CLOVERLEAF SUBDIVISION

LOCATED IN NE1/4 OF SECTION 23 AND NW1/4 OF SECTION 24, TOWNSHIP 11 SOUTH, RANGE 67 WEST OF THE 6TH P.M., COUNTY OF EL PASO, STATE OF COLORADO

ROADWAY PLANS

EPC STORMWATER REVIEW COMMENTS IN ORANGE BOXES WITH BLACK TEXT

JR RESPONSE IN GREEN

CONTACTS:

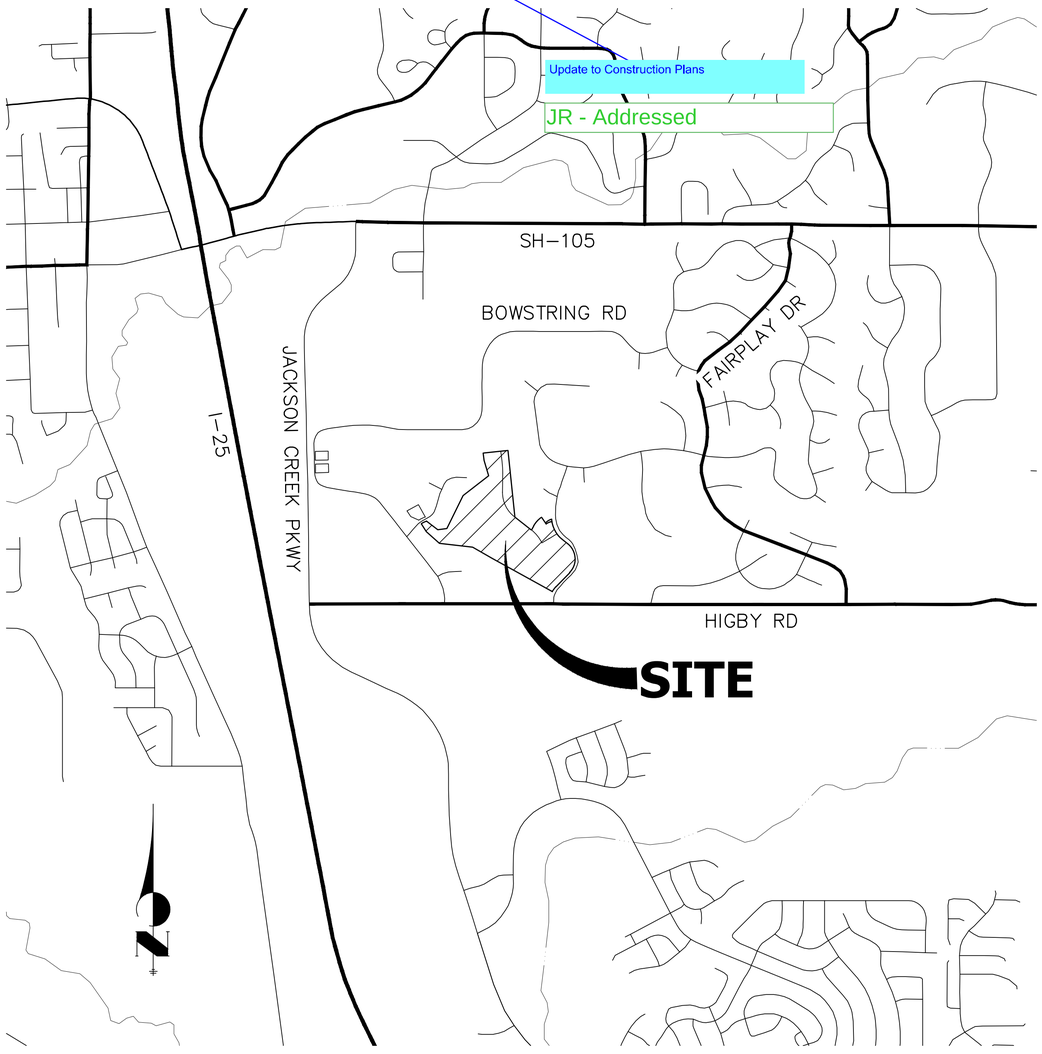
OWNER/DEVELOPER	PT CLOVERLEAF, LLC 1864 WOODMOOR DRIVE, SUITE 100 COLORADO SPRINGS, CO 80920 P~719-476-0800
ENGINEER/SURVEYOR	JR ENGINEERING, LLC ATTN: MIKE A. BRAMLETT 5475 TECH CENTER DRIVE, SUITE 235 COLORADO SPRINGS, CO 80919 P~303-267-6240
FIRE PROTECTION DISTRICT	TRI-LAKES MONUMENT FPD 16055 OLD FOREST POINT, SUITE 103 MONUMENT, CO 80132 P~719-484-0911
DISTRICT	WOODMOOR WATER & SANITATION DISTRICT NO. 1 1845 WOODMOOR DRIVE MONUMENT, CO 80132 P~719-488-2525 EXT. 0

Add El Paso County

Planning and Community Development
2880 International Cir., Suite 110
Colorado Springs, CO 80910
P 719-520-6819

Department of Public Works
3275 Akers Dr
Colorado Springs, CO 80922
719-529-6460

JR - Addressed



PROJECT LOCATION MAP

Update to Construction Plans

JR - Addressed

SHEET INDEX

1	COVER SHEET
2	LEGEND AND GENERAL NOTES
3-5	HORIZONTAL CONTROL PLAN
6	TYPICAL SECTIONS
7-14	ROADWAY PLAN AND PROFILE
15	MILL AND OVERLAY PLAN
16-17	SIGNAGE AND STRIPING PLAN
18-19	COUNTY DETAILS

Revise sheet index to contain entire plan set.

JR - Addressed

Add the Developer's signature block:

Owner/Developer's Statement:

I, the owner/developer have read and will comply with the requirements of the grading and erosion control plan and all of the requirements specified in these detailed plans and specifications.

[Name, Title]Date
[Business Name]
[Address]

BENCHMARK

NGS MONUMENT T 294 BEING MONUMENTED BY A 3-1/4" BRASS DISC SET IN A 4'X4' BOULDER, LOCATED 1.8 MILES EAST ALONG HIGBY ROAD FROM ITS INTERSECTION WITH JACKSON CREEK PARKWAY, 40 FEET SOUTH OF THE CENTERLINE OF THE ROAD, 8 FEET SOUTH OF A FENCE, AND 6.2 FEET SOUTH OF A WITNESS POST. SAID MONUMENT HAVING A PUBLISHED ELEVATION OF 7247.10 FEET, NAVD88.

BASIS OF BEARING

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

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.

Replace with:
These detailed plans and specifications were prepared under my direction and 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 plans 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.

JR - Addressed

JR - Addressed

PCD File No. SF-2123

Know what's below. Call before you dig.

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

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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COLORADO SPRINGS, CO 80920
ATTN: JOE DESJARDIN
719-476-0800
JDESJARDIN@PROTERRACO.COM

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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"=1,000
V-SCALE	N/A
DATE	5/14/21
DESIGNED BY	N/A
DRAWN BY	N/A
CHECKED BY	

CLOVERLEAF SUBDIVISION

COVER SHEET

SHEET 1 OF 19

JOB NO. 25158.01

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LEGEND

- CURB & GUTTER
- W — W — PROPOSED WATER LINE
- S — S — PROPOSED SANITARY SEWER LINE
- PROPOSED STORM SEWER W/MANHOLE
- PROPOSED TOP OF SLOPE
- PROPOSED TOE OF SLOPE
- PROPOSED RIGHT OF WAY
- EASEMENT LINE
- EXISTING RIGHT OF WAY
- EXISTING BOUNDARY LINE
- EXISTING PROPERTY LINE
- EXISTING CURB & GUTTER
- G — G — EXISTING GASLINE
- W — W — EXISTING WATERLINE
- E — E — EXISTING ELECTRIC LINE
- X — X — EXISTING FENCE
- S — S — EXISTING SANITARY SEWER W/MANHOLE
- EXISTING STORM SEWER W/MANHOLE
- EXISTING EDGE OF ASPHALT
- EXISTING EDGE OF CONCRETE
- EXISTING BOUNDARY LINE
- EXISTING PROPERTY LINE
- EXISTNG EASEMENT LINE

- PROPOSED PLUG W/ THRUST BLOCK
- PROPOSED FIRE HYDRANT
- PROPOSED WATER TEE
- PROPOSED WATER BEND
- PROPOSED FLARED END SECTION
- PROPOSED WATER VALVE
- EXISTING FIRE HYDRANT
- EXISTING ELECTRIC PEDESTAL
- EXISTING WATER MANHOLE
- EXISTING TELEPHONE PEDESTAL
- EXISTING WATER VALVE
- EXISTING FIRE HYDRANT
- EXISTING VALVE
- EXISTING STREET LIGHT
- EXISTING SIGN
- EXISTING TELEPHONE MANHOLE
- EXISTING FLARED END SECTION
- EXISTING WATER VALVE
- PROPOSED FLOW DIRECTION

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. ALL STORM DRAIN PIPE SHALL BE CLASS III RCP UNLESS OTHERWISE NOTED AND APPROVED BY PCD.

10. 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.

11. ALL CONSTRUCTION TRAFFIC MUST ENTER/EXIT THE SITE AT APPROVED CONSTRUCTION ACCESS POINTS.

12. 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.

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

14. 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.

15. 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.

For Information Only: Engineer's Statement is not required on all sheets, only in the cover sheet.

What will be required on all sheets at the final approval is the design engineer's signed/dated PE stamp.

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

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

No.	REVISION	BY	DATE

H-SCALE	N/A
V-SCALE	N/A
DATE	5/14/21
DESIGNED BY	N/A
DRAWN BY	N/A
CHECKED BY	

CLOVERLEAF SUBDIVISION

LEGEND AND GENERAL NOTES

SHEET 2 OF 19

JOB NO. 25158.01

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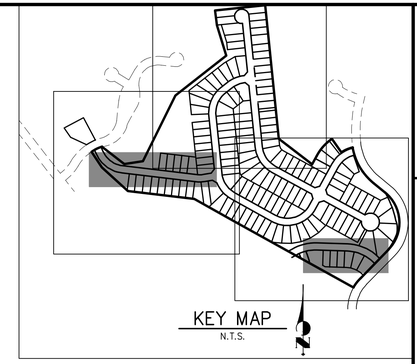

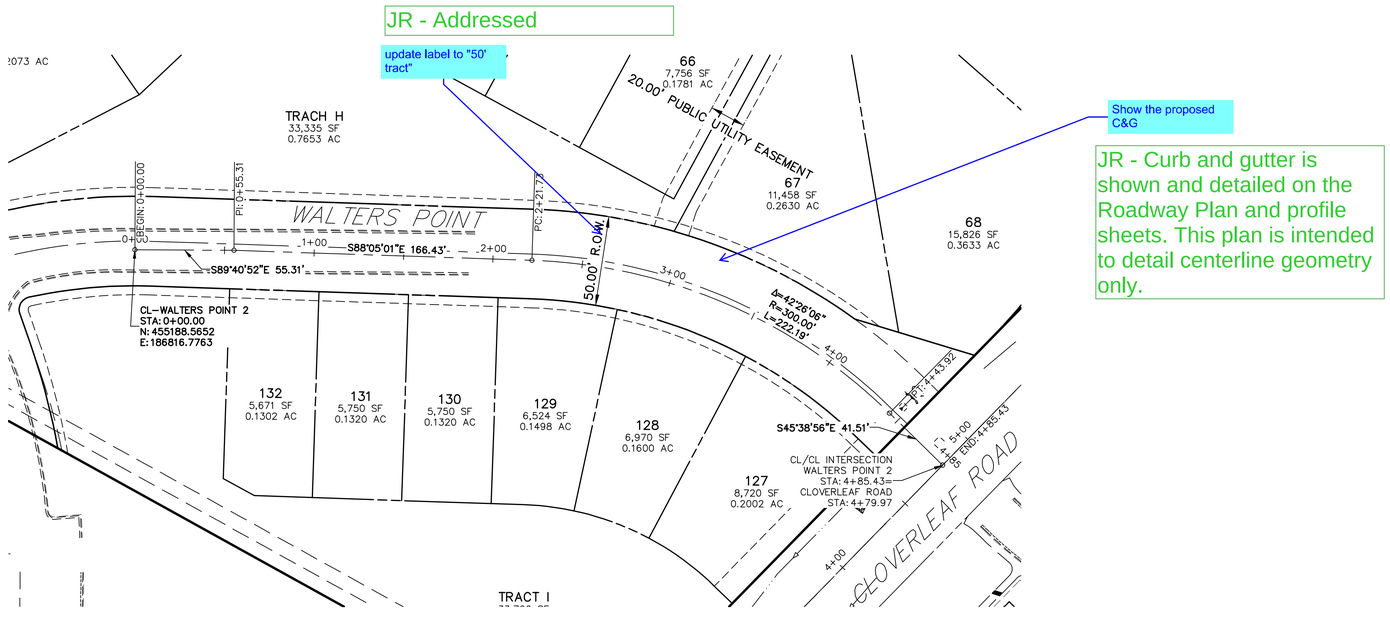

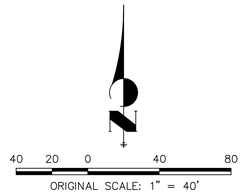

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DATE

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No.	REVISION	BY	DATE

H-SCALE	1"=40'
V-SCALE	N/A
DATE	5/14/21
DESIGNED BY	XXX
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CLOVERLEAF SUBDIVISION

HORIZONTAL CONTROL PLAN

SHEET 3 OF 19

JOB NO. 25158.01

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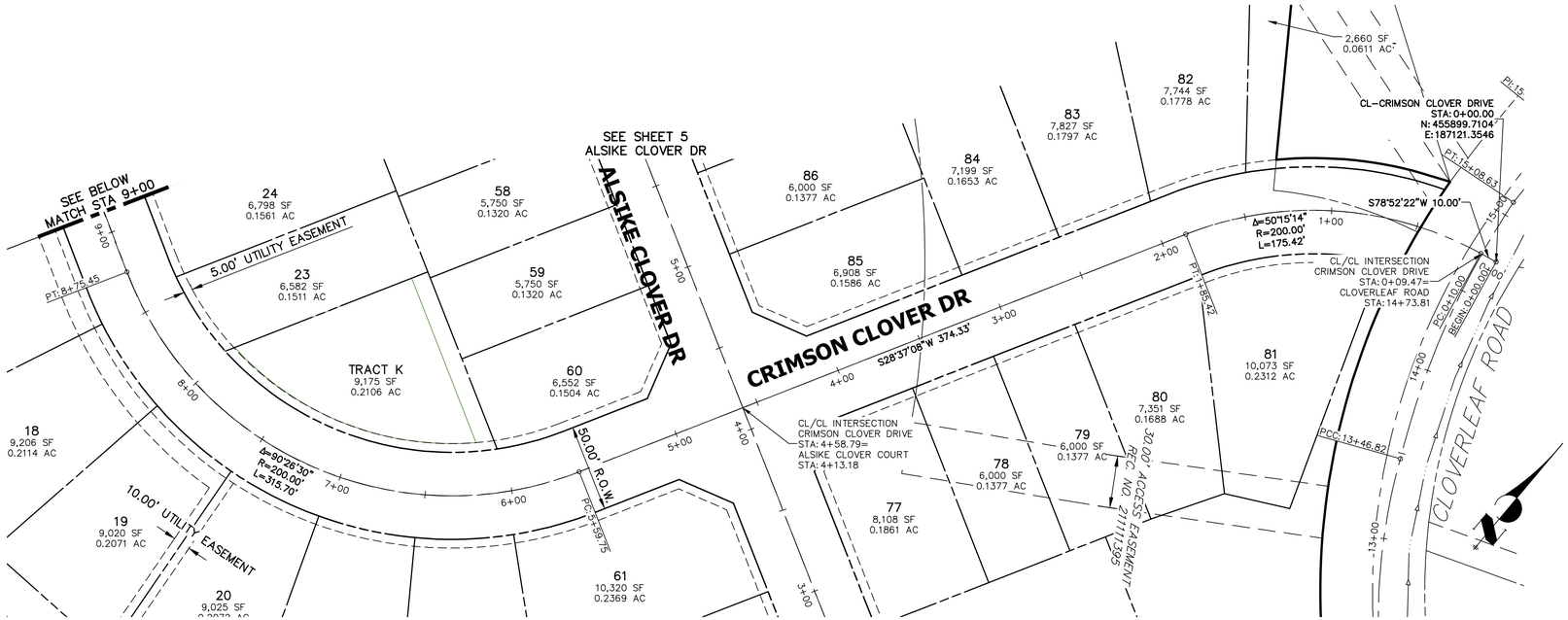

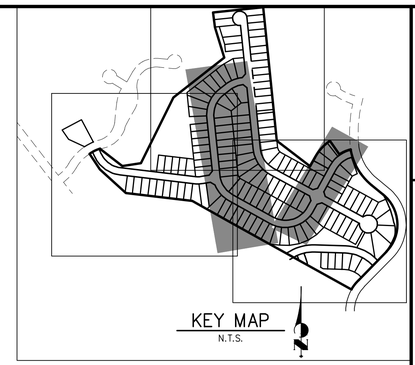

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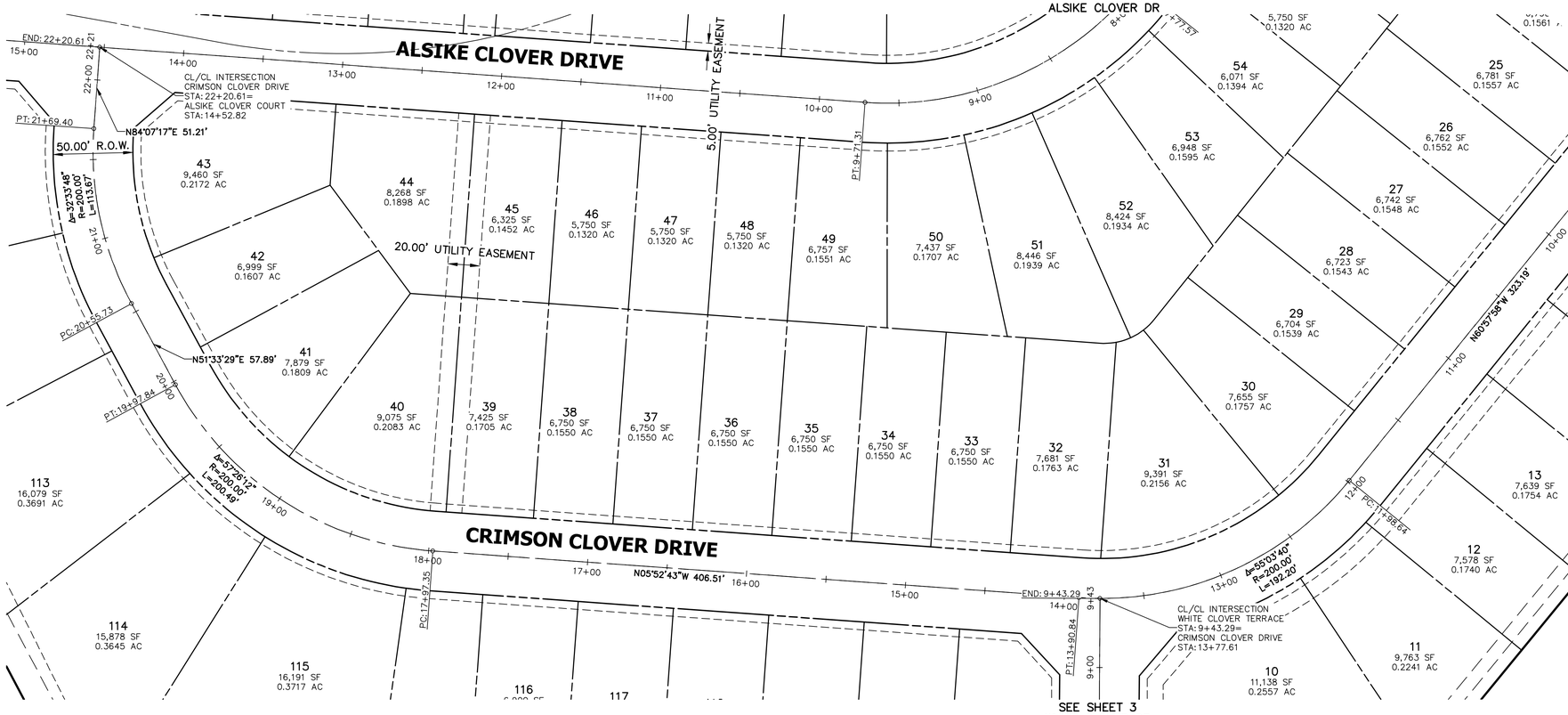

40 20 0 40 80
ORIGINAL SCALE: 1" = 40'

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

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

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CLOVERLEAF SUBDIVISION

HORIZONTAL CONTROL PLAN

SHEET 4 OF 19

JOB NO. 25158.01

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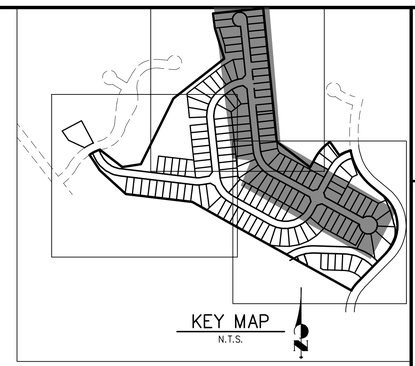

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30.00' UTILITY EASEMENT
16.00' UTILITY EASEMENT BOOK 5437 PAGE 646
20.00' UTILITY EASEMENT
5.00' UTILITY EASEMENT
106 6,003 SF 0.1378 AC
105 6,000 SF 0.1377 AC
104 6,000 SF 0.1377 AC
TRACT B 7,423 SF 0.1704 AC
103 6,000 SF 0.1377 AC
102 6,000 SF 0.1377 AC
101 6,000 SF 0.1377 AC
100 6,000 SF 0.1377 AC
TRACT C 5,143 SF 0.1181 AC
99 6,000 SF 0.1377 AC
98 6,000 SF 0.1377 AC
97 7,200 SF 0.1653 AC
96 7,200 SF 0.1653 AC
2,400 SF 0.0551 AC
TRACT D
95 7,211 SF 0.1655 AC
94 7,200 SF 0.1653 AC
93 7,200 SF 0.1653 AC
92 7,481 SF 0.1717 AC
91 10,609 0.2436 AC
107 6,925 SF 0.1590 AC
BEGIN: 0+00.00
0+00
PI: 18+90.66
ALSIKE CLOVER DRIVE
50.00' R.O.W.
N05°52'43"W 919.35'
END: 22+20.61
CL/CL INTERSECTION CRIMSON CLOVER DRIVE STA: 22+20.61= ALSIKE CLOVER COURT STA: 14+52.82
SEE BELOW MATCH STA 9+00
S84°07'17"W 30.00'
END: 19+20.66
PRC: 1+96.36
PT: 21+69.40
111 17,892 SF 0.4108 AC
110 15,672 SF 0.3598 AC
109 16,692 SF 0.3832 AC
43 9,460 SF 0.2172 AC
42 6,999 SF 0.1607 AC
44 8,268 SF 0.1898 AC
45 6,325 SF 0.1452 AC
46 5,750 SF 0.1320 AC
47 5,750 SF 0.1320 AC
48 5,750 SF 0.1320 AC
49 6,757 SF 0.1551 AC
50 7,437 SF 0.1707 AC
PT: 9+71.31
CRIMSON CLOVER DR
SEE SHEET 4

0.2114 AC
91 10,609 SF 0.2436 AC
90 7,762 SF 0.1782 AC
89 7,200 SF 0.1653 AC
88 7,200 SF 0.1653 AC
87 7,200 SF 0.1653 AC
86 6,000 SF 0.1377 AC
85 6,908 SF 0.1586 AC
78 6,000 SF 0.1377 AC
77 8,108 SF 0.1861 AC
76 7,100 SF 0.1630 AC
75 7,100 SF 0.1630 AC
74 7,100 SF 0.1630 AC
73 7,100 SF 0.1630 AC
72 6,545 SF 0.1503 AC
0.2250 AC
70 9,106 SF 0.2090 AC
69 11,186 SF 0.2568 AC
SEE ABOVE MATCH STA 9+00
CRIMSON CLOVER DR
CL/CL INTERSECTION CRIMSON CLOVER DRIVE STA: 4+58.79= ALSIKE CLOVER COURT STA: 4+13.18
N61°22'52"W 777.57'
ALSIKE CLOVER DRIVE
Δ=55°30'09" R=200.00' L=193.74'
PC: 7+77.57
50.00' R.O.W.
BEGIN: 0+00.00
CL-ALSIKE CLOVER COURT STA: 0+00.00 N: 455359.4553 E: 187206.3372
END: 2+93.80
PC: 2+55.14
52 8,424 SF 0.1934 AC
53 6,948 SF 0.1595 AC
54 6,071 SF 0.1394 AC
55 5,750 SF 0.1320 AC
56 5,750 SF 0.1320 AC
57 5,750 SF 0.1320 AC
58 5,750 SF 0.1320 AC
59 5,750 SF 0.1320 AC
60 6,552 SF 0.1504 AC
61 10,320 SF 0.2369 AC
62 8,554 SF 0.1964 AC
63 8,554 SF 0.1964 AC
64 8,554 SF 0.1964 AC
65 8,554 SF 0.1964 AC
66 7,756 SF 0.1781 AC
20.00' PUBLIC UTILITY EASEMENT
67 11,458 S 0.2630 A
CRIMSON CLOVER DR
SEE SHEET 4

40 20 0 40 80
ORIGINAL SCALE: 1" = 40'

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

ENGINEER'S STATEMENT

PREPARED UNDER MY DIRECT SUPERVISION AND ON BEHALF OF JR ENGINEERING

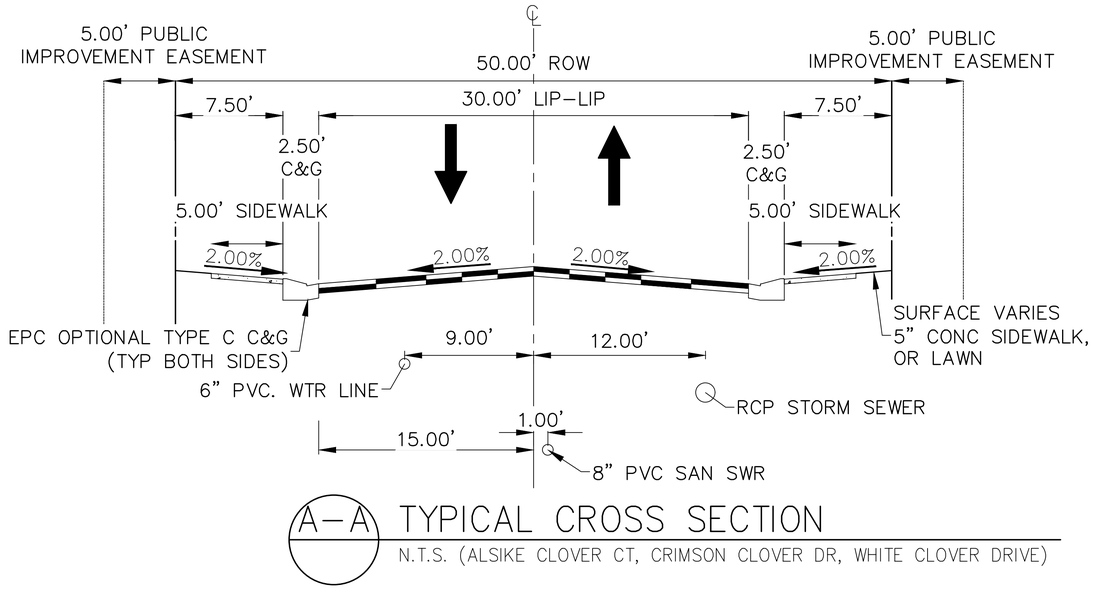
COLORADO REGISTERED MIKE A. BRAMLETT 32314 PROFESSIONAL ENGINEER

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

CLOVERLEAF SUBDIVISION
HORIZONTAL CONTROL PLAN

SHEET 5 OF 19
JOB NO. 25158.01

X:\25\10000.all\25158\01\Drawings\Sheet Dwgs\HC01.dwg, HC03, 5/11/2021 10:34:56 AM, BeckmanC



A-A TYPICAL CROSS SECTION

N.T.S. (ALSIKE CLOVER CT, CRIMSON CLOVER DR, WHITE CLOVER DRIVE)

Provide typical cross section of the gravel trail along leggins way

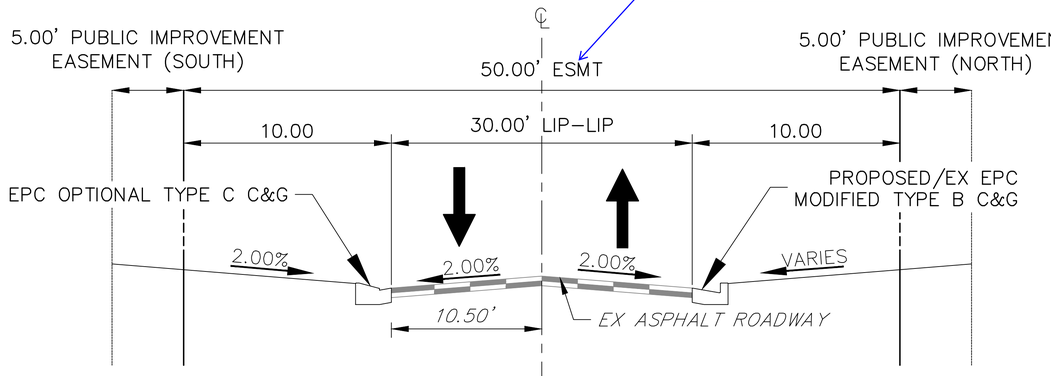
JR - Addressed

Add road classifications to all cross sections as well as proposed speed limit.

JR - Addressed

JR - Addressed

Update to tract



Update the station reference to correspond to sheet 8

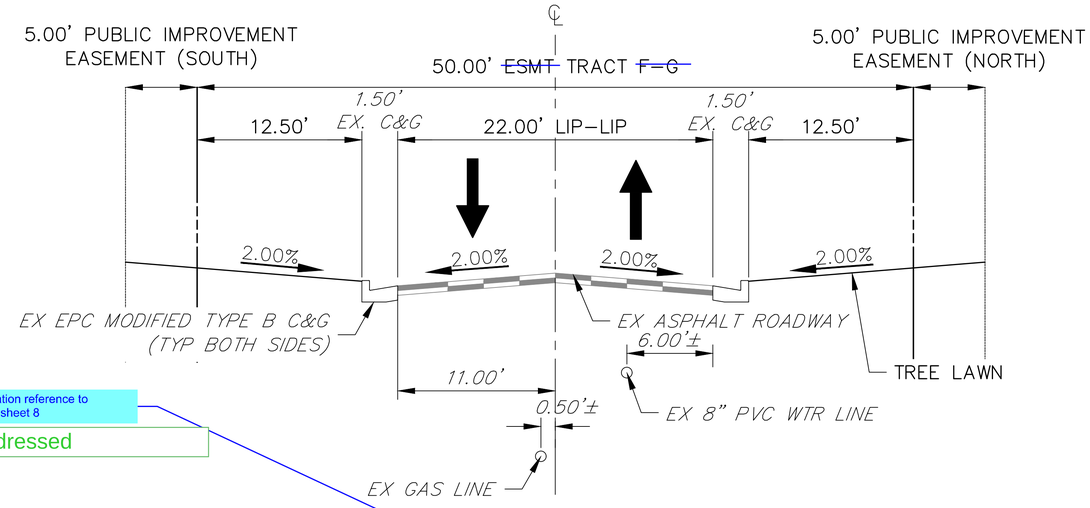
JR - Addressed

B-B CROSS SECTION - WALTERS POINT STA: 0+00-5+69.03±

N.T.S.

Identify as Private Road
Identify posted speed limit

JR - Addressed



Update the station reference to correspond to sheet 8

JR - Addressed

C-C CROSS SECTION - WALTERS POINT STA: 5+69.03 ±-7+32

N.T.S.

Identify as Private Road
Identify posted speed limit

JR - Addressed

Know what's below. Call before you dig.

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

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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	N/A	DESIGNED BY	N/A
V-SCALE	N/A	DRAWN BY	N/A
DATE	5/14/21	CHECKED BY	

CLOVERLEAF SUBDIVISION

TYPICAL SECTIONS

SHEET 6 OF 19

JOB NO. 25158.01

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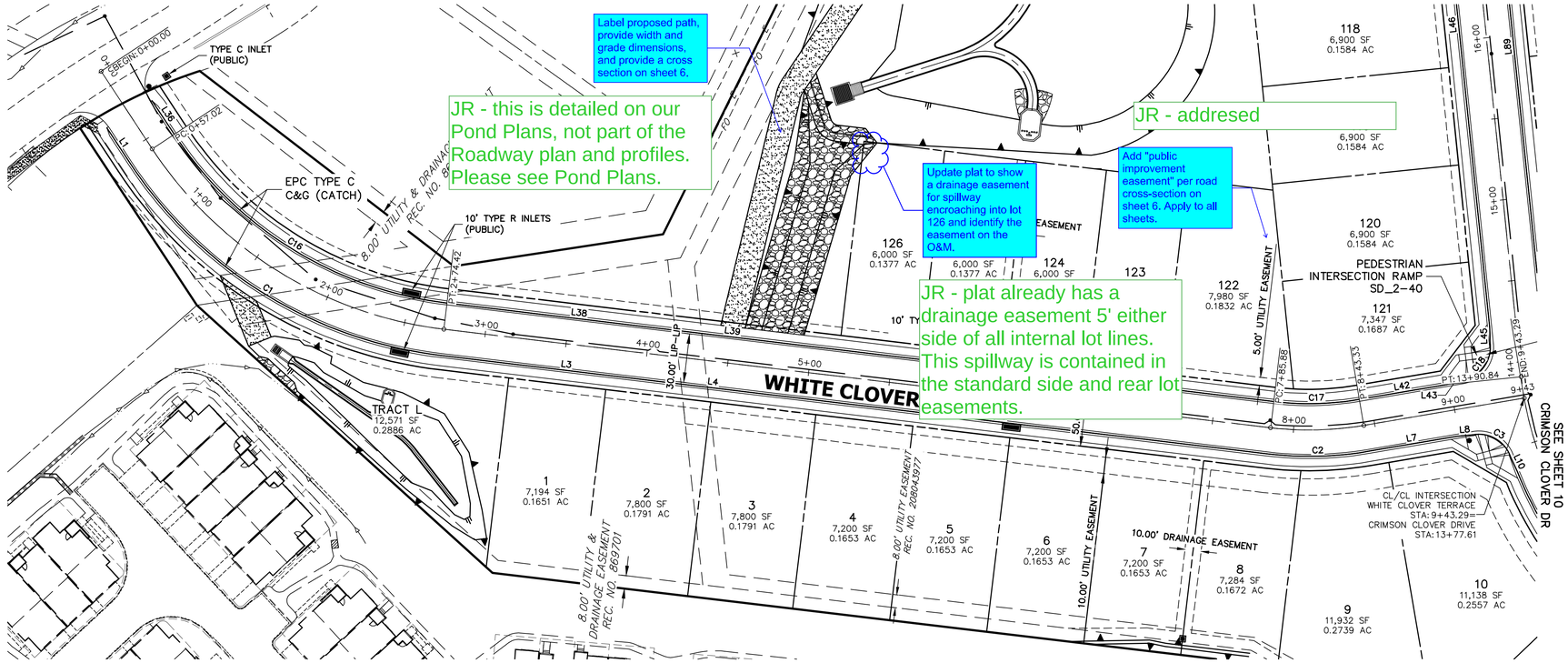
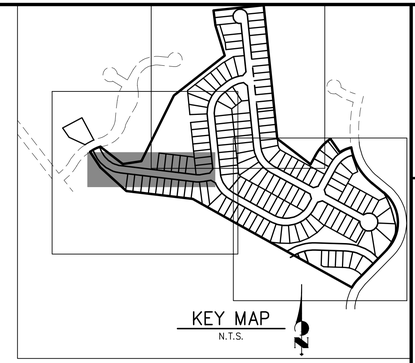
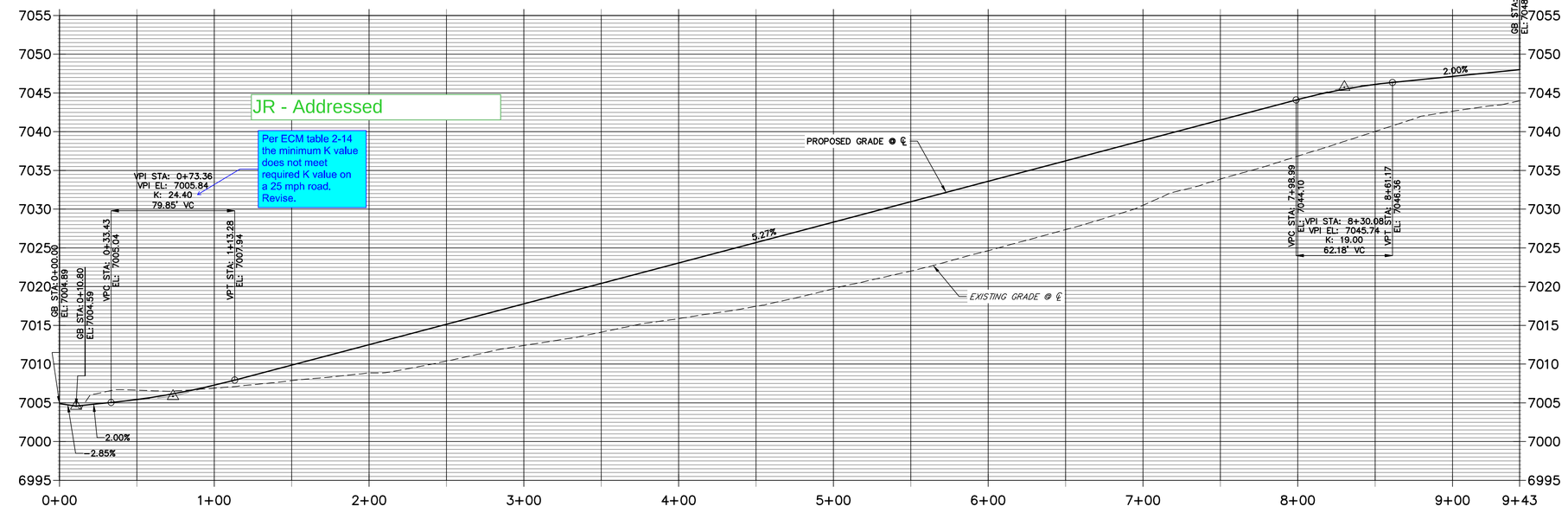


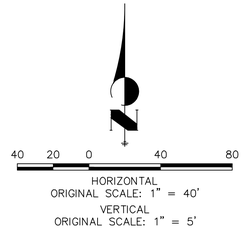


LINE TABLE		
LINE	BEARING	DISTANCE
L1	S33°23'09"E	26.11'
L3	S83°12'34"E	154.55'
L4	S83°12'34"E	27.00'
L5	S83°12'34"E	329.91'
L7	N80°19'53"E	55.44'
L8	N85°05'42"E	10.03'
L10	S24°49'55"E	10.05'
L36	S33°23'09"E	24.81'
L38	S83°12'34"E	162.67'
L39	S83°12'34"E	27.00'
L40	S83°12'34"E	321.79'
L42	N80°19'53"E	54.42'
L43	N75°34'04"E	10.03'
L45	N01°06'54"W	10.03'
L46	N05°52'43"W	374.67'
L89	N05°52'43"W	405.01'

CURVE TABLE			
CURVE	DELTA	RADIUS	LENGTH
C1	49°49'25"	266.17'	231.46'
C2	16°27'33"	216.17'	62.10'
C3	80°54'56"	20.50'	28.95'
C16	49°49'25"	233.83'	203.34'
C17	16°27'33"	183.83'	52.81'
C18	86°12'36"	20.50'	30.85'

WHITE CLOVER TERRACE PROFILE
STA 0+00.00 TO 9+43.29





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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JDESJARDIN@PROTERRACO.COM

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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"=40'
V-SCALE	1"=5'
DATE	5/14/21
DESIGNED BY	XXX
DRAWN BY	CRB
CHECKED BY	

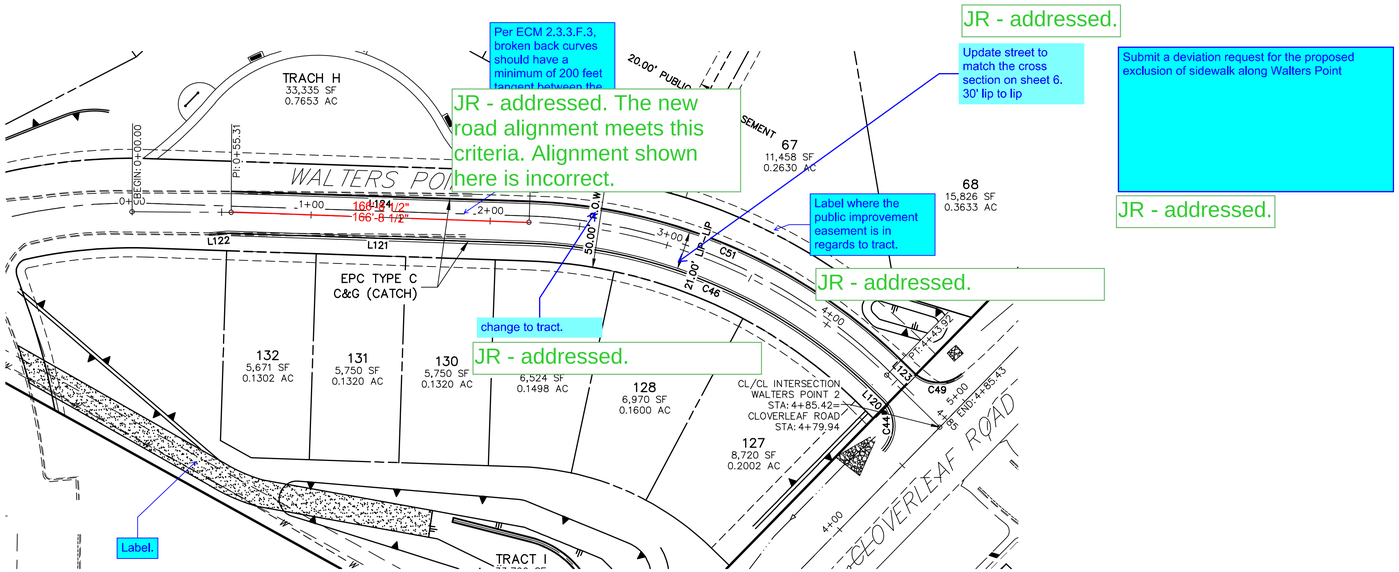
CLOVERLEAF SUBDIVISION

ROADWAY PLAN AND PROFILE

SHEET 7 OF 19

JOB NO. 25158.01

X:\25\10000.all\25158010\Drawings\Sheet Dwgs\SR01.dwg, SR01, 8/11/2021 10:35:38 AM, BrieAmanC



Per ECM 2.3.3.F.3, broken back curves should have a minimum of 200 feet tangent between the

JR - addressed. The new road alignment meets this criteria. Alignment shown here is incorrect.

JR - addressed.

Update street to match the cross section on sheet 6. 30' lip to lip

Submit a deviation request for the proposed exclusion of sidewalk along Walters Point

JR - addressed.

Label where the public improvement easement is in regards to tract.

JR - addressed.

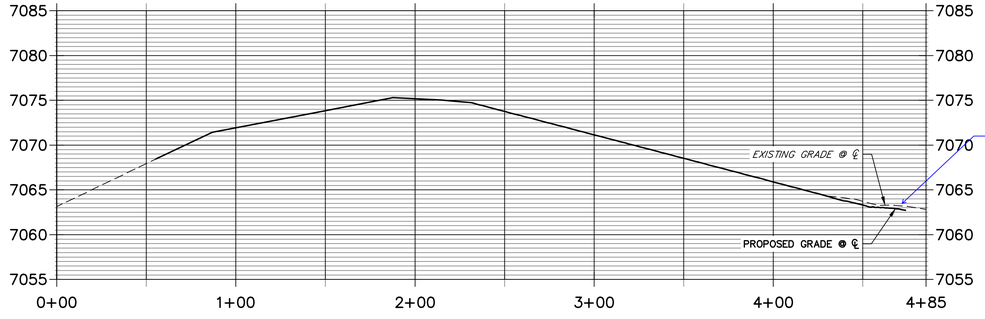
change to tract.

JR - addressed.

Label.

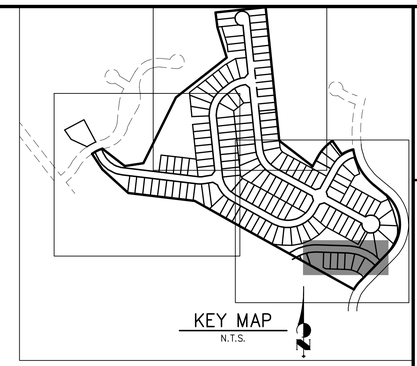
JR - Addressed, See pond plans for details.

WALTERS POINT 2 PROFILE
STA 0+00.00 TO 4+85.43



JR - addressed.

Show tie-in to existing road.



LINE TABLE		
LINE	BEARING	DISTANCE
L120	N45°38'56"W	8.02'
L121	N88°05'01"W	168.19'
L122	S85°50'05"W	10.05'
L123	N45°38'56"W	9.74'
L124	N88°05'01"W	166.44'

CURVE TABLE			
CURVE	DELTA	RADIUS	LENGTH
C44	89°27'57"	20.00'	31.23'
C46	42°26'06"	288.33'	213.55'
C49	85°05'23"	20.00'	29.70'
C51	42°26'06"	311.50'	230.71'

40 20 0 40 80

HORIZONTAL
ORIGINAL SCALE: 1" = 40'
VERTICAL
ORIGINAL SCALE: 1" = 5'

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COLORADO REGISTERED MIKE A. BRAMLETT 32314 PROFESSIONAL ENGINEER

MIKE A. BRAMLETT, P.E.
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No.	REVISION	BY	DATE

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V-SCALE	1"=5'
DATE	5/14/21
DESIGNED BY	XXX
DRAWN BY	CRB
CHECKED BY	

CLOVERLEAF SUBDIVISION

ROADWAY PLAN AND PROFILE

SHEET 8 OF 19

JOB NO. 25158.01

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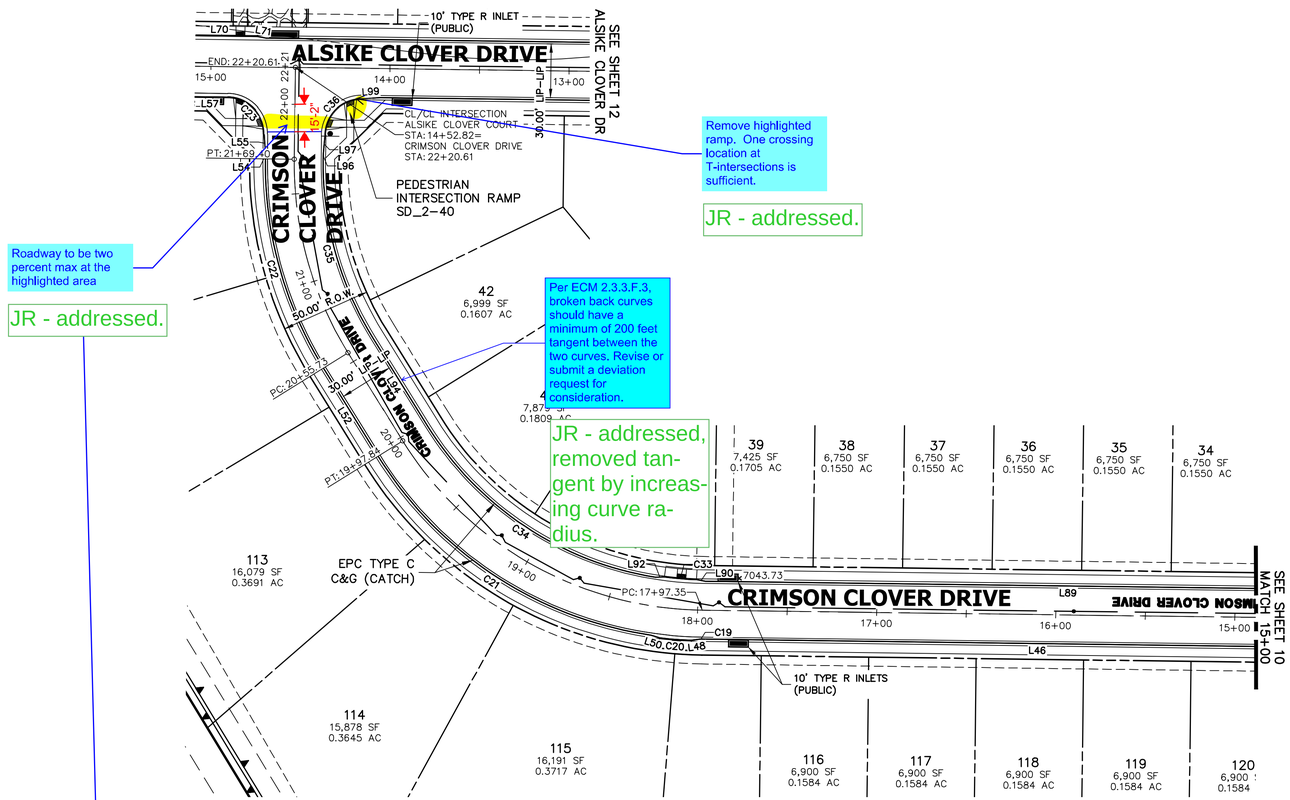

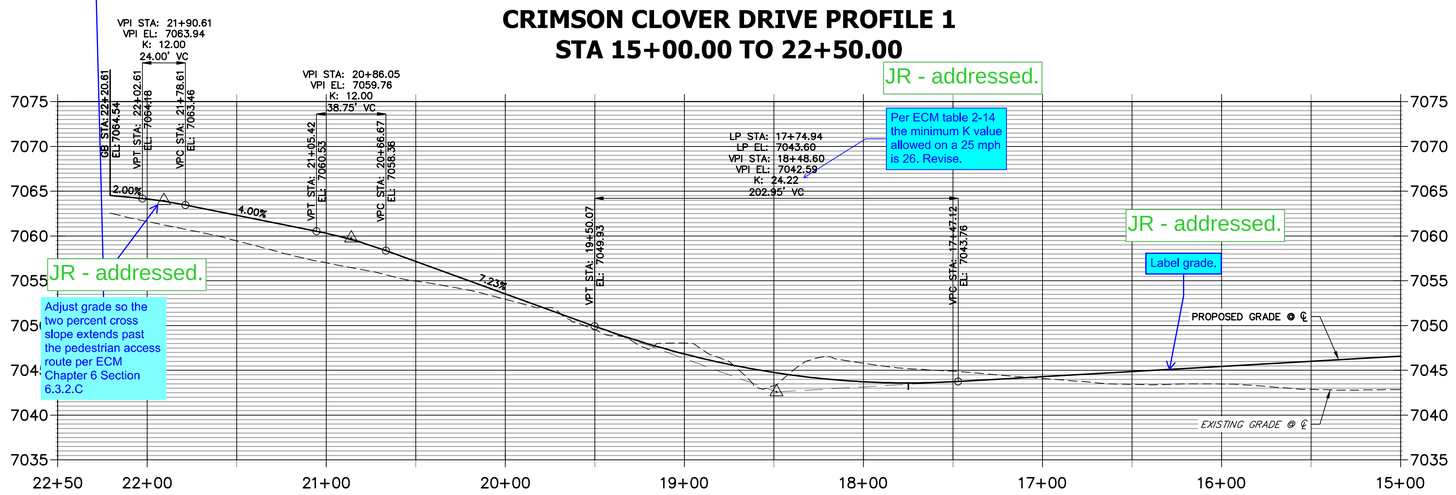

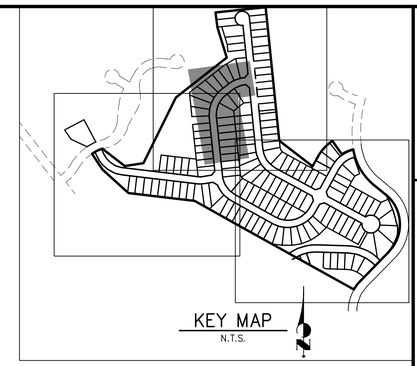

LINE TABLE		
LINE	BEARING	DISTANCE
L46	N05°52'43"W	374.67'
L48	N14°25'01"W	5.08'
L50	N10°30'21"E	5.06'
L52	N51°33'29"E	57.89'
L54	N84°07'17"E	3.71'
L55	N79°21'28"E	10.03'
L57	N05°52'43"W	19.90'
L70	S05°52'43"E	42.33'
L71	S03°33'50"W	5.07'
L89	N05°52'43"W	405.01'
L90	N03°58'59"E	5.06'
L92	N07°47'48"W	5.08'
L94	N51°33'29"E	57.89'
L96	N84°07'17"E	3.71'
L97	N88°53'06"E	10.03'
L99	S10°38'32"E	10.03'

CURVE TABLE			
CURVE	DELTA	RADIUS	LENGTH
C19	0°14'34"	216.17'	0.92'
C20	4°40'36"	217.00'	17.71'
C21	49°52'18"	216.17'	188.16'
C22	32°33'48"	216.17'	122.86'
C23	90°00'00"	20.50'	32.20'
C33	5°39'00"	183.00'	18.05'
C34	49°07'54"	183.83'	157.64'
C35	32°33'48"	183.83'	104.48'
C36	90°00'00"	20.50'	32.20'

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H-SCALE	1"=40'
V-SCALE	1"=5'
DATE	5/14/21
DESIGNED BY	XXX
DRAWN BY	CRB
CHECKED BY	

CLOVERLEAF SUBDIVISION

ROADWAY PLAN AND PROFILE

40 20 0 40 80
HORIZONTAL
ORIGINAL SCALE: 1" = 40'
VERTICAL
ORIGINAL SCALE: 1" = 5'

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

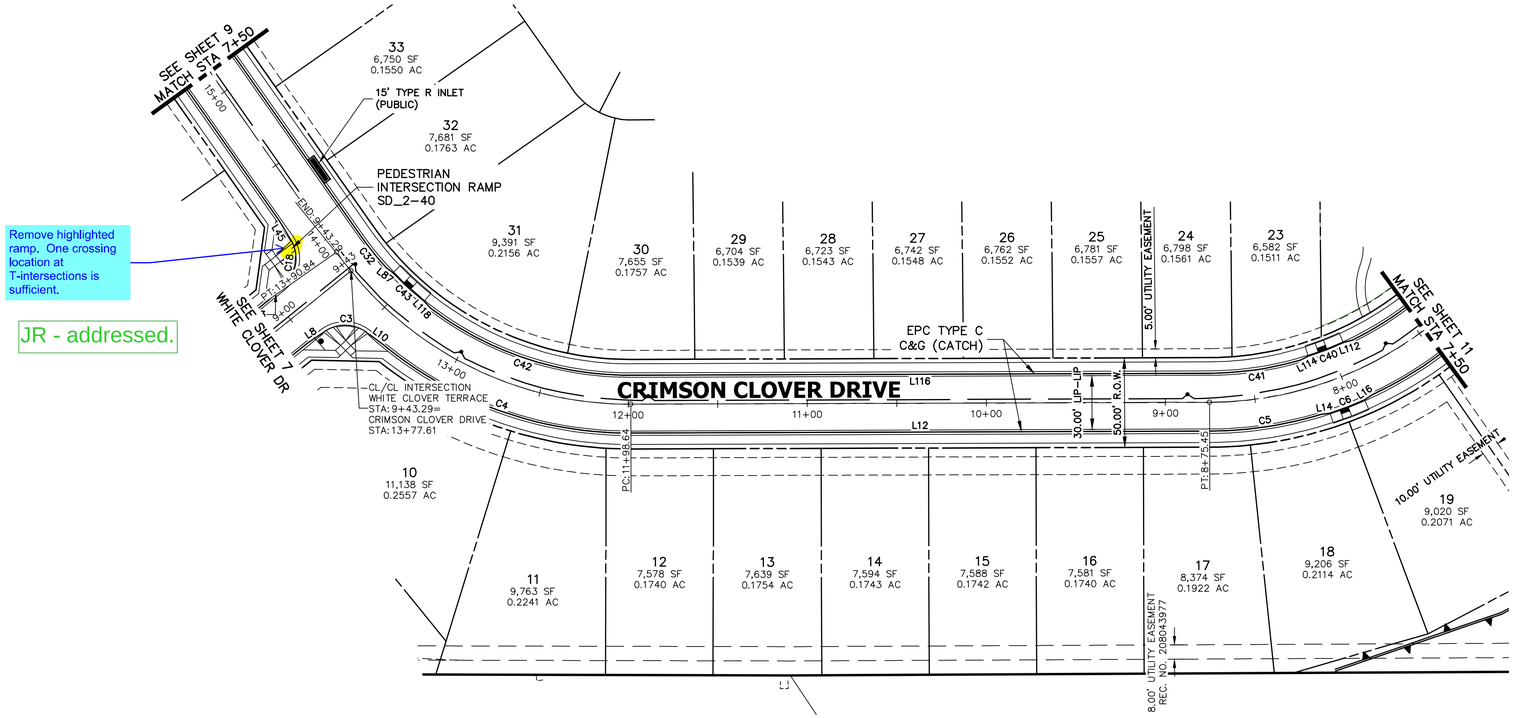
MIKE A. BRAMLETT, P.E.
COLORADO P.E. 32314
FOR AND ON BEHALF OF JR ENGINEERING, LLC

DATE

SHEET 9 OF 19

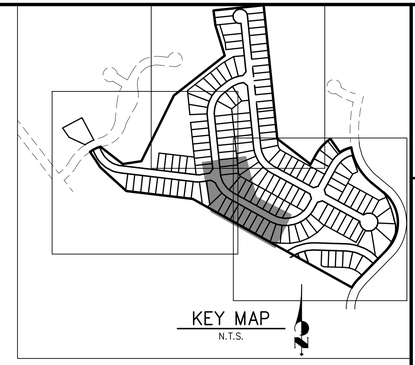
JOB NO. 25158.01

X:\25\10000.all\25158\01\Drawings\Sheet Dwgs\Sht1.dwg, Sht3, 5/11/2021 10:36:00 AM, BeckmanC



Remove highlighted ramp. One crossing location at T-intersections is sufficient.

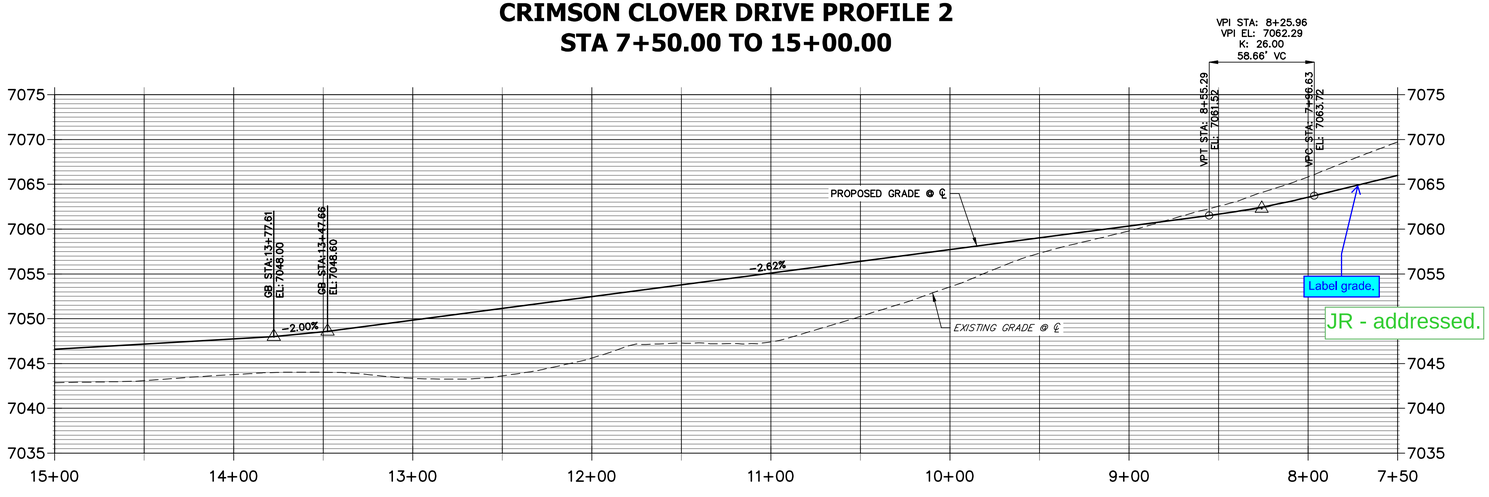
JR - addressed.



