SADDLEHORN RANCH - FILING 1

A PARCEL OF LAND LOCATED IN THE SOUTH HALF OF SECTION 3 AND THE NORTH HALF OF THE NORTH HALF OF SECTION 10
TOWNSHIP 13 SOUTH, RANGE 64 WEST OF THE 6TH P.M.,
EL PASO COUNTY, STATE OF COLORADO

CONSTRUCTION DOCUMENTS

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

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

ABBREVIATIONS

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

VICINITY MAP

SCALE: 1" = 2000'

SHEET INDEX

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4	– TYPICAL SECTIONS
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6–17	– STREET IMPROVEMENT PLAN AND PROFILE
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34–35	– CHANNEL IMPROVEMENT PLANS
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47	– POND G OUTLET STRUCTURE DETAILS
48–50	– DETAILS

CONTACTS:

OWNER/DEVELOPER	ROI PROPERTY GROUP, LLC 2495 RIGDON STREET NAPA, CALIFORNIA 94558 P~707-633-9700
ENGINEER/SURVEYOR	JR ENGINEERING, LLC ATTN: MIKE A. BRAMLETT 5475 TECH CENTER DRIVE, SUITE 235 COLORADO SPRINGS, CO 80919 P~(303) 267-6240
FIRE PROTECTION DISTRICT	FALCON FIRE PROTECTION 12072 ROYAL COUNTY DOWN ROAD FALCON, CO 80831 P~(719) 495-4050
DISTRICT	SADDLEHORN METRO DISTRICT

J·R ENGINEERING

BENCHMARK:

THE VERTICAL DATUM IS BASED OFF AN OPUS SOLUTION RAN ON CONTROL POINT #100 (NO. 4 REBAR) AND IS ADJUSTED TO NGVD 1929, ELEVATION 6754.61.

BASIS OF BEARINGS:

THE WEST LINE OF SECTION 3, T3S, R64W, 6TH P.M., MONUMENTED BY A 3-1/4" ALUMINUM CAP STAMPED "PLS 17496" IN A RANGE BOX AT THE NORTHWEST CORNER OF SECTION 3 AND A NO. 8 REBAR IN A RANGE BOX AT THE SOUTHWEST CORNER OF SECTION 3, BEARING N00°32'28"W AS REFERENCED TO COLORADO STATE PLANE CENTRAL ZONE.

Engineering Review

04/08/2020 1:52:24 PM
dsdkuehster
stevekuehster@elpasoco.com
(719) 520-6813
EPC Planning & Community Development Department

Minor Comment Sheet 4.

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

OWNER/DEVELOPER STATEMENT

I, THE OWNER/DEVELOPER HAVE READ AND WILL COMPLY WITH ALL OF THE REQUIREMENTS SPECIFIED IN THESE DETAILED PLANS AND SPECIFICATIONS.

BILL GUMAN — DATE

WILLIAM GUMAN AND ASSOCIATES
731 NORTH WEBER STREET
COLORADO SPRINGS, CO 80903

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. — DATE

COUNTY ENGINEER/ECM ADMINISTRATOR

ENGINEER'S STATEMENT

THESE DETAILED PLANS AND SPECIFICATIONS WERE PREPARED UNDER MY DIRECT SUPERVISION. SAID PLANS AND SPECIFICATIONS HAVE BEEN PREPARED ACCORDING TO THE CRITERIA ESTABLISHED BY THE COUNTY FOR DETAILED ROADWAY, DRAINAGE, GRADING AND EROSION CONTROL PLANS AND SPECIFICATIONS, AND SAID PLANS AND SPECIFICATIONS ARE IN CONFORMITY WITH APPLICABLE MASTER DRAINAGE PLANS AND MASTER TRANSPORTATION PLANS. SAID PLAN AND SPECIFICATIONS MEET THE PURPOSES FOR WHICH THE PARTICULAR ROADWAY AND DRAINAGE FACILITIES ARE DESIGNED AND ARE CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF. I ACCEPT RESPONSIBILITY FOR ANY LIABILITY CAUSED BY ANY NEGLIGENT ACTS, ERRORS OR OMISSIONS ON MY PART IN PREPARATION OF THESE DETAILED PLANS AND SPECIFICATIONS.

COLORADO REGISTERED MIKE A. BRAMLETT 32314 PROFESSIONAL ENGINEER

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

PREPARED FOR
ROI PROPERTY GROUP, LLC
2495 RIGDON STREET
NAPA, CALIFORNIA
(707) 365-6891
BRADY WILLIAMS

J·R ENGINEERING
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Fort Collins 970-491-9888 • www.jrengineering.com

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V-SCALE	N/A
DATE	01/10/20
DESIGNED BY	NQJ
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SADDLEHORN RANCH – FILING 1
– CONSTRUCTION DOCUMENTS

COVER SHEET

SHEET 1 OF 50

JOB NO. 2514202

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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)
   - 3.2. CITY OF COLORADO SPRINGS/ EL PASO COUNTY DRAINAGE CRITERIA MANUAL, VOLUMES 1 AND 2
   - 3.3. COLORADO DEPARTMENT OF TRANSPORTATION (CDOT) STANDARD SPECIFICATIONS AND BRIDGE CONSTRUCTION
   - 3.4. CDOT M&S STANDARDS

4. NOTWITHSTANDING ANYTHING DEPICTED IN THESE PLANS IN WORDS OR GRAPHIC REPRESENTATION, ALL DESIGN AND CONSTRUCTION RELATED TO ROADS, STORM DRAINAGE AND EROSION CONTROL SHALL CONFORM TO THE STANDARDS AND REQUIREMENTS OF THE MOST RECENT VERSIONS OF THE RELEVANT ADOPTED EL PASO COUNTY STANDARDS, INCLUDING THE LAND DEVELOPMENT CODE, THE ENGINEERING CRITERIA MANUAL, THE DRAINAGE CRITERIA MANUAL, AND THE DRAINAGE CRITERIA MANUAL VOLUME 2. ANY DEVIATIONS FROM REGULATIONS AND STANDARDS MUST BE REQUESTED, AND APPROVED, IN WRITING. ANY MODIFICATIONS NECESSARY TO MEET CRITERIA AFTER-THE-FACT WILL BE ENTIRELY THE DEVELOPER'S RESPONSIBILITY TO RECTIFY.

5. IT IS THE DESIGN ENGINEER'S RESPONSIBILITY TO ACCURATELY SHOW EXISTING CONDITIONS, BOTH ONSITE AND OFFSITE, ON THE CONSTRUCTION PLANS. ANY MODIFICATIONS NECESSARY DUE TO CONFLICTS, OMISSIONS, OR CHANGED CONDITIONS WILL BE ENTIRELY THE DEVELOPER'S RESPONSIBILITY TO RECTIFY.

6. CONTRACTOR SHALL SCHEDULE A PRE-CONSTRUCTION MEETING WITH EL PASO COUNTY PLANNING AND COMMUNITY DEVELOPMENT INSPECTIONS, PRIOR TO STARTING CONSTRUCTION.

7. IT IS THE CONTRACTOR'S RESPONSIBILITY TO UNDERSTAND THE REQUIREMENTS OF ALL JURISDICTIONAL AGENCIES TO OBTAIN ALL REQUIRED PERMITS, INCLUDING BUT NOT LIMITED TO EL PASO COUNTY EROSION AND STORMWATER QUALITY CONTROL PERMIT (ESQCP), REGIONAL BUILDING FLOODPLAIN DEVELOPMENT PERMIT, U.S. ARMY CORPS OF ENGINEERS-ISSUED 401 AND/OR 404 PERMITS, AND COUNTY AND STATE FUGITIVE DUST PERMITS.

8. CONTRACTOR SHALL NOT DEVIATE FROM THE PLANS WITHOUT FIRST OBTAINING WRITTEN APPROVAL FROM THE DESIGN ENGINEER AND EL PASO COUNTY 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 IDENTIFIED IN THE PLANS, SHALL BE PROVIDED AT ALL INTERSECTIONS. OBSTRUCTIONS GREATER THAN 18 INCHES ABOVE FLOWLINE ARE NOT ALLOWED IN SIGHT TRIANGLES.

12. SIGNING AND STRIPING SHALL COMPLY WITH EL PASO COUNTY DEPARTMENT OF PUBLIC WORKS AND MUTCD CRITERIA.

13. CONTRACTOR SHALL OBTAIN ANY PERMITS REQUIRED BY EL PASO COUNTY DEPARTMENT OF PUBLIC WORKS, INCLUDING WORK WITHIN THE RIGHT-OF-WAY AND SPECIAL TRANSPORT PERMITS.

14. THE LIMITS OF CONSTRUCTION SHALL REMAIN WITHIN THE PROPERTY LINE UNLESS OTHERWISE NOTED. THE OWNER/DEVELOPER SHALL OBTAIN WRITTEN PERMISSION AND EASEMENTS, WHERE REQUIRED, FROM ADJOINING PROPERTY OWNER(S) PRIOR TO ANY OFF-SITE DISTURBANCE, GRADING, OR CONSTRUCTION.

SIGNING AND STRIPING NOTES

1. ALL SIGNS AND PAVEMENT MARKING SHALL BE IN COMPLIANCE WITH THE CURRENT MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD).

2. REMOVAL OF EXISTING PAVEMENT MARKINGS SHALL BE ACCOMPLISHED BY A METHOD THAT DOES NOT MATERIALLY DAMAGE THE PAVEMENT. THE PAVEMENT MARKINGS SHALL BE REMOVED TO THE EXTENT THEY WILL NOT BE VISIBLE UNDER DAY OR NIGHT CONDITIONS. AT NO TIME WILL IT BE ACCEPTABLE TO PAINT OVER EXISTING PAVEMENT MARKINGS.

3. ANY DEVIATION FROM THE STRIPING AND SIGNING PLAN SHALL BE APPROVED BY EL PASO COUNTY PLANNING AND COMMUNITY DEVELOPMENT.

4. ALL SIGNS SHOWN ON THE SIGNING AND STRIPING PLAN SHALL BE NEW SIGNS. EXISTING SIGNS MAY REMAIN OR BE REUSED IF THEY MEET CURRENT EL PASO COUNTY AND MUTCD STANDARDS.

5. STREET NAME AND REGULATORY STOP SIGNS SHALL BE ON THE SAME POST AT INTERSECTIONS.

6. ALL REMOVED SIGNS SHALL BE DISPOSED OF IN A PROPER MANNER BY THE CONTRACTOR.

7. ALL STREET NAME SIGNS SHALL BE "D" SERIES LETTERS, WITH LOCAL ROADWAY SIGNS BEING 4" UPPER-LOWER CASE LETTERING ON 8" BLANK AND NON-LOCAL ROADWAY SIGNS BEING 6" LETTERING. UPPER-LOWER CASE ON 12" BLANK, WITH A WHITE BORDER THAT IS NOT RECESSED. MULTI-LANE ROADWAYS WITH SPEED LIMITS OF 40 MPH OR HIGHER SHALL HAVE 8" UPPER-LOWER CASE LETTERING ON 18" BLANK WITH A WHITE BORDER THAT IS NOT RECESSED. THE WIDTH OF THE NON-RECESSED WHITE BORDERS SHALL MATCH PAGE 255 OF THE 2012 MUTCD "STANDARD HIGHWAY SIGNS".

8. ALL TRAFFIC SIGNS SHALL HAVE A MINIMUM HIGH INTENSITY PRISMATIC GRADE SHEETING.

9. ALL LOCAL RESIDENTIAL STREET SIGNS SHALL BE MOUNTED ON A 1.75" X 1.75" SQUARE TUBE SIGN POST AND STUB POST BASE,. FOR OTHER APPLICATIONS, REFER TO THE CDOT STANDARD S-614-8 REGARDING USE OF THE P2 TUBULAR STEEL POST SLIPBASE DESIGN.

10. ALL SIGNS SHALL BE SINGLE SHEET ALUMINUM WITH 0.100" THICKNESS.

11. ALL LIMIT LINES/STOP LINES, CROSSWALK LINES, PAVEMENT LEGENDS, AND ARROWS SHALL BE A MINIMUM 125 MIL THICKNESS PREFORMED THERMOPLASTIC PAVEMENT MARKINGS WITH TAPERED LEADING EDGES PER CDOT STANDARD S-627-1. WORD AND SYMBOL MARKINGS SHALL BE THE NARROW TYPE, STOP BARS SHALL BE 24" IN WIDTH, CROSSWALK LINES SHALL BE 12" WIDE AND 8' LONG PER CDOT S-267-1.

12. ALL LONGITUDINAL LINES SHALL BE A MINIMUM 15MIL THICKNESS EPOXY PAINT. ALL NON-LOCAL RESIDENTIAL ROADWAYS SHALL INCLUDE BOTH RIGHT AND LEFT EDGE LINE STRIPING AND ANY ADDITIONAL STRIPING AS REQUIRED BY CDOT S-627-1.

13. THE CONTRACTOR SHALL NOTIFY EL PASO COUNTY PLANNING AND COMMUNITY DEVELOPMENT (719) 520-6819 PRIOR TO AND UPON COMPLETION OF THE SIGNING AND STRIPING.

14. THE CONTRACTOR SHALL OBTAIN A WORK IN THE RIGHT OF WAY PERMIT FROM THE EL PASO COUNTY DEPARTMENT OF PUBLIC WORKS (DPW) PRIOR TO ANY SIGNAGE OR STRIPING WORK WITHIN AN EXISTING EL PASO COUNTY ROADWAY.

ENGINEER'S STATEMENT

PREPARED UNDER MY DIRECT SUPERVISION AND ON BEHALF OF JR ENGINEERING

COLORADO REGISTERED MIKE A. BRAMLETT 32314 PROFESSIONAL ENGINEER

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

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

PREPARED FOR
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STANDARD NOTES

SHEET 2 OF 50

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LAYER LINETYPE LEGEND

	EXISTING	PROPOSED
PHASE LINE		
MATCH LINE		
SECTION LINE		
BOUNDARY LINE		
PROPERTY LINE		
EASEMENT LINE		
RIGHT OF WAY		
R.O.W. A LINE	A	A
CENTERLINE		
CITY LIMITS		
WIRE FENCE	X	X
CHAIN LINK FENCE	O	O
WOOD FENCE	◇	◆
MASONRY FENCE	□	■
GUARDRAIL		
CONC. BARRIER		
CABLE TV	TV	TV
ELECTRIC	E	E
FIBER OPTIC	FO	FO
GAS MAIN	G	G
IRRIGATION MAIN	IRR	IRR
OIL/PETRO. MAIN	O	O
OVERHEAD UTILITY	OHU	OHU
SANITARY SEWER	S	
STORM DRAIN		
TELEPHONE	T	T
WATER MAIN	W	W
RAW WATER LINE	RWL	RWL
SWALE/WATERWAY FLOWLINE		
DIVERSION DITCH		
DIVERSION CHANNEL		
MAJOR DRAINAGE BASIN		
MINOR DRAINAGE BASIN		
TOP OF SLOPE		
TOE OF SLOPE		
EDGE OF WATER		
INDEX CONTOUR	6100	6100
INTERMEDIATE CONTOUR		
DEPRESSION CONT. (INDEX)	6100	6100
DEPRESSION CONT. (INTER)		
TOP OF CUTS		
TOE OF FILLS		
CUT AND FILL LINE		C/F C/F
SILT FENCE	SF SF	SF SF
100 YEAR FLOODPLAIN	100YR	100YR
500 YEAR FLOODPLAIN	500YR	500YR
FLOODWAY	FLDWY	FLDWY
BASE FLOOD ELEVATION		
EDGE OF WETLANDS		
STONE WALL		
FLOW ARROWS		

UTILITIES LEGEND

	EXISTING	PROPOSED
STORM SEWER		
MANHOLE		
STORM INLET		
AREA INLET – SQUARE		
AREA INLET – ROUND		
FLARED END SECTION		
RIPRAP		
SANITARY SEWER		
LINE MARKER	Mkr San	
SERVICE MARKER		
CLEAN-OUT		
MANHOLE W/ DIRECTIONAL FLOW ARROW		
WATER LINE		
LINE MARKER	Mkr W	
SERVICE MARKER		
FIRE HYDRANT		
FIRE CONNECTION		
MANHOLE		
BEND		
BLOW-OFF VALVE		
WELL	WELL	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	
SERVICE MARKER		
METER		
VALVE		
PLUG		
TEE		
DRY UTILITIES		
CABLE TV MARKER	Mkr TV	
CABLE TELEVISION PEDESTAL		
ELECTRIC MARKER	Mkr E	
ELECTRIC SERVICE MARKER		
ELECTRICAL PEDESTAL		
ELECTRICAL METER		
ELECTRICAL MANHOLE		
FIBER-OPTIC MARKER	Mkr FO	
IRRIGATION PEDESTAL		
TELEPHONE MARKER	Mkr T	
TELEPHONE PEDESTAL		
TELEPHONE MANHOLE		
UTILITY POLE		
GUY ANCHOR		
GUY POLE		
MISC. UTILITIES		
VENT PIPE	VP VP	VP
TEST HOLE DESIGNATOR	TH# FIRM/FIRSTCO AGENCY	

MONUMENTATION LEGEND

ALUMINUM CAP – FOUND	AC
BRASS CAP – FOUND	BC
BENCHMARK – FOUND	
CROSS – FOUND	
MONUMENT – SET	
MONUMENT – FOUND (DEFAULT)	
MONUMENT – FOUND (ALTERNATE 1)	
MONUMENT – FOUND (ALTERNATE 2)	
MONUMENT – FOUND (ALTERNATE 3)	
MONUMENT – FOUND (ALTERNATE 4)	
MONUMENT – FOUND (ALTERNATE 5)	
MONUMENT – FOUND (ALTERNATE 6)	
MONUMENT – FOUND (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	

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SADDLEHORN RANCH – FILING 1

LEGEND

ENGINEER'S STATEMENT

PREPARED UNDER MY DIRECT SUPERVISION AND ON BEHALF OF JR ENGINEERING

COLORADO REGISTERED MIKE A. BRAMLETT 32314 PROFESSIONAL ENGINEER

MIKE A. BRAMLETT, P.E. DATE
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SHEET 3 OF 50

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TYPICAL RURAL LOCAL

POSTED SPEED LIMIT = 30 MPH, DESIGN SPEED LIMIT = 30 MPH

SCALE: 1" = 5'

CURTIS ROAD – MODIFIED MINOR RURAL ARTERIAL

STA: 1+05 – 10+40.09 & 15+82.58 – 30+81.13

POSTED SPEED LIMIT = 45 MPH

SCALE: 1" = 5'

(LOOKING NORTH)

CURTIS ROAD – MODIFIED MINOR RURAL ARTERIAL

STA: 12+42.36 – 14+94.72

POSTED SPEED LIMIT = 45 MPH

SCALE: 1" = 5'

(LOOKING NORTH)

remove "full depth asphalt" and replace it with "Composite asphalt section" on these details. These improvements are subject to a pavement section design.

SWALE SECTION A–A

SCALE: 1"=5'

SWALE SEED MIX:
EROSION CONTROL BLANKET WITH PAWNEE BUTTES SEED INC. – "LOW GROW NATIVE MIX"
–IDAHO FESCUE
–SANDBERG BLUEGRASS
–ROCKY MOUNTAIN FESCUE
–BIG BLUEGRASS

SWALE SECTION B–B

SCALE: 1"=5'

SWALE SEED MIX:
EROSION CONTROL BLANKET WITH PAWNEE BUTTES SEED INC. – "LOW GROW NATIVE MIX"
–IDAHO FESCUE
–SANDBERG BLUEGRASS
–ROCKY MOUNTAIN FESCUE
–BIG BLUEGRASS

ROADSIDE SWALE NOTES

1. SWALE SECTION A–A PROVIDES MINIMUM SWALE DIMENSIONS. IN AREAS WHERE 3:1 TIE BACK TO EXISTING DOES NOT PROIVDE MINIMUM SWALE DEPTH, SWALE TO BE CUT DEEPER SUCH THAT 3' DEPTH IS PROVIDED RELATIVE TO EXISTING GRADE.
2. SWALE SECTION B–B TO BE USED IN FILL AREAS OF ROADWAY WHERE CUTTING SWALE DEEPER TO ACHIEVE 3.0' DEPTH RELATIVE TO EXISTING GRADE CAN NOT BE ACHIEVED DUE TO DOWN STREAM GRADE REQUIREMENTS. 2.0' BERM MUST BE PROVIDED TO MITIGATE FUTURE EROSION.

CURTIS ROAD SWALE SECTION (EL PASO COUNTY MOD. RURAL MINOR ARTERIAL)

SCALE: 1"=5'

SWALE SEED MIX:
EROSION CONTROL BLANKET WITH PAWNEE BUTTES SEED INC. – "LOW GROW NATIVE MIX"
–IDAHO FESCUE
–SANDBERG BLUEGRASS
–ROCKY MOUNTAIN FESCUE
–BIG BLUEGRASS

ENGINEER'S STATEMENT

PREPARED UNDER MY DIRECT SUPERVISION AND ON BEHALF OF JR ENGINEERING

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

DATE

COLORADO REGISTERED MIKE A. BRAMLETT 32314 PROFESSIONAL ENGINEER

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

PREPARED FOR
ROI PROPERTY GROUP, LLC
2495 RIGDON STREET
NAPA, CALIFORNIA
(707) 365-6891
BRADY WILLIAMS

J·R ENGINEERING
A Westrian Company
Centennial 303-740-9393 • Colorado Springs 719-593-2593
Fort Collins 970-491-9888 • www.jrengineering.com

No.	REVISION	BY	DATE

H-SCALE	VARIES
V-SCALE	N/A
DATE	01/10/20
DESIGNED BY	NQJ
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SADDLEHORN RANCH – FILING 1

TYPICAL SECTIONS

SHEET 4 OF 50

JOB NO. 2514202

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CURTIS ROAD ASPHALT DEMO DETAIL

SCALE: 1" = 2'

KEY MAP

N.T.S.

