NOTES:
5. Pavement shall be PCCP for Approaches, 6 in., on subgrade treatment Type II.
6. See Standard Drawing E 610-DRIV-08 for sections A-A and B-B.

LEGEND
- Width of sidewalk
- Distance between back face of curb to sidewalk.
- Distance from front face of curb to R or R/W.
- Sidewalk elevation transition.

INDIANA DEPARTMENT OF TRANSPORTATION
CLASS I DRIVE
SEPTEMBER 2012
STANDARD DRAWING NO. E 610-DRIV-01

/s/ Richard L. VanCleave 09/04/12
SUPERVISOR, ROADWAY STANDARDS DATE
/s/ Mark A. Miller 09/04/12
CHIEF ENGINEER DATE
CONCRETE CURB & GUTTER CONNECTION FOR CLASS I & III DRIVES

NOTES:

1. See Standard Drawing E 610-DRIV-08 for Section A-A, and Section B-B.
2. Pavement shall be PCCP for Approaches, 9 In., on subgrade treatment Type II.
3. See Standard Drawings E 604-SWKR-01 or E 604-SWKR-02 for sidewalk elevation transition details, or Standard Drawing E 604-SWCR-09 for sidewalk curb ramp details if the drive is signalized.

LEGEND

W = Width of sidewalk
Wd = Driveway width
B = Distance between back face of curb and sidewalk
D = Distance from front face of curb to R or R/W

INDIANA DEPARTMENT OF TRANSPORTATION

CLASS III DRIVE

SEPTEMBER 2012

STANDARD DRAWING NO. E 610-DRIV-03

/s/ Richard L. VanCleave 09/04/12
SUPERVISOR, ROADWAY STANDARDS

/s/ Mark A. Miller 09/04/12
CHIEF ENGINEER
NOTES:
2. See Standard Drawings E 610-DRIV-10 for Sections A-A, B-B and C-C.
3. See Standard Drawings E 610-DRIV-09 for Section P-P.

LEGEND

- HMA for Approaches: 165#/yd³ HMA Surface Type B on 275#/yd³ HMA Intermediate Type B on 880#/yd³ HMA base, Type B on subgrade treatment Type II or PCCP for Approaches, 9", on subgrade treatment Type II
- The greater thickness of either the drive or the paved shoulder section.
- Plan shoulder section.
- For type and thickness equivalent to surface in place, see plans.

PLAN VIEW
(PAVED SHOULDER 8'-0" FEET OR GREATER IN WIDTH)

PLAN VIEW
(PAVED SHOULDER LESS THAN 8'-0" IN WIDTH OR UNPAVED SHOULDER)
Notes:
2. See Standard Drawing E 610-DRIV-10 for Section A-A, B-B, and C-C.
3. Where the shoulder is earthen or aggregate or the paved width is less than 8'-0", the drive radii shall be tangent to the edge of the travel lane. Where the paved shoulder width is 8'-0" or more, the drive radii shall be tangent to the edge of the paved shoulder.
**PLAN VIEW**

**NOTES:**
3. Class VI Drive accommodates a WB-65 (IDV) design vehicle with a 45'-0" turning radius.

**SECTION E-F**

**SECTION D-D**

**SECTION F-F**

**LEGEND**

- HMA for Approaches:
  - 165#/yd HMA Surface Type B on
  - 275#/yd HMA Intermediate Type B on
  - 88#/yd HMA base, Type B on subgrade treatment Type II
  - or
  - PCCP for Approaches, 9", on subgrade treatment Type II

- The greater thickness of either the drive or the paved shoulder section.

- For type and thickness equivalent to surface in place, see plans.
NOTES:
2. See Standard Drawing E 610-DRIV-12 for sections A-A, B-B and C-C.
3. Joint Placement Detail should be used with Class I, III and VII drives.
5. See Standard Drawing E 610-DRIV-16 for details and corners.

LEGEND
- HMA for Approaches:
  - 165#/yd HMA Surface Type B on
  - 275#/yd HMA Intermediate Type B on
  - 88#/yd HMA base, Type B on subgrade treatment Type II
  - or
  - PCPP for Approaches, 9 in. on subgrade treatment Type II
- Sidewalk elevation transition
- For type and thickness equivalent to surface in place, see plans.