LINE TABLE		
LINE	BEARING	DISTANCE
L8	N85°05'42"E	10.03'
L10	S24°49'55"E	10.05'
L12	S60°57'58"E	323.28'
L14	S68°52'04"E	5.06'
L16	N85°23'23"E	5.06'
L43	N75°34'04"E	10.03'
L45	N01°06'54"W	10.03'
L87	N23°14'32"W	5.06'
L112	N76°27'34"W	5.08'
L114	N87°10'53"W	5.08'
L116	N60°57'58"W	323.28'
L118	N13°15'46"W	5.06'

CURVE TABLE			
CURVE	DELTA	RADIUS	LENGTH
C3	80°54'56"	20.50'	28.95'
C4	39°32'13"	216.17'	149.17'
C5	16°43'16"	216.17'	63.09'
C6	5°27'47"	217.00'	20.69'
C18	86°12'36"	20.50'	30.85'
C32	7°06'09"	183.83'	22.79'
C40	6°35'35"	183.00'	21.06'
C41	15°59'31"	183.83'	51.31'
C42	37°24'52"	183.83'	120.04'
C43	7°25'38"	182.99'	23.72'

CRIMSON CLOVER DRIVE PROFILE 2
STA 7+50.00 TO 15+00.00



Label grade.

JR - addressed.

40 20 0 40 80

HORIZONTAL
ORIGINAL SCALE: 1" = 40'
VERTICAL
ORIGINAL SCALE: 1" = 5'

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No.	REVISION	BY	DATE

H-SCALE 1"=40'
V-SCALE 1"=5'
DATE 5/14/21
DESIGNED BY XXX
DRAWN BY CRB
CHECKED BY

CLOVERLEAF SUBDIVISION

ROADWAY PLAN AND PROFILE

SHEET 10 OF 19

JOB NO. 25158.01

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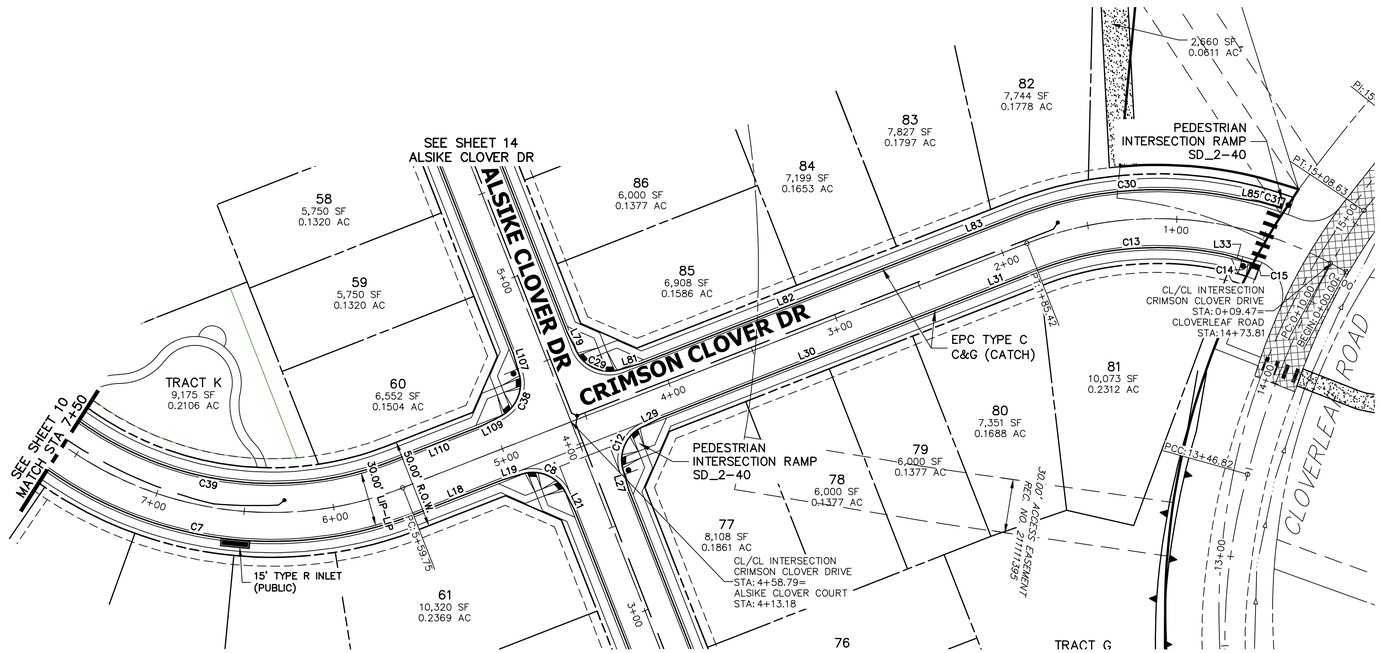
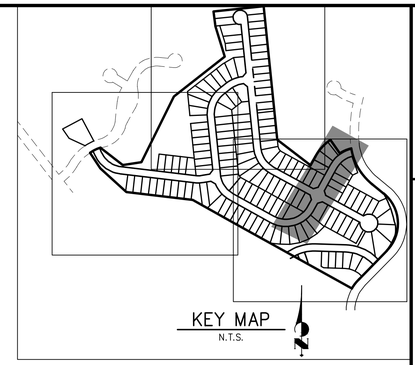
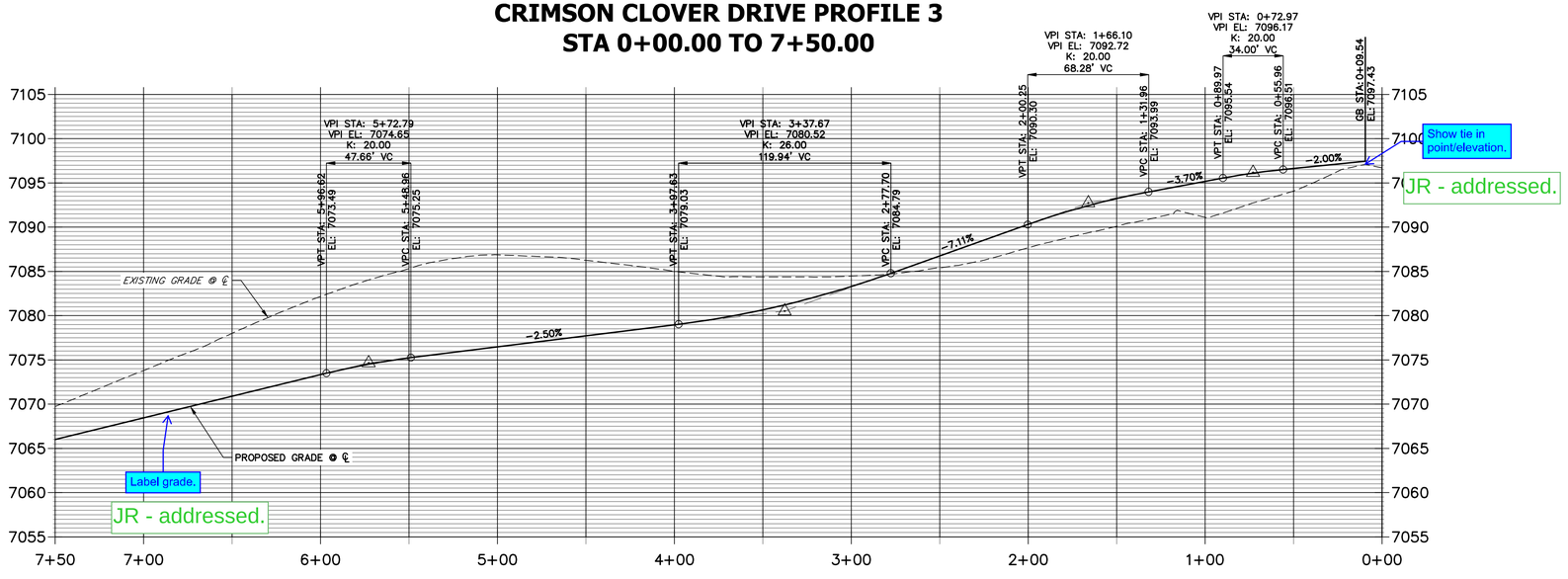


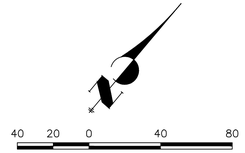


LINE TABLE		
LINE	BEARING	DISTANCE
L18	N28°37'08"E	53.45'
L19	N33°22'57"E	10.03'
L21	S66°08'41"E	10.03'
L27	N56°37'03"W	10.03'
L29	N23°51'19"E	10.03'
L30	N28°37'08"E	178.15'
L31	N28°37'08"E	47.73'
L33	N68°45'34"E	10.06'
L79	S66°08'41"E	10.03'
L81	N33°22'57"E	10.03'
L82	N28°37'08"E	178.15'
L83	N28°37'08"E	47.73'
L85	N59°01'03"E	10.06'
L107	S56°37'03"E	10.03'
L109	S23°51'19"W	10.03'
L110	S28°37'08"W	53.45'

CURVE TABLE			
CURVE	DELTA	RADIUS	LENGTH
C7	65°35'25"	216.17'	247.46'
C8	90°00'00"	20.50'	32.20'
C12	90°00'00"	20.50'	32.20'
C13	33°49'29"	183.83'	108.53'
C14	2°03'15"	183.00'	6.56'
C15	7°03'10"	18.00'	2.22'
C29	90°00'00"	20.50'	32.20'
C30	33°49'29"	216.17'	127.62'
C31	3°33'44"	217.00'	13.49'
C38	90°00'00"	20.50'	32.20'
C39	64°41'55"	183.83'	207.59'

CRIMSON CLOVER DRIVE PROFILE 3
STA 0+00.00 TO 7+50.00





Know what's below. Call before you dig.

ENGINEER'S STATEMENT

PREPARED UNDER MY DIRECT SUPERVISION AND ON BEHALF OF JR ENGINEERING

32314

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

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

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

No.	REVISION	BY	DATE

H-SCALE 1"=40'
V-SCALE 1"=5'
DATE 5/14/21
DESIGNED BY XXX
DRAWN BY CRB
CHECKED BY

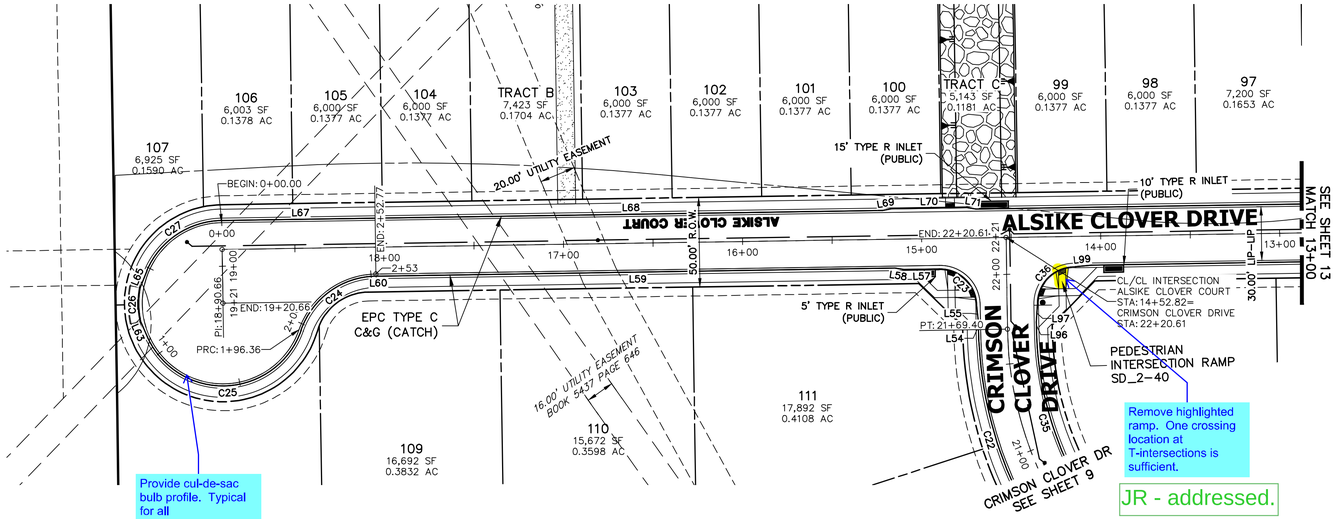
CLOVERLEAF SUBDIVISION

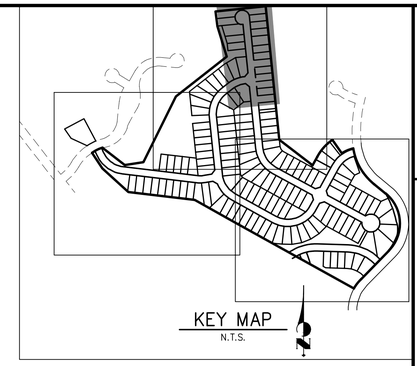
ROADWAY PLAN AND PROFILE

SHEET 11 OF 19

JOB NO. 25158.01

X:\25100\00.all\25158\01Drawings\Sheet Dwgs\SR01.dwg, SR05, 5/11/2021 10:35:20 AM, BreAnnaC

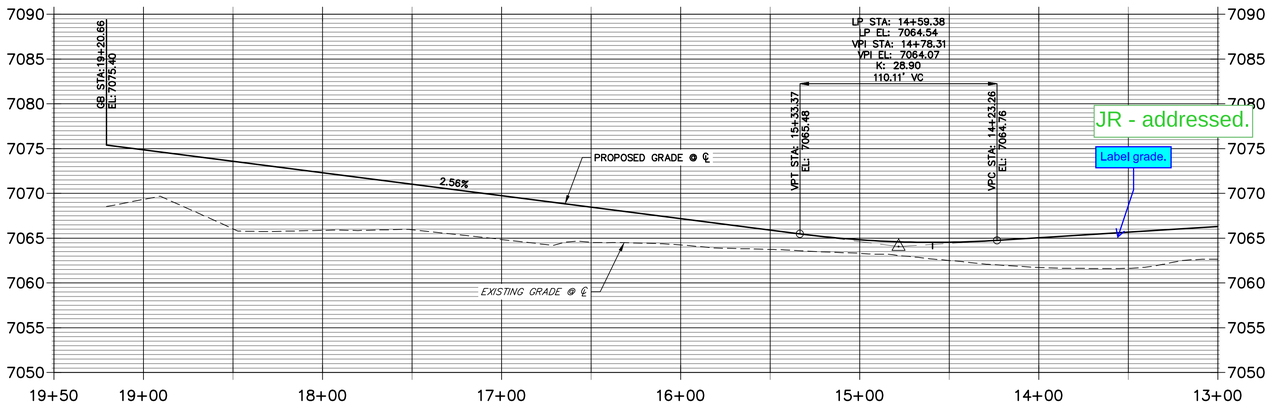




LINE TABLE		
LINE	BEARING	DISTANCE
L54	N84°07'17"E	3.71'
L55	N79°21'28"E	10.03'
L57	N05°52'43"W	19.90'
L58	N03°35'02"E	5.07'
L59	N05°52'43"W	287.13'
L60	N05°52'43"W	2.64'
L63	N61°32'49"E	10.36'
L65	S73°25'41"E	10.36'
L67	S05°52'42"E	88.32'
L68	S05°52'42"E	280.69'
L69	S15°19'07"E	5.07'
L70	S05°52'43"E	42.33'
L71	S03°33'50"W	5.07'
L96	N84°07'17"E	3.71'
L97	N88°53'06"E	10.03'
L99	S10°38'32"E	10.03'

CURVE TABLE			
CURVE	DELTA	RADIUS	LENGTH
C22	32°33'48"	216.17'	122.86'
C23	90°00'00"	20.50'	32.20'
C24	70°00'37"	45.00'	54.99'
C25	135°38'05"	46.17'	109.30'
C26	23°09'44"	47.00'	19.00'
C27	65°44'55"	46.17'	52.98'
C35	32°33'48"	183.83'	104.48'
C36	90°00'00"	20.50'	32.20'

ALSKE CLOVER COURT PROFILE 1
STA 13+00.00 TO 19+50.00



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ENGINEER'S STATEMENT

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32314

MIKE A. BRAMLETT, P.E.
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Fort Collins 970-491-9888 • www.jrengineering.com

No.	REVISION	BY	DATE

H-SCALE	1"=40'
V-SCALE	1"=5'
DATE	5/14/21
DESIGNED BY	XXX
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CHECKED BY	

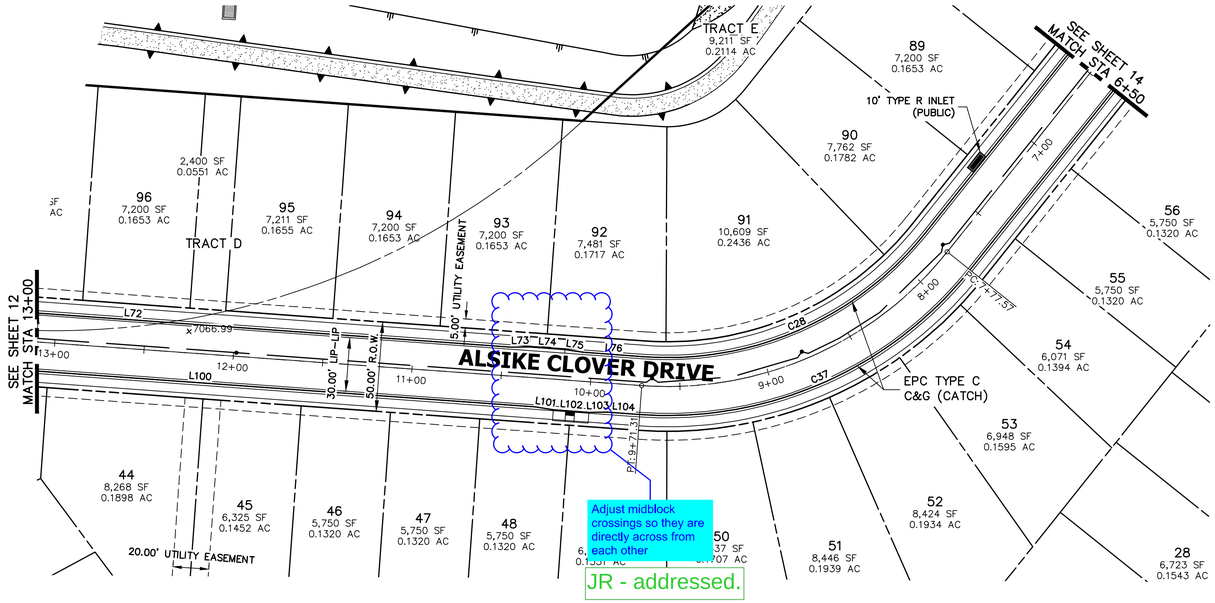
CLOVERLEAF SUBDIVISION

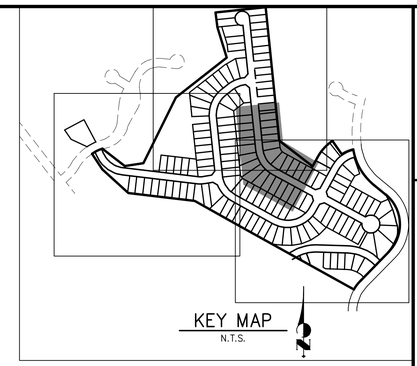
ROADWAY PLAN AND PROFILE

SHEET 12 OF 19

JOB NO. 25158.01

X:\25100\00\.dir\25158D1\Drawings\Sheet Dwgs\SR01.dwg, SR06, 5/11/2021 10:35:33 AM, BreAnnaC

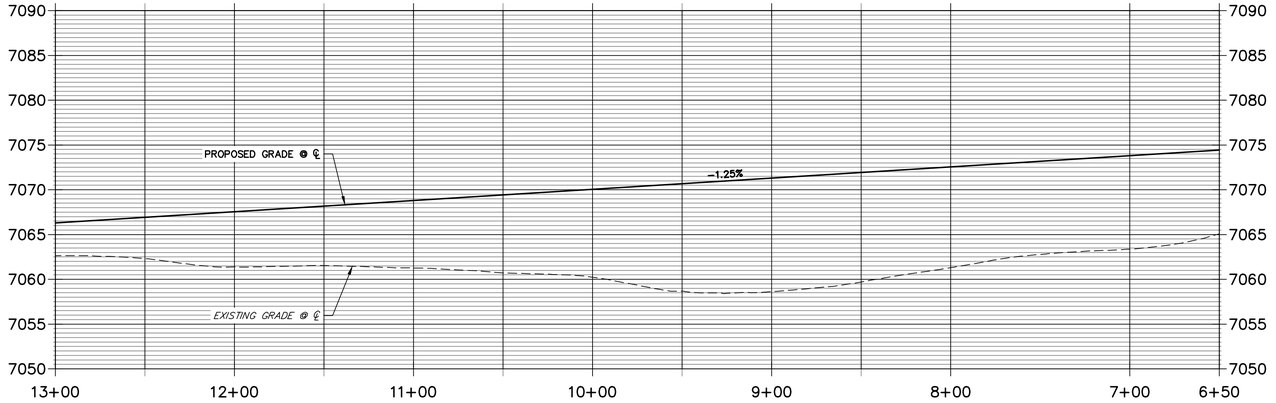




LINE TABLE		
LINE	BEARING	DISTANCE
L72	S05°52'42"E	423.86'
L73	S10°38'26"E	10.03'
L74	S05°52'43"E	20.00'
L75	S01°06'56"E	10.03'
L76	S05°52'42"E	34.15'
L100	S05°52'43"E	375.66'
L101	S01°06'54"E	10.03'
L102	S05°52'43"E	20.00'
L103	S10°38'32"E	10.03'
L104	S05°52'43"E	18.35'

CURVE TABLE			
CURVE	DELTA	RADIUS	LENGTH
C28	55°30'09"	183.83'	178.08'
C37	55°30'09"	216.17'	209.40'

ALSIKE CLOVER COURT PROFILE 2
STA 6+50.00 TO 13+00.00



40 20 0 40 80

HORIZONTAL
ORIGINAL SCALE: 1" = 40'
VERTICAL
ORIGINAL SCALE: 1" = 5'

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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
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CHECKED BY	

CLOVERLEAF SUBDIVISION

ROADWAY PLAN AND PROFILE

SHEET 13 OF 19

JOB NO. 25158.01

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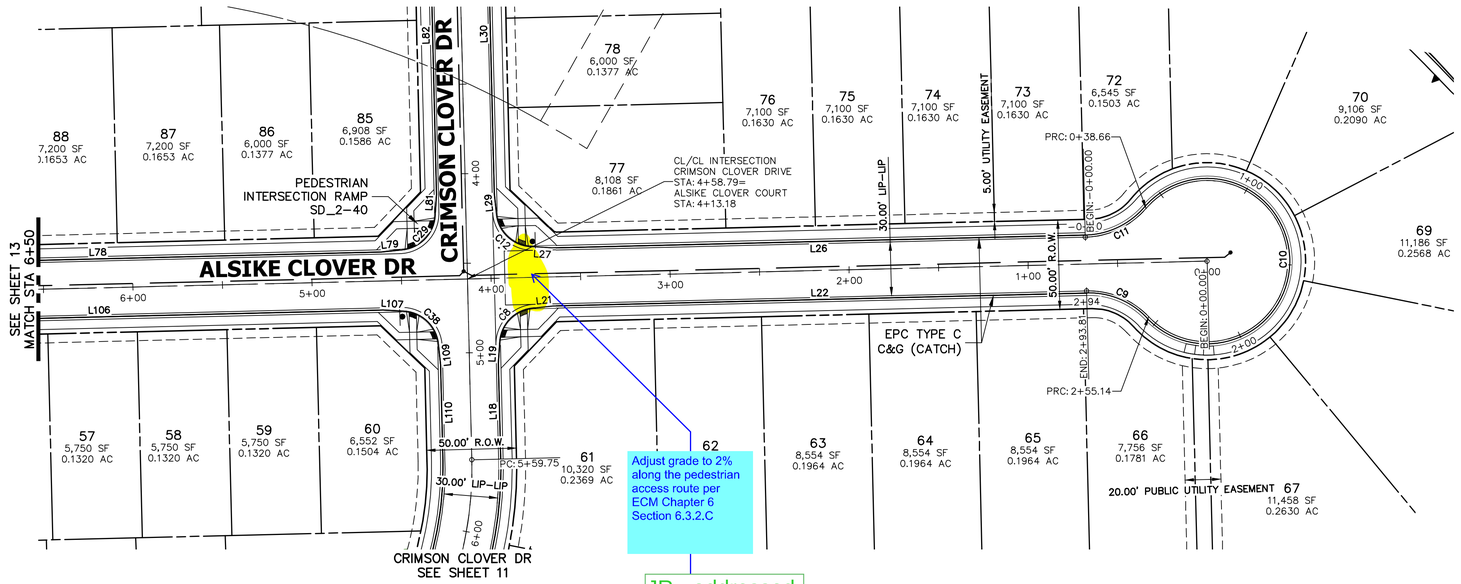
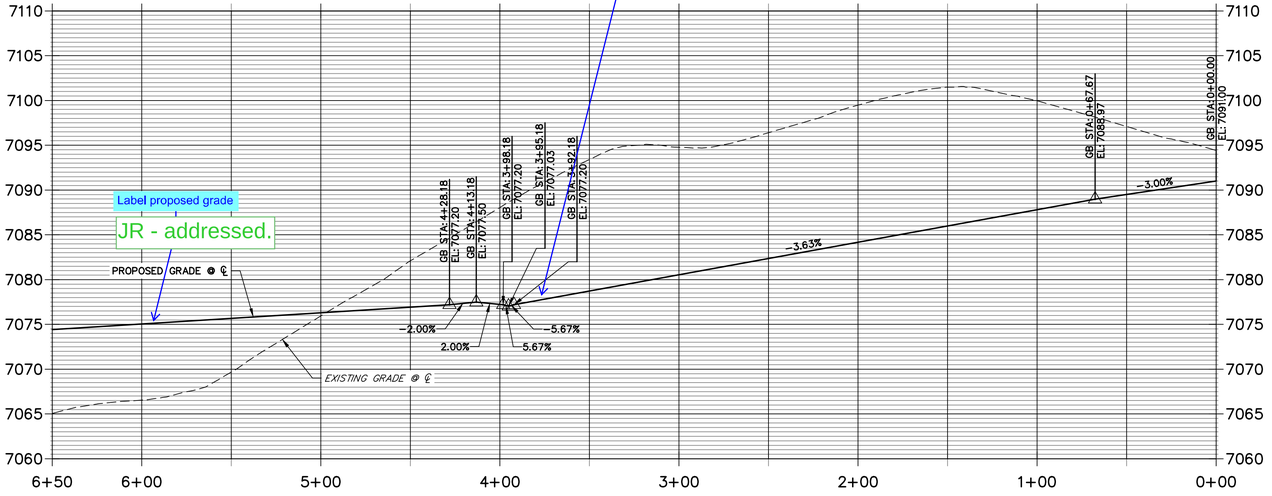
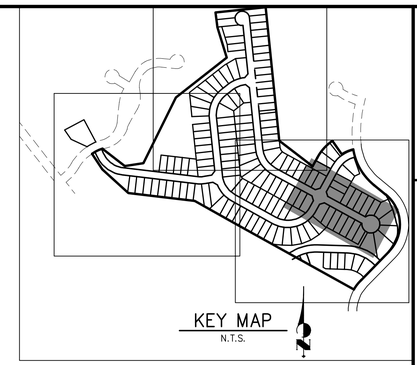


JR - addressed.

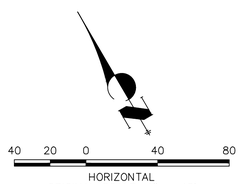
ALSIKE CLOVER COURT PROFILE 3
STA 0+00.00 TO 6+50.00





LINE TABLE		
LINE	BEARING	DISTANCE
L18	N28°37'08"E	53.45'
L19	N33°22'57"E	10.03'
L21	S66°08'41"E	10.03'
L22	S61°22'52"E	298.08'
L26	N61°22'52"W	298.08'
L27	N56°37'03"W	10.03'
L29	N23°51'19"E	10.03'
L30	N28°37'08"E	178.15'
L78	S61°22'52"E	316.88'
L79	S66°08'41"E	10.03'
L81	N33°22'57"E	10.03'
L82	N28°37'08"E	178.15'
L106	S61°22'52"E	316.88'
L107	S56°37'03"E	10.03'
L109	S23°51'19"W	10.03'
L110	S28°37'08"W	53.45'

CURVE TABLE			
CURVE	DELTA	RADIUS	LENGTH
C8	90°00'00"	20.50'	32.20'
C9	47°51'46"	45.00'	37.59'
C10	275°43'32"	46.17'	222.18'
C11	47°51'46"	45.00'	37.59'
C12	90°00'00"	20.50'	32.20'
C29	90°00'00"	20.50'	32.20'
C38	90°00'00"	20.50'	32.20'



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

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

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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"=40'	DESIGNED BY	XXX
V-SCALE	1"=5'	DRAWN BY	CRB
DATE	5/14/21	CHECKED BY	

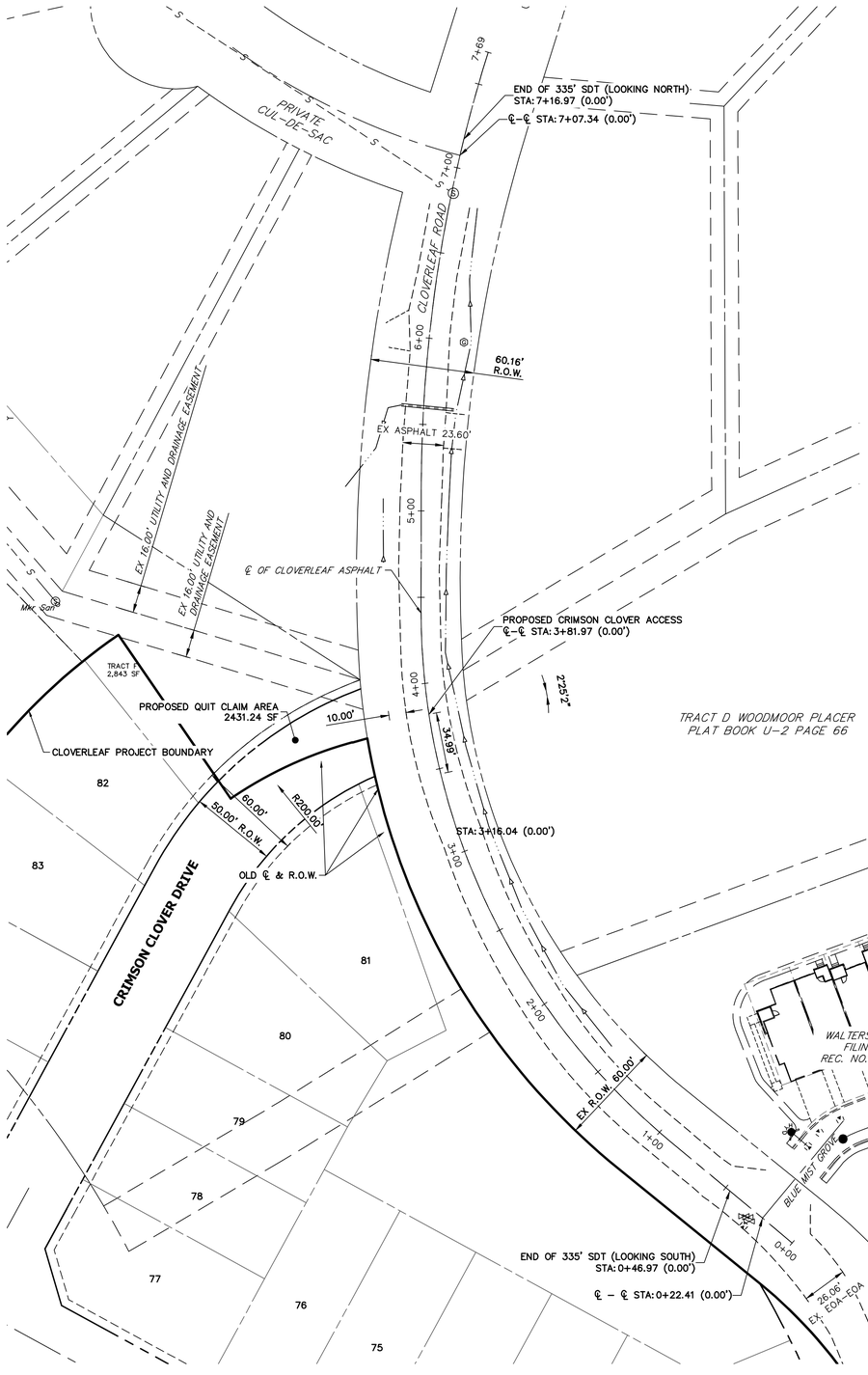
CLOVERLEAF SUBDIVISION

ROADWAY PLAN AND PROFILE

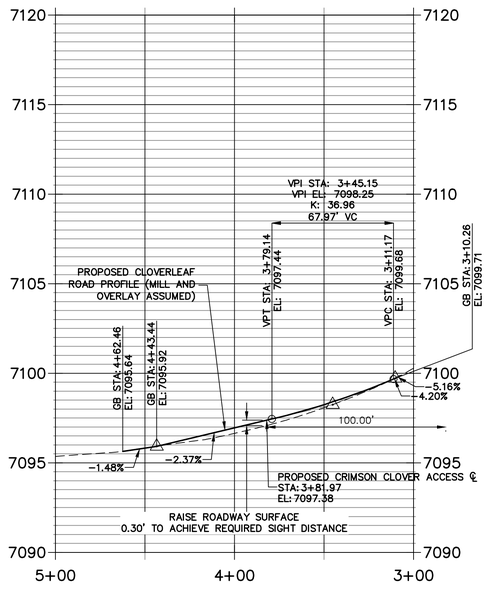
SHEET 14 OF 19

JOB NO. 25158.01

X:\25\10000.all\25158010\Drawings\Sheet Dwgs\SR01.dwg, SR05_5/11/2021 10:36:50 AM, BeekmanC

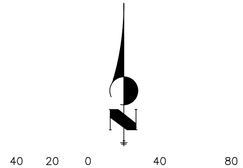


CLOVERLEAD ROAD PROFILE
STA 3+00.00 TO 5+00.00



Provide cloverleaf road profile from 0+00 to 7+00.
Show the intersection line of sight on the profile.

JR - addressed.



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ENGINEER'S STATEMENT

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32314

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No.	REVISION	BY	DATE

H-SCALE	1"=40'
V-SCALE	1"=4'
DATE	5/14/21
DESIGNED BY	XXX
DRAWN BY	CRB
CHECKED BY	

CLOVERLEAF SUBDIVISION
MILL AND OVERLAY PLAN

SHEET 15 OF 19

JOB NO. 25158.01

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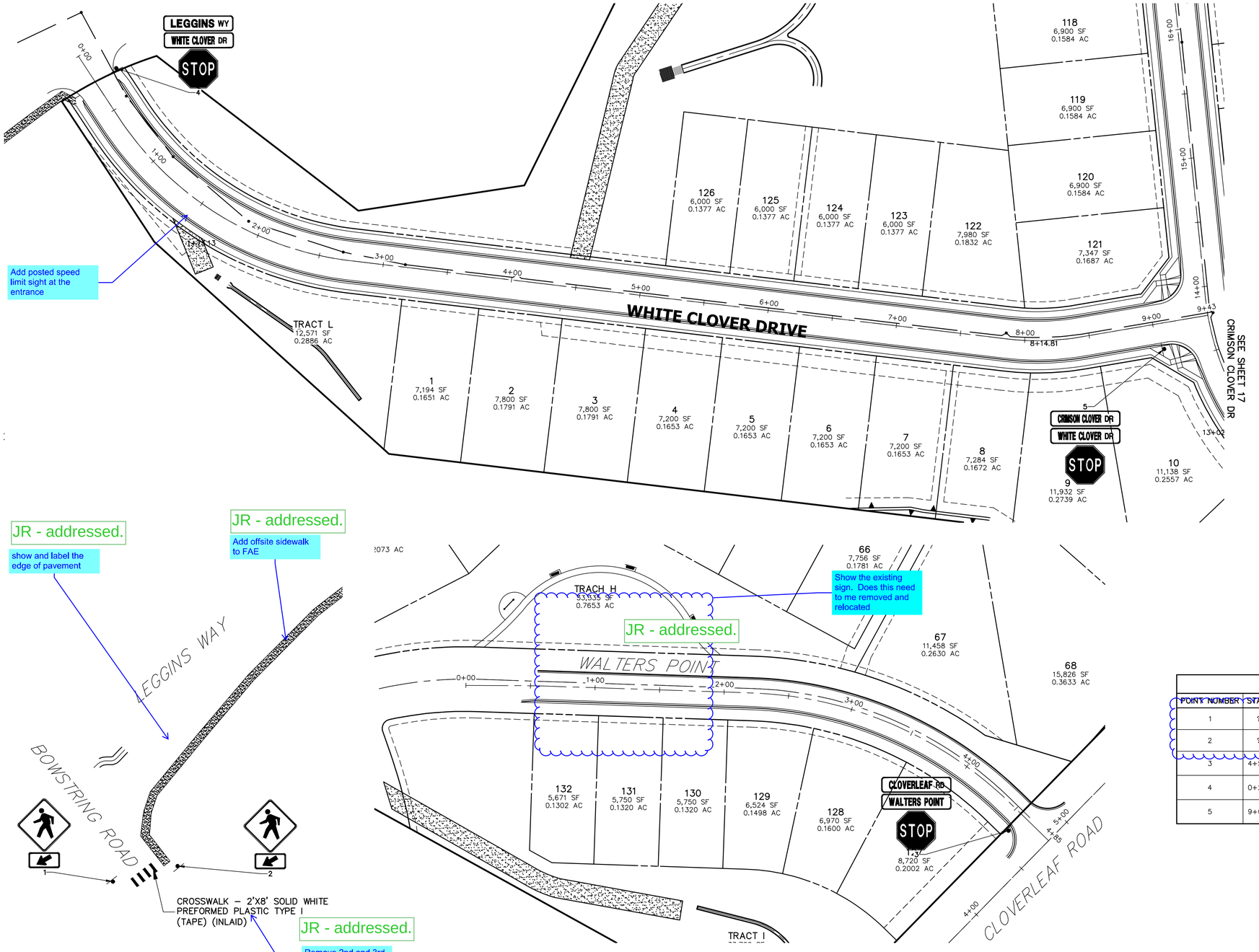
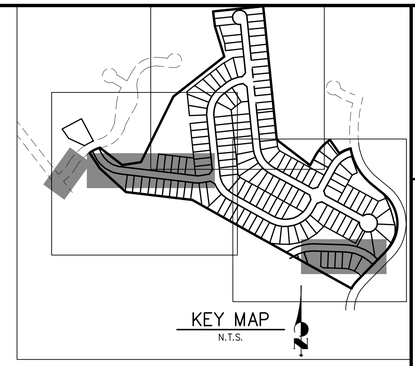


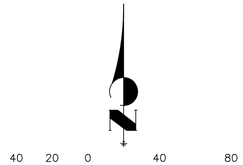


JR - addressed.

Fill out.

SIGN TABULATION

POINT NUMBER	STATION	OFFSET	ALIGNMENT	NOTES	DESCRIPTION
1	???	???' (???)	???		30X30 W11-2 24X12 W16-7P
2	???	???' (???)	???		30X30 W11-2 24X12 W16-7P
3	4+57.82	16.08' (RT)	WALTERS POINT 2		30X30 R1-1 54X12 D3-1 (X4)
4	0+23.87	19.35' (LT)	WHITE CLOVER TERRACE		30X30 R1-1 54X12 D3-1 (X4)
5	9+05.59	20.03' (RT)	WHITE CLOVER TERRACE		30X30 R1-1 54X12 D3-1 (X4)



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COLORADO REGISTERED MIKE A. BRAMLETT 32314 PROFESSIONAL ENGINEER

MIKE A. BRAMLETT, P.E. DATE
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H-SCALE	1"=40'
V-SCALE	N/A
DATE	5/14/21
DESIGNED BY	XXX
DRAWN BY	CRB
CHECKED BY	

CLOVERLEAF SUBDIVISION

SIGNAGE AND STRIPING PLAN

SHEET 16 OF 19

JOB NO. 25158.01

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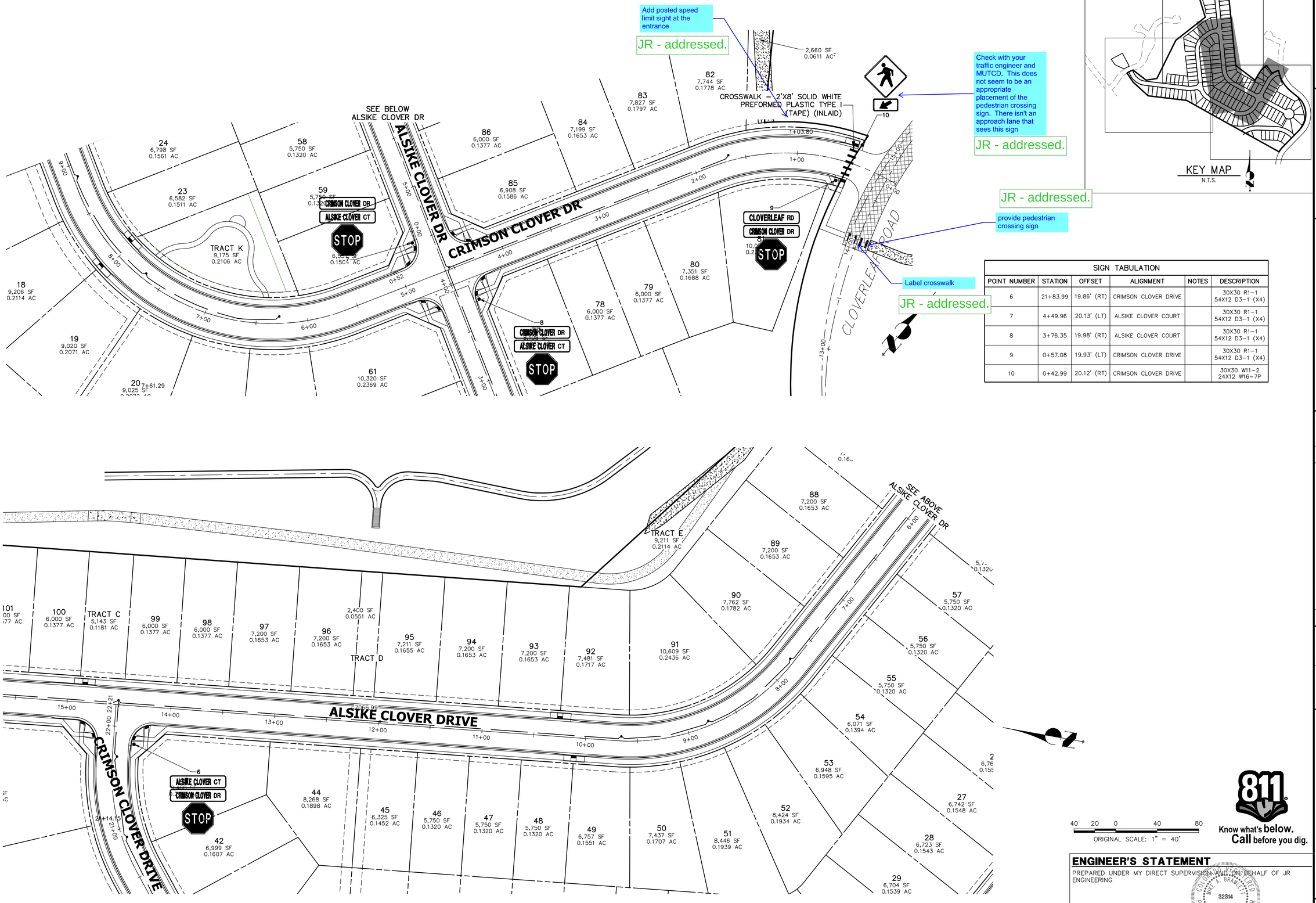

SIGN TABULATION					
POINT NUMBER	STATION	OFFSET	ALIGNMENT	NOTES	DESCRIPTION
6	21+83.99	19.86' (RT)	CRIMSON CLOVER DRIVE		30X30 R1-1 54X12 D3-1 (X4)
7	4+49.96	20.13' (LT)	ALSIKE CLOVER COURT		30X30 R1-1 54X12 D3-1 (X4)
8	3+76.35	19.98' (RT)	ALSIKE CLOVER COURT		30X30 R1-1 54X12 D3-1 (X4)
9	0+57.08	19.93' (LT)	CRIMSON CLOVER DRIVE		30X30 R1-1 54X12 D3-1 (X4)
10	0+42.99	20.12' (RT)	CRIMSON CLOVER DRIVE		30X30 W11-2 24X12 W16-7P

40 20 0 40 80
ORIGINAL SCALE: 1" = 40'

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V-SCALE	N/A
DATE	5/14/21
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DRAWN BY	CRB
CHECKED BY	

CLOVERLEAF SUBDIVISION

SIGNAGE AND STRIPING PLAN

SHEET 17 OF 19

JOB NO. 25158.01

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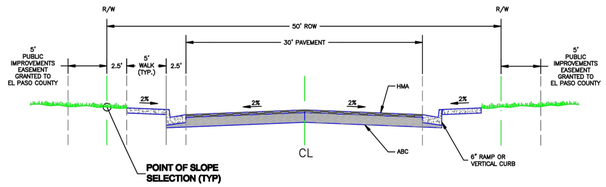
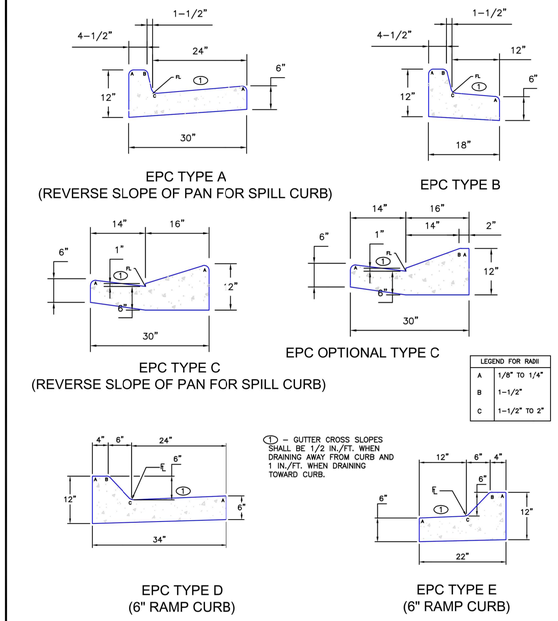


Roadway Design Parameters
Design Speed: 25 mph
Posted Speed: 25 mph
Maximum ADT: 3,000
Design Vehicle: WB-50

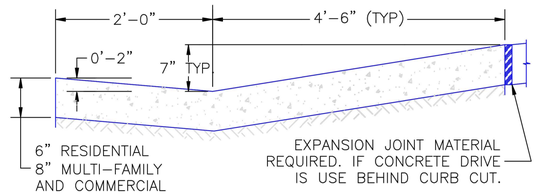
SCALE: NOT TO SCALE

12/31/05 DATE APPROVED: John A. McCarty DEPARTMENT OF TRANSPORTATION	Urban Local Roadway Standard Cross Section REVISION DATE: 12/22/05 FILE NAME: SD_2-2	EL PASO COUNTY DEPARTMENT OF TRANSPORTATION

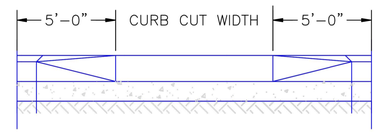


SCALE: NOT TO SCALE

8/11/11 DATE APPROVED: André P. Brackin DEPARTMENT OF TRANSPORTATION	Typical Curb and Gutter Details Standard Drawing REVISION DATE: 12/8/15 FILE NAME: SD_2-20	EL PASO COUNTY DEPARTMENT OF TRANSPORTATION



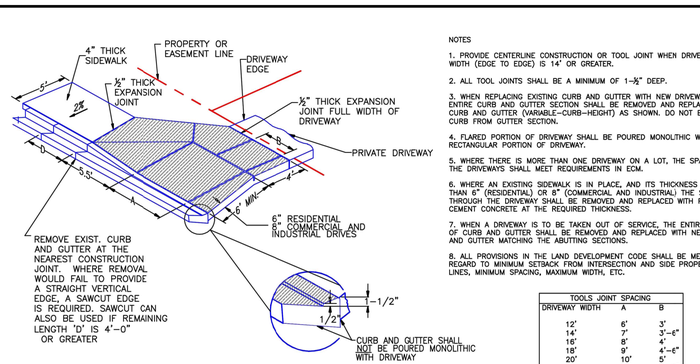
CROSS SECTION



FRONT VIEW

SCALE: NOT TO SCALE

8/11/11 DATE APPROVED: André P. Brackin DEPARTMENT OF TRANSPORTATION	Driveway Cut Detail Standard Drawing REVISION DATE: 11/10/04 FILE NAME: SD_2-23	EL PASO COUNTY DEPARTMENT OF TRANSPORTATION



NOTES

1. PROVIDE CENTERLINE CONSTRUCTION OR TOOL JOINT WHEN DRIVEWAY WIDTH (EDGE TO EDGE) IS 14' OR GREATER.
2. ALL TOOL JOINTS SHALL BE A MINIMUM OF 1-½" DEEP.
3. WHEN REPLACING EXISTING CURB AND GUTTER WITH NEW DRIVEWAY, ENTIRE CURB AND GUTTER SECTION SHALL BE REMOVED AND REPLACED WITH CURB AND GUTTER (VARIABLE-CURB-HEIGHT) AS SHOWN. DO NOT BREAK CURB FROM GUTTER SECTION.
4. FLARED PORTION OF DRIVEWAY SHALL BE POURED MONOLITHIC WITH MAIN RECTANGULAR PORTION OF DRIVEWAY.
5. WHERE THERE IS MORE THAN ONE DRIVEWAY ON A LOT, THE SPACING OF THE DRIVEWAYS SHALL MEET REQUIREMENTS IN ECM.
6. WHERE AN EXISTING SIDEWALK IS IN PLACE, AND ITS THICKNESS IS LESS THAN 6" (RESIDENTIAL) OR 8" (COMMERCIAL AND INDUSTRIAL) THE SIDEWALK THROUGH THE DRIVEWAY SHALL BE REMOVED AND REPLACED WITH PORTLAND CEMENT CONCRETE AT THE REQUIRED THICKNESS.
7. WHEN A DRIVEWAY IS TO BE TAKEN OUT OF SERVICE, THE ENTIRE LENGTH OF CURB AND GUTTER SHALL BE REMOVED AND REPLACED WITH NEW CURB AND GUTTER MATCHING THE ABUTTING SECTIONS.
8. ALL PROVISIONS IN THE LAND DEVELOPMENT CODE SHALL BE MET, WITH REGARD TO MINIMUM SETBACK FROM INTERSECTION AND SIDE PROPERTY LINES, MINIMUM SPACING, MAXIMUM WIDTH, ETC.

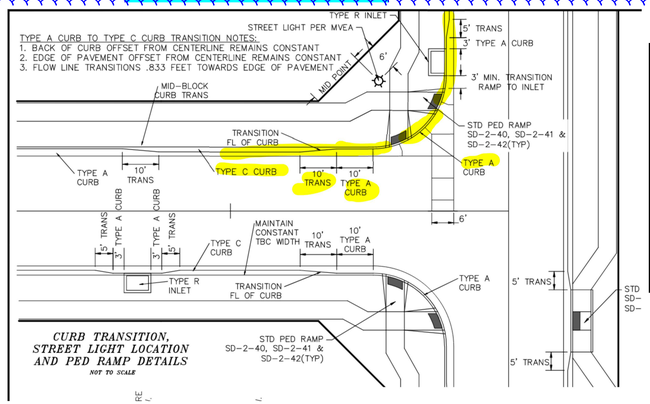
TOOLS JOINT SPACING		
DRIVEWAY WIDTH	A	B
12'	6'	3'
14'	7'	3'-6"
16'	8'	4'
18'	9'	4'-6"
20'	10'	5'
22'	11'	5'-6"
24'	8'	4'
26'	8'-8"	4'-4"
28'	9'-4"	4'-8"
30'	10'	5'

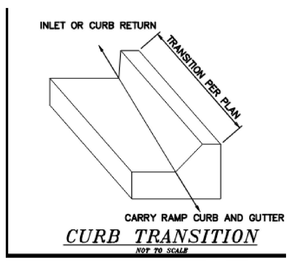
SCALE: NOT TO SCALE

8/11/11 DATE APPROVED: André P. Brackin DEPARTMENT OF TRANSPORTATION	Driveway Detail With Attached Sidewalk Standard Drawing REVISION DATE: 11/10/04 FILE NAME: SD_2-24	EL PASO COUNTY DEPARTMENT OF TRANSPORTATION

JR - addressed.

provide transition details at curb returns from ramp curb to vertical curb. See example detail below.





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 PROFESSIONAL ENGINEER 32314

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

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

No.	REVISION	BY	DATE

H-SCALE	N/A		
V-SCALE	N/A		
DATE	5/14/21		
DESIGNED BY	N/A		
DRAWN BY	N/A		
CHECKED BY			

CLOVERLEAF SUBDIVISION

COUNTY DETAILS

SHEET 18 OF 19

JOB NO. 25158.01

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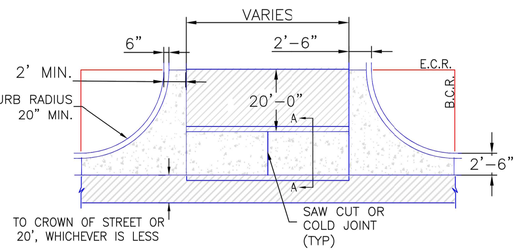
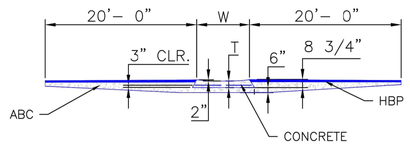


PLAN VIEW



SECTION A–A

NOTES

1. W – WIDTH SHALL BE 6' FOR LOCAL, 8' FOR COLLECTORS, AND 10' FOR ARTERIAL ROADS.

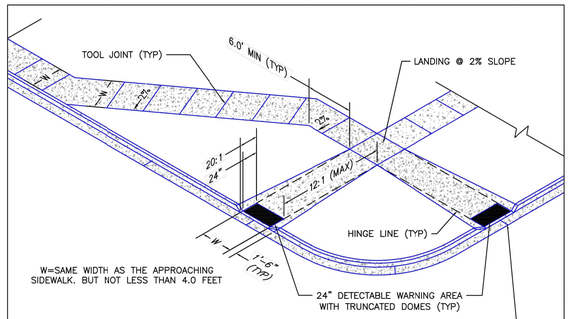
2. T – SQUARED–OFF RETURN TO BE POURED MONOLITHICALLY, 8" PCC FOR LOCAL ROADS, 9" FOR COLLECTORS WITH 6x6 – 4.4 W.W.F. OR #4 REINFORCING BAR @ 18" EACH WAY.

3. = 3" MINIMUM ASPHALT DEPTH (2 LIFTS).

4. DESIGN TO SPECIFY ELEVATIONS AT PI AND PCR.

SCALE: NOT TO SCALE

8/11/11 DATE APPROVED: André P. Brackin DEPARTMENT OF TRANSPORTATION	Typical Cross Pan Layout Detail Standard Drawing REVISION DATE: 12/8/15 FILE NAME: SD_2–26	EL PASO COUNTY DEPARTMENT OF TRANSPORTATION



W=SAME WIDTH AS THE APPROACHING SIDEWALK. BUT NOT LESS THAN 4.0 FEET

LAYOUT CURB SECTIONS SO THAT AT LEAST ONE TOOL JOINT IS WITHIN RAMP THROAT

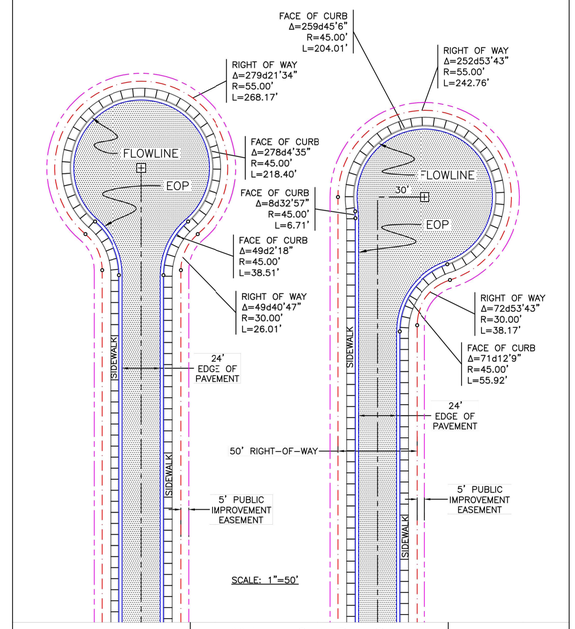
PEDESTRIAN RAMP NOTES

1. ALL WORK SHALL BE DONE IN ACCORDANCE WITH THE CURRENT ENGINEERING CRITERIA MANUAL AND ADA REQUIREMENTS.
2. CONTRACTOR TO NOTIFY ENGINEERING DIVISION INSPECTION STAFF 48 HOURS PRIOR TO CONCRETE PLACEMENT.
3. PEDESTRIAN RAMP CONSTRUCTION SHALL BE A MINIMUM 4,500 PSI CONCRETE, MINIMUM 4" THICK, NON–COLORED, NON–SCORED, COARSE BROOM FINISH.
4. RAMP LOCATION AND LENGTH MAY REQUIRE MODIFICATION TO MAINTAIN THE 12:1 MAXIMUM RUNNING RAMP SLOPE AND 20:1 DETECTABLE WARNING AREA DUE TO STREET INTERSECTION GRADES AND/OR ALIGNMENTS.
5. DETECTABLE WARNING AREA SHALL START A MINIMUM OF 6" BUT NOT MORE THAN 8" FROM THE FLOWLINE OF THE CURB AT ANY POINT.
6. DETECTABLE WARNING AREA SHALL BE PREFABRICATED, REDDISH INTEGRALLY COLORED, TRUNCATED–DOME, PAVERS. THERMOPLASTIC TRUNCATED DOMES WILL NOT BE ACCEPTED.
7. THE DETECTABLE WARNING AREA SHALL BE 24" IN LENGTH AND THE FULL WIDTH OF THE RAMP.
8. RAMP WIDTH REQUIRED IS SAME AS APPROACHING SIDEWALK; 4' MINIMUM.
9. ALL RAMPS WILL BE PERPENDICULAR TO TRAFFIC WITH THE EXCEPTION OF MID–BLOCK OR TERMINAL RAMPS WHICH MAY BE PARALLEL SUBJECT TO APPROVAL.
10. AVOID PLACING DRAINAGE STRUCTURES, TRAFFIC SIGNAL/SIGNAGE, UTILITIES/JUNCTION BOXES, OR OTHER OBSTRUCTIONS WITHIN PROPOSED RAMP AREAS.

GENERAL NOTES

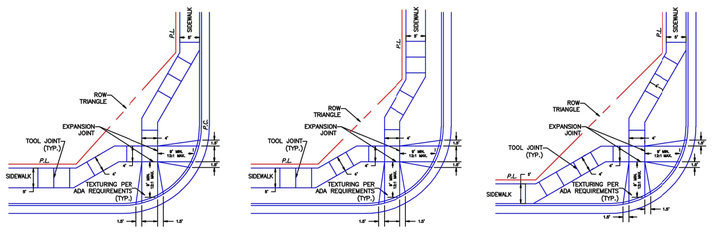
1. WHERE THE 1'–6" FLARED SIDE(S) OF A PERPENDICULAR CURB RAMP IS (ARE) CONTIGUOUS WITH A PEDESTRIAN OR HARD SURFACE AREA, THE MAXIMUM FLARE SLOPE SHALL NOT EXCEED 10:1.
2. PEDESTRIAN WALKWAY AND/OR LOCATION OF EXISTING OR FUTURE PEDESTRIAN RAMPS ON OPPOSITE CORNERS SHALL BE REVIEWED BEFORE CONSTRUCTING NEW RAMPS.
3. AT MARKED PEDESTRIAN CROSSINGS, THE BOTTOM OF THE RAMPS, EXCLUSIVE OF THE FLARE SIDES, SHALL BE TOTALLY CONTAINED WITHIN THE MARKINGS.

7/9/09 DATE APPROVED: André P. Brackin DEPARTMENT OF TRANSPORTATION	Pedestrian Intersection Ramp Standard Drawing REVISION DATE: 12/8/15 FILE NAME: SD_2–41	EL PASO COUNTY DEPARTMENT OF TRANSPORTATION



SCALE: 1"=50'

1/1/08 DATE APPROVED: John A. McCarty DEPARTMENT OF TRANSPORTATION	Urban Cul–De–Sac Details Standard Drawing REVISION DATE: 12/8/15 FILE NAME: SD_2–75	EL PASO COUNTY DEPARTMENT OF TRANSPORTATION



SCALE: NOT TO SCALE

9/16/10 DATE APPROVED: André P. Brackin DEPARTMENT OF TRANSPORTATION	Pedestrian Intersection Ramp Detail Standard Drawing REVISION DATE: 11/10/04 FILE NAME: SD_2–40	EL PASO COUNTY DEPARTMENT OF TRANSPORTATION

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
PT CLOVERLEAF, LLC
1864 WOODMOOR DR., STE. 100
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719-476-0800
JDESJARDIN@PROTERRACO.COM

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No.	REVISION	BY	DATE

H–SCALE	N/A
V–SCALE	N/A
DATE	5/14/21
DESIGNED BY	N/A
DRAWN BY	N/A
CHECKED BY	

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

DATE

CLOVERLEAF SUBDIVISION

COUNTY DETAILS

SHEET 19 OF 19

JOB NO. 25158.01

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CLOVERLEAF FILING 2

EL PASO COUNTY, COLORADO

STORM SEWER AND POND PLANS

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 EINGEERI9NG CRITERIA MANUAL, THE DRAINAGE CRITERIA MANUAL, AND THE DRAINAGE CRITERIA MANUAL VOLUME 2. ANY DEVIATIONS FROM REGULATIONS AND STANDARDS MUST BE REQUESTED, AND APPROVED, IN WRITING. ANY MODIFICATIONS NECESSARY TO MEET CRITERIA AFTER-THE-FACT WILL BE ENTIRELY THE DEVELOPER'S RESPONSIBILITY TO 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 PCD. CONTRACTOR SHALL NOTIFY THE DESIGN ENGINEER IMMEDIATELY UPON DISCOVERY OF ANY ERRORS OR INCONSISTENCIES.