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SADDLEHORN RANCH – FILING 1

CURTIS ROAD DEMOLITION PLAN

DEMOLITION LEGEND

- 2" MILL & OVERLAY
- 6" SAWCUT & DEMOLITION
- STRIPING DEMOLITION

CURTIS ROAD DEMOLITION NOTES

1. ALL EXISTING ℄ STRIPING TO REMAIN, UNLESS OTHERWISE NOTED.
2. ALL EXISTING ASPHALT BETWEEN LIMITS OF MILL AND OVERLAY TO REMAIN.
3. EXISTING ASPHALT OUTSIDE THE EXISTING EDGE LINE STRIPING IS TO BE DEMOLISHED, TYPICAL BOTH SIDES OF CURTIS ROAD.
4. EXISTING EDGE LINE STRIPING TO BE REMOVED WITHIN LIMITS OF CURTIS ROAD IMPROVEMENTS. SEE CURTIS ROAD STRIPING PLAN FOR PROPOSED STRIPING.

50 25 0 50 100

HORIZONTAL
ORIGINAL SCALE: 1" = 50'
VERTICAL
ORIGINAL SCALE: 1" = 5'

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COLORADO MIKE A. BRAMLETT 32314 PROFESSIONAL ENGINEER

SHEET 5 OF 50

JOB NO. 2514202

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KEY MAP
N.T.S.

50 25 0 50 100
HORIZONTAL
ORIGINAL SCALE: 1" = 50'
VERTICAL
ORIGINAL SCALE: 1" = 5'

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SADDLEHORN RANCH – FILING 1

CURTIS ROAD – GRADING PLAN

POINT TABULATION

POINT #	STATION	OFFSET	ALIGNMENT	ELEVATION	DESCRIPTION
110	6+05.11	14.00' (LT)	EX. CURTIS ROAD	6781.79	EOA
111	7+04.99	14.00' (LT)	EX. CURTIS ROAD	6781.63	EOA
112	8+05.03	14.00' (LT)	EX. CURTIS ROAD	6781.91	EOA
113	9+04.96	14.00' (LT)	EX. CURTIS ROAD	6781.57	EOA
114	10+04.95	14.00' (LT)	EX. CURTIS ROAD	6781.26	EOA
115	11+04.98	14.00' (LT)	EX. CURTIS ROAD	6780.91	EOA
116	12+05.01	14.00' (LT)	EX. CURTIS ROAD	6780.18	EOA
117	13+05.06	14.00' (LT)	EX. CURTIS ROAD	6779.99	EOA
118	14+05.10	14.00' (LT)	EX. CURTIS ROAD	6779.03	EOA
119	15+05.05	14.00' (LT)	EX. CURTIS ROAD	6778.00	EOA
120	16+05.11	14.00' (LT)	EX. CURTIS ROAD	6777.42	EOA
121	17+05.16	14.00' (LT)	EX. CURTIS ROAD	6776.17	EOA
122	18+05.14	14.00' (LT)	EX. CURTIS ROAD	6775.21	EOA
123	19+05.11	14.00' (LT)	EX. CURTIS ROAD	6773.66	EOA
124	20+05.18	14.00' (LT)	EX. CURTIS ROAD	6772.15	EOA
125	21+05.17	14.00' (LT)	EX. CURTIS ROAD	6770.58	EOA
126	22+05.20	14.00' (LT)	EX. CURTIS ROAD	6769.16	EOA
127	23+05.22	14.00' (LT)	EX. CURTIS ROAD	6767.91	EOA
128	23+95.69	14.00' (LT)	EX. CURTIS ROAD	6767.16	EOA
129	25+05.11	14.00' (LT)	EX. CURTIS ROAD	6766.19	EOA
130	26+05.18	14.00' (LT)	EX. CURTIS ROAD	6766.42	EOA
131	27+05.17	14.00' (LT)	EX. CURTIS ROAD	6766.91	EOA
132	28+05.18	14.00' (LT)	EX. CURTIS ROAD	6764.46	EOA
133	29+05.22	14.00' (LT)	EX. CURTIS ROAD	6760.88	EOA
134	30+05.15	14.00' (LT)	EX. CURTIS ROAD	6757.88	EOA
139	6+04.87	14.00' (RT)	EX. CURTIS ROAD	6781.03	EOA

POINT TABULATION

POINT #	STATION	OFFSET	ALIGNMENT	ELEVATION	DESCRIPTION
140	7+04.99	14.00' (RT)	EX. CURTIS ROAD	6781.04	EOA
141	8+04.95	14.00' (RT)	EX. CURTIS ROAD	6781.11	EOA
142	9+05.02	14.00' (RT)	EX. CURTIS ROAD	6781.05	EOA
143	10+05.03	14.00' (RT)	EX. CURTIS ROAD	6780.45	EOA
144	11+05.01	17.87' (RT)	EX. CURTIS ROAD	6780.08	EOA
145	12+14.68	24.30' (RT)	EX. CURTIS ROAD	6779.67	EOA
146	13+14.57	26.00' (RT)	EX. CURTIS ROAD	6778.89	EOA
147	14+14.50	26.00' (RT)	EX. CURTIS ROAD	6777.94	EOA
148	17+04.97	14.00' (RT)	EX. CURTIS ROAD	6775.82	EOA
149	18+04.99	14.00' (RT)	EX. CURTIS ROAD	6774.39	EOA
150	19+05.01	14.00' (RT)	EX. CURTIS ROAD	6773.17	EOA
151	20+04.95	14.00' (RT)	EX. CURTIS ROAD	6771.67	EOA
152	21+04.95	14.00' (RT)	EX. CURTIS ROAD	6770.10	EOA
153	22+04.93	14.00' (RT)	EX. CURTIS ROAD	6768.64	EOA
154	23+04.91	14.00' (RT)	EX. CURTIS ROAD	6767.19	EOA
155	23+95.59	14.00' (RT)	EX. CURTIS ROAD	6766.35	EOA
156	25+05.02	14.00' (RT)	EX. CURTIS ROAD	6765.93	EOA
157	26+04.91	14.00' (RT)	EX. CURTIS ROAD	6766.06	EOA
158	26+84.50	14.00' (RT)	EX. CURTIS ROAD	6766.69	EOA
159	28+04.90	14.00' (RT)	EX. CURTIS ROAD	6764.22	EOA
160	29+04.87	14.00' (RT)	EX. CURTIS ROAD	6760.39	EOA
161	30+04.93	16.05' (RT)	EX. CURTIS ROAD	6757.30	EOA
162	30+71.08	14.00' (LT)	EX. CURTIS ROAD	6756.56	PI/BEGIN TAPER
163	30+71.08	14.00' (RT)	EX. CURTIS ROAD	6756.43	PI/BEGIN TAPER
164	30+81.13	11.04' (RT)	EX. CURTIS ROAD	6756.44	END TAPER/TIE INTO EX.±
165	30+81.03	11.61' (LT)	EX. CURTIS ROAD	6756.43	END TAPER/TIE INTO EX.±

POINT TABULATION

POINT #	STATION	OFFSET	ALIGNMENT	ELEVATION	DESCRIPTION
106	2+04.99	14.00' (LT)	EX. CURTIS ROAD	6782.73	EOA
107	3+05.02	14.00' (LT)	EX. CURTIS ROAD	6782.91	EOA
108	4+04.95	14.00' (LT)	EX. CURTIS ROAD	6782.53	EOA
109	5+04.94	14.00' (LT)	EX. CURTIS ROAD	6782.02	EOA
135	2+04.99	14.00' (RT)	EX. CURTIS ROAD	6782.38	EOA
136	3+04.96	14.00' (RT)	EX. CURTIS ROAD	6782.94	EOA
137	4+05.02	14.00' (RT)	EX. CURTIS ROAD	6782.17	EOA

POINT TABULATION

POINT #	STATION	OFFSET	ALIGNMENT	ELEVATION	DESCRIPTION
138	5+05.04	14.00' (RT)	EX. CURTIS ROAD	6781.21	EOA
166	1+04.98	10.79' (RT)	EX. CURTIS ROAD	6781.28	TIE INTO EX.±/BEGIN TAPER
167	1+14.97	14.00' (RT)	EX. CURTIS ROAD	6781.35	PI/END TAPER
168	1+05.02	12.21' (LT)	EX. CURTIS ROAD	6781.61	TIE INTO EX.±/BEGIN TAPER
169	1+15.03	14.00' (LT)	EX. CURTIS ROAD	6781.74	PI/END TAPER
173	16+05.02	14.00' (RT)	EX. CURTIS ROAD	6776.66	EOA

CURTIS ROAD GRADING NOTES

1. SEE SHEET 4 FOR PROPOSED TYPICAL SECTIONS OF CURTIS ROAD.
2. PROPOSED EDGE OF ASPHALT IS SET AT –2.00% FROM EXISTING EDGE OF ASPHALT ELEVATIONS.
3. ALL ELEVATIONS ARE EDGE OF ASPHALT, UNLESS OTHERWISE NOTED.

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

ENGINEER'S STATEMENT

PREPARED UNDER MY DIRECT SUPERVISION AND ON BEHALF OF JR ENGINEERING

COLORADO REGISTERED PROFESSIONAL ENGINEER MIKE A. BRAMLETT 32314

MIKE A. BRAMLETT, P.E.
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SHEET 6 OF 50

JOB NO. 2514202

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KEY MAP

N.T.S.

SIGNING AND STRIPING NOTES

1. ALL SIGNS AND PAVEMENT MARKING SHALL BE IN COMPLIANCE WITH THE CURRENT MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD).
2. REMOVAL OF EXISTING PAVEMENT MARKINGS SHALL BE ACCOMPLISHED BY A METHOD THAT DOES NOT MATERIALLY DAMAGE THE PAVEMENT. THE PAVEMENT MARKINGS SHALL BE REMOVED TO THE EXTENT THEY WILL NOT BE VISIBLE UNDER DAY OR NIGHT CONDITIONS. AT NO TIME WILL IT BE ACCEPTABLE TO PAINT OVER EXISTING PAVEMENT MARKINGS.
3. ANY DEVIATION FROM THE STRIPING AND SIGNING PLAN SHALL BE APPROVED BY EL PASO COUNTY PLANNING AND COMMUNITY DEVELOPMENT.
4. ALL SIGNS SHOWN ON THE SIGNING AND STRIPING PLANN SHALL BE NEW SIGNS. EXISTING SIGNS MAY REMAIN OR BE REUSED IF THEY MEET CURRENT EL PASO COUNTY AND MUTCD STANDARDS.
5. STREET NAME AND REGULATORY STOP SIGNS SHALL BE ON THE SAME POST AT INTERSECTIONS.
6. ALL REMOVED SIGNS SHALL BE DISPOSED OF IN A PROPER MANNER BY THE CONTRACTOR.
7. ALL STREET NAME SIGNS SHALL BE "D" SERIES LETTERS, WITH LOCAL ROADWAY SIGNS BEING 4" UPPER-LOWER CASE LETTERING ON 8" BLANK AND NON-LOCAL ROADWAY SIGNS BEING 6" LETTERING. UPPER-LOWER CASE ON 12" BLANK, WITH A WHITE BORDER THAT IS NOT RECESSED. MULTI-LANE ROADWAYS WITH SPEED LIMITS OF 40 MPH OR HIGHER SHALL HAVE 8" UPPER-LOWER CASE LETTERING ON 18" BLANK WITH A WHITE BORDER THAT IS NOT RECESSED. THE WIDTH OF THE NON-RECESSED WHITE BORDERS SHALL MATCH PAGE 255 OF THE 2012 MUTCD "STANDARD HIGHWAY SIGNS".
8. ALL TRAFFIC SIGNS SHALL HAVE A MINIMUM HIGH INTENSITY PRISMATIC GRADE SHEETING.
9. ALL LOCAL RESIDENTIAL STREET SIGNS SHALL BE MOUNTED ON A 1.75" X 1.75" SQUARE TUBE SIGN POST AND STUB POST BASE,. FOR OTHER APPLICATIONS, REFER TO THE CDOT STANDARD S-614-8 REGARDING USE OF THE P2 TUBULAR STEEL POST SLIPBASE DESIGN.
10. ALL SIGNS SHALL BE SINGLE SHEET ALUMINUM WITH 0.100" THICKNESS.
11. ALL LIMIT LINES/STOP LINES, CROSSWALK LINES, PAVEMENT LEGENDS, AND ARROWS SHALL BE A MINIMUM 125 MIL THICKNESS PREFORMED THERMOPLASTIC PAVEMENT MARKINGS WITH TAPERED LEADING EDGES PER CDOT STANDARD S-627-1. WORD AND SYMBOL MARKINGS SHALL BE THE NARROW TYPE, STOP BARS SHALL BE 24" IN WIDTH, CROSSWALK LINES SHALL BE 12" WIDE AND 8' LONG PER CDOT S-267-1.
12. ALL LONGITUDINAL LINES SHALL BE A MINIMUM 15MIL THICKNESS EPOXY PAINT. ALL NON-LOCAL RESIDENTIAL ROADWAYS SHALL INCLUDE BOTH RIGHT AND LEFT EDGE LINE STRIPING AND ANY ADDITIONAL STRIPING AS REQUIRED BY CDOT S-627-1.
13. THE CONTRACTOR SHALL NOTIFY EL PASO COUNTY PLANNING AND COMMUNITY DEVELOPMENT (719) 520-6819 PRIOR TO AND UPON COMPLETION OF THE SIGNING AND STRIPING.
14. THE CONTRACTOR SHALL OBTAIN A WORK IN THE RIGHT OF WAY PERMIT FROM THE EL PASO COUNTY DEPARTMENT OF PUBLIC WORKS (DPW) PRIOR TO ANY SIGNAGE OR STRIPING WORK WITHIN AN EXISTING EL PASO COUNTY ROADWAY.

CURTIS ROAD STRIPING NOTES

1. SEE SHEET 4 FOR PROPOSED TYPICAL SECTIONS OF CURTIS ROAD.
2. STRIPING REMOVAL IS PER CURTIS ROAD GRADING AND DEMOLITION PLAN.

LEGEND

- PROPOSED SIGN
- EXISTING SIGN
- (XX) PROPOSED STRIPE
- (XXX) EXISTING STRIPE
- (A) CENTER LINE – 5" WIDE, 3" GAP, SOLID DOUBLE YELLOW
- (B) CENTER LINE – 5" WIDE, 10' LONG, 30' GAP, DASHED SINGLE YELLOW
- (C) CENTER LINE – 5" WIDE, 10' LONG, 30' GAP, & SOLID YELLOW, DASHED/SOLID DOUBLE YELLOW
- (D) EDGE LINE – 5" WIDE, SOLID WHITE
- (E) CHANNELIZING LINE – 8" WIDE, SOLID WHITE
- (F) WIDE DOTTED ENTRANCE LINE – 8" WIDE x 2' LONG, 4' GAP, WHITE
- (G) STOP BAR – 2' SOLID WHITE

50 25 0 50 100

HORIZONTAL
ORIGINAL SCALE: 1" = 50'
VERTICAL
ORIGINAL SCALE: 1" = 5'

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SADDLEHORN RANCH – FILING 1

CURTIS ROAD – STRIPING PLAN

SHEET 7 OF 50

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KEY MAP
N.T.S.

OSCURO TRAIL PROFILE
STA 0+00.00 TO 10+00.00

POINT TABULATION

POINT #	STATION	OFFSET	ALIGNMENT	ELEVATION	DESCRIPTION
1	0+14.04	14.00' (LT)	OSCURO TRAIL	6774.73	PCR
2	0+24.96	18.06' (RT)	OSCURO TRAIL	6774.16	PCR
3	0+86.92	14.00' (RT)	OSCURO TRAIL	6771.52	PI/ BEGIN TYP. STREET SECTION
4	0+86.92	14.00' (LT)	OSCURO TRAIL	6771.52	BEGIN TYP. STREET SECTION
5	3+72.35	14.00' (LT)	OSCURO TRAIL	6758.97	PCR
6	3+72.25	14.00' (RT)	OSCURO TRAIL	6758.98	PCR
9	4+40.25	14.00' (RT)	OSCURO TRAIL	6755.74	PCR
10	4+40.35	14.00' (LT)	OSCURO TRAIL	6755.95	PCR
13	5+88.90	14.00' (RT)	OSCURO TRAIL	6748.81	PC
14	5+88.90	14.00' (LT)	OSCURO TRAIL	6748.81	PC
15	9+13.12	14.00' (RT)	OSCURO TRAIL	6734.59	PT
16	9+13.12	14.00' (LT)	OSCURO TRAIL	6734.59	PT
17	4+44.35	28.00' (LT)	OSCURO TRAIL	6753.27	BEGIN SWALE
18	4+44.26	28.00' (RT)	OSCURO TRAIL	6753.59	BEGIN SWALE
19	0+34.76	28.13' (RT)	OSCURO TRAIL	6771.12	BEGIN SWALE
20	0+22.11	28.28' (LT)	OSCURO TRAIL	6771.43	BEGIN SWALE
22	2+99.89	31.03' (RT)	OSCURO TRAIL	6758.00	SWALE GB
25	3+69.24	33.23' (LT)	OSCURO TRAIL	6754.10	SWALE PI
28	5+75.00	28.00' (RT)	OSCURO TRAIL	6746.24	SWALE GB
29	8+00.00	28.01' (RT)	OSCURO TRAIL	6735.71	SWALE GB/CHECK DAM
30	8+20.83	28.00' (LT)	OSCURO TRAIL	6734.73	SWALE GB
31	5+90.00	28.00' (LT)	OSCURO TRAIL	6745.54	SWALE GB
32	9+22.95	28.00' (LT)	OSCURO TRAIL	6731.34	SWALE GB
92	9+39.06	30.64' (RT)	OSCURO TRAIL	6730.34	SWALE GB
97	5+99.95	28.00' (LT)	OSCURO TRAIL	6745.07	CHECK DAM
98	5+99.96	27.89' (RT)	OSCURO TRAIL	6745.10	CHECK DAM
99	7+99.84	28.00' (LT)	OSCURO TRAIL	6735.72	CHECK DAM
100	10+00.08	28.00' (LT)	OSCURO TRAIL	6729.84	CHECK DAM
101	9+99.82	35.47' (RT)	OSCURO TRAIL	6728.54	CHECK DAM

POINT TABULATION

POINT #	STATION	OFFSET	ALIGNMENT	ELEVATION	DESCRIPTION
7	37+34.99	14.00' (LT)	TRUCHAS TRAIL	6757.45	PCR
8	37+35.09	14.00' (RT)	TRUCHAS TRAIL	6757.45	PCR
11	38+03.09	14.00' (RT)	TRUCHAS TRAIL	6756.99	PCR
12	38+02.99	14.00' (LT)	TRUCHAS TRAIL	6756.99	PCR
23	38+07.84	38.29' (RT)	TRUCHAS TRAIL	6751.33	BEGIN SWALE
24	37+39.00	27.99' (LT)	TRUCHAS TRAIL	6754.44	END SWALE
105	38+12.18	28.00' (LT)	TRUCHAS TRAIL	6753.68	SWALE PI/BEGIN SWALE

STREET IMPROVEMENT NOTES

1. ALL STATIONING IS ℄, UNLESS OTHERWISE NOTED.
2. ALL PROFILE ELEVATIONS ARE ℄, UNLESS OTHERWISE NOTED.
3. ALL POINT TABULATIONS ARE EDGE OF ASPHALT, UNLESS OTHERWISE NOTED.
4. ALL CURB RETURN RADII ARE 20', UNLESS OTHERWISE NOTED.
5. ALL SLOPE LABELS ARE SWALE CENTERLINE, UNLESS OTHERWISE NOTED.
6. SEE SHEET 4 FOR TYPICAL STREET SECTIONS, SWALE SECTION A-A AND SECTION B-B DIMENSIONS AND DETAILS.
7. ALL PROPOSED ROW WIDTHS ARE 60', UNLESS OTHERWISE NOTED.
8. ABBREVIATIONS: EOA = EDGE OF ASPHALT, P.I.E. = PUBLIC IMPROVEMENTS EASEMENT.

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No.	REVISION	BY	DATE

H-SCALE	1"=50'
V-SCALE	1"=5'
DATE	01/10/20
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SADDLEHORN RANCH – FILING 1

OSCURO TRAIL – PLAN AND PROFILE

SHEET 8 OF 50

JOB NO. 2514202

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KEY MAP
N.T.S.

