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09/08/09

See Sheet 1A For Index of Sheets

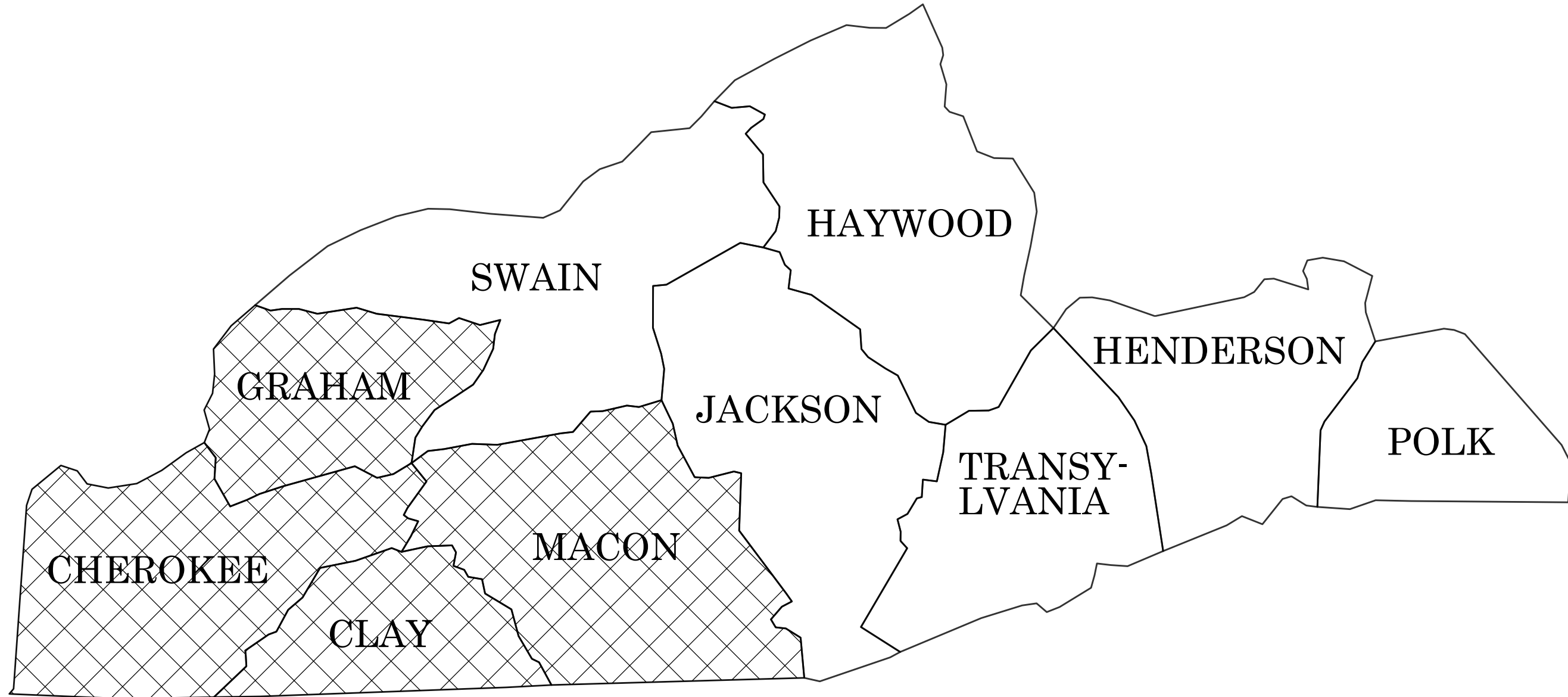
STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

DIVISION 14

LOCATION: *VARIOUS LOCATIONS ACROSS
DISTRICT 3 IN DIVISION 14*

TYPE OF WORK: *ID/IQ ON-CALL CONCRETE INSTALLATION,
REPAIR & MAINTENANCE SERVICES*

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	DN12200306	1	20
STATE PROJ. NO.		F. A. PROJ. NO.	DESCRIPTION
GMR14.CHE.1P			
GMR14.CHE.2P			
GMR14.CLA.1P			
GMR14.CLA.2U			
GMR14.GRA.1P			
GMR14.CLA.2P			
GMR14.MAC.1P			
GMR14.MAC.2P			



CONTRACT: DN12200306

Prepared in the Office of:
DIVISION OF HIGHWAYS
253 WEBSTER RD., SYLVA NC, 28779

2024 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE:
N/A

LETTING DATE:
NOVEMBER 12, 2025

JESSE A. RUSSELL, P.E.
PROJECT ENGINEER

JAMES HOLLINGSWORTH
PROJECT DESIGN ENGINEER

ROADWAY DESIGN ENGINEER

SIGNATURE: P.E.



INDEX OF SHEETS

SHEET NUMBER	SHEET
1	TITLE SHEET
1A	INDEX OF SHEETS AND STANDARD DRAWINGS
2B-1	CONCRETE WASHOUT STRUCTURE
2D-1 thru 2D-13	TRANSITION DETAILS

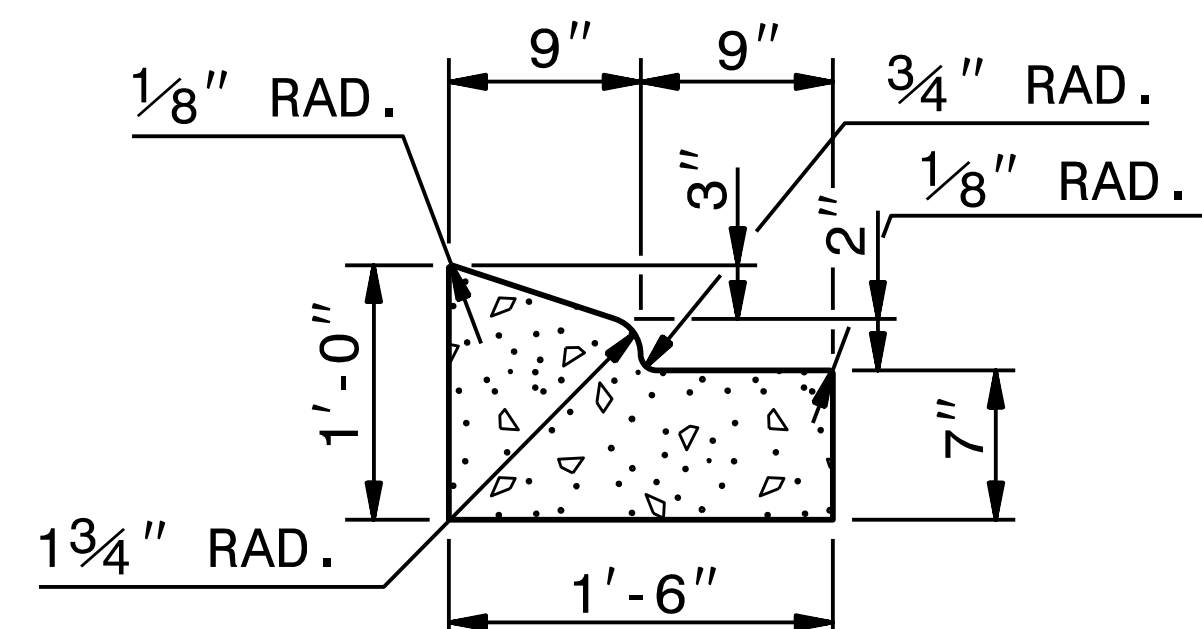
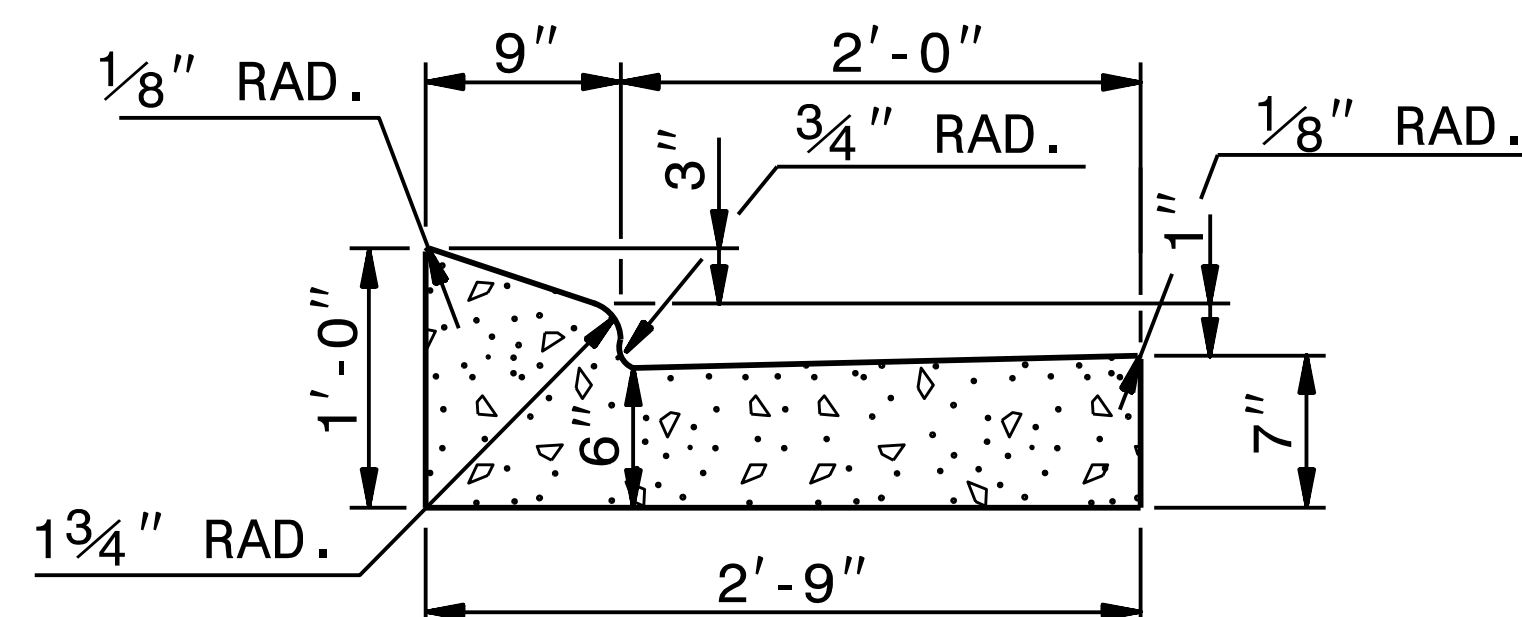
GENERAL NOTES: 2024 SPECIFICATIONS

DISPOSAL OF ALL CONCRETE MATERIALS NOT COVERED BY THE 2024 STANDARD SPECIFICATIONS FOR ROADS AND STRUCTURES, IS CONSIDERED INCIDENTAL TO ALL OTHER PAY ITEMS IN THE CONTRACT