9. CONTRACTOR SHALL COORDINATE GEOTECHNICAL TESTING PER ECM STANDARDS. PAVEMENT DESIGN SHALL BE APPROVED BY EL PASO COUNTY PCD PRIOR TO PLACEMENT OF CURB AND GUTTER AND PAVEMENT.

10. ALL CONSTRUCTION TRAFFIC MUST ENTER/EXIT THE SITE AT APPROVED CONSTRUCTION ACCESS POINTS.

11. SIGHT VISIBILITY TRIANGLES ARE IDENTIFIED IN THE PLANS SHALL BE PROVIDED AT ALL INTERSECTIONS. OBSTRUCTIONS GREATER THAN 18 INCHES ABOVE FLOWLINE ARE NOT ALLOWED IN SIGHT TRIANGLES.

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

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

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

STORM SEWER GENERAL NOTES

1. ALL STATIONING IS ALONG STORM SEWER CENTERLINE UNLESS OTHERWISE INDICATED. ALL ELEVATIONS ARE INVERT UNLESS OTHERWISE INDICATED.

2. ALL STORM SEWER BENDS AND WYES SHOWN ON THE PLAN SHALL BE PREFABRICATED.

3. HORIZONTAL AND VERTICAL BENDS ARE INDICATED ON THE PLANS.

4. JOINTS SHALL BE IN ACCORDANCE WITH ASTM C443 "STANDARD SPECIFICATIONS FOR JOINTS FOR CIRCULAR CONCRETE SEWER AND CULVERT PIPE USING RUBBER GASKET." IN NO CASE SHALL THE MAXIMUM JOINT OPENING FOR STRAIGHT ALIGNMENT EXCEED 1 INCH OR ONE AND ONE-HALF INCH ON CURVED ALIGNMENT.

5. INLET DIMENSIONS SHOWN ON PLANS REFER TO DISTANCES FROM INSIDE FACES OF BOX BETWEEN THE WIDTHS AND LENGTHS.

6. MANHOLE WIDTHS AND LENGTHS SHOWN ON PLAN REFER TO THE EXTERIOR WALL DIMENSIONS.

7. ALL STORM SEWER SHALL BE A MINIMUM OF CLASS III REINFORCED CONCRETE PIPE. SPECIFIC SEGMENTS OF STORM SEWER SHALL BE REQUIRED TO BE CONSTRUCTED OF A MINIMUM OF 5000 PSI CONCRETE DUE TO EXCESSIVE VELOCITIES. REFER TO ADDITIONAL NOTES WITHIN CONSTRUCTION PLANS.

8. SINCE ALL PIPE ENTRIES INTO THE BASE ARE VARIABLE, THE DIMENSIONS SHOWN ARE TYPICAL. ACTUAL DIMENSIONS AND QUANTITIES FOR CONCRETE AND REINFORCEMENT SHALL BE AS REQUIRED IN THE WORK.

9. THE MH RING (FRAME) SHALL BE SET IN A BED OF GROUT. THE FRAME SHALL BE SURROUNDED WITH A GROUT IN UNPAVED AREA, OR A CONCRETE COLLAR IN PAVED AREA.

10. PRECAST MANHOLES AND REINFORCEMENT SHALL CONFORM TO ASTM C 478 (AASHTO M 199).

11. CAST IN PLACE MANHOLES SHALL BE CLASS B CONCRETE.

12. STEPS SHALL BE REQUIRED WHEN THE MANHOLE DEPTH EXCEEDS 3'-6" AND SHALL BE IN ACCORDANCE WITH AASHTO M 199.

13. ALL REINFORCING STEEL SHALL HAVE A MINIMUM YIELD STRENGTH OF 60,000 PSI. VERTICAL STEEL SHALL BE PLACED AT ℄ OF WALL. ALL BARS SHALL HAVE A 2" MINIMUM CLEARANCE.

14. FLOW CHANNELS AND INVERTS SHALL BE FORMED BY SHAPING WITH CLASS B CONCRETE OR APPROVED GROUT.

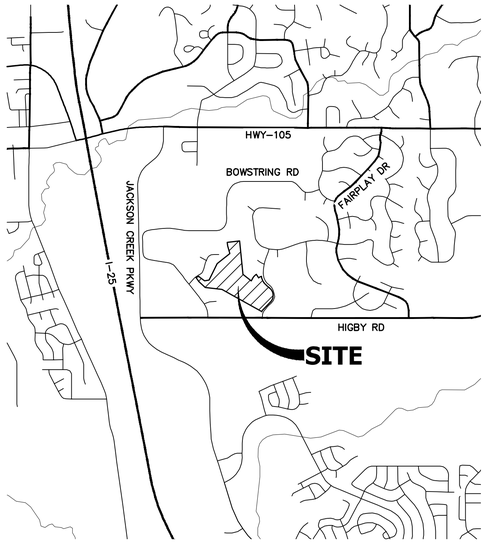
15. STUB-OUTS SHALL EXTEND 4 FT MINIMUM BEYOND OUTSIDE WALL SURFACE OF MANHOLE AND BE SATISFACTORILY PLUGGED.

16. CHECK WITH THE LOCAL GOVERNMENT AUTHORITY FOR ANY ADDITIONAL STORM SEWER SPECIFICATIONS, DETAILS, OR REGULATIONS.

17. THE SLOPE OF THE MANHOLE COVER SHALL MATCH THE ROADWAY PROFILE AND CROSS SLOPE.

18. THE CONTRACTOR SHALL PROVIDE SHOP DRAWINGS OF ALL PREFABRICATED STRUCTURES TO THE ENGINEER FOR REVIEW PRIOR TO INSTALLATION.

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



VICINITY MAP
SCALE: 1"=2000'

SHEET INDEX

1	–	TITLE
2	–	LEGEND
3-8	–	STORM SEWER PLANS
9-24	–	POND PLANS AND DETAILS
25	–	DETAIL SHEET

CONTACTS:

OWNER/DEVELOPER	PT CLOVERLEAF, LLC 1864 WOODMOOR DRIVE, SUITE 100 COLORADO SPRINGS, CO 80920 P~719-476-0800
ENGINEER/SURVEYOR	JR ENGINEERING, LLC ATTN: MIKE A. BRAMLETT 5475 TECH CENTER DRIVE, SUITE 235 COLORADO SPRINGS, CO 80919 P~303-267-6240
FIRE PROTECTION DISTRICT	TRI-LAKES MONUMENT FPD 16055 OLD FOREST POINT, SUITE 103 MONUMENT, CO 80132 P~719-484-0911
DISTRICT	WOODMOOR WATER & SANITATION DISTRICT NO. 1 1845 WOODMOOR DRIVE 80132 525 EXT. 0

Remove cover sheet and update the sheet index on page one of this pdf document to include the storm sewer and pond plans.

JR Addressed
Didn't separate sheetset references due to different CD's that will be split up in the field while construction is occurring.

A 3-1/4" BRASS DISC SET IN A 4"X4" BOULDER, LOCATED 1.8 MILES EAST ALONG HIGBY ROAD FROM ITS SECTION WITH JACKSON CREEK PARKWAY, 40 FEET SOUTH OF THE CENTERLINE HE ROAD, 6 FEET SOUTH OF A FENCE, AND 6.2 FEET SOUTH OF A WITNESS SAID MONUMENT HAVING A PUBLISHED ELEVATION OF 7247.10 FEET, NAVD88.

ASIS OF BEARING

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

OWNER/DEVELOPER STATEMENT

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

JOE DESJARDIN — DATE

PT CLOVERLEAF, LLC
1864 WOODMOOR DRIVE
COLORADO SPRINGS, CO 80920

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

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
PT CLOVERLEAF, LLC
1864 WOODMOOR DRIVE
COLORADO SPRINGS, CO 80920
ATTN: JOE DESJARDIN
(719) 476-0800
JDESJARDIN@PROTERRACO.COM

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"=2000'
V-SCALE	N/A
DATE	04/27/2021
DESIGNED BY	SAV
DRAWN BY	SAV
CHECKED BY	

CLOVERLEAF FILING 2

COVER SHEET

SHEET 1 OF 25

JOB NO. 25158.01

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LAYER LINETYPE LEGEND

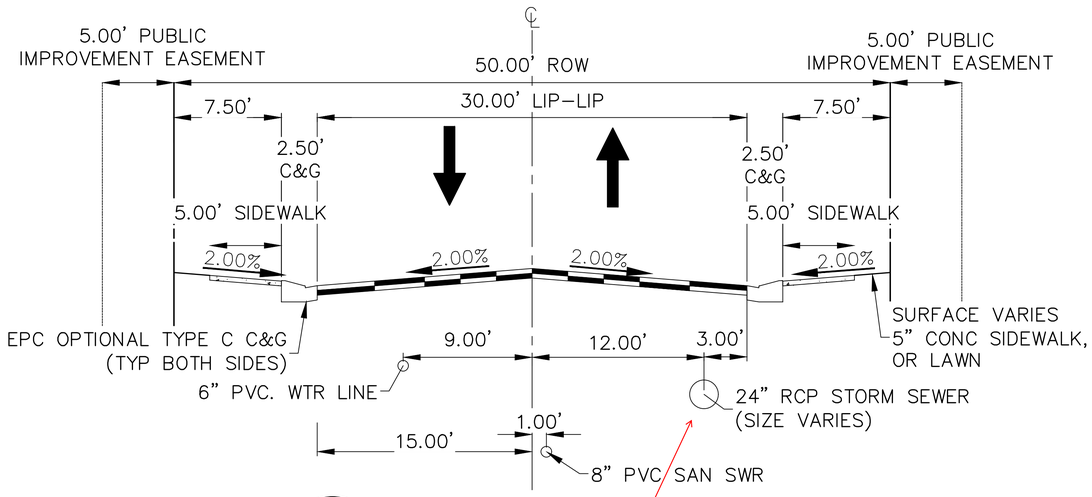
	EXISTING	PROPOSED
PHASE LINE		
MATCH LINE		
SECTION LINE		
BOUNDARY LINE		
PROPERTY LINE		
EASEMENT LINE		
RIGHT OF WAY		
R.O.W. A LINE	A	A
CENTERLINE		
CITY LIMITS		
WIRE FENCE		
CHAIN LINK FENCE		
WOOD FENCE		
MASONRY FENCE		
GUARDRAIL		
CONC. BARRIER		
CABLE TV	TV	TV
ELECTRIC	E	E
FIBER OPTIC	FO	FO
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	
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		

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
TEST HOLE DESIGNATOR	TH# FIRM/AGENCY	

LANDSCAPE LEGEND

	EXISTING	PROPOSED
TREE – CONIFEROUS		
TREE – DECIDUOUS		
SHRUB/BUSH		
SHRUBS AND BUSHES		
IRRIGATION BOX		
IRRIGATION SPRINKLER		
IRRIGATION VALVE		
BOLLARD		
FLAGPOLE		FP



A–A TYPICAL CROSS SECTION

N.T.S

Pending. Meeting on 6/30 to determine final utility cross section

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

JR Addressed

fremove

Ref \\[illegible]\Drawings\Sheet Dwgs\[illegible]_mRemoved_Sheet.dwg

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

DATE

update sheet number

N/A-See cover

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CLOVERLEAF FILING 2

LEGEND

SHEET 2 OF 25

JOB NO. 25158.01

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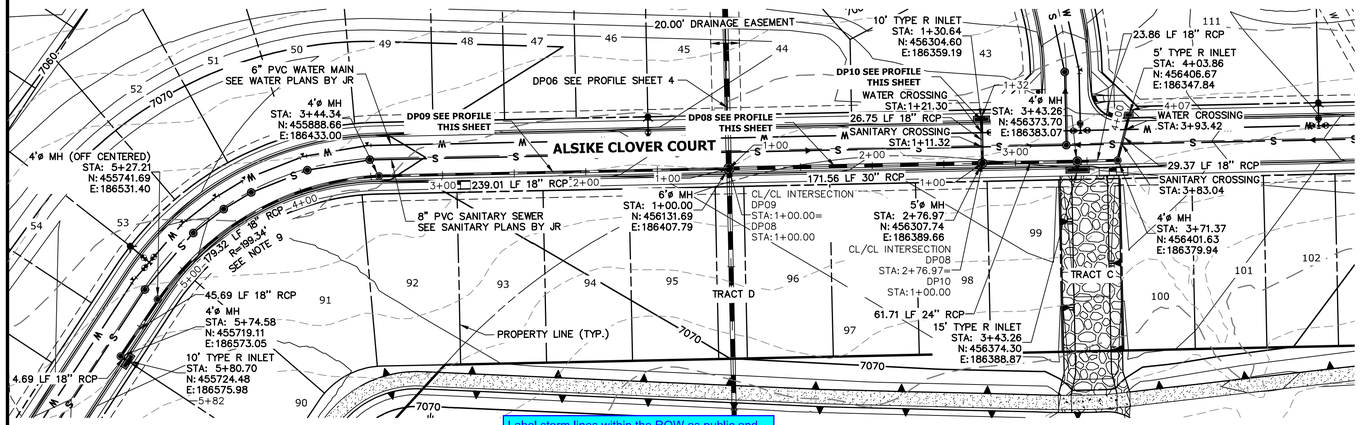
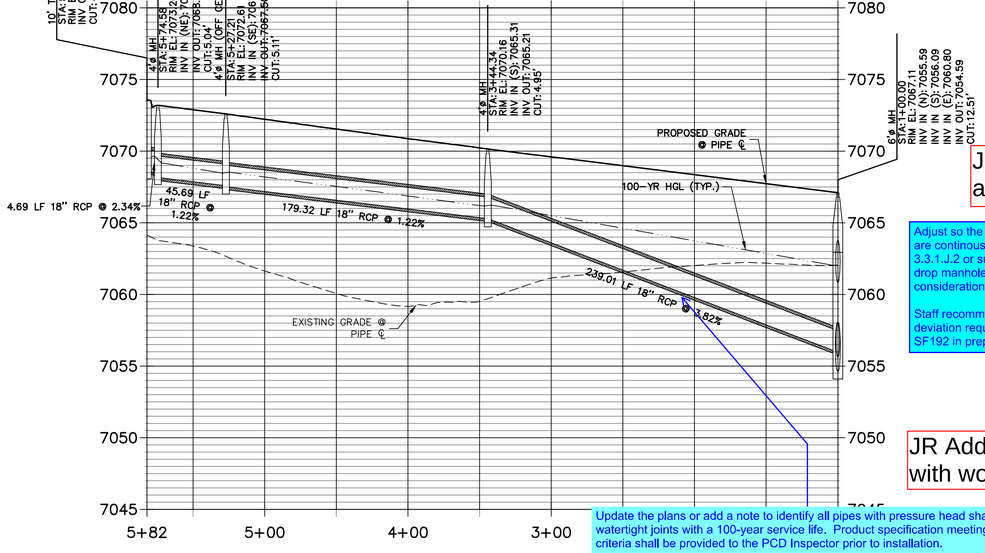


Label storm lines within the ROW as public and outside the ROW as private.
See the preliminary plans for which main is noted as public or private.
Update the financial assurance estimate form accordingly. public storm sewer is listed in Section 2 and private storm sewer is listed in section 3.

JR Addresed- Updated label for private

STA 1+00.00 TO 5+82.20



JR Addressed- Will submit deviations for drops larger than 1 ft

Adjust so the inside top slopes of the conduits are continous through the manhole per ECM 3.3.1.J.2 or submit a deviation request to allow drop manholes for the ECM Administrators consideration.

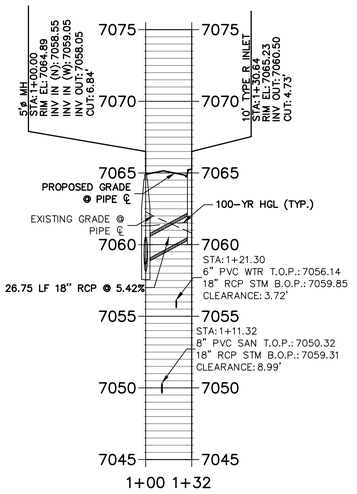
Staff recommends you review the approved deviation request for Trails at Aspen Ridge, SF192 in preparing your deviation request.

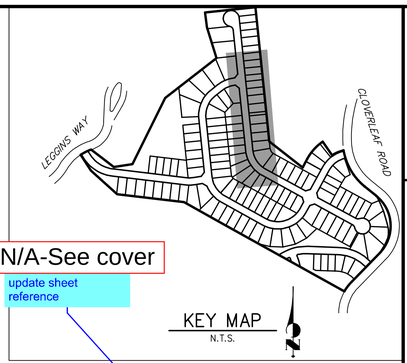
JR Addressed-Added note with wording as suggested

Update the plans or add a note to identify all pipes with pressure head shall use watertight joints with a 100-year service life. Product specification meeting this criteria shall be provided to the PCD Inspector prior to installation.

See ECM 3.3.1 D for the specific criteria.

DP10 PROFILE
STA 1+00.00 TO 1+32.14





N/A-See cover

update sheet reference

NOTES

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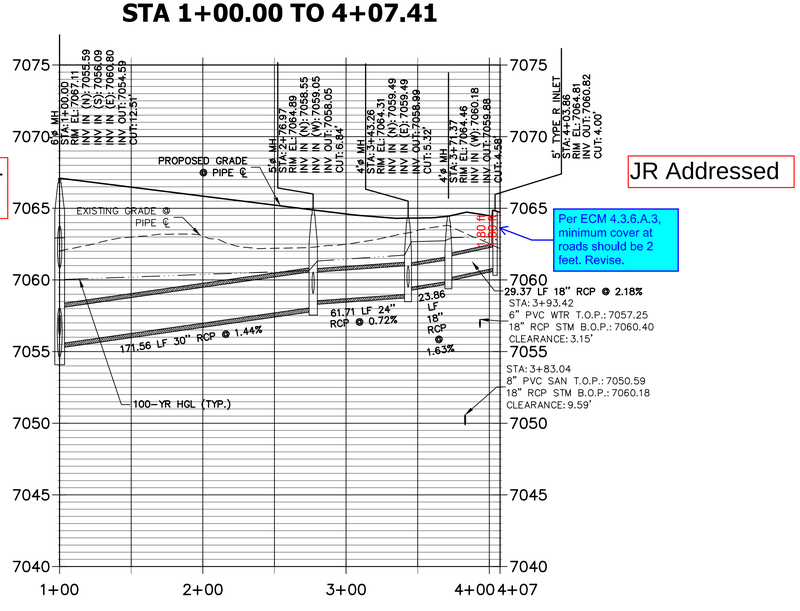
DP08 PROFILE
STA 1+00.00 TO 4+07.41



JR Addressed

Per ECM 4.3.6.A.3, minimum cover at roads should be 2 feet. Revise.

50 25 0 50 100

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

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

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CHECKED BY			

CLOVERLEAF FILING 2

STORM SEWER PLAN AND PROFILE

SHEET 3 OF 25

JOB NO. 25158.01

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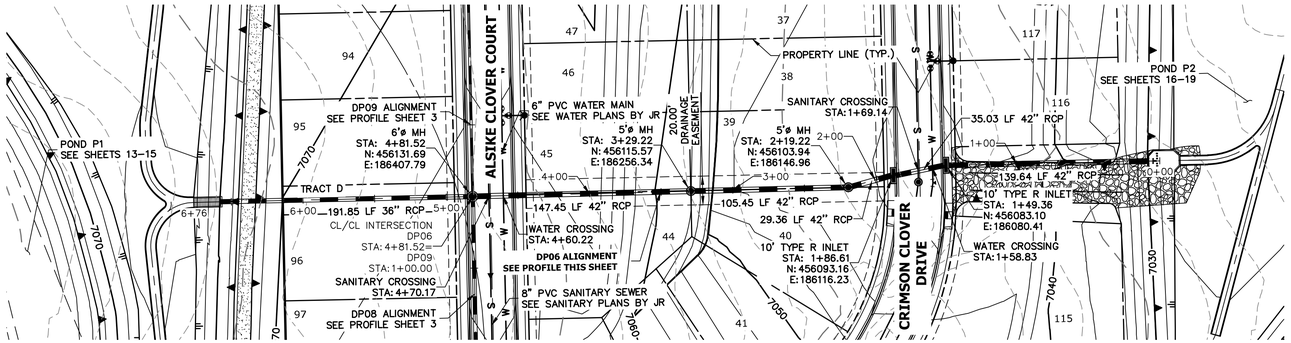
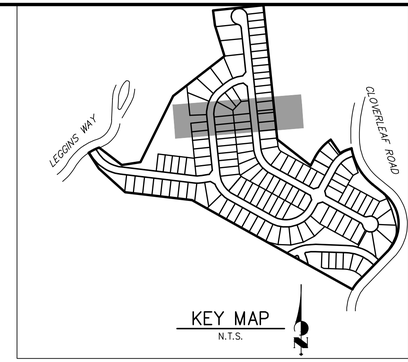
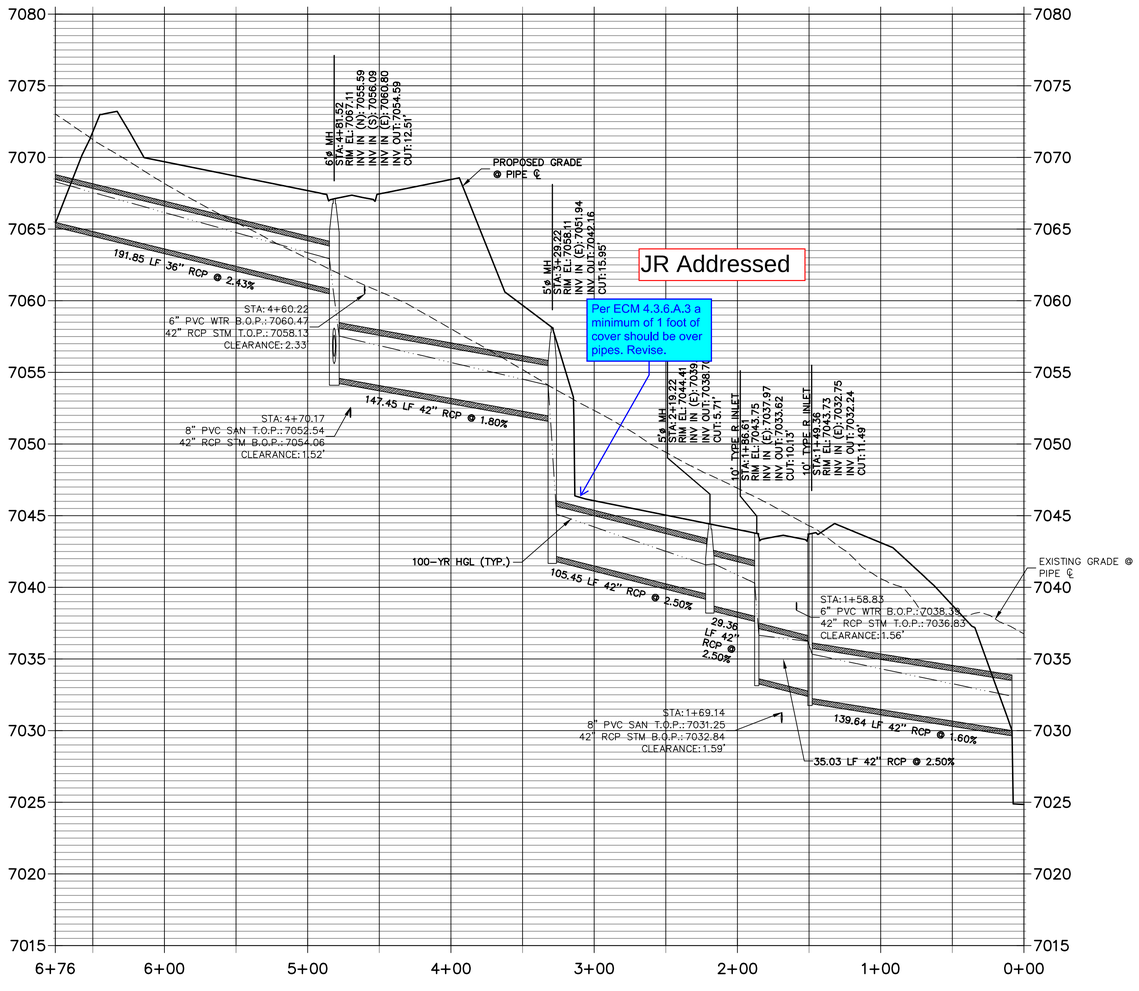




DP06 PROFILE
STA 0+00.00 TO 6+76.22



NOTES

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50 25 0 50 100

HORIZONTAL
ORIGINAL SCALE: 1" = 50'

VERTICAL
ORIGINAL SCALE: 1" = 5'

ENGINEER'S STATEMENT

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COLORADO REGISTERED MIKE A. BRAMLETT 32314 PROFESSIONAL ENGINEER

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CLOVERLEAF FILING 2

STORM SEWER PLAN AND PROFILE

SHEET 4 OF 25

JOB NO. 25158.01

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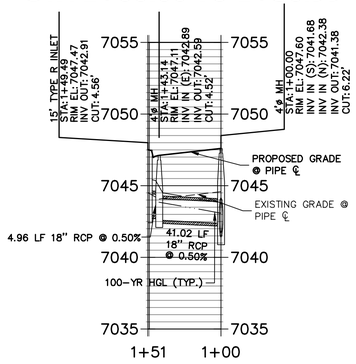
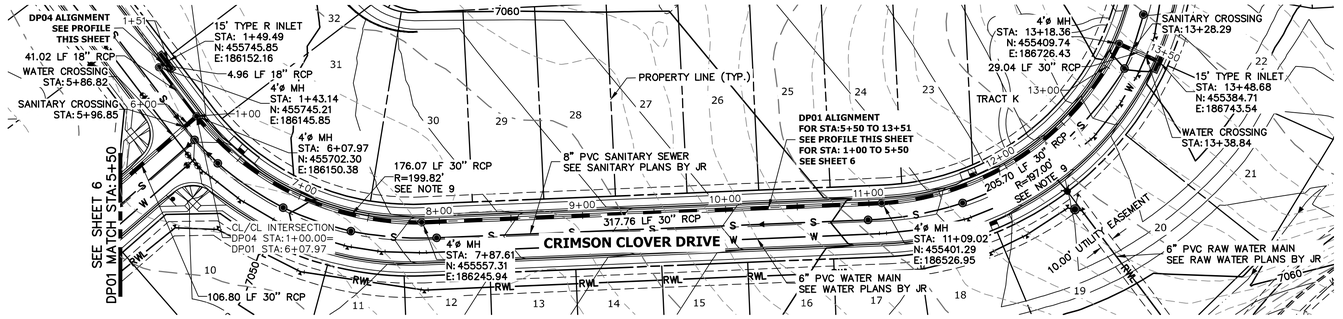
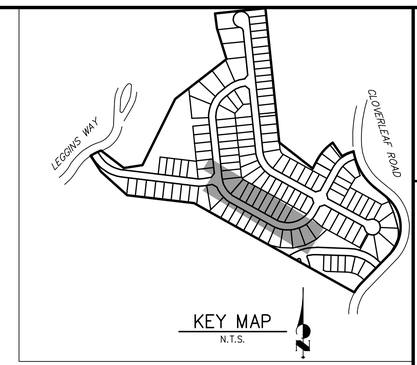
DP04 PROFILE
STA 1+00.00 TO 1+50.99







DP01 PROFILE
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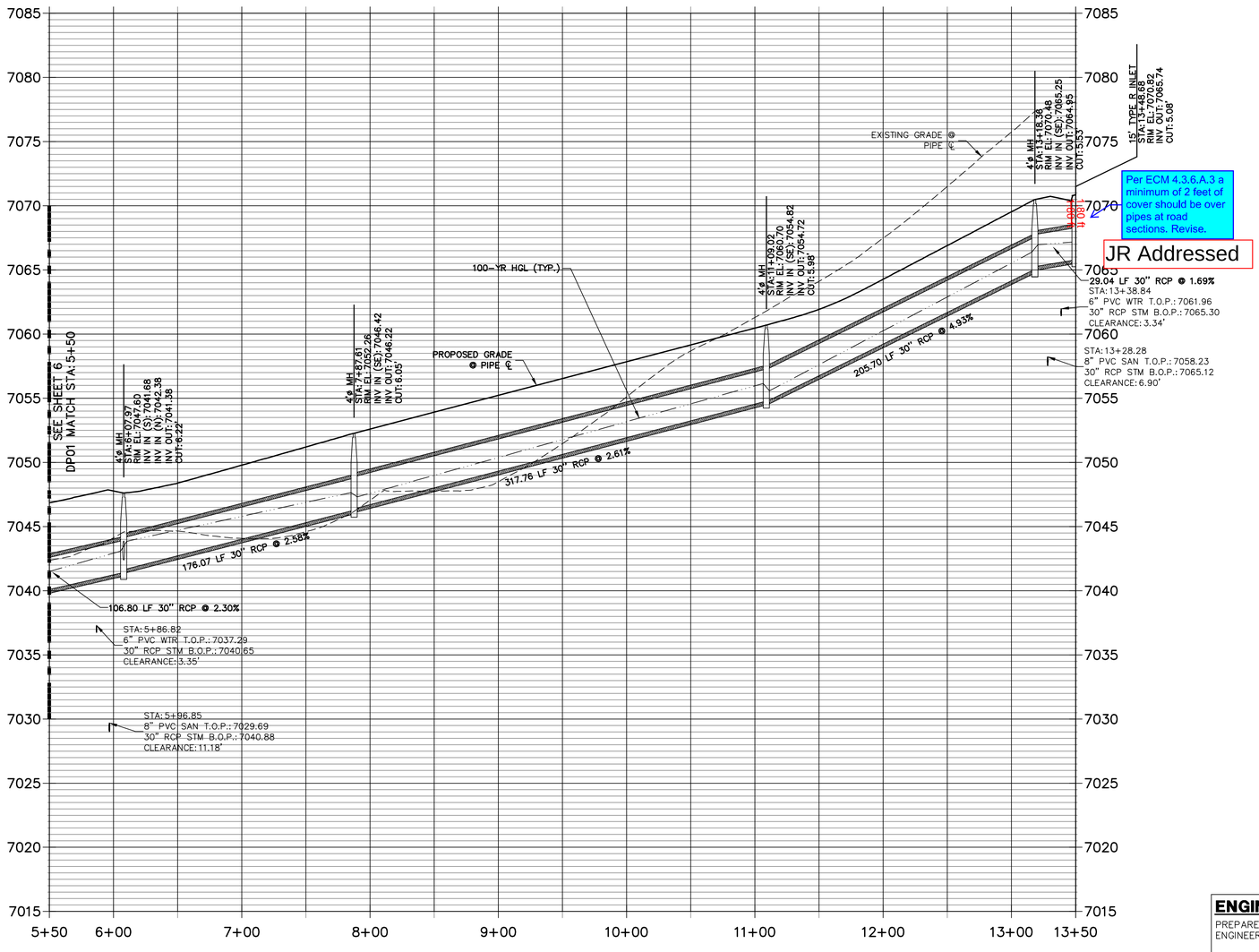

Per ECM 4.3.6.A.3 a minimum of 2 feet of cover should be over pipes at road sections. Revise.

JR Addressed

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

NOTES

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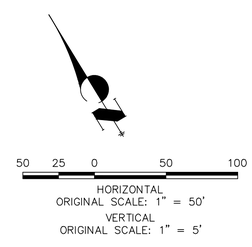

ENGINEER'S STATEMENT

PREPARED UNDER MY DIRECT SUPERVISION AND ON BEHALF OF JR ENGINEERING

32314

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

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CLOVERLEAF FILING 2

STORM SEWER PLAN AND PROFILE

SHEET 5 OF 25

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DP02 PROFILE
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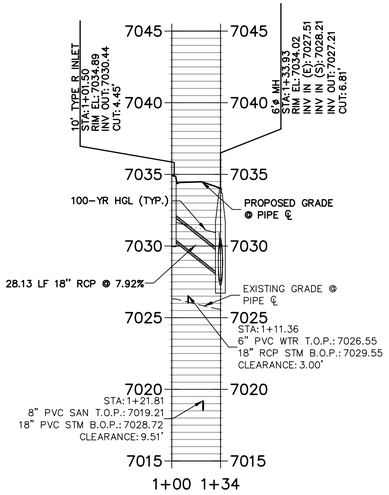

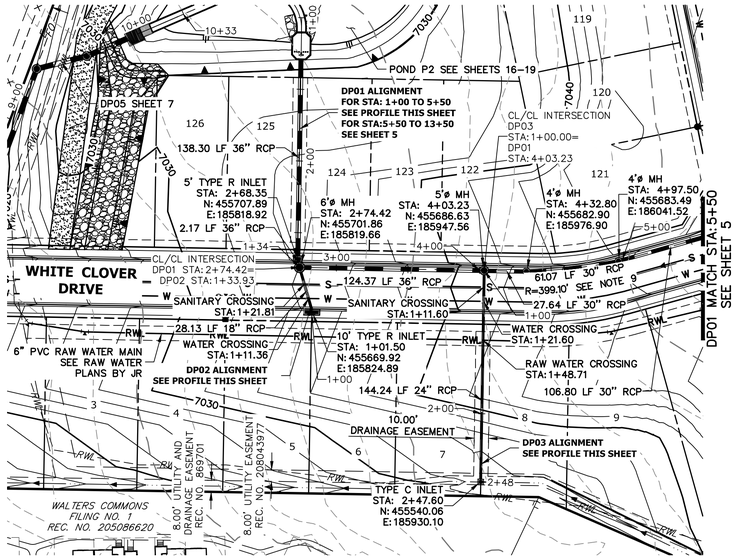

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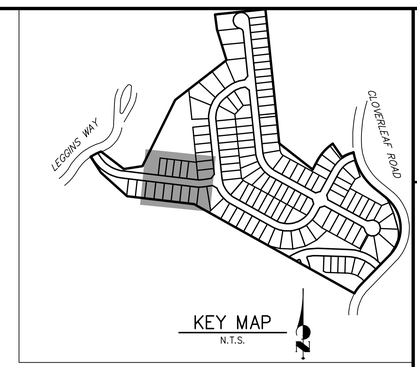
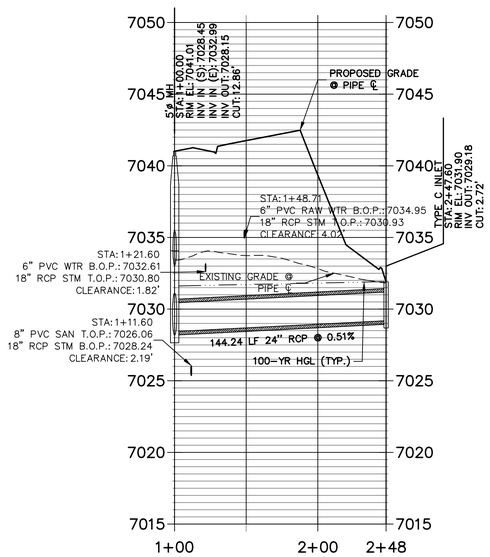
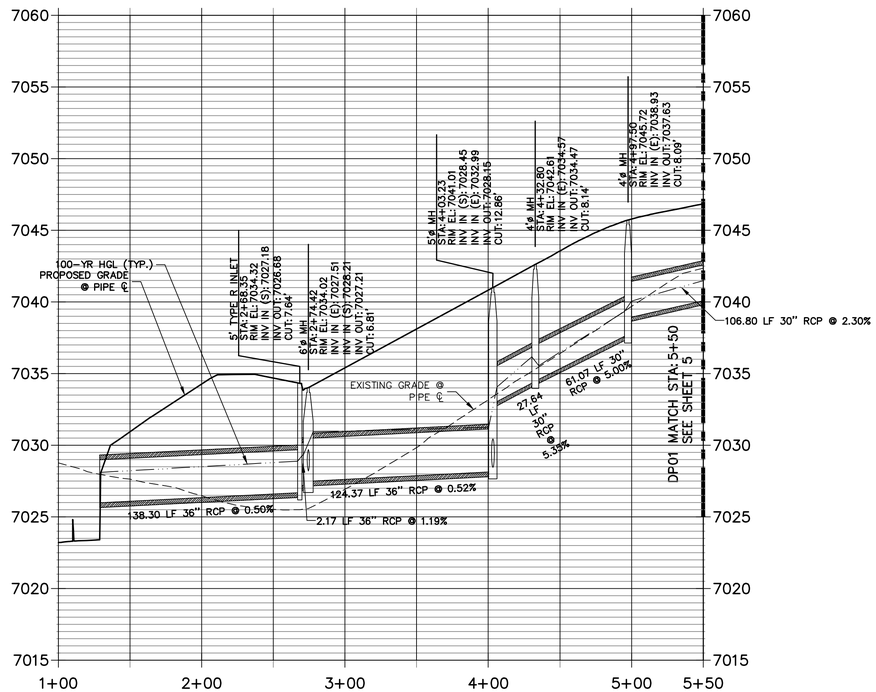


DP03 PROFILE
STA 1+00.00 TO 2+47.60



DP01 PROFILE (1)
STA 1+00.00 TO 5+50.00



50 25 0 50 100

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

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

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PREPARED FOR
PT CLOVERLEAF, LLC
1864 WOODMOOR DRIVE
COLORADO SPRINGS, CO 80920
ATTN: JOE DESJARDIN
(719) 476-0800
JDESJARDIN@PROTERRACO.COM

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'	DESIGNED BY	APL
V-SCALE	1"=5'	DRAWN BY	APL
DATE	05/10/21	CHECKED BY	

CLOVERLEAF FILING 2

STORM SEWER PLAN AND PROFILE

SHEET 6 OF 25

JOB NO. 25158.01

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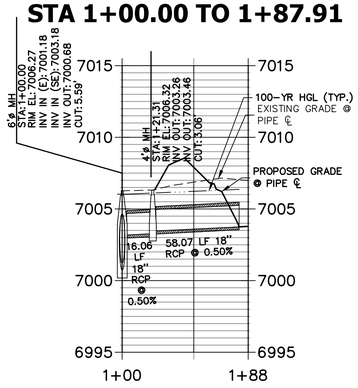
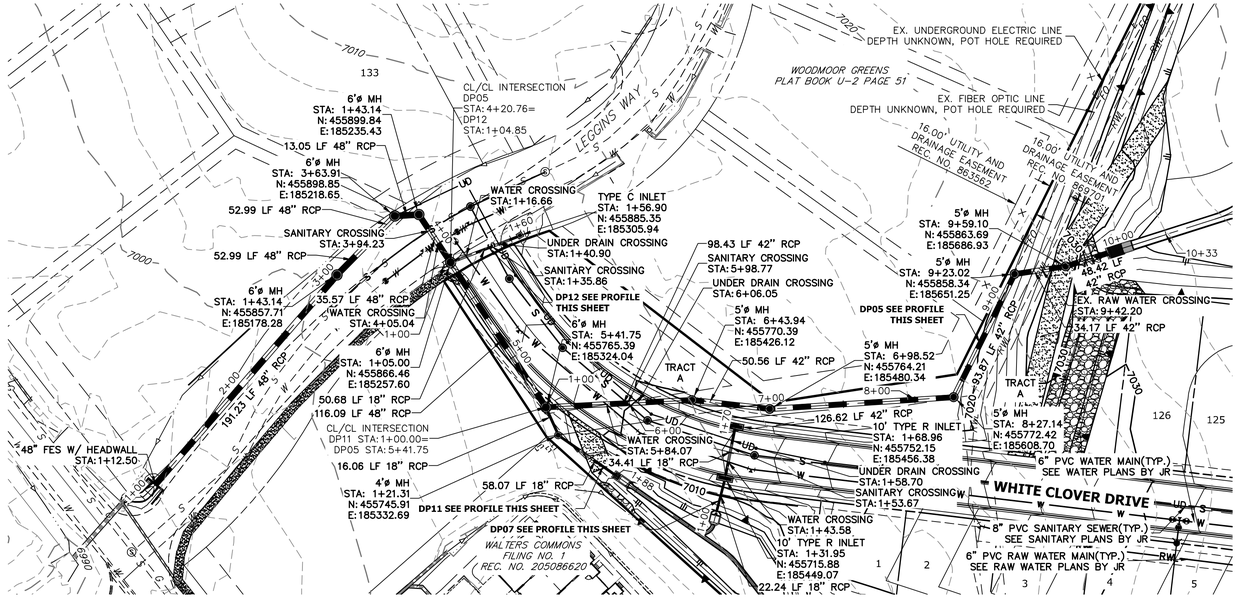
DP11 PROFILE
STA 1+00.00 TO 1+87.91

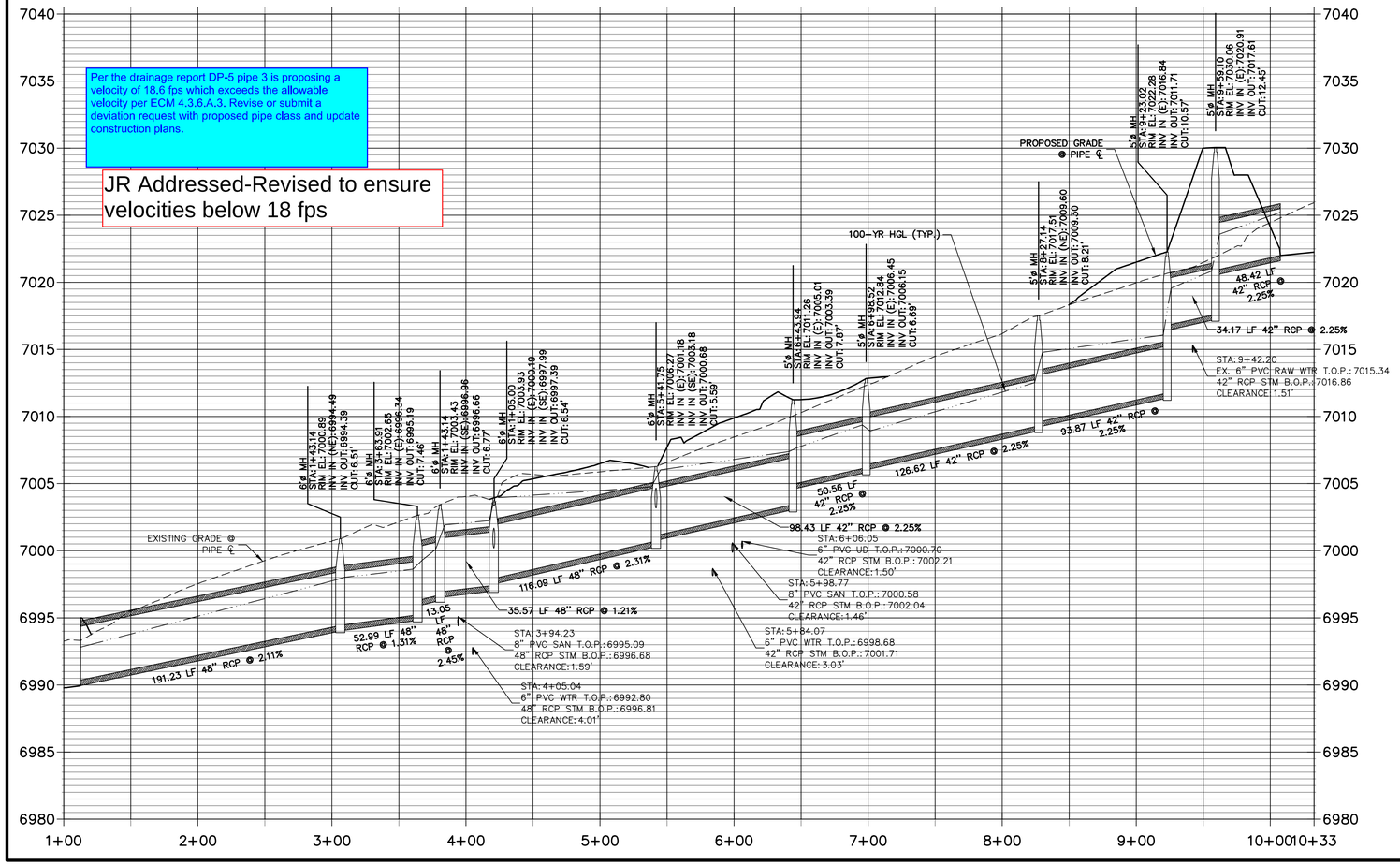




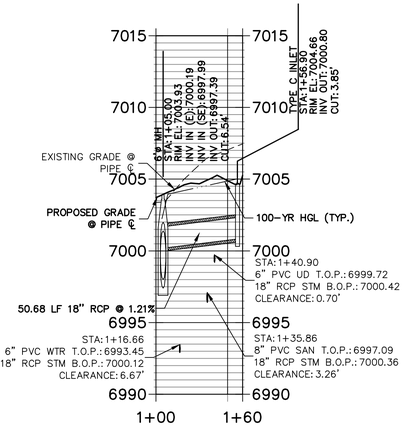
DP05 PROFILE
STA 1+00.00 TO 10+32.61

Per the drainage report DP-5 pipe 3 is proposing a velocity of 18.6 fps which exceeds the allowable velocity per ECM 4.3.6.A.3. Revise or submit a deviation request with proposed pipe class and update construction plans.

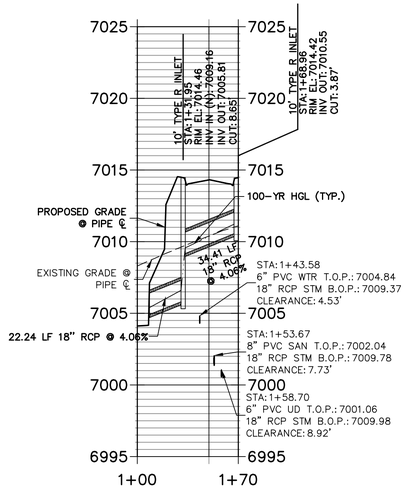
JR Addressed-Revised to ensure velocities below 18 fps



DP12 PROFILE
STA 1+00.00 TO 1+60.47

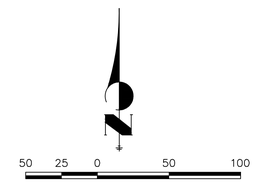


DP07 PROFILE
STA 1+00.00 TO 1+70.46



NOTES

1. SEE SHEET 1 FOR BENCHMARK. SEE SHEET 2 FOR LEGEND.
2. ALL STATIONING IS PIPE CENTERLINE UNLESS OTHERWISE NOTED.
3. ALL RCP STORM SEWER SHALL BE CLASS III UNLESS OTHERWISE NOTED.
4. PIPE LENGTHS ARE MEASURED FROM THE INSIDE WALL OF INLETS AND FROM THE CENTER OF MANHOLES. PIPE LENGTHS INCLUDE FES LENGTH AND/OR HEADWALL THICKNESS.
5. ALL MANHOLE COVERS SHALL BE ORIENTED TO AVOID CURB, GUTTER, SIDEWALK AND CROSSPANS UNLESS OTHERWISE NOTED.
4. ALL MANHOLES SHALL HAVE AN ECCENTRIC CONE UNLESS OTHERWISE NOTED.
5. PROVIDE A MINIMUM OF 18" FROM THE RIM TO THE TOP OF SLAB FOR ALL FLAT TOP MANHOLES.
6. ALL ON-GRADE INLETS ARE TO MATCH TBC ELEVATIONS AT EACH END, FOLLOWING STREET GRADES.
7. INLET STATIONING IS TO CENTER OF INLET.
8. PIPES SHALL HAVE JOINT RESTRAINTS ON LAST 3 JOINTS AT PIPE OUTFALL.
9. ALL CURVED PIPES SHALL BE BUILT IN ACCORDANCE WITH THE AMERICAN CONCRETE PIPE ASSOCIATION (ACPA) DESIGN DATA 21. PIPE MANUFACTURE TO BE USED MUST BE ABLE TO MEET LENGTH AND JOINT OPENING CRITERIA PER ACPA.



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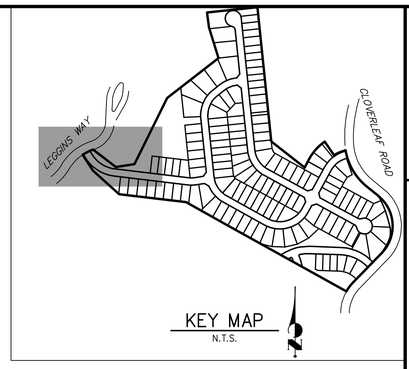

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V-SCALE	1"=5'
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DRAWN BY	APL
CHECKED BY	

CLOVERLEAF FILING 2

STORM SEWER PLAN AND PROFILE

SHEET 7 OF 25

JOB NO. 25158.01

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NOTES

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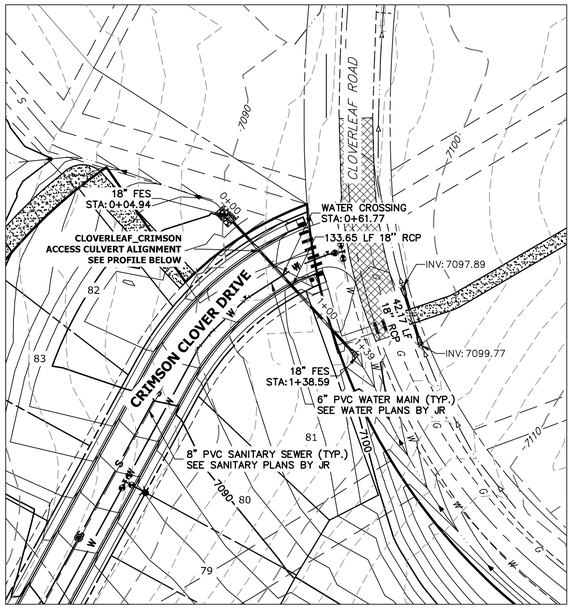

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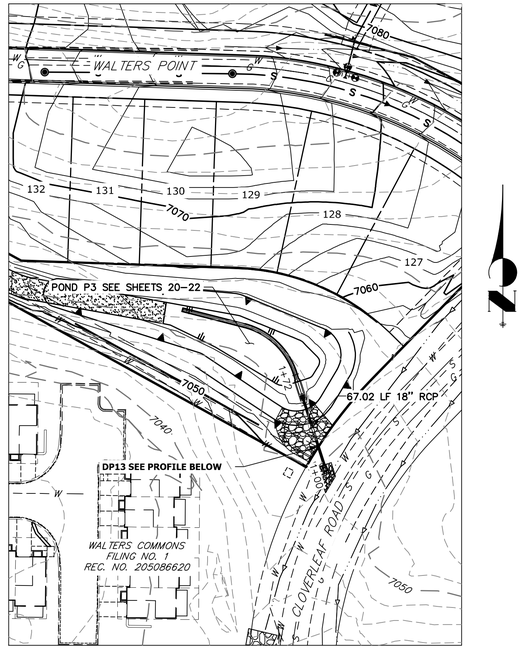

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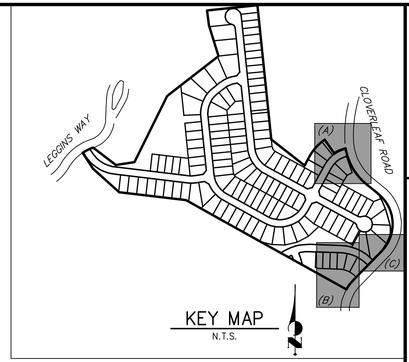
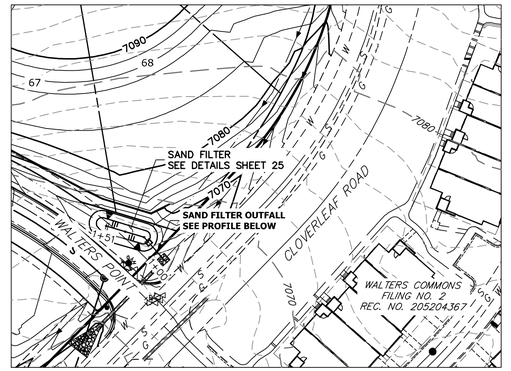


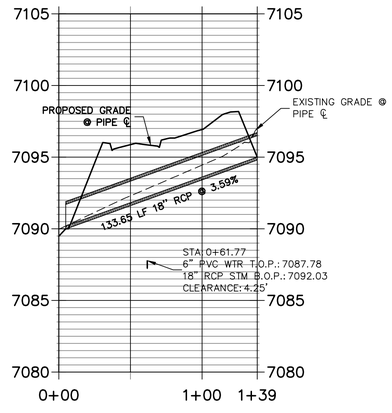
KEY MAP
N.T.S.



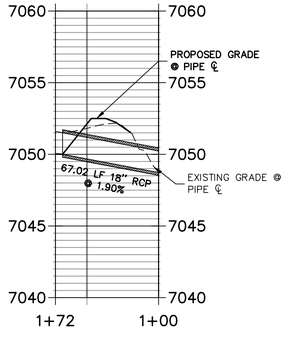
(C)

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

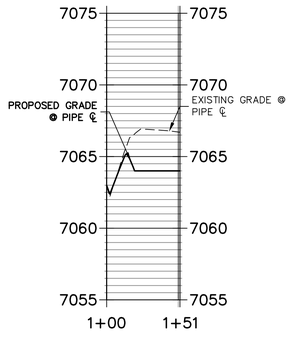
CLOVERLEAF_CRIMSON ACCESS CULVERT PROFILE
STA 0+00.00 TO 1+38.59



DP13 PROFILE
STA 1+00.00 TO 1+72.02



SAND FILTER PROFILE
STA 1+00.00 TO 1+51.29



50 25 0 50 100

HORIZONTAL
ORIGINAL SCALE: 1" = 50'

VERTICAL
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CHECKED BY	

CLOVERLEAF FILING 2

STORM SEWER PLAN AND PROFILE

SHEET 8 OF 25

JOB NO. 25158.01

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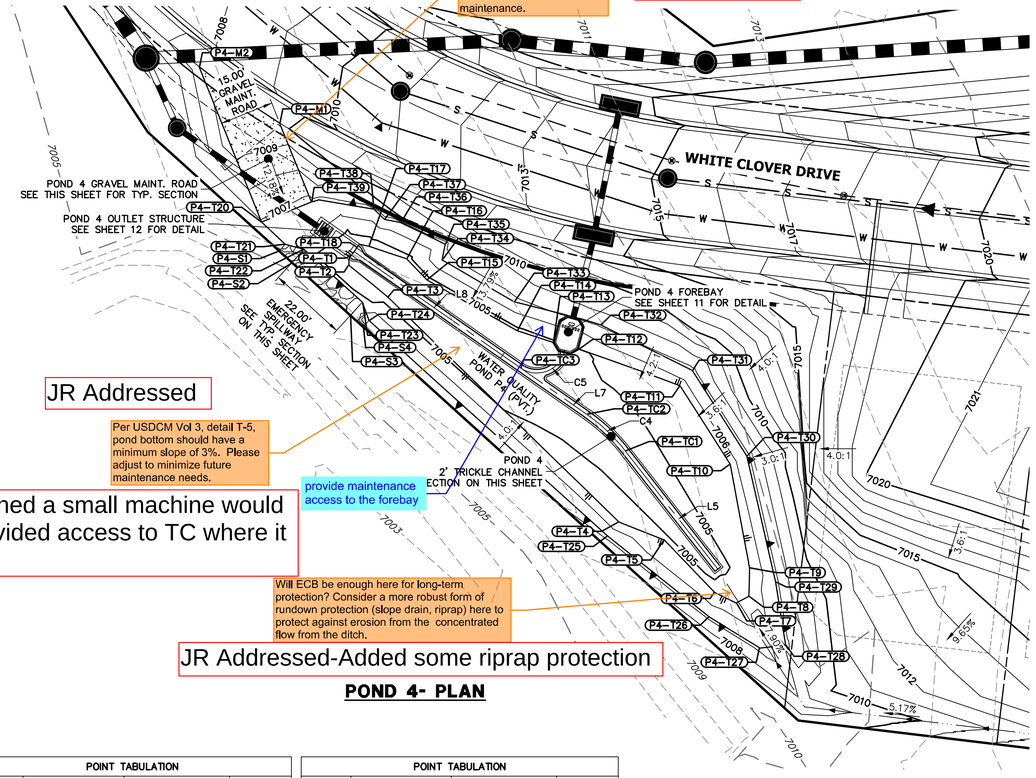
The comments on the four sheets related to Pond 4 (sheets 9-12) are typical comments that should be applied to the sheets with details for the other three ponds.

Access road needs to extend down to outlet structure and trickle channel for maintenance.

JR Addressed



JR Addressed

Per USDCM Vol 3, detail T-5, pond bottom should have a minimum slope of 3%. Please adjust to minimize future maintenance needs.

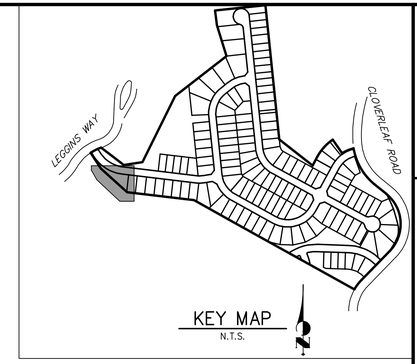
JR Addressed-Due to pond size, we determined a small machine would be used for maintenance. Therefore just provided access to TC where it can be crossed to forebay.

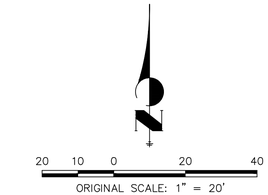
provide maintenance access to the forebay

Will ECB be enough here for long-term protection? Consider a more robust form of rundown protection (slope drain, riprap) here to protect against erosion from the concentrated flow from the ditch.

JR Addressed-Added some riprap protection

POND 4- PLAN





NOTES

1. ALL PROPOSED POND IMPROVEMENTS ARE PRIVATE UNLESS OTHERWISE NOTED.
2. SEE SHEETS 3–8 FOR PROPOSED STORM SEWER DESIGN.

POINT TABULATION			
ID NO.	DESCRIPTION	NORTHING/EASTING	ELEVATION
P4–M1	MAINT. ROAD	N: 455747.33 E: 185361.29	7009.85
P4–M2	MAINT. ROAD	N: 455763.03 E: 185338.81	7008.51
P4–S1	SPILLWAY	N: 455711.59 E: 185361.21	7005.84
P4–S2	SPILLWAY	N: 455708.27 E: 185364.86	7005.55
P4–S3	SPILLWAY/TOP	N: 455693.57 E: 185381.04	7005.75
P4–S4	SPILLWAY/TOP	N: 455690.35 E: 185384.61	7005.80
P4–T1	TOE	N: 455710.15 E: 185381.24	7004.25
P4–T2	TOE	N: 455707.59 E: 185380.66	7004.35
P4–T3	TOE	N: 455698.78 E: 185391.47	7004.49
P4–T4	TOE	N: 455635.91 E: 185456.05	7005.28
P4–T5	TOE	N: 455630.92 E: 185468.70	7005.06
P4–T6	TOE	N: 455616.22 E: 185482.78	7005.15
P4–T7	TOE	N: 455613.34 E: 185488.78	7005.28
P4–T8	TOE	N: 455615.15 E: 185492.35	7005.36
P4–T9	TOE	N: 455623.15 E: 185492.51	7005.20
P4–T10	TOE	N: 455652.05 E: 185487.14	7005.59
P4–T11	TOE	N: 455673.93 E: 185473.16	7005.58

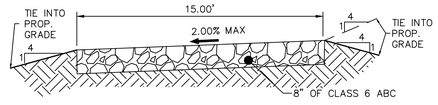
POINT TABULATION			
ID NO.	DESCRIPTION	NORTHING/EASTING	ELEVATION
P4–T12	TOE	N: 455684.19 E: 185444.86	7005.07
P4–T13	TOE	N: 455686.05 E: 185437.70	7004.86
P4–T14	TOE	N: 455689.31 E: 185427.66	7004.75
P4–T15	TOE	N: 455703.50 E: 185402.36	7004.73
P4–T16	TOE	N: 455709.36 E: 185396.77	7004.70
P4–T17	TOE	N: 455712.88 E: 185386.20	7004.40
P4–T18	TOE	N: 455712.61 E: 185382.95	7004.25
P4–T20	TOP/MAINT. TRAIL	N: 455719.64 E: 185356.26	7006.93
P4–T21	TOP/SPILLWAY	N: 455713.43 E: 185362.88	7006.75
P4–T22	TOP/SPILLWAY	N: 455712.06 E: 185368.12	7005.66
P4–T23	TOP/SPILLWAY	N: 455697.27 E: 185384.40	7005.20
P4–T24	TOP/SPILLWAY	N: 455692.14 E: 185386.23	7006.75
P4–T25	TOP	N: 455632.02 E: 185452.86	7006.75
P4–T26	TOP	N: 455609.46 E: 185481.27	7006.75
P4–T27	TOP	N: 455600.72 E: 185495.38	7006.75
P4–T28	TOP	N: 455601.57 E: 185502.57	7006.75
P4–T29	TOP	N: 455619.17 E: 185499.78	7006.75

POINT TABULATION			
ID NO.	DESCRIPTION	NORTHING/EASTING	ELEVATION
P4–T30	TOP	N: 455654.39 E: 185491.75	7006.75
P4–T31	TOP	N: 455678.23 E: 185476.50	7006.75
P4–T32	TOP	N: 455690.94 E: 185450.93	7007.12
P4–T33	TOP	N: 455697.37 E: 185426.80	7006.75
P4–T34	TOP	N: 455709.06 E: 185406.69	7006.75
P4–T35	TOP	N: 455713.46 E: 185407.55	7006.75
P4–T36	TOP	N: 455719.48 E: 185395.08	7006.75
P4–T37	TOP	N: 455720.34 E: 185390.56	7006.75
P4–T38	TOP	N: 455723.24 E: 185387.66	7006.76
P4–T39	TOP	N: 455725.24 E: 185370.18	7006.75
P4–TC1	TRICKLE CHANNEL	N: 455655.80 E: 185457.80	7004.22
P4–TC2	TRICKLE CHANNEL	N: 455665.97 E: 185447.07	7004.14
P4–TC3	TRICKLE CHANNEL	N: 455678.94 E: 185428.51	7004.03

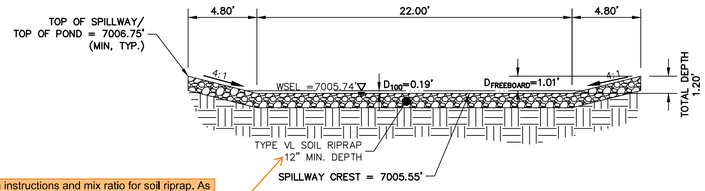
LINE TABLE		
LINE	BEARING	DISTANCE
L5	S38°02'12"E	41.93'
L7	S55°02'56"E	22.64'
L8	S55°02'56"E	56.63'

CURVE TABLE			
CURVE	DELTA	RADIUS	LENGTH
C4	17°00'45"	50.00'	14.85'
C5	108°16'49"	8.00'	15.12'

POND 4 TRICKLE CHANNEL
SCALE: 1"=3'



15' GRAVEL MAINTENANCE ACCESS ROAD TYPICAL SECTION
N.T.S.