POINT TABULATION					
POINT #	STATION	OFFSET	ALIGNMENT	ELEVATION	DESCRIPTION
33	11+97.62	28.00' (LT)	OSCURO TRAIL	6726.00	SWALE GB
34	12+20.21	42.20' (RT)	OSCURO TRAIL	6722.03	SWALE GB
35	12+65.85	14.00' (LT)	OSCURO TRAIL	6727.71	PCR
36	12+71.62	28.00' (LT)	OSCURO TRAIL	6723.80	END SWALE
39	13+27.66	28.00' (LT)	OSCURO TRAIL	6723.39	BEGIN SWALE
40	13+33.90	14.00' (LT)	OSCURO TRAIL	6726.33	PCR
41	13+48.90	28.00' (LT)	OSCURO TRAIL	6722.97	SWALE GB
42	16+25.00	28.00' (LT)	OSCURO TRAIL	6717.09	SWALE GB
43	16+09.11	14.00' (LT)	OSCURO TRAIL	6720.47	PC
44	16+09.11	14.00' (RT)	OSCURO TRAIL	6720.47	PC
45	14+70.00	28.00' (RT)	OSCURO TRAIL	6720.39	SWALE GB
46	18+16.50	28.00' (LT)	OSCURO TRAIL	6712.27	END SWALE
51	16+09.09	28.00' (RT)	OSCURO TRAIL	6717.43	SWALE GB
52	18+70.97	28.00' (LT)	OSCURO TRAIL	6710.90	END SWALE
53	18+66.55	28.00' (RT)	OSCURO TRAIL	6711.58	END SWALE
93	18+69.00	14.00' (LT)	OSCURO TRAIL	6715.78	LOW PT
94	18+69.00	14.00' (RT)	OSCURO TRAIL	6715.78	LOW PT

POINT TABULATION					
POINT #	STATION	OFFSET	ALIGNMENT	ELEVATION	DESCRIPTION
54	20+73.78	14.00' (LT)	ZARAGOZA TRAIL	6721.35	PT
57	20+52.48	28.01' (RT)	ZARAGOZA TRAIL	6717.33	SWALE GB/CHECK DAM
59	20+73.78	14.00' (RT)	ZARAGOZA TRAIL	6721.35	PT
60	20+60.00	28.00' (LT)	ZARAGOZA TRAIL	6717.65	SWALE GB/CHECK DAM

POINT TABULATION					
POINT #	STATION	OFFSET	ALIGNMENT	ELEVATION	DESCRIPTION
37	0+32.71	14.00' (LT)	DEL CERRO TRAIL	6726.60	PCR
38	0+35.35	14.00' (RT)	DEL CERRO TRAIL	6726.57	PCR

OSCURO TRAIL (1) & ZARAGOZA TRAIL PROFILE
STA 10+00.00 TO 21+00.00

STREET IMPROVEMENT NOTES

1. ALL STATIONING IS ℄, UNLESS OTHERWISE NOTED.
2. ALL PROFILE ELEVATIONS ARE ℄, UNLESS OTHERWISE NOTED.
3. ALL POINT TABULATIONS ARE EDGE OF ASPHALT, UNLESS OTHERWISE NOTED.
4. ALL CURB RETURN RADII ARE 20', UNLESS OTHERWISE NOTED.
5. ALL SLOPE LABELS ARE SWALE CENTERLINE, UNLESS OTHERWISE NOTED.
6. SEE SHEET 4 FOR TYPICAL STREET SECTIONS, SWALE SECTION A–A AND SECTION B–B DIMENSIONS AND DETAILS.
7. ALL PROPOSED ROW WIDTHS ARE 60', UNLESS OTHERWISE NOTED.
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50 25 0 50 100
HORIZONTAL
ORIGINAL SCALE: 1" = 50'
VERTICAL
ORIGINAL SCALE: 1" = 5'

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

ENGINEER'S STATEMENT

PREPARED UNDER MY DIRECT SUPERVISION AND ON BEHALF OF JR ENGINEERING

COLORADO REGISTERED PROFESSIONAL ENGINEER MIKE A. BRAMLETT 32314

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

DATE

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

PREPARED FOR
ROI PROPERTY GROUP, LLC
2495 RIGDON STREET
NAPA, CALIFORNIA
(707) 365–6891
BRADY WILLIAMS

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SADDLEHORN RANCH – FILING 1

OSCURO TRAIL (CONT.) & ZARAGOZA TRAIL – PLAN AND PROFILE

SHEET 9 OF 50

JOB NO. 2514202

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POINT TABULATION					
POINT #	STATION	OFFSET	ALIGNMENT	ELEVATION	DESCRIPTION
69	29+98.12	14.00' (LT)	TRUCHAS TRAIL	6764.03	PT
70	29+49.40	34.98' (LT)	TRUCHAS TRAIL	6758.00	SWALE GB
72	30+99.11	14.00' (LT)	TRUCHAS TRAIL	6765.05	HIGH POINT
73	30+99.11	14.00' (RT)	TRUCHAS TRAIL	6765.05	HIGH POINT
74	30+96.80	43.70' (LT)	TRUCHAS TRAIL	6758.07	BEGIN SWALE/SWALE HP
96	29+98.12	14.00' (RT)	TRUCHAS TRAIL	6764.03	PT

POINT TABULATION					
POINT #	STATION	OFFSET	ALIGNMENT	ELEVATION	DESCRIPTION
62	22+88.95	28.00' (LT)	ZARAGOZA TRAIL	6728.71	SWALE GB
63	22+88.78	28.00' (RT)	ZARAGOZA TRAIL	6728.70	SWALE GB/CHECK DAM
64	24+22.88	40.76' (LT)	ZARAGOZA TRAIL	6732.00	SWALE GB
65	26+82.11	14.00' (LT)	ZARAGOZA TRAIL	6750.74	PC
66	25+50.37	37.25' (LT)	ZARAGOZA TRAIL	6739.00	SWALE GB
67	25+50.32	37.61' (RT)	ZARAGOZA TRAIL	6738.92	SWALE GB
68	24+75.40	38.87' (RT)	ZARAGOZA TRAIL	6735.00	SWALE GB
71	26+82.07	35.87' (RT)	ZARAGOZA TRAIL	6745.75	BEGIN SWALE
95	27+31.11	34.15' (LT)	ZARAGOZA TRAIL	6748.52	SWALE GB/CHECK DAM
102	25+40.13	37.67' (LT)	ZARAGOZA TRAIL	6738.44	CHECK DAM
103	24+39.43	40.50' (LT)	ZARAGOZA TRAIL	6732.91	CHECK DAM
104	28+16.82	33.18' (LT)	ZARAGOZA TRAIL	6752.25	CHECK DAM
170	25+38.88	37.91' (RT)	ZARAGOZA TRAIL	6738.33	CHECK DAM
171	26+39.35	36.43' (RT)	ZARAGOZA TRAIL	6743.53	CHECK DAM
172	24+37.86	39.47' (RT)	ZARAGOZA TRAIL	6733.74	CHECK DAM
174	26+82.11	14.00' (RT)	ZARAGOZA TRAIL	6750.74	PC

KEY MAP
N.T.S.

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ZARAGOZA TRAIL (1) & TRUCHAS TRAIL PROFILE
STA 21+00.00 TO 31+65.00

STREET IMPROVEMENT NOTES

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2. ALL PROFILE ELEVATIONS ARE ℄, UNLESS OTHERWISE NOTED.
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50 25 0 50 100

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ORIGINAL SCALE: 1" = 5'

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COLORADO REGISTERED PROFESSIONAL ENGINEER MIKE A. BRAMLETT 32314

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

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SADDLEHORN RANCH – FILING 1

ZARAGOZA TRAIL (CONT.) & TRUCHAS TRAIL – PLAN AND PROFILE

SHEET 10 OF 50

JOB NO. 2514202

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KEY MAP
N.T.S.

POINT TABULATION					
POINT #	STATION	OFFSET	ALIGNMENT	ELEVATION	DESCRIPTION
7	37+34.99	14.00' (LT)	TRUCHAS TRAIL	6757.45	PCR
8	37+35.09	14.00' (RT)	TRUCHAS TRAIL	6757.45	PCR
11	38+03.09	14.00' (RT)	TRUCHAS TRAIL	6756.99	PCR
12	38+02.99	14.00' (LT)	TRUCHAS TRAIL	6756.99	PCR
23	38+07.84	38.29' (RT)	TRUCHAS TRAIL	6751.33	BEGIN SWALE
24	37+39.00	27.99' (LT)	TRUCHAS TRAIL	6754.44	END SWALE
26	38+30.00	28.00' (LT)	TRUCHAS TRAIL	6753.67	SWALE GB
75	36+20.33	31.08' (LT)	TRUCHAS TRAIL	6755.08	SWALE GB
105	38+12.18	28.00' (LT)	TRUCHAS TRAIL	6753.68	SWALE PI/BEGIN SWALE

POINT TABULATION					
POINT #	STATION	OFFSET	ALIGNMENT	ELEVATION	DESCRIPTION
5	3+72.35	14.00' (LT)	OSCURO TRAIL	6758.97	PCR
6	3+72.25	14.00' (RT)	OSCURO TRAIL	6758.98	PCR
9	4+40.25	14.00' (RT)	OSCURO TRAIL	6755.74	PCR
10	4+40.35	14.00' (LT)	OSCURO TRAIL	6755.95	PCR

TRUCHAS TRAIL (1) PROFILE
STA 31+65.00 TO 41+50.00

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50 25 0 50 100
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ORIGINAL SCALE: 1" = 50'
VERTICAL
ORIGINAL SCALE: 1" = 5'

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COLORADO REGISTERED PROFESSIONAL ENGINEER MIKE A. BRAMLETT 32314

MIKE A. BRAMLETT, P.E.
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SADDLEHORN RANCH - FILING 1

TRUCHAS TRAIL (CONT.) - PLAN AND PROFILE

SHEET 11 OF 50

JOB NO. 2514202

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KEY MAP
N.T.S.

POINT TABULATION					
POINT #	STATION	OFFSET	ALIGNMENT	ELEVATION	DESCRIPTION
76	45+20.00	28.00' (LT)	TRUCHAS TRAIL	6746.59	SWALE GB
77	46+91.32	28.00' (LT)	TRUCHAS TRAIL	6747.09	PC/SWALE GB
79	47+10.00	28.00' (RT)	TRUCHAS TRAIL	6747.28	SWALE GB
80	46+57.52	28.00' (RT)	TRUCHAS TRAIL	6745.63	END SWALE
81	46+24.95	28.00' (RT)	TRUCHAS TRAIL	6745.09	BEGIN SWALE
82	45+80.35	37.00' (RT)	TRUCHAS TRAIL	6744.34	END SWALE
83	45+80.35	28.00' (LT)	TRUCHAS TRAIL	6745.81	END SWALE/SWALE LP
84	46+91.33	14.00' (LT)	TRUCHAS TRAIL	6750.13	PC
85	47+62.65	65.94' (LT)	TRUCHAS TRAIL	6747.86	PRC
86	48+01.93	17.88' (RT)	TRUCHAS TRAIL	6751.28	PRC
87	47+74.34	14.00' (RT)	TRUCHAS TRAIL	6750.95	PC
89	45+19.31	34.31' (RT)	TRUCHAS TRAIL	6745.01	SWALE GB
90	45+80.35	14.00' (LT)	TRUCHAS TRAIL	6749.21	LOW PT
91	45+80.35	14.00' (RT)	TRUCHAS TRAIL	6749.21	LOW PT
175	47+98.07	31.34' (RT)	TRUCHAS TRAIL	6748.16	PRC
176	47+74.88	28.23' (RT)	TRUCHAS TRAIL	6748.00	PC

TRUCHAS TRAIL (2) PROFILE
STA 41+50.00 TO 48+46.00

STREET IMPROVEMENT NOTES

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50 25 0 50 100
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VERTICAL
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MIKE A. BRAMLETT, P.E.
COLORADO P.E. 32314
FOR AND ON BEHALF OF JR ENGINEERING, LLC

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SADDLEHORN RANCH – FILING 1

TRUCHAS TRAIL (CONT.)

SHEET 12 OF 50

JOB NO. 2514202

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DEL CERRO TRAIL PROFILE
STA 0+00.00 TO 11+00.00

CULVERT MAINTENANCE ACCESS ROAD TYPICAL SECTION
N.T.S.

KEY MAP
N.T.S.

POINT TABULATION					
POINT #	STATION	OFFSET	ALIGNMENT	ELEVATION	DESCRIPTION
37	0+32.71	14.00' (LT)	DEL CERRO TRAIL	6726.60	PCR
38	0+35.35	14.00' (RT)	DEL CERRO TRAIL	6726.57	PCR
190	5+64.28	68.84' (LT)	DEL CERRO TRAIL	6710.32	END SWALE
191	6+88.75	26.52' (LT)	DEL CERRO TRAIL	6716.62	BEGIN SWALE
192	6+49.53	28.00' (RT)	DEL CERRO TRAIL	6717.00	BEGIN SWALE
193	7+52.55	14.00' (LT)	DEL CERRO TRAIL	6718.78	PC
194	7+52.57	14.00' (RT)	DEL CERRO TRAIL	6718.78	PC
264	0+64.61	43.54' (LT)	DEL CERRO TRAIL	6718.57	BEGIN SWALE
265	4+78.60	36.21' (LT)	DEL CERRO TRAIL	6715.39	PC/SWALE GB
266	4+88.61	38.88' (LT)	DEL CERRO TRAIL	6714.82	SWALE PT
267	5+52.02	67.01' (LT)	DEL CERRO TRAIL	6711.00	SWALE PT
268	5+32.86	61.33' (LT)	DEL CERRO TRAIL	6712.10	SWALE PC
269	6+55.77	14.00' (LT)	DEL CERRO TRAIL	6719.83	BEGIN MAINT. ROAD
270	6+71.86	14.00' (LT)	DEL CERRO TRAIL	6719.65	BEGIN MAINT. ROAD
271	6+01.60	154.00' (LT)	DEL CERRO TRAIL	6712.16	END MAINT. ROAD
272	6+02.10	194.27' (LT)	DEL CERRO TRAIL	6713.06	END MAINT. ROAD
273	3+82.50	14.00' (RT)	DEL CERRO TRAIL	6722.80	BEGIN MAINT. ROAD
274	2+89.53	14.00' (RT)	DEL CERRO TRAIL	6723.81	BEGIN MAINT. ROAD
275	5+09.02	76.69' (RT)	DEL CERRO TRAIL	6714.99	MAINT. ROAD – PT
276	5+23.22	71.85' (RT)	DEL CERRO TRAIL	6714.69	MAINT. ROAD – PT
277	4+69.76	43.46' (RT)	DEL CERRO TRAIL	6720.06	MAINT. ROAD – PC
278	4+72.18	28.66' (RT)	DEL CERRO TRAIL	6720.36	MAINT. ROAD – PC
279	5+46.26	139.49' (RT)	DEL CERRO TRAIL	6709.53	MAINT. ROAD – PC
280	5+32.06	144.33' (RT)	DEL CERRO TRAIL	6709.83	MAINT. ROAD – PC
281	5+36.60	175.88' (RT)	DEL CERRO TRAIL	6708.00	MAINT. ROAD – PT
282	5+36.60	221.49' (RT)	DEL CERRO TRAIL	6707.34	END MAINT. ROAD

STREET IMPROVEMENT NOTES

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SADDLEHORN RANCH – FILING 1

DEL CERRO TRAIL – PLAN AND PROFILE

SHEET 13 OF 50

JOB NO. 2514202

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POINT TABULATION					
POINT #	STATION	OFFSET	ALIGNMENT	ELEVATION	DESCRIPTION
195	13+28.30	14.00' (LT)	DEL CERRO TRAIL	6712.52	PT
196	13+28.01	14.00' (RT)	DEL CERRO TRAIL	6712.52	PT
197	13+76.09	14.00' (RT)	DEL CERRO TRAIL	6712.00	PCR
199	13+82.09	28.00' (RT)	DEL CERRO TRAIL	6708.07	END SWALE/BEGIN SWALE
200	13+82.09	28.02' (LT)	DEL CERRO TRAIL	6708.35	END SWALE
201	13+76.09	14.00' (LT)	DEL CERRO TRAIL	6712.00	PCR
204	14+44.09	14.00' (LT)	DEL CERRO TRAIL	6711.26	PCR/END OF IMPROVEMENTS
205	14+44.09	0.00' ()	DEL CERRO TRAIL	6711.54	END IMPROVEMENTS
206	14+44.09	14.00' (RT)	DEL CERRO TRAIL	6711.26	PCR/END OF IMPROVEMENTS
208	14+38.09	28.00' (RT)	DEL CERRO TRAIL	6707.99	BEGIN SWALE
209	14+38.09	28.00' (LT)	DEL CERRO TRAIL	6708.27	END SWALE
210	12+64.97	27.81' (RT)	DEL CERRO TRAIL	6710.23	SWALE GB
211	12+64.95	28.19' (LT)	DEL CERRO TRAIL	6710.23	SWALE GB

POINT TABULATION					
POINT #	STATION	OFFSET	ALIGNMENT	ELEVATION	DESCRIPTION
198	79+47.30	14.37' (LT)	EL RACIENO TRAIL	6711.25	PCR
202	0+34.00	14.00' (LT)	EL RACIENO TRAIL	6711.69	PCR
203	0+34.00	14.00' (RT)	EL RACIENO TRAIL	6711.69	PCR
207	79+47.81	14.48' (RT)	EL RACIENO TRAIL	6711.16	PCR

KEY MAP
N.T.S.

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

PREPARED FOR
ROI PROPERTY GROUP, LLC
2495 RIGDON STREET
NAPA, CALIFORNIA
(707) 365-6891
BRADY WILLIAMS

J·R ENGINEERING
A Westrian Company
Centennial 303-740-9393 • Colorado Springs 719-593-2593
Fort Collins 970-491-9888 • www.jrengineering.com

DEL CERRO TRAIL PROFILE (1)
STA 11+00.00 TO 15+00.00

STREET IMPROVEMENT NOTES

1. ALL STATIONING IS ℄, UNLESS OTHERWISE NOTED.
2. ALL PROFILE ELEVATIONS ARE ℄, UNLESS OTHERWISE NOTED.
3. ALL POINT TABULATIONS ARE EDGE OF ASPHALT, UNLESS OTHERWISE NOTED.
4. ALL CURB RETURN RADII ARE 20', UNLESS OTHERWISE NOTED.
5. ALL SLOPE LABELS ARE SWALE CENTERLINE, UNLESS OTHERWISE NOTED.
6. SEE SHEET 4 FOR TYPICAL STREET SECTIONS, SWALE SECTION A-A AND SECTION B-B DIMENSIONS AND DETAILS.
7. ALL PROPOSED ROW WIDTHS ARE 60', UNLESS OTHERWISE NOTED.
8. ABBREVIATIONS: EOA = EDGE OF ASPHALT, P.I.E. = PUBLIC IMPROVEMENTS EASEMENT.

50 25 0 50 100
HORIZONTAL
ORIGINAL SCALE: 1" = 50'
VERTICAL
ORIGINAL SCALE: 1" = 5'

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

ENGINEER'S STATEMENT

PREPARED UNDER MY DIRECT SUPERVISION AND ON BEHALF OF JR ENGINEERING

COLORADO REGISTERED PROFESSIONAL ENGINEER MIKE A. BRAMLETT 32314

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

DATE

No.	REVISION	BY	DATE

H-SCALE	1" = 50'
V-SCALE	1" = 5'
DATE	01/10/20
DESIGNED BY	NQJ
DRAWN BY	NQJ
CHECKED BY	

SADDLEHORN RANCH – FILING 1

DEL CERRO TRAIL (CONT.) – PLAN AND PROFILE

SHEET 14 OF 50

JOB NO. 2514202

X:\2510000.all\2514202\Drawings\Sheet Dwgs\CDs\2514202S02.dwg, Del Cerro (2), 2/3/2020 8:00:29 AM, CS

KEY MAP
N.T.S.

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

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

CARRANZA TRAIL & EL RACIENO TRAIL PROFILE
STA 57+30.00 TO 69+50.00

Know what's below. Call before you dig.

POINT TABULATION					
POINT #	STATION	OFFSET	ALIGNMENT	ELEVATION	DESCRIPTION
286	65+06.42	14.00' (RT)	CARRANZA TRAIL	6696.26	LOW PT
289	58+59.39	26.78' (LT)	CARRANZA TRAIL	6697.36	PRC
290	58+76.92	14.00' (RT)	CARRANZA TRAIL	6697.61	PCC
291	58+53.60	24.24' (RT)	CARRANZA TRAIL	6697.37	PRC

POINT TABULATION					
POINT #	STATION	OFFSET	ALIGNMENT	ELEVATION	DESCRIPTION
223	66+76.39	14.00' (RT)	EL RACIENO TRAIL	6697.84	PT
224	66+76.39	28.00' (LT)	EL RACIENO TRAIL	6694.80	SWALE GB/PT
225	66+76.39	14.00' (LT)	EL RACIENO TRAIL	6697.84	PT
285	66+76.39	28.00' (RT)	EL RACIENO TRAIL	6694.80	SWALE GB/PT

STREET IMPROVEMENT NOTES

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2. ALL PROFILE ELEVATIONS ARE ℄, UNLESS OTHERWISE NOTED.
3. ALL POINT TABULATIONS ARE EDGE OF ASPHALT, UNLESS OTHERWISE NOTED.
4. ALL CURB RETURN RADII ARE 20', UNLESS OTHERWISE NOTED.
5. ALL SLOPE LABELS ARE SWALE CENTERLINE, UNLESS OTHERWISE NOTED.
6. SEE SHEET 4 FOR TYPICAL STREET SECTIONS, SWALE SECTION A–A AND SECTION B–B DIMENSIONS AND DETAILS.
7. ALL PROPOSED ROW WIDTHS ARE 60', UNLESS OTHERWISE NOTED.
8. ABBREVATIONS: EOA = EDGE OF ASPHALT, P.I.E. = PUBLIC IMPROVEMENTS EASEMENT.

POINT TABULATION					
POINT #	STATION	OFFSET	ALIGNMENT	ELEVATION	DESCRIPTION
212	57+64.40	38.19' (LT)	CARRANZA TRAIL	6693.02	END SWALE
213	58+91.03	14.00' (RT)	CARRANZA TRAIL	6697.75	BEGIN TYPICAL STREET SECTION
214	59+67.36	14.00' (LT)	CARRANZA TRAIL	6698.51	PT
215	59+67.36	14.00' (RT)	CARRANZA TRAIL	6698.51	PT
216	58+77.73	14.00' (LT)	CARRANZA TRAIL	6697.61	BEGIN TYPICAL STREET SECTION/PRC
217	58+91.03	28.00' (RT)	CARRANZA TRAIL	6694.71	SWALE PCC/GB
218	61+66.03	14.00' (LT)	CARRANZA TRAIL	6700.41	HP
219	61+66.03	14.00' (RT)	CARRANZA TRAIL	6700.41	HP
220	63+60.38	14.00' (LT)	CARRANZA TRAIL	6697.92	PC
221	61+92.20	28.00' (LT)	CARRANZA TRAIL	6697.19	SWALE GB
222	63+60.38	14.00' (RT)	CARRANZA TRAIL	6697.92	PC
226	61+66.03	28.00' (RT)	CARRANZA TRAIL	6697.37	SWALE HP
227	61+66.03	28.00' (LT)	CARRANZA TRAIL	6697.37	SWALE HP

POINT TABULATION					
POINT #	STATION	OFFSET	ALIGNMENT	ELEVATION	DESCRIPTION
228	65+06.42	28.00' (RT)	CARRANZA TRAIL	6692.72	END SWALE
229	64+59.21	28.00' (LT)	CARRANZA TRAIL	6693.38	END SWALE
230	57+74.59	30.88' (LT)	CARRANZA TRAIL	6696.06	LP
231	58+70.26	33.09' (LT)	CARRANZA TRAIL	6694.48	SWALE PRC
232	58+66.74	32.55' (RT)	CARRANZA TRAIL	6694.51	SWALE PRC
233	59+67.22	28.00' (LT)	CARRANZA TRAIL	6695.47	SWALE GB/PT
234	59+60.00	28.00' (RT)	CARRANZA TRAIL	6695.40	SWALE GB/PT
235	58+77.66	28.00' (LT)	CARRANZA TRAIL	6694.57	SWALE PRC
236	61+46.92	28.00' (LT)	CARRANZA TRAIL	6697.28	SWALE GB
237	61+47.00	28.00' (RT)	CARRANZA TRAIL	6697.28	SWALE GB
238	63+60.38	28.00' (LT)	CARRANZA TRAIL	6694.88	SWALE GB/PC
239	65+75.00	28.00' (RT)	CARRANZA TRAIL	6693.73	SWALE GB
240	65+75.00	28.00' (LT)	CARRANZA TRAIL	6693.73	SWALE GB

POINT TABULATION					
POINT #	STATION	OFFSET	ALIGNMENT	ELEVATION	DESCRIPTION
241	65+06.42	14.00' (LT)	CARRANZA TRAIL	6696.26	LOW PT
242	65+06.42	28.01' (LT)	CARRANZA TRAIL	6692.00	END SWALE
243	57+68.26	0.00' ()	CARRANZA TRAIL	6696.38	BEGIN IMPROVEMENTS CARRANZA TRAIL
251	58+76.92	28.00' (RT)	CARRANZA TRAIL	6694.60	SWALE PCC
283	61+92.20	28.00' (RT)	CARRANZA TRAIL	6697.19	SWALE GB
284	63+60.38	28.00' (RT)	CARRANZA TRAIL	6694.88	SWALE GB/PC

ENGINEER'S STATEMENT

PREPARED UNDER MY DIRECT SUPERVISION AND ON BEHALF OF JR ENGINEERING

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

COLORADO REGISTERED PROFESSIONAL ENGINEER
MIKE A. BRAMLETT
32314
DATE

No.	REVISION	BY	DATE

H-SCALE	1" = 50'
V-SCALE	1" = 5'
DATE	01/10/20
DESIGNED BY	NQJ
DRAWN BY	NQJ
CHECKED BY	

SADDLEHORN RANCH – FILING 1

CARRANZA & EL RACIENO TRAIL– PLAN AND PROFILE

SHEET 15 OF 50

JOB NO. 2514202

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KEY MAP
N.T.S.