2024 ROADWAY ENGLISH STANDARD DRAWINGS

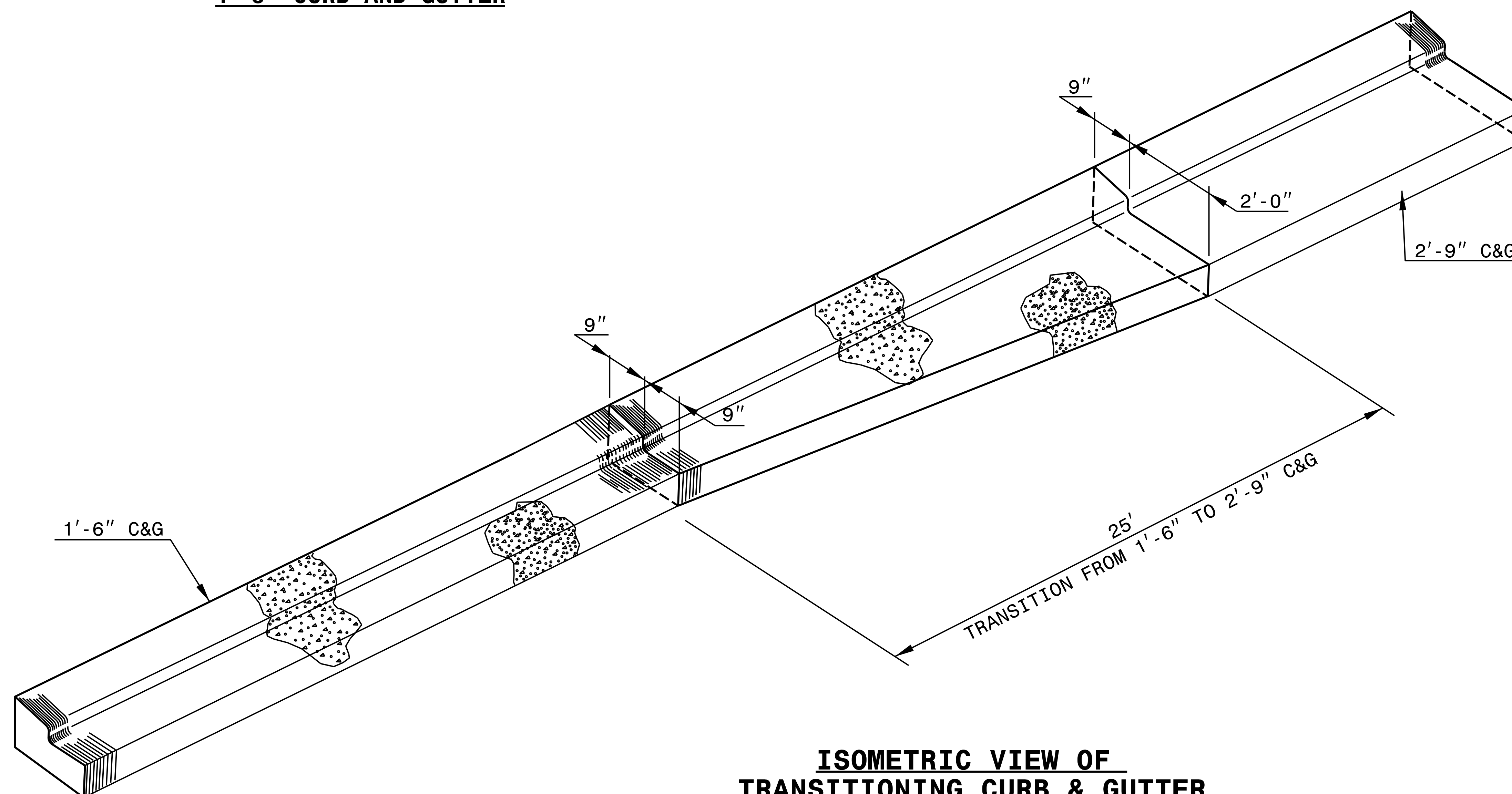
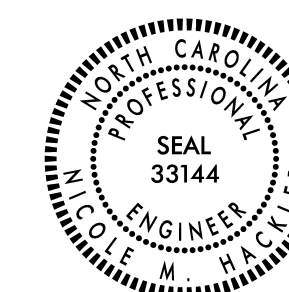
The following Roadway Standards as appear in "Roadway Standard Drawings" Highway Design Branch - N. C. Department of Transportation - Raleigh, N. C., Dated January 16, 2024 are applicable to this project and by reference hereby are considered a part of these plans:

STD.NO.	TITLE
DIVISION 3 - PIPE CULVERTS	
300.01	Method of Pipe Installation
310.10	Driveway Pipe Construction
DIVISION 8 - INCIDENTALS	
846.01	Concrete Curb, Gutter and Curb & Gutter
848.01	Concrete Sidewalk
848.02	Driveway Turnout - Radius Type
848.03	Driveway Turnout - Drop Curb Type
848.04	Street Turnout
848.06	Curb Ramp - Existing Curb & Gutter
850.01	Concrete Paved Ditches
852.01	Concrete Islands
852.02	Concrete Mountable Median - for Use with Rigid or Flexible Pavement
852.10	Median Construction - with Curb and Gutter
DIVISION 11 - WORK ZONE TRAFFIC CONTROL	
1101.01	WORK ZONE WARNING SIGNS
1101.02	TEMPORARY LANE CLOSURES
1101.03	TEMPORARY ROAD CLOSURES
1101.04	TEMPORARY SHOULDER CLOSURES
1101.05	WORK ZONE VEHICLE ACCESSES
1101.06	WARNING SIGNS FOR BLASTING ZONES
1101.11	TRAFFIC CONTROL DESIGN TABLES
1110.01	STATIONARY WORK ZONE SIGNS
1110.02	PORTABLE WORK ZONE SIGNS
1115.01	FLASHING ARROW BOARDS
1130.01	DRUMS
1135.01	CONES
1145.01	BARRICADES
1150.01	FLAGGING DEVICES
1160.01	TEMPORARY CRASH CUSHION
1165.01	TRUCK MOUNTED ATTENUATOR
1170.01	PORTABLE CONCRETE BARRIER
1180.01	SKINNY - DRUMS

**1'-6" CURB AND GUTTER****2'-9" CURB AND GUTTER**

NOTE: SEE STD. DWG. 846.01 FOR ADDITIONAL
CURB AND GUTTER INFORMATION.

SEE ROADWAY PLANS FOR LOCATION OF
CURB TRANSITION.

**ISOMETRIC VIEW OF
TRANSITIONING CURB & GUTTER**

DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED

**CONTRACT STANDARDS
AND DEVELOPMENT UNIT**
Office 919-707-6950 FAX 919-250-4119

**DETAIL OF 1'-6"
TO 2'-9" CURB & GUTTER
TRANSITION SECTION**

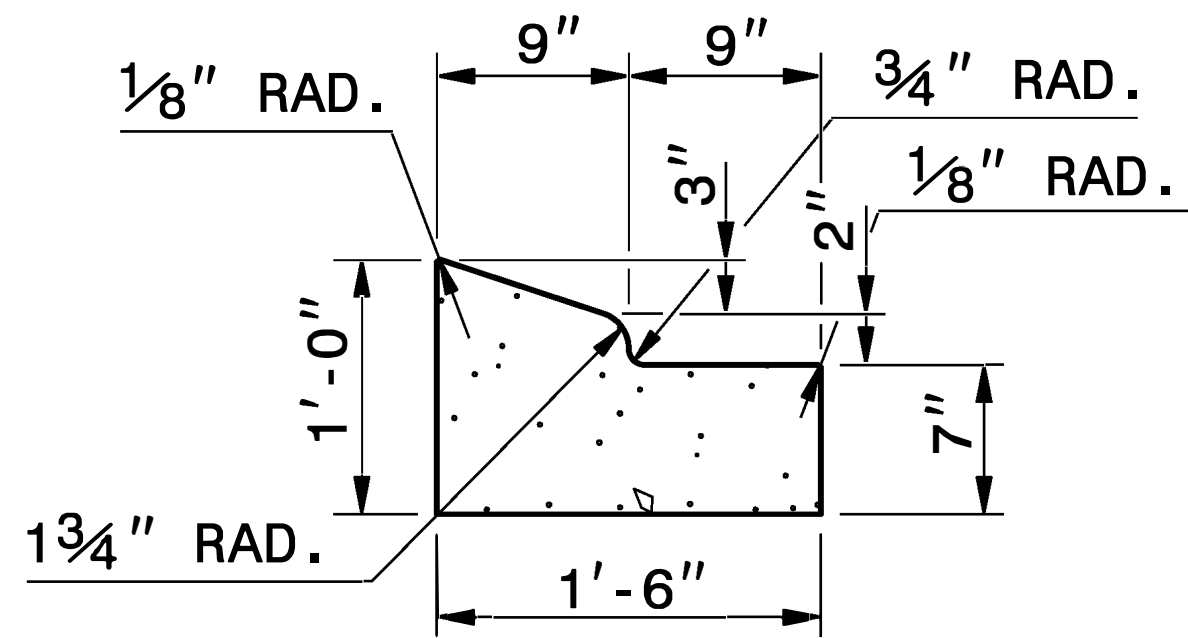
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MODIFIED BY: T.S.SPELL DATE: JAN. 23, 2007
CHECKED BY: DATE:
FILE SPEC.: DS174:/usr/details/stand/cotransit.dgn



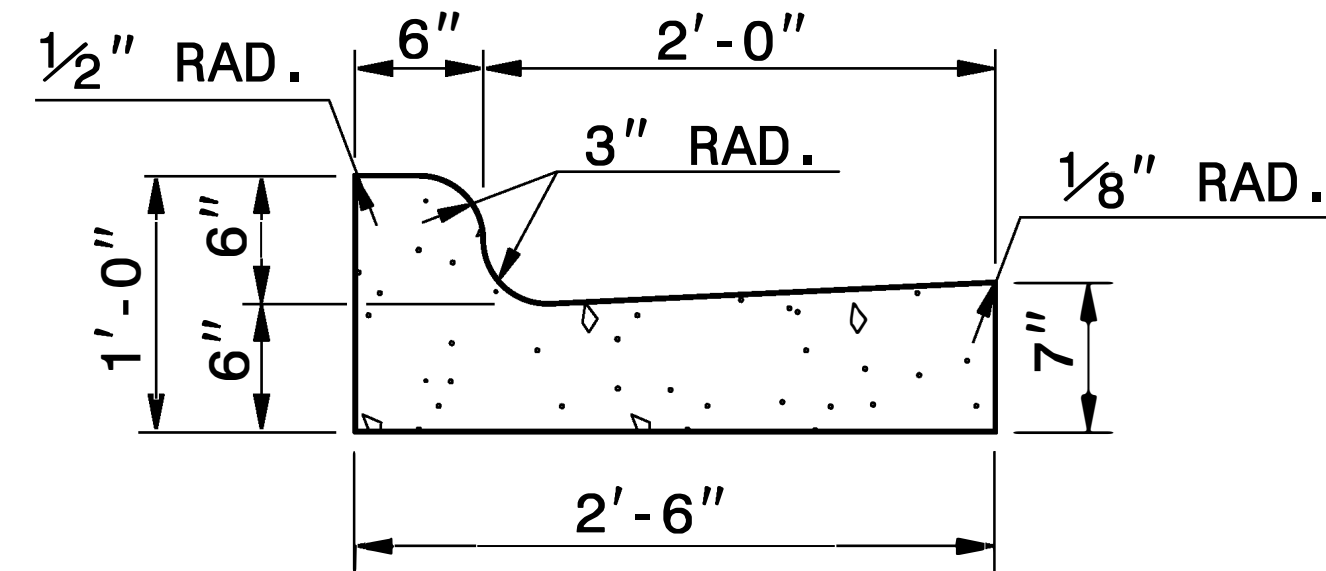
SEE ROADWAY PLANS FOR LOCATION OF CURB TRANSITION.



ORIGINAL BY: T.S.SPELL DATE: NOV. 26, 2001
MODIFIED BY: T.S.SPELL DATE: JAN. 23, 2007
CHECKED BY: _____ DATE: _____
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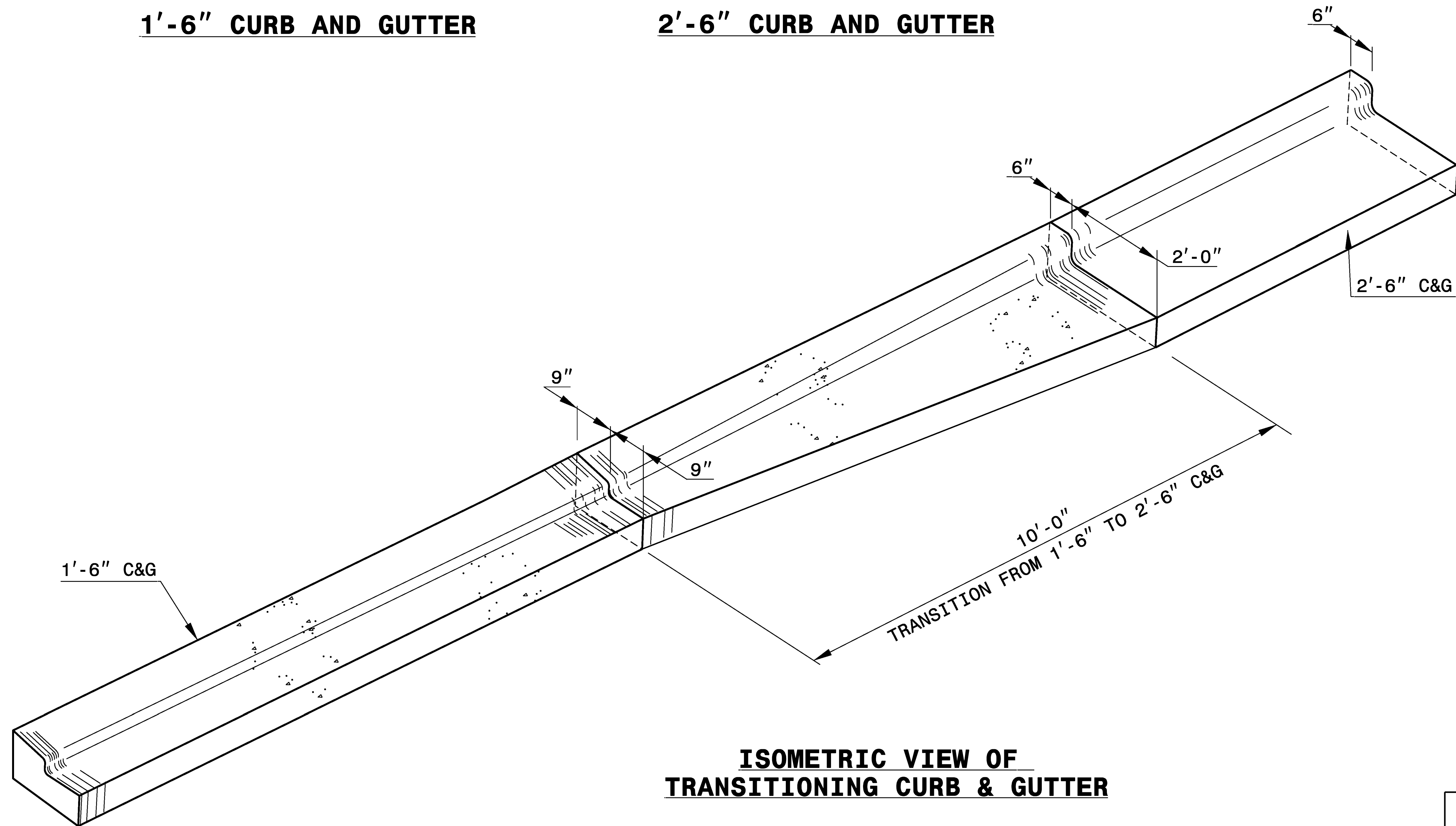
1'-6" CURB AND GUTTER



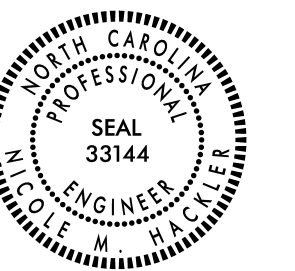
2'-6" CURB AND GUTTER

NOTE: SEE STD. DWG. 846.01 FOR ADDITIONAL CURB AND GUTTER INFORMATION.