Specify installation instructions and mix ratio for soil riprap. As an example, note: "Per MHFD Spec Section 31-37-00, the soil material shall be native or topsoil and mixed with 65% riprap and 35% soil by volume. And soil riprap shall consist of uniform mixture of soil and riprap without voids." And specify the riprap designation per Table 1 of the same spec.

JR Addressed

POND 4 EMERGENCY SPILLWAY TYP. SECTION
SCALE: 1"=5'

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.

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V-SCALE	N/A			DRAWN BY	GAG
				CHECKED BY	

CLOVERLEAF FILING 2

POND PLANS AND DETAILS

SHEET 9 OF 25

JOB NO. 25158.01

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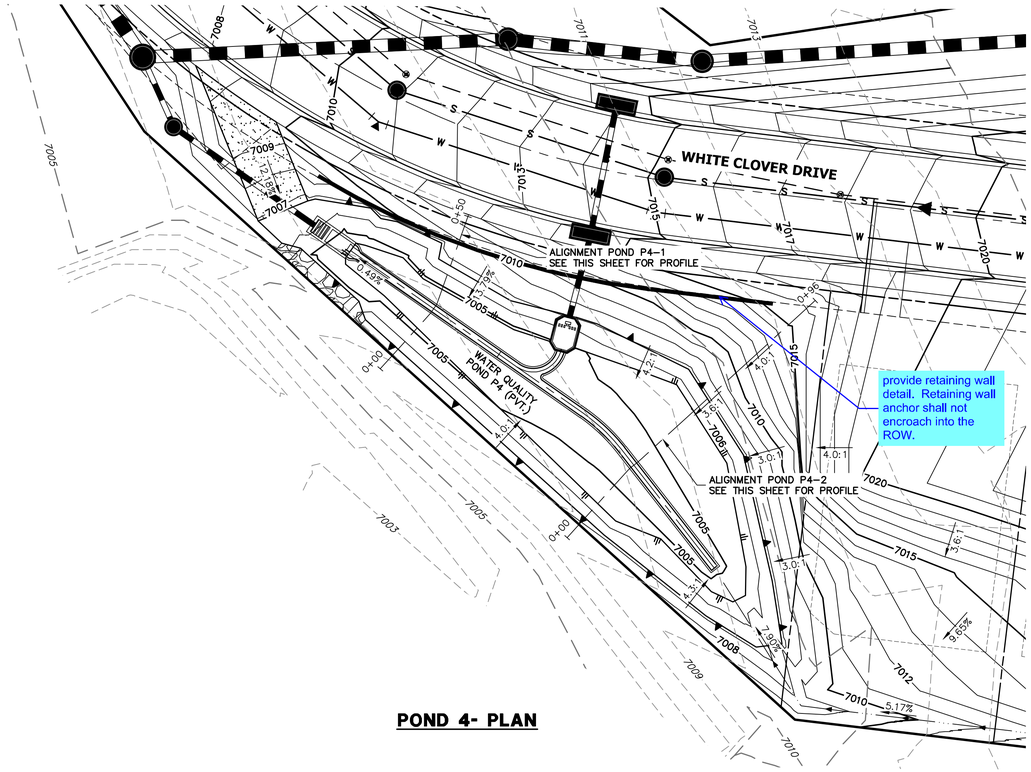
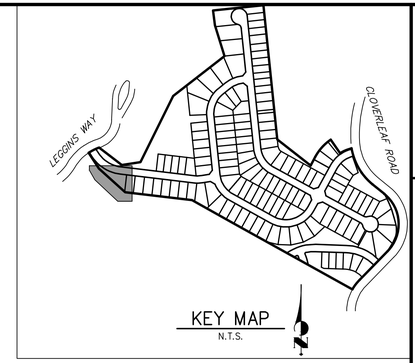
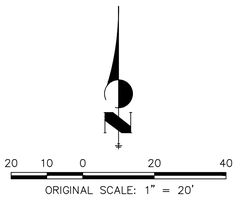


POND 4- PLAN

JR Addressed-Referenced to see independent sheets for design





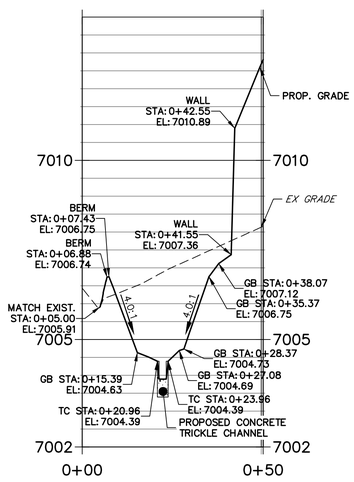
NOTES

1. ALL PROPOSED POND IMPROVEMENTS ARE PRIVATE UNLESS OTHERWISE NOTED.
2. SEE SHEETS 3–8 FOR PROPOSED STORM SEWER DESIGN.

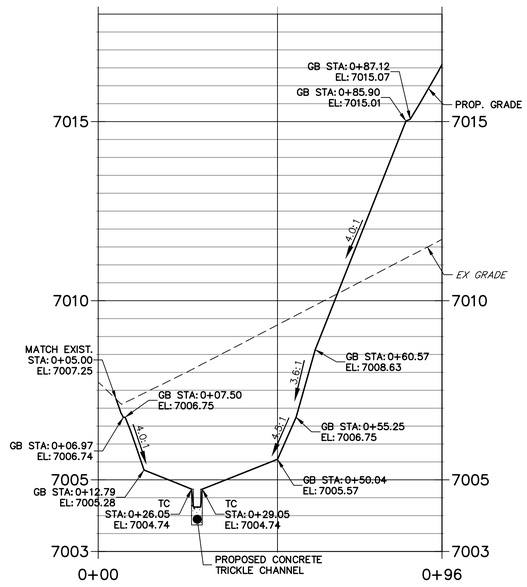
THE LOCATIONS OF EXISTING ABOVE GROUND AND UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE WAY ONLY. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK. THE CONTRACTOR SHALL BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE CAUSED BY HIS FAILURE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

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

POND P4-1 PROFILE
STA 0+00.00 TO 0+50.49



POND P4-2 PROFILE
STA 0+00.00 TO 0+95.96



ENGINEER'S STATEMENT

PREPARED UNDER MY DIRECT SUPERVISION AND ON BEHALF OF JR ENGINEERING

COLORADO LICENSED
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
PT CLOVERLEAF, LLC
1864 WOODMOOR DRIVE
COLORADO SPRINGS, CO 80920
ATTN: JOE DESJARDIN
(719) 476-0800
JDESJARDIN@PROTERRACO.COM

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"=20'
V-SCALE	1"=2'
DATE	05/10/21
DESIGNED BY	GVT
DRAWN BY	CAG
CHECKED BY	

CLOVERLEAF FILING 2

POND PLANS AND DETAILS

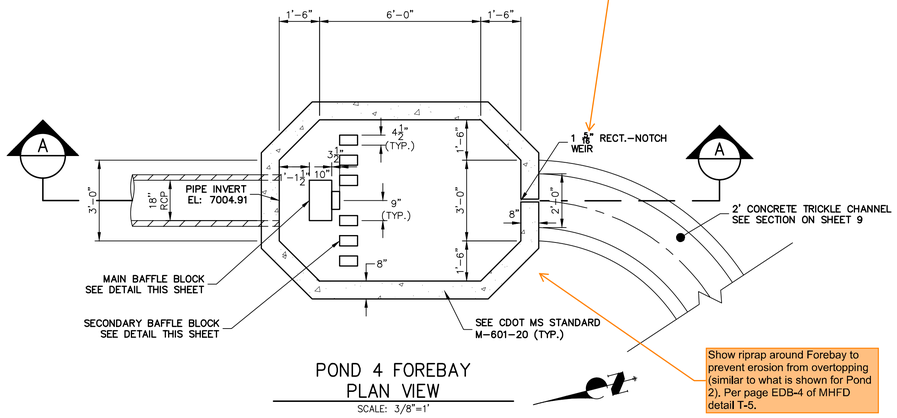
SHEET 10 OF 25

JOB NO. 25158.01

X:\25\10000.all\25158.01\Drawings\Sheet Dwgs\CDs\25158.01P04.dwg, P4 Profile, 5/13/2021 11:37:57 AM, CS

JR Addressed-Updated to min of 3" slot

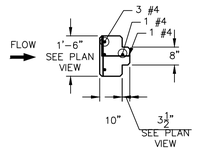
equals 0.11ft. Page 109 of FDR shows that it should be 0.08.



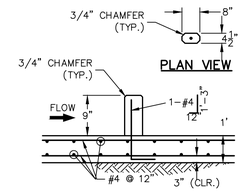
POND 4 FOREBAY
PLAN VIEW
SCALE: 3/8"=1'

Show riprap around Forebay to prevent erosion from overtopping (similar to what is shown for Pond 2). Per page EDB-4 of MHFD detail T-5.

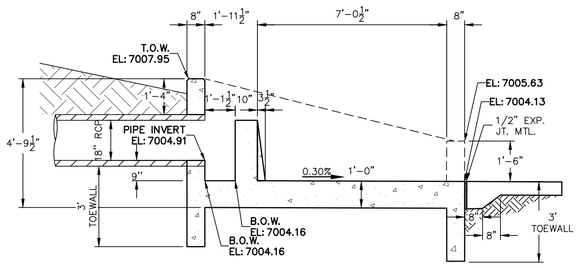
JR Addressed



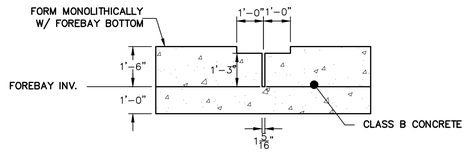
POND 4 FOREBAY MAIN
BAFFLE BLOCK PLAN
SCALE: 3/8"=1'



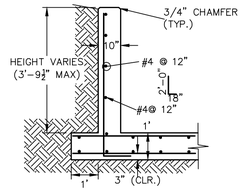
POND 4 FOREBAY SECONDARY
BAFFLE BLOCK DETAILS
SCALE: 3/8"=1'



POND 4 FOREBAY CROSS SECTION A-A
SCALE: 3/8"=1'



POND 101 DT01 FOREBAY
SECTION AT WEIR
SCALE: 3/8"=1'



POND 4 FOREBAY WINGWALL
REINFORCING DETAIL
SCALE: 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 PROFESSIONAL ENGINEER 32314

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
PT CLOVERLEAF, LLC
1864 WOODMOOR DRIVE
COLORADO SPRINGS, CO 80920
ATTN: JOE DESJARDIN
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JDESJARDIN@PROTERRACO.COM

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

No.	REVISION	BY	DATE

H-SCALE	3/8"=1'
V-SCALE	3/8"=1'
DATE	05/10/21
DESIGNED BY	GAG
DRAWN BY	GAG
CHECKED BY	

CLOVERLEAF FILING 2

POND PLANS AND DETAILS

SHEET 11 OF 25

JOB NO. 25158.01

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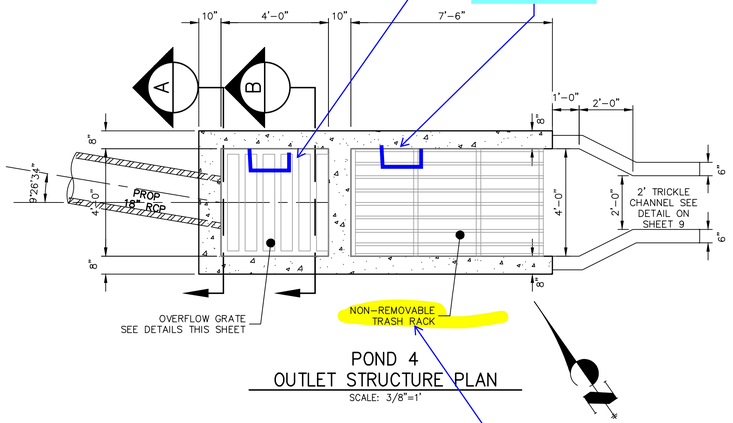
provide steps for maintenance access to the bottom of the structure. Typical for all outlet structures when depth exceeds 30". Provide details of the steps.

JR Addressed-added steps



POND 4
OUTLET STRUCTURE PLAN
SCALE: 3/8"=1'

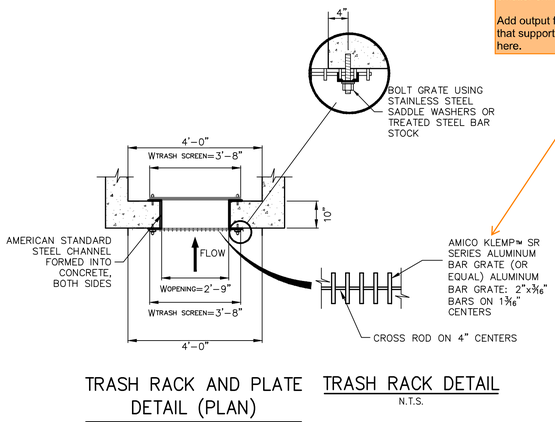
Revise design. Safety grate must be either bolted or locked to allow access inside the structure for maintenance. Typical of all outlet structures

JR Addressed

JR Addressed-Used grate as suggested

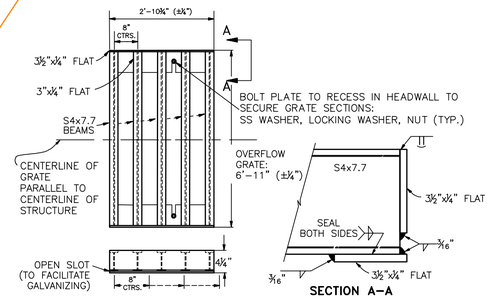
Please refer to the EDB tab on the UD-BMP spreadsheet for size and type of trash rack. It's very likely that a well screen will be spec'd for this application. It is not desirable to have such large opening compared to the smaller orifice holes.

Add output from the spreadsheet to FDR that supports which trash rack you spec out here.

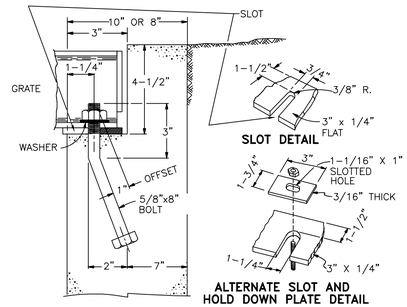


TRASH RACK AND PLATE DETAIL (PLAN)
N.T.S.

TRASH RACK DETAIL
N.T.S.



OVERFLOW GRATE DETAILS
N.T.S.



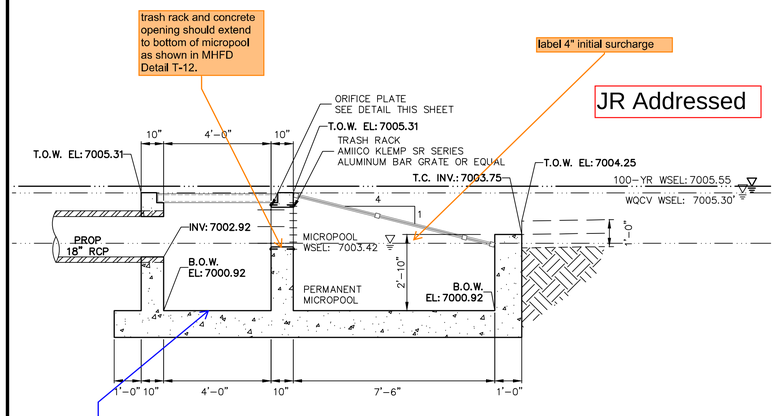
OVERFLOW GRATE INSTALLATION DETAIL
N.T.S.

JR Addressed

trash rack and concrete opening should extend to bottom of micropool as shown in MHFD Detail T-12.

label 4" initial surcharge

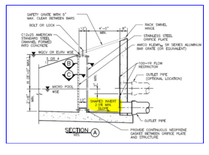
JR Addressed

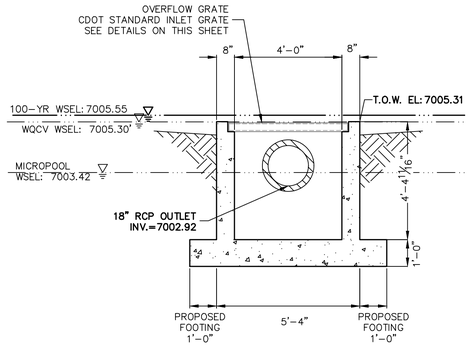


POND 4
OUTLET STRUCTURE PROFILE
SCALE: 3/8"=1'

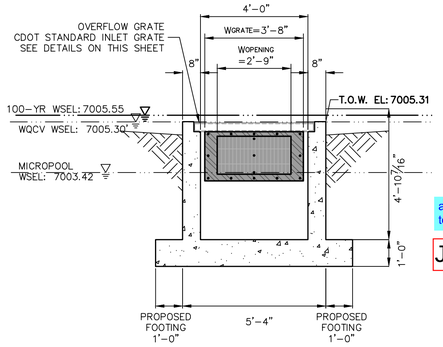
Per USDCM Vol. 3, revise to provide a 2.5% sloped invert (minimum) towards pipe. See figure.

JR Addressed

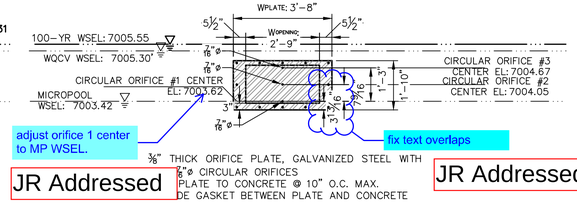




A A-A SECTION
SCALE: 3/8"=1'



B B-B SECTION
SCALE: 3/8"=1'



JR Addressed

ORIFICE PLATE DETAIL
SCALE: 3/8"=1'

JR Addressed

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No.	REVISION	BY	DATE

H-SCALE	3/8"=1'
V-SCALE	3/8"=1'
DATE	05/10/21
DESIGNED BY	GAG
DRAWN BY	GAG
CHECKED BY	

CLOVERLEAF FILING 2

POND PLANS AND DETAILS

SHEET 12 OF 25

JOB NO. 25158.01

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 MIKE A. BRAMLETT 32314 PROFESSIONAL ENGINEER

X:\25\10000.all\25158011\Drawings\Sheet Dwgs\CDs\25158011P04-DT.dwg, P4-Outlet, 5/13/2021 11:38:35 AM, CS

POINT TABULATION			
ID NO.	DESCRIPTION	NORTHING/EASTING	ELEVATION
P1–M1	MAINT. ROAD	N: 455842.31 E: 186673.08	7073.04
P1–M2	MAINT. ROAD	N: 455869.12 E: 186616.53	7073.04
P1–M3	MAINT. ROAD	N: 455893.86 E: 186588.06	7073.04
P1–M4	MAINT. ROAD	N: 455929.77 E: 186576.56	7073.04
P1–M5	MAINT. ROAD	N: 456208.10 E: 186566.22	7073.00
P1–M6	MAINT. ROAD	N: 456374.74 E: 186556.67	7071.98
P1–M7	MAINT. ROAD	N: 456424.26 E: 186550.33	7071.90
P1–M8	MAINT. ROAD	N: 456613.63 E: 186512.82	7072.77
P1–M9	MAINT. ROAD	N: 456625.83 E: 186505.09	7072.63
P1–M10	MAINT. ROAD	N: 456629.64 E: 186491.15	7072.47
P1–M11	MAINT. ROAD	N: 456616.97 E: 186368.07	7070.00
P1–M12	MAINT. ROAD	N: 456607.02 E: 186369.10	7069.74
P1–M13	MAINT. ROAD	N: 456619.69 E: 186492.18	7072.67
P1–M14	MAINT. ROAD	N: 456617.79 E: 186499.14	7072.82
P1–M15	MAINT. ROAD	N: 456611.69 E: 186503.01	7072.97
P1–M16	MAINT. ROAD	N: 456423.23 E: 186540.35	7072.32
P1–M17	MAINT. ROAD	N: 456373.60 E: 186546.73	7072.25
P1–M18	MAINT. ROAD	N: 456219.47 E: 186555.56	7073.18
P1–M19	MAINT. ROAD	N: 455929.40 E: 186566.57	7073.24
P1–M20	MAINT. ROAD	N: 455888.36 E: 186579.71	7073.24
P1–M21	MAINT. ROAD	N: 455860.09 E: 186612.24	7073.24
P1–M22	MAINT. ROAD	N: 455818.52 E: 186699.92	7073.25
P1–M23	MAINT. ROAD	N: 455886.75 E: 186625.77	7068.75

POINT TABULATION			
ID NO.	DESCRIPTION	NORTHING/EASTING	ELEVATION
P1–M24	MAINT. ROAD	N: 455876.36 E: 186634.66	7070.00
P1–M25	MAINT. ROAD	N: 455811.38 E: 186707.97	7073.31
P1–M26	MAINT. ROAD	N: 455796.60 E: 186739.15	7073.31
P1–M27	MAINT. ROAD	N: 455793.52 E: 186787.09	7074.63
P1–M28	MAINT. ROAD	N: 455824.20 E: 186824.05	7075.94
P1–M29	MAINT. ROAD	N: 455881.31 E: 186862.95	7079.71
P1–M30	MAINT. ROAD	N: 455929.52 E: 186912.45	7084.23
P1–M31	MAINT. ROAD	N: 455930.38 E: 186915.24	7084.40
P1–M32	MAINT. ROAD	N: 455929.11 E: 186917.87	7084.58
P1–M33	MAINT. ROAD	N: 455859.27 E: 186982.75	7093.41
P1–M34	MAINT. ROAD	N: 455869.86 E: 186993.39	7093.83
P1–M35	MAINT. ROAD	N: 455939.32 E: 186928.86	7084.20
P1–M36	MAINT. ROAD	N: 455945.34 E: 186916.37	7083.58
P1–M37	MAINT. ROAD	N: 455941.26 E: 186903.11	7083.93
P1–M38	MAINT. ROAD	N: 455890.96 E: 186851.47	7079.40
P1–M39	MAINT. ROAD	N: 455831.37 E: 186810.88	7075.63
P1–M40	MAINT. ROAD	N: 455807.78 E: 186782.45	7074.33
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P1–M42	MAINT. ROAD	N: 455824.02 E: 186716.33	7073.00
P1–M43	MAINT. ROAD	N: 455886.91 E: 186645.38	7068.84
P1–M44	MAINT. ROAD	N: 455891.37 E: 186640.34	7068.03
P1–T1	TOE	N: 456412.94 E: 186592.80	7066.90
P1–T2	TOE	N: 456326.15 E: 186619.93	7066.67

POINT TABULATION			
ID NO.	DESCRIPTION	NORTHING/EASTING	ELEVATION
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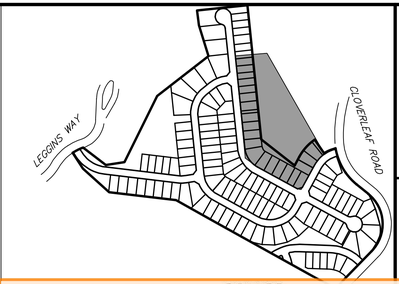
P1–T4	TOE	N: 456229.46 E: 186634.03	7066.10
P1–T5	TOE	N: 456203.09 E: 186641.82	7066.02
P1–T6	TOE	N: 456159.05 E: 186658.38	7066.18
P1–T7	TOE	N: 456125.16 E: 186675.84	7066.52
P1–T8	TOE	N: 456091.08 E: 186699.84	7067.10
P1–T9	TOE	N: 455983.58 E: 186797.19	7068.69
P1–T10	TOE	N: 455950.29 E: 186813.43	7068.28
P1–T11	TOE	N: 455913.53 E: 186808.84	7067.73
P1–T12	TOE	N: 455875.63 E: 186792.23	7067.71
P1–T13	TOE	N: 455864.96 E: 186789.23	7067.79
P1–T14	TOE	N: 455853.83 E: 186784.59	7067.94
P1–T15	TOE	N: 455844.13 E: 186777.43	7068.07
P1–T16	TOE	N: 455833.45 E: 186757.62	7068.14
P1–T17	TOE	N: 455836.64 E: 186735.33	7068.20
P1–T18	TOE	N: 455879.52 E: 186683.74	7068.10
P1–T19	TOE	N: 455888.61 E: 186662.96	7068.07
P1–T20	TOE	N: 455893.70 E: 186621.30	7068.00
P1–T21	TOE	N: 455911.68 E: 186605.54	7067.94
P1–T22	TOE	N: 455934.91 E: 186599.93	7067.69
P1–T23	TOE	N: 456147.72 E: 186601.88	7065.50
P1–T24	TOE	N: 456155.68 E: 186601.03	7065.50
P1–T25	TOE	N: 456198.01 E: 186595.95	7066.22

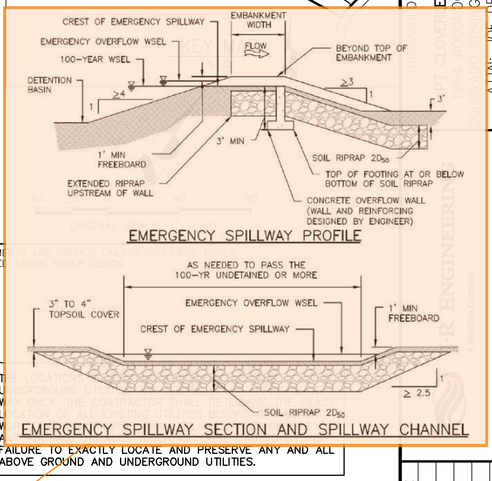
POINT TABULATION			
ID NO.	DESCRIPTION	NORTHING/EASTING	ELEVATION
P1–T26	TOE	N: 456366.96 E: 186584.79	7066.74
P1–T27	TOE	N: 456410.29 E: 186580.14	7066.89
P1–T28	TOE	N: 456417.36 E: 186585.27	7066.92
P1–T29	TOP	N: 456442.05 E: 186579.64	7073.00
P1–T30	TOP	N: 456421.44 E: 186615.79	7073.00
P1–T31	TOP	N: 456336.19 E: 186643.72	7073.00
P1–T32	TOP	N: 456302.28 E: 186651.65	7073.00
P1–T33	TOP	N: 456244.73 E: 186659.89	7073.00
P1–T34	TOP	N: 456227.84 E: 186663.83	7073.00
P1–T35	TOP	N: 456169.74 E: 186684.23	7073.00
P1–T36	TOP	N: 456137.86 E: 186699.19	7073.00
P1–T37	TOP	N: 456104.74 E: 186719.83	7073.00
P1–T38	TOP	N: 456079.97 E: 186738.34	7073.00
P1–T39	TOP	N: 455990.53 E: 186814.49	7073.00
P1–T40	TOP	N: 455945.57 E: 186834.18	7073.01
P1–T41	TOP	N: 455897.21 E: 186825.72	7073.00
P1–T42	TOP	N: 455867.59 E: 186812.38	7073.00
P1–T43	TOP	N: 455853.72 E: 186807.59	7073.00
P1–T44	TOP	N: 455818.43 E: 186774.06	7073.01
P1–T45	TOP	N: 455819.72 E: 186725.40	7073.00
P1–T46	TOP	N: 455847.07 E: 186667.71	7073.00
P1–T47	TOP	N: 455870.93 E: 186617.38	7073.00
P1–T48	TOP	N: 455894.96 E: 186589.73	7073.00

POINT TABULATION			
ID NO.	DESCRIPTION	NORTHING/EASTING	ELEVATION
P1–T49	TOP	N: 455929.85 E: 186578.56	7073.00
P1–T50	TOP	N: 456208.17 E: 186568.22	7073.00
P1–T51	TOP	N: 456367.26 E: 186559.15	7073.00
P1–T52	TOP	N: 456408.12 E: 186555.54	7070.75
P1–TC1	TRICKLE CHANNEL	N: 455895.40 E: 186798.06	7067.62
P1–TC2	TRICKLE CHANNEL	N: 455891.15 E: 186784.05	7066.93
P1–TC3	TRICKLE CHANNEL	N: 455889.70 E: 186740.21	7066.70
P1–TC4	TRICKLE CHANNEL	N: 455910.29 E: 186701.48	7066.48
P1–TC5	TRICKLE CHANNEL	N: 455938.70 E: 186670.96	7066.27
P1–TC6	TRICKLE CHANNEL	N: 455975.03 E: 186645.65	7066.05
P1–TC7	TRICKLE CHANNEL	N: 456018.55 E: 186637.55	7065.82
P1–TC8	TRICKLE CHANNEL	N: 456094.31 E: 186639.72	7065.44
P1–TC9	TRICKLE CHANNEL	N: 456125.31 E: 186637.10	7065.29
P1–TC10	TRICKLE CHANNEL	N: 456145.45 E: 186626.16	7065.14
P1–TC11	TRICKLE CHANNEL	N: 456151.98 E: 186604.20	7065.07
P1–TC12	TRICKLE CHANNEL	N: 456151.70 E: 186601.46	7065.47
P1–TC13	TRICKLE CHANNEL	N: 456163.88 E: 186623.01	7065.12
P1–TC14	TRICKLE CHANNEL	N: 456187.71 E: 186628.49	7065.25
P1–TC15	TRICKLE CHANNEL	N: 456414.78 E: 186585.67	7066.40

LINE TABLE		
LINE	BEARING	DISTANCE
L1	S84°07'17"W	2.74'
L2	N06°04'25"W	21.04'
L3	N01°38'18"E	75.79'
L4	N47°02'38"W	41.70'
L5	S73°08'30"W	14.64'
L6	N10°40'50"W	231.07'

CURVE TABLE			
CURVE	DELTA	RADIUS	LENGTH
C1	89°48'18"	30.00'	47.02'
C2	7°42'43"	75.00'	10.09'
C3	48°40'56"	105.00'	89.22'
C4	59°48'52"	85.00'	88.74'
C5	94°31'50"	30.50'	50.32'





NOTES

1. ALL PROPOSED POND IMPROVEME
2. SEE SHEETS 3–8 FOR PROPOSE

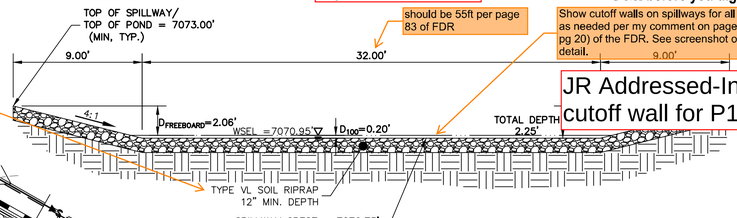
811 Know what's below. Call before you dig.

FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL ABOVE GROUND AND UNDERGROUND UTILITIES.

JR Addressed-Updated FDR

should be 55ft per page 83 of FDR

Show cutoff walls on spillways for all ponds as needed per my comment on page 17 (pdf pg 20) of the FDR. See screenshot of MHFD detail.



POND 1 EMERGENCY SPILLWAY TYP. SECTION

SCALE: 1"=5'

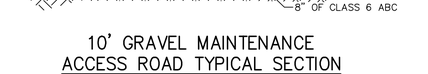
revise if micropool and outlet are revised. This elevation should be 6.5ft above Stage = 0ft, per page 83 of FDR

JR Addressed-Updated FDR

JR Addressed-Included cutoff wall for P1 and P2

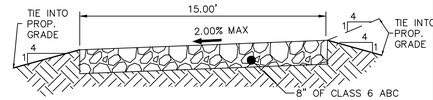
Per DCM 6.5.3 access roads should be a minimum of 15 feet. Revise.

JR Addressed-Included both to have main access of 15' and smaller trail of 10'.



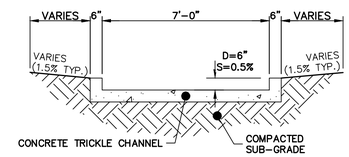
10' GRAVEL MAINTENANCE ACCESS ROAD TYPICAL SECTION

N.T.S.



15' GRAVEL MAINTENANCE ACCESS ROAD TYPICAL SECTION

N.T.S.



POND 1 TRICKLE CHANNEL

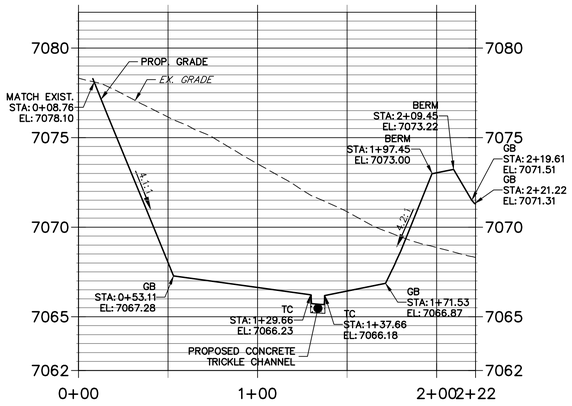
SCALE: 1"=3'

JR Addressed

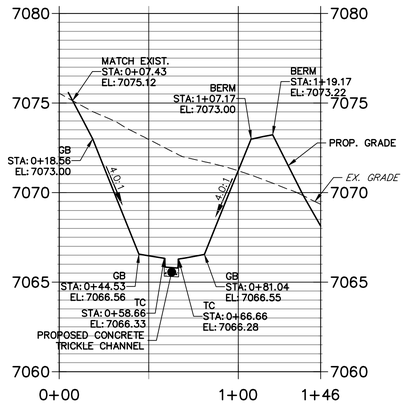
Specify installation instructions and mix ratio for soil riprap. As an example, note: "Per MHFD Spec Section 31-37-00, the soil material shall be native or topsoil and mixed with 65% riprap and 35% soil by volume. And soil riprap shall consist of uniform mixture of soil and riprap without voids." And specify the riprap designation per Table 1 of the same spec.

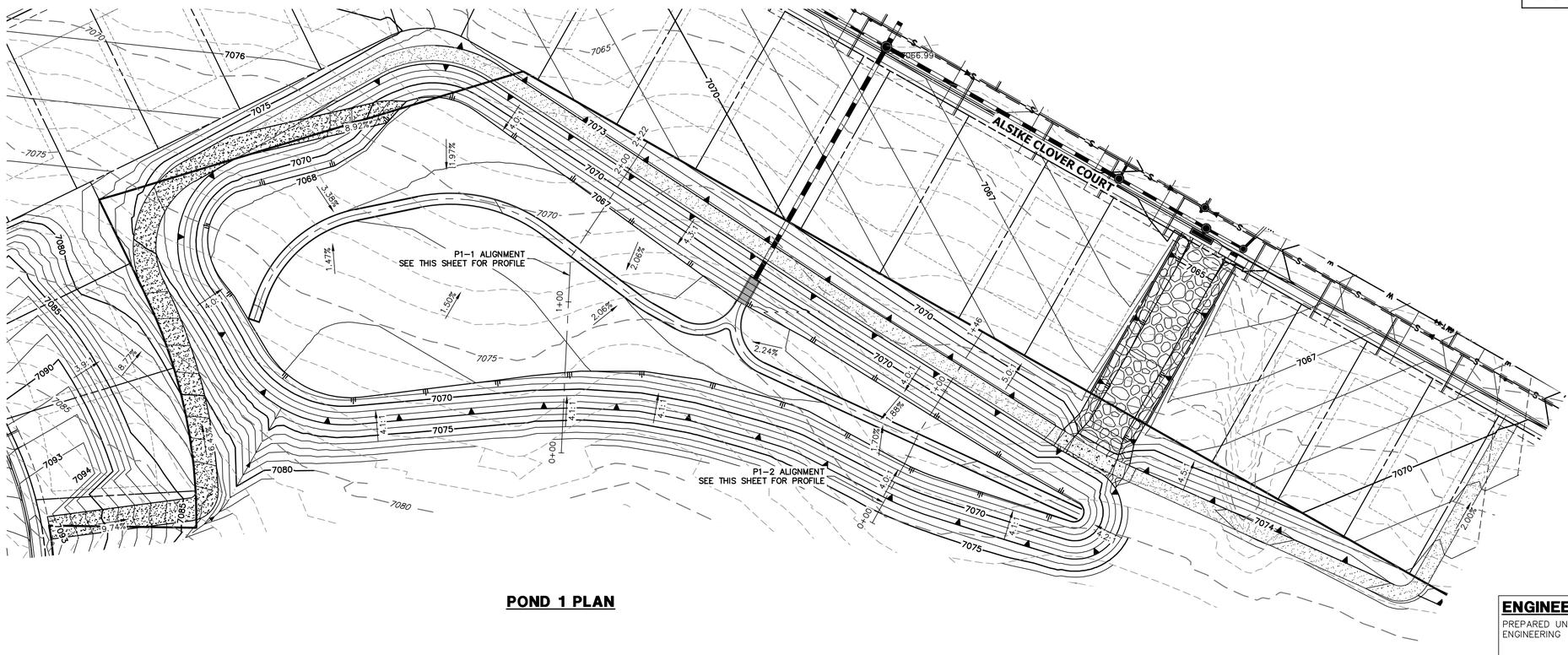
POND 1 10' GRAVEL MAINT. ROAD SEE TYP. SECTION ON THIS SHEET
POND 1 OUTLET STRUCTURE SEE SHEET 15 FOR DETAILS
POND 1 TRICKLE CHANNEL SEE TYP. SECTION ON THIS SHEET
ALSIKE CLOVER COURT
15.00' GRAVEL MAINT. ROAD
8.92%
10.00' GRAVEL MAINT. ROAD
EMERGENCY SPILLWAY SEE TYP. SECTION ON THIS SHEET
POND 1 15' GRAVE SEE TYP. SECTION
1.47%
1.50%
2.06%
2.24%
1.70%
4.16%
4.00%
4.11%
4.37%
4.01%
4.00%
2.01%
2.00%
2.00%
2.00

P1-1 PROFILE
STA 0+00.00 TO 2+21.69

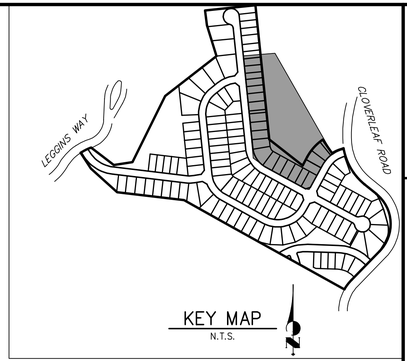


P1-2 PROFILE
STA 0+00.00 TO 1+45.94





POND 1 PLAN



40 20 0 40 80

HORIZONTAL
ORIGINAL SCALE: 1" = 40'

VERTICAL
ORIGINAL SCALE: 1" = 4'

NOTES

1. ALL PROPOSED POND IMPROVEMENTS ARE PRIVATE UNLESS OTHERWISE NOTED.
2. SEE SHEETS 3–8 FOR PROPOSED STORM SEWER DESIGN.

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.

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 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
PT CLOVERLEAF, LLC
1864 WOODMOOR DRIVE
COLORADO SPRINGS, CO 80920
ATTN: JOE DESJARDIN
(719) 476-0800
JDESJARDIN@PROTERRACO.COM

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"=40'
V-SCALE	1"=4'
DATE	05/10/21
DESIGNED BY	GVT
DRAWN BY	GVT
CHECKED BY	

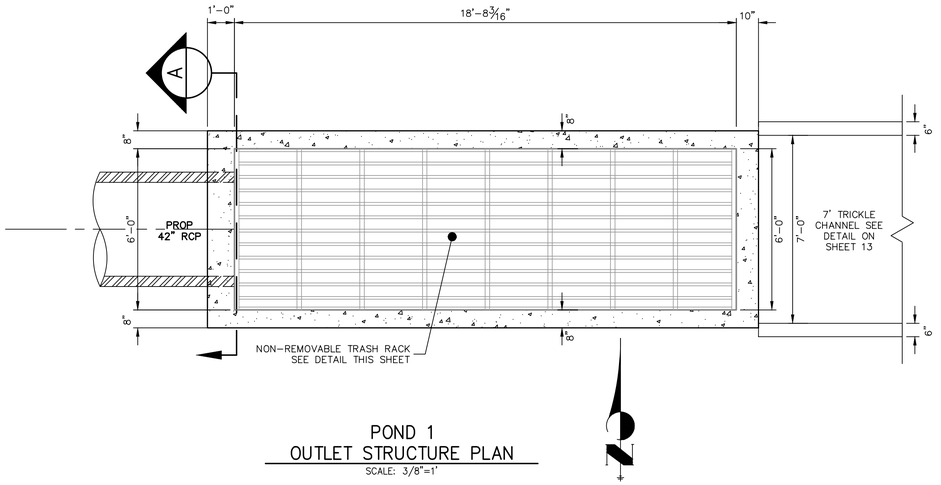
CLOVERLEAF FILING 2

POND PLANS AND DETAILS

SHEET 14 OF 25

JOB NO. 25158.01

X:\25\10000.all\25158\01\Drawings\Sheet Dwgs\CDs\25158P01.dwg, P1 Profile, 5/13/2021 11:39:49 AM, CS



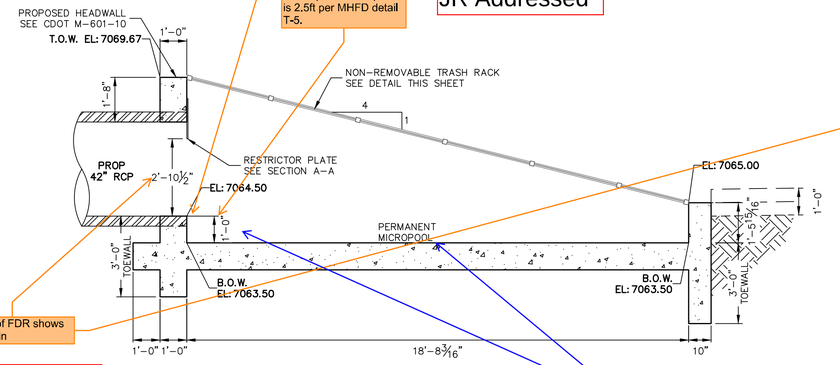
POND 1
OUTLET STRUCTURE PLAN
SCALE: 3/8"=1'

JR Addressed-
FDR matches

The bottom of page 76 of the FDR shows invert of pipe as 0.5ft above Stage = 0ft. But Stage = 0ft is at top of micropool. Reconfigure outlet as needed to achieve this once micropool depth is adjusted

Min depth of micropool is 2.5ft per MHFD detail T-5.

JR Addressed



Page 82 of FDR shows this as 36in

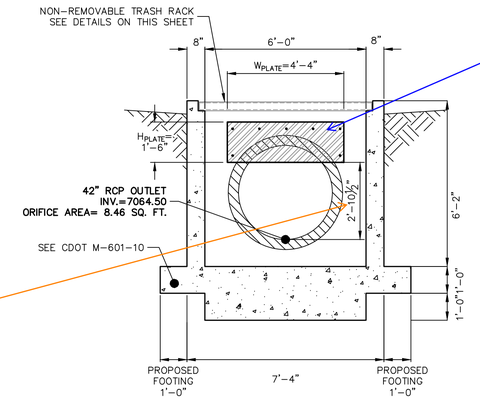
JR Addressed-
Updated FDR

POND 1
OUTLET STRUCTURE PROFILE
SCALE: 3/8"=1'

Update design. Shallow standing water can result in mosquito breeding.

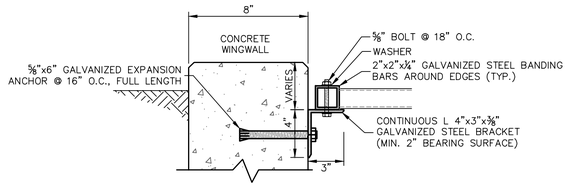
JR Addressed

JR Addressed

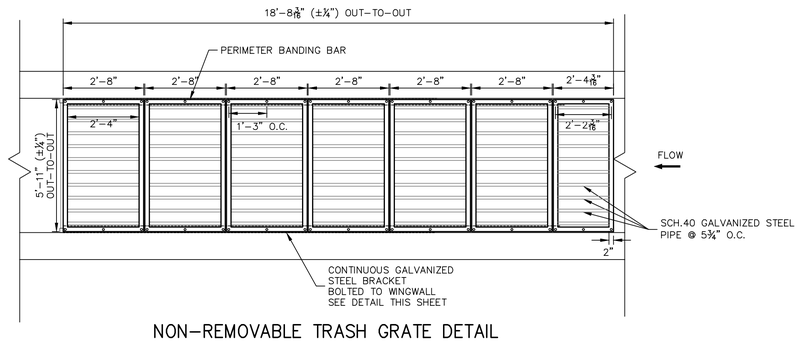


identify plate thickness. typical for all ponds

A A-A SECTION
SCALE: 3/8"=1'



TRASH GRATE CONNECTION TO WALLS
N.T.S.



NON-REMOVABLE TRASH GRATE DETAIL
(PLAN)
N.T.S.

Know what's below.
Call before you dig.

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MIKE A. BRAMLETT, P.E. DATE
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Fort Collins 970-491-9888 • www.jrengineering.com

No.	REVISION	BY	DATE

H-SCALE	1"=XX'
V-SCALE	1"=X'
DATE	05/10/21
DESIGNED BY	XXX
DRAWN BY	XXX
CHECKED BY	

CLOVERLEAF FILING 2

POND PLANS AND DETAILS

SHEET 15 OF 25

JOB NO. 25158.01

X:\25\10000.all\25158\01Drawings\Sheet Dwgs\CDs\25158P01-DT.dwg, P1-Outlet, 5/13/2021 11:40:11 AM, CS

POINT TABULATION			
ID NO.	DESCRIPTION	NORTHING/EASTING	ELEVATION
P2–M1	MAINT. ROAD	N: 455732.46 E: 185646.43	7024.96
P2–M2	MAINT. ROAD	N: 455873.71 E: 185680.33	7029.59
P2–M3	MAINT. ROAD	N: 455879.71 E: 185682.16	7029.53
P2–M4	MAINT. ROAD	N: 455885.10 E: 185685.34	7029.84
P2–M5	MAINT. ROAD	N: 455870.73 E: 185695.04	7029.88
P2–M6	MAINT. ROAD	N: 455873.67 E: 185695.89	7029.84
P2–M7	MAINT. ROAD	N: 455876.28 E: 185697.48	7030.09
P2–S1	SPILLWAY TOE	N: 455826.95 E: 185716.57	7027.84
P2–S2	SPILLWAY TOE	N: 455727.56 E: 185687.58	7027.21
P2–S3	SPILLWAY TOE	N: 455729.47 E: 185671.48	7026.33
P2–S4	SPILLWAY TOE	N: 455831.43 E: 185701.21	7027.84
P2–S5	SPILLWAY TOE	N: 455869.23 E: 185700.29	7028.00
P2–S6	SPILLWAY TOP	N: 455824.15 E: 185726.17	7030.34
P2–S7	SPILLWAY TOP	N: 455726.36 E: 185697.65	7027.75
P2–S8	SPILLWAY TOP/MAINT. ROAD	N: 455730.67 E: 185661.41	7025.78
P2–S9	SPILLWAY TOP	N: 455834.23 E: 185691.61	7030.12
P2–T1	TOE	N: 456196.51 E: 185860.07	7026.60

POINT TABULATION			
ID NO.	DESCRIPTION	NORTHING/EASTING	ELEVATION
P2–T2	TOE	N: 456194.31 E: 185886.26	7026.49
P2–T3	TOE	N: 456192.25 E: 185910.80	7026.71
P2–T4	TOE/FOREBAY	N: 456074.58 E: 185921.13	7026.28
P2–T5	TOE/FOREBAY	N: 456058.98 E: 185922.64	7026.28
P2–T6	TOE	N: 455935.99 E: 185933.24	7025.70
P2–T7	TOE	N: 455873.95 E: 185908.84	7025.43
P2–T8	TOE/FOREBAY	N: 455856.09 E: 185843.33	7025.17
P2–T9	TOE/FOREBAY	N: 455858.58 E: 185830.11	7024.95
P2–T10	TOE	N: 455873.27 E: 185751.88	7022.81
P2–T11	TOE	N: 455874.19 E: 185748.55	7022.74
P2–T12	TOE	N: 455875.68 E: 185745.43	7022.67
P2–T13	TOE	N: 455877.69 E: 185742.61	7022.59
P2–T14	TOE	N: 455883.54 E: 185737.91	7022.57
P2–T15	TOE	N: 455902.00 E: 185753.40	7023.31
P2–T16	TOE	N: 455940.54 E: 185760.17	7024.51
P2–T17	TOE	N: 455982.65 E: 185755.05	7026.17
P2–T18	TOE	N: 456091.94 E: 185790.68	7026.60

POINT TABULATION			
ID NO.	DESCRIPTION	NORTHING/EASTING	ELEVATION
P2–T19	TOP	N: 456225.18 E: 185919.99	7030.00
P2–T20	TOP/FOREBAY	N: 456072.49 E: 185939.85	7030.00
P2–T21	TOP/FOREBAY	N: 456064.83 E: 185940.62	7030.00
P2–T22	TOP	N: 455929.91 E: 185949.77	7030.00
P2–T23	TOP	N: 455868.78 E: 185929.80	7030.15
P2–T24	TOP	N: 455836.83 E: 185873.99	7030.00
P2–T25	TOP	N: 455844.40 E: 185742.36	7030.00
P2–T26	TOP	N: 455843.36 E: 185734.18	7028.00
P2–T27	TOP	N: 455845.39 E: 185717.09	7027.94
P2–T28	TOP	N: 455848.73 E: 185709.31	7027.94
P2–T29	TOP	N: 455855.75 E: 185704.57	7027.96
P2–T30	TOP/MAINT. ROAD	N: 455876.86 E: 185697.87	7030.15
P2–T31	TOP/MAINT. ROAD	N: 455935.15 E: 185719.07	7031.03
P2–T32	TOP/MAINT. ROAD	N: 456098.40 E: 185777.78	7029.96
P2–T33	TOP/MAINT. ROAD	N: 456209.92 E: 185852.13	7030.50
P2–T34	TOP/MAINT. ROAD	N: 455901.35 E: 185696.29	7031.38
P2–T35	TOP/MAINT. ROAD	N: 456102.93 E: 185768.78	7030.16

POINT TABULATION			
ID NO.	DESCRIPTION	NORTHING/EASTING	ELEVATION
P2–T36	TOP/MAINT. ROAD	N: 456215.47 E: 185843.81	7030.70
P2–T37	TOE/MAINT. ROAD	N: 455887.44 E: 185705.00	7031.16
P2–T38	TOE/MAINT. ROAD	N: 455964.90 E: 185757.21	7025.78
P2–TC1	TRICKLE CHANNEL	N: 456064.41 E: 185898.85	7024.65
P2–TC2	TRICKLE CHANNEL	N: 456052.26 E: 185870.89	7024.45
P2–TC3	TRICKLE CHANNEL	N: 456185.30 E: 185883.03	7025.76
P2–TC4	TRICKLE CHANNEL	N: 456023.30 E: 185854.35	7024.12
P2–TC5	TRICKLE CHANNEL	N: 455955.29 E: 185842.30	7023.43
P2–TC6	TRICKLE CHANNEL	N: 455918.85 E: 185824.82	7023.02
P2–TC7	TRICKLE CHANNEL	N: 455867.13 E: 185837.89	7023.29
P2–TC8	TRICKLE CHANNEL	N: 455893.79 E: 185827.22	7022.99
P2–TC9	TRICKLE CHANNEL	N: 455899.27 E: 185799.02	7022.69
P2–TC10	TRICKLE CHANNEL	N: 455896.72 E: 185791.00	7022.61
P2–TC11	TRICKLE CHANNEL	N: 455878.34 E: 185733.07	7022.00

LINE TABLE		
LINE	BEARING	DISTANCE
L1	N10°02'28"E	164.48'
L2	N10°02'28"E	69.12'
L3	N72°23'27"E	60.78'
L4	S84°07'17"W	18.94'
L5	S13°41'44"W	2.84'
L6	S06°47'26"W	2.01'
L7	N72°23'27"E	8.41'

CURVE TABLE			
CURVE	DELTA	RADIUS	LENGTH
C1	62°20'59"	75.20'	81.83'
C2	70°25'33"	50.40'	61.95'
C3	114°23'59"	30.00'	59.90'

NOTES

1. ALL PROPOSED POND IMPROVEMENTS ARE PRIVATE UNLESS OTHERWISE NOTED.
2. SEE SHEETS 3–8 FOR PROPOSED STORM SEWER DESIGN.

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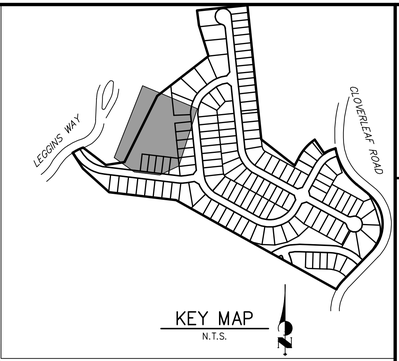


KEY MAP
N.T.S.

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

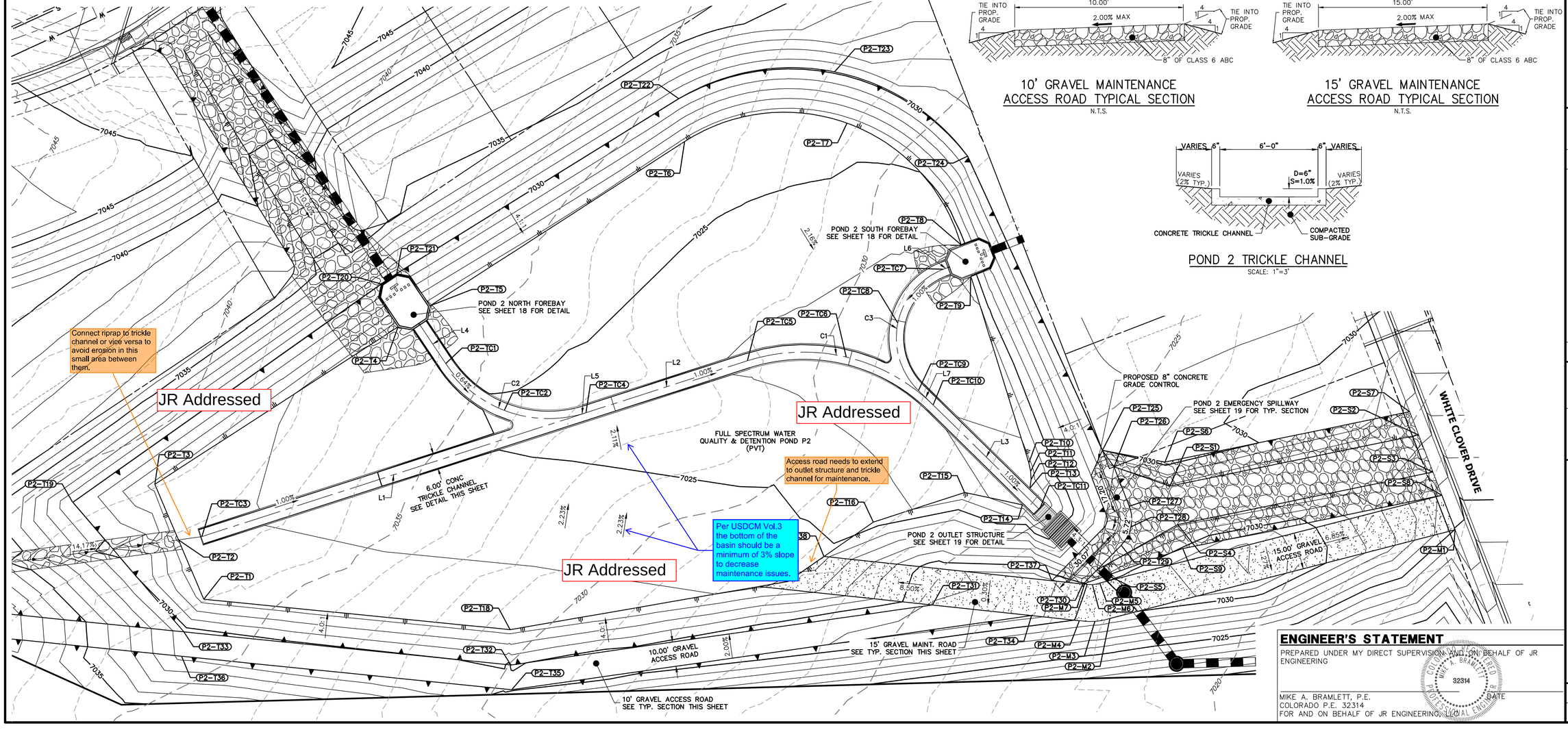
JR Addressed-Provide 15' for main access and 10' for additional access

Per DCM 6.5.3 access roads should be a minimum of 15 feet. Revise.

10' GRAVEL MAINTENANCE ACCESS ROAD TYPICAL SECTION
N.T.S.

15' GRAVEL MAINTENANCE ACCESS ROAD TYPICAL SECTION
N.T.S.

