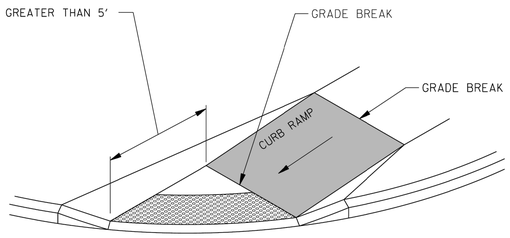
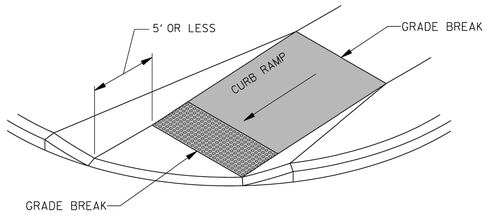


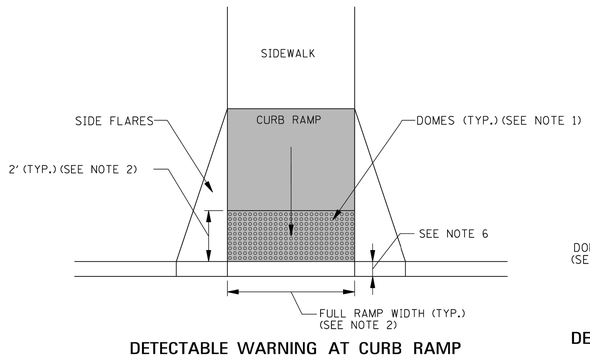
DETECTABLE WARNING PLACEMENT DETAIL 1

NOTE: IF THE DISTANCE FROM THE GRADE BREAK IS GREATER THAN OF EQUAL TO 5', DETECTABLE WARNINGS SHALL BE PLACED ALONG THE RADIUS OF THE CURVE AS SHOWN IN THE ABOVE DETAIL.

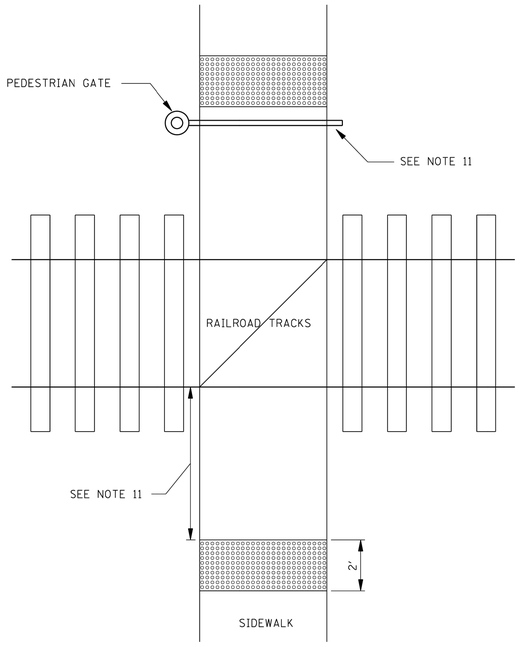


DETECTABLE WARNING PLACEMENT DETAIL 2

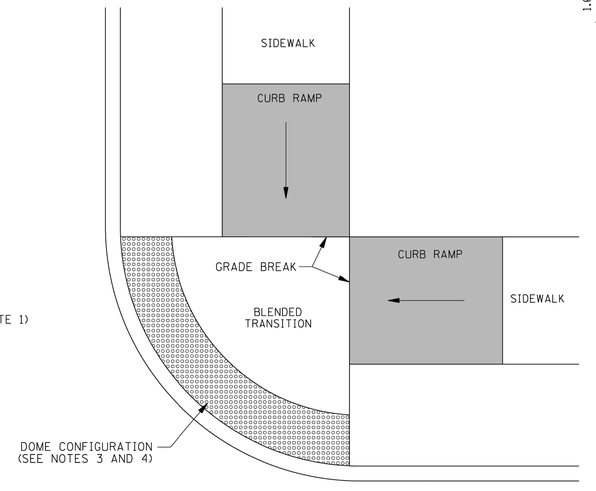
NOTE: IF THE DISTANCE FROM THE GRADE BREAK IS LESS THAN OR EQUAL TO 5', DETECTABLE WARNINGS SHALL BE PLACED ON THE CURB RAMP ALONG THE BOTTOM GRADE BREAK WITH ONE CORNER 5" TO 9" FROM THE FRONT OF THE CURB OR EDGE OF THE ROADWAY.



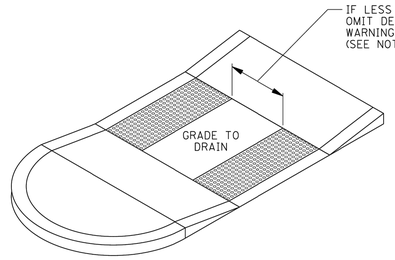
DETECTABLE WARNING AT CURB RAMP



DETECTABLE WARNINGS AT RAILROAD CROSSING

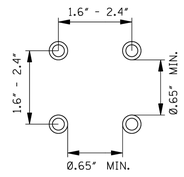


DETECTABLE WARNING AT BLENDED TRANSITION (CONFIGURATION: TYPES K AND J)

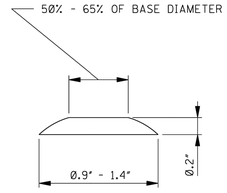


DETECTABLE WARNINGS AT MEDIAN ISLANDS

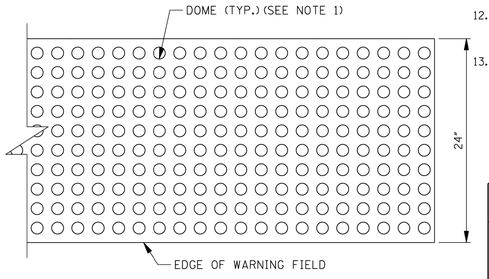
NON-ELEVATED CROSSING



DOME SPACING



DOME SECTION



DETECTABLE WARNING LAYOUT

GENERAL NOTES:

1. THE DETAILS PROVIDED ARE NOT DRAWN TO SCALE. THE QUANTITY OF DOMES DEPICTED ON THE DETECTABLE WARNING UNIT (THE DOMES AND THE ENTIRE 2' LEVEL SURFACE) IS FOR ILLUSTRATION ONLY.

2. ALL DETECTABLE WARNINGS SHOWN ON THIS SHEET SHALL BE PAID FOR - PER SQUARE FEET, UNLESS OTHERWISE NOTED IN THE PLANS.

DETECTABLE WARNING UNIT DIMENSIONS:

3. DETECTABLE WARNING SURFACES SHALL EXTEND 2' MINIMUM IN THE DIRECTION OF PEDESTRIAN TRAVEL. AT CURB RAMPS AND BLENDED TRANSITIONS, DETECTABLE WARNING SURFACES SHALL EXTEND THE FULL WIDTH OF THE RAMP RUN (EXCLUDING ANY FLARED SIDES), BLENDED TRANSITION, OR TURNING SPACE. AT PEDESTRIAN AT-GRADE RAIL CROSSINGS NOT LOCATED WITHIN A STREET OR HIGHWAY, DETECTABLE WARNINGS SHALL EXTEND THE FULL WIDTH OF THE CROSSING. AT BOARDING PLATFORMS FOR BUSES AND RAIL VEHICLES, DETECTABLE WARNING SURFACES SHALL EXTEND THE FULL LENGTH OF THE PUBLIC USE AREAS OF THE PLATFORM. AT BOARDING AND ALIGHTING AREAS AT SIDEWALK OR STREET LEVEL TRANSIT STOPS FOR RAIL VEHICLES, DETECTABLE WARNING SURFACES SHALL EXTEND THE FULL LENGTH OF THE TRANSIT STOP.

