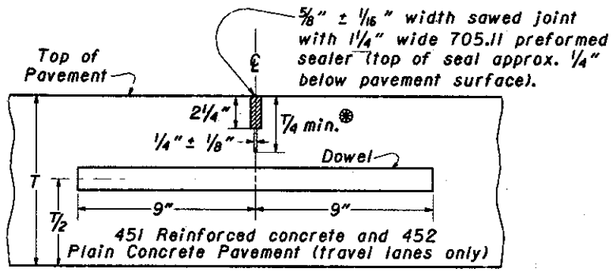
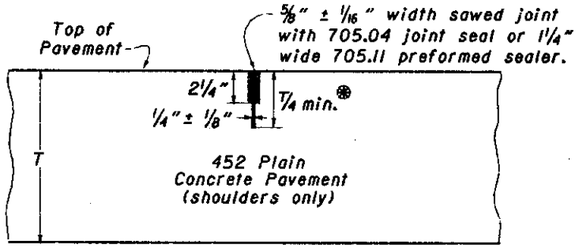
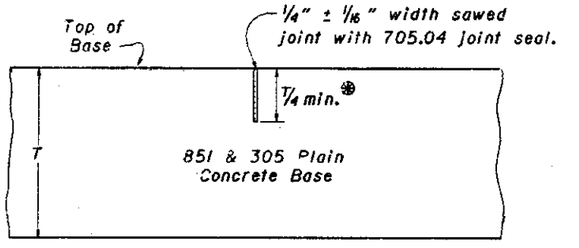
CONTRACTION JOINTS



SECTION - 451 & 452 PAVEMENT



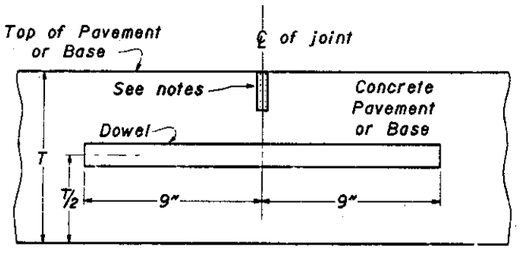
SECTION - 452 SHOULDER



SECTION - 851 & 305 BASE

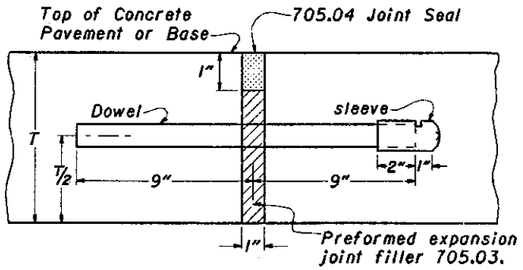
❋ Where T > 10", the sawcut depth shall be T/3.

CONSTRUCTION JOINT

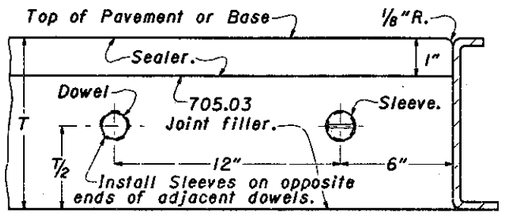


SECTION THROUGH CONSTRUCTION JOINT

EXPANSION JOINT



SECTION THROUGH EXPANSION JOINT



SIDE ELEVATION OF EXPANSION JOINT

GENERAL : Notes and details shown on this drawing shall be considered in conjunction with and supplemental to the pertinent specifications for portland cement concrete pavements and bases, and incidentals related thereto.

All joints shall be constructed normal to the centerline of the pavement lane unless otherwise directed.

Where dowels are specified, they shall be round, straight steel bars of the size indicated in the following table, and shall be coated in accordance with the requirements of specification 709.13. Dowel basket assemblies shall also be coated in accordance with 709.13. Dowels shall be spaced at 12" centers, beginning 6" from the longitudinal joint.

DOWEL SIZE	
(T) THICKNESS OF PAVEMENT	DIAMETER OF DOWEL
8.5" or less	1"
8.6" to 10"	1 1/4"
over 10"	1 1/2" or as shown on plan

ASSEMBLY : Each joint assembly used to hold dowels in position shall be continuous between longitudinal joints or between longitudinal joint and pavement edge. The assembly shall be firmly held in proper position by at least eight 1/2" steel pins driven at an angle to brace the assembly from lateral and vertical displacement during the placing of the concrete. These pins shall be at least 18" in length. Two of these pins shall be driven opposite each other at each end of the assembly and the remaining pins shall be driven in staggered positions on each side of the assembly. In exceptional cases where it is impractical to use the 18" length pins, such as where hardpan or rock is encountered, the Engineer may authorize use of shorter pins provided the assembly is held firmly. Where the assembly is placed on granular material which may allow settlement or distortion, the assembly shall be anchored to prevent settlement or distortion with some combination of pins and/or steel plates, or by some other means to the satisfaction of the Engineer.

When concrete pavement is placed on an existing concrete pavement or a stabilized base, the joint assemblies (baskets) shall be held firmly in position by the use of a power driven fastener and an appropriate clip at 6 locations along the assembly (3 each side of the assembly) to secure the basket from lateral and vertical displacement during concrete placement.

Dowel spacing is shown for pavement lanes of even foot widths. Where other widths are specified, standard cages may be used with dowel spacings adjusted as follows :

The 6" dowel spacing shall be maintained at the longitudinal joint. The spacing at the outer edge of the lane may be increased up to 12". Where an odd width of lane occurs, a dowel shall be placed 6" from the outer edge of the lane if the standard cage would provide for a space exceeding 12". Such a dowel shall be held rigidly in proper position by a method satisfactory to the Engineer or a dowel cage of greater length than required may be used by cutting the assembly and splicing to attain the required length.

This drawing is intended for use with a uniform depth pavement. When the project involves the placing of variable depth pavement, the joint components shall be held in place in accordance with the method shown in the plan or as approved by the Engineer.

EXPANSION JOINTS : Expansion joint filler shall be held rigidly in position and shall be continuous for the full width of each lane. The face of the expansion joint shall be perpendicular to the concrete surface and shall not be skewed horizontally except when abutting a skewed bridge approach slab.

Smooth dowels shall be used, and free movement shall be provided by applying a coating of a thin layer of oil or other "bond-breaking" material just prior to placing the concrete. One free end of each dowel shall be equipped, after coating, with a sleeve of metal or other approved material approximately 3" long, designed with crimped end and overlapping seams, fitting closely around the dowel. Each sleeve shall be provided with a depression or interior projection to act as a stop for the dowel, sufficiently distant from the crimped end to allow 1" for longitudinal dowel movement with pavement expansion. In lieu of this requirement, any other means may be used if approved by the Director.

Proper size dowel holes shall be punched or drilled into the preformed expansion joint filler in order to insure tight fitting dowels.

CONTRACTION JOINTS : All contraction joints in 451 reinforced concrete and 452 plain concrete pavements shall be dowelled. Contraction joints in 305 plain concrete base or shoulders shall be dowelled if within 500' of a pressure relief joint.

To provide for longitudinal movement at the joint, dowels shall be smooth and coated with a bond breaking material such as a thin layer of oil just prior to placing the concrete.

Contraction joints of the type specified shall be spaced in accordance with the following table :

CONTRACTION JOINT SPACING	
TYPES OF PAVEMENT OR BASE	MAXIMUM SPACING BETWEEN JOINTS
451 Reinforced Concrete Pavement	21 lin. ft.
452 Plain ❋ Concrete Pavement	17 lin. ft.
851 & 305 Plain Concrete Base	20 lin. ft.

❋ Where Item 452 Plain Concrete Pavement is being placed next to Item 451 Reinforced Concrete Pavement, the joint spacing in the 452 shall be 21 feet and match the joints in the mainline pavement. Where Item 452 Plain Concrete Pavement is being used as shoulder, rumble strips shall be placed as per BP-8.1.

CONSTRUCTION JOINTS : Smooth dowels shall be used in transverse construction joints in all portland cement concrete pavements, shoulders and base. The joint shall be formed by using an adequate bulkhead that will provide a straight joint. The bulkhead shall have openings provided for dowel bars spaced as outlined under "ASSEMBLY." The bulkhead shall be shaped to fit the typical section of the pavement or base. Dowels shall be held rigidly in position during the placing of the concrete.

Construction joints in reinforced concrete pavement may be located at a contraction joint or between contraction joints, provided they are not closer than 10 feet to another parallel joint. In plain concrete pavement or concrete base a construction joint shall not be located closer than 6 feet to another parallel joint.

Kerf and seal conforming in all respects to details shown for contraction joints shall be provided at each construction joint in concrete pavement and base.

SEALING BASE CONTRACTION JOINTS :
All contraction joints for plain concrete bases shall be sealed as detailed hereon and the cost included in the unit price bid for Item 305 or 851.

