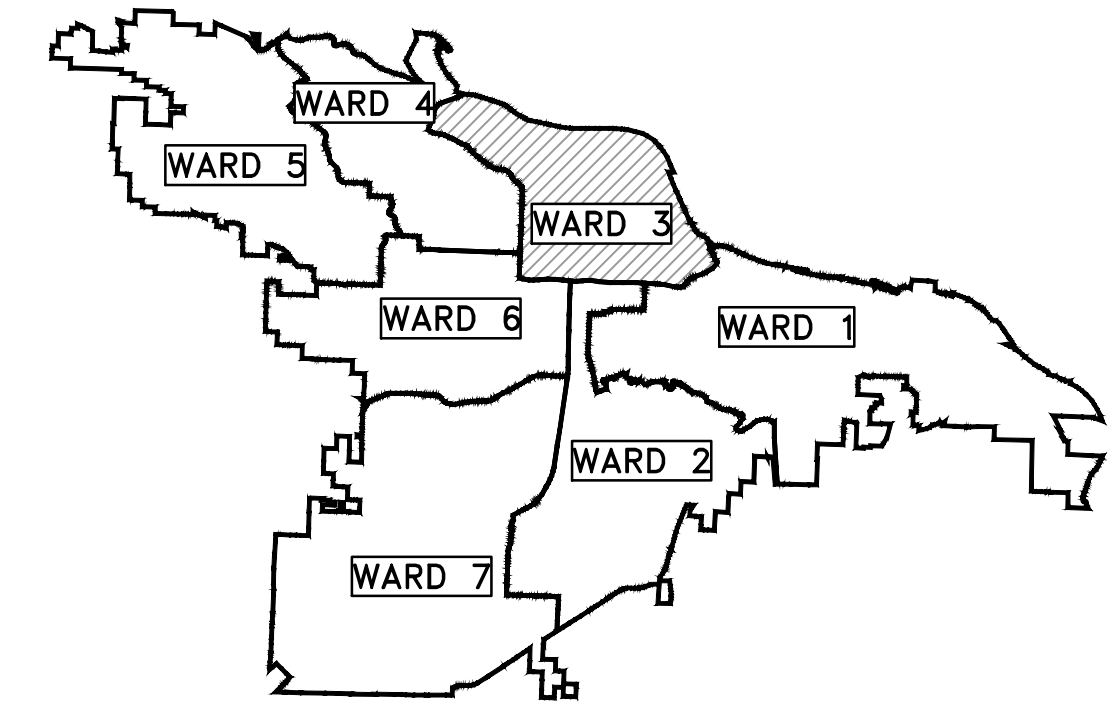
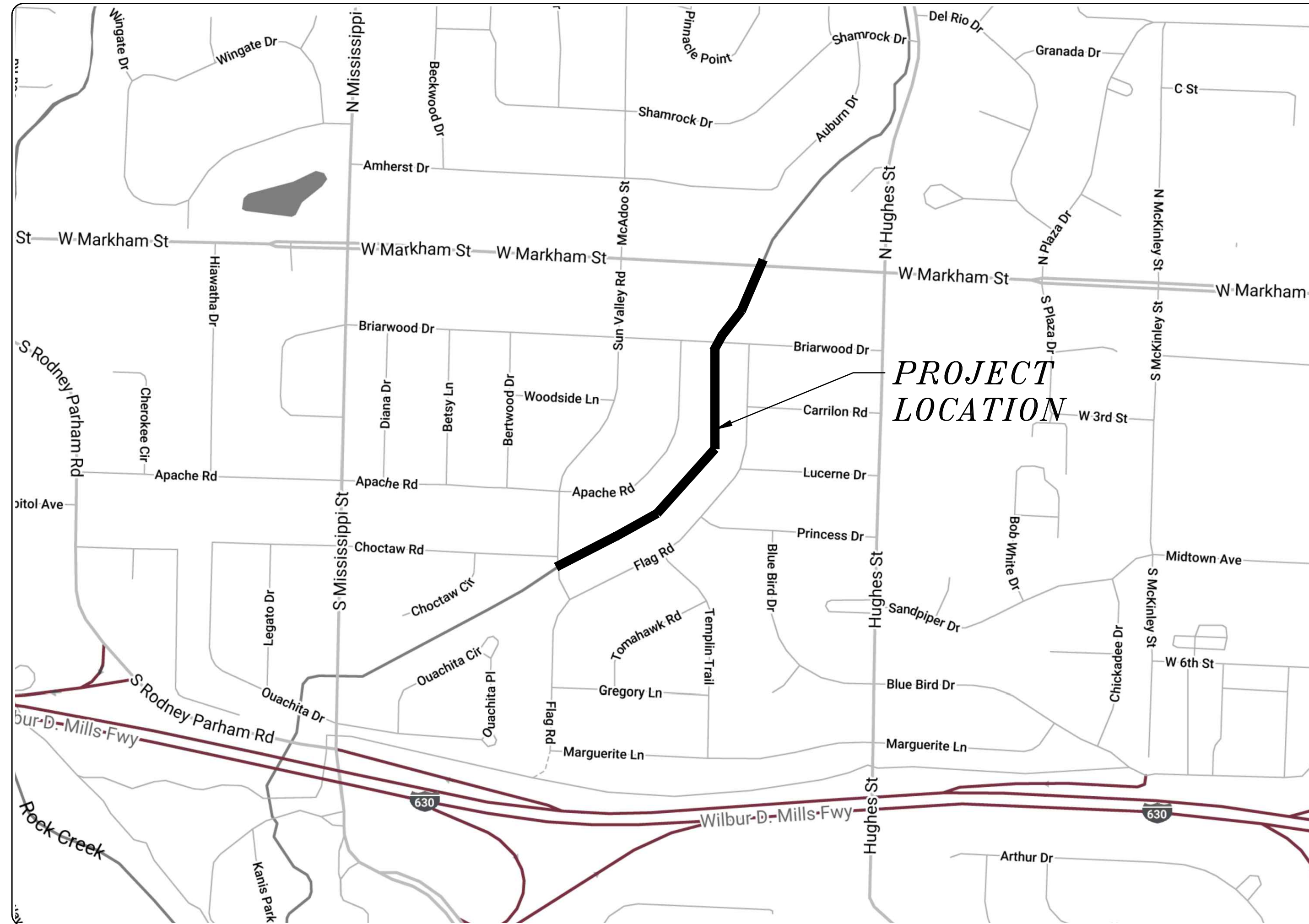


