

**DECATUR COUNTY
CONSTRUCTION & DEVELOPMENT
STANDARDS MANUAL**

**SECTION 02500
PAVING AND SURFACING**

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1.00 General

1.01 Description

A. Work in this section includes the installation of new and repair and replacement of highways, streets, roads, pavement, drives, parking areas, sidewalks, curbs, gutters and other paved areas damaged or destroyed during construction of the work.

1.02 Related Sections

- | | |
|------------------------------|---------------|
| A. Earthwork for Utilities | Section 02222 |
| B. Landscaping for Utilities | Section 02902 |

1.03 References

A. Latest addition of Indiana Department of Transportation Standard Specification, including Supplements is made a part of the specifications by reference.

1.04 Quality Assurance

- A. Perform Work in accordance with Indiana Department of Transportation Standard Specification.
- B. Mixing Plant: Conform to Indiana Department of Transportation Standard Specification.
- C Approval of Material Conform to Indiana Department of Transportation Standard Specification.

1.05 Traffic Control

- A. The Contractor shall plan construction operations so that exiting local traffic access can be maintained.
- B. Appropriate traffic control devices (barricades, barrels, lights, flaggers, etc) shall be maintained during construction by the contractor.
- C. Traffic control devices used for maintenance of traffic shall comply with the *Indiana Manual on Uniform Traffic Control Devices*.

2.00 Materials

2.01 Aggregate

A. Fine aggregates shall consist of natural sand of manufactured sand produced by crushing stone or gravel.

1. Fine aggregates used in Portland cement concrete and bituminous pavements shall be free of injurious amounts of organic materials
- B. Coarse aggregates shall consist of clean, tough, durable fragments of crushed rock, crushed or uncrushed gravel.
- C. Fine and coarse aggregates shall comply with Indiana Department of Transportation Standard Specification

2.02 Bituminous Materials

- A. Bituminous Binder and Surface Courses shall conform to Indiana Department of Transportation Standard Specification. Base and Binder may contain up to a maximum of 25% of reclaimed asphalt pavement (RAP) in accordance with INDOT Specifications.
- B. Tack Coat shall conform to Indiana Department of Transportation Standard Specification.
- C. Asphalt Cement shall conform to Indiana Department of Transportation Standard Specification.
- D. Coarse Aggregates shall conform to Indiana Department of Transportation Standard Specification.
- E. Aggregate for Surface Course Mix shall conform to Indiana Department of Transportation Standard Specification.
- F. Hauling Equipment shall conform to Indiana Department of Transportation Standard Specification.
- G. Pavers and Rollers shall conform to Indiana Department of Transportation Standard Specification not less than 10 tons.

2.03 Hot Mix Asphalt

- A. All Hot Mix Asphalt (HMA) materials shall conform to Indiana Department of Transportation Specification.
- B. All coarse and fine aggregate materials shall conform to Indiana Department of Transportation Specification.

2.04 Portland Cement Concrete Pavement

- A. All Portland Cement Concrete Pavement (PCCP) materials shall conform to Indiana Department of Transportation Specification.

3.00 Execution

3.01 Examination

- A. Notify Engineer 48 hours prior to starting work.
- B. Verify that compacted granular base is dry and ready to support paving and imposed loads.
- C. Verify gradients and elevations of base are correct.
- D. Beginning of installation means acceptance of substrate.

3.02 Preparation – Primer and Tack Coats

- A. Apply primer coat in accordance with Indiana Department of Transportation Standard Specification.
- B. Apply tack coat in accordance with Indiana Department of Transportation Standard Specification.

3.03 Placing Hot Mix Asphalt

- A. Install Work in accordance with Indiana Department of Transportation Standard Specification.
- B. Place asphalt within 24 hours of applying primer or tack coat.
- C. Place to compacted thickness shown on typical pavement section on plans.
- D. Install gutter drainage grilles and frames and manhole frames in correct position and elevation.
- E. Compact pavement by rolling. Do not displace or extrude pavement from position. Hand compact in areas inaccessible to rolling equipment.
- F. Perform rolling with consecutive passes to achieve even and smooth finish without roller marks.

