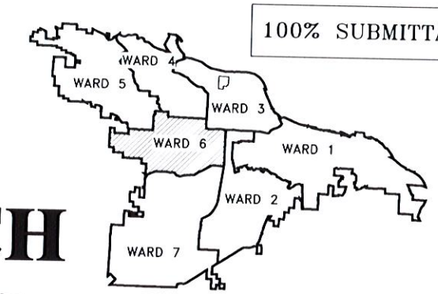
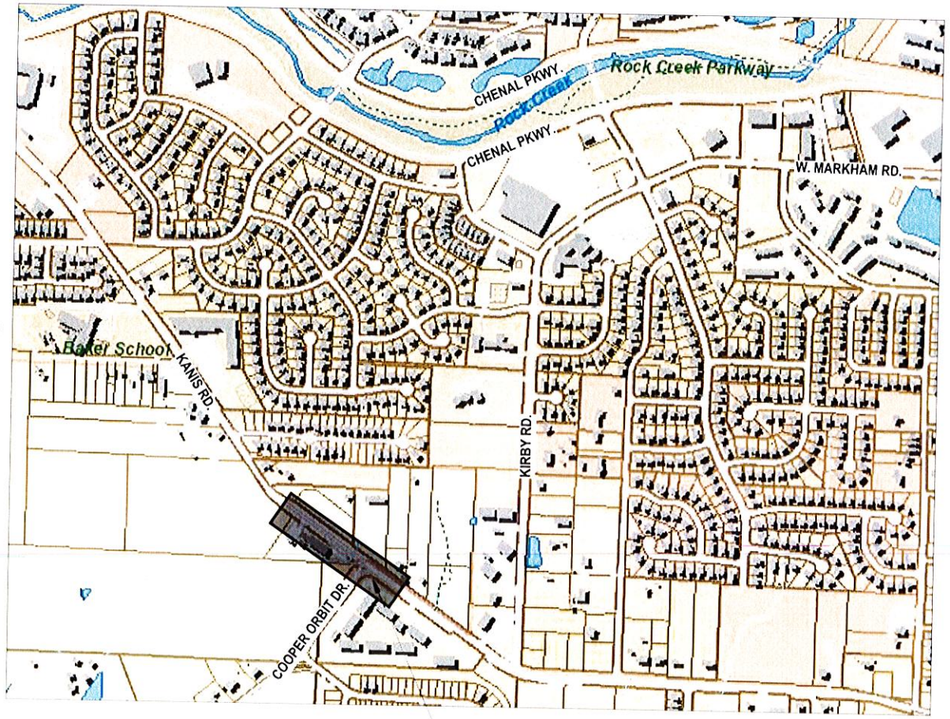
100% SUBMITTAL

PROJECT # 00-22-TR-146
KANIS ROAD AT PANTHER BRANCH INTERSECTION IMPROVEMENTS

(COOPER ORBIT RD. & KANIS RD.)



PROJECT LOCATION – WARD 6



PROJECT LOCATION

LOCATION

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C5	EXISTING CONDITIONS PLAN
C6	KANIS RD. PLAN & PROFILE SHEET
C7	COOPER ORBIT RD. PLAN & PROFILE SHEET
C8	DRIVEWAY PLAN SHEET 1
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T1	MAINTENANCE OF TRAFFIC PHASE I
T2	MAINTENANCE OF TRAFFIC PHASE II
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T5	TRAFFIC SIGNAL STREET NAME SIGNS
T6	SIGNALIZATION PLAN
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T9	WIRE DIAGRAM
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PUBLIC WORKS · CITY OF LITTLE ROCK ·

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

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

TEC A CLEAR DIRECTION
Traffic Engineering Consultants, Inc.
217 E. Dickson St., Suite 106, Fayetteville, AR 72701, Ph: 479-335-5636, Web: www.tecusa.com
CERTIFICATE OF AUTHORIZATION TRAFFIC ENGINEERING CONSULTANTS, INC. No. 194 ARKANSAS

REVISIONS	DATE

CITY OF LITTLE ROCK, ARKANSAS
KANIS ROAD AT PANTHER BRANCH INTERSECTION IMPROVEMENTS

COVER SHEET

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

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 13224
B. FINLEY VINSON, III

DRAWN BY	AT
DESIGNED	LC
CHECKED	BAP
DATE	03-28-2025
SCALE	NO SCALE
PROJECT NO.	
SHEET NO.	C1

100% SUBMITTAL

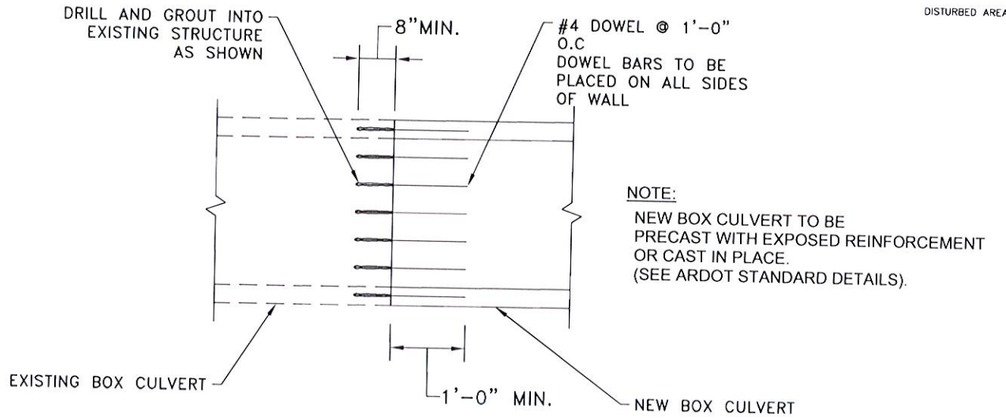
ITEM	DESCRIPTION	QTY	UNIT
2.01	SITE PREPARATION (INCLUDE TREE REMOVAL)	1	L.S.
3.01	UNCLASSIFIED EXCAVATION	63	C.Y.
3.02	SELECT FILL	1103	C.Y.
4.01	AGGREGATE BASE COURSE (CLASS 7)	666	TON
5.01	TACK COAT	63	GAL
6.01	ACHM SURFACE COURSE	140	TON
6.02	ACHM BINDER COURSE	140	TON
7.06	CONCRETE DRIVEWAY (6" THICK), STANDARD FINISH	1285	S.F.
8.03	CONCRETE CURB AND GUTTER (CLASS 3)	382	L.F.
9.04	CONCRETE SIDEWALK (4" THICK)	1950	S.F.
10.01	AREA INLET	1	EA.
10.01	CURB INLET	2	EA.
10.11	3' THROAT EXTENSION	2	EA.
11.01	REINFORCED CONCRETE RETAINING WALL	1480	S.F.
11.02	REINFORCED CONCRETE BOX CULVERT (6'X3')	20	L.F.
11.03	CAST-IN-PLACE CONCRETE	1	C.Y.
13.18S	STORM DRAIN PIPE, 18" SIDE DRAIN	175	L.F.
14.01	SOLID SODDING (BERMUDA, INCLUDED 4" TOPSOIL)	450	S.Y.
16.01	MAINTENANCE OF TRAFFIC	1	L.S.
18.07	HAND RAILING	350	L.F.
18.09	ACCESS RAMP (TYPE 3)	36	S.Y.
18.10	WATER FOR DUST CONTROL	3,000	GAL
19.01	FINAL CLEAN UP	1	L.S.
24.01	CONSTRUCTION ENTRANCE (CO)	1	EA.
24.02	CHECK DAM	6	C.Y.
24.06	FILTER SOCK (12")	40	L.F.
24.01	SILT FENCE - TYPE A (SFA)	1425	L.F.

EXISTING

- IRON ROD — O IR
- PK NAIL — O PK
- R.R. SPIKE — O 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)
- SIGN POST
- BENCHMARK
- STORM SEWER MANHOLE — D
- SANITARY SEWER MANHOLE — S
- TELEPHONE MANHOLE — T
- ELECTRIC MANHOLE — E
- TELEPHONE BOX — T
- ELECTRIC BOX — E
- CABLE BOX — C
- 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
- OVERHEAD ELECTRIC — OE
- OVERHEAD TELEPHONE — OT
- OVERHEAD CABLE — OC
- UNDERGROUND TELEPHONE — UGT
- UNDERGROUND ELECTRIC — UGE
- UNDERGROUND CABLE — UGC
- WATER LINE — W
- SEWER LINE — S
- GAS LINE — G
- STORM SEWER/CULVERT — 24" CMP/RCP/DIP
- EDGE OF WOODS
- CONTOUR LINE — 650

PROPOSED

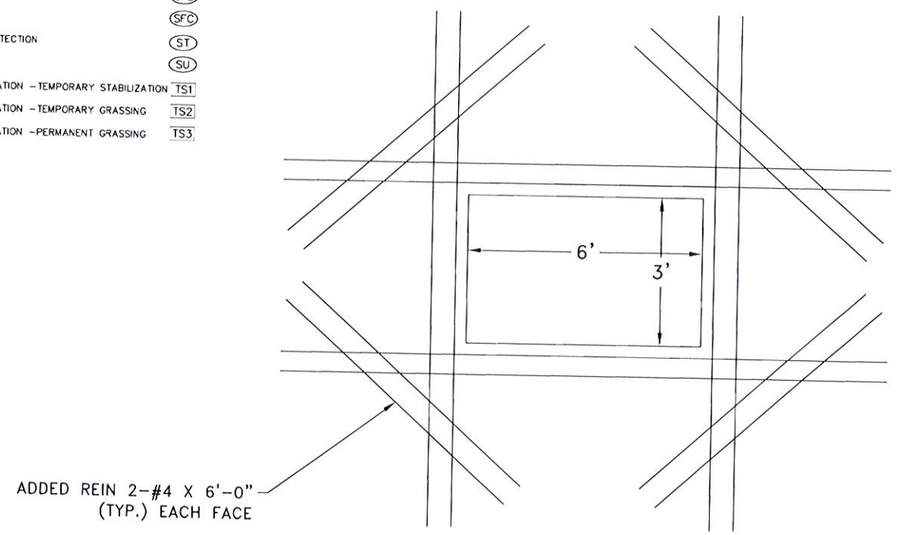
- PROPOSED CONTOUR — 25
- PROPOSED SPOT ELEVATION — 25.00
- PROPOSED SPOT CURB ELEVATION — 25.50 / 25.00
- STORM SEWER – PIPE
- STORM SEWER – MITERED END SECTION
- STORM SEWER – GRATE INLET
- STORM SEWER – JUNCTION BOX — D D
- STORM SEWER – FLARED END SECTION
- STORM SEWER – HEADWALL
- STORM SEWER – SINGLE WING — D
- STORM SEWER – DOUBLE WING — D
- STORM SEWER – AREA INLET — D
- GRADE BREAK LINE
- HIGH POINT — HP
- LOW POINT — LP
- CUT LINE — C
- FILL LINE — F
- SANITARY SEWER PIPE — SAN
- SANITARY SEWER MANHOLE — S
- PROPOSED CURB
- PROPOSED 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 — TS1
- DISTURBED AREA STABILIZATION –TEMPORARY GRASSING — TS2
- DISTURBED AREA STABILIZATION –PERMANENT GRASSING — TS3



NOTE:
NEW BOX CULVERT TO BE PRECAST WITH EXPOSED REINFORCEMENT OR CAST IN PLACE.
(SEE ARDOT STANDARD DETAILS).

EXISTING BOX CULVERT EXTENSION
NTS

NOTES:
1. TYP. VERT. & HORIZ. WALL REINFORCEMENT NOT SHOWN FOR CLARITY.
2. HALF OF REINFORCEMENT IN OPEN ADDED TO EACH SIDE OF OPENING.



WALL PENETRATION OF CONCRETE BOX
NTS

REVISIONS	DATE

CITY OF LITTLE ROCK, ARKANSAS
KANIS ROAD AT PANTHER BRANCH
INTERSECTION IMPROVEMENTS

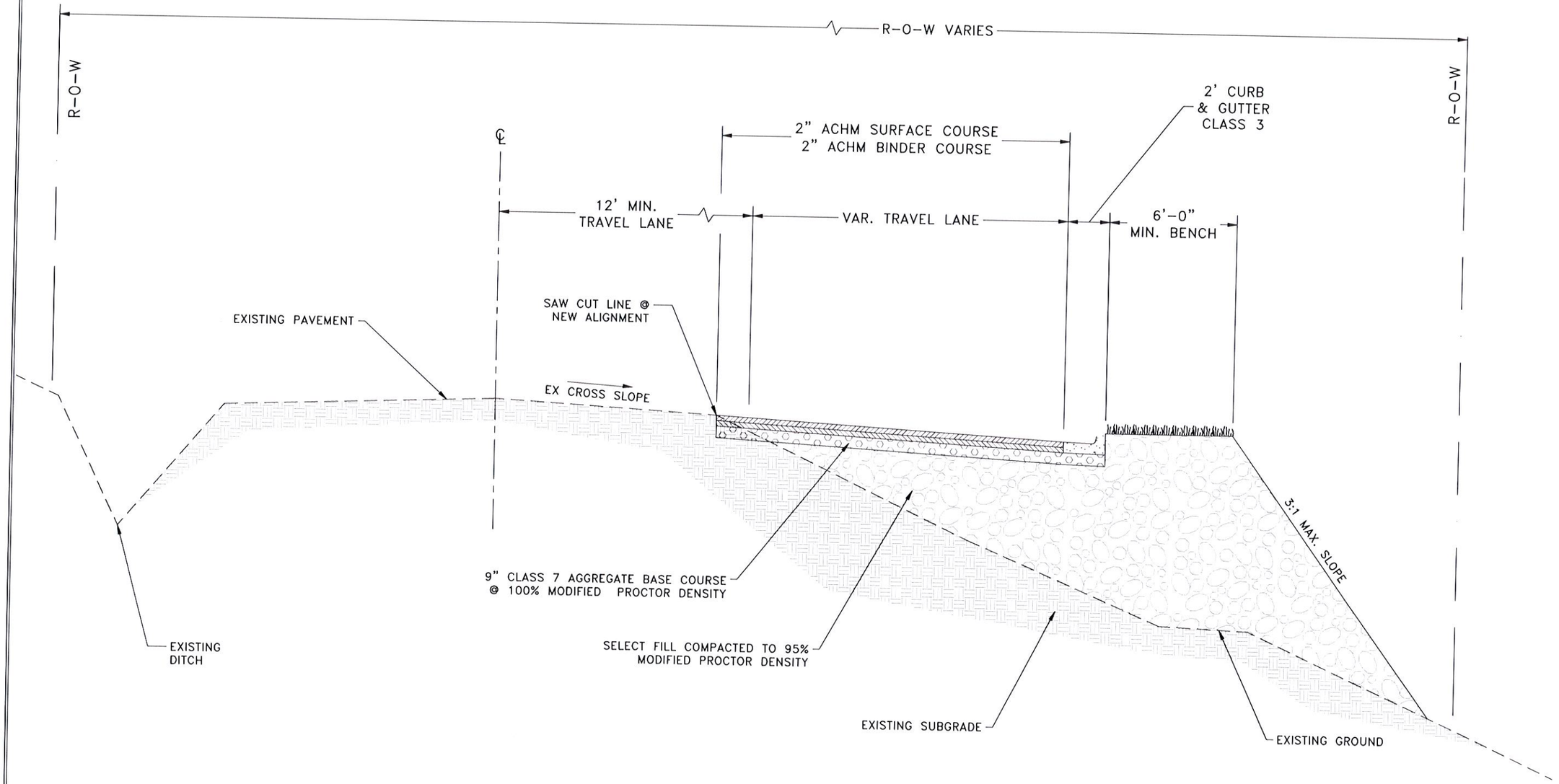
LEGEND, QUANTITIES, & DETAILS SHEET

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

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 13217
BRADLEY A. PETERSON
4/2/25

DRAWN BY	AT
DESIGNED	LC
CHECKED	BAP
DATE	03-28-2025
SCALE	NO SCALE
PROJECT NO.	
SHEET NO.	C2

100% SUBMITTAL



TYPICAL SECTION - KANIS ROAD

Sta 11+00.00 to Sta. 11+09.85

Transition Cross-Slope to Match Existing for first 50' and last 50' of Street.

REVISIONS	DATE

CITY OF LITTLE ROCK, ARKANSAS
KANIS ROAD AT PANTHER BRANCH
INTERSECTION IMPROVEMENTS

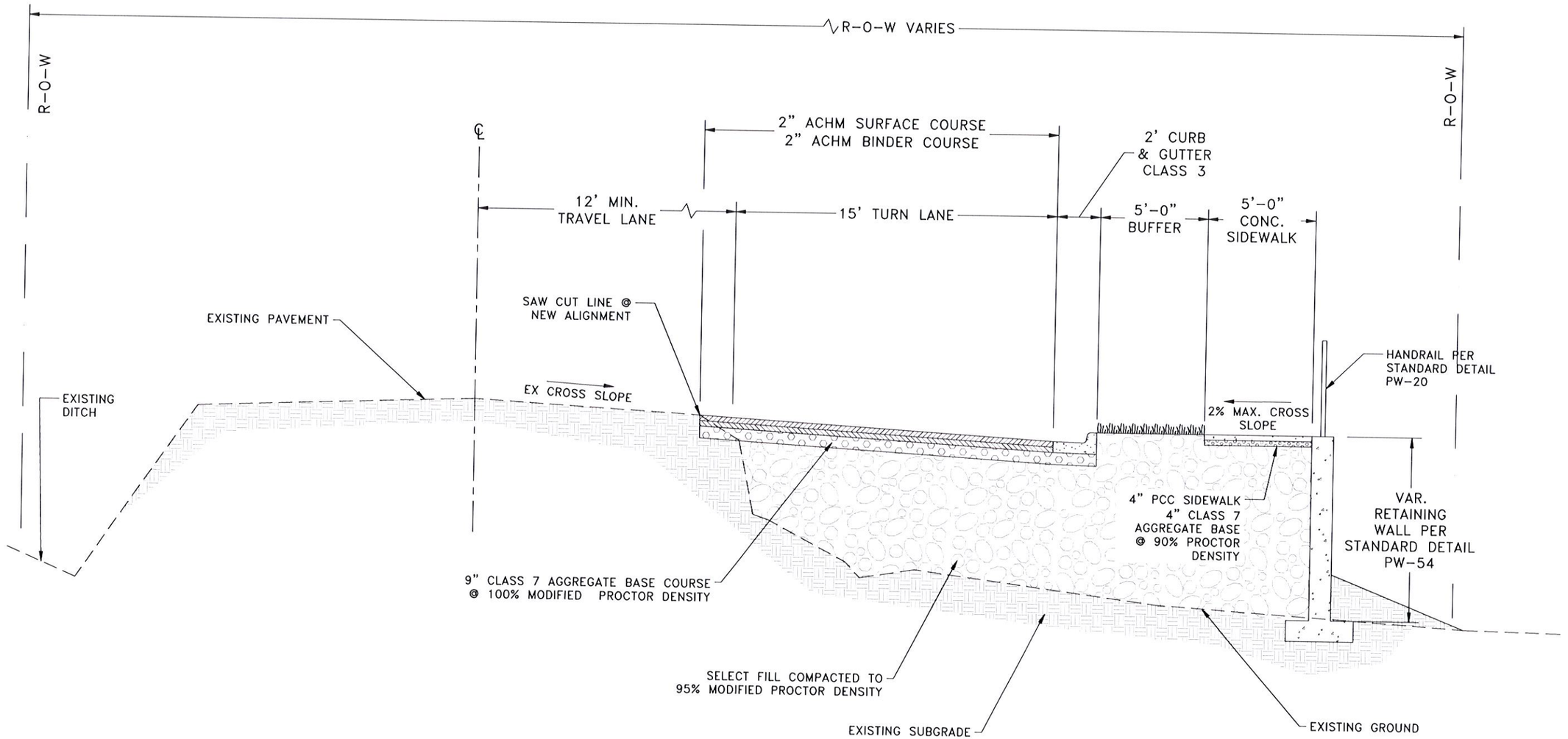
TYPICAL SECTION SHEET 1

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

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 13217
BRADLEY A. PETERSEN
4/2/25

DRAWN BY	AT
DESIGNED	LC
CHECKED	BAP
DATE	03-28-2025
SCALE	NO SCALE
PROJECT NO.	
SHEET NO.	C3

100% SUBMITTAL



TYPICAL SECTION - KANIS ROAD

Sta 11+09.85 to Sta. 15+.39

Transition Cross-Slope to Match Existing for first 50' and last 50' of Street.

REVISIONS	DATE

CITY OF LITTLE ROCK, ARKANSAS
KANIS ROAD AT PANTHER BRANCH
INTERSECTION IMPROVEMENTS

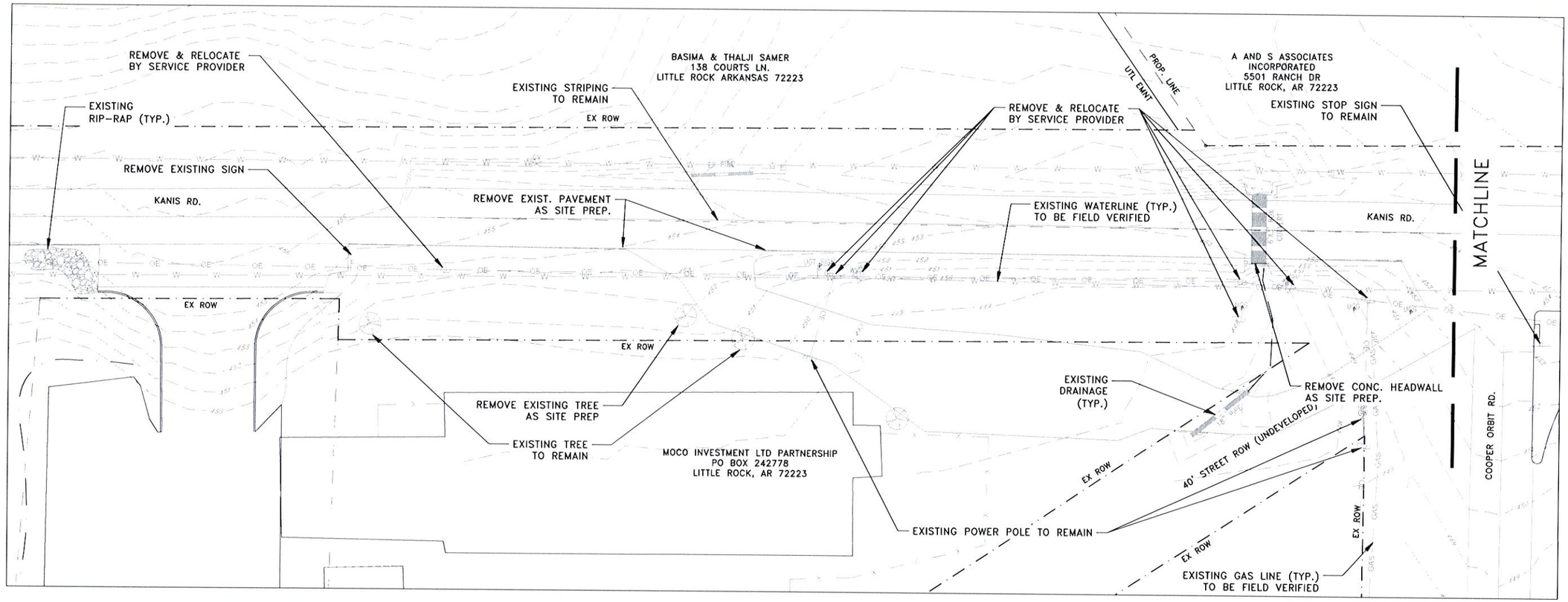
TYPICAL SECTION SHEET 2

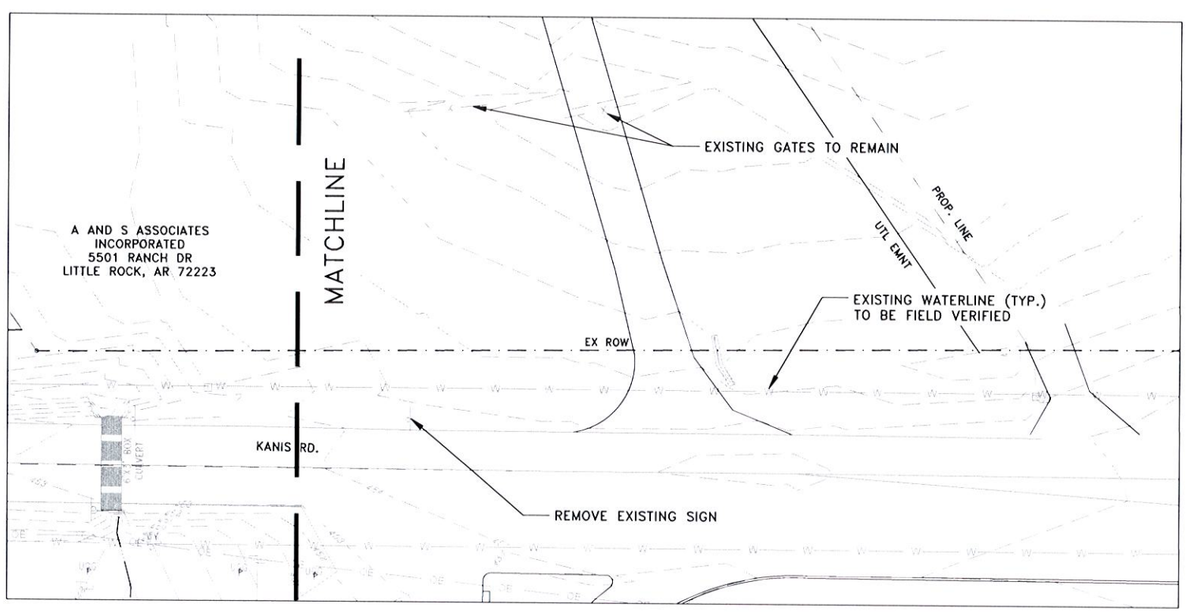
DEPARTMENT OF PUBLIC WORKS
CIVIL ENGINEERING
701 W. MARKHAM
LITTLE ROCK, ARKANSAS 72201

