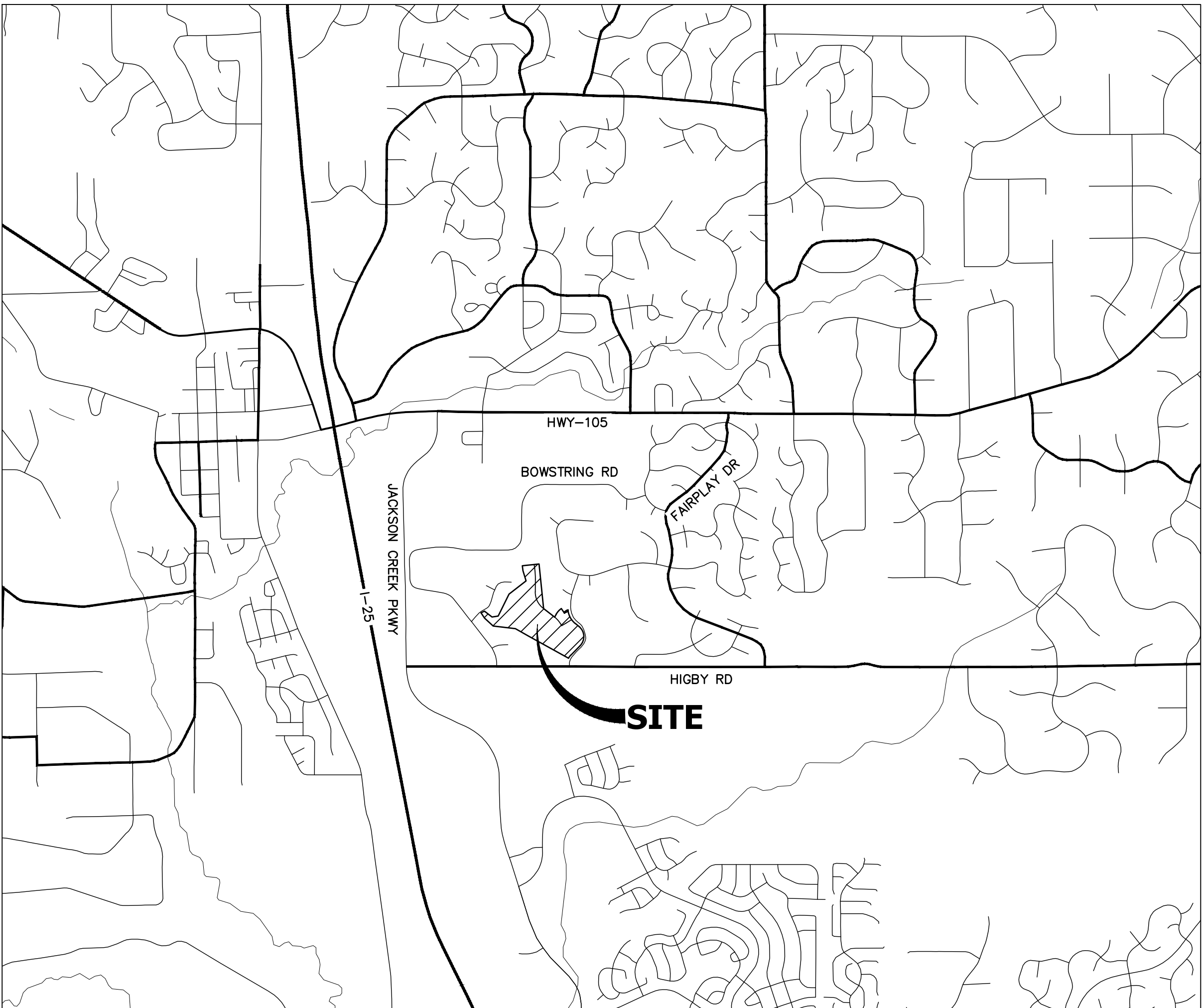
PREPARED FOR
MONUMENT HILL CM LLC
1864 WOODMOOR DR. STE 100
COLORADO SPRINGS, CO 80920
ATTN: JOE DESJARDIN
719-476-0800

J.R. ENGINEERING
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ABBREVIATIONS

AC	ACRE	INT	INTERSECTION
AD	ALGEBRAIC DIFFERENCE	INV	INVERT
AH	AHEAD	IRR	IRRIGATION
ARCH	ARCHITECT	KB	KICK (THRUST) BLOCK
ASCE	AMERICAN SOCIETY OF CIVIL ENGINEERS	LB	LOAD
ASS'Y	ASSEMBLY	LE	LANDSCAPE EASEMENT
AVE	AVENUE	LF	LINEAR FOOT
BB	BOX BASE	LN	LANE
BK	BACK	LOMR	LETTER OF MAP REVISION
BNDY	BOUNDARY	LP	LOW POINT
BOP	BOTTOM OF PIPE	LS	LUMP SUM
BOV	BLOW OFF VALVE	LT	LEFT
BFV	BUTTERFLY VALVE	MAX	MAXIMUM
BLVD	BOULEVARD	M/D	MOISTURE DENSITY
BW	BOTTOM OF WALL	MDDP	MASTER DEVELOPMENT DRAINAGE PLAN
C&G	CURB & GUTTER	MH	MANHOLE
CATV	CABLE TELEVISION	MIN	MINIMUM
CB	CATCH BASIN	MS	MOUNTABLE SIDEWALK
CBC	CONCRETE BOX CULVERT	N	NORTH
CDOT	COLORADO DEPARTMENT OF TRANSPORTATION	NRCP	NON-REINFORCED CONCRETE PIPE
CDS	CUL-DE-SAC	ODP	OFFICIAL DEVELOPMENT PLAN
CF	CUBIC FOOT	OHE	OVERHEAD ELECTRIC
CFS	CUBIC FEET PER SECOND	OHU	OVERHEAD UTILITY
CIP	COMPLETE IN PLACE	PC	POINT OF CURVATURE
CL	CENTER LINE	PCC	POINT OF COMPOUND CURVATURE
CLOMR	CONDITIONAL LETTER OF MAP REVISION	PCR	POINT OF CURB RETURN
CLR	CLEAR	PDP	PRELIMINARY DEVELOPMENT PLAN
CMP	CORRUGATED METAL PIPE	PE	PROFESSIONAL ENGINEER
CO	CLEAN OUT	PI	POINT OF INTERSECTION
COCs	CITY OF COLORADO SPRINGS	PKWY	PARKWAY
CONC	CONCRETE	PL	PROPERTY LINE
CR	CIRCLE	PR	PROPOSED
CSP	CORRUGATED STEEL PIPE	PRC	POINT OF REVERSE CURVATURE
CSU	COLORADO SPRINGS UTILITIES	PT	POINT OF TANGENCY
CT	COURT	PV	PLUG VALVE
CTRB	CONCRETE THRUST REDUCER	PVC	POLYVINYL CHLORIDE
CY	CUBIC YARD	R	RADIUS
DBPS	DRAINAGE BASIN PLANNING STUDY	RCBC	REINFORCED CONCRETE BOX CULVERT
DE	DRAINAGE EASEMENT	RCP	REINFORCED CONCRETE PIPE
DIA	DIAMETER	RD	ROAD
DIP	DUCTILE IRON PIPE	ROW	RIGHT OF WAY
DR	DRIVE	RT	RIGHT
DRC	DESIGN REVIEW COMMITTEE	STE	SOUTH
DU	DWELLING UNITS	SAN	SANITARY SEWER
DY	DAY	SF	SQUARE FOOT
E	EAST	ST	STREET
EA	EACH	STA	STATION
EGL	ENERGY GRADE LINE	STM	STORM SEWER
EL	ELEVATION	SY	SQUARE YARD
ELEC	ELECTRIC	SY-IN	SQUARE YARD INCH
EOA	EDGE OF ASPHALT	TB	THRUST BLOCK
EPC	EL PASO COUNTY	TBC	TOP BACK OF CURB
ERCP	ELLIPTICAL RCP	TBW	TOP BACK OF WALK
ESMT	EASEMENT	TEL	TELEPHONE
EST	ESTIMATE	TN	TON
EX	EXISTING	TOA	TOP OF ASPHALT
FDP	FINAL DEVELOPMENT PLAN	TOB	TOP OF BOX
FDR	FINAL DRAINAGE REPORT	TOC	TOP OF CURB OR CONCRETE
FES	FLARED END SECTION	TOF	TOP OF FOUNDATION
FF	FINISHED FLOOR ELEVATION	TOP	TOP OF PIPE
FG	FINISHED GRADE	TW	TOP OF WALL
FH	FIRE HYDRANT	TYP	TYPICAL
FL	FLOWLINE	UDFCD	URBAN DRAINAGE AND FLOOD CONTROL DISTRICT
FL	FILING	UE	UTILITY EASEMENT
FO	FIBER OPTIC CABLE	U&DE	UTILITY & DRAINAGE EASEMENT
GB	GRADE BREAK	UGE	UNDERGROUND ELECTRIC
GE	GAS EASEMENT	VCP	VITRIFIED CLAY PIPE
GIS	GEOGRAPHIC INFORMATION SYSTEM	VPC	VERTICAL POINT OF CURVATURE
GL	GAS LINE	VPI	VERTICAL POINT OF INTERSECTION
GPS	GLOBAL POSITIONING SYSTEM	VPT	VERTICAL POINT OF TANGENCY
GV	GATE VALVE	VTC	VEHICLE TRACKING CONTROL
HBP	HOT BITUMINOUS PAVEMENT	W	WEST
HC	HANDICAP	WL	WATER LINE
HDC	HIGH DEFLECTION COUPLING	WM	WATER MAIN
HDPE	HIGH DENSITY POLYETHYLENE	WRD	WATER RESOURCES DEPARTMENT
HGL	HYDRAULIC GRADE LINE	WS	WATER SURFACE
HMA	HOT MIX ASPHALT	WSE	WATER SURFACE ELEVATION
HOA	HOME OWNERS ASSOCIATION	WTR	WATER
HP	HIGH POINT	YR	YEAR
HR	HOUR		
I	INLET		
IE	IRRIGATION EASEMENT		



VICINITY MAP
SCALE: 1" = 2000'

SHEET INDEX

1	-	COVER SHEET
2	-	LEGEND & NOTES
3	-	TYPICAL SECTIONS
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8-12	-	DETAILS

BASIS OF BEARING

THE BASIS OF BEARINGS IS THE WESTERLY LINE OF TRACT, B, WOODMOOR PLACER, BEING MONUMENTED BY A 1-1/4" YELLOW PLASTIC CAP ILLEGIBLE AT BOTH ENDS. SAID LINE BEARING N26°20'33"E AS REFERENCED TO COLORADO STATE PLANE CENTRAL ZONE.

BENCHMARK

NGS MONUMENT T 294 BEING MONUMENTED BY A 3-1/4" BRASS DISC SET IN A 4'X4' BOULDER, LOCATED 1.8 MILES EAST ALONG HIGBY ROAD FROM ITS INTERSECTION WITH JACKSON CREEK PARKWAY, 40 FEET SOUTH OF THE CENTERLINE OF THE ROAD, 6 FEET SOUTH OF A FENCE, AND 6.2 FEET SOUTH OF A WITNESS POST. SAID MONUMENT HAVING A PUBLISHED ELEVATION OF 7247.10 FEET, NAVD88.

THE LOCATIONS OF EXISTING ABOVE GROUND AND UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE WAY ONLY. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK. THE CONTRACTOR SHALL BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE CAUSED BY HIS FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL ABOVE GROUND AND UNDERGROUND UTILITIES.

CONTACTS:

OWNER	CND-CLOVERLEAF, LLC ATTN: AZIZ SIDDIQUI 1111 N. POST OAK ROAD HOUSTON, TX 77055 P~224-415-6619
DEVELOPER	MONUMENT HILL CM LLC ATTN: JOE DESJARDIN 1864 WOODMOOR DRIVE, SUITE 100 COLORADO SPRINGS, CO 80920 P~719-476-0800
CONTRACTOR/OPERATOR (EROSION CONTROL)	MONUMENT HILL CM LLC ATTN: CHARLIE WILLIAMS 1864 WOODMOOR DRIVE, SUITE 100 COLORADO SPRINGS, CO 80920 P~719-492-1933
ENGINEER/SURVEYOR	JR ENGINEERING, LLC ATTN: MIKE A. BRAMLETT 5475 TECH CENTER DRIVE, SUITE 235 COLORADO SPRINGS, CO 80919 P~303-267-6240
FIRE PROTECTION DISTRICT	TRI-LAKES MONUMENT FPD 16055 OLD FOREST POINT, SUITE 103 MONUMENT, CO 80132 P~719-484-0911
DISTRICT	WOODMOOR WATER & SANITATION DISTRICT NO. 1 1845 WOODMOOR DRIVE MONUMENT, CO 80132 P~719-488-2525 EXT. 0
EL PASO COUNTY	PLANNING AND COMMUNITY DEVELOPMENT 2880 INTERNATIONAL CIRCLE, SUITE 110 COLORADO SPRINGS, CO 80910 P~719-520-6819 DEPARTMENT OF PUBLIC WORKS 3275 AKERS DR COLORADO SPRINGS, CO 80922 P~719-529-6460

EL PASO COUNTY STATEMENT

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 EOM 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.

APPROVED
Engineering Department
01/31/2023 5:06:20 PM
JENNIFER IRVINE, P.E.
EPC Planning & Community Development Department

COUNTY ENGINEER/ECM ADMINISTRATOR

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 PLANS.

OWNER/DEVELOPER STATEMENT

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

✓ Joseph W. Desjardin
JOE DESJARDIN
MONUMENT HILL CM LLC
1864 WOODMOOR DRIVE, SUITE 100
COLORADO SPRINGS, CO 80920
11/12/2021
DATE