3.04 Tolerances

- A. Flatness: Maximum variation of 1/8 inch measured with 10 foot straight edge.
- B. Compacted Thickness: Within ¼ inch of design thickness.

- C. Variation from True Elevation: Within ½ inch.

3.05 Protection

- A. Immediately after placement, protect pavement from mechanical injury until surface temperature is less than 140 degrees Fahrenheit.

3.06 Preparation – Portland Cement Concrete Pavement

- A. Moisten base to minimize absorption of water from fresh concrete.
- B. Place and secure forms to correct location, dimension, profile and gradient.
- C. Place joint filler vertical in position, in straight lines. Secure to formwork during concrete placement.

3.07 Finishing

- A. Drive Paving: Light broom.
- B. Sidewalk Paving: Light broom.
- C. Curbs and Gutters: Light broom.
- D. Direction of Texturing: Transverse to pavement direction.
- E. Inclined Vehicular Ramps: Broomed perpendicular to slope.
- F. Place curing compound on exposed concrete surfaces immediately after finishing. Apply in accordance with manufacturer's instructions.

3.08 Tolerances

- A. Maximum variation of surface flatness: ¼ inch in 10 feet.
- B. Variation from True Position: Within ¼ inch.

3.09 Field Quality Control

- A. Field inspection and testing will be performed under provision of Indiana Department of Transportation Specification.
- B. Three concrete test cylinders will be taken for every 50 or less cubic yards of each class of concrete place each day.
- C. One additional test cylinder will be taken during cold weather and cured on site under same conditions as concrete it represents.

D. One slump test will be taken for each set of test cylinders taken.

E. If test or inspection, indicate work does not meet specified requirements, remove work and replace at contractor's expense.

3.10 Protection

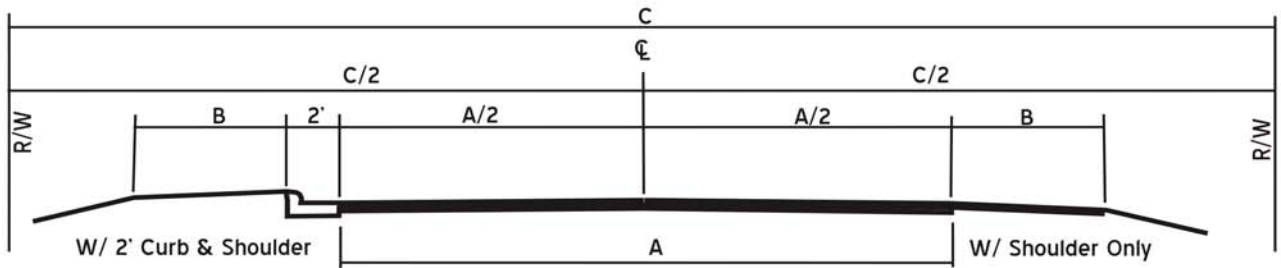
A. Immediately after placement, protect pavement from premature drying, excessive hot or cold temperatures and mechanical injury.

B. Do not permit pedestrian or vehicular traffic over pavement until 75 percent design strength of concrete has been achieved.

3.11 Testing

A. Cost of testing shall be at contractor's expense.

END SECTION 02500



**GEOMETRIC DESIGN CRITERIA
2 LANE**

TYPE OF STREET CATEGORY	AVERAGE DAILY TRAFFIC (ADT)	PAVEMENT WIDTH MIN	SHOULDER WIDTH MIN	RIGHTS-OF-WAY WIDTH
		A	B	C
Arterial - I	Less than 400	24 ft	6 ft	80 ft
Arterial - II	400 - 3000	24 ft	8 ft	80 ft
Arterial - III	3000 - 5000	28 ft	8 ft	80 ft
Arterial - IV	More than 5000	28 ft	11 ft	80 ft
Collector - I	Less than 400	24 ft	4 ft	60 ft
Collector - II	400 - 1000	28 ft	6 ft	60 ft
Collector - III	1000 - 3000	28 ft	6 ft	60 ft
Collector - IV	3000 - 5000	28 ft	8 ft	60 ft
Collector - V	More than 5000	28 ft	10 ft	60 ft
Local - I	Less than 400	20 ft	2 ft	50 ft
Local - II	400 - 1000	24 ft	6 ft	50 ft
Local - III	1000 - 3000	24 ft	6 ft	50 ft
Local - IV	3000 - 5000	24 ft	6 ft	50 ft
Local - V	More than 5000	24 ft	8 ft	50 ft

