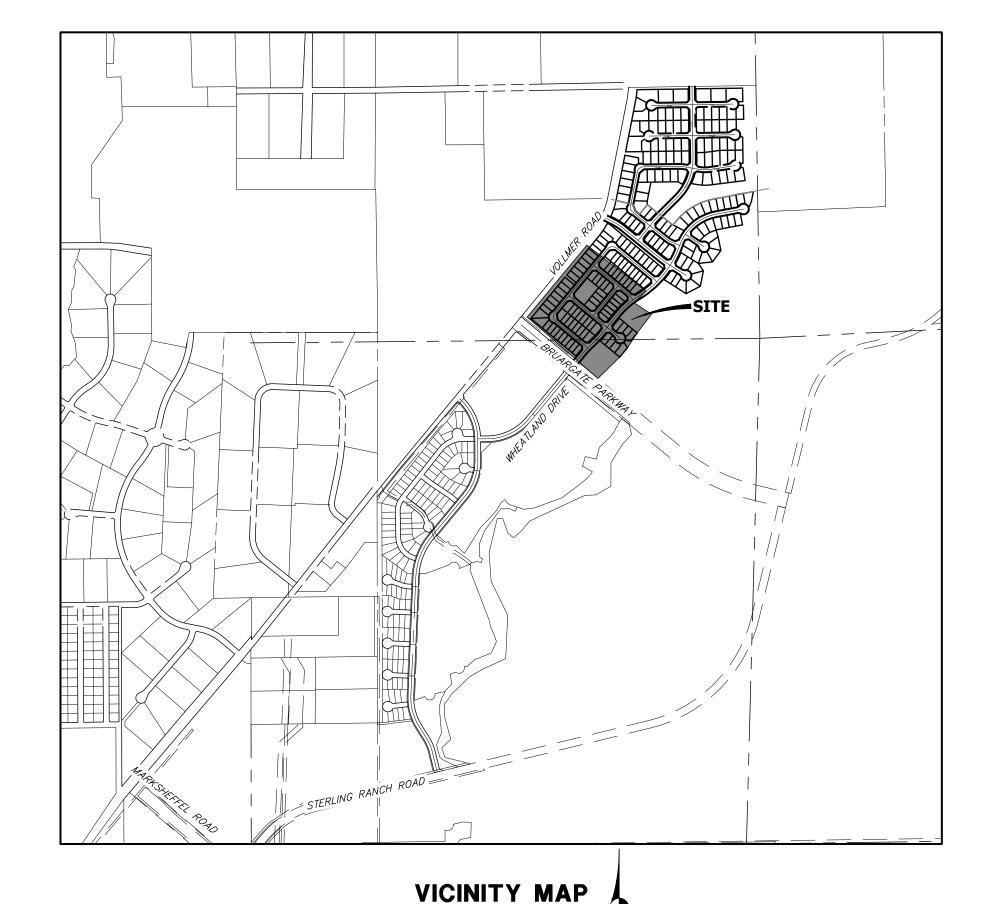
# HOMESTEAD NORTH AT STERLING RANCH

# COUNTY OF EL PASO, STATE OF COLORADO EARLY GRADING AND EROSION CONTROL PLANS **JUNE 2020**

#### **GRADING AND EROSION CONTROL STANDARD NOTES**

- STORMWATER DISCHARGES FROM CONSTRUCTION SITES SHALL NOT CAUSE OR THREATEN TO CAUSE POLLUTION, CONTAMINATION, OR DEGRADATION OF STATE WATERS. ALL WORK AND EARTH DISTURBANCE SHALL BE DONE IN A MANNER THAT MINIMIZES POLLUTION OF ANY ON-SITE OR OFF-SITE WATERS, INCLUDING WETLANDS.
- NOTWITHSTANDING ANYTHING DEPICTED IN THESE PLANS IN WORDS OR GRAPHIC REPRESENTATION, ALL DESIGN AND CONSTRUCTION RELATED TO ROADS, STORM DRAINAGE AND EROSION CONTROL SHALL CONFORM TO THE STANDARDS AND REQUIREMENTS OF THE MOST RECENT VERSION OF THE RELEVANT ADOPTED EL PASO COUNTY STANDARDS, INCLUDING THE LAND DEVELOPMENT CODE, THE ENGINEERING CRITERIA MANUAL, THE DRAINAGE CRITERIA MANUAL, AND THE DRAINAGE CRITERIA MANUAL VOLUME 2. ANY DEVIATIONS FROM REGULATIONS AND STANDARDS MUST BE REQUESTED, AND APPROVED, IN WRITING.
- A SEPARATE STORMWATER MANAGEMENT PLAN (SMWP) 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.
- 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
- 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
- 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.
- 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.
- 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
- 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.
- . 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.
- 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 LOOSENED PRIOR TO INSTALLATION OF
- . 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
- 3. 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
- 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.
- . 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.
- 8. 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
- O. 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
- 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
- AND SHALL BE CONSIDERED A PART OF
- 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



#### STANDARD NOTES FOR EL PASO COUNTY CONSTRUCTION PLANS

- 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, BEFORE BEGINNING 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) 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

COVER

3-2 GRADING PLAN 4-5 DETAIL SHEET

- 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 EINGEERI9NG 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
- 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
- 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 PCD. 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 PCD 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 OWENER/DEVELOPER SHALL OBTAIN WRITTEN PERMISSION AND EASEMENTS, WHERE REQUIRED, FROM ADJOINING PROPERTY OWNER(S) PRIOR TO ANY OFF-SITE DISTURBANCE, GRADING, OR CONSTRUCTION.

**Engineering Review** 01/06/2021 4:13:24 PM dsdrice JeffRice@elpasoco.com (719) 520-7877 **EPC Planning & Community Development Department** 

 $\sim$ **EPC STORMWATER REVIEW COMMENTS** IN ORANGE BOXES WITH BLACK TEXT 

 $\sim$ **PCD-ENGINEERING REVIEW COMMENTS** 

#### **AGENCIES**

OWNER/DEVELOPER: 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

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

JENNIFER IRVINE, P.E.

### OWNER/DEVELOPER STATEMENT

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

JAMES F. MORLEY 20 BOULDER CRESCENT, SUITE 201 COLORADO SPRINGS, CO 80903

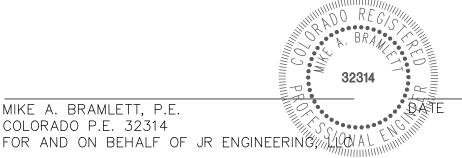
# **ENGINEER'S STATEMENT**

MIKE A. BRAMLETT, P.E.

COLORADO P.E. 32314

COUNTY ENGINEER/ECM ADMINISTRATOR

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.

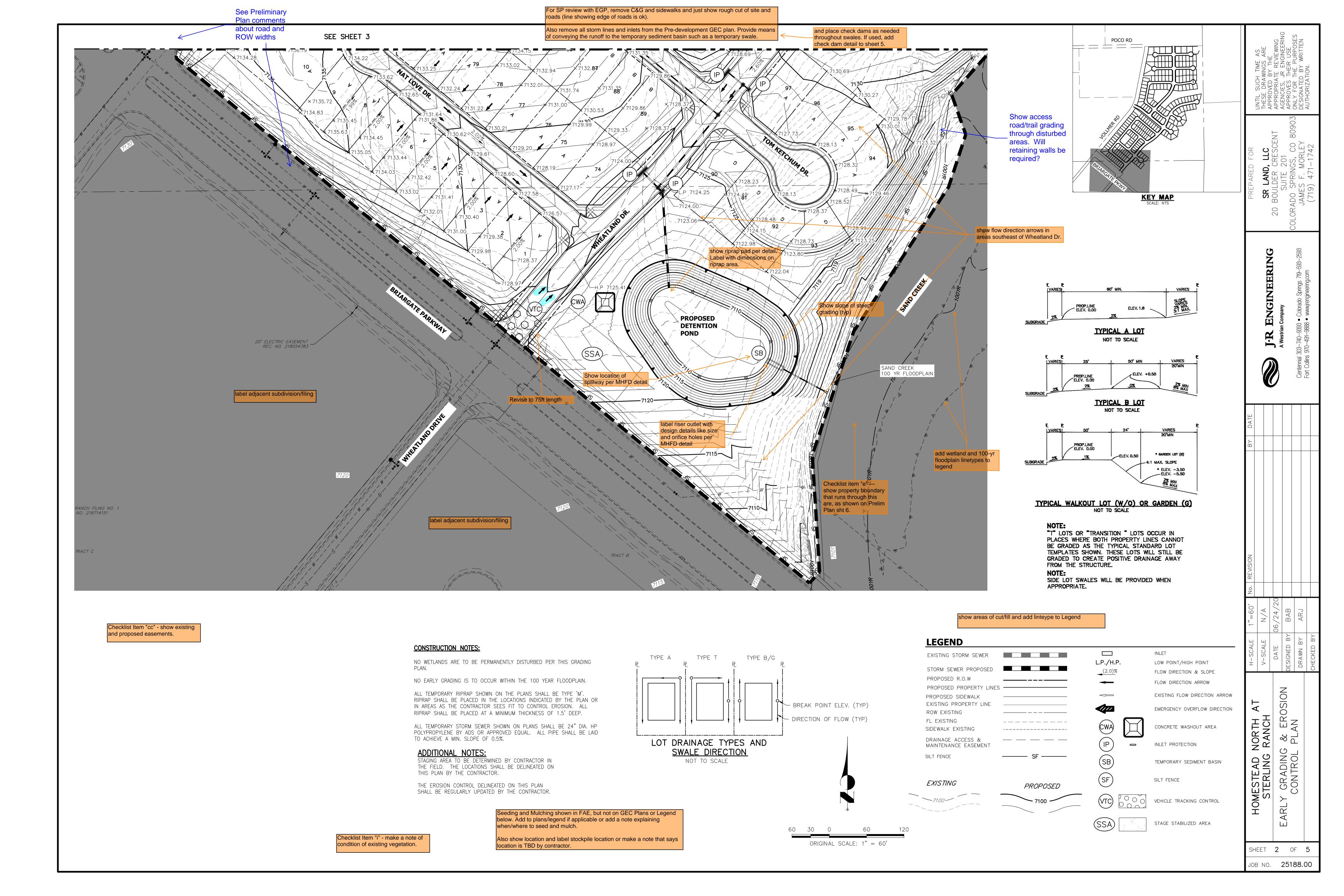


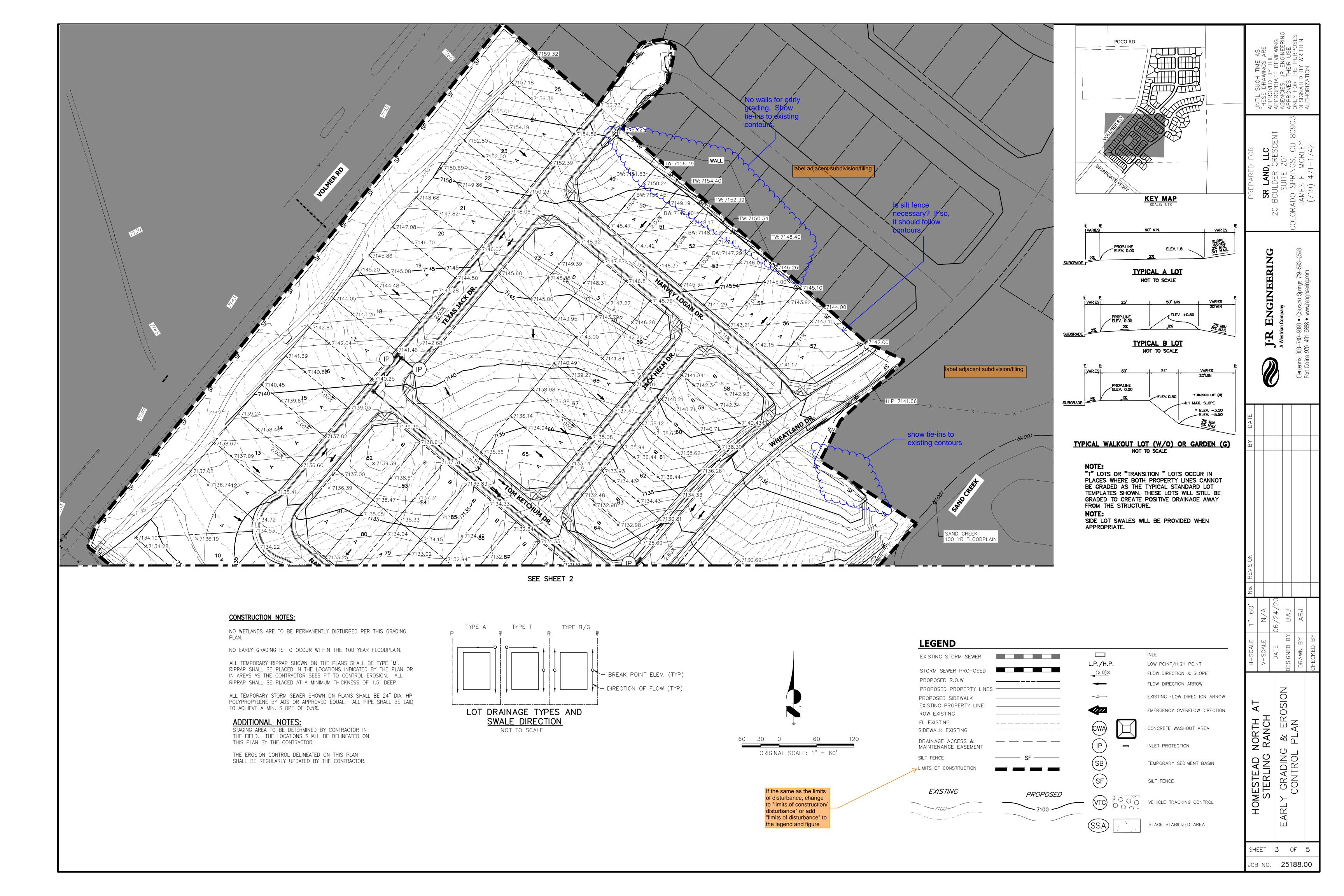
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SHEET **1** OF **5** Call before you dig. JOB NO. 25188.00

