INDEX OF SHEETS AND STANDARD DRAWINGS

INDEX OF SHEETS

<table>
<thead>
<tr>
<th>SHEET NO.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
</tr>
<tr>
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NOTE: CROSS SECTIONS NOT NORMALLY INCLUDED IN PLANS SOLD TO PROSPECTIVE BIDDERS, BUT MAY BE HAD UPON REQUEST.

ROADWAY STANDARD DRAWINGS

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<thead>
<tr>
<th>DRWG.NO.</th>
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<tr>
<td>CDP-1</td>
<td>CONCRETE DITCH PAVING</td>
<td>12-08-96</td>
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<td>FES-1</td>
<td>FLARED END SECTION</td>
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<td>FES-2</td>
<td>FLARED END SECTION</td>
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<tr>
<td>GR-6</td>
<td>GUARD RAIL DETAILS</td>
<td>7-14-10</td>
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<tr>
<td>GR-8</td>
<td>GUARD RAIL DETAILS</td>
<td>7-14-10</td>
</tr>
<tr>
<td>GR-10</td>
<td>GUARD RAIL DETAILS</td>
<td>7-14-10</td>
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<td>GR-10A</td>
<td>GUARD RAIL DETAILS</td>
<td>7-14-10</td>
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<tr>
<td>GR-11</td>
<td>GUARD RAIL DETAILS</td>
<td>7-14-10</td>
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<tr>
<td>B-1</td>
<td>IMPACT ATTENUATION BARRIER</td>
<td>10-15-08</td>
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<td>PBC-1</td>
<td>PRECAST CONCRETE BOX CULVERTS</td>
<td>1-28-15</td>
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<tr>
<td>PC-1</td>
<td>CONCRETE PIPE CULVERT FILL HEIGHTS &amp; BEDDING</td>
<td>2-27-14</td>
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<tr>
<td>PCM-1</td>
<td>METAL PIPE CULVERT FILL HEIGHTS &amp; BEDDING</td>
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<td>PA-1</td>
<td>PAVEMENT HANDLING DETAILS</td>
<td>6-01-17</td>
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<td>RCB-1</td>
<td>REINFORCED CONCRETE BOX CULVERT DETAILS</td>
<td>7-25-12</td>
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<td>RCB-2</td>
<td>EXCAVATION PAYMENTS, BACKFILL, &amp; SOIL SODDING FOR BOX CULVERTS</td>
<td>11-20-03</td>
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<tr>
<td>RCB-3</td>
<td>METHOD OF EXTENDING EXISTING R.C. BOX CULVERTS</td>
<td>10-12-96</td>
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<tr>
<td>TC-1</td>
<td>STANDARD TRAFFIC CONTROLS FOR HIGHWAY CONSTRUCTION</td>
<td>4-10-17</td>
</tr>
<tr>
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<td>STANDARD TRAFFIC CONTROLS FOR HIGHWAY CONSTRUCTION</td>
<td>9-02-15</td>
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<tr>
<td>TC-3</td>
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<tr>
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<td>STANDARD TRAFFIC CONTROLS FOR HIGHWAY CONSTRUCTION - TEMPORARY PRECAST BARRIER</td>
<td>2-27-14</td>
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<td>TEC-1</td>
<td>TEMPORARY EROSION CONTROL DEVICES</td>
<td>12-15-11</td>
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<tr>
<td>TEC-2</td>
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<tr>
<td>TEC-4</td>
<td>TEMPORARY EROSION CONTROL DEVICES</td>
<td>7-26-12</td>
</tr>
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</table>

INDEX OF SHEETS AND STANDARD DRAWINGS

4/04

RE-PRINTED

WWW.RD.WI.GOV

STATE ENGINEER

REVISION DATE

NEEDED DATED

STANDARD DRAININGS

INDEX OF SHEETS AND STANDARD DRAWINGS

INDEX OF SHEETS AND STANDARD DRAWINGS
GOVERNING SPECIFICATIONS

ARKANSAS STATE HIGHWAY COMMISSION STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION, EDITION OF 2014, AND THE FOLLOWING SPECIAL PROVISIONS AND SUPPLEMENTAL SPECIFICATIONS:

NUMBER  TITLE

1. GRADE LINE DENOTES FINISHED GRADE WHERE SHOWN ON PLANS.

2. ALL PIPES, LINES, POWER, TELEPHONE, AND TELEGRAPH LINES TO BE MOVED OR LOWERED BY THE RESPECTIVE OWNERS AS PER 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. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING U.S. MAILBOXES WITHIN THE PROJECT LIMITS IN SUCH A MANNER THAT THE PUBLIC MAY RECEIVE CONTINUED MAIL SERVICE. PAYMENT WILL BE CONSIDERED INCLUDED IN THE PRICE BID FOR THE VARIOUS BID ITEMS.

5. ALL LAND MONUMENTS LOCATED WITHIN THE CONSTRUCTION AREA SHALL BE PROTECTED IN ACCORDANCE WITH SECTION 107.12 OF THE STANDARD SPECIFICATIONS.

6. ALL TREES THAT DO NOT DIRECTLY INTERFERE WITH THE PROPOSED CONSTRUCTION SHALL BE SPARED AS DIRECTED BY THE ENGINEER. CARE AND DISCRETION SHALL BE USED TO INSURE THAT ALL TREES NOT TO BE REMOVED SHALL BE HANDLED AS LITTLE AS POSSIBLE DURING THE CONSTRUCTION OPERATIONS.

7. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING A FENCE TO CONTROL LivESTOCK IN AREAS WHERE PASTURES ARE SEVERED. WIRE FENCE MAY BE CONSTRUCTED IN FILL OR FULLY THEREOF, THE CONTRACTOR AT HIS OWN EXPENSE, MAY ELECT TO PROVIDE TEMPORARY FENCING SUITABLE TO CONTAIN LIVESTOCK.

8. THIS PROJECT IS COVERED UNDER A SECTION 404 NARRATIVES 14 PERMIT, REFER TO SECTION 110 OF THE STANDARD SPECIFICATIONS, EDITION OF 2014, FOR PERMIT REQUIREMENTS.

9. ALL FLEXIBLE BASE AND ASPHALTIC PAVEMENTS REMOVED SHALL BE PAID FOR UNDER THE ITEM NO. 210 - UNCLASSIFIED EROSION.

10. THE EXISTING ASPHALT PAVEMENT TO BE REMOVED FROM THE REMAINING PAVEMENT SHALL BE SEPARATED BY SAWING ALONG A NEAT LINE. AFTER SAWING, 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 BE REPAIRED AT THE CONTRACTOR'S EXPENSE.

GOVERNING SPECIFICATIONS AND GENERAL NOTES
HEIGHT, SUPPORT, & SHORING
BY THE CONTRACTOR
SEE LANDSLIDE REPAIR SPECIAL PROVISION

LANDSLIDE REPAIR
FOR ILLUSTRATION ONLY
HEIGHT, SUPPORT, AND SHORING
BY THE CONTRACTOR
(SEE LANDSLIDE REPAIR SPECIAL PROVISION)

FOR ILLUSTRATION ONLY
HEIGHT, SUPPORT, SHORING
BY THE CONTRACTOR
(SEE LANDSLIDE REPAIR SPECIAL PROVISION)

THE THICKNESS OF AGGREGATE BASE COURSE SHALL BE SHEETED ON PAPER, AND THE THICKNESS OF AGGREGATE BASE COURSE SHALL NOT EXCEED THE THICKNESS THAT DOES NOT MEET TOLERANCE INDICATED.
PAYMENT shall NOT BE MADE FOR MATERIAL PLACED IN EXCESS OF THE TOLERANCE INDICATED.

ASPHALT FOR LEVELING OF EXISTING PAVEMENT shall BE PLACED ONLY IF WHERE DIRECTED BY THE ENGINEER. CALCULATIONS FOR THE AMOUNT OF LEVELING AND/OR LEVELING OPERATIONS shall NOT BE MADE. ALL LEVELING AND/OR LEVELING OPERATIONS shall BE CONSIDERED INCLUDED IN THE VARIOUS PAY ITEMS.

THE FINAL 2" OF SURFACE COURSE is TO BE PLACED AFTER ALL OTHER COURSES have BEEN FAII. IN-PLACE JOINTS shall NOT BE AT LANE LINES.

WITH APPROVAL OF THE ENGINEER, THE CONTRACTOR shall BE ALLOWED TO SUBSTITUTE AT NO ADDITIONAL COST THE EXISTING PAVEMENT GRADE SURFACE COURSE FOR THE AGGREGATE BASE COURSE ON THE SHOULDERS.

THE EXISTING PAVEMENT TO BE REMOVED FROM THE REMAINING PAVEMENT shall BE REMOVED FROM THE REMAINING PAVEMENT BY SCYTHING ALONG A NEAT LINE. AFTER REMOVAL, 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 PAVEMENT THAT IS TO REMAIN shall BE REPAIRED AT THE CONTRACTOR's EXPENSE.

TYPICAL SECTIONS OF IMPROVEMENT
AGGREGATE BASE COURSE (CLASS 7) VAR. COMP. DEPTH
(44,000 TONS/STA.)
GEOSYNTHETICALLY CONFINED
SOIL WALL AND BACKFILL
FOR ILLUSTRATION ONLY
HEIGHT, SUPPORT, AND SHORING
BY THE CONTRACTOR
(SEE LANDSLIDE REPAIR
SPECIAL PROVISION)

TO BE USED IF AND WHERE
DIRECTED BY THE ENGINEER.

NOTES:
THE THICKNESS OF AGGREGATE BASE COURSE SHALL BE
WITHIN PLUS OR MINUS ONE INCH OF THE PLAN THICKNESS
SHOWN; THE CONTRACTOR WILL CORRECT ANY DEFICIENT
THICKNESS THAT DOES NOT MEET TOLERANCE INDICATED.
PAYMENT WILL NOT BE MADE FOR MATERIAL PLACED IN
EXCESS OF THE TOLERANCE INDICATED.

ASPHALT FOR LEVELING OF EXISTING PAVEMENT SHALL
BE PLACED ONLY IF AND WHERE DIRECTED BY THE ENGINEER.
CALCULATIONS FOR THE AMOUNT OF LEVELING AND/OR LEVELING OPERATIONS
SHALL BE PERFORMED BEFORE CONSTRUCTING NOTCH AND
WIDENING.
CALCULATIONS WILL NOT BE PAID FOR DIRECTLY, BUT PAYMENT WILL BE
CONSIDERED INCLUDED IN THE VARIOUS PAY ITEMS.

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

WITH APPROVAL OF THE ENGINEER, THE CONTRACTOR WILL BE
ALLOWED TO SUBSTITUTE ASPHALT FOR LEVELING OF
EXISTING PAVEMENT TO BE WITHIN PLUS OR MINUS ONE INCH
IN LIEU OF AGGREGATE BASE COURSE ON THE SHOULDERS.

THE EXISTING ASPHALT PAVEMENT TO BE REMOVED FROM THE
REMAINING PAVEMENT SHALL BE LEVELLED OFF AND LAYING A
NEAT LINE. AFTER LAYING, THE REMAINDER SHALL BE
CAREFULLY REMOVED IN A MANNER THAT WILL NOT DAMAGE THE
PAVEMENT THAT IS TO REMAIN, ANY DAMAGE OF THE ASPHALT
PAVEMENT IN PLACE SHALL BE REPAIRED AT
THE CONTRACTOR'S EXPENSE.

2 LANE OPEN SHOULDER
HWY 59, SITE No. 2
STA. 54+76.00 TO STA. 58+20.00

TYPICAL SECTIONS OF IMPROVEMENT
CONCRETE DITCH PAVING (TYPE SPECIAL)

SECTION DETAIL FOR GUARDRAIL

NOTE: REFER TO STANDARD DRAWINGS
GR-B, GR-G, GR-SA, GR-10 & GR-10A
FOR ADDITIONAL INFORMATION.

STA, 235+89.00 TO STA, 238+66.00
STA, 7+67.00 TO STA, 12+05.00
STA, 54+23.00 TO STA, 58+73.00
STA, 61+00.00 TO STA, 63+73.50
STA, 65+14.29 TO STA, 68+74.00

MATCH SHOULDER ELEV.

SECTION DETAIL FOR PAVEMENT TRANSITIONS

NOTE: CONSTRUCTION OF DITCH BLOCK IS SUBSIDIARY TO CONCRETE PAVED DITCH (TYPE SPECIAL).
SITE NO. 2
TEMPORARY EROSION CONTROL DETAILS

C.L. SURVEY

EXIST. R/W

STA. 23+56.68
BEGIN CONSTRUCTION
LOG MILE 15.81

STA. 24+58.62
END CONSTRUCTION
LOG MILE 15.79

EXIST. R/W

DATE OF REVISION

REVISION

LEGEND

- ROCK DITCH CHECKS
- SILT FENCE
- GENERAL SITE FLOW DIRECTION INDICATOR

STA. 29+87.02
BEGIN CONSTRUCTION
LOG MILE 15.69

EXIST. R/W

STA. 31+91.99
END CONSTRUCTION
LOG MILE 15.67

C.L. SURVEY

NO. 29+76-E

NO. 29+76-E

NO. 29+76-E

NO. 29+76-E

30
SITE NO. 1 CONSTRUCTION SEQUENCE:

INSTALL ADVANCE WARNING SIGNS AND DEVICES.

INSTALL TEMPORARY EROSION CONTROL DEVICES.

CONSTRUCT LANDSLIDE REPAIR MEASURES & PIPE CULVERT FROM STA. 236+80 TO STA. 238+60.

APPLY LEVEL COURSE TO EXISTING LANES IF AND WHERE DIRECTED BY THE ENGINEER.

CONSTRUCT NEW PAVEMENT & GUARDRAIL FROM STA. 235+41 TO STA. 239+16.

APPLY FINAL 2" LIFT OF ACMD SURFACE COURSE TO EXISTING LANES IF AND WHERE DIRECTED BY THE ENGINEER.

CONSTRUCT NEW PAVEMENT & GUARDRAIL FROM STA. 235+41 TO STA. 239+16.

APPLY FINAL 2" LIFT OF ACMD SURFACE COURSE AND INSTALL PERMANENT PAVEMENT MARKING AS SHOWN IN THE PERMANENT PAVEMENT MARKING DETAILS AND REFER TO STANDARD DRAWING PM-1.

QUANTITIES ENTIRE PROJECT

SIGNS = 30/2% 500 FT.

FURNISHING AND INSTALLING PCCB = 800 LIN. FT.

RELOCATING PCCB = 7,035 LIN. FT.

TRAFFIC DRUMS = 227 EACH

REMOVAL OF PERMANENT PAVEMENT MARKINGS = 9,260 LIN. FT.

REMOVAL CONSTRUCTION PAVEMENT MARKINGS = 8,679 LIN. FT.

CONSTRUCTION PAVEMENT MARKINGS = 8,431 LIN. FT.

WARNING LIGHTS = 210 EACH

PORTABLE TRAFFIC SIGNALS = 20 EACH

PRECAST CONCRETE BARRIERS = 15 EACH

WHITE CONSTRUCTION PAVEMENT MARKING = 330'
**Work Zone Limits**

<table>
<thead>
<tr>
<th>Station</th>
<th>Description of Work</th>
</tr>
</thead>
<tbody>
<tr>
<td>8+22.00</td>
<td>Landslide Repair and Replace Pipe Culvert at Sta. 10+33</td>
</tr>
<tr>
<td>17+12.67</td>
<td>Replace Rock Culvert and Pipe Culvert Extension</td>
</tr>
<tr>
<td>35+54.16</td>
<td>Replace Rock Culvert and Pipe Culvert Extension</td>
</tr>
<tr>
<td>45+03.80</td>
<td>Replace R.C. Box Culvert</td>
</tr>
<tr>
<td>48+40.26</td>
<td>Replace Rock Culvert and Pipe Culvert Extension</td>
</tr>
<tr>
<td>54+76.00</td>
<td>Landslide Repair and Replace Culverts at Sta. 57+47 and Sta. 57+97</td>
</tr>
<tr>
<td>61+62.00</td>
<td>Landslide Repair and Replace R.C. Box Culvert at Sta. 62+23</td>
</tr>
<tr>
<td>66+65.00</td>
<td>Landslide Repair and Replace Pipe Culvert at Sta. 67+93</td>
</tr>
</tbody>
</table>

**Site No. 2 Construction Sequence:**

- Install advance warning signs and devices for overall project.
- For each specific work zone area:
  1. Install advance warning signs and devices.
  2. Install temporary erosion control devices.
  3. Construct landslide repair measures and/or culvert replacement extension.
  4. Apply lane closure or existing lanes if and where directed.
  5. Construct new pavement.
  6. Construct new culvert, where shown on plans.

