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. PAYMENT WILL NOT BE MADE FOR MATERIAL PLACED WITH EXCESS OF THE TOLERANCE INDICATED.

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

4. THE EXISTING ASPHALT PAVEMENT TO BE REMOVED FROM THE REMAINING PAVEMENT SHALL BE SEPARATED BY SAWING ALONG A HEAT LANE. 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 TO THE ASPHALT PAVEMENT THAT IS TO REMAIN IN PLACE SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE.

STA. 300+46.16 - STA. 302+41.16
STA. 306+63.85 - STA. 308+79.10

2 LANE FULL DEPTH DETOUR - HWY, 89 SITE 1

STA. 302+41.16 - STA. 306+63.85
DETOURElevation - HWY, 89 SITE 1
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 PILOT THICKNESS SHOWN. THE CONTRACTOR WILL CORRECT ANY DEFICIENT THICKNESS THAT DOES NOT MEET TOLERANCE INDICATED. PAYMENT WILL NOT BE MADE FOR MATERIAL PLACED WITH EXCESS OF THE TOLERANCE INDICATED.
3. 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 BY CONSULTING NOTICED AND PAYMENT WILL NOT BE MADE FOR DIRECTLY BUT PAYMENT WILL BE MADE TO ALLOW ITEMS.
4. THE FINAL 2" OF SURFACE COURSE IS TO BE PLACED AFTER ALL OTHER COURSES HAVE BEEN Laid. CONDITIONAL JOINTS SHALL BE AT LANE LINE.
5. THE EXISTING ASPHALT PAVEMENT SHALL BE REMOVED FROM THE REMAINING PAVEMENT SHALL BE SEPARATED BY SAWING ALONG A HEAT LINE. AFTER SAWING, THE PAVEMENT TO BE REMOVED SHALL BE CAREFULLY REMOVED IN A MANNER THAT WILL NOT DAMAGE THE PAVEMENT TO BE REMOVED ANY DAMAGE TO THE ASPHALT PAVEMENT THAT IS TO REMAIN. THE COST SHALL BE PAID FOR REMOVAL OF PAVEMENT NOT SAFELY REMOVED AT THE CONTRACTOR'S EXPENSE.
6. 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 USED SHALL BE APPROVED BY THE ENGINEER. PAYMENT FOR THIS WORK SHALL BE CONSIDERED IN THE PRICE BID FOR THE VARIOUS CONTRACT ITEMS.
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 PLANNED THICKNESS SHOWN. THE CONTRACTOR WILL CORRECT ANY DEFICIENCY THICKNESS THAT DOES NOT MEET TOLERANCE INDICATED. PAYMENT WILL NOT BE MADE FOR MATERIAL PLACED WITH EXCESS OF THE TOLERANCE INDICATED.

3. THE FINAL "C" OF CURB WIDTH IS TO BE PLACED AFTER ALL OTHER COURSES HAVE BEEN Laid. CONDITIONAL JOINTS SHALL BE AT LANE LINES.

4. THE EXISTING ASPHALT PAVEMENT TO BE REMOVED FROM THE REMAINING PAVEMENT SHALL BE SEPARATED BY ROLLING A SEAL LAYER, AFTER SEPARATION THE PAVEMENT TO BE REMOVED SHALL BE CAREFULLY REMOVED IN A MANNER THAT WILL NOT DAMAGE THE PAVEMENT. THE REMAINING ASPHALT PAVEMENT THAT IS TO REMAIN IN PLACE SHALL BE REPAIRED AT THE CONTRACTORS EXPENSE.

5. 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/USAGES SHALL BE APPROVED BY THE ENGINEER. PAYMENT FOR THIS WORK SHALL BE CONSIDERED INCLUDED IN THE PRICE BID FOR THE VARIOUS CONTRACT ITEMS.

STA. 103+00.00 - STA. 104+88.62 (TRANSITION)
2 LANE CURB AND GUTTER - HWY. 89 SITE 2

STA. 104+88.62 - STA. 106+69.81
STA. 103+33.14 - STA. 121+98.58
STA. 135+35.73 - STA. 152+10.67
STA. 157+85.58 - STA. 173+00.00
3 FULL DEPTH SUPER ELEVATION - HWY. 89 SITE 2
TYPICAL SECTIONS OF IMPROVEMENT

STA, 106+69.81 - STA, 109+33.14
STA, 121+98.58 - STA, 136+70.73
STA, 150+75.67 - STA, 157+85.58
3 FULL DEPTH NORMAL CROWN - HWY, 89 SITE 2

NOTES:
1. REFER TO CROSS SECTIONS FOR DEVIATION FROM THE NORMAL SLOPES. NO CHANGES SHALL BE MADE FROM THE PLENUM 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 THE THICKNESS TO THE INDICATED TOLERANCE. PAYMENT WILL NOT BE MADE FOR MATERIAL PLACED WITH EXCESS OF THE TOLERANCE INDICATED.

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

4. THE EXISTING ASPHALT PAVEMENT TO BE REMOVED FROM THE REMAINING PAVEMENT SHALL BE LEAVING A NEAT LINE AFTER REMOVAL. THE PAVEMENT TO BE REMOVED SHALL BE CAREFULLY REMOVED IN SUCH A MANNER THAT IT 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.

5. PRIOR TO AND DURING PLACEMENT OF PAVEMENT IN FRONT OF THE CURB AND GUTTER, THE CONTRACTOR SHALL PROVIDE ENOUGH TIME TO ENSURE THAT THE MATERIAL USED SHALL BE APPROVED BY THE ENGINEER. PAYMENT FOR THE WORK SHALL BE CONSIDERED INCLUDED IN THE PRICE BID FOR THE VARIOUS CONTRACT ITEMS.
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 PLAIN THICKNESS SHOWN, THE CONTRACTOR WILL CORRECT ANY DEFICIENT THICKNESS THAT DOES NOT MEET TOLERANCE INDIcATED. PAYMENT WILL NOT BE MADE FOR MATERIAL PLACED WITH EXCESS OF THE TOLERANCE INDICATED.

3. ASPHALT FOR LEVELING OF EXISTING PAYMENT 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.

4. THE FINAL 2" OF SURFACE COURSE IS TO BE PLACED AFTER ALL OTHER COURSES HAVE BEEN Laid, LONITUDINAL JOINTS SHALL BE AT LANE LINES.

5. 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.

1. REFER TO CROSS SECTIONS FOR DEVIATIONS 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 DEVIATION THAT DOES NOT MEET TOLERANCE INDICATED. PAYMENT WILL NOT BE MADE FOR MATERIAL PLACED WITH EXCESS OF THE TOLERANCE INDICATED.

3. ASPHALT FOR LEVELING OF EXISTING PAVEMENT SHALL BE PLACED ONLY AS DIRECTED BY THE ENGINEER. CALCULATIONS FOR THE AMOUNT OF LEVELING AND/OR LEVELING OPERATIONS SHALL BE PERFORMED BEFORE CONCRETING NOTCH AND WIDENING. PAYMENTS WILL NOT BE MADE FOR DIRECTLY BUT PAYMENT WILL BE CONSIDERED INCLUDED IN THE VARIES PAY ITEMS.

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

5. THE EXISTING ASPHALT PAVEMENT TO BE REMOVED FROM THE REMAINING PAVEMENT SHALL BE SEPARATED BY SAWING ALONG A HEAT 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.

TYPICAL SECTIONS OF IMPROVEMENT
NOTES:

1. REFER TO CROSS SECTIONS FOR ELEVATION 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 PLANNED THICKNESS SHOWN. THE CONTRACTOR WILL COMPARE ANY DEFECTIVE THICKNESS THAT DOES NOT MEET TOLERANCE INDICATED. PAYMENT WILL NOT BE MADE FOR MATERIALS PLACED WITH EXCESS OF THE TOLERANCE INDICATED.

3. ASPHALT FOR LEVELING OF EXISTING PAVEMENT SHALL BE PLACED ONLY IF AND WHERE DIRECTED BY THE ENGINEER. CALCULATIONS SHOWING THE AMOUNT OF LEVELING AND/OR LEVING FLATTENING SHALL BE PERFORMED BEFORE AND AFTER WORK IS COMPLETED. IF NOT COVERED IN OTHER ITEMS, THIS FIELD WORK AND ALL CORRELATING CALCULATIONS WILL NOT BE PAID FOR DIRECTLY BUT PAYMENT WILL BE CONSIDERED INCLUDED IN THE VARIOUS PAY ITEMS.

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

5. THE EXISTING ASPHALT PAVEMENT TO BE REMOVED FROM THE REMAINING PAVEMENT SHALL BE SEPARATED BY SERRING ALONG A HEAT LANE. AFTER SERRING, 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.

6. 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 USED SHALL BE APPROVED BY THE ENGINEER. PAYMENT FOR THIS WORK SHALL BE CONSIDERED INCLUDED IN THE PRICE BID FOR THE VARIOUS CONTRACT ITEMS.
STA. 7585+00.00 - STA. 7585+15.20 (EB EXIT TO HWY, 89 CONNECTOR)  
(RAMPS SHOWN IN DIRECTION OF TRAFFIC)

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. ANY DEVIATION FROM THE CONTRACTOR WILL CORRECT ANY DEFICIENT THICKNESS THAT DOES NOT MEET TOLERANCE INDICATED. PAYMENT WILL NOT BE MADE FOR MATERIAL PLACED WITH EXCESS OF THE TOLERANCE INDICATED.

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

STA. 7585+15.20 - STA. 7588+28.86 (EB EXIT TO HWY, 89 CONNECTOR)  
(RAMPS SHOWN IN DIRECTION OF TRAFFIC)
STA. 7588+26.86 – STA. 7592+92.56 (EB EXIT TO HWY. 89)
STA. 7592+92.56 – STA. 7592+06.29 (EB EXIT TO HWY. 89) (TRANSITION)
(RAMPS SHOWN IN DIRECTION OF TRAFFIC)

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 DRAWN. THE CONTRACTOR WILL CORRECT
   ANY DEFICIENT THICKNESS THAT DOES NOT MEET
   TOLERANCE INDICATED. PAYMENT WILL NOT BE MADE
   FOR MATERIAL PLACED WITH EXCESS OF THE TOLERANCE
   INDICATED.

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

STA. 7588+29.84 – STA. 7590+44.96 (EB EXIT TO HWY. 365)
STA. 7590+00.00 – STA. 7590+79.72 (HWY. 365 TO HWY. 89)
STA. 7608+16.54 – STA. 7608+12.28 (HWY. 365 TO EB ENTRANCE CONNECTOR)
STA. 7604+65.25 – STA. 7607+13.77 (HWY. 89 TO HWY. 365 CONNECTOR)
(RAMPS SHOWN IN DIRECTION OF TRAFFIC)
STA. 7592+06.29 - STA. 7595+12.37 (EB Exit to HWY. 89 Connector) (Ramps shown in direction of traffic)

STA. 7593+12.37 - STA. 7598+29.30 (EB Exit to HWY. 89 Connector) (Ramps shown in direction of traffic)

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. PAYMENT WILL NOT BE MADE FOR MATERIAL PLACED WITH EXCESS OF THE TOLERANCE INDICATED.

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

4. THE EXISTING ASPHALT PAVEMENT TO BE REMOVED FROM THE REMAINING PAVEMENT SHALL BE SEPARATED BY SANDING ALONG A HEAT LINE. AFTER SANDING, 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.
NOTES:

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

2. THE THICKNESS OF AGGREGATE BASE COURSE SHALL BE 6 IN. PLUS OR MINUS ONE IN. OF THE PLANNED THICKNESS. THE CONTRACTOR WILL CONNECT ANY DEFICIENT THICKNESS THAT DOES NOT MEET TOLERANCE INDICATED. PAYMENT WILL NOT BE MADE FOR MATERIAL PLACED WITH EXCESS OF THE TOLERANCE INDICATED.

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

4. THE EXISTING ASPHALT PAVEMENT TO BE REMOVED FROM THE REMAINING PAVEMENT SHALL BE SEPARATED BY SAWING ALONG A HEAT LINE. AFTER SAWING, THE PAVEMENT TO BE REMOVED SHALL BE CAREFULLY REMOVED FROM THE PAVEMENT AND WELL NOT TO 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.

STA. 7587+35.66 - STA. 7588+95.74 (HWY. 365 TO HWY. 89)
STA. 7604+00.00 - STA. 7606+00.00 (HWY. 365 TO EB ENTRANCE CONNECTOR)
STA. 7607+83.37 - STA. 7608+21.90 (HWY. 89 TO HWY. 365 CONNECTOR)
STA. 7592+94.06 - STA. 7593+02.47 (EB EXIT TO HWY. 365)
(RAMPS ShOWN IN DIRECTION OF TRAFFIC)
STA. 7588+95.74 – STA. 7590+00.00 (HWY. 365 TO HWY. 89)
STA. 7604+99.66 – STA. 7606+00.00 (HWY. 365 TO EB ENTRANCE CONNECTOR)
STA. 7607+76.32 – STA. 7607+97.53 (HWY. 89 TO HWY. 365 CONNECTOR)
STA. 7590+44.96 – STA. 7592+94.05 (EB EXIT TO HWY. 365)
(RAMPS SHOWN IN DIRECTION OF TRAFFIC)

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 6 INCH PLUS OR MINUS ONE INCH OF THE PLAN
THICKNESS SHOWN. THE CONTRACTOR WILL CORRECT
ANY EXCESSIVE THICKNESS THAT DOES NOT MEET
TOLERANCE INDICATED. PAYMENTS WILL NOT BE MADE
FOR MATERIAL PLACED WITH EXCESS OF THE TOLERANCE
INDICATED.

3. THE FINAL 6 IN SURFACE COURSE IS TO BE PLACED
AFTER ALL OTHER COURSES HAVE BEEN Laid. LONGITUDINAL
JOINTS SHALL BE AT LANE LINES.

STA. 7590+00.00 – STA. 7590+79.72 (HWY. 365 TO HWY. 89)
STA. 7608+12.28 – STA. 7608+81.39 (HWY. 365 TO EB ENTRANCE CONNECTOR)
STA. 7603+81.49 – STA. 7604+65.25 (HWY. 89 TO HWY. 365 CONNECTOR)
STA. 7607+13.77 – STA. 7607+83.37 (HWY. 89 TO HWY. 365 CONNECTOR)
(RAMPS SHOWN IN DIRECTION OF TRAFFIC)
STA. 7598+2.12 - STA. 7608+54.40
STA. 7608+54.40 - STA. 7608+99.96 (TRANSITION)
(RAMPS SHOWN IN DIRECTION OF TRAFFIC)
I-40 EASTBOUND ENTRANCE

NOTE:
4. 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 TWO INCHES OR ANY ONE INCH OF THE NEW THICKNESS SHOWN, THE CONTRACTOR WILL CORRECT ANY DEFICIENT THICKNESS THAT DOES NOT MEET THE TOLERANCE INDICATED. PAYMENT WILL NOT BE MADE FOR MATERIAL PLACED WITH EXCESS OF THE TOLERANCE INDICATED.

3. THE FINAL 2" OF SURFACE COURSE IS TO BE PLACED AFTER ALL OTHER COURSES HAVE BEEN Laid. LONGITUDINAL JOINTS SHALL BE AT LANE LINES.
STA. 761+53.71 - STA. 761+36.72 (TRANSITION)  
(RAMPS SHOWN IN DIRECTION OF TRAFFIC)  
I-40 EASTBOUND ENTRANCE

NOTE:
1. REFER TO CROSS SECTIONS FOR DEVIATION FROM 
   THE NORMAL SLOPE. NO SWANSOLES SHALL BE MADE 
   FROM THE PLANNED SLOPES WITHOUT THE APPROVAL 
   OF THE ENGINEER.

2. THE THICKNESS OF AGGREGATE BASE COURSE SHALL 
   BE RETAIN PLUS OR MINUS ONE INCH OF THE PLAN. 
   TOLERANCE SHOWN. THE CONTRACTOR WILL CONNECT 
   ANY DEFICIENT THICKNESS THAT DOES NOT MEET 
   TOLERANCE MENTIONED. PAYMENT WILL NOT BE MADE 
   FOR MATERIAL PLACED WITH EXCESS OF THE TOLERANCE 
   INDICATED.

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

4. THE EXISTING ASPHALT PAVEMENT TO BE REMOVED 
   FROM THE REMAINING PAVEMENT SHALL BE SEPARATED 
   BY SAWING ALONG A HEAT 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.

STA. 761+36.72 - STA. 761+43.45  
(RAMPS SHOWN IN DIRECTION OF TRAFFIC)  
I-40 EASTBOUND ENTRANCE

TYPICAL SECTIONS OF IMPROVEMENT
STA. 764+31.45 - STA. 7620+36.72
STA. 7620+36.72 - STA. 7623+39.72 (TRANSITION)
(RAMPS SHOWN IN DIRECTION OF TRAFFIC)
I-40 EASTBOUND ENTRANCE

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 THICKNESS
   SHOWN. THE CONTRACTOR WILL CORRECT ANY DEFICIENCY
   THAT DOES NOT MEET THE THICKNESS REQUIREMENTS.
   THE CONTRACTOR IS RESPONSIBLE FOR PROPER PLACE
   AND MATERIALS WITHIN +/- TOLERANCE INDICATED.

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

4. THE EXISTING ASPHALT PAVEMENT TO BE REMOVED
   FROM THE REMAINING PAVEMENT SHALL BE SEPARATED
   BY SAWING ALONG A HEAT LINE. AFTER SAWING, THE
   PAVEMENT TO BE REMOVED SHALL BE CAREFULLY REMOVED
   IN A MANNER THAT WILL NOT DAMAGE THE PAVEMENT.
   ANY DAMAGE TO THE ASPHALT
   PAVEMENT THAT IS TO REMAIN IN PLACE SHALL BE REPAIRED
   AT THE CONTRACTOR'S EXPENSE.

STA. 7623+36.72 - STA. 7630+36.72
STA. 7630+36.72 - STA. 7633+36.72 (TRANSITION)
(RAMPS SHOWN IN DIRECTION OF TRAFFIC)
I-40 EASTBOUND ENTRANCE
STA. 100+28.49 - STA. 102+55.95
STA. 106+60.03 - STA. 107+52.20
FULL DEPTH - MAIN STREET CONNECTOR

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 DEFICIT THICKNESS THAT DOES NOT MEET TOLERANCE INDICATED. PAYMENT WILL NOT BE MADE FOR MATERIAL PLACED WITH EXCESS OF THE TOLERANCE INDICATED.

3. 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.

4. THE FINAL 2" OF SURFACE COURSE IS TO BE PLACED AFTER ALL OTHER COURSES HAVE BEEN Laid, CONDITIONAL JOINTS SHALL BE AT LANE LINES.

STA. 105+55.95 - STA. 106+60.03
FULL DEPTH - MAIN STREET CONNECTOR
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-IN-FOUR (0.25%) OF THE THICKNESS SHOWN. THE CONTRACTOR WILL CORRECT ANY DEFICIENT THICKNESS THAT DOES NOT MEET THE TOLERANCE INDICATED. PAYMENT WILL NOT BE MADE FOR MATERIAL PLACED WITH EXCESS OF THE TOLERANCE INDICATED.

3. 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. PAYMENT WILL NOT BE PAID FOR DIRECTLY BUT PAYMENT WILL BE CONSIDERED INCLUDED IN THE VARIOUS PAY ITEMS.

