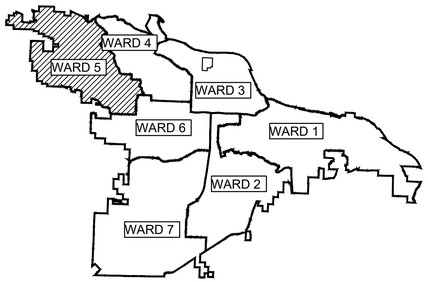
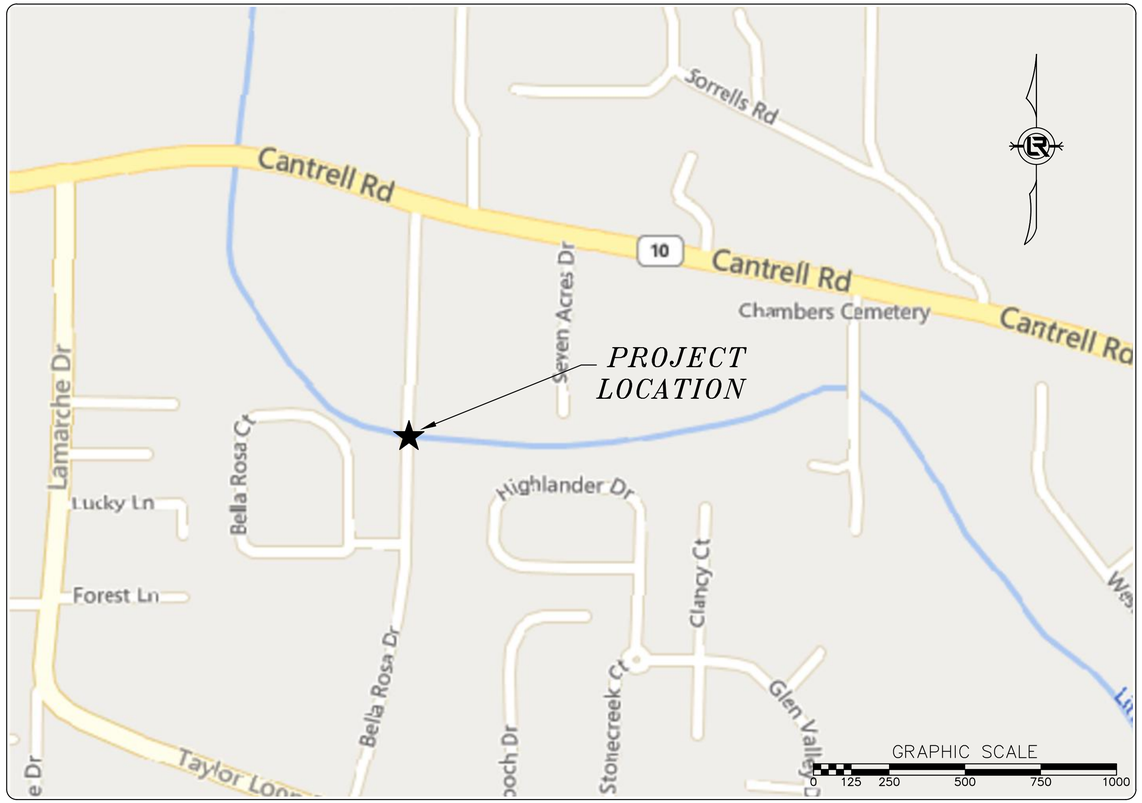
PROJECT NO. 05-17-ST-223B
BELLA ROSA DRIVE
BRIDGE REPLACEMENT
LITTLE ROCK, AR



PROJECT LOCATION - WARD 5



SHEET NO.	TITLE
C1	COVER SHEET
C2	GENERAL NOTES, LEGENDS, AND QUANTITIES
C3	SITE PREPARATION AND EROSION CONTROL PLAN
C4	SITE PLAN
C5	ROADWAY DETAILS
C6	TRAFFIC CONTROL PLAN
S1	CULVERT LAYOUT PLAN AND GENERAL NOTES
S2	CULVERT WINGWALL ELEVATIONS
S3	CULVERT SECTIONS
S4	CULVERT BARREL REINFORCING (1 OF 2)
S5	CULVERT BARREL REINFORCING (2 OF 2)
S6	CORRAL RAIL DETAILS (1 OF 2)
S7	CORRAL RAIL DETAILS (2 OF 2)
S8	HANDRAIL DETAILS
S9	MISCELLANEOUS DETAILS

PUBLIC WORKS · CITY OF LITTLE ROCK ·

2019-2021
BOND PROGRAM

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

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

Certificate of Authorization Olsson Inc. No.1010 Arkansas Engineer

ISSUED FOR BID

REVISIONS	DATE

CITY OF LITTLE ROCK, ARKANSAS
BELLA ROSA DRIVE BRIDGE REPLACEMENT
COVER SHEET

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

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 10031
JASON GHIDOTTI

DRAWN BY	CKS
DESIGNED	JJG
CHECKED	ROD
DATE	04/24/2025
SCALE	1"=250'
PROJECT NO.	05-17-ST-223B
SHEET NO.	C1

	BELLA ROSA DRIVE BRIDGE REPLACEMENT		
	05-17-ST-223B		
	4/24/2025		
ITEM #	ITEM DESCRIPTION	UNIT	QUANTITY
2.01	SITE PREPARATION, INCLUDING MOBILIZATION	LS	1
3.01	UNCLASSIFIED EXCAVATION	CY	10
3.02	COMPACTED EMBANKMENT, SELECT FILL	CY	24
4.01	AGGREGATE BASE COURSE (CLASS 7)	TON	201
6.01	ACHM SURFACE COURSE	TON	53.5
7.06	CONCRETE DRIVEWAY (6" THICK), STANDARD FINISH	SF	210
8.03	CONCRETE CURB AND GUTTER (CLASS 3)	LF	222
9.03	CONCRETE FLUME	SF	23.1
9.04	CONCRETE SIDEWALK (4" THICK)	SF	594.4
9.06	CONCRETE WALK OVER FLUME	SF	23.1
11.02	CONCRETE, REINFORCED BOX CULVERT AND WINGWALLS	CY	148.34
11.10	REINFORCED CONCRETE (PIPE ENCASEMENT)	CY	13.1
14.01	SOLID SODDING	SY	94.1
16.01	MAINTENANCE OF TRAFFIC	LS	1
18.40	HANDRAIL	LF	107.6
18.45	RIPRAP (GROUTED)	CY	40
19.01	FINAL CLEANUP	LS	1
24.02	ROCK CHECK DAM	CY	8
24.05	ROCK DAM	CY	20
26.10	TRENCH AND EXCAVATION SAFETY	LS	1
812.00	BRIDGE NAME PLATE	EA	1

NOTE: ITEM NO. 2.01 TO INCLUDE ALL UNCLASSIFIED EXCAVATION AND REMOVAL AND DISPOSAL OF EXISTING MATERIALS FOR CONSTRUCTION OF STRUCTURES. REFER TO SECTIONS 2 AND 12 OF THE CITY OF LITTLE ROCK "CONTRACT CONDITIONS AND SPECIFICATIONS".

GENERAL NOTES:

1. THE EXISTING UTILITY LOCATIONS SHOWN ON THE PLANS ARE APPROXIMATE AND MAY NOT INCLUDE ALL LINES PRESENT. THE CONTRACTOR SHALL BE RESPONSIBLE TO CALL 811, AND COORDINATE FIELD LOCATION OF EXISTING UNDERGROUND UTILITIES PRIOR TO BEGINNING GRADING ACTIVITIES. !!STOP!! CALL BEFORE YOU DIG!!
2. UTILITIES AS SHOWN WERE OBTAINED FROM INFORMATION INDICATED ON THE SURVEY OR BY FIELD OBSERVATION. CONTRACTOR SHALL FIELD VERIFY ALL HORIZONTAL AND VERTICAL LINES AND GRADES OF EXISTING UTILITIES PRIOR TO THE CONSTRUCTION OF IMPROVEMENTS. CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY UPON DISCOVERY OF A DISCREPANCY BETWEEN THE CONTRACT DRAWINGS AND ACTUAL FIELD CONDITIONS.
3. CONTRACTOR SHALL NOT CHANGE OR DEVIATE FROM THE PLANS WITHOUT FIRST OBTAINING WRITTEN APPROVAL FROM THE OWNER AND ENGINEER.
4. CONTRACTOR SHALL BE RESPONSIBLE TO OBTAIN ALL PERMITS AND PAY ALL FEES AS REQUIRED BY THE CONSTRUCTION COVERED IN THESE PLANS.
5. ALL WORK AND MATERIALS SHALL BE SUBJECT TO INSPECTION AND APPROVAL BY THE OWNER OR THE OWNER'S REPRESENTATIVE.

EXISTING

- IRON ROD — IR
- PK NAIL — PK
- R.R. SPIKE — RR(Sp)
- CONC. MONUMENT — CM
- WATER VALVE — WV
- WATER METER — WM
- EXISTING ELEVATION
- 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
- STORMWATER FLOW DIRECTION
- TRAFFIC FLOW DIRECTION
- PROPERTY LINE
- SETBACK LINE
- EASEMENT LINE
- CURB
- FENCE — X X X
- OVERHEAD ELECTRIC — OE
- OVERHEAD TELEPHONE — OT
- OVERHEAD CABLE — OC
- UNDERGROUND TELEPHONE — UGT
- UNDERGROUND ELECTRIC — UGE
- UNDERGROUND CABLE — UGC
- WATER LINE — W
- SEWER LINE — SS
- GAS LINE — 4"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
- GUARD RAIL POST
- 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 CURB INLET (D)
- STORM SEWER – DOUBLE WING CURB INLET (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

CERTIFICATE OF AUTHORIZATION — Olsson Inc. No.1010 — ARKANSAS ENGINEER

ISSUED FOR BID

REVISIONS	DATE

CITY OF LITTLE ROCK, ARKANSAS
BELLA ROSA DRIVE BRIDGE REPLACEMENT
GENERAL NOTES, LEGENDS AND QUANTITIES

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

STATE OF ARKANSAS — LICENSED PROFESSIONAL ENGINEER — No. 10031 — JASON GHIDOTTI

DRAWN BY	CKS
DESIGNED	JJG
CHECKED	ROD
DATE	04/23/2025
SCALE	
PROJECT NO.	05-17-ST-223B
SHEET NO.	C2

EROSION CONTROL NOTES:

1. PROVIDE EROSION CONTROL MEASURES TO PREVENT SOIL EROSION AND DISCHARGE OF SOIL-BEARING WATER RUNOFF OR AIRBORNE DUST TO ADJACENT PROPERTIES AND WALKWAYS.
2. LIMITS OF EROSION AND SEDIMENT CONTROL STRUCTURES SHOWN ARE SCHEMATIC. NECESSARY EROSION AND SEDIMENT CONTROL MEASURES DEPEND HEAVILY ON CONTRACTOR SCHEDULING AS WELL AS MEANS AND METHODS. ANY ADDITIONAL TYPE OR QUANTITY OF STRUCTURES NOT SHOWN THAT ARE NECESSARY TO PREVENT SEDIMENT FROM LEAVING THE SITE ARE THE CONTRACTOR'S RESPONSIBILITY.
3. CONSTRUCT EROSION CONTROL IMPROVEMENTS PRIOR TO BEGINNING OF ANY OTHER WORK.
4. FREQUENTLY INSPECT AND REPAIR OR REPLACE EROSION AND SEDIMENT CONTROL MEASURES PROMPTLY AS NEEDED.
5. DISPOSE OF SEDIMENT TRAPPED BY THESE PRACTICES IN AN APPROVED SITE IN A MANNER THAT WILL NOT CONTRIBUTE TO ADDITIONAL SILTATION.
6. REMOVE ACCUMULATED SILT WHEN IT REACHES A DEPTH OF 6 INCHES AND DISPOSE OF IN AN APPROVED SPOIL SITE OR AS ABOVE.
7. DO NOT ALLOW SILT FENCES TO OBSTRUCT SIDEWALKS, BUILDING ENTRANCES OR DRIVEWAYS.
8. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTENANCE OF ALL EROSION & SEDIMENT CONTROL MEASURES AND PRACTICES THROUGHOUT THE PROJECT. ANY AND ALL FINES ASSOCIATED WITH EROSION CONTROL VIOLATIONS WILL BE THE CONTRACTOR'S RESPONSIBILITY.
9. EROSION CONTROL IS THE CONTRACTOR'S RESPONSIBILITY. THIS PLAN SHOULD BE USED AS A GUIDE AND REPRESENTS THE MINIMUM EROSION CONTROL DEVICES REQUIRED.
10. THE CONTRACTOR IS RESPONSIBLE FOR REMOVING THE TEMPORARY EROSION & SEDIMENT CONTROL DEVICES AFTER COMPLETION OF CONSTRUCTION AND ONLY WHEN AREAS HAVE BEEN STABILIZED WITH A HEALTHY STAND OF PERMANENT VEGETATION.
11. THE CONTRACTOR SHALL PROVIDE ANY TEMPORARY STABILIZATION AS REQUIRED.
12. ALL EROSION CONTROL DEVICES SHALL CONFORM TO THE APPLICABLE SECTIONS OF THE STANDARD SPECIFICATIONS AND DESIGN CRITERIA OF THE ENGINEERING DIVISION, DEPARTMENT OF PUBLIC WORKS, CITY OF LITTLE ROCK, ARKANSAS.
13. THE CONTRACTOR WILL BE REQUIRED TO CLEAN THE STREETS OF DEPOSITED MUD AS FREQUENTLY AS NEEDED AS DETERMINED BY THE ENGINEER IN ORDER TO KEEP THEM USABLE AND TO CONTROL DUST.
14. CONTRACTOR IS RESPONSIBLE FOR PHASED INSTALLATION OF EROSION CONTROL BMP'S IN ORDER TO PREVENT SEDIMENT FROM BREACHING THE LIMITS OF DISTURBANCE.

SURVEY NOTES:

1. NORTH IS REFERENCED TO NAD83 (2011) AR STATE PLANE COORDINATE SYSTEM, NORTH ZONE, U.S. SURVEY FEET.
2. ELEVATIONS ARE REFERENCED TO NAVD88 AS DETERMINED THROUGH GPS OBSERVATIONS.
3. UNDERGROUND UTILITIES ARE SHOWN BASED ON MARKINGS LEFT PURSUANT TO ARKANSAS ONE CALL LOCATE REQUEST TICKET NUMBER 231101-1345 ALONG WITH ABOVE GROUND VISIBLE EVIDENCE AND THE PULASKI COUNTY PAGIS GIS. NO EXCAVATIONS WERE MADE DURING THE COURSE OF THIS SURVEY TO DETERMINE THE EXISTENCE OR ACCURATE LOCATION OF UNDERGROUND UTILITIES. FIELD VERIFY ALL UNDERGROUND FACILITIES PRIOR TO ANY EXCAVATIONS.
4. THE SUBJECT PROPERTY LIES IN FLOOD ZONE "AE", AREAS DETERMINED TO BE WITHIN THE 1% ANNUAL CHANCE FLOODPLAIN., BASED ON GRAPHICAL MAPPING AND SCALING ONLY FROM F.E.M.A. FLOOD INSRUANCE RATE MAP NO. 05119C0312G, LAST REVISED JULY 6, 2015.
5. FIELD WORK WAS COMPLETED NOVEMBER 9, 2023.