Mike A. Bramlett
MIKE A. BRAMLETT, P.E.
COLORADO P.E. 32314
FOR AND ON BEHALF OF JR ENGINEERING, LLC
11/11/21
DATE

CLOVERLEAF FILING NO. 2

COVER SHEET
FILE NO. SF-21-023
GEC PLANS

SHEET 1 OF 12

JOB NO. 25158.01

GRADING AND EROSION CONTROL STANDARD NOTES

1. STORMWATER DISCHARGES FROM CONSTRUCTION SITES SHALL NOT CAUSE OR THREATEN TO CAUSE POLLUTION, CONTAMINATION, OR DEGRADATION OF STATE WATERS. ALL WORK AND EARTH DISTURBANCE SHALL BE DONE IN A MANNER THAT MINIMIZES POLLUTION OF ANY ON-SITE OR OFF-SITE WATERS, INCLUDING WETLANDS.
2. NOTWITHSTANDING ANYTHING DEPICTED IN THESE PLANS IN WORDS OR GRAPHIC REPRESENTATION, ALL DESIGN AND CONSTRUCTION RELATED TO ROADS, STORM DRAINAGE AND EROSION CONTROL SHALL CONFORM TO THE STANDARDS AND REQUIREMENTS OF THE MOST RECENT VERSION OF THE RELEVANT ADOPTED EL PASO COUNTY STANDARDS, INCLUDING THE LAND DEVELOPMENT CODE, THE ENGINEERING CRITERIA MANUAL, THE DRAINAGE CRITERIA MANUAL, AND THE DRAINAGE CRITERIA MANUAL VOLUME 2. ANY DEVIATIONS FROM REGULATIONS AND STANDARDS MUST BE REQUESTED, AND APPROVED, IN WRITING.
3. A SEPARATE STORMWATER MANAGEMENT PLAN (SWMP) FOR THIS PROJECT SHALL BE COMPLETED AND AN EROSION AND STORMWATER QUALITY CONTROL PERMIT (ESQCP) ISSUED PRIOR TO COMMENCING CONSTRUCTION. MANAGEMENT OF THE SWMP DURING CONSTRUCTION IS THE RESPONSIBILITY OF THE DESIGNATED QUALIFIED STORMWATER MANAGER OR CERTIFIED EROSION CONTROL INSPECTOR. THE SWMP SHALL BE LOCATED ON SITE AT ALL TIMES DURING CONSTRUCTION AND SHALL BE KEPT UP TO DATE WITH WORK PROGRESS AND CHANGES IN THE FIELD.
4. ONCE THE ESQCP IS APPROVED AND A "NOTICE TO PROCEED" HAS BEEN ISSUED, THE CONTRACTOR MAY INSTALL THE INITIAL STAGE EROSION AND SEDIMENT CONTROL MEASURES AS INDICATED ON THE APPROVED GEC. A PRECONSTRUCTION MEETING BETWEEN THE CONTRACTOR, ENGINEER, AND EL PASO COUNTY WILL BE HELD PRIOR TO ANY CONSTRUCTION. IT IS THE RESPONSIBILITY OF THE APPLICANT TO COORDINATE THE MEETING TIME AND PLACE WITH COUNTY STAFF.
5. CONTROL MEASURES MUST BE INSTALLED PRIOR TO COMMENCEMENT OF ACTIVITIES THAT COULD CONTRIBUTE POLLUTANTS TO STORMWATER. CONTROL MEASURES FOR ALL SLOPES, CHANNELS, DITCHES, AND DISTURBED LAND AREAS SHALL BE INSTALLED IMMEDIATELY UPON COMPLETION OF THE DISTURBANCE.
6. ALL TEMPORARY SEDIMENT AND EROSION CONTROL MEASURES SHALL BE MAINTAINED AND REMAIN IN EFFECTIVE OPERATING CONDITION UNTIL PERMANENT SOIL EROSION CONTROL MEASURES ARE IMPLEMENTED AND FINAL STABILIZATION IS ESTABLISHED. ALL PERSONS ENGAGED IN LAND DISTURBANCE ACTIVITIES SHALL ASSESS THE ADEQUACY OF CONTROL MEASURES AT THE SITE AND IDENTIFY IF CHANGES TO THOSE CONTROL MEASURES ARE NEEDED TO ENSURE THE CONTINUED EFFECTIVE PERFORMANCE OF THE CONTROL MEASURES. ALL CHANGES TO TEMPORARY SEDIMENT AND EROSION CONTROL MEASURES MUST BE INCORPORATED INTO THE STORMWATER MANAGEMENT PLAN.
7. TEMPORARY STABILIZATION SHALL BE IMPLEMENTED ON DISTURBED AREAS AND STOCKPILES WHERE GROUND DISTURBING CONSTRUCTION ACTIVITY HAS PERMANENTLY CEASED OR TEMPORARILY CEASED FOR LONGER THAN 14 DAYS.
8. FINAL STABILIZATION MUST BE IMPLEMENTED AT ALL APPLICABLE CONSTRUCTION SITES. FINAL STABILIZATION IS ACHIEVED WHEN ALL GROUND DISTURBING ACTIVITIES ARE COMPLETE AND ALL DISTURBED AREAS EITHER HAVE A UNIFORM VEGETATIVE COVER WITH INDIVIDUAL PLANT DENSITY OF 70 PERCENT OF PRE-DISTURBANCE LEVELS ESTABLISHED OR EQUIVALENT PERMANENT ALTERNATIVE STABILIZATION METHOD IS IMPLEMENTED. ALL TEMPORARY SEDIMENT AND EROSION CONTROL MEASURES SHALL BE REMOVED UPON FINAL STABILIZATION AND BEFORE PERMIT CLOSURE.
9. ALL PERMANENT STORMWATER MANAGEMENT FACILITIES SHALL BE INSTALLED AS DESIGNED IN THE APPROVED PLANS. ANY PROPOSED CHANGES THAT AFFECT THE DESIGN OR FUNCTION OF PERMANENT STORMWATER MANAGEMENT STRUCTURES MUST BE APPROVED BY THE ECM ADMINISTRATOR PRIOR TO IMPLEMENTATION.
10. EARTH DISTURBANCES SHALL BE CONDUCTED IN SUCH A MANNER SO AS TO EFFECTIVELY MINIMIZE ACCELERATED SOIL EROSION AND RESULTING SEDIMENTATION. ALL DISTURBANCES SHALL BE DESIGNED, CONSTRUCTED, AND COMPLETED SO THAT THE EXPOSED AREA OF ANY DISTURBED LAND SHALL BE LIMITED TO THE SHORTEST PRACTICAL PERIOD OF TIME. PRE-EXISTING VEGETATION SHALL BE PROTECTED AND MAINTAINED WITHIN 50 HORIZONTAL FEET OF A WATERS OF THE STATE UNLESS SHOWN TO BE INFEASIBLE AND SPECIFICALLY REQUESTED AND APPROVED.
11. COMPACTION OF SOIL MUST BE PREVENTED IN AREAS DESIGNATED FOR INFILTRATION CONTROL MEASURES OR WHERE FINAL STABILIZATION WILL BE ACHIEVED BY VEGETATIVE COVER. AREAS DESIGNATED FOR INFILTRATION CONTROL MEASURES SHALL ALSO BE PROTECTED FROM SEDIMENTATION DURING CONSTRUCTION UNTIL FINAL STABILIZATION IS ACHIEVED. IF COMPACTION PREVENTION IS NOT FEASIBLE DUE TO SITE CONSTRAINTS, ALL AREAS DESIGNATED FOR INFILTRATION AND VEGETATION CONTROL MEASURES MUST BE LOOSENEED PRIOR TO INSTALLATION OF THE CONTROL MEASURE(S).
12. ANY TEMPORARY OR PERMANENT FACILITY DESIGNED AND CONSTRUCTED FOR THE CONVEYANCE OF STORMWATER AROUND, THROUGH, OR FROM THE EARTH DISTURBANCE AREA SHALL BE A STABILIZED CONVEYANCE DESIGNED TO MINIMIZE EROSION AND THE DISCHARGE OF SEDIMENT OFF SITE.
13. CONCRETE WASH WATER SHALL BE CONTAINED AND DISPOSED OF IN ACCORDANCE WITH THE SWMP. NO WASH WATER SHALL BE DISCHARGED TO OR ALLOWED TO ENTER STATE WATERS, INCLUDING ANY SURFACE OR SUBSURFACE STORM DRAINAGE SYSTEM OR FACILITIES. CONCRETE WASHOUTS SHALL NOT BE LOCATED IN AN AREA WHERE SHALLOW GROUNDWATER MAY BE PRESENT, OR WITHIN 50 FEET OF A SURFACE WATER BODY, CREEK OR STREAM.
14. DURING DEWATERING OPERATIONS OF UNCONTAMINATED GROUND WATER MAY BE DISCHARGED ON SITE, BUT SHALL NOT LEAVE THE SITE IN THE FORM OF SURFACE RUNOFF UNLESS AN APPROVED STATE DEWATERING PERMIT IS IN PLACE.
15. EROSION CONTROL BLANKETING OR OTHER PROTECTIVE COVERING SHALL BE USED ON SLOPES STEEPER THAN 3:1.
16. CONTRACTOR SHALL BE RESPONSIBLE FOR THE REMOVAL OF ALL WASTES FROM THE CONSTRUCTION SITE FOR DISPOSAL IN ACCORDANCE WITH LOCAL AND STATE REGULATORY REQUIREMENTS. NO CONSTRUCTION DEBRIS, TREE SLASH, BUILDING MATERIAL WASTES OR UNUSED BUILDING MATERIALS SHALL BE BURIED, DUMPED, OR DISCHARGED AT THE SITE.
17. WASTE MATERIALS SHALL NOT BE TEMPORARILY PLACED OR STORED IN THE STREET, ALLEY, OR OTHER PUBLIC WAY, UNLESS IN ACCORDANCE WITH AN APPROVED TRAFFIC CONTROL PLAN. CONTROL MEASURES MAY BE REQUIRED BY EL PASO COUNTY ENGINEERING IF DEEMED NECESSARY, BASED ON SPECIFIC CONDITIONS AND CIRCUMSTANCES.
18. TRACKING OF SOILS AND CONSTRUCTION DEBRIS OFF-SITE SHALL BE MINIMIZED. MATERIALS TRACKED OFF-SITE SHALL BE CLEANED UP AND PROPERLY DISPOSED OF IMMEDIATELY.
19. THE OWNER/DEVELOPER SHALL BE RESPONSIBLE FOR THE REMOVAL OF ALL CONSTRUCTION DEBRIS, DIRT, TRASH, ROCK, SEDIMENT, SOIL, AND SAND THAT MAY ACCUMULATE IN ROADS, STORM DRAINS AND OTHER DRAINAGE CONVEYANCE SYSTEMS AND STORMWATER APPURTENANCES AS A RESULT OF SITE DEVELOPMENT.
20. THE QUANTITY OF MATERIALS STORED ON THE PROJECT SITE SHALL BE LIMITED, AS MUCH AS PRACTICAL, TO THAT QUANTITY REQUIRED TO PERFORM THE WORK IN AN ORDERLY SEQUENCE. ALL MATERIALS STORED ON-SITE SHALL BE STORED IN A NEAT, ORDERLY MANNER, IN THEIR ORIGINAL CONTAINERS, WITH ORIGINAL MANUFACTURER'S LABELS.
21. NO CHEMICAL(S) HAVING THE POTENTIAL TO BE RELEASED IN STORMWATER ARE TO BE STORED OR USED ONSITE UNLESS PERMISSION FOR THE USE OF SUCH CHEMICAL(S) IS GRANTED IN WRITING BY THE ECM ADMINISTRATOR. IN GRANTING APPROVAL FOR THE USE OF SUCH CHEMICAL(S), SPECIAL CONDITIONS AND MONITORING MAY BE REQUIRED.
22. BULK STORAGE OF ALLOWED PETROLEUM PRODUCTS OR OTHER ALLOWED LIQUID CHEMICALS IN EXCESS OF 55 GALLONS SHALL REQUIRE ADEQUATE SECONDARY CONTAINMENT PROTECTION TO CONTAIN ALL SPILLS ONSITE AND TO PREVENT ANY SPILLED MATERIALS FROM ENTERING STATE WATERS, ANY SURFACE OR SUBSURFACE STORM DRAINAGE SYSTEM OR OTHER FACILITIES.
23. NO PERSON SHALL CAUSE THE IMPEDIMENT OF STORMWATER FLOW IN THE CURB AND GUTTER OR DITCH EXCEPT WITH APPROVED SEDIMENT CONTROL MEASURES.
24. OWNER/DEVELOPER AND THEIR AGENTS SHALL COMPLY WITH THE "COLORADO WATER QUALITY CONTROL ACT" (TITLE 25, ARTICLE 8, CRS), AND THE "CLEAN WATER ACT" (33 USC 1344), IN ADDITION TO THE REQUIREMENTS OF THE LAND DEVELOPMENT CODE, DCM VOLUME II AND THE ECM APPENDIX I. ALL APPROPRIATE PERMITS MUST BE OBTAINED BY THE CONTRACTOR PRIOR TO CONSTRUCTION (1041, NPDES, FLOODPLAIN, 404, FUGITIVE DUST, ETC.). IN THE EVENT OF CONFLICTS BETWEEN THESE REQUIREMENTS AND OTHER LAWS, RULES, OR REGULATIONS OF OTHER FEDERAL, STATE, LOCAL, OR COUNTY AGENCIES, THE MOST RESTRICTIVE LAWS, RULES, OR REGULATIONS SHALL APPLY.
25. ALL CONSTRUCTION TRAFFIC MUST ENTER/EXIT THE SITE ONLY AT APPROVED CONSTRUCTION ACCESS POINTS.
26. PRIOR TO CONSTRUCTION THE PERMITTEE SHALL VERIFY THE LOCATION OF EXISTING UTILITIES.
27. A WATER SOURCE SHALL BE AVAILABLE ON SITE DURING EARTHWORK OPERATIONS AND SHALL BE UTILIZED AS REQUIRED TO MINIMIZE DUST FROM EARTHWORK EQUIPMENT AND WIND.
28. THE SOILS REPORT FOR THIS SITE HAS BEEN PREPARED BY ENTECH ENGINEERING, INC. (DATED 04/07/2020) AND SHALL BE CONSIDERED A PART OF THESE PLANS.
29. AT LEAST TEN (10) DAYS PRIOR TO THE ANTICIPATED START OF CONSTRUCTION, FOR PROJECTS THAT WILL DISTURB ONE (1) ACRE OR MORE, THE OWNER OR OPERATOR OF CONSTRUCTION ACTIVITY SHALL SUBMIT A PERMIT APPLICATION FOR STORMWATER DISCHARGE TO THE COLORADO DEPARTMENT OF PUBLIC HEALTH AND ENVIRONMENT, WATER QUALITY DIVISION. THE APPLICATION CONTAINS CERTIFICATION OF COMPLETION OF A STORMWATER MANAGEMENT PLAN (SWMP), OF WHICH THIS GRADING AND EROSION CONTROL PLAN MAY BE A PART. FOR INFORMATION OR APPLICATION MATERIALS CONTACT:

COLORADO DEPARTMENT OF PUBLIC HEALTH AND ENVIRONMENT
WATER QUALITY CONTROL DIVISION
WOOD - PERMITS
4300 CHERRY CREEK DRIVE SOUTH
DENVER, CO 80246-1530
ATTN: PERMITS UNIT

LAYER LINETYPE LEGEND

	EXISTING	PROPOSED
PHASE LINE		
MATCH LINE		
SECTION LINE		
BOUNDARY LINE		
PROPERTY LINE		
EASEMENT LINE		
RIGHT OF WAY		
R.O.W. A LINE		
CENTERLINE		
CITY LIMITS		
WIRE FENCE		
CHAIN LINK FENCE		
WOOD FENCE		
MASONRY FENCE		
GUARDRAIL		
CONC. BARRIER		
CABLE TV		
ELECTRIC		
FIBER OPTIC		
GAS MAIN		
IRRIGATION MAIN		
OIL/PETRO. MAIN		
OVERHEAD UTILITY		
SANITARY SEWER		
STORM DRAIN		
TELEPHONE		
WATER MAIN		
RAW WATER LINE		
SWALE/WATERWAY FLOWLINE		
DIVERSION DITCH		
DIVERSION CHANNEL		
MAJOR DRAINAGE BASIN		
MINOR DRAINAGE BASIN		
TOP OF SLOPE		
TOE OF SLOPE		
EDGE OF WATER		
INDEX CONTOUR		
INTERMEDIATE CONTOUR		
DEPRESSION CONT. (INDEX)		
DEPRESSION CONT. (INTER)		
TOP OF CUTS		
TOE OF FILLS		
CUT AND FILL LINE		
SILT FENCE		
100 YEAR FLOODPLAIN		
500 YEAR FLOODPLAIN		
FLOODWAY		
BASE FLOOD ELEVATION		
EDGE OF WETLANDS		
STONE WALL		
STORMWATER FLOW ARROWS		

UTILITIES LEGEND

	EXISTING	PROPOSED
STORM SEWER		
MANHOLE		
STORM INLET		
AREA INLET - SQUARE		
AREA INLET - ROUND		
FLARED END SECTION		
RIPRAP		
SANITARY SEWER		
LINE MARKER		
SERVICE MARKER		
CLEAN-OUT		
MANHOLE W/ DIRECTIONAL FLOW ARROW		
WATER LINE		
LINE MARKER		
SERVICE MARKER		
FIRE HYDRANT		
FIRE CONNECTION		
MANHOLE		
BEND		
BLOW-OFF VALVE		
WELL		
METER		
VALVE		
REDUCER		
THRUST BLOCK		
CROSS		
PLUG W/ THRUST BLOCK		
TEE		
REVERSE ANCHOR		
ANODE		
AIR & VACUUM VALVE ASSEMBLY		
TRANSMISSION BLOW-OFF ASSEMBLY		
GAS LINE		
MARKER		
SERVICE MARKER		
METER		
VALVE		
PLUG		
TEE		
DRY UTILITIES		
CABLE TV MARKER		
CABLE TELEVISION PEDESTAL		
ELECTRIC MARKER		
ELECTRIC SERVICE MARKER		
ELECTRICAL PEDESTAL		
ELECTRICAL METER		
ELECTRICAL MANHOLE		
FIBER-OPTIC MARKER		
IRRIGATION PEDESTAL		
TELEPHONE MARKER		
TELEPHONE PEDESTAL		
TELEPHONE MANHOLE		
UTILITY POLE		
GUY ANCHOR		
GUY POLE		

STORM WATER MANAGEMENT

STRAW BALE BARRIER	
CONSTRUCTION FENCE	
CONCRETE WASHOUT AREA	
INLET PROTECTION	
LIMITS OF CONSTRUCTION/ DISTURBANCE	
OUTLET PROTECTION	
PERMANENT SEEDING & MULCHING	
SEDIMENT BASIN	
SILT FENCE	
STABILIZED STAGING AREA	
TEMPORARY STOCK PILE	
TEMPORARY SWALE	
VEHICLE TRACKING CONTROL	
EROSION CONTROL BLANKET	
ROUGH CUT STREET CONTROL	
SEDIMENT CONTROL LOG (WATTLE)	
CUT AND FILL LINE	

UNTIL SUCH TIME AS THESE DRAWINGS ARE APPROVED BY THE APPROPRIATE REVIEWING AGENCIES, OR ENGINEERING APPROVES THEIR USE, THESE DRAWINGS ARE DESIGNATED BY WRITTEN AUTHORIZATION.

PREPARED FOR
MONUMENT HILL CM LLC
1864 WOODMOOR DR. STE 100
COLORADO SPRINGS, CO 80920
ATTN: JOE DESJARDIN
719-476-0800

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A Western Company

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Fort Collins 970-491-9888 • www.jrengineering.com

BY	DATE	REVISION	No.	N/A	H-SCALE	V-SCALE	DATE	DESIGNED BY	DRAWN BY	CHECKED BY
							11/11/21	RPD	RPD	

CLOVERLEAF FILING NO. 2

LEGEND & NOTES

FILE NO. SF-21-023

GEC PLANS

SHEET 2 OF 12

JOB NO. 25158.01

ENGINEER'S STATEMENT

PREPARED UNDER MY DIRECT SUPERVISION AND ON BEHALF OF JR ENGINEERING

MIKE A. BRAMLETT, P.E.
COLORADO P.E. 32314
FOR AND ON BEHALF OF JR ENGINEERING, LLC

EPC/PCD 1/31/22

DATE 11/11/21

32314

PROFESSIONAL ENGINEER

11/11/21

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PROFESSIONAL ENGINEER

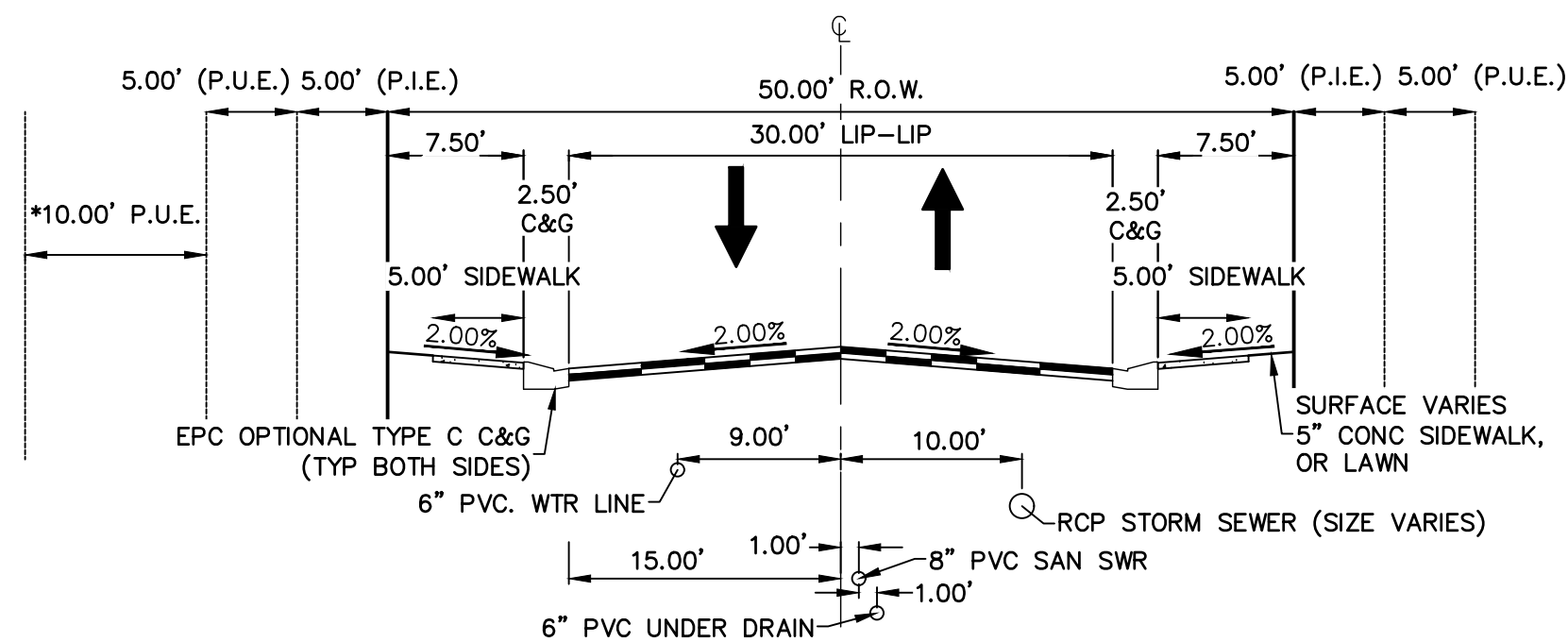
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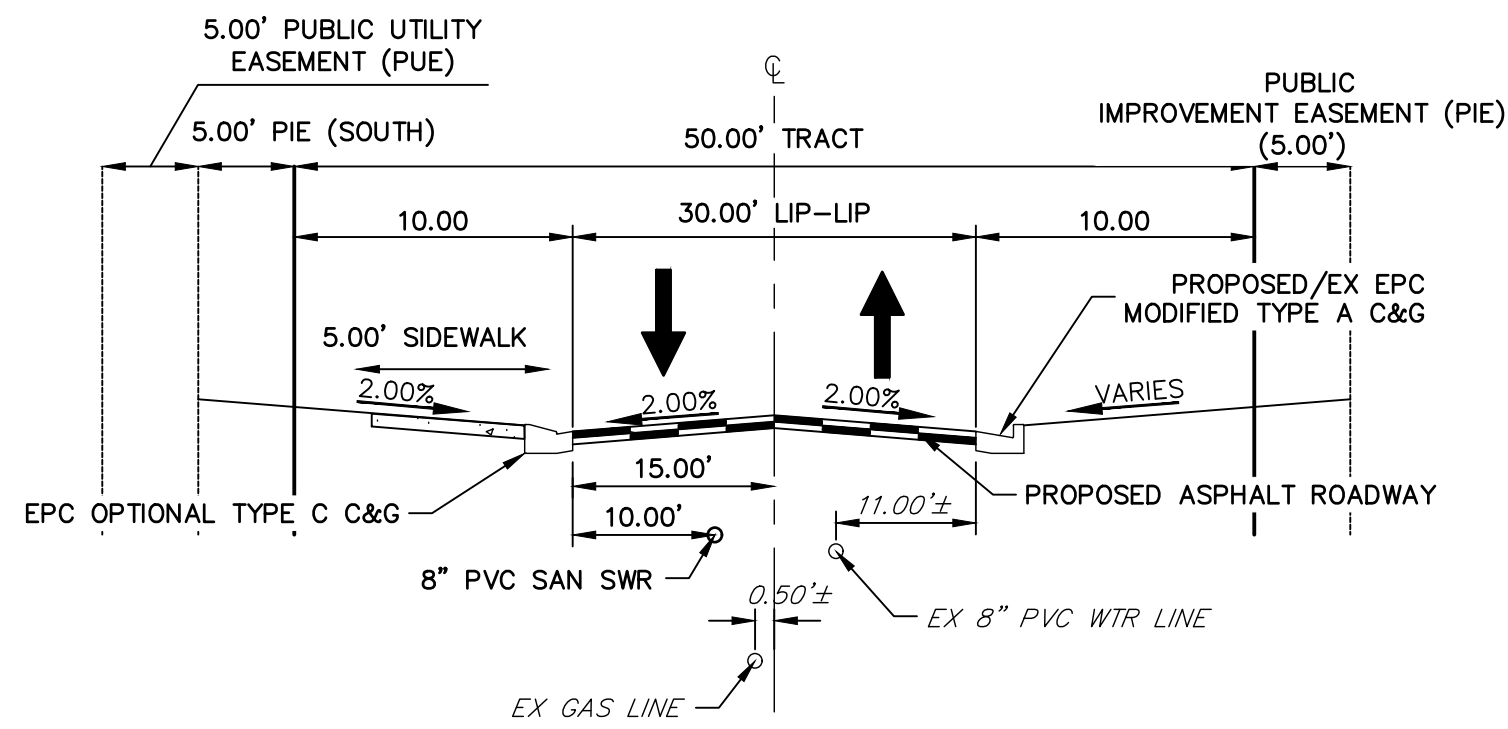
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11/11/21

