
































|                          | 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               |          |          |

|                      | <i>EXISTING</i>   | <i>PROPOSED</i>   |
|----------------------|---|---|
| TREE – CONIFEROUS    |  |  |
| TREE – DECIDUOUS     |  |  |
| SHRUB/BUSH           |  |  |
| SHRUBS AND BUSHES    |  |  |
| IRRIGATION BOX       |  |   |
| IRRIGATION SPRINKLER |  |   |
| IRRIGATION VALVE     |  |   |
| BOLLARD              |  |   |
| FLAGPOLE             |  |   |







|                     | EXISTING  | PROPOSED  |
|---------------------|---|---|
| <i>STORM SEWER</i>  |   |   |
| MANHOLE             | ⊙   | ●   |
| STORM INLET         |   | ■   |
| AREA INLET – SQUARE | □   |   |
| AREA INLET – ROUND  | ○   |   |
| FLARED END SECTION  | ▷   | ◁   |
| RIPRAP              |  |  |

|                                   |   |   |
|-----------------------------------|---|---|
| LINE MARKER                       | <i>Mkr San</i>  |   |
| SERVICE MARKER                    |  |   |
| CLEAN-OUT                         |  |  |
| MANHOLE W/ DIRECTIONAL FLOW ARROW |  |  |

| LINE MARKER     | Mkr W   |   |
|-----------------|---|---|
| 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  $Mkr G^{\circ}$

|                |   |   |
|----------------|---|---|
| SERVICE MARKER |  |   |
| METER          |  |  |
| VALVE          |  |  |

PLUG [ ]  
TEE [ ]  
*DRY UTILITIES*

|                           |   |
|---------------------------|---|
| CABLE TV MARKER           | <i>Mkr TV</i>  |
| CABLE TELEVISION PEDESTAL |                |
| ELECTRIC MARKER           | <i>Mkr E</i>   |
| ELECTRIC SERVICE MARKER   |                |

|                         |   |
|-------------------------|---|
| ELECTRIC SERVICE MARKER |  |
| ELECTRICAL PEDESTAL     |  |
| ELECTRICAL METER        |  |
| ELECTRICAL MANHOLE      |  |

|                     |   |
|---------------------|---|
| FIBER-OPTIC MARKER  | <i>Mkr FO</i> °   |
| IRRIGATION PEDESTAL |  |
| TELEPHONE MARKER    | <i>Mkr T</i> °  |

|                    |   |   |
|--------------------|---|---|
| TELEPHONE PEDESTAL |  |   |
| TELEPHONE MANHOLE  |  |   |
| UTILITY POLE       |  |  |

GUY ANCHOR 

GUY POLE 

*MISC UTILITIES*

VENT PIPE  VP

TEST HOLE DESIGNATOR  TH#

FIRM FREQUENCY  FF

|                                   |                 |
|-----------------------------------|-----------------|
| ALUMINUM CAP - FOUND              | ● AC            |
| BRASS CAP - FOUND                 | ● BC            |
| BENCHMARK - FOUND                 | ⊕               |
| CROSS - FOUND                     | +               |
| MONUMENT - SET                    | ○               |
| MONUMENT - FOUND<br>(DEFAULT)     | ●               |
| MONUMENT - FOUND<br>(ALTERNATE 1) | ■               |
| MONUMENT - FOUND<br>(ALTERNATE 2) | ◼               |
| MONUMENT - FOUND<br>(ALTERNATE 3) | ▲               |
| MONUMENT - FOUND<br>(ALTERNATE 4) | ▲               |
| MONUMENT - FOUND<br>(ALTERNATE 5) | ◆               |
| MONUMENT - FOUND<br>(ALTERNATE 6) | ◆               |
| MONUMENT - FOUND<br>(ALTERNATE 7) | ▲               |
| NAIL & WASHER - FOUND             | ● NAIL & WASHER |
| PANEL - FOUND                     | ⋈               |
| PK NAIL - FOUND                   | ● PK NAIL       |
| ROW MONUMENT - FOUND              | ⊕               |
| ROW MARKER - FOUND                | □               |
| SECTION CORNER - FOUND            | ⋈               |
| SECTION CORNER - SET              | ⋈               |
| QUARTER-SECTION CORNER - FOUND    | ●               |
| QUARTER-SECTION CORNER - SET      | ●               |
| SECTION CENTER - FOUND            | ⊙               |
| SECTION CENTER - FOUND            | ⊙               |
| CONTROL/TRaverse POINT - SET      | △               |

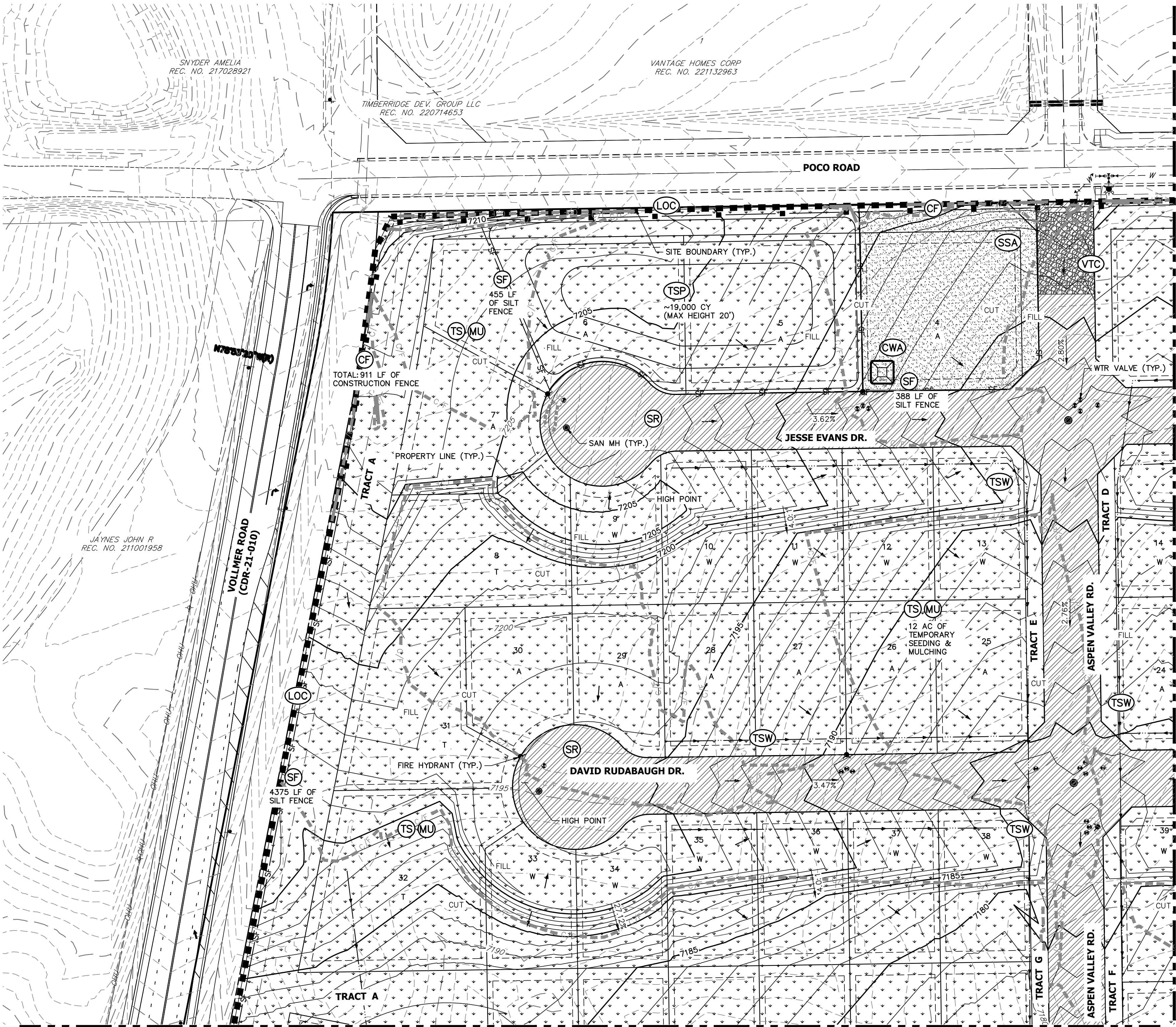
|  |           |  |   |  |
|--|-----------|--|---|--|
| CONSTRUCTION FENCE                     | (CF)      |  | EXISTING STORM SEWER                      |  |
| SILT FENCE                             | (SF)      |  | STORM SEWER PROPOSED                      |  |
| CONCRETE WASHOUT AREA                  | (CWA)     |  | PROPOSED R.O.W                            |  |
| LIMITS OF CONSTRUCTION/<br>DISTURBANCE | (LOC)     |  | PROPOSED PROPERTY LINES                   |  |
| TEMPORARY SEEDING<br>& MULCHING        | (TS) (MU) |  | PROPOSED SIDEWALK                         |  |
| SEDIMENT BASIN                         | (SB)      |  | EXISTING PROPERTY LINE                    |  |
| STABILIZED STAGING AREA                | (SSA)     |  | ROW EXISTING                              |  |
| TEMPORARY STOCK PILE                   | (TSP)     |  | FL EXISTING                               |  |
| TEMPORARY SWALE                        | (TSW)     |  | SIDEWALK EXISTING                         |  |
| VEHICLE TRACKING CONTROL               | (VTC)     |  | DRAINAGE ACCESS &<br>MAINTENANCE EASEMENT |  |
| SURFACE ROUGHENING                     | (SR)      |  |   |  |
| CUT AND FILL LINE                      |           |  |   |  |