See Article 3 of Subdivision Control Ordinates for additional requirements. The standards established by this table can be amended by the Plan Commission if determined necessary for safety, efficiency, maintenance, anticipated problems or future growth as advised by the Plan Department. Rights-of-way will increase as required for addition of sidewalks and paths.

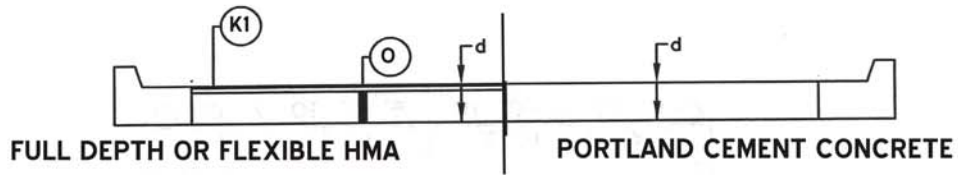
Decatur County

DWG #PS-1



**PAVING AND SURFACING
PAVEMENT SECTIONS**





- | | | |
|--|---|---|
| <p>FLEXIBLE HMA d = 12"</p> <ul style="list-style-type: none"> (K1) 165 lb/syd HMA, Type A, Surface 275 lb/syd HMA, Type A, Intermediate (O) 8" Compacted Aggregate Base, No. 53 | <p>FULL DEPTH HMA d = 10"</p> <ul style="list-style-type: none"> (K1) 165 lb/syd HMA, Type A, Surface 275 lb/syd HMA, Type A, Intermediate (O) 330 lb/syd HMA, Type A, Base 330 lb/syd HMA, Type A, Base | <p>PORTLAND CEMENT CONCRETE d = 8"</p> |
|--|---|---|

LOCAL STREETS

- | | | |
|--|---|--|
| <p>FLEXIBLE HMA d = 16"</p> <ul style="list-style-type: none"> (K1) 165 lb/syd HMA, Type A, Surface 275 lb/syd HMA, Type A, Intermediate (O) 12" Compacted Aggregate Base, No. 53 Place in 2-6" lifts | <p>FULL DEPTH HMA d = 11"</p> <ul style="list-style-type: none"> (K1) 165 lb/syd HMA, Type A, Surface 385 lb/syd HMA, Type A, Intermediate (O) 330 lb/syd HMA, Type A, Base 330 lb/syd HMA, Type A, Base | <p>PORTLAND CEMENT CONCRETE d = 10"</p> |
|--|---|--|

COLLECTOR STREETS

- | | | |
|--|---|--|
| <p>FLEXIBLE HMA d = 20"</p> <ul style="list-style-type: none"> (K1) 165 lb/syd HMA, Type A, Surface 385 lb/syd HMA, Type A, Intermediate (O) 15" Compacted Aggregate Base, No. 53 Place in 3-5" lifts | <p>FULL DEPTH HMA d = 12"</p> <ul style="list-style-type: none"> (K1) 165 lb/syd HMA, Type A, Surface 275 lb/syd HMA, Type A, Intermediate (O) 440 lb/syd HMA, Type A, Base 440 lb/syd HMA, Type A, Base | <p>PORTLAND CEMENT CONCRETE d = 11"</p> |
|--|---|--|

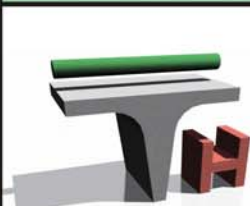
ARTERIAL STREETS

GENERAL NOTES:

1. IF GREATER THAN 10% TRUCK TRAFFIC IS ANTICIPATED, ADD 1" TO ALL TOTAL THICKNESSES.
2. DEPTH OF CONCRETE CURB SHALL EQUAL DEPTH OF CONCRETE PAVEMENT.

