ARKANSAS STATE HIGHWAY AND TRANSPORTATION DEPARTMENT
CONSTRUCTION PLANS FOR STATE HIGHWAY

HAW CREEK
STR. & APPRS. (S)

JOHNSON COUNTY

ROUTE 123 SECTION 3

JOB 080444
FED. AID PROJ. NHPP-0036(17)

NOT TO SCALE

STA. 111+55.60 CONSTRUCT
TRI, 28° 12' 83" 3'-0"
THREE-SIDED PRECAST CULVERT
ON 35° LT, FWX WHEN
W/WINGS ON 3#1 LT. & RT.
TOTAL SPAN = 110'-7½"

STA. 111+10.00
BEGIN JOB 080444
LOG MILE 6.38

BEGINNING:
LAT: N 35° 40' 55"
LONG: W 93° 14' 49"

MID POINT:
LAT: N 35° 40' 53"
LONG: W 93° 14' 44"

ENDING:
LAT: N 35° 40' 50"
LONG: W 93° 14' 38"

STA. 121+71.29
END JOB 080444
LOG MILE 6.20

DEPUTY DIRECTOR
AND CHIEF ENGINEER

8-3-64

APPROVED
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GENERAL NOTES

1. GRADE LINE DENOTES FINISHED GRADE WHERE SHOWN ON PLANS.
2. ALL PIPE, LINES, BOXES, TELEPHONE, AND TELEGRAPH LINES TO BE MOVED OR LOBBED BY THE RESPECTIVE OWNERS AS AGREEMENT WITH SUCH OWNERS.
3. ANY EQUIPMENT OR APPURTENANCE THAT INTERFERS WITH THE PROPOSED CONSTRUCTION AND WHICH MAY BE THE PROPERTY OF 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 BEING 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 MAKE SURE 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 LIVE STOCK IN AREAS WHERE PASTURES ARE ADJACENT. WHEN FENCES MAY BE CONSTRUCTED IMPACTFULLY OR IN PLACE THROUGH THE CONTRACTOR AT HIS OWN EXPENSE, MAY ELECT TO PROVIDE TEMPORARY FENCING SUITABLE TO CONTROL LIVE STOCK.
8. ALL FLEXIBLE BASE AND ASPHALTIC PAVEMENTS REMOVED SHALL BE PAID FOR UNDER THE TENDING 350 - UNADJUSTED EXCAVATION.
9. THE EXISTING ASPHALT PAVEMENT TO BE REMOVED FROM THE REMAINING PAVEMENT SHALL BE SEPARATED BY SAVING ALONG A NEATLINE. AFTER SAVING, 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.

INDEX OF SHEETS, GOVERNING SPECIFICATIONS, AND GENERAL NOTES
TYPICAL SECTIONS OF IMPROVEMENT

STA. 112+40.00 TO STA. 121+00.00

NOTES:

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

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.

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

AFTER PLACING FINAL 2" OF SURFACE COURSE, THE EXISTING SLOPE SHALL BE REDRESSED AS DIRECTED BY THE ENGINEER PRIOR TO SEEDING IN ORDER TO MAINTAIN A UNIFORM SLOPE. PAYMENT FOR THIS WORK SHALL BE INCLUDED IN THE PRICE BID FOR VARIOUS CONTRACT ITEMS.

ON ALL SUPERELEVATED CURVES AND THROUGH SUPERELEVATION TRANSITIONS, THE ALGEBRAIC DIFFERENCE BETWEEN PAVEMENT SLOPE AND SHOULDER SLOPE SHALL NOT EXCEED 0.05' /'.
TYPICAL SECTIONS OF IMPROVEMENT

STA. 112+10.00 TO STA. 112+36.00

STA. 121+00.00 TO STA. 121+71.29 (REVERSE CURB FOR RT. SIDE)

NOTE:
REFER TO CROSS SECTIONS FOR Deviation FROM THE NORMAL SLOPES. NO CHANGES SHALL BE MADE FROM THE PLANNED SLOPES WITHOUT THE APPROVAL OF THE ENGINEER.

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 THE OPENING OF SITE. THE CONTRACTOR WILL NOT BE PAID FOR DIRECTLY BUT WILL BE CONSIDERED TO BE INCLUDED IN THE VARIOUS PAY ITEMS.

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

AFTER PLACING TAC FINAL 2" OF SURFACE COURSE, THE EXISTING SLOPE SHALL BE REDRESSED AS DIRECTED BY THE ENGINEER PRIOR TO SEEDING IN ORDER TO MAINTAIN A UNIFORM SLOPE. PAYMENT FOR THIS WORK SHALL BE INCLUDED IN THE PRICE BID FOR VARIOUS CONTRACT ITEMS.

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.

PRIOR TO AND DURING PLACEMENT OF PAVEMENT IN FRONT OF THE CURB AND GUTTER, THE CONTRACTOR SHALL PROVIDE POSITIVE DRAINAGE AT ALL TIMES. THE METHODS OF DRAINAGE SHALL BE APPROVED BY THE ENGINEER. PAYMENT FOR THIS WORK SHALL BE CONSIDERED INCLUDED IN THE PRICE BID FOR THE VARIOUS CONTRACT ITEMS.
ON ALL SUPERELEVATED CURVES AND THROUGH SUPERELEVATION TRANSITIONS, THE ALGEBRAIC DIFFERENCE BETWEEN PAVEMENT SLOPE AND SHOULDER SLOPE SHALL NOT EXCEED 0.08°.

TYPICAL SECTIONS OF IMPROVEMENT - SUPERELEVATION

NOTES:
1. REFER TO CROSS SECTIONS FOR DEVIATION FROM THE NORMAL SLOPES. NO CHANGES SHALL BE MADE FROM THE PLANNED SLOPES WITHOUT THE APPROVAL OF THE ENGINEER.
2. 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.
3. PAYMENT WILL NOT BE MADE FOR MATERIAL PLACED IN EXCESS OF THE TOLERANCE INDICATED.
4. ASPHALT FOR LEVELING OF EXISTING PAVEMENT SHALL BE PLACED ONLY IF AND WHERE DIRECTED BY THE ENGINEER. CALCULATIONS FOR THE MOUNT OF LEVELING AND/OR LEVELING OPERATIONS SHALL BE PERFORMED BEFORE CONSTRUCTING NO THICKER AND WIDER LEVELS. CALCULATIONS WILL NOT BE PAID FOR DIRECTLY BUT WILL BE INCLUDED IN THE VARIOUS PAY ITEMS.
5. THE FINAL 2’ OF SURFACE COURSE IS TO BE PLACED AFTER ALL OTHER COURSES HAVE BEEN LAYED.
6. LONGITUDINAL JOINTS SHALL BE AT LANE LINES.
7. AFTER PLACING THE FINAL 2’ OF SURFACE COURSE, THE EXISTING SLOPE SHALL BE REDUCED AS DIRECTED BY THE ENGINEER PRIOR TO SEEDING IN ORDER TO MAINTAIN A UNIFORM SLOPE. PAYMENT FOR THIS WORK SHALL BE INCLUDED IN THE PRICE BID FOR VARIOUS CONTRACT ITEMS.

