

# City of Columbus

## Standard Drawings

2007



Public Service Department  
Transportation Division

Michael B. Coleman  
Mayor

Henry Guzmán  
Public Service Director

Patricia A. Austin, P.E.  
Administrator

Randall J. Bowman, P.E.  
City Engineer

# Standard Drawing Index

City of Columbus, Ohio

Department of Public Service

Transportation Division

Reference Index of Standard Construction Drawings

Effective Date: 01/01/07

<b>STANDARD DRAWING No.</b>	<b>STANDARD DRAWING TITLE</b>	<b>REVISION DATE</b>
-------------------------------------	-------------------------------	----------------------

Summary of 2007 Revisions – 12 Sheets

1440	Your Bond Money at Work Sign *NEW*	01/01/2007
1441	Pavement & Utility Cut Repair Standards	01/01/2007
2000	Straight 18" Concrete Curb, Item 609	01/01/2007
2010	Standard Concrete Combined Curb & Gutter, Item 609	01/01/2007
2020	Special 8" Concrete Combined Curb & Gutter, Item 609	01/01/2007
2030	Concrete Mountable Curb and Gutter *NEW*	01/01/2007
2100	26' Section with Concrete Combined Curb & Gutter	01/01/2007
2100	26' Section with Concrete Mountable Curb & Gutter	01/01/2007
2105	26' Section (Industrial) with Special 8" Concrete Curb & Gutter	01/01/2007
2110	32' Section with Concrete Combined Curb & Gutter	01/01/2007
2115	36' Section with Concrete Combined Curb & Gutter	01/01/2007
2120	44' Section with 8" Concrete Combined Curb & Gutter	01/01/2007
2125	55' Section with 8" Concrete Combined Curb & Gutter	01/01/2007
2130	Widening of Existing Pavement to Min. 22' Width	01/01/2007
2135	24' Flexible Pavement (Industrial)	01/01/2007
2140	24' Flexible Pavement with Provision for Expansion to 55' Flexible Pavement	01/01/2007
2150	Typical Alley Intersection, Item 452 Type I & II	01/01/2007
2151	Typical Alley Paving Section, Item 452	01/01/2007
2154	Eyebrow Typical Section	01/01/2007
2155	Cul-de-sac Joint Spacing Details	01/01/2007
2156	Standard Cul-de-sacs for 26' wide Streets	01/01/2007
2157	Standard T-Turnaround	01/01/2007
2158	Dimensions for Standard Cul-de-sac	01/01/2007
2160	Pavement Replacement (Driveways)	01/01/2007
2161	Pavement Replacement (Temporary)	01/01/2007

<b>STANDARD DRAWING No.</b>	<b>STANDARD DRAWING TITLE</b>	<b>REVISION DATE</b>
2166	Typical Utility Excavation Plan Detail Requirements	01/01/2007
2170	Joint Details for Portland Cement Concrete Paving, Item 305 Base	01/01/2007
2171	Special 8" Transition Section with Integral Curb	01/01/2007
2175	Pavement Relief Joint Detail, Item 454	01/01/2007
2179	Backfilling Within Highway Right-of-Way	01/01/2007
2180	Street Resurfacing Typical and Details	01/01/2007
2181	Parked Vehicles in Resurfacing Areas	01/01/2007
2190	Detail of Temporary Barricade for End of Roadway Pavement	01/01/2007
2191	Typical Drivepost Installation *NEW*	01/01/2007
2195	Break-Away Bollard	01/01/2007
2201	Standard Residential Driveways on Public R/W	01/01/2007
2202	Standard Commercial Driveway on Public R/W	01/01/2007
2210	Standard Commercial Driveway with Island on Public Right-of-Way	01/01/2007
2220	Driveways - Commercial, Multiple Dwelling, or School: Type A, B or C	01/01/2007
2221	Temporary Street Approach	01/01/2007
2222	Temporary Construction Entrance *NEW*	01/01/2007
2225	Integral Curb, Gutter, and Pavement for Commercial Drives, Item 452	01/01/2007
2300	Standard Sidewalks, Item 608 and Specifications	01/01/2007
2301	Standard Brick Sidewalk Specifications	01/01/2007
2302	Shared Use Path Details	01/01/2007
2303	8" Concrete Walk Limits at an Intersection with an Arterial Street	01/01/2007
2304	Concrete Sidewalk behind the Curb at Intersections *NEW*	01/01/2007
2319	Standard Wheelchair Ramps	01/01/2007
2320	Pipe Roof Drain, Item 618	01/01/2007
2328	Concrete Steps, Item 608	01/01/2007
2330	Right-In & Right-Out Island Details *NEW*	01/01/2007
2331	Concrete Median, Item 612	01/01/2007
2332	Concrete Bus Pad	01/01/2007
2335	Roadway Speed Humps *NEW*	01/01/2007
2337	Intersection Speed Humps *NEW*	01/01/2007
2343	Inlet Mounted Post	01/01/2007
2345	Anchor Assembly for Overpass Bridge Screening	01/01/2007
2347	Vertical Extension of Structural Expansion Joints, Item 516	01/01/2007

# City of Columbus Standard Drawings Public Service Department Transportation Division

## Summary of 2007 Revisions

### **COVER**

Revised the cover as needed to be current.

### **INDEX**

Revised the index as needed to be current. Labeled new drawings \*NEW\*. Deleted "Dr A" from their numbers.

### **Body**

Revised the text for all the standard drawings and added a title block to each one. Overall text revisions were made for user friendliness and uniformity. Deleted "Dr A" from their numbers and text. Revised specific standard drawings as follows.

## STANDARD DRAWINGS

### **SUMMARY OF REVISIONS**

#### **1440 – New Drawing – Your Bond Money At Work Sign**

Added a new drawing for the installation of a bond sign at applicable construction sites.

#### **1441 – Pavement & Utility Cut Repair Standards**

Sheet one - Added to type III detail "7" of 301 or 305".

Sheet two - In plan view moved the word "sawcut" down, added arrows to the cutout area, and directed the reader to the General Notes concerning the larger pavement area requirements. Also added "/Ft" to the slope, and a note "In residential areas with established lawns, sod shall be placed rather than seeding".

Sheet three - In the third paragraph under Scope of Services added the word "Bituminous" between the words "a" and "patch". In the bottom paragraph changed the first sentence to read "A small lateral trench cut or small pavement area shall be defined as 5 feet or less in width and/or no greater than 100 feet in length." In the second sentence added the words "one or both of" between the words "exceed" and "these". Deleted the word "arterial" after item 305 PCC Base.

Sheet four - In the top paragraph changed the first sentence to read "When a trench exceeds 100 feet in length, the repair shall include planing a full lane width (or any other width as directed by the Transportation Division) to a depth of 1&1/4" for the entire length of the trench". Deleted the second paragraph and its title "Marking of Utility Pavement Cuts". Added this as the second paragraph on the page "When trenching

work crosses one or more lanes all of the affected lanes shall require a plan and resurfacing as described above. This work shall include all of the affected pavement area”.

Sheet five – No Changes.

Sheet six - In note I replaced “of CMSC as appropriate” with “as per the City of Columbus Construction and Material Specifications”.

Sheet seven – New sheet - Added a sheet 7 for “Recessed Steel Plate Requirements”.

**2000 – Straight 18” Concrete Curb, Item - 609**

Added a hot applied joint and crack sealer bead to the gutter joint where the top surface of asphalt meets the curb. Added “For replacement work, the curb shall be removed at an existing joint, or no closer than 5-feet from an existing joint”. Added note “If the bottom of the subbase is more than 7” below the bottom of the curb, the underdrain shall be adjusted to keep the top of the underdrain pipe at least 2” below the subbase”. Added note “Subgrade compaction shall be completed before underdrain installation. Added note “When a curb and gutter inlet is installed the top of the bonnet shall be the same elevation as the top of curb, and the edge of pavement elevation shall be 3/8” higher than the grate wherever they meet/touch”. In the drawing of the pavement deleted the words “per standard drawing” and replaced with “Specified”. In the subbase area deleted the 7” dimension.

**2010 – Standard Concrete Combined Curb & Gutter, Item - 609**

Added all of the same notes as described above (excluding the gutter joint bead) for Standard Drawing 2000. Also added the dimension to the center of the underdrain from the back of curb. Changed the asterisk note to “The pavement shall be flush at the gutter in front of curb ramps. Curb ramps shall be built as per Standard Drawing 2319”.

**2020 – Special 8” Concrete Combined Curb & Gutter, Item - 609**

All the comments from Standard Drawing 2010 apply to this drawing as well.

**2030 – New Drawing – Concrete Mountable Curb & Gutter**

Added a new standard drawing for a “Mountable Curb & Gutter”.

**2100 – 26’ Section With Standard Concrete Combined Curb & Gutter**

Sheet one - Changed the cut dimensions for accuracy. Moved the A, B, & C note into the note section of the sheet and made these changes to it; deleted the word “values” and replaced with “the depths”. Inserted the words “square footage” between the word “the” and “area”. Deleted the words “are shown on” and replaced with the word “see”. In the area explanation note deleted the word “below”. Replaced 2% with 1.56%. Added an asterisk to profile grade label and a note to the sheet “For a standard curb and gutter the profile grade and the string line elevation are the same”.

Sheet two – Replaced this sheet with the current Residential Pavement Policy chart.

Sheet three - Replaced the abbreviation "A.B." with the word "AREA" throughout the sheet. In column BB row 1 added ½" to each of the cut numbers. Changed the "AREA=" note to read "The square footage area below the string line for earthwork purposes". Changed "subdrain" to "underdrain".

**2100 – 26' Section With Concrete Mountable Curb & Gutter**

Sheet four - The Mountable Curb and Gutter detail has been removed from this sheet and became Standard Drawing 2030. All changes made to sheet one of this standard drawing were also made to this sheet. Referred to sheet 2 for the residential pavement policy chart

Sheet five – This sheet has been deleted.

Sheet six – now sheet 5 - Made all of the same changes as per sheet 3 of this standard drawing except as noted. Subtracted 1&1/2" from all of the cut dimensions, except for column BB row 1. Modified the numbers as needed in that box.

**2105 – 26' Section With Special 8" Concrete Curb & Gutter (Industrial)**

Changed the cut dimensions for accuracy. In the area explanation note deleted the word "below". Replaced 2% with 1.56%. Added an asterisk to profile grade label and added this asterisk note to the sheet "For a special 8" curb and gutter the profile grade and the string line elevation are the same". Added 416 asphalt concrete for an option to 402 or 404. Added 8" into the title.

**2110 – 32' Section With Concrete Combined Curb & Gutter**

Sheet one - Changed the cut dimensions for accuracy. Moved the A, B, & C note into the note section of the sheet and made these changes to it; deleted the word "values" and replaced with "the depths". Inserted the words "square footage" between the word "the" and "area". Deleted the words "are shown on" and replaced with the word "see". In the area explanation note deleted the word "below". Replaced 2% with 1.56%. Added an asterisk to profile grade label and added this asterisk note to the sheet "For a standard curb and gutter the profile grade and the string line elevation are the same". Referred to sheet two of 2100 for residential pavement policy chart.

Sheet two – Deleted this sheet.

Sheet three – now sheet 2 - Made all of the same changes as Standard Drawing 2100 sheet 3.

Sheet four- now sheet 3 - Made all of the same changes as Standard Drawing 2105.

**2115 – 36' Section With Concrete Combined Curb & Gutter**

Sheet one - Made all of the same changes as Standard Drawing 2110 sheet 1.

Sheet two – Deleted this sheet.

Sheet three – now sheet 2 - Made all of the same changes as Standard Drawing 2100 sheet 3.

Sheet four – now sheet 3 - Made all of the same changes as Standard Drawing 2105.

**2120 – 44’ Section With Special 8” Concrete Combined Curb & Gutter**

Made all of the same changes as Standard Drawing 2105.

**2125 – 55’ Section With Special 8” Concrete Combined Curb & Gutter**

Made all of the same changes as Standard Drawing 2105 and deleted the seeding and mulching items.

**2130 – Widening Of Existing Pavement To Minimum 22’ Width**

Sheet one - Added all of the materials and requirements for a full width (edge of pavement to other edge of pavement) plan and resurfacing. That includes a vertical sawcut, 1&1/2” mill, tack coat, and new surface pavement. Added the option of 416-asphalt concrete. Added item number 605 to the underdrain pipe. Added Item-659 Seeding & Mulching to the drawing. Added sidewalk requirement note.

Sheet two - Made all of the same changes as sheet one of this standard drawing

Sheet three - Made all of the same changes as sheet one of this standard drawing.

**2135 – 24’ Flexible Pavement (Industrial)**

Added a 12” dimension in the detail between the bottom of the 304 subbase and the bottom of the underdrain. Added item-605 to the underdrain. Added 416-asphalt concrete as an option to 402 and 404. Added a circled 11 for #8 or #57 aggregate for the underdrain stone. Added sidewalk requirement note.

**2140 – 24’ Flexible Pavement With Future Expansion Provisions**

Sheet one - Added item-416 as an option to 404 & 402. Added sidewalk requirement note.

Sheet two - Same comments as sheet one.

**2150 – Typical Alley Intersection**

Sheet one - Added a 12-foot alley, with 16-foot r/w, and 2&1/2” depth at the inverted crown to the dimension chart. Added a note with asterisks that if sidewalks are built to grade then only detectable warnings are required. Added and deleted labels as needed to clarify the drawing.

Sheet two - Same comments as sheet one.

Sheet three - Added, modified and deleted labels as needed to clarify the drawing.

**2151 – Typical Alley Paving Section, Item - 452**

Added a 16’ – 12’ - 2&1/2” alley dimension to the chart. In the bottom line of the chart changed the over 20” to over 24”.

**2154 – Eyebrow Typical Section**

Sheet one - Changed the word subdrain to underdrain.

Sheet two - Same comment as sheet one, plus corrected the spelling of the word “Mountable” in the title.

Sheet three – No Changes.

**2155 – Cul-De-Sac Joint Spacing Details**

No Changes.

**2156 – Standard Cul-De-Sac For 26' Wide Street With 50' R/W**

Changed the word subdrain to underdrain.

**2157 – Standard T-Turnaround**

Sheet one - Changed this sheet to 1 of 2.

Sheet two – New Sheet - Added a sheet for signage requirements.

**2158 – Dimensions For Standard Cul-De-Sac On 26' Wide Street With 50' R/W**

No Changes.

**2160 – Pavement Replacement (Driveways)**

Deleted from detail (Type III A) the 2" depth for 404, and in the asphalt legend below the detail changed it to read 3" for residential and 4" for commercial. Deleted from the second detail (Type III B) the 6" depth for 452 and made a 452 depth legend below the detail. Added a note that allows for the replacement to match the existing or use the above, whichever is greater.

**2161 - Pavement Replacement (Temporary)**

Changed "Engineering & Construction Division" to "Transportation Division".

**2166 – Typical Utility Excavation Plan Detail Requirements**

Sheet one - No Changes.

Sheet two - No Changes.

**2170 – Joint Details For Portland Cement Concrete Paving, Item – 305 Base**

Changed 20' intervals for joints to 15' intervals.

**2171 – Special 8" Transition Section With Integral Curb**

Sheet one - Changed the class "G" concrete to class "C".

Sheet two – No Changes.

**2175 – Pavement Relief Joint Detail, Item – 454 (Residential)**

Changed the 1&1/4" dimension for the intermediate layer of 402 to 1&1/2".

**2179 – Backfilling Within Highway Right-Of-Way**

Added "or face of curb" next to the edge of pavement label. Noted that inside of this line work shall be done as per Item 901 of the C.M.S. Labeled the 45-degree line as the "Influence Line". Changed the 203.12 to "as per Item-912". Added "as per Item 911" to the compacted select material label.

**2180 – Street Resurfacing Typical And Details**

Reduced this 2 sheet standard drawing down to 1 sheet. Deleted the utility legend. Changed the title to "Street Resurfacing Typical and Details". Deleted the top detail. Added the word "min." to all of the surface layers of asphalt. Changed the title of the Feathering Typical to "Butt Joint Typical" and modified it for butt joint applications.

Deleted the intermediate course from the next to the top detail. Moved the two details from the deleted second sheet and made minor modifications to them.

#### **2181 – Parked Vehicles In Resurfacing Areas**

Labeled the PC & PT of corner radii more clearly. Changed the word car or cars to the word “Vehicle or Vehicles”. In the first paragraph after the words “responsible for” replaced with “notifying the proper authorities to have the illegally parked vehicles removed”. In the next to last paragraph replaced “the contractors off duty policemen” with “a law enforcement officer”. In the next sentence changed it to read, “The city at the expense of the vehicle’s owner will have the vehicle towed away”. Made other minor word changes as needed.

#### **2190 – Detail Of Temporary Barricade For End Of Roadway Pavement**

In the middle example deleted the signpost where it extends above the sign and labeled the height to the top of the sign as 72” In the right example changed the sign designation to X-4A-18. Deleted the words “High Intensity” from the explanation note.

#### **2191 – New Drawing – Typical Drivepost Installation Through Concrete/Asphalt**

This is a new standard drawing to install signposts thru Asphalt or Concrete.

#### **2195 – Break-Away Bollard**

Sheet one - No Changes.

Sheet two - Deleted the words High Intensity from the reflective sheeting requirements.

#### **2201 – Standard Residential Driveway On Public R/W**

Sheet one - Added that the minimum width for a two-car driveway is 16’. Added sidewalk thickness as 6”. Added a 12” dimension to the standard curb section detail. Added the words “and rising” to the bottom note after the concrete temperature requirement. Added “unless otherwise approved by the City of Columbus” to the alternate asphalt note. Labeled 45-degrees as the maximum angle for the flares. Changed the title to “Standard Residential Driveway With Tree Lawn on a Public R/W”. Noted the use of 304 instead of compacted earth in the profiles and notes. Labeled sidewalks to be a minimum of 4’ as shown or a minimum of 5 feet along an arterial roadway.

Sheet two - Deleted “& Specifications” and “on non arterials roadways” from the title. Made the walks 6-foot minimum as shown or 7-foot minimum along an arterial. Under the width requirements added “26-foot wide drive with 60 or more parking spaces”. Labeled the 8% Maximum slope to be “Commercial” and added “12% Max. Residential”. Changed the 1:12 to 1:13 in the ramp length chart.

Sheet three - Same changes as sheet 2 of this standard drawing.

Sheet four - Same changes as sheet 2 of this standard drawing, and deleted duplicated dimensions.

### **2202 – Standard Commercial Driveway On Public R/W**

Made same changes as sheet one of standard drawing 2201, changed title to “Standard Commercial Driveway On Public R/W”, and in the plan view redrew the driveway lines.

### **2210 – Standard Commercial Driveway With Island On Public R/W**

Changed title to read “Standard Commercial Driveway With Island on Public R/W”.

Redrew the dashed alternate driveway lines going at 45-degree angles and labeled them “45 degree Max.” Made the section line A-A bolder and easier to read. Moved the section line B-B as shown so that the section cut line matched with the section details. Shifted the driveway areas of the drawing so that the 5’ minimum from the PT of the corner to the driveway cut can be shown. At the corner added the word “\*curb” to the current ramps to be designed, and noted “See standard drawing 2319”. Labeled 8” thick sidewalks at the radius and noted “Sidewalks shall be installed as per standard drawing 2300 and 2303”. Labeled 6’ minimum cut through the islands for a sidewalk. Changed the class “G” concrete to class “C”. In section B-B labeled the top one as “Straight Curb” and the lower one as “Combined Curb and Gutter” and added the word pavement to the left side of each section.

### **2220 – Optional Commercial, Multiple Dwelling, Or School Driveways**

Sheet one - Changed the single asterisk note to “Pavement & curb may be poured integral with prior C.O.C. approval”. Deleted the word landings with its arrow line from the plan view. Added the word “curb” with 3 asterisks to the word “ramp” and added a triple asterisk note that reads “Curb ramp type G or H as per standard drawing 2319, or if the sidewalk is built at grade then curb ramps may not be required”. Made the dashed circle smaller in the plan view to match up with what is shown in the straight curb detail. Deleted the dashed circle from around the crown of the road in section A-A and ran the arrow from the concrete note to the crown. In the same note deleted the following “See applicable standard drawing in accordance with materials being used”.

Sheet two – Same changes as per sheet one of this Standard Drawing.

Sheet three - Deleted “or point A” from the type A and B profiles. Added “With prior City of Columbus approval” to all the notes referring to the approach and curb being poured integrally. Under the sidewalk note added, “Width shall be as per standard drawing 2300”. Labeled all slopes to be a maximum of 8%. Deleted the 12” dimension and arrows from the type B profile. Added the note “Curb Ramps shall be as per standard drawing 2319 or if the sidewalk is built at grade, the curb ramps may not be required”.

### **2221 – Temporary Street Approach**

Changed the title to “Temporary Street Approach”. Labeled the existing roadway as the “Primary Roadway”. Added the note “For a permanent approach, match the pavement buildup of the primary roadway”.

### **2222 – New Drawing - Temporary Construction Entrance**

Added a Standard Drawing for the installation of a construction entrance.

### **2225 – Integral Curb, Gutter, & Pavement For Commercial Drives**

Changed the title to include “Pavement”. Deleted the option to not include an underdrain.

### **2300 – Standard Sidewalks, Item – 608 And Specifications**

Deleted “or item 310 subbase” from the profiles, added double asterisks to “Compacted earth as per item 203 or 304” with a note reading “#57 aggregate may be used for replacement work”. In the fourth note down after wood float added “or broom finish”. In the bottom note added “and rising. Once placed the” in between the words “min.” and “concrete”. Replaced the current notify note with “Notification to the Inspection Services Section of the City of Columbus Transportation Division is required at least 24 hours before work is to begin”. In the first note changed the 3” slump requirement to 4”.

### **2301 – Standard Brick Sidewalk Specifications**

Sheet one – Same changes as per Standard Drawing 2300. Added a note for the sand/cement ratio requirement. Changed 2% to 1.56%. Added sidewalk width requirements to top profile.

Sheet two - Made the same changes as per Standard Drawing 2300 and 2301 sheet 1.

Sheet three – Modified the Pavers note after ASTM C936 to add “(4’W x 8”L x 23/8”H). Other sizes may be used with prior C.O.C. approval”.

### **2302 – Shared Use Path Details**

Sheet one - Changed the title to “Shared Use Path Pavement Detail”. Changed the Minimum width to 8’. Added depths to the material menu. Re-titled, re-numbered, and added all of the four sheets from former Standard Drawing 2442 (Bike Paths) to this Standard Drawing 2302, this standard drawing now has 5 sheets. The changes to the four added sheets are as follows.

Sheet Two - Changed the title to read “Shared Use Path Sign Detail” and re-numbered to 2302.

Sheet three – Re-titled and re-numbered as above.

Sheet four – Same as above.

Sheet five – Same as above and added a note that reads “Ramps shall be ADA compliant. They shall have slopes of 7.69% or less. See standard drawings 2319 for additional information”. Changed the bottom note to read, “All work shall be done in accordance with the City of Columbus, Construction and Material Specifications”. In the plan view detail changed “bike path” to “shared use path”.

### **2303 – 8” Concrete Walk At An Intersection With An Arterial Street**

Added a second shaded area for curb ramp locations. Changed curb lawn label to tree lawn.

### **2304 – New Drawing – Concrete Sidewalk Behind The Curb At Intersections**

Added a new drawing for the installation of sidewalks immediately behind the curb in lieu of tree lawns or utility strips at the corners of intersections.

### **2319 – Standard Wheelchair Curb Ramp Details And Specifications**

Reduced the number of sheets from 15 to 12.

Sheet one – Updated and replaced the Location & Numbering sheet.

Sheet two – Added, modified, and deleted notes on the General Construction Notes sheet. Added ramps to be installed as per Standard Drawing 2319, 2300, 2303, & Supplemental Specifications 1550, and 1551. Clarified curb ramp components, Noted, concrete material to be used for the curb ramp panel and flares. Deleted Type B, E, K, & P-3 curb ramps. Added note on 8" thick concrete. Deleted the allowance for 3-foot wide curb ramps and made them a minimum of 4 feet wide. Added note on wide flares and one foot flares. Added, top landings to be used "if turning is required". Deleted, note on street landings. Deleted note on directing pedestrians to opposing sidewalk. Modified note on offset intersections. Modified note on cross walks.

Sheet three - Type A curb ramps - Added the word "Wide" to the title. Added "minimum" to the landing and 2-foot dimensions. Deleted the left flare dimension and replaced the percentage and ratio numbers from the right flare with "10 X the curb height – Minimum (Typical)". Deleted section A-A and relabeled section B-B to A-A. Deleted "when placed separately" from under expansion material. Added "or 8" " next to the 6" concrete. Replaced "Trans. 6" to 4' conc." with "Transition to sidewalk thickness". Replaced "4" concrete" with "sidewalk". In the lower plan view deleted the section A-A lines and arrows.

Sheet four – DELETED - Type B curb ramps – Deleted this sheet. Type B curb ramps are no longer allowed.

Sheet four – FORMERLY SHEET 5 - Type C curb ramps - This sheet shall become the new sheet 4 of 12. The same changes in the section profile detail from sheet 3 will also apply to the section detail of this sheet. In the isometric view dashed the sidewalk landing above the ramp.

Sheet five – FORMERLY SHEET 6 - Type D curb ramps – The new sheet 5 of 12. The isometric view has been flipped to illustrate the normal application of a Type D curb ramp. Moved dimensions to accommodate this new view. In section B-B the same changes for the section detail of sheet 3 will also apply to this sheet. Section A-A was flipped to match the isometric view. Moved labels and dimensions to accommodate the new layout of the sheet. Added wide flare dimensions to be 10 X the curb height. Added "or non-walkable surface" to the permanent obstruction label.

Sheet seven – DELETED - Type E curb ramps – Deleted this sheet. Type E curb ramps are no longer allowed.

Sheet six – FORMERLY SHEET 8 – Type G curb ramps – The new sheet 6 of 12. In the isometric view deleted the 2' dimension and lines. Extended the 1-foot flare line to the top of the ramp panel. Changed the curb note at the top of the sheet to read, "Flare shown is not typical for uncurbed alleys or driveways". Deleted the B-B section lines and arrows. Deleted the entire section B-B detail from the sheet. In section A-A added an arrow line and the words "expansion material". Deleted note E from the bottom of the sheet.

Sheet seven – FORMERLY SHEET 9 - Type H curb ramps – The new sheet 7 of 12. In the isometric view deleted the 2' dimension and lines. Moved the A-A section cut lines as shown. Extended the flare line to the top of the ramp panel. Labeled a minimum of 3" between the detectable warning and the ramp edge when no flare is used and installed an asterisk. At the bottom of the sheet added an asterisk note that reads "This requirement is for embedded (non-surface applied) detectable warnings only". Deleted note E. In section B-B added, "flare" under the "1'-0". On the left side of the ramp added "Two Options: Either slope the utility strip to the ramp or use a flare". In a dashed line illustrated both options. In section A-A added an arrow line and "expansion material".

Sheet ten – DELETED - Type K curb ramps – Deleted this sheet. Type K curb ramps are no longer allowed.

Sheet eight – FORMERLY SHEET 11 – Type L curb ramps for medians – The new sheet 8 of 12. In the top view moved the A-A section lines. Changed the minimum opening width to 6'. Changed the minimum length for the ramps and landing to be 2-foot. Labeled the 2-foot ramp length dimension to be from the back of curb. In section detail B-B deleted the dimension for the upper landing. Gave a minimum length to the lower landings. Deleted the "1/2" preformed joint filler" label and replaced with "Expansion Material".

Sheet nine – FORMERLY SHEET 12 - Type P-1 curb ramps – The new sheet 9 of 12. Corrected the flares and detectable warning in the isometric. Relocated the cut lines. Deleted the sidewalk transition panels. Changed the ramp width at the street from 4-feet to 5-feet. In section A-A flipped the detail to match the cut lines. Labeled the back of sidewalk curb. Deleted the 4" as the concrete thickness at the street and added "or 8" at an alley or arterial crossing" to the two concrete thickness labels. Deleted 1/2" from the expansion material and ran an arrow to show expansion material between the ramp and back of the street curb.

Sheet ten – FORMERLY SHEET 13 - Type P-2 curb ramps – The new sheet 10 of 12. To section detail A-A made the same changes as for sheet 9 of this standard drawing. Corrected the flare in the isometric view. Moved the cut line. Deleted the dimension lines from the utility strip. Deleted the sidewalk transition panel.

Sheet fourteen – DELETED - Type P-3 curb ramps – Deleted this sheet. Type P-3 curb ramps are no longer allowed.

Sheet eleven – New sheet for brick curb ramps - Added a new sheet 11 of 12 for “Curb Ramps Made With Brick Or Granite Pavers”.

Sheet twelve – FORMERLY SHEET 15 - Detectable Warnings – The new sheet 12 of 12. Deleted the top right detail. Deleted the circles from the middle left detail and made the detectable warnings the same size. Added a new note that reads “Cast in place, or embedded, or any non-surface applied detectable warning must have a minimum of 3-inches of concrete on each side of the detectable warning”.

**2320 – Pipe Roof Drain, Item - 618**

Labeled the pipe slope to be a minimum of 3/16” per foot. Labeled a minimum depth of 2” between the top of pipe and top of curb at the face of the curb. Labeled the minimum pipe size as 3” ID and added a 3 asterisk note that reads “If there is existing roof drain pipe then match the existing size if larger than 3-inches”.

**2328 – Concrete Steps, Item - 608**

Sheet one - Changed the title to read, “Concrete Steps, Type A, Item 608”. In the small chart changed the “see sheet 2/2” to read “See sheet 2/3”.

Sheet two – No changes.

Sheet three – No Changes.

**2330 – New Drawing - Right Turn In And Out With Islands – 3 Sheets**

Sheet one – Right-In & Right-Out – New drawing

Sheet two – Left and Right In With Right Out – New drawing

Sheet three – Right In and Right Out With Add Lane - New drawing

**2331 – Concrete Median, Item - 612**

Added, “When approved” to the 2-foot wide medians. Added a note giving the option of installing 18” curb around the perimeter of the median.

**2332 – Concrete Bus Pad**

Sheet one – No Changes.

Sheet two - Changed notes and labeling to indicate the width of the bus pad shall be 10’ or equal to a full lane width, whichever is greater.

Sheet three – No Changes.

**2335 – New Drawing – Roadway Speed Humps – 3 Sheets**

Sheet one – 14’ Speed Hump – New drawing

Sheet two – 22’ Speed Hump – New drawing

Sheet three – Cross Sections For All Speed Humps (Excluding Intersection Speed Humps) – New Drawing

**2337 – New Drawing – Intersection Speed Humps – 2 Sheets**

Sheet one – Intersection Speed Hump – New drawing

Sheet Two – Intersection Speed Hump – New drawing

**2343 – Inlet Mounted Post**

No Changes

**2345 – Anchor Assembly For Overpass Bridge Screening**

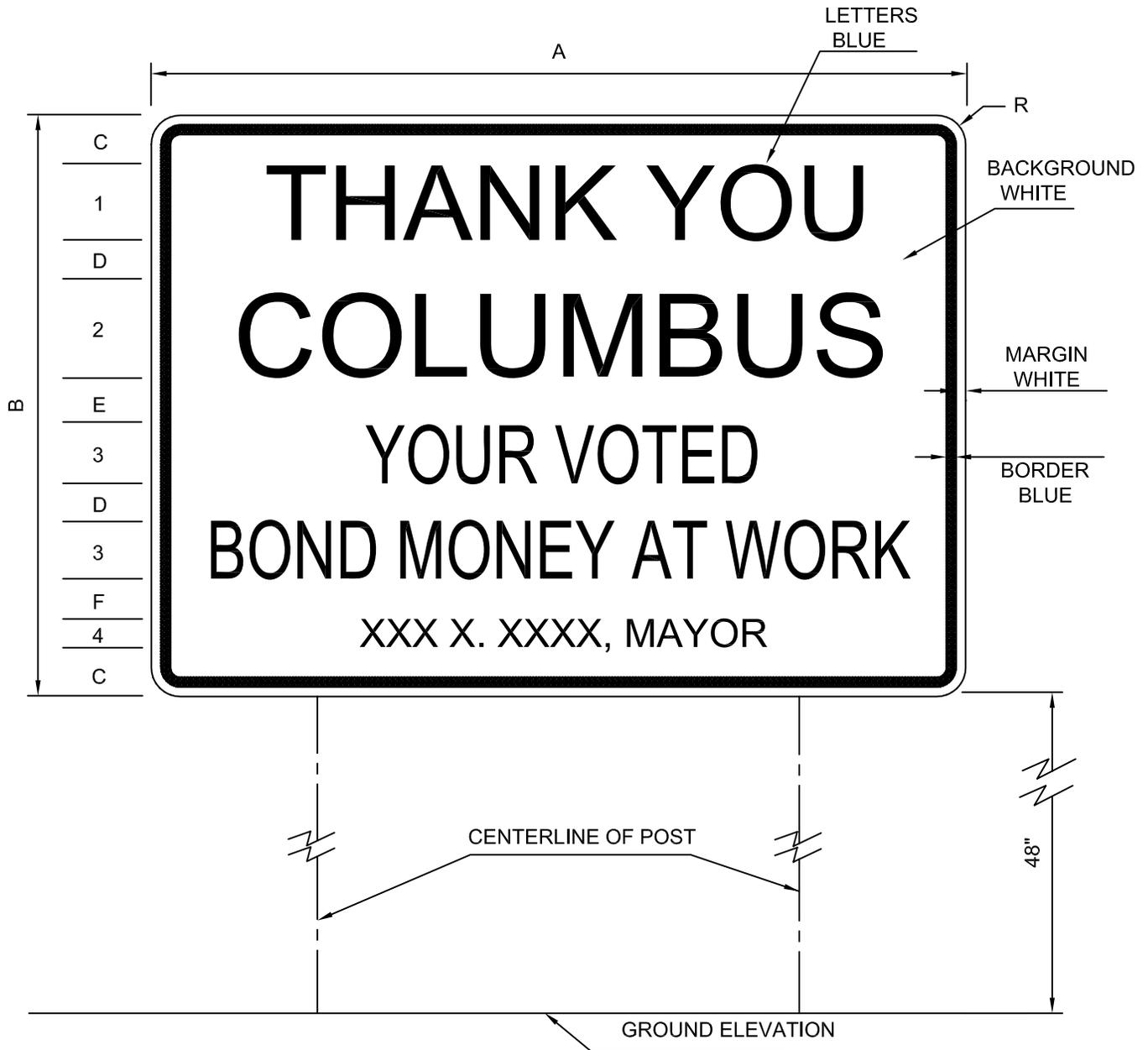
No Changes

**2347 – Vertical Extension Of Structural Expansion Joints, Item - 516**

No Changes

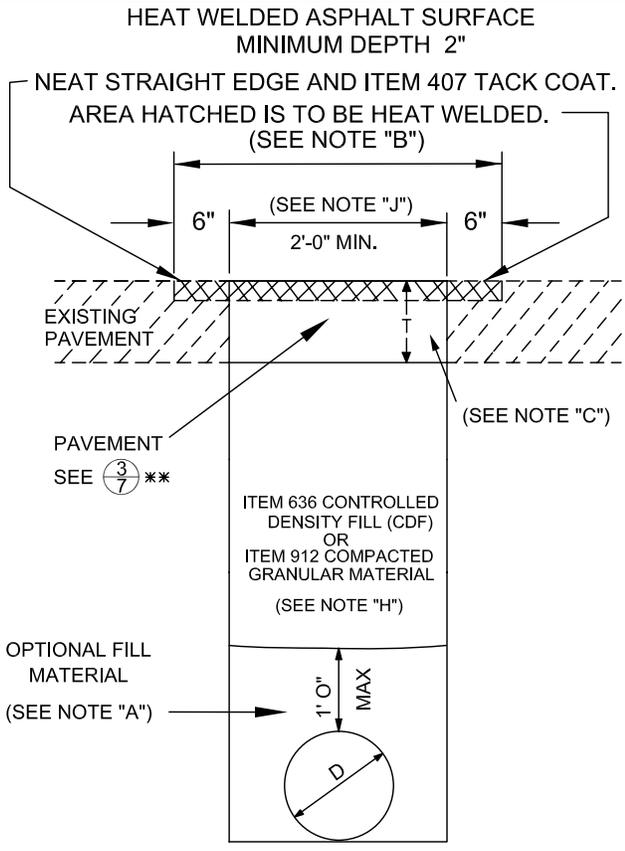
**2442 - This number has been deleted and the drawings have been re-titled, re-numbered, and moved to – Shared Use Path – 2302**

A	B	LETTERS				C	D	E	F	R	BORDER	MARGIN	NUMBER OF POSTS	POSTS LENGTH
		1	2	3	4									
42"	30"	4"D	5"C	3"C	1- $\frac{1}{2}$ " C	2- $\frac{1}{2}$ "	2"	2- $\frac{1}{2}$ "	2"	1- $\frac{1}{2}$ "	1/2"	1/2"	2	13'

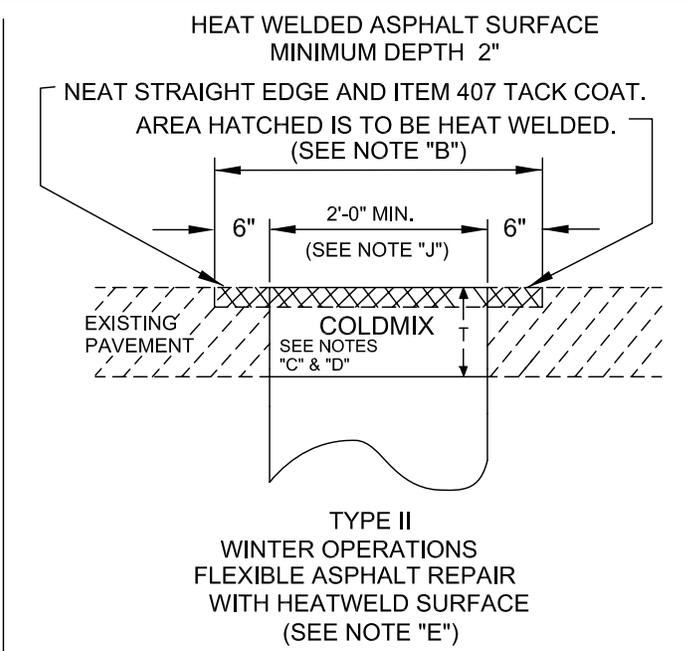


Metal Signs are to be mounted on 2 lb. Posts  
 Wood Signs are to be mounted on two 4"x 4" Posts  
 Wood Signs may have square corners

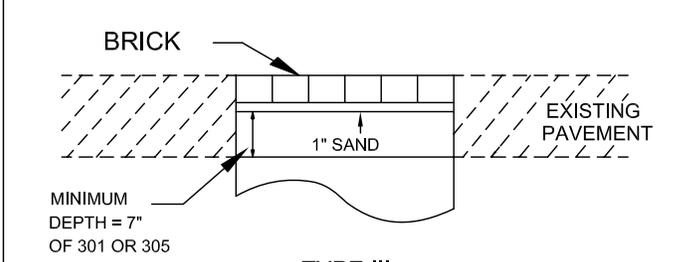
<b>YOUR BOND MONEY AT WORK SIGN</b>	
CITY OF COLUMBUS, OHIO DEPARTMENT OF PUBLIC SERVICE TRANSPORTATION DIVISION	<b>STD DWG 1440</b>
 CITY ENGINEER	REV: 01/01/07 SHT 1 OF 1



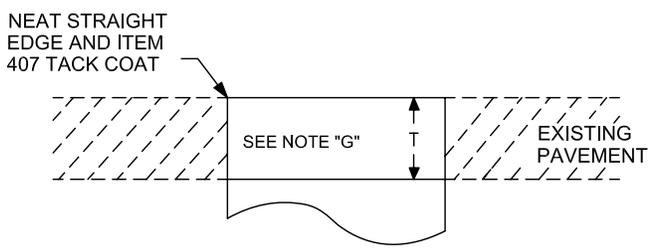
**TYPE I**  
STANDARD FLEXIBLE ASPHALT REPAIR  
WITH HEATWELD SURFACE  
(SEE NOTE "B")



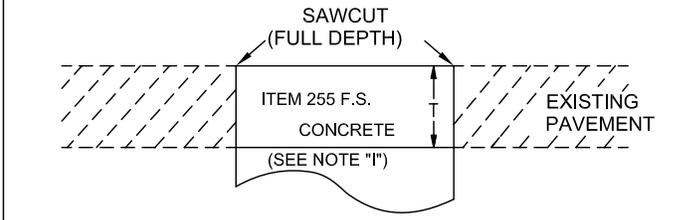
**TYPE II**  
WINTER OPERATIONS  
FLEXIBLE ASPHALT REPAIR  
WITH HEATWELD SURFACE  
(SEE NOTE "E")



**TYPE III**  
BRICK STREET REPAIR  
(SEE NOTE "F")



**TYPE IV**  
ALLEY REPAIR

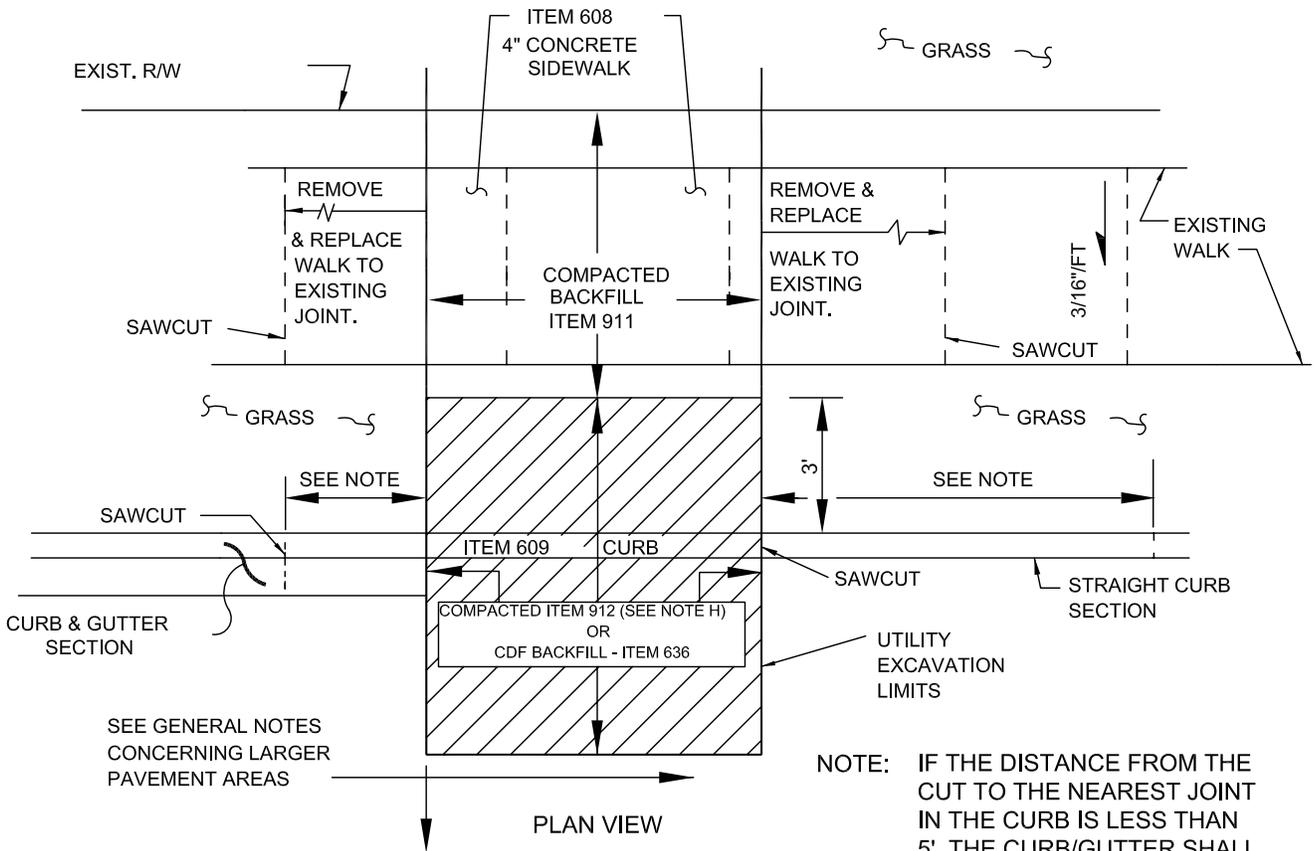


**TYPE V**  
CONCRETE STREET REPAIR  
OR  
CONCRETE BUS PAD

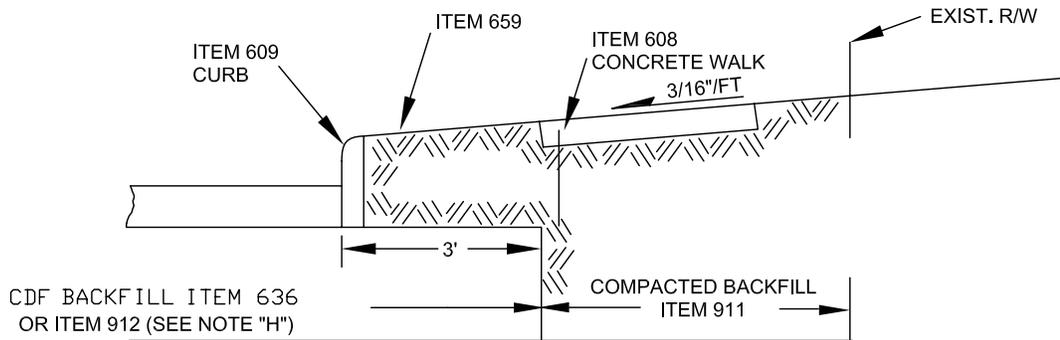
NOTE: BACKFILL FOR ALL TYPES SHALL MEET THE REQUIREMENTS SHOWN IN TYPE I ABOVE.  
T: MATCH EXISTING PAVEMENT THICKNESS, HOWEVER, MINIMUM OF 9" ON ALL STREET CUTS.

<b>PAVEMENT &amp; UTILITY CUT REPAIR STANDARDS</b>	
CITY OF COLUMBUS, OHIO DEPARTMENT OF PUBLIC SERVICE TRANSPORTATION DIVISION	<b>STD DWG 1441</b>
 CITY ENGINEER	REV: 01/01/07 SHT 1 OF 7

SIDEWALK AND CURB REPAIR DETAILS



NOTE: IF THE DISTANCE FROM THE CUT TO THE NEAREST JOINT IN THE CURB IS LESS THAN 5', THE CURB/GUTTER SHALL BE REMOVED AND REPLACED TO THE JOINT. IF THE DISTANCE IS GREATER THAN 5', THE CURB MAY REMAIN.



BOTTOM OF EXCAVATION

ALL GRASS AREAS SHALL BE SEEDED IN ACCORDANCE WITH ITEM 659 SEEDING AND MULCHING.

IN RESIDENTIAL AREAS WITH ESTABLISHED LAWNS, SOD SHALL BE PLACED RATHER THAN SEEDING.

PAVEMENT & UTILITY  
CUT REPAIR  
STANDARDS

CITY OF COLUMBUS, OHIO  
DEPARTMENT OF PUBLIC SERVICE  
TRANSPORTATION DIVISION

STD DWG

1441

REV: 01/01/07

SHT 2 OF 7

GENERAL NOTES

EXCAVATION PERMIT REQUIRED: A CITY OF COLUMBUS STREET EXCAVATION PERMIT IS REQUIRED FOR ALL EXCAVATIONS WITHIN THE PUBLIC RIGHT-OF-WAY, AS SET FORTH BY COLUMBUS CITY CODE, CHAPTER 903 AND ISSUED IN ACCORDANCE WITH PROVISIONS IN THE GENERAL RULES AND REGULATIONS OF THE TRANSPORTATION DIVISION.

SCOPE OF WORK

THIS WORK SHALL CONSIST OF PAVEMENT REMOVAL, NECESSARY EXCAVATION, AND PAVEMENT REPLACEMENT IN ACCORDANCE WITH THE DETAILS SHOWN HEREIN. ALL WORK AND MATERIALS SHALL CONFORM TO THE REQUIREMENTS OF THE CURRENT CITY OF COLUMBUS CONSTRUCTION AND MATERIALS SPECIFICATION (CCMS).

PROCEDURES USED FOR THE PAVEMENT REMOVAL AND REPLACEMENT SHALL NOT CAUSE SPALLING OR CRACKING OF ADJACENT PAVEMENT.

WHEN THE PAVEMENT IS REMOVED AND THE CONTRACTOR IS UNABLE TO COMPLETE THE REQUIRED REPLACEMENT IN TIME FOR IT TO BE OPENED TO TRAFFIC AS INDICATED ON THE PERMIT, THE EXCAVATION SHALL BE FILLED WITH A BITUMINOUS PATCH MATERIAL WITH A DURABLE SURFACE OR PROPERLY PLATED. (AS PER CITY CODE CHAPTER 903 &/OR SHEET 7 OF THIS STANDARD DRAWING) THE CONTRACTOR WILL BE REQUIRED TO MAINTAIN THESE PATCHES WHILE THEY ARE IN SERVICE. THE COST OF PLACING, MAINTAINING, AND REMOVING AND DISPOSING OF THE TEMPORARY PATCHES OR PLATES WILL BE AT THE CONTRACTOR'S EXPENSE.

WHEN ITEM 636 FCDF IS USED AS A BACKFILL, NO PAVEMENT SHALL BE PLACED UNTIL BLEED WATER HAS BEEN EVAPORATED FROM THE FCDF SURFACE OR HAS BEEN DRAINED OR REMOVED FROM THE SURFACE.

THE BACKFILLING PAVEMENT REPAIR AND/OR HEAT WELDING SHALL BE DONE BY THE CONTRACTOR OR PERMITEE IN ACCORDANCE WITH CITY SPECIFICATIONS. IF DESIRED, ANY OR ALL OF THIS WORK CAN BE PERFORMED BY THE CITY OF COLUMBUS. THE CITY SHALL COLLECT APPROPRIATE FEES AT THE TIME THE PERMIT IS ISSUED FOR SAID WORK.

RESTORATION OF ANY SIDEWALK, CURB, STREET PAVEMENT, ETC., SHALL OCCUR NO LATER THAN 30 DAYS AFTER CONCLUSION OF ANY UTILITY REPAIR OR INSTALLATION ACTIVITY. CONSTRUCTION ACTIVITY COMPLETED DECEMBER THROUGH APRIL SHALL BE RESOLVED NO LATER THAN MAY 31ST. ADDITIONAL PERMITS SHALL NOT BE ISSUED UNTIL THE VIOLATIONS ARE CORRECTED TO THE SATISFACTION OF THE CITY ENGINEER. IN ADDITION, EACH VIOLATION MAY BE DEALT WITH IN ACCORDANCE WITH SECTION 903.99 OF THE COLUMBUS CITY CODE.

**\*\* PAVING STANDARDS FOR LARGE TRENCHES OR PAVING AREAS**

A SMALL LATERAL TRENCH CUT OR SMALL PAVEMENT AREA SHALL BE DEFINED AS 5 FT OR LESS IN WIDTH AND/OR NO GREATER THAN 100 FT IN LENGTH. WHEN REPAIR AREAS EXCEED ONE OR BOTH OF THESE DIMENSIONS, THE PAVEMENT REPAIR SECTION SHALL CONFORM TO 2 INCHES OF ITEM 404 ASPHALT CONCRETE ON EITHER 7 INCHES OF ITEM 301 BITUMINOUS AGGREGATE BASE OR ITEM 305 PORTLAND CEMENT CONCRETE BASE. OTHERWISE PLANS SHOULD REFLECT REPLACEMENT OF THE PAVEMENT IN ACCORDANCE WITH CITY STANDARD TYPICAL SECTIONS AND ARE SUBJECT TO APPROVAL BY THE TRANSPORTATION DIVISION.

**PAVEMENT & UTILITY  
CUT REPAIR  
STANDARDS**

CITY OF COLUMBUS, OHIO  
DEPARTMENT OF PUBLIC SERVICE  
TRANSPORTATION DIVISION

STD DWG

**1441**

REV: 01/01/07

SHT 3 OF 7

WHEN A TRENCH EXCEEDS 100 FT IN LENGTH, THE REPAIR SHALL INCLUDE PLANING A FULL LANE WIDTH (OR ANY OTHER LANE WIDTH AS DIRECTED BY THE TRANSPORTATION DIVISION) TO A DEPTH OF 1 ¼ INCHES FOR THE ENTIRE LENGTH OF THE TRENCH. THE PLANED AREA SHALL THEN BE REPAVED WITH A PAVER IN ACCORDANCE WITH CURRENT CITY STANDARD SPECIFICATIONS. ITEM 413 CRACK SEALING SHALL BE APPLIED TO EXPOSED JOINTS ONCE THE PAVING OPERATION HAS BEEN COMPLETED.

WHEN TRENCHING WORK CROSSES LANES, ALL AFFECTED LANES SHALL REQUIRE PLANING AND RESURFACING AS DESCRIBED ABOVE. THIS WORK SHALL INCLUDE ALL OF THE AFFECTED PAVEMENT AREA.

#### SPECIAL NOTES

NOTE 'A' : WHEN USING CONTROLLED DENSITY FILL (CDF), THE OPTIONAL FILL AREA OVER THE CONDUIT MAY BE BACKFILLED WITH SAND, GRANULAR MATERIAL, OR OTHER SUITABLE 912 MATERIAL, FOR A DISTANCE NOT TO EXCEED 1 FT. A PROTECTIVE BARRIER OF VISQUEEN OR SIMILAR MATERIAL IS PERMITTED.

NOTE 'B' : FOR TYPE I AND TYPE II CUT REPAIRS, THE AREA TO BE HEAT WELDED IS TO INCLUDE THE CUT AND EXTEND FOR 6 INCHES BEYOND EACH SIDE OF THE CUT FOR A NOMINAL DEPTH OF 2 INCHES.

NOTE 'C' : FOR TYPE I AND TYPE II PAVEMENT REPAIR, THE ITEM 404 HOT ASPHALT OR COLD MIX SHALL BE PLACED IN LIFTS NOT EXCEEDING 3 INCHES AND COMPACTED WITH A COMBINATION VIBRATORY PLATE COMPACTOR, OR A VIBRATORY STEEL WHEELED ROLLER WITH A MINIMUM CERTIFIED FORCE OF 2000 POUNDS. IN ALL CASES THE SURFACE LIFT SHALL BE COMPACTED WITH THE VIBRATORY STEEL WHEELED ROLLER. WHEN PLACING HCM COLD MIX FULL DEPTH, MATERIAL TEMPERATURE SHALL BE 70 DEGREES OR ABOVE.

NOTE 'D' : COLD MIX SHALL BE HCM COLD MIX OR OTHER COLD MIX APPROVED BY THE CITY OF COLUMBUS. IN LIEU OF COLD MIX, THE CONTRACTOR MAY STOCKPILE 404 ASPHALT AND REHEAT IT TO PLACE IN CUT AS PAVEMENT REPAIR. TYPE II PAVEMENT REPLACEMENT SHALL CONSIST OF FULL DEPTH HPM COLD MIX FOR SMALL EXCAVATIONS. LARGE EXCAVATIONS SHALL REQUIRE A MINIMUM OF 7 INCHES OF FAST SETTING PORTLAND CEMENT AND 2 INCHES OF HPM COLD MIX.

NOTE 'E' : THE COLD MIX IS TO BE REPLACED WITH ITEM 404 ASPHALT WHICH IS TO BE HEAT WELDED AS SET FORTH IN NOTE 'B'. THIS WORK SHALL BE PERFORMED AS SOON AS ASPHALT IS AVAILABLE.

## PAVEMENT & UTILITY CUT REPAIR STANDARDS

CITY OF COLUMBUS, OHIO  
DEPARTMENT OF PUBLIC SERVICE  
TRANSPORTATION DIVISION

STD DWG

**1441**

REV: 01/01/07

SHT 4 OF 7

**NOTE 'F' : REPAIR OF BRICK STREETS**

1. BRICKS REMOVED FROM A REPAIR AREA SHALL BE STORED IN A SAFE PLACE BY THE CONTRACTOR FOR REUSE. THE CONTRACTOR WILL BE RESPONSIBLE FOR REPLACING ANY BRICKS THAT ARE STOLEN OR DAMAGED, AT NO ADDITIONAL COST TO THE CITY.
2. BRICKS MAY BE PURCHASED FROM THE CITY AT A NOMINAL COST TO THE CONTRACTOR. IF BRICKS ARE SUPPLIED BY THE CONTRACTOR, THEY MUST FIRST BE APPROVED BY THE CITY BEFORE THEY ARE USED.
3. SAW CUTTING: ALL PARTIAL BRICKS SHALL BE SAWCUT. FURTHER, NO BRICK WILL BE PERMITTED TO BE CUT, FOR REPLACEMENT, TO A LENGTH LESS THAN  $\frac{1}{2}$  ITS ORIGINAL LENGTH. THIS MAY REQUIRE SAW CUTTING OF ADJACENT UNDISTURBED BRICK(S).
4. THE PERIMETER FACES OF THE EXISTING BASE MATERIAL SHALL BE CUT BACK TO AS NEARLY VERTICAL ORIENTATION AS POSSIBLE. IF SHEARING OF THE ADJACENT BASE RESULTS, THE CONTRACTOR WILL BE PAID FOR THE ADDITIONAL AREAS OF REMOVAL AS DESCRIBED ON THE ATTACHED DETAIL SHEET.
5. THE MAXIMUM WIDTH OF A BRICK MORTAR JOINT SHALL BE  $\frac{1}{2}$  INCH. THIS RESTRICTION SHALL ALSO APPLY TO THE JOINT FORMED ADJACENT TO THE PERIMETER OF A REPAIR AREA, WHERE THE ROWS MAY NOT BE PARALLEL TO ONE ANOTHER.
6. MORTARING OF JOINTS: ALL JOINTS SHALL BE MORTARED WITH A 50/50 MIXTURE BY VOLUME OF SAND AND CEMENT SO AS TO PROVIDE A FLUSH FINISH. THIS MAY REQUIRE MORE THAN ONE APPLICATION. FURTHER, MECHANICAL VIBRATION WILL BE REQUIRED FOR CONSOLIDATION OF DRY MORTAR MIX.
7. ALLOWABLE BASE MATERIAL SHALL BE DETERMINED BY THE TRENCH SIZE AS APPLICABLE FOR SMALL OR LARGE EXCAVATIONS, AS AS SPECIFIED ON PAGE 3 OF 7.

**NOTE 'G' :** FOR ALLEY REPAIRS, THE PROPOSED PAVEMENT REPLACEMENT SHALL CONFORM TO THE EXISTING TYPE AND THICKNESS OF THE PAVEMENT. CHIP AND SEAL TYPE ALLEYS SHALL REQUIRE MATCHING THE EXISTING THICKNESS OF PAVEMENT WITH THE APPROPRIATE COMBINATION OF MATERIALS BASED ON THE SIZE OF THE EXCAVATION. THE MINIMUM SHALL CONSIST OF 3 INCHES OF ITEM 404 ASPHALT CONCRETE. FINISH CONCRETE PAVEMENT IS NOT PERMITTED. MATERIALS USED SHALL CONFORM TO THE REQUIREMENT OF THE CURRENT CCMS.

IF MORE THAN  $\frac{1}{3}$  OF THE WIDTH OF AN ALLEY IS REMOVED, THE PAVEMENT SHALL BE REPLACED AS PER TYPICAL AND THEN OVERLAYED OVER THE TOTAL WIDTH OF PAVEMENT AND LENGTH OF TRENCH.

# PAVEMENT & UTILITY CUT REPAIR STANDARDS

CITY OF COLUMBUS, OHIO  
DEPARTMENT OF PUBLIC SERVICE  
TRANSPORTATION DIVISION

STD DWG

**1441**

REV: 01/01/07

SHT 5 OF 7

**NOTE 'H' : ITEM 912 - COMPACTED GRANULAR BACKFILL:**

THIS METHOD OF BACKFILL CAN ONLY BE USED WITH FULL TIME CITY INSPECTION. AN INSPECTION FEE MUST BE POSTED WHEN THE PERMIT IS ISSUED.

**NOTE 'I' : CONCRETE BASE OR PAVEMENT**

IF PAVING REQUIREMENTS ALLOW FOR SUFFICIENT CURING TIME SO THAT FAST SETTING CONCRETE IS NOT NEEDED, STANDARD CONCRETE BASE OR PAVEMENT MAY BE PLACED AS PER THE CCMS. THIS OPTION MUST BE NOTED ON THE PERMIT APPLICATION AND APPROVED BY THE CITY OF COLUMBUS.

**NOTE 'J' : THE TRENCH WIDTH FOR SMALL PIPES AND CONDUITS SHALL BE OF SUFFICIENT WIDTH TO ALLOW FOR THE PROPER PLACEMENT OF THE BACKFILL MATERIAL. THE PAVEMENT PORTION OF THE TRENCH SHALL BE A MINIMUM OF 2 FT IN WIDTH. THIS IS TO ALLOW FOR THE PROPER COMPACTION OF THE ASPHALT PAVEMENT. IF THE TRENCH FOR PLACING CONDUIT IS NARROWER THAN 2 FT THEN THE PAVEMENT PORTION SHALL BE CUT BACK TO PROVIDE THE 2 FT MINIMUM FOR PAVING OPERATIONS.**

# PAVEMENT & UTILITY CUT REPAIR STANDARDS

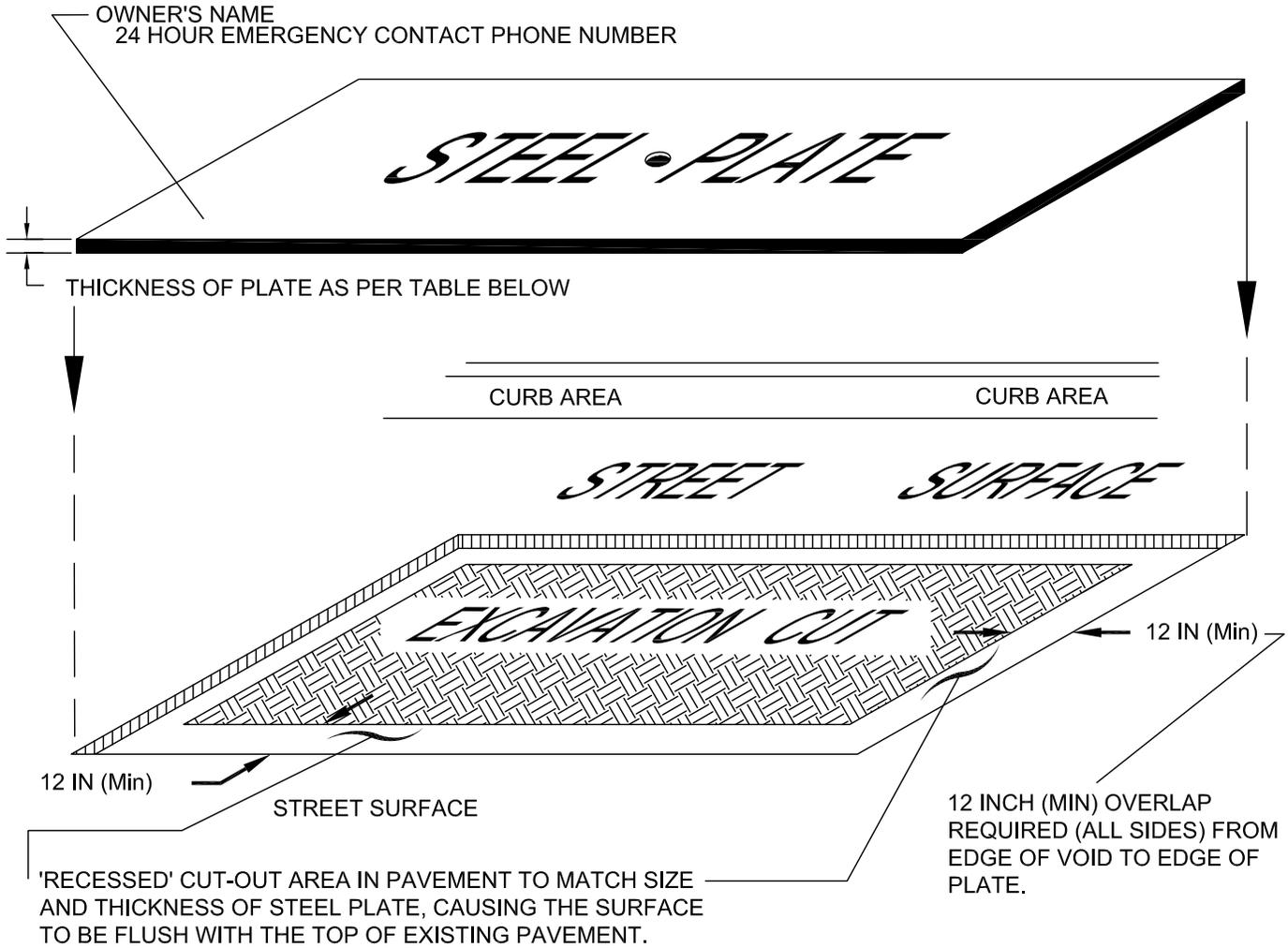
CITY OF COLUMBUS, OHIO  
DEPARTMENT OF PUBLIC SERVICE  
TRANSPORTATION DIVISION

STD DWG

**1441**

REV: 01/01/07

SHT 6 OF 7



THIS DRAWING ONLY APPLIES TO BITUMINOUS ASPHALT SURFACED STREETS

NOTE: ALL STEEL PLATES MUST HAVE THE FOLLOWING INFORMATION  
CLEARLY AND LEGIBLY 'ETCHED' INTO THEIR TOP SURFACE:

- 1 OWNERS NAME
- 2 A 24 HR. EMERGENCY CONTACT PHONE NUMBER.

MINIMUM THICKNESS OF STEEL PLATES	
SIZE OF PLATE	THICKNESS
4 FT x 4 FT	1/2 INCH
4 FT x 6 FT	3/4 INCH
LARGER	1 INCH

## STEEL PLATE REQUIREMENTS

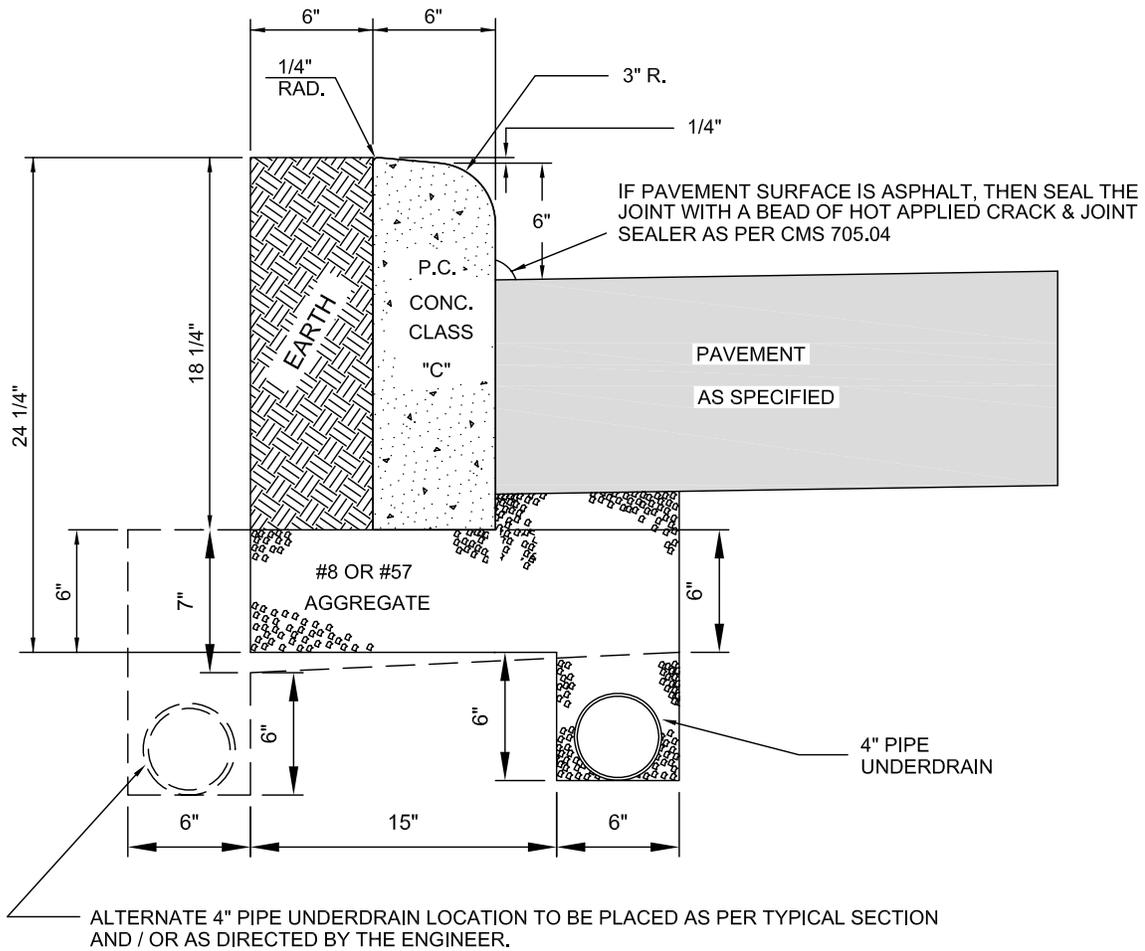
CITY OF COLUMBUS, OHIO  
DEPARTMENT OF PUBLIC SERVICE  
TRANSPORTATION DIVISION

STD DWG

1441

REV: 01/01/07

SHT 7 OF 7



0.74 C.F. CONCRETE PER L.F.

ALL EXPOSED SURFACES OF CONCRETE CURB SHALL HAVE A BRUSHED FINISH.