DOME ALIGNMENT:

4. THE ROWS OF DOMES SHALL BE ALIGNED TO BE PERPENDICULAR OR RADIAL TO THE GRADE BREAK AT THE RAMP LANDING OR BETWEEN THE CURB RAMP AND THE STREET.

5. WHERE DOMES ARE ARRAYED RADIALLY THEY MAY DIFFER IN DOME DIAMETER AND CENTER-TO-CENTER SPACING WITHIN THE RANGES SPECIFIED ON THIS SHEET.

COLOR REQUIREMENTS:

6. DETECTABLE WARNING SURFACES SHALL CONTRAST VISUALLY WITH ADJACENT GUTTER, STREET OR HIGHWAY, OR PEDESTRIAN ACCESS ROUTE SURFACE, EITHER LIGHT-ON-DARK OR DARK-ON-LIGHT.

DETECTABLE WARNINGS LOCATIONS:

7. ON PERPENDICULAR CURB RAMPS, WHERE THE ENDS OF THE BOTTOM GRADE BREAK ARE IN FRONT OF THE BACK OF CURB, DETECTABLE WARNING SURFACES SHALL BE PLACED AT THE BACK OF CURB. WHERE THE ENDS OF THE BOTTOM GRADE BREAK ARE BEHIND THE BACK OF CURB AND THE DISTANCE FROM EITHER END OF THE BOTTOM GRADE BREAK TO THE BACK OF CURB IS 5' OR LESS, DETECTABLE WARNING SURFACES SHALL BE PLACED ON THE RAMP RUN WITHIN ONE DOME SPACING OF THE BOTTOM GRADE BREAK. WHERE THE ENDS OF THE BOTTOM GRADE BREAK ARE BEHIND THE BACK OF CURB AND THE DISTANCE FROM EITHER END OF THE BOTTOM GRADE BREAK TO THE BACK OF CURB IS MORE THAN 5', DETECTABLE WARNING SURFACES SHALL BE PLACED ON THE LOWER LANDING AT THE BACK OF CURB.

8. ON PARALLEL CURB RAMPS, DETECTABLE WARNING SURFACES SHALL BE PLACED ON THE TURNING SPACE AT THE FLUSH TRANSITION BETWEEN THE STREET AND SIDEWALK.

9. ON BLENDED TRANSITIONS, DETECTABLE WARNING SURFACES SHALL BE PLACED AT THE BACK OF CURB. WHERE RAISED PEDESTRIAN STREET CROSSINGS, DEPRESSED CORNERS, OR OTHER LEVEL PEDESTRIAN STREET CROSSINGS ARE PROVIDED, DETECTABLE WARNING SURFACES SHALL BE PLACED AT THE FLUSH TRANSITION BETWEEN THE STREET AND THE SIDEWALK.

10. AT CUT-THROUGH PEDESTRIAN REFUGE ISLANDS, DETECTABLE WARNING SURFACES SHALL BE PLACED AT THE EDGES OF THE PEDESTRIAN ISLAND AND SHALL BE SEPARATED BY A 2' MINIMUM LENGTH OF SURFACE WITHOUT DETECTABLE WARNINGS.

11. AT PEDESTRIAN AT-GRADE RAIL CROSSINGS NOT LOCATED WITHIN A STREET OR HIGHWAY, DETECTABLE WARNING SURFACES SHALL BE PLACED ON EACH SIDE OF THE RAIL CROSSING. THE EDGE OF THE DETECTABLE WARNING SURFACE NEAREST THE RAIL CROSSING SHALL BE 6' MINIMUM AND 15' MAXIMUM FROM THE CENTERLINE OF THE NEAREST RAIL. WHERE PEDESTRIAN GATES ARE PROVIDED, DETECTABLE WARNING SURFACES SHALL BE PLACED ON THE SIDE OF THE GATES OPPOSITE THE RAIL.

12. AT BOARDING PLATFORMS FOR BUSES AND RAIL VEHICLES, DETECTABLE WARNING SURFACES SHALL BE PLACED AT THE BOARDING EDGE OF THE PLATFORM.

13. AT BOARDING AND ALIGHTING AREAS AT SIDEWALK OR STREET LEVEL TRANSIT STOPS FOR RAIL VEHICLES, DETECTABLE WARNING SURFACES SHALL BE PLACED AT THE SIDE OF THE BOARDING AND ALIGHTING AREA FACING THE RAIL VEHICLES.

STATE	PROJECT NO.
MISS.	

REVISION	BY	DATE

MISSISSIPPI DEPARTMENT OF TRANSPORTATION
ROADWAY DESIGN DIVISION
STANDARD PLAN

CURB RAMPS
DETECTABLE WARNING
DETAILS

ISSUE DATE: AUGUST 01, 2017

MDOT
WORKING NUMBER
CR-4
SHEET NUMBER
6424

DALE BAILEY
AN ASSOCIATION

Architects

One Jackson Place 250
188 East Capitol Street
Jackson, MS 39201
p 601.352.5411

201 Park Court Suite B
Ridgeland, MS 39157
p 601.790.9432

161 Lameuse St. Suite 201
Biloxi, MS 39530
p 228.374.1409

dalebaileyplans.com

BRANDON LEE MCKAY
LICENSED PROFESSIONAL ENGINEER
ENGINEER
8/10/23
29188
STATE OF MISSISSIPPI

Meridian High School
Baseball/Softball Re-Bid
2320 32nd St, Meridian, MS 39305

Construction Documents

Project No	22034-03
Date	8/10/23
Revisions	Rev Date
Addendum #1	8/10/23

WGK
204 West Leake Street
Clinton, Mississippi 39056
p. 601.925.4444

132 West Cherokee Street
Brookhaven, Mississippi 39601
p. 601.833.9598

C-808
Curb Ramps Detectable Warning Details

STATE	PROJECT NO.
MISS.	

STANDARD INSTALLATION DETAIL

TABLE 1: BEDDING AND BACKFILL REQUIREMENTS

BEDDING AND BACKFILL REQUIREMENTS FOR NON-RIGID PIPE IN CROSS DRAIN AND STORM DRAIN APPLICATIONS

A. BEDDING SHALL BE CLASS B IN ACCORDANCE WITH THE MISSISSIPPI STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, LATEST EDITION.
B. BACKFILL MATERIAL SHALL BE ONE OF THE FOLLOWING:
   1. FLOWABLE FILL IN ACCORDANCE WITH THE MISSISSIPPI STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION LATEST EDITION.
   2. CRUSHED STONE AGGREGATE BACKFILL IN ACCORDANCE WITH THE MISSISSIPPI STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, LATEST EDITION.

IF FLOWABLE FILL IS UTILIZED, CARE SHALL BE TAKEN TO PREVENT "FLOATING" OF THE PIPE.
THE COST OF FURNISHING AND PLACING THE REQUIRED BEDDING AND BACKFILL MATERIAL INDICATED IN A AND B SHALL BE INCLUDED IN THE UNIT COST OF THE NON-RIGID PIPE ALTERNATE, I.E., THERE IS NO SEPARATE PAY ITEM FOR NON-RIGID PIPE BEDDING AND BACKFILL MATERIAL.

BEDDING AND BACKFILL REQUIREMENTS FOR NON-RIGID PIPE IN SIDE DRAIN APPLICATIONS

A. BEDDING SHALL BE CLASS C IN ACCORDANCE WITH THE MISSISSIPPI SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, LATEST EDITION.
B. BACKFILL MATERIAL SHALL BE IN ACCORDANCE WITH THE MISSISSIPPI SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, LATEST EDITION. PIPES THAT SERVE AS A SIDE DRAIN ON DEPARTMENT RIGHT OF WAY, BUT CARRY DRAINAGE UNDER A COUNTY OR LOCAL ROAD SHALL ADHERE TO THE BEDDING AND BACKFILL REQUIREMENTS FOR A CROSS DRAIN CONTAINED ABOVE.