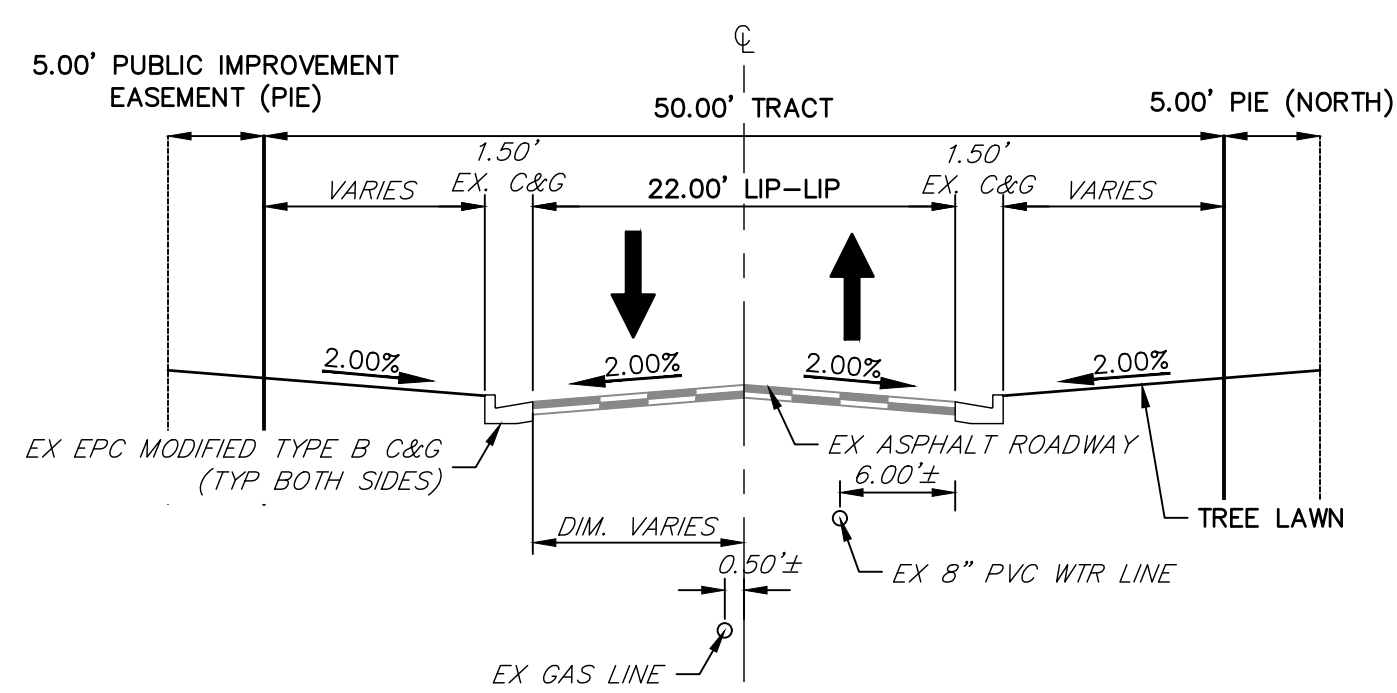
32314



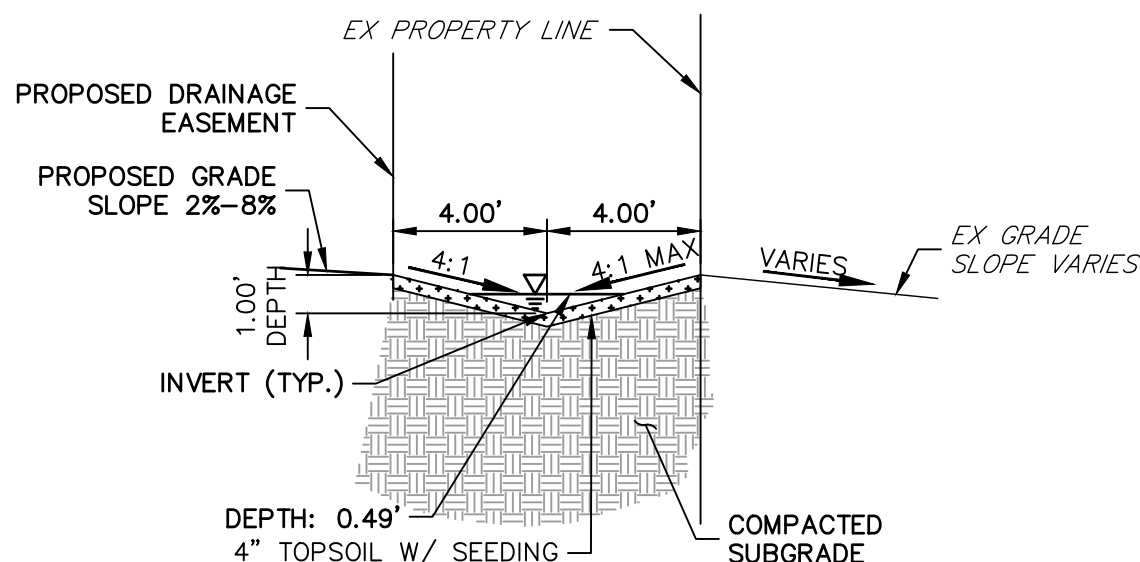
TYPICAL CROSS SECTION
N.T.S. (ALSKE CLOVER CT, CRIMSON CLOVER DR, WHITE CLOVER DRIVE)
(PUBLIC ROAD, URBAN LOCAL, POSTED SPEED LIMIT = 25 MPH)
(*SEE PLAN VIEW FOR 10' PUE LOCATION)



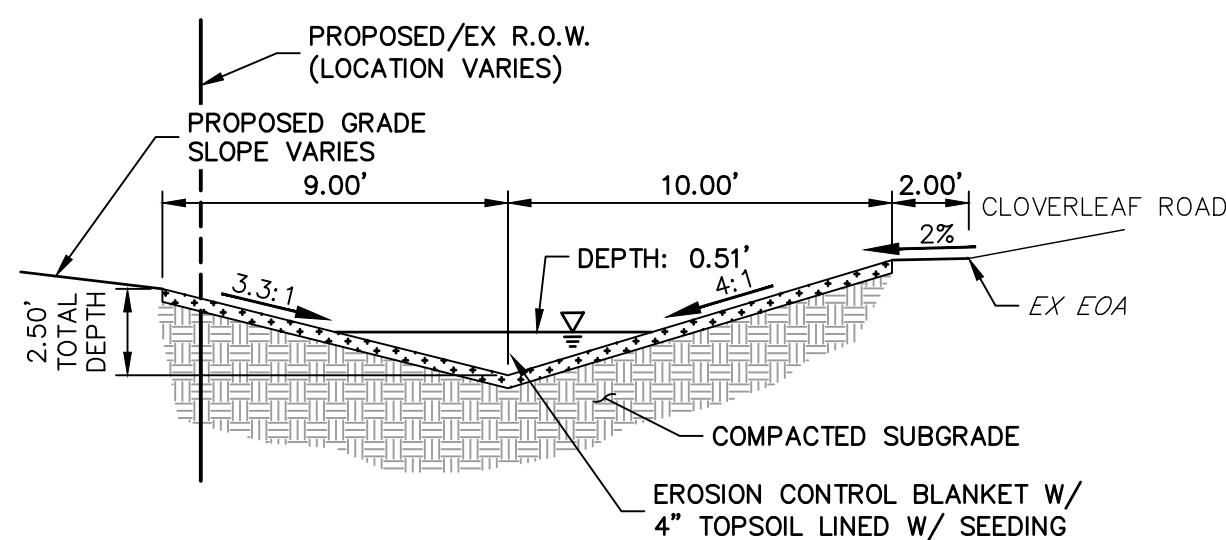
CROSS SECTION - WALTERS POINT
STA: 1+00-5+16.67±
N.T.S. (PRIVATE ROAD, POSTED SPEED LIMIT = 25 MPH)



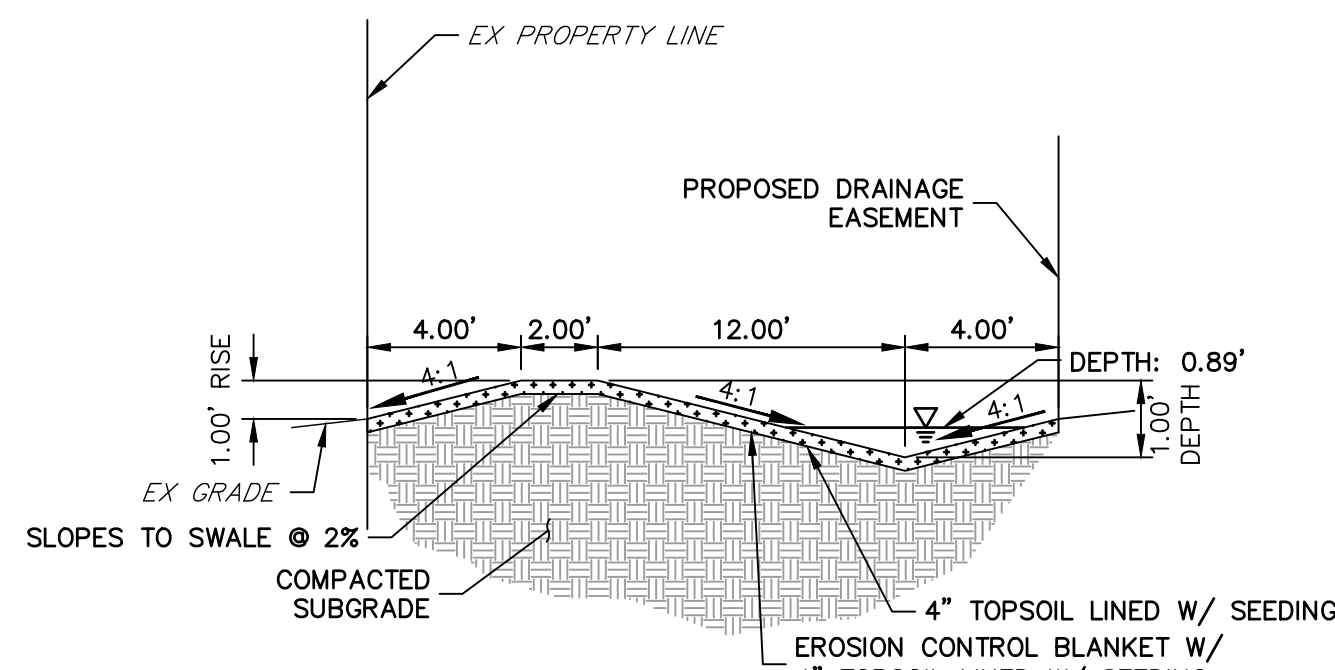
CROSS SECTION - WALTERS POINT
STA: 5+16.67±-7+32
N.T.S. (PRIVATE ROAD, POSTED SPEED LIMIT = 25 MPH)



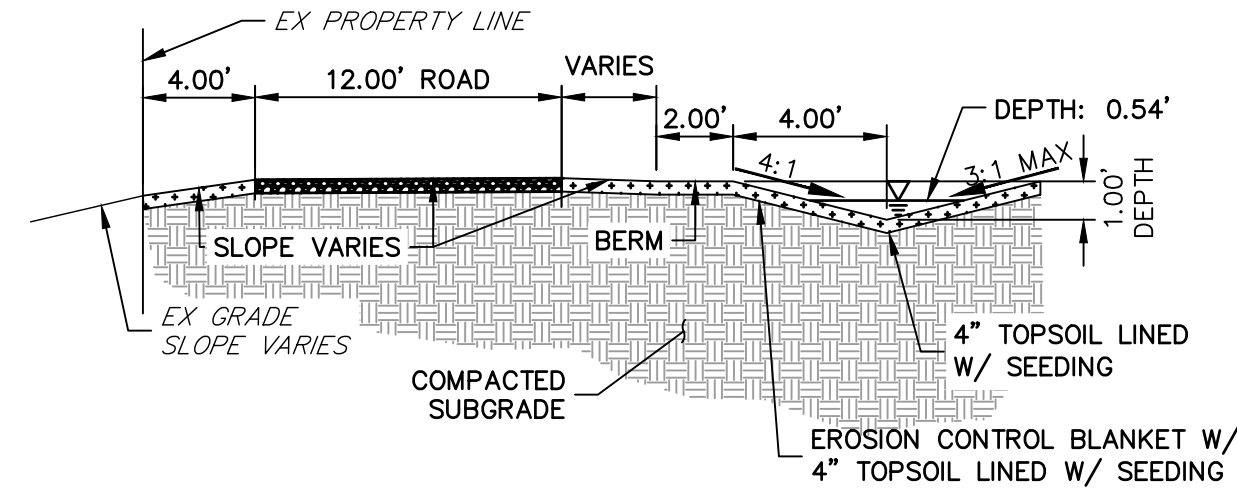
SWALE SECTION SA-SA (LOTS 1-17)
N.T.S.



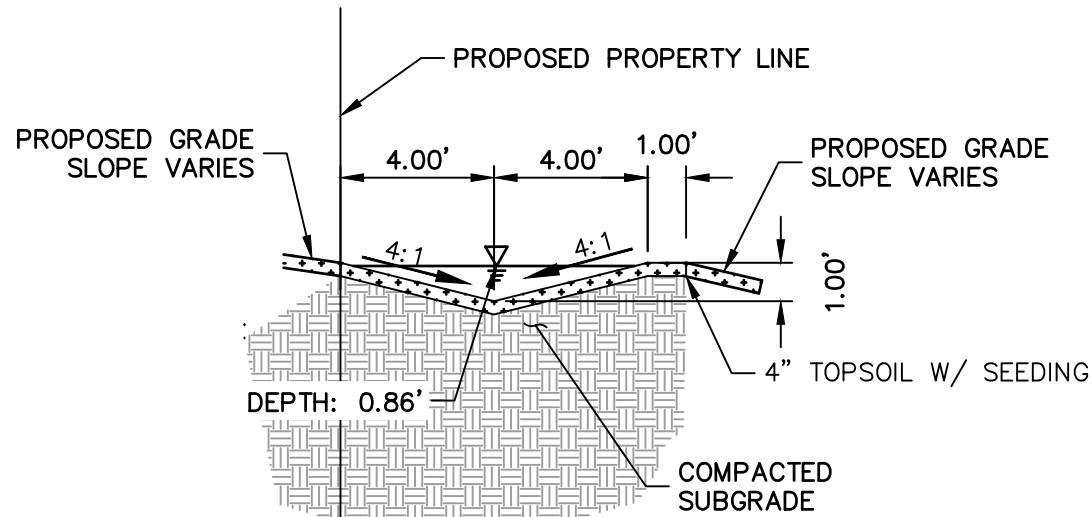
SWALE SECTION SB-SB
N.T.S.



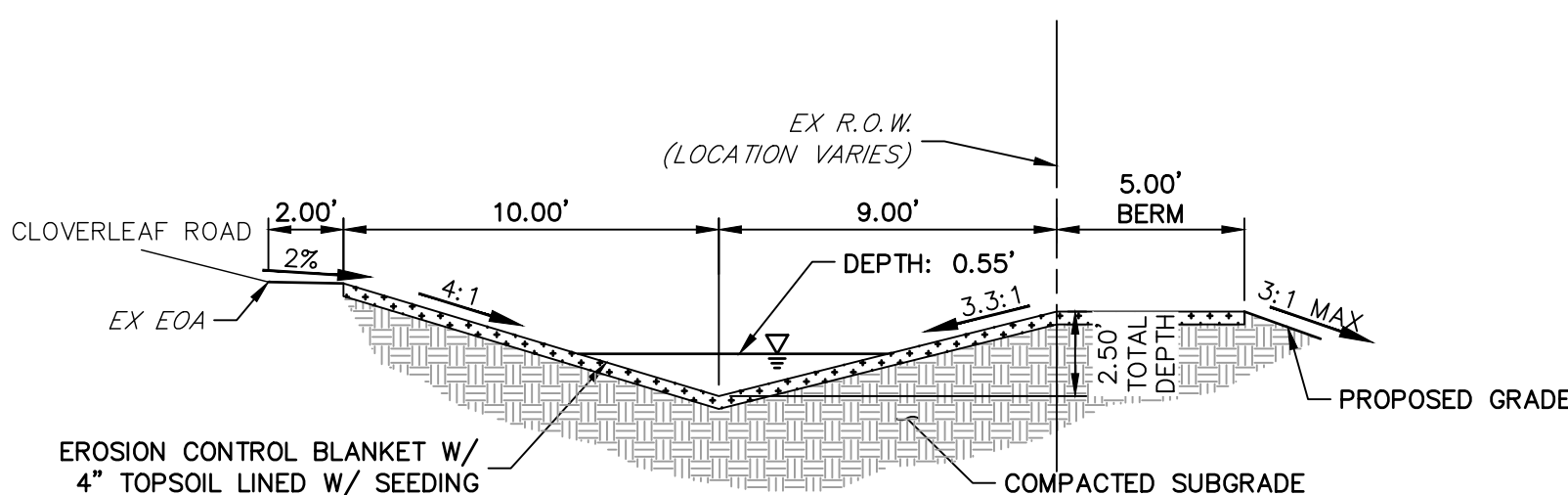
SWALE SECTION SD-SD (LOTS 112-114)
N.T.S.



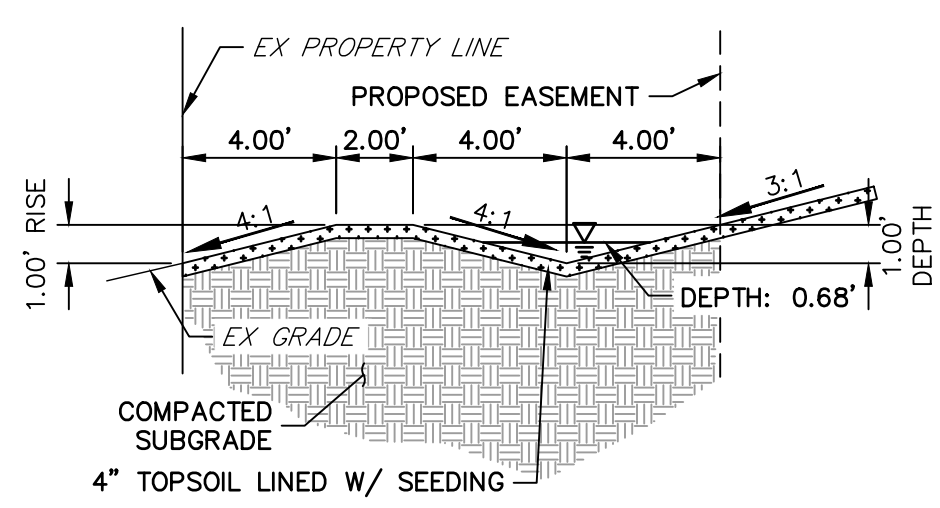
SWALE SECTION SE-SE (WEST OF LOT 132)
N.T.S.