IF THE BOTTOM OF THE SUBGRADE IS MORE THAN 7" BELOW THE BOTTOM OF THE CURB, THE UNDERDRAIN SHALL BE ADJUSTED TO KEEP THE TOP OF THE UNDERDRAIN AT LEAST 2" BELOW THE SUBBASE.

SUBGRADE COMPACTION SHALL BE COMPLETED BEFORE UNDERDRAIN INSTALLATION.

NOTE: WHEN A CURB AND GUTTER INLET IS INSTALLED, THE TOP OF THE BONNET SHALL BE THE SAME AS THE TOP OF CURB ELEVATION. THE EDGE OF PAVEMENT ELEVATION SHALL BE 3/8" HIGHER THAN THE GRATE WHEREVER THEY MEET/TOUCH.

FOR REPLACEMENT WORK, THE CURB SHALL BE REMOVED AT AN EXISTING JOINT OR NO CLOSER THAN 5 FEET FROM AN EXISTING JOINT.

1/2 " EXPANSION MATERIAL WILL BE INSTALLED BEHIND THE CURB WHEN A CONCRETE WALK, DRIVE, OR OTHER CONCRETE ITEM IS ADJOINING IT.

## STRAIGHT 18" CONCRETE CURB ITEM 609

CITY OF COLUMBUS, OHIO  
DEPARTMENT OF PUBLIC SERVICE  
TRANSPORTATION DIVISION

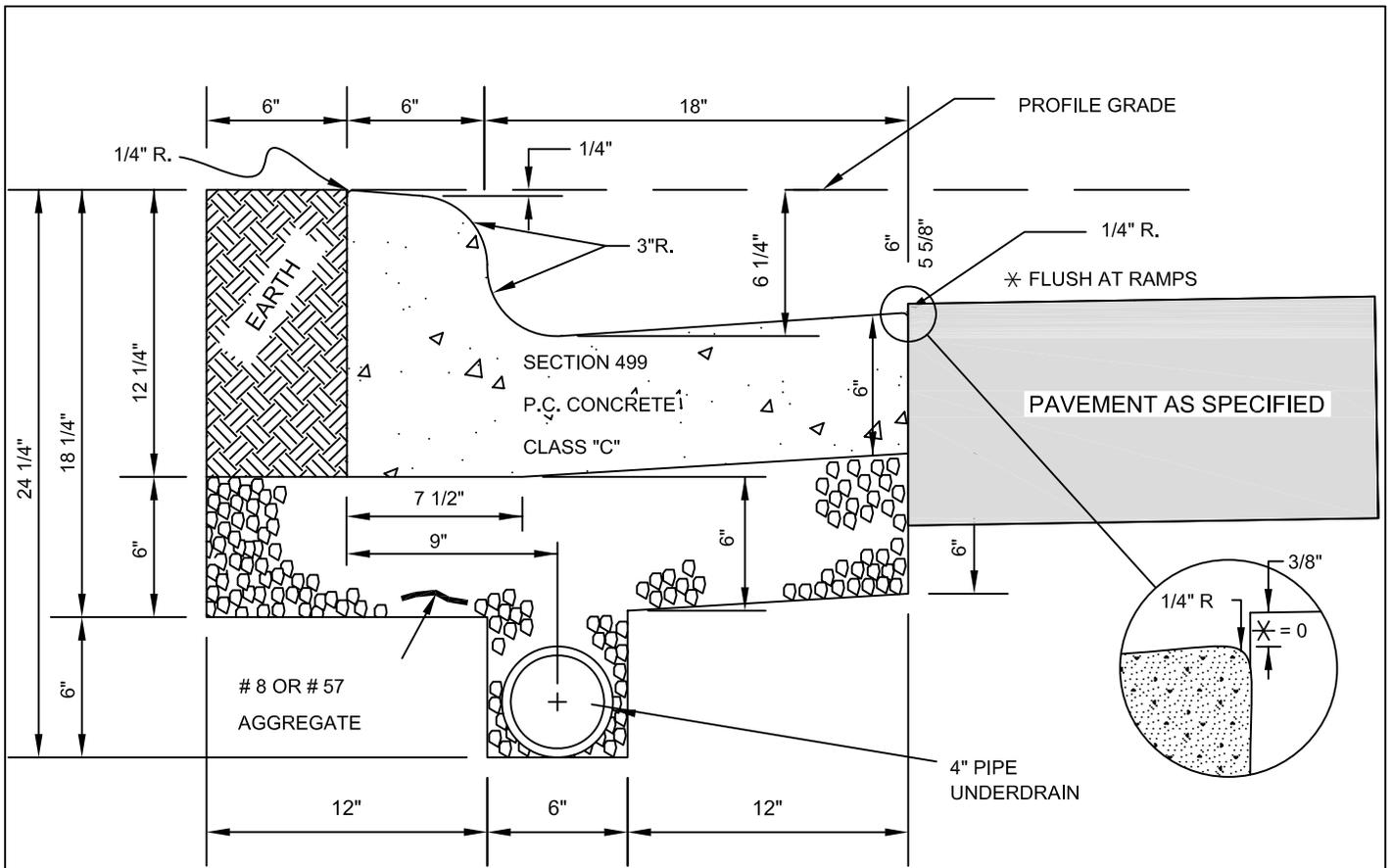
CITY ENGINEER,

*R. J. Baum*

STD DWG  
2000

REV: 01/01/07

SHT 1 OF 1



\* THE PAVEMENT SHALL BE FLUSH AT THE GUTTER IN FRONT OF CURB RAMPS. CURB RAMPS SHALL BE BUILT AS PER STD DWG 2319.

1.26 C.F. CONCRETE PER L.F.

ALL EXPOSED SURFACES OF CONCRETE CURB AND GUTTER SHALL HAVE A BRUSHED FINISH.

IF THE SUBGRADE IS MORE THAN 7" BELOW THE THE BOTTOM OF THE CURB, THE UNDERDRAIN SHALL BE ADJUSTED TO KEEP THE TOP OF THE UNDERDRAIN AT LEAST 2" BELOW THE SUBBASE.

SUBGRADE COMPACTION SHALL BE COMPLETED BEFORE UNDERDRAIN INSTALLATION.

NOTE: WHEN A CURB AND GUTTER INLET IS INSTALLED, THE TOP OF THE BONNET SHALL BE THE SAME AS THE TOP OF CURB ELEVATION. THE EDGE OF PAVEMENT SHALL BE 3/8" HIGHER THAN THE GRATE WHEREVER THEY MEET/TOUCH.

FOR REPLACEMENT WORK, THE CURB SHALL BE REMOVED AT AN EXISTING JOINT OR NO CLOSER THAN 5 FEET FROM AN EXISTING JOINT.

1/2" EXPANSION MATERIAL WILL BE INSTALLED BEHIND THE CURB WHEN A CONCRETE WALK, DRIVE, OR OTHER ITEM IS ADJOINING IT.

## STANDARD CONCRETE COMBINED CURB & GUTTER ITEM 609

CITY OF COLUMBUS, OHIO  
DEPARTMENT OF PUBLIC SERVICE  
TRANSPORTATION DIVISION

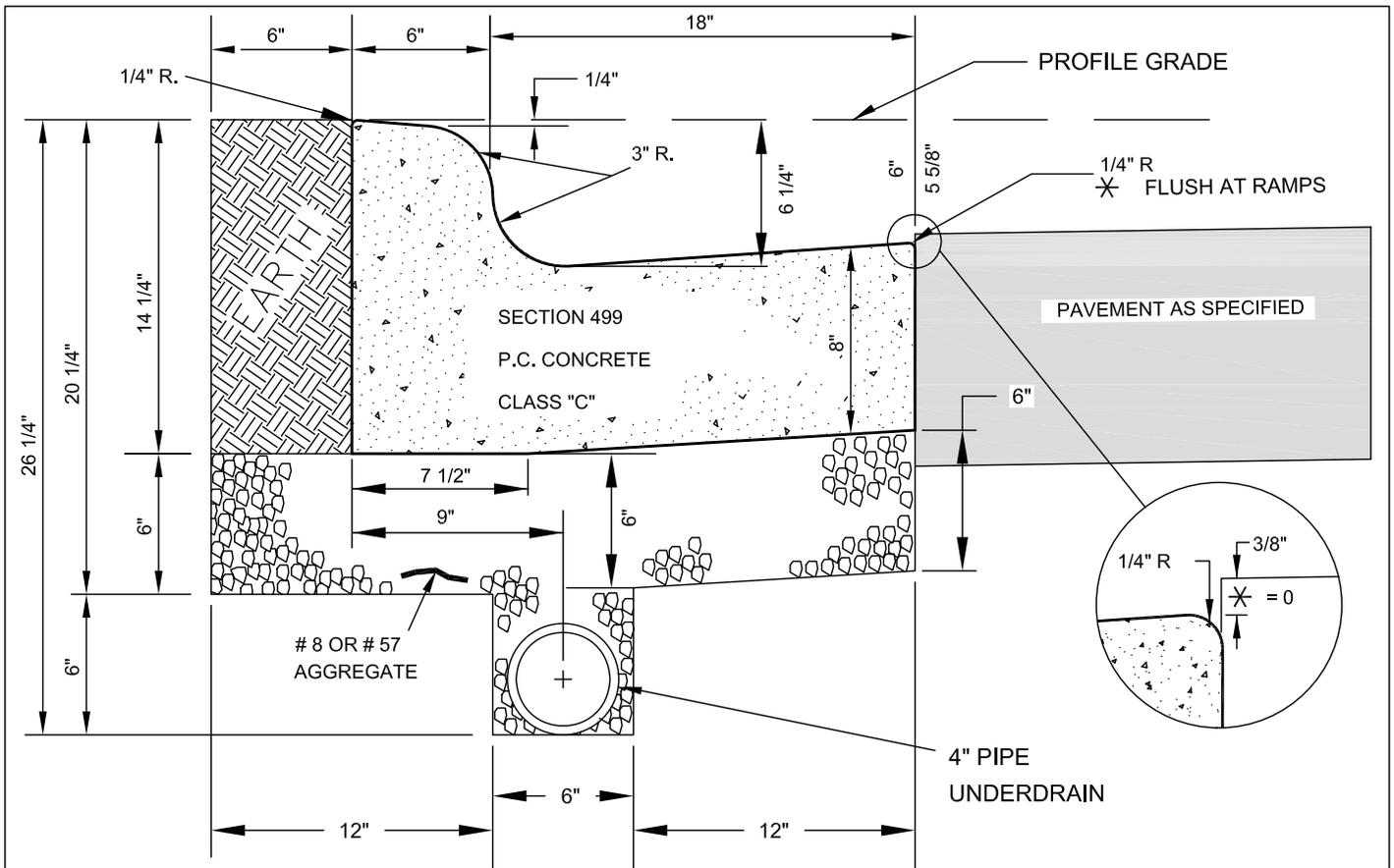
CITY ENGINEER

*Randy Baum*

STD DWG  
2010

REV: 01/01/07

SHT 1 OF 1



\* THE PAVEMENT SHALL BE FLUSH AT THE GUTTER IN FRONT OF CURB RAMPS. CURB RAMPS SHALL BE BUILT AS PER STD DWG 2319.

1.59 C.F. CONCRETE PER L.F.

ALL EXPOSED SURFACES OF CONCRETE CURB AND GUTTER SHALL HAVE A BRUSHED FINISH.

IF THE SUBGRADE IS MORE THAN 7" BELOW THE THE BOTTOM OF THE CURB, THE UNDERDRAIN SHALL BE ADJUSTED TO KEEP THE TOP OF THE UNDERDRAIN AT LEAST 2" BELOW THE SUBBASE.

SUBGRADE COMPACTION SHALL BE COMPLETED BEFORE UNDERDRAIN INSTALLATION.

NOTE: WHEN A CURB AND GUTTER INLET IS INSTALLED, THE TOP OF THE BONNET SHALL BE THE SAME AS THE TOP OF CURB ELEVATION. THE EDGE OF PAVEMENT SHALL BE 3/8" HIGHER THAN THE GRATE WHEREVER THEY MEET/TOUCH.

FOR REPLACEMENT WORK, THE CURB SHALL BE REMOVED AT AN EXISTING JOINT OR NO CLOSER THAN 5 FEET FROM AN EXISTING JOINT.

1/2" EXPANSION MATERIAL WILL BE INSTALLED BEHIND THE CURB WHEN A CONCRETE WALK, DRIVE, OR OTHER ITEM IS ADJOINING IT.

## SPECIAL 8" CONCRETE COMBINED CURB & GUTTER ITEM 609

CITY OF COLUMBUS, OHIO  
DEPARTMENT OF PUBLIC SERVICE  
TRANSPORTATION DIVISION

CITY ENGINEER,

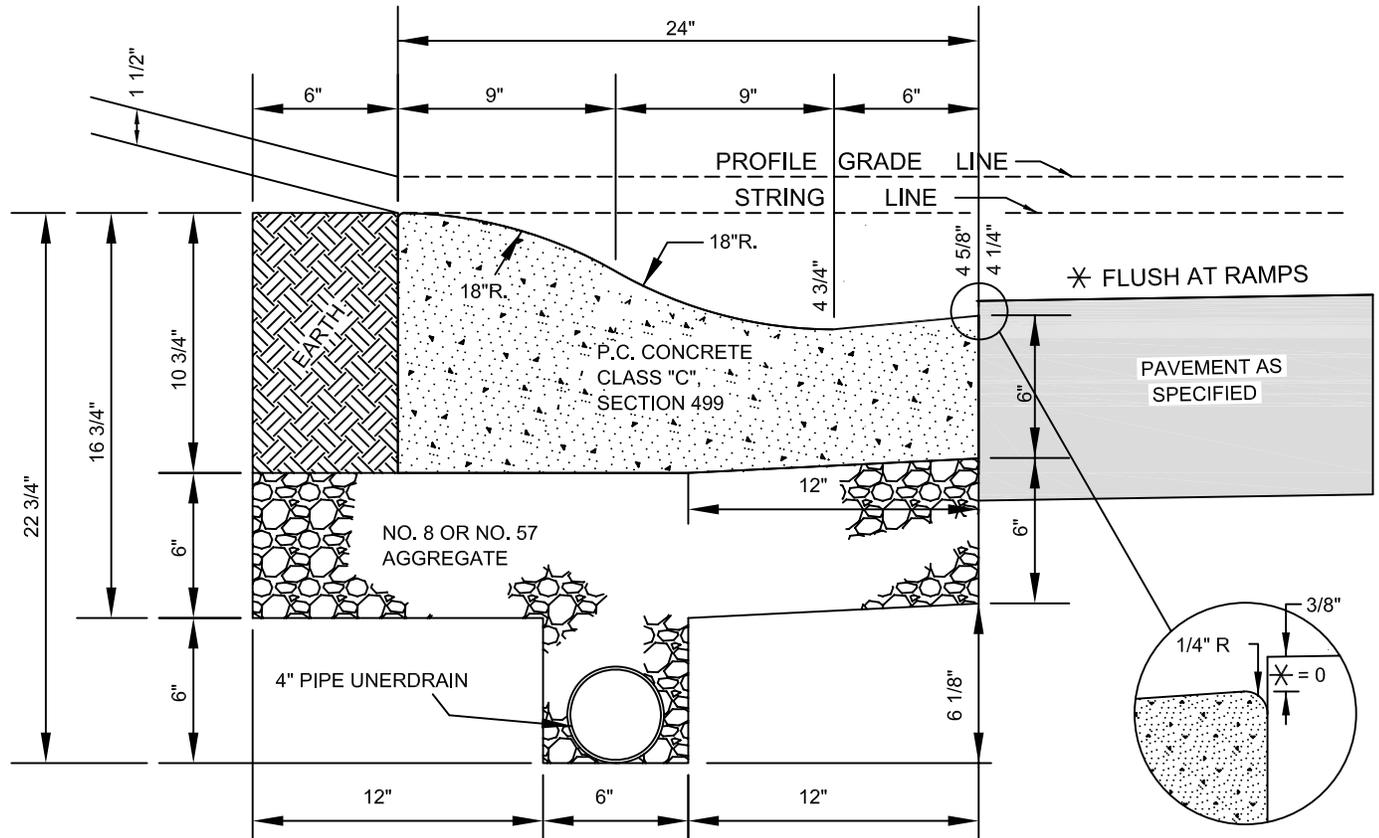


STD DWG  
2020

REV: 01/01/07

SHT 1 OF 1

NOTE: ALL MEASUREMENTS ARE FROM THE STRINGLINE



\* THE PAVEMENT SHALL BE FLUSH AT THE GUTTER IN FRONT OF CURB RAMPS. CURB RAMPS SHALL BE BUILT AS PER STD DWG 2319.

1.33 C.F. CONCRETE PER L.F.

ALL EXPOSED SURFACES OF CONCRETE CURB AND GUTTER SHALL HAVE A BRUSHED FINISH.

IF THE SUBGRADE IS MORE THAN 7" BELOW THE THE BOTTOM OF THE CURB, THE UNDERDRAIN SHALL BE ADJUSTED TO KEEP THE TOP OF THE UNDERDRAIN AT LEAST 2" BELOW THE SUBBASE.

SUBGRADE COMPACTION SHALL BE COMPLETED BEFORE UNDERDRAIN INSTALLATION.

NOTE: WHEN A CURB AND GUTTER INLET IS INSTALLED, THE TOP OF THE BONNET SHALL BE THE SAME AS THE TOP OF CURB ELEVATION. THE EDGE OF PAVEMENT SHALL BE 3/8" HIGHER THAN THE GRATE WHEREVER THEY MEET/TOUCH.

FOR REPLACEMENT WORK, THE CURB SHALL BE REMOVED AT AN EXISTING JOINT OR NO CLOSER THAN 5 FEET FROM AN EXISTING JOINT.

1/2" EXPANSION MATERIAL WILL BE INSTALLED BEHIND THE CURB WHEN A CONCRETE WALK, DRIVE OR OTHER ITEM IS ADJOINING IT.

# CONCRETE MOUNTABLE CURB & GUTTER

CITY OF COLUMBUS, OHIO  
DEPARTMENT OF PUBLIC SERVICE  
TRANSPORTATION DIVISION

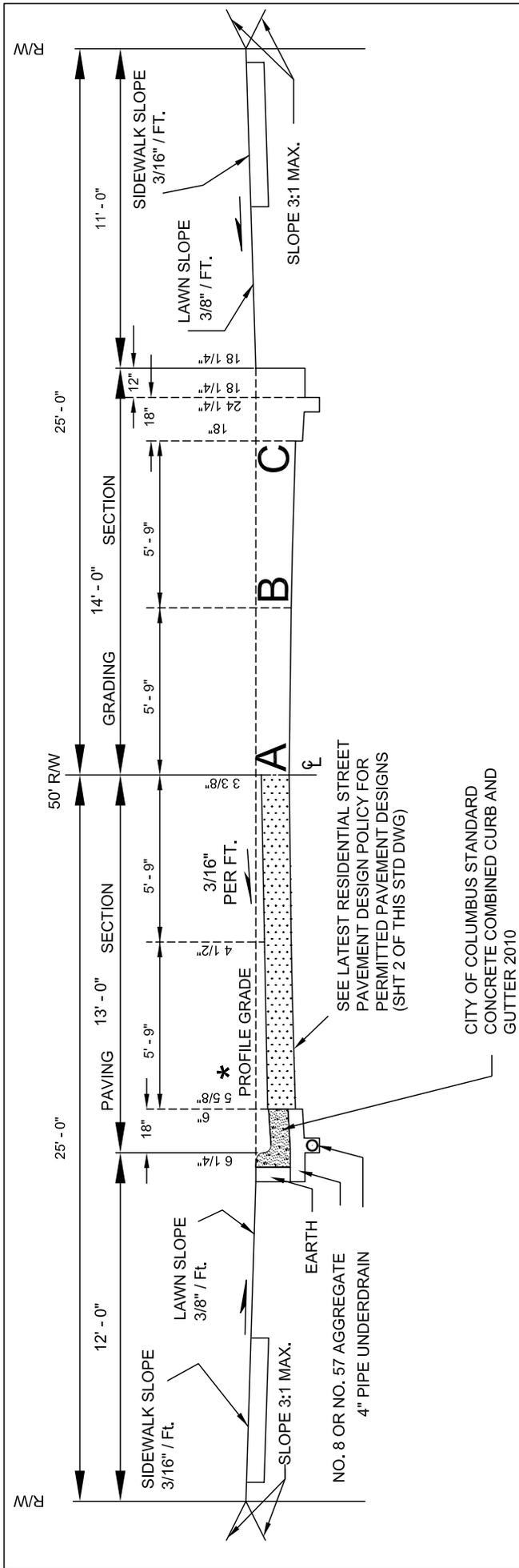
STD DWG  
2030

CITY ENGINEER,

*Paul J. Baum*

REV: 01/01/07

SHT 1 OF 1



NOTES: BACK OF WALK IS GENERALLY 12" FROM RW  
 USE ITEM 413, CRACK SEALING WHEN NEW PAVEMENT IS PLACED ADJACENT TO EXISTING PAVEMENT

THE PEDESTRIAN WALK WAY, AT LEAST 7' WIDE, BETWEEN OPPOSING RAMPS SHALL HAVE A CROSS-SLOPE (THE LONGITUDINAL STREET SLOPE) OF NO GREATER THAN 1.56%.

FOR THE DEPTHS OF A, B, & C FROM THE STRING LINE TO THE SUBGRADE AND THE SQUARE FOOT AREA BELOW THE STRING LINE, SEE DRAWING 2100 SHEET 3/5.

"AREA" REFERS TO THE SPACE BELOW THE STRING LINE FROM THE TOP OF CURB ON EACH SIDE OF THE ROAD DOWN TO THE GRADING LIMITS.

\* FOR STANDARD CURB AND GUTTER, THE PROFILE GRADE AND STRING LINE ELEVATIONS ARE THE SAME.

<h2>26' SECTION WITH CONCRETE COMBINED CURB &amp; GUTTER</h2>	
CITY OF COLUMBUS, OHIO DEPARTMENT OF PUBLIC SERVICE TRANSPORTATION DIVISION	
 CITY ENGINEER	<b>STD DWG 2100</b> REV: 01/01/07 SHT 1 OF 5

AA	BB	CC	DD	EE	FF	GG	HH					
								STANDARD			SOIL-STABILIZED	
AVERAGE DAILY TRAFFIC	TYPICAL APPLICATION	PAVEMENT COMPONENT	FD ASPHALT	CONCRETE	COMPOSITE †	FLEXIBLE	FD ASPHALT	CONCRETE	COMPOSITE †	FLEXIBLE		
1	TYPICALLY MINIGREENS STREETS AND CUL-DE-SACS WITH NO FUTURE EXTENSIONS POSSIBLE	ITEM 404	1.25		1.25	1.25	1.25		1.25	1.25	1.25	
		ITEM 402	1.50		1.50	1.50	1.50		1.50	1.50	1.50	
		ITEM 301	5.25		3.25	3.25	3.25	3.25			3.00	3.00
		ITEM 304			6.00							6.00
		ITEM 305			5.00 †						5.00 †	
		ITEM 452		6.00				5.00				
		CONSTRUCTED THICKNESS	8.00	6.00	7.75	12.00	6.00	5.00	7.25	11.75		
2	TYPICALLY SHORT ONE TO TWO BLOCK LONG LOOP STREETS WITH NO FUTURE EXTENSIONS POSSIBLE	ITEM 404	1.25		1.25	1.25	1.25		1.25	1.25	1.25	
		ITEM 402	1.50		1.50	1.50	1.50		1.50	1.50	1.50	
		ITEM 301	5.75		3.75	3.75	3.75	3.75			3.00	3.00
		ITEM 304			6.00							6.00
		ITEM 305			5.50 †						5.25 †	
		ITEM 452		6.00				6.00				
		CONSTRUCTED THICKNESS	8.50	6.00	8.25	12.50	6.50	6.00	8.00	11.75		
3	TYPICALLY THROUGH STREETS SERVING ONE OR MORE NEIGHBORHOODS OR ABUTTING PROPERTIES, BUT NO NON-RESIDENTIAL USES	ITEM 404	1.25		1.25	1.25	1.25		1.25	1.25	1.25	
		ITEM 402	1.50		1.50	1.50	1.50		1.50	1.50	1.50	
		ITEM 301	7.25		5.25	5.25	4.75	4.75			3.75	3.75
		ITEM 304			6.00							6.00
		ITEM 305			7.00*						6.50*	
		ITEM 452		7.50				7.00				
		CONSTRUCTED THICKNESS	10.00	7.50	9.75	14.00	7.50	7.00	9.25	12.50		
> 3500												

USE ODOT DESIGN METHOD FOR ULTIMATE DESIGN ADT\*\*

FD ASPHALT = FULL DEPTH ASPHALT ON PREPARED SUBGRADE  
 CONCRETE = 4000 psi STRENGTH PCC CONCRETE ON PREPARED SUBGRADE  
 COMPOSITE = 2500 psi STRENGTH PCC CONCRETE BASE WITH TWO-LAYER ASPHALT SURFACE, OR 3500 psi STRENGTH RCC CONCRETE BASE WITH TWO-LAYER ASPHALT SURFACE

FLEXIBLE = ASPHALT ON COMPACTED AGGREGATE BASE

ITEM NUMBERS REFER TO COLUMBUS CONSTRUCTION AND MATERIAL SPECIFICATION SECTION

† ITEM 306 WITH CLASS E (MODIFIED) CONCRETE:  
 MIN. 28-DAY STRENGTH OF 2500 psi

\* ITEM 305 CLASS E CONCRETE:  
 MIN. 28-DAY STRENGTH OF 3000 psi

\*\* ULTIMATE DESIGN ADT REFERS TO AVERAGE DAILY TRAFFIC (ADT) WITH PERCENT TRUCKS BREAKDOWN PER ODOT FOR FULL BUILD-OUT DEVELOPMENT, INCLUDING THROUGH TRAFFIC.

MINIMUM PAVEMENT COMPONENT LAYERS:

- ITEM 404: 1.25 INCHES
- ITEM 402: 1.50 INCHES
- ITEM 301: 3.00 INCHES
- ITEM 304: 6.00 INCHES
- ITEM 305: 5.00 INCHES
- ITEM 306: 5.00 INCHES
- ITEM 452: 5.00 INCHES

## 26' SECTION WITH CONCRETE COMBINED CURB & GUTTER RESIDENTIAL DESIGN

CITY OF COLUMBUS, OHIO  
 DEPARTMENT OF PUBLIC SERVICE  
 TRANSPORTATION DIVISION

STD DWG  
**2100**  
 REV: 01/01/07  
 SHT 2 OF 5

# STANDARD

ADT	AA FD ASPHALT	BB CONCRETE	CC COMPOSITE	DD FLEXIBLE
<b>1</b> 0-500	A = 11 3/8" B = 12 1/2" C = 13 5/8" AREA= 35.05	A = 9 3/8" B = 10 1/2" C = 11 5/8" AREA= 25.25	A = 11 1/8" B = 12 1/4" C = 13 3/8" AREA= 29.57	A = 15 3/8" B = 16 1/4" C = 17 5/8" AREA= 37.47
<b>2</b> 500-1500	A = 11 7/8" B = 13" C = 14 1/8" AREA= 31.01	A = 9 3/8" B = 10 1/2" C = 11 5/8" AREA= 26.21	A = 11 5/8" B = 12 3/4" C = 13 7/8" AREA= 30.53	A = 15 7/8" B = 16 3/4" C = 18 1/8" AREA= 38.43
<b>3</b> 1500-3500	A = 13 3/8" B = 14 1/2" C = 15 5/8" AREA= 33.88	A = 10 7/8" B = 12" C = 13 1/8" AREA= 29.09	A = 13 1/8" B = 14 1/4" C = 15 3/8" AREA= 33.40	A = 17 3/8" B = 18 1/4" C = 19 5/8" AREA= 41.31

# SOIL STABILIZED

ADT	EE FD ASPHALT	FF CONCRETE	GG COMPOSITE	HH FLEXIBLE
<b>1</b> 0-500	A = 9 3/8" B = 10 1/4" C = 11 5/8" AREA= 25.97	A = 8 3/8" B = 9 1/2" C = 10 5/8" AREA= 24.30	A = 11 1/8" B = 12 1/4" C = 13 3/8" AREA= 29.57	A = 15 1/8" B = 16 1/4" C = 17 3/8" AREA= 37.23
<b>2</b> 500-1500	A = 9 7/8" B = 10 3/4" C = 12 1/8" AREA= 26.93	A = 9 3/8" B = 10 1/2" C = 11 5/8" AREA= 26.21	A = 11 3/8" B = 12 1/2" C = 13 5/8" AREA= 30.05	A = 15 1/8" B = 16 1/4" C = 17 3/8" AREA= 37.23
<b>3</b> 1500-3500	A = 10 7/8" B = 12" C = 13 1/8" AREA= 29.09	A = 10 3/8" B = 11 1/2" C = 12 5/8" AREA= 28.13	A = 12 5/8" B = 13 3/4" C = 14 7/8" AREA= 32.44	A = 15 7/8" B = 17" C = 18 1/8" AREA= 38.67

AREA = THE SQUARE FOOT AREA BELOW THE STRING LINE FOR EARTHWORK PURPOSES  
NOTE: AREA DOES NOT INCLUDE THE UNDERDRAIN TRENCH.

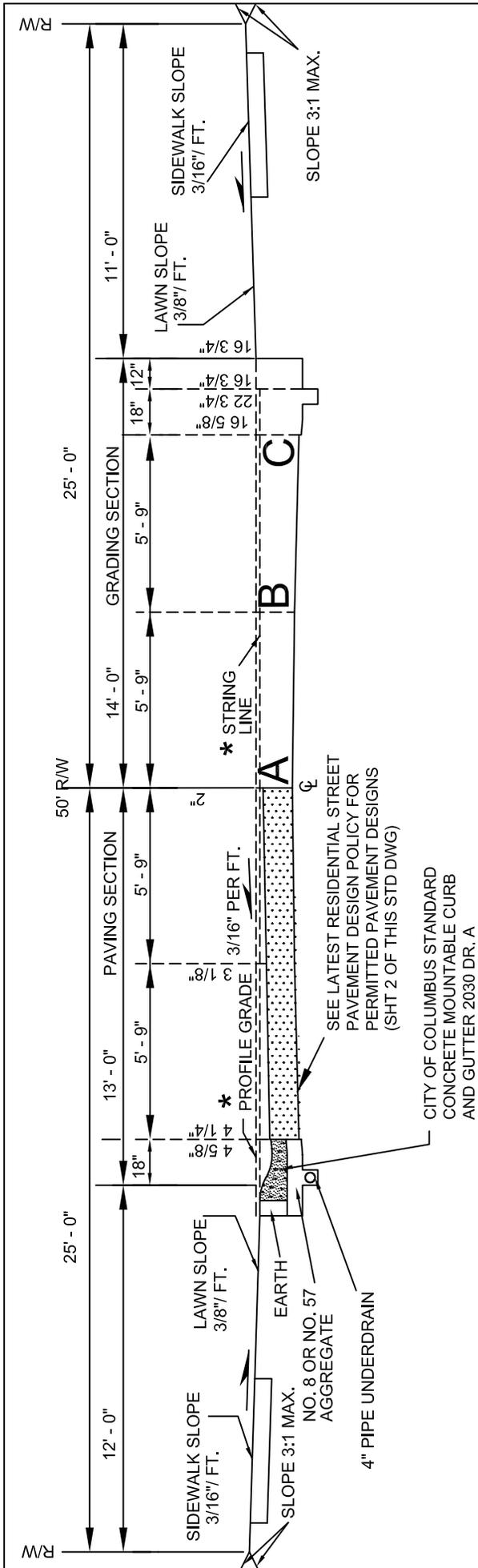
## 26' SECTION WITH CONCRETE COMBINED CURB & GUTTER

CITY OF COLUMBUS, OHIO  
DEPARTMENT OF PUBLIC SERVICE  
TRANSPORTATION DIVISION

**STD DWG**  
**2100**

REV: 01/01/07

SHT 3 OF 5



## 26' SECTION WITH CONCRETE MOUNTABLE CURB & GUTTER

CITY OF COLUMBUS, OHIO  
DEPARTMENT OF PUBLIC SERVICE  
TRANSPORTATION DIVISION

STD DWG
<b>2100</b>
REV: 01/01/07
SHT 4 OF 5

NOTES: BACK OF WALK IS GENERALLY 12" FROM R/W  
ALL MEASUREMENTS ARE TAKEN FROM THE STRINGLINE  
USE ITEM 413, CRACK SEALING WHEN NEW PAVEMENT IS PLACED ADJACENT TO EXISTING PAVEMENT  
THE PEDESTRIAN WALK WAY, AT LEAST 7' WIDE, BETWEEN OPPOSING RAMPERS SHALL HAVE A CROSS-SLOPE (THE LONGITUDINAL STREET SLOPE) OF NO GREATER THAN 1.56%.  
FOR THE DEPTHS OF A, B, & C FROM THE STRING LINE TO THE SUBGRADE AND THE SQUARE FOOT AREA BELOW THE STRING LINE, SEE DRAWING 2100 SHEET 3/5.  
"AREA" REFERS TO THE SPACE BELOW THE STRING LINE FROM THE TOP OF CURB ON EACH SIDE OF THE ROAD TO THE GRADING LIMITS.  
\* FOR MOUNTABLE CURB AND GUTTER, THE PROFILE GRADE ELEVATION IS 1 1/2" ABOVE THE STRING LINE.

# STANDARD

ADT	AA FD ASPHALT	BB CONCRETE	CC COMPOSITE	DD FLEXIBLE
1 0-500	A = 10" B = 11 1/8" C = 12 1/4" AREA= 28.32	A = 8" B = 9 1/8" C = 10 1/4" AREA= 23.53	A = 9 3/4" B = 10 7/8" C = 12" AREA= 27.84	A = 14" B = 15 1/8" C = 16 1/4" AREA= 35.99
2 500-1500	A = 10 1/2" B = 11 5/8" C = 12 3/4" AREA= 29.28	A = 8" B = 9 1/8" C = 10 3/4" AREA= 24.49	A = 10 3/4" B = 11 7/8" C = 13" AREA= 29.76	A = 14 1/2" B = 15 5/8" C = 16 3/4" AREA= 36.95
3 1500-3500	A = 12" B = 13 1/8" C = 14 1/4" AREA= 32.16	A = 9 1/2" B = 10 5/8" C = 11 3/4" AREA= 27.34	A = 11 3/4" B = 12 7/8" C = 14" AREA= 31.68	A = 16" B = 17 1/8" C = 18 1/4" AREA= 39.82

# SOIL STABILIZED

ADT	EE FD ASPHALT	FF CONCRETE	GG COMPOSITE	HH FLEXIBLE
1 0-500	A = 8" B = 9 1/8" C = 10 1/4" AREA= 24.49	A = 7" B = 8 1/8" C = 9 1/4" AREA= 22.57	A = 9 3/4" B = 10 7/8" C = 12" AREA= 27.84	A = 13 3/4" B = 14 7/8" C = 16" AREA= 35.51
2 500-1500	A = 8 1/2" B = 9 5/8" C = 10 3/4" AREA= 25.45	A = 8" B = 9 1/8" C = 10 1/4" AREA= 24.49	A = 10" B = 11 1/8" C = 12 1/4" AREA= 28.32	A = 14 3/4" B = 14 7/8" C = 16" AREA= 35.51
3 1500-3500	A = 9 1/2" B = 10 5/8" C = 11 3/4" AREA= 27.36	A = 9" B = 10 1/8" C = 11 1/4" AREA= 26.41	A = 11 1/4" B = 12 3/8" C = 13 1/2" AREA= 30.72	A = 14 1/2" B = 15 5/8" C = 16 3/4" AREA= 36.95

AREA = THE SQUARE FOOT AREA BELOW THE STRING LINE FOR EARTHWORK PURPOSES  
NOTE: AREA BELOW DOES NOT INCLUDE THE UNDERDRAIN TRENCH.

## 26' SECTION WITH CONCRETE MOUNTABLE CURB & GUTTER

CITY OF COLUMBUS, OHIO  
DEPARTMENT OF PUBLIC SERVICE  
TRANSPORTATION DIVISION

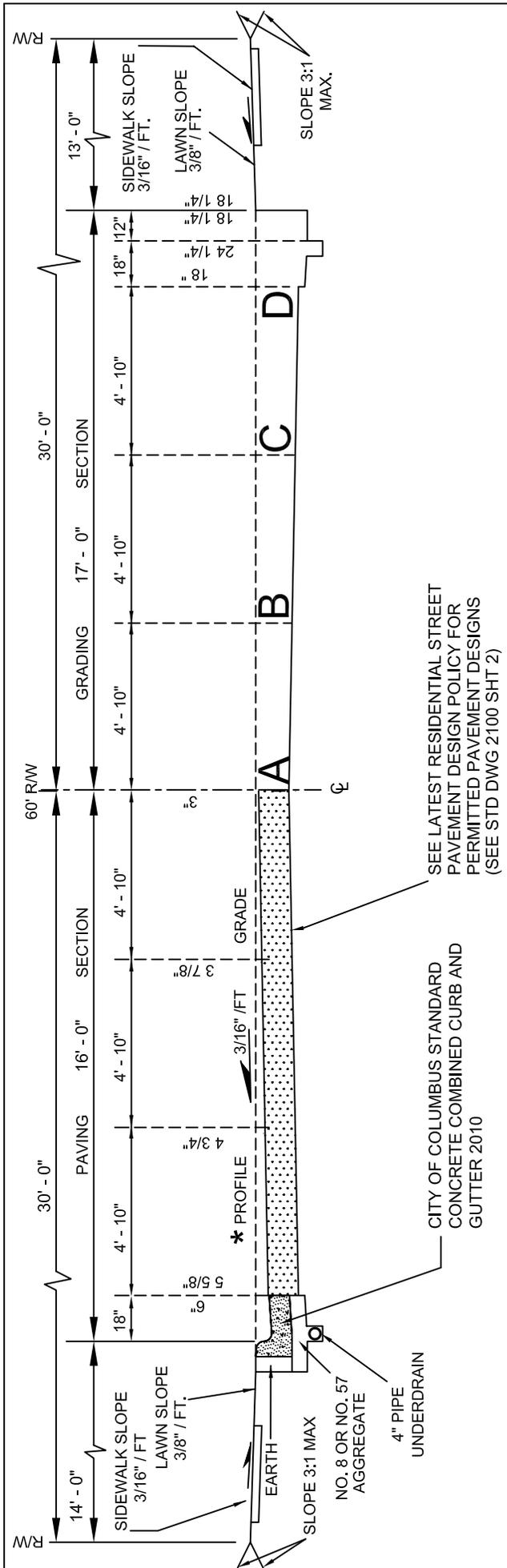
STD DWG

2100

REV: 01/01/07

SHT 5 OF 5





## 32' SECTION WITH CONCRETE COMBINED CURB & GUTTER (RESIDENTIAL)

CITY OF COLUMBUS, OHIO DEPARTMENT OF PUBLIC SERVICE TRANSPORTATION DIVISION	<b>STD DWG</b>  <b>2110</b>
CITY ENGINEER,	REV: 01/01/07  SHT 1 OF 3

NOTE: BACK OF WALK IS GENERALLY 12" FROM R/W

THE PEDESTRIAN WALK WAY, AT LEAST 7' WIDE, BETWEEN OPPOSING RAMPS SHALL HAVE A CROSS-SLOPE (THE LONGITUDINAL STREET SLOPE) OF NO GREATER THAN 1.56%.

FOR THE DEPTHS OF A, B, & C FROM THE STRING LINE TO THE SUBGRADE AND THE SQUARE FOOT AREA BELOW THE STRING LINE, SEE DRAWING 2110 SHEET 3/4.

"AREA" REFERS TO THE SPACE BELOW THE STRING LINE FROM THE TOP OF CURB ON EACH SIDE OF THE ROAD DOWN TO THE GRADING LIMITS.

\* FOR STANDARD CURB AND GUTTER, THE PROFILE GRADE AND STRING LINE ELEVATIONS ARE THE SAME.

SEE LATEST RESIDENTIAL STREET PAVEMENT DESIGN POLICY FOR PERMITTED PAVEMENT DESIGNS (SEE STD DWG 2100 SHT 2)

CITY OF COLUMBUS STANDARD CONCRETE COMBINED CURB AND GUTTER 2010

# STANDARD

ADT	AA FD ASPHALT	BB CONCRETE	CC COMPOSITE	DD FLEXIBLE
<b>1</b> 0-500	A = 11" B = 11 7/8" C = 12 3/4" D = 13 5/8" AREA = 37.40	A = 9" B = 9 7/8" C = 10 3/4" D = 11 5/8" AREA = 31.36	A = 10 3/4" B = 11 5/8" C = 12 1/2" D = 13 3/8" AREA = 36.80	A = 15" B = 15 7/8" C = 16 3/4" D = 17 5/8" AREA = 47.07
<b>2</b> 500-1500	A = 11 1/2" B = 12 3/8" C = 13 1/4" D = 14 1/8" AREA = 38.61	A = 9" B = 9 7/8" C = 10 3/4" D = 11 5/8" AREA = 32.57	A = 11 1/4" B = 12 1/8" C = 13" D = 13 7/8" AREA = 38.01	A = 15 1/2" B = 16 3/8" C = 17 1/4" D = 18 1/8" AREA = 48.28
<b>3</b> 1500-3500	A = 13" B = 13 7/8" C = 14 3/4" D = 15 5/8" AREA = 42.23	A = 10 1/2" B = 11 3/8" C = 12 1/4" D = 13 1/8" AREA = 36.19	A = 12 3/4" B = 13 5/8" C = 14 1/2" D = 15 3/8" AREA = 41.43	A = 17" B = 17 7/8" C = 18 3/4" D = 19 5/8" AREA = 51.90

## SOIL STABILIZED

ADT	EE FD ASPHALT	FF CONCRETE	GG COMPOSITE	HH FLEXIBLE
<b>1</b> 0-500	A = 9" B = 9 7/8" C = 10 3/4" D = 11 5/8" AREA = 32.57	A = 8" B = 8 7/8" C = 9 3/4" D = 10 5/8" AREA = 30.15	A = 10 3/4" B = 11 5/8" C = 12 1/2" D = 13 3/8" AREA = 36.80	A = 14 3/4" B = 15 5/8" C = 16 1/2" D = 17 3/8" AREA = 46.46
<b>2</b> 500-1500	A = 9 1/2" B = 10 3/8" C = 11 1/4" D = 12 1/8" AREA = 33.78	A = 9" B = 9 7/8" C = 10 3/4" D = 11 5/8" AREA = 32.57	A = 11" B = 11 7/8" C = 12 3/4" D = 13 5/8" AREA = 37.40	A = 14 3/4" B = 15 5/8" C = 16 1/2" D = 17 3/8" AREA = 46.46
<b>3</b> 1500-3500	A = 10 1/2" B = 11 3/8" C = 12 1/4" D = 13 1/8" AREA = 36.19	A = 10" B = 10 7/8" C = 11 3/4" D = 12 5/8" AREA = 34.98	A = 12 1/4" B = 13 1/8" C = 14" D = 14 7/8" AREA = 40.42	A = 15 1/2" B = 16 3/8" C = 17 1/4" D = 18 1/8" AREA = 48.28

AREA = THE SQUARE FOOT AREA BELOW THE STRING LINE FOR EARTHWORK PURPOSES  
 NOTE: AREA DOES NOT INCLUDE THE UNDERDRAIN TRENCH.

32' SECTION WITH CONCRETE  
 COMBINED CURB & GUTTER  
 (RESIDENTIAL)

CITY OF COLUMBUS, OHIO  
 DEPARTMENT OF PUBLIC SERVICE  
 TRANSPORTATION DIVISION

STD DWG  
 2110

REV: 01/01/07

SHT 2 OF 3





# STANDARD

ADT	AA FD ASPHALT	BB CONCRETE	CC COMPOSITE	DD FLEXIBLE
<b>1</b> 0-500	A = 10 5/8" B = 11 5/8" C = 12 5/8" D = 13 5/8" AREA = 40.98	A = 8 5/8" B = 9 5/8" C = 10 5/8" D = 11 5/8" AREA = 34.10	A = 10 3/8" B = 11 3/8" C = 12 3/8" D = 13 3/8" AREA = 40.29	A = 14 5/8" B = 15 5/8" C = 16 5/8" D = 17 5/8" AREA = 51.98
<b>2</b> 500-1500	A = 11 1/8" B = 12 1/8" C = 13 1/8" D = 14 1/8" AREA = 42.35	A = 8 5/8" B = 9 5/8" C = 10 5/8" D = 11 5/8" AREA = 35.48	A = 10 7/8" B = 11 7/8" C = 12 7/8" D = 13 7/8" AREA = 41.67	A = 15 1/8" B = 16 1/8" C = 17 1/8" D = 18 1/8" AREA = 53.35
<b>3</b> 1500-3500	A = 12 5/8" B = 13 5/8" C = 14 5/8" D = 15 5/8" AREA = 46.48	A = 10 1/8" B = 11 1/8" C = 12 1/8" D = 13 1/8" AREA = 39.60	A = 12 3/8" B = 13 3/8" C = 14 3/8" D = 15 3/8" AREA = 45.79	A = 16 5/8" B = 17 5/8" C = 18 5/8" D = 19 5/8" AREA = 57.59

# SOIL STABILIZED

ADT	EE FD ASPHALT	FF CONCRETE	GG COMPOSITE	HH FLEXIBLE
<b>1</b> 0-500	A = 8 5/8" B = 9 5/8" C = 10 5/8" D = 11 5/8" AREA = 35.48	A = 7 5/8" B = 8 5/8" C = 9 5/8" D = 10 5/8" AREA = 32.73	A = 10 3/8" B = 11 3/8" C = 12 3/8" D = 13 3/8" AREA = 40.29	A = 14 3/8" B = 15 3/8" C = 16 3/8" D = 17 3/8" AREA = 51.29
<b>2</b> 500-1500	A = 9 1/8" B = 10 1/8" C = 11 1/8" D = 12 1/8" AREA = 36.85	A = 8 5/8" B = 9 5/8" C = 10 5/8" D = 11 5/8" AREA = 35.48	A = 10 5/8" B = 11 5/8" C = 12 5/8" D = 13 5/8" AREA = 40.98	A = 14 3/8" B = 15 3/8" C = 16 3/8" D = 17 3/8" AREA = 51.29
<b>3</b> 1500-3500	A = 10 1/8" B = 11 1/8" C = 12 1/8" D = 13 1/8" AREA = 39.60	A = 9 5/8" B = 10 5/8" C = 11 5/8" D = 12 5/8" AREA = 38.23	A = 11 7/8" B = 12 7/8" C = 13 7/8" D = 14 7/8" AREA = 44.42	A = 15 1/8" B = 16 1/8" C = 17 1/8" D = 18 1/8" AREA = 53.35

AREA = THE SQUARE FOOT AREA BELOW THE STRING LINE FOR EARTHWORK PURPOSES  
 NOTE: AREA BELOW DOES NOT INCLUDE THE UNDERDRAIN TRENCH.

36' SECTION WITH CONCRETE  
 COMBINED CURB & GUTTER  
 (RESIDENTIAL COLLECTOR)

CITY OF COLUMBUS, OHIO  
 DEPARTMENT OF PUBLIC SERVICE  
 TRANSPORTATION DIVISION

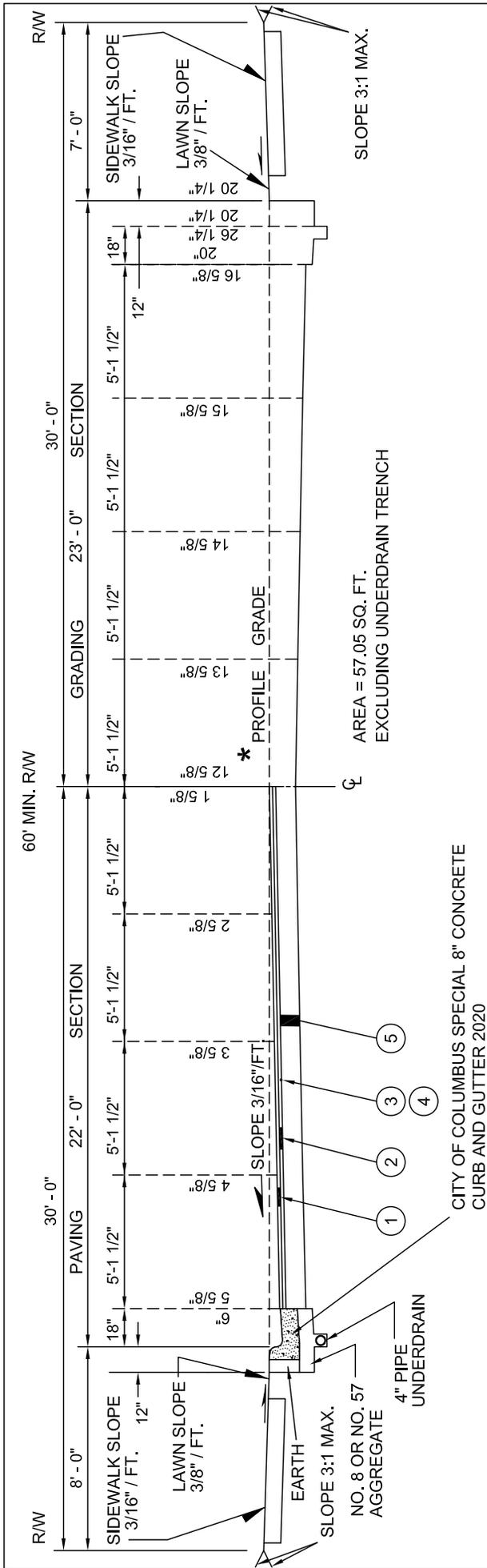
STD DWG

2115

REV: 01/01/07

SHT 2 OF 3





NOTE: BACK OF WALK IS GENERALLY 12" FROM R/W

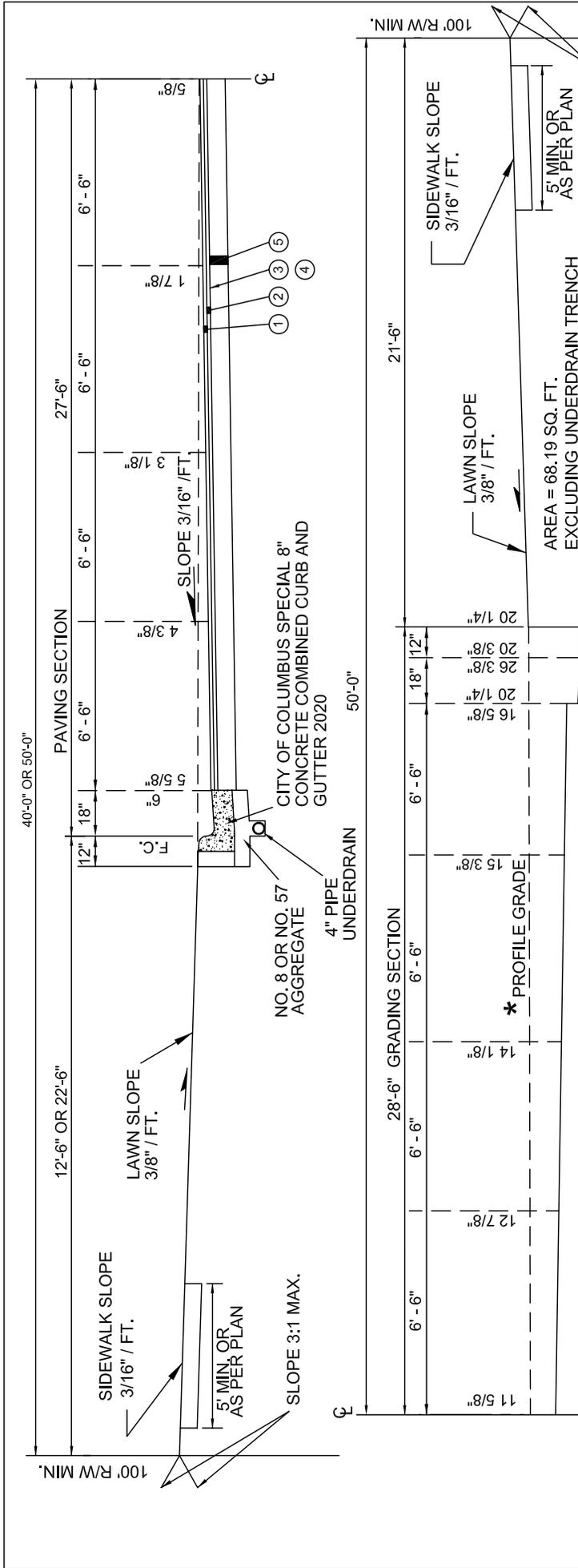
THE PEDESTRIAN WALK WAY, AT LEAST 7' WIDE, BETWEEN OPPOSING RAMPS SHALL HAVE A CROSS-SLOPE (THE LONGITUDINAL STREET SLOPE) OF NO GREATER THAN 1.56%.

"AREA" REFERS TO THE SPACE BELOW THE STRING LINE FROM THE TOP OF CURB ON EACH SIDE OF THE ROAD DOWN TO THE GRADING LIMITS.

- ① 1 1/4" HOT MIXED, HOT LAID ASPHALT CONCRETE, ITEM 404 OR ITEM 416
- ② 1 3/4" HOT MIXED, HOT LAID ASPHALT CONCRETE, ITEM 402 OR ITEM 416
- ③ TACK COAT, ITEM 407 BITUMINOUS MATERIAL, 702.02 RC-70, RC-250 OR 702.04 RS-1, RS-2 OR MS-2, APPLIED AT A RATE OF 0.1 GAL. PER SQ. YD.
- ④ COVER AGGREGATE CONSISTING OF CRUSHED GRAVEL OR LIMESTONE SIZE NO. 9, APPLIED AT A RATE OF 0.0026 TONS PER SQ. YD.
- ⑤ 8" PORTLAND CEMENT CONCRETE BASE - ARTERIAL, ITEM 305

\* FOR STANDARD CURB AND GUTTER, THE PROFILE GRADE AND STRING LINE ELEVATIONS ARE THE SAME.

<h2 style="margin: 0;">44' SECTION WITH SPECIAL 8" CONCRETE COMBINED CURB &amp; GUTTER</h2>	
CITY OF COLUMBUS, OHIO DEPARTMENT OF PUBLIC SERVICE TRANSPORTATION DIVISION	<b>STD DWG</b>  <b>2120</b>
 CITY ENGINEER	REV: 01/01/07  SHT 1 OF 1



NOTE: BACK OF WALK IS GENERALLY 12" FROM R/W

THE PEDESTRIAN WALK WAY, AT LEAST 7' WIDE, BETWEEN OPPOSING RAMPS SHALL HAVE A CROSS-SLOPE (THE LONGITUDINAL STREET SLOPE) OF NO GREATER THAN 1.56%.

"AREA" REFERS TO THE SPACE BELOW THE STRING LINE FROM THE TOP OF CURB ON EACH SIDE OF THE ROAD DOWN TO THE GRADING LIMITS.

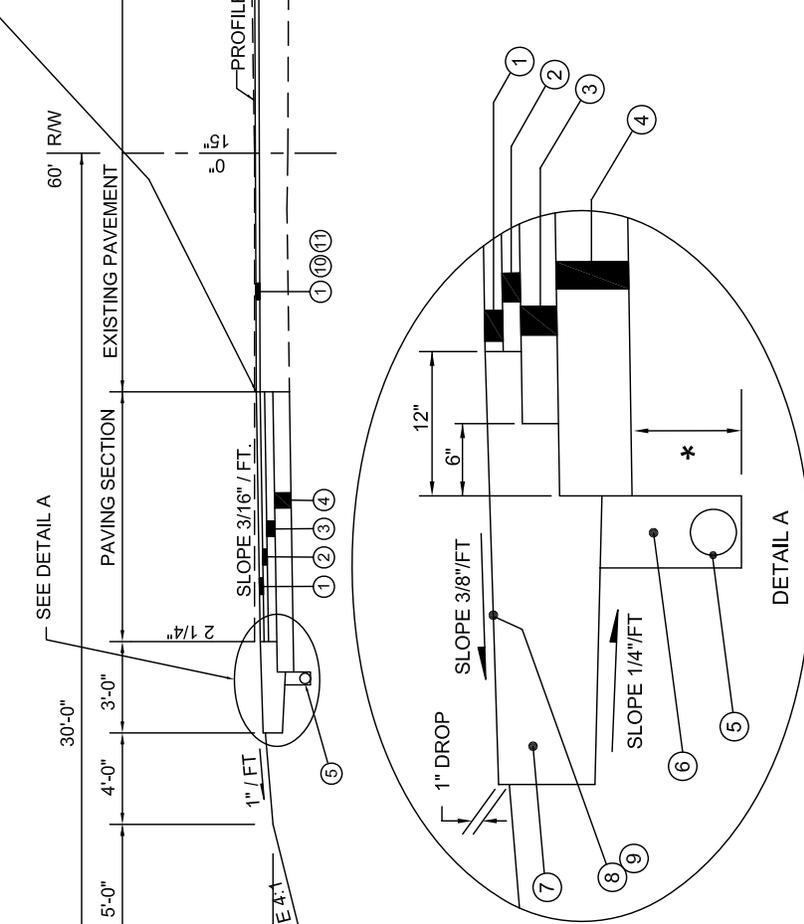
- ① 1-1/4" HOT MIXED, HOT LAID ASPHALT CONCRETE, ITEM 404 OR ITEM 416
- ② 1-3/4" HOT MIXED, HOT LAID ASPHALT CONCRETE, ITEM 402 OR ITEM 416
- ③ TACK COAT, ITEM 407 BITUMINOUS MATERIAL, 702.02, RC-70, RC-250 OR 702.04 RS-1, RS-2 OR MS-2, APPLIED AT A RATE OF 0.1 GAL. PER SQ. YD.
- ④ COVER AGGREGATE CONSISTING OF CRUSHED GRAVEL OR LIMESTONE SIZE NO. 9, APPLIED AT A RATE OF 0.0026 TONS PER SQ. YD.
- ⑤ 8" PORTLAND CEMENT CONCRETE BASE - ARTERIAL, ITEM 305

\* FOR SPECIAL 8" CURB AND GUTTER, THE PROFILE GRADE AND STRING LINE ELEVATIONS ARE THE SAME.

<h2 style="margin: 0;">55' SECTION WITH SPECIAL 8" CONCRETE COMBINED CURB &amp; GUTTER</h2>	
<p style="text-align: center; font-size: small;">CITY OF COLUMBUS, OHIO DEPARTMENT OF PUBLIC SERVICE TRANSPORTATION DIVISION</p>	<p style="font-size: x-large; font-weight: bold; margin: 0;">STD DWG 2125</p>
<p style="font-size: x-large; font-family: cursive; margin: 0;">[Signature]</p> <p style="font-size: small; margin: 0;">CITY ENGINEER</p>	<p style="font-size: small; margin: 0;">REV: 01/01/07</p> <p style="font-size: small; margin: 0;">SHT 1 OF 1</p>

FULL DEPTH SAWCUT OF EXISTING PAVEMENT TO CREATE A STRAIGHT EDGE FOR NEW PAVEMENT CONNECTION. VERTICAL EDGE SHALL HAVE TACK COAT, ITEM 407, APPLIED.

METHOD 'A' IS TO BE USED IF THERE ARE CATCH BASINS IN THE DITCH LINE TO TIE THE 4" UNDERDRAIN INTO, OR IF THE ELEVATION OF THE PROPOSED DITCH IS LOWER THAN THE ELEVATION OF THE 4" UNDERDRAIN. SEE SHT 2 FOR METHOD B



- METHOD "A"  
\* 6" MIN. 12" MAX.
- ① 1 1/2" HOT MIXED, HOT LAID ASPHALT CONCRETE, ITEM 404 OR 416
  - ② 1 1/2" HOT MIXED, HOT LAID ASPHALT CONCRETE, ITEM 404 (OR 402 OR 416)
  - ③ 3" BITUMINOUS AGGREGATE BASE, ITEM 301
  - ④ 6" CRUSHED AGGREGATE BASE, ITEM 304
  - ⑤ 4" PIPE UNDERDRAIN, ITEM 605
  - ⑥ NO. 8 OR NO. 57 AGGREGATE
  - ⑦ 8" AGGREGATE BERM, ITEM 304
  - ⑧ BITUMINOUS PRIME COAT, ITEM 408, 702.02, RC-250, MC-30, MC-70 OR MC-250 (APPLIED AT 0.40 GAL. PER SQ. YD.)
  - ⑨ SEAL COAT, ITEM 409, 702.02, RC-250, MC-800, MC-3000, 702.03, CBAE-800 OR 702.04, RS-1, RS-2, CRS-1, CRS-2 (USING 0.30 GAL. BITUMINOUS MATERIAL PER SQ. YD.) AND .008 CU. YD. COVER AGGREGATE PER SQ. YD.
  - ⑩ 1 1/2" PAVEMENT PLANING, ITEM 254
  - ⑪ TACK COAT, ITEM 407
  - ⑫ SEEDING AND MULCHING, ITEM 659

NOTES

C.O.C. POLICY IS TO INCLUDE SIDEWALKS ON ALL PROJECTS, ALTHOUGH NOT SHOWN HERE THEY WOULD TYPICALLY BE REQUIRED FOR WIDENING PROJECTS.

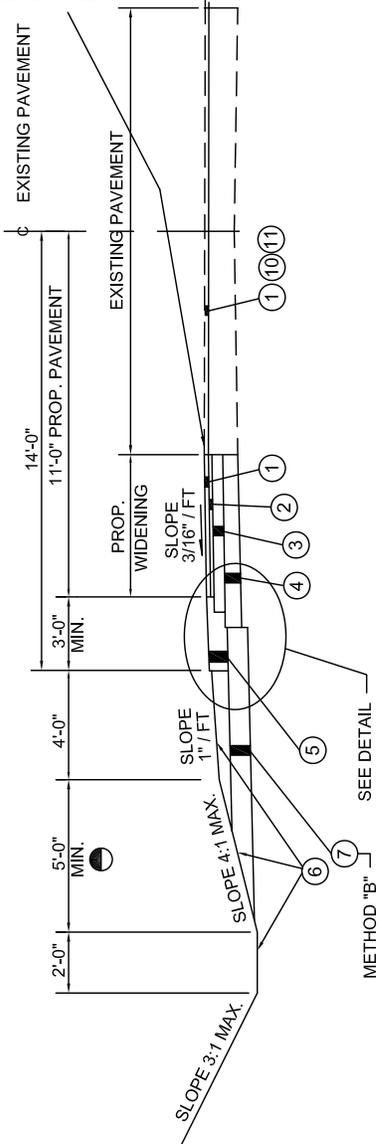
ALL WIDENING OPERATIONS SHALL INCLUDE A FULL WIDTH (EDGE OF PAVEMENT TO OTHER EDGE OF PAVEMENT) MILL & FILL OF THE EXISTING PAVEMENT FOR THE COMPLETE LENGTH OF THE WIDENING.

<b>WIDENING OF EXISTING PAVEMENT TO MINIMUM 22' WIDTH</b>	
CITY OF COLUMBUS, OHIO DEPARTMENT OF PUBLIC SERVICE TRANSPORTATION DIVISION	<b>STD DWG 2130</b>
CITY ENGINEER, 	REV: 01/01/07
	SHT 1 OF 3

RM

RM

FULL DEPTH SAWCUT OF EXISTING PAVEMENT TO CREATE A STRAIGHT EDGE FOR NEW PAVEMENT CONNECTION. VERTICAL EDGE SHALL HAVE TACK COAT, ITEM 407, APPLIED.

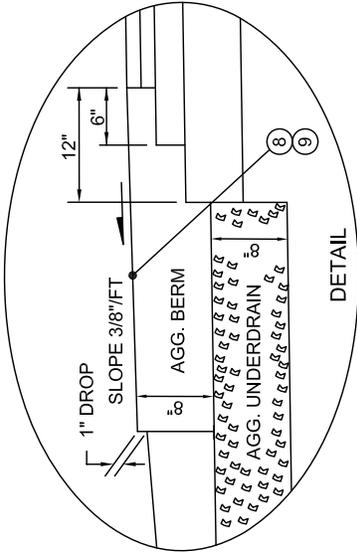


● VARY IN DESIGN STAGE TO MEET THE CONDITION ON THE SITE.

METHOD "A" TO BE USED WHEN POSSIBLE. METHOD "B" AS ALTERNATE.

SEE STANDARD DRAWING 2130 SHT 1 OF 3 FOR DETAIL OF METHOD "A"

EXISTING FIRE HYDRANTS SHALL BE ADJUSTED AND/OR RELOCATED TO 8'-0" OFF PROPOSED EDGE OF PAVEMENT



DETAIL  
METHOD "B"

NOTES:

C.O.C. POLICY IS TO INCLUDE SIDEWALKS ON ALL PROJECTS. ALTHOUGH NOT SHOWN HERE THEY WOULD TYPICALLY BE REQUIRED FOR ALL WIDENING PROJECTS.

ALL WIDENING OPERATIONS SHALL INCLUDE A FULL WIDTH (EDGE OF PAVEMENT TO OTHER EDGE OF PAVEMENT) MILL & FILL OF THE EXISTING PAVEMENT FOR THE COMPLETE LENGTH OF THE WIDENING.

- ① 1 1/2" HOT MIXED, HOT LAID ASPHALT CONCRETE, ITEM 404 OR 416
- ② 1 1/2" HOT MIXED, HOT LAID ASPHALT CONCRETE, ITEM 402 OR 416
- ③ 3" BITUMINOUS AGGREGATE BASE, ITEM 301
- ④ 6" CRUSHED AGGREGATE BASE, ITEM 304
- ⑤ 8" AGGREGATE BERM, ITEM 304
- ⑥ SEEDING AND MULCHING, ITEM 659
- ⑦ 8" AGGREGATE UNDERDRAIN, ITEM 605 (SPACED EVERY 50')
- ⑧ BITUMINOUS PRIME COAT, ITEM 408, 702.02, RC-250, MC-30 MC-70 OR MC-250 (APPLIED AT 0.40 GAL. PER SQ. YD.)
- ⑨ SEAL COAT, ITEM 409, 702.02, RC-250, RC-800, MC-800 MC-3000, 702.03, CBAE-800 OR 702.04, RS-1, RS-2, CRS-1, CRS-2 (USING 0.30 GAL. BITUMINOUS MATERIAL PER SQ. YD.) AND 0.008 CU. YD. COVER AGGREGATE PER SQ. YD.
- ⑩ 1 1/2" PAVEMENT PLANING, ITEM 254
- ⑪ TACK COAT, ITEM 407

# WIDENING OF EXISTING PAVEMENT TO 22' WIDTH

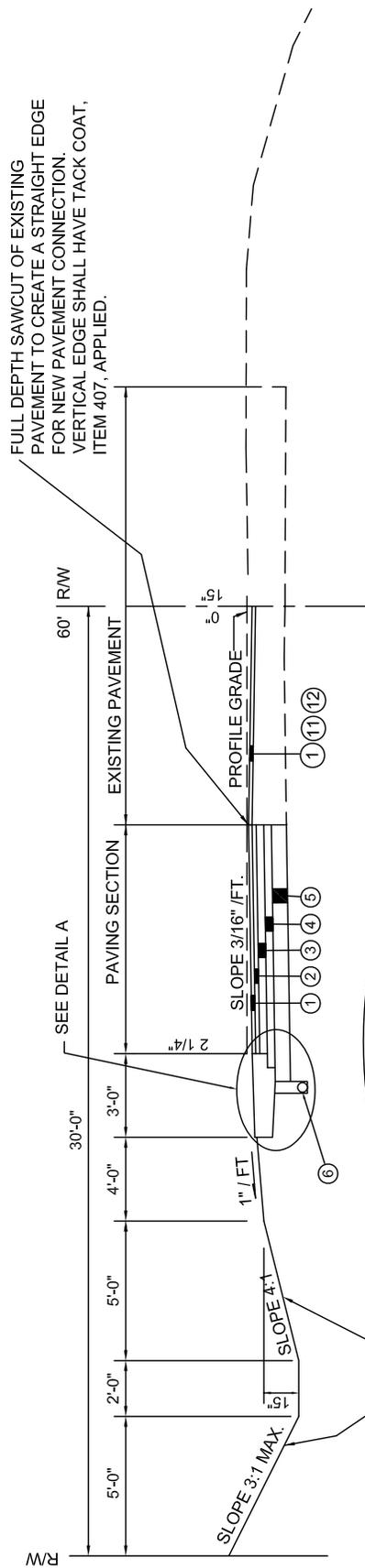
CITY OF COLUMBUS, OHIO  
DEPARTMENT OF PUBLIC SERVICE  
TRANSPORTATION DIVISION

STD DWG

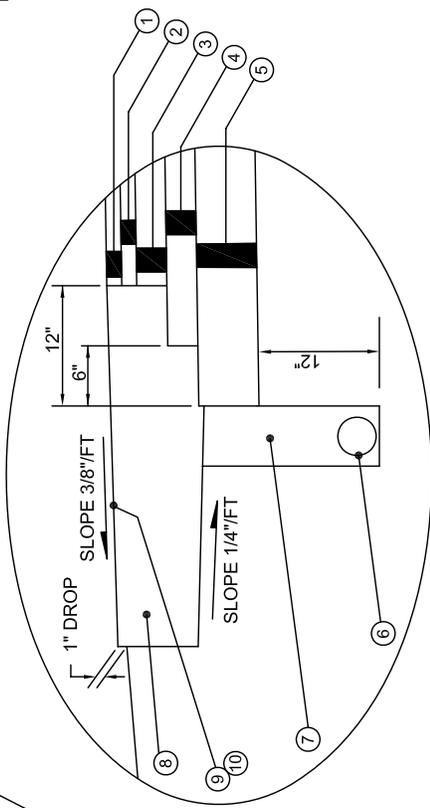
2130

REV: 01/01/07

SHT 2 OF 3



FULL DEPTH SAWCUT OF EXISTING PAVEMENT TO CREATE A STRAIGHT EDGE FOR NEW PAVEMENT CONNECTION. VERTICAL EDGE SHALL HAVE TACK COAT, ITEM 407, APPLIED.



