ARKANSAS DEPARTMENT OF TRANSPORTATION
CONSTRUCTION PLANS FOR STATE HIGHWAY

LOCUST CREEK STR. & APPRS. (S)

MARION COUNTY
HWY. 268 SECTION 0

JOB 090551
FED. AID PROJ. STPB-0045(32)

NOT TO SCALE

BEGIN JOB 090551
LOG MILE 0.15

STA. 101+77.23

STA. 118+72.65

END JOB 090551

BEGINNING OF PROJECT
LAT. = N 36°12'44" 21" LONG. = W 92°52'51"

MID-POINT OF PROJECT
LAT. = N 36°12'44" 23" LONG. = W 92°52'41"

END OF PROJECT
LAT. = N 36°12'44" 24" LONG. = W 92°52'31"

LENGTH OF PROJECT - CALCULATED ALONG C.L.
GROSS LENGTH OF PROJECT 800.00 FEET OR 0.15 MILES
NET = ROADWAY 800.00
NET = BRIDGES 108.00
NET = PROJECT 908.00

P.E. 090551

DESIGN TRAFFIC DATA

STATION  | YEAR  | ADT (Vehicles) | DIRECTIONAL DISTRIBUTION | DESIGN SPEED (MPH)
---------|-------|----------------|--------------------------|------------------
101+77.23| 2040  | 2040           | 60%                      | 55               
118+72.65| 2040  | 1,200          | 2                        | 55               

NOT TO SCALE
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### BRIDGE STANDARD DRAWINGS

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GENERAL NOTES
1. GRADE LINE NOTES FINISHED GRADE WHERE SHOWN ON PLANS.
2. ALL PIPE LINES, POWER, TELEPHONE, AND TELEGRAPH LINES TO BE MOVED OR COVERED BY THE RESPECTIVE OWNERS AS PART AGREEMENT WITH SUCH OWNERS.
3. ANY EQUIPMENT OR APPURTENANCE THAT INTERFERES WITH THE PROPOSED CONSTRUCTION AND WHICH MAY BE THE PROPERTY OF UTILITY SERVICE ORGANIZATIONS SHALL BE MOVED BY THE OWNERS UNLESS OTHERWISE PROVIDED.
4. ALL LAND MONUMENTS LOCATED WITHIN THE CONSTRUCTION AREA SHALL BE PROTECTED IN ACCORDANCE WITH SECTION 107.12 OF THE STANDARD SPECIFICATIONS.
5. ALL TREES THAT DO NOT DIRECTLY INTERFERE WITH THE PROPOSED CONSTRUCTION SHALL BE SHARPE AS DIRECTED BY THE ENGINEER. CARE AND DECISION SHALL BE USED TO ENSURE THAT ALL TREES NOT TO BE REMOVED SHALL BE HANDLED AS LITTLE AS POSSIBLE DURING THE CONSTRUCTION OPERATIONS.
6. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING A FENCE TO CONTROL LIVESTOCK IN AREAS WHERE PASTURES ARE SEVERED. WHERE FENCE MAY BE CONSTRUCTED FULLY OR IN BEU THRO. THE CONTRACTOR AT HIS OWN EXPENSE MAY ELECT TO PROVIDE TEMPORARY FENCING SUITABLE TO CONTAIN LIVESTOCK.
7. THE SEQUENCE AS SHOWN ON THE MAINTENANCE OF TRAFFIC PLANS IS A GENERAL OUTLINE FOR THE CONSTRUCTION OF THE PROJECT, AND IN NO WAY IT IS INTENDED TO COVER EVERY ITEM IN THE PROJECT. ITEMS NOT CRITICAL TO THE CONSTRUCTION SEQUENCE MAY BE CONSTRUCTED IN ANY STAGE AS APPROVED BY THE RESIDENT ENGINEER.
8. ALL FLEXIBLE BASE AND ASPHALT PAVEMENTS REMOVED SHALL BE PAID FOR UNDER THE ITEM NO 215 - UNCLASSIFIED EXCAVATION.
9. THE EXISTING ASPHALT PAVEMENT TO BE REMOVED FROM THE REMAINING PAVEMENT SHALL BE SEPARATED BY SAYING ALONG A NEAR LINE. AFTER SAYING THE PAVEMENT TO BE REMOVED SHALL BE CAREFULLY REMOVED IN A MANNER THAT WILL NOT DAMAGE THE PAVEMENT THAT IS TO REMAIN. ANY DAMAGE OF THE ASPHALT PAVEMENT THAT IS TO REMAIN IN PLACE SHALL NOT BE REPAIRED AT THE CONTRACTOR'S EXPENSE.
TYPICAL SECTION OF IMPROVEMENT

Hwy. 268

STA. 105+70.00 TO STA. 109+06.97
STA. 110+96.03 TO STA. 113+00.00

NOTE ON ALL SUPERELEVATED CURVES AND THROUGH SUPERELEVATION TRANSITIONS THE ALTERNATIVE DIFFERENCE BETWEEN PAYMENT SLOPE AND SHOULDER SLOPE SHALL NOT EXCEED 0.0067.

SUPERELEVATED TYPICAL SECTION OF IMPROVEMENT
Hwy. 268

TYPICAL SECTION NOTES:

1. REFER TO CROSS SECTIONS FOR DEVATIONS FROM THE NORMAL SLOPES, NO CHANGES SHALL BE MADE FROM THE PLANNED SLOPES WITHOUT THE APPROVAL OF THE ENGINEER.

2. THE FINAL 2" OF SURFACE COURSE IS TO BE PLACED AFTER ALL OTHER COURSES HAVE BEEN LAYED. LONITORIAL JOINTS SHALL BE AT ALINE LINES.

3. THE THICKNESS OF AGGREGATE BASE COURSE SHALL BE AT OR MORE THAN ONE INCH OF THE PLANT THICKNESS. WHEN THE CONTRACTOR WILL CONSIDER ANY DIFFERENT THICKNESS THAT DOES NOT MEET TOLERANCE INDICATED PAYMENT WILL NOT BE MADE FOR MATERIAL PLACED IN EXCESS OF THE TOLERANCE INDICATED.

4. WITH THE APPROVAL OF THE ENGINEER, THE CONTRACTOR WILL BE ALLOWED TO SUBSTITUTE AT NO ADDITIONAL COST TO THE DEPARTMENT THE FIRST LIFT OF ACHN REFERENCE COURSE "0.5" IN LIEU OF AGGREGATE BASE COURSE ON THE SHOULDERS.
ASPHALT CONCRETE HOT MIX SURFACE COURSE (200 LBS. PER SQ. YD.)
AGGREGATE BASE COURSE (CLASS 7)
7' COMP. DEPTH IF ASPHALT DRIVE EXIST OR
6' CONCRETE IF CONCRETE DRIVE EXIST.
AGGREGATE BASE COURSE (CLASS 7)
9' COMP. DEPTH OR CONFORM TO EXISTING DRIVEWAY

DETAIL FOR DRIVeway TWnOUTS
(COLLECTORS)

ASPHALT CONCRETE HOT MIX SURFACE COURSE (200 LBS. PER SQ. YD.)
AGGREGATE BASE COURSE (CLASS 7)
7' COMP. DEPTH IF ASPHALT DRIVE EXIST OR
6' CONCRETE IF CONCRETE DRIVE EXIST.
AGGREGATE BASE COURSE (CLASS 7)
9' COMP. DEPTH OR CONFORM TO EXISTING DRIVEWAY

NOTE: TWnOUTS AND PRIVATE DRIVES SHALL BE MODIFIED WHERE NECESSARY TO MEET LOCAL CONDITIONS AS DIRECTED BY THE ENGINEER.

CONSTRUCTION LIMITS

DETAIL FOR TRANSITIONS

CONSTRUCTION LIMITS

NOTE:
REFER TO PLANS SHEETS FOR WIDTH OF COUNTY ROAD

CONSTRUCTION LIMITS

TYPICAL SECTION OF IMPROVEMENT

VAR. ACMH BINDER COURSE 1" (VAR. DEPTH: 1ML.1'-7')
& TACK COATS
VAR. TACK COAT
(0.17 GALL. PER SQ. YD.)

METHOD OF RAISING GRADE

* 6' AGGREGATE BASE COURSE (CLASS 7)
TO BE REPLACED WITH ACMH BINDER COURSE (1"

DESIGN SLOPE
FILL
EXISTING SLOPE

DESIGN SLOPE
FILL
EXISTING SLOPE

22'-0" EXISTING PAVEMENT

0.002

22'-0" EXISTING PAVEMENT

0.002
C.C.C. & G. (TYPE B-1) (1'-6")
STA. 100+77.23 TO 105+00.00 RT.

AGGREGATE BASE COURSE (CLASS 7)
VAR. COMP'D DEPTH

SHOULDER
NORMAL

* NOTE: REFER TO STD. DVG. GR-9A AND CROSS SECTIONS FOR SLOPE REQUIREMENTS BEHIND GUARDRAIL.

GUARDRAIL (TYPE A)

7'-6" ADD'L ACHM SURFACE COURSE 1½" (200 LBS. PER SQ. YD.)

ADD'L AGGREGATE BASE COURSE (CLASS 7)
VAR. COMP. DEPTH (VAR. TONS/STA. 1)

WIDENING FOR GUARDRAIL

+20'-0" (TYP.)

+16'-0" (TYP.)

1'-6"

1'-6"

1'-6"

1'-6"

14 1/2" (TYP.)