POINT TABULATION					
POINT #	STATION	OFFSET	ALIGNMENT	ELEVATION	DESCRIPTION
197	13+76.09	14.00' (RT)	DEL CERRO TRAIL	6712.00	PCR
199	13+82.09	28.00' (RT)	DEL CERRO TRAIL	6708.07	END SWALE/BEGIN SWALE
206	14+44.09	14.00' (RT)	DEL CERRO TRAIL	6711.26	PCR/END OF IMPROVEMENTS

POINT TABULATION					
POINT #	STATION	OFFSET	ALIGNMENT	ELEVATION	DESCRIPTION
198	79+47.30	14.37' (LT)	EL RACIENO TRAIL	6711.25	PCR
207	79+47.81	14.48' (RT)	EL RACIENO TRAIL	6711.16	PCR
208	14+38.09	28.00' (RT)	EL RACIENO TRAIL	6707.99	BEGIN SWALE
244	72+66.60	14.00' (RT)	EL RACIENO TRAIL	6704.03	PC
245	72+66.60	14.00' (LT)	EL RACIENO TRAIL	6704.03	PC
246	72+66.60	28.00' (RT)	EL RACIENO TRAIL	6700.99	SWALE GB/PC
247	72+66.60	28.00' (LT)	EL RACIENO TRAIL	6701.04	SWALE PC
248	77+37.65	28.00' (LT)	EL RACIENO TRAIL	6705.93	SWALE PT
249	77+37.65	14.00' (LT)	EL RACIENO TRAIL	6708.98	PT
250	77+37.65	14.00' (RT)	EL RACIENO TRAIL	6708.98	PT
287	79+28.47	28.00' (LT)	EL RACIENO TRAIL	6707.94	SWALE GB
288	79+28.47	28.00' (RT)	EL RACIENO TRAIL	6707.94	SWALE GB
292	77+37.65	28.00' (RT)	EL RACIENO TRAIL	6705.97	SWALE PT

EL RACIENO TRAIL (1) PROFILE
STA 69+50.00 TO 79+78.00

50 25 0 50 100
HORIZONTAL
ORIGINAL SCALE: 1" = 50'
VERTICAL
ORIGINAL SCALE: 1" = 5'

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

STREET IMPROVEMENT NOTES

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ENGINEER'S STATEMENT

PREPARED UNDER MY DIRECT SUPERVISION AND ON BEHALF OF JR ENGINEERING

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

DATE

COLORADO REGISTERED PROFESSIONAL ENGINEER MIKE A. BRAMLETT 32314

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PREPARED FOR
ROI PROPERTY GROUP, LLC
2495 RIGDON STREET
NAPA, CALIFORNIA
(707) 365-6891
BRADY WILLIAMS

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

No.	REVISION	BY	DATE

H-SCALE	1" = 50'
V-SCALE	1" = 5'
DATE	01/10/20
DESIGNED BY	NQJ
DRAWN BY	NQJ
CHECKED BY	

SADDLEHORN RANCH – FILING 1

EL RACIENO TRAIL – PLAN AND PROFILE

SHEET 16 OF 50

JOB NO. 2514202

X:\2510000.all\2514202\Drawings\Sheet Dwgs\CIV\2514202SI02.dwg, EL Raciano, 2/3/2020 8:00:44 AM, CS

KEY MAP
N.T.S.

EL RACIENO TRAIL (2) PROFILE
STA 0+00.00 TO 11+90.00

POINT TABULATION					
POINT #	STATION	OFFSET	ALIGNMENT	ELEVATION	DESCRIPTION
200	13+82.09	28.02' (LT)	EL RACIENO TRAIL	6708.35	END SWALE
202	0+34.00	14.00' (RT)	EL RACIENO TRAIL	6711.69	PCR
203	0+34.00	14.00' (RT)	EL RACIENO TRAIL	6711.69	PCR
209	14+38.09	28.00' (LT)	EL RACIENO TRAIL	6708.27	END SWALE
252	2+14.72	14.00' (LT)	EL RACIENO TRAIL	6714.74	PC
253	2+14.72	14.00' (RT)	EL RACIENO TRAIL	6714.74	PC
254	1+49.76	28.00' (RT)	EL RACIENO TRAIL	6711.13	SWALE GB
255	1+50.00	28.00' (LT)	EL RACIENO TRAIL	6711.14	SWALE GB
256	10+64.88	28.01' (LT)	EL RACIENO TRAIL	6726.38	SWALE GB
257	10+86.07	25.40' (RT)	EL RACIENO TRAIL	6729.42	PRC

POINT TABULATION					
POINT #	STATION	OFFSET	ALIGNMENT	ELEVATION	DESCRIPTION
258	11+92.71	2.47' (RT)	EL RACIENO TRAIL	6727.93	SWALE HP
259	11+78.75	1.72' (RT)	EL RACIENO TRAIL	6730.97	HP
260	10+65.31	14.00' (LT)	EL RACIENO TRAIL	6729.12	PCC
261	10+65.31	14.00' (RT)	EL RACIENO TRAIL	6729.12	PRC
262	10+65.56	28.00' (RT)	EL RACIENO TRAIL	6726.39	SWALE GB
263	10+85.72	25.95' (LT)	EL RACIENO TRAIL	6729.41	PRC

POINT TABULATION					
POINT #	STATION	OFFSET	ALIGNMENT	ELEVATION	DESCRIPTION
201	13+76.09	14.00' (LT)	DEL CERRO TRAIL	6712.00	PCR
204	14+44.09	14.00' (LT)	DEL CERRO TRAIL	6711.26	PCR/END OF IMPROVEMENTS

50 25 0 50 100

HORIZONTAL ORIGINAL SCALE: 1" = 50'
VERTICAL ORIGINAL SCALE: 1" = 5'

Know what's below. Call before you dig.

STREET IMPROVEMENT NOTES

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ENGINEER'S STATEMENT

PREPARED UNDER MY DIRECT SUPERVISION AND ON BEHALF OF JR ENGINEERING

COLORADO REGISTERED PROFESSIONAL ENGINEER MIKE A. BRAMLETT 32314

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

DATE

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PREPARED FOR
ROI PROPERTY GROUP, LLC
2495 RIGDON STREET
NAPA, CALIFORNIA
(707) 365–6891
BRADY WILLIAMS

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No.	REVISION	BY	DATE

H–SCALE	1"=50'
V–SCALE	1"=5'
DATE	01/10/20
DESIGNED BY	NQJ
DRAWN BY	NQJ
CHECKED BY	

SADDLEHORN RANCH – FILING 1

EL RACIENO TRAIL (CONT.) – PLAN AND PROFILE

SHEET 17 OF 50

JOB NO. 2514202

X:\2510000.all\2514202\Drawings\Sheet Dwgs\C3\2514202SI02.dwg, El Raciano (2), 2/3/2020 8:00:52 AM, CS

KEY MAP
N.T.S.

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

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No.	REVISION	BY	DATE

H-SCALE	1"=100'
V-SCALE	N/A
DATE	01/10/20
DESIGNED BY	NQJ
DRAWN BY	NQJ
CHECKED BY	

100 50 0 100 200
ORIGINAL SCALE: 1" = 100'

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

ENGINEER'S STATEMENT

PREPARED UNDER MY DIRECT SUPERVISION AND ON BEHALF OF JR ENGINEERING

COLORADO LICENSED PROFESSIONAL ENGINEER MIKE A. BRAMLETT 32314

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

SADDLEHORN RANCH – FILING 1
SIGNAGE PLAN

SHEET 18 OF 50

JOB NO. 2514202

X:\2510000.all\2514202\Drawings\Sheet Dwgs\Civil\2514202SG01.dwg, SG01, 1/3/2020 8:01:12 AM, CS

KEY MAP
N.T.S.

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

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No.	REVISION	BY	DATE

H-SCALE	1"=100'
V-SCALE	N/A
DATE	01/10/20
DESIGNED BY	NQJ
DRAWN BY	NQJ
CHECKED BY	

SADDLEHORN RANCH – FILING 1

SIGNAGE PLAN

100 50 0 100 200
ORIGINAL SCALE: 1" = 100'

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

ENGINEER'S STATEMENT

PREPARED UNDER MY DIRECT SUPERVISION AND ON BEHALF OF JR ENGINEERING

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

DATE

COLORADO REGISTERED PROFESSIONAL ENGINEER MIKE A. BRAMLETT 32314

SHEET 19 OF 50

JOB NO. 2514202

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WATER SERVICE TABLE		
ID NO.	PIPE ℄ STATION	PIPE ALIGNMENT
LOT 1	19+62.47	WP02
LOT 2	16+43.91	WP02
LOT 3	13+03.47	WP02
LOT 4	9+73.03	WP02
LOT 5	5+75.73	WP02
LOT 6	2+48.36	WP02
LOT 7	0+23.01	WP02
LOT 8	1+97.26	WP01
LOT 9	4+40.13	WP01
LOT 10	6+94.13	WP01
LOT 11	9+34.28	WP01
LOT 12	9+61.97	WP01
LOT 13	11+49.09	WP01
LOT 14	11+74.18	WP01
LOT 15	13+61.01	WP01
LOT 16	8+31.67	WP03
LOT 17	5+65.00	WP03
LOT 18	3+58.90	WP03
LOT 19	9+83.13	WP02
LOT 20	12+17.58	WP02
LOT 21	6+46.88	WP02
LOT 22	3+59.16	WP02
LOT 23	4+52.95	WP01
LOT 24	4+92.95	WP01
LOT 25	7+23.03	WP03
LOT 26	10+15.99	WP05
LOT 27	8+02.16	WP05
LOT 28	5+69.94	WP05
LOT 29	29+79.40	WP01
LOT 30	27+92.59	WP01
LOT 31	25+51.21	WP01
LOT 32	26+61.00	WP01
LOT 33	29+82.40	WP01
LOT 34	6+71.89	WP04
LOT 35	9+95.07	WP04
LOT 36	12+73.84	WP04
LOT 37	13+16.41	WP04
LOT 38	15+62.77	WP04
LOT 39	19+20.43	WP04
LOT 40	19+60.43	WP04
LOT 41	11+87.75	WP04
LOT 42	11+47.75	WP04
LOT 43	8+49.46	WP04
LOT 44	5+66.32	WP04
LOT 45	2+86.08	WP04
LOT 46	0+51.00	WP05
LOT 47	2+94.55	WP05
LOT 48	5+36.89	WP05
LOT 49	7+45.76	WP05

KEY MAP
N.T.S.

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

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No.	REVISION	BY	DATE

H-SCALE	1" = 150'
V-SCALE	N/A
DATE	01/10/20
DESIGNED BY	NQJ
DRAWN BY	NQJ
CHECKED BY	

SADDLEHORN RANCH – FILING 1

OVERALL UTILITY & SERVICE PLAN

150 75 0 150 300
ORIGINAL SCALE: 1" = 150'

Know what's below. Call before you dig.

ENGINEER'S STATEMENT

PREPARED UNDER MY DIRECT SUPERVISION AND ON BEHALF OF JR ENGINEERING

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

DATE

SHEET 20 OF 50

JOB NO. 2514202

X:\2510000.all\2514202\Drawings\Sheet Dwgs\Civil\2514202UT01.dwg, UT01, 2/3/2020 8:01:33 AM, CS

KEY MAP
N.T.S.

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

PREPARED FOR
ROI PROPERTY GROUP, LLC
2495 RIGDON STREET
NAPA, CALIFORNIA
(707) 365-6891
BRADY WILLIAMS

WP01 PROFILE
STA 0+00.00 TO 10+00.00

NOTES

1. ALL WATER LINES ARE OWNED AND MAINTAINED BY SADDLEHORN RANCH METROPOLITAN DISTRICT, UNLESS OTHERWISE NOTED.
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N

50 25 0 50 100
HORIZONTAL
ORIGINAL SCALE: 1" = 50'
VERTICAL
ORIGINAL SCALE: 1" = 5'

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

ENGINEER'S STATEMENT

PREPARED UNDER MY DIRECT SUPERVISION AND ON BEHALF OF JR ENGINEERING

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

COLORADO REGISTERED PROFESSIONAL ENGINEER MIKE A. BRAMLETT 32314

DATE

J·R ENGINEERING
A Westrian Company
Centennial 303-740-9393 • Colorado Springs 719-593-2593
Fort Collins 970-491-9888 • www.jrengineering.com

No.	REVISION	BY	DATE

H-SCALE	1"=50'
V-SCALE	1"=5'
DATE	01/10/20
DESIGNED BY	NQJ
DRAWN BY	NQJ
CHECKED BY	

SADDLEHORN RANCH – FILING 1

WATER DISTRIBUTION PLAN – ZARAGOZA TRAIL

SHEET 21 OF 50

JOB NO. 2514202

X:\2510000.all\2514202\Drawings\Sheet Dwgs\CDs\2514202WP01.dwg, WP01, 2/3/2020 8:02:16 AM, CS

SEE SHEET 21
MATCH STA: 10+00

KEY MAP
N.T.S.

WP01 PROFILE (1)
STA 10+00.00 TO 19+50.00

NOTES

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50 25 0 50 100
HORIZONTAL
ORIGINAL SCALE: 1" = 50'
VERTICAL
ORIGINAL SCALE: 1" = 5'

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PREPARED UNDER MY DIRECT SUPERVISION AND ON BEHALF OF JR ENGINEERING

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

DATE

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PREPARED FOR
ROI PROPERTY GROUP, LLC
2495 RIGDON STREET
NAPA, CALIFORNIA
(707) 365-6891
BRADY WILLIAMS

J·R ENGINEERING
A Westrian Company
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Fort Collins 970-491-9888 • www.jrengineering.com

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H-SCALE	1" = 50'
V-SCALE	1" = 5'
DATE	01/10/20
DESIGNED BY	NQJ
DRAWN BY	NQJ
CHECKED BY	

SADDLEHORN RANCH – FILING 1

WATER DISTRIBUTION PLAN – OSCURO TRAIL

SHEET 22 OF 50

JOB NO. 2514202

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KEY MAP
N.T.S.

50 25 0 50 100
HORIZONTAL
ORIGINAL SCALE: 1" = 50'
VERTICAL
ORIGINAL SCALE: 1" = 5'

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WP01 PROFILE (2)
STA 19+50.00 TO 30+82.00

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

DATE

COLORADO REGISTERED PROFESSIONAL ENGINEER
MIKE A. BRAMLETT
32314

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(707) 365-6891
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Fort Collins 970-491-9888 • www.jrengineering.com

No.	REVISION	BY	DATE

H-SCALE	1"=50'
V-SCALE	1"=5'
DATE	01/10/20
DESIGNED BY	NQJ
DRAWN BY	NQJ
CHECKED BY	

SADDLEHORN RANCH – FILING 1

WATER DISTRIBUTION PLAN – DEL CERRO TRAIL

SHEET 23 OF 50

JOB NO. 2514202

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KEY MAP
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WP02 PROFILE
STA 0+00.00 TO 11+50.00

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50 25 0 50 100
HORIZONTAL
ORIGINAL SCALE: 1" = 50'
VERTICAL
ORIGINAL SCALE: 1" = 5'

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

ENGINEER'S STATEMENT

PREPARED UNDER MY DIRECT SUPERVISION AND ON BEHALF OF JR ENGINEERING

COLORADO REGISTERED PROFESSIONAL ENGINEER MIKE A. BRAMLETT 32314

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

No.	REVISION	BY	DATE

H-SCALE	1"=50'
V-SCALE	1"=5'
DATE	01/10/20
DESIGNED BY	NQJ
DRAWN BY	NQJ
CHECKED BY	

SADDLEHORN RANCH – FILING 1
WATER DISTRIBUTION PLAN – TRUCHAS TRAIL

SHEET 24 OF 50
JOB NO. 2514202

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WP02 PROFILE (1)
STA 11+50.00 TO 20+20.00

KEY MAP
N.T.S.

NOTES

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50 25 0 50 100
HORIZONTAL
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VERTICAL
ORIGINAL SCALE: 1" = 5'

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ENGINEER'S STATEMENT

PREPARED UNDER MY DIRECT SUPERVISION AND ON BEHALF OF JR ENGINEERING

COLORADO REGISTERED PROFESSIONAL ENGINEER MIKE A. BRAMLETT 32314 JR ENGINEERING, LLC

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

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2495 RIGDON STREET
NAPA, CALIFORNIA
(707) 365-6891
BRADY WILLIAMS

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No.	REVISION	BY	DATE

H-SCALE	1" = 50'
V-SCALE	1" = 5'
DATE	01/10/20
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CHECKED BY	

SADDLEHORN RANCH – FILING 1

WATER DISTRIBUTION PLAN – TRUCHAS TRAIL

SHEET 25 OF 50

JOB NO. 2514202

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WP03 PROFILE
STA 0+00.00 TO 8+81.87

KEY MAP
N.T.S.

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50 25 0 50 100
HORIZONTAL
ORIGINAL SCALE: 1" = 50'
VERTICAL
ORIGINAL SCALE: 1" = 5'

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ENGINEER'S STATEMENT

PREPARED UNDER MY DIRECT SUPERVISION AND ON BEHALF OF JR ENGINEERING

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

DATE

COLORADO LICENSED PROFESSIONAL ENGINEER MIKE A. BRAMLETT 32314 PROFESSIONAL ENGINEER LICENSE NO. 32314

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

PREPARED FOR
ROI PROPERTY GROUP, LLC
2495 RIGDON STREET
NAPA, CALIFORNIA
(707) 365–6891
BRADY WILLIAMS

J·R ENGINEERING
A Westrian Company
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No.	REVISION	BY	DATE

H–SCALE	1" = 50'
V–SCALE	1" = 5'
DATE	01/10/20
DESIGNED BY	NQJ
DRAWN BY	NQJ
CHECKED BY	

SADDLEHORN RANCH – FILING 1

WATER DISTRIBUTION PLAN – OSCURO TRAIL

SHEET 26 OF 50

JOB NO. 2514202

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KEY MAP
N.T.S.

WP04 PROFILE
STA 0+00.00 TO 12+00.00

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50 25 0 50 100
HORIZONTAL
ORIGINAL SCALE: 1" = 50'
VERTICAL
ORIGINAL SCALE: 1" = 5'

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

ENGINEER'S STATEMENT

PREPARED UNDER MY DIRECT SUPERVISION AND ON BEHALF OF JR ENGINEERING

COLORADO REGISTERED PROFESSIONAL ENGINEER MIKE A. BRAMLETT 32314

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

DATE

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PREPARED FOR
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(707) 365-6891
BRADY WILLIAMS

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No.	REVISION	BY	DATE

H-SCALE	1" = 50'
V-SCALE	1" = 5'
DATE	01/10/20
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DRAWN BY	NQJ
CHECKED BY	

SADDLEHORN RANCH – FILING 1

WATER DISTRIBUTION PLAN – EL RACIENO TRAIL

SHEET 27 OF 50

JOB NO. 2514202

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KEY MAP
N.T.S.

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

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WP04 PROFILE (1)
STA 12+00.00 TO 23+35.30

NOTES

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50 25 0 50 100
HORIZONTAL ORIGINAL SCALE: 1" = 50'
VERTICAL ORIGINAL SCALE: 1" = 5'

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

ENGINEER'S STATEMENT

PREPARED UNDER MY DIRECT SUPERVISION AND ON BEHALF OF JR ENGINEERING

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

DATE

No.	REVISION	BY	DATE

H-SCALE	1" = 50'
V-SCALE	1" = 5'
DATE	01/10/20
DESIGNED BY	NQJ
DRAWN BY	NQJ
CHECKED BY	

SADDLEHORN RANCH – FILING 1

WATER DISTRIBUTION PLAN – CARRANZA TRAIL

SHEET 28 OF 50

JOB NO. 2514202

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KEY MAP
N.T.S.