REFERENCES:
1. REFERENCE TO PLAN SECTIONS FOR FURTHER DETAIL.

ADD ON SUPERELEVATED CURVES AND THROUGH SUPERELEVATION TRANSITIONS THE ALGEBRAIC DIFFERENCE BETWEEN PAVEMENT SLOPE AND SHOULDER SLOPE SHALL NOT EXCEED 0.08°.

TYPICAL SECTIONS OF IMPROVEMENT - SUPERELEVATION
ASPHALT CONCRETE HOT MIX SURFACE COURSE (220 LBS. PER SQ. YD.)
AGGREGATE BASE COURSE (CLASS 7)
2" COMP. DEPTH IF ASPHALT DRIVE EXIST OR
6" CONCRETE IF CONCRETE DRIVE EXIST.

AGGREGATE BASE COURSE (CLASS 7)
0" COMP. DEPTH OR CONFORM TO EXISTING DRIVEWAY

DETAIL FOR TRANSITIONS

DETAIL FOR DRIVEWAY TURNOUTS
REVISIONS

EROSION CONTROL GENERAL NOTES

THE QUANTITIES AND LOCATIONS OF THE EROSION CONTROL DEVICES SHOWN IN THE PLANS ARE ESTIMATED AND MAY BE ALTERED IF AND WHERE DIRECTED BY THE ENGINEER. TO MAXIMIZE THEIR EFFECTIVENESS, THE DEVICES ARE TO BE INSTALLED IN AN AREA ONLY WHEN THE SOIL DISTURBING ACTIVITY IN THAT AREA BEGINS.

REFER TO SECTION 80 OF THE STANDARD SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.

* MAINTAIN ALL EROSION CONTROL DEVICES UNTIL THE END OF THE JOB UNLESS OTHERWISE SPECIFIED.

CLEARING AND GRUBBING STAGE
TEMPORARY EROSION CONTROL DETAILS
LEGEND

- E5 = SAND BAG DITCH CHECKS
- E6 = ROCK DITCH CHECKS
- E7 = DROP INLET SILT FENCE
- E1 = SILT FENCE
- E4 = SEDIMENT BASIN

NOTE: PERIMETER CONTROLS SHALL BE PLACED AS CLEARING AND GRABBING OPERATIONS ARE STARTED.

SILT FENCE (E-1)

STA. 112+10.00 TO STA. 113+00
35' RT. RETAIN

STA. 112+10 TO STA. 115+95
440' LT. RETAIN

STA. 114+25 TO STA. 115+65
195' LT. & RT. RETAIN

STA. 115+40 TO STA. 116+32
90' LT. & RT. RETAIN

STA. 116+44 TO STA. 117+66
80' LT.

STA. 116+32 TO STA. 122+16
555' LT. RETAIN

STA. 117+46 TO STA. 118+60
105' LT.

STA. 117+35 TO STA. 120+05
180' LT.

STA. 120+20 TO STA. 122+00
200' RT. RETAIN

EROSION CONTROL GENERAL NOTES

THE QUANTITIES AND LOCATIONS OF THE EROSION CONTROL DEVICES SHOWN IN THE PLANS ARE ESTIMATED AND MAY BE ALTERED IF AND WHERE DIRECTED BY THE ENGINEER TO MAXIMIZE THEIR EFFECTIVENESS. THE DEVICES ARE TO BE INSTALLED IN AN AREA ONLY WHEN THE SOIL DISTURBING ACTIVITY IN THAT AREA BEGINS.

REFER TO SECTION 110 OF THE STANDARD SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.

REVISIONS

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* MAINTAIN ALL EROSION CONTROL DEVICES UNTIL THE END OF THE JOB UNLESS OTHERWISE SPECIFIED.

STAGE 1

TEMPORARY EROSION CONTROL DETAILS
LEGEND

E5 = SAND BAG DITCH CHECKS
E6 = ROCK DITCH CHECKS
E7 = DROP INLET SILT FENCE
E9 = SILT FENCE
E14 = SEDIMENT BASIN

NOTE: PERIMETER CONTROLS SHALL BE PLACED AS CLEARING AND GRABBING OPERATIONS ARE STARTED.

STA. 112+10.00
BEGIN JOB 080444
LOG MILE 6.38

STA. 121+71.29
END JOB 080444
LOG MILE 6.20

SILT FENCE (E-3)
STA. 112+79 TO STA. 113+00 115' RT. RETAIN
STA. 112+80 TO STA. 113+05 440' LT. RETAIN
STA. 112+65 TO STA. 113+05 35' RT. RETAIN
STA. 112+40 TO STA. 113+05 195' LT. & RT. RETAIN
STA. 112+41 TO STA. 113+32 195' LT. & RT. RETAIN
STA. 112+44 TO STA. 113+32 80' LT. RETAIN
STA. 112+32 TO STA. 112+36 555' LT. RETAIN
STA. 112+50 TO STA. 112+60 105' LT. RETAIN
STA. 112+35 TO STA. 120+05 180' LT. RETAIN
STA. 120+20 TO STA. 122+00 200' RT. RETAIN
STA. 114+00 TO STA. 115+00 40' RT. RETAIN
STA. 115+30 TO STA. 115+54 60' RT.

SAND BAG DITCH CHECKS (E-5)
STA. 113+50 22 BAGS LT. RETAIN
STA. 113+70 22 BAGS LT. RETAIN
STA. 113+95 22 BAGS LT. RETAIN

ROCK DITCH CHECKS (E-6)
STA. 115+35 3 CUB. YD. LT. RETAIN
STA. 115+40 3 CUB. YD. LT. RETAIN

DROP INLET DITCH CHECKS (E-7)
STA. 112+36 20 LINFT. LT. RETAIN

EROSION CONTROL GENERAL NOTES
THE QUANTITIES AND LOCATIONS OF THE EROSION CONTROL DEVICES SHOWN IN THE PLANS ARE ESTIMATED AND MAY BE ALTERED IF AND WHERE DIRECTED BY THE ENGINEER.

TO MAXIMIZE THEIR EFFECTIVENESS, THE DEVICES ARE TO BE INSTALLED IN AN AREA ONLY WHEN THE SOIL DISTURBING ACTIVITY IN THAT AREA BEGINS.

REFER TO SECTION 00 OF THE STANDARD SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.

STAGE 2
TEMPORARY EROSION CONTROL DETAILS

* MAINTAIN ALL EROSION CONTROL DEVICES UNTIL THE END OF THE JOB UNLESS OTHERWISE SPECIFIED.

REVISIONS

DATE

REVISION

08/04/2016

08/04/2016

08/04/2016

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08/04/2016

08/04/2016

LEGEND

- (E-5) = Sand Bag Ditch Checks
- (E-6) = Rock Ditch Checks
- (E-7) = Drop Inlet Silt Fence
- (E-8) = Silt Fence
- (E-14) = Sediment Basin

NOTE: Perimeter controls shall be placed as clearing and grubbing operations are started.

