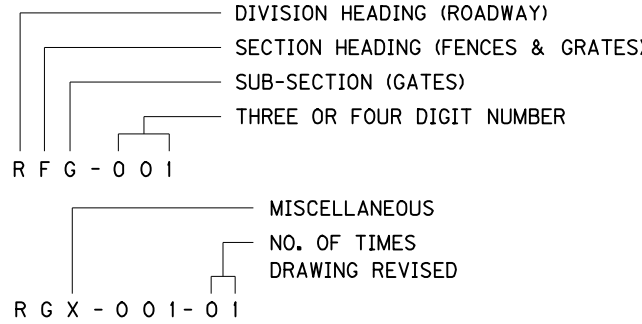
KENTUCKY STANDARD DRAWINGS

- ROADWAY
  - BARRIERS
    - GUARDRAIL AND BRIDGE END DRAINAGE RBB-SERIES
    - GUARDRAIL CONNECTORS TO BRIDGE ENDS RBC-SERIES
    - ENERGY ABSORPTION DEVICES RBE-SERIES
    - TYPICAL BARRIER INSTALLATIONS RBI-SERIES
    - CONCRETE MEDIAN BARRIERS RBM-SERIES
    - GUARDRAIL HARDWARE RBR-SERIES
  - DRAINAGE
    - BOX INLETS AND OUTLETS RDB-SERIES
    - PAVED DITCHES, FLUME INLETS & CHANNEL LINNING RDD-SERIES
    - HEADWALLS RDH-SERIES
    - TYPICAL DRAINAGE INSTALLATIONS RDI-SERIES
    - MANHOLES RDM-SERIES
    - PERFORATED PIPE RDP-SERIES
    - MISCELLANEOUS DRAINAGE RDX-SERIES
  - FENCES AND GRATES
    - CHAIN LINK FENCE RFC-SERIES
    - GATES RFG-SERIES
    - WOVEN WIRE FENCE RFW-SERIES
  - GENERAL
    - SUPERELEVATION AND CURVE WIDENING RGS-SERIES
    - MISCELLANEOUS STANDARDS RGX-SERIES
  - PAVEMENT
    - MEDIANS, CURBS, APPROACHES, ETC. RPM-SERIES
    - NON-REINFORCED CONC. PAVEMENT RPN-SERIES
    - STANDARD REINF. CONC. PAVEMENT RPS-SERIES
    - MISCELLANEOUS PAVING RPX-SERIES
  - ROADSIDE DEVELOPMENT
    - EROSION CONTROL RRE-SERIES
    - PLANTS RRP-SERIES
- TRAFFIC
  - PERMANENT
    - MARKERS TPM-SERIES
  - TEMPORARY
    - TRAFFIC CONTROL TTC-SERIES
    - DEVICES TTD-SERIES
    - STRIPING OPERATIONS TTS-SERIES
- BRIDGES
  - SEE OVERLEAF

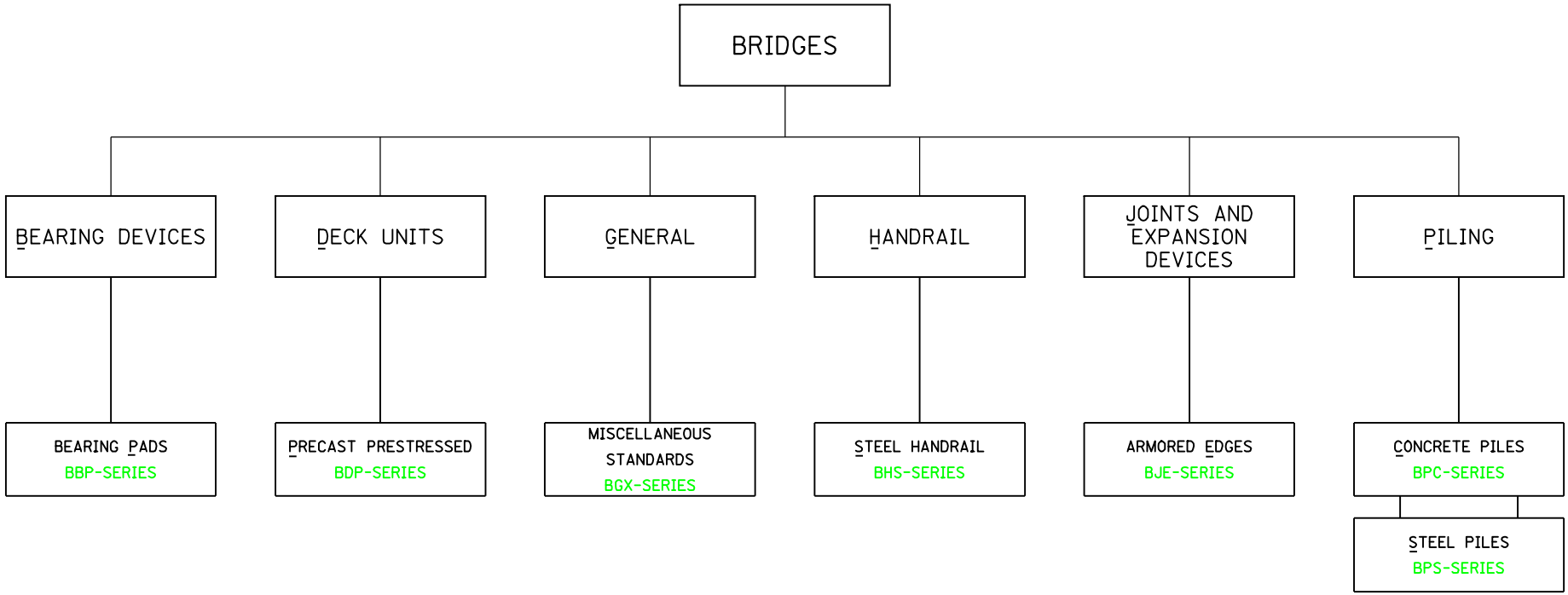
~ DRAWING NUMBER EXPLANATION ~



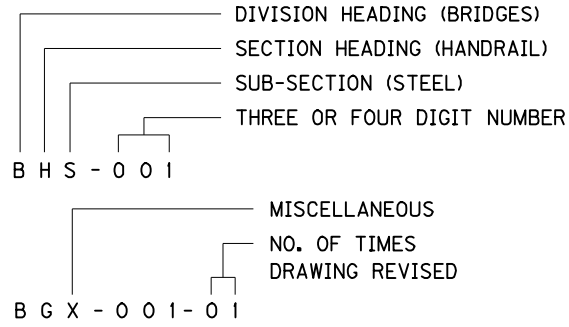
KENTUCKY DEPARTMENT OF HIGHWAYS

LAYOUT CHART FOR KENTUCKY STANDARD DRAWINGS

2003



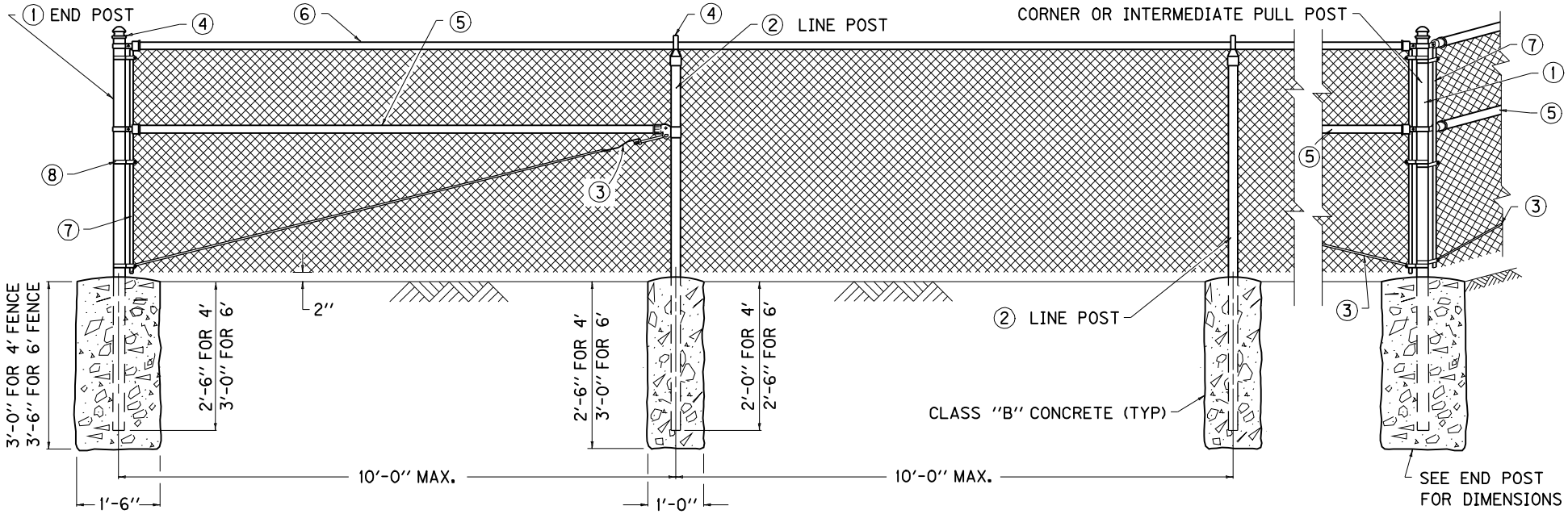
~ DRAWING NUMBER EXPLANATION ~

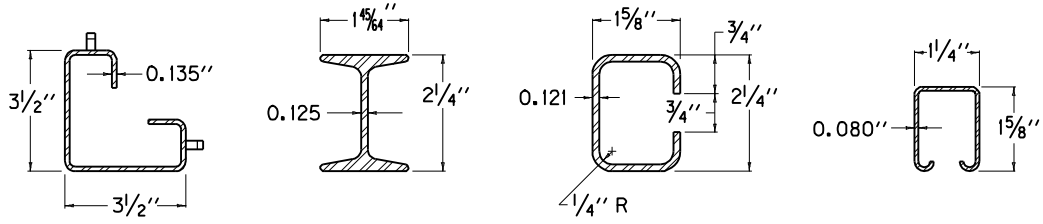


KENTUCKY DEPARTMENT OF HIGHWAYS

LAYOUT CHART FOR KENTUCKY STANDARD DRAWINGS

2003





ROLL FORMED TERMINAL POST & CORNER POST

HOT ROLLED LINE POST H - COLUMN

LINE POST HEAVY "C" ROLL FORMED

HOT ROLLED TOP & BRACE RAIL

~ NOTES ~

ALL POSTS SHALL BE SET IN CONCRETE TO THE DIMENSIONS INDICATED ON THIS DRAWING.

4' HIGH FENCE SHALL HAVE 4' FABRIC HEIGHT. 6' HIGH FENCE SHALL HAVE 6' FABRIC HEIGHT.

ALL FENCE FITTINGS SHALL COMPLY WITH ASTM F 626.

POST CAPS AND SOCKET TYPE BRACE END CONNECTIONS SHALL BE GALVANIZED PRESSED STEEL, CAST IRON OR OTHER TYPE AS APPROVED BY THE ENGINEER. THEY SHALL BE DESIGNED IN A MANNER TO EXCLUDE MOISTURE FROM INSIDE POSTS AND RAILS.

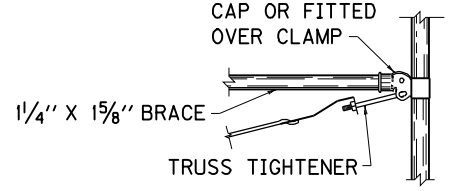
NPS = NOMINAL PIPE SIZE - ASTM F1083 AND F1043 (HEAVY INDUSTRIAL FENCE) SHALL GOVERN.

INDISCRIMINATE MIXING OF POSTS WILL NOT BE PERMITTED.

⑥ TENSION WIRE COMPLYING WITH ASTM A 824 SHALL BE SUBSTITUTED FOR THE TOP RAIL WHEN THE FENCE IS TO BE INSTALLED IN THE PATH OF AN ERRANT VEHICLE.

LEGEND / (ALTERNATES)

	TUBULAR	ROLL FORMED
①	2½" NPS END POST	3½" X 3½" END POST
②	2" NPS LINE POST	2¼" H-COL. LINE POST - OR - 2¼" C-COL. LINE POST
③	⅜" DIA. TRUSS ROD AND TIGHTNER	⅜" DIA. TRUSS ROD AND TIGHTNER
④	APPROVED CAPS	NOT REQUIRED
⑤	1¼" NPS BRACE	1¼" X 1⅝" TOP RAIL & BRACE
⑥	1¼" NPS TOP RAIL	
⑦	FLAT TENSION BAR	NOT REQUIRED
⑧	BRACE BAND AND TENSION BAND	NOT REQUIRED



BRACE AND TRUSS CONNECTOR

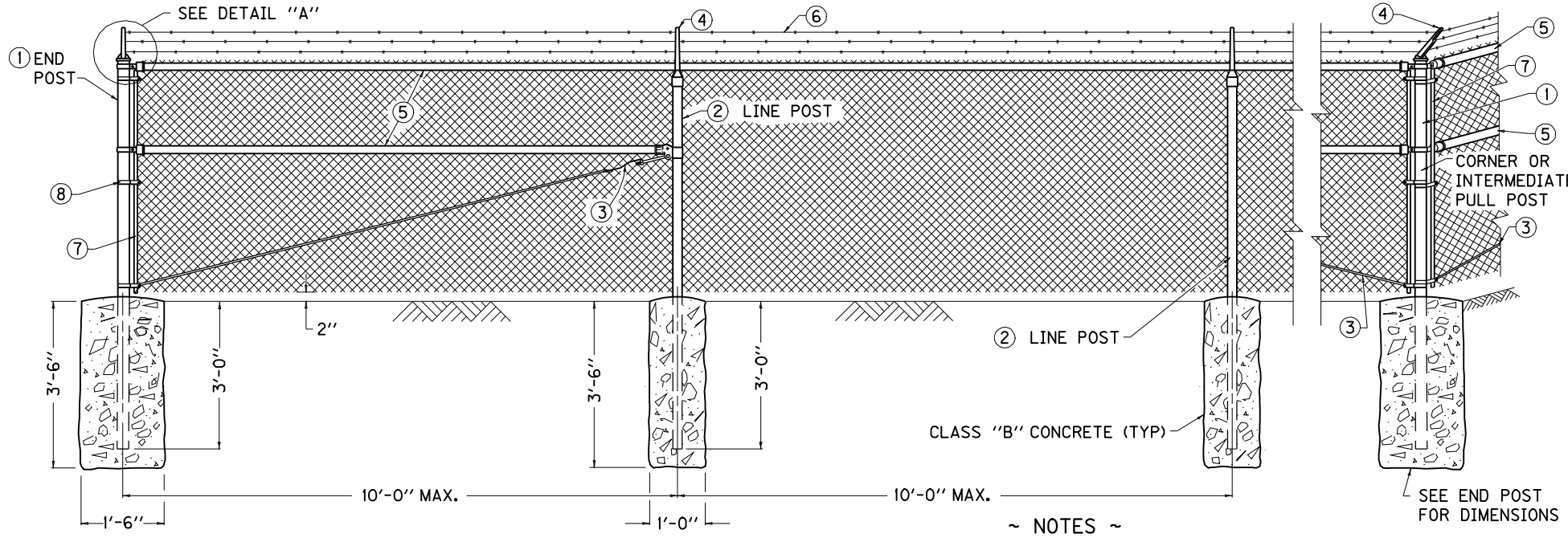
KENTUCKY
DEPARTMENT OF HIGHWAYS

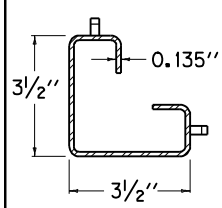
CHAIN LINK FENCE 4' TO 6' HIGH

STANDARD DRAWING NO. RFC-001-07

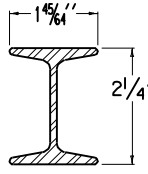
SUBMITTED John B. Rochester — DIRECTOR DIVISION OF DESIGN — 12-1-99 DATE

APPROVED — STATE HIGHWAY ENGINEER — 12-1-99 DATE

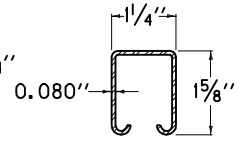




ROLL FORMED TERMINAL POST & CORNER POST



HOT ROLLED LINE POST H - COLUMN



ROLL FORMED TOP & BRACE RAIL

~ NOTES ~

CONSTRUCTION REQUIREMENT:

ALL POSTS SHALL BE SET IN CONCRETE TO THE DIMENSIONS SHOWN ON THIS DRAWING.

A, 1¼" NPS OR A 1¼" x 1⅝" ROLL FORMED SECTION, BOTTOM RAIL SHALL BE REQUIRED AROUND ALL UTILITY INSTALLATIONS AND AT OTHER LOCATIONS DESIGNATED BY THE ENGINEER.

MATERIALS:

8' HIGH FENCE SHALL HAVE 7' FABRIC HEIGHT. 9' HIGH FENCE SHALL HAVE 8' FABRIC HEIGHT. 10' HIGH FENCE SHALL HAVE 9' FABRIC HEIGHT. 11' HIGH FENCE SHALL HAVE 10' FABRIC HEIGHT. 12' HIGH FENCE SHALL HAVE 11' FABRIC HEIGHT.

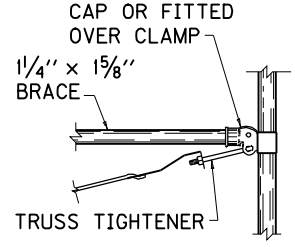
ALL FENCE FITTINGS SHALL COMPLY WITH ASTM F 626.

POST CAPS AND SOCKET TYPE BRACE END CONNECTIONS SHALL BE GALVANIZED PRESSED STEEL, CAST IRON OR OTHER TYPE AS APPROVED BY THE ENGINEER. THEY SHALL BE DESIGNED IN A MANNER TO EXCLUDE MOISTURE FROM INSIDE THE POSTS AND RAILS.

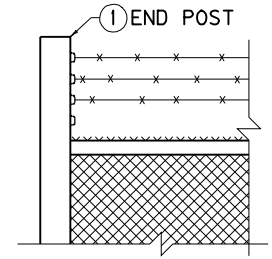
NPS = NOMINAL PIPE SIZE - ASTM F1083 AND F1043 (HEAVY INDUSTRIAL FENCE) SHALL GOVERN.

LEGEND / (ALTERNATES)

	TUBULAR	ROLL FORMED
1	2½" NPS END POST	3½" X 3½" END POST
2	2" NPS LINE POST	2¼" H-COL. LINE POST
3	⅜" DIA. TRUSS ROD AND TIGHTNER	⅜" DIA. TRUSS ROD AND TIGHTNER
4	BARBED WIRE ARMS	BARBED WIRE ARMS
5	1¼" NPS TOP RAIL & BRACE	1¼" X 1⅝" TOP RAIL & BRACE
6	BARBED WIRE	BARBED WIRE
7	FLAT TENSION BAR	NOT REQUIRED
8	BRACE BAND AND TENSION BAND	NOT REQUIRED



BRACE AND TRUSS CONNECTOR



DETAIL "A" ROLL FORMED

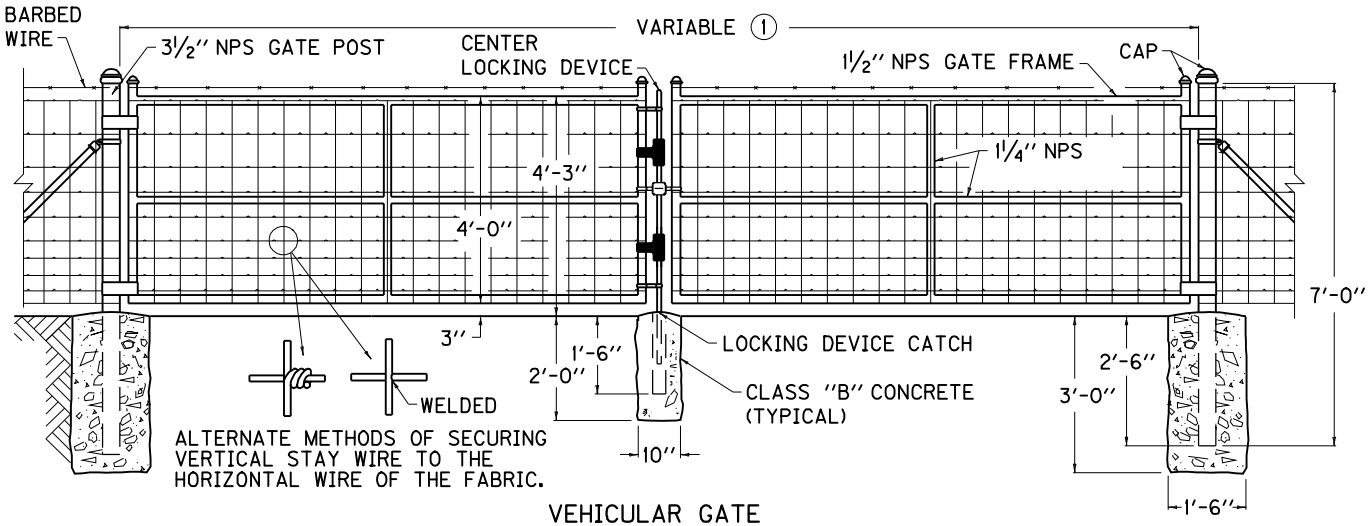
KENTUCKY DEPARTMENT OF HIGHWAYS

CHAIN LINK FENCE 8' TO 12' HIGH

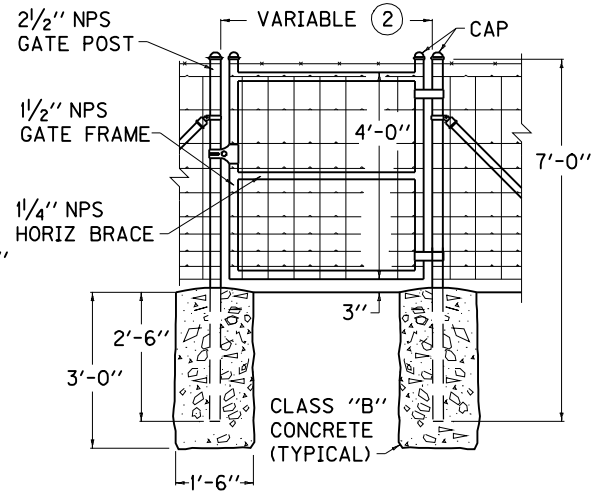
STANDARD DRAWING NO. RFC-002-04

SUBMITTED David Keith DIRECTOR DIVISION OF DESIGN 11-21-07 DATE

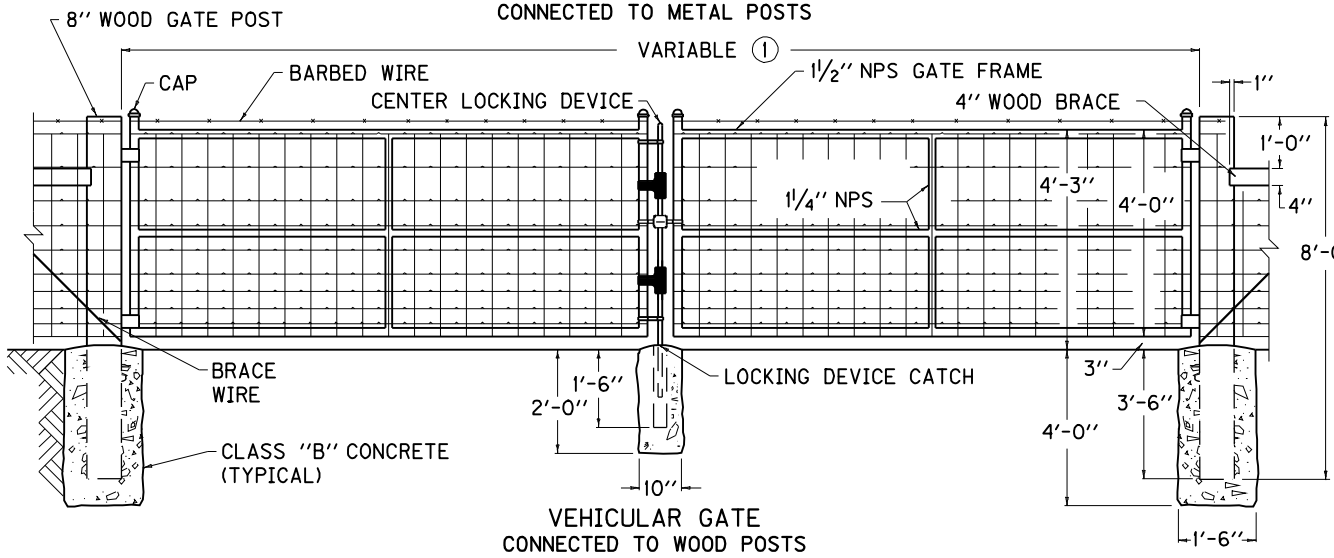
APPROVED Marcheryn Mathews STATE HIGHWAY ENGINEER 11-21-07 DATE



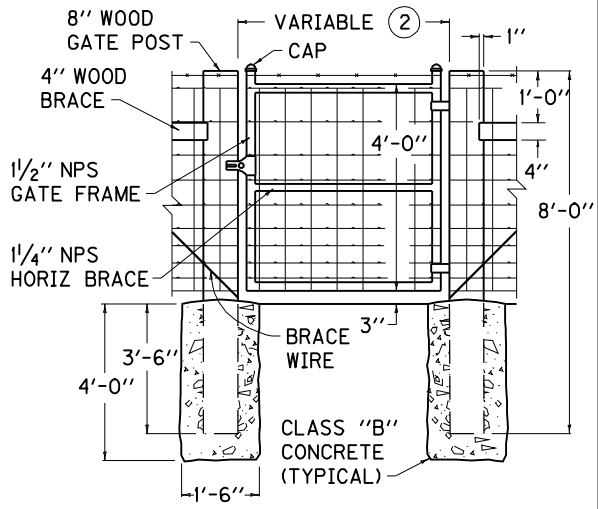
VEHICULAR GATE
CONNECTED TO METAL POSTS



PEDESTRIAN GATE
CONNECTED TO METAL POSTS



VEHICULAR GATE
CONNECTED TO WOOD POSTS



PEDESTRIAN GATE
CONNECTED TO WOOD POSTS

NOTES

BASIS OF PAYMENT

THE CONTRACT UNIT PRICE FOR WOVEN WIRE GATES SHALL BE:

(1) FEET WIDE SINGLE VEHICULAR WOVEN WIRE GATE

(1) FEET WIDE DOUBLE VEHICULAR WOVEN WIRE GATE

(2) FEET WIDE PEDESTRIAN WOVEN WIRE GATE

(1)- (2) AS SHOWN ON PLANS

CONSTRUCTION REQUIREMENTS

FABRIC TIE WIRES SHALL BE SPACED 1'-0" ON CENTERS.

THE CONTRACTOR IS NOT TO ORDER GATES UNTIL THEIR NECESSITY AND LOCATION HAVE BEEN CERTIFIED BY THE ENGINEER.

MATERIALS

WOVEN-WIRE FABRIC USED IN THE GATES SHALL EITHER BE ALUMINUM-COATED STEEL NO. 1047-6-9 OR ZINC-COATED STEEL NO. 1047-6-9.

NPS = NOMINAL PIPE SIZE - ASTM F1083 AND F1043 (HEAVY INDUSTRIAL FENCE) SHALL GOVERN.

GATES SHALL HAVE HEAVY PRESSED STEEL CORNERS SECURELY RIVETED OR SHALL BE MACHINE NOTCHED AND ELECTRICALLY WELDED SO AS TO BE RIGID AND WATER TIGHT. ALL WELDED JOINTS SHALL BE CLEANED AND PAINTED WITH TWO (2) COATS OF ALUMINUM PAINT.

GENERAL

(1) 6' TO 13' WIDTH FOR SINGLE GATE AND 12' TO 26' WIDTH FOR DOUBLE GATE.

(2) 4' TO 6' WIDTH

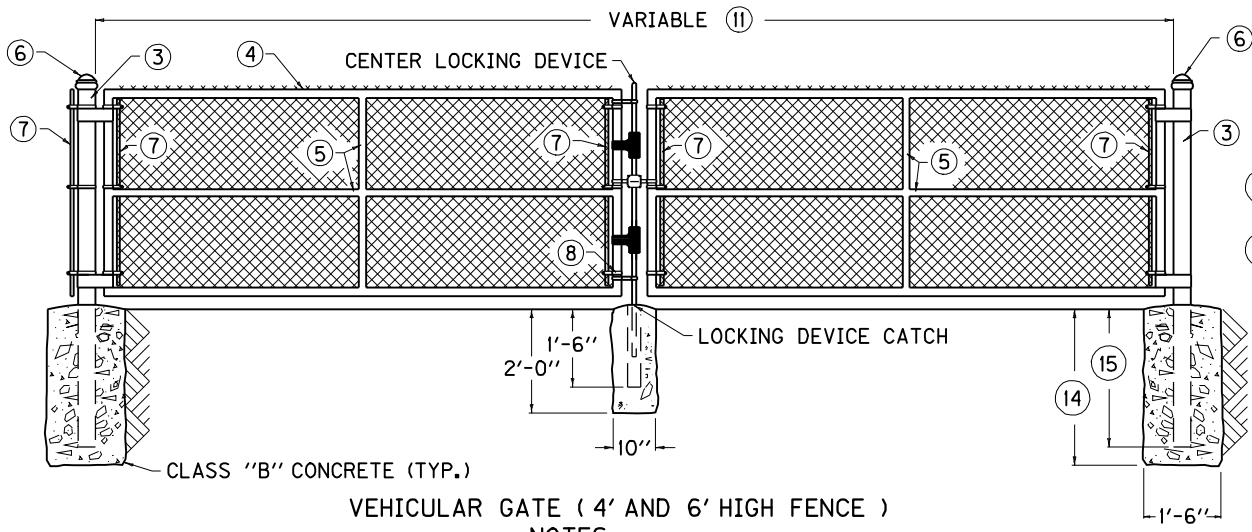
KENTUCKY DEPARTMENT OF HIGHWAYS

WOVEN WIRE GATES

STANDARD DRAWING NO. RFG-001-06

SUBMITTED John B. Sachstetter, DIRECTOR DIVISION OF DESIGN — DATE 12-1-99

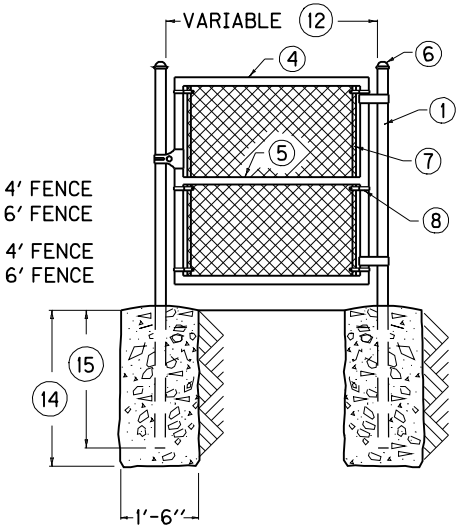
APPROVED T. M. Farrell, STATE HIGHWAY ENGINEER — DATE 12-1-99



(14) 3'-0" FOR 4' FENCE
3'-6" FOR 6' FENCE

(15) 2'-6" FOR 4' FENCE
3'-0" FOR 6' FENCE

VEHICULAR GATE (4' AND 6' HIGH FENCE)



PEDESTRIAN GATE (4' AND 6' HIGH FENCE)

NOTES

ALL POST SHALL BE SET IN CONCRETE TO THE DIMENSIONS AS INDICATED ON THIS DRAWING.

VEHICULAR AND PEDESTRIAN GATES SHALL HAVE HEAVY PRESSED STEEL CORNERS SECURELY RIVETED OR SHALL BE MACHINE NOTCHED, AND ELECTRICALLY WELDED SO AS TO BE RIGID AND WATER TIGHT; AND EQUIPPED WITH PADLOCKING DEVICE AND GROUND STOP.

ALL WELDED JOINTS SHALL BE CLEANED AND PAINTED WITH TWO (2) COATS OF ALUMINUM PAINT.

4' HIGH GATES SHALL HAVE 4' FABRIC HEIGHT. 6' HIGH GATES SHALL HAVE 6' FABRIC HEIGHT.

8' HIGH GATES SHALL HAVE 7' FABRIC HEIGHT. 9' HIGH GATES SHALL HAVE 8' FABRIC HEIGHT.

10' HIGH GATES SHALL HAVE 9' FABRIC HEIGHT. 11' HIGH GATES SHALL HAVE 10' FABRIC HEIGHT.

12' HIGH GATES SHALL HAVE 11' FABRIC HEIGHT.

BARBED WIRE IS REQUIRED ON 8' TO 12' HIGH GATES. SEE DETAIL "A" AND "B" FOR INSTALLATION.

THE CONTRACTOR IS NOT TO ORDER GATES UNTIL THEIR NECESSITY AND LOCATION HAVE BEEN CERTIFIED BY THE ENGINEER.

NPS = NOMINAL PIPE SIZE - ASTM F1083 AND ASTM F1043 (HEAVY INDUSTRIAL FENCE) SHALL GOVERN.

ALL FENCE FITTINGS SHALL COMPLY WITH ASTM F 626.

(11) 6' TO 13' WIDTH FOR SINGLE GATE OR 12' TO 26' WIDTH FOR DOUBLE GATE.

(12) 4' TO 6' WIDTH.

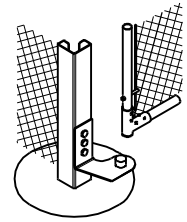
THE CONTRACT UNIT PRICE FOR CHAIN LINK GATES SHALL BE:

(11) FEET WIDE SINGLE VEHICULAR CHAIN LINK GATE (13) HIGH.

(11) FEET WIDE DOUBLE VEHICULAR CHAIN LINK GATE (13) HIGH.

(12) FEET WIDE PEDESTRIAN CHAIN LINK GATE (13) HIGH.

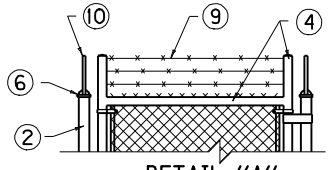
(13) AS SHOWN ON PLANS.



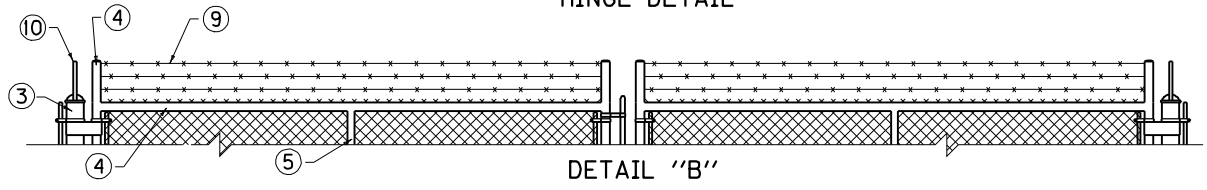
ROLL FORMED HINGE DETAIL

LEGEND / (ALTERNATES)

	TUBULAR	ROLL FORMED
(1)	END POST 2½" NPS	3½" X 3½"
(2)	END POST 2½" NPS	3½" X 3½"
(3)	GATE POST 3½" NPS	NO ALTERNATE
(4)	GATE FRAME 1½" NPS	NO ALTERNATE
(5)	1¼" NPS	NO ALTERNATE
(6)	APPROVED CAPS	NOT REQUIRED
(7)	FLAT TENSION BAR	NOT REQUIRED
(8)	BRACE BAND AND TENSION BAND	NOT REQUIRED
(9)	BARBED WIRE	BARBED WIRE
(10)	BARBED WIRE ARMS	BARBED WIRE ARMS



DETAIL "A"
(8' TO 12' HIGH FENCE)



DETAIL "B"
(8' TO 12' HIGH FENCE)

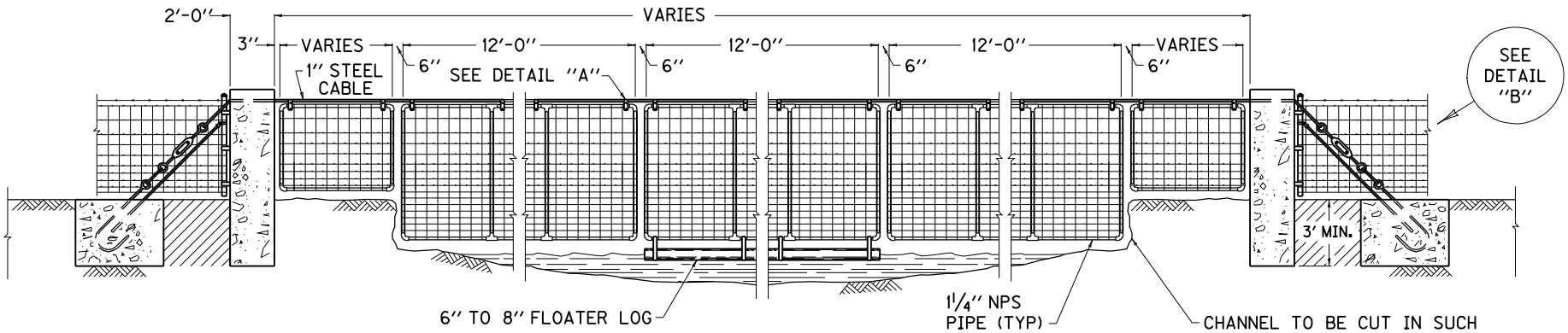
KENTUCKY DEPARTMENT OF HIGHWAYS

4' TO 12' HIGH CHAIN LINK GATE

STANDARD DRAWING NO. RFG-005-05

SUBMITTED John B. Rochester, DIRECTOR DIVISION OF DESIGN — 12-1-99 DATE

APPROVED T. M. Farrell, STATE HIGHWAY ENGINEER — 12-1-99 DATE



TYPICAL WATER GATE

NOTES

THE CONTRACT UNIT PRICE SHALL BE: WATER GATE TYPE 1 OR WATER GATE TYPE 2.

THIS ILLUSTRATION DEPICTS WATER GATE TYPE 1 USING WOVEN WIRE FABRIC. CHAIN LINK FENCE MAY BE USED AS TYPE 2.

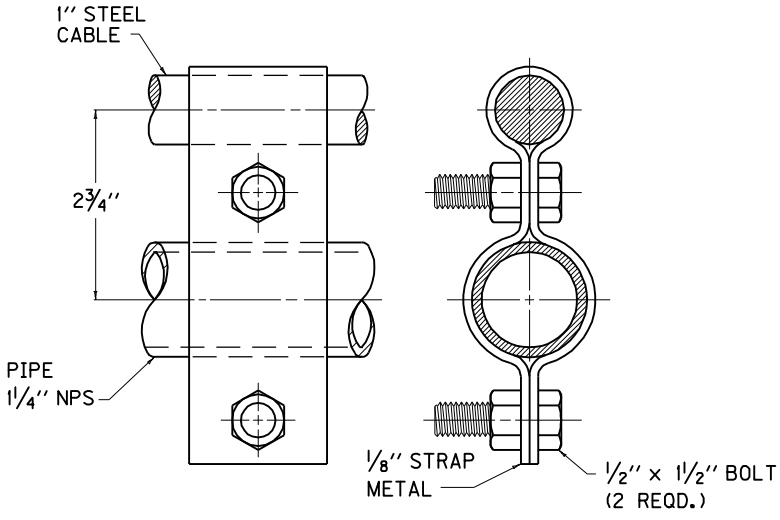
FABRIC TIE WIRES SHALL BE SPACED 1'-0" ON CENTERS. THE CONTRACTOR IS NOT TO ORDER GATES OF ANY TYPE UNTIL THEIR NECESSITY AND LOCATION ARE CERTIFIED BY THE ENGINEER.

ALL FENCE FITTINGS SHALL COMPLY WITH ASTM F 626.

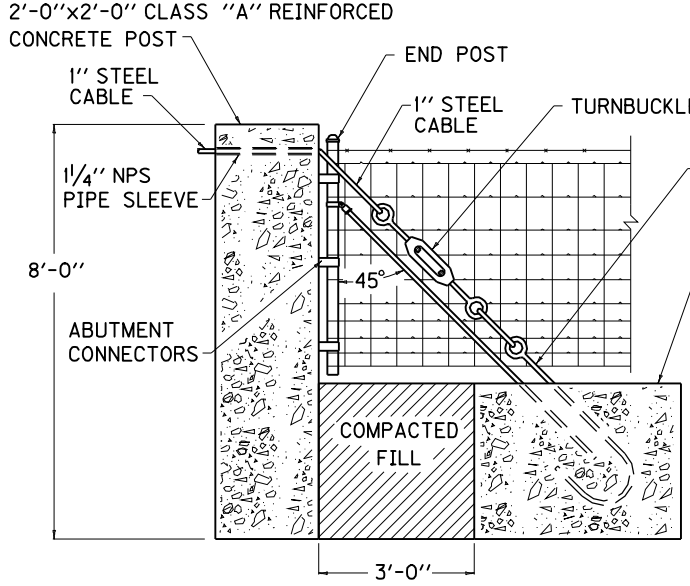
WOVEN-WIRE FABRIC USED ON WATER GATE TYPE 1 SHALL BE EITHER ALUMINUM-COATED STEEL NO. 1047-6-9 OR ZINC COATED STEEL NO. 1047-6-9.

WATER GATES SHALL HAVE HEAVY PRESSED STEEL CORNERS SECURELY RIVETED OR SHALL BE MACHINE NOTCHED AND ELECTRICALLY WELDED SO AS TO BE RIGID AND WATER TIGHT. ALL WELDED JOINTS SHALL BE CLEANED AND PAINTED WITH TWO (2) COATS OF ALUMINUM PAINT.

NPS = NOMINAL PIPE SIZE - ASTM F1083 AND F1043 (HEAVY INDUSTRIAL FENCE) SHALL GOVERN.



DETAIL "A"



DETAIL "B"

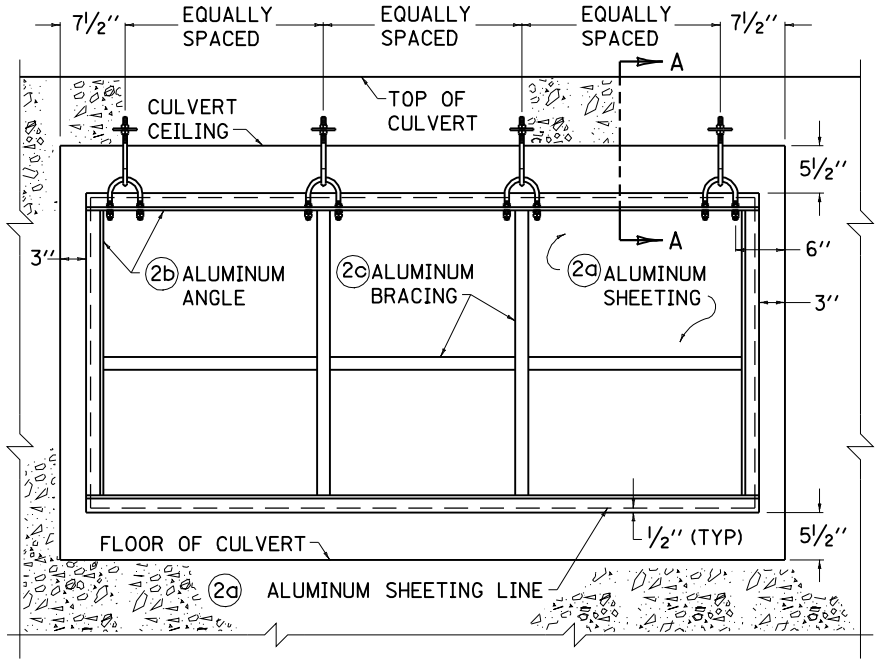
KENTUCKY DEPARTMENT OF HIGHWAYS

WATER GATE TYPE 1 AND TYPE 2

STANDARD DRAWING NO. RFG-010-04

SUBMITTED John B. Sachstetter, DIRECTOR DIVISION OF DESIGN — 12-1-99 DATE

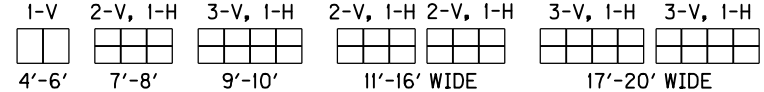
APPROVED J. M. Farrell, STATE HIGHWAY ENGINEER — 12-1-99 DATE



TYPICAL WATER GATE INSTALLATION

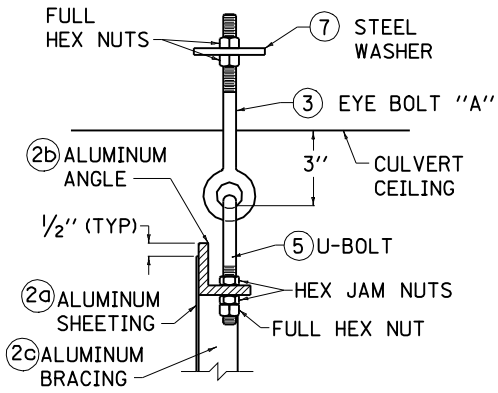
NOTES

1. PAY ITEM AND UNIT TO BID: WATER GATE TYPE 3, EACH (2 OR MORE SECTIONS PER CULVERT OPENING EQUALS ONE WATER GATE TYPE 3)
   1a. INCLUDES LABOR, MATERIALS, INSTALLATION, AND NECESSARY INCIDENTALS.
2. COMMERCIAL GRADE ALUMINUM
   (2a) SHEETING - 0.090" THICK, MILL FINISH.
   (2b) ANGLES - 2" x 2" x 3/8" @ 1.60 LBS./LIN. FT.
   (2c) BRACING - 1½" x 1½" x 1/8" SQUARE TUBING @ 0.826 LB./LIN. FT.
3. EYEBOLT "A" - GALVANIZED, WELDLESS, ½" DIA., 6" SHANK, 1" EYE I.D., 3" THREAD.
4. EYEBOLT "B" - GALVANIZED, WELDLESS, ½" DIA., 2½" SHANK, 1" EYE I.D., 1" THREAD.
5. U-BOLTS - CADIMUM PLATED STEEL, 3" BETWEEN LEGS, 4½" INSIDE LENGTH, 5" OUTSIDE LENGTH, 2¼" THREAD, ½" DIA.
6. HEX FULL NUTS AND JAM NUTS - ½" DIA., 13 THREADS/IN., FINISHED, DOUBLE CHAMFERED.
7. STEEL WASHER - 5/8" I.D., 2¾" O.D.
8. EXPANSION ANCHORS - 6000 LBS. MINIMUM HOLDING POWER.
9. WELD ANGLE AND BRACE CONNECTIONS FULLY ON ALL EXPOSED SIDES.
10. WELD SHEETING ON BOTH SIDES TO ANGLES AND BRACING AS SHOWN.
11. CULVERT OPENINGS GREATER THAN 10' IN WIDTH - USE MINIMUM OF 2 EQUAL WIDTH SECTIONS PER OPENING WITH 3" GAP BETWEEN SECTIONS (SEE DETAIL "A"). NO SECTION SHALL EXCEED 10' IN WIDTH.
12. USE OF ONE CONTINUOUS ALUMINUM SHEET IS DESIRABLE; HOWEVER IF MORE THAN ONE SHEET IS USED AND THE SEAMS DO NOT FIT THE MINIMUM REQUIRED BRACING DIAGRAM, ADDITIONAL SYMMETRICALLY PLACED BRACING SHALL BE REQUIRED. NO SEAMS SHALL BE VISIBLE FROM THE BRACING SIDE OF THE GATE.

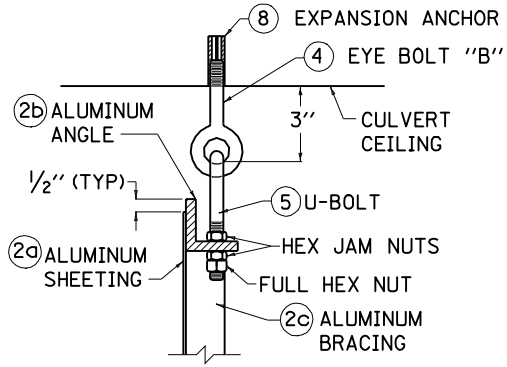


MINIMUM HOR. AND VER. BRACING SYSTEMS FOR VARIOUS WIDTH CULVERT OPENINGS.

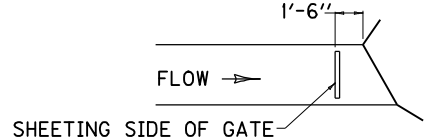
ONE (1) ADDITIONAL HOR. BRACE REQUIRED FOR CULVERT OVER 10' IN HEIGHT.



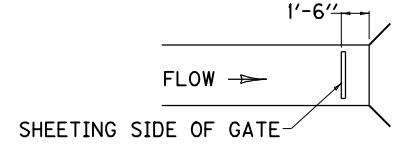
SECTION A-A
NEW CONSTRUCTION
HANGER SYSTEM



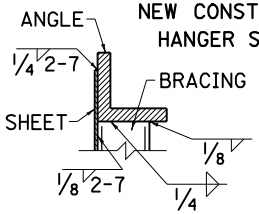
SECTION A-A
EXISTING CONSTRUCTION
HANGER SYSTEM



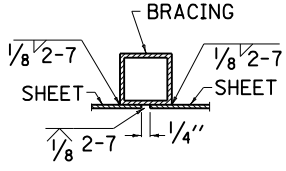
WATER GATE LOCATION
IN SKEWED CULVERTS



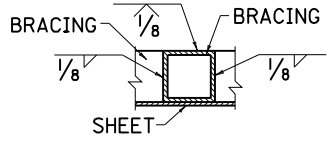
WATER GATE LOCATION
IN CULVERTS AT 90°



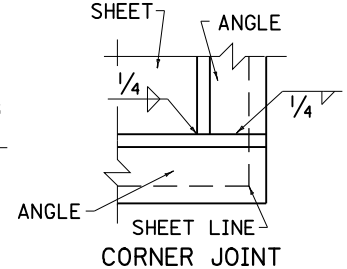
BRACING, ANGLE
AND SHEET WELDS



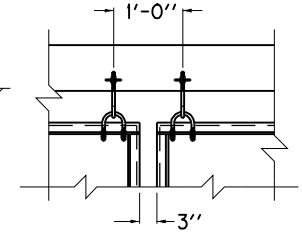
BRACING AND SHEET
SEAM WELDS



BRACING AND
BRACING WELDS



CORNER JOINT
WELDS



DETAIL "A"
(2 OR MORE SECTIONS)

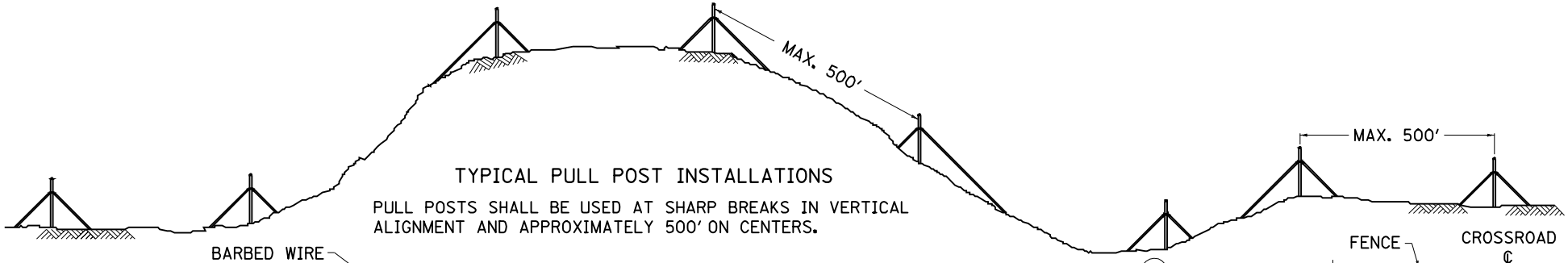
KENTUCKY
DEPARTMENT OF HIGHWAYS

WATER GATE
TYPE 3

STANDARD DRAWING NO. RFG-011-05

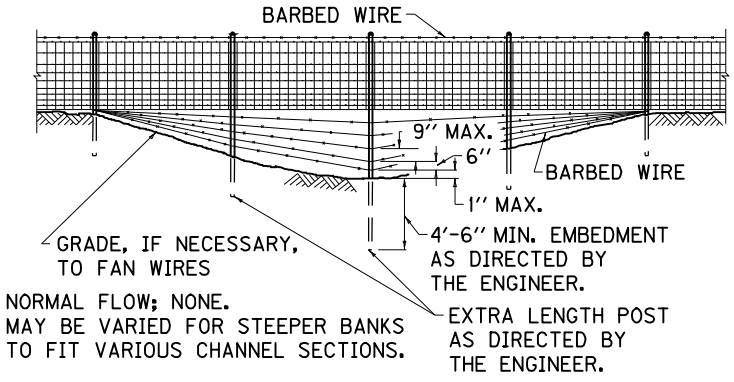
SUBMITTED Chris Keith — DIRECTOR DIVISION OF DESIGN — DATE 11-21-07

APPROVED Marcheyn Mathews — STATE HIGHWAY ENGINEER — DATE 11-21-07

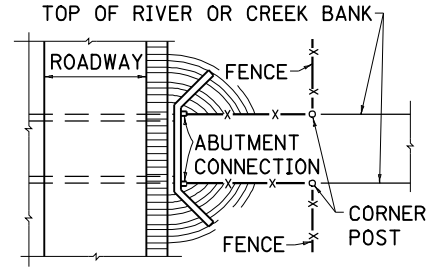


TYPICAL PULL POST INSTALLATIONS

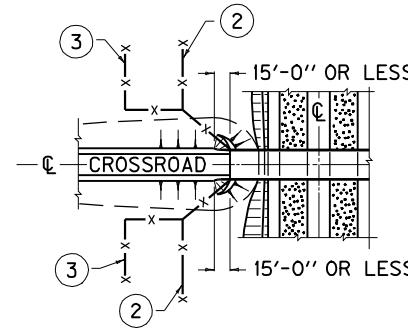
PULL POSTS SHALL BE USED AT SHARP BREAKS IN VERTICAL ALIGNMENT AND APPROXIMATELY 500' ON CENTERS.



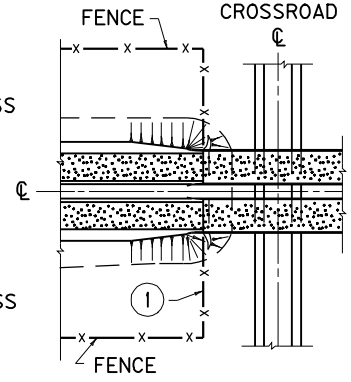
TYPE A CROSSING



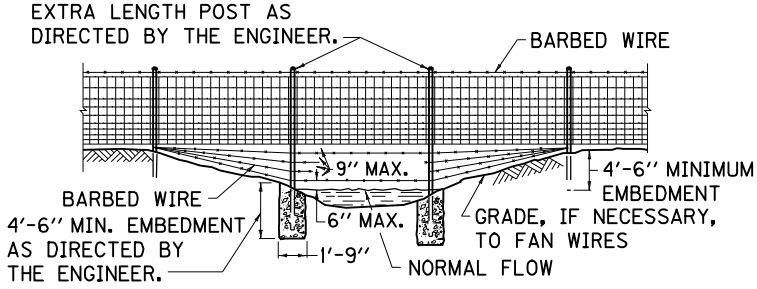
TYPICAL FENCE INSTALLATION FOR BOX CULVERT USED AS CATTLE CROSSING



HIGHWAY UNDER CROSSROAD



HIGHWAY OVER CROSSROAD



TYPE B CROSSING

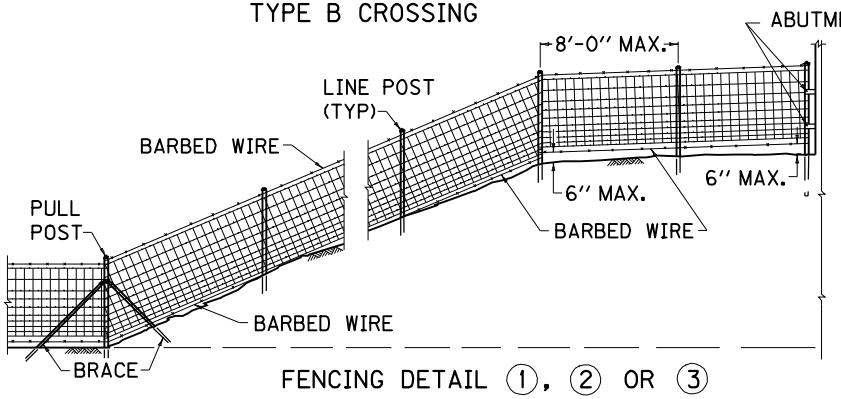
NOTES

DETAIL (1) NORMAL WAY OF HANDLING FENCE WHEN THE HIGHWAY IS OVER THE CROSSROAD IS AS SHOWN.

