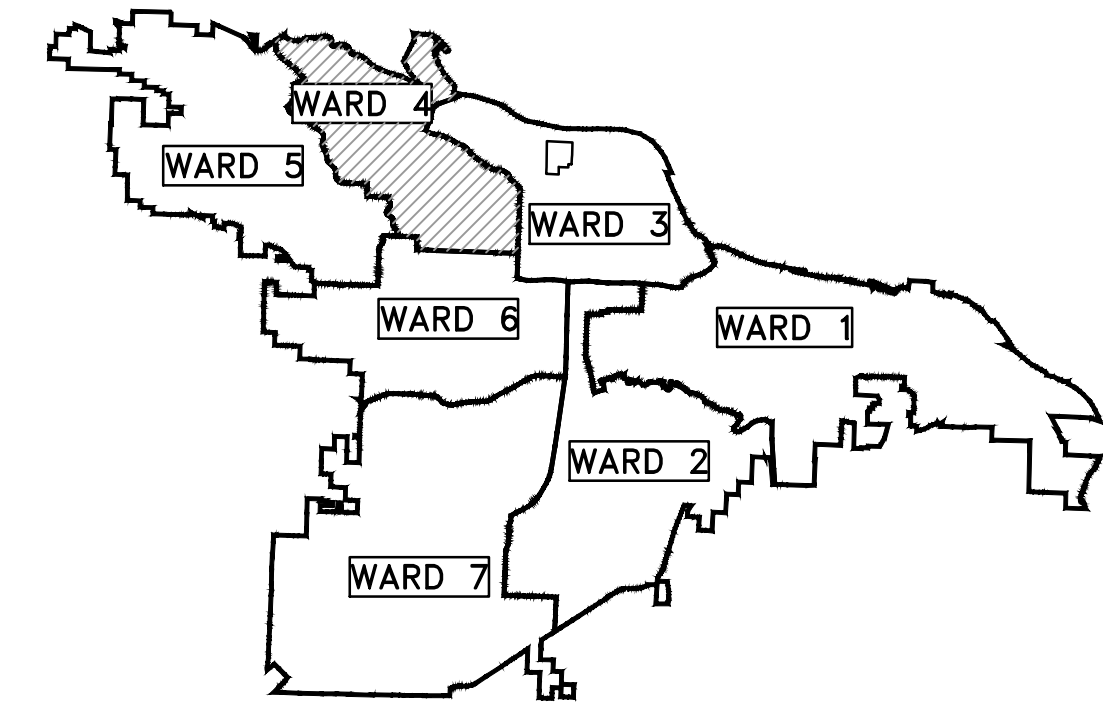
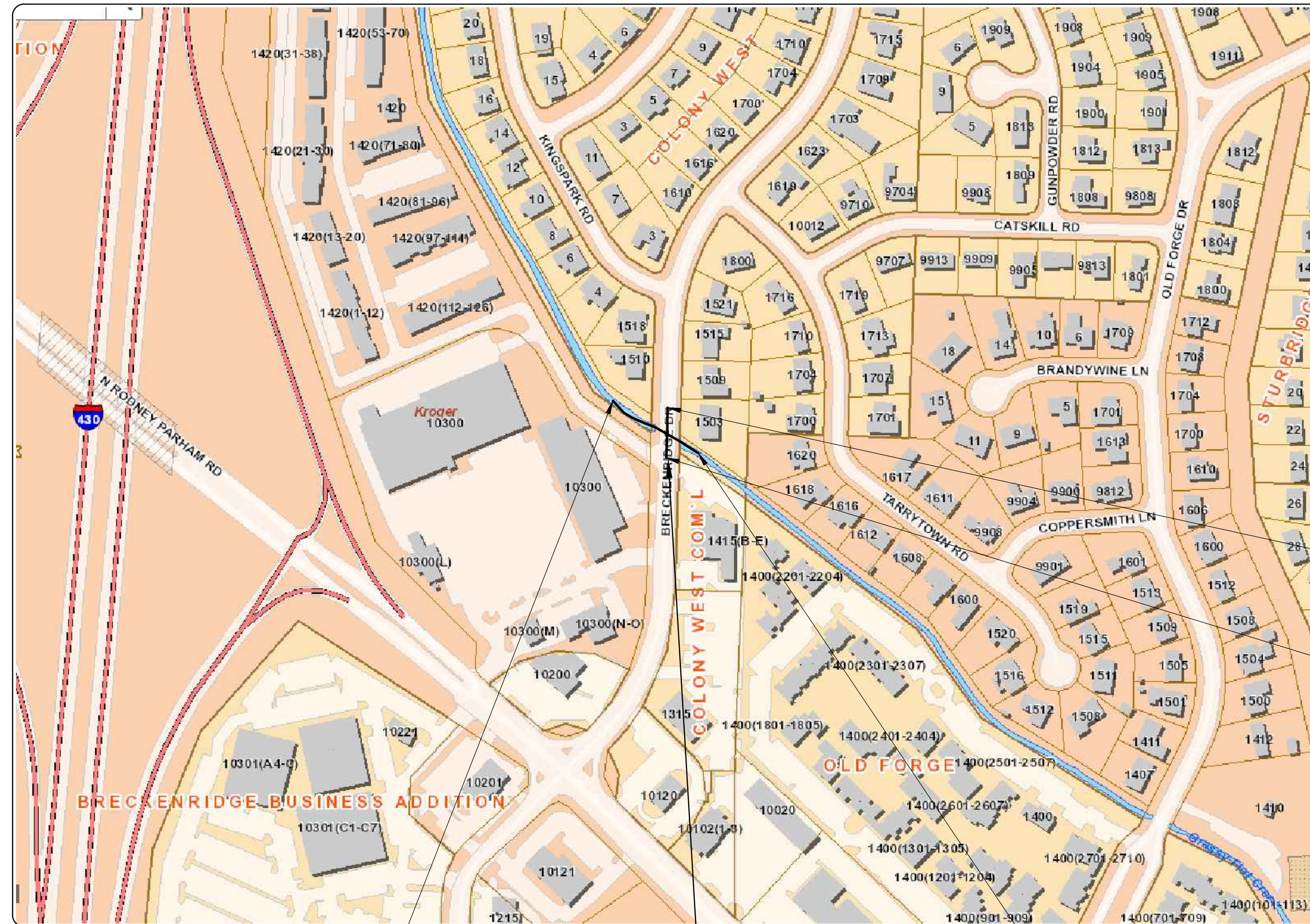


CLR PROJECT #04-17-DR-207 BRECKENRIDGE DRIVE CULVERT REPLACEMENT AT GRASSY FLAT CREEK



PROJECT LOCATION - WARD 4



DRAINAGE CHANNEL
PROJECT START
STATION 0+43
34.7684, -92.3868

**PROJECT
LOCATION**

DRAINAGE CHANNEL
PROJECT END
STATION 2+56
34.7681, -92.3862

SHEET NO.	TITLE
C1	COVER SHEET
C2	GENERAL NOTES AND QUANTITIES
C3	ROAD SECTIONS (1)
C4	ROAD SECTIONS (2)
C5	CULVERT SECTIONS (1)
C6	CULVERT SECTIONS (2)
C7	CULVERT SECTIONS (3)
C8	CULVERT SECTIONS (4)
C9	PLAN SHEET (1)
C10	PLAN SHEET (2)
C11	PLAN AND PROFILE SHEET - DRAINAGE CHANNEL (1)
C12	PLAN AND PROFILE SHEET - DRAINAGE CHANNEL (2)
C13	PLAN AND PROFILE SHEET - DRAINAGE CHANNEL (3)
C14	PLAN AND PROFILE SHEET - ROAD
C15	TRAFFIC CONTROL PLAN
C16	EROSION CONTROL PLAN

90% SUBMITTAL

ROAD
PROJECT START
STATION 10+39
34.7683, -92.3865

ROAD
PROJECT END
STATION 10+75
34.7682, -92.3865



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



2019-2021 BOND PROGRAM

DEPARTMENT OF PUBLIC WORKS
CIVIL ENGINEERING
701 WEST MARKHAM STREET
LITTLE ROCK, ARKANSAS 72201



3512 S. SHACKLEFORD RD.
LITTLE ROCK, AR 72205

REVISIONS DATE

CITY OF LITTLE ROCK, ARKANSAS
BRECKENRIDGE DRIVE DRAINAGE IMPROVEMENTS

COVER SHEET

DEPARTMENT OF PUBLIC WORKS
CIVIL ENGINEERING
701 W. MARKHAM
LITTLE ROCK, ARKANSAS 72201



SEAL

DRAWN BY
JDM
DESIGNED
BJW
CHECKED
JTM
DATE
6-25-2019
SCALE
N.T.S.

PROJECT NO.
CLR #04-17-DR-207
SHEET NO.

C1

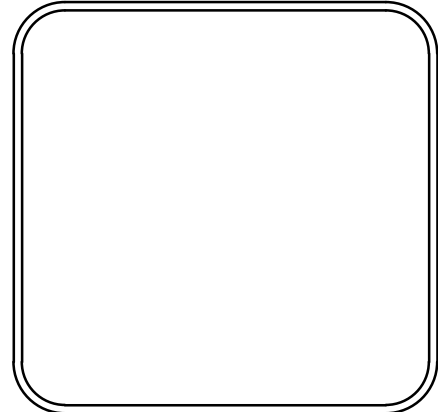
CLR #04-17-DR-207			
BRECKENRIDGE DRIVE DRAINAGE IMPROVEMENTS			
		10-Dec-18	
ITEM #	ITEM DESCRIPTION	UNIT	QUANTITY
2.01	Site Preparation (Incl. Mobilization)	LS	1
3.01	Unclassified Excavation	CY	320
4.01	Aggregate Base Course (Class 7)	TON	150
6.01	Asphalt Surface Course	TON	15
6.02	Asphalt Binder Course	TON	80
8.03	Concrete Curb and Gutter (Class 3)	LF	75
9.01	Sidewalk, 4"	SF	375
10.04	Curb Inlet - 4' Box	EA	1
10.05	Curb Inlet - 5' Box	EA	1
11.01	Concrete Wing Walls and Toe Walls	CY	6
11.10	Reinforced Concrete	CY	8.5
14.01	Solid Sodding (Bermuda)	SY	60
16.01	Maintenance of Traffic	LS	1
18.07	Handrail	LF	35
18.08	1' Thick Rip Rap (Grouted)	CY	100
19.01	Final Clean-Up	LS	1
24.05	Rock Dam (RD)	CY	6
26.01	Trench or Excavation Safety Systems	LS	1
45.00	16' x 4' Precast Reinforced Concrete Box Culvert	LF	54
625.01	Geotextile Fabric (Type 1)	SY	290

EXISTING		PROPOSED
IRON ROD	○ IR	PROPOSED CONTOUR
PK NAIL	○ PK	PROPOSED SPOT ELEVATION
R.R. SPIKE	○ RR(Sp)	PROPOSED SPOT CURB ELEVATION
CONC. MONUMENT	□ CM	STORM SEWER – PIPE
WATER VALVE	⊗ WV	STORM SEWER – MITERED END SECTION
WATER METER	□ WM	STORM SEWER – GRATE INLET
FIRE HYDRANT	⊕ FH	STORM SEWER – JUNCTION BOX
GAS METER	⊗ GM	STORM SEWER – FLARED END SECTION
GAS VALVE	⊗ GV	STORM SEWER – HEADWALL
CLEAN-OUT	○ CO	STORM SEWER – SINGLE WING
GUARD POST (BOLLARD)	• GP	STORM SEWER – DOUBLE WING
SIGN POST		STORM SEWER – AREA INLET
BENCHMARK		GRADE BREAK LINE
STORM SEWER MANHOLE	⊕	HIGH POINT
SANITARY SEWER MANHOLE	⊕	LOW POINT
TELEPHONE MANHOLE	⊕	CUT LINE
ELECTRIC MANHOLE	⊕	FILL LINE
TELEPHONE BOX	⊕	SANITARY SEWER PIPE
ELECTRIC BOX	⊕	SANITARY SEWER MANHOLE
CABLE BOX	⊕	PROPOSED CURB
UTILITY POLE	⊕	PROPOSED CONCRETE
GUY WIRE	⊕	CONSTRUCTION – ENTRANCE/EXIT
LIGHT POLE	⊕	CHECK DAM
POST OR POLE (TYPE AS NOTED)	⊕	DIVERSION BERM
MAILBOX	⊕	DOWNDRAIN STRUCTURE – TEMPORARY
DECIDUOUS TREE	⊕	ROCK DAM
EVERGREEN/CONIFEROUS TREE	⊕	SEDIMENT BARRIER – SILT FENCE
BUSH	⊕	SEDIMENT BARRIER – GRAVEL RING
PROPERTY LINE	⊕	SEDIMENT BARRIER – BLOCK & GRAVEL
SETBACK LINE	⊕	SEDIMENT BARRIER – BLOCK
EASEMENT LINE	⊕	TEMPORARY SEDIMENT BASIN
CURB	⊕	SILT FENCE – TYPE A
FENCE	⊕	SILT FENCE – TYPE B
OVERHEAD ELECTRIC	⊕	SILT FENCE – TYPE C
OVERHEAD TELEPHONE	⊕	STORM DRAIN OUTLET PROTECTION
OVERHEAD CABLE	⊕	SURFACE ROUGHENING
UNDERGROUND TELEPHONE	⊕	DISTURBED AREA STABILIZATION –TEMPORARY STABILIZATION
UNDERGROUND ELECTRIC	⊕	DISTURBED AREA STABILIZATION –TEMPORARY GRASSING
UNDERGROUND CABLE	⊕	DISTURBED AREA STABILIZATION –PERMANENT GRASSING
WATER LINE	⊕	MATting/BLANKETS
SEWER LINE	⊕	
GAS LINE	⊕	
STORM SEWER/CULVERT	⊕	
EDGE OF WOODS	⊕	
CONTOUR LINE	⊕	

REVISIONS	DATE

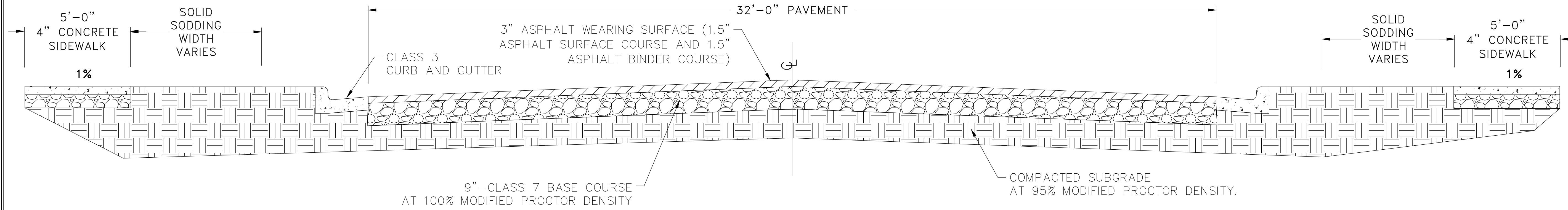
CITY OF LITTLE ROCK, ARKANSAS
BRECKENRIDGE DRIVE DRAINAGE IMPROVEMENTS
GENERAL NOTES AND QUANTITIES