EROSION CONTROL GENERAL NOTES

The quantities and locations of the erosion control devices shown in the plans are estimated and may be altered if and where directed by the engineer to maximize their effectiveness. The devices are to be installed in an area only when the soil disturbing activity in that area begins.

Refer to Section 110 of the standard specifications for additional requirements.

Temporary Erosion Control Details

Stage 3

- Maintain all erosion control devices until the end of the job unless otherwise specified.

Date

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<th>Revisions</th>
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Log Mile 6.38

Erosion Control Details

- STA. 112+10.00 Begin Job 080444
- STA. 121+71.29 End Job 080444

- STA. 112+10.00 to STA. 115+00: 115' RT. Retain
- STA. 112+10.00 to STA. 115+00: 440' LT. Retain
- STA. 112+10.00 to STA. 115+00: 35' RT. Retain
- STA. 112+10.00 to STA. 115+00: 195' LT. Retain
- STA. 112+10.00 to STA. 115+00: 190' LT. Retain
- STA. 112+10.00 to STA. 115+00: 80' LT. Retain
- STA. 112+10.00 to STA. 115+00: 555' LT. Retain
- STA. 112+10.00 to STA. 115+00: 105' LT. Retain
- STA. 112+10.00 to STA. 115+00: 180' LT. Retain
- STA. 112+10.00 to STA. 115+00: 200' RT. Retain
- STA. 112+10.00 to STA. 115+00: 40' RT. Retain
- STA. 112+10.00 to STA. 115+00: 60' RT. Retain

- STA. 112+10.00 to STA. 115+00: 22 Bags LT. Retain
- STA. 112+10.00 to STA. 115+00: 22 Bags LT. Retain
- STA. 112+10.00 to STA. 115+00: 3 Gravels LT. Retain
- STA. 112+10.00 to STA. 115+00: 3 Gravels LT. Retain
- STA. 112+10.00 to STA. 115+00: 20 Lin.Ft. LT. Retain
SEQUENCE OF CONSTRUCTION

STAGE 1 -
- MAINTAIN TRAFFIC ON EXISTING ROADWAY.
- CONSTRUCT 3 SIDED R.C. BOX CULVERT AND PROPOSED ROADWAY, PLACE PERMANENT PAVEMENT MARKINGS ON NEW ALIGNMENT.

STAGE 2 -
- CONSTRUCT PERMANENT CONNECTIONS TO EXISTING ROADWAY, PLACE PERMANENT PAVEMENT MARKINGS AND SHIFT TRAFFIC ONTO PROPOSED ALIGNMENT.

STAGE 3 -
- REMOVE EXISTING BRIDGE STRUCTURE AND COMPLETE DITCH AND SLOPE GRADES.

STAGE 2 CONSTRUCTION PAVEMENT MARKINGS = 1732 LIN.FT.
REMOVAL OF PERMANENT PAVEMENT MARKINGS = 2020 LIN.FT.

STAGE 1 MAINTENANCE OF TRAFFIC DETAILS
SEQUENCE OF CONSTRUCTION

STAGE 1 -
MAINTAIN TRAFFIC ON EXISTING ROADWAY,
CONSTRUCT 3 SIDED R.C. BOX CULVERT AND
PROPOSED ROADWAY, PLACE PERMANENT
PAVEMENT MARKINGS ON NEW ALIGNMENT.

STAGE 2 -
CONSTRUCT PERMANENT CONNECTIONS TO EXISTING
ROADWAY, PLACE PERMANENT PAVEMENT MARKINGS
AND SHIFT TRAFFIC ONTO PROPOSED ALIGNMENT.

STAGE 3 -
REMOVE EXISTING BRIDGE STRUCTURE AND
COMPLETE DITCH AND SLOPE GRADES.

TRAFFIC DRUMS = 16 EACH
VERTICAL PANELS = 16 EACH

STAGE 2
CONSTRUCTION PAVEMENT MARKINGS = 1722'
REMOVAL OF PERMANENT PAVEMENT MARKINGS = 20'
SEQUENCE OF CONSTRUCTION

STAGE 1 - MAINTAIN TRAFFIC ON EXISTING ROADWAY, CONSTRUCT 3 SIDED R.C. BOX CULVERT, AND PROPOSED ROADWAY, PLACE PERMANENT PAVEMENT MARKINGS ON NEW ALIGNMENT.

STAGE 2 - CONSTRUCT PERMANENT CONNECTIONS TO EXISTING ROADWAY, PLACE PERMANENT PAVEMENT MARKINGS AND SHIFT TRAFFIC ONTO PROPOSED ALIGNMENT.

STAGE 3 - REMOVE EXISTING BRIDGE STRUCTURE AND COMPLETE DITCH AND SLOPE GRADES.

TRAFFIC DRUMS = 28 EACH
THE 4" YELLOW STRIPING QUANTITY HAS BEEN ESTIMATED BASED ON A DOUBLE YELLOW CENTERLINE STRIPE FOR THE ENTIRE PROJECT. THE PROJECT MUST BE MARKED FOR PASSING ZONES PRIOR TO THE START OF THE 4" YELLOW STRIPE MARKING. ALL NEW CENTERLINE STRIPING AND/OR MARKING HAS BEEN PLACED TO SCHEDULE THE ZONING OF THE PROJECT.

PERMANENT PAVEMENT MARKING DETAILS
CONSTRUCTION PAVEMENT MARKINGS AND PERMANENT PAVEMENT MARKINGS

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<tr>
<th>DESCRIPTION</th>
<th>STAGE 1</th>
<th>STAGE 2</th>
<th>STAGE 3</th>
<th>END OF JOB</th>
<th>REMOVAL OF PERMANENT PAVEMENT MARKINGS</th>
<th>CONSTRUCTION PAVEMENT MARKINGS</th>
<th>RAISED PAVEMENT MARKERS</th>
<th>REFLECTORIZED PAINT PAVEMENT MARKING</th>
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NOTE: THIS IS A LOW TRAFFIC VOLUME ROAD AS DEFINED IN SECTION 604.03, STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION.

NOTE: THE 4" YELLOW STRIPING QUANTITY HAS BEEN ESTIMATED BASED ON A DOUBLE YELLOW CENTERLINE STRIPE FOR THE ENTIRE PROJECT. THE PROJECT MUST BE MARKED FOR PASSING ZONE PRIOR TO THE PLACEMENT OF ANY FINAL STRIPING. CONTACT THE MAINTENANCE DIVISION AFTER THE FINAL LIFT OF SURFACE COURSE HAS BEEN PLACED TO SCHEDULE THE ZONING OF THE PROJECT.