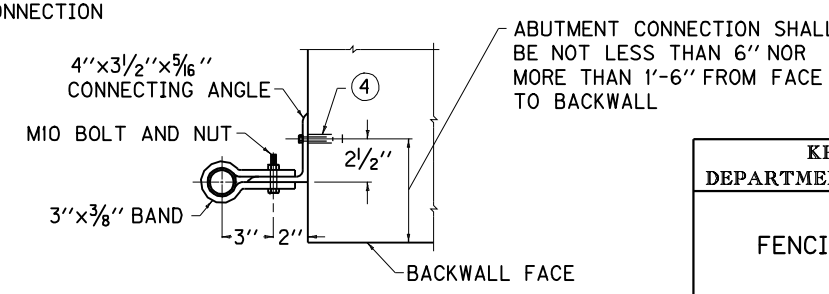
DETAIL (2) WHEN HIGHWAY RIGHT-OF-WAY IS WITHIN 15'-0" OR LESS OF THE FACE OF BACKWALL PROJECTED, ANGLE FENCE INTO ABUTMENT FROM TOE OF SLOPE AS SHOWN.

DETAIL (3) WHEN HIGHWAY RIGHT-OF-WAY IS GREATER THAN 15'-0" FROM THE FACE OF BACKWALL PROJECTED, ANGLE FENCE PARALLEL TO THE CENTERLINE OF CROSSROAD AND INTERSECT DETAIL (2) AS SHOWN.

(4) 1/2"x2" SELF-DRILL EXPANSION SHIELD AND BOLT ASSEMBLY.



FENCING DETAIL (1), (2) OR (3)



NOTE: ALL MATERIAL FOR ABUTMENT CONNECTION SHALL BE GALVANIZED.

ABUTMENT CONNECTION

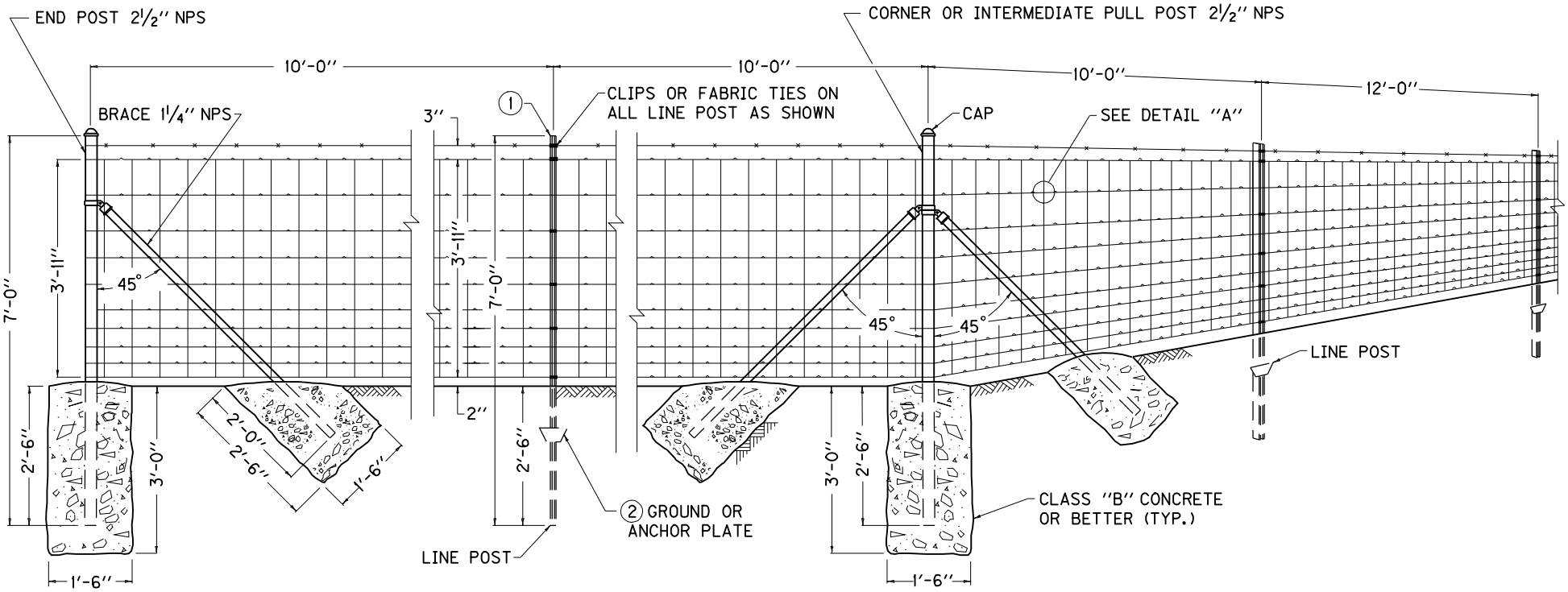
KENTUCKY DEPARTMENT OF HIGHWAYS

FENCING DETAILS

STANDARD DRAWING NO. RFW-001-04

SUBMITTED John B. Sachstetter, DIRECTOR DIVISION OF DESIGN — DATE 12-1-99

APPROVED, STATE HIGHWAY ENGINEER — DATE 12-1-99



RIGHT-OF-WAY FENCE

NOTES

MATERIALS:

WOVEN-WIRE FABRIC SHALL BE EITHER ALUMINUM-COATED STEEL NO. 1047-6-9 OR ZINC-COATED STEEL NO. 1047-6-9.

ALL FENCE FITTINGS SHALL COMPLY WITH ASTM F 626.

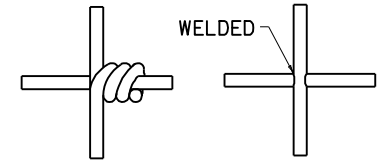
NPS = NOMINAL PIPE SIZE - ASTM F1083 AND F1043 (HEAVY INDUSTRIAL FENCE) SHALL GOVERN.

(1) STUDDED "T" POST AT 1.33 LBS. PER FOOT

- OR -

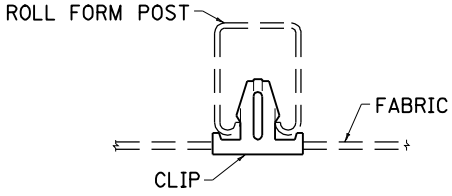
ROLL FORM POST AT 1.40 LBS. PER FOOT (SEE DETAIL)

(2) NOT REQUIRED FOR ROLL FORM POST.

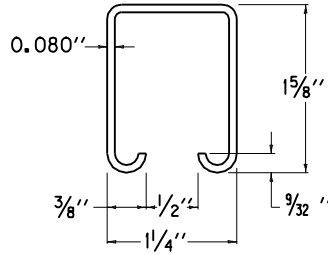


ALTERNATE METHODS OF SECURING VERTICAL STAY WIRE TO THE HORIZONTAL WIRE OF THE FABRIC.

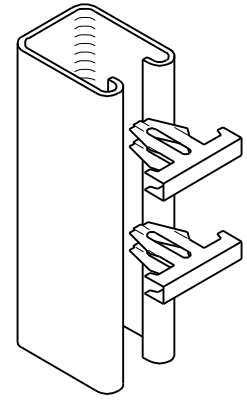
DETAIL "A"



PLAN VIEW OF CLIP INSTALLED IN ROLL FORM POST



PLAN VIEW OF ROLL FORM POST



ISOMETRIC EXPLODED VIEW OF ROLL FORM POST AND CLIPS

CLIPS SHALL BE SPRING STEEL ALUMINUM - FINISHED

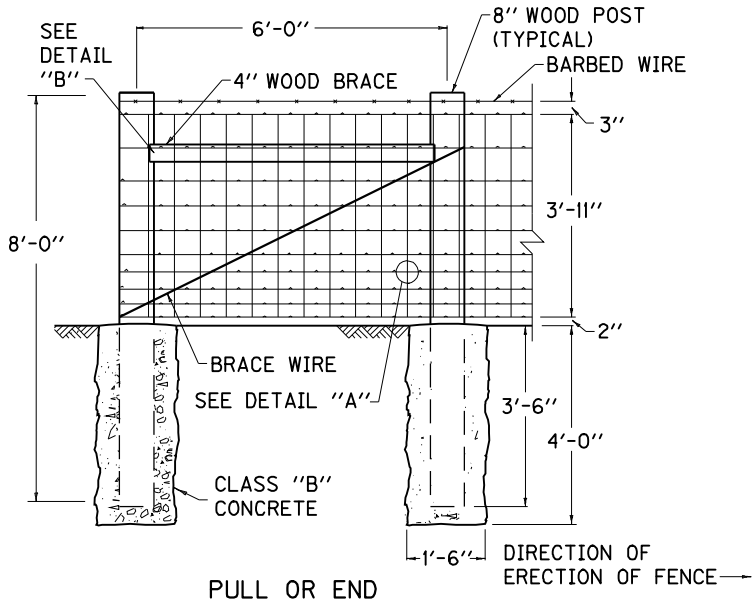
KENTUCKY DEPARTMENT OF HIGHWAYS

WOVEN WIRE FENCE TYPE 1

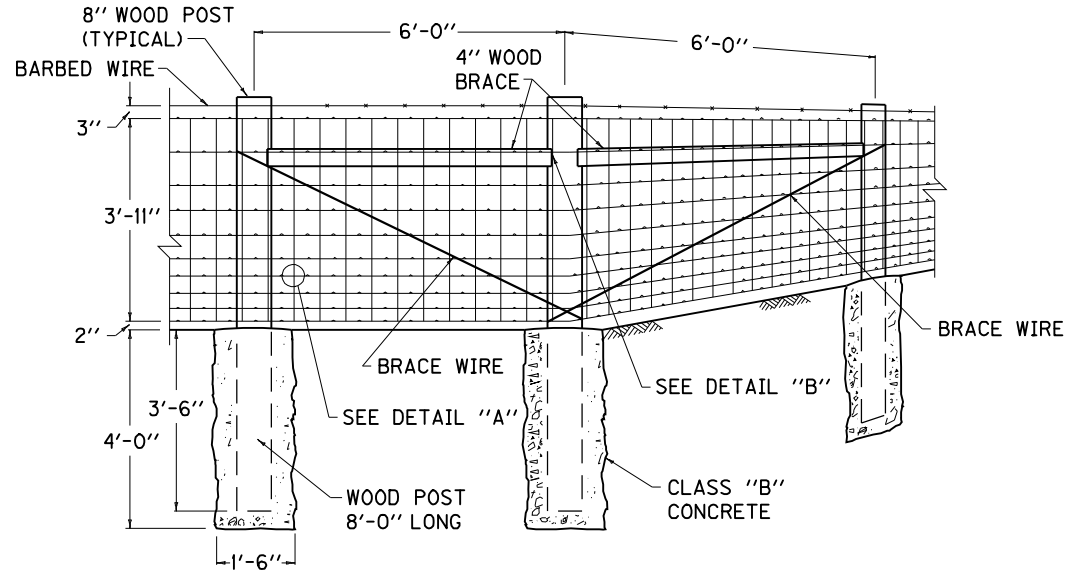
STANDARD DRAWING NO. RFW-005-06

SUBMITTED John B. Rockstroh — DIRECTOR DIVISION OF DESIGN — 12-1-99 DATE

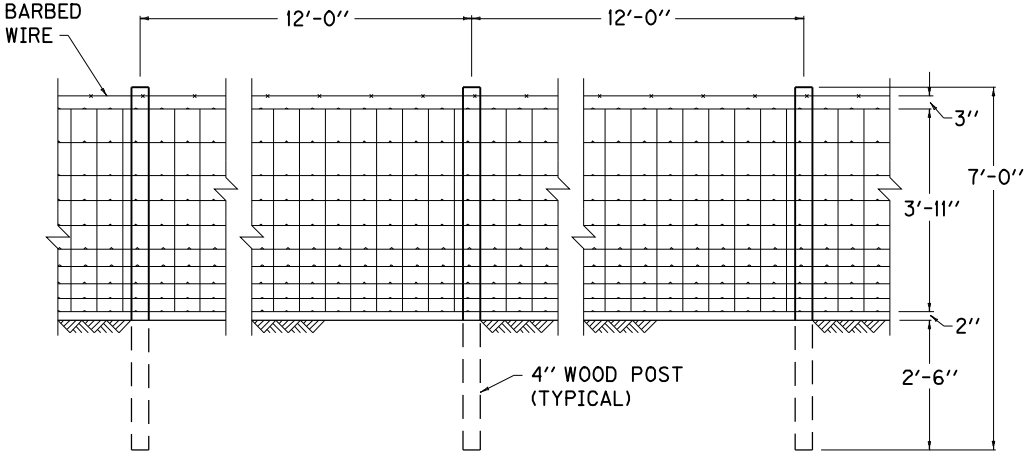
APPROVED — STATE HIGHWAY ENGINEER — 12-1-99 DATE



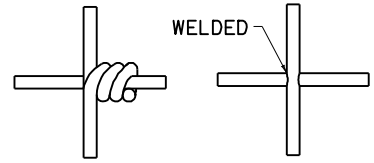
PULL OR END POST ASSEMBLY



CORNER POST ASSEMBLY

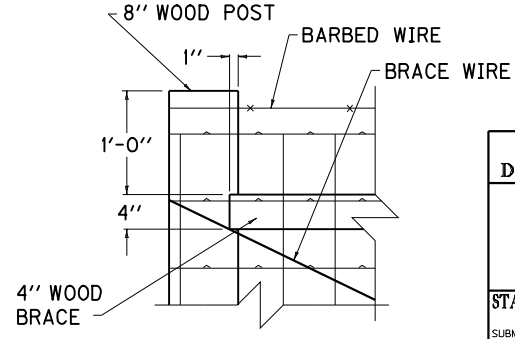


LINE POST



ALTERNATE METHODS OF SECURING VERTICAL STAY WIRE TO THE HORIZONTAL WIRE OF THE FABRIC.

DETAIL "A"



DETAIL "B"

NOTES

1. ON INTERMEDIATE PULL POST ASSEMBLIES, BRACE WIRES SHALL BE REQUIRED FOR BOTH DIRECTIONS.
2. WOVEN-WIRE FABRIC SHALL BE EITHER ALUMINUM-COATED STEEL NO. 1047-6-9 OR ZINC-COATED STEEL NO. 1047-6-9.

KENTUCKY DEPARTMENT OF HIGHWAYS

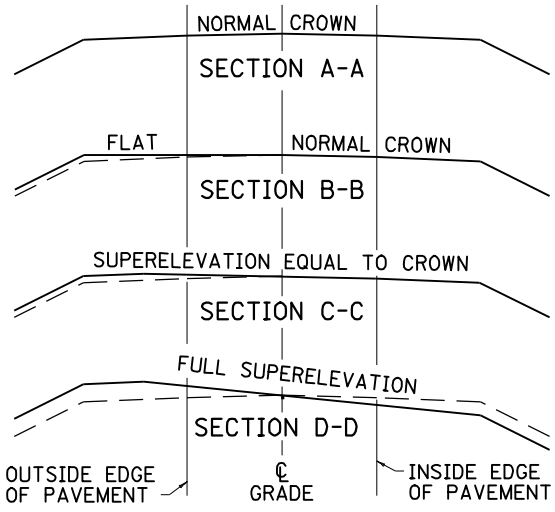
WOVEN WIRE FENCE TYPE 2

STANDARD DRAWING NO. RFW-006-06

SUBMITTED John B. Sachstetter — DIRECTOR DIVISION OF DESIGN — DATE 12-1-99

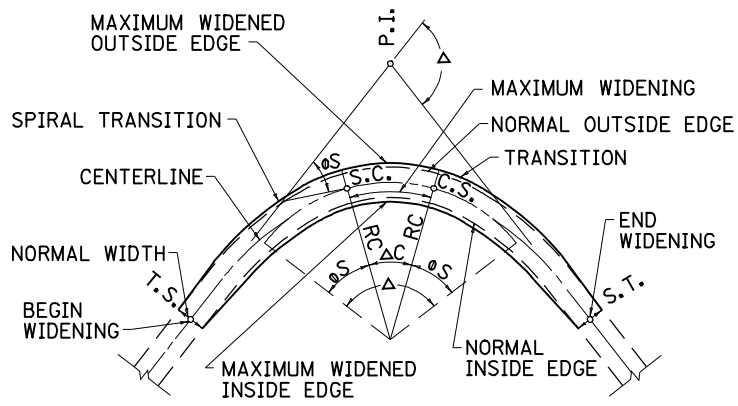
APPROVED — STATE HIGHWAY ENGINEER — DATE 12-1-99

~ SECTIONS ~



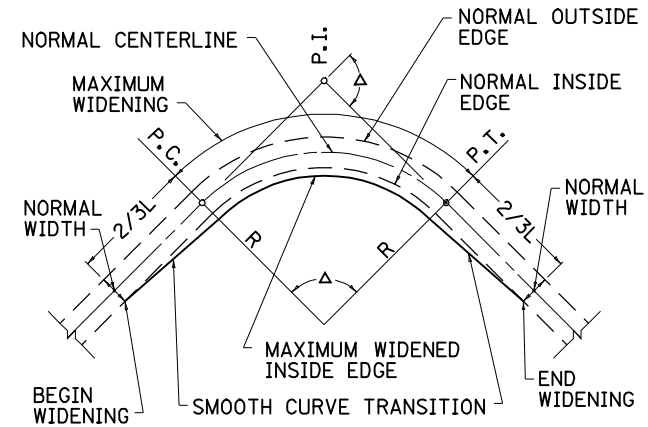
CURVE WIDENING FOR SPIRAL TRANSITION CURVES
(WIDENING DIVIDED EQUALLY ON EACH SIDE)

NOTE: IF DIRECTED SPIRAL TRANSITION CURVES SHALL BE WIDENED ON INSIDE ONLY.



NOTE: MINIMUM WIDENING = 2′-0″

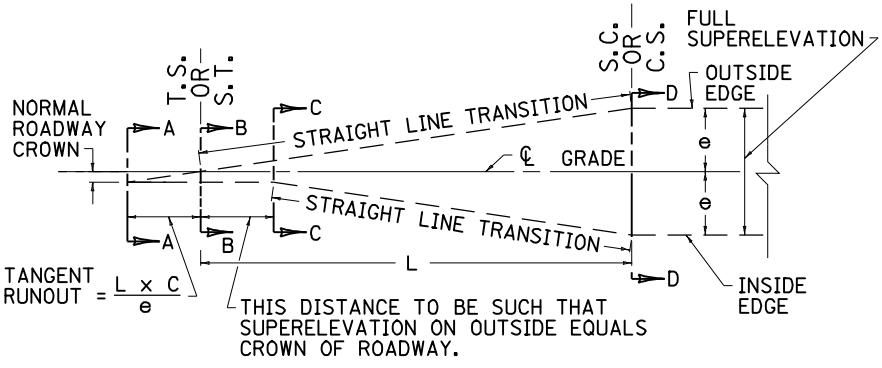
CURVE WIDENING FOR SIMPLE CURVES
(WIDENED ON INSIDE ONLY)



NOTE: MINIMUM WIDENING = 2′-0″
L = MINIMUM LENGTH OF RUNOFF.

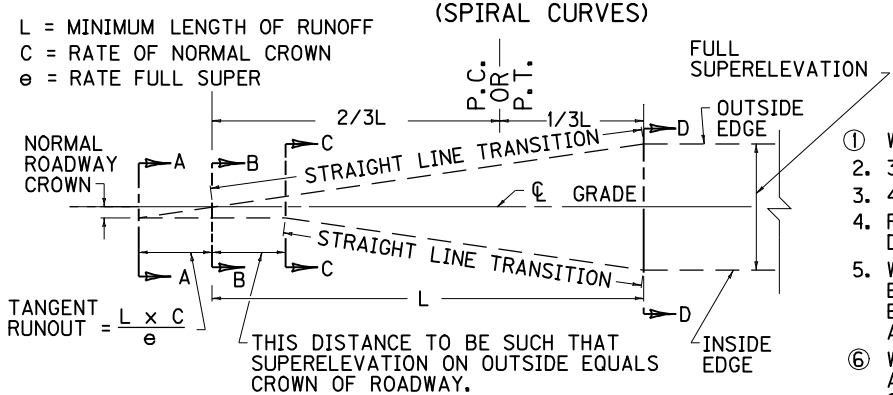
SUPERELEVATION TRANSITION FOR CURVES
SINGLE LANE PAVEMENT

⑥



(SPIRAL CURVES)

L = MINIMUM LENGTH OF RUNOFF
C = RATE OF NORMAL CROWN
e = RATE FULL SUPER



(SIMPLE CURVES)

CURVE WIDENING IN FEET FOR TWO-LANE PAVEMENTS ⑥

① PVMT. WIDTH	24 FEET			22 FEET					20 FEET			
RADIUS OF CURVE	DESIGN SPEED (MPH)											
	30	40	50	30	40	50	60	70	30	40	50	60
5000′												2.0
2500′									2.0	2.0	2.0	2.5
2000′								2.0	2.0	2.0	2.5	2.5
1500′							2.0	2.0	2.0	2.5	2.5	3.0
1200′						2.0	2.0		2.5	2.5	2.5	3.0
1000′					2.0	2.0	2.5		2.5	3.0	3.0	3.5
825′					2.0	2.5			2.5	3.0	3.5	
700′				2.0	2.0	2.5			3.0	3.0	3.5	
600′			2.0	2.0	2.5	3.0			3.0	3.5	4.0	
550′				2.0	2.5				3.0	3.5		
425′		2.0		2.5	3.0				3.5	4.0		
350′	2.0			3.0					4.0			
300′	2.5			3.5					4.5			
250′	3.0			4.0					5.0			
225′	3.5			4.5					5.5			

① WIDTH OF PAVEMENT ON TANGENT

2. 3-LANE PAVEMENTS: MULTIPLY ABOVE VALUES BY 1.5.
3. 4-LANE PAVEMENTS: MULTIPLY ABOVE VALUES BY 2.
4. FOR INTERMEDIATE DESIGN SPEEDS, USE THE NEXT HIGHER DESIGN SPEED VALUE.
5. WHEN REQUIRED ON CONSTRUCTION, CURVES SHALL BE SUPER-ELEVATED BY REVOLVING SECTION AROUND INSIDE OR OUTSIDE EDGE AS DIRECTED. SHORT VERTICAL CURVES TO BE INSERTED AT ″D″ AND ″A″ WHERE DIRECTED ON CONSTRUCTION.

⑥ WHEN SEMITRAILER VOLUMES ARE SIGNIFICANT REFER TO THE AASHTO ″A POLICY ON GEOMETRIC DESIGN OF HIGHWAYS AND STREETS″.

KENTUCKY DEPARTMENT OF HIGHWAYS

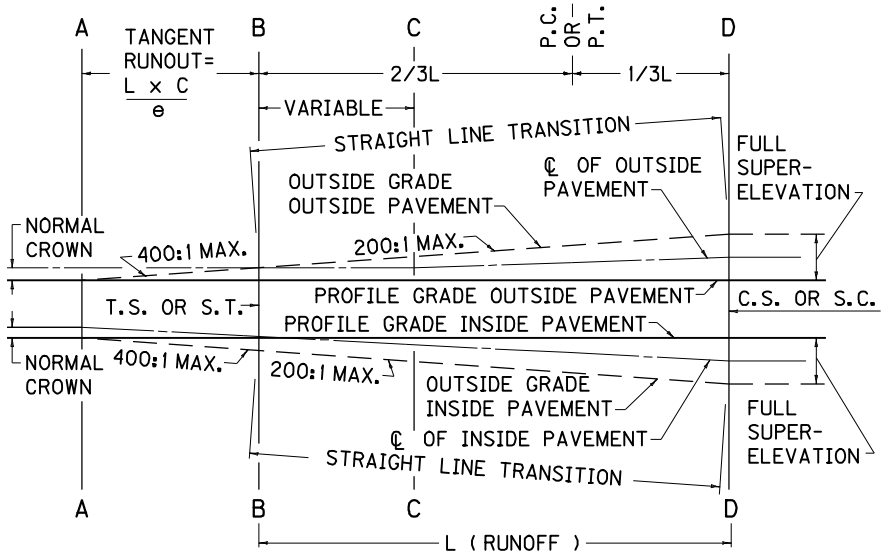
CURVE WIDENING AND SUPERELEVATION TRANSITIONS

STANDARD DRAWING NO. RGS-001-06

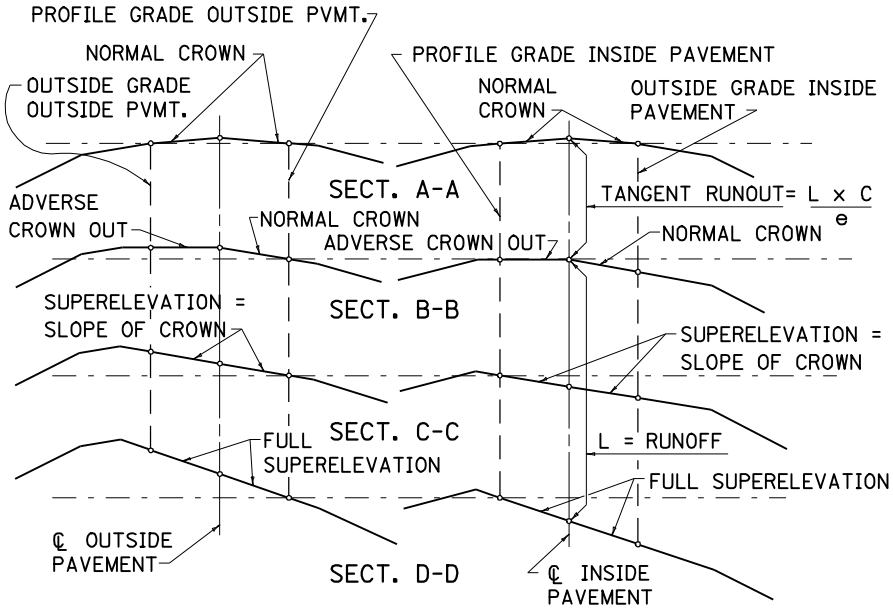
SUBMITTED John B. Sachatello, DIRECTOR DIVISION OF DESIGN — DATE 12-1-99

APPROVED [signature], STATE HIGHWAY ENGINEER — DATE 12-1-99

DEPRESSED MEDIAN

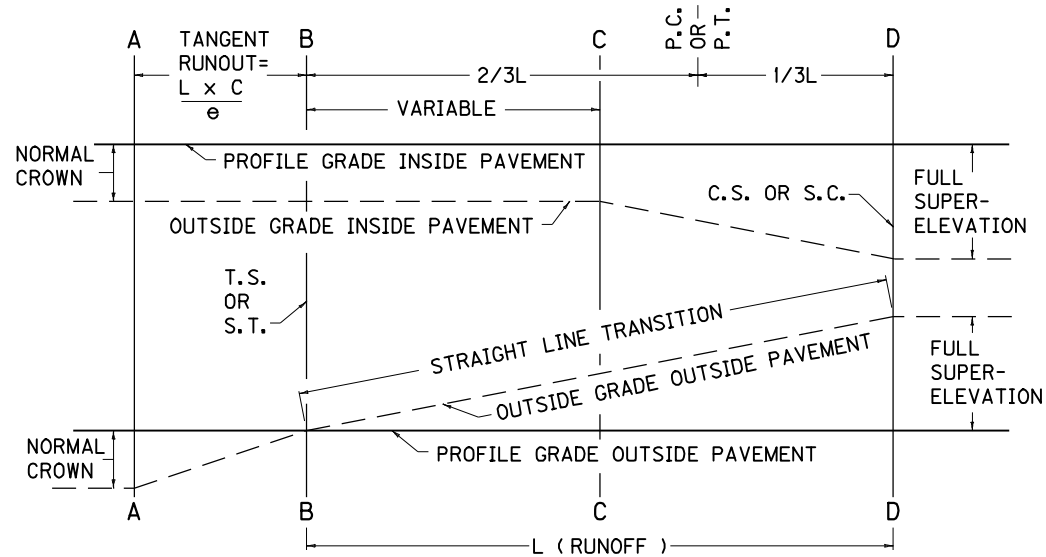


PROFILE OF PAVEMENT EDGES

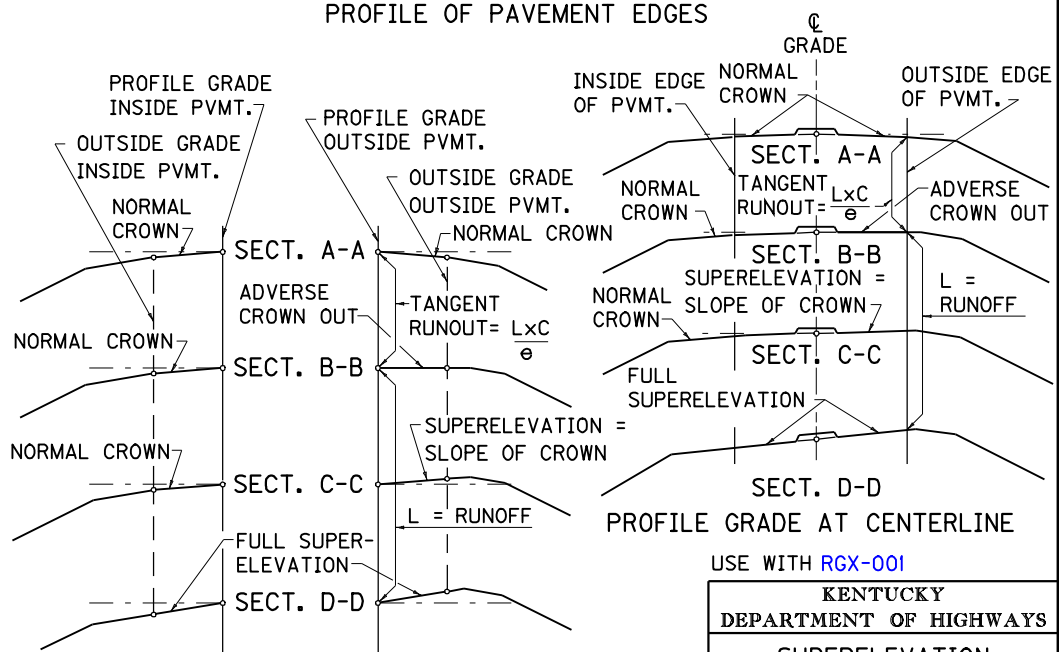


PROFILE GRADE AT MEDIAN EDGE

RAISED MEDIAN



PROFILE OF PAVEMENT EDGES



PROFILE GRADE AT MEDIAN EDGE

PROFILE GRADE AT CENTERLINE

USE WITH RGX-001

NOTES

1. SPECIAL CARE MUST BE EXERCISED IN THE DRAINING OF DITCH SUMPS INDUCED BY THE SUPERELEVATION.
2. L = MINIMUM LENGTH OF RUNOFF.
3. FOR HINGE POINT ROUNDING BETWEEN SUPERABLE AND NON-SUPERABLE SHOULDER SEE RGX-001

KENTUCKY DEPARTMENT OF HIGHWAYS

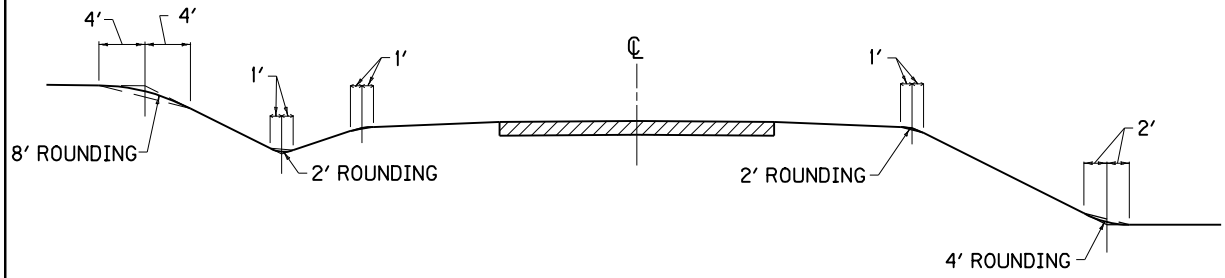
SUPERELEVATION FOR MULTILANE PAVEMENT

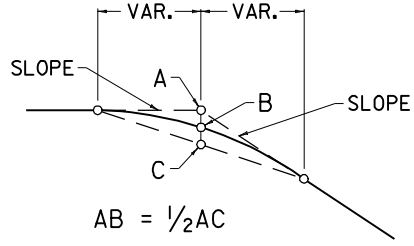
STANDARD DRAWING NO. RGS-002-05

SUBMITTED: DIRECTOR DIVISION OF DESIGN — DATE: 11-21-07

APPROVED: STATE HIGHWAY ENGINEER — DATE: 11-21-07

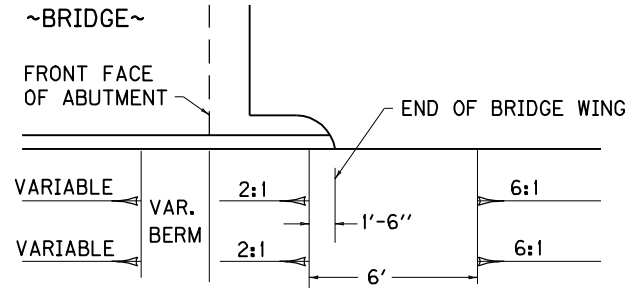
TYPICAL SECTION SHOWING ROUNDING OF SLOPES



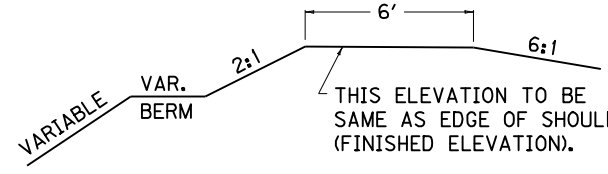


DETAIL FOR ROUNDING OF SLOPES

EARTH DIKE IN DEPRESSED MEDIAN AT THE END OF TWIN BRIDGES



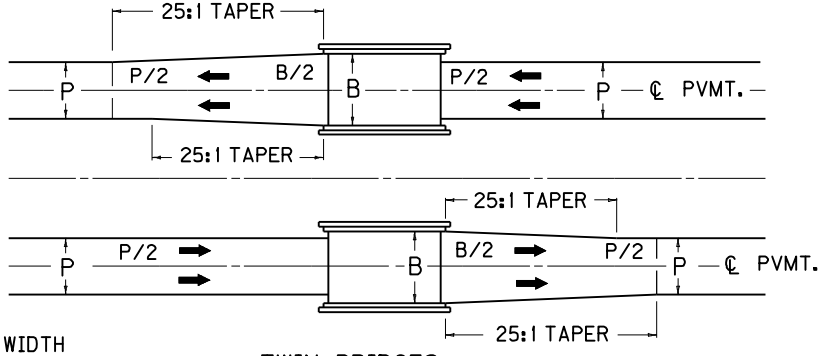
PLAN VIEW



TO BE CONSTRUCTED ON GRADE AND DRAIN CONTRACT.

PROFILE OF EARTH DIKE

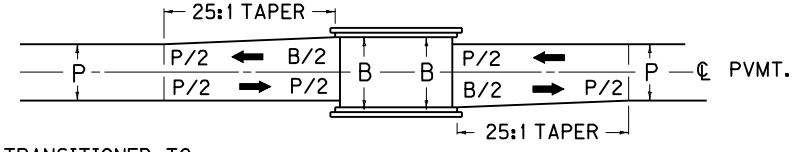
BRIDGE APPROACH FOR USE IN CONJUNCTION WITH ASPHALT CONCRETE PAVEMENT



TWIN BRIDGES

P = NORMAL PAVEMENT WIDTH

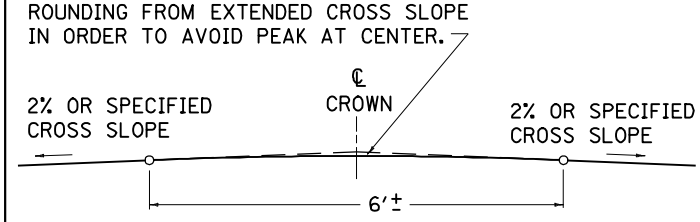
B = BRIDGE ROADWAY



NORMAL PAVEMENT SHALL BE TRANSITIONED TO MEET BRIDGE ROADWAY AS INDICATED ABOVE.

SINGLE BRIDGE

PAVEMENT AND SHOULDER CROWN ROUNDED



IN A HORIZONTAL CURVE, ROUNDING SHOULD BE USED AT HINGE POINT BETWEEN SUPERABLE AND NON-SUPERABLE SHOULDERS.

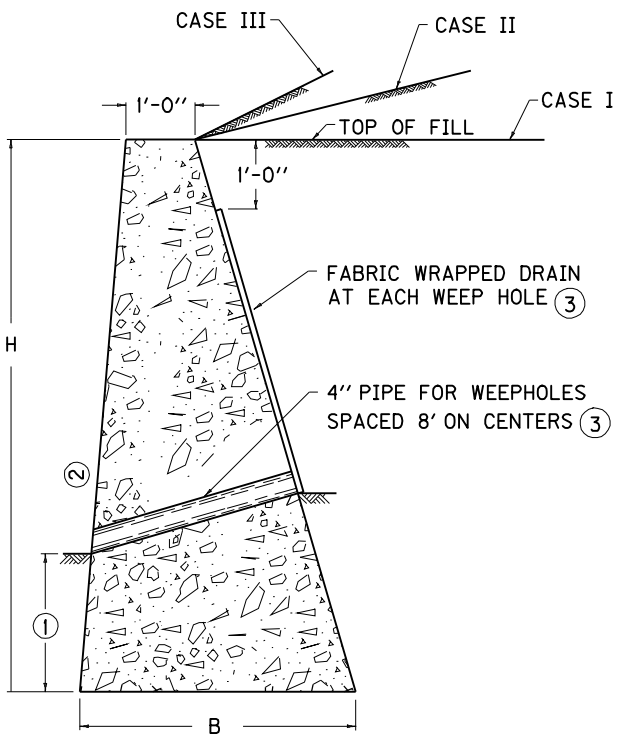
KENTUCKY
DEPARTMENT OF HIGHWAYS

MISCELLANEOUS
STANDARDS
PART 1

STANDARD DRAWING NO. RGX-001-05

SUBMITTED Chris Keith DIRECTOR DIVISION OF DESIGN 11-21-07 DATE

APPROVED Marcheyn Mathews STATE HIGHWAY ENGINEER 11-21-07 DATE



CASE I, CASE II, AND CASE III

H	B	END AREA SQ. FT.	VOLUME C.Y. / L.F.
CASE I OR II OR III			
3'-0"	1'-6"	3.7500	0.1389
3'-6"	1'-9"	4.8125	0.1782
4'-0"	2'-0"	6.0000	0.2222
4'-6"	2'-3"	7.3125	0.2708
5'-0"	2'-6"	8.7500	0.3241
5'-6"	2'-9"	10.3125	0.3819
6'-0"	3'-0"	12.0000	0.4444
6'-6"	3'-3"	13.8125	0.5116
7'-0"	3'-6"	15.7500	0.5833
7'-6"	3'-9"	17.8125	0.6597
8'-0"	4'-0"	20.0000	0.7407
8'-6"	4'-3"	22.3125	0.8264
9'-0"	4'-6"	24.7500	0.9167
9'-6"	4'-9"	27.3125	1.0116
CASE I			
10'-0"	5'-0"	30.0000	1.1111
10'-6"	5'-3"	32.8125	1.2153
11'-0"	5'-6"	35.7500	1.3241
11'-6"	5'-9"	38.8125	1.4375
12'-0"	6'-0"	42.0000	1.5556
CASE II OR III			
10'-0"	6'-0"	35.0000	1.2963
10'-6"	6'-3"	38.0625	1.4097
11'-0"	6'-6"	41.2500	1.5278
11'-6"	6'-9"	44.5625	1.6505
12'-0"	7'-0"	48.0000	1.7778

NOTES

THE RETAINING WALL DEPICTED ON THIS DRAWING SHALL BE USED WHEN THE HEIGHT (H DIMENSION) OF THE WALL IS 12'-0" OR LESS PROVIDED THE FILL COMPLIES WITH THE FOLLOWING CONDITIONS:

CASE I - WALL BACKFILL SLOPES DOWN , IS LEVEL, OR SLOPES UP FROM WALL AT 20:1 OR FLATTER. THIS LOW SLOPE ALLOWS FOR BACKFILLS WHICH WOULD BE LEVEL EXCEPT FOR THE SLOPE REQUIRED TO FACILITATE PROPER DRAINAGE.

CASE II - BACKFILL SLOPES UP STEEPER THAN 20:1 BUT NOT STEEPER THAN 4:1.

CASE III - BACKFILL SLOPES UP STEEPER THAN 4:1 BUT NOT STEEPER THAN 2:1. WHEN H DIMENSION IS GREATER THAN 8' (HEIGHT OF EXPOSED FACE GREATER THAN 6') INCREASE THE EMBEDMENT DEPTH TO 1/4H. (1).

SPECIAL DESIGNS SHALL BE REQUIRED WHEN THE FOLLOWING CONDITIONS EXIST:

(A) WALL HEIGHT IS GREATER THAN 12'-0"

(B) WALL IS SURCHARGED WITH DEAD LOAD FILL SLOPES STEEPER THAN 2:1.

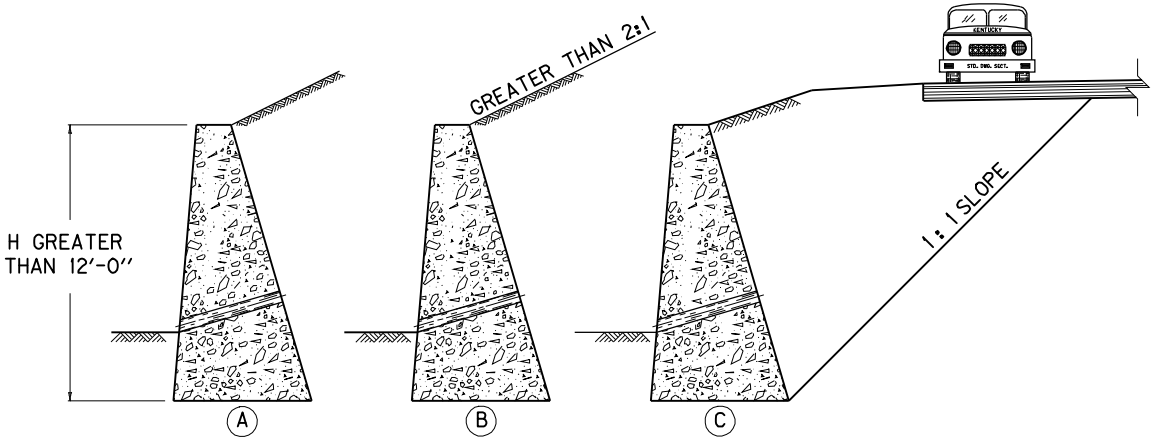
(C) WALL IS SURCHARGED WITH A LIVE LOAD WITHIN THE LIMITS OF A 1:1 SLOPE EXTENDING FROM THE BASE OF THE WALL.

AREAS AND VOLUMES HAVE BEEN COMPUTED WITHOUT DEDUCTING FOR BEVELED EDGES OR PIPE DRAINS. WHEN A RETAINING WALL VARIES IN HEIGHT, THE PRISMOIDAL FORMULA SHALL BE USED IN COMPUTING VOLUMES.

(1) MINIMUM EMBEDMENT VALUE FOR FIRM EARTH IS 2'-0"; CASE III REQUIRES AN EMBEDMENT OF 1/4H FOR A WALL OVER 8' (SEE CASE III ABOVE).

(2) BATTER: CASE I, AND CASE II
H = 3'-0" TO LESS THAN 5'-0" (VERTICAL)
H = 5'-0" TO LESS THAN 10'-0" (12 : 1)
H = 10'-0" TO 12'-0" (6 : 1)
CASE III
H = 3'-0" TO LESS THAN 5'-0" (12 : 1)
H = 5'-0" TO 12'-0" (6 : 1)

(3) FABRIC WRAPPED DRAINS AND 4" PIPE FOR WEEPHOLES SHALL BE INCLUDED IN THE UNIT PRICE BID FOR GRAVITY TYPE RETAINING WALLS.



SPECIAL DESIGNS REQUIRED

PAY ITEM	PAY UNIT
CONCRETE, CLASS B	CU. YD.
STRUCTURE EXCAVATION	CU. YD.
GRANULAR EMBANKMENT (WHEN REQUIRED)	CU. YD.

KENTUCKY
DEPARTMENT OF HIGHWAYS

RETAINING WALL GRAVITY TYPE NON - REINFORCED

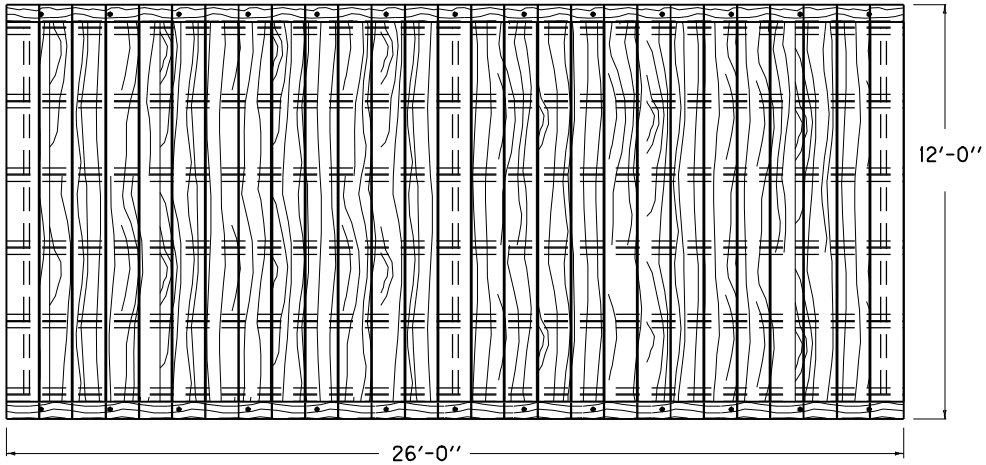
STANDARD DRAWING NO. RGX-002-08

SUBMITTED Gary W. Sharp, DIRECTOR DIVISION OF DESIGN 12-2-02 DATE

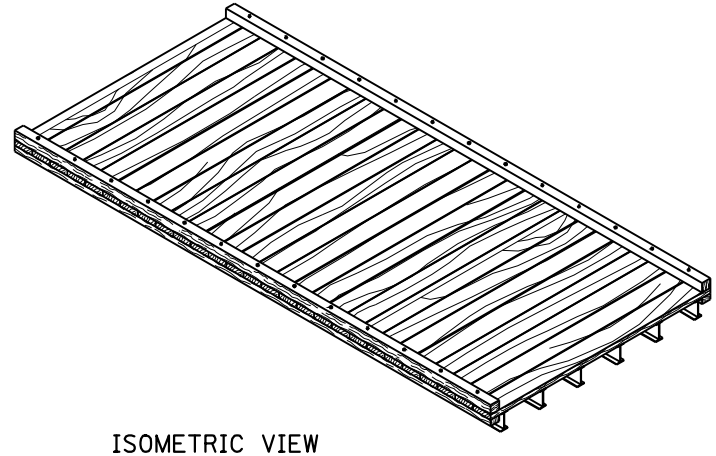
APPROVED J. M. Yowell, STATE HIGHWAY ENGINEER 12-2-02 DATE

NOTES

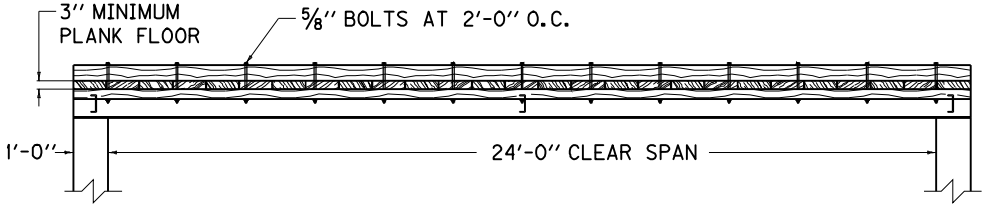
1. TYPES OF TEMPORARY BRIDGES AND PAVEMENT CROSSOVERS, OTHER THAN THE I-BEAM BRIDGE SHOWN HERE, WILL BE ACCEPTABLE UPON APPROVAL BY THE DEPARTMENT.
2. UNLESS OTHERWISE SPECIFIED THE STRUCTURE SHALL BE DESIGNED FOR AN H-10 LOADING.
3. STRUCTURE TO REMAIN THE PROPERTY OF THE CONTRACTOR.



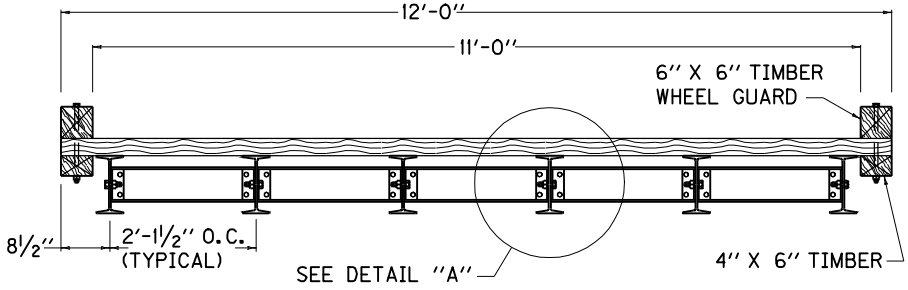
PLAN VIEW



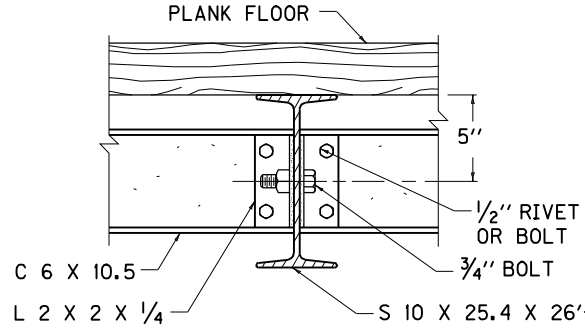
ISOMETRIC VIEW



ELEVATION VIEW



TYPICAL SECTION



DETAIL "A"

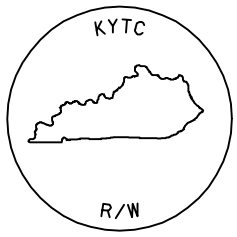
KENTUCKY
DEPARTMENT OF HIGHWAYS

TEMPORARY BRIDGE
OR
PAVEMENT CROSSOVER

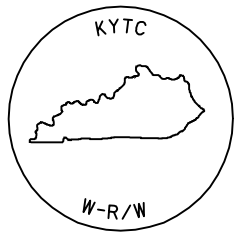
STANDARD DRAWING NO. RGX-003-02

SUBMITTED John B. Sachstetter — DIRECTOR DIVISION OF DESIGN — 12-1-99 DATE

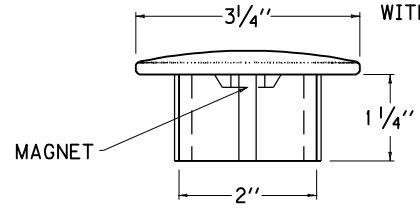
APPROVED — STATE HIGHWAY ENGINEER — 12-1-99 DATE



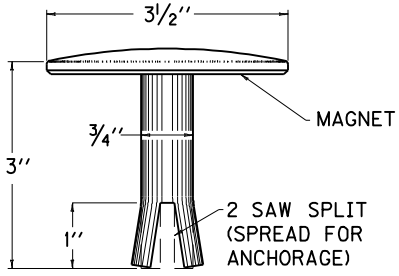
R/W MONUMENT
TYPE 1 OR 1A



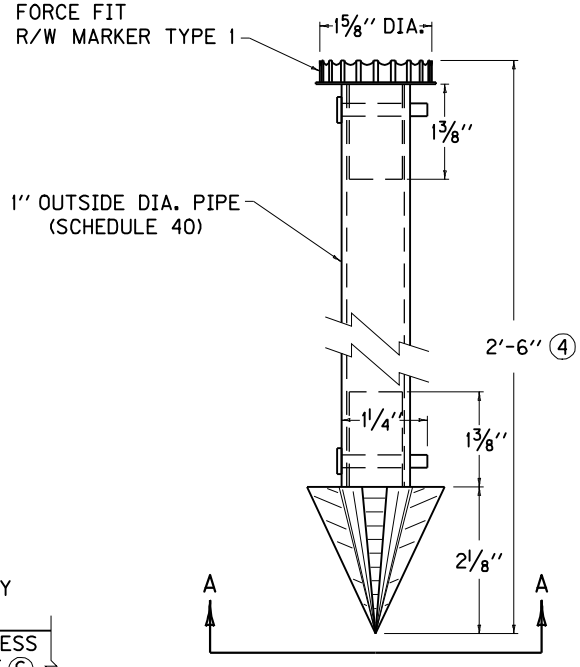
WITNESS R/W MONUMENT
TYPE 2



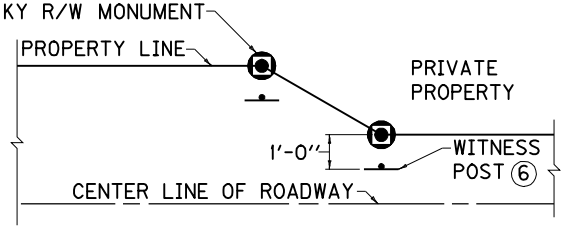
ELEVATION VIEW
R/W MONUMENT TYPE 1



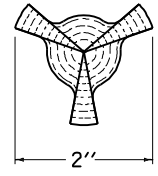
ELEVATION VIEW
R/W MONUMENT TYPE 1A



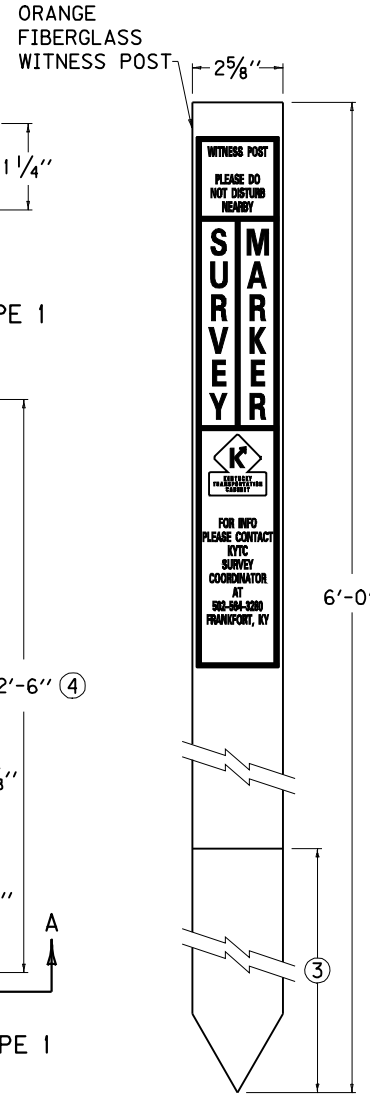
ELEVATION VIEW
R/W MONUMENT TYPE 1



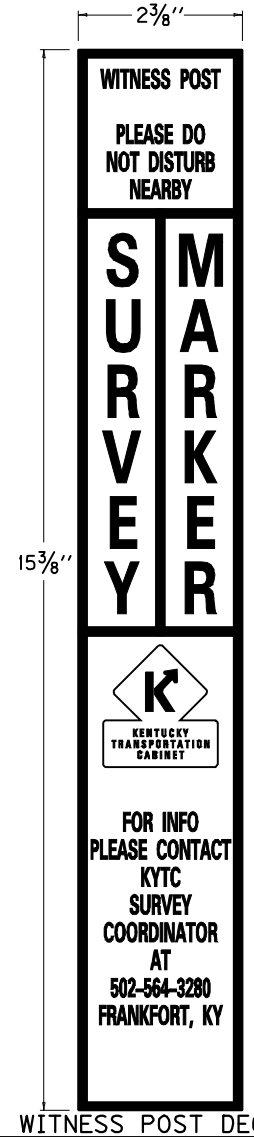
LAYOUT OF RURAL RIGHT-OF-WAY MONUMENTS



SECTION A-A



ELEVATION WITNESS POST



WITNESS POST DECAL

NOTES

1. MANUFACTURE R/W MONUMENTS FROM ALUMINUM ALLOY.
2. TYPE 1A MARKERS SHALL BE MOUNTED FLUSH IN EXISTING PAVEMENT, DRAINAGE BOXES, ETC. DRILL A 1 1/16'' DIAMETER HOLE AND EPOXY (COMMERICAL GRADE) INTO EXISTING CONCRETE.