* SEE APPROACH SLAB DETAILS IN BRIDGE DRAWINGS

SECTION OF APPROACH SLAB

AGGREGATE BASE COURSE (CLASS 7)
VARIABLE - 6" MIN. COMPACTED DEPTH
SEQUENCING:
STAGE I
8 INSTALL ADVANCE WARNING SIGNS.
2 INSTALL CONSTRUCTION PAVEMENT MARKINGS AND TRAFFIC CONTROL DEVICES AS DIRECTED BY THE ENGINEER.
3 CONSTRUCT NEW OFFSET ROADS* AND BRIDGE OVER LOWST CREEK.
4 CONSTRUCT NIGHT DRIVE AND PROVIDE TEMPORARY CONNECTION TO EXIST. HWY. 268.
5 INSTALL GUARDRAIL.

SEQUENCING:
STAGE II
8 MAINTAIN ADVANCE WARNING SIGNS.
2 INSTALL CONSTRUCTION PAVEMENT MARKINGS AND TRAFFIC CONTROL DEVICES AS DIRECTED BY THE ENGINEER.
3 CONSTRUCT PAVEMENT WIDENING AT CONNECTIONS TO EXISTING ROADS.
PLACE FILL UNTIL PROPERLY PERMANENT PAVEMENT MARRIAGES.
4 SHIFT TRAFFIC TO NEW ROADWAY & BRIDGE.
REMOVE OLD BRIDGE & UTILITATE EXISTING ROADWAY.

ADVANCE SIGNS AT BEGINNING AND END OF JOB

SIDE ROADS
ALL STAGES

TOTAL NEEDS: 2 SITES
10-78 RT. W.C.R. 2051
12-85 LT. NIGHT DR.

MAINTENANCE OF TRAFFIC
ADVANCE SIGNS AT JOB ENDS
REFLECTORIZED PAINT PAVEMENT MARKING:
WHITE (6") = 378 LINEAL FT.
YELLOW (6") = 378 LINEAL FT.

RAISED PAVEMENT MARKERS:
TYPE II (YELLOW/YELLOW) 60' O.C. = 45 EACH

6" DOUBLE YELLOW REFLECTORIZED PAINT PAVEMENT

TYPICAL 2-LANE PERMANENT PAVEMENT MARKING LAYOUT

-The 6" yellow striping quantity has been estimated based on a double yellow centerline stripe for the entire project. The project must be marked for passing/no passing zones prior to the placement of any final striping. Contact the maintenance division after the final lift of surface course has been placed to schedule the zoning of the project.
**Advance Warning Signs and Devices**

<table>
<thead>
<tr>
<th>SIGN NUMBER</th>
<th>DESCRIPTION</th>
<th>SIGN SIZE</th>
<th>STAGE 1</th>
<th>STAGE 2</th>
<th>MAXIMUM NUMBER REQUIRED</th>
<th>TOTAL SIGNS REQUIRED</th>
<th>VERTICAL PANELS</th>
<th>TRAFFIC DRUMS</th>
<th>BARRIACADES (TYPE II)</th>
</tr>
</thead>
<tbody>
<tr>
<td>W01-1</td>
<td>ROAD WORK (500 FT)</td>
<td>48*48&quot;</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>33.0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>W02-1</td>
<td>ROAD WORK (1000 FT)</td>
<td>48*48&quot;</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>33.0</td>
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<td></td>
</tr>
<tr>
<td>W03-1</td>
<td>ROAD WORK (500 FT)</td>
<td>48*48&quot;</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>33.0</td>
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<tr>
<td>W04-1</td>
<td>ROAD WORK (1000 FT)</td>
<td>48*48&quot;</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>33.0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>R11-1</td>
<td>ROAD CLOSED</td>
<td>48*36&quot;</td>
<td>2</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>30.0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>R11-1</td>
<td>DO NOT PASS</td>
<td>48*36&quot;</td>
<td>2</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>30.0</td>
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<td></td>
</tr>
<tr>
<td>W01-1A</td>
<td>RIGHT SHOULDER (CLOSE)</td>
<td>36*36&quot;</td>
<td>5</td>
<td>4</td>
<td>4</td>
<td>4</td>
<td>20.0</td>
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<tr>
<td>W01-1B</td>
<td>BUFALO</td>
<td>36*36&quot;</td>
<td>5</td>
<td>4</td>
<td>4</td>
<td>4</td>
<td>20.0</td>
<td></td>
<td></td>
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<tr>
<td>W01-1C</td>
<td>SHOULDER DROP OFF</td>
<td>36*36&quot;</td>
<td>5</td>
<td>4</td>
<td>4</td>
<td>4</td>
<td>20.0</td>
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<td></td>
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<tr>
<td>VERTICAL PANELS</td>
<td></td>
<td></td>
<td>27</td>
<td>25</td>
<td>27</td>
<td></td>
<td>28</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TRAFFIC DRUMS</td>
<td></td>
<td></td>
<td>26</td>
<td>13</td>
<td>28</td>
<td></td>
<td>28</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TYPE II BARRIACADE (10')</td>
<td></td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>3</td>
<td>48</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TYPE II BARRIACADE (10')</td>
<td></td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>3</td>
<td>48</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TOTALS:</td>
<td></td>
<td></td>
<td>316.0</td>
<td>27</td>
<td>28</td>
<td>48</td>
<td>32</td>
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</tr>
</tbody>
</table>

**Note:** This is a low traffic volume road as defined in Section 604.03, standard specifications for highway construction.

---

**Concrete Combination Curb and Gutter**

**Concrete Surfacing for Maintenance of Traffic**

<table>
<thead>
<tr>
<th>LOCATION</th>
<th>PIPE CULVERTS</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>EACH</td>
</tr>
<tr>
<td>101-147</td>
<td>HWY 268</td>
</tr>
<tr>
<td>101-426</td>
<td>HWY 268</td>
</tr>
<tr>
<td>103-277</td>
<td>HWY 268</td>
</tr>
<tr>
<td>111-695</td>
<td>HWY 268</td>
</tr>
<tr>
<td>113-610</td>
<td>HWY 268</td>
</tr>
</tbody>
</table>

**Total:** 5

**Note:** Quantities shown above shall include removal & disposal of all headwalls and flared end sections if applicable.

---

**Asphalt Concrete Patching for Maintenance of Traffic**

<table>
<thead>
<tr>
<th>LOCATION</th>
<th>TON (GAL)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>10</td>
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</tbody>
</table>

**Total:** 10

---

**Removal and Disposal of Curb and Gutter**

<table>
<thead>
<tr>
<th>STATION</th>
<th>LOCATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>101-77</td>
<td>HWY 208 ON RT</td>
</tr>
<tr>
<td>103-650</td>
<td>HWY 268 LT</td>
</tr>
</tbody>
</table>

**Total:** 423

---

**Advance Warning Signs and Devices**

**Construction Pavement Markings and Permanent Pavement Markings**

**Concrete Combination Curb and Gutter**

**Concrete Surfacing for Maintenance of Traffic**

**Asphalt Concrete Patching for Maintenance of Traffic**

**Removal and Disposal of Curb and Gutter**

---

**Grading and Clearing**

**Removal and Disposal of Fencing**

**Asphalt Concrete Patching for Maintenance of Traffic**

**Concrete Combination Curb and Gutter**

**Concrete Surfacing for Maintenance of Traffic**

**Removal and Disposal of Curb and Gutter**

---

**Advance Warning Signs and Devices**

**Construction Pavement Markings and Permanent Pavement Markings**

**Concrete Combination Curb and Gutter**

**Concrete Surfacing for Maintenance of Traffic**

**Asphalt Concrete Patching for Maintenance of Traffic**

**Removal and Disposal of Curb and Gutter**

---

**Grading and Clearing**

**Removal and Disposal of Fencing**

**Asphalt Concrete Patching for Maintenance of Traffic**

**Concrete Combination Curb and Gutter**

**Concrete Surfacing for Maintenance of Traffic**

**Removal and Disposal of Curb and Gutter**
## EROSION CONTROL

<table>
<thead>
<tr>
<th>STATION</th>
<th>LOCATION</th>
<th>PERMANENT EROSION CONTROL</th>
<th>TEMPORARY EROSION CONTROL</th>
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<tbody>
<tr>
<td></td>
<td></td>
<td>SPECIAL SEEDING</td>
<td>LIME</td>
</tr>
<tr>
<td></td>
<td></td>
<td>ACRE</td>
<td>TON</td>
</tr>
<tr>
<td>ENTIRE PROJECT</td>
<td>CLEARING AND DREDGING</td>
<td>1.71</td>
<td>3.42</td>
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<tr>
<td>ENTIRE PROJECT</td>
<td>STAGE 1</td>
<td>0.60</td>
<td>1.28</td>
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<tr>
<td>ENTIRE PROJECT</td>
<td>STAGE 2</td>
<td>0.68</td>
<td>1.36</td>
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**TOTALS:**
3.92
6.14
3.92
385.1
3.02
4.02
62.1
485
69
2623
299
299
119

**BASIS OF ESTIMATE:**
- LIME: 10.2 TONS / ACRE OF SEEDING
- WATER: 20.1 G. / M.G.A. / ACRE OF SEEDING
- SAND BAG DITCH CHECKS: 22 BAGS / LOCATION
- ROCK DITCH CHECKS: 3 CU.YD / LOCATION

**NOTE:** The temporary erosion control devices shown above and on the plans shall be installed in such sequence as to deter erosion and sedimentation on U.S. waterways as explained by the National Pollutant Discharge Elimination System permit.