SEE ROADWAY PLANS FOR LOCATION OF CURB TRANSITION.



**ISOMETRIC VIEW OF
TRANSITIONING CURB & GUTTER**



DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	
CONTRACT STANDARDS AND DEVELOPMENT UNIT	
Office 919-707-6950	FAX 919-250-4119
DETAIL OF 1'-6" TO 2'-6" CURB & GUTTER TRANSITION SECTION	
ORIGINAL BY: T.S. SPELL	DATE: MARCH 3, 2000
MODIFIED BY:	DATE:
CHECKED BY:	DATE:
FILE SPEC.: DS174:/usr/details/stand/cgtransit.dgn	

Technical drawing of a concrete curb cross-section. The drawing shows a curb with a total width of 2'-9" and a total height of 12". The curb is composed of a base layer (6" thick) and a top layer (6" thick). The top layer has a sloped top surface with a 13 3/4" radius and a 3/4" radius. The base layer has a sloped bottom surface with a 1/8" radius. The curb is reinforced with 1/8" diameter bars. The drawing also shows a side view of the curb with a 4" height and a 1" width. The curb is shown in cross-section with reinforcement details.

[illegible]

ISOMETRIC VIEW OF TRANSITIONING CURB & GUTTER



**CONTRACT STANDARDS
AND DEVELOPMENT UNIT**
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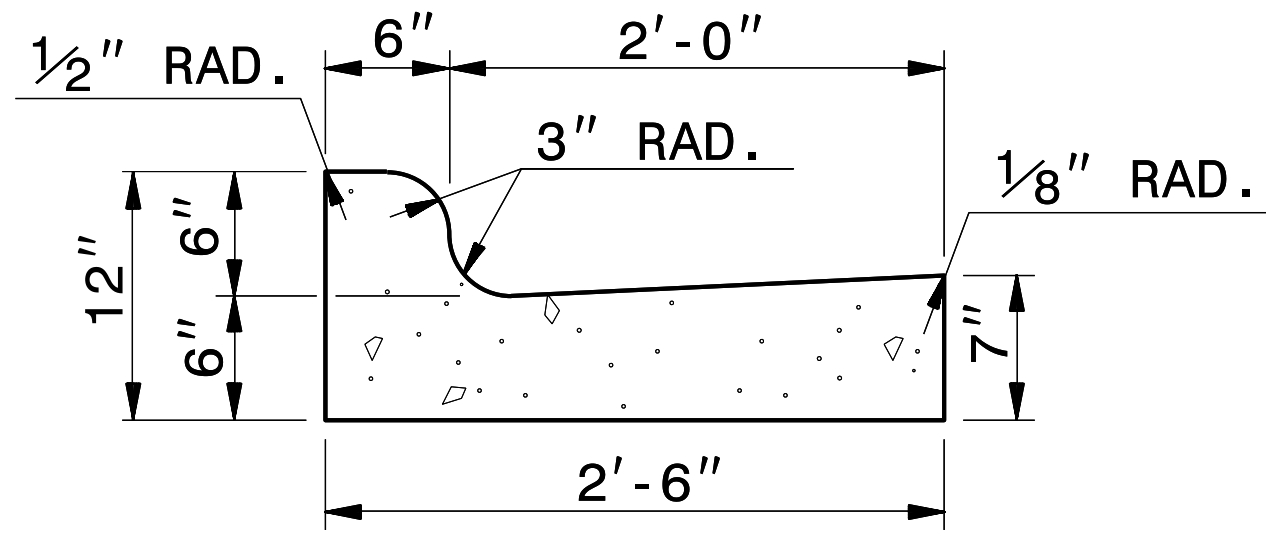
DETAIL OF 2'-9"
TO 2'-6" CURB & GUTTER
TRANSITION SECTION

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MODIFIED BY: _____	DATE: _____
CHECKED BY: _____	DATE: _____
FILE SPEC.: DS174:/usr/details/stand/cgtransit.dgn	

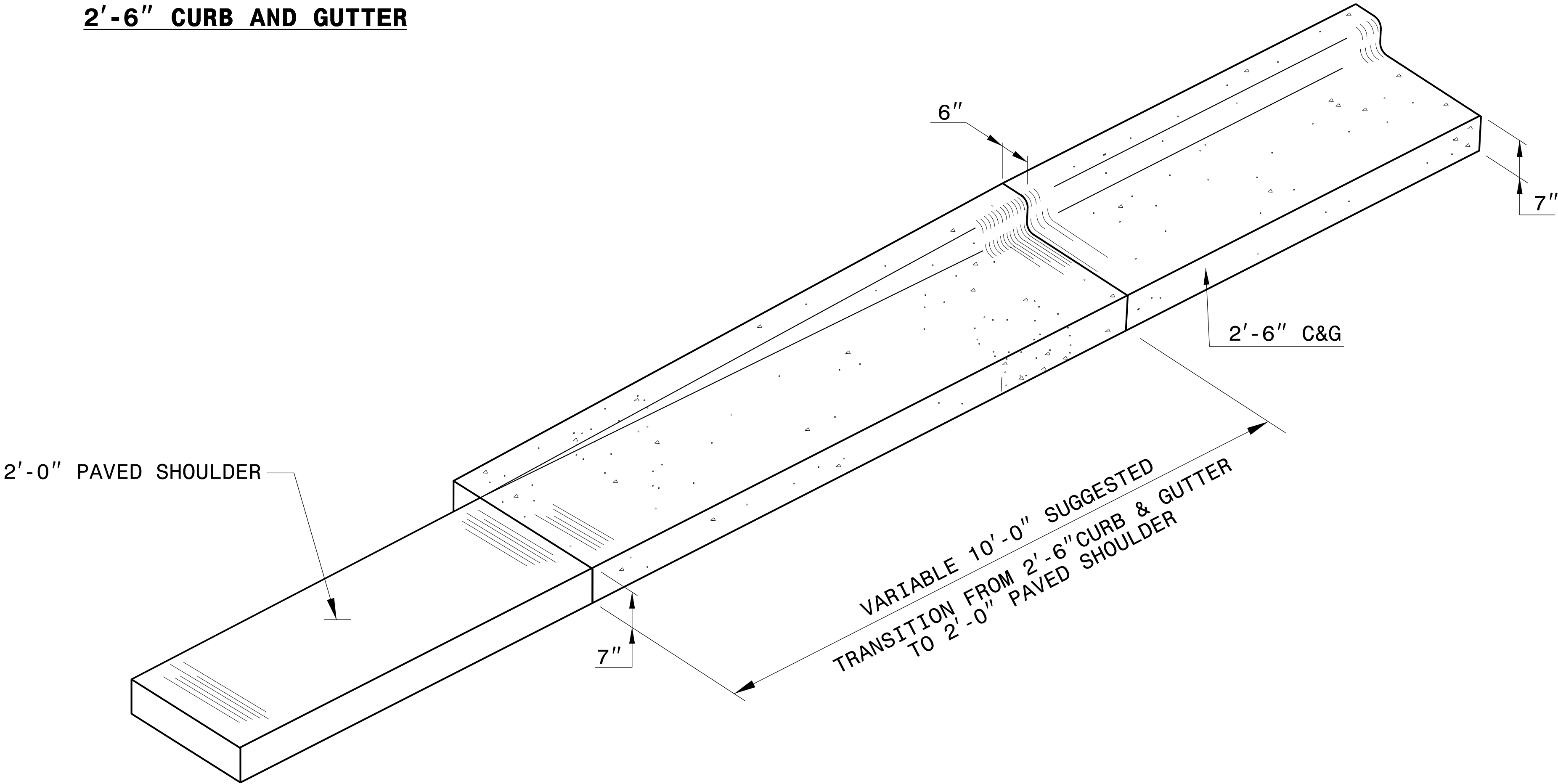
5/14/99

PROJECT REFERENCE NO.	SHEET NO.