THE COST OF FURNISHING AND PLACING THE REQUIRED BEDDING AND BACKFILL MATERIAL INDICATED IN A AND B SHALL BE INCLUDED IN THE UNIT COST OF THE NON-RIGID ALTERNATE PIPE, I.E., THERE IS NO SEPARATE PAY ITEM FOR NON-RIGID BEDDING AND BACKFILL MATERIAL.

TABLE 2:
HIGH DENSITY CORRIGATED POLYETHYLENE PIPE
HEIGHT OF COVER

NOMINAL DIAMETER IN.	MINIMUM COVER IN.	MAXIMUM COVER - FT.	
		CROSS DRAIN	SIDE DRAIN
12	12	38	11
15	12	36	12
18	12	35	11
24	12	30	10
30	12	25	9
36	21	29	10
42	21	27	9
48	21	25	8

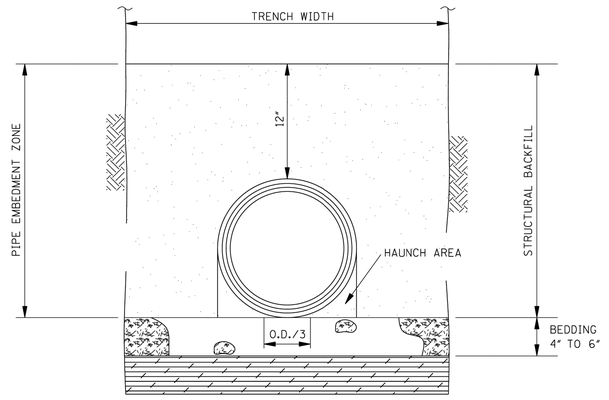
TABLE 3: RECOMMENDED TRENCH WIDTH

DIAMETER IN.	O.D. IN.	TRENCH WIDTH IN.
12	14.45	34
15	17.57	38
18	21.20	44
24	27.80	54
30	35.10	65
36	41.70	75
42	47.70	84
48	53.60	92

THE TRENCH WIDTH MUST BE WIDE ENOUGH TO ACCOMODATE COMPATION EQUIPMENT

TABLE 4: MULTIPLE INSTALLATION OF POLYETHYLENE PIPES

DIAMETER OF PIPE IN.	CLEAR DISTANCE BETWEEN PIPES FT.-IN.
18	1'-2"
24	1'-5"
30	1'-8"
36	1'-11"
42	2'-2"
48	2'-5"



TRENCH CROSS SECTION SHOWING TERMINOLOGY

GENERAL NOTES:

1. MATERIALS
   THERMOPLASTIC PIPE
   POLYETHYLENE PIPE SHALL CONFORM TO THE REQUIREMENTS OF AASHTO M 294, LATEST EDITION.
   DESIGNATION OF TYPE: TYPE S: THIS PIPE WILL HAVE A FULL CIRCULAR CROSS SECTION WITH AN OUTER CORRUGATED PIPE WALL AND A SMOOTH INNER LINER.
   BEDDING MATERIAL AND STRUCTURAL BACKFILL
   BEDDING MATERIAL AND STRUCTURAL BACKFILL SHALL MEET THE REQUIREMENTS OF TABLE 1.
2. JOINTS
   JOINTS FOR THERMOPLASTIC PIPE SHALL MEET THE PERFORMANCE REQUIREMENTS OF SOILTIGHTNESS UNLESS WATERTIGHTNESS IS SPECIFIED.
   SUITABLE JOINTS CAN BE OBTAINED WITH THE FOLLOWING TYPES OF CONNECTIONS:
   A) CORRUGATED BANDS (WITH OR WITHOUT GASKETS)
   B) BELL AND SPIGOT PIPE ENDS (WITH OF WITHOUT GASKETS)
   C) DOUBLE BELL COUPLINGS (WITH OR WITHOUT GASKETS)
3. INSTALLATION
   MINIMUM TRENCH WIDTHS SHALL MEET THE REQUIREMENTS OF TABLE 3.
   THE MIDDLE THIRD OF THE BEDDING MATERIAL UNDER THE PIPE SHOULD BE LOOSELY PLACED, WHILE THE REMAINDER SHALL BE COMPACTED TO A MINIMUM 90% OF MAXIMUM DENSITY PER AASHTO T 99.
   A MINIMUM OF 4 INCHES OF BEDDING SHALL BE PROVIDED PRIOR TO PLACEMENT OF THE PIPE.
   STRUCTURAL BACKFILL SHALL BE PLACED AND COMPACTED IN LAYERS NOT EXCEEDING AN 8" LOOSE LIFT THICKNESS AND BROUGHT UP EVENLY ON BOTH SIDES OF THE PIPE WITH AN ELEVATION NOT LESS THAN 12 INCHES ABOVE THE TOP OF THE PIPE. A MINIMUM COMPACTION LEVEL OF 90% STANDARD DENSITY PER AASHTO T 99 SHALL BE ACHIEVED.
   MINIMUM COVER REQUIREMENTS SHALL MEET THE REQUIREMENTS OF TABLE 2.
   FOR MULTIPLE INSTALLATIONS OF POLYETHYLENE PIPES, A CLEAR DISTANCE BETWEEN THE PIPES SHALL MEET THE REQUIREMENTS OF TABLE 4.
4. CALCULATIONS FOR FILL DEPTHS ARE BASED ON PROPERTIES DEFINED IN AASHTO M294 AND CALCULATIONS IN AASHTO SEC. 19.

REVISION	BY	DATE

MISSISSIPPI DEPARTMENT OF TRANSPORTATION
ROADWAY DESIGN DIVISION
STANDARD PLAN

FLEXIBLE PIPE CULVERT INSTALLATION

MDOT

WORKING NUMBER PI-2

SHEET NUMBER 6502

ISSUE DATE: AUGUST 01, 2017

DALE BAILEY
AN ASSOCIATION

Architects

One Jackson Place 250
188 East Capitol Street
Jackson, MS 39201
p 601.352.5411

201 Park Court Suite B
Ridgeland, MS 39157
p 601.790.9432

161 Lameuse St. Suite 201
Biloxi, MS 39530
p 228.374.1409

dalebaileyplans.com

BRANDON LEE MCKAY
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ENGINEER
8/10/23
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STATE OF MISSISSIPPI

Meridian High School
Baseball/Softball Re-Bid
2320 32nd St, Meridian, MS 39305

Construction Documents

Project No	22034-03
Date	8/10/23
Revisions	Rev Date
Addendum #1	8/10/23

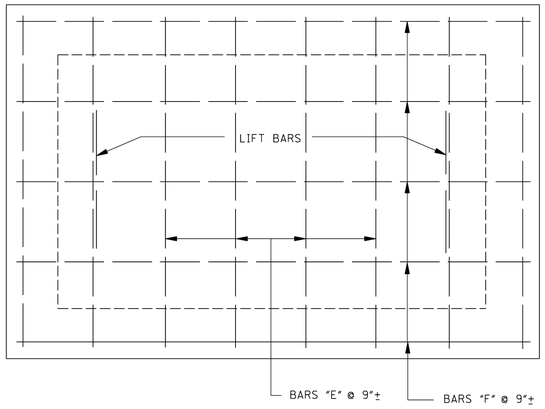
C-809

Flexible Pipe Culvert Installation

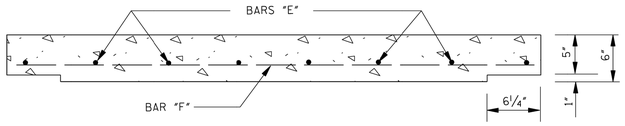
WGK
204 West Leake Street
Clinton, Mississippi 39056
p. 601.925.4444