SITE PREPARATION NOTES:

1. PROTECT EXISTING FEATURES OUTSIDE LIMITS OF DEMOLITION.
2. PROTECT EXISTING BUILDINGS, APPURTENANCES AND DRIVE ENTRANCES AS NOTED.
3. PROTECT EXISTING WATER LINES, GAS LINES, ELECTRIC LINES, LIGHT POLES, POWER POLES, TELEPHONE LINES, SEWER LINES AND RELATED COMPONENTS AND ALL OTHER EXISTING UTILITIES DESIGNATED TO REMAIN.
4. DEMOLITION OR EXCAVATION BY BLASTING WILL NOT BE PERMITTED ON THIS PROJECT.
5. DEMOLISH EXISTING DRIVEWAY APRONS NOTED. SAW CUT AND REMOVE EXISTING CURB AND GUTTER 5 FEET EACH WAY FROM DRIVEWAY APRON.
6. FOR CLEANUP SEE SPECIFICATIONS.
7. WHERE PARTIAL REMOVAL OF PAVING, CONCRETE, SIDEWALK, CURB & GUTTER, OR OTHER IMPROVEMENT IS NOTED, SAWCUT THE MATERIAL AT THE REMOVAL LINE. ROUGH OR RAGGED EDGES AT LIMITS OF REMOVAL WILL NOT BE ACCEPTABLE.

GRAPHIC SCALE
0 10 20 40 60 80

PULASKI COUNTY PROPERTY ID 53L0240001200 BELLA ROSA COMMERCE CENTER LLC

PULASKI COUNTY PROPERTY ID 53L0240600200 RICE MARTIN RYAN & NANCY LOUISE

PULASKI COUNTY PROPERTY ID 53L0240000102 CITY OF LITTLE ROCK

PULASKI COUNTY PROPERTY ID 53L0242100001 BELLA ROSA ESTATES

PULASKI COUNTY PROPERTY ID 53L0242101200 JT REVOC TRUST BENJAMIN & DONNA J WIEDOWER

PULASKI COUNTY PROPERTY ID 53L0240600300 SANDRA K STROBEL

BELLA ROSA DRIVE (50' R/W)

SIDEWALK

REMOVE "ROAD NARROWS" SIGN

EXIST. SS MH #280
TOP RIM=276.77
FL=263.87 (8" PVC (N)
FL=261.42 (18" DUCTILE (E)
FL=262.37 (8" PVC (S)
FL=261.37 (18" DUCTILE (W)

EXIST. SS MH #279
TOP RIM=274.15
FL=264.25 (8" PVC (N)
FL=264.15 (8" PVC (S)

EXIST. SS MH #288
TOP RIM=275.38
FL=262.18 (18" DUCTILE (E)
FL=262.08 (18" DUCTILE (W)

EXIST. SS MH #289
TOP RIM=276.47
FL=263.77 (18" DUCTILE (E)
FL=263.67 (18" DUCTILE (W)

EXIST. SS MH #281
TOP RIM=279.01
FL=266.91 (8" PVC (S)
FL=266.41 (8" PVC (N)

EXIST. STS INLET
TOP RIM=281.31
FL=276.01 (18" RCP (W)
FL=275.11 (30" RCP (N)

LIMITS OF DETAILED SURVEY

EXISTING DITCH

EXISTING COMMUNICATIONS LINE NOT LOCATED. CONTRACTOR TO FIELD VERIFY LINE LOCATION AND NOTIFY ENGINEER IF IN CONFLICT.

INSTALL TEMPORARY ROCK CHECK DAM PER DETAIL PW-68

INSTALL TEMPORARY ROCK CHECK DAM PER DETAIL PW-68

APPROXIMATE EXISTING DRAINAGE

REMOVE SIGN

SAWCUT

REMOVE AND DISPOSE OF EXISTING BRIDGE STRUCTURE AND WINGWALLS

REMOVE AND DISPOSE OF EXISTING RIPRAP

INSTALL TEMPORARY ROCK DAM PER DETAIL PW-70

APPROXIMATE LIMITS OF CONSTRUCTION

INSTALL 32 LF SILT FENCE ON CONTOUR

WOOD FENCE RUNS ALONG PROPERTY LINE

LIMITS OF DETAILED SURVEY

DRAINAGE AND UTILITY EASEMENT

30" RCP
FL=270.08'

GATE
(DO NOT DISTURB)

4' TALL CHAIN LINK FENCE
(DO NOT DISTURB)

SAWCUT AND REMOVE EXISTING CONCRETE DRIVE.

36" WIDE CONCRETE AND STUCCO WALL
(DO NOT DISTURB)

REMOVE RAMP

FLOW

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

ISSUED FOR BID

REVISIONS	DATE

CITY OF LITTLE ROCK, ARKANSAS
BELLA ROSA DRIVE BRIDGE IMPROVEMENTS

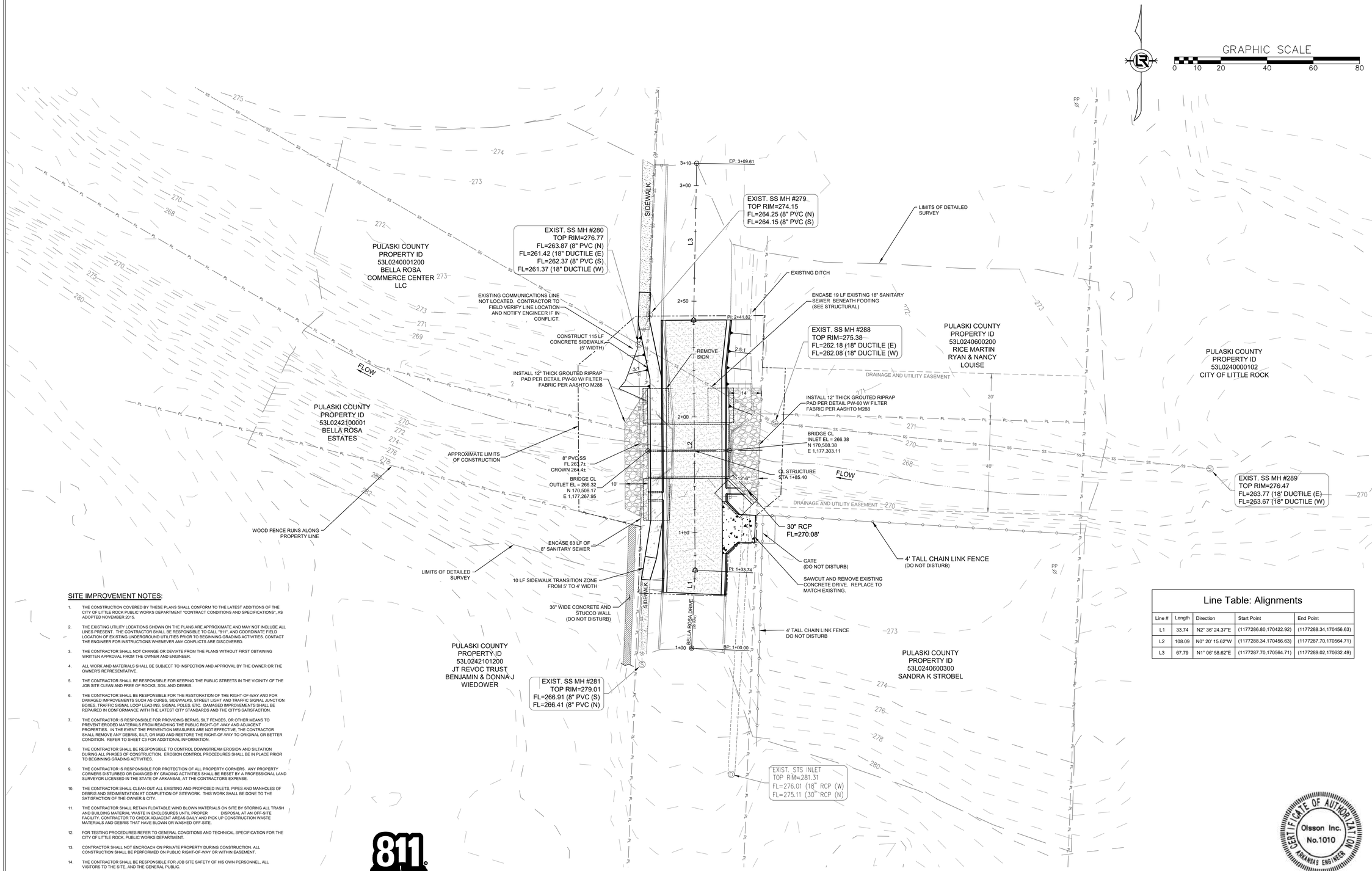
SITE PREPARATION AND EROSION CONTROL PLAN

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

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 10031
JASON GHIDOTTI

CERTIFICATE OF AUTHORIZATION
Olsson Inc.
No.1010
ARKANSAS ENGINEER

DRAWN BY	JJG
DESIGNED	JJG
CHECKED	ROD
DATE	04/24/2025
SCALE	1"=20'
PROJECT NO.	05-17-ST-223B
SHEET NO.	C3



SITE IMPROVEMENT NOTES:

1. THE CONSTRUCTION COVERED BY THESE PLANS SHALL CONFORM TO THE LATEST ADDITIONS OF THE CITY OF LITTLE ROCK PUBLIC WORKS DEPARTMENT "CONTRACT CONDITIONS AND SPECIFICATIONS", AS ADOPTED NOVEMBER 2015.
2. THE EXISTING UTILITY LOCATIONS SHOWN ON THE PLANS ARE APPROXIMATE AND MAY NOT INCLUDE ALL LINES PRESENT. THE CONTRACTOR SHALL BE RESPONSIBLE TO CALL "811", AND COORDINATE FIELD LOCATION OF EXISTING UNDERGROUND UTILITIES PRIOR TO BEGINNING GRADING ACTIVITIES. CONTACT THE ENGINEER FOR INSTRUCTIONS WHENEVER ANY CONFLICTS ARE DISCOVERED.
3. THE CONTRACTOR SHALL NOT CHANGE OR DEVIATE FROM THE PLANS WITHOUT FIRST OBTAINING WRITTEN APPROVAL FROM THE OWNER AND ENGINEER.
4. ALL WORK AND MATERIALS SHALL BE SUBJECT TO INSPECTION AND APPROVAL BY THE OWNER OR THE OWNER'S REPRESENTATIVE.
5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR KEEPING THE PUBLIC STREETS IN THE VICINITY OF THE JOB SITE CLEAN AND FREE OF ROCKS, SOIL AND DEBRIS.
6. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE RESTORATION OF THE RIGHT-OF-WAY AND FOR DAMAGED IMPROVEMENTS SUCH AS CURBS, SIDEWALKS, STREET LIGHT AND TRAFFIC SIGNAL JUNCTION BOXES, TRAFFIC SIGNAL LOOP LEAD INS, SIGNAL POLES, ETC. DAMAGED IMPROVEMENTS SHALL BE REPAIRED IN CONFORMANCE WITH THE LATEST CITY STANDARDS AND THE CITY'S SATISFACTION.
7. THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING BERMS, SILT FENCES, OR OTHER MEANS TO PREVENT ERODED MATERIALS FROM REACHING THE PUBLIC RIGHT-OF -WAY AND ADJACENT PROPERTIES. IN THE EVENT THE PREVENTION MEASURES ARE NOT EFFECTIVE, THE CONTRACTOR SHALL REMOVE ANY DEBRIS, SILT, OR MUD AND RESTORE THE RIGHT-OF-WAY TO ORIGINAL OR BETTER CONDITION. REFER TO SHEET C3 FOR ADDITIONAL INFORMATION.
8. THE CONTRACTOR SHALL BE RESPONSIBLE TO CONTROL DOWNSTREAM EROSION AND SILTATION DURING ALL PHASES OF CONSTRUCTION. EROSION CONTROL PROCEDURES SHALL BE IN PLACE PRIOR TO BEGINNING GRADING ACTIVITIES.
9. THE CONTRACTOR IS RESPONSIBLE FOR PROTECTION OF ALL PROPERTY CORNERS. ANY PROPERTY CORNERS DISTURBED OR DAMAGED BY GRADING ACTIVITIES SHALL BE RESET BY A PROFESSIONAL LAND SURVEYOR LICENSED IN THE STATE OF ARKANSAS, AT THE CONTRACTORS EXPENSE.
10. THE CONTRACTOR SHALL CLEAN OUT ALL EXISTING AND PROPOSED INLETS, PIPES AND MANHOLES OF DEBRIS AND SEDIMENTATION AT COMPLETION OF SITEWORK. THIS WORK SHALL BE DONE TO THE SATISFACTION OF THE OWNER & CITY.
11. THE CONTRACTOR SHALL RETAIN FLOATABLE WIND BLOWN MATERIALS ON SITE BY STORING ALL TRASH AND BUILDING MATERIAL WASTE IN ENCLOSURES UNTIL PROPER DISPOSAL AT AN OFF-SITE FACILITY. CONTRACTOR TO CHECK ADJACENT AREAS DAILY AND PICK UP CONSTRUCTION WASTE MATERIALS AND DEBRIS THAT HAVE BLOWN OR WASHED OFF-SITE.
12. FOR TESTING PROCEDURES REFER TO GENERAL CONDITIONS AND TECHNICAL SPECIFICATION FOR THE CITY OF LITTLE ROCK, PUBLIC WORKS DEPARTMENT.
13. CONTRACTOR SHALL NOT ENCROACH ON PRIVATE PROPERTY DURING CONSTRUCTION. ALL CONSTRUCTION SHALL BE PERFORMED ON PUBLIC RIGHT-OF-WAY OR WITHIN EASEMENT.
14. THE CONTRACTOR SHALL BE RESPONSIBLE FOR JOB SITE SAFETY OF HIS OWN PERSONNEL, ALL VISITORS TO THE SITE, AND THE GENERAL PUBLIC.
15. THE JOB SITE SHALL BE A DRUG FREE WORK PLACE. CONSUMPTION OF ALCOHOLIC BEVERAGES ON THE JOB SITE IS STICTLY PROHIBITED.
16. THE CONTRACTOR SHALL REMOVE ALL DEBRIS RESULTING FROM WORK UNDER THIS CONTRACT TO AN APPROVED DUMP SITE.
17. CONTRACTOR SHALL BE RESPONSIBLE FOR KEEPING THE PUBLIC STREETS IN THE VICINITY OF THE JOB SITE CLEAN AND FREE OF ROCKS, SOIL/MUD AND DEBRIS DURING ALL PHASES OF CONSTRUCTION.