DEPARTMENT OF PUBLIC WORKS
CIVIL ENGINEERING
701 W. MARKHAM
LITTLE ROCK, ARKANSAS 72201



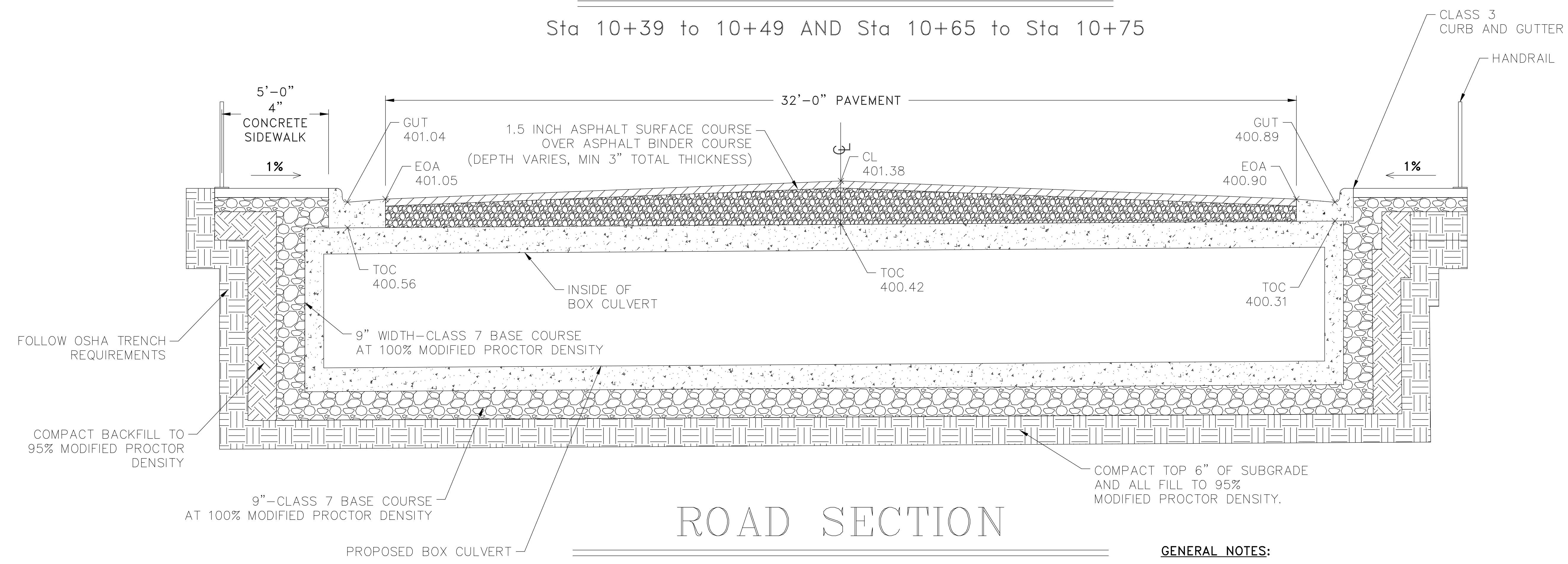
DRAWN BY
JDM
DESIGNED
BJW
CHECKED
JTM
DATE
6-25-2019
SCALE
N.T.S.
PROJECT NO.
CLR #04-17-DR-207
SHEET NO.
C2

REVISIONS	DATE



TYPICAL ROAD SECTION

Sta 10+39 to 10+49 AND Sta 10+65 to Sta 10+75



ROAD SECTION

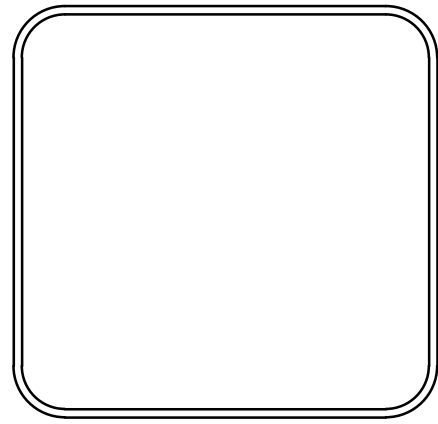
Sta 10+56.2

GENERAL NOTES:

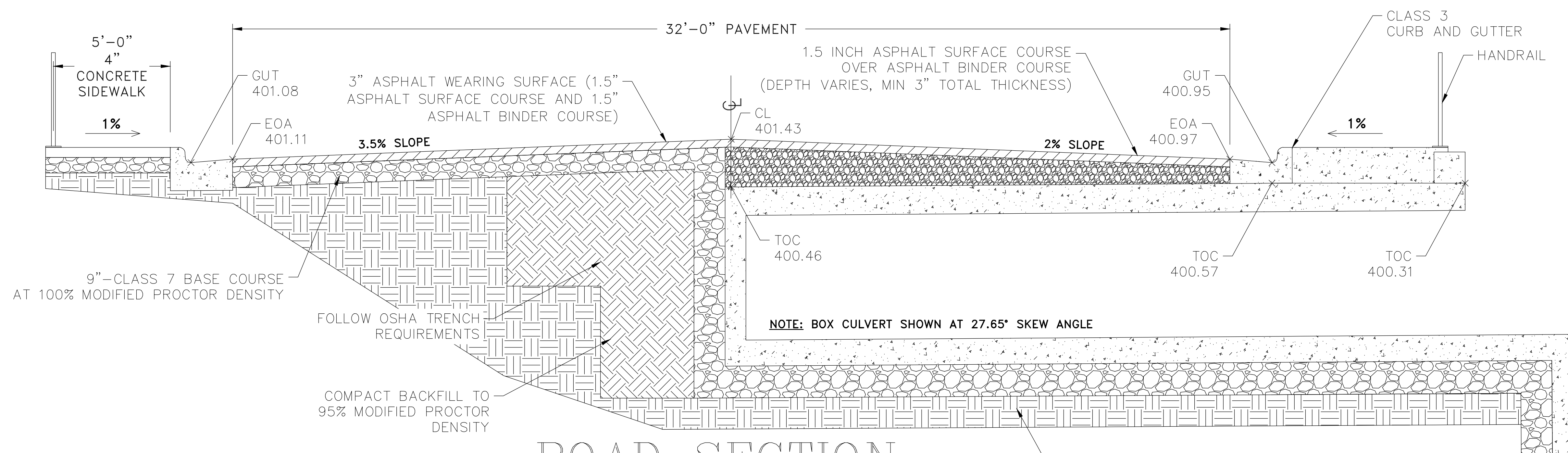
1. IN AREAS TO RECIEVE BITUMINOUS PAVING, CONCRETE DRIVEWAYS, OR CURB AND GUTTER, SUBGRADE SHALL BE COMPACTED TO A DENSITY NOT LESS THAN 95% OF MAXIMUM DENSITY OBTAINED AT OPTIMUM MOISTURE CONTENT. (AASHTO T-180)
2. FOR AREAS OF SUBGRADE PREPARATION TO RECIEVE CONCRETE SIDEWALKS, SUBGRADE SHALL BE COMPACTED TO A DENSITY NOT LESS THAN 90% OF MAXIMUM DENSITY. (AASHTO T-180)
3. CRUSHED STONE – DENSITY OF COMPACTED MATERIAL IN EACH COURSE SHALL BE COMPACTED TO A DENSITY NOT LESS THAN 100% OF MAXIMUM DENSITY. (AASHTO T-191)
4. BOX CULVERT: 16' SPAN X 4' RISE AT 26.75 SKEW H-20 LOADING FROM SCURLOCK INDUSTRIES OR APPROVED EQUIVALENT

CITY OF LITTLE ROCK, ARKANSAS
BRECKENRIDGE DRIVE DRAINAGE IMPROVEMENTS
ROAD SECTIONS (1)

DEPARTMENT OF PUBLIC WORKS
CIVIL ENGINEERING
701 W. MARKHAM
LITTLE ROCK, ARKANSAS 72201

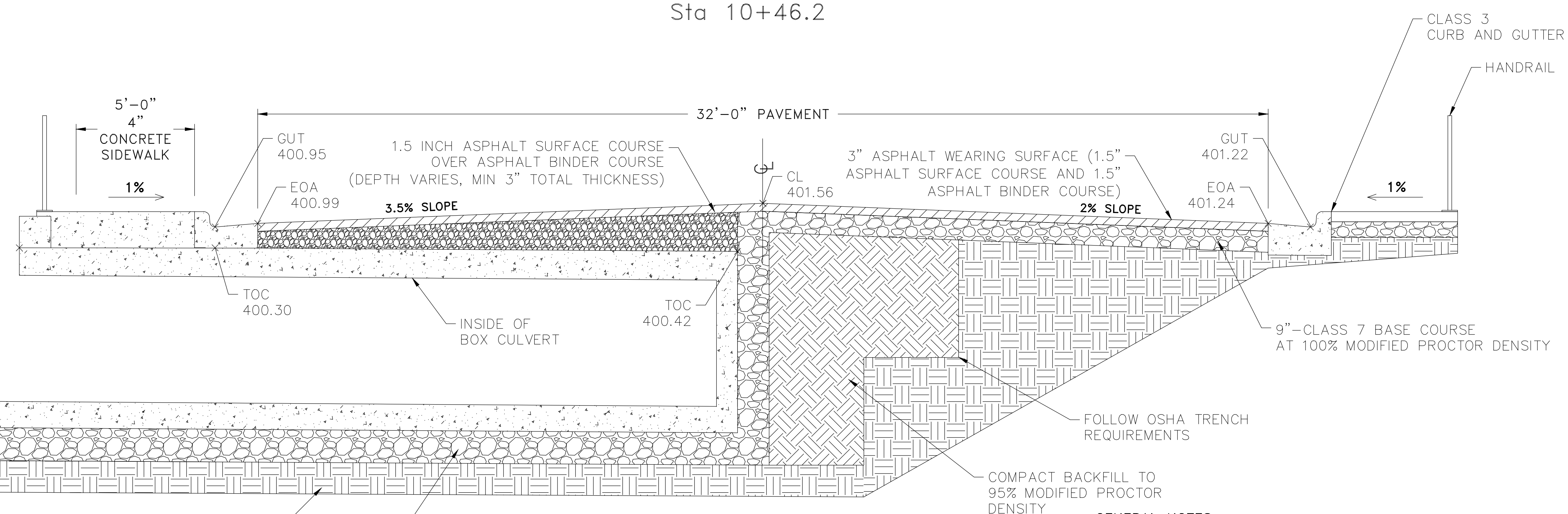


DRAWN BY JDM
DESIGNED BJW
CHECKED JTM
DATE 6-25-2019
SCALE NTS
PROJECT NO. CLR #04-17-DR-207
SHEET NO. C3



ROAD SECTION

Sta 10+46.2



ROAD SECTION

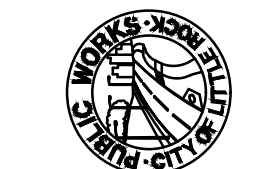
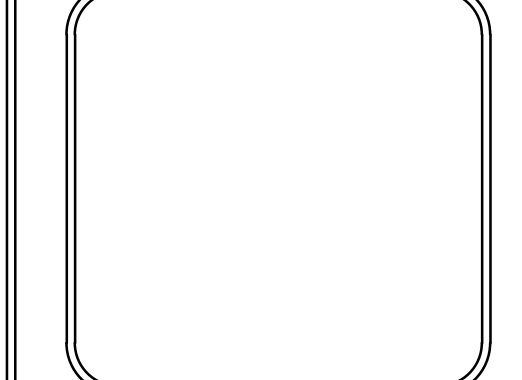
Sta 10+66.2

- GENERAL NOTES:**
1. IN AREAS TO RECIEVE BITUMINOUS PAVING, CONCRETE DRIVEWAYS, OR CURB AND GUTTER, SUBGRADE SHALL BE COMPACTED TO A DENSITY NOT LESS THAN 95% OF MAXIMUM DENSITY OBTAINED AT OPTIMUM MOISTURE CONTENT. (AASHTO T-180)
 2. FOR AREAS OF SUBGRADE PREPARATION TO RECIEVE CONCRETE SIDEWALKS, SUBGRADE SHALL BE COMPACTED TO A DENSITY NOT LESS THAN 90% OF MAXIMUM DENSITY. (AASHTO T-180)
 3. CRUSHED STONE – DENSITY OF COMPACTED MATERIAL IN EACH COURSE SHALL BE COMPACTED TO A DENSITY NOT LESS THAN 100% OF MAXIMUM DENSITY. (AASHTO T-191)
 4. BOX CULVERT: 16' SPAN X 4' RISE AT 26.75 SKEW H-20 LOADING FROM SCURLOCK INDUSTRIES OR APPROVED EQUIVALENT

REVISIONS	DATE

CITY OF LITTLE ROCK, ARKANSAS
 BRECKENRIDGE DRIVE DRAINAGE IMPROVEMENTS
 ROAD SECTIONS (2)

DEPARTMENT OF PUBLIC WORKS
 CIVIL ENGINEERING
 701 W. MARKHAM
 LITTLE ROCK, ARKANSAS 72201

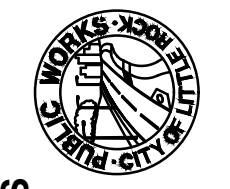
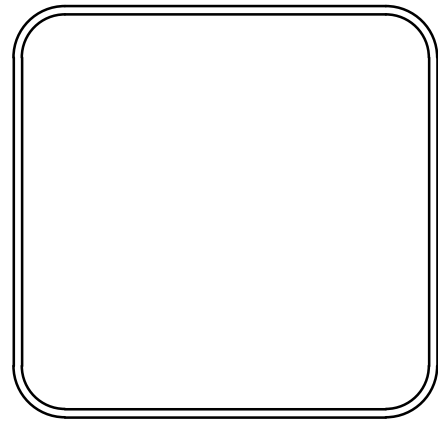