Apply final 2" lift ofadm surface course and install permanent pavement marking. Refer to standard drawing for details.

**Quantities Entire Project:**

- Signs = 3072 SQ. FT.
- Furnishing and Installing P.C.C.B. = 808 LIN. FT.
- Relocating P.C.C.B. = 7,033 LIN. FT.
- Removal of permanent pavement markings = 19,261 LIN. FT.
- Removal, construction pavement markings = 6,679 LIN. FT.
- Construction pavement markings = 8,643 LIN. FT.

**Work Zone Limits**

<table>
<thead>
<tr>
<th>Station</th>
<th>Description of Work</th>
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<tbody>
<tr>
<td>23+56.68</td>
<td>Replace Pipe Culvert</td>
</tr>
<tr>
<td>29+82.02</td>
<td>Replace Pipe Culvert</td>
</tr>
</tbody>
</table>

**Advance Warning**

- Flashing warning lights
- Portable traffic signal
- Precast concrete barrier
SOIL CHARACTERISTICS TABULATED ABOVE ARE REPRESENTATIVE OF THE LOCATION OF THE SAMPLE, AND FROM SURFACE INDICATIONS ARE TYPICAL FOR THE LIMITS SHOWN. THESE DATA ARE SHOWN FOR INFORMATION ONLY. THE STATE WILL NOT BE RESPONSIBLE FOR VARIATIONS IN THE SOIL CHARACTERISTICS AND/OR EXTENT OF SAME DIFFERING FROM THE ABOVE TABULATIONS.
### Soil Description:

<table>
<thead>
<tr>
<th>Depth (ft)</th>
<th>Surface Elevation</th>
<th>Description of Material</th>
<th>Soil Group</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>502.0</td>
<td>Slight Dip, Dark Gray SEAMS</td>
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</tr>
<tr>
<td>5</td>
<td></td>
<td>Moist, Very Loose, Brown Clayey Sand with Some Gravel (Rock Fragments)</td>
<td></td>
</tr>
<tr>
<td>10</td>
<td></td>
<td>Moist, Medium Dense, Brown Gravel (Sandstone Fragments)</td>
<td></td>
</tr>
<tr>
<td>15</td>
<td></td>
<td>Moist, Loose, Brown Clayey Sand with Gravel (Sandstone Fragments)</td>
<td></td>
</tr>
<tr>
<td>20</td>
<td></td>
<td>Wet, Loose, Brown Clayey Sand with Gravel (Sandstone Fragments)</td>
<td></td>
</tr>
<tr>
<td>25</td>
<td></td>
<td>SHALE WITH OCCASIONAL SANDSTONE SEAMS - Medium Hard, Slightly Weathered,</td>
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<tr>
<td></td>
<td></td>
<td>Slight Dip, Dark Gray</td>
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<td>30</td>
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<td>36</td>
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</table>

*Remarks:*

**SOIL CHARACTERISTICS TABULATED ABOVE ARE REPRESENTATIVE AT THE LOCATION OF THE SAMPLE, AND FROM SURFACE INDICATIONS ARE TYPICAL FOR THE LIMITS SHOWN. THESE DATA ARE SHOWN FOR INFORMATION ONLY. THE STATE WILL NOT BE RESITIBLE FOR VARIATIONS IN THE SOIL CHARACTERISTICS AND/OR EXTENT OF SAME DIFFERING FROM THE ABOVE TABULATIONS.
Site No. 1

Soil Borings Log

Soil Characteristic Tabulated Above Are Representative At The Location Of The Sample, And From Surface Indications Are Typical For The Limits Shown. These Data Are Shown For Information Only. The State Will Not Be Responsible For Variations In The Soil Characteristics And/Or Extent Of Same Differing From The Above Tabulations.

Arkansas Hwy. & Trans. Department
Materials Division - Geotechnical Sec.

Job No.: 040750
Job Name: Hwy 55 Slide Repair
Job Location: 5' Left of Centerline of Existing Roadway
Station: 237+47
Date: June 3, 2015
Type of Drilling: Hollow Stem Auger - Diamond Core
Equipment: CM&67

<table>
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<th>Depth (ft)</th>
<th>Description of Material</th>
<th>Soil Group</th>
<th>Plastic</th>
<th>Liquid</th>
<th>Dry Density</th>
<th>Water Content</th>
<th>Void Ratio</th>
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<tbody>
<tr>
<td>0</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Dry, Very Dense, Brown Sand with Gravel (Sandstone Fragments)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>Sandstone Boulders with Sandy Clay</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>20</td>
<td>Reddish Brown Sandy Clay with Boulders</td>
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</tr>
<tr>
<td>25</td>
<td>Boring Terminated</td>
<td></td>
<td></td>
<td></td>
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</tbody>
</table>

Remarks:

Boring terminated for job.
**AR-KANSAS HWY. & TRANS. DEPARTMENT MATERIALS DIVISION - GEOTECHNICAL SEC.**

**JOE NO:** 040750  Washington County

**JOB NAME:** Hwy 59 Slide Repair

**LOCATION:** 10+56

**LONGED BY:** Wade Roughter

**COMPLETION DEPTH:** 22.3

<table>
<thead>
<tr>
<th>DEPTH (FT)</th>
<th>DESCRIPTION OF MATERIAL</th>
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<tbody>
<tr>
<td>5</td>
<td>Moist, Medium Stiff, Brown and Gray Clay with Gravel (Sandstone and Shale Fragments)</td>
</tr>
<tr>
<td>10</td>
<td>SHALE - Brown and Gray, Highly Weathered, Soft</td>
</tr>
<tr>
<td>15</td>
<td>LIMESTONE - Gray, Thin Bedded, Slightly Weathered, Hard, with Slight Dip</td>
</tr>
<tr>
<td>30</td>
<td>Boring Terminated</td>
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</tbody>
</table>

**SURFACE ELEVATION:** 509.8

**SOIL CHARACTERISTICS:**

- **Soil Group:** Not specified
- **Plastic Limit:** Not specified
- **Plasticity Index:** Not specified
- **Consistency Class:** Not specified

**DATE:** October 6, 2011

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**AR-KANSAS HWY. & TRANS. DEPARTMENT MATERIALS DIVISION - GEOTECHNICAL SEC.**

**JOE NO:** 040750  Washington County

**JOB NAME:** Hwy 59 Slide Repair

**LOCATION:** 10' Right of Center Line of Hwy. 59

**LONGED BY:** Wade Roughter

**COMPLETION DEPTH:** 32.9

<table>
<thead>
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<td>Moist, Very Stiff, Brown Clay with Gravel (Sandstone Fragments)</td>
</tr>
<tr>
<td>10</td>
<td>SHALE - Gray, Highly Weathered, Medium Hard</td>
</tr>
<tr>
<td>15</td>
<td>SANDSTONE - Gray, Medium Bedded, Slightly Weathered, Calcareous, Well-Cemented, with Slight Dip</td>
</tr>
<tr>
<td>20</td>
<td>LIMESTONE - Gray, Medium Bedded, Slightly Weathered, Hard, with Slight Dip</td>
</tr>
<tr>
<td>25</td>
<td>LIMESTONE - Gray, Thick Bedded, Slightly Weathered, Hard, with Slight Dip *</td>
</tr>
<tr>
<td>30</td>
<td>LIMESTONE - Gray, Medium Bedded, Slightly Weathered, Hard, with Slight Dip and Vertically Fractured Layers</td>
</tr>
<tr>
<td>35</td>
<td>Boring Terminated</td>
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</table>

**SURFACE ELEVATION:** 511.5

**SOIL CHARACTERISTICS:**

- **Soil Group:** Not specified
- **Plastic Limit:** Not specified
- **Plasticity Index:** Not specified
- **Consistency Class:** Not specified

**DATE:** October 5, 2011
**Job No.: 040750**  
*Washington County*

**Job Name:**  
Hwy 59 Slide Repair

**Station:**  
12+62

**Location:**  
7 Right of Center Line of Hwy. 59

**Logged By:**  
Wade Boughner

**Completion Depth:** 37.3 ft

**Remarks:**  
*Total water loss was encountered at 24.8'. Long = 94.4978702, Lat = 35.76137648*

### Soil Characteristics

<table>
<thead>
<tr>
<th>Depth (ft)</th>
<th>Surface Elevation</th>
<th>Description of Material</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-5</td>
<td>515.7</td>
<td>Moist, Hard, Brown Clay with Gravel (Sandstone Fragments) and Organic Matter</td>
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<tr>
<td>5-10</td>
<td></td>
<td>SHALE - Brown and Gray, Highly Weathered, Soft</td>
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<tr>
<td>10-15</td>
<td></td>
<td>SANDSTONE - Gray, Medium Bedded, Slightly Weathered, Carbonaceous, Well-Cemented, with Slight Dip *</td>
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<tr>
<td>15-20</td>
<td></td>
<td>SANDSTONE - Gray, Medium Bedded, Slightly Weathered, Carbonaceous, Well-Cemented, with Slight Dip with Vertically Fractured Layers</td>
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<tr>
<td>20-25</td>
<td></td>
<td>LIMESTONE WITH SHALE PARTINGS - Gray, Medium Bedded, Slightly Weathered, Hard, with</td>
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</table>

**Remarks:**  
*Total water loss was encountered at 24.8'. Long = 94.4978702, Lat = 35.76137648*
### Soil Borings Log

**Job No.:** 040750  
**Location:** Hwy 59 Slide Repair  
**Date:** October 3, 2011

#### Site No. 2

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<thead>
<tr>
<th>BRDNG NO.</th>
<th>4</th>
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<tbody>
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<td>JOB NAME</td>
<td>Hwy 59 Slide Repair</td>
</tr>
<tr>
<td>DATE</td>
<td>October 3, 2011</td>
</tr>
<tr>
<td>LOCATION</td>
<td>Site No. 2</td>
</tr>
<tr>
<td>EQUITION</td>
<td>CME Automatic</td>
</tr>
<tr>
<td>DEPTH</td>
<td>48.5 ft</td>
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#### Description of Material

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<th>Depth (ft)</th>
<th>Surface Elevation</th>
<th>Soil Group</th>
<th>% Water</th>
<th>% Air</th>
<th>% Solids</th>
<th>% Liquid</th>
<th>Bulk Density</th>
<th>Moisture Loss</th>
<th>Coal Residue</th>
<th>Sandstone Fragments</th>
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<td>Moist, Stiff, Brown Clay with Gravel (Sandstone Fragments)</td>
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**Remarks:** Long = -94.46858664; Lat. = 35.764474087

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**Job No.:** 040750  
**Location:** Hwy 59 Slide Repair  
**Date:** October 3, 2011

#### Site No. 2

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#### Description of Material

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<th>Surface Elevation</th>
<th>Soil Group</th>
<th>% Water</th>
<th>% Air</th>
<th>% Solids</th>
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<th>Bulk Density</th>
<th>Moisture Loss</th>
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</tbody>
</table>

**Remarks:** Long = -94.46858664; Lat. = 35.764474087

---

**Soil Characteristics Tabulated Above are Representative at the Location of the Sample and from Surface Indications are Typical for the Limits Shown. These Data Are Shown for Information Only. The State Will Not Be Responsible for Variations in the Soil Characteristics and/or Extent of Same Differing from the Above Tabulations."
- **Job No.:** 040750
- **Location:** 7 Right of Center Line of Hwy. 59
- **Type of Drilling:** Hollow Stem Auger & CME 75 w/CME Automatic

### Description of Material

<table>
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<th>Depth (ft)</th>
<th>Surface Elevation</th>
<th>Description</th>
</tr>
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<tbody>
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<td>556.1</td>
<td>Moat, Stiff, Brown Clay with Gravel (Sandstone Fragments), Cobbles and Boulders</td>
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<td>Moat, Very Hard, Brown Clay with Gravel (Sandstone Fragments), Cobbles and Boulders</td>
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<tr>
<td>20</td>
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<td>Moat, Stiff, Brown Clay with Gravel (Sandstone Fragments) and Organic Matter</td>
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<tr>
<td>25</td>
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<td>Powdery, Bedded, Slightly Weathered, Slightly Calcareous, Well-Cemented, with Slight Dip and Vertically Fractured Layers</td>
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<tr>
<td>30</td>
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<td>Powdery, Laminated, Slightly Weathered, Hard, with Slight Dip and Vertically Fractured Layers</td>
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</tbody>
</table>

**Remarks:** Long = -94.48642805, Lat. = 35.764979458
### ARKANSAS HWY. & TRANS. DEPARTMENT
**MATERIALS DIVISION - GEOTECHNICAL SEC.**

**BOREE NO.:** 6  
**DATE:** October 3, 2011

**JOB NO.:** 040750  
**JOB NAME:** Hwy 59 Slide Repair

**STATION:** 27+36  
**LOCATION:** 10' Right of Center Line of Hwy 59

**LOGGED BY:** Wade Boughner  
**COMPLETION DEPTH:** 38.1

<table>
<thead>
<tr>
<th>Depth (FT)</th>
<th>Description of Material</th>
<th>Soil Group</th>
<th>% Moist.</th>
<th>Bulk Weight</th>
<th>Dry Weight</th>
<th>Moisture</th>
<th>Density</th>
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<td>Gravel (Sandstone Fragments), Cobble and Boulders with Clay</td>
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<tr>
<td>15 - 16</td>
<td>LIMESTONE - Brown and Gray, Thin Bedded, Slightly Weathered, Hard, with Slight Dip</td>
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<td>80</td>
<td>42</td>
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<td>20 - 25</td>
<td>LIMESTONE WITH SANDSTONE LAYERS AND SHALE SEAMS - Brown and Gray to Gray, Medium Bedded, Slightly Weathered, Hard, with Slight Dip</td>
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<td>25 - 30</td>
<td>SHALE WITH FREQUENT SANDSTONE LAYERS - Dark Gray, Laminated, Slightly Weathered, Hard, with Moderate Dip</td>
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<td>30 - 35</td>
<td>SANDSTONE WITH FREQUENT SHALE LAYERS - Gray, Medium Bedded, Slightly Weathered, Well-Cemented, with Slight Dip</td>
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<td>ALTERNATING LAYERS OF SHALE AND SANDSTONE - Dark Gray, Laminated, Slightly Weathered, Hard, with Slight Dip (Shale), Gray, Very Thin Bedded, Slightly Weathered, Well-Cemented, with Slight Dip</td>
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**ELEVATION:** 601.8