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 13217
BRADLEY A. PETERSON
4/2/25

DRAWN BY	AT
DESIGNED	LC
CHECKED	BAP
DATE	03-28-2025
SCALE	NO SCALE
PROJECT NO.	
SHEET NO.	C4

100% SUBMITTAL





GRAPHIC SCALE
0 10 20 40 60 80

REVISIONS	DATE

CITY OF LITTLE ROCK, ARKANSAS
KANIS ROAD AT PANTHER BRANCH
INTERSECTION IMPROVEMENTS

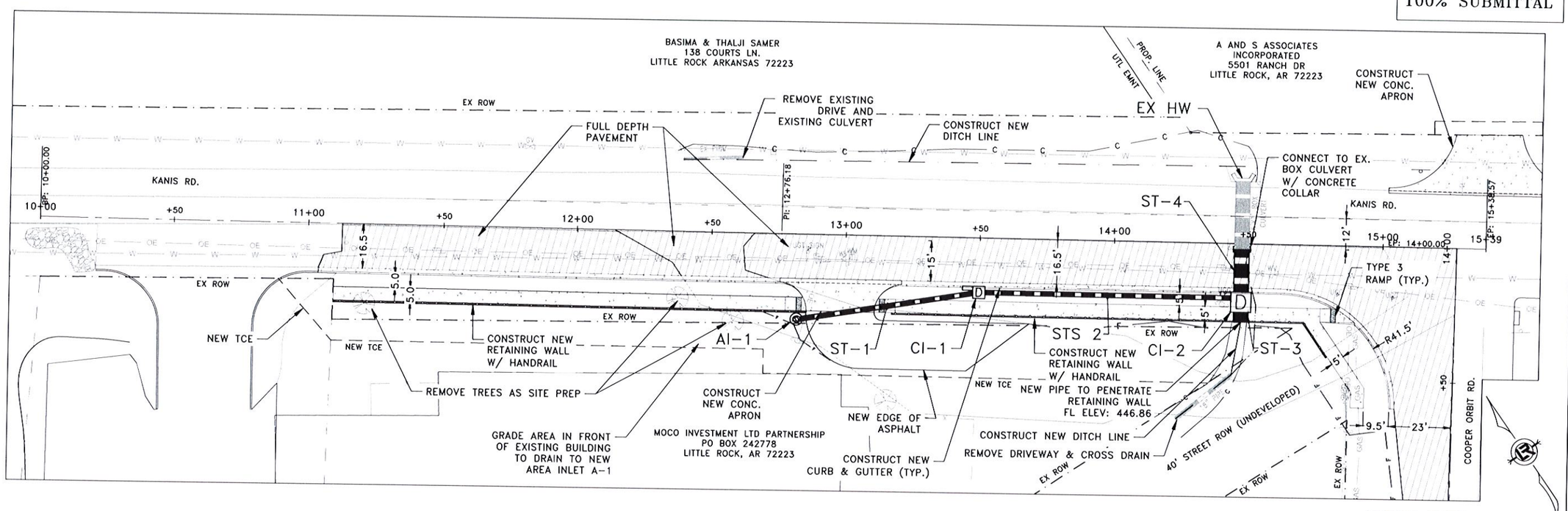
EXISTING CONDITIONS PLAN

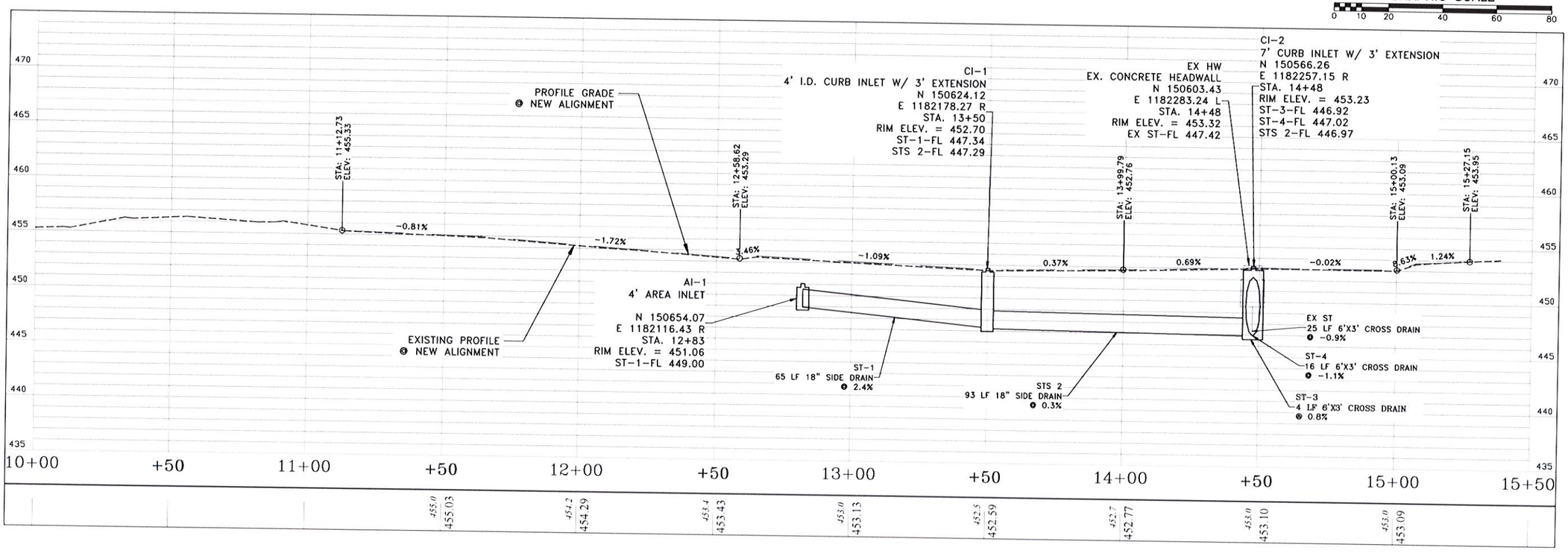
DEPARTMENT OF PUBLIC WORKS
CIVIL ENGINEERING
701 W. MARKHAM
LITTLE ROCK, ARKANSAS 72201

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 13217
BRADLEY A. PETERSON
4/2/25

DRAWN BY	AT
DESIGNED	LC
CHECKED	BAP
DATE	03-28-2025
SCALE	H: 1"=20' V: 1"=5'
PROJECT NO.	
SHEET NO.	C5

100% SUBMITTAL





REVISIONS	DATE

CITY OF LITTLE ROCK, ARKANSAS
KANIS ROAD AT PANTHER BRANCH
INTERSECTION IMPROVEMENTS

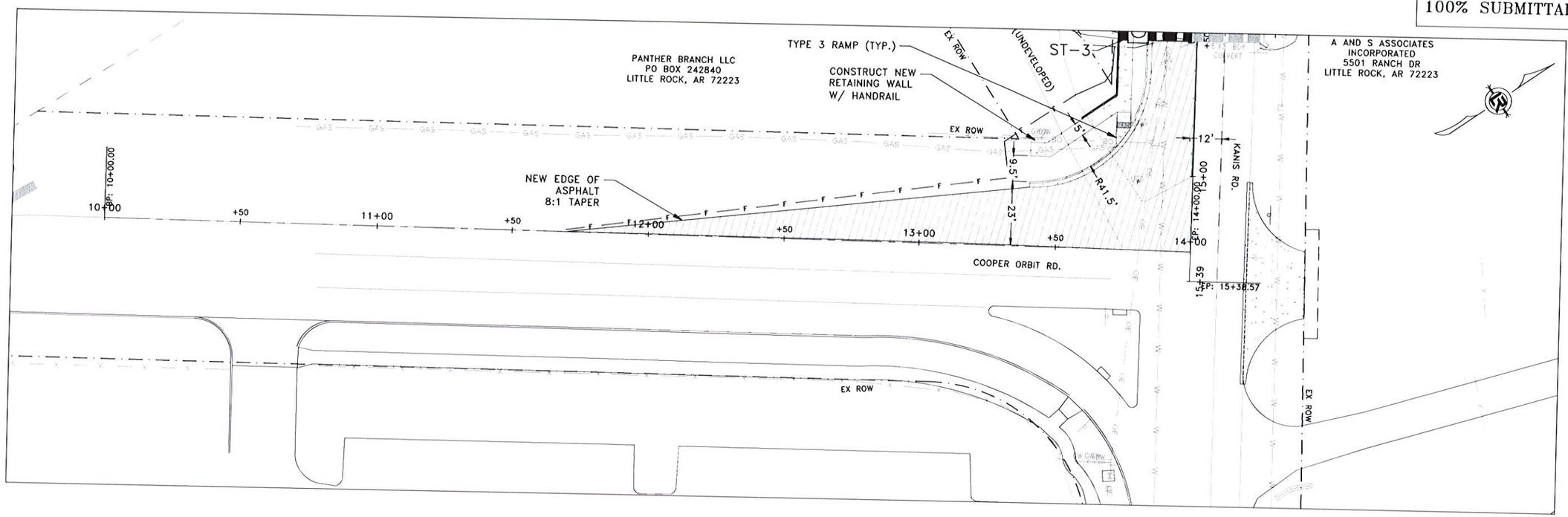
KANIS RD. PLAN & PROFILE

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

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 13217
BRADLEY A. PETERSON
4/2/25

DRAWN BY	AT
DESIGNED	LC
CHECKED	BAP
DATE	03-28-2025
SCALE	H: 1"=20' V: 1"=5'
PROJECT NO.	
SHEET NO.	C6

100% SUBMITTAL



GRAPHIC SCALE
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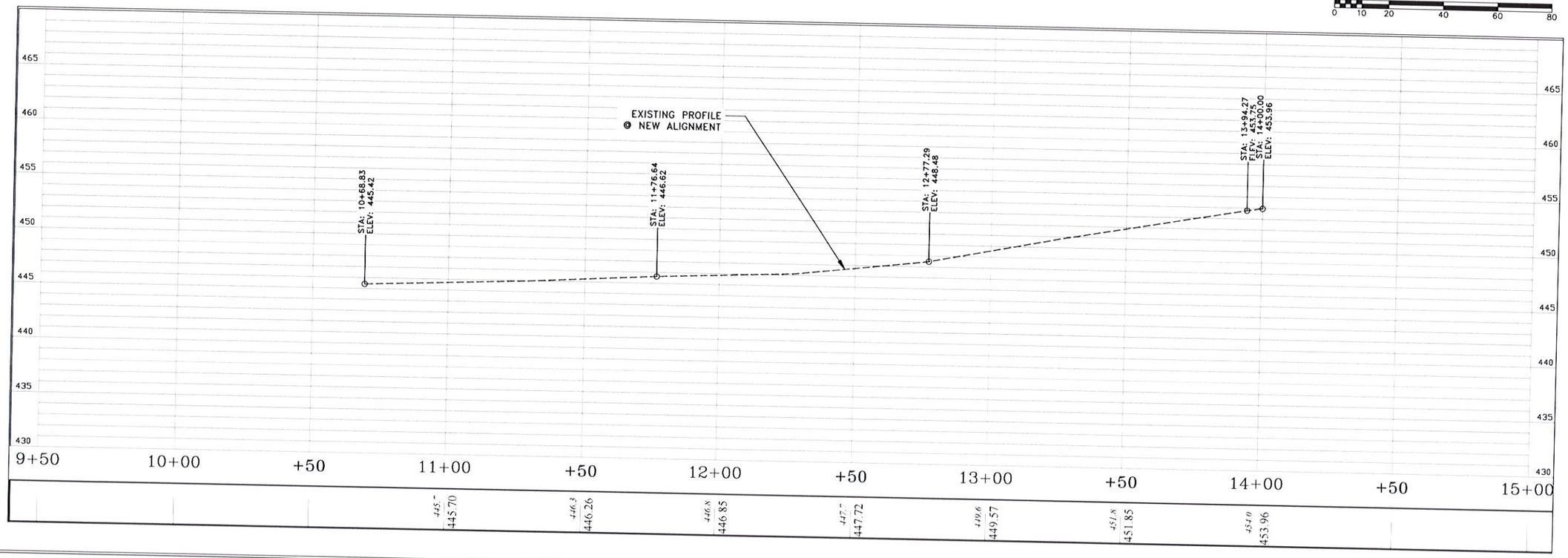


REVISIONS	DATE

CITY OF LITTLE ROCK, ARKANSAS
KANIS ROAD AT PANTHER BRANCH
INTERSECTION IMPROVEMENTS

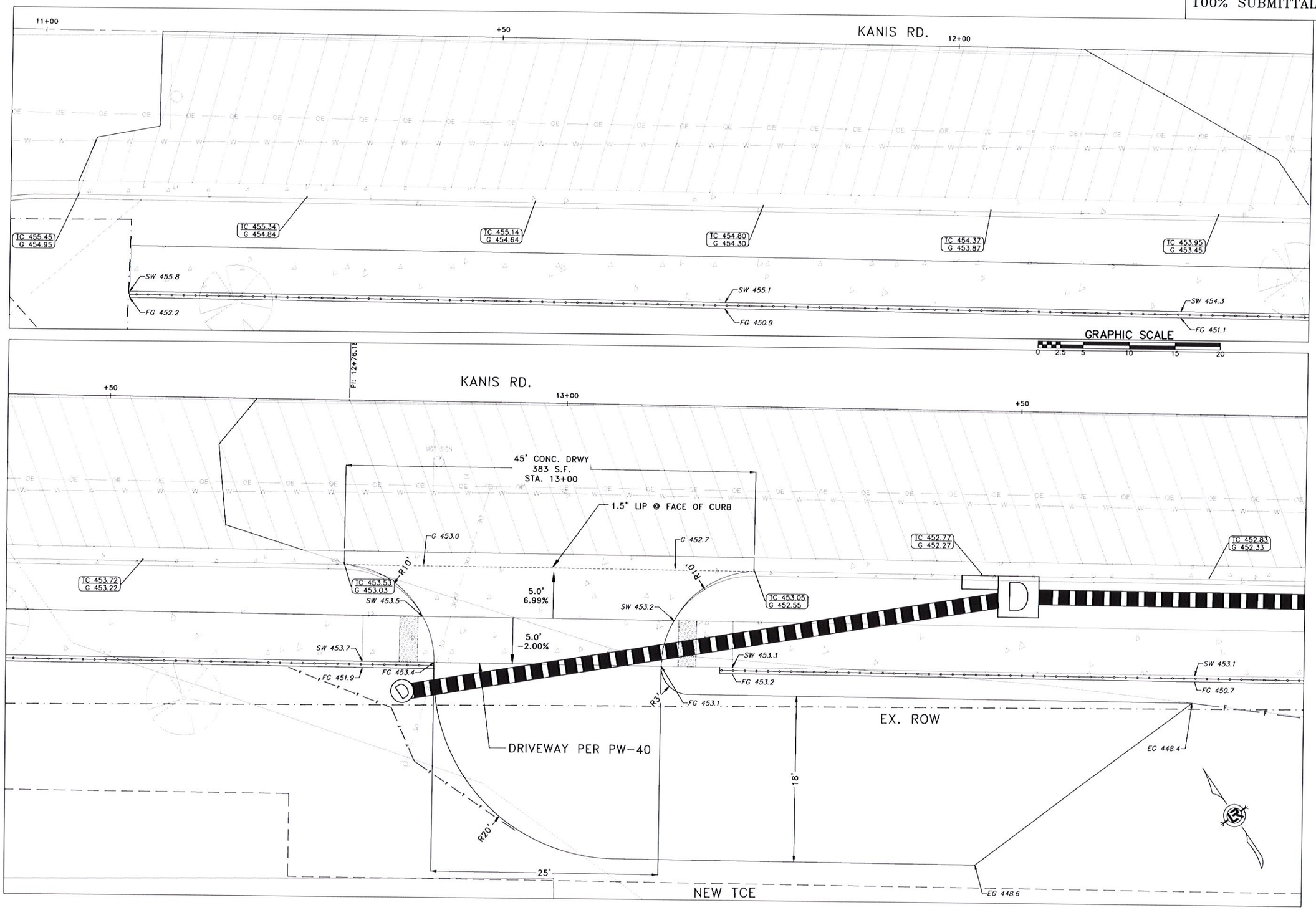
COOPER ORBIT RD. PLAN & PROFILE

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

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 13217
BRADLEY A. PETERSON
4/2/25

DRAWN BY	AT
DESIGNED	LC
CHECKED	BAP
DATE	03-28-2025
SCALE	H: 1"=20' V: 1"=5'
PROJECT NO.	
SHEET NO.	C7

100% SUBMITTAL



REVISIONS	DATE

CITY OF LITTLE ROCK, ARKANSAS
KANIS ROAD AT PANTHER BRANCH
INTERSECTION IMPROVEMENTS

DRIVEWAY PLAN SHEET 1

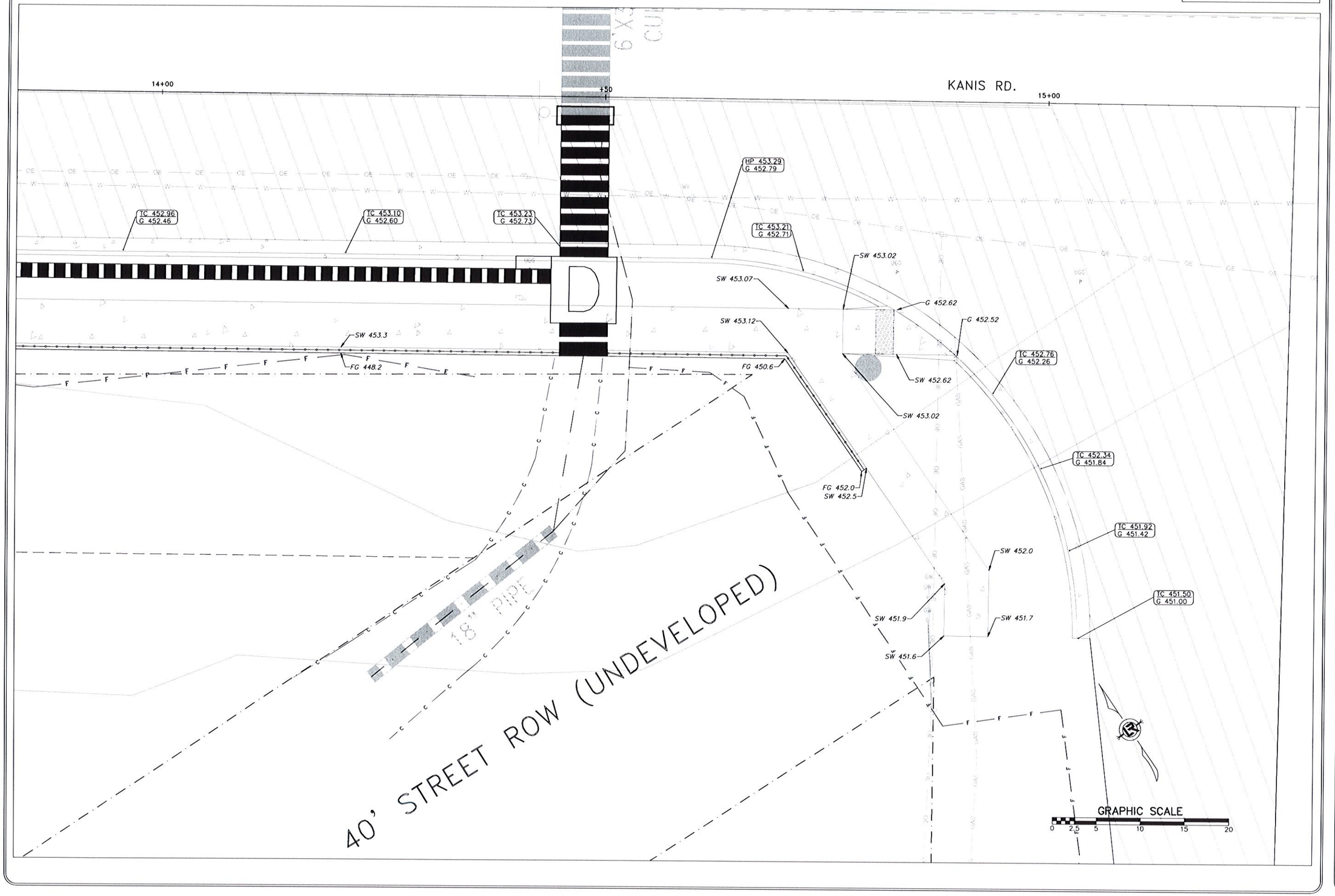
DEPARTMENT OF PUBLIC WORKS
CIVIL ENGINEERING
701 W. MARKHAM
LITTLE ROCK, ARKANSAS 72201

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 13217
BRADLEY A. PETERSON
4/2/25

DRAWN BY	AT
DESIGNED	LC
CHECKED	BAP
DATE	03-28-2025
SCALE	H: 1"=20' V: 1"=5'
PROJECT NO.	
SHEET NO.	C8

100% SUBMITTAL

REVISIONS	DATE



CITY OF LITTLE ROCK, ARKANSAS
KANIS ROAD AT PANTHER BRANCH
INTERSECTION IMPROVEMENTS

DRIVEWAY PLAN SHEET 2

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

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 13217
BRADLEY A. PETERSON
4/2/25

DRAWN BY	AT
DESIGNED	LC
CHECKED	BAP
DATE	03-28-2025
SCALE	H: 1"=20' V: 1"=5'
PROJECT NO.	
SHEET NO.	C9

100% SUBMITTAL

EXISTING GATE TO REMAIN

GRAPHIC SCALE
0 2.5 5 10 15 20

EXISTING GRAVEL DRIVE

TRAFFIC SIGNAL EQUIPMENT (BY OTHERS)

25'

NEW TCE

EX. ROW

FG 456.1

FG 456.2

FG 455.9

5.0'
2.00%

TRAFFIC SIGNAL EQUIPMENT (BY OTHERS)

EX. ROW

CONSTRUCT NEW CONC. APRON

R25'

15.8'
8.50%

FG 455.0

R25'

FG 455.6

1.5" LIP @ FACE OF CURB

EG 453.9

EG 454.5

SAWCUT AND MATCH EXIST. GRADE

EG 454.9

74' CONC. DRIVE
902 S.F.
STA. 15+39.00

KANIS RD.