**QUANTITIES ESTIMATED:**
See section 104.03 of the STD. SPECS.

## DRIVEWAYS & TURNOUTS

<table>
<thead>
<tr>
<th>STATION</th>
<th>SIDE</th>
<th>LOCATION</th>
<th>WIDTH</th>
<th>ACHM SURFACE COURSE (1/2&quot;)</th>
<th>AGGREGATE BASE COURSE (CLASS 77)</th>
<th>SIDE DRAINS</th>
<th>STANDARD DRAWINGS</th>
</tr>
</thead>
<tbody>
<tr>
<td>101+79</td>
<td>RT</td>
<td>HWY 268</td>
<td>20</td>
<td>211.98</td>
<td>23.30</td>
<td>86.51</td>
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</tr>
<tr>
<td>102+00</td>
<td>RT</td>
<td>HWY 268</td>
<td>16</td>
<td>128.00</td>
<td>14.28</td>
<td>62.85</td>
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</tr>
<tr>
<td>111+57</td>
<td>LT</td>
<td>HWY 268</td>
<td>18</td>
<td>588.17</td>
<td>62.30</td>
<td>63.10</td>
<td></td>
</tr>
<tr>
<td>111+63</td>
<td>LT</td>
<td>HWY 268</td>
<td>18</td>
<td>123.98</td>
<td>13.93</td>
<td>61.23</td>
<td></td>
</tr>
<tr>
<td>1+60</td>
<td>DR</td>
<td></td>
<td>28</td>
<td></td>
<td></td>
<td>50.00</td>
<td></td>
</tr>
</tbody>
</table>

**TOTALS:**
1031.19
113.65
812.06
98
94

**BASIS OF ESTIMATE:**
- ACHM SURFACE COURSE (1/2") = 24.5% MIN. AGGREGATE...
- 5.5% ASPHALT BINDER
- MAXIMUM NUMBER OF (VARIATIONS) = 115 (FOR PG 64-22)

**QUANTITY ESTIMATED:**
See section 104.03 of the STD. SPECS.

**NOTE:** For R.C. PIPE CULVERT INSTALLATIONS USE TYPE 3 SEEDING UNLESS OTHERWISE SPECIFIED.

## BENCH MARKS

<table>
<thead>
<tr>
<th>STATION</th>
<th>LOCATION</th>
<th>BENCH MARKS</th>
</tr>
</thead>
<tbody>
<tr>
<td>101+00</td>
<td>AT BRIDGE</td>
<td>1</td>
</tr>
</tbody>
</table>

**TOTAL:**
5

**NOTE:** Shown for information only. Bench marks shall be furnished and placed by state forces.

## ACHM PATCHING OF EXISTING ROADWAY

<table>
<thead>
<tr>
<th>STATION</th>
<th>DESCRIPTION</th>
<th>TON</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENTIRE PROJECT</td>
<td>TO BE USED IF AND WHERE DIRECTED BY THE ENGINEER</td>
<td>50</td>
</tr>
</tbody>
</table>

**TOTAL:**
50

**QUANTITIES:**
See section 104.03 of the STD. SPECS.

## EARTHWORK

<table>
<thead>
<tr>
<th>STATION</th>
<th>STATION</th>
<th>LOCATION / DESCRIPTION</th>
<th>UNCLASSIFIED EXCAVATION</th>
<th>COMPACTED EMBANKMENT</th>
<th>SOIL STABILIZATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENTIRE PROJECT</td>
<td>STAGE 1 MAIN LANE</td>
<td>3809</td>
<td>9985</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ENTIRE PROJECT</td>
<td>STAGE 2 MAIN LANE</td>
<td>423</td>
<td>547</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ENTIRE PROJECT</td>
<td>K HIGHT DR</td>
<td>922</td>
<td>547</td>
<td></td>
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<tr>
<td>ENTIRE PROJECT</td>
<td>APPROACHES</td>
<td>70</td>
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<tr>
<td>ENTIRE PROJECT</td>
<td>OBLITERATION OF EXISTING ROADWAY</td>
<td>532</td>
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<tr>
<td>ENTIRE PROJECT</td>
<td>REMOVAL OF EXISTING BRIDGE EMBANKMENT</td>
<td>436</td>
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<tr>
<td>ENTIRE PROJECT</td>
<td>TO BE USED IF AND WHERE DIRECTED BY THE ENGINEER</td>
<td>100</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**TOTALS:**
7161 | 11225 | 100

**QUANTITIES ESTIMATED:**
See section 104.03 of the STD. SPECS.

**NOTE:** Earthwork quantities shown above shall be paid as plan quantity.

## CONCRETE DITCH PAYING

<table>
<thead>
<tr>
<th>STATION</th>
<th>STATION</th>
<th>LOCATION</th>
<th>LENGTH</th>
<th>&quot;W&quot;</th>
<th>CONC. DITCH PAYING</th>
<th>SOLID SODDING</th>
<th>WATER</th>
</tr>
</thead>
<tbody>
<tr>
<td>101+15.00</td>
<td>101+36.00</td>
<td>Hwy 268 RT</td>
<td>105.00</td>
<td>9.00</td>
<td>194.67</td>
<td>73.33</td>
<td>0.29</td>
</tr>
<tr>
<td>110+45.00</td>
<td>111+20.00</td>
<td>Hwy 268 RT</td>
<td>105.00</td>
<td>12.00</td>
<td>194.67</td>
<td>46.67</td>
<td>0.59</td>
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</table>

**TOTALS:**
209.67 | 120.00 | 1.51

**QUANTITIES:**

## STRUCTURES

<table>
<thead>
<tr>
<th>STATION</th>
<th>DESCRIPTION</th>
<th>REINFORCED CONCRETE PIPE</th>
<th>FLARED END</th>
<th>SOLID SODDING</th>
<th>WATER</th>
<th>STD. D.W.G. NOS.</th>
</tr>
</thead>
<tbody>
<tr>
<td>101+47</td>
<td>36&quot; X 47 R.C. PIPE CULVERT</td>
<td>52</td>
<td>2</td>
<td>34</td>
<td>0.43</td>
<td>FEB-1, FEED, FGC-1</td>
</tr>
<tr>
<td>105+81</td>
<td>36&quot; X 77 R.C. PIPE CULVERT</td>
<td>72</td>
<td>2</td>
<td>34</td>
<td>0.43</td>
<td>FEB-1, FEED, FGC-1</td>
</tr>
<tr>
<td>111+08</td>
<td>60&quot; X 88 R.C. PIPE CULVERT</td>
<td>58</td>
<td>2</td>
<td>34</td>
<td>0.43</td>
<td>FEB-1, FEED, FGC-1</td>
</tr>
</tbody>
</table>

**TOTALS:**
72 | 52 | 58 | 2 | 2 | 144 | 1.51

**QUANTITIES:**

**NOTE:** For R.C. PIPE CULVERT INSTALLATIONS USE TYPE 3 SEEDING UNLESS OTHERWISE SPECIFIED.
### Approach Gutters and Slabs

<table>
<thead>
<tr>
<th>Station</th>
<th>Location</th>
<th>Approach Gutter (Type Special)</th>
<th>Approach Slabs (Type Special)</th>
<th>Reinforcing Steel/Row (6G, 8G)</th>
<th>Aggregate Base CRS. (Class 7)</th>
</tr>
</thead>
<tbody>
<tr>
<td>105+83.87</td>
<td>APPROACH SLAB</td>
<td>53.30</td>
<td>9881</td>
<td>34.45</td>
<td></td>
</tr>
<tr>
<td>110+48.03</td>
<td>APPROACH SLAB</td>
<td>53.35</td>
<td>9881</td>
<td>34.45</td>
<td></td>
</tr>
<tr>
<td>110+19.43</td>
<td>APPROACH SLAB</td>
<td>53.35</td>
<td>9881</td>
<td>34.45</td>
<td></td>
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<tr>
<td>105+53.51</td>
<td>APPROACH SLAB</td>
<td>53.45</td>
<td>9881</td>
<td>34.45</td>
<td></td>
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<tr>
<td>110+40.47</td>
<td>APPROACH SLAB</td>
<td>53.45</td>
<td>9881</td>
<td>34.45</td>
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<td>110+28.99</td>
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**Totals:**

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<table>
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<tr>
<th></th>
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<tbody>
<tr>
<td>32.24</td>
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</table>

### Pavement Repair Over Culverts (Asphalt)

<table>
<thead>
<tr>
<th>Station</th>
<th>Location</th>
<th>Width</th>
<th>Length</th>
<th>Ton</th>
</tr>
</thead>
<tbody>
<tr>
<td>101+47</td>
<td>HAV 26B</td>
<td>8.50</td>
<td>24</td>
<td>11</td>
</tr>
<tr>
<td>105+77</td>
<td>HAV 26B</td>
<td>6.67</td>
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<td>13</td>
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<tr>
<td>118+08</td>
<td>HAV 26B</td>
<td>12.00</td>
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<td>16</td>
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**Total:**

<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
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</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>48</td>
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</table>

### Cold Milling Asphalt Pavement

<table>
<thead>
<tr>
<th>Station</th>
<th>Location</th>
<th>Average Width</th>
<th>Cold Milling Asphalt Pavement</th>
</tr>
</thead>
</table>

### Erosion Control Matting

<table>
<thead>
<tr>
<th>Station</th>
<th>Location</th>
<th>Length</th>
<th>Class 3</th>
</tr>
</thead>
</table>

### Base and Surfacing

<table>
<thead>
<tr>
<th>Station</th>
<th>Location</th>
<th>Length</th>
<th>Aggregate Base Course</th>
<th>Tack Coat</th>
<th>ACHM Binder Course (1&quot;)</th>
<th>ACHM Surface Course (12&quot;)</th>
</tr>
</thead>
</table>

### Additional for Leveling/Methods of Raising Grade

<table>
<thead>
<tr>
<th>Station</th>
<th>Location</th>
<th>Average</th>
<th>Tack Coat</th>
<th>ACHM Binder Course (1&quot;)</th>
<th>ACHM Surface Course (12&quot;)</th>
</tr>
</thead>
</table>