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

5. THE EXISTING ASPHALT PAVEMENT TO BE REMOVED FROM THE REMAINING PAVEMENT SHALL BE SEPARATED BY SAWING ALONG A HEAT 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.
NOTES:

1. REFER TO CROSS SECTIONS FOR DEVIATION FROM THE NORMAL SLOPES, NO CHANGES SHALL BE MADE 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. ANYTHng THAT DOES NOT MEET THIS THICKNESS REQUIREMENT MAY BE RETURNED, OR MATERIAL ADDED TO OR SUBTRACTED FROM Mx FOR MATERIAL PLACED WITH EXCESS OF THE TOLERANCE INDICATED.

3. ASPHALT FOR LEVELING OF EXISTING PAVEMENT SHALL BE PLACED ONLY WHERE DIRECTED BY THE ENGINEER. CHAPTERS FOR THE AMOUNT OF LEVELING AND/OR LEVELING OPERATIONS SHALL BE PERFORMED BEFORE CONSTRUCTING NEW AND REPAIRING. ANY WORK NOT RELATED TO LEVELING SHALL BE CONSIDERED INCLUDED IN THE VARIOUS PAY ITEMS.

4. THE FINAL 3" OF SURFACE COURSE IS TO BE PLACED AFTER ALL OTHER COURSES HAVE BEEN LAYED. LONGITUDINAL JOINTS SHALL BE AT LANE LINES.

5. THE EXISTING ASPHALT PAVEMENT TO BE REMOVED FROM THE REMAINING PAVEMENT SHALL BE REMOVED BY SAVES ALONG A NEUTRAL LINE, 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.
STA. 115+41.56 - STA. 123+32.66
4 Lanes Notch and Widening - HWY. 365

STA. 123+32.66 - STA. 124+55.48
2 Lanes Notch and Widening Super-elevation - HWY. 365

NOTES:

1. REFER TO CROSS SECTIONS FOR DEVIATION FROM 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 PLANNED THICKNESS SHOWN. THE CONTRACTOR WILL CORRECT ANY EXCESSIVE THICKNESS THAT DOES NOT MEET TOLERANCE INDICATED. PAYMENT WILL NOT BE MADE FOR MATERIAL PLACED WITH EXCESS OF THE TOLERANCE INDICATED.

3. ASHALT FOR LEVELING OF EXISTING PAVEMENT SHALL BE PLACED ONLY IF DIRECTLY 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 MADE DIRECTLY BUT PAYMENT WILL BE CONSIDERED INCLUDED IN THE VARIOUS PAY ITEMS.

4. THE FILL 0'-0" OR SURFACE COURSE IS TO BE PLACED AFTER ALL OTHER COURSES HAVE BEEN Laid. LONGITUDINAL JOINTS SHALL BE AT LANE LINES.

5. THE EXISTING ASPHALT PAVEMENT TO BE REMOVED FROM THE REMAINING PAVEMENT SHALL BE DETERMINED BY SAMPLING ALONG A NEAT LINE. AFTER SAMPLING, 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.

6. PRIOR TO AND DURING PLACEMENT OF PAVEMENT IN FRONT OF THE CURB AND GUTTER, THE CONTRACTOR SHALL PROVIDE A POSITIVE DRAINAGE AT ALL TIMES. THE METHODS USED SHALL BE APPROVED BY THE ENGINEER. PAYMENT FOR WORK SHALL BE CONSIDERED INCLUDED IN THE PRICE BID FOR THE VARIOUS CONTRACT ITEMS.
GENERAL NOTES FOR CONCRETE BARRIER WALLS

1. ALL BARRIER WALLS SHALL BE CONSTRUCTED IN ACCORDANCE WITH SECTION 831 OF THE STANDARD SPECIFICATIONS, 2020 EDITION.

2. CONSTRUCTION JOINTS REQUIRED & LOCATION SPACING FOR BARRIER TYPES MEDIAN A, B, C, & D ARE AS SHOWN IN THE DRAWING. ALL SPACING REQUIREMENTS APPLY.

3. ALL CONSTRUCTION JOINTS TO BE FORMED IN PLACE CONCRETE ON TOP AND IN LINES OF BARRIER WALL.

4. CONCRETE FOR BARRIER TYPES MEDIAN A, B, C & D SHALL NOT BE USED FOR BARRIER AND MINIMUM CLEARANCE TO BE 3" C.C.

5. CONTRACT JOINTS ARE NOT PERMITTED AT THE CONCRETE BARRIER LOCATION.

6. ALL EXPOSED EDGES OF CONCRETE BARRIER WALL SHALL HAVE A ½" CHAMFER.

7. THE DESIGN OF BARRIER WALL TYPES C, D & E IS BASED ON A FOUNDATION DESIGN CAPACITY OF 1100 LBS PER SQUARE FOOT. INSTALLABLE CONNECTING MATERIAL SHALL BE REINFORCED AND切れ Bruinsky BY X REFERENCE AS DIRECTED BY THE ENGINEER.

8. SPACING BETWEEN EXPANSION JOINTS SHALL NOT EXCEED 100 FT FOR BARRIER TYPES A, B, & C.

9. CONCRETE WALLS SHALL BE FORCIBLY STRENGTHENED BY FASTENING JOINT TILES. CONTINUOUS REINFORCEMENT SHALL BE CUT AT 3' CLEAR OF EXPANSION JOINTS.

10. CONSTRUCT DRAINAGE OPENINGS AT 50 FT LCC AND AT SAD INiban ON THE PLANS. CONCRETE WALLS SHALL NOT PLACED IN 5' OF DRAINAGE OPENINGS.

11. MAINTAIN 3' CLEARANCE ON ALL FOUNDATION REINFORCEMENT AND 2' CLEARANCE ON ALL OTHER REINFORCEMENT.

12. REFER TO BARRIER MOUNTED LUMINAR SPECIAL DETAILS FOR INFORMATION REGARDING CONCRETE BARRIER WALLS REFER TO ILLUSTRATION DRAWING FOR LOCATIONS OF CONCRETE REINFORCEMENT.

13. CONCRETE BARRIER WALLS SHALL BE INSTALLED AND SECURED ACCORDING TO PIGS USING AN APPROVED INSTALLING SYSTEM FROM OPT.

CONCRETE BARRIER WALL
(MEDIAN TYPE B, MASH TL-4)

X = 0'-0" TO 1'-0" MAX

CONTRACTION JOINT DETAIL

7/9/2020
DETAILS OF RUMBLE STRIPS

LOCATION PLAN OF RUMBLE STRIPS
LEFT OR RIGHT SHOULDER

GENERAL NOTES

1. Rumble strips shall not be installed on curb sections, driveway ends, approach glands, intersections, streets or roadways, residential or commercial driveways or across transverse joints of concrete shoulders.

2. Rumble strips shall not be installed on a paved shoulder that is used as a deceleration lane for the length deemed appropriate by the Engineer.

3. The st. offset from the edge line may be increased to avoid longitudinal joints. In all cases, the lateral deviation from the planned street shall be kept to a minimum.

4. Rumble strips shall be measured by the linear foot longitudinally along the shoulder. Payment shall only include that portion of the shoulder on which rumble strips have been constructed. No requirement of payment will be made for gages, driveways, roadways, or other public road intersections where rumble strips have not been constructed.

5. The 12" depth shall generally apply for the entire 12" length. Some variation to suit shoulder slope breaks may be necessary.

PLAN VIEW

DETAIL FOR GAP PATTERN RUMBLE STRIP

NOTE: GAP PATTERN SHALL BE ADJUSTED BY THE ENGINEER IN THE RILED ALLOWING FOR DRIVeways TO serve AS THE GAP.
LOCATION PLAN OF RUMBLE STRIPS
LEFT OR RIGHT SHOULDER

CONCRETE MEDIAN BARRIER

NOTE:
1. ALIGNMENT OF RUMBLE STRIPS SHALL GENERALLY BE STRAIGHT AND
   DELINEATED APPROPRIATELY 4" FROM THE OUTER EDGE OF THE EDGE LINE.
   END CAPS MAY BE ADDED TO ACCOMMODATE VARIATIONS IN THE
   EDGE LINE AS WELL AS TO avoid EXCESSIVE CONSTRUCTION JOINTS.
2. THE 5/8" DEPTH SHALL GENERALLY APPLY FOR THE ENTIRE BC LENGTH.
   SOME VARIATION TO SUIT SHOULDER SLOPE BREAKS MAY BE NECESSARY.

DETAILS OF RUMBLE STRIPS

PLAN VIEW
BAR DIAGRAM

SECTION A-A - EXTENSION

TOP VIEW - EXTENSION

FRONT VIEW - EXTENSION

SPECIAL DETAILS

GENERAL NOTES:
1. ALL EXPOSED CORNERS TO HAVE 3/4" CHAMFER.
2. ALL HEAVY BARS SHALL BE #6 AND HAVE 1 1/2" COVER.
3. DROP INLET AND EXTENSIONS ON BOTH SIDES SHALL CONFORM TO THE CURVATURE OF THE CURB.
4. BULK CONSTRUCTION OF THE CURB AND CONTRACTOR SHALL MAINTAIN A SAME JOINT OR AROUND THE DROP INLET AS ARRANGED BY THE DESIGNER.
5. PAYMENT FOR CURB, CURB LINED CURB AND CURTAIN WITH THE LAYER 1 OF DROP INLET AND DROP INLET EXTENSIONS AND CURTAIN SHALL MADE FOR DROP INLET METER ON DROP INLET EXTENSION.
6. CONCRETE DITCH PAVING & SOLID SEEDING SHALL BE PAID FOR SEPARATELY.
7. CONTRACTOR EXTENSIONS UPSTREAM OF DROP INLET UNLESS OTHERWISE SPECIFIED.
WIDENING FOR GUARDRAIL

SHOULDER (10' NORMAL) 5'-6'
2'-0' 1'-6' 2'-0'
0.040' / 0.040' / 0.020' /
ADD'L. AGGREGATE BASE COURSE (CLASS 7)
5'-6' ADD'L. ACHAN SURFACE
COURSE (1/2') (220 LBS. PER SQ. YD.)
VAR. COMP. DEPTH VAR. TONS/STA.!

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

TOP VIEW

MIN 3' COVER

VARIABLE HEIGHT

FRONT VIEW

SIDE VIEW

SIDE VIEW

NO. 6 BARS AT 12" HORIZONTAL SPACING

NO. 6 BARS AT 12" HORIZONTAL SPACING

NO. 6 BARS AT 12" VERTICAL SPACING

VARIABLE HEIGHT

SECTION OF APPROACH SLAB

APPROPRIATE BASE COURSE (CLASS 7)
VARIABLE 6'-0" MIN. COMPACTED DEPTH

*SEE APPROACH SLAB DETAILS IN SERVICE DRAWINGS

PIE EXTENSION
REINFORCED CONCRETE COLLAR DETAIL
CONSTRUCTION PROJECT INFORMATION SIGN

DETAIL FOR TRANSITIONS

DETAIL FOR COUNTY ROAD TURNOUTS OPEN SHOULDER SECTION
DETAIL OF TURNOUTS, ASPHALT STREETS, COUNTY ROADS & STATE HIGHWAYS CURB & GUTTER SECTION

NOTE: PAVEMENT STRUCTURE FOR STATE HIGHWAYS, CITY STREETS, & COUNTY ROADS TO BE SAME AS MAIN LANES.

DETAIL FOR SOLID SODDING AROUND DROP INLETS

TRANSITION FROM OPEN SHOULDER TO CURB & GUTTER SECTION
CONCRETE BARRIER WALL (MEDIAN TYPE A) TRANSITION

CONTRACTION JOINT DETAIL

NOTES FOR MEDIAN BARRIER:
1. ALL EXPOSED EDGES SHALL HAVE 3/4" CHAMERS.
2. CONTRACTION JOINTS SHALL BE CONSTRUCTED AT 15'-0" MAXIMUM SPACING IN TOP AND SIDES OF MEDIAN BARRIER AND SHALL BE FORMED IN FRESH CONCRETE.
3. CONTRACTION JOINTS ARE NOT PERMITTED AT THE DOWEL BAR LOCATION.
4. ALL REINFORCING BARS SHALL HAVE 2" MINIMUM COVER.
5. DOWEL BARS WILL NOT BE REQUIRED IF BARRIER AND BASE ARE CAST AS A COMPLETE UNIT.
6. DRAINAGE OPENINGS TO BE CONSTRUCTED ADJACENT TO DROP INLETS. DOWEL BARS SHALL NOT BE PLACED WITHIN 3" OF DRAINAGE OPENINGS.

CONCRETE BARRIER WALL (MEDIAN TYPE A) (SECTION A-A)

CONCRETE BARRIER WALL (MEDIAN TYPE A; MASH TL-4)

FOR OVERHEAD SIGN STRUCTURE
5

3

4

3'-0"
32'-0"

(LBS)

REINF. STEEL

QTY. PER WING

LENGTHS

NO. REQ'D

6

32'-0"

5

6

4

3'-0"

46

4

6'-4"

12

50

6'-4"

4

11

71

4

1'-10"

71

L

L

L

"f"
L

SIDE WALL

INTERIOR WALL

DISTRIBUTION

DISTRIBUTION

DISTRIBUTION

"f0"
LENGTH = OH - 4"

"f1"
LENGTH = OH - 4"

"g"
LENGTH = SL

"d1"
LENGTH = SL

"e"
LENGTH = SL

"d2"
LENGTH = SL

12

10

LENGTH

NO. REQ'D

SPACING

SIZE

LENGTH

NO. REQ'D

NO. REQ'D

CU. YDS.

LBS.

REINFORCING
STEEL (GR. 60)

SPACING

32'-5" 4

SIZE

32'-0" 5

NO. REQ'D

4

SPACING

58

SIZE

13

NO. REQ'D

32'-0"

SPACING

32'-6" 6

L

SIZE

32'-0" 8

G
LENGTH = SL

NO. REQ'D

4

G
LENGTH = SL

SPACING

63.33

H
LENGTH = SL

SIZE

6'-8"

J
LENGTH = SL

LENGTH

32'-4"

L

I
LENGTH = OH - 4"
NO. REQ'D

8

L

I
LENGTH = OH - 4"

SPACING

6

L

DISTRIBUTION
REINF. STEEL

SIZE

10

L

F

INTERIOR WALL

DISTRIBUTION
REINF. STEEL

LENGTH

10

L

%HQWE

SIDE WALL

DISTRIBUTION
REINF. STEEL

NO. REQ'D

D

LENGTH = OW - 4" + BENDS
%HQW
I
G
E

BOTTOM SLAB

SPACING

LENGTH = OW - 4" + BENDS

TOP SLAB
DISTRIBUTION
REINF. STEEL

SIZE

SECTION LENGTH (FT.)

BOTTOM SLAB REINFORCING STEEL

INTERIOR WALL
REINFORCING STEEL

NO. REQ'D

OVER ALL HEIGHT

SL

TOP SLAB REINFORCING STEEL

SIDE WALL
REINFORCING STEEL

SPACING

OVER ALL WIDTH

OH

SPACING

TOTAL

SIZE

INTERIOR WALL THK.

OW

4

8'-1"

(Includes HDWL)

(Includes HDWL)

1 REINFORCING
STEEL (GR 60)

28.27

5393

'HVLJQ)LOO
'HSWK










NO. REQ'D

SIZE

SIDE WALL THK.

W

LENGTH

NO. REQ'D

BOTTOM SLAB THK.

C

Y

SPACING

TOP SLAB THK.

B

2'-0"

14'-3"
SHORT

REINFORCING
STEEL (GR. 60)

BOTTOM SLAB

LBS.

L

Bent "b1"

TOP SLAB
DISTRIBUTION

REINFORCING STEEL REINFORCING STEEL REINFORCING STEEL REINFORCING STEEL REINFORCING STEEL REINFORCING STEEL

LENGTH = OW - 4" + BENDS
"d"

INTERIOR WALL

CLASS "S"
CONCRETE

L

"c"

SIZE

CLEAR HEIGHT (FT.)

T

5

SHORT

LONG

5393 LBS.

(Includes HDWL)

CLASS "S"
CONCRETE

39

CU. YDS.

0'-9"

1 REINFORCING STEEL (GR 60)

NO. REQ'D

1'-9"

28.27 CU. YDS.

(Includes HDWL)

SPACING

4

CLASS "S" CONCRETE

SIZE

NO. REQ'D

NO. REQ'D

Y

SIZE

Bent "b"

"a"

SIZE

CLEAR SPAN (FT.)

H

12

10

20'-4"

4

SPACING

SIZE

LENGTH

LENGTH = OW - 4" + BENDS

SIZE

DESIGN FILL DEPTH (FT.)

S

4

1'-10"

"h" HDWL BARS

D

SIZE

LENGTHS
VARY

NO. REQ'D

11

LONG

CLASS "S"
CONCRETE

SPACING

NO. REQ'D

VARY

LENGTHS

NO. REQ'D

BAR SIZE

34

Min

LENGTH

SECTION LENGTH (FT.)

32'-0"

5

NO. REQ'D

OVER ALL HEIGHT

4

3'-0"

41

Min

SPACING

OVER ALL WIDTH

8.5

24

5

LBS.

8

3'-0"

Min

SIZE

INTERIOR WALL THK.

BAR SIZE

Min

NO. REQ'D

SIDE WALL THK.

SPACING

Min

41

SPACING

BOTTOM SLAB THK.

LENGTHS

Max
20'-6"

5

SIZE

TOP SLAB THK.

BAR SIZE

Max
20'-6"

BOTTOM SLAB REINFORCING STEEL

SIZE

CLEAR HEIGHT (FT.)

SIZE

NO. REQ'D

LENGTHS
VARY

NO. REQ'D

BAR SIZE

Max
32'-0"

SIDE WALL

SIZE

CLEAR SPAN (FT.)

LBS.

R.C. BOX SECTION

ADDITIONAL REINF. FOR HDWL

G

SIZE

6

HD

G

NO. REQ'D

37'-0"

HDWL DEPTH

H

SPACING

4

SL

J

SIZE

6

OH

I

NO. REQ'D

37'-0"

OW

I

SPACING

4

W

DISTRIBUTION
REINFORCING STEEL

SIZE

NO. REQ'D

C

REINFORCING STEEL

LENGTH

LENGTH

B

SIDE WALL DISTRIBUTION

REINFORCING STEEL

NO. REQ'D

SIZE

T

BOTTOM SLAB DISTRIBUTION

REINFORCING STEEL

I

SPACING

NO. REQ'D

DESIGN FILL DEPTH (FT.)

R.C. BOX SECTION

LENGTH

H

TOP SLAB DISTRIBUTION

"h" HDWL BARS

SIZE

D S

INTERIOR WALL
REINFORCING STEEL

Max

Min

INTERIOR WALL

SIDE WALL
REINFORCING STEEL

32'-0"

"k2" HDWL BARS

"k1" HDWL BARS

1'-8"

X

37'-3"

70*

573

Max

32'-0"

A 5 10 5

SPACING

SPACING

NO. REQ'D

VARY

BAR SIZE

LENGTHS

5

3'-4"

%DU3LQ'LD7DEOH











CU. YDS.