*NOTE: SEE STD. DWG. 846.01
FOR GENERAL NOTES



2'-6" CURB AND GUTTER

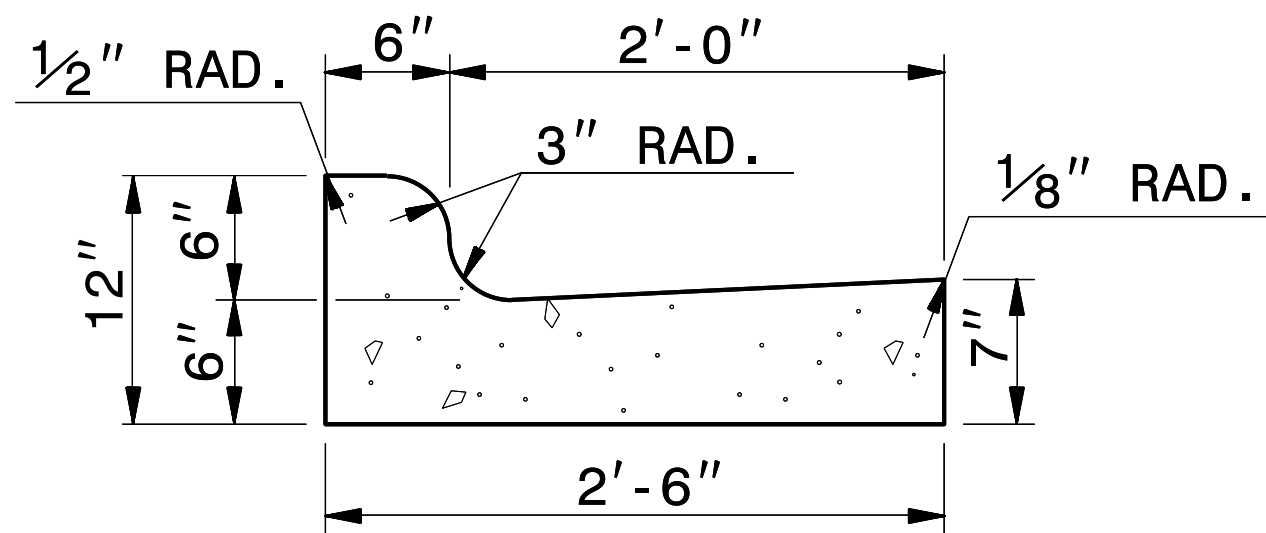


ISOMETRIC VIEW OF TRANSITION



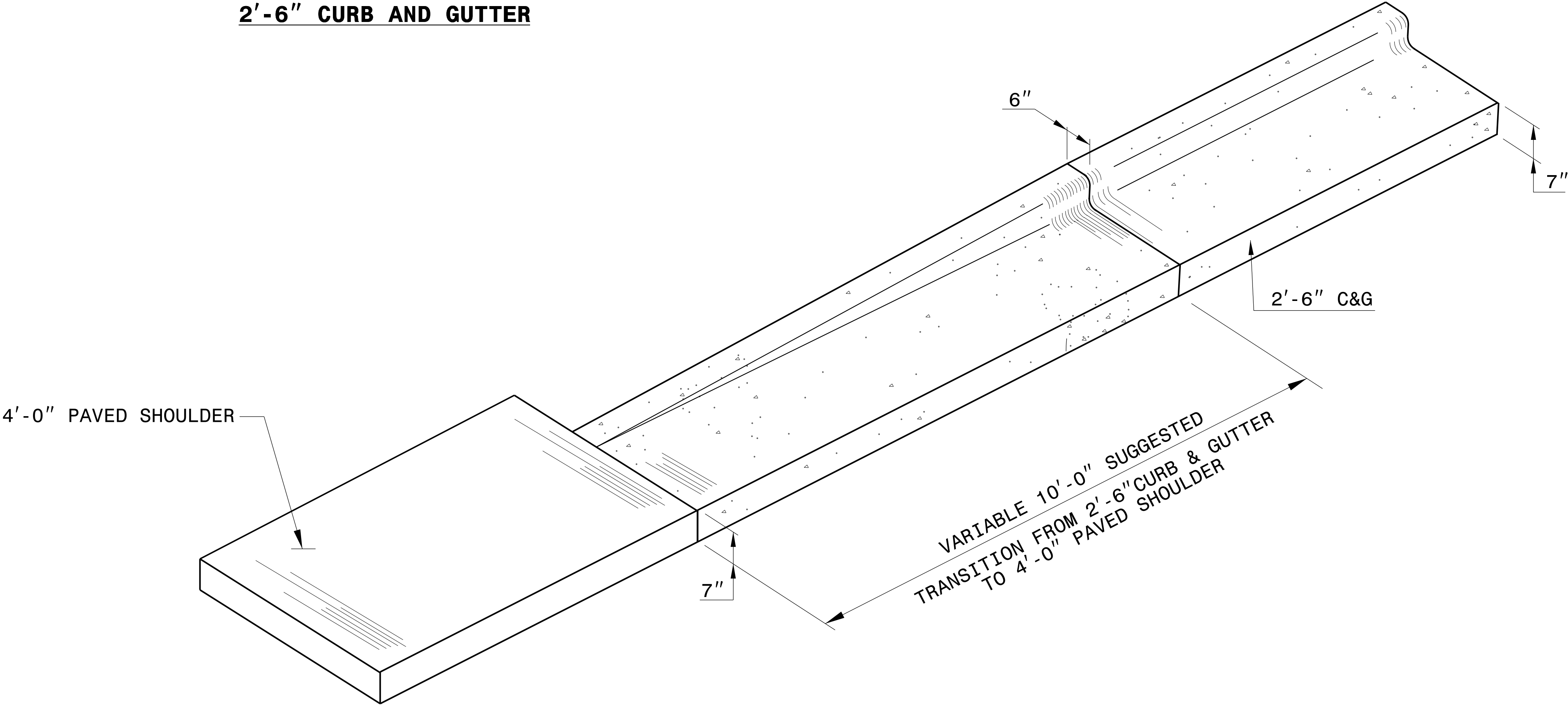
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	
CONTRACT STANDARDS AND DEVELOPMENT UNIT	
Office 919-707-6950	FAX 919-250-4119
DETAIL OF 10' TRANSITION FROM 2'-6" CURB & GUTTER TO 2'-0" PAVED SHOULDER	
ORIGINAL BY: _____	DATE: _____
MODIFIED BY: <u>rnbritt</u>	DATE: <u>04-13-2016</u>
CHECKED BY: _____	DATE: _____
FILE SPEC: <u>details/nbritt/english/misc/c&g transition sections.dgn</u>	

I:\MAP-2020\1630
S:\Contracts\Special Details\english\misc\c&g transition sections.dgn
J.Overton AT CSD-320965



2'-6" CURB AND GUTTER

*NOTE: SEE STD. DWG. 846.01
FOR GENERAL NOTES



ISOMETRIC VIEW OF TRANSITION

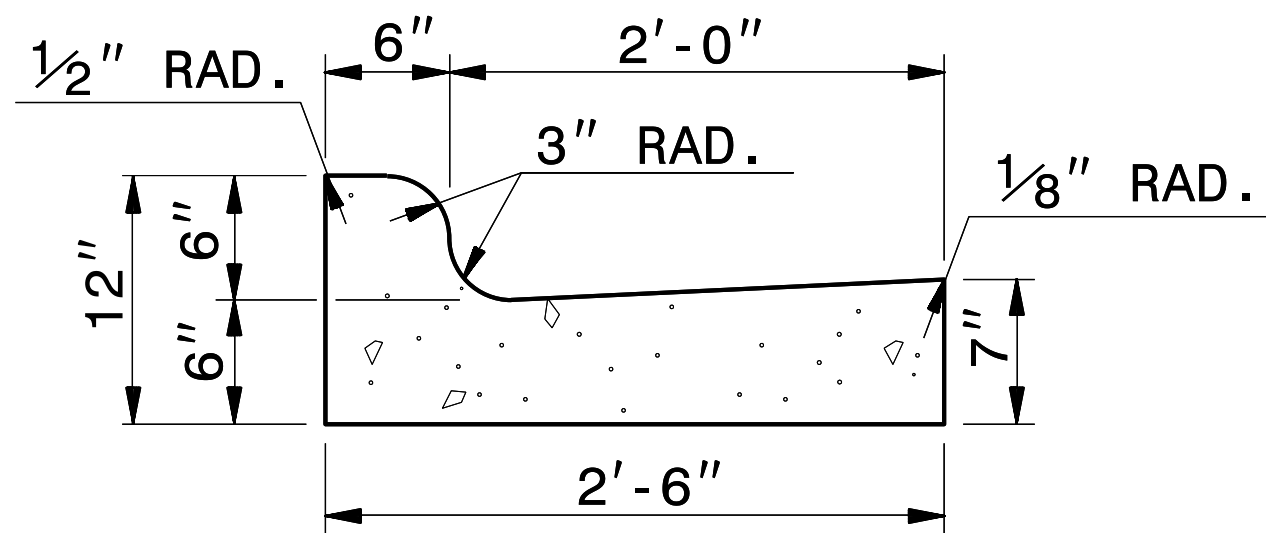


DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED

**CONTRACT STANDARDS
AND DEVELOPMENT UNIT**
Office 919-707-6950 FAX 919-250-4119

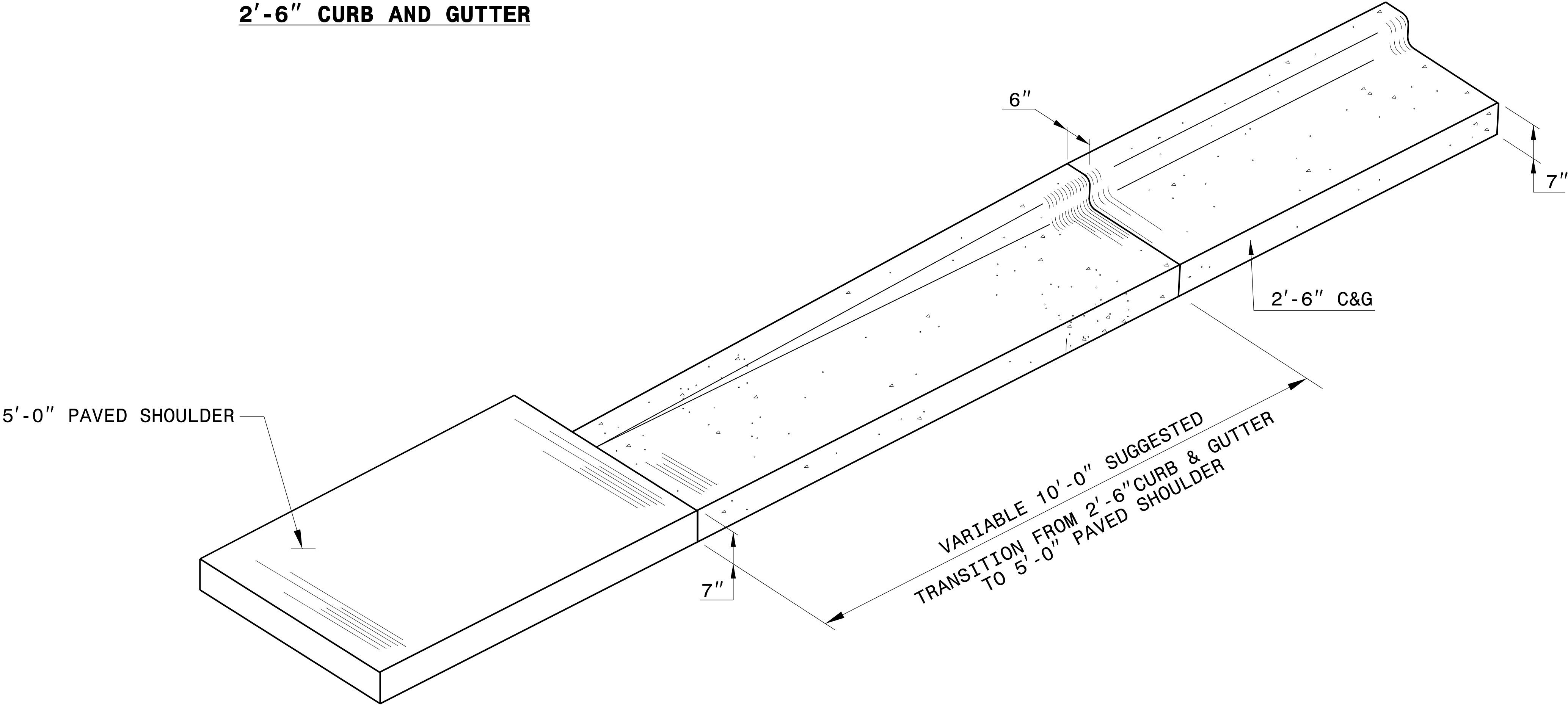
**DETAIL OF 10' TRANSITION
FROM 2'-6" CURB & GUTTER
TO 4'-0" PAVED SHOULDER**

ORIGINAL BY: _____ DATE: _____
MODIFIED BY: rnbritt DATE: 04-13-2016
CHECKED BY: _____ DATE: _____
FILE SPEC: details/nbritt/english/misc/c&g transition sections.dgn



2'-6" CURB AND GUTTER

*NOTE: SEE STD. DWG. 846.01
FOR GENERAL NOTES



ISOMETRIC VIEW OF TRANSITION

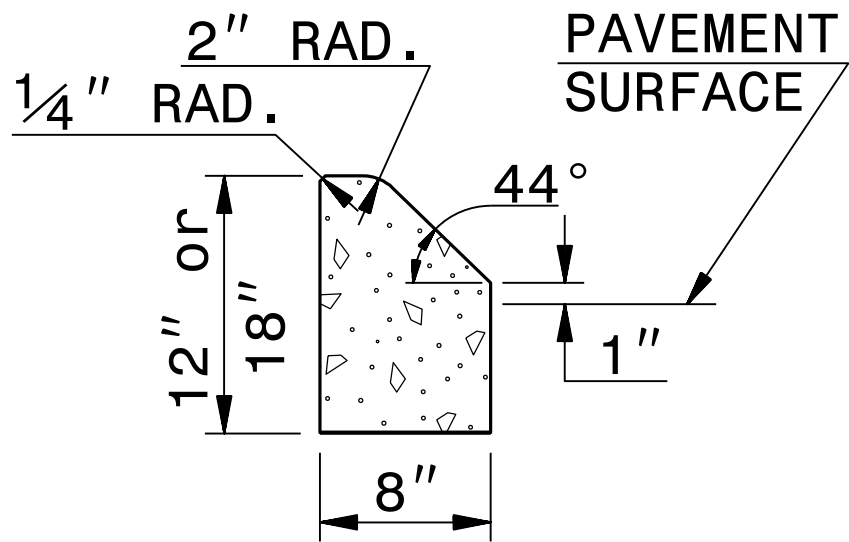


DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	
CONTRACT STANDARDS AND DEVELOPMENT UNIT	
Office 919-707-6950	FAX 919-250-4119
DETAIL OF 10' TRANSITION FROM 2'-6" CURB & GUTTER TO 5'-0" PAVED SHOULDER	
ORIGINAL BY: _____	DATE: _____
MODIFIED BY: <u>rnbritt</u>	DATE: <u>04-13-2016</u>
CHECKED BY: _____	DATE: _____
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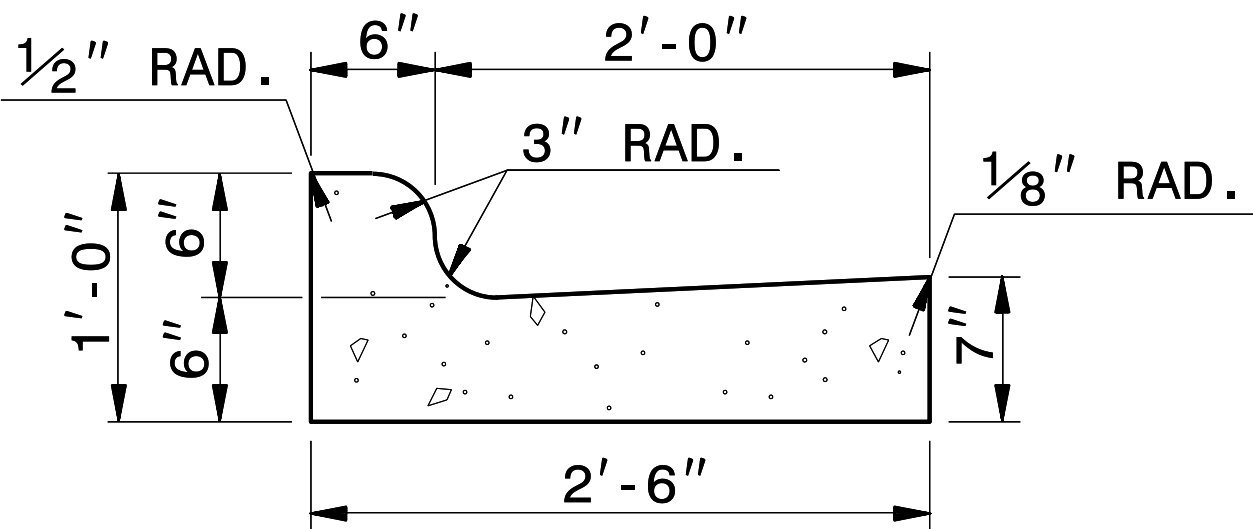
5/14/99

PROJECT REFERENCE NO.	SHEET NO.