DETAIL A

NOTES:

C.O.C. POLICY IS TO INCLUDE SIDEWALKS ON ALL PROJECTS, ALTHOUGH NOT SHOWN HERE THEY WOULD TYPICALLY BE REQUIRED FOR ALL WIDENING PROJECTS.

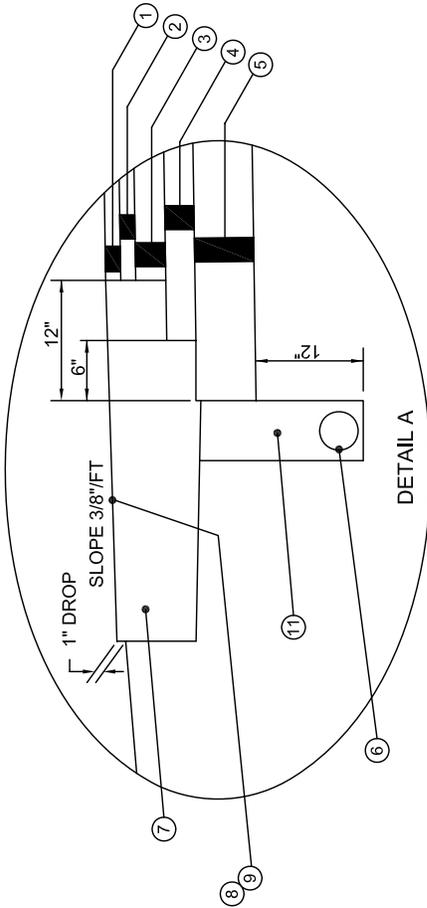
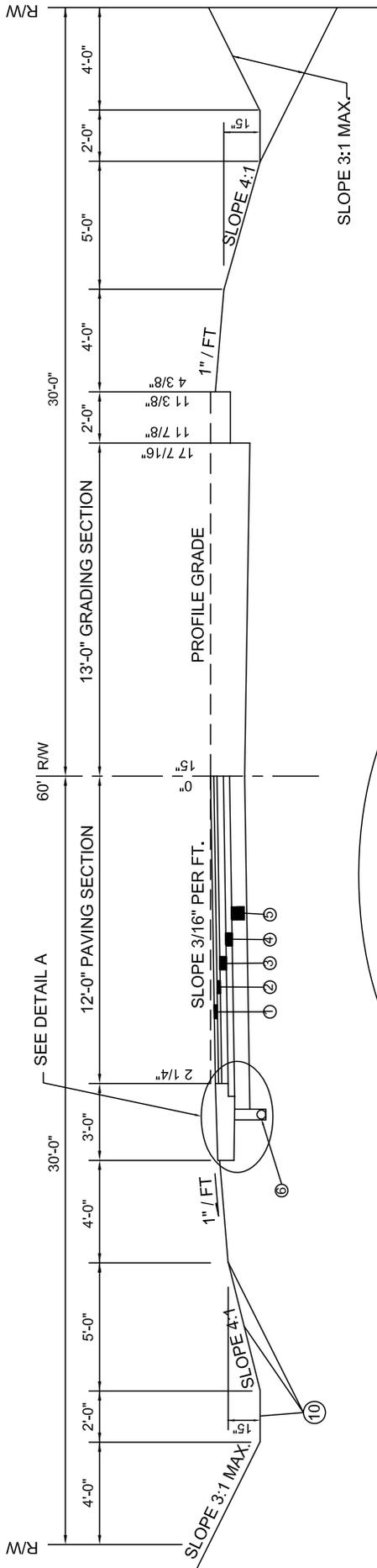
ALL WIDENING OPERATIONS SHALL INCLUDE A FULL WIDTH (EDGE OF PAVEMENT TO OTHER EDGE OF PAVEMENT) MILL & FILL OF THE EXISTING PAVEMENT FOR THE COMPLETE LENGTH OF THE WIDENING.

- ① 1 1/2" HOT MIXED, HOT LAID ASPHALT CONCRETE, ITEM 404 OR 416
- ② 1 1/2" HOT MIXED, HOT LAID ASPHALT CONCRETE, ITEM 404 (OR 402 OR 416)
- ③ 3" BITUMINOUS AGGREGATE BASE, ITEM 301
- ④ 3" BITUMINOUS AGGREGATE BASE, ITEM 301
- ⑤ 6" CRUSHED AGGREGATE BASE, ITEM 304
- ⑥ 4" PIPE UNDERDRAIN, ITEM 605
- ⑦ NO. 8 OR NO. 57 AGGREGATE
- ⑧ 8" AGGREGATE BERM, ITEM 304
- ⑨ BITUMINOUS PRIME COAT, ITEM 408, 702.02, RC-250, MC-30, MC-70 OR MC-250 (APPLIED AT 0.40 GAL. PER SQ. YD.)
- ⑩ SEAL COAT, ITEM 409, 702.02, RC-250, RC-800, MC-800, MC-3000, 702.03, CBAE-800 OR 702.04, RS-1, RS-2, CRS-1, CRS-2 (USING 0.30 GAL. BITUMINOUS MATERIAL PER SQ. YD.) AND .008 CU. YD. COVER AGGREGATE PER SQ. YD.
- ⑪ 1 1/2" PAVEMENT PLANING, ITEM 254
- ⑫ TACK COAT, ITEM 407
- ⑬ SEEDING AND MULCHING, ITEM 659

# WIDENING OF EXISTING PAVEMENT TO MINIMUM 22' WIDTH (ARTERIAL)

CITY OF COLUMBUS, OHIO  
DEPARTMENT OF PUBLIC SERVICE  
TRANSPORTATION DIVISION

STD DWG
<b>2130</b>
REV: 01/01/07
SHT 3 OF 3



- ① 1-1/2" HOT MIXED, HOT LAID ASPHALT CONCRETE, ITEM 404 OR 416
- ② 1-1/2" HOT MIXED, HOT LAID ASPHALT CONCRETE, ITEM 402 OR 416
- ③ 3" BITUMINOUS AGGREGATE BASE, ITEM 301
- ④ 3" BITUMINOUS AGGREGATE BASE, ITEM 301
- ⑤ 6" CRUSHED AGGREGATE BASE, ITEM 304
- ⑥ 4" PIPE UNDERDRAIN, ITEM 605
- ⑦ 8" AGGREGATE BERM, ITEM 304
- ⑧ BITUMINOUS PRIME COAT, ITEM 408, 702.02, RC-250, MC-30, MC-70 OR MC-250 (APPLIED AT 0.40 GAL. PER SQ. YD.)
- ⑨ SEAL COAT, ITEM 409, 702.02, RC-250, RC-800, MC-800, MC-3000, 702.03, CBAE-800 OR 702.04, RS-1, RS-2, CRS-1, CRS-2 (USING 0.30 GAL. BITUMINOUS MATERIAL PER. SQ. YD.) AND .008 CU. YD. COVER AGGREGATE PER SQ. YD.
- ⑩ SEEDING AND MULCHING, ITEM 659
- ⑪ NO. 8 OR NO. 57 AGGREGATE

C.O.C. POLICY IS TO INCLUDE SIDEWALKS ON ALL PROJECTS. ALTHOUGH NOT SHOWN HERE THEY WOULD TYPICALLY BE REQUIRED FOR THIS TYPE OF PROJECT.

# 24' FLEXIBLE PAVEMENT (INDUSTRIAL)

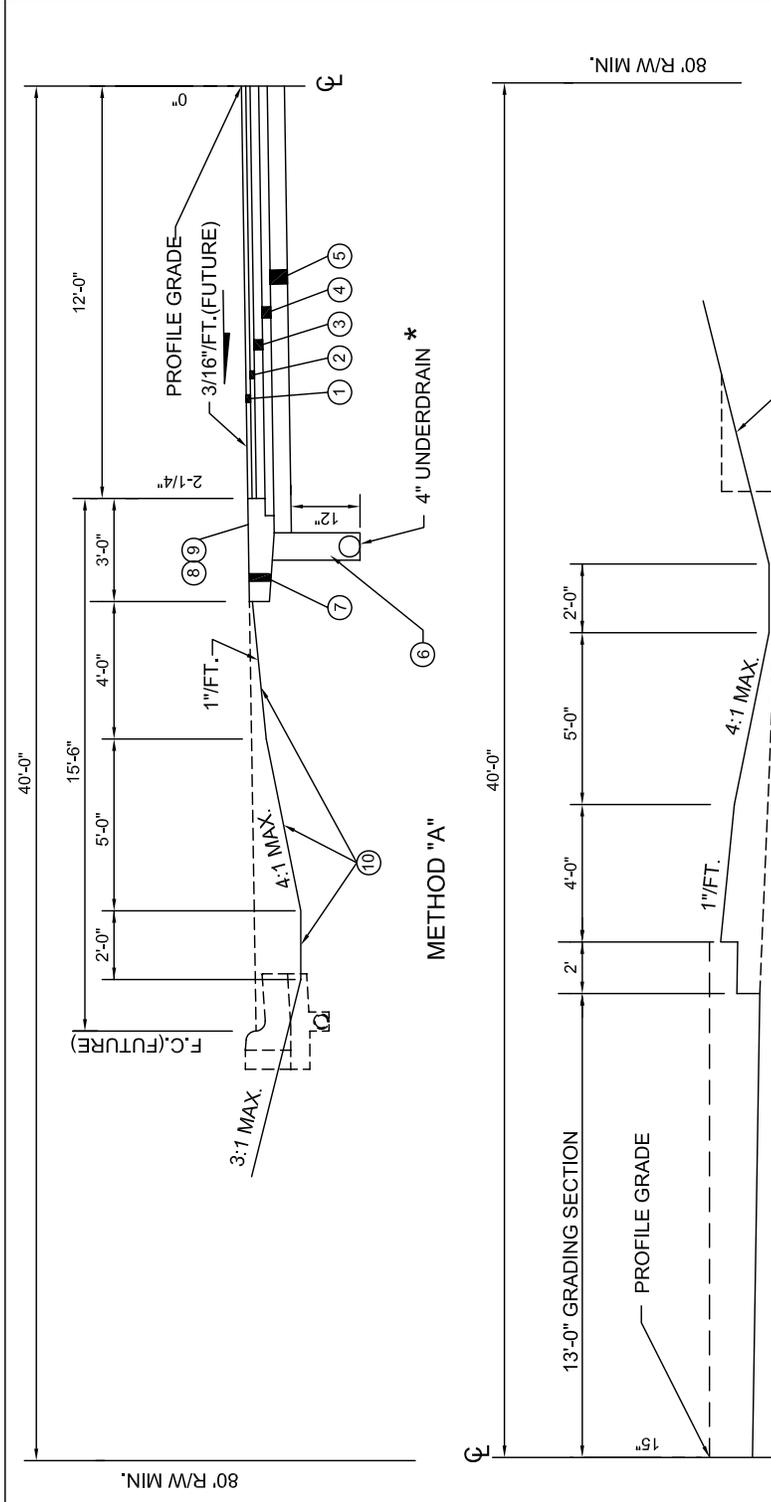
CITY OF COLUMBUS, OHIO  
DEPARTMENT OF PUBLIC SERVICE  
TRANSPORTATION DIVISION

CITY ENGINEER,

STD DWG  
2135

REV: 01/01/07

SHT 1 OF 1



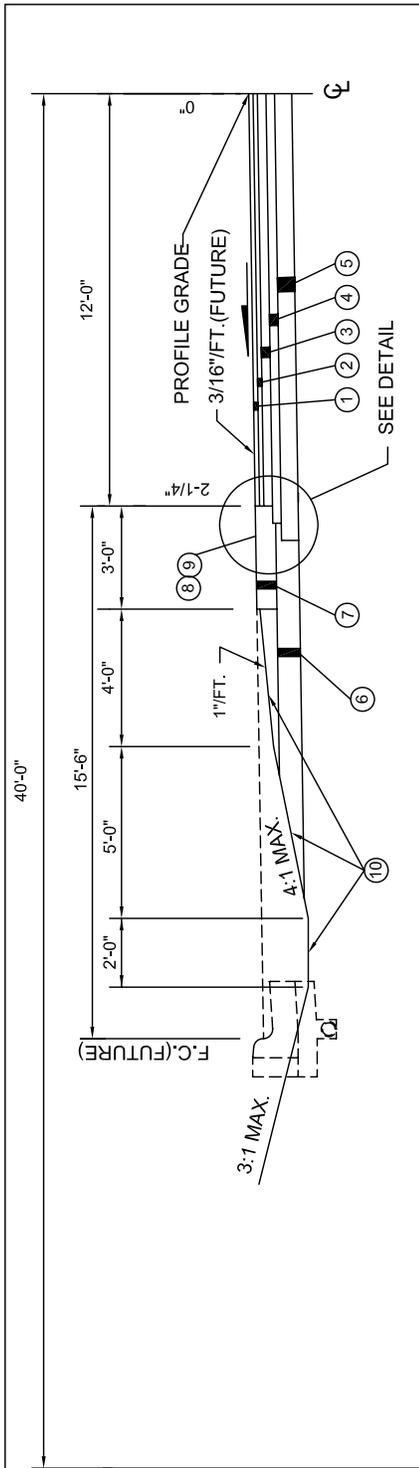
# 24' FLEXIBLE PAVEMENT WITH PROVISION FOR EXPANSION TO 55' FLEXIBLE PAVEMENT

CITY OF COLUMBUS, OHIO DEPARTMENT OF PUBLIC SERVICE TRANSPORTATION DIVISION		STD DWG <b>2140</b>
 CITY ENGINEER		REV: 01/01/07
		SHT 1 OF 2

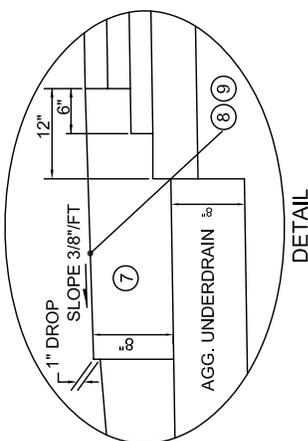
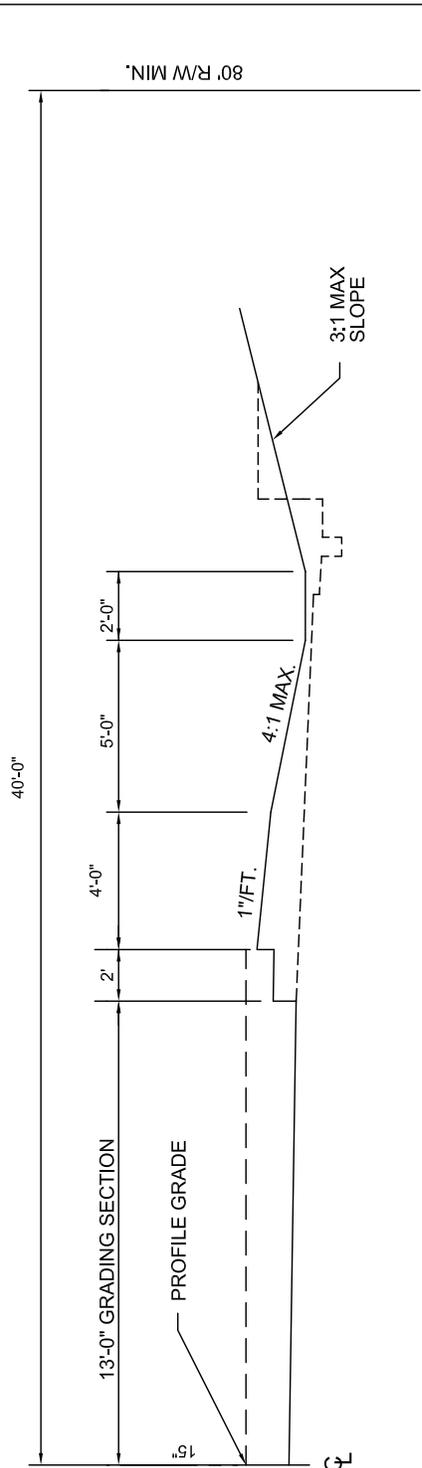
METHOD "A" TO BE USED WHEN POSSIBLE.  
METHOD "B" AS ALTERNATE.

- \* TO BE ON A GRADE AND DRAINED INTO DITCH OR STORM SEWER SYSTEM.
- ① 1-1/2" HOT MIXED, HOT LAID ASPHALT CONCRETE, ITEM 404 OR 416
  - ② 1-1/2" HOT MIXED, HOT LAID ASPHALT CONCRETE, ITEM 402 OR 416
  - ③ 3" BITUMINOUS AGGREGATE BASE, ITEM 301
  - ④ 3" BITUMINOUS AGGREGATE BASE, ITEM 301
  - ⑤ 6" CRUSHED AGGREGATE BASE, ITEM 304
  - ⑥ NO. 8 OR NO. 57 AGGREGATE
  - ⑦ 8" AGGREGATE BERM, ITEM 304
  - ⑧ BITUMINOUS PRIME COAT, ITEM 408, 702.02, RC-250, MC-30, MC-70 OR MC-250 (APPLIED AT 0.40 GAL. PER SQ. YD.)
  - ⑨ SEAL COAT, ITEM 409, 702.02, RC-250, MC-800, MC-3000, 702.03, CBAE-800 OR 702.04, RS-1, RS-2, CRS-1, CRS-2 (USING 0.30 GAL. BITUMINOUS MATERIAL PER SQ. YD.) AND .008 CU. YD. COVER AGGREGATE PER SQ. YD.
  - ⑩ SEEDING AND MULCHING - ITEM 659

C.O.C. POLICY IS TO INCLUDE SIDEWALKS ON ALL PROJECTS. ALTHOUGH NOT SHOWN HERE THEY WOULD TYPICALLY BE REQUIRED FOR THIS TYPE OF PROJECT.



METHOD "B"

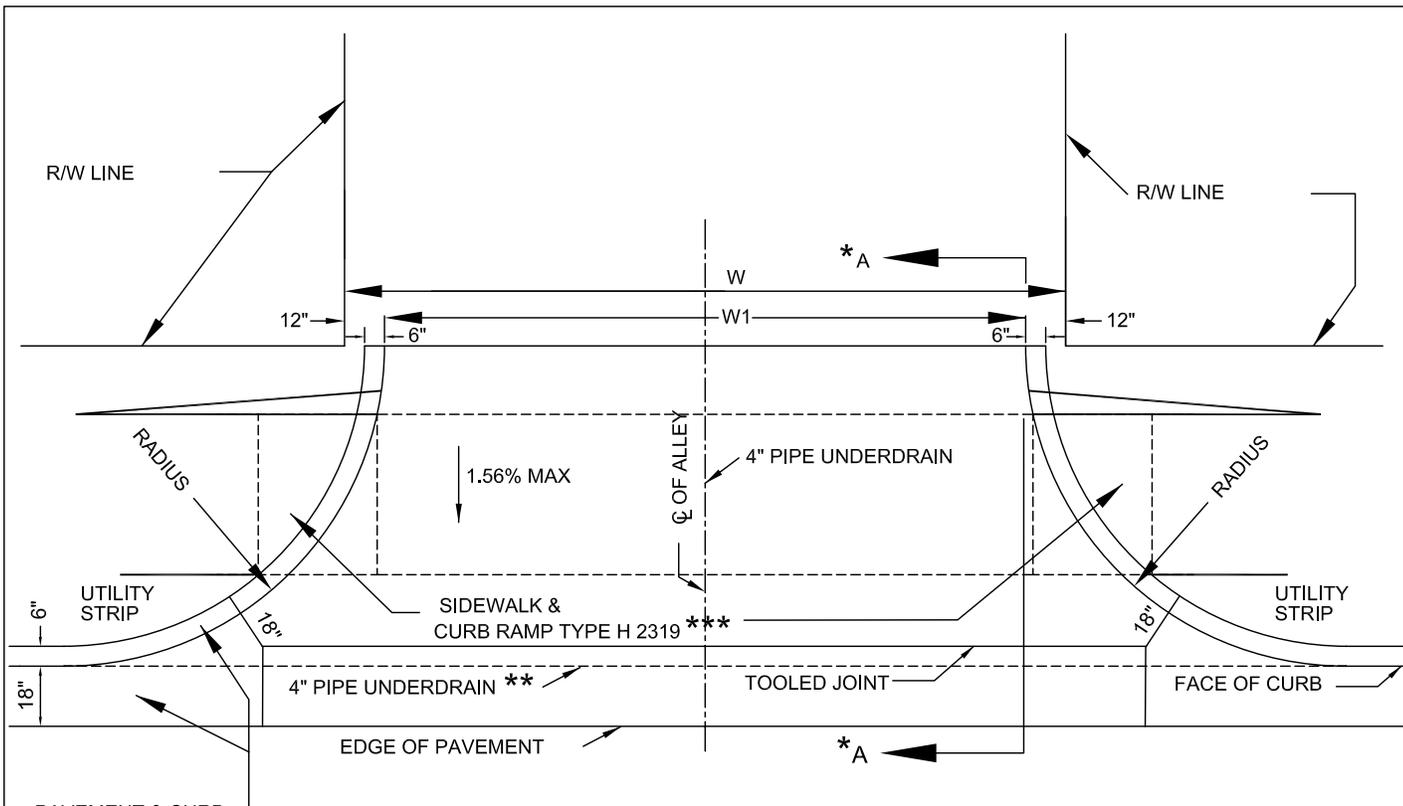


DETAIL

METHOD "A" TO BE USED WHEN POSSIBLE.  
METHOD "B" AS ALTERNATE.

- ① 1-1/2" HOT MIXED, HOT LAID ASPHALT CONCRETE, ITEM 404 OR 416
- ② 1-1/2" HOT MIXED, HOT LAID ASPHALT CONCRETE, ITEM 402 OR 416
- ③ 3" BITUMINOUS AGGREGATE BASE, ITEM 301
- ④ 3" BITUMINOUS AGGREGATE BASE, ITEM 301
- ⑤ 6" CRUSHED AGGREGATE BASE, ITEM 304
- ⑥ 8" AGGREGATE UNDERDRAIN, ITEM 605 (SPACED EVERY 25' ALTERNATE SIDES AND AT SUMPS)
- ⑦ 8" AGGREGATE BERM, ITEM 304
- ⑧ BITUMINOUS PRIME COAT, ITEM 408, 702.02, RC-250, MC-30, MC-70 OR MC-250 (APPLIED AT 0.40 GAL. PER SQ. YD.)
- ⑨ SEAL COAT, ITEM 409, 702.02, RC-250, RC-800, MC-800, MC-3000, 702.03, CBAE-800 OR 702.04, RS-1, RS-2, CRS-1, CRS-2 (USING 0.30 GAL. BITUMINOUS MATERIAL PER SQ. YD.) AND .008 CU. YD. COVER AGGREGATE PER SQ. YD.
- ⑩ SEEDING AND MULCHING - ITEM 659

<b>24' FLEXIBLE PAVEMENT WITH PROVISION FOR EXPANSION TO 55' FLEXIBLE PAVEMENT</b>	
CITY OF COLUMBUS, OHIO DEPARTMENT OF PUBLIC SERVICE TRANSPORTATION DIVISION	<b>STD DWG</b> <b>2140</b>
	REV: 01/01/07
	SHT 2 OF 2



PAVEMENT & CURB  
POURED INTEGRAL  
(BOTH SIDES)

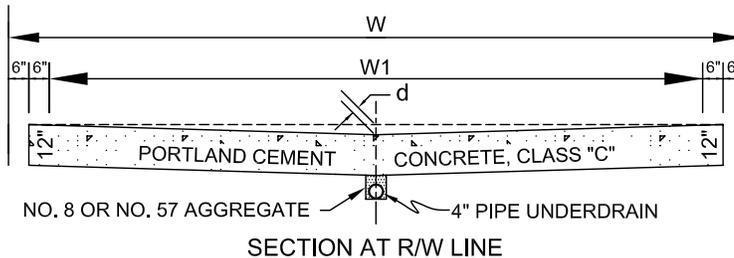
- \* SEE PAGE 3 OF 3 FOR SECTION AA
- \*\* MAINTAIN CONCRETE GUTTER AND 4" UNDERDRAIN
- \*\*\* IF SIDEWALK IS BUILT AT GRADE THEN ONLY DETECTABLE WARNINGS ARE REQUIRED.

NOTE: FOR JOINT DETAILS SEE STD DWG 2170

RAISED EDGE OR CURB ON ALLEY SECTION WILL BE INCLUDED IN THE AREA OF CONCRETE PAVING AND PAID FOR UNDER THIS ITEM.

W	W1	d
15'	13'	2 3/4"
16'	12'	2 1/2"
16'	14'	3"
18'	16'	3 1/4"
20'	18'	3 1/2"
26'	20'	3 3/4"

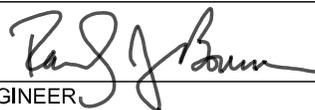
d = DISTANCE FROM STRINGLINE TO CENTERLINE INVERT.



## TYPICAL ALLEY INTERSECTION TYPE I (CURB & GUTTER) ITEM 452

CITY OF COLUMBUS, OHIO  
DEPARTMENT OF PUBLIC SERVICE  
TRANSPORTATION DIVISION

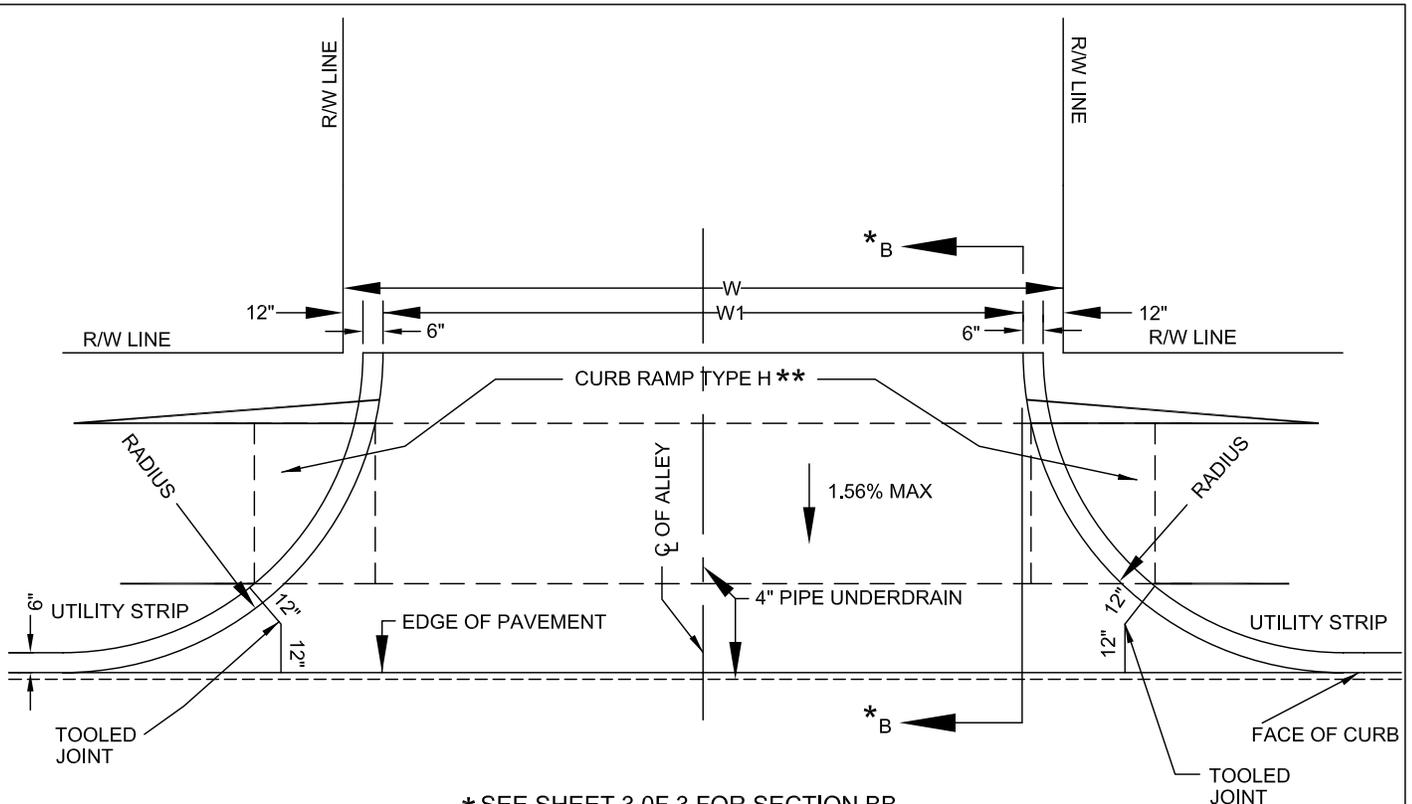
CITY ENGINEER



STD DWG  
**2150**

REV: 01/01/07

SHT 1 OF 3



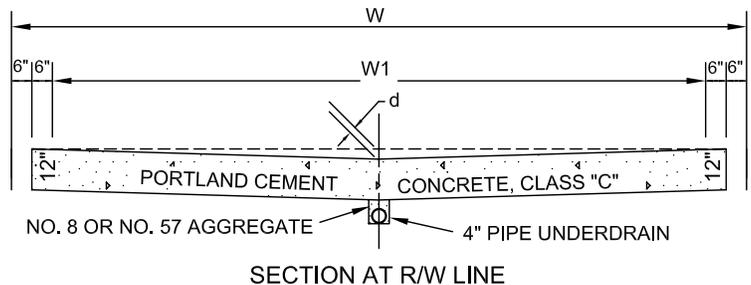
\* SEE SHEET 3 OF 3 FOR SECTION BB

\*\* IF SIDEWALK IS BUILT AT GRADE THEN ONLY DETECTABLE WARNINGS ARE REQUIRED.

RAISED EDGE OR CURB ON ALLEY SECTION WILL BE INCLUDED IN THE AREA OF CONCRETE PAVING AND PAID FOR UNDER THIS ITEM.

NOTE: FOR JOINT DETAILS SEE STD DWG 2170

W	W1	d
15'	13'	2 3/4"
16'	12'	2 1/2"
16'	14'	3"
18'	16'	3 1/4"
20'	18'	3 1/2"
26'	20'	3 3/4"



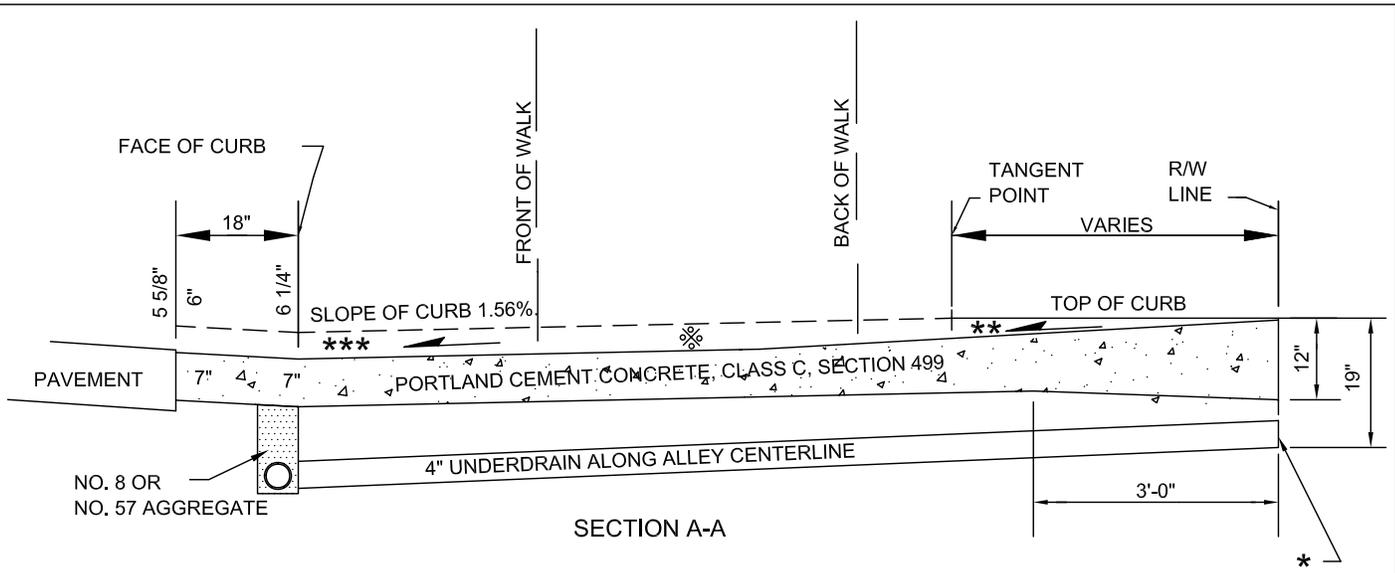
## TYPICAL ALLEY INTERSECTION TYPE II (STRAIGHT CURB) ITEM 452

CITY OF COLUMBUS, OHIO  
DEPARTMENT OF PUBLIC SERVICE  
TRANSPORTATION DIVISION

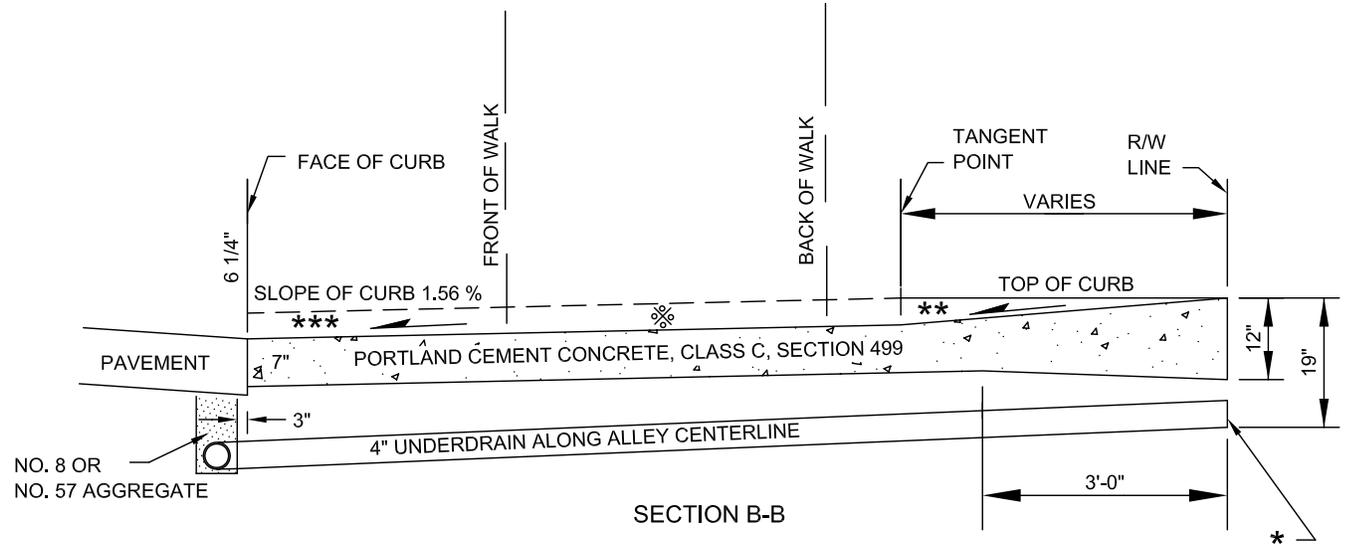
STD DWG  
**2150**

REV: 01/01/07

SHT 2 OF 3



SECTION A-A

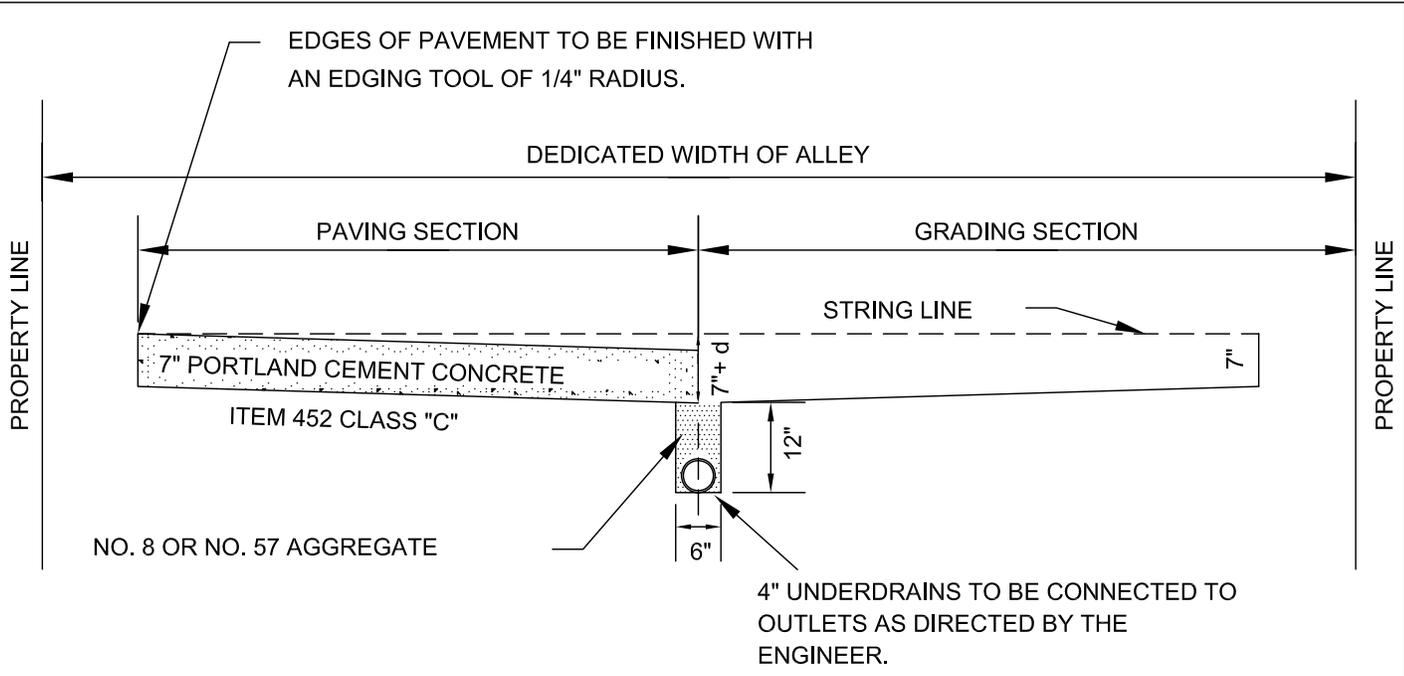


SECTION B-B

- ⊗ TOP OF PAVEMENT SHALL HAVE 1.56% MAX SLOPE FOR SIDEWALK AREA.
- \* CAP END IF NOT CONNECTED TO UNDERDRAIN AT TIME OF CONSTRUCTION.
- \*\* SLOPE VARIES
- \*\*\* TOP OF PAVEMENT 8% MAX SLOPE FROM GUTTER TO FRONT OF WALK.

## TYPICAL ALLEY INTERSECTION TYPE I & TYPE II ITEM 452

CITY OF COLUMBUS, OHIO DEPARTMENT OF PUBLIC SERVICE TRANSPORTATION DIVISION	STD DWG <b>2150</b> REV: 01/01/07 SHT 3 OF 3
---	---



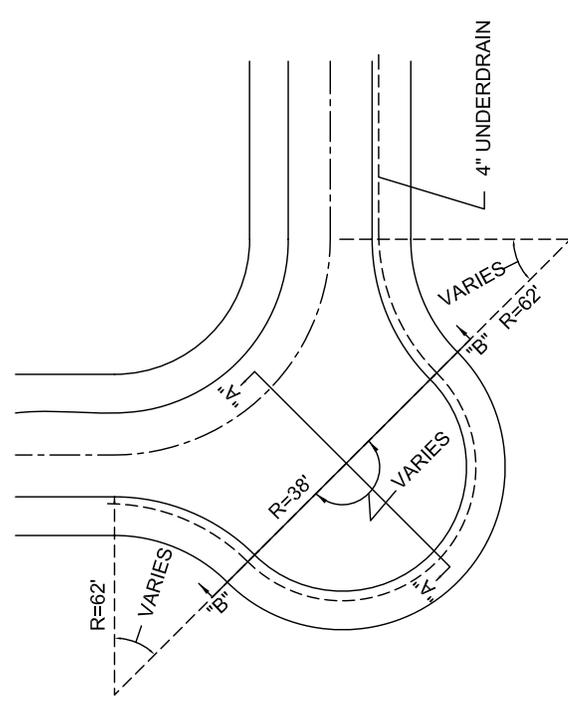
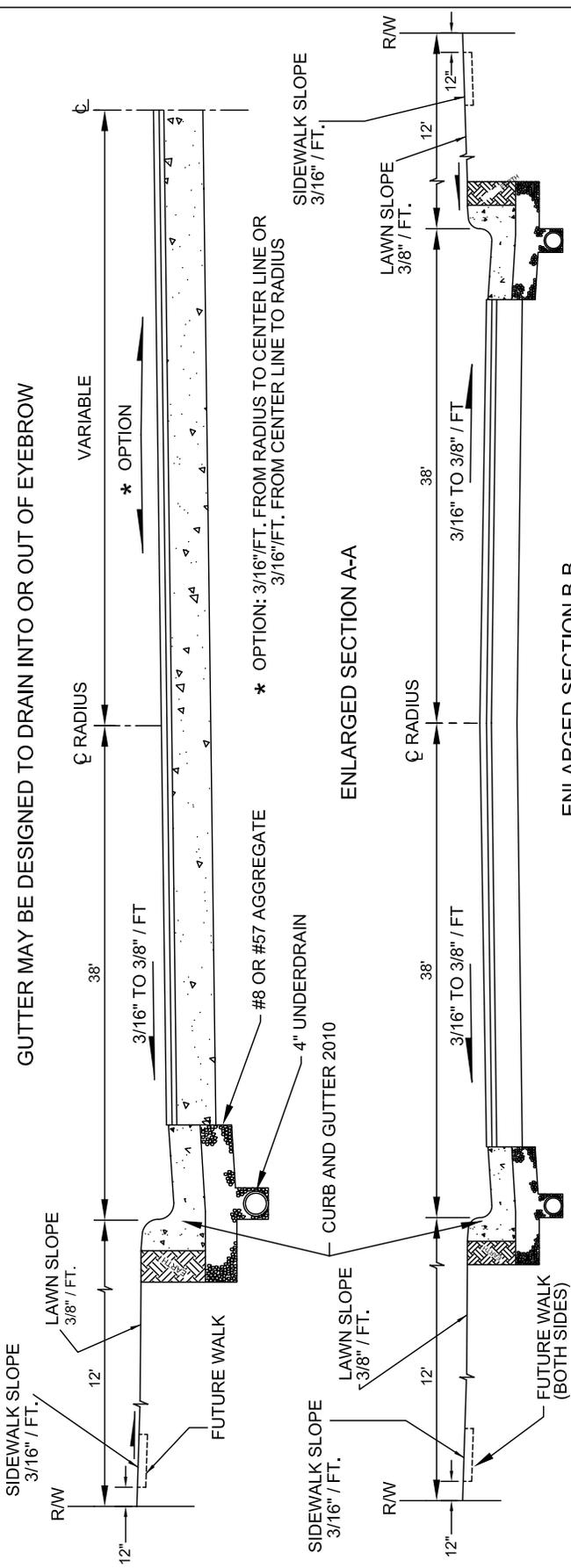
NOTE: FOR JOINT DETAILS SEE DWG. 2170 DR. A

R/W WIDTH	PAVING WIDTH	"d"	AREA BELOW STRING LINE (EXCLUDING UNDERDRAIN TRENCH)
15'	13'	2 3/4"	9.07 SQ. FT.
16'	12'	2 1/2"	9.62 SQ. FT.
16'	14'	3"	9.92 SQ. FT.
18'	16'	3 1/4"	11.50 SQ. FT.
20'	18'	3 1/2"	13.13 SQ. FT.
OVER 20'	20'	3 3/4"	14.79 SQ. FT.
OVER 24'	24'	4 1/2"	18.50 SQ. FT.

## TYPICAL ALLEY PAVING SECTION ITEM 452

CITY OF COLUMBUS, OHIO DEPARTMENT OF PUBLIC SERVICE TRANSPORTATION DIVISION	<b>STD DWG</b>  <b>2151</b>
CITY ENGINEER	REV: 01/01/07  SHT 1 OF 1

GUTTER MAY BE DESIGNED TO DRAIN INTO OR OUT OF EYEBROW



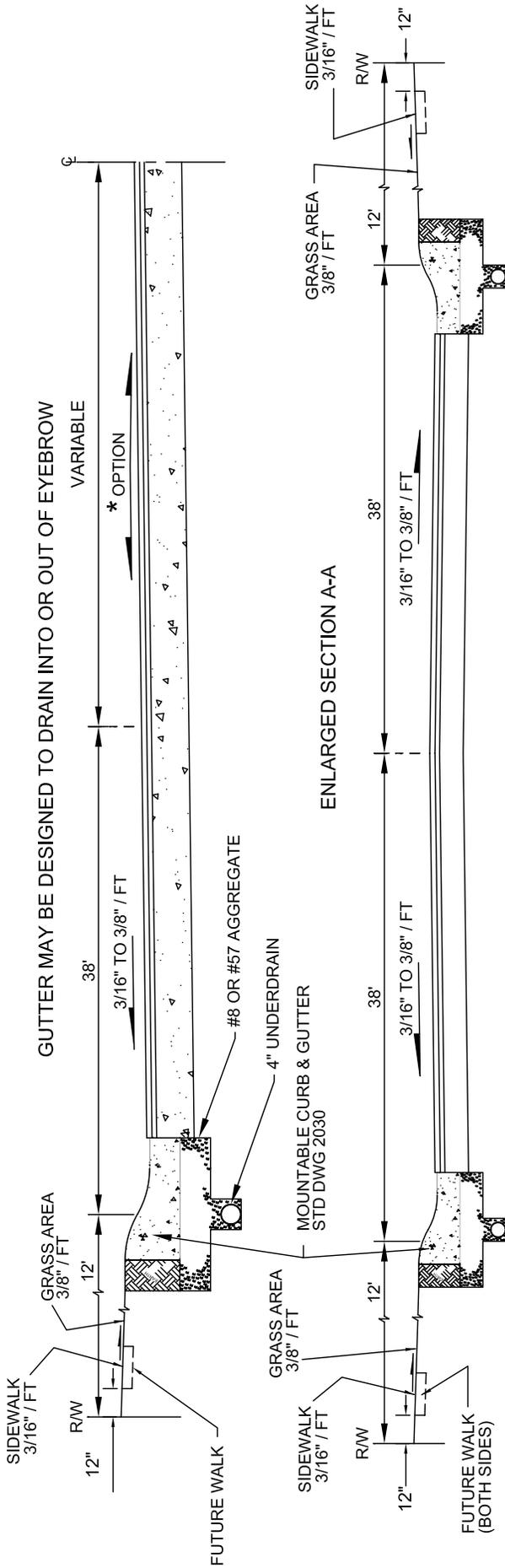
PLAN VIEW

SAWED CONTRACTION JOINTS SHALL BE SPACED 18' APART AS DIRECTED BY THE ENGINEER. SEE DWG. 2154 3/3.

THE TYPE OF CURB AROUND THE EYEBROW SHALL BE THE SAME AS THE TYPE USED ON THE ADJACENT STREET.

CROSS-SECTION OF PAVEMENT SHALL BE THE SAME AS THE PAVEMENT ON THE ADJACENT STREET.

<h1>EYEBROW TYPICAL SECTION</h1>	
CITY OF COLUMBUS, OHIO DEPARTMENT OF PUBLIC SERVICE TRANSPORTATION DIVISION	<b>STD DWG 2154</b>
CITY ENGINEER, 	REV: 01/01/07
	SHT 1 OF 3

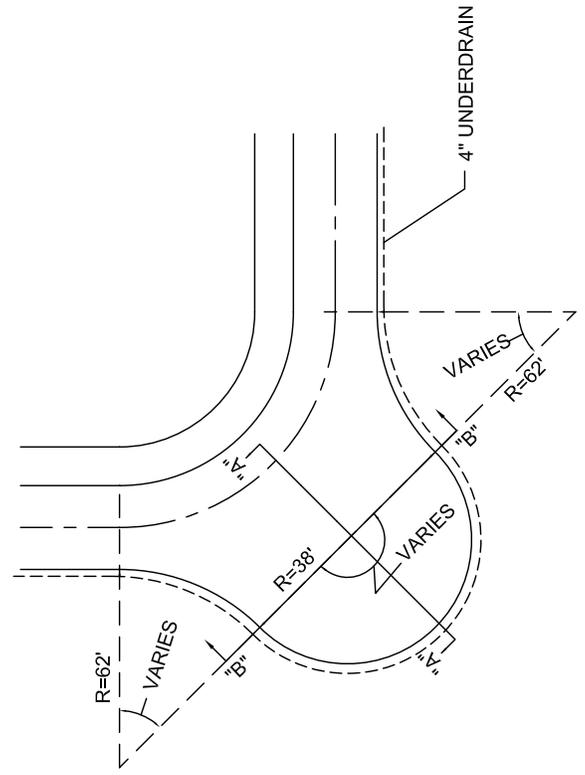


ENLARGED SECTION A-A

ENLARGED SECTION B-B

SAWED CONTRACTION JOINTS SHALL BE SPACED 18' APART AS DIRECTED BY THE ENGINEER. SEE DWG. 2154 3/3.

\* OPTION: 3/16\"/>



PLAN VIEW

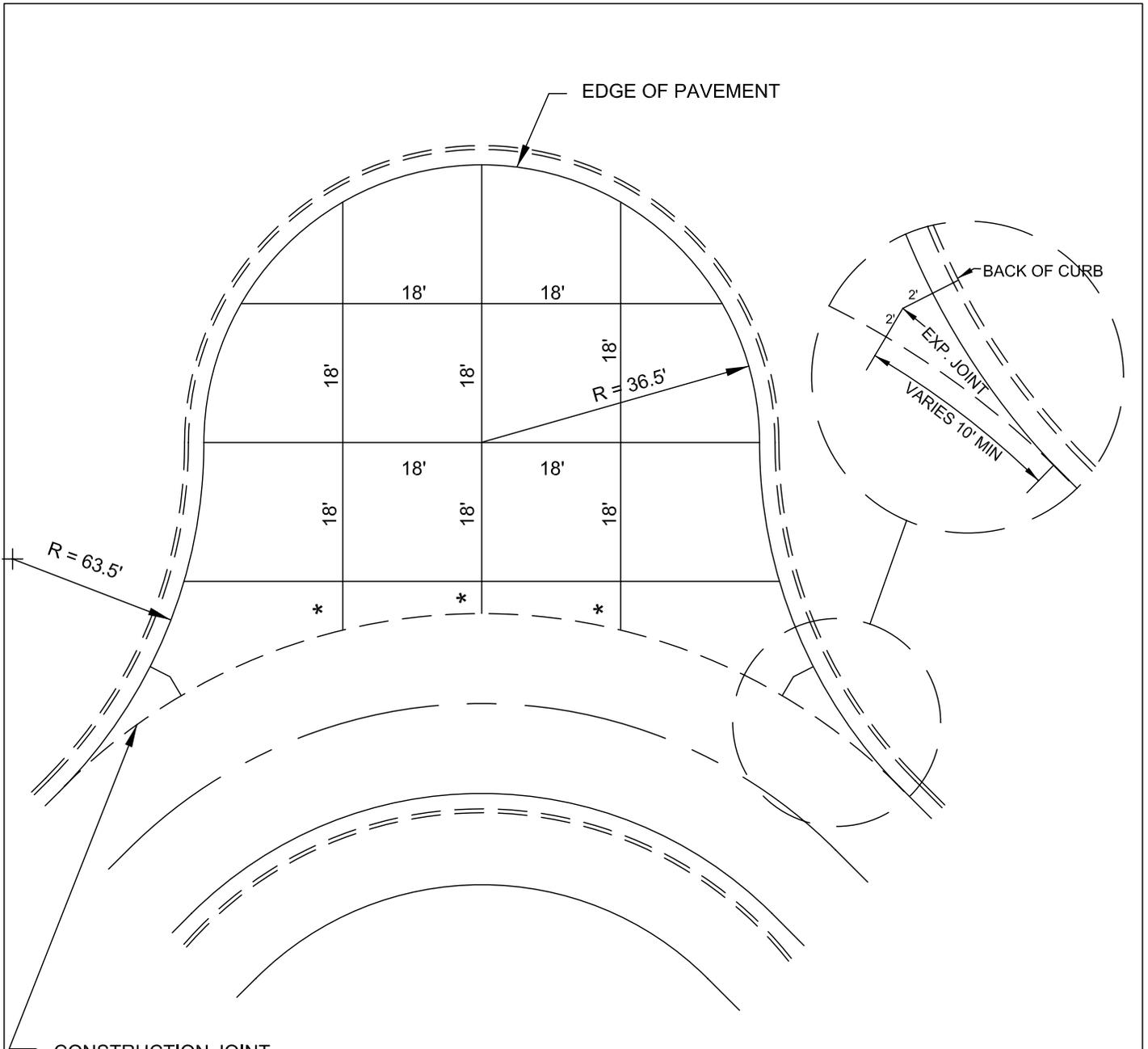
# EYEBROW TYPICAL SECTION USING MOUNTABLE CURB

CITY OF COLUMBUS, OHIO  
DEPARTMENT OF PUBLIC SERVICE  
TRANSPORTATION DIVISION

STD DWG  
**2154**

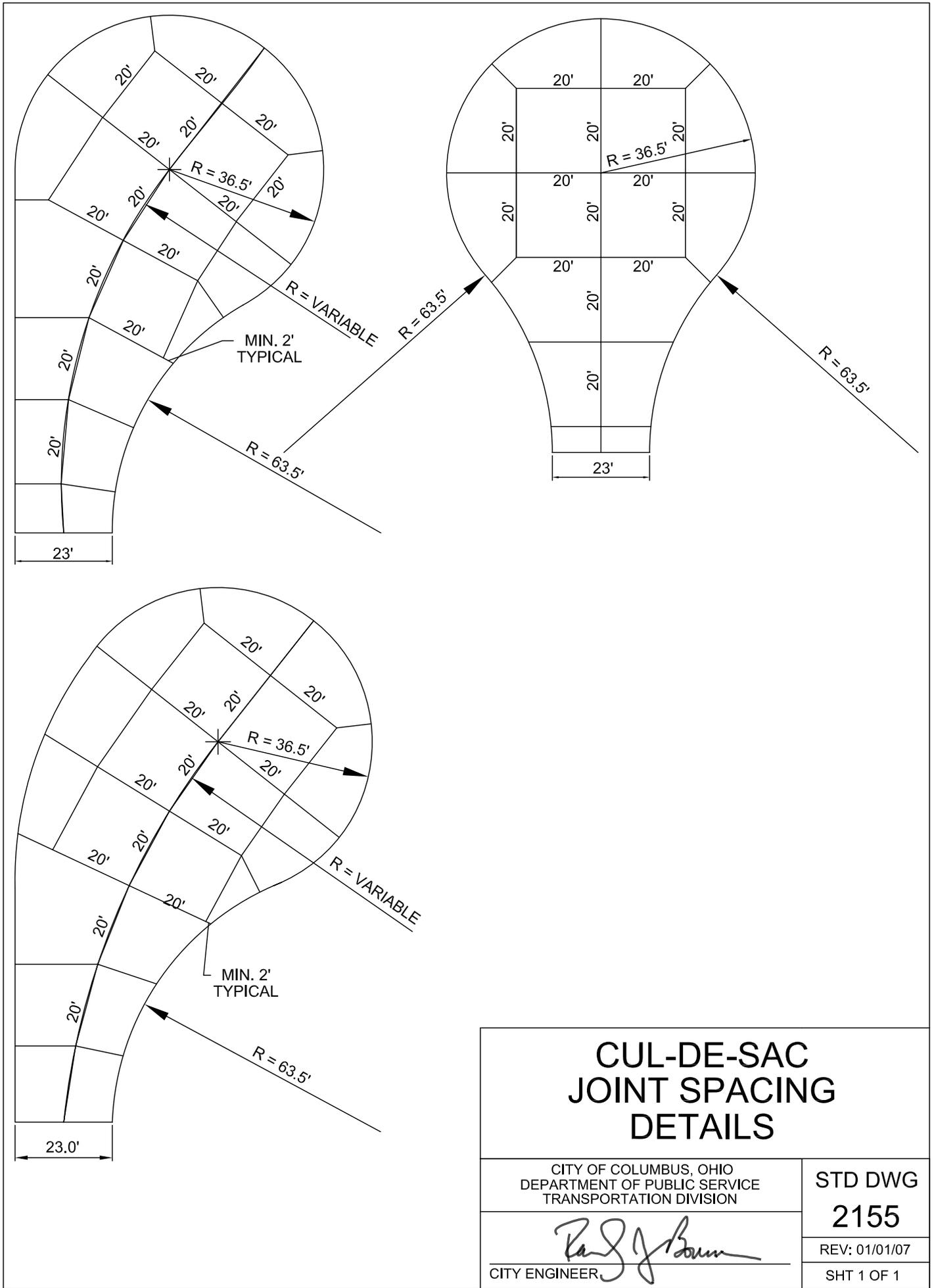
REV: 01/01/07

SHT 2 OF 3



\* VARIABLE  
2' MIN, 18' MAX.

<b>EYEBROW CONCRETE BASE SAWING DETAIL</b>	
CITY OF COLUMBUS, OHIO DEPARTMENT OF PUBLIC SERVICE TRANSPORTATION DIVISION	STD DWG <b>2154</b>
	REV: 01/01/07
	SHT 3 OF 3

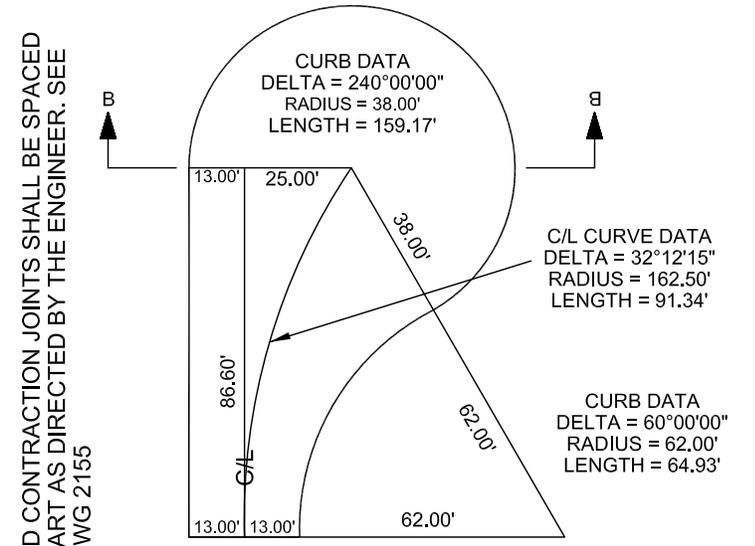
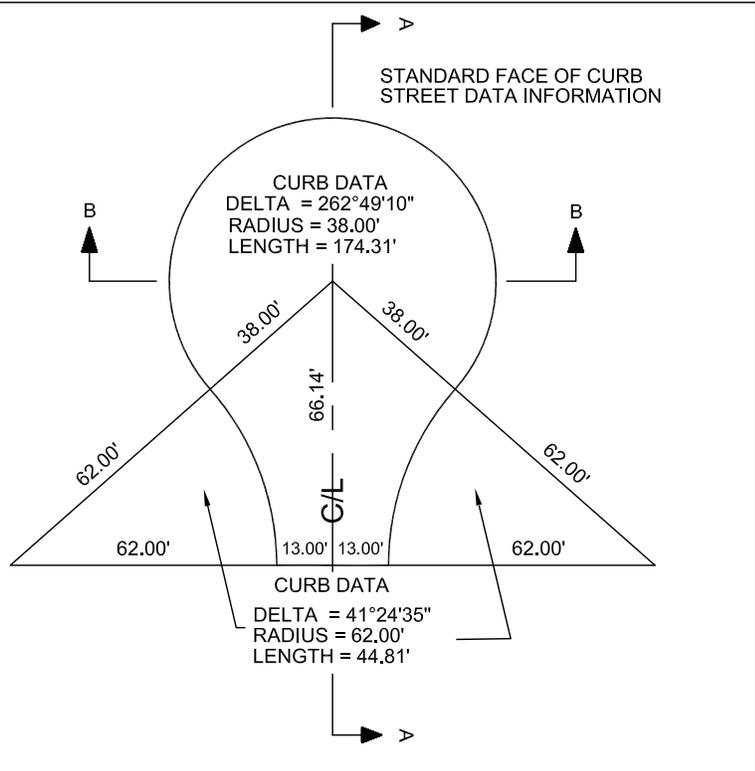
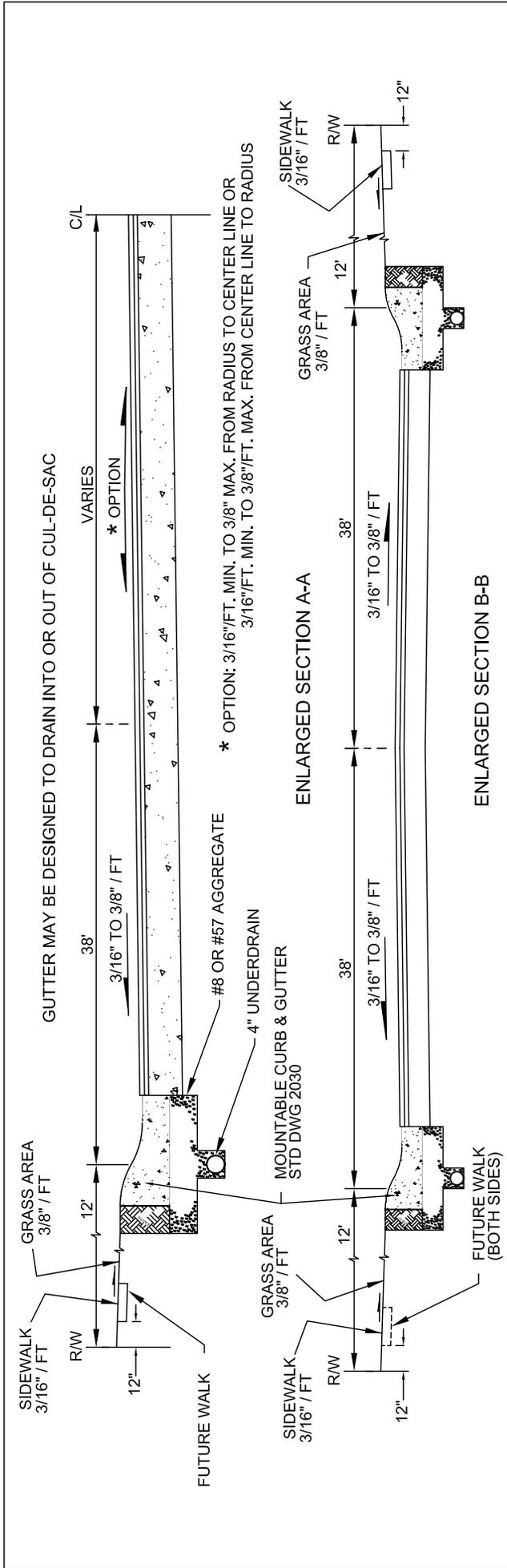


# CUL-DE-SAC JOINT SPACING DETAILS

CITY OF COLUMBUS, OHIO  
DEPARTMENT OF PUBLIC SERVICE  
TRANSPORTATION DIVISION

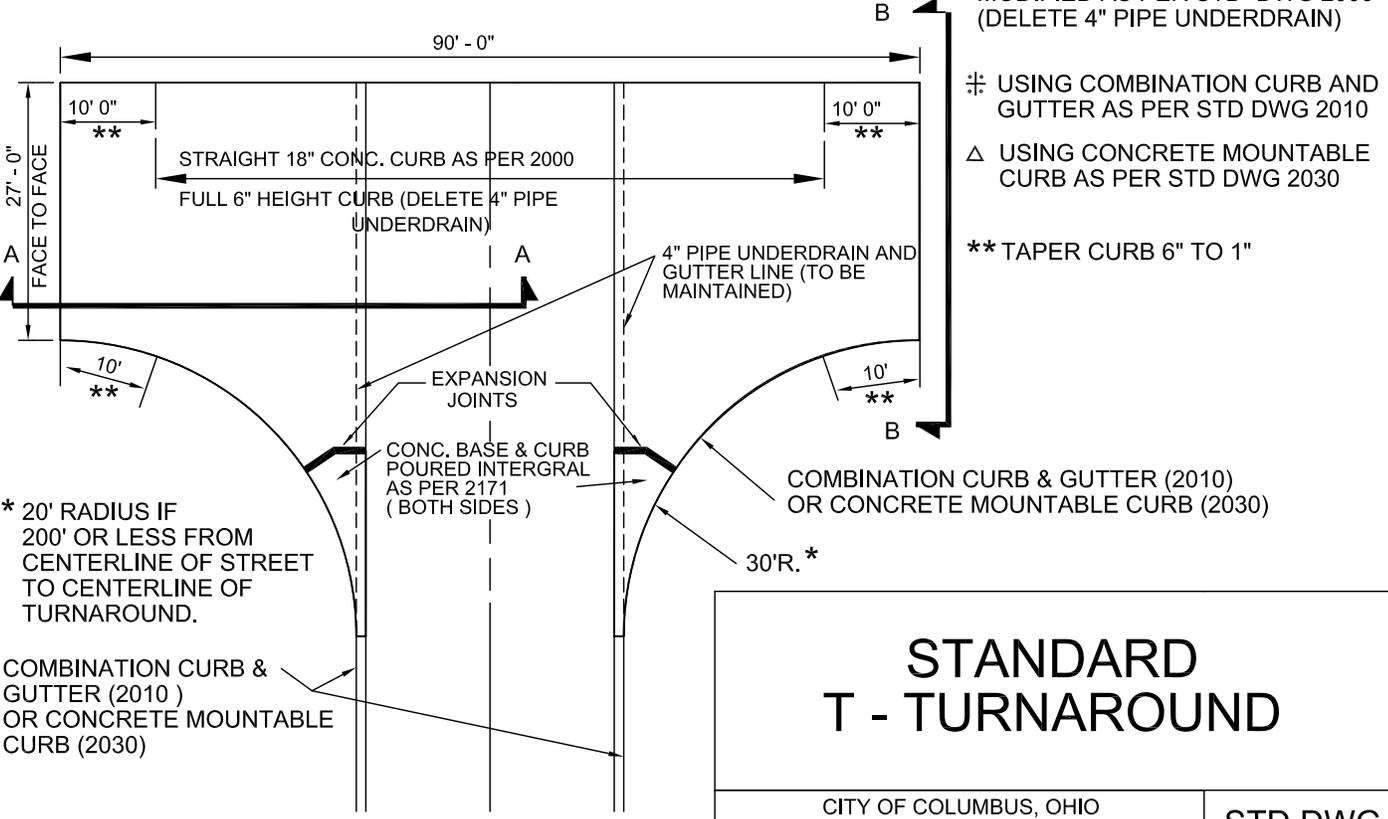
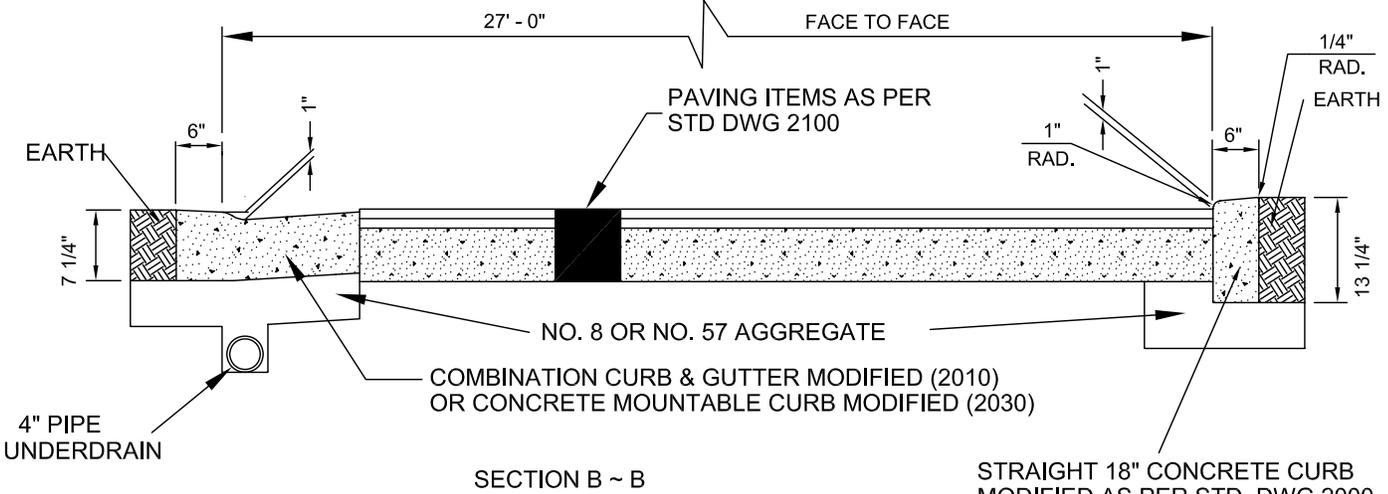
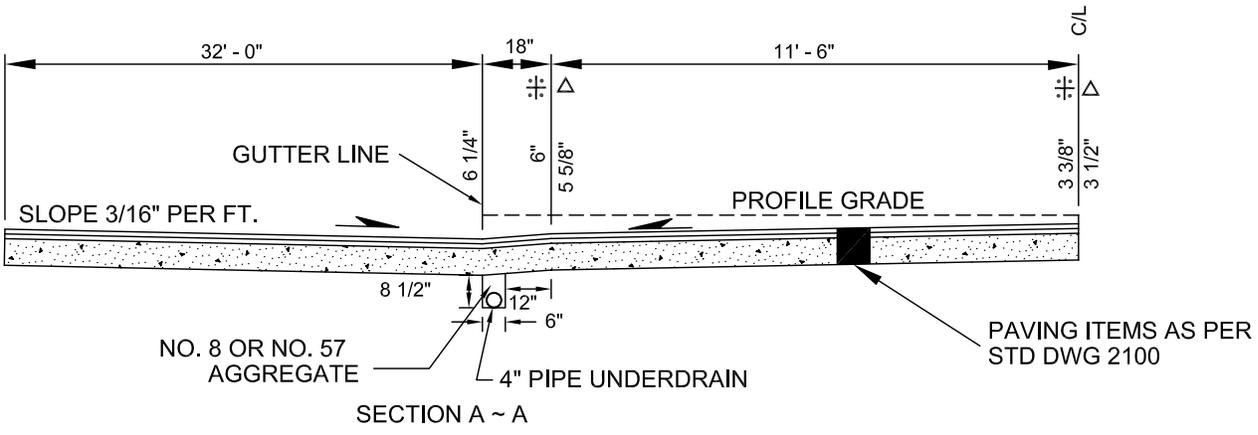
*Paul J. Baum*  
CITY ENGINEER

STD DWG  
**2155**  
REV: 01/01/07  
SHT 1 OF 1



SAWED CONTRACTION JOINTS SHALL BE SPACED 18' APART AS DIRECTED BY THE ENGINEER. SEE STD DWG 2155

<h1>STANDARD CUL-DE-SAC FOR 26' WIDE STREET ON A 50' RIGHT-OF-WAY</h1>	
CITY OF COLUMBUS, OHIO DEPARTMENT OF PUBLIC SERVICE TRANSPORTATION DIVISION	<b>STD DWG 2156</b>
 CITY ENGINEER	REV: 01/01/07 SHT 1 OF 1



STRAIGHT 18\" CONCRETE CURB MODIFIED AS PER STD DWG 2000 (DELETE 4\" PIPE UNDERDRAIN)

⊘ USING COMBINATION CURB AND GUTTER AS PER STD DWG 2010

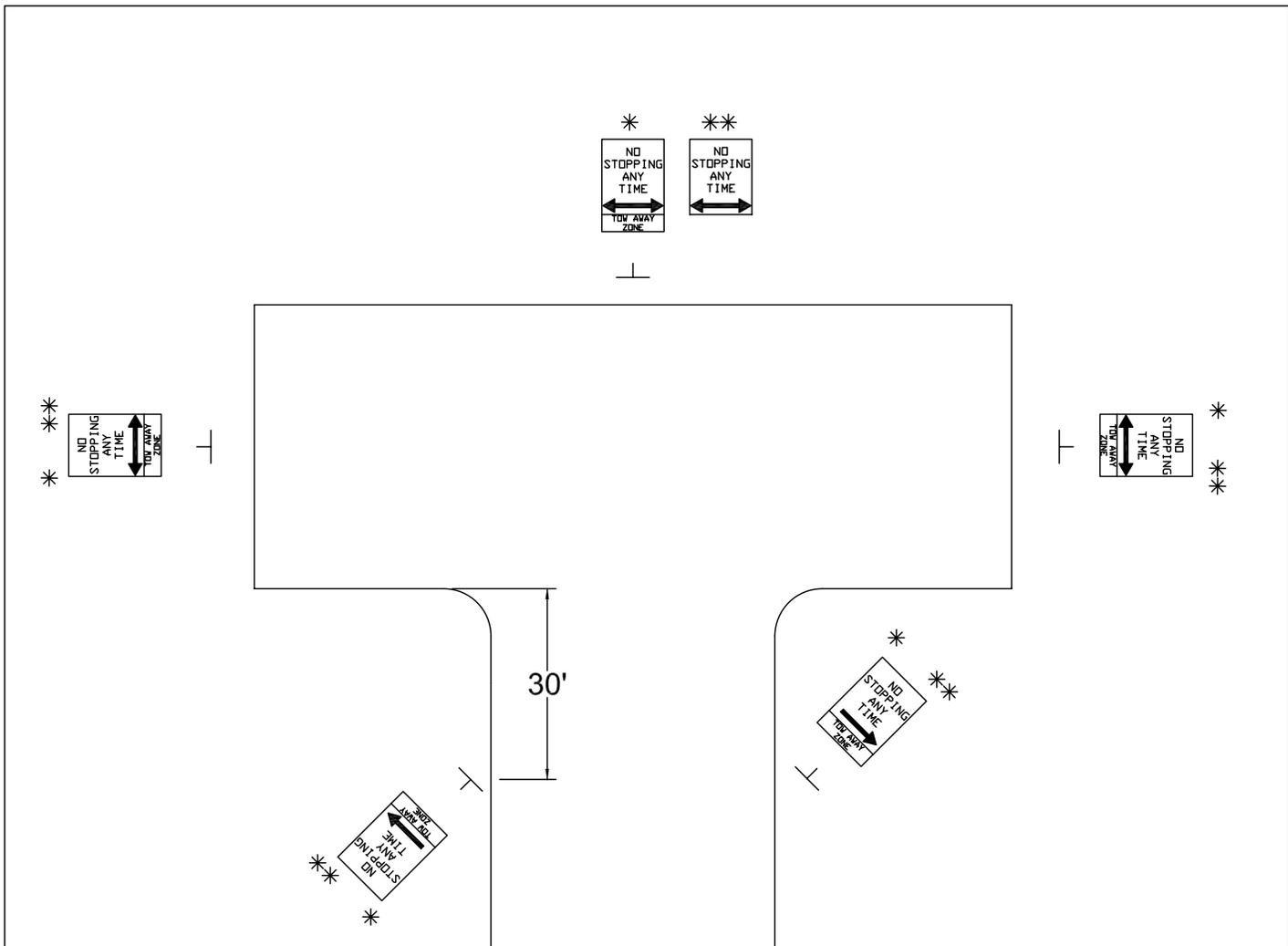
Δ USING CONCRETE MOUNTABLE CURB AS PER STD DWG 2030

\*\* TAPER CURB 6\" TO 1\"

\* 20' RADIUS IF 200' OR LESS FROM CENTERLINE OF STREET TO CENTERLINE OF TURNAROUND.