DRAWN BY JDM
DESIGNED BJW
CHECKED JTM
DATE 6-25-2019
SCALE NTS
PROJECT NO. CLR #04-17-DR-207
SHEET NO. C4

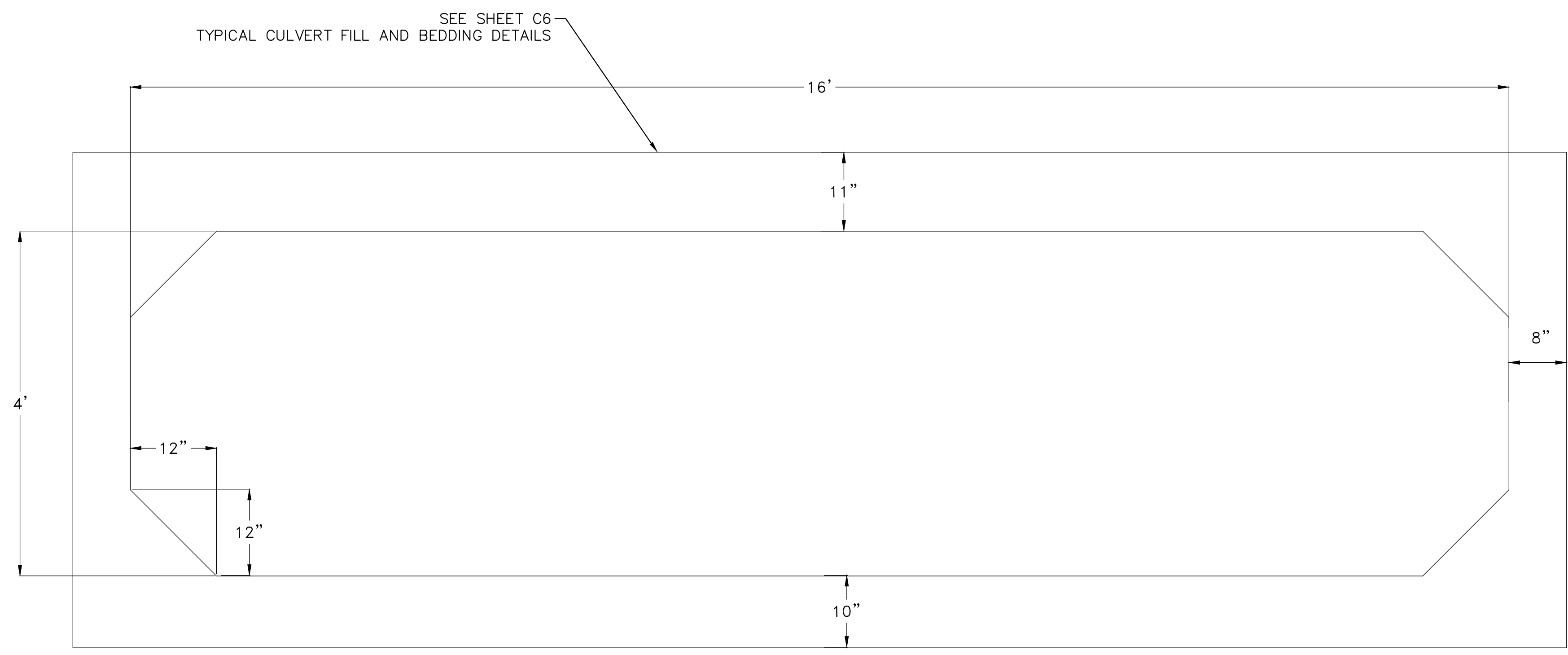
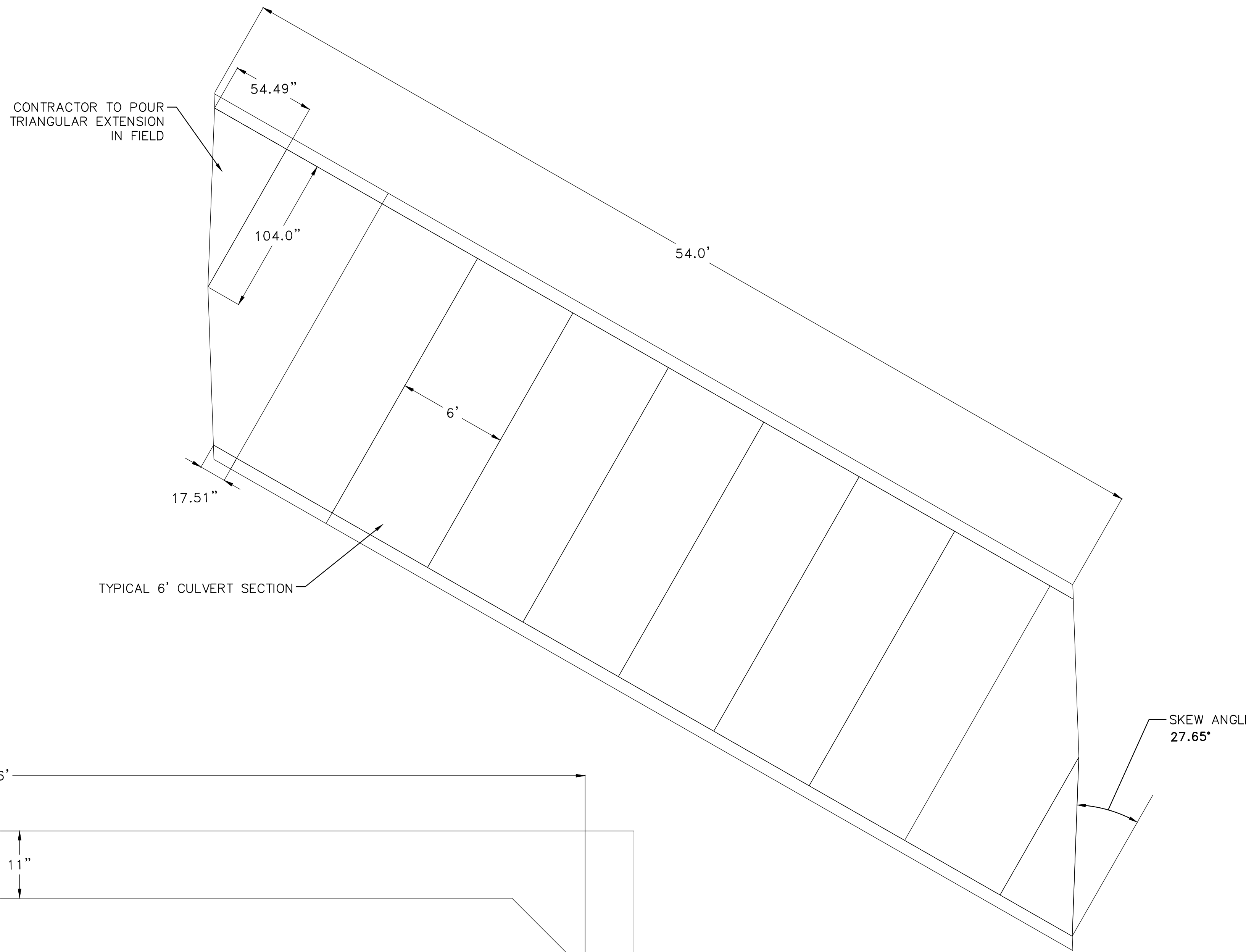
REVISIONS	DATE

CITY OF LITTLE ROCK, ARKANSAS
 BRECKENRIDGE DRIVE DRAINAGE IMPROVEMENTS
 CULVERT SECTIONS (1)

DEPARTMENT OF PUBLIC WORKS
 CIVIL ENGINEERING
 701 W. MARKHAM
 LITTLE ROCK, ARKANSAS 72201

DRAWN BY
 JDM
 DESIGNED
 BJW
 CHECKED
 JTM
 DATE
 6-25-2019
 SCALE
 NTS
 PROJECT NO.
 CLR #04-17-DR-207
 SHEET NO.
 C5

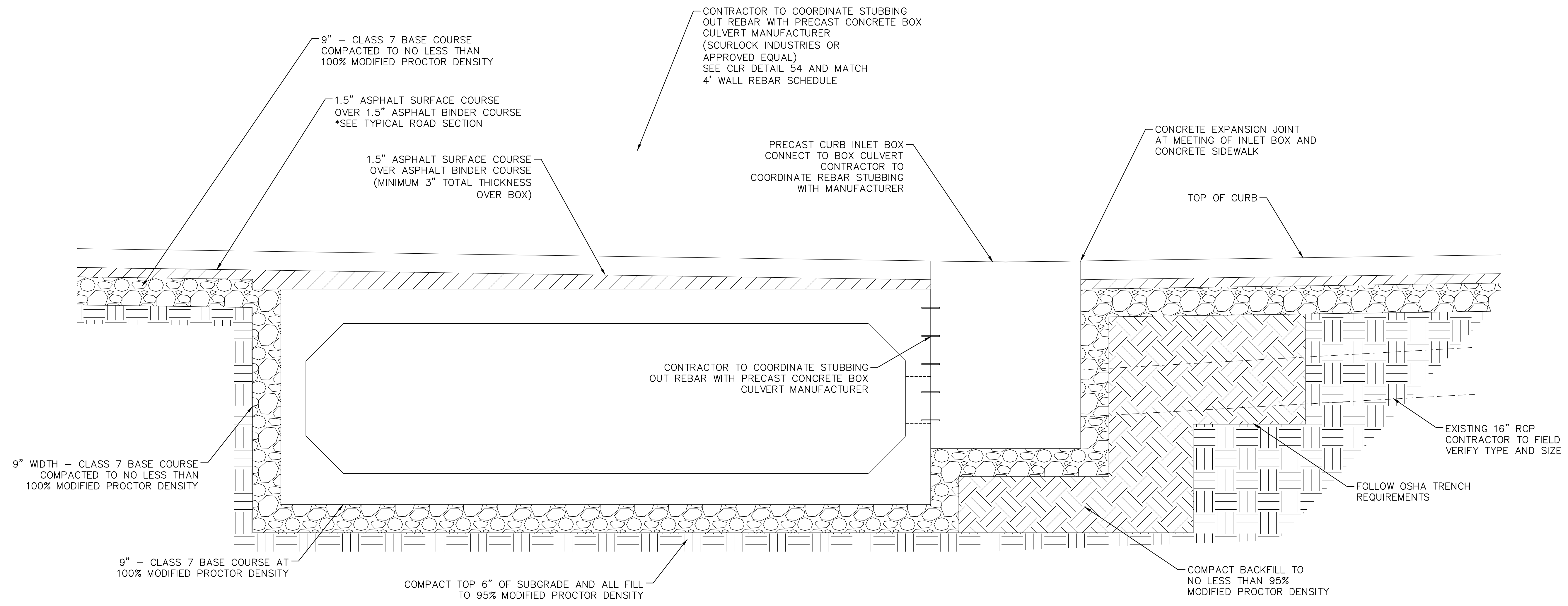


BOX CULVERT SECTION

GENERAL NOTES:

1. AREA BETWEEN 1.5 INCH ASPHALT SURFACE COURSE AND TOP OF BOX SHALL BE FILLED WITH ASPHALT BINDER COURSE (MIN 3" TOTAL THICKNESS). CURB AND SIDEWALK SHALL BE CONCRETE FILLED TO TOP OF BOX. SIDEWALK TO TIE INTO PROPOSED HEADWALL.
2. BACKFILL TO BE COMPACTED TO A DENSITY NOT LESS THAN 95% MODIFIED PROCTOR DENSITY.
3. 9" CLASS 7 BASE COURSE BEDDING MATERIAL COMPACTED TO A DENSITY NOT LESS THAN 100% MODIFIED PROCTOR DENSITY. COMPACT TOP 6" OF SUBGRADE AND ALL FILL TO A DENSITY NOT LESS THAN 95% MODIFIED PROCTOR DENSITY.
4. TRENCHING DURING INSTALLATION MUST MEET OSHA REQUIREMENTS.
5. SEE SHEET C6 FOR BOX CULVERT SECTION DETAILS.

REVISIONS	DATE

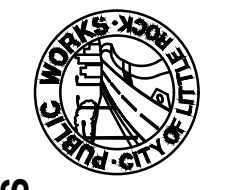


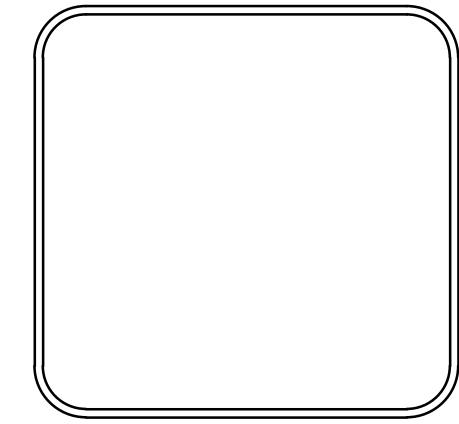
BOX CULVERT SECTION

GENERAL NOTES:

1. AREA BETWEEN 1.5 INCH ASPHALT SURFACE COURSE AND TOP OF BOX SHALL BE FILLED WITH ASPHALT BINDER COURSE (MIN 3" TOTAL THICKNESS). CURB AND SIDEWALK SHALL BE CONCRETE FILLED TO TOP OF BOX. SIDEWALK TO TIE INTO PROPOSED HEADWALL.
2. BACKFILL TO BE COMPACTED TO A DENSITY NOT LESS THAN 95% MODIFIED PROCTOR DENSITY.
3. 9" CLASS 7 BASE COURSE BEDDING MATERIAL COMPACTED TO A DENSITY NOT LESS THAN 100% MODIFIED PROCTOR DENSITY. COMPACT TOP 6" OF SUBGRADE AND ALL FILL TO A DENSITY NOT LESS THAN 95% MODIFIED PROCTOR DENSITY.
4. TRENCHING DURING INSTALLATION MUST MEET OSHA REQUIREMENTS.