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

Line Table: Alignments

Line #	Length	Direction	Start Point	End Point
L1	33.74	N2° 36' 24.37"E	(1177286.80,170422.92)	(1177288.34,170456.63)
L2	108.09	N0° 20' 15.62"W	(1177288.34,170456.63)	(1177287.70,170564.71)
L3	67.79	N1° 06' 58.62"E	(1177287.70,170564.71)	(1177289.02,170632.49)

ISSUED FOR BID

REVISIONS	DATE

CITY OF LITTLE ROCK, ARKANSAS
BELLA ROSA DRIVE BRIDGE IMPROVEMENTS

SITE PLAN

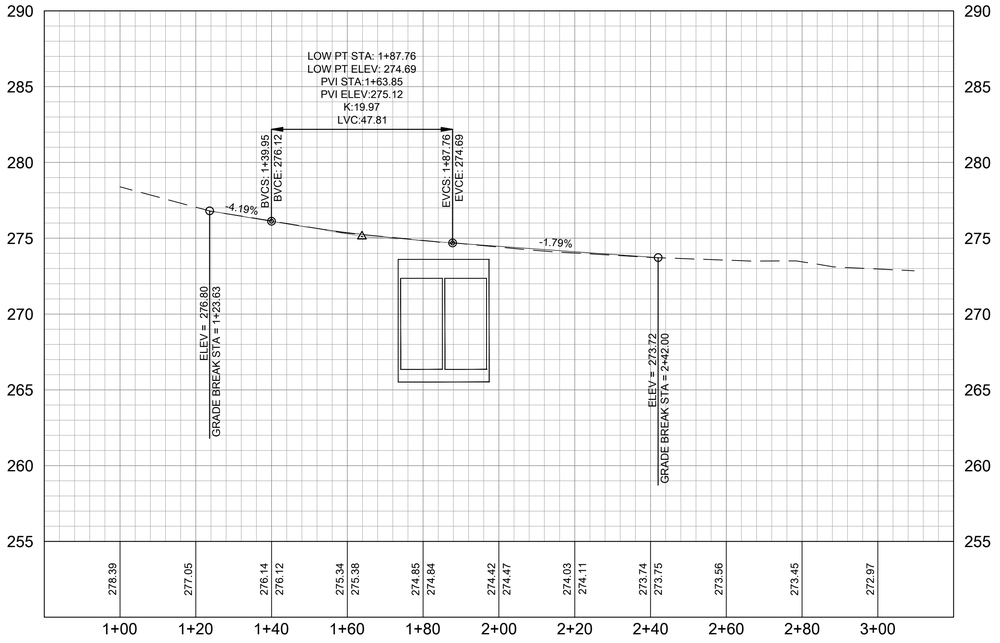
DEPARTMENT OF PUBLIC WORKS
CIVIL ENGINEERING
701 W. MARKHAM
LITTLE ROCK, ARKANSAS 72201

STATE OF ARKANSAS ★★★ LICENSED PROFESSIONAL ENGINEER ★★★ No. 10031 JASON GHIDOTTI

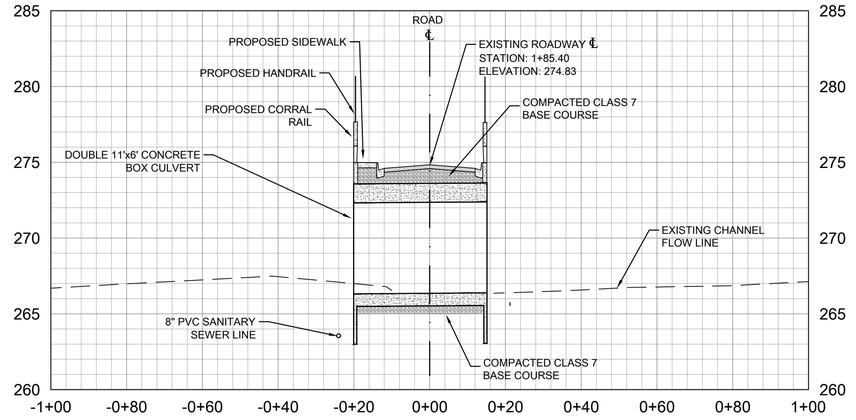
CERTIFICATE OF AUTHORIZATION Olsson Inc. No.1010 ARKANSAS ENGINEER

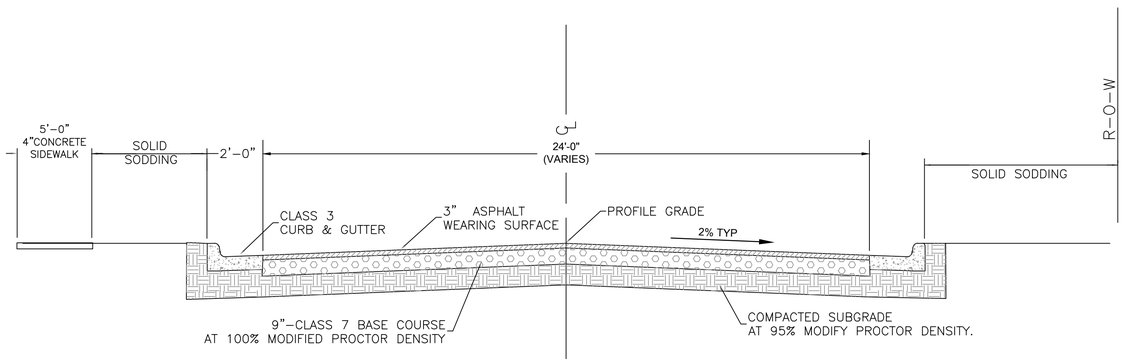
DRAWN BY	JJG
DESIGNED	JJG
CHECKED	ROD
DATE	04/24/2025
SCALE	1"=20'
PROJECT NO.	05-17-ST-223B
SHEET NO.	C4

STREET CL PROFILE



CULVERT CL SECTION





TYPICAL ROADWAY SECTION (PW-23)

GENERAL NOTES

1. IN AREAS TO RECEIVE 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 RECEIVE CONCRETE SIDEWALKS, SUBGRADE SHALL BE COMPACTED TO A DENSITY 90% MAXIMUM.(AASHTO T-180).
3. CRUSHED STONE- DENSITY OF COMPACTED MATERIAL IN EACH COURSE SHALL BE COMPACTED TO A DENSITY 100% MAXIMUM .(AASHTO T-191).

CERTIFICATE OF AUTHORIZATION
Olsson Inc.
No.1010
ARKANSAS ENGINEER

ISSUED FOR BID

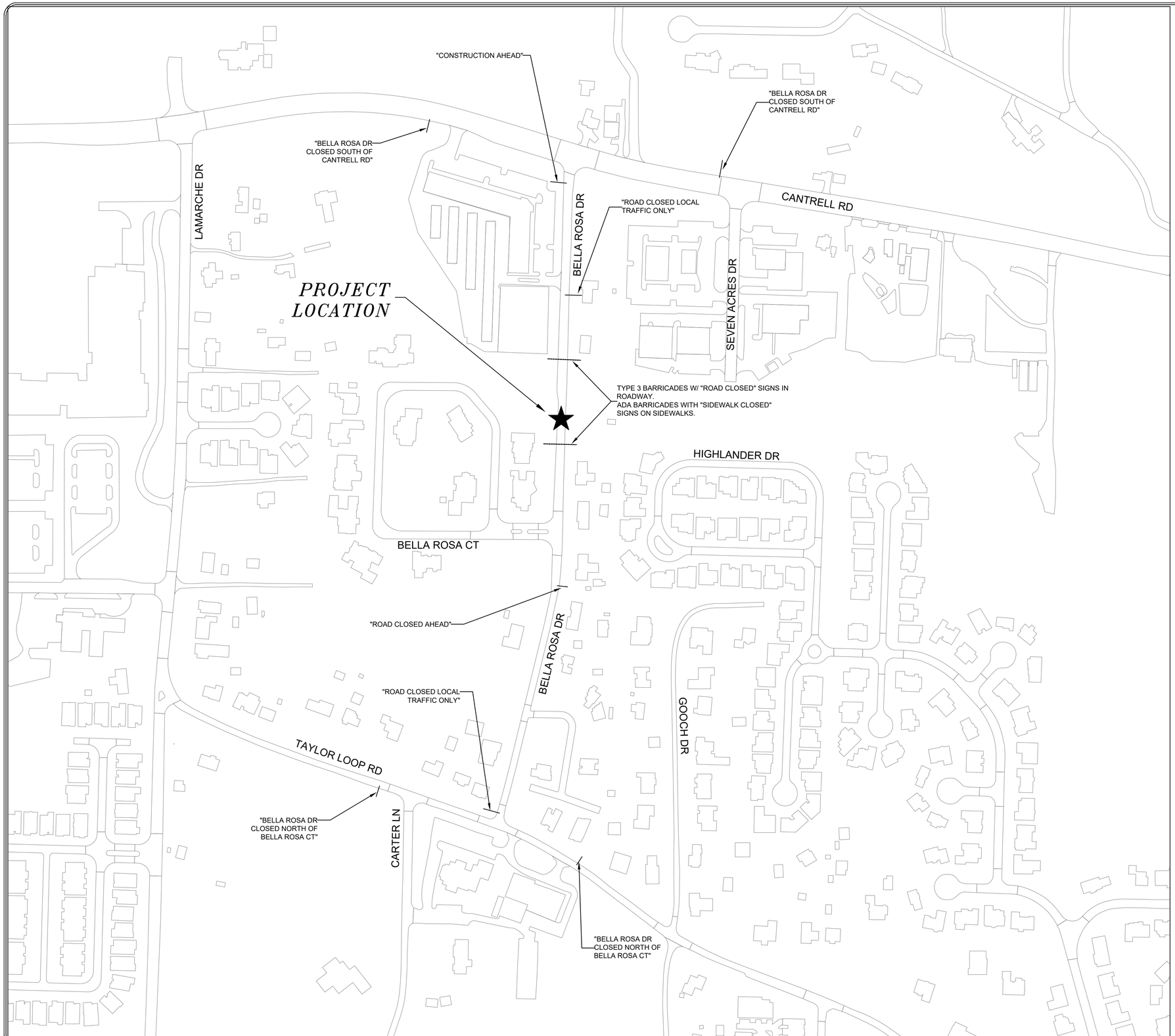
REVISIONS	DATE

CITY OF LITTLE ROCK, ARKANSAS
BELLA ROSA DRIVE BRIDGE REPLACEMENT
ROADWAY DETAILS

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

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No.10031
JASON GHIDOTTI

DRAWN BY	JJG
DESIGNED	JJG
CHECKED	ROD
DATE	04/23/2025
SCALE	N.T.S.
PROJECT NO.	05-17-ST-223B
SHEET NO.	C5



GRAPHIC SCALE

0 75 150 300 450 600

TRAFFIC CONTROL NOTES

1.) CONTRACTOR SHALL FOLLOW ALL APPLICABLE STANDARDS AND SPECIFICATIONS SET FORTH BY THE LOCAL AND/OR STATE JURISDICTION AS APPLICABLE. ALL SIGNS, BARRICADES, DRUMS, MARKINGS, AND OTHER TRAFFIC CONTROL DEVICES/SET-UP SHALL CONFORM TO THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (M.U.T.C.D.), MOST CURRENT EDITION.

2.) ALL TRAFFIC CONTROL DEVICES SHALL BE STANDARD IN SIZE, SHAPE, COLOR, AND MESSAGE, IN GOOD CONDITION, AND REFLECTORIZED. ALL SIGNS AND BARRICADES IN PLACE AT NIGHT SHALL BE REFLECTORIZED WITH HIGH INTENSITY SHEETING. ALL SIGNS SHALL BE SECURELY MOUNTED WITH HEIGHT AND LATERAL LOCATIONS AS DESCRIBED IN THE M.U.T.C.D.

3.) ALL SIGN SPACING SHALL BE 100' MINIMUM BETWEEN EXISTING OR TEMPORARY SIGNING. REFER TO LOCAL JURISDICTIONAL, AND/OR M.U.T.C.D. FOR APPROPRIATE SPACING OF SIGNING BASED ON SPEED LIMITS.

4.) THE CONTRACTOR SHALL PLACE AS MANY BARRICADES AS NEEDED TO EFFECTIVELY SHIELD VEHICLES AND/OR PEDESTRIANS FROM EXPOSED OBJECTS, EXCAVATIONS, AND CONSTRUCTION ACTIVITIES. ADA PEDESTRIAN BARRICADES SHALL BE INSTALLED AROUND ALL EXCAVATIONS LEFT OPEN DURING NON-CONSTRUCTION PERIODS AND/OR AS DIRECTED BY THE ENGINEER IN CHARGE OF CONSTRUCTION.

5.) ACCESS SHALL BE MAINTAINED AT ALL DRIVEWAYS AND SIDE-STREETS UNLESS OTHERWISE SHOWN IN PLANS. ROAD CLOSED, LOCAL TRAFFIC ONLY BARRICADES/SIGNING SHALL BE PLACED OFF THE VEHICLE LANES OF TRAFFIC, ADJACENT TO ROADWAY IN A CONSPICUOUS LOCATION.

6.) THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING ALL TRAFFIC CONTROL DEVICES ON AN AROUND-THE-CLOCK BASIS, WHETHER OR NOT WORK IS ACTIVELY BEING PURSUED AND ANY DEFICIENCIES NOTED SHALL BE CORRECTED IMMEDIATELY.

7.) THE TRAFFIC CONTROL REQUIREMENTS SHOWN ON THESE PLANS ARE MINIMUM REQUIREMENTS ONLY AND DO NOT ATTEMPT TO ADDRESS IN DEPTH THE VARIETY OF SITUATIONS THAT MAY OCCUR ONCE CONSTRUCTION HAS STARTED. IN NO WAY DO THE REQUIREMENTS SHOWN ON THESE PLANS RELIEVE THE CONTRACTOR OF THEIR RESPONSIBILITY FOR SELECTING THE PROPER TRAFFIC CONTROL DEVICES AND IMPLEMENTATION PROCEDURES THAT WILL ASSURE THE SAFETY OF MOTORISTS, PEDESTRIANS, AND WORKERS AT ALL TIMES. ANY ADDITIONAL QUANTITIES OF TRAFFIC CONTROL DEVICES NECESSARY TO COMPLETE THE CONTRACT OR AS ORDERED BY THE ENGINEER SHALL BE CONSIDERED SUBSIDIARY TO THE CONTRACT BID PRICE.