COMBINATION CURB & GUTTER (2010) OR CONCRETE MOUNTABLE CURB (2030)

<h1>STANDARD T - TURNAROUND</h1>	
CITY OF COLUMBUS, OHIO DEPARTMENT OF PUBLIC SERVICE TRANSPORTATION DIVISION	<b>STD DWG 2157</b>
CITY ENGINEER	REV: 01/01/07
	SHT 1 OF 2



SIGNAGE MUST BE INSTALLED TO KEEP TURNAROUND CLEAR FOR EMERGENCY VEHICLES. SIGNS ARE TO BE REMOVED IF AND WHEN THE STREET IS CUT THROUGH.

\* FOR USE ON PRIVATE STREETS ONLY



CP-116.16 (L)(R)(D)  
12"x 24"

\*\* FOR USE ON PUBLIC ROW

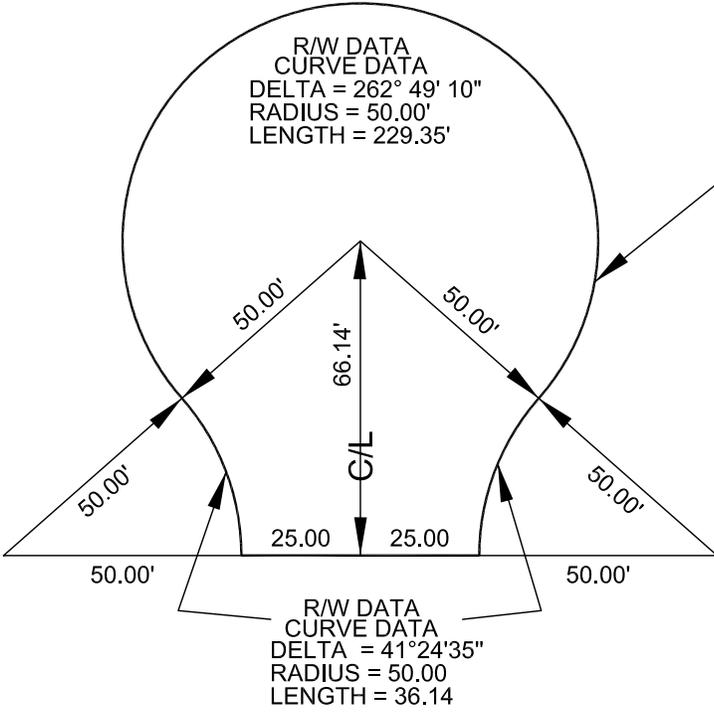


CP-114.01 (L)(R)(D)  
12"x 18"

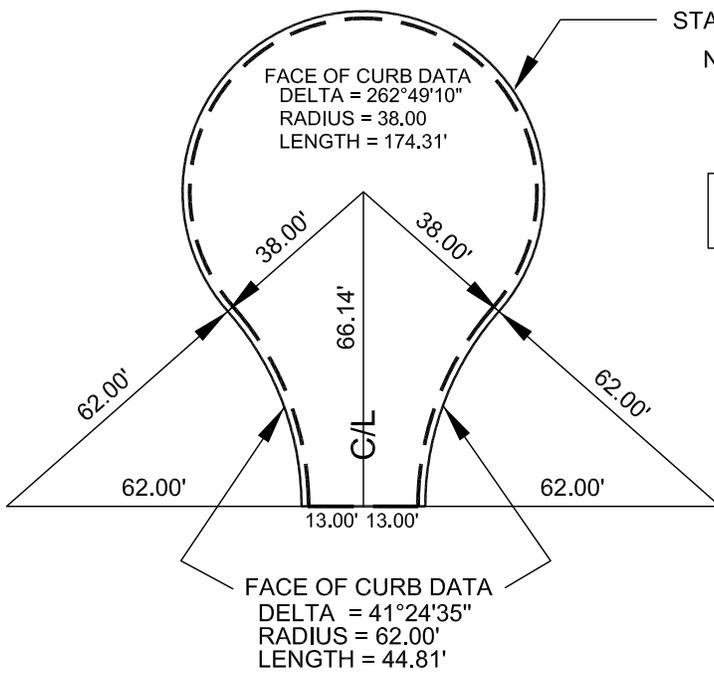
┌ U-CHANNEL DRIVE POST

# STANDARD T - TURNAROUND SIGNAGE REQUIREMENTS

CITY OF COLUMBUS, OHIO DEPARTMENT OF PUBLIC SERVICE TRANSPORTATION DIVISION	STD DWG <b>2157</b>
	REV: 01/01/07
	SHT 2 OF 2



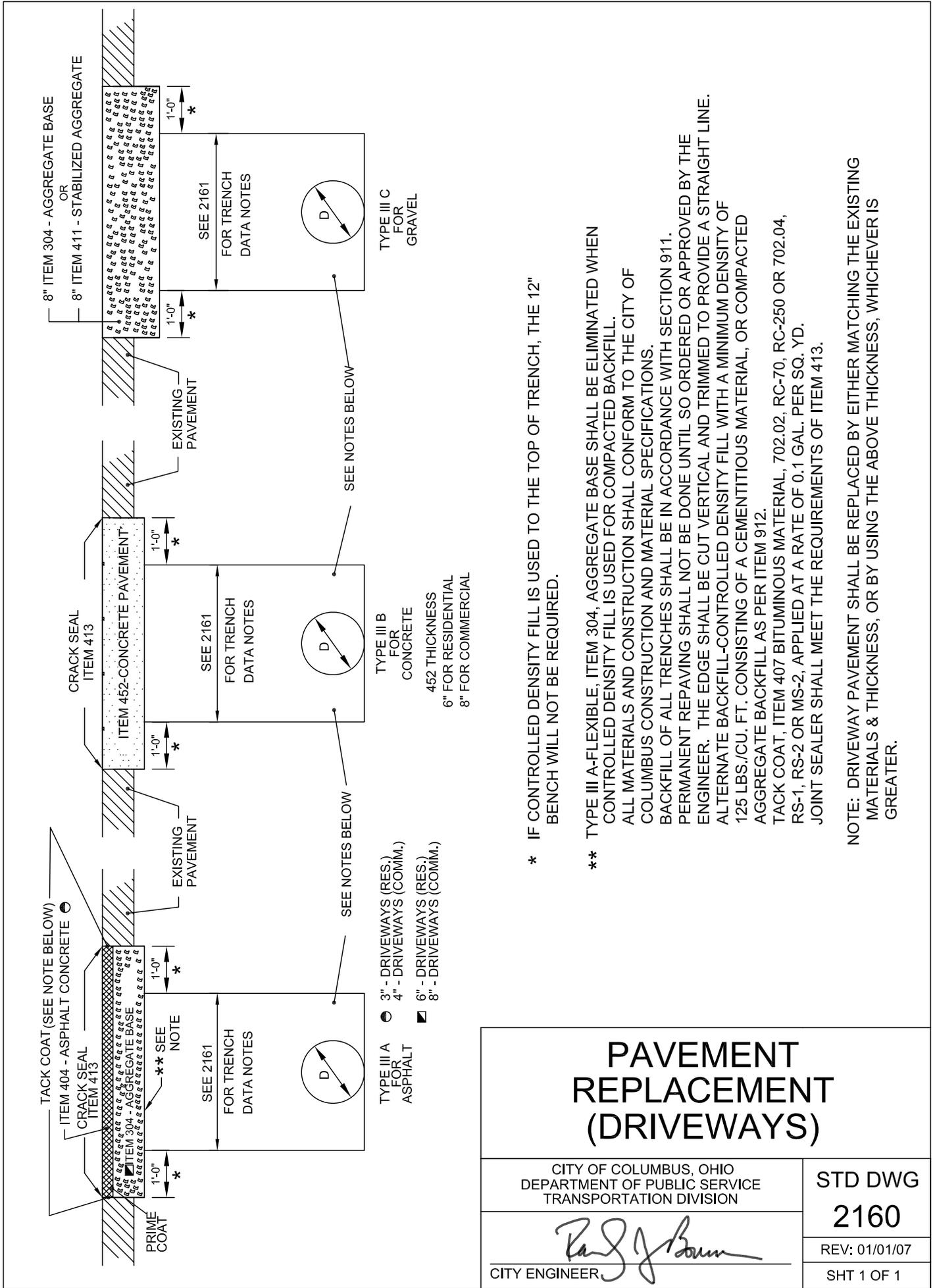
RIGHT-OF-WAY DATA  
AREA = 8887.77 S.F.  
NOTE: ALL DIMENSIONS SHOWN ARE FOR RIGHT-OF-WAY ONLY.



PAVEMENT AREA  
— — — PAVEMENT AREA ONLY  
AREA = 5102.09 Sq. Ft.

## DIMENSIONS FOR STANDARD CUL-DE-SAC FOR 26' WIDE STREET ON 50' RIGHT-OF-WAY

CITY OF COLUMBUS, OHIO DEPARTMENT OF PUBLIC SERVICE TRANSPORTATION DIVISION	<b>STD DWG 2158</b>
 CITY ENGINEER.	REV: 01/01/07
SHT 1 OF 1	



\* IF CONTROLLED DENSITY FILL IS USED TO THE TOP OF TRENCH, THE 12" BENCH WILL NOT BE REQUIRED.

\*\* TYPE III A-FLEXIBLE, ITEM 304, AGGREGATE BASE SHALL BE ELIMINATED WHEN CONTROLLED DENSITY FILL IS USED FOR COMPACTED BACKFILL. ALL MATERIALS AND CONSTRUCTION SHALL CONFORM TO THE CITY OF COLUMBUS CONSTRUCTION AND MATERIAL SPECIFICATIONS. BACKFILL OF ALL TRENCHES SHALL BE IN ACCORDANCE WITH SECTION 911. PERMANENT REPAVING SHALL NOT BE DONE UNTIL SO ORDERED OR APPROVED BY THE ENGINEER. THE EDGE SHALL BE CUT VERTICAL AND TRIMMED TO PROVIDE A STRAIGHT LINE. ALTERNATE BACKFILL-CONTROLLED DENSITY FILL WITH A MINIMUM DENSITY OF 125 LBS./CU. FT. CONSISTING OF A CEMENTITIOUS MATERIAL, OR COMPACTED AGGREGATE BACKFILL AS PER ITEM 912. TACK COAT, ITEM 407 BITUMINOUS MATERIAL, 702.02, RC-70, RC-250 OR 702.04, RS-1, RS-2 OR MS-2, APPLIED AT A RATE OF 0.1 GAL. PER SQ. YD. JOINT SEALER SHALL MEET THE REQUIREMENTS OF ITEM 413.

NOTE: DRIVEWAY PAVEMENT SHALL BE REPLACED BY EITHER MATCHING THE EXISTING MATERIALS & THICKNESS, OR BY USING THE ABOVE THICKNESS, WHICHEVER IS GREATER.

# PAVEMENT REPLACEMENT (DRIVEWAYS)

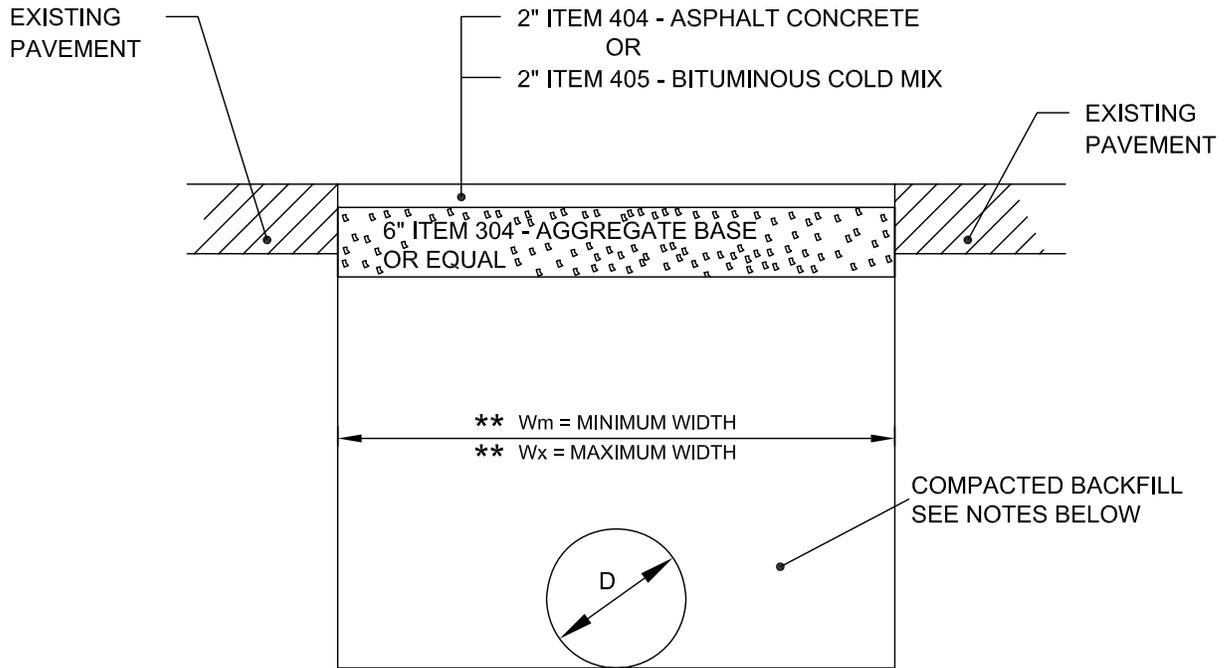
CITY OF COLUMBUS, OHIO  
DEPARTMENT OF PUBLIC SERVICE  
TRANSPORTATION DIVISION

CITY ENGINEER,

STD DWG  
2160

REV: 01/01/07

SHT 1 OF 1



\*\* IF CONDUIT IS STORM, SANITARY, OR WATER LINE, SEE THE FOLLOWING DEPARTMENT OF UTILITIES: DIVISION OF SEWERAGE AND DRAINAGE STANDARD DRAWINGS: AA-S149, AA-S150, AA-S151 FOR BEDDING AND TRENCH STANDARDS. FOR BEDDING (BENEATH PIPE OR CONDUIT) AND/OR INCLUDING UP TO ONE FOOT OF COVER OVER OUTSIDE TOP OF PIPE, THE APPROPRIATE UTILITY OWNER SHALL GOVERN. THE REMAINING BACKFILL IS GOVERNED BY THE TRANSPORTATION DIVISION. OPTIONS: CONTROL DENSITY FILL OR ITEM 304 (WHICH MUST HAVE NUCLEAR DENSITY TEST TO BE ALLOWED).

AGGREGATE BASE SHALL BE ELIMINATED WHEN CONTROLLED DENSITY FILL IS USED FOR COMPACTED BACKFILL.

ALL MATERIALS AND CONSTRUCTION SHALL CONFORM TO THE CITY OF COLUMBUS CONSTRUCTION AND MATERIAL SPECIFICATIONS.

BACKFILL OF ALL TRENCHES SHALL BE IN ACCORDANCE WITH STANDARD DRAWINGS 2160 & 1441.

TEMPORARY REPAVEMENT SHALL BE PLACED ON THE SAME DAY THE ORIGINAL PAVEMENT IS CUT.

ALTERNATE BACKFILL - CONTROLLED DENSITY FILL WITH A MINIMUM DENSITY OF 125 LBS./CU. FT. CONSISTING OF A CEMENTITIOUS MATERIAL.

## PAVEMENT REPLACEMENT (TEMPORARY)

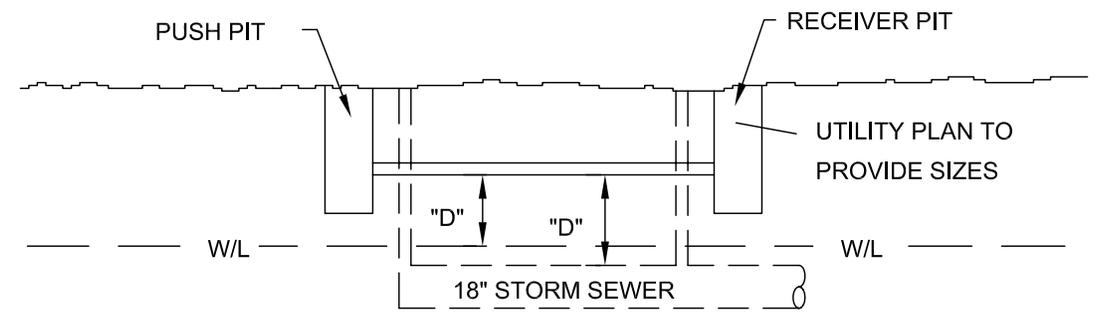
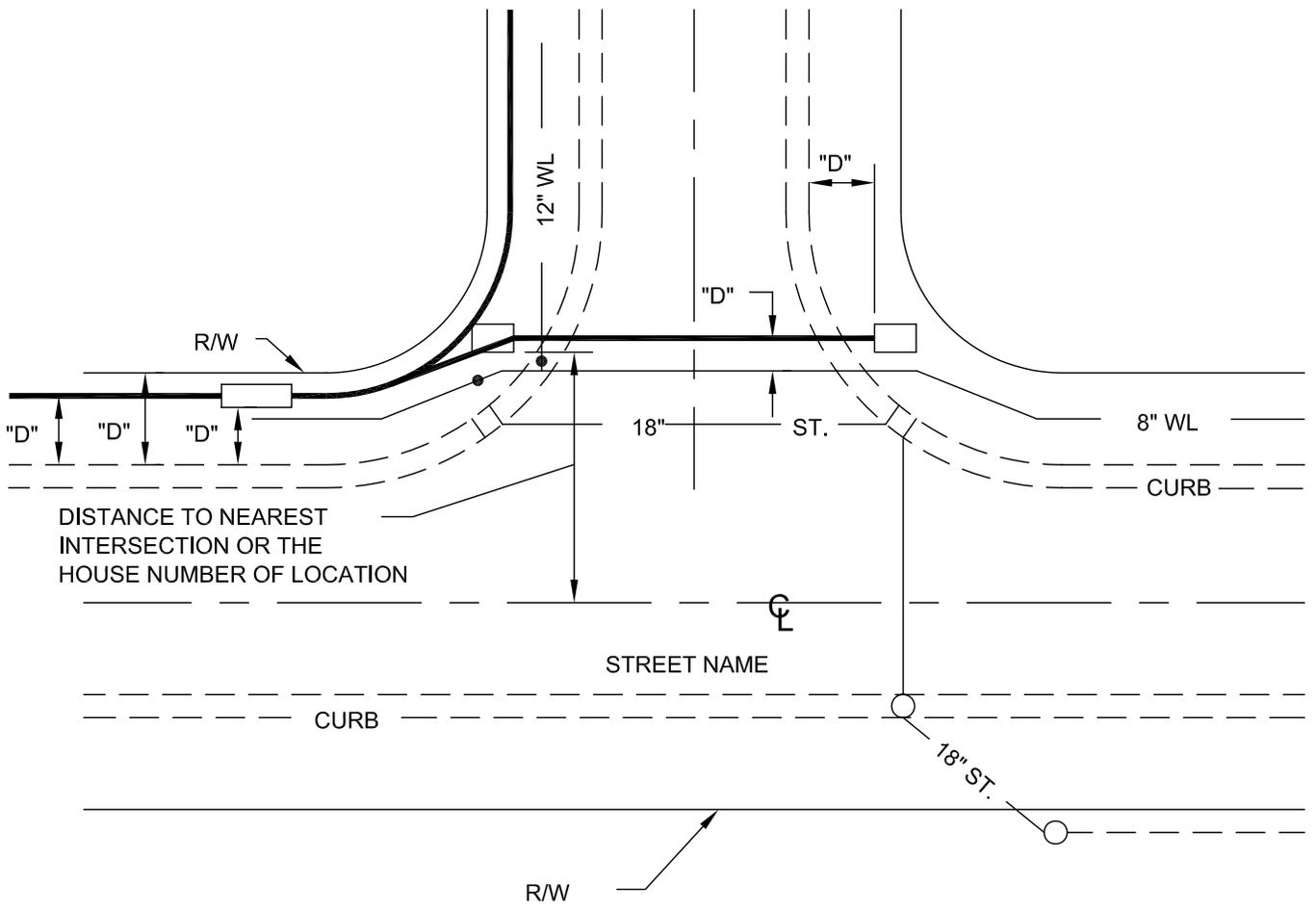
CITY OF COLUMBUS, OHIO  
DEPARTMENT OF PUBLIC SERVICE  
TRANSPORTATION DIVISION

**STD DWG  
2161**

CITY ENGINEER, 

REV: 01/01/07

SHT 1 OF 1



"D" DENOTES WHERE DIMENSIONS ARE NEEDED

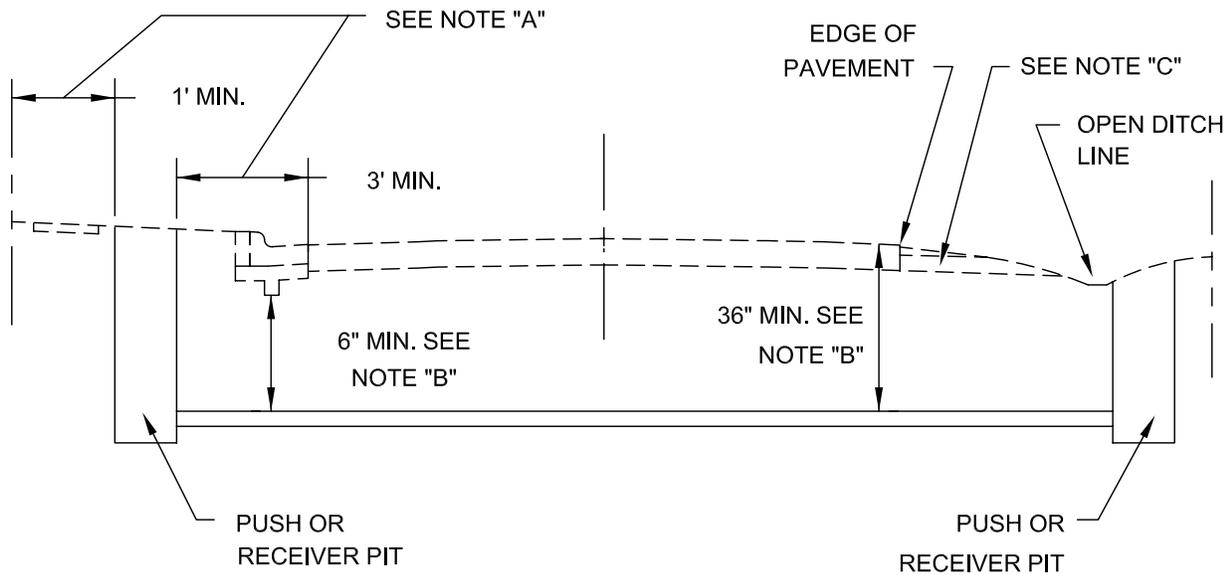
PAVEMENT REPLACEMENT SHALL BE AS PER STANDARD DRAWING 1441

# TYPICAL UTILITY EXCAVATION PLAN DETAIL REQUIREMENTS

CITY OF COLUMBUS, OHIO DEPARTMENT OF PUBLIC SERVICE TRANSPORTATION DIVISION	STD DWG <b>2166</b>
	REV: 01/01/07
CITY ENGINEER, <i>Randy Baum</i>	SHT 1 OF 2

TYPICAL LOCATION  
FOR CURBED STREETS

TYPICAL LOCATION  
FOR UNCURBED STREETS



NOTES:

- "A" MINIMUM OFFSETS SHALL BE 1 FOOT FROM RIGHT-OF-WAY LINES OR 3 FEET FROM EDGE OF PAVEMENT OR EDGE OF SHOULDER.
- "B" MINIMUM DEPTH FROM TOP OF PUSH TO TOP OF CURB FOR STANDARD COMBINED CURB AND GUTTER IS 30", STRAIGHT CURB 36", AND FLEXIBLE PAVEMENT 36" BELOW TOP OF PAVEMENT.
- "C" IF AGGREGATE DRAINS ARE DISTURBED, THEY MUST BE REPLACED.

## TYPICAL UTILITY EXCAVATION PLAN DETAIL REQUIREMENTS

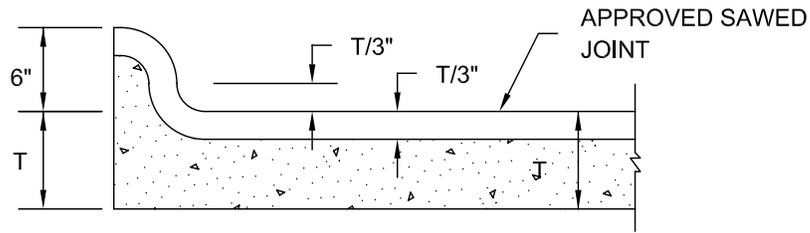
CITY OF COLUMBUS, OHIO  
DEPARTMENT OF PUBLIC SERVICE  
TRANSPORTATION DIVISION

STD DWG

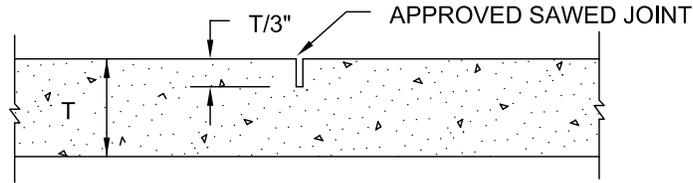
**2166**

REV: 01/01/07

SHT 2 OF 2

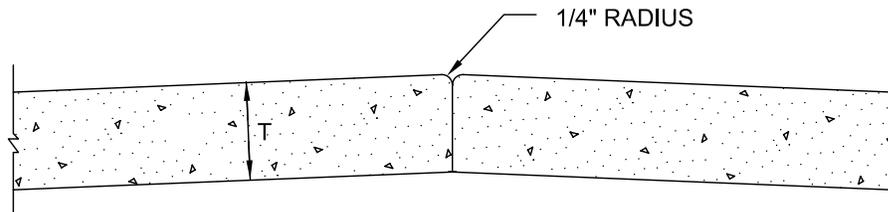


TRANSVERSE CONTRACTION JOINT AT INTEGRAL CURB

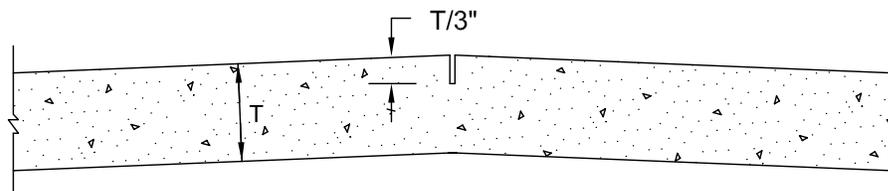


TRANSVERSE CONTRACTION JOINT

TRANSVERSE CONTRACTION JOINTS SHALL BE MADE BY SAWING JOINTS AT INTERVALS OF 15'. JOINTS SHALL BE T/3" IN DEPTH AT RIGHT ANGLES TO THE C.L. OF THE PAVEMENT. THIS OPERATION SHALL BE PERFORMED AS SOON AS THE INITIAL SETTING OF THE CONCRETE WILL PERMIT MOVEMENT OF THE SAWING EQUIPMENT WITHOUT DAMAGE TO THE SURFACE. SAW CUTS SHALL LINE UP WITH JOINTS CUT IN CURB OR CURB AND GUTTER.



C.L. CONSTRUCTION LONGITUDINAL JOINT



C.L. SAWED LONGITUDINAL JOINT

NOTE:  
C.L. = CENTERLINE

## JOINT DETAILS FOR PORTLAND CEMENT CONCRETE PAVING (ITEM 305 BASE)

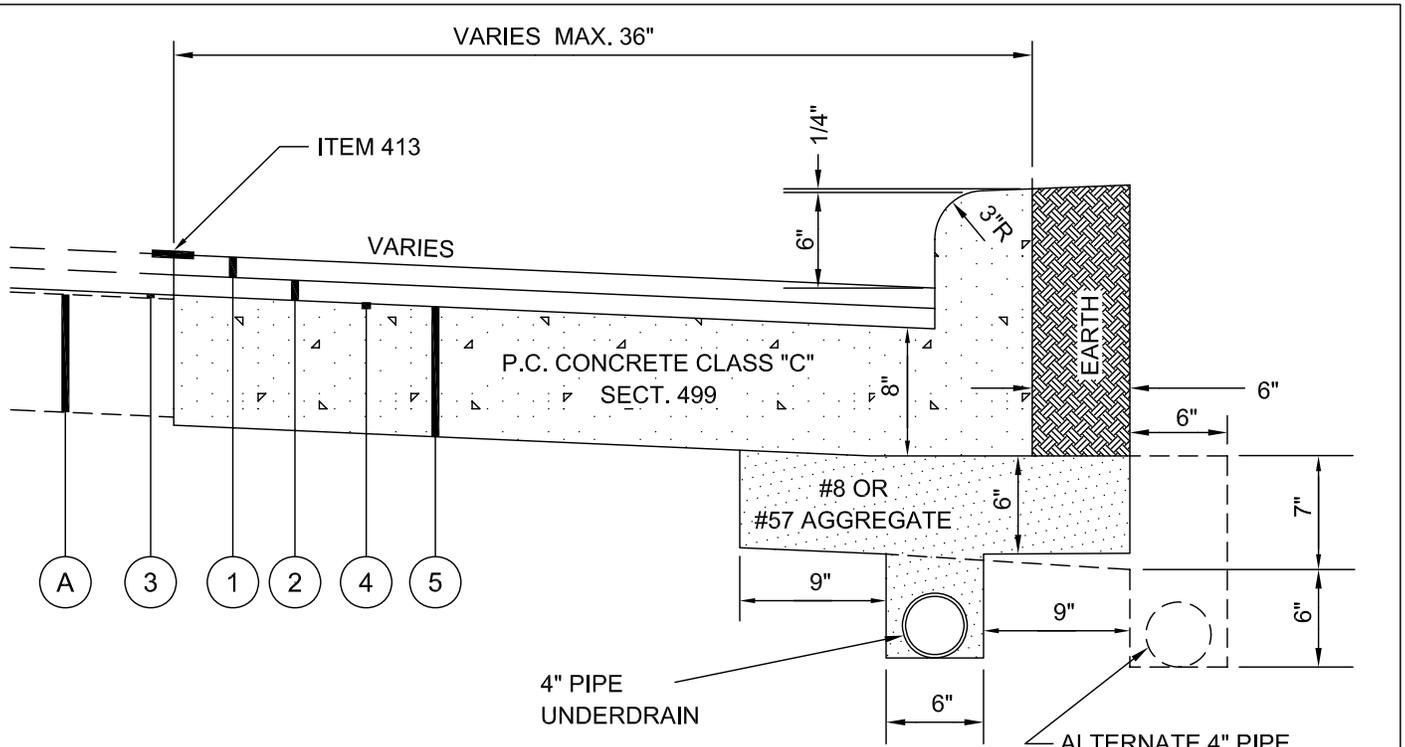
CITY OF COLUMBUS, OHIO  
DEPARTMENT OF PUBLIC SERVICE  
TRANSPORTATION DIVISION

STD DWG  
2170

REV: 01/01/07

CITY ENGINEER

SHT 1 OF 1



- (A) EXISTING PAVEMENT (VARIES)
- (1) 1 1/4" HOT MIXED, HOT LAID, ASPHALT CONCRETE, ITEM 404
- (2) 1 1/2" HOT MIXED, HOT LAID, ASPHALT CONCRETE, ITEM 402
- (3) 0" MIN. HOT MIXED, HOT LAID, ASPHALT CONCRETE, ITEM 404
- (4) TACK COAT, BITUMINOUS MATERIAL, 702.02 RC-70 OR RC-250 OR 702.04 RS-1, RS-2, OR MS-2 APPLIED AT A RATE OF 0.1 GAL. PER SQ. YD. AND COVER CONSISTING OF CRUSHED GRAVEL OR LIMESTONE SIZE NO. 9, ITEM 407
- (5) 8" PORTLAND CEMENT CONCRETE WITH INTEGRAL CURB, ITEM 452

ITEM 404, PRE-LEVELING COURSE, TO BE USED FOR CROWN CORRECTION IF NECESSARY.

## SPECIAL 8" TRANSITION SECTION WITH INTEGRAL CURB

CITY OF COLUMBUS, OHIO  
DEPARTMENT OF PUBLIC SERVICE  
TRANSPORTATION DIVISION

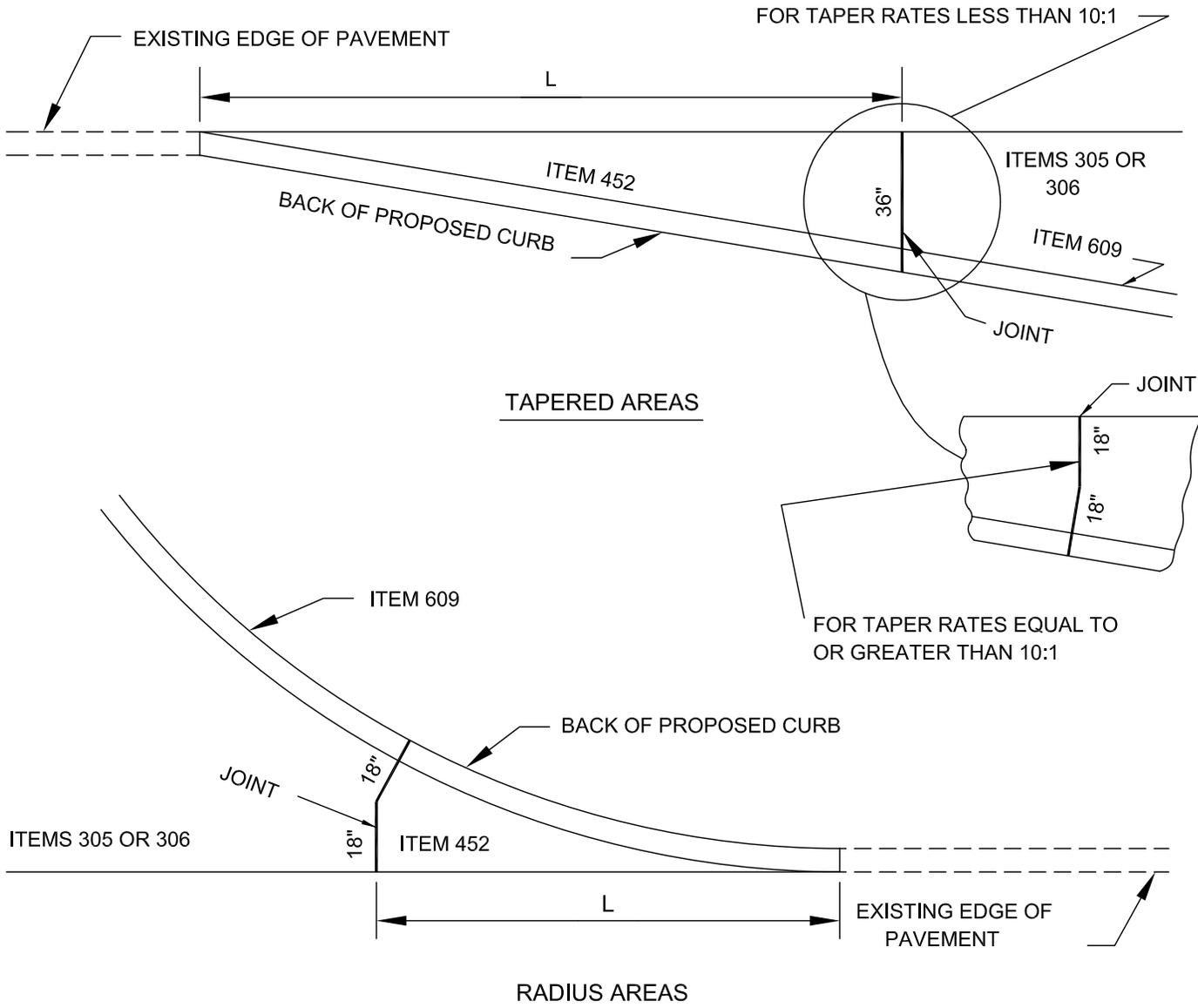
CITY ENGINEER,



STD DWG  
**2171**

REV: 01/01/07

SHT 1 OF 2



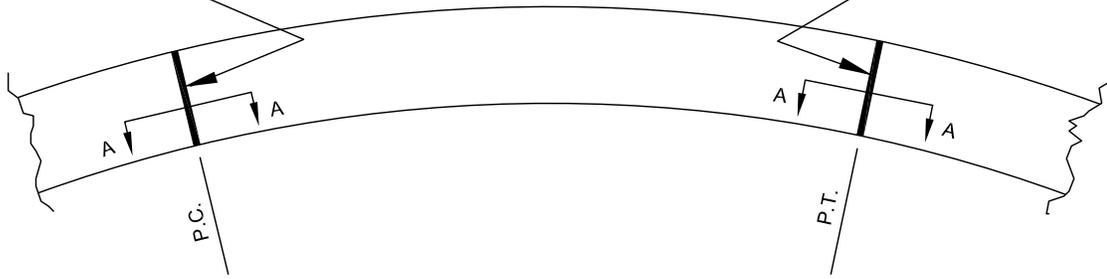
TO BE USED WHEN WIDTH OF CONCRETE BASE MATERIAL IS LESS THAN 36".

L - IF LENGTH L IS GREATER THAN 9 FEET, SAW IN EQUAL SEGMENTS 5 FEET TO 9 FEET LONG.

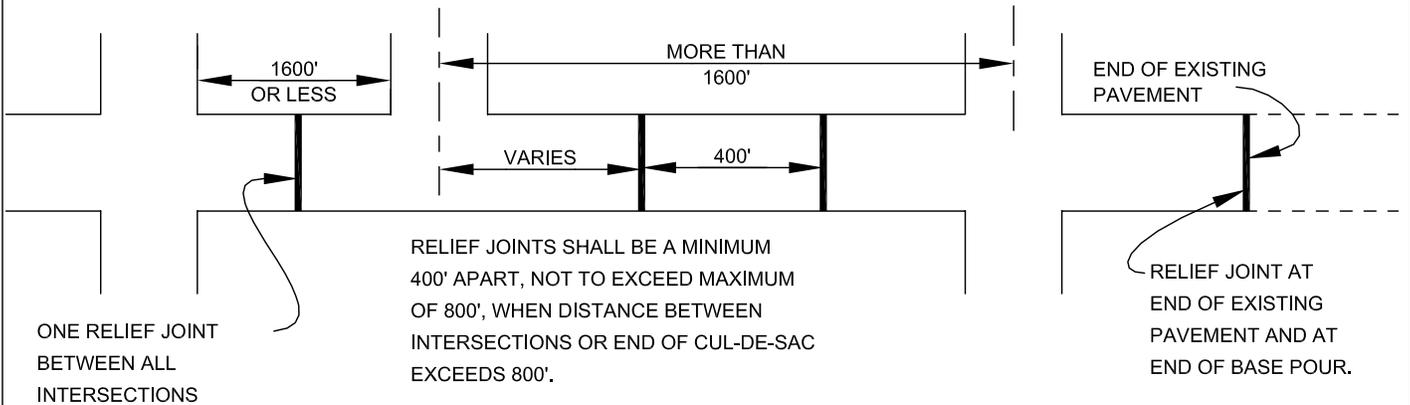
<b>JOINT LOCATIONS FOR TRANSITION SECTIONS OF CONCRETE BASE</b>	
CITY OF COLUMBUS, OHIO DEPARTMENT OF PUBLIC SERVICE TRANSPORTATION DIVISION	STD DWG <b>2171</b>
	REV: 01/01/07
	SHT 2 OF 2

PAVEMENT RELIEF JOINT

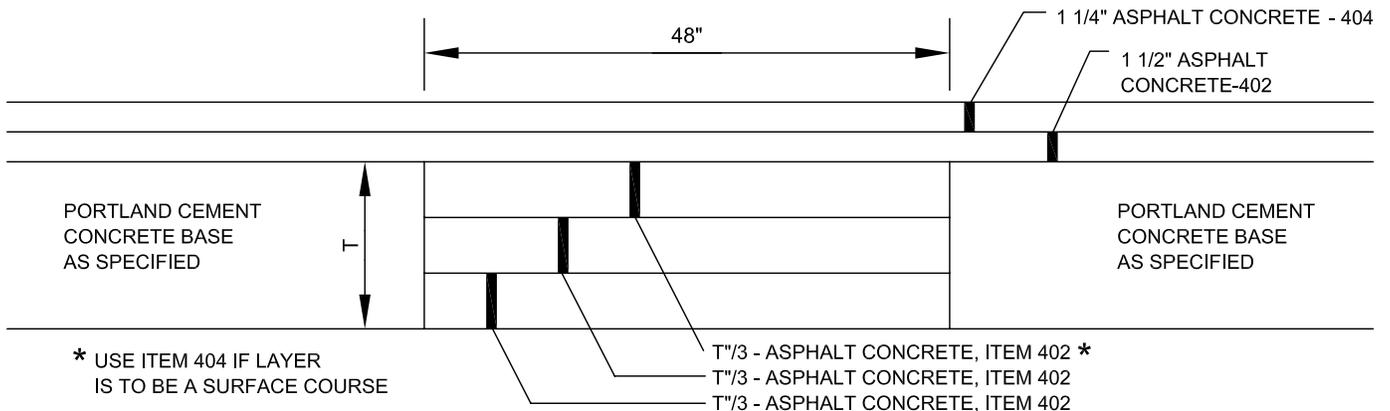
PAVEMENT RELIEF JOINT



RELIEF JOINT DETAIL IS FOR PAVEMENT SECTIONS WITH A CENTERLINE RADIUS OF UP TO 500' AND A DELTA ( $\Delta$ ) GREATER THAN 50°



TYPICAL LOCATION PLAN



SECTION A-A

FOR CONCRETE BASE PAVEMENT

2" EXPANSION MATERIAL SHALL BE PLACED AT ALL RELIEF JOINTS IN THE CONCRETE CURB, OR CURB AND GUTTER AND CENTERED ON THE RELIEF JOINT.

# PAVEMENT RELIEF JOINT DETAIL, ITEM 454 (RESIDENTIAL ONLY)

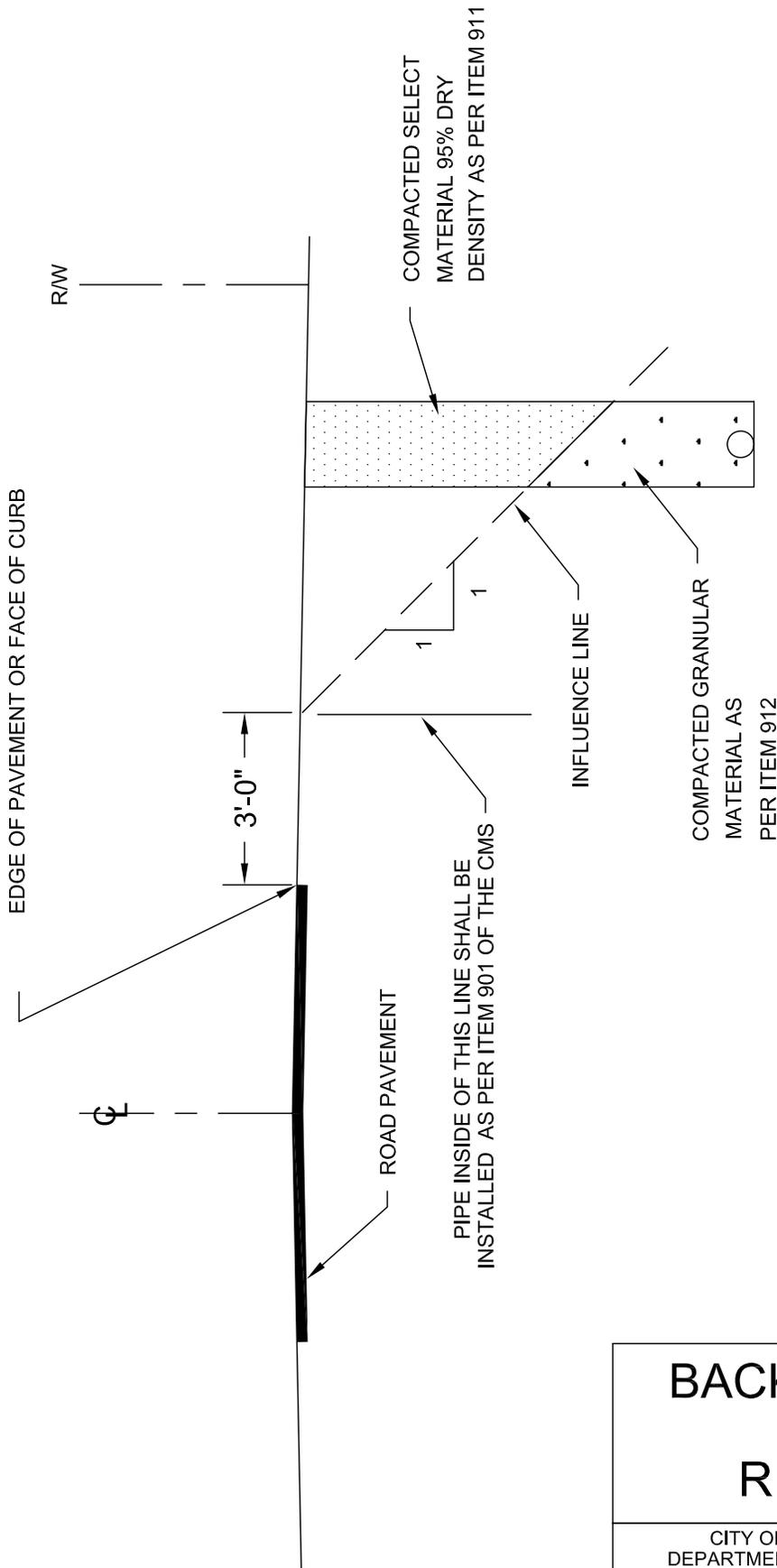
CITY OF COLUMBUS, OHIO  
DEPARTMENT OF PUBLIC SERVICE  
TRANSPORTATION DIVISION

*T. J. Baum*  
CITY ENGINEER

STD DWG  
2175

REV: 01/01/07

SHT 1 OF 1

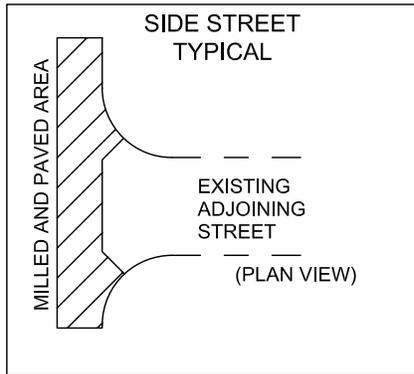
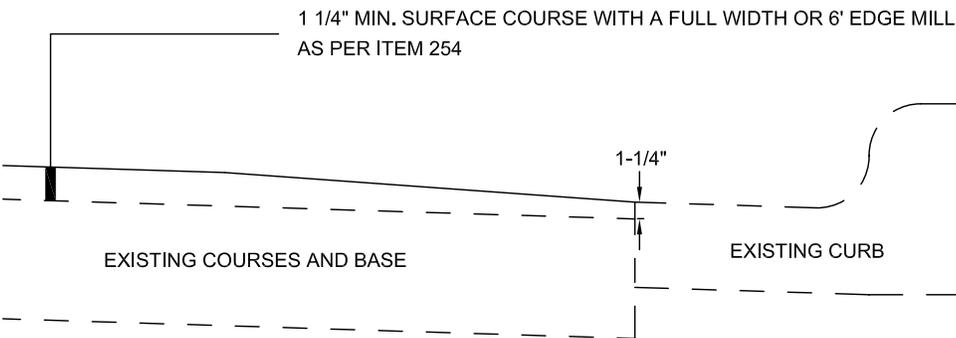
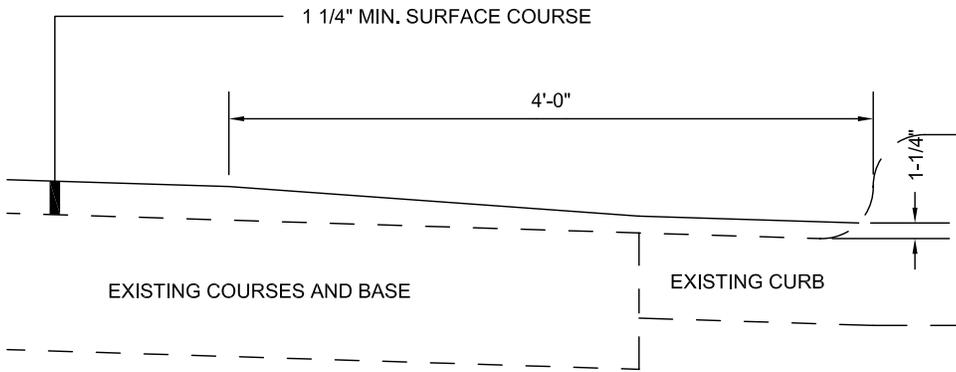


# BACKFILLING WITHIN HIGHWAY RIGHT-OF-WAY

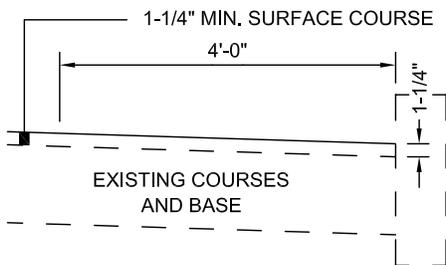
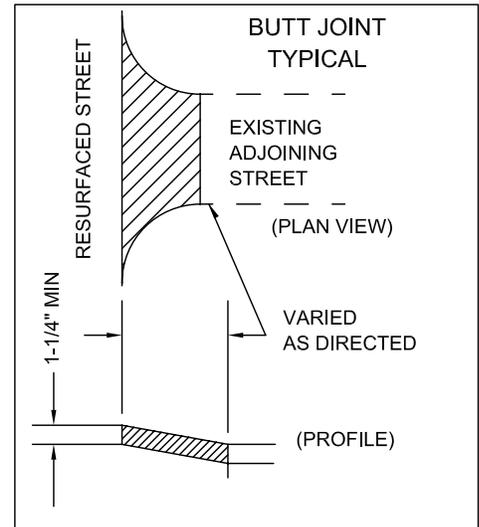
CITY OF COLUMBUS, OHIO  
DEPARTMENT OF PUBLIC SERVICE  
TRANSPORTATION DIVISION

  
 CITY ENGINEER

**STD DWG**  
**2179**  
 REV: 01/01/07  
 SHT 1 OF 1



NO SCALE



# STREET RESURFACING TYPICALS & DETAILS

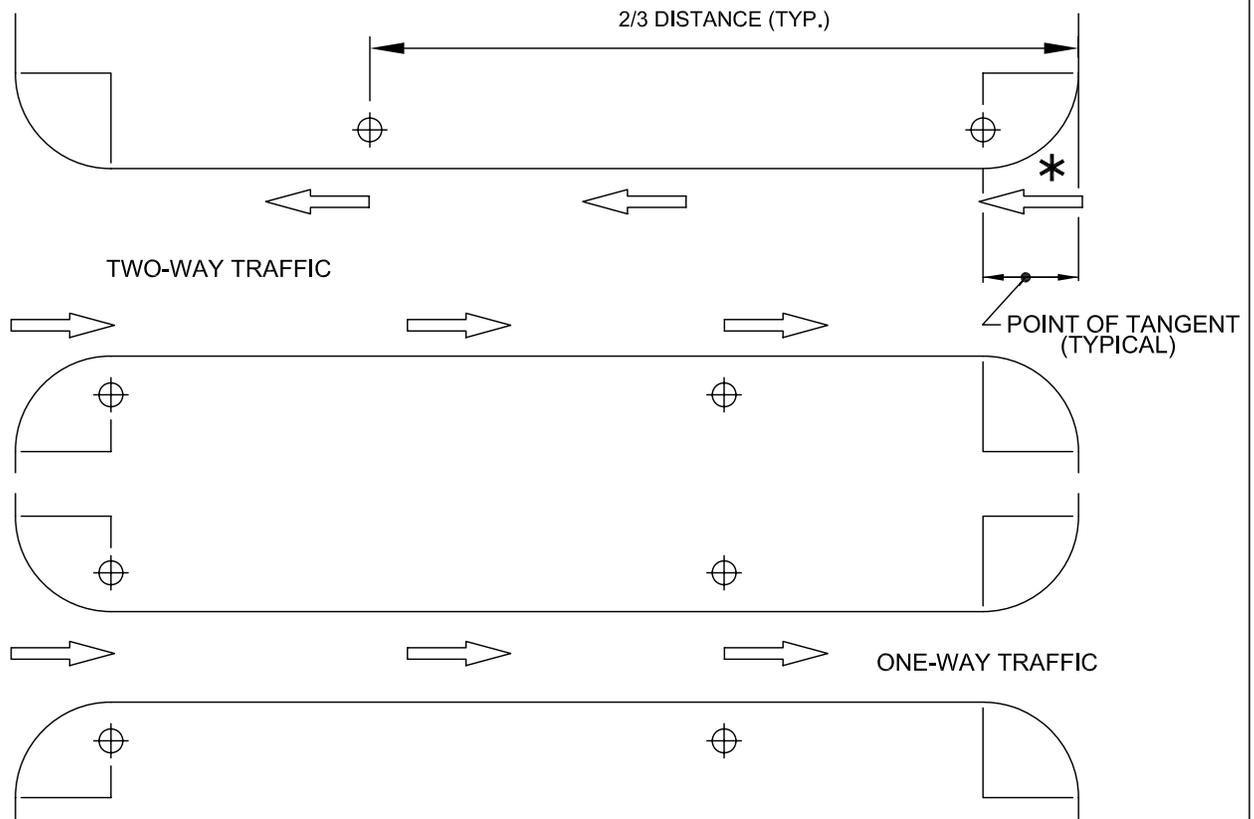
CITY OF COLUMBUS, OHIO  
DEPARTMENT OF PUBLIC SERVICE  
TRANSPORTATION DIVISION

STD DWG  
**2180**

*P J B*  
CITY ENGINEER

REV: 01/01/07

SHT 1 OF 1



PARKED VEHICLES

IN AREAS WITH A NORMAL NUMBER OF PARKED VEHICLES, THE CONTRACTOR WILL BE RESPONSIBLE FOR POSTING PAPER 'NO STOPPING' SIGNS ON THEIR BARRICADES 72 HOURS IN ADVANCE AND WILL BE RESPONSIBLE FOR NOTIFYING THE PROPER AUTHORITIES TO HAVE THE ILLEGALLY PARKED VEHICLES REMOVED.

UNIVERSITY AREA

IN THE UNIVERSITY AREA AND ANY STREET DESIGNATED BY THE CITY ENGINEER, THE FOLLOWING METHOD WILL BE USED TO REMOVE PARKED CARS:

THE CITY WILL FURNISH TO THE CONTRACTOR METAL 'NO STOPPING' SIGNS (A DEPOSIT OF \$50.00 PER SIGN WILL BE REQUIRED). THE CONTRACTOR WILL INSTALL THE SIGNS ON THEIR METAL POSTS AS PER THIS STANDARD DRAWING 72 HOURS IN ADVANCE OF CLOSING THE STREET AS DESCRIBED BELOW. THE CONTRACTOR WILL SUPPLEMENT THESE SIGNS WITH PAPER SIGNS PLACED ON BARRICADES AS NEEDED.

THE NIGHT BEFORE THE STREET IS SCHEDULED TO BE PAVED, THE CONTRACTOR WILL CLOSE THE STREET BY BARRICADING. ANY ILLEGALLY PARKED VEHICLES WILL BE TICKETED BY A LAW ENFORCEMENT OFFICER. THE CITY (AT THE EXPENSE OF THE OWNER) WILL THEN HAVE THE VEHICLE TOWED AWAY.

THE COST OF INSTALLING AND REMOVING SIGNS, BARRICADING THE STREET, LAW ENFORCEMENT OFFICER, AND ANY OTHER WORK NECESSARY TO CLEAR THE STREET OF PARKED VEHICLES SHALL BE INCLUDED IN THE PRICE OF ITEM 404 ASPHALT CONCRETE.

⊕ PLACEMENT OF SIGN

## PARKED VEHICLES IN RESURFACING AREAS

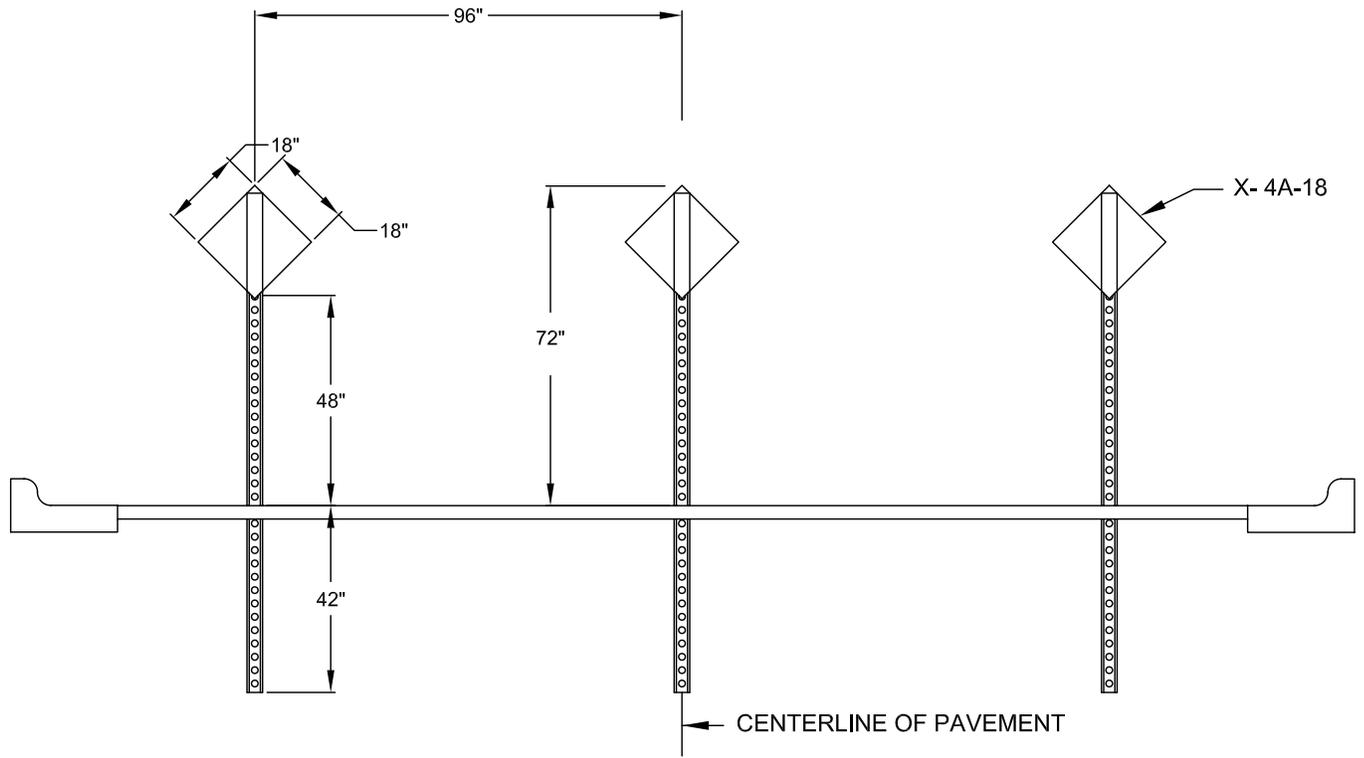
CITY OF COLUMBUS, OHIO  
DEPARTMENT OF PUBLIC SERVICE  
TRANSPORTATION DIVISION

*Randy J. Baum*  
CITY ENGINEER

STD DWG  
2181

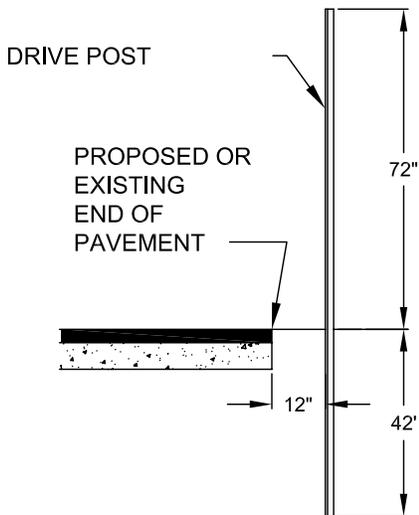
REV: 01/01/07

SHT 1 OF 1



NUMBER OF ASSEMBLIES TO BE INSTALLED;  
 PAVEMENTS 24' OR LESS IN WIDTH = 2  
 PAVEMENTS 25'-32' IN WIDTH = 3  
 PAVEMENTS 33'-40' IN WIDTH = 4  
 PAVEMENTS 41'-48' IN WIDTH = 5  
 PAVEMENTS 49'-56' IN WIDTH = 6  
 PAVEMENTS 57'-64' IN WIDTH = 7

THE X-4A IS A 18"X18" .080 GAUGE ALUMINUM PANEL COVERED WITH RED REFLECTIVE SHEETING.