WP05 PROFILE
STA 0+00.00 TO 11+00.00

NOTES

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VERTICAL
ORIGINAL SCALE: 1" = 5'

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COLORADO REGISTERED PROFESSIONAL ENGINEER MIKE A. BRAMLETT 32314

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

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PREPARED FOR
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BRADY WILLIAMS

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DATE	01/10/20
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DRAWN BY	NQJ
CHECKED BY	

SADDLEHORN RANCH – FILING 1

WATER DISTRIBUTION PLAN – EL RACIENO TRAIL

SHEET 29 OF 50

JOB NO. 2514202

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WP06 PROFILE
STA 0+00.00 TO 9+00.00

NOTES

1. ALL WATER LINES ARE OWNED AND MAINTAINED BY SADDLEHORN RANCH METROPOLITAN DISTRICT, UNLESS OTHERWISE NOTED.
2. THE LOCATIONS OF EXISTING ABOVE GROUND AND UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE WAY ONLY. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE CAUSED BY HIS FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL ABOVE GROUND AND UNDERGROUND UTILITIES.
3. ALL CURVILINEAR PIPE MUST BE ACCOMPLISHED BY USING HIGH DEFLECTION COUPLERS.
4. P.I.E. REPRESENTS PUBLIC IMPROVEMENTS EASEMENT.
5. ALL HORIZONTAL BENDS, TEES, AND CROSSES REQUIRE CONCRETE THRUST REACTION BLOCKS (CTRB). SEE CSU DETAILS A4–2 AND A4–3.
6. ALL HORIZONTAL AND VERTICAL BENDS TO BE ACCOMPLISHED WITH HIGH DEFLECTION (HD) COUPLINGS.
7. ALL VERTICAL BENDS REQUIRE MECHANICAL JOINT RESTRAINTS (MJR). SEE CSU DETAIL A4–4.

50 25 0 50 100

HORIZONTAL
ORIGINAL SCALE: 1" = 50'
VERTICAL
ORIGINAL SCALE: 1" = 5'

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

ENGINEER'S STATEMENT

PREPARED UNDER MY DIRECT SUPERVISION AND ON BEHALF OF JR ENGINEERING

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

COLORADO REGISTERED PROFESSIONAL ENGINEER MIKE A. BRAMLETT 32314

DATE

KEY MAP
N.T.S.

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

PREPARED FOR
ROI PROPERTY GROUP, LLC
2495 RIGDON STREET
NAPA, CALIFORNIA
(707) 365–6891
BRADY WILLIAMS

J·R ENGINEERING
A Westrian Company
Centennial 303–740–9393 • Colorado Springs 719–593–2593
Fort Collins 970–491–9888 • www.jrengineering.com

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H–SCALE	1" = 50'
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DATE	01/10/20
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SADDLEHORN RANCH – FILING 1

WATER DISTRIBUTION PLAN – HAEGLER RANCH TRIBUTARY 6

SHEET 30 OF 50

JOB NO. 2514202

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KEY MAP
N.T.S.

WP06 PROFILE (1)
STA 9+00.00 TO 15+48.70

NOTES

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50 25 0 50 100
HORIZONTAL
ORIGINAL SCALE: 1" = 50'
VERTICAL
ORIGINAL SCALE: 1" = 5'

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

DATE

COLORADO REGISTERED PROFESSIONAL ENGINEER MIKE A. BRAMLETT 32314

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V-SCALE	1"=5'
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SADDLEHORN RANCH – FILING 1

WATER DISTRIBUTION PLAN – HAEGLER RANCH TRIBUTARY 6 (CONT.)

SHEET 31 OF 50

JOB NO. 2514202

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KEY MAP
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V-SCALE	N/A
DATE	01/10/20
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SADDLEHORN RANCH – FILING 1

OVERALL FIRE HYDRANT PLAN

SHEET 32 OF 50

JOB NO. 2514202

150 75 0 150 300
ORIGINAL SCALE: 1" = 150'

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A1 CULVERT - PLAN

DP01 PROFILE
STA 0+00.00 TO 1+73.19

A1 CULVERT - PROFILE

A2 CULVERT - PLAN

DP03 PROFILE
STA 0+00.00 TO 1+56.04

A2 CULVERT - PROFILE

KEY MAP
N.T.S.

A3 CULVERT - PLAN

DP05 PROFILE
STA 0+00.00 TO 1+56.04

A3 CULVERT - PROFILE

DP06 PROFILE
STA 0+00.00 TO 1+56.00

A3 CULVERT - PROFILE

STORM SEWER NOTES

1. SEE DETAIL SHEET 49 FOR APPLICABLE STORM SEWER DETAILS.
2. PIPE LENGTHS MEASURED FROM CENTER OF MANHOLES TO CENTER OF MANHOLES, INSIDE FACE OF INLETS, OUTLET END OF FLARED END SECTIONS AND FACE OF WALLS WHERE APPLICABLE.
3. ℄ STATIONS & OFFSETS ARE LABELED AT CENTER OF STRUCTURE.
4. CONTRACTOR TO FIELD VERIFY EXISTING UTILITY LOCATIONS, PRIOR TO EXTENSION OF MAINS AND SERVICE CONNECTIONS. CONTRACTOR TO COORDINATE CONNECTIONS WITH UTILITY PROVIDER.
5. ALL STORM SEWER PIPES, INLETS, MANHOLES, AND UNDERGROUND FACILITY ARE PUBLIC.
6. ALL PUBLIC WATER LINES ARE OWNED BY SADDLEHORN RANCH METROPOLITAN DISTRICT.

50 25 0 50 100
ORIGINAL SCALE: 1" = 50'

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PREPARED UNDER MY DIRECT SUPERVISION AND ON BEHALF OF JR ENGINEERING

COLORADO REGISTERED MIKE A. BRAMLETT 32314 PROFESSIONAL ENGINEER

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

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SADDLEHORN RANCH – FILING 1

STORM SEWER PLAN AND PROFILE

SHEET 33 OF 50

JOB NO. 2514202

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KEY MAP
N.T.S.

DP08 PROFILE
STA 0+00.00 TO 7+00.00

DP08 PROFILE (1)
STA 7+00.00 TO 11+50.00

HORIZONTAL
ORIGINAL SCALE: 1" = 50'
VERTICAL
ORIGINAL SCALE: 1" = 5'

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DATE

COLORADO LICENSED PROFESSIONAL ENGINEER
MIKE A. BRAMLETT
32314

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SADDLEHORN RANCH – FILING 1

CHANNEL T6 IMPROVEMENTS – PLAN AND PROFILE

SHEET 34 OF 50

JOB NO. 2514202

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T6 CHANNEL IMPROVEMENTS - TYPICAL SECTION

SCALE: 1"=10'

CHANNEL SEED MIX: EROSION CONTROL BLANKET WITH PAWNEE BUTTES SEED INC. – "LOW GROW NATIVE MIX"
- IDAHO FESCUE
- SANDBERG BLUEGRASS
- ROCKY MOUNTAIN FESCUE
- BIG BLUEGRASS

KEY MAP
N.T.S.

DP08 PROFILE (2)
STA 11+50.00 TO 19+92.02

50 25 0 50 100

HORIZONTAL
ORIGINAL SCALE: 1" = 50'
VERTICAL
ORIGINAL SCALE: 1" = 5'

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SADDLEHORN RANCH – FILING 1

CHANNEL T6 IMPROVEMENTS – PLAN AND PROFILE

SHEET 35 OF 50

JOB NO. 2514202

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POND H
(21.16 TRIBUTARY ACRES, 17% COMP. IMPERVIOUSNESS)

DESIGN STORM	STORAGE	STAGE
WQCV (AC-FT)	0.181	6738.17
EURV (AC-FT)	0.126	6738.71
100-YEAR (AC-FT)	0.424	6739.91

KEY MAP
N.T.S.

LINE TABLE			CURVE TABLE			
LINE	BEARING	DISTANCE	CURVE	DELTA	RADIUS	LENGTH
L1	S89°54'25"E	115.62'	C1	54°19'02"	50.00'	47.40'
L3	S35°35'22"E	160.10'	C2	59°49'39"	25.00'	26.10'
L5	N84°34'58"E	23.93'				

POINT TABULATION			
ID NO.	DESCRIPTION	NORTHING/EASTING	ELEVATION
49	GB/LOW FLOW CHANNEL	N: 1405278.70 E: 3270060.30	6739.96
50	TIE INTO EX±	N: 1405343.08 E: 3270019.31	6742.00
51	OUTLET STRUCTURE	N: 1405140.42 E: 3270199.95	6736.00
52	SPILLWAY CREST	N: 1405183.55 E: 3270212.02	6740.00
53	SPILLWAY CREST	N: 1405189.66 E: 3270219.95	6740.00
54	SPILLWAY CREST	N: 1405194.54 E: 3270216.45	6740.00
55	SPILLWAY CREST	N: 1405188.43 E: 3270208.53	6740.00
56	LOW FLOW CHANNEL	N: 1405299.60 E: 3270019.73	6741.24
57	RIPRAP	N: 1405149.25 E: 3270319.69	6732.81
58	RIPRAP	N: 1405155.64 E: 3270313.46	6732.94
59	RIPRAP	N: 1405143.06 E: 3270259.76	6734.75
60	RIPRAP	N: 1405150.03 E: 3270259.05	6734.81
61	RIPRAP	N: 1405296.76 E: 3269922.11	6744.05
62	RIPRAP	N: 1405302.76 E: 3269922.12	6743.87
63	RIPRAP	N: 1405296.82 E: 3269903.99	6744.37
64	RIPRAP	N: 1405302.79 E: 3269904.12	6744.35
65	RIPRAP	N: 1405293.90 E: 3269836.10	6746.88
66	RIPRAP	N: 1405293.89 E: 3269842.10	6746.67
67	RIPRAP	N: 1405305.89 E: 3269842.12	6746.67
68	RIPRAP	N: 1405305.90 E: 3269836.12	6746.87

GRADING POINT NOTES

1. GRADING POINTS CONTINUED ON NEXT PAGE.

POINT TABULATION			
ID NO.	DESCRIPTION	NORTHING/EASTING	ELEVATION
1	TOE	N: 1405241.57 E: 3270037.69	6742.00
2	TOE	N: 1405182.52 E: 3270079.95	6738.19
3	TOE	N: 1405114.87 E: 3270128.36	6737.33
4	TOE	N: 1405108.65 E: 3270185.42	6736.83
5	TOE	N: 1405134.86 E: 3270199.75	6736.09
6	ACCESS ROAD	N: 1405161.43 E: 3270193.42	6736.86
7	ACCESS ROAD	N: 1405154.44 E: 3270183.66	6736.62
8	ACCESS ROAD	N: 1405218.33 E: 3270152.70	6738.45

POINT TABULATION			
ID NO.	DESCRIPTION	NORTHING/EASTING	ELEVATION
9	ACCESS ROAD	N: 1405211.35 E: 3270142.94	6738.21
10	ACCESS ROAD	N: 1405269.05 E: 3270101.64	6739.94
11	ACCESS ROAD	N: 1405276.03 E: 3270111.40	6740.18
12	ACCESS ROAD	N: 1405302.86 E: 3270067.02	6741.63
13	ACCESS ROAD	N: 1405312.78 E: 3270073.76	6741.86
14	ACCESS ROAD	N: 1405322.63 E: 3270022.84	6743.61
15	ACCESS ROAD	N: 1405334.27 E: 3270025.75	6743.85
16	ACCESS ROAD	N: 1405341.75 E: 3269946.24	6746.68

POINT TABULATION			
ID NO.	DESCRIPTION	NORTHING/EASTING	ELEVATION
17	ACCESS ROAD	N: 1405353.39 E: 3269949.15	6746.92
18	ACCESS ROAD/EOA	N: 1405357.98 E: 3269881.21	6749.60
19	ACCESS ROAD/EOA	N: 1405370.35 E: 3269881.23	6749.73
20	TOE	N: 1405288.13 E: 3270102.75	6740.57
21	TOP	N: 1405071.40 E: 3270060.60	6742.96
22	TOP	N: 1405071.40 E: 3270159.06	6742.00
23	TOP	N: 1405098.72 E: 3270214.48	6742.00
24	TOP	N: 1405150.41 E: 3270227.06	6742.00

POINT TABULATION			
ID NO.	DESCRIPTION	NORTHING/EASTING	ELEVATION
25	SPILLWAY TOP	N: 1405176.94 E: 3270216.73	6742.00
26	SPILLWAY TOP	N: 1405195.23 E: 3270203.67	6742.00
27	TOP	N: 1405227.15 E: 3270180.82	6742.04
28	TOP	N: 1405256.32 E: 3270159.94	6742.38
29	TOP	N: 1405295.16 E: 3270129.39	6742.53
30	TOP	N: 1405326.05 E: 3270090.72	6741.35
31	TOP/TIE INTO EX±	N: 1405346.43 E: 3270048.45	6741.00
32	TOP/TIE INTO EX±	N: 1405351.99 E: 3270061.76	6740.47

POINT TABULATION			
ID NO.	DESCRIPTION	NORTHING/EASTING	ELEVATION
33	TOP	N: 1405330.97 E: 3270101.71	6741.49
34	TOP	N: 1405301.96 E: 3270136.73	6742.55
35	TOP	N: 1405265.45 E: 3270165.71	6742.42
36	TOP	N: 1405218.49 E: 3270199.31	6742.00
37	SPILLWAY TOP	N: 1405201.05 E: 3270211.80	6742.00
38	SPILLWAY TOP	N: 1405183.04 E: 3270224.69	6742.00
39	TOP	N: 1405151.78 E: 3270236.93	6742.00
40	TOP	N: 1405094.64 E: 3270223.76	6742.00

POINT TABULATION			
ID NO.	DESCRIPTION	NORTHING/EASTING	ELEVATION
41	TOP	N: 1405159.00 E: 3270159.00	6741.99
42	TOP	N: 1405061.40 E: 3270060.60	6743.02
43	TIE INTO EX±	N: 1405257.86 E: 3269978.40	6744.00
44	TIE INTO EX±	N: 1405176.08 E: 3270035.41	6743.00
45	TIE INTO EX±	N: 1405077.93 E: 3270059.05	6743.00
46	LOW FLOW CHANNEL	N: 1405148.51 E: 3270153.48	6736.57
47	TIE INTO EX±	N: 1405265.51 E: 3269924.00	6746.00
48	LOW FLOW CHANNEL	N: 1405138.17 E: 3270176.17	6736.26

20 10 0 20 40
ORIGINAL SCALE: 1" = 20'

Know what's below. Call before you dig

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V-SCALE	N/A
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CHECKED BY	

SADDLEHORN RANCH – FILING 1

POND H GRADING PLAN

SHEET 36 OF 50

JOB NO. 2514202

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DP02 PROFILE
STA 0+00.00 TO 6+00.00

DP11 PROFILE
STA 0+00.00 TO 1+11.64

POINT TABULATION

ID NO.	DESCRIPTION	NORTHING/EASTING	ELEVATION
69	EDGE OF CONRETE	N:1405230.18 E:3270080.14	6737.86
70	EDGE OF CONRETE	N:1405244.35 E:3270099.72	6737.85
71	EDGE OF RIPRAP	N:1405258.14 E:3270078.71	6739.22
72	EDGE OF RIPRAP	N:1405254.65 E:3270073.83	6739.22
73	TRICKLE CHANNEL INV.	N:1405256.40 E:3270076.27	6739.22
75	END CONCRETE WALL/TOP OF BERM	N:1405226.33 E:3270080.89	6739.27
76	END CONCRETE WALL/TOP OF BERM	N:1405242.39 E:3270103.13	6739.27
77	TOP OF BERM	N:1405229.33 E:3270095.64	6739.27
78	TOE OF BERM	N:1405233.17 E:3270060.09	6739.89
79	TOE OF BERM	N:1405234.91 E:3270065.94	6739.29
80	TOE OF BERM	N:1405259.63 E:3270099.84	6739.26
81	TOE OF BERM	N:1405264.60 E:3270103.38	6739.74
82	TOE OF BERM	N:1405259.57 E:3270106.84	6739.31
83	TRICKLE CHANNEL INV	N:1405226.48 E:3270097.68	6737.70
84	TOE OF BERM	N:1405228.27 E:3270063.73	6739.35
85	TOE OF BERM	N:1405232.17 E:3270093.61	6737.77
86	RIPRAP/CONCRETE	N:1405255.24 E:3270083.13	6738.93
87	RIPRAP/CONCRETE	N:1405249.52 E:3270075.15	6738.93
88	BEGIN TRICKLE CHANNEL TAPER TO 4.0' TRICKLE CHANNEL	N:1405141.57 E:3270179.66	6736.31
89	BEGIN TRICKLE CHANNEL TAPER TO 4.0' TRICKLE CHANNEL	N:1405135.55 E:3270180.37	6736.28

20 10 0 20 40

HORIZONTAL
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VERTICAL
ORIGINAL SCALE: 1" = 2'

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SADDLEHORN RANCH – FILING 1

POND H GRADING PLAN

SHEET 37 OF 50

JOB NO. 2514202

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POND H EMERGENCY SPILLWAY

SCALE: N.T.S.

POND TRICKLE CHANNEL (ALL PONDS)

N.T.S.

GRAVEL MAINTENANCE ACCESS ROAD TYPICAL SECTION

N.T.S.

POND H FOREBAY

N.T.S.

POND H FOREBAY WEIR

N.T.S.

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

ENGINEER'S STATEMENT

PREPARED UNDER MY DIRECT SUPERVISION AND ON BEHALF OF JR ENGINEERING

COLORADO REGISTERED MIKE A. BRAMLETT 32314 PROFESSIONAL ENGINEER

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

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

PREPARED FOR
ROI PROPERTY GROUP, LLC
2495 RIGDON STREET
NAPA, CALIFORNIA
(707) 365-6891
BRADY WILLIAMS

J·R ENGINEERING
A Westrian Company
Centennial 303-740-9393 • Colorado Springs 719-593-2593
Fort Collins 970-491-9888 • www.jrengineering.com

No.	REVISION	BY	DATE

H-SCALE	NTS
V-SCALE	NTS
DATE	01/10/20
DESIGNED BY	NQJ
DRAWN BY	NQJ
CHECKED BY	

SADDLEHORN RANCH – FILING 1

POND H DETAILS

SHEET 38 OF 50

JOB NO. 2514202

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POND H OUTLET
STRUCTURE – PROFILE
SCALE: 3/4"=1'

A SECTION A AT ORIFICE (FRONT) WALL
SCALE: 3/4"=1'

B SECTION B AT OUTLET (REAR) WALL
SCALE: 3/4"=1'

POND H OUTLET
STRUCTURE – PLAN
SCALE: 3/4"=1'

WQCV TRASH SCREEN AND PLATE
DETAIL (PLAN)
SCALE: 3/4"=1'

R VALUE = (NET OPEN AREA)/(GROSS RACK AREA) = 0.60

TRASH SCREEN DETAIL
N.T.S.

EURV/WQCV ORIFICE PLATE:
4'-7" x 1'-6" x ½" THICK FLOW GALVANIZED STEEL FLOW CONTROL PLATE. PROVIDE CONTINUOUS NEOPRENE GASKET MATERIAL BETWEEN THE ORIFICE PLATE AND CONCRETE. BOLT PLATE TO CONCRETE @ 12" MAX O.C., 1½" FROM PLATE EDGE.

WQCV/EURV ORIFICE
PLATE DETAIL
SCALE: 3/4"=1'

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

DATE

COLORADO REGISTERED PROFESSIONAL ENGINEER
MIKE A. BRAMLETT
32314

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SADDLEHORN RANCH – FILING 1

POND H OUTLET STRUCTURE DETAILS

SHEET 39 OF 50

JOB NO. 2514202

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POINT TABULATION			
ID NO.	DESCRIPTION	NORTHING/EASTING	ELEVATION
45	SPILLWAY CREST	N: 1403335.87 E: 3271268.81	6705.50
46	SPILLWAY CREST	N: 1403374.15 E: 3271266.82	6705.50
47	SPILLWAY CREST	N: 1403374.54 E: 3271276.81	6705.50
48	SPILLWAY TOP	N: 1403380.29 E: 3271266.31	6707.05
49	SPILLWAY TOP	N: 1403381.57 E: 3271276.22	6707.05
50	TOP	N: 1403415.82 E: 3271251.17	6707.05
51	TOP	N: 1403422.24 E: 3271258.85	6707.05
52	TOP	N: 1403441.12 E: 3271220.11	6707.05
53	TOP	N: 1403449.33 E: 3271225.81	6707.05
54	TOP	N: 1403470.28 E: 3271178.78	6707.05
55	TOP	N: 1403478.27 E: 3271184.80	6707.05
56	TOP	N: 1403498.51 E: 3271138.78	6707.05
57	TOP	N: 1403507.01 E: 3271144.08	6707.05
58	TOP	N: 1403547.73 E: 3271069.03	6707.05
59	TOP	N: 1403555.21 E: 3271075.78	6707.05
60	TOP	N: 1403578.68 E: 3271025.17	6708.00
61	TOP	N: 1403586.85 E: 3271030.94	6708.00
62	TOP	N: 1403605.63 E: 3270986.98	6709.44
63	TOP	N: 1403613.80 E: 3270992.75	6709.44
66	TOP	N: 1403518.15 E: 3270793.85	6717.37

POINT TABULATION			
ID NO.	DESCRIPTION	NORTHING/EASTING	ELEVATION
67	TOP	N: 1403516.44 E: 3270794.89	6717.37
68	TOP	N: 1403548.04 E: 3270833.83	6715.71
69	TOP	N: 1403546.57 E: 3270835.19	6715.71
70	TOP	N: 1403575.74 E: 3270859.32	6713.45
71	TOP	N: 1403574.52 E: 3270860.90	6713.45
72	TOP	N: 1403577.56 E: 3270887.95	6711.50
73	OUTLET STRUCTURE	N: 1403342.42 E: 3271236.45	6700.01
74	RIPRAP	N: 1403588.90 E: 3270875.71	6711.73
75	RIPRAP	N: 1403599.49 E: 3270883.19	6711.16
76	RIPRAP	N: 1403597.55 E: 3270863.46	6711.23
77	RIPRAP	N: 1403624.34 E: 3270818.03	6712.93
78	RIPRAP	N: 1403627.68 E: 3270813.05	6712.97
79	RIPRAP	N: 1403646.35 E: 3270823.92	6712.84
80	RIPRAP	N: 1403643.67 E: 3270829.29	6712.83
81	RIPRAP	N: 1403661.60 E: 3270886.41	6714.19
82	RIPRAP	N: 1403670.05 E: 3270889.51	6714.08
83	RIPRAP	N: 1403665.92 E: 3270900.77	6714.39
84	RIPRAP	N: 1403657.47 E: 3270897.67	6714.35
85	TYPE M RIPRAP	N: 1403304.82 E: 3271283.64	6697.51
86	TYPE M RIPRAP	N: 1403310.54 E: 3271287.68	6697.37

KEY MAP
N.T.S.