8.) CONSTRUCTION VEHICLES PARKED ALONG STREETS AND CONSTRUCTION SIGNS SHALL NOT RESTRICT SIGHT DISTANCE FOR VEHICLES EXITING AT STREETS OR ANY DRIVES.

9.) THE CONTRACTOR SHALL KEEP ROADWAY CLOSURES DUE TO CONSTRUCTION ACTIVITIES TO A MINIMUM AND PROVIDE ADVANCED NOTICE TO AFFECTED USERS. THE CONTRACTOR SHALL REMOVE DIRT, MUD, AND OTHER CONSTRUCTION DEBRIS FROM STREETS AND SIDEWALKS IMMEDIATELY.

10.) THE CONTRACTOR SHALL NOTIFY ENFORCEMENT AND EMERGENCY AGENCIES BEFORE THE START OF CONSTRUCTION TO REQUEST THEIR COOPERATION AND TO PROVIDE COORDINATION OF SERVICES WHEN EMERGENCIES ARISE DURING CONSTRUCTION. WHEN THE CONTRACTOR COMPLETES THIS NOTIFICATION WITH ENFORCEMENT AND EMERGENCY AGENCIES, A REPORT SHOULD BE FURNISHED TO THE ENGINEER ON THE STATUS OF INCIDENT MANAGEMENT.

11.) THE CONTRACTOR MAY, IF NEED ARISES OR AT THE REQUEST OF THE ENGINEER, PLACE REDUCED SPEED LIMIT SIGNING AND WORK ZONE SPEED LIMIT SIGNING IN ADVANCE OF ALL ACTIVE WORK ZONE AREAS. WORK ZONE SPEED LIMIT REDUCTION SHALL NOT BE GREATER THAN 10 MPH THROUGHOUT CONSTRUCTION AREAS WITHOUT ADVANCED SIGNING IN PLACE. CONTRACTOR SHALL COVER OR REPLACE ALL SPEED LIMIT SIGNS IN CONFLICT WITH THE WORK ZONE SPEED LIMIT THROUGHOUT THE CONSTRUCTION AREA.

12.) THE CONTRACTOR SHALL ENSURE THAT ALL TEMPORARY TRAFFIC CONTROL DEVICES ARE REMOVED PROMPTLY ONCE THEY ARE NO LONGER NEEDED AND THAT THE ROADWAY IS RETURNED TO ITS ORIGINAL CONDITION.

CERTIFICATE OF AUTHORIZATION
Olsson Inc.
No.1010
ARKANSAS ENGINEER

ISSUED FOR BID

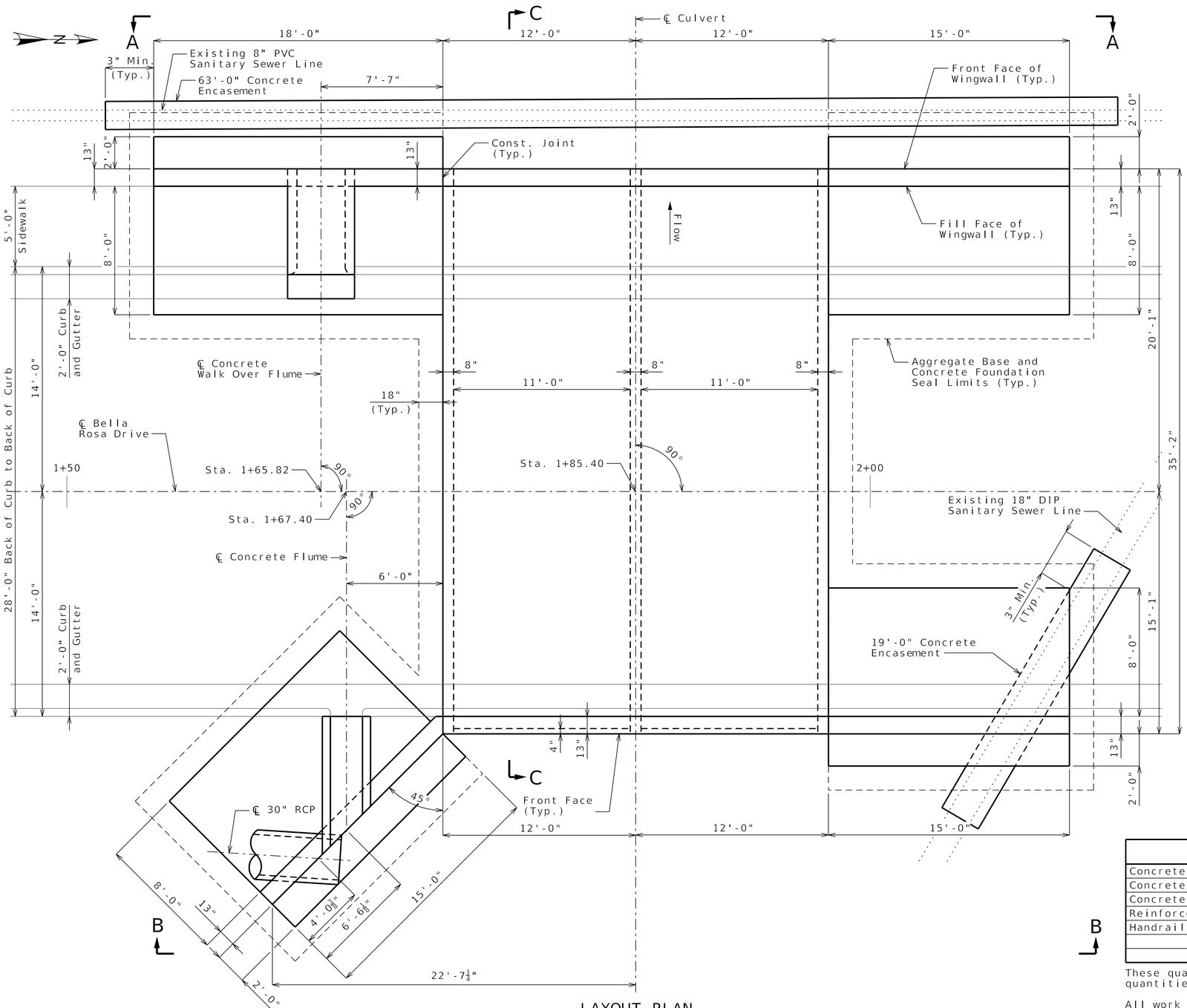
REVISIONS	DATE

CITY OF LITTLE ROCK, ARKANSAS
BELLA ROSA DRIVE BRIDGE REPLACEMENT
TRAFFIC CONTROL PLAN

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

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 10031
JASON GHIDOTTI

DRAWN BY	JJG
DESIGNED	JJG
CHECKED	ROD
DATE	04/24/2025
SCALE	1"=150'
PROJECT NO.	05-17-ST-223B
SHEET NO.	C6



LAYOUT PLAN

(Rip Rap, Corral Rail and Handrail not shown for clarity.)

Hydrologic Data
Design Flood Frequency = 10 years
Design Flood Discharge = 1,130 cfs
Design Flood (D.F.) Elevation = 271.65
Base Flood (100-year)
Base Flood Elevation = 275.85 *
Base Flood Discharge = 4,215 cfs
Outlet Velocity = 9.91 ft/s

* The proposed culvert produces no rise in calculated 100-year water surface elevation from existing conditions.

GENERAL NOTES

Construction Specifications:
City of Little Rock Specifications and Arkansas State Highway and Transportation Department Standard Specifications for Highway Construction (2014 edition) with applicable Supplemental Specifications and Special Provisions

Design Specifications:
2010 AASHTO LRFD Bridge Design Specifications

Design Loading:
Vehicular = HL-93 minus lane load
Earth = 120 lb/cf
Equivalent Fluid Pressure = 30 lb/cf (Min.), 60 lb/cf (Max.)
Design Fill Height (Culvert Barrel) = 0 ft to 2 ft

Design Unit Stresses:
Class S(AE) Concrete f'c = 4,000 psi
Reinforcing Steel (Grade 60) fy = 60,000 psi

Miscellaneous:
The culvert shall be cast-in-place.

All reinforcement in the culvert barrel, headwalls, wingwalls, and corral rails shall be epoxy coated.

Minimum clearance to reinforcing steel shall be 1 1/2", unless otherwise shown.

Contractor to provide shop drawings that include a bill of reinforcing for approval by the engineer prior to ordering materials.

"Sec" refers to the sections in the Arkansas 2014 Standard Specification for Highway Construction and Supplemental Specifications unless specified otherwise.

Drawings not to scale. Follow dimensions.

All dimensions are horizontal.

All elevations are shown in feet unless otherwise noted.

A qualified technician or geotechnical engineer shall check wingwall foundation soil to verify conditions are acceptable for an allowable bearing pressure of 3,000 psf with the proposed subgrade improvements. The engineer shall be notified if foundation soils do not meet this criteria.

Subgrade improvements for the wingwall foundations shall consist of 3-feet of Class 7 Aggregate placed to the limits shown on the plans and compacted to 95% modified proctor density. Type 2 Separation Geotextile shall be installed at the base and mid-height of the aggregate.

A minimum of 6" Class 7 Aggregate compacted to 95% modified proctor density shall be placed below the culvert barrel to the limits shown on the plans. The depth of Class 7 Aggregate may be increased by the engineer if unsuitable material is encountered.

Contractor shall be responsible for dewatering the excavation. Excavation shall be free of flowing water prior to construction of the footings or bottom slab. A minimum of 3" thick concrete foundation seal shall be provided if the flow of water cannot be arrested.

For elevations views A-A and B-B, see "Culvert Wingwall Elevations" sheet.

For Sections C-C, see "Culvert Sections" sheet.

For additional general notes, see Sheet S2.

Summary of Quantities		TOTAL
Concrete Flume	square foot	21.3
Concrete Walk Over Flume	square foot	33.7
Concrete, Reinforced Box Culvert and Wingwalls	cubic yard	148.34
Reinforced Concrete (Pipe Encasement)	cubic yard	13.11
Handrail	linear foot	107.6

These quantities are included in the summary of quantities on Sheet No. C2.

All work shown in the plans necessary to construct the box culvert, complete in place, shall be covered by the bid items in the above table.

No special measurement or payment will be made for removals, excavation, diversion berm, dewatering, aggregate base, backfill, compaction, concrete foundation seal, formwork, reinforcing, joint filler, or EPS foam. These items shall be considered subsidiary to other items.

CERTIFICATE OF AUTHORIZATION Olsson Inc. No.1010 ARKANSAS ENGINEER

ISSUED FOR BID

REVISIONS	DATE

CITY OF LITTLE ROCK, ARKANSAS
BELLA ROSA DRIVE BRIDGE REPLACEMENT
CULVERT LAYOUT PLAN AND GENERAL NOTES

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

STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER No. 20062 GRANT C. LUCKENBILL 11-23-25

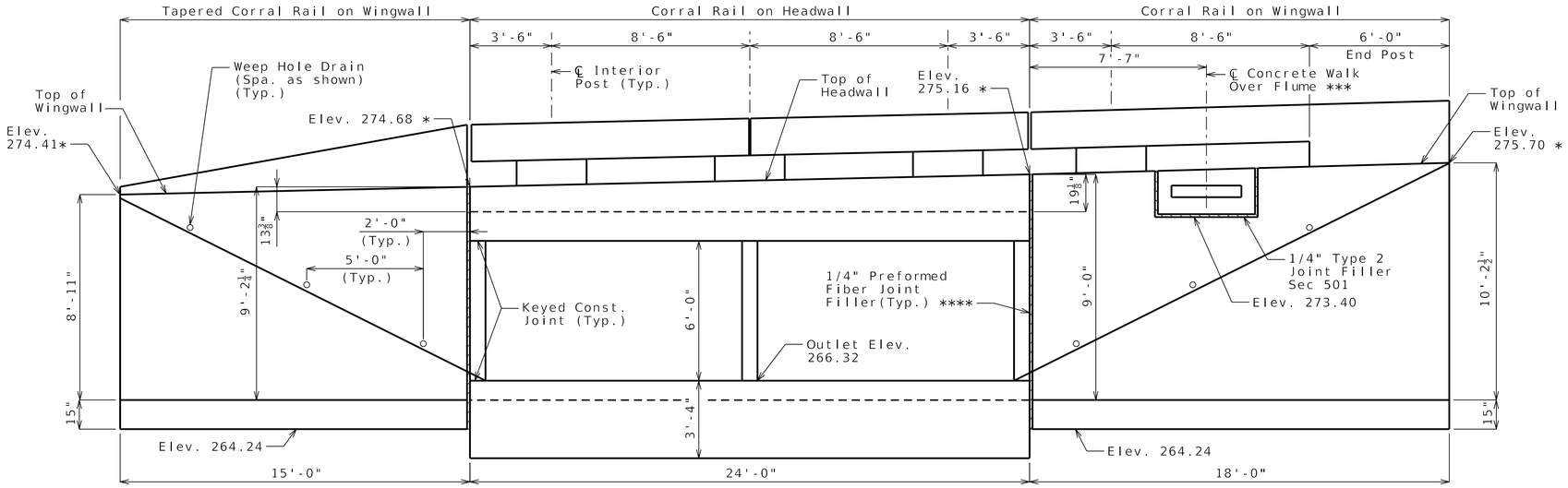
DRAWN BY	ABJ
DESIGNED	ENO
CHECKED	LAK/KAS
DATE	04/23/2025
SCALE	NO SCALE
PROJECT NO.	05-17-ST-223B
SHEET NO.	S1

GENERAL NOTES (con't):

Channel bottom shall be graded within right of way for transition of channel bed to culvert openings. Channel banks shall be tapered to match culvert openings.

Weep hole drains shall be 4" diameter PVC. A galvanized steel rodent screen and 2'x2' separation geotextile shall be centered on each drain. Adhere fabric and screen with an approved adhesive compound or approved form ties.

Waterproofing membrane shall be installed to the limits shown on the plans in accordance with manufacturer's recommendations. Wait 28 days after top slab is completed before applying waterproofing membrane. Apply manufacturer approved primer and allow primer to completely cure prior to placement of the waterproofing membrane. Waterproofing membrane may be MEL-DEK Deck Waterproofing System, Petrotac Self Adhesive Paving Membrane, or an approved equivalent.