IESTEAD STERLING





**SC-6** 

IP-7

Cool

Cool

Cool

Cool

Cool

Cool

Warm

Cool

Growth

Form

Bunch

Bunch

Bunch

Sod

Sod

Bunch

Sod

Sod

Sod

Sod

Sod

Sod

Bunch

Sod

Bunch

Sod

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

Sporobolus airoides

Agropyron riparium 'Sodar'

Agropyron smithii 'Arriba'

Festuca ovina 'duriuscula'

Agropyron riparium 'Sodar'

Agropyron smithii 'Arriba'

Bromus inermis leyss

Alopecurus pratensis

Phalaris arundinacea

Bromus inermis leyss

Agropyron elongatum

Poa compressa 'Ruebens'

Festuca ovina 'duriuscula

Lolium perenne 'Citation'

Bromus inermis leyss

Panicum virgatum

Agrostis alba

'Lincoln'

'Pathfinder'

'Lincoln'

Elvmus cinereus

Common

Alakali Soil Seed Mix

Sodar streambank wheatgrass

Fertile Loamy Soil Seed Mix

Ephriam crested wheatgrass

Sodar streambank wheatgrass

**High Water Table Soil Seed Mix** 

Arriba western wheatgrass

Arriba western wheatgrass

Alkali sacaton

Basin wildrve

Jose tall wheatgrass

Dural hard fescue

Meadow foxtail

Reed canarygrass

Lincoln smooth brome

Pathfinder switchgrass

Alkar tall wheatgrass

Dural hard fescue

Transition Turf Seed Mix

Ruebens Canadian bluegrass

Citation perennial ryegrass

Total

Lincoln smooth brome

Lincoln smooth brome

Name

Bouteloua gracilis

Schizachyrium scoparium

Calamovilfa longifolia

Sporobolus cryptandrus

Bouteloua curtipendula

Agropyron cristatum

Agropyron intermedium

Bouteloua curtipendula

Agropyron smithii 'Arriba'

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

1. INSPECT BMPs EACH WORKDAY, AND MAINTAIN THEM IN EFFECTIVE OPERATING CONDITION.

2. FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN BMPs IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE

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

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

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

through hydraulic seeding. Hydraulic seeding may be substituted for drilling only where slopes are steeper than 3:1. If

Bromus inermis leyss

'Lincoln'

hydraulic seeding is used, hydraulic mulching should be done as a separate operation.

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

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

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

Agropyron smithii 'Arriba'

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

Season<sup>b</sup>

Warm

Warm

Warm

Warm

Cool

Warm

Cool

PLS/acre

0.25

10.25

Pound

825,000

240,000

274,000

5,298,000

191,000

175,000

115,000

191,000

130,000

Form

Sod-forming

Bunch

Open sod

Bunch

Sod

Sod

Sod

Sod

Sod

bunchgrass

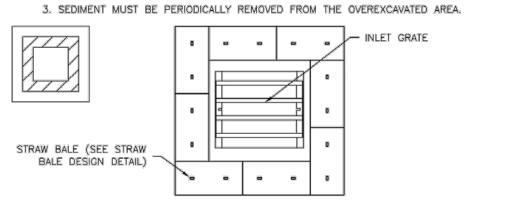
JOB NO. **25188.00** 

CONCENTRATED OR ROCK SOCK (USE IF FLOW " IS CONCENTRATED)

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



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

IP-6. STRAW BALE FOR SUMP INLET PROTECTION

IP-6 Urban Drainage and Flood Control District

August 2013

D (12" MIN.) -CULVERT END SECTION - ROCK SOCK CULVERT INLET PROTECTION SECTION A PLAN [ 10" MIN. KEY IN ROCK SOCK O" ON BEDROCK, PAVEMENT OR RIPRAP KEY IN ROCK SOCK 2" ON EARTH SECTION B

CIP-1. CULVERT INLET PROTECTION

CULVERT INLET PROTECTION INSTALLATION NOTES SEE PLAN VIEW FOR
 -LOCATION OF CULVERT INLET PROTECTION.

**Inlet Protection (IP)** 

2. SEE ROCK SOCK DESIGN DETAIL FOR ROCK GRADATION REQUIREMENTS AND JOINTING

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

3. WHERE BMPs HAVE FAILED, REPAIR OR REPLACEMENT SHOULD BE INITIATED UPON

4. SEDIMENT ACCUMULATED UPSTREAM OF THE CULVERT SHALL BE REMOVED WHEN THE SEDIMENT DEPTH IS ½ 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

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TS/PS-4 Urban Drainage and Flood Control District Urban Storm Drainage Criteria Manual Volume 3

June 2012

Pounds of

PLS/acre

7.0

5.5

17.75

2.0

3.0

2.5

15.5

0.25

0.5

3.0

1.0

5.5

10.75

1.0

3.0

3.0

7.5

Seeds/

Pound

1,750,000

165,000

79,000

110,000

175,000

565,000

130,000

170,000

110,000

900,000

5,000,000

68,000

130,000

389,000

79,000

2,500,000

565,000

247,000

130,000

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**Sediment Basin (SB)** 

Sandy Soil Seed Mix

Camper little bluestem

Vaughn sideoats grama

Arriba western wheatgrass

Ephriam crested wheatgrass<sup>d</sup>

Oahe Intermediate wheatgrass

Vaughn sideoats grama<sup>e</sup>

Lincoln smooth brome

Arriba western wheatgrass

Heavy Clay, Rocky Foothill Seed Mix

See Table TS/PS-3 for seeding dates.

Blue grama

Prairie sandreed

Sand dropseed

TS/PS-5

SC-7

# **Temporary and Permanent Seeding (TS/PS)**

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

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	Annual Grasses (Numbers in table reference species in Table TS/PS-1)		Perennial Grasses	
Seeding Dates	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	İ		✓	✓

# Mulch

TS/PS-6

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.

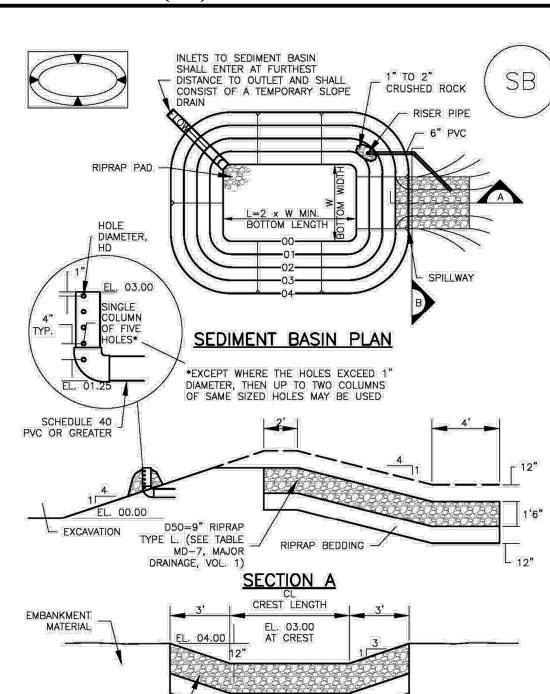
Seeded areas may require irrigation, particularly during extended dry periods. Targeted weed control may also be necessary.

Protect seeded areas from construction equipment and vehicle access.

# **Sediment Basin (SB)**

DISCOVERY OF THE FAILURE.

DIFFERENCES ARE NOTED.



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LARGER THAN 15 ACRES.

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

(DETAILS ADAPTED FROM DOUGLAS COUNTY, COLORADO)

BELOW THE SPILLWAY CREST).

LOCAL JURISDICTION.

SEDIMENT BASIN MAINTENANCE NOTES

EROSION, AND PERFORM NECESSARY MAINTENANCE.

**Sediment Basin (SB)** 

Circle/highlight the applicable row for this

TABLE SB-1. SIZ	ZING INFORMATION FO	OR 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 2 3 4 5 6 7 8 9 10 11 12 13 14 15	12 ½ 21 28 33 ½ 38 ½ 43 47 ¼ 51 55 58 ¼ 61 64 67 ½ 70 ½ 73 ¼	2 3 5 6 8 9 11 12 13 15 16 18 19 21 22	932 136 36 2352 2352 2352 2732 2732 28 136 136 136 136 136 136 136

# 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 CL, AND HOLE -FOR NONSTANDARD BASIN, SEE CONSTRUCTION DRAWINGS FOR DESIGN OF BASIN INCLUDING RISER HEIGHT H, NUMBER OF COLUMNS N, HOLE DIAMETER HD AND PIPE
- 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

SB-7

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\_\_ D50=9" RIPRAP TYPE L

SB-5

SHEET **4** OF **5** 

(WIDTH CAN BE

LESS IF CONST

VEHICLES ARE

PHYSICALLY

UNLESS OTHERWISE SPECIFIED

BY LOCAL JURISDICTION, USE

CDOT SECT. #703, AASHTO #3

NON-WOVEN GEOTEXTILE

VTC-3

COARSE AGGREGATE OR 6"

MINUS ROCK

BETWEEN SOIL AND ROCK

UNLESS OTHERWISE SPECIFIED BY LOCAL

#3 COARSE AGGREGATE

OR 6" MINUS ROCK

SECTION A

VTC-1. AGGREGATE VEHICLE TRACKING CONTROL

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JURISDICTION, USE COOT SECT. #703, AASHTO

NON-WOVEN GEOTEXTILE FABRIC

CONFINED ON BOTH SIDES)

**SM-4** 

CONSTRUCTION

SITE ACCESS

STABILIZED CONSTRUCTION ENTRANCE (SEE DETAILS VTC-1

TO VTC-3)

1. SEE PLAN VIEW FOR

FROM THE LOCAL JURISDICTION.

FENCE AND CONSTRUCTION FENCING.

DOCUMENTED THOROUGHLY.

DISCOVERY OF THE FAILURE.

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**SM-6** 

STABILIZED STAGING AREA MAINTENANCE NOTES

EROSION, AND PERFORM NECESSARY MAINTENANCE.

STABILIZED STAGING AREA MAINTENANCE NOTES

STORAGE, AND UNLOADING/LOADING OPERATIONS.

DIFFERENCES ARE NOTED.

SSA-3

**Stabilized Staging Area (SSA)** 

— SF/CF —— SF/CF —

ONSITE

CONSTRUCTION

VEHICLE

PARKING (IF

NEEDED)

— SF/CF —— SF/CF —

SSA-1. STABILIZED STAGING AREA

-CONTRACTOR MAY ADJUST LOCATION AND SIZE OF STAGING AREA WITH APPROVAL

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.

SECT. #703, AASHTO #3 COARSE AGGREGATE OR 6" (MINUS) ROCK.

4. THE STABILIZED STAGING AREA SHALL CONSIST OF A MINIMUM 3" THICK GRANULAR

5. UNLESS OTHERWISE SPECIFIED BY LOCAL JURISDICTION, ROCK SHALL CONSIST OF DOT

6. ADDITIONAL PERIMETER BMPs MAY BE REQUIRED INCLUDING BUT NOT LIMITED TO SILT

1. INSPECT BMPs EACH WORKDAY, AND MAINTAIN THEM IN EFFECTIVE OPERATING CONDITION.

POSSIBLE (AND ALWAYS WITHIN 24 HOURS) FOLLOWING A STORM THAT CAUSES SURFACE

2. FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN BMPs IN

3. WHERE BMPs HAVE FAILED, REPAIR OR REPLACEMENT SHOULD BE INITIATED UPON

4. ROCK SHALL BE REAPPLIED OR REGRADED AS NECESSARY IF RUTTING OCCURS OR UNDERLYING SUBGRADE BECOMES EXPOSED.

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5. STABILIZED STAGING AREA SHALL BE ENLARGED IF NECESSARY TO CONTAIN PARKING,

6. THE STABILIZED STAGING AREA SHALL BE REMOVED AT THE END OF CONSTRUCTION. THE

NOTE: MANY MUNICIPALITIES PROHIBIT THE USE OF RECYCLED CONCRETE AS GRANULAR MATERIAL FOR STABILIZED STAGING AREAS DUE TO DIFFICULTIES WITH RE-ESTABLISHMENT OF

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

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.