ADVANCE WARNING SIGNS AND DEVICES

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<th>SIGN NUMBER</th>
<th>DESCRIPTION</th>
<th>SIGN SIZE</th>
<th>STAGE 1</th>
<th>STAGE 2</th>
<th>STAGE 3</th>
<th>END OF JOB</th>
<th>MAXIMUM NUMBER REQUIRED</th>
<th>TOTAL SIGNS REQUIRED</th>
<th>VERTICAL PANELS</th>
<th>TRAFFIC DRUMS</th>
<th>BARRICADES (TYPE 1B)</th>
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<td>END ROAD WORK</td>
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<tr>
<td>R11-2</td>
<td>SHOULDER CLOSED</td>
<td>48&quot;x30&quot;</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>20.0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>W1-6</td>
<td>LARGE ARROW</td>
<td>48&quot;x24&quot;</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>16.0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>M-1</td>
<td>DO NOT PASS</td>
<td>24&quot;x39&quot;</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>10.0</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

VERITCAL PANELS: 15
TRAFFIC DRUMS: 23 14 28 28

NOTE: THIS IS A LOW TRAFFIC VOLUME ROAD AS DEFINED IN SECTION 604.03, STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION.
## CLEARING AND GRUBBING

<table>
<thead>
<tr>
<th>STATION</th>
<th>CLEARING</th>
<th>GRUBBING</th>
<th>STATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>112+10</td>
<td>11</td>
<td>11</td>
<td>122+71</td>
</tr>
</tbody>
</table>

**TOTALS:** 11 11

---

## REMOVAL AND DISPOSAL OF CULVERTS

<table>
<thead>
<tr>
<th>STATION</th>
<th>DESCRIPTION</th>
<th>PIPE CULVERTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>112+35</td>
<td>30&quot; X 18&quot; X 40&quot; ARCH CM PIPE WITHOUT</td>
<td>EACH</td>
</tr>
</tbody>
</table>

**TOTAL:** 1

*NOTE: QUANTITY SHOWN ABOVE SHALL INCLUDE REMOVAL & DISPOSAL OF ALL HEADWALLS AND FLARED END SECTIONS IF APPLICABLE.*

---

## 4" PIPE UNDERDRAIN

<table>
<thead>
<tr>
<th>STATION</th>
<th>STATION</th>
<th>LOCATION</th>
<th>4&quot; PIPE UNDERDRAIN</th>
</tr>
</thead>
<tbody>
<tr>
<td>114+94</td>
<td>115+31</td>
<td>77&quot; X 32&quot; ROADWAY W/CONG. DECK</td>
<td>LIN. FT.</td>
</tr>
<tr>
<td>115+03</td>
<td>115+03</td>
<td>28&quot; X 32&quot; ROADWAY W/CONG. DECK</td>
<td>EACH</td>
</tr>
</tbody>
</table>

**TOTAL:** 500 4

*NOTE: QUANTITIES ESTIMATED. SEE SECTION 104.03 OF THE STD. SPECS.*

---

## SOIL LOG

<table>
<thead>
<tr>
<th>STATION</th>
<th>LOCATION</th>
<th>DEPTH</th>
<th>LIQUID LIMIT</th>
<th>PLASTICITY INDEX</th>
<th>AASHO CLASSIFICATION</th>
<th>COLOR</th>
</tr>
</thead>
<tbody>
<tr>
<td>111+00</td>
<td>7&quot; RT</td>
<td>0.5</td>
<td>28</td>
<td>12</td>
<td>A-2-4D</td>
<td>BRGR</td>
</tr>
<tr>
<td>111+00</td>
<td>25&quot; RT</td>
<td>0.5</td>
<td>28</td>
<td>12</td>
<td>A-2-4D</td>
<td>BRGR</td>
</tr>
<tr>
<td>111+00</td>
<td>25&quot; RT</td>
<td>0.5</td>
<td>28</td>
<td>12</td>
<td>A-2-4D</td>
<td>BRGR</td>
</tr>
</tbody>
</table>

**TOTAL:** 91

*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.*

---

## ACHM PATCHING OF EXISTING ROADWAY

<table>
<thead>
<tr>
<th>DESCRIPTION</th>
<th>TON</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENTIRE PROJECT - TO BE USED ONLY WHERE DIRECTED BY THE ENGINEER</td>
<td>10</td>
</tr>
</tbody>
</table>

**TOTAL:** 10

*NOTE: QUANTITY ESTIMATED. SEE SECTION 104.03 OF THE STD. SPECS.*

---

## REMOVAL OF EXISTING BRIDGE STRUCTURE

<table>
<thead>
<tr>
<th>STATION</th>
<th>STATION</th>
<th>LOCATION</th>
<th>LUMP SUM</th>
</tr>
</thead>
<tbody>
<tr>
<td>114+94</td>
<td>114+94</td>
<td>17-25&quot; STONE PIER BRIDGE SITE NO. 1</td>
<td>1.00</td>
</tr>
<tr>
<td>114+94</td>
<td>114+94</td>
<td>17-25&quot; STONE PIER BRIDGE SITE NO. 1</td>
<td>1.00</td>
</tr>
</tbody>
</table>

---

## CONCRETE COMBINATION CURB AND GUTTER

<table>
<thead>
<tr>
<th>STATION</th>
<th>STATION</th>
<th>LOCATION</th>
<th>TYPE B-1 (3&quot; X 6&quot;)</th>
</tr>
</thead>
<tbody>
<tr>
<td>112+10</td>
<td>112+10</td>
<td>ON LT</td>
<td>20</td>
</tr>
<tr>
<td>121+00</td>
<td>121+01</td>
<td>ON LT</td>
<td>71</td>
</tr>
</tbody>
</table>

**TOTAL:** 91

---

## ASPHALT CONCRETE PATCHING FOR MAINTENANCE OF TRAFFIC

<table>
<thead>
<tr>
<th>LOCATION</th>
<th>TON</th>
<th>TACK COAT</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENTIRE PROJECT - TO BE USED ONLY WHERE DIRECTED BY THE ENGINEER</td>
<td>6</td>
<td>12</td>
</tr>
</tbody>
</table>

**TOTALS:** 6 12

*BASIS OF ESTIMATE: ASPHALT CONCRETE PATCHING FOR MAINTENANCE OF TRAFFIC...........25 TON/MILE TACK COAT FOR MAINTENANCE OF TRAFFIC..................................................0.00 GAL/MILE*
### STRUCTURES