CITY OF LITTLE ROCK, ARKANSAS
BRECKENRIDGE DRIVE DRAINAGE IMPROVEMENTS
 CULVERT SECTIONS (2)


 DEPARTMENT OF PUBLIC WORKS
 CIVIL ENGINEERING
 701 W. MARKHAM
 LITTLE ROCK, ARKANSAS 72201

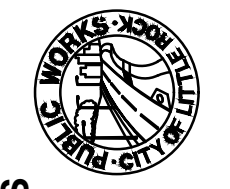

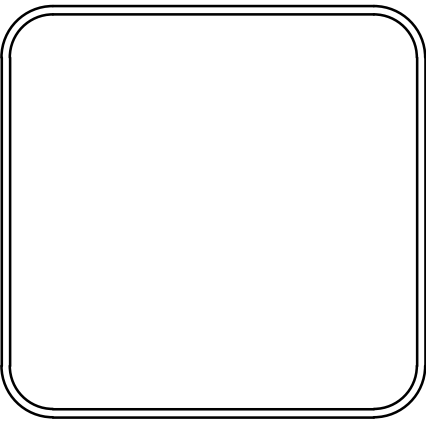


DRAWN BY
 JDM
DESIGNED
 BJW
CHECKED
 JTM
DATE
 6-25-2019
SCALE
 NTS
PROJECT NO.
 CLR #04-17-DR-207
SHEET NO.
 C6

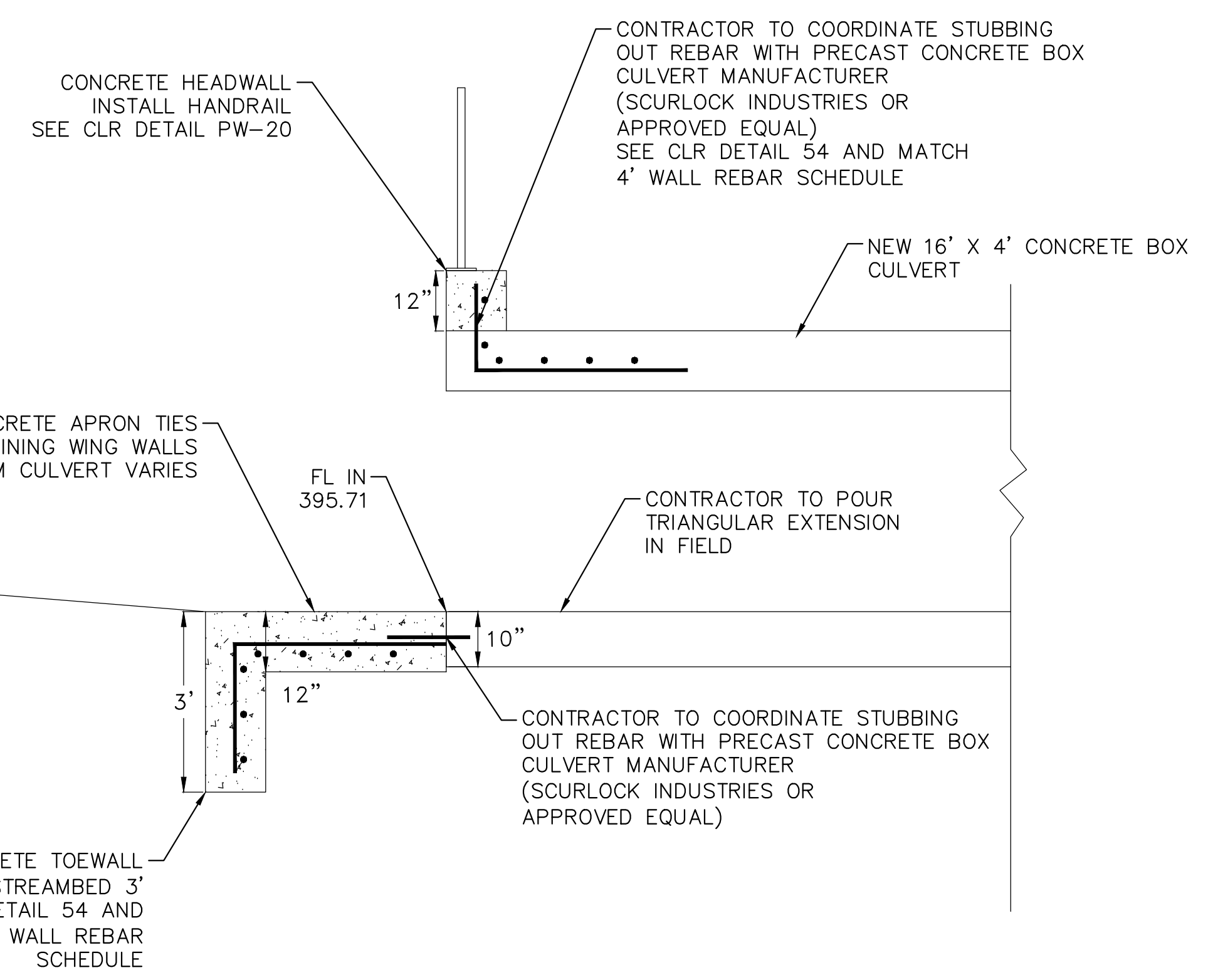
REVISIONS	DATE

CITY OF LITTLE ROCK, ARKANSAS
BRECKENRIDGE DRIVE DRAINAGE IMPROVEMENTS
 CULVERT SECTIONS (3)

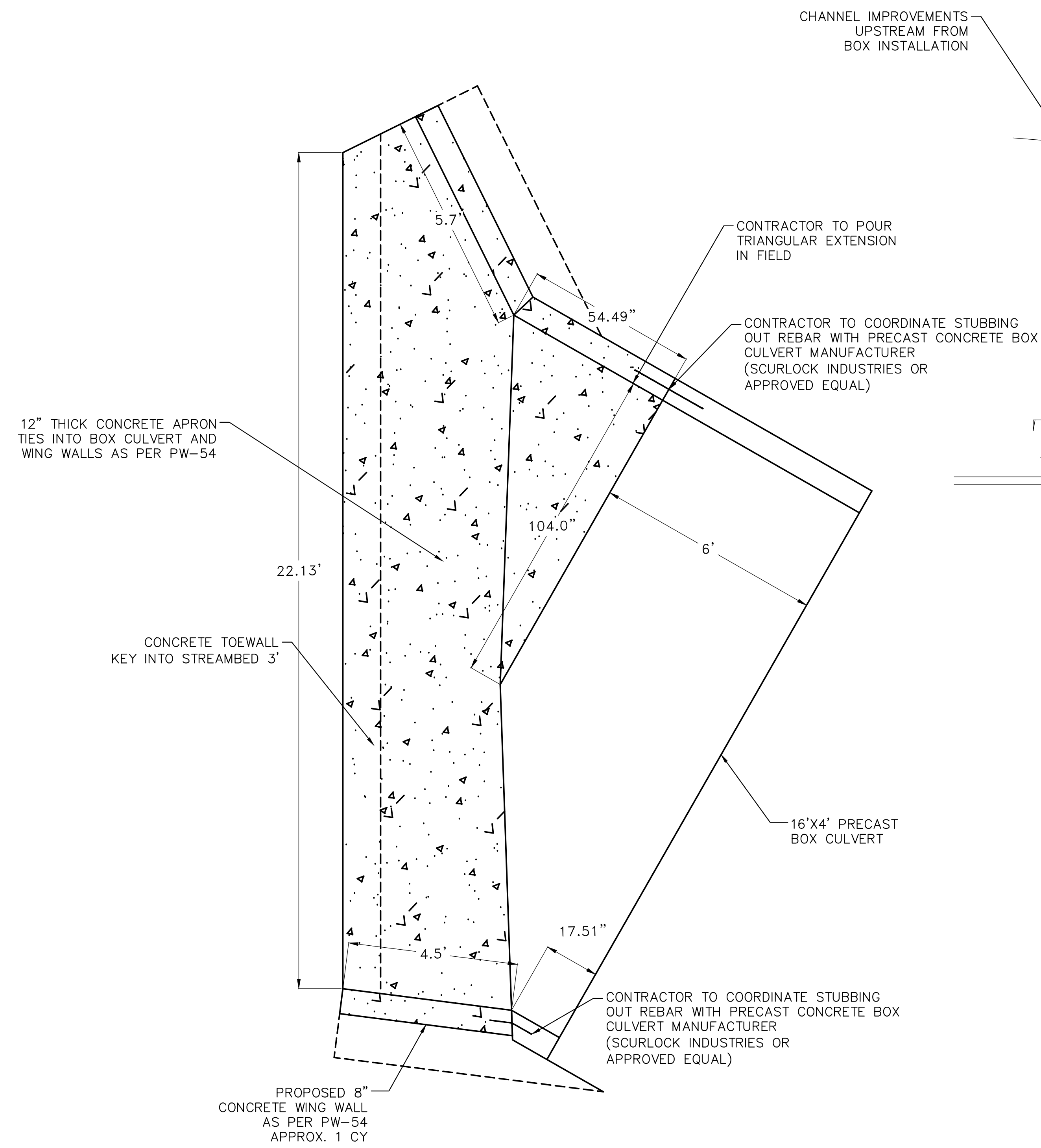
DEPARTMENT OF PUBLIC WORKS
 CIVIL ENGINEERING
 701 W. MARKHAM
 LITTLE ROCK, ARKANSAS 72201

DRAWN BY
JDM
DESIGNED
BJW
CHECKED
JTM
DATE
6-25-2019
SCALE
NTS
PROJECT NO.
CLR #04-17-DR-207
SHEET NO.
C7



TYPICAL APRON CROSS SECTION



BOX CULVERT WEST END (UPSTREAM)


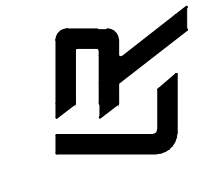
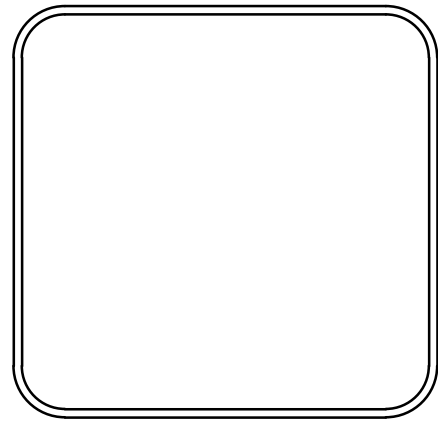
HEADWALL AND APRON NOTES:

1. REFER TO CLR DETAIL PW-54 FOR RETAINING WALL BAR SIZE AND SPACING. MATCH 4' RETAINING WALL BAR SIZE AND SPACING FOR HEADWALL, APRON, AND TOE REBAR SCHEDULE

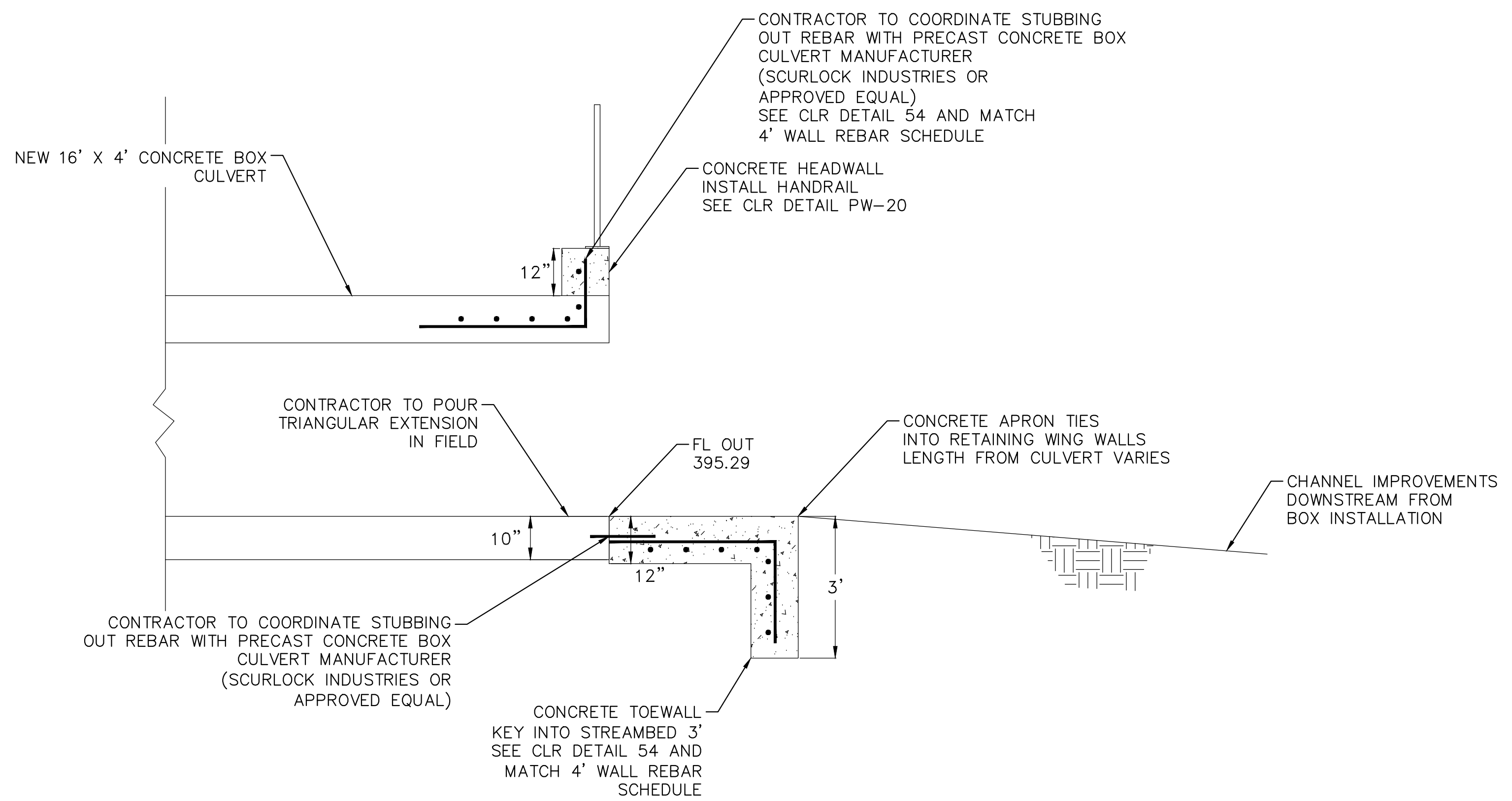
REVISIONS	DATE

CITY OF LITTLE ROCK, ARKANSAS
BRECKENRIDGE DRIVE DRAINAGE IMPROVEMENTS
 CULVERT SECTIONS (4)