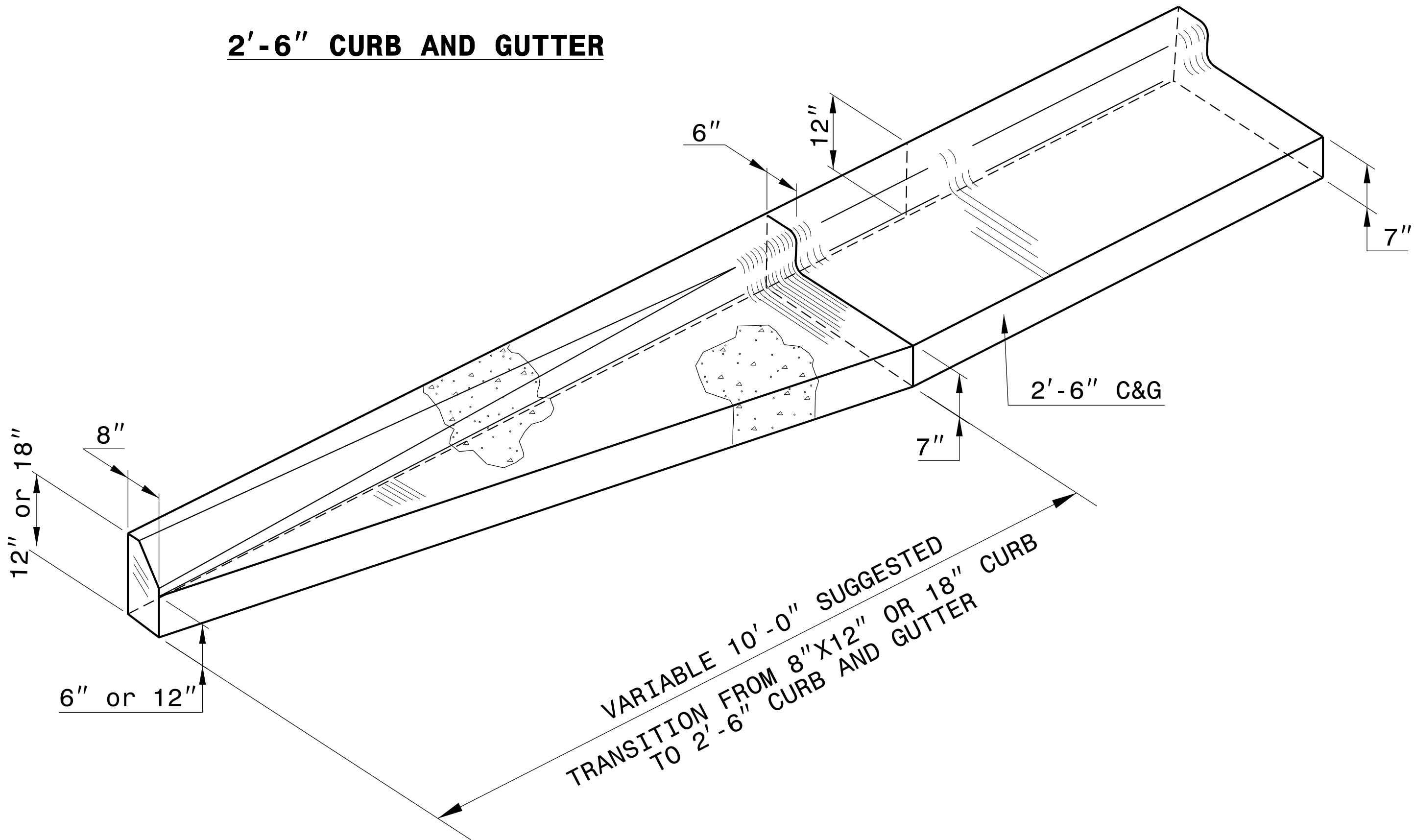
*NOTE: SEE STD. DWG. 846.01
FOR GENERAL NOTES



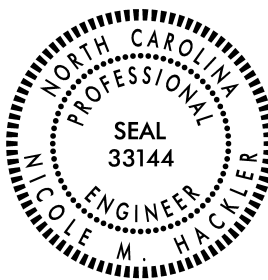
8" X 12" or 18" CONCRETE CURB



2'-6" CURB AND GUTTER



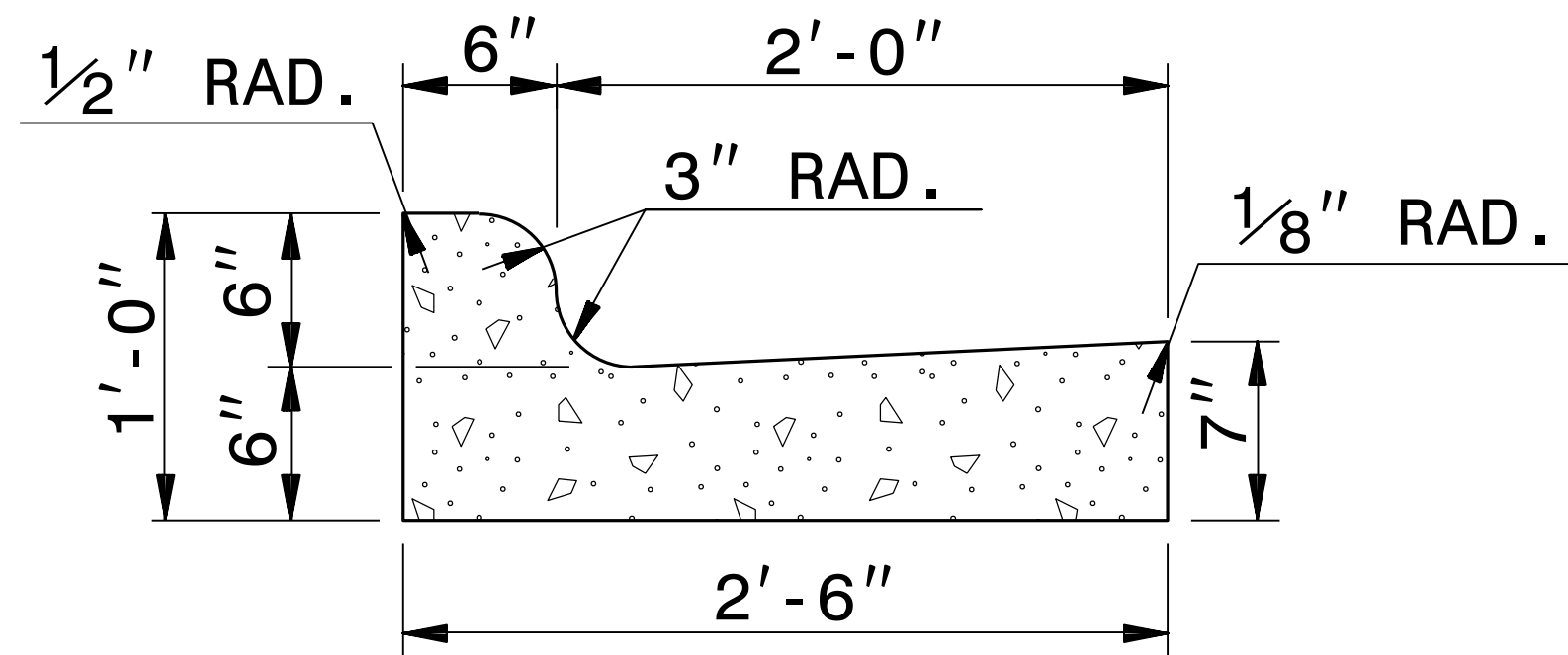
ISOMETRIC VIEW OF TRANSITION



DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED

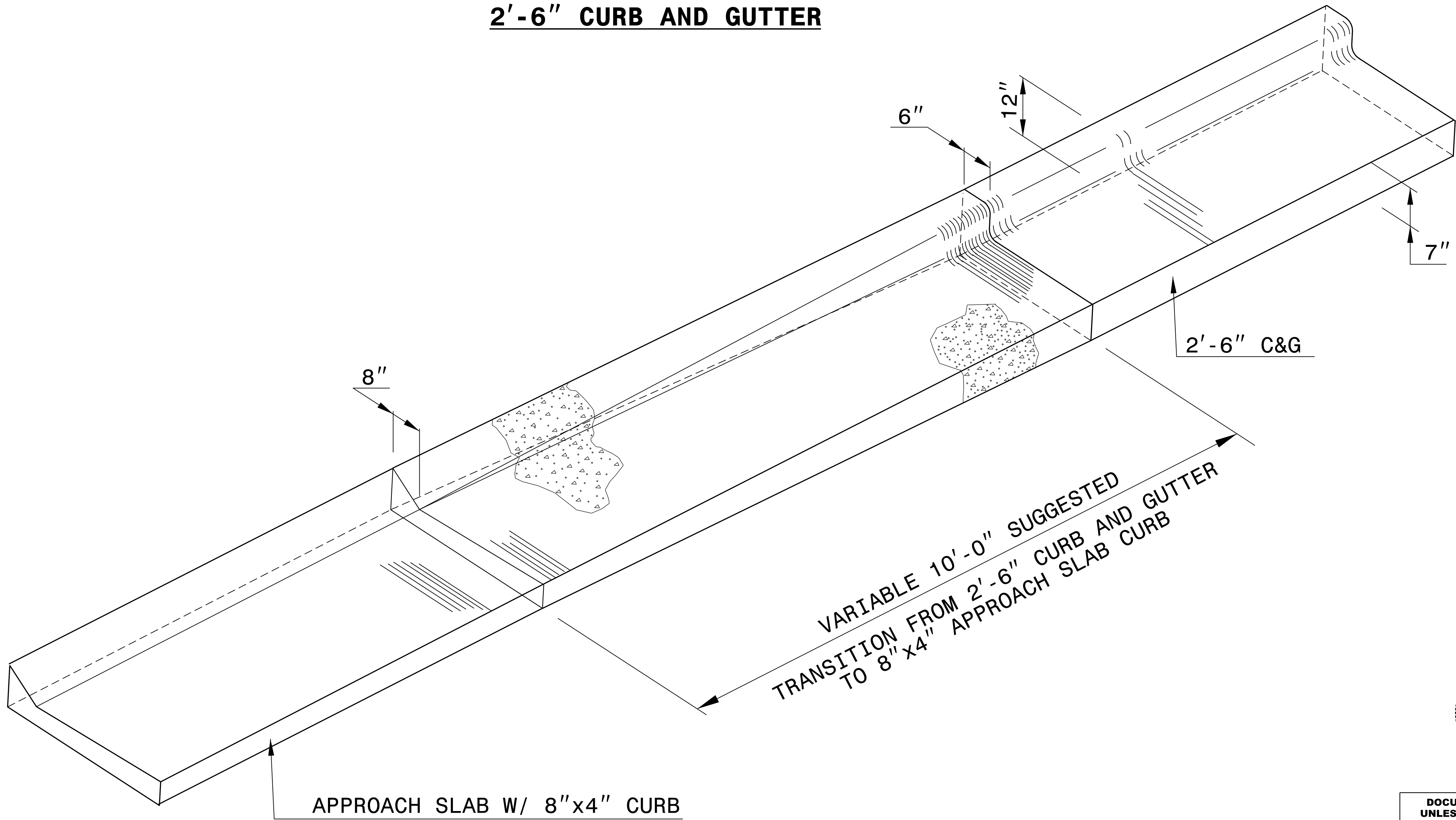
CONTRACT STANDARDS AND DEVELOPMENT UNIT	
Office 919-707-6950	FAX 919-250-4119
DETAIL OF 8"x 12" or 18" CURB TO 2'-6" CURB & GUTTER TRANSITION SECTION	
ORIGINAL BY: _____	DATE: _____
MODIFIED BY: K. KEMPF	DATE: 4-05-18
CHECKED BY: _____	DATE: _____
FILE SPEC.: details/ericiward/usr/details/stand/cgtransit.dgn	