<table>
<thead>
<tr>
<th>STATION</th>
<th>DESCRIPTION</th>
<th>CROSS DRAIN ALT.</th>
<th>F E S. ALT.</th>
<th>SPAN</th>
<th>HEIGHT</th>
<th>THREE-SIDED PRECAST CULVERT (28'X12')</th>
<th>CLASS S CONCRETE BRIDGE</th>
<th>REINF. EXC. FOR STR. BRIDGE</th>
<th>BRIDGE NAME PLATE (TYPE 0)</th>
<th>SOLID SODDING</th>
<th>WATER</th>
<th>STD. DWG. NO.</th>
</tr>
</thead>
<tbody>
<tr>
<td>112+36</td>
<td>CONSTR. W1wx24&quot; PIPE CULVERT W FES ON RT.</td>
<td>43</td>
<td>48</td>
<td>2</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Subtotals:**

| 115+05  | THREE-SIDED PRECAST CULVERT (28'x12') | 28 | 12 | 249 | 460.00 | 33300 | 1400 | 1 | 66 | 0.83 | | |

**Subtotals:**

| 115+05  | THREE-SIDED PRECAST CULVERT (28'x12') | 249 | 460.00 | 33300 | 1400 | 1 | 66 | 0.83 |

**TOTALS:**

| 115+05  | THREE-SIDED PRECAST CULVERT (28'x12') | 249 | 460.00 | 33300 | 1400 | 1 | 79 | 0.89 |

**BASE OF ESTIMATE:**

WATER: 12.6 GAL / SQ. YD. OF SOLID SODDING

**NOTE:** FOR R.C. PIPE CULVERT INSTALLATIONS USE TYPE 3 BEDDING UNLESS OTHERWISE SPECIFIED.

**NOTE:** FOR C.M. PIPE CULVERT INSTALLATIONS USE TYPE 2 BEDDING UNLESS OTHERWISE SPECIFIED.

### EROSION CONTROL

<table>
<thead>
<tr>
<th>STATION</th>
<th>STATION LOCATION</th>
<th>SPECIAL SEEDING</th>
<th>SPECIAL MULCH COVER</th>
<th>WATER</th>
<th>SPECIAL SECOND SEEDING</th>
<th>TEMPORARY SEEDING</th>
<th>WATER</th>
<th>SPECIAL MULCH COVER</th>
<th>WATER</th>
<th>SANDBAG DITCH CHECKS (E-5)</th>
<th>SANDBAG LOCATION</th>
<th>ROCK DITCH CHECKS (E-6)</th>
<th>SILT FENCE</th>
<th>SEDIMENT BASIN</th>
<th>OBLITERATION OF SEDIMENT BASIN</th>
<th>*SOMERSET REMOVAL &amp; DISPOSAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENTIRE</td>
<td>PROJECT CLEARING AND GRUBBING</td>
<td>0.71</td>
<td>0.43</td>
<td>0.71</td>
<td>72.4</td>
<td>0.31</td>
<td>2.02</td>
<td>2.02</td>
<td>41.2</td>
<td>66</td>
<td>6</td>
<td>1695</td>
<td>50</td>
<td>50</td>
<td>113</td>
<td>6</td>
</tr>
<tr>
<td>ENTIRE</td>
<td>PROJECT STAGE 1</td>
<td>0.25</td>
<td>0.90</td>
<td>0.25</td>
<td>25.5</td>
<td>0.25</td>
<td>0.25</td>
<td>0.25</td>
<td>5.1</td>
<td>6</td>
<td>6</td>
<td>400</td>
<td>6</td>
<td>50</td>
<td>20</td>
<td>6</td>
</tr>
<tr>
<td>ENTIRE</td>
<td>PROJECT STAGE 2</td>
<td>0.16</td>
<td>0.32</td>
<td>0.16</td>
<td>16.3</td>
<td>0.16</td>
<td>0.16</td>
<td>0.16</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**TOTALS:**

| 2.12 | 4.24 | 2.12 | 216.2 | 2.12 | 2.98 | 2.98 | 60.8 | 66 | 12 | 2195 | 50 | 50 | 139 |

**BASE OF ESTIMATE:**

LIME: 2 TONS / ACRE OF SEEDING
WATER: 100.0 G.P.A. / ACRE OF SEEDING
WATER: 20.4 M.G. / ACRE OF TEMPORARY SEEDING
SANDBAG DITCH CHECKS: 22 BAGS / LOCATION
ROCK DITCH CHECKS: 3 CU. YD. LOCATION

**NOTE:** THE TEMPORARY EROSION CONTROL DEVICES SHOWN ABOVE AND ON THE PLANS SHALL BE INSTALLED IN SUCH A SEQUENCE AS TO DETECTION EROSION AND SEDIMENTATION ON U.S. WATERWAYS AS EXPLAINED BY THE NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM PERMIT.

**QUANTITIES ESTIMATED:**

SEE SECTION 154.03 OF THE STD. SPECS.
**FENCE ITEMS**

<table>
<thead>
<tr>
<th>STATION</th>
<th>STATION</th>
<th>LOCATION</th>
<th>WIRE FENCE (TYPE D)</th>
<th>&quot;E-0&quot; GATES</th>
</tr>
</thead>
<tbody>
<tr>
<td>155+50</td>
<td>116+40</td>
<td>LT. SIDE</td>
<td>45</td>
<td>EACH</td>
</tr>
<tr>
<td>116+40</td>
<td>115+40</td>
<td>LT. SIDE</td>
<td>315</td>
<td></td>
</tr>
<tr>
<td>115+55</td>
<td>119+55</td>
<td>LT. SIDE</td>
<td>55</td>
<td></td>
</tr>
<tr>
<td>119+55</td>
<td>119+55</td>
<td>LT. SIDE</td>
<td>55</td>
<td></td>
</tr>
<tr>
<td>TOTAL:</td>
<td></td>
<td></td>
<td>315</td>
<td>2</td>
</tr>
</tbody>
</table>

* DENOTES ALTERNATE ST. ITEM

**REMOVAL AND DISPOSAL OF FENCE**

<table>
<thead>
<tr>
<th>STATION</th>
<th>STATION</th>
<th>LOCATION</th>
<th>FENCE</th>
</tr>
</thead>
<tbody>
<tr>
<td>118+10</td>
<td>113+10</td>
<td>LT. SIDE</td>
<td>12</td>
</tr>
<tr>
<td>120+07</td>
<td>120+09</td>
<td>LT. SIDE</td>
<td>12</td>
</tr>
<tr>
<td>TOTAL:</td>
<td></td>
<td></td>
<td>162</td>
</tr>
</tbody>
</table>

**COLD MILLING ASPHALT PAVEMENT**

<table>
<thead>
<tr>
<th>STATION</th>
<th>STATION</th>
<th>LOCATION</th>
<th>AVG. WIDTH</th>
<th>COLD MILLING ASPHALT PAVEMENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>113+00</td>
<td>113+00</td>
<td>MAIN Lanes</td>
<td>22.00</td>
<td>FEET SQ YD: 520.87</td>
</tr>
<tr>
<td>114+00</td>
<td>114+00</td>
<td>MAIN Lanes</td>
<td>22.00</td>
<td>409.22</td>
</tr>
<tr>
<td>TOTAL:</td>
<td></td>
<td></td>
<td></td>
<td>929.09</td>
</tr>
</tbody>
</table>

NOTE: AVERAGE MILLING DEPTH 1".

**SELECTED PIPE BEDDING**

<table>
<thead>
<tr>
<th>LOCATION</th>
<th>SELECTED PIPE BEDDING</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENTIRE PROJECT TO BE USED IF AND WHERE DIRECTED BY THE ENGINEER</td>
<td></td>
</tr>
<tr>
<td>TOTAL: 50</td>
<td></td>
</tr>
</tbody>
</table>

NOTE: QUANTITIES ESTIMATED
SEE SECTION 104.03 OF THE STD. SPECS.