VEGETATION IN AREAS WHERE RECYCLED CONCRETE WAS PLACED.

(DETAILS ADAPTED FROM DOUGLAS COUNTY, COLORADO, NOT AVAILABLE IN AUTOCAD)

EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE

MAINTENANCE OF BMPs SHOULD BE PROACTIVE, NOT REACTIVE. INSPECT BMPs AS SOON AS

EXISTING ROADWAY

STABILIZED STAGING AREA INSTALLATION NOTES

-LOCATION OF STAGING AREA(S).

CONSTRUCTION

3" MIN. THICKNESS

GRANULAR MATERIAL

SILT FENCE OR CONSTRUCTION

SHEET 5 OF 5

\_\_ SF \_\_\_ SF \_\_\_ SF \_ 1 ½" x 1 ½" (RECOMMENDED) WOODEN FENCE POST WITH 10' MAX SPACING GEOTEXTILE BACKFILL GROUND 6" MIN AT LEAST 10" OF SILT FENCE BURIEC

SILT FENCE POSTS SHALL OVERLAP AT JOINTS SO THAT NO GAPS -EXIST IN SILT FENCE ROTATE POSTS SHALL BE JOINED AS THICKNESS OF GEOTEXTILE HAS IN DIRECTION SHOWN AND DRIVEN INTO THE GROUND SECTION A

SF-1. SILT FENCE

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**SM-4** 

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SC-1

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**STOCKPILE** 

STOCKPILE PROTECTION PLAN

SECTION A

SP-1. STOCKPILE PROTECTION

2. 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

3. 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

4. FOR TEMPORARY STOCKPILES ON THE INTERIOR PORTION OF A CONSTRUCTION SITE, WHERE OTHER DOWNGRADIENT CONTROLS, INCLUDING PERIMETER CONTROL, ARE IN PLACE, STOCKPILE

November 2010

MM-2

SP

SILT FENCE (SEE SF DETAIL FOR

INSTALLATION REQUIREMENTS)

SILT FENCE (SEE SF DETAIL FOR

INSTALLATION REQUIREMENTS')

**Stockpile Management (SP)** 

**MM-2** 

**Stockpile Management (SM)** 

STOCKPILE PROTECTION MAINTENANCE NOTES

**Vehicle Tracking Control (VTC)** 

SIDEWALK OR OTHER

PAVED SURFACE

INSTALL ROCK FLUSH WITH OR BELOW TOP OF PAVEMENT

November 2010

COMPACTED SUBGRADE

replace with EPC approved VTC detail (VT-1 and VT-2 in

DCM Vol. 2, Chap 3.3), or just

revise to be 75ft min length

50 FOOT (MIN.)

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.

STOCKPILE PROTECTION MAINTENANCE NOTES

4. IF PERIMETER PROTECTION MUST BE MOVED TO ACCESS SOIL STOCKPILE, REPLACE PERIMETER CONTROLS BY THE END OF THE WORKDAY.

5. STOCKPILE PERIMETER CONTROLS CAN BE REMOVED ONCE ALL THE MATERIAL FROM THE STOCKPILE HAS BEEN USED.

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

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

Include details for the following BMP's, with examples of acceptable details provided.

			Detail # and Source		
ВМР	~	ECM (Appendix F)	DCM (Vol 2: Chap 3.3)	<u>MHFD</u> (USDCM Vol 3: Chap 7) ▼	CDOT Standard Plans on M-208
Concrete Washout		SD_3-84		MM-1	X
Mulching			MU-1	EC-4	

SILT FENCE INSTALLATION NOTES

DOWN THE STAKE.

DISCOVERY OF THE FAILURE.

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

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

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

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

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

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)

 ${\hbox{NOTE:}}$  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.

7. WHEN SILT FENCE IS REMOVED, ALL DISTURBED AREAS SHALL BE COVERED WITH TOPSOIL,

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**Vehicle Tracking Control (VTC)** 

STABILIZED CONSTRUCTION ENTRANCE/EXIT INSTALLATION NOTES

1. SEE PLAN VIEW FOR -LOCATION OF CONSTRUCTION ENTRANCE(S)/EXIT(S). -TYPE OF CONSTRUCTION ENTRANCE(S)/EXITS(S) (WITH/WITHOUT WHEEL WASH, CONSTRUCTION MAT OR TRM).

2. CONSTRUCTION MAT OR TRM STABILIZED CONSTRUCTION ENTRANCES ARE ONLY TO BE USED ON SHORT DURATION PROJECTS (TYPICALLY RANGING FROM A WEEK TO A MONTH) WHERE THERE WILL BE LIMITED VEHICULAR ACCESS.

3. A STABILIZED CONSTRUCTION ENTRANCE/EXIT SHALL BE LOCATED AT ALL ACCESS POINTS WHERE VEHICLES ACCESS THE CONSTRUCTION SITE FROM PAVED RIGHT-OF-WAYS. 4. STABILIZED CONSTRUCTION ENTRANCE/EXIT SHALL BE INSTALLED PRIOR TO ANY LAND DISTURBING ACTIVITIES.

5. A NON-WOVEN GEOTEXTILE FABRIC SHALL BE PLACED UNDER THE STABILIZED CONSTRUCTION ENTRANCE/EXIT PRIOR TO THE PLACEMENT OF ROCK.

SECT. #703, AASHTO #3 COARSE AGGREGATE OR 6" (MINUS) ROCK. STABILIZED CONSTRUCTION ENTRANCE/EXIT MAINTENANCE NOTES 1. INSPECT BMPs EACH WORKDAY, AND MAINTAIN THEM IN EFFECTIVE OPERATING CONDITION.

6. UNLESS OTHERWISE SPECIFIED BY LOCAL JURISDICTION, ROCK SHALL CONSIST OF DOT

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

3. WHERE BMPs HAVE FAILED, REPAIR OR REPLACEMENT SHOULD BE INITIATED UPON

EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE

4. ROCK SHALL BE REAPPLIED OR REGRADED AS NECESSARY TO THE STABILIZED ENTRANCE/EXIT TO MAINTAIN A CONSISTENT DEPTH. 5. SEDIMENT TRACKED ONTO PAVED ROADS IS TO BE REMOVED THROUGHOUT THE DAY AND

THE END OF THE DAY BY SHOVELING OR SWEEPING. SEDIMENT MAY NOT BE WASHED DOWN STORM SEWER DRAINS. MANY JURISDICTIONS HAVE BMP DETAILS THAT VARY FROM UDFCD STANDARD DETAILS. NOTE: MANY JURISDICTIONS HAVE BMP DETAILS THAT VARIATION OF THE STREET WHEN CONSULT WITH LOCAL JURISDICTIONS AS TO WHICH DETAIL SHOULD BE USED WHEN

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

PERIMETER CONTROLS MAY NOT BE REQUIRED.

STOCKPILE PROTECTION INSTALLATION NOTES

-TYPE OF STOCKPILE PROTECTION.

OR SLUMPS AGAINST THE PERIMETER, AND OTHER FACTORS.

SEE PLAN VIEW FOR:

 LOCATION OF STOCKPILES.

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IN PLACE FOR A MORE LIMITED TIME PERIOD (TYPICALLY 30-60 DAYS).