## DETAIL OF TEMPORARY BARRICADE FOR END OF ROADWAY PAVEMENT

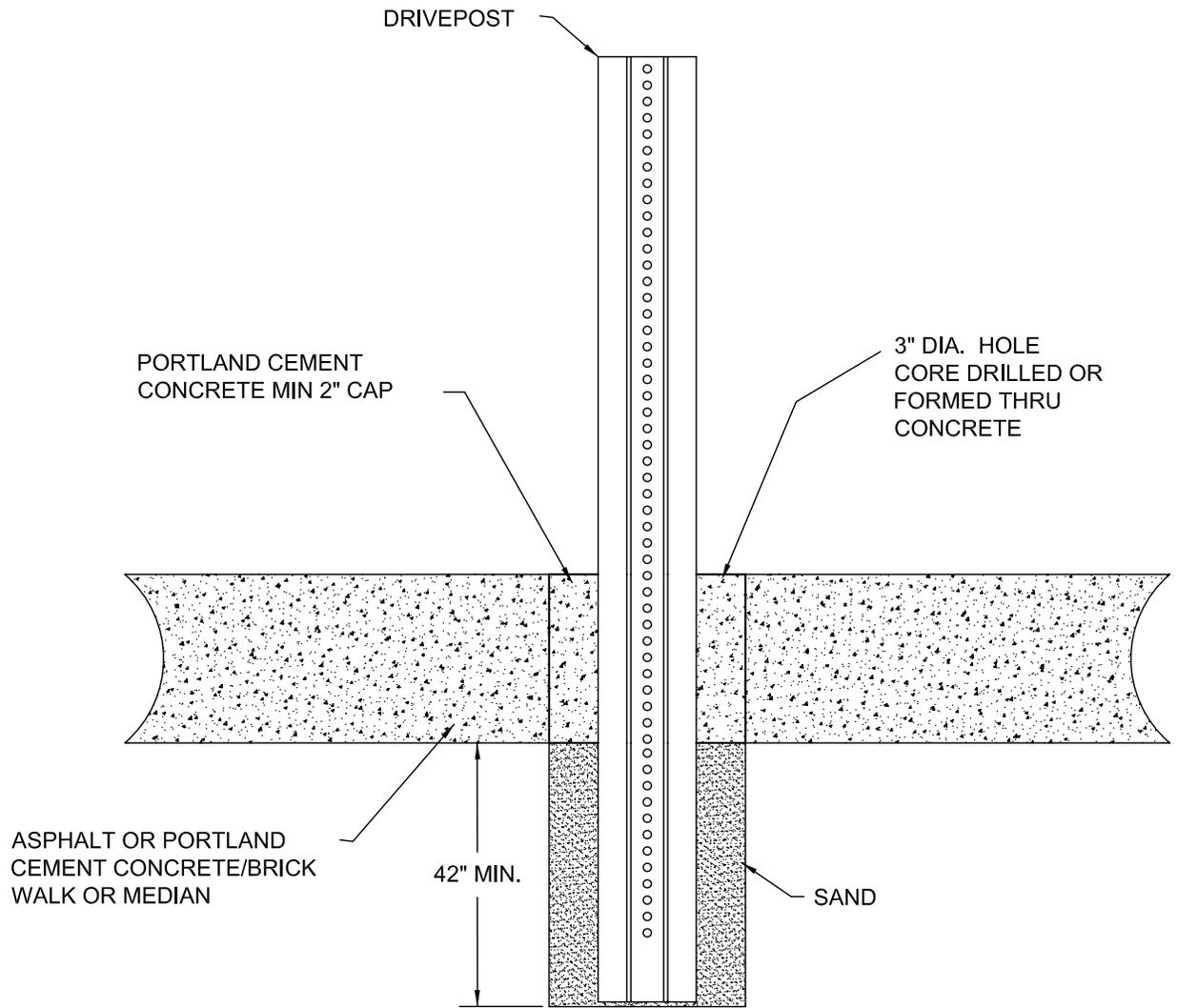
CITY OF COLUMBUS, OHIO  
 DEPARTMENT OF PUBLIC SERVICE  
 TRANSPORTATION DIVISION

STD DWG  
 2190

CITY ENGINEER,

REV: 01/01/07

SHT 1 OF 1



NOTE: MAINTAIN STANDARD INSTALLATION DEPTH OF DRIVE POST

## TYPICAL DRIVE POST INSTALLATION THROUGH CONCRETE/BRICK

CITY OF COLUMBUS, OHIO  
DEPARTMENT OF PUBLIC SERVICE  
TRANSPORTATION DIVISION

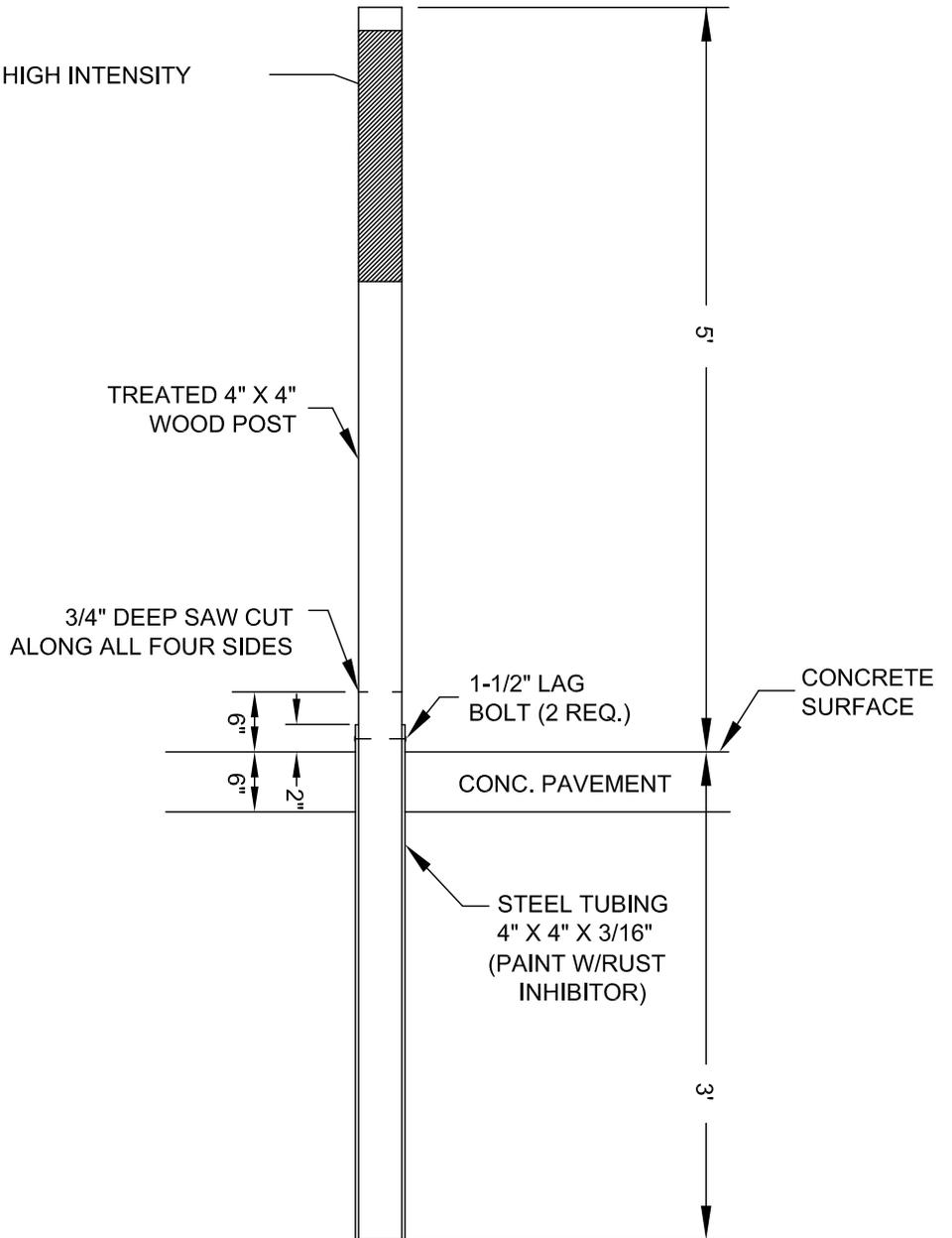
STD DWG  
2191

CITY ENGINEER,

REV: 01/01/07

SHT 1 OF 1

3-1/2" X 18" PANEL WITH HIGH INTENSITY  
 REFLECTIVE SHEETING  
 RED - NO OUTLET  
 YELLOW - OTHER  
 ( TWO PER BOLLARD )



FOR USE IN AREAS OPEN TO PEDESTRIAN TRAFFIC

## BREAK-AWAY BOLLARD TYPE A

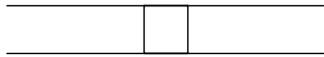
CITY OF COLUMBUS, OHIO  
 DEPARTMENT OF PUBLIC SERVICE  
 TRANSPORTATION DIVISION

CITY ENGINEER,

STD DWG  
 2195

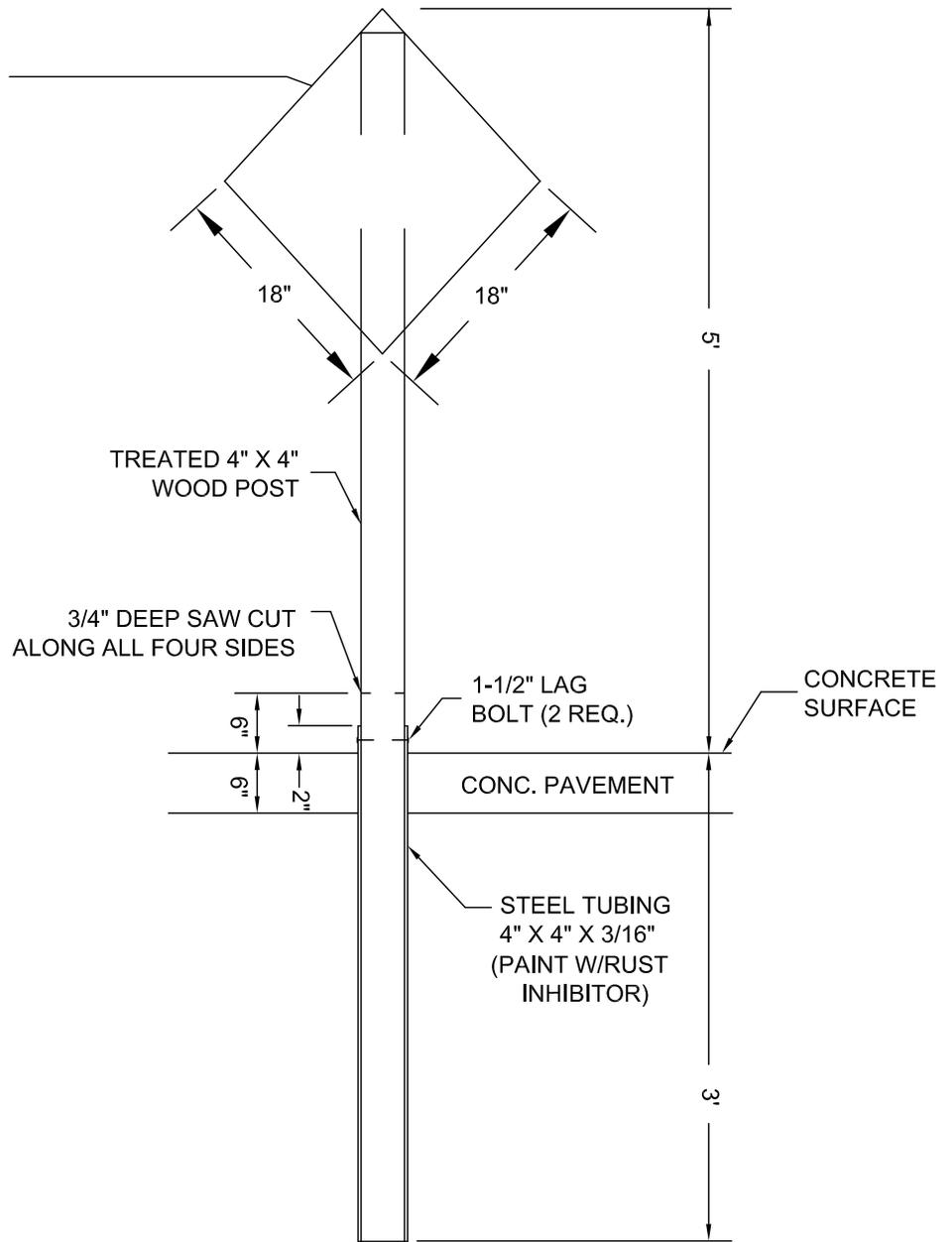
REV: 01/01/07

SHT 1 OF 2



TOP VIEW

18" X 18" PANEL WITH REFLECTIVE SHEETING  
RED - NO OUTLET  
YELLOW - OTHER  
( TWO PER BOLLARD )



FOR USE IN LIMITED ACCESS AREAS

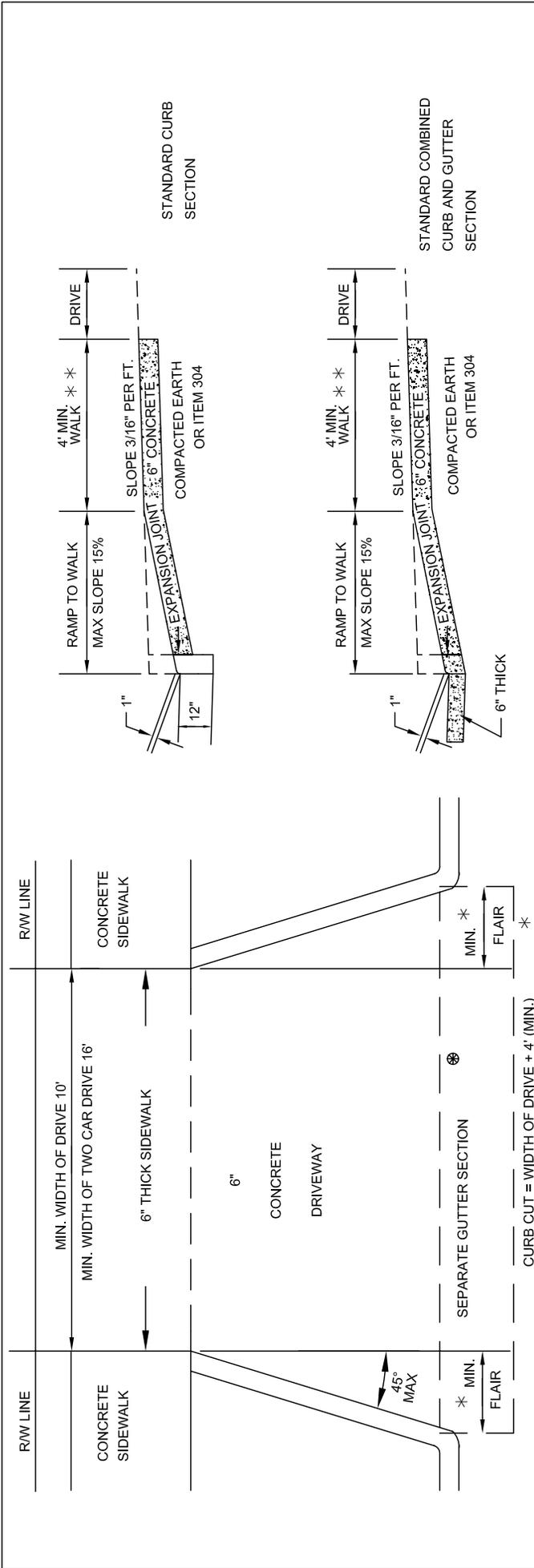
# BREAK-AWAY BOLLARD TYPE B

CITY OF COLUMBUS, OHIO  
DEPARTMENT OF PUBLIC SERVICE  
TRANSPORTATION DIVISION

STD DWG  
**2195**

REV: 01/01/07

SHT 2 OF 2



\* 5' ON ROADWAYS WITH 35 MPH SPEED LIMIT, 2' FOR SPEED LIMITS LESS THAN 35 MPH.

\*\* SIDEWALK WIDTH SHALL BE A MINIMUM OF 5 FEET ALONG AN ARTERIAL ROADWAY.

⊗ CURB OR COMBINED CURB AND GUTTER SHALL BE TAKEN OUT AND REPLACED WITH CONCRETE, SEPARATED FROM THE RAMP BY 1/2" PREMOLDED EXPANSION JOINT. WHEN LESS THAN 5' OF A CURB SECTION REMAINS AFTER THE CURB CUT IS LOCATED, IT SHALL ALSO BE REMOVED AND REPLACED.

CURB SHALL BE CONSTRUCTED IN MINIMUM 5' SECTIONS AND MAXIMUM 10' SECTIONS.

FILLS, IF REQUIRED, SHALL BE OF EARTH, COMPACTED IN 2" LAYERS, OR OF ITEM 304, AGGREGATE BASE, COMPACTED IN LAYERS NOT EXCEEDING 4".

DRIVEWAYS AND SIDEWALKS SHALL BE CONSTRUCTED AS SHOWN IN DETAILS OF PLAIN PORTLAND CEMENT CONCRETE, ITEM 452, 5% TO 8% AIR ENTRAINED, CONTAINING 6.4 BAGS OF CEMENT (CLASS C, SECT.499) PER C.Y., AND 3" MAX. SLUMP.

EXPANSION JOINTS SHALL BE PLACED TO FORM UTILITY STRIPS WHERE REQUIRED, AND WHEREVER NEW CONCRETE MEETS EXISTING CONSTRUCTION.

FORMS SHALL CONSIST OF WOOD 2" NOMINAL THICKNESS OR METAL OF EQUAL STRENGTH.

A STANDARD CURING COMPOUND SHALL BE PROPERLY APPLIED IMMEDIATELY AFTER FINISH.

ALTERNATE ASPHALT CONCRETE APPROACH: INSTEAD OF PLAIN PORTLAND CEMENT CONCRETE, THE PORTIONS OF THE DRIVEWAY OUTSIDE OF THE LIMITS OF THE SIDEWALK MAY BE CONSTRUCTED TO THESE MINIMUM REQUIREMENTS (TO BE USED ON UNCURBED RESIDENTIAL STREETS ONLY)

4" AGGREGATE BASE, ITEM 304

2" HOT MIXED, HOT LAID ASPHALT CONCRETE, ITEM 402 OR ITEM 416

2" HOT MIXED, HOT LAID ASPHALT CONCRETE, ITEM 404 OR ITEM 416

NOTE: ALTERNATE ASPHALT CONCRETE APPROACH SHALL NOT BE USED ON A CURBED STREET UNLESS OTHERWISE APPROVED BY THE C.O.C..

ITEM NUMBERS REFER TO STANDARD SPECIFICATIONS, TRANSPORTATION DIVISION, COLUMBUS, OHIO, CURRENT EDITION AND ALL WORK SHALL BE DONE IN ACCORDANCE WITH THESE SPECIFICATIONS.

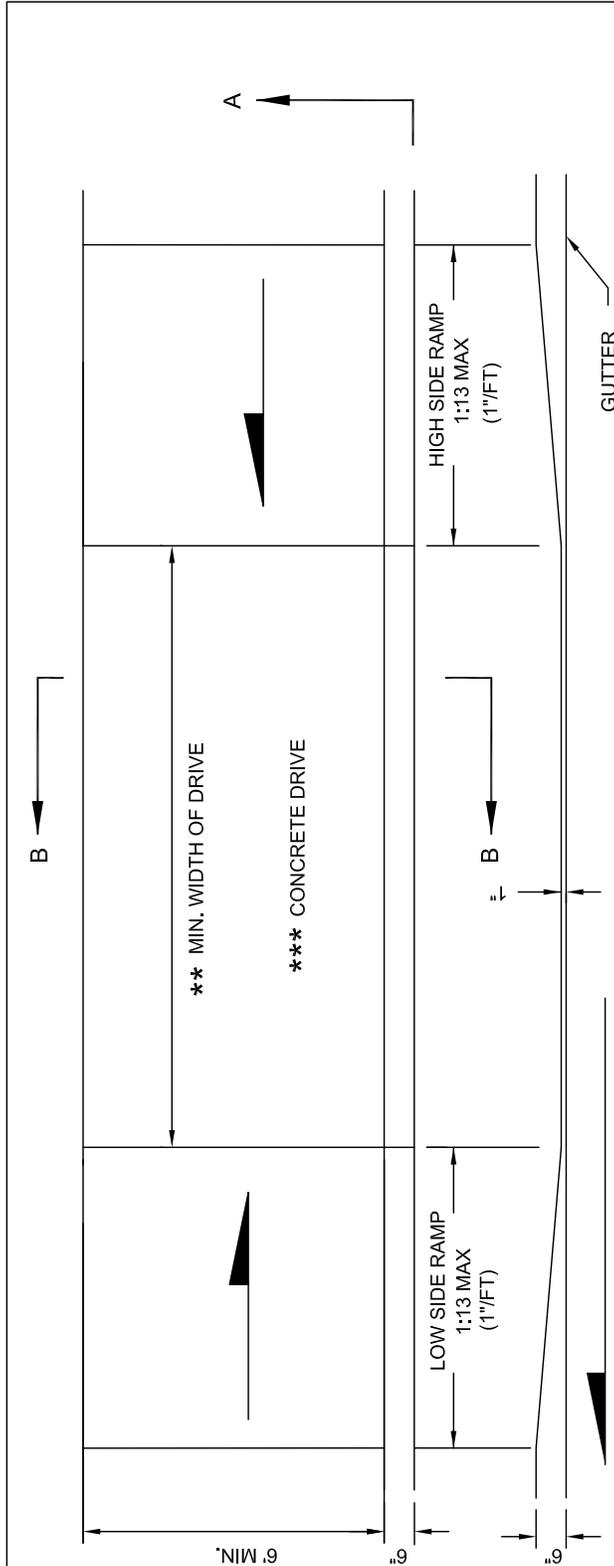
REGULATIONS CONCERNING DRIVEWAY ARE COVERED IN THE CITY OF COLUMBUS CODE, 1959, UNDER CHAPTER 905, AND AS AMENDED IN 1989.

NOTIFY THIS OFFICE WHEN FORMS WILL BE READY FOR INSPECTION, AT LEAST 24 HOURS BEFORE CONCRETE IS TO BE PLACED. TELEPHONE 645-7497. IN NO CASE SHALL CONCRETE BE PLACED WITHOUT APPROVAL OF FORM WORK BY THE INSPECTOR.

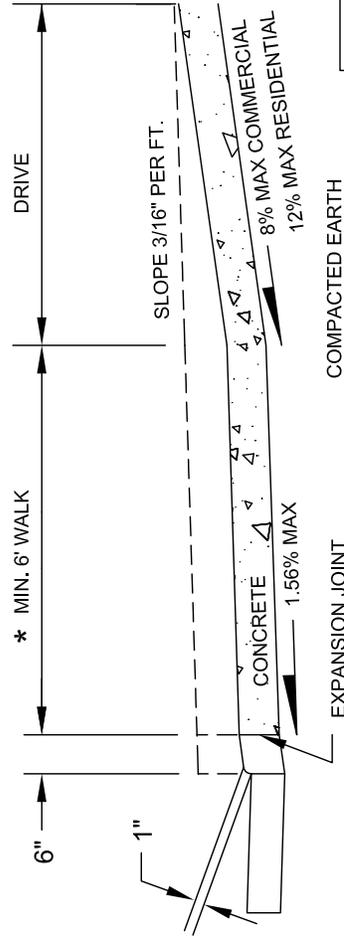
NO CONCRETE SHALL BE PLACED UNTIL TEMPERATURE IS 35° F. MIN. AND RISING. CONCRETE SHALL BE PROTECTED IN ACCORDANCE WITH SECTION 451.061 OF ITEM 451.

# STANDARD RESIDENTIAL DRIVEWAY WITH TREE LAWN ON PUBLIC R/W

CITY ENGINEER	CITY OF COLUMBUS, OHIO DEPARTMENT OF PUBLIC SERVICE TRANSPORTATION DIVISION	STD DWG <b>2201</b>
	<i>Randy Baum</i>	REV: 01/01/07 SHT 1 OF 4



LONGITUDINAL STREET PITCH SECTION A-A



SECTION B-B

STREET PITCH	RAMP LENGTH (1:13) LOW SIDE*	HIGH SIDE*
1%	5'-6"	7'-2"
2%	5'-0"	8'-4"
3%	4'-6"	10'-0"
4%	4'-2"	12'-6"
5%	3'-10"	16'-8"

\* MEASURED ALONG THE BACK OF CURB

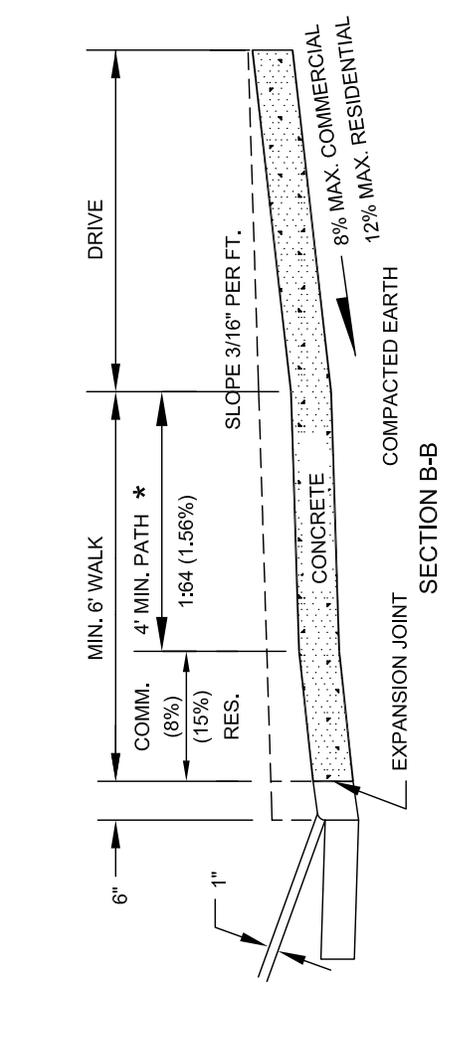
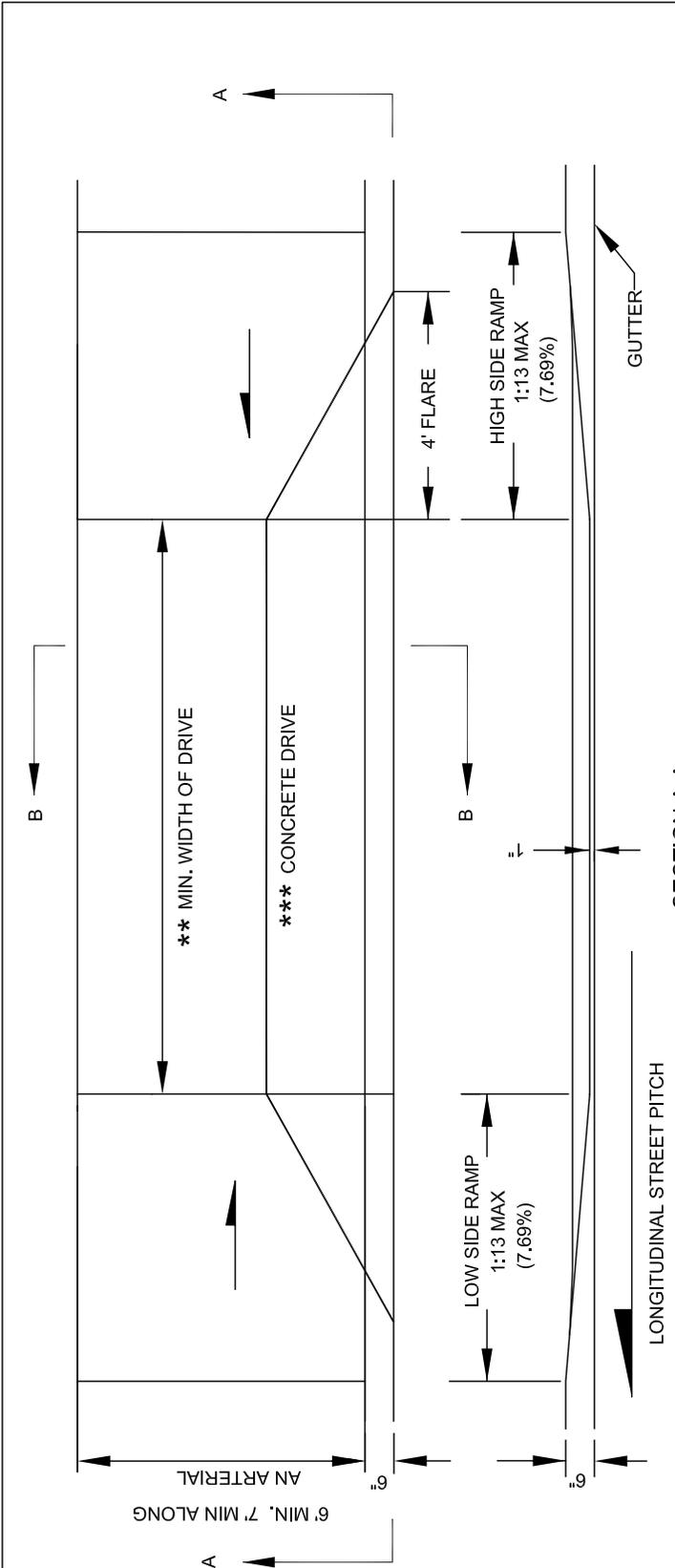
- \* 7' MIN. ALONG AN ARTERIAL
- \*\* WIDTH = 10' - RESIDENTIAL  
WIDTH = 20' COMMERCIAL OR  
26' WITH 60 OR MORE  
PARKING SPACES
- \*\*\* THICKNESS = 6" - RESIDENTIAL  
THICKNESS = 8" - COMMERCIAL

SEE SHEET 1/4 FOR ADDITIONAL INFORMATION

## STANDARD DRIVEWAY WITH SIDEWALK ADJACENT TO CURB ON PUBLIC R/W (RESIDENTIAL & COMMERCIAL)

CITY OF COLUMBUS, OHIO  
DEPARTMENT OF PUBLIC SERVICE  
TRANSPORTATION DIVISION

STD DWG  
**2201**  
REV: 01/01/07  
SHT 2 OF 4

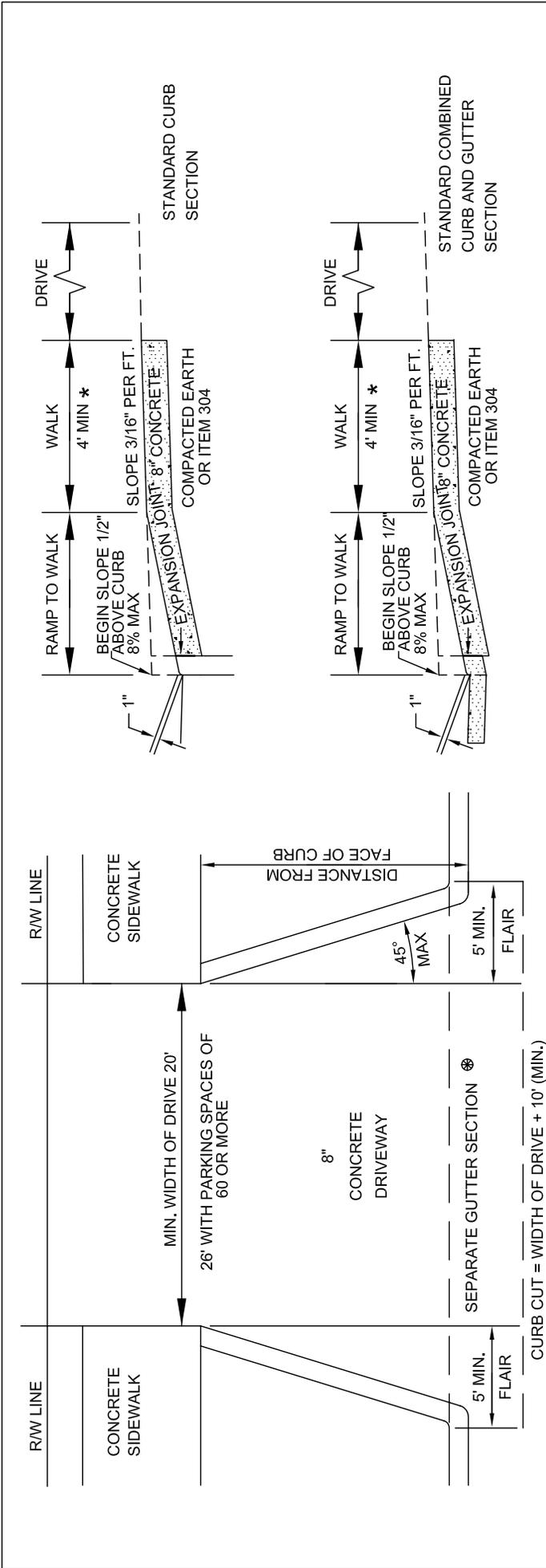


**STANDARD DRIVEWAY WITH  
SIDEWALK ADJACENT TO CURB  
ON PUBLIC R/W, PARALLEL RAMP  
TYPE (RES. & COMM.)**

CITY OF COLUMBUS, OHIO DEPARTMENT OF PUBLIC SERVICE TRANSPORTATION DIVISION	STD DWG
	<b>2201</b>
	REV: 01/01/07
SHT 3 OF 4	

- \* 5' MIN. ALONG AN ARTERIAL
  - \*\* WIDTH = 10' - RESIDENTIAL  
WIDTH = 20' COMMERCIAL OR 26' WITH  
60 OR MORE PARKING SPACES
  - \*\*\* THICKNESS = 6" - RESIDENTIAL  
THICKNESS = 8" - COMMERCIAL
- SEE SHEET 1/4 FOR ADDITIONAL INFORMATION





CURB OR COMBINED, CURB AND GUTTER SHALL BE TAKEN OUT AND REPLACED WITH CONCRETE, SEPARATED FROM THE RAMP BY 1/2" PREMOLDED EXPANSION JOINT. WHEN LESS THAN 5' OF A CURB SECTION REMAINS AFTER THE CURB CUT IS LOCATED, IT SHALL ALSO BE REMOVED AND REPLACED. CURB SHALL BE CONSTRUCTED IN MINIMUM 5' SECTIONS AND MAXIMUM 10' SECTIONS.

FILLS, IF REQUIRED, SHALL BE OF EARTH, COMPACTED IN 2" LAYERS, OR OF ITEM 304, AGGREGATE BASE, COMPACTED IN LAYERS NOT EXCEEDING 4". DRIVEWAYS AND SIDEWALKS SHALL BE CONSTRUCTED OF PLAIN PORTLAND CEMENT CONCRETE, ITEM 452, 5% TO 8% AIR ENTRAINED, (CLASS C, SECT.499) PER C.Y., AND 3" MAX. SLUMP (AS SHOWN IN DETAILS).

EXPANSION JOINTS SHALL BE PLACED TO FORM UTILITY STRIPS WHERE REQUIRED, AND WHEREVER NEW CONCRETE MEETS EXISTING CONSTRUCTION. FORMS SHALL CONSIST OF WOOD 2" NOMINAL THICKNESS OR METAL OF EQUAL STRENGTH.

A STANDARD CURING COMPOUND SHALL BE PROPERLY APPLIED IMMEDIATELY AFTER FINISH.

ALTERNATE ASPHALT CONCRETE APPROACH: INSTEAD OF PLAIN PORTLAND CEMENT CONCRETE. NOTE: ALTERNATE ASPHALT CONCRETE APPROACH SHALL NOT BE USED ON A CURBED STREET. THE PORTIONS OF THE DRIVEWAY OUTSIDE OF THE LIMITS OF THE SIDEWALK MAY BE CONSTRUCTED TO THESE MINIMUM REQUIREMENTS:

- 4" AGGREGATE BASE, ITEM 304
- 4" HOT MIXED, HOT LAID ASPHALT CONCRETE, ITEM 402 OR ITEM 416
- 4" HOT MIXED, HOT LAID ASPHALT CONCRETE, ITEM 404 OR ITEM 416

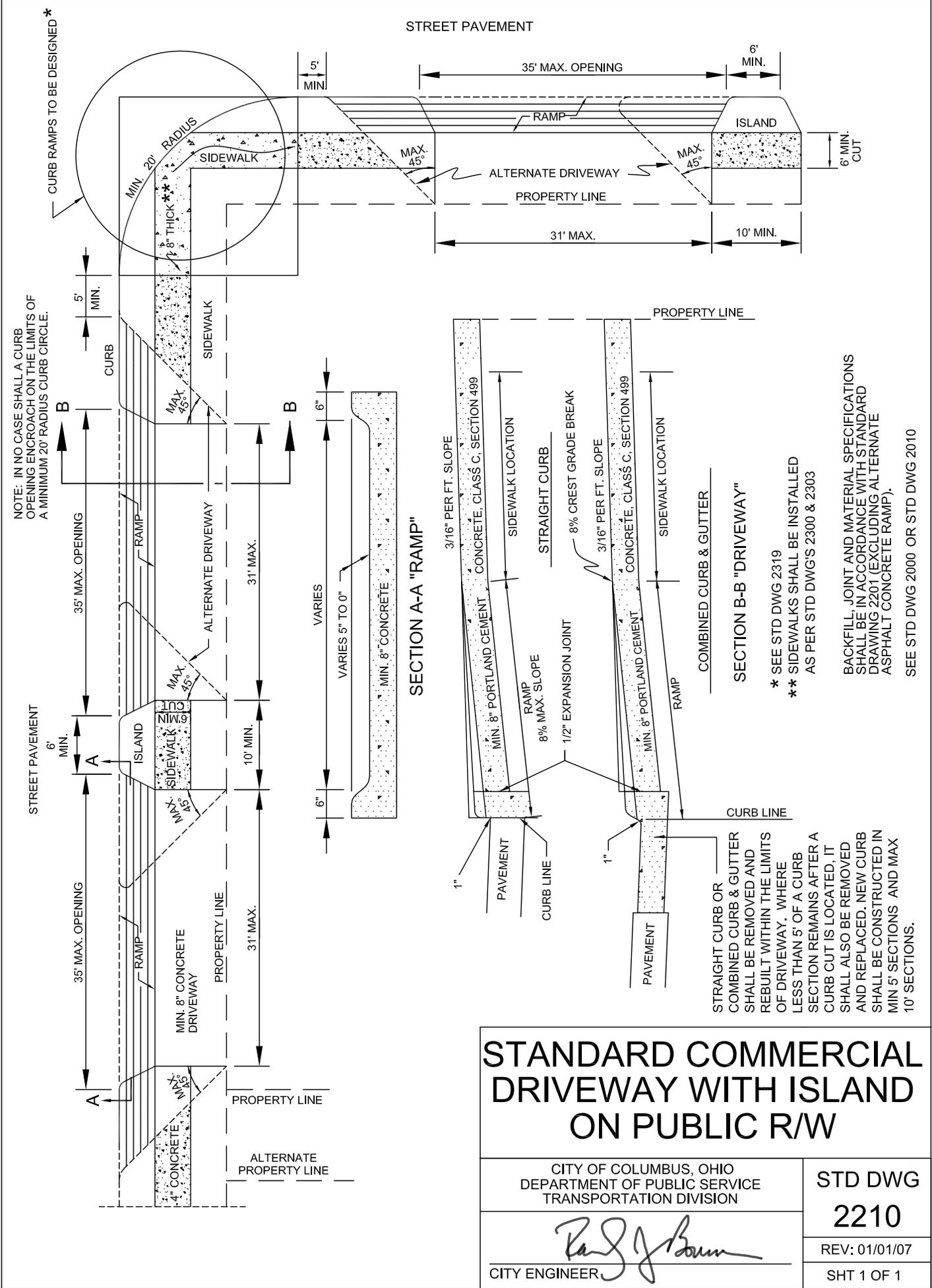
ITEM NUMBERS REFER TO STANDARD SPECIFICATIONS, TRANSPORTATION DIVISION, COLUMBUS, OHIO, CURRENT EDITION AND ALL WORK SHALL BE DONE IN ACCORDANCE WITH THESE SPECIFICATIONS. REGULATIONS CONCERNING DRIVEWAY ARE COVERED IN THE CITY OF COLUMBUS CODE, 1959, UNDER CHAPTER 905, AND AS AMENDED IN 1969.

NOTIFY THIS OFFICE WHEN FORMS WILL BE READY FOR INSPECTION, AT LEAST 24 HOURS BEFORE CONCRETE IS TO BE PLACED. TELEPHONE 645-7497. IN NO CASE SHALL CONCRETE BE PLACED WITHOUT APPROVAL OF FORM WORK BY THE INSPECTOR.

NO CONCRETE SHALL BE PLACED UNTIL TEMPERATURE IS 35° F. MIN. AND RISING. CONCRETE SHALL BE PROTECTED IN ACCORDANCE WITH SECTION 451.061 OF ITEM 451.

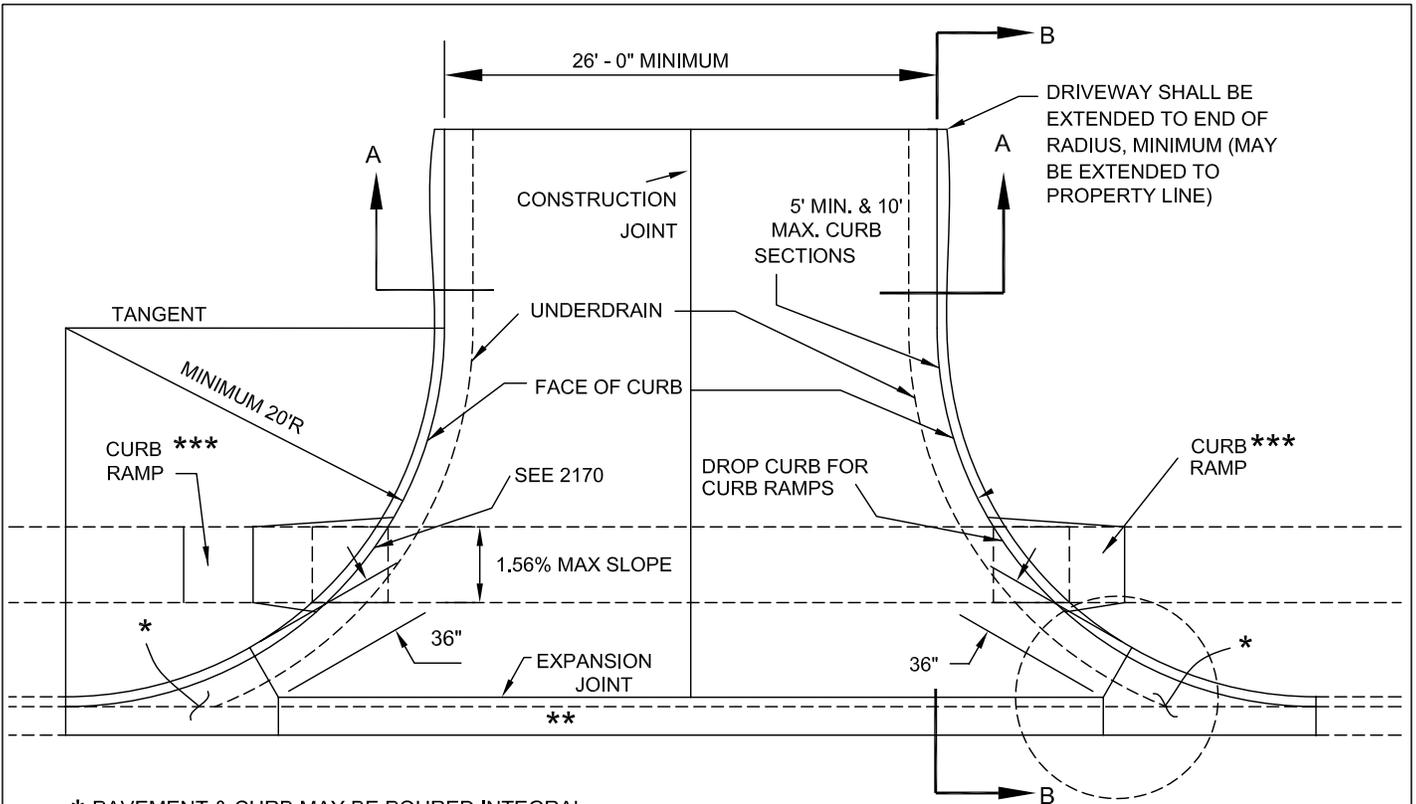
\* 5' MINIMUM ALONG AN ARTERIAL.

<h1 style="margin: 0;">STANDARD COMMERCIAL DRIVEWAY ON PUBLIC R/W</h1>	
CITY OF COLUMBUS, OHIO DEPARTMENT OF PUBLIC SERVICE TRANSPORTATION DIVISION	<b>STD DWG</b>  <b>2202</b>
CITY ENGINEER,	REV: 01/01/07
SHT 1 OF 1	



# STANDARD COMMERCIAL DRIVEWAY WITH ISLAND ON PUBLIC R/W

CITY OF COLUMBUS, OHIO DEPARTMENT OF PUBLIC SERVICE TRANSPORTATION DIVISION		STD DWG <b>2210</b>
 CITY ENGINEER		REV: 01/01/07
		SHT 1 OF 1



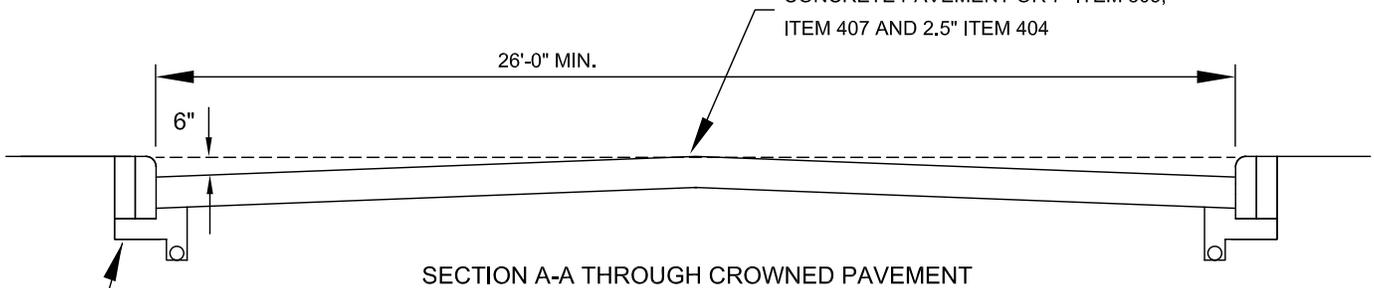
\* PAVEMENT & CURB MAY BE POURED INTEGRAL WITH PRIOR C.O.C. APPROVAL.

\*\* MAINTAIN CONCRETE GUTTER AND 4" UNDERDRAIN

\*\*\* CURB RAMP TYPE G OR H AS PER STD DWG 2319 IF THE SIDEWALK IS BUILT AT GRADE THEN CURB RAMPS MAY NOT BE REQUIRED.

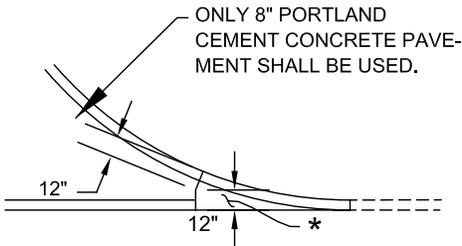
FOR STRAIGHT CURB, SEE DETAIL BELOW

OPTIONAL 8" PORTLAND CEMENT CONCRETE PAVEMENT OR 7" ITEM 305, ITEM 407 AND 2.5" ITEM 404



OPTIONAL CURB SEE STANDARD DRAWINGS: 2000 OR 2010

FOR SPECIFICATIONS SEE STD DWG 2202 FOR JOINT DETAIL SEE STD DWG 2170



STRAIGHT CURB DETAIL

# DRIVEWAYS - COMMERCIAL, MULTIPLE DWELLING, OR SCHOOL: TYPE A, B, OR C

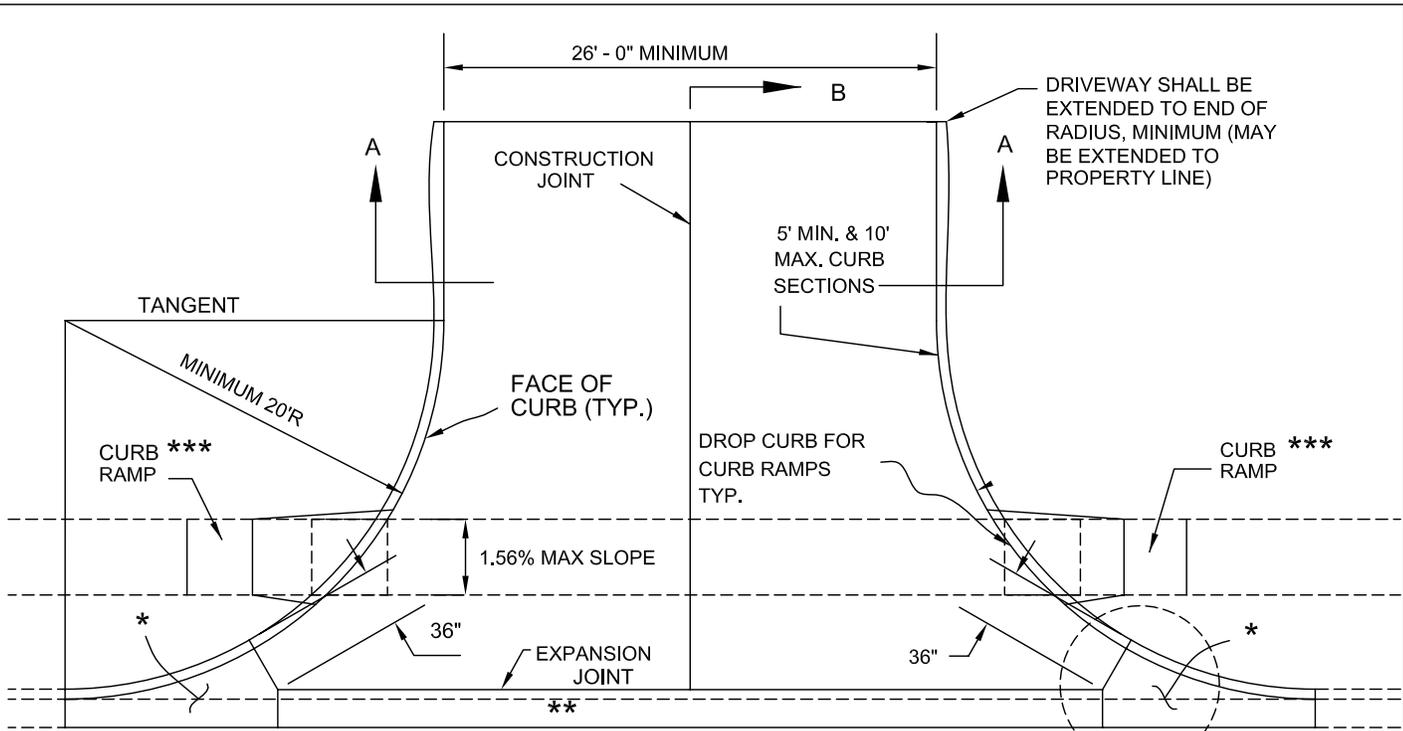
CITY OF COLUMBUS, OHIO  
DEPARTMENT OF PUBLIC SERVICE  
TRANSPORTATION DIVISION

CITY ENGINEER,

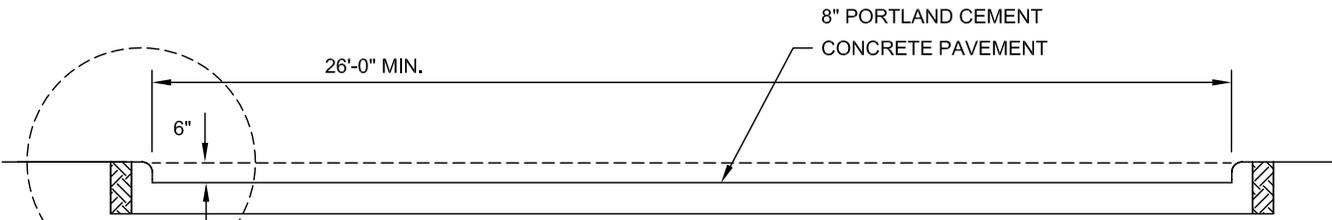
STD DWG  
**2220**

REV: 01/01/07

SHT 1 OF 3

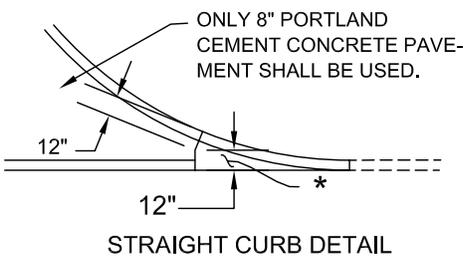


- \* PAVEMENT & CURB MAY BE POURED INTEGRAL WITH PRIOR C.O.C. APPROVAL.
- \*\* MAINTAIN CONCRETE GUTTER AND 4" UNDERDRAIN
- \*\*\* CURB RAMP TYPE G OR H AS PER STD DWG 2319 IF THE SIDEWALK IS BUILT AT GRADE THEN CURB RAMPS MAY NOT BE NEEDED.



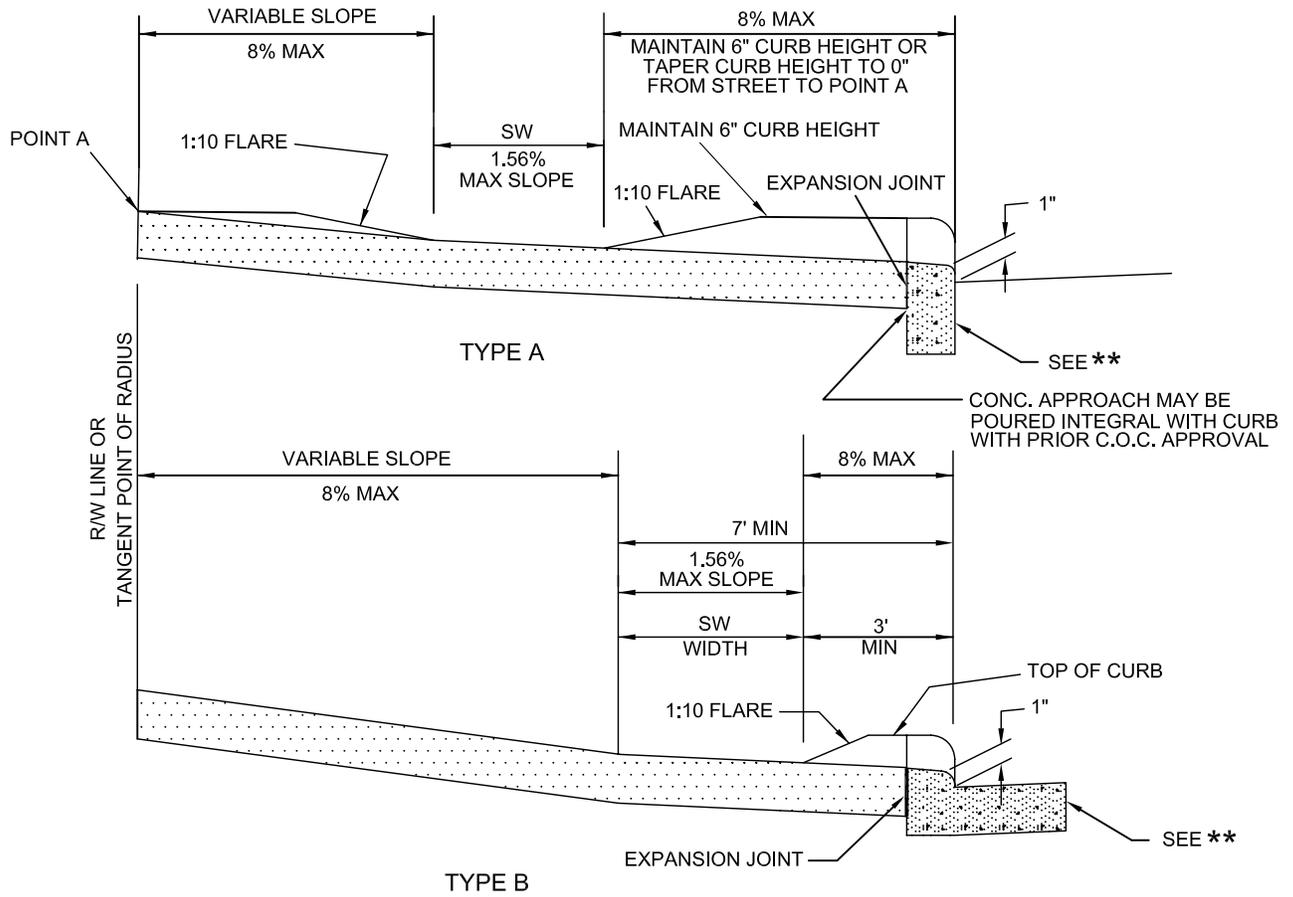
SECTION A-A THROUGH FLAT PAVEMENT

FOR SPECIFICATIONS SEE STD DWG 2202  
 FOR JOINT DETAIL SEE STD DWG 2170

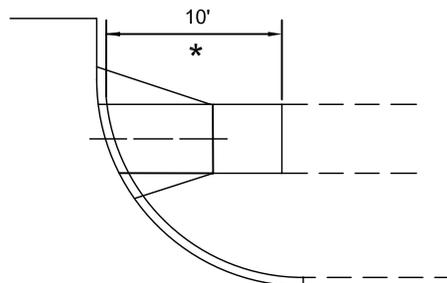
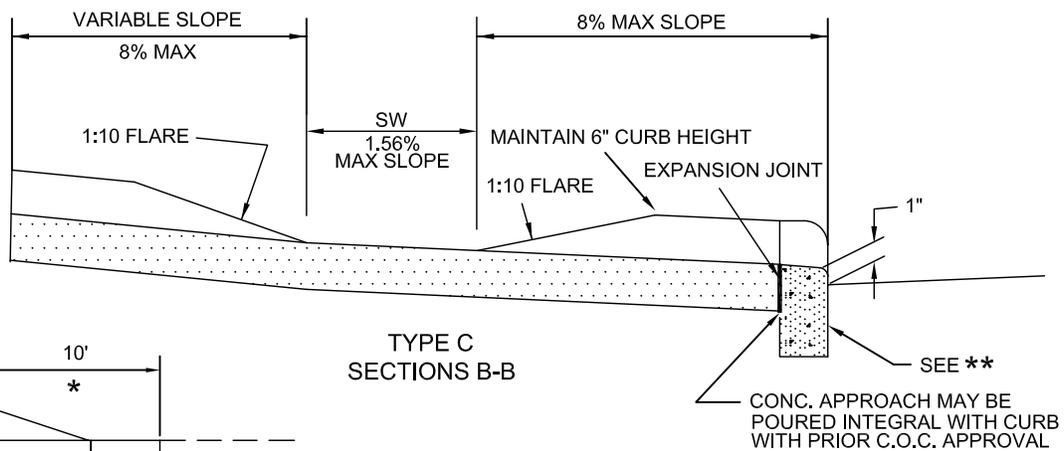


# DRIVEWAYS - COMMERCIAL, MULTIPLE DWELLING, OR SCHOOL: TYPE A, B, OR C

CITY OF COLUMBUS, OHIO DEPARTMENT OF PUBLIC SERVICE TRANSPORTATION DIVISION	<b>STD DWG</b> <b>2220</b>
	REV: 01/01/07
	SHT 2 OF 3



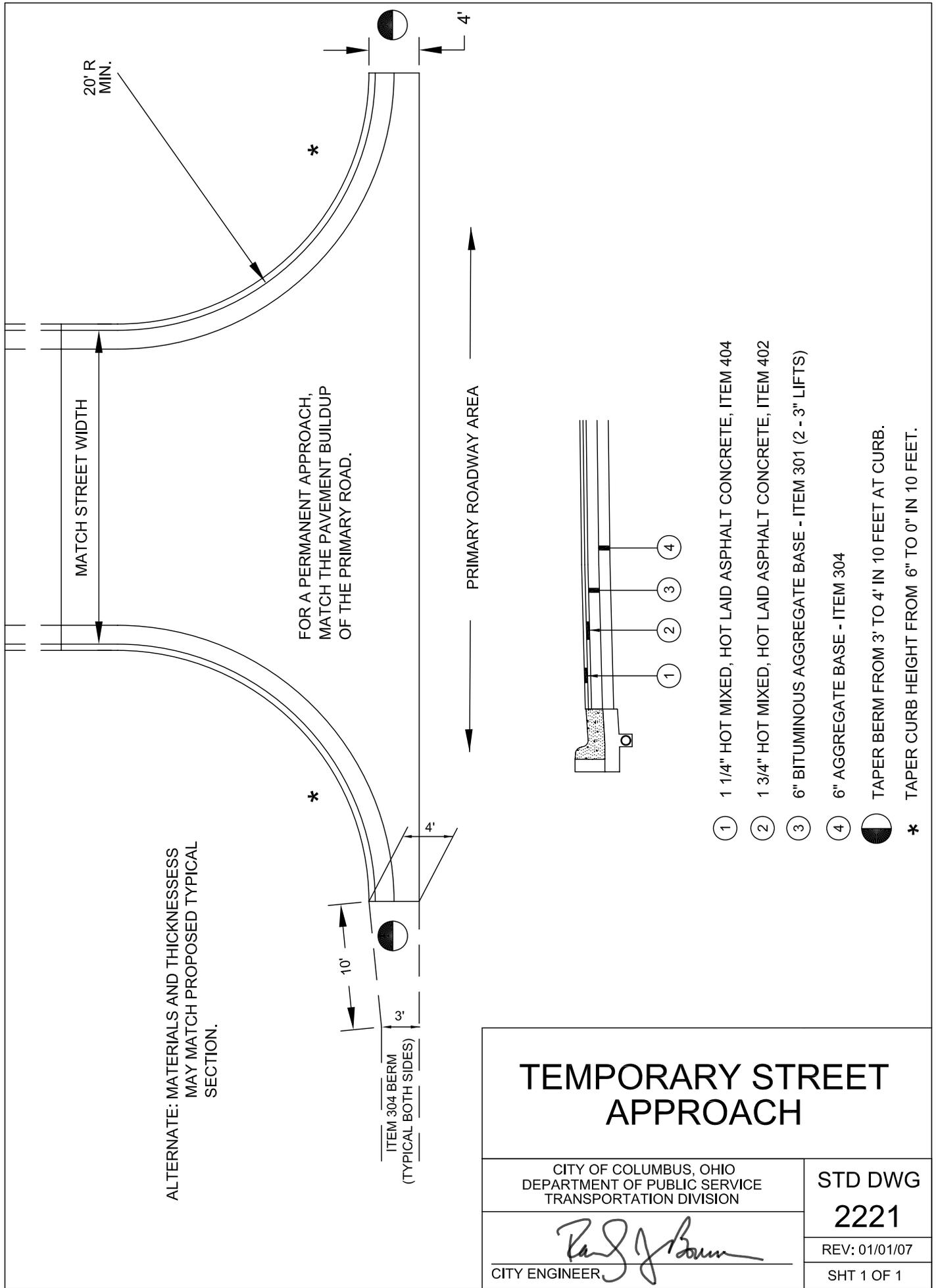
SW - SIDEWALK AREA, DROP CURB FOR WHEELCHAIR RAMP WIDTH SHALL BE PER STD DWG 2300



CURB RAMPS SHALL BE AS PER STD DWG 2319 OR IF SIDEWALK IS BUILT AT GRADE, RAMPS MAY NOT BE REQUIRED.

- ADA RAMP TO MEET DRIVEWAY APPROACH
- \* 8" CONCRETE
- \*\* STRAIGHT CURB OR CONCRETE CURB & GUTTER MAY BE USED ON EACH TYPE

<h2 style="margin: 0;">CURB HEIGHT TAPER TYPES A, B, OR C</h2>	
CITY OF COLUMBUS, OHIO DEPARTMENT OF PUBLIC SERVICE TRANSPORTATION DIVISION	<b>STD DWG</b> <b>2220</b> REV: 01/01/07 SHT 3 OF 3



ALTERNATE: MATERIALS AND THICKNESSES MAY MATCH PROPOSED TYPICAL SECTION.

# TEMPORARY STREET APPROACH

CITY OF COLUMBUS, OHIO  
DEPARTMENT OF PUBLIC SERVICE  
TRANSPORTATION DIVISION

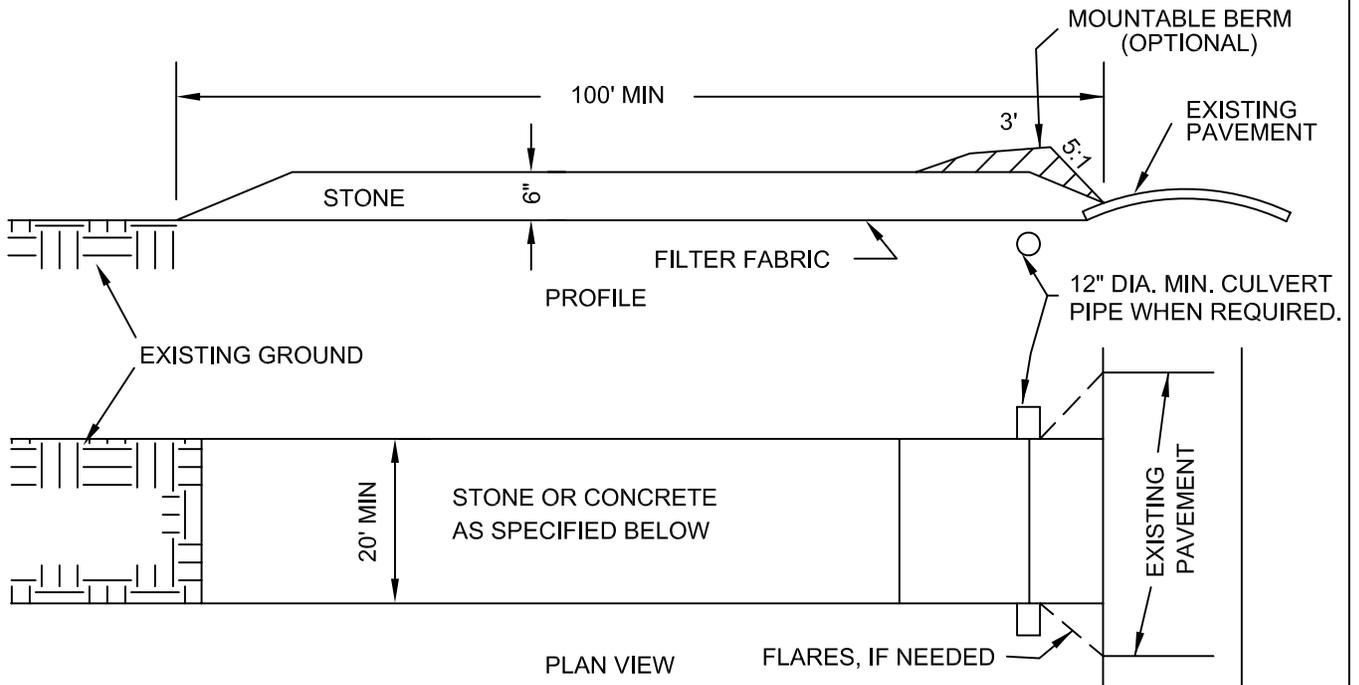
*Randy Baum*  
CITY ENGINEER

STD DWG  
2221

REV: 01/01/07

SHT 1 OF 1

- 1 1 1/4" HOT MIXED, HOT LAID ASPHALT CONCRETE, ITEM 404
- 2 1 3/4" HOT MIXED, HOT LAID ASPHALT CONCRETE, ITEM 402
- 3 6" BITUMINOUS AGGREGATE BASE - ITEM 301 (2 - 3" LIFTS)
- 4 6" AGGREGATE BASE - ITEM 304
- TAPER BERM FROM 3' TO 4' IN 10 FEET AT CURB.
- \* TAPER CURB HEIGHT FROM 6" TO 0" IN 10 FEET.