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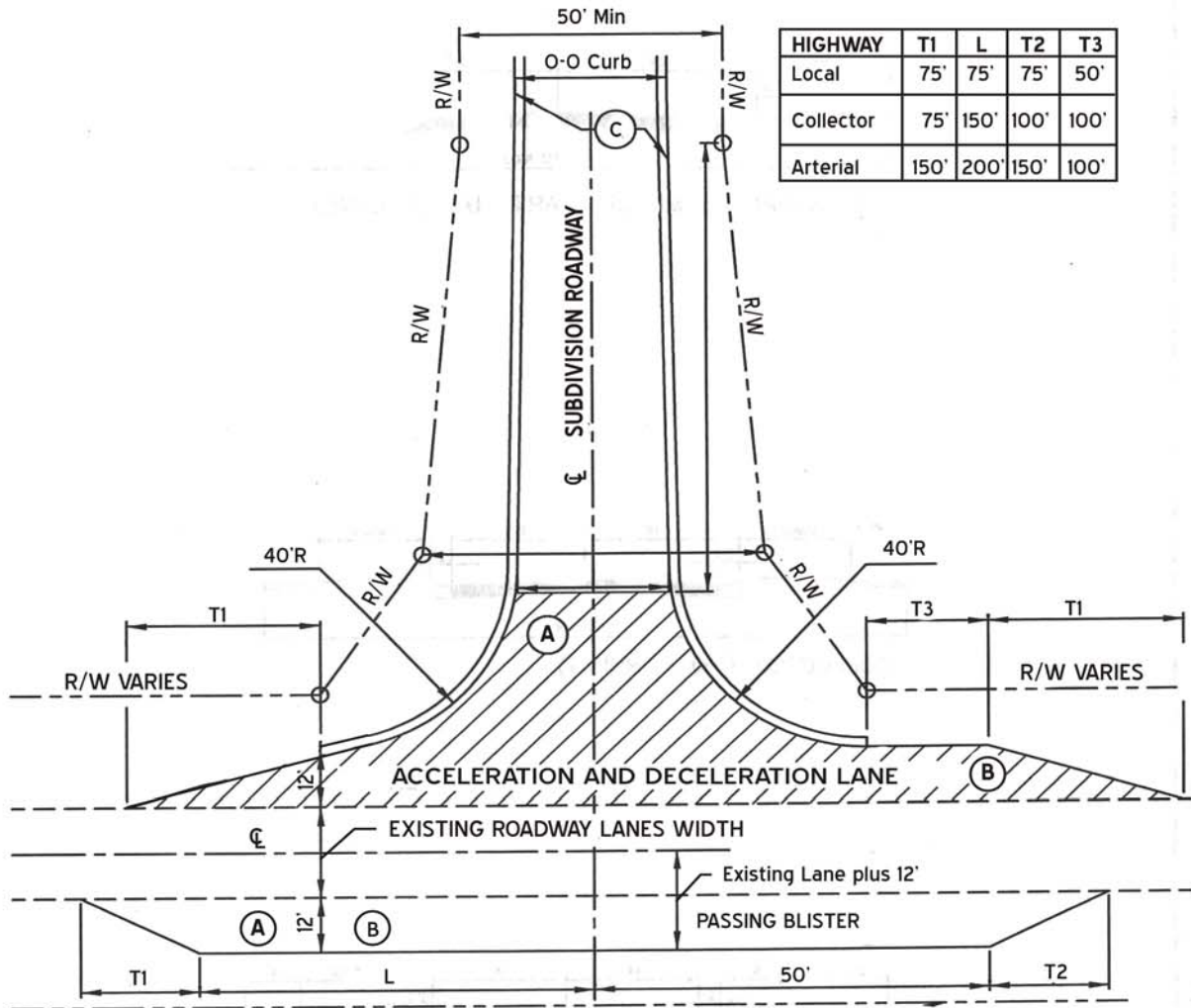
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BARTH & ASSOCIATES

