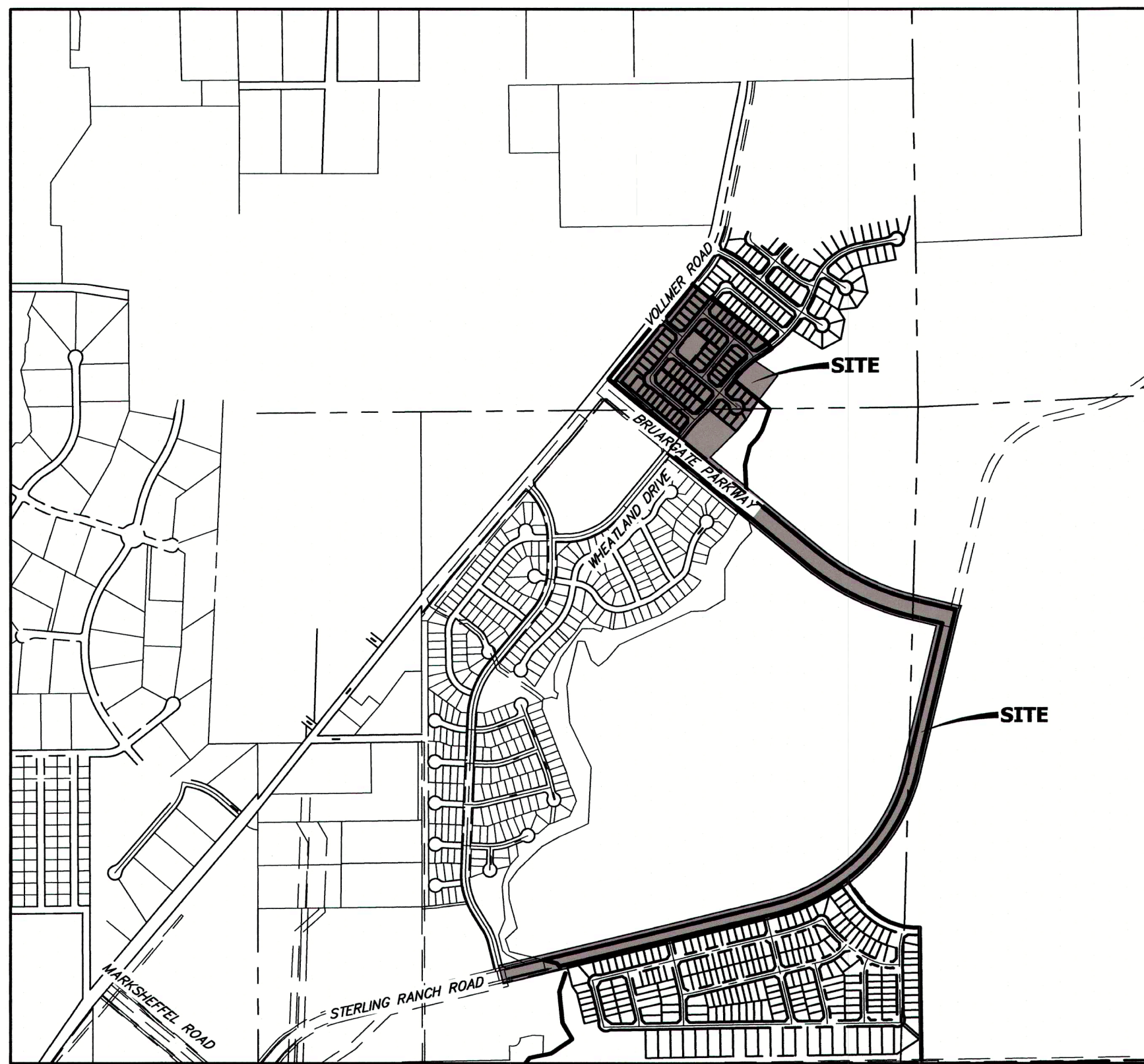


PCD FILING NO.: SP-20-008

- 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. EROSION CONTROL MEASURES SHALL BE INSTALLED 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 ACTIVITIES 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 OR 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 OBTAINED 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 (JULY 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
WQCD - PERMITS
4300 CHERRY CREEK DRIVE SOUTH
DENVER, CO 80246-1530
ATTN: PERMITS UNIT



VICINITY MAP
SCALE : 1"=1,000'

1 COVER
2-7 GRADING PLAN
8-11 DETAIL SHEET

1. ALL DRAINAGE AND ROADWAY CONSTRUCTION SHALL MEET THE STANDARDS AND SPECIFICATIONS OF THE CITY OF COLORADO SPRINGS/EL PASO COUNTY DRAINAGE CRITERIA MANUAL, VOLUMES 1 AND 2, AND THE EL PASO COUNTY ENGINEERING CRITERIA MANUAL.
2. CONTRACTOR SHALL BE RESPONSIBLE FOR THE NOTIFICATION AND FIELD NOTIFICATION OF ALL EXISTING UTILITIES, WHETHER SHOWN ON THE PLANS OR NOT. HISTORY OF EXISTING CONSTRUCTION LOCATION OF EXISTING UTILITIES SHALL BE VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION. CALL 811 TO CONTACT THE UTILITY NOTIFICATION CENTER OF COLORADO (UNCC).
3. CONTRACTOR SHALL KEEP A COPY OF THESE APPROVED PLANS, THE GRADING AND EROSION CONTROL PLAN, THE STORMWATER MANAGEMENT PLAN (SWMP), THE SOIL AND GEOTECHNICAL REPORT, AND THE APPROPRIATE DESIGN AND CONSTRUCTION STANDARDS AND SPECIFICATIONS AT THE JOB SITE AT ALL TIMES, INCLUDING THE FOLLOWING:
 - 3.1. EL PASO COUNTY ENGINEERING CRITERIA MANUAL (ECM)
 - 3.2. CITY OF COLORADO SPRINGS/ EL PASO COUNTY DRAINAGE CRITERIA MANUAL, VOLUMES 1 AND 2
 - 3.3. COLORADO DEPARTMENT OF TRANSPORTATION (CDOT) STANDARD SPECIFICATIONS AND BRIDGE CONSTRUCTION
 - 3.4. CDOT M&S STANDARDS
4. 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 VERSIONS 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. ANY MODIFICATIONS NECESSARY TO MEET CRITERIA AFTER-THE-FACT WILL BE ENTIRELY THE DEVELOPER'S RESPONSIBILITY TO RECTIFY.
5. IT IS THE DESIGN ENGINEER'S RESPONSIBILITY TO ACCURATELY SHOW EXISTING CONDITIONS, BOTH ONSITE AND OFFSITE, ON THE CONSTRUCTION PLANS. ANY MODIFICATIONS NECESSARY DUE TO CONFLICTS, OMISSIONS, OR CHANGED CONDITIONS WILL BE ENTIRELY THE DEVELOPER'S RESPONSIBILITY TO RECTIFY.
6. CONTRACTOR SHALL SCHEDULE A PRE-CONSTRUCTION MEETING WITH EL PASO COUNTY PLANNING AND COMMUNITY DEVELOPMENT INSPECTIONS, PRIOR TO STARTING CONSTRUCTION.
7. IT IS THE CONTRACTOR'S RESPONSIBILITY TO UNDERSTAND THE REQUIREMENTS OF ALL JURISDICTIONAL AGENCIES TO OBTAIN ALL REQUIRED PERMITS, INCLUDING BUT NOT LIMITED TO EL PASO COUNTY EROSION AND STORMWATER QUALITY CONTROL PERMIT (ESQCP), REGIONAL BUILDING FLOODPLAIN DEVELOPMENT PERMIT, U.S. ARMY CORPS OF ENGINEERS-ISSUED 401 AND/OR 404 PERMITS, AND COUNTY AND STATE FUGITIVE DUST PERMITS.
8. CONTRACTOR SHALL NOT DEVIATE FROM THE PLANS WITHOUT FIRST OBTAINING WRITTEN APPROVAL FROM THE DESIGN ENGINEER AND PCO. CONTRACTOR SHALL NOTIFY THE DESIGN ENGINEER IMMEDIATELY UPON DISCOVERY OF ANY ERRORS OR INCONSISTENCIES.
9. CONTRACTOR SHALL COORDINATE GEOTECHNICAL TESTING PER ECM STANDARDS. PAVEMENT DESIGN SHALL BE APPROVED BY EL PASO COUNTY PCO PRIOR TO PLACEMENT OF CURB AND GUTTER AND PAVEMENT.
10. ALL CONSTRUCTION TRAFFIC MUST ENTER/EXIT THE SITE AT APPROVED CONSTRUCTION ACCESS POINTS.
11. SIGHT VISIBILITY TRIANGLES ARE IDENTIFIED IN THE PLANS SHALL BE PROVIDED AT ALL INTERSECTIONS. OBSTRUCTIONS GREATER THAN 18 INCHES ABOVE FLOWLINE ARE NOT ALLOWED IN SIGHT TRIANGLES.
12. SIGNING AND STRIPING SHALL COMPLY WITH EL PASO COUNTY DEPARTMENT OF PUBLIC WORKS AND MUTCD CRITERIA.
13. CONTRACTOR SHALL OBTAIN ANY PERMITS REQUIRED BY EL PASO COUNTY DEPARTMENT OF PUBLIC WORKS, INCLUDING WORK WITHIN THE RIGHT-OF-WAY AND SPECIAL TRANSPORT PERMITS.
14. THE LIMITS OF CONSTRUCTION SHALL REMAIN WITHIN THE PROPERTY LINE UNLESS OTHERWISE NOTED. THE OWNER/DEVELOPER SHALL OBTAIN WRITTEN PERMISSION AND EASEMENTS, WHERE REQUIRED, FROM ADJOINING PROPERTY OWNER(S) PRIOR TO ANY OFF-SITE DISTURBANCE, GRADING, OR CONSTRUCTION.