**STABILIZED CONSTRUCTION ENTRANCE**

1. STONE SIZE - USE 2" STONE OR RECLAIMED OR RECYCLED CONCRETE EQUIVALENT.
2. LENGTH - A MINIMUM OF 100', BUT MAY BE LONGER AS DETERMINED BY THE CITY OF COLUMBUS.
3. THICKNESS - NOT LESS THAN SIX (6) INCHES.
4. WIDTH - TWENTY (20) FEET MINIMUM BUT NOT LESS THAN THE FULL WIDTH AT POINTS WHERE INGRESS OR EGRESS OCCURS. MAY BE WIDER AS DETERMINED BY THE CITY OF COLUMBUS.
5. FLARES OR RADII SHALL BE INSTALLED AT THE ENTRANCE IF THE PUBLIC ROADWAY SPEEDS AND/OR TRAFFIC CONDITIONS WARRANT IT, OR IF DIRECTED BY C.O.C. PERSONNEL.
6. FILTER FABRIC - WILL BE PLACED OVER THE ENTIRE AREA PRIOR TO PLACING THE STONE.
7. SURFACE WATER - ALL SURFACE WATER FLOWING OR DIVERTED TOWARD CONSTRUCTION ENTRANCES SHALL BE PIPED ACROSS THE ENTRANCE. IF PIPING IS IMPRACTICAL, A MOUNTABLE BERM WITH 5:1 SLOPES SHALL BE PERMITTED.
8. CULVERT PIPE - 12" MINIMUM PIPE IS REQUIRED IF A STORM DITCH OR SWALE EXISTS AT THE PROPOSED ENTRANCE. THE CULVERT PIPE INVERTS SHALL MATCH THE EXISTING DITCH AT BOTH SIDES OF THE ENTRANCE.
9. MAINTENANCE - THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PROTECT THE PUBLIC RIGHT-OF-WAY. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE AS CONDITIONS DEMAND AND REPAIR AND/OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT. ALL SEDIMENT SPILLED, DROPPED, WASHED, OR TRACKED ONTO PUBLIC RIGHT-OF-WAY MUST BE REMOVED IMMEDIATELY.
10. WASHING - WHEELS SHALL BE CLEANED TO REMOVE SEDIMENT PRIOR TO ENTRANCE INTO PUBLIC RIGHT-OF-WAY. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH STONE AND WHICH DRAINS INTO AN APPROVED SEDIMENT TRAPPING DEVICE
11. PERIODIC INSPECTION AND NEEDED MAINTENANCE SHALL BE PROVIDED AFTER EACH RAIN.
12. MAINTENANCE OF TRAFFIC SIGNAGE SHALL BE A 48" x 48" CONSTRUCTION ENTRANCE AHEAD, 200' (ADEQUATE SIGHT DISTANCE SHALL BE CONSIDERED) BEFORE THE ENTRANCE ON BOTH SIDES OF THE ROAD OR AS APPROVED BY THE C.O.C. TEMPORARY TRAFFIC CONTROL COORDINATOR. YOU SHALL CALL THE TTCC @ 645-6269 OR 645-5845 BEFORE STARTING THE ENTRANCE WORK.

**TEMPORARY  
CONSTRUCTION  
ENTRANCE**

CITY OF COLUMBUS, OHIO  
DEPARTMENT OF PUBLIC SERVICE  
TRANSPORTATION DIVISION

CITY ENGINEER,

STD DWG

2222

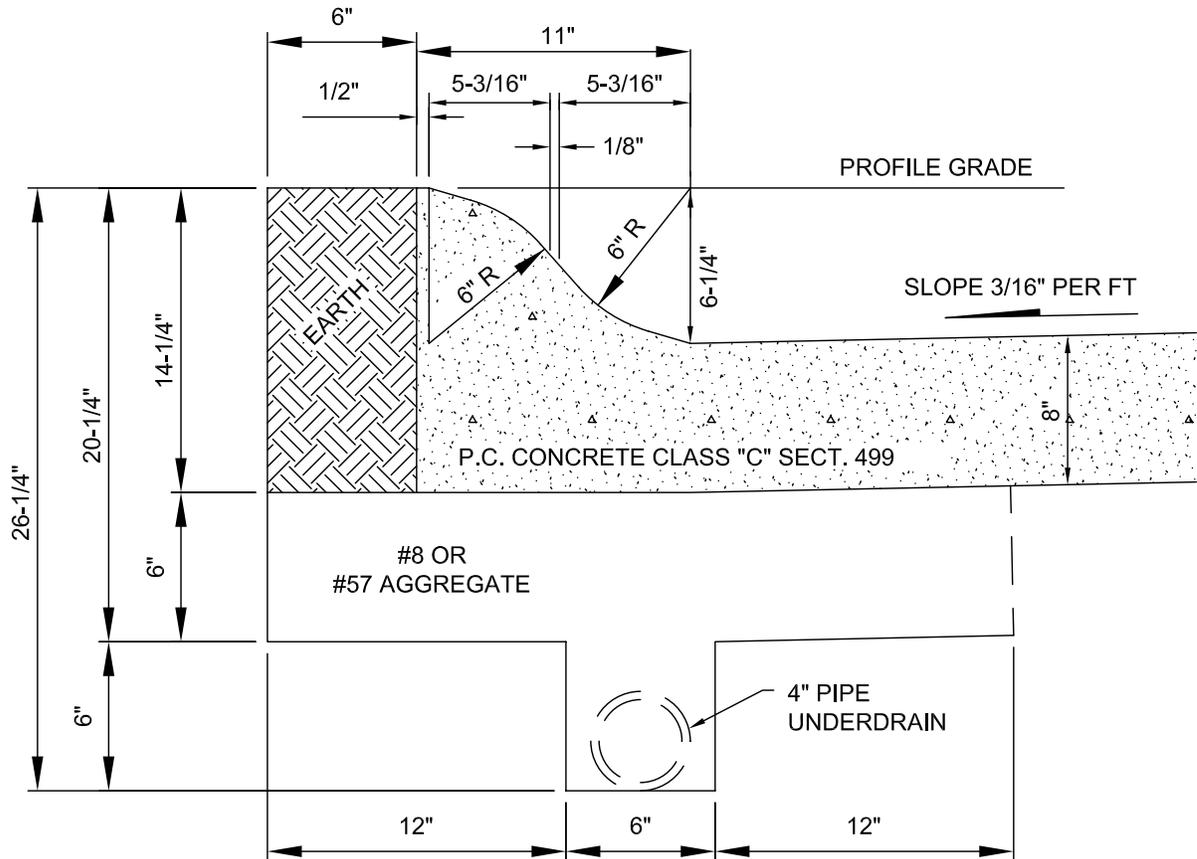
REV: 01/01/07

SHT 1 OF 1



8" CONCRETE, ITEM 452

SECTION VIEW OF DRIVE



ITEM 452-8" PORTLAND CEMENT CONCRETE PAVEMENT WITH INTEGRAL CURB

ALL PORTLAND CEMENT CONCRETE SPECIFIED ON THIS PLAN SHALL BE CLASS "C"

FOR DETAILS OF PORTLAND CEMENT CONCRETE PAVING SEE STD DWG 2170

**INTEGRAL CURB, GUTTER, AND PAVEMENT FOR COMMERCIAL DRIVES, ITEM 452**

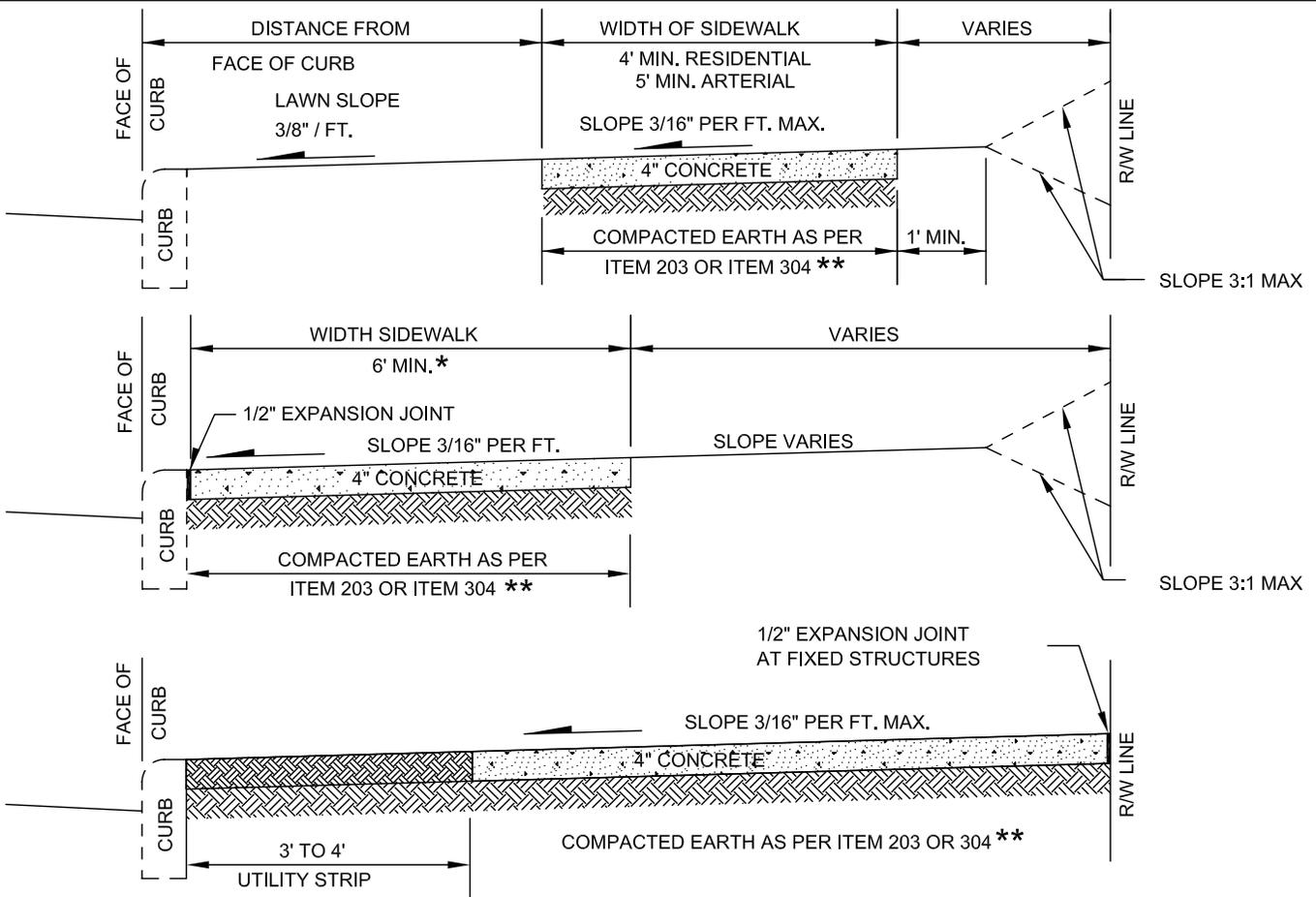
CITY OF COLUMBUS, OHIO  
DEPARTMENT OF PUBLIC SERVICE  
TRANSPORTATION DIVISION

CITY ENGINEER,

STD DWG  
**2225**

REV: 01/01/07

SHT 1 OF 1



SIDEWALKS SHALL BE CONSTRUCTED WITH P.C. CONCRETE (CLASS C, ITEM 499) WHICH SHALL CONTAIN 5% TO 8% ENTRAINED AIR AND A 4" MAXIMUM SLUMP.

WHERE DRIVEWAYS CROSS THE SIDEWALK THE CONCRETE SHALL BE 6" THICK. SEE STD DWG 2201.

LENGTH AND SLOPE OF DRIVEWAY RAMPS ARE VARIABLE ACCORDING TO THE DISTANCE OF THE SIDEWALK FROM THE CURB, SEE STD DWG 2201.

ALL CONCRETE SHALL BE PLACED IN ONE COURSE AND FINISHED WITH A WOOD FLOAT OR BROOM FINISH.

EXPANSION JOINTS SHALL BE PLACED WHEREVER NEW CONCRETE MEETS EXISTING CONSTRUCTION AND AT INTERVALS OF 30' OR LESS.

WATER AND GAS VALVE BOXES IN THE SIDEWALK AREA SHALL BE ADJUSTED TO PROPER GRADE.

ROOF DRAINS SHALL BE EXTENDED UNDER THE SIDEWALK AND THROUGH THE CURB. SEE STD DWG 2320.

FORMS SHALL BE MADE OF LUMBER 2" NOMINAL THICKNESS OR OF EQUALLY RIGID METAL.

IMMEDIATELY AFTER FINISHING, CONCRETE SHALL BE CURED IN AN APPROVED MANNER.

WHEN A SIDEWALK IS CONSTRUCTED FOR THE ENTIRE WIDTH FROM THE CURB TO THE LOT LINE, THE WALK SHALL BE CONSTRUCTED PART WIDTH 48" MIN AT A TIME, ALLOWING FOR SUFFICIENT UN-OBSTRICTED AREA 48" MIN FOR SAFE MOVEMENT OF PEDESTRIAN TRAFFIC.

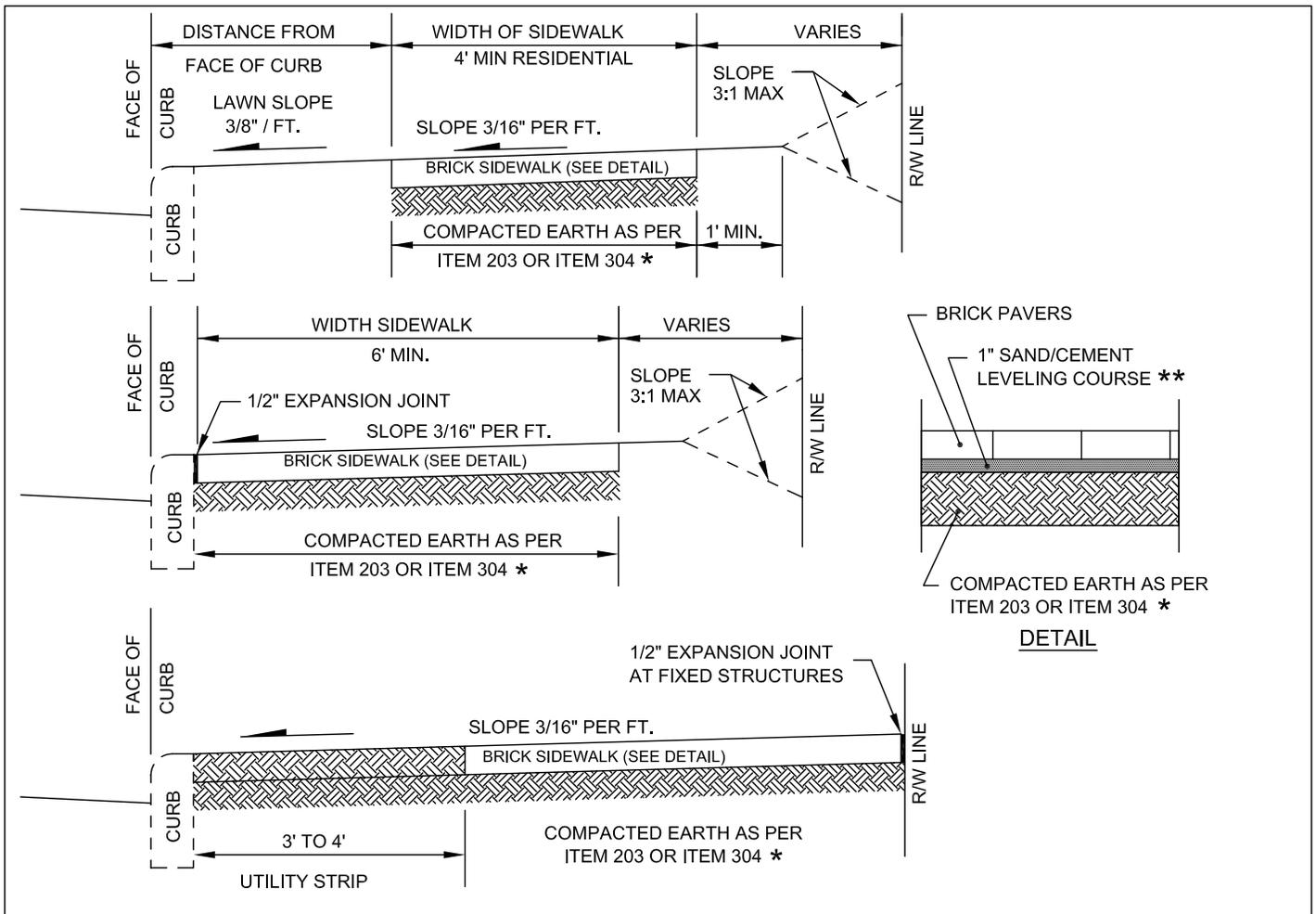
NOTIFICATION TO THE INSPECTION SERVICES SECTION OF THE C.O.C. TRANSPORTATION DIVISION IS REQUIRED AT LEAST 24 HRS BEFORE WORK IS TO BEGIN. TELEPHONE 645-7497. IN NO CASE MAY CONCRETE BE PLACED WITHOUT APPROVAL OF FORM WORK BY THE INSPECTOR.

NO CONCRETE SHALL BE PLACED UNTIL TEMPERATURE IS 35° F. MIN AND RISING. ONCE PLACED THE CONCRETE SHALL BE PROTECTED IN ACCORDANCE WITH SECTION 451.061 OF THE CURRENT EDITION OF THE COLUMBUS CMS.

ITEM NUMBERS REFER TO THE CITY OF COLUMBUS STANDARD CONSTRUCTION AND MATERIAL SPECIFICATIONS, TRANSPORTATION DIVISION, CURRENT EDITION. ALL WORK SHALL BE DONE IN ACCORDANCE WITH THESE SPECIFICATIONS.

- \* 7' MIN ALONG ARTERIAL ROADWAYS
- \*\* # 57 AGGREGATE MAY BE USED FOR REPLACEMENT WORK.

<h2 style="margin: 0;">STANDARD SIDEWALKS ITEM 608 &amp; SPECIFICATIONS</h2>	
CITY OF COLUMBUS, OHIO DEPARTMENT OF PUBLIC SERVICE TRANSPORTATION DIVISION	<b>STD DWG 2300</b>
CITY ENGINEER	REV: 01/01/07 SHT 1 OF 1



WATER AND GAS VALVES BOXES IN THE SIDEWALK AREA SHALL BE ADJUSTED TO PROPER GRADE.

ROOF DRAINS SHALL BE EXTENDED UNDER THE SIDEWALK AND THROUGH THE CURB. SEE STD DWG 2320.

FORMS SHALL BE MADE OF LUMBER 2" NOMINAL THICKNESS OR OF EQUALLY RIGID METAL.

WHERE DRIVEWAYS CROSS THE SIDEWALK, THE SIDEWALK AREA SHALL BE 6" THICK CONCRETE W/1.56% MAX. CROSS SLOPE. SEE STD DWG 2201.

WHEN A SIDEWALK IS CONSTRUCTED FOR THE ENTIRE WIDTH FROM THE CURB TO THE LOT LINE, THE WALK SHALL BE CONSTRUCTED PART WIDTH AT A TIME 48", ALLOWING FOR SUFFICIENT UN-OBSTRUCTED AREA 48" FOR SAFE MOVEMENT OF PEDESTRIAN TRAFFIC.

NOTIFICATION TO THE INSPECTION SERVICES SECTION OF THE C.O.C. TRANSPORTATION DIVISION IS REQUIRED AT LEAST 24 HOURS BEFORE WORK IS TO BEGIN.

ITEM NUMBERS REFER TO THE CITY OF COLUMBUS, CONSTRUCTION AND MATERIAL SPECIFICATIONS, TRANSPORTATION DIVISION, CURRENT EDITION. ALL WORK SHALL BE DONE IN ACCORDANCE WITH THESE SPECIFICATIONS.

\* #57 AGGREGATE MAY BE USED FOR REPLACEMENT WORK.

\*\* THE SAND TO CEMENT RATIO IS 5 PARTS SAND TO ONE PART CEMENT.

## STANDARD BRICK SIDEWALK SPECIFICATIONS (RESIDENTIAL)

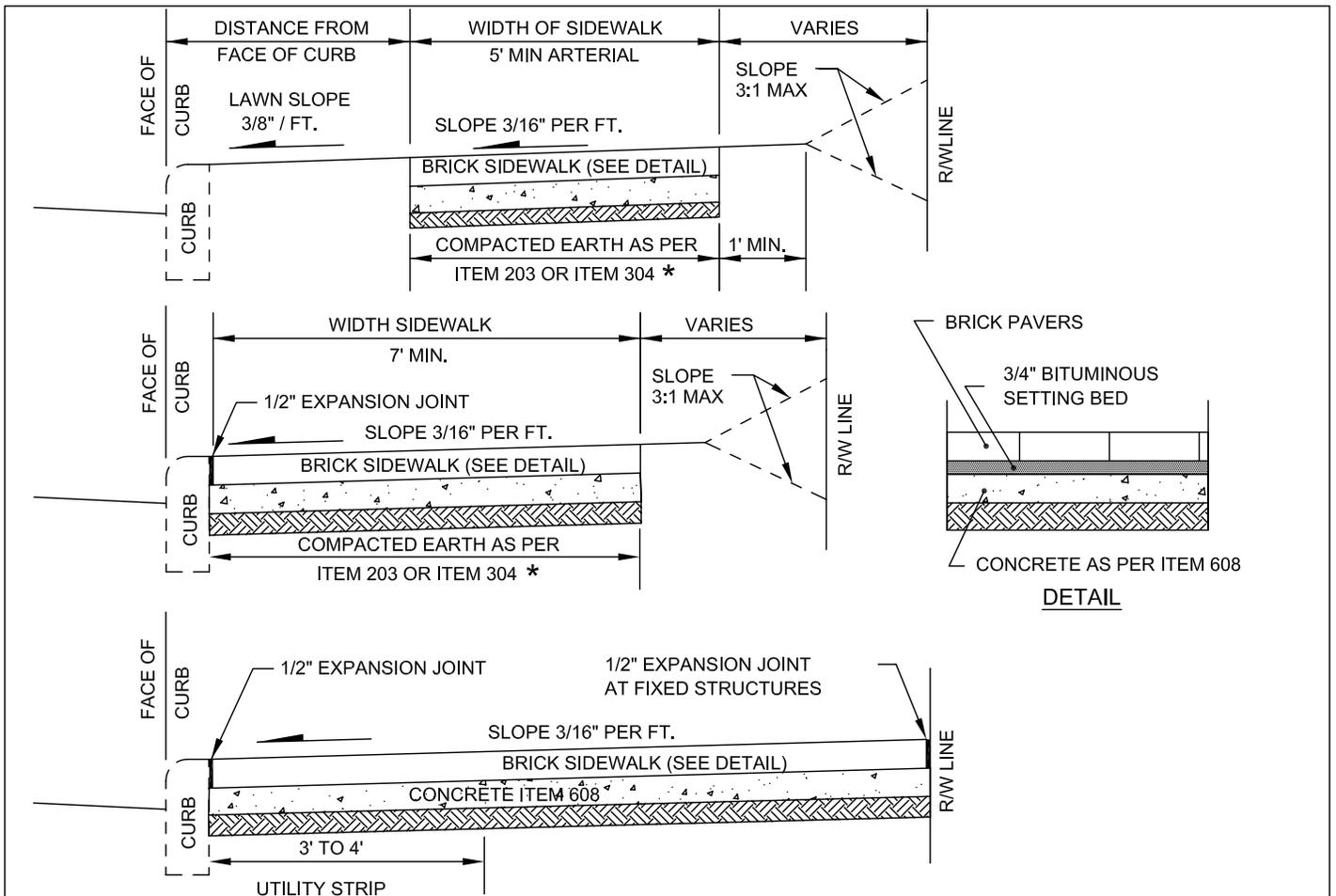
CITY OF COLUMBUS, OHIO  
DEPARTMENT OF PUBLIC SERVICE  
TRANSPORTATION DIVISION

CITY ENGINEER, 

**STD DWG  
2301**

REV: 01/01/07

SHT 1 OF 3



SIDEWALKS CONSTRUCTED WITH P.C. CONCRETE (CL.C, ITEM 499) WHICH SHALL CONTAIN 5% TO 8% ENTRAINED AIR AND A 4" MAXIMUM SLUMP.

WHERE DRIVEWAYS CROSS THE SIDEWALK, THE SIDEWALK AREA SHALL BE 8" THICK CONCRETE. SEE STD DWG 2202.

LENGTH AND SLOPE OF DRIVEWAY RAMPS ARE VARIABLE ACCORDING TO THE DISTANCE OF THE SIDEWALK FROM THE CURB, SEE STD DWG 2201.

ALL CONCRETE SHALL BE PLACED IN ONE COURSE AND FINISHED WITH A WOOD FLOAT.

EXPANSION JOINTS SHALL BE PLACED WHEREVER NEW CONCRETE TOUCHES EXISTING CONSTRUCTION AND AT INTERVALS OF 30' OR LESS.

WATER AND GAS VALVES BOXES IN THE SIDEWALK AREA SHALL BE ADJUSTED TO PROPER GRADE.

ROOF DRAINS SHALL BE EXTENDED UNDER THE SIDEWALK AND THROUGH THE CURB. SEE STD DWG 2320.

FORMS SHALL BE MADE OF LUMBER 2" NOMINAL THICKNESS OR OF EQUALLY RIGID METAL.

IMMEDIATELY AFTER FINISHING, CONCRETE SHALL BE CURED IN AN APPROVED MANNER.

WHEN A SIDEWALK IS CONSTRUCTED FOR THE ENTIRE WIDTH FROM THE CURB TO THE LOT LINE, THE WALK SHALL BE CONSTRUCTED PART WIDTH AT A TIME 48" Min., ALLOWING FOR SUFFICIENT UN-OBSTRUCTED AREA 48" Min. FOR SAFE MOVEMENT OF PEDESTRIAN TRAFFIC.

NOTIFICATION TO THE INSPECTION SERVICES SECTION OF THE C.O.C. TRANSPORTATION DIVISION IS REQUIRED AT LEAST 24 HOURS BEFORE WORK IS TO BEGIN. IN NO CASE MAY CONCRETE BE PLACED WITHOUT APPROVAL OF FORM WORK BY THE INSPECTOR.

NO CONCRETE SHALL BE PLACED UNTIL TEMPERATURE IS 35° F. MIN AND RISING. ONCE PLACED THE CONCRETE SHALL BE PROTECTED IN ACCORDANCE WITH SECTION 451.10 OF ITEM 451.

ONE INCH CONTRACTION JOINTS SHALL BE SAWED IN THE CONCRETE EVERY 10 FT.

ITEM NUMBERS REFER TO THE CITY OF COLUMBUS, CONSTRUCTION AND MATERIAL SPECIFICATIONS, TRANSPORTATION DIVISION, CURRENT EDITION. ALL WORK SHALL BE DONE IN ACCORDANCE WITH THESE SPECIFICATIONS.

## STANDARD BRICK SIDEWALK SPECIFICATIONS (ARTERIAL)

\* #57 AGGREGATE MAY BE USED FOR REPLACEMENT WORK

CITY OF COLUMBUS, OHIO DEPARTMENT OF PUBLIC SERVICE TRANSPORTATION DIVISION	STD DWG <b>2301</b>
	REV: 01/01/07
	SHT 2 OF 3

**ITEM SPECIAL - BRICK PAVERS INCLUDING CONCRETE BASE**

**MATERIAL NOTES:**

NEOPRENE-MODIFIED ASPHALT ADHESIVE - FURNISH NEOPRENE-MODIFIED ASPHALT ADHESIVE THAT CONTAINS 2 % NEOPRENE GRADE WMI OXIDIZED ASPHALT WITH A 150 DEGREE SOFTENING POINT (77 PENETRATION), AND 10 % LONG FIBERED INERT MATERIAL AS SUPPLIED BY (OR APPROVED EQUAL):

SEIDEL COMPANY, INC.  
11 MARKET SQUARE  
NEWBURYPORT, MASSACHUSETTS 01950  
(617) 649-6740

HASTINGS PAVEMENT COMPANY, INC.  
410 LAKEVILLE ROAD  
LAKE SUCCESS, NEW YORK 11042  
(516) 379-3500

**BITUMINOUS SETTING BED** - FURNISH ASPHALT CEMENT CONFORMING TO ASTM D3381, VISCOSITY GRADE AC-10 OR AC-20.

FURNISH FINE AGGREGATE OF NATURAL SAND AND/OR STONE SAND, COMPOSED OF HARD, TOUGH, DURABLE, UNCOATED PARTICLES, FREE FROM CLAY, SILT, ORGANIC MATERIAL OR OTHER DELETERIOUS SUBSTANCES. ENSURE THE SAND IS UNIFORMLY GRADED WITH ALL MATERIAL PASSING THE NO. 4 SIEVE AND MEETING THE REQUIREMENTS OF ASTM C136.

COMBINE THE DRIED FINE AGGREGATE WITH HOT ASPHALT CEMENT AND MIX HEAT TO APPROXIMATELY 300°F AT AN ASPHALT PLANT.

- A. PROVIDE AN APPROXIMATE PROPORTION OF MATERIALS OF 7 % ASPHALT CEMENT AND 93 % FINE AGGREGATE.
- B. PROVIDE EACH TON APPORTIONED BY WEIGHT TO 140 POUNDS OF ASPHALT CEMENT AND 1,860 POUNDS OF FINE AGGREGATE.

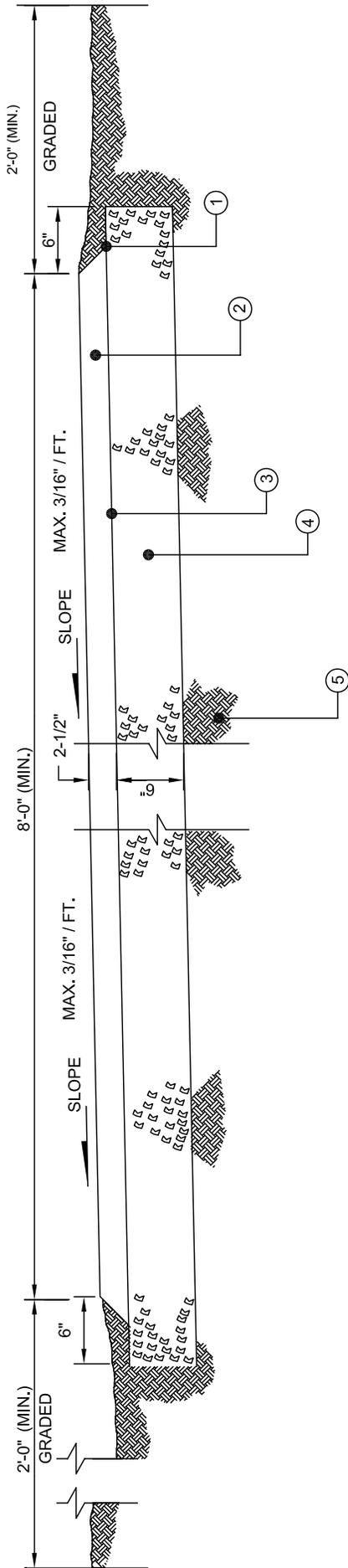
PAVERS - ALL BRICK PAVERS SHALL BE SOLID CONCRETE PAVING UNITS CONFORMING TO ASTM C936 (4" W x 8" L x 2 3/8" H). OTHER SIZES MAY BE USED WITH PRIOR C.O.C. APPROVAL.

CONCRETE BASE - ALL WORK FOR THE CONCRETE BASE SHALL CONFORM TO ITEM 608, EXCEPT THAT THE 608 REQUIREMENTS FOR EDGING OUTSIDE EDGES AND CONTROL JOINTS AT 5-FOOT INTERVALS SHALL BE WAIVED.

METHOD OF MEASUREMENT - PAVERS WILL BE MEASURED BY THE SQUARE FOOT FINISHED PAVERS COMPLETE IN PLACE.

BASIS OF PAYMENT - THE ACCEPTED QUANTITIES OF BRICK PAVERS WILL BE PAID FOR AT THE CONTRACT PRICES DESIGNATED FOR EACH OF THE PAVER TYPES SHOWN ON THE PLANS. EXCAVATION, BACKFILL, EXPANSION JOINT MATERIAL, ASPHALT ADHESIVE, BITUMINOUS SETTING BED, 4-INCH CONCRETE BASE, AND OTHER RELATED MISCELLANEOUS ITEMS WILL NOT BE PAID FOR SEPARATELY, BUT THE COST THEREOF SHALL BE INCLUDED IN THE COST OF THE BRICK PAVERS OF WHICH THEY ARE A PART.

<b>STANDARD BRICK SIDEWALK SPECIFICATIONS</b>	
CITY OF COLUMBUS, OHIO DEPARTMENT OF PUBLIC SERVICE TRANSPORTATION DIVISION	STD DWG <b>2301</b>
	REV: 01/01/07
	SHT 3 OF 3



NOTES:

1. 45% ANGLE HAND TAMP
2. 2 1/2" OF ITEM 404 ASPHALT CONCRETE-COMPACTED
3. ITEM 408 BITUMINOUS PRIME COAT (.25 GAL/SQ. YD.
4. 6" OF ITEM 304 AGGREGATE BASE
5. ITEM 204, COMPACTED SUBGRADE

# SHARED USE PATH PAVEMENT DETAIL

CITY OF COLUMBUS, OHIO  
DEPARTMENT OF PUBLIC SERVICE  
TRANSPORTATION DIVISION

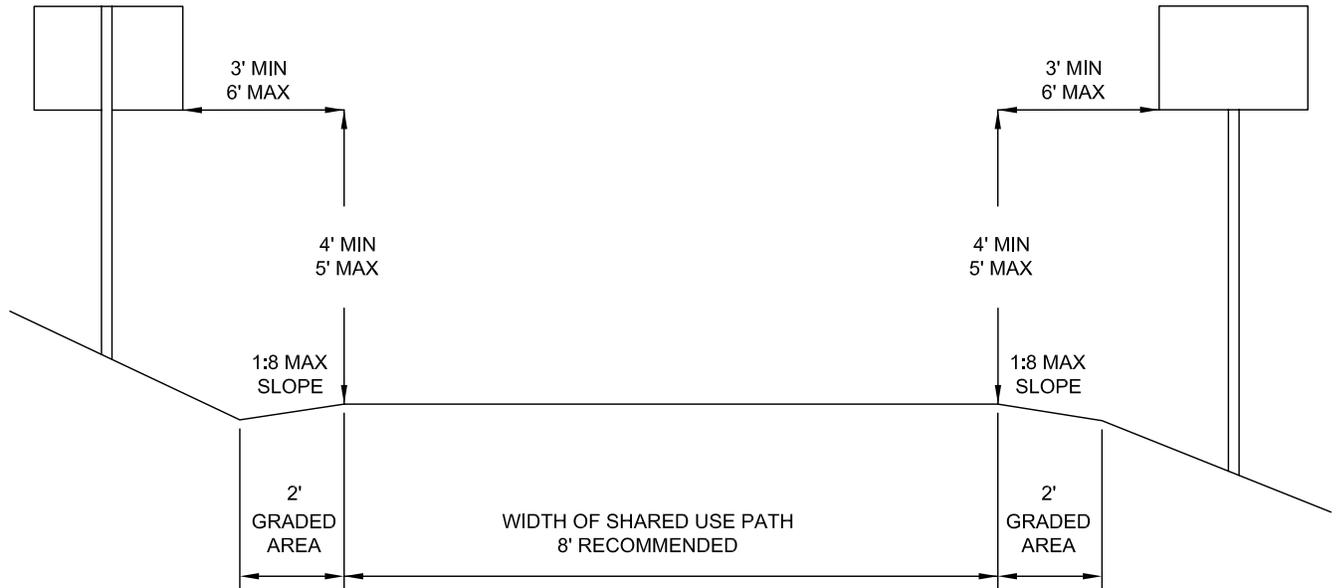
CITY ENGINEER,



STD DWG  
2302

REV: 01/01/07

SHT 1 OF 5



# SHARED USE PATH SIGN DETAIL

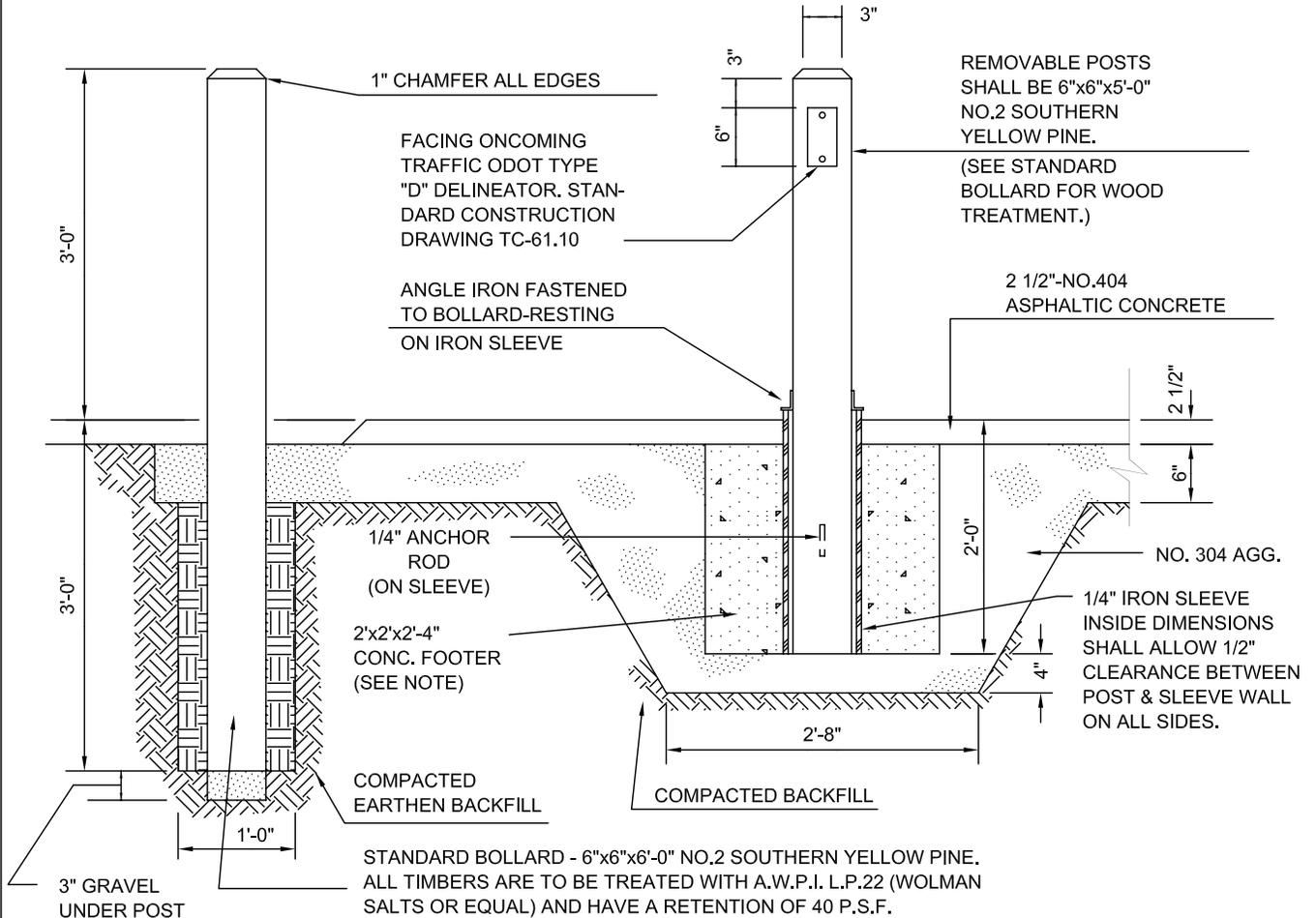
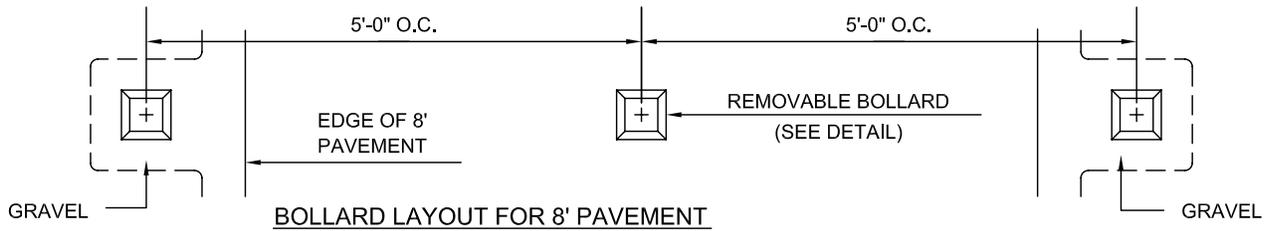
CITY OF COLUMBUS, OHIO  
DEPARTMENT OF PUBLIC SERVICE  
TRANSPORTATION DIVISION

STD DWG  
2302

REV: 01/01/07

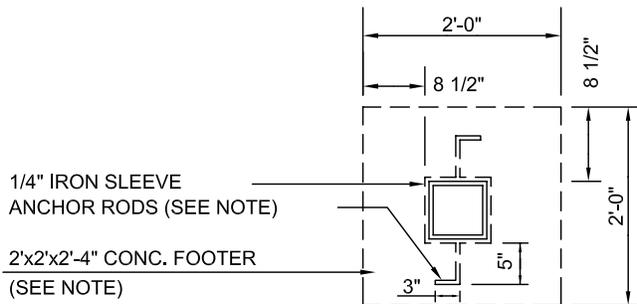
\_\_\_\_\_  
CITY ENGINEER

SHT 2 OF 5



**NOTES:**

- THE CONTRACTOR SHALL INSTALL THE EARTHEN BACKFILL IN 6" LIFTS AND TAKE CARE TO PLUMB EACH POST.
- THE IRON SLEEVES, ANGLE IRON, AND ANCHOR RODS SHALL BE PAINTED WITH TWO COATS OF RUST-OLEUM NO769 DAMP-PROOF RED PRIMER OR EQUAL PRIOR TO INSTALLATION.
- THE CONTRACTOR MAY SUBSTITUTE A 24" CIRCULAR FOOTER IN PLACE OF THE ONE SHOWN.



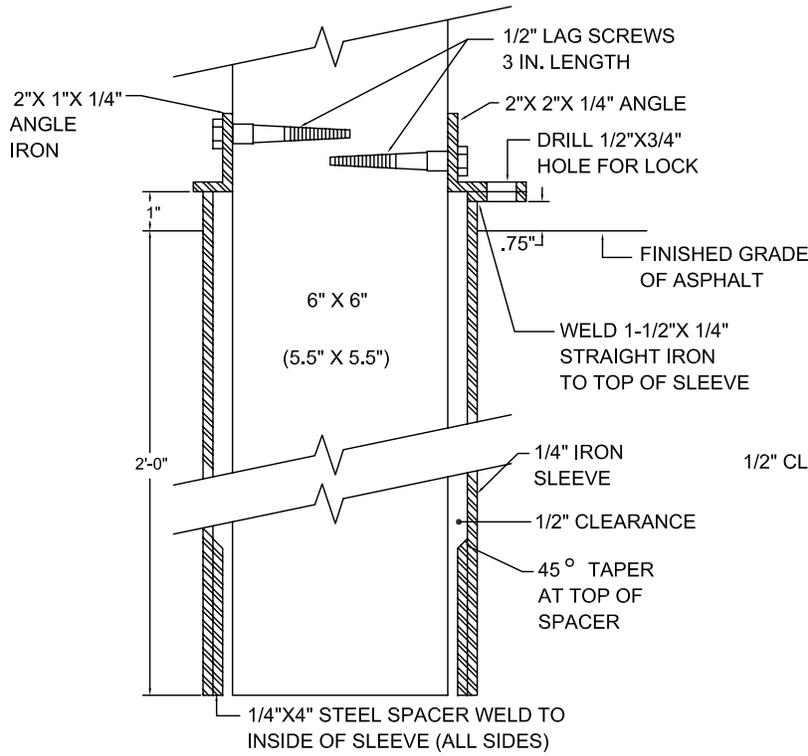
# SHARED USE PATH WOOD BOLLARD DETAIL

CITY OF COLUMBUS, OHIO  
DEPARTMENT OF PUBLIC SERVICE  
TRANSPORTATION DIVISION

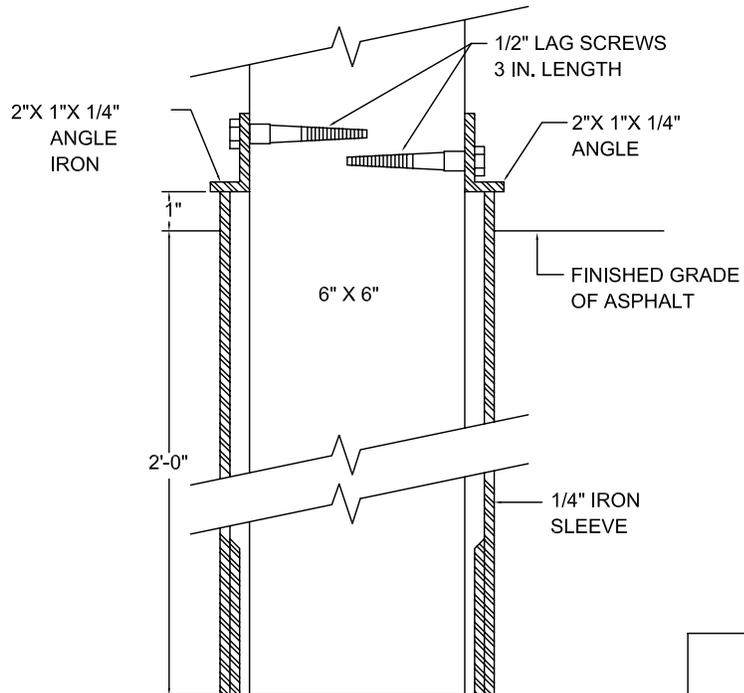
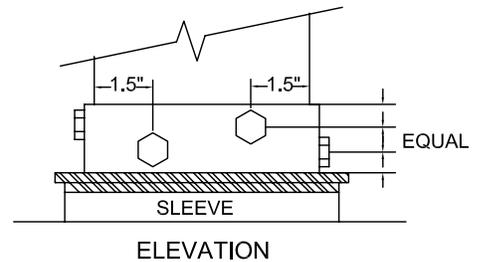
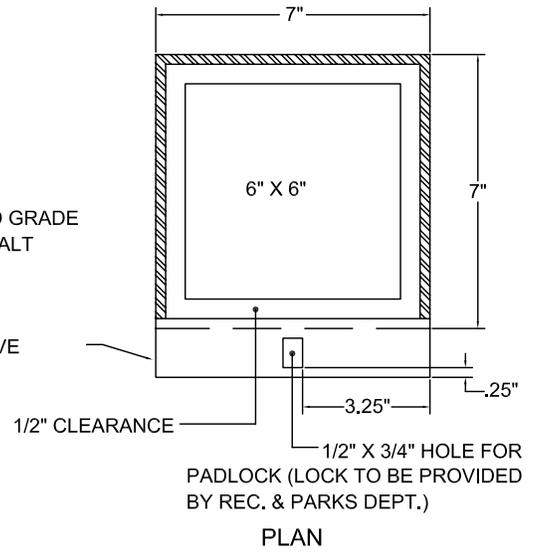
STD DWG  
**2302**

REV: 01/01/07

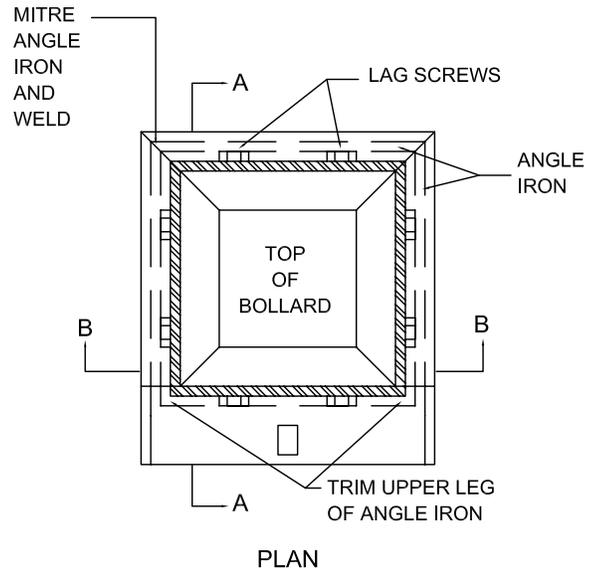
SHT 3 OF 5



SECTION A-A



SECTION B-B



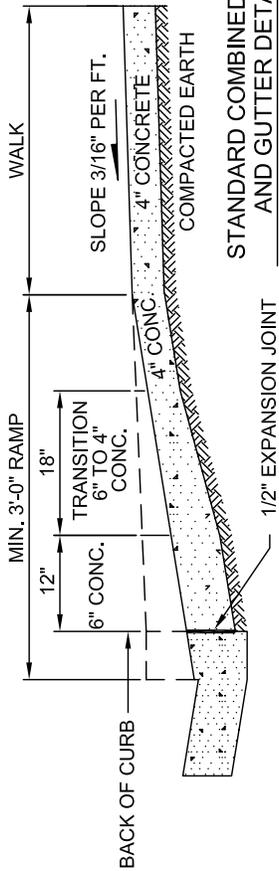
# REMOVABLE BOLLARD DETAIL

CITY OF COLUMBUS, OHIO  
DEPARTMENT OF PUBLIC SERVICE  
TRANSPORTATION DIVISION

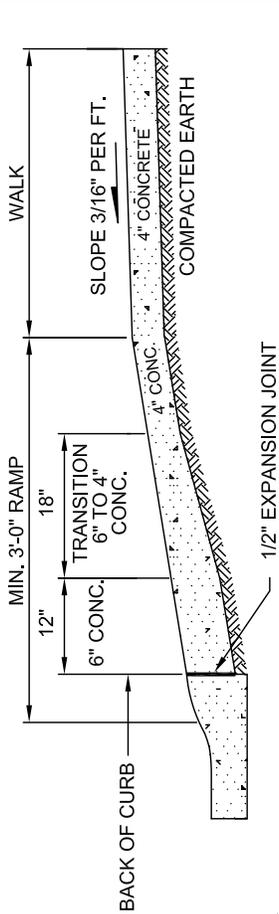
STD DWG  
**2302**

REV: 01/01/07

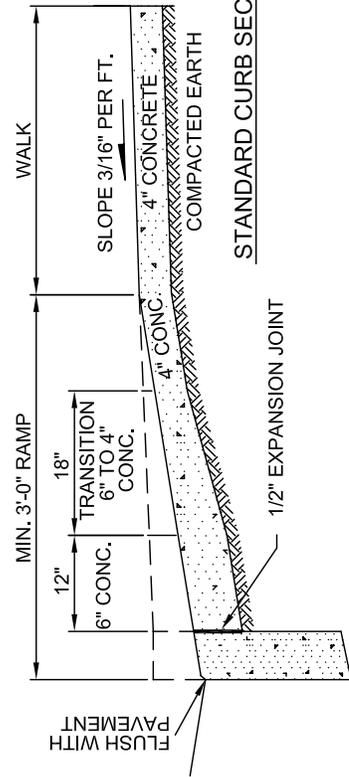
SHT 4 OF 5



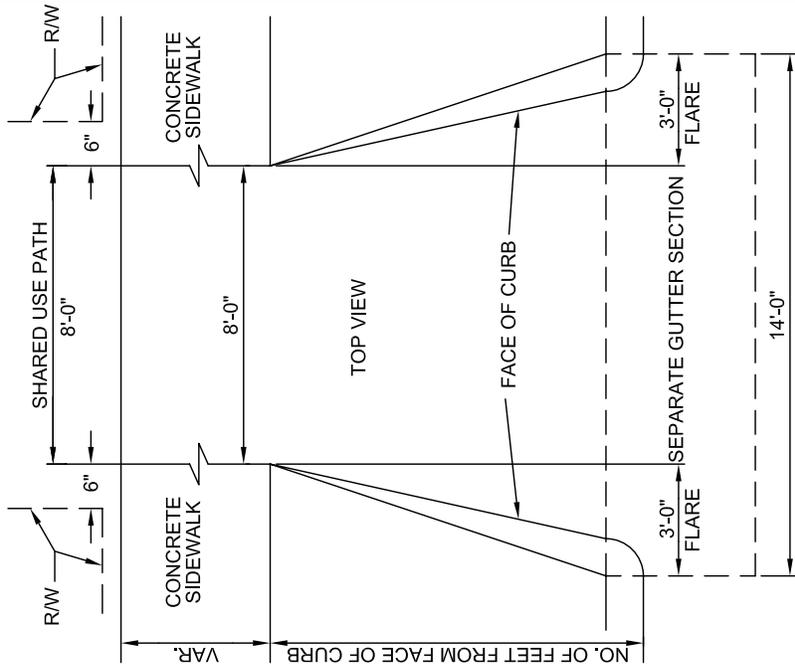
STANDARD COMBINED CURB AND GUTTER DETAIL



MOUNTABLE CURB DETAIL



STANDARD CURB SECTION



**NOTES:**  
 RAMP SHALL BE ADA COMPLIANT, THAT IS 7.69% SLOPE OR LESS. SEE STD DWG 2319 FOR ADDITIONAL INFORMATION.  
 CURB OR COMBINED CURB AND GUTTER SHALL BE TAKEN OUT AND REPLACED WITH CONCRETE, SEPARATE FROM THE RAMP BY 1/2" REMOLDED EXPANSION JOINT. WHEN LESS THAN 5'-0" OF A CURB SECTION REMAINS AFTER THE CURB CUT IS LOCATED, IT SHALL ALSO BE REMOVED AND REPLACED. NEW CURB SHALL BE CONSTRUCTED IN MIN 5' SECTIONS AND MAX 10' SECTIONS.  
 FILLS, IF REQUIRED, SHALL BE AS PER ITEM 203 OR ITEM 304.  
 BIKE PATH RAMP SHALL BE CONSTRUCTED OF PORTLAND CEMENT CONCRETE, 5% TO 8% AIR ENTRAINED, CONTAINING 6.4 BAGS OF CEMENT (CLASS 'C' SECT. 499) PER CU. YD., 4" MAX SLUMP.  
 EXPANSION JOINTS SHALL BE PLACED TO FORM UTILITY STRIPS WHERE REQUIRED, AND WHEREVER NEW CONCRETE TOUCHES EXISTING CONSTRUCTION.  
 FORMS SHALL CONSIST OF WOOD 2" NOMINAL THICKNESS OR METAL OF EQUAL STRENGTH.  
 A STANDARD CURING COMPOUND SHALL BE PROPERLY APPLIED IMMEDIATELY AFTER FINISH.  
 ALL WORK SHALL BE DONE IN ACCORDANCE WITH THE CITY OF COLUMBUS CONSTRUCTION AND MATERIALS SPECIFICATIONS.

# STANDARD SHARED USE PATH RAMP

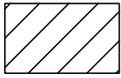
CITY OF COLUMBUS, OHIO  
 DEPARTMENT OF PUBLIC SERVICE  
 TRANSPORTATION DIVISION

STD DWG  
**2302**  
 REV: 01/01/07  
 SHT 5 OF 5

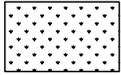
ARTERIAL STREET

PT

BACK OF CURB



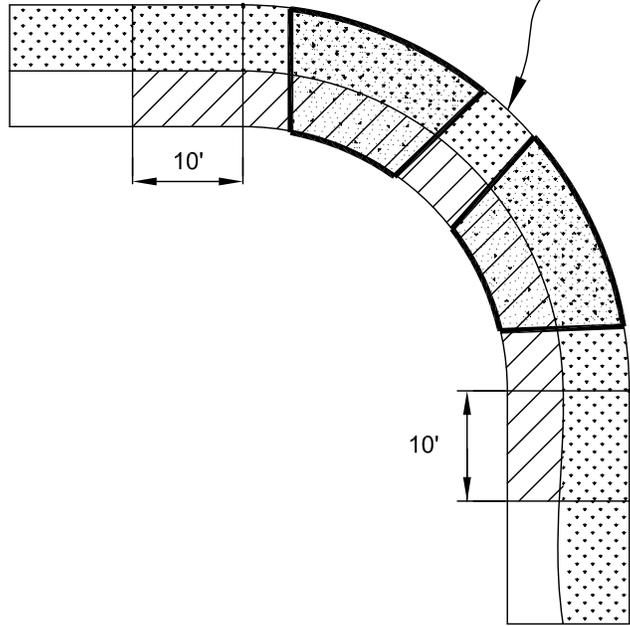
8" CONCRETE WALK



TREELAWN



ALL CURB RAMP AREAS

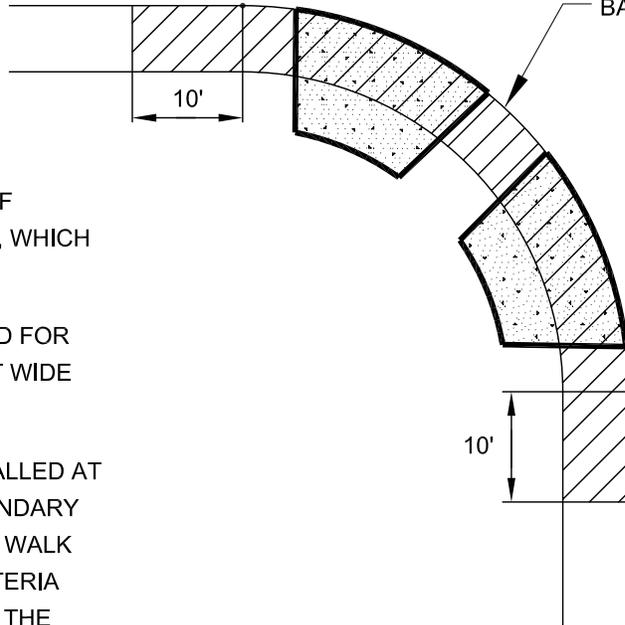


RESIDENTIAL STREET  
ARTERIAL STREET

ARTERIAL STREET

PT

BACK OF CURB



RESIDENTIAL STREET  
ARTERIAL STREET

**NOTE:**

THIS DETAIL DEFINES THE LIMITS OF PAYMENT FOR 8" CONCRETE WALK, WHICH INCLUDES CURB RAMPS.

EIGHT-INCH WALK IS NOT REQUIRED FOR WALK WHICH IS BEHIND A SIX-FOOT WIDE TREE LAWN.

ALL OTHER CONCRETE WALK INSTALLED AT THIS LOCATION OUTSIDE THIS BOUNDARY WILL BE PAID AT THE 4" CONCRETE WALK PRICE. ANY CHANGES TO THIS CRITERIA OR DETAIL MUST BE APPROVED BY THE ENGINEER.

# 8" CONCRETE WALK AT AN INTERSECTION WITH AN ARTERIAL STREET

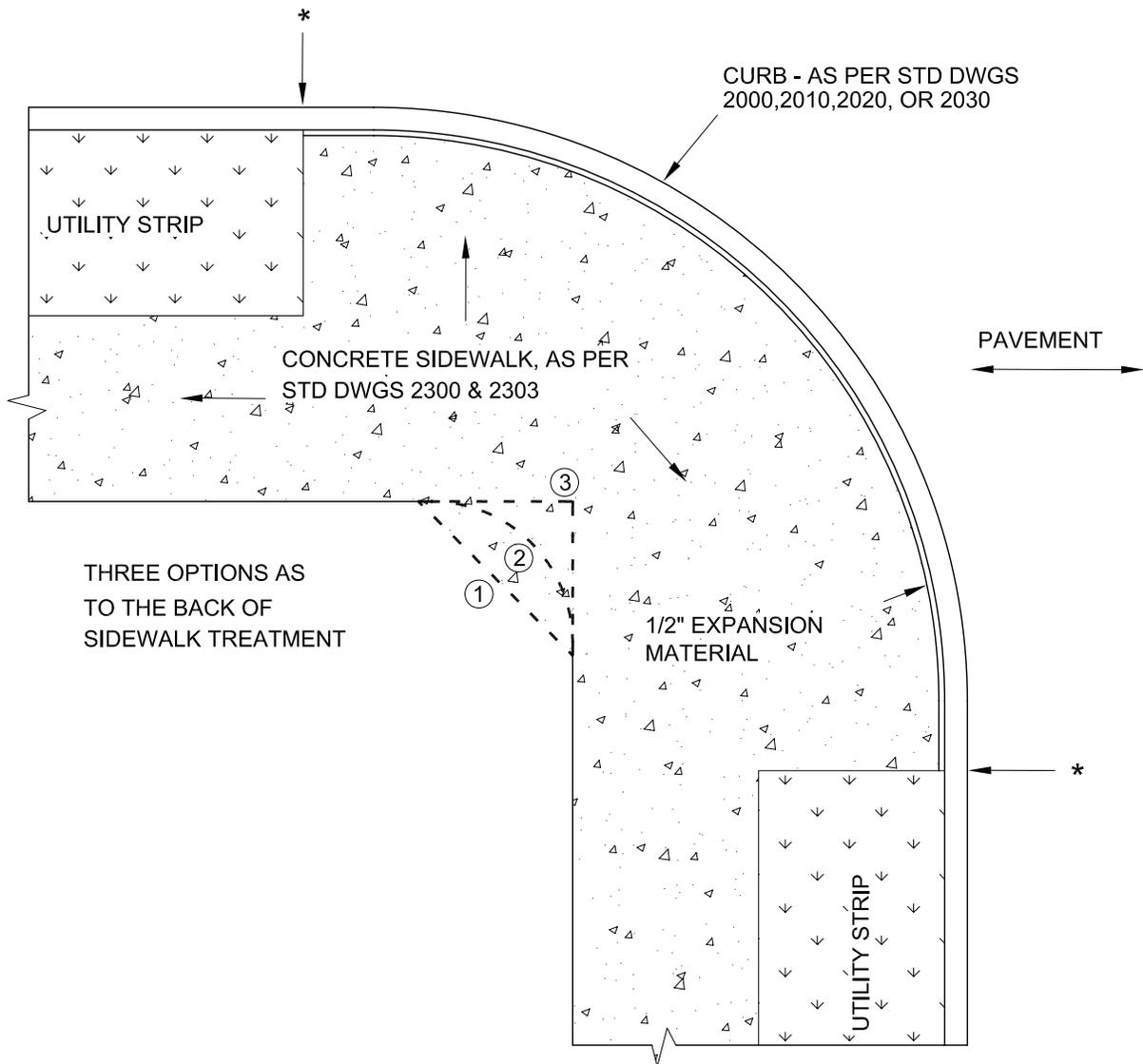
CITY OF COLUMBUS, OHIO  
DEPARTMENT OF PUBLIC SERVICE  
TRANSPORTATION DIVISION

STD DWG  
2303

CITY ENGINEER

REV: 01/01/07

SHT 1 OF 1



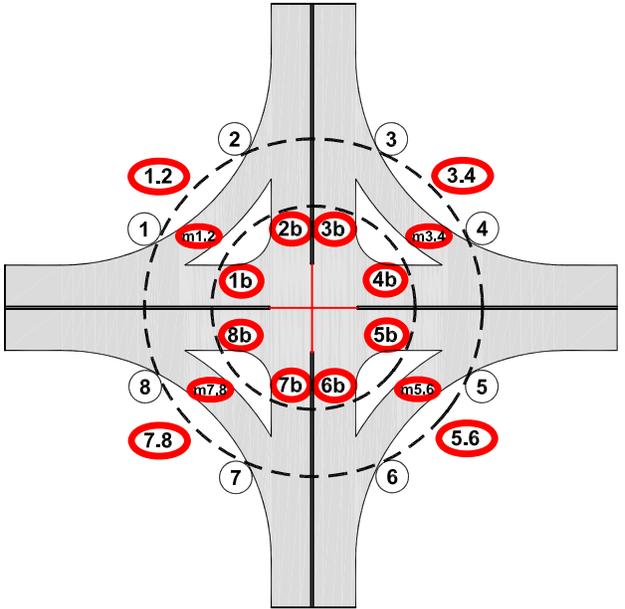
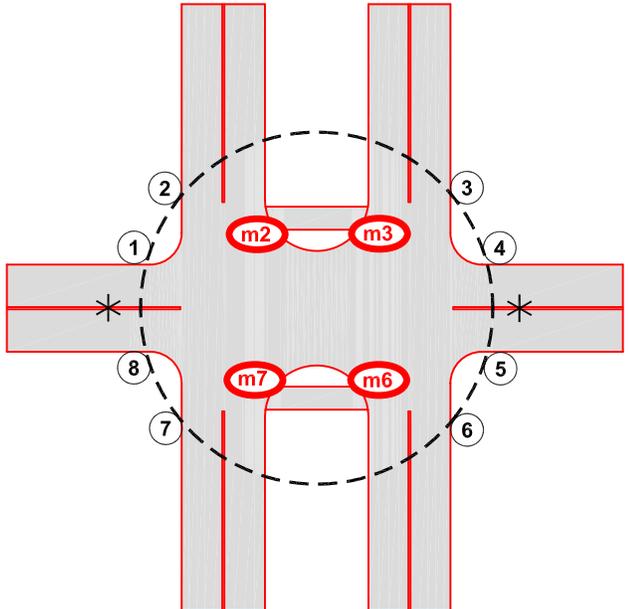
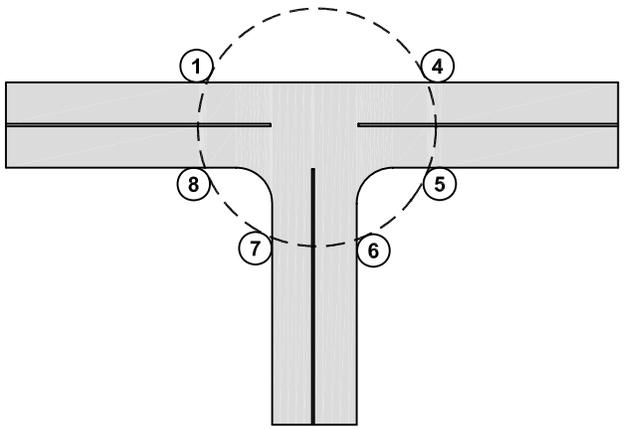
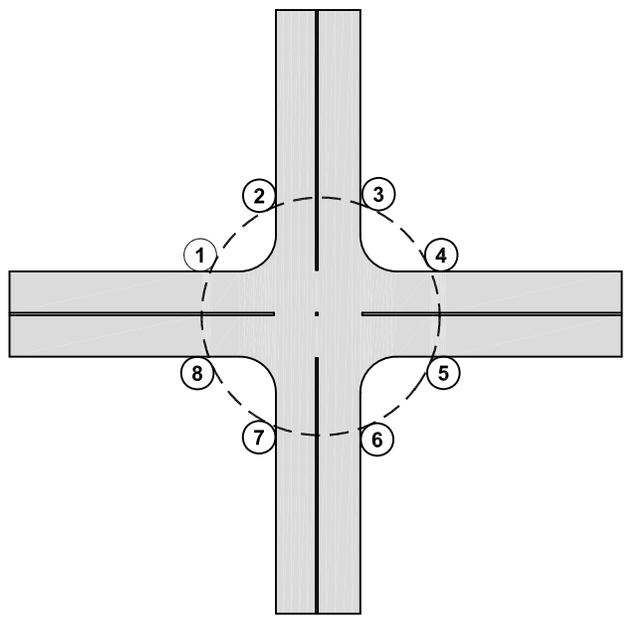
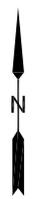
THREE OPTIONS AS TO THE BACK OF SIDEWALK TREATMENT

IF THERE IS ADEQUATE RIGHT-OF-WAY THE CONCRETE SIDEWALK SHALL BE LARGE ENOUGH TO ACCOMODATE THE CORRECT INSTALLATION OF TWO PERPENDICULAR CURB RAMPS WITH WIDE FLARES (10X THE CURB HEIGHT) AS PER STD DWG 2319.

- \* THE BEGINNING OF THE CONCRETE SIDEWALK SHALL BE NO CLOSER THAN THE POINT OF TANGENCY TO THE RADIUS OR THE BACK SIDE OF THE PERPENDICULAR SIDEWALK, WHICHEVER IS FURTHEST FROM THE CORNER. IT MAY BE AS FAR AS 10' FROM THE TANGENT AS PER STD DWG 2303.

## CONCRETE SIDEWALK BEHIND THE CURB AT INTERSECTIONS IN LIEU OF A UTILITY STRIP

CITY OF COLUMBUS, OHIO DEPARTMENT OF PUBLIC SERVICE TRANSPORTATION DIVISION	STD DWG <b>2304</b>
	REV: 01/01/07
CITY ENGINEER, <i>Paul J. Baum</i>	SHT 1 OF 1



ALL NUMBERING BEGINS FROM THE NORTHWEST CORNER AND GOES CLOCKWISE. EACH CORNER HAS ITS SPECIFIC NUMBER THAT MUST BE USED IF CURB RAMPS ARE IN THESE LOCATIONS.

\* MEDIAN RAMPS ON THE WEST AND/OR EAST LEGS WOULD BE M1, M8, AND M4, M5 RESPECTIVELY.