6'-8"

32'-4"

Max

L

2 28'-10" 6 12 5

32'-0"

SIZE

8

Max

2 24'-10" 4

4

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Max

SIZE

6

4 18 2

1'-8"

0LQ%DU/DS/HQJWK

 

 

 

 

 

6/
6HFWLRQ/HQJWK

32'-0"

SIZE

3:1

10

Min
37'-3"

X

SPACING

OH

Min
1'-8"

283

13'-4" 6 12 5

-

2'-9"

G

2

SIZE

OW

F

12'-8" 4

LENGTHS
VARY

W

27'-9" 6 18 18

2

4

NO. REQ'D

C

6

RI/RQJ
/DSV
5HT G

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
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
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


3'-4"

L

Max

2'-2"

4

F12

SPACING

B

D

-

BOTTOM SLAB REINFORCING STEEL

NO. REQ'D

HD

TOP SLAB REINFORCING STEEL

LENGTHS
VARY

T

3

Y

SPACING

LL

10

Max

SIZE

OVER ALL HEIGHT

H

11'-4"

24'-8" 4 18 17 X

4 18 2

21'-10"

OVER ALL WIDTH

-

INTERIOR WALL THK.

Y

S

5

L

4 18 6

SIDE WALL THK.

-

BOTTOM SLAB THK.

X

HDWL DEPTH

-

TOP SLAB THK.

-

-

SECTION LENGTH

Y

-

CLEAR HEIGHT (FT.)

-

CLEAR SPAN (FT.)

- X

DESIGN FILL DEPTH (FT.)

-

SLOPE

-

D

10

Min
3'-10"

F11

SIZE

-

-

SPACING

L

F10

-

Max

SIZE

-

Y

856

33

Min

NO. REQ'D

L

10'-10"

LBS.

9.42

F9

15'-3" 6 18 8

SPACING

-

6

SIZE

Y

CU.YD

1'-8"
4

NO. REQ'D

-

12'-2" 4 18 9 X

4 18 2

Max

LENGTHS
VARY

Y

4 18 4

SPACING

-

SPACING

-

W4

26'-10 5/8"

Min

NO. REQ'D

-

3'-3"
7'-3"
1'-4"
1'-4"
2'-0"
6'-0"
3'-3"
7'-3"
1'-4"
1'-4"
2'-0"
6'-0"

SIZE

-

SL

5

NO. REQ'D

6'-4"
-

SK

30

Min
Max
Min
Max
Min
Max
Min
Max
Min
Max
Min
Max

L

SIZE

-

SPACING

BAR SIZE

X

Min

F8

F7

F6

LENGTHS

AT HDWL
LENGTHS

SPACING

NO. REQ'D

BAR SIZE

LENGTHS

BAR SIZE

NO. REQ'D

-

-

SKEW (DEGREE)

Y

- X

L

NO. REQ'D

4 12 25 X

-

F5

LENGTHS
VARY

WING B

L

L

F4

SPACING

Y

Min 2'-8"
Max 7'-3"
Min 0'-9"
Max 1'-4"
Min 2'-0"
Max 6'-0"
Min 2'-8"
Max 7'-9"
Min 0'-9"
Max 1'-10"
Min 2'-0"
Max 6'-0"

SPACING

LENGTHS
VARY

4 12 13 X

F3

F2

SIZE

WING A

L

HEEL

SLOPE

FOOTING THK.

CLEAR HEIGHT
NO. REQ'D

WING

BAR SIZE

MAX. SPACING

F1

W3

14'-4 5/8"

W2

W1

12'-6" 25'-0"

BAR SIZE

1'-6"

SPACING

G2

1'-0 1/2"

LENGTH

G1

3'-3 3/8"

INLET

LENGTHS

WF2

2'-8 1/2"

INLET

WING A

NO. REQ'D

WF1

2'-2"

WING B

WING WING
B
A

WING B

BAR SIZE

WE

60

WING A

NO. REQ'D

AF2

0

WING B

SPACING

$)

1'-8"

WING A

LENGTHS

WH2

5'-10"

WINGWALLS

SIZE

WH1

1'-0"

PARALLEL WITH HDWL

REINFORCING STEEL
(Includes apron and laps if
required)

BAR SIZE

HL

36'-2 1/8"

FOOTINGS AT HDWL

CLASS "S"
CONCRETE
(Includes apron)

LENGTH OF FOOTING HEEL

NO. REQ'D

K

3:1

LENGTH OF

LENGTH

SL

30

FOOTING DIMENSION

LENGTHS

SK

WIDTH OF WING

NO. REQ'D

CW

0'-8"

WING WING
B
A

WALL END

WB

0'-9"

AT WING END

H

5'-0"

HDWL LENGTH

BOX SKEW (DEG.)

OW

32'-4"

OVER ALL WIDTH

WING WALL THK.

WINGWALL
ANGLE
(DEGREE)

LENGTHS
VARY

FOOTING WIDTH AT

WALL HEIGHT

32'-0"

13

58

4

6

252

6'-4"

4

12

252

6'-4"

4

11

71

4

11

71

4

12

10

4

12

20

153.77

23230

5DQJHRI$FWXDO
)LOO'HSWK
IWIW
!IWIW
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517


### OUTLET DATA TABLE

<table>
<thead>
<tr>
<th>OUTLET</th>
<th>DIMENSIONS</th>
<th>REINFORCING STEEL</th>
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<tbody>
<tr>
<td>Height</td>
<td></td>
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</tr>
<tr>
<td>Width</td>
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<td></td>
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<tr>
<td>Depth</td>
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<tr>
<td>Length</td>
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</table>

### SPECIAL DETAILS

- **Class:** S
- **Concrete:** (Includes HDWL)
- **Steel (Gr. 60):**

### OUTLET SLOPE SECTION

<table>
<thead>
<tr>
<th>Section</th>
<th>Slope</th>
<th>Length</th>
<th>Value</th>
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<tbody>
<tr>
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### OUTLET SKEWED END SECTION

<table>
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### OUTLET SPREADER SECTION

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</tbody>
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The required number of bars and lengths given are for estimating purposes only. The actual number and length required should be determined in detail.

Unless otherwise noted, all dimensions are in inches.
STA. 99+46.01
BEGIN JOB 080457 SITE 2
LOG MILE 1.24

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

**LEGEND**

- (-) = Sand & Bag Ditch Checks
- (*) = Rock Ditch Checks
- (O) = Silt Fence
- (a) = Filter Sock 12'
LEGEND

- SBD = SAND BAG DITCH CHECKS
- RCD = ROCK DITCH CHECKS
- SF = SILT FENCE
- FSO = FILTER SOCK (12")

* Maintain all erosion control devices until the end of the work related to this project.

CLEARING AND GRUBBING
TEMPORARY EROSION CONTROL DETAILS
LEGEND

- Sandbag Ditch Checks
- Rock Ditch Checks
- Silt Fence
- Filter Sock (12")

* Maintain all erosion control devices until the end of the job, unless otherwise specified.
LEGEND

- SAND BAG DITCH CHECKS
- ROCK DITCH CHECKS
- SILT FENCE
- FILTER Sock (D")

STA. 201+54.06
END JOB 080457
END SITE 2
- Maintain all erosion control devices until the end of the construction season begins.

LEGEND
- Sand bag ditch checks
- Rock ditch checks
- Silt fence
- Filter sock (02)

DATE OF REVISION
REVISION

CLEARING AND GRUBBING
TEMPORARY EROSION CONTROL DETAILS
* Maintain all erosion control devices until the end of the workweek or otherwise specified.

**LEGEND**
- (2) = Sand bag ditch checks
- (3) = Rock ditch checks
- (4) = Silt fence
- (5) = Filter sock (2")

**DATE OF REVISION**  **REVISION**
STA. 103+00.00
BEGIN JOB 080457
BEGIN SITE 1
LOG MILE 1.47

STA. 107+00.00
END SITE 1

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

LEGEND
- ☐ Sand Bag Ditch Checks
- ☑ Rock Ditch Checks
- ☐ Silt Fence
- ☐ Filter Sock 12"/1
* Maintain all erosion control devices until the end of the job unless otherwise specified.

**Legend**

- 00 = Sand Bag Ditch Checks
- 01 = Rock Ditch Checks
- 02 = Silt Fence
- 03 = Filter Sock (2")

**Table**

<table>
<thead>
<tr>
<th>Date of Revision</th>
<th>Revision</th>
</tr>
</thead>
<tbody>
<tr>
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</table>

**Temporary Erosion Control Details**

**Stage 2**
STAGE 3
TEMPORARY EROSION CONTROL DETAILS

LEGEND

- SAND BAG DITCH CHECKS
- ROCK DITCH CHECKS
- SILT FENCE
- FILTER SOCK 12'²

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

STA. 03+00.00
BEGIN JOB 080457
BEGIN SITE 1
LOG MILE 1.47

STA. 07+00.00
END SITE 1

AREA OF OBLITERATION
STATION 99+46.01
BEGIN JOB 080457 SITE 2
LOG MILE 1.24

- Maintain all erosion control devices until the end of
  the job, unless streambed is removed.

LEGEND

- Sand & Silt Socks
- Rock Silt Socks
- Silt Fence
- Filter Stock #71

STAGE 3
TEMPORARY EROSION CONTROL DETAILS
- Maintain all erosion control devices until the end of the construction operation.

**LEGEND**

- (SAD) = Sand Bag Ditch Checks
- (RCD) = Rock Ditch Checks
- (ST) = Silt Fence
- (FS) = Filter Sock (12")
LEGEND

(0) = Sand Bag Ditch Checks
(2) = Rock Ditch Checks
(4) = Silt Fence
(5) = Filter Sock (8")

REVISION

DATE OF

* Maintain all erosion control devices until the end of the job, unless otherwise specified.
STA. 99+44.51
BEGIN JOB 080457 SITE 2
LOG MILE 1.24

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

LEGEND

- Silt fence
- Filter sock 12"
* Maintain all erosion control devices until the end of the job, unless otherwise specified.

**Legend**
- (CD): Sand Bag Ditch Checks
- (C): Rock Ditch Checks
- (CO): SLT Fence
- (G): Filter Sock (G")

**Site Details**
- STA: 201.56
- End Job 080457
- End Site 2

**Dates and Revisions**

STAGE 4
TEMPORARY EROSION CONTROL DETAILS
SHEET
INTENTIONALLY
LEFT BLANK
SHEET

INTENTIONALLY LEFT BLANK
NOTE:
NOV-1 (VARIOUS DISTANCE) ADVANCE SIGNS TO BE REPLACED AS NEEDED BY EQUIVALENT NOV-5 SIGNS AS WORK AREA SHIFTS.

PORTABLE CHANGEABLE MESSAGE SIGN TO BE USED IF AND WHERE DIRECTED BY THE ENGINEER.

NOTE:
NOV-1 (VARIOUS DISTANCE) ADVANCE SIGNS TO BE REPLACED AS NEEDED BY EQUIVALENT NOV-5 SIGNS AS WORK AREA SHIFTS.

ADVANCE SIGNS AT BEGINNING AND END OF JOB ALL STAGES

MAINTENANCE OF TRAFFIC DETAILS
500’ PRECAST CONCRETE BARRIER (INCLUDES 12 SPECIAL END UNITS)

80’ TURNBACK
50’
20’
100’ TURNBACK

NORMAL SHOULDER
2’-0’
1-8’
2’-0’
0.04’
0.02’

0.04’

0.02’

0.04’

0.02’

SMALL PRECAST CONCRETE BARRIER

GUARDRAIL TYPE A

STAGE 1 OPERATIONS

1. REMOVE CONCRETE BARRIER AND MEDIAN FOOTING ON ALL EXISTING LANE LINES.
2. INSTALL NEW CONCRETE BARRIER ON BOTH SIDES OF HIGHWAY.
3. INSTALL NEW MEDIAN FOOTING ON BOTH SIDES OF HIGHWAY.
4. INSTALL NEW MEDIAN FOOTING ON BOTH SIDES OF HIGHWAY.

STAGE 2 OPERATIONS

1. REMOVE CONCRETE BARRIER AND MEDIAN FOOTING ON ALL EXISTING LANE LINES.
2. INSTALL NEW CONCRETE BARRIER ON BOTH SIDES OF HIGHWAY.
3. INSTALL NEW MEDIAN FOOTING ON BOTH SIDES OF HIGHWAY.
4. INSTALL NEW MEDIAN FOOTING ON BOTH SIDES OF HIGHWAY.

STAGE 3 OPERATIONS

1. REMOVE CONCRETE BARRIER AND MEDIAN FOOTING ON ALL EXISTING LANE LINES.
2. INSTALL NEW CONCRETE BARRIER ON BOTH SIDES OF HIGHWAY.
3. INSTALL NEW MEDIAN FOOTING ON BOTH SIDES OF HIGHWAY.
4. INSTALL NEW MEDIAN FOOTING ON BOTH SIDES OF HIGHWAY.

STAGE 4 OPERATIONS

1. REMOVE CONCRETE BARRIER AND MEDIAN FOOTING ON ALL EXISTING LANE LINES.
2. INSTALL NEW CONCRETE BARRIER ON BOTH SIDES OF HIGHWAY.
3. INSTALL NEW MEDIAN FOOTING ON BOTH SIDES OF HIGHWAY.
4. INSTALL NEW MEDIAN FOOTING ON BOTH SIDES OF HIGHWAY.

NOTE: REFER TO SPECIAL DETAILS FOR ADDITIONAL INFORMATION

DETAIL FOR CONSTRUCTION OF OVERHEAD SIGN STRUCTURE

MEDIAN FOOTING IN CONCRETE MEDIUM BARRIER WALL

ALL STAGES

MAINTENANCE OF TRAFFIC DETAILS
STA_99+46.61
BEGIN JOB 088457 SITE 2
LOG MILE 1.24

MAINTENANCE OF TRAFFIC DETAILS
### Table: Maintenance of Traffic Details

<table>
<thead>
<tr>
<th>Stage</th>
<th>Operation</th>
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</thead>
<tbody>
<tr>
<td>Stage 1</td>
<td>JCT 99 (3 ksi) to JCT 101 (3 ksi) 1, 2, 3, 4, 5 &amp; 6</td>
</tr>
<tr>
<td>Stage 2</td>
<td>JCT 101 (3 ksi) to JCT 102 (3 ksi) 1, 2, 3, 4, 5 &amp; 6</td>
</tr>
<tr>
<td>Stage 3</td>
<td>JCT 102 (3 ksi) to JCT 103 (3 ksi) 1, 2, 3, 4, 5 &amp; 6</td>
</tr>
</tbody>
</table>

**Notes:**
- **JCT 99 (3 ksi):** JCT 99 (3 ksi) to JCT 101 (3 ksi) and from JCT 101 (3 ksi) to JCT 102 (3 ksi)
- **JCT 102 (3 ksi):** JCT 102 (3 ksi) to JCT 103 (3 ksi)

**Steps:**
1. **Prepare:** Site preparation for installation of temporary barriers.
2. **Install:** Temporary barriers along the designated areas.
3. **Open:** Traffic doors to allow traffic to pass through.
4. **Close:** Temporary barriers to control traffic flow.

**Traffic Control:**
- **Stage 1:** Use portable barriers, cones, and traffic signs.
- **Stage 2:** Use fixed barriers, cones, and traffic signs.
- **Stage 3:** Use permanent barriers, cones, and traffic signs.

**Critical Areas:**
- JCT 99 (3 ksi) to JCT 101 (3 ksi) and from JCT 101 (3 ksi) to JCT 102 (3 ksi)
- JCT 102 (3 ksi) to JCT 103 (3 ksi)

**Temporary Signage:**
- Reflective signs indicating the upcoming work area.

**Traffic Diversions:**
- Use detours to minimize traffic disruption during construction.

**Safety Measures:**
- Wear appropriate safety gear (hard hats, safety vests).
- Use proper signage and markings for clear visibility.

**Environmental Considerations:**
- Minimize noise pollution during construction.
- Ensure adherence to local environmental regulations.

**Completion:**
- Monitor traffic flow and adjust signs as needed.
- Remove temporary barriers and signage post-construction.

**Checklist:**
- Ensure all safety measures are in place.
- Confirm traffic control plans are effective.
- Regularly update traffic diversions as work progresses.

**Contact Information:**
- For any queries, contact the project manager at 555-1234.
STAGE OPERATIONS

MAINTAIN TRAFFIC ON ALL EXISTING LANES UNTIL NOTED OTHERWISE.

INSTALL PRECAST CONC BARRIER ON L/D & SHOULDER.

REPLACE GUARDRATIONS ON I-P & BRIDGE.

REPLACE PRECAST TRANSITION R-3 FROM 576.756+7.00 TO 576.756+12.00.

CONSTRUCT T-P-C ON 625 FT WY, 600 CONNECTOR.

CONSTRUCT Y-PY, 625 TO WY, 600 CONNECTOR.

NORTH AND WEST WY, 625 ON RT FROM 576.756+12.00 TO 576.756+5.00.

NORTH AND WEST WY, 625 ON RT FROM 576.756+5.00 TO 576.756+5.00.

CONSTRUCT WY, 600 BRIDGE DEFLATION ABOUT.

STAGE 1

MAINTENANCE OF TRAFFIC DETAILS
M A I N T E N A N C E O F T R A F F I C D E T A I L S
STA. 99+66.51
BEGIN JOB 080457 SITE 2
LOG MILE 1.24
## ADVANCE WARNING SIGNS AND DEVICES - CME-020234(A)

<table>
<thead>
<tr>
<th>SIGN NUMBER</th>
<th>DESCRIPTION</th>
<th>SIGN SIZE</th>
<th>STAGE 1</th>
<th>STAGE 2</th>
<th>STAGE 3</th>
<th>WARNER NUMBER REQUIRED</th>
<th>TOTAL SIGNS REQUIRED</th>
<th>VERTICAL PANELS</th>
<th>TRAFFIC DRUMS</th>
<th>BARRICADES (TYPE B)</th>
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<tbody>
<tr>
<td>22-1.1</td>
<td>ROAD WORK 150 FT</td>
<td>48X48&quot;</td>
<td>4</td>
<td>4</td>
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<td>4</td>
<td>16</td>
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<tr>
<td>22-1.3</td>
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<tr>
<td>22-1.4</td>
<td>ROAD WORK 600 FT</td>
<td>48X48&quot;</td>
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<td>4</td>
<td>4</td>
<td>16</td>
<td>54</td>
<td>45</td>
<td>4</td>
</tr>
<tr>
<td>22-1.5</td>
<td>ROAD WORK 900 FT</td>
<td>48X48&quot;</td>
<td>4</td>
<td>4</td>
<td>4</td>
<td>4</td>
<td>16</td>
<td>54</td>
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## ADVANCE WARNING SIGNS AND DEVICES - STPU-020234(A)

<table>
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<th>DESCRIPTION</th>
<th>SIGN SIZE</th>
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<th>STAGE 2</th>
<th>STAGE 3</th>
<th>WARNER NUMBER REQUIRED</th>
<th>TOTAL SIGNS REQUIRED</th>
<th>VERTICAL PANELS</th>
<th>TRAFFIC DRUMS</th>
<th>BARRICADES (TYPE B)</th>
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<tbody>
<tr>
<td>22-1.1</td>
<td>ROAD WORK 150 FT</td>
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<td>16</td>
<td>54</td>
<td>45</td>
<td>4</td>
</tr>
<tr>
<td>22-1.2</td>
<td>ROAD WORK 150 FT</td>
<td>48X48&quot;</td>
<td>4</td>
<td>4</td>
<td>4</td>
<td>4</td>
<td>16</td>
<td>54</td>
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<tr>
<td>22-1.3</td>
<td>ROAD WORK 300 FT</td>
<td>48X48&quot;</td>
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<td>4</td>
<td>16</td>
<td>54</td>
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</table>

**Note:** These tables represent advance warning signs and devices for various stages of road work, including the number of signs required for each stage. The tables are designed to help in planning and implementing traffic control measures during road construction projects.
### CONSTRUCTION PAVEMENT MARKINGS AND PERMANENT PAVEMENT MARKINGS - CMF-002(44)

<table>
<thead>
<tr>
<th>DESCRIPTION</th>
<th>STAGE 3</th>
<th>STAGE 4</th>
<th>END OF JOB</th>
<th>CONSTRUCTION PAVEMENT MARKINGS</th>
<th>PERMANENT PAVEMENT MARKINGS</th>
<th>THERMOPLASTIC PAVEMENT MARKINGS</th>
<th>REFLECTORIZED PAINT PAVEMENT MARKINGS</th>
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<td>IN. FT.</td>
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**TOTALS**

|                              | 0.000 | 0.000 |            |                                 |                               |                            |                                        |

**NOTE:** This is a High Traffic Volume Road as defined in section 16.4.0.0.0 of the Standard Specifications for Highway Construction.