OWNER/DEVELOPER: SR LAND, LLC
20 BOULDER CRESCENT, SUITE 201
COLORADO SPRINGS, CO 80903
JAMES F. MORLEY (719) 471-1742

CIVIL ENGINEER: JR ENGINEERING, LLC
5475 TECH CENTER DRIVE
COLORADO SPRINGS, CO 80919
MIKE BRAMLETT P.E. (303) 267-6240

COUNTY ENGINEERING: EL PASO COUNTY PLANNING
AND COMMUNITY DEVELOPMENT
2880 INTERNATIONAL CIRCLE, SUITE 110
COLORADO SPRINGS, CO 80910
JEFF RICE, P.E. (719) 520-6300

TRAFFIC ENGINEERING: EL PASO COUNTY DEPARTMENT OF PUBLIC WORKS
3275 AKERS DRIVE
COLORADO SPRINGS, CO 80922
JENNIFER IRVINE, P.E. (719) 520-6460

WATER RESOURCES: STERLING RANCH METRO DISTRICT ENGINEERS
JDS-HYDRO CONSULTANTS
545 E. PIKES PEAK AVE., SUITE 300
COLORADO SPRINGS, CO 80903
JOHN MCGINN (719) 668-8769

FIRE DISTRICT: BLACK FOREST FIRE PROTECTION DISTRICT
11445 TEACHOUT ROAD
COLORADO SPRINGS, CO 80908
CHIEF BRYAN JACK (719) 495-4300

GAS DEPARTMENT: COLORADO SPRINGS UTILITIES
7710 DURANT DR.
COLORADO SPRINGS, CO 80947
TIM WENDT (719) 668-3556

ELECTRIC DEPARTMENT: MOUNTAIN VIEW ELECTRIC
11140 E. WOODMEN ROAD
FALCON, CO 80831
(719) 495-2283

COMMUNICATIONS: QWEST COMMUNICATIONS
(U.N.C.C. LOCATORS) (800) 922-1987
AT&T (LOCATORS) (719) 635-3674

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

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

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


APPROVED
Engineering Department

05/16/2022 2:51:40 PM
dsdniikann

JENNIFER IRVINE, P.E.

COUNTY ENGINEER/ECM ADMINISTRATOR

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


JAMES F. MORLEY

SR LAND, LLC
20 BOULDER CRESCENT, SUITE 201
COLORADO SPRINGS, CO 80903

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

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

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
SR LAND, LLC
20 BOULDER CRESCENT
SUITE 201
COLORADO SPRINGS, CO 80903
JAMES F. MORLEY
(719) 471-1742

J·R ENGINEERING



Centennial 303-740-9393 • Colorado Springs 719-593-2593
Fort Collins 970-491-9888 • www.jengineering.com

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NOI

[illegible]

E	N/A
E	N/A
	01/10/20
BY	BAB
Y	ARJ
BY	

	H-SCALE
	V-SCALE
	DATE
	DESIGNED
	DRAWN BY
	CHECKED

AT		
----	--	--

NORTH
G RANCH
SHEET

ESTEAD
STERLING
COVER

HOMES	
-------	--

SHEET #1 OF 11
JOB NO. 25188.00



Know what's below.
Call before you dig

SEE SHEET # 3

50' SITE VISIBILITY & PUBLIC IMPROVEMENT EASEMENT REC. NO. 218714151

PERMANENT EROSION CONTROL BLANKET V MAX SC250 OR EQUIVALENT

20' ELECTRIC EASEMENT REC. NO. 218054783

25' PUBLIC IMPROVEMENT EASEMENT REC. NO. 218054783 SR COMMERCIAL LLC

WHEATLAND DRIVE

BRIARGATE PARKWAY

WHEATLAND DR.

15'X30' RIPRAP PAD

PROPOSED SEDIMENT BASIN 1

6" PVC RISER PIPE W/ 1 1/2" HOLES SEE DETAIL SHEET #

SAND CREEK 100 YR FLOODPLAIN

SPILLWAY TYPE M RIPRAP C/L

TYPE M RIPRAP

PERMANENT EROSION CONTROL BLANKET V MAX SC250 OR EQUIVALENT

STERLING RANCH FILING NO. 1

TRACT A

TRACT B

TRACT C

RANCH FILING NO. 1 NO. 218714151

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

<div style="display: flex; justify-content: space-between;"> <div> <p>HOMESTEAD NORTH AT STERLING RANCH</p> </div> <div> <p>EARLY GRADING & EROSION CONTROL PLAN</p> </div> </div>	
SHEET	2 OF 44
JOB NO.	25188.00



SEE SHEET # 2

CONSTRUCTION NOTES:

NO WETLANDS ARE TO BE PERMANENTLY DISTURBED PER THIS GRADING PLAN.

NO EARLY GRADING IS TO OCCUR WITHIN THE 100 YEAR FLOODPLAIN.

ALL TEMPORARY RIPRAP SHOWN ON THE PLANS SHALL BE TYPE 'M'. RIPRAP SHALL BE PLACED IN THE LOCATIONS INDICATED BY THE PLAN OR IN AREAS AS THE CONTRACTOR SEES FIT TO CONTROL EROSION. ALL RIPRAP SHALL BE PLACED AT A MINIMUM THICKNESS OF 1.5' DEEP.

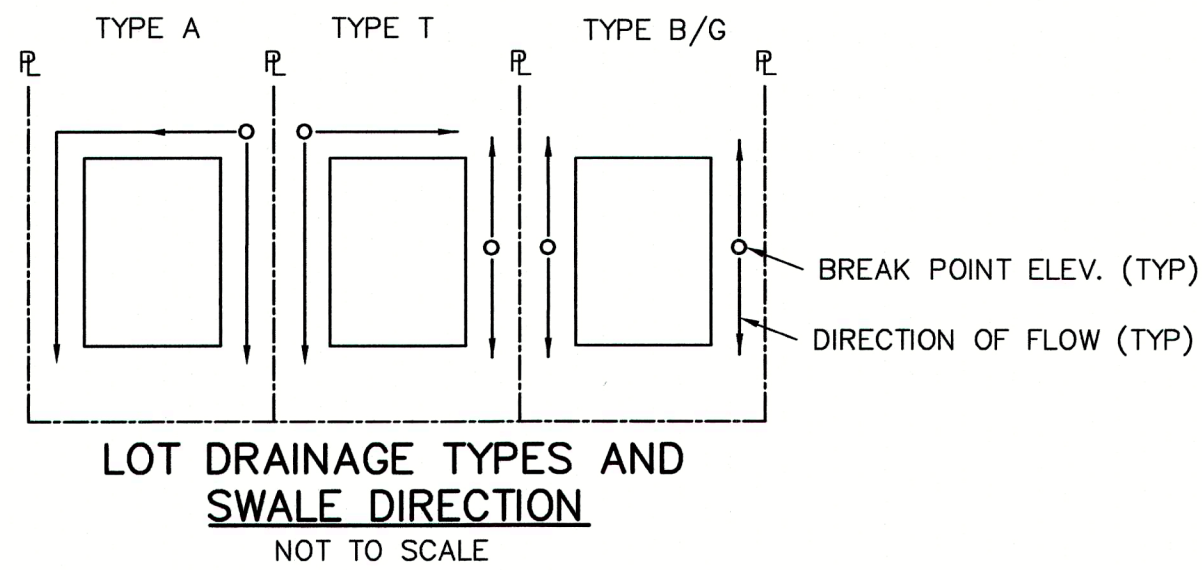
ALL TEMPORARY STORM SEWER SHOWN ON PLANS SHALL BE 24" DIA. HP POLYPROPYLENE BY ADS OR APPROVED EQUAL. ALL PIPE SHALL BE LAID TO ACHIEVE A MIN. SLOPE OF 0.5%.