132 West Cherokee Street
Brookhaven, Mississippi 39601
p. 601.833.9598

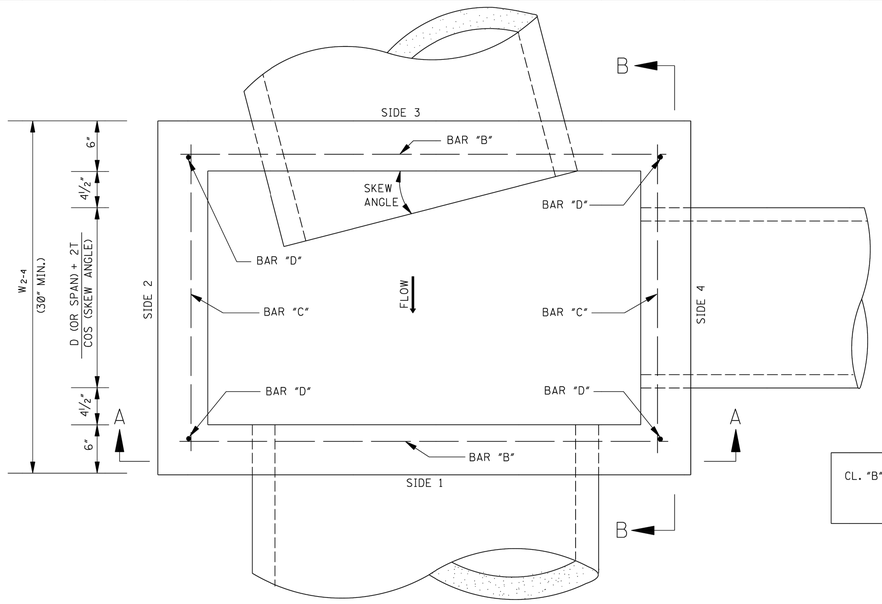
STATE	PROJECT NO.
MISS.	



PLAN OF COVER



ELEVATION OF COVER

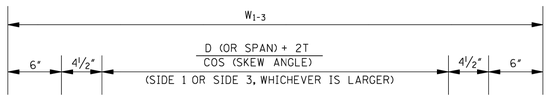


PLAN

REINFORCING BAR LIST			
BAR	SIZE	NUMBER REQUIRED	LENGTH
A	#4	2 PER PIPE OPENING	$\sqrt{196" + \left(\frac{W^*}{2} + 2"\right)^2}$
B	#4	2	W_{1-3} - 6"
C	#4	2	W_{2-4} - 6"
D	#4	4	H - 6"
E	#4	$2\left[\left(\frac{W_{1-3}}{9"}\right)^{**} + 1\right]$	W_{2-4} - 4"
F	#4	$2\left[\left(\frac{W_{2-4}}{9"}\right)^{**} + 1\right]$	W_{1-3} - 4"

NOTE: VARIABLES AND DESIGNATIONS ARE AS FOLLOWS:
D (OR SPAN) = PIPE DIAMETER (OR SPAN)
W_{1-3} = WIDTH OF SIDE 1 & SIDE 3
W_{2-4} = WIDTH OF SIDE 2 & SIDE 4
W* = W_{1-3} OR W_{2-4} (SIDE OF ENTERING PIPE)
** = ROUND TO NEAREST WHOLE NUMBER

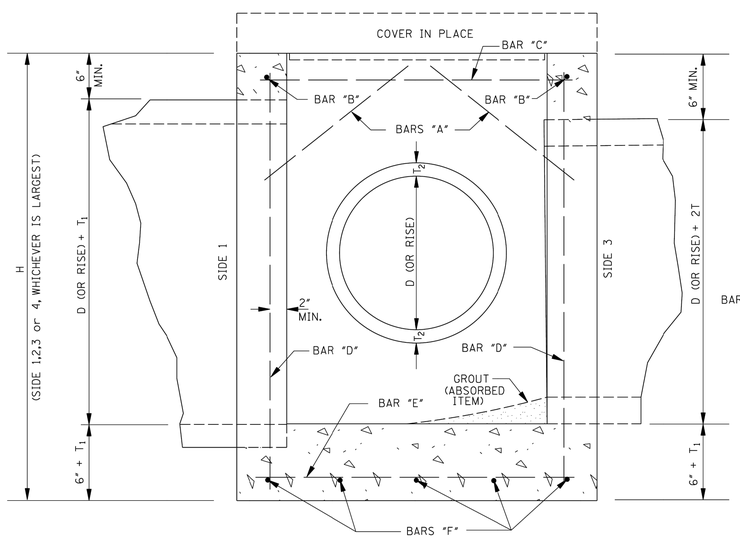
CL. "B" CONC. (yd^3) = [(Q1 + Q2) / 46,656] - ∑ PIPE OPENING DEDUCTIONS
WHERE: Q1 = [5"W_{1-3} W_{2-4}] + [1"(W_{1-3} - 12.5")(W_{2-4} - 12.5")] + [(T_1 + 6")W_{1-3} W_{2-4}]
Q2 = 12"[H - (T_1 + 6")][(W_{1-3} - 12") + W_{2-4}]



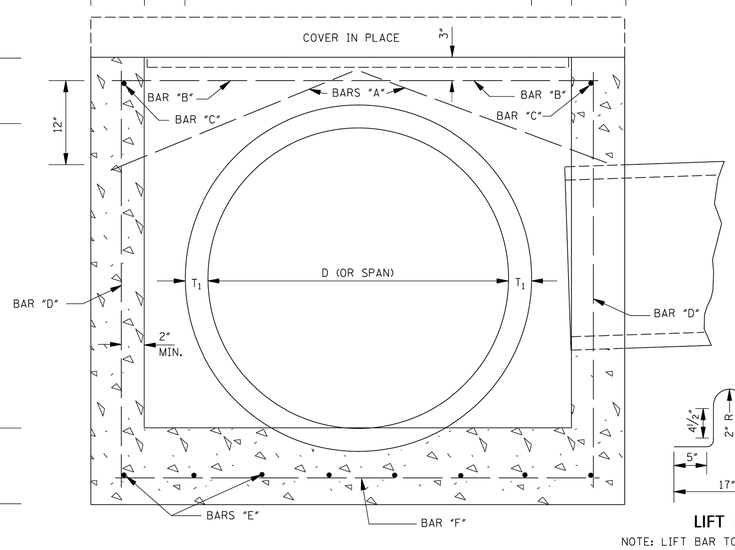
COMMON PIPE SIZE					
CIRCULAR PIPE			ARCH PIPE		
PIPE SIZE	T	PIPE OPENING DEDUCTION (yd^3)	PIPE SIZE	T	PIPE OPENING DEDUCTION (yd^3)
18"	2½"	0.053	22" x 13"	2½"	0.053
24"	3"	0.091	29" x 18"	3"	0.087
30"	3½"	0.138	36" x 23"	3½"	0.129
36"	4"	0.196	44" x 27"	4"	0.185
42"	4½"	0.263	51" x 31"	4½"	0.245
48"	5"	0.340	58" x 36"	5"	0.318
54"	5½"	0.427	65" x 40"	5½"	0.394
60"	6"	0.524	73" x 45"	6"	0.489
66"	6½"	0.630			
72"	7"	0.747			

GENERAL NOTES:

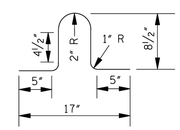
1. REINFORCING STEEL QUANTITIES TO BE COMPUTED FROM BAR LIST AND SHOWN ELSEWHERE ON THE PLANS.
2. QUANTITIES FOR JUNCTION BOXES SHOWN ON THE PLANS WILL BE THE BASIS FOR PAYMENT UNLESS AUTHORIZED MODIFICATIONS ARE MADE.
3. CONCRETE SHALL BE CLASS "B" AND REINFORCING STEEL SHALL BE DEFORMED BARS.
4. SIDE 1 OF THE JUNCTION BOX WILL ALWAYS BE THE OUTFLOW SIDE.
5. IF PIPES ARE SKEWED MORE THAN 15° OR IF SKEWED PIPES PRODUCE CONFLICTS WITH ANOTHER OPENING, THE PIPE SHALL BE BROKEN BACK TO THE WALL OF THE JUNCTION BOX.