INDIANA DEPARTMENT OF TRANSPORTATION
CLASS VII DRIVE AND JOINT PLACEMENT DETAIL
SEPTEMBER 2012
STANDARD DRAWING NO. E 610-DRIV-07
/s/ Richard L. VanCleave 09/04/12
SUPERVISOR, ROADWAY STANDARDS DATE
/s/ Mark A. Miller 09/04/12
CHIEF ENGINEER DATE
**NOTES:**

2. The limits for X are based on a 6" curb height. For other curb heights, the limits for X shall be adjusted.


**LEGEND**

- **W** = Width of sidewalk
- **X** = Distance between back face of curb to sidewalk.
- **Y** = Distance from front face of curb to R or R/W.
- **=** Sidewalk elevation transition section view.
- **PCCP** = PCCP
Notes:
1. See Standard Drawing E 610-DRIV-02 for Class II Drive details.
2. See Standard Drawing E 610-DRIV-04 for Class IV Drive details.
SECTION B-B
(APPROACH GRADE FOR CUT OR FILL TO BE USED WITH EARTH SHOULDERS)

SECTION C-C
(APPROACH GRADE FOR CUT OR FILL TO BE USED WITH PAVED SHOULDER 8'-0" OR WIDER)

SECTION A-A
(APPROACH GRADE FOR CUT OR FILL TO BE USED WITH LESS THAN 8'-0" WIDTH PAVED OR COMPACTED AGGREGATE SHOULDERS)

Notes:
1. See Standard Drawing E 610-DRIV-02, -04 and -05 for location of Sections A-A, B-B and C-C.
2. Where physical restrictions limit the space available for the construction of a drive from a roadway in an embankment section the downgrade breakpoint of the drive may begin at the edge of the shoulder without a crest vertical curve if the algebraic difference in grades meets the criteria in Note 7 on Standard Drawing E 610-DRIV-13.
NOTES
1. See Standard Drawing E 610-DRIV-06 for plan and sections of Class VI Drive.

TYPICAL PROFILE GRADE IN FILL

TYPICAL PROFILE GRADE IN CUT

INDIANA DEPARTMENT OF TRANSPORTATION
CLASS VI DRIVE
TYPICAL PROFILE GRADES
SEPTEMBER 2010

STANDARD DRAWING NO. E 610-DRIV-11

/s/ Richard L. VanCleave 09/01/10
DESIGN STANDARDS ENGINEER

/s/ Mark A. Miller 09/01/10
CHIEF HIGHWAY ENGINEER
NOTES

1. See Standard Drawing E 610-DRIV-07 for plan of Class VII Drive.


3. See Standard Drawing E 610-DRIV-16 for keyway joint shown in Detail A and for joint placement and corner reinforcement.
GENERAL NOTES

1. These notes apply to Standard Drawings E 610-DRIV-01 through 12.
2. If a PCCP approach is Class III or Class IV, the shoulder shall be constructed using ear construction Type C as detailed on Standard Drawing E 605-DRIV-02.
3. When the maximum approach grade of ±10% does not meet the grade of the existing drive before the R/W line, the approach grade of ±10% shall extend beyond the R/W to the point of intersection with the existing driveway grade. Construction beyond the R/W line shall be done in temporary R/W.
4. The appropriate pipe end treatment should be provided for pipes located either inside the clear zone or outside the clear zone.
5. The maximum algebraic difference in grades shall not exceed 8% for crested grade nor 12% for sagged grades for Types I and II drives, nor 11% for crested grade and 14% for sagged grades for Types III, IV, and V drives.
6. The minimum driveway pavement sections for Class III, IV, VI and VII Drives have been designed for 400 trucks per day. If the truck traffic count is greater than 400 per day, the required pavement section shall be as shown elsewhere on the plans.
7. See Standard Drawing E 610-DRIV-14 for shoulder treatment at driveways.
8. Curb Ramp Type H, as shown on Standard Drawing E 604-SWCR-09, when the approach is signalized, or a sidewalk elevation transition as shown on Standard Drawing E 604-SDWK-02 shall be used when sidewalk is adjacent to curb.
9. When X is equal to or greater than 2 ft but less than 6 ft, either a Curb Ramp Type G as shown on Standard Drawing E 604-SWCR-09, when the approach is signalized, or a sidewalk elevation transition as shown on Standard Drawing E 604-SDWK-01 shall be used.
10. When X is equal to or greater than 6 ft, no curb ramp or sidewalk elevation transition is required unless the curb height is in excess of 6 inches.
11. Embankment slopes within the mainline clear zone for new construction/reconstruction projects or within the obstruction-free zone for 3R projects shown in the table on Standard Drawing E 610-PRAP-04. Outside the clear zone or the obstruction-free zone, the embankment slopes should desirably be 4:1 but not steeper than 3:1.
12. Hc - earth cover over culvert shall be 1 foot or greater.