### CLEARING AND GRUBBING - CMF-002(44)

<table>
<thead>
<tr>
<th>STATION</th>
<th>LOCATION</th>
<th>CLEARING AND GRUBBING</th>
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<tbody>
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**TOTALS**

|                              | 0.000 | 0.000 |            |                                 |                               |                            |                                        |

### REMOVAL AND DISPOSAL OF ITEMS - CMF-0023(44)

<table>
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<tr>
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<th>STATION</th>
<th>LOCATION</th>
<th>REMOVAL AND DISPOSAL OF ITEMS</th>
<th>CONSTRUCTION PAVEMENT MARKINGS</th>
<th>PERMANENT PAVEMENT MARKINGS</th>
<th>THERMOPLASTIC PAVEMENT MARKINGS</th>
<th>REFLECTORIZED PAINT PAVEMENT MARKINGS</th>
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<td>STATION</td>
<td>LOCATION</td>
<td>REMOVAL AND DISPOSAL OF ITEMS</td>
<td>CONSTRUCTION PAVEMENT MARKINGS</td>
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<td>THERMOPLASTIC PAVEMENT MARKINGS</td>
<td>REFLECTORIZED PAINT PAVEMENT MARKINGS</td>
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</table>

**TOTALS**

|                              | 0.000 | 0.000 |            |                                 |                               |                            |                                        |

**NOTE:** The quantity shown does not include the removal of any items due to the removal and disposal of all guide rails, terminals, and warning posts.

### CONSTRUCTION PAVEMENT MARKINGS AND PERMANENT PAVEMENT MARKINGS - CMF-002(44)

<table>
<thead>
<tr>
<th>DESCRIPTION</th>
<th>STAGE 1</th>
<th>STAGE 2</th>
<th>STAGE 3</th>
<th>STAGE 4</th>
<th>END OF JOB</th>
<th>REMOVAL OF PERMANENT PAVEMENT MARKINGS</th>
<th>CONSTRUCTION PAVEMENT MARKINGS</th>
<th>REMOVAL OF CONSTRUCTION PAVEMENT MARKINGS</th>
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<td>IN. FT.</td>
<td>U.S. FT.</td>
<td>IN. FT.</td>
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<tr>
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</table>

**TOTALS**

|                              | 0.000 | 0.000 |            |                                 |                               |                            |                                        |

**NOTE:** This is a High Traffic Volume Road as defined in section 16.4.0.0.0 of the Standard Specifications for Highway Construction.

**NOTE:** The quantity shown does not include the removal of any items due to the removal and disposal of all guide rails, terminals, and warning posts.
**EARTHWORK - CMW-0231344**

<table>
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<tr>
<th>STATION</th>
<th>DESCRIPTION</th>
<th>LOCATION</th>
<th>UNCOMPACTED</th>
<th>COMPACTED</th>
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<th>NOTES</th>
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<tr>
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<td>0001-0312</td>
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<td>1366</td>
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<tr>
<td>1000+00</td>
<td>1000-0312</td>
<td>60' EASTBOUND ROADWAY</td>
<td>1166</td>
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<td>278</td>
<td>1444</td>
<td>1444</td>
</tr>
<tr>
<td>1000+00</td>
<td>1000-0312</td>
<td>30' W CB ASST</td>
<td>1166</td>
<td>1166</td>
<td>278</td>
<td>1444</td>
<td>1444</td>
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<tr>
<td>1000+00</td>
<td>1000-0312</td>
<td>30' W CB ASST</td>
<td>1166</td>
<td>1166</td>
<td>278</td>
<td>1444</td>
<td>1444</td>
</tr>
<tr>
<td>1000+00</td>
<td>1000-0312</td>
<td>30' W CB ASST</td>
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<td>278</td>
<td>1444</td>
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**SOIL LOG**

<table>
<thead>
<tr>
<th>STATION</th>
<th>LATITUDE</th>
<th>LONGITUDE</th>
<th>DEPTH</th>
<th>SQUEEZE</th>
<th>PLASTICITY</th>
<th>ASHBY CLASSIFICATION</th>
<th>COLOR</th>
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<tbody>
<tr>
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</tr>
<tr>
<td>1000+00</td>
<td>35.00</td>
<td>116.00</td>
<td>30</td>
<td>0.00</td>
<td>30</td>
<td>BOWERS</td>
<td>30</td>
</tr>
<tr>
<td>1000+00</td>
<td>35.00</td>
<td>116.00</td>
<td>30</td>
<td>0.00</td>
<td>30</td>
<td>BOWERS</td>
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<td>1000+00</td>
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<td>116.00</td>
<td>30</td>
<td>0.00</td>
<td>30</td>
<td>BOWERS</td>
<td>30</td>
</tr>
</tbody>
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**CONCRETE DITCH PAVING - CMW-023444**

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**CONCRETE DITCH PAVING - STPU-023444**

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**EROSION CONTROL MATING - CMW-023444**

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**EROSION CONTROL MATING - STPU-023444**

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**CONCRETE WALKS (TYPE SPECIAL) - STPU-023444**

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## Erosion Control - STPU02344

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### Note:
- *Note: Quantity Estimated*  
- See Section 14 of the Std. Spec.  
- Underdrain shall be stubbed into the proposed drop-inlet E and where directed by the engineer.  
- Payment for this item is included in the unit price bid for 4" Pipe Underdrain.
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**NOTE:** AVERAGE MILEAGE = 0.767

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**COLD MILLING ASPHALT PAVEMENT - 2P40205(444)**

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**TOTAL:** 1233.0

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**DRIEWAYS & TURNOUTS - CMEF-002(444)**

**QUANTITIES**
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### Concrete Barrier Wall - CMF-003244

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### ACQ/M Patching of Existing Roadway - CMF-002346

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### Rumble Strips in Asphalt Shoulders - STP-003246

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### Concrete Barrier Wall - CMF-002344

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### ACQ/M Patching of Existing Roadway - STP-002346

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### Animal Passage Shelves for Wildlife Crossings - CMF-003246

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### Asphalts Concrete Patching for Maintenance of Traffic - STP-002344

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### Structures - STP-003246

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**TOTALS FOR JOB NO. 080457**

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**Summary of Quantities**

Total quantity: 105 cubic meters
Total rate: 30,000
Total value: 30,500

Date: 2023-01-01

Note: Values are approximate and subject to review.
### SUMMARY OF QUANTITIES (BOX 2 OF 3)

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### SUMMARIES OF QUANTITIES AND REVISIONS

**DATE**

- Removed the animal passage sign(100, 90 100, 90) from the previous page, as noted.
- Introduced the animal passage sign(100, 90 100, 90) to new page.
- Changed the animal passage sign(100, 90 100, 90) to the new design(100, 90 100, 90).

**REVISION**

- Added new animal passage sign(100, 90 100, 90) to the new page.
- Revised the animal passage sign(100, 90 100, 90) as noted.

**SHEET NUMBER**

- Sheet number 1.
- Sheet number 2.
- Sheet number 3.

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**SUMMARY OF QUANTITIES AND REVISIONS**

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**SHEET NUMBER**

- Sheet number 1.
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- Sheet number 3.
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**Standard GPS Control Point Maintenance - Call 540-248-2800 for reference points and 540-248-2801 for USGS control points**
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*Note: The images and data are placeholders and do not reflect actual content.*
REFER TO SURVEY CONTROL DETAIL SHEETS FOR HORIZONTAL AND VERICAL CONTROL DATA.
Refer to survey control detail sheets for horizontal and vertical control data.
Refer to survey control detail sheets for horizontal and vertical control data.
STA. 100+00, 95 ON MAIN STREET CONNECTOR
- STA. A = 175+99.69 ON HWY. 89
Δ = 85'00.00'

REFER TO SURVEY CONTROL DETAIL SHEETS FOR HORIZONTAL AND VERTICAL CONTROL DATA.

STA. 100+28.43 BEGIN MAIN STREET CONNECTOR

STA. 107+12.20 END MAIN STREET CONNECTOR
350 REFER TO SURVEY CONTROL DETAIL SHEETS FOR HORIZONTAL AND VERTICAL CONTROL DATA.

EASTBOUND ENTRANCE

STA. 761+53.78 BEGIN SUPERELEVATION
STA. 761+82.58 MAX SUPERELEVATION (0.035' /')
STA. 761+31.45 END SUPERELEVATION

AREA OF OBLITERATION

350 REFER TO SURVEY CONTROL DETAIL SHEETS FOR HORIZONTAL AND VERTICAL CONTROL DATA.

EASTBOUND ENTRANCE
STA. 100+00.00
BEGIN MAIN STREET CONNECTOR

320 REFER TO SURVEY CONTROL DETAIL SHEETS FOR HORIZONTAL AND VERTICAL CONTROL DATA.
STA. 146+79.53
BEGIN MAIN STREET CONNECTOR

200 REFER TO SURVEY CONTROL DETAIL SHEETS FOR HORIZONTAL AND VERTICAL CONTROL DATA.
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<td>VEHICLE DETECTOR RACK (16 CHANNEL)</td>
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* ONE SPARE VIDEO DETECTOR AND ONE SPARE VIDEO PROCESSOR SHALL BE SUPPLIED.
TRAFFIC SIGNAL NOTES:

1. ALL ELECTRICAL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE CURRENT EDITIONS OF THE NFPA 70 (CURRENT EDITION) NATIONAL ELECTRICAL CODE, NFPA 101 (CURRENT EDITION) LIFE SAFETY CODE, NATIONAL ELECTRICAL CODE AND LOCAL ELECTRICAL CODE.

2. EXTEND GREEN EARTH GROUNDED CONDUCTOR (E.G.C.) FROM GROUND BAR AT MAIN BREAKER TO CONTROL PANEL AND TO FIRST POLE; SOLELY BOND E.G.C. TO GROUND LUG OF CONTROL CABINET AND TO POLE GROUND. ENSURE THAT ONLY ONE NEUTRAL TO GROUND BOND EXIST IN THE SYSTEM AND THAT IT IS AT THE MAIN BREAKER.


4. CONTRACTOR SHALL CONNECT A SEPARATE NEUTRAL FOR EACH LOAD SWITCH REPRESENTED ON EACH SIGNAL POLE.

5. TRAFFIC CONTROLLER CABINET AND LAYOUT SHALL BE SUCH THAT IT IS NOT NECESSARY TO SHUT DOWN POWER OR REMOVE LOAD SWITCHES IN ORDER TO EASILY TEST OR MODIFY DETECTOR INPUTS TO THE CONTROLLER.

6. CONTROLLER CABINET SHALL BE WIRE SUCH THAT DURING FLASH OPERATIONS POWER TO THE LOAD SWITCHES CANNOT BEKECIDE TO LOAD SWITCH POWER BUS.

7. ALL PARTS OF THIS INSTALLATION SHALL BE IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION, STANDARD DRAWINGS AND WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, CURRENT EDITION.

8. CONDUIT INSTALLED UNDER ROADWAY SURFACES SHALL BE INSTALLED BY PUSHING OR BORING METHODS. IF THE ENGINEER DETERMINES THIS IS NOT FEASIBLE, THEN A TRENCHING METHOD AS SHOWN IN THE STANDARD DRAWINGS MAY BE USED.

9. TRAFFIC SIGNAL POLES SHALL BE GALVANIZED. BACKPLATES SHALL BE SUPPLIED FOR ALL SIGNAL HEADS.

10. PAVEMENT MARKING SHOWN FOR REFERENCE ONLY. SEE PERMANENT PAVEMENT MARKING DETAILS.

11. FOUNDATION FOR ALL POLES SHALL BE EXTENDED IF NECESSARY TO ACCOMMODATE THE REQUIREMENTS FOR SIGNAL HEAD CLEARANCE ABOVE ROADWAY ONLY AT LOCATIONS WHERE THE POLE ELEVATION AT THE POLE IS RATING OF THE ROADWAY (REF. NTSF/N STANDAR DRAWING). PAVEMENT WIDTHS TO BE ANALYZED IN SECTION 1110 TRAFFIC SIGN SUPPORT MAST ARM AND POLE WITH FOUNDATION OF THE STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION, CURRENT EDITION.

12. ALL CONCRETE BOXES SHALL BE TYPE 2 HD UNLESS OTHERWISE INDIATED. ALL CONDUIT SHALL BE THREE (3") DIAMETER UNLESS SPECIFIED ON PLANS.

13. CONTRACTOR SHALL NOTIFY ALL EXISTING UTILITY OWNERS BEFORE BEGINNING WORK ON THIS PROJECT.

14. LED LUMINARIES ASSEMBLIES SHALL HAVE A BUG RATING OF Ud.

15. HARDWARE INPUTS MAY BE DETERMINED BY SUPPLIER. EACH DETECTOR OUTPUT SHALL INPUT THE CONTROLLER THROUGH A SEPARATE INPUT. ADDING A SEPARATE INPUT UNLESS OTHERWISE NOTED AND BE PROGRAMMABLE BY THE ASSOCIATED PHASE COMBINATION (COMB.) DETECTORS SHALL ALSO BE PROGRAMMABLE TO PROVIDE VEHICLE COUNT/COUNT OcUNT OF DATA.

16. THE LOCAL RADIO WITH ANTENNA SHALL BE COMPATIBLE WITH THE EXISTING CLOSED LOOP COORDINATION SYSTEM IN THE CITY/COUNTY.

17. TO DETERMINE UTILITY CLEARANCES ABOVE THE TRAFFIC SIGNAL POLE, REFER TO THE POLE SCHEDULE FOR VERTICAL SHAFT HEIGH. WHERE THE POLE SCHEDULE INDICATES THAT A LUMINAR ARM WILL BE USED, THIRTY-EIGHT (38) FEET SHOULD BE USED TO DETERMINE UTILITY CLEARANCE ABOVE THE LUMINAR ARM. WHERE THE POLE SCHEDULE INDICATES THAT A LUMINAR ARM WILL NOT BE USED, A LUMINAR ARM OF A HEIGHT OF TWENODES (31.) FEET SHOULD BE USED TO DETERMINE UTILITY CLEARANCE ABOVE THE TRAFFIC SIGNAL MAST ARM. AN ADDITIONAL SIX (6) FEET SHOULD BE USED DIRECTLY ABOVE "VIDEO DETECTOR" AT LOCATIONS SHOWN ON THE SIGNAL PLANS.

18. THE DESIRABLE MINIMUM DISTANCE FROM THE FACE OF ROADWAY CURB OR SHOULDER EDGE TO THE FACE OF NON- BREAKAWAY POLE OR OBSTRUCTION IS SIX (6) FEET. REFER TO TRAFFIC SIGNAL PLANS FOR SPECIFIC LOCATION OF POLES, CONTROLLER AND ANY OTHER NON-BREAKAWAY OBSTRUCTIONS. REFER TO "DESIGN PARAMETERS; MINIMUM CLEAR ZONE DISTANCE" FOR MINIMUM DISTANCE FROM THE EDGE OF TRAVELER EDGE TO THE FACE OF NON- BREAKAWAY POLE OR OBSTRUCTION. TRAFFIC SIGNAL POLES OR ANY OTHER NON-BREAKAWAY OBSTRUCTION SHALL NOT BE INSTALLED WITHIN THE CLEAR ZONE.

19. AS DETERMINED BY THE ENGINEER FOUNDATION EMBEDEF MAY BE DECREASED BY A MAXIMUM OF TWO FEET IF COMPETENT ROCK IS ENCOUNTERED PRIOR TO ACHIEVING PLAN EMBEDEF AND AT LEAST HALF OF THE REMAINING EMBEDEF LENGTH IS KEPT INTO COMPEDEF ROCK.

20. CONNECTION OF TRAFFIC SIGNAL DISPLAY TO FIELD WIRING SHALL UTILIZE AN APPROVED TERMINAL STRIP BEHIND HAND-HOLE COVER AT BASE OF POLE. TERMINAL STRIP SHALL PROVIDE PROTECTION TO PREVENT EXPOSURE TO THE PUBLIC IN THE EVENT THAT POLE COVER IS MISSING. PAYMENT FOR TERMINAL STRIPS SHALL BE INCLUDED IN ITEM 714 TRAFFIC SIGNAL MAST ARM AND POLE WITH FOUNDATION OF THE STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION, CURRENT EDITION.

21. CONTROLLER CABINET LAYOUT AND ORIENTATION SHALL CONFORM TO MSA STANDARDS.

22. ONE VIDEO PROGRAMMING MODULE SHALL BE PROVIDED FOR ARMING AND SETUP OF DETECTORS IF THE VIDEO SYSTEM CANNOT BE ADJUSTED THROUGH HARDWARE AND SOFTWARE PROVIDED BY OWNER WITHIN THE JOB.

23. TRAFFIC SIGNAL CONTRACTOR SHALL NOTIFY THE RESIDENT ENGINEER OR ASSIGNED DEPARTMENT PROJECT INSPECTOR EACH DAY PRIOR TO SIGNAL RELATED WORK. NO WORK ON TRAFFIC SIGNALS WILL BE ALLOWED OR APPROVED WITHOUT THE PRIOR NOTIFICATION.


25. DOOR PANEL TEST PUSH BUTTONS SHALL ACTUATE INDICATED PHASES. DETECTOR ASSIGNMENTS AND/OR SIDE PANEL ARRAYS MAY REQUIRE MODIFICATION.

26. ALL SYSTEM DETECTOR RACKS AND ASSOCIATED EQUIPMENT SHALL BE PROTECTED BY THE JAHN CONTROLLER CABINET POWER SURGE PROTECTION.

27. IN BOXES, POLE BASES, JUNCTION BOXES AND CONTROLLER CABINETS, THE DIRECTION OF EACH CABLE RUN SHALL BE INDICATED BY ATTACHING A PERMANENT TAG OF Rigid PLASTIC OR NON-FERRIOUS METAL TO THE CONDUIT. TAGS SHALL BE EMBOSSED, STAMPED OR ENGRAVED WITH LETTERS 1/16" OR GREATER IN HEIGHT AND SECURED TO THE CONDUIT WITH NYLON OR PLASTIC TIES. IN Instances WHERE THE CONDUCT OR CONDUIT ENTRANCES ARE NOT VISIBLE OR ACCESSIBLE, A DIRECTION TAG SHALL BE ATTACHED TO EACH CABLE.