### Additional for Super-elevation

<table>
<thead>
<tr>
<th>Station</th>
<th>Location</th>
<th>Average</th>
<th>Tack Coat</th>
<th>ACHM Binder Course (1&quot;)</th>
<th>ACHM Surface Course (12&quot;)</th>
</tr>
</thead>
</table>

### Wearing for Guaradrails

<table>
<thead>
<tr>
<th>Station</th>
<th>Location</th>
<th>Average</th>
<th>Tack Coat</th>
<th>ACHM Binder Course (1&quot;)</th>
<th>ACHM Surface Course (12&quot;)</th>
</tr>
</thead>
</table>

### Wearing for Curb & gutter

<table>
<thead>
<tr>
<th>Station</th>
<th>Location</th>
<th>Average</th>
<th>Tack Coat</th>
<th>ACHM Binder Course (1&quot;)</th>
<th>ACHM Surface Course (12&quot;)</th>
</tr>
</thead>
</table>

**Basis of Estimate:** ACHM Surface Course (12") 94.0% Min. AGGR. 5.5% Asphalt Binder

**ACHM Binder Course (1")** 95.0% Min. AGGR. 5.0% Asphalt Binder

**Maximum Number of Operations + 110% for PG 64-22**

**Tack Coat Quantities were calculated using the Emsurf Asphalts Rates. Refer to S-500-1 for the residial asphalt application rates.**

---

**Quantities**

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<th>Item</th>
<th>Quantity</th>
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<tr>
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<td>1614.28</td>
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<td>22.01</td>
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<td>8.70</td>
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<td>8.70</td>
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**Section 104.03 of the Std. Specs.**

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**Note:** QUANTITY ESTIMATED. SEE SECTION 104.03 OF THE STD. SPECS.
### SCHEDULE OF BRIDGE QUANTITIES - JOB NO. 00550

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1. All piping shall be ASTM A106, Grade B, 304 stainless steel piping, except 50 shall have special GSP approved driving points which shall not be paid for direct costs. All driving points shall be paid for direct costs. It shall be considered supplementary to the item "Steel Piping GR D555".
### SUMMARY OF QUANTITIES (BOX 1 OF 2)

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### REVISIONS

**DATE** | **REVISION** | **SHEET NUMBER**
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7/15/2020 | REVISED QUANTITIES CLASS S CONCRETE-BRIDGE, CLASS 3 (A) CONCRETE-BRIDGE, CLASS 2 PROTECTIVE SURFACE TREATMENT, REINFORCED STEEL-BRIDGE, EPOXY-COATED REINFORCED STEEL (GRADE 60), PREBONDED STRUCTURAL STEEL IN BEAM SPANS (A709, GR. 50), ELASTOMERIC BEARINGS, & FOUNDATION PROTECTION RIBBON | 19,19, & 37

### SUMMARY OF QUANTITIES & REVISIONS
# Survey Control Details

### Survey Control Coordinates

**Project Name:** ad090551  
**Date:** 3/5/2019  
**Coordinate System:** ARKANSAS STATE PLANE - NORTH ZONE BASED ON GPS CONTROL, PROJECTED TO GROUND.  
**Units:** U.S. SURVEY FOOT

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<td>1013299.0691</td>
<td>175.950</td>
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</tbody>
</table>

**Note:** Rebar and Cap - Standard: 5/8" Rebar with 2" Aluminum Cap stamped.  
**Standard:** Markings common to all caps, or as indicated (other markings indicated in the point description of the individual point).  
**All distances are ground, use Cap + 1.0 for stakeout for this project.**  
**This CAF is intended for use within the project limits.**  
**Grid Coordinates are stored under file name: ad090551.caf**

**Horizontal Datum NAVD 83 (2011)**

### 005551 CL - Highway 268

<table>
<thead>
<tr>
<th>Point No.</th>
<th>Type</th>
<th>Station</th>
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<th>Easting</th>
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### 005551 CL - Knight Drive

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</table>

**Basis of Bearing:**

ARKANSAS STATE PLANE GRID BEARINGS - D301-NORTH ZONE DETERMINED FROM AN AVERAGE FOR POINTS 1-5.

**Convergence Angle:** 00 00' 30" 40' LEFT AT LAT N 36°24'21" N LON 00°52'42"

**Grid Azimuth:** ASTRONOMICAL AZIMUTH - CONVERGENCE ANGLE.
BENDING DIAGRAM

BAR LIST

Work Number Required Length Pin Diameter
--- ---- ---- ----
BS01 6 34"-3" 5/8"
BS02 10 17'-4" 25/32"
BS03 62 17'-4" 25/32"
BS04 6 9'-0" 25/32"
BS05 6 7'-0" 25/32"
BS01 6 34'-2" 5/8"
BS01 7 36'-0" 5/8"

C401 42 9'-3" 3"
C402 14 12'-5" 5/8"
C403 14 12'-5" 5/8"
F401 16 17'-0" 45/32"
F401 23 9'-3" 6/8"

Note: All dimensions are approximate.

SECTION B-B
Scale 1" = 1'-0"

SECTION C-C
Scale 1" = 1'-0"

SECTION D-D
(Typ, Both End of Cap)
Scale 1" = 1'-0"
TABLE OF FABRICATOR VARIABLES

<table>
<thead>
<tr>
<th>SERVICE LOAD</th>
<th>ELASTOMERIC PAD</th>
<th>EXTERNAL LOAD PLATE</th>
<th>ANCHOR BOLT</th>
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<td>BORED, BORED</td>
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</table>

GENERAL NOTES

Elastomeric bearings shall conform to Section 8.08 and shall be paid for at the unit price bid for "Elastomeric Bearings". Long-duration bearing of classic lot samples specified in Subsection 8.08.05 is required.

External load plates shall conform to ASTM A775, Grade 50. Pipe sleeves shall be ASTM A358, Grade 6 or shall be guaranteed to conform to A358 M 33L Class C or ASTM 805/805M Grades 50.

Elastomeric bearings shall be completely fabricated (excluding bolts, both holes and all shop welding) and shall be cleaned before installation. The elastomeric bearing shall be cleaned in accordance with Subsection 8.08.05. Other surfaces shall be coated in accordance with Subsection 8.08.40 for painted steel and 8.08.41 for unpainted Grade 50w steel.

Anchor bolts, washers, and nuts shall conform to Subsection 8.07.12. The anchor bolt grade of steel shall be as specified in Subsection 8.07.12. The anchor bolt shall be covered with rustproof paint and/or rustproof coating, and shall have all Shop steel sleeves will not be required. Anchor Bolts may be cast in plastic or drilled into plastic, or drilled into plastic. If anchor bolts are to be cast in plastic or drilled into plastic, the galvanized Sheet Metal Sleeves shall be cast in place as shown, sleeves shall be galvanized Steel Sleeves, and shall be removed during the anchor bolt shall be accurately sized and fixed using EPDM approved epoxy or non-reactive grout that completely fills the hole. Galvanized metal sleeves shall meet the requirements of ASTM G57C Type II or approved equivalent of thickness and gauge, and be galvanized according to ASTM A632. Galvanized steel sleeves will not be paid for directly, but will be considered a substitute to the item "Structural Steel in Beam Spans, ASTM A775, Gr. 50W". Bearings shall be aimed in accordance with Subsection 8.08.06. This work and materials are considered as the Item "Elastomeric Bearings" and will not be paid for directly.

ANCHOR BOLT DETAIL

Anchor Bolts may be cast in plastic or drilled into plastic, or drilled into plastic. If anchor bolts are to be cast in plastic or drilled into plastic, the galvanized Sheet Metal Sleeves shall be cast in place as shown, sleeves shall be galvanized Steel Sleeves, and shall be removed during the anchor bolt shall be accurately sized and fixed using EPDM approved epoxy or non-reactive grout that completely fills the hole. Galvanized metal sleeves shall meet the requirements of ASTM G57C Type II or approved equivalent of thickness and gauge, and be galvanized according to ASTM A632. Galvanized steel sleeves will not be paid for directly, but will be considered a substitute to the item "Structural Steel in Beam Spans, ASTM A775, Gr. 50W". Bearings shall be aimed in accordance with Subsection 8.08.06. This work and materials are considered as the Item "Elastomeric Bearings" and will not be paid for directly.
TYPICAL ROADWAY SECTION NEAR END OF SPAN

Anchor bolts shall comply with A572 Grade 36 with Supplementary Requirement S1 and galvanizing according to Subsection B07.01. Nuts and washers for bolts shall be as specified in Subsection B07.01.

Use lower nut and washer to adjust to grade. Snap right hand nut and washer after grade is adjusted.

Bolts, nuts, and washers shall be paid for at the unit price bid for "Structural Steel in Beam Spans (A709, Grade 50)."

ANCHOR BOLT DETAIL

ALTERNATE ANCHOR BOLT DETAIL

BEARING PLATE DETAIL
### BAR LIST

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<td>S409</td>
<td>60</td>
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<td>4</td>
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<td>S411</td>
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<tr>
<td>R325</td>
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<td>2&quot;</td>
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### BENDING DIAGRAM

**SECTION AT END BEND (NORMAL TO CAP)**

**Details:**
- **Granular Material:** Gravel or other approved material, flowable fill shall not be allowed. See Section.
- **Concrete:** Mix design to be specified by engineer. See Section.
- **Concrete Mix Design:** To be specified by engineer. See Section.
- **Concrete Mix Design:** To be specified by engineer. See Section.

**Notes:**
- For additional details, see Section.
- Pipe underdrains shall be placed as specified in the Standard Specifications.
- Flowable fill shall not be allowed. See Section.
- Flowable fill shall not be allowed. See Section.

**Dimensions:**
- All dimensions are in feet and inches.
- All details are shown in the standard scale of 1/4" = 1'-0".
Note: The surface finish for approach slabs shall match that used on the bridge deck.