ADDITIONAL NOTES:

EXISTING VEGETATION: AN AERIAL SURVEY WAS USED TO DETERMINE A 30% COVER OF NATIVE GRASSES.

STAGING AREA & STOCKPILE LOCATION TO BE DETERMINED BY CONTRACTOR IN THE FIELD. THE LOCATIONS SHALL BE DELINEATED ON THIS PLAN BY THE CONTRACTOR.

THE EROSION CONTROL DELINEATED ON THIS PLAN SHALL BE REGULARLY UPDATED BY THE CONTRACTOR.



LOT DRAINAGE TYPES AND SWALE DIRECTION
NOT TO SCALE

LEGEND

EXISTING STORM SEWER

STORM SEWER PROPOSED

PROPOSED R.O.W.

PROPOSED PROPERTY LINE

PROPOSED SIDEWALK

EXISTING PROPERTY LINE

ROW EXISTING

FL EXISTING

SIDEWALK EXISTING

DRAINAGE ACCESS & MAINTENANCE EASEMENT

SILT FENCE

LIMITS OF CONSTRUCTION/DISTURBANCE

EXISTING WETLAND BOUNDARY

EXISTING 100 YEAR FLOODPLAIN

CUT/ FILL

TEMPORARY DITCH

EXISTING

CHECK DAM

INLET

LOW POINT/HIGH POINT

FLOW DIRECTION & SLOPE

FLOW DIRECTION ARROW

EXISTING FLOW DIRECTION ARROW

EMERGENCY OVERFLOW DIRECTION

CONCRETE WASHOUT AREA

INLET PROTECTION

TEMPORARY SEDIMENT BASIN

SILT FENCE

VEHICLE TRACKING CONTROL

STAGE STABILIZED AREA

TEMPORARY SEEDING

EROSION CONTROL BLANKET

L.P./H.P.

(2.0)%

FLOW DIRECTION ARROW

EXISTING FLOW DIRECTION ARROW

EMERGENCY OVERFLOW DIRECTION

CONCRETE WASHOUT AREA

INLET PROTECTION

TEMPORARY SEDIMENT BASIN

SILT FENCE

VEHICLE TRACKING CONTROL

STAGE STABILIZED AREA

TEMPORARY SEEDING

EROSION CONTROL BLANKET

EXISTING

PROPOSED

C/F

7100

K

INLET

LOW POINT/HIGH POINT

FLOW DIRECTION & SLOPE

FLOW DIRECTION ARROW

EXISTING FLOW DIRECTION ARROW

EMERGENCY OVERFLOW DIRECTION

CONCRETE WASHOUT AREA

INLET PROTECTION

TEMPORARY SEDIMENT BASIN

SILT FENCE

VEHICLE TRACKING CONTROL

STAGE STABILIZED AREA

TEMPORARY SEEDING

EROSION CONTROL BLANKET

EXISTING

PROPOSED

C/F

7100

K

RS

ROCK SOCK

GRASS LINED DITCH

W/ TEMPORARY EROSION CONTROL BLANKET

VELOCITY 2.69 FT/S

CRIT. DEPTH: 0.36 FT

MIN DEPTH: 1.36 FT

SECTION A-A

NOT TO SCALE

EPC 5/16/2022

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

DATE 1/31/22

1/31/22

1/31/22

1/31/22

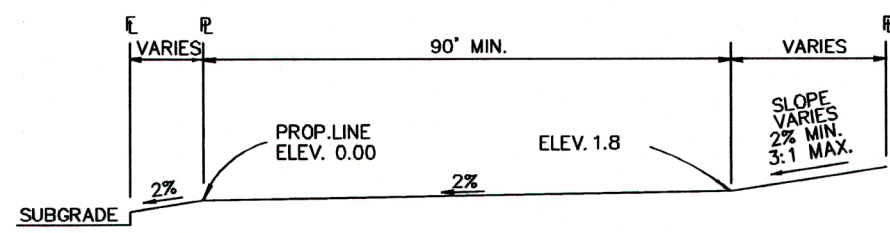
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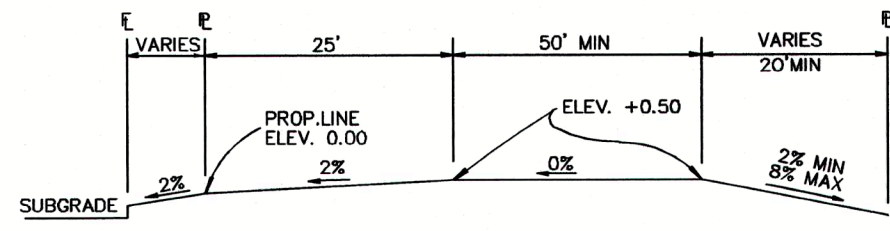
KEY MAP

SCALE: NTS



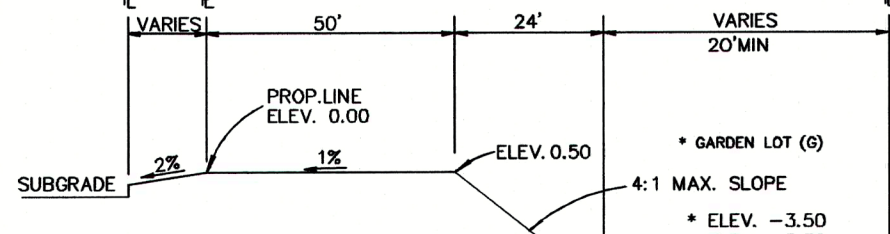
TYPICAL A LOT

NOT TO SCALE



TYPICAL B LOT

NOT TO SCALE



TYPICAL WALKOUT LOT (W/O) OR GARDEN (G)

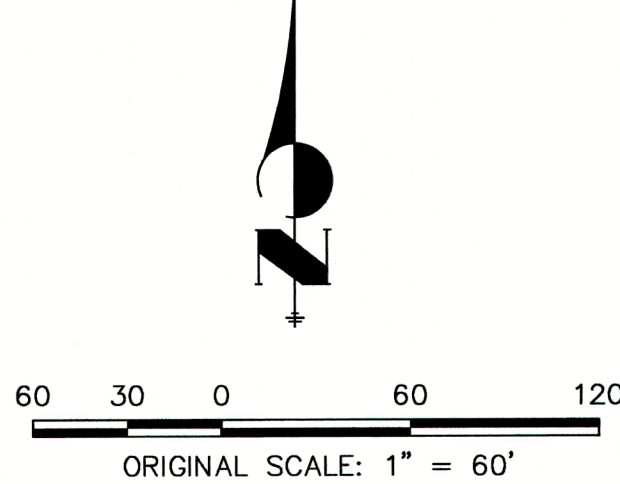
NOT TO SCALE

NOTE:

"T" LOTS OR "TRANSITION" LOTS OCCUR IN PLACES WHERE BOTH PROPERTY LINES CANNOT BE GRADED AS THE TYPICAL STANDARD LOT TEMPLATES SHOWN. THESE LOTS WILL STILL BE GRADED TO CREATE POSITIVE DRAINAGE FROM THE STRUCTURE.