③ WITNESS POST SHALL BE BURIED 1'-6'' TO 2'-0'' IN GROUND.

④ WHEN ROCK IS ENCOUNTERED LENGTH MAY BE REDUCED.

5. SET ALL R/W MONUMENTS FLUSH WITH GROUND OR ADJOINING SURFACE.

⑥ THE LAND SURVEYOR IN CHARGE OF MONUMENTATION IS ENCOURAGED TO PLACE A WITNESS POST FOR THE RIGHT-OF-WAY MONUMENTS WHERE PRACTICAL AND FEASIBLE. IF POSSIBLE, A MINIMUM OF THREE WITNESS POSTS PER PROJECT SHOULD BE PLACED.

KENTUCKY
DEPARTMENT OF HIGHWAYS

RIGHT-OF-WAY MONUMENTS

STANDARD DRAWING NO. RGX-005-05

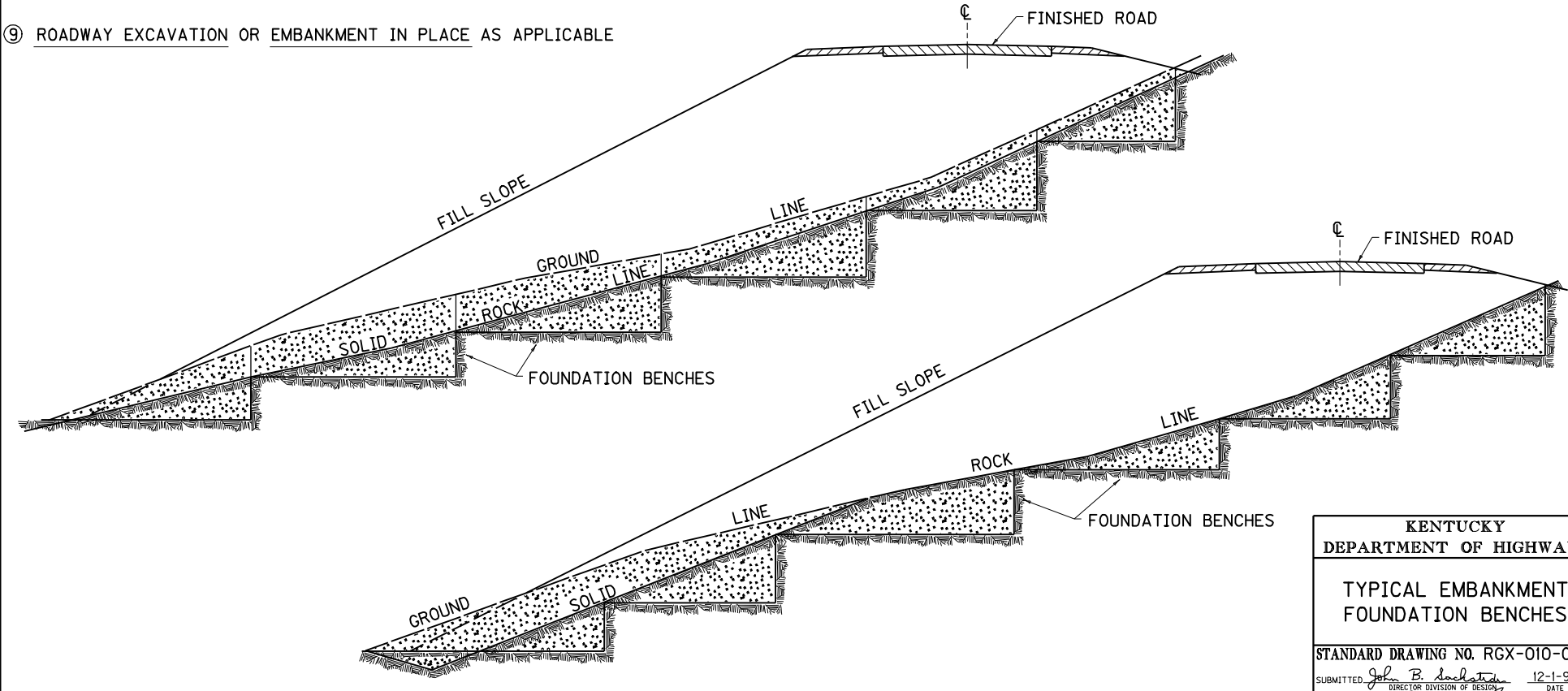
SUBMITTED David Keith — DIRECTOR DIVISION OF DESIGN — 11-21-07 DATE

APPROVED Marcheyn Mathews — STATE HIGHWAY ENGINEER — 11-21-07 DATE

TYPICAL EMBANKMENT FOUNDATION BENCHES

1. THIS TREATMENT FOR EMBANKMENT FOUNDATION BENCHES AS INDICATED ON THIS SHEET, SHALL BE ACCEPTED AS GUIDES FOR HIGHWAY DESIGN, HOWEVER, ALL THE CONDITIONS THAT WILL BE ENCOUNTERED CANNOT BE SHOWN, SO THE DESIGNER MUST GIVE CONSIDERABLE THOUGHT TO THE LOCATIONS AND DIMENSIONS OF THESE BENCHES.
2. DEFINITE DESIGN INFORMATION CANNOT BE ESTABLISHED AS TO SIZE OF THESE BENCHES, DUE TO THE IRREGULARITIES AND THE DIFFERENT RATES OF INCLINE OF THE EXISTING CROSS SECTION, HOWEVER, IT IS GENERALLY BELIEVED THAT A 6' TO 12' RISE AND A 20' TO 35' HORIZONTAL RUN IS FAIRLY TYPICAL WITH A 15' HORIZONTAL RUN BEING THE MINIMUM.
3. WHEN THE INCLINE OF THE CROSS SECTION IS 15 PERCENT OR GREATER THESE EMBANKMENT FOUNDATION BENCHES SHALL BE CONSTRUCTED IN THE ORIGINAL SLOPE AS THE EMBANKMENT IS CONSTRUCTED IN COMPACTED LAYERS OR LIFTS.
4. WHEN EMBANKMENT FOUNDATION BENCHES ARE SHOWN ON THE CROSS SECTION, THE VOLUME SHALL BE COMPUTED AS ROADWAY EXCAVATION OR EMBANKMENT IN PLACE AS APPLICABLE AND SHOWN IN THE SHEET TOTALS AND BROUGHT FORWARD TO BE INCLUDED IN THE TOTAL EARTHWORK WITH THIS NOTE "⑨ TOTAL INCLUDES "X" NUMBER OF CUBIC YARDS FROM EMBANKMENT FOUNDATION BENCHES."
5. THE EXCAVATION FROM THESE BENCHES WILL NOT BE SHOWN IN THE DISTRIBUTION OF QUANTITIES BUT THEY WILL DEFINITELY BE A PAY QUANTITY BY VIRTUE OF THE FACT THEY ARE INCLUDED IN THE TOTAL OF ROADWAY EXCAVATION QUANTITIES.
6. NO QUANTITIES WILL BE ALLOWED FOR THE REFILLING OF THESE BENCHES, SINCE SUPPOSEDLY, THE MATERIAL THAT WAS EXCAVATED WILL BE PROCESSED AND PLACED BACK IN THESE BENCHES.
7. IF THE CROSS SECTION IS AN EARTH ONE, THAT IS IF NO ROCK IS SHOWN, THEN THE FOUNDATION BENCHES SHALL BE INDICATED ON THE CROSS SECTION AND CONSTRUCTED AS SHOWN BY THE DRAWING AND THE VOLUME OF EXCAVATION BECOMES A PAY ITEM AS ROADWAY EXCAVATION OR EMBANKMENT IN PLACE AS APPLICABLE, IN OTHER WORDS, SUPPORT BENCHING OF EARTH SECTIONS SHALL BE GIVEN SAME TREATMENT AS ROCK OR NEAR ROCK SECTION.
8. SHOULD IT BE EVIDENT, AT THE TIME OF CONSTRUCTION, THAT THE ENGINEER FINDS AND SO DIRECTS THAT EMBANKMENT FOUNDATION BENCHING IS NECESSARY AND IT IS NOT SO INDICATED ON THE DESIGN CROSS SECTIONS THE BASIS OF PAYMENT SHALL BE AS HEREIN BEFORE STATED.

⑨ ROADWAY EXCAVATION OR EMBANKMENT IN PLACE AS APPLICABLE



KENTUCKY
DEPARTMENT OF HIGHWAYS

TYPICAL EMBANKMENT
FOUNDATION BENCHES

STANDARD DRAWING NO. RGX-010-03

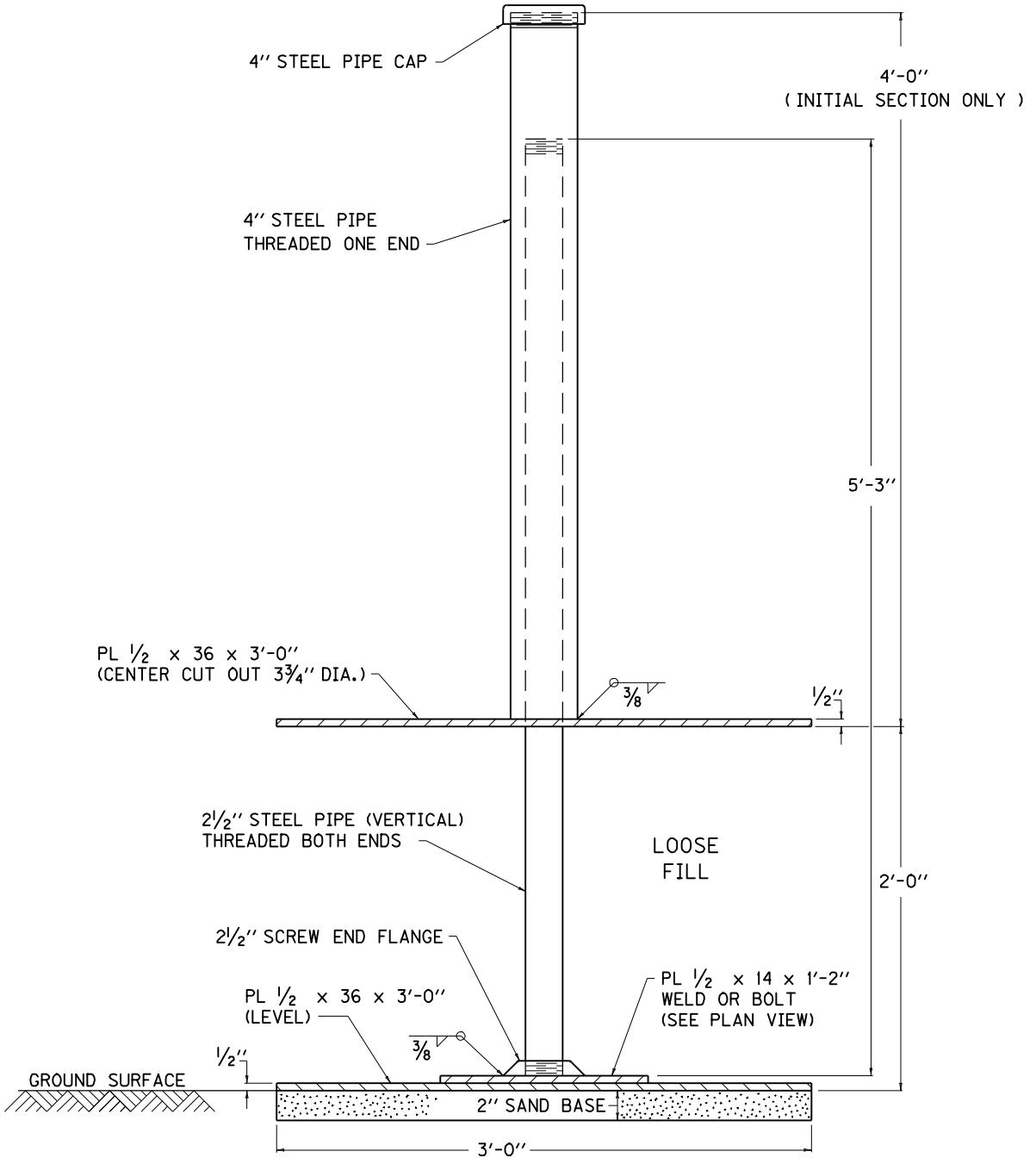
SUBMITTED John B. Sachstetter — DIRECTOR DIVISION OF DESIGN — 12-1-99 DATE

APPROVED — STATE HIGHWAY ENGINEER — 12-1-99 DATE

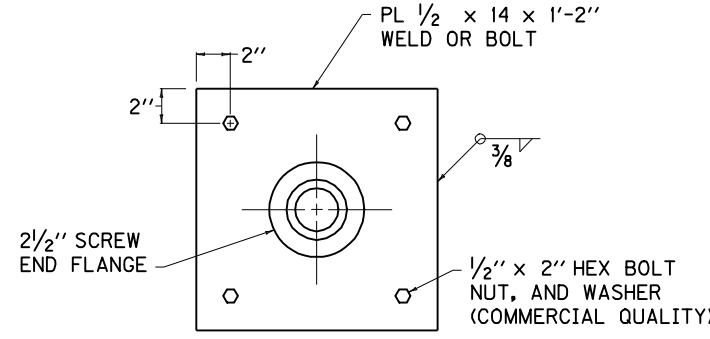
NOTES

ADDITIONAL PIPE SHALL BE FURNISHED IN 5'-3" SECTIONS (DUE TO COMMERICAL PIPE LENGTHS OF 21'-0") THREADED ON BOTH ENDS, PAID FOR PER LINEAR FOOT AND SHALL MEET THE REQUIREMENTS OF SECTION 810.05.03 OF THE CURRENT STANDARD SPECIFICATIONS.

PIPE SIZES ARE GIVEN IN NOMINAL DIAMETERS.



ELEVATION VIEW



PLAN VIEW

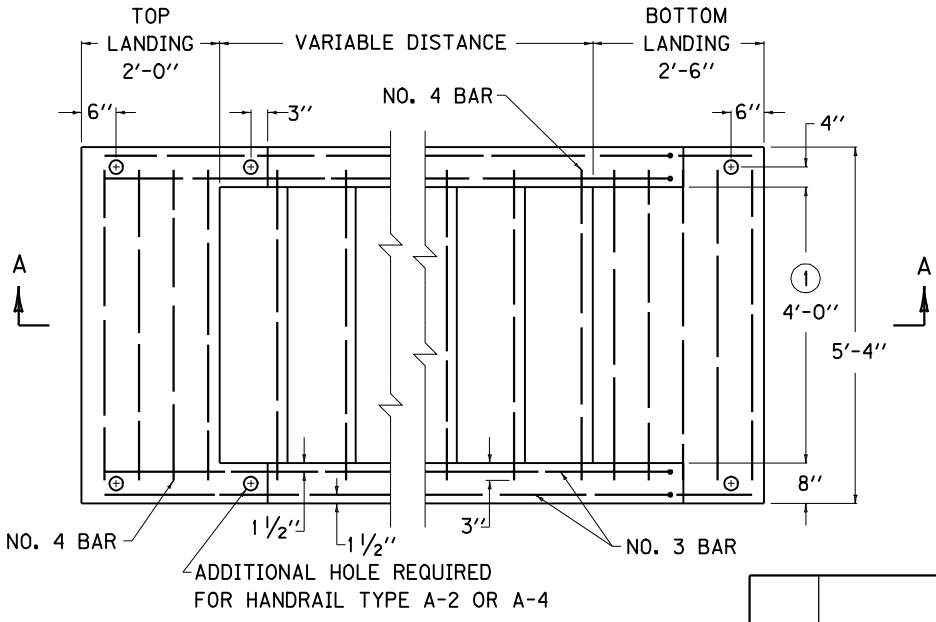
KENTUCKY
DEPARTMENT OF HIGHWAYS

SETTLEMENT PLATFORM

STANDARD DRAWING NO. RGX-015-02

SUBMITTED John B. Sachstetter — DIRECTOR DIVISION OF DESIGN — 12-1-99 DATE

APPROVED — STATE HIGHWAY ENGINEER — 12-1-99 DATE



PLAN VIEW

NOTES

BID ITEM AND UNIT TO BID:

CLASS "A" CONCRETE FOR STEPS (CUBIC YARDS)

MATERIAL REQUIRMENTS:

(A) MAT REINFORCEMENT (2)
NO. 4 REINFORCEMENT BARS, LONGITUDINAL BARS 6" O.C. AND TRANSVERSE BARS 12" O.C. MIN. GRADE 40; OR
WELDED WIRE FABRIC - 6x6 - W4xW4 58 LBS./100 SQ. FT.

(B) NO. 4 REINFORCEMENT BARS ADDITIONALLY AS SHOWN.

(C) NO. 3 REINFORCEMENT BARS ADDITIONALLY AS SHOWN.

GENERAL:

(A) ROUND ALL EXPOSED EDGES AND CORNERS 1/4" R.

(B) MAT REINFORCEMENT IN BOTTOM OF THE STEPS SHALL BE WIRE FABRIC OR BAR MAT REINFORCEMENT (2) .

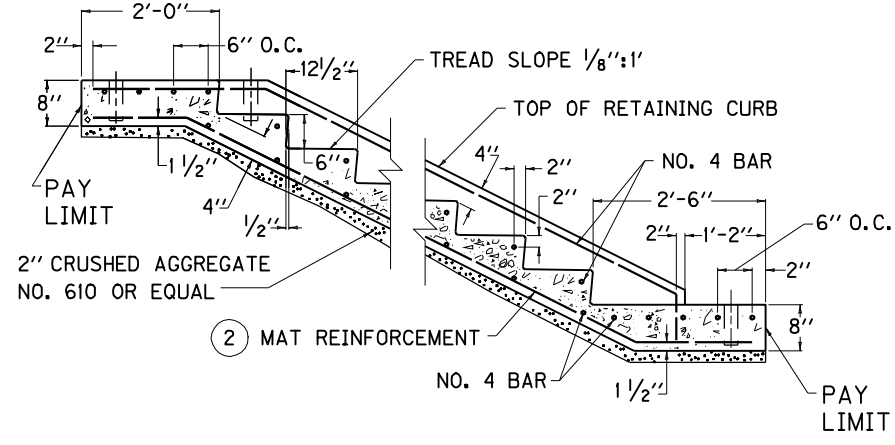
(C) HANDRAIL SHALL BE REQUIRED WITH THREE OR MORE STEPS.

(D) REINFORCING STEEL SHALL BE PLACED SO NOT TO INTERFERE WITH HANDRAIL POSTS.

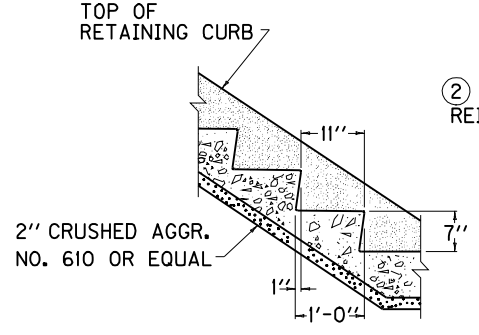
TABLE OF QUANTITIES

SLOPE	LOCATION	ADDITIONAL NO. 4 BAR REINF. (LBS.)		MAT REINFORCEMENT				CU. YDS. CLASS "A" CONCRETE	
				WIRE FABRIC (SQ. FT.)		BAR MAT (LBS.)			
		4' WIDTH	(1)	4' WIDTH	(1)	4' WIDTH	(1)	4' WIDTH	(1)
2:1	BOTTOM LANDING	23.547	3.340	11.776	2.375	27.388	5.177	0.337	0.059
	INTERMEDIATE STEP	10.855	1.336	5.991	1.208	12.191	2.283	0.16	0.025
	TOP LANDING	22.483	3.340	9.504	1.917	20.708	3.897	0.265	0.051
1 1/2:1	BOTTOM LANDING	23.603	3.340	12.602	2.542	28.613	5.400	0.36	0.062
	INTERMEDIATE STEP	10.271	1.336	5.268	1.063	11.119	2.088	0.16	0.025
	TOP LANDING	22.545	3.340	9.710	1.958	21.014	3.952	0.281	0.054

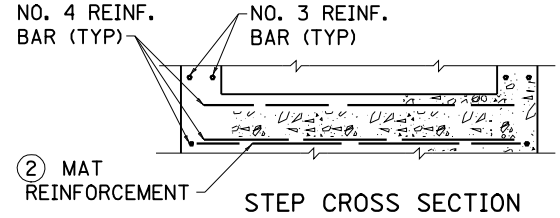
(1) APPROXIMATE QUANTITY TO ADD FOR EACH ADDITIONAL FOOT OF WIDTH OVER 4'-0".



SECTION A-A 2:1 SLOPE



STEP DETAIL FOR 1 1/2:1 SLOPE



STEP CROSS SECTION

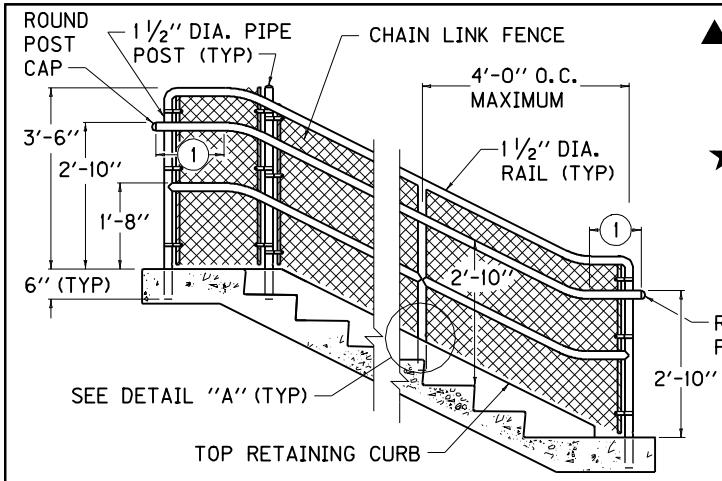
KENTUCKY DEPARTMENT OF HIGHWAYS

CONCRETE STEPS

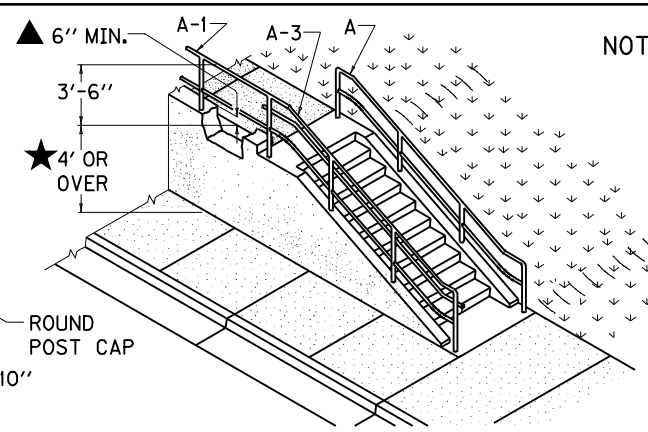
STANDARD DRAWING NO. RGX-020-12

SUBMITTED Gary W. Sharp, DIRECTOR DIVISION OF DESIGN 12-2-02 DATE

APPROVED J. M. Yowell, STATE HIGHWAY ENGINEER 12-2-02 DATE



ELEVATION OF HANDRAIL TYPE A-4



ISOMETRIC OF HANDRAIL TYPE A, A-1 AND A-2

HANDRAIL TYPE DESCRIPTION TABLE

TYPE	HEIGHT REQD.	FENCE REQD.	MAX. POST SPACING	NO. OF RAILS
A	2'-10"	NO	4'-0"	2
A-1	3'-6"	NO	4'-0"	2
A-2	3'-6"	YES	4'-0"	2
A-3	3'-6"	NO	4'-0"	3
A-4	3'-6"	YES	4'-0"	3

NOTES: BID ITEM AND UNIT TO BID PER LINEAR FOOT: HANDRAIL TYPE A, A-1, A-2, A-3 OR A-4.

HANDRAIL WITH INTERNAL CONNECTIONS: HANDRAIL SHALL BE CONSTRUCTED OF 1 1/2" SCHEDULE 40 ALUMINUM PIPE IN ACCORDANCE WITH ASTM B221 ALLOY 6063-T52 FOR RAIL AND ASTM B210 ALLOY 6063-T832 FOR POSTS.

~OR~

HANDRAIL WITH WELDED CONNECTIONS: HANDRAIL SHALL BE CONSTRUCTED OF 1 1/2" SCHEDULE 40 ALUMINUM PIPE IN ACCORDANCE WITH ASTM B221 OR B210 ALLOY 6061-T6.

ANCHOR POST IN FORMED HOLES (SEE DETAIL "A"). FOR INSTALLATION PROCEDURES OF THE CHAIN LINK FENCE AS APPLICABLE SEE CUR. STD. DWG. RFC-001.

HANDRAIL SHALL BE REQUIRED WITH THREE OR MORE STEPS. HANDRAIL IS OPTIONAL WITH LESS THAN THREE STEPS.

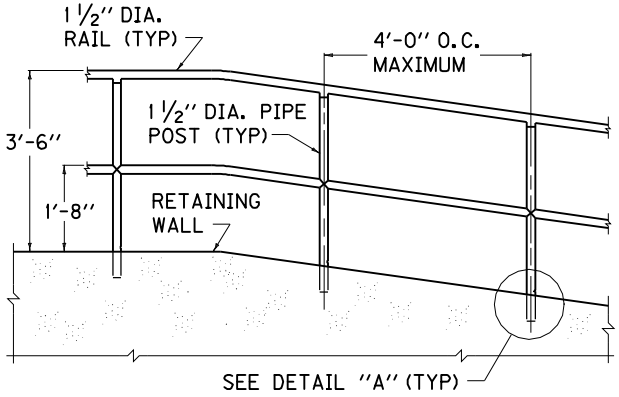
★ HANDRAIL USED AS A TOP HANDRAIL ON STEPS AND HANDRAIL USED ON A RETAINING WALL SHALL BE REQUIRED WHEN THE ADJACENT FLOOR, GROUND LEVEL, ROAD, WALK, ETC. IS 4' OR MORE BELOW THE TOP OF THE RETAINING WALL.

▲ THE TOP OF THE RETAINING WALL OR CURB SHALL BE A MIN. OF 6" ABOVE THE ADJOINING SIDEWALK.

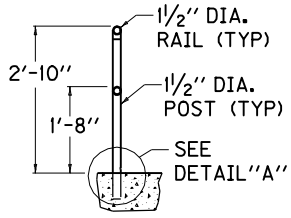
(1) A DISTANCE OF 1'-0" MIN. SHALL BE PARALLEL TO THE STEP RUNNER.

ALL INTERNAL CONNECTIONS SHALL BE MADE WITH AN EPOXY ADHESIVE (RECOMMENDED BY THE MANUFACTURE), STAINLESS STEEL MACHINE SCREWS WITH LOCK WASHERS, AND THREADED TUBULAR RIVETS IN ORDER TO PROVIDE A SMOOTH INSTALLATION. EXPANSION JOINTS SHALL BE PROVIDED APPROX. 20'-0" O.C.

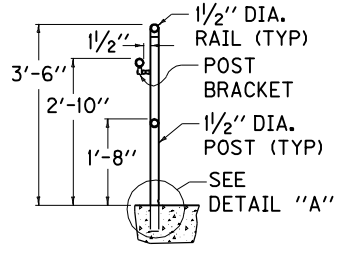
SIDEWALK SLABS SHALL BE THICKENED TO 8"x8"x8" AT POST LOCATIONS.



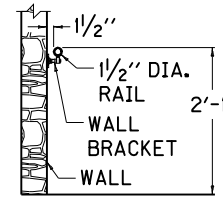
ELEVATION OF HANDRAIL TYPE A-1



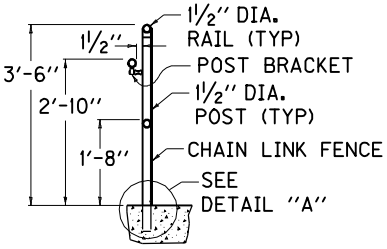
SECTION OF HANDRAIL TYPE A



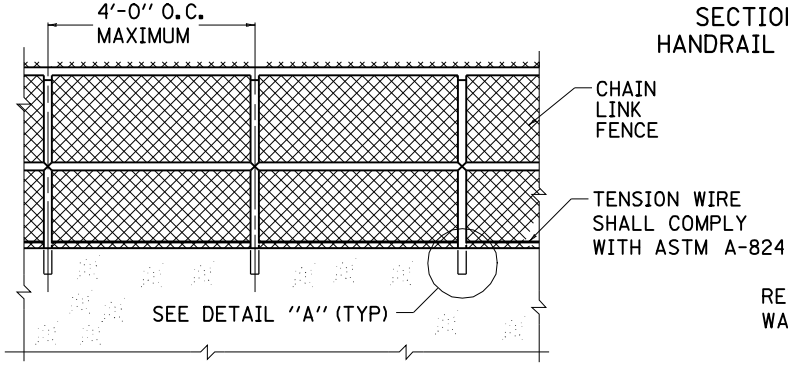
SECTION OF HANDRAIL TYPE A-3



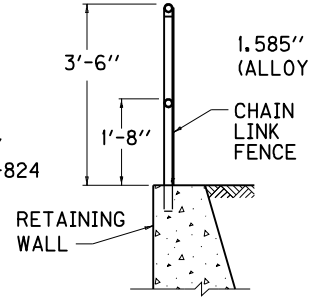
SECT. FOR WALL MOUNTED HANDRAIL



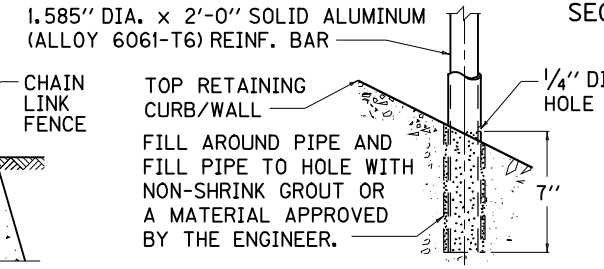
SECT. OF HANDRAIL TYPE A-4



ELEVATION OF HANDRAIL TYPE A-2



SECTION OF HANDRAIL TYPE A-2



DETAIL "A"

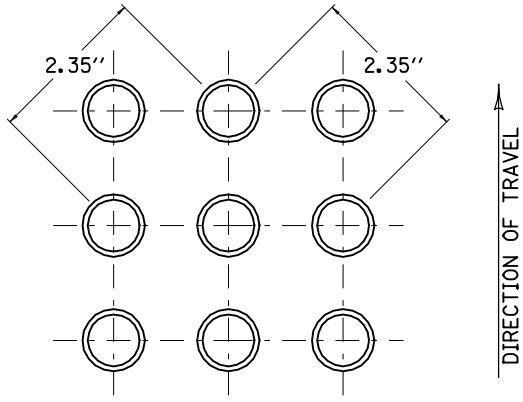
KENTUCKY DEPARTMENT OF HIGHWAYS

HANDRAIL TYPE A, A-1, A-2, A-3, A-4

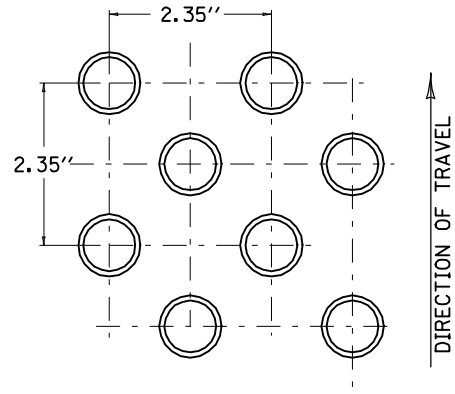
STANDARD DRAWING NO. RGX-030-06

SUBMITTED John B. Rochester, DIRECTOR DIVISION OF DESIGN — DATE 12-1-99

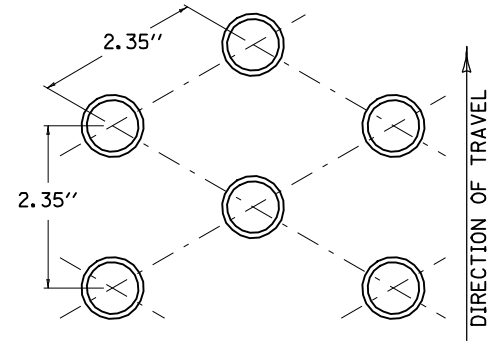
APPROVED [signature], STATE HIGHWAY ENGINEER — DATE 12-1-99



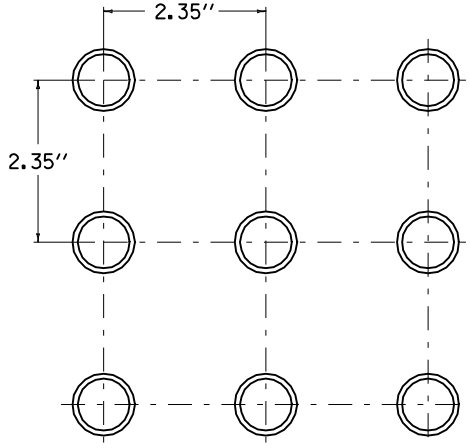
SQUARE PATTERN (PARALLEL ALIGNMENT)



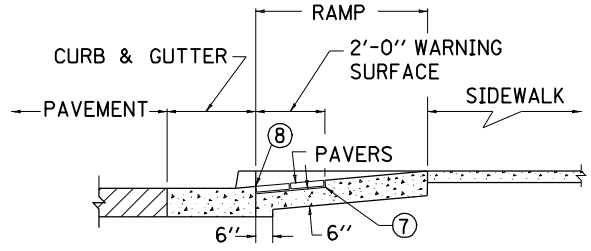
SQUARE PATTERN (DIAGONAL ALIGNMENT)



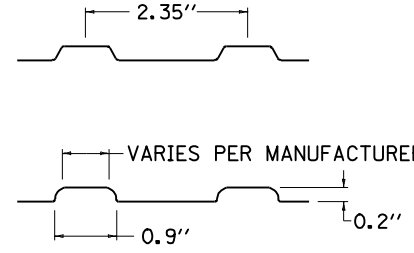
TRIANGULAR PATTERN



SQUARE PATTERN



TYPICAL DETECTABLE WARNING INSTALLATION



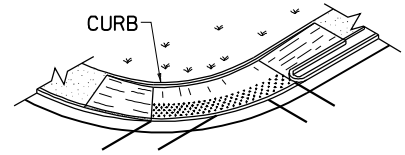
TRUNCATED DOME PROFILE

NOTES

1. LANDINGS WILL PROVIDE A LEVEL AREA (LESS THAN 2% GRADE OR CROSS SLOPE) AT APPROXIMATE STREET ELEVATION. A 4 FOOT SQUARE LEVEL LEVEL LANDING IS THE REQUIRED MINIMUM.
2. ALL SIDEWALK RAMPS REQUIRE DETECTABLE WARNINGS.
3. ANY DRIVEWAY 24' OR GREATER REQUIRES ADA SIDEWALK TREATMENTS WITH DETECTABLE WARNINGS WHICH WILL BE INCIDENTAL TO THE ENTRANCE CONSTRUCTION.
4. DETECTABLE WARNINGS SHALL BE INCIDENTAL TO SIDEWALK CONSTRUCTION.
5. PAVERS SHALL BE CONCRETE WITH A MINIMUM THICKNESS OF 2''.
6. PAVERS SHALL BE A COLOR HOMOGENOUS THROUGHOUT THE PAVER, THAT COLOR SHALL CONTRAST VISUALLY WITH THE ADJOINING SURFACES, EITHER LIGHT-ON-DARK OR DARK-ON-LIGHT. THE DEPARTMENT WILL ALLOW EITHER YELLOW OR RED AS COLORS.

⑦ PAVERS TO BE SET IN MORTAR.

⑧ DETECTABLE WARNING SURFACE BEGINS AT BACK OF CURB.



TYPICAL PLACEMENT PARALLEL CURB RAMPS

USE WITH CUR. STD. DWGS. RPM-160 AND RPM-170

KENTUCKY DEPARTMENT OF HIGHWAYS

TRUNCATED DOMES

STANDARD DRAWING NO. RGX-040

SUBMITTED _____ DIRECTOR DIVISION OF DESIGN 11-21-07 DATE

APPROVED _____ STATE HIGHWAY ENGINEER 11-21-07 DATE

NOTES

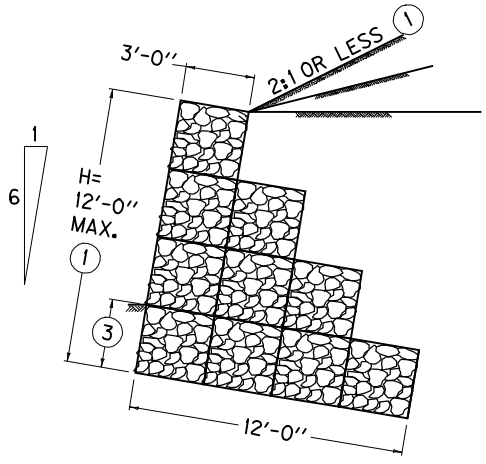
BID ITEMS AND UNITS TO BID:
- a. RETAINING WALL, GABION - CUBIC YARD
- b. STRUCTURE EXCAVATION, AS CLASSIFIED - SEE THE CURRENT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION.

(1) THE GABION RETAINING WALL DEPICTED ON THIS DRAWING SHALL BE USED WHEN THE HEIGHT (H DIMENSION) OF THE WALL IS 12'-0" OR LESS AND THE BACKFILL SLOPE IS 2:1 OR LESS.

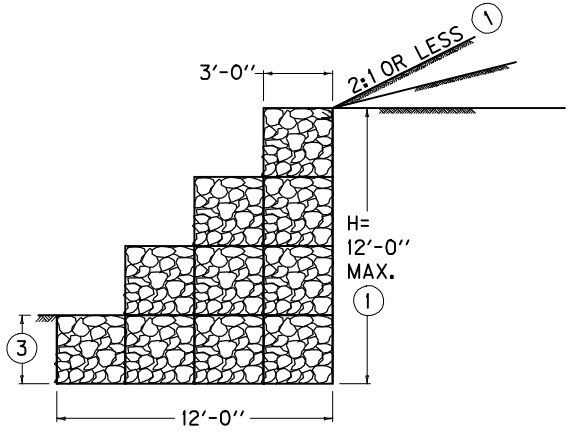
(2) LENGTH OF GABIONS MAY BE 6'-0", 9'-0" OR 12'-0" LONG WITH PARTITIONS 3'-0" ON CENTER.

(3) 3'-0" MINIMUM EMBEDMENT.

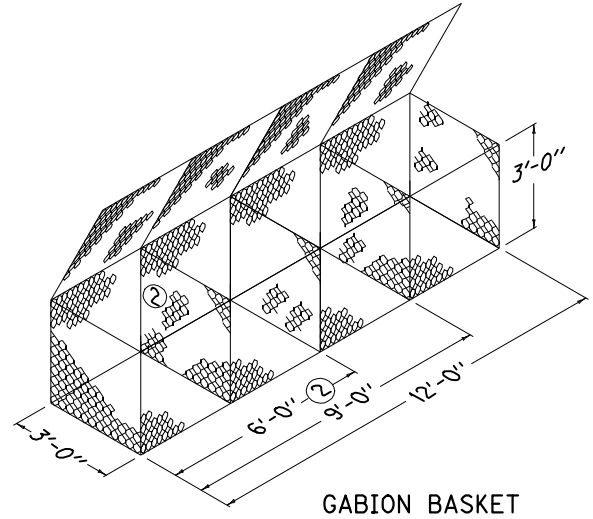
(4) SPECIAL DESIGNS SHALL BE REQUIRED WHEN THE FOLLOWING CONDITIONS EXIST:
- (A) WALL HEIGHT IS GREATER THAN 12'-0".
- (B) WALL IS SURCHARGED WITH DEAD LOAD FILL SLOPES STEEPER THAN 2:1.
- (C) WALL IS SURCHARGED WITH A LIVE LOAD WITHIN THE LIMITS OF A 1:1 SLOPE EXTENDING FROM THE BASE OF THE WALL.



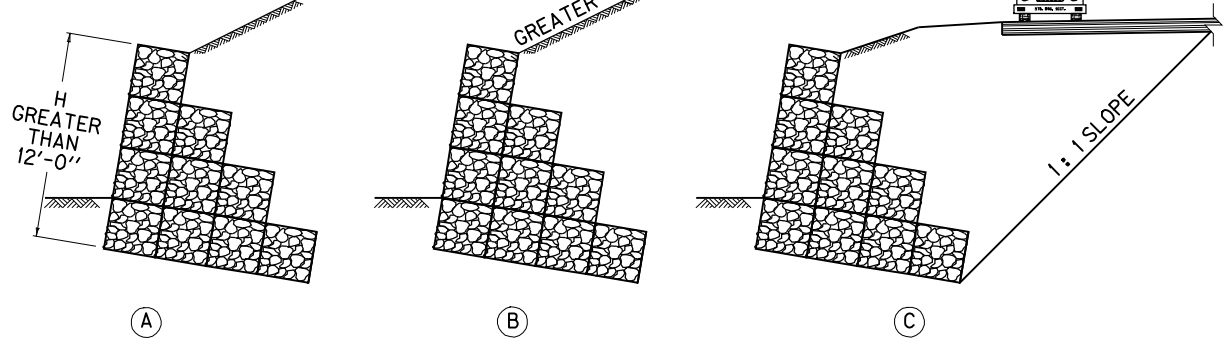
FRONT FACE 6:1 BATTER



FRONT FACE STEPPED



GABION BASKET ISOMETRIC



SPECIAL DESIGNS REQUIRED (4)

KENTUCKY
DEPARTMENT OF HIGHWAYS

GABION RETAINING WALLS

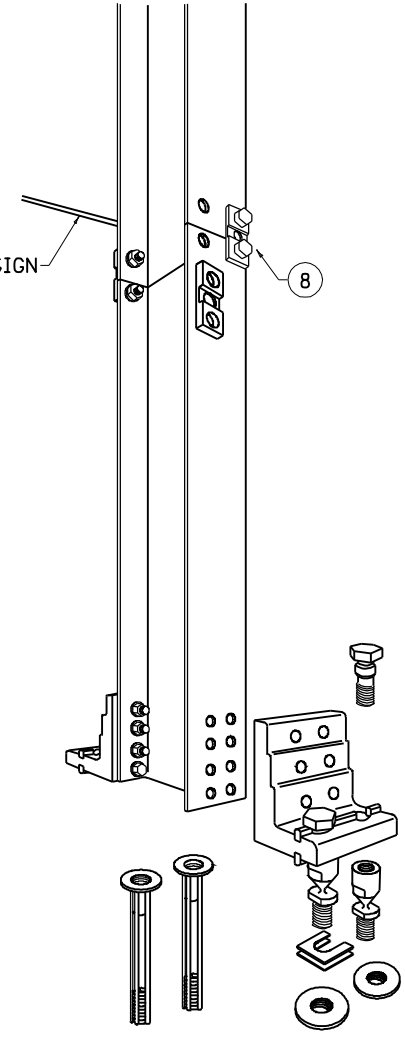
STANDARD DRAWING NO. RGX-050-01

SUBMITTED John B. Rochester, DIRECTOR DIVISION OF DESIGN — DATE 12-1-99

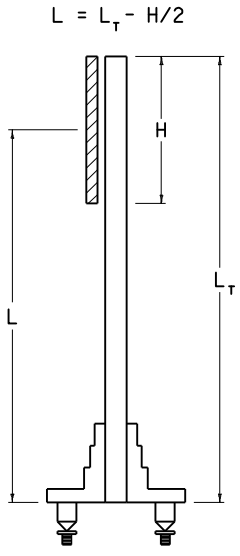
APPROVED [signature], STATE HIGHWAY ENGINEER — DATE 12-1-99

~NOTES~

1. BREAKAWAY SIGN SUPPORT SYSTEM FOR TYPE C BEAM SHALL BE SELECTED FROM THE KENTUCKY DEPARTMENT OF HIGHWAYS APPROVED LIST FOR BREAKAWAY SIGN SUPPORT SYSTEMS OR AN APPROVED EQUAL. ACCEPTABLE ALTERNATE BREAKAWAY SIGN SUPPORT SYSTEMS SHALL BE APPROVED BY THE DIVISION OF HIGHWAY DESIGN AND FHWA PRIOR TO INSTALLATION.
2. SELECTION OF THE PROPER BRACKET NUMBER SHALL BE IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.
3. ALL HARDWARE ITEMS SUPPLIED ARE AMERICAN STANDARD SIZES AND SHALL BE GALVANIZED AND CONFORM TO ASTM A153 OR ASTM B695.
4. FASTENERS, EXCEPT FOR SPECIAL BOLT AND COUPLINGS, ARE INSTALLED WITH LOCKWASHERS, AND DO NOT HAVE SPECIFIC TORQUE REQUIREMENTS. FASTENERS SHALL BE SECURED AS TIGHT AS POSSIBLE WITH CONVENTIONAL WRENCHES, UNLESS NOTED OTHERWISE.
5. SQUARE UP AND LEVEL INDIVIDUAL COMPONENTS, PARTICULARLY ANCHORS TO MINIMIZE THE NEED FOR SHIMMING BETWEEN THE COUPLINGS AND ANCHORS.
6. NO MORE THAN TWO SHIMS SHALL BE PLACED UNDER ANY ONE COUPLING. NO MORE THAN THREE SHIMS UNDERNEATH ANY PAIR OF COUPLINGS.
7. THE CONTRACTOR SHALL FURNISH TWO (2) COMPLETE SETS OF SHOP PLANS FOR APPROVAL BY THE ENGINEER A MINIMUM OF TWO WEEKS PRIOR TO INSTALLATION.
8. THE HINGE SHOULD BE AT LEAST 7'-0" ABOVE THE GROUND.
9. A SINGLE POST IF 7'-0" OR MORE FROM ANOTHER POST, SHALL HAVE A WEIGHT LESS THAN 45 LB./FT. TOTAL WEIGHT BELOW THE HINGE, BUT ABOVE THE SHEAR PLATE OF THE BREAKAWAY BASE, SHOULD NOT EXCEED 600 LB.
10. FOR TWO POSTS SPACED LESS THAN 7'-0" APART, EACH POST SHOULD HAVE A WEIGHT LESS THAN 18 LB./FT.
11. COUPLINGS SHALL NOT BE USED IN SIGN STRUCTURES WITH THREE SUPPORTS OR MORE IF POSTS ARE CLOSER THAN 7'-0" APART.
12. REFER TO DETAIL SHEET "FOOTING DETAILS FOR TYPE C BEAM" FOR FOOTER DETAILS.



~ PICTORIAL VIEW ~



~ ELEVATION VIEW ~

BRACKET SELECTION TABLE

I-BEAM POST SIZE	BRACKET NO. 1		BRACKET NO. 2		BRACKET NO. 3	
	MIN. "L"	MAX. "L"	MIN. "L"	MAX. "L"	MIN. "L"	MAX. "L"
6"	12'-0"	29'-0"	9'-0"	12'-0"	0	9'-0"
8"	14'-0"	29'-0"	10'-0"	14'-0"	0	10'-0"
10"	16'-0"	29'-0"	11'-0"	16'-0"	0	11'-0"
12"	18'-0"	29'-0"	13'-0"	18'-0"	0	13'-0"
14"	19'-0"	29'-0"	14'-0"	19'-0"	0	14'-0"
16"	21'-0"	29'-0"	15'-0"	21'-0"	0	15'-0"
18"	23'-0"	29'-0"	16'-0"	23'-0"	0	16'-0"
21"	25'-0"	29'-0"	18'-0"	25'-0"	0	18'-0"

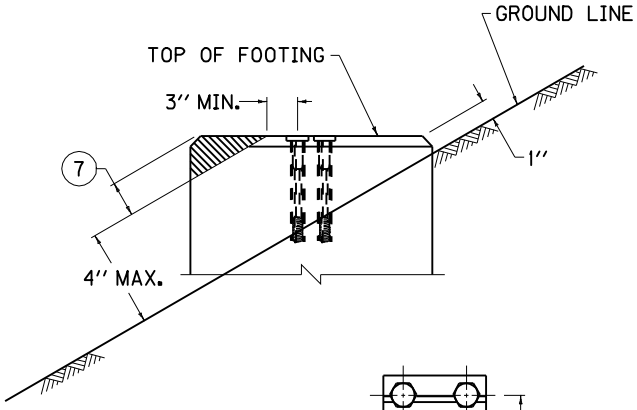
KENTUCKY DEPARTMENT OF HIGHWAYS

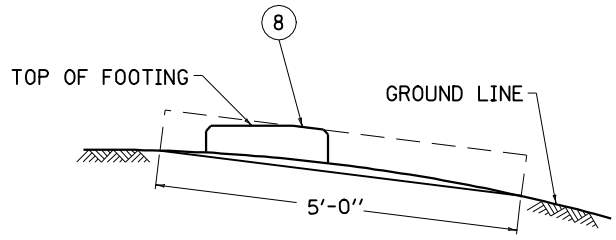
BREAKAWAY SIGN SUPPORT SYSTEM FOR TYPE C BEAM

STANDARD DRAWING NO. RGX-060

SUBMITTED Chris Kniffitt, DIRECTOR DIVISION OF DESIGN, 11-21-07 DATE

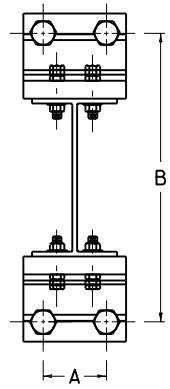
APPROVED Marcheyn Mathews, STATE HIGHWAY ENGINEER, 11-21-07 DATE





FOOTING SELECTION TABLE

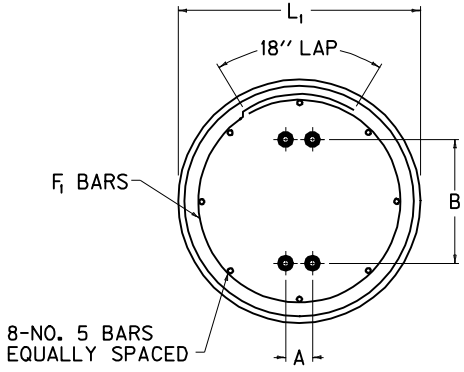
POST SIZE	L_1 DIA.	D_1 DEPTH	STEEL F_1 BARS QTY	STEEL F_1 BARS SIZE	REINF. LBS.	CONC. CU. YD.
W6	2'-0''	5'-0''	5	#4	57	0.58
W8	2'-6''	7'-0''	7	#4	88	1.27
W10	3'-0''	8'-0''	8	#4	110	2.09
W12	3'-0''	8'-0''	8	#4	110	2.09
W14	3'-0''	9'-0''	9	#4	124	2.36
W16	3'-6''	9'-0''	9	#4	133	3.21
W18	3'-6''	9'-0''	9	#4	133	3.21
W21	4'-0''	9'-0''	9	#4	143	4.19



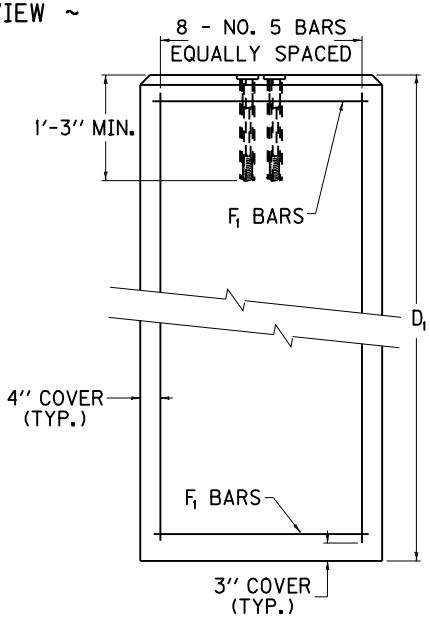
~ PLAN VIEW ~

~NOTES~

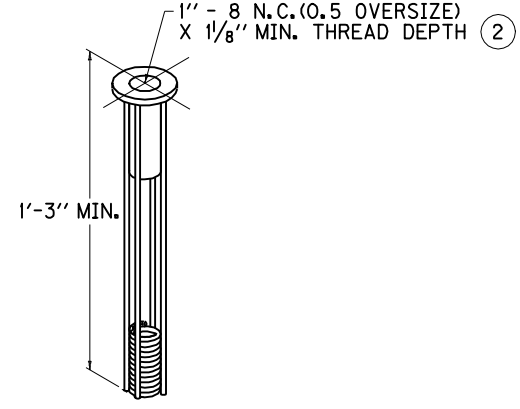
1. ENTER FOOTING SELECTION TABLE WITH REQUIRED POST SIZE AND FIND REQUIRED FOOTING VALUES AS SHOWN IN DETAILS.
2. THE ANCHOR SHALL BE 304 STAINLESS STEEL WITH 1053 STEEL ROD AND COIL.
3. FORM TOP 1'-0'' OF THE FOOTING.
4. USE CLASS ''A'' CONCRETE IN ALL FOOTINGS.
5. ACTUAL DIMENSIONS "A" & "B" SHOULD BE OBTAINED FROM THE MANUFACTURER OR MEASURED FROM THE ASSEMBLED BRACKETS PRIOR TO PLACEMENT OF ANCHORS.
6. TO INSURE PROPER SPACING AND ALIGNMENT OF ANCHORS, IT IS RECOMMENDED THAT ALL ANCHORS BE HELD IN PLACE BY A RIGID TEMPLATE WHILE THE CONCRETE IS PLACED AND CURED.
7. FOOTING PROJECTIONS ABOVE GROUND LINE SHALL BE MINIMIZED. THE MAXIMUM PERMISSIBLE FOOTING PROJECTION SHALL BE 4'' ON THE LOWER SLOPE SIDE. WHERE NECESSARY, THE SHADED AREA OF THE FOOTING SHALL BE REMOVED AND REINFORCEMENT SHALL BE BENT TO FIT.
8. THE TOP OF THE FOOTING SHALL NOT PROJECT MORE THAN 4'' ABOVE ANY 5'-0'' CHORD ALIGNED PERPENDICULARY TO THE EDGE OF THE ROADWAY BETWEEN A POINT ON THE GROUND SURFACE ON ONE SIDE OF THE SUPPORT TO A POINT ON THE GROUND SURFACE ON THE OTHER SIDE OF THE SUPPORT.