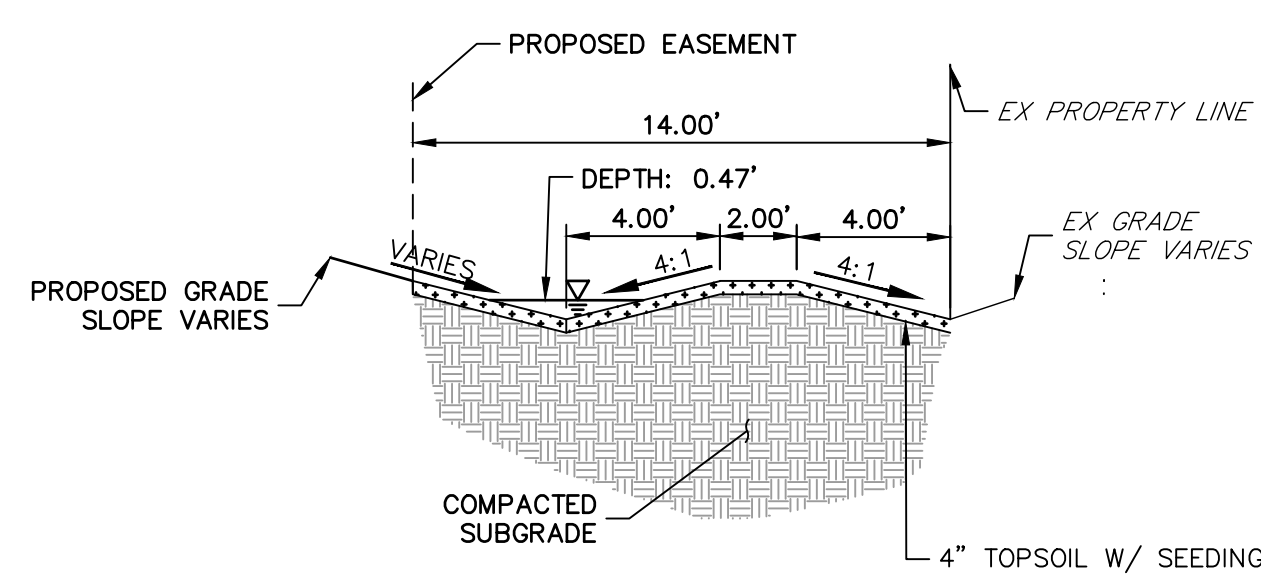
SWALE SECTION SA'-SA' (LOTS 18-21)
N.T.S.



SWALE SECTION SC-SC
N.T.S.



SWALE SECTION SD'-SD' (LOTS 109-111)
N.T.S.



SWALE SECTION SF-SF (LOT 127)
N.T.S.

SWALE NOTES

- SWALE SECTIONS ARE FACING UPSTREAM.
- FLOW DEPTHS ARE FOR THE 100-YEAR CONDITION.
- PROPOSED SWALES WILL BE LOCATED IN EXISTING DRAINAGE EASEMENTS, REAR LOT DRAINAGE EASEMENTS, TRACTS, OR AN ADDITIONAL PROPOSED DRAINAGE EASEMENT WILL BE PROVIDED. DRAINAGE EASEMENTS RESTRICT THE INSTALLATION OF FENCING, STRUCTURES, OR THE STORAGE OF MATERIALS WITHIN THE EASEMENT.
- RETAINING WALLS GREATER THAN 4' IN HEIGHT WILL REQUIRE BUILDING PERMIT.

EPC PCD 1/31/22

ENGINEER'S STATEMENT

PREPARED UNDER MY DIRECT SUPERVISION AND ON BEHALF OF JR ENGINEERING

Mike A. Bramlett, P.E.
COLORADO P.E. 32314
FOR AND ON BEHALF OF JR ENGINEERING, LLC

32314

DATE 11/11/21

CLOVERLEAF FILING NO. 2

TYPICAL SECTIONS
FILE NO. SF-21-023

GEC PLANS

SHEET 3 OF 12

JOB NO. 25158.01

PREPARED FOR

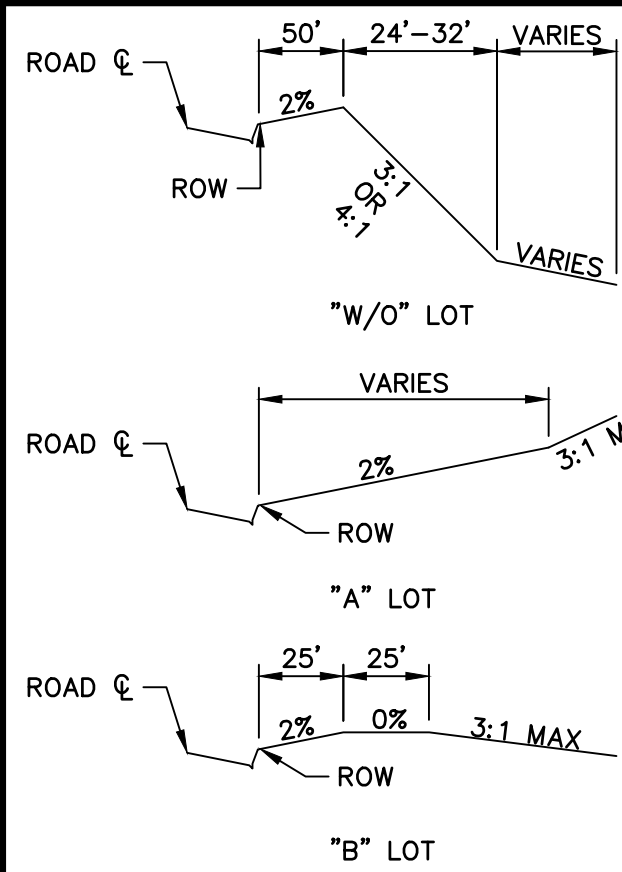
MONUMENT HILL CM LLC
1864 WOODMOOR DR. STE 100
COLORADO SPRINGS, CO 80920
ATTN: JOE DESJARDIN
719-476-0800

J.R. ENGINEERING
A Western Company



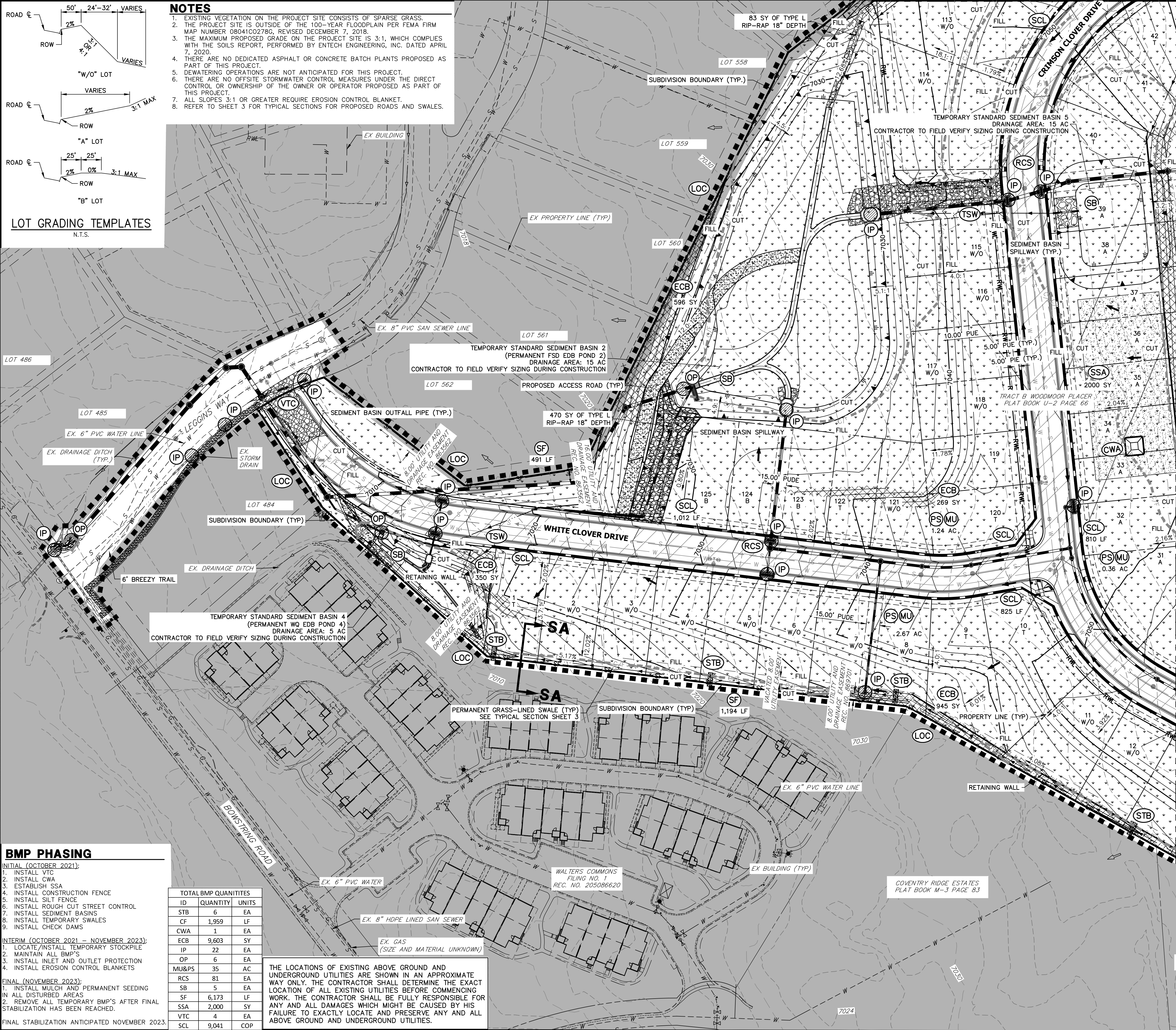
Central 303-740-9888 • Colorado Springs 719-583-2583
Fort Collins 970-491-9888 • www.jrengineering.com

UNTIL SUCH TIME AS
THESE DRAWINGS ARE
APPROVED BY THE
APPROPRIATE REVIEWING
AGENCIES, OR ENGINEERING
APPROVES THEIR USE,
THESE DRAWINGS ARE
DESIGNATED BY WRITTEN
AUTHORIZATION.



LOT GRADING TEMPLATES
N.T.S.

- NOTES**
- EXISTING VEGETATION ON THE PROJECT SITE CONSISTS OF SPARSE GRASS.
 - THE PROJECT SITE IS OUTSIDE OF THE 100-YEAR FLOODPLAIN PER FEMA FIRM MAP NUMBER 08041C0278G, REVISED DECEMBER 7, 2018.
 - THE MAXIMUM PROPOSED GRADE ON THE PROJECT SITE IS 3:1, WHICH COMPLIES WITH THE SOILS REPORT, PERFORMED BY ENTECH ENGINEERING, INC. DATED APRIL 7, 2020.
 - THERE ARE NO DEDICATED ASPHALT OR CONCRETE BATCH PLANTS PROPOSED AS PART OF THIS PROJECT.
 - DEWATERING OPERATIONS ARE NOT ANTICIPATED FOR THIS PROJECT.
 - THERE ARE NO OFFSITE STORMWATER CONTROL MEASURES UNDER THE DIRECT CONTROL OR OWNERSHIP OF THE OWNER OR OPERATOR PROPOSED AS PART OF THIS PROJECT.
 - ALL SLOPES 3:1 OR GREATER REQUIRE EROSION CONTROL BLANKET.
 - REFER TO SHEET 3 FOR TYPICAL SECTIONS FOR PROPOSED ROADS AND SWALES.



BMP PHASING

- INITIAL (OCTOBER 2021):**
- INSTALL VTC
 - INSTALL CWA
 - ESTABLISH SSA
 - INSTALL CONSTRUCTION FENCE
 - INSTALL SILT FENCE
 - INSTALL ROUGH CUT STREET CONTROL
 - INSTALL SEDIMENT BASINS
 - INSTALL TEMPORARY SWALES
 - INSTALL CHECK DAMS
- INTERIM (OCTOBER 2021 – NOVEMBER 2023):**
- LOCATE/INSTALL TEMPORARY STOCKPILE
 - MAINTAIN ALL BMP'S
 - INSTALL INLET AND OUTLET PROTECTION
 - INSTALL EROSION CONTROL BLANKETS
- FINAL (NOVEMBER 2023):**
- INSTALL MULCH AND PERMANENT SEEDING IN ALL DISTURBED AREAS
 - REMOVE ALL TEMPORARY BMP'S AFTER FINAL STABILIZATION HAS BEEN REACHED.
- FINAL STABILIZATION ANTICIPATED NOVEMBER 2023.

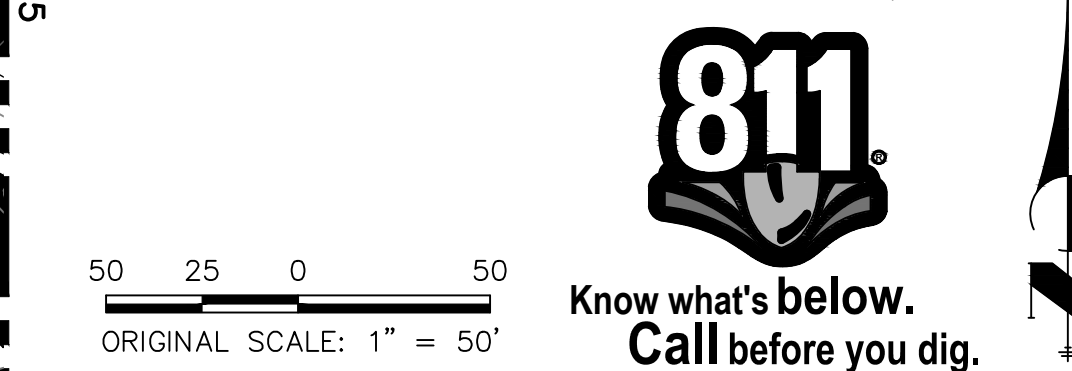
TOTAL BMP QUANTITIES		
ID	QUANTITY	UNITS
STB	6	EA
CF	1,959	LF
CWA	1	EA
ECB	9,603	SY
IP	22	EA
OP	6	EA
MU&PS	35	AC
RCS	81	EA
SB	5	EA
SF	6,173	LF
SSA	2,000	SY
VTC	4	EA
SCL	9,041	COP

THE LOCATIONS OF EXISTING ABOVE GROUND AND UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE WAY ONLY. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK. THE CONTRACTOR SHALL BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE CAUSED BY HIS FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL ABOVE GROUND AND UNDERGROUND UTILITIES.

SEE SHEET 6

LEGEND

- STRAW BALE BARRIER (STB)
- CONSTRUCTION FENCE (CF)
- CONCRETE WASHOUT AREA (CWA)
- INLET PROTECTION (IP)
- LIMITS OF CONSTRUCTION/DISTURBANCE (LOC)
- OUTLET PROTECTION (OP)
- PERMANENT SEEDING & MULCHING (PS/MU)
- SEDIMENT BASIN (SB)
- SILT FENCE (SF)
- STABILIZED STAGING AREA (SSA)
- TEMPORARY STOCK PILE (TSP)
- TEMPORARY SWALE (TSW)
- VEHICLE TRACKING CONTROL (VTC)
- EROSION CONTROL BLANKET (ECB)
- ROUGH CUT STREET CONTROL (RCS)
- SEDIMENT CONTROL LOG (WATTLE) (SCL)
- CUT AND FILL LINE (C/F)



OWNER/DEVELOPER STATEMENT

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

JOE DESJARDIN _____ DATE _____

MONUMENT HILL CM LLC
1864 WOODMOOR DRIVE, SUIT 100
COLORADO SPRINGS, CO 80920

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 PLANS.

Mike A. Bramlett, P.E.
COLORADO P.E. 32314
FOR AND ON BEHALF OF JR ENGINEERING

DATE 11/11/21

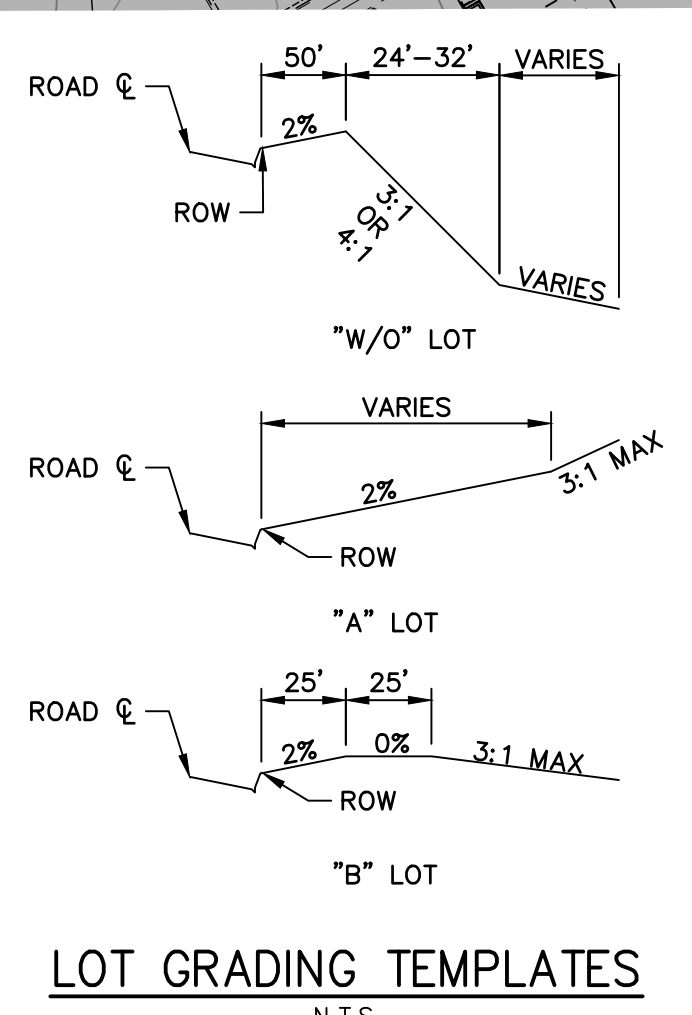
UNTIL SUCH TIME AS THESE DRAWINGS ARE APPROVED BY THE AGENCIES, OR ENGINEERING APPROVES THEIR USES DESIGNATED BY WRITTEN AUTHORIZATION.

PREPARED FOR
MONUMENT HILL CM LLC
1864 WOODMOOR DR. STE 100
COLORADO SPRINGS, CO 80920
ATTN: JOE DESJARDIN
719-476-0800
JDESJARDIN@PROTERRACO.COM

J.R. ENGINEERING
A Western Company
Central 303-740-9383 • Colorado Springs 719-583-2593
Fort Collins 970-491-9888 • www.jrengineering.com

No.	REVISION	BY	DATE
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CLOVERLEAF FILING NO. 2			
SHEET	4	OF	12
GRADING AND EROSION CONTROL PLANS			
GEC PLANS			
JOB NO.	25158.01		



TOTAL BMP QUANTITIES		
ID	QUANTITY	UNITS
STB	6	EA
CF	1,959	LF
CWA	1	EA
ECB	9,603	SY
IP	22	EA
OP	6	EA
MU&PS	35	AC
RCS	81	EA
SB	5	EA
SF	6,173	LF
SSA	2,000	SY
VTC	4	EA
SCL	9,041	COP

NOTES

1. EXISTING VEGETATION ON THE PROJECT SITE CONSISTS OF SPARSE GRASS.
2. THE PROJECT SITE IS OUTSIDE OF THE 100-YEAR FLOODPLAIN PER FEMA FIRM MAP NUMBER 08041C02276, REVISED DECEMBER 7, 2018.
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6. THERE ARE NO OFFSITE STORMWATER CONTROL MEASURES UNDER THE DIRECT CONTROL OR OWNERSHIP OF THE OWNER OR OPERATOR PROPOSED AS PART OF THIS PROJECT.
7. ALL SLOPES 3:1 OR GREATER REQUIRE EROSION CONTROL BLANKET.
8. REFER TO SHEET 3 FOR TYPICAL SECTIONS FOR PROPOSED ROADS AND SWALES.