NOTE:

SIDE LOT SWALES WILL BE PROVIDED WHEN APPROPRIATE.



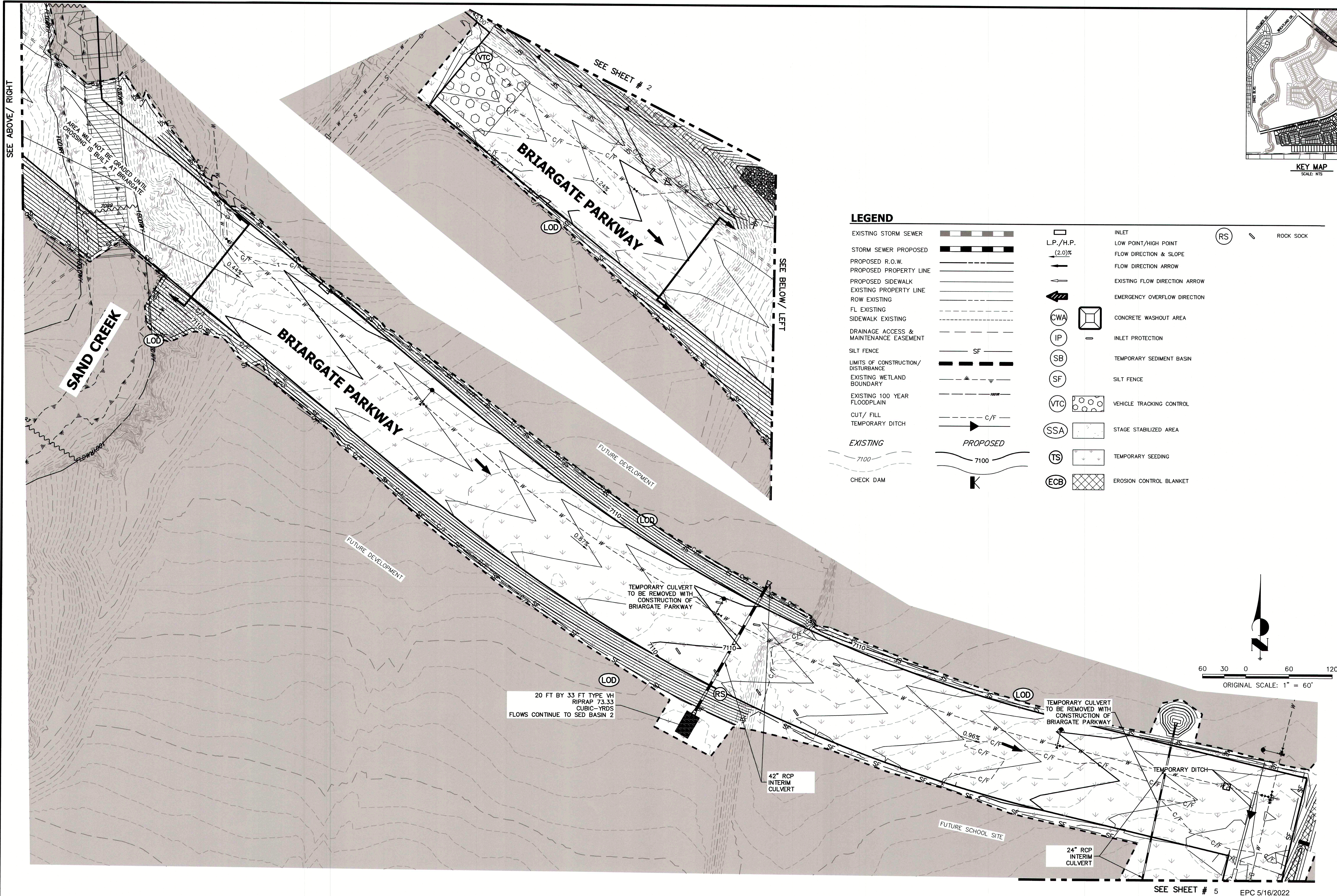
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COLORADO SPRINGS, CO 80903
JAMES F. MORLEY
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V-SCALE	N/A				
DESIGNED BY	BAB				
DRAWN BY	ARJ				
CHECKED BY					

HOMESTEAD NORTH AT
STERLING RANCH
EARLY GRADING & EROSION
CONTROL PLAN
SHEET 3 OF 11
JOB NO. 25188.00



LEGEND

- EXISTING STORM SEWER
STORM SEWER PROPOSED
PROPOSED R.O.W.
PROPOSED PROPERTY LINE
PROPOSED SIDEWALK
EXISTING PROPERTY LINE
ROW EXISTING
FL EXISTING
SIDEWALK EXISTING
DRAINAGE ACCESS & MAINTENANCE EASEMENT
SILT FENCE
LIMITS OF CONSTRUCTION / DISTURBANCE
EXISTING WETLAND BOUNDARY
EXISTING 100 YEAR FLOODPLAIN
CUT / FILL
TEMPORARY DITCH
- EXISTING
7100
CHECK DAM
- PROPOSED
7100
K
- INLET
LOW POINT/HIGH POINT
FLOW DIRECTION & SLOPE
FLOW DIRECTION ARROW
EXISTING FLOW DIRECTION ARROW
EMERGENCY OVERFLOW DIRECTION
- CWA
IP
SB
SF
VTC
SSA
TS
ECB
- CONCRETE WASHOUT AREA
INLET PROTECTION
TEMPORARY SEDIMENT BASIN
SILT FENCE
VEHICLE TRACKING CONTROL
STAGE STABILIZED AREA
TEMPORARY SEEDING
EROSION CONTROL BLANKET
- RS
ROCK SOCK

CONSTRUCTION NOTES

NO WETLANDS ARE TO BE PERMANENTLY DISTURBED PER THIS GRADING PLAN.
NO EARLY GRADING IS TO OCCUR WITHIN THE 100 YEAR FLOODPLAIN.

ADDITIONAL NOTES

STAGING AREA TO BE DETERMINED BY CONTRACTOR IN THE FIELD. THE LOCATIONS SHALL BE DELINEATED ON THIS PLAN BY THE CONTRACTOR.
THE EROSION CONTROL DELINEATED ON THIS PLAN SHALL BE REGULARLY UPDATED BY THE CONTRACTOR.