SECTION B–B



SECTION A–A



LIFT BAR

NOTE: LIFT BAR TO BE FABRICATED FROM A #4 BAR 30" LONG. TWO LIFT BARS ARE REQUIRED. REINFORCING STEEL FOR 2 LIFT BARS = 3.3 lbs.

REVISION	BY	DATE

MISSISSIPPI DEPARTMENT OF TRANSPORTATION
ROADWAY DESIGN DIVISION
STANDARD PLAN

JUNCTION BOX FOR PIPE CULVERTS

MDOT

WORKING NUMBER JB-1

ISSUE DATE: AUGUST 01, 2017

SHEET NUMBER 6504

DALE BAILEY
AN ASSOCIATION

Architects

One Jackson Place 250
188 East Capitol Street
Jackson, MS 39201
p 601.352.5411

201 Park Court Suite B
Ridgeland, MS 39157
p 601.790.9432

161 Lameuse St. Suite 201
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dalebaileyplans.com

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C-810

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p. 601.925.4444

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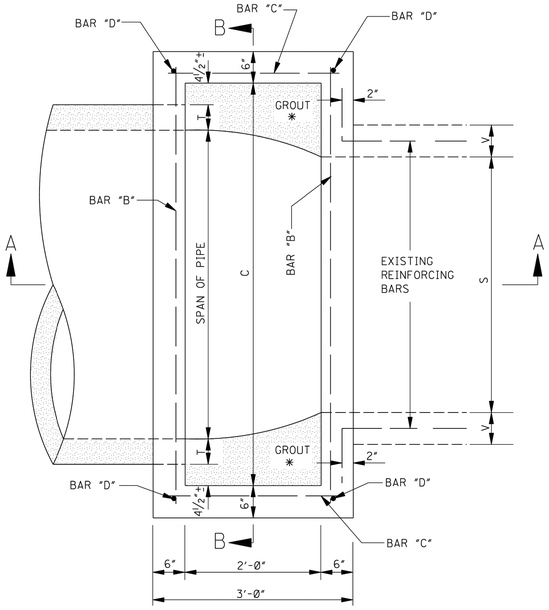
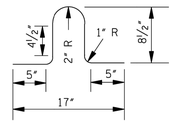
STATE	PROJECT NO.
MISS.	



PLAN



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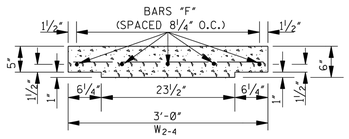
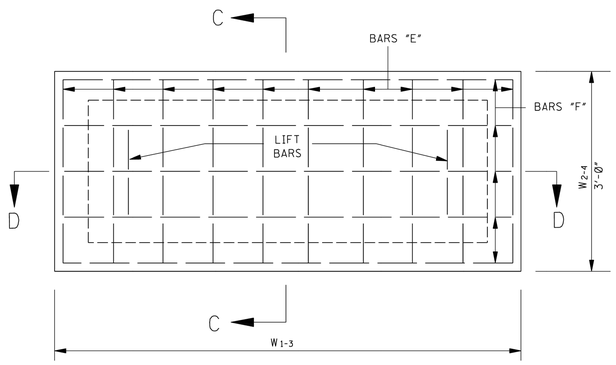
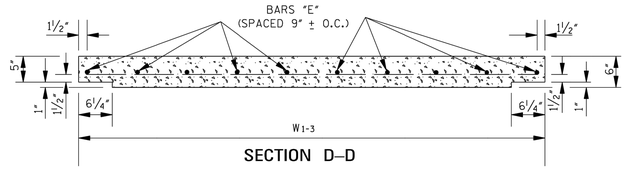


SECTION C–C



PLAN OF COVER



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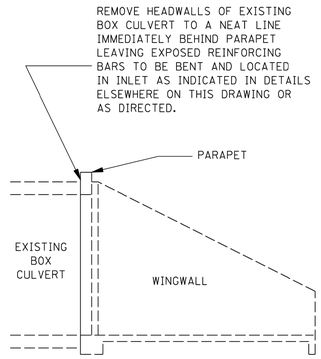
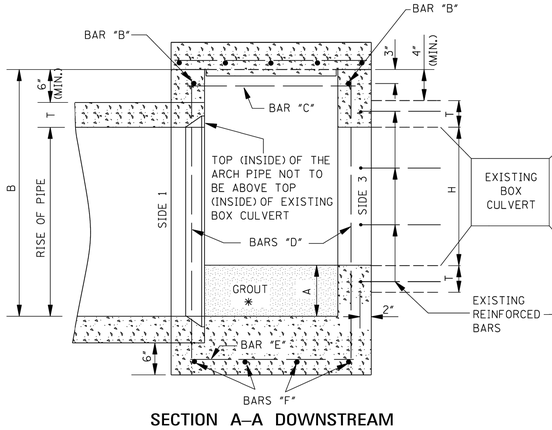
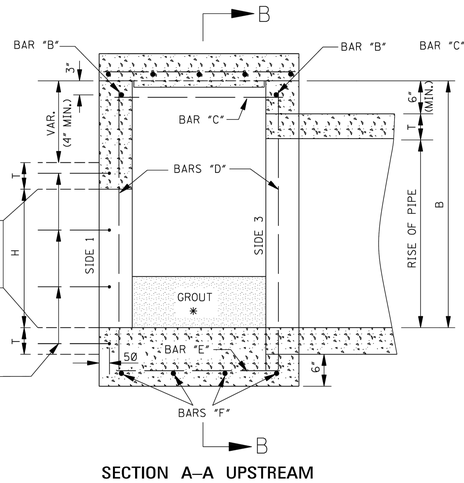


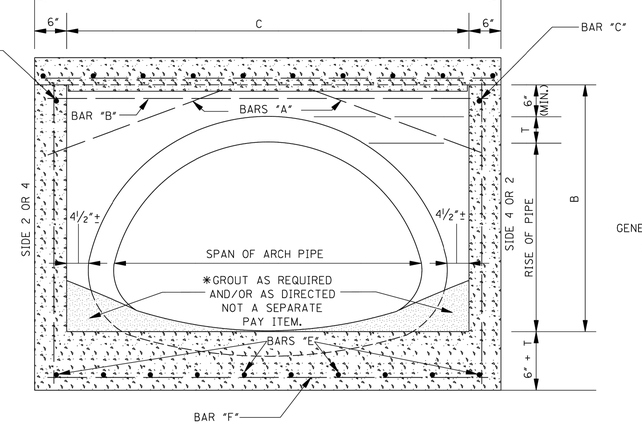
HEADWALL REMOVAL DETAILS



SECTION A–A DOWNSTREAM



SECTION A–A UPSTREAM



SECTION B–B

GENERAL NOTES:

1. THE QUANTITIES SHOWN WILL BE USED AS THE BASIS FOR PAYMENT UNLESS THIS DRAWING IS MODIFIED.
2. CONCRETE SHALL BE CLASS "B" AND REINFORCING STEEL SHALL BE SIZE #4 DEFORMED BARS.
3. SIDE 1 OF THE JUNCTION BOX WILL ALWAYS BE THE OUTFLOW SIDE.
4. ESTIMATE AN ADDITIONAL 3.3 lbs. FOR 2 LIFT BARS.
5. CONCRETE QUANTITIES SHOWN HAVE BEEN ADJUSTED FOR BOX & PIPE OPENING DEDUCTIONS.