REVISIONS	DATE

CITY OF LITTLE ROCK, ARKANSAS
KANIS ROAD AT PANTHER BRANCH
INTERSECTION IMPROVEMENTS

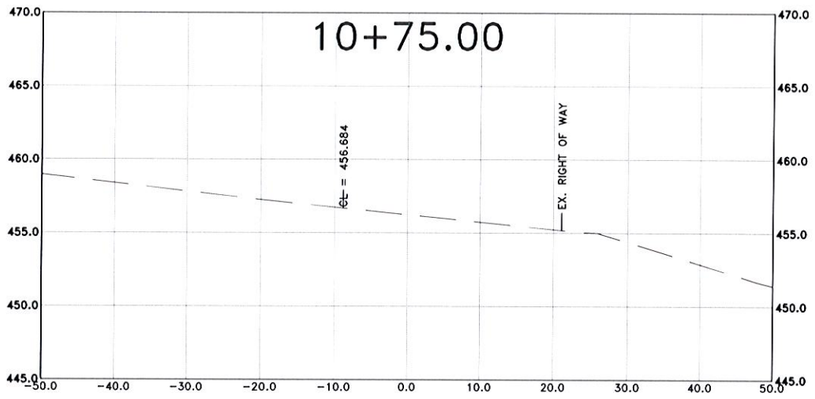
DRIVEWAY PLAN SHEET 3

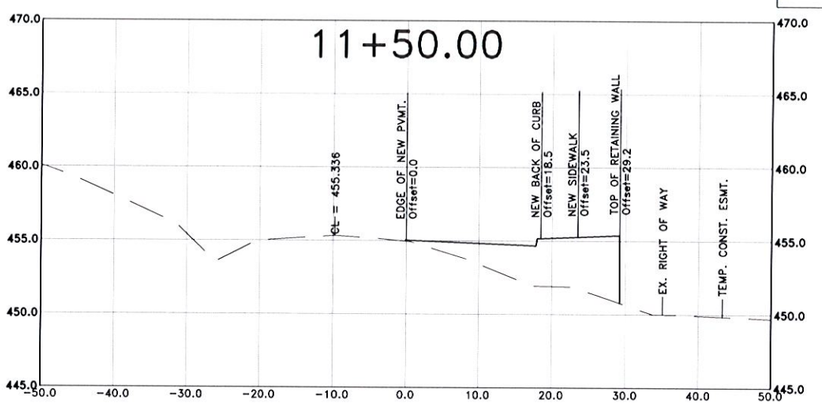
DEPARTMENT OF PUBLIC WORKS
CIVIL ENGINEERING
701 W. MARKHAM
LITTLE ROCK, ARKANSAS 72201

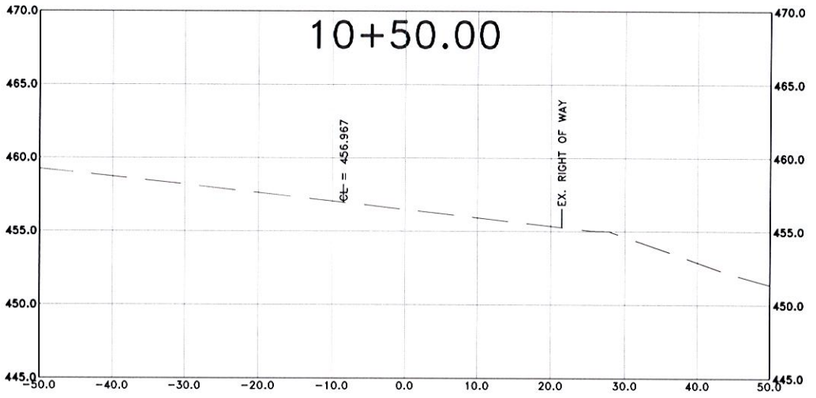
STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 13217
BRADLEY A. PETERSON
4/2/25

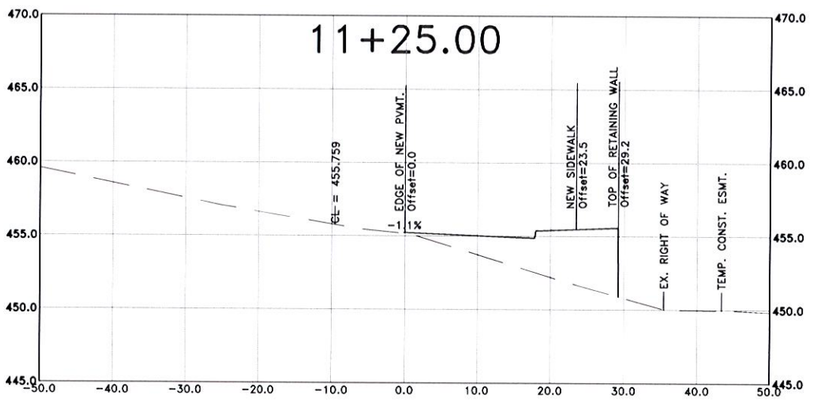
DRAWN BY	AT
DESIGNED	LC
CHECKED	BAP
DATE	03-28-2025
SCALE	H: 1"=20' V: 1"=5'
PROJECT NO.	
SHEET NO.	C10

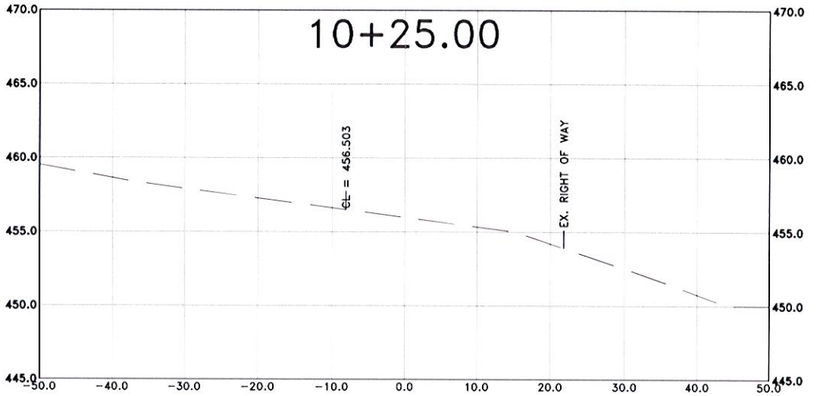
100% SUBMITTAL

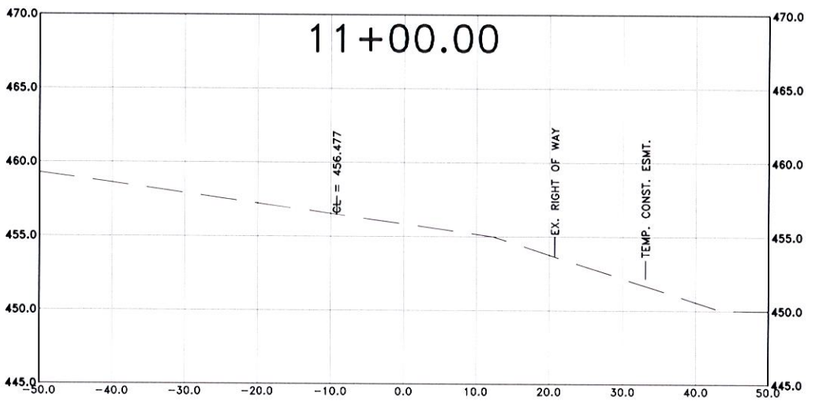












REVISIONS	DATE

CITY OF LITTLE ROCK, ARKANSAS
KANIS ROAD AT PANTHER BRANCH
INTERSECTION IMPROVEMENTS

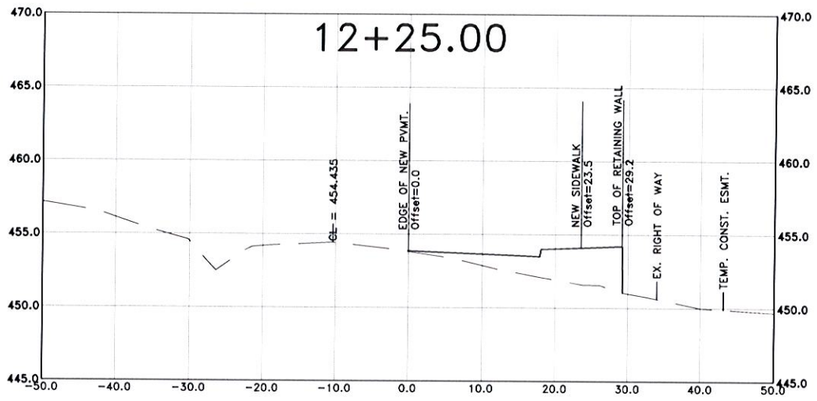
KANIS RD CROSS SECTION SHEET 1

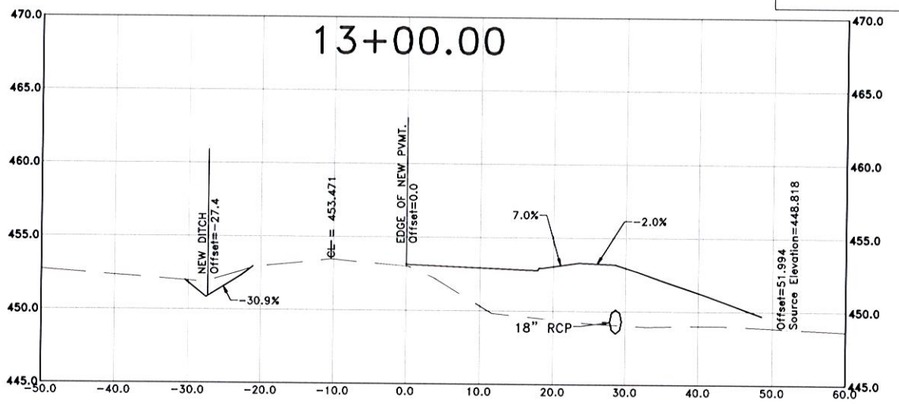
DEPARTMENT OF PUBLIC WORKS
CIVIL ENGINEERING
701 W. MARKHAM
LITTLE ROCK, ARKANSAS 72201

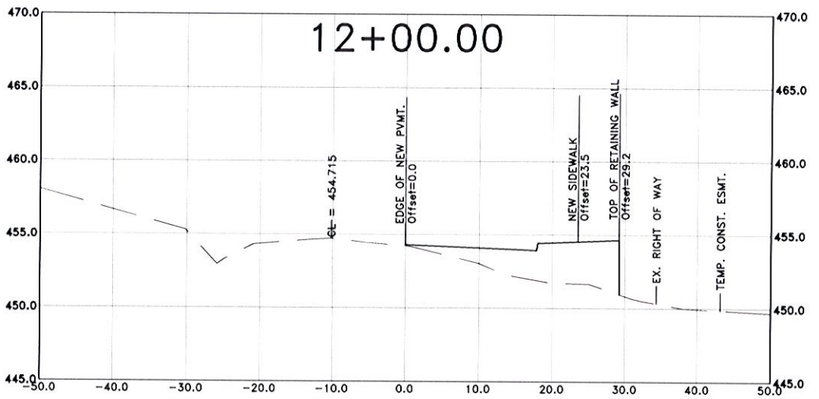
STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 13217
BRADLEY A. PETERSON
4/2/25

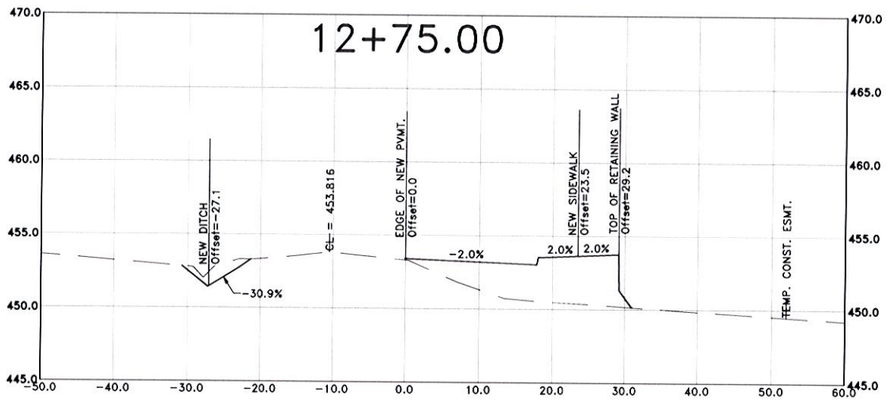
DRAWN BY	AT
DESIGNED	LC
CHECKED	BAP
DATE	03-28-2025
SCALE	H: 1"=10' V: 1"=5'
PROJECT NO.	
SHEET NO.	C11

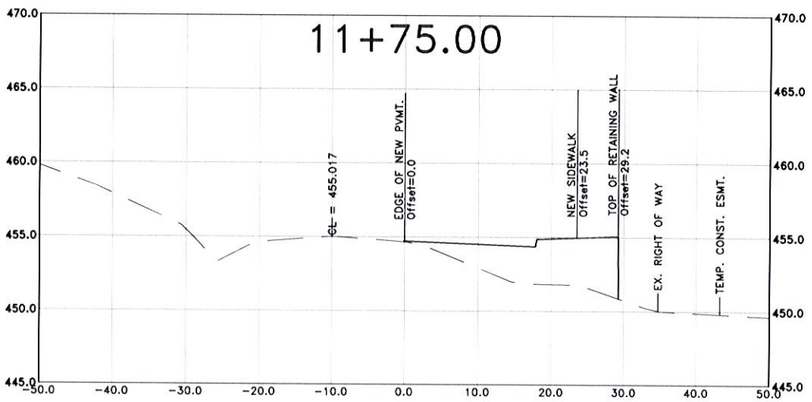
100% SUBMITTAL

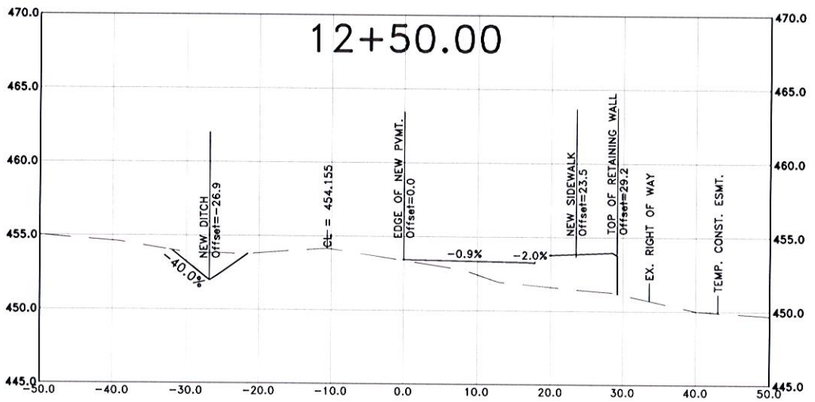












REVISIONS	DATE

CITY OF LITTLE ROCK, ARKANSAS
KANIS ROAD AT PANTHER BRANCH
INTERSECTION IMPROVEMENTS

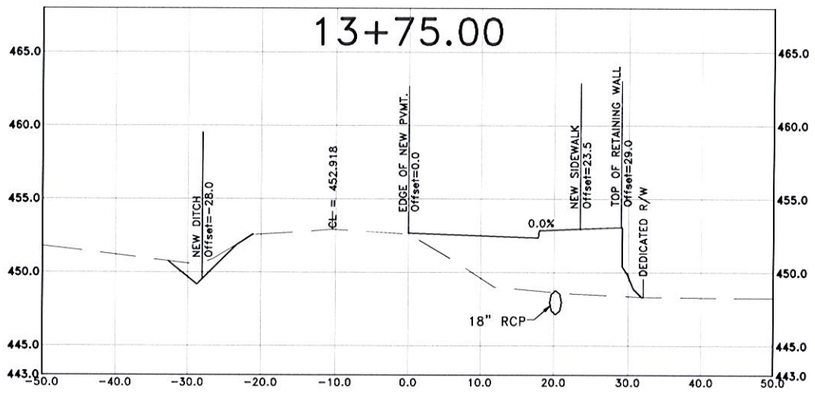
KANIS RD CROSS SECTION SHEET 2

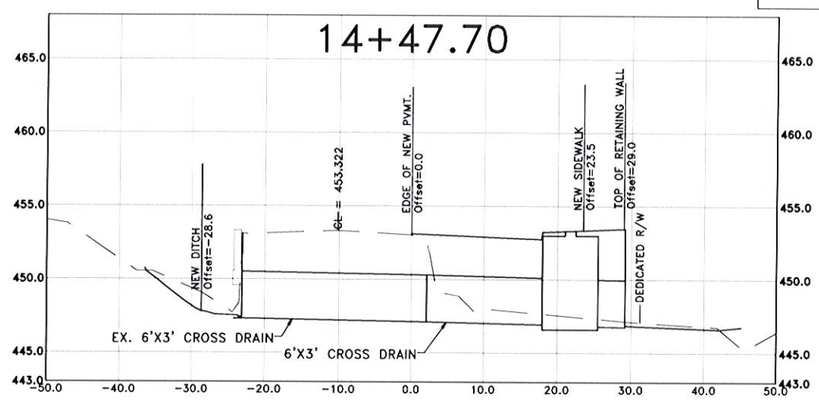
DEPARTMENT OF PUBLIC WORKS
CIVIL ENGINEERING
701 W. MARKHAM
LITTLE ROCK, ARKANSAS 72201

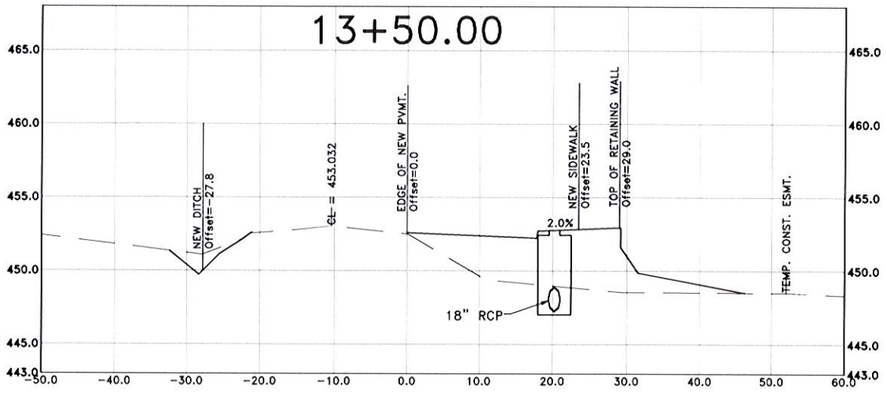
STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 13217
BRADLEY A. PETERSON
4/2/25

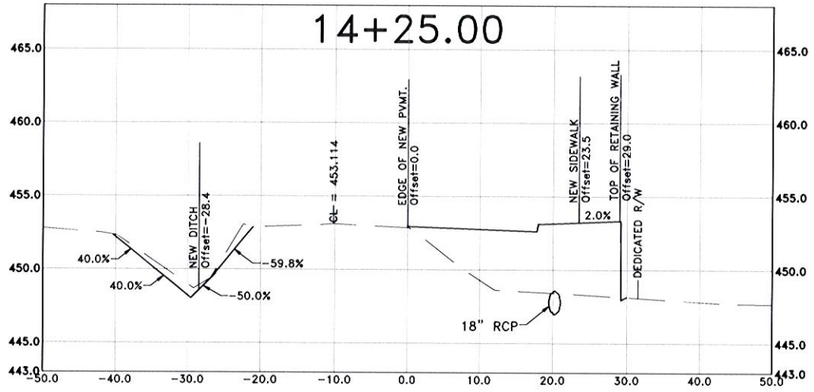
DRAWN BY	AT
DESIGNED	LC
CHECKED	BAP
DATE	03-28-2025
SCALE	H: 1"=10' V: 1"=5'
PROJECT NO.	
SHEET NO.	C12

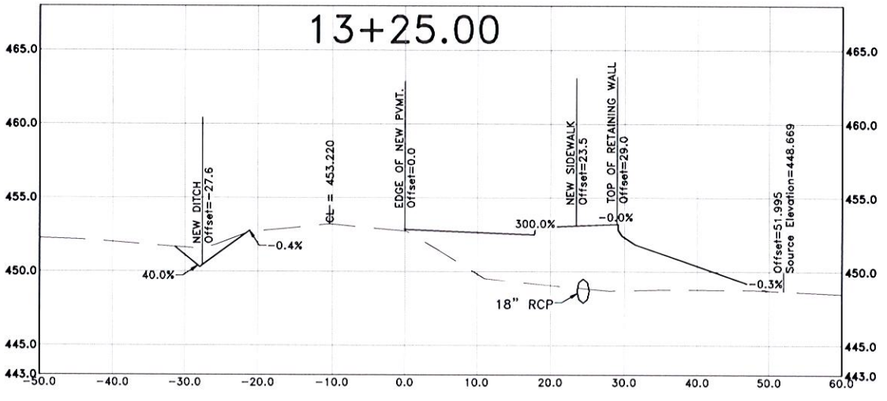
100% SUBMITTAL

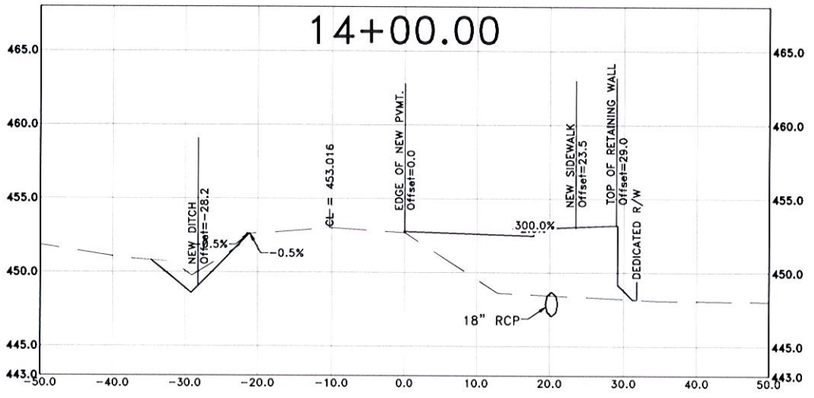












REVISIONS	DATE

CITY OF LITTLE ROCK, ARKANSAS
KANIS ROAD AT PANTHER BRANCH
INTERSECTION IMPROVEMENTS

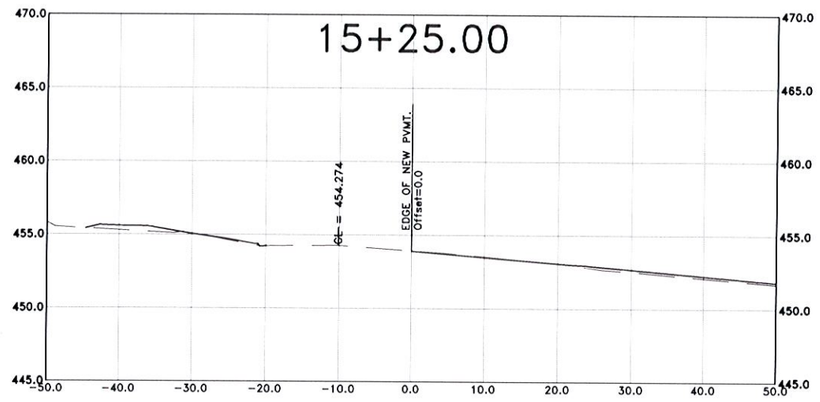
KANIS RD CROSS SECTION SHEET 3

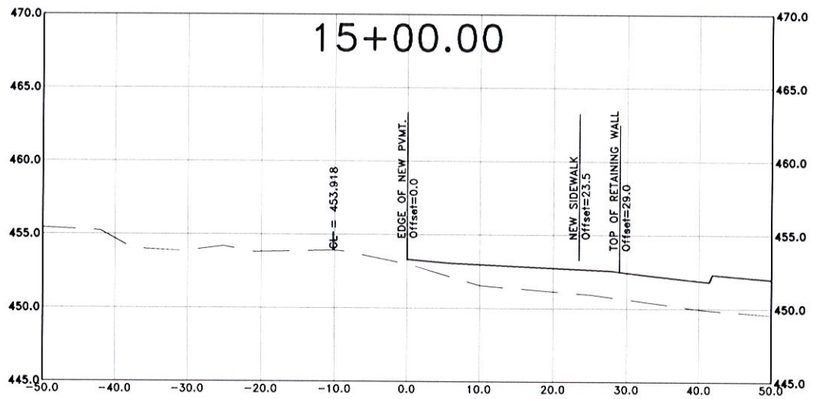
DEPARTMENT OF PUBLIC WORKS
CIVIL ENGINEERING
701 W. MARKHAM
LITTLE ROCK, ARKANSAS 72201

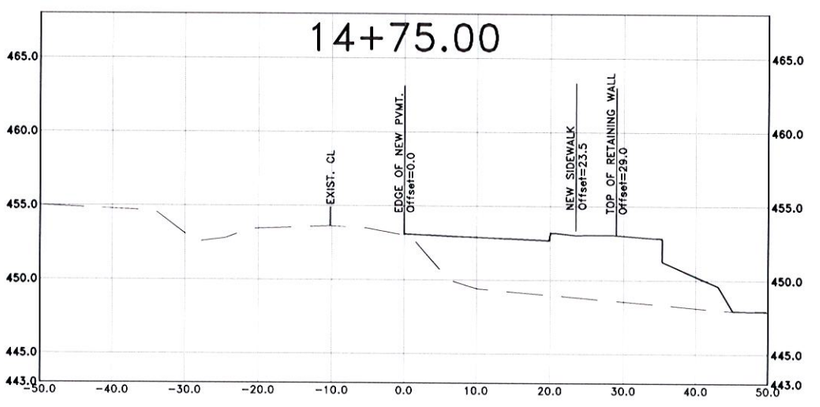
STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 13217
BRADLEY A. PETERSON
4/2/25

DRAWN BY	AT
DESIGNED	LC
CHECKED	BAP
DATE	03-28-2025
SCALE	H: 1"=10' V: 1"=5'
PROJECT NO.	
SHEET NO.	C13

100% SUBMITTAL







REVISIONS	DATE

CITY OF LITTLE ROCK, ARKANSAS
KANIS ROAD AT PANTHER BRANCH
INTERSECTION IMPROVEMENTS

KANIS RD CROSS SECTION SHEET 4

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

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 13217
BRADLEY A. PETERSON
4/2/25

DRAWN BY	AT
DESIGNED	LC
CHECKED	BAP
DATE	03-28-2025
SCALE	H: 1"=10' V: 1"=5'
PROJECT NO.	
SHEET NO.	C14

100% SUBMITTAL

REVISIONS	DATE

BASIMA & THALJI SAMER
138 COURTS LN.
LITTLE ROCK ARKANSAS 72223

A AND S ASSOCIATES
INCORPORATED
5501 RANCH DR
LITTLE ROCK, AR 72223

MOCO INVESTMENT LTD PARTNERSHIP
PO BOX 242778
LITTLE ROCK, AR 72223

PANTHER BRANCH LLC
PO BOX 242840
LITTLE ROCK, AR 72223

KANIS RD.

KANIS RD.

EX ROW

EX ROW

EX ROW

EX ROW

EX ROW

EX ROW

NEW TCE

NEW TCE

PROP. LINE

UTL EMNT

40' STREET ROW (UNDEVELOPED)

COOPER ORBIT RD.