EARTHWORK NOTES

VOLUME FILL: 149,891 yd³
VOLUME CUT: 251,794 yd³

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

HOMESTEAD NORTH AT STERLING RANCH
EARLY GRADING & EROSION CONTROL PLAN

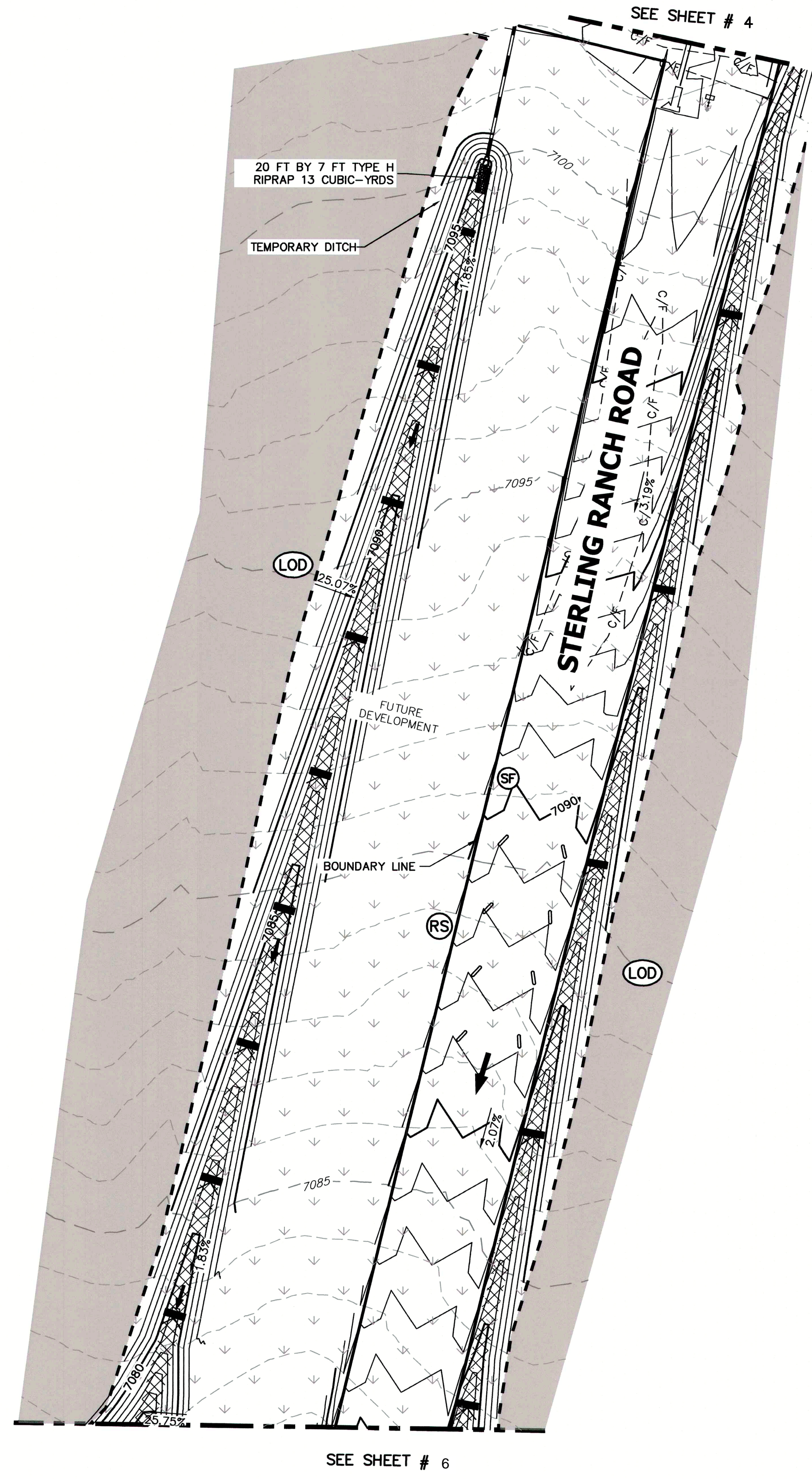
SHEET 4 OF 11
JOB NO. 25188.00

BY	DATE	REVISION	No.	1"=60'	H-SCALE	V-SCALE	DATE	DESIGNED BY	DRAWN BY	CHECKED BY
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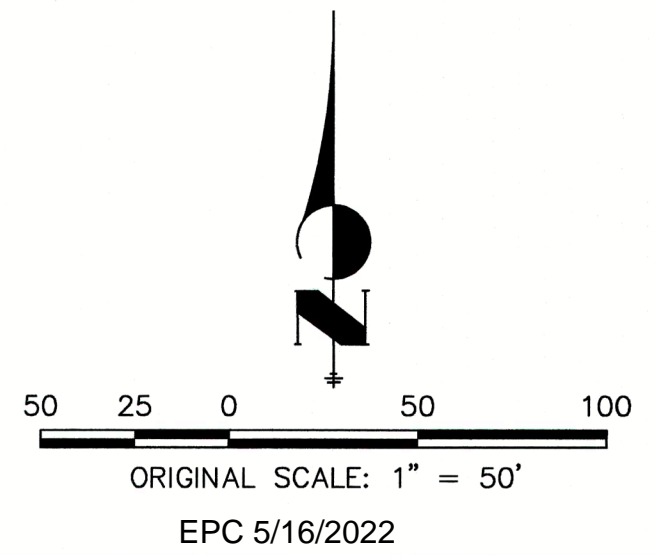
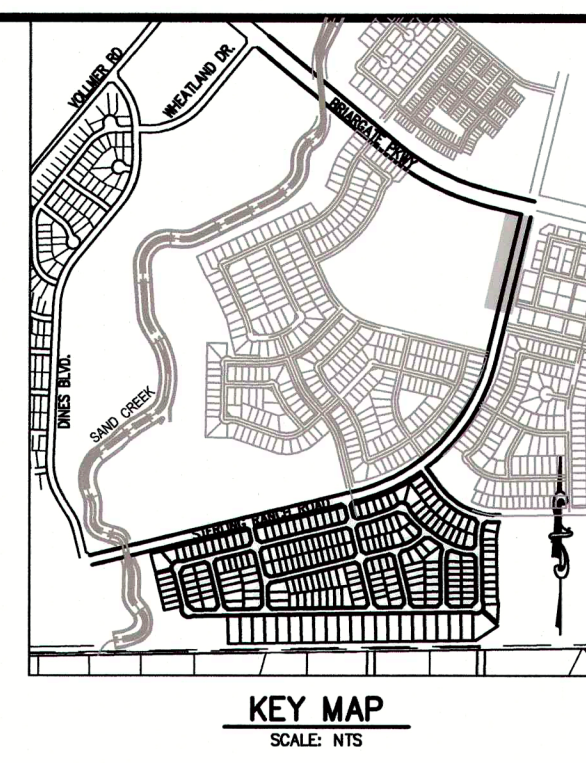
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LEGEND

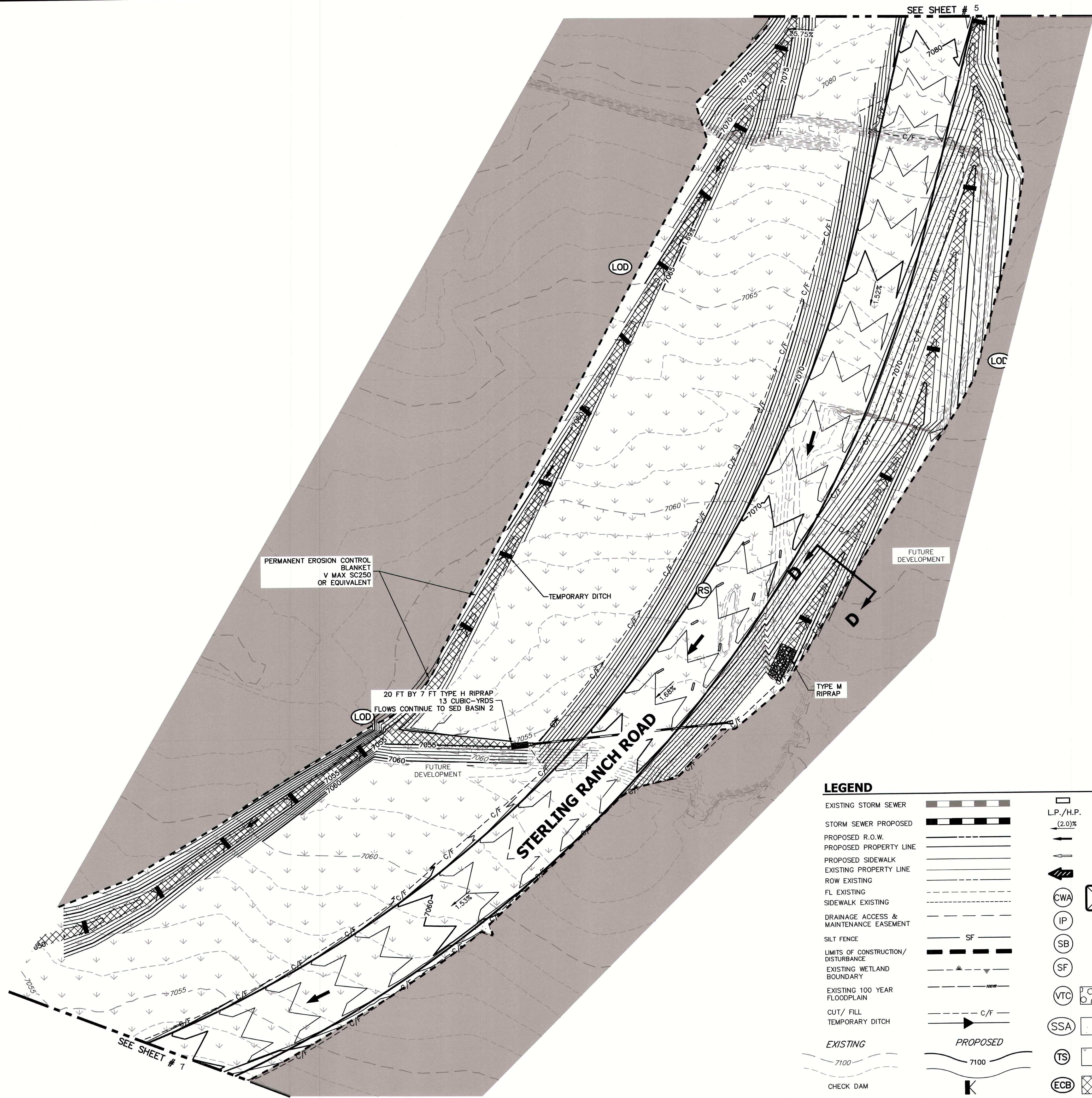
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STORM SEWER PROPOSED	[Symbol]	LOW POINT/HIGH POINT	[Symbol]
PROPOSED R.O.W.	[Symbol]	FLOW DIRECTION & SLOPE	[Symbol]
PROPOSED PROPERTY LINE	[Symbol]	FLOW DIRECTION ARROW	[Symbol]
PROPOSED SIDEWALK	[Symbol]	EXISTING FLOW DIRECTION ARROW	[Symbol]
EXISTING PROPERTY LINE	[Symbol]	EMERGENCY OVERFLOW DIRECTION	[Symbol]
ROW EXISTING	[Symbol]	CONCRETE WASHOUT AREA	[Symbol]
FL EXISTING	[Symbol]	INLET PROTECTION	[Symbol]
SIDEWALK EXISTING	[Symbol]	TEMPORARY SEDIMENT BASIN	[Symbol]
DRAINAGE ACCESS & MAINTENANCE EASEMENT	[Symbol]	SILT FENCE	[Symbol]
SILT FENCE	[Symbol]	VEHICLE TRACKING CONTROL	[Symbol]
LIMITS OF CONSTRUCTION/DISTURBANCE	[Symbol]	STAGE STABILIZED AREA	[Symbol]
EXISTING WETLAND BOUNDARY	[Symbol]	TEMPORARY SEEDING	[Symbol]
EXISTING 100 YEAR FLOODPLAIN	[Symbol]	EROSION CONTROL BLANKET	[Symbol]
CUT / FILL	[Symbol]		
TEMPORARY DITCH	[Symbol]		
EXISTING	[Symbol]		
PROPOSED	[Symbol]		
CHECK DAM	[Symbol]		