28. THE CONTRACTOR SHALL PERFORM ALL WORK POSSIBLE THAT WILL MINIMIZE THE TIME THAT TRAFFIC SIGNAL IS OUT OF OPERATION. IF, IN THE OPINION OF THE ENGINEER, TRAFFIC CONDITIONS WARRANT THE CONTRACTOR SHALL PROVIDE PLACEMENT TO DIRECT TRAFFIC WHILE THE TRAFFIC SIGNAL IS OUT OF OPERATION.

29. ALL NON- METALLIC CONDUIT RUNS SHALL HAVE BELL RING FITTINGS INSTALLED ON THE TERMINATING ENDS OF THE CONDUIT. THIS INCLUDES POLE BOXES, POLE BASES, AND TRAFFIC SIGNAL CABINS.

30. ALL CONCRETE BOXES SHALL BE SET ON A GRAVEL OR CRUSHED STONE BEDDING AS SPECIFIED IN SECTION 711 CONCRETE BOX, OF THE STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION, EDITION OF 2014.

DATE: 10-31-2000 10:30 AM.
### TRAFFIC SIGNAL QUANTITIES

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<th>QUANTITY</th>
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<td>NICKEL-MALLOY CONDUIT (2&quot;)</td>
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<td>VIDEO VIDEO DETECTOR BACK (16 CHANNELS)</td>
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*One spare video detector and one spare video processor shall be supplied.

### STAGE 4 TRAFFIC SIGNAL QUANTITIES

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<td>SP</td>
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*Stage 4: Relocate traffic signal heads 1, 2, 3, and 4; rotate video detectors V2, V6, V1, and V6 as shown on the temporary plans for stage 4.*

### STAGE 2 TRAFFIC SIGNAL QUANTITIES

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<tr>
<td>SP</td>
<td>ANTENNA CABLE (TYPE 2)</td>
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<td>EACH</td>
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<tr>
<td>SP &amp; T708</td>
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<td>NICKEL-MALLOY CONDUIT (2&quot;)</td>
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</table>

*Stage 2: Install all temporary traffic signal equipment, including the permanent service port assembly (2 circuits) with all associated items as shown in the stage 2 temporary traffic signal plans and remove all existing traffic signal equipment.*

### HWY. 365 AND HWY. 19 INTERSECTION

#### STAGE 4 TRAFFIC SIGNAL QUANTITIES

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<th>ITEM NUMBER</th>
<th>ITEM</th>
<th>QUANTITY</th>
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*Stage 4: Remove the existing traffic signal equipment at the intersection of Highway 365 and Highway 19. When the highway is shifted to the new overpass and the existing overpass is removed.*

*(Refer to maintenance of traffic details)*

---

**LOCATION:** HWY. 365 & HWY. 19 **CITY:** MOUNTAIN **COUNTY:** FULLEREN **DISTRICT:** ORANGE **SCALE:** 1:500 **DRAWN BY:** DOE **DATE:** 10-32-2020 **FILE NAME:** S000457.01.dra **DRAWN BY:** DOE
NOTE TO CONTRACTOR:
TRAFFIC SIGNAL OPERATIONS SHALL BE MAINTAINED
THROUGHOUT ALL CONSTRUCTION PHASES.

STAGES 2, 3, AND 4 DETECTOR SPACING CHART

<table>
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<tr>
<th>POSTED SPEED</th>
<th>LEAD VDZ</th>
<th>LAG VDZ</th>
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<tr>
<td>35 MPH</td>
<td>200'</td>
<td>50'</td>
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<tr>
<td>40 WB RAMP VIRTUAL LOOPS</td>
<td>200'</td>
<td>50'</td>
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NOTES:
1. ALL SIGNAL HEADS SHALL HAVE BACKPLATES.
2. REFER TO SPECIAL PROVISION "REFLECTIVE BACKPLATES" FOR DETAILS ON REQUIREMENTS FOR BACKPLATES.

STAGES 2 AND 3 TRAFFIC SIGNAL

LOCATION: HWY 89/1-40 WB RAMP
CITY: PAULINE
COUNTY: FAULKNER
DISTRICT: 12
SCALE: 1:160
NOTE TO CONTRACTOR:
TRAFFIC SIGNAL OPERATIONS SHALL BE MAINTAINED THROUGHOUT ALL CONSTRUCTION PHASES.
STAGES 2, 3, AND 4 TEMPORARY WIRING DIAGRAM

NOTES TO CONTRACTOR:
1. ALL DETECTOR RACK CHANNELS, INCLUDING UNUSED, SHALL BE BROUGHT TO TERMINAL STRIP IN DETECTOR AREA OF CABINET.
2. THE LOCAL GOVERNMENT SHALL BE RESPONSIBLE FOR PROVIDING POWER TO THE SERVICE POINT.
STAGES 2, 3, & 4
PHASING DIAGRAM

STAGES 2, 3, & 4
SIGNAL FACES

NOTES:
1. ALL SIGNAL HEADS SHALL HAVE BACKPLATES.
2. REFER TO SPECIAL PROVISION "RETROREFLECTIVE BACKPLATES" FOR DETAILS ON REQUIREMENTS FOR BACKPLATES.

STAGES 2.3, AND 4 DETECTOR CHART
TEMPORARY DETECTOR SYSTEM DESCRIPTION: JOB 369417

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<th>TYPE</th>
<th>CAS. #</th>
<th>AMP #</th>
<th>CON. #</th>
<th>PHS</th>
<th>SYSTEM DET.</th>
<th>MASTER SYSTEM DETECTORS</th>
<th>COMMENTS</th>
<th>TUBE LENGTHS</th>
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<td>V227</td>
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<td>CAMERA V6</td>
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SPARE 4, 5, & 11-15

CONTROLLER INPUT ABBREVIATIONS:
V = VEHICLE INPUT
D = SYSTEM OR AUXILIARY INPUT
P = PEDESTRIAN INPUT

NOTE: "AMP CHN =" REFERS TO THE RACK OUTPUT POSITION.
THIS IS WIRING TO CONTROLLER INPUT DETECTOR NUMBER WHICH IS PROGRAMMED TO ACTIVATE THE DESIGNATED PHASE.
EXAMPLE: V9 = SYSTEM DETECTOR 1, V10 = SYSTEM DETECTOR 2

STAGES 2, 3, AND 4 INTERVAL CHART
HWY 69/40 WB RAMP DETECTOR ASSIGNMENTS

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<tr>
<th>SIGNAL FACES</th>
<th>2H6</th>
<th>CLR</th>
<th>4 CLR</th>
<th>FLASH</th>
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<td>1 &amp; 2</td>
<td>G</td>
<td>Y</td>
<td>R</td>
<td>R</td>
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<tr>
<td>3 &amp; 4</td>
<td>G</td>
<td>Y</td>
<td>R</td>
<td>R</td>
</tr>
<tr>
<td>5 &amp; 6</td>
<td>R</td>
<td>R</td>
<td>G</td>
<td>Y</td>
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LOCATION: HWY 69/40 WB RAMP
CITY: PHILADELPHIA
COUNTY: PHILADELPHIA
DISTRICT: ORS
SCALE: 1" = 100'
NOTE TO CONTRACTOR:
TRAFFIC SIGNAL OPERATIONS SHALL BE MAINTAINED THROUGHOUT ALL CONSTRUCTION PHASES.
NOTE TO CONTRACTOR:
TRAFFIC SIGNAL OPERATIONS SHALL BE MAINTAINED
THROUGHOUT ALL CONSTRUCTION PHASES.

**POLE LOCATIONS**

<table>
<thead>
<tr>
<th>POLE</th>
<th>LOCATION &amp; STATION</th>
<th>OFFSET</th>
<th>X, Y COORDINATES</th>
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</thead>
<tbody>
<tr>
<td>A</td>
<td>HWY 89 - STA. 192+53.04</td>
<td>47' RT.</td>
<td>1187557.05, 232231.11</td>
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<tr>
<td>B</td>
<td>HWY 89 - STA. 191+71.48</td>
<td>44' RT.</td>
<td>1187473.56, 232233.20</td>
</tr>
<tr>
<td>C</td>
<td>HWY 89 - STA. 191+14.61</td>
<td>44' RT.</td>
<td>1187415.44, 232235.81</td>
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<td>D</td>
<td>HWY 89 - STA. 190+70.09</td>
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<td>HWY 89 - STA. 192+19.04</td>
<td>41’ LT.</td>
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<td>HWY 89 - STA. 192+43.72</td>
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<td>H</td>
<td>HWY 89 - STA. 192+43.45</td>
<td>35’ RT.</td>
<td>1187547.05, 232242.11</td>
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</tbody>
</table>

**DESIGN PARAMETERS**

- POSTED SPEED LIMIT: 35 MPH EAST AND WEST APPROACH
- NA MPH NORTH AND SOUTH APPROACH
- NO BUS STOPS
- NO RAILROAD TRACKS
- NO EXISTING INTERCONNECTIONS
- NO FIRE STATION
- NO PARKING
- NO SIGHT DISTANCE RESTRICTIONS

LOCATION OF STOP LINES SHOWN ON PERMANENT PAVEMENT MARKING DETAILS (SEE SEPARATE SHEET).

MINIMUM CLEAR ZONE DISTANCE 4 FEET BEHIND Curb

LOCAL ANTENNA. ANTEHAND CABLE SHALL BE INSTALLED IN A SEPARATE 2" PIPING SHAFT AND SHALL CONTAIN NO OTHER POWER CARRYING CONDUCTORS.

SERVICE POIST IN MAIN BREAKER BY CONTRACTOR 10 FEET OF CONTROL ROOM PROVIDED 1ST STAGE 1.
NOTES TO CONTRACTOR:

1. ONE SEPARATE 1-56 IS RUN TO EACH POLE FOR THE PEDESTRIAN PUSH BUTTON.

2. ALL DETECTOR PACK CHANNELS, INCLUDING UNDED, SHALL BE BROUGHT TO TERMINAL STRIP IN DETECTOR AREA OF CABINET.

3. THE LOCAL GOVERNMENT SHALL BE RESPONSIBLE FOR PROVIDING POWER TO THE SERVICE POINT.

LOCATION: HWY. 86/1-40 MP 8.7

CITY: MULHEIM

COUNTY: FULLER

DISTRIBUTION OR SCALE: 1/8" DRAWN BY: ONE

DATE: 08-22-2020

FILE NAME: 00800005-01.mmp
## SIGNING SUMMARY OF QUANTITIES

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<thead>
<tr>
<th>ITEM NUMBER</th>
<th>ITEM</th>
<th>TOTAL</th>
<th>UNIT</th>
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<tr>
<td>SP</td>
<td>RELOCATION OF EXISTING OVERHEAD SIGN STRUCTURE (OH-040-23-20)</td>
<td>1</td>
<td>EACH</td>
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<tr>
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<td>GUIDE SIGN - ROADSIDE MOUNTED (DEMOUNTABLE LEGEND)</td>
<td>106</td>
<td>SQ. FT</td>
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<td>SS &amp; 726</td>
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<td>SP, SS, &amp; 726</td>
<td>STANDARD SIGN</td>
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</table>

**NOTES:**

ALL EXISTING GUIDE SIGNS SHALL BE MAINTAINED IN SUCH A MANNER THAT THE SIGNS ARE FULLY VISIBLE, INTACT, AND ERECT FOR THE DURATION OF THE PROJECT, AND SHALL BE REMOVED WHEN THEIR USE IS NO LONGER REQUIRED. REMOVAL AND DISPOSAL OF SIGNS, SUPPORTS, AND FOUNDATIONS SHALL NOT BE PAID FOR SEPARATELY BUT SHALL BE CONSIDERED SUBSIDIARY TO OTHER ITEMS IN THE CONTRACT.

THE EXISTING SIGNS AND SUPPORTS SHALL BECOME THE PROPERTY OF THE CONTRACTOR. THE EXISTING FOOTINGS SHALL BE REMOVED AND THE HOLES FILLED WITH A SUITABLE MATERIAL AND COMPACTED.

EXISTING LOGOS WILL BE RELOCATED TO THE NEW LOGO SIGN BY THE CONTRACTOR. THE LOGO INSTALLATION SHALL NOT BE PAID FOR SEPARATELY BUT SHALL BE CONSIDERED SUBSIDIARY TO OTHER ITEMS IN THE CONTRACT.

THE CONTRACTOR SHOULD MAKE EVERY EFFORT TO LOCATE BURIED UTILITIES PRIOR TO EXCAVATION INCLUDING, BUT NOT LIMITED TO, CALLING ARKANSAS ONE CALL CENTER (800) 482-8998 FOR LOCATES. SHOULD IT BE DETERMINED A POSSIBILITY OF A UTILITY CONFLICT, CONTRACTOR SHALL CONSULT WITH THE RESIDENT ENGINEER FOR FURTHER GUIDANCE.

BREAKAWAY SIGN SUPPORT TOTAL IS CALCULATED BY TAKING THE LENGTH OF H1, H2, H3, AND THE STUB POST AND MULTIPLYING BY THE BEAM WEIGHT (LBS).
### OVERHEAD SIGNING QUANTITIES

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<th>SIGN NO./LOCATION</th>
<th>INSTALL SIGN STRUCTURE</th>
<th>REMOVE EXISTING SIGN STRUCTURE</th>
<th>RELOCATION OF EXISTING SIGN STRUCTURE</th>
<th>GUIDE SIGN</th>
<th>OVERHEAD CMS ASSEMBLY</th>
<th>GUARDRAIL</th>
<th>GUARDRAIL SURF. CR.</th>
<th>OVERHEAD CMS SIGN</th>
<th>LEGEND</th>
<th>TYPE</th>
<th>STD. TYPE</th>
<th>ANCHOR POSTS TYPE 1</th>
<th>AND TYPE 2</th>
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<th>ACMH</th>
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### ROADSIDE MOUNTED SIGNING QUANTITIES

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<th>GUIDE SIGN</th>
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<th>I-BEAM BREAKAWAY SIGN SUPPORT</th>
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<td>H-1 H-2 H-3</td>
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"N" VALUES - SECTION A-A

BORING LEGEND

SECTION A-A

"N" VALUES - SECTION B-B

BORING LEGEND

SECTION B-B
"N" VALUES - SECTION C-C

Sta. 179+45 - 20' East of C.I. Construction

12.1 - 12.2, Nwdw (1)
15.5 - 15.6, Nwdw (2)

Sta. 179+45 - 25' East of C.I. Construction

9.0 - 9.1, Nwdw (1)
12.5 - 12.6, Nwdw (2)

Sta. 179+45 - 50' East of C.I. Construction

9.0 - 9.1, Nwdw (1)
13.5 - 13.6, Nwdw (2)

For Borrow Legend, see Omg. No. 08860.

"N" VALUES - SECTION D-D

Sta. 181+35 - 20' West of C.I. Construction

8.0 - 8.1, Nwdw (1)
10.5 - 10.6, Nwdw
13.5 - 13.6, Nwdw
20.0 - 20.1, Nwdw (2)
23.0 - 23.1, Nwdw (3)

Sta. 181+40 - 25' West of C.I. Construction

10.5 - 10.6, Nwdw (1)
13.5 - 13.6, Nwdw

Sta. 181+45 - 50' West of C.I. Construction

8.0 - 8.1, Nwdw (1)
10.5 - 10.6, Nwdw
13.5 - 13.6, Nwdw

ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

ARKANSAS LICENSED PROFESSIONAL ENGINEER NO. 08361

W. D. CROWELL

LAYOUT OF BRIDGE
HIGHWAY 89 OVER UPRR & HIGHWAY 365
UPRR OVERPASS & REALIGN. (MAYFLOWER) (S)
FAULKNER COUNTY

ROUTE #: SEC: 5
SHEET 4 OF 4
### Sheet 1 of 4

**Details of Bent 1**

**Highway 89 Over UPRR & Highway 365**

**Arkansas State Highway Commission**

**Little Rock, Ark.**

**Drawing No. 6004**

---

**Plan**

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<th>View 3</th>
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**Elevation**

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**Notes:**

1. See "REMARKS" on Sheet 2.
2. See Table 1 for additional details.
3. See Table 2 for material details.
4. See Table 3 for section details.
5. See Table 4 for location details.
6. See Table 5 for bending moments.
7. See Table 6 for design details.

---

**General Notes:**

- For General Notes, see Sheet 3, Dep. No. 6006.
- For Joint Details, see Sheet 4, Dep. No. 6008 & "SIDEWALK SECTION THROUGH JOINT AT END BENT" on Sheet 5, Dep. No. 6010.
- Structural steel and all steel connections shall be in accordance with "Structural Steel in Highway Bridges (SSHB), 2005." See Sheet 6, Dep. No. 6012.