BMP PHASING

INITIAL (OCTOBER 2021):

1. INSTALL VTC
2. INSTALL CWA
3. ESTABLISH SSA
4. INSTALL CONSTRUCTION FENCE
5. INSTALL Silt FENCE
6. INSTALL ROUGH CUT STREET CONTROL
7. INSTALL SEDIMENT BASINS
8. INSTALL TEMPORARY SWALES
9. INSTALL CHECK DAMS

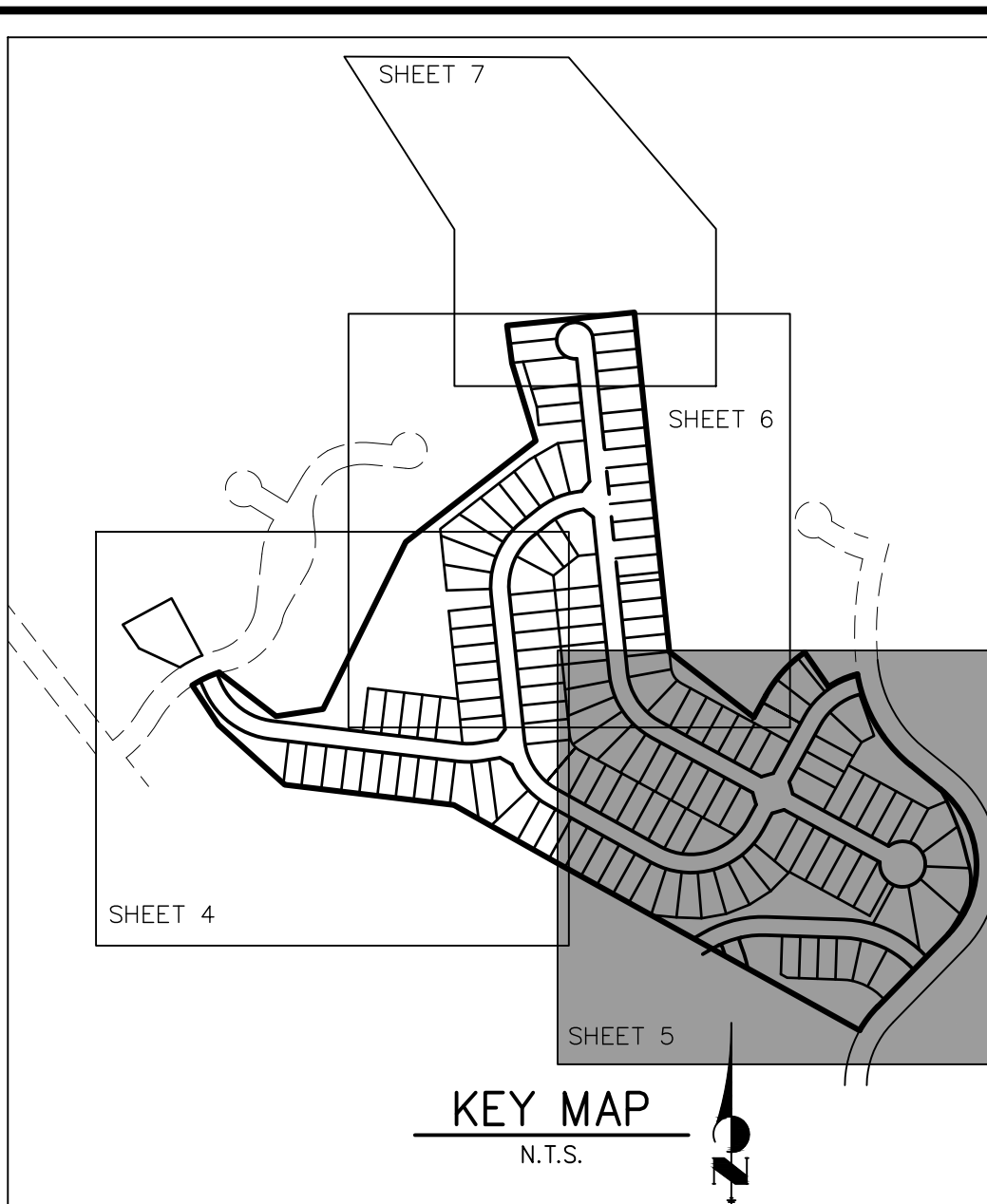
INTERIM (OCTOBER 2021 – NOVEMBER 2023):

1. LOCATE/INSTALL TEMPORARY STOCKPILE
2. INSTALL MAIN A/B BENCHES
3. INSTALL INLET AND OUTLET PROTECTION
4. INSTALL EROSION CONTROL BLANKETS

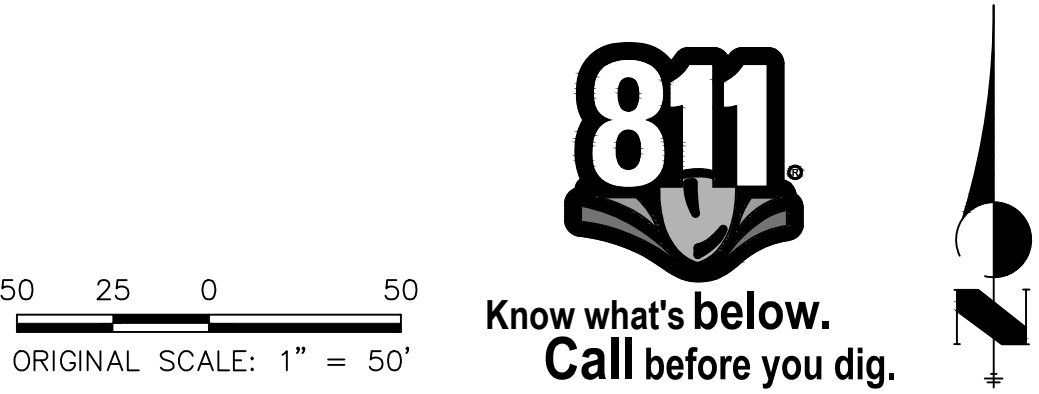
FINAL (NOVEMBER 2023):

1. INSTALL MULCH AND PERMANENT SEEDING IN ALL DISTURBED AREAS
2. REMOVE ALL TEMPORARY BMP'S AFTER FINAL STABILIZATION HAS BEEN REACHED.

FINAL STABILIZATION ANTICIPATED NOVEMBER 2023.



LEGEND		
STRAW BALE BARRIER	(STB)	
CONSTRUCTION FENCE	(CF)	
CONCRETE WASHOUT AREA	(CWA)	
INLET PROTECTION	(IP)	
LIMITS OF CONSTRUCTION/ DISTURBANCE	(LOC)	
OUTLET PROTECTION	(OP)	
PERMANENT SEEDING & MULCHING	(PS) (MU)	
SEDIMENT BASIN	(SB)	
SILT FENCE	(SF)	
STABILIZED STAGING AREA	(SSA)	
TEMPORARY STOCK PILE	(TSP)	
TEMPORARY SWALE	(TSW)	
VEHICLE TRACKING CONTROL	(VTC)	
EROSION CONTROL BLANKET	(ECB)	
ROUGH CUT STREET CONTROL	(RCS)	
SEDIMENT CONTROL LOG (WATTLE)	(SCL)	
CUT AND FILL LINE		



OWNER/DEVELOPER STATEMENT

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

DATE

MONUMENT HILL CM LLC
1864 WOODMOOR DRIVE, SUIT 100
COLORADO SPRINGS, CO 80920

ENGINEER'S STATEMENT

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MIKE A. BRAMLETT, P.E.
COLORADO P.E. 32314
FOR AND ON BEHALF OF JR ENGINEERING, LLC

UNTIL SUCH TIME AS THESE DRAWINGS ARE APPROVED BY THE APPROPRIATE REVIEWING AGENCIES, JR ENGINEERING APPROVES THEIR USE ONLY FOR THE PURPOSES DESIGNATED BY WRITTEN AUTHORIZATION.

PREPARED FOR

MONUMENT HILL CM LLC
1864 WOODMOOR DR. STE 100
COLORADO SPRINGS, CO 80920
ATTN: JOE DESJARDIN
719-476-0800
JDESJARDIN@PROTERRACO.COM

**J•R ENGINEERING**
A Westrian Company

Centennial 303-740-9383 • Colorado Springs 719-550-2593
Fort Collins 970-491-9888 • www.jrengineering.com

[illegible]

H-SCALE	1"=50'	No.
V-SCALE	N/A	
DATE	11/11/21	
DESIGNED BY	RPD	
DRAWN BY	RPD	
CHECKED BY		

JOB NO.	25158.01	SHEET	5	OF	12	CLOVERLEAF FILING NO. 2
						GRADING AND EROSION CONTROL PLANS
						GEC PLANS



TOTAL BMP QUANTITIES		
ID	QUANTITY	UNITS
STB	6	EA
CF	1,959	LF
CWA	1	EA
ECB	9,603	SY
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MU&PS	35	AC
RCS	81	EA
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BMP PHASING

INITIAL (OCTOBER 2021):

1. INSTALL VTC
2. INSTALL CWA
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4. INSTALL CONSTRUCTION FENCE
5. INSTALL SILT FENCE
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8. INSTALL TEMPORARY SWALES
9. INSTALL CHECK DAMS

INTERIM (OCTOBER 2021 – NOVEMBER 2023):

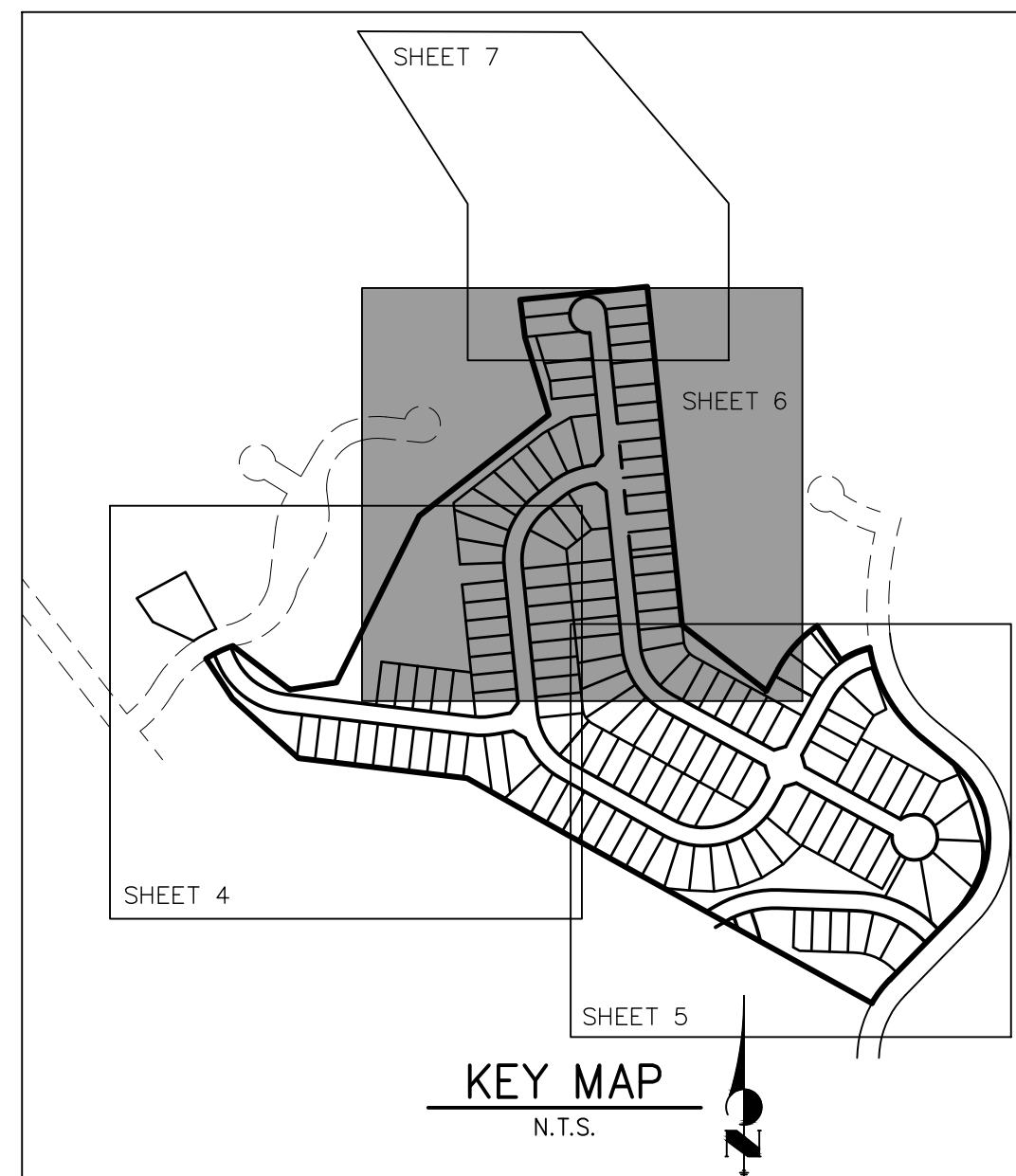
1. LOCATE/INSTALL TEMPORARY STOCKPILE
2. MAINTAIN ALL BMP'S
3. INSTALL INLET AND OUTLET PROTECTION
4. INSTALL EROSION CONTROL BLANKETS

FINAL (NOVEMBER 2023)


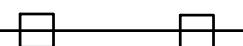




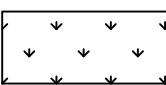


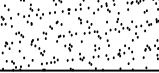


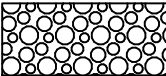




1. INSTALL MULCH AND PERMANENT SEEDING IN ALL DISTURBED AREAS
2. REMOVE ALL TEMPORARY BMP'S AFTER FINAL STABILIZATION HAS BEEN REACHED.

FINAL STABILIZATION ANTICIPATED NOVEMBER 2023

THE LOCATIONS OF EXISTING ABOVE GROUND AND UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE WAY ONLY. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK. THE CONTRACTOR SHALL BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE CAUSED BY HIS FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL ABOVE GROUND AND UNDERGROUND UTILITIES.



LEGEND

STRAW BALE BARRIER	(STB)	
CONSTRUCTION FENCE	(CF)	
CONCRETE WASHOUT AREA	(CWA)	
INLET PROTECTION	(IP)	
LIMITS OF CONSTRUCTION/ DISTURBANCE	(LOC)	
OUTLET PROTECTION	(OP)	
PERMANENT SEEDING & MULCHING	(PS) (MU)	
SEDIMENT BASIN	(SB)	
SILT FENCE	(SF)	
STABILIZED STAGING AREA	(SSA)	
TEMPORARY STOCK PILE	(TSP)	
TEMPORARY SWALE	(TSW)	
VEHICLE TRACKING CONTROL	(VTC)	
EROSION CONTROL BLANKET	(ECB)	
ROUGH CUT STREET CONTROL	(RCS)	
SEDIMENT CONTROL LOG (WATTLE)	(SCL)	
CUT AND FILL LINE		



50 25 0 50
ORIGINAL SCALE: 1" = 50'

Know what's **below**.
Call before you dig.

OWNER/DEVELOPER STATEMENT

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

JOE DESJARDIN _____ DATE _____

MONUMENT HILL CM LLC
1864 WOODMOOR DRIVE, SUIT 100
COLORADO SPRINGS, CO 80920

ENGINEER'S STATEMENT

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MIKE A. BRAMLETT, P.
COLORADO P.E. 32314
FOR AND ON BEHALF

11/11/21

CLOVERLEAF FILING NO. 2

GRADING AND EROSION CONTROL PLANS

GEC PLANS

SHEET 6 OF 12

JOB NO. 25158.01



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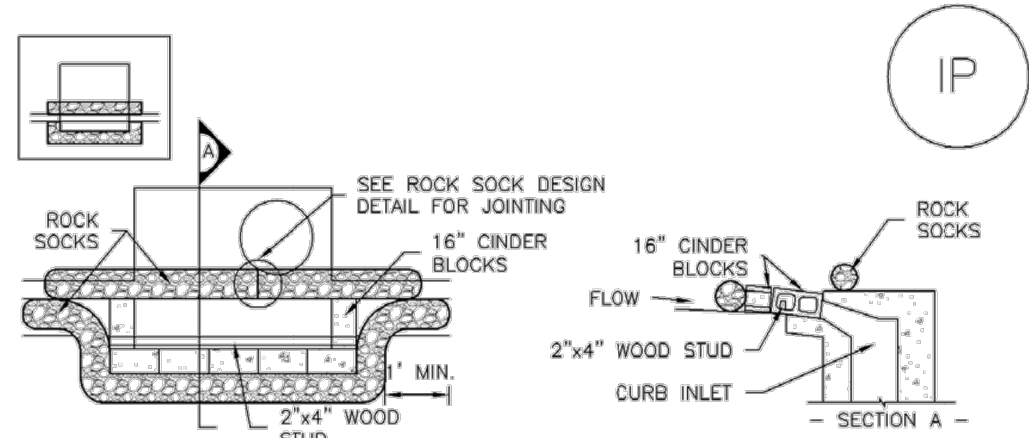
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ONLY FOR THE PURPOSES DESIGNATED BY WRITTEN AUTHORIZATION.

SC-6

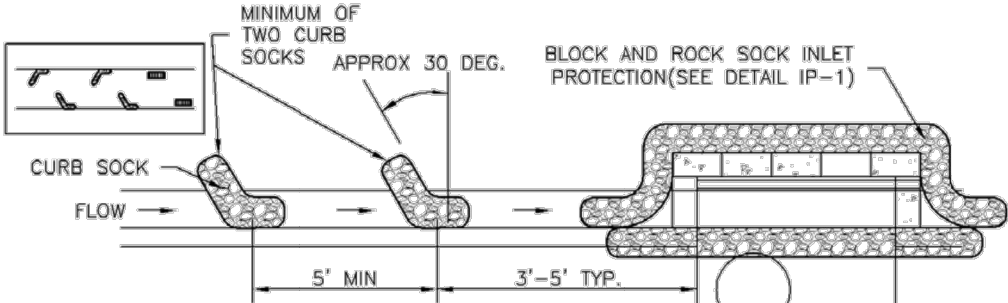
Inlet Protection (IP)



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

BLOCK AND CURB SOCK INLET PROTECTION INSTALLATION NOTES

1. SEE ROCK SOCK DESIGN DETAIL FOR INSTALLATION REQUIREMENTS.
2. CONCRETE "CINDER" BLOCKS SHALL BE LAID ON THEIR SIDES AROUND THE INLET IN A SINGLE ROW, ABUTTING ONE ANOTHER WITH THE OPEN END FACING AWAY FROM THE CURB.
3. GRAVEL BAGS SHALL BE PLACED AROUND CONCRETE BLOCKS, CLOSELY ABUTTING ONE ANOTHER AND JOINED TOGETHER IN ACCORDANCE WITH ROCK SOCK DESIGN DETAIL.



IP-2. CURB ROCK SOCKS UPSTREAM OF INLET PROTECTION

CURB ROCK SOCK INLET PROTECTION INSTALLATION NOTES

1. SEE ROCK SOCK DESIGN DETAIL INSTALLATION REQUIREMENTS.
2. PLACEMENT OF THE SOCK SHALL BE APPROXIMATELY 30 DEGREES FROM PERPENDICULAR IN THE OPPOSITE DIRECTION OF FLOW.
3. SOCKS ARE TO BE FLUSH WITH THE CURB AND SPACED A MINIMUM OF 5 FEET APART.
4. AT LEAST TWO CURB SOCKS IN SERIES ARE REQUIRED UPSTREAM OF ON-GRADE INLETS.

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Inlet Protection (IP)

GENERAL INLET PROTECTION INSTALLATION NOTES

1. SEE PLAN VIEW FOR:
-LOCATION OF INLET PROTECTION.
-TYPE OF INLET PROTECTION (IP-1, IP-2, IP-3, IP-4, IP-5, IP-6)
2. INLET PROTECTION SHALL BE INSTALLED PROMPTLY AFTER INLET CONSTRUCTION OR PAVING IS COMPLETE (TYPICALLY WITHIN 48 HOURS). IF A RAINFALL/RUNOFF EVENT IS FORECAST, INSTALL INLET PROTECTION PRIOR TO ONSET OF EVENT.
3. 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.

INLET PROTECTION 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 INLET PROTECTION SHALL BE REMOVED AS NECESSARY TO MAINTAIN BMP EFFECTIVENESS. TYPICALLY WHEN STORAGE VOLUME REACHES 50% OF CAPACITY, A DEPTH OF 6" WHEN SILT FENCE IS USED, OR 1/4 OF THE HEIGHT FOR STRAW BALES.
5. INLET PROTECTION IS TO REMAIN IN PLACE UNTIL THE UPSTREAM DISTURBED AREA IS PERMANENTLY STABILIZED, UNLESS THE LOCAL JURISDICTION APPROVES EARLIER REMOVAL OF INLET PROTECTION IN STREETS.
6. WHEN INLET PROTECTION AT AREA INLETS IS REMOVED, THE DISTURBED AREA SHALL BE COVERED WITH TOP SOIL, SEEDED AND MULCHED, OR OTHERWISE STABILIZED IN A MANNER APPROVED BY THE LOCAL JURISDICTION.