~ TOP VIEW ~



~ SIDE VIEW ~



~ ANCHOR PICTORIAL VIEW ~

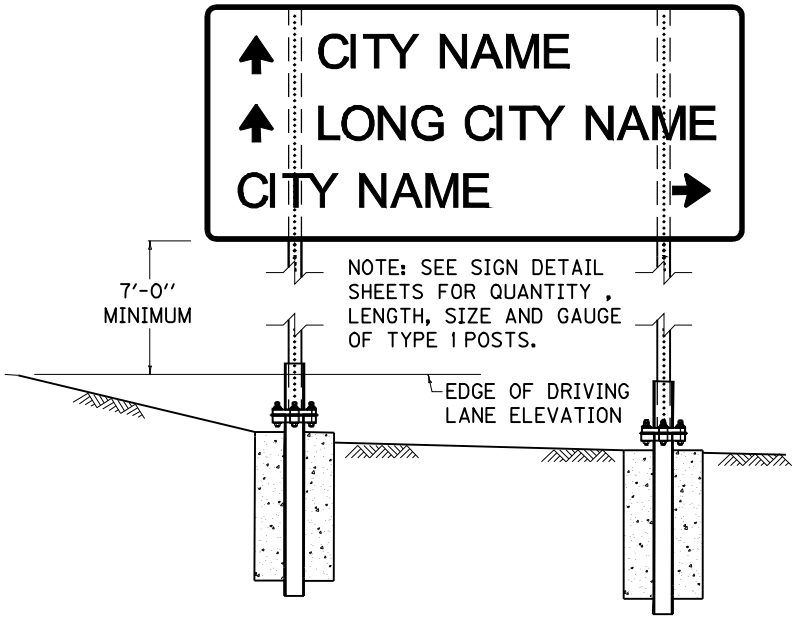
KENTUCKY
DEPARTMENT OF HIGHWAYS

FOOTING DETAILS FOR TYPE C BEAM

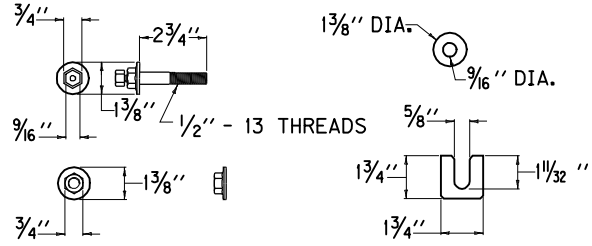
STANDARD DRAWING NO. RGX-061

SUBMITTED _____ DIRECTOR DIVISION OF DESIGN — 11-21-07 DATE

APPROVED _____ STATE HIGHWAY ENGINEER — 11-21-07 DATE



TYPICAL SHEETING SIGN BREAKAWAY SUPPORT INSTALLATION



TORQUE FREE MATCH PLATE HARDWARE

TYPE "D" SUPPORT
OMNI-DIRECTIONAL BREAK-A-WAY
FOR TYPE 1 POSTS

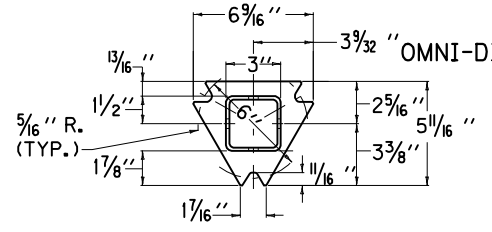
NOTES

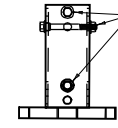
1. AUGER AN 18" DIA. HOLE BY 42" DEEP AT THE PREDETERMINED LOCATION.
2. TAP THE BOTTOM OF THE 48" BASE STUB INTO THE SOIL IN THE BOTTOM OF THE HOLE WITH THE BASE PLUMB AND SQUARED UP WITH THE ROADWAY, MAKING SURE THE POINT OF THE PLATE IS FACING ONCOMING TRAFFIC. (THIS SERVES TO STABILIZE THE BASE WHILE POURING THE CONCRETE AS WELL AS TO ALLOW FOR WATER DRAINAGE BELOW THE CONCRETE FOOTING.)
3. DEPTH OF IMBEDMENT TO LEAVE 2 1/2" FROM THE GRADE TO THE TOP OF THE BASE.
4. ALLOW CONCRETE TO SETUP UNTIL HARDENED. (APPROX. 24 HOURS)
5. PLACE 1 EACH TEFLON COATED WASHER SHIM ON EACH OF THE 3 NOTCHED POINTS, WITH THE OPEN SIDE FACING TOWARDS THE CENTER OF THE TRIANGLE.
6. PLACE TOP POST RECIEVER SO THAT THE SIGN POST IS IN CORRECT POSITION FOR SIGN VISIBILITY, ON TO THE BASE AND WASHER SHIMS.
7. PLACE 1 EACH 1/2" WASHER ONTO TORQUE FREE BOLT AND PLACE IN EACH NOTCHED POINT OF THE TRIANGLE. PUSH EACH TEFLON COATED WASHER SHIM AGAINST THE SHANK OF EACH BOLT AND FINGER TIGHTEN 1/2" FLANGED LOCK NUT.
8. FULLY TIGHTEN, THEN LOOSEN, ALL THREE TORQUE FREE BOLTS USING THE LARGER 3/4" HEX HEAD. COMPLETE BY TIGHTENING EACH BOLT USING THE SMALLER 9/16" HEX HEAD UNTIL IT TWIST OFF.

   NOTE: SECONDARY HEAD WILL TWIST OFF AT DESIRED TORQUE LEVEL TO MEET FEDERAL COMPLIANCE.
9. INSERT SIGN SUPPORT INTO THE TUBULAR PORTION OF THE TOP POST RECIEVER AND SECURE WITH 3 EACH 3/8" - 16 x 3 1/2" GRADE 8 FLANGED SHOULDER BOLTS AND FLANGED NUTS.

   NOTE: WHERE HIGHER WINDLOAD IS DESIRED, INSERT THE NEXT SIZE SMALLER SQUARE POST INSIDE BOTTOM OF MAIN UPRIGHT POST.

   NOTE: ON MULTI-LEG INSTALLATIONS, BE SURE THAT ALL ANCHORS ARE SQUARED AND LINED UP WITH EACH OTHER.
10. TYPE D BREAKAWAY SIGN SUPPORT SYSTEMS FOR THE TYPE I POSTS SHALL BE SELECTED FROM THE KENTUCKY DEPARTMENT OF HIGHWAYS APPROVED MATERIALS LIST. OR AN APPROVED EQUAL. ACCEPTABLE ALTERNATES SHALL BE APPROVED BY THE DIVISION OF HIGHWAY DESIGN AND FHWA, PRIOR TO INSTALLATION.



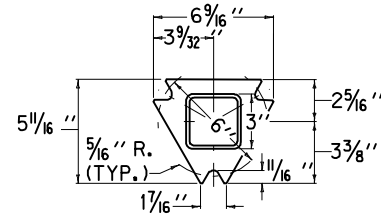


3/8" - 16 x 3 1/2" GRADE 8 FLANGED SHOULDER BOLT WITH 3/8"-16 GRADE 8 SER. FLANGE NUT (9)

MATERIALS: TUBE RECEIVER - 3" x 3" x 7 GA. ASTM A500
ASTM A500 GRADE B TUBE PLATE - ASTM A572 GRADE 50

TOP POST RECEIVER / FOR 2 1/2" SQUARE POST

2 1/4" x 12 GA. MAYBE INSERTED INTO
2 1/2" X 12 GA. FOR ADDITIONAL WINDLOAD



BOTTOM BASE CONCRETE STUB (2)

MATERIALS: TUBE - 3"X 3" X 7 GA. ASTM A500
GRADE B TUBE PLATE - ASTM A572 GRADE 50

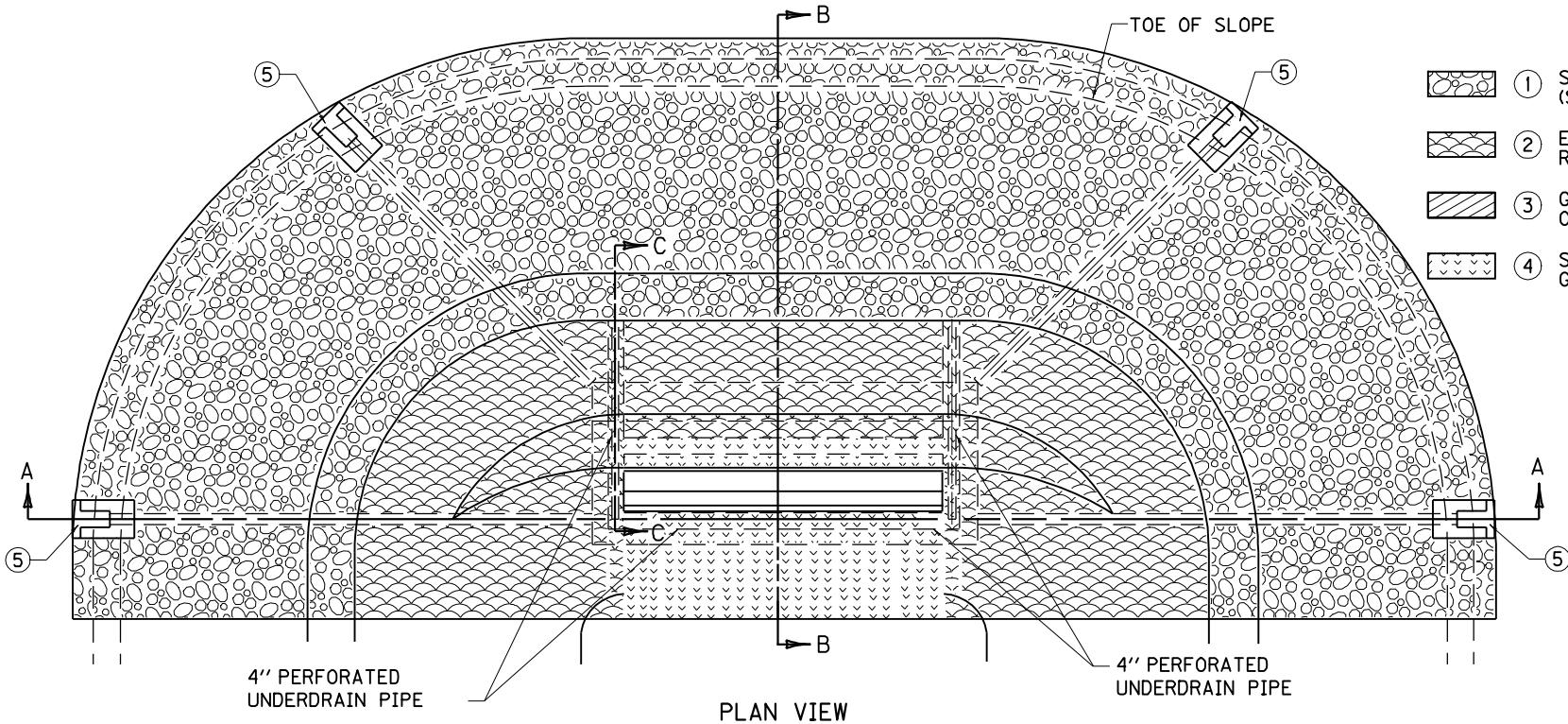
KENTUCKY DEPARTMENT OF HIGHWAYS

TYPE D BREAKAWAY SIGN SUPPORT

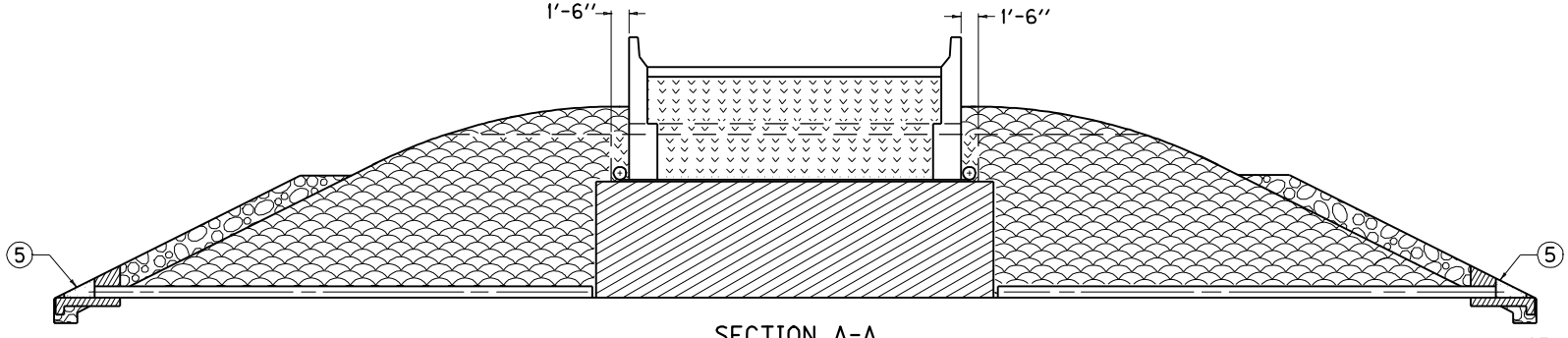
STANDARD DRAWING NO. RGX-065

SUBMITTED: Chris Kniffen, DIRECTOR DIVISION OF DESIGN — DATE: 11-21-07

APPROVED: Marcellyn Mosheuer, STATE HIGHWAY ENGINEER — DATE: 11-21-07



PLAN VIEW



SECTION A-A

LEGEND

1. SLOPE PROTECTION (SEE BRIDGE PLANS)
2. EMBANKMENT (GRANULAR, ROCK OR SOIL PER PLANS)
3. GRANULAR PILE CORE OR COHESIVE PILE CORE
4. STRUCTURE GRANULAR BACKFILL

USE WITH CUR. STD. DWG. RGX-105

NOTES:

THE PURPOSE OF THIS DRAWING AND CURRENT STANDARD DRAWING RGX-105 IS TO DEFINE THE LIMITS OF THE FOUR MATERIALS SHOWN. FOR SIMPLICITY PURPOSES, AN END-BENT ON A ZERO DEGREE SKEW IS SHOWN. THE SAME PRINCIPLES WOULD APPLY FOR MORE VARIED STRUCTURES.

(1) SLOPE PROTECTION REQUIRED WHEN AND AS NOTED ON THE BRIDGE PLANS.
(2) GRANULAR OR ROCK EMBANKMENT REQUIRED WHEN AND AS NOTED ON THE ROADWAY PLANS.
(3) GRANULAR PILE CORE REQUIRED WITH GRANULAR OR ROCK EMBANKMENT. COHESIVE PILE CORE REQUIRED WITH DRILLED SHAFTS AND PRE-DRILLED PILES.
(4) STRUCTURE GRANULAR BACKFILL REQUIRED AT ALL TIMES.
(5) 8" PERFORATED UNDERDRAIN PIPE. FOR HEADWALL CONSTRUCTION SEE CURRENT STD. DWG RDP-010.

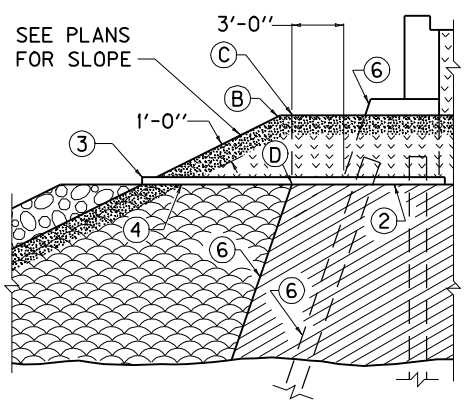
KENTUCKY
DEPARTMENT OF HIGHWAYS

TREATMENT OF EMBANKMENTS AT END-BENTS

STANDARD DRAWING NO. RGX-100-05

SUBMITTED: DIRECTOR DIVISION OF DESIGN — DATE: 11-21-07

APPROVED: STATE HIGHWAY ENGINEER — DATE: 11-21-07



SECTION C-C

SECTION B-B

CONSTRUCTION SEQUENCE "A"

1. CONSTRUCT EMBANKMENT TO SLOPES A, B, F, AND G SUCH THAT NO UNCOMPACTED OR LOOSE MATERIAL SHALL REMAIN.
2. EXCAVATE FOR END-BENT TO C, D, E, AND F.
3. INSTALL PILES (OR OTHER FOUNDATION).
4. PLACE 2" MORTAR BED OR ANY CLASS CONCRETE.
5. CONSTRUCT CONCRETE END-BENT.
6. INSTALL 4" PERFORATED UNDERDRAIN PIPE AND BACKFILL.
7. BACKFILL TO C, D, E, F, G, Z, AND J.

(1) CONSTRUCTION SEQUENCE "B"

1. CONSTRUCT EMBANKMENT TO TEMPORARY SLOPE (4).
2. INSTALL PILES (OR OTHER FOUNDATION).
3. PLACE 2" MORTAR BED OR ANY CLASS CONCRETE.
4. CONSTRUCT CONCRETE END-BENT.
5. INSTALL 4" PERFORATED UNDERDRAIN PIPE AND BACKFILL.
6. BACKFILL TO FINISHED GRADE.

NOTES

(1) CONSTRUCTION SEQUENCE "B" IS A PERMITTED ALTERNATE ONLY WHEN GRANULAR OR ROCK EMBANKMENT IS REQUIRED.

(2) 2" MORTAR BED OR ANY CLASS CONCRETE.

(3) 4" PERFORATED UNDERDRAIN PIPE WRAPPED WITH GEOTEXTILE FABRIC FOR DRAINING THE EXCAVATED TRENCH AND STRUCTURE GRANULAR BACKFILL.

(4) ACCEPTABLE ALTERNATE FOR TEMPORARY SLOPE (CONSTRUCTION SEQUENCE "B").

5. SHADED PORTIONS AND REPRESENT LIMITS OF NON-ERODIBLE GRANULAR EMBANKMENT.

(6) SLOPES ARE EQUAL.

(7) H = EMBANKMENT HEIGHT MEASURED FROM SUBGRADE ELEVATION AT POINT (Z) TO THE LOWEST ELEVATION AT THE TOE OF THE SLOPE.

(8) LIMITS OF EMBANKMENT CONSTRUCTION (2H OR 50' MAX.) REQUIRING 2' MAX LIFT THICKNESS.

9. SEE CURRENT SPECIAL PROVISION NO. 69 FOR CONSTRUCTION AND MATERIAL REQUIREMENTS, METHOD OF MEASUREMEMT AND BASIS OF PAYMENT.

10. STRUCTURE GRANULAR BACKFILL PLACED AS A COMPLETE SEPARATE OPERATION AFTER CONSTRUCTION OF ALL OTHER EMBANKMENT.

11. *NO INDIVIDUAL FRAGMENTS LARGER THAN 4 INCHES IN ANY DIMENSION PERMITTED WITHIN 3'-0" OF THE STRUCTURE.*

(12) PLACE GEOTEXTILE FABRIC, TYPE IV PRIOR TO PLACING STRUCTURE GRANULAR BACKFILL (WITH SOIL EMBANKMENT ONLY) AND AGGREGATE BASE COURSE (WITH ALL EMBANKMENT MATERIALS).

LEGEND

- SLOPE PROTECTION (SEE BRIDGE PLANS)
- GRANULAR PILE CORE OR COHESIVE PILE CORE
- STRUCTURE GRANULAR BACKFILL
- EMBANKMENT (GRANULAR, ROCK OR SOIL PER PLANS)

USE WITH CUR. STD. DWG. RGX-100

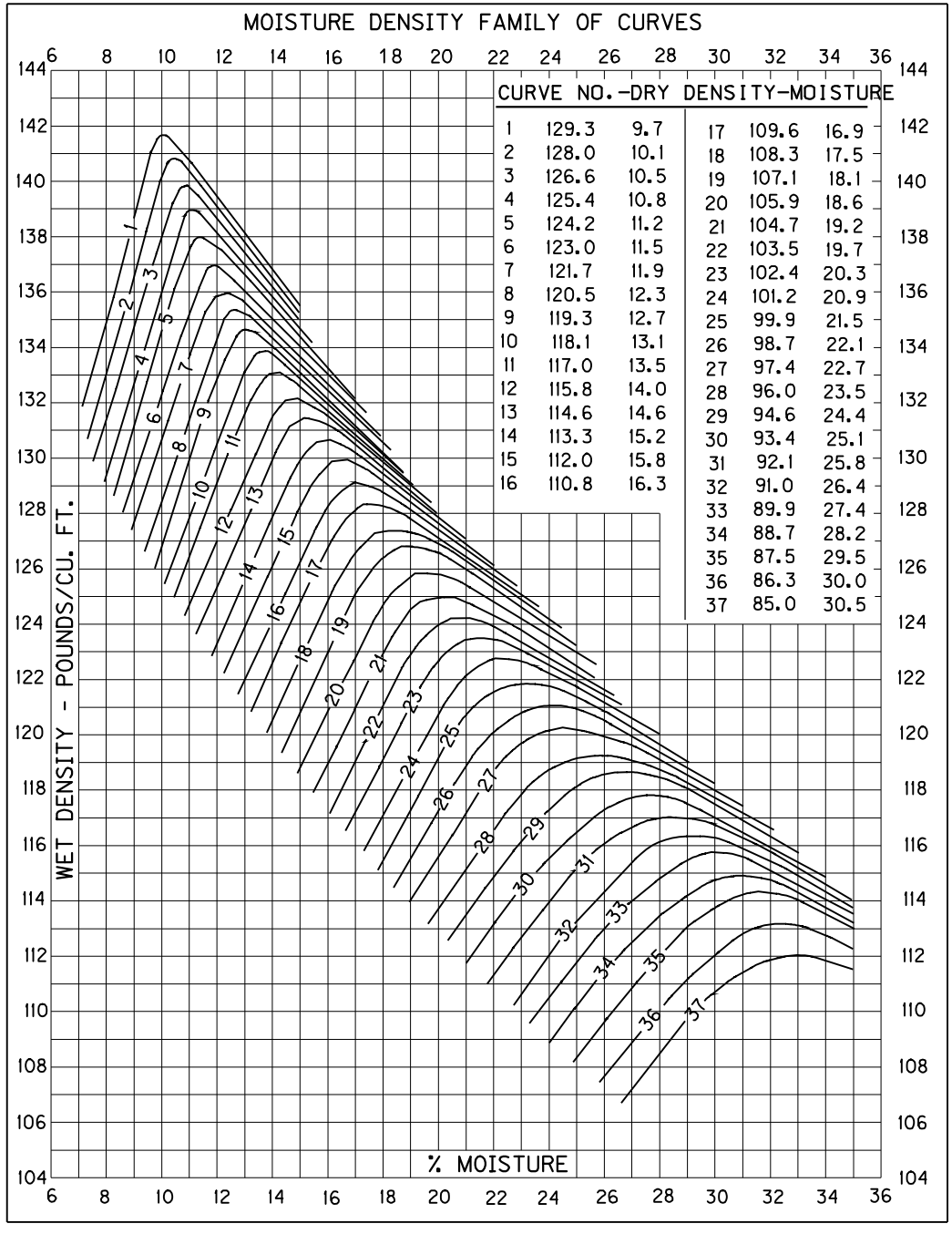
KENTUCKY
DEPARTMENT OF HIGHWAYS

TREATMENT OF EMBANKMENTS AT END-BENTS

STANDARD DRAWING NO. RGX-105-06

SUBMITTED: DIRECTOR DIVISION OF DESIGN — DATE: 11-21-07

APPROVED: STATE HIGHWAY ENGINEER — DATE: 11-21-07



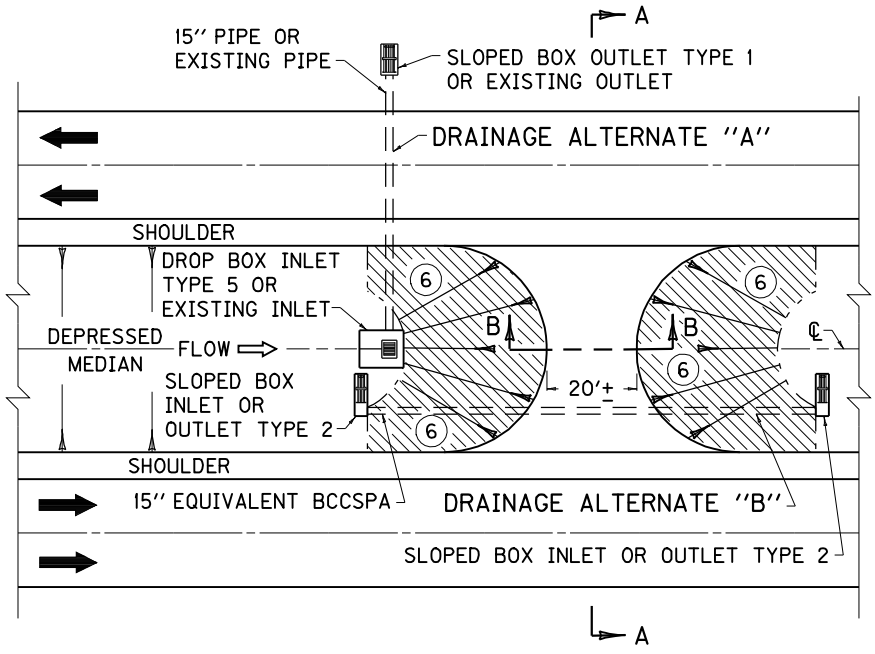
KENTUCKY
DEPARTMENT OF HIGHWAYS

ONE POINT PROCTER
FAMILY OF CURVES

STANDARD DRAWING NO. RGX-200

SUBMITTED John B. Sachstetter — DIRECTOR DIVISION OF DESIGN — 12-1-99 DATE

APPROVED — STATE HIGHWAY ENGINEER — 12-1-99 DATE



PLAN VIEW

NOTES

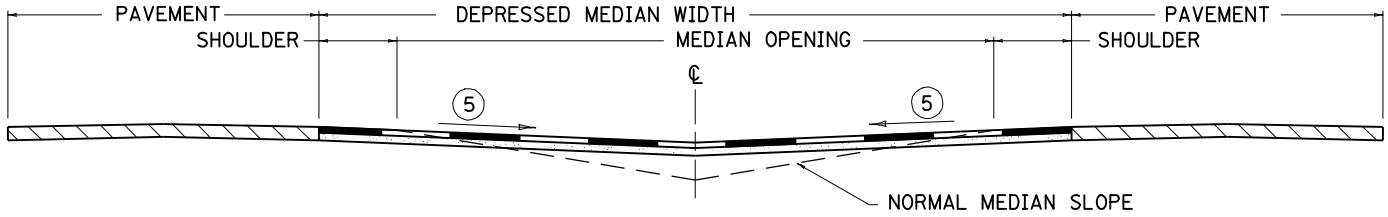
THE ITEMS BELOW SHALL BE INCLUDED IN THE GENERAL, PAVING, AND DRAINAGE SUMMARIES AS APPLICABLE:

1. EARTHWORK - EXCAVATION OR BORROW.
2. PAVING - SAME AS MAINLINE SHOULDER DESIGN.
3. DRAINAGE ALTERNATE ''A'' - USE WHEN MEDIAN OPENING CAN BE LOCATED NEAR PROPOSED OR EXISTING DRAINAGE. MODIFY EXISTING INLET AND OUTLET IF NECESSARY.
4. DRAINAGE ALTERNATE ''B'' - USE WHEN ALTERNATE ''A'' IS NOT POSSIBLE, ESPECIALLY TO PREVENT TUNNELING OR CUTTING EXISTING MAINLINE PAVEMENT. ESTABLISH FLOW LINE AT CORRESPONDING MEDIAN DITCH ELEVATION AND WRAP SLOPES TO FIT BOXES.

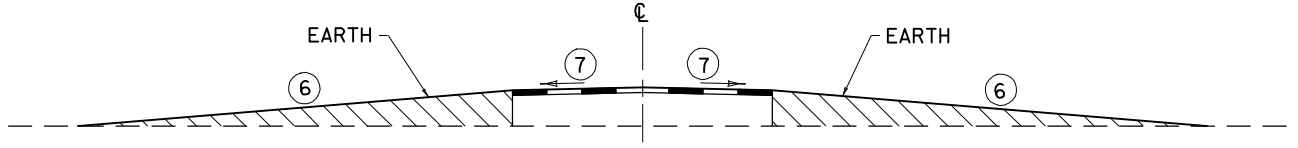
(5) 4% MINIMUM

(6) 12:1 SLOPES OR FLATTER

(7) PAVEMENT CROSS SLOPE = 2%



SECTION A-A



SECTION B-B

THIS DRAWING TO BE USED ONLY FOR FULL CONTROL OF ACCESS PROJECTS WITH DEPRESSED MEDIANS.

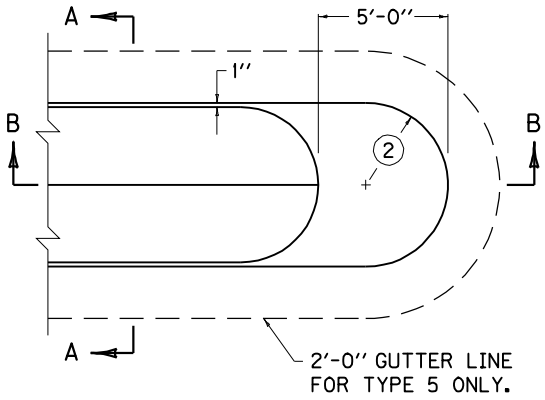
KENTUCKY
DEPARTMENT OF HIGHWAYS

PERMANENT
U-TURN
MEDIAN OPENING

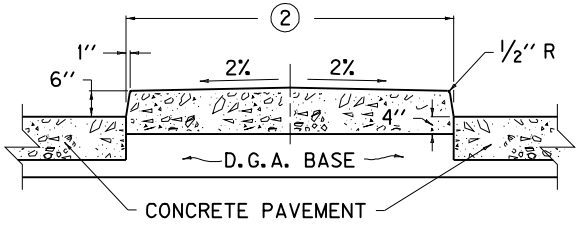
STANDARD DRAWING NO. RPM-001-03

SUBMITTED John B. Rochester — DIRECTOR DIVISION OF DESIGN — 12-1-99 DATE

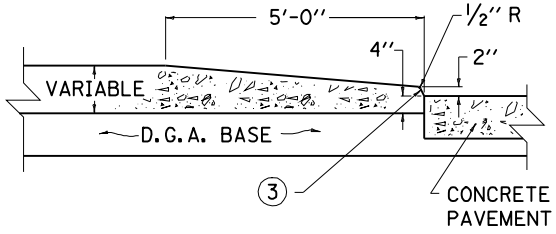
APPROVED — STATE HIGHWAY ENGINEER — 12-1-99 DATE



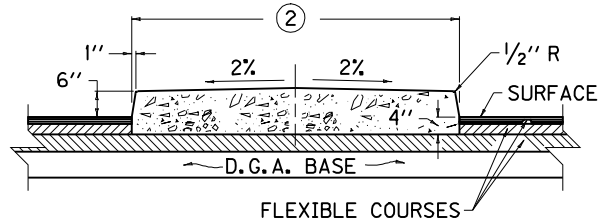
PLAN VIEW
BARRIER MEDIAN



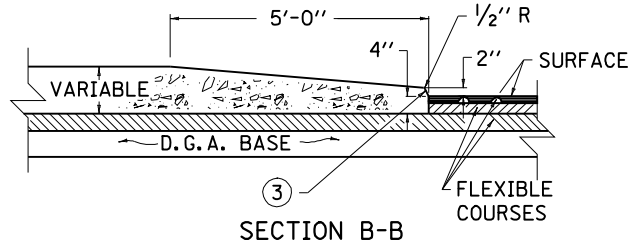
SECTION A-A



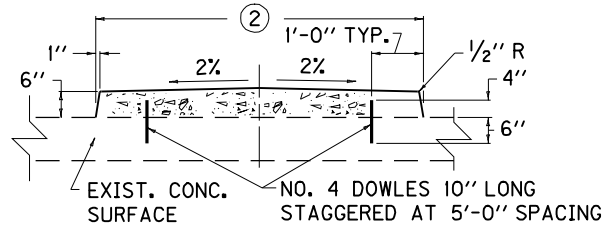
SECTION B-B
BARRIER MEDIAN
WITH RIGID PAVEMENT
(TYPE 1)



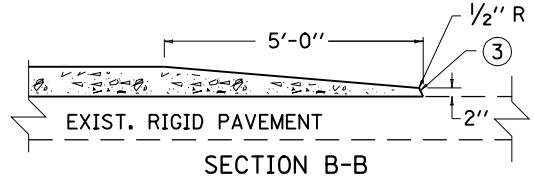
SECTION A-A



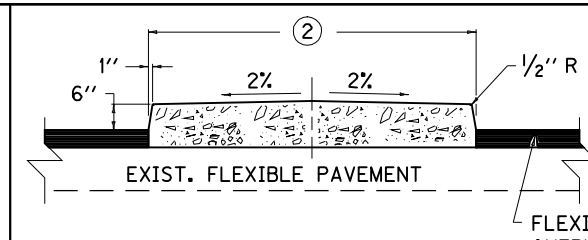
SECTION B-B
BARRIER MEDIAN
WITH FLEXIBLE PAVEMENT
(TYPE 2)



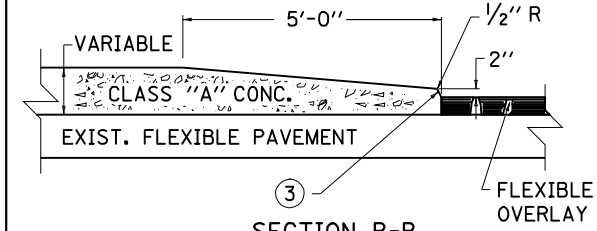
SECTION A-A



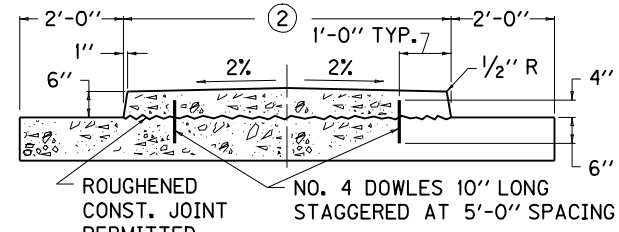
SECTION B-B
BARRIER MEDIAN
ON EXISTING RIGID PAVEMENT
(TYPE 3)



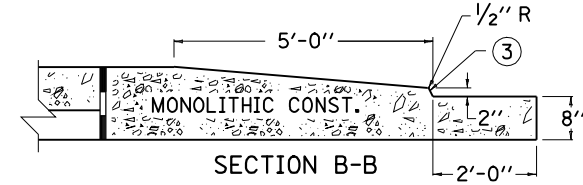
SECTION A-A



SECTION B-B
BARRIER MEDIAN
ON EXISTING FLEXIBLE PAVEMENT
(TYPE 4)



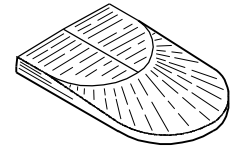
SECTION A-A



SECTION B-B
BARRIER MEDIAN
WITH FLEXIBLE PAVEMENT
(TYPE 5)

NOTES

1. THE UNIT BID PER SQUARE YARD SHALL BE: STANDARD BARRIER MEDIAN TYPE _★_ .
   ★= 1 OR 2 OR 3 OR 4 OR 5.
2. SEE PLANS FOR CONSTANT OR VARIABLE WIDTH DIMENSIONS.
3. SLOPE TO CONFORM TO SIDE SLOPES.
4. ALL BARRIER MEDIANS SHALL BE CONSTRUCTED OF CLASS "A" CONCRETE.



ISOMETRIC VIEW
(NOSE)

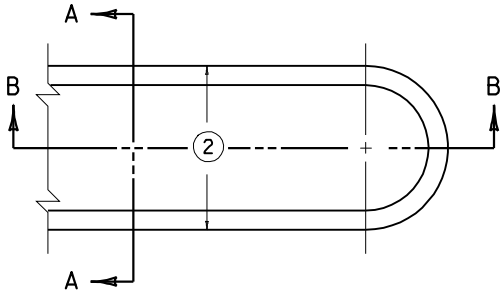
KENTUCKY
DEPARTMENT OF HIGHWAYS

STANDARD
BARRIER MEDIAN

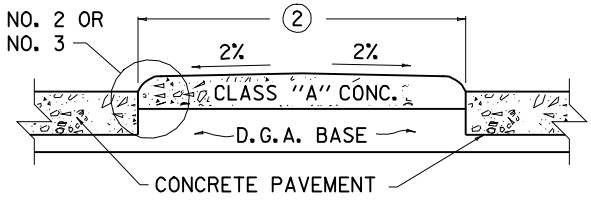
STANDARD DRAWING NO. RPM-010-05

SUBMITTED John B. Rochester, DIRECTOR DIVISION OF DESIGN — DATE 12-1-99

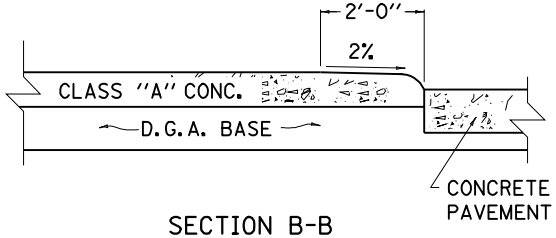
APPROVED [signature], STATE HIGHWAY ENGINEER — DATE 12-1-99



PLAN VIEW
MOUNTABLE MEDIAN



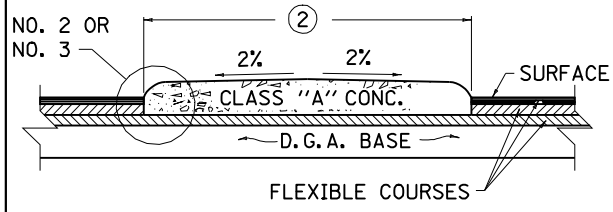
SECTION A-A



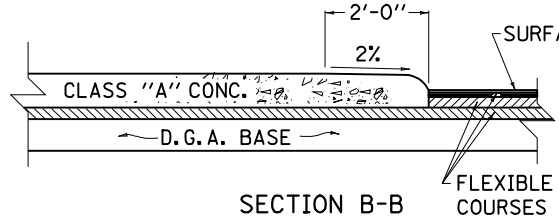
SECTION B-B
MOUNTABLE MEDIAN
WITH RIGID PAVEMENT
(TYPE 1 & TYPE 1A)

NOTES

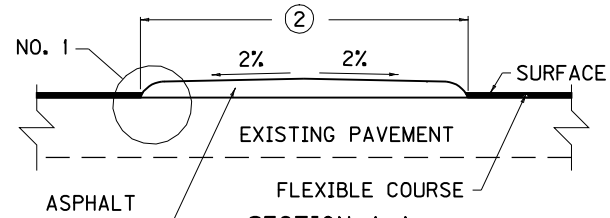
1. THE UNIT BID PER SQUARE YARD SHALL BE: MOUNTABLE MEDIAN TYPE _★_ .
   ★ = 1 OR 1A OR 2 OR 2A OR 3 OR 3A OR 4 OR 5.
   (THE LETTER "A" DENOTES LIP CURB, NO. 3)
2. SEE PLANS FOR CONSTANT OR VARIABLE WIDTH DIMENSIONS.
3. DEPTH OF CONCRETE SHALL BE SHOWN ELSEWHERE ON THE PLANS, (MIN. OF 6").



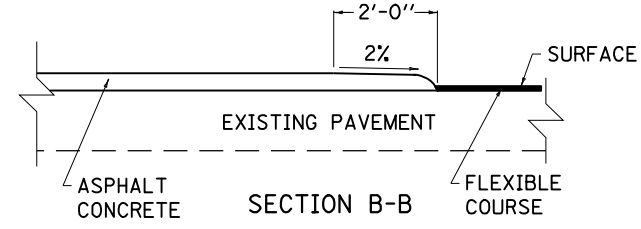
SECTION A-A



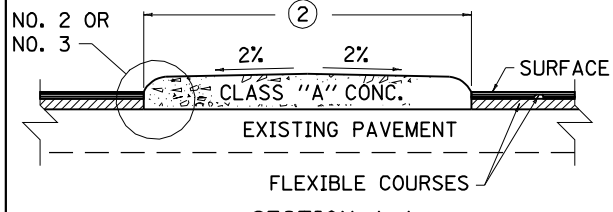
SECTION B-B
MOUNTABLE MEDIAN
WITH FLEXIBLE PAVEMENT
(TYPE 2 & TYPE 2A)



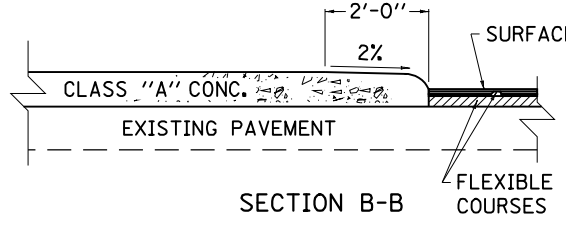
SECTION A-A



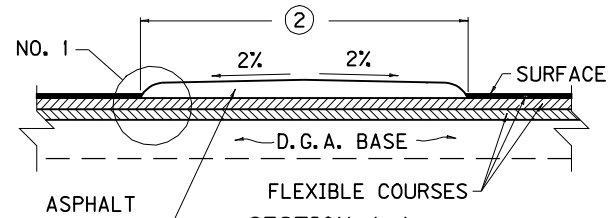
SECTION B-B
MOUNTABLE MEDIAN
ON EXISTING PAVEMENT
(TYPE 4)



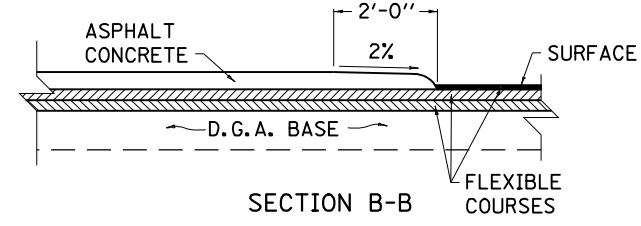
SECTION A-A



SECTION B-B
MOUNTABLE MEDIAN
ON EXISTING PAVEMENT
(TYPE 3 & TYPE 3A)

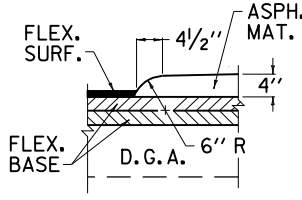


SECTION A-A

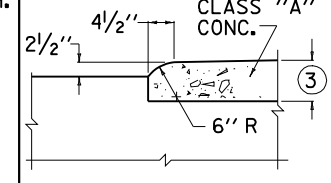


SECTION B-B
MOUNTABLE MEDIAN
WITH FLEXIBLE PAVEMENT
(TYPE 5)

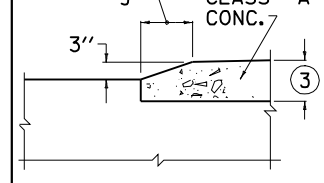
NO. 1



NO. 2



NO. 3



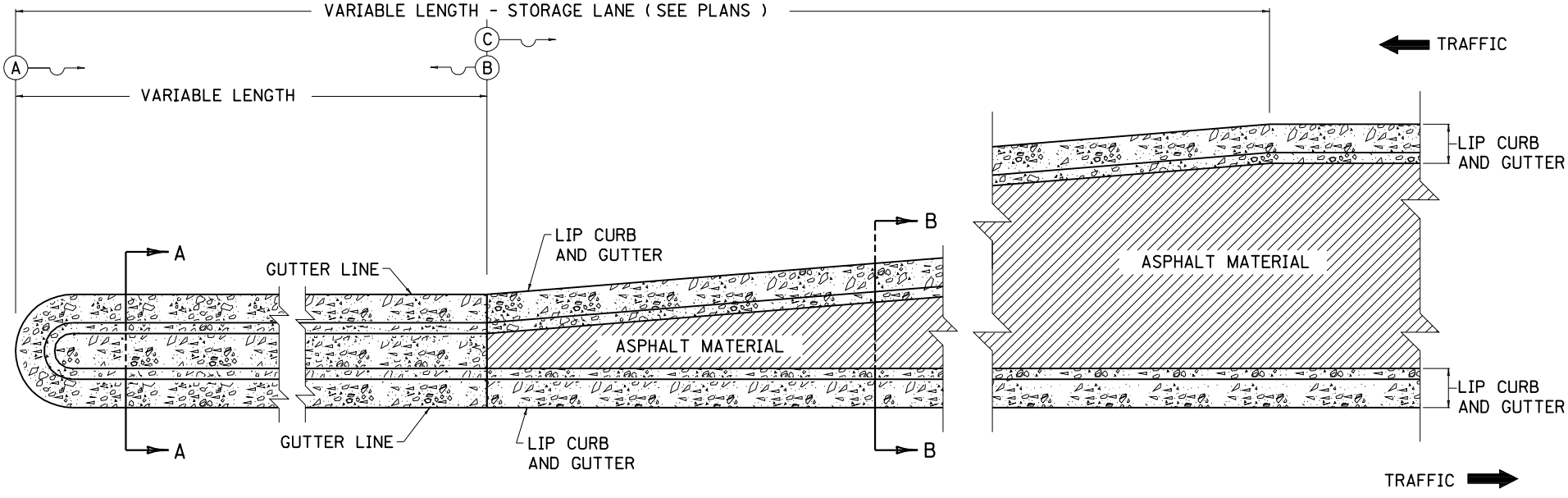
KENTUCKY
DEPARTMENT OF HIGHWAYS

MOUNTABLE
MEDIAN

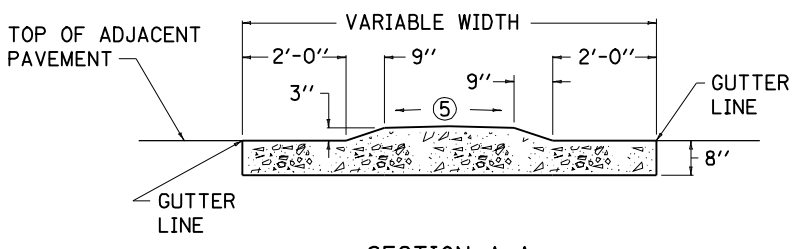
STANDARD DRAWING NO. RPM-011-05

SUBMITTED Chris Kreft, DIRECTOR DIVISION OF DESIGN — 11-21-07 DATE

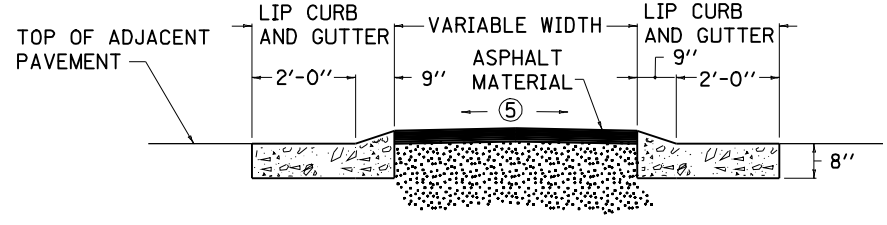
APPROVED Marcheyn Mathews, STATE HIGHWAY ENGINEER — 11-21-07 DATE



PLAN VIEW



SECTION A-A



SECTION B-B

NOTES

1. THE BID ITEM PER SQUARE YARD BETWEEN POINTS (A) AND (B) SHALL BE "MOUNTABLE MEDIAN TYPE 6A".
2. THE VARIABLE LENGTH MOUNTABLE MEDIAN BETWEEN POINTS (A) AND (B)
3. SHALL MEET THE CURRENT REQUIRMENTS OF STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION.
4. CURB AND GUTTER TERMINATES AT POINT (C) (SEE PLANS).

(5) CROSS SLOPE OF 2% ON TANGENTS AND PARALLEL PAVEMENT CROSS SLOPE ON SUPERELEVATED SECTIONS.

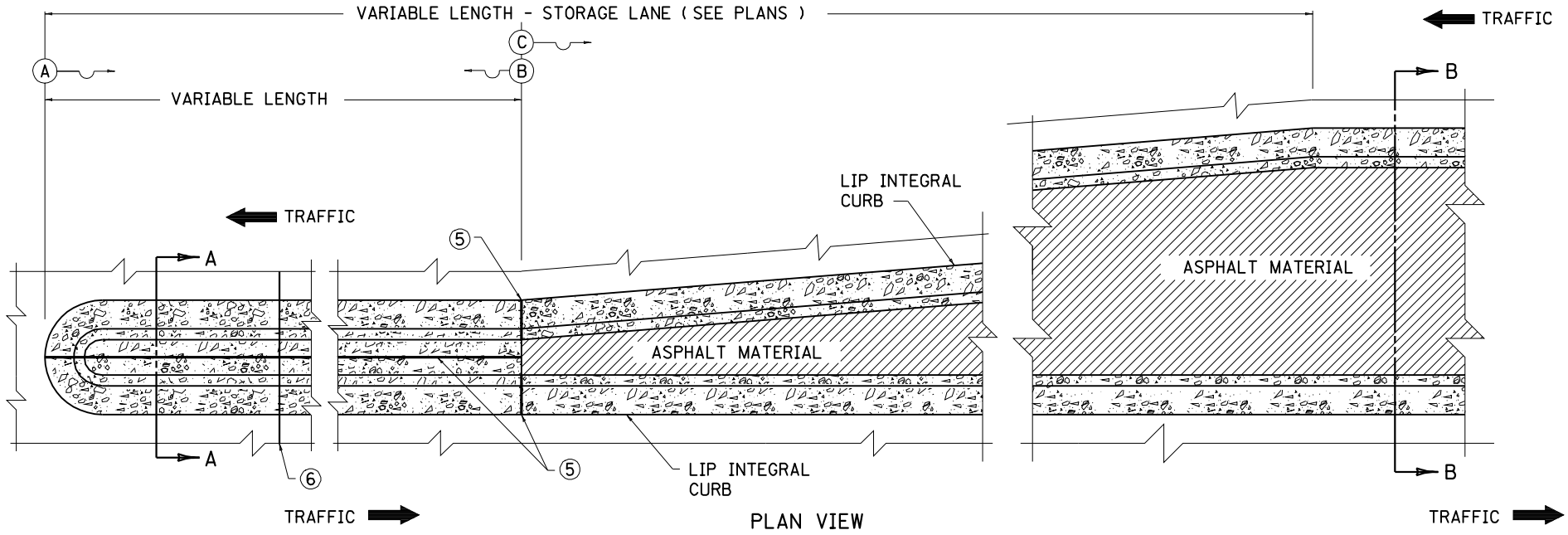
KENTUCKY
DEPARTMENT OF HIGHWAYS

MOUNTABLE MEDIAN TYPE 6A

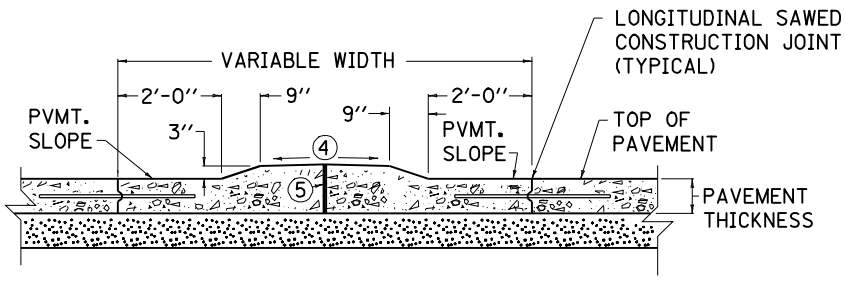
STANDARD DRAWING NO. RPM-012-03

SUBMITTED John B. Sachstetter — DIRECTOR DIVISION OF DESIGN — 12-1-99 DATE

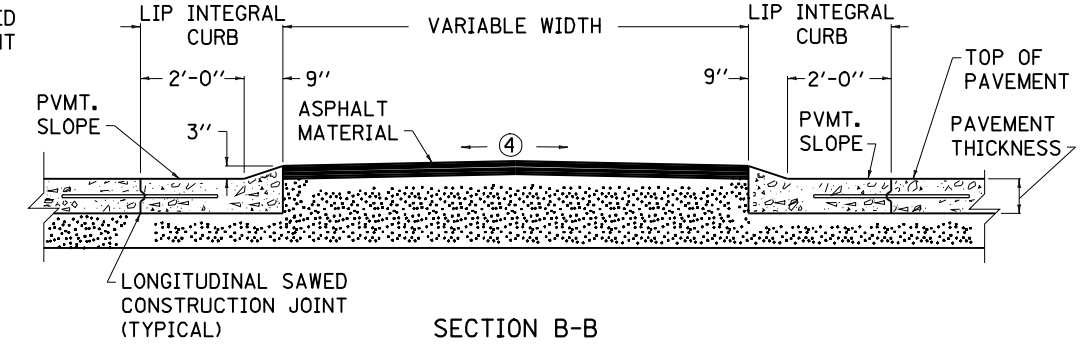
APPROVED — STATE HIGHWAY ENGINEER — 12-1-99 DATE



PLAN VIEW



SECTION A-A



SECTION B-B

NOTES

1. THE BID ITEM PER SQUARE YARD BETWEEN POINTS (A) AND (B) SHALL BE "MOUNTABLE MEDIAN TYPE 7A".
2. THE VARIABLE LENGTH MOUNTABLE MEDIAN BETWEEN POINTS (A) AND (B) SHALL MEET THE CURRENT REQUIRMENTS OF STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION.
3. LIP INTEGRAL CURB TERMINATES AT POINT (C) (SEE PLANS).

(4) CROSS SLOPE OF 2% ON TANGENTS AND PARALLEL PAVEMENT CROSS SLOPE ON SUPERELEVATED SECTIONS.

(5) 1/2" PREMOLDED EXPANSION JOINT MATERIAL.

(6) TRANSVERSE JOINTS IN THE MOUNTABLE MEDIAN BETWEEN POINTS (A) AND (B) SHALL BE CONSTRUCTED AND SEALED IN THE SAME MANNER AS THE JOINTS IN THE ADJOINING CONCRETE PAVEMENT.