|      |                                       |       |   |
|------|---------------------------------------|-------|---|
| 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                                      |
| ASSY | 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                                      |
| BT   | BUTTERFLY VALVE                       | MAX   | MAXIMUM                                   |
| BLVD | BULEVARD                              | M/D   | MOISTURE DENSITY                          |
| BW   | BOTTOM OF WALL                        | MDP   | MASTER DEVELOPMENT                        |
| C&G  | CURB & GUTTER                         |       | DRAINAGE PLAN                             |
| CATV | CABLE TELEVISION                      | MH    | MANHOLE                                   |
| CH   | CHITCH BASIN                          | MIN   | MINIMUM                                   |
| CBC  | CONCRETE BOX CULVERT                  | MS    | MOUNTABLE SIDEWALK                        |
| CDOT | COLORADO DEPARTMENT OF TRANSPORTATION | N     | NORTH                                     |
| CDS  | CUL-DE-SAC                            | NRCP  | NON-REINFORCED CONCRETE PIPE              |
| CF   | CUBIC FOOT                            | ODP   | OFFICIAL DEVELOPMENT PLAN                 |
| CFS  | CUBIC FEET PER SECOND                 | OE    | OVERHEAD ELECTRIC                         |
| CL   | COMPLETE IN PLACE                     | OHU   | OVERHEAD UTILITY                          |
| CIP  | CENTER LINE                           | PC    | POINT OF CURVATURE                        |
| CLMR | CONDITIONAL LETTER OF MAP REVISION    | PCC   | POINT OF COMPOUND                         |
| CLR  | CLEAR                                 | PCR   | POINT OF CURB RETURN                      |
| CMO  | CORRUGATED METAL PIPE                 | PDP   | PRELIMINARY DEVELOPMENT PLAN              |
| CO   | CLEAN OUT                             | PE    | PROFESSIONAL ENGINEER                     |
| COCS | CITY OF COLORADO SPRINGS              | P     | POINT OF INTERSECTION                     |
| CONC | CONCRETE                              | PKWY  | PARKWAY                                   |
| CR   | CIRCLE                                | PL    | PROPERTY LINE                             |
| CSP  | CORRUGATED STEEL PIPE                 | PR    | PROPOSED                                  |
| CSU  | COLORADO SPRINGS UTILITIES            | PRC   | POINT OF REVERSE CURVATURE                |
| CT   | CUT                                   | PT    | POINT OF TANGENCY                         |
| CTRB | CONCRETE THRUST REDUCER               | PV    | PLUG VALVE                                |
| CY   | CUBIC YARD                            | PVC   | POLYVINYL CHLORIDE                        |
| DBPS | DRAINAGE BASIN PLANNING               | R     | RADIUS                                    |
| DE   | DRAINAGE EASEMENT                     | RCBC  | REINFORCED CONCRETE BOX CULVERT           |
| DIA  | DIAMETER                              | ROP   | REINFORCED CONCRETE PIPE ROAD             |
| DIP  | DUCTILE IRON PIPE                     | ROW   | RIGHT OF WAY                              |
| DR   | DRIVE                                 | RT    | RIGHT                                     |
| DRC  | DESIGN REVIEW COMMITTEE               | S     | SOUTH                                     |
| DU   | DWELLING UNITS                        | STE   | STEEL                                     |
| DY   | DAY                                   | SAN   | SANITARY SEWER                            |
| E    | EAST                                  | SF    | SQUARE FOOT                               |
| EAL  | EACH                                  | ST    | STREET                                    |
| EGL  | ENERGY GRADE LINE                     | STA   | STATION                                   |
| EL   | ELEVATION                             | STM   | STORM SEWER                               |
| ELEC | ELECTRIC                              | SY    | SQUARE YARD                               |
| EOA  | EDGE OF ASPHALT                       | SY-IN | SQUARE YARD INCH                          |
| EPC  | EL PASO COUNTY                        | TB    | THRUST BLOCK                              |
| ERCP | ELLIPTICAL RCP                        | TBC   | TOP BACK OF CURB                          |
| ESMT | EASEMENT                              | TBW   | TOP BACK OF WALK                          |
| EST  | ESTIMATE                              | TEL   | TELEPHONE                                 |
| EX   | EXISTING                              | TN    | TON                                       |
| FD   | FINAL DEVELOPMENT PLAN                | TOA   | TOP OF ASPHALT                            |
| FDR  | FINAL DRAINAGE REPORT                 | TOB   | TOP OF BOX                                |
| FES  | FLARED END SECTION                    | TOC   | TOP OF CURB OR CONCRETE                   |
| FF   | FINISHED FLOOR ELEVATION              | TOP   | TOP OF FOUNDATION                         |
| FG   | FINISHED GRADE                        | TOP   | TOP OF PIPE                               |
| FI   | FIRE HYDRANT                          | TP    | TOP OF WALL                               |
| FL   | FLOWLINE                              | TYP   | TYPICAL                                   |
| FIL  | FILING                                | UDFCD | URBAN DRAINAGE AND FLOOD CONTROL DISTRICT |
| FIO  | FIBER OPTIC CABLE                     |       | UTILITY EASEMENT                          |
| FO   | GRADE BREAK                           | UE    | UTILITY & DRAINAGE EASEMENT               |
| GE   | GEAS EASEMENT                         | U&D   | UTILITY & DRAINAGE EASEMENT               |
| GIS  | GEOGRAPHIC INFORMATION SYSTEM         | UGE   | UNDERGROUND ELECTRIC                      |
| GL   | GAZE LINE                             | VCP   | VITRIFIED CLAY PIPE                       |
| GPS  | GLOBAL POSITIONING SYSTEM             | VPC   | VERTICAL POINT OF CURVATURE               |
| GV   | GATE VALVE                            | VPI   | VERTICAL POINT OF INTERSECTION            |
| HBP  | HOT BITUMINOUS PAVEMENT               | VPT   | VERTICAL POINT OF TANGENCY                |
| HDC  | HANDICAP                              | VTC   | VEHICLE TRACKING CONTROL                  |
| HDC  | HIGH DEFLECTION COUPLING              | W     | WEST                                      |
| HDP  | HIGH DENSITY POLYETHYLENE             | WL    | WATER LINE                                |
| HCL  | HYDRAULIC GRADE LINE                  | WM    | WATER MAIN                                |
| HMA  | HOT MIX ASPHALT                       | WRD   | WATER RESOURCES                           |
| HOA  | HOME OWNERS ASSOCIATION               |       | DEPARTMENT                                |
| HP   | HIGH POINT                            | WS    | WATER SURFACE                             |
| HR   | HOUR                                  | WSE   | WATER SURFACE ELEVATION                   |
| I    | INLET                                 | WTR   | WATER                                     |
| IE   | IRRIGATION EASEMENT                   | YR    | YEAR                                      |

[illegible]