**REMARKS:** Poor core recovery due to a piece of core lodged in core barrel. Long. = -94.45835546; Lat. = 36.756215666

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**SOIL CHARACTERISTICS Tabulated Above are Representative at the Location of the Sample, and From Surface Indications are Typical for the Limits Shown. These Data are for Information Only, the State Will Not Be Responsible for Variations in the Soil Characteristics and/or Extent of Same Differing From the Above Tabulations.**
<table>
<thead>
<tr>
<th>DEPTH (FT)</th>
<th>DESCRIPTION OF MATERIAL</th>
<th>SOIL GROUP</th>
<th>% NASH</th>
<th>DRY WEIGHT</th>
<th>% WATER</th>
<th>% STRENGTH</th>
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<tbody>
<tr>
<td>3</td>
<td>Moist, Stiff, Brown and Gray Clay with Gravel (Sandstone Fragments)</td>
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<td>45</td>
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<tr>
<td>5-6</td>
<td>LIMESTONE - Gray, Medium Bedded, Slightly Weathered, Moderately Hard, with Slight Dip</td>
<td>LIM</td>
<td>63</td>
<td>73</td>
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<tr>
<td>7-8</td>
<td>LIMESTONE WITH FREQUENT SHALE LAYERS - Gray, Medium Bedded, Slightly Weathered, Hard, with Slight Dip</td>
<td>LIM</td>
<td>78</td>
<td>74</td>
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<tr>
<td>20</td>
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<td>100</td>
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</tr>
<tr>
<td>30</td>
<td>LIMESTONE WITH FREQUENT SHALE LAYERS - Gray, Medium Bedded, Slightly Weathered, Hard, with Slight Dip</td>
<td>LIM</td>
<td>100</td>
<td>58</td>
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REMARKS: Long = 64.47046256; Lat = 35.772197193

SOIL CHARACTERISTICS TABULATED ABOVE ARE REPRESENTATIVE AT THE LOCATION OF THE SAMPLE, AND FROM SURFACE LOCATIONS ARE TYPICAL FOR THE LIMITS SHOWN. THESE DATA ARE SHOWN FOR INFORMATION ONLY. THE STATE WILL NOT BE RESPONSIBLE FOR VARIATIONS IN THE SOIL CHARACTERISTICS AND/OR EXTENT OF SAME DIFFERING FROM THE ABOVE TABULATIONS.
<table>
<thead>
<tr>
<th>Depth FT</th>
<th>Description of Material</th>
<th>Soil Group</th>
<th>Plastic Limit</th>
<th>Liquid Limit</th>
<th>Plastic Index</th>
<th>Atterberg Limits Test</th>
<th>Remarks</th>
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<tr>
<td>0</td>
<td>Moist, Medium Stiff, Brown and Gray Clay with Gravel (Sandstone Fragments)</td>
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<td>3</td>
<td>Moist, Medium Stiff, Brown and Gray Clay with Gravel (Sandstone Fragments)</td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>12</td>
<td>SHALE - Brown and Gray, Highly Weathered, Medium Hard</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>59.1</td>
<td>LIMESTONE WITH FREQUENT SHALE LAYERS - Gray, Medium Bedded, Slightly Weathered, Hard, with Slight Dip and Vertically Fractioned Layers</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>100.74</td>
<td>LIMESTONE WITH FREQUENT SHALE LAYERS - Gray, Medium Bedded, Slightly Weathered, Hard, with Slight Dip</td>
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REMARKS: Long = -94.47046255; Lat = 35.772395017

SOIL CHARACTERISTICS TABULATED ABOVE ARE REPRESENTATIVE AT THE LOCATION OF THE SAMPLE, AND FROM SURFACE INDICATIONS ARE TYPICAL FOR THE LIMITS SHOWN. THESE DATA ARE SHOWN FOR INFORMATION ONLY; THE STATE WILL NOT BE RESPONSIBLE FOR VARIATIONS IN THE SOIL CHARACTERISTICS AND/OR EXTENT OF SAME DIFFERING FROM THE ABOVE TABULATIONS.
**SOIL CHARACTERISTICS TABULATED ABOVE ARE REPRESENTATIVE AT THE LOCATION OF THE SAMPLE AND FROM SURFACE INDICATIONS ARE TYPICAL FOR THE LIMITS SHOWN. THESE DATA ARE SHOWN FOR INFORMATION ONLY. THE STATE WILL NOT BE RESPONSIBLE FOR VARIATIONS IN THE SOIL CHARACTERISTICS AND/OR EXTENT OF SAME DIFFERING FROM THE ABOVE TABULATIONS.**

<table>
<thead>
<tr>
<th>DEPTH (FT)</th>
<th>DESCRIPTION OF MATERIAL</th>
<th>SOIL GROUP</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 - 5</td>
<td>SHALE - Brown and Gray, Highly Weathered, Soft</td>
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<td>5 - 10</td>
<td>Moi, Very Stiff, Brown and Gray Clay with Organic Matter</td>
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</tr>
<tr>
<td>10 - 15</td>
<td>SHALE - Brown and Gray, Highly Weathered, Medium Hard</td>
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</tr>
<tr>
<td>15 - 20</td>
<td>LIMESTONE - Gray, Medium Bedded, Slightly Weathered, Moderately Hard, with Slight Dip</td>
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</tr>
<tr>
<td>20 - 25</td>
<td>SHALE - Dark Gray, Laminated, Slightly Weathered, Medium Hard, with Slight Dip</td>
<td></td>
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<tr>
<td>25 - 30</td>
<td>LIMESTONE WITH FREQUENT SHALE LAYERS - Gray, Medium Bedded, Slightly Weathered, Hard, with Slight Dip</td>
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</tr>
<tr>
<td>30 - 35</td>
<td>LIMESTONE WITH FREQUENT SHALE LAYERS - Gray, Medium Bedded, Slightly Weathered, Hard, with Slight Dip</td>
<td></td>
</tr>
</tbody>
</table>

**SOIL CHARACTERISTICS TABULATED ABOVE ARE REPRESENTATIVE AT THE LOCATION OF THE SAMPLE AND FROM SURFACE INDICATIONS ARE TYPICAL FOR THE LIMITS SHOWN. THESE DATA ARE SHOWN FOR INFORMATION ONLY. THE STATE WILL NOT BE RESPONSIBLE FOR VARIATIONS IN THE SOIL CHARACTERISTICS AND/OR EXTENT OF SAME DIFFERING FROM THE ABOVE TABULATIONS.**

<table>
<thead>
<tr>
<th>DEPTH (FT)</th>
<th>DESCRIPTION OF MATERIAL</th>
<th>SOIL GROUP</th>
</tr>
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<tbody>
<tr>
<td>40</td>
<td>LIMESTONE WITH CARBONATE</td>
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</tr>
<tr>
<td>45</td>
<td>CALCAREOUS SANDSTONE WITH SHALE LAYERS - Gray, Medium Bedded, Slightly Weathered, Well-Cemented, with Slight Dip</td>
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</tbody>
</table>

**SOIL CHARACTERISTICS TABULATED ABOVE ARE REPRESENTATIVE AT THE LOCATION OF THE SAMPLE AND FROM SURFACE INDICATIONS ARE TYPICAL FOR THE LIMITS SHOWN. THESE DATA ARE SHOWN FOR INFORMATION ONLY. THE STATE WILL NOT BE RESPONSIBLE FOR VARIATIONS IN THE SOIL CHARACTERISTICS AND/OR EXTENT OF SAME DIFFERING FROM THE ABOVE TABULATIONS.**

<table>
<thead>
<tr>
<th>DEPTH (FT)</th>
<th>DESCRIPTION OF MATERIAL</th>
<th>SOIL GROUP</th>
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<tbody>
<tr>
<td>50</td>
<td>LIMESTONE WITH CARBONATE</td>
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</tr>
<tr>
<td>55</td>
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<tr>
<td>60</td>
<td>LIMESTONE WITH CARBONATE</td>
<td></td>
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<tr>
<td>65</td>
<td>LIMESTONE WITH CARBONATE</td>
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</tr>
<tr>
<td>70</td>
<td>LIMESTONE WITH CARBONATE</td>
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</tbody>
</table>

**SOIL CHARACTERISTICS TABULATED ABOVE ARE REPRESENTATIVE AT THE LOCATION OF THE SAMPLE AND FROM SURFACE INDICATIONS ARE TYPICAL FOR THE LIMITS SHOWN. THESE DATA ARE SHOWN FOR INFORMATION ONLY. THE STATE WILL NOT BE RESPONSIBLE FOR VARIATIONS IN THE SOIL CHARACTERISTICS AND/OR EXTENT OF SAME DIFFERING FROM THE ABOVE TABULATIONS.**

<table>
<thead>
<tr>
<th>DEPTH (FT)</th>
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<tr>
<td>75</td>
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<td>90</td>
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<tr>
<td>95</td>
<td>LIMESTONE WITH CARBONATE</td>
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</tbody>
</table>

**SOIL CHARACTERISTICS TABULATED ABOVE ARE REPRESENTATIVE AT THE LOCATION OF THE SAMPLE AND FROM SURFACE INDICATIONS ARE TYPICAL FOR THE LIMITS SHOWN. THESE DATA ARE SHOWN FOR INFORMATION ONLY. THE STATE WILL NOT BE RESPONSIBLE FOR VARIATIONS IN THE SOIL CHARACTERISTICS AND/OR EXTENT OF SAME DIFFERING FROM THE ABOVE TABULATIONS.**
**Arkansas Hwy. & Trans. Department Materials Division - Geotechnical Sec.**

**Job No.:** 040750  
**Job Name:** Hwy 59 Slide Repair  
**Station:** 57+27  
**Location:** 7 Right of Center Line of Hwy. 59  
**Logged By:** Wade Boughner  
**Date:** September 29, 2011  
**Type of Drilling:** Hollow Stem Auger & CME 75 w/ CME Automatic  
**Hammer Correction Factor:** 1.38

<table>
<thead>
<tr>
<th>Completion Depth</th>
<th>Description of Material</th>
<th>Soil Group</th>
</tr>
</thead>
<tbody>
<tr>
<td>42.9 ft</td>
<td>Sandstone Cobbles and Boulders</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Sandstone Cobbles and Boulders with some Clay</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Limestone with frequent weathered shale layers - Gray, clastic, slightly bedded, hard, with slight dip</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Limestone with frequent shale layers - Dark Gray, laminated, weathered, hard, with slight dip</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Limestone with frequent shale layers - Gray, thin bedded, slightly weathered, hard, with slight dip</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Limestone with frequent shale layers - Gray, medium bedded, slightly weathered, hard, with slight dip</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Boring Terminated</td>
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</tr>
</tbody>
</table>

**Remarks:** Long = 94.47088392; Lat. = 35.772735804

**Arkansas Hwy. & Trans. Department Materials Division - Geotechnical Sec.**

**Job No.:** 040750  
**Job Name:** Hwy 59 Slide Repair  
**Station:** 57+27  
**Location:** 7 Right of Center Line of Hwy. 59  
**Logged By:** Wade Boughner  
**Date:** September 29, 2011  
**Type of Drilling:** Hollow Stem Auger & CME 75 w/ CME Automatic  
**Hammer Correction Factor:** 1.38

<table>
<thead>
<tr>
<th>Completion Depth</th>
<th>Description of Material</th>
<th>Soil Group</th>
</tr>
</thead>
<tbody>
<tr>
<td>42.9 ft</td>
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</tbody>
</table>

**Remarks:** Long = 94.47088392; Lat. = 35.772735804

**Soil Characteristics Tabulated Above are Representative at the Location of the Sample and from Surface Indications are Typical for the Limits Shown. These Data Are Shown for Information Only. The State Will Not Be Responsible for Variations in the Soil Characteristics and/or Extent of Same Differing from the Above Tabulations.**
### Arkansas Hwy. & Trans. Department

**Materials Division - Geotechnical Sec.**

**Boring No.: 040750**

**Washington County**

**Job No.: 040750**

**Washington County Hwy 59 Slide Repair**

**Date:** September 26, 2011

**Type of Drilling:** Hollow Stem Auger & CME 75 w/CME Automatic

**Station:** 58+17

**Location:** 10' Right of Center Line of Hwy. 59

**Logged By:** Wade Boughner

**Completion Depth:** 55.2 ft

**Sample at 30.2' was wet.**

**Surface Elevation:** 803.2 ft

**Remarks:** Sample at 30.2' was wet. Long. = -94.47104165; Lat. = 35.772933392

---

**Soil Characteristics Tabulated Above are Representative at the Location of the Sample and from Surface Indications are Typical for the Limits Shown. These Data are Shown for Information Only. The State will not be Responsible for Variations in the Soils Characteristics and/or Extent of Same Differing from the Above Tabulations.**

---

### Soil Borings Log

**Site No. 2**

**Boring No.: 040750**

**Washington County**

**Job No.: 040750**

**Washington County Hwy 59 Slide Repair**

**Date:** September 26, 2011

**Type of Drilling:** Hollow Stem Auger & CME 75 w/CME Automatic

**Station:** 58+17

**Location:** 10' Right of Center Line of Hwy. 59

**Logged By:** Wade Boughner

**Completion Depth:** 55.2 ft

**Remarks:** Sample at 30.2' was wet. Long. = -94.47104165; Lat. = 35.772933392

---

**Soil Characteristics Tabulated Above are Representative at the Location of the Sample and from Surface Indications are Typical for the Limits Shown. These Data are Shown for Information Only. The State will not be Responsible for Variations in the Soils Characteristics and/or Extent of Same Differing from the Above Tabulations.**

---

**Depth**

<table>
<thead>
<tr>
<th>FT</th>
<th>Description of Material</th>
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</thead>
<tbody>
<tr>
<td>0</td>
<td>Surface Elevation: 803.2</td>
</tr>
<tr>
<td>4</td>
<td>Moist, Very Stiff, Brown and Gray Clay with Gravel (Sandstone and Shale Fragments)</td>
</tr>
<tr>
<td>8</td>
<td>Moist, Stiff, Brown and Gray Clay with Gravel (Sandstone Fragments)</td>
</tr>
<tr>
<td>12</td>
<td>SHALE - Brown and Gray, Highly Weathered, Soft</td>
</tr>
<tr>
<td>16</td>
<td>SHALE - Brown and Gray, Highly Weathered, Medium Hard</td>
</tr>
<tr>
<td>20</td>
<td>SHALE - Brown and Gray, Highly Weathered, Soft</td>
</tr>
<tr>
<td>24</td>
<td>LIMESTONE WITH FREQUENT SHALE LAYERS - Gray, Thin Bedded, Slightly Weathered, Hard, with Slight Dip</td>
</tr>
<tr>
<td>28</td>
<td>LIMESTONE WITH FREQUENT SHALE LAYERS - Gray, Medium Bedded, Slightly Weathered, Hard, with Slight Dip</td>
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<tr>
<td>32</td>
<td>SHALE WITH FREQUENT LIMESTONE LAYERS - Dark Gray, Laminated, Slightly Weathered, Hard, with Slight Dip</td>
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</tbody>
</table>

**Soil Group**

<table>
<thead>
<tr>
<th>FT</th>
<th>Sample No.</th>
<th>Soil Group</th>
<th>% Moist.</th>
<th>% Water</th>
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<th>Voids</th>
<th>Silt</th>
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<td>70</td>
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</tr>
</tbody>
</table>

**Remarks:** Sample at 30.2' was wet. Long. = -94.47104165; Lat. = 35.772933392
ARKANSAS HWY. & TRANS. DEPARTMENT
MATERIALS DIVISION - GEOTECHNICAL SEC.