**PAVING AND SURFACING
TYPICAL
PAVEMENT SECTIONS**

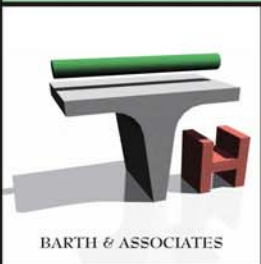




- (A) Passing blister required when turning volumes exceed 300/day
- (B) Roadway shall be constructed to same specifications as subdivision roadway
- (C) Curb and gutter 24" wide

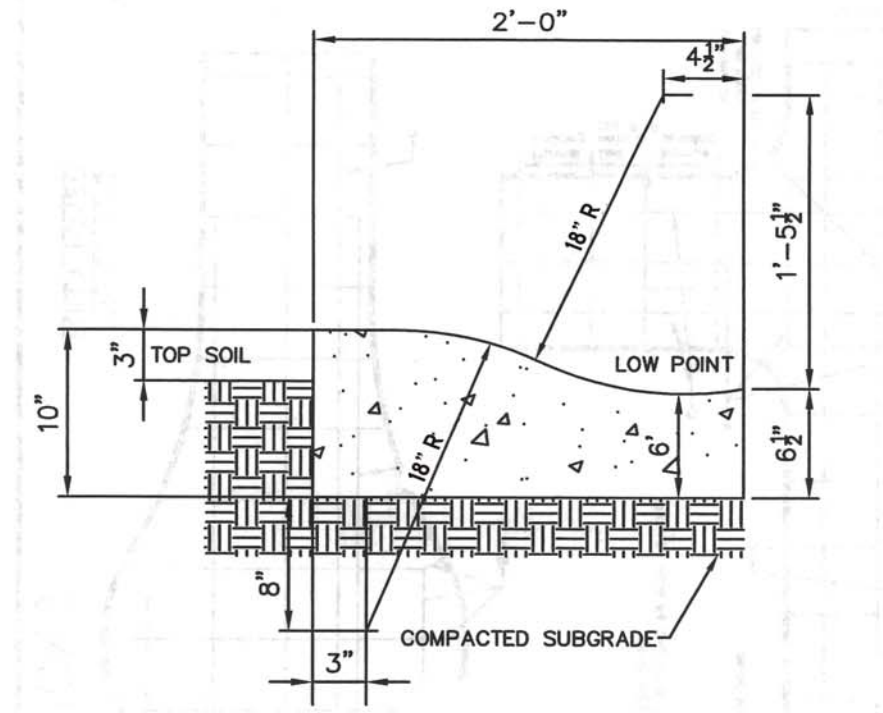
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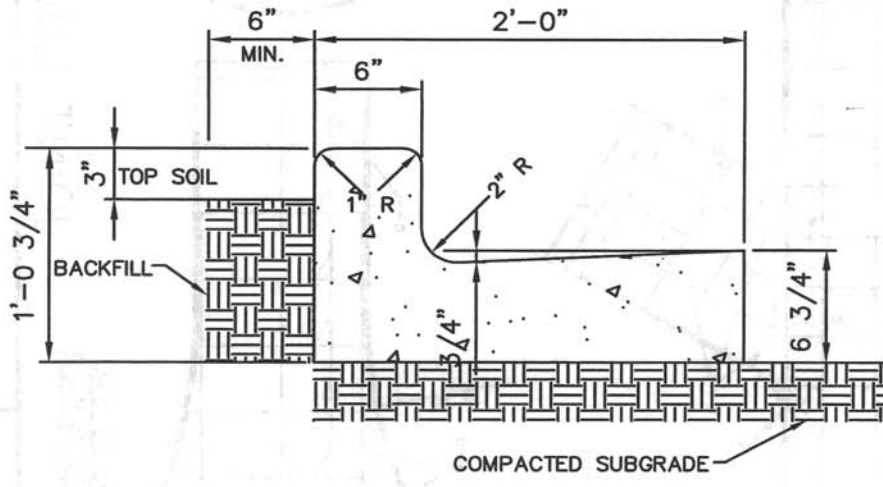