CLR PROJECT 03-17-DR-235 BRIARWOOD AREA DRAINAGE IMPROVEMENTS SUN VALLEY ROAD TO MARKHAM STREET



PROJECT LOCATION - WARD 3

SHEET NO.	TITLE
C1	COVER SHEET
C2	QUANTITIES & DETAILS
C3	BRIARWOOD DITCH 1
C4	BRIARWOOD DITCH 2
C5	BRIARWOOD DITCH 3
C6	BRIARWOOD DITCH 4
C7	LOCAL DRAINAGE IMPROVEMENTS 1
C8	LOCAL DRAINAGE IMPROVEMENTS 2



**2019-2021
BOND PROGRAM**

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



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



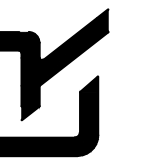
4701 Northshore Drive
North Little Rock, AR 72118
501-376-3633

REVISIONS	DATE

CITY OF LITTLE ROCK, ARKANSAS
BRIARWOOD AREA DRAINAGE IMPROVEMENTS

COVER SHEET

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



DRAWN BY	MJM
DESIGNED	RCC
CHECKED	RCC
DATE	7-10-2019
SCALE	N.T.S.

PROJECT NO.	03-17-DR-235
SHEET NO.	C1

CLR PROJECT# 03-17-DR-235			
BRIARWOOD AREA DRAINAGE IMPROVEMENTS - PHASE 1			
July 10, 2019			
ITEM #	ITEM DESCRIPTION	UNIT	QUANTITY
2.01	SITE PREPARATION	LS	1
3.01	UNCLASSIFIED EXCAVATION	CY	1,422
3.06	BORROW MATERIAL	CY	1,585
3.40	TOPSOIL	CY	297
11.10	REINFORCED CONCRETE	CY	560
11.11	CONCRETE PIPE COLLAR	EA	1
11.12	CONCRETE DITCH PAVING	SY	3
13.36C	STORM DRAIN PIPE, 36" RCP	LF	10
13.48C	STORM DRAIN PIPE, 48" RCP	LF	7
14.01	SOLID SODDING, BERMUDA	SY	2,679
16.01	MAINTENANCE OF TRAFFIC	LS	1
18.55	WATER FOR DUST CONTROL	GAL	10,000
19.01	FINAL CLEANUP	LS	1
23.02	C-BALLAST	TON	960
23.04	STONE BACKFILL	TON	616
24.05	ROCK DAM (RD)	CY	66
24.12	SILT FENCE - TYPE B (SFB)	LF	425
25.04	FENCE CHAIN LINK (4')	LF	1,290
25.16	FENCE WOOD (6')	LF	800
26.10	TRENCH & EXCAVATION SAFETY	LS	1
29.10	PROJECT INFORMATION KIOSK (PW-18)	LS	1
606.36C	FLARED END SECTION 36" RCP	EA	1

QUANTITIES ONLY INCLUDE
PHASE 1 IMPROVEMENTS

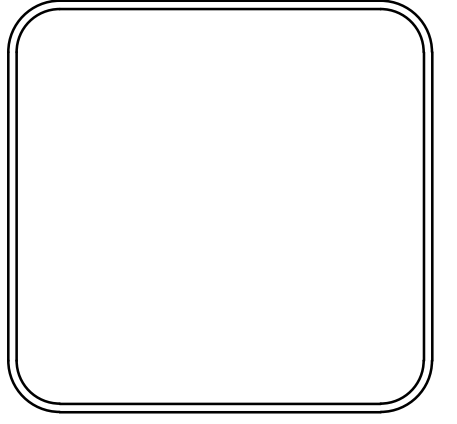
EXISTING	PROPOSED
IRON ROD	○ IR
PK NAIL	○ PK
R.R. SPIKE	○ RR(Sp)
CONC. MONUMENT	□ CM
WATER VALVE	⊗ WV
WATER METER	□ WM
FIRE HYDRANT	⊕ FH
GAS METER	⊕ GM
GAS VALVE	⊕ GV
CLEAN-OUT	○ CO
GUARD POST (BOLLARD)	● GP
SIGN POST	⊥
BENCHMARK	⊕
STORM SEWER MANHOLE	⊕ D
SANITARY SEWER MANHOLE	⊕ S
TELEPHONE MANHOLE	⊕ T
ELECTRIC MANHOLE	⊕ E
TELEPHONE BOX	⊕
ELECTRIC BOX	⊕
CABLE BOX	⊕
UTILITY POLE	⊕
GUY WIRE	⊕
LIGHT POLE	⊕
POST OR POLE (TYPE AS NOTED)	⊕
MAILBOX	⊕
DECIDUOUS TREE	⊕
EVERGREEN/CONIFEROUS TREE	⊕
BUSH	⊕
PROPERTY LINE	---
SETBACK LINE	---
EASEMENT LINE	---
CURB	====
FENCE	— X — X —
OVERHEAD UTILITY	— OHP — OHP —
UNDERGROUND TELEPHONE	— UGT — UGT — UGT —
UNDERGROUND ELECTRIC	— UGE — UGE — UGE —
WATER LINE	— 8"W — 8"W — 8"W —
SEWER LINE	— BS — BS — BS —
GAS LINE	— GAS — GAS — GAS —
STORM SEWER/CULVERT	— 24" CMP/RCP/DIP —
CONTOUR LINE	--- 650 ---

CONTOUR	○ 25.00
SPOT ELEVATION	○ 25.50
SPOT CURB ELEVATION	○ 25.00
STORM SEWER - PIPE	—
STORM SEWER - MITERED END SECTION	—
STORM SEWER - GRATE INLET	—
STORM SEWER - JUNCTION BOX	—
STORM SEWER - FLARED END SECTION	—
STORM SEWER - HEADWALL	—
STORM SEWER - INLET WITH SINGLE EXTENSION	—
STORM SEWER - INLET WITH DOUBLE EXTENSION	—
STORM SEWER - AREA INLET	—
GRADE BREAK LINE	---
HIGH POINT	HP
LOW POINT	LP
CUT LINE	---
FILL LINE	---
SANITARY SEWER PIPE	—
SANITARY SEWER MANHOLE	⊕
CURB	====
CONCRETE	⊕
CONSTRUCTION - ENTRANCE/EXIT	⊕ CO
CHECK DAM	⊕ CD
DIVERSION BERM	⊕ DI
DOWNDRAIN STRUCTURE - TEMPORARY	⊕ DN
ROCK DAM	⊕ RD
SEDIMENT BARRIER - SILT FENCE	⊕ SD1
SEDIMENT BARRIER - GRAVEL RING	⊕ SD2
SEDIMENT BARRIER - BLOCK & GRAVEL	⊕ SD3
SEDIMENT BARRIER - BLOCK	⊕ SD4
TEMPORARY SEDIMENT BASIN	⊕ SB1
SILT FENCE - TYPE A	⊕ SFA
SILT FENCE - TYPE B	⊕ SFB
SILT FENCE - TYPE C	⊕ SFC
STORM DRAIN OUTLET PROTECTION	⊕ ST
SURFACE ROUGHENING	⊕ SU
DISTURBED AREA STABILIZATION - TEMPORARY STABILIZATION	⊕ TSS1
DISTURBED AREA STABILIZATION - TEMPORARY GRASSING	⊕ TSS2
DISTURBED AREA STABILIZATION - PERMANENT GRASSING	⊕ TSS3
MATTING/BLANKETS	⊕ Mb