POND 2 TRICKLE CHANNEL
SCALE: 1"=3'



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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No.	REVISION	BY	DATE

H–SCALE	1"=20'
V–SCALE	N/A
DATE	05/10/21
DESIGNED BY	GVT
DRAWN BY	GVT
CHECKED BY	

CLOVERLEAF FILING 2

POND PLANS AND DETAILS

SHEET 16 OF 25

JOB NO. 25158.01

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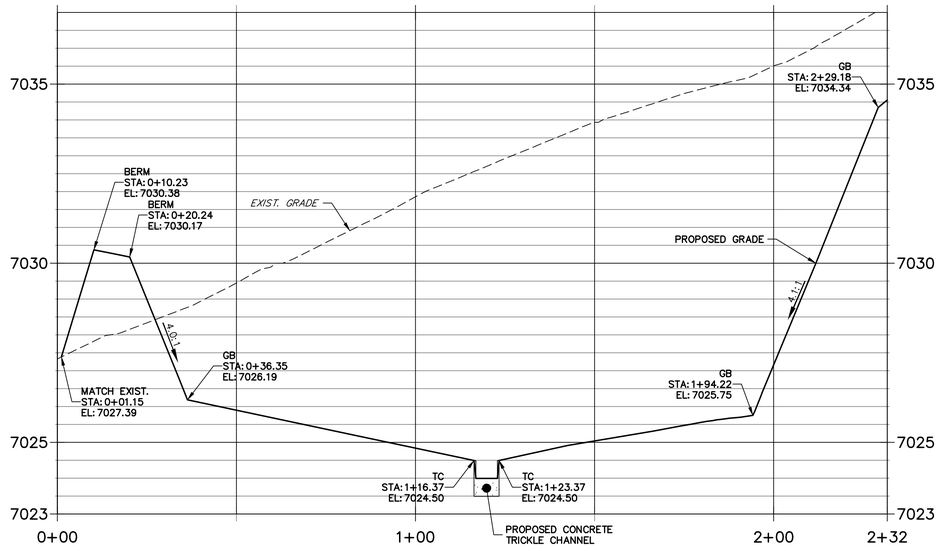
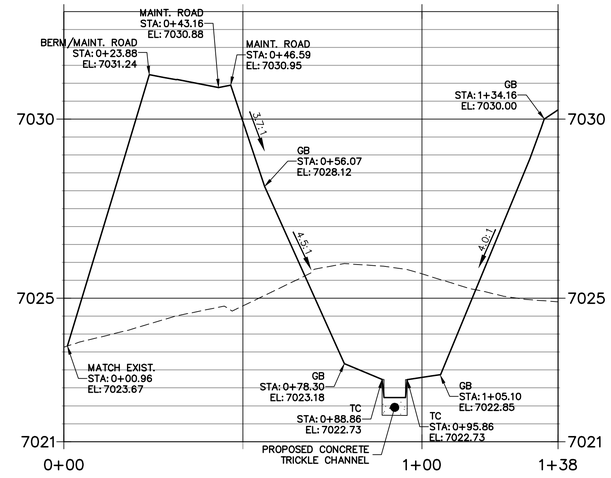
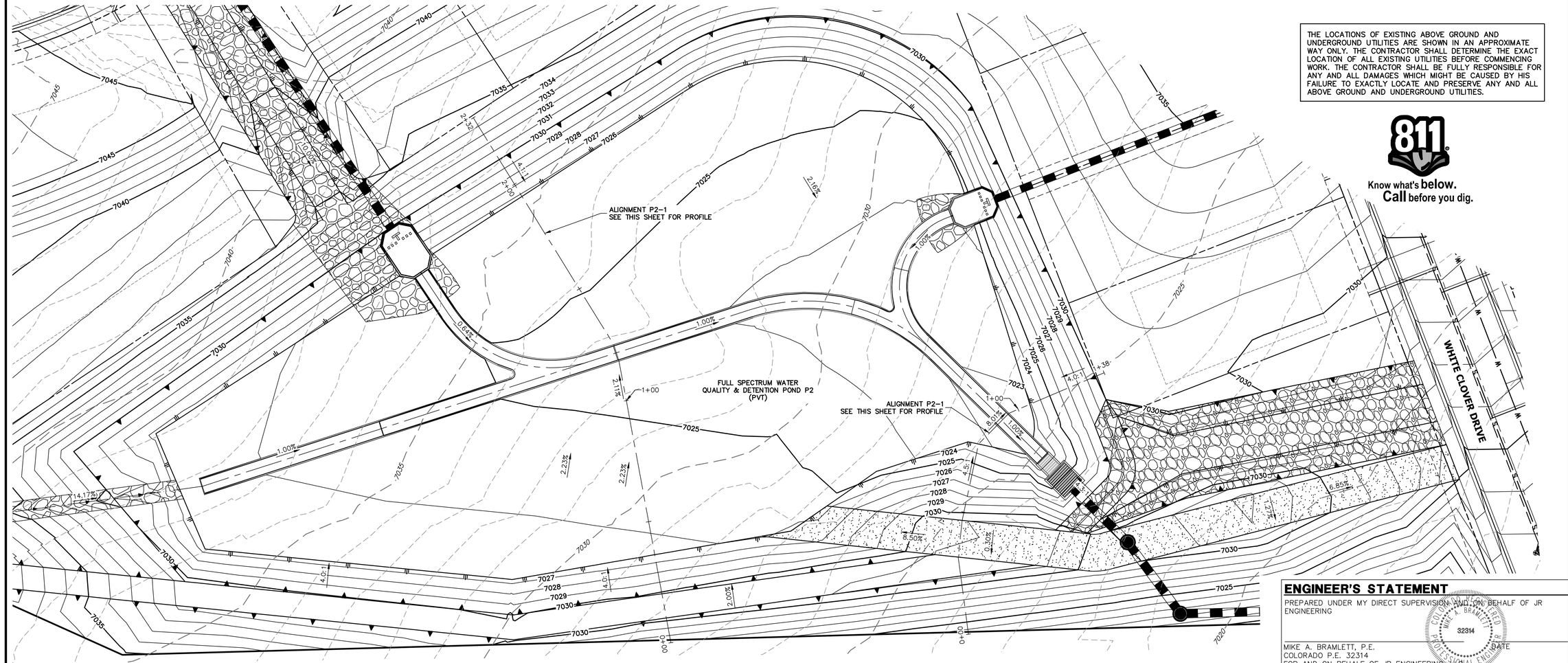
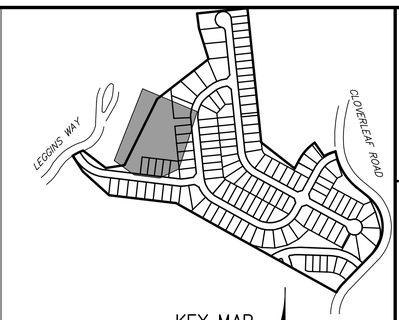
POND P2-1 PROFILE
STA 0+00.00 TO 2+31.77



POND P2-2 PROFILE
STA 0+00.00 TO 1+37.95







20 10 0 20 40

HORIZONTAL
ORIGINAL SCALE: 1" = 20'
VERTICAL
ORIGINAL SCALE: 1" = 2'

NOTES

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2. SEE SHEETS 3–8 FOR PROPOSED STORM SEWER DESIGN.

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

ENGINEER'S STATEMENT

PREPARED UNDER MY DIRECT SUPERVISION AND ON BEHALF OF JR ENGINEERING

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
PT CLOVERLEAF, LLC
1864 WOODMOOR DRIVE
COLORADO SPRINGS, CO 80920
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(719) 476-0800
JDESJARDIN@PROTERRACO.COM

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"=20'
V-SCALE	1"=2'
DATE	05/10/21
DESIGNED BY	GVT
DRAWN BY	GVT
CHECKED BY	

CLOVERLEAF FILING 2

POND PLANS AND DETAILS

SHEET 17 OF 25

JOB NO. 25158.01

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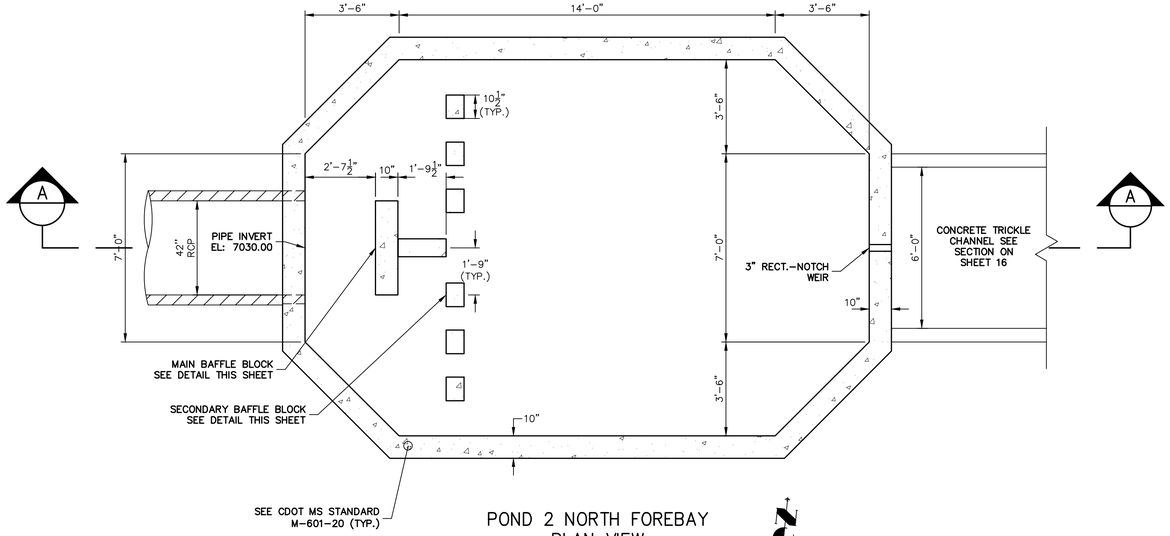
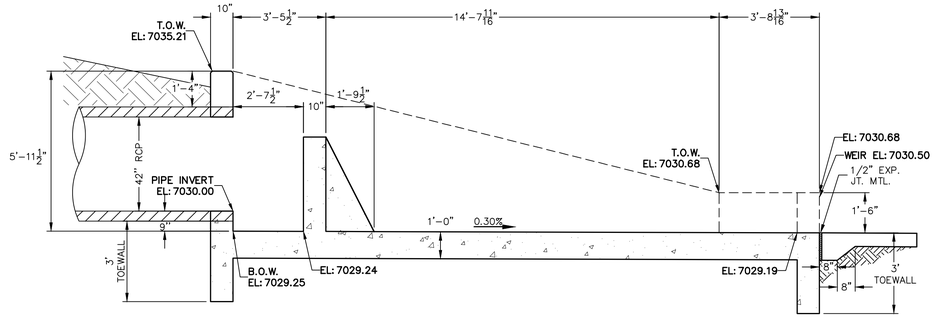


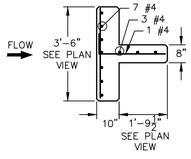
POND 2 NORTH FOREBAY PLAN VIEW

SCALE: 3/8"=1'



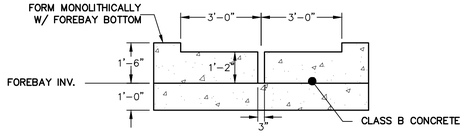
POND 2 NORTH FOREBAY CROSS SECTION A–A

SCALE: 3/8"=1'



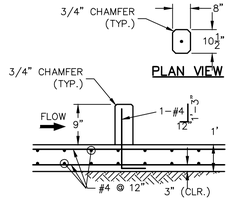
POND 2 NORTH FOREBAY MAIN BAFFLE BLOCK PLAN

SCALE: 3/8"=1'



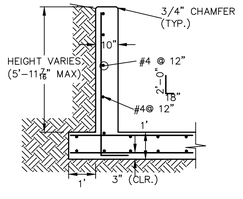
POND 2 NORTH FOREBAY SECTION AT WEIR

SCALE: 3/8"=1'



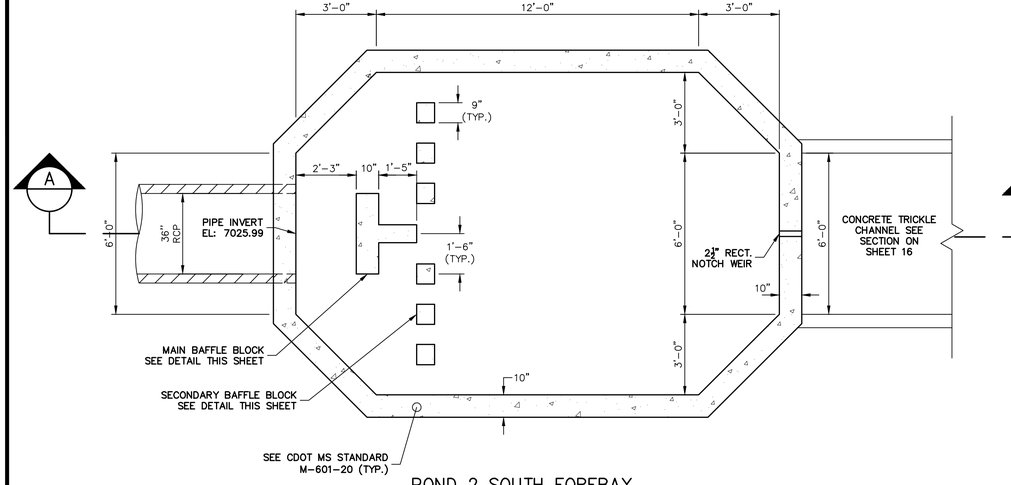
POND 2 NORTH FOREBAY SECONDARY BAFFLE BLOCK DETAILS

SCALE: 3/8"=1'



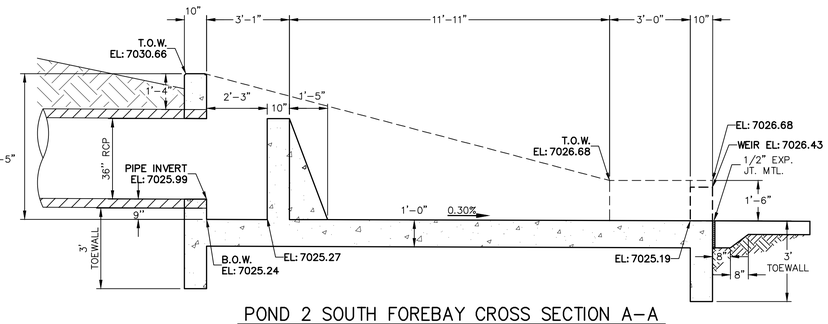
POND 2 NORTH FOREBAY WINGWALL REINFORCING DETAIL

SCALE: N.T.S.



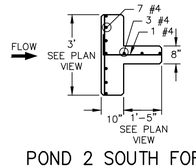
POND 2 SOUTH FOREBAY PLAN VIEW

SCALE: 3/8"=1'



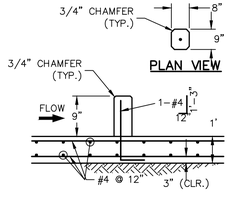
POND 2 SOUTH FOREBAY CROSS SECTION A–A

SCALE: 3/8"=1'



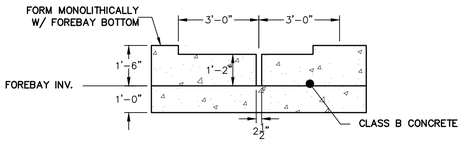
POND 2 SOUTH FOREBAY MAIN BAFFLE BLOCK PLAN

SCALE: 3/8"=1'



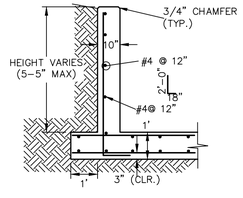
POND 2 SOUTH FOREBAY SECONDARY BAFFLE BLOCK DETAILS

SCALE: 3/8"=1'



POND 2 SOUTH FOREBAY SECTION AT WEIR

SCALE: 3/8"=1'



POND 2 SOUTH WINGWALL REINFORCING DETAIL

SCALE: 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, LOCAL ENGINEER

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No.	REVISION	BY	DATE

H-SCALE	3/8"=1'	DESIGNED BY	GAG
V-SCALE	3/8"=1'	DRAWN BY	GAG
DATE	05/10/21	CHECKED BY	

CLOVERLEAF FILING 2

POND PLANS AND DETAILS

SHEET 18 OF 25

JOB NO. 25158.01

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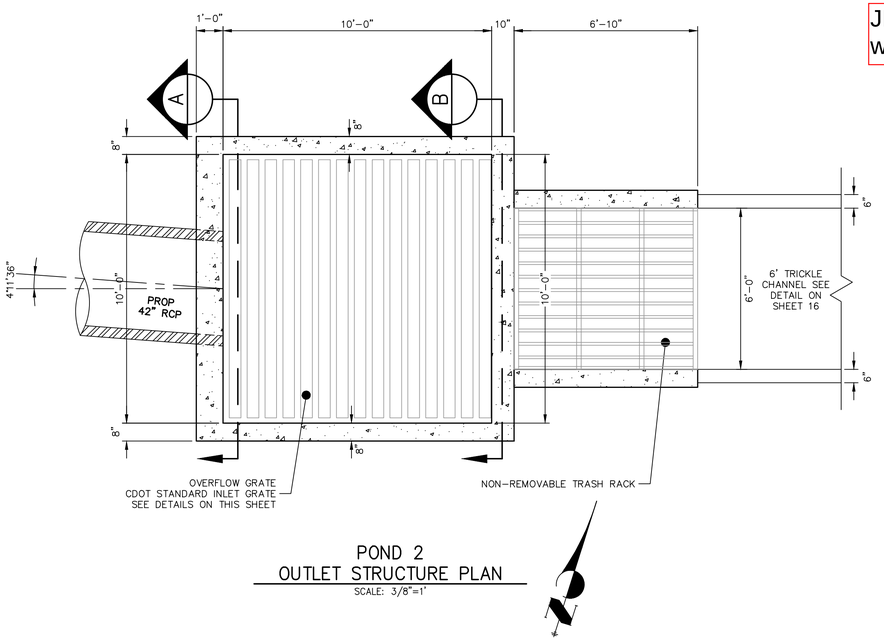
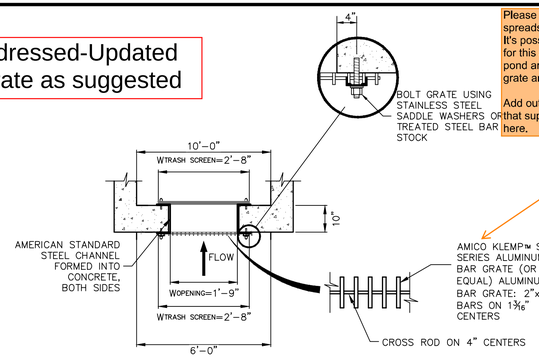


POND 2
OUTLET STRUCTURE PLAN
SCALE: 3/8"=1'

JR Addressed-Updated with grate as suggested

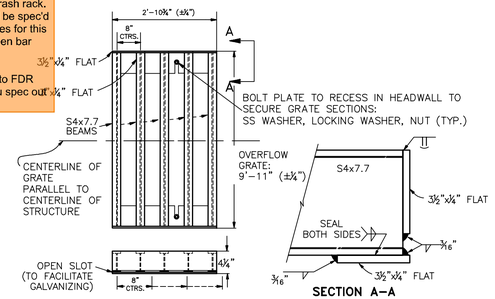


TRASH RACK AND PLATE DETAIL (PLAN)
N.T.S.

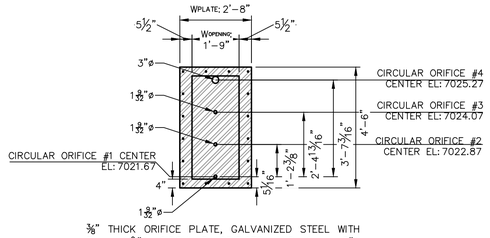
TRASH RACK DETAIL
N.T.S.

Please refer to the EDB tab on the UD-BMP spreadsheet for size and type of trash rack. It's possible that a well screen will be spec'd for this application. The orifice holes for this pond are close to the cutoff between bar grate and well screen.

Add output from the spreadsheet to FDR that supports which trash rack you spec out here.

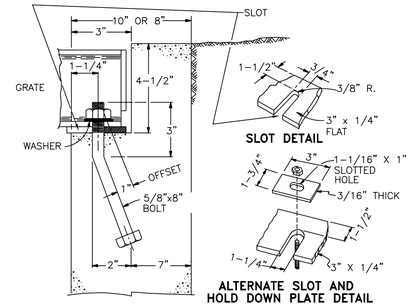


OVERFLOW GRATE DETAILS
N.T.S.



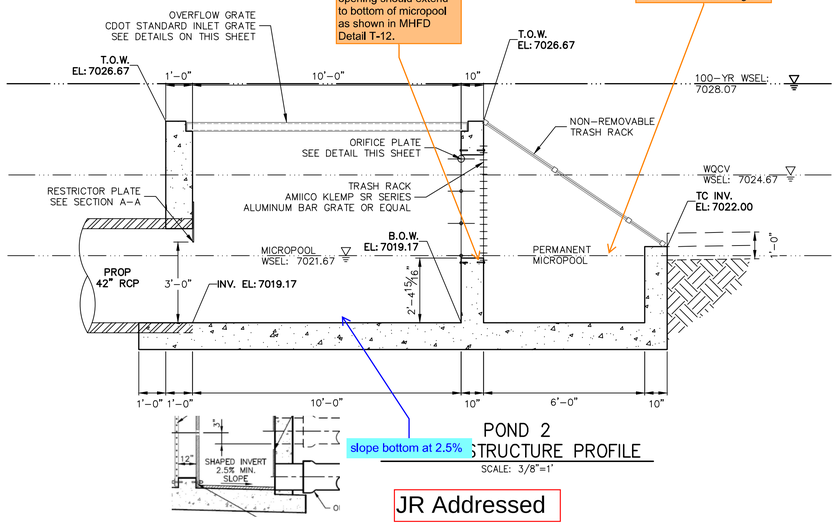
⅜" THICK ORIFICE PLATE, GALVANIZED STEEL WITH 3 – 1 3/32"ø CIRCULAR ORIFICES AND 1 – 3"ø CIRCULAR ORIFICE BOLT PLATE TO CONCRETE @ 10" O.C. MAX.
PROVIDE GASKET BETWEEN PLATE AND CONCRETE

ORIFICE PLATE DETAIL
SCALE: 3/8"=1'



OVERFLOW GRATE INSTALLATION DETAIL
N.T.S.

JR Addressed

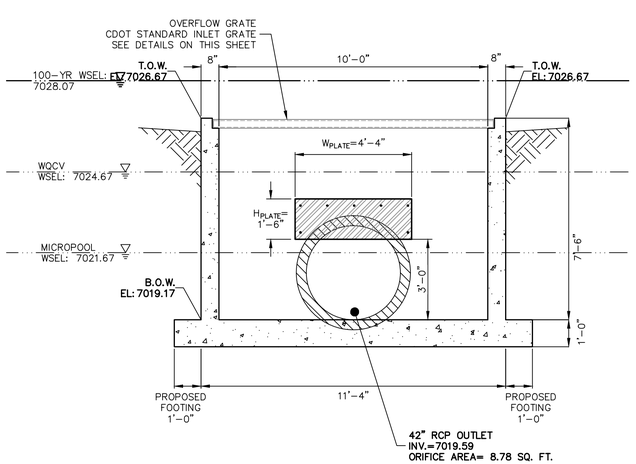


POND 2
STRUCTURE PROFILE
SCALE: 3/8"=1'

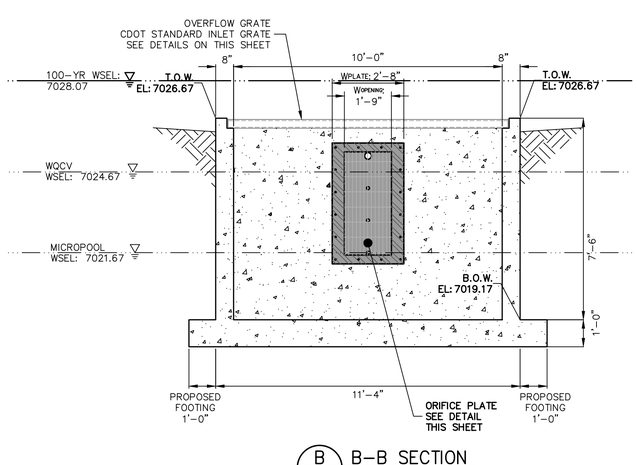
trash rack and concrete opening should extend to bottom of micropool as shown in MHFD Detail T-12.

label 4" initial surcharge

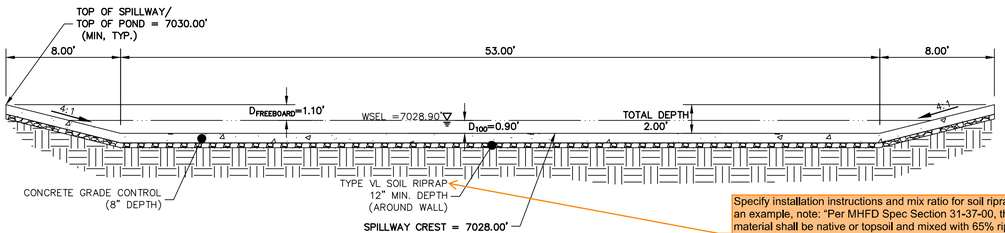
JR Addressed



A A-A SECTION
SCALE: 3/8"=1'



B B-B SECTION
SCALE: 3/8"=1'



POND 2 EMERGENCY SPILLWAY
TYP. SECTION
SCALE: 1"=5'

Specify installation instructions and mix ratio for soil riprap. As an example, note: "Per MHFD Spec Section 31-37-00, the soil material shall be native or topsoil and mixed with 65% riprap and 35% soil by volume. And soil riprap shall consist of uniform mixture of soil and riprap without voids." And specify the riprap designation per Table 1 of the same spec.

JR Addressed

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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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No.	REVISION	BY	DATE

H-SCALE	V-SCALE	DATE	DESIGNED BY	DRAWN BY	CHECKED BY
3/8"=1'	3/8"=1'	05/10/21	GAG	GAG	

CLOVERLEAF FILING 2

POND PLANS AND DETAILS

SHEET 19 OF 25

JOB NO. 25158.01

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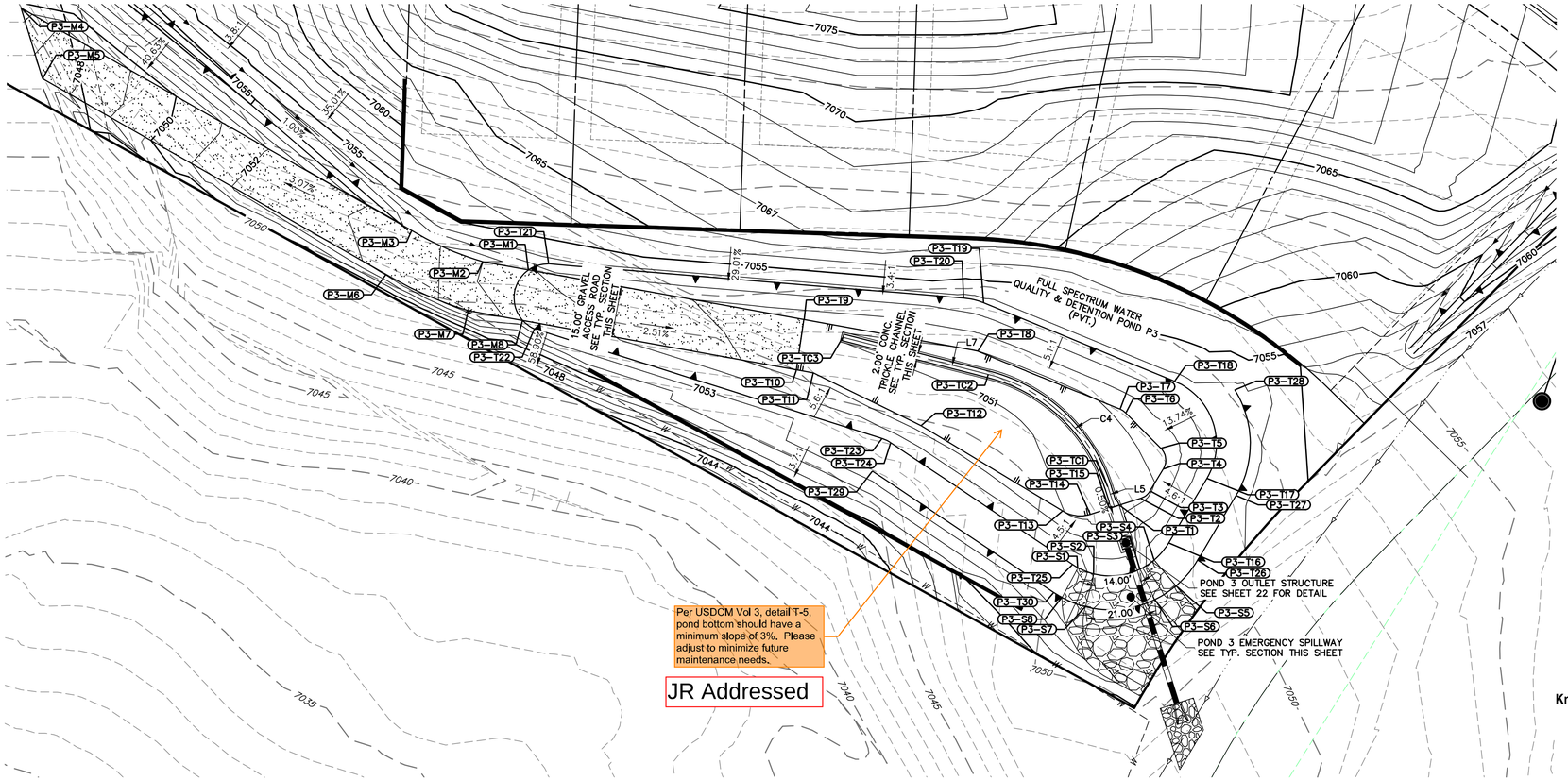

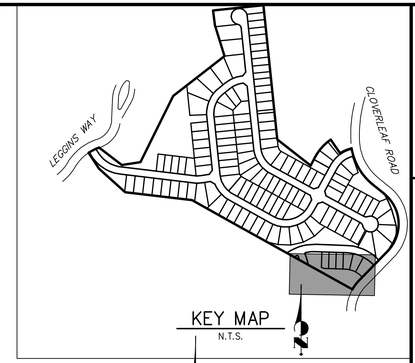

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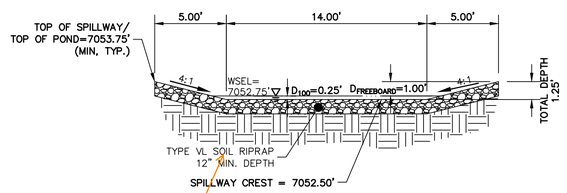
POINT TABULATION			
ID NO.	DESCRIPTION	NORTHING/EASTING	ELEVATION
P3–M1	MAINT. ROAD/TOP	N: 455036.49 E: 186903.21	7053.07
P3–M2	MAINT. ROAD	N: 455038.92 E: 186889.75	7054.48
P3–M3	MAINT. ROAD	N: 455048.11 E: 186868.73	7053.44
P3–M4	MAINT. ROAD	N: 455113.88 E: 186753.16	7049.44
P3–M5	MAINT. ROAD	N: 455093.02 E: 186759.49	7047.32
P3–M6	MAINT. ROAD	N: 455035.17 E: 186861.12	7053.14
P3–M7	MAINT. ROAD	N: 455024.45 E: 186885.45	7054.47
P3–M8	TOE/MAINT. ROAD	N: 455021.56 E: 186901.49	7053.74
P3–S1	SPILLWAY TOP	N: 454948.41 E: 187065.65	7053.75
P3–S2	SPILLWAY TOP	N: 454946.60 E: 187070.29	7052.50
P3–S3	SPILLWAY TOP	N: 454948.01 E: 187083.94	7052.50
P3–S4	SPILLWAY TOP	N: 454950.73 E: 187088.12	7053.75
P3–S5	SPILLWAY TOP	N: 454943.10 E: 187094.58	7053.75
P3–S6	SPILLWAY TOP	N: 454939.01 E: 187088.31	7052.50
P3–S7	SPILLWAY TOP	N: 454936.90 E: 187067.84	7052.50
P3–S8	SPILLWAY TOP	N: 454939.63 E: 187060.88	7053.75
P3–T1	TOE/OUTLET	N: 454966.91 E: 187077.76	7050.50

POINT TABULATION			
ID NO.	DESCRIPTION	NORTHING/EASTING	ELEVATION
P3–T2	TOE	N: 454968.95 E: 187084.15	7050.77
P3–T3	TOE	N: 454971.13 E: 187086.92	7050.91
P3–T4	TOE	N: 454977.64 E: 187090.84	7051.16
P3–T5	TOE	N: 454983.74 E: 187090.10	7051.24
P3–T6	TOE	N: 454994.22 E: 187079.69	7051.13
P3–T7	TOE	N: 454995.33 E: 187078.03	7051.11
P3–T8	TOE	N: 455012.45 E: 187035.88	7050.98
P3–T9	TOE/MAINT. ROAD	N: 455021.81 E: 186984.55	7051.32
P3–T10	TOE/MAINT. ROAD	N: 455006.77 E: 186982.44	7051.59
P3–T11	TOE	N: 455006.03 E: 186987.42	7051.53
P3–T12	TOE	N: 454990.46 E: 187019.12	7051.59
P3–T13	TOE	N: 454965.18 E: 187061.11	7051.01
P3–T14	TOE	N: 454964.22 E: 187069.30	7050.71
P3–T15	TOE/OUTLET	N: 454966.00 E: 187074.90	7050.50
P3–T16	TOP	N: 454955.78 E: 187092.39	7053.75
P3–T17	TOP	N: 454974.86 E: 187103.72	7053.75
P3–T18	TOP	N: 455003.57 E: 187094.13	7053.75

POINT TABULATION			
ID NO.	DESCRIPTION	NORTHING/EASTING	ELEVATION
P3–T19	TOP	N: 455026.72 E: 187037.76	7053.75
P3–T20	TOP	N: 455028.16 E: 187031.80	7053.75
P3–T21	TOP	N: 455038.25 E: 186909.20	7053.47
P3–T22	TOP	N: 455019.04 E: 186904.96	7053.75
P3–T23	TOP	N: 454986.61 E: 187007.74	7053.75
P3–T24	TOP	N: 454985.38 E: 187010.30	7053.75
P3–T25	TOP	N: 454949.37 E: 187064.06	7053.75
P3–T26	TOP	N: 454950.67 E: 187100.99	7053.75
P3–T27	TOP	N: 454969.75 E: 187112.32	7053.75
P3–T28	TOP	N: 455001.03 E: 187111.93	7053.75
P3–T29	TOP	N: 454976.96 E: 187004.90	7053.75
P3–T30	TOP	N: 454941.06 E: 187058.50	7053.75
P3–TC1	TRICKLE CHANNEL	N: 454972.28 E: 187074.48	7050.03
P3–TC2	TRICKLE CHANNEL	N: 455005.57 E: 187039.18	7050.28
P3–TC3	TRICKLE CHANNEL	N: 455016.54 E: 186996.14	7050.51

LINE TABLE		
LINE	BEARING	DISTANCE
L5	S17°39'02"E	6.11'
L7	S75°42'05"E	44.42'

CURVE TABLE			
CURVE	DELTA	RADIUS	LENGTH
C4	58°03'03"	50.00'	50.66'

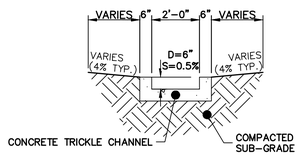


POND 3 EMERGENCY SPILLWAY TYP. SECTION

SCALE: 1"=5'

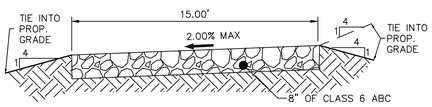
Specify installation instructions and mix ratio for soil riprap. As an example, note: "Per MHFD Spec Section 31-37-00, the soil material shall be native or topsoil and mixed with 65% riprap and 35% soil by volume. And soil riprap shall consist of uniform mixture of soil and riprap without voids." And specify the riprap designation per Table 1 of the same spec.

JR Addressed



POND 3 TRICKLE CHANNEL

SCALE: 1"=3'



15' GRAVEL MAINTENANCE ACCESS ROAD TYPICAL SECTION

N.T.S.

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
PT CLOVERLEAF, LLC
1864 WOODMOOR DRIVE
COLORADO SPRINGS, CO 80920
ATTN: JOE DESJARDIN
(719) 476–0800
JDESJARDIN@PROTERRACO.COM

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"=20'
V-SCALE	N/A
DATE	05/10/21
DESIGNED BY	GVT
DRAWN BY	GVT
CHECKED BY	

CLOVERLEAF FILING 2

POND PLANS AND DETAILS

SHEET 20 OF 25

JOB NO. 25158.01

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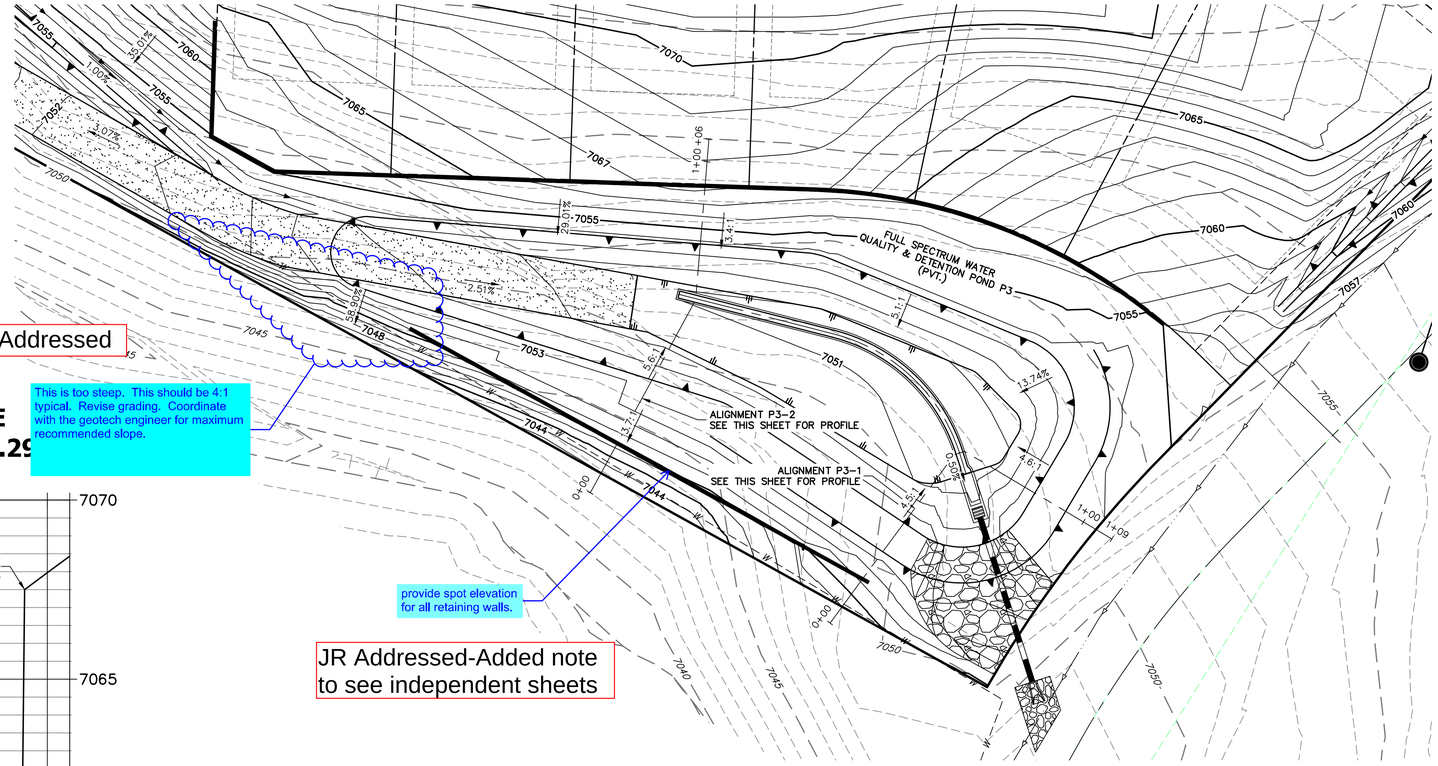
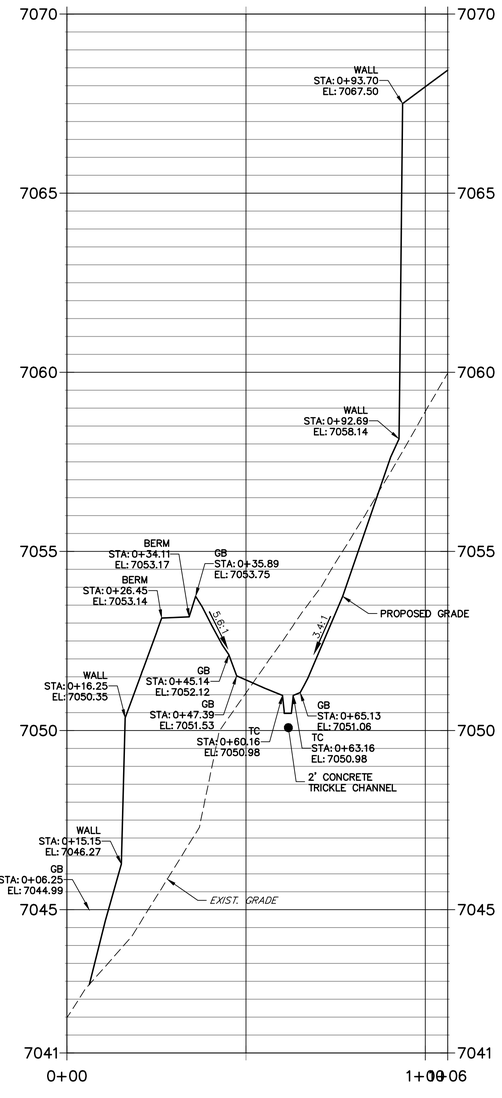


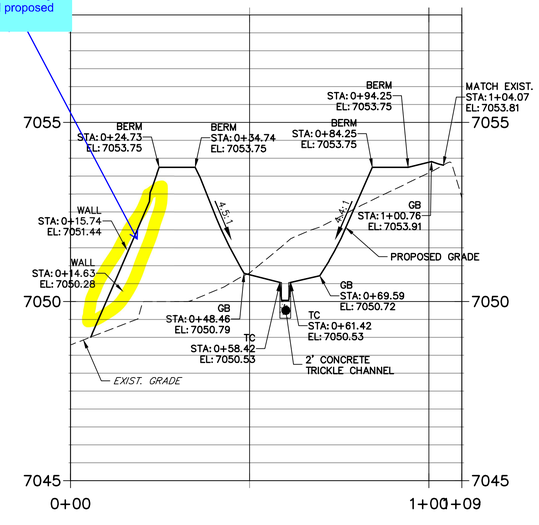
POND P3-1 PROFILE
STA 0+00.00 TO 1+06.29

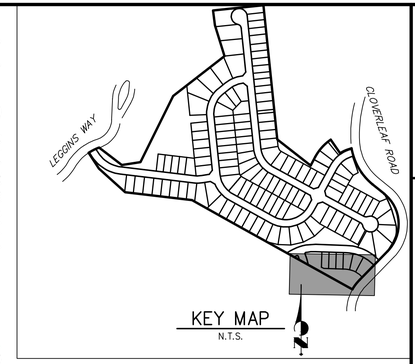


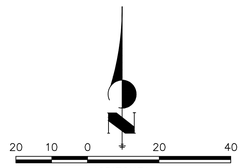
JR Addressed

POND P3-2 PROFILE
STA 0+00.00 TO 1+09.25

update. The profile does not seem to reflect the retaining wall.\ and proposed grade







HORIZONTAL
ORIGINAL SCALE: 1" = 20'
VERTICAL
ORIGINAL SCALE: 1" = 2'

NOTES

1. ALL PROPOSED POND IMPROVEMENTS ARE PRIVATE UNLESS OTHERWISE NOTED.
2. SEE SHEETS 3–8 FOR PROPOSED STORM SEWER DESIGN.

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.

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 DATE

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

No.	REVISION	BY	DATE

H-SCALE	1"=20'	DESIGNED BY	GVT	
V-SCALE	1"=2'	DRAWN BY	GVT	
DATE	05/10/21	CHECKED BY		

CLOVERLEAF FILING 2

POND PLANS AND DETAILS

SHEET 21 OF 25

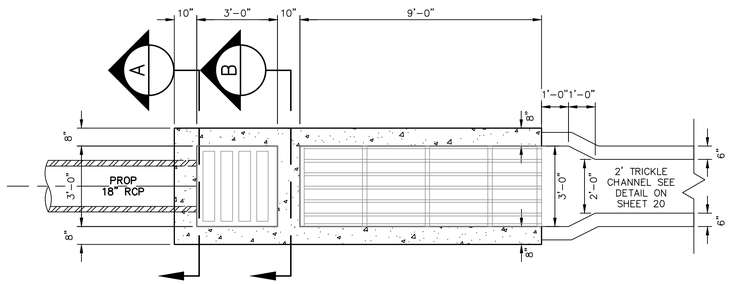
JOB NO. 25158.01

X:\25158.01\Drawings\Sheet Dwgs\CDs\25158.01P03.dwg, P3 Profile, 5/13/2021 11:43:20 AM, CS

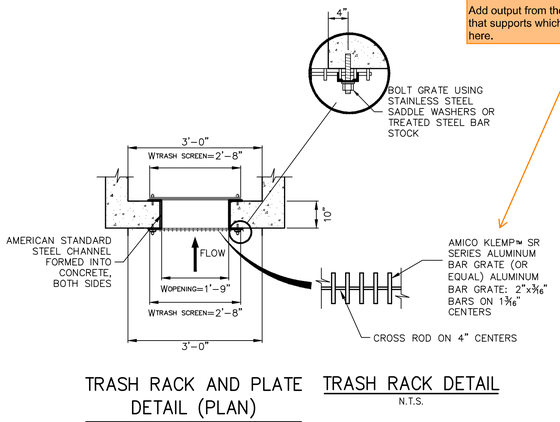
JR Addressed-Used grate detail as suggested

Please refer to the EDB tab on the UD-BMP spreadsheet for size and type of trash rack. It's very likely that a well screen will be spec'd for this application. It is not desirable to have such large opening compared to the smaller orifice holes.

Add output from the spreadsheet to FDR that supports which trash rack you spec out here.

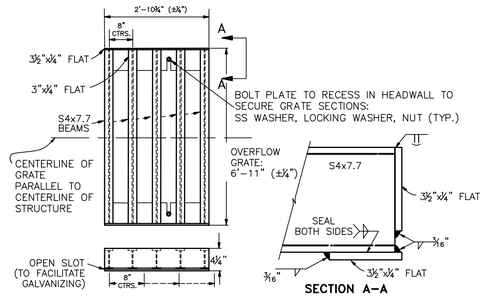


POND 3
OUTLET STRUCTURE PLAN
SCALE: 3/8"=1'

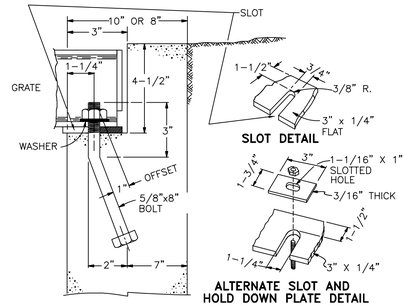


TRASH RACK AND PLATE DETAIL (PLAN)
N.T.S.

TRASH RACK DETAIL
N.T.S.



OVERFLOW GRATE DETAILS
N.T.S.



OVERFLOW GRATE INSTALLATION DETAIL
N.T.S.

JR Addressed

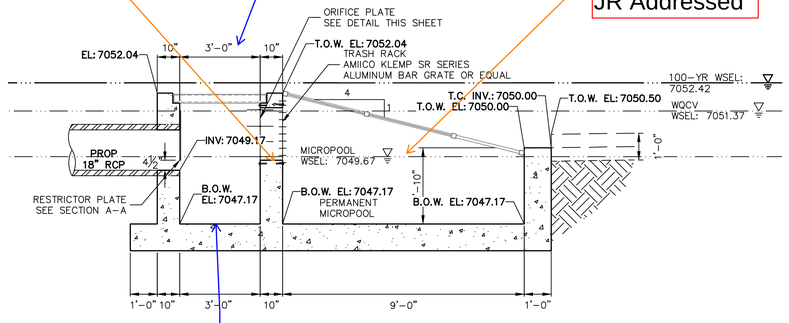
JR Addressed-Didn't change, we have used smaller than 4' (Type C) grates before

trash rack and concrete opening should extend to bottom of micropool as shown in MHFD Detail T-12.

Per USDCM T-12, the minimum width is 4 feet. Revise.

label 4" initial surcharge

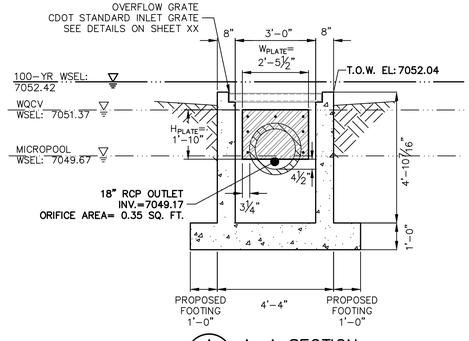
JR Addressed



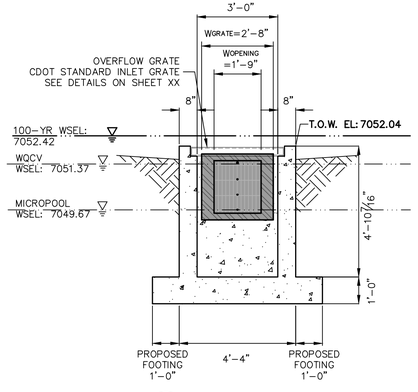
Per USDCM Vol. 3, revise to provide a 2.5% sloped invert (minimum) towards pipe. See figure.

JR Addressed

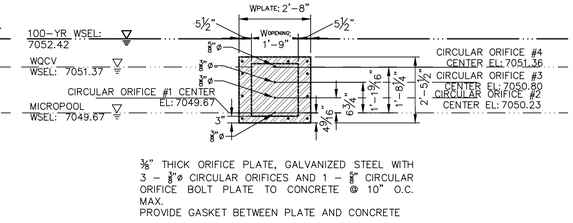
POND 3
OUTLET STRUCTURE PROFILE
SCALE: 3/8"=1'



A A-A SECTION
SCALE: 3/8"=1'



B B-B SECTION
SCALE: 3/8"=1'



⅜" THICK ORIFICE PLATE, GALVANIZED STEEL WITH 3 – 8¾"ø CIRCULAR ORIFICES AND 1 – 8¾"ø CIRCULAR ORIFICE BOLT PLATE TO CONCRETE @ 10" O.C. MAX.
PROVIDE GASKET BETWEEN PLATE AND CONCRETE

ORIFICE PLATE DETAIL
SCALE: 3/8"=1'

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

No.	REVISION	BY	DATE

H-SCALE	1"=XX'
V-SCALE	1"=X'
DATE	05/10/21
DESIGNED BY	XXX
DRAWN BY	XXX
CHECKED BY	

CLOVERLEAF FILING 2

POND PLANS AND DETAILS

SHEET 22 OF 25

JOB NO. 25158.01

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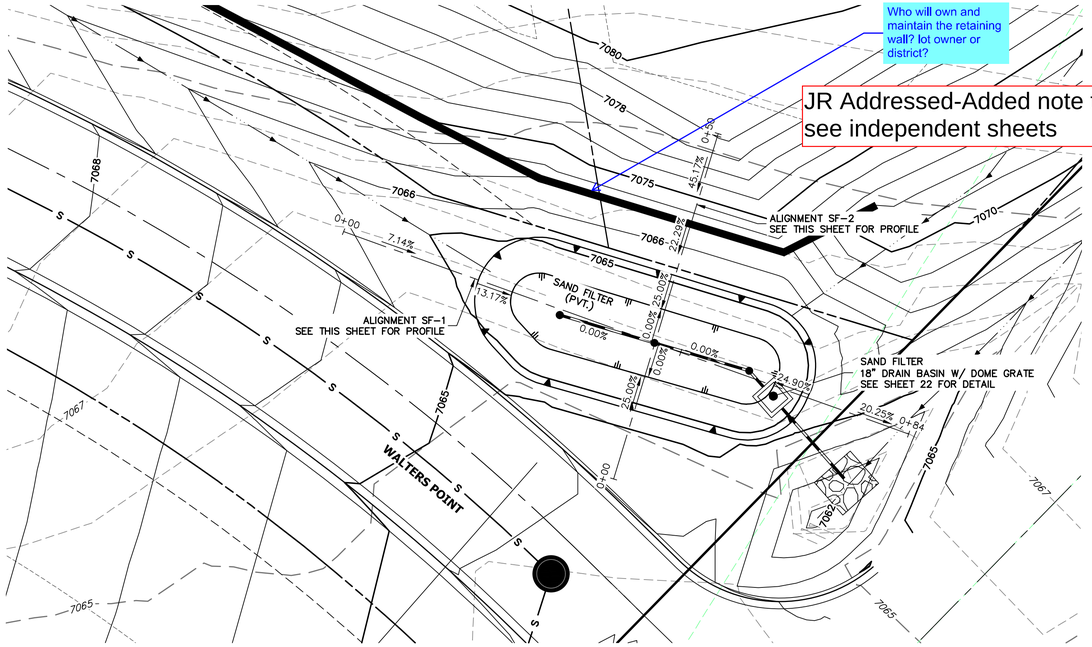
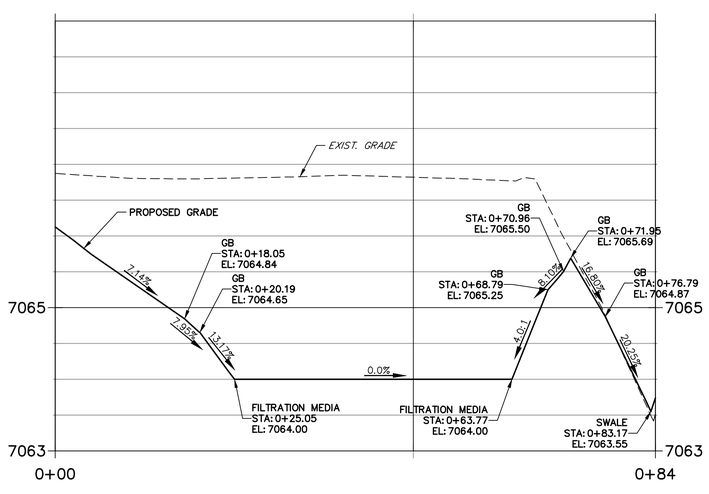
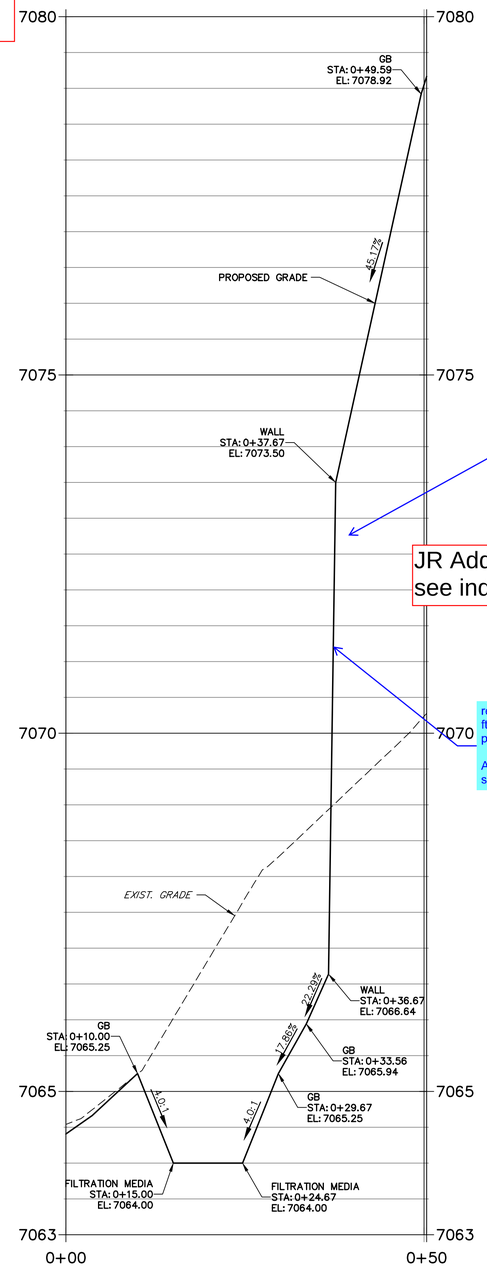


SAND FILTER-PLAN

POND P3-1 PROFILE
STA 0+00.00 TO 0+83.79



POND P3-2 PROFILE
STA 0+00.00 TO 0+50.37



NOTES

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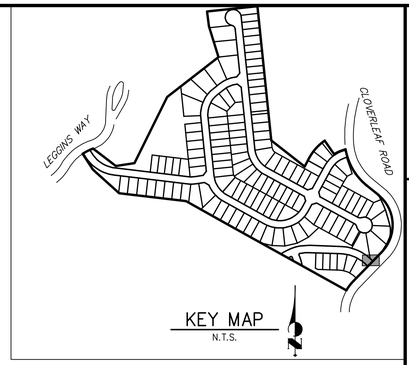
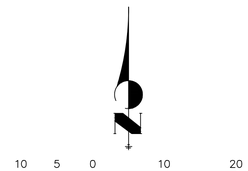
2. SEE SHEETS 3–8 FOR PROPOSED STORM SEWER DESIGN.



KEY MAP
N.T.S.



ORIGINAL SCALE: 1" = 10'

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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

32314

MIKE A. BRAMLETT, P.E.
COLORADO P.E. 32314
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Fort Collins 970–491–9888 • www.jrengineering.com

No.	REVISION	BY	DATE

H-SCALE	1"=10'
V-SCALE	1"=5'
DATE	05/10/21
DESIGNED BY	GAG
DRAWN BY	GAG
CHECKED BY	

CLOVERLEAF FILING 2

POND PLANS AND DETAILS

SHEET 23 OF 25

JOB NO. 25158.01

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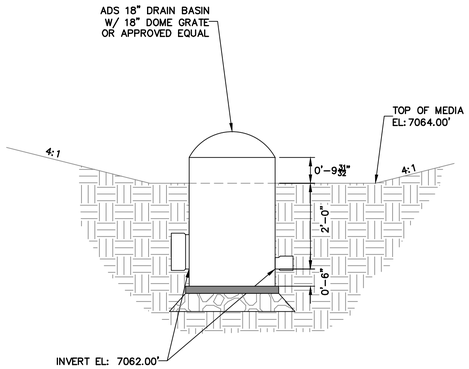
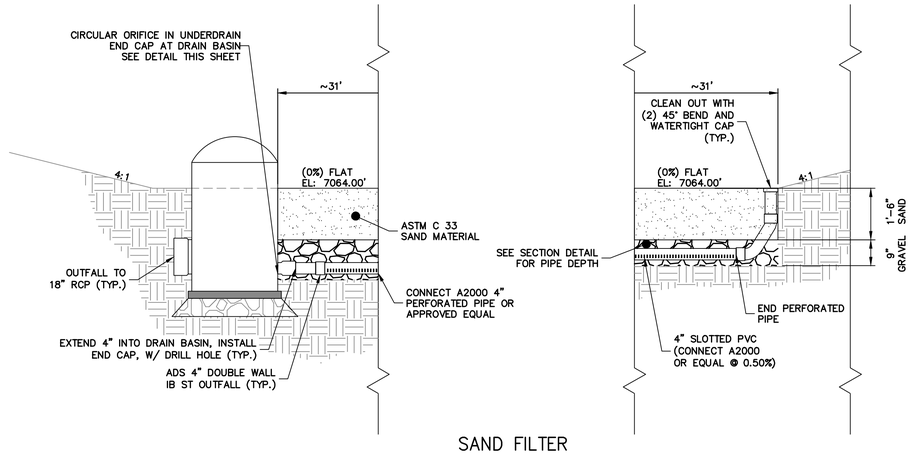


DRAIN BASIN
OUTLET FRONT DETAIL

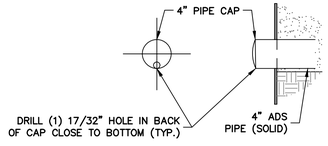
SCALE: N.T.S.



SAND FILTER
LONGITUDINAL CROSS
SECTION DETAILS

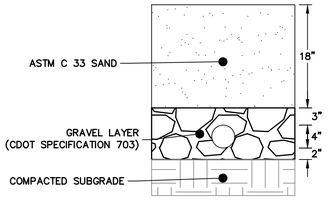
SCALE: N.T.S.

NOTE: SEE URBAN DRAINAGE VOLUME 3 FACT SHEETS T-6
FOR FURTHER DETAILS AND SPECIFICATIONS.



SAND FILTER UNDERDRAIN
END CAP DETAIL

SCALE: N.T.S.



SAND FILTER
SUB-SURFACE SECTION

SCALE: N.T.S.

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

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COLORADO REGISTERED MIKE A. BRAMLETT 32314 PROFESSIONAL ENGINEER

MIKE A. BRAMLETT, P.E. DATE
COLORADO P.E. 32314
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No.	REVISION	BY	DATE

H-SCALE	N.T.S.
V-SCALE	N.T.S.
DATE	05/10/21
DESIGNED BY	GAG
DRAWN BY	GAG
CHECKED BY	

CLOVERLEAF FILING 2

POND PLANS AND DETAILS

SHEET 24 OF 25

JOB NO. 25158.01

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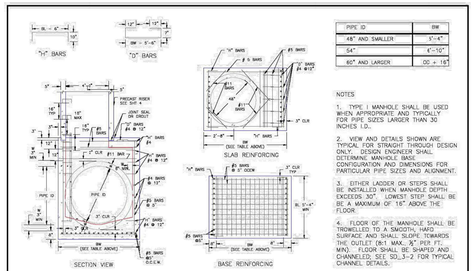


PIPE ID	BW
48" AND SMALLER	5'-4"
54"	6'-10"
60" AND LARGER	OD + 18"

NOTES

1. TYPE I MANHOLE SHALL BE USED WHEN APPROPRIATE AND TYPICALLY FOR PIPE SIZES LARGER THAN 30 INCHES I.D.

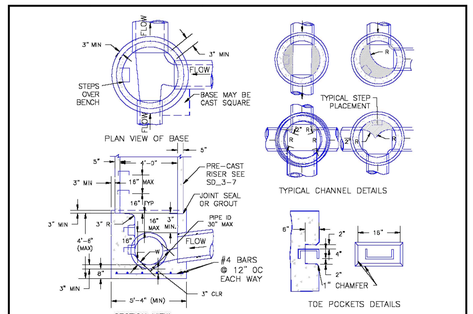
2. VIEW AND DETAILS SHOWN ARE TYPICAL FOR STRAIGHT THROUGH DESIGN ONLY. DESIGN ENGINEER SHALL DETERMINE MANHOLE BASE CONFIGURATION AND DIMENSIONS FOR PARTICULAR PIPE SIZES AND ALIGNMENT.

3. EITHER LADDER OR STEPS SHALL BE INSTALLED WHEN MANHOLE DEPTH EXCEEDS 30". LOWEST STEP SHALL BE A MAXIMUM OF 16" ABOVE THE FLOOR.