JOB NO.: 040750
JOB NAME: Hwy 59 Slide Repair
LOCATION: 59+53

LOCATION: 11' Right of Center Line of Hwy. 59
LOCATED BY: Wade Boughner
COMPLETION DEPTH: 53.1

<table>
<thead>
<tr>
<th>DEPTH (FT)</th>
<th>DESCRIPTION OF MATERIAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td>Moist, Medium Stiff, Brown and Gray Clay with Gravel (Sandstone Fragments)</td>
</tr>
<tr>
<td>5</td>
<td>Moist, Stiff, Brown and Gray Clay with Gravel (Sandstone and Shale Fragments)</td>
</tr>
<tr>
<td>5</td>
<td>SHALE - Brown and Gray, Highly Weathered, Soft</td>
</tr>
<tr>
<td>20</td>
<td>Moist, Stiff, Brown Clay</td>
</tr>
<tr>
<td>25</td>
<td>SHALE - Brown and Gray, Highly Weathered, Medium Hard</td>
</tr>
<tr>
<td>30</td>
<td>SHALE - Brown and Gray, Laminated, Highly Soft, Weathered, with Slight Dip</td>
</tr>
</tbody>
</table>

SURFACE ELEVATION: 813.7

SOIL CHARACTERISTICS TABULATED ABOVE ARE REPRESENTATIVE AT THE LOCATION OF THE SAMPLE, AND FROM SURFACE INDICATIONS ARE TYPICAL FOR THE LIMITS SHOWN. THESE DATA ARE SHOWN FOR INFORMATION ONLY. THE STATE WILL NOT BE RESPONSIBLE FOR VARIATIONS IN THE SOIL CHARACTERISTICS AND/OR EXTENT OF SAME DIFFERING FROM THE ABOVE TABULATIONS.
<table>
<thead>
<tr>
<th>DEPTH</th>
<th>DESCRIPTION OF MATERIAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td>Moist, Stiff, Gray and Brown Clay with Gravel (Limestone Fragments), Cobbles and Boulders</td>
</tr>
<tr>
<td>10</td>
<td>Moist, Stiff, Gray and Brown Clay with Gravel (Shale Fragments)</td>
</tr>
<tr>
<td>15</td>
<td>Moist, Stiff, Gray and Brown Clay with Gravel (Shale Fragments)</td>
</tr>
<tr>
<td>20</td>
<td>Moist, Medium Stiff, Brown Clay with Gravel (Shale Fragments)</td>
</tr>
<tr>
<td>25</td>
<td>Moist, Very Stiff, Brown Clay with Gravel (Sandstone Fragments)</td>
</tr>
<tr>
<td>30</td>
<td>SHALE - Gray, Highly Weathered, Soft</td>
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<tr>
<td>35</td>
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</tbody>
</table>

**Remarks:** Long = 64.47122346; Lat = 35.7774029437

---

**SOIL CHARACTERISTICS**

SOIL CHARACTERISTICS TABULATED ABOVE ARE REPRESENTATIVE AT THE LOCATION OF THE SAMPLE AND FROM SURFACE INDICATIONS ARE TYPICAL FOR THE LIMITS SHOWN. THESE DATA ARE SHOWN FOR INFORMATION ONLY, THE STATE WILL NOT BE RESPONSIBLE FOR VARIATIONS IN THE SOIL CHARACTERISTICS AND/OR EXTENT OF SAME DIFFERING FROM THE ABOVE TABULATIONS.
### Site No. 2

** Arkansaas Hwy & Trans. Department Materials Division - Geotechnical Sec. **

#### Boring No. 4

**Job No.:** 040750  Washington County  
**Job Name:** Hwy 59 Slide Repair  
**Date:** September 21, 2011  
**Type of Drilling:** Hollow Stem Auger & Hammer  
**Location:** 0' Right of Center Line of Hwy. 59  
**Logged by:** Wade Boughner  
**Complet. Depth:** 38.2

<table>
<thead>
<tr>
<th>Depth (ft)</th>
<th>Description of Material</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Moist, Stiff, Brown Clay with Gravel (Sandstone Fragments), Cobbles and Boulders</td>
</tr>
<tr>
<td></td>
<td>Moist, Stiff, Brown and Gray Clay with Gravel (Sandstone Fragments)</td>
</tr>
<tr>
<td></td>
<td>Moist, Hard, Brown and Gray Clay with Gravel (Sandstone and Shale Fragments), Cobbles and Boulders</td>
</tr>
<tr>
<td></td>
<td>Shale with Sandstone Fragments - Gray, Weathered, Medium Hard</td>
</tr>
<tr>
<td></td>
<td>Shale with Sandstone Seams - Dark Gray, Laminated, Slightly Weathered, Medium Hard, with Slight Dip</td>
</tr>
<tr>
<td></td>
<td>Shale - Dark Gray, Laminated, Slightly Weathered, Medium Hard, with Slight Dip</td>
</tr>
<tr>
<td></td>
<td>Limestone - Gray, Medium Bedded, Slightly Weathered, Hard, with Slight Dip</td>
</tr>
</tbody>
</table>

#### Boring No. 14

**Job No.:** 040750  Washington County  
**Job Name:** Hwy 59 Slide Repair  
**Date:** September 21, 2011  
**Type of Drilling:** Hollow Stem Auger & Hammer  
**Location:** 0' Right of Center Line of Hwy. 59  
**Logged by:** Wade Boughner  
**Complet. Depth:** 14.2

<table>
<thead>
<tr>
<th>Depth (ft)</th>
<th>Description of Material</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Limestone with frequent Shale Seams - Gray, Medium Bedded, Slightly Weathered, Hard, with Slight Dip</td>
</tr>
<tr>
<td></td>
<td>Boring Terminated</td>
</tr>
</tbody>
</table>

### Remarks:

**Long:** 94.4711606; **Lat.:** 35.774214794

Soil characteristics tabulated above are representative at the location of the sample, and from surface indications are typical for the limits shown. These data are shown for information only. The State will not be responsible for variations in the soil characteristics and/or extent of same differing from the above tabulations.

**SITE NO. 2**

Soil borings log
## ARKANSAS HWY. & TRANS. DEPARTMENT
### MATERIALS DIVISION - GEOTECHNICAL SEC.

<table>
<thead>
<tr>
<th>BORING NO.</th>
<th>040750</th>
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<tbody>
<tr>
<td>JOB NO.</td>
<td>040750</td>
</tr>
<tr>
<td>JOB NAME:</td>
<td>Hwy 59 Slide Repair</td>
</tr>
<tr>
<td>DATE:</td>
<td>September 20, 2011</td>
</tr>
<tr>
<td>LOCATION:</td>
<td>Station: 85+69 7' Right of Center Line of Hwy. 59</td>
</tr>
<tr>
<td>MATERIALS</td>
<td>SHALE WITH OCCASIONAL LIMESTONE SEAMS - Gray, Medium Bedded, Slightly Weathered, Hard, with Slight Dip</td>
</tr>
<tr>
<td>SOIL CORRECTION FACTOR:</td>
<td>1.38</td>
</tr>
<tr>
<td>COMPLETION DEPTH:</td>
<td>43.8</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>DEPTH (FT)</th>
<th>DESCRIPTION OF MATERIAL</th>
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</thead>
<tbody>
<tr>
<td>4</td>
<td>Mos, Stiff, Brown Clay with Gravel (Sandstone Fragments) and Cobbles</td>
</tr>
<tr>
<td>6</td>
<td>Mos, Stiff, Brown Clay with Gravel (Sandstone Fragments)</td>
</tr>
<tr>
<td>10</td>
<td>SHALE - Gray, Highly Weathered, Soft</td>
</tr>
<tr>
<td>15</td>
<td>SHALE - Gray, Weathered, Medium Hard</td>
</tr>
<tr>
<td>20</td>
<td>SHALE WITH SANDSTONE SEAMS - Dark Gray, Laminated, Slightly Weathered, Medium Hard, with Slight Dip</td>
</tr>
<tr>
<td>25</td>
<td>SHALE - Dark Gray, Laminated, Slightly Weathered, Medium Hard, with Slight Dip</td>
</tr>
<tr>
<td>30</td>
<td></td>
</tr>
<tr>
<td>35</td>
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</tr>
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</table>

**SOIL CHARACTERISTICS:**
- Tabulated above are representative at the location of the sample.
- From surface indications are typical for the limits shown. These data are shown for information only. The state will not be responsible for variations in the soil characteristics and/or extent of same differing from the above tabulations.

**REMARKS:**
- Long. = -94.47078662; Lat. = 35.774880401

---

## ARKANSAS HWY. & TRANS. DEPARTMENT
### MATERIALS DIVISION - GEOTECHNICAL SEC.

<table>
<thead>
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<th>BORING NO.</th>
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<tbody>
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<td>JOB NAME:</td>
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</tr>
<tr>
<td>LOCATION:</td>
<td>Station: 85+69 7' Right of Center Line of Hwy. 59</td>
</tr>
<tr>
<td>MATERIALS</td>
<td>LIMESTONE WITH OCCASIONAL SHALE SEAMS - Dark Gray, Laminated, Slightly Weathered, Hard, with Slight Dip</td>
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<tr>
<td>SOIL CORRECTION FACTOR:</td>
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</tr>
<tr>
<td>COMPLETION DEPTH:</td>
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<table>
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<td>SHALE - Gray, Highly Weathered, Soft</td>
</tr>
<tr>
<td>15</td>
<td>SHALE - Gray, Weathered, Medium Hard</td>
</tr>
<tr>
<td>20</td>
<td>SHALE WITH SANDSTONE SEAMS - Dark Gray, Laminated, Slightly Weathered, Medium Hard, with Slight Dip</td>
</tr>
<tr>
<td>25</td>
<td>SHALE - Dark Gray, Laminated, Slightly Weathered, Medium Hard, with Slight Dip</td>
</tr>
<tr>
<td>30</td>
<td></td>
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<td>35</td>
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</tr>
</tbody>
</table>

**SOIL CHARACTERISTICS:**
- Tabulated above are representative at the location of the sample.
- From surface indications are typical for the limits shown. These data are shown for information only. The state will not be responsible for variations in the soil characteristics and/or extent of same differing from the above tabulations.

**REMARKS:**
- Long. = -94.47078662; Lat. = 35.774880401
### Soil Borings Log

**Arkansas Hwy. & Trans. Department**  
**Materials Division - Geotechnical Sec.**

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<thead>
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<tbody>
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<tr>
<td>Location:</td>
<td>7 Right of Center Line of Hwy. 59</td>
<td></td>
</tr>
<tr>
<td>Driller:</td>
<td>Wade Boughner</td>
<td></td>
</tr>
<tr>
<td>Date:</td>
<td>September 20, 2011</td>
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**Completion Depth: 12.9 ft**

<table>
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<th>Depth (ft)</th>
<th>Description of Material</th>
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<tbody>
<tr>
<td>0-5</td>
<td>Moist, Soft, Dark Gray Clay with Gravel (Shale Fragments)</td>
</tr>
<tr>
<td>5-10</td>
<td>SHALE - Brown and Gray, Highly Weathered, Soft</td>
</tr>
<tr>
<td>10-15</td>
<td>SHALE - Gray, Highly Weathered, Soft</td>
</tr>
<tr>
<td>15-25</td>
<td>SHALE - Gray and Brown, Highly Weathered, Soft</td>
</tr>
<tr>
<td>25-30</td>
<td>SHALE - Gray, Weathered, Medium Hard</td>
</tr>
<tr>
<td>30-35</td>
<td>SHALE - Dark Gray, Laminated, Slightly Weathered, Medium Hard, with Slight Dip</td>
</tr>
</tbody>
</table>

**Remarks:** A water stratum was encountered at 15.2 ft. Long = 94.47095335; Lat = 35.77534839

---

**Arkansas Hwy. & Trans. Department**  
**Materials Division - Geotechnical Sec.**

<table>
<thead>
<tr>
<th>Boring No.</th>
<th>040750</th>
<th>Washington County</th>
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<tbody>
<tr>
<td>Job Name:</td>
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</tr>
<tr>
<td>Location:</td>
<td>7 Right of Center Line of Hwy. 59</td>
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<td>Driller:</td>
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</tr>
<tr>
<td>Date:</td>
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</table>

**Completion Depth: 32.9 ft**

<table>
<thead>
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<th>Description of Material</th>
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<tbody>
<tr>
<td>0-5</td>
<td>SHALE - Brown and Gray, Highly Weathered, Soft</td>
</tr>
<tr>
<td>5-10</td>
<td>SHALE - Gray, Highly Weathered, Soft</td>
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<tr>
<td>10-15</td>
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</tr>
<tr>
<td>15-25</td>
<td>SHALE - Gray, Weathered, Medium Hard</td>
</tr>
<tr>
<td>25-30</td>
<td>SHALE - Dark Gray, Laminated, Slightly Weathered, Medium Hard, with Slight Dip</td>
</tr>
<tr>
<td>30-35</td>
<td>LIMESTONE - Gray, Medium Bedded, Slightly Weathered, Hard, with Slight Dip</td>
</tr>
<tr>
<td>35-40</td>
<td>SHALE - Dark Gray, Laminated, Slightly Weathered, Medium Hard, with Slight Dip</td>
</tr>
<tr>
<td>40-45</td>
<td>SHALE - Dark Gray, Laminated, Slightly Weathered, Medium Hard, with Slight Dip</td>
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<tr>
<td>45-50</td>
<td>SHALE - Dark Gray, Laminated, Slightly Weathered, Medium Hard, with Slight Dip</td>
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<tr>
<td>50-55</td>
<td>Boring Terminated</td>
</tr>
</tbody>
</table>

**Remarks:** A water stratum was encountered at 15.0 ft. Long = 94.47095335; Lat = 35.77534839

---

**Soil Characteristics Tabulated Above are Representative at the Location of the Sample.**

**Elevation:** 851.3 ft

**Location:** Rooftop of Drilling Location: 35.77534839, WLL 75.0 ft.

---

**Soil Characteristics Tabulated Above are Representative at the Location of the Sample.**

**Elevation:** 861.3 ft

**Location:** Rooftop of Drilling Location: 35.77534839, WLL 75.0 ft.
### Soil Borings Log

**ARKANSAS HWY. & TRANS. DEPARTMENT MATERIALS DIVISION - GEOTECHNICAL SEC.**

**JOB NO.:** 040750  
**JOB NAME:** Hwy 59 Slide Repair  
**DATE:** September 15 & 19, 2011  
**TYPE OF DRILLING:** Hollow Stem Auger & CME Automatic  
**EQUIPMENT:** CME 75 w/ CME Automatic  
**DEPT. CORRECTION FACTOR:** 1.38  
**REMARKS:** Long. = -94.47060263; Lat. = 35.7775180408

**LOCATION:** 66+90  
**STATION:** 7 Right of Center Line of Hwy. 59  
**LOGGED BY:** Wade Boughner  
**COMPLETION DEPTH:** 62.4

<table>
<thead>
<tr>
<th>DEPTH (FT)</th>
<th>DESCRIPTION OF MATERIAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td>Asphalt Pavement (4&quot;)</td>
</tr>
<tr>
<td>10</td>
<td>Moist, Very Stiff, Gray Sandy Clay with Gravel</td>
</tr>
<tr>
<td>15</td>
<td>Moist, Medium Stiff, Dark Gray Clay with Gravel</td>
</tr>
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<tr>
<td>25</td>
<td>Moist, Very Stiff, Brown and Gray Clay with Trace of Gravel (Shale Fragments)</td>
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<tr>
<td>30</td>
<td>Moist, Stiff, Brown and Gray Clay with Gravel (Shale Fragments)</td>
</tr>
<tr>
<td>35</td>
<td>Moist, Stiff, Brown and Gray Clay with Gravel (Sandstone Fragments)</td>
</tr>
</tbody>
</table>

**SOIL CHARACTERISTICS:**

- **SOIL GROUP:** Sand
- **PLASTIC LIMIT:** 44
- **LIQUID LIMIT:** 13
- **MAX. DRY WEIGHT (PSF):** 60
- **MIN. DRY WEIGHT (PSF):** 40
- **DENSITY (PSF):** 92
- **STIFFNESS:** 80

**Remarks:** Long. = -94.47060263; Lat. = 35.7775180408

---

**ARKANSAS HWY. & TRANS. DEPARTMENT MATERIALS DIVISION - GEOTECHNICAL SEC.**

**JOB NO.:** 040750  
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**Remarks:** Long. = -94.47060263; Lat. = 35.7775180408

---

**SOIL CHARACTERISTICS TABULATED ABOVE ARE REPRESENTATIVE AT THE LOCATION OF THE SAMPLE AND FROM SURFACE INDICATIONS ARE TYPICAL FOR THE LIMITS SHOWN. THESE DATA ARE SHOWN FOR INFORMATION ONLY. THE STATE WILL NOT BE RESPONSIBLE FOR VARIATIONS IN THE SOIL CHARACTERISTICS AND/OR EXTENT OF SAMPLING DIFFERING FROM THE ABOVE TABULATIONS.
<table>
<thead>
<tr>
<th>SIGN NUMBER</th>
<th>DESCRIPTION</th>
<th>SIGN SIZE</th>
<th>STAGE 1</th>
<th>MAXIMUM NUMBER REQUIRED</th>
<th>TOTAL SIGNS REQUIRED</th>
<th>TRAFFIC DRUMS</th>
<th>BARRICADES (TYPE III)</th>
<th>FURNISHING &amp; INSTALLING PRECAST CONCRETE BARRIER</th>
<th>RELOCATING PRECAST CONCRETE BARRIER</th>
<th>TEMPORARY IMPACT ATTENUATION BARRIER (RELOCATION)</th>
<th>TEMPORARY IMPACT ATTENUATION BARRIER (REPAIR)</th>
<th>PORTABLE TRAFFIC SIGNAL SYSTEM - ACTUATED</th>
</tr>
</thead>
<tbody>
<tr>
<td>W00-1</td>
<td>ROAD WORK, 1500 FT.</td>
<td>48&quot;x48&quot;</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>32.0</td>
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<tr>
<td>W00-3</td>
<td>ROAD WORK, 1500 FT.</td>
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<td>2</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>W00-4</td>
<td>ROAD WORK AHEAD W FLASHING WARNING LIGHT</td>
<td>48&quot;x48&quot;</td>
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<td>32.0</td>
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<tr>
<td>V0-3</td>
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<tr>
<td>R01-2</td>
<td>STOP HERE ROED</td>
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**NOTES:**
- *
- QUANTITIES ESTIMATED:
- SEE SECTION 104.03 OF THE STD. SPECS.
- TO BE USED IF AND WHERE DIRECTED BY THE ENGINEER.