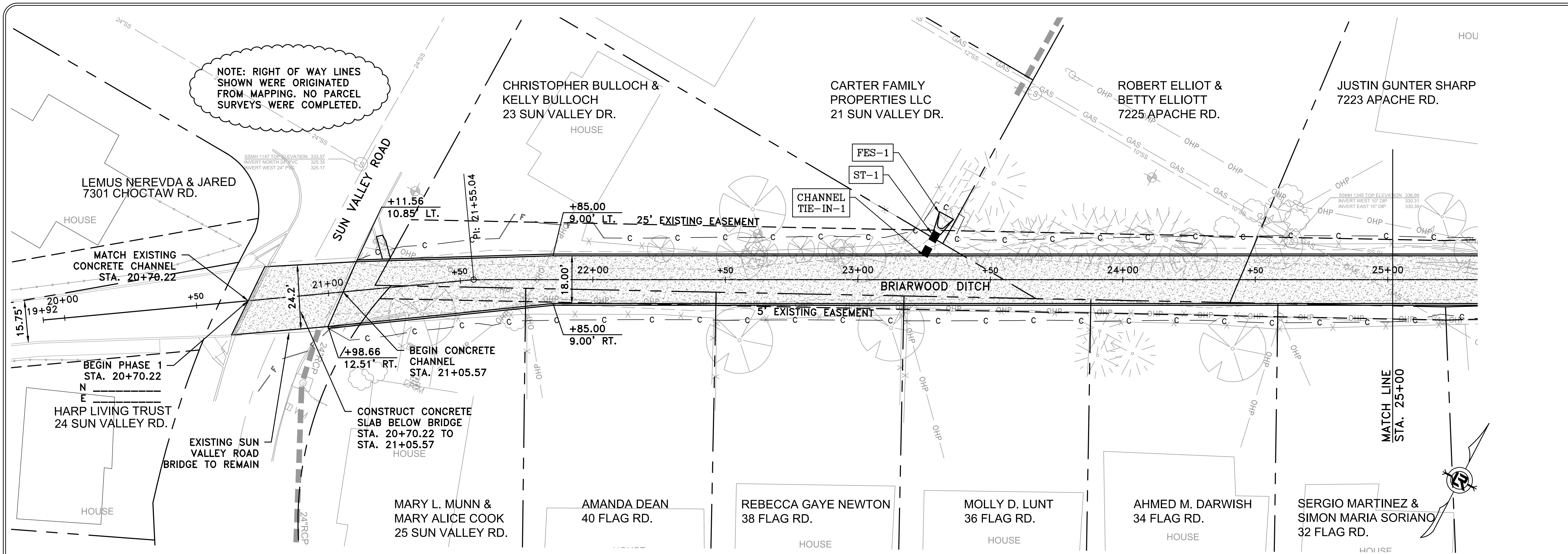
REVISIONS	DATE

CITY OF LITTLE ROCK, ARKANSAS
BRIARWOOD AREA DRAINAGE IMPROVEMENTS
QUANTITIES & DETAILS

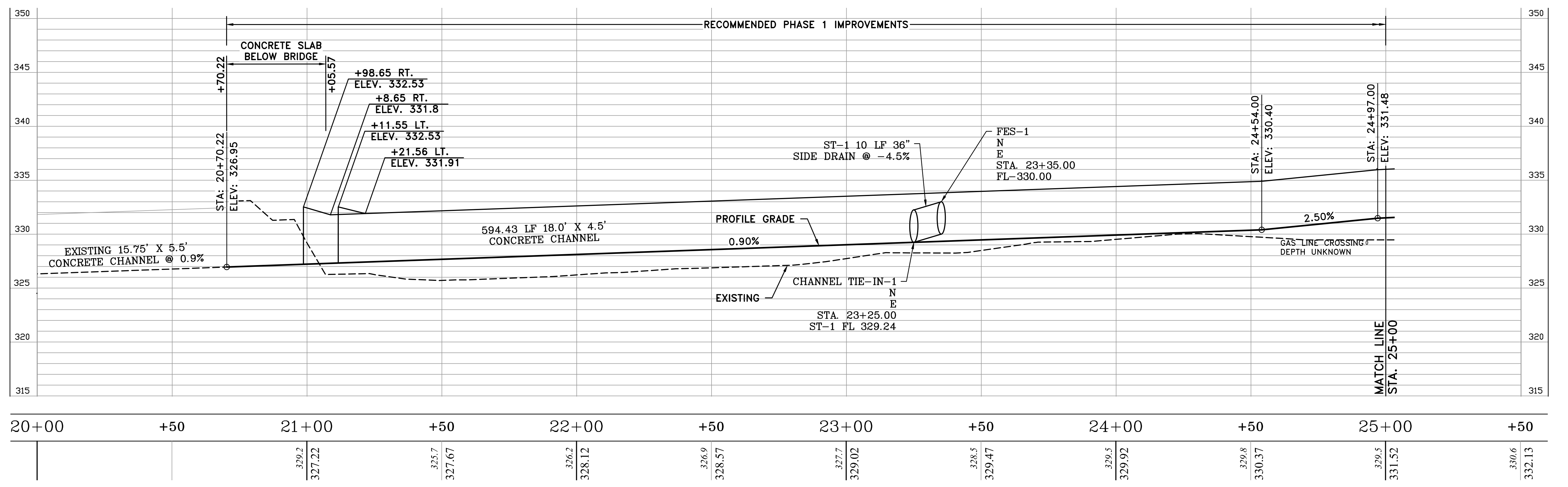
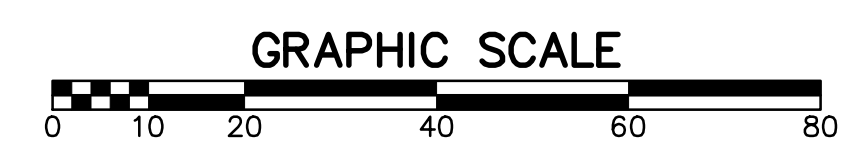
DEPARTMENT OF PUBLIC WORKS
CIVIL ENGINEERING
701 W. MARKHAM
LITTLE ROCK, ARKANSAS 72201