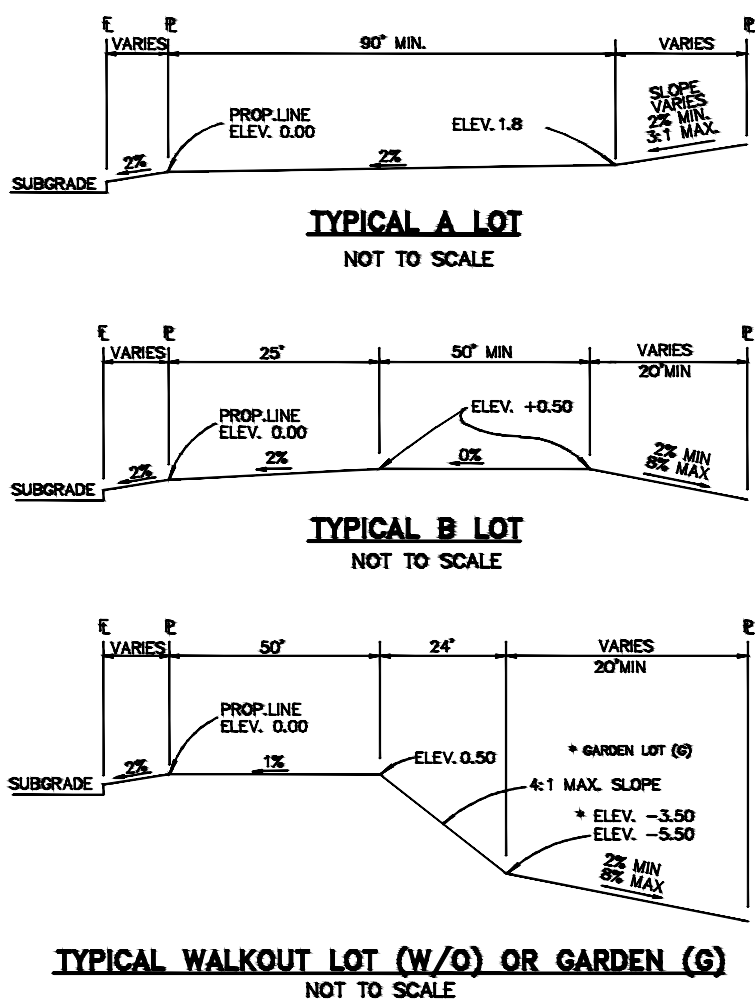
|             |        |
|-------------|--------|
| H-SCALE     | N/A    |
| V-SCALE     | N/A    |
| DATE        | 7/1/22 |
| DESIGNED BY | QNL    |
| DRAWN BY    | QNL    |
| CHECKED BY  |        |

|   |
|---|
| <p>HOMESTEAD NORTH AT<br/>STERLING RANCH FILING NO. 3</p> |
| <p>LEGEND</p>   |
|   |



**BMP PHASING**

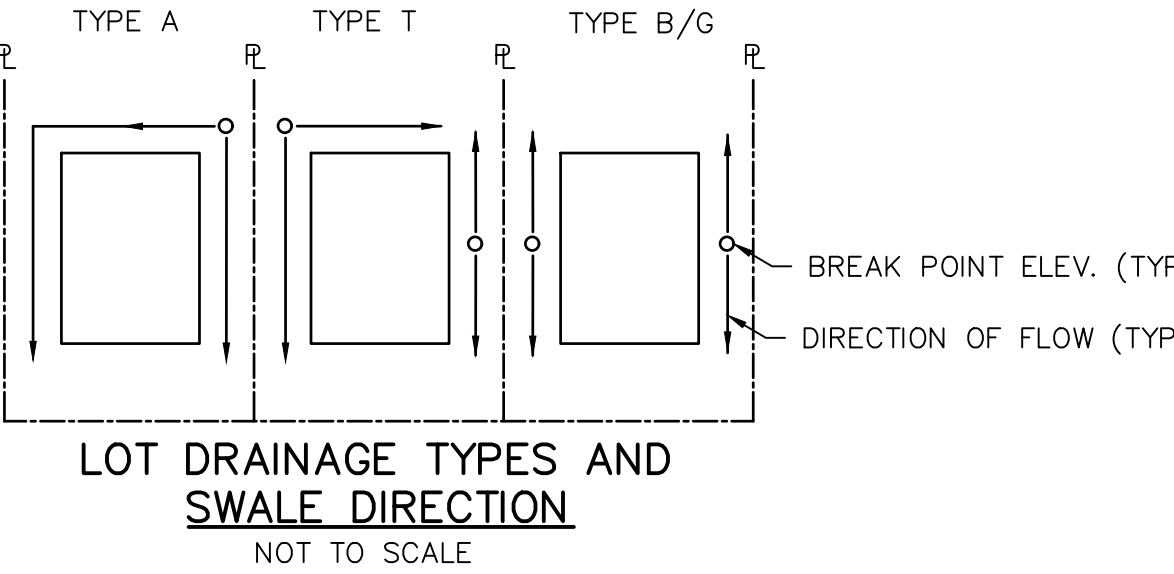
- |  |   |   |
|--|---|---|
| <b>INITIAL (SUMMER 2023)</b><br>1. INSTALL VTC<br>2. ESTABLISH SSA<br>3. INSTALL SILT AND CONSTRUCTION FENCE<br>4. INSTALL SEDIMENT BASINS | <b>INTERIM (FALL 2023)</b><br>1. MAINTAIN ALL BMP'S | <b>FINAL (WINTER 2023)</b><br>1. INSTALL MULCH AND TEMPORARY SEEDING IN ALL DISTURBED AREA<br>2. REMOVE ALL TEMPORARY BMP'S AFTER FINAL STABILIZATION |
|--|---|---|



**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 AWAY FROM THE STRUCTURE.  
**NOTE:**  
SIDE LOT SWALES WILL BE PROVIDED WHEN APPROPRIATE.

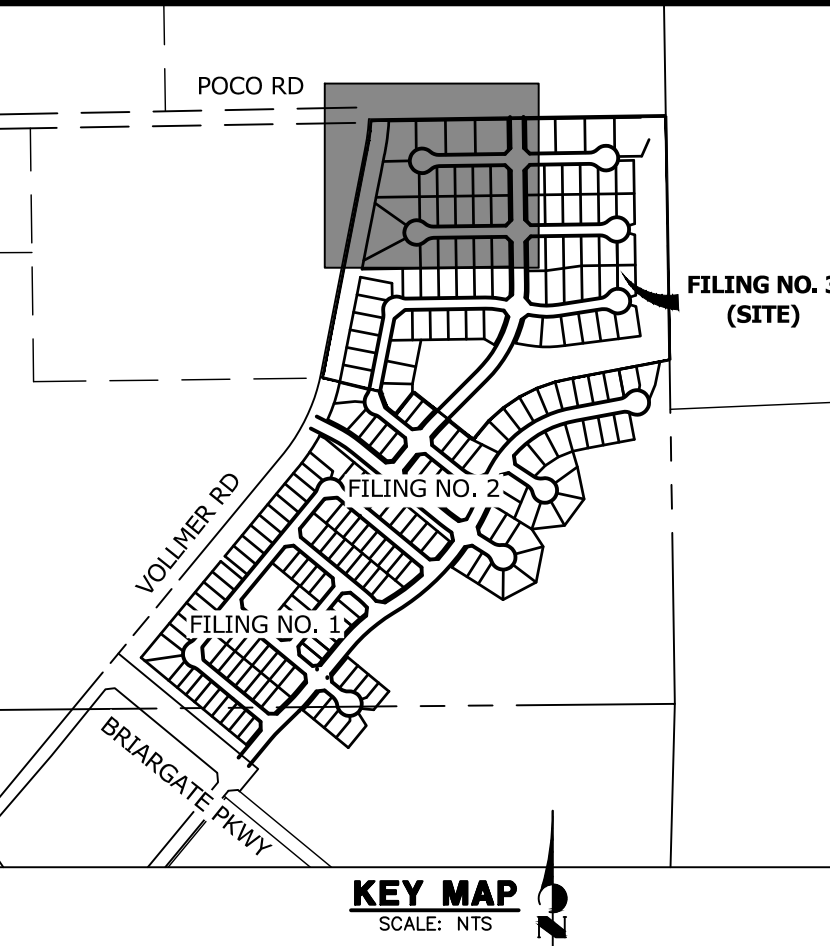
**ADDITIONAL NOTES:**  
STAGING AREA TO BE DETERMINED BY CONTRACTOR IN THE FIELD. THE LOCATIONS SHALL BE DELINEATED ON THIS PLAN BY THE CONTRACTOR.  
THE EROSION CONTROL DELINEATED ON THIS PLAN SHALL BE REGULARLY UPDATED BY THE CONTRACTOR.