RS [Symbol] ROCK SOCK



ENGINEER'S STATEMENT
PREPARED UNDER MY DIRECT SUPERVISION AND ON BEHALF OF JR ENGINEERING
Mike Bramlett
MIKE A. BRAMLETT, P.E.
COLORADO P.E. 32314
FOR AND ON BEHALF OF JR ENGINEERING, LLC
DATE 1/3/22

JR ENGINEERING A Westman Company Central 303-740-9383 • Colorado Springs 719-589-2583 Fort Collins 970-481-9888 • www.jrengineering.com	PREPARED FOR	SR LAND, LLC 20 BOULDER CRESCENT SUITE 201 COLORADO SPRINGS, CO 80903 JAMES F. MORLEY (719) 471-1742					
	BY	DATE					
No.	REVISION	1"=60'	N/A	DATE	DESIGNED BY	DRAWN BY	CHECKED BY
				01/10/22	RAB	CGV	
HOMESTEAD NORTH AT STERLING RANCH		EARLY GRADING & EROSION CONTROL PLAN					
SHEET 5 OF 11		JOB NO. 25188.00					



SEE SHEET # 5

SEE SHEET # 7

LEGEND

EXISTING STORM SEWER

STORM SEWER PROPOSED

PROPOSED R.O.W.

PROPOSED PROPERTY LINE

PROPOSED SIDEWALK

EXISTING PROPERTY LINE

ROW EXISTING

FL EXISTING

SIDEWALK EXISTING

DRAINAGE ACCESS & MAINTENANCE EASEMENT

SILT FENCE

LIMITS OF CONSTRUCTION/DISTURBANCE

EXISTING WETLAND BOUNDARY

EXISTING 100 YEAR FLOODPLAIN

CUT / FILL

TEMPORARY DITCH

EXISTING

PROPOSED

CHECK DAM

7100

7100

7100

7100

7100

7100

7100

7100

7100

7100

7100

7100

7100

L.P./H.P.

(2.0)%

FLOW DIRECTION & SLOPE

FLOW DIRECTION ARROW

EXISTING FLOW DIRECTION ARROW

EMERGENCY OVERFLOW DIRECTION

CONCRETE WASHOUT AREA

INLET PROTECTION

TEMPORARY SEDIMENT BASIN

SILT FENCE

VEHICLE TRACKING CONTROL

STAGE STABILIZED AREA

TEMPORARY SEEDING

EROSION CONTROL BLANKET

GRASS LINED DITCH
W/ PERMANENT
V MAX SC250 EROSION
CONTROL BLANKET OR
EQUIVALENT

VELOCITY 5.26 FT/S
CRIT. DEPTH: 1.55 FT
MIN DEPTH: 2.55 FT

SECTION D-D

NOT TO SCALE

NOTE: ADD
PERMANENT EROSION
CONTROL BLANKET
TO CHANNEL UP TO
MIN DEPTH

KEY MAP

SCALE: NTS

50 25 0 50 100
ORIGINAL SCALE: 1" = 50'
EPC 5/16/2022

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

DATE 1/31/22

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NO.	REVISION	BY	DATE
1			
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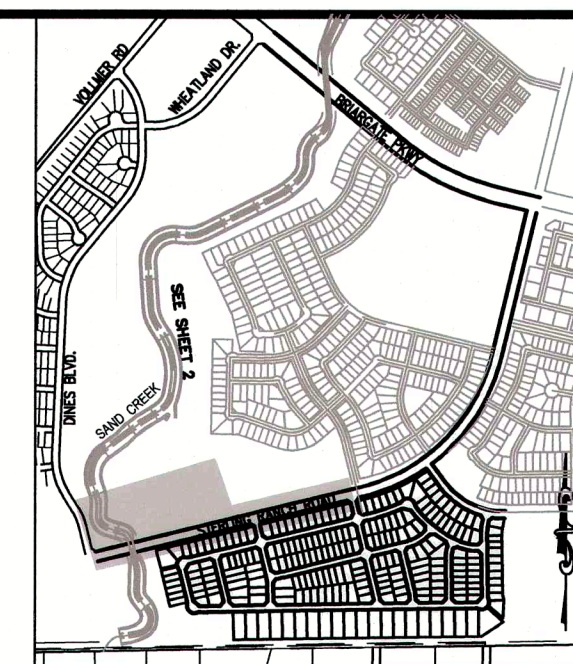
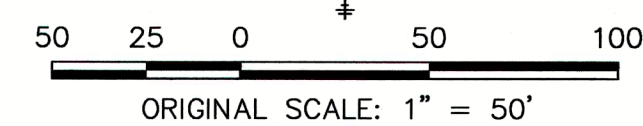
H-SCALE	1"=60'	DESIGNED BY	RAB	CHECKED BY	
V-SCALE	N/A	DRAWN BY	CCV		
DATE	01/10/22				

HOMESTEAD NORTH AT
STERLING RANCH

EARLY GRADING & EROSION
CONTROL PLAN

SHEET # OF 11

JOB NO. 25188.00



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V-SCALE	N/A				
DATE	3/25/22				
DESIGNED BY	RAB				
DRAWN BY	CCV				
CHECKED BY					

HOMESTEAD NORTH AT STERLING RANCH		7	OF	11
GRADING AND EROSION CONTROL PLAN				
SHEET				
JOB NO.		25188.00		

EPC 5/16/2022

ENGINEER'S STATEMENT

PREPARED UNDER MY DIRECT SUPERVISION AND ON BEHALF OF JR
ENGINEERING

Mike Bramlett

MIKE A. BRAMLETT, P.E.
COLORADO P.E. 32314

FOR AND ON BEHALF OF JR ENGINEERING, LOCAL ENGINEERING

DATE *1/31/12*

Mulching (MU)

EC-4

Description

Mulching consists of evenly applying straw, hay, shredded wood mulch, rock, bark or compost to disturbed soils and securing the mulch by crimping, tackifiers, netting or other measures. Mulching helps reduce erosion by protecting bare soil from rainfall impact, increasing infiltration, and reducing runoff. Although often applied in conjunction with temporary or permanent seeding, it can also be used for temporary stabilization of areas that cannot be reseeded due to seasonal constraints.