DEPARTMENT OF PUBLIC WORKS
 CIVIL ENGINEERING
 701 W. MARKHAM
 LITTLE ROCK, ARKANSAS 72201

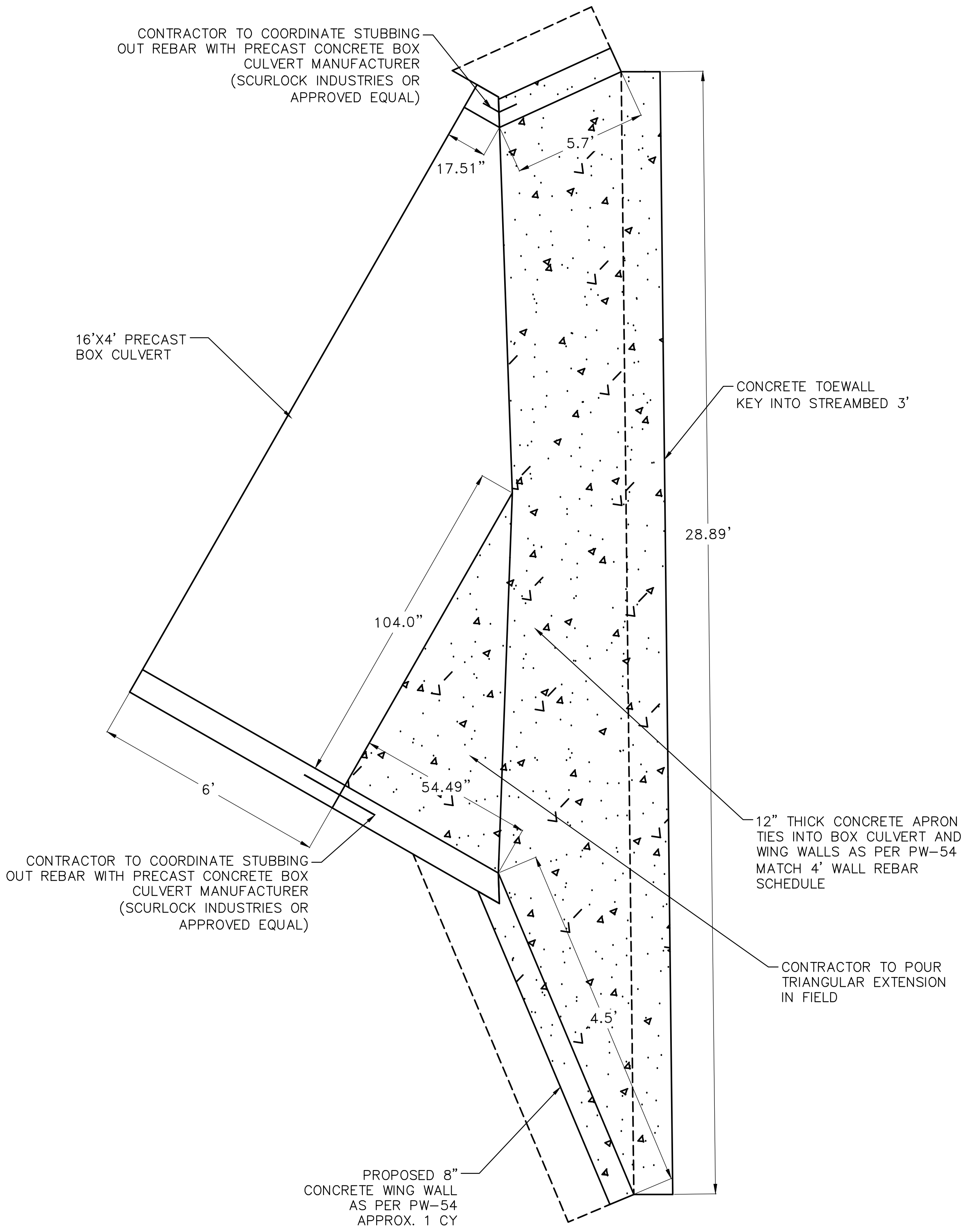
DRAWN BY
 JDM
 DESIGNED
 BJW
 CHECKED
 JTM
 DATE
 6-25-2019
 SCALE
 NTS
 PROJECT NO.
 CLR #04-17-DR-207
 SHEET NO.
 C8



TYPICAL APRON CROSS SECTION

HEADWALL AND APRON NOTES:

1. REFER TO CLR DETAIL PW-54 FOR RETAINING WALL BAR SIZE AND SPACING. MATCH 4' RETAINING WALL BAR SIZE AND SPACING FOR HEADWALL, APRON, AND TOE REBAR SCHEDULE

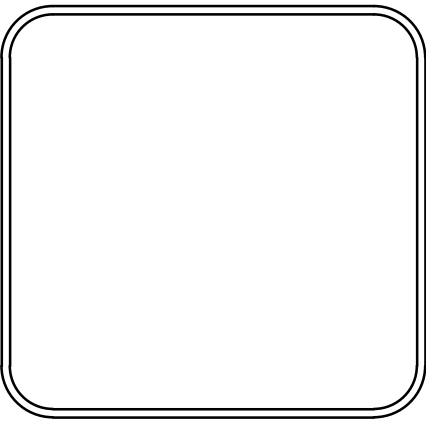


BOX CULVERT EAST END (DOWNSTREAM)

REVISIONS	DATE

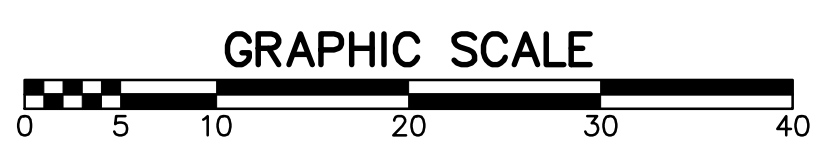
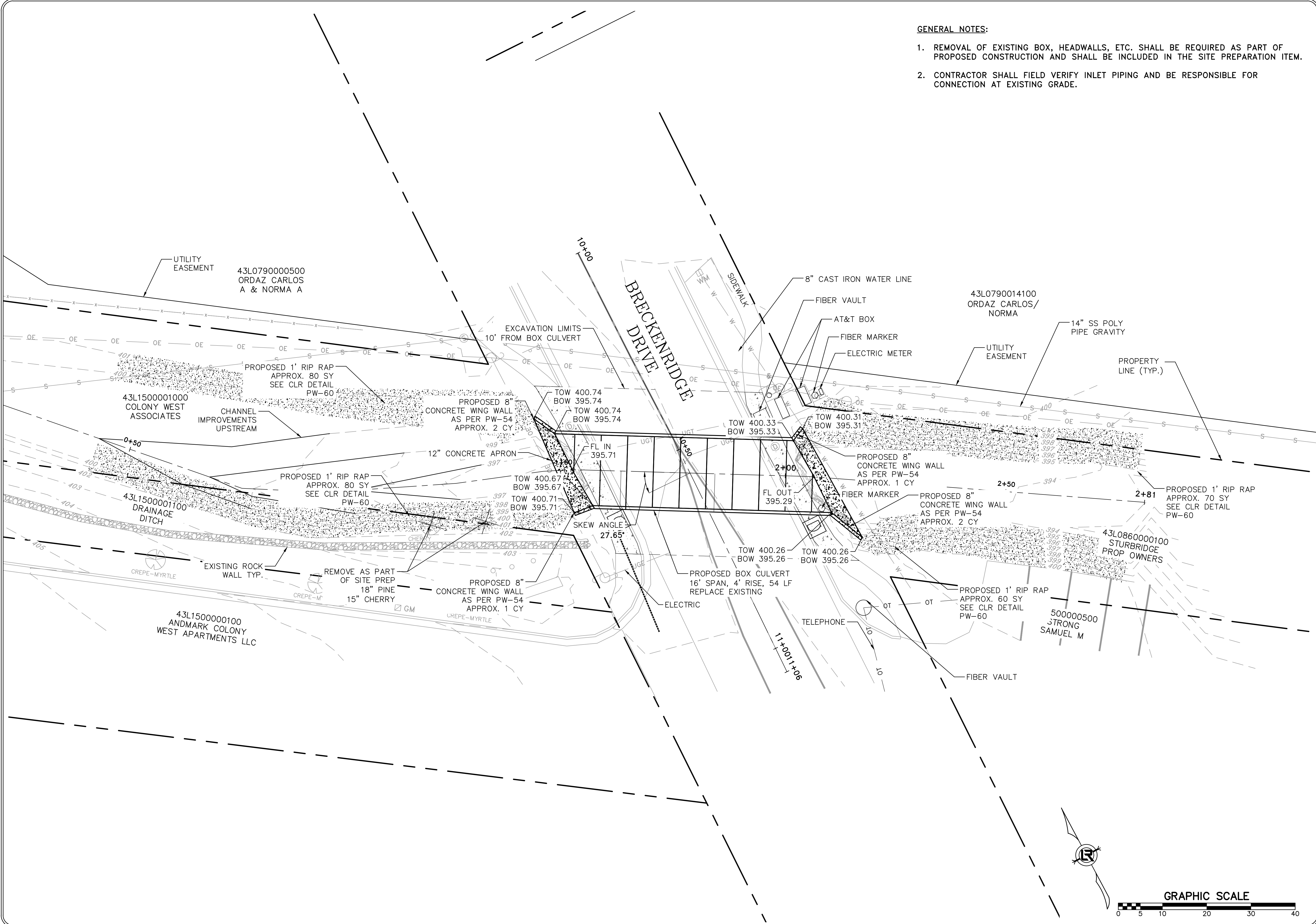
CITY OF LITTLE ROCK, ARKANSAS
BRECKENRIDGE DRIVE DRAINAGE IMPROVEMENTS
 PLAN SHEET (1)

DEPARTMENT OF PUBLIC WORKS
 CIVIL ENGINEERING
 701 W. MARKHAM
 LITTLE ROCK, ARKANSAS 72201



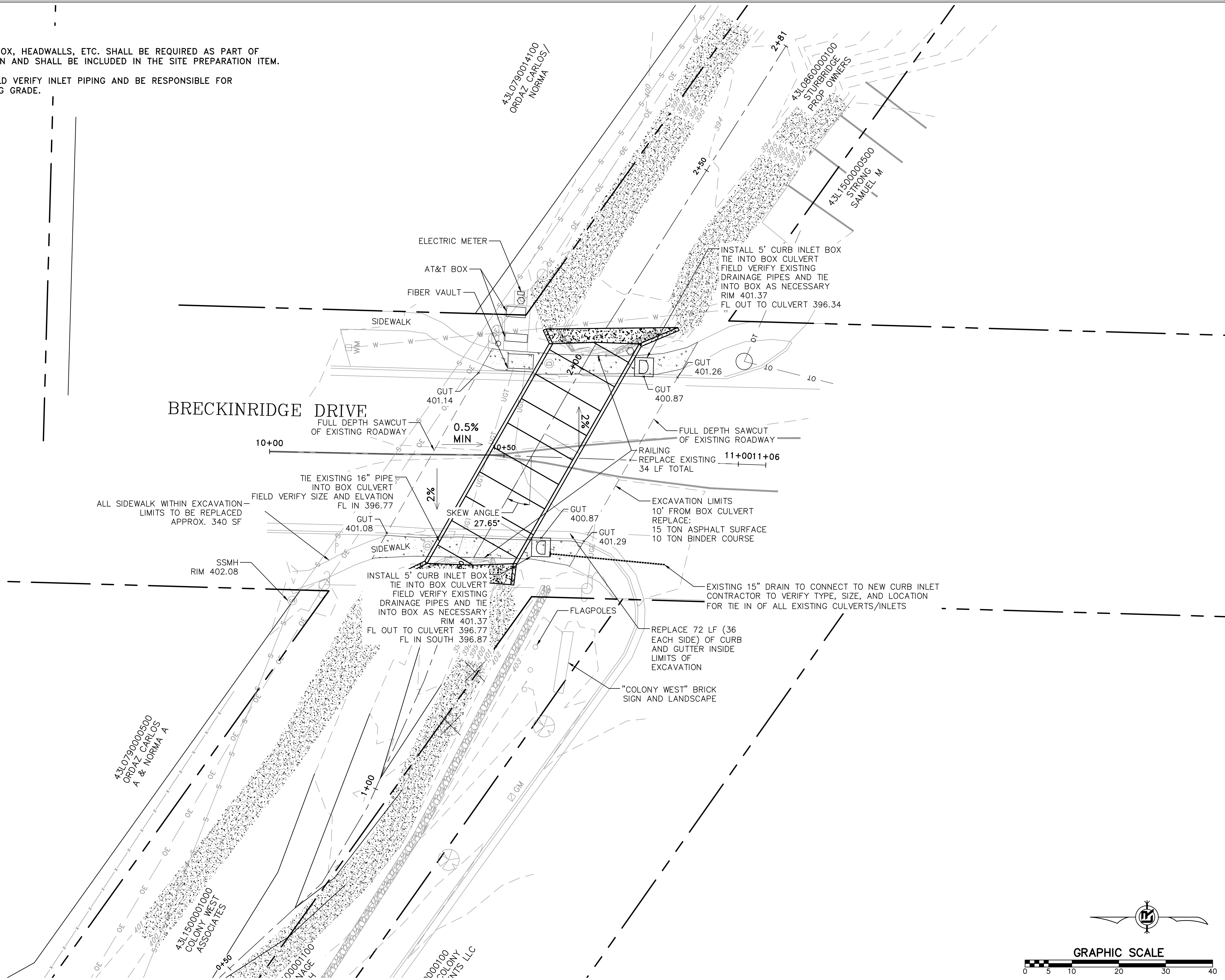
DRAWN BY
 JDM
 DESIGNED
 BJW
 CHECKED
 JTM
 DATE
 6-25-2019
 SCALE
 1"=10'
 PROJECT NO.
 CLR #04-17-DR-207
 SHEET NO.
 C9

- GENERAL NOTES:**
1. REMOVAL OF EXISTING BOX, HEADWALLS, ETC. SHALL BE REQUIRED AS PART OF PROPOSED CONSTRUCTION AND SHALL BE INCLUDED IN THE SITE PREPARATION ITEM.
 2. CONTRACTOR SHALL FIELD VERIFY INLET PIPING AND BE RESPONSIBLE FOR CONNECTION AT EXISTING GRADE.




GENERAL NOTES:

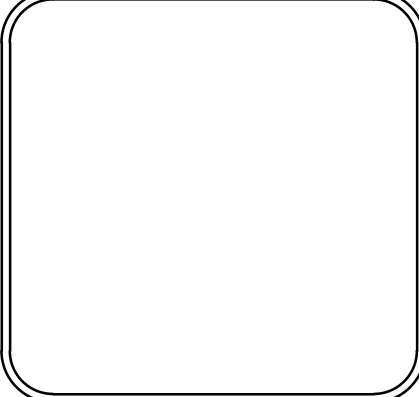
1. REMOVAL OF EXISTING BOX, HEADWALLS, ETC. SHALL BE REQUIRED AS PART OF PROPOSED CONSTRUCTION AND SHALL BE INCLUDED IN THE SITE PREPARATION ITEM.
2. CONTRACTOR SHALL FIELD VERIFY INLET PIPING AND BE RESPONSIBLE FOR CONNECTION AT EXISTING GRADE.