**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.

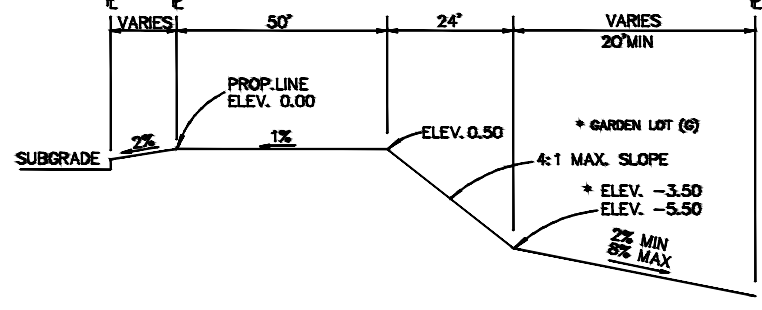
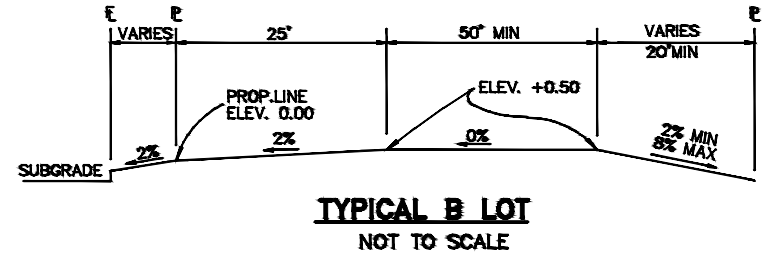
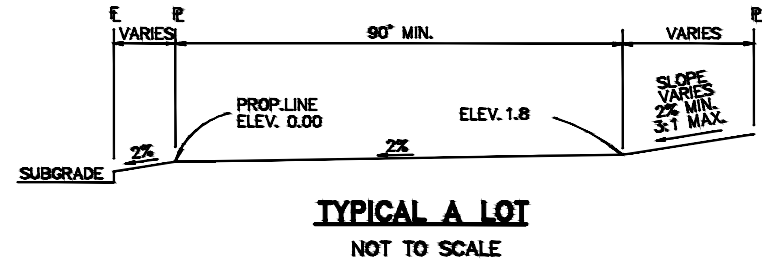
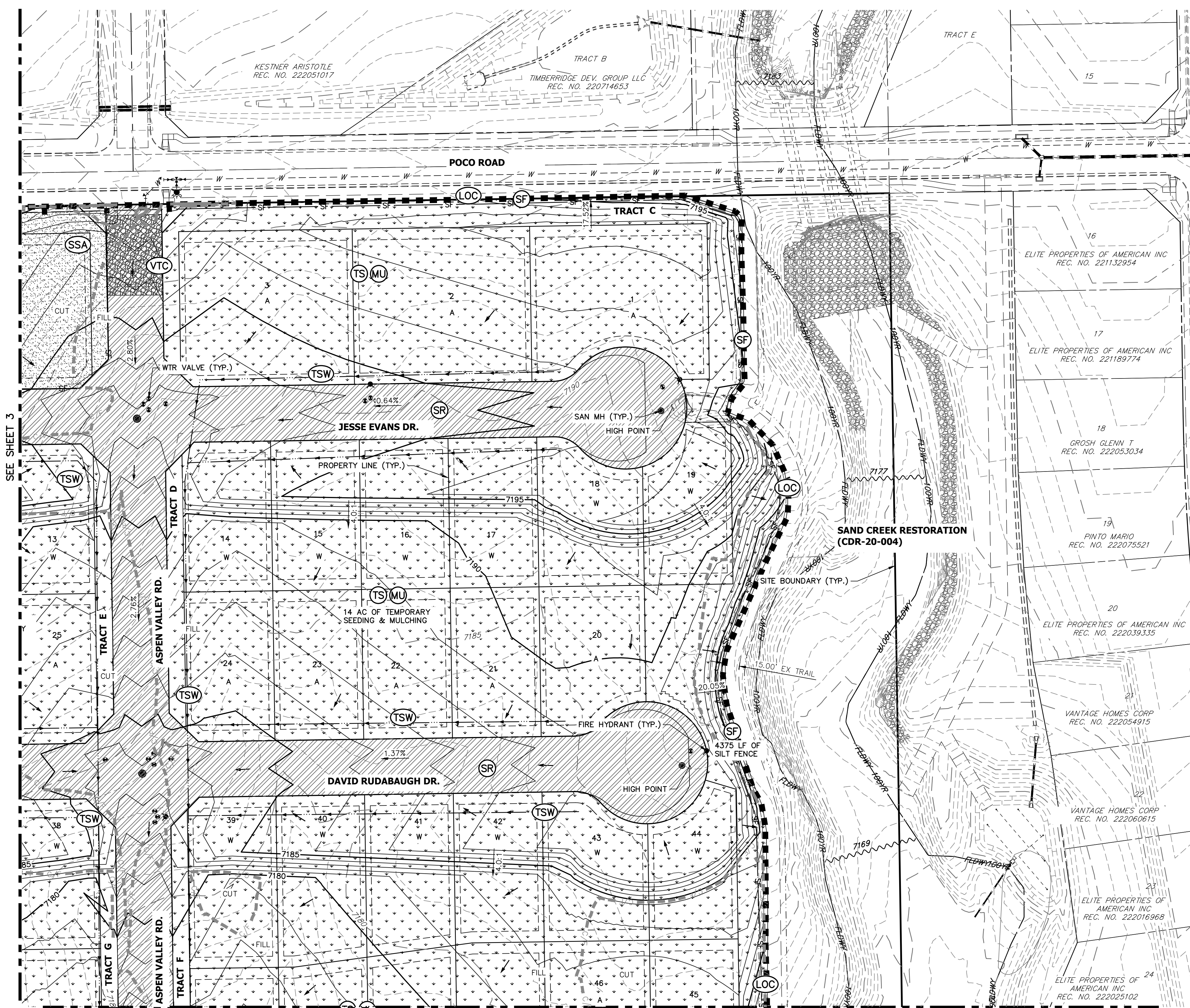


**LEGEND**

- |                                    |         |         |  |         |
|------------------------------------|---------|---------|--|---------|
| CONSTRUCTION FENCE                 | (CF)    | —■—     | EXISTING STORM SEWER                   | —■—■—■— |
| SILT FENCE                         | (SF)    | —SF—    | STORM SEWER PROPOSED                   | —■—■—■— |
| CONCRETE WASHOUT AREA              | (CWA)   | □       | PROPOSED R.O.W                         | —■—■—■— |
| LIMITS OF CONSTRUCTION/DISTURBANCE | (LOC)   | —■—■—■— | PROPOSED PROPERTY LINES                | —■—■—■— |
| TEMPORARY SEEDING & MULCHING       | (TS/MU) | □       | PROPOSED SIDEWALK                      | —■—■—■— |
| SEDIMENT BASIN                     | (SB)    | □       | EXISTING PROPERTY LINE                 | —■—■—■— |
| STABILIZED STAGING AREA            | (SSA)   | □       | ROW EXISTING                           | —■—■—■— |
| TEMPORARY STOCK PILE               | (TSP)   | □       | FL EXISTING                            | —■—■—■— |
| TEMPORARY SWALE                    | (TSW)   | —■—■—■— | SIDEWALK EXISTING                      | —■—■—■— |
| VEHICLE TRACKING CONTROL           | (VTC)   | □       | DRAINAGE ACCESS & MAINTENANCE EASEMENT | —■—■—■— |
| SURFACE ROUGHENING                 | (SR)    | □       |  |         |
| CUT AND FILL LINE                  |         | —■—■—■— |  |         |
- EXISTING**  
7100  
INLET  
LOW POINT/HIGH POINT  
FLOW DIRECTION & SLOPE  
FLOW DIRECTION ARROW  
EXISTING FLOW DIRECTION ARROW  
EMERGENCY OVERFLOW DIRECTION
- PROPOSED**  
7100  
L.P./H.P.  
(2.0)%  
FLOW DIRECTION ARROW  
EMERGENCY OVERFLOW DIRECTION