BUREAU OF LOCATION AND DESIGN
OHIO DEPARTMENT OF TRANSPORTATION

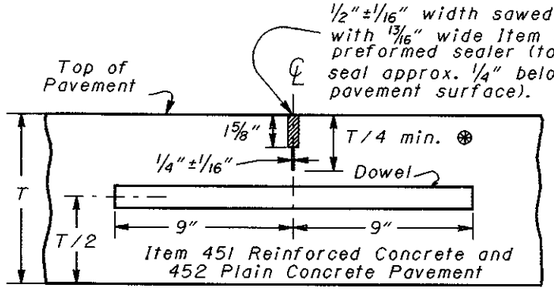
TRANSVERSE PAVEMENT JOINTS

DATE 2-21-92

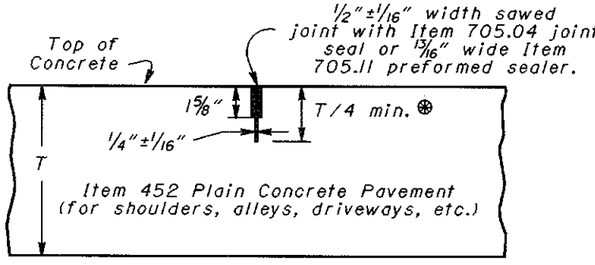
STANDARD CONSTRUCTION DRAWING **BP-2.2**

APPROVED R.K. Hulman ENGR., L & D

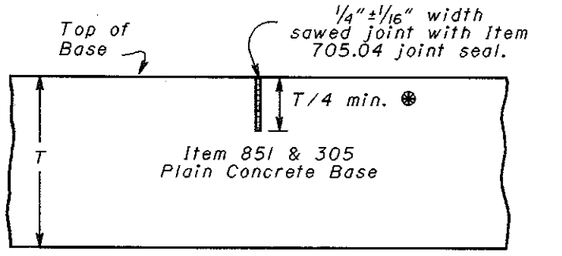
CONTRACTION JOINTS



SECTION - ITEM 451 & 452
(See Notes)



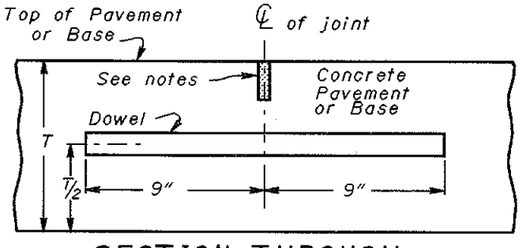
SECTION - ITEM 452
(See Notes)



SECTION - ITEM 851 & 305 BASE

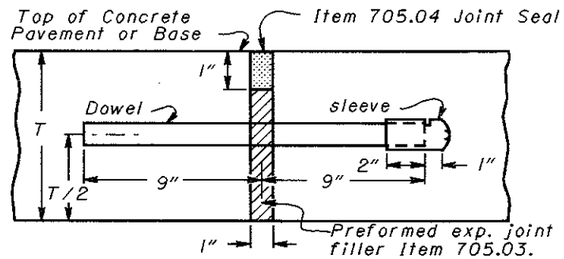
❋ Where T > 10", the sawcut depth shall be T/3.

CONSTRUCTION JOINT

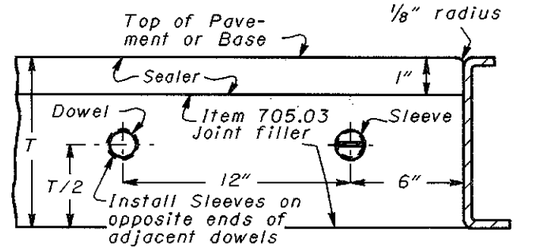


SECTION THROUGH CONSTRUCTION JOINT

EXPANSION JOINT



SECTION THROUGH EXP. JOINT



SIDE ELEVATION OF EXP. JOINT

NOTES

GENERAL: Notes and details shown on this drawing shall be considered in conjunction with and supplemental to the pertinent specifications for portland cement concrete pavement and bases, and incidentals related thereto.

All joints shall be constructed normal to the centerline of the pavement lane unless otherwise directed.

Where dowels are specified, they shall be round, straight steel bars of the size indicated in the following table. Steel bars and dowel basket assemblies shall be coated in accordance with the requirements of Item 709.13.

Dowels shall be spaced at 12" centers, beginning 6" from the longitudinal joint.

DOWEL SIZE	
(T) THICKNESS OF PAVEMENT	DIAMETER OF STEEL DOWEL
8.5" or less	1"
8.6" to 10"	1¼"
over 10"	1½" or as shown on plan

ASSEMBLY: Each joint assembly used to hold dowels in position shall be continuous between longitudinal joints or between longitudinal joint and pavement edge. The assembly shall be firmly held in proper position by at least eight ½" steel pins driven at an angle to brace the assembly from lateral and vertical displacement during the placing of the concrete. These pins shall be at least 18" in length. Two of these pins shall be driven opposite each other at each end of the assembly and the remaining pins shall be driven in staggered positions on each side of the assembly. In exceptional cases where it is impractical to use the 18" length pins, such as where hardpan or rock is encountered, the Engineer may authorize use of shorter pins provided the assembly is held firmly. Where the assembly is placed on granular material which may allow settlement or distortion, the assembly shall be anchored to prevent settlement ment or distortion with some combination of pins and/or steel plates, or by some other means to the satisfaction of the Engineer.

When concrete pavement is placed on an existing concrete pavement or a stabilized base, the joint assemblies (baskets) shall be held firmly in position by the use of a power driven fastener and an appropriate clip at 6 locations along the assembly (3 each side of the assembly) to secure the basket from lateral and vertical displacement during concrete placement.

Dowel spacing is shown for pavement lanes of even foot widths. Where other widths are specified, standard cages may be used with dowel spacings adjusted as follows:

The 6" dowel spacing shall be maintained at the longitudinal joint. The spacing at the outer edge of the lane may be increased up to 12". Where an odd width of lane occurs, a dowel shall be placed 6" from the outer edge of the lane if the standard cage would provide for a space exceeding 12". Such a dowel shall be held rigidly in proper position by a method satisfactory to the Engineer or a dowel cage of greater length than required may be used by cutting the assembly and splicing to attain the required length.

This drawing is intended for use with a uniform depth pavement. When the project involves the placing of variable depth pavement, the joint components shall be held in place in accordance with the method shown in the plan or as approved by the Engineer.

EXPANSION JOINTS: Expansion joint filler shall be held rigidly in position and shall be continuous for the full width of each lane. The face of the expansion joint shall be perpendicular to the concrete surface and shall not be skewed horizontally except when abutting a skewed bridge approach slab.

Smooth dowels shall be used, and free movement shall be provided by applying a coating of a thin layer of oil or other "bond-breaking" material just prior to placing the concrete. One free end of each dowel shall be equipped, after coating, with a sleeve of metal or other approved material approximately 3" long, designed with crimped end and overlapping seams fitting closely around the dowel. Each sleeve shall be provided with a depression or interior projection to act as a stop for the dowel, sufficiently distant from the crimped end to allow 1" for longitudinal dowel movement with pavement expansion. In lieu of this requirement, any other means may be used if approved by the Director.

Proper size dowel holes shall be punched or drilled into the preformed expansion joint filler in order to insure tight fitting dowels.

CONTRACTION JOINTS: All contraction joints in Item 451 Reinforced Concrete Pavement shall be dowelled. Contraction joints in Item 452 Plain Concrete Pavement shall be dowelled where they are located in mainline pavement, ramps, acceleration/deceleration lanes, or collector/distributor lanes, or shoulders within 500 feet of a pressure relief joint. Contraction joints in Item 452 Plain Concrete Pavement shall not be dowelled in alleys, private drives, or commercial drives.

To provide for longitudinal movement at the joint, dowels shall be smooth and coated with a bond breaking material such as a thin layer of oil just prior to placing the concrete.

Contraction joints of the type specified shall be spaced in accordance with the following table:

CONTRACTION JOINT SPACING	
TYPES OF PAVEMENT OR BASE	MAXIMUM SPACING BETWEEN JOINTS
Item 451 Reinforced Concrete Pavement	21 lin. ft.
Item 452 Plain❋ Concrete Pavement	17 lin. ft.
Items 851 & 305 Plain Concrete Base	20 lin. ft.

❋ Where Item 452 Plain Concrete Pavement (for shoulders, etc.) is being placed and tied longitudinally to Item 451, Reinforced Concrete Pavement, or Item 305, Plain Concrete Base, the joints in Item 452 shall match the spacing alignment, sawing, and sealing requirements of the joints in the Item 451 or 305. Where Item 452, Plain Concrete Pavement, is being used as a shoulder, rumble strips shall be placed as per Std. Constr. Dwg. BP-8.1.

CONSTRUCTION JOINTS: Smooth dowels shall be used in transverse construction joints in all portland cement concrete pavements, shoulders and base. The joint shall be formed by using an adequate bulkhead that will provide a straight joint. The bulkhead shall have openings provided for dowel bars spaced as outlined under "GENERAL." The bulkhead shall be shaped to fit the typical section of the pavement or base. Dowels shall be held rigidly in position during the placing of the concrete.