---

**Typical Anchor Bolt Layout**

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<table>
<thead>
<tr>
<th>Anchor Bolt Type</th>
<th>Anchor Bolt Material</th>
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<tbody>
<tr>
<td>A</td>
<td>B</td>
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**Typical Pedestal Details**

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<thead>
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<th>Pedestal Type</th>
<th>Pedestal Material</th>
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</thead>
<tbody>
<tr>
<td>A</td>
<td>B</td>
</tr>
</tbody>
</table>
```

---

**Typical Joint Details**

```
<table>
<thead>
<tr>
<th>Joint Type</th>
<th>Joint Material</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>B</td>
</tr>
</tbody>
</table>
```

---

**Typical Bending Moment Details**

```
<table>
<thead>
<tr>
<th>Bending Moment</th>
<th>Bending Moment Material</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>B</td>
</tr>
</tbody>
</table>
```

---

**Typical Layout Details**

```
<table>
<thead>
<tr>
<th>Layout Type</th>
<th>Layout Material</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>B</td>
</tr>
</tbody>
</table>
```

---

**Typical Working Platform Details**

```
<table>
<thead>
<tr>
<th>Working Platform Type</th>
<th>Working Platform Material</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>B</td>
</tr>
</tbody>
</table>
```

---

**For additional information, see Layout.**
K-FRAME CONNECTION DETAILS
NOTE:

1. If permanent steel bridge deck forms are used, the fabrication drawing plates are required to accommodate the deck form supports.

BEARING STIFFENER DETAIL AT END BENTS

(Shown at end of girder)

\[
\begin{align*}
\text{Sheet Width} & \approx 1' \text{ to } 2' \\
\text{1" min. radius} \quad \text{1" min. radius} \\
\end{align*}
\]

BEARING STIFFENER DETAIL AT INTERMEDIATE BENTS

(Shown at end of girder)

\[
\begin{align*}
\text{Sheet Width} & \approx 1' \text{ to } 2' \\
\text{1" min. radius} \quad \text{1" min. radius} \\
\end{align*}
\]

NOTE:
All bearing stiffeners shall be vertically to the head gage.
<table>
<thead>
<tr>
<th>Span 1</th>
<th>Span 2</th>
<th>Span 3</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**TABLE OF DEAD LOAD DEFLECTIONS (INCHES)**

<table>
<thead>
<tr>
<th>Span 1</th>
<th>Span 2</th>
<th>Span 3</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**DEAD LOAD DEFLECTION DIAGRAM**

**Notes:**

- Carrier for dead load deflection due to vertical forces. Deflections shown are along C.C. Center of stress from A.D. leading to C.C. Bearing. Negative sign (-) indicates joint above beam, Vertical force connections not included.

- Dead load deflections shown include an assumed loading of 18 p.e. to account for live load and dead load in conjunction with the deflections in the table. The addition of the load may be necessary upon review of the contract documents given in the approved changes. The loading sequence shown is " Temporary - PLAN & DRC."
<table>
<thead>
<tr>
<th>Span 1</th>
<th>Span 2</th>
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</thead>
<tbody>
<tr>
<td>760</td>
<td>870</td>
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</table>

**DEAD LOAD DEFLECTION DIAGRAM**

**TABLE OF DEAD LOAD DEFLECTIONS (INCHES)**

<table>
<thead>
<tr>
<th>Order 1, A, B</th>
<th>Order 1, A, B</th>
<th>Order 1, A, B</th>
<th>Order 1, A, B</th>
<th>Order 1, A, B</th>
<th>Order 1, A, B</th>
<th>Order 1, A, B</th>
<th>Order 1, A, B</th>
</tr>
</thead>
<tbody>
<tr>
<td>500</td>
<td>625</td>
<td>750</td>
<td>875</td>
<td>1000</td>
<td>1125</td>
<td>1250</td>
<td>1375</td>
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<tr>
<td>625</td>
<td>750</td>
<td>875</td>
<td>1000</td>
<td>1125</td>
<td>1250</td>
<td>1375</td>
<td>1500</td>
</tr>
<tr>
<td>750</td>
<td>875</td>
<td>1000</td>
<td>1125</td>
<td>1250</td>
<td>1375</td>
<td>1500</td>
<td>1625</td>
</tr>
<tr>
<td>875</td>
<td>1000</td>
<td>1125</td>
<td>1250</td>
<td>1375</td>
<td>1500</td>
<td>1625</td>
<td>1750</td>
</tr>
<tr>
<td>1000</td>
<td>1125</td>
<td>1250</td>
<td>1375</td>
<td>1500</td>
<td>1625</td>
<td>1750</td>
<td>1875</td>
</tr>
<tr>
<td>1125</td>
<td>1250</td>
<td>1375</td>
<td>1500</td>
<td>1625</td>
<td>1750</td>
<td>1875</td>
<td>2000</td>
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<tr>
<td>1250</td>
<td>1375</td>
<td>1500</td>
<td>1625</td>
<td>1750</td>
<td>1875</td>
<td>2000</td>
<td>2125</td>
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<tr>
<td>1375</td>
<td>1500</td>
<td>1625</td>
<td>1750</td>
<td>1875</td>
<td>2000</td>
<td>2125</td>
<td>2250</td>
</tr>
<tr>
<td>1500</td>
<td>1625</td>
<td>1750</td>
<td>1875</td>
<td>2000</td>
<td>2125</td>
<td>2250</td>
<td>2375</td>
</tr>
</tbody>
</table>

**BAR LIST**

- **K3020**: 60 ft 12" 50 ft
- **K4020**: 60 ft 12" 50 ft
- **K6020**: 60 ft 12" 50 ft
- **K6030**: 60 ft 12" 50 ft
- **K6040**: 60 ft 12" 50 ft

**Notes**
- Column for dead load deflection plus vertical curve is a "t" tolerance.
TABLE OF QUANTITIES

<table>
<thead>
<tr>
<th>ITEM</th>
<th>UNCLASSIFIED</th>
<th>AGGREGATE</th>
<th>CONCRETE</th>
<th>SELECT GRANULAR</th>
<th>RETAINING WALL</th>
<th>TEXTURED COATING</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>ELEVATION</td>
<td>BASE COURSE</td>
<td>MIXING</td>
<td>GRANULAR</td>
<td>BAGGED</td>
<td>FINISH</td>
</tr>
<tr>
<td></td>
<td>ITEM NO.</td>
<td>210</td>
<td>300</td>
<td>605</td>
<td>605</td>
<td>605</td>
</tr>
<tr>
<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Notes:

- Stations and offsets shown are measured along C.I. Construction. Offsets are shown to the outside vertical face of wall.
- Material shown is profile grade at top of coping.
- For additional details, see Fig. No. 6192.
- For "SECTION C-A" and "SECTION A-E", see Fig. No. 6192.
- For "WORK DETAIL DRAWINGS" see Fig. No. 61922.

*Exhibit Stone Finish 5/16" Sp. No. 804567

"ARCHITECTURAL FINISH"

PLAN

1" = 20' 0"
GENERAL NOTES:

Sections for retaining walls and other structures must be obtained from the Construction Contract
Procurement Sections of the Program Management Guidelines.

Reinforcement, placement, and details for retaining walls may be specified in the Construction Contract
Procurement Sections of the Program Management Guidelines.

Drainage and adjacent embankments shall be designed and detailed as determined by the Engineer.

Sheets for retaining walls shall be designed and detailed as determined by the Engineer.

Precast, Prestressed, and Precast/Prestressed components shall be designed and detailed as determined by the Engineer.

Chamfer detail

Place of Retaining Wall

N - Depth of Insert

ARCHITECTURAL FINISH DETAIL

Top of Concrete Coping

Architectural Finish
(Anchor Stone)

FORM INSERT DETAILS ON MSE WALLS

See Bridge Layouts and MSE Wall details for locations of form inserts.

PLACEMENT AT MSE WALLS

All Exposed MSE Wall E

Bottom of MSE Wall Coping

Horizontally Graded MSE Wall Face

Flexible Ground Line at Face of MSE Wall

CHAMFER DETAIL

SECTIONS

WIDTH (W) 2M

HEIGHT (H) 2M

LENGTH (L) 2M

Thickness (T) 1M

See Bridge Layouts and MSE Wall details for locations of form inserts.

FORM INSERT DETAILS ON MSE WALLS

See Bridge Layouts and MSE Wall details for locations of form inserts.

PLACEMENT AT MSE WALLS

ALL EXPOSED MSE WALL E

Bottom of MSE Wall Coping

Horizontal Graded MSE Wall Face

Flexible Ground Line at Face of MSE Wall

CHAMFER DETAIL

SECTION 290 517

Sheets for retaining walls and other structures must be obtained from the Construction Contract
Procurement Sections of the Program Management Guidelines.

Reinforcement, placement, and details for retaining walls may be specified in the Construction Contract
Procurement Sections of the Program Management Guidelines.

Precast, Prestressed, and Precast/Prestressed components shall be designed and detailed as determined by the Engineer.

The following materials and placement of Aggregate Base Course (Class 7) are to be used in the retaining wall.

Concrete Mix (Class 8) to be specified in the Construction Contract Procurement Sections of the Program Management Guidelines.
**VIEW A-A - FOUNDATION B**

**BAR LIST - FOUNDATION B**

<table>
<thead>
<tr>
<th>BAR</th>
<th>SIZE</th>
<th>NO. REQ'D</th>
<th>LENGTH</th>
<th>P.O.</th>
</tr>
</thead>
<tbody>
<tr>
<td>CB2</td>
<td>5/8&quot;</td>
<td>10</td>
<td>45'</td>
<td>7</td>
</tr>
<tr>
<td>CB3</td>
<td>3/4&quot;</td>
<td>5</td>
<td>30'</td>
<td>4</td>
</tr>
<tr>
<td>F70</td>
<td>7/8&quot;</td>
<td>70</td>
<td>45'</td>
<td>5</td>
</tr>
<tr>
<td>F80</td>
<td>1-1/4&quot;</td>
<td>60</td>
<td>45'</td>
<td>3</td>
</tr>
</tbody>
</table>

**BAR LIST - FOUNDATION A**

<table>
<thead>
<tr>
<th>BAR</th>
<th>SIZE</th>
<th>NO. REQ'D</th>
<th>LENGTH</th>
<th>P.O.</th>
</tr>
</thead>
<tbody>
<tr>
<td>CB2</td>
<td>5/8&quot;</td>
<td>8</td>
<td>15'</td>
<td>7</td>
</tr>
<tr>
<td>CB3</td>
<td>3/4&quot;</td>
<td>10</td>
<td>15'</td>
<td>4</td>
</tr>
<tr>
<td>F70</td>
<td>7/8&quot;</td>
<td>10</td>
<td>15'</td>
<td>5</td>
</tr>
<tr>
<td>F80</td>
<td>1-1/4&quot;</td>
<td>9</td>
<td>15'</td>
<td>3</td>
</tr>
</tbody>
</table>

**SECTION D-D**

**SECTION E-E**

**ELEVATION**

**FOUNDATION B**

**FOUNDATION A**

**APPROXIMATE QUANTITIES FOR FOUNDATION**

<table>
<thead>
<tr>
<th>STRUCTURE</th>
<th>CLASS D CONCRETE</th>
<th>REINFORCING STEEL</th>
<th>MORTAR PORTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>FOUNDATION A</td>
<td>17.22</td>
<td>2.164</td>
<td>51</td>
</tr>
<tr>
<td>FOUNDATION B</td>
<td>24.67</td>
<td>2.748</td>
<td>36</td>
</tr>
</tbody>
</table>

**SHEET 1 OF 2**

**DETAILS FOR RELOCATION OF STEEL OVERHEAD SIGN STRUCTURE**

**DATE:** 10/11/2023

**ARKANSAS STATE HIGHWAY COMMISSION**

**LITTLE ROCK, ARK**

**SEC:** 31

**CHARLES B. RILEY, P.E.**

**LEONARD PROFESSIONAL ENGINEER**

**NO. 925**

**ARKANSAS STATE HIGHWAY COMMISSION**

**LEONARD PROFESSIONAL ENGINEER**

**NO. 925**

**SHEET 1 OF 2**

**DETAILS FOR RELOCATION OF STEEL OVERHEAD SIGN STRUCTURE**

**DATE:** 10/11/2023

**LITTLE ROCK, ARK**

**SEC:** 31

**MARK OLIFER, P.E.**

**LEONARD PROFESSIONAL ENGINEER**

**NO. 925**

**ARKANSAS STATE HIGHWAY COMMISSION**

**LEONARD PROFESSIONAL ENGINEER**

**NO. 925**
STA 101+41 TO STA 102+00

<table>
<thead>
<tr>
<th>AREA CUT</th>
<th>43</th>
<th>AREA FILL</th>
<th>27</th>
<th>CUT VOLUME</th>
<th>58</th>
<th>FILL VOLUME</th>
<th>86</th>
</tr>
</thead>
<tbody>
<tr>
<td>101+41</td>
<td></td>
<td>101+41</td>
<td></td>
<td>297.00</td>
<td></td>
<td>300.00</td>
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</tr>
<tr>
<td>102+00</td>
<td></td>
<td>102+00</td>
<td></td>
<td>297.25</td>
<td></td>
<td>300.81</td>
<td></td>
</tr>
</tbody>
</table>

CROSS SECTION STA, 101+41 TO 102+00
CROSS SECTIONS - HWY 89 SECTION 2

AREA CUT   9
AREA FILL 85
CUT VOLUME  30
FILL VOLUME 119

AREA CUT  3
AREA FILL 54
CUT VOLUME  4
FILL VOLUME 31

AREA CUT  0
AREA FILL 75
CUT VOLUME  30
FILL VOLUME 86

STA 103+00. CONSTRUCT
CROSS IN RY.
F.L. D.I. 301.00
APPROACH = 5 CU. YDS.

STA 102+64 - IN PLACE
18" SLPPMCCS PIPE = 100 LIN. FT.
18" R.C. PIPE (CL. III) = 106 LIN. FT.
H = 2'-11"
TY C = 4'-0" x 2'-11"
TY MO = 4'-0" I.D.
CONNECT TO D.I. @ STA. 102+00 ON RT.
18" x 100' PIPE CULV'T
18" x 6' R.C. PIPE CULV'T &
D.I. ON RT. W./
STA. 103+00- CONSTRUCT
F.L. INLET= 301.08
TOP ELEV. = 303.92
STA. 103+00.00 RT.

20'-0" EXIST. PAVEMENT

20'-0" EXIST. PAVEMENT

20'-0" EXIST. PAVEMENT

20'-0" EXIST. PAVEMENT

20'-0" EXIST. PAVEMENT

20'-0" EXIST. PAVEMENT

20'-0" EXIST. PAVEMENT

20'-0" EXIST. PAVEMENT

20'-0" EXIST. PAVEMENT

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20'-0" EXIST. PAVEMENT

20'-0" EXIST. PAVEMENT

20'-0" EXIST. PAVEMENT

20'-0" EXIST. PAVEMENT

20'-0" EXIST. PAVEMENT

20'-0" EXIST. PAVEMENT
CROSS SECTIONS - HWY. 89 SECTION 2

103+41.00

STA, 04/04/97 CONSTRUCT
18" x 24' PIPE CULV'T.
STA 103+41 IN PLACE
TOP ELEV. = 307.51

STA 104+00.00 RT.
F.L. INLET = 304.04

AREA CUT  1
AREA FILL  59
CUT VOLUME  1
FILL VOLUME  120

AREA CUT  3
AREA FILL  61
CUT VOLUME  1
FILL VOLUME  20

AREA CUT  7
AREA FILL  80
CUT VOLUME  9
FILL VOLUME  131

18" SLPPMC PIPE = 100 LIN. FT.
18" R.C. PIPE (CL. III) = 106 LIN. FT.
H = 4'-0"
TY C = 4'-0" x 2'-11"
TY MO = 4'-0" I.D.
CONNECT TO D.I. @ STA. 30+50 ON RT.
18" x 100' PIPE CULV'T OUTLET
18" x 6' R.C. PIPE CULV'T INLET & D.I. ON RT. W./
STA. 104+00- CONSTRUCT

AREA CUT  1
AREA FILL  59
CUT VOLUME  1
FILL VOLUME  120

AREA CUT  3
AREA FILL  61
CUT VOLUME  1
FILL VOLUME  20

AREA CUT  7
AREA FILL  80
CUT VOLUME  9
FILL VOLUME  131

18" RSRC PIPE, 54' @ 0.5' SP.
10'-21-20
OUTLET = 309.00

INLET = 309.29

R 0 8 0 4 5 7 .D G N

10 /1 /2 0 2 0

CROSS SECTION STA. 131+50 TO 132+50

ELEV. = 309.00
END -0.06% RT. DT. GR.
131+50.00

ELEV. = 311.94
END 1.35% LT. DT. GR.
132+50.00

ELEV. = 310.59
END 0.15% LT. DT. GR.
BEGIN 1.35% LT. DT. GR.
131+50.00

AREA CUT  55
AREA FILL  74
CUT VOLUME  213
FILL VOLUME  69

AREA CUT  21
AREA FILL  82
CUT VOLUME  71
FILL VOLUME  144

AREA CUT  15
AREA FILL  79
CUT VOLUME  34
FILL VOLUME  149

STA.13+50 CONSTRUCT
24" R.C. PIPE (CL. V) = 216 LIN. FT.
24" SLPPMCCS PIPE = 216 LIN. FT.
STA.13+50 AREA CUT 55 AREA FILL 74 AREA CUT 21 AREA FILL 82 AREA CUT 15 AREA FILL 79

AREA CUT  44
AREA FILL  90
CUT VOLUME  313
FILL VOLUME  50

CROSS SECTION STA. 131+50 TO 132+50

24" FES= 6 EA.

D.A.= 23.5 AC., Q25= 45.4 CFS.
CROSS SECTIONS - HWY. 89 SECTION 2

AREA CUT  234
AREA FILL  118
CUT VOLUME  473
FILL VOLUME 174

AREA CUT  217
AREA FILL  211
CUT VOLUME  396
FILL VOLUME 334

18" F.E.S. = 1 EACH
18" R.C. PIPE (CL. III) = 10 LIN. FT.
H = 4'-0"
TY C = 4'-0" x 4'-0"
TY MO = 4'-0" I.D.
18" x 10' STUB OUTLET W./ F.E.S.
8' EXTENSION & D. I. ON RT. W./
STA. 172+65 CONSTRUCT

CROSS SECTION STA.  171+50 TO  172+50
ELEV. = 295.00
END 0.50% RT. DT. GR.
BEGIN 0.33% RT. DT. GR.
171+50.00
298.07
3 :1
3 :1
0.020 '/'
0.038 '/'
0.038 '/'
0.019 '/'
3 :1
3 :1
298.87
293.23
301.33
302.83
302.99
302.35
301.41
300.47
300.83
300.89
300.99
299.41
295.00
301.68

CROSS SECTION STA.  172+00 TO  172+50
ELEV. = 290.00
END 0.50% RT. DT. GR.
BEGIN 0.33% RT. DT. GR.
172+00.00
295.00
3 :1
3 :1
0.020 '/'
0.038 '/'
0.038 '/'
0.019 '/'
3 :1
3 :1
297.18
295.33
301.89
302.52
302.58
302.19
301.02
300.00
300.44
300.50
300.60
297.18
295.33
301.89

CROSS SECTION STA.  172+50 TO  173+00
ELEV. = 285.00
END 0.50% RT. DT. GR.
BEGIN 0.33% RT. DT. GR.
172+50.00
295.00
3 :1
3 :1
0.020 '/'
0.038 '/'
0.038 '/'
0.019 '/'
3 :1
3 :1
299.05
293.07
299.05
301.02
301.41
302.35
302.89
302.83
302.73
302.67
302.19
301.02
300.00
300.44
300.50
300.60
298.29
295.17
301.47

CUT VOLUME  660
FILL VOLUME 288

CUT VOLUME  417
FILL VOLUME 288

CUT VOLUME  532
FILL VOLUME 106

CUT VOLUME  447
FILL VOLUME 156

CUT VOLUME  413
FILL VOLUME 223
CONSTRUCT APPROACH = 25 CU. YDS.
STA. 193+50 - F.L. D.I. 261.44

AREA CUT 2
AREA FILL 106

CUT VOLUME 3
FILL VOLUME 140

CROSS SECTIONS - HWY. 89 SECTION 2

24" FES = 1 EA.
24" R.C. PIPE = 94 LIN. FT.
CLASS III TYPE III BEDDING W/FES
CONNECTED TO STA. 193+20 TYPE E DROP INLET
24" x 94' R.C. PIPE CULVERT
REMOVE AND CONSTRUCT
24" x 68' PIPE CULVERT W/HEADWALLS
STA. 193+00 IN PLACE

24" FES = 1 EA.
24" R.C. PIPE = 96 LIN. FT.
CLASS III TYPE III BEDDING W/F.E.S.
CONNECTED TO STA. 193+20 TYPE E DROP INLET
24" x 96' R.C. PIPE CULVERT
REMOVE AND CONSTRUCT
24" x 66' PIPE CULVERT W/HEADWALLS
STA. 193+50 IN PLACE

4' x 3" x H= 3'-0"