# CURB RAMP LOCATION & NUMBERING SYSTEM

CITY OF COLUMBUS, OHIO  
DEPARTMENT OF PUBLIC SERVICE  
TRANSPORTATION DIVISION

*Randy Brown*  
CITY ENGINEER

STD DWG

2319

REV: 01/01/07

SHT 1 OF 12

## GENERAL NOTES, SIDEWALK CURB RAMPS

1. CURB RAMPS SHALL BE INSTALLED AS PER STD DWGS, 2300, 2303, 2319 AND SUPPLEMENTAL SPECIFICATIONS 1550 AND 1551.
2. CURB RAMP COMPONENTS: THE CURB RAMP INCLUDES THE RAMP PANEL, FLARED SIDES, AND LANDING WHEN NEEDED.
3. MATERIAL: THE RAMP PANEL AND FLARED SIDES SHALL BE CONCRETE. EXCEPTION: WITH PRIOR WRITTEN APPROVAL FROM THE CITY ENGINEER (OR AUTHORIZED REPRESENTATIVE) BRICK OR GRANITE PAVERS MAY BE ALLOWED FOR SPECIFIC APPLICATIONS. SEE SHEET 11 OF THIS STANDARD DRAWING FOR THE CORRECT DESIGN AND/OR INSTALLATION OF A BRICK OR GRANITE CURB RAMP.
4. CURB RAMP TYPE: CURB RAMPS SHALL BE SPECIFIED BY THE APPROPRIATE TYPE AND SHALL BE PERPENDICULAR TO THE CURB EXCEPT TYPES G AND H.
  - TYPE A - PERPENDICULAR RAMP WITH WIDE FLARES
  - TYPE C - PERPENDICULAR RAMP IN UTILITY STRIP
  - TYPE D - PERPENDICULAR RAMP OBSTRUCTED ON ONE SIDE
  - TYPE G - RAMP WITH RECESSED LOWER LANDING FOR ALLEYS AND DRIVES. MAY BE USED AT OTHER LOCATIONS WITH PRIOR WRITTEN CITY APPROVAL
  - TYPE H - RAMP WITH RECESSED LOWER LANDING FOR ALLEYS AND DRIVES. MAY BE USED AT OTHER LOCATIONS WITH PRIOR WRITTEN CITY APPROVAL
  - TYPE L - MEDIAN RAMP WITH CENTER LANDING
  - TYPE P1 - COMBINED PERPENDICULAR AND PARALLEL RAMP
  - TYPE P2 - COMBINED PERPENDICULAR AND PARALLEL RAMP IN ONE DIRECTION

NOTE: CITY OF COLUMBUS ORDER OF PREFERENCE IS (1) PERPENDICULAR AND (2) PARALLEL.
5. CURB RAMPS AT ALLEY AND ARTERIAL CROSSINGS SHALL BE 8" THICK CONCRETE
6. RAMP RUNNING SLOPE: THE RUNNING SLOPE SHALL BE 1:20 (5%) TO 1:13 (7.7%). THE RUNNING SLOPE MAY BE INCREASED TO 10 % WITH PRIOR WRITTEN CITY APPROVAL.
7. RAMP CROSS SLOPE: THE MAXIMUM CROSS SLOPE SHALL BE 1:64 (1.56%,  $\frac{3}{16}$ " PER FOOT).
8. PERPENDICULAR RAMP WIDTH: THE MINIMUM WIDTH OF A RAMP SHALL BE 4-FT.
9. PARALLEL RAMP WIDTH: TYPE P RAMPS SHALL BE A MINIMUM OF 4-FT BY 5-FT, PER THE STD DWG
10. ALL JOINTS BETWEEN NEW AND EXISTING MATERIALS SHALL BE FLUSH.
11. WIDE FLARES: THE LENGTH MEASUREMENT OF THE FLARE AT THE FACE OF CURB SHALL BE A MINIMUM OF 10 TIMES THE CURB HEIGHT.
12. 1-FT FLARES: THE MEASUREMENT OF THE FLARE AT THE FACE OF CURB SHALL BE A MINIMUM OF 1-FT.
13. LANDINGS: LANDINGS SHALL BE A MINIMUM OF 4-FT BY 4-FT WITH A 1:64 (1.56%) CROSS SLOPE FOR ALL CURB RAMP TYPES EXCEPT PARALLEL CURB RAMPS. OFF STREET LANDINGS FOR PARALLEL CURB RAMPS SHALL BE A MINIMUM OF 4-FT BY 5-FT AS INDICATED IN THE STD DWG. LANDINGS ARE REQUIRED AS FOLLOWS:
  - TOP LANDING - CURB RAMP TYPES A, C, D, AND L SHALL HAVE LANDINGS AT THE TOP OF THE RAMP IF TURNING IS REQUIRED.
  - LOWER RECESSED LANDING - CURB RAMP TYPES G AND H SHALL HAVE A RECESSED LANDING AT THE BOTTOM OF THE RAMP WHERE IT INTERSECTS THE CURB LINE.
  - LANDING AT INTERSECTING SIDEWALKS - WHEREVER SIDEWALKS INTERSECT, THERE SHALL BE A LANDING MEETING THE ABOVE REQUIREMENTS.
14. STREET COUNTER SLOPE: THE COUNTER SLOPE AT THE BASE OF THE RAMP SHALL BE A MAXIMUM OF 1:20 (5%) FOR A MINIMUM OF 2-FT.
15. RAMPS AT MARKED AND UNMARKED CROSSINGS: AT MARKED CROSSINGS THE RAMP AND STREET LANDING MUST BE FULLY CONTAINED WITHIN THE MARKED CROSSWALK. AT UNMARKED CROSSINGS THE RAMP AND STREET LANDING MUST BE WITHIN THE PEDESTRIAN RIGHT-OF-WAY AS DEFINED BY CITY CODE.
16. SURFACES: RAMP, FLARE, AND LANDING SURFACES MUST BE STABLE AND SLIP RESISTENT. RAMPS SHALL BE MEDIUM BROOMED TRANSVERSE TO THE DIRECTION OF TRAVEL. GRATINGS, VALVE BOXES, AND UTILITY BOXES SHALL NOT BE LOCATED IN THE RAMP, LANDING, OR TRANSITION AREAS.
17. OFFSET INTERSECTIONS: AT OFFSET 'T' INTERSECTIONS RAMPS BETWEEN OFFSET STREETS MAY BE DELETED IF THE CENTERLINES OF OFFSET STREETS ARE NO MORE THAN 200-FT APART.
18. DETECTABLE WARNINGS: DETECTABLE WARNINGS SHALL BE INSTALLED ACCORDING TO C.O.C. STD DWG 2319 SHEET 12/12 AND SUPPLEMENTAL SPECIFICATION 1551.
19. OPPOSING RAMPS SHALL HAVE A PEDESTRIAN WALKWAY ACROSS THE STREET, ATLEAST 7' WIDE, WITH A CROSS SLOPE (LONGITUDINAL STREET SLOPE) OF NO GREATER THAN 1.56%. VERTICAL CURVES SHALL BE INSTALLED AS NEEDED.

# CURB RAMP GENERAL CONSTRUCTION NOTES

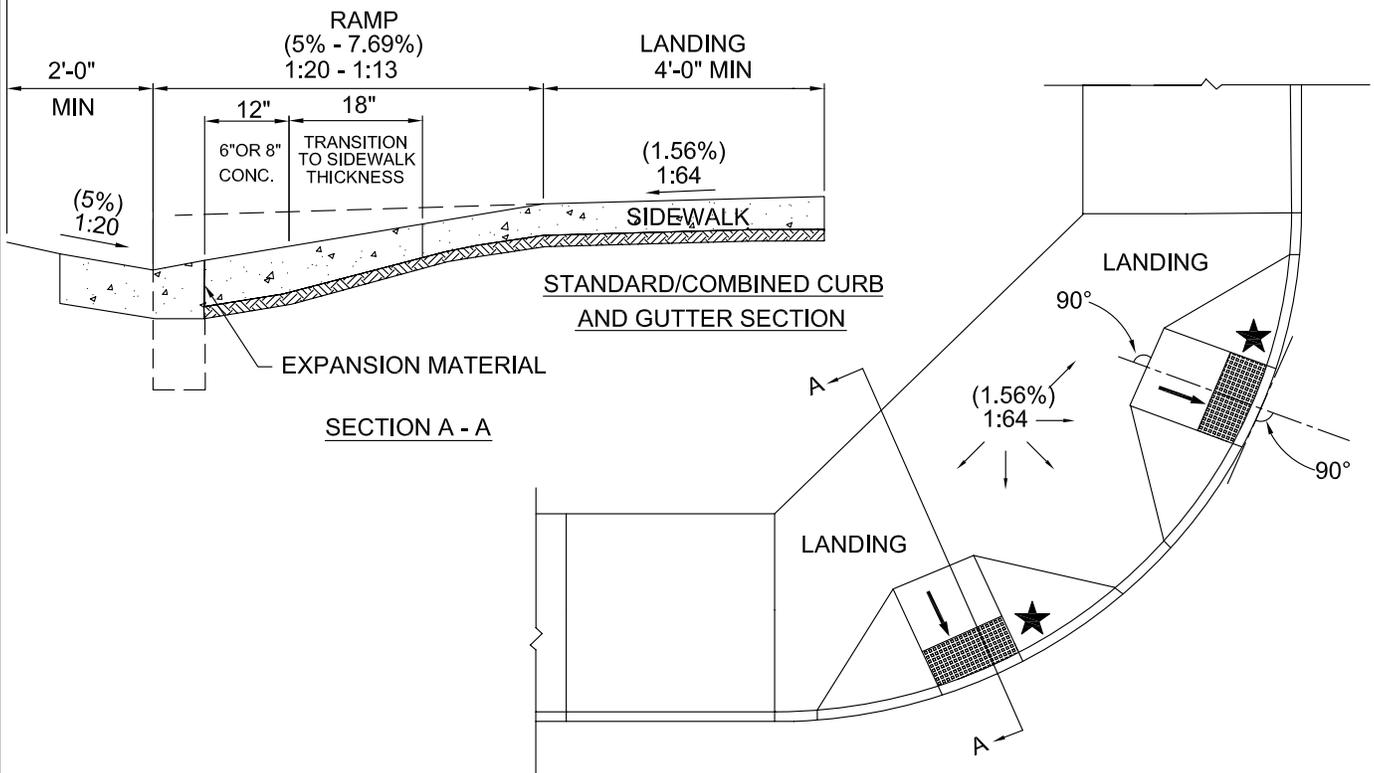
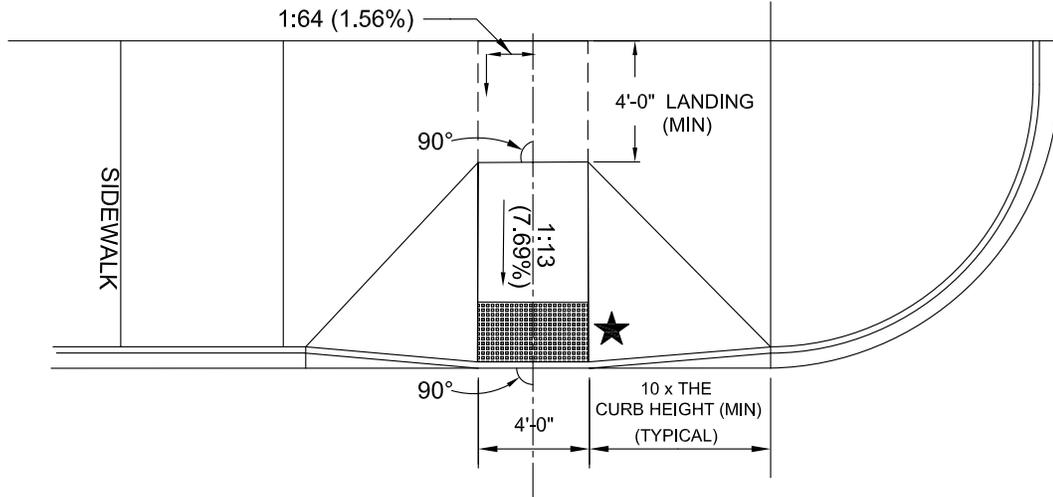
CITY OF COLUMBUS, OHIO  
DEPARTMENT OF PUBLIC SERVICE  
TRANSPORTATION DIVISION

STD DWG

2319

REV: 01/01/07

SHT 2 OF 12



★ SEE SHEET 12/12 FOR DETECTABLE WARNING DETAILS

# CURB RAMP TYPE A PERPENDICULAR WITH WIDE FLARES

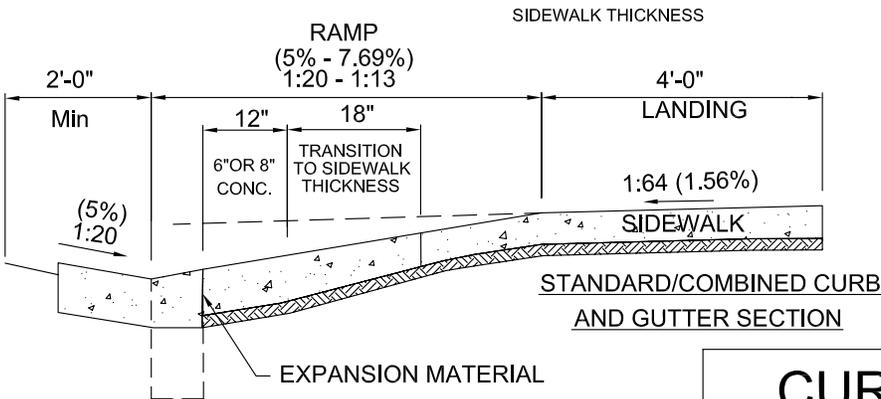
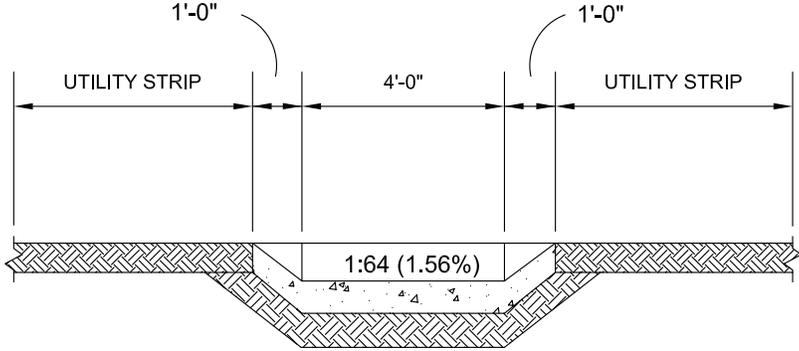
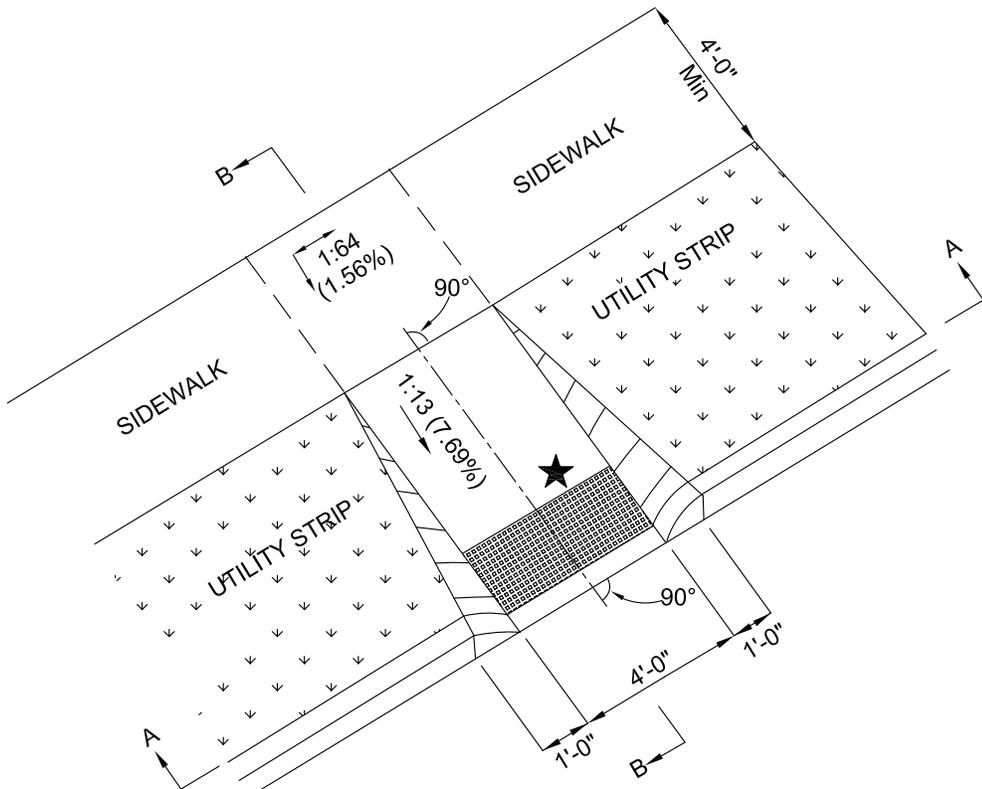
CITY OF COLUMBUS, OHIO  
DEPARTMENT OF PUBLIC SERVICE  
TRANSPORTATION DIVISION

STD DWG

2319

REV: 01/01/07

SHT 3 OF 12

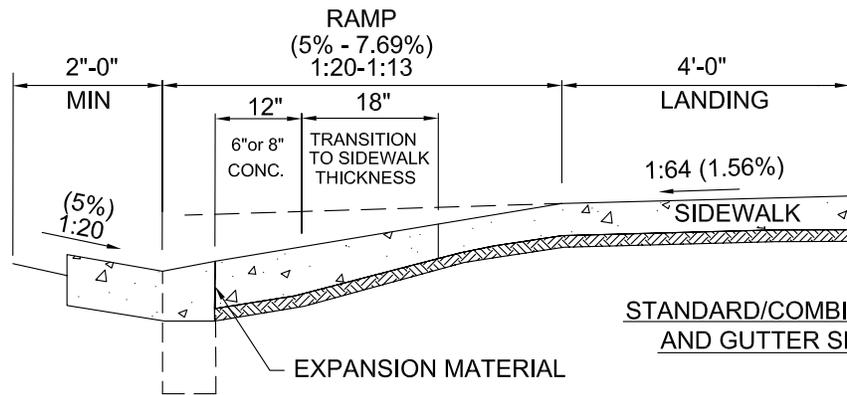
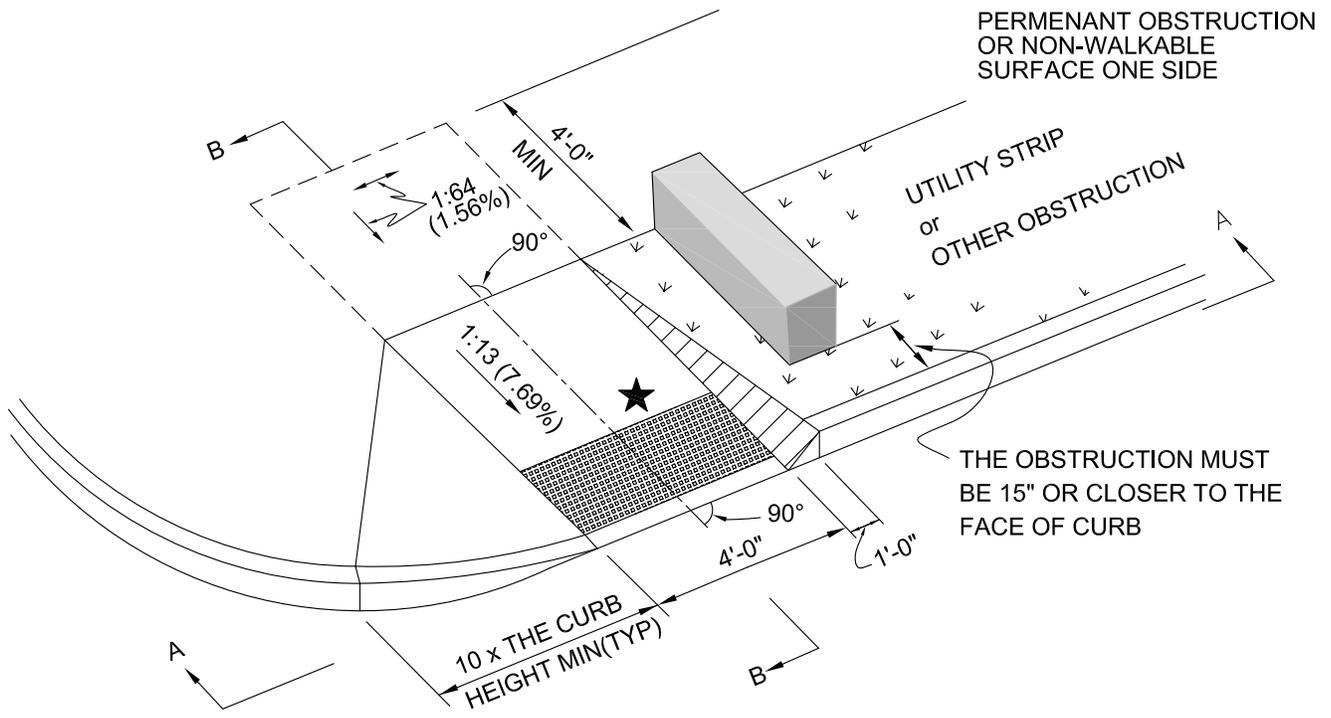


# CURB RAMP TYPE C PERPENDICULAR IN UTILITY STRIP

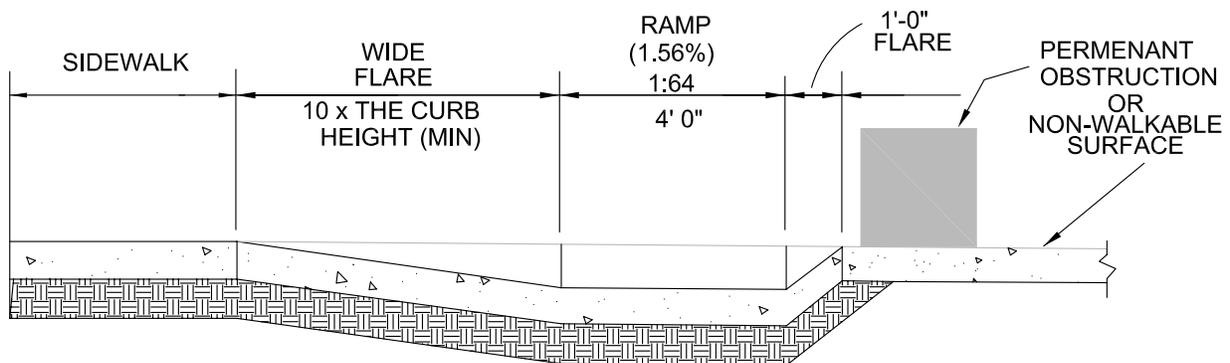
★ SEE SHEET 12/12 FOR DETECTABLE WARNING DETAILS

CITY OF COLUMBUS, OHIO  
DEPARTMENT OF PUBLIC SERVICE  
TRANSPORTATION DIVISION

STD DWG  
**2319**  
REV: 01/01/07  
SHT 4 OF 12



SECTION B-B



SECTION A-A

★ SEE SHEET 12/12 FOR DETECTABLE WARNING DETAILS

# CURB RAMP TYPE D PERPENDICULAR (OBSTRUCTED ONE SIDE)

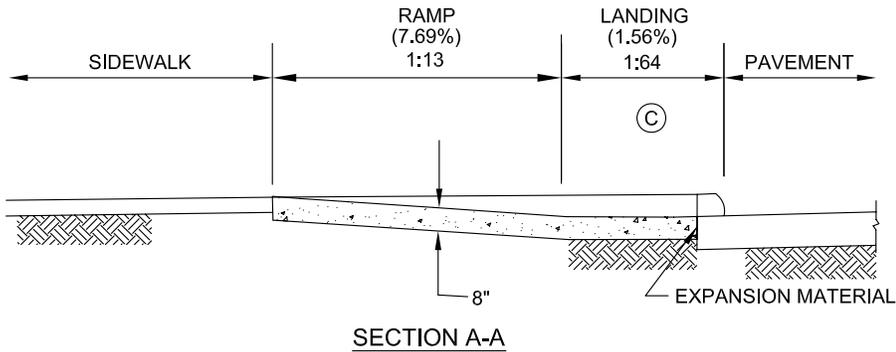
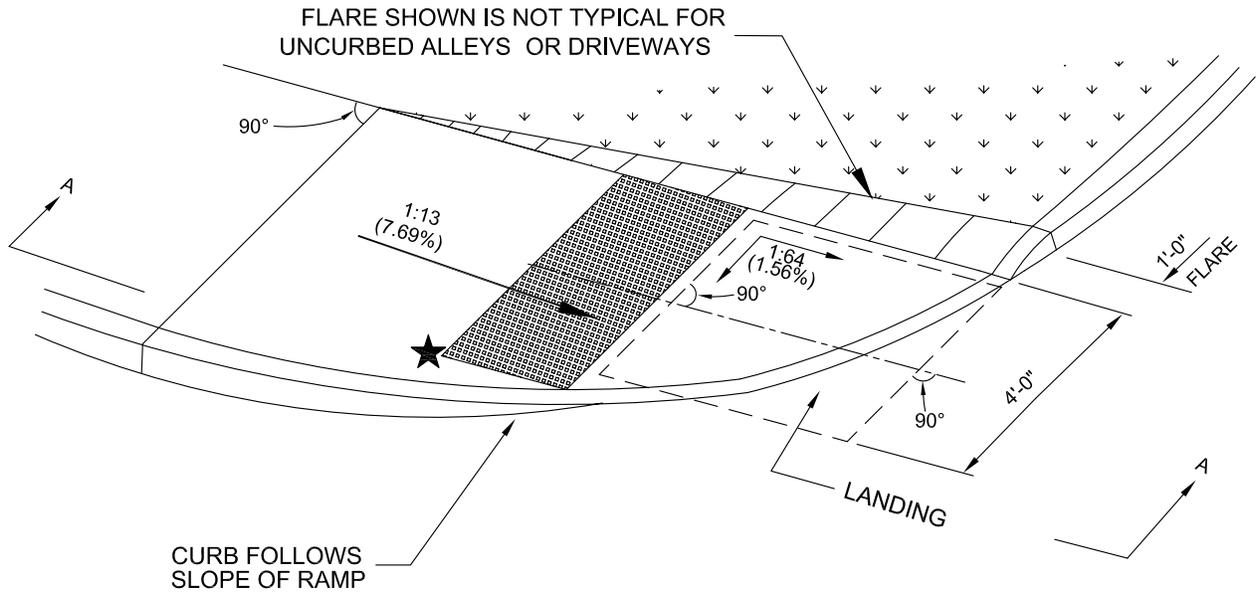
CITY OF COLUMBUS, OHIO  
DEPARTMENT OF PUBLIC SERVICE  
TRANSPORTATION DIVISION

STD DWG

2319

REV: 01/01/07

SHT 5 OF 12



SUPPLEMENTAL NOTES

- A. THE BOTTOM EDGE OF THE RAMP SHALL CHANGE PLANES PERPENDICULAR TO THE LANDING.
- B. THE EDGE OF THE CURB SHALL BE FLUSH WITH THE EDGE OF THE ADJACENT PAVEMENT AND GUTTER.
- C. THE LANDING AT THE BOTTOM OF THE RAMP SHALL BE  $\geq$  2.5-FT BY 4-FT WITH A MAXIMUM CROSS SLOPE OF 1:64 (1.56%) IN TWO DIRECTIONS.
- D. THE PEDESTRIAN WALK WAY BETWEEN THE TWO RAMPS SHALL HAVE A MAXIMUM OF 1:64 (1.56%) CROSS SLOPE WITH A 1:20 MAXIMUM RUNNING SLOPE

★ SEE SHEET 12/12 FOR DETECTABLE WARNING DETAILS

## CURB RAMP TYPE G ALLEYS & DRIVEWAYS

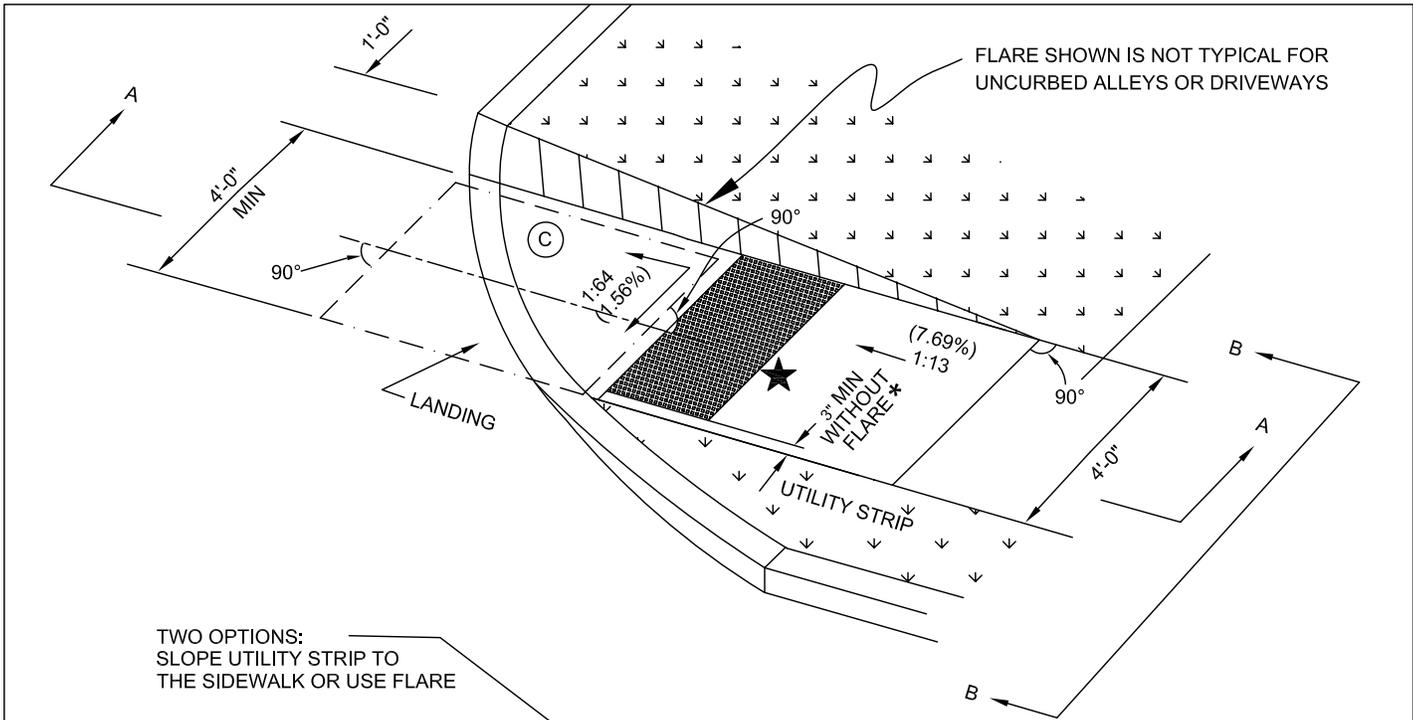
CITY OF COLUMBUS, OHIO  
DEPARTMENT OF PUBLIC SERVICE  
TRANSPORTATION DIVISION

STD DWG

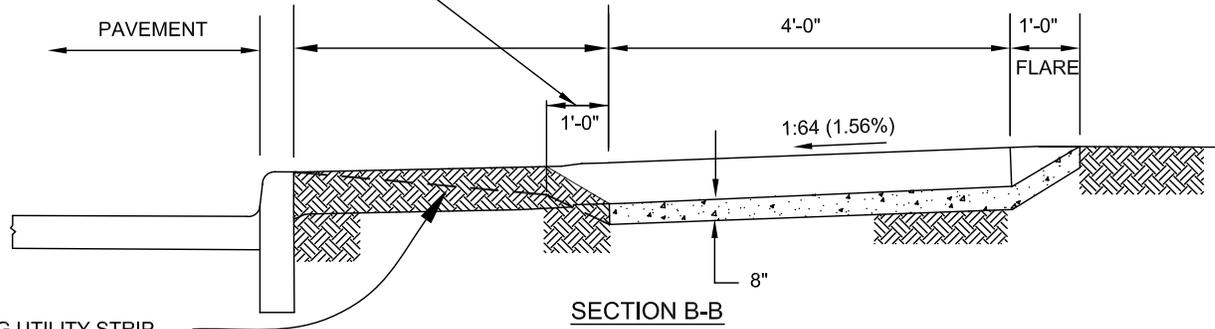
2319

REV: 01/01/07

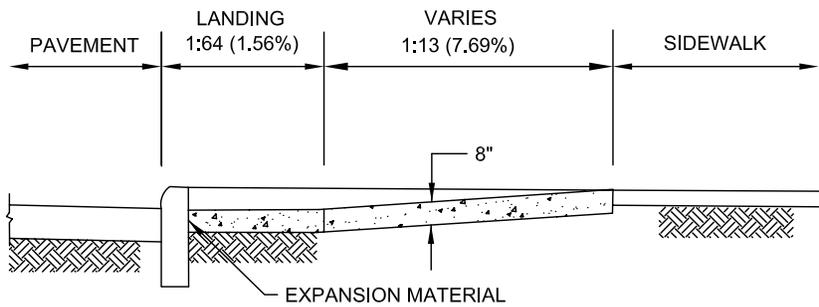
SHT 6 OF 12



TWO OPTIONS:  
SLOPE UTILITY STRIP TO  
THE SIDEWALK OR USE FLARE



SLOPING UTILITY STRIP



SECTION A-A

**SUPPLEMENTAL NOTES**

- A. THE BOTTOM EDGE OF THE RAMP SHALL CHANGE PLANES PERPENDICULAR TO THE LANDING.
- B. THE EDGE OF THE CURB SHALL BE FLUSH WITH THE EDGE OF THE ADJACENT PAVEMENT AND GUTTER.
- C. THE LANDING AT THE BOTTOM OF THE RAMP SHALL BE >= 2.5-FT BY 4-FT WITH A MAXIMUM CROSS SLOPE OF 1:64 (1.56%) IN TWO DIRECTIONS.
- D. THE PEDESTRIAN WALK WAY BETWEEN THE TWO RAMPS SHALL HAVE A MAXIMUM OF 1:64 (1.56%) CROSS SLOPE WITH A 1:20 MAXIMUM RUNNING SLOPE.

\* THIS IS FOR EMBEDDED (NON-SURFACE APPLIED) DETECTABLE WARNINGS ONLY.

★ SEE SHEET 12/12 FOR DETECTABLE WARNING DETAILS

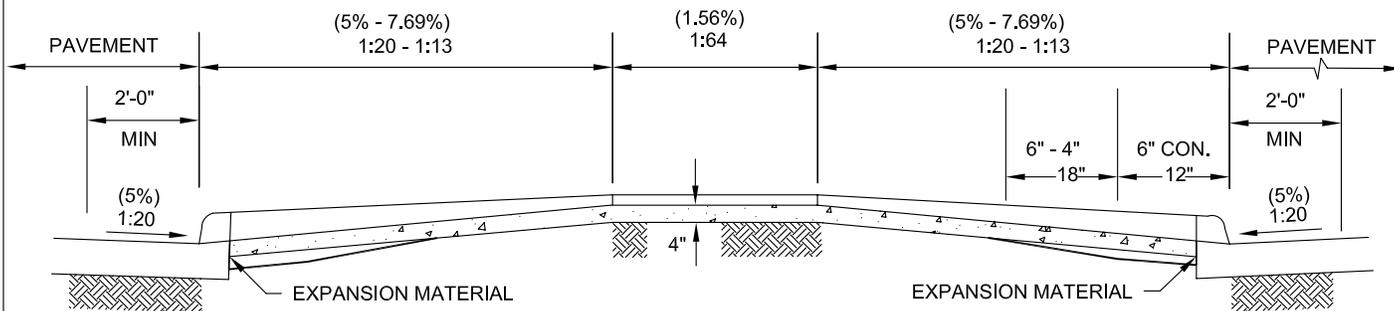
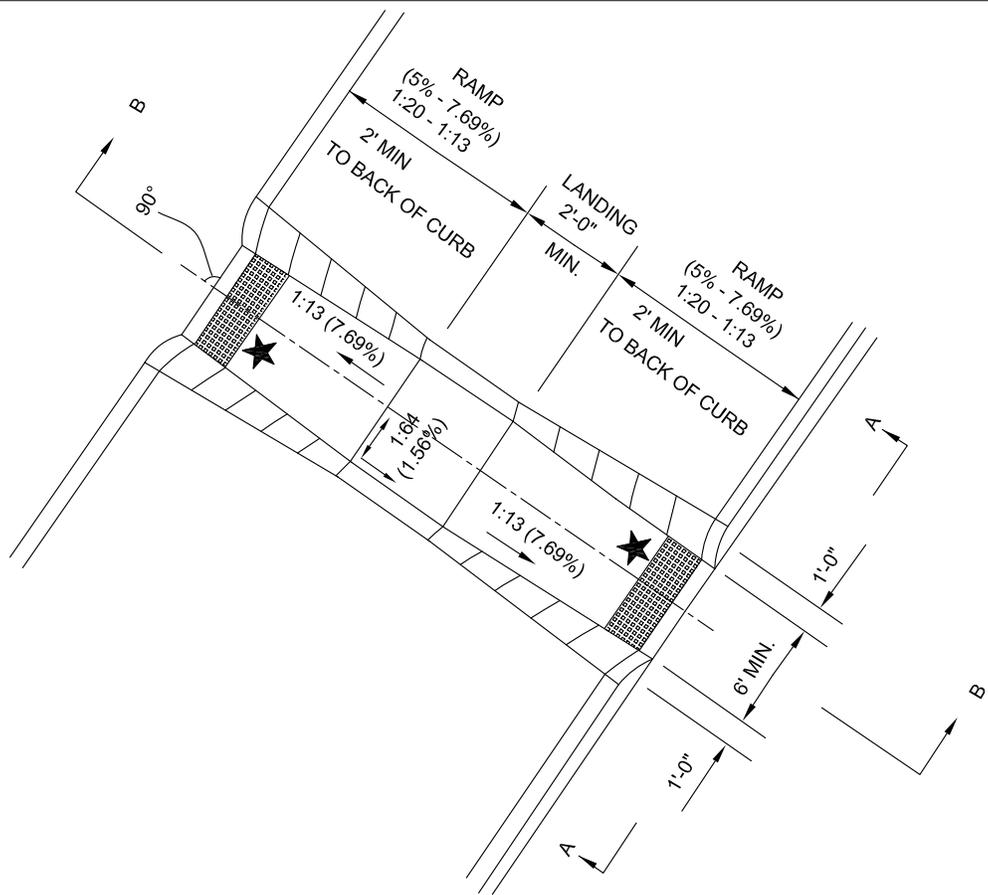
# CURB RAMP TYPE H ALLEYS & DRIVEWAYS

CITY OF COLUMBUS, OHIO  
DEPARTMENT OF PUBLIC SERVICE  
TRANSPORTATION DIVISION

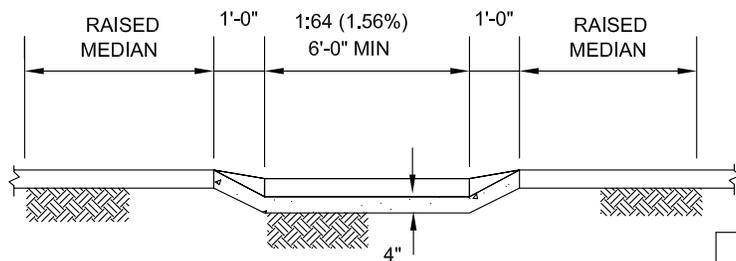
STD DWG  
**2319**

REV: 01/01/07

SHT 7 OF 12



SECTION B-B



SECTION A-A

# CURB RAMP TYPE L MEDIAN RAMP WITH LANDING

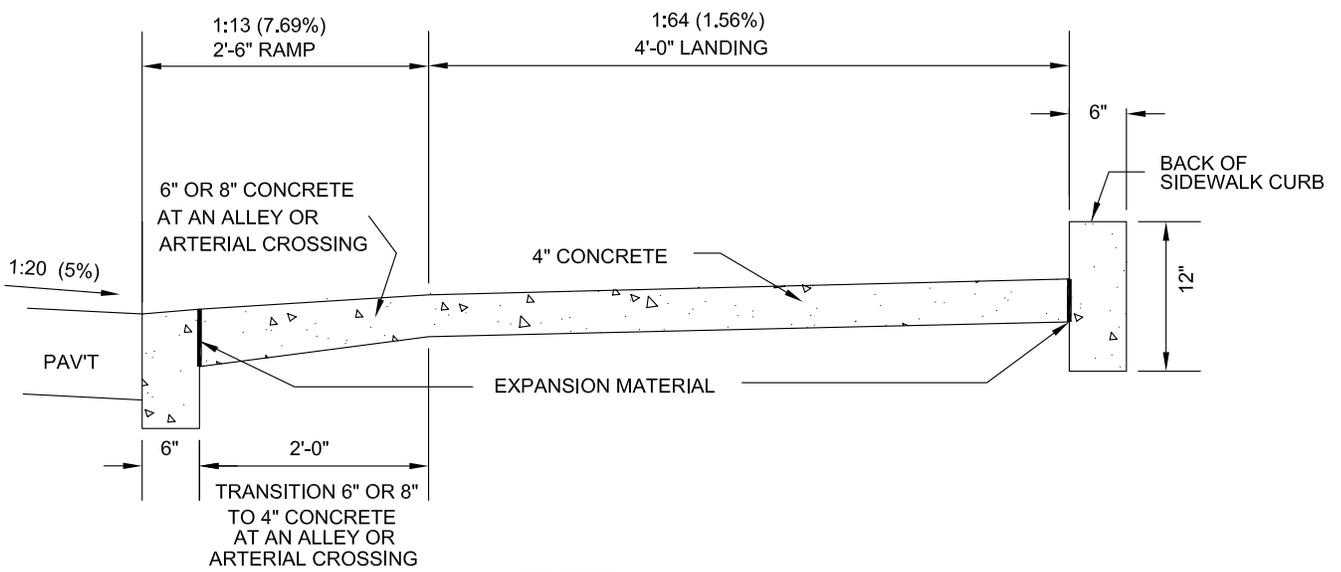
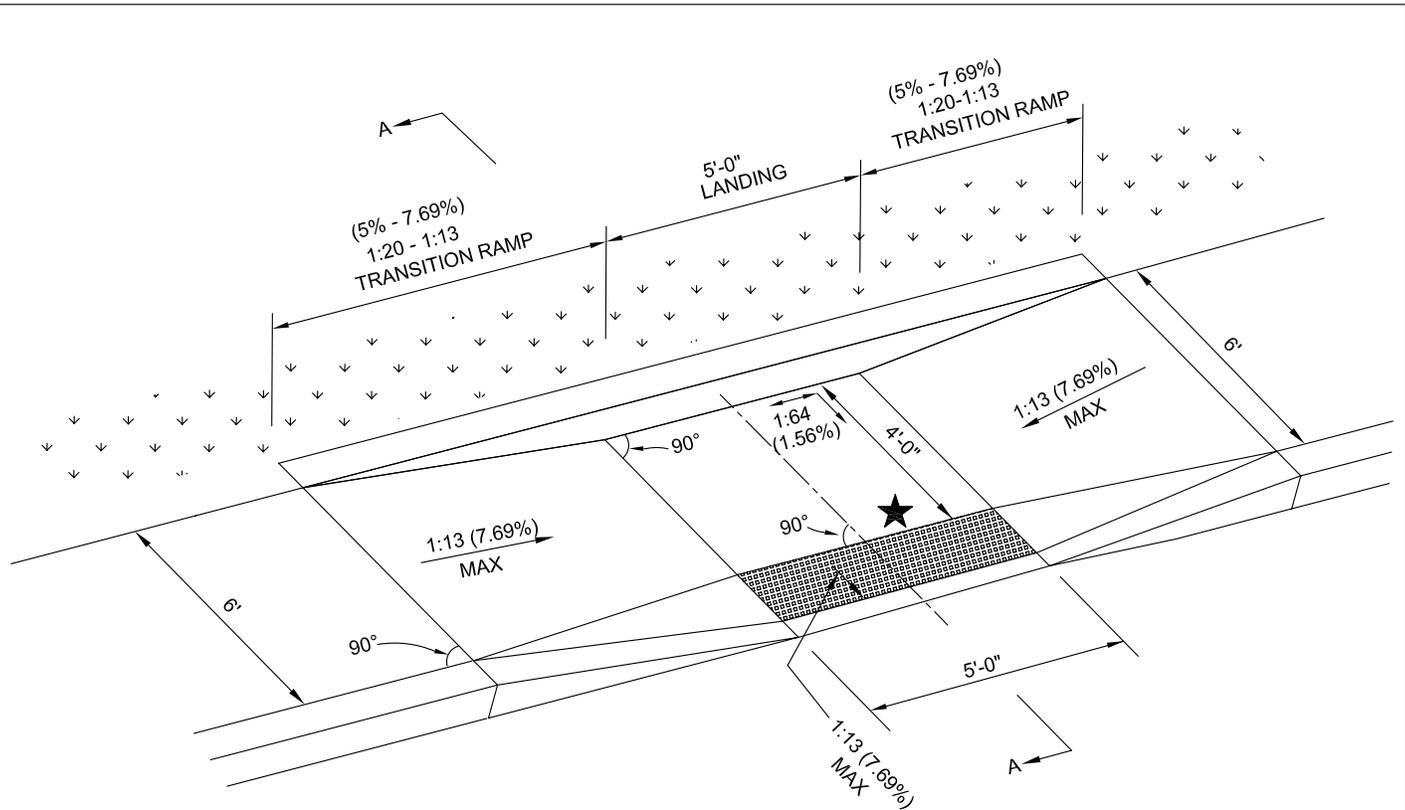
★ SEE SHEET 12/12 FOR DETECTABLE WARNING DETAILS

CITY OF COLUMBUS, OHIO  
DEPARTMENT OF PUBLIC SERVICE  
TRANSPORTATION DIVISION

STD DWG  
**2319**

REV: 01/01/07

SHT 8 OF 12



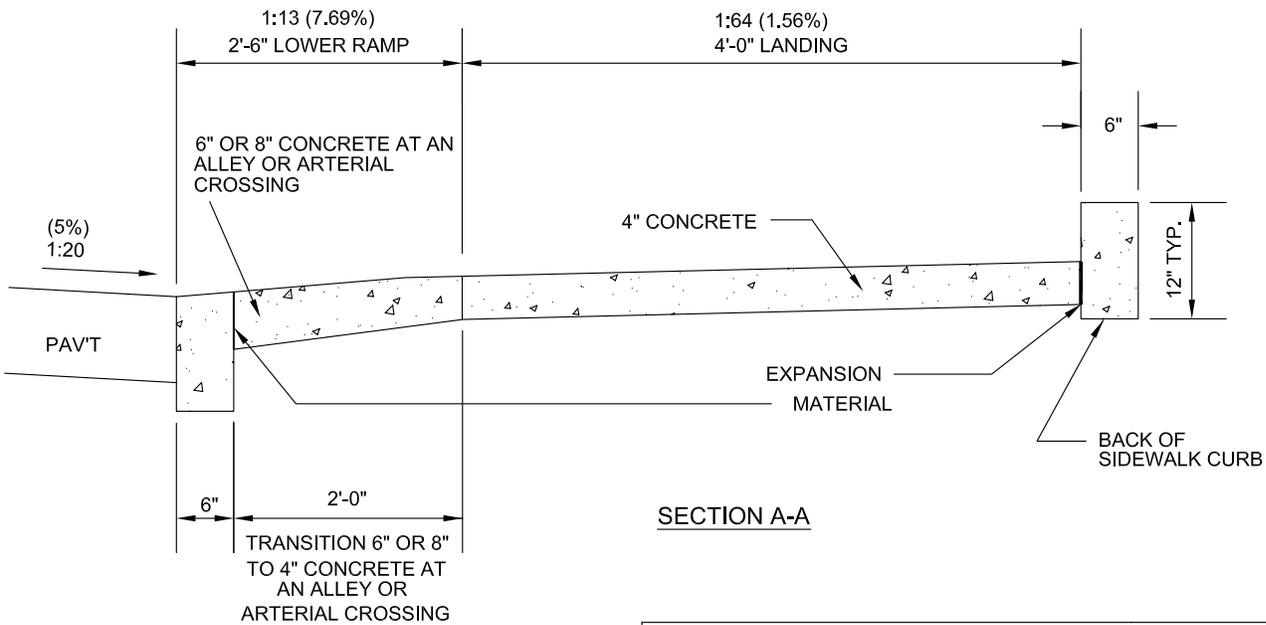
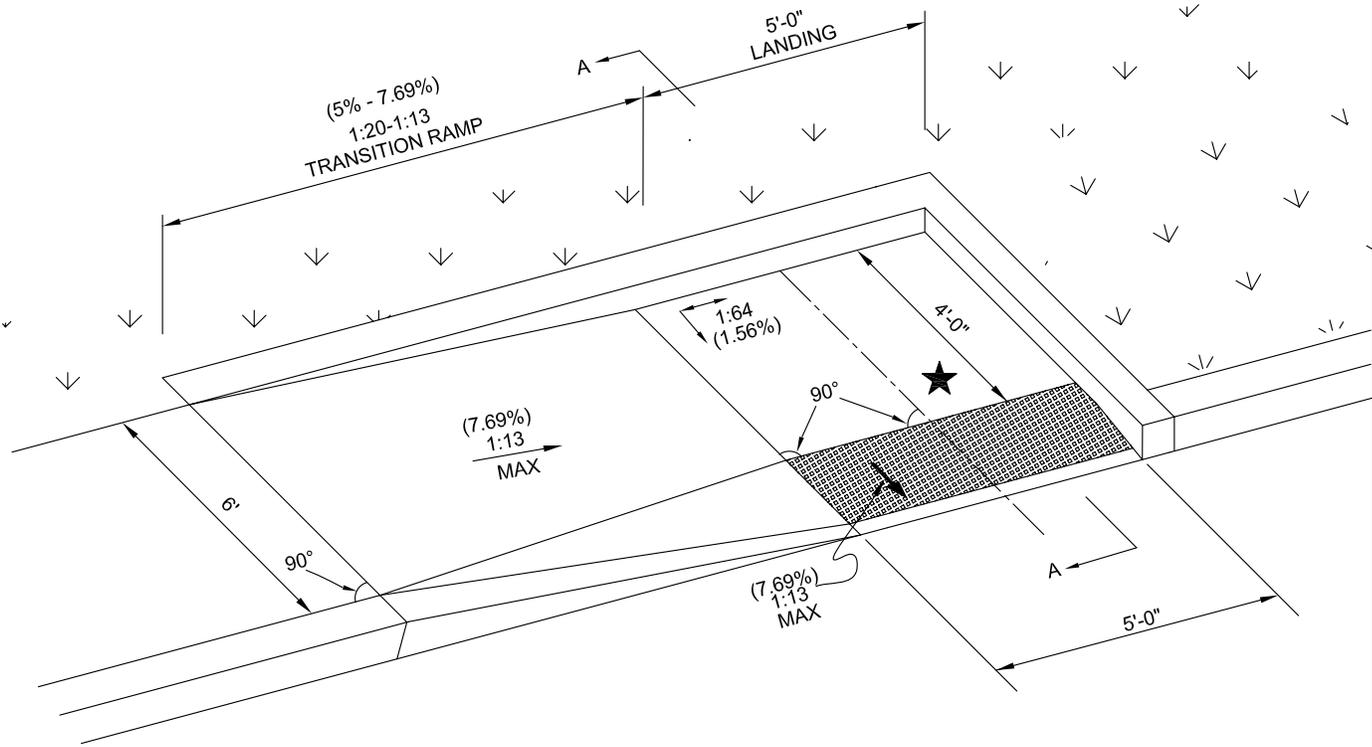
SECTION A-A

★ SEE SHEET 12/12 FOR DETECTABLE WARNING DETAILS

# CURB RAMP TYPE P-1 PERPENDICULAR & PARALLEL

CITY OF COLUMBUS, OHIO  
DEPARTMENT OF PUBLIC SERVICE  
TRANSPORTATION DIVISION

STD DWG
<b>2319</b>
REV: 01/01/07
SHT 9 OF 12



★ SEE SHEET 12/12 FOR DETECTABLE WARNING DETAILS

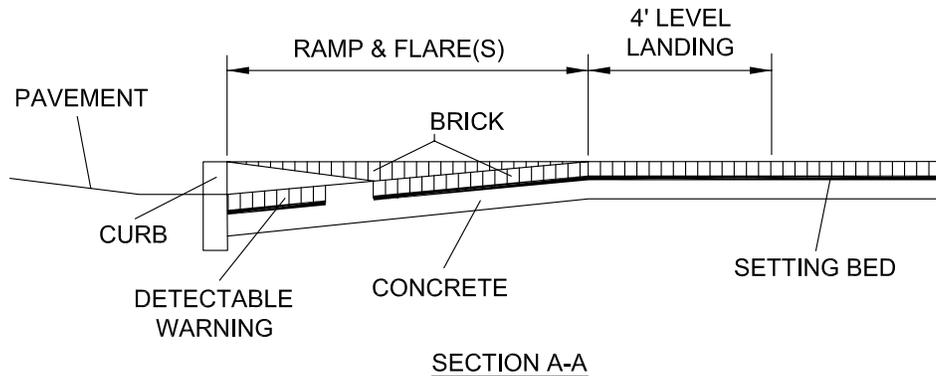
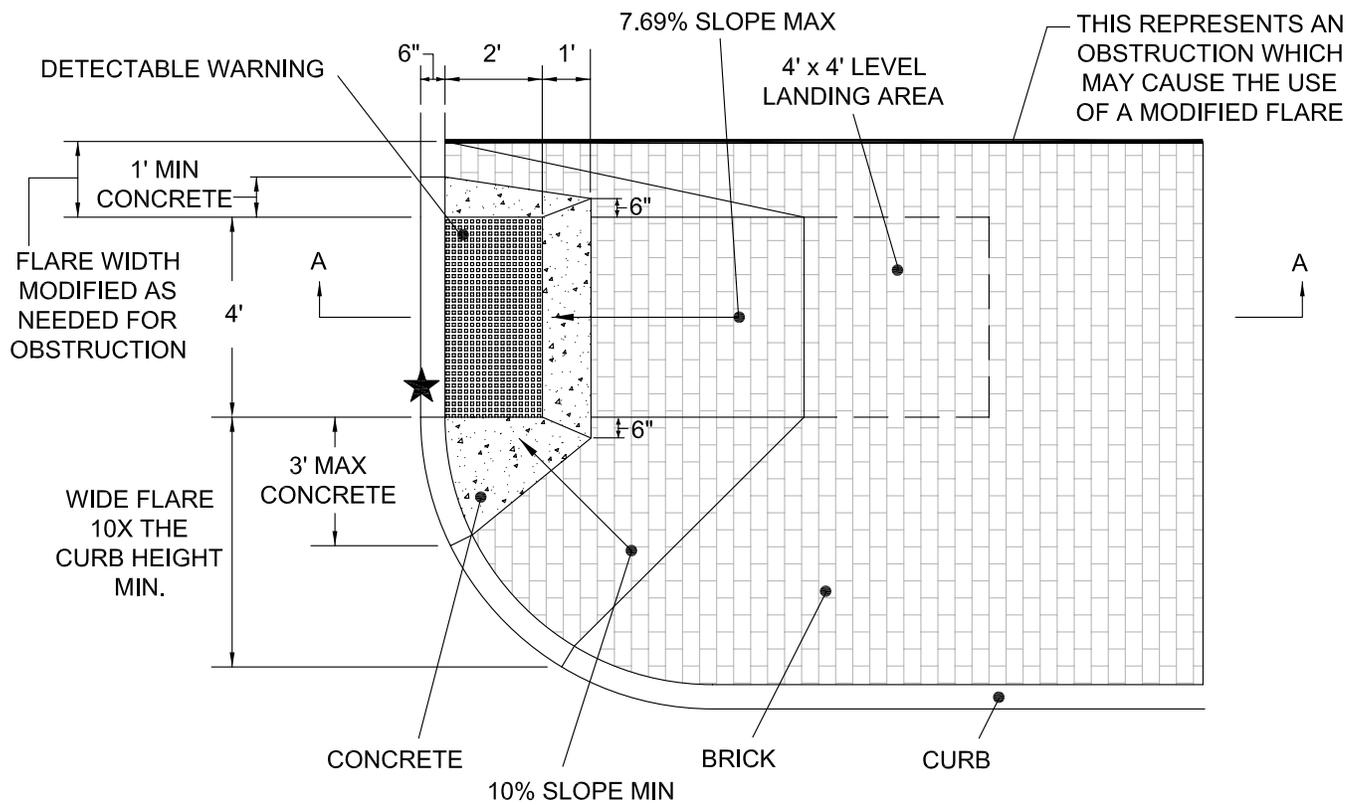
## CURB RAMP TYPE P-2 PERPENDICULAR & PARALLEL (ONE DIRECTION)

CITY OF COLUMBUS, OHIO  
DEPARTMENT OF PUBLIC SERVICE  
TRANSPORTATION DIVISION

**STD DWG**  
**2319**

REV: 01/01/07

SHT 10 OF 12



1. WRITTEN APPROVAL FROM THE C.O.C. CITY ENGINEER OR AN AUTHORIZED REPRESENTATIVE SHALL BE OBTAINED PRIOR TO THE DESIGN OR CONSTRUCTION OF A BRICK OR GRANITE CURB RAMP.
2. ALONG WITH THE REQUIREMENT OF THIS SHEET FOR BRICK OR GRANITE CURB RAMPS, ALL OTHER APPLICABLE REQUIREMENTS OF 2319 SHALL BE FOLLOWED.
3. BRICK OR GRANITE CURB RAMPS SHALL BE TYPED AS PER 2319. TYPICALLY TYPE A OR TYPE D WILL BE USED. ALL APPLICABLE DIMENSIONS AND REQUIREMENTS FOR THE SELECTED TYPE OF RAMP SHALL BE FOLLOWED.
4. WIDE FLARES WILL BE USED WHEREVER POSSIBLE. A MODIFIED FLARE SHALL BE USED WHEN AN OBSTRUCTION EXISTS.
5. THE INSTALLATION OF THE BRICK OR GRANITE PAVERS SHALL BE DONE AS PER STD DWG 2301, STANDARD BRICK SIDEWALKS FOR ARTERIALS.

★ SEE SHEET 12/12 FOR DETECTABLE WARNING DETAILS

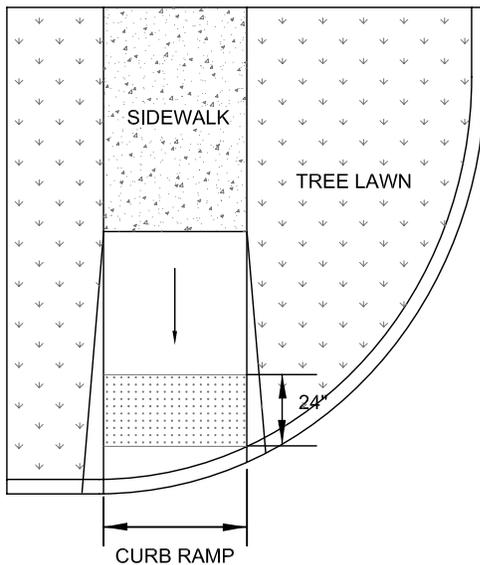
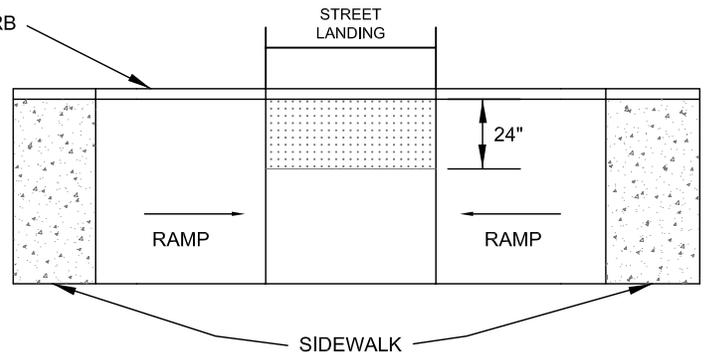
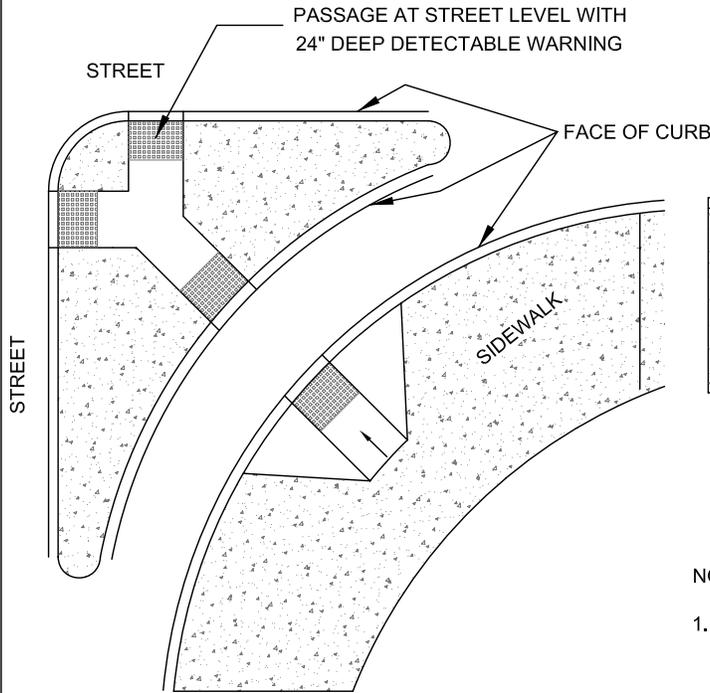
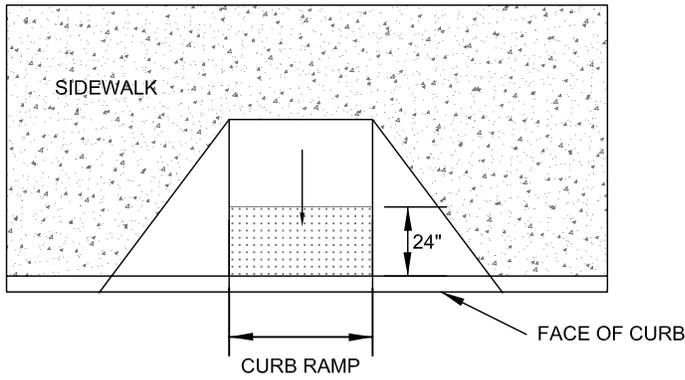
## CURB RAMP MADE WITH BRICK OR GRANITE PAVERS

CITY OF COLUMBUS, OHIO  
DEPARTMENT OF PUBLIC SERVICE  
TRANSPORTATION DIVISION

STD DWG  
2319

REV: 01/01/07

SHT 11 OF 12



NOTES:

1. DETECTABLE WARNINGS SHALL BE PROVIDED WHEREVER A CURB RAMP CROSSES A VEHICULAR WAY. EXCLUDING UNSIGNALIZED DRIVEWAY CROSSINGS.
2. DETECTABLE WARNINGS SHALL BE PROVIDED 24" IN THE DIRECTION OF TRAVEL AND EXTEND THE FULL WIDTH OF THE CURB RAMP OR FLUSH SURFACE. THE DETECTABLE WARNING SHALL BE LOCATED ADJACENT TO THE CURB LINE.
3. MATERIALS SHALL COMPLY WITH C.O.C. SUPPLEMENTAL SPECIFICATION 1551.
4. DETECTABLE WARNINGS SHALL BE PLACED 6" TO 8" BEHIND THE FACE OF CURB AND BEHIND THE CURB JOINT.
5. CAST IN PLACE OR ANY NON-SURFACE APPLIED DETECTABLE WARNING MUST HAVE A MINIMUM OF 3" OF CONCRETE ON EACH SIDE OF THE WARNING.

# DETECTABLE WARNINGS

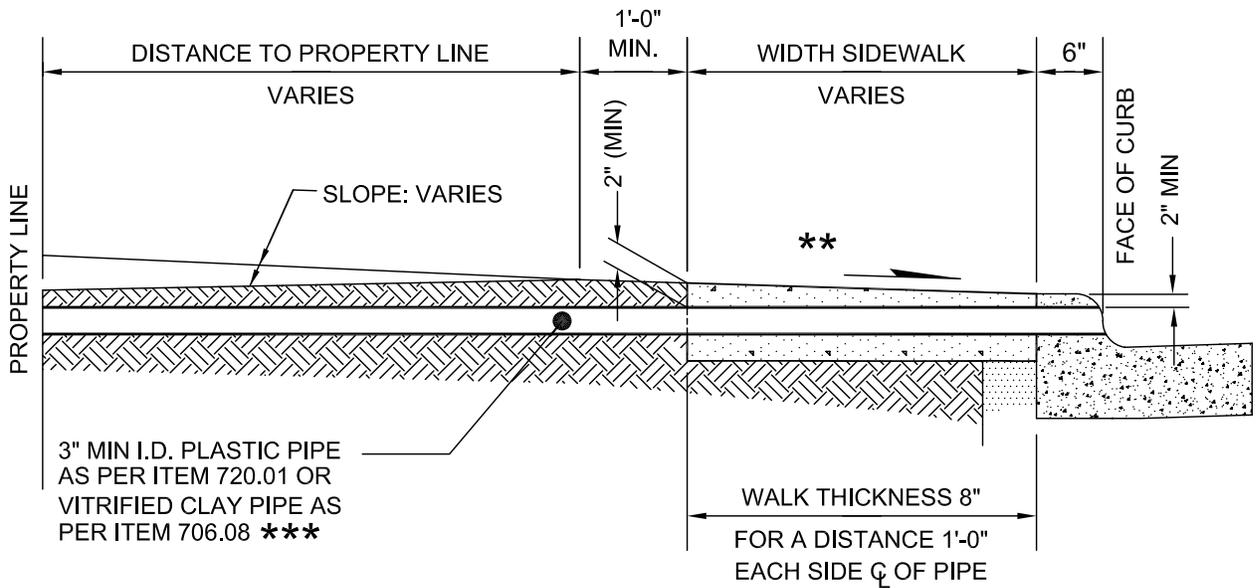
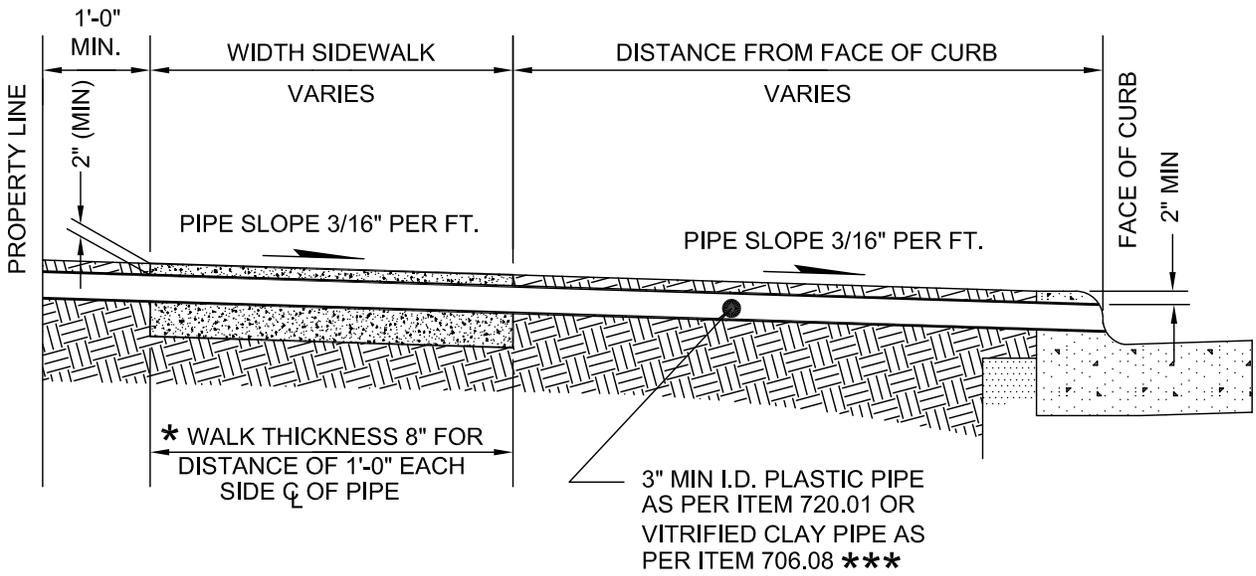
CITY OF COLUMBUS, OHIO  
DEPARTMENT OF PUBLIC SERVICE  
TRANSPORTATION DIVISION

STD DWG

2319

REV: 01/01/07

SHT 12 OF 12



- \* APPLICABLE ONLY WHERE THICKNESS OF CONCRETE OVER PIPE IS LESS THAN 4" MOUNTABLE CURB SHALL BE CORE DRILLED ONLY FOR ROOF DRAIN OPENING.
- \*\* SLOPE 3/16" PER FT ON SIDEWALK AREA
- \*\*\* IF THERE IS EXISTING ROOF DRAIN PIPE, THEN MATCH EXISTING SIZE IF LARGER THAN 3".