4. FLOOR OF THE MANHOLE SHALL BE TROWELLED TO A SMOOTH, HARD SURFACE AND SHALL SLOPE TOWARDS THE OUTLET (8:1 MIN., ½" PER FT. MIN.). FLOOR SHALL BE SHAPED AND CHANNELED; SEE SD_3-2 FOR TYPICAL CHANNEL DETAILS.

SCALE: NOT TO SCALE

DATE APPROVED:	Storm Sewer Manhole Detail Type I Standard Drawing	
7/9/09	REVISION DATE: 7/9/09	FILE NAME: SD_3-1
André Brackin, DEPARTMENT OF TRANSPORTATION		



NOTES

1. TYPE I MANHOLES SHALL BE USED WHEN APPROPRIATE AND TYPICALLY WHEN THE PIPE SIZES ARE 30" OR LESS INSIDE DIAMETER.

2. VIEW AND DETAILS ARE TYPICAL. DESIGN ENGINEER SHALL DETERMINE MANHOLE BASE CONFIGURATION AND DIMENSIONS FOR PARTICULAR PIPE SIZES AND ALIGNMENT.

3. EITHER LADDER OF STEPS SHALL BE INSTALLED WHEN MANHOLE DEPTH EXCEEDS 30", STEPS IN BASE SHALL BE INSTALLED IN "TOE POCKETS" (SEE DETAIL THIS SHEET). LOWEST STEP SHALL BE A MAXIMUM OF 16" ABOVE THE FLOOR.

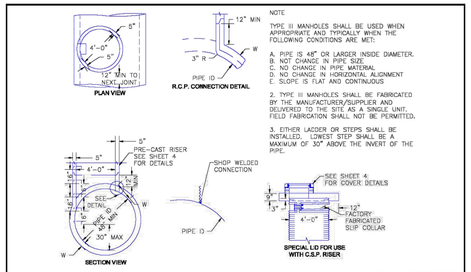
4. PIPES SHALL BE TRIMMED TO FINAL SHAPE AND SET BEFORE MANHOLE IS POURED.

5. BENCH SHALL BE SLOPED TOWARD CENTER OF MANHOLE BASE (4:1 MAX., ½" PER FOOT. MIN.).

6. FLOOR OF MANHOLE SHALL BE TROWELLED TO A SMOOTH, HARD SURFACE AND SHALL SLOPE TOWARDS THE OUTLET (8:1., ½" PER FT. MIN.) . FLOOR SHALL BE SHAPED AND CHANNELED; SEE DETAILS THIS SHEET.

SCALE: NOT TO SCALE

DATE APPROVED:	Storm Sewer Manhole Detail Type II Standard Drawing	
André P. Brackin, DEPARTMENT OF TRANSPORTATION	REVISION DATE: 11/10/04	FILE NAME: SD_3-2



NOTE

TYPE III MANHOLES SHALL BE USED WHEN APPROPRIATE AND TYPICALLY WHEN THE FOLLOWING CONDITIONS ARE MET:

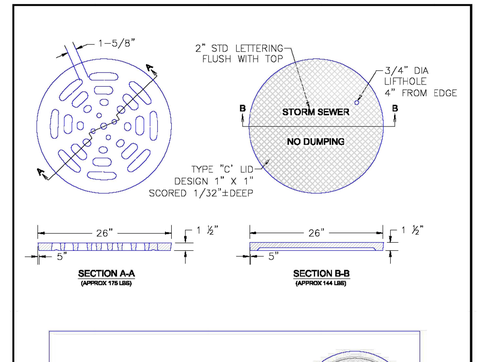
A. PIPE IS 48" OR LARGER INSIDE DIAMETER.
B. NOT CHANGE IN PIPE SIZE.
C. NO CHANGE IN PIPE MATERIAL
D. NO CHANGE IN HORIZONTAL ALIGNMENT
E. SLOPE IS FLAT AND CONTINUOUS

2. TYPE III MANHOLES SHALL BE FABRICATED BY THE MANUFACTURER/SUPPLIER AND DELIVERED TO THE SITE AS A SINGLE UNIT. FIELD FABRICATION SHALL NOT BE PERMITTED.

3. EITHER LADDER OR STEPS SHALL BE INSTALLED. LOWEST STEP SHALL BE A MAXIMUM OF 30" ABOVE THE INVERT OF THE PIPE.

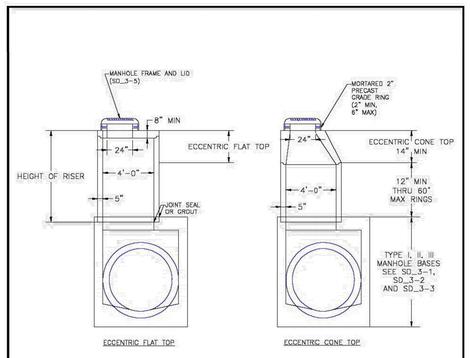
SCALE: NOT TO SCALE

DATE APPROVED:	Storm Sewer Manhole Detail Type III Standard Drawing	
8/11/11	REVISION DATE: 11/10/04	FILE NAME: SD_3-3
André P. Brackin, DEPARTMENT OF TRANSPORTATION		



SCALE: NOT TO SCALE

DATE APPROVED:	Storm Sewer Manhole Details Standard Drawing	
9/16/10	REVISION DATE: 9/16/10	FILE NAME: SD_3-5
André P. Brackin, DEPARTMENT OF TRANSPORTATION		

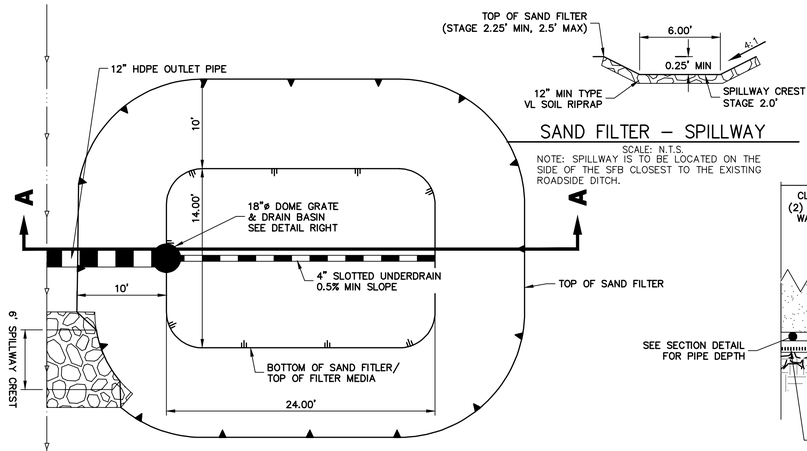


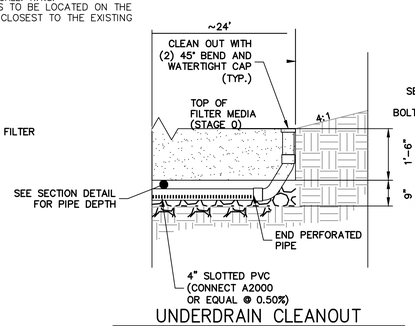
NOTES

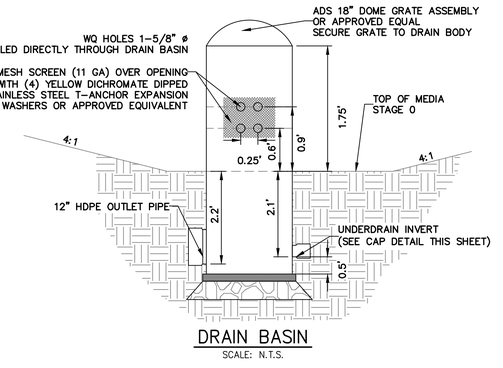
1. ALL WORK SHALL BE DONE IN ACCORDANCE WITH THE STANDARD AND SUPPLEMENTAL SPECIFICATIONS APPLICABLE TO THE PROJECT.
2. PRECAST RISERS SHALL CONFORM TO ASTM C478.
3 STEPS SHALL BE INSTALLED WHEN MANHOLE DEPTH EXCEEDS 30". STEPS SHALL BE CAST IRON OR EXTRUDED ALUMINUM, 1000 LB CAPACITY, 12" WIDE WITH NON-SKID GROOVES AND DROP FRONT ON SAFETY NOSES, IN ACCORDANCE WITH APPROVED OSHA REQUIREMENTS.

SCALE: NOT TO SCALE

DATE APPROVED:	Storm Sewer Manhole Riser and Cover Detail Standard Drawing	
8/11/11	REVISION DATE: 11/23/04	FILE NAME: SD_3-7
André P. Brackin, DEPARTMENT OF TRANSPORTATION		







811 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.

PREPARED FOR
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No.	REVISION	BY	DATE

H-SCALE	1"=50'
V-SCALE	N/A
DATE	05/10/21
DESIGNED BY	SAV
DRAWN BY	SAV
CHECKED BY	

CLOVERLEAF FILING 2

DETAIL SHEET

SHEET 25 OF 25

JOB NO. 25158.01

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CLOVERLEAF FILING 2

EL PASO COUNTY, COLORADO

PUBLIC UTILTY PLAN

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 EINGEERI9NG CRITERIA MANUAL, THE DRAINAGE CRITERIA MANUAL, AND THE DRAINAGE CRITERIA MANUAL VOLUME 2. ANY DEVIATIONS FROM REGULATIONS AND STANDARDS MUST BE REQUESTED, AND APPROVED, IN WRITING. ANY MODIFICATIONS NECESSARY TO MEET CRITERIA AFTER-THE-FACT WILL BE ENTIRELY THE DEVELOPER'S RESPONSIBILITY TO 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 PCD. CONTRACTOR SHALL NOTIFY THE DESIGN ENGINEER IMMEDIATELY UPON DISCOVERY OF ANY ERRORS OR INCONSISTENCIES.

9. CONTRACTOR SHALL COORDINATE GEOTECHNICAL TESTING PER ECM STANDARDS. PAVEMENT DESIGN SHALL BE APPROVED BY EL PASO COUNTY PCD PRIOR TO PLACEMENT OF CURB AND GUTTER AND PAVEMENT.

10. ALL CONSTRUCTION TRAFFIC MUST ENTER/EXIT THE SITE AT APPROVED CONSTRUCTION ACCESS POINTS.

11. SIGHT VISIBILITY TRIANGLES ARE IDENTIFIED IN THE PLANS SHALL BE PROVIDED AT ALL INTERSECTIONS. OBSTRUCTIONS GREATER THAN 18 INCHES ABOVE FLOWLINE ARE NOT ALLOWED IN SIGHT TRIANGLES.

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

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

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

STANDARD NOTES FOR WOODMOOR CONSTRUCTION PLANS

1. ALL MATERIALS AND INSTALLATION PROCEDURES WILL BE IN COMPLIANCE WITH THE SYSTEM SPECIFICATIONS AND THE RULES AND REGULATIONS OF THE DISTRICT.

2. DEVELOPER/OWNER OR CONTRACTOR SHALL BE RESPONSIBLE FOR DETERMINING AND OBTAINING ANY AND ALL PERMITS REQUIRED TO PERFORM THE WORK FROM ALL APPLICABLE REGULATORY AGENCIES OR ENTITIES HAVING JURISDICTION, AND WILL PERFORM THE WORK IN ACCORDANCE WITH ANY AND ALL APPLICABLE ORDINANCES, REGULATIONS, LAWS AND PERMITS ISSUED BY SUCH ENTITIES OR AGENCIES.

3. CONTRACTOR SHALL POTHOLE AND FIELD VERIFY ELEVATIONS, PIPE SIZE, TYPE, ALIGNMENT, ECT. OF EXISTING WATER LINES AT ALL NOTED CONNECTION POINTS TO THE DISTRICTS SYSTEM.

4. IN CASE OF CONFLICT BETWEEN THESE PLANS AND THE SYSTEM SPECIFICATIONS, CONSULT THE DISTRICT PRIOR TO COMMENCING WORK.

5. CONTRACTOR SHALL NOTIFY THE DISTRICT A MINIMUM OF 2 WORKING DAYS PRIOR TO PERFORMING SCHEDULED TESTS FOR OBSERVATION BY DISTRICT PERSONNEL.

6. BYPASS PUMPING OF EXISTING FLOWS IS REQUIRED WHEN CONNECTING TO THE DISTRICT'S EXISTING SEWER SYSTEM. CONTRACTOR SHALL PROVIDE 100% REDUNDANT PUMPING CAPACITY WITH CONTINUOUS SUPERVISION DURING PUMPING OPERATIONS WITH THE DISTRICT PRIOR TO COMMENCING PUMPING OPERATIONS.

7. THE COLORADO CENTRAL ZONE (NAD 83) IS THE HORIZONTAL CONTROL FOR IMPROVEMENTS SHOWN ON THE PLAN SET.

8. THE NORTH AMERICAN VERTICAL DATUM 1988 (NAVD '88) IS THE VERTICAL CONTROL FOR THE IMPROVEMENTS SHOWN ON THE PLAN SET.

WATER AND SEWER SERVICE LINE NOTES

1. SEWER SERVICE TAP CONNECTIONS WILL BE LOCATED A MINIMUM OF FIVE (5) FEET AWAY FROM ANY MANHOLE AND BE INSTALLED AT THE MAIN WITH A GASKET WYE OR TEE FITTING FOR NEW INSTALLATIONS OF SEWER MAIN. FOR SERVICE TAP CONNECTIONS TO EXISTING SEWER MAINS A SEWER SERVICE SADDLE TAP MAY BE INSTALLED.

2. SEWER SERVICE LINES/STUBS WILL BE INSTALLED SUCH THAT A SEWER SERVICE CLEAN OUT IS LOCATED 5 FEET INTO THE PROPERTY OR CENTERED IN THE FRONT LOT EASEMENT, WHICHEVER IS LESS AND BE LOCATED A MINIMUM OF 10 FEET AWAY FROM ANY SIDE LOT LINE. TRACER WIRE FROM THE SEWER TAP AT THE MAIN TO THE CLEAN OUT AT THE PROPERTY LINE SHALL BE INSTALLED AND A METAL TEE POST WILL BE INSTALLED NEXT TO THE CLEAN OUT FOR PROTECTION AND EASE OF LOCATION.

3. A MINIMUM OF 10 FEET OF HORIZONTAL SEPARATION MUST BE MAINTAINED BETWEEN WATER SERVICE LINES AND SEWER SERVICE LINES.

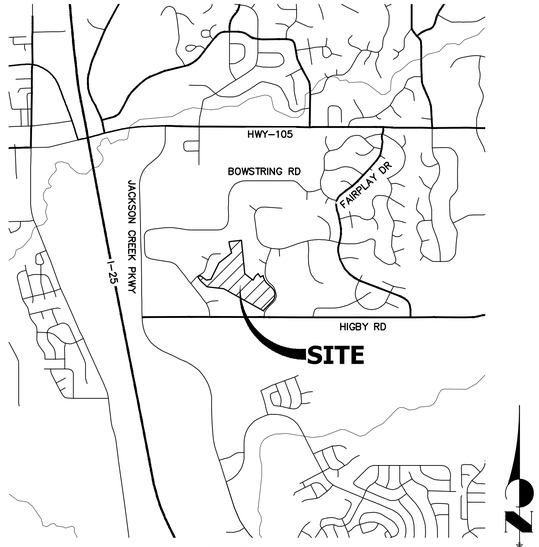
4. WATER SERVICE LINES/STUBS WILL BE ¾" IN DIAMETER UNLESS OTHERWISE NOTED AND INSTALLED SUCH THAT THE CURB STOP IS LOCATED 5 FEET INTO THE PROPERTY OR CENTERED IN THE FRONT LOT EASEMENT, WHICHEVER IS LESS AND A MINIMUM OF 10 FEET FROM ANY SEWER SERVICE LINE/SEWER CLEAN OUT.

5. CURB STOPS AND BOXES SHALL BE BURIED SUCH THAT 6-FEET (±0') OF COVER EXISTS AS MEASURED FROM FINISHED GRADE TO THE TOP OF THE SERVICE LINE. A METAL TEE POST WILL BE INSTALLED AT THE CURB STOP BOX FOR PROTECTION AND EASE OF LOCATION.

6. WATER SERVICE TAPS WILL NOT BE LOCATED ON A FIRE HYDRANT LATERAL OR WITHIN 30" FROM A PIPE BELL, VALVE OR MECHANICAL JOINT CONNECTION. WATER TAPS WILL MAINTAIN MINIMUM OF FIVE (5) FOOT SPACING FROM OTHER TAPS ON THE WATER MAIN.

7. DIRECT TAPPING OF WATER SERVICE LINE CORPORATION (I.E. NO SADDLE) WILL NOT BE PERMITTED.

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



VICINITY MAP
SCALE: 1"=2000'

SHEET INDEX

1	–	COVER SHEET
2	–	LEGEND & TYPICAL SECTION
3-8	–	SANITARY SEWER PLAN AND PROFILE
9-10	–	UNDER DRAIN
11-15	–	WATER DISTRIBUTION PLAN
16-17	–	RAW WATER PLAN
18-19	–	UTILITY SERVICE PLAN
20-22	–	DETAIL SHEETS

Owner and contractors have requested that plan sets remain separate with individual covers due to having different contractors for each plan set

remove utility cover sheet and add sheet index to the 1st page or upload the utility construction plans as a separate standalone document.

CONTACTS:

OWNER/DEVELOPER	PT CLOVERLEAF, LLC 1864 WOODMOOR DRIVE, SUITE 100 COLORADO SPRINGS, CO 80920 P~719-476-0800
ENGINEER/SURVEYOR	JR ENGINEERING, LLC ATTN: MIKE A. BRAMLETT 5475 TECH CENTER DRIVE, SUITE 235 COLORADO SPRINGS, CO 80919 P~303-267-6240
FIRE PROTECTION DISTRICT	TRI-LAKES MONUMENT FPD 16055 OLD FOREST POINT, SUITE 103 MONUMENT, CO 80132 P~719-484-0911
DISTRICT	WOODMOOR WATER & SANITATION DISTRICT NO. 1 1845 WOODMOOR DRIVE MONUMENT, CO 80132 P~719-488-2525 EXT. 0

BENCHMARK

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

BASIS OF BEARING

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

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

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

WOODMOOR WATER AND SANITATION DISTRICT NO. 1
APPROVED FOR CONSTRUCTION

DATE: BY:

THESE PLANS HAVE BEEN REVIEWED ONLY FOR GENERAL CONFORMANCE WITH DISTRICT RULES AND REGULATIONS AND SYSTEM SPECIFICATIONS. REVIEW AND CONSTRUCTION APPROVAL BY THE DISTRICT DOES NOT RELIEVE THE DEVELOPER/OWNER AND/OR CONTRACTOR FROM RESPONSIBILITY FOR COMPLIANCE WITH ANY RULES, REGULATIONS, OR SPECIFICATIONS REQUIRED BY THE DISTRICT.

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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No.	REVISION	BY	DATE

H-SCALE	1"=2000'
V-SCALE	N/A
DATE	05/10/21
DESIGNED BY	APL
DRAWN BY	APL
CHECKED BY	

CLOVERLEAF FILING 2

COVER SHEET

SHEET 1 OF 21

JOB NO. 25158.01

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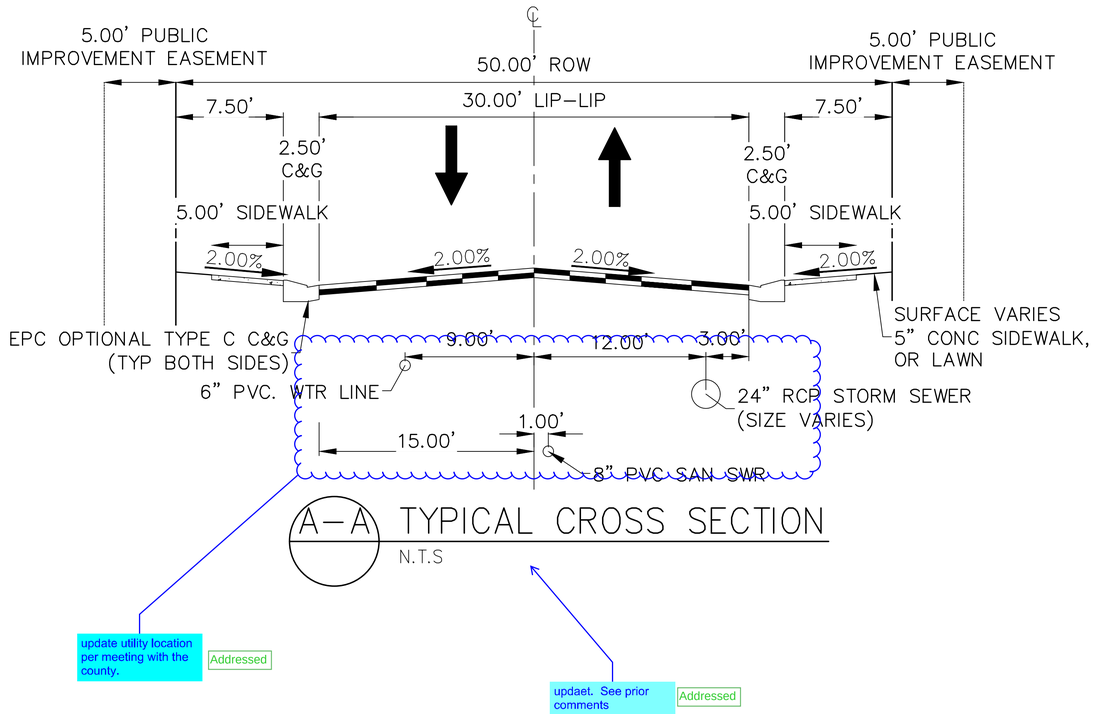
LAYER LINETYPE LEGEND

	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		
CHAIN LINK FENCE		
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
SILT FENCE	SF	SF
100 YEAR FLOODPLAIN	100YR	100YR
500 YEAR FLOODPLAIN	500YR	500YR
FLOODWAY	FLDWY	FLDWY
BASE FLOOD ELEVATION		
EDGE OF WETLANDS		
STONE WALL		

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
TEST HOLE DESIGNATOR	TH# FIRM / AGENCY	



A–A TYPICAL CROSS SECTION

N.T.S

update utility location per meeting with the county. Addressed

updaet. See prior comments Addressed

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

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V–SCALE	N/A	DRAWN BY	APL
DATE	05/10/21	CHECKED BY	

CLOVERLEAF FILING 2

LEGEND & TYPICAL SECTION

SHEET 2 OF 21

JOB NO. 25158.01

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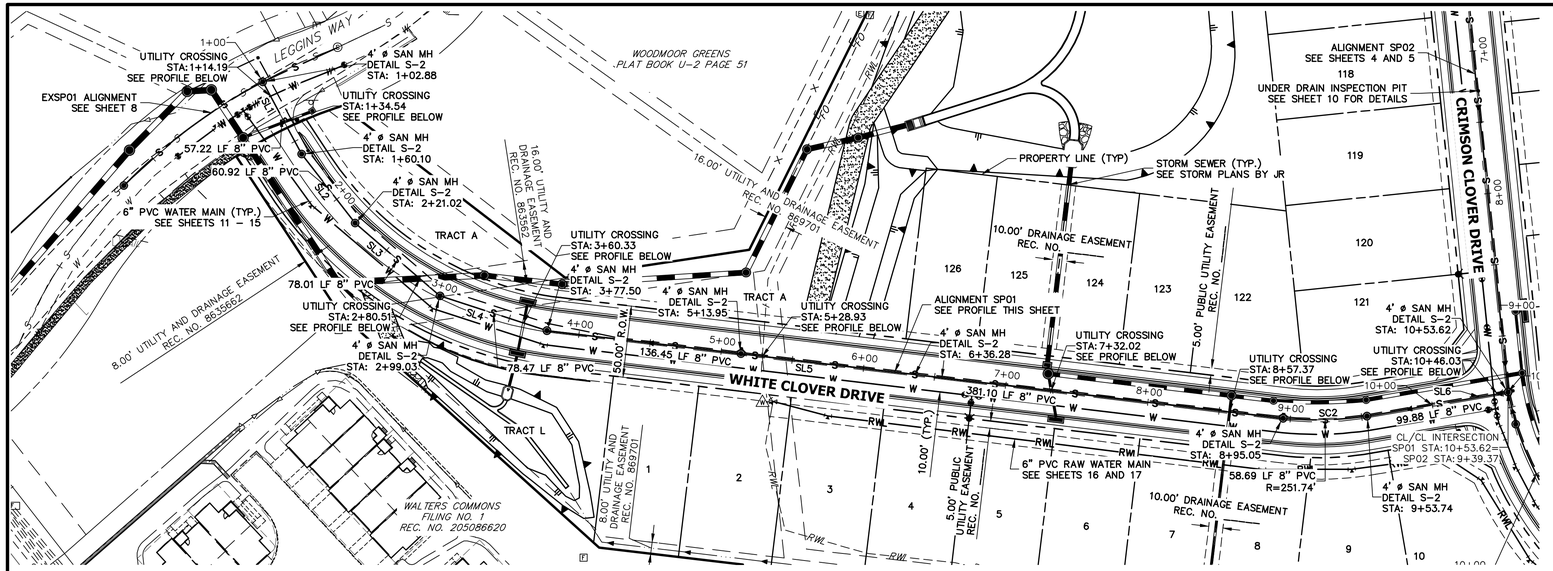
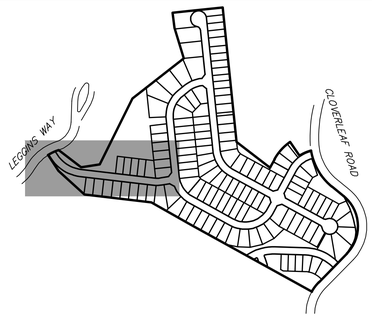


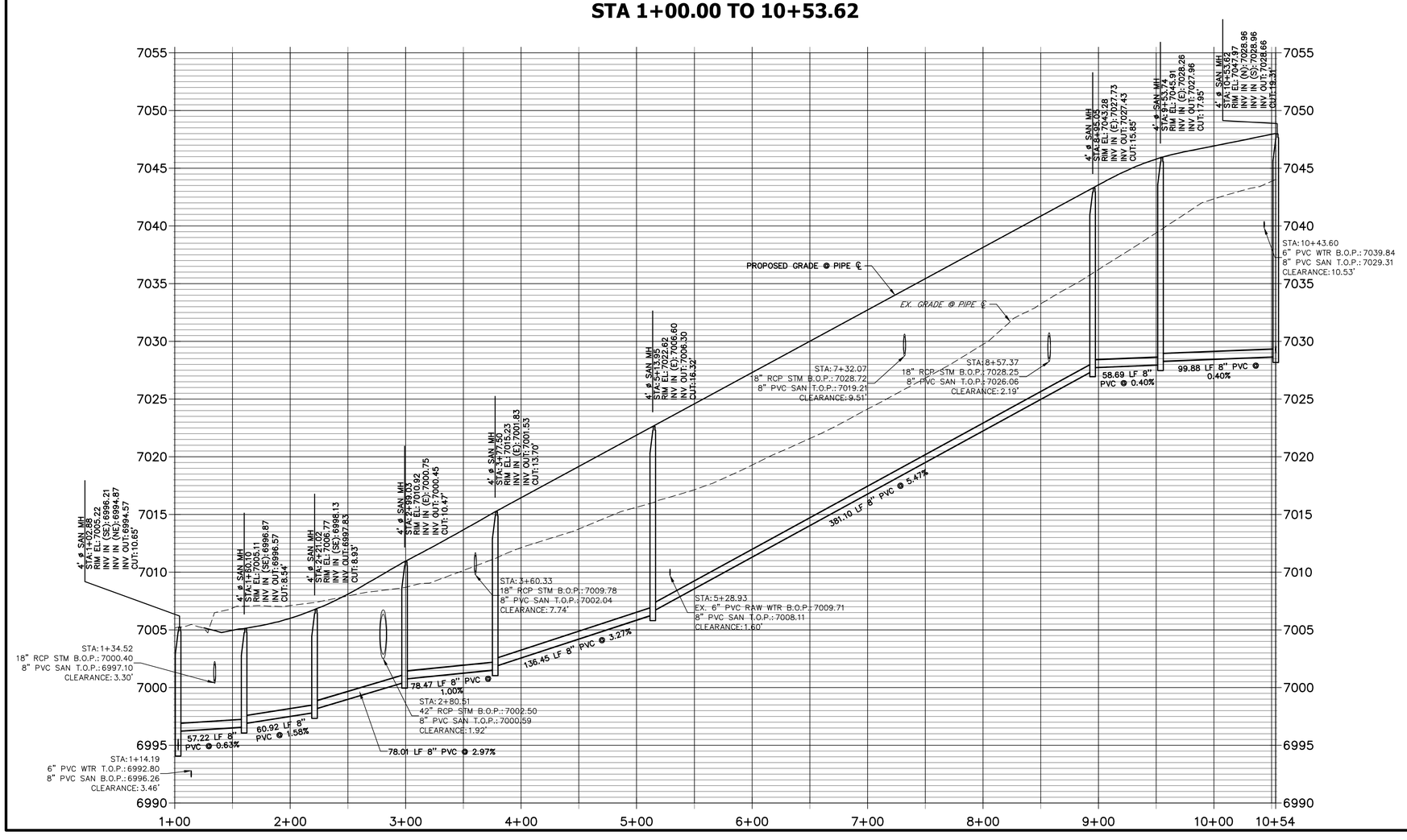
LINE TABLE		
LINE	BEARING	DISTANCE
SL1	N28°19'49"W	57.22'
SL2	N37°43'47"W	60.92'
SL3	N49°22'41"W	77.63'
SL4	N71°57'34"W	78.28'
SL5	N83°12'34"W	517.55'
SL6	S80°19'21"W	102.09'

CURVE TABLE			
CURVE	DELTA	RADIUS	LENGTH
SC2	13°20'52"	252.77'	58.89'



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.

SP01 PROFILE
STA 1+00.00 TO 10+53.62



NOTES

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2. THE PROPOSED UNDER DRAIN SHALL ONLY DEVIATE FROM THE TYPICAL UNDER DRAIN TRENCH SECTION AT THE OUTFALL LOCATION SEE SHEET 9.

Know what's below. Call before you dig.

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

WOODMOOR WATER AND SANITATION DISTRICT NO. 1
APPROVED FOR CONSTRUCTION

DATE: BY:

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PREPARED FOR
PT CLOVERLEAF, LLC
1864 WOODMOOR DRIVE
COLORADO SPRINGS, CO 80920
ATTN: JOE DESJARDIN
(719) 476-0800
JDESJARDIN@PROTERRACO.COM

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	05/10/21
DESIGNED BY	APL
DRAWN BY	APL
CHECKED BY	

CLOVERLEAF FILING 2

SANITARY SEWER PLAN AND PROFILE

SHEET 3 OF 21

JOB NO. 25158.01

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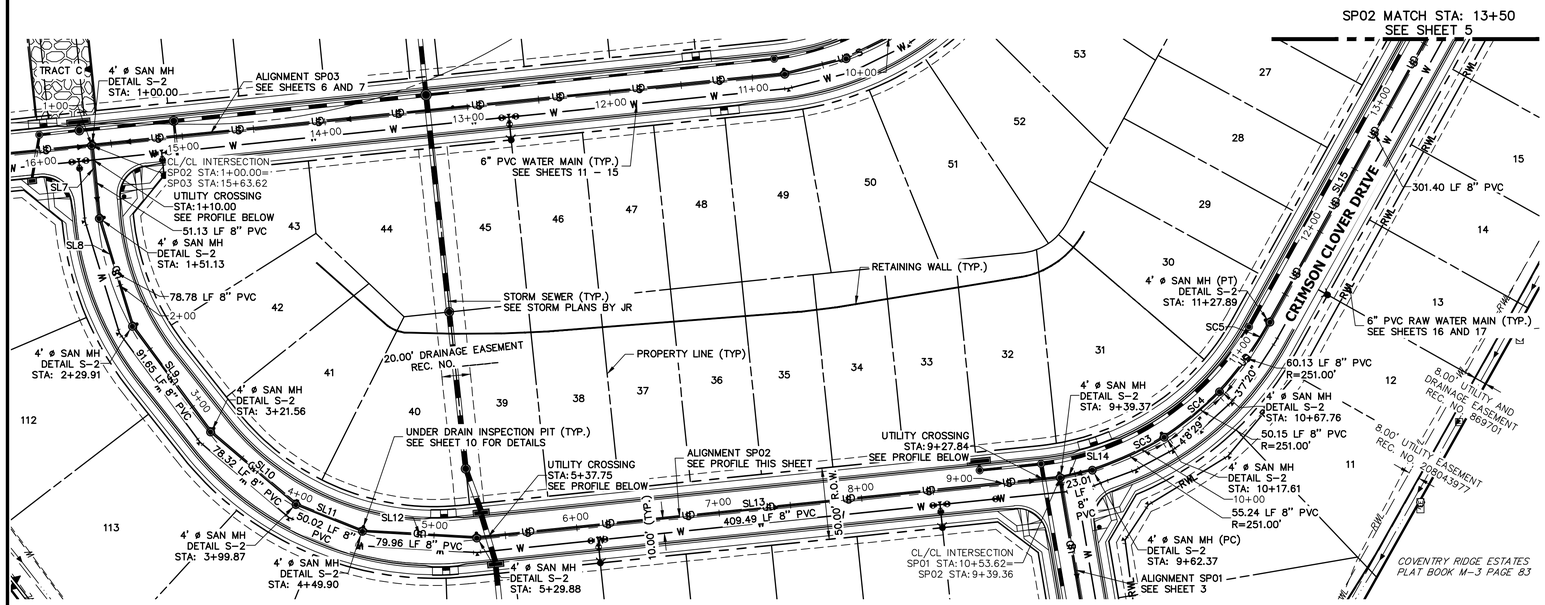

LINE TABLE		
LINE	BEARING	DISTANCE
SL7	S84°07'17"W	52.13'
SL8	S72°52'17"W	78.59'
SL9	S53°30'31"W	91.32'
SL10	S40°18'29"W	78.09'
SL11	S21°57'22"W	49.64'
SL12	S03°18'29"W	79.96'
SL13	S05°54'13"E	409.51'
SL14	S13°21'10"E	23.01'
SL15	S60°57'58"E	301.40'

CURVE TABLE			
CURVE	DELTA	RADIUS	LENGTH
SC3	12°36'31"	251.00'	55.24'
SC4	11°26'49"	251.00'	50.15'
SC5	13°43'34"	251.00'	60.13'

NOTES

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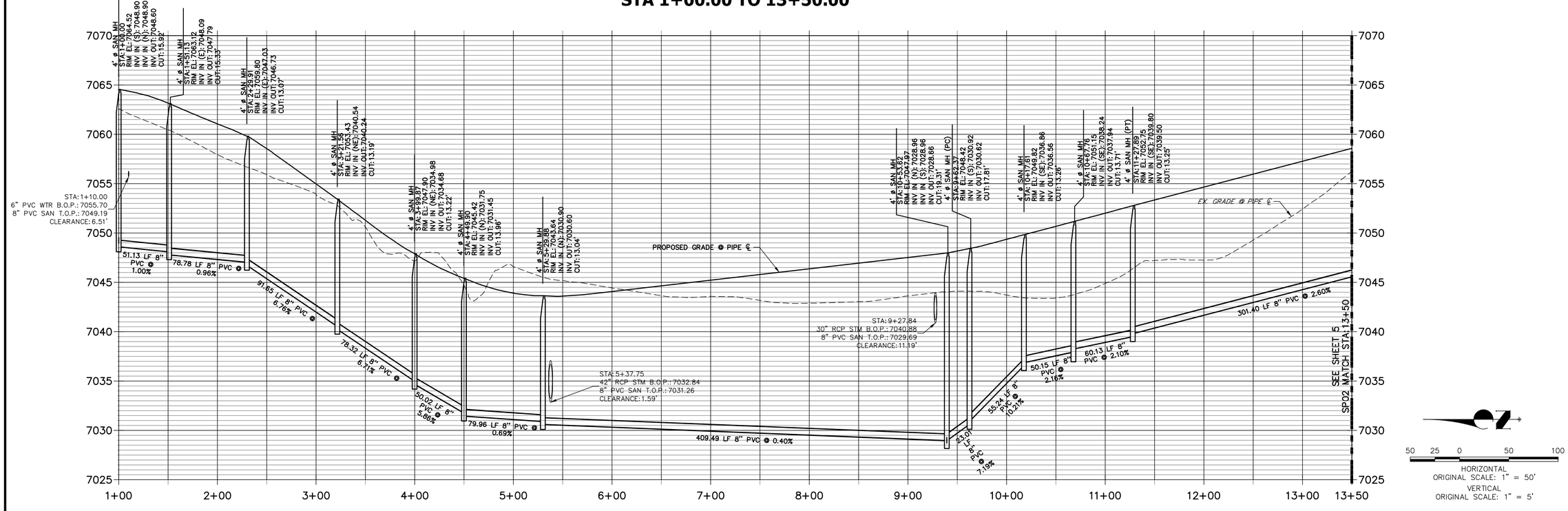
SP02 PROFILE
STA 1+00.00 TO 13+50.00



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

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WOODMOOR WATER AND SANITATION DISTRICT NO. 1
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No.	REVISION	BY	DATE

H-SCALE	1"=50'	DESIGNED BY	APL
V-SCALE	1"=5'	DRAWN BY	APL
DATE	05/10/21	CHECKED BY	

CLOVERLEAF FILING 2

SANITARY SEWER PLAN AND PROFILE

SHEET 4 OF 21

JOB NO. 25158.01

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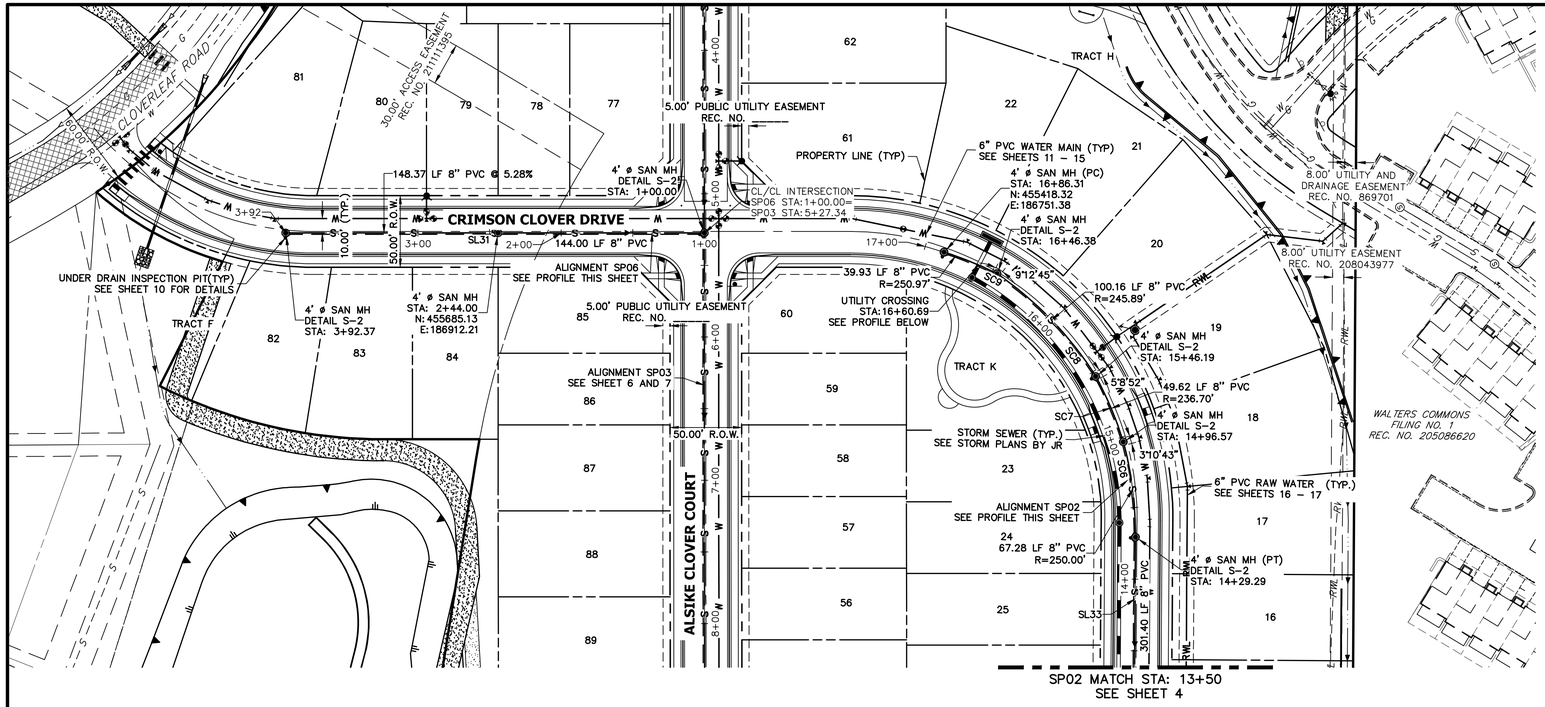
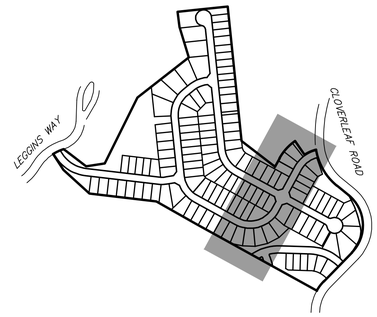


CURVE TABLE			
CURVE	DELTA	RADIUS	LENGTH
SC6	15°25'13"	250.00'	67.28'
SC7	11°22'34"	250.00'	49.64'
SC8	22°57'26"	250.00'	100.17'
SC9	8°57'19"	255.50'	39.93'

LINE TABLE		
LINE	BEARING	DISTANCE
SL31	N28°37'08"E	291.37'
SL33	S60°57'58"E	301.40'



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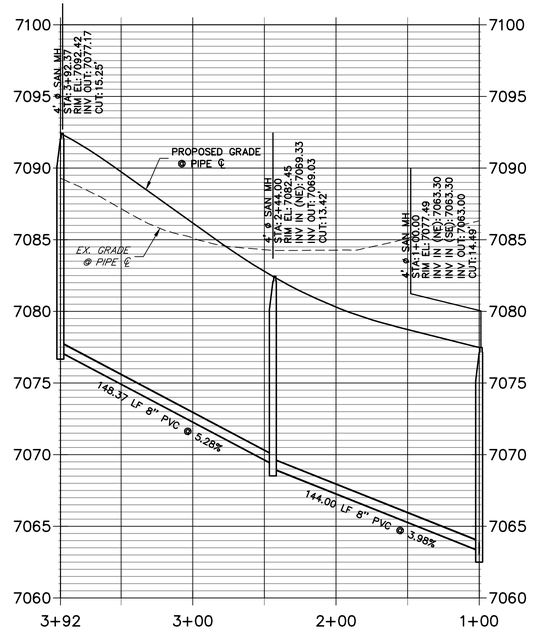
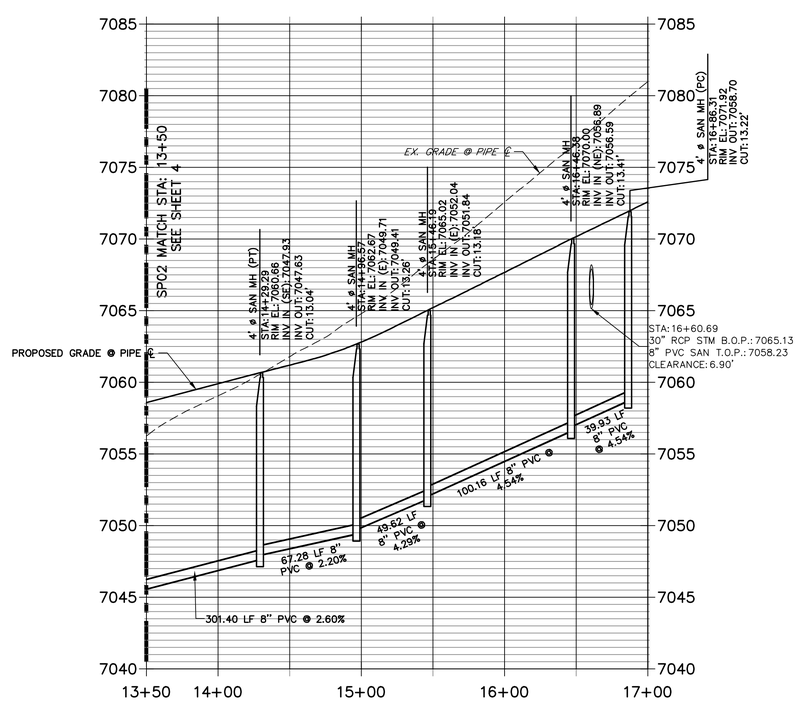
SP06 PROFILE
STA 1+00.00 TO 3+92.37



SP02 PROFILE (1)
STA 13+50.00 TO 17+00.00



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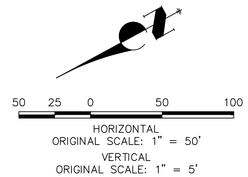

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No.	REVISION	BY	DATE

H-SCALE 1"=50'
V-SCALE 1"=5'
DATE 05/10/21
DESIGNED BY APL
DRAWN BY APL
CHECKED BY

CLOVERLEAF FILING 2

SANITARY SEWER PLAN AND PROFILE

SHEET 5 OF 21

JOB NO. 25158.01

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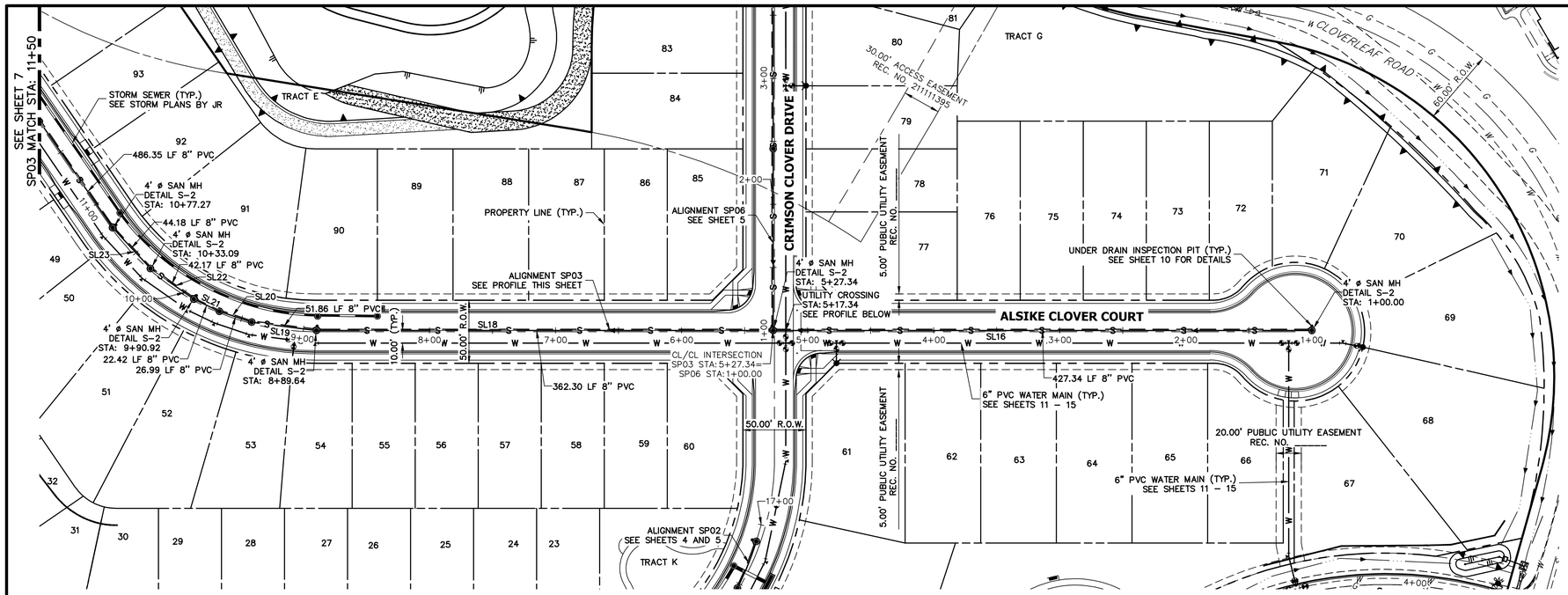

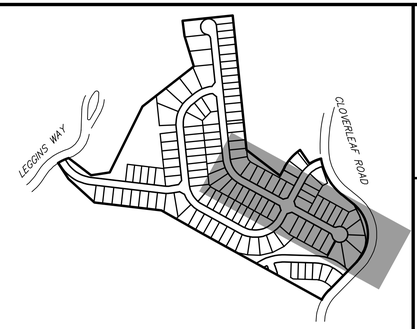

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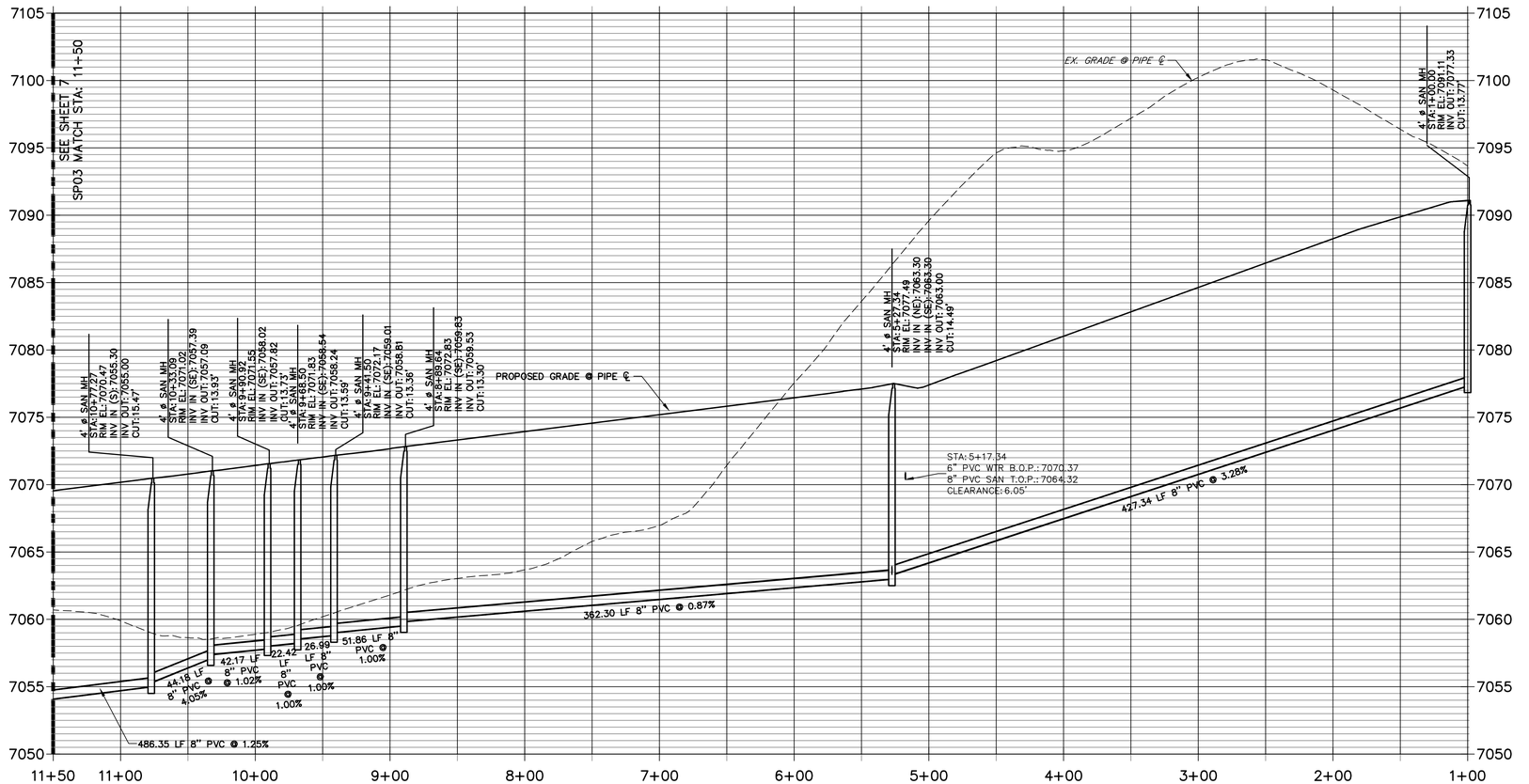
SP03 PROFILE
STA 1+00.00 TO 11+50.00



LINE TABLE		
LINE	BEARING	DISTANCE
SL16	N61°22'52"W	428.34'
SL18	S61°22'52"E	361.30'
SL19	N54°11'11"W	51.40'
SL20	N42°44'20"W	27.28'
SL21	S35°53'20"E	22.42'
SL22	S26°18'32"E	42.17'
SL23	S14°09'05"E	44.17'

Know what's below. Call before you dig.