DRAWN BY MJM
DESIGNED RCC
CHECKED RCC
DATE 7-10-2019
SCALE N.T.S.
PROJECT NO. 03-17-DR-235
SHEET NO. C2



NOTE: RIGHT OF WAY LINES SHOWN WERE ORIGINATED FROM MAPPING. NO PARCEL SURVEYS WERE COMPLETED.

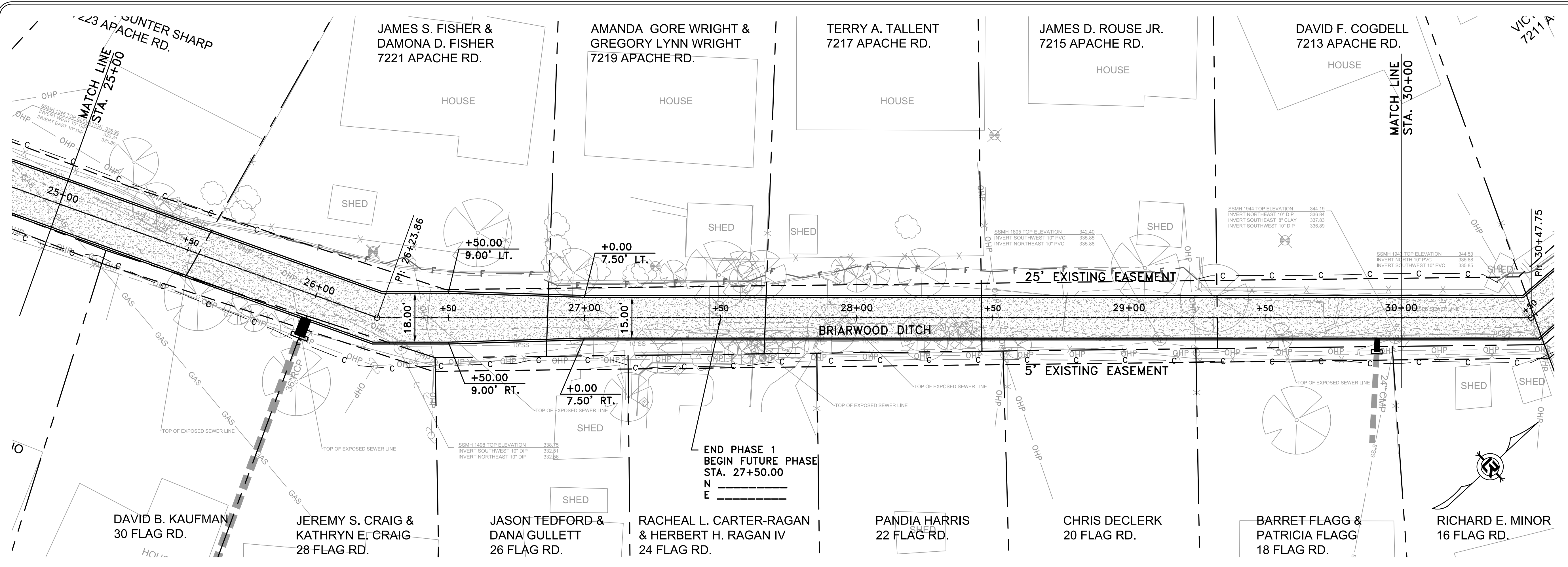


REVISIONS	DATE

CITY OF LITTLE ROCK, ARKANSAS
 BRIARWOOD AREA DRAINAGE IMPROVEMENTS
 BRIARWOOD DITCH 1
 PLAN & PROFILE - STA. 20+00 TO 25+50

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

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 MJM
 DESIGNED
 RCC
 CHECKED
 RCC
 DATE
 7-10-2019
 SCALE
 H: 1"=20'
 V: 1"=5'
 PROJECT NO.
 03-17-DR-235
 SHEET NO.
 C3



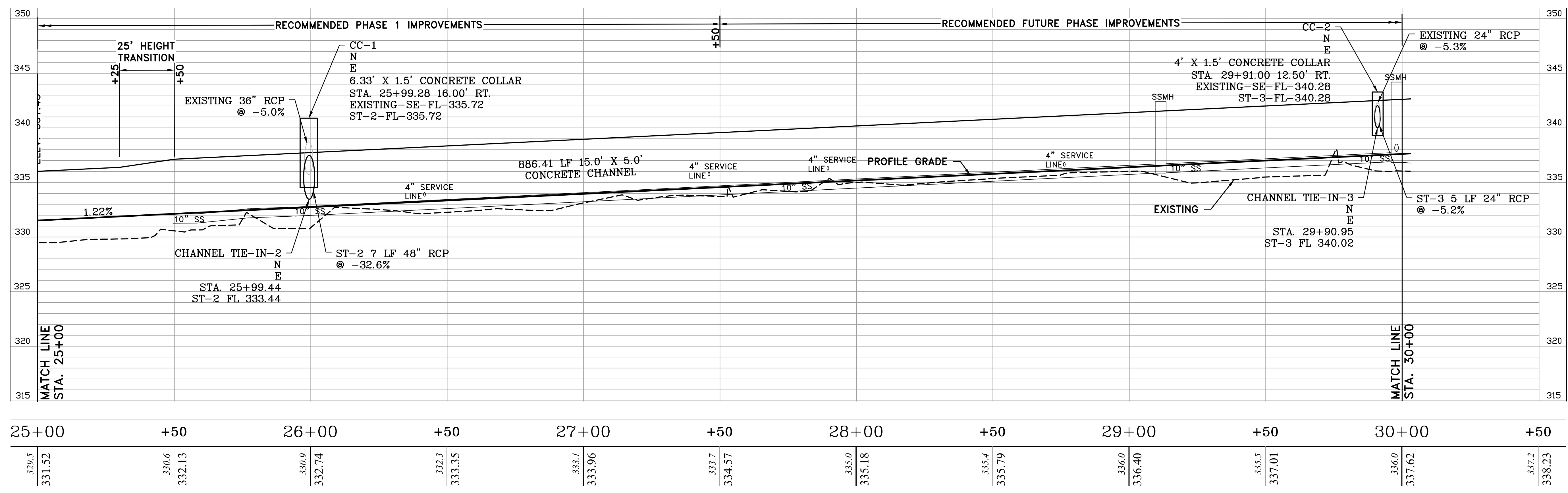
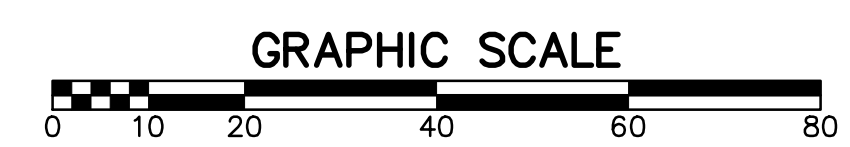
REVISIONS	DATE