S84° 45' 19.71"E
19.993

SET PK NAIL
150843.8176
1181905.0098

SET PK NAIL
150683.3718
1182129.8017

SET PK NAIL
150531.4438
1182343.7383

10+00

+50

11+00

+50

12+00

+50

13+00

+50

14+00

+50

15+00

15+39

S54° 28' 57.20"E
276.178

S46° 31' 46.86"E
285.774

S36° 44' 18.21"E
222.390

S54° 37' 09.70"E
262.395

N25° 41' 30.48"E
40.128

S51° 06' 47.92"W
65.306

N63° 16' 48.55"W
200.321

N71° 59' 55.72"E
85.075

S62° 31' 03.99"W
48.54'

PP E
N:150647.2110
E:1182112.4050
ELEV:449.399

S29° 30' 22.38"E
71.076

CTL
N:150621.5140
E:1182164.8080
ELEV:448.504

CTL
N:150507.5050
E:1182301.3950
ELEV:451.340

GRAPHIC SCALE
0 10 20 40 60 80

CITY OF LITTLE ROCK, ARKANSAS
KANIS ROAD AT PANTHER BRANCH
INTERSECTION IMPROVEMENTS

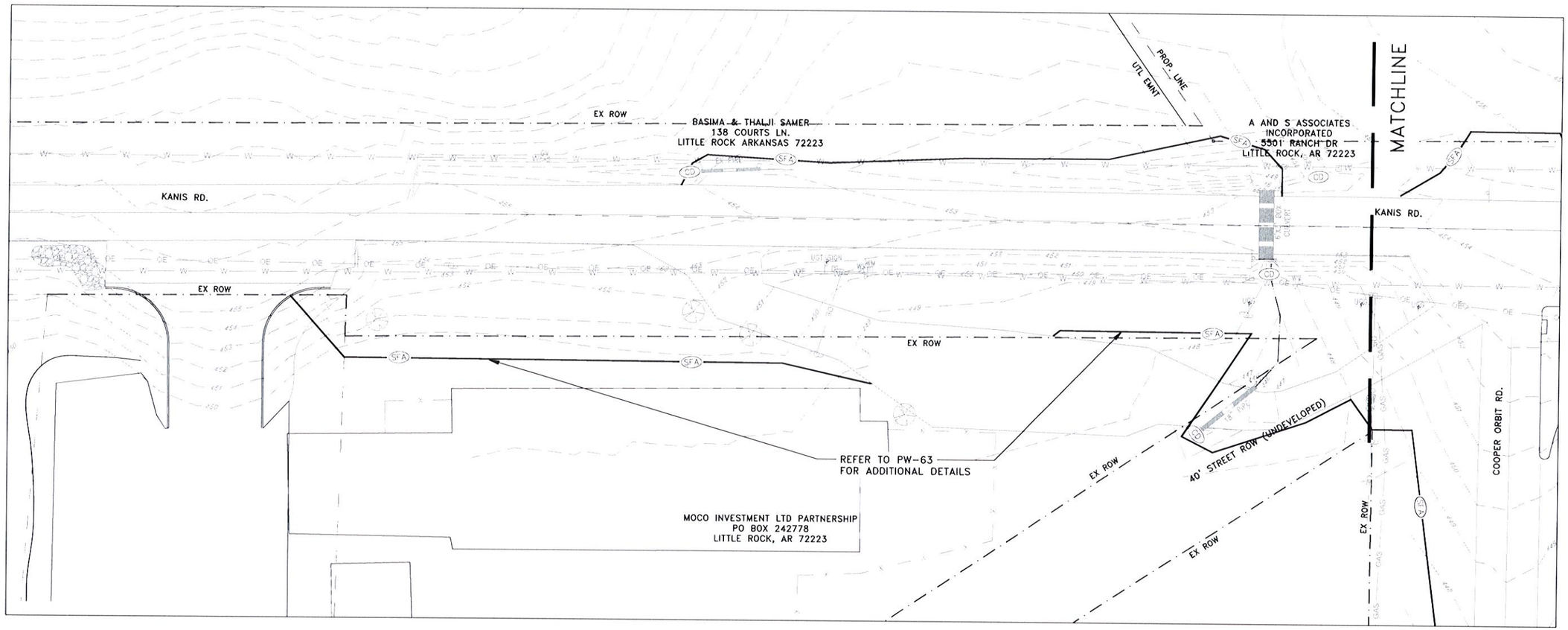
CENTERLINE FIELD TIES SHEET

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

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 13217
BRADLEY A. PETERSON
4/2/25

DRAWN BY	AT
DESIGNED	LC
CHECKED	BAP
DATE	03-28-2025
SCALE	H: 1"=20' V: 1"=5'
PROJECT NO.	
SHEET NO.	C15

100% SUBMITTAL



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	SBT
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	TS1
DISTURBED AREA STABILIZATION – TEMPORARY GRASSING	TS2
DISTURBED AREA STABILIZATION – PERMANENT GRASSING	TS3
MATTING/BLANKETS	MB

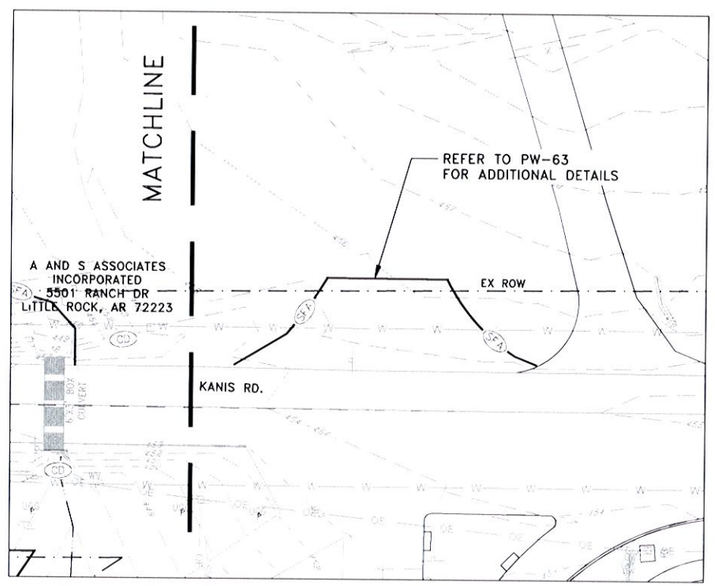
PHASE 1

1. INSTALL STABILIZED CONSTRUCTION ENTRANCE/EXIT(S) AND SWPPP INFORMATION SIGN.
2. INSTALL SILT FENCE(S) ON THE SITE. CLEAR ONLY THOSE AREAS NECESSARY TO INSTALL SILT FENCE.
3. PREPARE TEMPORARY PARKING AND STORAGE AREA.
4. HALT ALL ACTIVITIES AND CONTACT THE CITY OF LITTLE ROCK TO PERFORM INSPECTION AND ACCEPTANCE OF BMP'S.
5. CONSTRUCT AND STABILIZE SEDIMENT BASIN(S) AND SEDIMENT TRAP(S) WITH APPROPRIATE OUTFALL STRUCTURES. CLEAR ONLY THOSE AREAS NECESSARY TO INSTALL BASINS AND TRAPS.
6. INSTALL AND STABILIZE HYDRAULIC CONTROL STRUCTURES (DIKES, SWALES, CHECK DAMS, ETC.). CLEAR ONLY THOSE AREAS NECESSARY TO INSTALL HYDRAULIC CONTROL DEVICES.

CONSTRUCTION EROSION CONTROL BEST MANAGEMENT PRACTICES

UPON IMPLEMENTATION AND INSTALLATION OF THE FOLLOWING AREAS: TRAILERS, PARKING, LAY DOWN, PORTA-POTTY, WHEEL WASH, CONCRETE WASHOUT, FUEL AND MATERIAL STORAGE CONTAINERS, SOLID WASTE CONTAINERS, ETC., IMMEDIATELY DENOTE THEM ON THE SITE MAPS AND NOTE ANY CHANGES IN LOCATION AS THEY OCCUR THROUGHOUT THE CONSTRUCTION PROCESS. IN ADDITION, NOTE ANY OFF-SITE AREA WHERE FILL IS IMPORTED FROM OR SOIL IS EXPORTED TO ON THE SITE MAPS.

GRAPHIC SCALE
0 10 20 40 60 80



REVISIONS	DATE

CITY OF LITTLE ROCK, ARKANSAS
KANIS ROAD AT PANTHER BRANCH
INTERSECTION IMPROVEMENTS

EROSION CONTROL PH I SHEET

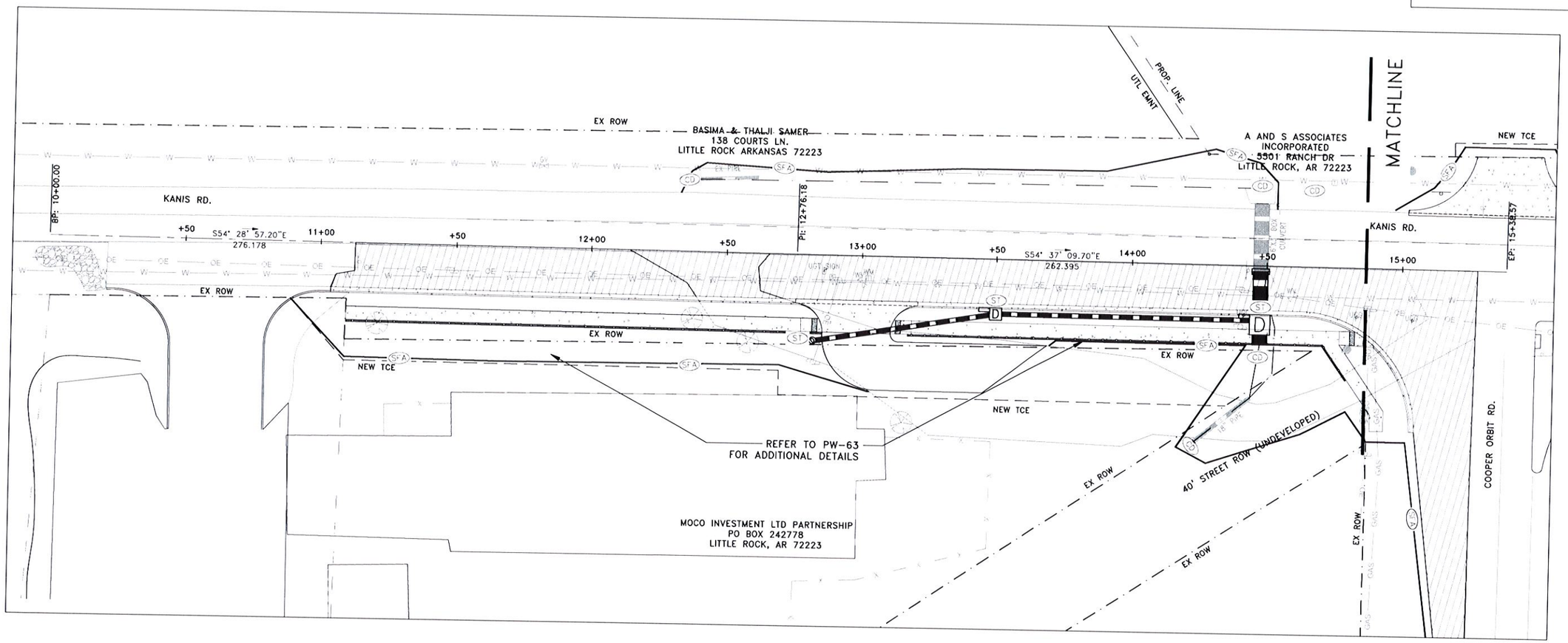
DEPARTMENT OF PUBLIC WORKS
CIVIL ENGINEERING
701 W. MARKHAM
LITTLE ROCK, ARKANSAS 72201

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 13217
BRADLEY A. PETERSON
4/2/25

DRAWN BY	AT
DESIGNED	LC
CHECKED	BAP
DATE	03-28-2025
SCALE	H: 1"=20' V: 1"=5'
PROJECT NO.	
SHEET NO.	C16

100% SUBMITTAL

REVISIONS	DATE



CONSTRUCTION – ENTRANCE/EXIT	CO
CHECK DAM	CD
DIVERSION BERM	D
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	TS1
DISTURBED AREA STABILIZATION – TEMPORARY GRASSING	TS2
DISTURBED AREA STABILIZATION – PERMANENT GRASSING	TS3
MATTING/BLANKETS	MS

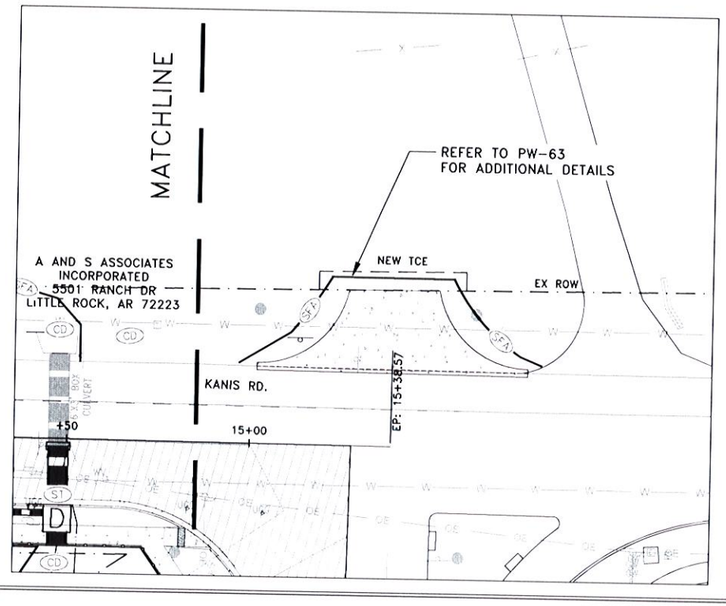
PHASE 2

1. BEGIN SITE DEMOLITION, CLEARING AND GRUBBING.
2. CONTINUE GRADING THE SITE.
3. INSTALL UTILITIES, UNDERDRAINS, STORM SEWERS & INLETS.
4. PREPARE SUBGRADE, ROAD BASE AND CURBS AND GUTTERS.
5. CONSTRUCT DRIVEWAY TRANSITIONS.
6. INSTALL APPROPRIATE INLET PROTECTION DEVICES FOR PAVED AREAS AS WORK PROGRESSES.

CONSTRUCTION EROSION CONTROL BEST MANAGEMENT PRACTICES

UPON IMPLEMENTATION AND INSTALLATION OF THE FOLLOWING AREAS: TRAILERS, PARKING, LAY DOWN, PORTA-POTTY, WHEEL WASH, CONCRETE WASHOUT, FUEL AND MATERIAL STORAGE CONTAINERS, SOLID WASTE CONTAINERS, ETC., IMMEDIATELY DENOTE THEM ON THE SITE MAPS AND NOTE ANY CHANGES IN LOCATION AS THEY OCCUR THROUGHOUT THE CONSTRUCTION PROCESS. IN ADDITION, NOTE ANY OFF-SITE AREA WHERE FILL IS IMPORTED FROM OR SOIL IS EXPORTED TO ON THE SITE MAPS.

GRAPHIC SCALE
0 10 20 40 60 80



CITY OF LITTLE ROCK, ARKANSAS
KANIS ROAD AT PANTHER BRANCH
INTERSECTION IMPROVEMENTS

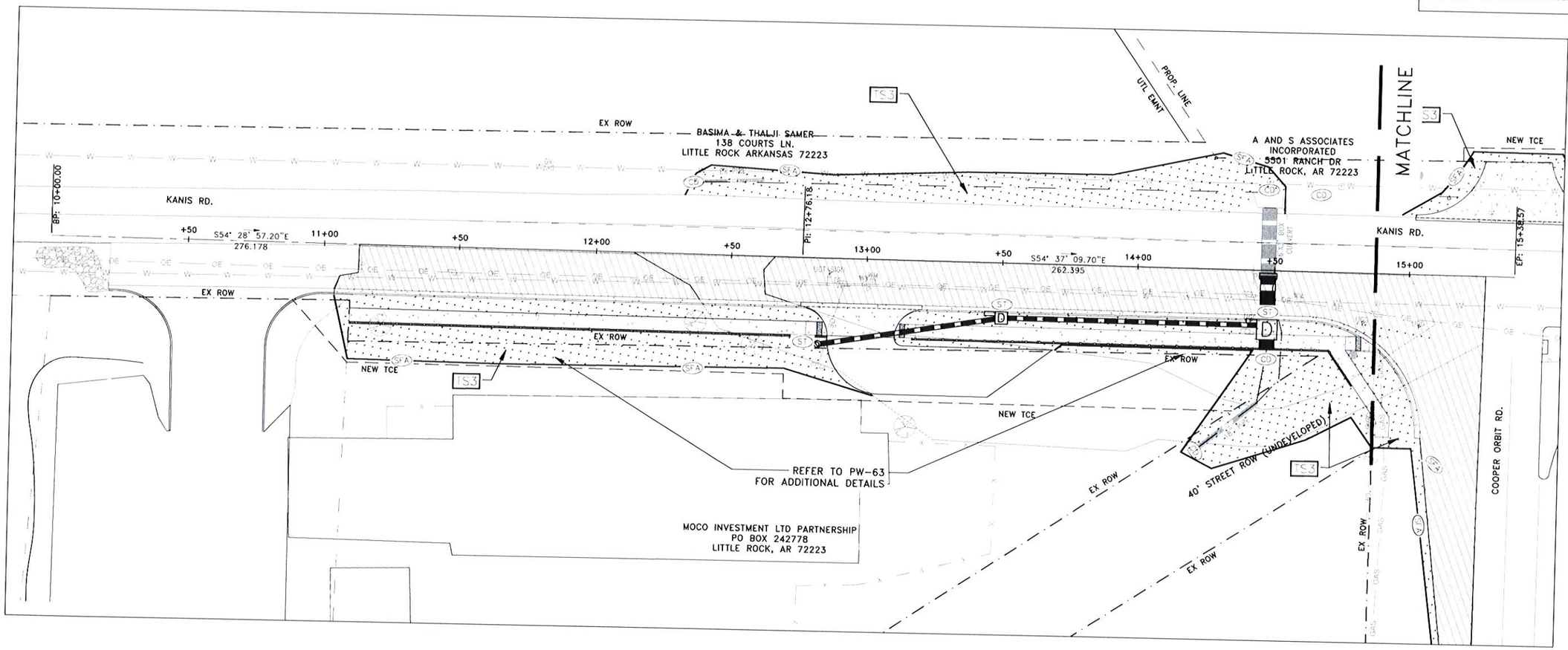
EROSION CONTROL PH II SHEET

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

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 13217
BRADLEY A. PETERSON
4/2/25

DRAWN BY	AT
DESIGNED	LC
CHECKED	BAP
DATE	03-28-2025
SCALE	H: 1"=20' V: 1"=5'
PROJECT NO.	
SHEET NO.	C17

100% SUBMITTAL



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	SBT
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	TS1
DISTURBED AREA STABILIZATION – TEMPORARY GRASSING	TS2
DISTURBED AREA STABILIZATION – PERMANENT GRASSING	TS3
MATTING/BLANKETS	MB

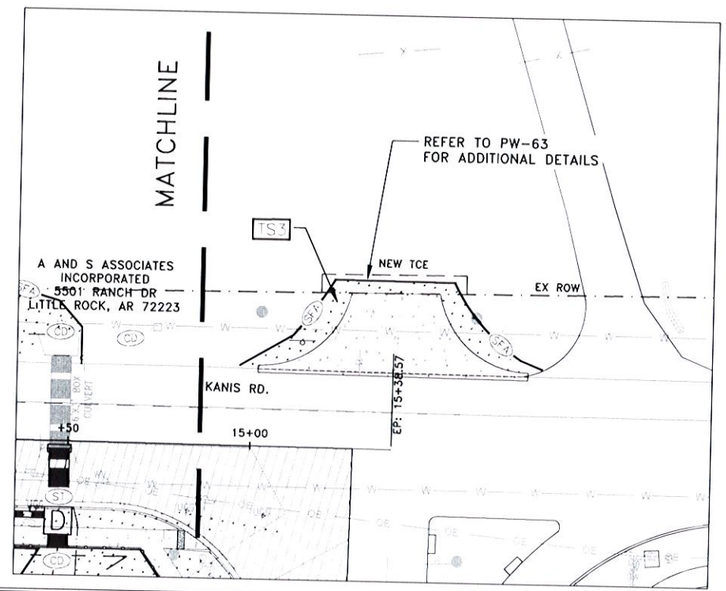
PHASE 3

1. FINISH GRADE SIDE SLOPES & PREPARE SUBGRADES FOR SIDEWALKS, ETC.
2. PREPARE SITE FOR PAVING.
3. PAVE WHERE INDICATED ON PLANS. CONSTRUCT SIDEWALKS.
4. INSTALL APPROPRIATE INLET PROTECTION DEVICES FOR PAVED AREAS AS WORK PROGRESSES.
5. COMPLETE GRADING AND INSTALLATION OF PERMANENT STABILIZATION OVER ALL NON-PAVED AREAS.

CONSTRUCTION EROSION CONTROL BEST MANAGEMENT PRACTICES

UPON IMPLEMENTATION AND INSTALLATION OF THE FOLLOWING AREAS: TRAILERS, PARKING, LAY DOWN, PORTA-POTTY, WHEEL WASH, CONCRETE WASHOUT, FUEL AND MATERIAL STORAGE CONTAINERS, SOLID WASTE CONTAINERS, ETC., IMMEDIATELY DENOTE THEM ON THE SITE MAPS AND NOTE ANY CHANGES IN LOCATION AS THEY OCCUR THROUGHOUT THE CONSTRUCTION PROCESS. IN ADDITION, NOTE ANY OFF-SITE AREA WHERE FILL IS IMPORTED FROM OR SOIL IS EXPORTED TO ON THE SITE MAPS.

GRAPHIC SCALE
0 10 20 40 60 80



REVISIONS	DATE

CITY OF LITTLE ROCK, ARKANSAS
KANIS ROAD AT PANTHER BRANCH
INTERSECTION IMPROVEMENTS

EROSION CONTROL PH III SHEET

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

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 13217
BRADLEY A. PETERSON
4/2/25

DRAWN BY	AT
DESIGNED	LC
CHECKED	BAP
DATE	03-28-2025
SCALE	H: 1"=20' V: 1"=5'
PROJECT NO.	
SHEET NO.	C18

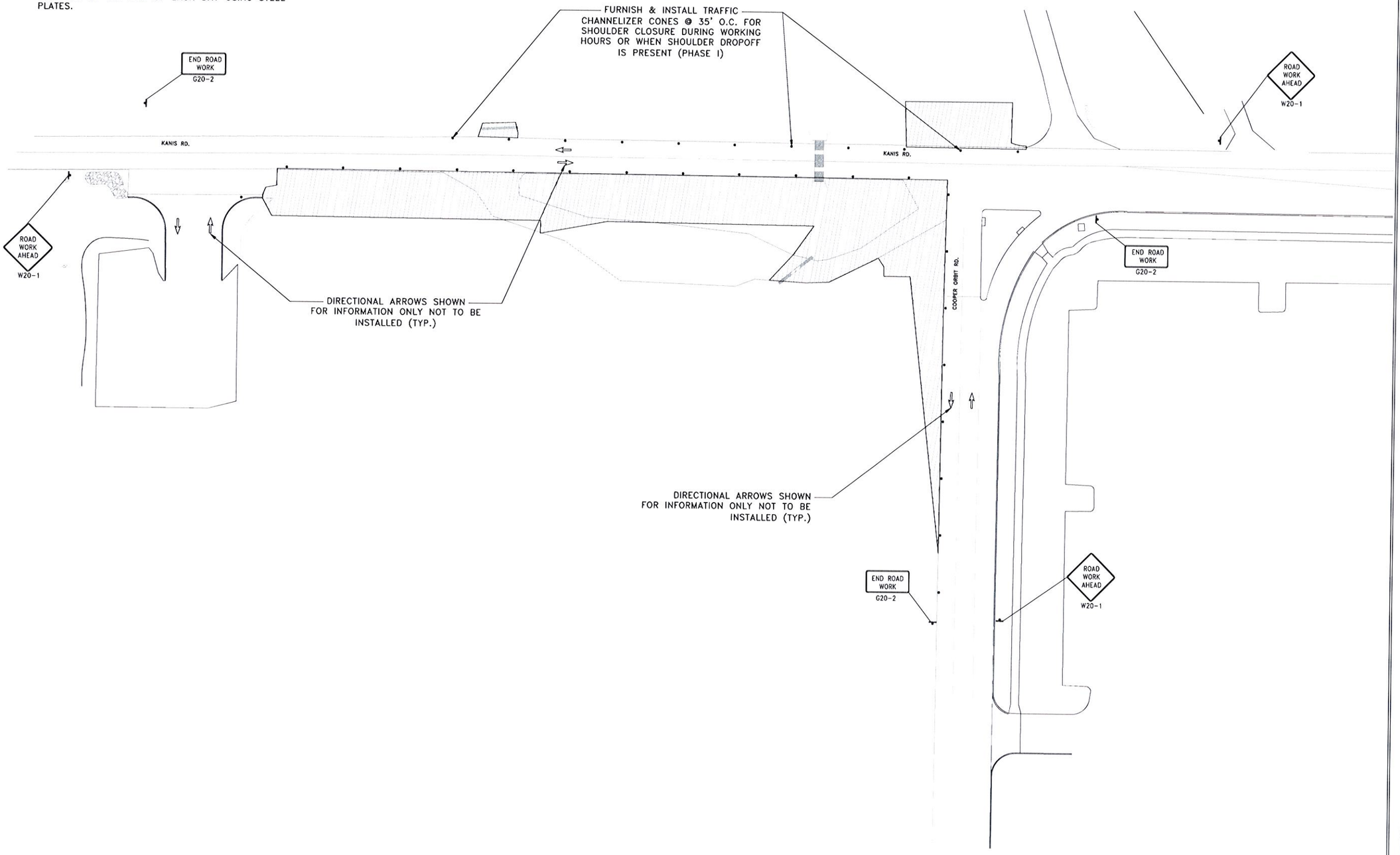
NOTE:
1. CONTRACTOR TO MAINTAIN ACCESS TO ALL DRIVEWAYS AND MAINTAIN 9' FT. MINIMUM LANES.
2. ALL WORK SHALL BE PERFORMED IN COMPLIANCE WITH THE CURRENT EDITION OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES AND THE OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION REGULATIONS.
3. ONLY ONE LANE MAY BE CLOSED AT A TIME DURING NORMAL WORKING HOURS AND ALL LANES MUST BE REOPENED AT THE END OF EACH DAY USING STEEL PLATES.