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VTC-6

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SP-3

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JOB NO. **25188.00** 

# HOMESTEAD NORTH AT STERLING RANCH

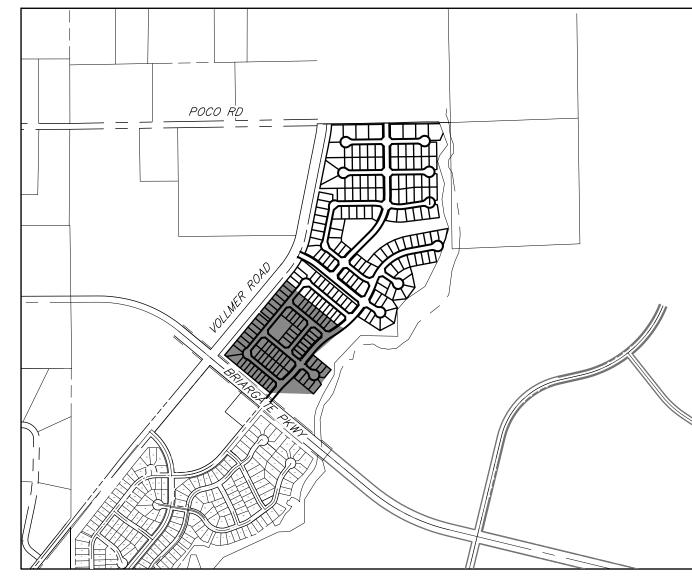
# **GENERAL NOTES**

- ALL UTILITY CONSTRUCTION TO BE CONDUCTED IN CONFORMANCE WITH THE CURRENT STERLING RANCH METROPOLITAN DISTRICT (SRMD, THE DISTRICT) SPECIFICATIONS.
- ALL PLANS ON THE JOB SITE SHALL BE SIGNED BY THE DISTRICT AND THE DISTRICT'S ENGINEER. ANY REVISION TO THE PLANS SHALL BE SO NOTED WITH THE OLD DRAWING MARKED NOT VALID.
- . ALL STATIONING IS CENTERLINE UNLESS OTHERWISE NOTED. ALL ELEVATIONS ARE CENTERLINE UNLESS OTHERWISE NOTED.
- ALL MATERIALS AND WORKMANSHIP SHALL BE SUBJECT TO INSPECTION BY THE DISTRICT. THE DISTRICT RESERVES THE RIGHT TO ACCEPT OR REJECT ANY SUCH MATERIALS AND WORKMANSHIP THAT DOES NOT CONFORM TO ITS STANDARDS AND SPECIFICATIONS.
- ALL WATER AND SEWER SERVICE LOCATIONS SHALL BE CLEARLY MARKED ON EITHER THE CURB HEAD OR THE FACE OF THE CURB. WITH AN "S" FOR SEWER AND A "W" FOR WATER.
- DUCTILE IRON PIPES, INCLUDING FITTINGS, VALVES AND FIRE HYDRANTS, SHALL BE WRAPPED WITH POLYETHYLENE TUBING, DOUBLE BONDED AT EACH JOINT AND ELECTRICALLY ISOLATED. BONDING AND ANODE CONNECTIONS SHALL BE THOROUGHLY COATED WITH BITUMINUOUS COATINGS.
- ALL DUCTILE IRON PIPE LESS THAN 12 INCHES AND FITTINGS SHALL HAVE CATHODIC PROTECTION USING TWO NO. 6 WIRES WITH 17 LB MAGNESIUM ANODES EVERY 400 FEET AND 9 LB MAGNESIUM ANODES AT EACH FITTING. ALL DUCTILE IRON PIPE 12 INCHES AND GREATER AND FITTINGS SHALL HAVE CATHODIC PROTECTION USING TWO NO. 6 WIRES WITH 17 LB MAGNESIUM ANODES EVERY 300 FEET AND 9 LB MAGNESIUM ANODES AT EACH FITTING.
- ALL PIPE MATERIAL, BACKFILL AND INSTALLATION SHALL CONFORM TO THE APPLICABLE SPECIFICATIONS OF THE CITY OF COLORADO SPRINGS, COLORADO DEPARTMENT OF TRANSPORTATION, EL PASO COUNTY DEPARTMENT OF TRANSPORTATION, COLORADO SPRINGS UTILITIES AND THE GEOTECHNICAL ENGINEER.
- COMPACTION TESTS SHALL BE 95% STANDARD PROCTOR AS DETERMINED BY ASTM D698, UNLESS OTHERWISE APPROVED BY THE DISTRICT OR HIGHER STANDARD AS IMPOSED BY ANOTHER AGENCIES HAVING RIGHT-OF-WAY JURISDICTION. THIS SHALL INCLUDE ALL VALVES, FIRE HYDRANT RUNS, WATER & SEWER SERVICE LINES AND MANHOLES. ALL REPORTS SHALL BE SUBMITTED TO THE DISTRICT FOR REVIEW AND APPROVAL.
- . THE LOCATION OF ALL EXISTING UTILITIES SHOWN ON THE DRAWINGS ARE APPROXIMATE ONLY. THE LOCATION OF ALL UTILITIES SHALL BE FIELD VERIFIED PRIOR TO COMMENCING CONSTRUCTION ACTIVITIES. THE DISTRICT SHALL BE NOTIFIED OF ANY DEVIATIONS TO THE LINE AND/OR GRADE AS DEPICTED ON THE PLANS. CONTRACTOR SHALL SUBMIT TO THE DISTRICT AND THE ENGINEER OF RECORD A REPORT OF THE FIELD VERIFIED INFORMATION PRIOR TO THE START OF CONSTRUCTION.
- I. ALL BENDS SHALL BE FIELD STAKED PRIOR TO THE START OF CONSTRUCTION.
- . BENDS, DEFLECTION & CUT PIPE LENGTHS SHALL BE USED TO HOLD HORIZONTAL ALIGNMENT OF SEWER AND WATER LINES TO NO MORE THAN 0.5' FROM THE DESIGNED ALIGNMENT. CONSTRUCTION STAKES TO BE AT 25' INTERVALS ALONG CURVES TO ASSURE LOCATION OF PIPE LINE CONSTRUCTION.
- 13. AT ALL LOCATIONS WHERE CAP AND STUB IS NOTED ON DRAWINGS, PROVIDE A PLUG AT THE END OF THE PIPE JOINT NEAREST THE SPECIFIED STATION. PROVIDE A REVERSE ANCHOR AT ALL WATER LINE PLUGS.
- 14. ALL UNUSED SALVAGED WATER UTILITY MATERIAL SHALL BE RETURNED TO THE METROPOLITAN DISTRICT AS REQUESTED.
- 15. AT THE CONTRACTOR'S EXPENSE, ALL UTILITY MAINS SHALL BE SUPPORTED AND PROTECTED SUCH THAT THEY SHALL FUNCTION CONTINUOUSLY DURING CONSTRUCTION OPERATIONS. SHOULD A UTILITY MAIN FAIL AS A RESULT OF THE CONTRACTOR'S OPERATION, IT SHALL BE REPLACED IMMEDIATELY BY THE CONTRACTOR OR BY THE DISTRICT AT FULL COST OF LABOR AND MATERIALS TO THE CONTRACTOR/DEVELOPER.
- 6. PUMPING OR BYPASS OPERATIONS SHALL BE REVIEWED AND APPROVED BY BOTH THE DISTRICT AND THE DISTRICT ENGINEER PRIOR TO
- 7. THE CONTRACTOR SHALL REPLACE OR REPAIR DAMAGE TO ALL SURFACE IMPROVEMENTS, INCLUDING BUT NOT LIMITED TO FENCES, LANDSCAPING, CURB AND GUTTER AND/OR ASPHALT THAT MAY BE CAUSED DURING CONSTRUCTION.
- 18. ALL CONTRACTORS WORKING ON OR NEAR A WATER OR SEWER FACILITY (TO INCLUDE SERVICE LINE) SHALL HAVE LIABILITY INSURANCE NAMING THE DISTRICT AS AN ADDITIONAL INSURED AND SHALL PROVIDE A CURRENT COPY OF WORKERS CÓMPENSATION INSURANCE ON FILE WITH THE DISTRICT. NO WORK CAN PROCEED WITHOUT CURRENT CERTIFICATES ON FILE AT THE DISTRICTS' OFFICE.
- 19. THE CONTRACTOR SHALL NOTIFY THE DISTRICT AND ALL AFFECTED UTILITY COMPANIES ADJACENT TO THE PROPOSED UTILITY CONSTRUCTION A MINIMUM OF 48 HOURS AND A MAXIMUM OF 96 HOURS PRIOR TO THE START OF CONSTRUCTION. A WEEKLY CONSTRUCTION MEETING SHALL BE REQUIRED WITH THE CONTRACTOR, DISTRICT ENGINEER AND ALL OTHER PARTIES AS DEEMED NECESSARY BY THE DISTRICT.
- 20. COMMENCEMENT OF CONSTRUCTION OF WATER/SEWER SYSTEMS WITHIN THE METROPOLITAN DISTRICT:
- a. PRIOR TO THE START OF CONSTRUCTION, A <u>PRE—CONSTRUCTION MEETING IS REQUIRED</u> A MINIMUM OF 48 HOURS IN ADVANCE OF COMMENCEMENT OF WORK. A REPRESENTATIVE OF THE OWNER OR DEVELOPER, A REPRESENTATIVE OF THE CONTRACTOR AND DESIGN ENGINEER ARE REQUIRED TO ATTEND. CONTACT THE DISTRICT TO SCHEDULE THE PRE-CONSTRUCTION MEETING. NO PRE-CONSTRUCTION MEETING CAN BE SCHEDULED PRIOR TO FOUR (4) SIGNED / APPROVED PLAN SETS ARE RECEIVED BY THE DISTRICT.
- THE CONTRACTOR IS REQUIRED TO NOTIFY THE DISTRICT A MINIMUM OF 48 HOURS AND A MAXIMUM OF 2 WEEKS PRIOR TO THE START C CONSTRUCTION. THE CONTRACTOR SHALL ALSO NOTIFY AFFECTED UTILITY COMPANIES AT LEAST 48 HOURS PRIOR TO THE START OF CONSTRUCTION ADJACENT TO THE KNOWN UTILITYLINES.
- 21. TESTING OF FACILITIES:
- a. THE CONTRACTOR SHALL NOTIFY THE DISTRICT A MINIMUM OF 48 HOURS AND A MAXIMUM OF 96 HOURS PRIOR TO THE START OF ANY
- b. ALL SECTIONS OF WATER LINE ARE TO MEET THE FOLLOWING PRESSURE TESTING REQUIREMENTS:
- TEST 100% OF ALL LINES • MUST PASS PRESSURE TEST TO 200 PSI FOR TWO HOURS (UNLESS OTHERWISE APPROVED ON THE PLANS).
- c. ALL SANITARY SEWER FACILITIES ARE TO MEET THE FOLLOWING TESTING REQUIREMENTS
- ALL LINES SHALL BE JET CLEANED PRIOR TO VACUUM OR PRESSURE TESTING ALL MANHOLES SHALL BE VACUUM TESTED WITH DISTRICT STAFF PRESENT PRIOR TO CCTV INSPECTION.
- SEWER MAINS TO BE PRESSURE TEST PRIOR TO CCTV INSPECTION • ALL LINES SHALL BE CCTV INSPECTED AND VIDEO SHALL TO BE SUBMITTED TO THE DISTRICT FOR REVIEW AND APPROVAL.
- 22. PRELIMINARY ACCEPTANCE SHALL BE DEFINED AS THE POINT IN TIME THAT THE DISTRICT ACCEPTS THE FACILITY FOR USE. ALL SURFACE IMPROVEMENTS AND RESTORATION SHALL BE COMPLETED WITHIN 30 DAYS OF COMMENCEMENT. SHOULD THE CONTRACTOR FAIL TO COMPLETE ALL SURFACE IMPROVEMENTS AND RESTORATION WITHIN 30 DAYS OF COMMENCEMENT OF SERVICE, THE DISTRICT, AT THEIR DISCRETION, MAY ELECT TO COMPLETE THE IMPROVEMENTS AT THE CONTRACTORS COST.
- 3. FINAL ACCEPTANCE BY THE DISTRICT OF ANY LINE OR SYSTEM SHALL NOT OCCUR UNTIL COMPLETION OF FINAL ASPHALT LAYERS AND/OR FINAL COMPLETION AND/OR RESTORATION OF ALL SURFACE IMPROVEMENTS. THE WARRANTY PERIOD FOR ALL FACILITIES PRIOR TO FINAL ACCEPTANCE SHALL BE 24 MONTHS COMMENCING AFTER PRELIMINARY ACCEPTANCE.
- 24. ACCEPTANCE:
- a. THE DISTRICT MAY GIVE PRELIMINARY ACCEPTANCE ONCE ALL OF THE TESTS ON ALL THE LINES HAVE BEEN COMPLETED AND A WALK-THRU
- b. A SECOND ACCEPTANCE MAY OCCUR ONCE FIRST LIFT OF ASPHALT GOES DOWN AND A SECOND WALK-THRU OF THE SYSTEM OCCURS. IF ALL FACILITIES ARE CLEAN AND ACCESSIBLE, A FINAL ACCEPTANCE MAY OCCUR (THE DISTRICT MAY REQUIRE CLEANING AND RE-VIDEO OF THE SYSTEM, DEPENDING ON THE SEVERITY OF THE CONTAMINATION).
- 25. ALL WATER AND SEWER MAINS, INCLUDING SERVICE LINES, SHALL HAVE "AS—BUILT" DRAWINGS PREPARED AND APPROVED PRIOR TO PRELIMINARY ACCEPTANCE BY THE DISTRICT.
- 26. ALL COMMERCIAL/BUSINESS DEVELOPMENTS SHALL HAVE AN EIGHT INCH (MIN.) WATER MAIN LOOPED THROUGH THE PROPOSED PROPERTY WITH GATE VALVES LOCATED WHERE THE MAIN ENTERS THE PROPERTY LINE. AN EIGHT INCH SEWER MAIN SHALL BE INSTALLED FOR SERVICE TO COMMERCIAL/BUSINESS DEVELOPMENTS, AND A MANHOLE SHALL BE LOCATED WHERE THE MAIN ENTERS THE PROPERTY. THE END OF THE MAINS SHALL BE MARKED WITH THE APPROPRIATE COLORED CARSONITE MARKER ALONG WITH TRACER WIRE.
- 7. AFTER REVIEW AND APPROVAL OF PLANS FOR THE EXTENSION OF LINES, FACILITIES AND/OR SERVICES, CONSTRUCTION MUST BE COMMENCED WITHIN 18 MONTHS FOR RESIDENTIAL SUBDIVISIONS AND 12 MONTHS FOR ANY COMMERCIAL INSTALLATIONS.
- 28. INSPECTION FEES: CALL THE DISTRICT (719-495-2500) FOR FEE SCHEDULE.

### **WASTEWATER SYSTEM INSTALLATION NOTES**

- SANITARY SEWER LENGTHS ARE MH CENTER-MH CENTER (OR STRUCTURE CENTER-STRUCTURE CENTER). ALL SANITARY SEWER PIPES SHALL BE SDR 35 PVC OR EQUAL. SEWER LINES MAY NOT EXCEED 7% GRADE FOR ANY SIZE WITHOUT PRÍOR APPROVAL OF THE DISTRICT. ALL NEWLY CONSTRUCTED RESIDENTIAL SANITARY SEWER TAPS SHALL USE PRE-MANUFACTURED IN-LINE PVC PUSH-ON WYES. TAPPING SADDLES MAY ONLY BE USED FOR TAPPING PRE-EXISTING MAINS.
- . ALL SANITARY SEWER MANHOLES SHALL BE WRAPPED WITH RU116 RUBR-NEK JOINT WRAP OR EQUIVALENT AND COATED.
- 3. COMMENCEMENT OF USE OF SEWER LINES AND/OR SYSTEMS:
- a. NO SANITARY SEWER FACILITY SHALL BE PLACED IN SERVICE UNTIL AFTER THE COMPLETION OF ALL JET CLEANING, PRESSURE TESTING, CCTV INSPECTION, COMPACTION TESTING AND AS-BUILT DRAWINGS ARE SUBMITTED AND APPROVED BY THE DISTRICT.
- b. NO SANITARY SEWER FACILITY SHALL BE PLACED IN SERVICE UNTIL ALL SERVICE LINES ARE COMPLETED AND THE FIRST LIFT OF ASPHALT IS COMPLETED OVER THE LINE. IN THE CASE WHERE NO ASPHALT IS TO BE PLACED OVER THE LINE, ANY REQUIRED SURFACE SURFACE IMPROVEMENTS SHALL BE COMPLETED PRIOR TO USE OF THE FACILITY.
- c. ALL NECESSARY EASEMENTS (PLATTED OR DEEDED) ARE DEDICATED, EXECUTED BY THE DISTRICT, AND RECORDED.
- d. DOWNSTREAM PLUG CAN BE REMOVED ONCE FIRST LIFT OF ASPHALT IS DOWN AND THE ABOVE REQUIREMENTS ARE MET.

# **COUNTY OF EL PASO, STATE OF COLORADO** EARLY SANITARY SEWER PLAN **JUNE 2020**



VICINITY MAP N.T.S.

SHEET INDEX

SANITARY SEWER PLAN

#### **BENCHMARKS**

- 1. THE TOP OF AN ALUMINUM SURVEYORS CAP. STAMPED "9853". AT THE SOUTHEAST BOUNDARY CORNER OF BARBARICK SUBDIVISION NORTHING = 411416.273EASTING = 235167.071ELEVATION= 7023.42
- 2. THE TOP OF A RED PLASTIC SURVEYORS CAP, ILLEGIBLE, AT THE NORTHWEST BOUNDARY CORNER OF PAWNEE RANCHEROS SUBDIVISION NORTHING = 410095.404EASTING = 235052.131ELEVATION= 7000.40
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#### LEGEND

FLOWLINE TO FLOWLINE BOTTOM OF PIPE TOP TOP OF PIPE SS SANITARY SEWER STM STORM SEWER WATER STATION LOT NUMBER BEGIN TRANSITION END TRANSITION POINT OF CURB RETURN POINT OF REVERSE CURVE POINT OF COMPOUND CURVE POINT OF CURVE POINT OF TANGENT SPECIAL BEDDING NOTES

RIGHT OF WAY



COUNTY ENGINEERING:

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 EL PASO COUNTY PLANNING

JEFF RICE, P.E. (719) 520-6300

AND COMMUNITY DEVELOPMENT 2880 INTERNATIONAL CIRCLE, SUITE 110 COLORADO SPRINGS, CO 80910

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

QWEST COMMUNICATIONS COMMUNICATIONS:

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

## **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.

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

JENNIFER IRVINE, P.E.