VIEW A-A

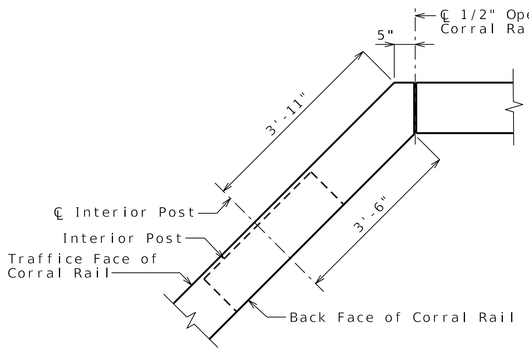
(Handrail, Concrete Foundation Seal Course, Aggregate Base, and Shear Key not shown for clarity)

* Edge of sidewalk or back of curb to be flush with top of headwall and wingwalls

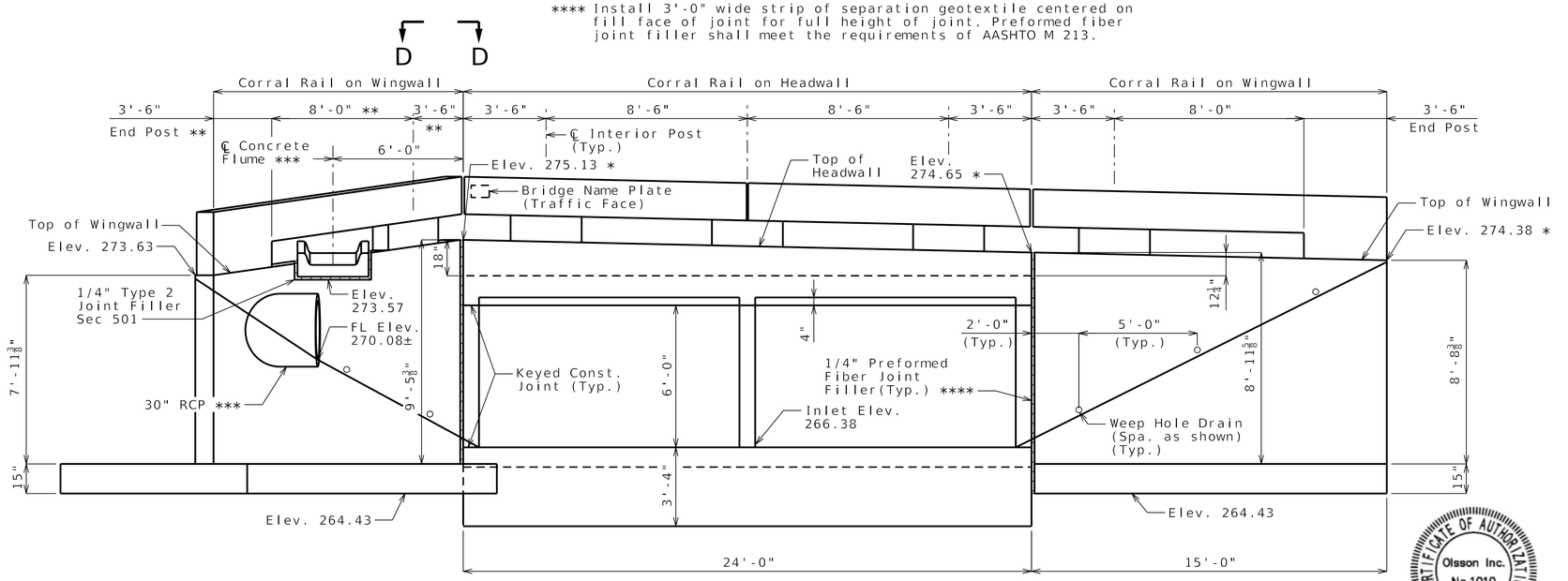
** Measured along back face of corral rail

*** See Miscellaneous Details Sheet

**** Install 3'-0" wide strip of separation geotextile centered on fill face of joint for full height of joint. Preformed fiber joint filler shall meet the requirements of AASHTO M 213.



VIEW D-D



VIEW B-B

(Handrail, Concrete Foundation Seal Course, Aggregate Base, and Shear Key not shown for clarity)

Note:
For location of elevation views A-A and B-B, see "Culvert Layout Plan and General Notes" sheet.

ISSUED FOR BID

REVISIONS	DATE

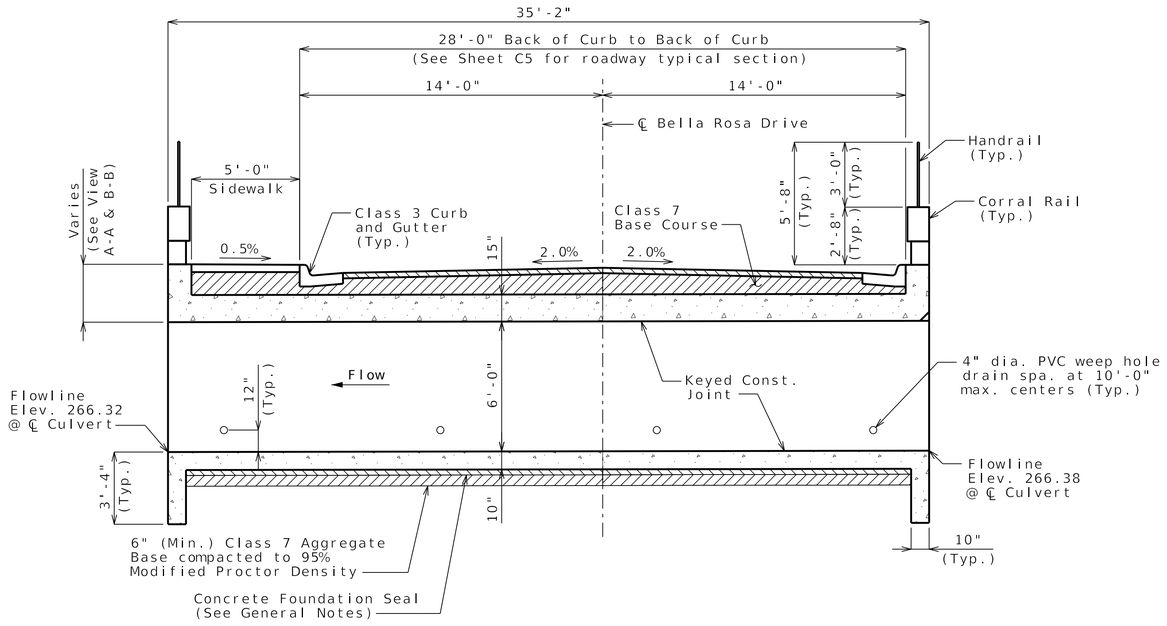
CITY OF LITTLE ROCK, ARKANSAS
BELLA ROSA DRIVE BRIDGE REPLACEMENT
CULVERT WINGWALL ELEVATIONS

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

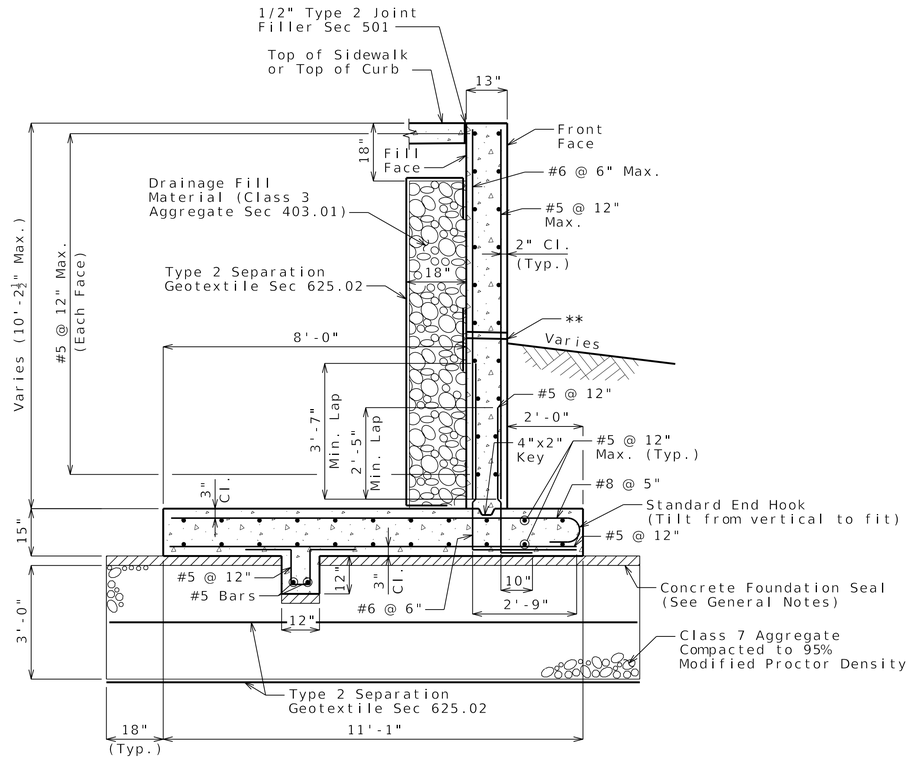
STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 20062
GRANT C. LUCKENBILL
4-23-25

CERTIFICATE OF AUTHORIZATION
Olsson Inc.
No.1010
ARKANSAS ENGINEER

DRAWN BY	ABJ
DESIGNED	ENO
CHECKED	LAK/KAS
DATE	04/23/2025
SCALE	NO SCALE
PROJECT NO.	05-17-ST-223B
SHEET NO.	S2



SECTION C-C



SECTION THRU WINGWALL

Corral rail on wingwall not shown for clarity.
See Corral Rail Details sheets for additional rebar to be embedded in wingwalls.

**4" dia. PVC weep hole drain spa. as shown in View A-A and B-B (2% min. slope)

Note:
For location of Sectio C-C, see "Culvert Layout Plan and General Notes" sheet.

CERTIFICATE OF AUTHORIZATION
Olsson Inc.
No.1010
ARKANSAS ENGINEER

ISSUED FOR BID

REVISIONS	DATE

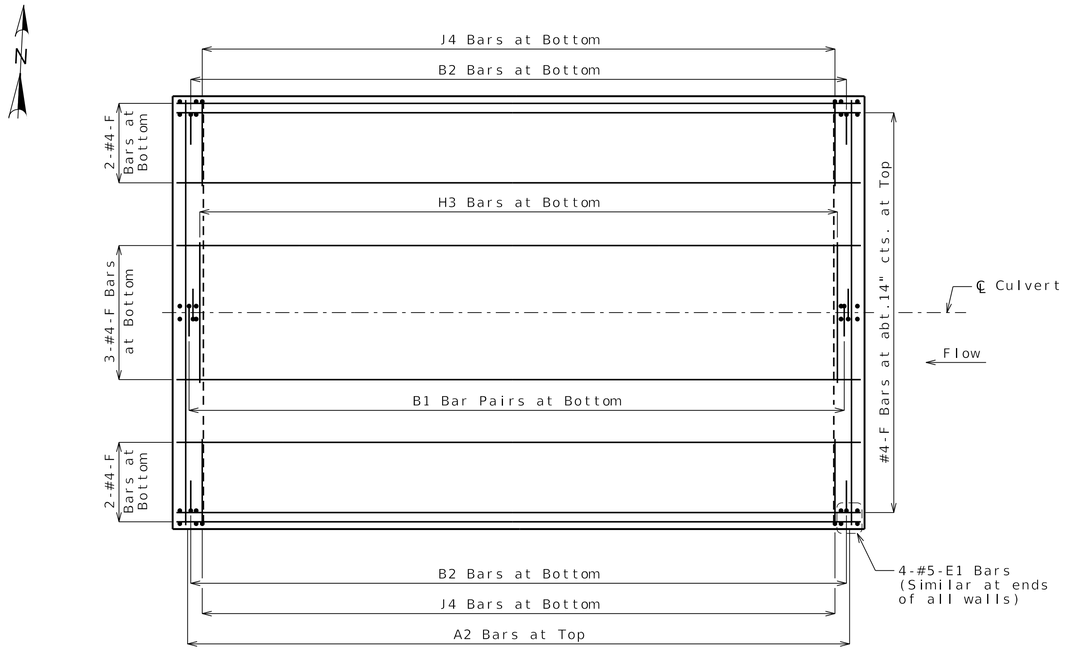
CITY OF LITTLE ROCK, ARKANSAS
BELLA ROSA DRIVE BRIDGE REPLACEMENT

CULVERT SECTIONS

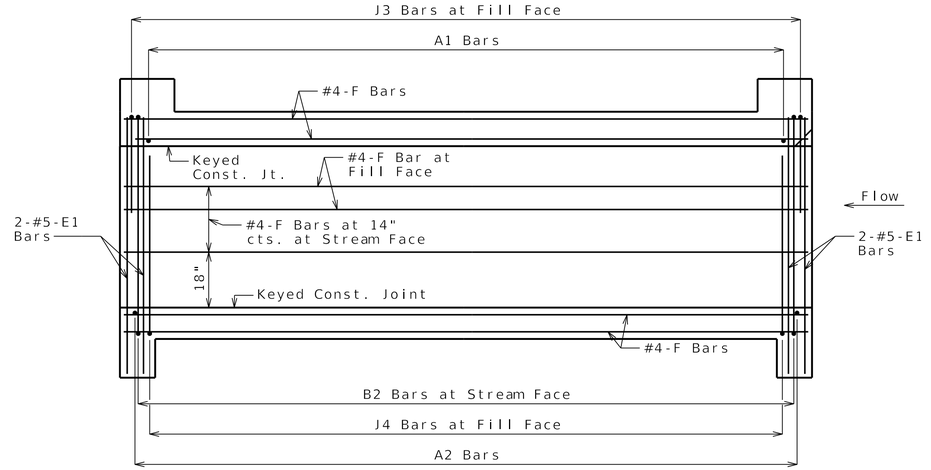
DEPARTMENT OF PUBLIC WORKS
CIVIL ENGINEERING
701 W. MARKHAM
LITTLE ROCK, ARKANSAS 72201

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No.20062
GRANT C. LUCKENBILL
4-23-25