Construction joints in reinforced concrete pavement may be located at a contraction joint or between contraction joints, provided they are not closer than 10 feet to another parallel joint. In plain concrete pavement or concrete base a construction joint shall not be located closer than 6 feet to another parallel joint.

Kerf and seal conforming in all respects to details shown for contraction joints shall be provided at each construction joint in concrete pavement and base.

SEALING BASE CONTRACTION JOINTS: All contraction joints for plain concrete bases shall be sealed as detailed hereon and the cost included in the unit price bid for Item 305 or 851.

BUREAU OF LOCATION AND DESIGN
OHIO DEPARTMENT OF TRANSPORTATION

TRANSVERSE PAVEMENT JOINTS

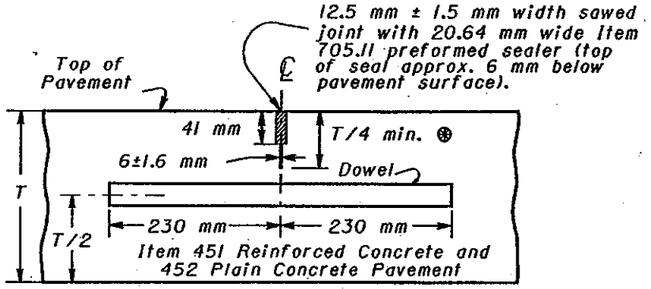
DATE
2-21-92
10-28-94

STANDARD CONSTRUCTION DRAWING **BP-2.2**

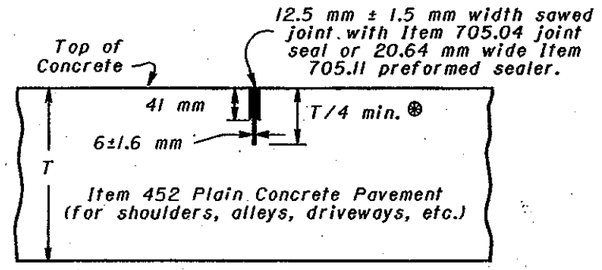
APPROVED D.K. Hulman

ENGR., L & D

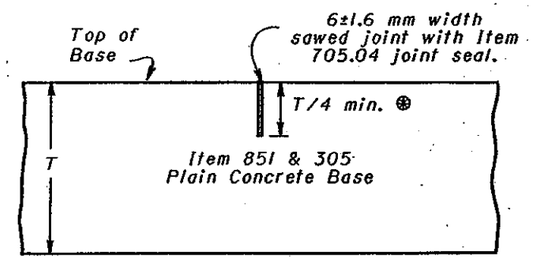
CONTRACTION JOINTS



SECTION - ITEM 451 & 452
(See Notes)



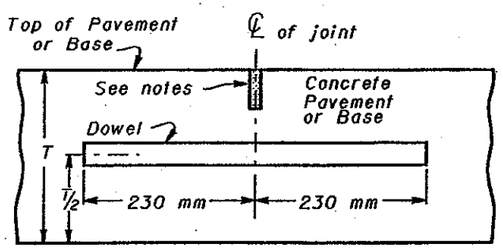
SECTION - ITEM 452
(See Notes)



SECTION - ITEM 851 & 305 BASE

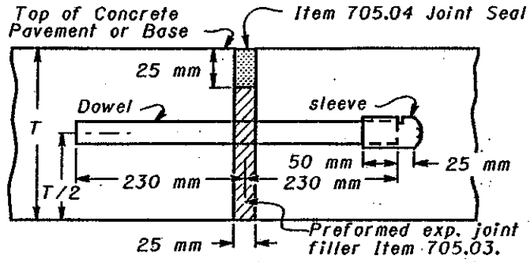
❋ Where T > 255 mm, the sawcut depth shall be T/3.

CONSTRUCTION JOINT

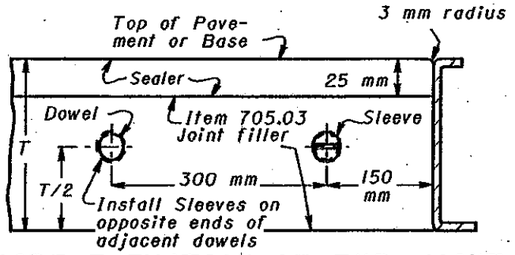


SECTION THROUGH CONSTRUCTION JOINT

EXPANSION JOINT



SECTION THROUGH EXP. JOINT



SIDE ELEVATION OF EXP. JOINT

NOTES

GENERAL: Notes and details shown on this drawing shall be considered in conjunction with and supplemental to the pertinent specifications for portland cement concrete pavement and bases, and incidentals related thereto.

All joints shall be constructed normal to the centerline of the pavement lane unless otherwise directed.

Where dowels are specified, they shall be round, straight steel bars of the size indicated in the following table. Steel bars and dowel basket assemblies shall be coated in accordance with the requirements of Item 709.13.

Dowels shall be spaced at 300 mm centers, beginning 150 mm from the longitudinal joint.

DOWEL SIZE	
(T) THICKNESS OF PAVEMENT	DIAMETER OF STEEL DOWEL
Less than 215 mm	25 mm
215 to 255 mm	32 mm
over 255 mm	38 mm or as shown on plan

ASSEMBLY: Each joint assembly used to hold dowels in position shall be continuous between longitudinal joints or between longitudinal joint and pavement edge. The assembly shall be firmly held in proper position by at least eight 13 mm steel pins driven at an angle to brace the assembly from lateral and vertical displacement during the placing of the concrete. These pins shall be at least 460 mm in length. Two of these pins shall be driven opposite each other at each end of the assembly and the remaining pins shall be driven in staggered positions on each side of the assembly. In exceptional cases where it is impractical to use the 460 mm length pins, such as where hardpan or rock is encountered, the Engineer may authorize use of shorter pins provided the assembly is held firmly. Where the assembly is placed on granular material which may allow settlement or distortion, the assembly shall be anchored to prevent settlement or distortion with some combination of pins and/or steel plates, or by some other means to the satisfaction of the Engineer.

When concrete pavement is placed on an existing concrete pavement or a stabilized base, the joint assemblies (baskets) shall be held firmly in position by the use of a power driven fastener and an appropriate clip at 6 locations along the assembly (3 each side of the assembly) to secure the basket from lateral and vertical displacement during concrete placement.

Dowel spacing is shown for pavement lanes of even 0.3 m increments. Where other widths are specified, standard cages may be used with dowel spacings adjusted as follows:

The 150 mm dowel spacing shall be maintained at the longitudinal joint. The spacing at the outer edge of the lane may be increased up to 300 mm. Where an odd width of lane occurs, a dowel shall be placed 150 mm from the outer edge of the lane if the standard cage would provide for a space exceeding 300 mm. Such a dowel shall be held rigidly in proper position by a method satisfactory to the Engineer or a dowel cage of greater length than required may be used by cutting the assembly and splicing to attain the required length.

This drawing is intended for use with a uniform depth pavement. When the project involves the placing of variable depth pavement, the joint components shall be held in place in accordance with the method shown in the plan or as approved by the Engineer.

EXPANSION JOINTS: Expansion joint filler shall be held rigidly in position and shall be continuous for the full width of each lane. The face of the expansion joint shall be perpendicular to the concrete surface and shall not be skewed horizontally except when abutting a skewed bridge approach slab.

Smooth dowels shall be used, and free movement shall be provided by applying a coating of a thin layer of oil or other "bond-breaking" material just prior to placing the concrete. One free end of each dowel shall be equipped, after coating, with a sleeve of metal or other approved material approximately 75 mm long, designed with crimped end and overlapping seams fitting closely around the dowel. Each sleeve shall be provided with a depression or interior projection to act as a stop for the dowel, sufficiently distant from the crimped end to allow 25 mm for longitudinal dowel movement with pavement expansion. In lieu of this requirement, any other means may be used if approved by the Director.

Proper size dowel holes shall be punched or drilled into the preformed expansion joint filler in order to insure tight fitting dowels.

CONTRACTION JOINTS: All contraction joints in Item 451 Reinforced Concrete Pavement shall be dowelled. Contraction joints in Item 452 Plain Concrete Pavement shall be dowelled where they are located in mainline pavement, ramps, acceleration/deceleration lanes, or collector/distributor lanes, or shoulders within 150 m of a pressure relief joint. Contraction joints in Item 452 Plain Concrete Pavement shall not be dowelled in alleys, private drives, or commercial drives.

To provide for longitudinal movement at the joint, dowels shall be smooth and coated with a bond breaking material such as a thin layer of oil just prior to placing the concrete. Contraction joints of the type specified shall be spaced in accordance with the following table:

CONTRACTION JOINT SPACING	
TYPES OF PAVEMENT OR BASE	MAXIMUM SPACING BETWEEN JOINTS
Item 451 Reinforced Concrete Pavement	6.5 m
Item 452 Plain❋ Concrete Pavement	5.0 m
Items 851 & 305 Plain Concrete Base	6.0 m

❋ Where Item 452 Plain Concrete Pavement (for shoulders, etc.) is being placed and tied longitudinally to Item 451, Reinforced Concrete Pavement, or Item 305, Plain Concrete Base, the joints in Item 452 shall match the spacing alignment, sawing, and sealing requirements of the joints in the Item 451 or 305. Where Item 452, Plain Concrete Pavement, is being used as a shoulder, rumble strips shall be placed as per Std. Constr. Dwg. BP-8.1M.