<table>
<thead>
<tr>
<th>SIGN NUMBER</th>
<th>DESCRIPTION</th>
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<th>STAGE 1</th>
<th>MAXIMUM NUMBER REQUIRED</th>
<th>TOTAL SIGNS REQUIRED</th>
<th>TRAFFIC DRUMS</th>
<th>BARRICADES (TYPE III)</th>
<th>FURNISHING &amp; INSTALLING PRECAST CONCRETE BARRIER</th>
<th>RELOCATING PRECAST CONCRETE BARRIER</th>
<th>TEMPORARY IMPACT ATTENUATION BARRIER (RELOCATION)</th>
<th>TEMPORARY IMPACT ATTENUATION BARRIER (REPAIR)</th>
<th>PORTABLE TRAFFIC SIGNAL SYSTEM - ACTUATED</th>
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<td>W00-3</td>
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<td>2</td>
<td>32.0</td>
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</tr>
<tr>
<td>W00-4</td>
<td>ROAD WORK AHEAD W FLASHING WARNING LIGHT</td>
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<td>2</td>
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</tr>
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</tr>
<tr>
<td>W00-6</td>
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<td>2</td>
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</table>

**NOTES:**
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- TO BE USED IF AND WHERE DIRECTED BY THE ENGINEER.
### CONCRETE DITCH PAVING

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<thead>
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<th>LOCATION</th>
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<th>&quot;S&quot;</th>
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<th>SOLID</th>
<th>WATER</th>
</tr>
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<td>100</td>
<td>2349</td>
<td>10.14</td>
<td>0.13</td>
</tr>
</tbody>
</table>

### CONCRETE ROADWAY BASE

| STATION | DESCRIPTION | RENFORCED CONCRETE PIPE CULVERT (CLASS A) | FLARED END SECTIONS FOR R.C. PIPE CULVERTS | SPAN | HEIGHT | LENGTH | CLASS B & C CONCRETE ROADWAY | UNCLASSIFIED | SOLID | WATER | STIM NO.
<table>
<thead>
<tr>
<th></th>
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</thead>
<tbody>
<tr>
<td>SITE NO. 1</td>
<td>336+41.00</td>
<td>3-36+41.00</td>
<td>100</td>
<td>100</td>
<td>2349</td>
<td>10.14</td>
<td>0.13</td>
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<td></td>
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<tr>
<td>TOTALS SITE NO. 1</td>
<td></td>
<td>336+41.00</td>
<td>100</td>
<td>100</td>
<td>2349</td>
<td>10.14</td>
<td>0.13</td>
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### GUARDRAIL

<table>
<thead>
<tr>
<th>STATION</th>
<th>LOCATION</th>
<th>GUARDRAIL (TYPE A)</th>
<th>GUARDRAIL TERMINAL (TYPE B)</th>
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<th>EARTHWORK</th>
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<td>3-36+41.00</td>
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<td>100</td>
<td>2349</td>
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<tr>
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<td>336+41.00</td>
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<td>100</td>
<td>2349</td>
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### REMOVAL AND DISPOSAL OF ITEMS

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<tr>
<td>SITE NO. 2</td>
<td>36+38</td>
<td>SITE NO. 2 R.C. PIPE</td>
<td>54+76</td>
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### LANDSLIDE REPAIR

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<td>TOTALS SITE NO. 1</td>
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<td>20.00</td>
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**NOTE:** FOR R.C. PIPE CULVERT INSTALLATIONS USE TYPE 3 BEDDING UNLESS OTHERWISE SPECIFIED.
### Dumped Riprap and Filter Blanket

<table>
<thead>
<tr>
<th>Site No.</th>
<th>Location</th>
<th>Dumped Riprap (Grouted)</th>
<th>Dumped Riprap</th>
<th>Filter Blanket</th>
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<tr>
<td>Site No. 1</td>
<td>Outlet of Pipe Culvert</td>
<td>5</td>
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<td>Site No. 2</td>
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<td>Site No. 3</td>
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<td>Site No. 5</td>
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**Totals Site No. 1:** 80 160 180

**Totals Site No. 2:** 14 27 17

**Totals:** 92 184 180

Note: Quantity estimated. See section 104.3 of the Standard Specifications.

### Clearing and Grubbing

<table>
<thead>
<tr>
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<th>Clearing</th>
<th>Grubbing</th>
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<tbody>
<tr>
<td>Site No. 1</td>
<td>237+43</td>
<td>234+16</td>
<td>Site No. 1 HWY. 59 Left</td>
</tr>
<tr>
<td>Site No. 2</td>
<td>5+32</td>
<td>11+60</td>
<td>Site No. 2 HWY. 59 Right</td>
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<tr>
<td></td>
<td>17+10</td>
<td>16+13</td>
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<tr>
<td></td>
<td>23+66</td>
<td>24+89</td>
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<td>30+00</td>
<td>31+60</td>
<td>Site No. 2 HWY. 59 Right</td>
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<td></td>
<td>35+50</td>
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<td>48+75</td>
<td>49+75</td>
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<td>54+76</td>
<td>55+89</td>
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<td>61+28</td>
<td>62+28</td>
<td>Site No. 2 HWY. 59 Right</td>
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**Totals Site No. 2:** 18 18

**Totals:** 21 21

Note: Quantity estimated. See section 104.3 of the Standard Specifications.

### Paving Repair Over Culverts (Asphalt)

<table>
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<th>Length</th>
<th>Ton</th>
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<tr>
<td>Site No. 1</td>
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<td>35</td>
<td>17</td>
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<tr>
<td>Site No. 2</td>
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<td>12.83</td>
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<td>24+09</td>
<td>15.87</td>
<td>24</td>
<td>21</td>
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<td></td>
<td>30+41</td>
<td>10.63</td>
<td>24</td>
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<tr>
<td></td>
<td>36+17</td>
<td>12.83</td>
<td>23</td>
<td>16</td>
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<tr>
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<td>44+61</td>
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<td></td>
<td>48+32</td>
<td>16.17</td>
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<td>51+55</td>
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<td>62+23</td>
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<td>67+63</td>
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<td></td>
<td>69+10</td>
<td>8.06</td>
<td>23</td>
<td>11</td>
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**Total:** 172

Note: Filter Blanket shall be geotextile fabric (Type 5).
### Base and Surfacing

<table>
<thead>
<tr>
<th>Station</th>
<th>Station</th>
<th>Location</th>
<th>Aggregate Base Course (Class II)</th>
<th>Tack Coat</th>
<th>ACIM Binder Course (1%)</th>
<th>ACIM Surface Course (12%)</th>
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</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td><strong>Length</strong></td>
<td><strong>Tack Coat</strong></td>
<td><strong>ACIM Binder</strong></td>
<td><strong>ACIM Surface</strong></td>
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<tr>
<td></td>
<td></td>
<td></td>
<td><strong>Tons</strong></td>
<td><strong>Avg. Wt.</strong></td>
<td><strong>Gallons</strong></td>
<td><strong>Avg. Wt.</strong></td>
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<tr>
<td>Site No. 1</td>
<td>Main Lanes</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>310+00</td>
<td>310+00</td>
<td>HWY 59 - TRANSITION</td>
<td>100.00</td>
<td>63.00</td>
<td>38.5</td>
<td>25.0</td>
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<tr>
<td>316+00</td>
<td>316+00</td>
<td>HWY 59 - TRANSITION</td>
<td>100.00</td>
<td>63.00</td>
<td>38.5</td>
<td>25.0</td>
</tr>
<tr>
<td>318+00</td>
<td>318+00</td>
<td>HWY 59 - TRANSITION</td>
<td>100.00</td>
<td>63.00</td>
<td>38.5</td>
<td>25.0</td>
</tr>
</tbody>
</table>

### Additional for Quadrant Widening

- 316+00 | HWY 59 - TRANSITION | 175.00 | 16.00 | 311.11 | 0.17 | 52.89 |
- 318+00 | HWY 59 - TRANSITION | 50.00 | 7.75 | 3.88 |
- 318+00 | HWY 59 - TRANSITION | 50.00 | 7.75 | 3.88 |

**Totals Site No. 1:**

- 484.24 | 883.72 | 85.62 | 241.90 | 76.70 | 1582.15 | 108.10 |

### Main Lanes

- 7+22.00 | HWY 59 - TRANSITION | 100.00 | 42.88 | 42.88 | 29.50 | 327.79 | 220.00 | 36.56 |
- 11+50.00 | HWY 59 - TRANSITION | 328.00 | 85.75 | 261.24 | 42.42 | 889.97 | 0.05 | 44.50 | 11.42 | 418.20 | 650.00 | 137.35 | 29.50 | 1075.11 | 220.00 | 118.26 |
- 12+50 | HWY 59 - TRANSITION | 100.00 | 42.88 | 42.88 | 29.50 | 327.79 | 220.00 | 36.56 |
- 54+50.00 | HWY 59 - TRANSITION | 100.00 | 44.38 | 44.38 | 30.00 | 333.33 | 220.00 | 36.67 |
- 56+60.00 | HWY 59 - TRANSITION | 120.00 | 88.75 | 108.50 | 24.42 | 328.60 | 0.05 | 16.28 | 11.42 | 132.37 | 650.00 | 50.55 | 30.00 | 400.00 | 220.00 | 44.50 |
- 57+00.00 | HWY 59 - TRANSITION | 104.00 | 85.75 | 89.24 | 24.42 | 282.18 | 0.05 | 14.11 | 11.42 | 131.96 | 650.00 | 43.55 | 29.50 | 340.68 | 220.00 | 37.50 |
- 57+50.00 | HWY 59 - TRANSITION | 120.00 | 38.75 | 108.50 | 24.42 | 328.60 | 0.05 | 16.28 | 11.42 | 132.37 | 650.00 | 50.55 | 30.00 | 400.00 | 220.00 | 44.50 |
- 58+20.00 | HWY 59 - TRANSITION | 100.00 | 44.38 | 44.38 | 30.00 | 333.33 | 220.00 | 36.67 |
- 59+20.00 | HWY 59 - TRANSITION | 100.00 | 42.88 | 42.88 | 29.50 | 327.79 | 220.00 | 36.56 |
- 61+60.00 | HWY 59 - TRANSITION | 160.00 | 85.75 | 127.20 | 24.42 | 434.13 | 0.05 | 21.71 | 11.42 | 203.02 | 650.00 | 67.00 | 29.50 | 372.78 | 220.00 | 36.56 |
- 62+20.00 | HWY 59 - TRANSITION | 100.00 | 42.88 | 42.88 | 29.50 | 327.79 | 220.00 | 36.56 |
- 63+50.00 | HWY 59 - TRANSITION | 100.00 | 42.88 | 42.88 | 29.50 | 327.79 | 220.00 | 36.56 |
- 66+50.00 | HWY 59 - TRANSITION | 160.00 | 85.75 | 127.20 | 24.42 | 434.13 | 0.05 | 21.71 | 11.42 | 203.02 | 650.00 | 67.00 | 29.50 | 372.78 | 220.00 | 36.56 |
- 67+50.00 | HWY 59 - TRANSITION | 100.00 | 42.88 | 42.88 | 29.50 | 327.79 | 220.00 | 36.56 |

**Totals Site No. 2:**

- 1259.65 | 6501.86 | 379.31 | 1282.15 | 416.66 | 7617.34 | 747.87 |

### Additional for Leveling

- 8+22.00 | HWY 59 - TRANSITION | 328.00 | 13.00 | 473.78 | 0.17 | 80.54 |
- 11+50.00 | HWY 59 - TRANSITION | 344.00 | 13.00 | 496.89 | 0.17 | 84.47 |
- 12+50 | HWY 59 - TRANSITION | 160.00 | 13.00 | 231.11 | 0.17 | 38.29 |
- 12+50 | HWY 59 - TRANSITION | 160.00 | 13.00 | 231.11 | 0.17 | 38.29 |

**Totals Site No. 3:**

- 1703.61 | 6500.70 | 499.83 | 1304.06 | 466.36 | 9046.34 | 931.67 |

### Basis of Estimate:

- ACIM Surface Course (12") 55.5% MIN. AGG. 4% Asphalt Binder
- ACIM Binder Course (1%) 95.5% MIN. AGG. 4% Asphalt Binder
- Maximum number of GViations = 115 for Po-94-22

Tack Coat Quantities were calculated using the Emulsified Asphalt rates. Refer to SS-400-1 for the residual asphalt application rates.