LEGEND

5 1/2 in. preformed joint filler
8 Monolithic curb for PCCP Approaches or concrete curb and gutter for HMA for Approaches
M Longitudinal joint
C Concrete sidewalk
K For type and thickness equivalent to surface in place, see plans
E Keyway construction joint

NOTES

1. The pay limits shown hereon generally apply to Type I, II, III, IV, VI and VII Drives as shown on Standard Drawings E 610-DRIV-01, -02, -03, -04, -06 and -07 respectively.
2. Approach Area - HMA for Approaches or PCCP for Approaches. This area typically extends from the edge of an 8 ft or wider paved travelway shoulder to the right of way or property line or within a few feet of the right of way or property line where the new drive meets the grade of the existing drive, depending on the site-specific conditions. Where the travelway paved shoulder width is less than 8 feet, this area will be measured from the edge of travelway.
3. Transition Area - an equivalent pavement section to the existing drive. This area typically extends from the right of way or property line to a point on the property owner's drive where the new drive grade can match the existing drive grade.
LEGEND

N  Greater thickness of drive or shoulder section

*  Mainline pavement section

**  Greater thickness of PCCP drive or PCCP shoulder

***  Same section as mainline shoulder

TEMPORARY EDGE OF HMA SHOULDER
(TREATMENT WHERE PCCP DRIVE IS TO BE CONSTRUCTED)


3. See Standard Drawing E 610-DRIV-07 for keyway joint shown in Detail A and for joint placement and corner reinforcement.

4. See Standard Drawing E 605-ERCN-01 for ear construction Type A. See Standard Drawing E 605-ERCN-02 for ear construction Type B.
PRIVATE DRIVE Crossover PLAN FOR \( W = 8'-0" \) to less than 30'-0"

PRIVATE DRIVE Crossover PLAN FOR \( W = 30'-0" \) to over 40'-0"

Notes:
1. Thickened edge
2. See Standard Drawings:
   - E 605-ERCN-01 for TYPE "A" Ear Construction
   - E 605-ERCN-02 for TYPE "B" Ear Construction
   - E 610-DRIV-18 for sections A-A and B-B
3. Contraction Joint Type D-1, see Standard Drawing E 503-CCPJ-01 for details.
5. 1" Preformed Joint Filler.
6. Private drive crossovers shall be constructed of HMA or PCCP as shown on the plans section unless otherwise directed.
7. Integral Concrete Curb, see Standard Drawing E 605-CCIN-01 for details.

INDIANA DEPARTMENT OF TRANSPORTATION
PRIVATE DRIVE CROSSOVER PLANS
SEPTEMBER 2010
STANDARD DRAWING NO. E 610-DRIV-17

/s/ Richard L. Vancleave  09/01/10
DESIGN STANDARDS ENGINEER  DATE

/s/ Mark A. Miller  09/01/10
CHIEF HIGHWAY ENGINEER  DATE
NOTES:

10. Private drive crossovers shall be constructed of HMA or PCCP as shown on the plans, unless otherwise directed.

1. Thicken edges to be same thickness as mainline pavement.

2. For location of cross sections see Standard Drawing E 610-DRIV-17.


SECTION A-A

TO BE USED WITH CROWN PAVEMENTS.

SECTION B-B

TO BE USED WITH 3 IN. TILTED PAVEMENTS.

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INDIANA DEPARTMENT OF TRANSPORTATION
PRIVATE DRIVE CROSSES
CROSS SECTIONS
SEPTEMBER 2007

STANDARD DRAWING NO. E 610-DRIV-18

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/\ Richard L. VanCleave 08/04/07
CHIEF HIGHWAY ENGINEER DATE

/\ Mark A. Miller 09/04/07
CHIEF HIGHWAY ENGINEER DATE

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No. 9750 STATE OF

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NOTES:
1. Thicked edge
2. See Standard Drawings:
   E 605-ERCH-02 for TYPE "A" ear construction
   E 605-ERCH-02 for TYPE "B" ear construction
5. Grade for commercial drive crossover shall be the same as for private drive crossover. For cross sections see Standard Drawing E 610-DRIV-18 except the RCCP thickness shall be 9 in.
7. Commercial drive crossover shall be constructed of HMA or RCCP as shown on the plans, unless otherwise directed by the Engineer.

COMMERCIAL DRIVE CROSSOVER PLAN FOR W = 0' to less than 30'

COMMERCIAL DRIVE CROSSOVER PLAN FOR W = 30' to over 40'

INDIANA DEPARTMENT OF TRANSPORTATION
COMMERCIAL DRIVE CROSSOVERS PLANS
SEPTEMBER 2007
STANDARD DRAWING NO. E 610-DRIV-19
APPROACH GRADE FOR CUT OR FILL
TO BE USED WITH PAVED SHOULDER
Notes

1. 3 ft. or wider as necessary to feather to existing grade

2. Pavement wedge to be centered on center line of drive.

Drive area to be treated with HMA for approaches

PRIVATE OR COMMERCIAL DRIVE

PRIVATE or Commercial drive

Commercial drive 60' to 100'

Private drive 50' to 60'

Edge of travelway

6 ft. (typ.)

6 ft. (typ.)

6" min. (typ.)