**GENERAL NOTES**

This drawing shall be used for Approach Slabs in Seismic Performance Zone 1.

All concrete shall be Class S slab with a minimum 28-day compressive strength of 4000 psi and shall be poured in the dry.

An reinforcing steel shall be Grade 60 yield strength or ASTM A706 deformed reinforcing steel.

Approach slabs shall be measured and paid for in accordance with Section 504.

**QUANTITIES FOR ONE**

**TYPE SPECIAL APPROACH SLAB**

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**DETAILS FOR**

**TYPE SPECIAL APPROACH SLABS**

For intersection slabs:
- Reinforcing
- Concrete
- Steel plates

**STATE OF ARKANSAS**

**REGISTERED PROFESSIONAL ENGINEER**

**ARKANSAS STATE HIGHWAY COMMISSION**

**DRAWN BY**

**CHECKED BY**

**BRIDGE NO. 07965**

**DRAWING NO. 6753**

**SPECIAL SHEET**

**LITTLE ROCK, ARK.**

**DATE 04-01-2002**

**SCALE 1" = 1'-0"**

**C-020965**

**APPROACH SLAB**

**G7135**
\( \text{PLAN OF APPROACH GUTTER A} \)

End Bridge Shown, Depth Bridge Shallari
Scale 1" = 1'-0"

\( \text{PLAN OF APPROACH GUTTER B} \)

End Bridge Shown, Depth Bridge Shallari
Scale 1" = 1'-0"

\( \text{SECTION A-A} \)

For Guard Roll Connection Details See Std. Draw. No. CR-10

\( \text{SECTION B-B} \)

\( \text{SECTION C-C} \)

\( \text{SECTION D-D} \)

\( \text{GENERAL NOTES} \)

All concrete shall be Class 5 or Class 4000 mixtures. Grade 60 reinforcing steel shall be used. Portland cement concrete pavement shall be placed in the dry, all weather condition. Grade 60 reinforcing steel shall be Grade 60 yield strength > 65,000 psi, conforming to AASHTO M 3 or 322, type 4, with test reports.

\( \text{DETAILS FOR TYPE SPECIAL APPROACH GUTTERS} \)

\( \text{ARKANSAS STATE HIGHWAY COMMISSION} \)

\( \text{LITTLE ROCK, ARK} \)

\( \text{DESIGNER:} \)

\( \text{DRAWN BY:} \)

\( \text{CHECKED BY:} \)

\( \text{DATE:} \)

\( \text{SCALE:} \)

\( \text{DETAILS:} \)

\( \text{DATE:} \)

\( \text{DRAWING NO.} \)
STA. 107+00 TO STA. 109+47

STAGE 1

- AREA CUT: 0 SQ.FT.
- AREA FILL: 0 SQ.FT.
- CUT VOLUME: 0 CU.YD.
- FILL VOLUME: 0 CU.YD.

STAGE 2

- AREA CUT: 24 SQ.FT.
- AREA FILL: 413 SQ.FT.
- CUT VOLUME: 0 CU.YD.
- FILL VOLUME: 1375 CU.YD.

STAGE 1

- AREA CUT: 0 SQ.FT.
- AREA FILL: 475 SQ.FT.
- CUT VOLUME: 0 CU.YD.
- FILL VOLUME: 1645 CU.YD.

STAGE 2

- AREA CUT: 41 SQ.FT.
- AREA FILL: 0 SQ.FT.
- CUT VOLUME: 0 CU.YD.
- FILL VOLUME: 1707 CU.YD.

STAGE 1

- AREA CUT: 0 SQ.FT.
- AREA FILL: 447 SQ.FT.
- CUT VOLUME: 0 CU.YD.
- FILL VOLUME: 1965 CU.YD.

STAGE 2

- AREA CUT: 38 SQ.FT.
- AREA FILL: 0 SQ.FT.
- CUT VOLUME: 0 CU.YD.
- FILL VOLUME: 2255 CU.YD.

STAGE 1

- AREA CUT: 0 SQ.FT.
- AREA FILL: 475 SQ.FT.
- CUT VOLUME: 0 CU.YD.
- FILL VOLUME: 1845 CU.YD.

STAGE 2

- AREA CUT: 41 SQ.FT.
- AREA FILL: 0 SQ.FT.
- CUT VOLUME: 0 CU.YD.
- FILL VOLUME: 2107 CU.YD.

CONSTRUCTION STAGE 1

- 11' TRAFFIC LANES

CONSTRUCTION STAGE 2

- 11' TRAFFIC LANES

OBLITERATE EXISTING PAVEMENT

22' PAVEMENT EXIST.
EMBANKMENT CONSTRUCTION AND FOOTING BACKFILL AT VERTICAL WALL ABUTMENTS

EMBANKMENT CONSTRUCTION AT SPILL-THROUGH PILE END BENTS

EMBANKMENT CONSTRUCTION AND FOOTING BACKFILL AT SPILL-THROUGH END BENTS

GENERAL NOTES

The bridge embankment shall be defined as a section of embankment, not less than 20 feet long adjacent to the bridge end and together with the side slopes and slopes under the bridge and including the end of the embankment. The embankment shall be constructed in 6-inch horizontal layers that are graded and compacted by the use of mechanical equipment to the satisfaction of the Engineer. Refer to Subsections 2009.030 and 2011.060 for construction requirements.
GENERAL NOTES
These GENERAL NOTES are applicable unless otherwise shown in the Plan Details, Special Provisions, or Supplemental Specifications.

CONSTRUCTION SPECIFICATIONS Arkansas Highway and Transportation Department

DESIGN SPECIFICATIONS Sperry Bridge, Little Rock, Arkansas.

SUPERSTRUCTURE NOTES

MATERIALS AND TESTING:

Class III/IV Concrete

Reinforcing Steel: Grade 60, ASTM A615 Type II

Structural Steel: ASTM A992

Structural Steel: ASTM A572 Gr. 70

Structural Steel: ASTM A572 Gr. 50, SS400

Structural Steel: ASTM A572 Gr. 50, SS400

Structural Steel: ASTM A572 Gr. 50, SS400

See Plan Details for detailing of Structural Steel required.

CONCRETE:

All concrete shall be Class III/IV with a minimum 28-day compressive strength of 4,000 psi. Concrete placed in the dry and all exposed surfaces shall be protected from 7% unless otherwise noted.

The superstructure design is driven by the use of waveable bases, forming and placement is the responsibility of the contractor and is subject to the forms placed on the surface and the finishing process. Simultaneous with the construction of the concrete, through the concrete, through the construction, the concrete shall be allowed to cure for at least 28 days prior to placement. Concrete shall be placed in a manner that will not cause any damage to the forms or the work area.

The concrete deck spanning the structural steel shall be placed in accordance with Subsection B.3.1 of the Bridge Design Guide for the Arkansas Highway and Transportation Department. All exposed surfaces shall be protected from 7% unless otherwise noted.

The concrete deck shall be covered with a minimum of 300 psi at the time of placement. The concrete deck shall be allowed to cure at least 28 days prior to placement. The concrete deck shall be allowed to cure for at least 28 days prior to placement. The concrete deck shall be allowed to cure for at least 28 days prior to placement. The concrete deck shall be allowed to cure for at least 28 days prior to placement.

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GENERAL NOTES:

1. The full width of each section shall be poured monolithically.
2. Toe walls to be constructed full width at each end of ditch paving, and poured monolithically.
3. Solid sod along ditch paving to be placed within 14 days of ditch paving construction.
4. 3" wide transverse expansion joints shall be placed in concrete ditch paving at 40 intervals. The space shall be filled with approved joint filler complying with AASHTO M213.

ARIZONA STATE HIGHWAY COMMISSION

CONCRETE DITCH PAVING

STANDARD DRAWING CDP-1
TYPICAL PIPE CULVERT WITH FLARED END SECTION & 3:1 FORESLOPE

TYPICAL PIPE CULVERT WITH FLARED END SECTION & FLATTENED ADJACENT SLOPES

TYPICAL MULTIPLE PIPE CULVERT WITH FLARED END SECTION & FLATTENED ADJACENT SLOPES

R.C. CURTAIN WALL DIMENSIONS & QUANTITIES

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NOTES:

1. CAST-IN-PLACE.

2. CEMENT AND DRY-MIXED GROUT MUST MEET THE REQUIREMENTS OF THE STANDARD SPECIFICATIONS.

3. ALL REINFORCING STEEL IN BARS & 6" GA.

4. CEMENT FOR CURTAIN WALL SHALL MEET THE REQUIREMENTS OF THE STANDARD SPECIFICATIONS.

5. WALL, CHANNEL, & CONSTRUCTION JOINTS SHALL BE SET IN PLACE & THE REMAINING PORTIONS OF THE FLARED END SECTION (LOWER 1'-0") SHALL BE PLACED.

6. PIPE SIDE OF R.C. CURTAIN WALL PLACED.

7. CONSTRUCTION JOINTS SHALL BE APPROVED BY THE ENGINEER.

8. ALLOW PRECAST IN 2 OR MORE PIECES CHAMFERED EDGES.
METHODS OF INSTALLATION OF GUARDRAIL AT LESS THAN FULL SHOULDER WIDTH BRIDGES USING GUARDRAIL TERMINAL (TYPE 2)

METHOD OF INSTALLATION OF GUARDRAIL AT FULL SHOULDER WIDTH BRIDGES USING GUARDRAIL TERMINAL (TYPE 2)

LEGEND

- TIME SCREW GUARDRAIL TERMINAL
- GUARDRAIL TERMINAL (TYPE 2)

METHOD OF INSTALLATION OF GUARDRAIL USING GUARDRAIL TERMINALS (TYPE 1) (FULL SHOULDER WIDTH OR LESS BRIDGES)
NORMAL ROADWAY WIDTH

WIDTH OF SURFACING

SECTION ON CURVE

SECTION ON TANGENT

NOTE: NORMAL SECTION TO EACH SIDE TO SUPPORT GUARDRAIL

AROUND 5'-6" VARIABLE

4' MIN.