Mulch can be applied either using standard mechanical dry application methods or using hydromulching equipment that hydraulically applies a slurry of water, wood fiber mulch, and often a tackifier.

Appropriate Uses

Use mulch in conjunction with seeding to help protect the seedbed and stabilize the soil. Mulch can also be used as a temporary cover on low to mild slopes to help temporarily stabilize disturbed areas where growing season constraints prevent effective reseeding. Disturbed areas should be properly mulched and tacked, or seeded, mulched and tacked promptly after final grade is reached (typically within no longer than 14 days) on portions of the site not otherwise permanently stabilized.

Standard dry mulching is encouraged in most jurisdictions; however, hydromulching may not be allowed in certain jurisdictions or may not be allowed near waterways.

Do not apply mulch during windy conditions.

Design and Installation

Prior to mulching, surface-roughen areas by rolling with a crimping or punching type roller or by track walking. Track walking should only be used where other methods are impractical because track walking with heavy equipment typically compacts the soil.

A variety of mulches can be used effectively at construction sites. Consider the following:

Mulch	
Functions	
Erosion Control	Yes
Sediment Control	Moderate
Site/Material Management	No



Photograph MU-1. An area that was recently seeded, mulched, and crimped.

June 2012	Urban Drainage and Flood Control District Urban Storm Drainage Criteria Manual Volume 3	MU-1
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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.

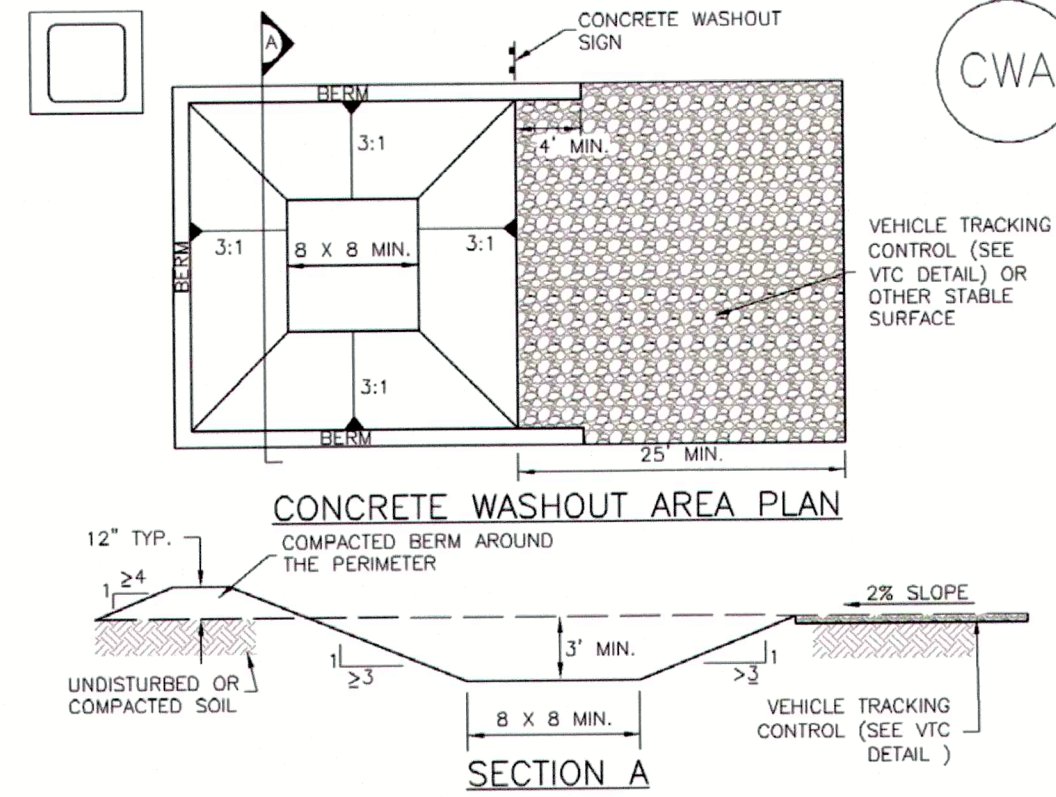
Seeded areas may require irrigation, particularly during extended dry periods. Targeted weed control may also be necessary.

Protect seeded areas from construction equipment and vehicle access.

TS/PS-6	Urban Drainage and Flood Control District Urban Storm Drainage Criteria Manual Volume 3	June 2012
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Concrete Washout Area (CWA)