I3-MAR-2019 09:50
S:\Contracts\Contractors\Special Details\ericiward\usr\details\stand\c&g transition sections.dgn
J.Hoverton AT CSD-292595



*NOTE: SEE STD. DWG. 846.01
FOR GENERAL NOTES

2'-6" CURB AND GUTTER



ISOMETRIC VIEW OF TRANSITION



DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED

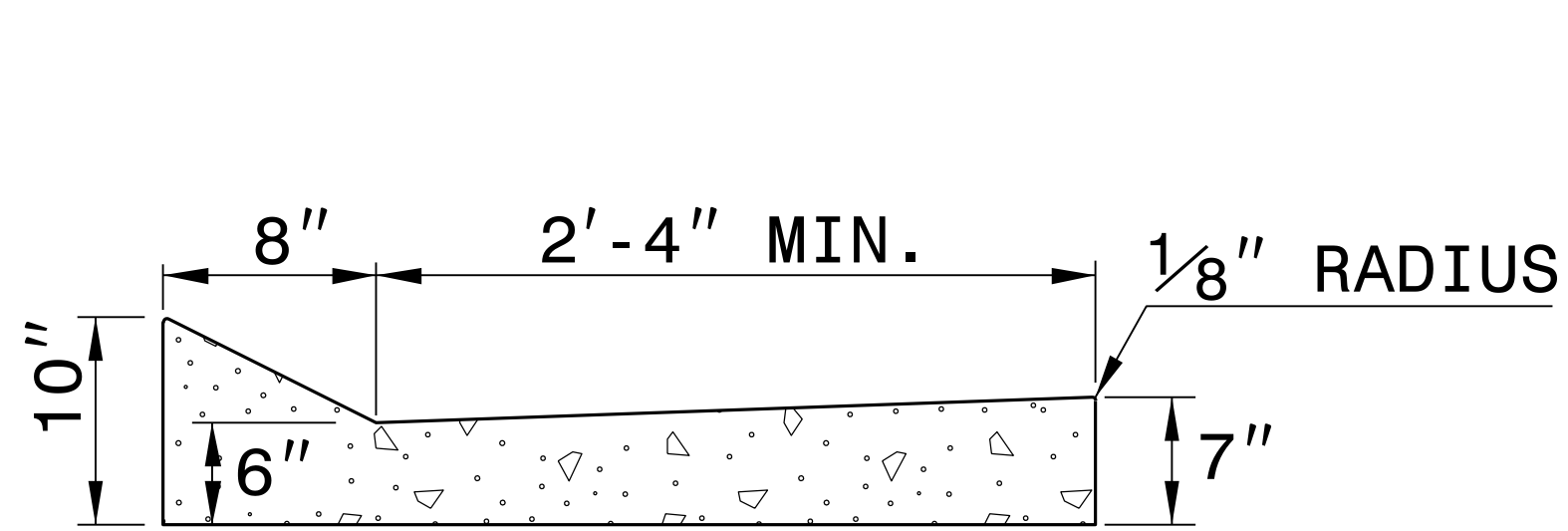
CONTRACT STANDARDS AND DEVELOPMENT UNIT	
Office 919-707-6950	FAX 919-250-4119
DETAIL OF 2'-6" CURB & GUTTER TO 8"x4" APPROACH SLAB CURB TRANSITION SECTION	
ORIGINAL BY: E.E. WARD	DATE: 5-29-02
MODIFIED BY:	DATE:
CHECKED BY:	DATE:
FILE SPEC.: /usr/details/stand/cgtransit.dgn	



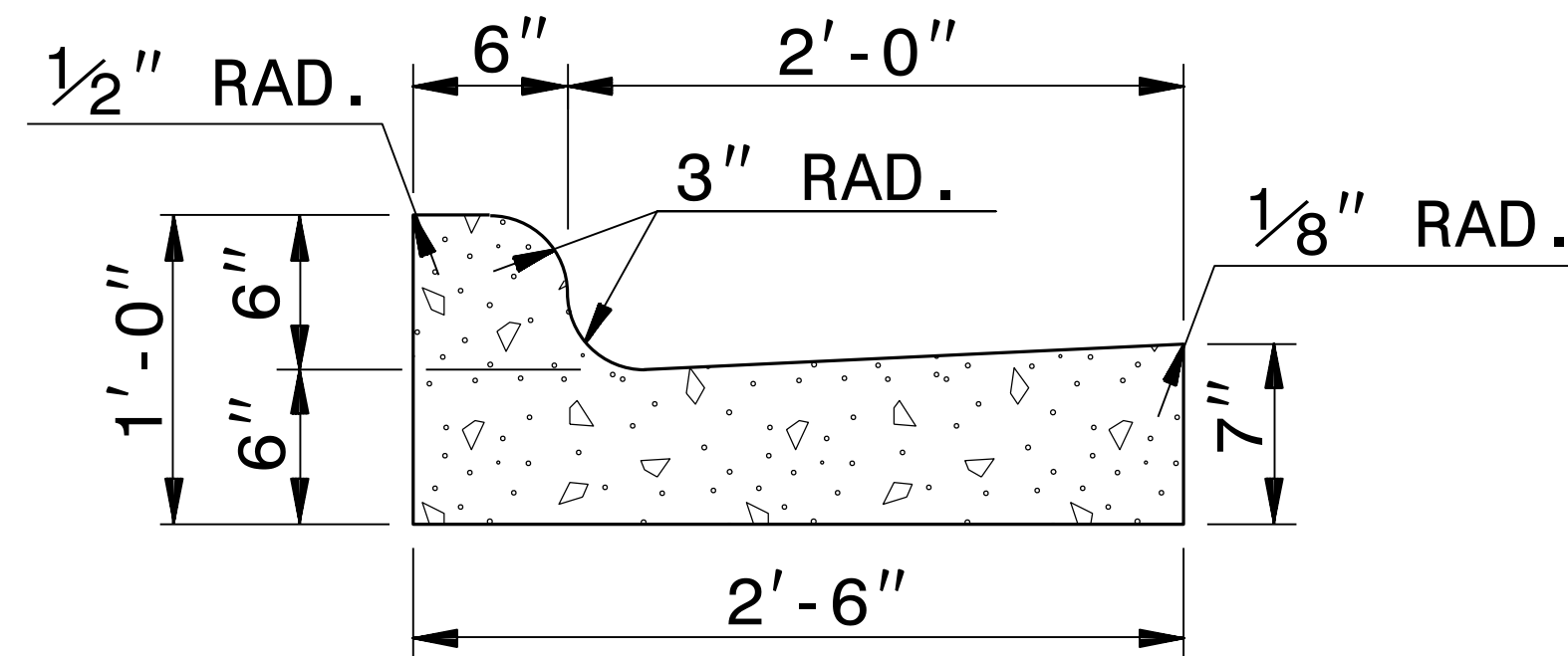
SEE ROADWAY PLANS FOR LOCATION OF CURB TRANSITION.



ORIGINAL BY:	<u>T.S.Spell</u>	DATE:	<u>8-13-02</u>
MODIFIED BY:	_____	DATE:	_____
CHECKED BY:	_____	DATE:	_____
FILE SPEC.:	<u>w:usr/details/stand/cgtransit.dgn</u>		