# **WATER & SEWER MAIN EXTENSIONS**

ANY CHANGES OR ALTERATIONS AFFECTING THE GRADE, ALIGNMENT, ELEVATION AND/OR DEPTH OF COVER OF ANY WATER OR SEWER MAINS OR OTHER APPURTENANCE SHOWN ON THIS DRAWING SHALL BE THE RESPONSIBILITY OF THE OWNER/DEVELOPER. THE OWNER/DEVELOPER SHALL BE RESPONSIBLE FOR ALL OPERATIONAL DAMAGES AND DEFECTS IN INSTALLATION AND MATERIAL FOR MAINS AND SERVICES FROM THE DATE OF APPROVAL UNTIL FINAL ACCEPTANCE IS ISSUED.

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

# DISTRICT APPROVALS

COUNTY ENGINEER/ECM ADMINISTRATOR

THE STERLING RANCH METROPOLITAN DISTRICT RECOGNIZES THE DESIGN ENGINEER AS HAVING RESPONSIBILITY FOR THE DESIGN AND HAS LIMITED ITS SCOPE OF REVIEW ACCORDINGLY.

### STERLING RANCH METROPOLITAN DISTRICT WASTEWATER DESIGN APPROVAL

PROJECT NO. IN CASE OF ERRORS OR OMISSIONS WITH THE WATER DESIGN AS SHOWN ON THIS DOCUMENT THE STANDARDS AS DEFINED IN THE "RULES AND REGULATIONS FOR INSTALLATION OF WASTEWATER MAINS AND SERVICES" SHALL RULE.

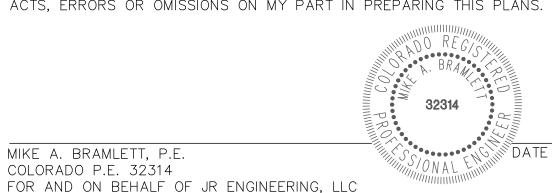
APPROVAL EXPIRES 180 DAYS FROM DESIGN APPROVAL.

#### **ENGINEER'S STATEMENT**

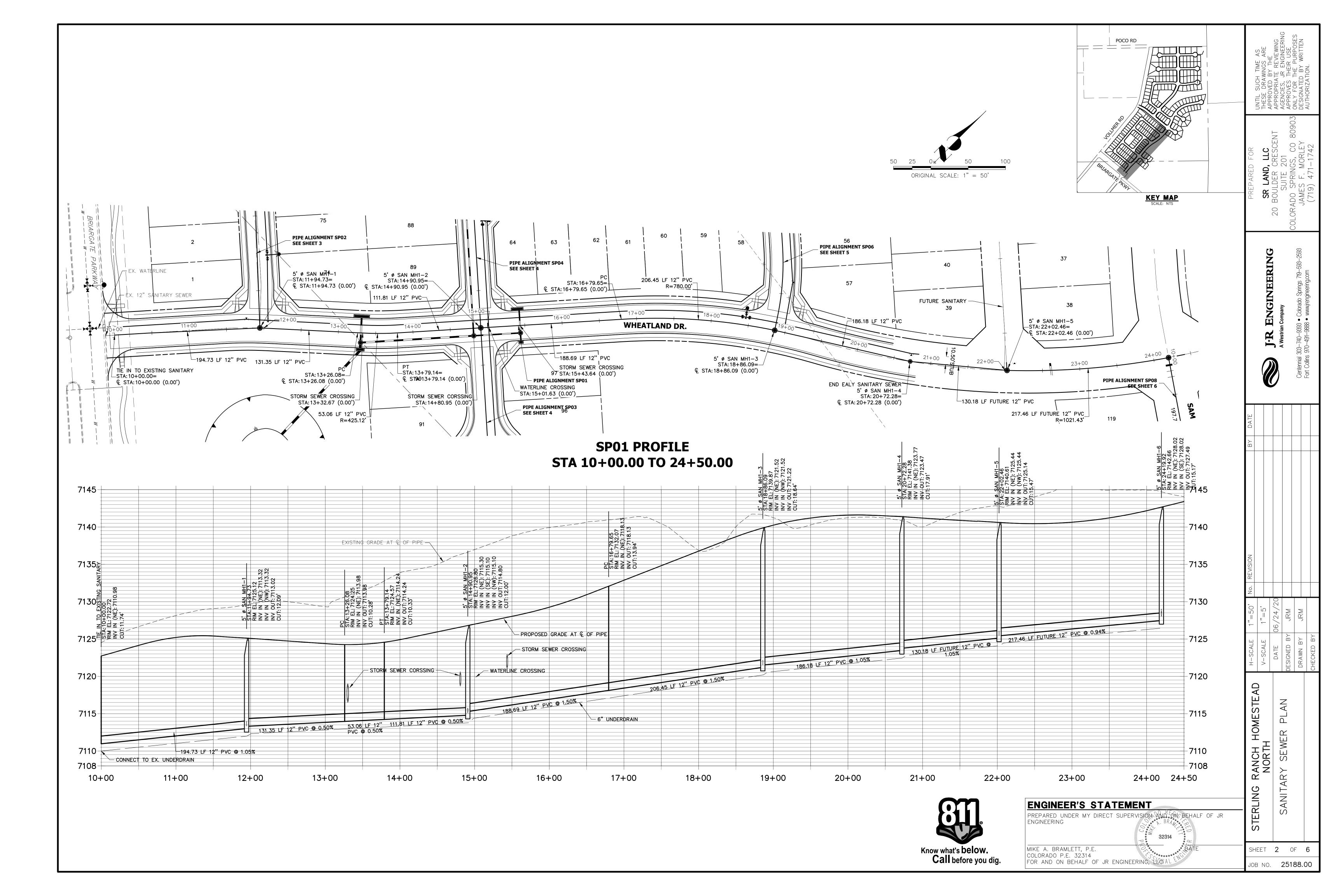
MIKE A. BRAMLETT, P.E.

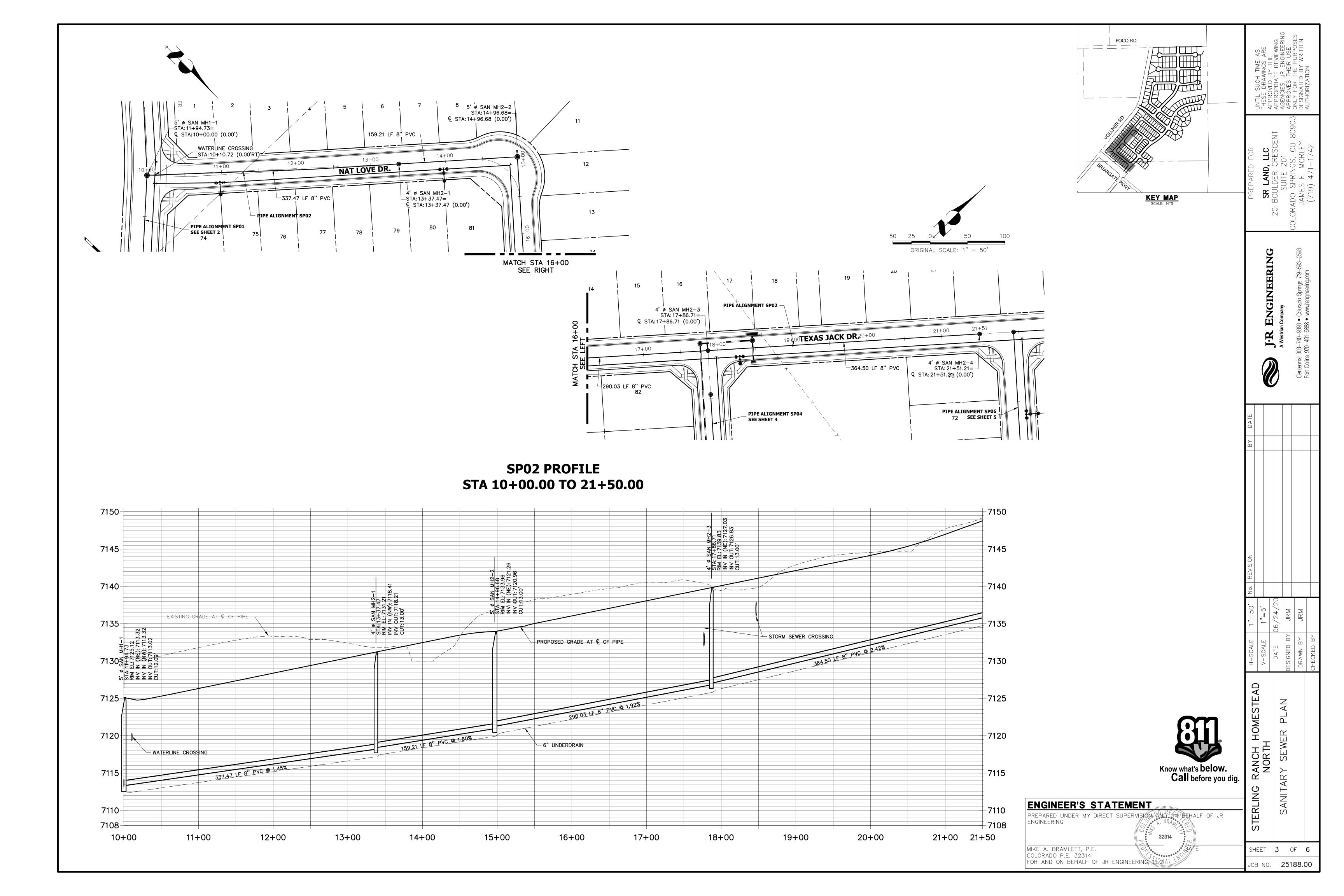
COLORADO P.E. 32314

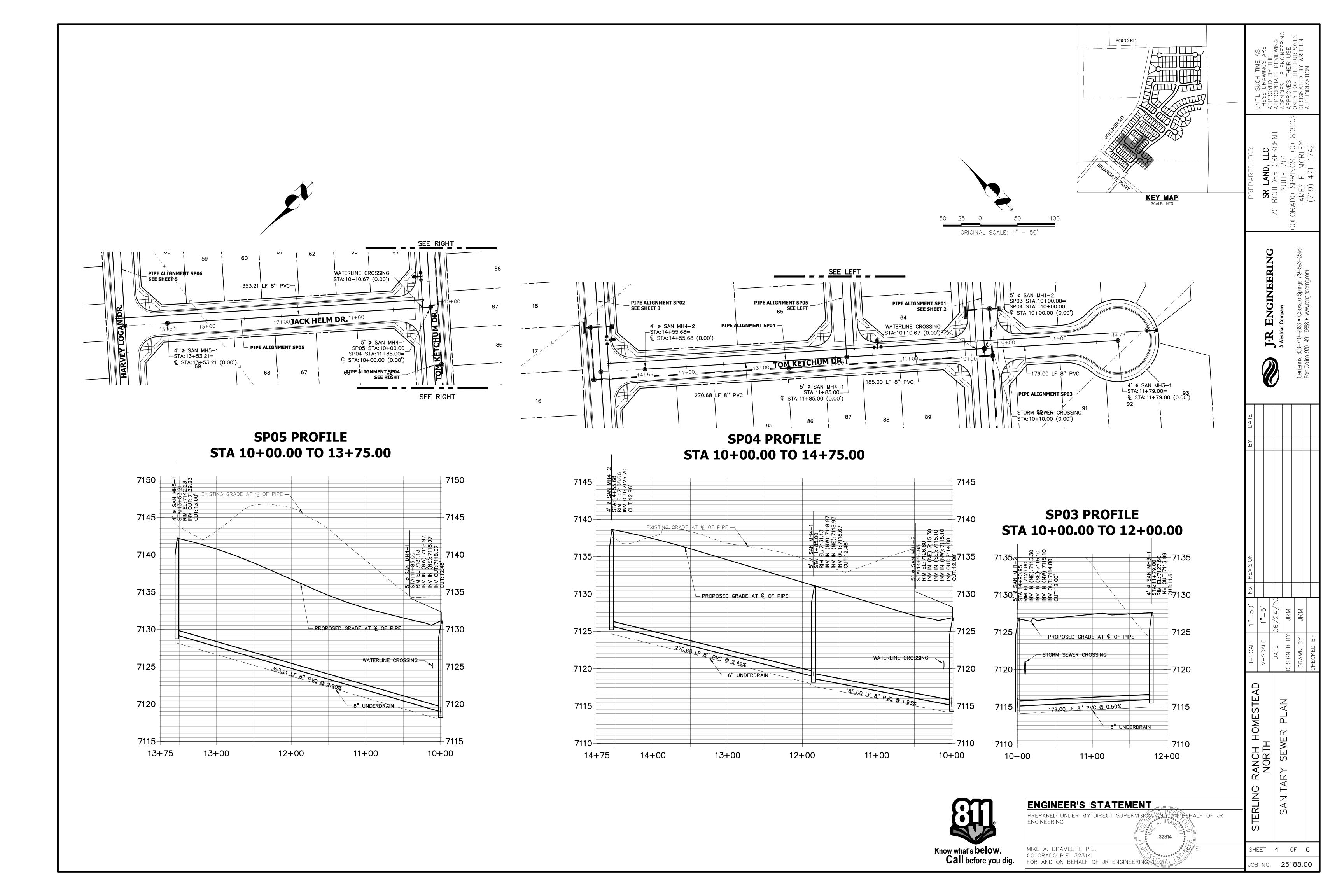
THIS WASTEWATER SYSTEM PLAN WAS PREPARED UNDER MY DIRECTION AND SUPERVISION AND IS CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF. SAID PLAN HAS BEEN PREPARED ACCORDING TO THE CRITERIA ESTABLISHED BY THE COUNTY FOR WASTEWATER SYSTEM PLANS. I ACCEPT RESPONSIBILITY FOR ANY LIABILITY CAUSED BY ANY NEGLIGENT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