CONSTRUCTION JOINTS: Smooth dowels shall be used in transverse construction joints in all portland cement concrete pavements, shoulders and base. The joint shall be formed by using an adequate bulkhead that will provide a straight joint. The bulkhead shall have openings provided for dowel bars spaced as outlined under "GENERAL." The bulkhead shall be shaped to fit the typical section of the pavement or base. Dowels shall be held rigidly in position during the placing of the concrete.

Construction joints in reinforced concrete pavement may be located at a contraction joint or between contraction joints, provided they are not closer than 3.0 m to another parallel joint. In plain concrete pavement or concrete base a construction joint shall not be located closer than 1.8 m to another parallel joint.

Kerf and seal conforming in all respects to details shown for contraction joints shall be provided at each construction joint in concrete pavement and base.

SEALING BASE CONTRACTION JOINTS: All contraction joints for plain concrete bases shall be sealed as detailed hereon and the cost included in the unit price bid for Item 305 or 851.

metric units

BUREAU OF LOCATION AND DESIGN
OHIO DEPARTMENT OF TRANSPORTATION

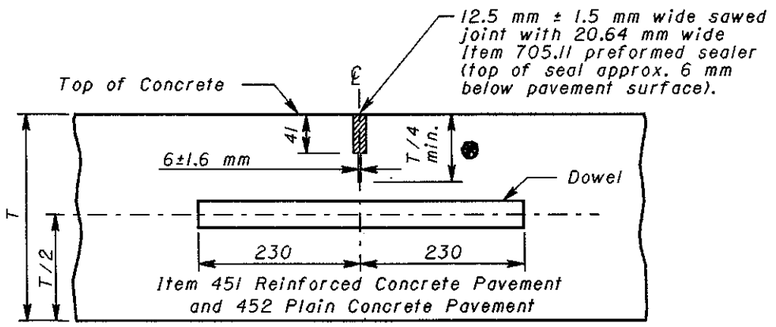
TRANSVERSE PAVEMENT JOINTS

DATE 10-28-94

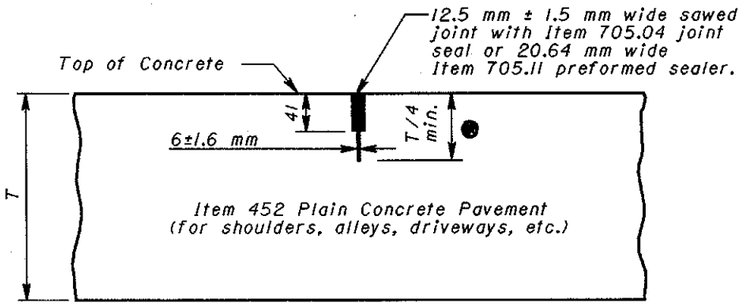
STANDARD CONSTRUCTION DRAWING **BP-2.2M**

APPROVED W. K. Hulman
ENGR., L & D

CONTRACTION JOINTS

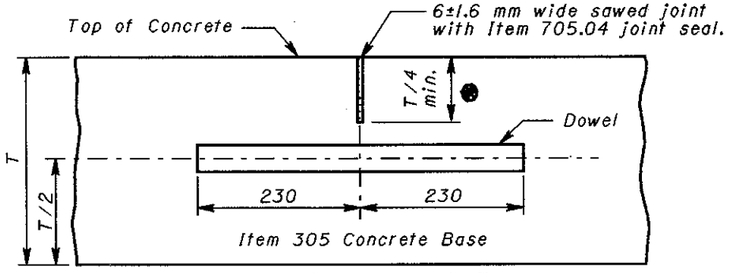


SECTION - ITEM 451 & 452

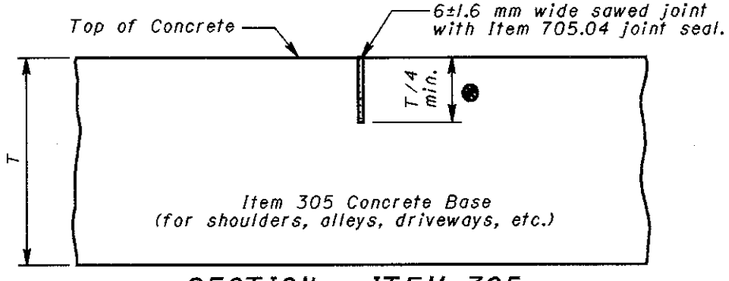


SECTION - ITEM 452

● Where T > 255 mm, the sawcut depth shall be T/3.



SECTION - ITEM 305



SECTION - ITEM 305

NOTES

GENERAL: Notes and details shown on this drawing shall be considered in conjunction with and supplemental to the pertinent specifications for portland cement concrete pavement and bases, and related incidentals.

JOINT COMPONENTS: This drawing is intended for use with a uniform depth pavement. When the project involves the placing of variable depth pavement, the joint components shall be held in place in accordance with the method shown in the plans or as approved by the Engineer.

CONTRACTION JOINTS: All contraction joints in Item 451 Reinforced Concrete Pavement shall be dowelled. Contraction joints in Item 452 Plain Concrete Pavement and Item 305 Concrete Base shall be dowelled where they are located in mainline pavement, ramps, acceleration/deceleration lanes, or collector/distributor lanes, or in shoulders within 150 m of a pressure relief joint.

Contraction joints in Item 305 Concrete Base and in Item 452 Plain Concrete Pavement shall not be dowelled in alleys, private drives, or commercial drives.

Contraction joints of the type specified shall be spaced in accordance with the Contraction Joint Spacing table:

CONTRACTION JOINT SPACING	
TYPES OF PAVEMENT OR BASE	MAXIMUM SPACING BETWEEN JOINTS
Item 451 Reinforced Concrete Pavement	6.5 m
Item 452 Plain ● Concrete Pavement	5.0 m
Item 305 Concrete Base	6.0 m

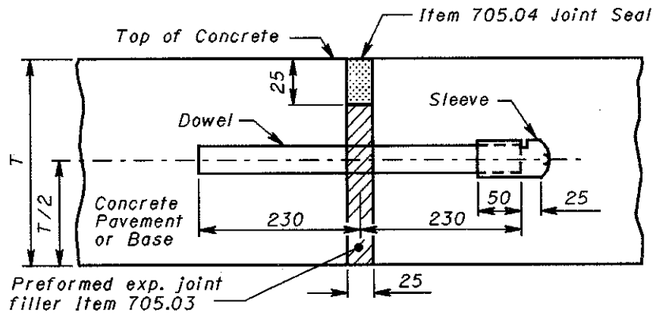
● Where Item 452 Plain Concrete Pavement (for shoulders, etc.) is being placed and tied longitudinally to Item 451, Reinforced Concrete Pavement, or Item 305, Concrete Base the joints in Item 452 shall match the spacing alignment, sawing, and sealing requirements of the joints in Item 451 or 305.

CONSTRUCTION JOINTS: In plain concrete pavement or concrete base a construction joint shall not be located closer than 1.8 m to another parallel joint.

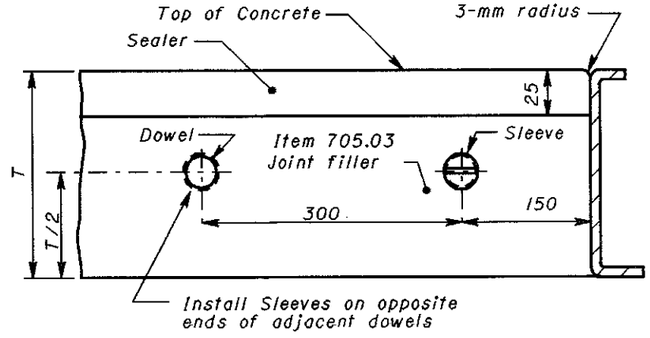
Kerf and seal conforming in all respects to details shown for contraction joints shall be provided at each construction joint in concrete pavement and base.

SEALING BASE CONTRACTION JOINTS: All contraction joints for concrete base shall be sealed as detailed on this drawing and the cost included in the unit price bid for Item 305.

EXPANSION JOINT

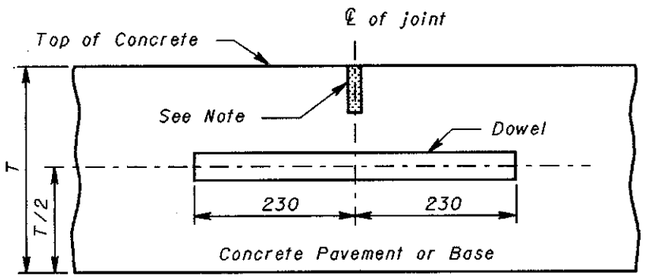


SECTION THROUGH EXP. JOINT



SIDE ELEVATION OF EXP. JOINT
(through Concrete Pavement or Base)

CONSTRUCTION JOINT



SECTION THROUGH CONSTRUCTION JOINT

All dimensions are in millimeters unless otherwise noted.

metric units

This Drawing Replaces BP-2.2.