PHASE I

GRAPHIC SCALE
0 15 30 60 90 120

100% SUBMITTAL

PHASE I CONSTRUCTION



REVISIONS	DATE

CITY OF LITTLE ROCK, ARKANSAS
KANIS ROAD AT PANTHER BRANCH INTERSECTION IMPROVEMENTS

MAINTENANCE OF TRAFFIC PHASE I

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

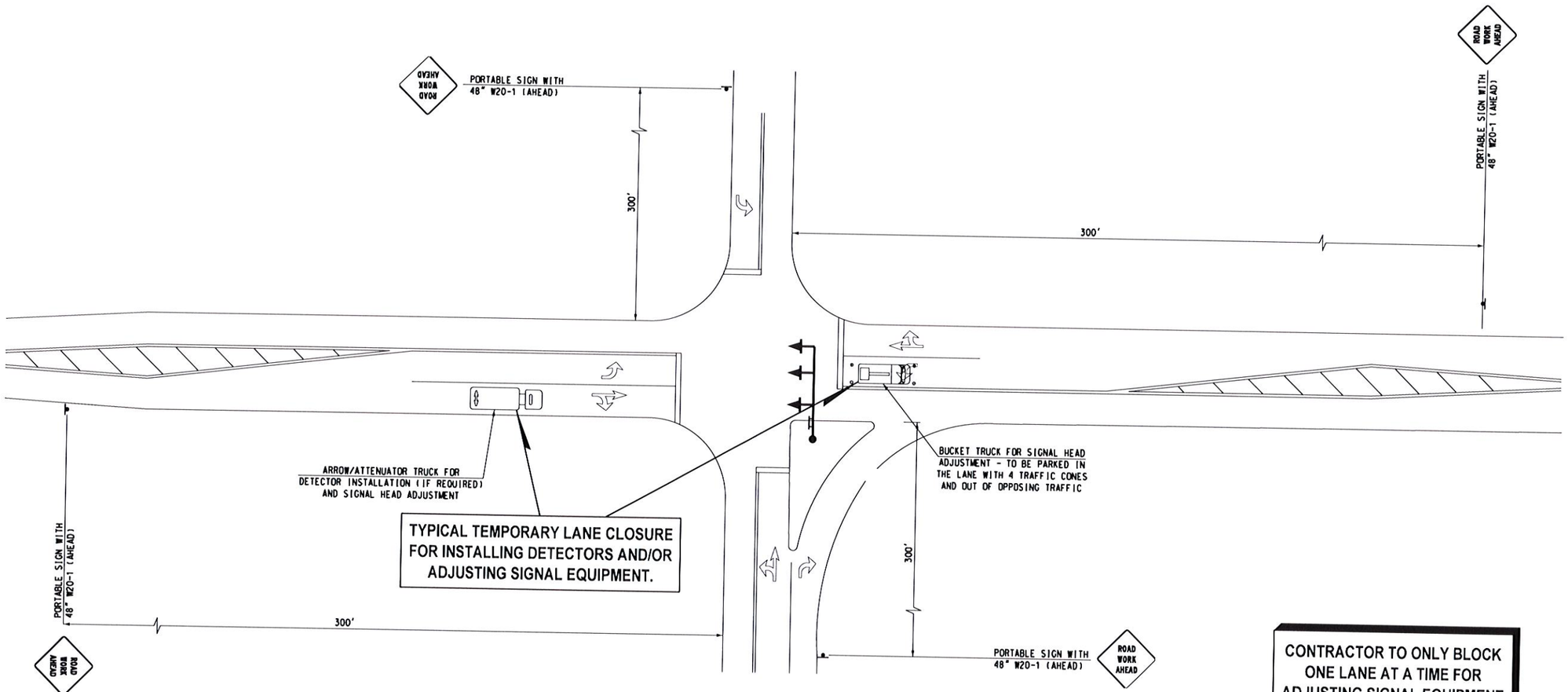
STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 13224
B. FINLEY VINSON, III

DRAWN BY	AT
DESIGNED	LC
CHECKED	BAP
DATE	03-28-2025
SCALE	H: 1"=20' V: 1"=5'
PROJECT NO.	
SHEET NO.	T1

100% SUBMITTAL

PHASE II

NOTE:
1. ALL WORK SHALL BE PERFORMED IN COMPLIANCE WITH THE CURRENT EDITION OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES AND THE OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION REGULATIONS.
2. ONLY ONE LANE MAY BE CLOSED AT A TIME DURING NORMAL WORKING HOURS AND ALL LANES MUST BE REOPENED AT THE END OF EACH DAY USING STEEL PLATES.



CONTRACTOR TO ONLY BLOCK ONE LANE AT A TIME FOR ADJUSTING SIGNAL EQUIPMENT AND/OR INSTALLING DETECTORS.

REVISIONS	DATE

CITY OF LITTLE ROCK, ARKANSAS
KANIS RD. AND COOPER ORBIT RD.
INTERSECTION IMPROVEMENTS

MAINTENANCE OF TRAFFIC PHASE II

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

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 13224
B. FINLEY VINSON, III

DRAWN BY	MJB
DESIGNED	BFV
CHECKED	
DATE	4/14/2025
SCALE	N/A
PROJECT NO.	
SHEET NO.	T2

4/14/2025 G:\DOPprojects\04 Little Rock Office Projects\LR-25C - SD, Intersection Improvement, Kanis & Panther Branch - Little Rock, AR\CAD\T4-MAINT OF TRAFFIC.dgn

100% SUBMITTAL

TRAFFIC SIGNAL QUANTITIES

ITEM NUMBER	ITEM	QUANTITY	UNIT
SP & 701	SYSTEM LOCAL CONTROLLER TS2-TYPE 2, E-NET (8 PHASES) (INSTALLATION ONLY)	1	EACH
SP	BATTERY BACKUP SYSTEM	1	EACH
SP & 706	TRAFFIC SIGNAL HEAD, LED, (3 SECTION, 1 WAY) (INSTALLATION ONLY)	9	EACH
SP & 706	TRAFFIC SIGNAL HEAD, LED, (4 SECTION, 1 WAY) (INSTALLATION ONLY)	1	EACH
SP & 707	COUNTDOWN PEDESTRIAN SIGNAL HEAD, LED (INSTALLATION ONLY)	2	EACH
708	TRAFFIC SIGNAL CABLE (5C/12 A.W.G.)	340	LIN. FT.
708	TRAFFIC SIGNAL CABLE (5C/14 A.W.G.)	800	LIN. FT.
708	TRAFFIC SIGNAL CABLE (7C/14 A.W.G.)	140	LIN. FT.
708	TRAFFIC SIGNAL CABLE (20C/14 A.W.G.)	410	LIN. FT.
SP	ELECTRICAL CONDUCTORS-IN-CONDUIT (1C/8 A.W.G., E.G.C.)	530	LIN. FT.
SP	ELECTRICAL CONDUCTORS-IN-CONDUIT (1C/12 A.W.G., E.G.C.)	60	LIN. FT.
SP	ELECTRICAL CONDUCTORS-IN-CONDUIT (2C/6 A.W.G.)	100	LIN. FT.
SP	ELECTRICAL CONDUCTORS-IN-CONDUIT (2C/12 A.W.G.)	490	LIN. FT.
SP	LOCAL RADIO WITH ANTENNA (INSTALLATION ONLY)	1	EACH
SP	ANTENNA CABLE (TYPE 6) (INSTALLATION ONLY)	170	LIN. FT.
710	NON-METALLIC CONDUIT (3")	560	LIN. FT.
711	CONCRETE PULL BOX (TYPE 2 HD)	4	EACH
711	CONCRETE PULL BOX (TYPE 3 HD)	1	EACH
SS & 714	TRAFFIC SIGNAL MAST ARM AND POLE WITH FOUNDATION (34')	1	EACH
SS & 714	TRAFFIC SIGNAL MAST ARM AND POLE WITH FOUNDATION (38')	1	EACH
SS & 714	TRAFFIC SIGNAL MAST ARM AND POLE WITH FOUNDATION (34'-42')	1	EACH
SP	LED LUMINAIRE ASSEMBLY	2	EACH
715	TRAFFIC SIGNAL PEDESTAL POLE WITH FOUNDATION	1	EACH
SP	SERVICE POINT ASSEMBLY (2 CIRCUITS)	1	EACH
SP	18" STREET NAME SIGN	4	EACH
733	VIDEO DETECTION EQUIPMENT (MIOVISION TRAFFIC LINK)	1	LS
SP	ETHERNET SWITCH, T100 HARDENED (8 PORT)	1	EACH

QUANTITY IS ESTIMATED AND IS TO BE USED AS DIRECTED BY THE ENGINEER

PAVEMENT MARKING QUANTITIES

ITEM NUMBER	ITEM	QUANTITY	UNIT
719 & 50.00	THERMOPLASTIC PAVEMENT MARKING (WHITE, 4")	910	LIN. FT.
719 & 50.00	THERMOPLASTIC PAVEMENT MARKING (WHITE, 12")	150	LIN. FT.
719 & 50.00	THERMOPLASTIC PAVEMENT MARKING (YELLOW, 4")	2550	LIN. FT.
719 & 50.00	THERMOPLASTIC PAVEMENT MARKING (YIELD LINE)	14	LIN. FT.
719 & 50.00	THERMOPLASTIC PAVEMENT MARKING (WORDS)	5	EACH
719 & 50.00	THERMOPLASTIC PAVEMENT MARKING (ARROWS)	6	EACH

THE CITY OF LITTLE ROCK CONTRACT CONDITIONS AND SPECIFICATIONS AND THE ARKANSAS STATE HIGHWAY COMMISSION STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION SHALL GOVERN. WHEN IN CONFLICT THE CITY OF LITTLE ROCK CONTRACT CONDITIONS AND SPECIFICATIONS SHALL GOVERN.

REVISIONS	DATE

CITY OF LITTLE ROCK, ARKANSAS
KANIS RD. AND COOPER ORBIT RD.
INTERSECTION IMPROVEMENTS

SUMMARY OF TRAFFIC SIGNAL QUANTITIES

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

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 13224
B. FINLEY VINSON, III

DRAWN BY	
DESIGNED	
CHECKED	
DATE	4/11/2025
SCALE	N/A
PROJECT NO.	
SHEET NO.	T3

100% SUBMITTAL

TRAFFIC SIGNAL NOTES:

1. THE TRAFFIC SIGNAL SHALL NOT BE PUT INTO OPERATION OR SWITCHED TO THE NEXT CONSTRUCTION STAGE PRIOR TO THE FOLLOWING:
   A. ALL TRAFFIC SIGNAL EQUIPMENT HAS BEEN INSTALLED ACCORDING TO THE PLANS, SPECIAL PROVISIONS, AND PROPERLY FUNCTIONAL. THIS INCLUDES BUT NOT LIMITED TO: CABINETS, PULL BOXES, JUNCTION BOXES, POLES, MAST ARMS, FOUNDATIONS, LUMINAIRES, SIGNAL HEADS, PEDESTRIAN SIGNAL HEADS, PUSH BUTTONS, DETECTION SYSTEM, CONDUITS, CONDUCTORS, CABLES, TRAFFIC CONTROLLER, CONFLICT MONITOR, COMMUNICATION SYSTEM, SERVICE POINT, AND RAILROAD INTERCONNECT SYSTEM.
   B. THE DETECTION SYSTEM SHALL BE INSTALLED, SETUP, AND CONFIGURED BY THE CONTRACTOR OR THEIR SUPPLIER PER PLANS. A TRAFFIC OPERATIONS INSPECTOR SHALL INSPECT AND PROVIDE APPROVAL IN ORDER TO PUT THE TRAFFIC SIGNAL INTO OPERATION.
   C. THE TRAFFIC CONTROLLER AND CONFLICT MONITOR SHALL BE PROGRAMMED TO OPERATE AS REQUIRED PER THE PLANS (PHASING DIAGRAM, INTERVAL CHART, AND ANY ADDITIONAL NOTES), SPECIAL PROVISIONS AND ARDOT SPECIFICATIONS.
   D. TIMING SETTINGS HAVE BEEN PROGRAMMED AND APPROVED AS REQUIRE BY ITS MANAGEMENT SECTION-MAINTENANCE DIVISION.
   E. THE TRAFFIC SIGNAL HAS BEEN INSPECTED AND APPROVED BY A TRAFFIC OPERATIONS INSPECTOR.
   F. ALL REQUIRED DOCUMENTS RELATED TO THE TRAFFIC SIGNAL EQUIPMENT, THIS INCLUDES BUT NOT LIMITED TO: TEST RESULTS, CONFIGURATION/DATA REPORTS, WARRANTIES, AND ANY OTHER DOCUMENTATION REQUIRED PER PLANS AND SPECIAL PROVISIONS.
2. CONTRACTOR SHALL NOTIFY ALL EXISTING UTILITY OWNERS BEFORE BEGINNING WORK ON THIS PROJECT.
3. TRAFFIC SIGNAL CONTRACTOR SHALL NOTIFY THE RESIDENT ENGINEER OR ASSIGNED DEPARTMENT PROJECT INSPECTOR EACH DAY PRIOR TO SIGNAL RELATED WORK. NO WORK ON TRAFFIC SIGNALS WILL BE ALLOWED OR APPROVED WITHOUT THIS PRIOR NOTIFICATION.
4. THE CONTRACTOR SHALL PERFORM ALL WORK POSSIBLE THAT WILL MINIMIZE THE TIME THAT THE TRAFFIC SIGNAL IS OUT OF OPERATION. IF, IN THE OPINION OF THE ENGINEER, TRAFFIC CONDITIONS WARRANT, THE CONTRACTOR SHALL PROVIDE FLAGMEN TO DIRECT TRAFFIC WHILE THE TRAFFIC SIGNAL IS OUT OF OPERATION.
5. ALL ELECTRICAL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE CURRENT EDITIONS OF THE NFPA 70 (CURRENT EDITION) NATIONAL ELECTRICAL CODE, NFPA 101 (CURRENT EDITION) LIFE SAFETY CODE, STATE ELECTRICAL CODE AND LOCAL ELECTRICAL CODE.
6. EXTEND GREEN EQUIPMENT GROUNDING CONDUCTOR (E.G.C.) FROM GROUND BAR AT MAIN BREAKER TO CONTROL PANEL AND TO FIRST POLE. SOLIDLY BOND E.G.C. TO GROUND LUG OF CONTROL CABINET AND TO POLE GROUND. ENSURE THAT ONLY ONE NEUTRAL-TO-GROUND BOND EXISTS IN THE SYSTEM AND THAT IT IS AT THE MAIN BREAKER.
7. ELECTRICAL SERVICE SHALL BE PROVIDED BY THE CITY/COUNTY TO A SERVICE POLE WITH EXTERNAL RAINTIGHT BREAKER (MAIN BREAKER), GALVANIZED STEEL SERVICE RISER, METER LOOP (IF REQUIRED), AND WEATHERHEAD AT A MUTUALLY ACCEPTABLE POINT WITHIN THE RIGHT-OF-WAY. IF THE SERVICE POINT IS OVER 10 FEET FROM THE CONTROLLER, THE CONTRACTOR SHALL PROVIDE AND INSTALL A SEPARATE TWO CIRCUIT EXTERNAL BREAKER (SECONDARY BREAKER) ON OR NEAR THE TRAFFIC SIGNAL CONTROLLER CABINET AND SHALL INSTALL CONDUIT, ELECTRICAL SERVICE WIRE (2c/#6 A.W.G. USE RATED, WITH GROUND TYPICAL), AND PERFORM WIRING TO TAP INTO THE CITY'S/ COUNTY'S MAIN BREAKER AS PART OF THIS CONTRACT. CONDUIT IS PAID FOR AS A SEPARATE ITEM OF THIS CONTRACT. TWO CIRCUIT BREAKERS, CONSIDERED SUBSIDIARY TO THE CONTROL EQUIPMENT, ARE NEEDED WHERE STREET LIGHTING IS INCLUDED. AS PART OF THE SIGNAL INSTALLATION, STREET LIGHTING CIRCUIT (2c/#12 A.W.G. UF RATED, TYPICAL) SHALL BE KEPT FROM THE CIRCUIT SERVING THE TRAFFIC SIGNAL CONTROL EQUIPMENT FROM THE POINT OF TIE-IN AT THE SECONDARY BREAKER PROVIDED BY THE CONTRACTOR.
8. CONTRACTOR SHALL CONNECT A SEPARATE NEUTRAL FOR EACH LOAD SWITCH REPRESENTED ON EACH SIGNAL POLE.
9. TRAFFIC CONTROLLER CABINET AND LAYOUT SHALL BE SUCH THAT IT IS NOT NECESSARY TO SHUT DOWN POWER OR REMOVE LOAD SWITCHES IN ORDER TO EASILY TEST OR MODIFY DETECTOR INPUTS TO THE CONTROLLER.
10. CONTROLLER CABINET SHALL BE WIRED SUCH THAT DURING FLASH OPERATIONS POWER TO THE LOAD SWITCHES CANNOT BACKFEED TO LOAD SWITCH POWER BUSS.
11. ALL PARTS OF THIS INSTALLATION SHALL BE IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION, STANDARD DRAWINGS, AND WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, CURRENT EDITION.
12. CONTROLLER CABINET LAYOUT AND ORIENTATION SHALL CONFORM TO IMSA STANDARDS.
13. DOOR PANEL TEST PUSH BUTTONS SHALL ACTUATE INDICATED PHASES. DETECTOR ASSIGNMENTS AND/OR SIDE PANEL JUMPERS MAY REQUIRE MODIFICATION.
14. ALL SYSTEM DETECTOR RACKS AND ASSOCIATED EQUIPMENT SHALL BE PROTECTED BY THE MAIN CONTROLLER CABINET POWER SURGE PROTECTION.
15. ONE VIDEO PROGRAMMNG MODULE SHALL BE PROVIDED FOR AIMING AND SETUP OF DETECTORS IF THE VIDEO SYSTEM CANNOT BE ADJUSTED THROUGH HARDWARE AND SOFTWARE PROVIDED BY ITEMS WITHIN THE JOB.
16. HARDWARE INPUTS MAY BE DETERMINED BY SUPPLIER. EACH DETECTOR OUTPUT SHALL INPUT THE CONTROLLER THROUGH A SEPARATE INPUT UNLESS OTHERWISE NOTED AND BE PROGRAMMED TO ACTUATE THE ASSOCIATED PHASE. COMBINATION (COMB.) DETECTORS SHALL ALSO BE PROGRAMMED TO PROVIDE VEHICLE COUNT/OCCUPANCY DATA.
17. THE LOCAL RADIO WITH ANTENNA AND TRAFFIC SIGNAL CONTROLLER SHALL BE COMPATIBLE WITH THE EXISTING COORDINATION SYSTEM IN THE CITY/COUNTY.
18. CONDUIT INSTALLED UNDER ROADWAY SURFACES SHALL BE INSTALLED BY PUSHING OR BORING METHOD OR AS DIRECTED BY THE ENGINEER. PVC OR HDPE CONDUIT SHALL BE USED AND SHALL BE UL LISTED. PVC CONDUIT SHALL BE MARKED "DIR. BORING" OR "DIRECTIONAL BORING" PER NEC. IF THE ENGINEER DETERMINES THIS IS NOT FEASIBLE, THEN A TRENCHING METHOD AS SHOWN IN THE STANDARD DRAWINGS MAY BE USED. THE ENGINEER SHALL GRANT A WRITTEN APPROVAL PRIOR TO USING THE TRENCHING METHOD.
19. ALL CONDUIT SHALL BE THREE (3") INCH DIAMETER UNLESS SPECIFIED ON PLANS. ALL CONDUIT UNDER THE ROADWAY, SIDEWALKS, AND DRIVEWAYS SHALL HAVE A MINIMUM DEPTH OF 24" FROM THE TOP OF THE CONDUIT TO THE FINISHED GRADE. CONDUIT DEPTH MAY NEED TO INCREASE NEAR DRAINAGE STRUCTURES.
20. CONDUIT BELL END FITTINGS SHALL BE INSTALLED ON ALL TERMINATING ENDS OF NON-METALLIC CONDUIT RUNS. THIS INCLUDES PULL BOXES, POLE BASES, AND TRAFFIC SIGNAL CABINETS. THE COST OF THE FITTINGS SHALL BE CONSIDERED SUBSIDARY TO THE PAY ITEM. ALL NON-METALLIC CONDUIT SHALL USE LONG SWEEP 90 DEGREE ELBOWS ON ALL CONDUIT BENDS.
21. ALL CONCRETE PULL BOXES SHALL BE (TYPE 2 HD) UNLESS OTHERWISE INDICATED. PULL BOX LIDS SHALL CLOSE FLUSH WITHOUT PINCHING ANY CONDUCTORS. CONDUIT LENGTHS IN PULL BOXES SHALL BE SET ACCORDINGLY. ANY CONDUCTORS THAT HAVE BEEN DAMAGED BY PINCHING SHALL BE COMPLETELY REPLACED AT THE CONTRACTOR'S EXPENSE.
22. ALL CONCRETE PULL BOXES SHALL BE SET ON A GRAVEL OR CRUSHED STONE BEDDING AS SPECIFIED IN SECTION 711, CONCRETE PULL BOX, OF THE STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION, EDITION OF 2014.
23. CONTRACTOR SHALL ATTACH A PERMANENT TAG OF RIGID PLASTIC OR NON-FERROUS METAL TO EACH CONDUIT AT PULLBOXES, POLE BASES, JUNCTION BOXES AND CONTROLLER CABINETS. TAGS SHALL BE EMBOSSED, STAMPED OR ENGRAVED WITH LETTERS 1/4" OR GREATER IN HEIGHT AND SECURED TO THE CONDUIT WITH NYLON OR PLASTIC TIES. EACH TAG SHALL INDICATE THE END LOCATION OF CONDUIT RUN. THE COST OF THE TAGS SHALL BE SUBSIDIARY TO THE CONDUIT PAY ITEM.

    EXAMPLES FOR CONDUIT IN SIDE CABINET: "TO POLE A AND B" OR "TO POLE C"
    EXAMPLES FOR CONDUIT IN PULL BOX: "TO POLE A" OR "TO TRAFFIC CABINET"
24. ALL STEEL POLES SHALL BE DESIGNED TO MEET THE AASHTO STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES AND TRAFFIC SIGNALS, 4th EDITION (2001) WITH 2003 AND 2006 INTERIMS.
25. ALL TRAFFIC SIGNAL POLES SHALL BE GALVANIZED.
26. CONNECTION OF TRAFFIC SIGNAL DISPLAY TO FIELD WIRING SHALL UTILIZE AN APPROVED TERMINAL STRIP BEHIND HAND-HOLE COVER AT BASE OF POLE. TERMINAL STRIP SHALL PROVIDE PROTECTION TO PREVENT EXPOSURE TO THE PUBLIC IN THE EVENT THAT POLE COVER IS MISSING. PAYMENT FOR TERMINAL STRIPS SHALL BE INCLUDED IN ITEM 714 TRAFFIC SIGNAL MAST ARM AND POLE WITH FOUNDATION OF THE STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION, CURRENT EDITION.
27. FOUNDATION FOR ALL POLES SHALL BE EXTENDED IF NECESSARY TO ACCOMMODATE THE REQUIREMENTS FOR SIGNAL HEAD CLEARANCE ABOVE ROADWAY ONLY AT LOCATIONS WHERE THE GROUND ELEVATION AT THE POLE IS BELOW THE ELEVATION OF THE ROADWAY (SEE NOTES ON STANDARD DRAWING). PAYMENT WILL BE INCLUDED IN SECTION 714 TRAFFIC SIGNAL MAST ARM AND POLE WITH FOUNDATION OF THE STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION, CURRENT EDITION.
28. TO DETERMINE UTILITY CLEARANCES ABOVE THE TRAFFIC SIGNAL POLE, REFER TO THE POLE SCHEDULE FOR VERTICAL SHAFT HEIGHT. WHERE THE POLE SCHEDULE INDICATES THAT A LUMINAIRE ARM WILL BE USED, THIRTY-EIGHT (38') FEET SHOULD BE USED TO DETERMINE UTILITY CLEARANCE ABOVE THE LUMINAIRE ARM. WHERE THE POLE SCHEDULE INDICATES A TRAFFIC SIGNAL POLE WITHOUT A LUMINAIRE ARM, A HEIGHT OF TWENTY-ONE (21') FEET SHOULD BE USED TO DETERMINE UTILITY CLEARANCE ABOVE THE TRAFFIC SIGNAL MAST ARM. AN ADDITIONAL SIX (6') FEET SHOULD BE USED DIRECTLY ABOVE "VIDEO DETECTOR" AT LOCATIONS SHOWN ON THE SIGNAL PLANS.
29. THE DESIRABLE MINIMUM DISTANCE FROM THE FACE OF ROADWAY CURB OR SHOULDER EDGE TO THE FACE OF NON-BREAKAWAY POLE OR OBSTRUCTION IS SIX (6') FEET. REFER TO TRAFFIC SIGNAL PLANS FOR SPECIFIC LOCATION OF POLES, CONTROLLER AND ANY OTHER NON-BREAKAWAY OBSTRUCTIONS. REFER TO "DESIGN PARAMETERS, MINIMUM CLEAR ZONE DISTANCE" FOR MINIMUM DISTANCE FROM THE EDGE OF TRAVELED WAY TO THE FACE OF A NON-BREAKAWAY POLE OR OBSTRUCTION. TRAFFIC SIGNAL POLES OR ANY OTHER NON-BREAKAWAY OBSTRUCTION SHALL NOT BE INSTALLED WITHIN THE CLEAR ZONE.
30. AS DETERMINED BY THE ENGINEER, FOUNDATION EMBEDMENT MAY BE DECREASED BY A MAXIMUM OF TWO FEET IF COMPETENT ROCK IS ENCOUNTERED PRIOR TO ACHIEVING PLAN EMBEDMENT AND AT LEAST HALF OF THE REMAINING PLAN EMBEDMENT LENGTH IS KEYED INTO COMPETENT ROCK.
31. LED LUMINAIRE ASSEMBLIES SHALL HAVE A BUG RATING OF U0.
32. BACKPLATES SHALL BE SUPPLIED FOR ALL TRAFFIC SIGNAL HEADS, REFER TO THE RETROREFLECTIVE BACKPLATES SPECIAL PROVISION FOR REQUIREMENTS.
33. PAVEMENT MARKINGS SHOWN FOR REFERENCE ONLY. SEE PERMANENT PAVEMENT MARKING DETAILS.
34. BEFORE FINAL ACCEPTANCE OF THE TRAFFIC SIGNAL, THE CONTRACTOR SHALL PROVIDE TWO (2) SETS OF LEDGER SIZE (11" X 17") AS-BUILT TRAFFIC SIGNAL PLANS TO THE MAINTENANCE AUTHORITY AND ARDOT.
35. VIDEO DETECTION SYSTEM SHALL BE MIOVISION SMARTVIEW 360° CAMERA OR APPROVED EQUAL. CONTRACTOR SHALL PROVIDE ALL LABOR AND MATERIALS NECESSARY FOR THE INSTALLATION OF MIOVISION VIDEO DETECTION SYSTEM.
36. LUMINAIRES SHALL BE LEOTEK GREENCOBRA GCI-60F-MV-NV-3-GY-700
37. HANDHOLE COVERS AND BACKPLATES TO BE METAL.
38. OWNER PROVIDES MATERIALS FOR ITEMS AS NOTED IN QUANTITY LIST AS (INSTALLATION ONLY). INCIDENTAL INSTALLATION MATERIALS MAY BE NECESSARY AND SHALL BE PROVIDED BY CONTRACTOR.
39. THE CITY OF LITTLE ROCK CONTRACT CONDITIONS AND SPECIFICATIONS AND THE ARKANSAS STATE HIGHWAY COMMISSION STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION SHALL GOVERN. WHEN IN CONFLICT THE CITY OF LITTLE ROCK CONTRACT CONDITIONS AND SPECIFICATIONS SHALL GOVERN.