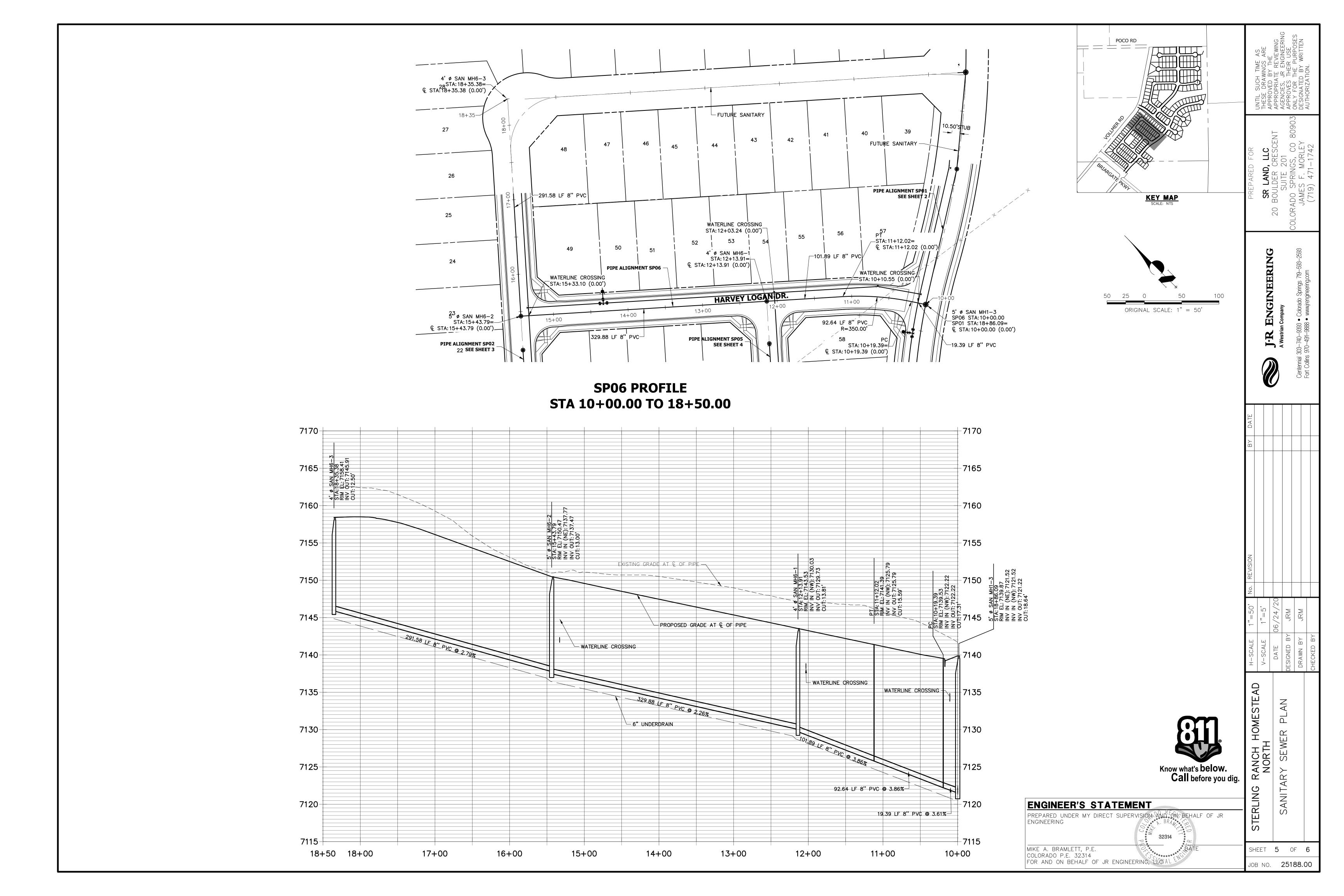


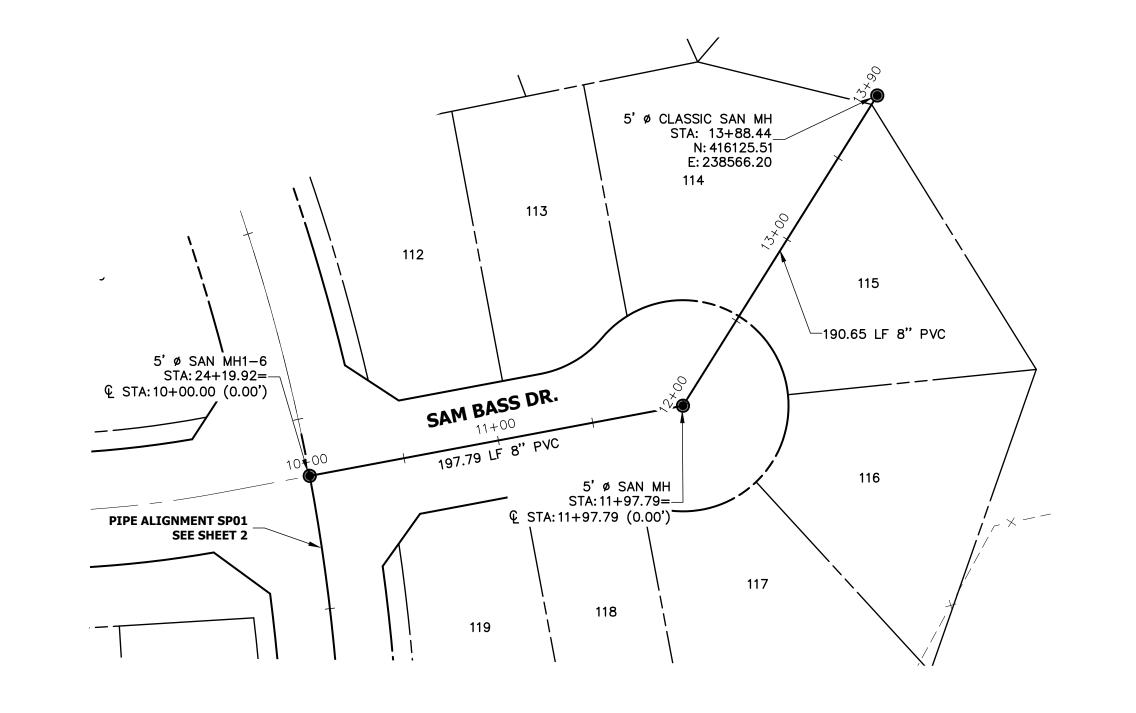
SHEET 1 OF 6 JOB NO. **25188.00** 

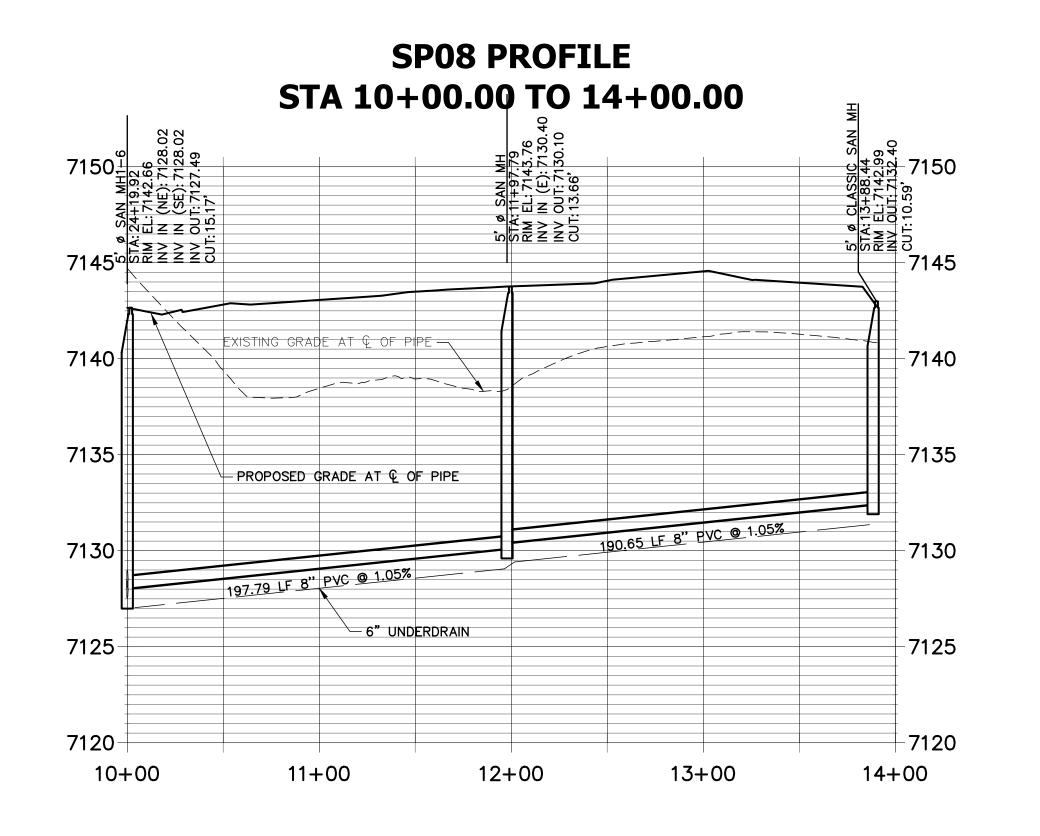


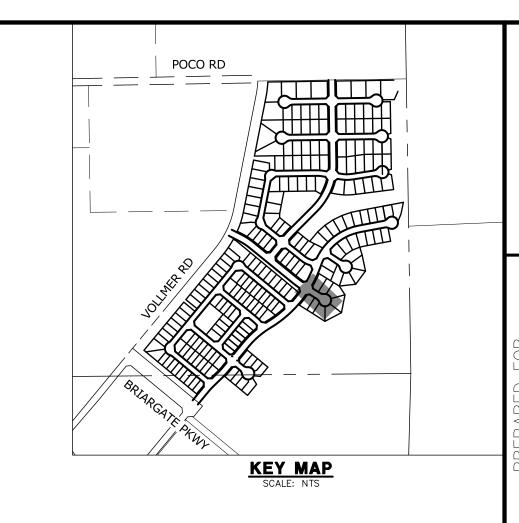


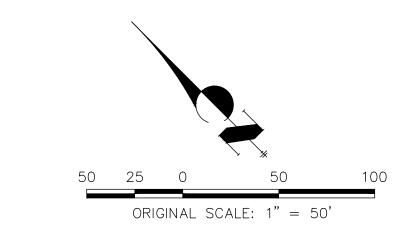












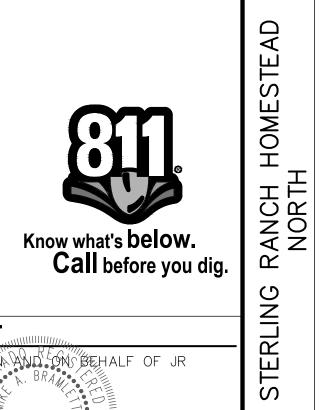
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Centennial 303–740–9393 • Colora

Fort Collins 970–491–9888 • www.jir

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ENGINEER'S STA	TEMENT,
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MIKE A. BRAMLETT, P.E.
COLORADO P.E. 32314
FOR AND ON BEHALF OF JR ENGINEERING, JONALE