50 25 0 50 100

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

WOODMOOR WATER AND SANITATION DISTRICT NO. 1
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No.	REVISION	BY	DATE

H-SCALE	1"=50'	DESIGNED BY	APL
V-SCALE	1"=5'	DRAWN BY	APL
DATE	05/10/21	CHECKED BY	

CLOVERLEAF FILING 2

SANITARY SEWER PLAN AND PROFILE

SHEET 6 OF 21

JOB NO. 25158.01

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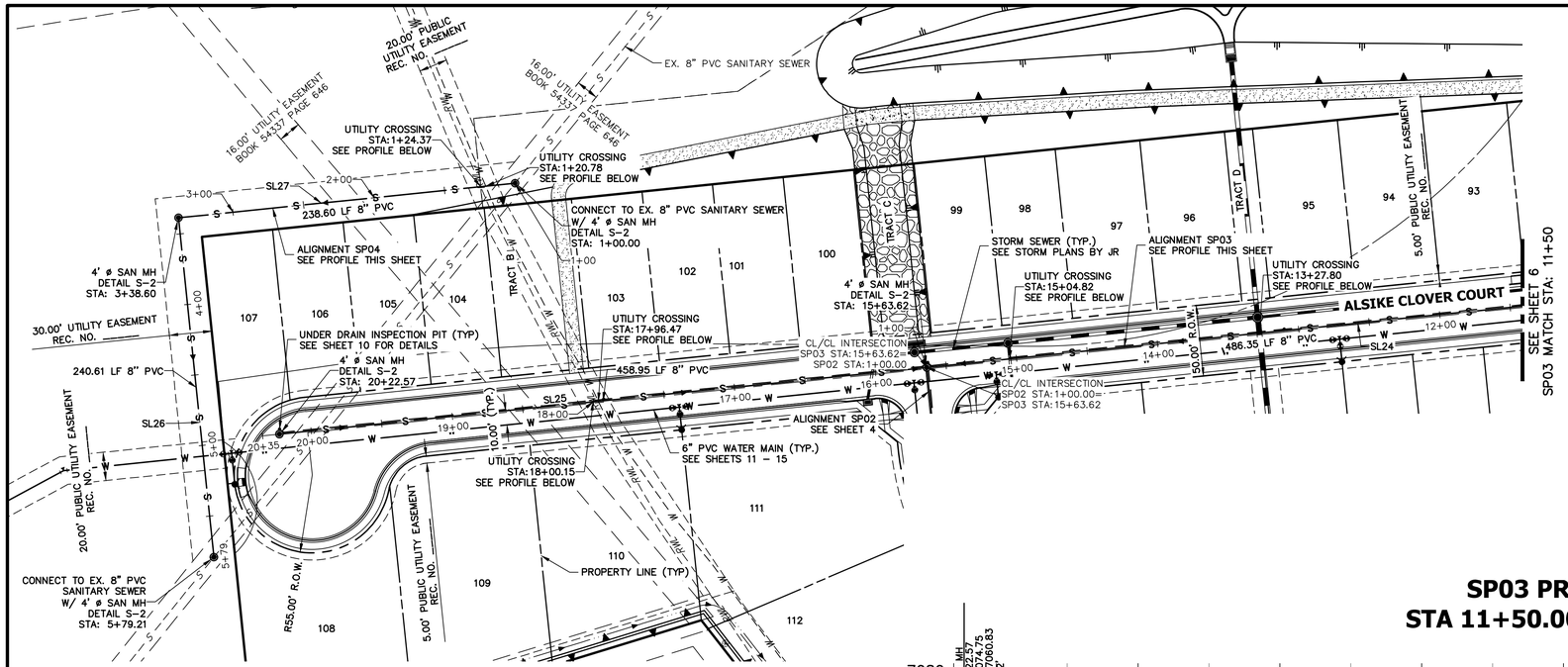
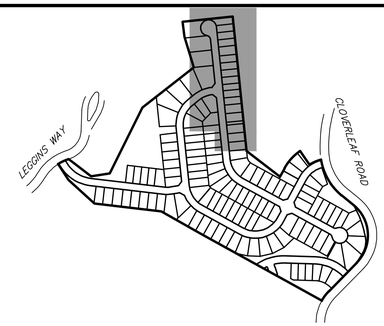


LINE TABLE		
LINE	BEARING	DISTANCE
SL24	S05°52'43"E	485.36'
SL25	S05°52'43"E	459.95'
SL26	S84°03'34"W	240.61'
SL27	N05°52'43"W	238.60'



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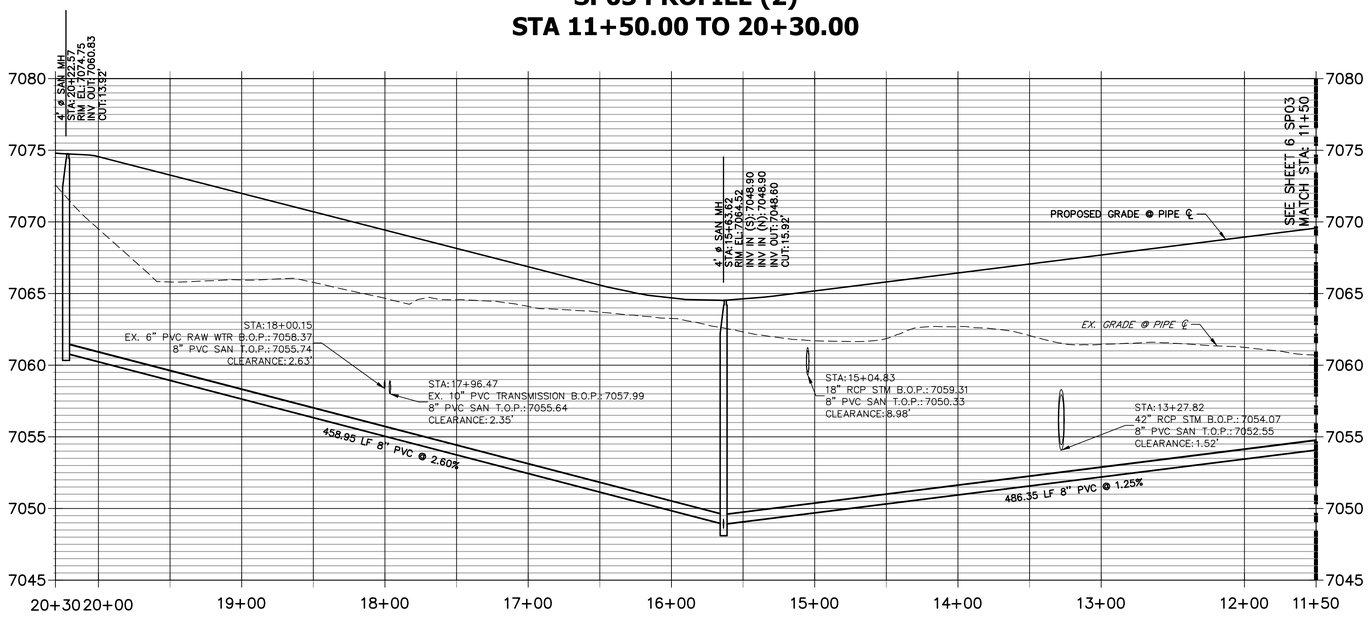
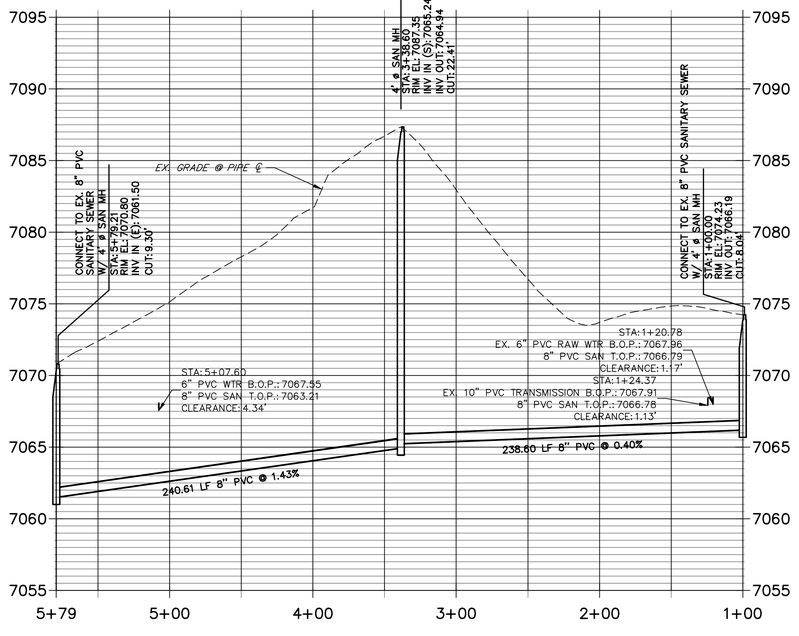
SP03 PROFILE (2)
STA 11+50.00 TO 20+30.00



SP04 PROFILE
STA 1+00.00 TO 5+79.21



50 25 0 50 100

HORIZONTAL ORIGINAL SCALE: 1" = 50'

VERTICAL ORIGINAL SCALE: 1" = 5'

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V-SCALE	1"=5'		
DATE	05/10/21		
DESIGNED BY	APL		
DRAWN BY	APL		
CHECKED BY			

CLOVERLEAF FILING 2

SANITARY SEWER PLAN AND PROFILE

SHEET 7 OF 21

JOB NO. 25158.01

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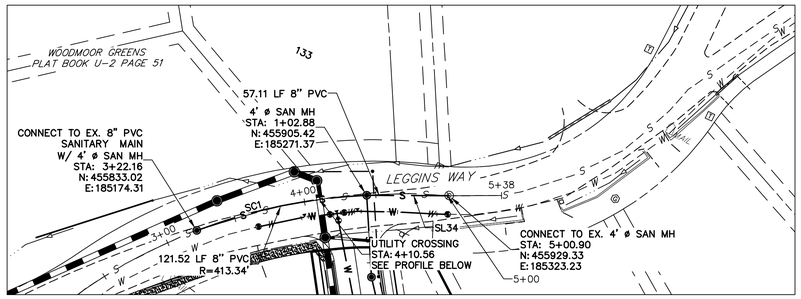
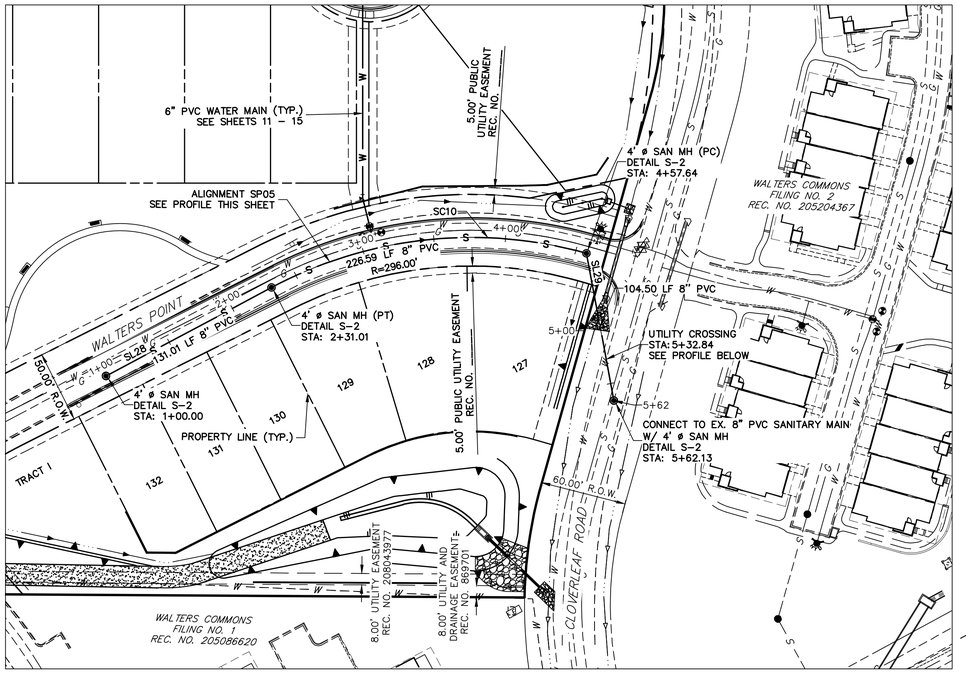
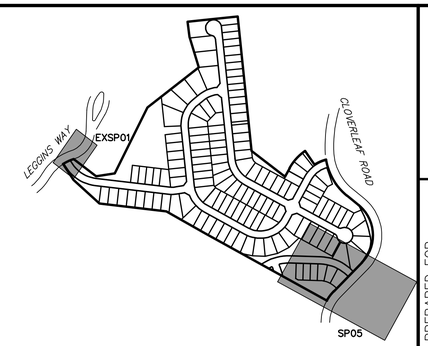
CURVE TABLE			
CURVE	DELTA	RADIUS	LENGTH
SC1	14°20'09"	374.34'	93.66'

LINE TABLE		
LINE	BEARING	DISTANCE
SL34	N65°14'28"E	57.11'



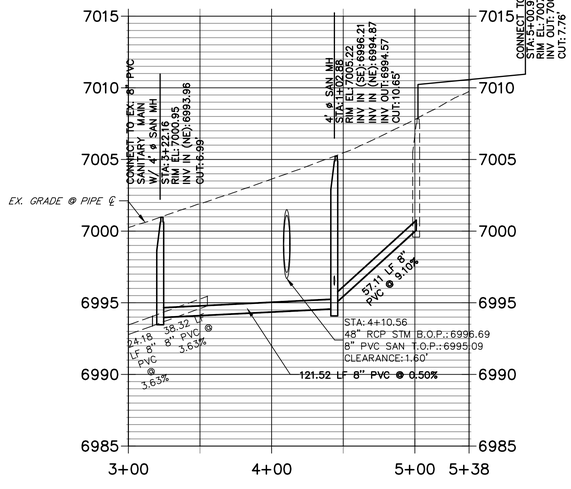




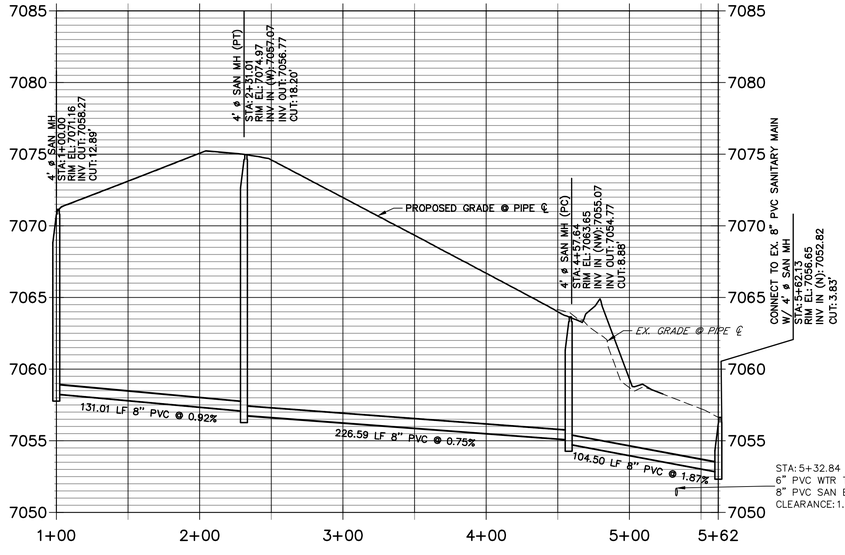
LINE TABLE		
LINE	BEARING	DISTANCE
SL28	S89°30'04"E	131.01'
SL29	S18°03'22"W	104.50'

CURVE TABLE			
CURVE	DELTA	RADIUS	LENGTH
SC10	43°51'37"	296.00'	226.59'

EX SP01 PROFILE
STA 3+00.00 TO 5+37.82



SP05 PROFILE
STA 1+00.00 TO 5+62.13



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50 25 0 50 100

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

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CHECKED BY

CLOVERLEAF FILING 2

SANITARY SEWER PLAN AND PROFILE

SHEET 8 OF 21

JOB NO. 25158.01

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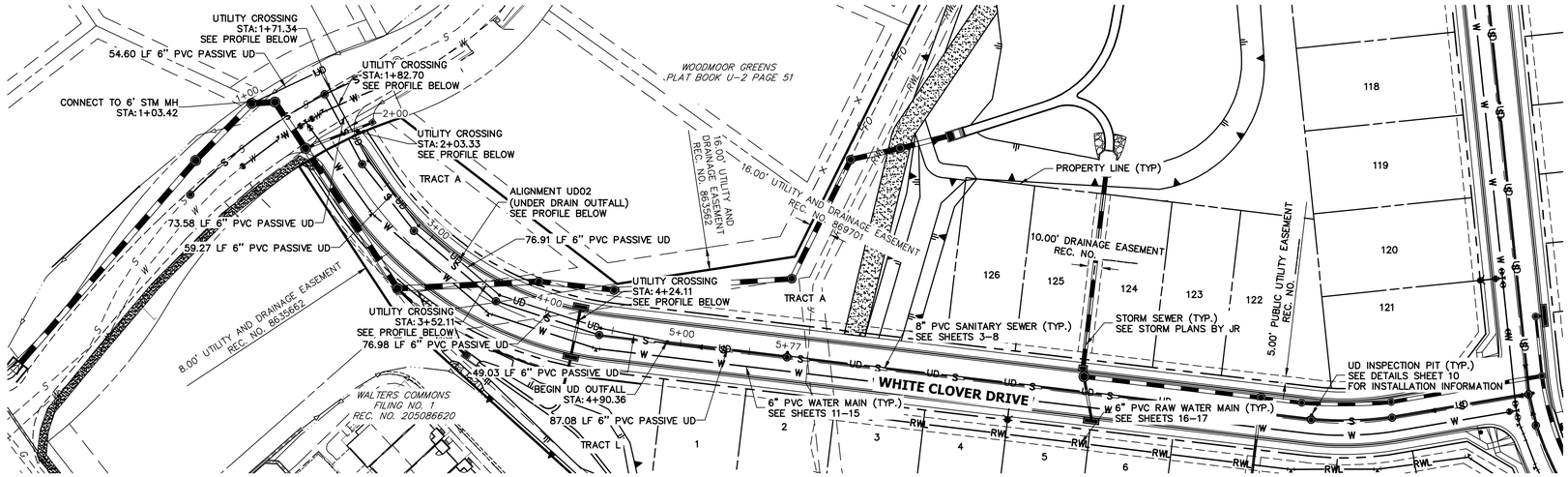
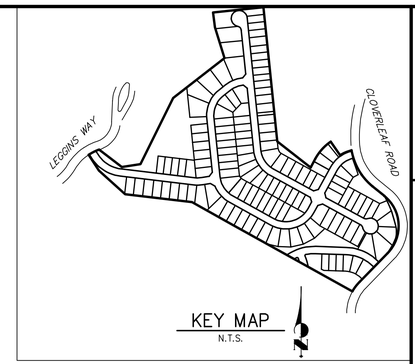
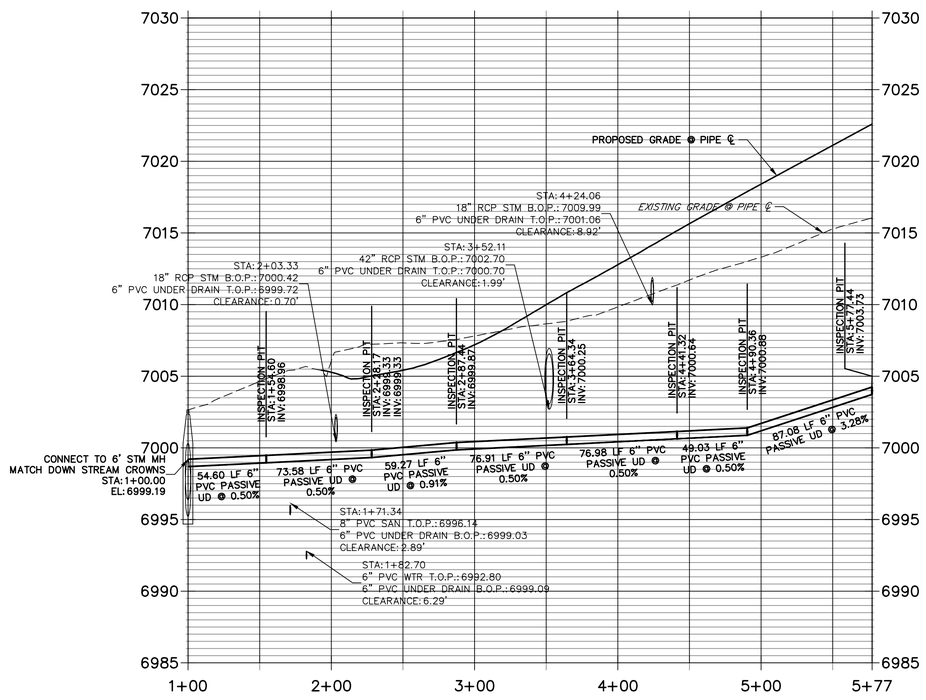
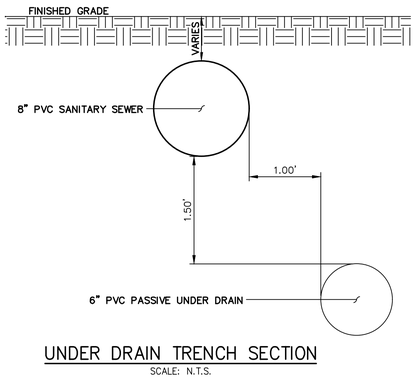




UD02 PROFILE
STA 1+00.00 TO 5+77.44





UNDER DRAIN TRENCH SECTION
SCALE: N.T.S.

NOTES

1. SEE DETAILS SHEET 10 FOR UNDER DRAIN INSTALLATION INFORMATION.
2. UNDER DRAIN IS TO BE LOCATED 1' HORIZONTALLY FROM OUTSIDE OF SANITARY PIPE TO OUTSIDE OF UNDER DRAIN UNTIL OUTFALL. SEE DETAIL THIS SHEET.
3. UNDER DRAIN IS TO BE LOCATED 1.5' VERTICALLY FROM BOTTOM OF SANITARY PIPE TO TOP OF UNDER DRAIN UNTIL OUTFALL. SEE DETAIL THIS SHEET.
4. FOR UNDER DRAIN SERVICE LOCATION SEE UTILITY SERVICE PLAN SHEETS 18 AND 19.

50 25 0 50 100

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

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1864 WOODMOOR DRIVE
COLORADO SPRINGS, CO 80920
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(719) 476-0800
JDESJARDIN@PROTERRACO.COM

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CLOVERLEAF FILING 2

UNDER DRAIN

SHEET 9 OF 21

JOB NO. 25158.01

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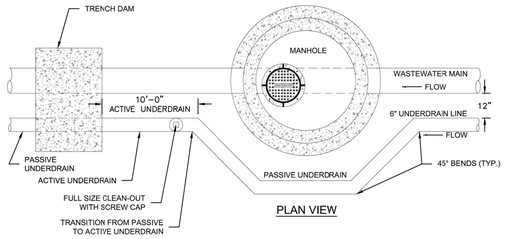
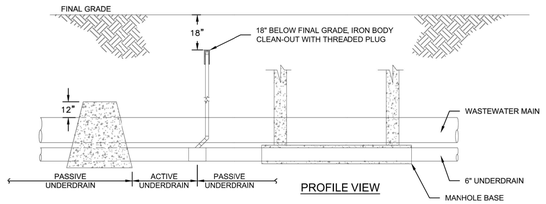


PLAN VIEW



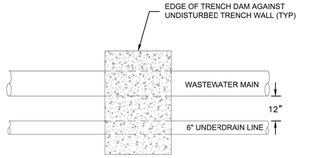
PROFILE VIEW

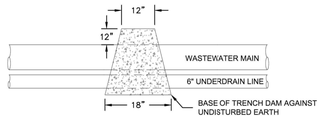
Colorado Springs Utilities
It's how we're all connected

PASSIVE GROUNDWATER UNDERDRAIN SCHEMATIC

C6-1

DATED 5/2015





NOTES:

1. TRENCH DAMS ARE REQUIRED AT THE TRANSITION FROM ACTIVE UNDERDRAINS TO PASSIVE UNDERDRAINS.

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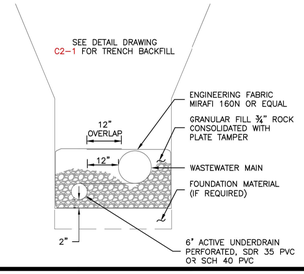
UNDERDRAIN TRENCH DAM

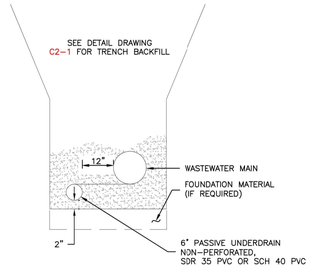
C6-2

DATED 5/2015

ACTIVE UNDERDRAIN PIPE



PASSIVE UNDERDRAIN PIPE



NOTES:

1. ACTIVE UNDERDRAIN PIPE REQUIRED FOR 10' DOWNSTREAM OF EACH MANHOLE WHERE UNDERDRAINS ARE INSTALLED.

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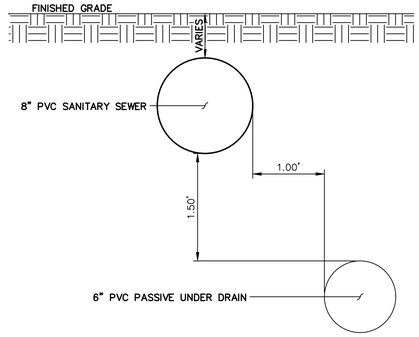
PREFERRED COMMON TRENCH UNDERDRAIN WITH WASTEWATER MAIN

C6-3

DATED 5/2015



UNDER DRAIN TRENCH SECTION

SCALE: N.T.S.

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UNDER DRAIN

SHEET 10 OF 21

JOB NO. 25158.01

4. Outfall

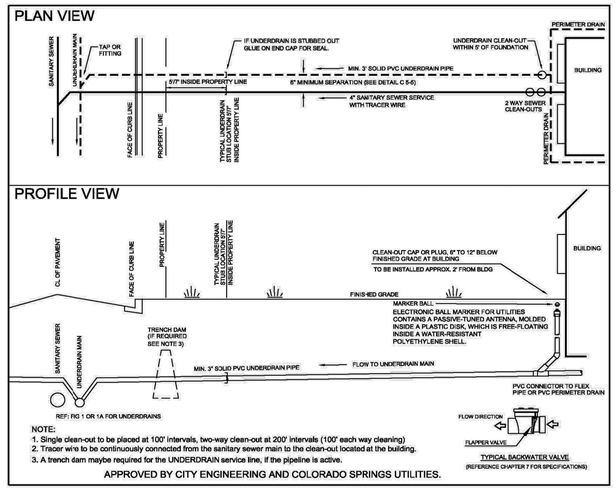

Figure 13-3 – Underdrain Service Line

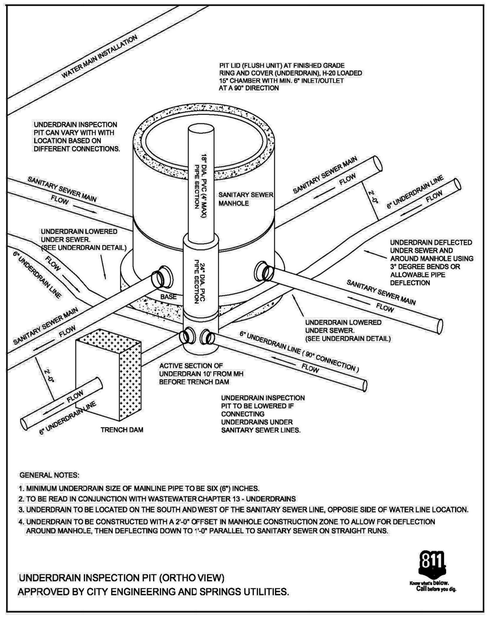

Figure 13-2D – Underdrain Inspection Pit

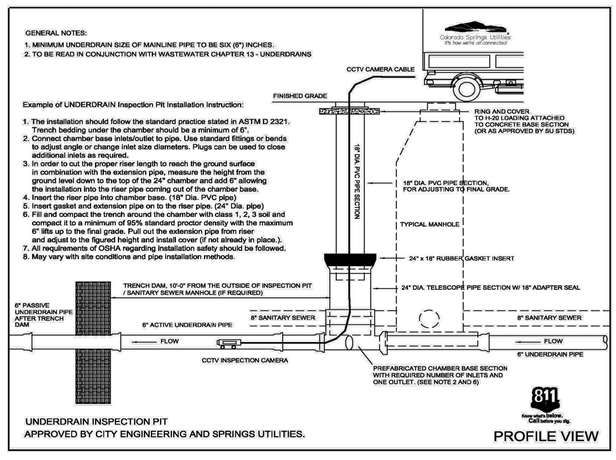

Figure 13-2C – Alternate 2 Underdrain Inspection Pit

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WP03 PROFILE (1)
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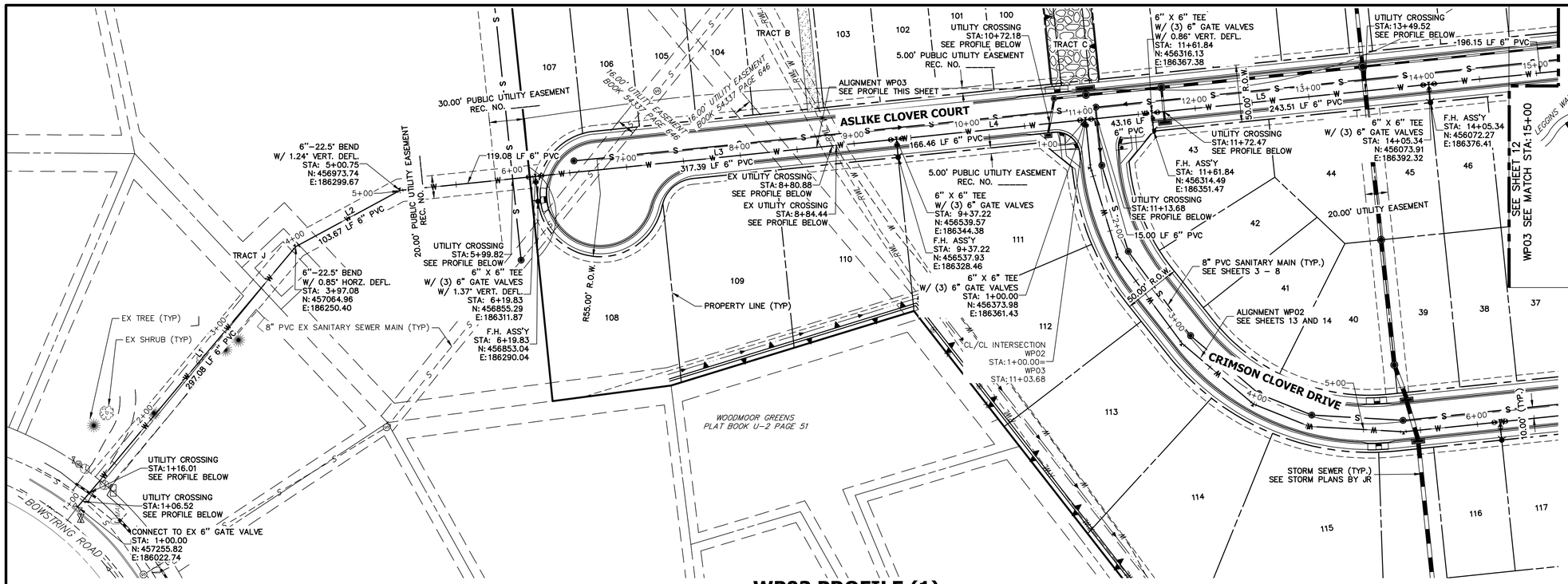
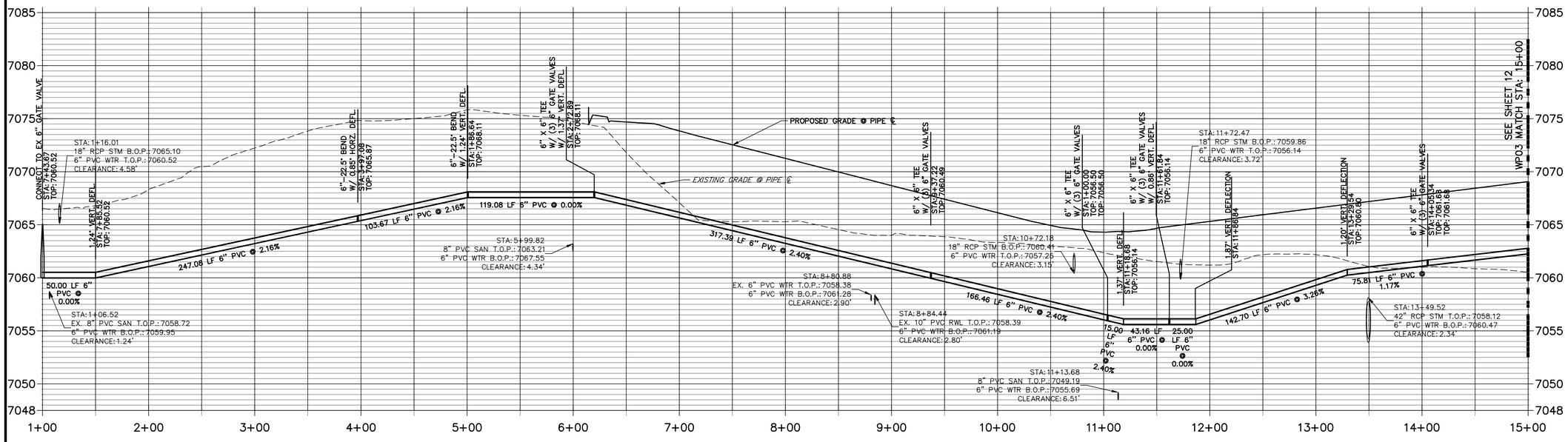


LINE TABLE		
LINE	BEARING	DISTANCE
L1	S50°01'28"E	297.08'
L2	S28°22'43"E	103.67'
L3	S5°52'43"E	436.47'
L4	S5°52'43"E	166.46'
L5	S5°52'43"E	497.81'



50 25 0 50 100

HORIZONTAL ORIGINAL SCALE: 1" = 50'

VERTICAL ORIGINAL SCALE: 1" = 5'

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JDESJARDIN@PROTERRACO.COM

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CLOVERLEAF FILING 2

WATER DISTRIBUTION PLAN

SHEET 11 OF 21

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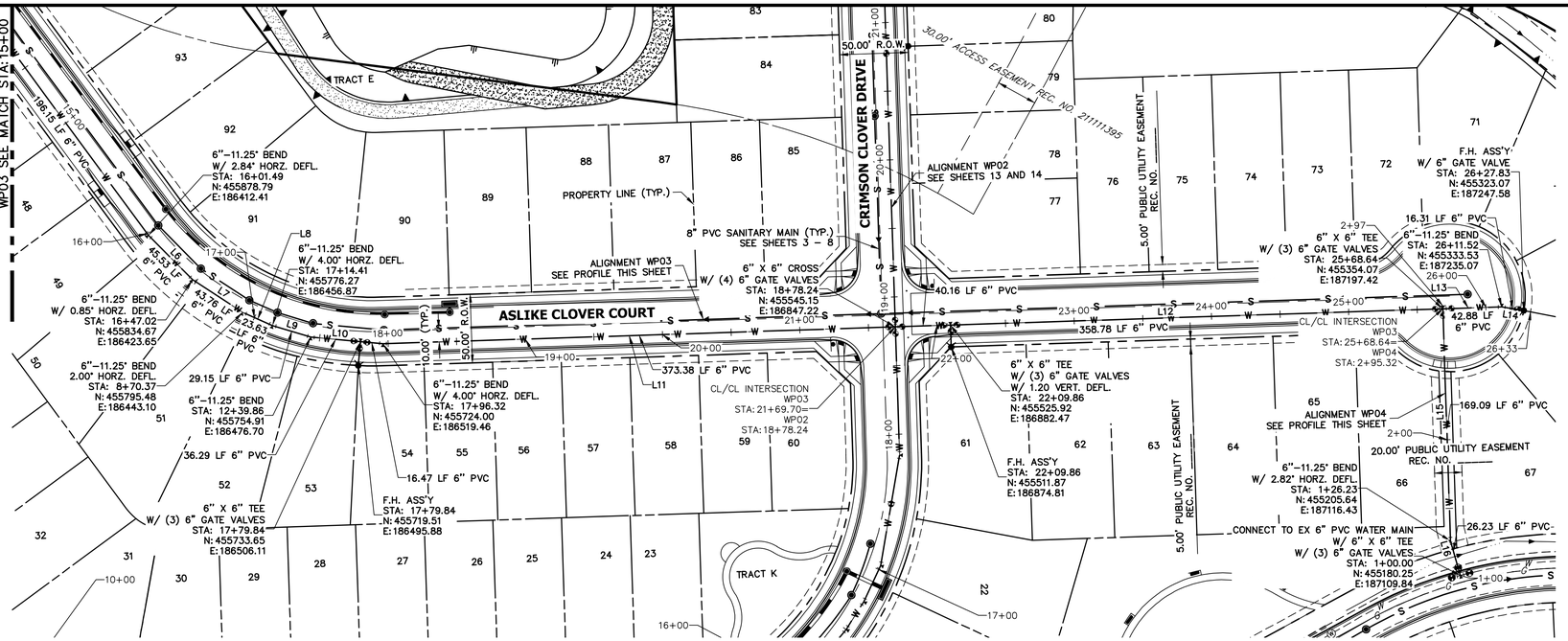

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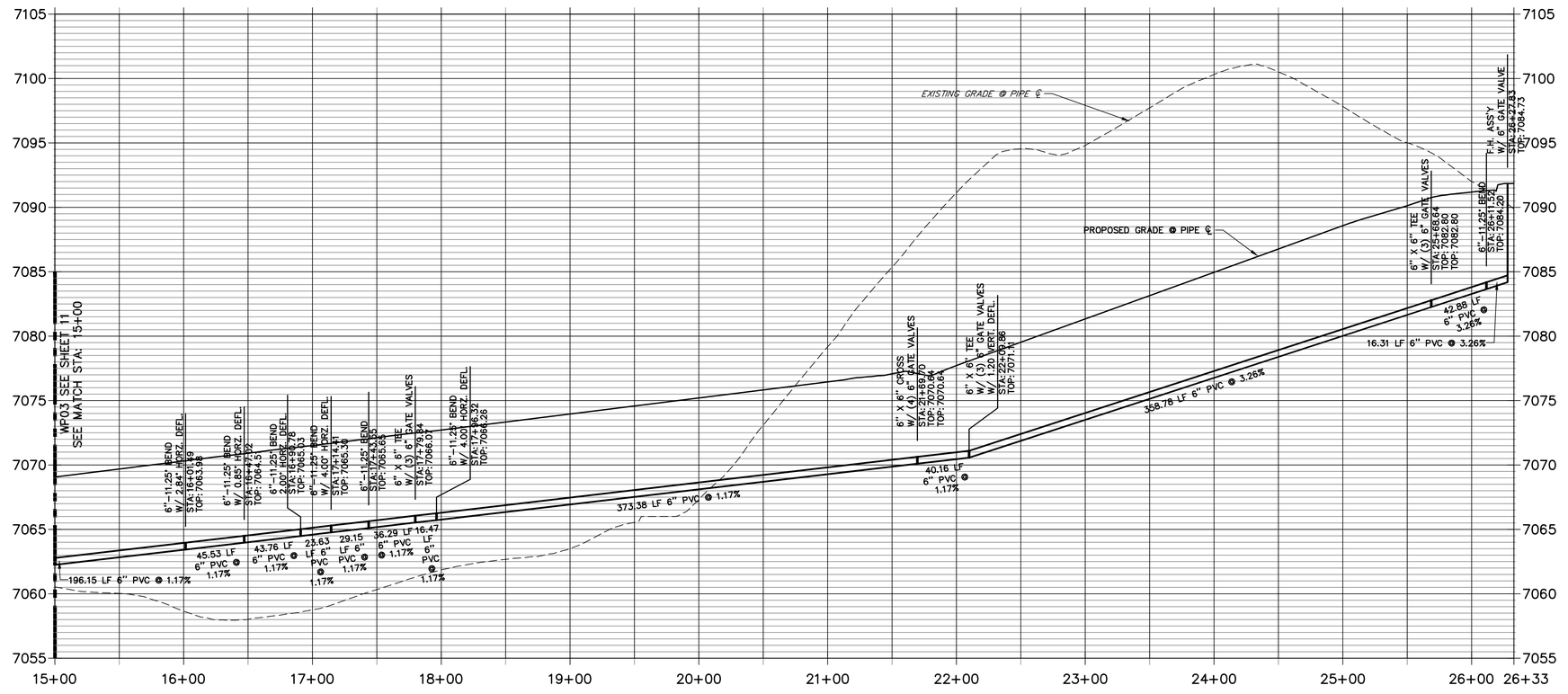

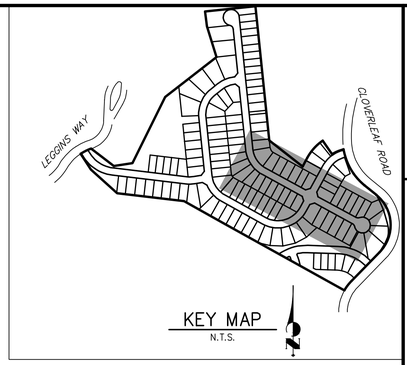

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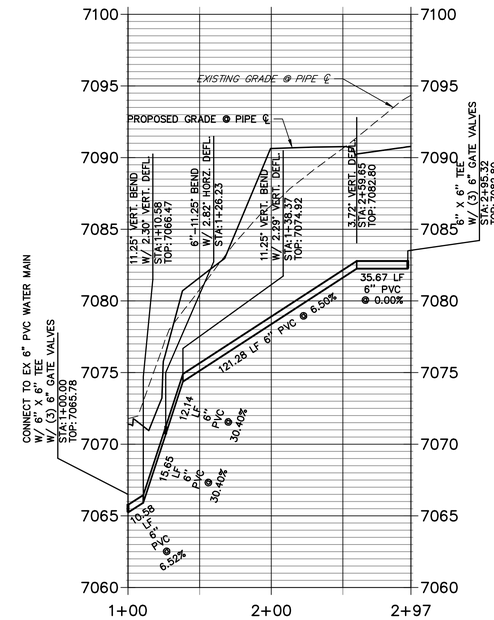

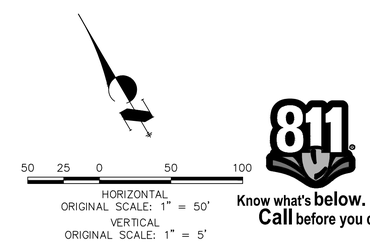

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LINE TABLE		
LINE	BEARING	DISTANCE
L6	S14°17'22"E	45.53'
L7	S26°23'25"E	43.76'
L8	S35°38'25"E	23.63'
L9	S42°52'45"E	29.15'
L10	S54°07'45"E	52.76'
L11	S61°22'52"E	373.38'
L12	S61°22'52"E	398.94'
L13	S61°22'52"E	42.88'
L14	S50°07'52"E	16.31'
L15	N28°37'08"E	171.25'
L16	N14°33'06"E	26.23'

WOODMOOR WATER AND SANITATION DISTRICT NO. 1
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WATER DISTRIBUTION PLAN

SHEET 12 OF 21

JOB NO. 25158.01

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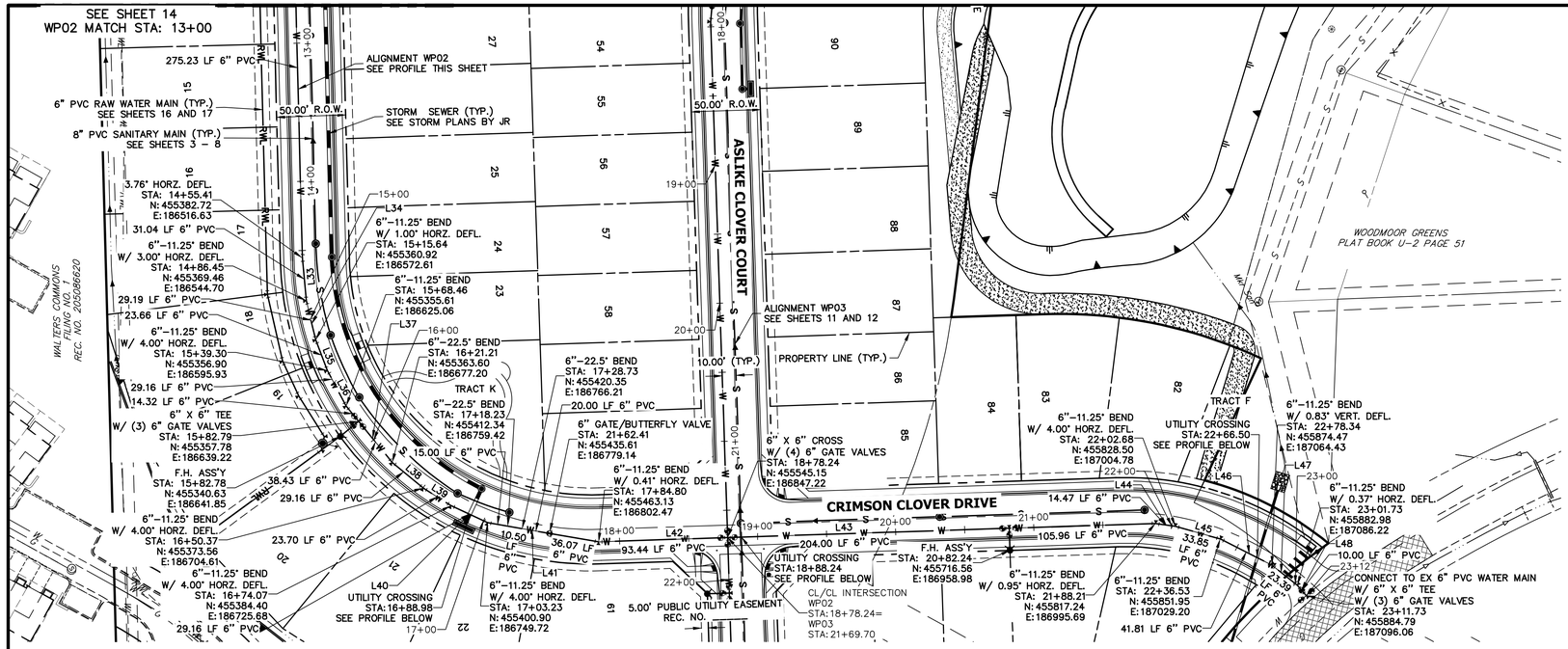
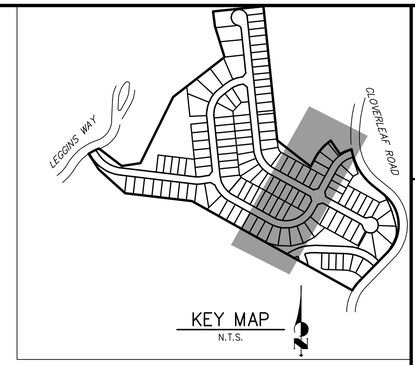


LINE TABLE		
LINE	BEARING	DISTANCE
L33	S64°43'26"E	31.04'
L34	S72°58'17"E	29.19'
L35	S80°13'16"E	23.66'
L36	S87°27'59"E	29.16'
L37	N81°17'01"E	52.75'
L38	N70°02'03"E	29.16'
L39	N62°47'02"E	23.70'
L40	N55°32'01"E	29.16'
L41	N40°17'02"E	81.57'
L42	N28°37'08"E	93.44'
L43	N28°37'08"E	309.96'
L44	N38°55'00"E	14.47'
L45	N46°10'00"E	33.85'
L46	N57°25'00"E	41.81'
L47	N68°40'00"E	23.39'
L48	N79°32'49"E	10.00'



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WP02 PROFILE (2)
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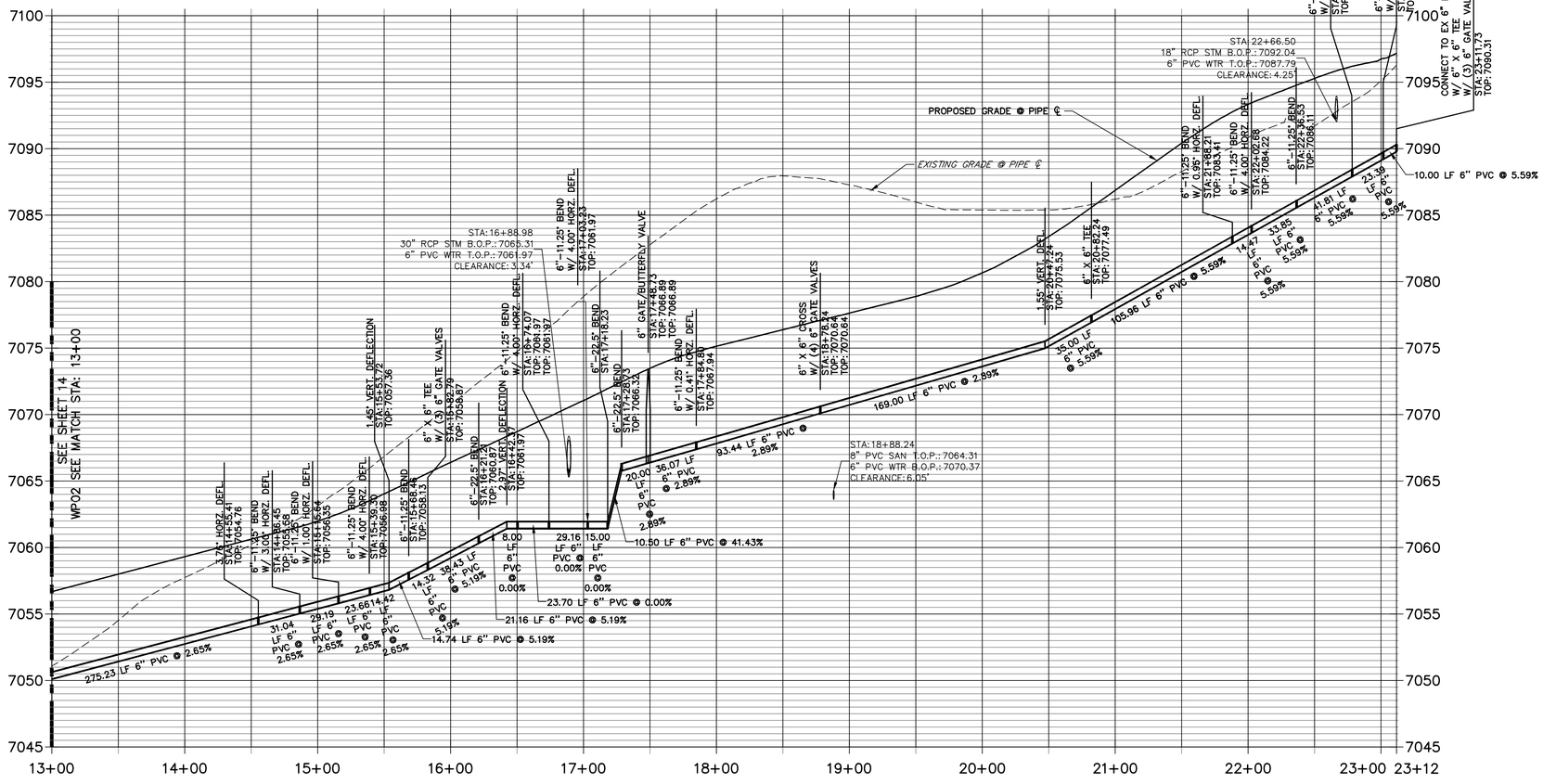

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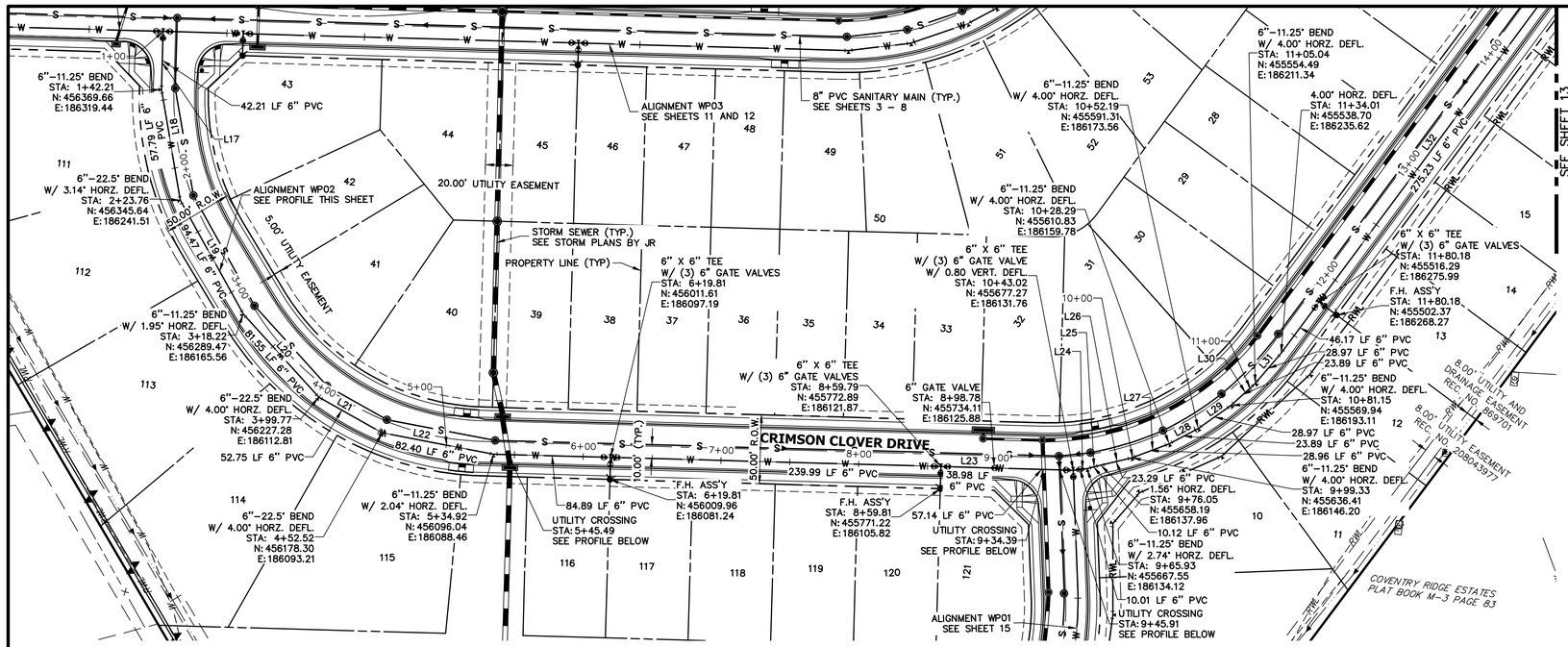
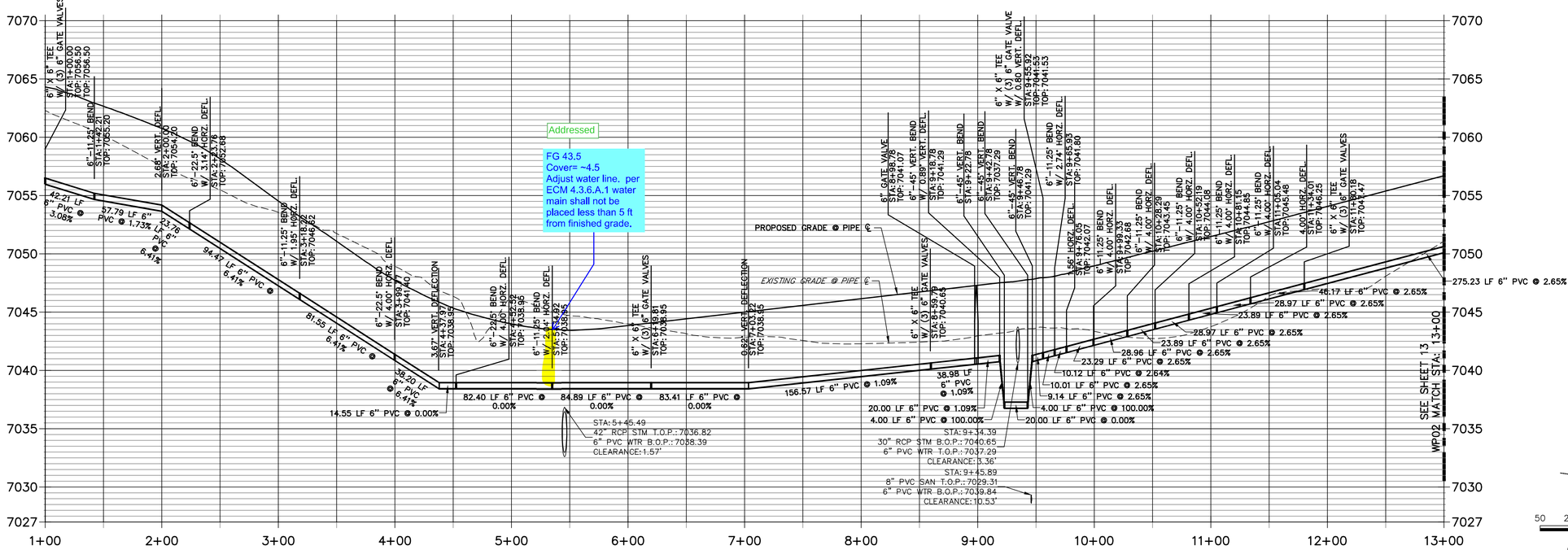


LINE TABLE		
LINE	BEARING	DISTANCE
L17	S84°07'17"W	42.21'
L18	S72°52'17"W	81.55'
L19	S53°30'31"W	94.47'
L20	S40°18'29"W	81.55'
L21	S21°48'29"W	52.75'
L22	S3°18'29"W	82.40'
L23	S5°54'13"E	421.00'
L24	S13°45'51"E	10.12'
L25	S22°16'44"E	10.01'
L26	S20°42'58"E	23.28'
L27	S27°57'58"E	28.96'
L28	S35°12'58"E	23.89'
L29	S42°27'58"E	28.97'
L30	S49°42'58"E	23.89'
L31	S56°57'59"E	28.97'
L32	S60°57'58"E	321.40'

WP02 PROFILE (1)
STA 1+00.00 TO 13+00.00



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VERTICAL
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No.	REVISION	BY	DATE

H-SCALE	1"=50'
V-SCALE	1"=5'
DATE	05/10/21
DESIGNED BY	APL
DRAWN BY	APL
CHECKED BY	

CLOVERLEAF FILING 2

WATER DISTRIBUTION PLAN

SHEET 14 OF 21

JOB NO. 25158.01

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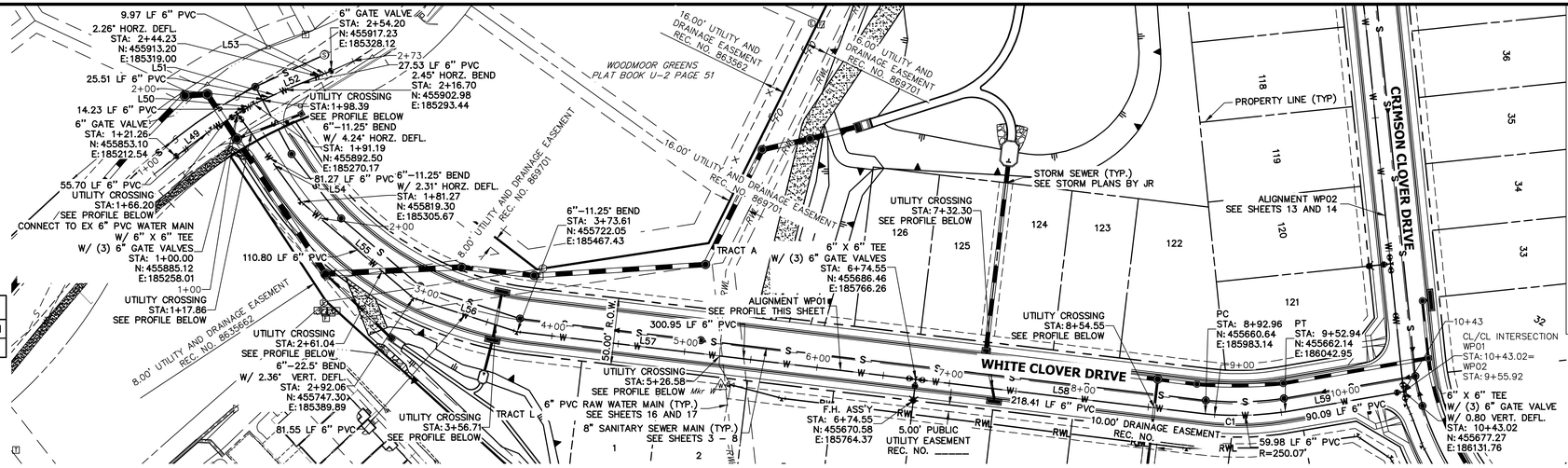
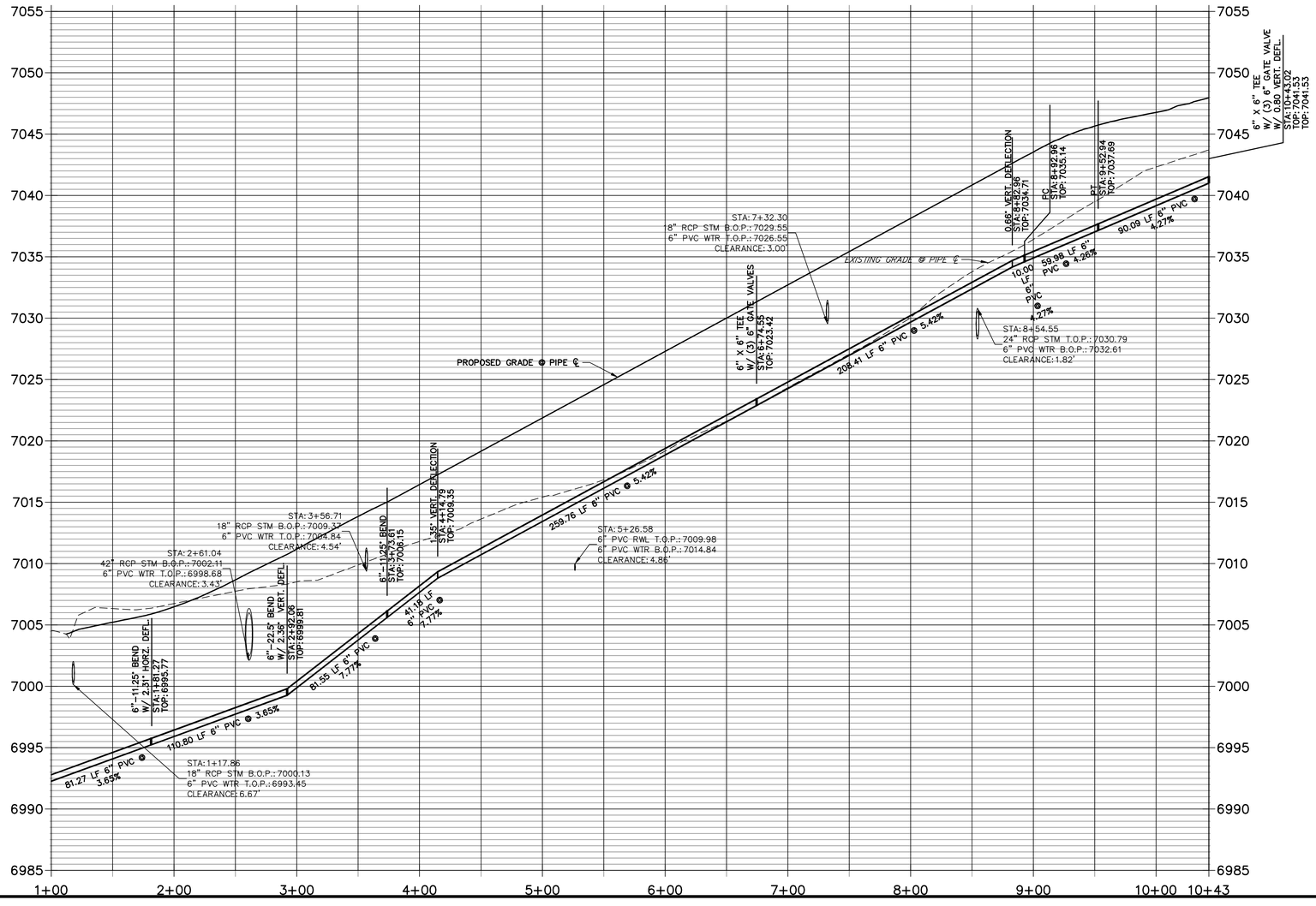
LINE TABLE		
LINE	BEARING	DISTANCE
L49	N52°10'30"E	54.26'
L50	N58°44'22"E	36.93'
L51	N65°45'14"E	25.51'
L52	N68°12'21"E	27.53'
L53	N65°56'45"E	28.32'
L54	S35°54'40"E	81.27'
L55	S49°28'23"E	110.80'
L56	S71°57'34"E	81.55'
L57	S83°12'34"E	300.95'
L58	S83°12'34"E	218.41'
L59	N80°19'55"E	90.09'

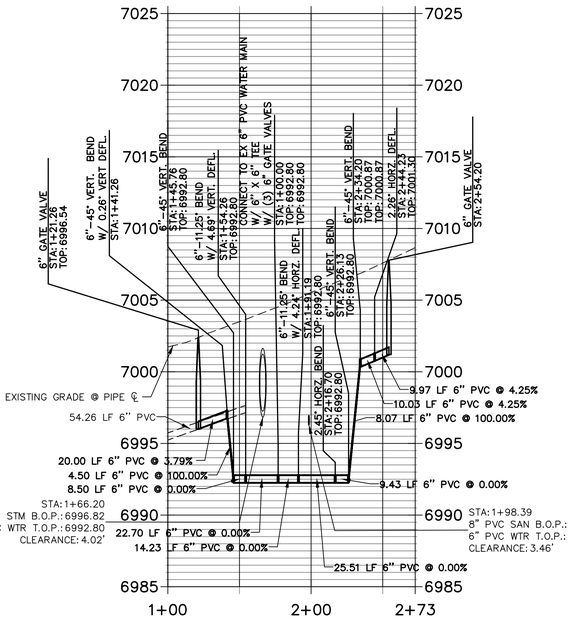
CURVE TABLE			
CURVE	DELTA	RADIUS	LENGTH
C1	13°44'29"	250.07'	59.98'



WP01 PROFILE
STA 1+00.00 TO 10+43.02



EX WP01 PROFILE
STA 1+00.00 TO 2+72.55



50 25 0 50 100

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

Know what's below. Call before you dig.

WOODMOOR WATER AND SANITATION DISTRICT NO. 1
APPROVED FOR CONSTRUCTION

DATE: BY:

THESE PLANS HAVE BEEN REVIEWED ONLY FOR GENERAL CONFORMANCE WITH DISTRICT RULES AND REGULATIONS AND SYSTEM SPECIFICATIONS. REVIEW AND CONSTRUCTION APPROVAL BY THE DISTRICT DOES NOT RELIEVE THE DEVELOPER/OWNER AND/OR CONTRACTOR FROM RESPONSIBILITY FOR COMPLIANCE WITH ANY RULES, REGULATIONS, OR SPECIFICATIONS REQUIRED BY THE DISTRICT.