USE WITH RIGID PAVEMENT

KENTUCKY
DEPARTMENT OF HIGHWAYS

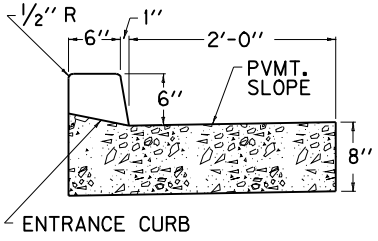
MOUNTABLE MEDIAN TYPE 7A

STANDARD DRAWING NO. RPM-015-03

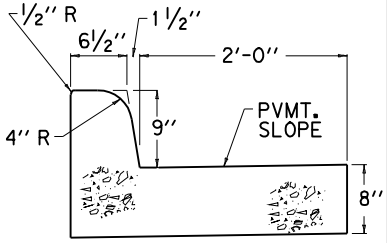
SUBMITTED John B. Sachstetter — DIRECTOR DIVISION OF DESIGN — 12-1-99 DATE

APPROVED — STATE HIGHWAY ENGINEER — 12-1-99 DATE

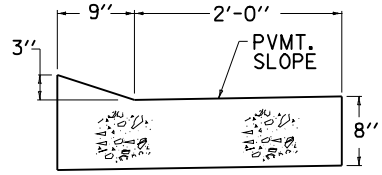
STANDARD CURB & GUTTER



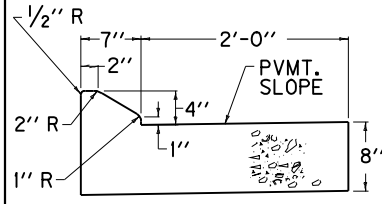
BARRIER CURB & GUTTER



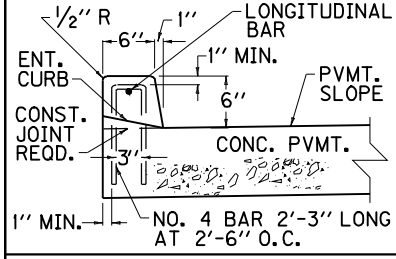
LIP CURB & GUTTER



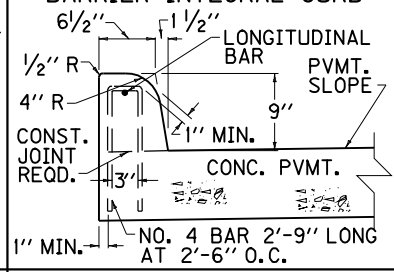
ISLAND CURB & GUTTER



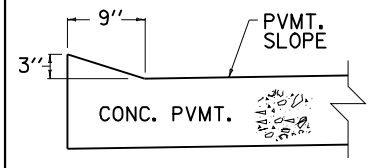
① STANDARD INTEGRAL CURB



BARRIER INTEGRAL CURB

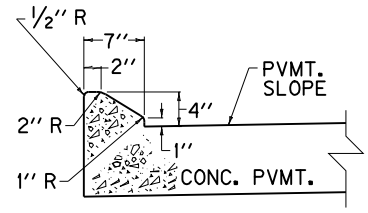


LIP INTEGRAL CURB



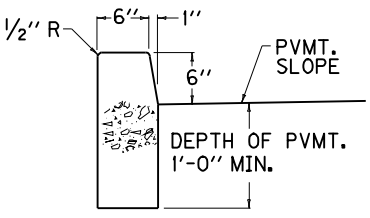
CONST. JOINT NOT PERMITTED

ISLAND INTEGRAL CURB

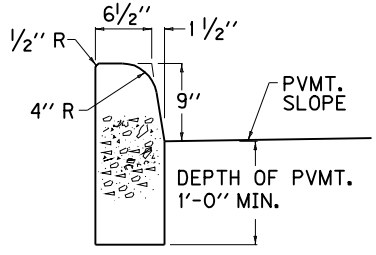


CONST. JOINT NOT PERMITTED

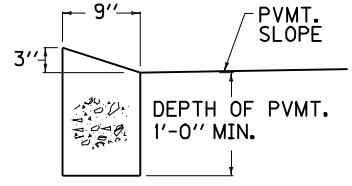
STANDARD HEADER CURB



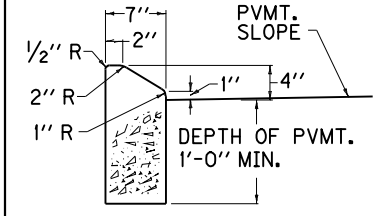
BARRIER HEADER CURB



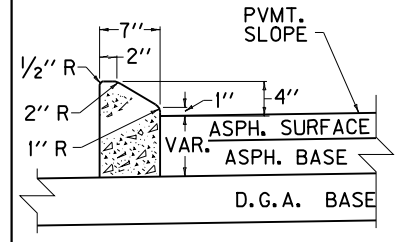
LIP HEADER CURB



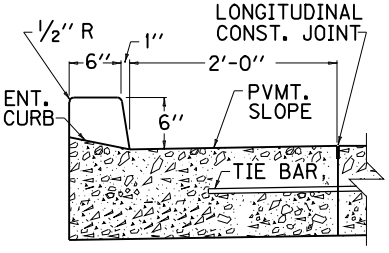
ISLAND HEADER CURB TYPE 1



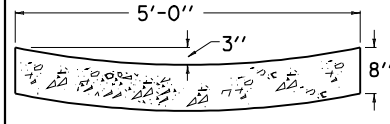
ISLAND HEADER CURB TYPE 2



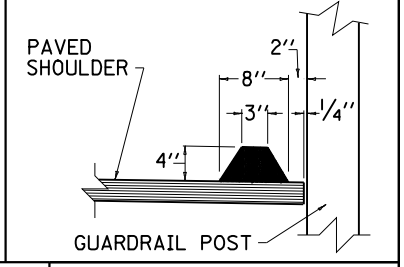
② STANDARD INTEGRAL CURB



VALLEY GUTTER



ASPHALT WEDGE CURB



~ NOTES ~

ALL INTEGRAL CURBS SHOWING REINFORCING STEEL SHALL BE CAST SEPARATELY FROM THE PAVEMENT AND THE REINFORCEMENT SHALL CONSIST SOLELY OF NO. 4 BARS AS DETAILED ON THIS DRAWING. ON CONSTRUCTION CARE SHOULD BE TAKEN SO THAT NO REINFORCEMENT BARS ARE CLOSER THAN 3" TO THE CENTER OF THE SAWED TRANSVERSE JOINT.

①② THE CONTRACTOR HAS THE OPTION OF CONSTRUCTING THE STANDARD INTEGRAL CURB AS DETAILED IN EITHER ① OR ② . IF ② IS CHOSEN A LONGITUDINAL CONSTRUCTION JOINT SHALL BE REQUIRED AND THE REMAINING PAVEMENT AND CURB SHALL BE CONSTRUCTED MONOLITHIC WITHOUT A HORIZONTAL CONSTRUCTION JOINT AND ACCOMPANYING REINFORCING STEEL.

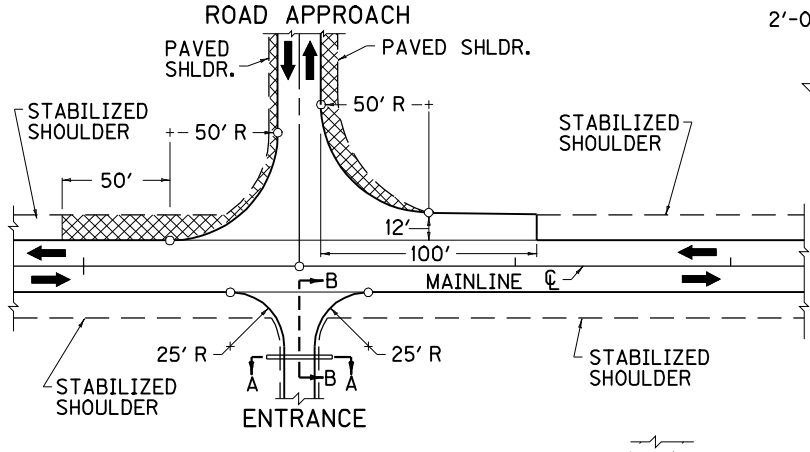
KENTUCKY DEPARTMENT OF HIGHWAYS

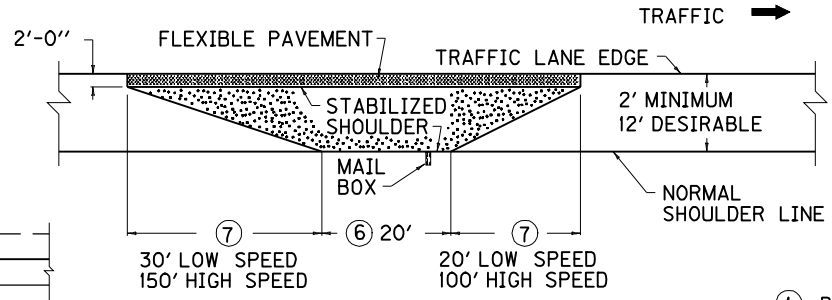
CURB AND GUTTER, CURBS, AND VALLEY GUTTER

STANDARD DRAWING NO. RPM-100-09

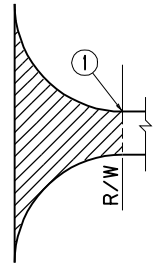
SUBMITTED Gary W. Sharp, DIRECTOR DIVISION OF DESIGN 12-2-02 DATE

APPROVED T. M. Newell, STATE HIGHWAY ENGINEER 12-2-02 DATE

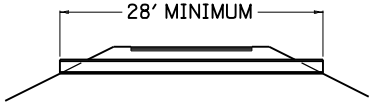




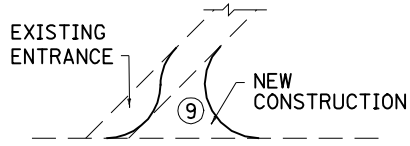
MAIL BOX TURNOUT



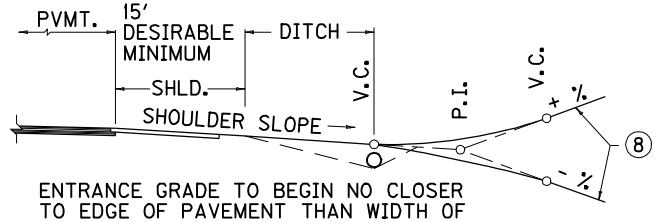
① PAVE TO R/W LINE OR END OF RADIUS, WHICHEVER IS FURTHER FROM THE EDGE OF TRAFFIC LANE.



SECTION A-A



PLAN VIEW

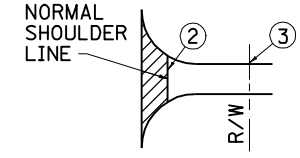


ENTRANCE GRADE TO BEGIN NO CLOSER TO EDGE OF PAVEMENT THAN WIDTH OF SHOULDER PLUS DITCH.

⑧ MAXIMUM GRADE FOR ENTRANCES 50' OR GREATER IN LENGTH:
MOUNTAINOUS TERRAIN - 20%
ROLLING TERRAIN - 16%
FLAT TERRAIN - 12%

SECTION B-B

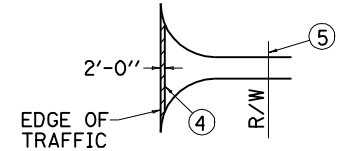
ROAD AND STREET APPROACHES



② PAVED TO SHOULDER LINE

③ SURFACE TO R/W LINE OR TOUCHDOWN WITH TRAFFIC BOUND BASE.

ENTRANCE
(RESIDENTIAL AND COMMERICAL)



ENTRANCE
(FARM FIELD)

④ PAVE AS SHOWN WITH FLEXIBLE PAVEMENT.

⑤ SURFACE TO R/W LINE WITH TRAFFIC BOUND BASE.

~ APPROACHES AND ENTRANCES ~

ROAD APPROACH ILLUSTRATION IS FOR MAINLINE ROAD, ADT 400 OR GREATER. PAVED SHOULDER PORTION SHOWN SHALL ONLY BE APPLICABLE WHERE THE MAINLINE SPECIFIES STABILIZED OR PAVED SHOULDERS. IF THE MAINLINE SHOULDER IS PAVED, THIS SHOULDER PORTION SHALL ALSO BE PAVED.

WHEN THE MAINLINE ADT IS UNDER 400, USE A 25' RADIUS WITH NO DECELERATION WIDTH PROVIDED.

THE PAVEMENT ON ENTRANCES AND APPROACHES THAT IS DISTURBED DURING NEW CONSTRUCTION OPERATIONS SHALL BE REPLACED WITH A PAVEMENT EQUIVALENT TO THE EXISTING PAVEMENT, REGARDLESS OF THE SURFACE MATERIAL USED ELSEWHERE. THE PAVEMENT DESIGN SHALL BE AS SHOWN ON THE PLANS OR AS APPROVED BY THE ENGINEER.

THE RADII ON COUNTY OR SECONDARY ROADS SHALL NOT BE LESS THAN 25' MEASURED TO THE INSIDE EDGE OF THE SURFACE. EACH ADDITIONAL FOOT OF SURFACE WIDTH WILL REQUIRE AN ADDITIONAL FOOT OF PIPE.

PIPE ILLUSTRATION IS BASED ON THE USE OF 15" PIPE. LARGER SIZES MAY BE INSTALLED WITH APPROPRIATE MODIFICATIONS. PIPES SMALLER THAN 15" DIAMETER ARE NOT TO BE USED EXCEPT IN SPECIAL CASES, WHEN SPECIFICALLY AUTHORIZED.

IN CUT SECTION, SIGHT DISTANCE SHALL BE PROVIDED ON ENTRANCES AND APPROACHES BY DAYLIGHTING THE CUT FROM THE POINTS WHERE THE RADII BEGINS, TO POINTS NOT LESS THAN 100' ON EACH OF THE INTERSECTING ROADWAY.

⑨ IF FEASIBLE, ALL APPROACHES AND ENTRANCES SHALL INTERSECT SHOULDER LINE AT RIGHT ANGLES. IF NOT AT RIGHT ANGLES, PIPE LENGTH SHALL BE INCREASED TO PROVIDE ACCURATE RADIUS.

▨ MINIMUM PAVED AREAS FOR ENTRANCES AND APPROACHES. THESE PAVED AREAS MAY BE EXTENDED TO TOUCHDOWN OR TIE-DOWN POINT PROVIDED THE EXISTING IS PAVED.

~ MAIL BOX TURNOUT ~

▩ THE 2'-0" WIDE FLEXIBLE PAVEMENT FOR THE LENGTH AS SHOWN, OR AS DETERMINED BY THE ENGINEER, SHALL BE APPLIED TO ALL MAIL BOX TURNOUTS. THE PAVEMENT DESIGN SHALL BE AS SHOWN ON THE PLANS OR AS APPROVED BY THE ENGINEER

▩ FOR STABILIZED SHOULDERS, THIS AREA SHALL RECEIVE THE SAME TREATMENT AS THAT FOR ADJOINING STABILIZED SHOULDERS. FOR EARTH SHOULDERS THIS AREA SHALL RECEIVE 3" TO 5" OF COMPACTED DENSE GRADED AGGREGATE BASE, BANK GRAVEL, OR TRAFFIC BOUND BASE.

⑦ HIGH SPEED EQUALS 50 MILES PER HOUR OR GREATER. LOW SPEED EQUALS LESS THAN 50 MILES PER HOUR.

⑥ ADD 2'-0" FOR EACH ADDITIONAL MAIL BOX.

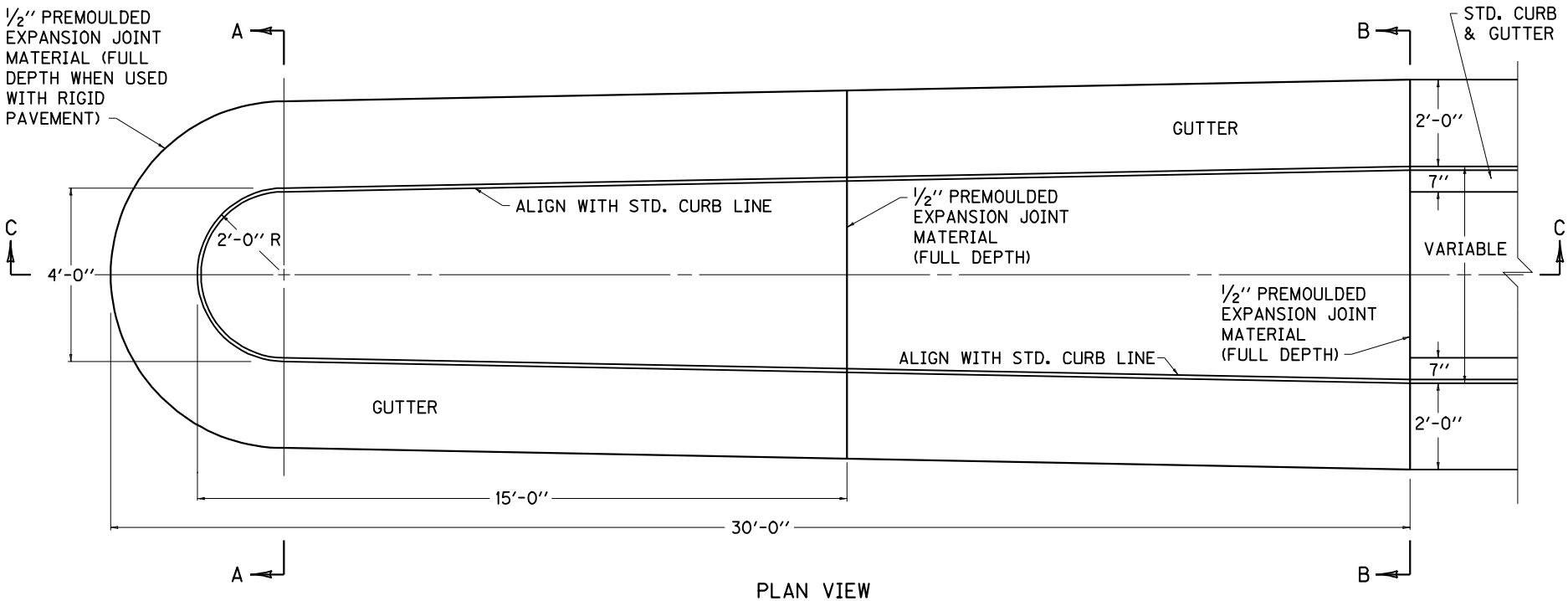
KENTUCKY DEPARTMENT OF HIGHWAYS

APPROACHES ENTRANCES AND MAIL BOX TURNOUT

STANDARD DRAWING NO. RPM-110-05

SUBMITTED _____ DIRECTOR DIVISION OF DESIGN — 11-21-07 DATE

APPROVED _____ STATE HIGHWAY ENGINEER — 11-21-07 DATE



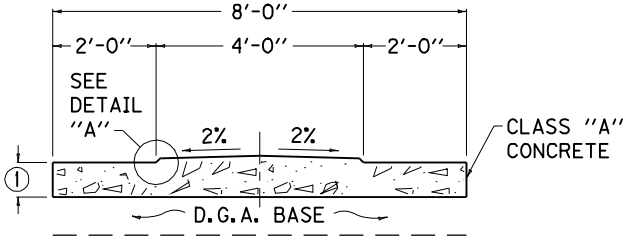
PLAN VIEW

SECTION C-C

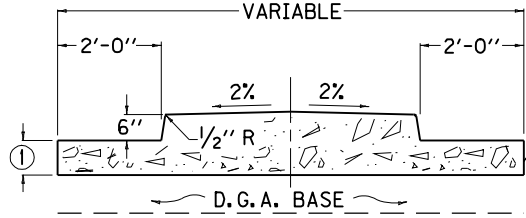
NOTES

THE CONTRACT UNIT PRICE BID EACH FOR CONCRETE TERMINAL SECTION TYPE 1 SHALL INCLUDE ALL MATERIAL, LABOR, TOOLS, ETC. NECESSARY TO COMPLETE THE WORK IN PLACE, AND SHALL RECEIVE A WOOD FLOAT FINISH.

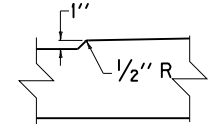
(1) 8" WHEN USED WITH FLEXIBLE PAVEMENT AND PAVEMENT THICKNESS WITH RIGID PAVEMENT.



SECTION A-A



SECTION B-B



DETAIL "A"

KENTUCKY DEPARTMENT OF HIGHWAYS

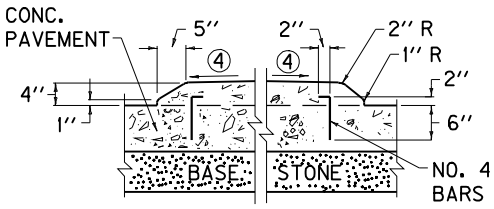
CONCRETE TERMINAL SECTION TYPE 1

STANDARD DRAWING NO. RPM-115-04

SUBMITTED John B. Rochester DIRECTOR DIVISION OF DESIGN 12-1-99 DATE

APPROVED T. M. Farrell STATE HIGHWAY ENGINEER 12-1-99 DATE

~ RIGID PAVEMENT ~

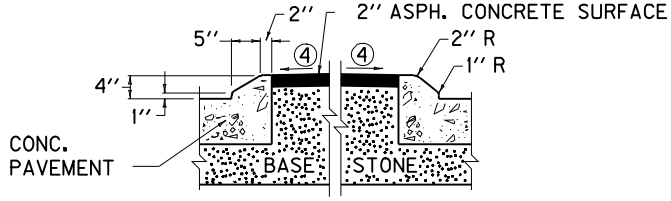


SECTION 1-1

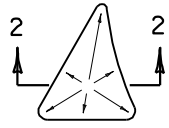
SMALL (UP TO 150 SQ. FT.)
CONCRETE ISLAND

BASE - FULL DEPTH PAVEMENT

NO. 4 BARS TO BE PLACED 6'' FROM EDGE ON 12'' CENTERS AROUND ENTIRE ISLAND. BARS ARE TO BE 10'' LONG AND BENT AS DETAILED ABOVE.

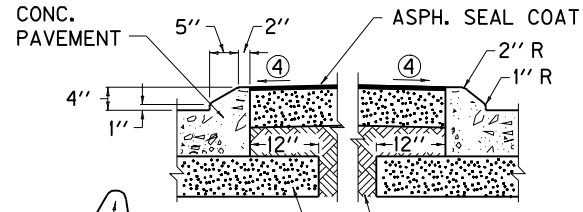


SECTION 2-2

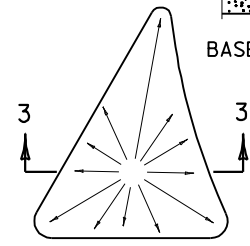


INTERMEDIATE (150 TO 1000 SQ. FT.)
ISLAND INTEGRAL CURB

AREA IN ISLAND FILLED WITH BASE STONE AND CAPPED WITH 2'' ASPHALT CONCRETE SURFACE.



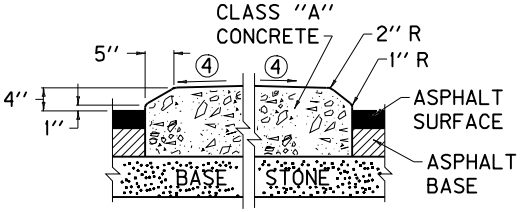
SECTION 3-3



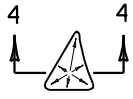
LARGE (1000 SQ. FT. AND ABOVE)
ISLAND INTEGRAL CURB

AREA IN ISLAND FILLED WITH COMPACTED EARTH, 7'' BASE STONE AND ASPHALT SEAL COAT.

~ FLEXIBLE PAVEMENT ~

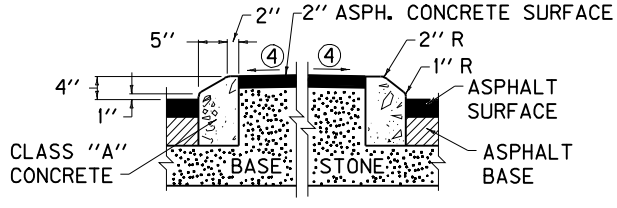


SECTION 4-4

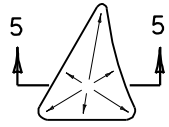


SMALL (UP TO 150 SQ. FT.)
CONCRETE ISLAND

BASE - FULL DEPTH BASE STONE.

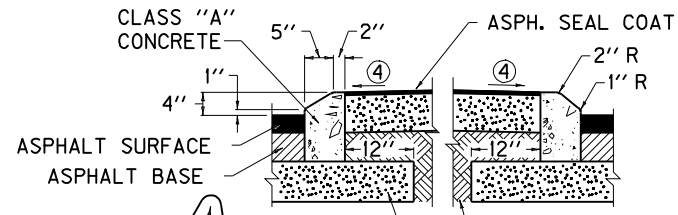


SECTION 5-5

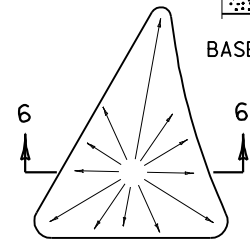


INTERMEDIATE (150 TO 1000 SQ. FT.)
CONCRETE ISLAND HEADER CURB

AREA IN ISLAND FILLED WITH BASE STONE AND CAPPED WITH 2'' ASPHALT CONCRETE SURFACE.



SECTION 6-6



LARGE (1000 SQ. FT. AND ABOVE)
CONCRETE ISLAND HEADER CURB

AREA IN ISLAND FILLED WITH COMPACTED EARTH, 7'' BASE STONE AND ASPHALT SEAL COAT.

NOTES

1. CONCRETE ISLAND SHALL BE PAID FOR ON A SQ. YD. BASIS AND SHALL INCLUDE ALL CLASS ''A'' CONCRETE, STEEL REINFORCEMENT AND LABOR NECESSARY FOR A COMPLETE INSTALLATION. FINISHING AND CURING SHALL BE THE SAME AS REQUIRED FOR CONCRETE SIDEWALK.
2. THE AREA IN THE LARGE RAISED ISLANDS SHALL BE GRADED AND SURFACED SO AS NOT TO OBSTRUCT SIGHT DISTANCE.
3. SEE SURFACING SCHEDULE FOR BASE STONE AND SURFACING OF ISLANDS IN EXCESS OF 1000 SQ. FT.
4. (④) PAVED AREA SHALL BE SLOPED SO AS TO OBTAIN PROPER DRAINAGE AS DIRECTED BY THE ENGINEER ON CONSTRUCTION.
5. WHEN THE GRADES DO NOT PERMIT THE ISLAND SURFACE TO DRAIN, THEY SHALL BE CROWNED AS SHOWN WITH A MAXIMUM CROSS SLOPE OF 4%.
6. DIMENSIONS AND RADII SHOWN ARE TYPICAL FOR BOTH SIDES OF ISLAND.

KENTUCKY
DEPARTMENT OF HIGHWAYS

ISLAND CURB CONSTRUCTION DETAILS
(RIGID & FLEXIBLE PAVEMENT)

STANDARD DRAWING NO. RPM-120-06

SUBMITTED John B. Rochester — DIRECTOR DIVISION OF DESIGN — 12-1-99 DATE

APPROVED — STATE HIGHWAY ENGINEER — 12-1-99 DATE

NOTES

THE UNIT PRICE BID PER LINEAR FOOT FOR "PRECAST VEHICLE STOP" SHALL INCLUDE ALL CLASS "A" CONCRETE, STEEL REINFORCEMENT, STEEL DOWELS, LABOR AND ALL INCIDENTALS NECESSARY FOR A COMPLETE INSTALLATION.

(1) THE PLANS SHALL SPECIFY THE LENGTHS OF THE INDEPENDENT UNITS. 2'-0", 4'-0", 6'-0" AND 8'-0" ARE STANDARD LENGTHS. 3'-0", 5'-0" AND 7'-0" LENGTHS MAY BE USED WHEN REQUIRED.

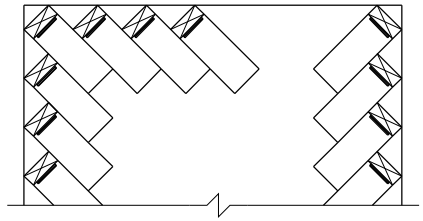
(2) NO. 5 BARS - 1'-6" MIN. LENGTH. FILL VOID WITH BUTYL RUBBER CAULKING (COMMERCIAL GRADE) OR OTHER APPROVED MATERIAL.

(3) NO. 3 DEFORMED BARS (OR LARGER) 3 REQUIRED.

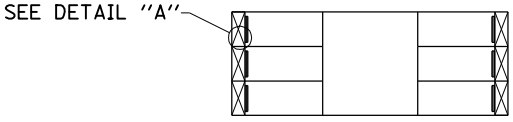
THE MINIMUM REQUIREMENT FOR REINFORCING STEEL SHALL BE GRADE 40.

THE UNIT WEIGHS APPROXIMATELY 38 POUNDS PER FOOT.

OTHER TYPES OF STOPS MAY BE PERMITTED IF APPROVED IN WRITING BY THE ENGINEER.

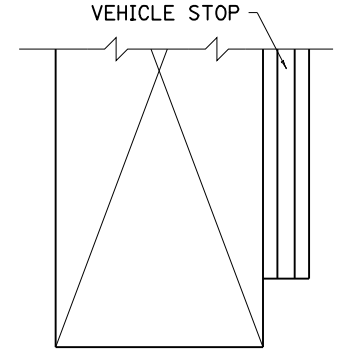


SKEWED PARKING

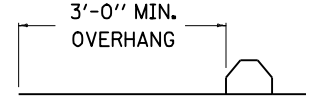


PERPENDICULAR PARKING

TYPICAL VEHICLE STOP INSTALLATION

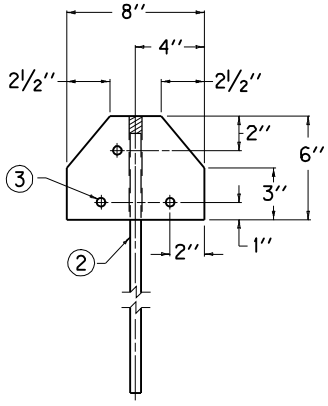


PLAN VIEW

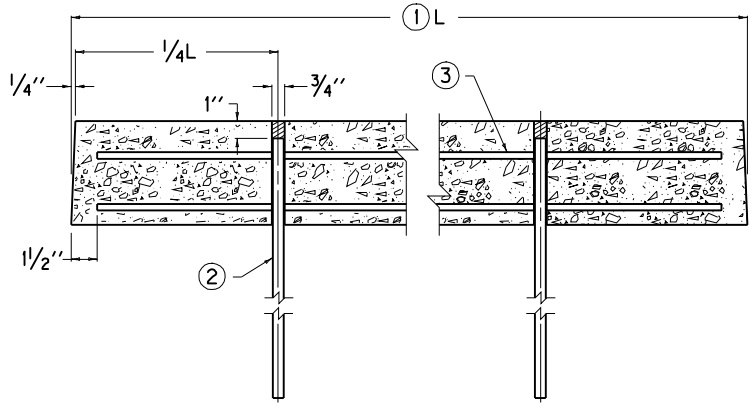


END ELEVATION

DETAIL "A"



END VIEW



SECTIONAL ELEVATION

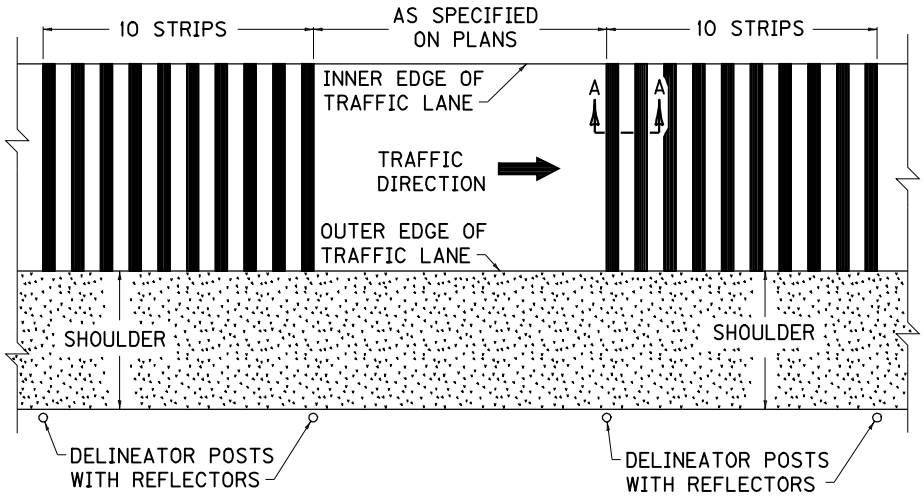
KENTUCKY
DEPARTMENT OF HIGHWAYS

PRECAST
VEHICLE STOP

STANDARD DRAWING NO. RPM-130-03

SUBMITTED John B. Rochester — DIRECTOR DIVISION OF DESIGN — 12-1-99 DATE

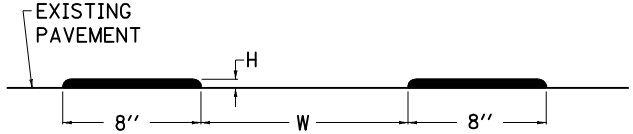
APPROVED — STATE HIGHWAY ENGINEER — 12-1-99 DATE



PLAN VIEW

NOTES

1. BID ITEMS: RUMBLE STRIPS TYPE ☆
   ☆ 1 OR 2
   DELINEATOR POSTS
   DELINEATORS WHITE
2. THE CONTRACT UNIT PRICE PER LINEAR FOOT FOR A TEN (10) STRIP WIDE UNIT SHALL INCLUDE ALL LABOR, FORMING, MATERIALS AND INCIDENTALS NECESSARY TO COMPLETE THE WORK.
3. THE CONTRACT UNIT PRICE EACH FOR DELINEATOR POSTS AND DELINEATORS WHITE SHALL INCLUDE THE DELINEATOR POST, DELINEATOR UNIT, LABOR AND ALL INCIDENTALS NECESSARY FOR ONE COMPLETE INSTALLATION.
4. APPROXIMATE QUANTITIES REQUIRED FOR ONE UNIT TEN (10) STRIPS WIDE X 1'-0" LONG.
   - 0.01 TON FOR 1/4" ASPHALT CONCRETE MIX
   - 0.015 TON FOR 3/8" ASPHALT CONCRETE MIX
   - 0.019 TON FOR 1/2" ASPHALT CONCRETE MIX
   - 0.075 GAL. OF TACK COAT
5. RUMBLE STRIP ASPHALT MATERIAL SHALL BE "CL1 ASPHALT SURFACE 0.38E PG64-22".
6. TWO 7'-0" LONG, TYPE I DELINEATOR POSTS SHALL BE INSTALLED AT EACH LOCATION.
7. TWO - 3 3/8" DIAMETER TYPE III A SILVER WHITE DELINEATOR UNITS SHALL BE INSTALLED AT THE TOP OF EACH DELINEATOR POST WITH A NO. 10 ALUMINUM OR STAINLESS STEEL SLOTTED ROUND HEAD MACHINE SCREW, WASHER AND VANDAL PROOF NUT.
8. THE PAVEMENT SHALL BE CLEANED AND THE STRIPS SHALL BE CONSTRUCTED UNIFORMLY AT RIGHT ANGLES TO THE CENTER LINE OF THE ROADWAY.
9. THE TACK COAT SHALL BE APPLIED FULL STRENGTH WITH A LIBERAL COAT.
10. SIDE FORMS OR OTHER APPROVED METHODS SHALL BE USED TO ACCOMPLISH THE DESIRED 10 UNIT STRIP SYSTEM. A SUFFICIENT AMOUNT OF ASPHALT MIXTURE SHALL BE PLACED IN THE FORMS AND COMPACTED WITH A LIGHT ROLLER SO AS TO PROVIDE A COMPACTED THICKNESS OF 1/4" TO 1/2" AS APPLICABLE.
11. THE DELINEATOR UNIT SHALL BE CONSTRUCTED IN SUCH A MANNER THAT TOP OF THE DELINEATOR UNIT IS 4'-0" ABOVE TOP OF PAVEMENT.
12. THE REFLECTIVE SURFACE OF THE DELINEATOR UNIT SHALL FACE TRAFFIC AND POINT TOWARD THE CENTER LINE OF THE ROADWAY APPROXIMATELY ONE-FOURTH MILE AWAY.



SECTION A-A

TYPE	MPH	H	W
1	0 - 45	1/4" -3/8"	12"
2	OVER 45	3/8" -1/2"	24"

KENTUCKY DEPARTMENT OF HIGHWAYS

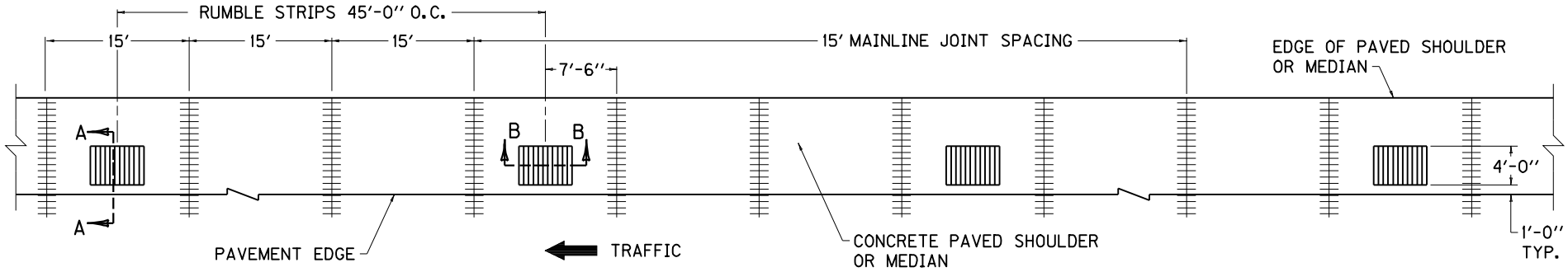
RUMBLE STRIPS

STANDARD DRAWING NO. RPM-140-04

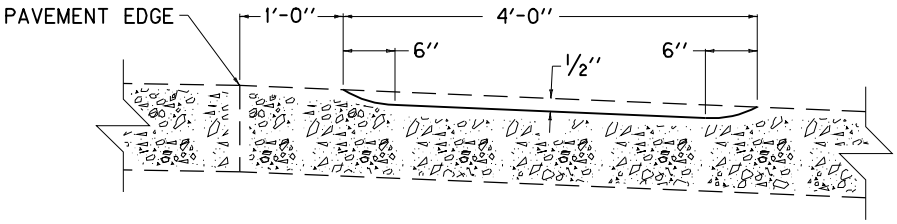
SUBMITTED Gary W. Sharp, DIRECTOR DIVISION OF DESIGN 12-2-02 DATE

APPROVED J. M. Yowell, STATE HIGHWAY ENGINEER 12-2-02 DATE

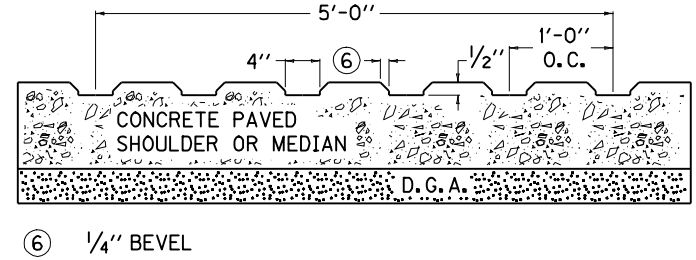
JOINTED PLAIN CONCRETE PAVED SHOULDER OR MEDIAN (DOWELLED) WITH JOINTED PLAIN CONCRETE MAINLINE PAVEMENT



PLAN VIEW



SECTION A-A



⑥ 1/4" BEVEL

SECTION B-B

NOTES

1. BID ITEM: RUMBLE STRIPS TYPE 3.
   THE CONTRACT UNIT PRICE PER LINEAR FOOT FOR A SIX (6) STRIP UNIT SHALL INCLUDE ALL LABOR, MATERIALS AND INCIDENTALS NECESSARY TO COMPLETE ONE INSTALLATION.
2. THE GROOVED RUMBLE STRIPS SHALL BE CUT INTO THE CURED CONCRETE SHOULDER AS DETAILED ON THIS DRAWING.
3. THE GROOVE SHALL BE TAPERED OUT, SO AS TO PROVIDE POSITIVE DRAINAGE.
4. WHEN THE SHOULDER IS USED TO MAINTAIN TRAFFIC DURING CONSTRUCTION, THE RUMBLE STRIPS SHALL NOT BE CUT UNTIL THE MAINLINE IS OPENED TO TRAFFIC.

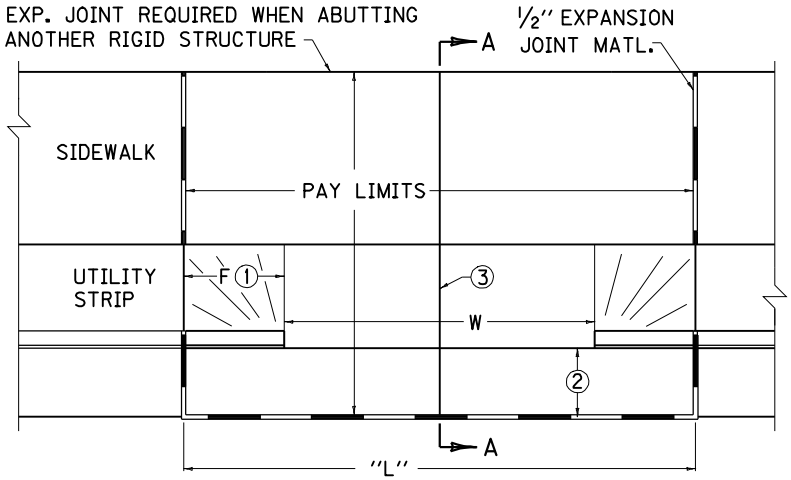
KENTUCKY
DEPARTMENT OF HIGHWAYS

RUMBLE STRIPS
TYPE 3

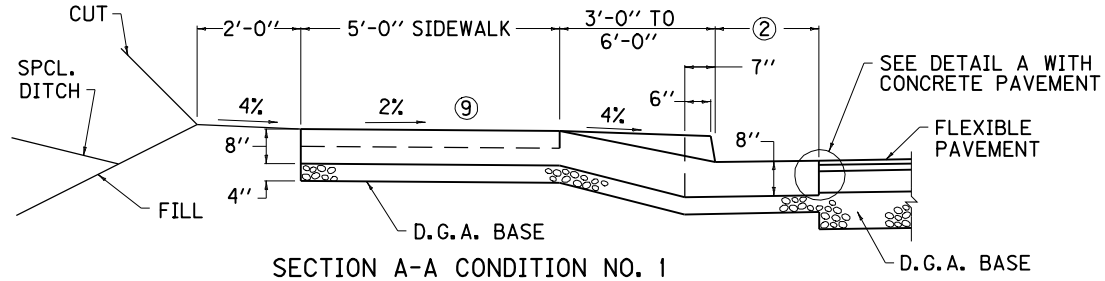
STANDARD DRAWING NO. RPM-145-03

SUBMITTED Gary W. Sharp, DIRECTOR DIVISION OF DESIGN 12-2-02 DATE

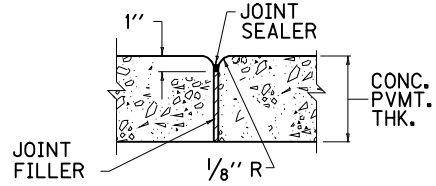
APPROVED J. M. Yowell, STATE HIGHWAY ENGINEER 12-2-02 DATE



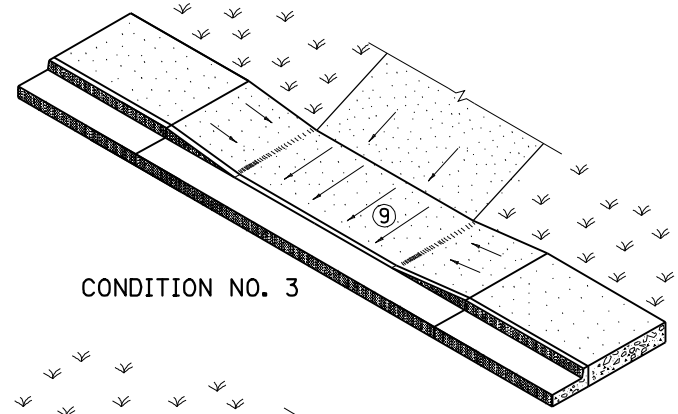
PLAN VIEW



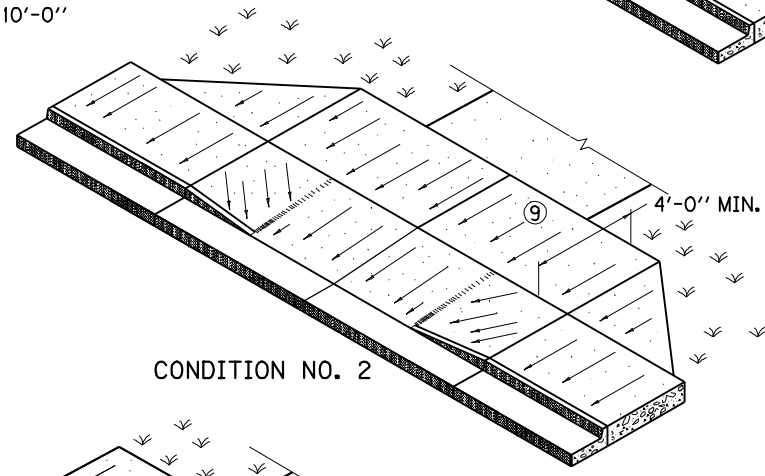
SECTION A-A CONDITION NO. 1



DETAIL A



CONDITION NO. 3



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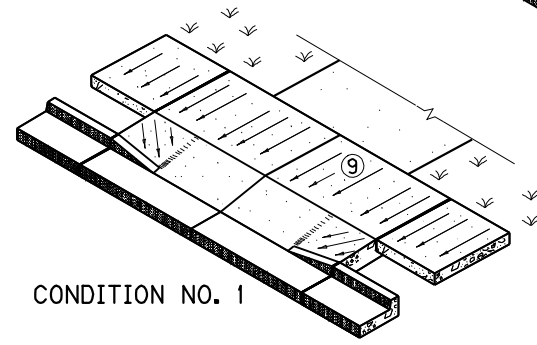


CONDITION NO. 1

~ NOTES ~

① FOR WIDTH W AND F:
RESIDENTIAL - MINIMUM W = 12'-0", MAXIMUM W = 24'-0" ; MINIMUM F = 2'-6", MAXIMUM F = 10'-0"
COMMERCIAL - MINIMUM W = 24'-0", MAXIMUM W = 36'-0"; F = 10'-0"
WHEN MORE THAN 2 LANES ARE REQUIRED, 36'-0" WIDTH MAY BE INCREASED TO RELIEVE INTERFERENCE BETWEEN ENTERING AND EXITING TRAFFIC.
RADIAL RETURNS SHALL BE USED ON ENTRANCES IN THE FOLLOWING CASES:

a. ON DRIVEWAYS EXPECTING TO CARRY MORE THAN 600 TRIPS PER DAY.
b. WHEN ENTRANCE WIDTH IS GREATER THAN 36'.
c. WHEN THE HIGHWAY HAS A POSTED OR OPERATING SPEED OVER 45 MPH.
d. ON A RURAL SECTION WHERE A FLUSH SHOULDER EXISTS.
e. WHERE AN EXCLUSIVE RIGHT TURN LANE IS USED.

② 1'-0" OR 2'-0" WITH CONCRETE PAVEMENT, 2'-0" WITH FLEXIBLE PAVEMENT

③ WHEN "L" DIMENSION IS GREATER THAN 15'-0" A SAWED AND SEALED JOINT, 1 1/2" DEEP AND 1/4" WIDE SHALL BE PLACED AT THE CENTER OF THE "L" DIMENSION. WIDE ENTRANCES REQUIRE ADDITIONAL JOINTS, SPACING SHALL NOT EXCEED 15'-0" O.C.

4. CLASS "A" CONCRETE OR JOINTED PLAIN CONCRETE PAVEMENT SHALL BE USED IN THE ENTRANCE PAVEMENT.

5. THE ENTRANCE PAVEMENT SHALL RECEIVE A BROOM FINISH AND SHALL BE CURED THE SAME AS THE MAINLINE PAVEMENT AND/OR SIDEWALK.

6. THE CONTRACT UNIT PRICE BID PER SQUARE YARD FOR "CONC. ENT. PAVEMENT-8 INCH (CODE NO. 2101)" SHALL INCLUDE CLASS "A" CONCRETE AND ALL INCIDENTALS NECESSARY TO COMPLETE THE WORK. D.G.A. SHALL BE A SEPARATE BID ITEM.

7. USE CONDITION NO. 3 WHEN NO UTILITY STRIP IS PROVIDED, AND INCORPORATE FEATURES OF OTHER DESIGNS SHOWN WHERE NOT IN CONFLICT.

8. PROVIDING THAT ADA GUIDELINES SHOWN IN NOTES ⑨ AND 10 ARE FOLLOWED, THE ENGINEER MAY MODIFY THE DESIGN TO BETTER FIT EXISTING CONDITIONS.

⑨ 2% CROSS SLOPE MAXIMUM ON SIDEWALK. IF CONDITIONS WARRANT, SIDEWALK MAY BE SLOPED 2% AWAY FROM ROADWAY.

10. SIDEWALKS SHOULD BE DESIGNED WITH A MAX. GRADE OF 5% . WHERE A SIDEWALK RUNS ALONG A STEEP ROADWAY, THE SIDEWALK GRADE MAY EXCEED 5% IF IT FOLLOWS THE GRADE OF THE ROADWAY.

⑪ ANY DRIVEWAY 24' OR GREATER REQUIRES ADA SIDEWALK TREATMENTS WITH DETECTABLE WARNINGS WHICH WILL BE INCIDENTAL TO THE ENTRANCE CONSTRUCTION.

USE WITH CUR. STD. DWG.
RGX-040

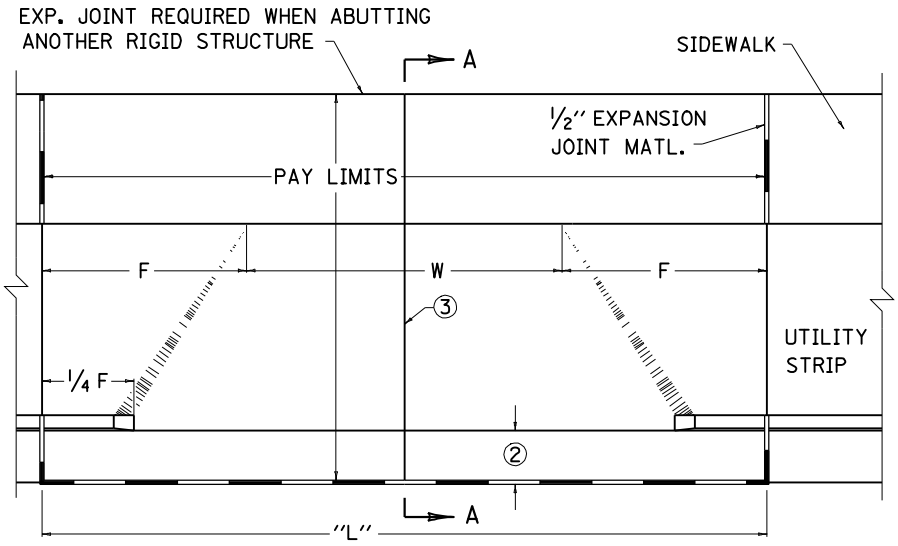
KENTUCKY
DEPARTMENT OF HIGHWAYS

CONCRETE ENTRANCE PAVEMENT AND SIDEWALK

STANDARD DRAWING NO. RPM-150-06

SUBMITTED _____ DIRECTOR DIVISION OF DESIGN — DATE 11-21-07

APPROVED _____ STATE HIGHWAY ENGINEER — DATE 11-21-07



PLAN VIEW

~ NOTES ~

① FOR WIDTH W AND F:
RESIDENTIAL - MINIMUM W = 12'-0", MAXIMUM W = 24'-0"
MINIMUM F = 2'-6", MAXIMUM F = 10'-0"
COMMERCIAL - MINIMUM W = 24'-0", MAXIMUM W = 36'-0"
F = 10'-0"
WHEN MORE THAN 2 LANES ARE REQUIRED, 36'-0" WIDTH MAY BE INCREASED TO RELIEVE INTERFERENCE BETWEEN ENTERING AND EXITING TRAFFIC.
RADIAL RETURNS SHALL BE USED ON ENTRANCES IN THE FOLLOWING CASES:

a. ON DRIVEWAYS EXPECTING TO CARRY MORE THAN 600 TRIPS PER DAY.
b. WHEN ENTRANCE WIDTH IS GREATER THAN 36'.
c. WHEN THE HIGHWAY HAS A POSTED OR OPERATING SPEED OVER 45 MPH.
d. ON A RURAL SECTION WHERE A FLUSH SHOULDER EXISTS.
e. WHERE AN EXCLUSIVE RIGHT TURN LANE IS USED.

② 1'-0" OR 2'-0" WITH CONCRETE PAVEMENT, 2'-0" WITH FLEXIBLE PAVEMENT.

③ WHEN "L" DIMENSION IS GREATER THAN 15'-0" A SAWED AND SEALED JOINT, 1 1/2" DEEP AND 1/4" WIDE SHALL BE PLACED AT THE CENTER OF THE "L" DIMENSION. WIDE ENTRANCES REQUIRE ADDITIONAL JOINTS, SPACING SHALL NOT EXCEED 15'-0" O.C.

4. CLASS "A" CONCRETE OR JOINTED PLAIN CONCRETE PAVEMENT SHALL BE USED IN THE ENTRANCE PAVEMENT.

5. THE ENTRANCE PAVEMENT SHALL RECEIVE A BROOM FINISH AND SHALL BE CURED THE SAME AS THE MAINLINE PAVEMENT AND/OR SIDEWALK.

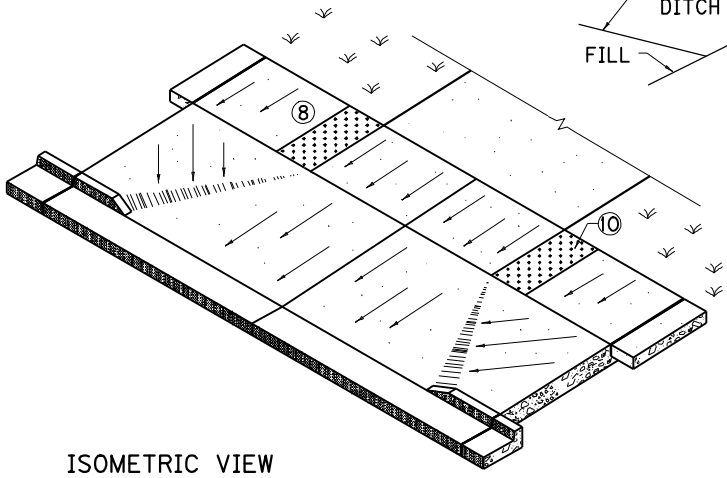
6. THE CONTRACT UNIT PRICE BID PER SQUARE YARD FOR "CONC. ENT. PAVEMENT-8 INCH (CODE NO. 2101)" SHALL INCLUDE CLASS "A" CONCRETE AND ALL INCIDENTALS NECESSARY TO COMPLETE THE WORK. D.G.A. SHALL BE A SEPARATE BID ITEM.

7. PROVIDING THAT ADA GUIDELINES SHOWN IN NOTE ⑧ AND 9 ARE FOLLOWED, THE ENGINEER MAY MODIFY THE DESIGN TO BETTER FIT EXISTING CONDITIONS.

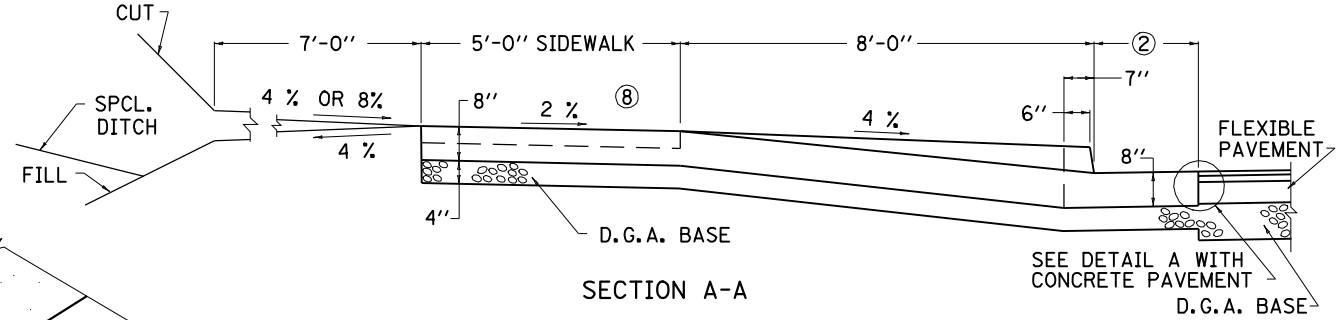
⑧ 2% CROSS SLOPE MAXIMUM ON SIDEWALK.