|   |  |              |  |                 |  |
|---|--|--------------|--|-----------------|--|
| HOMESTEAD NORTH AT<br>STERLING RANCH FILING NO. 3 |  | SHEET 3 OF 9 |  | JOB NO. 2518812 |  |
|   |  |              |  |                 |  |
| GRADING & EROSION<br>CONTROL PLAN                 |  | DATE         |  | 7/1/22          |  |
|   |  | DESIGNED BY  |  | QNL             |  |
|   |  | DRAWN BY     |  | QNL             |  |
|   |  | CHECKED BY   |  |                 |  |
|   |  |              |  |                 |  |
| H-SCALE   |  | 1"=50'       |  | No.             |  |
| V-SCALE   |  | N/A          |  |                 |  |
| DATE  |  | 7/1/22       |  |                 |  |
| DESIGNED BY                                       |  | QNL          |  |                 |  |
| DRAWN BY  |  | QNL          |  |                 |  |
| CHECKED BY  |  |              |  |                 |  |
|   |  |              |  |                 |  |
|   |  |              |  |                 |  |
|   |  |              |  |                 |  |
|   |  |              |  |                 |  |
|   |  |              |  |                 |  |
|   |  |              |  |                 |  |
|   |  |              |  |                 |  |
|   |  |              |  |                 |  |
|   |  |              |  |                 |  |
|   |  |              |  |                 |  |
|   |  |              |  |                 |  |
|   |  |              |  |                 |  |
|   |  |              |  |                 |  |
|   |  |              |  |                 |  |
|   |  |              |  |                 |  |
|   |  |              |  |                 |  |
|   |  |              |  |                 |  |
|   |  |              |  |                 |  |
|   |  |              |  |                 |  |
|   |  |              |  |                 |  |
|   |  |              |  |                 |  |
|   |  |              |  |                 |  |
|   |  |              |  |                 |  |
|   |  |              |  |                 |  |
|   |  |              |  |                 |  |
|   |  |              |  |                 |  |
|   |  |              |  |                 |  |
|   |  |              |  |                 |  |
|   |  |              |  |                 |  |
|   |  |              |  |                 |  |
|   |  |              |  |                 |  |
|   |  |              |  |                 |  |
|   |  |              |  |                 |  |
|   |  |              |  |                 |  |
|   |  |              |  |                 |  |
|   |  |              |  |                 |  |
|   |  |              |  |                 |  |
|   |  |              |  |                 |  |
|   |  |              |  |                 |  |
|   |  |              |  |                 |  |
|   |  |              |  |                 |  |
|   |  |              |  |                 |  |
|   |  |              |  |                 |  |
|   |  |              |  |                 |  |
|   |  |              |  |                 |  |
|   |  |              |  |                 |  |
|   |  |              |  |                 |  |
|   |  |              |  |                 |  |
|   |  |              |  |                 |  |
|   |  |              |  |                 |  |
|   |  |              |  |                 |  |
|   |  |              |  |                 |  |
|   |  |              |  |                 |  |
|   |  |              |  |                 |  |
|   |  |              |  |                 |  |
|   |  |              |  |                 |  |
|   |  |              |  |                 |  |
|   |  |              |  |                 |  |
|   |  |              |  |                 |  |
|   |  |              |  |                 |  |
|   |  |              |  |                 |  |
|   |  |              |  |                 |  |
|   |  |              |  |                 |  |
|   |  |              |  |                 |  |
|   |  |              |  |                 |  |
|   |  |              |  |                 |  |
|   |  |              |  |                 |  |
|   |  |              |  |                 |  |
|   |  |              |  |                 |  |
|   |  |              |  |                 |  |
|   |  |              |  |                 |  |
|   |  |              |  |                 |  |
|   |  |              |  |                 |  |
|   |  |              |  |                 |  |
|   |  |              |  |                 |  |
|   |  |              |  |                 |  |
|   |  |              |  |                 |  |
|   |  |              |  |                 |  |
|   |  |              |  |                 |  |
|   |  |              |  |                 |  |
|   |  |              |  |                 |  |
|   |  |              |  |                 |  |
|   |  |              |  |                 |  |
|   |  |              |  |                 |  |
|   |  |              |  |                 |  |
|   |  |              |  |                 |  |
|   |  |              |  |                 |  |
|   |  |              |  |                 |  |
|   |  |              |  |                 |  |
|   |  |              |  |                 |  |
|   |  |              |  |                 |  |
|   |  |              |  |                 |  |
|   |  |              |  |                 |  |
|   |  |              |  |                 |  |
|   |  |              |  |                 |  |
|   |  |              |  |                 |  |
|   |  |              |  |                 |  |
|   |  |              |  |                 |  |
|   |  |              |  |                 |  |
|   |  |              |  |                 |  |
|   |  |              |  |                 |  |
|   |  |              |  |                 |  |
|   |  |              |  |                 |  |
|   |  |              |  |                 |  |
|   |  |              |  |                 |  |
|   |  |              |  |                 |  |
|   |  |              |  |                 |  |
|   |  |              |  |                 |  |
|   |  |              |  |                 |  |
|   |  |              |  |                 |  |
|   |  |              |  |                 |  |
|   |  |              |  |                 |  |
|   |  |              |  |                 |  |
|   |  |              |  |                 |  |
|   |  |              |  |                 |  |
|   |  |              |  |                 |  |
|   |  |              |  |                 |  |
|   |  |              |  |                 |  |
|   |  |              |  |                 |  |
|   |  |              |  |                 |  |
|   |  |              |  |                 |  |
|   |  |              |  |                 |  |
|   |  |              |  |                 |  |
|   |  |              |  |                 |  |
|   |  |              |  |                 |  |
|   |  |              |  |                 |  |
|   |  |              |  |                 |  |
|   |  |              |  |                 |  |
|   |  |              |  |                 |  |
|   |  |              |  |                 |  |
|   |  |              |  |                 |  |
|   |  |              |  |                 |  |
|   |  |              |  |                 |  |
|   |  |              |  |                 |  |
|   |  |              |  |                 |  |
|   |  |              |  |                 |  |
|   |  |              |  |                 |  |
|   |  |              |  |                 |  |
|   |  |              |  |                 |  |
|   |  |              |  |                 |  |
|   |  |              |  |                 |  |
|   |  |              |  |                 |  |
|   |  |              |  |                 |  |
|   |  |              |  |                 |  |
|   |  |              |  |                 |  |
|   |  |              |  |                 |  |
|   |  |              |  |                 |  |
|   |  |              |  |                 |  |
|   |  |              |  |                 |  |
|   |  |              |  |                 |  |
|   |  |              |  |                 |  |
|   |  |              |  |                 |  |
|   |  |              |  |                 |  |
|   |  |              |  |                 |  |
|   |  |              |  |                 |  |
|   |  |              |  |                 |  |



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 AWAY FROM THE STRUCTURE.

**NOTE:**  
SIDE LOT SWALES WILL BE PROVIDED WHEN APPROPRIATE.

**ADDITIONAL NOTES:**  
STAGING AREA TO BE DETERMINED BY CONTRACTOR IN THE FIELD. THE LOCATIONS SHALL BE DELINEATED ON THIS PLAN BY THE CONTRACTOR.

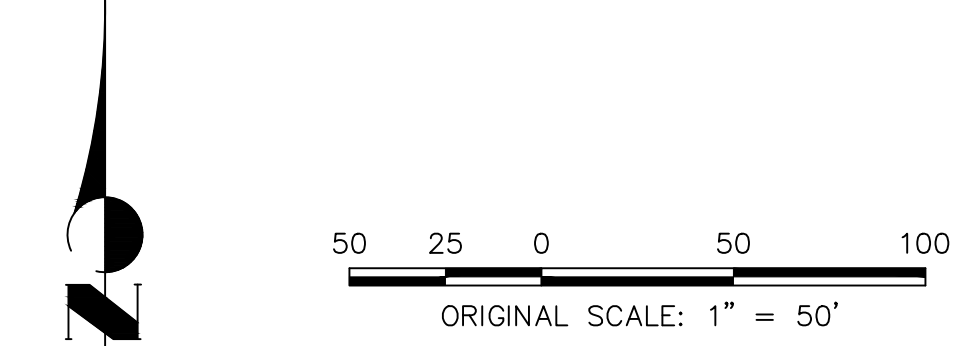
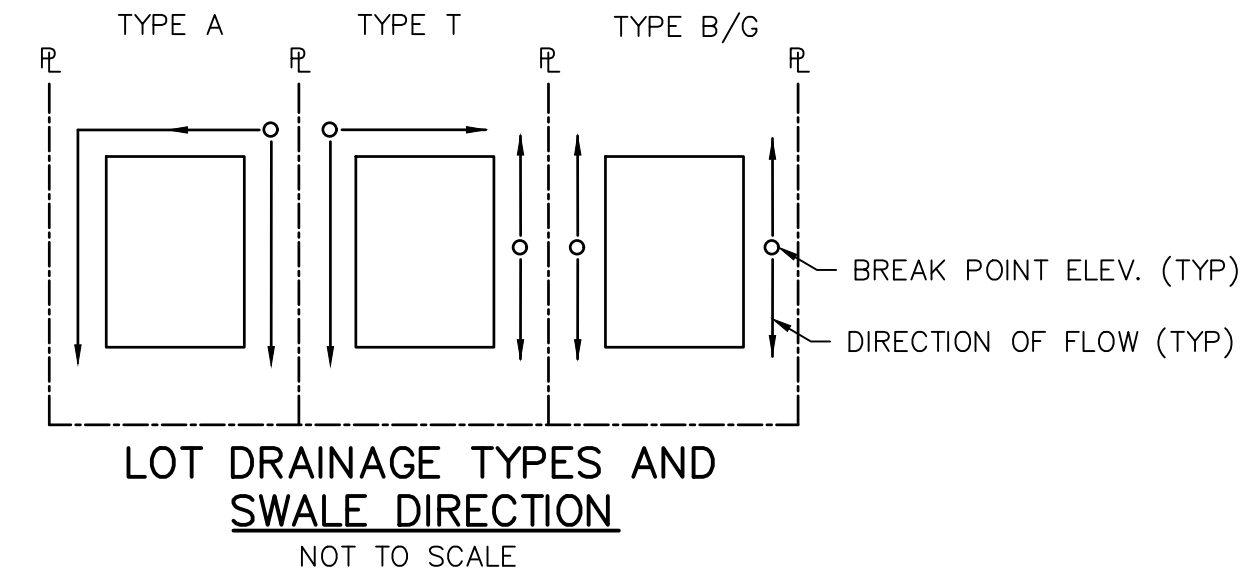
THE EROSION CONTROL DELINEATED ON THIS PLAN SHALL BE REGULARLY UPDATED BY THE CONTRACTOR.