**EROSION CONTROL MATTING**

<table>
<thead>
<tr>
<th>STATION</th>
<th>STATION</th>
<th>LOCATION</th>
<th>LENGTH</th>
<th>CLASS 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>113+00</td>
<td>114+00</td>
<td>RT. SIDE</td>
<td>700.00</td>
<td>125</td>
</tr>
<tr>
<td>116+00</td>
<td>118+00</td>
<td>RT. SIDE</td>
<td>500.00</td>
<td>266.67</td>
</tr>
<tr>
<td>TOTAL:</td>
<td></td>
<td></td>
<td>1200.00</td>
<td>492.50</td>
</tr>
</tbody>
</table>

NOTE: AVERAGE WIDTH = 8'-0"

**DUMPED RIPRAP AND FILTER BLANKET**

<table>
<thead>
<tr>
<th>STATION</th>
<th>LOCATION</th>
<th>DUMPED RIPRAP (TYPE SPECIAL)</th>
<th>FILTER BLANKET</th>
</tr>
</thead>
<tbody>
<tr>
<td>113+00</td>
<td>OUTLET OF PIPE CULVERT 3</td>
<td>12</td>
<td>3</td>
</tr>
<tr>
<td>TOTAL:</td>
<td></td>
<td>13</td>
<td>37</td>
</tr>
</tbody>
</table>

NOTE: QUANTITIES ESTIMATED
SEE SECTION 104.03 OF THE STANDARD SPECIFICATIONS
NOTE: FILTER BLANKET SHALL BE GEOTEXTILE FABRIC (TYPE 5).

**EARTHWORK**

<table>
<thead>
<tr>
<th>STATION</th>
<th>STATION</th>
<th>LOCATION / DESCRIPTION</th>
<th>UNCLASSIFIED EXCAVATION</th>
<th>COMPACTED EMBANKMENT</th>
<th>TOPSOIL FURNISHED AND PLACED</th>
<th>SOIL STABILIZATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENTIRE PROJECT</td>
<td>STAGE 1 - MAIN Lanes</td>
<td>351</td>
<td>6883</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ENTIRE PROJECT</td>
<td>STAGE 2 - MAIN Lanes</td>
<td>133</td>
<td>9</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ENTIRE PROJECT</td>
<td>STAGE 3 - UTILIZATION OF EXISTING ROADSIDE</td>
<td>1328</td>
<td>5</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ENTIRE PROJECT</td>
<td>DRIVES</td>
<td>140</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ENTIRE PROJECT</td>
<td>CHANNEL CHANGE</td>
<td>2200</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ENTIRE PROJECT</td>
<td>TO BE USED IF AND WHERE DIRECTED BY THE ENGINEER</td>
<td>500</td>
<td>100</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TOTALS</td>
<td>4022</td>
<td>7631</td>
<td>500</td>
<td>100</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* QUANTITIES ESTIMATED
SEE SECTION 104.03 OF THE STD. SPECS.

NOTE: EARTHWORK QUANTITIES SHOWN ABOVE SHALL BE PAID AS PLANNED QUANTITY.
### CONCRETE DITCH PAVING

<table>
<thead>
<tr>
<th>STATION (FT)</th>
<th>LENGTH (FT)</th>
<th>&quot;W&quot; (FEET)</th>
<th>CONCRETE DITCH PAVING (SOLID)</th>
<th>WATER (GAL)</th>
</tr>
</thead>
<tbody>
<tr>
<td>113+50.00</td>
<td>105.00</td>
<td>4.00</td>
<td>66.67</td>
<td>66.67</td>
</tr>
</tbody>
</table>

**TOTALS:** 66.67

Basis of Estimate: 12.6 GAL / SQ. YD. OF SOLID SODDING.

### DRIVEWAYS & TURNOUTS

<table>
<thead>
<tr>
<th>STATION</th>
<th>SIDE</th>
<th>DESCRIPTION</th>
<th>LENGTH (FEET)</th>
<th>ACHIM SURFACE COURSE (28&quot;) 3/8&quot; 320 LBS, PER SQ. YD (PG 64-22)</th>
<th>AGGREGATE BASE COURSE (CLASS 7)</th>
<th>STANDARD DRAWINGS</th>
</tr>
</thead>
<tbody>
<tr>
<td>113+27</td>
<td>LT</td>
<td>PRIVATE DRIVE</td>
<td>16</td>
<td>37.01</td>
<td>4.07</td>
<td>80.44</td>
</tr>
<tr>
<td>119+74</td>
<td>LT</td>
<td>PRIVATE DRIVE</td>
<td>16</td>
<td>37.01</td>
<td>4.07</td>
<td>81.78</td>
</tr>
</tbody>
</table>

**TOTALS:** 74.02

Basis of Estimate: ACHIM SURFACE COURSE (3/8") 94.6% MN. AGG. 54% ASPHALT BINDER

Maximum Number of Gyrations = 115 FOR PG 64-22

Quantity Estimated

See Section 104.03 of the Std. Spec.

* To be used if and where directed by the Engineer.

### PAVEMENT REPAIR OVER CULVERTS (ASPHALT)

<table>
<thead>
<tr>
<th>STATION</th>
<th>LOCATION</th>
<th>WIDTH</th>
<th>LENGTH</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>114+07</td>
<td>RT. HEADWALL</td>
<td>1</td>
<td>20.00</td>
<td>20.00</td>
</tr>
</tbody>
</table>

**TOTAL:**

Average Depth = 2"

### BASE AND SURFACING

<table>
<thead>
<tr>
<th>STATION</th>
<th>STATION</th>
<th>LOCATION</th>
<th>LENGTH (FEET)</th>
<th>AGGREGATE BASE COURSE (CLASS 7)</th>
<th>TACK COAT</th>
<th>ACHIM SURFACE COURSE (3/8&quot;)</th>
</tr>
</thead>
<tbody>
<tr>
<td>113+10.00</td>
<td>113+10.00</td>
<td>100' TRANSITION</td>
<td>100.00</td>
<td>43.75</td>
<td>43.75</td>
<td>20.00</td>
</tr>
<tr>
<td>113+10.00</td>
<td>113+10.00</td>
<td>MAINLANES - NOTCH &amp; WEIR</td>
<td>26.00</td>
<td>80.30</td>
<td>20.00</td>
<td>20.00</td>
</tr>
<tr>
<td>113+10.00</td>
<td>113+10.00</td>
<td>MAINLANES - FULL DEPTH</td>
<td>4.00</td>
<td>223.00</td>
<td>8.90</td>
<td>20.00</td>
</tr>
<tr>
<td>113+10.00</td>
<td>113+10.00</td>
<td>MAINLANES - NOTCH &amp; WEIR</td>
<td>132.00</td>
<td>230.00</td>
<td>1978.00</td>
<td>20.00</td>
</tr>
<tr>
<td>113+10.00</td>
<td>113+10.00</td>
<td>TRANSITION</td>
<td>100.00</td>
<td>43.75</td>
<td>43.75</td>
<td>20.00</td>
</tr>
<tr>
<td>113+10.00</td>
<td>113+10.00</td>
<td>LEVELING</td>
<td>26.00</td>
<td>20.00</td>
<td>20.00</td>
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**TOTALS:**

2371.74

Basis of Estimate: ACHIM SURFACE COURSE (3/8") 94.6% MN. AGG. 54% ASPHALT BINDER

Maximum Number of Gyrations = 115 FOR PG 64-22

Tack coat quantities were calculated using the emulsified asphalt rates. Refer to SS-400-1 for the residual asphalt application rates.
## SUMMARY OF QUANTITIES

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## STRUCTURES OVER 20 SPAN

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* DENOTES ALTERNATE BID ITEMS.