TYPE E DROP INLET
STA. 193+20 CONSTRUCT
STA. 11+00.00 TO STA. 12+00.00

OUTLET = 315.39 LT.

GRADE TO DRAIN
STA. 11+15.00, ELEV. 315.50 END 0.00% RT. DITCH GRADE
STA. 10+85.00, ELEV. 315.50 BEGIN 0.00% RT. DITCH GRADE
STA. 12+00.00, ELEV. 318.84 BEGIN 1.47% RT. DITCH GRADE
STA. 12+00.00, ELEV. 318.84 BEGIN 2.87% LT. DITCH GRADE

AREA FILL 0
FILL VOLUME 0

AREA CUT 262
CUT VOLUME 455
FILL VOLUME 0

AREA CUT 740
CUT VOLUME 396
FILL VOLUME 0

AREA CUT 229
CUT VOLUME 26
FILL VOLUME 0

R 0 8 0 4 5 7 .D G N
CROSS SECTIONS - SNUGGS CIRCLE

D A = 0.36 AC, Q25 = 0.5 CFS
29" X 18" FES = 2 EA.
28" X 20" SLPPMCCS PIPE = 34 LIN. FT.
29" X 18" R.C. PIPE (CL. IV) II BEDDING = 34 LIN. FT.
29" X 18" X 34' PIPE CULVERT W/ FES
STA. 11+00 CONSTRUCT
CROSS SECTION STA.43+12 TO STA. 43+62

INLET = 297.25 RT.
OUTLET = 297.00 LT.
OUTLET = 301.20 LT.
INLET = 302.41 RT.

AREA CUT   81

AREA FILL  243

AREA CUT    0

AREA FILL  342

AREA CUT    0

CUT VOLUME   57
FILL VOLUME 412

FILL VOLUME 160
CUT VOLUME    0
FILL VOLUME 96
CUT VOLUME  35

ELEV. = 297.25 END 0.00% RT. DT. GR. STA. 43+25.00
ELEV. = 297.00 END 0.00% LT. DT. GR. STA. 43+25.00

D.A. = 1.2 AC., Q25 = 2.8 CFS.
18" FES= 2 EA.
18" R.C. PIPE= 70 LIN.FT.
(CLASS III) (TYPE 3 BEDDING) W/FES
18" x 70' R.C. PIPE CULVERT
STA. 43+12 - CONSTRUCT

D.A. = 1.2 AC., Q25 = 2.8 CFS.
18" FES= 2 EA.
18" R.C. PIPE= 58 LIN.FT.
(CLASS III) (TYPE 3 BEDDING) W/FES
18" x 58' R.C. PIPE CULVERT
STA. 43+62 - CONSTRUCT
CROSS SECTION STA. 5+00 TO STA. 6+00

INLET = 297.00 LT.
OUTLET = 296.50 RT.

CUT VOLUME  4
FILL VOLUME 121

CUT VOLUME  44
FILL VOLUME 52

CUT VOLUME  75
FILL VOLUME 19

AREA CUT  1
AREA FILL 67

AREA CUT  37
AREA FILL 32

AREA CUT  36
AREA FILL  2

D.A. = 0.35 AC., Q25 = 0.8 CFS.
24" FES= 2 EA.
24" SLPPMCCS PIPE = 38 LIN. FT.
24" R.C. PIPE (CL. V) = 38 LIN. FT.
(CLASS V) (TYPE 3 BEDDING) W/FES
24" x 38' PIPE CULVERT
STA. 5+50 CONSTRUCT

CROSS SECTION STA. 5+00 TO STA. 6+00
OUTLET = 287.71 RT.

CROSS SECTION STA. 101+50 TO STA. 102+00

ELEV. = 287.71

BEGIN -0.65% RT. DT. GR.

STA. 101+50.00

ELEV. = 294.91

END -1.67% LT. DT. GR.

STA. 101+50.00

INLET = 294.86 LT.

CUT VOLUME 29

FILL VOLUME 1214

AREA CUT 12

AREA FILL 1104

INLET = 287.71 LT.

AREA CUT 2

AREA FILL 1110

INLET = 288.62 LT.

CUT VOLUME 14

FILL VOLUME 2146

AREA CUT 12

AREA FILL 1214

AREA CUT 2

AREA FILL 1110

AREA CUT 2

AREA FILL 1110

CUT VOLUME 29

FILL VOLUME 1214

CUT VOLUME 14

FILL VOLUME 2146

D.A. = 2.0 AC., Q25 = 4.5 CFS.

24" FES = 2 EA.

24" R.C. PIPE = 120 LIN. FT.

(CLASS III) (TYPE 3 BEDDING) W/FES

24" x 120' R.C. PIPE CULVERT

STA. 101+50 - CONSTRUCT

CROSS SECTION STA. 101+50 TO STA. 102+00
INLET = 280.26 RT.

OUTLET = 280.00 LT.

ELEV. = 280.00

END 0.00% LT. DT. GR.

STA. 106+80.00

CUT VOLUME 172
FILL VOLUME 6

AREA CUT 137
AREA FILL 10

STA. 106+60.00
END 0.00% LT. DT. GR.
ELEV. = 280.00

STA. 106+80.00
END 0.00% LT. DT. GR.
ELEV. = 280.00

ELEV. = 280.26
BEGIN 0.00% RT. DT. GR.
STA. 106+50.00

CUT VOLUME 115
FILL VOLUME 0

AREA CUT 93
AREA FILL 10

STA. 106+68.00
END 0.00% LT. DT. GR.
ELEV. = 280.00

STA. 106+80.00
END 0.00% LT. DT. GR.
ELEV. = 280.00

ELEV. = 280.26
BEGIN 0.00% RT. DT. GR.
STA. 106+50.00

D.A. = 8.2 AC., Q25 = 18 CFS.
24" FES = 2 EA.
24" R.C. PIPE = 68 LIN. FT.
(CLASS III) (TYPE 3 BEDDING) W/FES
24" x 68' R.C. PIPE CULVERT
STA. 106+68.31 - CONSTRUCT

CROSS SECTION STA, 106+50 TO STA, 107+00
AREA CUT 30
AREA FILL 18

AREA CUT 30
AREA FILL 18

AREA CUT 30
AREA FILL 18

CROSS SECTION STA. 99+00 TO STA. 100+00

EXISTING PAVEMENT

BEGIN 100' PAVEMENT TAPER TO ADD O' TURN LANE

STA 99+00 PAVEMENT TAPER TO ADD O' TURN LANE
CROSS SECTION STA. 103+50 TO STA. 104+50

AREA CUT 45
AREA FILL 20

CUT VOLUME 71
FILL VOLUME 19

AREA CUT 32
AREA FILL 1

CUT VOLUME 49
FILL VOLUME 20

AREA CUT 21
AREA FILL 21

CUT VOLUME 44
FILL VOLUME 19

EXISTING PAVEMENT

STA. 104+04.13 RT.
END 325' TAPER FOR 12' LEFT TURN LANE

STA. 104+54.64 SL.
END 237.13' LANE DROP OF 12' RIGHT TURN LANE

CROSS SECTION STA. 103+50 TO STA. 104+50
CROSS SECTION STA. 110+50 TO STA. 111+50

EXISTING PAVEMENT
28.31'

265 270 275 280 285 290 295 300 305
0 10 20 30 40 50 60 70 80 90 100 110 120 130

CUT VOLUME 57
FILL VOLUME 4

AREA CUT 30
AREA FILL 1

CUT VOLUME 60
FILL VOLUME 7

AREA CUT 32
AREA FILL 3

CUT VOLUME 58
FILL VOLUME 10

AREA CUT 30
AREA FILL 4

CUT VOLUME 56
FILL VOLUME 6

AREA CUT 30
AREA FILL 1

AREA CUT 32
AREA FILL 3

AREA CUT 30
AREA FILL 4

CROSS SECTION STA. 110+50 TO STA. 111+50

EXISTING PAVEMENT
25.57'

22'-0"
CROSS SECTIONS - HWY. 365

Area Cut: 27
Area Fill: 113
Cut Volume: 10
Fill Volume: 26

Area Cut: 16
Area Fill: 43
Cut Volume: 34
Fill Volume: 121

Area Cut: 17
Area Fill: 36
Cut Volume: 31
Fill Volume: 70

Existing Pavement 22'-0"
CROSS SECTION STA. 7609+00 TO STA. 7609+97

OUTLET = 272.61 RT.

ELEV. = 272.61

BEGIN 0.00% RT. DT. GR.

STA. 7609+75.00

AREA CUT   486
AREA FILL  37
CUT VOLUME  117
FILL VOLUME  8

AREA CUT   405
AREA FILL  34
CUT VOLUME  825
FILL VOLUME 65

AREA CUT   445
AREA FILL  38
CUT VOLUME  743
FILL VOLUME  60

CUT VOLUME STA. 7609+75.00

MAX. AREA Cuts

MAX. AREA Fills

AREA CUT 486
AREA FILL 37
CUT VOLUME 117
FILL VOLUME 8

CROSS SECTIONS - EASTBOUND ENTRANCE

24" x 100' R.C. PIPE CULVERT TO RT.

STA. 7609+97 IN PLACE

25'-0" RAMP AND SHOULDERS

EXISTING PAVEMENT

36'-0" 

36'-0" 

24" FES = 1 EA.

24" R.C. PIPE = 58 LIN. FT.

(CLASS III) TYPE 3 BEDDING) W/FES LT.

24" R.C. PIPE = 58 LIN. FT.

24" FES = 1 EA.

10-21-20

24" FES = 1 EA.

24" R.C. PIPE = 58 LIN. FT.

(CLASS III) TYPE 3 BEDDING) W/FES LT.

24" R.C. PIPE = 58 LIN. FT.

24" FES = 1 EA.

10-21-20

24" FES = 1 EA.

24" R.C. PIPE = 58 LIN. FT.

(CLASS III) TYPE 3 BEDDING) W/FES LT.

24" R.C. PIPE = 58 LIN. FT.

24" FES = 1 EA.

10-21-20

24" FES = 1 EA.

24" R.C. PIPE = 58 LIN. FT.

(CLASS III) TYPE 3 BEDDING) W/FES LT.

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24" FES = 1 EA.

24" R.C. PIPE = 58 LIN. FT.

(CLASS III) TYPE 3 BEDDING) W/FES LT.

24" R.C. PIPE = 58 LIN. FT.

24" FES = 1 EA.

10-21-20

24" FES = 1 EA.

24" R.C. PIPE = 58 LIN. FT.

(CLASS III) TYPE 3 BEDDING) W/FES LT.

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24" FES = 1 EA.

10-21-20

24" FES = 1 EA.

24" R.C. PIPE = 58 LIN. FT.

(CLASS III) TYPE 3 BEDDING) W/FES LT.

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24" FES = 1 EA.

10-21-20

24" FES = 1 EA.

24" R.C. PIPE = 58 LIN. FT.

(CLASS III) TYPE 3 BEDDING) W/FES LT.

24" R.C. PIPE = 58 LIN. FT.

24" FES = 1 EA.

10-21-20

24" FES = 1 EA.

24" R.C. PIPE = 58 LIN. FT.

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24" FES = 1 EA.

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24" FES = 1 EA.

10-21-20

24" FES = 1 EA.

24" R.C. PIPE = 58 LIN. FT.

(CLASS III) TYPE 3 BEDDING) W/FES LT.

24" R.C. PIPE = 58 LIN. FT.

24" FES = 1 EA.

10-21-20

24" FES = 1 EA.

24" R.C. PIPE = 58 LIN. FT.

(CLASS III) TYPE 3 BEDDING) W/FES LT.

24" R.C. PIPE = 58 LIN. FT.
EMBANKMENT CONSTRUCTION AND FOOTING BACKFILL AT VERTICAL WALL ABUTMENTS

EMBANKMENT CONSTRUCTION AT SPILL-THROUGH FILE END BENTS

GENERAL NOTES:
The bridge end embankment shall be defined as a section of embankment, not less than 25 feet long adjacent to the bridge end, and forming the side slope and slope of the embankment. It shall be extended by the use of mechanical equipment, as directed by the engineer. Refer to Subsection 6.2.2(b) for construction requirements.

EMBANKMENT CONSTRUCTION AND FOOTING BACKFILL AT SPILL-THROUGH END BENTS

VERTICAL WALL ABUTMENTS

SPILL-THROUGH END BENTS WITH STUD WING

SPILL-THROUGH END BENTS WITH TRANSITION WING

METHOD OF DETERMINING FILL SLOPE LOCATION AT BRIDGE ENDS

STANDARD DETAILS FOR EMBANKMENT CONSTRUCTION AND BACKFILL AT BRIDGE ENDS

ARKANSAS STATE HIGHWAY COMMISSION
The steel and additional concrete for the walls shall not be paid for directly, but shall be considered to be included in the price bid for concrete ditch paving.

The wall depth may be altered to ±1" when directed by the engineer in rock excavation.

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' intervals; the space shall be filled with approved joint filler complying with AASHTO M213.
METHOD OF CONSTRUCTING DROP INLET ON EXISTING R.C. BOX CULVERT

METHOD OF CONSTRUCTING DROP INLET ON NEW R.C. BOX CULVERT

HEAVY DUTY RING & COVER

JUNCTION BOX (TYPE E)

DETAIL OF YARD DRAIN

ARKANSAS STATE HIGHWAY COMMISSION
DETAILS OF DROP INLETS & JUNCTION BOXES
STANDARD DRAWING FPC-9
DETAILS OF WIDENING FOR GUARDRAIL

SECTION A-A

SECTION B-B

DETAILS SHOWING POSITION OF GUARDRAIL ON HIGHWAY

METHOD OF INSTALLATION OF GUARDRAIL AT FIXED OBSTACLE
## Construction Sequence

1. Place structural concrete material on the ground.
2. Install conduitalis and structural hence.
3. Complete structural concrete work, including backfill.

**Notes:** Structural backfill and structural concrete material will not be paid for separately, but compensation will be considered to be included in the price bid per linear foot of metal pipe.

### Installation Material Requirements

<table>
<thead>
<tr>
<th>Material Type</th>
<th>Installation Material Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>Type 1</td>
<td>Structural Concrete</td>
</tr>
<tr>
<td>Type 2</td>
<td>Backfill Concrete</td>
</tr>
</tbody>
</table>

### Embankment and Trench Installations

1. Structural Concrete and other structural concrete material shall be computed to 1/30 of the manhours required according to the type of material being used.
2. Fill material shall be used for embankment fill or trench fill whenever possible.

### General Notes

1. Metal pipe and conduitalis shall be furnished on a commercial basis and shall be purchased from a reputable manufacturer.
2. All metal pipe and conduitalis shall be furnished with a minimum of 10 pieces, unless otherwise specified.

### Corrugated Steel Pipe Round

<table>
<thead>
<tr>
<th>Pipe Diameter</th>
<th>ID</th>
<th>OD</th>
<th>Overall Wall Thickness</th>
<th>Material Thickness</th>
<th>Material Gauge</th>
</tr>
</thead>
<tbody>
<tr>
<td>40</td>
<td>3</td>
<td>4</td>
<td>0.125</td>
<td>Steel</td>
<td>6</td>
</tr>
<tr>
<td>60</td>
<td>4</td>
<td>5</td>
<td>0.15</td>
<td>Steel</td>
<td>8</td>
</tr>
<tr>
<td>80</td>
<td>5</td>
<td>6</td>
<td>0.175</td>
<td>Steel</td>
<td>10</td>
</tr>
</tbody>
</table>

### Equivalents Metal Thicknesses and Gauges

<table>
<thead>
<tr>
<th>Metal Thickness</th>
<th>Gauge Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.125</td>
<td>6</td>
</tr>
<tr>
<td>0.15</td>
<td>8</td>
</tr>
<tr>
<td>0.175</td>
<td>10</td>
</tr>
</tbody>
</table>

### Corrugated Aluminum Pipe Round

<table>
<thead>
<tr>
<th>Pipe Diameter</th>
<th>ID</th>
<th>OD</th>
<th>Overall Wall Thickness</th>
<th>Material Thickness</th>
<th>Material Gauge</th>
</tr>
</thead>
<tbody>
<tr>
<td>40</td>
<td>3</td>
<td>4</td>
<td>0.125</td>
<td>Aluminum</td>
<td>12</td>
</tr>
<tr>
<td>60</td>
<td>4</td>
<td>5</td>
<td>0.15</td>
<td>Aluminum</td>
<td>14</td>
</tr>
<tr>
<td>80</td>
<td>5</td>
<td>6</td>
<td>0.175</td>
<td>Aluminum</td>
<td>16</td>
</tr>
</tbody>
</table>

### Corrugated Metal Pipe Arches

<table>
<thead>
<tr>
<th>Pipe Diameter</th>
<th>ID</th>
<th>OD</th>
<th>Overall Wall Thickness</th>
<th>Material Thickness</th>
<th>Material Gauge</th>
</tr>
</thead>
<tbody>
<tr>
<td>40</td>
<td>3</td>
<td>4</td>
<td>0.125</td>
<td>Steel</td>
<td>6</td>
</tr>
<tr>
<td>60</td>
<td>4</td>
<td>5</td>
<td>0.15</td>
<td>Steel</td>
<td>8</td>
</tr>
<tr>
<td>80</td>
<td>5</td>
<td>6</td>
<td>0.175</td>
<td>Steel</td>
<td>10</td>
</tr>
</tbody>
</table>

### Commercial Notes

1. Metal pipe and conduitalis shall be furnished on a commercial basis and shall be purchased from a reputable manufacturer.
2. All metal pipe and conduitalis shall be furnished with a minimum of 10 pieces, unless otherwise specified.

### Standard Drawing

**Metal Pipe Culvert Fill Heights & Bedding**

- **Date:** 12/01/94
- **Revision:** 11/01/94
- **Drawing No.:** 94-0139

---

*Arkansas State Highway Commission*
**MINIMUM TRENCH WIDTH BASED ON FILL HEIGHT "H"**

<table>
<thead>
<tr>
<th>Trench Depth &quot;D&quot;</th>
<th>Minimum Trench Width &quot;W1&quot;</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.5 ft</td>
<td>5 ft</td>
</tr>
<tr>
<td>1 ft</td>
<td>6 ft</td>
</tr>
<tr>
<td>1.5 ft</td>
<td>7 ft</td>
</tr>
<tr>
<td>2 ft</td>
<td>8 ft</td>
</tr>
</tbody>
</table>

**MINIMUM COVER FOR CONSTRUCTION LOADS**

<table>
<thead>
<tr>
<th>Diameter (inches)</th>
<th>Minimum Cover (inches)</th>
</tr>
</thead>
<tbody>
<tr>
<td>36</td>
<td>30</td>
</tr>
<tr>
<td>48</td>
<td>36</td>
</tr>
<tr>
<td>60</td>
<td>42</td>
</tr>
<tr>
<td>72</td>
<td>48</td>
</tr>
</tbody>
</table>

**GENERAL NOTES**

1. Pipe shall conform to ANSI Standard A519 and shall conform to the construction specifications for non-bursting culvert of Type 1 and/or Type 2. 
2. Design of the design shall conform to the requirements of the Standard Specifications for Highway Construction and Design. 
3. The minimum allowable design depth shall be the minimum pipe plus a sufficient cover to ensure protection from the pipe. 
4. Materials shall be selected as required by the engineer. 
5. The minimum acceptable design depth shall be determined by the engineer. 
6. The minimum acceptable design depth shall be the minimum pipe plus a sufficient cover to ensure protection from the pipe. 
7. Pipe shall be installed in accordance with the Standard Specifications for Highway Construction and Design. 
8. The minimum acceptable design depth shall be the minimum pipe plus a sufficient cover to ensure protection from the pipe. 
9. The minimum acceptable design depth shall be the minimum pipe plus a sufficient cover to ensure protection from the pipe. 
10. Pipes shall be installed in accordance with the Standard Specifications for Highway Construction and Design. 

**LEGEND**

- H - Fill Height
- D - Diameter of Pipe
- W - Minimum Wall Thickness
- C - Structural Delineation
- L - Unstrated Layer

**PLASTIC PIPE CULVERT (HIGH DENSITY POLYETHYLENE)**

**ARKANSAS STATE HIGHWAY COMMISSION**

**STANDARD DRAWING PCP-I**
MAXIMUM FILL HEIGHT
BASED ON STRUCTURAL BACKFILL

<table>
<thead>
<tr>
<th>TYPE</th>
<th>FEET</th>
<th>METER</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>0.75</td>
<td>0.23</td>
</tr>
<tr>
<td>2</td>
<td>0.50</td>
<td>0.15</td>
</tr>
</tbody>
</table>

MINIMUM TRENCH WIDTH
BASED ON FILL HEIGHT "W"

<table>
<thead>
<tr>
<th>FEET</th>
<th>METER</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.50</td>
<td>0.15</td>
</tr>
<tr>
<td>0.75</td>
<td>0.23</td>
</tr>
</tbody>
</table>

MINIMUM COVER FOR CONSTRUCTION LOADS

<table>
<thead>
<tr>
<th>FEET</th>
<th>METER</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.75</td>
<td>0.23</td>
</tr>
<tr>
<td>1.00</td>
<td>0.30</td>
</tr>
</tbody>
</table>

MULTIPLE INSTALLATION OF PVC PIPES

<table>
<thead>
<tr>
<th>FEET</th>
<th>METER</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.50</td>
<td>0.15</td>
</tr>
<tr>
<td>0.75</td>
<td>0.23</td>
</tr>
<tr>
<td>1.00</td>
<td>0.30</td>
</tr>
</tbody>
</table>

GENERAL NOTES

1. All installations are to be made per the latest applicable standards. Installations shall conform to the special specifications, if any.
2. Plastic pipe designs and installation shall conform to the manufacturer's specifications. Plastic pipe shall be installed in accordance with the manufacturer's recommendations.