**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.



**LEGEND**

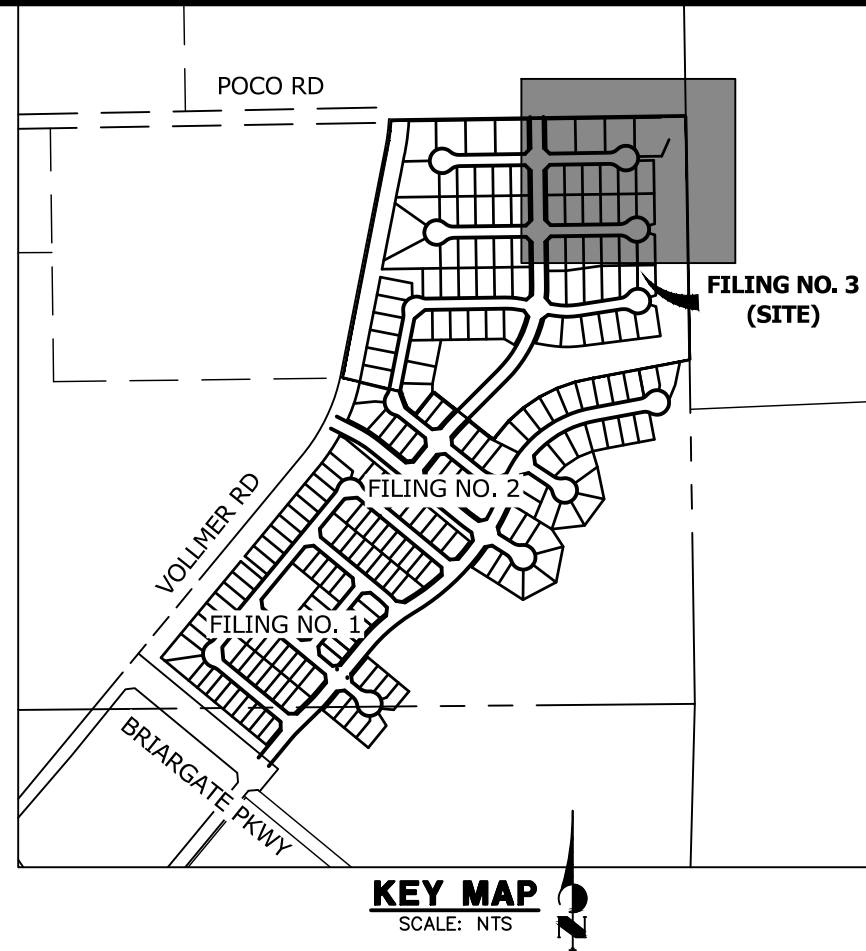
|                                    |         |   |  |   |
|------------------------------------|---------|---|--|---|
| CONSTRUCTION FENCE                 | (CF)    | — | EXISTING STORM SEWER                   | — |
| SILT FENCE                         | (SF)    | — | STORM SEWER PROPOSED                   | — |
| CONCRETE WASHOUT AREA              | (CWA)   | □ | PROPOSED R.O.W                         | — |
| LIMITS OF CONSTRUCTION/DISTURBANCE | (LOC)   | — | PROPOSED PROPERTY LINES                | — |
| TEMPORARY SEEDING & MULCHING       | (TS MU) | — | PROPOSED SIDEWALK                      | — |
| SEDIMENT BASIN                     | (SB)    | □ | EXISTING PROPERTY LINE                 | — |
| STABILIZED STAGING AREA            | (SSA)   | — | ROW EXISTING                           | — |
| TEMPORARY STOCK PILE               | (TSP)   | — | FL EXISTING                            | — |
| TEMPORARY SWALE                    | (TSW)   | — | SIDEWALK EXISTING                      | — |
| VEHICLE TRACKING CONTROL           | (VTC)   | — | DRAINAGE ACCESS & MAINTENANCE EASEMENT | — |
| SURFACE ROUGHENING                 | (SR)    | — |  |   |
| CUT AND FILL LINE                  |         | — |  |   |

|                               |          |
|-------------------------------|----------|
| EXISTING                      | PROPOSED |
| INLET                         | □        |
| LOW POINT/HIGH POINT          | □        |
| FLOW DIRECTION & SLOPE        | ↑        |
| FLOW DIRECTION ARROW          | ↑        |
| EXISTING FLOW DIRECTION ARROW | ↑        |
| EMERGENCY OVERFLOW DIRECTION  | ↑        |

**BMP PHASING**

|  |   |   |
|--|---|---|
| <b>INITIAL (SUMMER 2023)</b><br>1. INSTALL VTC<br>2. ESTABLISH SSA<br>3. INSTALL SILT AND CONSTRUCTION FENCE<br>4. INSTALL SEDIMENT BASINS | <b>INTERIM (FALL 2023)</b><br>1. MAINTAIN ALL BMP'S | <b>FINAL (WINTER 2023)</b><br>1. INSTALL MULCH AND TEMPORARY SEEDING IN ALL DISTURBED AREA<br>2. REMOVE ALL TEMPORARY BMP'S AFTER FINAL STABILIZATION |
|--|---|---|



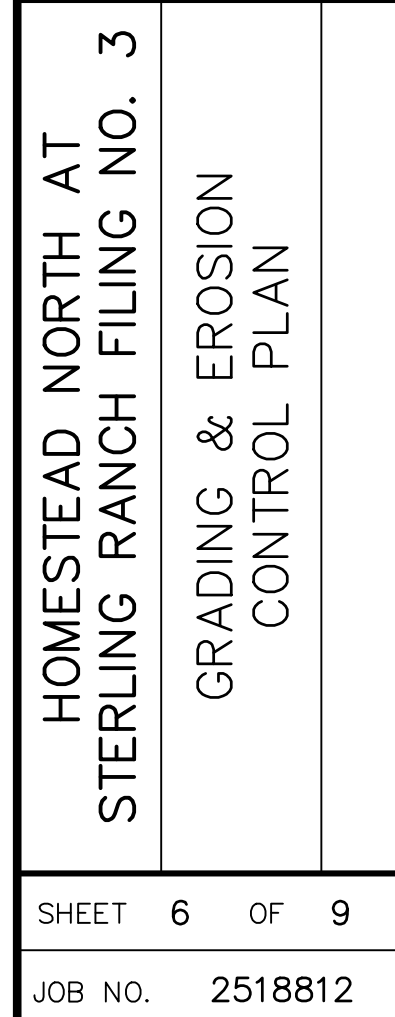
UNTIL SUCH TIME AS THESE DRAWINGS ARE APPROVED BY THE AGENCIES, OR ENGINEERING APPROVES THEIR USE, THESE DRAWINGS ARE DESIGNATED BY WRITTEN AUTHORIZATION.