9. SIDEWALKS SHOULD BE DESIGNED WITH A MAX. GRADE OF 5% . WHERE A SIDEWALK RUNS ALONG A STEEP ROADWAY, THE SIDEWALK GRADE MAY EXCEED 5% IF IT FOLLOWS THE GRADE OF THE ROADWAY.

⑩ ANY DRIVEWAY 24' OR GREATER REQUIRES ADA SIDEWALK TREATMENTS WITH DETECTABLE WARNINGS WHICH WILL BE INCIDENTAL TO THE ENTRANCE CONSTRUCTION.

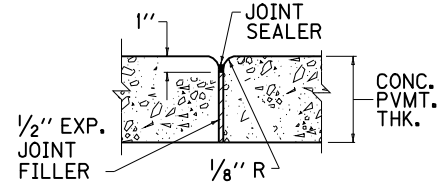


ISOMETRIC VIEW



SECTION A-A

USE WITH CUR. STD. DWG.
RGX-040



DETAIL A

KENTUCKY DEPARTMENT OF HIGHWAYS

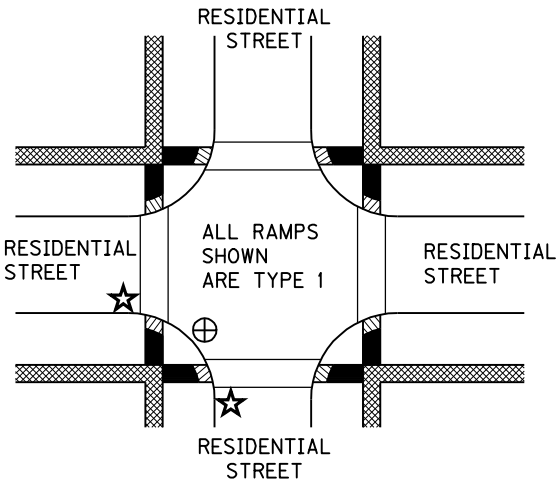
CONCRETE ENTRANCE PAVEMENT AND SIDEWALK

STANDARD DRAWING NO. RPM-152-06

SUBMITTED Chris Keith DIRECTOR DIVISION OF DESIGN 11-21-07 DATE

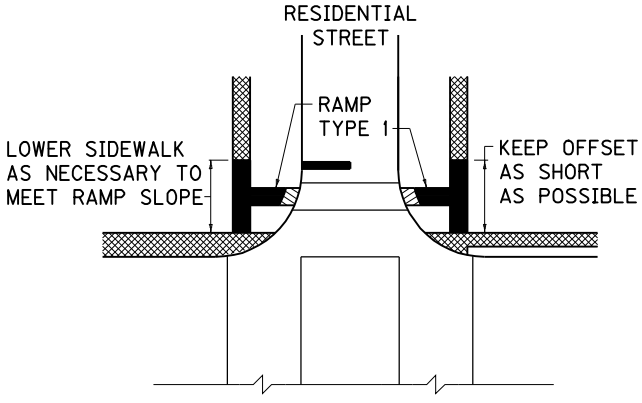
APPROVED Marcheyn Matthews STATE HIGHWAY ENGINEER 11-21-07 DATE

DETAIL (1)



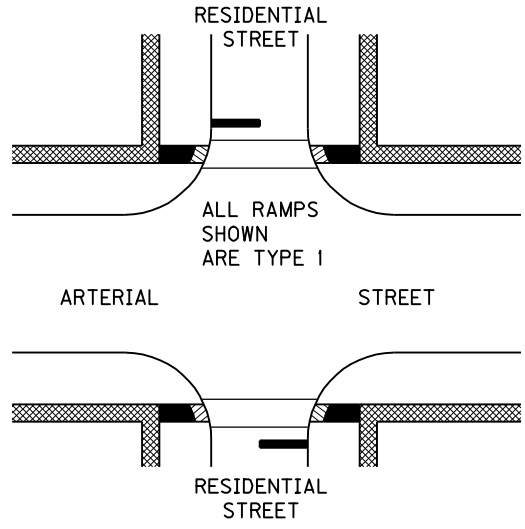
NORMAL TREATMENT IN RESIDENTIAL AREA

DETAIL (2)



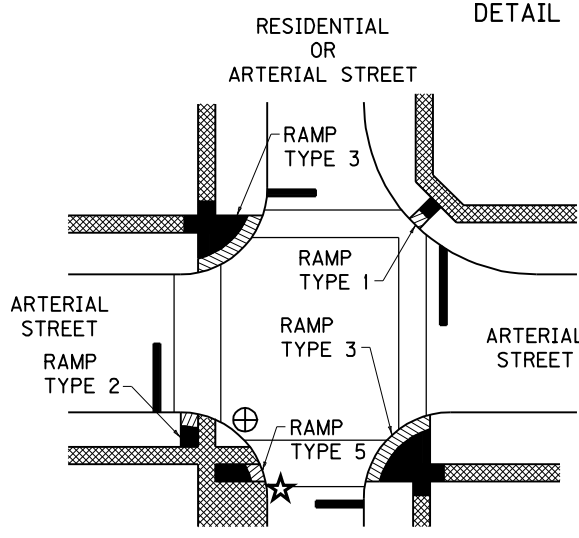
MAY BE USED ONLY WHERE TRAFFIC IS LOW AND WHERE OTHER FEATURES MAKE DETAIL (1) IMPRACTICAL.

DETAIL (3)



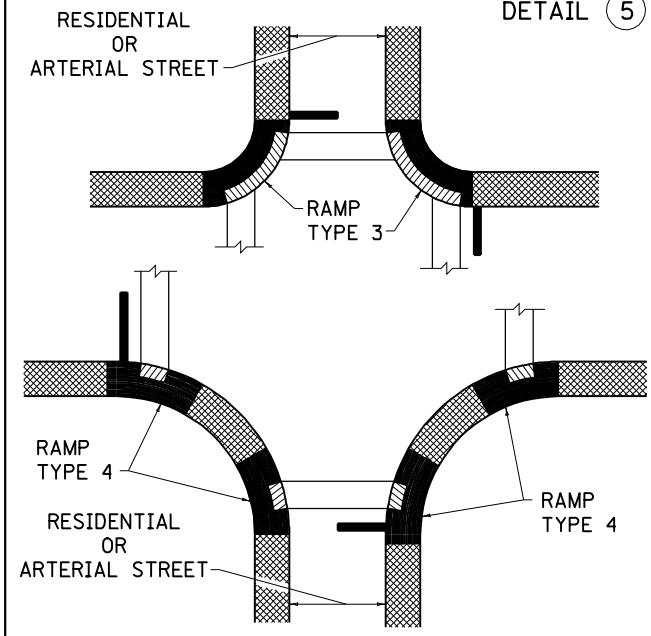
NO TRAFFIC SIGNAL WITH HEAVY TRAFFIC ON ARTERIAL

DETAIL (4)



SIGNALIZED INTERSECTION TYPICAL RAMP TREATMENTS

DETAIL (5)



SIDEWALK ADJACENT TO CURB LARGE AND SMALL RADII

LEGEND

- DETECTABLE WARNINGS
- SIDEWALK
- SIDEWALK RAMPS
- CROSSWALK
- STOP LINE MARKING
- PERFERRED LOCATION OF DRAINAGE INLET (TYPICAL)
- ALTERNATE LOCATION OF DRAINAGE INLET (TYPICAL)

USE WITH CUR. STD. DWG.S. RGX-040 AND RPM-170

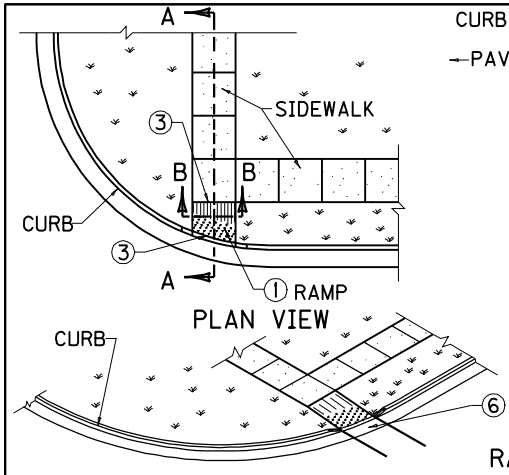
KENTUCKY DEPARTMENT OF HIGHWAYS

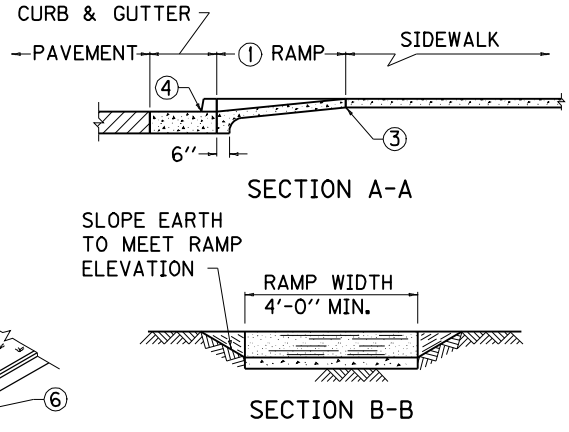
TYPICAL INSTALLATIONS FOR SIDEWALK RAMPS

STANDARD DRAWING NO. RPM-160-03

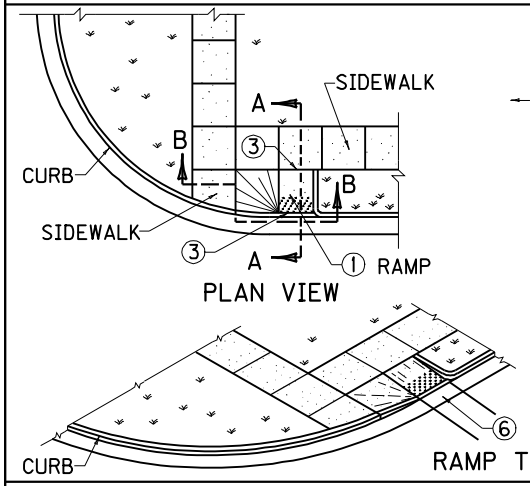
SUBMITTED: DIRECTOR DIVISION OF DESIGN — DATE: 11-21-07

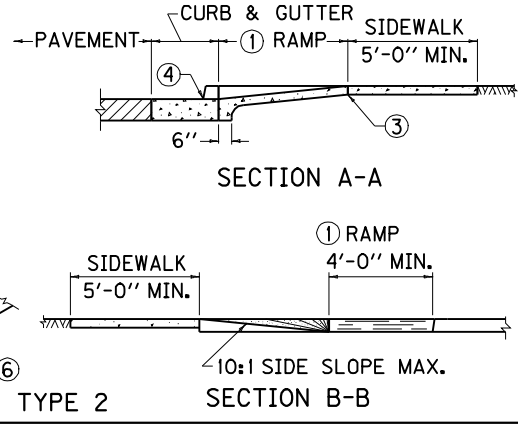
APPROVED: STATE HIGHWAY ENGINEER — DATE: 11-21-07





RAMP TYPE 1





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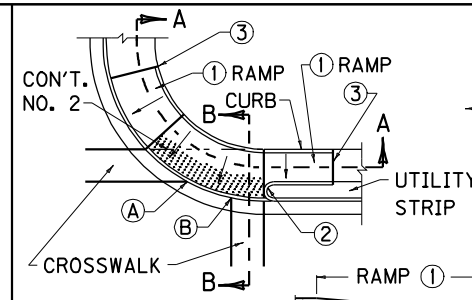
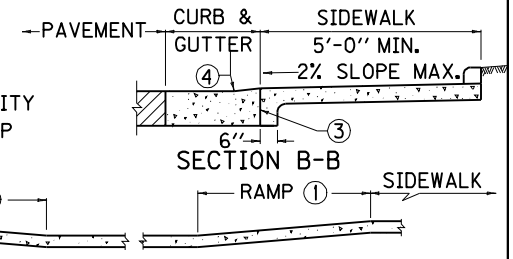
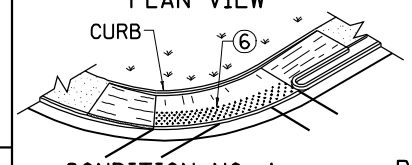
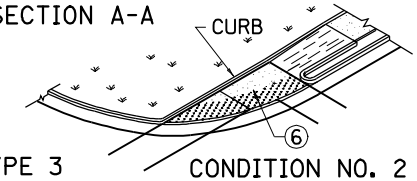
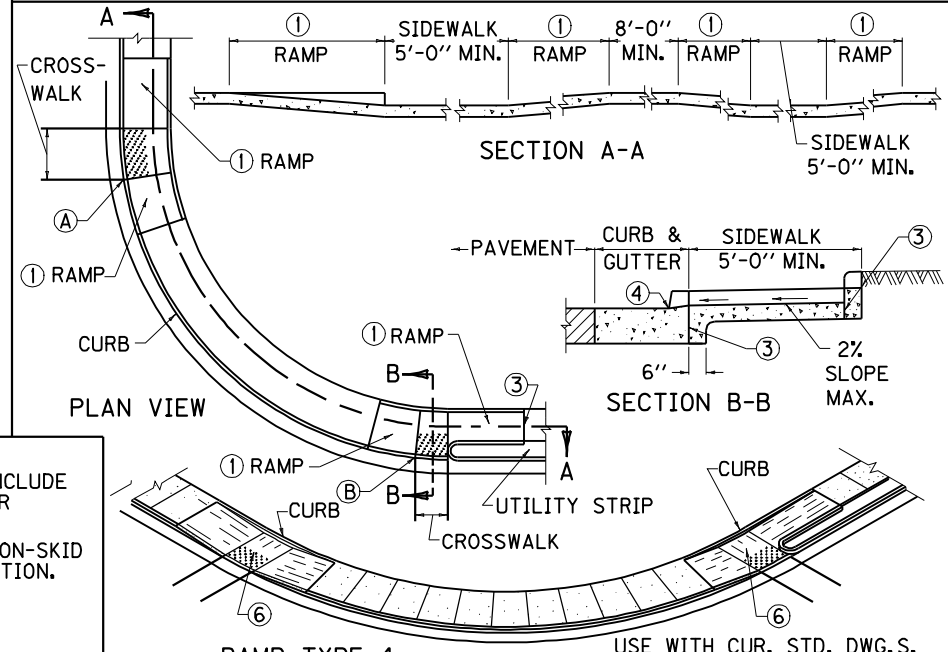






RAMP TYPE 3





RAMP TYPE 4

USE WITH CUR. STD. DWG.S.
RGX-040 AND RPM-160

NOTES

RAMPS SHALL BE PAID PER SQ. YARD OF 4'' CONC. SIDEWALK AND THE UNIT PRICE SHALL INCLUDE ALL MATERIALS, FORMS, CURB BEHIND RAMP AND LANDING, AND INCIDENTALS NECESSARY FOR CONSTRUCTION.

THE RAMP SHALL BE CONSTRUCTED OF CLASS ''A'' CONCRETE. A BROOM FINISH OR EQUAL NON-SKID FINISH IS REQUIRED. DETECTABLE WARNINGS SHALL BE INCIDENTAL TO SIDEWALK CONSTRUCTION.

THE NORMAL GUTTER LINE SHALL BE MAINTAINED THROUGH THE AREA OF THE RAMP.

RAMPS SHOULD BE LOCATED WITHIN MARKED LIMITS OF CROSSWALKS.

USE RAMP TYPE 3 WHEN POINT A TO B IS LESS THAN 20 FEET.

USE RAMP TYPE 4 WHEN POINT A TO B IS 20 FEET OR MORE.

① CURB RAMP GRADE SHALL NOT EXCEED 12:1, CROSS SLOPE SHALL NOT EXCEED 2%

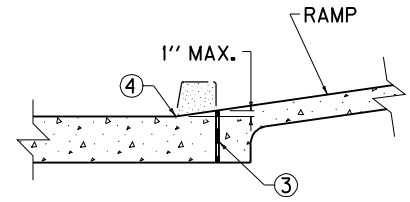
② CURB RETURN REQUIRED WHEN UTILITY STRIP IS 4 FEET OR GREATER. FOR UTILITY STRIPS LESS THAN 4 FEET, THE AREA IS TO BE SURFACED WITH SIDEWALK WITHIN THE RAMP.

③ ½'' EXPANSION JOINT AT BACK OF CURB LINE AND AT SIDEWALK LINE.

④ NO BUMP PERMITTED. SAME SLOPE AS RAMP AND NOT TO EXCEED 1'' IN HEIGHT. RAMPS SHALL BE CONSTRUCTED SO THAT WATER WILL NOT ACCUMULATE ON WALKING SURFACES.

5. ALL SIDEWALK RAMPS REQUIRE DETECTABLE WARNINGS.

⑥ LANDINGS WILL PROVIDE A LEVEL AREA (LESS THAN 2% GRADE OR CROSS SLOPE) AT APPROXIMATE STREET ELEVATION. A 4 FOOT SQUARE LEVEL LANDING IS THE REQUIRED MINIMUM.



DROP CURB FOR RAMP

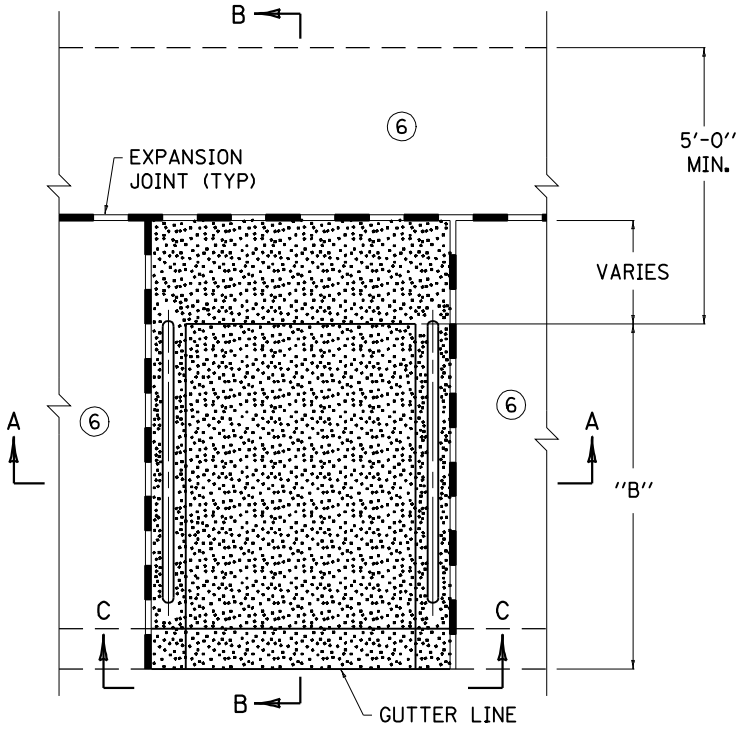
KENTUCKY
DEPARTMENT OF HIGHWAYS

SIDEWALK RAMPS

STANDARD DRAWING NO. RPM-170-06

SUBMITTED Chris Keith DIRECTOR DIVISION OF DESIGN 11-21-07 DATE

APPROVED Marcheyn Mathews STATE HIGHWAY ENGINEER 11-21-07 DATE



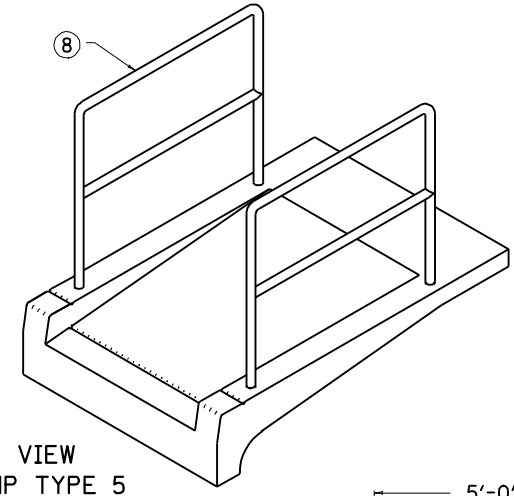
PLAN VIEW
SIDEWALK RAMP TYPE 5

NOTES

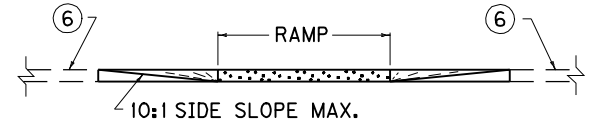
1. EXISTING SIDEWALK AND CURB SHALL BE REMOVED TO THE LIMITS AS DESIGNATED BY THE ENGINEER.
2. WHERE EXISTING JOINTS ARE LOCATED MORE THAN 2'-0'' FROM THE RAMP LIMITS SHOWN, THE CONTRACTOR SHALL SAW CUT THE SIDEWALK AND CURB PRIOR TO REMOVAL.
3. A MINIMUM AREA FOR SIDEWALK RAMP TYPE 5 IS INDICATED BY [▒] AND IS TO BE CALCULATED ON A SQUARE YARD BASIS AND PAID FOR AS ''SIDEWALK-4 INCH CONCRETE''. A BROOM FINISH OR EQUAL NON-SKID FINISH IS REQUIRED.
4. HANDRAIL TYPE A-1 SHALL MEET ALL REQUIREMENTS AND BE PAID FOR IN ACCORDANCE WITH CURRENT STD. DWG. RGX-030.

(5) CUT GROOVE TO CONFORM TO THE ADJACENT CURB.
(6) EXISTING SIDEWALK.
(7) THE LENGTHS SHOWN ARE MINIMUMS. IF ADEQUATE SPACE IS AVAILABLE A MINIMUM SLOPE OF 12:1 IS DESIRABLE.
(8) HANDRAIL TYPE A-1 MAY BE ELIMINATED PROVIDED ADEQUATE SPACE IS AVAILABLE TO CONSTRUCT 10:1 RAMP SIDE SLOPES AS SHOWN IN SECTION C-C.

9. ALL SIDEWALK RAMPS REQUIRE DETECTABLE WARNINGS.

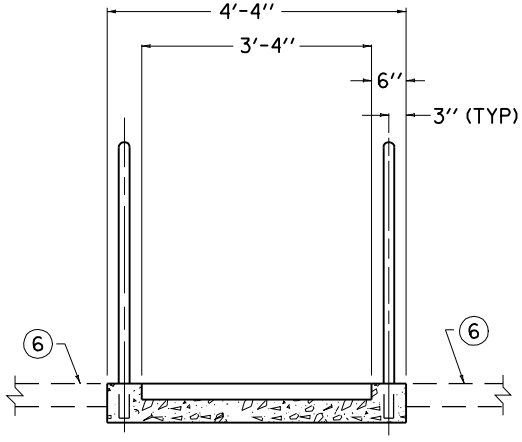


ISOMETRIC VIEW
SIDEWALK RAMP TYPE 5

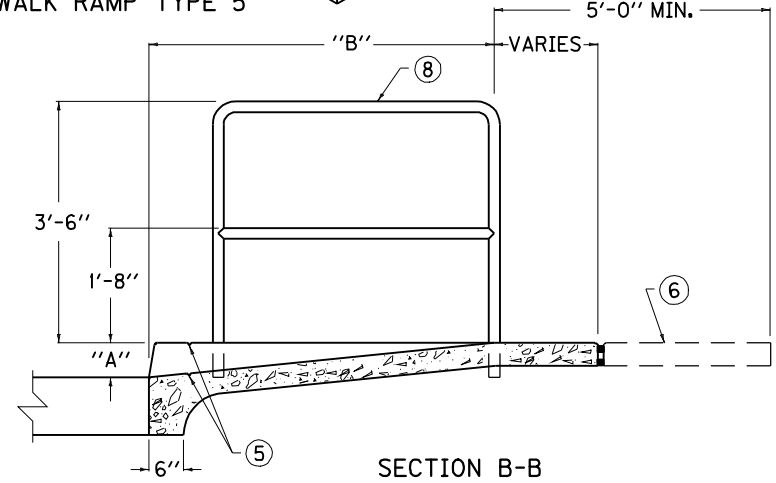


SECTION C-C (8)
(ALTERNATE TO HANDRAIL TYPE B)

RAMP HEIGHT ''A''	(7) RAMP LENGTH ''B''
≤3''	2'-0''
>3''≤6''	5'-0''



SECTION A-A



SECTION B-B

USE WITH CUR. STD. DWG. RPM-160

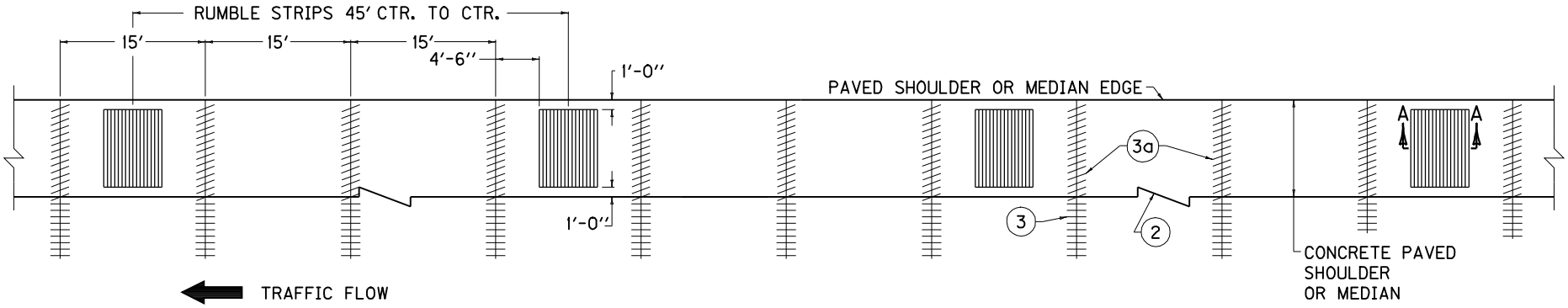
KENTUCKY
DEPARTMENT OF HIGHWAYS

SIDEWALK RAMP

STANDARD DRAWING NO. RPM-172-05

SUBMITTED Gary W. Sharp, DIRECTOR DIVISION OF DESIGN 12-2-02 DATE

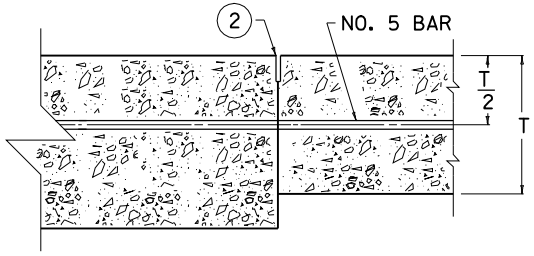
APPROVED J. M. Yowell, STATE HIGHWAY ENGINEER 12-2-02 DATE



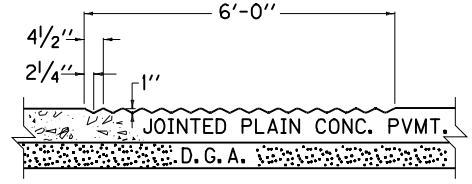
(6) JOINTED PLAIN CONCRETE PAVED SHOULDER OR MEDIAN (UNDOWELLED) WITH JOINTED PLAIN CONCRETE MAINLINE PAVEMENT

NOTES

1. THE COST OF CONSTRUCTING RUMBLE STRIPS SHALL BE INCLUDED IN THE UNIT BID PRICE FOR JOINTED PLAIN CONCRETE PAVEMENT.
2. (2) (3) (3a) SEE CUR. STD. DWG. RPS-010 FOR JOINT SYMBOLS AND DETAILS.
3. AFTER FINAL FINISHING OF THE PAVEMENT, CORRUGATIONS FOR RUMBLE STRIPS SHALL BE FORMED AT THE INTERVALS SHOWN INTO THE PLASTIC CONCRETE.
4. THE CORRUGATIONS SHALL BE ROUNDED RATHER THAN PEAKED, WITH THE TOP FLUSH WITH THE SHOULDER OR MEDIAN SLOPE.
5. THE TROUGH SHALL BE TAILED OUT, SO AS TO PROVIDE POSITIVE DRAINAGE.
6. JOINTED PLAIN CONCRETE SHOULDER OR MEDIAN (UNDOWELLED) IS DETAILED. WHEN JOINTED PLAIN CONCRETE SHOULDER OR MEDIAN (DOWELLED) IS REQUIRED REFER TO CURRENT STANDARD DRAWING RPM-145 FOR DETAIL.



JOINT DETAIL



SECTION A-A

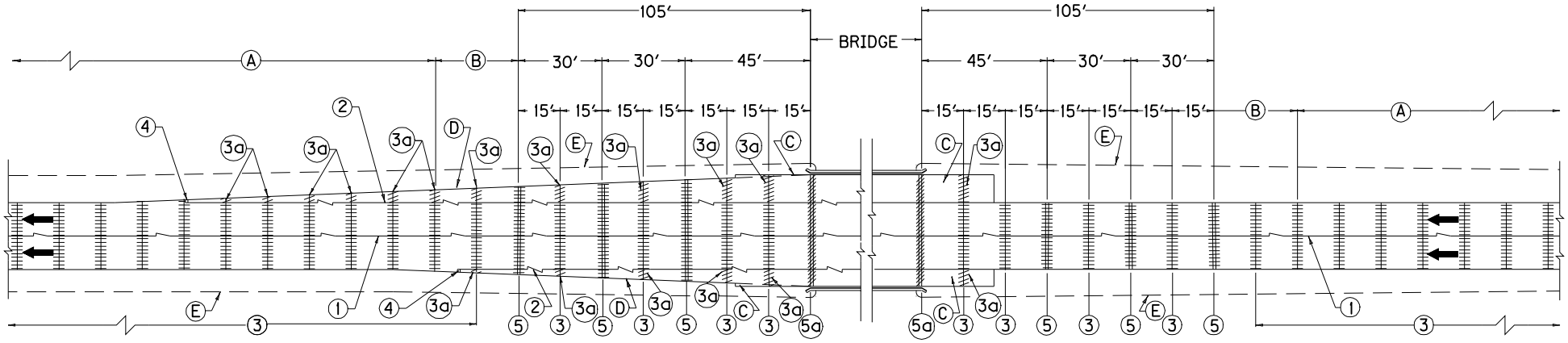
KENTUCKY DEPARTMENT OF HIGHWAYS

JOINTED PLAIN CONCRETE PAVEMENT FOR SHOULDERS & MEDIANS

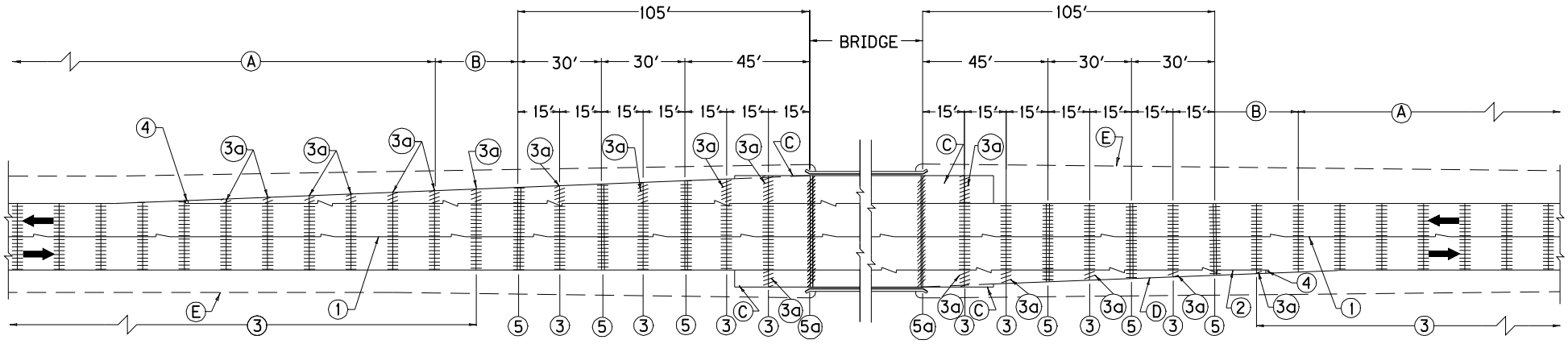
STANDARD DRAWING NO. RPN-001-06

SUBMITTED Chris Kreft DIRECTOR DIVISION OF DESIGN 11-21-07 DATE

APPROVED Marcheyn Matthews STATE HIGHWAY ENGINEER 11-21-07 DATE



• SINGLE BRIDGE OR TWIN BRIDGES WITH ONE DIRECTION TRAFFIC •



•SINGLE BRIDGE WITH TWO DIRECTION TRAFFIC•

•NOTES•

(A) NORMAL SPACING OF TRANSVERSE CONTRACTION JOINTS ARE 15′-0″ ON CENTER TAKEN ALONG ℄ OF PAVEMENT.

(B) THIS DISTANCE TO BE EQUALLY DIVIDED WHEN LESS THAN THE SUM OF THE SPACING OF THE NEXT TWO TRANSVERSE CONTRACTION JOINTS EXCEEDS A MAXIMUM OF 15′-0″.

(C) THIS SLAB REQUIRED ONLY WHEN NEEDED FOR BRIDGE END DRAINAGE.

(D) PAVEMENT TRANSITION 25′:1′, NOT PERMITTED WHEN CONSTRUCTED IN CONJUNCTION WITH P.C.C. SHOULDERS.

(E) SHOULDER TRANSITION 100′:1′.

F. SEE CURRENT STD. DWG. RPS-010 FOR JOINT SYMBOLS AND DETAILS.

G. IF WORK IS INTERRUPTED IN EXCESS OF 30 MINUTES, OR AT THE END OF DAYS PAVING, A TRANSVERSE CONSTRUCTION JOINT SHALL BE INSTALLED; HOWEVER, IT SHALL NOT BE PERMITTED WITHIN 5 FEET OF A TRANSVERSE CONTRACTION JOINT.

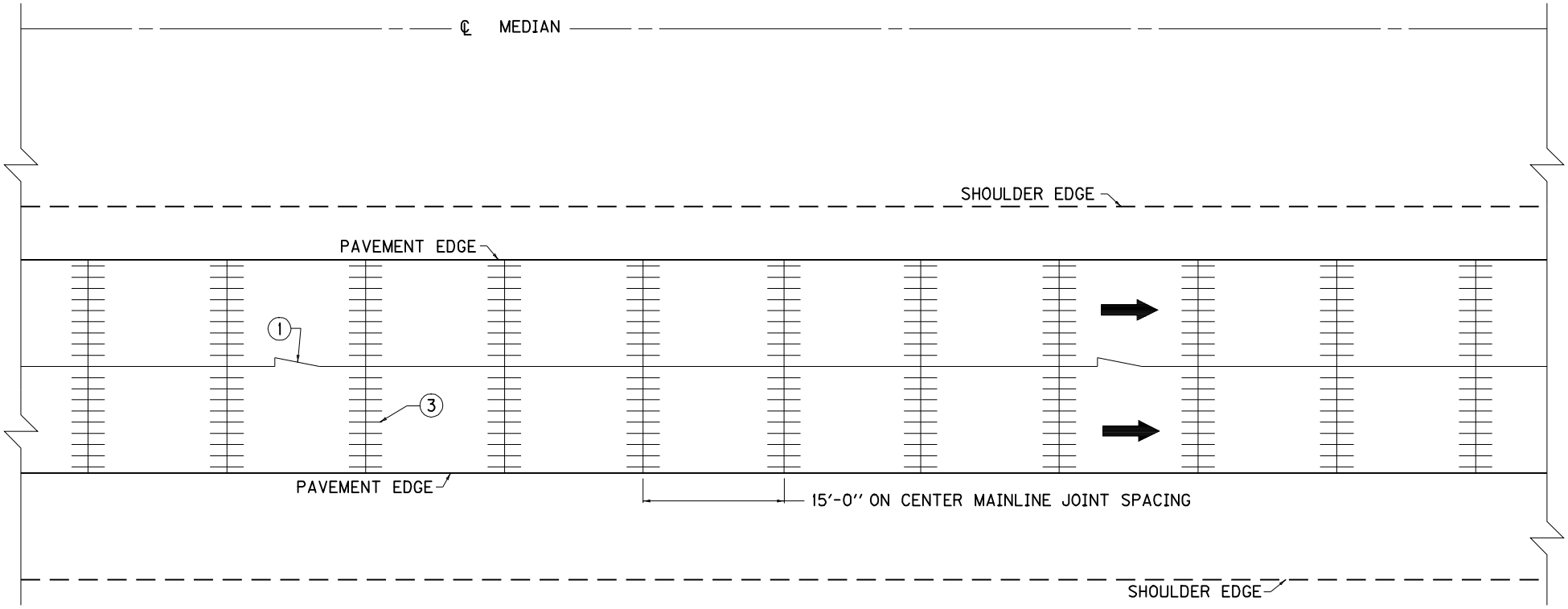
KENTUCKY
DEPARTMENT OF HIGHWAYS

PAVEMENT TRANSITIONS & JOINT DETAILS FOR JOINTED PLAIN CONCRETE PAVEMENT AT BRIDGE ENDS

STANDARD DRAWING NO. RPN-010-06

SUBMITTED Gary W. Sharp — DIRECTOR DIVISION OF DESIGN — 12-2-02 DATE

APPROVED — STATE HIGHWAY ENGINEER — 12-2-02 DATE



PLAN VIEW

NOTES

JOINTS

TRANSVERSE CONTRACTION JOINTS SHALL BE SPACED 15′-0″ ON CENTER AND SAWED TO A MINIMUM DEPTH OF ONE THIRD OF THE PAVEMENT THICKNESS (T/3) OR 4″ WHICHEVER IS LESS. ALL TRANSVERSE CONTRACTION AND TRANSVERSE EXPANSION JOINTS SHALL REQUIRE LOAD TRANSFER ASSEMBLIES AS DETAILED ON THE PLANS OR STANDARD DRAWINGS.

JOINT SPACING AND TYPE, AT BRIDGE ENDS, SHALL BE REQUIRED AS SHOWN ON THE PLANS OR CURRENT STANDARD DRAWING RPS-010.

TRANSVERSE CONSTRUCTION JOINTS SHALL BE CONSTRUCTED IN ACCORDANCE WITH SECTION 501.03.17.

(1) (3) SEE CURRENT STANDARD DRAWING RPS-010 FOR JOINT SYMBOLS AND DETAILS.

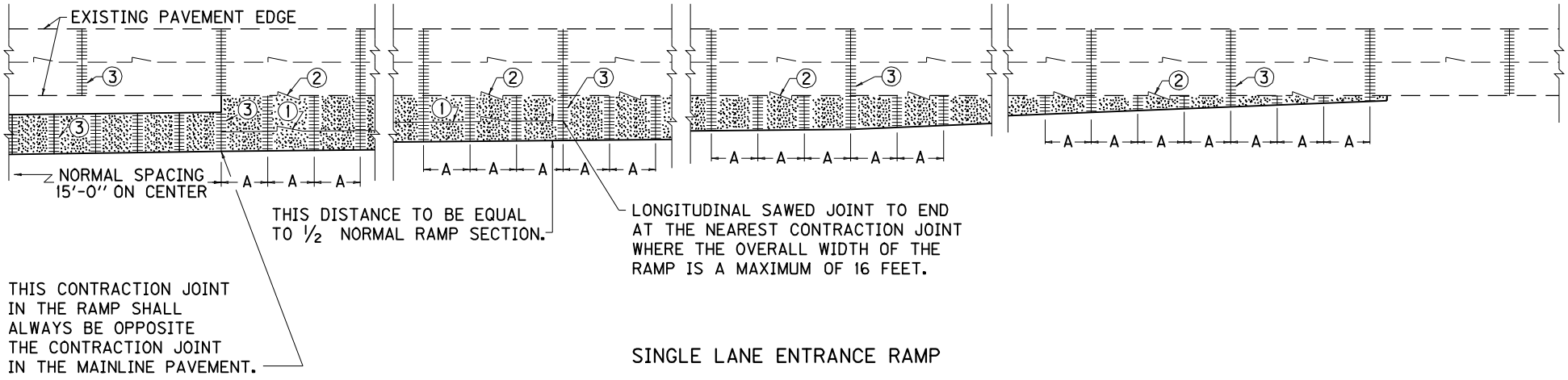
KENTUCKY
DEPARTMENT OF HIGHWAYS

JOINTED PLAIN CONCRETE PAVEMENT

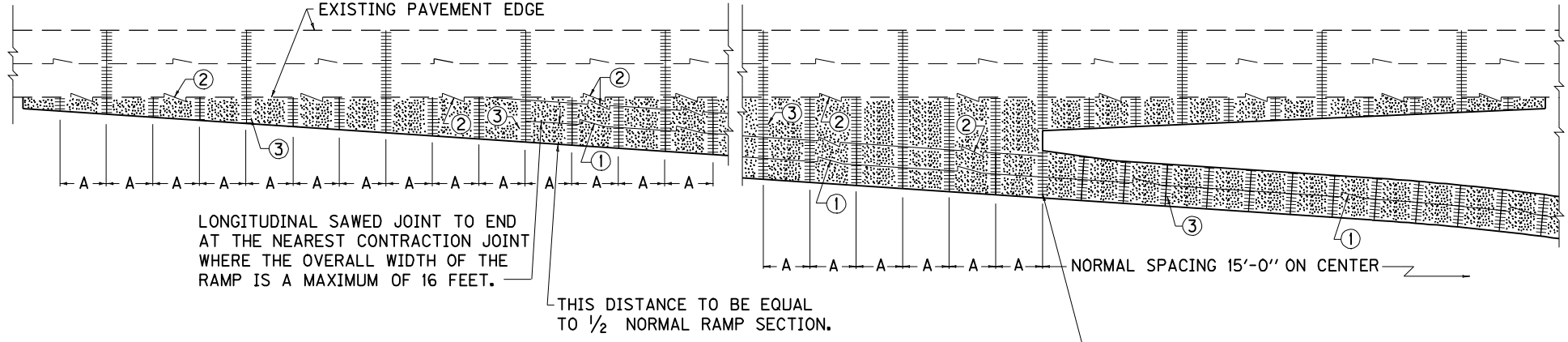
STANDARD DRAWING NO. RPN-015-04

SUBMITTED Gary W. Sharp, DIRECTOR DIVISION OF DESIGN 12-2-02 DATE

APPROVED J. M. Yowell, STATE HIGHWAY ENGINEER 12-2-02 DATE



SINGLE LANE ENTRANCE RAMP



SINGLE LANE EXIT RAMP

NOTES

1. (A) WHEN JOINTED PLAIN CONCRETE PAVEMENT IS SPECIFIED FOR AN ACCELERATION LANE, DECELERATION LANE, AN ADDITIONAL LANE, OR TAPER, AND IS TO BE CONSTRUCTED ADJACENT TO AN EXISTING JOINTED REINFORCED CONCRETE PAVEMENT, THE SPACING OF THE TRANSVERSE CONTRACTION JOINTS IN THE JOINTED PLAIN CONCRETE PAVEMENT SHALL BE AS FOLLOWS:
   - (a) WHEN THE SPACING OF THE TRANSVERSE CONTRACTION JOINTS IN THE EXISTING PAVEMENT IS 50 FEET, THE SPACING OF THE TRANSVERSE CONTRACTION JOINTS IN THE JOINTED PLAIN CONCRETE PAVEMENT SHALL BE 16⅔ FEET.
   - (b) WHEN THE SPACING OF THE TRANSVERSE CONTRACTION JOINTS IN THE EXISTING PAVEMENT IS 25 FEET, THE SPACING OF THE TRANSVERSE CONTRACTION JOINTS IN THE JOINTED PLAIN CONCRETE PAVEMENT SHALL BE 12½ FEET.
2. SEE CURRENT STANDARD DRAWING RPS-010 FOR JOINT SYMBOLS AND DETAILS.
3. LONGITUDINAL SAWED JOINTS AT CENTER LINE SHALL BE REQUIRED FOR ALL RAMPS AND LOOPS GREATER THAN 16 FEET IN WIDTH.
4. ALL CONTRACTION JOINTS IN THE RAMP IMMEDIATELY OPPOSITE TO THE MAIN LINE PAVEMENT SHALL BE A CONTINUATION OF THE JOINTS IN THE MAINLINE PAVEMENT.
5. ▨ PROPOSED JOINTED PLAIN CONRETE PAVEMENT.

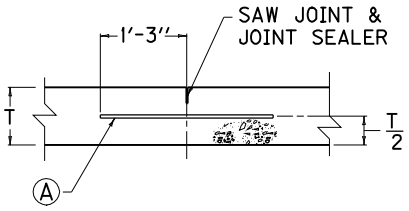
KENTUCKY
DEPARTMENT OF HIGHWAYS

CONCRETE PAVEMENT JOINTS TYPES & SPACING

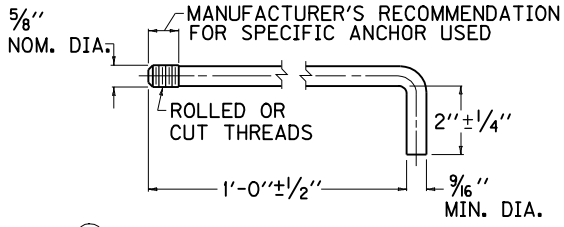
STANDARD DRAWING NO. RPN-020-03

SUBMITTED Gary W. Sharp, DIRECTOR DIVISION OF DESIGN 12-2-02 DATE

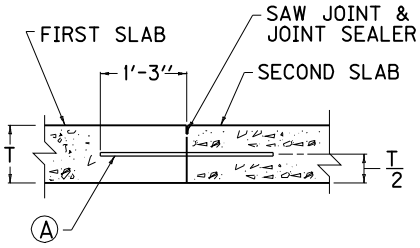
APPROVED J. M. Yowell, STATE HIGHWAY ENGINEER 12-2-02 DATE



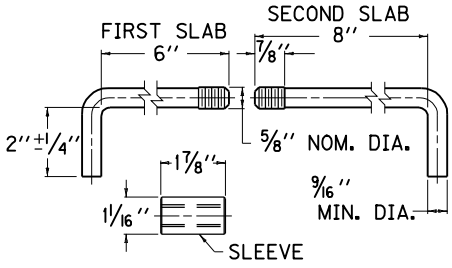
① LONGITUDINAL SAWED JOINT



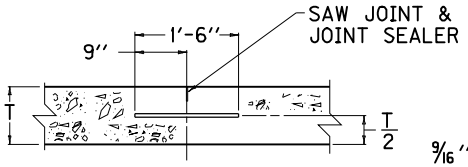
Ⓑ HOOK BOLT FOR USE WITH EXPANSION ANCHOR
(SEE STANDARD SPECIFICATIONS FOR BASIS OF PAYMENT)



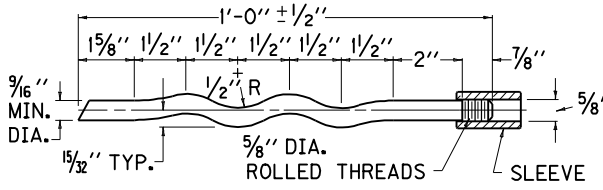
② LONGITUDINAL SAWED CONSTRUCTION JOINT



ALTERNATE 1
HOOK BOLTS FOR
CONSTRUCTION JOINTS

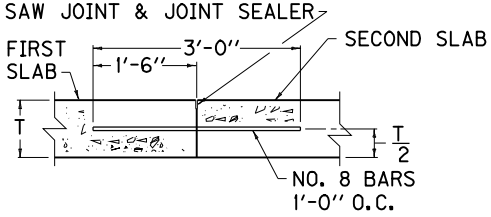


③ TRANSVERSE SAWED CONTRACTION JOINT

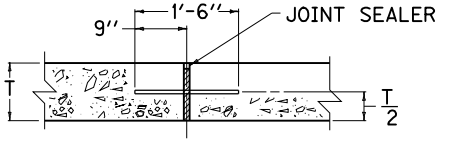


ALTERNATE 2 (FIRST SLAB)
DEFORMED ANCHOR BOLT
(TO BE USED WITH 8" HOOK BOLT)

5/8" PLASTIC INSERT



④ TRANSVERSE SAWED CONSTRUCTION JOINT



⑤ TRANSVERSE EXPANSION JOINT

NOTES

LONGITUDINAL JOINTS SHALL BE USED WHEN SHOWN ON THE TYPICAL SECTION, AND STANDARD DRAWINGS AND SHALL BE CONSTRUCTED AS SHOWN ON THIS DRAWING.

LONGITUDINAL CONSTRUCTION JOINTS BETWEEN ADJOINING SLABS, AND PAVED IN SEPARATE OPERATIONS SHALL USE HOOK-BOLTS OR TIE BARS AND BE CONSTRUCTED AS SHOWN ON THIS DRAWING.

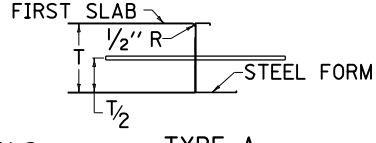
IN LIEU OF THE DEFORMED TIE BARS THE CONTRACTOR SHALL BE PERMITTED TO USE EITHER ALT. 1 OR ALT. 2 HOOK BOLT AS DETAILED.

SLIP-FORM PAVEMENT

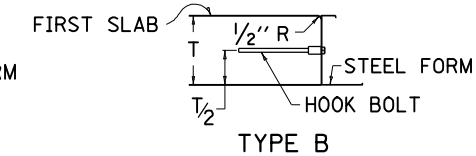
④ DEFORMED TIE BARS USED IN TRANSVERSE CONSTRUCTION JOINTS SHALL BE NO CLOSER THAN 6" TO THE PAVEMENT EDGE OR ANY LONGITUDINAL JOINT.

Ⓐ NO. 5 DEFORMED TIE BAR 2'-6" LONG PLACED 1'-8" ON CENTER AND PLACED 1'-8" MINIMUM FROM ANY TRANSVERSE JOINT.

Ⓑ EXPANSION ANCHOR FOR BOLT SIZE INDICATED SHALL BE BETHLEHEM MINE ROOF EXPANSION TYPE WITH K-1 SHELL , PHILLIPS RED HEAD ANCHOR, CHICAGO EXPANSION BOLT CO. - SPECIAL FLUSH SELF DRILLING ANCHOR , OR APPROVED TYPE. INSTALLATION SHALL CONFORM TO MANUFACTURER'S RECOMMENDATION. HOOK BOLTS WITH EXPANSION ANCHORS ATTACHED SHALL NOT BE LESS THAN 14" IN LENGTH. HOOK BOLTS WITH EXPANSION ANCHORS SHALL BE SPACED 5'-0" O.C.



TYPE A



TYPE B

METHODS OF FORMING CONSTRUCTION JOINTS WHEN FORMS ARE USED

JOINT SYMBOLS

- ① LONGITUDINAL SAWED JOINT
- ② LONGITUDINAL SAWED CONSTRUCTION JOINT
- ③ TRANSVERSE SAWED CONTRACTION JOINT
- ④ TRANSVERSE SAWED CONSTRUCTION JOINT (1'-0" MIN.)
- ⑤ TRANSVERSE EXPANSION JOINT
- 1a LONGITUDINAL SAWED JOINT (WITHOUT TIE BARS)
- 2a LONGITUDINAL SAWED CONSTRUCTION JOINT (WITHOUT TIE BARS)
- 3a TRANSVERSE SAWED CONTRACTION JOINT (WITHOUT LOAD TRANSFER ASSEMBLY)
- 4a TRANSVERSE SAWED CONSTRUCTION JOINT (WITHOUT TIE BARS)
- 5a 1/2" TRANSVERSE EXPANSION JOINT (WITHOUT LOAD TRANSFER ASSEMBLY)

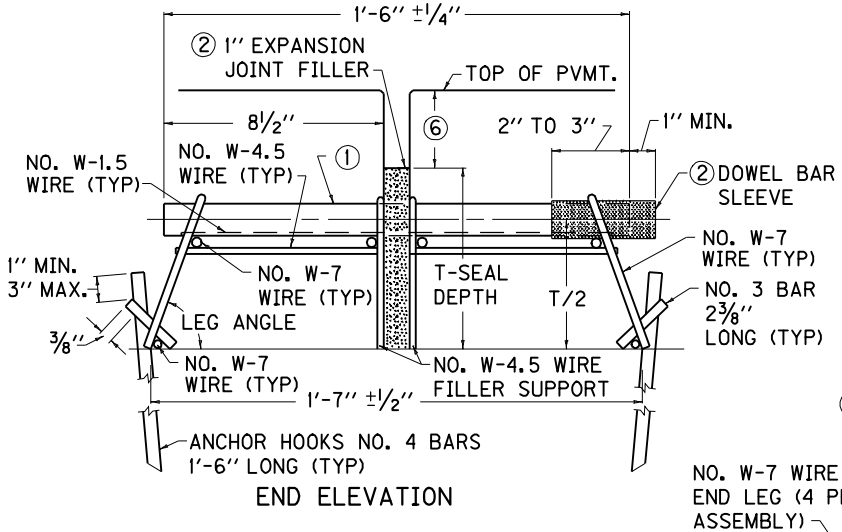
KENTUCKY
DEPARTMENT OF HIGHWAYS

CONCRETE PAVEMENT JOINT DETAILS

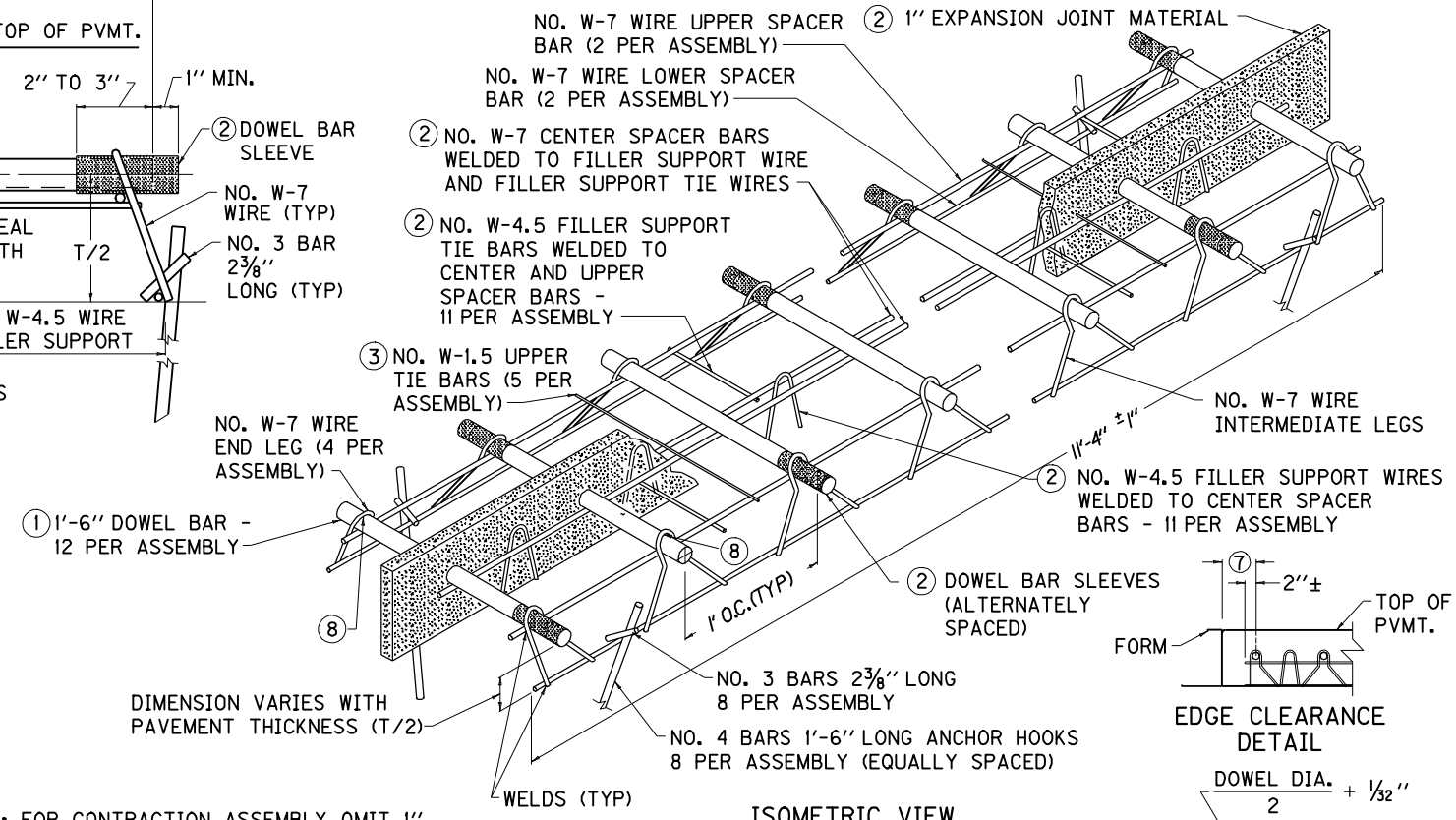
STANDARD DRAWING NO. RPS-010-10

SUBMITTED Gary W. Sharp, DIRECTOR DIVISION OF DESIGN 12-2-02 DATE

APPROVED J. M. Yowell, STATE HIGHWAY ENGINEER 12-2-02 DATE



END ELEVATION



ISOMETRIC VIEW

EDGE CLEARANCE DETAIL

NOTES

① DOWEL BAR SIZES

PAVEMENT THICKNESS						
8"	9"	10"	11"	12"	13"	14"
BAR DIAMETER						
1 1/4"			1 1/2"		1 3/4"	
LEG ANGLES +/- 3 DEGREES						
63	63	63	70	70	70	70

② EXPANSION ASSEMBLY IS ILLUSTRATED: FOR CONTRACTION ASSEMBLY OMIT 1" EXPANSION JOINT MATERIAL, NO. W-7 CENTER SPACER BARS, NO. W-4.5 FILLER SUPPORT WIRES, FILLER TIE BARS, AND DOWEL BAR SLEEVES.