DIMENSIONS OF EXISTING BOX CULVERT				DIMENSIONS OF JUNCTION BOX REQUIRED			DIMENSIONS OF PRECAST COVER		DIMENSIONS OF ARCH PIPE REQUIRED				CLASS "B" STRUCTURAL CONCRETE (yd^3)	REINFORCING STEEL (lbs)	BAR LIST					
S	H	T	V	A	B	C	W_{1-3}	W_{2-4}	S	R	L	T			"A"	"B"	"C"	"D"	"E"	"F"
2'	2'	6"	6"	0"	32½"	52"	5'-4"	3'	36"	23"	6'	3½"	1.532	78	2 @ 3'-1"	2 @ 4'-10"	2 @ 2'-6"	4 @ 3'-3"	16 @ 2'-6"	9 @ 4'-10"
3'	2'	6½"	6"	3"	37"	61"	6'-1"	3'	44"	27"	8'	4"	1.764	89	2 @ 3'-5"	2 @ 5'-7"	2 @ 2'-6"	4 @ 3'-8"	18 @ 2'-6"	9 @ 5'-7"
4'	2'	7"	6"	7"	41½"	69"	6'-9"	3'	51"	31"	8'	4½"	1.996	99	2 @ 3'-9"	2 @ 6'-3"	2 @ 2'-6"	4 @ 4'-1"	20 @ 2'-6"	9 @ 6'-3"
5'	2'	7½"	6"	12"	47"	77"	7'-5"	3'	58"	36"	8'	5"	2.258	105	2 @ 4'-1"	2 @ 6'-11"	2 @ 2'-6"	4 @ 4'-7"	20 @ 2'-6"	9 @ 6'-11"
3'	3'	6½"	6"	0"	45½"	69"	6'-9"	3'	51"	31"	8'	4½"	1.995	99	2 @ 3'-9"	2 @ 6'-3"	2 @ 2'-6"	4 @ 4'-5"	20 @ 2'-6"	9 @ 6'-3"
4'	3'	7"	6"	0"	47"	77"	7'-5"	3'	58"	36"	8'	5"	2.238	105	2 @ 4'-1"	2 @ 6'-11"	2 @ 2'-6"	4 @ 4'-7"	20 @ 2'-6"	9 @ 6'-11"
5'	3'	7½"	6½"	4"	51½"	85"	8'-1"	3'	65"	40"	8'	5½"	2.469	115	2 @ 4'-4"	2 @ 7'-7"	2 @ 2'-6"	4 @ 5'-0"	22 @ 2'-6"	9 @ 7'-7"
6'	3'	8"	6½"	9"	57"	94"	8'-10"	3'	73"	45"	8'	6"	2.767	126	2 @ 4'-9"	2 @ 8'-4"	2 @ 2'-6"	4 @ 5'-6"	24 @ 2'-6"	9 @ 8'-4"

BY	REVISION	DATE

MISSISSIPPI DEPARTMENT OF TRANSPORTATION
ROADWAY DESIGN DIVISION
STANDARD PLAN

JUNCTION BOX FOR BOX CULVERT TO CONCRETE ARCH PIPE

ISSUE DATE: AUGUST 01, 2017

WORKING NUMBER JB-1A

SHEET NUMBER 6505

DALE BAILEY
AN ASSOCIATION

Architects

One Jackson Place 250
188 East Capitol Street
Jackson, MS 39201
p 601.352.5411

201 Park Court Suite B
Ridgeland, MS 39157
p 601.790.9432

161 Lameuse St. Suite 201
Biloxi, MS 39530
p 228.374.1409

dalebaileyplans.com

BRANDON LEE MCKAY
LICENSED PROFESSIONAL ENGINEER
8/10/23
29188
STATE OF MISSISSIPPI

Meridian High School
Baseball/Softball Re-Bid
2320 32nd St, Meridian, MS 39305

Construction Documents

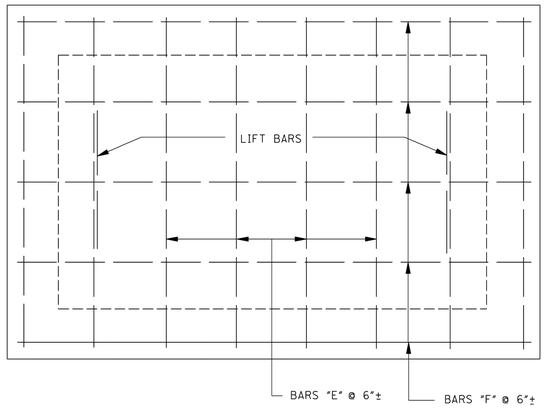
Project No	22034-03
Date	8/10/23
Revisions	Rev Date
Addendum #1	8/10/23

WGK
204 West Leake Street
Clinton, Mississippi 39056
p. 601.925.4444

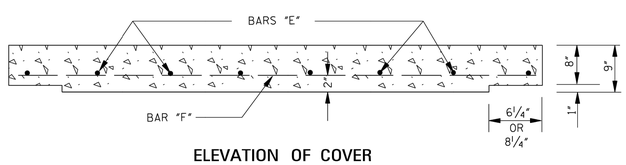
132 West Cherokee Street
Brookhaven, Mississippi 39601
p. 601.833.9598

C-811
Juunction Box for Box Culvert To Concrete Arch Pipe

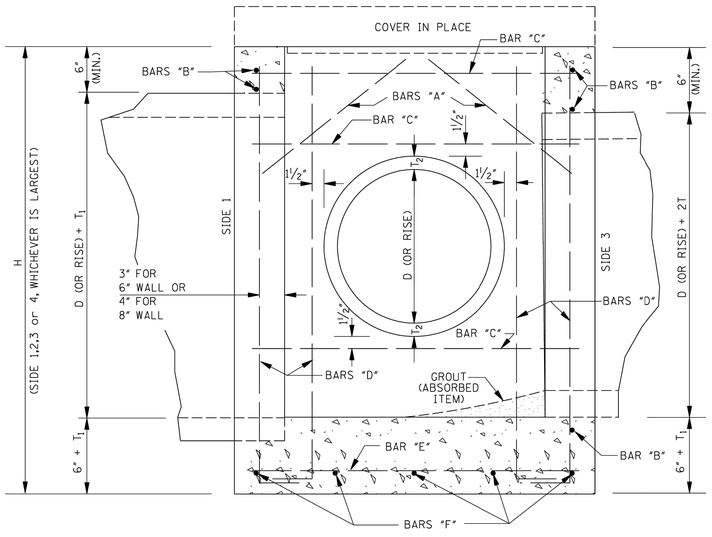
STATE	PROJECT NO.
MISS.	