## PIPE ROOF DRAIN ITEM 618

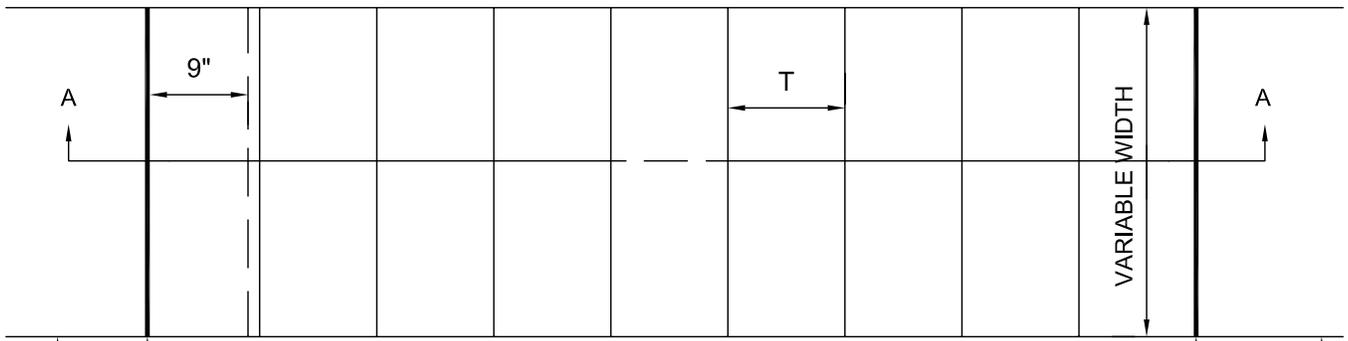
CITY OF COLUMBUS, OHIO  
DEPARTMENT OF PUBLIC SERVICE  
TRANSPORTATION DIVISION

CITY ENGINEER,

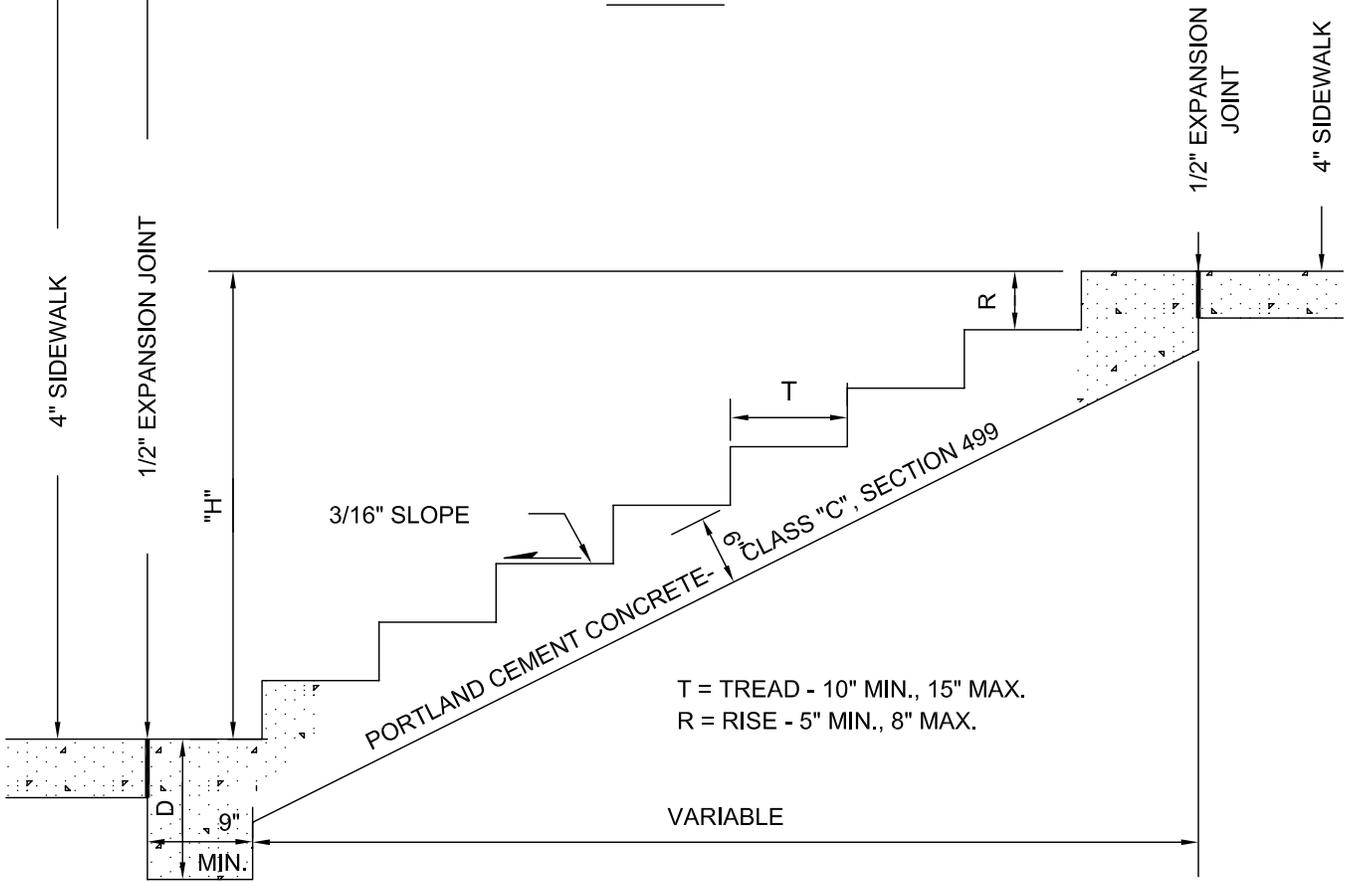
STD DWG  
2320

REV: 01/01/07

SHT 1 OF 1



TOP VIEW



SECTION A-A

T = TREAD - 10" MIN., 15" MAX.  
 R = RISE - 5" MIN., 8" MAX.

NO SCALE

FOR "H"=24" AND UNDER  
 SEE SHEET 2/3

NO. OF RISERS	"D"
4	8"
5	10"
6	10"
7	12"
8	12"

# CONCRETE STEPS TYPE A ITEM 608

CITY OF COLUMBUS, OHIO  
 DEPARTMENT OF PUBLIC SERVICE  
 TRANSPORTATION DIVISION

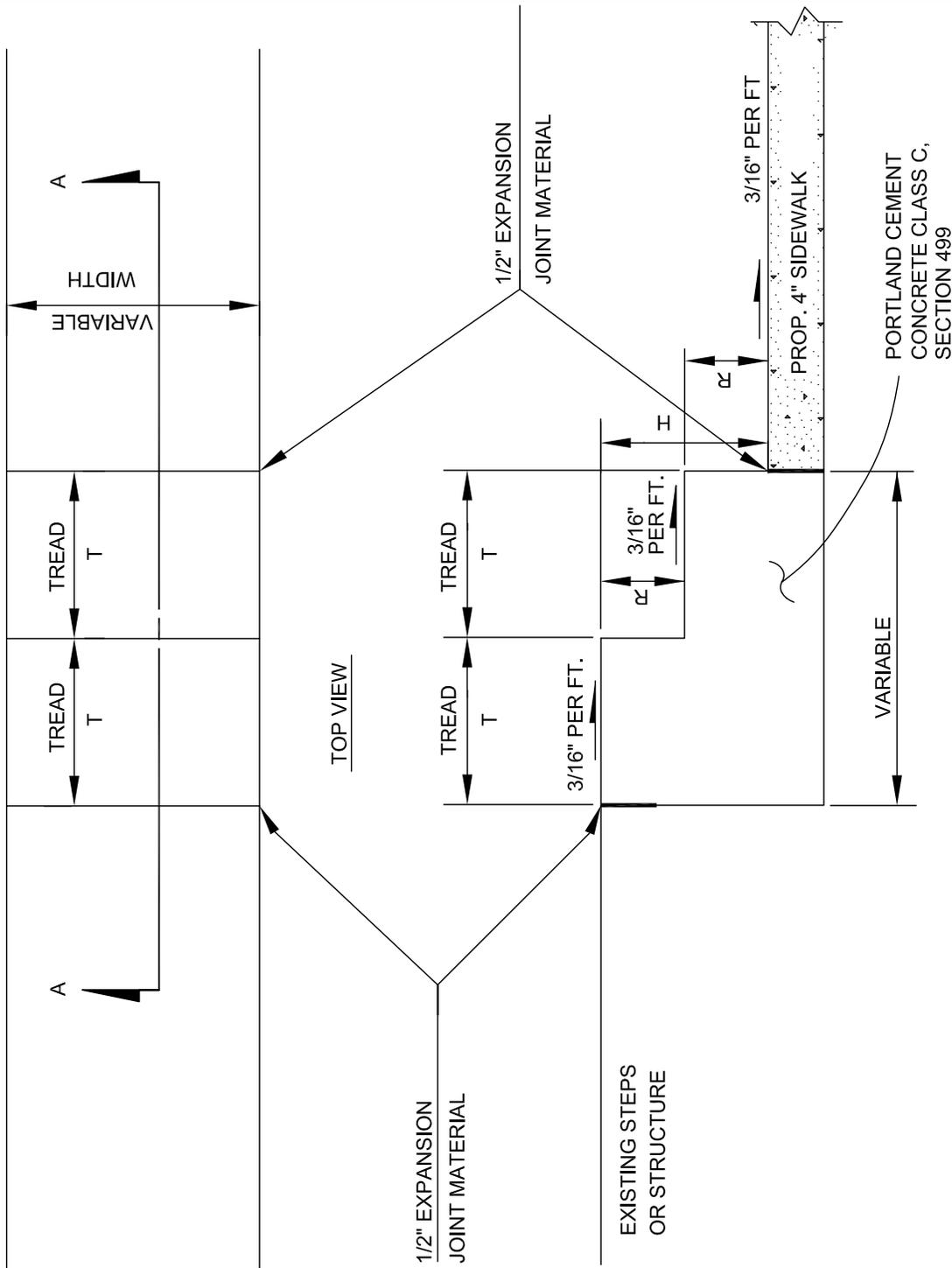
CITY ENGINEER,

STD DWG  
 2328

REV: 01/01/07

SHT 1 OF 3





SECTION A-A

T = TREAD - 10" MIN., 15" MAX.  
 R = RISER - 5" MIN., 8" MAX.

IF "H" IS GREATER THAN 24", SEE SHT. 1/3

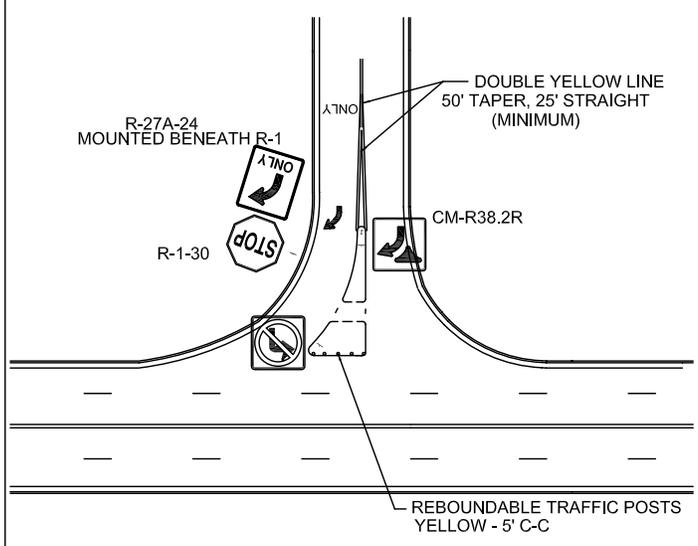
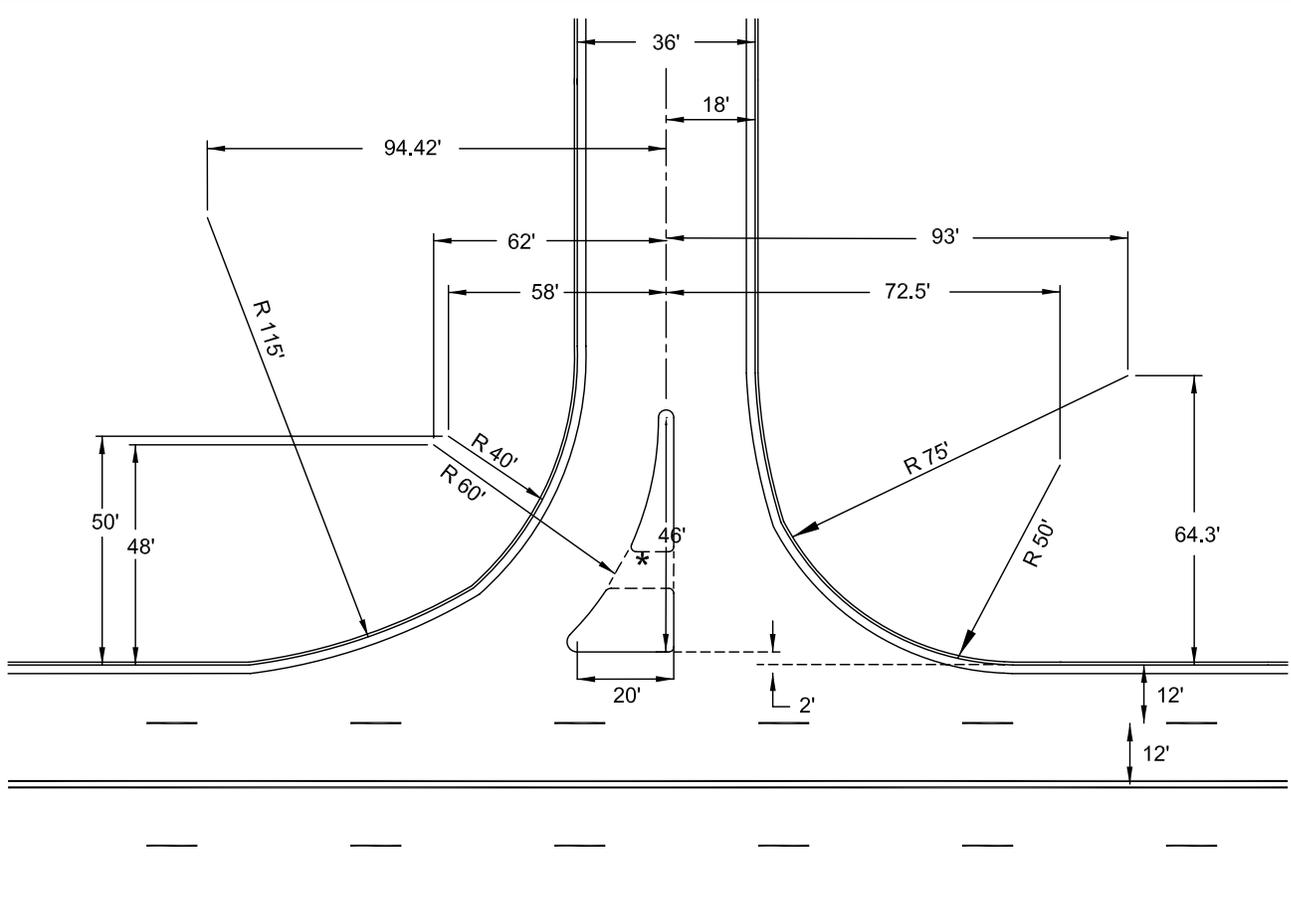
THIS STANDARD DRAWING MAY BE USED WHEN CONSTRUCTING A SMALL PORCH STOOP OR WHEN MEETING EXISTING STEPS.

# CONCRETE STEPS TYPE C ITEM 608

CITY OF COLUMBUS, OHIO  
 DEPARTMENT OF PUBLIC SERVICE  
 TRANSPORTATION DIVISION

STD DWG
<b>2328</b>
REV: 01/01/07
SHT 3 OF 3





DIMENSIONS ARE TO FACE OF CURB  
(UNLESS OTHERWISE NOTED)

DESIGN IS FOR WB-50 TURNING TEMPLATE

CHANGES FROM THESE DRAWINGS WILL REQUIRE  
CITY OF COLUMBUS APPROVAL

\* NOTE: AS PER CITY OF COLUMBUS POLICY,  
SIDEWALKS ARE REQUIRED ON ROADWAY PROJECTS.  
DRIVE ISLANDS SHALL BE BUILT WITH AN ADA  
COMPLIANT PEDESTRIAN CROSSING. PLEASE SEE STD  
DWG'S 2300 AND 2319 FOR THE PROPER  
CONSTRUCTION OF SIDEWALKS AND CURB RAMPS.

ISLAND CORNER RADII ARE 2' MIN

ISLANDS MAY BE BORDERED WITH 18" STRAIGHT CURB  
AS PER STD DWG 2000, OR INSTALLED AS A SINGLE  
CONCRETE PLACEMENT AS SHOWN.

# LEFT IN & RIGHT IN WITH RIGHT OUT

CITY OF COLUMBUS, OHIO  
DEPARTMENT OF PUBLIC SERVICE  
TRANSPORTATION DIVISION

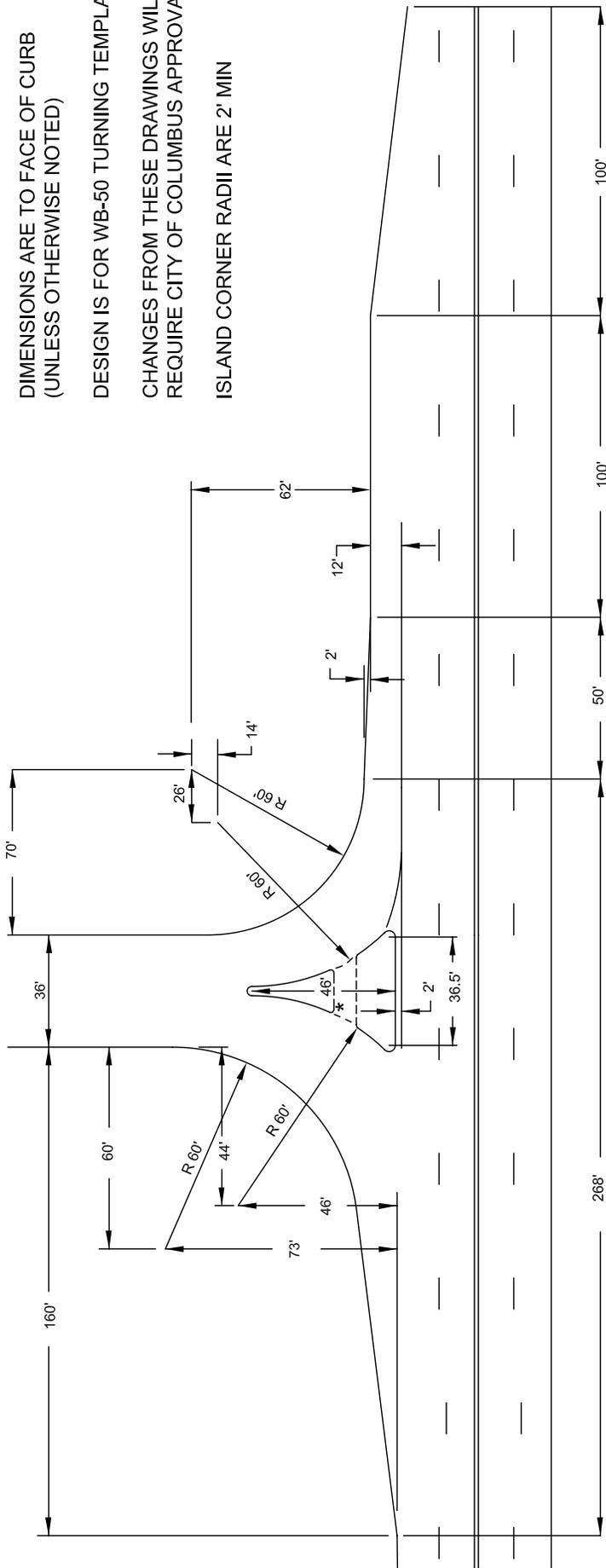
STD DWG  
**2330**  
REV: 01/01/07  
SHT 2 OF 3

DIMENSIONS ARE TO FACE OF CURB  
(UNLESS OTHERWISE NOTED)

DESIGN IS FOR WB-50 TURNING TEMPLATE

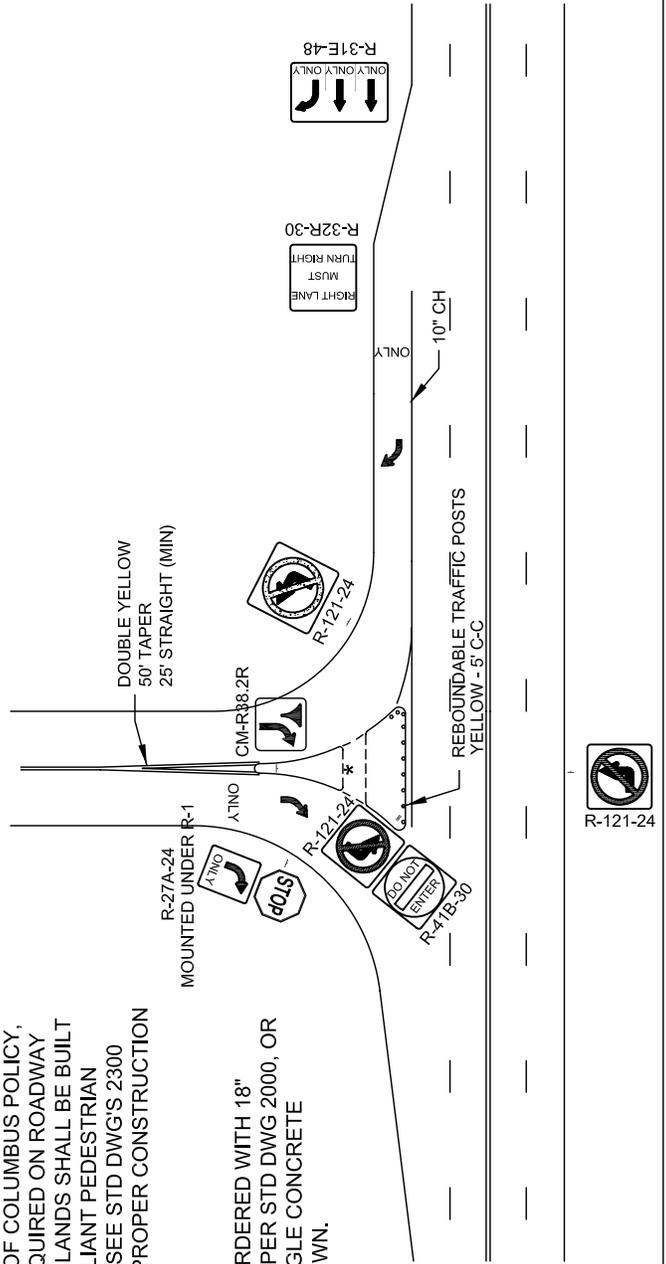
CHANGES FROM THESE DRAWINGS WILL  
REQUIRE CITY OF COLUMBUS APPROVAL

ISLAND CORNER RADII ARE 2' MIN



\* NOTE: AS PER CITY OF COLUMBUS POLICY, SIDEWALKS ARE REQUIRED ON ROADWAY PROJECTS. DRIVE ISLANDS SHALL BE BUILT WITH AN ADA COMPLIANT PEDESTRIAN CROSSING. PLEASE SEE STD DWG'S 2300 AND 2319 FOR THE PROPER CONSTRUCTION OF SIDEWALKS AND CURB RAMPS.

ISLANDS MAY BE BORDERED WITH 18" STRAIGHT CURB AS PER STD DWG 2000, OR INSTALLED AS A SINGLE CONCRETE PLACEMENT AS SHOWN.



# RIGHT IN & RIGHT OUT WITH ADD LANE

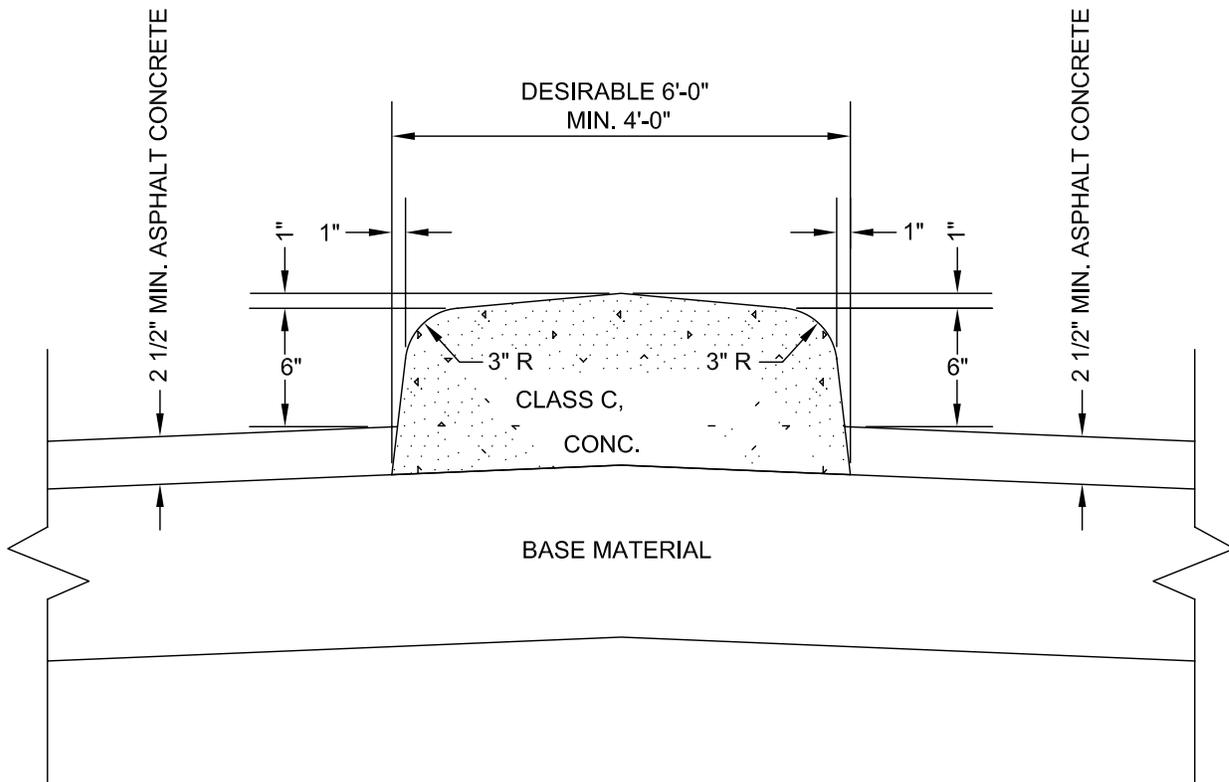
CITY OF COLUMBUS, OHIO  
DEPARTMENT OF PUBLIC SERVICE  
TRANSPORTATION DIVISION

STD DWG  
**2330**

REV: 01/01/07

SHT 3 OF 3





1.33 C.F. CONCRETE PER L.F. FOR 2' WIDTH (WHEN APPROVED)

2.74 C.F. CONCRETE PER L.F. FOR 4' WIDTH

3.99 C.F. CONCRETE PER L.F. FOR 6' WIDTH

JOINTS: 1/4" CONTRACTION JOINTS SHALL BE CONSTRUCTED OR SAWED AT 10' INTERVALS TO A 2" MINIMUM DEPTH AND ALIGNED WITH TRANSVERSE CONSTRUCTION JOINTS IN BASE.

MEDIANS MAY BE BUILT BY INSTALLING STRAIGHT 18" CONCRETE CURB, AS PER STD DWG 2000, AROUND THE PERIMETER OF THE CONCRETE MEDIAN PLACEMENT.

## CONCRETE MEDIAN ITEM 612

CITY OF COLUMBUS, OHIO  
DEPARTMENT OF PUBLIC SERVICE  
TRANSPORTATION DIVISION

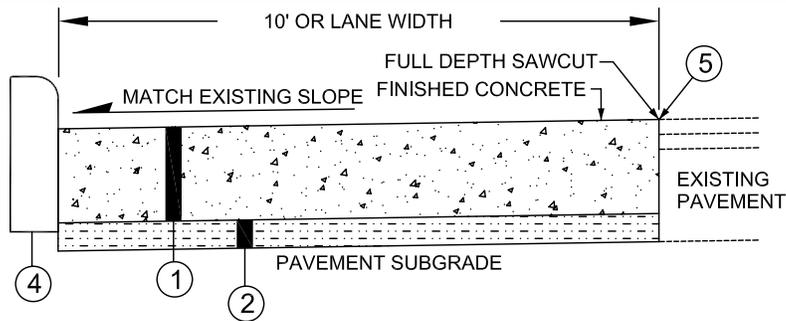
CITY ENGINEER,

STD DWG

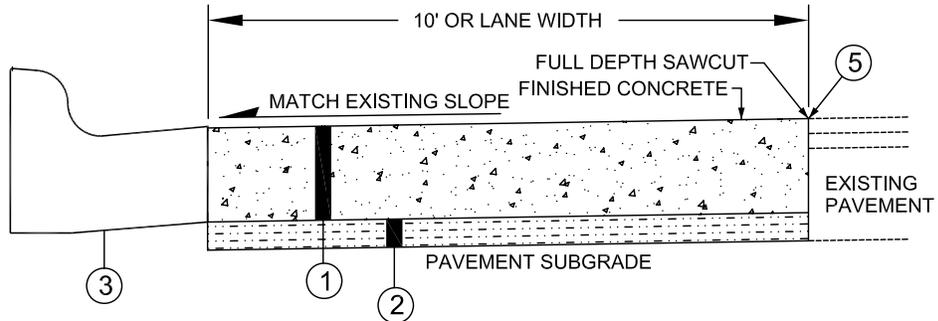
2331

REV: 01/01/07

SHT 1 OF 1



TYPE A: CONCRETE BUS PAD AT LOCATIONS WITH STRAIGHT CURB



TYPE B: CONCRETE BUS PAD AT LOCATIONS WITH COMBINATION CURB & GUTTER

- ① 10" ITEM 452, PLAIN PORTLAND CEMENT CONCRETE PAVEMENT
- ② 6" ITEM 304, AGGREGATE BASE
- ③ ITEM SPECIAL, 10" CONCRETE COMBINED CURB AND GUTTER (STANDARD DRAWING 2020, MODIFIED)
- ④ EXISTING STRAIGHT CURB OR ITEM 609, STRAIGHT 18" CONCRETE CURB (STANDARD DRAWING 2000)
- ⑤ ITEM 413, CRACK SEALING, HOT APPLIED

ITEM SPEC., CONCRETE BUS PAD, S.Y., SHALL INCLUDE THE FOLLOWING ITEMS; ALL SAWCUTTING, PAVEMENT REMOVAL, 6" ITEM 304, 10" ITEM 452, AND ITEM 413.

## CONCRETE BUS PAD

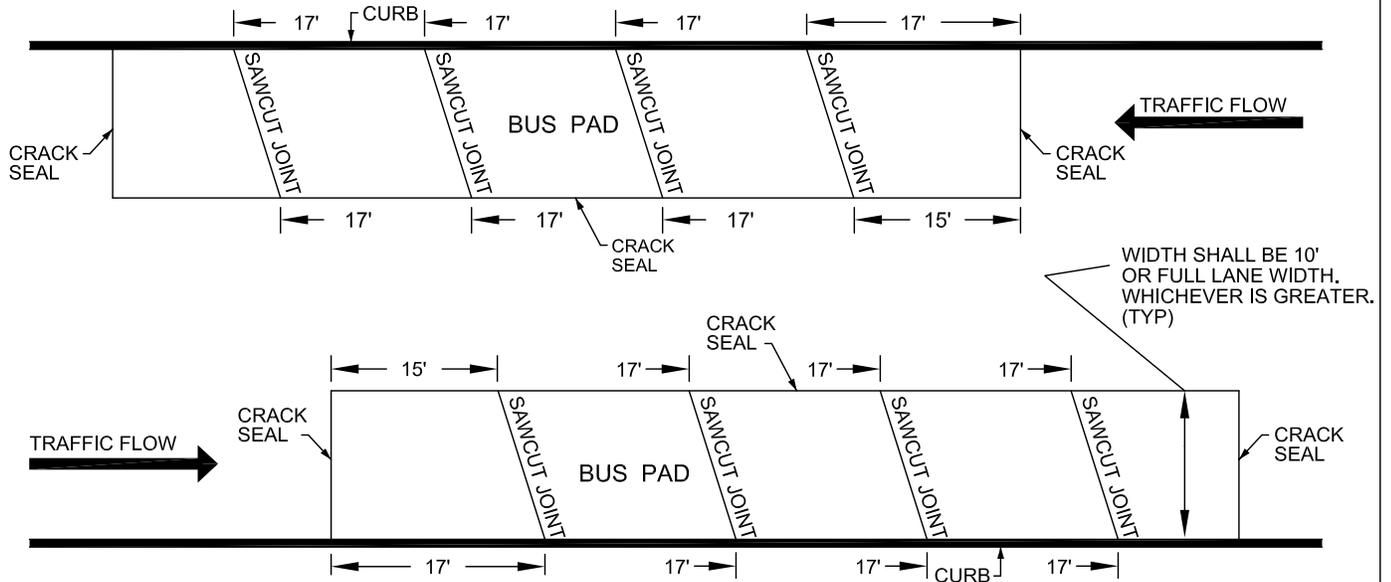
CITY OF COLUMBUS, OHIO  
DEPARTMENT OF PUBLIC SERVICE  
TRANSPORTATION DIVISION

CITY ENGINEER

STD DWG  
2332

REV: 01/01/07

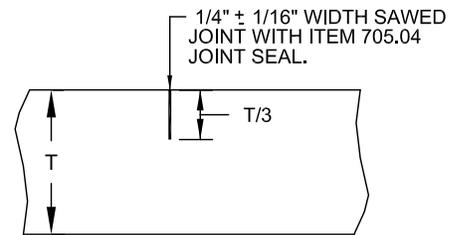
SHT 1 OF 3



TRANSVERSE JOINT PLAN VIEW

TRANSVERSE JOINT

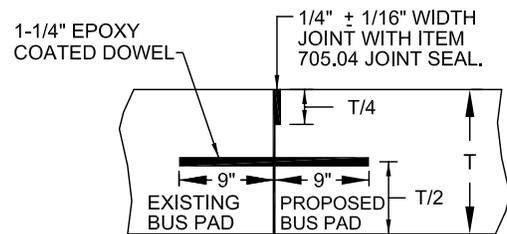
EACH CONCRETE PAD SHALL BE SAWCUT TO PROVIDE CONTRACTION JOINTS WITH A MINIMUM SPACING OF 17 FEET. THE JOINT SHALL BE SKEWED WITH THE RIGHT EDGE OF THE JOINT 2 FEET AHEAD OF THE LEFT EDGE IN THE DIRECTION OF TRAVEL FOR A 10' WIDE OR FULL LANE WIDTH (WHICHEVER IS GREATER) BUS PAD (SEE PLAN VIEW ABOVE AND DETAIL "A"). EACH SAWCUT JOINT SHALL BE SEALED WITH ITEM 705.04.



DETAIL "A"

CONSTRUCTION JOINT

AT LOCATIONS WHERE A CONSTRUCTION JOINT IS REQUIRED (WHERE THE BUS PAD REQUIRES PARTIAL REPLACEMENT, LENGTHENING OR WIDENING), 1-1/4" EPOXY COATED DOWELS ARE TO BE USED AS SHOWN IN DETAIL "B". DOWELS SHALL BE SPACED AT 12" CENTERS FOR TRANSVERSE JOINTS AND 30" CENTERS FOR LONGITUDINAL, BEGINNING 6" FROM THE JOINT. THIS WORK SHALL BE PAID FOR UNDER ITEM 509, EPOXY COATED REINFORCING STEEL (POUNDS) AND ITEM 510, DOWEL HOLES (EACH).



DETAIL "B"

# CONCRETE BUS PAD TRANSVERSE JOINT DETAIL

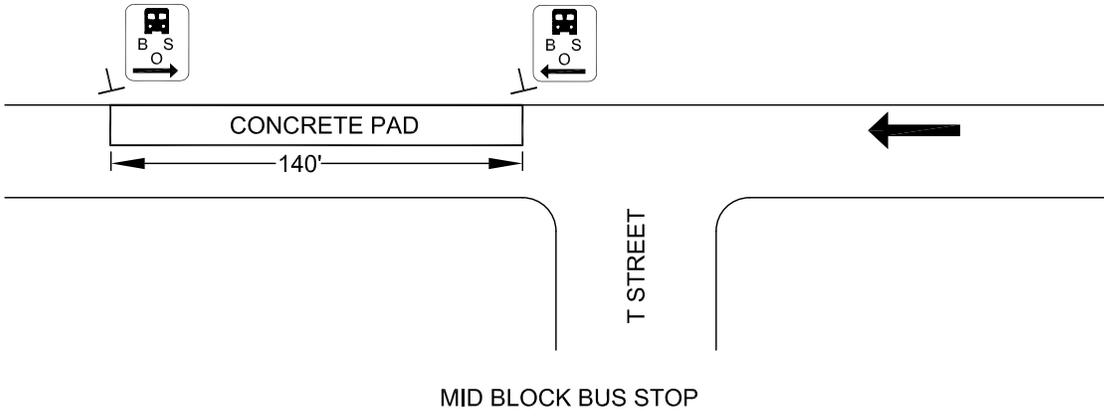
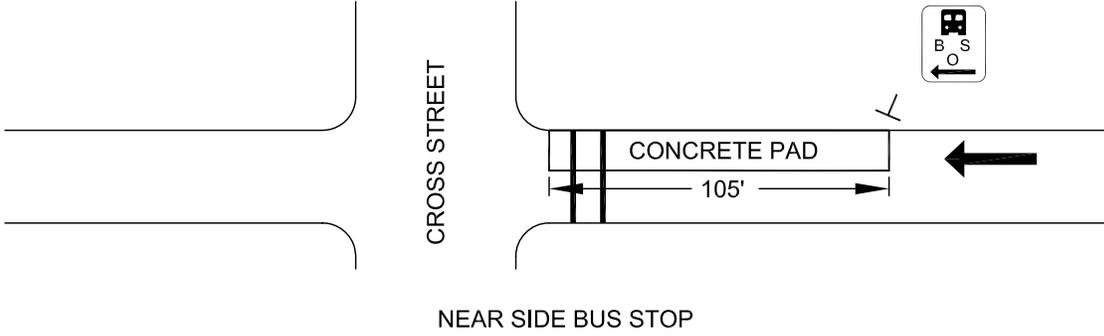
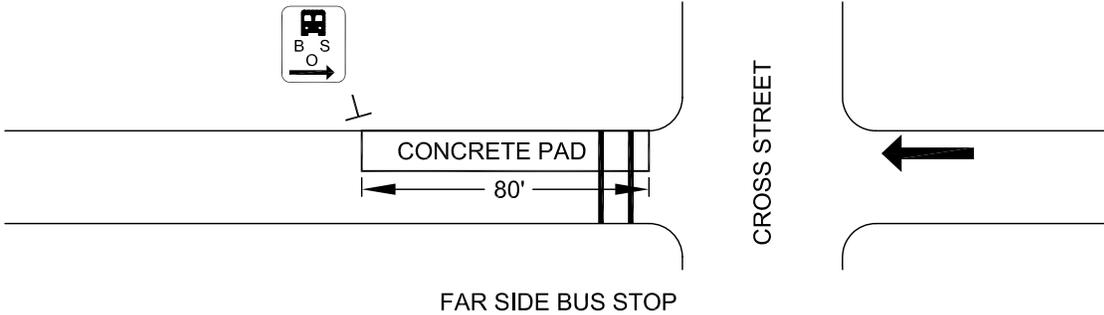
CITY OF COLUMBUS, OHIO  
DEPARTMENT OF PUBLIC SERVICE  
TRANSPORTATION DIVISION

STD DWG

2332

REV: 01/01/07

SHT 2 OF 3

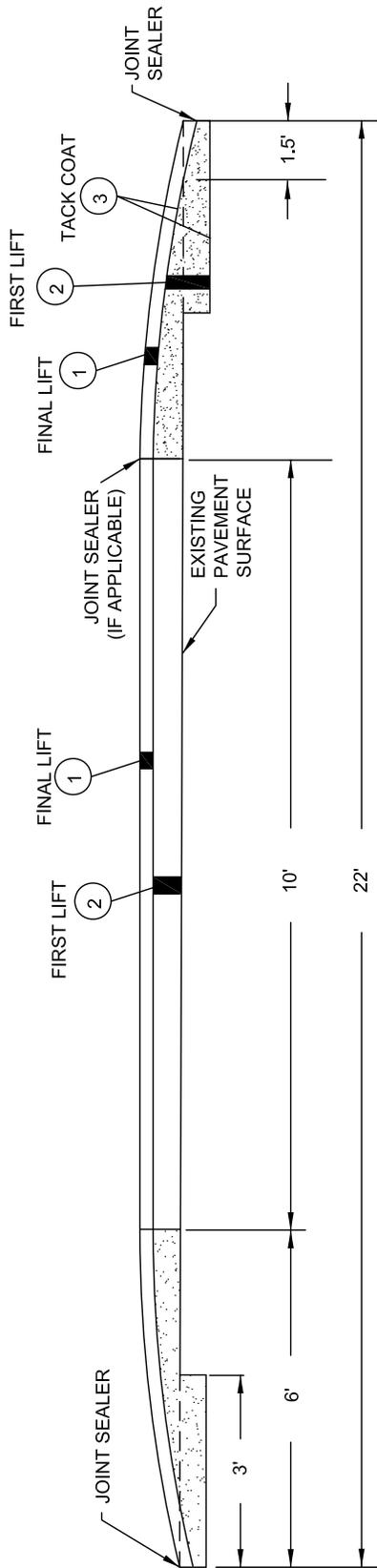


← DIRECTION OF TRAVEL

<b>CONCRETE BUS PAD TYPICAL LOCATIONS</b>	
CITY OF COLUMBUS, OHIO DEPARTMENT OF PUBLIC SERVICE TRANSPORTATION DIVISION	STD DWG <b>2332</b>
	REV: 01/01/07
	SHT 3 OF 3

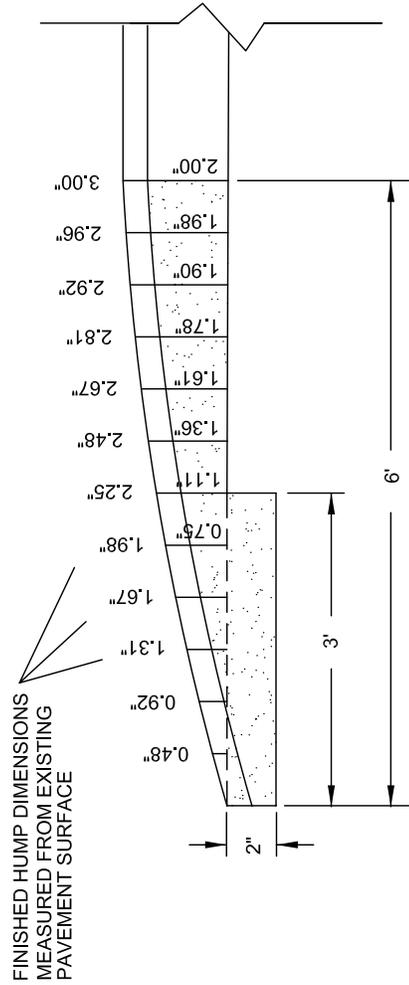


SPEED HUMP CROSS-SECTION



- 1 - 1.5" HOT MIXED, HOT LAID ASPHALT CONCRETE, ITEM 404
- 2 - 1.5" HOT MIXED, HOT LAID ASPHALT CONCRETE, ITEM 402
- 3 - TACK COAT, ITEM 407 BITUMINOUS MATERIAL

MINIMUM COOLING TEMPERATURE FOR ITEM 402 SHALL BE <150 DEG. F BEFORE THE 404 COURSE CAN BE APPLIED.

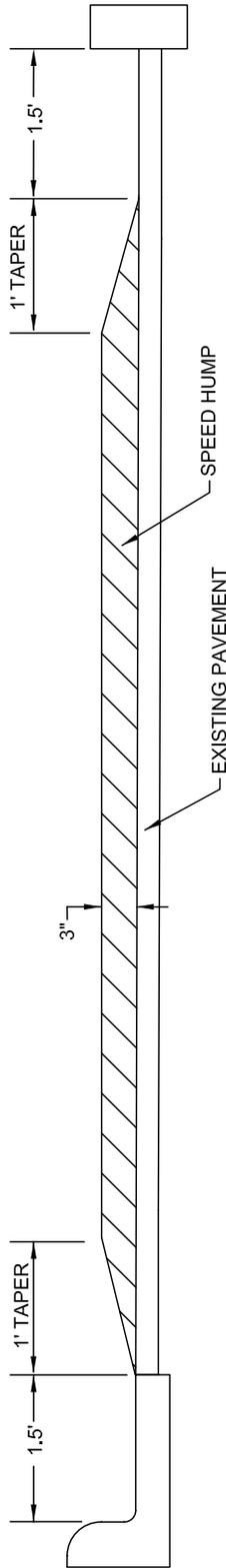


FINISHED HUMP DIMENSIONS MEASURED FROM EXISTING PAVEMENT SURFACE

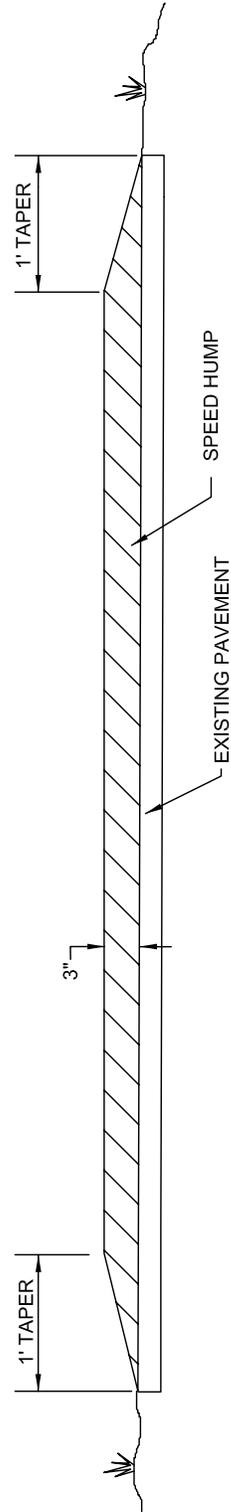
CORRECT SIGNAGE AND PAVEMENT MARKINGS ARE REQUIRED FOR SPEED HUMP INSTALLATION. CALL (614) 645-8376 FOR THE PAVEMENT MARKING SECTION AND THE TRAFFIC SIGNAGE SECTION FOR THIS INFORMATION.

<h1>22' SPEED HUMP</h1>	
CITY OF COLUMBUS, OHIO DEPARTMENT OF PUBLIC SERVICE TRANSPORTATION DIVISION	STD DWG <b>2335</b>
	REV: 01/01/07
	SHT 2 OF 3

ROADWAY CROSS-SECTION



CURB & GUTTER OR STRAIGHT CURB



UNCURBED

NOTE: DRAWING DOES NOT SHOW REQUIRED MILLING  
(REFERENCE SPEED HUMP CROSS-SECTION DRAWINGS)

**CROSS SECTIONS FOR  
ALL SPEED HUMPS  
(EXCLUDING INTERSECTION  
SPEED HUMPS)**

CITY OF COLUMBUS, OHIO  
DEPARTMENT OF PUBLIC SERVICE  
TRANSPORTATION DIVISION

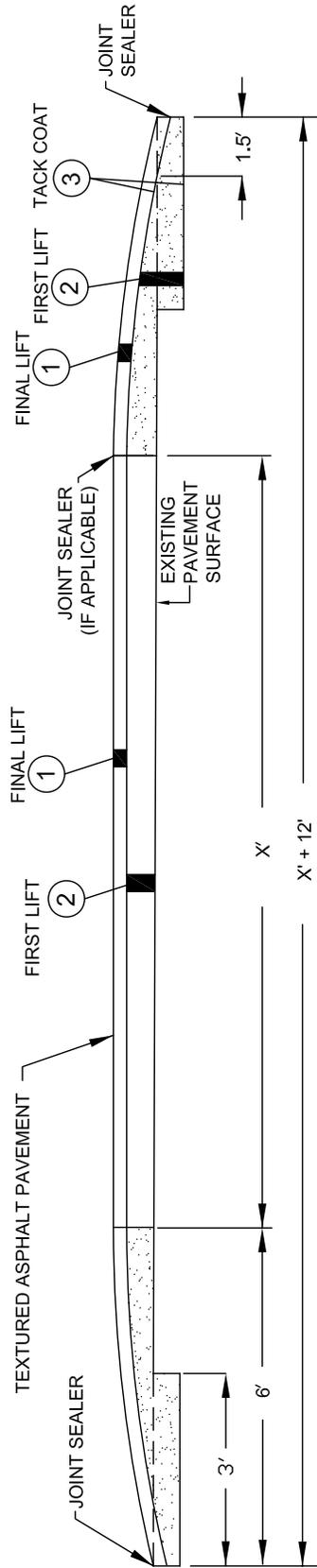
STD DWG

**2335**

REV: 01/01/07

SHT 3 OF 3

INTERSECTION SPEED HUMP CROSS-SECTION



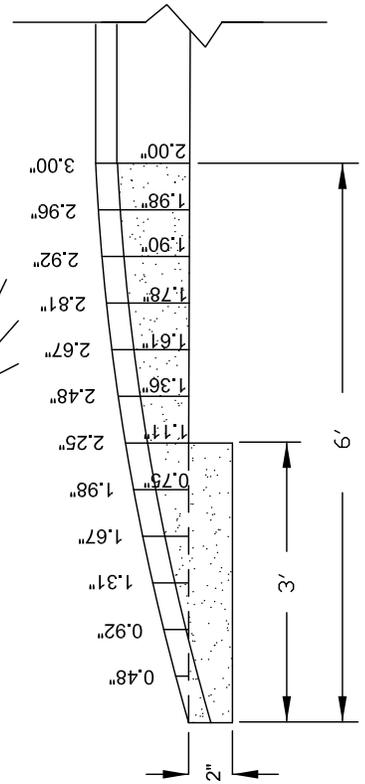
- ① - 1.5" HOT MIXED, HOT LAID ASPHALT CONCRETE, ITEM 404
- ② - 1.5" HOT MIXED, HOT LAID ASPHALT CONCRETE, ITEM 402
- ③ - TACK COAT, ITEM 407 BITUMINOUS MATERIAL

MINIMUM COOLING TEMPERATURE FOR ITEM 402 SHALL BE <150 DEG. F BEFORE THE 404 COURSE CAN BE APPLIED.

X = VARIES ACCORDING TO STREET WIDTH

CORRECT SIGNAGE AND PAVEMENT MARKINGS ARE REQUIRED FOR SPEED HUMP INSTALLATIONS. CALL (614) 645-8376 FOR THE PAVEMENT MARKING SECTION AND THE TRAFFIC SIGNAGE FOR THIS INFORMATION.

FINISHED HUMP DIMENSIONS MEASURED FROM EXISTING PAVEMENT SURFACE



INTERSECTION SPEED HUMP

CITY OF COLUMBUS, OHIO  
DEPARTMENT OF PUBLIC SERVICE  
TRANSPORTATION DIVISION

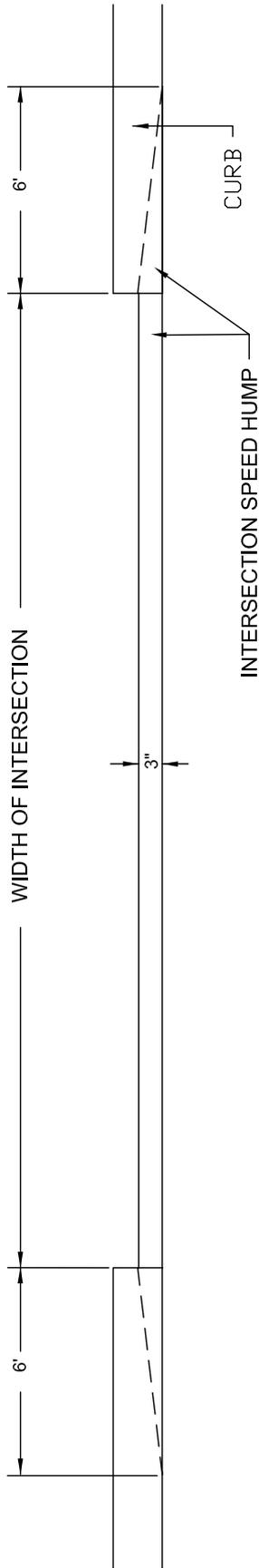
CITY ENGINEER

STD DWG  
2337

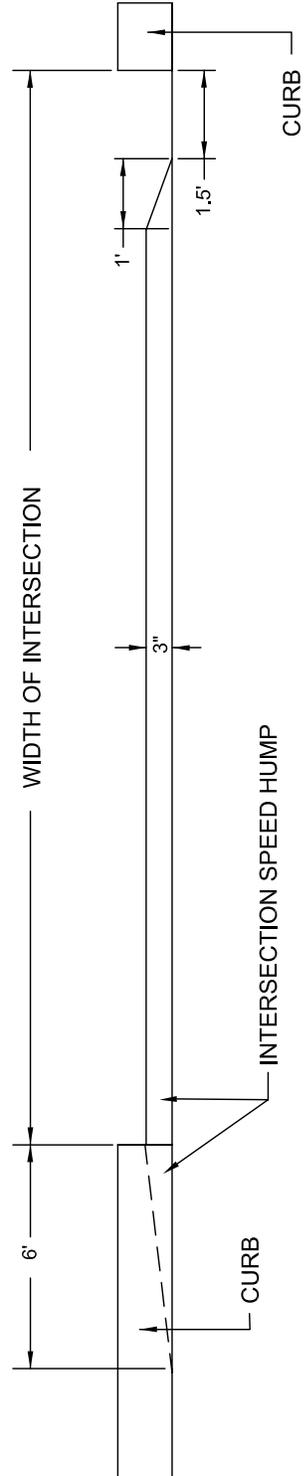
REV: 01/01/07

SHT 1 OF 2

ROADWAY CROSS-SECTION FOR INTERSECTION SPEED HUMPS



FOUR - LEG INTERSECTION



THREE - LEG INTERSECTION

**INTERSECTION  
SPEED HUMP**

CITY OF COLUMBUS, OHIO  
DEPARTMENT OF PUBLIC SERVICE  
TRANSPORTATION DIVISION

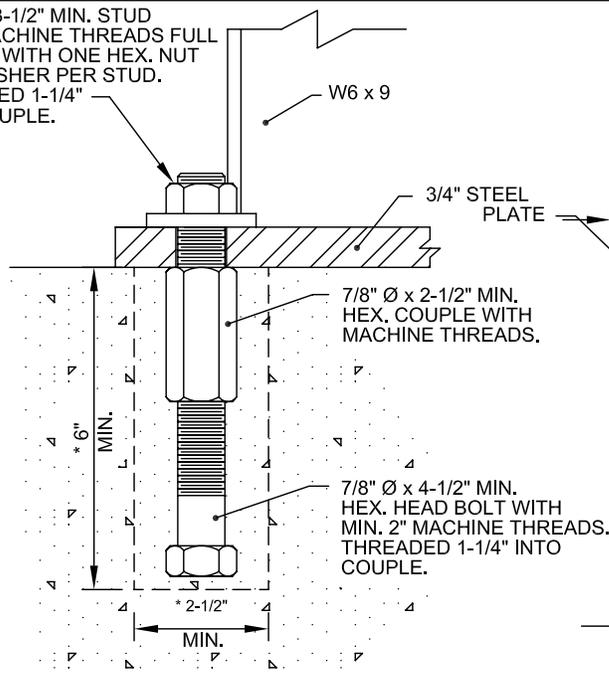
STD DWG

**2337**

REV: 01/01/07

SHT 2 OF 2

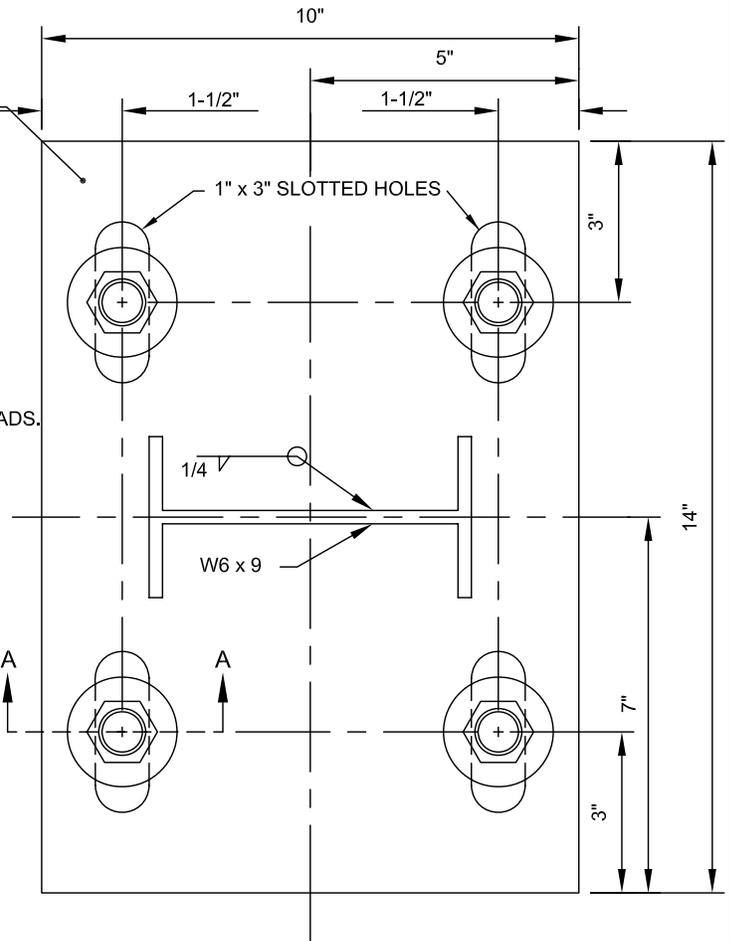
7/8" Ø x 3-1/2" MIN. STUD WITH MACHINE THREADS FULL LENGTH WITH ONE HEX. NUT AND WASHER PER STUD. THREADED 1-1/4" INTO COUPLE.



SECTION A-A

WHEN ANCHOR ASSEMBLY IS PLACED IN A PRECAST OR EXISTING CONCRETE SECTION, DOWELING AND GROUTING SHALL BE REQUIRED.

NOTE: FASTEN ANCHOR ASSEMBLY RIGIDLY TO FORM BEFORE PLACING CONCRETE. STUD AND BOLT LENGTHS TO BE DETERMINED BY ENGINEER FOR EACH APPLICATION.



ALTERNATE ANCHOR ASSEMBLY - A COMPRESSION ANCHOR MAY BE USED IN PRECAST AND EXISTING CONCRETE SECTIONS:

7/8" DIAMETER

\* 13,000 LB. ULTIMATE PULLOUT.

\* 20,000 LB. ULTIMATE SHEAR.

\* ULTIMATE LOAD CAPACITY IN 4,000 PSI CONCRETE.

ALL MATERIAL AND LABOR NECESSARY TO INSTALL INLET MOUNTED POSTS HEREIN DESCRIBED SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ITEM 606- INLET MOUNTED POST.

# INLET MOUNTED POST

CITY OF COLUMBUS, OHIO  
DEPARTMENT OF PUBLIC SERVICE  
TRANSPORTATION DIVISION

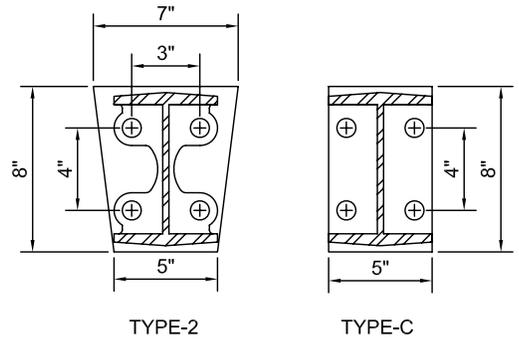
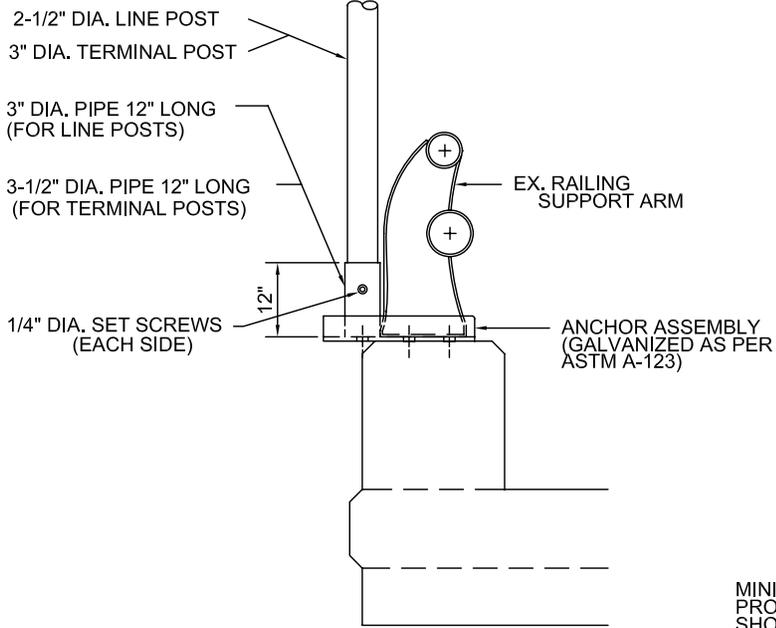
CITY ENGINEER,

STD DWG

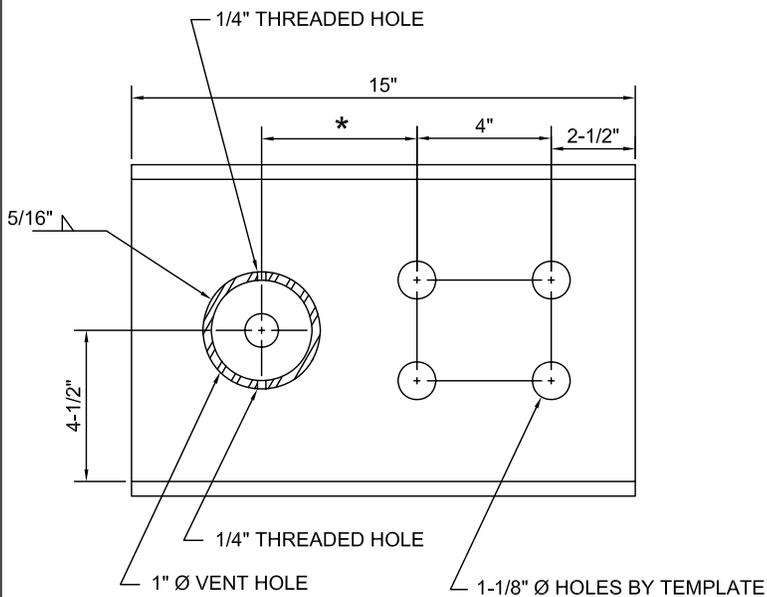
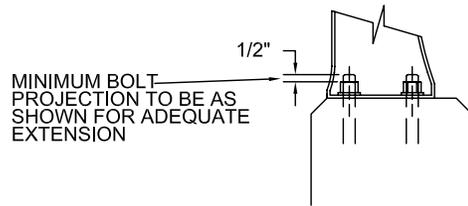
2343

REV: 01/01/07

SHT 1 OF 1

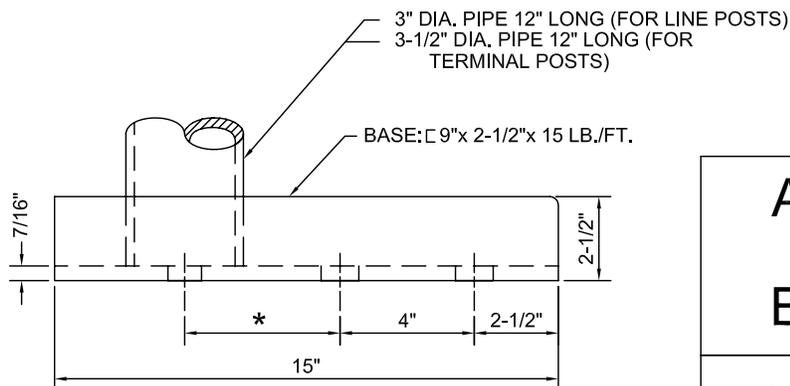


TYPICAL RAILING SUPPORTS



BOLTS LACKING ADEQUATE EXTENSION SHALL BE CUT OFF AND STUD BOLTS WELDED THERE TO, BY THE STICK ELECTRODE METHOD, USING A FULL PENETRATION WELD. MINIMUM STUD HEIGHT OF 2-1/2" ABOVE PARAPET WALL. STUD BOLTS TO CONFORM TO DIAMETER, THREAD SIZES AND SPECIFICATION OF EXISTING BOLTS. ELECTRIC CORROSION PREVENTION SHALL BE AS PER ITEM 517.05

- \* 4-1/2" (FOR LINE POSTS)
- \* 4-3/4" (FOR TERMINAL POSTS)



# ANCHOR ASSEMBLY FOR OVERPASS BRIDGE SCREENING

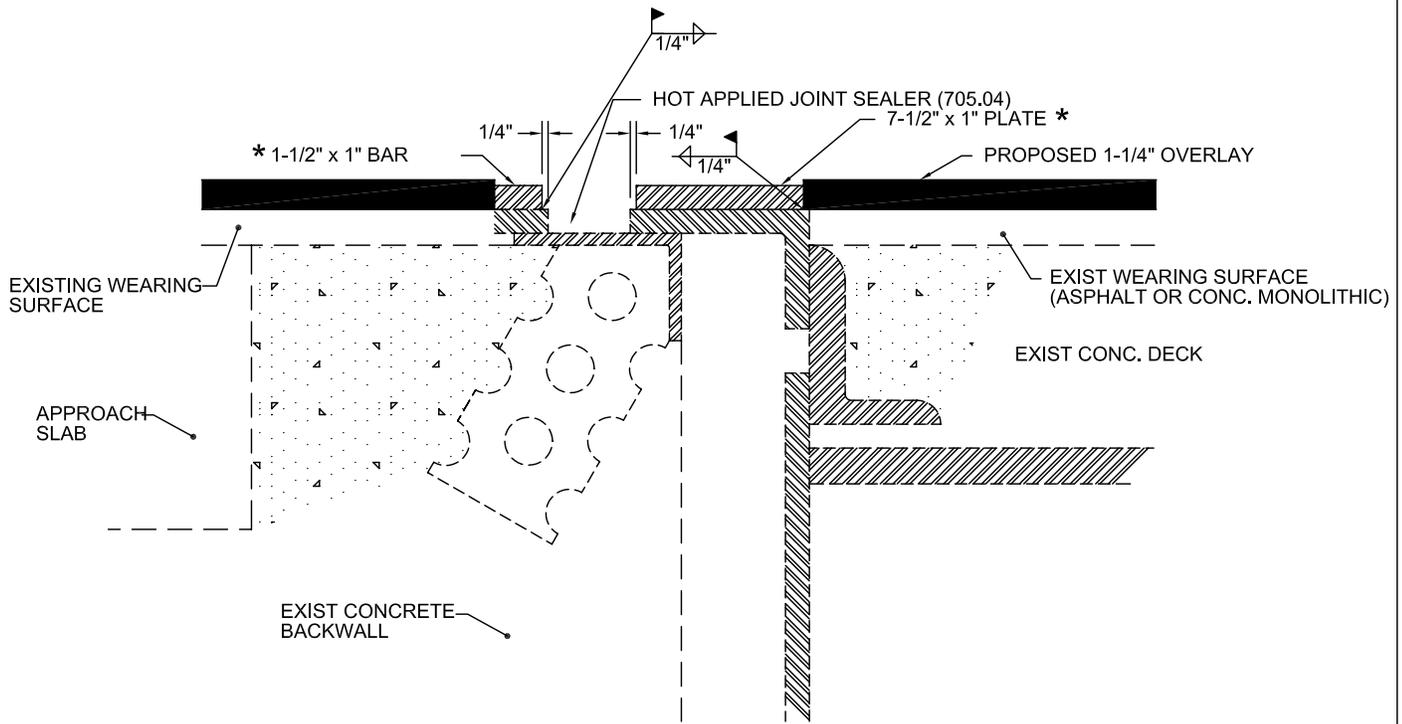
CITY OF COLUMBUS, OHIO  
 DEPARTMENT OF PUBLIC SERVICE  
 TRANSPORTATION DIVISION

STD DWG  
 2345

CITY ENGINEER,

REV: 01/01/07

SHT 1 OF 1



\* PLATE AND BAR HAVE BEEN SIZED BASED ON STANDARD STEEL EXPANSION JOINTS. CONTRACTOR SHALL VERIFY DIMENSIONS FOR EACH INSTALLATION. PLATE AND BAR SHALL BE 1/2" LESS IN WIDTH THAN THE EXISTING CONDITIONS.

THIS ITEM SHALL INCLUDE FURNISHING OF ALL MATERIALS AND NECESSARY LABOR TO FABRICATE, ASSEMBLE, CONSTRUCT AND INSTALL VERTICAL EXTENSIONS. ALL COSTS TO BE INCLUDED IN THE CONTRACT BID PRICES FOR ITEM 516 VERTICAL EXTENSION OF STRUCTURAL EXPANSION JOINTS PER LINEAR FOOT INSTALLED. ITEM 516 OF THE CURRENT COLUMBUS CONSTRUCTION AND MATERIAL SPECIFICATIONS SHALL GOVERN THE ITEMS OF THIS WORK.

NOTE: IF ANY PORTION OF EXPANSION JOINT IS OPENED TO TRAFFIC PRIOR TO PAVING OPERATIONS, A TEMPORARY ASPHALT RAMP SHALL BE CONSTRUCTED.

## VERTICAL EXTENSION OF STRUCTURAL EXPANSION JOINTS, ITEM 516

CITY OF COLUMBUS, OHIO  
DEPARTMENT OF PUBLIC SERVICE  
TRANSPORTATION DIVISION

CITY ENGINEER,



STD DWG  
**2347**

REV: 01/01/07

SHT 1 OF 1