5' MIN.

5'-6" NORM.

5'-6" NORM.

NORMAL ROADWAY WIDTH

NORMAL ROADWAY WIDTH

SHOULDER PIER PROTECTION

MEDIAN PIER PROTECTION

METHOD OF INSTALLATION OF GUARDRAIL AT FIXED OBSTACLE

DETAILED SHOWING POSITION OF GUARDRAIL ON HIGHWAY

DETAILED WIDENING FOR GUARDRAIL

GUARDRAIL (TYPE A)

GUARDRAIL (TYPE A)

DETAILED SHOWING POSITION OF GUARDRAIL ON HIGHWAY

DETAILED WIDENING FOR GUARDRAIL

GUARDRAIL DETAILS

STANDARD DRAWING GR-9
THREE BEAM RAIL WITH STEEL TUBING BLOCKOUT AND STEEL POSTS 1-7

W-BEAM TO THREE BEAM TRANSITION RAIL WITH WOOD OR PLASTIC BLOCKOUT AND STEEL POST 8

GENERAL NOTES:
- Posts shall be set perpendicular to the roadway profile and vertically in cross section.
- Wood posts & wood blocks shall be either dens 1 structural or better with wood fiber or treated southern pine.

GENERAL NOTES:
- Posts shall be set perpendicular to the roadway profile and vertically in cross section.
- Wood posts & wood blocks shall be either dens 1 structural or better with wood fiber or treated southern pine.

THREE BEAM RAIL WITH WOOD OR PLASTIC BLOCKOUTS & WOOD POSTS POSTS 1-6

THREE BEAM RAIL WITH WOOD OR PLASTIC BLOCKOUT & WOOD POST POST 7

W-BEAM TO THREE BEAM TRANSITION RAIL WITH WOOD OR PLASTIC BLOCKOUT & WOOD POST POST 8

WOOD POSTS & WOOD BLOCKS SHALL BE EITHER DENS NO. 1 STRUCTURAL OR BETTER WITH WOOD FIBER OR TREATED SOUTHERN PINE.
THREE BEAM GUARDRAIL CONNECTION AT BRIDGE ENDS
CONSTRUCTION SEQUENCE

1. Placement of bedding material to grade, do not compact.
2. Install pipe to grade where normal excavation or foundation construction.
3. Install pipe in horizontal alignment to the middle third of the pipe.
4. Place and compact the haunch and structural bedding material as directed by the engineer.
5. Material in the haunch and outer structural bedding shall be compacted to 95% of the maximum density according to the type or class of material used.
6. Impervious material should be placed as directed by the engineer at the ends of the concrete pipe culvert for structural bedding and/or backfill.
7. Impervious material shall be placed as directed by the engineer at the ends of the concrete pipe culvert for structural bedding and/or backfill.
8. Pipe will be measured and paid for as "selected pipe bedding." If suitable material is not available, the engineer may authorize the use of "selected pipe backfill." Borrow material or material from the roadway excavation will be used to backfill the pipe.
9. Cutting or displacement of reinforcement will not be permitted.
10. When the existing material excavated for the pipe trench is determined by the engineer to be unsuitable, the engineer may authorize the use of "selected pipe bedding." The maximum allowable trench width shall be the minimum width practicable for the maximum density according to the type or class of material used.

NOTE: Haunch and structural bedding material will not be paid for separately, but compensation will be considered to be included in the price bid per linear foot of concrete pipe.

- LEGEND -

1. Normal Outside Diameter of Pipe
2. Full Cross-Section of Pipe
3. Structural Bedding
4. Haunch
5. Structural Bedding
6. Haunch

GENERAL NOTES

2. No organic material shall be used in the construction and installation of concrete pipe culverts.
3. Concrete pipe culverts shall conform to AASHTO M 206, Standard Specifications for Highway Constructions (Current Edition), with applicable AASHTO classifications.
4. Pipe will be measured and paid for as "selected pipe bedding." If suitable material is not available, the engineer may authorize the use of "selected pipe backfill." Borrow material or material from the roadway excavation will be used to backfill the pipe.
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- LEGEND -

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4. Pipe will be measured and paid for as "selected pipe bedding." If suitable material is not available, the engineer may authorize the use of "selected pipe backfill." Borrow material or material from the roadway excavation will be used to backfill the pipe.
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6. Impervious material should be placed as directed by the engineer at the ends of the concrete pipe culvert for structural bedding and/or backfill.
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9. Cutting or displacement of reinforcement will not be permitted.
10. When the existing material excavated for the pipe trench is determined by the engineer to be unsuitable, the engineer may authorize the use of "selected pipe bedding." The maximum allowable trench width shall be the minimum width practicable for the maximum density according to the type or class of material used.

Note: Haunch and structural bedding material will not be paid for separately, but compensation will be considered to be included in the price bid per linear foot of concrete pipe.
MINIMUM TRENCH WIDTH BASED ON FILL HEIGHT "H"

| Trench Width | H < 10'-0" | H ≥ 10'-0"
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GENERAL NOTES

1. PIPE SHALL CONFORM TO ASHSO M326.4.2 "AASHTO LRFD BRIDGE CONSTRUCTION SPECIFICATIONS." JOINTS SHALL BE INSTALLED PER MANUFACTURER'S DIRECTIVES.

2. PLASTIC PIPE CULVERT DESIGN SHALL CONFORM TO AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, FIFTH EDITION, 2010 WITH 2010 INTERIMS.

3. COMPACT STRUCTURAL BEDDING OUTSIDE THE MIDDLE THIRD OF THE PIPE.

4. THE STRUCTURAL BACKFILL SHALL BE PLACED AND COMPACTED IN COMPLIANCE WITH THE REQUIREMENTS OF THE TYPE OR CLASS OF MATERIAL USED.

5. PIPE INSTALLATION MAY REQUIRE THE USE OF RESTRAINTS, WEIGHTING AND SIMULTANEOUSLY TO THE ELEVATION OF THE MINIMUM COVER.

6. IMPERVIOUS MATERIAL SHOULD BE PLACED AS DIRECTED BY THE ENGINEER AT THE ENDS OF THE CULVERT TO PREVENT LOSS OF STRUCTURAL BEDDING WHEN PERVIOUS MATERIAL IS USED FOR STRUCTURAL BEDDING AND/OR BACKFILL.

7. THE EXISTING MATERIAL EXCAVATED FOR THE PIPE TRENCH WILL BE REPLACED WITH MATERIAL FROM THE ROADWAY EXCAVATION WILL BE USED TO BACKFILL THE PIPE. IF SUITABLE MATERIAL IS NOT AVAILABLE, THE ENGINEER MAY AUTHORIZE THE USE OF "SELECTED PIPE BACKFILL."
GENERAL NOTES

1. Pipe shall conform to AASHTO M334.sm. Class PVC-1245 shall be used, and shall be in accordance with the standard specifications for plastic construction products to which this project is subject.

2. Pipe shall be placed and compacted in accordance with the provisions of the standard specifications for plastic construction products.

3. The installation of the pipe and the subsequent backfill shall be performed in accordance with the standard specifications for plastic construction products.

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MATERIAL REQUIREMENTS FOR STRUCTURAL BACKFILL AND STRUCTURAL BEDDING

STRUCTURAL BACKFILL, EMBANKMENT, AND OUTER STRUCTURAL BEDDING MATERIAL SHALL BE COMPACTED TO 95% OF THE MAXIMUM DENSITY ACCORDING TO THE TYPE OR CLASS OF MATERIAL USED.

MINIMUM TRENCH WIDTH BASED ON FILL HEIGHT "H"

<table>
<thead>
<tr>
<th>Diameter (inches)</th>
<th>Type 1</th>
<th>Type 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>18</td>
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<td>60</td>
<td>36'</td>
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</table>

MINIMUM TRENCH WIDTH - LEGEND -

H = FILL HEIGHT (FT.)
D = OUTSIDE DIAMETER OF PIPE
L = LENGTH OF PIPE
R = OUTER STRUCTURAL BEDDING AREA
A = UNCLASSIFIED SOIL

EMBANKMENT AND TRENCH INSTALLATIONS

1. PLACE STRUCTURAL BEDDING MATERIAL TO GRADE. DO NOT COMPACT.
2. INSTALL PIPE TO GRADE.
3. COMPACT STRUCTURAL BEDDING OUTSIDE THE MIDDLE THIRD OF THE PIPE.
4. THE STRUCTURAL BACKFILL SHALL BE PLACED AND COMPACTED IN 8" LAYERS. THE LAYERS SHALL BE BROUGHT UP EVENLY AND SIMULTANEOUSLY TO THE ELEVATION OF THE MINIMUM COVER.
5. PIPE INSTALLATION MAY REQUIRE THE USE OF RESTRAINTS, WEIGHTING AND SIMULTANEOUSLY TO THE ELEVATION OF THE MINIMUM COVER.
**Notes:**

1. Refer to the stripping details for pavement marking line widths.
2. This drawing shall be used in conjunction with the latest revised edition of the "Manual on Uniform Traffic Control Devices."
3. Raised pavement markers shall be placed on an 80 feet spacing, unless otherwise shown in the plans.

**Pavement Marking Details**

**Concrete Pavement**

- **Broken Line Striping**
  - Center Line
  - Skip Yellow
  - Raised Pavement Marker (Typ.)