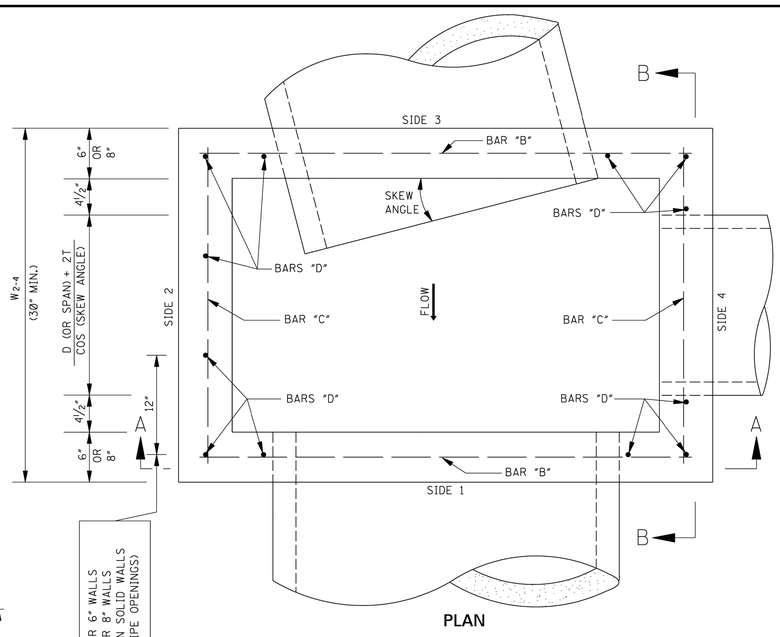
PLAN OF COVER



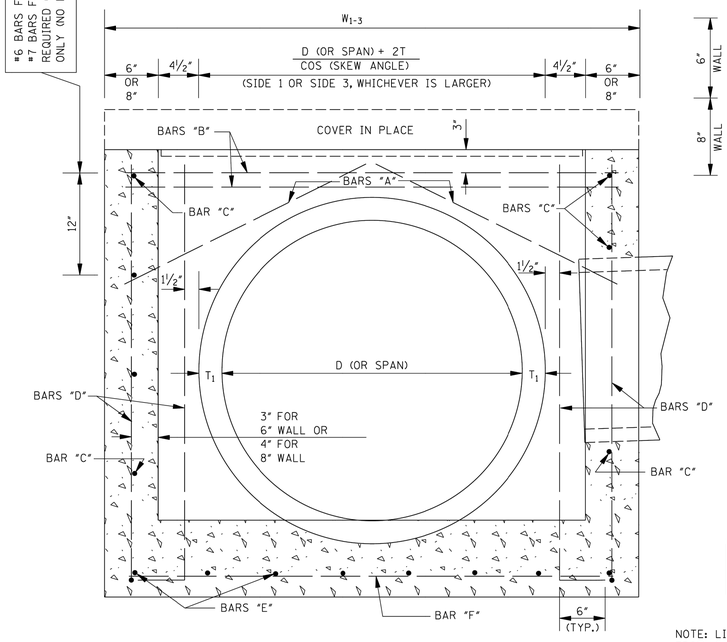
ELEVATION OF COVER



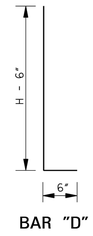
SECTION B–B



PLAN



SECTION A–A



BAR "D"

REINFORCING BAR LIST

BAR	SIZE	NUMBER REQUIRED	LENGTH
"A"	#4	2 PER PIPE OPENING	$\sqrt{196" + \left(\frac{W^*}{2} + 2"\right)^2}$
"B"	#6 FOR 6" WALL #7 FOR 8" WALL	2 + [2 PER OPENING SIDE 3] + [1 PER SIDE 1] + [12" O.C. FOR SOLID WALL]	W_{1-3} - 4"
"C"		2 + [2 PER OPENING] + [12" O.C. FOR SOLID WALL]	W_{2-4} - 4"
"D"		4 + [2 PER OPENING] + [12" O.C. FOR SOLID WALL]	H
"E"	#6	$2\left[\left(\frac{W_{1-3}}{6"}\right)^{**} + 1\right]$	W_{2-4} - 4"
"F"	#6	$2\left[\left(\frac{W_{2-4}}{6"}\right)^{**} + 1\right]$	W_{1-3} - 4"

NOTE: VARIABLES AND DESIGNATIONS ARE AS FOLLOWS:
D (OR SPAN) = PIPE DIAMETER (OR SPAN)
W_{1-3} = WIDTH OF SIDE 1 & SIDE 3
W_{2-4} = WIDTH OF SIDE 2 & SIDE 4
W* = W_{1-3} OR W_{2-4} (SIDE OF ENTERING PIPE)
** = ROUND TO NEAREST WHOLE NUMBER

CL. "B" CONC. (yd^3) = [(Q1 + Q2) / 46,656] - $\sum$ PIPE OPENING DEDUCTIONS
WHERE: 6" WALL
Q1 = [8"$W_{1-3}W_{2-4}$] + [1"(W_{1-3} - 12.5")(W_{2-4} - 12.5")] + [(T_1 + 6")$W_{1-3}W_{2-4}$]
Q2 = 12"[H - (T_1 + 6")][(W_{1-3} - 12") + W_{2-4}]
OR: 8" WALL
Q1 = [8"$W_{1-3}W_{2-4}$] + [1"(W_{1-3} - 16.5")(W_{2-4} - 16.5")] + [(T_1 + 6")$W_{1-3}W_{2-4}$]
Q2 = 16"[H - (T_1 + 6")][(W_{1-3} - 16") + W_{2-4}]

COMMON PIPE SIZE

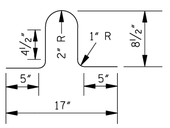
CIRCULAR PIPE				ARCH PIPE			
PIPE SIZE	T	PIPE OPENING DEDUCTION (yd^3)		PIPE SIZE	T	PIPE OPENING DEDUCTION (yd^3)	
		6" WALL	†8" WALL			6" WALL	†8" WALL
18"	2½"	0.053	0.071	22" X 13"	2½"	0.053	0.071
24"	3"	0.091	0.121	29" X 18"	3"	0.087	0.116
30"	3½"	0.138	0.184	36" X 23"	3½"	0.129	0.172
36"	4"	0.196	0.261	44" X 27"	4"	0.185	0.247
42"	4½"	0.263	0.350	51" X 31"	4½"	-	0.327
48"	5"	-	0.453	58" X 36"	5"	-	0.424
54"	5½"	-	0.569	65" X 40"	5½"	-	0.525
60"	6"	-	0.699	73" X 45"	6"	-	0.652
66"	6½"	-	0.840				
72"	7"	-	0.996				

6" WALL
8" WALL
6" WALL
8" WALL

† NOTE: IF ANY PIPE REQUIRING A 8" WALL IS USED, ALL WALLS SHALL BE 8" REGARDLESS OF PIPE SIZE.

GENERAL NOTES:

1. REINFORCING STEEL QUANTITIES TO BE COMPUTED FROM BAR LIST AND SHOWN ELSEWHERE ON THE PLANS.
2. QUANTITIES FOR JUNCTION BOXES SHOWN ON THE PLANS WILL BE THE BASIS FOR PAYMENT UNLESS AUTHORIZED MODIFICATIONS ARE MADE.
3. CONCRETE SHALL BE CLASS "B" AND REINFORCING STEEL SHALL BE DEFORMED BARS, ASTM A 615, GRADE 60 OR AASHTO M 31, GRADE 60.
4. SIDE 1 OF THE JUNCTION BOX WILL ALWAYS BE THE OUTFLOW SIDE.
5. IF PIPES ARE SKEWED MORE THAN 15° OR IF SKEWED PIPES PRODUCE CONFLICTS WITH ANOTHER OPENING, THE PIPE SHALL BE BROKEN BACK TO THE WALL OF THE JUNCTION BOX.



LIFT BAR

NOTE: LIFT BAR TO BE FABRICATED FROM A #4 BAR 30" LONG. TWO LIFT BARS ARE REQUIRED. REINFORCING STEEL FOR 2 LIFT BARS = 3.3 lbs.