POINT TABULATION			
ID NO.	DESCRIPTION	NORTHING/EASTING	ELEVATION
1	BEGIN ACCESS ROAD	N: 1403644.44 E: 3270874.37	6715.90
2	BEGIN ACCESS ROAD	N: 1403656.21 E: 3270878.51	6716.03
3	ACCESS ROAD	N: 1403615.61 E: 3270915.23	6712.33
4	ACCESS ROAD	N: 1403625.42 E: 3270922.14	6712.57
5	ACCESS ROAD	N: 1403586.79 E: 3270956.08	6709.90
6	ACCESS ROAD/TOE	N: 1403596.59 E: 3270963.00	6710.14
7	ACCESS ROAD	N: 1403557.96 E: 3270996.93	6709.01
8	ACCESS ROAD/TOE	N: 1403567.76 E: 3271003.85	6709.25
9	ACCESS ROAD	N: 1403529.13 E: 3271037.78	6708.14
10	ACCESS ROAD/TOE	N: 1403538.93 E: 3271044.70	6708.38
11	ACCESS ROAD	N: 1403500.30 E: 3271078.63	6705.93
12	ACCESS ROAD/TOE	N: 1403510.10 E: 3271085.55	6706.17
13	ACCESS ROAD	N: 1403471.47 E: 3271119.48	6704.64
14	ACCESS ROAD/TOE	N: 1403481.27 E: 3271126.40	6704.88
15	ACCESS ROAD	N: 1403442.64 E: 3271160.34	6703.35
16	ACCESS ROAD/TOE	N: 1403452.44 E: 3271167.26	6703.59
17	ACCESS ROAD	N: 1403413.81 E: 3271201.19	6702.07
18	ACCESS ROAD/TOE	N: 1403423.61 E: 3271208.11	6702.31
19	ACCESS ROAD	N: 1403377.66 E: 3271233.11	6700.77
20	ACCESS ROAD/TOE	N: 1403379.70 E: 3271244.93	6701.01

POINT TABULATION			
ID NO.	DESCRIPTION	NORTHING/EASTING	ELEVATION
22	TOE	N: 1403424.60 E: 3271033.27	6705.85
23	TOE	N: 1403406.35 E: 3271059.13	6705.04
24	TOE	N: 1403377.52 E: 3271099.99	6703.75
25	TOE	N: 1403348.69 E: 3271140.84	6702.46
26	TOE	N: 1403330.35 E: 3271166.83	6701.64
27	TOE	N: 1403324.95 E: 3271214.47	6700.60
31	TOP	N: 1403396.95 E: 3271018.31	6708.51
32	TOP	N: 1403372.18 E: 3271070.75	6707.05
33	TOP	N: 1403372.47 E: 3271052.73	6707.00
34	TOP	N: 1403359.73 E: 3271088.40	6707.05
35	TOP	N: 1403351.56 E: 3271082.62	6707.05
36	TOP	N: 1403331.16 E: 3271128.87	6707.05
37	TOP	N: 1403322.86 E: 3271123.30	6707.05
38	TOP	N: 1403313.01 E: 3271154.60	6707.05
39	TOP	N: 1403304.65 E: 3271149.09	6707.05
40	TOP	N: 1403305.72 E: 3271223.71	6707.05
41	TOP	N: 1403295.83 E: 3271225.95	6707.04
42	SPILLWAY TOP	N: 1403334.79 E: 3271256.88	6707.05
43	SPILLWAY TOP	N: 1403329.68 E: 3271265.48	6707.05
44	SPILLWAY CREST	N: 1403340.22 E: 3271259.80	6705.50

LINE TABLE		
LINE	BEARING	DISTANCE
L1	S54°48'20"E	451.85'

POND I (38.04 TRIBUTARY ACRES, 17% COMP. IMPERVIOUSNESS)		
DESIGN STORM	STORAGE	STAGE
WQCV (AC-FT)	0.325	6702.97
EURV (AC-FT)	0.233	6703.76
100-YEAR (AC-FT)	0.797	6705.5

POND I GRADING NOTES

1. ALL RIPRAP IS TYPE L (18" DEPTH) UNLESS OTHERWISE NOTED.

30 15 0 30
ORIGINAL SCALE: 1" = 30'

Know what's **below.**
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MIKE A. BRAMLETT, P.E.
COLORADO P.E. 32314
FOR AND ON BEHALF OF JR ENGINEERING, LLC

DATE

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V-SCALE	N/A
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DESIGNED BY	NQJ
DRAWN BY	NQJ
CHECKED BY	

SADDLEHORN RANCH – FILING 1

POND I GRADING PLAN

SHEET 40 OF 50

JOB NO. 2514202

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DP04 PROFILE
STA 0+00.00 TO 6+71.61

DP09 PROFILE
STA 0+00.00 TO 0+70.00

POINT TABULATION			
ID NO.	DESCRIPTION	NORTHING/EASTING	ELEVATION
89	RIPRAP/MATCH EX	N: 1403248.89 E: 3271362.90	6694.68
90	RIPRAP/MATCH EX	N: 1403260.78 E: 3271358.20	6694.77
91	RIPRAP	N: 1403616.14 E: 3270883.30	6712.42
92	RIPRAP	N: 1403619.25 E: 3270871.27	6712.95
93	END TRICKLE CHANNEL/BEGIN FOREBAY CONCRETE	N: 1403514.56 E: 3270997.71	6708.07
94	END TRICKLE CHANNEL/BEGIN FOREBAY CONCRETE	N: 1403509.66 E: 3270994.25	6708.07
95	BEGIN TRICKLE CHANNEL/INV.	N: 1403490.90 E: 3271026.05	6706.61
96	EDGE OF CONCRETE/BOTTOM OF BERM	N: 1403494.90 E: 3271020.30	6706.68
97	CREST OF WEIR WALL	N: 1403492.88 E: 3271023.16	6708.18
98	CREST/END OF WEIR WALL	N: 1403485.23 E: 3271010.24	6708.18
99	BOTTOM OF BERM/EDGE OF RIPRAP	N: 1403484.86 E: 3270988.35	6708.06
100	BOTTOM OF BERM/EDGE OF RIPRAP	N: 1403488.43 E: 3270993.30	6707.66
101	BOTTOM OF BERM/EDGE OF RIPRAP	N: 1403481.43 E: 3270993.39	6707.85
102	CREST/END OF WEIR WALL	N: 1403507.70 E: 3271025.97	6708.18
103	EDGE OF CONCRETE/BOTTOM OF BERM	N: 1403488.62 E: 3271008.26	6706.68
104	BOTTOM OF BERM/EDGE OF RIPRAP	N: 1403525.16 E: 3271023.81	6708.40
105	BOTTOM OF BERM/EDGE OF RIPRAP	N: 1403522.92 E: 3271017.18	6708.12
106	BOTTOM OF BERM/EDGE OF RIPRAP	N: 1403528.78 E: 3271018.89	6708.71
107	TRICKLE CHANNEL INV.	N: 1403512.11 E: 3270995.98	6708.07
108	EDGE OF CONCRETE/BOTTOM OF BERM	N: 1403508.45 E: 3271022.09	6706.68

POINT TABULATION			
ID NO.	DESCRIPTION	NORTHING/EASTING	ELEVATION
110	BEGIN FOREBAY CONCRETE/END RIPRAP	N: 1403505.25 E: 3270997.19	6707.78
111	BEGIN FOREBAY CONCRETE/END RIPRAP	N: 1403513.28 E: 3271002.85	6707.78
113	BEGIN TRICKLE CHANNEL TAPER TO 4.0' TRICKLE CHANNEL	N: 1403356.40 E: 3271221.83	6700.51
114	BEGIN TRICKLE CHANNEL TAPER TO 4.0' TRICKLE CHANNEL	N: 1403351.50 E: 3271218.37	6700.51

30 15 0 30 60

HORIZONTAL
ORIGINAL SCALE: 1" = 30'
VERTICAL
ORIGINAL SCALE: 1" = 3'

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ENGINEER'S STATEMENT

PREPARED UNDER MY DIRECT SUPERVISION AND ON BEHALF OF JR ENGINEERING

COLORADO REGISTERED MIKE A. BRAMLETT 32314 PROFESSIONAL ENGINEER

MIKE A. BRAMLETT, P.E. DATE
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SADDLEHORN RANCH – FILING 1

POND I GRADING PLAN

SHEET 41 OF 50

JOB NO. 2514202

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POND I EMERGENCY SPILLWAY

SCALE: N.T.S.

POND TRICKLE CHANNEL (ALL PONDS)

N.T.S.

GRAVEL MAINTENANCE ACCESS ROAD TYPICAL SECTION

N.T.S.

POND I FOREBAY WEIR

N.T.S.

POND I FOREBAY

N.T.S.

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SADDLEHORN RANCH – FILING 1

POND I DETAILS

SHEET 42 OF 50

JOB NO. 2514202

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POND I OUTLET
STRUCTURE – PROFILE
SCALE: 3/4"=1'

A SECTION A AT ORIFICE (FRONT) WALL
SCALE: 3/4"=1'

B SECTION B AT OUTLET (REAR) WALL
SCALE: 3/4"=1'

EURV/WQCV ORIFICE PLATE:
5'-2" x 1'-6" x ½" THICK FLOW GALVANIZED STEEL FLOW CONTROL PLATE. PROVIDE CONTINUOUS NEOPRENE GASKET MATERIAL BETWEEN THE ORIFICE PLATE AND CONCRETE. BOLT PLATE TO CONCRETE @ 12" MAX O.C., 1½" FROM PLATE EDGE.

WQCV/EURV ORIFICE
PLATE DETAIL
SCALE: 3/4"=1'

POND I OUTLET
STRUCTURE – PLAN
SCALE: 3/4"=1'

WQCV TRASH SCREEN AND PLATE
DETAIL (PLAN)
SCALE: 3/4"=1'

R VALUE = (NET OPEN AREA)/(GROSS RACK AREA) = 0.60

TRASH SCREEN DETAIL
N.T.S.

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SADDLEHORN RANCH – FILING 1

POND I OUTLET STRUCTURE DETAILS

SHEET 43 OF 50

JOB NO. 2514202

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POND G (33.57 TRIBUTARY ACRES, 18.6% COMP. IMPERVIOUSNESS)		
DESIGN STORM	STORAGE	STAGE
WQCV (AC-FT)	0.307	6691.84
EURV (AC-FT)	0.239	6692.34
100-YEAR (AC-FT)	0.698	6692.46

KEY MAP
N.T.S.

POINT TABULATION			
ID NO.	DESCRIPTION	NORTHING/EASTING	ELEVATION
41	SPILLWAY CREST	N: 1403208.78 E: 3271647.56	6693.48
42	SPILLWAY CREST	N: 1403205.38 E: 3271638.15	6693.48
43	SPILLWAY CREST	N: 1403189.97 E: 3271654.36	6693.48
44	SPILLWAY TOP	N: 1403212.27 E: 3271635.78	6695.30
45	SPILLWAY TOP	N: 1403215.69 E: 3271645.25	6695.30
46	TOP	N: 1403273.20 E: 3271637.67	6695.30
47	TOP	N: 1403273.25 E: 3271627.67	6695.30
48	TOP	N: 1403304.56 E: 3271629.75	6695.29
49	TOP	N: 1403305.74 E: 3271647.52	6695.30
50	TOP	N: 1403356.17 E: 3271715.49	6695.30
51	TOP	N: 1403346.79 E: 3271718.97	6694.90
52	ACCESS ROAD	N: 1403219.25 E: 3271676.50	6690.64
54	ACCESS ROAD/TOE	N: 1403290.34 E: 3271791.45	6691.69
55	ACCESS ROAD/TOE	N: 1403270.39 E: 3271764.80	6691.49
56	ACCESS ROAD/TOE	N: 1403320.44 E: 3271831.64	6691.99
57	ACCESS ROAD	N: 1403386.91 E: 3271918.42	6692.57
58	TOE	N: 1403291.51 E: 3271652.58	6690.88
59	TOE	N: 1403354.61 E: 3271758.43	6691.65
60	TOP	N: 1403321.80 E: 3271674.45	6695.30
61	TOP	N: 1403331.44 E: 3271671.47	6695.30

POINT TABULATION				POINT TABULATION			
ID NO.	DESCRIPTION	NORTHING/EASTING	ELEVATION	ID NO.	DESCRIPTION	NORTHING/EASTING	ELEVATION
1	TOP	N: 1403487.89 E: 3271881.52	6696.71	21	RIPRAP	N: 1403425.88 E: 3271950.28	6692.92
2	TOP	N: 1403410.40 E: 3271823.07	6695.30	22	ACCESS ROAD	N: 1403355.01 E: 3271857.78	6691.97
3	TOP	N: 1403418.99 E: 3271817.95	6695.30	23	ACCESS ROAD	N: 1403419.11 E: 3271977.16	6696.37
4	TOE	N: 1403250.28 E: 3271652.37	6690.42	24	ACCESS ROAD/TOE	N: 1403363.21 E: 3271888.75	6692.42
5	TOE	N: 1403383.63 E: 3271807.11	6692.00	25	ACCESS ROAD	N: 1403373.86 E: 3271882.97	6692.16
6	TOE	N: 1403328.63 E: 3271714.85	6691.33	26	ACCESS ROAD/TOE	N: 1403345.76 E: 3271865.46	6692.24
7	TRICKLE CHANNEL END	N: 1403237.54 E: 3271655.35	6690.29	27	ACCESS ROAD	N: 1403329.89 E: 3271824.24	6691.73
8	TOP	N: 1403247.48 E: 3271627.64	6695.29	28	TOP	N: 1403387.51 E: 3271957.43	6695.65
9	TOP	N: 1403248.05 E: 3271637.67	6695.30	29	ACCESS ROAD	N: 1403426.06 E: 3271966.68	6696.28
10	ACCESS ROAD/RIPRAP	N: 1403420.21 E: 3271959.47	6695.53	30	TOP	N: 1403342.14 E: 3271911.65	6695.30
11	END BERM/EDGE OF RIPRAP	N: 1403440.42 E: 3271906.07	6692.78	31	TOP	N: 1403346.74 E: 3271900.94	6695.30
12	ACCESS ROAD	N: 1403222.54 E: 3271671.10	6690.56	32	TOP	N: 1403246.52 E: 3271779.16	6695.30
13	ACCESS ROAD	N: 1403220.50 E: 3271665.46	6690.68	33	TOP	N: 1403254.44 E: 3271773.04	6695.30
14	ACCESS ROAD/TOE	N: 1403210.11 E: 3271684.30	6690.89	34	TOP	N: 1403202.50 E: 3271701.06	6695.30
15	ACCESS ROAD/TOE	N: 1403248.54 E: 3271735.63	6691.27	35	TOP	N: 1403193.79 E: 3271706.09	6695.30
16	ACCESS ROAD/TOE	N: 1403197.46 E: 3271667.41	6691.05	36	TOP	N: 1403169.17 E: 3271671.97	6695.30
17	ACCESS ROAD	N: 1403228.07 E: 3271708.30	6691.07	37	TOP	N: 1403169.96 E: 3271652.70	6695.28
18	ACCESS ROAD	N: 1403260.08 E: 3271731.02	6691.04	38	SPILLWAY TOP	N: 1403179.73 E: 3271647.43	6695.30
19	ACCESS ROAD	N: 1403300.26 E: 3271784.67	6691.44	39	SPILLWAY TOP	N: 1403183.13 E: 3271656.83	6695.30
20	ACCESS ROAD/RIPRAP	N: 1403416.30 E: 3271954.64	6695.02	40	SPILLWAY CREST	N: 1403186.58 E: 3271644.95	6693.48

LINE TABLE		
LINE	BEARING	DISTANCE
L1	N55°45'50"E	343.82'

POND GRADING NOTES

1. POND GRADING POINT TABLES ARE CONTINUED ON NEXT SHEET.

20 10 0 20 40
ORIGINAL SCALE: 1" = 20'

Know what's below. Call before you dig.

ENGINEER'S STATEMENT

PREPARED UNDER MY DIRECT SUPERVISION AND ON BEHALF OF JR ENGINEERING

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

DATE

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SADDLEHORN RANCH – FILING 1

POND G GRADING PLAN

SHEET 44 OF 50

JOB NO. 2514202

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DP07 PROFILE
STA 0+00.00 TO 5+39.26

DP10 PROFILE
STA 0+00.00 TO 0+77.46

POINT TABULATION

ID NO.	DESCRIPTION	NORTHING/EASTING	ELEVATION
62	TOP	N: 1403178.14 E: 3271658.78	6695.30
63	TOP	N: 1403180.35 E: 3271670.37	6695.30
64	TOP	N: 1403278.65 E: 3271823.68	6695.30
65	TOP	N: 1403287.03 E: 3271818.19	6695.30
66	TOP	N: 1403310.93 E: 3271851.32	6695.30
67	TOP	N: 1403302.53 E: 3271856.76	6695.30
68	TOE	N: 1403413.98 E: 3271858.01	6692.37
69	TOE	N: 1403437.93 E: 3271898.19	6692.66
70	TOP	N: 1403365.93 E: 3271927.62	6695.30
71	TOP	N: 1403357.27 E: 3271932.62	6695.29
72	TOP	N: 1403381.93 E: 3271966.79	6695.79
73	ACCESS ROAD	N: 1403376.33 E: 3271924.43	6692.82
74	TOP	N: 1403383.72 E: 3271995.12	6696.62
75	TOP	N: 1403389.02 E: 3271988.41	6696.49
76	TOP	N: 1403443.55 E: 3271878.68	6695.30
77	TOP	N: 1403452.22 E: 3271873.69	6695.30
78	TOP	N: 1403483.60 E: 3271886.24	6696.60
79	TOE	N: 1403426.62 E: 3271879.22	6692.52
80	RIPRAP	N: 1403432.75 E: 3271932.89	6692.10
81	RIPRAP	N: 1403437.90 E: 3271937.35	6693.04

POINT TABULATION

ID NO.	DESCRIPTION	NORTHING/EASTING	ELEVATION
82	RIPRAP	N: 1403423.04 E: 3271948.16	6692.51
83	RIPRAP	N: 1403437.07 E: 3271943.37	6694.17
84	RIPRAP	N: 1403418.07 E: 3271945.97	6693.44
85	RIPRAP	N: 1403435.16 E: 3271945.54	6694.14
86	RIPRAP	N: 1403425.57 E: 3271954.47	6693.89
87	RIPRAP	N: 1403410.86 E: 3271979.20	6694.77
88	RIPRAP	N: 1403400.95 E: 3271972.43	6694.25
89	RIPRAP	N: 1403396.80 E: 3271980.37	6694.95
90	RIPRAP	N: 1403407.05 E: 3271987.09	6695.07
91	RIPRAP	N: 1403461.08 E: 3271982.48	6694.69
92	RIPRAP	N: 1403470.08 E: 3271990.41	6694.95
93	RIPRAP	N: 1403476.96 E: 3271964.48	6694.70
94	RIPRAP	N: 1403485.96 E: 3271972.41	6694.95
95	BEGIN CONCRETE FOREBAY/ END RIPRAP	N: 1403426.18 E: 3271927.22	6692.01
96	BEGIN CONCRETE FOREBAY/ END RIPRAP	N: 1403421.22 E: 3271930.59	6692.01
97	BOTTOM OF BERM/EDGE OF RIPRAP	N: 1403412.98 E: 3271894.80	6692.02
98	EDGE OF CONCRETE/BOTTOM OF BERM	N: 1403420.45 E: 3271902.60	6691.80
99	BOTTOM OF BERM/EDGE OF RIPRAP	N: 1403393.63 E: 3271914.41	6692.32
100	BOTTOM OF BERM/EDGE OF RIPRAP	N: 1403396.13 E: 3271906.13	6692.07
101	EDGE OF BERM/MAINTENANCE ROAD	N: 1403393.23 E: 3271926.21	6692.68

POINT TABULATION

ID NO.	DESCRIPTION	NORTHING/EASTING	ELEVATION
102	EDGE OF BERM/MAINTENANCE ROAD	N: 1403398.87 E: 3271933.16	6692.78
103	BOTTOM OF BERM/BEGIN TRICKLE CHANNEL	N: 1403403.00 E: 3271898.49	6691.76
104	EDGE OF BERM/TOE OF SLOPE	N: 1403434.53 E: 3271907.67	6692.50
105	END/CREST OF WEIR WALL	N: 1403397.17 E: 3271914.25	6692.68
106	BOTTOM OF BERM/EDGE OF RIPRAP	N: 1403436.90 E: 3271901.08	6692.63
107	END/CREST OF WEIR WALL	N: 1403419.78 E: 3271898.73	6692.68
108	BOTTOM OF BERM/EDGE OF RIPRAP	N: 1403422.52 E: 3271895.98	6692.27
109	EDGE OF CONCRETE/BOTTOM OF BERM	N: 1403400.54 E: 3271916.31	6691.80
110	CREST OF WEIR WALL	N: 1403404.97 E: 3271901.38	6692.68
113	BEGIN TRICKLE CHANNEL TAPER TO 4.0' TRICKLE CHANNEL	N: 1403251.32 E: 3271670.27	6690.41
114	BEGIN TRICKLE CHANNEL TAPER TO 4.0' TRICKLE CHANNEL	N: 1403246.27 E: 3271673.52	6690.44

20 10 0 20 40
HORIZONTAL
ORIGINAL SCALE: 1" = 20'
VERTICAL
ORIGINAL SCALE: 1" = 2'

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

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COLORADO REGISTERED PROFESSIONAL ENGINEER MIKE A. BRAMLETT 32314

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

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SADDLEHORN RANCH – FILING 1

POND G GRADING PLAN

SHEET 45 OF 50

JOB NO. 2514202

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POND G EMERGENCY SPILLWAY

SCALE: N.T.S.

POND TRICKLE CHANNEL (ALL PONDS)

N.T.S.

GRAVEL MAINTENANCE ACCESS ROAD TYPICAL SECTION

N.T.S.

POND G FOREBAY WEIR

N.T.S.

POND G FOREBAY

N.T.S.