3. When installing multiple pipes, the minimum cover shall be the minimum cover specified for the individual pipe.
4. Minimum cover shall be measured from the pipe to the top of the trench. This shall be maintained in all cases.

CONSTRUCTION SEQUENCE

1. Place structural backfill material to grade, not compact.
2. Compact fill to grade.
3. Compact structural backfill material to grade, not exceeding 6 feet.
4. Layout and alignment of the pipe shall be determined and maintained to the elevation of the pipe.
5. Trench installation may be subject to additional requirements or other approved methods, in order to ensure adequate drainage or fill height.

LEGEND

- Structural Backfill Material
- Uncovered Area

ARIZONA STATE HIGHWAY COMMISSION
PLASTIC PIPE HIGHWAY
(PVC F949)
STANDARD DRAWING PCP-2
Broken Line Striping

Solid Line Striping on Concrete Pavement

Solid Line Striping on Asphalt Pavement

Striping at Adjacent No Passing Lanes

Yield Line Detail

Crosswalk and Stop Line Details

Note:
1. Refer to the striping details for pavement marking line patterns.
2. The striping shall be used in conjunction with the latest revised edition of the "Manual on Uniform Traffic Control Devices." 
3. Pavement markers shall be placed on no feet spacing unless otherwise shown on the plans.

Arkansas State Highway Commission

Pavement Marking Details

Standard Drawing PM-1
REINFORCED CONCRETE BOX CULVERT GENERAL NOTES

CONCRETE SHALL BE CLASS 5 WITH A MINIMUM 28 DAY COMPRESSIVE STRENGTH OF 3000 PSL

REINFORCING STEEL SHALL BE ASTM A 706 IN 55, GRADE 55.

CONSTRUCTION AND MATERIALS FOR MINERAL SLAB CULVERT DRAINAGE, INCLUDING MEER HOLES AND GRANULAR MATERIAL, SHALL BE SUBSIDIARY TO THE BIG NEW "CLASS 5 CONCRETE".

MEMBRANE WATERPROOFING SHALL CONFORM TO THE REQUIREMENTS OF SECTION 89 OF THE STANDARD SPECIFICATIONS.

REINFORCING STEEL TOLERANCE: THE TOLERANCES FOR REINFORCING STEEL SHALL BE THOSE LISTED IN "MANUAL OF STANDARD PRACTICE" PUBLISHED BY CONCRETE REINFORCING STEEL INSTITUTE EXCEPT FOR THE TOLERANCE FOR T-BAR AND BENT BARS SUCH AS FIGURE 3 ON PAGE 7-40 OF THE MANUAL.

VERTICAL FABRIC ALTERNATE

REINFORCING STEEL TOLERANCES: THE TOLERANCES FOR REINFORCING STEEL SHALL BE THOSE LISTED IN "MANUAL OF STANDARD PRACTICE" PUBLISHED BY CONCRETE REINFORCING STEEL INSTITUTE EXCEPT FOR THE TOLERANCE FOR T-BAR AND BENT BARS SUCH AS FIGURE 3 ON PAGE 7-40 OF THE MANUAL.

VERTICAL FABRIC ALTERNATE

WEFT HOLES IN BOX CULVERT SLEEPS SHALL HAVE A MINIMUM HORIZONTAL SPACING OF 30'-0" AND SHALL BE SPACED TO CLEAR ALL REINFORCING STEEL. THE DRAIN SLAB SHALL BE 4" DIAMETER AND SHALL BE PLACED 2" ABOVE THE TOP OF THE DRAIN SLAB.

WEFT HOLES IN BOX CULVERT SLEEPS SHALL HAVE A MINIMUM HORIZONTAL SPACING OF 30'-0" AND SHALL BE SPACED TO CLEAR ALL REINFORCING STEEL. THE DRAIN SLAB SHALL BE 4" DIAMETER AND SHALL BE PLACED 2" ABOVE THE TOP OF THE DRAIN SLAB.

WEIGHT HOLES IN BOX CULVERT SLEEPS SHALL HAVE A MINIMUM HORIZONTAL SPACING OF 30'-0" AND SHALL BE SPACED TO CLEAR ALL REINFORCING STEEL. THE DRAIN SLAB SHALL BE 4" DIAMETER AND SHALL BE PLACED 2" ABOVE THE TOP OF THE DRAIN SLAB.

THE REQUIREMENTS SHOWN ON THIS DRAWING SHALL SUPERSEDE THE CORRESPONDING REQUIREMENTS ON ALL REINFORCED CONCRETE BOX CULVERT STANDARD DRAWINGS.

R.C. BOX CULVERT HEADWALL MODIFICATIONS


ARKANSAS STATE HIGHWAY COMMISSION

REINFORCED CONCRETE BOX CULVERT DETAILS

STANDARD DRAWING RCB-1
COMMUNICATION POLES SHALL BE TIED TO THE GROUND AT ONE END TO A FLOOR CONCRETE COLUMN, THE OTHER END TO A 3-Hole CONCRETE COLUMN. ALL TIE BOLTS MUST BE PROPERLY SECURED IN CONCRETE COLUMN.

NOTE:

ALL CONCRETE SHALL BE A MINIMUM OF 3000 PSI COMPRESSION STRENGTH. ALL STEEL SHALL BE A MINIMUM OF 3000 PSI TENSILE STRENGTH.

PROVIDE CLEAT NAILS, DETAIL TO TO FIT THE AREA AT TOP OF POLE.
1. For Section "Protected Permissive" Left turn heads should be placed 5 feet behind the left end of the approach lane, or in the center of the approach lane.

2. Where it is necessary to place heads on other than the streets shown on plan sheets, resulting in heads extending more than 10 feet past the edge of the street, the left end of the approach lane, and shall be so placed as to avoid the obstruction. A layout drawing must be provided for the installation of the heads if additional coordination is required.

3. Signal head spacing shall be 5 feet for Section "Protected Permissive" at the left edge of the signal heads on center, measured horizontally perpendicular to the approach.

4. All signal heads shown on this sheet shall be located according to the dimensions shown in relation to the approach lane of the intersection.

5. Minimum mounting height of signal heads located between 40 feet and 65 feet from stop shall be in accordance with Figure 40-5 of Part B.

6. Center of lane from approach side.
**SUPERELEVATION TABLE FOR ONE-WAY TRAFFIC**

<table>
<thead>
<tr>
<th>DF/CURVE</th>
<th>30 MPH</th>
<th>45 MPH</th>
<th>60 MPH</th>
<th>75 MPH</th>
<th>90 MPH</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>90 FT</td>
<td>180 FT</td>
<td>270 FT</td>
<td>360 FT</td>
<td>450 FT</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**General Notes**

1. On curves with one lane only, super-elevation shall be computed at both inside and outside edges of the roadway.
2. Super-elevations given in the crossing sections are based on a 0.02 h or grade and 0.02 h or grade is the normal crown.
3. Length of curve shall be doubled where it equals or exceeds a multiple of 25 ft of 60 ft.
4. For two-lane roads, super-elevations may be used for the inside edge of the roadway only, and the outer edge of the roadway may have a crown.
5. Curved roadways with less than 4 lanes shall have additional super-elevations as follows:

**How to read the table**

- The table provides super-elevation values for different speeds and distances on one-way traffic curves.
- The values are given for various speeds (30, 45, 60, 75, 90 mph) and distances (90 ft, 180 ft, 270 ft, 360 ft, 450 ft).
- The super-elevation values are calculated based on the normal crown and the length of the curve.
- For two-lane roads, only the inside edge of the roadway is considered for super-elevation.
- Curved roadways with less than 4 lanes require additional super-elevations as specified.

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**Diagrams:**

- Diagrams show one-way traffic inside lanes and outside lanes with super-elevation formulas and control points.
- The diagrams illustrate the concept of super-elevation and its application in one-way traffic scenarios.

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**Tables and Method of Super-elevation for One-Way Traffic:**

- The table above provides the necessary data for implementing super-elevation in one-way traffic conditions.
- This information is crucial for highway design and ensures safe and smooth travel for all road users.

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**Arkansas State Highway Commission:**

- The table and diagrams are part of a standard drawing for one-way traffic conditions.
- This document is a guideline for highway engineers and designers to ensure the safety and efficiency of one-way traffic systems.
# Super-elevation Table for Two-Way Traffic

<table>
<thead>
<tr>
<th>Degree of</th>
<th>25 MPH</th>
<th>30 MPH</th>
<th>35 MPH</th>
<th>40 MPH</th>
<th>45 MPH</th>
<th>50 MPH</th>
<th>55 MPH</th>
<th>60 MPH</th>
<th>65 MPH</th>
<th>70 MPH</th>
<th>75 MPH</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lx (ft)</td>
<td>8</td>
<td>8</td>
<td>8</td>
<td>8</td>
<td>8</td>
<td>8</td>
<td>8</td>
<td>8</td>
<td>8</td>
<td>8</td>
<td>8</td>
</tr>
<tr>
<td>Lp (ft)</td>
<td>9</td>
<td>9</td>
<td>9</td>
<td>9</td>
<td>9</td>
<td>9</td>
<td>9</td>
<td>9</td>
<td>9</td>
<td>9</td>
<td>9</td>
</tr>
<tr>
<td>L (ft)</td>
<td>17</td>
<td>17</td>
<td>17</td>
<td>17</td>
<td>17</td>
<td>17</td>
<td>17</td>
<td>17</td>
<td>17</td>
<td>17</td>
<td>17</td>
</tr>
</tbody>
</table>

**General Notes:****

1. On pavements with two-way traffic, the super-elevation shall be developed on the inside pavement edge unless otherwise noted on the plans.
2. Super-elevation values shown on the cross sections are minimum.
3. Edges of alignment may be rounded in multiples of 25 ft or 50 ft, at paving submittals.
4. Pavements wider than 2 lanes shall have additional transition lengths as follows:
   - 1 lane undivided: +225 ft
   - 2 lanes undivided: +450 ft
   - 3 lanes undivided: +675 ft

**Superelevation Formula:**

\[ L = \frac{V^2}{gR} \]

**Standard Method When Super-elevation Revolves Around Center Line:**

- **L**: Length of superelevation
- **V**: Design Speed (mph)
- **g**: 32.17 ft/s²
- **R**: Radius of curve (ft)

**Slope:**

- **Grad**: Grade (‰)
- **Grad**: Grade (‰)

**Super-elevation:**

- **Normal Crown:** Normal crown super-elevation of normal crown slope.
- **Ramp of Super-elevation:** Flat plus.
- **Point of Super-elevation Transition:** Distance from Point of Super-elevation Transition.
- **Width of Pavement:** Width of pavement.

**Super-elevation Design:**

- **Minimum:** Minimum super-elevation for the specific condition.
- **Maximum:** Maximum super-elevation for the specific condition.
- **Outside Super-elevation Edge:** Outside super-elevation edge.
- **Inside Super-elevation Edge:** Inside super-elevation edge.
- **Control Point:** Control point.

**Super-elevation Notes:**

- **Super-elevation:** Super-elevation for the specific condition.
- **Outside Super-elevation Edge:** Outside super-elevation edge.
- **Inside Super-elevation Edge:** Inside super-elevation edge.

**Standard Method When Super-elevation Revolves Around Inner Subgrade Point:**

- **L**: Length of superelevation
- **V**: Design Speed (mph)
- **g**: 32.17 ft/s²
- **R**: Radius of curve (ft)

**Superelevation Formula:**

\[ L = \frac{V^2}{gR} \]

**Slope:**

- **Grad**: Grade (‰)
- **Grad**: Grade (‰)

**Super-elevation:**

- **Normal Crown:** Normal crown super-elevation of normal crown slope.
- **Ramp of Super-elevation:** Flat plus.
- **Point of Super-elevation Transition:** Distance from Point of Super-elevation Transition.
- **Width of Pavement:** Width of pavement.

**Super-elevation Design:**

- **Minimum:** Minimum super-elevation for the specific condition.
- **Maximum:** Maximum super-elevation for the specific condition.
- **Outside Super-elevation Edge:** Outside super-elevation edge.
- **Inside Super-elevation Edge:** Inside super-elevation edge.
- **Control Point:** Control point.

**Super-elevation Notes:**

- **Super-elevation:** Super-elevation for the specific condition.
- **Outside Super-elevation Edge:** Outside super-elevation edge.
- **Inside Super-elevation Edge:** Inside super-elevation edge.

ARKANSAS STATE HIGHWAY COMMISSION

**Tables and Method of Super-elevation for Two-Way Traffic**

- **Sections:** Sections where super-elevation exceeds 2C.
- **Standard Drawing:** SE-2

**Table Fillers:**

- **Table Fillers:** Table fillers for the specific condition.
THE CONTRACTOR SHALL DRILL AND POP-RIVET LEGEND, SHIELDS, ARROWS, OR OTHER COPY AS SHOWN.

NOTES:

1. LEGEND ON GUIDE SIGNS ON THE MAIN LANES SHALL BE DEMOUNTABLE LEGEND.
2. LEGEND ON GUIDE SIGNS ON CROSS ROADS AND RAMPS SHALL BE DIRECT APPLIED.
3. THE DEMOUNTABLE AND DIRECT APPLIED LEGENDS SHALL BE TYPE I SHEETING.
4. THE BACKGROUND ON ALL GUIDE SIGNS AND STANDARD SIGNS SHALL BE CONSTRUCTED USING TYPE IV SHEETING.
5. THERE IS SHEETING FOR BORDER, LEGEND, SHIELDS, ARROWS, OR OTHER COPY.
6. THE LEGEND, SHIELDS, ARROWS OR OTHER COPY SHALL BE APPLIED WITH RIVETS ONLY.
7. NO OTHER METHOD OF APPLYING CHARACTERS IS ALLOWED.

ARIZONA STATE HIGHWAY COMMISSION
MOUNTING DETAILS FOR DEMOUNTABLE LEGEND ON GUIDE SIGNS

DATE: [ ] UNDOCK: [ ] HOOK: [ ]

STANDARD DRAWING SIS-6
**Mounting Hardware**

**One Sign**
- **Mounting Plan:**
  - Diagram showing the mounting plan with dimensions and notes.
  - Textual notes about the placement and dimensions.

**Two Signs**
- **Mounting Plan:**
  - Diagram showing the mounting plan with dimensions and notes.
  - Textual notes about the placement and dimensions.

- **Dimensions:**
  - Heights, widths, and other relevant measurements are specified.

**Placement**
- **Diagram:**
  - Illustration of the mounting hardware setup.
  - Textual notes about the placement and dimensions.

**Type 1**
- **Mounting Plan:**
  - Diagram showing the mounting plan with dimensions and notes.
  - Textual notes about the placement and dimensions.

**Shim Detail**
- **Diagram:**
  - Illustration of the shim detail with dimensions and notes.
  - Textual notes about the construction and dimensions.

**Top Plate**
- **Diagram:**
  - Illustration of the top plate with dimensions and notes.
  - Textual notes about the construction and dimensions.

**Bottom Plate**
- **Diagram:**
  - Illustration of the bottom plate with dimensions and notes.
  - Textual notes about the construction and dimensions.

**Notes:**
- The stud anchor shall be set in an 8’ x 8’ x 10’ deep concrete footing, refer to specifications.
- Other notes and specifications as per the drawing.

**Arkansas State Highway Commission**

**Detail of Omni-Directional Breakaway Sign Supports**

**Standard Drawing SHS-7**

**Drawing Details:**
- Name: [Redacted]
- Date: [Redacted]
CLEARING AND GRUBBING

CONSTRUCTION SEQUENCE
1. Placement of Controls (e.g., Silt Fences, Diversion Ditches, Sediment Blankets)
2. Perform clearing and grubbing operation

EXCAVATION

EXISTING GROUND

INTERCEPTOR OR DIVERSION DITCH

NUMBER OF PHASES WILL VARY, THREE PHASES SHOWN FOR ILLUSTRATION

GENERAL NOTE

ALL CUT SLOPES SHALL BE COVERED WITH TARRED SCAFFOLDS OR OTHER EROSION CONTROL DEVICES AS SPECIFIED.

CONSTRUCTION SEQUENCE
1. Excavate and stabilize interceptor and/or diversion ditch
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, clear debris, stabilize, and cover with other erosion control devices as specified

EMBANKMENT

CONSTRUCTION SEQUENCE
1. Construct diversion ditch, check stability of embankment, place silt fences, or other erosion control devices as specified
2. Place Phase 1 embankment with permanent or temporary seeding
3. Place Phase 2 embankment with permanent or temporary seeding, place permanent or temporary seeding, place permanent or temporary seeding, or other erosion control devices as specified
4. Place final phase of embankment with permanent or temporary seeding, check stability, and place permanent or temporary seeding, or other erosion control devices as specified

ARAKANS STATE HIGHWAY COMMISSION
TEMPORARY EROSION CONTROL DEVICES
STANDARD DRAWING TEC-3
GENERAL NOTES:

These installations to be used where normal fencing installation would cause the collecting or pooling of water in the channels or where the installation will not permit normal installation. Installations will be made only where directed by the Engineer.

When a fence line approaches a ditch, gully or depression, the last post or top of grade shall be placed close enough to the channel or gully so that the fence may be strong enough to support the post in the depression without touching the ground.

When necessary, the normal fence shall continue on grade and the gully or depression treated by auxiliary fences as shown.

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

ARKANSAS STATE HIGHWAY COMMISSION

WIRE FENCE WATER GAPS

STANDARD DRAWING WF-2