**Asphalt Pavement**

- **Solid Line Striping on Concrete Pavement**
  - Continuous Yellow
  - Center Joint
  - Skip Yellow

- **Solid Line Striping on Asphalt Pavement**
  - Continuous Yellow
  - Center Joint

**Striping at Adjacent No Passing Lanes**

- **Concrete Pavement**
  - White Yield Line
  - Continuous Yellow

- **Asphalt Pavement**
  - Continuous Yellow
  - Center Joint

**Pavement Edge Line Marking**

- **Continuous White**
  - Edge of Pavement

**Detail of Standard Raised Pavement Markers**

- **Type II**
  - Prismatic Reflector
  - Red/Clear or Yellow/Yellow

**Yield Line Detail**

- **Direction of Travel**
- **White Yield Line**
- **Perpendicular to Entry Lane**

**Crosswalk and Stop Line Details**

- **10' Offset Line**
- **2' Offset Line**
- **6' Offset Line**

**AR KANSAS STATE HIGHWAY COMMISSION**

**STANDARD DRAWING PM-1**
NOTES FOR PIPE UNDERDRAINS

1. GEOTEXTILE FABRIC SHALL MEET THE REQUIREMENTS OF SECTION 625 FOR TYPE 1. PAYMENT FOR GEOTEXTILE FABRIC AND GRANULAR FILTER MATERIAL SHALL BE INCLUDED IN THE PRICE BID FOR "4" PIPE UNDERDRAINS." UNDERDRAIN OUTLET PROTECTORS WILL BE MEASURED AND PAID FOR IN ACCORDANCE WITH SECTION 611 OF THE STANDARD SPECIFICATIONS.

2. THE LOCATION OF ALL LATERALS SHALL BE MARKED WITH 4" X 12" PERMANENT PAVEMENT MARKING TAPE (TYPE III WHITE) AT THE OUTSIDE EDGE OF THE ROADWAY.

3. OLD PIPE MAY BE CONNECTED TO NEW PIPE LATERALS WHERE DIRECTED BY THE ENGINEER.

4. THE LOCATION OF ALL LATERALS SHALL BE MARKED WITH 4" X 12" PERMANENT PAVEMENT MARKING TAPE (TYPE III WHITE) AT THE OUTSIDE EDGE OF THE ROADWAY.

5. PAYMENT FOR THE RODENT SCREEN SHALL BE INCLUDED IN THE PRICE BID PER EACH FOR "UNDERDRAIN OUTLET PROTECTORS." THE WIDTH OF THE TRENCH AT THE TOP.

6. GRANULAR MATERIAL SHALL BE WRAPPED WITH GEOTEXTILE FABRIC. LAP FABRIC 12" OR " ALL AROUND & LAPPED AT TOP.

7. AT LOCATIONS WHERE A SINGLE LATERAL IS USED THE CONTRACTOR SHALL HAVE THE FOLLOWING OPTIONS: 1. INSTALL OUTLET PROTECTOR AS SHOWN ON STANDARD DRAWING PU-1 AND GROUT THE UNUSED HOLE OR 2. INSTALL AN OUTLET PROTECTOR WITH A SINGLE HOLE.

8. ANY EXISTING UNDERDRAINS THAT INTERFERE WITH INSTALLATION OF THE NEW UNDERDRAIN SYSTEM SHALL BE REMOVED AND DISPOSED OF AS DIRECTED BY THE ENGINEER. PAYMENT WILL BE CONSIDERED INCLUDED IN THE PRICE BID FOR THE VARIOUS CONTRACT ITEMS.

9. EXISTING UNDERDRAIN OUTLET PROTECTORS SHALL BE MEASURED AND PAID FOR AS "4" PIPE UNDERDRAINS." UNDERDRAIN OUTLET PROTECTORS WILL BE MEASURED AND PAID FOR BY THE UNIT IN ACCORDANCE WITH SECTION 611 OF THE STANDARD SPECIFICATIONS.

10. THE LOCATION OF ALL LATERALS SHALL BE MARKED WITH 4" X 12" PERMANENT PAVEMENT MARKING TAPE (TYPE III WHITE) AT THE OUTSIDE EDGE OF THE ROADWAY.

NOTE: GEOTECE TEXTILE FABRIC SHALL MEET THE REQUIREMENTS OF SECTION 625 FOR TYPE 1. PAYMENT FOR GEOTEXTILE FABRIC AND GRANULAR FILTER MATERIAL SHALL BE INCLUDED IN THE PRICE BID FOR "4" PIPE UNDERDRAINS." UNDERDRAIN OUTLET PROTECTORS WILL BE MEASURED AND PAID FOR IN ACCORDANCE WITH SECTION 611 OF THE STANDARD SPECIFICATIONS.

1. UNLESS OTHERWISE SPECIFIED ON THE PLANS, THE UNDERDRAIN COVER SHALL BE THROUGHOUT COMPLETELY SLOTTED AND SHALL BE SUBSIDIARY TO PIPE UNDERDRAIN.

2. GRANULAR MATERIAL SHALL BE WRAPPED WITH GEOTEXTILE FABRIC. LAP FABRIC 12" OR " ALL AROUND & LAPPED AT TOP.

3. EXISTING " PIPE UNDERDRAINS MAY BE CONNECTED TO NEW PIPE LATERALS WHERE DIRECTED BY THE ENGINEER. PAYMENT FOR CONNECTING TO DROP MEETS SHALL BE CONSIDERED INCLUDED IN THE PRICE BID FOR " PIPE UNDERDRAINS.

4. THE LOCATION OF ALL LATERALS SHALL BE MARKED WITH 4" X 12" PERMANENT PAVEMENT MARKING TAPE (TYPE III WHITE) AT THE OUTSIDE EDGE OF THE ROADWAY.

5. PAYMENT FOR THE RODENT SCREEN SHALL BE INCLUDED IN THE PRICE BID PER EACH FOR "UNDERDRAIN OUTLET PROTECTORS."

6. ANY EXISTING UNDERDRAINS THAT INTERFERE WITH INSTALLATION OF THE NEW UNDERDRAIN SYSTEM SHALL BE REMOVED AND DISPOSED OF AS DIRECTED BY THE ENGINEER. PAYMENT WILL BE CONSIDERED INCLUDED IN THE PRICE BID FOR THE VARIOUS CONTRACT ITEMS. EXISTING UNDERDRAIN OUTLET PROTECTORS SHALL BE MEASURED AND PAID FOR AS "4" PIPE UNDERDRAINS." UNDERDRAIN OUTLET PROTECTORS WILL BE MEASURED AND PAID FOR BY THE UNIT IN ACCORDANCE WITH SECTION 611 OF THE STANDARD SPECIFICATIONS.

7. AT LOCATIONS WHERE A SINGLE LATERAL IS USED THE CONTRACTOR SHALL HAVE THE FOLLOWING OPTIONS: 1. INSTALL OUTLET PROTECTOR AS SHOWN ON STANDARD DRAWING PU-1 AND GROUT THE UNUSED HOLE OR 2. INSTALL AN OUTLET PROTECTOR WITH A SINGLE HOLE.

8. ANY EXISTING UNDERDRAINS THAT INTERFERE WITH INSTALLATION OF THE NEW UNDERDRAIN SYSTEM SHALL BE REMOVED AND DISPOSED OF AS DIRECTED BY THE ENGINEER. PAYMENT WILL BE CONSIDERED INCLUDED IN THE PRICE BID FOR THE VARIOUS CONTRACT ITEMS.

9. EXISTING UNDERDRAIN OUTLET PROTECTORS SHALL BE MEASURED AND PAID FOR AS "4" PIPE UNDERDRAINS." UNDERDRAIN OUTLET PROTECTORS WILL BE MEASURED AND PAID FOR BY THE UNIT IN ACCORDANCE WITH SECTION 611 OF THE STANDARD SPECIFICATIONS.

10. THE LOCATION OF ALL LATERALS SHALL BE MARKED WITH 4" X 12" PERMANENT PAVEMENT MARKING TAPE (TYPE III WHITE) AT THE OUTSIDE EDGE OF THE ROADWAY.

NOTE: GEOTEXTILE FABRIC SHALL MEET THE REQUIREMENTS OF SECTION 625 FOR TYPE 1. PAYMENT FOR GEOTEXTILE FABRIC AND GRANULAR FILTER MATERIAL SHALL BE INCLUDED IN THE PRICE BID FOR "4" PIPE UNDERDRAINS." UNDERDRAIN OUTLET PROTECTORS WILL BE MEASURED AND PAID FOR IN ACCORDANCE WITH SECTION 611 OF THE STANDARD SPECIFICATIONS.
**GENERAL NOTES**

2. SUPERELEVATION VALUES SHOWN ON THE CROSS SECTIONS ARE VALUES TO PERMIT SIMPLER CALCULATIONS.

**ABBREVIATIONS**

NC - NORMAL CROWN  
RC - REVERSE CROWN, SUPERELEVATION AT NORMAL CROWN SLOPE  
L - DISTANCE FROM BEGINNING OF SUPERELEVATION TRANSITION TO ANY POINT (FT.)  
d - WIDTH OF PAVEMENT  
Ls - LENGTH OF SUPERELEVATION TRANSITION (FT.)  
C - NORMAL CROWN (FT.)

e - RATE OF SUPERELEVATION (FT. PER FT.)  
G - WIDTH OF SUBGRADE (FT.)

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**ADDED FORMULA**

**ISSUED**  
534-1-9-87

**DATE**  
01-09-87

**DATE FILMED**  
10-07-96

**REVISION**  
1

**ARKANSAS STATE HIGHWAY COMMISSION**

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1. ON PAVEMENT WITH TWO-WAY TRAFFIC, THE SUPERELEVATION SHALL BE REVOLVED ON THE INSIDE PAVEMENT EDGE UNLESS OTHERWISE NOTED ON THE PLANS.