(DETAIL ADAPTED FROM TOWN OF PARKER, 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.

NOTE: THE DETAILS INCLUDED WITH THIS FACT SHEET SHOW COMMONLY USED, CONVENTIONAL METHODS OF INLET PROTECTION IN THE DENVER METROPOLITAN AREA. THERE ARE MANY PROPRIETARY INLET PROTECTION METHODS ON THE MARKET. UDFCD NEITHER ENDORSES NOR DISCOURAGES USE OF PROPRIETARY INLET PROTECTION; HOWEVER, IN THE EVENT PROPRIETARY METHODS ARE USED, THE APPROPRIATE DETAIL FROM THE MANUFACTURER MUST BE INCLUDED IN THE SUMP AND THE BMP MUST BE INSTALLED AND MAINTAINED AS SHOWN IN THE MANUFACTURER'S DETAILS.

NOTE: SOME MUNICIPALITIES DISCOURAGE OR PROHIBIT THE USE OF STRAW BALES FOR INLET PROTECTION. CHECK WITH LOCAL JURISDICTION TO DETERMINE IF STRAW BALE INLET PROTECTION IS ACCEPTABLE.

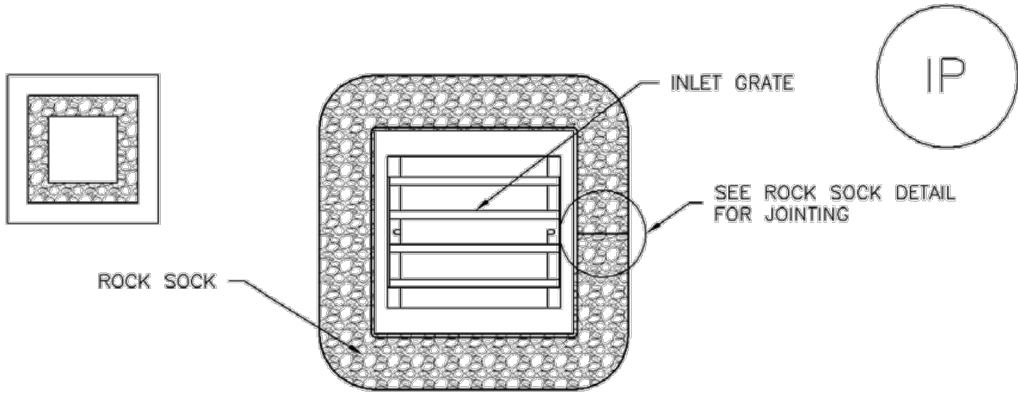
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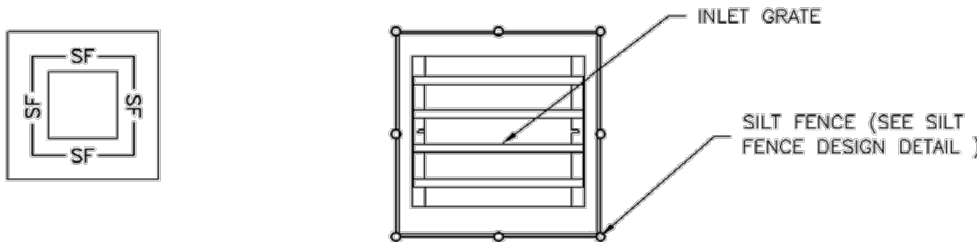
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IP-3. ROCK SOCK SUMP/AREA INLET PROTECTION

ROCK SOCK SUMP/AREA INLET PROTECTION INSTALLATION NOTES

1. SEE ROCK SOCK DESIGN DETAIL FOR INSTALLATION REQUIREMENTS.
2. STRAW WATTLES/SEDIMENT CONTROL LOGS MAY BE USED IN PLACE OF ROCK SOCKS FOR INLETS IN PERVIOUS AREAS. INSTALL PER SEDIMENT CONTROL LOG DETAIL.



IP-4. SILT FENCE FOR SUMP INLET PROTECTION

SILT FENCE INLET PROTECTION INSTALLATION NOTES

1. SEE SILT FENCE DESIGN DETAIL FOR INSTALLATION REQUIREMENTS.
2. POSTS SHALL BE PLACED AT EACH CORNER OF THE INLET AND AROUND THE EDGES AT A MAXIMUM SPACING OF 3 FEET.
3. STRAW WATTLES/SEDIMENT CONTROL LOGS MAY BE USED IN PLACE OF SILT FENCE FOR INLETS IN PERVIOUS AREAS. INSTALL PER SEDIMENT CONTROL LOG DETAIL.

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Mulching (MU)

- Clean, weed-free and seed-free cereal grain straw should be applied evenly at a rate of 2 tons per acre and must be tacked or fastened by a method suitable for the condition of the site. Straw mulch must be anchored (and not merely placed) on the surface. This can be accomplished mechanically by crimping or with the aid of tackifiers or nets. Anchoring with a crimping implement is preferred, and is the recommended method for areas flatter than 3:1. Mechanical crimpers must be capable of tucking the long mulch fibers into the soil to a depth of 3 inches without cutting them. An agricultural disk, while not an ideal substitute, may work if the disk blades are dull or blunted and set vertically; however, the frame may have to be weighted to afford proper soil penetration.
- Grass hay may be used in place of straw; however, because hay is comprised of the entire plant including seed, mulching with hay may seed the site with non-native grass species which might in turn out-compete the native seed. Alternatively, native species of grass hay may be purchased, but can be difficult to find and are more expensive than straw. Purchasing and utilizing a certified weed-free straw is an easier and less costly mulching method. When using grass hay, follow the same guidelines as for straw (provided above).
- On small areas sheltered from the wind and heavy runoff, spraying a tackifier on the mulch is satisfactory for holding it in place. For steep slopes and special situations where greater control is needed, erosion control blankets anchored with stakes should be used instead of mulch.
- Hydraulic mulching consists of wood cellulose fibers mixed with water and a tackifying agent and should be applied at a rate of no less than 1,500 pounds per acre (1,425 lbs of fibers mixed with at least 75 lbs of tackifier) with a hydraulic mulcher. For steeper slopes, up to 2000 pounds per acre may be required for effective hydrosedding. Hydromulch typically requires up to 24 hours to dry; therefore, it should not be applied immediately prior to inclement weather. Application to roads, waterways and existing vegetation should be avoided.
- Erosion control mats, blankets, or nets are recommended to help stabilize steep slopes (generally 3:1 and steeper) and waterways. Depending on the product, these may be used alone or in conjunction with grass or straw mulch. Normally, use of these products will be restricted to relatively small areas. Biodegradable mats made of straw and jute, straw-coconut, coconut fiber, or excelsior can be used instead of mulch. (See the ECM/TRM BMP for more information.)
- Some tackifiers or binders may be used to anchor mulch. Check with the local jurisdiction for allowed tackifiers. Manufacturer's recommendations should be followed at all times. (See the Soil Binder BMP for more information on general types of tackifiers.)
- Rock can also be used as mulch. It provides protection of exposed soils to wind and water erosion and allows infiltration of precipitation. An aggregate base course can be spread on disturbed areas for temporary or permanent stabilization. The rock mulch layer should be thick enough to provide full coverage of exposed soil on the area it is applied.

Maintenance and Removal

After mulching, the bare ground surface should not be more than 10 percent exposed. Reapply mulch, as needed, to cover bare areas.

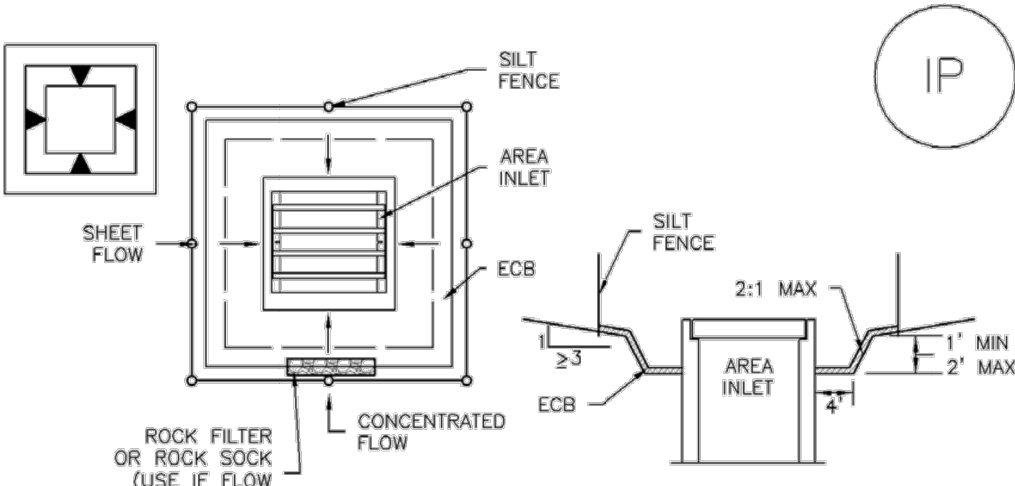
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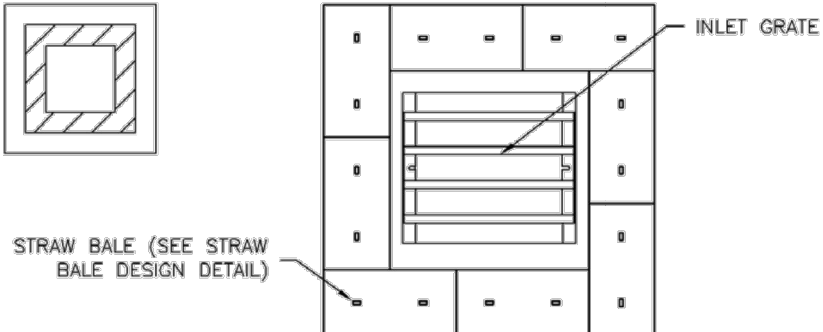
Inlet Protection (IP)



IP-5. OVEREXCAVATION INLET PROTECTION

OVEREXCAVATION INLET PROTECTION INSTALLATION NOTES

1. THIS FORM OF INLET PROTECTION IS PRIMARILY APPLICABLE FOR SITES THAT HAVE NOT YET REACHED FINAL GRADE AND SHOULD BE USED ONLY FOR INLETS WITH A RELATIVELY SMALL CONTRIBUTING DRAINAGE AREA.
2. WHEN USING FOR CONCENTRATED FLOWS, SHAPE BASIN IN 2:1 RATIO WITH LENGTH ORIENTED TOWARDS DIRECTION OF FLOW.
3. SEDIMENT MUST BE PERIODICALLY REMOVED FROM THE OVEREXCAVATED AREA.



IP-6. STRAW BALE FOR SUMP INLET PROTECTION

STRAW BALE BARRIER INLET PROTECTION INSTALLATION NOTES

1. SEE STRAW BALE DESIGN DETAIL FOR INSTALLATION REQUIREMENTS.
2. BALES SHALL BE PLACED IN A SINGLE ROW AROUND THE INLET WITH ENDS OF BALES TIGHTLY ABUTTING ONE ANOTHER.

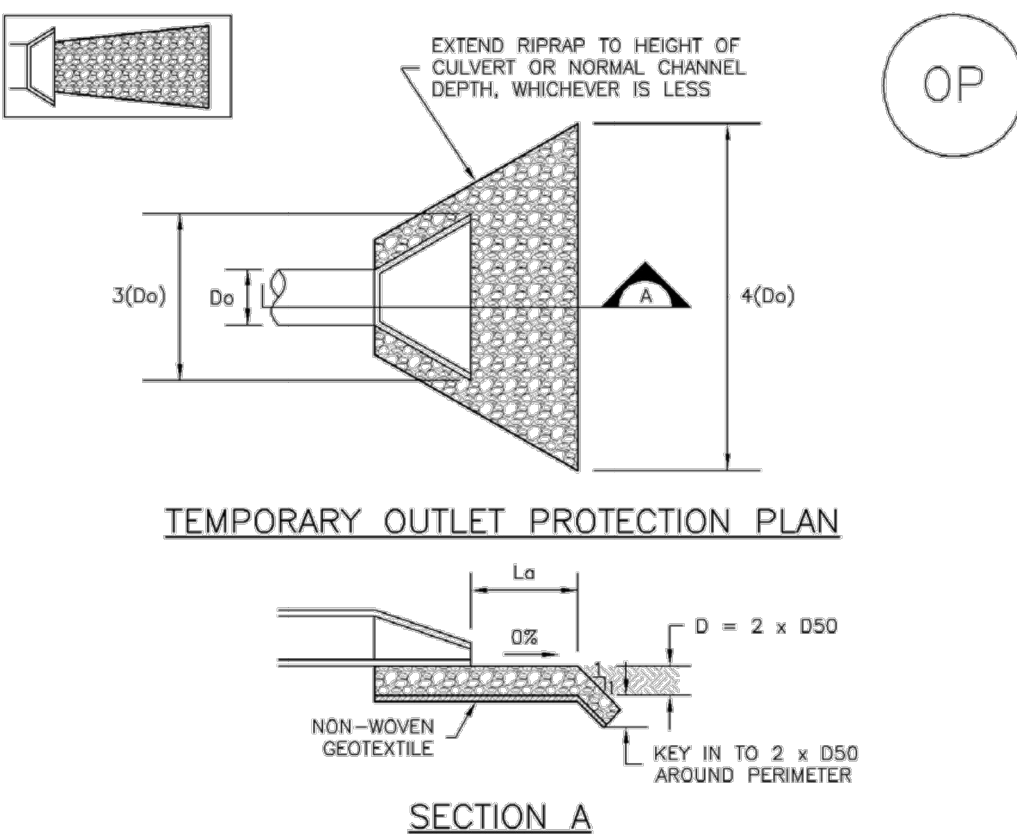
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Temporary Outlet Protection (TOP)



TEMPORARY OUTLET PROTECTION PLAN

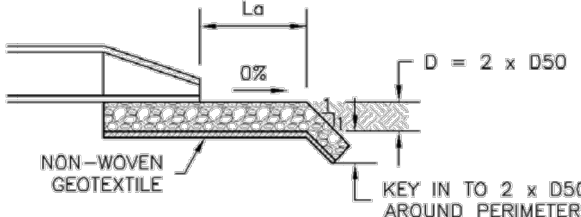


TABLE OP-1. TEMPORARY OUTLET PROTECTION SIZING TABLE				
PIPE DIAMETER, D _o (INCHES)	DISCHARGE, Q (CFS)	APRON LENGTH, L _a (FT)	RIPRAP D ₅₀ DIAMETER MIN (INCHES)	
8	2.5	5	4	6
	5	10	4	6
12	5	10	4	6
	10	10	6	9
	20	16	9	12
	30	23	12	16
18	40	26	16	16
	30	16	9	9
	40	26	9	9
	60	30	12	16

OP-1. TEMPORARY OUTLET PROTECTION

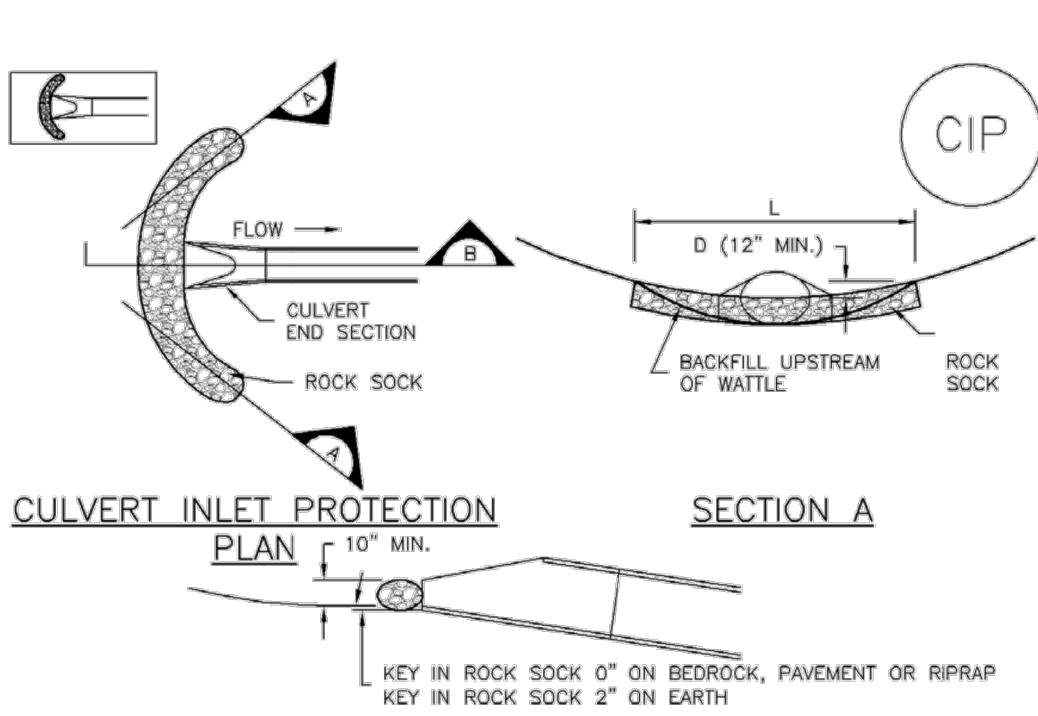
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Inlet Protection (IP)

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CIP-1. CULVERT INLET PROTECTION

CULVERT INLET PROTECTION INSTALLATION NOTES

1. SEE PLAN VIEW FOR:
-LOCATION OF CULVERT INLET PROTECTION.
2. SEE ROCK SOCK DESIGN DETAIL FOR ROCK GRADATION REQUIREMENTS AND JOINING DETAIL.

CULVERT INLET PROTECTION 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 CULVERT SHALL BE REMOVED WHEN THE SEDIMENT DEPTH IS 3/8 THE HEIGHT OF THE ROCK SOCK.
5. CULVERT INLET PROTECTION SHALL REMAIN IN PLACE UNTIL THE UPSTREAM DISTURBED AREA IS PERMANENTLY STABILIZED AND APPROVED BY THE LOCAL JURISDICTION.

(DETAILS ADAPTED FROM 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.

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Temporary Outlet Protection (TOP)

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TEMPORARY OUTLET PROTECTION INSTALLATION NOTES

1. SEE PLAN VIEW FOR:
-LOCATION OF OUTLET PROTECTION.
-DIMENSIONS OF OUTLET PROTECTION.
2. DETAIL IS INTENDED FOR PIPES WITH SLOPE ≤ 10%. ADDITIONAL EVALUATION OF RIPRAP SIZING AND OUTLET PROTECTION DIMENSIONS REQUIRED FOR STEEPER SLOPES.
3. TEMPORARY OUTLET PROTECTION INFORMATION IS FOR OUTLETS INTENDED TO BE UTILIZED LESS THAN 2 YEARS.

TEMPORARY OUTLET PROTECTION INSPECTION AND 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.
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(DETAILS ADAPTED FROM AURORA, COLORADO AND PREVIOUS VERSION OF VOLUME 3, NOT AVAILABLE IN AUTOCAD)

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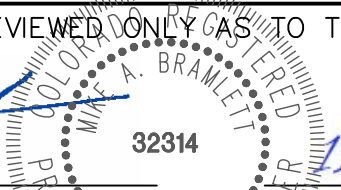


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ENGINEER'S STATEMENT

STANDARD DETAILS SHOWN WERE REVIEWED ONLY AS TO THEIR APPLICATION ON THIS PROJECT

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COLORADO P.E. 32314
FOR AND ON BEHALF OF JR ENGINEERING, LLC



UNTIL SUCH TIME AS THESE DRAWINGS ARE APPROVED BY THE APPROPRIATE REVIEWING AGENCIES, OR ENGINEERING APPROVES THEIR USE, THESE DRAWINGS ARE DESIGNATED BY WRITTEN AUTHORIZATION.