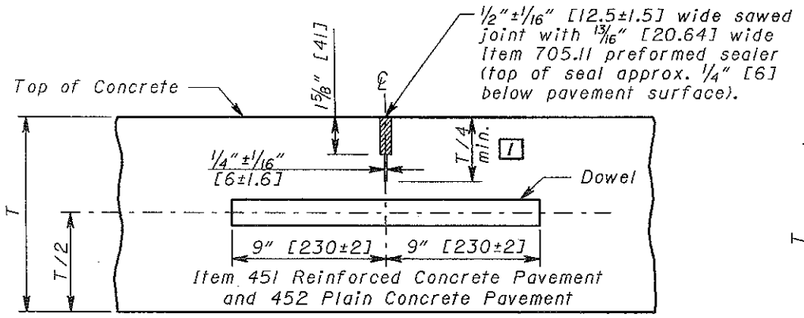
OFFICE OF PLANNING
OHIO DEPARTMENT OF TRANSPORTATION

TRANSVERSE PAVEMENT JOINTS

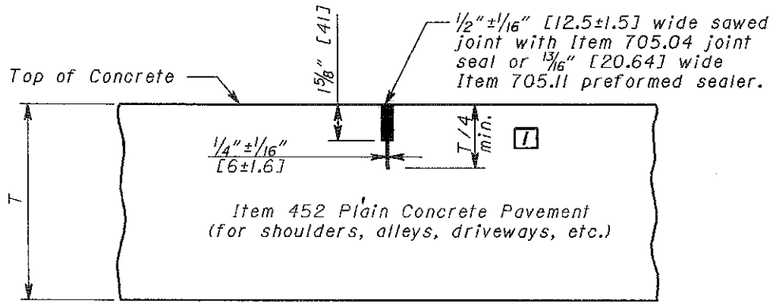
DATE: 10-28-94, 4-8-97

STANDARD CONSTRUCTION DRAWING **BP-2.2M**

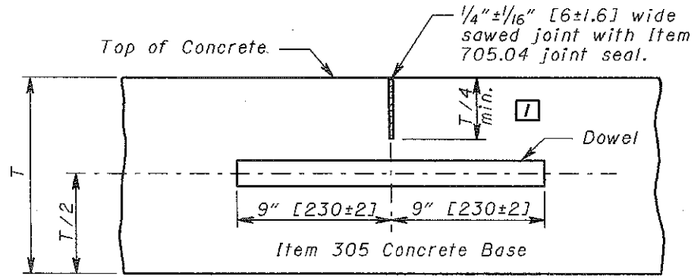
APPROVED Lang F. Sutherland
ADMINISTRATOR



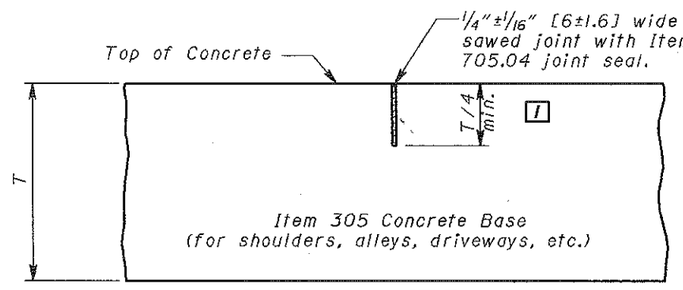
SECTION - ITEM 451 & 452



SECTION - ITEM 452

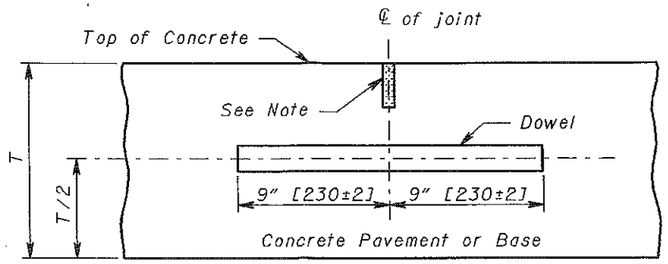


SECTION - ITEM 305



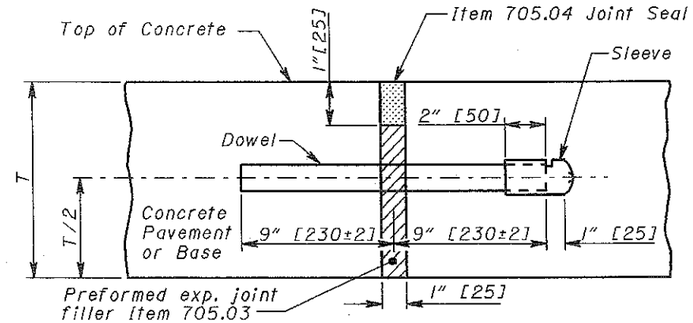
SECTION - ITEM 305

CONTRACTION JOINTS

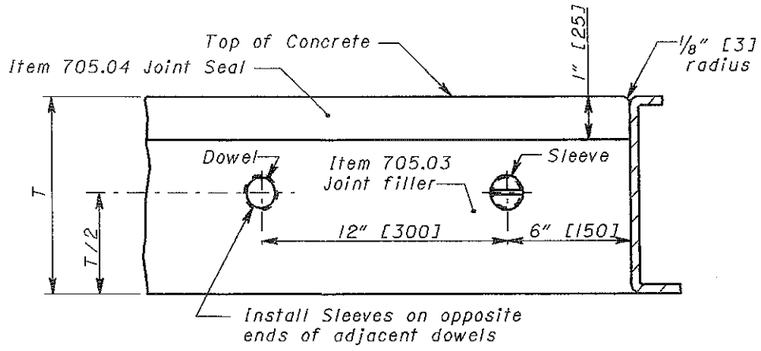


SECTION THROUGH CONSTRUCTION JOINT

CONSTRUCTION JOINT



SECTION THROUGH EXP. JOINT



SIDE ELEVATION OF EXP. JOINT
(through Concrete Pavement or Base)

EXPANSION JOINT

NOTES

GENERAL: *Notes and details shown on this drawing shall be considered in conjunction with and supplemental to the pertinent specifications for portland cement concrete pavement and bases, and related incidentals.*

JOINT COMPONENTS: *This drawing is intended for use with a uniform depth pavement. When the project involves the placing of variable depth pavement, the joint components shall be held in place in accordance with the method shown in the plans or as approved by the Engineer.*

CONTRACTION JOINTS: *Contraction joints in Item 305 Concrete Base shall be dowelled where they are located in mainline pavement, ramps, acceleration/deceleration lanes, or collector/distributor lanes, or in shoulders within 500' [150 m] of a pressure relief joint.*

Contraction joints in Item 305 Concrete Base shall not be dowelled in alleys, private drives, or commercial drives.

Contraction joints of the type specified shall be spaced in accordance with the CONTRACTION JOINT SPACING Table.

CONTRACTION JOINT SPACING	
Types of Pavement or Base	***Maximum Spacing Between Joints***
Item 451 Reinforced Concrete Pavement	*21' [6.5 m]*
Item 452 Plain Concrete Pavement	*15' [4.6 m]*
Item 305 Concrete Base	*15' [4.6 m]*

CONSTRUCTION JOINTS: *In Item 305 Concrete Base, a construction joint shall not be located closer than than 6' [1.8 m] to another parallel joint.*

Kerf and seal conforming in all respects to details shown for contraction joints shall be provided at each construction joint in concrete pavement and base.

SEALING BASE CONTRACTION JOINTS: *All contraction joints for concrete base shall be sealed as detailed on this drawing and the cost included in the unit price bid for Item 305.*

LEGEND

1 *Where T > 10" [255], the sawcut depth shall be T/3.*

THIS DRAWING REPLACES BP-2.2M DATED 10-21-97.

OHIO DEPARTMENT OF TRANSPORTATION
Randy Cunningham
ROADWAY DESIGN ENGINEER
DATE 7-28-00

REVISIONS

STDS. ENGR. M. Evans
DRAWN D. Focke

All metric dimensions (in brackets [ ]) are in millimeters unless otherwise noted.