## REVISIONS

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## SUMMARY OF QUANTITIES AND REVISIONS
## SURVEY CONTROL COORDINATES

**Project Name**: SOBO444
**Date**: 8/1/2012
**Coordinate System**: ARKANSAS STATE PLANE - NORTH ZONE BASED ON GPS CONTROL, 360012-360015 PROJECTED TO GROUND,
**Units**: U.S. SURVEY FOOT

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**Note**: Rebar and Cap - Standard: 5/8" Rebar with 2" Aluminum Cap stamped. *standard markings common to all caps, or as indicated in the project description of the individual point.*

**NAD 92 Vertical Datum**: NAVD 88

**Coordinate System**: ARKANSAS STATE PLANE - NORTH ZONE BASED ON GPS CONTROL, 360012-360015 PROJECTED TO GROUND

**CONVERGENCE**: NORTH 00 43 31 LEFT AT LT 35 40 54.6 LON 093 14 46.9

## SURVEY CONTROL DETAILS

**Reference Points**: 490974, 53

**Survey Control Details**

**Base of Bearing**: ARKANSAS STATE PLANE GRID BEARINGS - O301 NORTHERN ZONE

**Convergence Angle**: 00 43 31 LEFT AT LT 35 40 54.6 LON 093 14 46.9

**Grid Azimuth**: ASTRONOMICAL AZIMUTH - CONVERGENCE AZIMUTH.
TYPE A

ENERGY DISSIPATORS
INO SCALE

TYPE B

THE STEEL AND ADDITIONAL CONCRETE FOR THE KNEE SHALL NOT BE PAID FOR DIRECTLY BUT SHALL BE CONSIDERED TO BE INCLUDED IN THE PRICE BID FOR CONCRETE DITCH PAVING.

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 30 DAYS OF DITCH PAVING CONSTRUCTION.

1/2" WIDE TRANSVERSE EXPANSION JOINTS SHALL BE PLACED IN CONCRETE DITCH PAVING AT 40 IN. INTERVALS; THE SPACE SHALL BE FILLED WITH APPROVED JOINT FILLER COMPLYING WITH AHP-0029A.

ARKANSAS STATE HIGHWAY COMMISSION

CONCRETE DITCH PAVING

STANDARD DRAWING CDP-1
CONCRETE COMBINATION CURB AND GUTTER

DETAIL OF GUTTER SLOPE
GUTTER SHALL BE CONSTRUCTED ON 2% SLOPE AWAY FROM ROADWAY, REGARDLESS OF ROADWAY SLOPE.

ALTERNATE CONSTRUCTION METHOD FOR INTEGRAL CURB

CONCRETE CURB

DETAILS OF MODIFIED CURB

NOTE: USE MODIFIED CURB AS SPECIFIED ON SHEET L-1. COMPENSATION FOR MODIFIED CURB WILL NOT BE CONSIDERED INCLUDED IN THE PRICE BID FOR THE TYPE OF CURB OR CURB AND GUTTER SPECIFIED.

ARKANSAS STATE HIGHWAY COMMISSION

CURBING DETAILS

STANDARD DRAWING CG-1
TYPICAL PIPE CULVERT WITH FLARED END SECTION & FLATTENED ADJACENT SLOPES

TYPICAL PIPE CULVERT WITH FLARED END SECTION & FLATTENED ADJACENT SLOPES

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

R.C. CURTAIN WALL DIMENSIONS & QUANTITIES

REINFORCING STEEL SCHEDULE

SOLID SODDING

GENERAL NOTES:
1) ALL PIPE SIZES MUST BE PROVIDED TO BE IN COMPLIANCE WITH THE PIPE REINFORCEMENT REQUIREMENTS SHOWN ON THE PLAN.
2) ALL SODOING MUST BE PROVIDED TO BE IN COMPLIANCE WITH THE SODOING REQUIREMENTS SHOWN ON THE PLAN.
3) ALL REINFORCING STEEL MUST BE PROVIDED TO BE IN COMPLIANCE WITH THE REINFORCING STEEL REQUIREMENTS SHOWN ON THE PLAN.
4) ALL CONCRETE MUST BE PROVIDED TO BE IN COMPLIANCE WITH THE CONCRETE REQUIREMENTS SHOWN ON THE PLAN.

NOTES:
1) ALL PIPE SIZES MUST BE PROVIDED TO BE IN COMPLIANCE WITH THE PIPE REINFORCEMENT REQUIREMENTS SHOWN ON THE PLAN.
2) ALL SODOING MUST BE PROVIDED TO BE IN COMPLIANCE WITH THE SODOING REQUIREMENTS SHOWN ON THE PLAN.
3) ALL REINFORCING STEEL MUST BE PROVIDED TO BE IN COMPLIANCE WITH THE REINFORCING STEEL REQUIREMENTS SHOWN ON THE PLAN.
4) ALL CONCRETE MUST BE PROVIDED TO BE IN COMPLIANCE WITH THE CONCRETE REQUIREMENTS SHOWN ON THE PLAN.
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END VIEW

CONCRETE ARCH PIPE

NOTE: SLOPE END ON UPSTREAM SECTION
NOTE: SLOPE END ON DOWNSTREAM SECTION

FOR REINFORCED CONCRETE PIPE CULVERTS

END SECTIONS FOR CORRUGATED METAL PIPE CULVERTS

ARAKANS STATE HIGHWAY COMMISSION

STANDARD DRAWING FES-2
NOTES:
1. REFER TO THE Striping DETAILS FOR PAVEMENT MARKING LINE WIDTHS.
2. THIS DRAWING SHALL BE USED IN CONJUNCTION WITH THE LATEST REVISION ADJOIN 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

CONTINUOUS YELLOW

SOLID LINE STRIPING ON CONCRETE PAVEMENT

CONTINUOUS YELLOW

SOLID LINE STRIPING ON ASPHALT PAVEMENT

CONTINUOUS YELLOW

ASPHALT PAVEMENT

CONCRETE PAVEMENT

STRIPING AT ADJACENT NO PASSING LANES

CROSSWALK AND STOPBAR DETAILS

ARIZONA STATE HIGHWAY COMMISSION

PAVEMENT MARKING DETAILS

STANDARD DRAWING PM-1
NOTE:
1. Granular backfill to be subsidiary to pipe underdrain.
2. Unless otherwise specified on the plans, the underdrain cover shall be placed on the bottom of the trench at the top.
3. Granular material shall be compacted to a minimum of 90% of the maximum density at the top of the trench.