SHEET 6 OF 6

JOB NO. 25188.00

SEWER

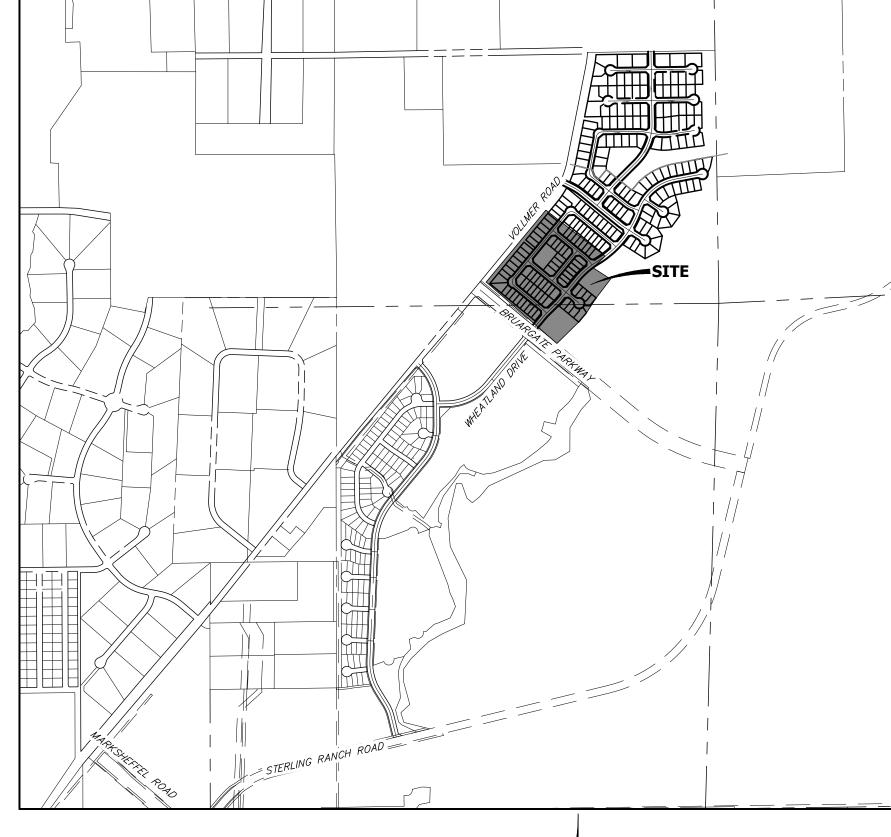
SANITARY

# HOMESTEAD NORTH AT STERLING RANCH

# COUNTY OF EL PASO, STATE OF COLORADO EARLY WATER SYSTEM PLAN **JUNE 2020**

#### **GENERAL NOTES**

- ALL UTILITY CONSTRUCTION TO BE CONDUCTED IN CONFORMANCE WITH THE CURRENT STERLING RANCH METROPOLITAN DISTRICT (SRMD, THE DISTRICT) SPECIFICATIONS.
- ALL PLANS ON THE JOB SITE SHALL BE SIGNED BY THE DISTRICT AND THE DISTRICT'S ENGINEER. ANY REVISION TO THE PLANS SHALL BE SO NOTED WITH THE OLD DRAWING MARKED NOT VALID.
- ALL STATIONING IS CENTERLINE UNLESS OTHERWISE NOTED. ALL ELEVATIONS ARE CENTERLINE UNLESS OTHERWISE NOTED.
- ALL MATERIALS AND WORKMANSHIP SHALL BE SUBJECT TO INSPECTION BY THE DISTRICT. THE DISTRICT RESERVES THE RIGHT TO ACCEPT OR REJECT ANY SUCH MATERIALS AND WORKMANSHIP THAT DOES NOT CONFORM TO ITS STANDARDS AND SPECIFICATIONS.
- ALL WATER AND SEWER SERVICE LOCATIONS SHALL BE CLEARLY MARKED ON EITHER THE CURB HEAD OR THE FACE OF THE CURB, WITH AN "S" FOR SEWER AND A "W"
- DUCTILE IRON PIPES, INCLUDING FITTINGS, VALVES AND FIRE HYDRANTS, SHALL BE WRAPPED WITH POLYETHYLENE TUBING, DOUBLE BONDED AT EACH JOINT AND ELECTRICALLY ISOLATED. BONDING AND ANODE CONNECTIONS SHALL BE THOROUGHLY COATED WITH BITUMINUOUS COATINGS.
- ALL DUCTILE IRON PIPE LESS THAN 12 INCHES AND FITTINGS SHALL HAVE CATHODIC PROTECTION USING TWO NO. 6 WIRES WITH 17 LB MAGNESIUM ANODES EVERY 400 FEET AND 9 LB MAGNESIUM ANODES AT EACH FITTING. ALL DUCTILE IRON PIPE 12 INCHES AND GREATER AND FITTINGS SHALL HAVE CATHODIC PROTECTION USING TWO NO. 6 WIRES WITH 17 LB MAGNESIUM ANODES EVERY 300 FEET AND 9 LB MAGNESIUM ANODES AT EACH FITTING.
- ALL PIPE MATERIAL, BACKFILL AND INSTALLATION SHALL CONFORM TO THE APPLICABLE SPECIFICATIONS OF THE CITY OF COLORADO SPRINGS, COLORADO DEPARTMENT OF TRANSPORTATION, EL PASO COUNTY DEPARTMENT OF TRANSPORTATION, COLORADO SPRINGS UTILITIES AND THE GEOTECHNICAL ENGINEER.
- COMPACTION TESTS SHALL BE 95% STANDARD PROCTOR AS DETERMINED BY ASTM D698. UNLESS OTHERWISE APPROVED BY THE DISTRICT OR HIGHER STANDARD AS IMPOSED BY ANOTHER AGENCIES HAVING RIGHT-OF-WAY JURISDICTION. THIS SHALL INCLUDE ALL VALVES, FIRE HYDRANT RUNS, WATER & SEWER SERVICE LINES AND MANHOLES. ALL REPORTS SHALL BE SUBMITTED TO THE DISTRICT FOR REVIEW AND APPROVAL.
- THE LOCATION OF ALL EXISTING UTILITIES SHOWN ON THE DRAWINGS ARE APPROXIMATE ONLY. THE LOCATION OF ALL UTILITIES SHALL BE FIELD VERIFIED PRIOR TO COMMENCING CONSTRUCTION ACTIVITIES. THE DISTRICT SHALL BE NOTIFIED OF ANY DEVIATIONS TO THE LINE AND/OR GRADE AS DEPICTED ON THE PLANS. CONTRACTOR SHALL SUBMIT TO THE DISTRICT AND THE ENGINEER OF RECORD A REPORT OF THE FIELD VERIFIED INFORMATION PRIOR TO THE START OF CONSTRUCTION. ALL BENDS SHALL BE FIELD STAKED PRIOR TO THE START OF CONSTRUCTION.
- BENDS, DEFLECTION & CUT PIPE LENGTHS SHALL BE USED TO HOLD HORIZONTAL ALIGNMENT OF SEWER AND WATER LINES TO NO MORE THAN 0.5' FROM THE DESIGNED ALIGNMENT. CONSTRUCTION STAKES TO BE AT 25' INTERVALS ALONG CURVES TO ASSURE LOCATION OF PIPE LINE CONSTRUCTION.
- 3. AT ALL LOCATIONS WHERE CAP AND STUB IS NOTED ON DRAWINGS, PROVIDE A PLUG AT THE END OF THE PIPE JOINT NEAREST THE SPECIFIED STATION. PROVIDE A REVERSE ANCHOR AT ALL WATER LINE PLUGS.
- 14. ALL UNUSED SALVAGED WATER UTILITY MATERIAL SHALL BE RETURNED TO THE METROPOLITAN DISTRICT AS REQUESTED.
- 5. AT THE CONTRACTOR'S EXPENSE, ALL UTILITY MAINS SHALL BE SUPPORTED AND PROTECTED SUCH THAT THEY SHALL FUNCTION CONTINUOUSLY DURING CONSTRUCTION OPERATIONS. SHOULD A UTILITY MAIN FAIL AS A RESULT OF THE CONTRACTOR'S OPERATION, IT SHALL BE REPLACED IMMEDIATELY BY THE CONTRACTOR OR BY THE DISTRICT AT FULL COST OF LABOR AND MATERIALS TO THE CONTRACTOR/DEVELOPER.
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VICINITY MAP

#### SHEET INDEX

- COVER SHEET WATER PLAN
- WATERLINE LOWERING

### BENCHMARKS

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# **WATER SYSTEM INSTALLATION NOTES**

8. COMMENCEMENT OF USE OF WATER LINES AND/OR SYSTEMS:

- 1. ALL WATER AND FORCE MAIN PIPE SHALL BE AWWA C900 PVC, OR EQUAL, PRESSURE CLASS 200. ALL WATER AND FORCE MAIN FITTINGS SHALL HAVE MECHANICAL RESTRAINS AND THRUST BLOCKS. ALL WATER AND FORCE MAIN PIPE SHALL HAVE A MINIMUM COVER DEPT OF FIVE AND ON-HALF (5.5) FEET
- 2. ALL WATER VALVES ASSOCIATED WITH THE POTABLE WATER SYSTEM SHALL BE OPEN CLOCKWISE. ALL VALVES INSTALLED IN LANDSCAPED AREAS AND/OR NOT WITHIN PAVED STREETS SHALL BE MARKED WITH CARSONITE MARKERS. ALL VALVES ASSOCIATED WITH THE RAW WATER SYSTEM SHALL BE OPEN COUNTERCLOCKWISE AND MARKED WITH CARSONITE MARKERS AS APPLICABLE.
- 3. THE DEVELOPER OR HIS ENGINEER SHALL LOCATE ALL FIRE HYDRANTS AND SERVCIE STUB-OUTS FOR FUTURE DEVELOPEMENT. ANY REQUIRED REALIGNMENT, (HORIZONTAL OR VERTICAL), SHALL BE AT THE EXPENSE OF THE DEVELOPER. FIRE HYDRANT LOCATION SHALL BE REVIEWED AND APPROVED BY THE APPLICABLE FIRE AUTHORITY.
- 4. FIRE HYDRANTS SHALL BE OPEN RIGHT WITH 7/8" x 7/8" SQUARE TAPERED ALONG WITH SERVICE CAPS. LUBRICATION TYPE: (GREASE). ACCEPTABLE BRANDS ARE AMERICAN AVK SERIES 2700 (MODERN) AND MUELLER SUPER CENTURION 250.
- BE USED AT INTERSECTIONS AND SERVICE STUBS).

5. ALL MAIN LINES (PVC & DUCTILE IRON) SHALL BE INSTALLED WITH COATED #12 TRACER WIRE WITH TEST STATIONS AT INTERVALS NO GREATER THAN 500 FT (VALVE BOXES CAN

- 6. CONTRACTOR SHALL MAKE CONNECTIONS TO EXISTING WATER LINE WITHOUT SHUTDOWN, OR ELSE NOTIFY THE DISTRICT OF ANY SERVICE SHUTDOWNS NECESSARY TO CONNECT TO
- 7. IRRIGATION SERVICES SHALL HAVE A STOP AND WASTE CURB STOP VALVE INSTALLED ALONG WITH TRACER WIRE EXTENDING BACK TO THE MAIN LINE.
- a. NO WATER FACILITY SHALL BE PLACED IN SERVICE UNTIL AFTER THE COMPLETION OF ALL PRESSURE TESTING, FLUSHING, BAC-T TESTING, COMPACTION TESTING, AND AS-BUILT DRAWINGS ARE SUBMITTED AND APPROVED BY THE DISTRICT. b. NO WATER FACILITY SHALL BE PLACED IN SERVICE UNTIL ALL SERVICE LINES ARE COMPLETED AND THE FIRST LIFT OF ASPHALT IS COMPLETED OVER THE LINE. IN THE CASE WHERE NO ASPHALT IS TO BE PLACED OVER THE LINE, SURFACE IMPROVEMENTS SHALL BE COMPLETED PRIOR TO USE OF THE FACILITY. c. ALL EASEMENTS (PLATTED OR DEEDED) ARE DEDICATED, EXECUTED BY THE DISTRICT, AND RECORDED.

#### **AGENCIES**

CIVIL ENGINEER:

OWNER/DEVELOPER: 20 BOULDER CRESCENT, SUITE 201

COLORADO SPRINGS, CO 80903 JAMES F. MORLEY (719) 471-1742

> 5475 TECH CENTER DRIVE COLORADO SPRINGS, CO 80919

JR ENGINEERING, LLC

3275 AKERS DRIVE

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

COUNTY ENGINEERING: EL PASO COUNTY PLANNING ELECTRIC DEPARTMENT: MOUNTAIN VIEW ELECTRIC AND COMMUNITY DEVELOPMENT 11140 E. WOODMEN ROAD 2880 INTERNATIONAL CIRCLE, SUITE 110 COLORADO SPRINGS, CO 80910

FIRE DISTRICT:

FALCON, CO 80831 (719) 495-2283

QWEST COMMUNICATIONS TRAFFIC ENGINEERING: EL PASO COUNTY DEPARTMENT OF PUBLIC WORKS (U.N.C.C. LOCATORS) (800) 922-1987 AT&T (LOCATORS) (719) 635-3674

JENNIFER IRVINE, P.E. (719) 520-6460 WATER RESOURCES: STERLING RANCH METRO DISTRICT ENGINEERS

JDS-HYDRO CONSULTANTS 545 E. PIKES PEAK AVE., SUITE 300

MIKE BRAMLETT P.E. (303) 267-6240

COLORADO SPRINGS, CO 80903 JOHN MCGINN (719) 668-8769

JEFF RICE, P.E. (719) 520-6300

COLORADO SPRINGS, CO 80922

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

JENNIFER IRVINE, P.E.