PREPARED FOR  
**SR LAND, LLC**  
20 BOULDER CRESCENT  
SUITE 200  
COLORADO SPRINGS, CO 80903  
JAMES F. MORLEY  
(719) 471-1742

**J.R. ENGINEERING**  
A Western Company  
Central 303-740-9888 • Colorado Springs 719-583-2583  
Fort Collins 970-491-9888 • www.jrengineering.com

|  |      |          |     |    |     |         |     |        |             |          |            |
|--|------|----------|-----|----|-----|---------|-----|--------|-------------|----------|------------|
| BY   | DATE | REVISION | No. | 1" | 50' | H-SCALE | N/A | DATE   | DESIGNED BY | DRAWN BY | CHECKED BY |
|  |      |          |     |    |     |         |     | 7/1/22 | QNL         | QNL      |            |
| HOMESTEAD NORTH AT STERLING RANCH FILING NO. 3 |      |          |     |    |     |         |     |        |             |          |            |
| GRADING & EROSION CONTROL PLAN                 |      |          |     |    |     |         |     |        |             |          |            |
| SHEET 4 OF 9                                   |      |          |     |    |     |         |     |        |             |          |            |
| JOB NO. 2518812                                |      |          |     |    |     |         |     |        |             |          |            |









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

Unlined dikes or swales should only be used for intercepting sheet flow runoff and are not intended for diversion of concentrated flows.

Details with notes are provided for several design variations, including:

- ED-1. Unlined Earth Dike formed by Berm
- DS-1. Unlined Excavated Swale
- DS-2. Unlined Swale Formed by Cut and Fill
- DS-3. ECB-lined Swale
- DS-4. Synthetic-lined Swale
- DS-5. Riprap-lined Swale

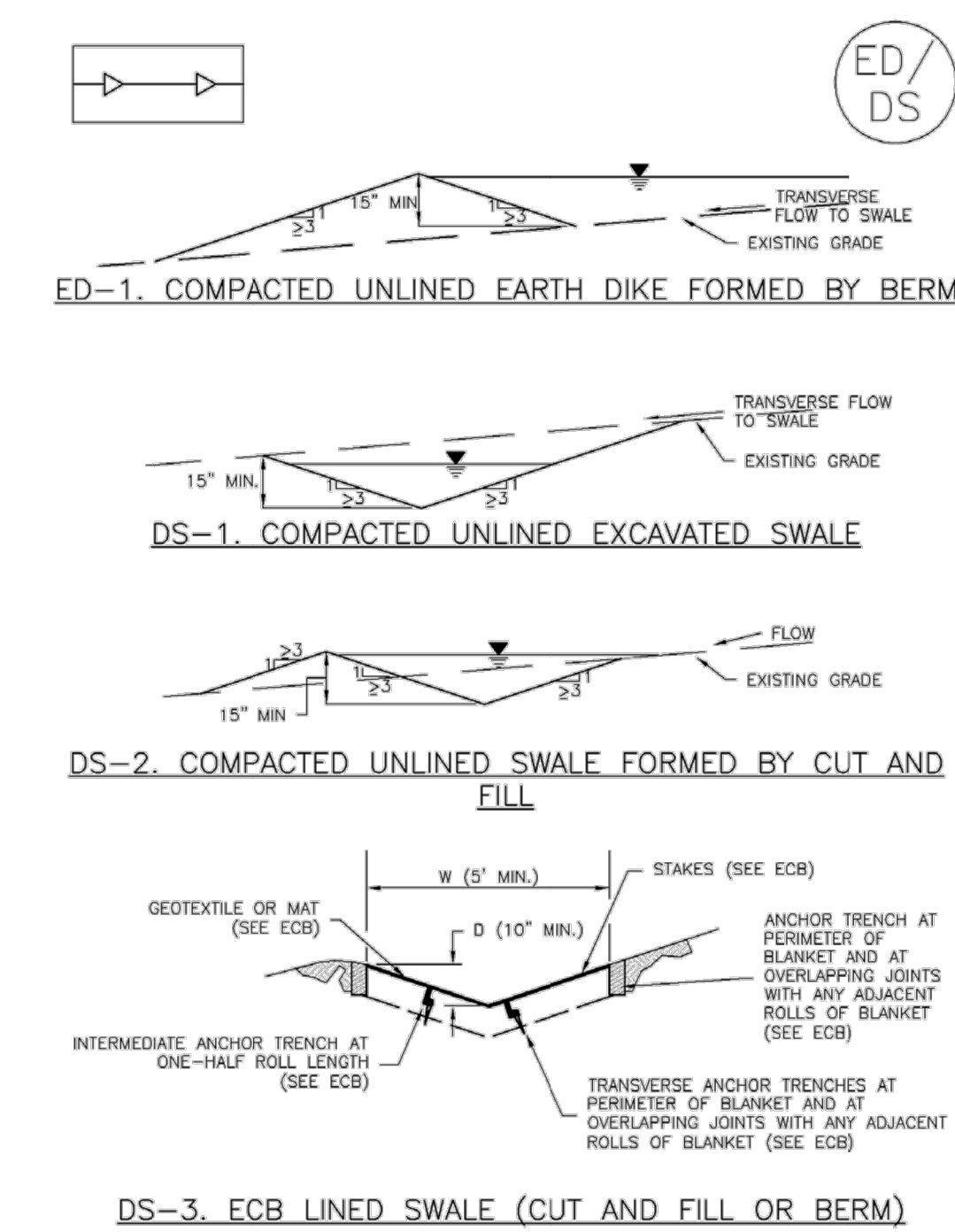
The details also include guidance on permissible velocities for cohesive channels if unlined approaches will be used.

Maintenance and Removal

Inspect earth dikes for stability, compaction, and signs of erosion and repair. Inspect side slopes for erosion and damage to erosion control fabric. Stabilize slopes and repair fabric as necessary. If there is reoccurring extensive damage, consider installing rock check dams or lining the channel with riprap.

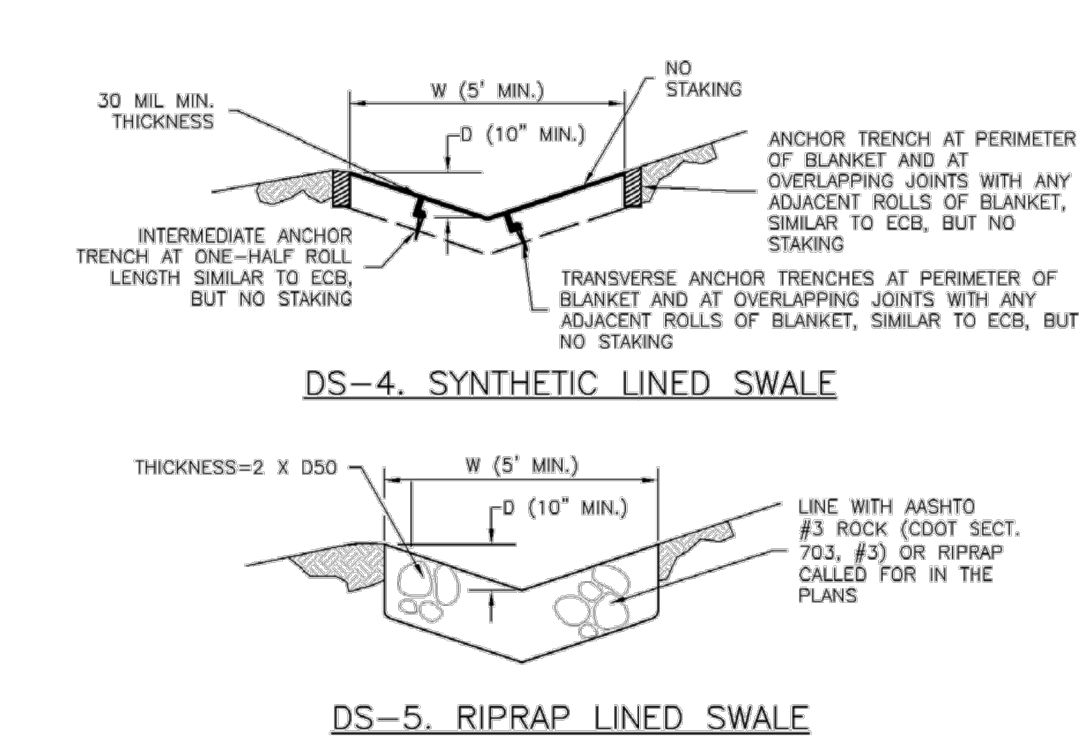
If drainage swales are not permanent, remove dikes and fill channels when the upstream area is stabilized. Stabilize the fill or disturbed area immediately following removal by revegetation or other permanent stabilization method approved by the local jurisdiction.