REVISIONS	DATE

CITY OF LITTLE ROCK, ARKANSAS
KANIS RD. AND COOPER ORBIT RD.
INTERSECTION IMPROVEMENTS

TRAFFIC SIGNAL NOTES

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

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 13224
B. FINLEY VINSON, III

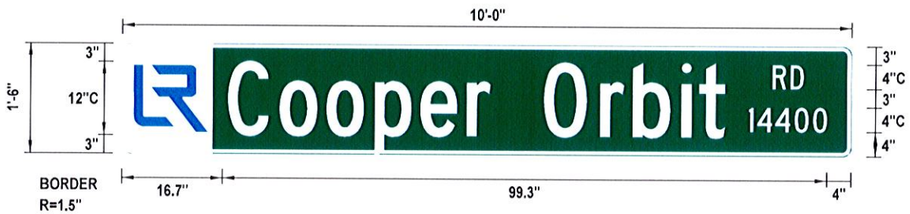
DRAWN BY	
DESIGNED	
CHECKED	
DATE	4/11/2025
SCALE	N/A
PROJECT NO.	
SHEET NO.	T4

100% SUBMITTAL

BORDER
R=1.5"
TH=0.75"

BORDER
R=1.5"
TH=0.75"

BORDER
R=1.5"
TH=0.75"



BORDER
R=1.5"
TH=0.75"

NOTES:

1. REFLECTIVE SHEETING SHALL COMPLY WITH ASTM 4956 TYPE 8 OR 9 3M DIAMOND GRADE REFLECTIVE SHEETING. SHEETING AND LEGEND SHALL BE APPLIED IN SUCH A MANNER TO PROVIDE WRINKLE AND BUBBLE FREE SURFACES. APPLICATION OF SHEETING IS CAUSE FOR REJECTION OF MATERIALS DUE TO WORKMANSHIP.
2. ALUMINUM SIGN BLANK SHALL BE ALLOY 6061-T6 OR 5052-H38. THE ALUMINUM SIGN SHALL BE ALSO ALODIZED. THE ALUMINUM SHEETING SHALL BE 0.100 INCH NOMINAL THICKNESS AND OF THE SIZE SHOWN WITH 1.5" CORNER RADII. PRIOR TO FABRICATION OF THE SIGNS, THE LAYOUT SHALL FIRST BE APPROVED BY AN AGENT OF THE CITY/ COUNTY.
3. WHEN CROSSROAD HAS TWO NAMES, THE SIGN FOR THE CROSSROAD TO THE LEFT MAY BE INSTALLED ON THE BACKSIDE OF THE MAST ARM ON THE NEARSIDE LEFT POLE. SEE STANDARD DRAWING SHEET FOR MORE INFORMATION FOR MOUNTING ON MAST ARM ASSEMBLY.
4. THE SERIES C 2000 STANDARD ALPHABET SHALL BE USED FOR ALL LETTERS. 12" UPPERCASE 9" LOWERCASE.

REVISIONS	DATE

CITY OF LITTLE ROCK, ARKANSAS
KANIS RD. AND COOPER ORBIT RD.
INTERSECTION IMPROVEMENTS

TRAFFIC SIGNAL STREET NAME SIGNS

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

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 13224
B. FINLEY VINSON, III

DRAWN BY	SB
DESIGNED	BFV
CHECKED	
DATE	4/14/2025
SCALE	N/A
PROJECT NO.	
SHEET NO.	T5

KANIS RD. AND COOPER ORBIT RD.
POLE DIMENSIONS

POLE	MAST ARM	* MAST ARM ANGLE	** HAND HOLE	VERT. SHAFT	LUM. ARM	* LUM. ANGLE
A	38'	215°	180°	35'	20'	215°
B	34'	305°	90°	35'	20'	305°
C-DUAL	42' - 32'	35° - 305°	90°	35'	N/A	N/A
D	PED POLE	N/A	N/A	20'	N/A	N/A

* MAST ARM AND LUMINAIRE ARM ANGLE MEASURED FROM PLAN NORTH = 0°, CLOCKWISE ROTATION.
** HAND HOLE LOCATION MEASURED CLOCKWISE FROM MAST ARM.

POLE D (SEE PEDESTRIAN PUSH BUTTON PEDESTAL DETAIL).

KANIS RD. AND COOPER ORBIT RD.
POLE LOCATIONS

POLE	LOCATION & STATION	OFFSET	X, Y COORDINATES
A	N/A	N/A	1182335.25, 150582.19
B	N/A	N/A	1182383.16, 150547.86
C	N/A	N/A	~~1182342.01, 150496.68~~
D	N/A	N/A	~~1182278.68, 150540.77~~

TOP OF POLE FOUNDATION ELEVATION SHALL BE THREE (3) INCHES ABOVE THE FINISHED SURFACE ELEVATION AT THE LOCATIONS SHOWN ABOVE.

TOP OF POLE FOUNDATION ELEVATION MAY BE INCREASED IN ACCORDANCE WITH STANDARD DRAWING SD-11.

POLE D (SEE PEDESTRIAN PUSH BUTTON PEDESTAL DETAIL).

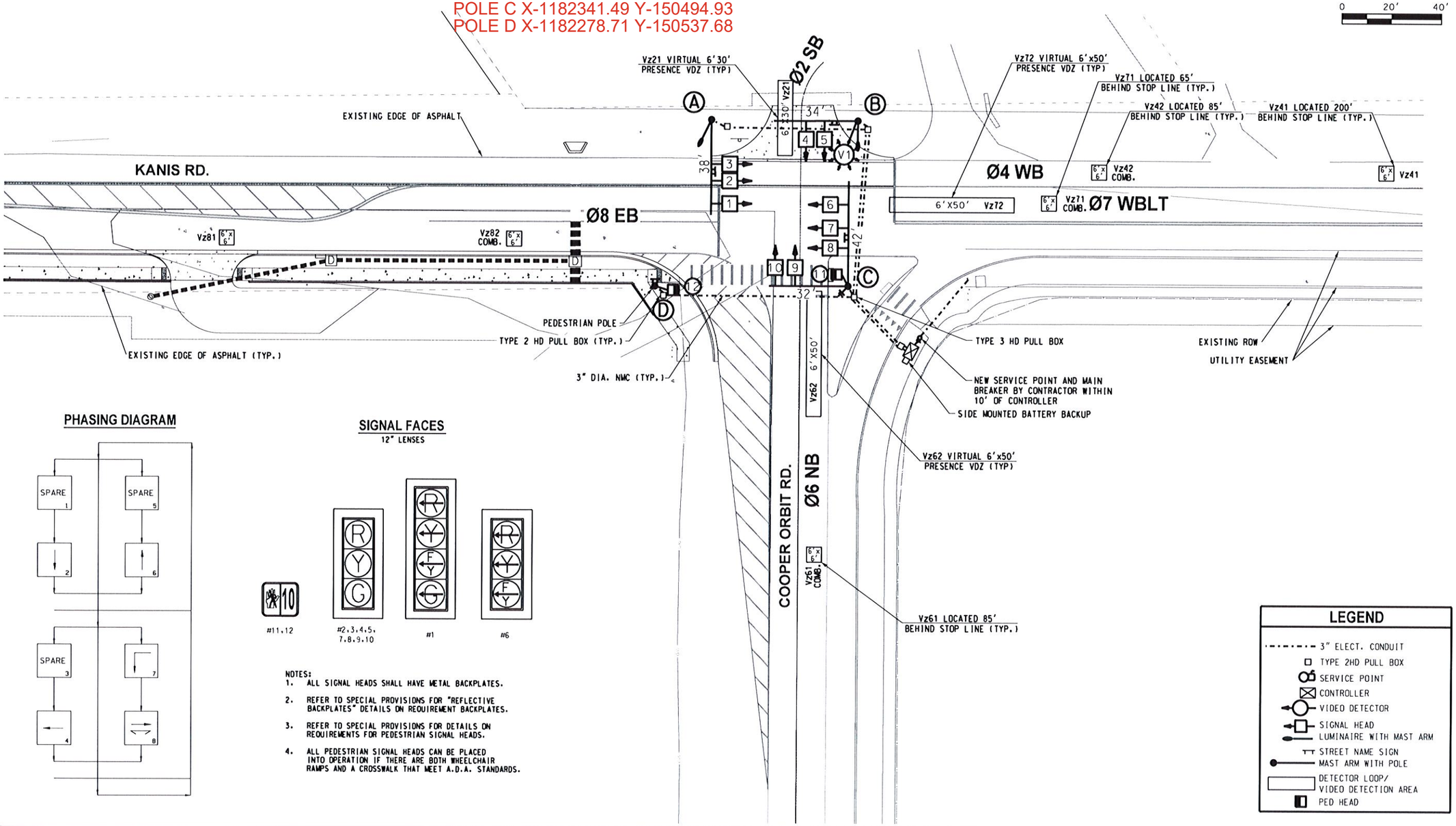
REVISED POLE LOCATIONS
POLE C X-1182341.49 Y-150494.93
POLE D X-1182278.71 Y-150537.68

DETECTOR SPACING CHART

KANIS RD. VIRTUAL LOOPS		
POSTED SPEED	DISTANCE FROM STOP LINE	
	LEAD VDZ	LAG VDZ
35 MPH	200'	85'
COOPER ORBIT RD. VIRTUAL LOOPS		
POSTED SPEED	DISTANCE FROM STOP LINE	
	LEAD VDZ	LAG VDZ
30 MPH	85'	N/A

100% SUBMITTAL

0 20' 40'



PHASING DIAGRAM

SIGNAL FACES
12" LENSES

NOTES:
1. ALL SIGNAL HEADS SHALL HAVE METAL BACKPLATES.
2. REFER TO SPECIAL PROVISIONS FOR "REFLECTIVE BACKPLATES" DETAILS ON REQUIREMENT BACKPLATES.
3. REFER TO SPECIAL PROVISIONS FOR DETAILS ON REQUIREMENTS FOR PEDESTRIAN SIGNAL HEADS.
4. ALL PEDESTRIAN SIGNAL HEADS CAN BE PLACED INTO OPERATION IF THERE ARE BOTH WHEELCHAIR RAMPS AND A CROSSWALK THAT MEET A.D.A. STANDARDS.

LEGEND

- 3" ELECT. CONDUIT
- TYPE 2HD PULL BOX
- SERVICE POINT
- CONTROLLER
- VIDEO DETECTOR
- SIGNAL HEAD LUMINAIRE WITH MAST ARM
- STREET NAME SIGN
- MAST ARM WITH POLE
- DETECTOR LOOP/ VIDEO DETECTION AREA
- PED HEAD

REVISIONS	DATE

CITY OF LITTLE ROCK, ARKANSAS
KANIS ROAD AT PANTHER BRANCH
INTERSECTION IMPROVEMENTS

SIGNALIZATION PLAN

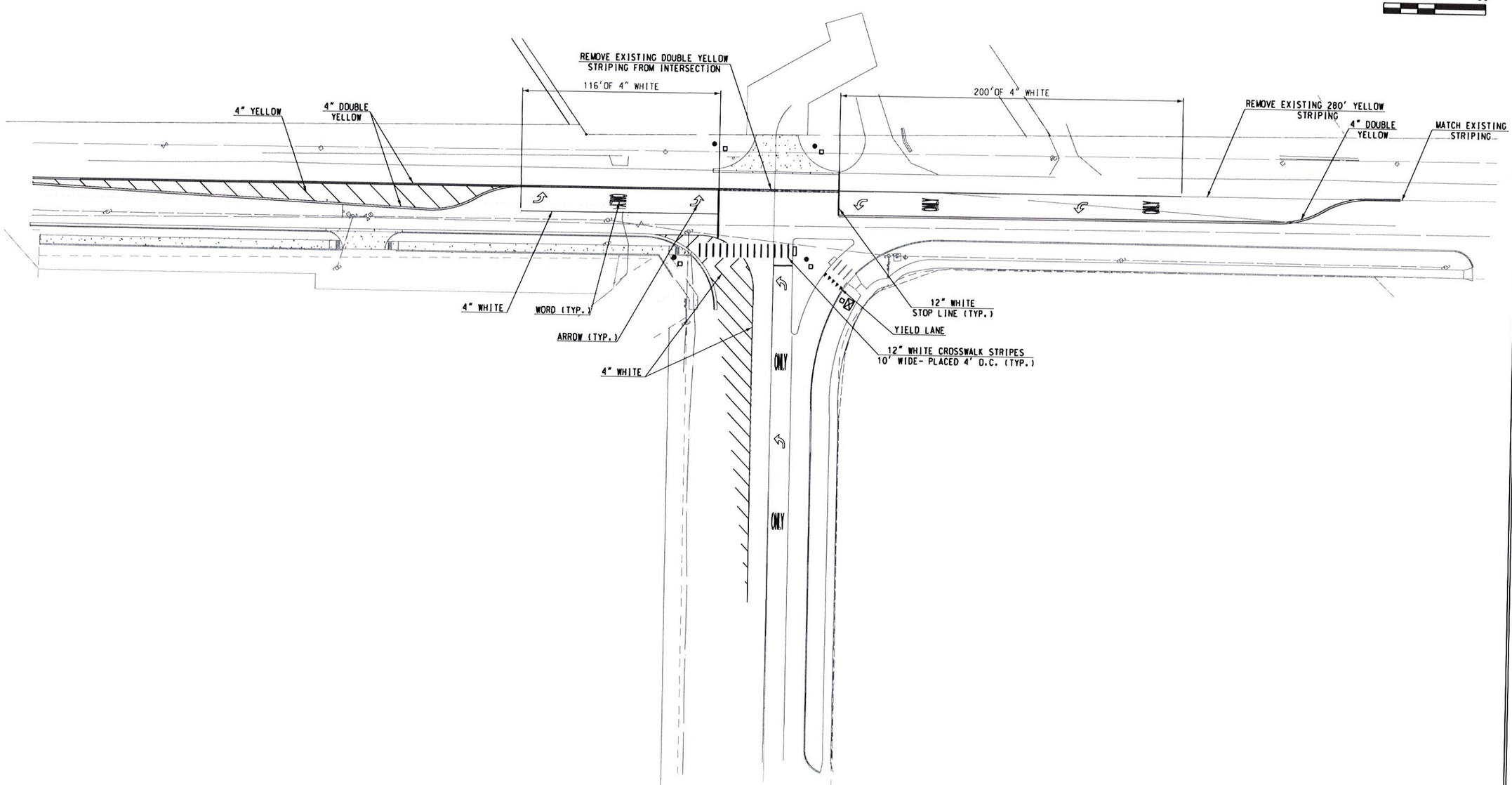
DEPARTMENT OF PUBLIC WORKS
CIVIL ENGINEERING
701 W. MARKHAM
LITTLE ROCK, ARKANSAS 72201

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 13224
B. FINLEY VINSON, III

DRAWN BY	MJB
DESIGNED	BFV
CHECKED	
DATE	4/14/2025
SCALE	1" = 20'
PROJECT NO.	
SHEET NO.	T6

4/14/2025 G:\DProjects\04 Little Rock Office Projects\LR-I25C - SD\Intersection Improvement\Kanis & Panther Branch - Little Rock, AR\CAD\T6-20 SCALE.dgn

100% SUBMITTAL



REVISIONS	DATE

CITY OF LITTLE ROCK, ARKANSAS
KANIS ROAD AT PANTHER BRANCH
INTERSECTION IMPROVEMENTS

PAVEMENT MARKING PLAN

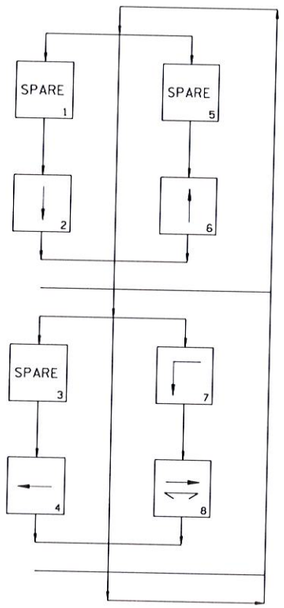
DEPARTMENT OF PUBLIC WORKS
CIVIL ENGINEERING
701 W. MARKHAM
LITTLE ROCK, ARKANSAS 72201

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 13224
B. FINLEY VINSON, III

DRAWN BY	MJB
DESIGNED	BFV
CHECKED	
DATE	4/14/2025
SCALE	1" = 30'
PROJECT NO.	
SHEET NO.	T7

4/14/2025 G:\0&Projects\04 Little Rock Office Projects\LR-0256 - SD, Intersection Improvement, Kanis & Panther Branch - Little Rock, AR\CAD\17-PAVEMENT MARKING.dgn

PHASING DIAGRAM

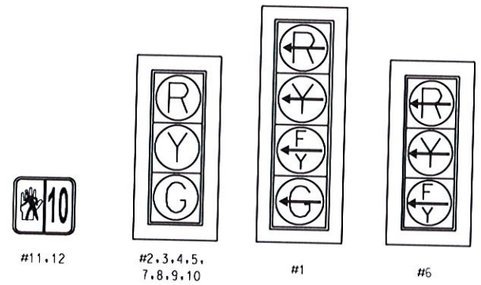


INTERVAL CHART

SIGNAL FACES	KANIS RD. AND COOPER ORBIT RD. 2+6	CLR.	4+7	CLR.	4+8	CLR.	FLASH SEQUENCE
1	~~←R~~	~~←R~~	~~←G~~	**	~~←FY~~	~~←Y~~	~~←R~~
2&3	R	R	G	*	G	*	R
4&5	G	Y	R	R	R	R	R
6	~~←R~~	~~←R~~	~~←FY~~	**	~~←FY~~	**	~~←R~~
7&8	R	R	R	R	G	Y	R
9&10	G	Y	R	R	R	R	R
11&12	DW	DW	DW	DW	W	FDW	BLK

* DENOTES GREEN OR YELLOW BALL DEPENDING ON NEXT PHASE
** DENOTES FLASHING YELLOW ARROW OR YELLOW ARROW DEPENDING ON NEXT PHASE

SIGNAL FACES
12" LENSES



#11,12 #2,3,4,5, 7,8,9,10 #1 #6

NOTES:
1. ALL SIGNAL HEADS SHALL HAVE METAL BACKPLATES.
2. REFER TO SPECIAL PROVISIONS FOR "REFLECTIVE BACKPLATES" DETAILS ON REQUIREMENT BACKPLATES.
3. REFER TO SPECIAL PROVISIONS FOR DETAILS ON REQUIREMENTS FOR PEDESTRIAN SIGNAL HEADS.
4. ALL PEDESTRIAN SIGNAL HEADS CAN BE PLACED INTO OPERATION IF THERE ARE BOTH WHEELCHAIR RAMPS AND A CROSSWALK THAT MEET A.D.A. STANDARDS.

DETECTOR CHART

DETECTOR SYSTEM DESCRIPTION: JOB											
KANIS RD. AND COOPER ORBIT RD. DETECTOR ASSIGNMENTS				HARDWARE INPUTS BY SUPPLIER			PROGRAM ASSIGNMENTS LOCAL		MASTER SYSTEM DETECTOR NUMBERS	COMMENTS	
DET. ID #	LOCATION DIRECTION	TYPE	DET. #	CAB. TRM. #	AMP CHN. #	CON IMP. #	PHS	SYSTEM DET. #			
Vz21	SB NEAR	COMB.			6	V10	2	2		V1	MOUNTED TO POLE B
Vz41	WB ADVANCE	LOCAL			13	V4	4			V1	MOUNTED TO POLE B
Vz42	WB NEAR	COMB.			14	V12	4	4		V1	
Vz61	NB ADVANCE	LOCAL			3	V6	6			V1	MOUNTED TO POLE B
Vz62	NB NEAR	COMB.			4	V14	6	6		V1	
Vz71	WB LEFT TURN FAR	COMB.			15	V15	7	7		V1	MOUNTED TO POLE B
Vz72	WB LEFT TURN	LOCAL			16	V7	7			V1	
Vz81	EB ADVANCE	LOCAL			11	V8	8			V1	MOUNTED TO POLE B
Vz82	EB NEAR	COMB.			12	V16	8	8		V1	
PB8	(COOPER ORBIT) S. LEG	PED.				P8	8				
					SPARE: 1,3,5						

CONTROLLER INPUT ABBREVIATIONS:
V = VEHICLE INPUT
D = SYSTEM OR AUXILIARY INPUT
P = PEDESTRIAN INPUT

NOTE: THIS IS WIRED TO CONTROLLER INPUT DETECTOR NUMBER WHICH IS PROGRAMMED TO ACTUATE THE DESIGNATED PHASE.
EXAMPLE: V9 = SYSTEM DETECTOR 1, V10 = SYSTEM DETECTOR 2

100% SUBMITTAL

REVISIONS	DATE

CITY OF LITTLE ROCK, ARKANSAS
KANIS RD. AND COOPER ORBIT RD.
INTERSECTION IMPROVEMENTS

SIGNALIZATION DETAILS

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

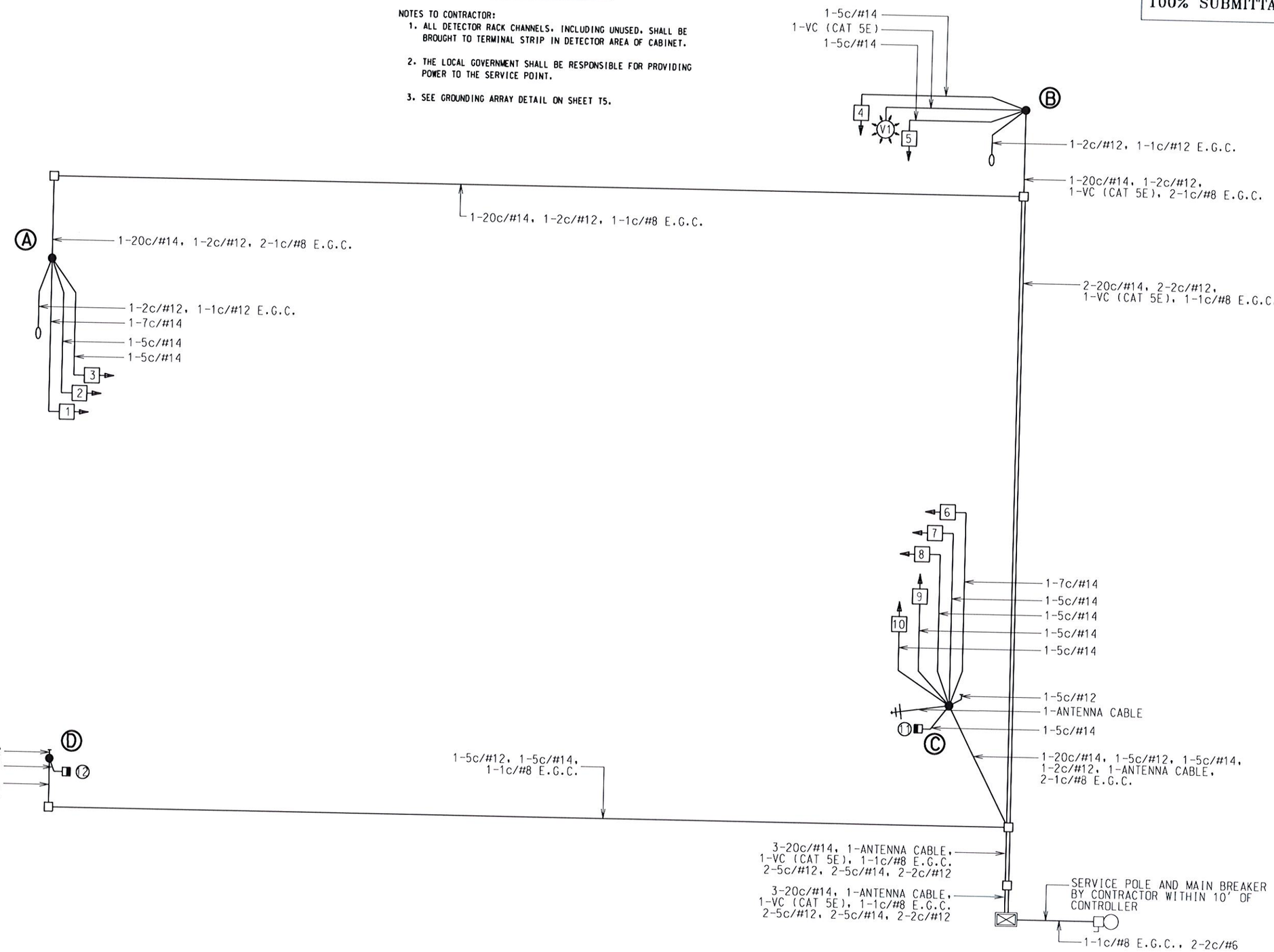
STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 13224
B. FINLEY VINSON, III

DRAWN BY	MJB
DESIGNED	BFV
CHECKED	
DATE	4/14/2025
SCALE	N/A
PROJECT NO.	
SHEET NO.	T8

4/14/2025 G:\@Projects\04 Little Rock Office Projects\LR-025c - SD, Intersection Improvement, Kanis & Panther Branch - Little Rock, AR\CAD\T8-DETAIL.dgn

WIRING DIAGRAM

NOTES TO CONTRACTOR:
1. ALL DETECTOR RACK CHANNELS, INCLUDING UNUSED, SHALL BE BROUGHT TO TERMINAL STRIP IN DETECTOR AREA OF CABINET.
2. THE LOCAL GOVERNMENT SHALL BE RESPONSIBLE FOR PROVIDING POWER TO THE SERVICE POINT.
3. SEE GROUNDING ARRAY DETAIL ON SHEET T5.