**PAVING AND SURFACING
SUBDIVISION ENTRANCE
FROM
COLLECTOR OR ARTERIAL**





TYPE I - ROLLER CURB



TYPE II - STRAIGHT CURB

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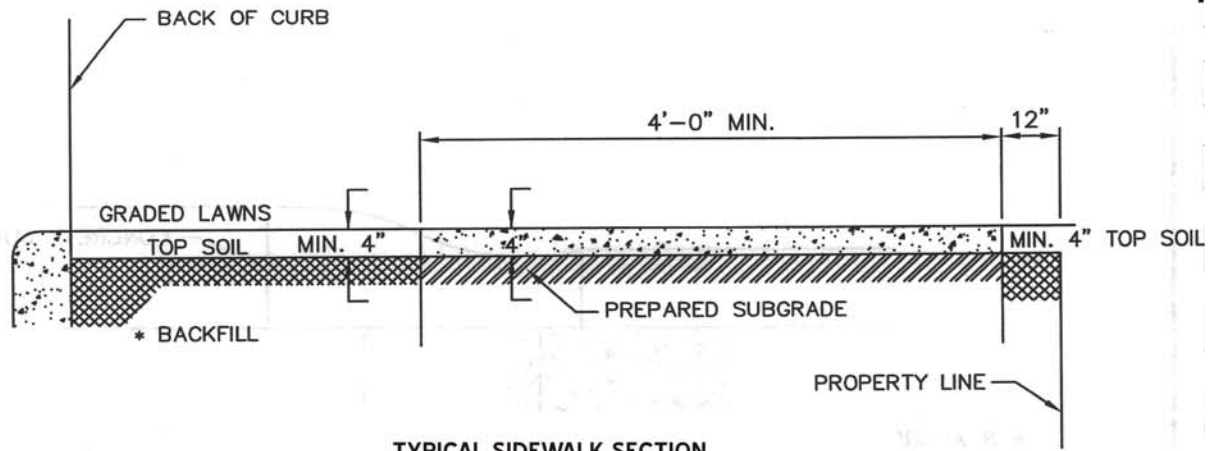
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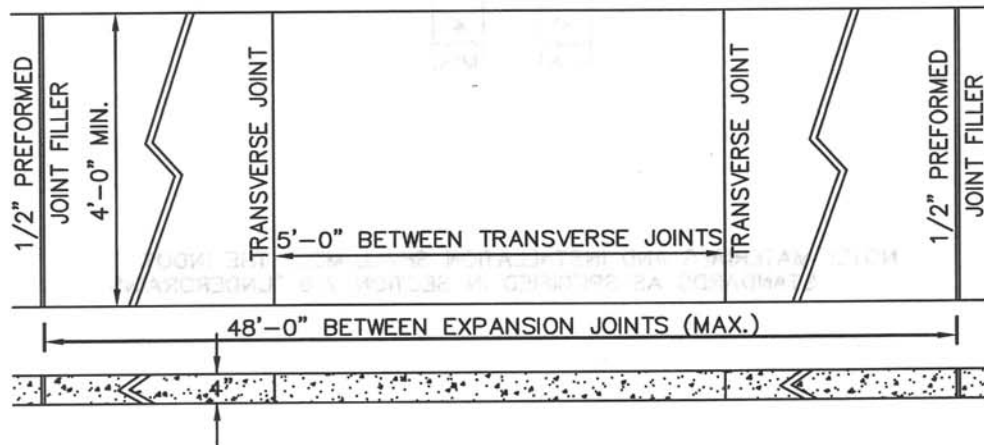
BARTH & ASSOCIATES

**PAVING AND SURFACING
CURB & GUTTER
DETAILS**





* THE SPACE BEHIND THE CURB SHALL BE FILLED WITH SUITABLE MATERIAL TO THE REQUIRED ELEVATION AND COMPACTED IN LAYERS NOT TO EXCEED 6" IN DEPTH.
 SUBGRADE UNDER ALL CURBS, SIDEWALKS, AND DRIVES SHALL BE COMPACTED IN ACCORDANCE WITH I.N.D.O.T. SPECIFICATIONS.