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V-SCALE	NTS
DATE	01/10/20
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SADDLEHORN RANCH – FILING 1

POND G GRADING PLAN

SHEET 46 OF 50

JOB NO. 2514202

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POND G OUTLET STRUCTURE – PROFILE

SCALE: 3/4"=1'

A 40 SECTION A AT ORIFICE (FRONT) WALL

SCALE: 3/4"=1'

B 40 SECTION B AT OUTLET (REAR) WALL

SCALE: 3/4"=1'

POND G OUTLET STRUCTURE – PLAN

SCALE: 3/4"=1'

WQCV TRASH SCREEN AND PLATE DETAIL (PLAN)

SCALE: 3/4"=1'

R VALUE = (NET OPEN AREA)/(GROSS RACK AREA) = 0.60

TRASH SCREEN DETAIL

N.T.S.

EURV/WQCV ORIFICE PLATE:
4'-1" x 1'-6" x ½" THICK FLOW GALVANIZED STEEL FLOW CONTROL PLATE. PROVIDE CONTINUOUS NEOPRENE GASKET MATERIAL BETWEEN THE ORIFICE PLATE AND CONCRETE. BOLT PLATE TO CONCRETE @ 12" MAX O.C., 1½" FROM PLATE EDGE.

WQCV/EURV ORIFICE PLATE DETAIL

SCALE: 3/4"=1'

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POND G OUTLET STRUCTURE DETAILS

SHEET 47 OF 50

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THRUST BLOCK DIMENSIONS and VOLUMES - PVC & DIP 250 psi

MAIN SIZE (in.)	TYPE OF FITTING	MINIMUM BEARING SURFACE AREA (ft^2)	MINIMUM A_x(ft)	MINIMUM A_y(ft)	MINIMUM C_x(ft)	MINIMUM C_y(ft)	MINIMUM B (ft)	APPROXIMATE VOLUME (yd^3)
4	11.25° BEND	1.00	1.00	1.00	0.25	0.33	2.00	0.25
4	22.5° BEND	2.00	1.41	1.41	0.21	0.33	2.00	0.25
4	45° BEND	3.50	1.87	1.87	0.42	0.33	2.00	0.25
4	TEE & DEAD END	4.75	2.18	2.18	0.67	0.33	2.00	0.25
6	11.25° BEND	2.00	1.41	1.41	0.25	0.50	2.00	0.25
6	22.5° BEND	3.75	1.94	1.94	0.38	0.50	2.00	0.25
6	45° BEND	7.25	2.69	2.69	0.58	0.50	2.00	0.25
6	TEE & DEAD END	9.50	3.08	3.08	0.83	0.50	2.00	0.50
8	11.25° BEND	3.25	1.80	1.80	0.34	0.67	2.00	0.25
8	22.5° BEND	6.50	2.55	2.55	0.48	0.67	2.00	0.25
8	45° BEND	12.50	3.57	3.50	0.67	0.67	2.00	0.50
8	TEE & DEAD END	16.25	4.64	3.50	1.08	0.67	2.00	0.75

THRUST BLOCK DIMENSIONS and VOLUMES - PVC (Maximum Static Pressure = 170 psi)

MAIN SIZE (in.)	TYPE OF FITTING	MINIMUM BEARING SURFACE AREA (ft^2)	MINIMUM A_x(ft)	MINIMUM A_y(ft)	MINIMUM C_x(ft)	MINIMUM C_y(ft)	MINIMUM B (ft)	APPROXIMATE VOLUME (yd^3)
12	11.25° BEND	4.75	2.18	2.18	0.43	1.00	2.00	0.25
12	22.5° BEND	9.25	3.04	3.04	0.64	1.00	2.00	0.50
12	45° BEND	18.00	4.92	3.66	1.00	1.00	2.00	0.75
12	TEE & DEAD END	23.50	6.42	3.66	1.46	1.00	2.48	1.00
16	11.25° BEND	8.00	2.83	2.83	0.44	1.33	2.00	0.50
16	22.5° BEND	16.00	4.27	3.75	0.66	1.33	2.00	0.75
16	45° BEND	31.00	8.27	3.75	1.00	1.33	3.64	1.75
16	TEE & DEAD END	40.50	10.80	3.75	1.92	1.33	4.44	3.00

THRUST BLOCK DIMENSIONS and VOLUMES - DIP (Maximum Static Pressure = 250 psi)

MAIN SIZE (in.)	TYPE OF FITTING	MINIMUM BEARING SURFACE AREA (ft^2)	MINIMUM A_x(ft)	MINIMUM A_y(ft)	MINIMUM C_x(ft)	MINIMUM C_y(ft)	MINIMUM B (ft)	APPROXIMATE VOLUME (yd^3)
12	11.25° BEND	6.75	2.60	2.60	0.43	1.00	2.00	0.50
12	22.5° BEND	13.50	3.69	3.66	0.64	1.00	2.00	0.50
12	45° BEND	26.25	7.17	3.66	1.00	1.00	3.09	1.50
12	TEE & DEAD END	34.25	9.36	3.66	1.46	1.00	3.95	2.25
16	11.25° BEND	11.75	3.43	3.43	0.44	1.33	2.00	0.50
16	22.5° BEND	23.25	6.20	3.75	0.66	1.33	2.77	1.00
16	45° BEND	45.50	12.13	3.75	1.00	1.33	5.57	4.00
16	TEE & DEAD END	59.50	15.87	3.75	1.92	1.33	6.98	6.50

NOTES:

1. THE MINIMUM BEARING SURFACE AREAS SHOWN ARE BASED ON A MAX STATIC PIPE PRESSURE OF 170/250 POUNDS PER SQUARE INCH PLUS A SAFETY FACTOR OF 1.5 AND AN ALLOWABLE SOIL BEARING CAPACITY OF 1500 POUNDS PER SQUARE FOOT. BEARING SURFACE AREA IS ROUNDED UP TO THE NEAREST 0.25 SQUARE FEET. REFERENCE AWWA M-23 AND M-41.
2. THE DESIGN ENGINEER IS RESPONSIBLE FOR VERIFYING ASSUMPTIONS BASED ON ACTUAL SITE CONDITIONS. IF SITE CONDITIONS VARY FROM THE ASSUMPTIONS THE DESIGN ENGINEER SHALL PROVIDE A SITE SPECIFIC DESIGN IN ACCORDANCE WITH AWWA M-23, PVC PIPE - DESIGN AND INSTALLATION AND AWWA M-41, DUCTILE-IRON PIPE AND FITTINGS. SITE SPECIFIC DESIGNS INCLUDING GEOTECHNICAL INFORMATION SHALL BE SUBMITTED TO COLORADO SPRINGS UTILITIES FOR REVIEW.
3. THE MINIMUM BEARING SURFACE AREA AND APPROXIMATE VOLUME OF CONCRETE SHALL BE SHOWN ON THE CONSTRUCTION PLANS FOR ALL CONCRETE THRUST BLOCKS. CONCRETE MIX SHALL BE PER MATERIAL CHAPTER 4.
4. THE APPROXIMATE VOLUMES SHOWN ARE BASED ON THE MINIMUM BEARING SURFACE AREA AND THE MINIMUM TRENCH DIMENSIONS. THE APPROXIMATE VOLUME IS ROUNDED UP TO THE NEAREST 0.25 CUBIC YARDS.
5. THESE CHARTS MAY ONLY BE USED IF THE BLOCK HEIGHT (A_y) IS EQUAL TO OR LESS THAN ONE HALF THE TOTAL DEPTH (H) FROM THE FINISHED GRADE TO THE BOTTOM OF THE BLOCK. THE MINIMUM DIMENSIONS SHOWN ARE BASED ON A PIPE DEPTH OF 5 FEET. SEE DETAIL DRAWING A4-3.
6. A SITE SPECIFIC DESIGN SHALL BE REQUIRED FOR PIPES LARGER THAN 16 INCHES OR MAX STATIC PIPE PRESSURES GREATER THAN 250 POUNDS PER SQUARE INCH. THE DESIGN ENGINEER HAS THE OPTION OF PROVIDING A SITE SPECIFIC DESIGN FOR PIPES SMALLER THAN 16 INCHES OR MAX STATIC PRESSURES LESS THAN 250 POUNDS PER SQUARE INCH.
7. ALL CALCULATIONS SHALL BE PROVIDED TO COLORADO SPRINGS UTILITIES FOR REVIEW.

Colorado Springs Utilities — It's how we're all connected

CONCRETE THRUST REACTION BLOCKS

A4-2

DATED 03/2014

CONCRETE THRUST REACTION BLOCK REQUIREMENTS FOR TEES OR TAPS

INDICATES THAT A CONCRETE THRUST REACTION BLOCK IS REQUIRED

S_b = SOIL BEARING CAPACITY
A_x = CONCRETE THRUST REACTION BLOCK WIDTH
A_y = CONCRETE THRUST REACTION BLOCK HEIGHT
T = THRUST
H = DEPTH TO BOTTOM OF THE CONCRETE THRUST REACTION BLOCK
$A_y \leq 1/2\ H_t$

NOTES:

1. A SITE SPECIFIC DESIGN SHALL BE REQUIRED FOR CONNECTIONS OR FITTING SIZE COMBINATIONS NOT SHOWN ABOVE.
2. THE CONCRETE THRUST REACTION BLOCK SHALL BEAR AGAINST UNDISTURBED SOIL.
3. THE CONCRETE THRUST REACTION BLOCK SHALL BE INSTALLED WITH A 45° ANGLE FROM THE FITTING TO THE UNDISTURBED SOIL AS SHOWN IN THE DRAWING ABOVE.
4. REFER TO DETAIL DRAWING A4-2 FOR STANDARD CONCRETE THRUST REACTION BLOCK DIMENSIONS AND VOLUMES.
5. DUCTILE IRON FITTINGS AND PIPE SHALL BE WRAPPED IN POLYETHYLENE TUBING WHERE ADJACENT TO CONCRETE.

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CONCRETE THRUST REACTION BLOCKS

A4-3

DATED 03/2014

L = MINIMUM RESTRAINED PIPE LENGTH (FEET)

PIPE DIAMETER		45° BEND			22-1/2° BEND			11-1/4° BEND			DEAD END VALVE OR PLUG, TO INCLUDE IN LINE VALVES (SEE NOTE 8)		
MAX. STATIC PRESSURE (PSI)		<100	100-150	150-200	<100	100-150	150-200	<100	100-150	150-200	<100	100-150	150-200
6 INCH	DUCTILE IRON AND PVC	6	9	12	3	5	6	2	3	3	49	73	97
8 INCH	DUCTILE IRON AND PVC	8	12	16	4	6	8	2	3	4	63	94	125
12 INCH	DUCTILE IRON AND PVC	12	17	23	6	8	11	3	4	6	89	133	177
16 INCH	DUCTILE IRON AND PVC	15	22	29	7	11	14	4	5	7	USE CONCRETE REVERSE ANCHOR	USE CONCRETE REVERSE ANCHOR	USE CONCRETE REVERSE ANCHOR
20 INCH	DUCTILE IRON AND PVC	18	26	35	9	13	17	4	6	8			
24 INCH	DUCTILE IRON AND PVC	20	30	40	10	15	20	5	7	10			
30 INCH	DUCTILE IRON AND PVC	24	36	48	12	18	24	6	9	12			
36 INCH	DUCTILE IRON AND PVC	28	42	56	14	20	27	7	10	14			

NOTES:

1. PRESSURE GREATER THAN 200 PSI REQUIRE SPECIAL DESIGN APPROVED BY SPRINGS UTILITIES. APPROVED BY COLORADO SPRINGS UTILITIES.
2. LENGTH IS BASED ON MINIMUM 5 FEET OF GROUND COVER AND SOIL COMPACTED ACCORDING TO CHAPTER 5 OF THESE WATER LESS. IF THE DEPTH IS LESS THAN 5 FEET RESTRAINED LENGTH MUST BE DESIGNED BY THE DESIGN ENGINEER.
3. APPROVED METHODS OF RESTRAINED PIPE BEYOND INITIAL FITTING SHALL BE IN ACCORDANCE WITH CHAPTER 4.
4. RESTRAINED PIPE LENGTH APPLIES TO CONDITIONS WHERE NO CONCRETE THRUST REACTION BLOCK IS PRESENT.
5. CALCULATIONS ARE BASED ON A POORLY GRADED SANDS, GRAVEL AND GRAVEL-SAND MIXTURE, LITTLE OR NO FINES, TYPE 4 BEDDING CONDITIONS - "PIPE BEDDED IN SAND, GRAVEL OR CRUSHED STONE TO A DEPTH OF 1/8 PIPE DIAMETER (4" MIN.)." FACTOR OF SAFETY 2:1.
6. FIGURES ARE BASED ON DIP WRAPPED IN POLYETHYLENE MATERIAL.
7. MEASUREMENTS ARE IN FEET.
8. USE CRA FOR DOWN TURNING BENDS.
9. RESTRAINED LENGTH FOR DEAD END MAY BE USED AT THE DISCRETION OF COLORADO SPRINGS UTILITIES.

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RESTRAINED PIPE LENGTH (FEET) W/MECHANICAL JOINT RESTRAINTS

A4-4

DATED 03/2014

ELEVATION

NOTE:
DIP LATERALS AND HYDRANTS SHALL BE POLY WRAPPED AND INCLUDE 1-17lb. ANODE.

VERTICAL & HORIZONTAL OFFSET BEND UPON INSPECTORS AND COLORADO SPRINGS UTILITIES APPROVAL

ELEVATION

NOTES:

1. MECHANICAL JOINT RESTRAINTS SHALL BE INSTALLED PER DETAIL DRAWINGS A4-4, A4-5, & CHAPTER 5.
2. TRACER WIRE AND GROUND LEVEL TEST BOX TO BE INSTALLED WITH EACH FIRE HYDRANT. PLACE TEST BOX WITHIN 6" FROM THE HYDRANT.
3. REFERENCE DETAIL DRAWINGS A5-1 & A5-2 FOR FIRE HYDRANT LOCATION.
4. INSTALLATION OF A PRIVATE FIRE HYDRANT WILL REQUIRE A SECONDARY VALVE INSTALLED AT THE PROPERTY LINE.
5. HYDRANT BASE BLOCK SHALL BE PLACED ON UNDISTURBED EARTH.
6. DO NOT BLOCK WEEP HOLE WITH POLYWRAP.
7. COVER DRAIN ROCK WITH POLYWRAP PRIOR TO BACKFILL.
8. FOR HDPE HYDRANT CONNECTION SEE DETAIL DRAWING A10-9.
9. FOR PRIVATE FIRE HYDRANTS A SECONDARY VALVE SHALL BE INSTALLED ON THE PROPERTY LINE OR RIGHT-OF WAY LINE.

Colorado Springs Utilities — It's how we're all connected

FIRE HYDRANT INSTALLATION

A5-3

DATED 03/2014

NOTES:

1. ALL DUCTILE IRON FITTINGS AND PIPE SHALL BE CATHODICALLY PROTECTED PER SECTION 2.6.I.
2. ALL FITTINGS SHALL HAVE MJ RESTRAINTS IN ACCORDANCE WITH CHAPTER 5.
3. EXAMPLE CAN VARY DUE TO SITE CONDITIONS AND COLORADO SPRINGS UTILITIES INSPECTOR'S DIRECTION.
4. RESTRAINED JOINTS ARE REQUIRED WITHIN LOWERING.
5. NO TAPS OR TEES ARE ALLOWED WITHIN THE LOWERING.
6. WHERE WATER MAIN CROSSES UNDER STORM SEWER, WASTEWATER OR NON-POTABLE WATER INFRASTRUCTURE, A MINIUMUM OF 9 FEET REQUIRED BETWEEN THE CENTERLINE OF THE CROSSING AND THE FIRST JOINT. THIS MEETS THE REQUIREMENTS FOR SECONDARY CONTAINMENT AS DESCRIBED IN SECTION 2.6.H.2.

Colorado Springs Utilities — It's how we're all connected

LOWERING DETAIL UTILITY CROSSING 30" & SMALLER

A7-1

DATED 01/2016

NOTES:

1. ALL DUCTILE IRON FITTINGS AND PIPE SHALL BE CATHODICALLY PROTECTED PER SECTION 2.6.I.
2. ALL FITTINGS SHALL HAVE MJ RESTRAINTS IN ACCORDANCE WITH CHAPTER 5.
3. EXAMPLE CAN VARY DUE TO SITE CONDITIONS AND COLORADO SPRINGS UTILITIES INSPECTOR'S DIRECTION.
4. RESTRAINED JOINTS ARE REQUIRED WITHIN LOWERING.
5. NO TAPS OR TEES ARE ALLOWED WITHIN THE LOWERING.
6. WHERE WATER MAIN CROSSES UNDER STORM SEWER, WASTEWATER OR NON-POTABLE WATER INFRASTRUCTURE, REFERENCE SECTION 2.6-H.2.

Colorado Springs Utilities — It's how we're all connected

LOWERING DETAIL W/CASING UTILITY CROSSING GREATER THAN 30"

A7-2

DATED 06/2015

NOTE:
AN ADDITIONAL CASING SPACER SHALL BE CENTERED ON THE PIPE WHEN 18' TO 20' LONG PIPE JOINTS ARE USED. (TYP.)
* "W" SHALL BE ADDED WHEN A SLEEVE IS REQUIRED TO CROSS A ROADWAY IMPROVEMENT SUCH AS A ROUNDABOUT OR MEDIAN. "W" IS NOT REQUIRED WHEN CROSSING AN UNDERGROUND UTILITY.

NOTES:

1. ALL FITTINGS AND BELLS SHALL BE RESTRAINED IN THE CASING PIPE.
2. LOCATE CASING SPACERS AT "HOMING" LOCATION FOR SLEEVES GREATER THAN 50 FEET IN LENGTH TO PREVENT DAMAGE TO BELL DURING INSTALLATION AND EXTRACTION OF PIPE, IF REMOVED.
3. CASING SHALL BE STEEL PIPE WITH A MINIMUM YIELD STRENGTH OF 35,000 PSI. CASING THICKNESS SHALL BE SPECIFIED BY THE DESIGN ENGINEER ON THE PLANS BASED ON THE ANTICIPATED LOADS. SEE DETAIL DRAWING A7-4.
4. THE DIAMETER OF THE CASING SHALL BE SPECIFIED BY THE DESIGN ENGINEER. THE DIAMETER SHALL TAKE INTO ACCOUNT THE MAXIMUM O.D. WITH THE USE OF RESTRAINED JOINT PIPE.
5. SEE DETAIL DRAWING A7-4 FOR CASING SPACER DETAILS.
6. LOCATE SPACERS ON BOTH SIDES OF JOINTS TO ELIMINATE DEFLECTION OF THE JOINT IN THE SLEEVE.
7. WHERE WATER MAIN CROSSES UNDER STORM SEWER, WASTEWATER OR NON-POTABLE WATER INFRASTRUCTURE, REFERENCE SECTION 2.6-H.2.
8. WHEN CROSSING A ROADWAY IMPROVEMENT, THE WIDTH OF THE IMPROVEMENT SHALL BE ADDED TO THE LENGTH OF THE SLEEVE.

Colorado Springs Utilities — It's how we're all connected

TYPICAL STEEL CASING INSTALLATION

A7-3

DATED 06/2015

CASING PIPE MINIMUM SIZES AND THICKNESSES (TO BE VERIFIED BY THE DESIGN ENGINEER) BASED ON ACTUAL LOADING AND SITE CONDITIONS

CASING PIPE NOMINAL SIZE (IN)	MIN. THICKNESS (IN)
12	0.250
14	0.312
16	0.312
18	0.312
20	0.375
24	0.500
32	0.500
36	0.625

CASING PIPE MINIMUM SIZES AND THICKNESSES ARE BASED ON E80 LOADING. VARIANCES TO THESE MINIMUMS MAY BE ALLOWED WITH SUPPORTING CALCULATIONS FROM THE DESIGN ENGINEER

SECTION A-A

TYPICAL PIPE SUPPORT CASING ARRANGEMENT (CENTERED/RESTRAINED)

CARRIER PIPE:

1. CARRIER PIPE SHALL BE CENTERED WITHIN CASING BY USE OF APPROVED STAINLESS STEEL CASING SPACERS AS MANUFACTURED BY APPROVED MANUFACTURER BY COLORADO SPRINGS UTILITIES. (REFERENCE CHAPTER 2)

PLACEMENT OF SPACERS ON CARRIER PIPE:

1. GENERAL - ONE SPACER SHALL BE PLACED MAX. 2' FROM EACH END OF CASING AND ON EITHER SIDE OF EACH BELL OR MECHANICAL JOINT. SUBSEQUENT SPACERS SHALL BE PLACED AT 8' INTERVALS WITHIN THE CASING, OR IN ACCORDANCE WITH PIPE MANUFACTURERS RECOMMENDATIONS.

END SEALS:

1. END SEALS SHALL BE USED TO ENSURE A WATER TIGHT SEAL ON EITHER END OF THE CASING.

CATHODIC PROTECTION:

1. CASING SHALL BE CATHODICALLY PROTECTED PER SECTION 2.6.I.

SPACER

Colorado Springs Utilities — It's how we're all connected

TYPICAL STEEL CASING INSTALLATION

A7-4

DATED 06/2015

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

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, LLC

COLORADO PROFESSIONAL ENGINEER — MIKE A. BRAMLETT — 32314 — PROFESSIONAL ENGINEER — DATE

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

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No.	REVISION	BY	DATE

H-SCALE	N/A		
V-SCALE	N/A		
DATE	01/10/20		
DESIGNED BY	NQJ		
DRAWN BY	NQJ		
CHECKED BY			

SADDLEHORN RANCH – FILING 1

WATER DETAILS

SHEET 48 OF 50

JOB NO. 2514202

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TYPICAL STREAM CROSSING CROSS SECTION

CAISSON CROSS SECTION

STREAM CROSSING NOTES:

1. EXAMPLE CAN VARY DUE TO SITE CONDITIONS AND COLORADO SPRINGS UTILITIES INSPECTOR'S DIRECTIONS.
2. ALL STREAM CROSSINGS SHALL BE REVIEWED AND APPROVED BY COLORADO SPRINGS UTILITIES PLANNING AND ENGINEERING.
3. CONCRETE ENCASEMENT OF THE WATER MAIN IS NOT REQUIRED WHEN CROSSING FORMED CONCRETE CHANNELS. CASING PIPE IS STILL REQUIRED.