③ NO. W-1.5 UPPER TIE BARS WELDED TO UPPER SPACER BARS CUT AFTER FIRST CONCRETE PLACEMENT.

④ FOR END LEGS, BEND WIRE AS SHOWN BY PHANTOM LINES IN INTERMEDIATE LEG DETAIL.

⑤ REFERENCE POINTS SHALL BE REQUIRED ON EACH SIDE OF THE LOAD TRANSFER ASSEMBLY, IN ORDER TO LOCATE THE INTENDED SAWED JOINT AFTER PAVING. ALL SAWING SHALL BE ACCURATELY CONTROLLED TO THE CENTERLINE OF THE LOAD TRANSFER ASSEMBLIES. LONGITUDINAL ORIENTATION OF DOWEL BARS SHALL BE SUCH THAT ALL DOWEL BARS ARE PARALLEL WITH THE CENTERLINE OF EACH PAVING LANE.

⑥ SEE APPLICABLE CURRENT STD. DWG. RPX-010 OR RPX-020 FOR SEAL DEPTH.

⑦ 4 1/2" MIN. AND 10 1/2" MAX. FOR VARIABLE SLAB WIDTH. 6" FOR UNIFORM OR STD. SLAB WIDTH. LOCATION AND SPACING SEE APPLICABLE PAVEMENT STANDARD DRAWINGS.

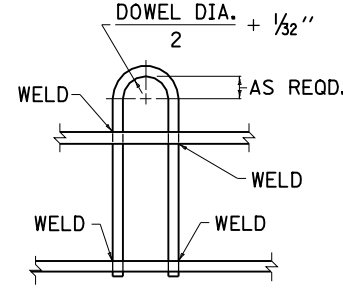
⑧ WELD EITHER NO. W-7 UPPER SPACER BAR OR LEG SUPPORT TO ALTERNATE ENDS OF DOWEL BARS AS TYPICALLY SHOWN.

9. DOWEL ENDS SHALL NOT VARY MORE THAN 1/4" FROM A STRAIGHT LINE.

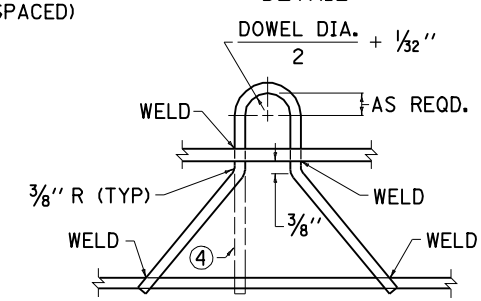
10. DOWELS SHALL BE PARALLEL WITH BASE, WITH A TOLERANCE OF 1/4".

11. EPOXY SHALL BE CLEANED OFF TO BARE METAL BEFORE WELDING DOWEL TO WIRE.

12. "U" LEG OR "A" LEG ARE ACCEPTABLE ALTERNATES PROVIDING MATCHED LEGS ARE SUPPLIED.



INTERMEDIATE OPTIONAL "U" LEG DETAIL



INTERMEDIATE OPTIONAL "A" LEG DETAIL

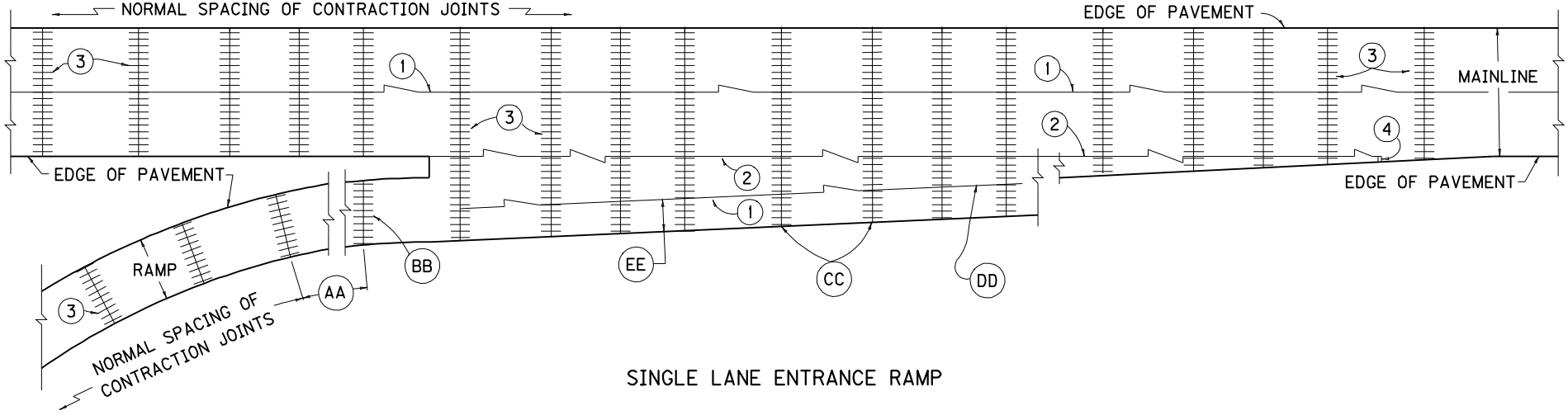
KENTUCKY DEPARTMENT OF HIGHWAYS

EXPANSION AND CONTRACTION JOINT LOAD TRANSFER ASSEMBLIES

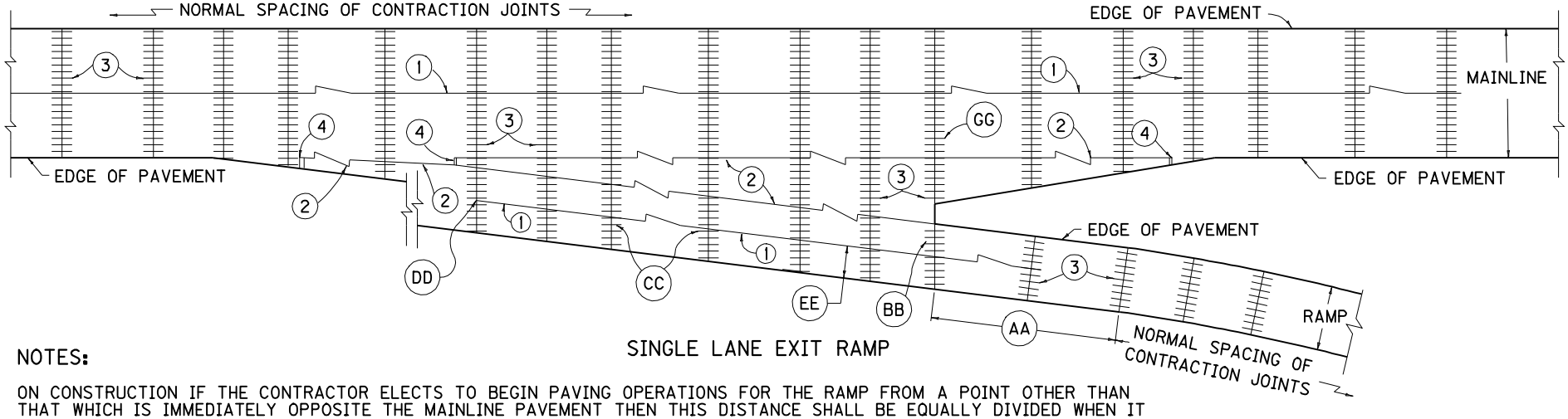
STANDARD DRAWING NO. RPS-020-13

SUBMITTED: DIRECTOR DIVISION OF DESIGN — DATE: 11-21-07

APPROVED: STATE HIGHWAY ENGINEER — DATE: 11-21-07



SINGLE LANE ENTRANCE RAMP



SINGLE LANE EXIT RAMP

NOTES:

(AA) ON CONSTRUCTION IF THE CONTRACTOR ELECTS TO BEGIN PAVING OPERATIONS FOR THE RAMP FROM A POINT OTHER THAN THAT WHICH IS IMMEDIATELY OPPOSITE THE MAINLINE PAVEMENT THEN THIS DISTANCE SHALL BE EQUALLY DIVIDED WHEN IT BECOMES GREATER THAN 20 FEET AND LESS THAN 40 FEET.

(BB) THIS CONTRACTION JOINT IN THE RAMP SHALL ALWAYS BE OPPOSITE THE CONTRACTION JOINT IN THE MAINLINE PAVEMENT.

(CC) ALL CONTRACTION JOINTS IN THE RAMP IMMEDIATELY OPPOSITE THE MAINLINE PAVEMENT SHALL BE A CONTINUATION OF THE JOINTS IN THE MAINLINE PAVEMENT.

(DD) LONGITUDINAL SAWED JOINT SHALL END AT THE NEAREST CONTRACTION JOINT, WHERE THE OVERALL WIDTH OF THE RAMP IS A MAXIMUM OF 16 FEET.

(EE) THIS DISTANCE SHALL BE EQUAL TO ½ THE NORMAL RAMP SECTION.

FF. LONGITUDINAL SAWED JOINTS AT CENTERLINE SHALL BE REQUIRED FOR ALL RAMPS AND LOOP WIDTHS GREATER THAN 16 FEET.

(GG) THIS CONTRACTION JOINT SHALL ALWAYS BE PLACED OPPOSITE THE NOSE OF THE RAMP. THE TWO CONTRACTION JOINTS IMMEDIATELY PRECEEDING THIS JOINT, DEPENDING ON THE DIRECTION OF PAVING OPERATIONS, SHALL BE EQUALLY DIVIDED, PROVIDED THE SPACING DOES NOT EXCEED THE NORMAL SPACING. SHOULD SPACING BE GREATER THAN NORMAL, AN EXTRA JOINT SHALL BE ADDED AND THE DISTANCE EQUALLY DIVIDED. THE JOINT IMMEDIATELY FOLLOWING THE JOINT THAT IS PLACED OPPOSITE THE RAMP NOSE SHALL BE NORMALLY SPACED.

HH. SEE CURRENT STANDARD DRAWING RPS-010 FOR JOINT SYMBOLS AND DETAILS.

II. NORMAL SPACING OF CONTRACTION JOINTS INDICATED ON THIS DRAWING ARE TO BE IN ACCORDANCE WITH SPACING INDICATED ON CURRENT STANDARD DRAWING RPN-015 .

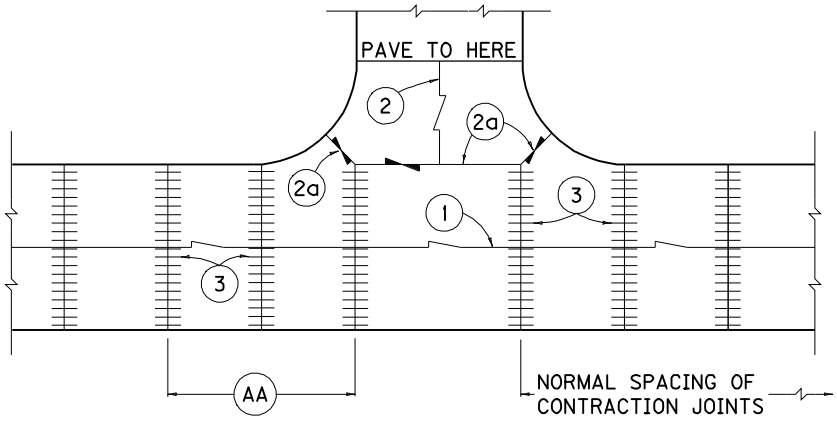
KENTUCKY
DEPARTMENT OF HIGHWAYS

CONCRETE PAVEMENT JOINTS TYPES AND SPACING

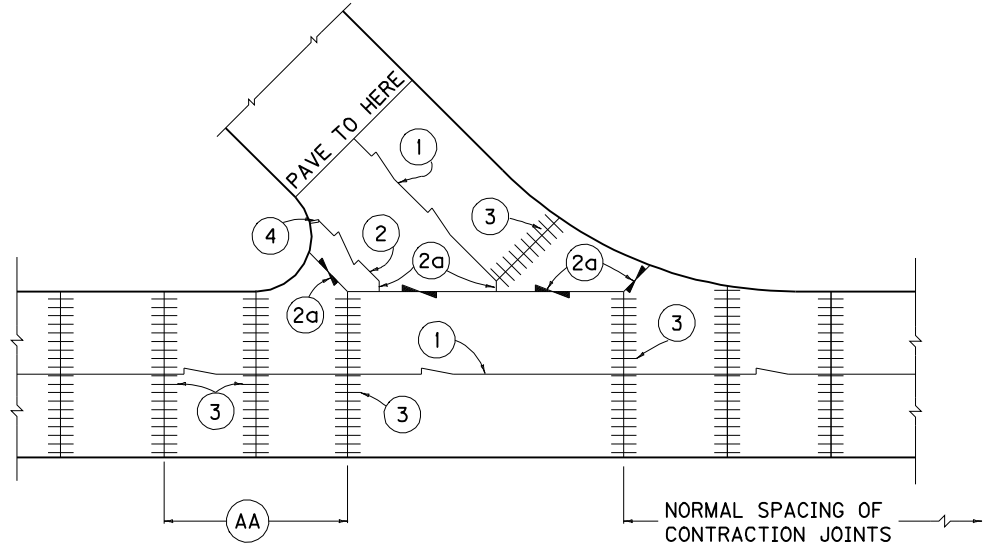
STANDARD DRAWING NO. RPS-030-05

SUBMITTED Gary W. Sharp. DIRECTOR DIVISION OF DESIGN 12-2-02 DATE

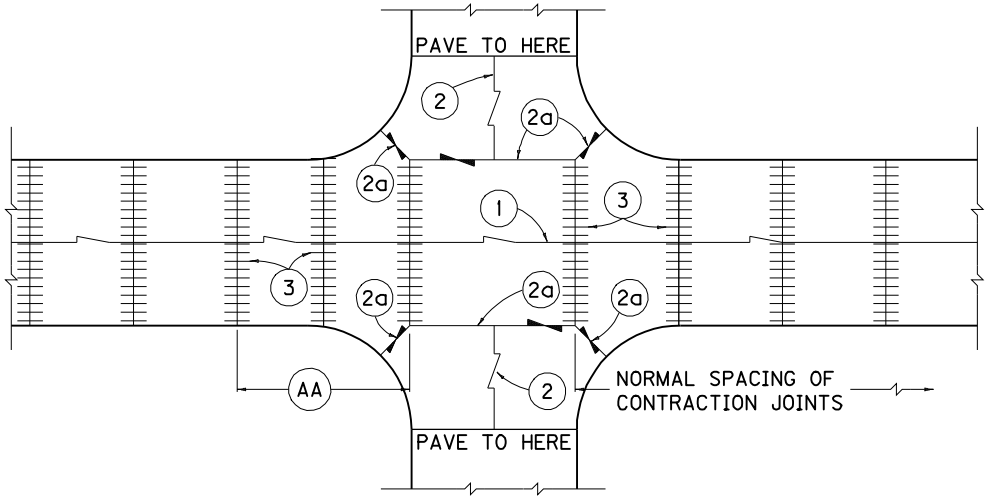
APPROVED J. M. Yowell STATE HIGHWAY ENGINEER 12-2-02 DATE



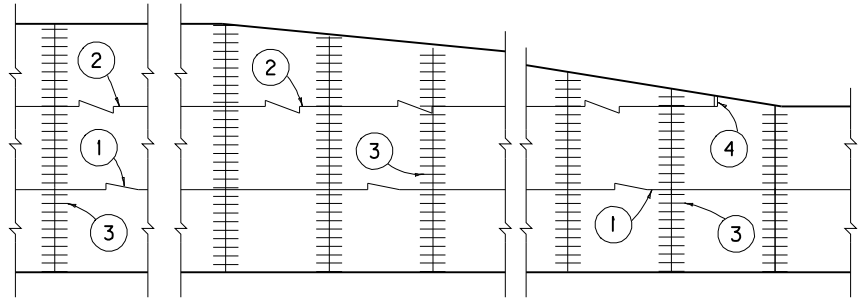
SINGLE INTERSECTIONS



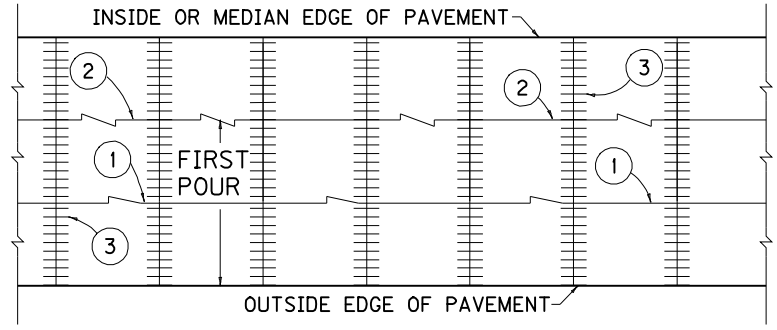
ANGLE INTERSECTION



DOUBLE INTERSECTIONS



DECELERATING LANE



NORMAL THREE LANE PAVEMENT

NOTES

SEE CURRENT STD. DWG. RPS-010 FOR JOINT SYMBOLS AND DETAILS.

DRAWINGS ON THIS SHEET ARE DETAILED ON THE PREMISE THAT PAVEMENT CONSTRUCTION WILL BE FROM LEFT TO RIGHT. IF PAVEMENT CONSTRUCTION IS IN THE OPPOSITE DIRECTION, TRANSVERSE JOINT SPACING DETAILS SHALL BE REVERSED END FOR END.

(AA) THIS DISTANCE TO BE EQUALLY DIVIDED WHEN GREATER THAN 20 FEET AND LESS THAN 40 FEET.

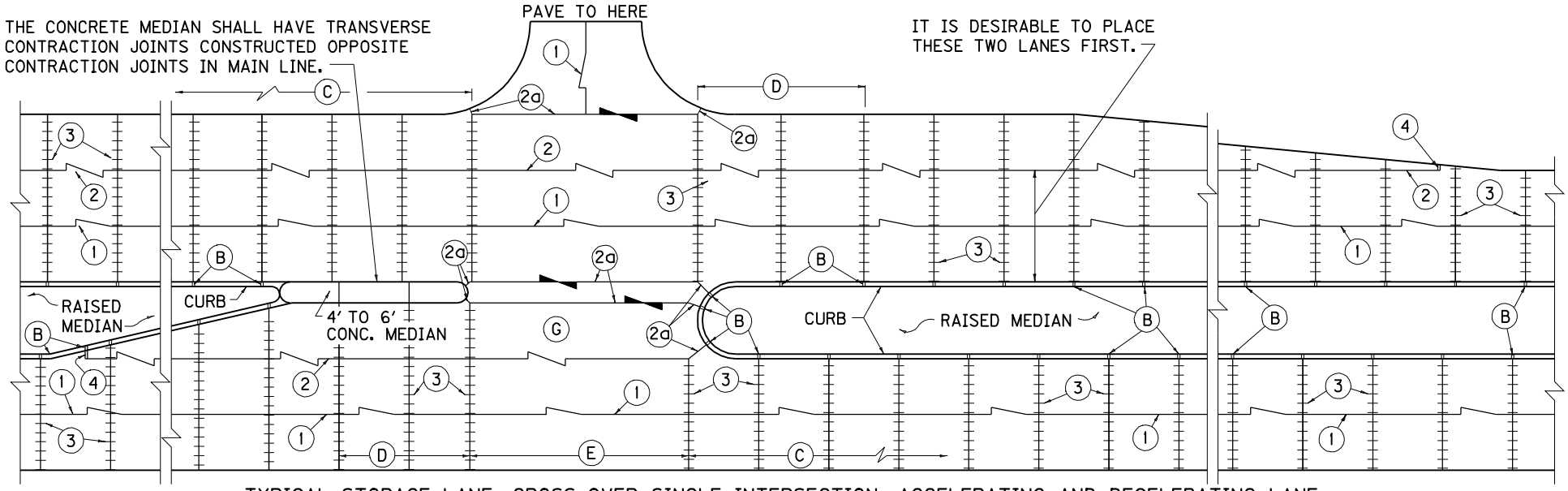
KENTUCKY
DEPARTMENT OF HIGHWAYS

CONCRETE PAVEMENT JOINTS TYPES AND SPACING

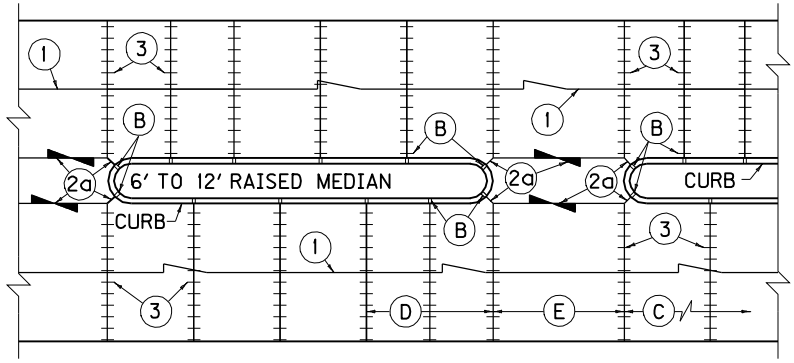
STANDARD DRAWING NO. RPS-031-05

SUBMITTED Gary W. Sharp, DIRECTOR DIVISION OF DESIGN 12-2-02 DATE

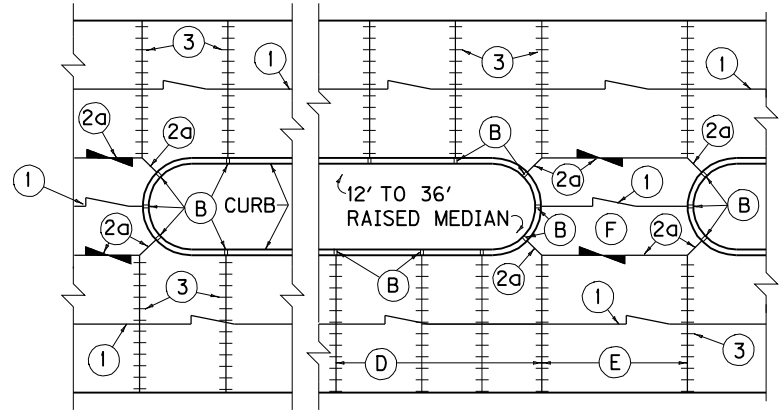
APPROVED T. M. Farrell, STATE HIGHWAY ENGINEER 12-2-02 DATE



TYPICAL STORAGE LANE, CROSS-OVER SINGLE INTERSECTION, ACCELERATING AND DECELERATING LANE



TYPICAL DIVIDED PAVEMENT WITH NARROW RAISED MEDIAN AND CROSS-OVER



TYPICAL DIVIDED PAVEMENT WITH WIDE RAISED MEDIAN AND CROSS-OVER

NOTES:

SEE CURRENT STD. DWG. RPS-010 FOR JOINT SYMBOLS AND DETAIL.

ALL INTEGRAL CURBS CONSTRUCTED WITH CONCRETE BASE OR PAVEMENT SHALL HAVE JOINTS COINCIDING WITH THE TRANSVERSE JOINTS AND OTHER JOINTS SHOWN ON THIS STANDARD DRAWING. THE JOINTS SHALL BE FILLED WITH ½" PREMOLDED EXPANSION JOINT FILLER, CUT TO THE REQUIRED SECTION.

(B) ½" EXPANSION JOINT FILLER.

(C) NORMAL SPACING OF CONTRACTION JOINTS 15'-0" ON CENTER.

(D) THIS DISTANCE TO BE EQUALLY DIVIDED WHEN GREATER THAN 20 FEET AND LESS THAN 40 FEET.

(E) NO CONTRACTION JOINT REQUIRED WHEN DISTANCE LESS THAN NORMAL SPACING OF JOINTS. EQUALLY DIVIDED WHEN DISTANCE IS GREATER THAN 20 FEET AND LESS THAN 40 FEET.

(F) A LONGITUDINAL SAWED JOINT SHALL BE CONSTRUCTED IN THE CROSS-OVER WHEN THE WIDTH OF CROSS-OVER BECOMES GREATER THAN 16 FEET AND LESS THAN 24 FEET. WHEN WIDTH BECOMES GREATER THAN 24 FEET A LONGITUDINAL SAWED AND LONGITUDINAL CONSTRUCTION JOINT SHALL BE CONSTRUCTED IN THE CROSS-OVER.

(G) SHOULD THE CROSS-OVER LENGTH BECOME GREATER THAN NORMAL SPACING OF CONTRACTION JOINTS A TRANSVERSE CONTRACTION JOINT SHALL BE PLACED IN THE CROSS-OVER OPPOSITE THE CONTRACTION JOINTS IN THE MAIN LINE.

USE WITH CUR. STD. DWG. RPS-010

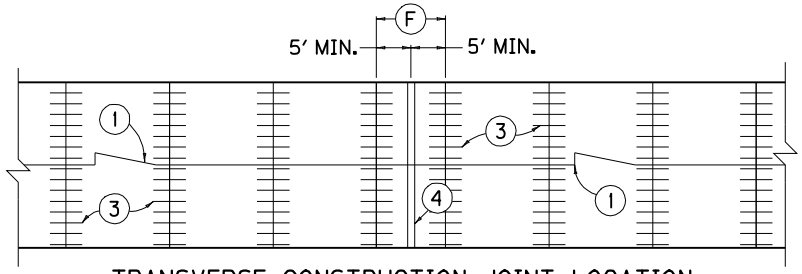
KENTUCKY
DEPARTMENT OF HIGHWAYS

CONCRETE PAVEMENT JOINTS TYPES AND SPACING

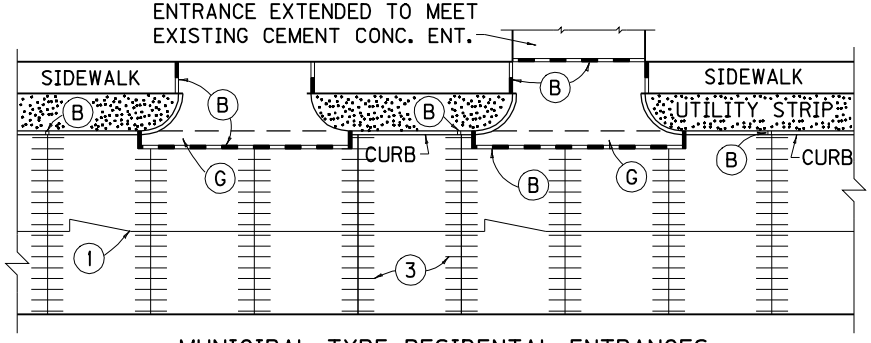
STANDARD DRAWING NO. RPS-032-05

SUBMITTED Gary W. Sharp, DIRECTOR DIVISION OF DESIGN 12-2-02 DATE

APPROVED [signature], STATE HIGHWAY ENGINEER 12-2-02 DATE



TRANSVERSE CONSTRUCTION JOINT LOCATION

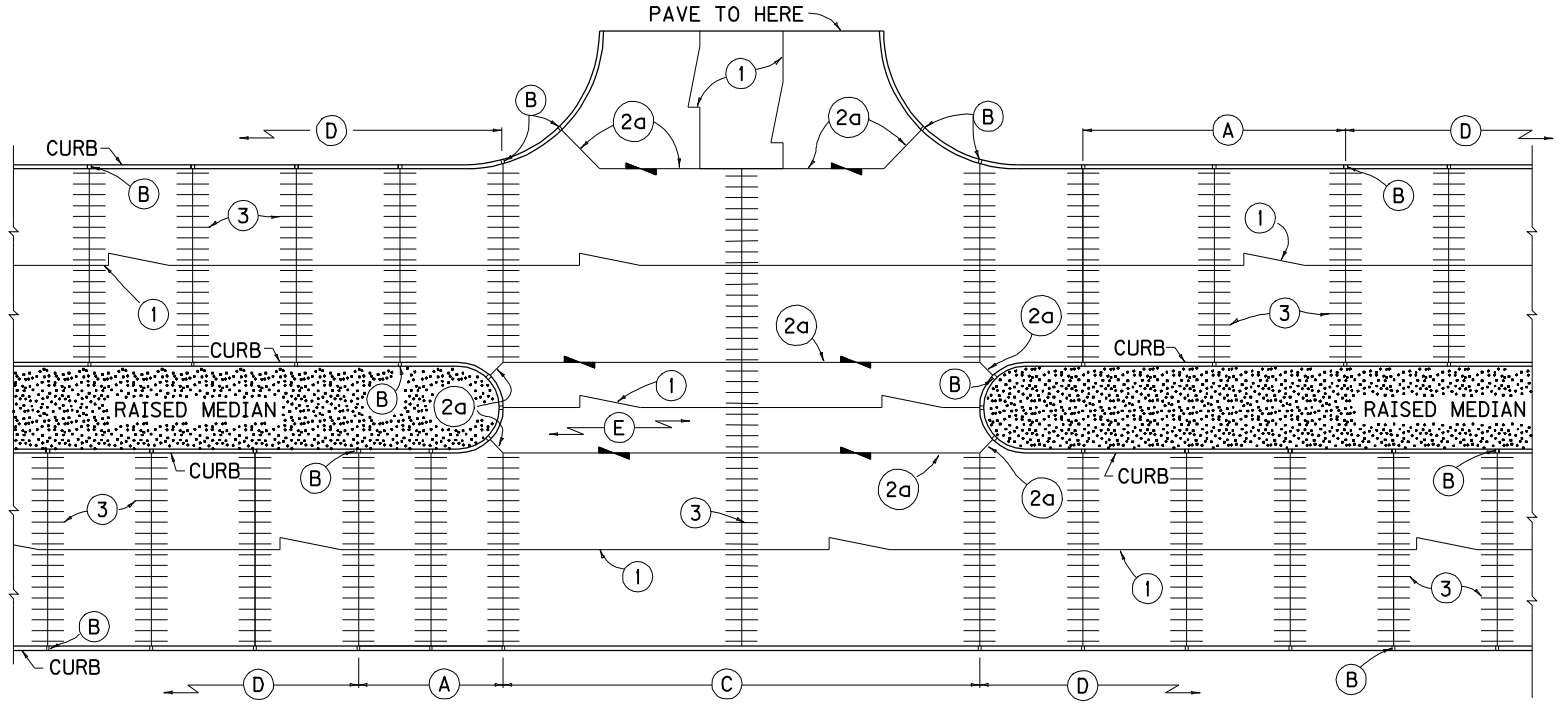


MUNICIPAL TYPE RESIDENTAL ENTRANCES

NOTES

1. SEE CURRENT STANDARD DRAWING RPS-010 FOR JOINT SYMBOLS AND DETAILS.
2. THE INSTALLATION OF LONGITUDINAL SAWED AND CONSTRUCTION JOINTS IN TURNOUTS SHALL DEPEND ON WIDTH OF TURNOUT WITH THE RULE THAT 16 FEET SHALL BE MAXIMUM POUR WITHOUT CONSTRUCTION OF A LONGITUDINAL JOINT.
3. ALL INTEGRAL CURBS CONSTRUCTED WITH CONCRETE BASE OR PAVEMENT SHALL HAVE JOINTS COINCIDING WITH THE TRANSVERSE JOINTS AND OTHER JOINTS SHOWN ON THIS STANDARD DRAWING. THE JOINTS SHALL BE FILLED WITH ½" PREMOLDED EXPANSION JOINT FILLER, CUT TO REQUIRED SECTION.

(A) THIS DISTANCE TO BE EQUALLY DIVIDED WHEN GREATER THAN 20' AND LESS THAN 40'.
(B) ½" EXPANSION JOINT FILLER.
(C) THIS DISTANCE TO BE EQUALLY DIVIDED WHEN GREATER THAN 20' AND LESS THAN 40'. NO TRANSVERSE JOINT WILL BE REQUIRED IF DISTANCE IS LESS THAN NORMAL SPACING OF JOINTS.
(D) NORMAL SPACING OF CONTRACTION JOINTS.
(E) EQUALLY DIVIDE AND CONSTRUCT LONGITUDINAL SAWED JOINT WHEN WIDTH OF CROSSOVER BECOMES GREATER THAN 16' AND LESS THAN 24'. WHEN WIDTH BECOMES GREATER THAN 24', A LONGITUDINAL SAWED AND LONGITUDINAL CONSTRUCTION JOINT SHALL BE CONSTRUCTED IN THE CROSSOVER.
(F) NORMAL SPACING OF TRANSVERSE CONTRACTION JOINTS.
(G) SEE CURRENT STD. DWG. RPM-150 OR RPM-152 , AS APPLICABLE FOR MORE DETAIL.



TYPICAL DIVIDED LANE WITH CROSSOVER AND CURB

USE WITH
CURRENT STD. DWG. RPS-010

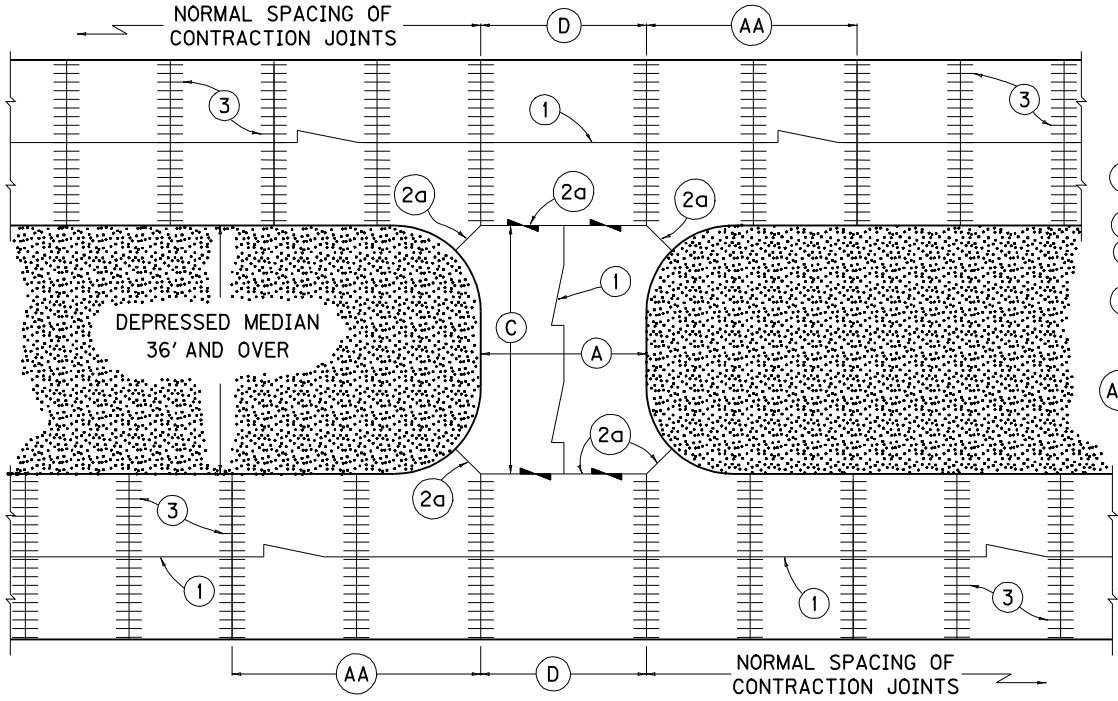
KENTUCKY
DEPARTMENT OF HIGHWAYS

CONCRETE
PAVEMENT JOINTS
TYPES AND SPACING

STANDARD DRAWING NO. RPS-033-06

SUBMITTED Gary L. Sharpe DIRECTOR DIVISION OF DESIGN 12-2-02 DATE

APPROVED T. M. Farrell STATE HIGHWAY ENGINEER 12-2-02 DATE



TYPICAL DIVIDED PAVEMENT WITH DEPRESSED MEDIAN AND CROSSOVER

NOTES

ALL INTEGRAL CURBS CONSTRUCTED WITH CONCRETE BASE OR PAVEMENT SHALL HAVE JOINTS COINCIDING WITH THE TRANSVERSE JOINTS AND OTHER JOINTS SHOWN ON THIS STANDARD DRAWING. THE JOINTS SHALL BE FILLED WITH ½" PREMOLDED EXPANSION JOINT FILLER, CUT TO THE REQUIRED SECTION.

SEE CURRENT STANDARD DRAWING RPS-010 FOR JOINT SYMBOLS AND DETAILS.

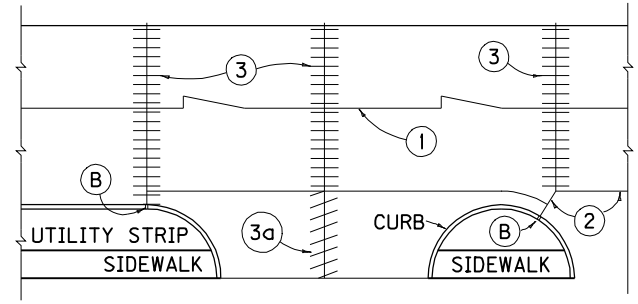
(A) EQUALLY DIVIDE AND CONSTRUCT LONGITUDINAL SAWED JOINT WHEN DISTANCE BECOMES GREATER THAN 16 FEET.

(B) ½" EXPANSION JOINT FILLER.

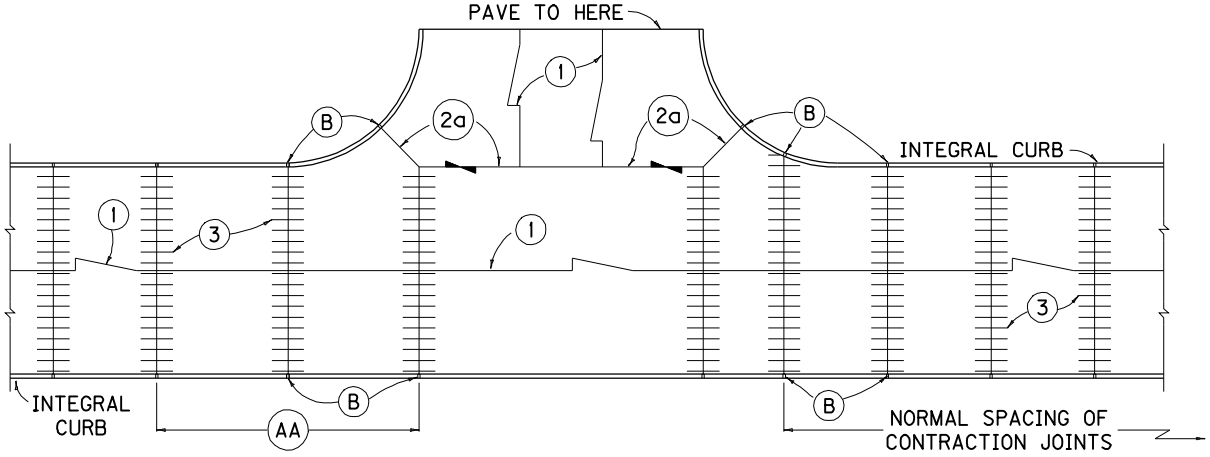
(C) TRANSVERSE CONTRACTION JOINT REQUIRED ONLY WHEN DISTANCE IN EXCESS OF NORMAL SPACING OF CONTRACTION JOINTS.

(D) NO CONTRACTION JOINTS REQUIRED BETWEEN THESE TWO CONTRACTION JOINTS WHEN DISTANCE IS LESS THAN NORMAL SPACING OF JOINTS. EQUALLY DIVIDE WHEN DISTANCE IS GREATER THAN 20 FEET AND LESS THAN 40 FEET.

(AA) THIS DISTANCE TO BE EQUALLY DIVIDED WHEN GREATER THAN 20 FEET AND LESS THAN 40 FEET.



COMMERCIAL ENTRANCE



CEMENT CONCRETE BASE WITH INTEGRAL CURB

USE WITH CURRENT STD. DWG. RPS-010

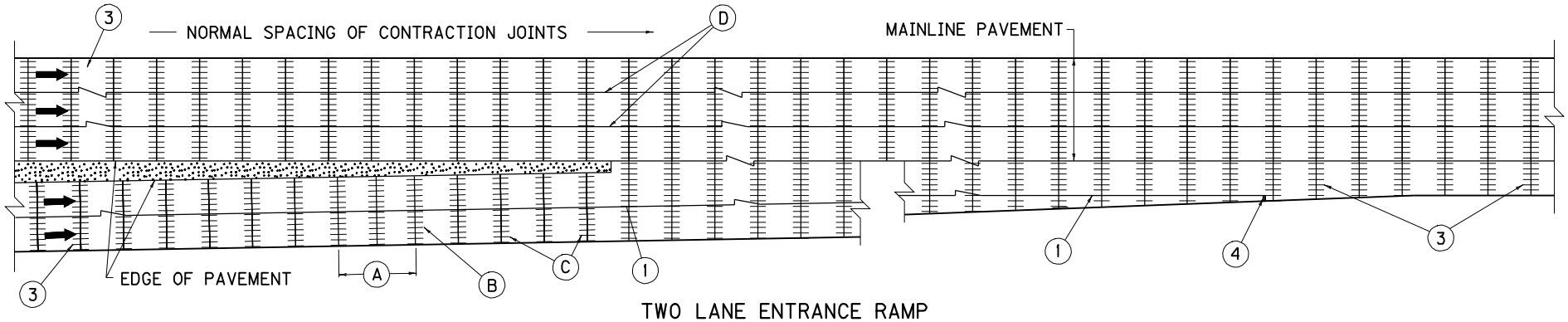
KENTUCKY
DEPARTMENT OF HIGHWAYS

CONCRETE PAVEMENT JOINTS TYPES AND SPACING

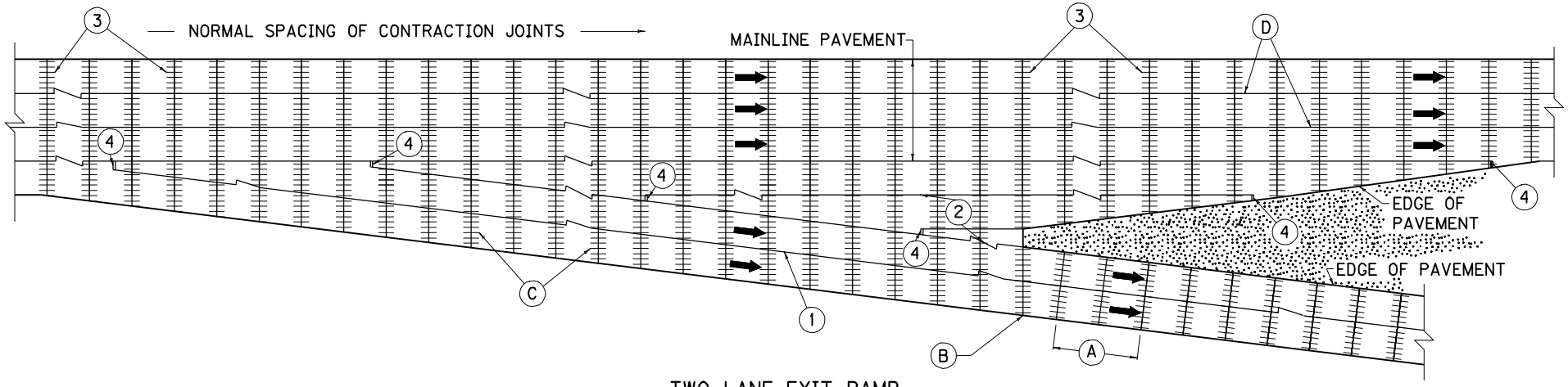
STANDARD DRAWING NO. RPS-034-06

SUBMITTED Gary W. Sharp, DIRECTOR DIVISION OF DESIGN 12-2-02 DATE

APPROVED J. M. Yowell, STATE HIGHWAY ENGINEER 12-2-02 DATE



TWO LANE ENTRANCE RAMP



TWO LANE EXIT RAMP

NOTES

NORMAL SPACING OF CONTRACTION JOINTS INDICATED ON THIS DRAWING ARE TO BE IN ACCORDANCE WITH SPACING INDICATED ON CURRENT STANDARD DRAWING RPN-015 .

(A) ON CONSTRUCTION IF THE CONTRACTOR ELECTS TO BEGIN PAVING OPERATIONS FOR THE RAMP FROM A POINT OTHER THAN WHICH IS IMMEDIATELY OPPOSITE THE MAINLINE PAVEMENT, THIS DISTANCE SHALL BE EQUALLY DIVIDED WHEN IT BECOMES GREATER THAN 20 FEET AND LESS THAN 40 FEET.

(B) THIS CONTRACTION JOINT IN THE RAMP SHALL ALWAYS BE OPPOSITE THE CONTRACTION JOINT IN THE MAINLINE PAVEMENT.

(C) ALL CONTRACTION JOINTS IN THE RAMP IMMEDIATELY OPPOSITE THE MAINLINE PAVEMENT SHALL BE A CONTINUATION OF THE JOINTS IN THE MAINLINE PAVEMENT.

(D) SEE TYPICAL SECTIONS FOR SPECIFIC TYPE OF LONGITUDINAL JOINT.
SEE CURRENT STANDARD DRAWING RPS-010 FOR JOINT SYMBOL AND DETAIL.

USE WITH CUR. STD. DWG. RPS-010

KENTUCKY
DEPARTMENT OF HIGHWAYS

CONCRETE PAVEMENT JOINTS TYPES AND SPACING

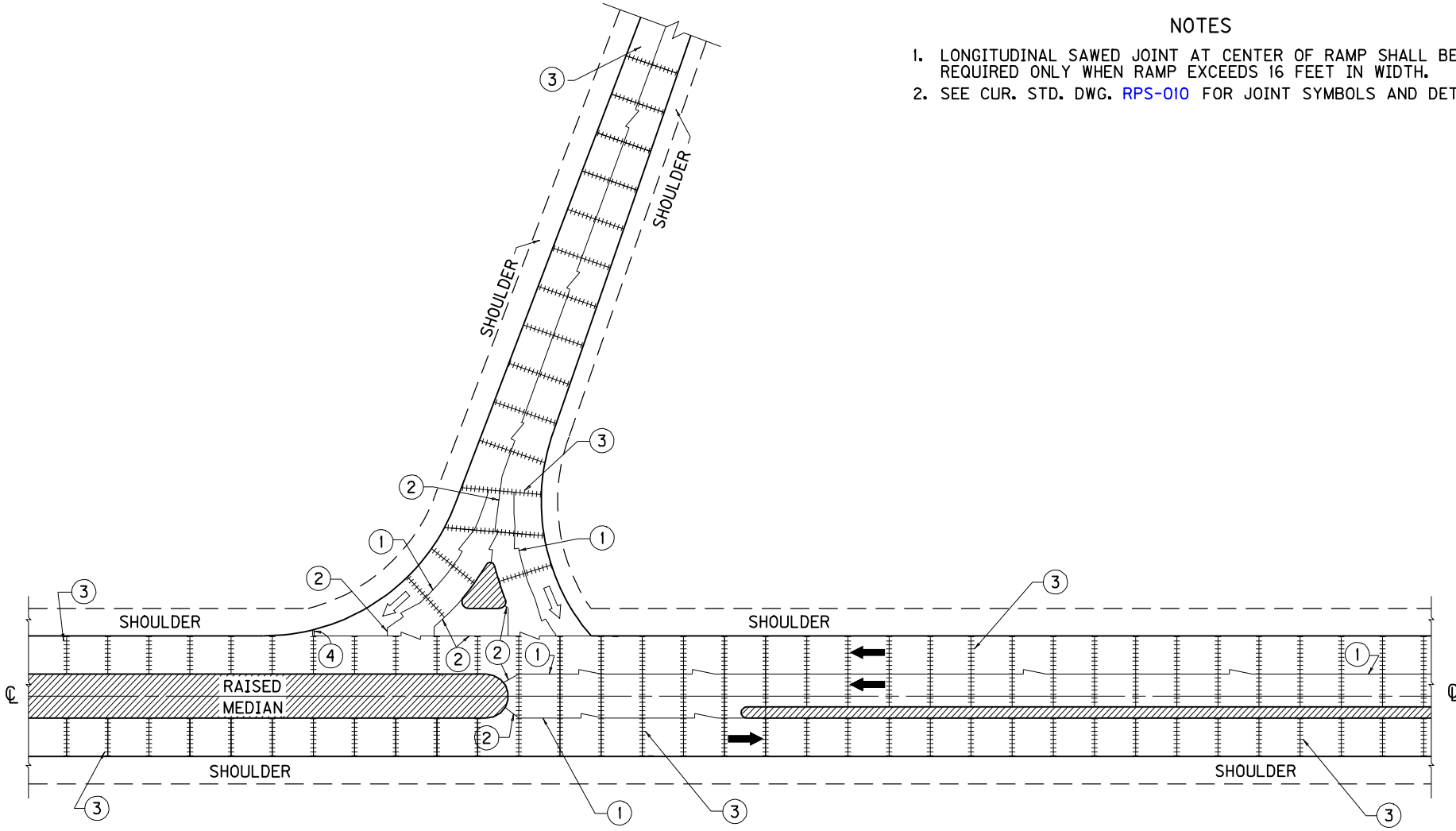
STANDARD DRAWING NO. RPS-035-05

SUBMITTED Gary L. Sharp. DIRECTOR DIVISION OF DESIGN 12-2-02 DATE

APPROVED T. M. Farrell STATE HIGHWAY ENGINEER 12-2-02 DATE

NOTES

1. LONGITUDINAL SAWED JOINT AT CENTER OF RAMP SHALL BE REQUIRED ONLY WHEN RAMP EXCEEDS 16 FEET IN WIDTH.
2. SEE CUR. STD. DWG. RPS-010 FOR JOINT SYMBOLS AND DETAIL.



INTERCHANGE RAMP DETAIL
ENTRANCE TO MINOR TWO LANE ROAD

USE WITH CUR. STD. DWG. RPS-010

KENTUCKY
DEPARTMENT OF HIGHWAYS

CONCRETE
PAVEMENT JOINTS
TYPES AND SPACING

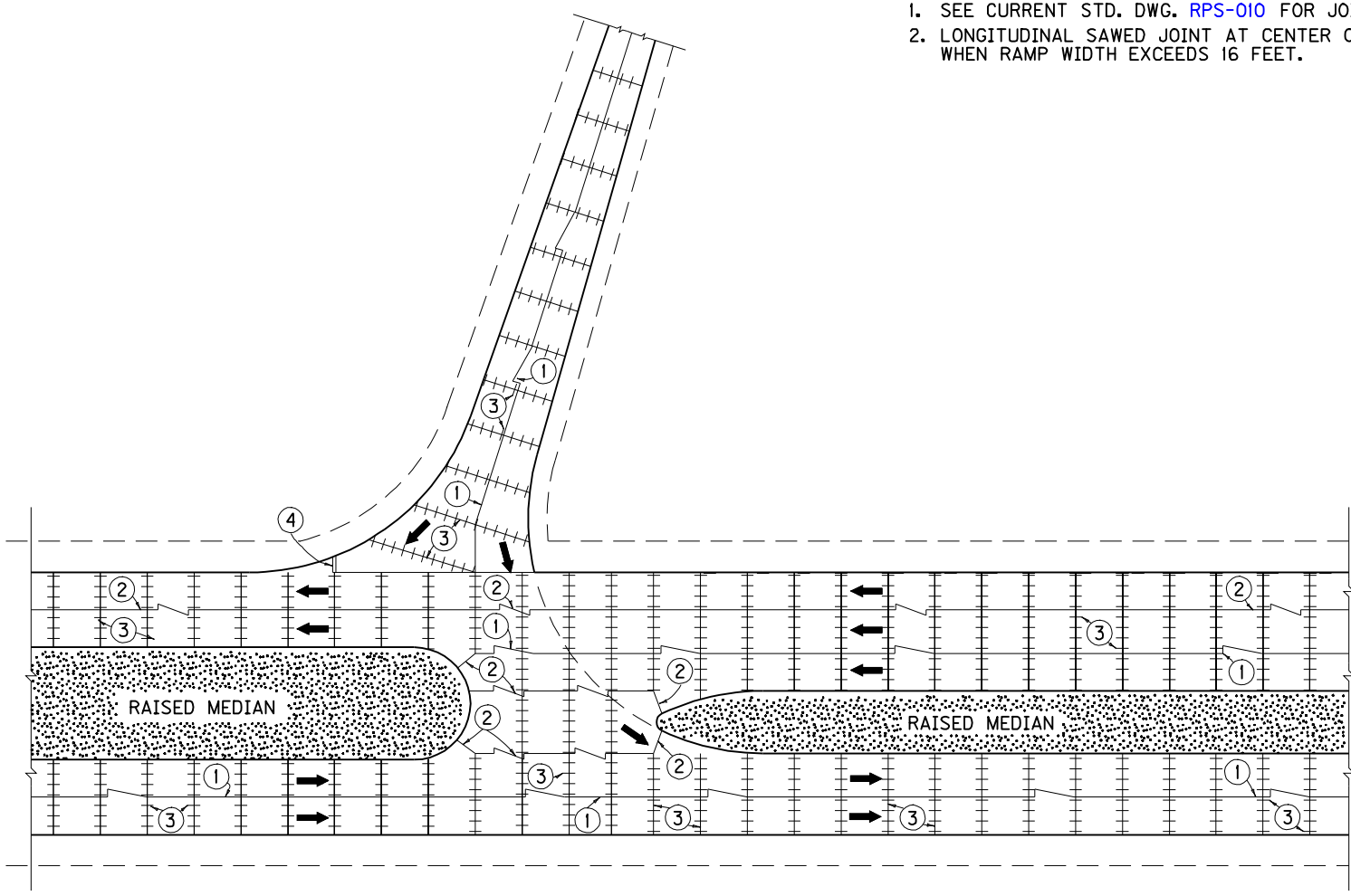
STANDARD DRAWING NO. RPS-036-05

SUBMITTED Gary W. Sharp, DIRECTOR DIVISION OF DESIGN 12-2-02 DATE

APPROVED J. M. Yowell, STATE HIGHWAY ENGINEER 12-2-02 DATE

NOTES

1. SEE CURRENT STD. DWG. RPS-010 FOR JOINT SYMBOLS AND DETAIL.
2. LONGITUDINAL SAWED JOINT AT CENTER OF RAMP SHALL BE REQUIRED ONLY WHEN RAMP WIDTH EXCEEDS 16 FEET.