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



November 2010 Urban Drainage and Flood Control District Urban Storm Drainage Criteria Manual Volume 3 ED/DS-3

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



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

ED/DS-4 Urban Drainage and Flood Control District Urban Storm Drainage Criteria Manual Volume 3 November 2010

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

EARTH DIKE AND DRAINAGE SWALE MAINTENANCE NOTES

- INSPECT BMPs EACH WORKDAY, AND MAINTAIN THEM IN EFFECTIVE OPERATING CONDITION. MAINTENANCE OF BMPs SHOULD BE PROACTIVE, NOT REACTIVE. INSPECT BMPs AS SOON AS POSSIBLE (AND ALWAYS WITHIN 24 HOURS) FOLLOWING A STORM THAT CAUSES SURFACE EROSION, AND PERFORM NECESSARY MAINTENANCE.
- FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN BMPs IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.
- WHERE BMPs HAVE FAILED, REPAIR OR REPLACEMENT SHOULD BE INITIATED UPON DISCOVERY OF THE FAILURE.
- SWALES SHALL REMAIN IN PLACE UNTIL THE END OF CONSTRUCTION; IF APPROVED BY LOCAL JURISDICTION, SWALES MAY BE LEFT IN PLACE.
- WHEN A SWALE IS REMOVED, THE DISTURBED AREA SHALL BE COVERED WITH TOPSOIL, SEEDED AND MULCHED OR OTHERWISE STABILIZED IN A MANNER APPROVED BY LOCAL JURISDICTION.

(DETAIL ADAPTED FROM DOUGLAS COUNTY, COLORADO AND THE CITY OF COLORADO SPRINGS, COLORADO, NOT AVAILABLE IN AUTOCAD)

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

November 2010 Urban Drainage and Flood Control District Urban Storm Drainage Criteria Manual Volume 3 ED/DS-5

SEEDING & MULCHING

ALL SOIL TESTING, SOILS AMENDMENT AND FERTILIZER DOCUMENTATION, AND SEED LOAD AND BAG TICKETS MUST BE ADDED TO THE CSWMP.

SOIL PREPARATION

- IN AREAS TO BE SEEDDED, THE UPPER 6 INCHES OF THE SOIL MUST NOT BE HEAVILY COMPACTED, AND SHOULD BE IN FRABLE CONDITION. LESS THAN 85% STANDARD PROCTOR DENSITY IS ACCEPTABLE. AREAS OF COMPACTION OR GENERAL CONSTRUCTION ACTIVITY MUST BE SCARIFIED TO A DEPTH OF 6 TO 12 INCHES PRIOR TO SPREADING TOPSOIL TO BREAK UP COMPACTED LAYERS AND PROVIDE A BLENDING ZONE BETWEEN DIFFERENT SOIL LAYERS.
- AREAS TO BE PLANTED SHALL HAVE AT LEAST 4 INCHES OF TOPSOIL SUITABLE TO SUPPORT PLANT GROWTH.
- THE CITY RECOMMENDS THAT EXISTING AND/OR IMPORTED TOPSOIL BE TESTED TO IDENTIFY SOIL DEFICIENCIES AND ANY SOIL AMENDMENTS NECESSARY TO ADDRESS THESE DEFICIENCIES. SOIL AMENDMENTS AND/OR FERTILIZERS SHOULD BE ADDED TO CORRECT TOPSOIL DEFICIENCIES BASED ON SOIL TESTING RESULTS.
- TOPSOIL SHALL BE PROTECTED DURING THE CONSTRUCTION PERIOD TO RETAIN ITS STRUCTURE, AVOID COMPACTION, AND TO PREVENT EROSION AND CONTAMINATION. STRIPPED TOPSOIL MUST BE STORED IN AN AREA AWAY FROM MACHINERY AND CONSTRUCTION OPERATIONS, AND CARE MUST BE TAKEN TO PROTECT THE TOPSOIL AS A VALUABLE COMMODITY. TOPSOIL MUST NOT BE STRIPPED DURING UNDESIRABLE WORKING CONDITIONS (E.G. DURING WET WEATHER OR WHEN SOILS ARE SATURATED). TOPSOIL SHALL NOT BE STORED IN SWALES OR IN AREAS WITH POOR DRAINAGE.

SEEDING

- ALLOWABLE SEED MIXES ARE INCLUDED IN THE CITY OF COLORADO SPRINGS STORMWATER CONSTRUCTION MANUAL. ALTERNATIVE SEED MIXES ARE ACCEPTABLE IF INCLUDED IN AN APPROVED LANDSCAPING PLAN.
- SEED SHOULD BE DRILL-SEEDDED WHENEVER POSSIBLE.
  - SEED DEPTH MUST BE 1/4 TO 1/2 INCHES WHEN DRILL-SEEDING IS USED.
- BROADCAST SEEDING OR HYDRO-SEEDING WITH TACKIFIER MAY BE SUBSTITUTED ON SLOPES STEEPER THAN 3:1 OR ON OTHER AREAS NOT PRACTICAL TO DRILL SEED.
  - SEEDING RATES MUST BE DOUBLED FOR BROADCAST SEEDING OR INCREASED BY 50% IF USING A BRILLION DRILL OR HYDRO-SEEDING.
  - BROADCAST SEEDING MUST BE LIGHTLY HAND-RAKED INTO THE SOIL.

MULCHING

- MULCHING SHOULD BE COMPLETED AS SOON AS PRACTICABLE AFTER SEEDING, HOWEVER PLANTED AREAS MUST BE MULCHED NO LATER THAN 14 DAYS AFTER PLANTING.
- MULCHING REQUIREMENTS INCLUDE:
  - HAY OR STRAW MULCH
    - ONLY CERTIFIED WEED-FREE AND CERTIFIED SEED-FREE MULCH MAY BE USED. MULCH MUST BE APPLIED AT 2 TONS/ACRE AND ADEQUATELY SECURED BY CRIMPING AND/OR TACKIFIER.
    - CRIMPING MUST NOT BE USED ON SLOPES GREATER THAN 3:1 AND MULCH FIBERS MUST BE TUCKED INTO THE SOIL TO A DEPTH OF 3 TO 4 INCHES.
    - TACKIFIER MUST BE USED IN PLACE OF CRIMPING ON SLOPES STEEPER THAN 3:1.
  - HYDRAULIC MULCHING
    - HYDRAULIC MULCHING IS AN OPTION ON STEEP SLOPES OR WHERE ACCESS IS LIMITED.
    - IF HYDRO-SEEDING IS USED, MULCHING MUST BE APPLIED AS A SEPARATE, SECOND OPERATION.
    - WOOD CELLULOSE FIBERS MIXED WITH WATER MUST BE APPLIED AT A RATE OF 2,000 TO 2,500 POUNDS/ACRE, AND TACKIFIER MUST BE APPLIED AT A RATE OF 100 POUNDS/ACRE.
  - EROSION CONTROL BLANKET
    - EROSION CONTROL BLANKET MAY BE USED IN PLACE OF TRADITIONAL MULCHING METHODS.

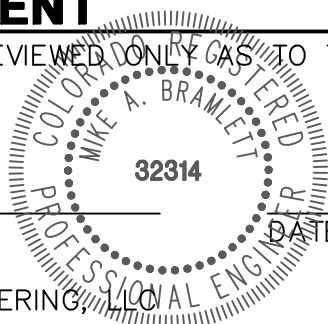
SM

|                       |  |                     |  |
|-----------------------|--|---------------------|--|
| STORMWATER ENTERPRISE |  | SEEDING & MULCHING  |  |
| APPROVED:             |  | ISSUED: 10/7/19     |  |
| DESIGNED:             |  | REVISION: 8/19/2020 |  |
| DRAWING NO. 100-34    |  |                     |  |

ENGINEER'S STATEMENT

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

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



HOMESTEAD NORTH AT STERLING RANCH FILING NO. 3

DETAIL SHEET

SHEET 9 OF 9

JOB NO. 2518812

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

PREPARED FOR

SR LAND, LLC  
20 BOULDER CRESCENT  
SUITE 200  
COLORADO SPRINGS, CO 80903  
JAMES F. MORLEY  
(719) 471-1742

J.R. ENGINEERING  
A Western Company



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

BY DATE

No. REVISION

N/A

H-SCALE  
V-SCALE

DATE

DESIGNED BY

DRAWN BY

CHECKED BY

7/1/22 QNL QNL

X:\2518812\Drawings\Sheet Dwg\Earth Utilities\GED\2518812.DWG, 2518812.DWG, 7/1/2022 3:44:35 PM, CS