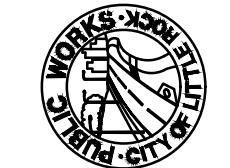
CITY OF LITTLE ROCK, ARKANSAS

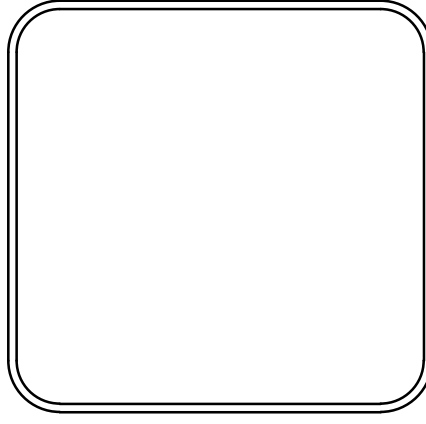
BRIARWOOD AREA DRAINAGE IMPROVEMENTS

BRIARWOOD DITCH 2

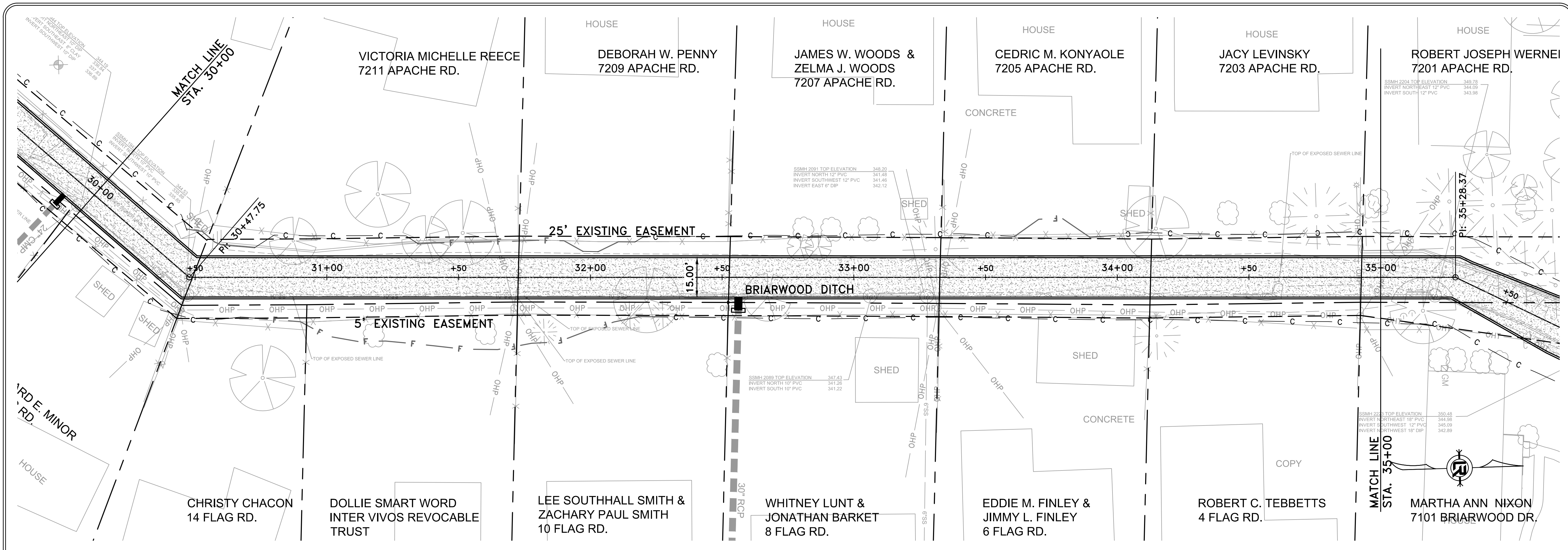
PLAN & PROFILE - STA. 25+00 TO 30+00




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



DRAWN BY
 MJM
 DESIGNED
 RCC
 CHECKED
 RCC
 DATE
 7-10-2019
 SCALE
 H: 1"=20'
 V: 1"=5'
 PROJECT NO.
 03-17-DR-235
 SHEET NO.
C4