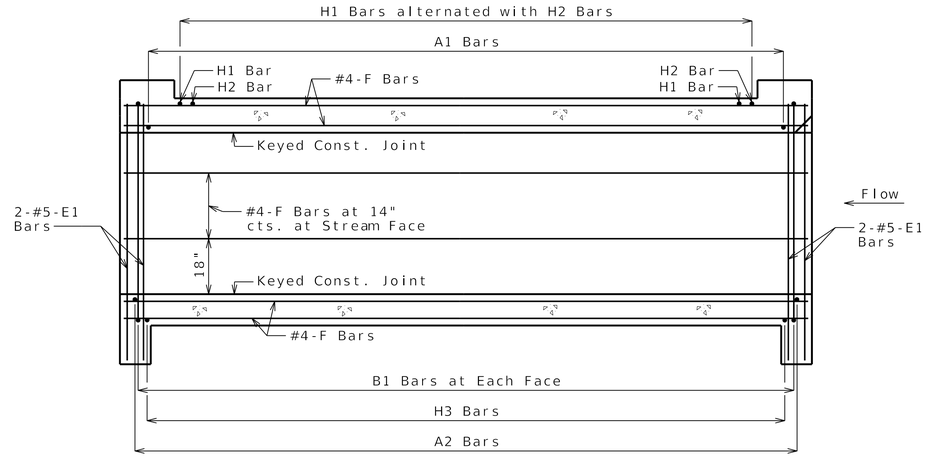
DRAWN BY	ABJ
DESIGNED	ENO
CHECKED	LAK/KAS
DATE	04/23/2025
SCALE	NO SCALE
PROJECT NO.	05-17-ST-223B
SHEET NO.	S3



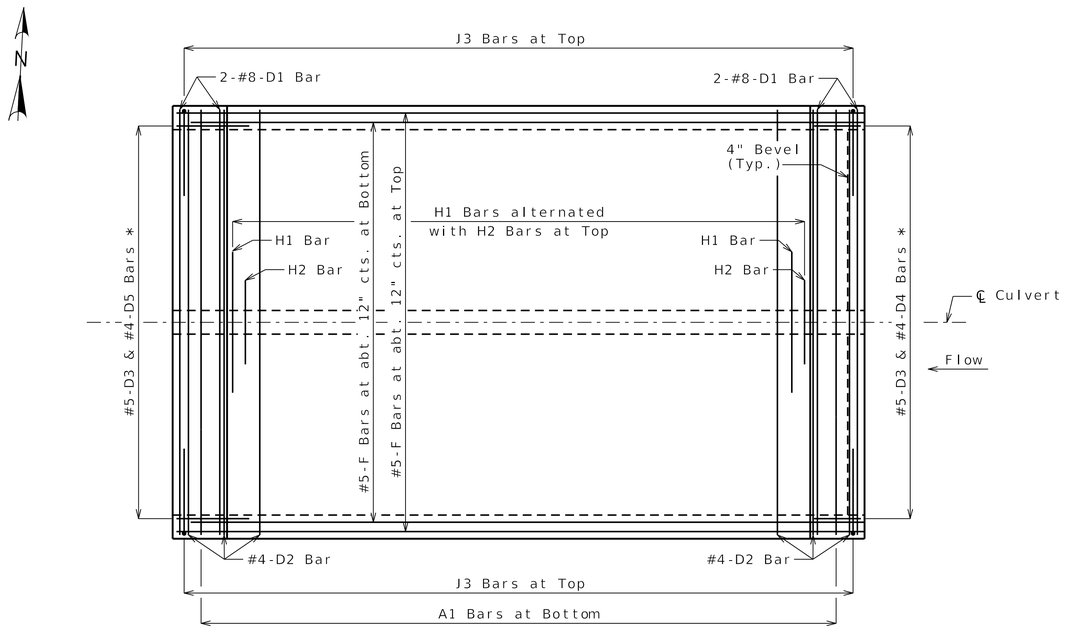
PLAN OF BOTTOM SLAB



ELEVATION OF EXTERIOR WALL



SECTION NEAR INTERIOR WALL



PLAN OF TOP SLAB

B Bars in walls are not shown for clarity
* Spa. as shown on "Corral Rail Details (1 or 2)" sheet

Notes:

For section thru barrel and headwalls and bar sizes, spacing and dimensions of all reinforcement, see Sheet "Culvert Barrel Reinforcing (2 of 2)".

Construction joint key not shown for clarity in plan and elevation.
For construction joint details, see Sheet "Culvert Barrel Reinforcing (2 of 2)".

Lap #4 longitudinal bars a minimum of 30" at splices.

Lap #5 longitudinal bars a minimum of 37" at splices.

Beveled headwall shall be located at upstream end.

CERTIFICATE OF AUTHORIZATION
Olsson Inc.
No.1010
ARKANSAS ENGINEER

ISSUED FOR BID

REVISIONS	DATE

CITY OF LITTLE ROCK, ARKANSAS
BELLA ROSA DRIVE BRIDGE REPLACEMENT
CULVERT BARREL REINFORCING (1 OF 2)

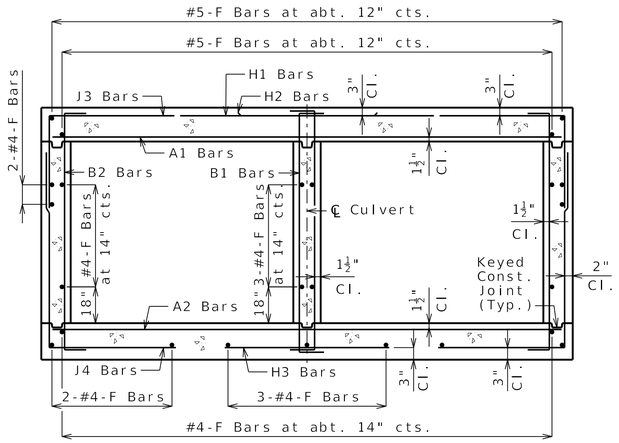
DEPARTMENT OF PUBLIC WORKS
CIVIL ENGINEERING
701 W. MARKHAM
LITTLE ROCK, ARKANSAS 72201

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No.20062
GRANT C. LUCKENBILL
4-23-25

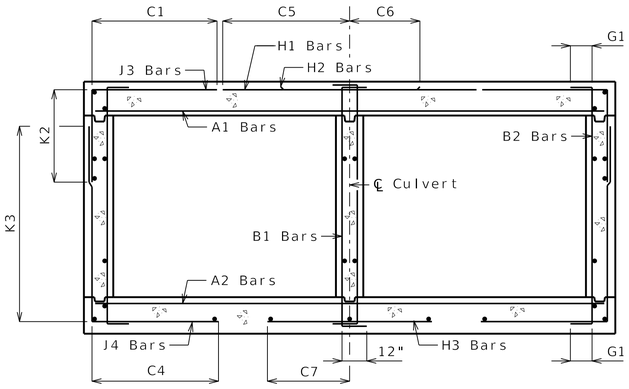
DRAWN BY	ABJ
DESIGNED	ENO
CHECKED	LAK/KAS
DATE	04/23/2025
SCALE	NO SCALE
PROJECT NO.	05-17-ST-223B
SHEET NO.	S4

SPAN (S) = 11 FT HEIGHT (HT) = 6 FT																															
DESIGN FILL	MEMBER THICKNESS				TOP SLAB BARS												BOTTOM SLAB BARS										WALL BARS					
					A1 BARS		J3 BARS				H1 BARS			H2 BARS			A2 BARS		J4 BARS				H3 BARS				B1 BARS		B2 BARS		
	TS	BS	TX	TI	SIZE	SPA.	SIZE	SPA.	C1	K2	SIZE	SPA.	C5	SIZE	SPA.	C6	SIZE	SPA.	SIZE	SPA.	C4	K3	SIZE	SPA.	C7		SIZE	SPA.	SIZE	SPA.	G1	
0-2 FT	15	10	8	8	5	6	5	6	57	42	5	12	111	5	12	34	5	6	5	6	57	78	6	6	58		5	12	5	12	12	

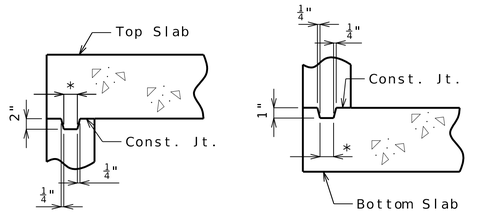
Dimensions in table are in inches unless otherwise specified.



BARREL REINFORCEMENT



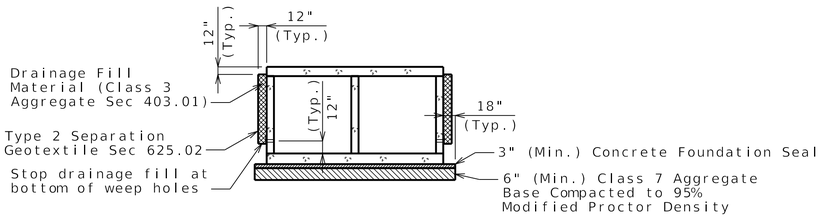
BARREL REINFORCEMENT DIMENSIONS DIAGRAM



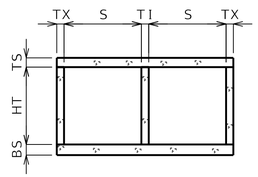
KEYED CONSTRUCTION JOINTS

Exterior wall shown, interior wall similar

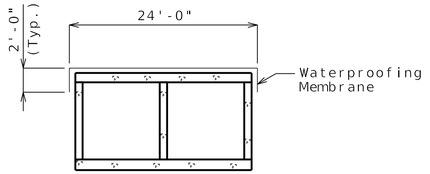
* Approximately one third of wall thickness



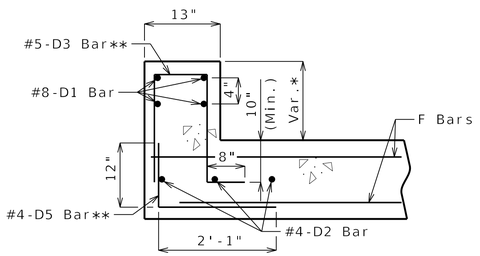
AGGREGATE BASE AND BACKFILL LIMITS



MEMBER DIMENSIONS

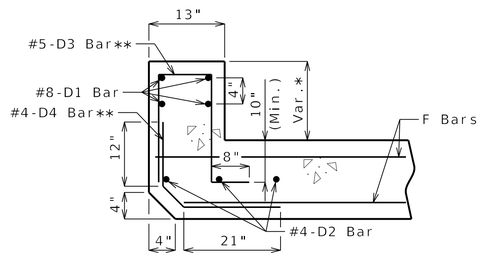


WATERPROOFING DETAILS



DOWNSTREAM HEADWALL REINFORCEMENT

Corral Rail on headwall not shown for clarity.



UPSTREAM HEADWALL REINFORCEMENT

Corral Rail on headwall not shown for clarity.

* See "Culvert Wingwall Elevations" sheet for top of headwall elevations.

** Spaced as shown on "Elevation of Corral Rail on Headwall" on "Corral Rail Details (1 of 2)" sheet

Notes:

Barrel sections are symmetrical about and normal to ℄ culvert.

See "Corral Rail Details" sheets for additional reinforcing to be embedded in headwall.

CERTIFICATE OF AUTHORIZATION Olsson Inc. No.1010 ARKANSAS ENGINEER

ISSUED FOR BID

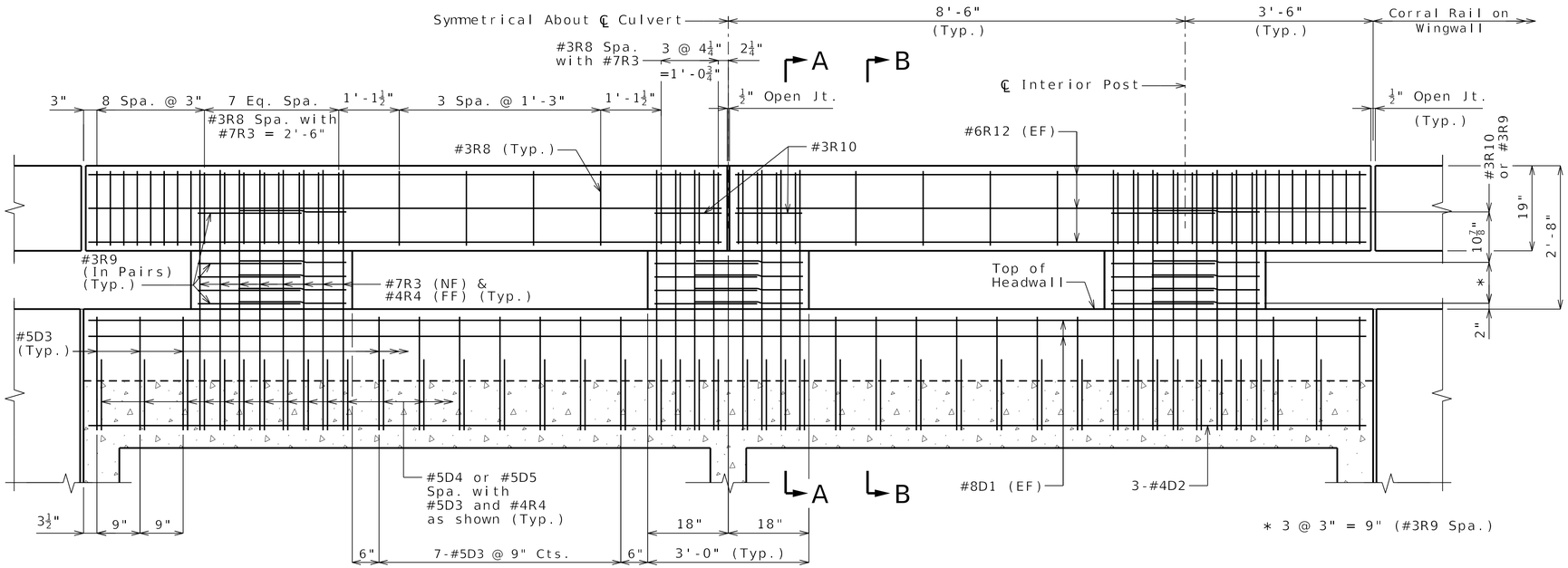
REVISIONS	DATE

CITY OF LITTLE ROCK, ARKANSAS
BELLA ROSA DRIVE BRIDGE REPLACEMENT
CULVERT BARREL REINFORCING (2 OF 2)