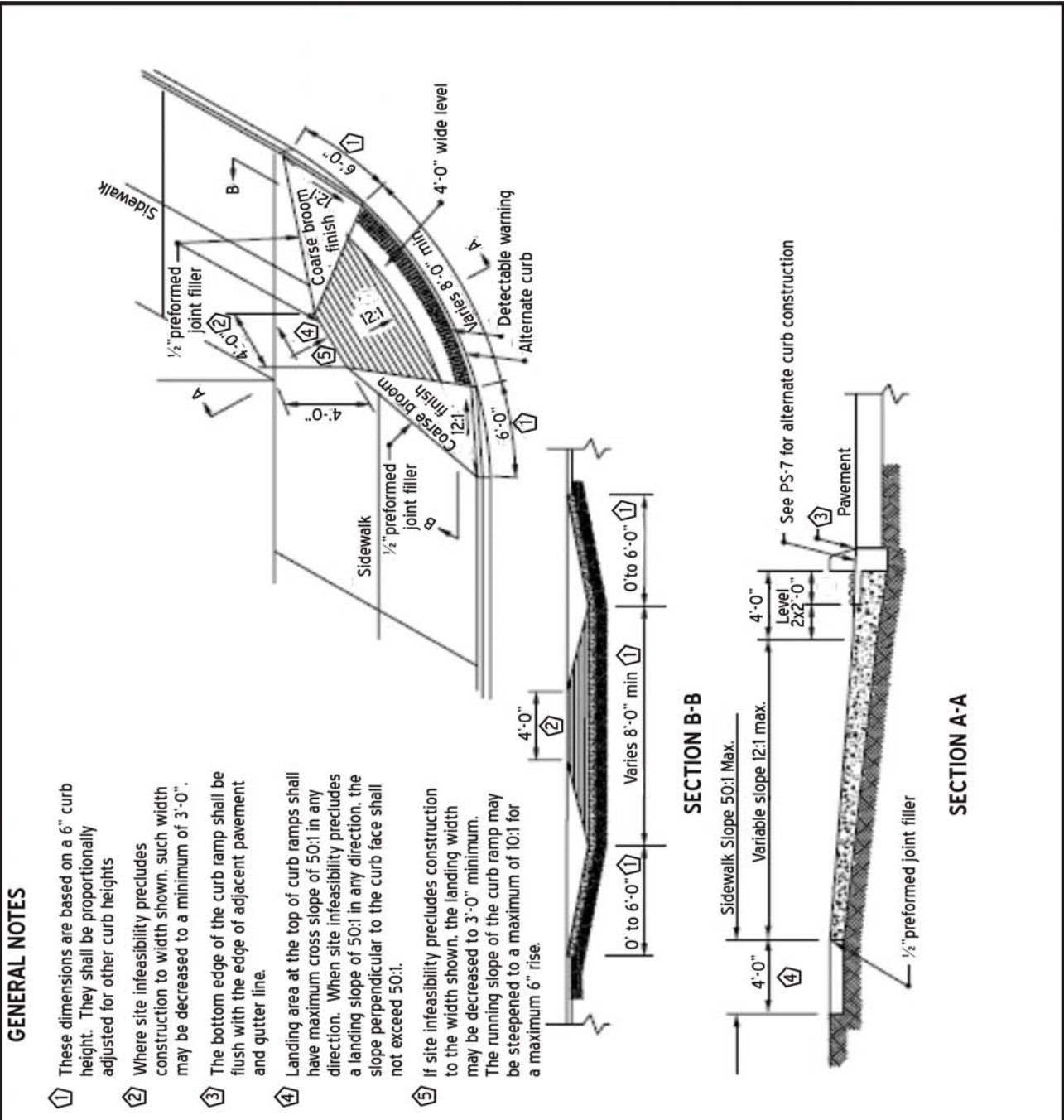
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**PAVING AND SURFACING
SIDEWALK
DETAILS**





Decatur County DWG #PS-6



**PAVING AND SURFACING
HANDICAP
SIDEWALK RAMP**