### Quantities
### SUMMARY OF QUANTITIES

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<td>203</td>
<td>RELOCATION</td>
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<td>204</td>
<td>DEMOLITION</td>
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<tr>
<td>205</td>
<td>STORAGE</td>
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<tr>
<td>206</td>
<td>DUMPED RIPRAP</td>
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<tr>
<td>207</td>
<td>FILTERBLANKET</td>
</tr>
<tr>
<td>208</td>
<td>class S CONCRETE.</td>
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<td>209</td>
<td>TEMPORARY IMPACT ATTENUATION BARRIER (RELOCATION)</td>
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<tr>
<td>210</td>
<td>TEMPORARY RAISED</td>
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<tr>
<td>211</td>
<td>REFLECTORIZED PAINT PAVEMENT MARKING</td>
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<tr>
<td>212</td>
<td>LANDSLIDE REPAIR (SITE NO. 1)</td>
</tr>
<tr>
<td>213</td>
<td>LANDSLIDE REPAIR (SITE NO. 2)</td>
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<td>LANDSLIDE REPAIR (SITE NO. 3)</td>
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<td>SEEDING</td>
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<td>219</td>
<td>GUARDRAIL (TYPE A)</td>
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<td>220</td>
<td>GUARDRAIL TERMINAL (TYPE 2)</td>
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<td>221</td>
<td>CONCRETE DITCH PAVING</td>
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<tr>
<td>222</td>
<td>CONCRETE DITCH PAVING (TYPE SPECIAL)</td>
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<td>223</td>
<td>REINFORCED CONCRETE PIPE CULVERTS (CLASS B)</td>
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<td>REINFORCED CONCRETE PIPE CULVERTS (CLASS C)</td>
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<td>REINFORCED CONCRETE PIPE CULVERTS (CLASS D)</td>
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<td>REINFORCED CONCRETE PIPE CULVERTS (CLASS E)</td>
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<td>227</td>
<td>FLARED END SECTIONS FOR REINFORCED CONCRETE PIPE CULVERTS</td>
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<td>228</td>
<td>PAVEMENT REPAIR OVER CULVERTS (ASPHALT)</td>
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<td>229</td>
<td>DRAINAGE C-cigarettes</td>
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<td>240</td>
<td>ROADWAY CONSTRUCTION CONTROL</td>
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<tr>
<td>241</td>
<td>PORTABLE TRAFFIC SIGNS SYSTEM - ACTIVATED</td>
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<td>REFLECTED PAINT PAVEMENT MARKING (WHITE)</td>
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<td>248</td>
<td>UNCLASSIFIED EXCAVATION FOR STRUCTURES/ROADWAY</td>
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<td>249</td>
<td>CLASS S CONCRETE ROADWAY</td>
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<td>MEAT CEMENT GROUT</td>
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**Summary of Quantities and Revisions**

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<td>9-19-17</td>
<td>REVISED LANDSLIDE REPAIR SPECIAL PROVISIONS AND ADDED BP PRICE ADJUSTMENT FOR ASPHALT BINDER AT 59 400-4 TO GOVERN IN SPECIFICATIONS LIST</td>
<td>36, 37 &amp; 39</td>
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<tr>
<td>9-28-17</td>
<td>ADDED ADDITIONAL QUANTITIES FOR CLEARING AND GRAVING MOVED QUANTITY BOX</td>
<td>36, 37 &amp; 39</td>
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SURVEY CONTROL COORDINATES

Project Name: 040750RA
Date: 6/30/1977
Coordinate System: ALL COORDINATES ARE ASSUMED

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Note: All distances are ground. Assumed coordinates store under file name 040750RA.CTL

REFERENCE POINTS (I-1500 SERIES) are to be used to establish control of the primary control points listed above. Reference points are not to be used for vertical control.

Bearings are grid based on assumed bearing.

Reference Points are not to be used for vertical control.

ASSUMED COORDINATES are stored under file name 040750RA.CTL.

REFERENCE POINTS I-1500 SERIES are to be used to establish control of the primary control points listed above. Reference points are not to be used for vertical control.

Bearings are grid based on assumed bearing.

ASSUMED COORDINATES are stored under file name 040750RA.CTL.

REFERENCE POINTS I-1500 SERIES are to be used to establish control of the primary control points listed above. Reference points are not to be used for vertical control.

Bearings are grid based on assumed bearing.

ASSUMED COORDINATES are stored under file name 040750RA.CTL.

REFERENCE POINTS I-1500 SERIES are to be used to establish control of the primary control points listed above. Reference points are not to be used for vertical control.

Bearings are grid based on assumed bearing.

ASSUMED COORDINATES are stored under file name 040750RA.CTL.

REFERENCE POINTS I-1500 SERIES are to be used to establish control of the primary control points listed above. Reference points are not to be used for vertical control.

Bearings are grid based on assumed bearing.

ASSUMED COORDINATES are stored under file name 040750RA.CTL.

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ASSUMED COORDINATES are stored under file name 040750RA.CTL.

REFERENCE POINTS I-1500 SERIES are to be used to establish control of the primary control points listed above. Reference points are not to be used for vertical control.

Bearings are grid based on assumed bearing.
STA, 237+24 IN PLACE
30" X 74" R.C. PIPE CULVERT
43°50'01" RT. FWD. SKEW
(CRASS III-TYPE 3 BEINING)
WITH HEADWALLS LT. & RT.
REMOVE HEADWALLS & 5' PLASTIC PIPE
FILL & ABANDON PIPE

STA, 237+43 CONSTRUCT
30" X 86" R.C. PIPE CULVERT
(CRASS III-TYPE 3 BEINING)
WITH FES LT.
(43°50'01" RT. FWD. SKEW)
GSO = 23 CFS D.A. = .73 ACRES
GRAUTED RIPRAP 5 CUL YD.

LANDSLIDE REPAIR (SITE NO. II - STA. 236+41 - STA. 238+6)

STA. GUARDRAIL GUARDRAIL TERMINAL
236+00 238+00 175 LIN. FT. 2 EACH

LIMS OF CONSTRUCTION

STA. 238+600
END CONSTRUCTION SITE NO.1

C.L. HWY. 59
PI: 236+70.85
A: +3°14'00" RT.
D: 00'00'00"
T: 170.95"
L: 350.74'
PT: 238+46.64

GUARDRAIL (TYPE A)
GUARDRAIL TERMINAL (TYPE 2)

RETURN

100' TRANSITION

100' TRANSITION

STA. 236+400
BEGIN JOB 040150 & SITE NO.1
LOG MILE 23.9

LANDSLIDE REPAIR

EXIST. PROFILE

EXIST. PROFILE

F.L. ELEV. 505.80
F.L. ELEV. OUT 497.08

F.L. ELEV. 505.80
F.L. ELEV. OUT 497.08

515

510

505

500

236+00 236+50
237+00 237+50
238+00 238+50
239+00 239+50
240+00

515

510

505

500
STA. 17+64 - IN PLACE
4' x 3' ROCK CULVERT & 36" R.C. CULVERT EXT.
6' OVERALL LENGTH
WITH HEADWALLS LT. & RT. FILL AND ABANDON 54' BT.
STA. 17+64 - CONSTRUCT
48" x 48" R.C. PIPE CULVERT
WITH FES RT.
CL. 40 (TYPE 3 BEDDING)
QSU = 69 CFS S.L. = 22.2 ACRES
GROUTED RIPRAP = 25 CU. YD.

EXIST. R/W CONCRETE DITCH PAVING (TYPE SPECIAL)
EXIST. R/W LOG MILE 15.93

STA. 17+64 CAST CONSTRUCTION LOG MILE 15.93

HYW. 59

SITE NO. 2

CONCRETE DITCH PAVING (TYPE SPECIAL)
STA 24+09 - IN PLACE
30" x 49 R.C. PIPE CULVERT
WITH HEADWALLS L & R RT.
REMOVE 30' FROM LT.
AND FILL AND ABANDON 44' RT.
STA 24+09 - CONSTRUCT
DOUBLE 30" x 49 R.C. PIPE CULVERT
CLASS III TYPE 3 BEDDING
WITH FES RT.
500' + 600' D.A. = 17.4 ACRES
GROUTED RIPRAP = 34 CY. YD.

CONCRETE
DITCH PAVING
(TYPE SPECIAL)

EXIST, R/W

C.L. SURVEY

STA 23+56.68
BEGIN CONSTRUCTION
LOG MILE 15.81

STA 24+58.62
END CONSTRUCTION
LOG MILE 15.79

EXIST, PROFILE

HWY. 59
SITE NO. 2
STA. 30+00 - IN PLACE
36" X 38 R.C. PIPE CULVERT
WITH HEADWALLS 11 & RT.
REMOVE

STA. 30+40 - CONSTRUCT
48" X 36 R.C. PIPE CULVERT
CLASS IV TYPE 3 REINFORCED
GROUND HYDRAULIC AREA: 60 C.F. TO:

C.L. HWY. 59
P.I. = 30+66.09
A = 009°57'88" RT.
B = 02°30'00" F.
T = 84.69° L = 40.50°
P.C. = 29+83.50
P.T. = 3+52.80

30 CONCRETE
DITCH PAVING
TYPE SPECIAL

STA. 29+82.02
BEGIN CONSTRUCTION
LOG MILE 15.69

STA. 31+09.99
END CONSTRUCTION
LOG MILE 15.67

HWY. 59
SITE NO. 2

EXIST. W/M

C.L. SURVEY

EXIST. PROFILE

EXIST. W/M
STA. 36+17 - IN PLACE
4' x 4' ROCK CULVERT AND 36' R.C. CULVERT, EXT.
OVERALL LENGTH
WITH HEADWALLS LT. & RT.
REMOVE

STA. 36+17 - CONSTRUCT
4' x 4' x 49' R.C. BOX CULVERT
WITH 2-WINGWALLS RT.
550 + 78 CFS, Q.A. = 6.5 ACRES
GROUTED RPMP = 54 COL. 10.

C.L. HWY. 59
P.A. = 39+88.38
S = 4\(\frac{27}{22}\)' 0.5' L.T.
D = 0°00'00"
I = 584.08'
L = 40.20'
P.C. = 33+88.30
P.T. = 45+07.50

CONCRETE DITCH PAVING (TYPE SPECIAL)

C.L. SURVEY

STA. 36+17.5
BEGIN CONSTRUCTION
LOG MILE 15.58

STA. 36+54.45
END CONSTRUCTION
LOG MILE 15.56

EXIST PROFILE

EXIST 8/R

HWY. 59
SITE NO. 2
STA 45+66 - IN PLACE
4' X 3' X 59 R/C BOX CULVERT
WITH HEADWALLS LT. & RT.
RENAME 37 FT FROM LT.
FILL AND ABANDON BT. RT.

STA 45+66 - CONSTRUCT
48" X 59 R/C PIPE CULVERT
W/ FES RT.
CLASS V TYPE 3 BEDDING
500 = 36 DPS D.A. + 8.6 ACRES
GROUTED RPRP = 5/1 CV YD.

STA 45+03.80
BEGIN CONSTRUCTION
LOG MLE 15.42

C.L., HWY. 59
P.J. = -45+52.37
D = 14'9'9" BT.
0 = 08'07"30""""""
1 = 72'38"
R.P. = 45+15.50
P.T. = 45+45.90

CONCRETE
DITCH PAVING
(TYPE SPECIAL)

C.L. SURVEY

45+66

STA 45+66.77
END CONSTRUCTION
LOG MLE 15.40

EXIST, B/M

EXIST, PROFILE

PLAN AND PROFILE SHEET - SITE NO. 2
LANDSLIDE REPAIR (SITE NO. 41) STA. 61+62 - STA. 63+22

Landslide Repair

STA. 63+22 - IN PLACE
6' X 4' X 6' R.C. BOX CULVERT
WITH MINIMUM WALLS LT. & RT.
REMOVE

STA. 63+22 - CONSTRUCT
6' X 4' X 6' R.C. BOX CULVERT
ITSELF WITH MIN. WALLS, STANDARDS
WITH MINIMUM WALLS RT.
CSD = 69 CFS G.A. = 2.6 ACRES
GRUDED RIPRAPP = 10 CLYD.

GUARDRAIL

STA. STA.

GUARDRAIL
GUARDRAIL

GUARDRAIL (TYPE 1)
GUARDRAIL (TYPE 2)

STA. 63+22.00
END CONSTRUCTION
LOG MILE 15.08

STA. 6+62.00
BEGIN CONSTRUCTION
LOG MILE 15.08

C.L. HWY. 59
P.Z. = 60+52.53
A = 78.36360' RT.
D = 107.00000'
T = 426.67
L = 736.00
P.Z. = 56+13.90
P.Z. = 63+26.50

LANDSLIDE REPAIR SITE NO. 2

Hwy. 59

LOG MILE

15.08

15.11
STA. 237+24 - IN PLACE
30" X 14 R.C. PIPE CULVERT
REMOVE HEADWALLS LT & RT.
REMOVE 3-PLASTIC PIPE FILL & ABANDON PIPE

STA. 237+43 - CONSTRUCT
30" X 14 R.C. PIPE CULVERT
HEADWALLS USE 3 MASONRY
WITH TEES LT. & RT.
30" X 35 FT. DJA = 7.5 ACRES
GROUTED RIPRAP = 5 CY. YD.

STA. 236+97 TO STA. 237+43
CROSS SECTION

SKEWED 43° 50' 17" RT. FWD.

CROSS SECTIONS
END LANDSLIDE REPAIR SITE NO. 1

CROSS SECTION STA. 237+97 TO STA. 238+47
STA. 10+33 - IN PLACE
30' x 78' R.C./P.G.
WITH HEADWALLS LT. & RT.
RETAIL
CROSSTED 

CROSS SECTION STA. 10+33 TO STA. 10+22
STA.17+64 IN PLACE
4'x3' ROCK CULVERT & 36" R.C. CULVERT EXT.
6' OVERALL LENGTH
WITH HEADWALLS L.T. & R.T.
REMOVE

STA.17+64 - CONSTRUCT
48" x 48 R.C. PIPE CULVERT
WITH TES RT.
CLASS II
REGULAR
D80 = 69 CFS DA = 22.2 ACRES
GRADED RIPRAP = 25 CY YD.

CROSS SECTIONS
STA.17+64 TO STA.17+80
END LANDSLIDE REPAIR SITE NO. 2

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END LANDSLIDE REPAIR SITE NO. 2
CROSS SECTION STA.3+50 TO STA.17+64
STA. 30+41 - IN PLACE
30' x 38" R.C. PIPE CULVERT
WITH HEADWALLS L.T. & R.T.,
REMOVE

STA. 30+41 - CONSTRUCT
48' x 38" R.C. PIPE CULVERT
CLASS III TYPE 3 BEDDING
O50 = 48 C.Y. D.A. = .43 ACRES
GROUTED RIPRAP = 60 CY. YD.

STA. 24+09 - IN PLACE
30' x 74" R.C. PIPE CULVERT
WITH HEADWALLS L.T. & R.T.,
REMOVE 30' FROM L.T.
AND FILL AND ABANDON 45' R.T.

STA. 24+09 - CONSTRUCT
DOUBLE 30' x 45" R.C. PIPE CULVERT
CLASS III TYPE 3 BEDDING
WITH FES R.T.
O50 = 62 C.Y. D.A. = .74 ACRES
GROUTED RIPRAP = 122 CY. YD.

CROSS SECTIONS
STA. 24+09 TO STA. 30+41

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APPEND SECTIONS
END PIPE
END SECT. F.L. OUTLET 56' G.D.
F.L. OUTLET 59.43
F.L. OUTLET 57.53
STA. 24+09

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STA. 30+41 - IN PLACE
30' x 38" R.C. PIPE CULVERT
WITH HEADWALLS L.T. & R.T.,
REMOVE
STA. 45+61 - IN PLACE
4' x 10' R.C. BOX CULVERT
WITH HEADWALLS LT. & RT.,
REMOVAL 2FT FROM LT,
FILL & ABANDON RT RT.

STA. 45+61 - CONSTRUCT
48" x 8' D.I. PIPE CULVERT
WITH COVER 3' (CLASS II TYPE 3 BEDDING)
Diameter 1375 CFY 66.5 ACRES
GROUTED RIPRAP = 54 CU. YD.

45+61
STA. 45+61 - CONSTRUCT
30' x 10' R.C. BOX CULVERT
WITH HEADWALLS LT. & RT.
Diameter 755 CFY = 16.5 ACRES
GROUTED RIPRAP = 54 CU. YD.

STA. 36+17 - IN PLACE
4' x 10' ROCK CULVERT AND
36" R.C. CULVERT EXT.
45' OVERALL LENGTH
WITH HEADWALLS LT. & RT.,
REMOVAL

STA. 36+17 - CONSTRUCT
4' x 10' R.C. BOX CULVERT
WITH HEADWALLS LT. & RT.
Diameter 755 CFY = 16.5 ACRES
GROUTED RIPRAP = 54 CU. YD.

CROSS SECTION STA. 36+17 TO STA. 45+61
STA. 49+33 - IN PLACE
4' x 3' ROCK CULVERT AND
4' x 3' CULVERT EXT.
36' OVERALL LENGTH
WITH HEADWALLS LT. & RT.
REMOVAL

STA. 49+33 - CONSTRUCT
48" x 37 KC PIPE CULVERT
KLASS HYDRO 3 BEDDING
WITH FES RT.
CROSS lt. STA. 62.5 ACRE
GROUTED RIPRAP = 56 CU. YD.