100% SUBMITTAL

REVISIONS	DATE

CITY OF LITTLE ROCK, ARKANSAS
KANIS RD. AND COOPER ORBIT RD.
INTERSECTION IMPROVEMENTS

WIRE DIAGRAM

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

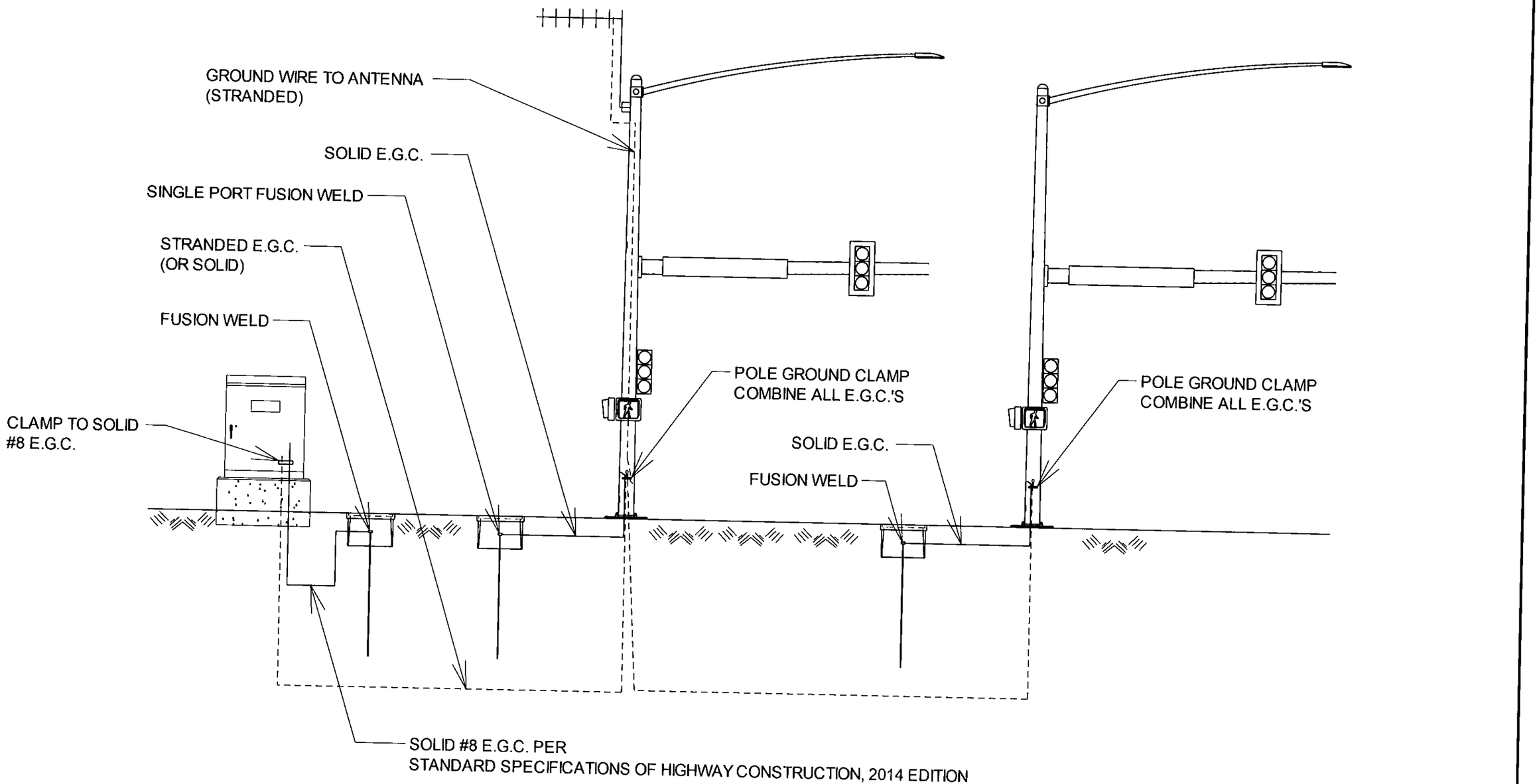
STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 13224
B. FINLEY VINSON, III

DRAWN BY	MJB
DESIGNED	BFV
CHECKED	
DATE	4/14/2025
SCALE	N/A
PROJECT NO.	
SHEET NO.	T9

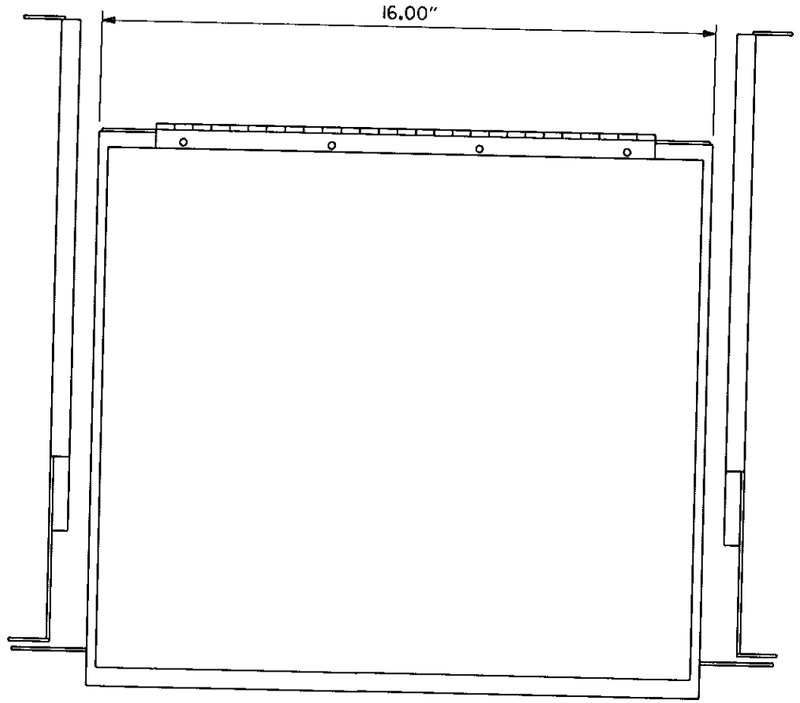
4/14/2025 G:\0Projects\04 Little Rock Office Projects\LR-25C - SD, Intersection Improvement, Kanis & Panther Branch - Little Rock, ARK\CAD\T9-WIRE.dgn

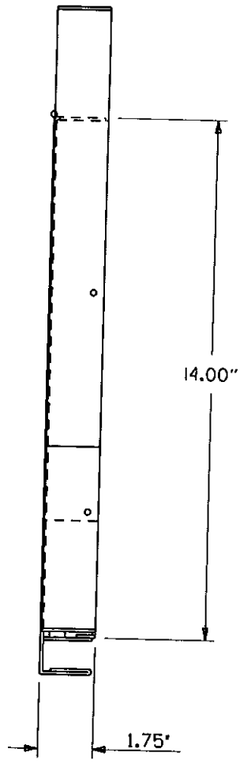
GROUNDING ARRAY
SINGLE-PORT FUSION WELDS

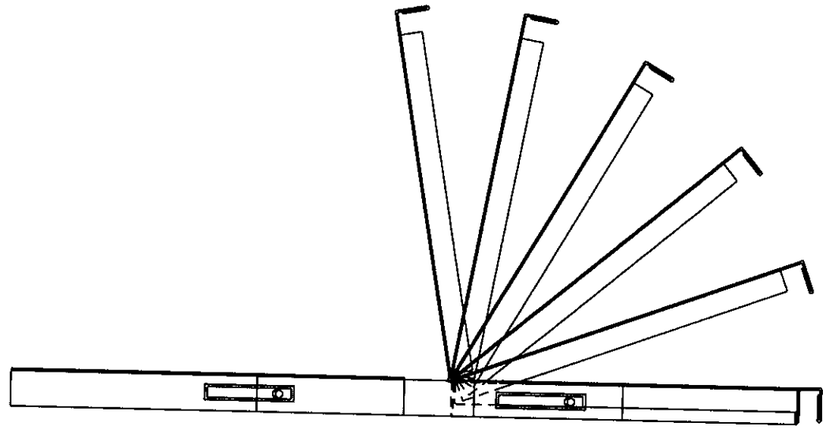
DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
			ARK.	GUIDE		
		GROUNDING ARRAY DETAIL				



DRAWER PLAN VIEW

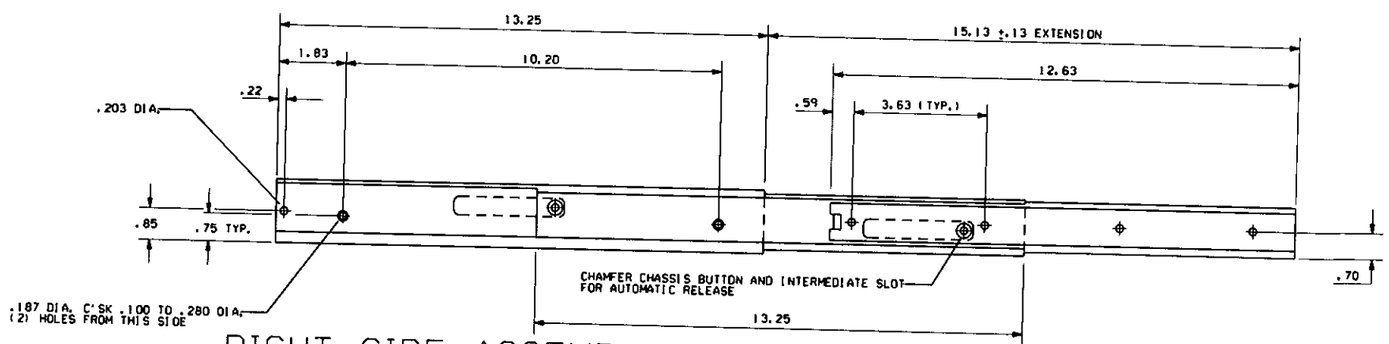






NOTES:
1. RIGHT HAND SLIDE SHOWN, LEFT SLIDE OPPOSITE.
2. GENERAL DEVICES (CC3D02-99-D1D2) OR EQUAL AND CONTAINS (1) RIGHT HAND SLIDE ASSEMBLY, (1) LEFT HAND SLIDE ASSEMBLY.
3. ALL HARDWARE NECESSARY TO FASTEN SLIDE ASSEMBLY TO UNDERSIDE OF CONTROLLER SHELF SHALL BE INCLUDED.

FRONT VIEW



RIGHT SIDE ASSEMBLY

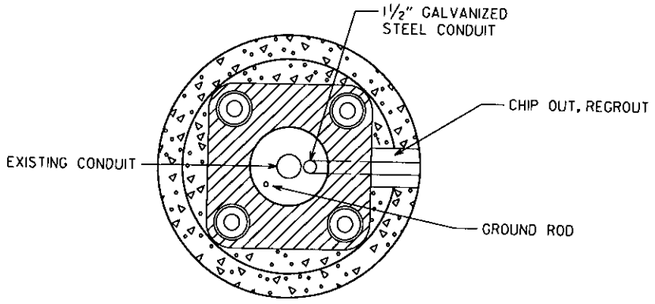
DATE	REVISION	DATE FILM
9-12-13	ISSUED AS STANDARD DRAWING	
6-15-05	ISSUED	

ARKANSAS STATE HIGHWAY COMMISSION

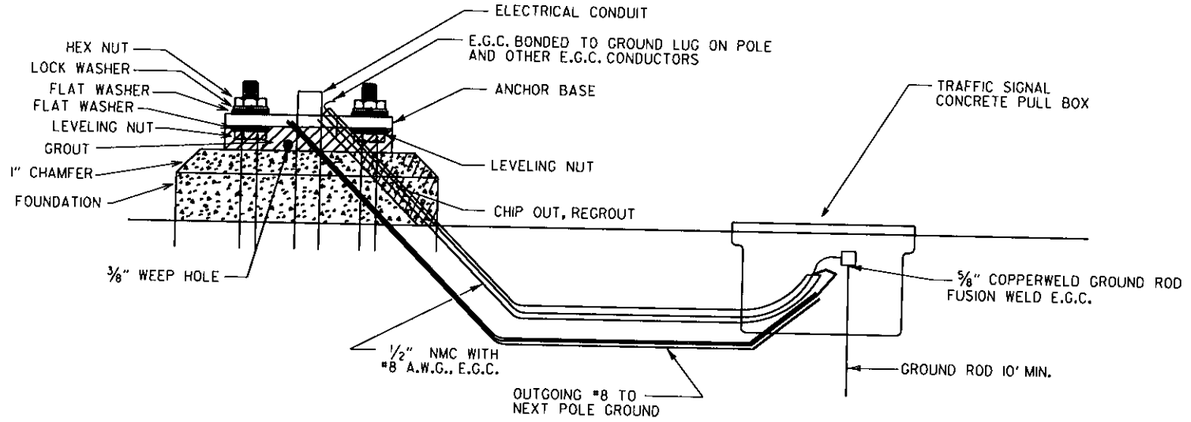
CONTROLLER CABINET UTILITY DRAWER

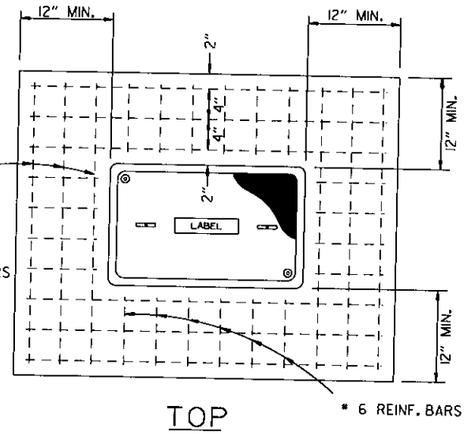
STANDARD DRAWING SD-5

CONDUIT ENTRY TO EXISTING POLE BASE



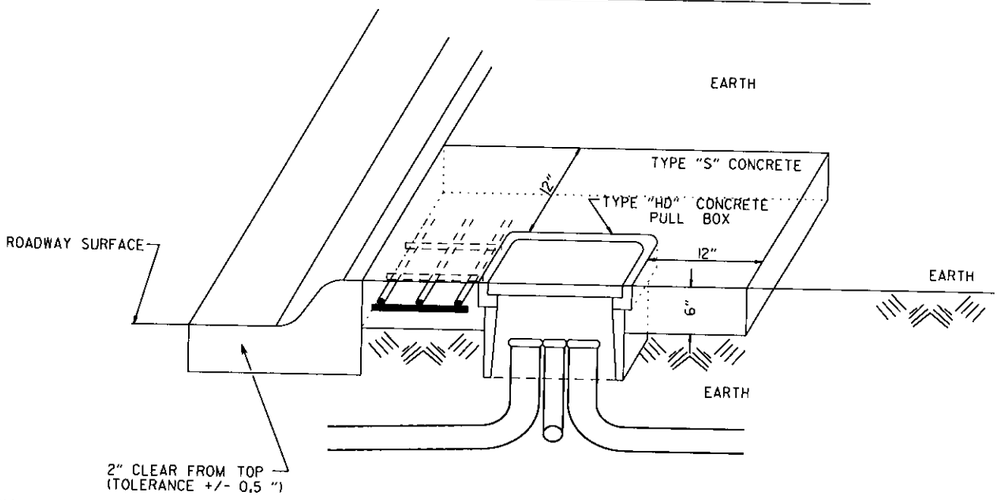
ANCHOR BASE

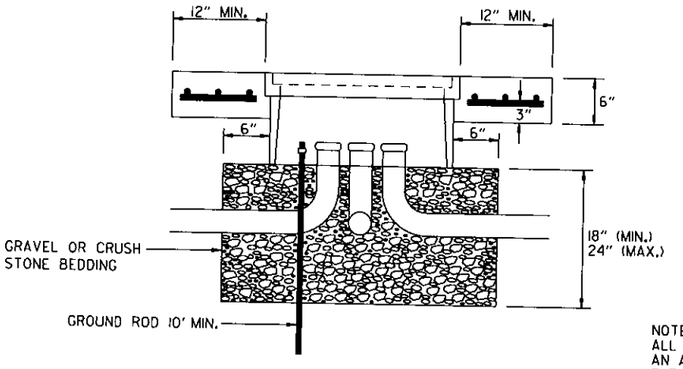




TOP

TYPE "HD" CONCRETE PULL BOX DETAIL

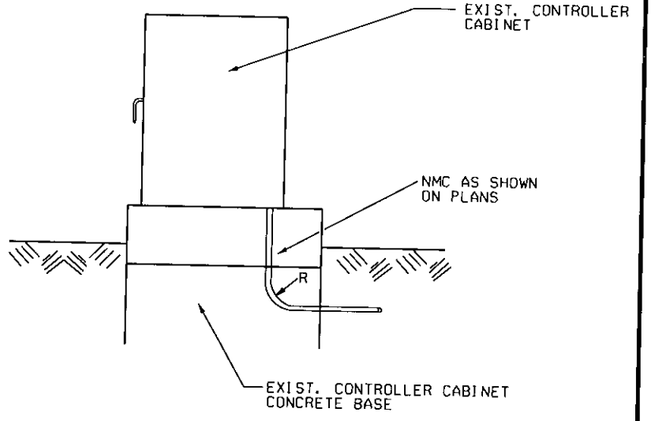




ELEVATION

NOTE:
ALL TYPE 1 HD, TYPE 2 HD, AND TYPE 3 HD CONCRETE PULL BOXES ARE INSTALLED WITH AN APRON OF CONCRETE 12" WIDE AND 6" IN DEPTH. ALL PAYMENT SHALL BE INCLUDED IN THE PRICE OF THE TYPE HD CONCRETE PULL BOX. THE CONCRETE PULL BOX SHALL BE INSTALLED FLUSH TO SURROUNDING GRADE UNLESS OTHERWISE INSTRUCTED BY THE ENGINEER. THE CONCRETE SHALL BE CLASS "S". THREE #6 REINFORCING BARS IN THE APRON ON ALL SIDES OF THE CONCRETE PULL BOX IS REQUIRED IN CONCRETE.

CONDUIT ENTRY TO EXISTING CONTROLLER CABINET



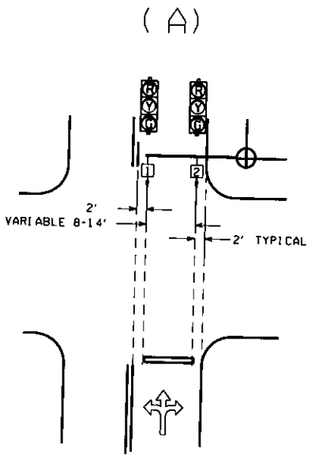
NOTE: ENTRY TO CABINET SHALL BE THROUGH A CUT IN THE BASE SUFFICIENT TO PROVIDE ADEQUATE CONDUIT RADIUS FOR ITEM.

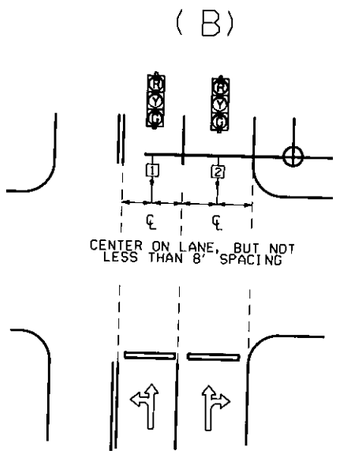
DATE	REVISION	FILMED
02-13-24	REVISED NOTES AND TYPE "HD" CONCRETE PULL BOX DETAILS	
11-16-17	REVISED NOTES	
09-02-15	REVISED PULL BOX DEPTH	
09-12-13	ISSUED AS STANDARD DRAWING	
05-21-09	REVISED GROUNDING	
07-31-08	ADDED & REVISED CONDUIT ENTRY	
06-23-04	REVISED CLEARANCE AT CURB ENTRY	
01-04-02	ADDED REINFORCING TO BOX APRON	
07-02-01	REVISED	
12-27-99	REVISED NOTES	
11-18-98	ISSUED	

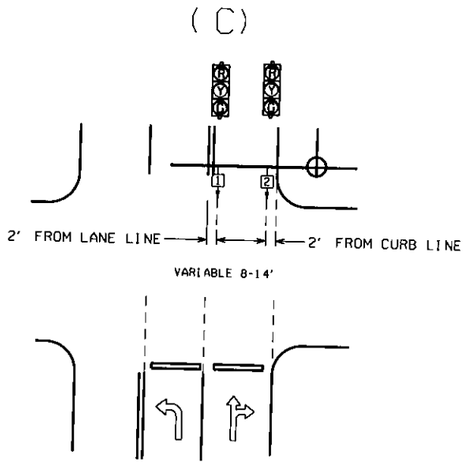
ARKANSAS STATE HIGHWAY COMMISSION

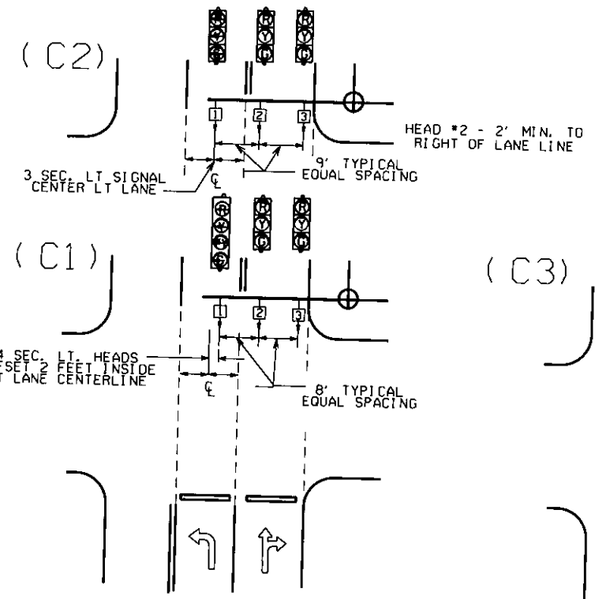
HEAVY DUTY PULL BOX

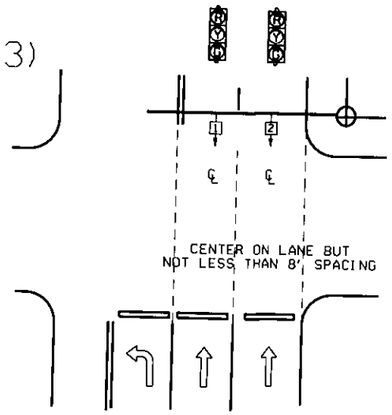
STANDARD DRAWING SD-6

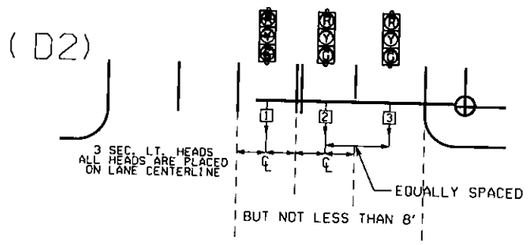


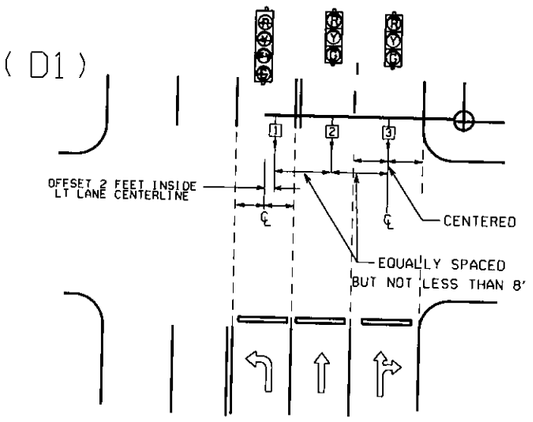




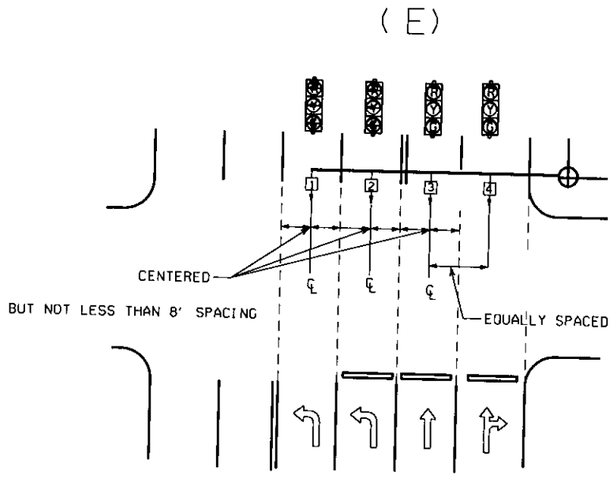








NOTE: WHERE LEFT TURN HEAD (HEAD 1 ON D1 AND D2) IS NOT CALLED FOR ON PLANS, MAST ARM LENGTH MAY STILL BE ALLOWED FOR FUTURE INSTALLATION. HEADS FOR THROUGH MOVEMENTS SHALL STILL BE ALIGNED WITH THROUGH LANES AS SHOWN ON DETAILS.