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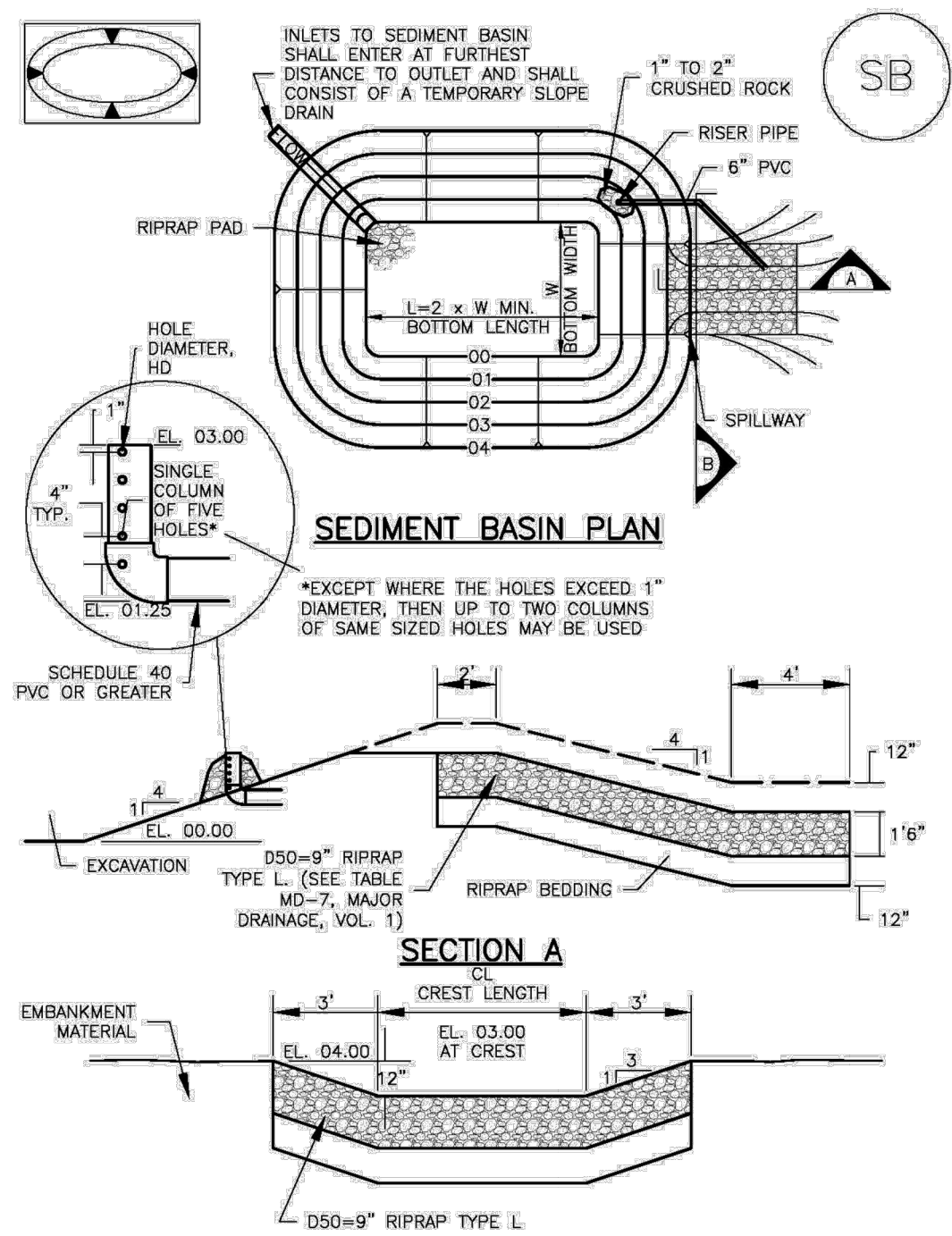
DETAILS
FILE NO. SF-21-023
GEC PLANS

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Sediment Basin (SB)

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SC-1

Silt Fence (SF)

SILT FENCE INSTALLATION NOTES

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

SILT FENCE MAINTENANCE NOTES

1. INSPECT BMPs EACH WORKDAY, AND MAINTAIN THEM IN EFFECTIVE OPERATING CONDITION. MAINTENANCE OF BMPs SHOULD BE PROACTIVE, NOT REACTIVE. INSPECT BMPs AS SOON AS POSSIBLE (AND ALWAYS WITHIN 24 HOURS) FOLLOWING A STORM THAT CAUSES SURFACE EROSION, AND PERFORM NECESSARY MAINTENANCE.
2. FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN BMPs IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.
3. WHERE BMPs HAVE FAILED, REPAIR OR REPLACEMENT SHOULD BE INITIATED UPON DISCOVERY OF THE FAILURE.
4. SEDIMENT ACCUMULATED UPSTREAM OF THE SILT FENCE SHALL BE REMOVED AS NEEDED TO MAINTAIN THE FUNCTIONALITY OF THE BMP. TYPICALLY WHEN DEPTH OF ACCUMULATED SEDIMENTS IS APPROXIMATELY 6".
5. REPAIR OR REPLACE SILT FENCE WHEN THERE ARE SIGNS OF WEAR, SUCH AS SAGGING, Tearing, OR COLLAPSE.
6. SILT FENCE IS TO REMAIN IN PLACE UNTIL THE UPSTREAM DISTURBED AREA IS STABILIZED AND APPROVED BY THE LOCAL JURISDICTION, OR IS REPLACED BY AN EQUIVALENT PERIMETER SEDIMENT CONTROL BMP.
7. WHEN SILT FENCE IS REMOVED, ALL DISTURBED AREAS SHALL BE COVERED WITH TOPSOIL, SEEDED AND MULCHED OR OTHERWISE STABILIZED AS APPROVED BY LOCAL JURISDICTION.

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

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Sediment Basin (SB)

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

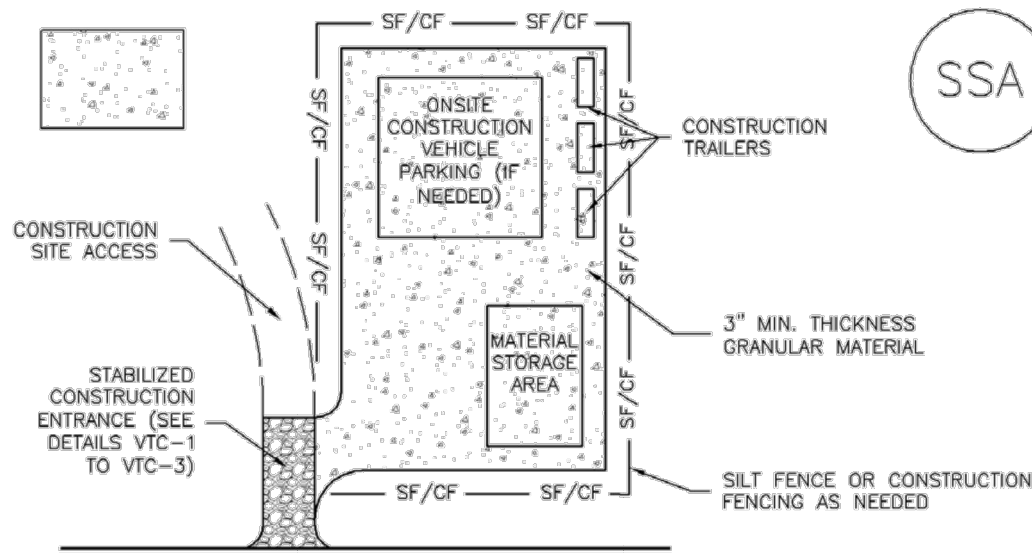
SEDIMENT BASIN INSTALLATION NOTES

1. SEE PLAN VIEW FOR:
 - LOCATION OF SEDIMENT BASIN.
 - TYPE OF BASIN (STANDARD BASIN OR NONSTANDARD BASIN).
 - FOR STANDARD BASIN, BOTTOM WIDTH W, CREST LENGTH CL, AND HOLE DIAMETER, HD.
 - FOR NONSTANDARD BASIN, SEE CONSTRUCTION DRAWINGS FOR DESIGN OF BASIN INCLUDING RISER HEIGHT H, NUMBER OF COLUMNS N, HOLE DIAMETER HD AND PIPE DIAMETER D.
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 ON BASINS AS 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 SCH 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.

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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).
 - 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 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 IF RUTTING OCCURS OR UNDERLYING SUBGRADE BECOMES EXPOSED.

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Sediment Basin (SB)

SC-7

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, SEEDED AND MULCHED OR OTHERWISE STABILIZED AS APPROVED BY LOCAL JURISDICTION.
- (DETAILS ADAPTED FROM DOUGLAS COUNTY, COLORADO)
- NOTE: MANY JURISDICTIONS HAVE BMP DETAILS THAT VARY FROM UDFCD STANDARD DETAILS. CONSULT WITH LOCAL JURISDICTIONS AS TO WHICH DETAIL SHOULD BE USED WHEN DIFFERENCES ARE NOTED.

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SM-6

Stabilized Staging Area (SSA)

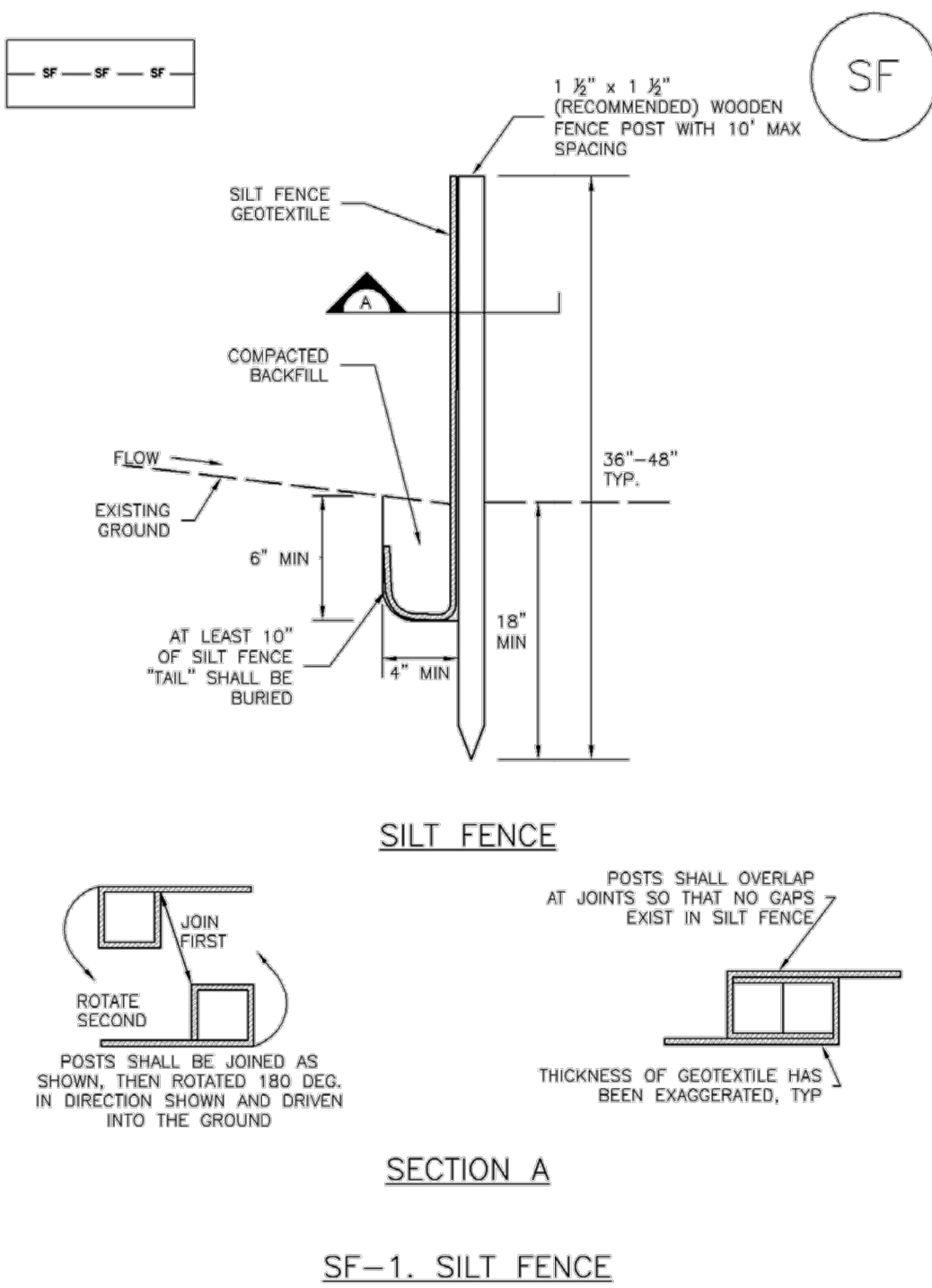
STABILIZED STAGING AREA MAINTENANCE NOTES

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 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)

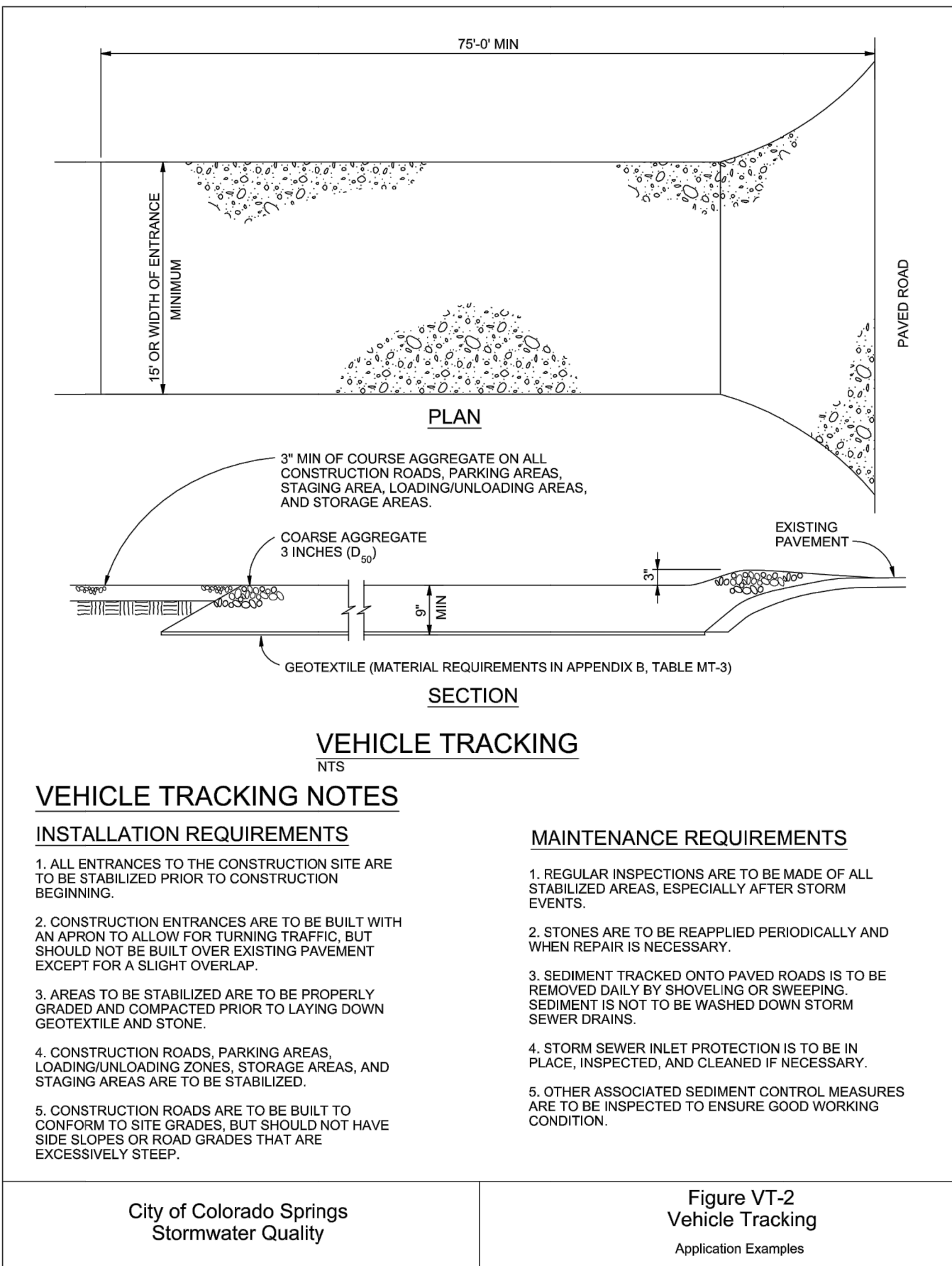
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Silt Fence (SF)

SC-1



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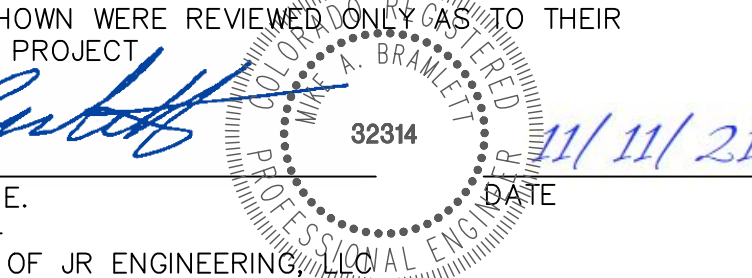
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ENGINEER'S STATEMENT

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Mike A. Bramlett, P.E.
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FOR AND ON BEHALF OF JR ENGINEERING, LLC



BY	DATE	REVISION	No.	H-SCALE	V-SCALE	DATE	DESIGNED BY	DRAWN BY	CHECKED BY
				N/A	N/A	11/11/21	RPD	RPD	
CLOVERLEAF FILING NO. 2									
DETAILS									
FILE NO. SF-21-023									
GEC PLANS									
SHEET 10 OF 12									
JOB NO. 25158.01									

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UNTIL SUCH TIME AS THESE DRAWINGS ARE APPROVED BY THE AGENCIES, OR ENGINEERING APPROVES THEIR USE, THESE DRAWINGS ARE DESIGNATED BY WRITTEN AUTHORIZATION.

Temporary and Permanent Seeding (TS/PS) EC-2

Seeding dates for the highest success probability of perennial species along the Front Range are generally in the spring from April through early May and in the fall after the first of September until the ground freezes. If the area is irrigated, seeding may occur in summer months, as well. See Table TS/PS-3 for appropriate seeding dates.

Table TS/PS-1. Minimum Drill Seeding Rates for Various Temporary Annual Grasses

Species* (Common name)	Growth Season*	Pounds of Pure Live Seed (PLS)/acre*	Planting Depth (inches)
1. Oats	Cool	35 - 50	1 - 2
2. Spring wheat	Cool	25 - 35	1 - 2
3. Spring barley	Cool	25 - 35	1 - 2
4. Annual ryegrass	Cool	10 - 15	½
5. Millet	Warm	3 - 15	½ - ¾
6. Sudangrass	Warm	5-10	½ - ¾
7. Sorghum	Warm	5-10	½ - ¾
8. Winter wheat	Cool	20-35	1 - 2
9. Winter barley	Cool	20-35	1 - 2
10. Winter rye	Cool	20-35	1 - 2
11. Triticale	Cool	25-40	1 - 2

* Successful seeding of annual grass resulting in adequate plant growth will usually produce enough dead-plant residue to provide protection from wind and water erosion for an additional year. This assumes that the cover is not disturbed or mowed closer than 8 inches.

Hydraulic seeding may be substituted for drilling only where slopes are steeper than 3:1 or where access limitations exist. When hydraulic seeding is used, hydraulic mulching should be applied as a separate operation, when practical, to prevent the seeds from being encapsulated in the mulch.

b See Table TS/PS-3 for seeding dates. Irrigation, if consistently applied, may extend the use of cool season species during the summer months.

c Seeding rates should be doubled if seed is broadcast, or increased by 50 percent if done using a Brillion Drill or by hydraulic seeding.