CONCRETE ENCASEMENT DETAIL WITH CAISSON

Colorado Springs Utilities It's how we're all connected	TYPICAL CREEK CROSSING	A7-7 DATED 01/2017

L BRACKET DETAIL

CONCRETE ENCASEMENT DETAIL WITHOUT CAISSON

STREAM CROSSING NOTES:

1. EXAMPLE CAN VARY DUE TO SITE CONDITIONS AND COLORADO SPRINGS UTILITIES INSPECTOR'S DIRECTIONS.
2. ALL STREAM CROSSINGS SHALL BE REVIEWED AND APPROVED BY COLORADO SPRINGS UTILITIES PLANNING AND ENGINEERING.
3. CONCRETE ENCASEMENT OF THE WATER MAIN IS NOT REQUIRED WHEN CROSSING FORMED CONCRETE CHANNELS. CASING PIPE IS STILL REQUIRED.

Colorado Springs Utilities It's how we're all connected	PIPE ENCASEMENT DETAIL	A7-8 DATED 01/2017

TYPICAL GATE VALVE BOX

MJ OR FLANGED BUTTERFLY VALVE
WITH ROTATED ACTUATOR VALVE BOX

NOTES:

1. MAIN AND FIRE HYDRANT VALVES AND VALVE BOXES SHALL NOT BE IN THE CURB PAN, CURB OR SIDEWALK.
2. VALVE BOXES SHALL BE SLIP TYPE, PER CHAPTER 4.
3. DEBRIS CAPS SHALL BE INSTALLED AS CLOSE UNDER THE CAST IRON COVER WITHOUT INTERFERING WITH COVER OPERATIONS.
4. DEBRIS CAPS WITH FLEXIBLE SKIRTS SHALL BE TRIMMED TO PROVIDE A SMOOTH CONTACT WITH THE INTERIOR OF THE VALVE BOX.
5. FOR SERVICE LINES 4" AND GREATER, TRACER WIRE WILL BE BROUGHT UP IN THE SECONDARY VALVE BOX.

Colorado Springs Utilities It's how we're all connected	VALVE BOX INSTALLATION	A9-1 DATED 03/2014

PLAN
DEAD END OR REVERSE ANCHOR

ELEVATION
DEAD END OR REVERSE ANCHOR

DIAMETER (in)	PRESSURE (psi)	x (in)	Ax (in)	y (in)	Ay (in)	Ab (sf)	h (in)	Vol (cy)
4	250	12	72	12	28.80	6.80	18	1.0
6	250	18	84	12	30.90	9.73	18	1.0
8	250	36	120	12	33.05	18.53	18	1.5
12	170	36	120	15	43.20	24.60	18	2.0
12	250	48	144	18	49.20	36.80	24	3.75
16	170	54	156	18	53.40	44.05	24	4.25
16	250	60	168	24	65.40	60.50	36	8.5

NOTES:

1. THE MINIMUM BEARING SURFACE AREAS SHOWN ARE BASED ON A MAX STATIC PIPE PRESSURE OF 170/250 POUNDS PER SQUARE INCH PLUS A SAFETY FACTOR OF 1.5, AND AN ALLOWABLE SOIL BEARING CAPACITY OF 1500 POUNDS PER SQUARE FOOT. FOR HDPE ADDITIONAL ASSUMPTIONS INCLUDE A MAX 50°-F TEMPERATURE CHANGE AND A POISSON RATIO OF 0.45. REFERENCE AWWA M-23, M-41 AND M-55.
2. THE DESIGN ENGINEER IS RESPONSIBLE FOR VERIFYING ASSUMPTION BASED ON ACTUAL SITE CONDITIONS. IF SITE VARY FROM THE ASSUMPTIONS THE DESIGN ENGINEER SHALL PROVIDE A SITE SPECIFIC DESIGN THAT SHALL BE IN ACCORDANCE WITH AWWA M-23, PVC PIPE - DESIGN AND INSTALLATION AND AWWA M-41, DUCTILE-IRON PIPE AND FITTINGS. SITE SPECIFIC DESIGNS USING GEOTECHNICAL INFORMATION SHALL BE SUBMITTED TO COLORADO SPRINGS UTILITIES FOR APPROVAL.
3. THE MINIMUM LATERAL BEARING SURFACE AREA (Ab) AND APPROXIMATE VOLUME OF CONCRETE (Vol) SHALL BE SHOWN ON THE CONSTRUCTION PLANS FOR ALL CONCRETE REVERSE ANCHORS.
4. THE APPROXIMATE VOLUMES SHOWN ARE BASED ON THE MINIMUM DIMENSIONS IN THE TABLE. THE APPROXIMATE VOLUME IS ROUNDED UP TO THE NEAREST 0.25 CUBIC YARDS.
5. A SITE SPECIFIC DESIGN SHALL BE REQUIRED FOR PIPES LARGER THAN 16 INCHES OR MAX STATIC PIPE PRESSURES GREATER THAN 250 POUNDS PER SQUARE INCH. THE DESIGN ENGINEER HAS THE OPTION OF PROVIDING A SITE SPECIFIC DESIGN FOR PIPES SMALLER THAN 16 INCHES OR MAX STATIC PRESSURES LESS THAN THE PRESSURE LISTED IN THE TABLE.
6. FOR CORROSION PROTECTION OF THE RODS SEE DETAIL DRAWING A8-11.
7. A TRENCH WIDTH OF 4 FEET AND 6" BEDDING UNDER THE PIPE ARE ASSUMED FOR BEARING CALCULATIONS, (Ax, Ay, x AND y).
8. THE DESIGN ENGINEER SHALL ENSURE THE CONSTRUCTION OF THE CONCRETE REVERSE ANCHOR SHALL NOT CONFLICT WITH OTHER UTILITIES.
9. DUCTILE IRON FITTINGS AND PIPE SHALL BE WRAPPED IN POLYETHYLENE TUBING WHERE ADJACENT TO CONCRETE.

Colorado Springs Utilities It's how we're all connected	CONCRETE REVERSE ANCHOR FOR MECHANICAL JOINT RESTRAINTS	A4-8 DATED 06/2015

CSU WATER LESS SECTION 2.6.H.2 UTILITY CROSSINGS

WHEN CROSSING ANOTHER UTILITY, MINIMUM VERTICAL SEPARATION IS REQUIRED TO BE MAINTAINED, REFER TO SECTION 2.6.G. WHEN CROSSING A STORM SEWER OR WASTEWATER MAIN, IT IS PREFERRED TO LAY THE WATER MAIN ABOVE THE STORM SEWER OR WASTEWATER MAIN. HOWEVER, A WATER LOWERING MAY BE REQUIRED TO MEET DEPTH AND VERTICAL SEPARATION CRITERIA, REFER TO DETAIL DRAWING A7-1. WHERE THE WATER MAIN CROSSES UNDER ANOTHER UTILITY GREATER THAN 30 INCHES IN DIAMETER, THE WATER MAIN SHALL BE INSTALLED IN A CASING PIPE, SEE DETAIL DRAWING A7-2.

WHERE THE WATER MAIN CROSSES OTHER UTILITY INFRASTRUCTURE AND THE REQUIRED SEPARATION CANNOT BE MET, THE DESIGN ENGINEER SHALL DESIGN AND CONSTRUCT THE CROSSING TO PROTECT THE WATER MAIN FROM OTHER UTILITY INFRASTRUCTURE. WHERE THE WATER MAIN CROSSES A WASTEWATER, STORM SEWER, OR A NONPOTABLE WATER MAIN OR SERVICE LINE AND THE WATER MAIN IS THE LOWER UTILITY OR WHERE THE MINIMUM SEPARATION CANNOT BE MET, THE WATER OR OTHER UTILITY SHALL HAVE SECONDARY CONTAINMENT. IF THE WATER MAIN IS GREATER THAN 5 FEET BELOW THE WASTEWATER, STORM SEWER, OR A NONPOTABLE WATER MAIN SECONDARY CONTAINMENT IS NOT REQUIRED. THE FOLLOWING METHODS OF INSTALLATION SHALL BE CONSIDERED SECONDARY CONTAINMENT BY COLORADO SPRINGS UTILITIES:

- THE WATER MAIN OR THE WASTEWATER, STORM SEWER, OR NONPOTABLE WATER MAIN SHALL BE INSTALLED IN A CASING PIPE EXTENDING NO LESS THAN 9 FEET ON EITHER SIDE OF THE CENTERLINE OF THE CROSSING. SEE DETAIL DRAWING A7-3, OR
- THE WATER MAIN OR THE WASTEWATER, STORM SEWER, OR NONPOTABLE WATER MAIN SHALL BE CONSTRUCTED WITHOUT MECHANICAL JOINTS FOR 9 FEET ON EITHER SIDE OF THE CROSSING, OR
- A FULL JOINT OF WATER MAIN SHALL BE CENTERED UNDER THE UPPER UTILITY, OR
- THE WATER MAIN OR THE WASTEWATER, STORM SEWER, OR NONPOTABLE WATER MAIN SHALL BE ENCASED IN FLOW FILL, PER THE SPECIFICATION IN THE SECTION 4.4.S, FOR 9 FEET ON EITHER SIDE OF THE CROSSING, WITH LIMITS EXTENDING TO 6 INCHES AND ABOVE THE PIPE.
- THE WATER MAIN IS CONSTRUCTED OF HDPE OR WELDED STEEL AND THERE ARE NO MECHANICAL FITTINGS WITHIN 9 FEET ON EITHER SIDE OF THE CROSSING.

WHEREVER MINIMUM SEPARATION CANNOT BE MET, FLOW FILL, PER SECTION 4.4.S, SHALL BE USED TO ACHIEVE ACCEPTABLE COMPACTION BETWEEN THE UPPER AND LOWER UTILITY, SEE DETAIL DRAWING A7-6.

IF THE WATER MAIN CROSSES ANOTHER UTILITY, AND A GEOTECHNICAL ANALYSIS OR FIELD CONDITIONS INDICATE POTENTIAL SETTLEMENT THAT MAY CAUSE A POINT LOAD ON THE WATER MAIN, A SAFETY HAZARD EXISTS THAT WOULD COMPROMISE MAINTENANCE OF THE WATER MAIN, OR ADEQUATE SEPARATION CANNOT BE ATTAINED TO PREVENT A POINT LOAD ON THE WATER MAIN, THEN BRIDGING OF THE WATER MAIN OR OTHER UTILITY MAY BE REQUIRED AT THE DISCRETION OF COLORADO SPRINGS UTILITIES. SEE DETAIL DRAWINGS A7-5 AND A7-6.

ENGINEER'S STATEMENT

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

COLORADO REGISTERED MIKE A. BRAMLETT 32314 PROFESSIONAL ENGINEER

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

DATE

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H-SCALE	N/A
V-SCALE	N/A
DATE	01/10/20
DESIGNED BY	NQJ
DRAWN BY	NQJ
CHECKED BY	

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WATER DETAILS (CONT.)

SHEET 49 OF 50

JOB NO. 2514202

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FIXED

* RAIL LENGTH TABLE

TYPE 3 BARRICADE		LENGTH
FIXED	MOVABLE	
F - A	M - A	8'- 14'
F - B	M - B	15'- 24'
F - C	M - C	25'- 35'
F - D	M - D	> 35'

MOVABLE-SKIDS

MOVABLE-HINGED

NOTES

1. TYPE 3 BARRICADES HAVE 3 REFLECTORIZED RAIL FACES IF FACING TRAFFIC IN ONE DIRECTION AND 6 IF FACING TRAFFIC IN TWO DIRECTIONS.
2. THE PORTION OF THE POST ABOVE THE GROUND LINE SHALL BE PAINTED IN ACCORDANCE WITH THE APPROPRIATE GENERAL NOTE.
3. DETACHABLE EXTENSION WING RAILS FOR BYPASSING OF CONSTRUCTION EQUIPMENT ARE PERMITTED, WHEN NECESSARY, ON FIXED OR MOVABLE TYPE 3 BARRICADES. THE LENGTH SHALL BE ADEQUATE TO CLOSE THE BORROW PIT AND/OR SHOULDER AS REQUIRED.

TYPICAL TYPE 3 BARRICADES

GENERAL NOTES

1. THE VARIOUS TYPES, COMBINATIONS AND APPLICATIONS OF SIGNS AND WARNING LIGHTS FOR BARRICADES REQUIRED FOR EACH PROJECT SHALL BE:
   A. AS SPECIFIED OR DETAILED IN THE PLANS.
   B. AS SHOWN IN APPLICABLE TYPICAL ILLUSTRATIONS.
   C. AS CALLED FOR AND SUBJECT TO APPROVAL BY THE ENGINEER.
2. TEMPORARY AND PERMANENT BARRICADES TYPE 3 SHALL BE FABRICATED FROM APPROVED CRASH TESTED MATERIALS. SEE SECTION 614 AND 630 OF THE STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION FOR ADDITIONAL REQUIREMENTS.
3. ALL PAINTING SHALL CONFORM WITH THE FOLLOWING:
   A. THE APPLICABLE SECTION OF 508 OF THE STANDARD SPECIFICATIONS.
   B. ALL SKIDS, BRACES AND POSTS SHALL BE PAINTED WITH 2 COATS OF EXTERIOR WHITE PAINT
   C. THE BACKSIDES OF RAILS AND VERTICAL PANEL CHANNELIZING DEVICES FACING ONE DIRECTION OF TRAFFIC ONLY SHALL BE PAINTED WITH "EXTERIOR WHITE PAINT.
   D. ALUMINUM OR GALVANIZED STEEL SKIDS, BRACES AND POSTS SHALL NOT BE PAINTED.
4. ALL STRIPED SURFACES SHALL CONFORM WITH THE FOLLOWING:
   A. THE ENTIRE AREA OF ORANGE AND WHITE STRIPES SHALL BE FABRICATED AS ONE PIECE.
   B. HORIZONTAL RAILS, WING RAILS AND VERTICAL PANEL CHANNELIZING DEVICES SHALL HAVE ORANGE AND WHITE STRIPES ON THE FACE SIDE(S) SLANTING DOWNWARD AT A 45° ANGLE TOWARD THE SIDE(S) TO WHICH TRAFFIC IS TO PASS OR TURN.
   C. PERMANENT BARRICADES SHALL HAVE RETROREFLECTIVE RED AND WHITE STRIPES. THEY MAY BE USED AT LOCATIONS TO MARK THE END OF A ROAD, STREET OR HIGHWAY THAT ENDS AT A "T" INTERSECTION, OR WHERE THERE IS NO CROSSROAD OR OUTLET.
   D. ALL RETROREFLECTIVE SHEETING SHALL CONFORM TO ASTM D4956:
      1. ORANGE AND WHITE SHALL BE TYPE II, III OR IV.
      2. RED AND WHITE SHALL BE TYPE II, III OR IV.
5. FOR ALL WOODEN BARRICADE COMPONENTS NOMINAL LUMBER DIMENSIONS ARE SATISFACTORY.
6. ALL SCREWS, BOLTS, NUTS AND WASHERS SHALL BE GALVANIZED OR CADMIUM PLATED.
7. STABILITY OF BARRICADES AND CHANNELIZING DEVICES SHALL CONFORM WITH THE FOLLOWING:
   A. SKIDS (BASES) OF MOVABLE BARRICADES SHALL BE WEIGHTED WITH SANDBAGS ONLY WHERE NECESSARY TO PROVIDE STABILITY
   B. NO MOVABLE OR PORTABLE DEVICE SHALL BE WEIGHTED BY ANY METHOD OR WITH ANY MATERIAL THAT WOULD MAKE THEM HAZARDOUS TO MOTORISTS.
8. WARNING LIGHTS USED WITH BARRICADES, DRUMS AND VERTICAL PANELS SHALL CONFORM WITH THE FOLLOWING:
   A. USE FLASHING WARNING LIGHTS WHEN DEVICES ARE USED SINGLY, AND STEADY BURN LIGHTS WHEN THEY ARE USED IN A SERIES FOR CHANNELIZATION.
   B. THEY SHALL BE POSITIONED ABOVE THE TOP RAIL OF BARRICADES OR ON TOP OF DRUMS AND VERTICAL PANELS.
9. CONCRETE BARRIER (TEMPORARY) SHALL CONFORM WITH:
   A. PRECAST CONCRETE BARRIER AS SHOWN ON COLORADO STANDARD PLAN M-606-14.
   B. BARRIER REFLECTORS SHALL BE INSTALLED THAT MEET THE REQUIREMENTS OF STANDARD TYPICAL DELINEATOR INSTALLATIONS, EXCEPT THE MAXIMUM SPACING SHALL BE 50', AND THEY WILL NOT BE PAID FOR BUT ARE INCLUDED IN THE COST OF THE BARRIER.
   C. CONCRETE BARRIER END TREATMENT SHALL BE IN ACCORDANCE WITH CLEAR ZONE CRITERIA, AND PLACED AS SHOWN ON THE PLANS.
10. SIGN PANELS MOUNTED ON BARRICADES WILL BE PAID FOR SEPARATELY.

TYPICAL TYPE 3 BARRICADE CHARACTERISTICS

	BARRICADE DESIGNATIONS
	TYPE 3
RAIL WIDTH	8" MIN.-12" MAX.
RAIL LENGTH	AS REQUIRED, SEE RAIL LENGTH TABLE
HEIGHT	5' MIN.
USE	TEMPORARY OR PERMANENT
STRIPES	SEE DETAIL OF BARRICADE STRIPING AND APPROPRIATE GENERAL NOTES.

FOR RAILS LESS THAN 3' LONG, 4" WIDE STRIPES SHALL BE USED.

RAIL STRIPING DETAIL

1. IF SPECIAL PANELS 3'OR GREATER IN HEIGHT ARE REQUIRED, THEN 6" STRIPES SHALL BE USED.
2. IF FIXED PLACEMENT IS REQUIRED, MOUNT ON DELINEATOR POST. SEE COLORADO STANDARD PLAN S-612-1.

TYPICAL VERTICAL PANEL

1. THE 18" MINIMUM DIMENSION SHALL APPLY TO THE SMALLEST MEASUREMENT OF OBLONG, RECTANGULAR, OR FLATTENED SIDE DRUMS.
2. THERE SHALL BE AT LEAST TWO ORANGE AND TWO WHITE HORIZONTAL, CIRCUMFERENTIAL, RETROREFLECTIVE STRIPES ON EACH DRUM.

TYPICAL DRUM

Computer File Information	
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Last Modification Date: 06/03/16	Initials: MBhat
Full Path: www.coloradodot.info/library/traffic/traffic-s-standard-plans	
Drawing File Name: S-630-02.dgn	
CAD Ver.: MicroStation V8i Scale: Not to Scale Units: English	

Sheet Revisions		
	Date:	Comments
EC	06/03/16	UPDATED GENERAL NOTES 4 C

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Safety & Traffic Engineering KCM

BARRICADES, DRUMS, CONCRETE BARRIERS (TEMP) & VERTICAL PANELS

Issued By: Safety & Traffic Engineering Branch July 4, 2012

STANDARD PLAN NO.
S-630-2
Sheet No. 1 of 1

NOTES:

1. SOIL RIPRAP DETAILS ARE APPLICABLE TO SLOPED AREAS. REFER TO THE SITE PLAN ACTUAL LOCATION AND LIMITS.
2. MIX UNIFORM ALLY 65% RIPRAP BY VOLUME WITH 35% OF APPROVED SOIL BY VOLUME PRIOR TO PLACEMENT.
3. PLACE STONE-SOIL MIX TO RESULT IN SECURELY INTERLOCKED ROCK AT THE DESIGN THICKNESS AND GRADE. COMPACT AND LEVEL TO ELIMINATE ALL VOIDS AND ROCKS PROJECTING ABOVE DESIGN RIPRAP TOP GRADE.
4. CRIMP OR TACKIFY MULCH OR USE APPROVED HYDROMULCH AS CALLED FOR IN THE PLANS AND SPECIFICATIONS.

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PLAN VIEW

SECTION A-A SECTION B-B

NOTES

1. SURFACE TREATMENT OF DRIVEWAY TO MATCH SURFACE TREATMENT OF ROAD WITHIN THE ROW.
2. DRAIN PIPE TO BE 18" DIAMETER CMP MINIMUM.
3. PIPE SLOPE TO BE CONSISTENT WITH FLOWLINE OF DITCH, MINIMUM OF 1% PREFERED.
4. ALL DRIVEWAYS SHALL HAVE A 4 PERCENT CROWN.
5. WHEN SLOPING TOWARDS ROAD, DRIVEWAYS SHALL HAVE A MAXIMUM GRADE OF 4 PERCENT FOR A MINIMUM OF 20 FEET WHERE THE SITE ALLOWS.

SCALE: NOT TO SCALE

8/11/11	Driveway Access on Rural Local Roadway Standard Drawing	EL PASO COUNTY DEPARTMENT OF TRANSPORTATION
DATE APPROVED: André P. Brackin, DEPARTMENT OF TRANSPORTATION	REVISION DATE: 12/8/15	FILE NAME: SD_3-14

Sheet Revisions			
EC	3/11	GESC MANUAL UPDATES	DVD
EC	5/13	GESC MANUAL UPDATES	DVD

NOTE: SCALES SHOWN ARE FOR 22"x34" PLOTS ONLY. ACCORDINGLY FOR 11"x17" SHEETS.

Castle Rock

UTILITIES DEPARTMENT
Stormwater Engineering Division

GESC

GRADING, EROSION, AND SEDIMENT CONTROL

GESC PLAN STANDARD NOTES AND DETAILS

SHEET 7 OF 14

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SALSBURY CLUSTER BOX UNIT 3300 SERIES "F" MODEL 3316 W/ PEDESTAL 3385 OR EQ. (16) MAILBOXES, (1) OUTGOING MAIL COMPARTMENT, (2) PARCEL LOCKERS

MAILBOX DETAILS

ENGINEER'S STATEMENT

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

COLORADO REGISTERED PROFESSIONAL ENGINEER MIKE A. BRAMLETT 32314

MIKE A. BRAMLETT, P.E.
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H-SCALE	N/A
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MISCELLANEOUS DETAILS

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FACILITIES MAP

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

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