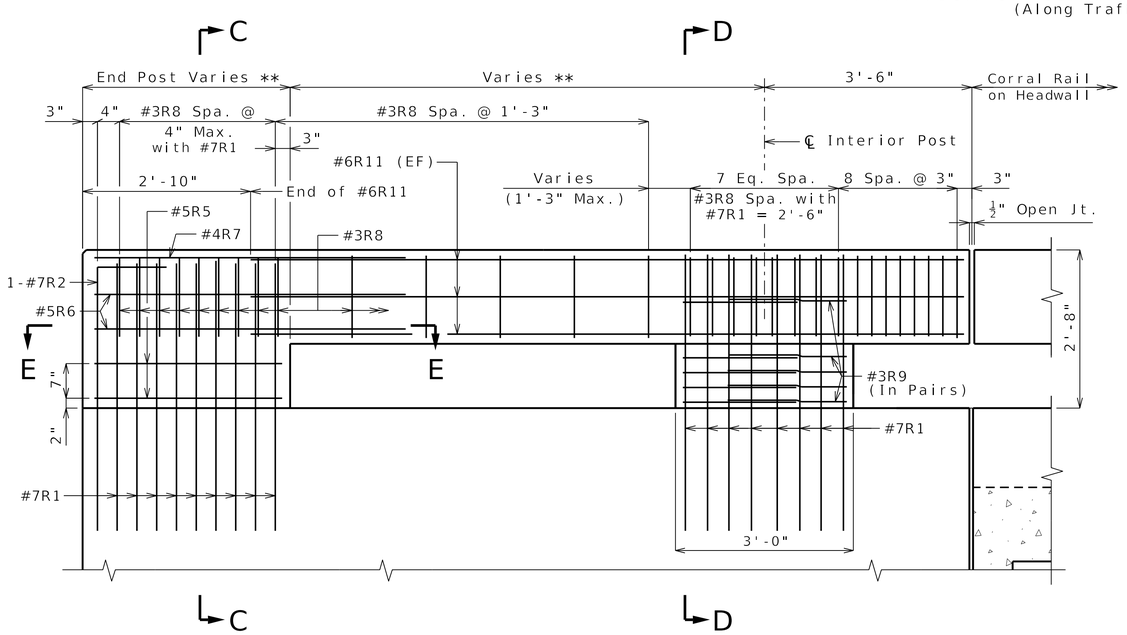
DEPARTMENT OF PUBLIC WORKS
CIVIL ENGINEERING
701 W. MARKHAM
LITTLE ROCK, ARKANSAS 72201

STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER No.20062 GRANT C. LUCKENBILL 4-23-25

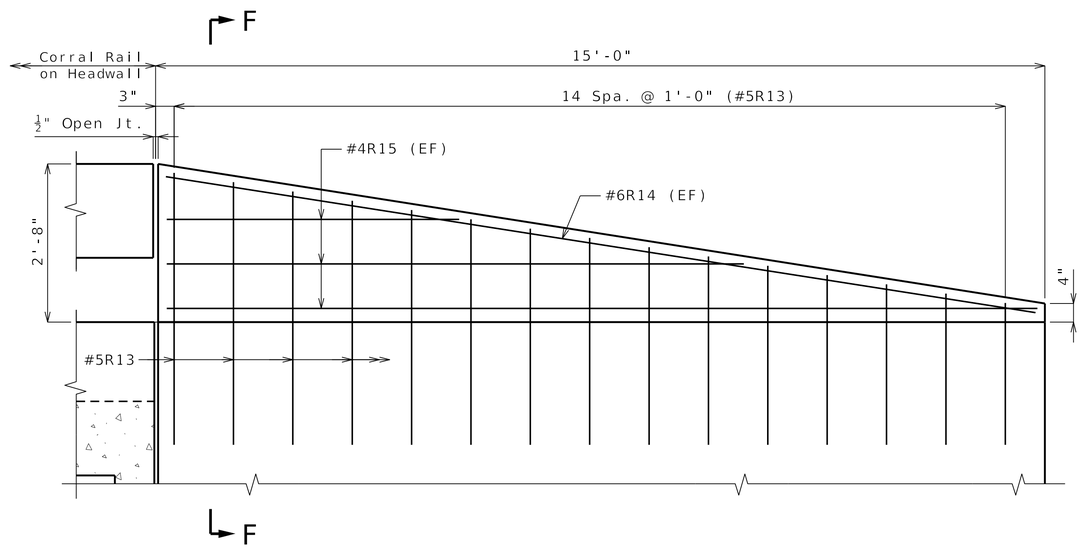
DRAWN BY	ABJ
DESIGNED	ENO
CHECKED	LAK/KAS
DATE	04/23/2025
SCALE	NO SCALE
PROJECT NO.	05-17-ST-223B
SHEET NO.	S5



ELEVATION OF CORRAL RAIL ON HEADWALL
(Along Traffic Face)



ELEVATION OF CORRAL RAIL ON WINGWALL
(Along Traffic Face)
** See "Culvert Wingwall Elevations" sheet.



ELEVATION TAPERED OF CORRAL RAIL ON WINGWALL
(Along Traffic Face)

Legend:
NF = Near Face
FF = Far Face
EF = Each Face

Notes:

Top of corral rail shall be built parallel to grade and corral rail joints normal to grade.

All exposed edges of corral rail shall have either a 1/2-inch radius or a 3/8-inch bevel, unless otherwise noted.

Concrete in the Corral Rail is included in the quantity for "Concrete, Reinforced Box Culvert and Wingwalls".

CERTIFICATE OF AUTHORIZATION Olsson Inc. No.1010 ARKANSAS ENGINEER

ISSUED FOR BID

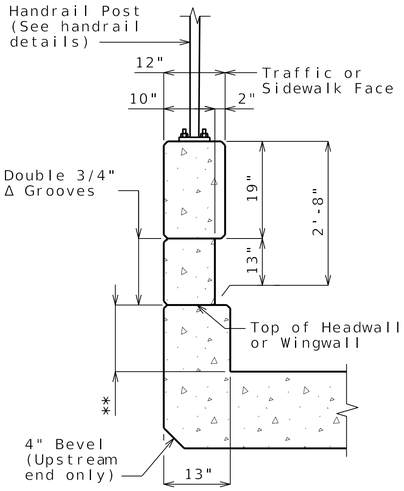
REVISIONS	DATE

CITY OF LITTLE ROCK, ARKANSAS
BELLA ROSA DRIVE BRIDGE REPLACEMENT
CORRAL RAIL DETAILS (1 OF 2)

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

STATE OF ARKANSAS ★★★ REGISTERED PROFESSIONAL ENGINEER ★★★ No. 20062 GRANT C. LUCKENBILL 4-23-25

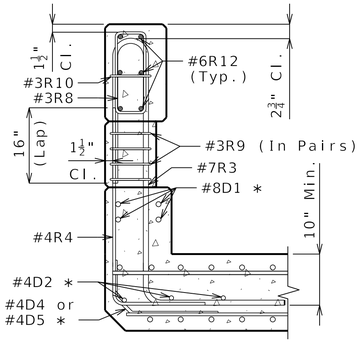
DRAWN BY	ABJ
DESIGNED	ENO
CHECKED	LAK/KAS
DATE	04/23/2025
SCALE	NO SCALE
PROJECT NO.	05-17-ST-223B
SHEET NO.	S6



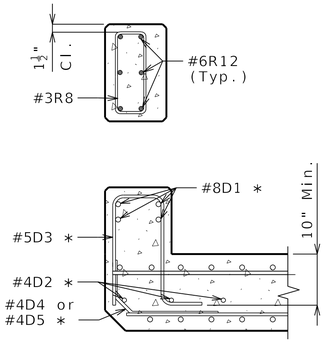
TYPICAL INTERIOR POST

Post shown on headwall. Post on wingwall similar.

** Height varies, see "Culvert Wingwall Elevations" sheet.

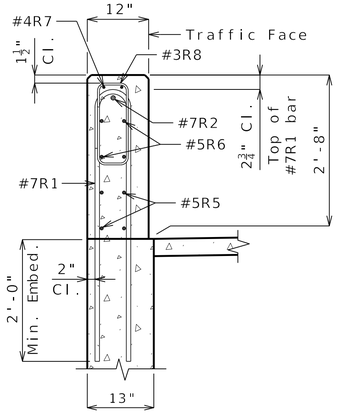


SECTION A-A

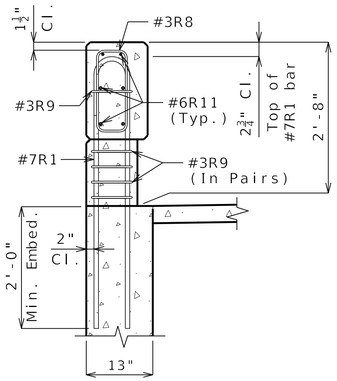


SECTION B-B

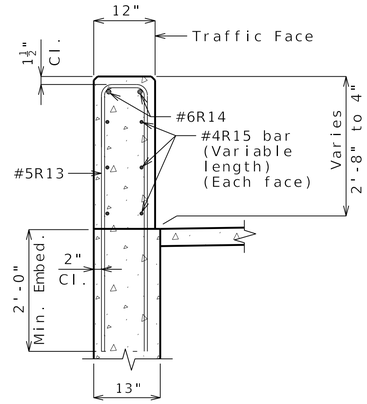
* See "Culvert Barrel Reinforcing" sheets for additional information about D bars.



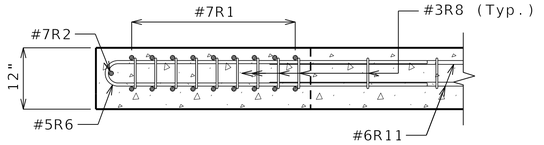
SECTION C-C



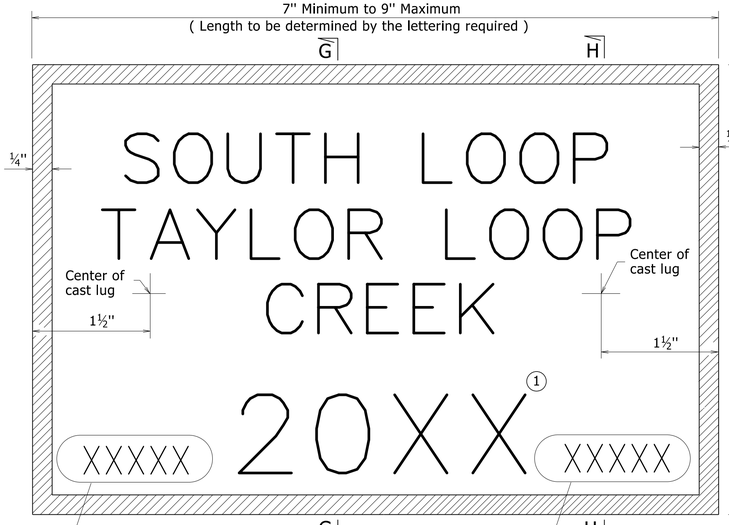
SECTION D-D



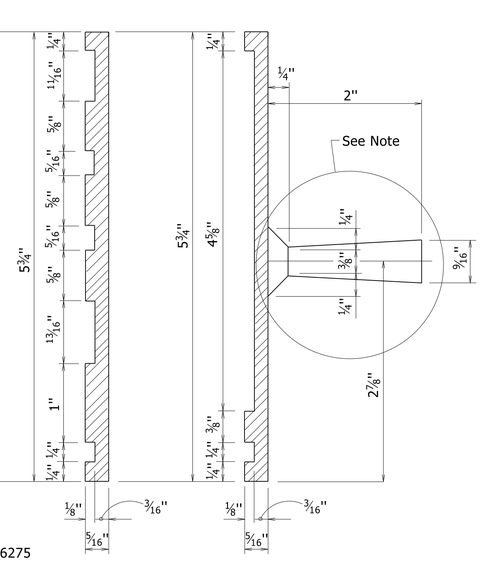
SECTION F-F



SECTION E-E



BRIDGE NAME PLATE DETAIL



SECTION G-G

SECTION H-H

NAME PLATE NOTES:

Name plates shall be cast bronze and shall meet the material requirements as specified in Section 812.

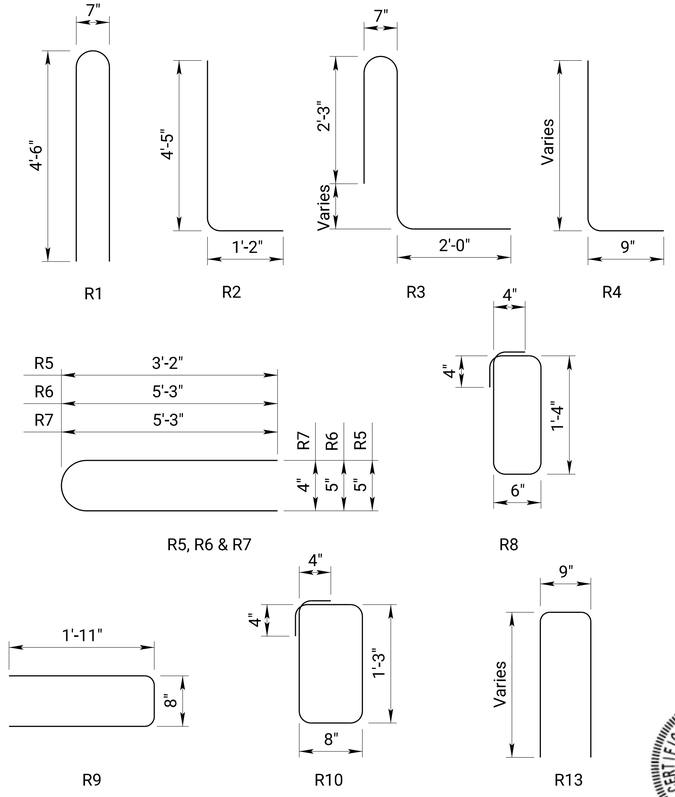
Body of plate shall be 3/16" thick and shall include two tapering cone lugs ⅜" to 9/16"x 2" long. The border and all lettering shall be raised ⅛" above the face of plate and shall be polished.

All lettering shall be plain gothic, square cut and not tapered.

The number of plates required and the location and name on the plate for each bridge shall be as designated on the plans.

Alternate attachments may be used provided such attachments are submitted and approval secured before fabrication is begun.

(1) Year in which contract is awarded.