CROSS SECTION STA. 49+33 TO STA. 54+00
END LANDSLIDE REPAIR SITE NO. 4

CROSS SECTION STA. 62+62 TO STA. 63+12
STA 66+00 CONSTRUCT
30' X 60' R.C. PIPE CULVERT
CLASS II (TYPE 2 BEDDING)
WITH FCS LT. & RT.
ROUTED RIPRAP = 13 CU YD.

STA 65+65 TO STA 66+15
STA.67+93 - IN PLACE
24" RC PIPE CULVERT
80% AHEAD WALLS LT. & RT.
REMOVED

STA.67+93 - CONSTRUCT
24" RC PIPE CULVERT
CLASS III TYPE 3 BEDDING
WITH FES RT.
5000 FT/PS SLA + 65 ACRES
GROUTED RIPRAP + 4 CU. YD.

CROSS SECTIONS
STA.67+65 TO STA.67+93
TOE WALL DETAIL FOR CONCRETE DITCH PAVING

GENERAL NOTES:

- The full width of each section shall be poured monolithically.
- Toe walls to be constructed full width at each end of ditch paving, and poured monolithically.
- Solid sod along ditch paving to be placed within 14 days of ditch paving construction.
- 1'-wide transverse expansion joints shall be placed in concrete ditch paving at 40-foot intervals. The space shall be filled with approved joint filler complying with AASHTO M273.

ENERGY DISSIPATORS

- To be used for the entire length of ditch when slope of ditch paving exceeds 7%. The dissipators will not be paid for separately but shall be considered to be included in the price bid for concrete ditch paving.

NUMBER OF ELEMENTS PER ROW VARIES WITH WIDTH OF PAVING SPECIFIED
TABLE OF DIMENSIONS

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* The measured span and rise shall not vary more than ±2 per cent
  from the values specified by AASHTO. W, C. P. R.

END SECTIONS FOR REINFORCED CONCRETE PIPE CULVERTS

SECTION A-A

NOTE: ALTERNATE CONNECTIONS TO THE PIPE CULVERTS IN ACCORDANCE WITH MANUFACTURER'S STANDARD
PRACTICE, MAY BE MADE SUBJECT TO THE APPROVAL OF THE ENGINEER.

END SECTIONS FOR CORRUGATED METAL PIPE CULVERTS

SECTION X-X
SECTION Y-Y

END VIEW

ARMSAS HIGHWAY COMMISSION

STANDARD DRAWING FES-2
DETAIL OF GUARD RAIL PLACEMENT BEHIND CURB (W-BEAM)

FOR DESIGN SPEEDS OF 35 MPH OR LESS
ALUM FACE OF GUARD RAIL
WITH FACE OF CURB.

FOR DESIGN SPEEDS OF 35 MPH OR MORE
PLACE GUARD RAIL POSTS AGAINST BACK OF CURB.

NONE BOTH NUTS, WASHERS & BOLTS TO BE MARKED IN ACCORDANCE WITH SECTION 603.0204 OF THE STANDARD SPECIFICATIONS.

SECTION A-A

DETAIL OF CONNECTION

Plan View Wood
Posts

Other base configuration
acceptable

Notes:
For overlying soil depths ranging from 0 to 18", the depth of required drilling 38 is equal to 24".

Zone A
Backfill to 6" (in 6" increments) with nail-tempered steel anchors as required by Section 603.0204.

Zone B
Backfill to 24" with nail-tempered steel anchors as required by Section 603.0204. Required drilling depth is equal to either 24" or the depth of embankment to less.

Case 1

Case 2

DETAIi OF POST PLACEMENT IN SOLID ROCK (W-BEAM)

ARKANSAS STATE HIGHWAY COMMISSION

GUARD RAIL DETAILS

STANDARD DRAWING GR-8A
NOTE: GUARD RAIL/wiki/ terminal (TYPE D) TO BE INSTALLED ONLY AT LOCATIONS SHOWN ON PLANS.

LAP OF GUARD RAIL SHALL BE AS SHOWN FOR A DISTANCE OF UP TO 200', CHANGE TO LAP IN DIRECTION OF TRAVEL.

METHODS OF INSTALLATION OF GUARD RAIL AT LESS THAN FULL SHOULDER WIDTH BRIDGES USING GUARD RAIL TERMINAL (TYPE 2)

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

METHOD OF INSTALLATION OF GUARD RAIL USING GUARD RAIL TERMINAL (TYPE 1) (FULL SHOULDER WIDTH OR LESS BRIDGES)

LEGEND

ARKANSAS STATE HIGHWAY COMMISSION

GUARD RAIL DETAILS

STANDARD DRAWING GR-9
NOTE: NORMAL SECTION TO BE WIDENED APPROX. 5'-6" EACH SIDE TO SUPPORT GUARD RAIL.

SECTION A-A
DETAILS OF WIDENING FOR GUARD RAIL

SECTION B-B

METHOD OF INSTALLATION OF GUARD RAIL AT FIXED OBSTACLE

SHOULDER PIER PROTECTION

VARIABLE 50'-0"

9' MIN... 50'-0" MAX...

MEDIAN PIER PROTECTION

50'-0" MIN...

ENTRANCE/EXIT RAMP PROTECTION

100'-0"

EDGE OF TRAVELED WAY

TRAFFIC

END TERMINAL

GUARD RAIL

LIMITS OF WIDENING FOR GUARD RAIL (MATCH SHOULDER SLOPE)

NORMAL SECTION TO BE WIDENED APPROX. 5'-6"

EACH SIDE TO SUPPORT GUARD RAIL.

SECTION ON TANGENT

SECTION ON CURVE

DETAILS SHOWING POSITION OF GUARD RAIL ON HIGHWAY

NORMAL ROADWAY WIDTH

WIDTH OF SURFACING

NORMAL ROADWAY WIDTH

WIDTH OF SURFACING

ARKANSAS STATE HIGHWAY COMMISSION

GUARD RAIL DETAILS

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

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

NOTE: THESE DIMENSIONS WILL NEED TO BE ADJUSTED IN THE FIELD TO MAKE THE TRANSITION FROM 36" MID POINT OF THREE BEAM TO 22" MID POINT OF W-BEAM.

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

GENERAL NOTES:

RAIL POSTS SHALL BE SET PERPENDICULAR TO THE ROADWAY PROFILE GRADE AND VERTICALLY IN CROSS SECTION.

WOOD POSTS & WOOD BLOCKS SHALL BE EITHER DECK NO. 1 STRUCTURAL OR BETTER SATURDAY FROM NO. 1007 SOUTHERN PINE.
NOTE: APPROXIMATE QUANTITIES SHOWN ARE FOR INFORMATIONAL PURPOSES ONLY. PAYMENT TO BE INCLUDED IN UNIT PRICE BID FOR IMPACT ATTENUATION BARRIER.

**Detail of Barrier Pad**

- **Type C**
  - Barrier length: 27'-6"
  - Design impact speed: 73.3 fps
- **Type B**
  - Barrier length: 34'-6"
  - Design impact speed: 88 fps
- **Type A**
  - Barrier length: 41'-6"
  - Design impact speed: 103 fps

**General Notes**
1. Dimensions shown are to top of plastic modules.
2. Spacing between plastic modules shall not exceed 6" at the top.
3. Plastic modules shall meet the requirements of NCHRP-350 or Manual for Assessing Safety Hardware (MASH).

**Method of Installation of Impact Attenuation Barrier for Pier Protection**

**Approximate Quantities Per Pad**

<table>
<thead>
<tr>
<th>Type</th>
<th>Aggregate Base Course</th>
<th>AC McM Surf. Course</th>
<th>PCC Base</th>
<th>Tons</th>
<th>Yds</th>
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<tbody>
<tr>
<td>A</td>
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<tr>
<td>B</td>
<td>8.1</td>
<td>3.8</td>
<td>14.9</td>
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<td>3</td>
</tr>
<tr>
<td>C</td>
<td>6.6</td>
<td>3.1</td>
<td>26.3</td>
<td>1</td>
<td>3</td>
</tr>
</tbody>
</table>

NOTE: Approximate quantities shown are for informational purposes only. Payment to be included in unit price bid for impact attenuation barrier.

**Note:** Barrier pad to be skewed towards oncoming traffic to a maximum of 6d with 6d being normal.

**Detail of Barrier Pad**

- **Alternate #1**
  - Avg. 8'-6" A.C.H.M. Surf. Course (1/2"
  - 220 lbs. per sq. yd. & Aggregate Base Course (4" compacted depth)

- **Alternate #2**
  - Avg. 8'-6" Portland Cement Concrete Base (4" U.T.)

**Impact Attenuation Barrier**

- Date: 10-15-99
- Revision: 0
- Date Filmed: 0

Arkansas State Highway Commission

**Standard Drawing**

18-1
### Minimum Height of Fill "h" Over Circular R/C. Pipe Culverts

**Class of Pipe**
- **Type I or 2**
- **Type 3**
- **All**

**Installation:**
- **Class I**
- **Class IV**
- **Class V**

<table>
<thead>
<tr>
<th>PIPE ID (IN)</th>
<th>FEET</th>
</tr>
</thead>
<tbody>
<tr>
<td>01-12</td>
<td>2</td>
</tr>
<tr>
<td>13-16</td>
<td>2.5</td>
</tr>
<tr>
<td>17-24</td>
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<td>25-33</td>
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<td>43-62</td>
<td>5.5</td>
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<tr>
<td>63-78</td>
<td>6</td>
</tr>
<tr>
<td>79-90</td>
<td>6.5</td>
</tr>
</tbody>
</table>

**Notes:**
- For minimum cover values, "h" shall include a minimum of 12" of pavement and/or base.

### Maximum Height of Fill "h" Over Circular R/C. Pipe Culverts

**Installation Type:**
- **Class I**
- **Class IV**
- **Class V**

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**Notes:**
- For minimum cover values, "h" shall include a minimum of 12" of pavement and/or base.

### Construction Sequence
1. Place structural bedding material to grade, do not compact.
2. Position pipe using structural bedding material outside the middle third of the pipe.
3. Place and compact the hydraulic area up to the middle of the pipe.
4. Complete backfill according to subsection 601.03.05.L.

**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.

---

### Embankment and Trench Installations
1. Material in the haunch and outer structural bedding shall be compacted to 90% of the maximum density according to the type or class of material used.
2. For trenches with walls of natural soil, the density of the soil in the lower side zone shall be at least 85% of the maximum density according to the type or class of material used.
3. For embankments, the material in the lower side zone shall be compacted to 90% of the maximum density according to the type or class of material used.

---

### General Notes
1. Concrete pipe culvert construction shall conform to Arkansas State Highway and Transportation Department Standard Specifications for Highway Construction Current Edition with applicable Supplemental Specifications and Special Provisions. Unless otherwise noted in the plans, section and subsection refer to the standard construction specifications.
2. Concrete pipe culvert design shall conform to AASHTO LRFD Bridge Design Specifications, Fifth Edition 2020 with 2020 Interim.
3. All pipe shall conform to section 601.03.05.01.R.C. pipe culverts shall conform to AASHTO M316, and R.C. pipe culverts shall conform to AASHTO M414.
4. All pipe shall be protected during construction by a cover sufficient to prevent damage in transit of equipment.
5. The minimum trench width shall be the outside diameter of the pipe plus 24 inches. The minimum allowable trench width shall be the minimum practicable for cleaning conditions.
6. Multiple pipe culverts shall be installed with a minimum clearance of 24 inches between string lines of pipe refer to Section 601.03.05.01 for minimum clearance where pipe ends are used.

---

### Reinforced Concrete Pipe Culvert Fill Heights & Bedding

**Standard Drawing:** PCC-1

**Revision:**
- **Standard Note:**
- **HAUNCHES & BIRDSEYE NOTE:**
- **REVIEW DATE:**
- **PRELIMINARY DATE:**

---

### Reinforced Concrete Elliptical Pipe Dimensions

**Class of Pipe**
- **Type I or 2**
- **Type 3**

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**Notes:**
- For minimum cover values, "h" shall include a minimum of 12" of pavement and/or base.

---

### Reinforced Concrete Horizontal Elliptical Pipe Dimensions

**Class of Pipe**
- **Type I or 2**
- **Type 3**

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**Notes:**
- For minimum cover values, "h" shall include a minimum of 12" of pavement and/or base.

---

### Legend
- **Normal Inside Diameter of Pipe**
- **Type of Fill**
- **Cover Height over pipe (feet)**
- **H = Undersized Soil**
NOTES:
1. REFER TO THE STRIPING DETAILS FOR PAVEMENT MARKING LINE WIDTHS.
2. THIS DRAWING SHALL BE USED IN CONJUNCTION WITH THE LATEST REVISED ADDITION 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.

CONCRETE PAVEMENT

BROKEN LINE STRIPING

ASPHALT PAVEMENT

SOLID LINE STRIPING ON CONCRETE PAVEMENT

SOLID LINE STRIPING ON ASPHALT PAVEMENT

ASPHALT PAVEMENT

CONCRETE PAVEMENT

DETAIL OF STANDARD RAISED PAVEMENT MARKERS

YIELD LINE DETAIL

CROSSWALK AND STOPBAR DETAILS

ARKANSAS STATE HIGHWAY COMMISSION

PAVEMENT MARKING DETAILS

STANDARD DRAWING PM-1
SOLID SODDING

R.C. BOX CULVT.

PLAN

PARTIAL SECTION SHOWING SODDING AT HEADWALLS AND WING WALLS

NOTE: LENGTH MEASURED ALONG THE CENTER OF 2' STRIP OF SOLID SODDING.

EXCAVATION LIMITS, BACKFILL, & SOLID SODDING FOR BOX CULVERTS

GENERAL NOTES:
ROADWAY EXCAVATION (CHANNEL CHANGE) WILL BE PAID FOR AT R.C. BOX CULVERT LOCATIONS. IT WILL BE PAID TO THE LIMITS ACTUALLY CUT AND WILL BE CONFIRMED TO THE LIMITS SHOWN IN THE DRAWING. BACKFILL WILL BE PLACED IN HORIZONTAL LAYERS.

STANDARD DRAWING RCB-2

ARKANSAS STATE HIGHWAY COMMISSION
GENERAL NOTES

THE RESIDENT ENGINEER WILL MAKE INDIVIDUAL CALCULATIONS OF QUANTITIES FOR EACH STRUCTURE LENGTHWISE, MAKING NO ALLOWANCE FOR OVERBREAKAGE BEYOND THE LINES INDIATED.

IN ALL CASES MINIMUM FOOTINGS SHALL BE REMOVED SO AS TO PERMIT 2 INCHES PLUS 40 TIMES DIAMETER OF STEEL DIAMETER SPLICE OF REINFORCING STEEL.

REINFORCING STEEL REMOVED FROM EXISTING STRUCTURE SHALL NOT BE REUSED IN CONSTRUCTING EXTENSION.

ON R.C. BOX CULVERTS THAT HAVE AN EXISTING CONCRETE APRON THE CONCRETE APRON SHALL BE REMOVED WITH THE WINGS. THE COST OF REMOVING ALL OLD CONCRETE SHALL BE INCLUDED IN THE PRICE BID PER CUBIC YARD FOR NEW CONCRETE OF THE CLASS SPECIFIED AND NO ADDITIONAL COMPENSATION WILL BE ALLOWED.

MATERIALS FOR SECURING DOWEL BARS SHALL MEET THE REQUIREMENTS OF SECTION 507.02 OF THE STANDARD SPECIFICATIONS.

DOWEL BARS SHALL BE INSTALLED AS FOLLOWS: THE DRILLING PROCEDURE SHALL BE APPROVED BY THE ENGINEER. THE FILLING SYSTEM SHALL BE APPROVED BY THE ENGINEER AND SHALL BE AN INJECTION-TYPE SYSTEM WHICH WILL INSURE THAT SUFFICIENT MATERIAL IS INJECTED TO COMPLETELY SURROUND THE BARS AND FILLS THE HOLES.