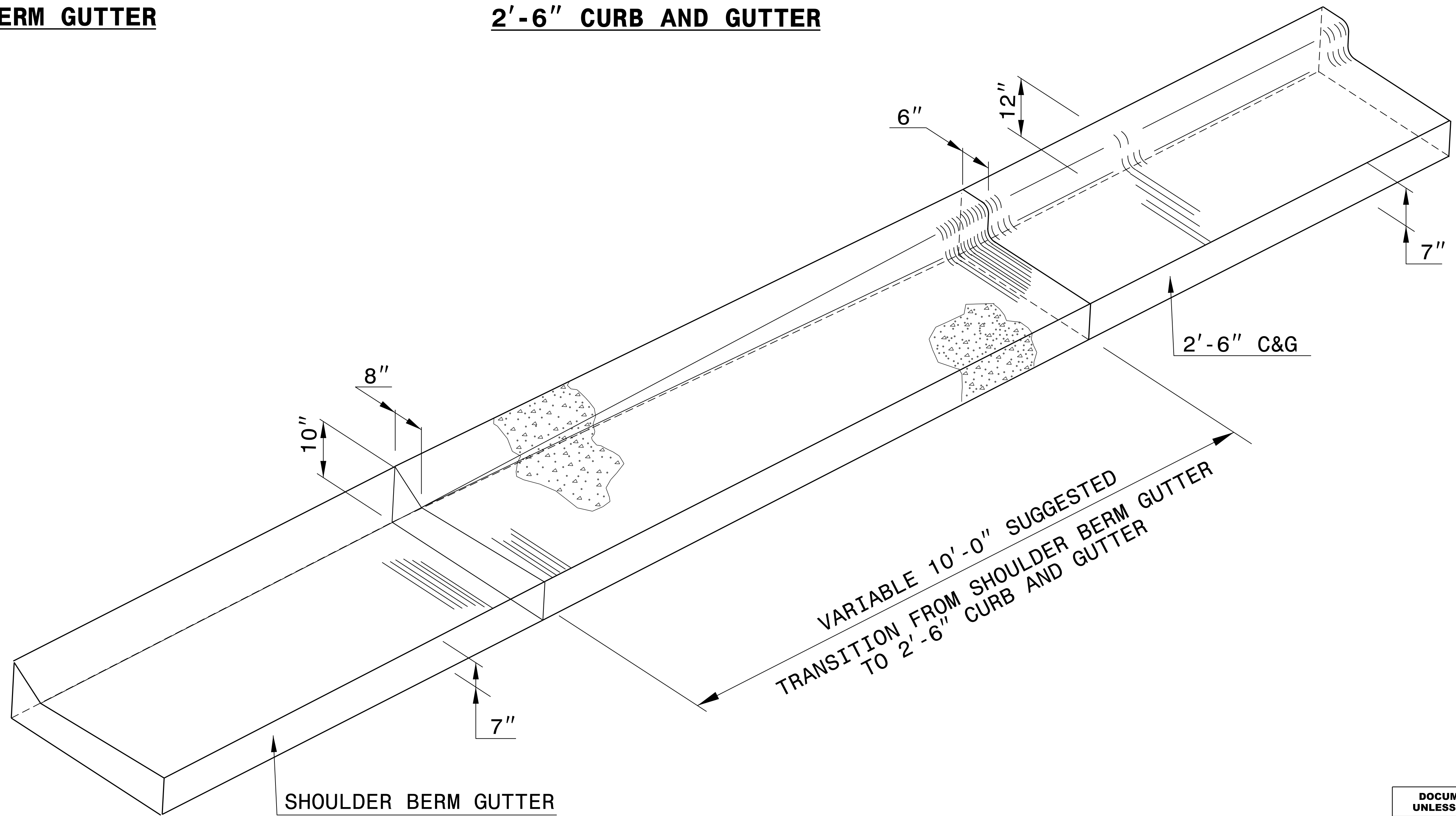


SHOULDER BERM GUTTER



2'-6" CURB AND GUTTER

*NOTE: SEE STD. DWG. 846.01
FOR GENERAL NOTES



ISOMETRIC VIEW OF TRANSITION



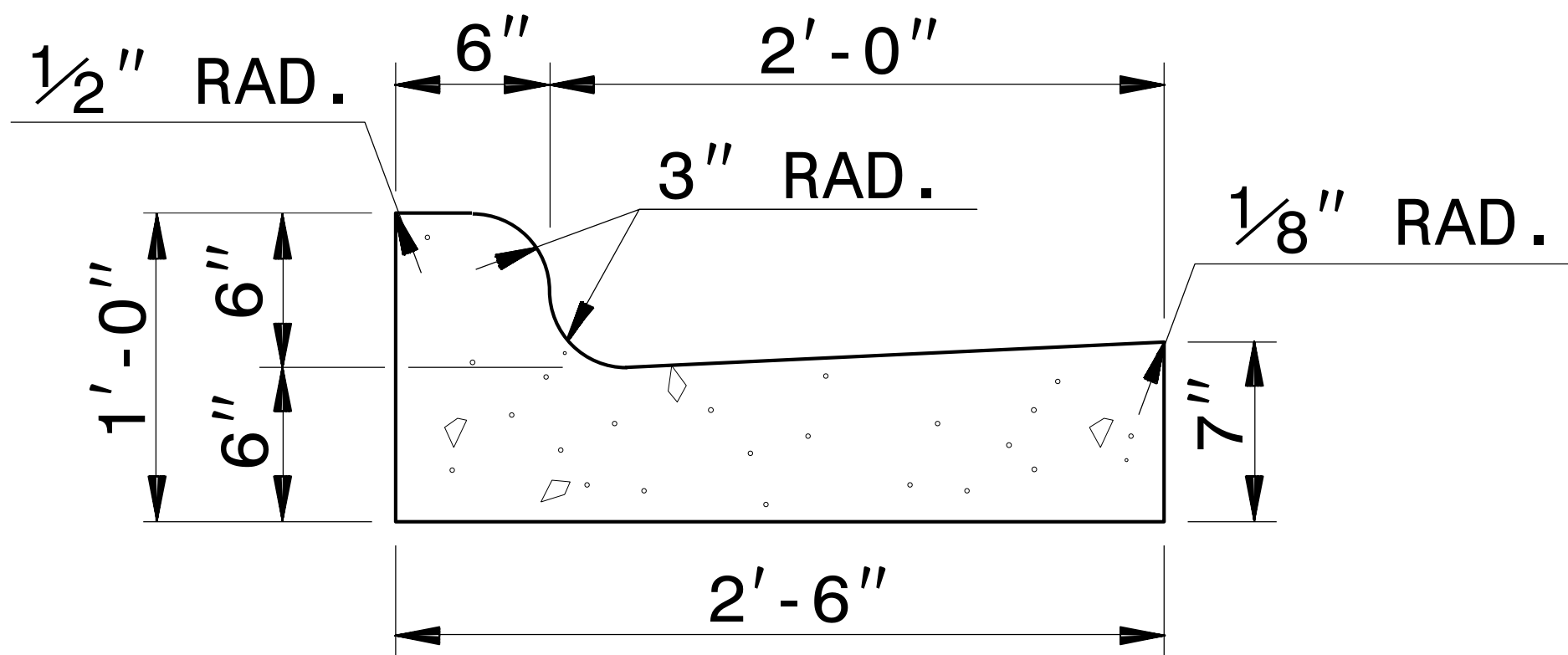
DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED

**CONTRACT STANDARDS
AND DEVELOPMENT UNIT**
Office 919-707-6950 FAX 919-250-4119

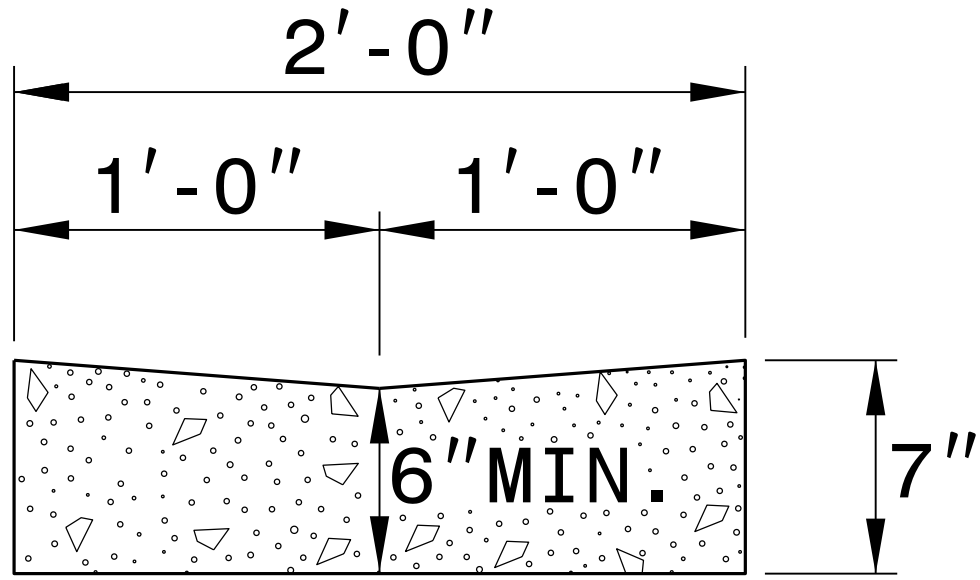
**DETAIL OF SHOULDER BERM GUTTER
TO 2'-6" CURB & GUTTER
TRANSITION SECTION**

ORIGINAL BY: E.E. WARD	DATE: 5-29-02
MODIFIED BY:	DATE:
CHECKED BY:	DATE:
FILE SPEC.: /usr/details/stand/cgtransit.dgn	

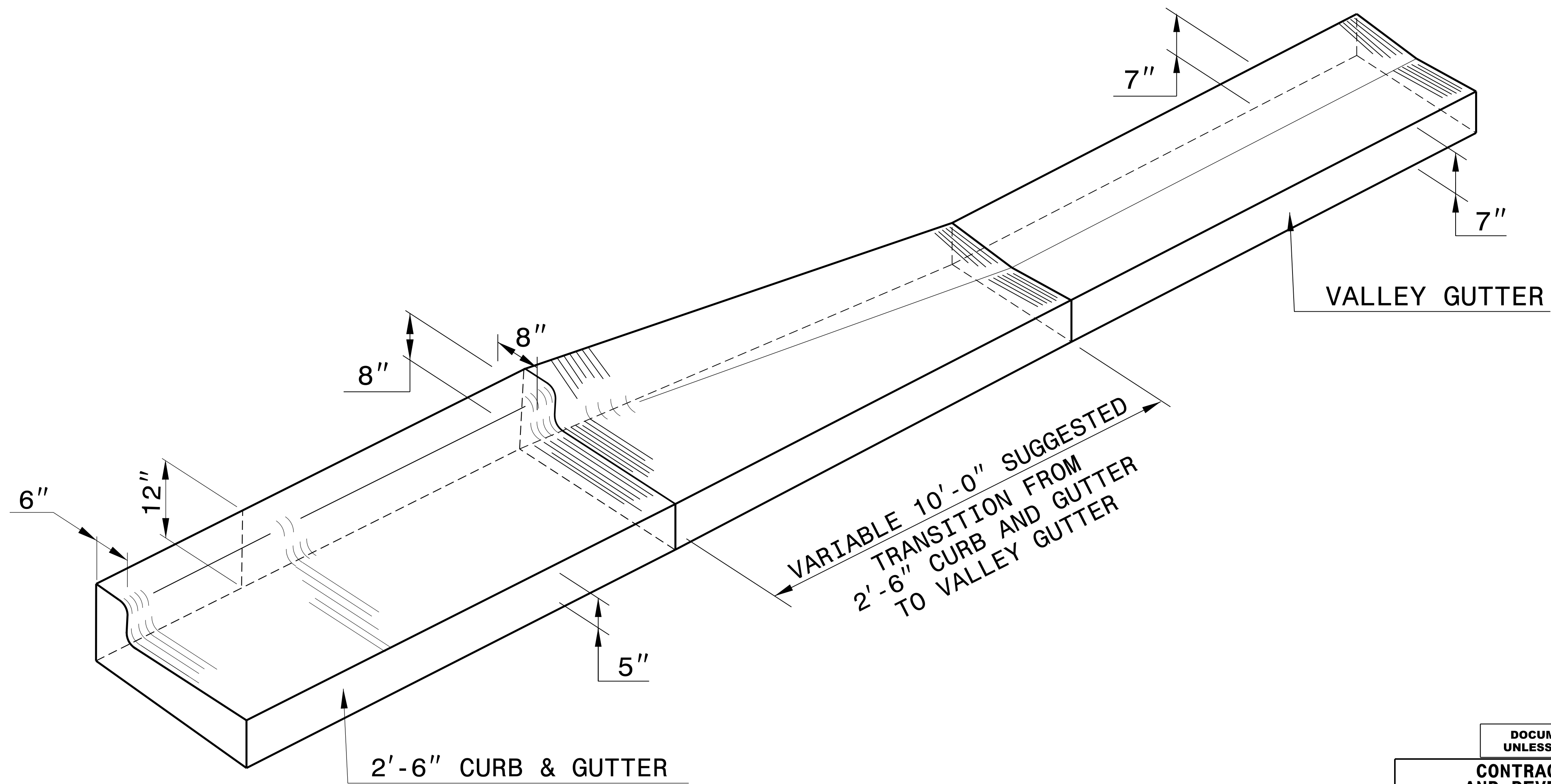
*NOTE: SEE STD. DWG. 846.01
FOR GENERAL NOTES



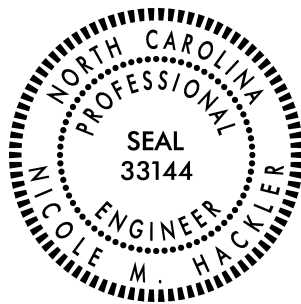
2'-6" CURB AND GUTTER



VALLEY GUTTER

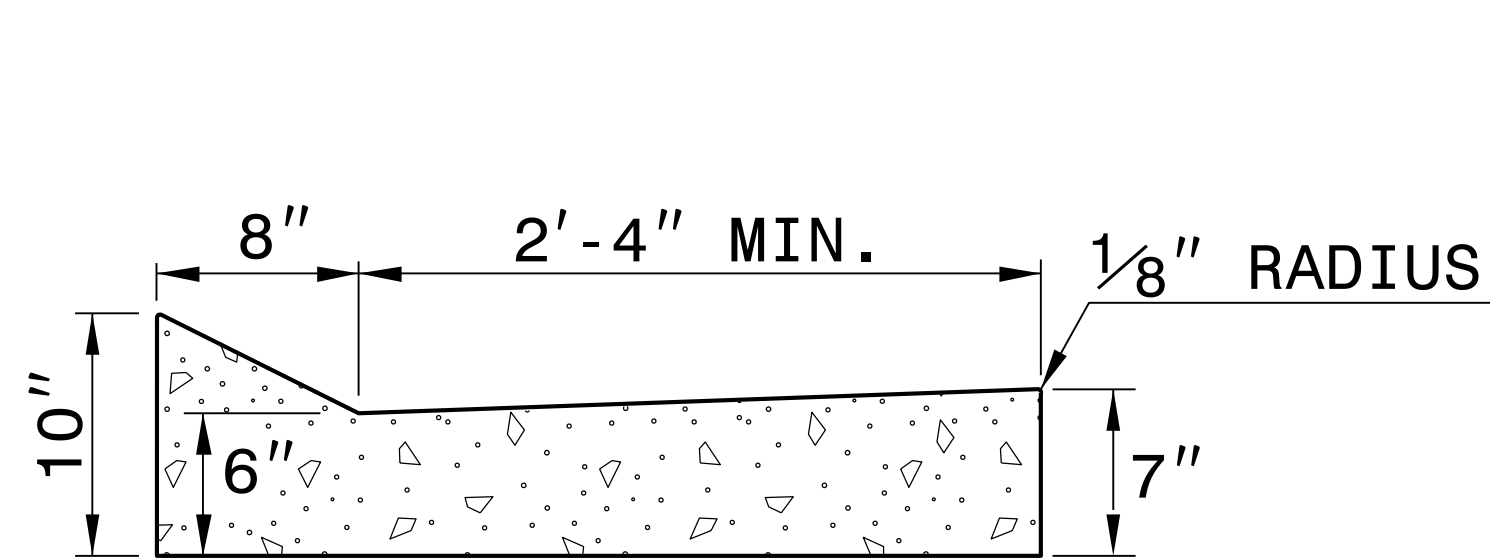


ISOMETRIC VIEW OF TRANSITION

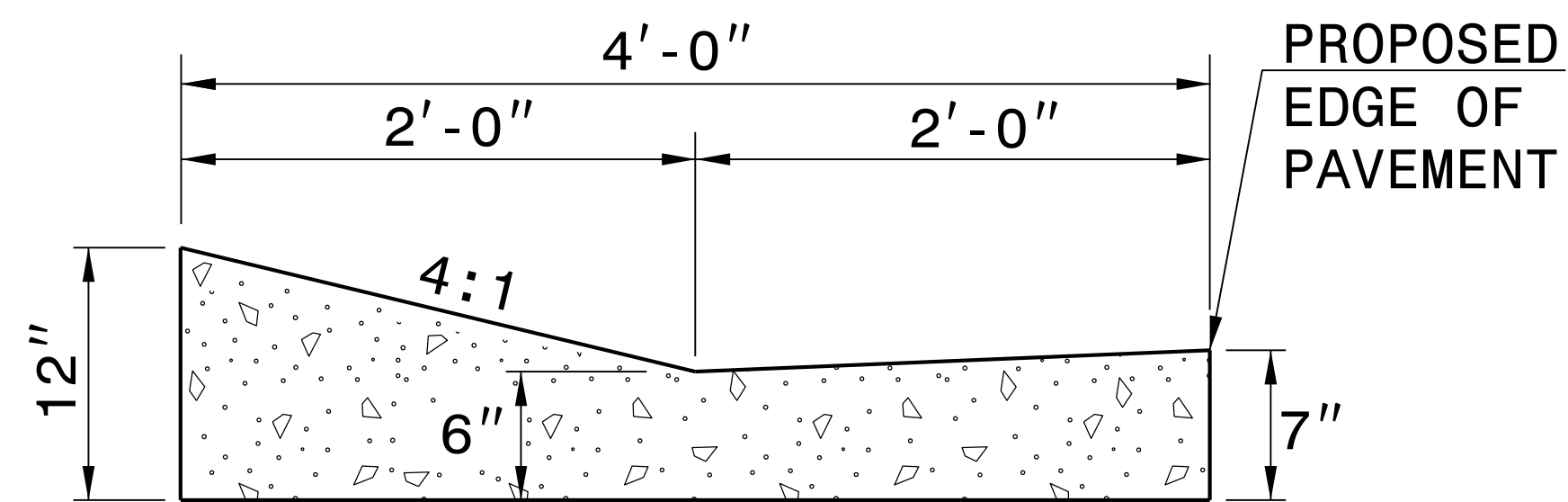


DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED

CONTRACT STANDARDS AND DEVELOPMENT UNIT	
Office 919-707-6950	FAX 919-250-4119
TRANSITION FROM 2'-6" CURB AND GUTTER TO VALLEY GUTTER	
ORIGINAL BY: T.S.SPELL	DATE: FEB.4.2009
MODIFIED BY:	DATE:
CHECKED BY:	DATE:
FILE SPEC.: w:usr/details/stand/cgtransit.dgn	