REVISIONS	DATE

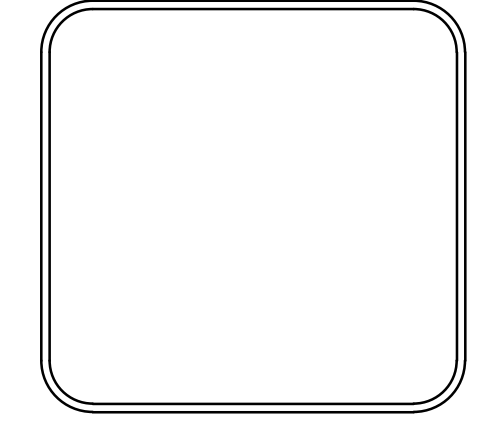
CITY OF LITTLE ROCK, ARKANSAS

BRIARWOOD AREA DRAINAGE IMPROVEMENTS

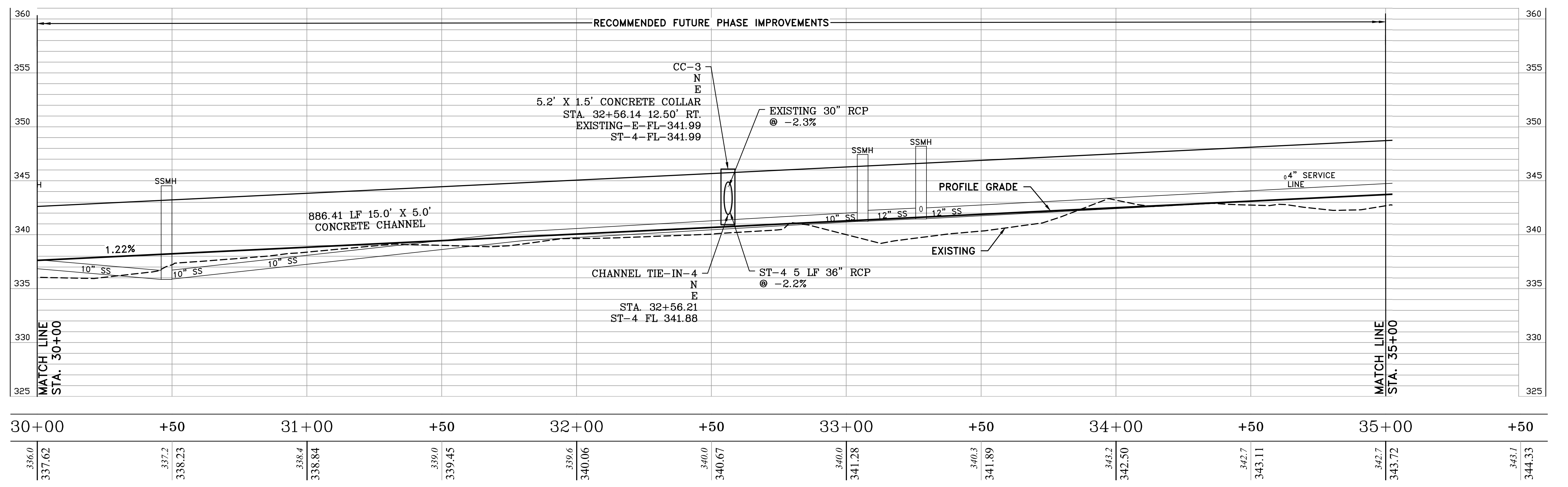
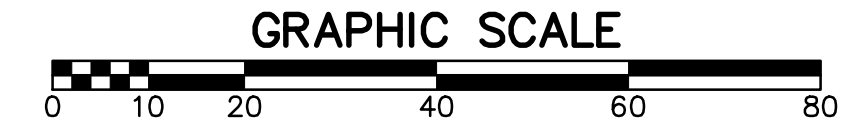
BRIARWOOD DITCH 3