THE CONTRACTOR SHALL HAVE THE OPTION OF USING EITHER METHOD I OR METHOD 2. REGARDLESS OF WHICH METHOD IS USED, PAY QUANTITIES WILL BE CALCULATED BASE ON METHOD I.

NOTE

NO PART OF THIS STANDARD IS TO BE USED FOR ANY DETAILS RELATIVE TO NEW CONSTRUCTION.

SEE STANDARD DRAWING LISTED IN TABULATION OF STRUCTURES FOR ALL NEW CONSTRUCTION DETAILS.
Standard traffic control devices used on road construction shall conform to the manual on uniform traffic control devices, latest edition, and to the standard highway signs, latest edition as approved by the federal highway administration.

1. Traffic control devices shall be set up just before the start of construction operations and shall be properly maintained during the time such conditions exist. They shall remain in place one day longer than required, weather permitting.

2. Standard signs and construction signs shall be kept in proper position and be clean and legible at all times. All signs that do not apply to existing conditions shall be removed. Construction signs shall be replaced with standard traffic control devices.

3. Signs are usually mounted on a single post, although those over 36" or larger than 30 ft. shall be mounted on two or more above in barricade.

4. Signs direct buried in soil shall be 2 lb. minimum channel posts or 4" wood. Posts shall be painted green. Wood posts shall be painted white. All signs shall be neatly constructed and shall be replaced, cleaned, or repaired as required for the duration of the job. There shall be no more than one 36" long post in a 54" long post or in a barricade.

5. Posts mounted signs in rural areas shall be constructed and painted in accordance with standard drawing tc-3.

6. Post mounted signs in urban areas shall be constructed and painted with the exception of the mounting edges. Signs in urban areas shall be mounted on a minimum of 3 ft. from the pavement edge.

7. All post and barricade mounted signs mounted in rural areas shall be mounted a minimum distance of 7 ft. from the bottom of the signs to the roadway surface. All post and barricade mounted signs shall be mounted in rural areas shall be mounted a minimum distance of 7 ft. from the bottom of the signs to the roadway surface. The minimum height for road signs shall be 5 ft. In the absence of road signs, temporary signs may be mounted on portable supports for short-term, short-duration, and mobile conditions. They shall be no less than 1 ft. beyond the traveled way. Long-term stationary signs shall be directly buried in soil unless conditions necessitate the use of portable stands. Such stands shall be made of concrete, or other solid materials, shall be used in conjunction with portable sign supports.

8. Flashing shall use reflectorized slow-moving signal flags or flasher signals shall be used only for emergency situations.

9. Most of the signs shown are oriented to the right, however this does not preclude the use of mirror images of these signs where the reverse orientation might better direct motorists to the proper direction of movement.

10. Road signs shall be placed at least 5 ft. away from any work zone except when a speed reduction of 25% is expected. For road signs, a minimum of 1 ft. of road shall be used in advance of the "reduced speed" sign.

11. Special instructional signs that are different from the standard signs shall be used for non-construction uses. These signs shall not be used for non-construction uses. These signs shall not be used for non-construction uses.
4 feet or greater preferred. If less than 4 feet, Precast Units shall be connected to slab (See BARRIER STABILIZATION DETAIL-BRIDGE DECKS STD. DRWG. TC-4).

Precast Units shall be connected to slab (See BARRIER STABILIZATION DETAIL-BRIDGE DECKS STD. DRWG. TC-4).

Barrier shall be dowelled to pavement when the dimension is less than 4'-0" and the dimension is greater than 24 inches.

BARRIER PLACEMENT ALONG BRIDGE WITH OFFSET

** Offset Distance for Two Way Traffic Only

BARRIER PLACEMENT ALONG ROADWAY WITH OFFSET

** Offset Distance for Two Way Traffic Only

Offset Distance Table

<table>
<thead>
<tr>
<th>Offset Distance (in)</th>
<th>4</th>
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</tr>
<tr>
<td>3</td>
<td>12</td>
<td>12</td>
<td>12</td>
</tr>
</tbody>
</table>

If offset distance is not attainable, then use "Barrier Placement With Attenuator" detail shown below.

BARRIER PLACEMENT WITH ATTENUATOR

** Offset Distance for Two Way Traffic Only

General Notes

When shown on the Plans, the ends of the Temporary Precast Concrete Barrier shall be protected with an NCHRP-350 or Manual For Assessing Safety Hardware (MASH) approved Crash Cushion. Payment for Crash Cushions shall be made under the item of "Temporary Impact Attenuation Barrier."

ARKANSAS STATE HIGHWAY COMMISSION

STANDARD TRAFFIC CONTROLS FOR HIGHWAY CONSTRUCTION - TEMPORARY PRECAST BARRIER

STANDARD DRAWING TC-5
GENERAL NOTES

1. Strain bales shall be installed so that the bindings are
   secured around the bales rather than along the slats
   and bottom of the bales. The bales shall be a minimum
   of 12 inches in length.

2. No gaps shall be left between bales.

3. Strain bale filter barrier completed and accepted
   shall be measured by the bales in place of the
   authorized unit price bid per bale for strain bale
   filter check.

GEOTEXTILE FABRIC SHEAL BE
SPICED TOGETHER
WITH A SEAM
ONLY AT
A SUPPORT
POST OR TWO
SECTIONS OF
FENCE MAY
BE OVERLAPPING.
PAYMENT FOR ADDITIONAL MATERIAL FOR
OVERLAP SHALL NOT BE MADE.

NUMBER OF SAND BAGS
THE NUMBER OF BAGS
WITH OPPOSITE CONDITIONS
OF WATER LEVEL
PLACE SAND BAGS
AND Ditch Check
IN AREA OF SHEER FLOW

WATTLE DITCH CHECK (E-1)

DROP INLET SILT FENCE (E-7)

SECTION A-A
ROCK DITCH CHECK
(E-6)

SECTION A-A
SILT FENCE (E-11)

SILT FENCE ON R/W FENCE (E-4)

BRAZED STRAW FILTER BARRIER
(E-2)

ARIZONA STATE HIGHWAY COMMISSION
TEMPORARY EROSION CONTROL
DEVICES
STANDARD DRAWING TEC-1
MIN. WIDTH

DUMPED RIPPAP

4 MIN.

PLAN VIEW

DUMPED RIPPAP

NOTE:
SIZE OF BASIN TO BE DETERMINED BY VOLUME REQUIRED; HOWEVER A MINIMUM LENGTH-TO-WIDTH RATIO OF 2:1 SHALL BE USED.

TOP OF BANK

EXIST, FLOW LINE

SECTION A-A

EXIST, FLOW LINE

SECTION ON FLOW LINE

SEDIMENT BASIN WITH RIPRAP OUTLET (E-9)

SLOPE TO BE 1:1 OR PLATTER

NOTE:
SIZE OF BASIN TO BE DETERMINED BY VOLUME REQUIRED; HOWEVER A MINIMUM LENGTH-TO-WIDTH RATIO OF 2:1 SHALL BE USED.

TOP OF LEVEE

FLOW

PERFORATED RISER PIPE

SECTION ON FLOW LINE

SEDIMENT BASIN WITH PIPE OUTLET (E-10)

18" MIN. NON-PERFORATED PIPE WITH ANTI-SEEP COLLAR

NOTES:
- SECTION SHALL BE USED AT THE INLET FOR TWO-DIRECTIONAL FLOW.
- DUMPED RIPPAP AS NEEDED

TOP OF LEVEE

FLOW

PERFORATED RISER PIPE

SECTION ON FLOW LINE

SEDIMENT BASIN (E-14)

ARKANSAS STATE HIGHWAY COMMISSION
TEMPORARY EROSION CONTROL DEVICES
STANDARD DRAWING TEC-2
CLEARING AND GRUBBING

CONSTRUCTION SEQUENCE
1. PLACE PERIMETER CONTROLS (I.E., FENCE, DIVERSION DITCHES, EMBANKMENT BARRIERS) ETC.
2. PERFORM CLEARING AND GRUBBING OPERATION.

CLEARING

AND

GRUBBING

EMBANKMENT

CONSTRUCTION SEQUENCE
1. CONSTRUCT DIVERSION DITCHES, DITCH CHECKS, SEDIMENT BASINS, ETC., AS REQUIRED.
2. PLACE PERMANENT OR TEMPORARY SEEDING.
3. PLACE FINAL PHASE EMBANKMENT WITH PERMANENT OR TEMPORARY SEEDING.
4. PLACE TREAD PHASES AND SLOPE DRAINS AND MAINTAIN UNTIL ENTIRE SLOPE IS STABILIZED.

GENERAL NOTE

ALL EMBANKMENT SLOPES SHALL BE DRESSED, PREPARED, SEEDED, AND MAINTAINED AS REQUIRED. EXCAVATION AND STABILIZATION WORK PROCEEDS SLOPES SHALL BE DRESSED, PREPARED, SEEDED, AND MAINTAINED IN EQUAL INCREMENTS NOT TO EXCEED 25 FEET, MEASURED VERTICALLY.

CONSTRUCTION SEQUENCE
1. EXCAVATE AND STABILIZE INTERCEPTOR DITCH OR DIVERSION DITCHES.
2. PERFORM PHASE I EXCAVATION, PLACE PERMANENT OR TEMPORARY SEEDING.
3. PLACE PHASE I EMBANKMENT WITH PERMANENT OR TEMPORARY SEEDING.
4. PLACE PHASE 2 EMBANKMENT WITH PERMANENT OR TEMPORARY SEEDING.
5. PERFORM FINAL PHASE OF EXCAVATION, PLACE PERMANENT OR TEMPORARY SEEDING.
6. FINAL PHASE EMBANKMENT WITH PERMANENT OR TEMPORARY SEEDING.

NOTE:
PHASES WILL VARY.

EXISTING GROUND
INTERCEPTOR OR DIVERSION DITCH

EXISTING GROUND

PHASE 1 EXCAVATION
PHASE 2 EXCAVATION
FINAL PHASE EXCAVATION

SHEET DITCH STABILIZED AS REQUIRED

EXISTING EMBANKMENT

EMBANKMENT TO BE IN PLACE AND DRAIN UNTIL SLOPE IS COMpletely STABILIZED.

GENERAL NOTE

NOTE:
NUMBER OF PHASES WILL VARY.

EXISTING GROUND

PHASE 1 EMBANKMENT
PHASE 2 EMBANKMENT
FINAL PHASE EMBANKMENT

SHEET DITCH STABILIZED AS REQUIRED

EXISTING DITCH

EXISTING EMBANKMENT

EMBANKMENT TO BE IN PLACE AND DRAIN UNTIL SLOPE IS COMPLETELY STABILIZED.

GENERAL NOTE

NOTE:
NUMBER OF PHASES WILL VARY.

EXISTING GROUND

PHASE 1 EMBANKMENT
PHASE 2 EMBANKMENT
FINAL PHASE EMBANKMENT

SHEET DITCH STABILIZED AS REQUIRED

EXISTING DITCH

EXISTING EMBANKMENT

EMBANKMENT TO BE IN PLACE AND DRAIN UNTIL SLOPE IS COMPLETELY STABILIZED.

GENERAL NOTE

NOTE:
NUMBER OF PHASES WILL VARY.

EXISTING GROUND

PHASE 1 EMBANKMENT
PHASE 2 EMBANKMENT
FINAL PHASE EMBANKMENT

SHEET DITCH STABILIZED AS REQUIRED

EXISTING DITCH

EXISTING EMBANKMENT

EMBANKMENT TO BE IN PLACE AND DRAIN UNTIL SLOPE IS COMPLETELY STABILIZED.

GENERAL NOTE

NOTE:
NUMBER OF PHASES WILL VARY.

EXISTING GROUND

PHASE 1 EMBANKMENT
PHASE 2 EMBANKMENT
FINAL PHASE EMBANKMENT

SHEET DITCH STABILIZED AS REQUIRED

EXISTING DITCH

EXISTING EMBANKMENT

EMBANKMENT TO BE IN PLACE AND DRAIN UNTIL SLOPE IS COMPLETELY STABILIZED.

GENERAL NOTE

NOTE:
NUMBER OF PHASES WILL VARY.

EXISTING GROUND

PHASE 1 EMBANKMENT
PHASE 2 EMBANKMENT
FINAL PHASE EMBANKMENT

SHEET DITCH STABILIZED AS REQUIRED

EXISTING DITCH

EXISTING EMBANKMENT

EMBANKMENT TO BE IN PLACE AND DRAIN UNTIL SLOPE IS COMPLETELY STABILIZED.

GENERAL NOTE

NOTE:
NUMBER OF PHASES WILL VARY.

EXISTING GROUND

PHASE 1 EMBANKMENT
PHASE 2 EMBANKMENT
FINAL PHASE EMBANKMENT

SHEET DITCH STABILIZED AS REQUIRED

EXISTING DITCH

EXISTING EMBANKMENT

EMBANKMENT TO BE IN PLACE AND DRAIN UNTIL SLOPE IS COMPLETELY STABILIZED.

GENERAL NOTE

NOTE:
NUMBER OF PHASES WILL VARY.

EXISTING GROUND

PHASE 1 EMBANKMENT
PHASE 2 EMBANKMENT
FINAL PHASE EMBANKMENT

SHEET DITCH STABILIZED AS REQUIRED

EXISTING DITCH

EXISTING EMBANKMENT

EMBANKMENT TO BE IN PLACE AND DRAIN UNTIL SLOPE IS COMPLETELY STABILIZED.

GENERAL NOTE

NOTE:
NUMBER OF PHASES WILL VARY.

EXISTING GROUND

PHASE 1 EMBANKMENT
PHASE 2 EMBANKMENT
FINAL PHASE EMBANKMENT

SHEET DITCH STABILIZED AS REQUIRED

EXISTING DITCH

EXISTING EMBANKMENT

EMBANKMENT TO BE IN PLACE AND DRAIN UNTIL SLOPE IS COMPLETELY STABILIZED.

GENERAL NOTE

NOTE:
NUMBER OF PHASES WILL VARY.

EXISTING GROUND

PHASE 1 EMBANKMENT
PHASE 2 EMBANKMENT
FINAL PHASE EMBANKMENT

SHEET DITCH STABILIZED AS REQUIRED

EXISTING DITCH

EXISTING EMBANKMENT

EMBANKMENT TO BE IN PLACE AND DRAIN UNTIL SLOPE IS COMPLETELY STABILIZED.
TEMPORARY EROSION CONTROL DEVICES

GENERAL NOTES

1. This work shall consist of furnishing, placing, and maintaining the triangular silt dike units shown for use as a continuous and/or drop inlet. The triangular silt dike unit shall be installed and located as shown on the diagrams. Construction will be in accordance with the plans and specifications.

2. Triangular silt dike units shall be triangular-shaped and having a height of at least 0.5' above the surrounding ground level. These units shall be placed and installed in accordance with the plans and specifications. The triangular silt dike units shall be placed in a manner that ensures proper drainage and stability.

3. The contractor shall provide all necessary personnel, equipment, and materials required for the installation of the triangular silt dike units. The contractor shall be responsible for the accuracy of the plans and specifications. The contractor shall be responsible for ensuring that the triangular silt dike units are installed in accordance with the plans and specifications.

4. Accepted triangular silt dike units, as measured on the finished grade, will be paid for at the rate specified in the contract. The contractor shall be responsible for ensuring that the triangular silt dike units are installed in accordance with the plans and specifications.

NOTE: Silt dike units shall be installed in a continuous manner, extending from the top of the cut or fill slope to the bottom of the cut or fill slope.

SYMBOLS

- Triangle symbol to be used to indicate device on plan.

- Note: Silt dike units shall only be used for drop inlets in sump locations.