PLAN VIEW

SIDE VIEW

FRONT VIEW

DETAILED OF POLE UNDERDRAIN LATERALS

WHEN PLACED ALONG PAVEMENT EDGE

NOTES: PIPE PIPE FOR LATERALS SHALL MEET THE REQUIREMENTS OF ASTM D 3085 AND THE FANSU DISTRICT COMMON SCHEDULE 40 PIPE.

ARKANSAS STATE HIGHWAY COMMISSION

DETAILS OF PIPE UNDERDRAIN

STANDARD DRAWING PU-1
PLAN

PARTIAL SECTION SHOWING SOLID SODDING AT HEADWALLS AND WING WALLS

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

SECTION B-B

DETAILS FOR NEW CHANNELS

GENERAL NOTES:
ROADWAY EXCAVATION (CHANNEL CHANGES) WILL BE PAID FOR AT R.C. BOX CULVERT LOCATION. IT WILL BE PAID TO THE LIMITS ACTUALLY CUT AND WILL BE CONFINED TO DROP PORTION OF THE DESIGNED AREA THAT IS ABOVE THE FLOW LINE. ROADWAY EXCAVATION (CHANNEL CHANGES) SHALL BE MEASURED BY CROSS SECTIONS AND VOLUMES COMPUTED BY AVERAGE END AREA METHOD. ALL CHANNEL CHANGES SHALL BE BROUGHT TO GRADE PRIOR TO MAKING ANY EXCAVATION FOR STRUCTURES.

EXCAVATION FOR STRUCTURES WILL BE PAID FOR AT ALL R.C. BOX CULVERT LOCATIONS. THE LIMITS TO BE USED ARE THE LIMITS SHOWN AND SHALL BE CONFINED TO DROP PORTION OF THE DESIGNED AREA THAT IS ABOVE THE FLOW LINE. ROADWAY EXCAVATION SHOWN IN SECTION C-C ABOVE AS SUBSIDIARY WILL NOT BE MEASURED AS PAID FOR DIRECTLY, BUT PAYMENT WILL BE CONSIDERED TO BE INCLUDED IN THE VARIOUS ITEMS OF EXCAVATION.
### Superelevation Table for Two-Way Traffic

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**Abbreviations:**

- N:C — Normal Crown
- N:R — Reverse Crown

- **Terms:**
  - Lx: Length of Superelevation Transition (ft).
  - Ly: Length of Superelevation (ft).

**General Notes:**
1. On pavement with two-way traffic, the superelevation shall be resolved on the inside pavement edge unless otherwise noted in the plans.
2. Superelevation values shown in the cross sections are nominal.
3. Transition lengths shall be resolved in multiples of 25 ft or 50 ft.
4. Pavements wider than 2 lanes shall have additional transition lengths as follows:
   - 3 Lanes: 175 ft
   - 4 Lanes: 200 ft
   - 5 Lanes: 225 ft
   - 6 Lanes: 250 ft

**Superelevation Formula:**

\[ E = \frac{\text{Speed} \times \text{Radius}}{2 \times \text{G}} \]

**Outside Subgrade Edge:**

- Inside Subgrade Edge
- Control Point

**Standard Method:**

- When superelevation revolves around inner subgrade point or inner pavement edge.

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**Arkansas State Highway Commission**

**Tables and Method of Superelevation for Two-Way Traffic**

**Standard Drawing SE-2**
CLEARING AND GRUBBING

CONSTRUCTION SEQUENCE
1. PLACE PERIMETER CONTROLS (E.G., SILT FENCES, DIVERSION DITCHES, DREDGE BARRIERS, ETC.).
2. PERFORM CLEARING AND GRUBBING OPERATION.

EXCAVATION

EXISTING GROUND

INTERCEPTOR OR DIVERSION DITCH

EXISTING GROUND

PHASE 1 EXCAVATION

PHASE 2 EXCAVATION

FINAL PHASE EXCAVATION

GENERAL NOTE

ALL CUT SLOPES SHALL BE DRIED, PREPARED, SEEDED AND WHITED AS SHOWN. DREDGE BARRIERS SHALL BE ERECTED AND STABILIZED IN ACCORDANCE WITH EXISTING SPECIFICATIONS. INTERCEPTOR OR DIVERSION DITCHES SHALL BE COMPLETED AS SHOWN.

CONSTRUCTION SEQUENCE
1. EXCAVATE AND STABILIZE INTERCEPTOR OR DIVERSION DITCHES.
2. PERFORM PHASE 1 EXCAVATION, PLACE PERMANENT OR TEMPORARY SEEDING.
3. PERFORM PHASE 2 EXCAVATION, PLACE PERMANENT OR TEMPORARY SEEDING.
4. PERFORM FINAL PHASE OF EXCAVATION, PLACE PERMANENT OR TEMPORARY SEEDING.
5. REMOVE TRENCH DREDGE BARRIER OR CONSTRUCTION CONTROL DEVICES AS REQUIRED.

EMBANKMENT

DIVERSION DITCH TO BE IN PLACE WHEN SOIL IS COMPLETELY STABILIZED.

SIDE DITCH

EXISTING GROUND

PREVIOUS EROSION CONTROL DEVICES

GENERAL NOTE

ALL EMBANKMENT SLOPES SHALL BE DRIED, SEeded, AND WHITED AS SHOWN. ALL EMBANKMENTS SHOULD BE COMPLETED AND STABILIZED IN ACCORDANCE WITH EXISTING SPECIFICATIONS. SIDE DITCHES AS SHOWN TO BE COMPLETED AS REQUIRED VARIOUSLY.

CONSTRUCTION SEQUENCE
1. COMPLETE DIVERSION DITCHES, PLACE PERMANENT SEEDING, SILT FENCES, OR OTHER EROSION CONTROL DEVICES AS REQUIRED.
2. PLACE EMBANKMENT WITHOUT SEEDING OR TEMPORARY SEEDING.
3. TO BE TEMPORARILY SEeded FOR A PERIOD OF GREATER THAN 30 DAYS.
4. PLACE PHASE 2 EMBANKMENT, WITH PERMANENT OR TEMPORARY SEEDING.
5. PHASE 2 EMBANKMENT TO BE COMPLETELY STABILIZED VARIOUSLY.
6. PLACE FINAL PHASE OF EMBANKMENT, WITH PERMANENT SEEDING.
7. REMOVE DIVERSION DITCHES AND EMBANKMENT SEEDING AND MOWING UNITS. ENTIRE SLOPE IS STABILIZED.

ARKANSAS STATE HIGHWAY COMMISSION

TEMPORARY EROSION CONTROL DEVICES

STANDARD DRAWING TEC-3