COUNTY ENGINEER/ECM ADMINISTRATOR

# **WATER & SEWER MAIN EXTENSIONS**

ANY CHANGES OR ALTERATIONS AFFECTING THE GRADE, ALIGNMENT, ELEVATION AND/OR DEPTH OF COVER OF ANY WATER OR SEWER MAINS OR OTHER APPURTENANCE SHOWN ON THIS DRAWING SHALL BE THE RESPONSIBILITY OF THE OWNER/DEVELOPER. THE OWNER/DEVELOPER SHALL BE RESPONSIBLE FOR ALL OPERATIONAL DAMAGES AND DEFECTS IN INSTALLATION AND MATERIAL FOR MAINS AND SERVICES FROM THE DATE OF APPROVAL UNTIL FINAL ACCEPTANCE IS ISSUED.

JAMES F. MORLEY

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

# **DISTRICT APPROVALS**

(719) 471-1742

THE STERLING RANCH METROPOLITAN DISTRICT RECOGNIZES THE DESIGN ENGINEER AS HAVING RESPONSIBILITY FOR THE DESIGN AND HAS LIMITED ITS SCOPE OF REVIEW ACCORDINGLY.

### STERLING RANCH METROPOLITAN DISTRICT WATER DESIGN APPROVAL

IN CASE OF ERRORS OR OMISSIONS WITH THE WATER DESIGN AS SHOWN ON THIS DOCUMENT THE STANDARDS AS DEFINED IN THE "RULES AND REGULATIONS FOR INSTALLATION OF WATER MAINS AND SERVICES" SHALL RULE.

APPROVAL EXPIRES 180 DAYS FROM DESIGN APPROVAL

# FIRE AUTHORITY APPROVAL

THE NUMBER OF FIRE HYDRANTS AND HYDRANT LOCATIONS SHOWN ON THIS WATER INSTALLATION PLAN ARE CORRECT AND ADEQUATE TO SATISFY THE FIRE PROTECTION REQUIREMENTS AS SPECIFIED BY THE FIRE DISTRICT SERVIING THE PROPERTY NOTED ON THE PLANS.

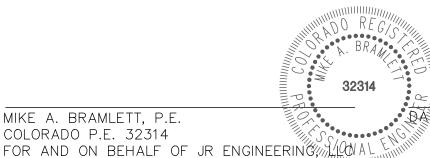
FIRE PROTECTION DISTRICT

FIRE PROTECTION DISTRICT

DATE

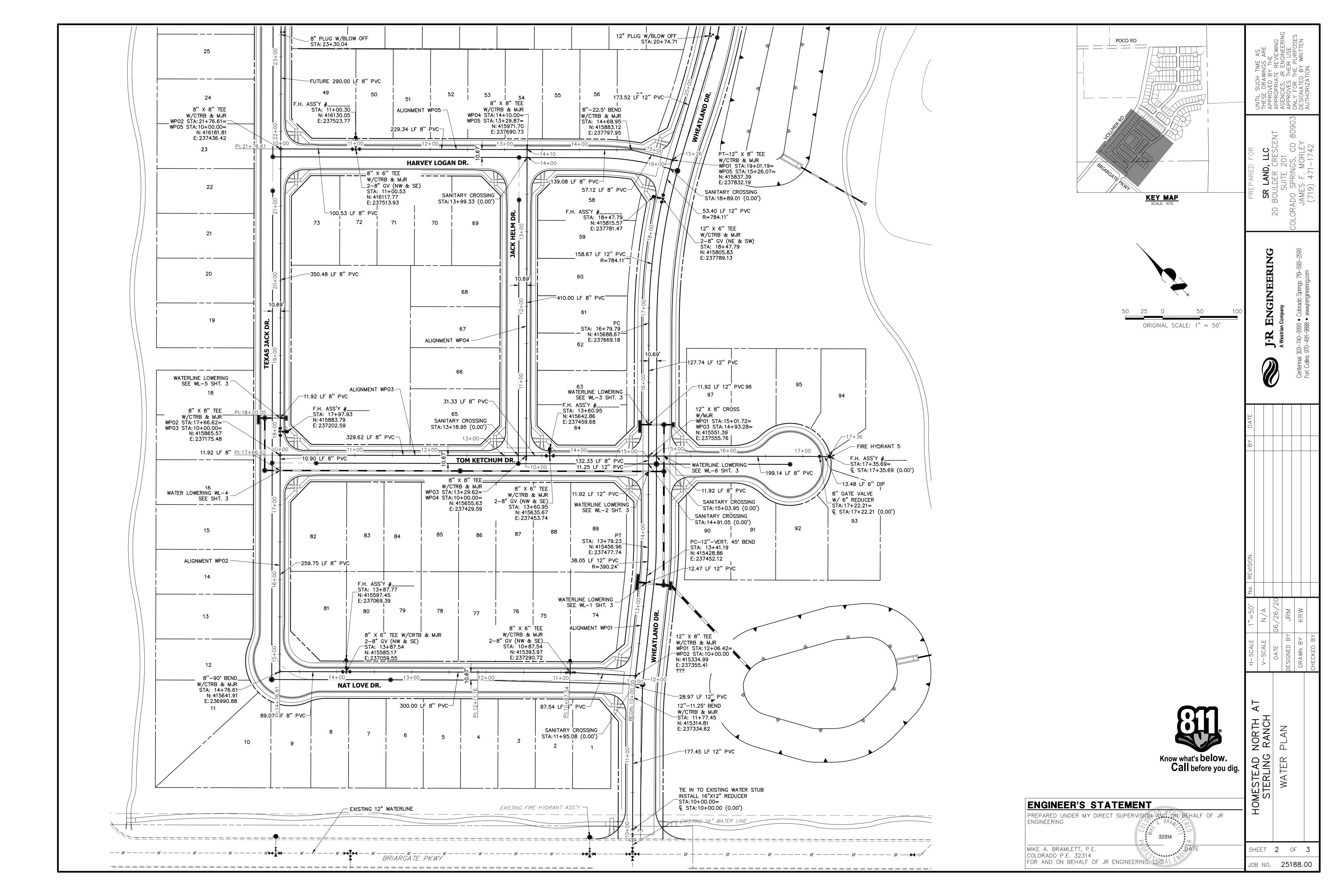
# **ENGINEER'S STATEMENT**

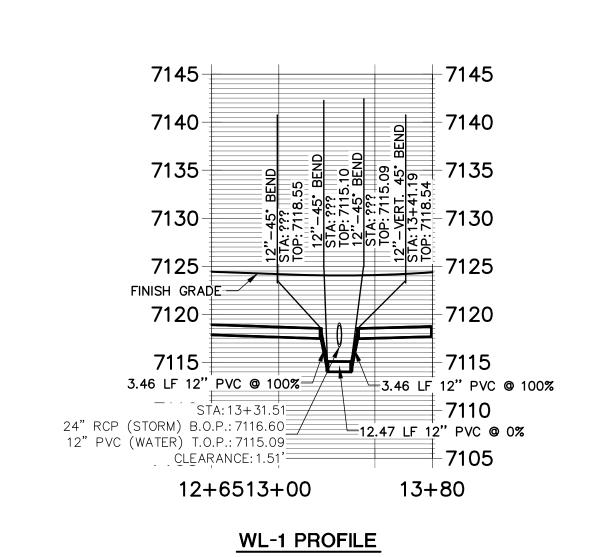
THIS WATER SYSTEM PLAN WAS PREPARED UNDER MY DIRECTION AND SUPERVISION AND IS CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF. SAID PLAN HAS BEEN PREPARED ACCORDING TO THE CRITERIA ESTABLISHED BY THE COUNTY FOR WATER SYSTEM PLANS. I ACCEPT RESPONSIBILITY FOR ANY LIABILITY CAUSED BY ANY NEGLIGENT ACTS,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

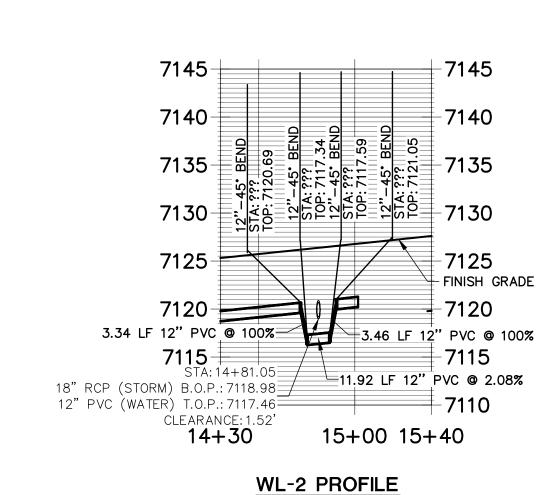


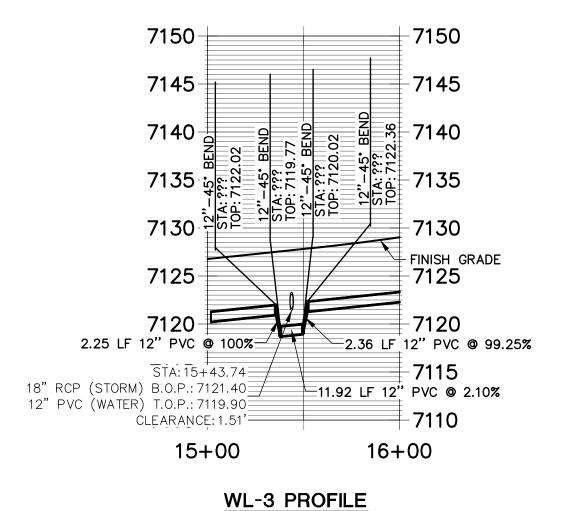
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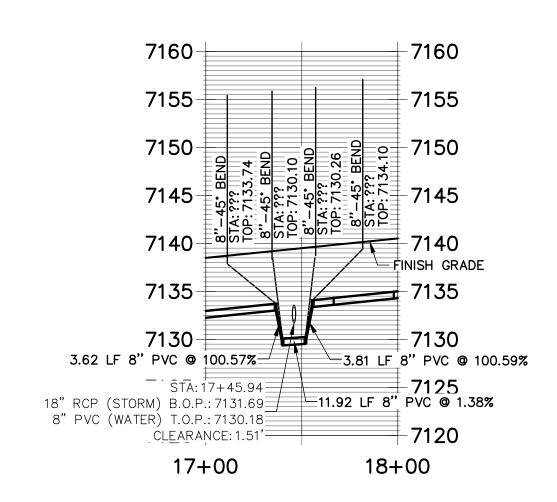
SHEET 1 OF 3 IOB NO. **25188.00** 



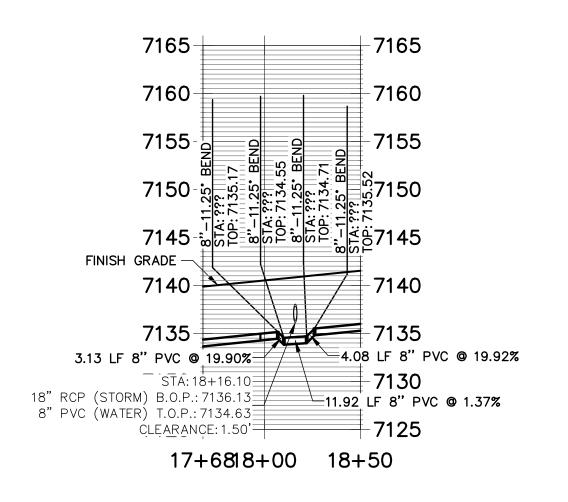




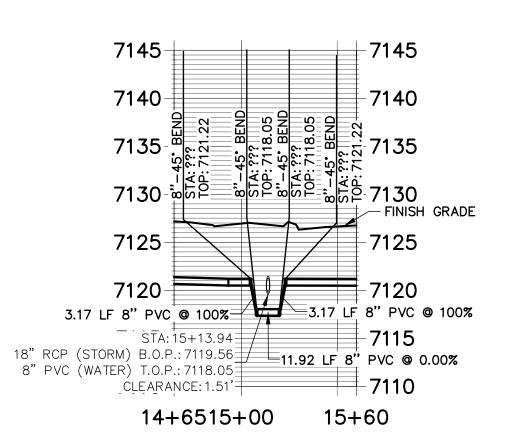




WL-4 PROFILE



WL-5 PROFILE



WL-6 PROFILE

HORIZONTAL
ORIGINAL SCALE: 1" = 50'
VERTICAL
ORIGINAL SCALE: 1" = 10'



KEY MAP

SCALE: NTS

	AT	91
,	NORTH RANCH	LOWERING
V. u dig.	IOMESTEAD STERLING	WATERLINE
	10	WA

ENGINEER'S STATEMENT
PREPARED UNDER MY DIRECT SUPERVISION AND FOND BEHALF OF JEENGINEERING  32314
MIKE A. BRAMLETT, P.E. COLORADO P.E. 32314 FOR AND ON BEHALF OF JR ENGINEERING, JOHN ALEMANIA

SHEET 3 OF 3

JOB NO. 25188.00