INTERCHANGE RAMP DETAIL
ENTRANCE TO MINOR FOUR LANE ROAD

USE WITH CUR. STD. DWG. RPS-010

KENTUCKY
DEPARTMENT OF HIGHWAYS

CONCRETE
PAVEMENT JOINTS
TYPES AND SPACING

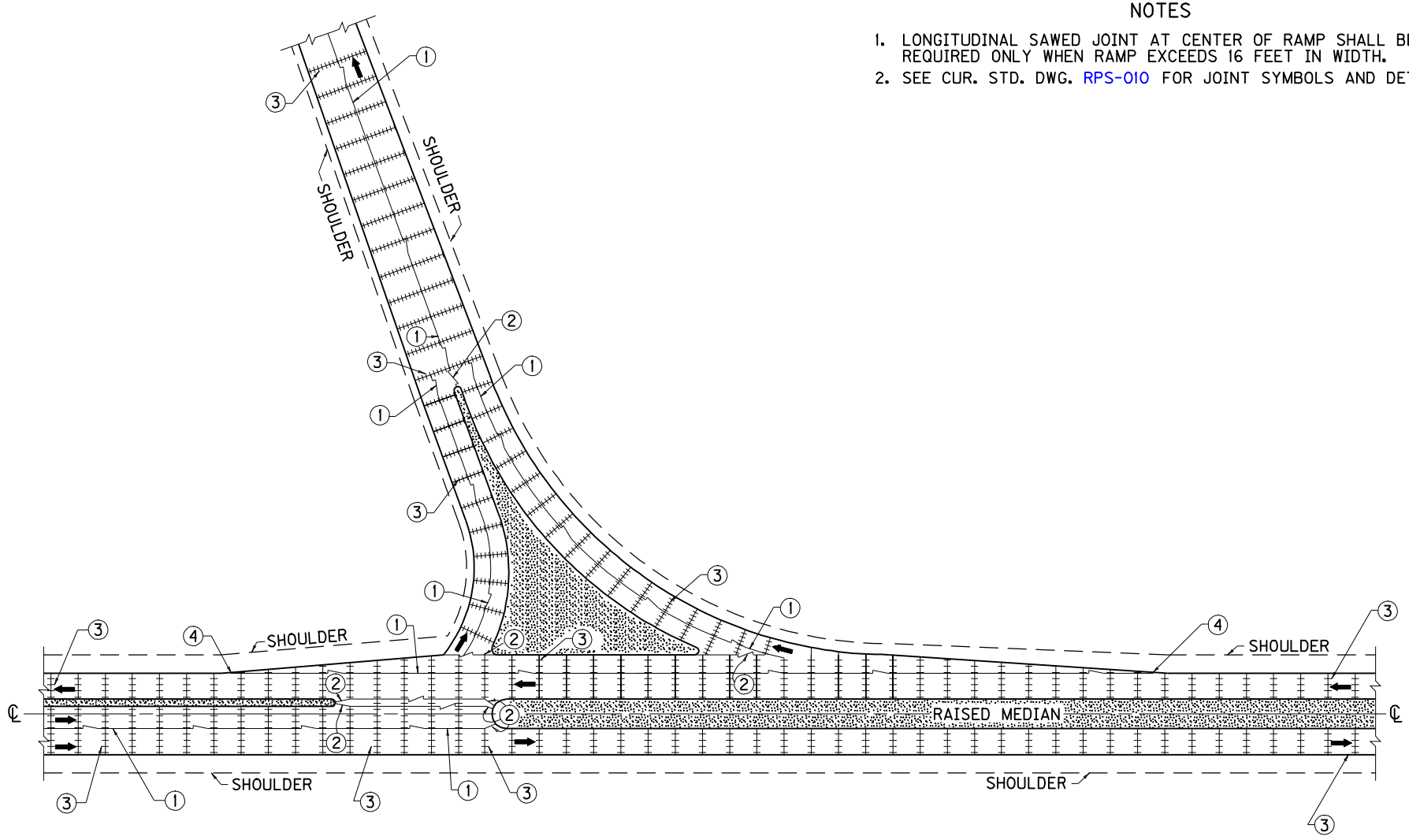
STANDARD DRAWING NO. RPS-037-05

SUBMITTED Gary W. Sharpe DIRECTOR DIVISION OF DESIGN 12-2-02 DATE

APPROVED J. M. Yowell STATE HIGHWAY ENGINEER 12-2-02 DATE

NOTES

1. LONGITUDINAL SAWED JOINT AT CENTER OF RAMP SHALL BE REQUIRED ONLY WHEN RAMP EXCEEDS 16 FEET IN WIDTH.
2. SEE CUR. STD. DWG. RPS-010 FOR JOINT SYMBOLS AND DETAIL.



INTERCHANGE RAMP DETAIL
EXIT FROM MINOR TWO LANE ROAD

USE WITH CUR. STD. DWG. RPS-010

KENTUCKY
DEPARTMENT OF HIGHWAYS

CONCRETE
PAVEMENT JOINTS
TYPES AND SPACING

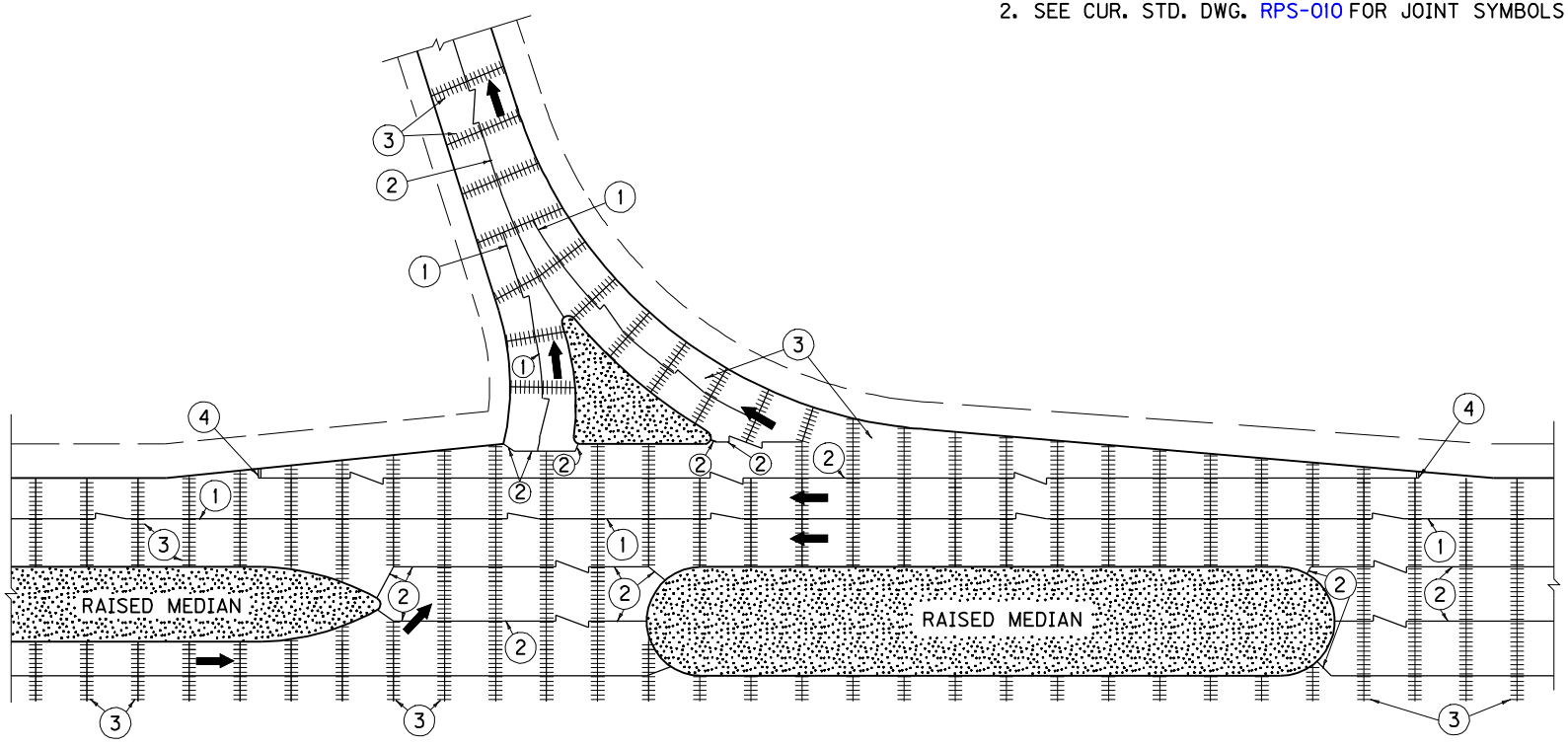
STANDARD DRAWING NO. RPS-038-05

SUBMITTED Gary W. Sharp, DIRECTOR DIVISION OF DESIGN 12-2-02 DATE

APPROVED J. M. Yowell, STATE HIGHWAY ENGINEER 12-2-02 DATE

NOTES

1. LONGITUDINAL SAWED JOINT AT CENTER OF RAMP SHALL BE REQUIRED ONLY WHEN RAMP EXCEEDS 16 FEET IN WIDTH.
2. SEE CUR. STD. DWG. RPS-010 FOR JOINT SYMBOLS AND DETAIL.



INTERCHANGE RAMP DETAIL
EXIT FROM MINOR FOUR LANE ROAD

USE WITH CUR. STD. DWG. RPS-010

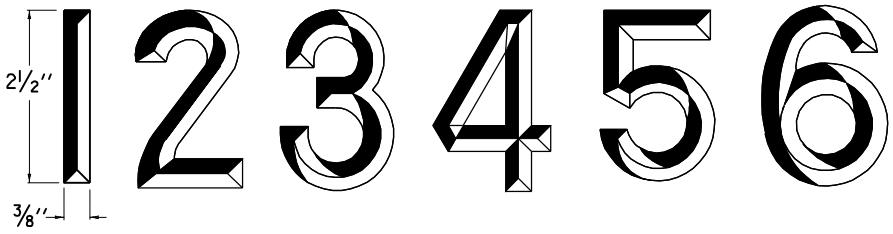
KENTUCKY
DEPARTMENT OF HIGHWAYS

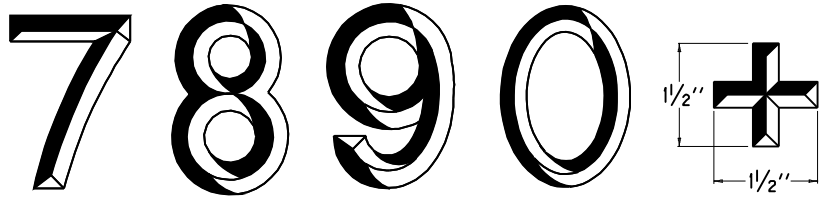
CONCRETE
PAVEMENT JOINTS
TYPES AND SPACING

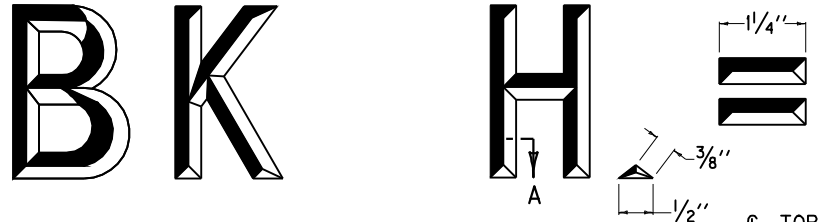
STANDARD DRAWING NO. RPS-039-05

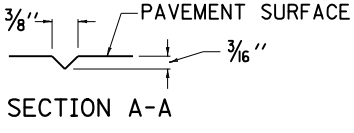
SUBMITTED Gary W. Sharp, DIRECTOR DIVISION OF DESIGN 12-2-02 DATE

APPROVED J. M. Yowell, STATE HIGHWAY ENGINEER 12-2-02 DATE

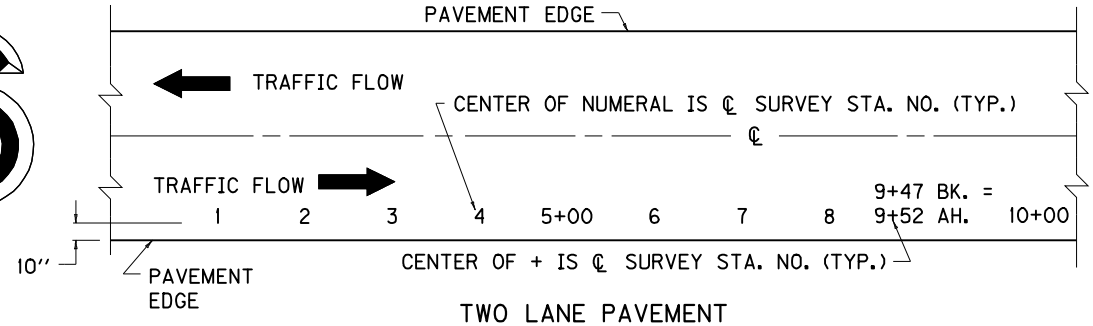




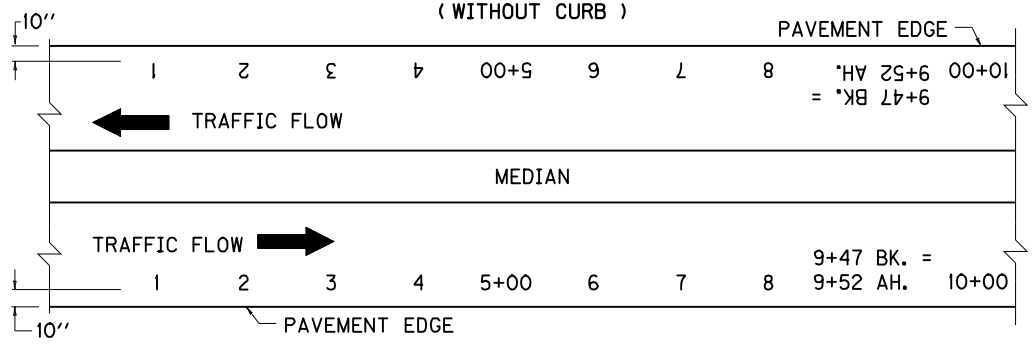




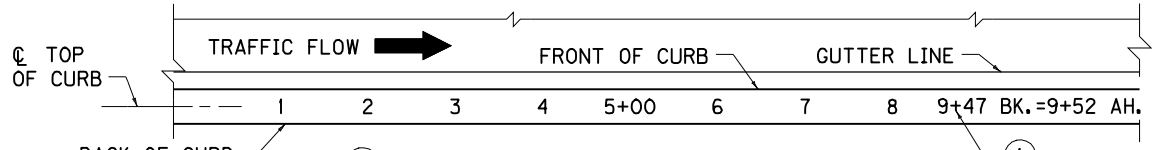
SECTION A-A



TWO LANE PAVEMENT
(WITHOUT CURB)



MULTI-LANE (4-6 ETC.) DIVIDED PAVEMENT
(WITHOUT CURB)



(2) TWO OR MORE LANE PAVEMENT WITH CURB

NOTES:

THE MARKING SHALL BE ACCOMPLISHED BY THE USE OF RAISED LETTERS IMPRESSED IN THE CONCRETE. THE SIZE, STYLE, PROPORTION, AND OTHER DETAILS SHALL BE AS INDICATED ON THIS SHEET.

(1) EQUATIONS SHALL BE SHOWN IN FULL. WHERE AN EQUATION FALLS WITHIN 50 FEET OF A STATION MARKING, THE STATION MARKING SHALL BE ELIMINATED AND THE EQUATION SHOWN IN A STRAIGHT LINE WITH THE + MARK OF THE BACK STATION BEING THE ℄ SURVEY STATION NUMBER.

THE PAVEMENT SHALL BE MARKED BEFORE THE CONCRETE HAS TAKEN ITS INITIAL SET, AND ALL DISPLACED AGGREGATE REMOVED SO THAT THE PAVEMENT SURFACE IS LEFT IN A SMOOTH CONDITION WITH LETTERS FULLY AND NEATLY FORMED.

THE UNIT PRICE BID PER SQUARE YARD FOR CONCRETE PAVEMENT SHALL INCLUDE PAYMENT IN FULL FOR ALL LABOR, MATERIALS, TOOLS AND INCIDENTALS NECESSARY TO COMPLETE THE WORK.

(2) ON TWO LANE ROADWAYS WHEN CURB IS TO BE CONSTRUCTED ON THE OUTSIDE EDGE OF THE TRAVELING LANES, THE STATION MARKING SHALL BE PLACED IN THE CURB ON THE RIGHT SIDE ONLY, IN THE DIRECTION OF SURVEY.

ON DIVIDED HIGHWAYS, WHEN CURBS ARE TO BE PLACED ON OUTSIDE EDGE OF EACH LANE OF TRAFFIC, THE STATION MARKINGS SHALL BE PLACED ON EACH OUTSIDE CURB. SEE DETAIL FOR PROPER LOCATION.

TWO LANE PAVEMENTS

STATION NUMBERS AND EQUATIONS SHALL BE MARKED ALONG THE RIGHT EDGE OF PAVEMENT IN THE DIRECTION OF SURVEY IN SUCH A POSITION AS TO BE READ RIGHT SIDE UP FROM THE DRIVER'S SEAT OF A CAR TRAVELING ON THE SHOULDER.

MULTI-LANE (4-6 ETC.) DIVIDED PAVEMENTS

STATION NUMBERS AND EQUATIONS SHALL BE MARKED ALONG THE OUTSIDE EDGES OF BOTH LANES IN SUCH A POSITION AS TO BE READ RIGHT SIDE UP FROM THE DRIVER'S SEAT OF A CAR TRAVELING ON THE SHOULDER OF EACH TWO LANE COMPONENT.

RAMPS

STATION NUMBERS AND EQUATIONS SHALL BE MARKED ON THE RIGHT SIDE OF THE PAVEMENT EDGE IN THE DIRECTION OF THE FLOW OF TRAFFIC SUCH THAT THEY CAN BE READ RIGHT SIDE UP FROM THE DRIVER'S SEAT OF A CAR TRAVELING ON THE RIGHT SHOULDER.

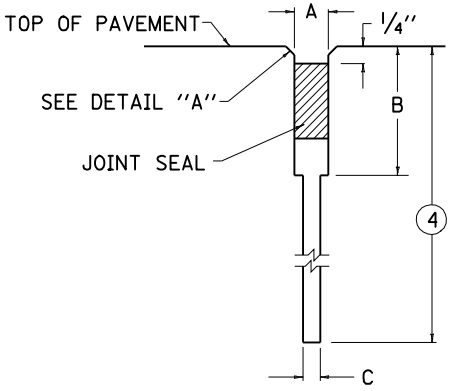
KENTUCKY
DEPARTMENT OF HIGHWAYS

STATION MARKINGS CONCRETE PAVEMENT

STANDARD DRAWING NO. RPX-001-03

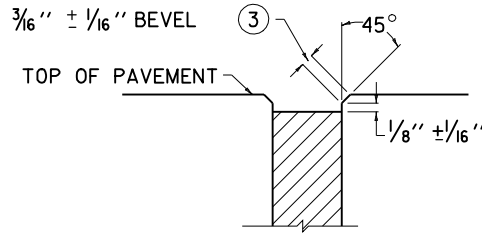
SUBMITTED John B. Sachstetter — DIRECTOR DIVISION OF DESIGN — DATE 12-1-99

APPROVED — STATE HIGHWAY ENGINEER — DATE 12-1-99



JOINT SHAPE FOR
TRANSVERSE SAWED CONTRACTION JOINT

JOINT SPACING	DIMENSIONS			SEAL WIDTH UNCOMPRESSED
	A	B	C	
15'-0''	3/8''	2''	1/8'' TO 3/8''	11/16 ''
25'-0''	1/2''	2''	1/8'' TO 1/2''	1''
50'-0''	5/8''	2''	1/8'' TO 5/8''	1 1/4''



DETAIL ''A''

- NOTES -

PAYMENT FOR ALL WORK SHALL BE INCIDENTAL TO THE UNIT PRICE BID PER SQ. YD. OF PAVEMENT.

TOLERANCES ON ALL JOINT WIDTH DIMENSIONS PLUS OR MINUS 1/16''.

INSTALLATION OF PREFORMED POLYCHLOROPRENE SEALS (NEOPRENE) SHALL BE IN ACCORDANCE WITH ARTICLE 501.03.18 OF THE CURRENT STANDARD SPECIFICATIONS, EXCEPT TRANSVERSE EXPANSION JOINTS SHALL RECEIVE PREFORMED SEALS IN ACCORDANCE WITH THIS DRAWING .

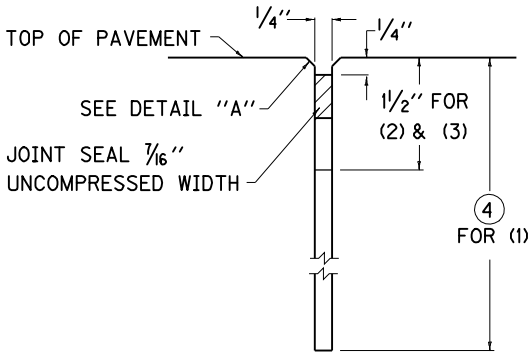
(1) THE REMAINING JOINT SHALL BE IN ACCORDANCE WITH CURRENT STD. DWG. RPS-010 AND RPS-020.

(2) ALL LONGITUDINAL AND TRANSVERSE SAWED CONSTRUCTION JOINTS SHALL BE CUT TO THE DEPTH SHOWN AND SHALL BE SEALED WITH HOT POURED ELASTIC JOINT SEAL.

(3) THESE EDGES SHALL BE BEVELED USING A CUTTING OR GRINDING DEVICE .

(4) JOINT DEPTH IS T/3 OR 4'' WHICHEVER IS LESS.

T = PAVEMENT THICKNESS

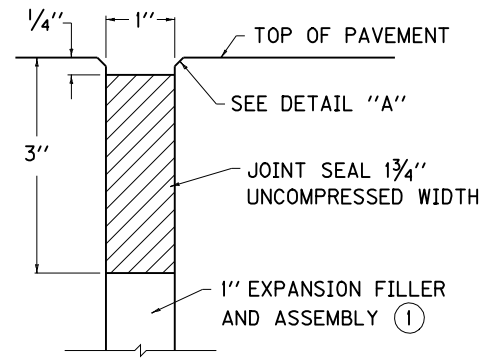


JOINT SHAPE FOR

(1) LONGITUDINAL SAWED JOINT (TIED)

(2) LONGITUDINAL SAWED CONSTRUCTION JOINT (TIED) (2)

(3) TRANSVERSE SAWED CONSTRUCTION JOINT (TIED) (2)



JOINT SHAPE FOR
TRANSVERSE EXPANSION JOINT

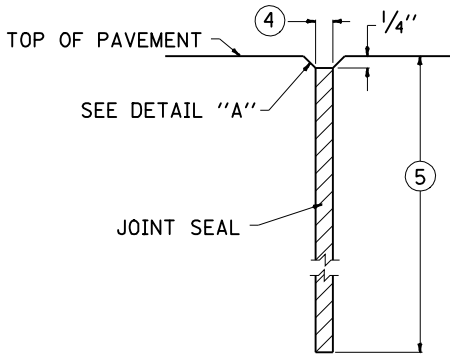
KENTUCKY
DEPARTMENT OF HIGHWAYS

PREFORMED COMPRESSION JOINT SEAL FOR CONCRETE PAVEMENT

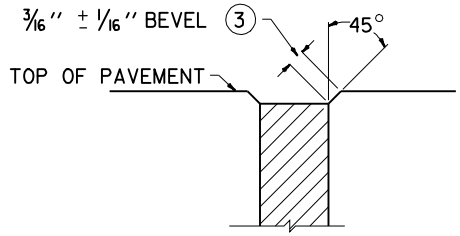
STANDARD DRAWING NO. RPX-010-04

SUBMITTED Gary W. Sharp, DIRECTOR DIVISION OF DESIGN 12-2-02 DATE

APPROVED T. M. Farrell, STATE HIGHWAY ENGINEER 12-2-02 DATE



JOINT SHAPE FOR
TRANSVERSE SAWED CONTRACTION JOINT



DETAIL ''A''

- NOTES -

PAYMENT FOR ALL WORK SHALL BE INCIDENTAL TO THE UNIT PRICE BID PER SQ. YD. OF PAVEMENT.

(1) THE REMAINING JOINT SHALL BE IN ACCORDANCE WITH CURRENT STD. DWG. RPS-010 AND RPS-020.

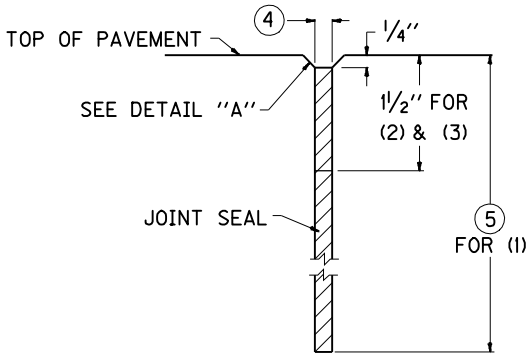
2. ALL LONGITUDINAL AND TRANSVERSE SAWED JOINTS SHALL BE CUT TO THE DEPTH SHOWN AND SHALL BE SEALED WITH HOT POURED ELASTIC JOINT SEAL.

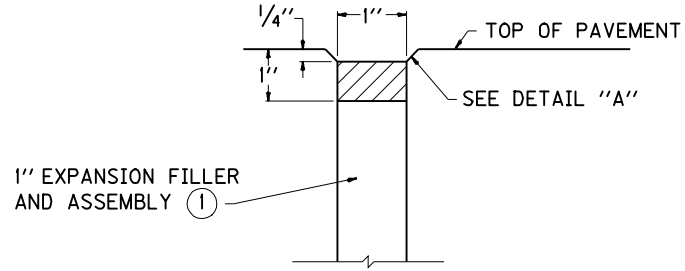
(3) THESE EDGES SHALL BE BEVELED USING A CUTTING OR GRINDING DEVICE .

(4) 1/8'' MIN. - 1/4'' MAX.

(5) JOINT DEPTH IS T/3 OR 4'' WHICHEVER IS LESS.

T = PAVEMENT THICKNESS





JOINT SHAPE FOR
TRANSVERSE EXPANSION JOINT

(1) LONGITUDINAL SAWED JOINT (TIED)

(2) LONGITUDINAL SAWED CONSTRUCTION JOINT (TIED)

(3) TRANSVERSE SAWED CONSTRUCTION JOINT (TIED)

KENTUCKY
DEPARTMENT OF HIGHWAYS

HOT-POURED ELASTIC JOINT SEALS FOR CONCRETE PAVEMENT

STANDARD DRAWING NO. RPX-015-03

SUBMITTED Gary L. Sharp, DIRECTOR DIVISION OF DESIGN 12-2-02 DATE

APPROVED J. M. Yowell, STATE HIGHWAY ENGINEER 12-2-02 DATE

- NOTES -

T = PAVEMENT THICKNESS.

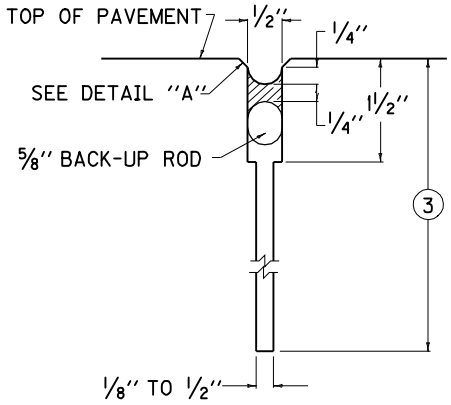
PAYMENT FOR WORK SHALL BE INCIDENTAL TO THE UNIT PRICE PER SQ. YD. OF PAVEMENT.

(1) THE REMAINING JOINT SHALL BE IN IN ACCORDANCE WITH CURRENT STD. DWGS. RPS-020 AND RPS-010.

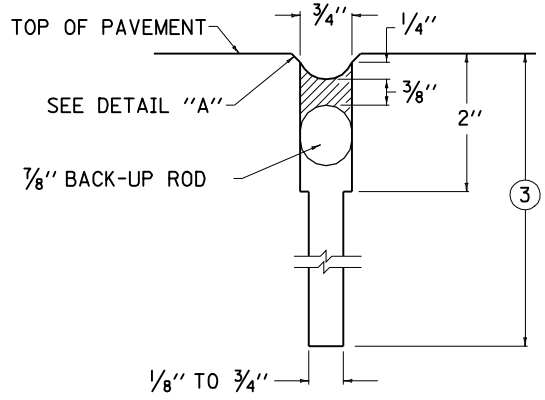
(2) THESE EDGES SHALL BE BEVELED USING A CUTTING OR GRINDING DEVICE.

JOINT TOLERANCES : SAW CUT DEPTH -0" TO + 1/2"
SAW CUT WIDTH -0" TO + 1/16"
SEAL BEAD THICKNESS -0" TO + 1/8"

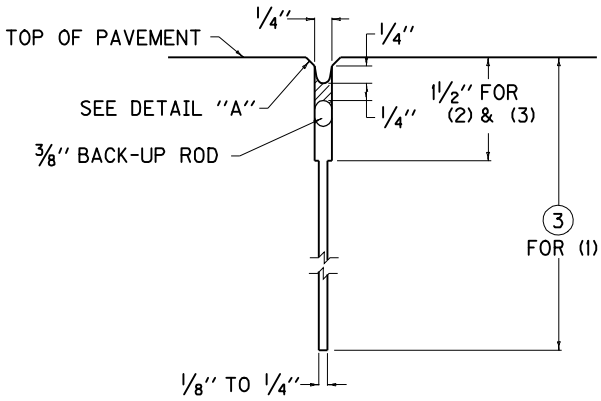
(3) JOINT DEPTH IS T/3 OR 4" WHICHEVER IS LESS.



JOINT SHAPE FOR
TRANSVERSE SAWED CONTRACTION JOINT
(WHEN SLAB LENGTH DOES NOT EXCEED 25'-0")



JOINT SHAPE FOR
TRANSVERSE SAWED CONTRACTION JOINT
(WHEN SLAB LENGTH EXCEEDS 25'-0")

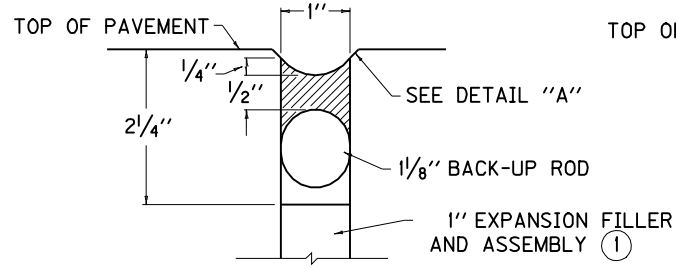


JOINT SHAPE FOR

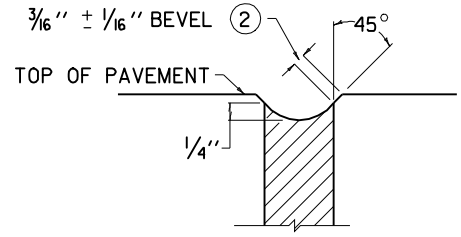
(1) LONGITUDINAL SAWED JOINT (TIED)

(2) LONGITUDINAL SAWED CONSTRUCTION JOINT (TIED)

(3) TRANSVERSE SAWED CONSTRUCTION JOINT (TIED)



JOINT SHAPE FOR
TRANSVERSE EXPANSION JOINT



DETAIL "A"

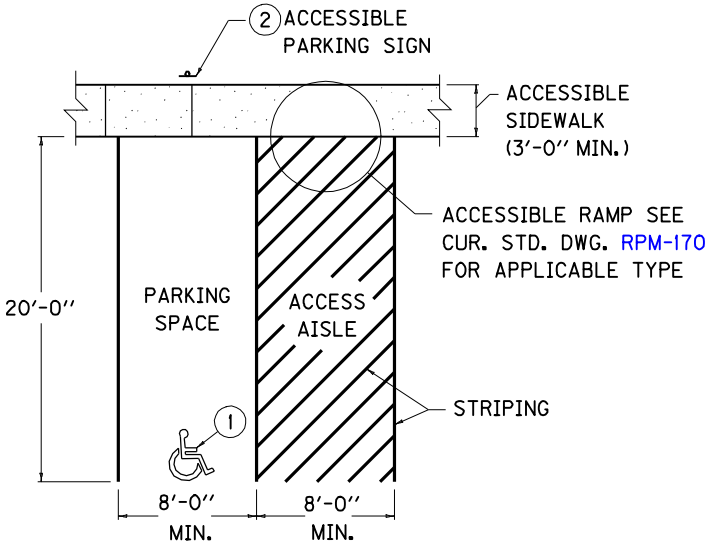
KENTUCKY
DEPARTMENT OF HIGHWAYS

SILICONE RUBBER SEALS
FOR
CONCRETE PAVEMENT

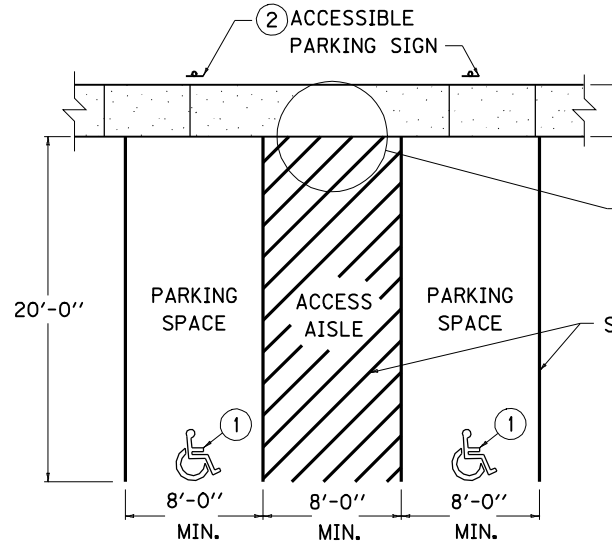
STANDARD DRAWING NO. RPX-020-05

SUBMITTED Gary L. Sharp, DIRECTOR DIVISION OF DESIGN 12-2-02 DATE

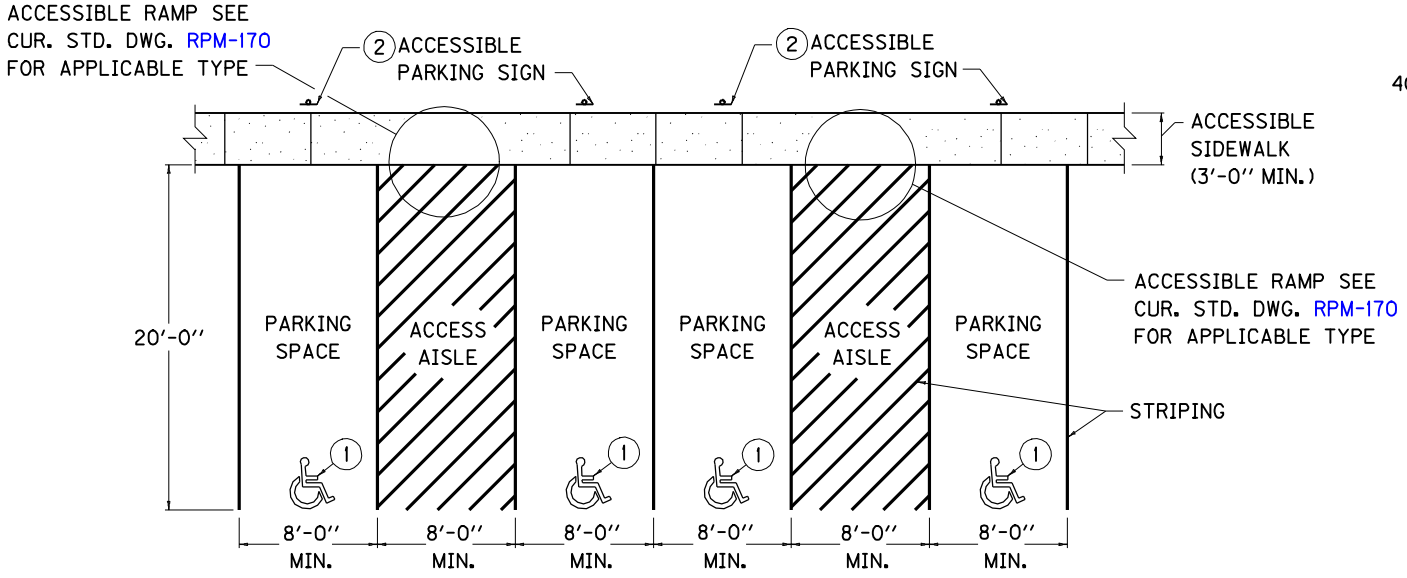
APPROVED T. M. Farrell, STATE HIGHWAY ENGINEER 12-2-02 DATE



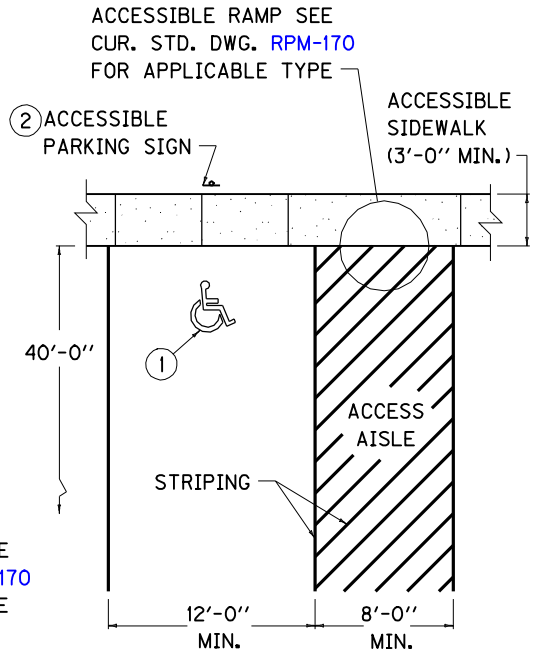
PLAN VIEW OF ONE ACCESSIBLE PARKING SPACE



PLAN VIEW OF TWO
ACCESSIBLE PARKING SPACES



PLAN VIEW OF MULTIPLE ACCESSIBLE PARKING SPACES



PLAN VIEW OF BUS
ACCESSIBLE PARKING SPACE

NOTES

1. INTERNATIONAL SYMBOL OF ACCESSIBILITY.
2. INTERNATIONAL SYMBOL OF ACCESSIBILITY WITH "VAN-ACCESSIBLE" SIGN MOUNTED BELOW.
3. SEE ELSEWHERE IN THE PLANS FOR APPLICABLE ACCESSIBLE SIGNING DETAILS.
4. SEE ELSEWHERE IN THE PLANS FOR STRIPING DETAILS.

USE WITH CUR. STD. DWG. RPM-170

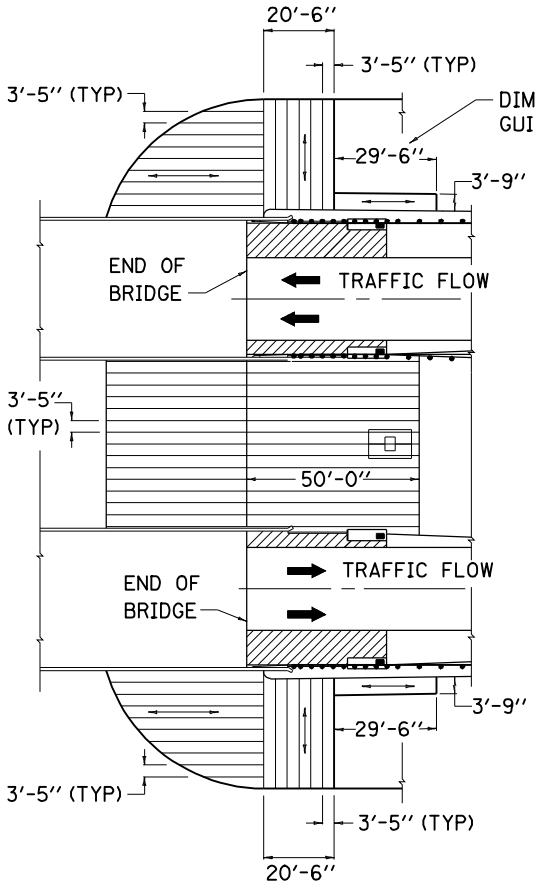
KENTUCKY
DEPARTMENT OF HIGHWAYS

ACCESSIBLE PARKING SPACE DETAILS

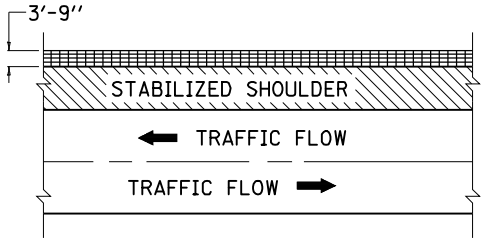
STANDARD DRAWING NO. RPX-100-02

SUBMITTED John B. Rochester — DIRECTOR DIVISION OF DESIGN — 12-1-99 DATE

APPROVED — STATE HIGHWAY ENGINEER — 12-1-99 DATE



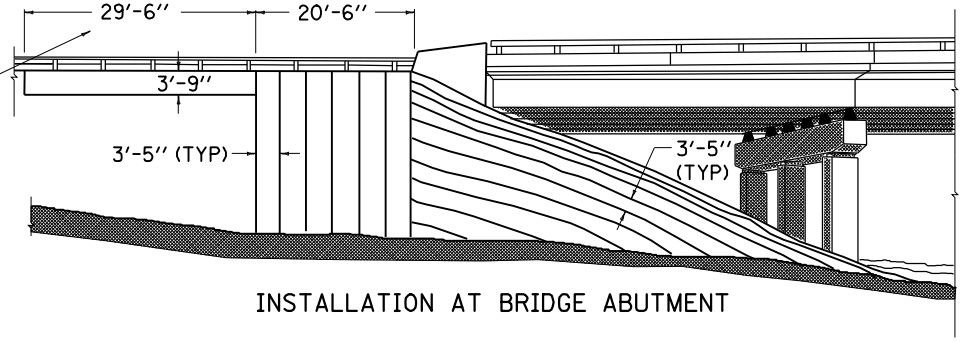
PLAN VIEW
INSTALLATION AT BRIDGE ABUTMENT



INSTALLATION ADJACENT TO ROADWAY

ANY AREA WITHIN 8'-0" OF THE ROADWAY THAT IS SEEDED SHALL BE PROTECTED WITH ONE 3'-9" WIDTH OF NETTING.

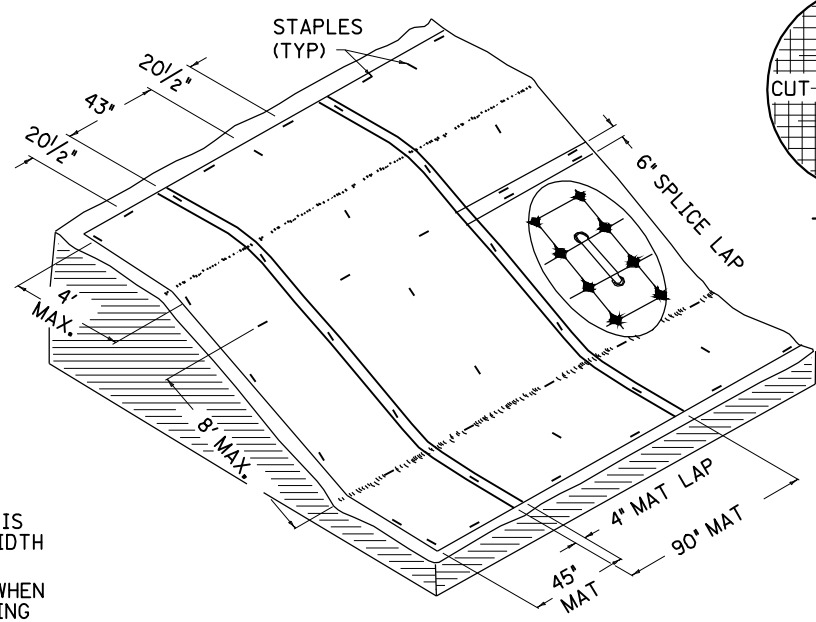
STABILIZED SHOULDERS HAVE BEEN DEPICTED. WHEN THE SHOULDERS ARE EARTH THE STRIP OF NETTING SHALL BE ADJACENT TO THE ROADWAY.



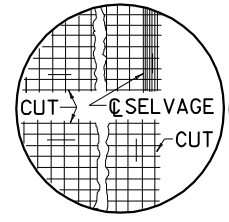
INSTALLATION AT BRIDGE ABUTMENT

NOTES

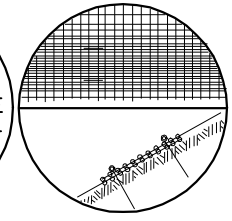
1. METHOD OF MEASUREMENT AND BASIS OF PAYMENT SHALL BE IN ACCORDANCE WITH KENTUCKY STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION.
2. BLACK PLASTIC NETTING: MANUFACTURED FROM EXTRUDED RECTANGULAR MESH PLASTIC; A MINIMUM OF 45" WIDE, APPROXIMATELY ¾"X1" MESH OPENINGS; WEIGHING NOT LESS THAN 2.6 LBS. PER 1000 SQ. FT. (±0.5 LB). OTHER NETTING MAY BE USED IF APPROVED BY THE ENGINEER.
3. STAPLES SHALL BE U-SHAPED AND MADE FROM STEEL WIRE OF NO. W1-W1.5 OR W2 AS NEEDED FOR INSTALLATION CONDITIONS. THE STAPLES SHALL HAVE A MINIMUM WIDTH OF 1" AND A MINIMUM LENGTH OF 6".
4. NETTING SHALL BE INSTALLED AT LOCATIONS SHOWN ON THE PLANS OR AS DIRECTED BY THE ENGINEER, ALL IN ACCORDANCE WITH THIS STANDARD DRAWING.
5. STAPLES SHALL BE DRIVEN FLUSH WITH SOIL SURFACE AT ALL EDGES AND LAPS IN ALTERNATE ROWS OF 4'-0" AND 8'-0" MAXIMUM SPACING DOWN THE SLOPE AS DEPICTED BELOW, (BEGIN AND END ALL INSTALLATIONS WITH A ROW OF STAPLES ON 4'-0" MAXIMUM SPACING) WITH THE STAPLE TOPS TURNED AS FOLLOWS: STAPLES ON 4'-0" SPACING, PARALLEL TO MAT LENGTH. STAPLES SHALL BRIDGE A MINIMUM OF TWO STRANDS OF NETTING AND BE LOCATED WITH AT LEAST TWO STRANDS BETWEEN STAPLE AND ALL EDGES. KEEP NETTING TAUT AND IN CONTACT WITH THE MULCH AT ALL POINTS, BUT DO NOT STRETCH.



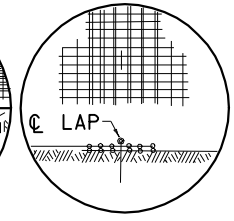
INSTALLATION ON SLOPES



TERMINAL EDGES



6" SPLICE LAP



4" MAT LAP

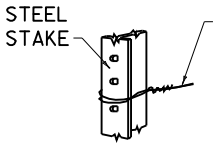
KENTUCKY DEPARTMENT OF HIGHWAYS

NETTING

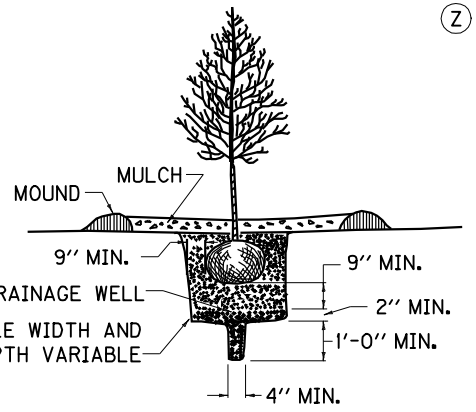
STANDARD DRAWING NO. RRE-002-04

SUBMITTED John B. Rochester, DIRECTOR DIVISION OF DESIGN — 12-1-99 DATE

APPROVED T. M. Farrell, STATE HIGHWAY ENGINEER — 12-1-99 DATE



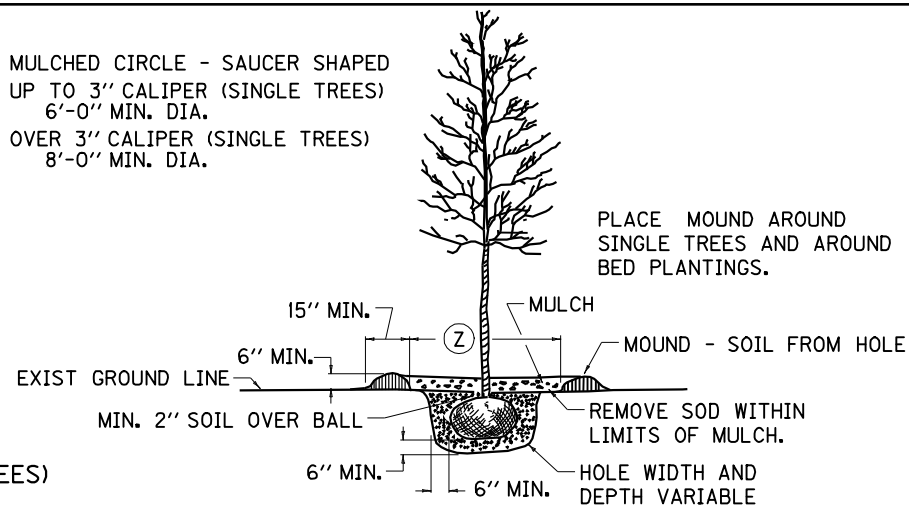
WIRING DETAIL "A"



PLANTING DETAIL "B" (ALL DOGWOOD TREES)

1. NOTE LARGER HOLE SIZE.
2. DRAINAGE WELL SHALL BE FILLED WITH COARSE UNSIFTED SAND OR GRAVEL, NOT CRUSHED LIMESTONE.
3. BACKFILL SHALL BE STANDARD MIXTURE EXCEPT OMIT FERTILIZER AND ADD TO BACKFILL FOR EACH TREE ONE TABLESPOON 100% IRON CHELATE AND ONE PINT 5-10-10 ACID FERTILIZER PER 1" OF TRUNK CALIPER.
4. DO NOT PLANT DEEPER THAN AS IN NURSERY.

Ⓩ MULCHED CIRCLE - SAUCER SHAPED
UP TO 3" CALIPER (SINGLE TREES) 6'-0" MIN. DIA.
OVER 3" CALIPER (SINGLE TREES) 8'-0" MIN. DIA.

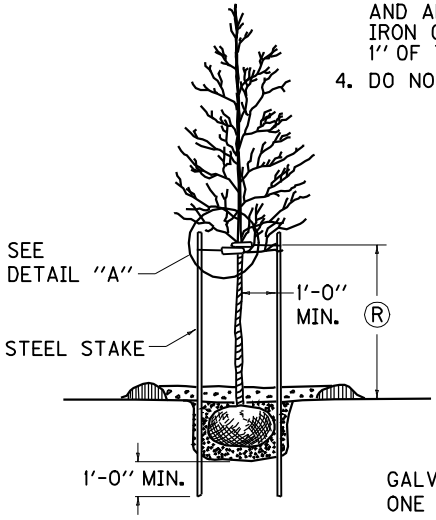


PLANTING DETAIL "C" (ALL TREES)

1. SEE DOGWOOD DETAIL THIS SHEET.
2. SEE SUMMARY SHEET FOR MINIMUM BALL AND HOLE SIZE.
3. NO EXCAVATED SOIL SHALL BE USED AS BACKFILL.
4. EXCESS SOIL TO BE DISPOSED OF AS DIRECTED BY THE ENGINEER.
5. DEPTH OF MULCH TO BE UNIFORM OVER ENTIRE MULCHED AREA.

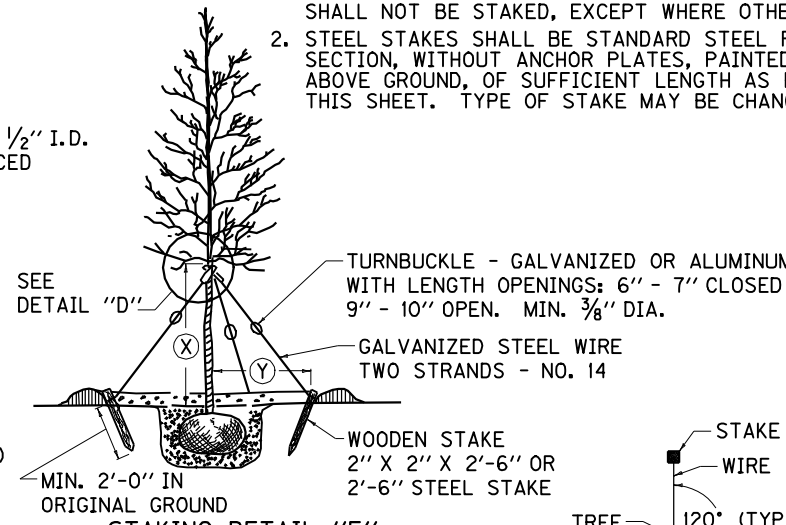
NOTES

1. PLANTS UNDER THE SIZES OR NOT OF THE TYPES SHOWN ON THIS SHEET SHALL NOT BE STAKED, EXCEPT WHERE OTHERWISE NOTED ON THE PLANS.
2. STEEL STAKES SHALL BE STANDARD STEEL FENCE POSTS, 1 1/4" IN CROSS SECTION, WITHOUT ANCHOR PLATES, PAINTED GREEN, NON REFLECTORIZED ABOVE GROUND, OF SUFFICIENT LENGTH AS REQUIRED IN STAKING DETAILS THIS SHEET. TYPE OF STAKE MAY BE CHANGED WITH APPROVAL OF ENGINEER.



STAKING DETAIL "E"

WIRING DETAIL "D"



STAKING DETAIL "F"

SHADE TREES

1 1/4" THRU 2" CALIPER USE 1 STAKE (OVER 2" TO 3" CAL. USE 2 STAKES)
DISTANCE Ⓡ = 1/3 HEIGHT OF TREE (MINIMUM).

EVERGREEN TREES

5' TO 8' HEIGHT USE 2 STAKES (OVER 8' HEIGHT USE 3 STAKES)
DISTANCE Ⓡ = 2/3 HEIGHT OF TREE (MINIMUM).

FLOWERING TREES

6' TO 8' HEIGHT USE 1 STAKE (OVER 8' HEIGHT USE 2 STAKES)
DISTANCE Ⓡ = 2/3 HEIGHT OF TREE (MINIMUM).

SHADE TREES OVER 3" CALIPER

DISTANCE Ⓧ = 1/3 HEIGHT OF TREE OR TO LOWEST MAIN BRANCHES IF HIGHER (MINIMUM)
DISTANCE Ⓨ = 3/4 OF DISTANCE Ⓧ (MINIMUM)

PLAN VIEW OF STAKING TRIPOD

KENTUCKY DEPARTMENT OF HIGHWAYS

PLANTING AND STAKING DETAILS

STANDARD DRAWING NO. RRP-001-04

SUBMITTED John B. Sachstetter DIRECTOR DIVISION OF DESIGN 12-1-99 DATE

APPROVED J. M. Yowell STATE HIGHWAY ENGINEER 12-1-99 DATE