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PREPARED FOR
PT CLOVERLEAF, LLC
1864 WOODMOOR DRIVE
COLORADO SPRINGS, CO 80920
ATTN: JOE DESJARDIN
(719) 476-0800
JDESJARDIN@PROTERRACO.COM

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

No.	REVISION	BY	DATE

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V-SCALE	1"=5'
DATE	05/10/21
DESIGNED BY	APL
DRAWN BY	APL
CHECKED BY	

CLOVERLEAF FILING 2

WATER DISTRIBUTION PLAN

SHEET 15 OF 21

JOB NO. 25158.01

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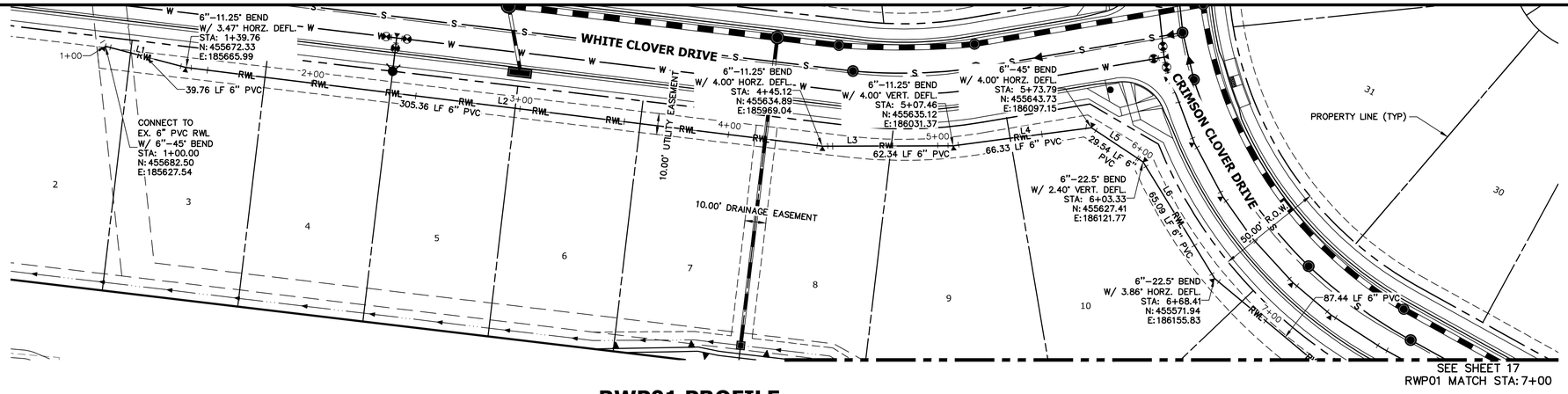
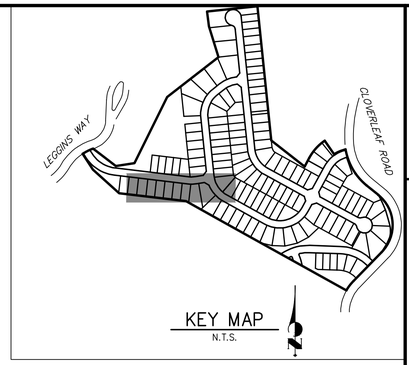
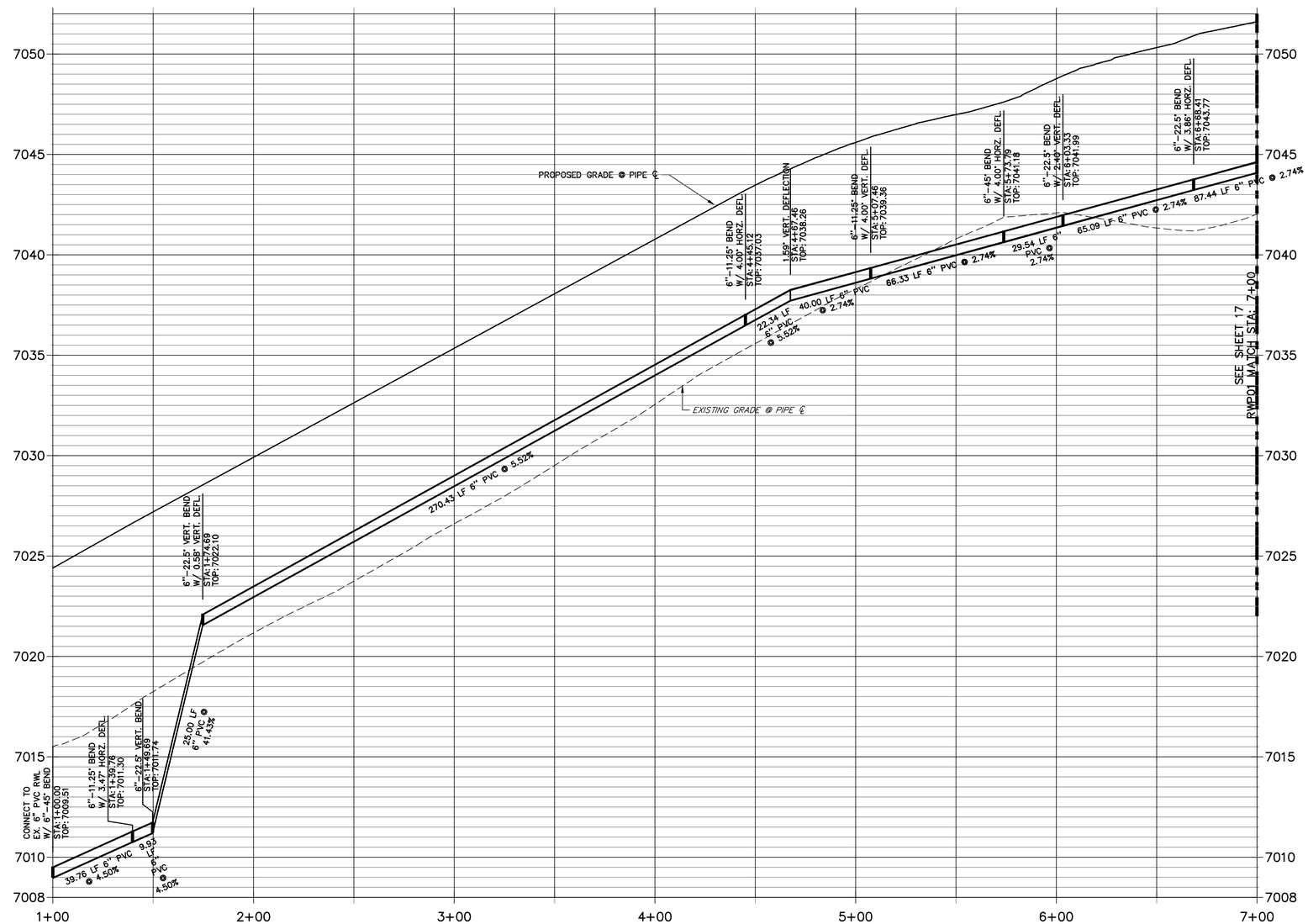




RWP01 PROFILE
STA 1+00.00 TO 7+00.00



LINE TABLE		
LINE	BEARING	DISTANCE
L1	S75°10'32"E	39.69'
L2	S82°57'27"E	305.43'
L3	N89°47'33"E	62.34'
L4	N82°32'33"E	66.33'
L5	S56°27'27"E	29.54'
L6	S31°33'22"E	65.09'

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.

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

30 15 0 30 60

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

WOODMOOR WATER AND SANITATION DISTRICT NO. 1
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No.	REVISION	BY	DATE

H–SCALE	1" = 30'	DESIGNED BY	APL
V–SCALE	1" = 3'	DRAWN BY	SAV
DATE	05/10/21	CHECKED BY	

CLOVERLEAF FILING 2

RAW WATER PLAN

SHEET 16 OF 21

JOB NO. 25158.01

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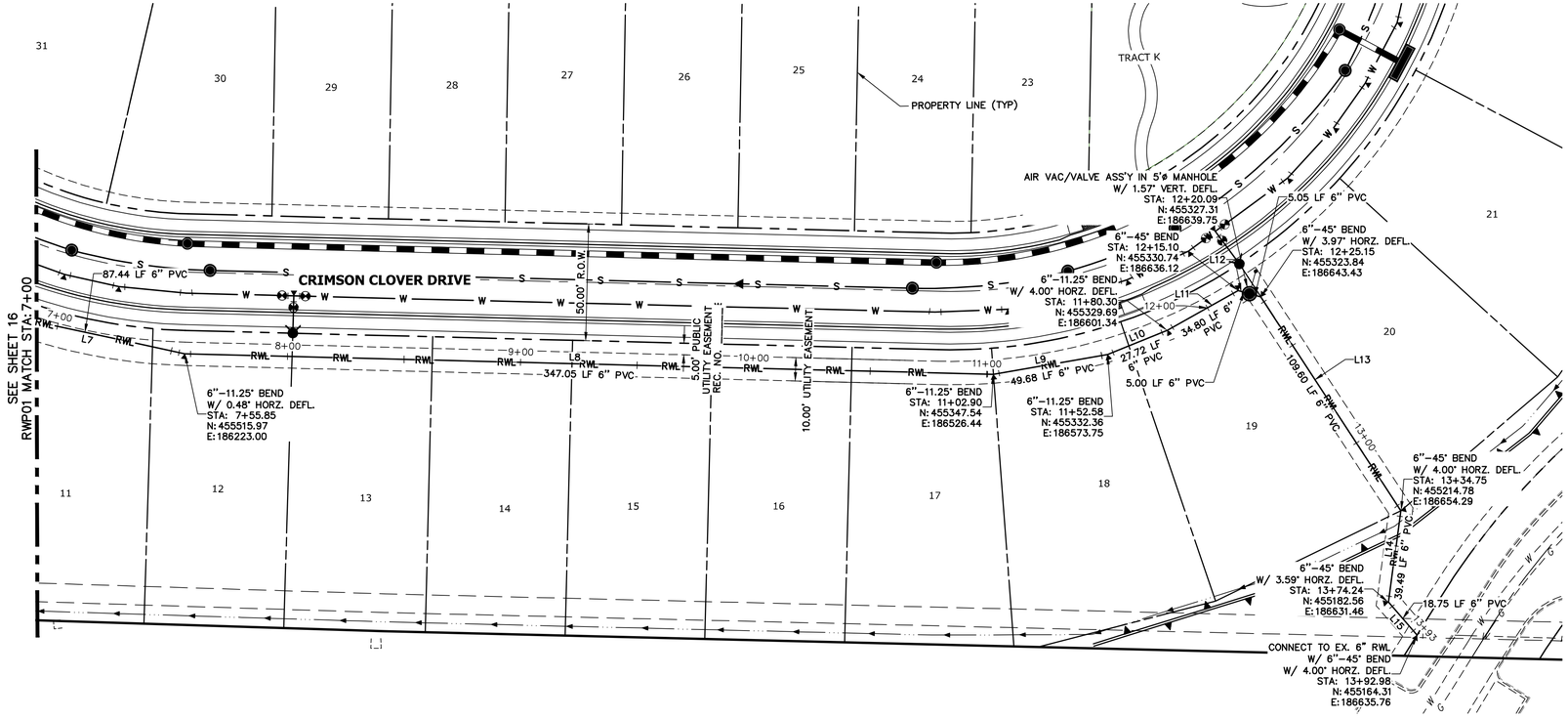
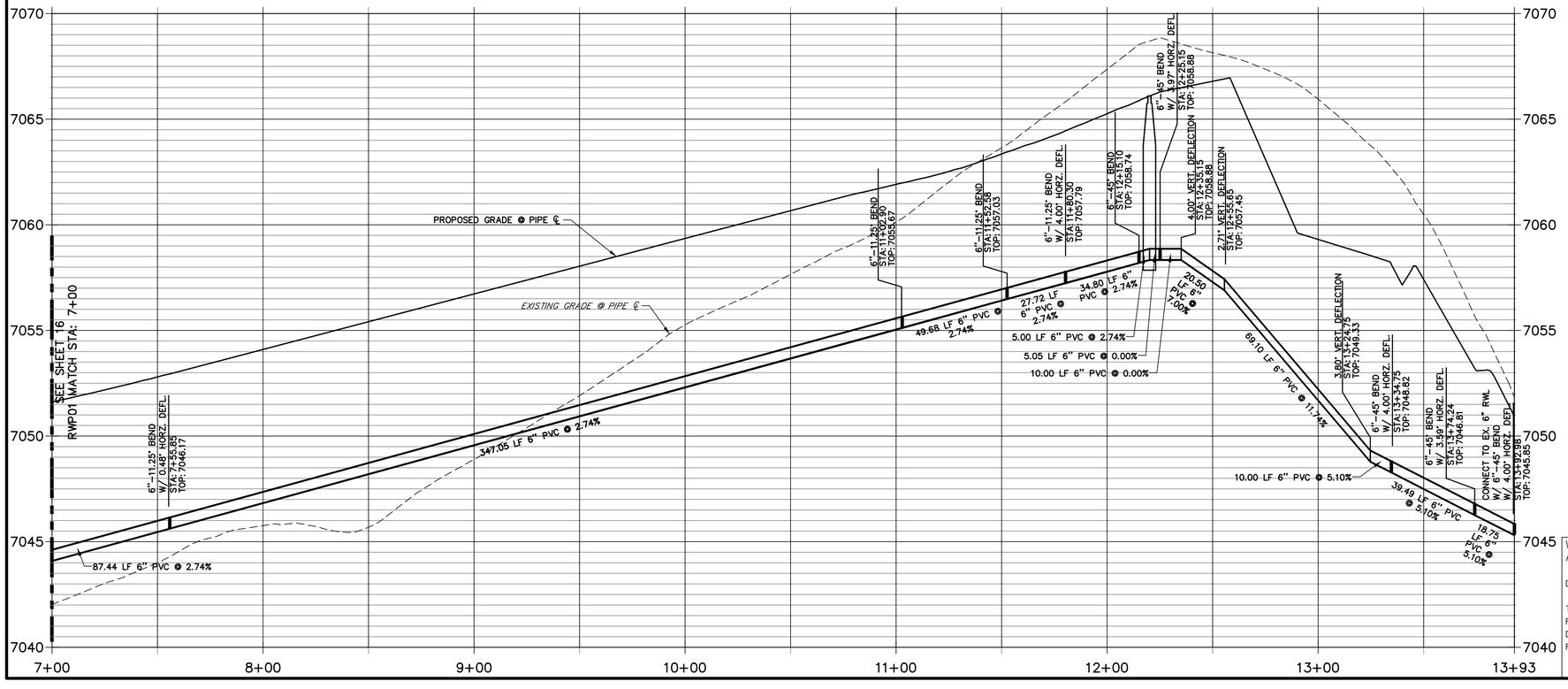
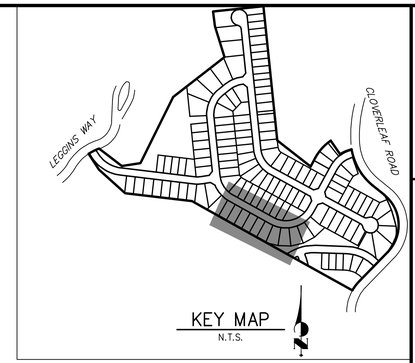


RWP02 PROFILE
STA 7+00.00 TO 13+92.98





LINE TABLE		
LINE	BEARING	DISTANCE
L7	S50°11'50"E	87.44'
L8	S60°57'58"E	347.05'
L9	S72°12'58"E	49.68'
L10	S84°27'58"E	27.72'
L11	N88°17'02"E	34.79'
L12	S46°42'58"E	10.05'
L13	S5°41'02"E	109.60'
L14	S35°19'00"W	39.49'
L15	S13°16'07"E	18.75'

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Know what's below. Call before you dig.

30 15 0 30 60

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

WOODMOOR WATER AND SANITATION DISTRICT NO. 1
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No.	REVISION	BY	DATE

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V-SCALE	1"=3'
DATE	05/10/21
DESIGNED BY	APL
DRAWN BY	SAV
CHECKED BY	

CLOVERLEAF FILING 2

RAW WATER PLAN

SHEET 17 OF 21

JOB NO. 25158.01

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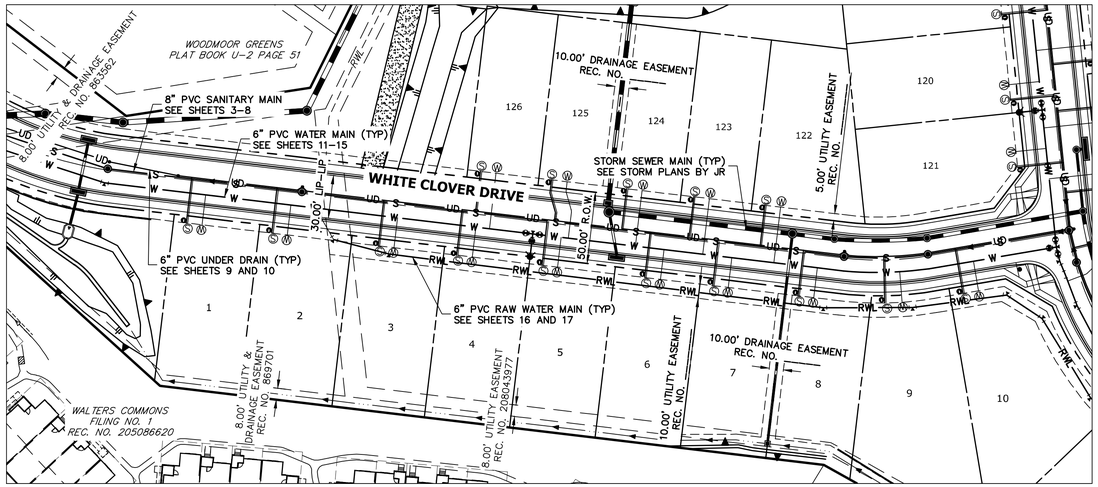
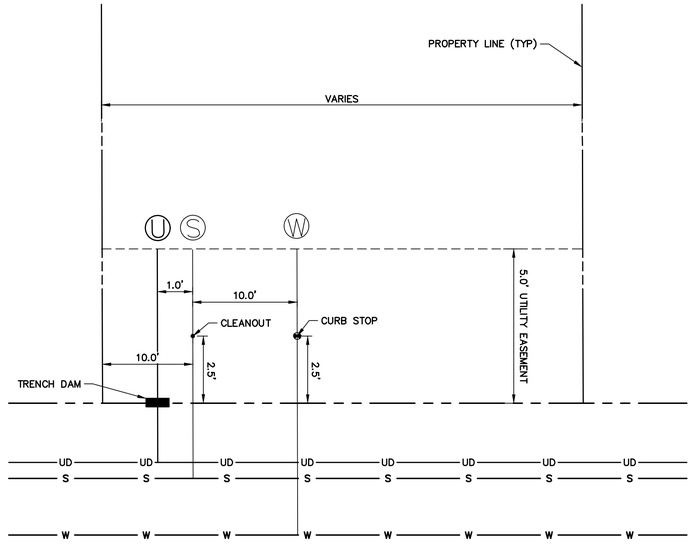
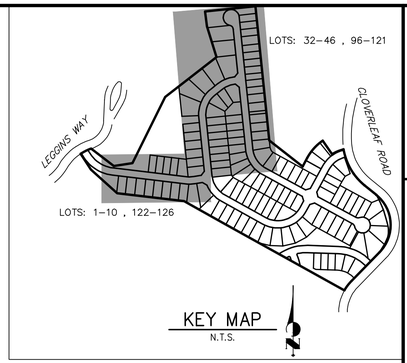


LOTS: 1–10 , 122–126



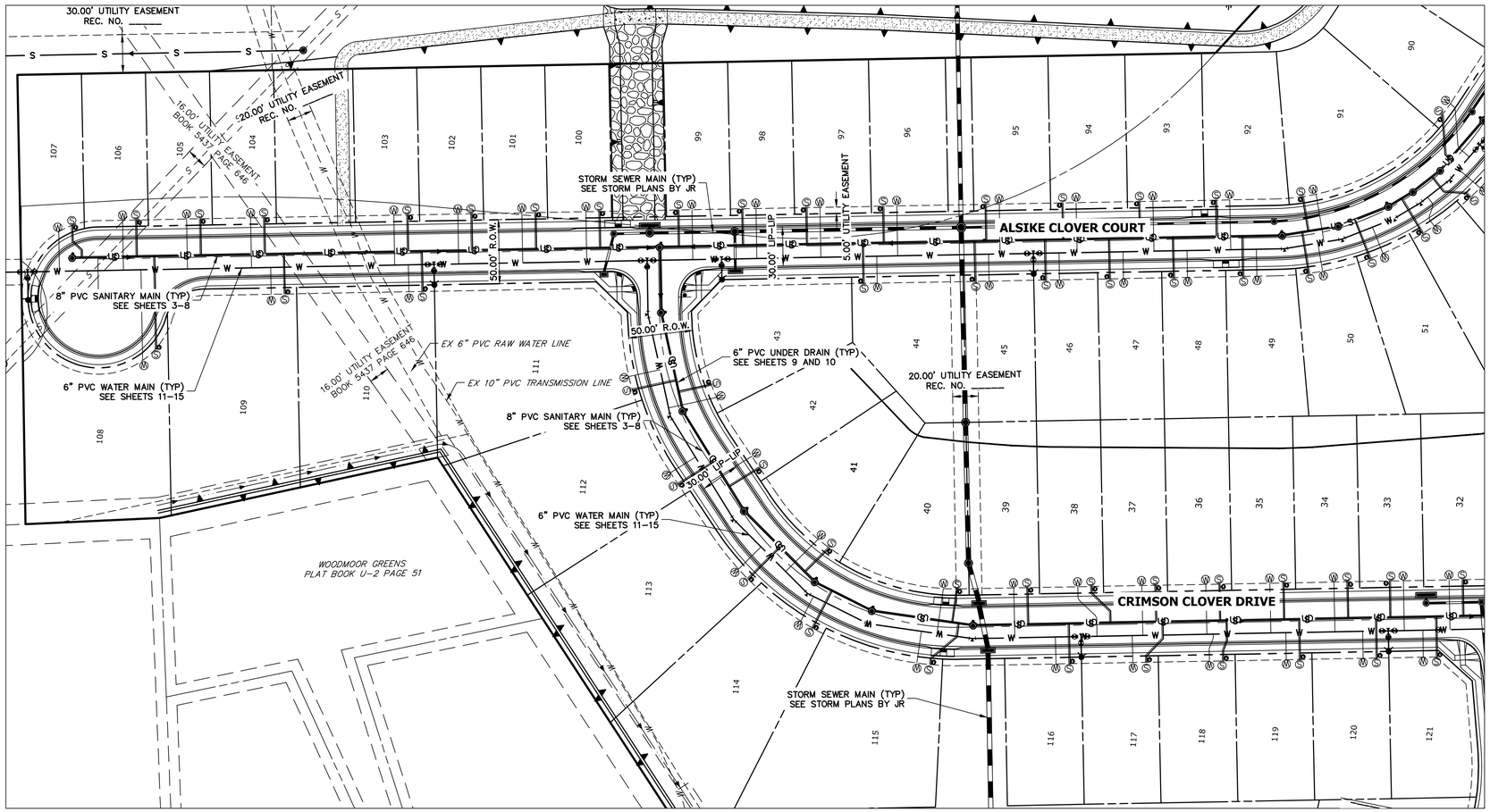
TYPICAL UTILITY SERVICE LAYOUT

SCALE: 1" = 1'



KEY MAP

N.T.S.



LOTS: 32–46 , 96–121

NOTES

1. ALL SANITARY SERVICE LINES SHALL BE 4" PVC AND INSTALLED PER DETAIL G-8.
2. ALL POTABLE WATER SERVICE LINES SHALL BE ¾" TYPE K COPPER AND INSTALLED PER DETAIL G-6.
3. A MINIMUM OF 10' SEPARATION BETWEEN WATER AND SANITARY LINES IS REQUIRED. SERVICE SHALL BE AT LEAST 10' AWAY FROM SIDE LOT LINES, PER DETAIL G-5.
4. PROVIDE METAL T-POST AT CURB STOP WHEN CONSTRUCTION OF WATER SERVICE IS COMPLETE.
5. PROVIDE METAL T-POST AT CLEAN OUT WHEN CONSTRUCTION OF SANITARY SERVICE IS COMPLETE.
6. SERVICES STUB OUTS SHALL EXTENDED TO THE INSIDE EDGE OF FRONT UTILITY EASEMENT PER DETAILS G-8 AND G-6.
7. ALL UNDER DRAIN SERVICES SHALL BE INSTALLED PER COLORADO SPRINGS UTILITY FIGURE 13-3. SEE SHEET 10.
8. SEE THIS SHEET FOR TYPICAL UTILITY SERVICE LAYOUT.

Know what's below. Call before you dig.

50 25 0 50 100

ORIGINAL SCALE: 1" = 50'

WOODMOOR WATER AND SANITATION DISTRICT NO. 1
APPROVED FOR CONSTRUCTION

DATE: BY:

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No.	REVISION	BY	DATE

H-SCALE	1"=50'
V-SCALE	N/A
DATE	05/10/21
DESIGNED BY	APL
DRAWN BY	APL
CHECKED BY	

CLOVERLEAF FILING 2

UTILITY SERVICE PLAN

SHEET 18 OF 21

JOB NO. 25158.01

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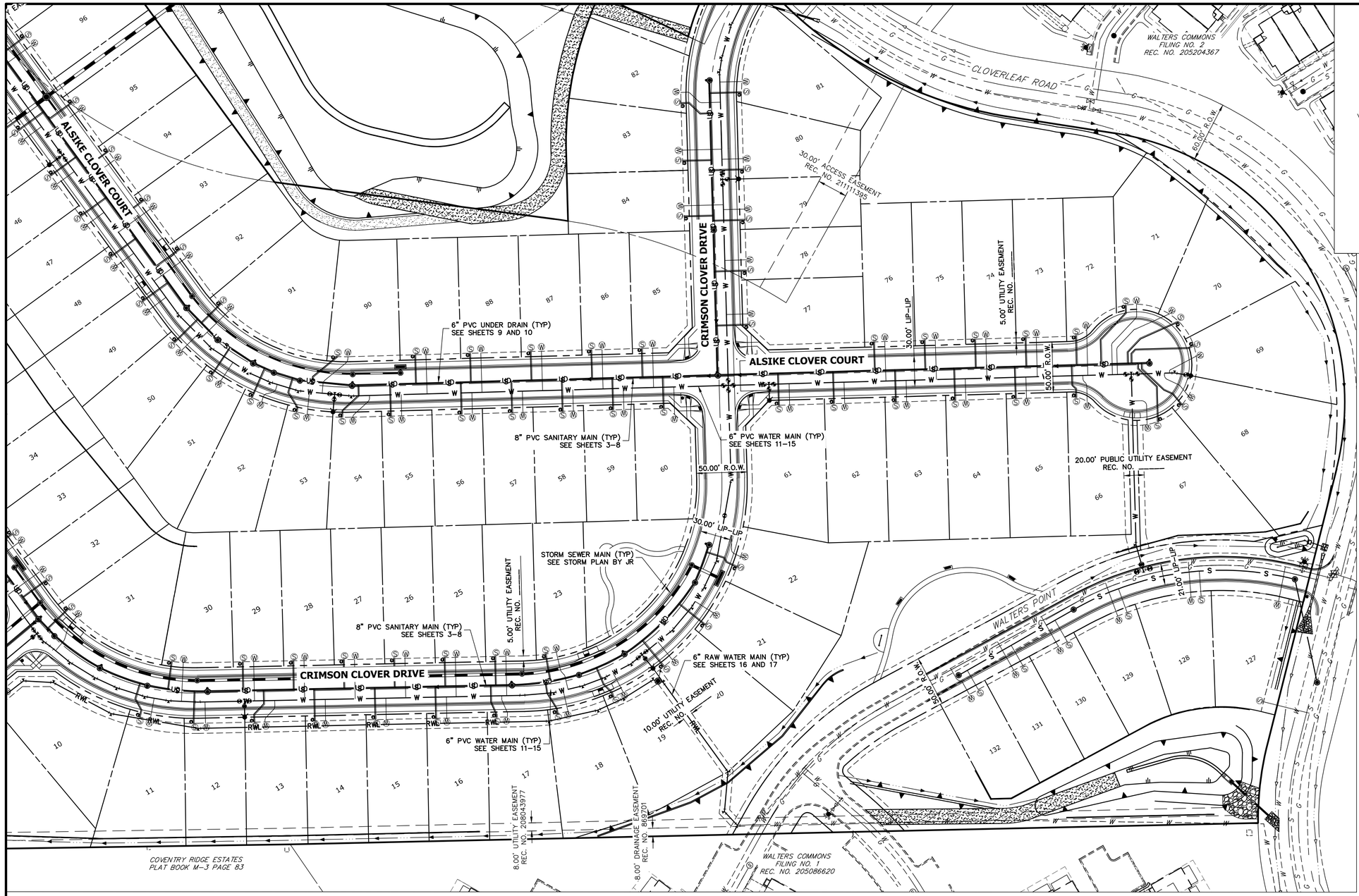
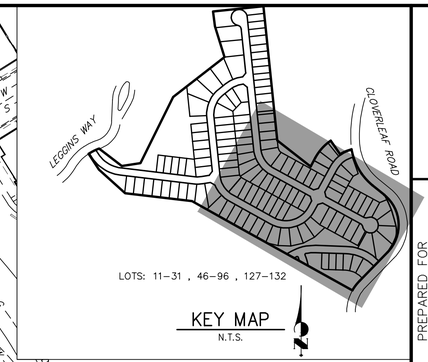


LOTS: 11–31 , 46–95 , 127–132



NOTES

1. ALL SANITARY SERVICE LINES SHALL BE 4" PVC AND INSTALLED PER DETAIL G–8.
2. ALL POTABLE WATER SERVICE LINES SHALL BE ¾" TYPE K COPPER AND INSTALLED PER DETAIL G–6.
3. A MINIMUM OF 10' SEPARATION BETWEEN WATER AND SANITARY LINES IS REQUIRED. SERVICE SHALL BE AT LEAST 10' AWAY FROM SIDE LOT LINES, PER DETAIL G–5.
4. PROVIDE METAL T–POST AT CURB STOP WHEN CONSTRUCTION OF WATER SERVICE IS COMPLETE.
5. PROVIDE METAL T–POST AT CLEAN OUT WHEN CONSTRUCTION OF SANITARY SERVICE IS COMPLETE.
6. SERVICES STUB OUTS SHALL EXTENDED TO THE INSIDE EDGE OF FRONT UTILITY EASEMENT PER DETAILS G–8 AND G–6.
7. ALL UNDER DRAIN SERVICES SHALL BE INSTALLED PER COLORADO SPRINGS UTILITY FIGURE 13–3. SEE SHEET 10.
8. SEE SHEET 18 FOR TYPICAL UTILITY SERVICE LAYOUT.

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

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

WOODMOOR WATER AND SANITATION DISTRICT NO. 1
APPROVED FOR CONSTRUCTION

DATE: BY:

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No.	REVISION	BY	DATE

H–SCALE	1"=50'	DESIGNED BY	APL
V–SCALE	N/A	DRAWN BY	APL
DATE	05/10/21	CHECKED BY	

CLOVERLEAF FILING 2

UTILITY SERVICE PLAN

SHEET 19 OF 21

JOB NO. 25158.01

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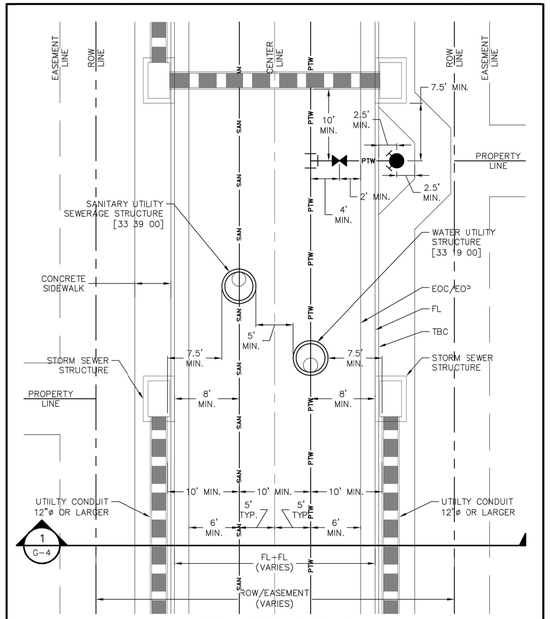
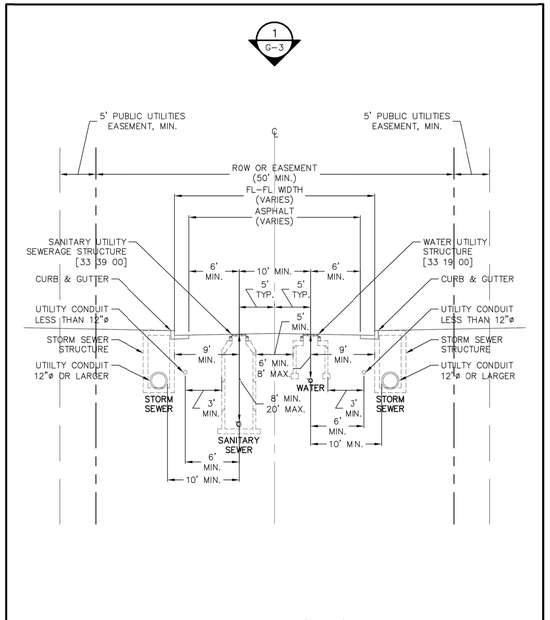


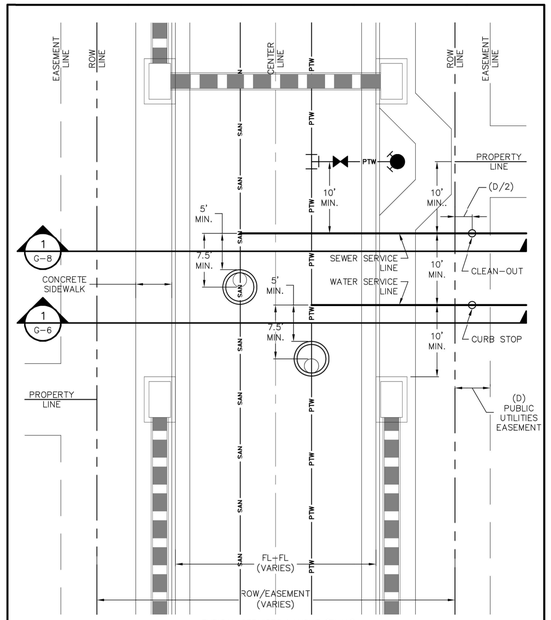
1 TYPICAL UTILITIES LAYOUT (PLAN)
1"=10'

WOODMOOR WATER & SANITATION DISTRICT NO. 1	TYPICAL UTILITIES LAYOUT (PLAN)	G-3
	GENERAL	–
	THIS CONSTRUCTION DETAIL SHOWS GENERAL CONFORMANCE TO SYSTEM SPECIFICATIONS AND MAY NEED TO BE ADJUSTED FOR SPECIFIC APPLICATIONS.	MAY 13, 2014



1 TYPICAL UTILITIES LAYOUT (SECTION)
1"=10'

WOODMOOR WATER & SANITATION DISTRICT NO. 1	TYPICAL UTILITIES LAYOUT (SECTION)	G-4
	GENERAL	–
	THIS CONSTRUCTION DETAIL SHOWS GENERAL CONFORMANCE TO SYSTEM SPECIFICATIONS AND MAY NEED TO BE ADJUSTED FOR SPECIFIC APPLICATIONS.	MAY 13, 2014

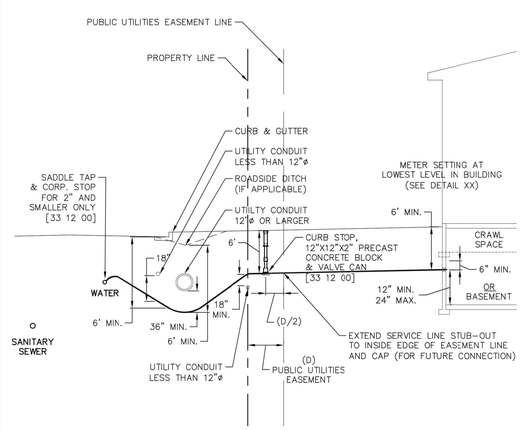


1 TYPICAL SERVICES LAYOUT (PLAN)
1"=10'

WOODMOOR WATER & SANITATION DISTRICT NO. 1	TYPICAL SERVICES LAYOUT (PLAN)	G-5
	GENERAL	–
	THIS CONSTRUCTION DETAIL SHOWS GENERAL CONFORMANCE TO SYSTEM SPECIFICATIONS AND MAY NEED TO BE ADJUSTED FOR SPECIFIC APPLICATIONS.	MAY 13, 2014

REFER TO WATER & SEWER SERVICE LINE EQUIPMENT SPECIFICATIONS FOR SUPPLEMENTAL INFORMATION (APP C OF THE SYSTEM SPECIFICATIONS)

GENERAL NOTES:
– PROVIDE METAL T–POST AT CURB STOP WHEN CONSTRUCTION OF STUB–OUT TO LOT IS COMPLETE. T–POST MAY BE REMOVED AFTER CONNECTION TO SERVICE STUB.



1 WATER SERVICE (3/4" TO 2")
1"=10'

WOODMOOR WATER & SANITATION DISTRICT NO. 1	WATER SERVICE (3/4" TO 2")	G-6
	GENERAL	–
	THIS CONSTRUCTION DETAIL SHOWS GENERAL CONFORMANCE TO SYSTEM SPECIFICATIONS AND MAY NEED TO BE ADJUSTED FOR SPECIFIC APPLICATIONS.	MAY 13, 2014

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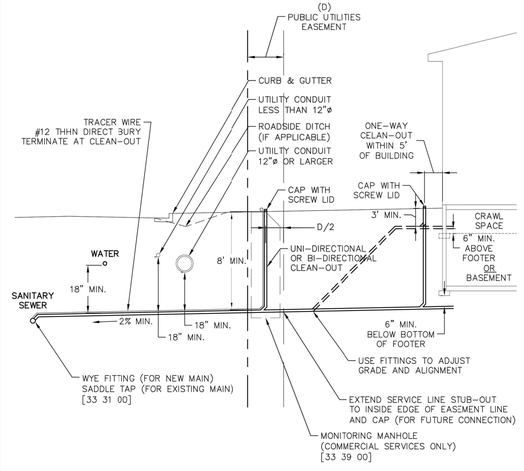
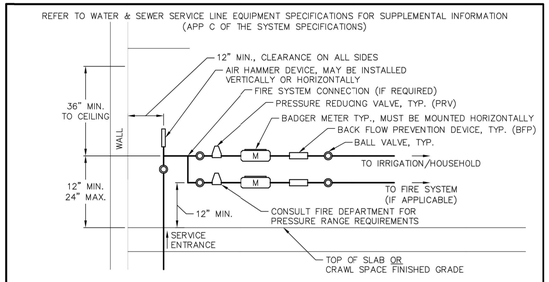
GENERAL NOTES:
– PROVIDE METAL T–POST AT CURB STOP WHEN CONSTRUCTION OF STUB–OUT TO LOT IS COMPLETE. T–POST MAY BE REMOVED AFTER CONNECTION TO SERVICE STUB.
– INTERMEDIATE CLEAN–OUT ASSEMBLIES REQUIRED AT 100' INTERVALS (FOR UNI–DIRECTIONAL) OR 200' INTERVALS (FOR BI–DIRECTIONAL) BETWEEN PROPERTY LINE CLEAN–OUT AND BUILDING CLEAN–OUT..



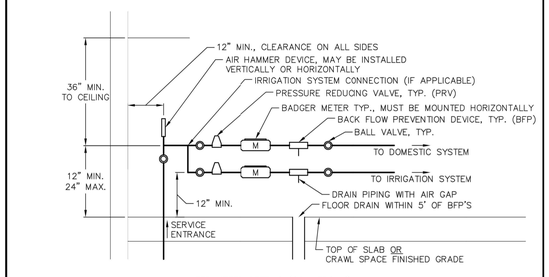
1 TYPICAL SEWER SERVICE (SECTION)
1"=10'

WOODMOOR WATER & SANITATION DISTRICT NO. 1	TYPICAL SEWER SERVICE (SECTION)	G-8
	GENERAL	–
	THIS CONSTRUCTION DETAIL SHOWS GENERAL CONFORMANCE TO SYSTEM SPECIFICATIONS AND MAY NEED TO BE ADJUSTED FOR SPECIFIC APPLICATIONS.	MAY 13, 2014

REFER TO WATER & SEWER SERVICE LINE EQUIPMENT SPECIFICATIONS FOR SUPPLEMENTAL INFORMATION (APP C OF THE SYSTEM SPECIFICATIONS)

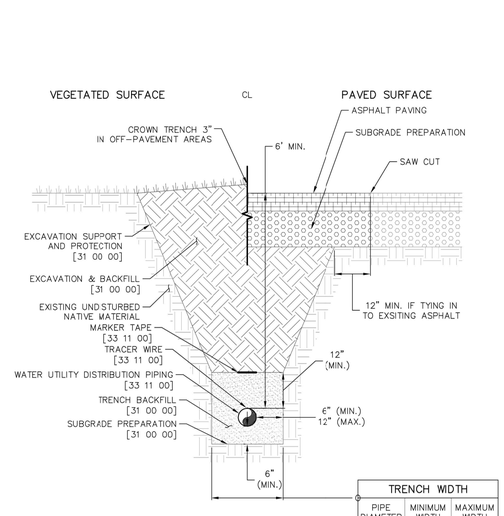


1 WATER METER SETTING (RESIDENTIAL)
NOT TO SCALE



1 WATER METER SETTING (COMMERCIAL)
NOT TO SCALE

WOODMOOR WATER & SANITATION DISTRICT NO. 1	WATER METER SETTING DETAIL	G-9
	GENERAL	–
	THIS CONSTRUCTION DETAIL SHOWS GENERAL CONFORMANCE TO SYSTEM SPECIFICATIONS AND MAY NEED TO BE ADJUSTED FOR SPECIFIC APPLICATIONS.	MAY 13, 2014



TRENCH WIDTH		
PIPE DIAMETER	MINIMUM WIDTH	MAXIMUM WIDTH
4"	1'–4"	2'–4"
6"	1'–6"	2'–6"
8"	1'–8"	2'–8"
10"	1'–10"	2'–10"
12"	2'–0"	3'–0"
14"	2'–2"	3'–2"

1 TYPICAL WATER TRENCH (SECTION)
1"=2'

WOODMOOR WATER & SANITATION DISTRICT NO. 1	TYPICAL WATER TRENCH	W-1
	WATER UTILITY DISTRIBUTION PIPING	33 11 00
	THIS CONSTRUCTION DETAIL SHOWS GENERAL CONFORMANCE TO SYSTEM SPECIFICATIONS AND MAY NEED TO BE ADJUSTED FOR SPECIFIC APPLICATIONS.	MAY 13, 2014

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

No.	REVISION	BY	DATE

H–SCALE	N/A
V–SCALE	N/A
DATE	05/10/21
DESIGNED BY	APL
DRAWN BY	APL
CHECKED BY	

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DETAIL SHEETS

SHEET 20 OF 21

JOB NO. 25158.01

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

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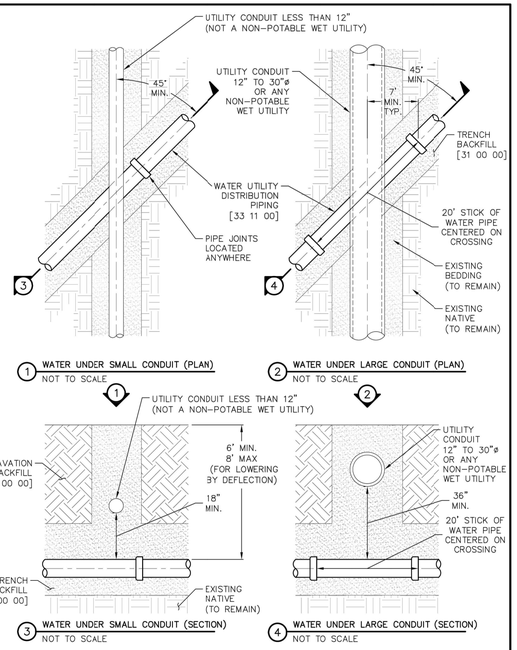
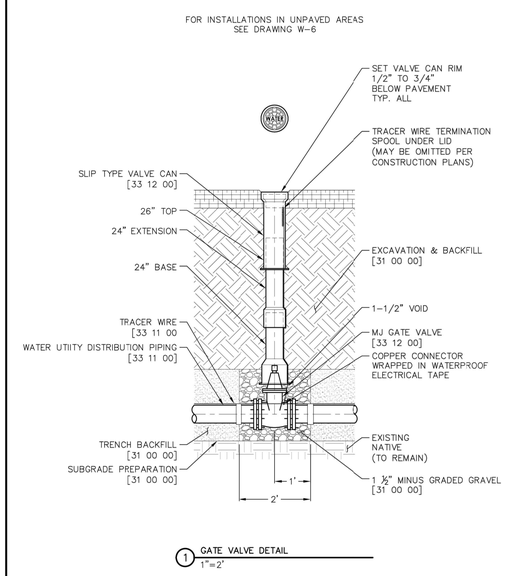
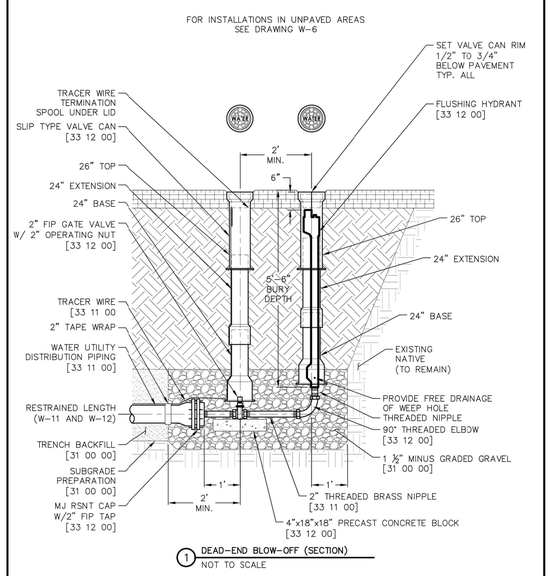


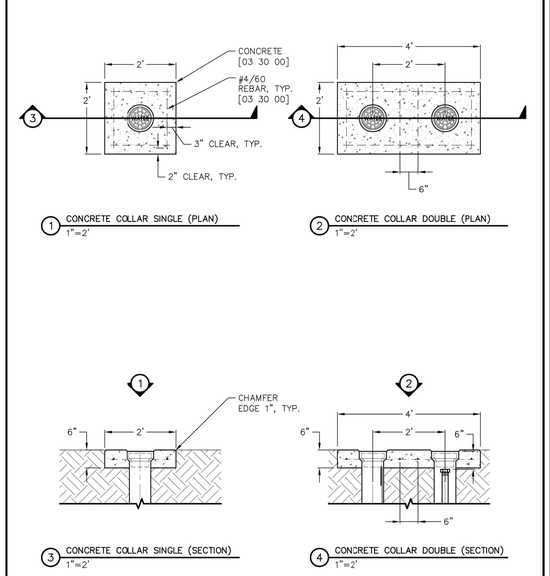
WOODMOOR WATER & SANITATION DISTRICT NO. 1	WATER CROSSING UNDER UTILITIES	W-3
	WATER UTILITY DISTRIBUTION PIPING	33 11 00
	THIS CONSTRUCTION DETAIL SHOWS GENERAL CONFORMANCE TO SYSTEM SPECIFICATIONS AND MAY NEED TO BE ADJUSTED FOR SPECIFIC APPLICATIONS.	MAY 13, 2014



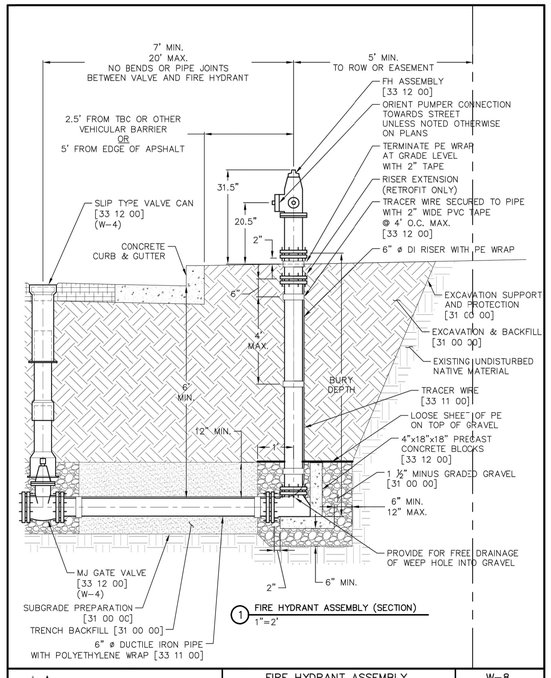
WOODMOOR WATER & SANITATION DISTRICT NO. 1	GATE VALVE	W-4
	WATER UTILITY DISTRIBUTION EQUIPMENT	33 12 00
	THIS CONSTRUCTION DETAIL SHOWS GENERAL CONFORMANCE TO SYSTEM SPECIFICATIONS AND MAY NEED TO BE ADJUSTED FOR SPECIFIC APPLICATIONS.	MAY 13, 2014



WOODMOOR WATER & SANITATION DISTRICT NO. 1	DEAD-END BLOW-OFF ASSEMBLY	W-5
	WATER UTILITY DISTRIBUTION EQUIPMENT	33 12 00
	THIS CONSTRUCTION DETAIL SHOWS GENERAL CONFORMANCE TO SYSTEM SPECIFICATIONS AND MAY NEED TO BE ADJUSTED FOR SPECIFIC APPLICATIONS.	MAY 13, 2014



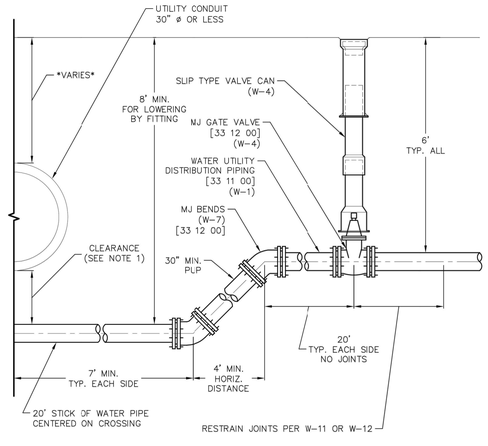
WOODMOOR WATER & SANITATION DISTRICT NO. 1	VALVE CANS IN UNPAVED AREAS	W-6
	WATER UTILITY DISTRIBUTION EQUIPMENT	33 12 00
	THIS CONSTRUCTION DETAIL SHOWS GENERAL CONFORMANCE TO SYSTEM SPECIFICATIONS AND MAY NEED TO BE ADJUSTED FOR SPECIFIC APPLICATIONS.	MAY 13, 2014



WOODMOOR WATER & SANITATION DISTRICT NO. 1	FIRE HYDRANT ASSEMBLY	W-8
	WATER UTILITY DISTRIBUTION EQUIPMENT	33 12 00
	THIS CONSTRUCTION DETAIL SHOWS GENERAL CONFORMANCE TO SYSTEM SPECIFICATIONS AND MAY NEED TO BE ADJUSTED FOR SPECIFIC APPLICATIONS.	MAY 13, 2014

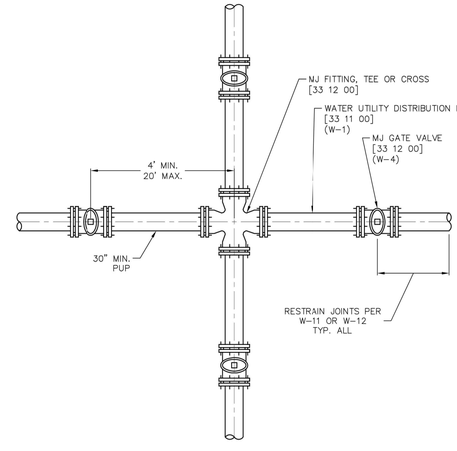
GENERAL NOTES:
– EARTHWORK, TRACER WIRE, AND PIPE WRAP OMMITTED FOR CLARITY.

DETAIL NOTES:
1. 18" MIN. IF CROSSING UNDER CONDUIT LESS THAN 12"ø. 36" MIN. IF CROSSING UNDER CONDUIT 12" TO 30" DIAMETER.



WOODMOOR WATER & SANITATION DISTRICT NO. 1	WATER LOWERING BY FITTING	W-9
	WATER UTILITY DISTRIBUTION EQUIPMENT	33 12 00
	THIS CONSTRUCTION DETAIL SHOWS GENERAL CONFORMANCE TO SYSTEM SPECIFICATIONS AND MAY NEED TO BE ADJUSTED FOR SPECIFIC APPLICATIONS.	MAY 13, 2014

GENERAL NOTES:
– EARTHWORK, TRACER WIRE, AND PIPE WRAP OMMITTED FOR CLARITY.



WOODMOOR WATER & SANITATION DISTRICT NO. 1	WATER MAIN JJNCTION	W-10
	WATER UTILITY DISTRIBUTION EQUIPMENT	33 12 00
	THIS CONSTRUCTION DETAIL SHOWS GENERAL CONFORMANCE TO SYSTEM SPECIFICATIONS AND MAY NEED TO BE ADJUSTED FOR SPECIFIC APPLICATIONS.	MAY 13, 2014

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DETAIL SHEETS

SHEET 21 OF 21

JOB NO. 25158.01

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TEE'S			
NOMINAL RUN DIAMETER	NOMINAL BRANCH DIAMETER	RUN	BRANCH
[IN]	[IN]	[FT]	[FT]
4"	4"	10	F.O.
4"	6"	10	8
4"	8"	10	42
6"	4"	10	F.O.
6"	6"	10	F.O.
6"	8"	10	21
8"	4"	10	F.O.
8"	6"	10	F.O.
8"	8"	10	2

CALCULATION METHOD & ASSUMPTIONS
EBAA IRON RESTRAINED LENGTH CALCULATOR (VERSION 5.4)

PIPE MATERIAL: PVC
SOIL TYPE: CH, GRAN. FILL
SAFETY FACTOR: 1.5:1
TRENCH TYPE: 5
DEPTH OF BURY: 6 FEET
TEST PRESSURE: 200 PSI

REDUCERS		
NOMINAL LARGE DIAMETER	NOMINAL SMALL DIAMETER	LENGTH
[IN]	[IN]	[FT]
6"	4"	32
8"	4"	59
8"	6"	35

DEAD-ENDS AND VALVES	
NOMINAL PIPE DIAMETER	LENGTH
[IN]	[FT]
4"	44
6"	62
8"	82

HORIZONTAL AND VERTICAL BENDS										
NOMINAL PIPE DIAMETER	HORIZONTAL BENDS				VERTICAL BENDS (OFFSETS)					
					45°		22.5°		12.5°	
	90°	45°	22.5°	11.25°	UPPER	LOWER	UPPER	LOWER	UPPER	LOWER
[IN]	[FT]	[FT]	[FT]	[FT]	[FT]	[FT]	[FT]	[FT]	[FT]	[FT]
4"	90° BENDS NOT ALLOWED	5	3	2	19	5	9	3	5	2
6"		7	4	2	26	7	13	3	7	2
8"		10	5	3	34	8	17	4	9	2

NOTES:
1. RESTRAINED PIPE LENGTH SHALL BE ACHIEVED WITH MECHANICAL JOINT RESTRAINTS OR BELL RESTRAINTS. DO NOT USE THREADED TIE RODS OR CONCRETE KICKER BLOCKS.

2. FOR VALVES, BENDS, AND TEE RUNS THE LENGTHS OF TIED PIPES ARE MEASURED EACH WAY.

3. FOR DEAD-ENDS, TEE BRANCHES, AND REDUCERS THE LENGTHS OF TIED PIPE ARE MEASURED ONE WAY IN THE OPPOSITE DIRECTION OF THE APPLIED THRUST.

4. F.O. = MECHANICAL JOINT RESTRAINT AT FITTING ONLY.

WOODMOOR WATER & SANITATION DISTRICT NO. 1

LENGTH OF RESTRAINED PIPE (PVC)	W-11
WATER UTILITY DISTRIBUTION EQUIPMENT	33 12 00
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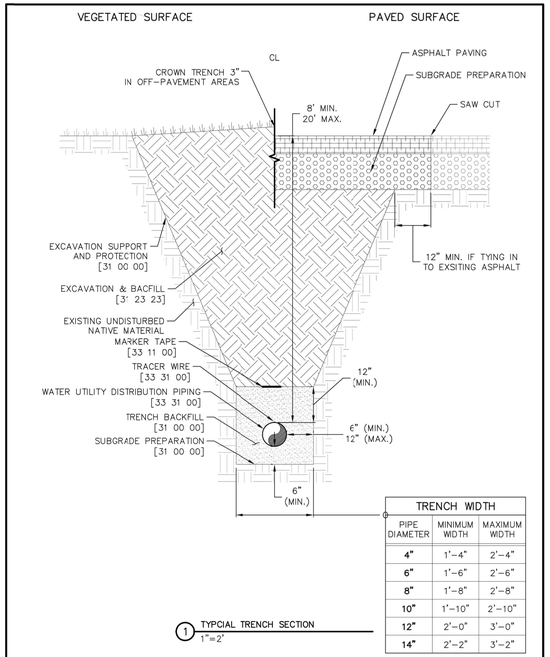

1 TYPICAL TRENCH SECTION
1" = 2'

TRENCH WIDTH		
PIPE DIAMETER	MINIMUM WIDTH	MAXIMUM WIDTH
4"	1'-4"	2'-4"
6"	1'-6"	2'-6"
8"	1'-8"	2'-8"
10"	1'-10"	2'-10"
12"	2'-0"	3'-0"
14"	2'-2"	3'-2"

WOODMOOR WATER & SANITATION DISTRICT NO. 1

TYPICAL SEWER TRENCH SECTION	S-1
SANITARY UTILITY SEWERAGE PIPING	33 31 00
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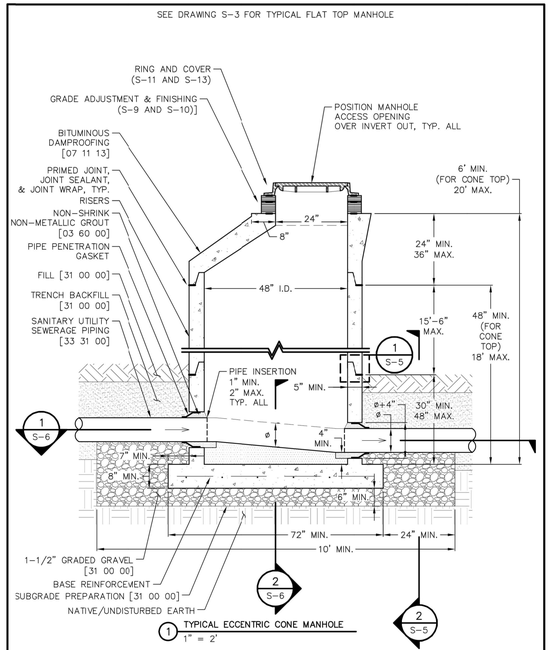
SEE DRAWING S-3 FOR TYPICAL FLAT TOP MANHOLE

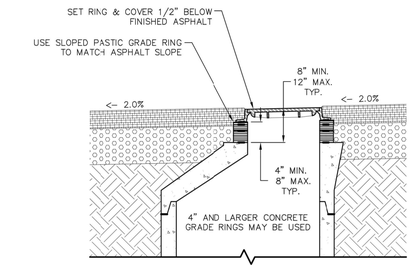


1 TYPICAL ECCENTRIC CONE MANHOLE
1" = 2'

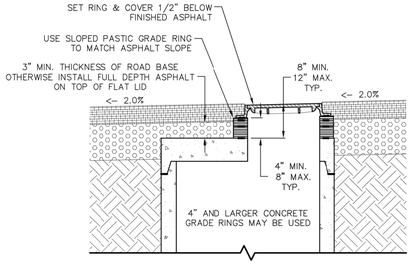
WOODMOOR WATER & SANITATION DISTRICT NO. 1

TYPICAL ECCENTRIC CONE MANHOLE	S-2
SANITARY UTILITY SEWERAGE STRUCTURES	33 39 00
THIS CONSTRUCTION DETAIL SHOWS GENERAL CONFORMANCE TO SYSTEM SPECIFICATIONS AND MAY NEED TO BE ADJUSTED FOR SPECIFIC APPLICATIONS.	MAY 13, 2014

SEE DRAWING S-10 FOR FINISHING IN NON-PAVED SURFACES



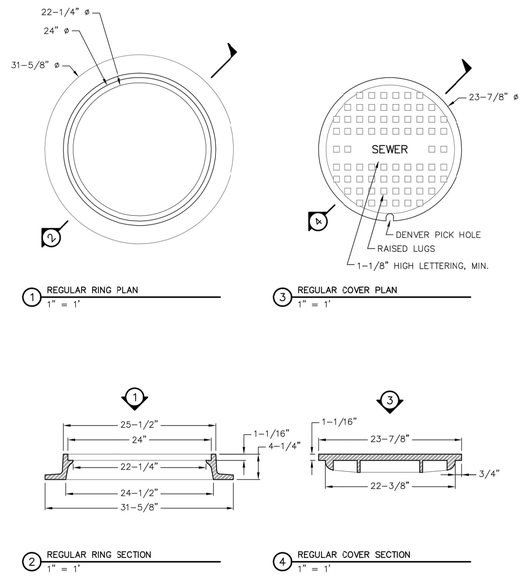
1 CONE TOP MANHOLE IN PAVEMENT
1" = 2'



2 FLAT TOP MANHOLE IN PAVEMENT
1" = 2'

WOODMOOR WATER & SANITATION DISTRICT NO. 1

MANHOLES IN PAVED AREAS	S-9
SANITARY UTILITY SEWERAGE STRUCTURES	33 39 00
THIS CONSTRUCTION DETAIL SHOWS GENERAL CONFORMANCE TO SYSTEM SPECIFICATIONS AND MAY NEED TO BE ADJUSTED FOR SPECIFIC APPLICATIONS.	MAY 13, 2014



1 REGULAR RING PLAN
1" = 1'

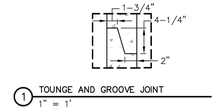
3 REGULAR COVER PLAN
1" = 1'

2 REGULAR RING SECTION
1" = 1'

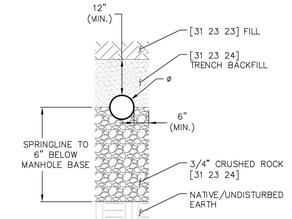
4 REGULAR COVER SECTION
1" = 1'

WOODMOOR WATER & SANITATION DISTRICT NO. 1

STANDARD SEWER RING & COVER	S-11
SANITARY UTILITY SEWERAGE STRUCTURES	33 39 00
THIS CONSTRUCTION DETAIL SHOWS GENERAL CONFORMANCE TO SYSTEM SPECIFICATIONS AND MAY NEED TO BE ADJUSTED FOR SPECIFIC APPLICATIONS.	MAY 13, 2014



1 TOUNGE AND GROOVE JOINT
1" = 1'



2 PIPE BEDDING AT CONNECTION TO MANHOLE
1" = 2'

WOODMOOR WATER & SANITATION DISTRICT NO. 1

MANHOLE DETAILS	S-5
SANITARY UTILITY SEWERAGE STRUCTURES	33 39 00
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DETAIL SHEETS

SHEET 22 OF 21

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