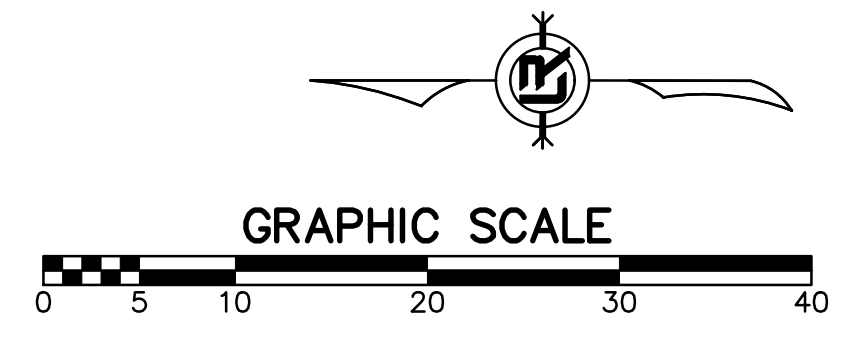
REVISIONS	DATE

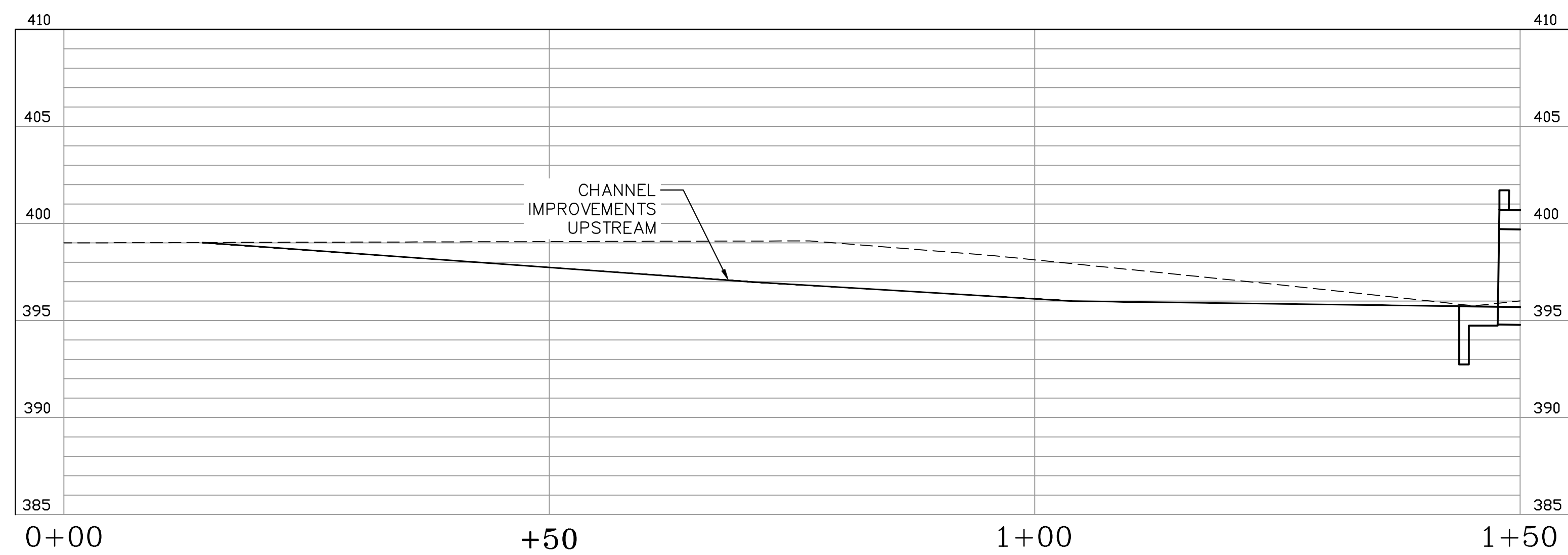
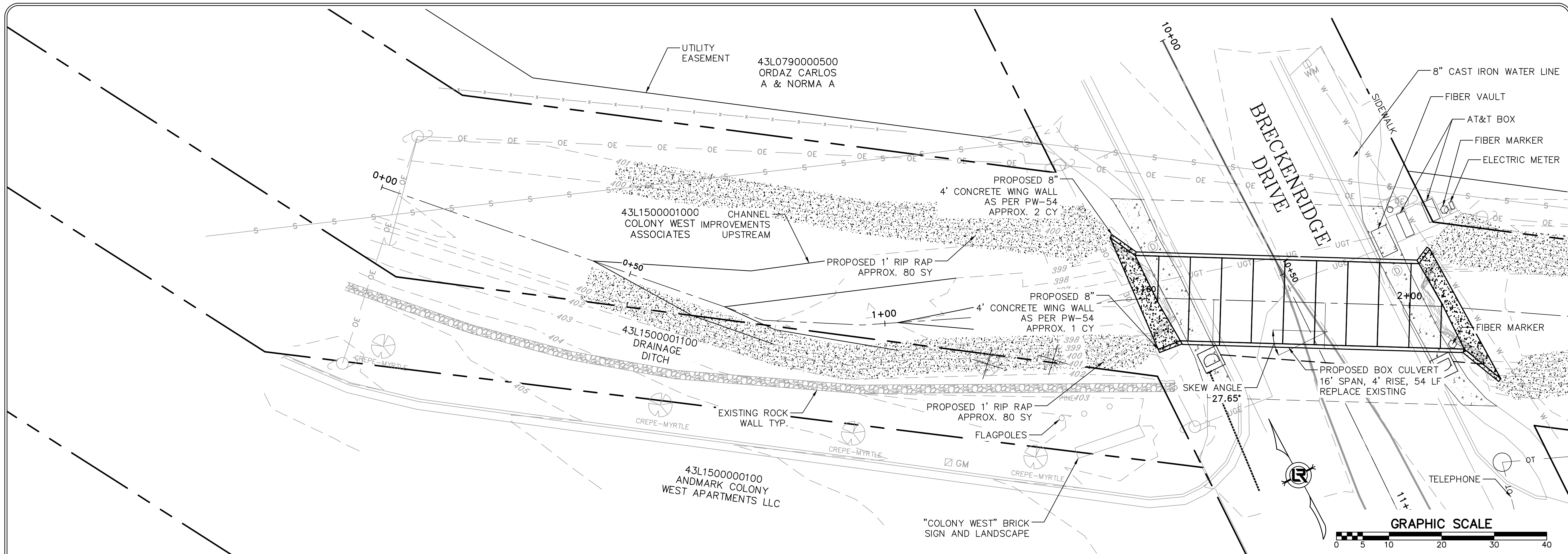
CITY OF LITTLE ROCK, ARKANSAS
BRECKENRIDGE DRIVE DRAINAGE IMPROVEMENTS
 PLAN SHEET (2)


DEPARTMENT OF PUBLIC WORKS
CIVIL ENGINEERING
 701 W. MARKHAM
 LITTLE ROCK, ARKANSAS 72201



DRAWN BY JDM
DESIGNED BJW
CHECKED JTM
DATE 6-25-2019
SCALE H: 1"=10' V: 1"=5'
PROJECT NO. CLR #04-17-DR-207
SHEET NO. C10



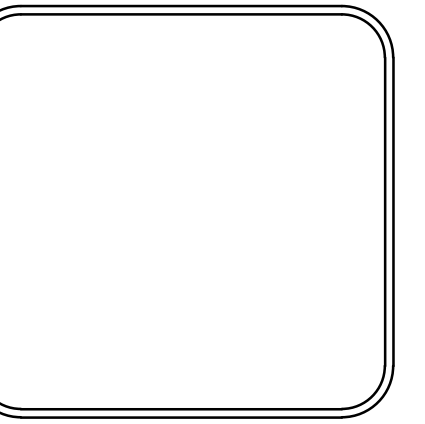


DRAINAGE CHANNEL CL

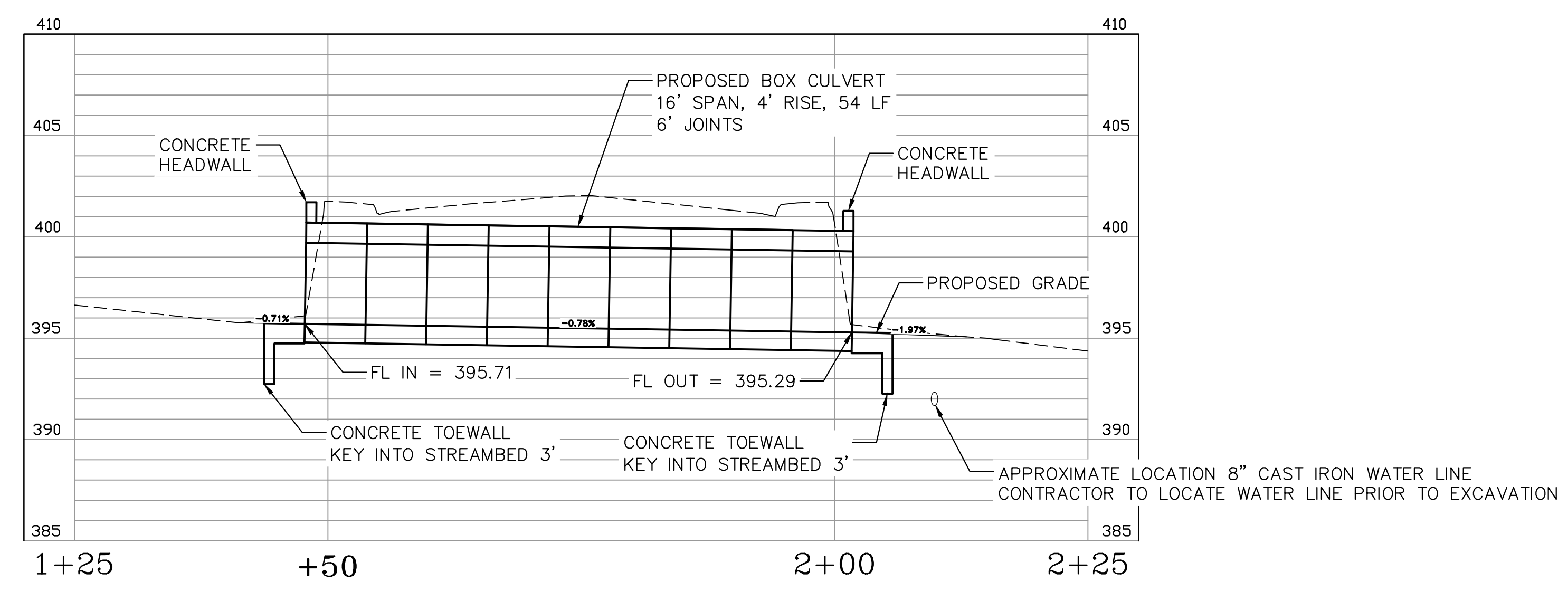
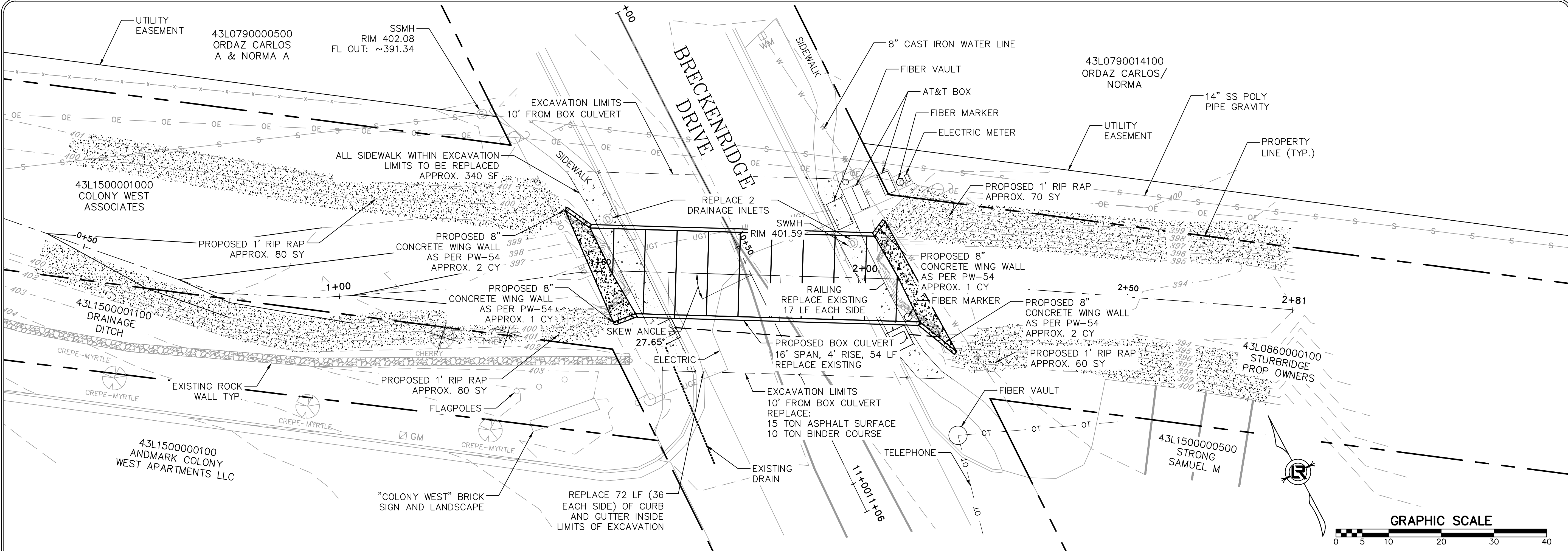
REVISIONS	DATE

CITY OF LITTLE ROCK, ARKANSAS
 BRECKENRIDGE DRIVE DRAINAGE IMPROVEMENTS
 PLAN AND PROFILE SHEET - DRAINAGE CHANNEL (1)

DEPARTMENT OF PUBLIC WORKS
 CIVIL ENGINEERING
 701 W. MARKHAM
 LITTLE ROCK, ARKANSAS 72201




DRAWN BY JDM
DESIGNED BJW
CHECKED JTM
DATE 6-25-2019
SCALE H: 1"=10' V: 1"=5'
PROJECT NO. CLR #04-17-DR-207
SHEET NO. C11