3. LENGTHS FOR L MAY BE ROUNDED IN MULTIPLES OF 25 FT. OR 50 FT.

LENGTHS AS FOLLOWS:

4. PAVEMENTS WIDER THAN 2 LANES SHALL HAVE ADDITIONAL TRANSITION

3 LANE UNDIVIDED - - - - - +20%  
4 LANE UNDIVIDED - - - - - +50%  
5 LANE UNDIVIDED - - - - - +80%  
6 LANE UNDIVIDED - - - - - +100%

**NOTE:** MAINTAIN NORMAL CROWN ON INSIDE UNTIL SUPERELEVATION EXCEEDS 2C.

**SUPERELEVATION FOR TWO-WAY TRAFFIC**

**TABLES AND METHOD OF SUPERELEVATION**

**SUPERELEVATION TABLE FOR TWO-WAY TRAFFIC**

<table>
<thead>
<tr>
<th>DEGREE OF CURVE</th>
<th>30 MPH</th>
<th>40 MPH</th>
<th>50 MPH</th>
<th>60 MPH</th>
<th>70 MPH</th>
<th>80 MPH</th>
<th>90 MPH</th>
</tr>
</thead>
<tbody>
<tr>
<td>L</td>
<td>200</td>
<td>300</td>
<td>400</td>
<td>500</td>
<td>600</td>
<td>700</td>
<td>800</td>
</tr>
<tr>
<td>d</td>
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<td>Ls</td>
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<tr>
<td>C</td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**SUPERELEVATION FORMULA**

\[ \text{SUPERELEVATION} = \frac{L_{de}}{L_{s}} \]

**STANDARD METHOD WHEN SUPERELEVATION REVOLVES AROUND CENTER LINE**

CONTROL POINT

NOTE: MAINTAIN NORMAL CROWN ON INSIDE UNTIL SUPERELEVATION EXCEEDS 2C.

**SUPERELEVATION PROFILE**

OUTSIDE SUBGRADE EDGE

GARDEN FILED

INSTEP TO INNER PAVEMENT EDGE

**ARAKANSAS STATE HIGHWAY COMMISSION**

TABLES AND METHOD OF SUPERELEVATION FOR TWO-WAY TRAFFIC

**STANDARD DRAWING SE-2**
ADDED FILTER SOCK E-3 AND E-13

AND ARRANGEMENT VARIABLE WITH SECTION 625 GEOTEXTILE FABRIC

STAKES

R U N O F F INSTALL A MINIMUM OF 2 UPSLOPE STAKES AND 4 DOWNSLOPE STAKES BACKFILL COMPACTED EARTH ROADSIDE DITCHES SAND BAGS WATTLE

SECTION A-A F L O W L I N E O F D IT C H

6'' MIN.

WATER LEVEL SAND BAG DITCH CHECK (E-5)

STAKES 2' UPSLOPE WILL NOT BE MADE. OVERLAPPED INSTEAD. PAYMENT OF ADDITIONAL MATERIAL FOR OVERLAP ONLY AT A SUPPORT POST OR TWO SECTIONS OF FENCE MAY BE

GEOTEXTILE FABRIC SHALL BE SPLICED TOGETHER WITH A SEWN SEAM

SILT FENCE (E-11) WATTLE DITCH CHECK (E-1)

F L O W L I N E O F D IT C H

6 ' M A X .

WATER LEVEL

SECTION B-B F L O W L I N E O F D IT C H

6'' MIN.

WATER LEVEL

SECTION C-C

F L O W L I N E O F D IT C H

6'' MIN.

WATER LEVEL

AUTHOR: ARKANSAS STATE HIGHWAY COMMISSION

TEMPORARY EROSION CONTROL DEVICES

COMPOST FILTER SOCK DROP INLET PROTECTION (E-13)

REVISION

FILTER SOCK ALONG SLOPE (E-3)

DROP INLET PLAN VIEW

N.T.S.

DROP INLET PERSPECTIVE VIEW

N.T.S.

FILTER SOCK ALONG SLOPE (E-3)

DROP INLET PLAN VIEW

N.T.S.

FILTER SOCK ALONG SLOPE (E-3)

DROP INLET PERSPECTIVE VIEW

N.T.S.

FILTER SOCK ALONG SLOPE (E-3)

DROP INLET PLAN VIEW

N.T.S.

FILTER SOCK ALONG SLOPE (E-3)

DROP INLET PERSPECTIVE VIEW

N.T.S.

FILTER SOCK ALONG SLOPE (E-3)
CLEARING AND GRUBBING

CONSTRUCTION SEQUENCE
1. Place perimeter controls (i.e., silt fences, diversion ditches, sediment Blanket).
2. Perform clearing and grubbing operation.

GENERAL NOTE
The work progresses. Slopes shall be excavated and stabilized in equal increments not to exceed 25 feet, measured horizontally.

CONSTRUCTION SEQUENCE
1. Excavate and stabilize interceptor and/or diversion ditches.
2. Perform Phase 1 excavation. Place permanent or temporary seeding.
3. Perform Phase 2 excavation. Place permanent or temporary seeding.
4. Perform final phase of excavation. Place permanent or temporary seeding. Sediment Blanket, other erosion control devices as required.

EMBANKMENT

CONSTRUCTION SEQUENCE
1. Construct diversion ditches, check. Silt fences, sediment Blanket as specified.
2. Place Phase 1 embankment. Place permanent, or temporary seeding.
3. Place Phase 2 embankment. Permanent or temporary seeding. Construction is to be temporarily abandoned for a period of greater than 21 days.
4. Place final phase of embankment with permanent or temporary seeding. Place diversion ditches and slope drains and maintain until entire slope is stabilized.

GENERAL NOTE
All embankment slopes shall be seeded, prepared, and mulched as required. The work progresses. Slopes shall be constructed and stabilized in equal increments not to exceed 25 feet, measured vertically.

CONSTRUCTION SEQUENCE
1. Place perimeter controls (i.e., silt fences, diversion ditches, sediment Blanket). Three phases shown for illustration. The number of phases will vary. The work progresses. Slopes shall be excavated and stabilized in equal increments not to exceed 25 feet, measured horizontally.
GENERAL NOTES:

These installations to be used where normal fencing installations would cause the collecting of drift in the channel or the depression will not permit normal installation. Installations will be made only where directed by the engineer.

When a fence line approaches a ditch, gully or depression, the last post on level ground shall be placed close enough to the edge of the drop off that the fence may be strung to the post in the depression without touching the ground.

In terrain of such extreme irregularity that minor grading will not be feasible, the normal fence shall continue on grade, and the gullies or depressions treated by auxiliary fences as shown.

Payment for the type installation used will not be made directly but will be included in the contract unit price bid for wire fence or chain link fence.

When a fence line approaches a ditch, gully or depression, the last post on level ground shall be placed close enough to the edge of the drop off that the fence may be strung to the post in the depression without touching the ground.

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Payment for the type installation used will not be made directly but will be included in the contract unit price bid for wire fence or chain link fence.
GENERAL NOTES
STEEL LINE POSTS SHALL BE PAINTED OR GALVANIZED. 
TYPICAL CONSTRUCTION HOLE OF GROUNDED BOLTS MUST 
CONFORM TO THE DIMENSIONS AND WEIGHTS SPECIFIED ON 
STANDARD DRAWING W/F-3. CONCRETE FENCES SHALL 
HEAVE OR SUNken 1'-0" IN LENGTH IN ORDER TO PROVIDE 
SUFFICIENT SET IN SOFT 
GROUND OR SMALL DEPRESSIONS.

REVIEWED R/W LOCATION DETAIL

NOTE: STEEL LINE POSTS SHALL BE 6'-6" MINIMUM LENGTH.

NOTE: STEEL WIRE SHALL BE 8 STRANDS BARBED WIRE (D-2)
3'-3" MIN. 1'-0" MIN.

MAX. SPACING TO BE 10'-0"

TYPICAL VEHICULAR GATES
OTHER TYPE VEHICULAR GATES MAY BE USED WITH THE APPROVAL OF THE 
ENGINEER.

THE METHOD OF SECURING GATE LATCH AND/OR LOCKS MUST 
BE APPROVED BY THE ENGINEER.

ADDED TYPE D-2 FENCE
DELETED CLASS CONCRETE
ADDED CORNER POST NOTES
GENERAL REVISIONS

NOTE:

THE ENDS OF THE BARBED WIRE SHALL BE 
CONNECTED TO THE PROJECTING WIRES 
SPLICE FOR BARBED WIRE BETWEEN PULL 
POST ASSEMBLY AND PULL POST 
THE HORIZONTAL WIRES OF THE FIRST WEB. 
THE METHOD OF SECURING BARBED WIRE BETWEEN PULL 
AND END POSTS ADJACENT TO BRIDGE 
CONNECTION SHALL BE CONSTRUCTED BETWEEN 
EVERNY MONUMENTS.

WRAPPED A MINIMUM OF 4 TIMES FOR EACH WIRE LOOP.

THE ENDS OF THE BARBED WIRE SHALL BE 
CONNECTED TO THE PROJECTING WIRES 
SPLICE FOR VENWIRE BETWEEN PULL 
AND END POSTS ADJACENT TO BRIDGE 
CONNECTION SHALL BE CONSTRUCTED BETWEEN 
EVERNY MONUMENTS.

WRAPPED A MINIMUM OF 4 TIMES FOR EACH WIRE LOOP.

THE ENDS OF THE BARBED WIRE SHALL BE 
CONNECTED TO THE PROJECTING WIRES 
SPLICE FOR BARBED WIRE BETWEEN PULL 
AND END POSTS ADJACENT TO BRIDGE 
CONNECTION SHALL BE CONSTRUCTED BETWEEN 
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