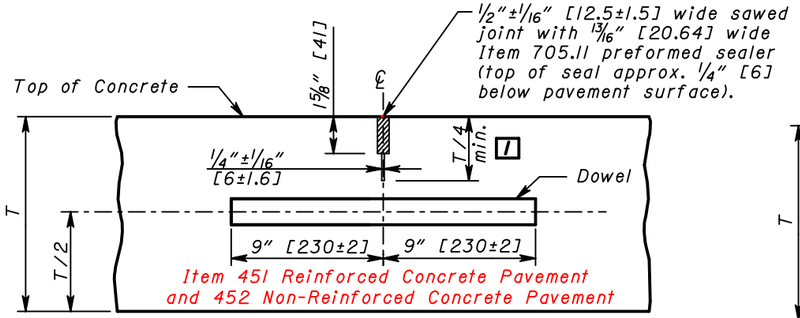
ROADWAY ENGINEERING SERVICES

STANDARD ROADWAY CONSTRUCTION DRAWING

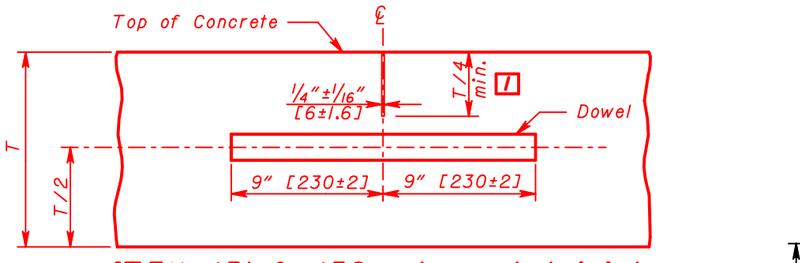
TRANSVERSE PAVEMENT JOINTS

NUMBER **BP-2.2**

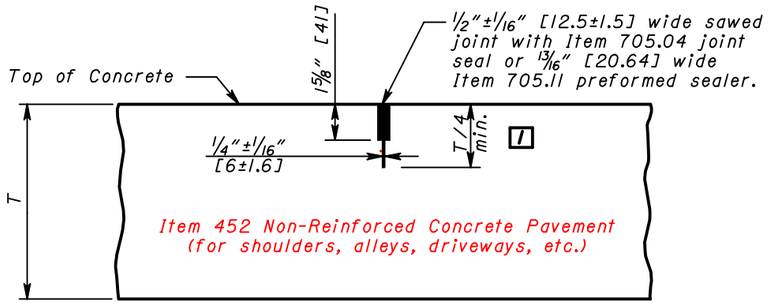
1 / 1



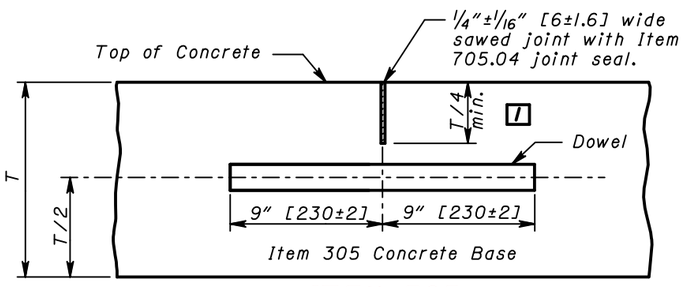
ITEM 451 & 452 w/sealed joints



ITEM 451 & 452 w/unsealed joints
(Dowel Bar omitted for shoulders, alleys, driveways, etc.)

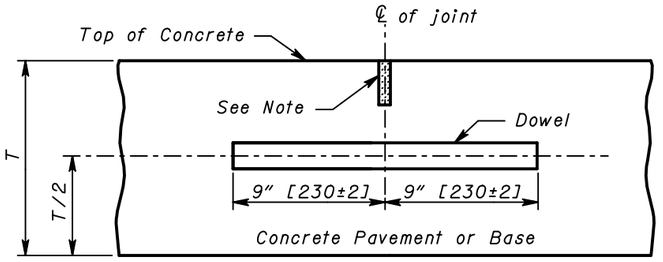


ITEM 452 w/sealed joints



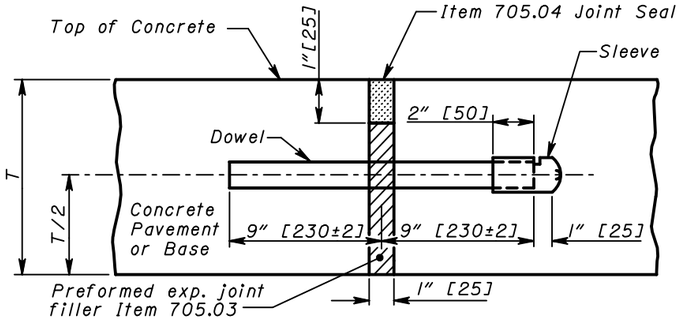
ITEM 305
(Dowel Bar omitted for shoulders, alleys, driveways, etc.)

CONTRACTION JOINTS SECTIONS

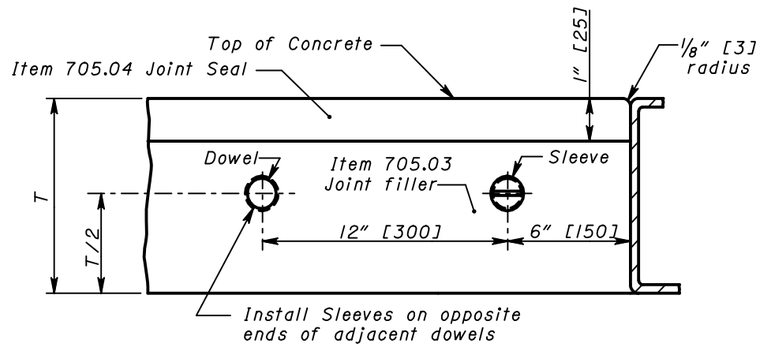


SECTION THROUGH CONSTRUCTION JOINT

CONSTRUCTION JOINT



SECTION THROUGH EXP. JOINT



SIDE ELEVATION OF EXP. JOINT
(through Concrete Pavement or Base)

EXPANSION JOINTS

NOTES

GENERAL: *Notes and details shown on this drawing shall be considered in conjunction with and supplemental to the pertinent specifications for portland cement concrete pavement and bases, and related incidentals.*

JOINT COMPONENTS: *This drawing is intended for use with a uniform depth pavement. When the project involves the placing of variable depth pavement, the joint components shall be held in place in accordance with the method shown in the plans or as approved by the Engineer.*

CONTRACTION JOINTS: *Contraction joints in Item 305 Concrete Base shall be dowelled where they are located in mainline pavement, ramps, acceleration/deceleration lanes, or collector/distributor lanes, or in shoulders within 500' [150 m] of a pressure relief joint.*

Contraction joints in Item 305 Concrete Base shall not be dowelled in alleys, private drives, or commercial drives.

Contraction joints of the type specified shall be spaced in accordance with the CONTRACTION JOINT SPACING Table.

CONTRACTION JOINT SPACING	
Types of Pavement or Base	**Maximum Spacing Between Joints**
Item 451 Reinforced Concrete Pavement	21' [6.5 m]
Item 452 Non-Reinforced Concrete Pavement	15' [4.6 m]
Item 305 Concrete Base	15' [4.6 m]

CONSTRUCTION JOINTS: *In Item 305 Concrete Base, a construction joint shall not be located closer than than 6' [1.8 .m] to another parallel joint.*

Kerf and seal conforming in all respects to details shown for contraction joints shall be provided at each construction joint in concrete pavement and base.

SEALING BASE CONTRACTION JOINTS: *All contraction joints for concrete base shall be sealed as detailed on this drawing and the cost included in the unit price bid for Item 305.*

LEGEND

[I] *Where T > 10" [255], the sawcut depth shall be T/3.*

THIS DRAWING REPLACES BP-2.2 DATED 7-28-00.

OHIO DEPARTMENT OF TRANSPORTATION
ROADWAY DESIGN ENGINEER
DATE 7-16-04

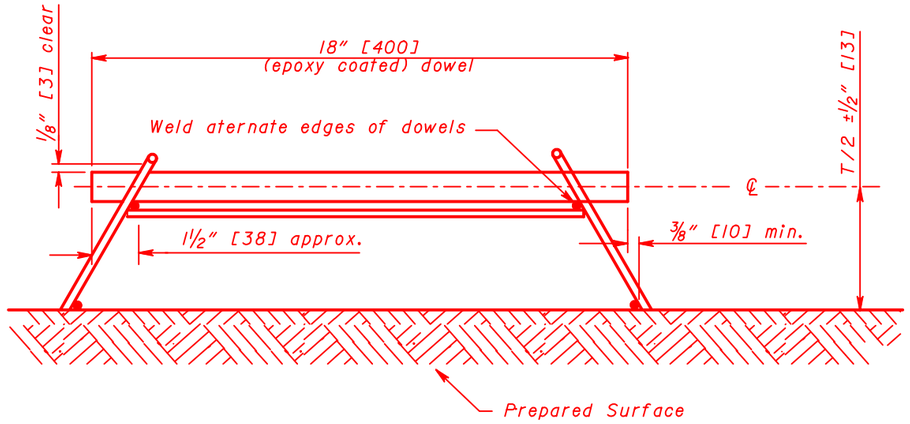
STDS. ENGR. D. Focke

All metric dimensions (in brackets [ ]) are in millimeters unless otherwise noted.