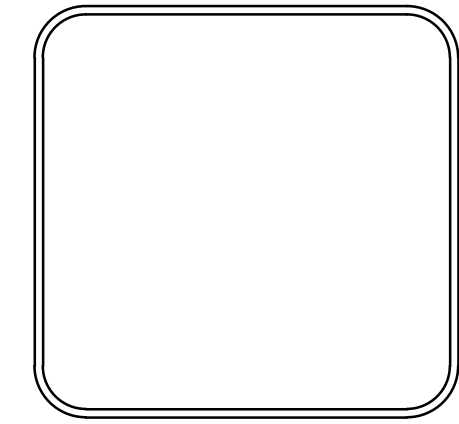


DRAINAGE CHANNEL CL

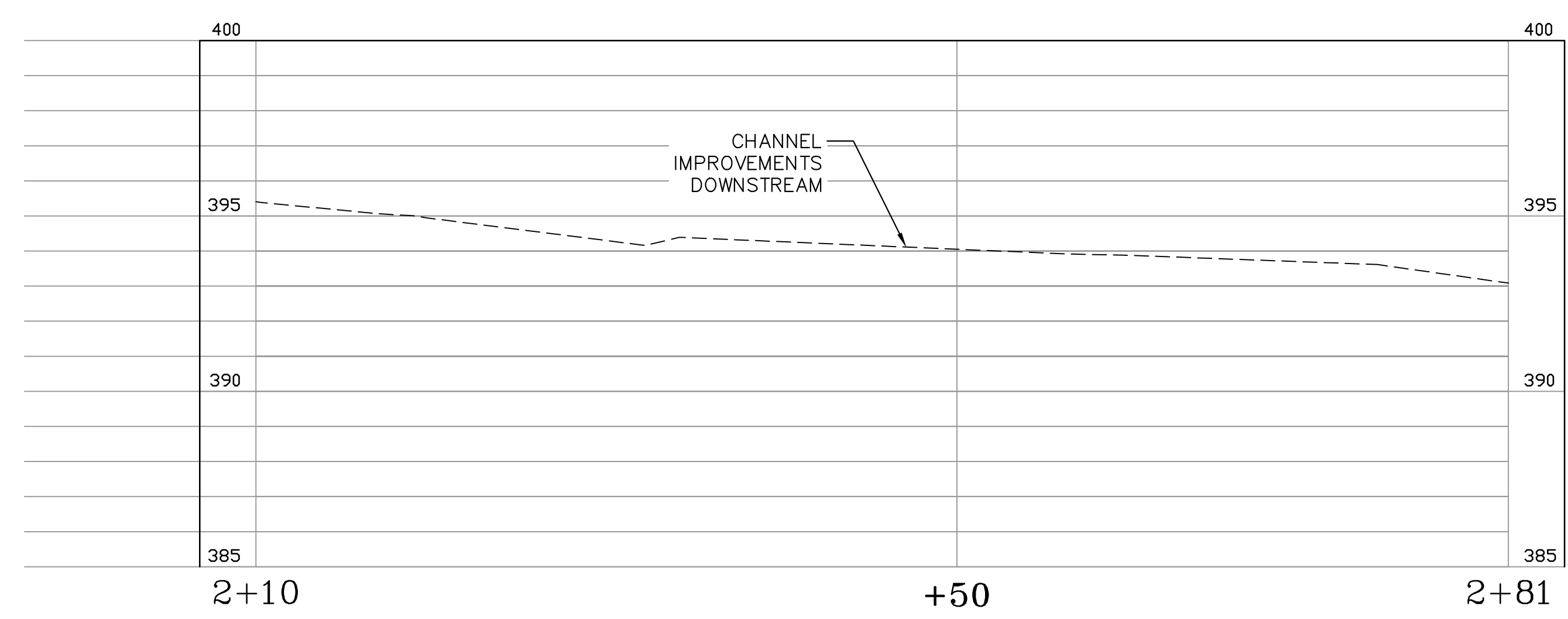
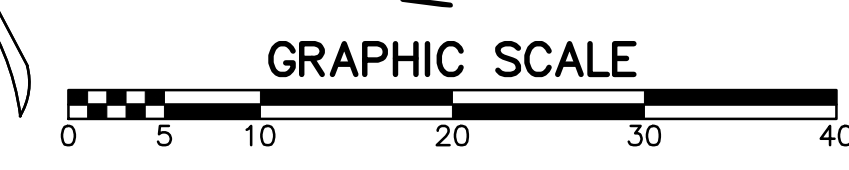
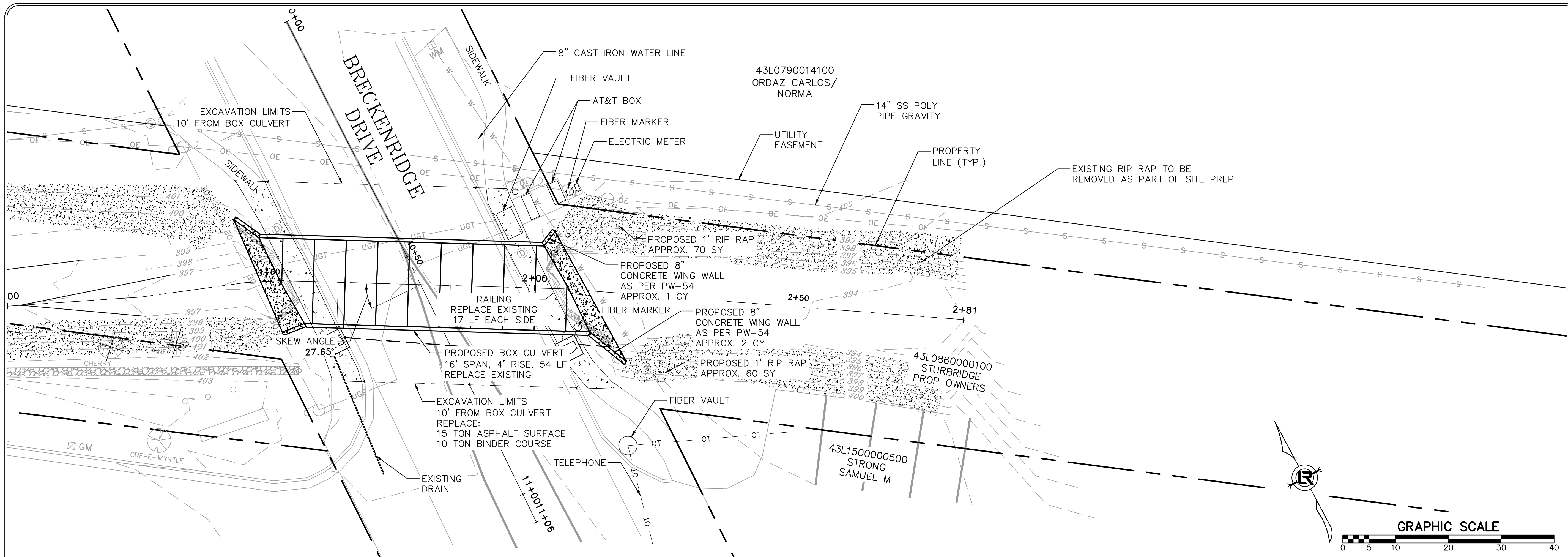
REVISIONS	DATE

CITY OF LITTLE ROCK, ARKANSAS
BRECKENRIDGE DRIVE DRAINAGE IMPROVEMENTS
 PLAN AND PROFILE SHEET - DRAINAGE CHANNEL (2)


 DEPARTMENT OF PUBLIC WORKS
 CIVIL ENGINEERING
 701 W. MARKHAM
 LITTLE ROCK, ARKANSAS 72201



DRAWN BY
JDM
 DESIGNED
BJW
 CHECKED
JTM
 DATE
6-25-2019
 SCALE
 H: 1"=10'
 V: 1"=5'
 PROJECT NO.
CLR #04-17-DR-207
 SHEET NO.
C12

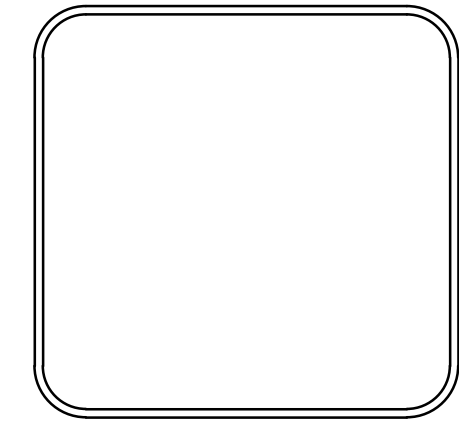


DRAINAGE CHANNEL CL

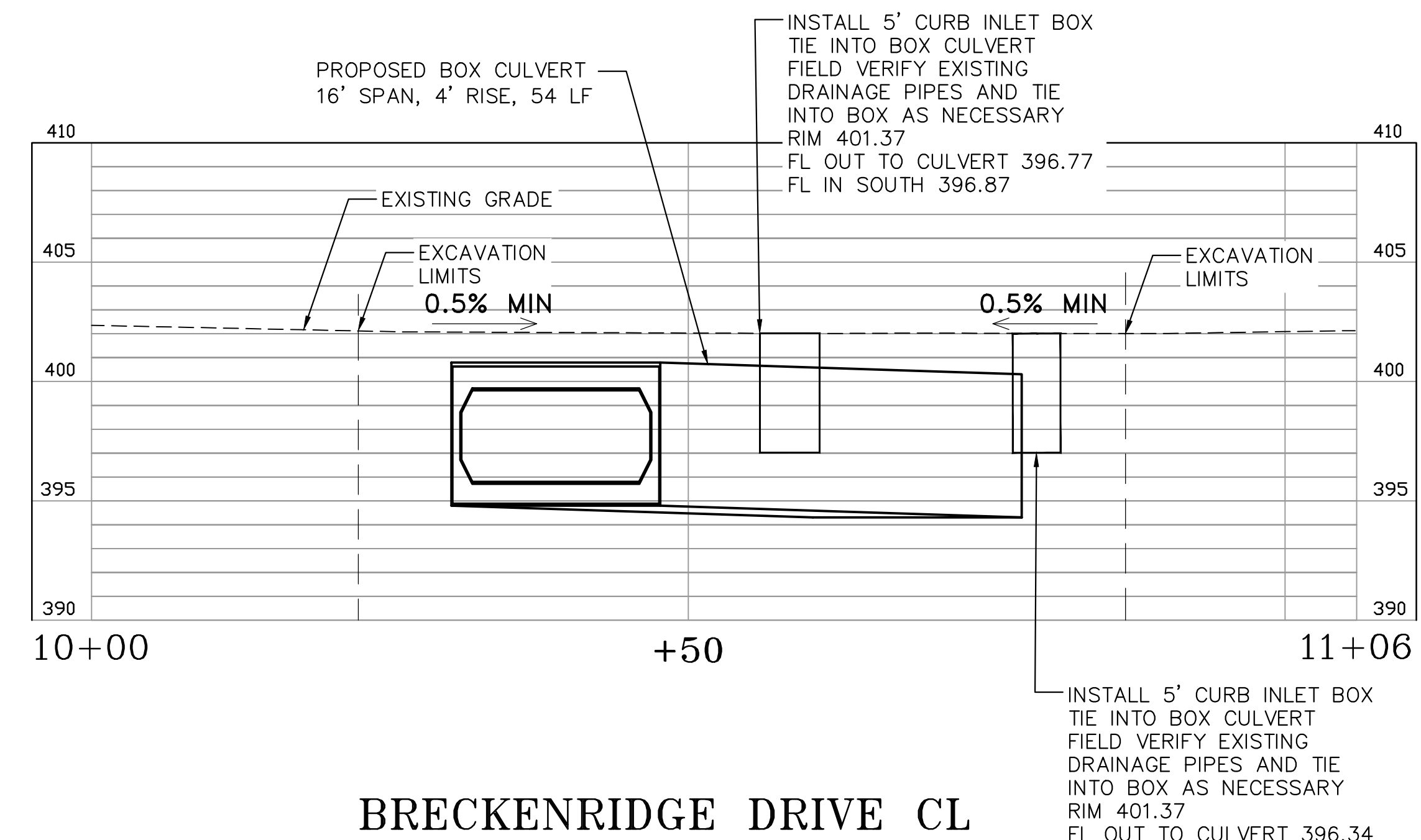
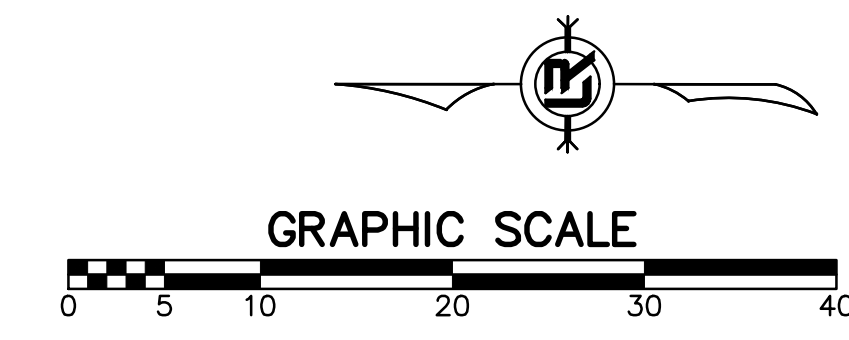
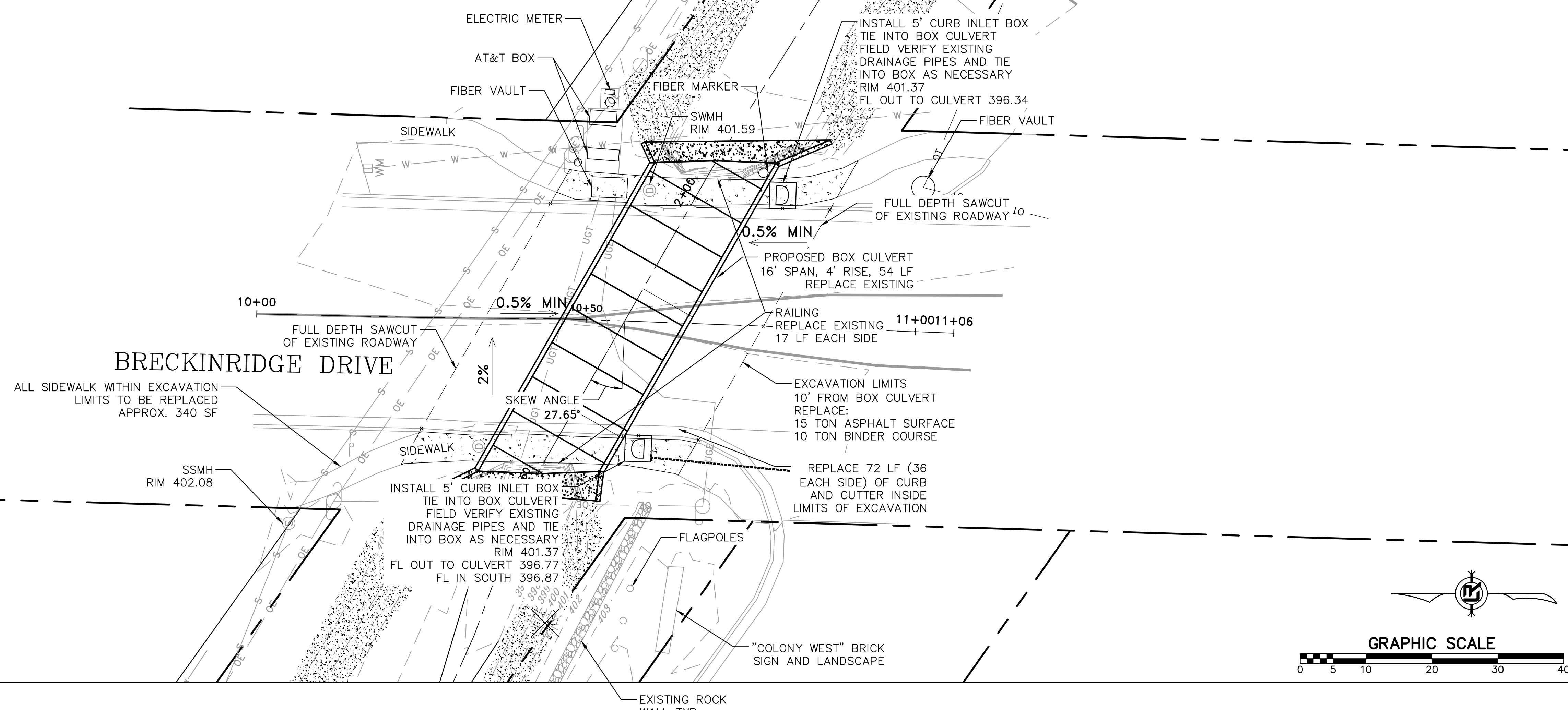
REVISIONS	DATE