℄ = CENTER OF LANE FROM APPROACH SIDE

GENERAL NOTES:

1. FOUR SECTION "PROTECTED/PERMISSIVE" LEFT TURN HEADS SHOULD BE PLACED A MINIMUM OF TWO (2') FEET TO THE RIGHT OF THE CENTERLINE OF THE APPROACHING LEFT TURN LANE.

2. THREE SECTION "PROTECTED" LEFT TURN HEADS SHOULD BE PLACED ON THE CENTERLINE OF THE APPROACHING LEFT TURN LANE.

3. WHEN IT IS NECESSARY TO PLACE POLES OTHER THAN AS SHOWN ON PLAN SHEET(S) RESULTING IN MAST ARM EXTENDING MORE THAN TWO FEET PAST (TO THE LEFT OF) THE CENTERLINE OF THE APPROACHING LEFT TURN LANE, MAST ARM SHALL BE CUT TO APPROPRIATE LENGTH AS DETERMINED BY THE ENGINEER, AND A NEW END CAP PROVIDED. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DETERMINING THIS PRIOR TO INSTALLING THE MAST ARM IF ADDITIONAL COMPENSATION IS REQUIRED.

4. SIGNAL HEAD SPACING SHALL, IN NO CASE, BE LESS THAN EIGHT (8') FEET BETWEEN HEADS ON CENTER, MEASURED HORIZONTALLY PERPENDICULAR TO THE APPROACH.

5. ALL SIGNAL HEADS SHOWN ON THIS DETAIL SHEET SHALL BE LOCATED ACCORDING TO THE DIMENSIONS SHOWN IN RELATION TO THE APPROACH SIDE OF THE INTERSECTION.

6. MAXIMUM MOUNTING HEIGHT OF SIGNAL FACES LOCATED BETWEEN 40 FEET AND 53 FEET FROM STOP BAR SHALL BE IN ACCORDANCE WITH FIGURE 4D-5 OF 2009 MUTCD.

DATE	REVISION	DATE FILM
12-8-16	REVISED NOTE 6	
9-12-13	ISSUED AS STANDARD DRAWING	
3-11-10	2009 MUTCD	
12-9-99	ISSUED	

ARKANSAS STATE HIGHWAY COMMISSION

SIGNAL HEAD PLACEMENT

STANDARD DRAWING SD-8

NOTES:
PEDESTRIAN AND TRAFFIC SIGNAL HEAD SIGNS:
EACH ITEM "TRAFFIC SIGNAL HEAD (4 SEC., 1-WAY)" SHALL INCLUDE A SIGN (R10-12a) AS SHOWN, ATTACHED TO THE MAST ARM OR SPAN ASSEMBLY 12" TO THE RIGHT OF THE SIGNAL HEAD UNLESS REMOVED WITHIN THE SIGNAL PLAN NOTES.

EACH ITEM "TRAFFIC SIGNAL HEAD (3 SEC., 1-WAY)" TO BE USED AS A LEFT TURN INDICATION ONLY SHALL INCLUDE A SIGN (R10-10) AS SHOWN, ATTACHED TO THE MAST ARM OR SPAN ASSEMBLY 12" TO THE RIGHT OF THE SIGNAL HEAD.

EACH PEDESTRIAN PUSHBUTTON SHALL HAVE ONE R10-3E SIGN ATTACHED TO THE POLE ABOVE THE BUTTON. ALL SIGNS SHALL BE MANUFACTURED IN ACCORDANCE WITH SECTION 723 OF THE STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION.

ALL SIGN BLANKS SHALL BE CONSTRUCTED OF ALUMINUM ALLOY (ASTM DESIGNATION B-209, ALLOY 5052-H38) WITH THICKNESS OF 0.100 INCH.

GENERAL NOTES:
1. MAST ARM POLES SHALL BE MOUNTED A MINIMUM OF FOUR (4') FEET BEHIND CURB OR SHOULDER.

2. OCTAGONAL POLES AND ARMS MEETING THE REQUIREMENTS OF THE PLANS SPECIFICATIONS CAN BE INSTALLED IN LIEU OF ROUND. ALL POLES AND ARMS IN A JOB MUST BE THE SAME SHAPE.

3. MINIMUM STRUCTURAL REQUIREMENTS;
DESIGN SPECIFICATIONS: AASHTO STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES AND TRAFFIC SIGNALS, 4TH EDITION (2001) WITH 2003 AND 2006 INTERIMS.

USE FATIGUE CATEGORY I FOR ALL STRUCTURES ON ROUTES WHERE THE SPEED LIMIT IS 65 MPH AND GREATER AT THE STRUCTURE LOCATION AND ON ROUTES WHERE THE SPEED LIMIT IS GREATER THAN 45 MPH WITH AN MAST ARM OF 60' OR LONGER.

USE FATIGUE CATEGORY II FOR ALL STRUCTURES ON ROUTES WHERE THE SPEED LIMIT IS LESS THAN 65 MPH AND GREATER THAN 45 MPH WITH MAST ARMS LESS THAN 60' AND ON ROUTES WHERE THE SPEED LIMITS OF 45 MPH AND LESS WITH AN MAST ARM OF 60' OR LONGER.

USE FATIGUE CATEGORY III FOR ALL STRUCTURES WHERE THE SPEED LIMIT IS 45 MPH AND LESS AND MAST ARMS LESS THAN 60'.

CONSTRUCTION SPECIFICATIONS:
STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION (CURRENT EDITION) WITH APPLICABLE SUPPLEMENTAL SPECIFICATIONS AND SPECIAL PROVISIONS.

BASE WIND SPEED: 90 MPH.

STEEL MEMBERS CONSIDERED MAIN LOAD CARRYING MEMBERS WITH A THICKNESS GREATER THAN ½" SHALL MEET THE LONGITUDINAL CHARPY V-NOTCH TEST SPECIFIED IN SUBSECTION 807.05 OF THE STANDARD SPECIFICATIONS.

DEAD LOAD: AS A MINIMUM, DESIGN SHALL BE BASED ON THE FIXED ATTACHMENTS SHOWN BELOW OR AS MODIFIED IN THE PLANS.

ALL SIGNAL HEADS TO BE ONE WAY, TWELVE (12") INCH AND HAVE FIVE (5") INCH BACK PLATES:

SIGNAL HEADS AT THE END OF MAST ARM - ONE 4 SEC., 85 LB., (4.5 SQ. FT., ONE SIGN MOUNTED 3 FEET FROM SIGNAL HEAD (2'-0" X 2'-6"; 20 LB.) REMAINING SIGNAL HEADS SPACED AT 8 FT. (3 SEC., 56 LB., 8.3 SQ. FT.);
DESIGN TO ACCOMMODATE;
2 SIGNAL HEADS FOR MAST ARMS 10 FT. TO 16 FT.
3 SIGNAL HEADS FOR MAST ARMS 18 FT. TO 24 FT.
4 SIGNAL HEADS FOR MAST ARMS OVER 26 FT.

STREET NAME SIGN - 72" X 18", 36 LB., MOUNTED SUCH THAT OUTSIDE EDGE IS NOT GREATER THAT 12 FT. FROM POLE. DEPENDING UPON POSITION OF SIGNAL HEAD ADJACENT TO POLE, SIGN MAY OVERLAP POLE SHAFT.
ROADWAY LUMINAIRES (WHERE REQUIRED ON PLAN SHEET) - VARIABLE ARM LENGTH (MAX. WT. 75 LB., 3.3 SQ. FT.)
PEDESTRIAN SIGNALS - TWO 1 SEC., 12 INCH MOUNTED 8 FT. FROM BASE OF POLE, POST MOUNTED 3 SEC. SIGNAL HEAD AT 10 FT. ON SIDE OF POLE.

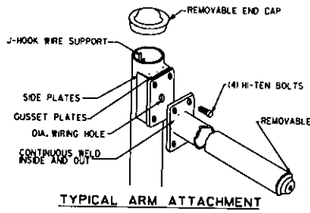
4. POLE/MAST ARM CAP - POLE AND MAST ARM CAPS SHALL BE PROVIDED, FABRICATED OF EITHER STEEL OR CAST ALUMINUM.

5. HAND HOLE - HAND HOLES SHALL BE 4 IN. X 6 IN. FOR STANDARD, AND 3 IN. X 5 IN. FOR PED POLES. MINIMUM PLACED APPROXIMATELY 12 INCHES FROM BASE, AND SHALL BE FIXED WITH A BOLT DOWN COVER. A VACCUM FORMED ABS COVER IS AN ACCEPTABLE ALTERNATE TO STEEL. POLES GREATER THAN 21FT. IN HEIGHT (FOR ROADWAY LUMINAIRE ATTACHMENT) SHALL INCLUDED A HAND HOLE WITHIN 12 INCHES OF MAST ARM(S) ATTACHMENT(S).

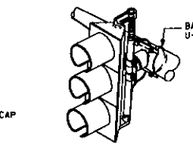
6. POLE/MAST ARM TAPER SLOPE - AVERAGE TAPER OF SIGNAL MAST ARMS AND POLE SHAFT SHALL BE 0.125 TO 0.15 INCHES PER FOOT.

MAST ARM CENTERLINE ANGLE AT ATTACHMENT POINT WITH POLE SHALL MAINTAIN NOT LESS THAN 0.5 DEGREES OR MORE THAN 4 DEGREES POSITIVE SLOPE WITH A LINE PERPENDICULAR TO THE POLE CENTERLINE. THE MAST ARM SHALL MAINTAIN A POSITIVE SLOPE AFTER IT IS PLACED UNDER LOAD.

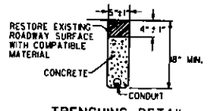
7. NUT COVERS - EACH POLE SHALL INCLUDE A BOLT DOWN NUT COVER FOR EACH ANCHOR BOLT.



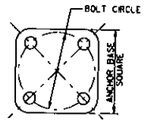
TYPICAL ARM ATTACHMENT



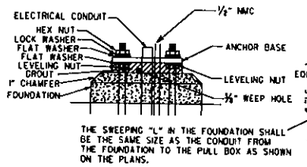
NOTE: THE SIGNAL SHALL BE CONNECTED TO THE MAST ARM BY BRACKETING AS DIRECTED BY THE ENGINEER.



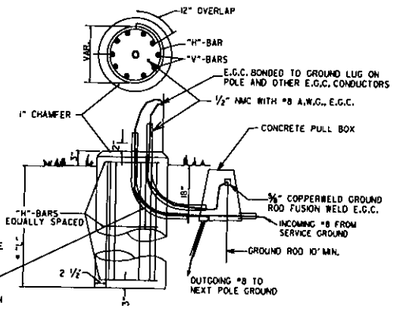
TRENCHING DETAIL
(FOR SAW CUT TRENCH IN ROADWAY)



ANCHOR BASE



THE SWEEPING "L" IN THE FOUNDATION SHALL BE THE SAME SIZE AS THE CONDUIT FROM THE FOUNDATION TO THE PULL BOX AS SHOWN ON THE PLANS.



THE GROUND ROD SHALL BE FUSION WELDED TO A 1C/#8 A.W.G. SOLID COPPER GROUND WIRE. ATTACHMENT TO THE PRIMARY GROUND MAY BE BY AN APPROVED CLAMP. THE GROUND ROD IS TO BE LOCATED IN THE CONCRETE PULL BOX.

TYPICAL FOUNDATION DETAILS

POLE FOUNDATION MINIMUM DIMENSIONS AND STEEL REINFORCING. ALL REINFORCING STEEL SHALL BE GRADE 40 MIN.

ARM LENGTH	FOUNDATION DIAMETER	DEPTH "L"*	STEEL VERTICAL	STEEL HORIZONTAL	STEEL O.C.
PED	30"	7'-0"	12-#7 (6'-6")	10-#4	8.44"
2' TO 12'	30"	10'-6"	12-#7 (10'-0")	15-#4	8.42"
OVER 12' TO 20'	30"	11'-6"	12-#7 (11'-0")	16-#4	8.66"
OVER 20' TO 35'	36"	12'-6"	13-#8 (12'-0")	17-#4	8.88"
OVER 35' TO 50'	36"	13'-6"	13-#8 (13'-0")	19-#4	8.56"
OVER 50' TO 72'	42"	14'-6"	18-#8 (14'-0")	20-#4	8.74"
TWINS TO 20'	30"	16'-0"	12-#6 (15'-6")	22-#4	8.76"
TWINS OVER 20' TO 44'	36"	16'-0"	13-#8 (15'-6")	22-#4	8.76"
TWINS OVER 44' TO 50'	42"	16'-0"	18-#8 (15'-6")	22-#4	8.76"
TWINS OVER 50' TO 72'	42"	16'-6"	18-#8 (16'-0")	23-#4	8.64"

* WHEN THE GROUND ELEVATION AT THE POLE IS LOWER THAN THE ROADWAY ELEVATION, THE LENGTH OF FOUNDATION ABOVE THE GROUND MAY BE INCREASED TO PROVIDE THE REQUIRED SIGNAL HEAD CLEARANCE ABOVE THE ROADWAY. WHEN THE REQUIRED LENGTH OF FOUNDATION ABOVE THE GROUND IS 18" OR LESS, NO INCREASE IN DEPTH "L" WILL BE REQUIRED. WHEN THE REQUIRED LENGTH OF FOUNDATION ABOVE THE GROUND IS 5'-6" OR LESS, INCREASE DEPTH "L" BY 1'-0", FOR LENGTHS GREATER THAN 5'-6", DEPTH "L" SHALL BE ADJUSTED AS DIRECTED BY THE ENGINEER. LONGITUDINAL REINFORCING, AS SHOWN IN THE TABLE, SHALL BE PROVIDED FOR THE LENGTH OF THE EXTENDED SHAFT AND #4 TIES SHALL BE PROVIDED AT A SPACING NOT TO EXCEED 9" ON CENTERS. PAYMENT WILL BE IN ACCORDANCE WITH SECTION 714 TRAFFIC SIGNAL MAST ARM AND POLE WITH FOUNDATION OF THE STANDARD SPECIFICATIONS.

** IN LIEU OF DESIGNING THE STRUCTURE TO RESIST PERIODIC GALLOPING, A VIBRATORY MITIGATION DEVICE MAY BE PROVIDED BY THE POLE MANUFACTURER. THE VIBRATORY MITIGATION DEVICE SHALL BE AN ANTI-GALLOPING PANEL CONSISTING OF A 60" X 16" X 0.125" SIGN BLANK MOUNTED NEAR THE END OF THE MAST ARM NOT TO EXCEED ONE QUARTER OF THE LENGTH OF THE MAST ARM FROM THE END OF THE MAST ARM WITH THE LONG AXIS OF THE PANEL COLLINEAR WITH THE LONG AXIS OF THE MAST ARM. THE PANEL SHOULD BE MOUNTED AT SUCH THE HEIGHT AS TO PROVIDE AT LEAST 6" CLEAR FROM THE TOP OF ANY SIGNAL ASSEMBLY OF SIGN PANEL LOCATED ON THE MAST ARM WITHIN THE LENGTH OF THE ANTI-GALLOPING PANEL.

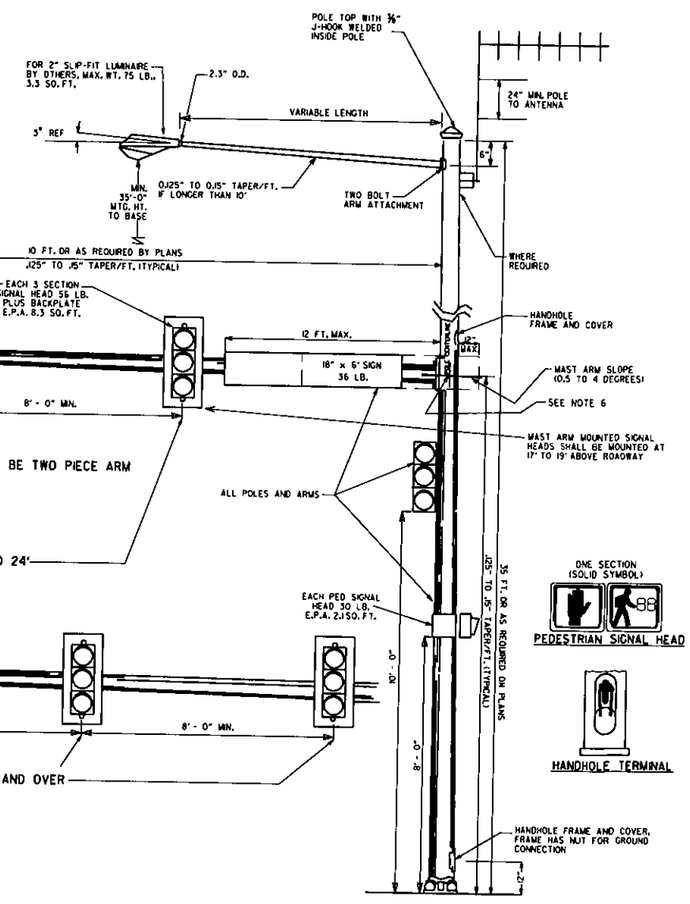
TRUCK-INDUCED GUST LOADS SHALL BE EXCLUDED FOR FATIGUE DESIGN FOR ALL STRUCTURES EXCEPT MAST ARMS MOUNTED OVER FACILITIES WITH POSTED SPEEDS OF 65 MPH OR GREATER AT THE LOCATION OF THE STRUCTURE.

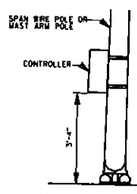
SIGNAL OPERATION NOTES:

FLASHING OPERATION - PRIOR TO NORMAL OPERATION, SIGNAL SHALL BE FLASHED FOR A PERIOD OF 3 TO 5 WORK DAYS OR AS DIRECTED BY THE ENGINEER. SIGNAL SHALL BE PLACED IN OPERATION ONLY ON A REGULAR WORK DAY, EXCEPT FRIDAY.

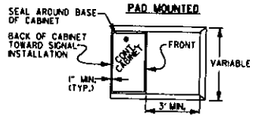
THE CONTRACTOR MAY BE REQUIRED TO ALTER THE FLASHING DISPLAY DURING THE TEMPORARY FLASH PERIOD. AT THE TIME THE INTERSECTION IS PLACED IN PERMANENT OPERATION, THE FLASH SEQUENCE SHALL THEN BE RETURNED TO THAT INDICATED ON THE PLAN SHEETS. NO ADDITIONAL COMPENSATION SHALL BE ALLOWED FOR THESE ALTERATIONS IN FLASH SEQUENCE.

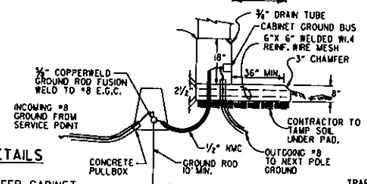
SPECIAL NOTE: 90 MPH WIND ZONE DESIGN, SEE NOTE 3. MINIMUM STRUCTURAL REQUIREMENTS.





SPAN WIRE SUPPORT POLE AND MAST ARM POLE MOUNTED





CONTROLLER CABINET MOUNTING DETAILS

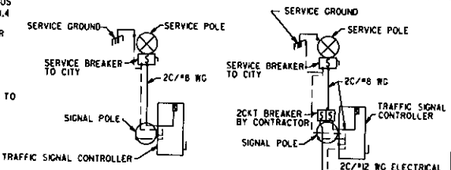
NOTE:
UNLESS OTHERWISE DIRECTED BY THE ENGINEER, CABINET ORIENTATION SHALL BE SUCH THAT THE BACK OF THE CABINET IS PARALLEL TO THE STREET AND POSITIONED TO ALLOW VISIBILITY OF THE SIGNAL DISPLAY WHILE OBSERVING THE CONTROLLER FRONT PANEL.

8. GROUND ROD - A 10' X ⅝" GROUND ROD SHALL BE INSTALLED IN THE CONCRETE PULL BOX FOR EACH POLE AND THE CONTROLLER. PAYMENT FOR THE GROUND ROD AND ½" NMC SHALL BE INCLUDED IN ITEM 714 FOR SIGNAL POLES AND ITEM 701FOR THE CONTROLLER, THE CONCRETE PULL BOX AND CONDUCTOR BOX SHALL BE PAID SEPERATELY.

9. POLE BASE/FOUNDATION - ANCHOR BOLTS SHALL INCLUDE AS A MINIMUM, ONE LEVELING NUT, TWO FLAT WASHERS, ONE LOCK WASHER, AND ONE HEX NUT. PERIMETER OF ANCHOR BASE SHALL BE GROUTED WITH A ¼" WEEP HOLE. ALL CONCRETE SHALL BE CLASS "S" OR GREATER.

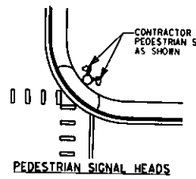
10. CONCRETE - ALL CONCRETE FOR CONTROLLER CABINET AND POLE FOUNDATIONS SHALL BE CLASS "S" OR GREATER.

CONCRETE BASE MOUNTED CABINET DETAILS



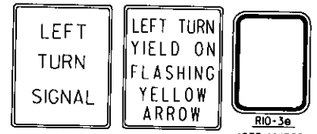
SERVICE DISCONNECT
NOTE: ELECTRICAL GROUND CONDUCTOR IS BONDED TO ALL METAL ENCLOSURES

11. PEDESTRIAN PHASES - PEDESTRIAN MOVEMENTS SHALL BE PUSH BUTTON ACTUATED AND CONCURRENTLY TIMED, UNLESS OTHERWISE INDICATED ON THE PLAN SHEET(S). FURNISHING AND INSTALLING PEDESTRIAN PUSH SWITCH SHALL BE CONSIDERED SUBSIDIARY TO THE ITEM 701 PEDESTRIAN SIGNAL HEAD.



PEDESTRIAN SIGNAL HEADS

DATE	REVISION	FILMED
02-13-24	REVISED SPECIAL SIGN TO R10-12a SIGN	
11-16-17	REVISED NOTES, ADDED PEDESTRIAN SIGNAL HEAD DETAIL, ADDED HANDHOLE TERMINAL DETAIL, ADDED TRENCHING DETAIL	
02-27-14	REVISED NOTES.	
09-12-13	ISSUED AS STANDARD DRAWING	
12-08-16	REVISED NOTES	
02-27-14	REVISED NOTES	
09-12-13	ISSUED AS STANDARD DRAWING	
07-21-11	REVISED VMD, SIGNAL HEADS	
05-21-09	REVISED GROUNDING	
07-31-08	REVISED GROUNDING	
04-25-08	ADDED VIBRATORY MITIGATION DEVICE & NOTES	
04-18-08	REVISED AASHTO NOTES	
04-17-08	REVISED TO 2001 AASHTO STANDARDS	
10-12-04	REVISED CABINET ORIENTATION	
06-23-04	REVISED	
05-8-04	REV. NOTE 3/AASHTO REQUIREMENTS	
06-8-01	REV. NOTES & POLE MAST ARM SLOPE	
04-11-01	REVISED POLE TAPERS	
04-25-00	REV. NOTES & SIGNAL HEAD PLACEMENT	
11-22-99	REVISED FOUNDATION DETAILS	
11-17-98	REVISED DETAILS AND NOTES	
11-21-95	ISSUED	



ARKANSAS STATE HIGHWAY COMMISSION

STEEL POLE WITH MAST ARM

STANDARD DRAWING SD-11