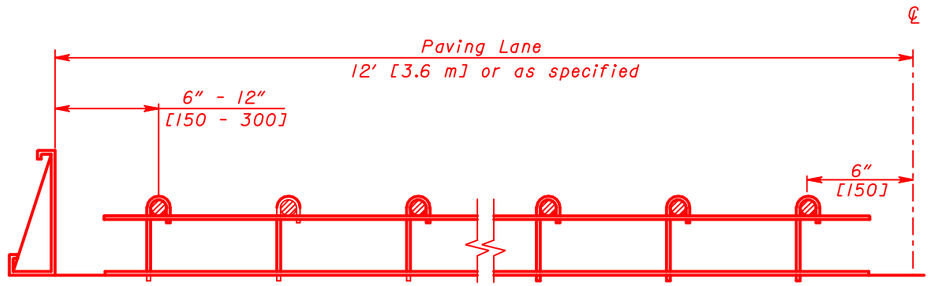
ROADWAY ENGINEERING SERVICES

STANDARD ROADWAY CONSTRUCTION DRAWING
TRANSVERSE PAVEMENT JOINTS

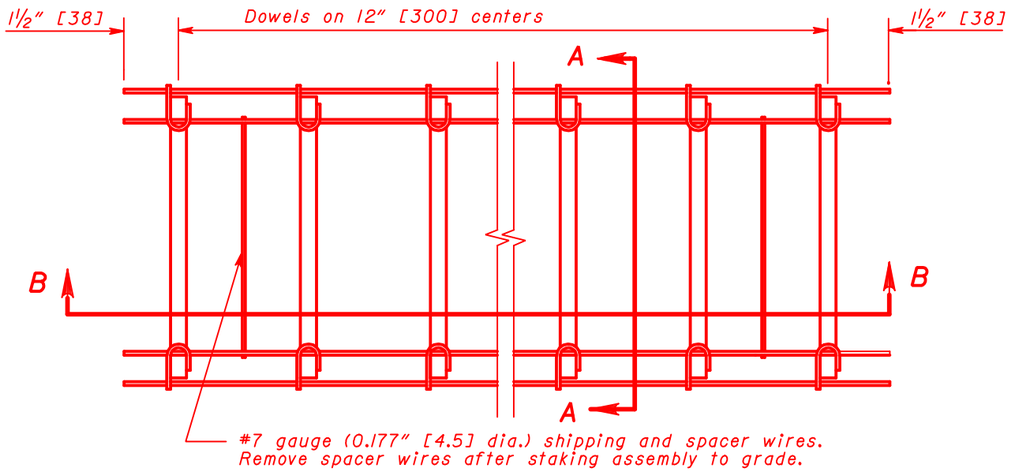
NUMBER **BP-2.2**



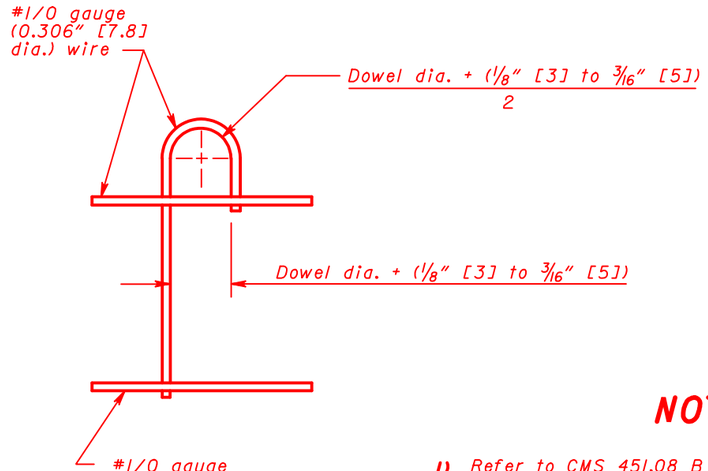
SECTION A-A



SECTION B-B



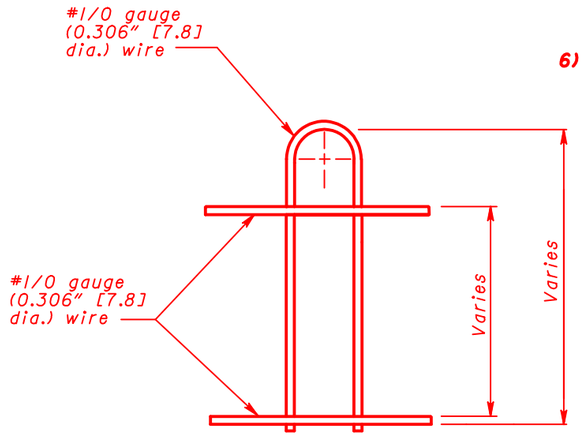
PLAN VIEW



J-LEG DETAIL
(ALTERNATE)

NOTES

1) Refer to CMS 451.08 B and 709.13 for dowel specifications.
2) Wire sizes shown are minimum required.
3) All wire intersections are to be welded.
4) Stakes typically applied at working ends of dowel.
5) TOLERANCES:
   A) ±1/4" per foot [±20 mm per meter] unless otherwise specified.
   B) Centerline of individual dowels shall be parallel to each other, the surface and the centerline of the slab.
   C) On centers should be ±1/2" [±13].
   D) Dowels should be placed at mid-depth of slab.
6) J-Leg or U-Leg to be installed on inside or outside of subframe.



U-LEG DETAIL

OHIO DEPARTMENT OF TRANSPORTATION
ROADWAY DESIGN ENGINEER
7-16-04
DATE

STDS. ENGR. D. Focke

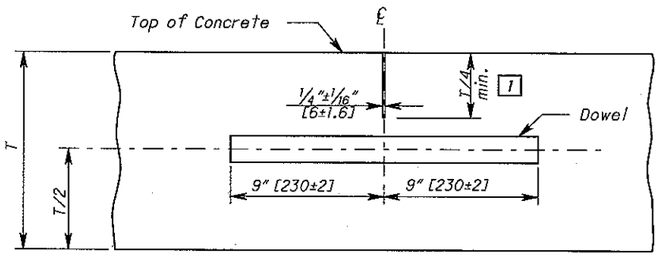
All metric dimensions [in brackets [ ]] are in millimeters unless otherwise noted.

ROADWAY ENGINEERING SERVICES

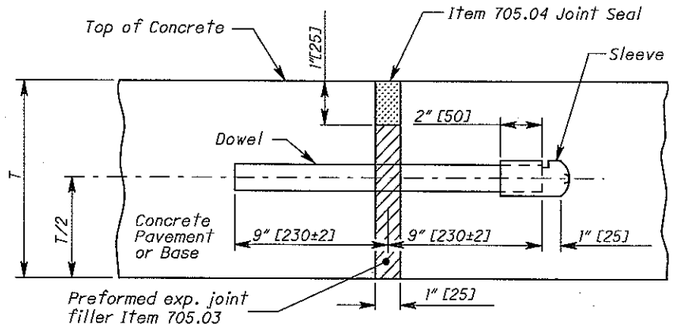
STANDARD ROADWAY CONSTRUCTION DRAWING
TRANSVERSE PAVEMENT JOINTS
(Universal Welded Dowel Basket Assembly)

NUMBER BP-2.2

2 / 2



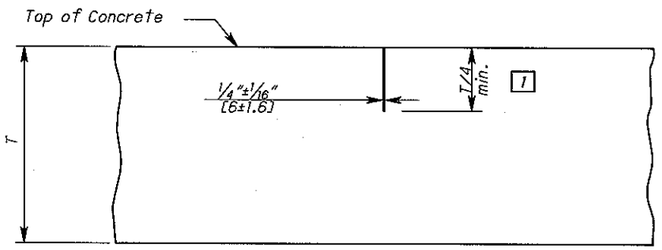
ITEM 451, 452 & 305



SECTION THROUGH EXP. JOINT

LEGEND

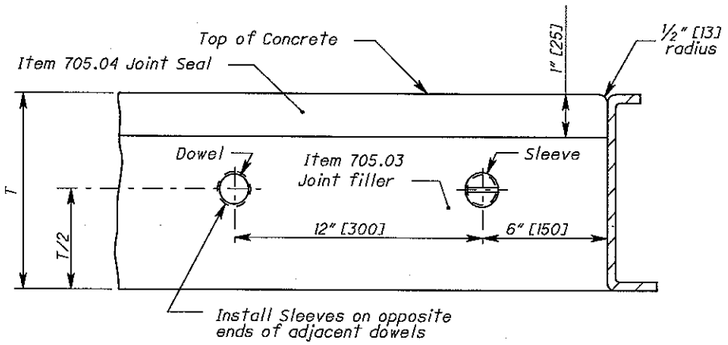
1 Where T > 10" [255], the sawcut depth shall be T/3. If using early entry saws, cut joints 2¼" to 2½" [56 to 63] deep and ⅛" [3] wide.



ITEM 452 and 305

(for shoulders, alleys, driveways, etc.)

CONTRACTION JOINTS SECTIONS



SIDE ELEVATION OF EXP. JOINT

(through Concrete Pavement or Base)

EXPANSION JOINTS

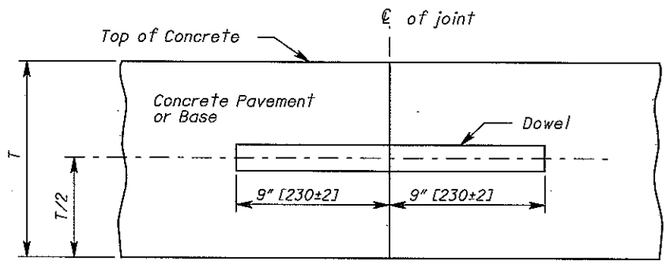
NOTES

GENERAL: Notes and details shown on this drawing shall be considered in conjunction with and supplemental to the pertinent specifications for portland cement concrete pavement and bases, and related incidentals.