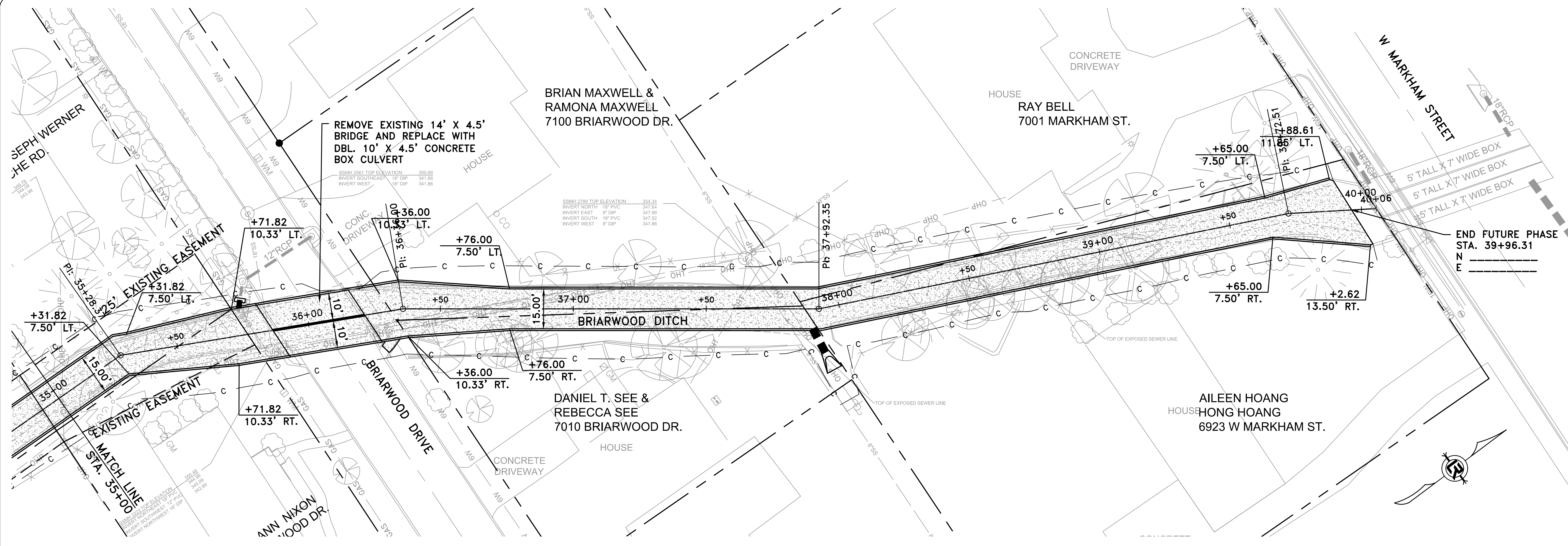
PLAN & PROFILE - STA. 30+00 TO 35+50


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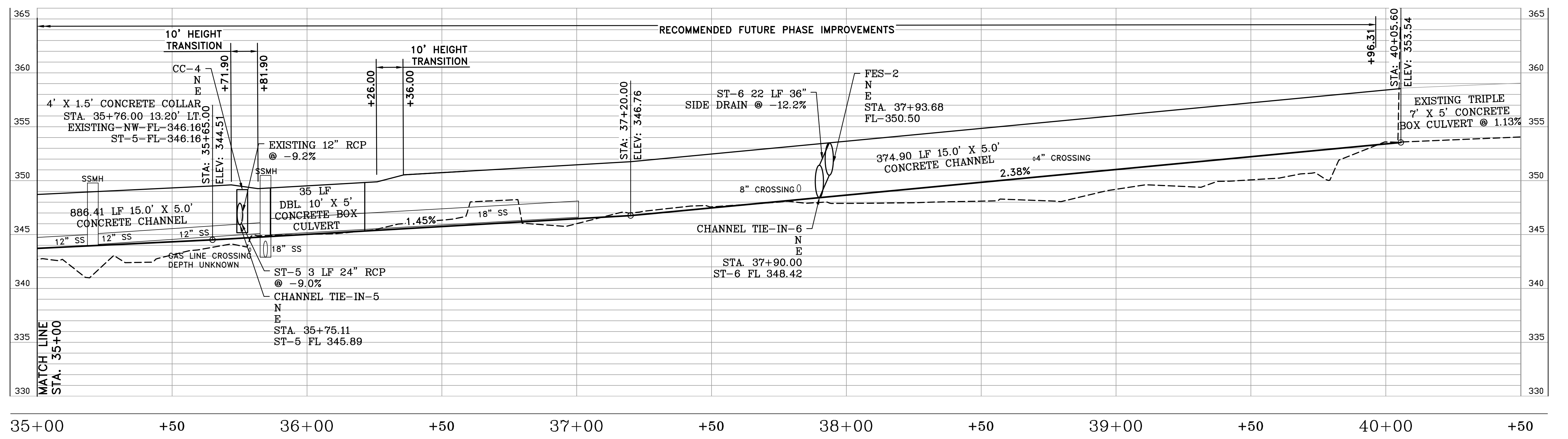
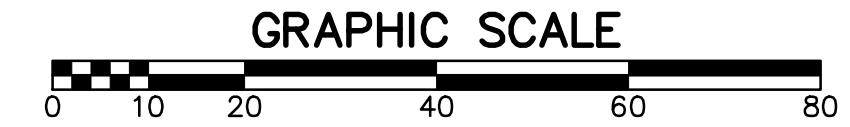
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 MJM
 DESIGNED
 RCC
 CHECKED
 RCC
 DATE
 7-10-2019
 SCALE
 H: 1"=20'
 V: 1"=5'
 PROJECT NO.
 03-17-DR-235
 SHEET NO.
C5





REVISIONS	DATE

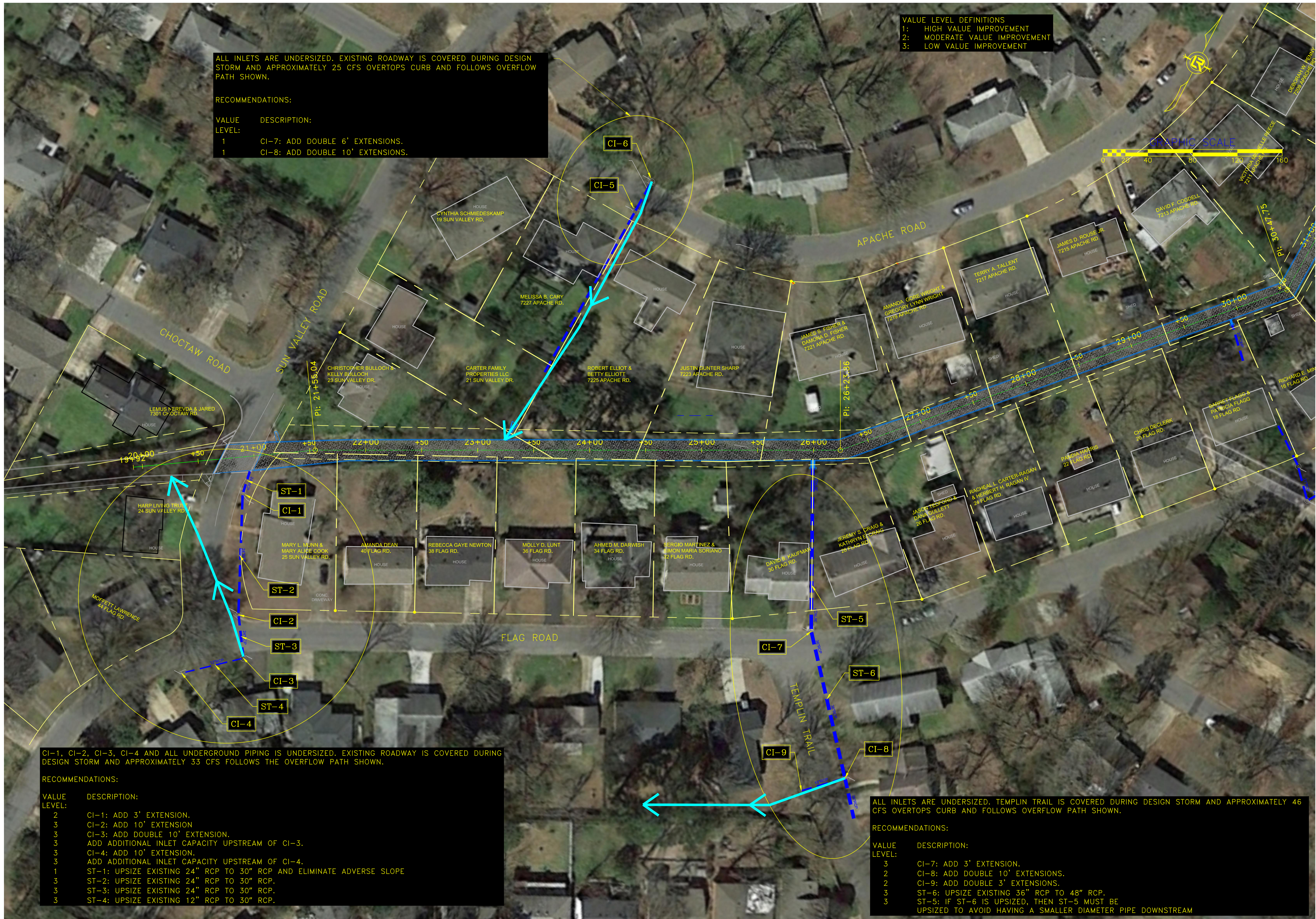
CITY OF LITTLE ROCK, ARKANSAS
 BRIARWOOD AREA DRAINAGE IMPROVEMENTS
 BRIARWOOD DITCH 4
 PLAN & PROFILE - STA. 35+00 TO 40+50



342.7	343.72	343.7	344.33	345.0	345.02	346.3	345.74	346.0	346.47	347.6	347.47	347.9	348.66	348.7	349.84	349.2	351.03	350.7	352.22	353.6	353.41
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DEPARTMENT OF PUBLIC WORKS
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 701 W. MARKHAM
 LITTLE ROCK, ARKANSAS 72201

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 MJM
 DESIGNED
 RCC
 CHECKED
 RCC
 DATE
 7-10-2019
 SCALE
 H: 1"=20'
 V: 1"=5'
 PROJECT NO.
 03-17-DR-235
 SHEET NO.
 C6



VALUE LEVEL DEFINITIONS
 1: HIGH VALUE IMPROVEMENT
 2: MODERATE VALUE IMPROVEMENT
 3: LOW VALUE IMPROVEMENT

ALL INLETS ARE UNDERSIZED. EXISTING ROADWAY IS COVERED DURING DESIGN STORM AND APPROXIMATELY 25 CFS OVERTOPS CURB AND FOLLOWS OVERFLOW PATH SHOWN.