CORRAL RAIL BAR BENDING DIAGRAMS

ISSUED FOR BID

REVISIONS	DATE

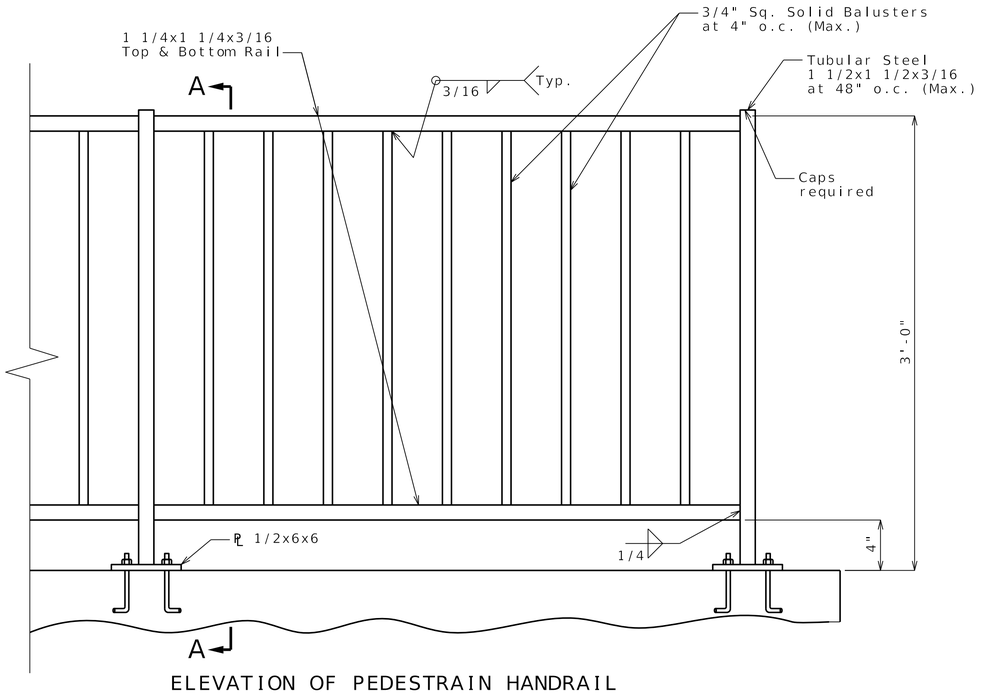
CITY OF LITTLE ROCK, ARKANSAS
BELLA ROSA DRIVE BRIDGE REPLACEMENT
CORRAL RAIL DETAILS (2 OF 2)

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

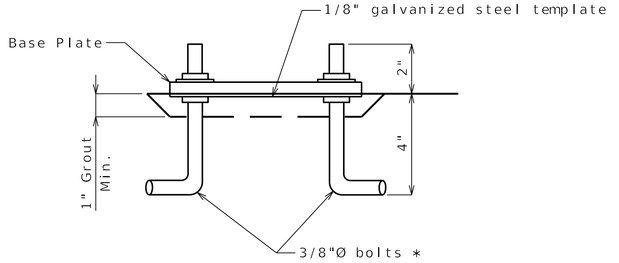
STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 20062
GRANT C. LUCKENBILL
4-23-25

CERTIFICATE OF AUTHORIZATION
Olsson Inc.
No.1010
ARKANSAS ENGINEER

DRAWN BY	ABJ
DESIGNED	ENO
CHECKED	LAK/KAS
DATE	04/23/2025
SCALE	NO SCALE
PROJECT NO.	05-17-ST-223B
SHEET NO.	S7

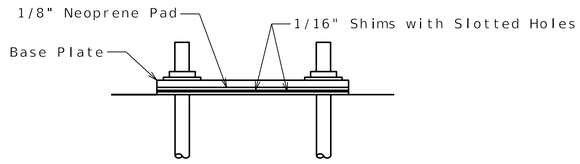


ELEVATION OF PEDESTRAIN HANDRAIL



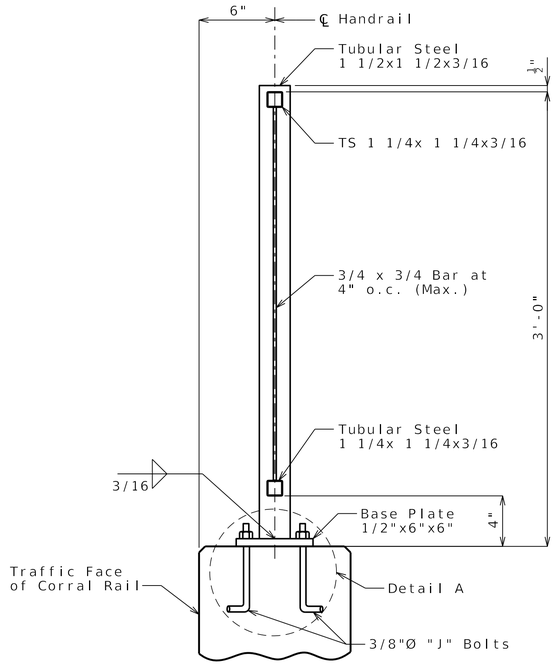
DETAIL A

*Stainless Steel Bolt ASTM A193, Grade B8 or B8A
Stainless Steel AASHTO M292, Grade 8
Stainless Steel Washer ASTM A276, Grade 302

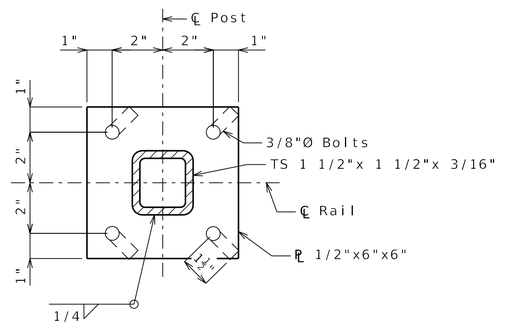


OPTIONAL LEVELING DETAIL

Contractor may place the 1/8" galvanized steel template on the finished Corral Rail surface and provide shim plates and neoprene pads for leveling, in lieu of placing the template on nuts, leveling and finishing with grout.



SECTION A-A



PLAN OF BASE PLATE

Handrail Notes:
All posts & balusters shall be vertical.

Handrail shall be installed on top of the full length of both corral rails.

Center of handrail posts shall clear Corral Rail joints by at least 6 inches.

Contractor shall submit complete, detailed shop drawings for approval by the engineer prior to ordering materials.

CERTIFICATE OF AUTHORIZATION
Olsson Inc.
No.1010
ARKANSAS ENGINEER

ISSUED FOR BID

REVISIONS	DATE

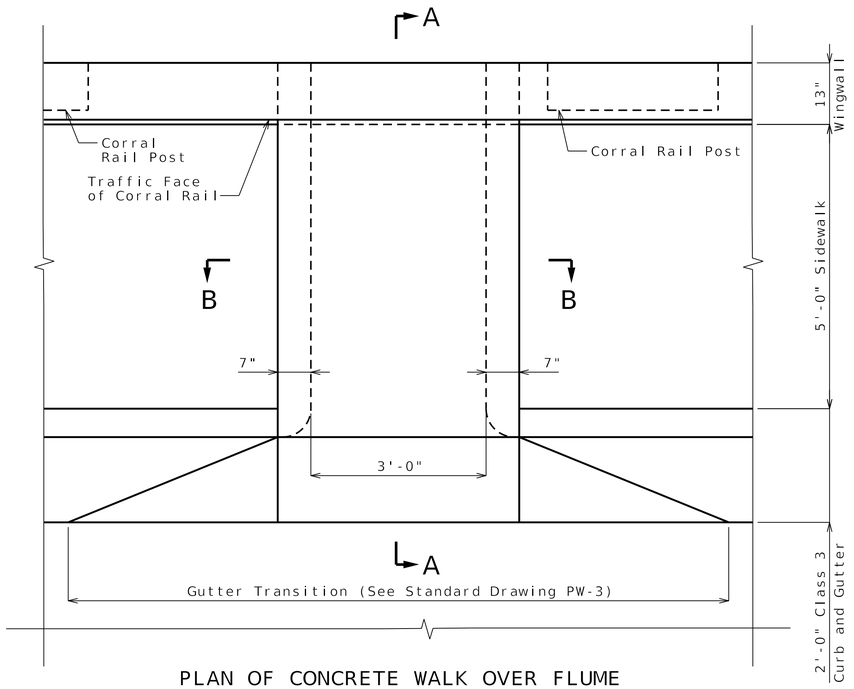
CITY OF LITTLE ROCK, ARKANSAS
BELLA ROSA DRIVE BRIDGE REPLACEMENT

HANDRAIL DETAILS

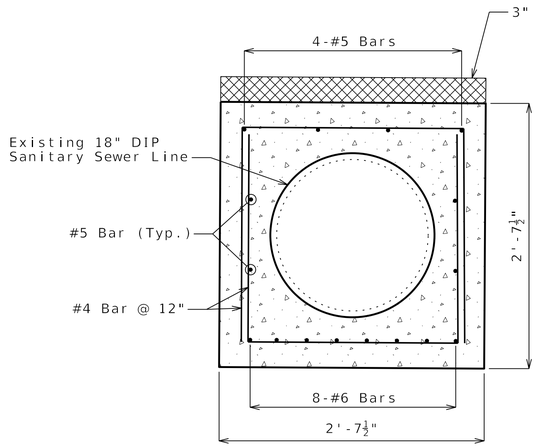
DEPARTMENT OF PUBLIC WORKS
CIVIL ENGINEERING
701 W. MARKHAM
LITTLE ROCK, ARKANSAS 72201

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No.20062
GRANT C. LUCKENBILL
4-23-25

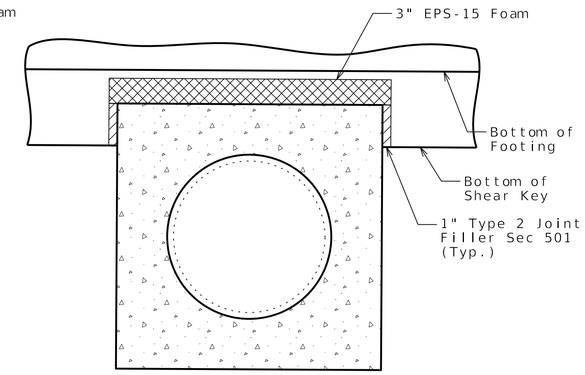
DRAWN BY	ABJ
DESIGNED	ENO
CHECKED	LAK/KAS
DATE	04/23/2025
SCALE	NO SCALE
PROJECT NO.	05-17-ST-223B
SHEET NO.	S8



PLAN OF CONCRETE WALK OVER FLUME



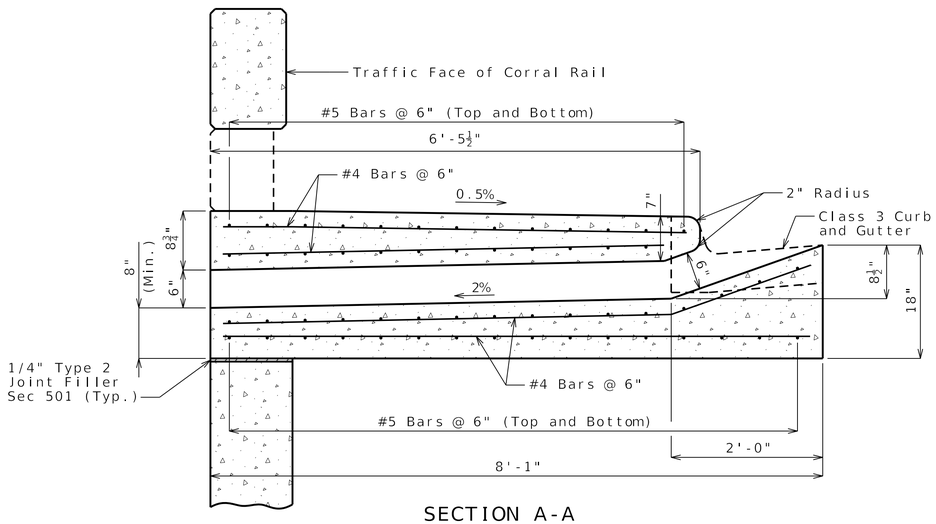
ENCASEMENT TYPICAL SECTION FOR EXISTING 18" DIP



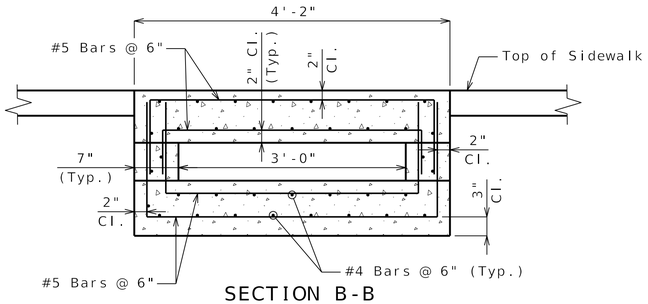
SECTION THRU ENCASEMENT AT WINGWALL FOOTING KEYWAY

(Reinforcement not shown)

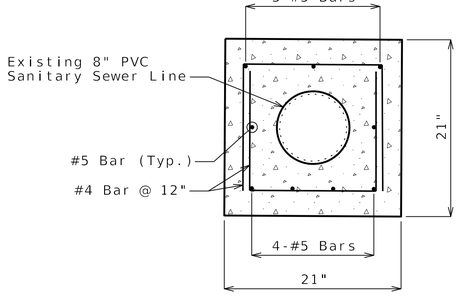
Note: Trim keyway reinforcing to 1 1/2" clear to blockout



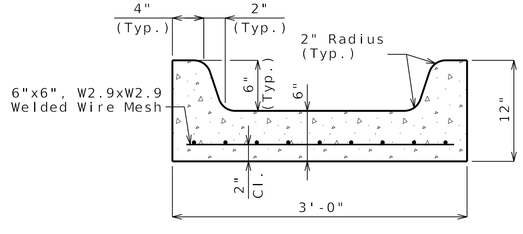
SECTION A-A



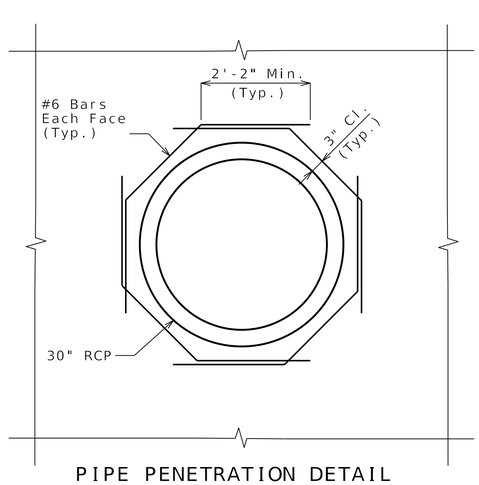
SECTION B-B



ENCASEMENT TYPICAL SECTION FOR EXISTING 8" PVC



CONCRETE FLUME DETAIL



PIPE PENETRATION DETAIL

Install 3" non-shrink grout ring all around pipe on fill face of wingwall.

Notes:

The finished grade and slope of the Concrete Walk Over Flume are to conform with the finished cross slope and grade of proposed sidewalk.

Concrete Walk Over Flume and Concrete Flume shall be constructed and in accordance with Section 9 of the City of Little Rock Technical Specifications.

Pipe Encasements shall be constructed in accordance with Section 11 of the City of Little Rock Technical Specifications.

CERTIFICATE OF AUTHORIZATION Olsson Inc. No.1010 ARKANSAS ENGINEER

ISSUED FOR BID

REVISIONS	DATE

CITY OF LITTLE ROCK, ARKANSAS

BELLA ROSA DRIVE BRIDGE REPLACEMENT

MISCELLANEOUS DETAILS

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

STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER No.20082 GRANT C. LUCKETT 4-23-25

DRAWN BY	ABJ
DESIGNED	ENO
CHECKED	LAK/KAS
DATE	04/23/2025
SCALE	NO SCALE
PROJECT NO.	05-17-ST-223B
SHEET NO.	S9