MM-1



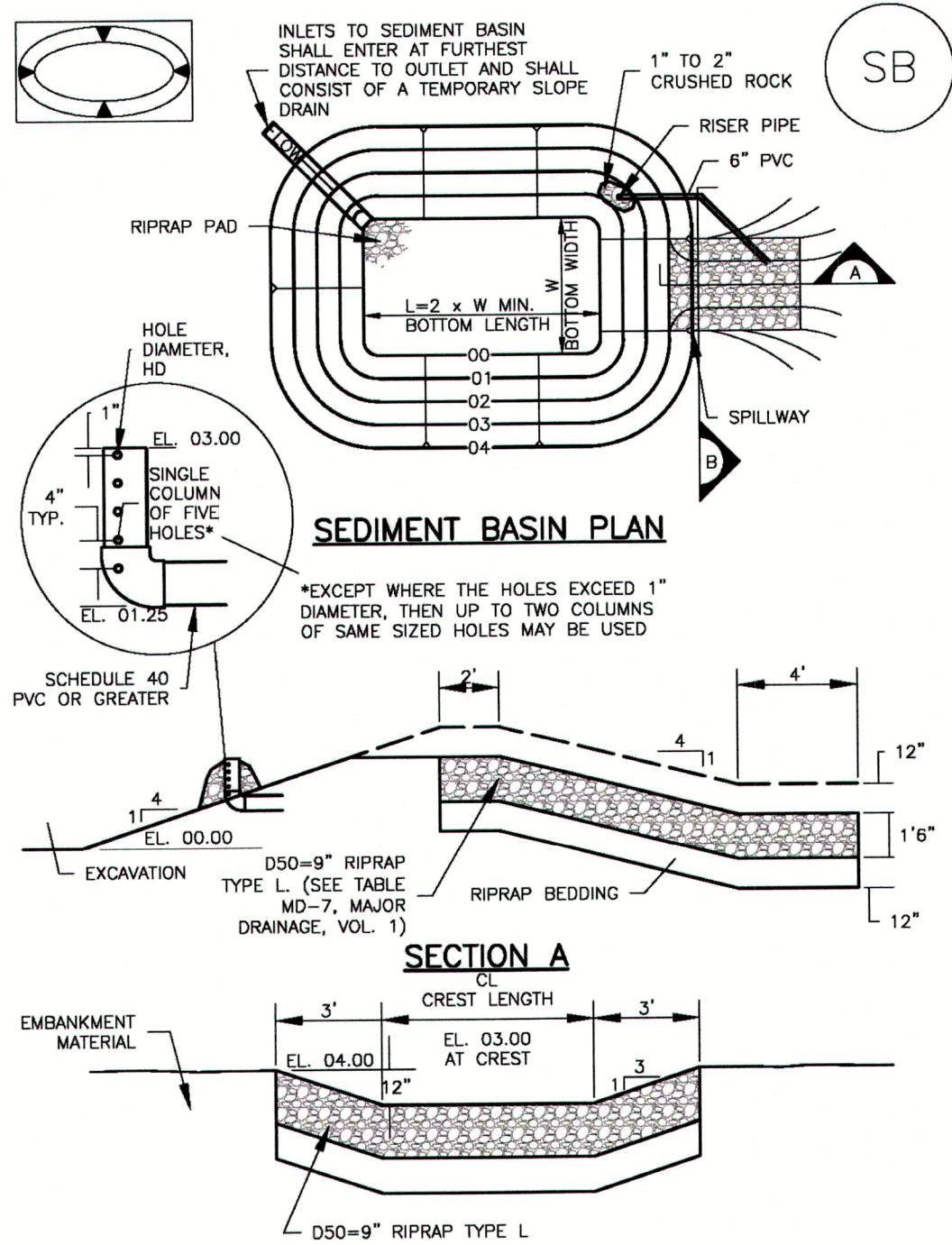
CWA-1. CONCRETE WASHOUT AREA

CWA INSTALLATION NOTES

- SEE PLAN VIEW FOR:
 - CWA INSTALLATION LOCATION.
- DO NOT LOCATE AN UNLINED CWA WITHIN 400' OF ANY NATURAL DRAINAGE PATHWAY OR WATERBODY. DO NOT LOCATE WITHIN 1,000' OF ANY WELLS OR DRINKING WATER SOURCES. IF SITE CONSTRAINTS MAKE THIS INFASIBLE, OR IF HIGHLY PERMEABLE SOILS EXIST ON SITE, THE CWA MUST BE INSTALLED WITH AN IMPERMEABLE LINER (16 MIL MIN. THICKNESS) OR SURFACE STORAGE ALTERNATIVES USING PREFABRICATED CONCRETE WASHOUT DEVICES OR A LINED ABOVE GROUND STORAGE ARE SHOULD BE USED.
- THE CWA SHALL BE INSTALLED PRIOR TO CONCRETE PLACEMENT ON SITE.
- CWA SHALL INCLUDE A FLAT SUBSURFACE PIT THAT IS AT LEAST 6" BY 8' SLOPES LEADING OUT OF THE SUBSURFACE PIT SHALL BE 3:1 OR FLATER. THE PIT SHALL BE AT LEAST 3' DEEP.
- BERM SURROUNDING SIDES AND BACK OF THE CWA SHALL HAVE MINIMUM HEIGHT OF 1'.
- VEHICLE TRACKING PAD SHALL BE SLOPED 2% TOWARDS THE CWA.
- SIGNS SHALL BE PLACED AT THE CONSTRUCTION ENTRANCE, AT THE CWA, AND ELSEWHERE AS NECESSARY TO CLEARLY INDICATE THE LOCATION OF THE CWA TO OPERATORS OF CONCRETE TRUCKS AND PUMP RIGS.
- USE EXCAVATED MATERIAL FOR PERIMETER BERM CONSTRUCTION.

November 2010	Urban Drainage and Flood Control District Urban Storm Drainage Criteria Manual Volume 3	CWA-3
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SC-7 Sediment Basin (SB)



August 2013	Urban Drainage and Flood Control District Urban Storm Drainage Criteria Manual Volume 3	SB-5
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EC-2 Temporary and Permanent Seeding (TS/PS)

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

Common Name	Botanical Name	Growth Season	Growth Form	Seeds/Pound	Pounds of PLS/acre
Alkali 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 'Sodar'</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 'Sodar'</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 Mix¹					
Ruebens Canadian bluegrass	<i>Poa compressa 'Ruebens'</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

TS/PS-4	Urban Drainage and Flood Control District Urban Storm Drainage Criteria Manual Volume 3	June 2012
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SC-7 Sediment Basin (SB)

TABLE SB-1. SIZING INFORMATION FOR STANDARD SEDIMENT BASIN				
Upstream Drainage Area (rounded to nearest acre), (ac)	Basin Bottom Width (W), (ft)	Spillway Crest Length (L), (ft)	Hole Diameter (HD), (in)	
1	12 1/2	2	9 3/4	
2	21	3	11 1/4	
3	28	5	12 1/2	
4	33 1/2	6	14	
5	38 1/2	8	15 1/2	
6	43	9	16 1/2	
7	47 1/2	11	18 1/2	
8	51	12	19 1/2	
9	55	13	20 1/2	
10	58 1/2	15	21 1/2	
11	61	16	22 1/2	
12	64	18	24 1/2	
13	67 1/2	19	25 1/2	
14	70 1/2	21	27 1/2	
15	73 1/2	22	28 1/2	
SEDIMENT BASIN 1	22	100	31	1 3/4
SEDIMENT BASIN 2	17	152	103	2
253 ONSITE ACRES				

SEDIMENT BASIN INSTALLATION NOTES

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

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.

SB-6	Urban Drainage and Flood Control District Urban Storm Drainage Criteria Manual Volume 3	August 2013
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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	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 ¹	<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 ²	<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

¹ 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.

² See Table TS/PS-3 for seeding dates.

³ If site is to be irrigated, the transition turf seed rates should be doubled.

⁴ Crested wheatgrass should not be used on slopes steeper than 6H to 1V.

⁵ Can substitute 0.5 lbs PLS of blue grama for the 2.0 lbs PLS of Vaughn sidecoats grama.

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Sediment Basin (SB) SC-7

SEDIMENT BASIN MAINTENANCE NOTES

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

(DETAILS ADAPTED FROM DOUGLAS COUNTY, COLORADO)

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

August 2013	Urban Drainage and Flood Control District Urban Storm Drainage Criteria Manual Volume 3	SB-7
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EPC 5/16/2022

UNTIL SUCH TIME AS THESE DRAWINGS ARE APPROVED BY THE AGENCIES, J-R ENGINEERING APPROVES THEIR USE ONLY FOR THE PURPOSES DESIGNATED BY WRITTEN AUTHORIZATION.

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BY	DATE	NO.	REVISION	H-SCALE	V-SCALE	DATE	DESIGNED BY	DRAWN BY	CHECKED BY	SHEET	OF	JOB NO.
				N/A	N/A	01/10/22	RAB	RAB		8	11	25188.00
HOMESTEAD NORTH AT STERLING RANCH DETAIL												

SC-1

**SM-4 Vehicle Tracking Control (VTC)**

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

Silt Fence (SF)

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

Stockpile Management (SP) **MM-2**

Stockpile Management (SM)

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

SM-6

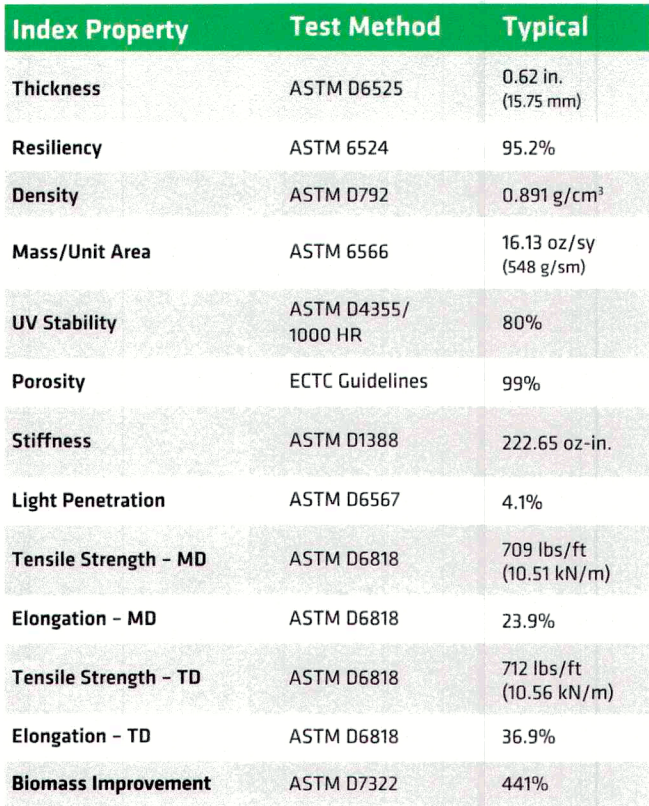


SM-6	Stabilized Staging Area (SSA)
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(DETAILS ADAPTED FROM DOUGLAS COUNTY, COLORADO, NOT AVAILABLE IN AUTOCAD)

EPC 5/16/2022

SHEET		9		OF		11		HOMESTEAD NORTH AT STERLING RANCH				No.	REVISION	BY	DATE	
												H-SCALE	N/A	N/A		
												V-SCALE	N/A			
												DATE	01/10/22			
												DESIGNED BY	RAB			
												DRAWN BY	RAB			
												CHECKED BY				



Design Permissible Shear Stress		
	Short Duration	Long Duration
Phase 1: Unvegetated	3.0 psf (144 Pa)	2.5 psf (120 Pa)
Phase 2: Partially Veg.	8.0 psf (383 Pa)	8.0 psf (383 Pa)
Phase 3: Fully Veg.	10.0 psf (480 Pa)	8.0 psf (383 Pa)
Unvegetated Velocity	9.5 fps (2.9 m/s)	
Vegetated Velocity	15 fps (4.6 m/s)	

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DETAIL

JOB NO. 25188.00

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