RECOMMENDATIONS:

VALUE LEVEL:	DESCRIPTION:
1	CI-7: ADD DOUBLE 6' EXTENSIONS.
1	CI-8: ADD DOUBLE 10' EXTENSIONS.



CI-1, CI-2, CI-3, CI-4 AND ALL UNDERGROUND PIPING IS UNDERSIZED. EXISTING ROADWAY IS COVERED DURING DESIGN STORM AND APPROXIMATELY 33 CFS FOLLOWS THE OVERFLOW PATH SHOWN.

RECOMMENDATIONS:

VALUE LEVEL:	DESCRIPTION:
2	CI-1: ADD 3' EXTENSION.
3	CI-2: ADD 10' EXTENSION
3	CI-3: ADD DOUBLE 10' EXTENSION.
3	ADD ADDITIONAL INLET CAPACITY UPSTREAM OF CI-3.
3	CI-4: ADD 10' EXTENSION.
3	ADD ADDITIONAL INLET CAPACITY UPSTREAM OF CI-4.
1	ST-1: UPSIZE EXISTING 24" RCP TO 30" RCP AND ELIMINATE ADVERSE SLOPE
3	ST-2: UPSIZE EXISTING 24" RCP TO 30" RCP.
3	ST-3: UPSIZE EXISTING 24" RCP TO 30" RCP.
3	ST-4: UPSIZE EXISTING 12" RCP TO 30" RCP.

ALL INLETS ARE UNDERSIZED. TEMPLIN TRAIL IS COVERED DURING DESIGN STORM AND APPROXIMATELY 46 CFS OVERTOPS CURB AND FOLLOWS OVERFLOW PATH SHOWN.

RECOMMENDATIONS:

VALUE LEVEL:	DESCRIPTION:
3	CI-7: ADD 3' EXTENSION.
2	CI-8: ADD DOUBLE 10' EXTENSIONS.
2	CI-9: ADD DOUBLE 3' EXTENSIONS.
3	ST-6: UPSIZE EXISTING 36" RCP TO 48" RCP.
3	ST-5: IF ST-6 IS UPSIZED, THEN ST-5 MUST BE UPSIZED TO AVOID HAVING A SMALLER DIAMETER PIPE DOWNSTREAM

REVISIONS	DATE

CITY OF LITTLE ROCK, ARKANSAS
 BRIARWOOD AREA DRAINAGE IMPROVEMENTS
 LOCAL DRAINAGE IMPROVEMENTS 1
 PLAN - STA. 20+00 TO 30+00

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

DRAWN BY
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 DESIGNED
 RCC
 CHECKED
 RCC
 DATE
 7-10-2019
 SCALE
 1"=40'
 PROJECT NO.
 03-17-DR-235
 SHEET NO.
 C7



VALUE LEVEL DEFINITIONS
 1: HIGH VALUE IMPROVEMENT
 2: MODERATE VALUE IMPROVEMENT
 3: LOW VALUE IMPROVEMENT

THERE IS INSUFFICIENT INLET CAPACITY ON THE NORTH SIDE OF BRIARWOOD DRIVE AND ALL UNDERGROUND PIPING IS UNDERSIZED. BRIARWOOD DRIVE IS COVERED DURING DESIGN STORM AND APPROXIMATELY 10 CFS OVERTOPS CURB AND FOLLOWS OVERFLOW PATH SHOWN.

RECOMMENDATIONS:

VALUE LEVEL:	DESCRIPTION:
2	ADD ADDITIONAL UPSTREAM INLET CAPACITY.
2	ST-10: UPSIZE EXISTING 12" RCP TO 24" RCP.
2	ST-11: UPSIZE EXISTING 12" RCP TO 24" RCP.

ALL INLETS ARE UNDERSIZED. EXISTING ROADWAY IS COVERED DURING DESIGN STORM AND APPROXIMATELY 25 CFS OVERTOPS CURB AND FOLLOWS OVERFLOW PATH SHOWN.

RECOMMENDATIONS:

VALUE LEVEL:	DESCRIPTION:
1	CI-11: ADD DOUBLE 10' EXTENSIONS.
2	CI-10: ADD 3' EXTENSION.
3	CI-12: ADD DOUBLE 10' EXTENSIONS.

CI-14, CI-15, AND UNDERGROUND PIPING IS UNDERSIZED. FLAG ROAD IS COVERED DURING DESIGN STORM AND APPROXIMATELY 37 CFS OVERTOPS CURB AND FOLLOWS OVERFLOW PATH SHOWN.

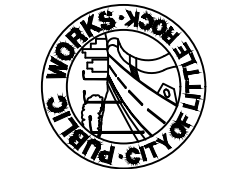
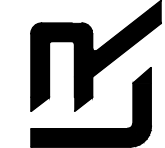
RECOMMENDATIONS:

VALUE LEVEL:	DESCRIPTION:
1	CI-13: ADD DOUBLE 3' EXTENSIONS.
1	CI-14: ADD DOUBLE 10' EXTENSIONS.
1	CI-15: ADD DOUBLE 10' EXTENSIONS.
1	ADD ADDITIONAL INLET CAPACITY UPSTREAM OF CI-15.
1	ST-7: UPSIZE EXISTING 30" RCP TO 36" RCP.
1	ST-8: UPSIZE EXISTING 30" TO 36" RCP.
2	ST-9: UPSIZE EXISTING 21" RCP TO 30" RCP.

REVISIONS	DATE

CITY OF LITTLE ROCK, ARKANSAS
BRIARWOOD AREA DRAINAGE IMPROVEMENTS
 LOCAL DRAINAGE IMPROVEMENTS 2
 PLAN - STA. 30+00 TO 40+05.86

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

DRAWN BY
 MJM
DESIGNED
 RCC
CHECKED
 RCC
DATE
 7-10-2019
SCALE
 1"=40'
PROJECT NO.
 03-17-DR-235
SHEET NO.
 C8