BY	REVISION	DATE

MISSISSIPPI DEPARTMENT OF TRANSPORTATION
ROADWAY DESIGN DIVISION
STANDARD PLAN

JUNCTION BOX TYPE 2 FOR TRAFFIC LOAD
(MAXIMUM "W" = 9'-3")

MDOT
WORKING NUMBER JB-2

ISSUE DATE: AUGUST 01, 2017

SHEET NUMBER 6506

DALE BAILEY
AN ASSOCIATION

Architects

One Jackson Place 250
188 East Capitol Street
Jackson, MS 39201
p 601.352.5411

201 Park Court Suite B
Ridgeland, MS 39157
p 601.790.9432

161 Lameuse St. Suite 201
Biloxi, MS 39530
p 228.374.1409

dalebaileyplans.com

BRANDON LEE MCKAY
LICENSED PROFESSIONAL ENGINEER
8/10/23
29188
STATE OF MISSISSIPPI

Meridian High School
Baseball/Softball Re-Bid
2320 32nd St, Meridian, MS 39305

Construction Documents

Project No	22034-03
Date	8/10/23
Revisions	Rev Date
Addendum #1	8/10/23

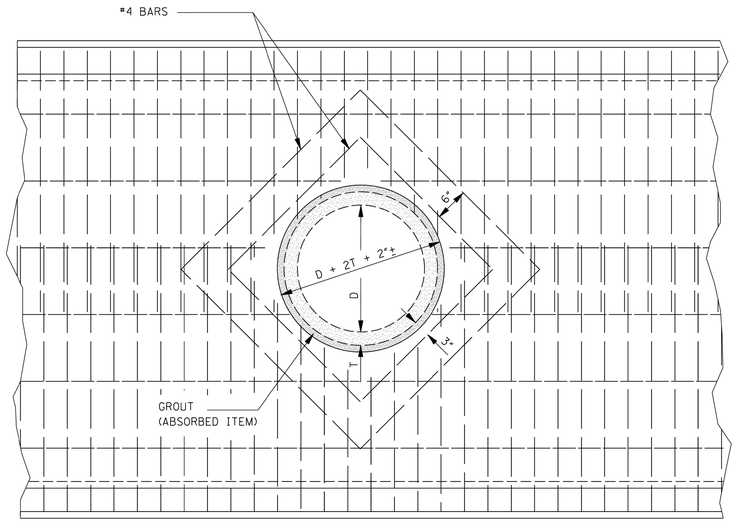
C-812

Junction Box TYpe 2 for Traffic Load

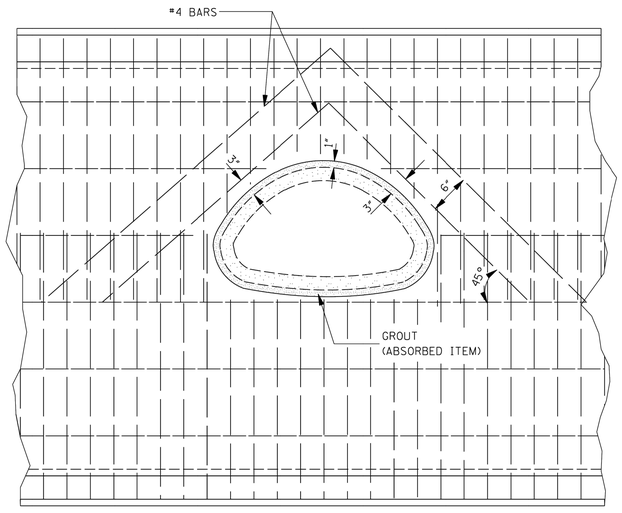
WGK
204 West Leake Street
Clinton, Mississippi 39056
p. 601.925.4444

132 West Cherokee Street
Brookhaven, Mississippi 39601
p. 601.833.9598

STATE	PROJECT NO.
MISS.	



ELEVATION SHOWING CIRCULAR PIPE
STUBBED INTO BOX CULVERT BARREL OR WING–WALL



ELEVATION SHOWING ARCH PIPE STUBBED
INTO BOX CULVERT BARREL OR WING–WALL

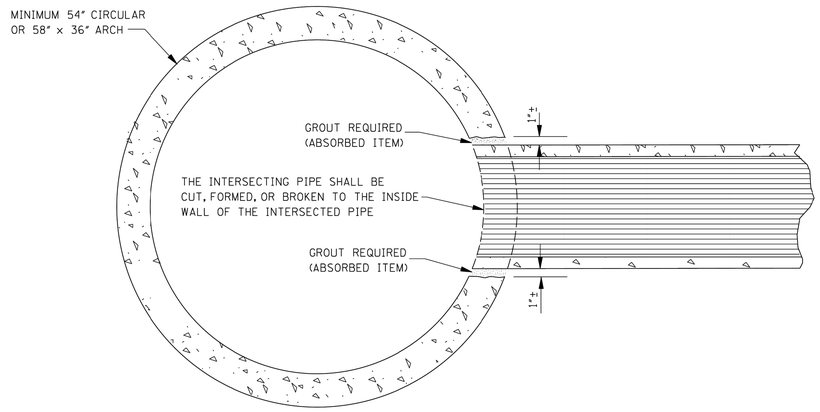
BAR LIST		
PIPE SIZE	#4 BARS	
	NO.	LGTH.
18"	4	2'-6"
	4	3'-6"
24"	4	3'-1"
	4	4'-1"
30"	4	3'-8½"
	4	4'-8½"
22" X 13"	2	3'-10"
	2	4'-9"
	1	5'-4"
29" X 18"	2	4'-6"
	2	5'-5"
	1	6'-3"

NOTES:

1. A 24" DIAMETER PIPE IS THE MAXIMUM SIZE THAT MAY BE STUBBED INTO A 54" DIAMETER PIPE.
2. A 60" DIAMETER PIPE IS THE MINIMUM SIZE THAT A 30" DIAMETER PIPE MAY BE STUBBED INTO.

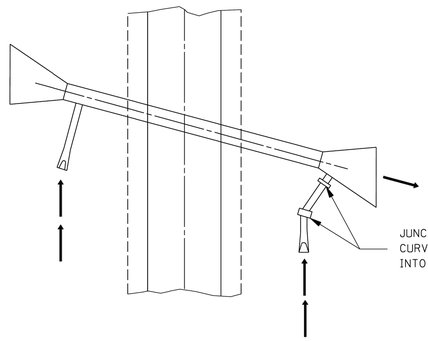
GENERAL NOTES:

1. PAYMENT FOR WORK AND MATERIALS FOR STUBBING A PIPE CULVERT INTO A BOX CULVERT OR CONCRETE PIPE SHALL BE PAID FOR AS A BRANCH CONNECTION OF THE APPROPRIATE SIZE, TYPE AND DESCRIPTION.
2. THE TABLE ON THIS SHEET INDICATES THE NUMBER AND LENGTHS OF ADDITIONAL REINFORCING STEEL BARS REQUIRED FOR BOX CULVERTS CONSTRUCTED. FOR A DOUBLE ROW OF REINFORCEMENT, DOUBLE THE NUMBER OF BARS SHOWN. THE ADDITIONAL REINFORCING STEEL SHALL BE INCLUDED IN THE COST FOR THIS TYPE OF BRANCH CONNECTION. THE QUANTITIES SHOWN IN THE TABLE ARE FOR THE MOST COMMON SIZES OF PIPE.
3. THE REINFORCEMENT OF THE INTERSECTED BOX OR PIPE SHALL BE CUT AS NECESSARY TO ACCOMMODATE THE STUBBED PIPE.
4. THE CONTRACTOR MAY INSERT THE INTERSECTING PIPE INTO THE FORM AT THE PROPER LOCATION IN LIEU OF FORMING BY BLOCKING OUT.



ELEVATION SHOWING PIPE CULVERT
STUBBED INTO CONCRETE PIPE CULVERT

NOTE: TYPICAL INSTALLATION FOR MEDIAN STUB TO CROSSING DRAIN WITH MINIMUM COVER.



TYPICAL PLAN OF BRANCH CONNECTION
TO BOX CULVERT WING–WALL

REVISION	BY	DATE

MISSISSIPPI DEPARTMENT OF TRANSPORTATION
ROADWAY DESIGN DIVISION
STANDARD PLAN

BRANCH CONNECTIONS

MDOT

WORKING NUMBER
BC-1

ISSUE DATE: AUGUST 01, 2017

SHEET NUMBER
6507

DALE BAILEY
AN ASSOCIATION

Architects

One Jackson Place 250
188 East Capitol Street
Jackson, MS 39201
p 601.352.5411

201 Park Court Suite B
Ridgeland, MS 39157
p 601.790.9432

161 Lameuse St. Suite 201
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dalebaileyplans.com

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ENGINEER
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p. 601.925.4444

132 West Cherokee Street
Brookhaven, Mississippi 39601
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