CITY OF LITTLE ROCK, ARKANSAS
 BRECKENRIDGE DRIVE DRAINAGE IMPROVEMENTS
 PLAN AND PROFILE SHEET - DRAINAGE CHANNEL (3)

DEPARTMENT OF PUBLIC WORKS
 CIVIL ENGINEERING
 701 W. MARKHAM
 LITTLE ROCK, ARKANSAS 72201




DRAWN BY
 JDM
 DESIGNED
 BJW
 CHECKED
 JTM
 DATE
 6-25-2019
 SCALE
 H: 1"=10'
 V: 1"=5'
 PROJECT NO.
 CLR #04-17-DR-207
 SHEET NO.
C13

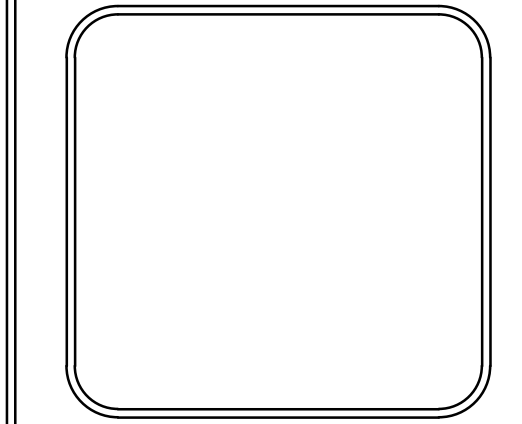


BRECKENRIDGE DRIVE CL

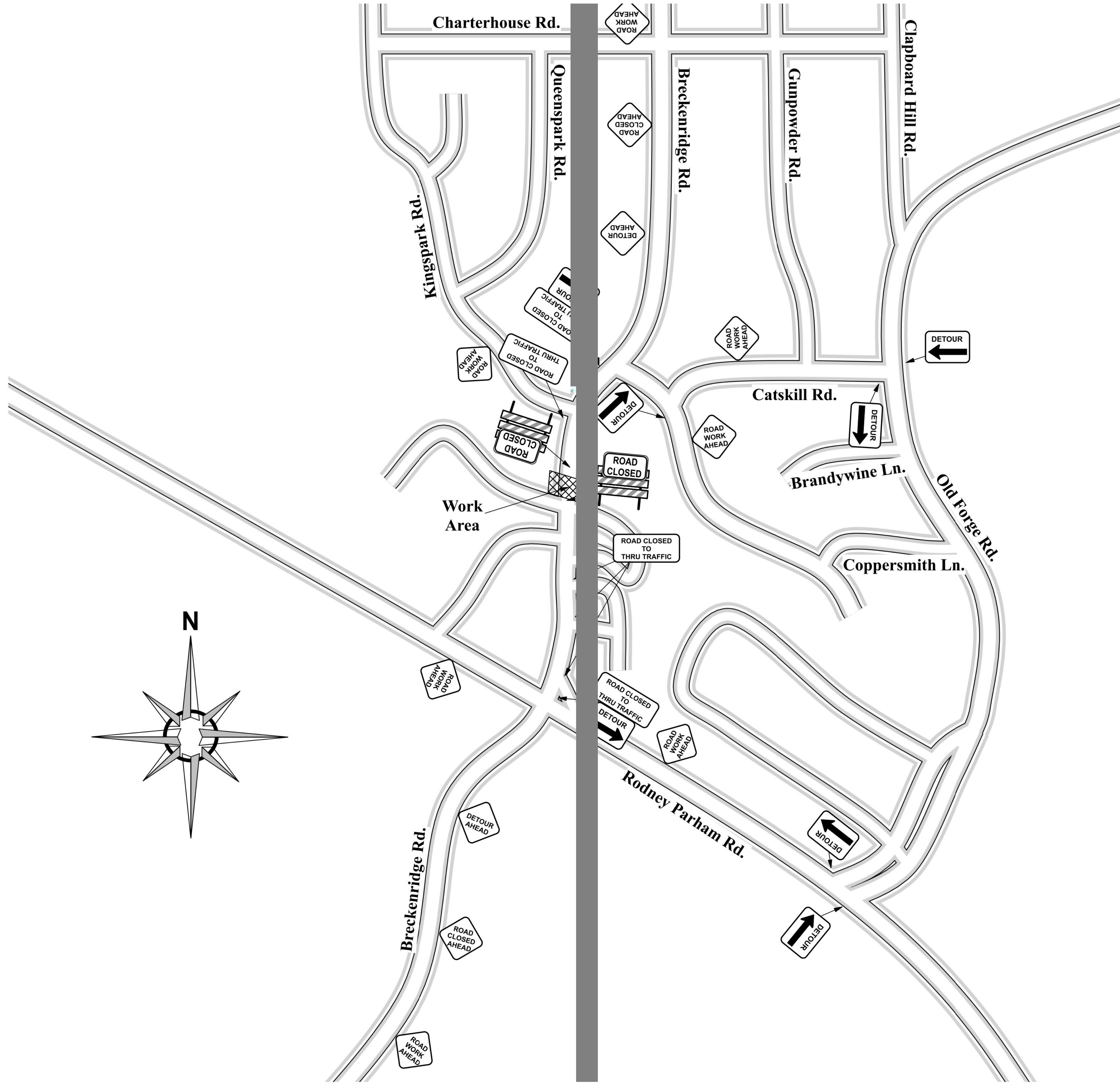
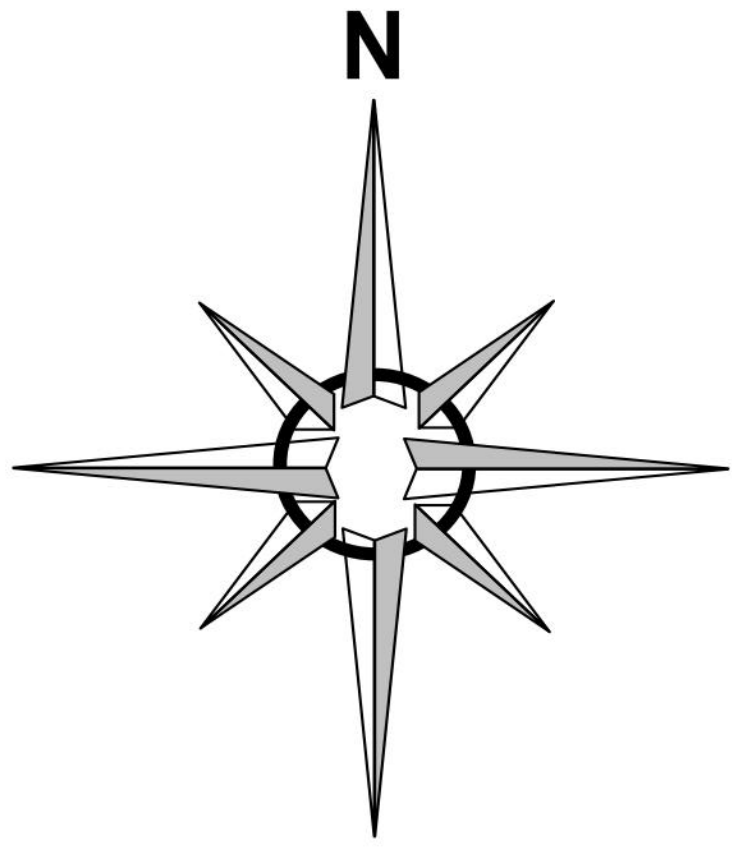
REVISIONS	DATE

CITY OF LITTLE ROCK, ARKANSAS
BRECKENRIDGE DRIVE DRAINAGE IMPROVEMENTS
 PLAN AND PROFILE SHEET - ROAD


 DEPARTMENT OF PUBLIC WORKS
 CIVIL ENGINEERING
 701 W. MARKHAM
 LITTLE ROCK, ARKANSAS 72201



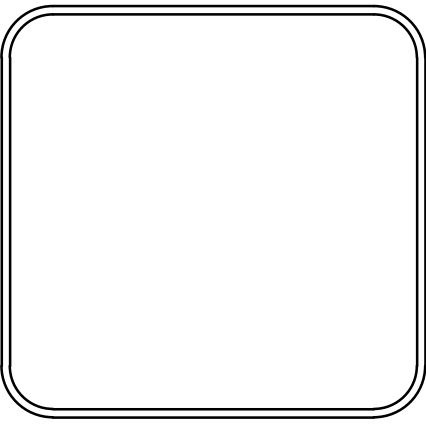
DRAWN BY JDM
DESIGNED BJW
CHECKED JTM
DATE 6-25-2019
SCALE H: 1"=10' V: 1"=5'
PROJECT NO. CLR #04-17-DR-207
SHEET NO. C14



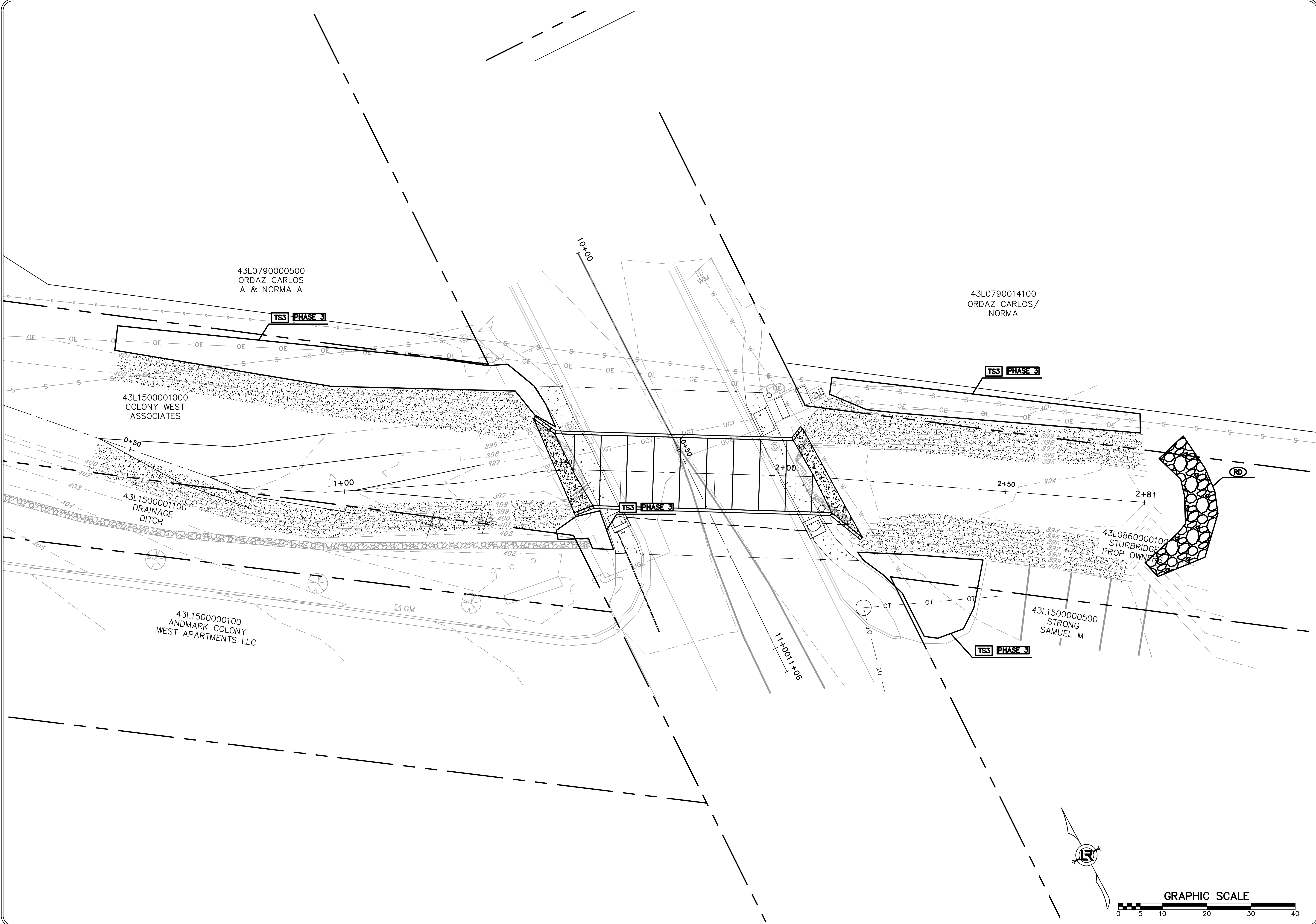
REVISIONS	DATE

CITY OF LITTLE ROCK, ARKANSAS
 BRECKENRIDGE DRIVE DRAINAGE IMPROVEMENTS
 TRAFFIC CONTROL PLAN

DEPARTMENT OF PUBLIC WORKS
 CIVIL ENGINEERING
 701 W. MARKHAM
 LITTLE ROCK, ARKANSAS 72201




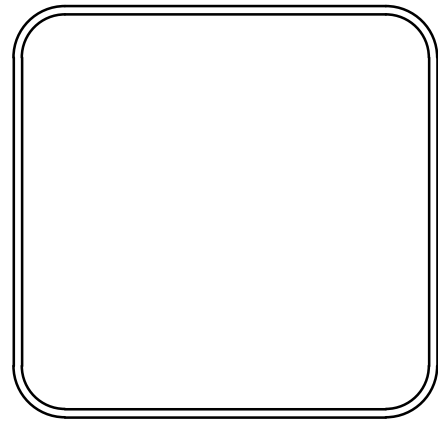
DRAWN BY JDM
DESIGNED BJW
CHECKED JTM
DATE 6-25-2019
SCALE 1"=10'
PROJECT NO. CLR #04-17-DR-207
SHEET NO. C15



REVISIONS	DATE

CITY OF LITTLE ROCK, ARKANSAS
BRECKENRIDGE DRIVE DRAINAGE IMPROVEMENTS
EROSION CONTROL PLAN


DEPARTMENT OF PUBLIC WORKS
CIVIL ENGINEERING
 701 W. MARKHAM
 LITTLE ROCK, ARKANSAS 72201



DRAWN BY
 JDM
DESIGNED
 BJW
CHECKED
 JTM
DATE
 6-25-2019
SCALE
 1"=10'
PROJECT NO.
 CLR #04-17-DR-207
SHEET NO.
C16