EC-2 Temporary and Permanent Seeding (TS/PS)

Table TS/PS-2. Minimum Drill Seeding Rates for Perennial Grasses

Common ^a Name	Botanical Name	Growth Season ^b	Growth Form	Seeds/ Pound	Pounds of PLS/acre
Alkalali Soil Seed Mix					
Alkali sacaton	<i>Sporobolus airoides</i>	Cool	Bunch	1,750,000	0.25
Basin wildrye	<i>Elymus cinereus</i>	Cool	Bunch	165,000	2.5
Sodar streambank wheatgrass	<i>Agropyron riparium 'Soda'</i>	Cool	Sod	170,000	2.5
Jose tall wheatgrass	<i>Agropyron elongatum 'Jose'</i>	Cool	Bunch	79,000	7.0
Arriba western wheatgrass	<i>Agropyron smithii 'Arriba'</i>	Cool	Sod	110,000	5.5
Total					17.75
Fertile Loamy Soil Seed Mix					
Ephrium crested wheatgrass	<i>Agropyron cristatum 'Ephrium'</i>	Cool	Sod	175,000	2.0
Dural hard fescue	<i>Festuca ovina 'duriuscula'</i>	Cool	Bunch	565,000	1.0
Lincoln smooth brome	<i>Bromus inermis leysii 'Lincoln'</i>	Cool	Sod	130,000	3.0
Sodar streambank wheatgrass	<i>Agropyron riparium 'Soda'</i>	Cool	Sod	170,000	2.5
Arriba western wheatgrass	<i>Agropyron smithii 'Arriba'</i>	Cool	Sod	110,000	7.0
Total					15.5
High Water Table Soil Seed Mix					
Meadow foxtail	<i>Alopecurus pratensis</i>	Cool	Sod	900,000	0.5
Redtop	<i>Agrostis alba</i>	Warm	Open sod	5,000,000	0.25
Reed canarygrass	<i>Phalaris arundinacea</i>	Cool	Sod	68,000	0.5
Lincoln smooth brome	<i>Bromus inermis leysii 'Lincoln'</i>	Cool	Sod	130,000	3.0
Pathfinder switchgrass	<i>Panicum virgatum 'Pathfinder'</i>	Warm	Sod	389,000	1.0
Alkar tall wheatgrass	<i>Agropyron elongatum 'Alkar'</i>	Cool	Bunch	79,000	5.5
Total					10.75
Transition Turf Seed Mix^c					
Ruebans Canadian bluegrass	<i>Poa compressa 'Ruebans'</i>	Cool	Sod	2,500,000	0.5
Dural hard fescue	<i>Festuca ovina 'duriuscula'</i>	Cool	Bunch	565,000	1.0
Citation perennial ryegrass	<i>Lolium perenne 'Citation'</i>	Cool	Sod	247,000	3.0
Lincoln smooth brome	<i>Bromus inermis leysii 'Lincoln'</i>	Cool	Sod	130,000	3.0
Total					7.5

Temporary and Permanent Seeding (TS/PS) EC-2

Table TS/PS-2. Minimum Drill Seeding Rates for Perennial Grasses (cont.)

Common Name	Botanical Name	Growth Season ^a	Growth Form	Seeds/ Pound	Pounds of PLS/acre
Sandy Soil Seed Mix					
Blue grama	<i>Bouteloua gracilis</i>	Warm	Sod-forming bunchgrass	825,000	0.5
Camper little bluestem	<i>Schizachyrium scoparium 'Camper'</i>	Warm	Bunch	240,000	1.0
Prairie sandreed	<i>Calamovilfa longifolia</i>	Warm	Open sod	274,000	1.0
Sand dropseed	<i>Sporobolus cryptandrus</i>	Cool	Bunch	5,298,000	0.25
Vaughn sidecoats grama	<i>Bouteloua curtipendula 'Vaughn'</i>	Warm	Sod	191,000	2.0
Arriba western wheatgrass	<i>Agropyron smithii 'Arriba'</i>	Cool	Sod	110,000	5.5
Total					10.25
Heavy Clay, Rocky Foothill Seed Mix					
Ephrium crested wheatgrass ^d	<i>Agropyron cristatum 'Ephrium'</i>	Cool	Sod	175,000	1.5
Oahe Intermediate wheatgrass	<i>Agropyron intermedium 'Oahe'</i>	Cool	Sod	115,000	5.5
Vaughn sidecoats grama ^e	<i>Bouteloua curtipendula 'Vaughn'</i>	Warm	Sod	191,000	2.0
Lincoln smooth brome	<i>Bromus inermis leysii 'Lincoln'</i>	Cool	Sod	130,000	3.0
Arriba western wheatgrass	<i>Agropyron smithii 'Arriba'</i>	Cool	Sod	110,000	5.5
Total					17.5

^a All of the above seeding mixes and rates are based on drill seeding followed by crimped straw mulch. These rates should be doubled if seed is broadcast and should be increased by 50 percent if the seeding is done using a Brillion Drill or is applied through hydraulic seeding. Hydraulic seeding may be substituted for drilling only where slopes are steeper than 3:1. If hydraulic seeding is used, hydraulic mulching should be done as a separate operation.

^b See Table TS/PS-3 for seeding dates.

^c If site is to be irrigated, the transition turf seed rates should be doubled.

^d Crested wheatgrass should not be used on slopes steeper than 6H to 1V.

^e Can substitute 0.5 lbs PLS of blue grama for the 2.0 lbs PLS of Vaughn sidecoats grama.

EC-2 Temporary and Permanent Seeding (TS/PS)

Table TS/PS-3. Seeding Dates for Annual and Perennial Grasses

Seeding Dates	Annual Grasses (Numbers in table reference species in Table TS/PS-1)		Perennial Grasses	
	Warm	Cool	Warm	Cool
January 1–March 15			✓	✓
March 16–April 30	4	1,2,3	✓	✓
May 1–May 15	4		✓	
May 16–June 30	4,5,6,7			
July 1–July 15	5,6,7			
July 16–August 31				
September 1–September 30		8,9,10,11		
October 1–December 31			✓	✓

Mulch

Cover seeded areas with mulch or an appropriate rolled erosion control product to promote establishment of vegetation. Anchor mulch by crimping, netting or use of a non-toxic tackifier. See the Mulching BMP Fact Sheet for additional guidance.

Maintenance and Removal

Monitor and observe seeded areas to identify areas of poor growth or areas that fail to germinate. Reseed and mulch these areas, as needed.

An area that has been permanently seeded should have a good stand of vegetation within one growing season if irrigated and within three growing seasons without irrigation in Colorado. Reseed portions of the site that fail to germinate or remain bare after the first growing season.

Seeded areas may require irrigation, particularly during extended dry periods. Targeted weed control may also be necessary.

Protect seeded areas from construction equipment and vehicle access.

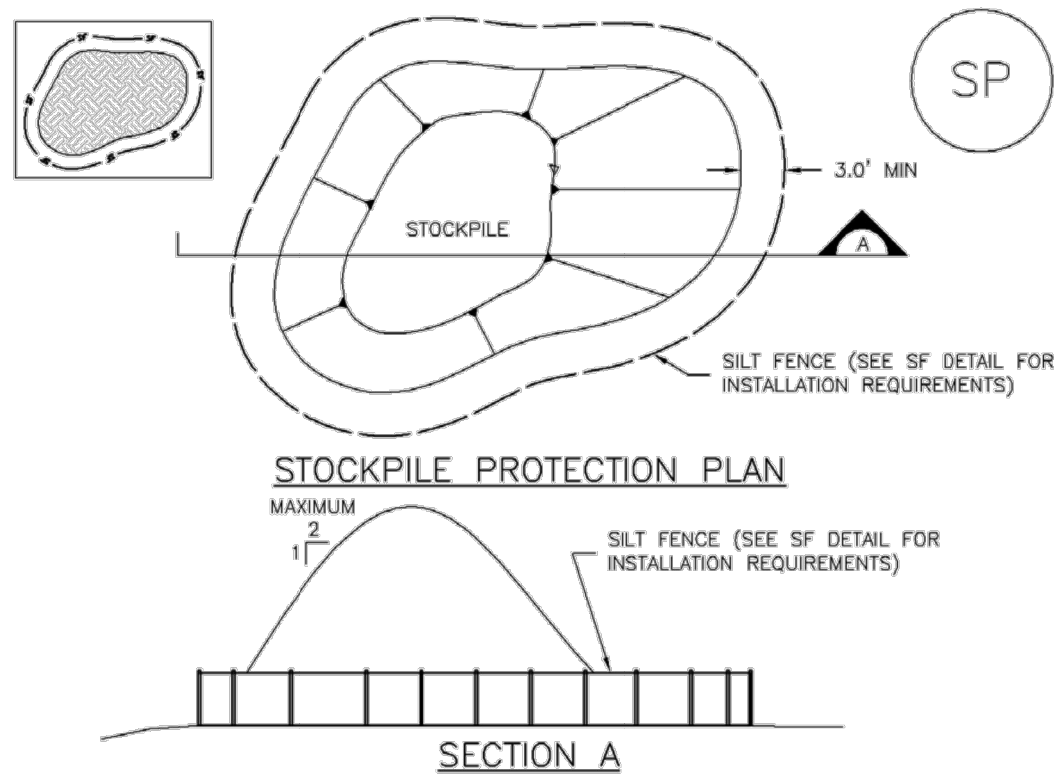
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TS/PS-4 Urban Drainage and Flood Control District June 2012
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June 2012 Urban Drainage and Flood Control District TS/PS-5
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TS/PS-6 Urban Drainage and Flood Control District June 2012
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Stockpile Management (SP) MM-2



- SP-1. STOCKPILE PROTECTION**
- STOCKPILE PROTECTION INSTALLATION NOTES**
- SEE PLAN VIEW FOR:
—LOCATION OF STOCKPILES
—TYPE OF STOCKPILE PROTECTION.
 - INSTALL PERIMETER CONTROLS IN ACCORDANCE WITH THEIR RESPECTIVE DESIGN DETAILS. SILT FENCE IS SHOWN IN THE STOCKPILE PROTECTION DETAILS; HOWEVER, OTHER TYPES OF PERIMETER CONTROLS INCLUDING SEDIMENT CONTROL LOGS OR ROCK SOCKS MAY BE SUITABLE IN SOME CIRCUMSTANCES. CONSIDERATIONS FOR DETERMINING THE APPROPRIATE TYPE OF PERIMETER CONTROL FOR A STOCKPILE INCLUDE WHETHER THE STOCKPILE IS LOCATED ON A PERVIOUS OR IMPERVIOUS SURFACE, THE RELATIVE HEIGHTS OF THE PERIMETER CONTROL AND STOCKPILE, THE ABILITY OF THE PERIMETER CONTROL TO CONTAIN THE STOCKPILE WITHOUT FAILING IN THE EVENT THAT MATERIAL FROM THE STOCKPILE SHIFTS OR SLUMPS AGAINST THE PERIMETER, AND OTHER FACTORS.
 - STABILIZE THE STOCKPILE SURFACE WITH SURFACE ROUGHENING, TEMPORARY SEEDING AND MULCHING, EROSION CONTROL BLANKETS, OR SOIL BINDERS. SOILS STOCKPILED FOR AN EXTENDED PERIOD (TYPICALLY FOR MORE THAN 60 DAYS) SHOULD BE SEEDED AND MULCHED WITH A TEMPORARY GRASS COVER ONCE THE STOCKPILE IS PLACED (TYPICALLY WITHIN 14 DAYS). USE OF MULCH ONLY OR A SOIL BINDER IS ACCEPTABLE IF THE STOCKPILE WILL BE IN PLACE FOR A MORE LIMITED TIME PERIOD (TYPICALLY 30-60 DAYS).
 - FOR TEMPORARY STOCKPILES ON THE INTERIOR PORTION OF A CONSTRUCTION SITE, WHERE OTHER DOWNGRADIENT CONTROLS, INCLUDING PERIMETER CONTROL, ARE IN PLACE, STOCKPILE PERIMETER CONTROLS MAY NOT BE REQUIRED.

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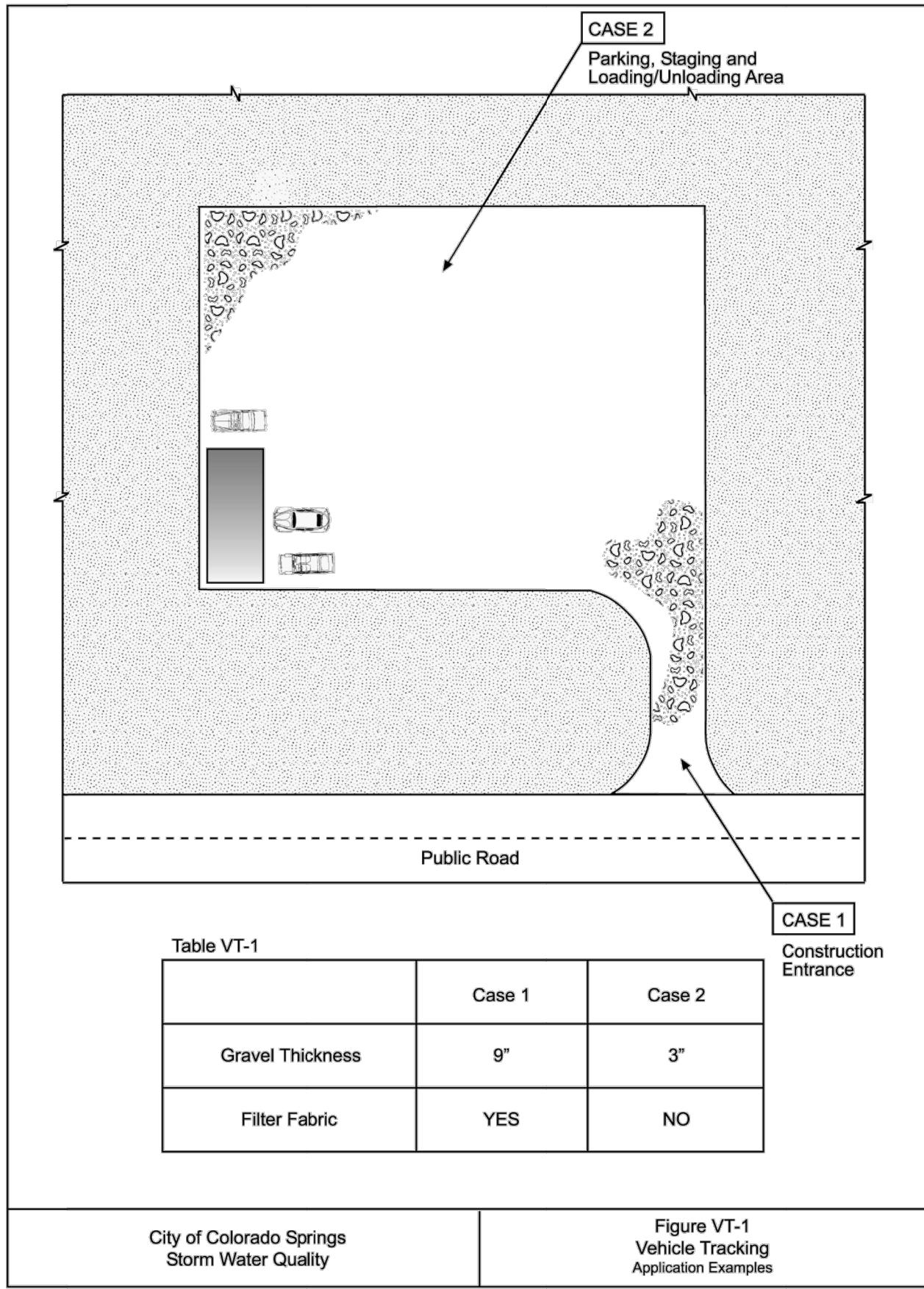
MM-2 Stockpile Management (SM)

STOCKPILE PROTECTION 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.
- STOCKPILE PROTECTION MAINTENANCE NOTES**
- IF PERIMETER PROTECTION MUST BE MOVED TO ACCESS SOIL STOCKPILE, REPLACE PERIMETER CONTROLS BY THE END OF THE WORKDAY.
 - STOCKPILE PERIMETER CONTROLS CAN BE REMOVED ONCE ALL THE MATERIAL FROM THE STOCKPILE HAS BEEN USED.

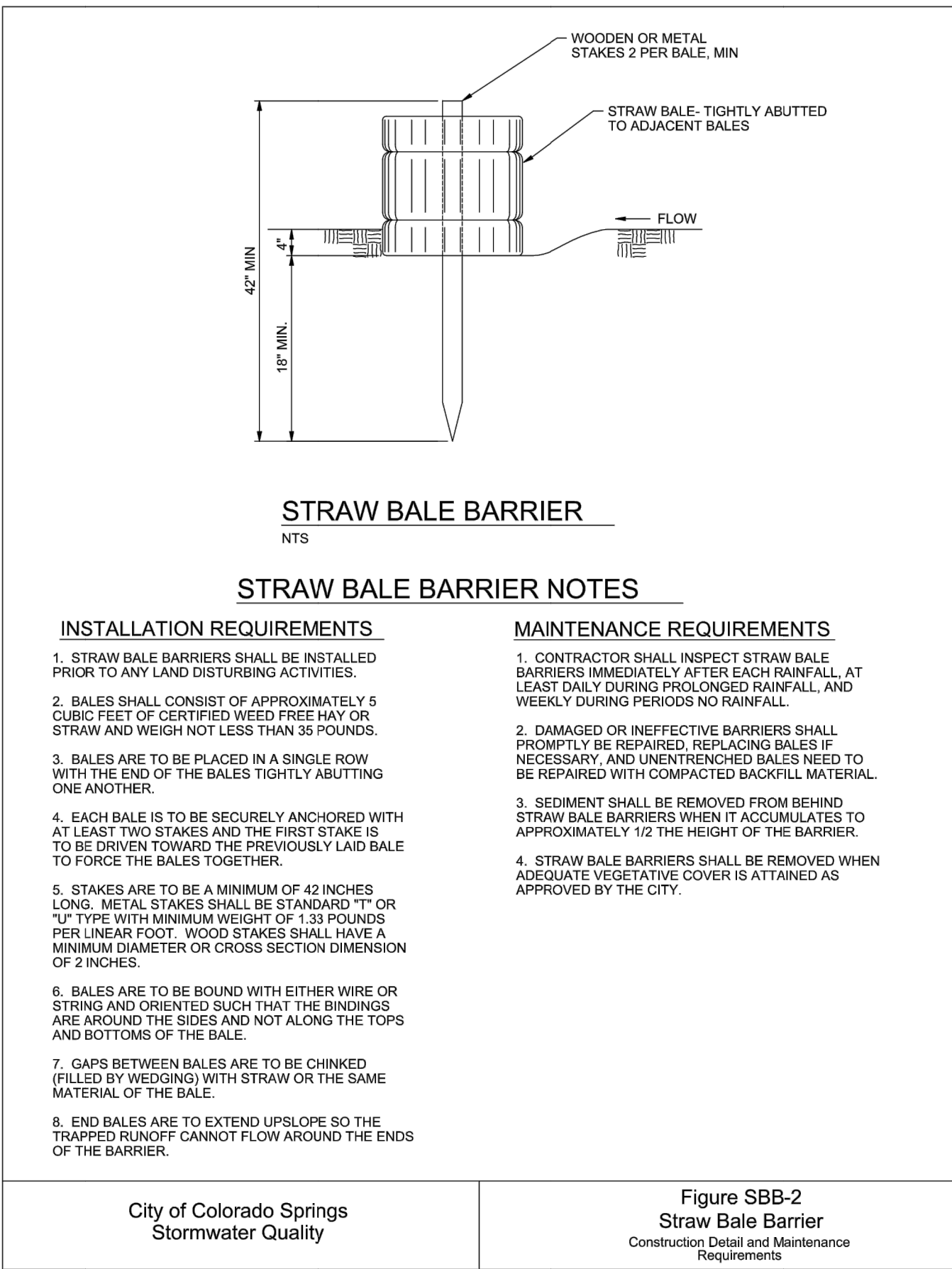
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ENGINEER'S STATEMENT

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FOR AND ON BEHALF OF JR ENGINEERING, LLC



CLOVERLEAF FILING NO. 2

DETAILS
FILE NO. SF-21-023

GEC PLANS

SHEET 11 OF 12

JOB NO. 25158.01

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