JOINT COMPONENTS: This drawing is intended for use with a uniform depth pavement. When the project involves the placing of variable depth pavement, the joint components shall be held in place in accordance with the method shown in the plans or as approved by the Engineer.

CONTRACTION JOINTS: Contraction joints in Items 452 and 305 shall not be dowelled in alleys, private drives, or commercial drives.

Contraction joints of the type specified shall be spaced in accordance with the CONTRACTION JOINT SPACING Table.



SECTION THROUGH CONSTRUCTION JOINT

CONSTRUCTION JOINT

CONTRACTION JOINT SPACING	
Types of Pavement or Base	Maximum Spacing Between Joints
Item 451 Reinforced Concrete Pavement	21' [6.5 m]
Item 452 Non-Reinforced Concrete Pavement	15' [4.6 m]
Item 305 Concrete Base	15' [4.6 m]

THIS SHEET REPLACES BP-2.2 DATED 7-16-04.

STATE OF OHIO DEPARTMENT OF TRANSPORTATION

David A. Koosman 7-18-08

PAVEMENT ENGINEERING ADMINISTRATOR DATE

ALL METRIC DIMENSIONS (IN BRACKETS [ ]) ARE IN MILLIMETERS UNLESS OTHERWISE NOTED.

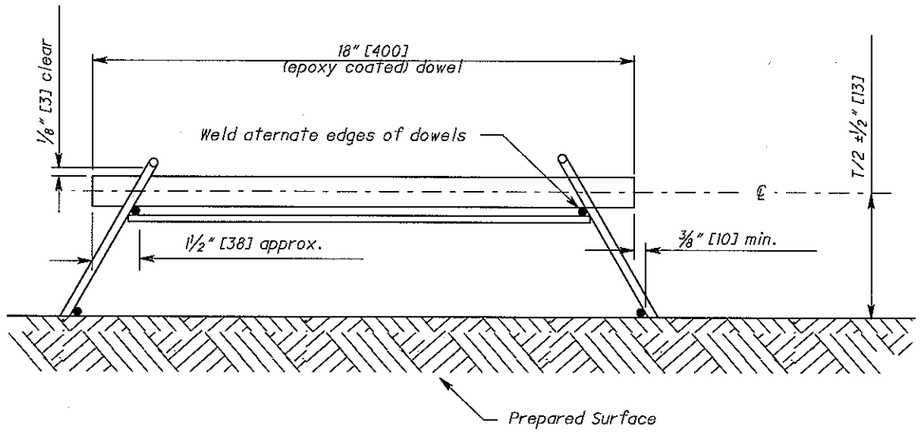
PAVEMENT DESIGN ENGR D. Miller

OFFICE OF ROADWAY ENGINEERING

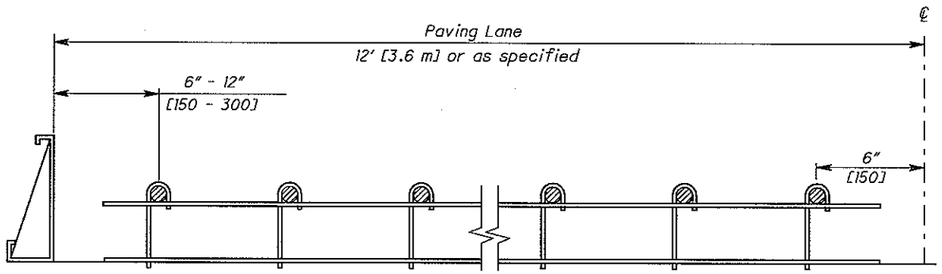
STANDARD ROADWAY CONSTRUCTION DRAWING

TRANSVERSE PAVEMENT JOINTS

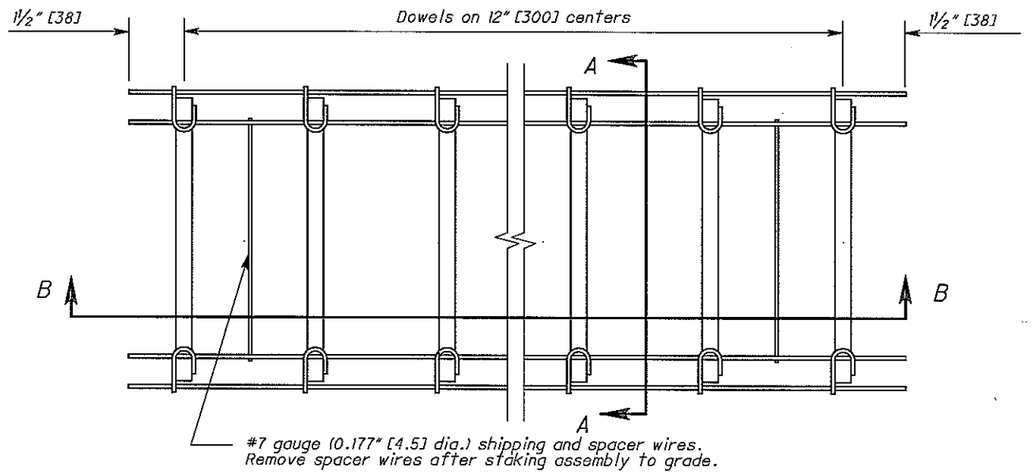
SCD NUMBER BP-2.2



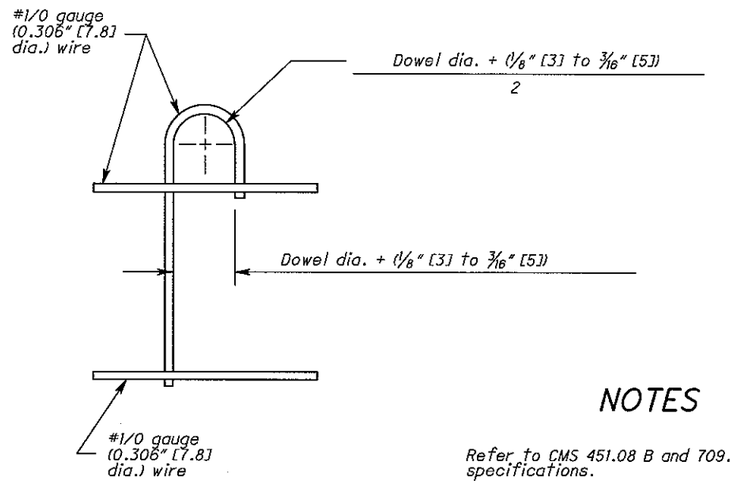
SECTION A-A



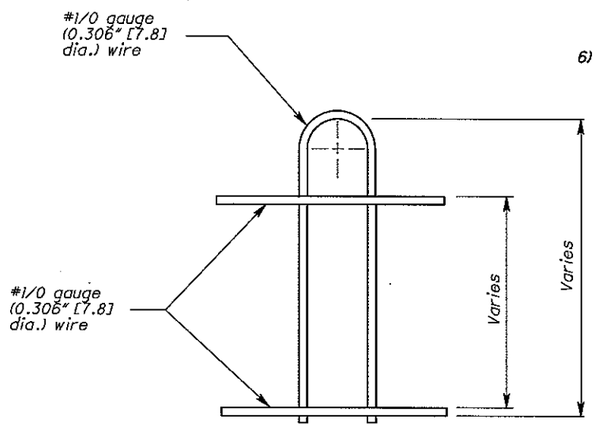
SECTION B-B



PLAN VIEW



J-LEG DETAIL
(ALTERNATE)



U-LEG DETAIL

NOTES

Refer to CMS 451.08 B and 709.13 for dowel specifications.

1) Wire sizes shown are minimum required.

2) All wire intersections are to be welded.

3) Stakes typically applied at working ends of dowel.

4) TOLERANCES:

5) A) ±1/4" per foot [±20 mm per meter] unless otherwise specified.

   B) Centerline of individual dowels shall be parallel to each other, the surface and the centerline of the slab.

   C) On centers should be ±1/2" [±13].

   D) Dowels should be placed at mid-depth of slab.

6) J-Leg or U-Leg to be installed on inside or outside of subframe.

THIS SHEET REPLACES BP-2.2 DATED 7-16-04.

STATE OF OHIO DEPARTMENT OF TRANSPORTATION
PAVEMENT ENGINEERING ADMINISTRATOR
7-18-08
DATE

ALL METRIC DIMENSIONS (IN BRACKETS [ ]) ARE IN MILLIMETERS UNLESS OTHERWISE NOTED.

PAVEMENT DESIGN ENGR
D. Miller

OFFICE OF ROADWAY ENGINEERING

STANDARD ROADWAY CONSTRUCTION DRAWING

TRANSVERSE PAVEMENT JOINTS

SCD NUMBER
BP-2.2

2 / 2