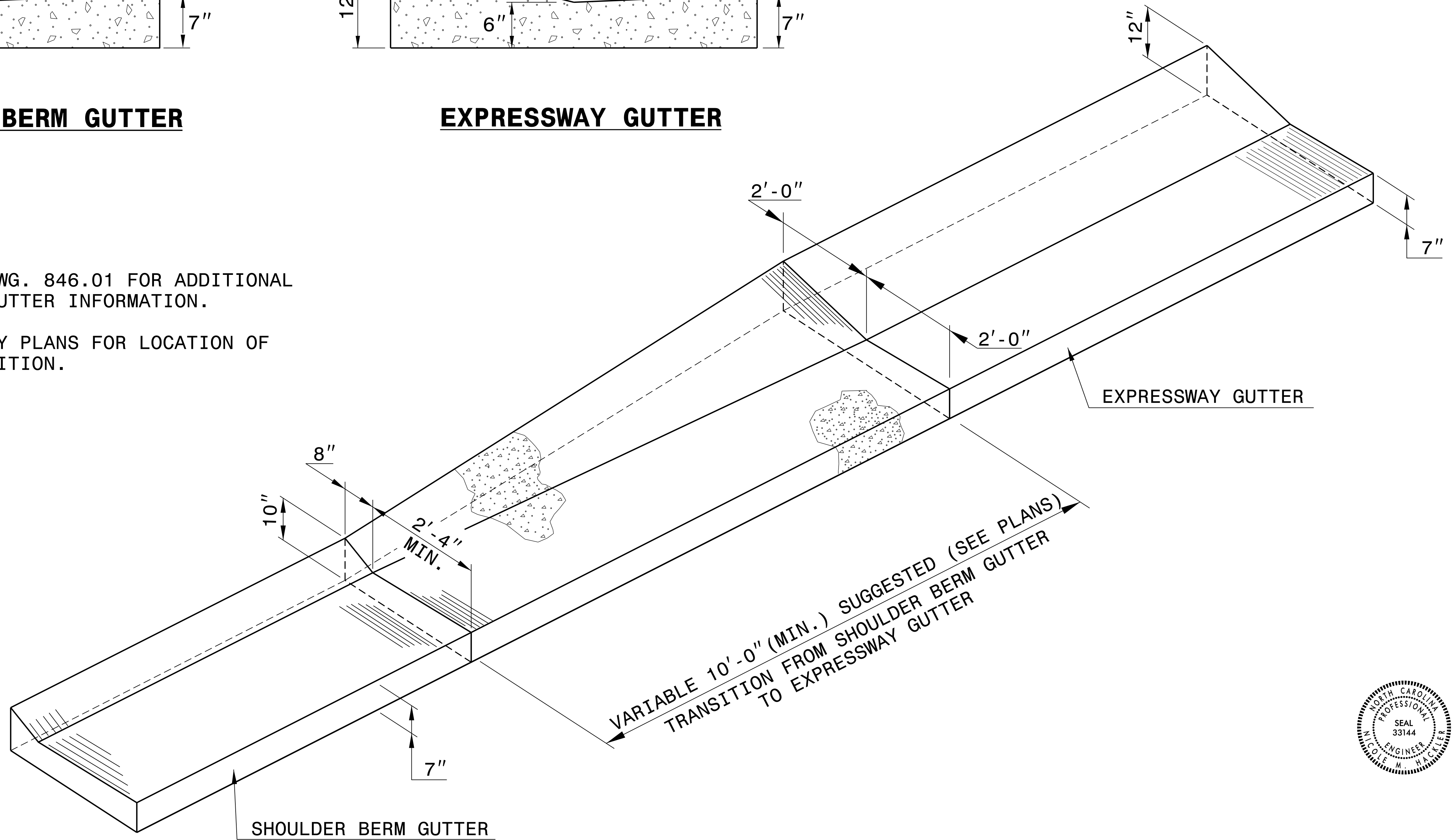
SHOULDER BERM GUTTER



EXPRESSWAY GUTTER

NOTE: SEE STD. DWG. 846.01 FOR ADDITIONAL CURB AND GUTTER INFORMATION.

SEE ROADWAY PLANS FOR LOCATION OF CURB TRANSITION.



ISOMETRIC VIEW OF TRANSITION



DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED

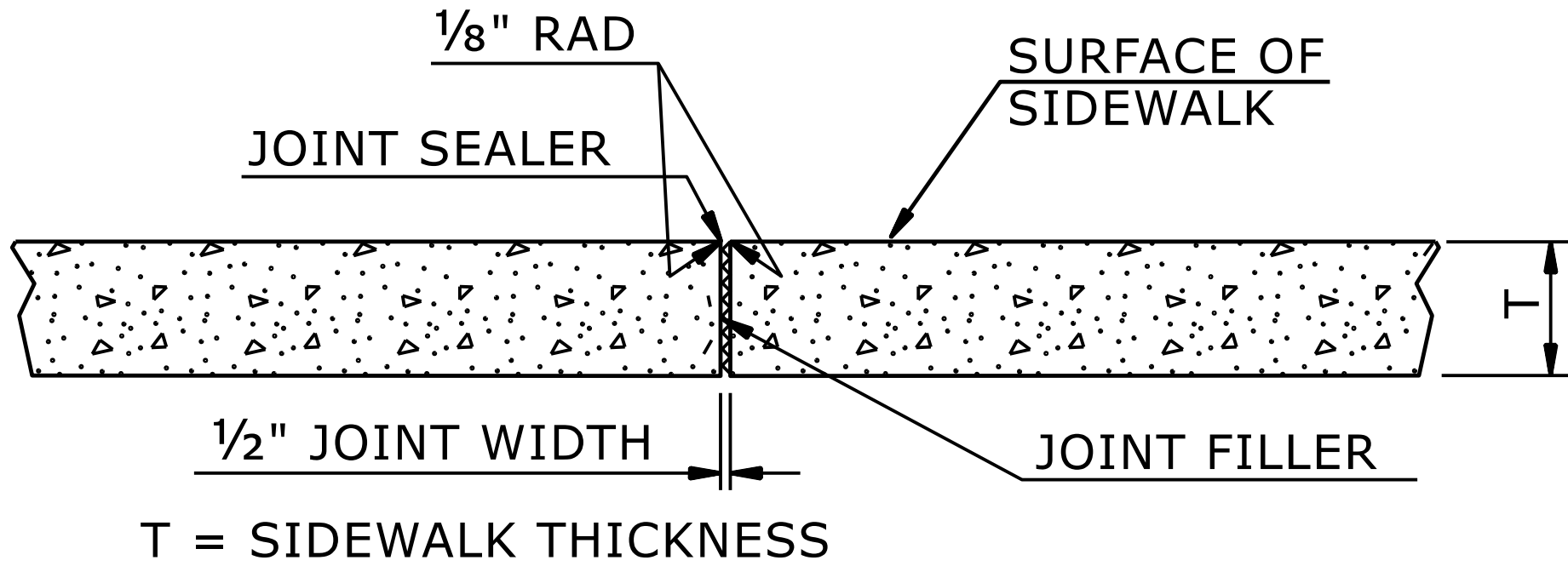
CONTRACT STANDARDS AND DEVELOPMENT UNIT	
Office 919-707-6950 FAX 919-250-4119	
DETAIL OF SHOULDER BERM GUTTER TO EXPRESSWAY GUTTER TRANSITION SECTION	
ORIGINAL BY: T.S. Spell	DATE: 8-13-02
MODIFIED BY:	DATE:
CHECKED BY:	DATE:
FILE SPEC.: wusr/details/stand/cgtransit.dgn	

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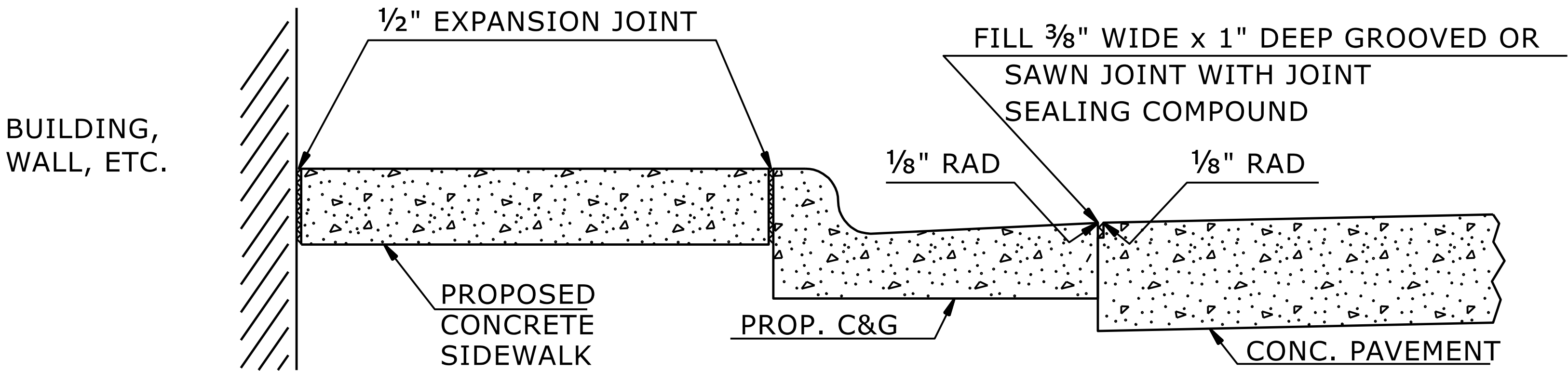
CONSTRUCT STANDARD SIDEWALK 5' WIDE AND 4" THICK UNLESS OTHERWISE DENOTED ON PLANS.

PLACE A GROOVE JOINT 1" DEEP WITH 1/8" RADII IN THE CONCRETE SIDEWALK AT 5' INTERVALS. ONE 1/2" EXPANSION JOINT WILL BE REQUIRED AT 50' INTERVALS. A 1/2" EXPANSION JOINT WILL BE REQUIRED WHERE THE SIDEWALK JOINS ANY RIGID STRUCTURE.

SEE STD. DWG. 848.06 FOR CURB RAMP LOCATION REQUIREMENTS AND CONSTRUCTION GUIDELINES.



TRANSVERSE EXPANSION JOINT
IN SIDEWALK



DETAILS SHOWING JOINTS IN CONCRETE SIDEWALK

STATE OF
NORTH CAROLINA
DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.

ROADWAY DETAIL DRAWING FOR
CONCRETE SIDEWALK

SHEET 1 OF 1

848D01



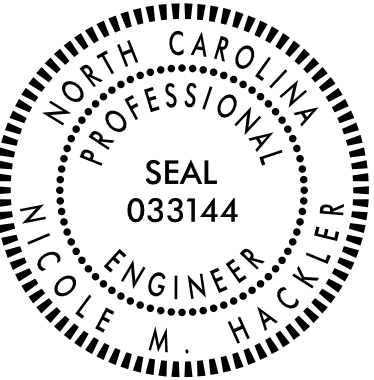
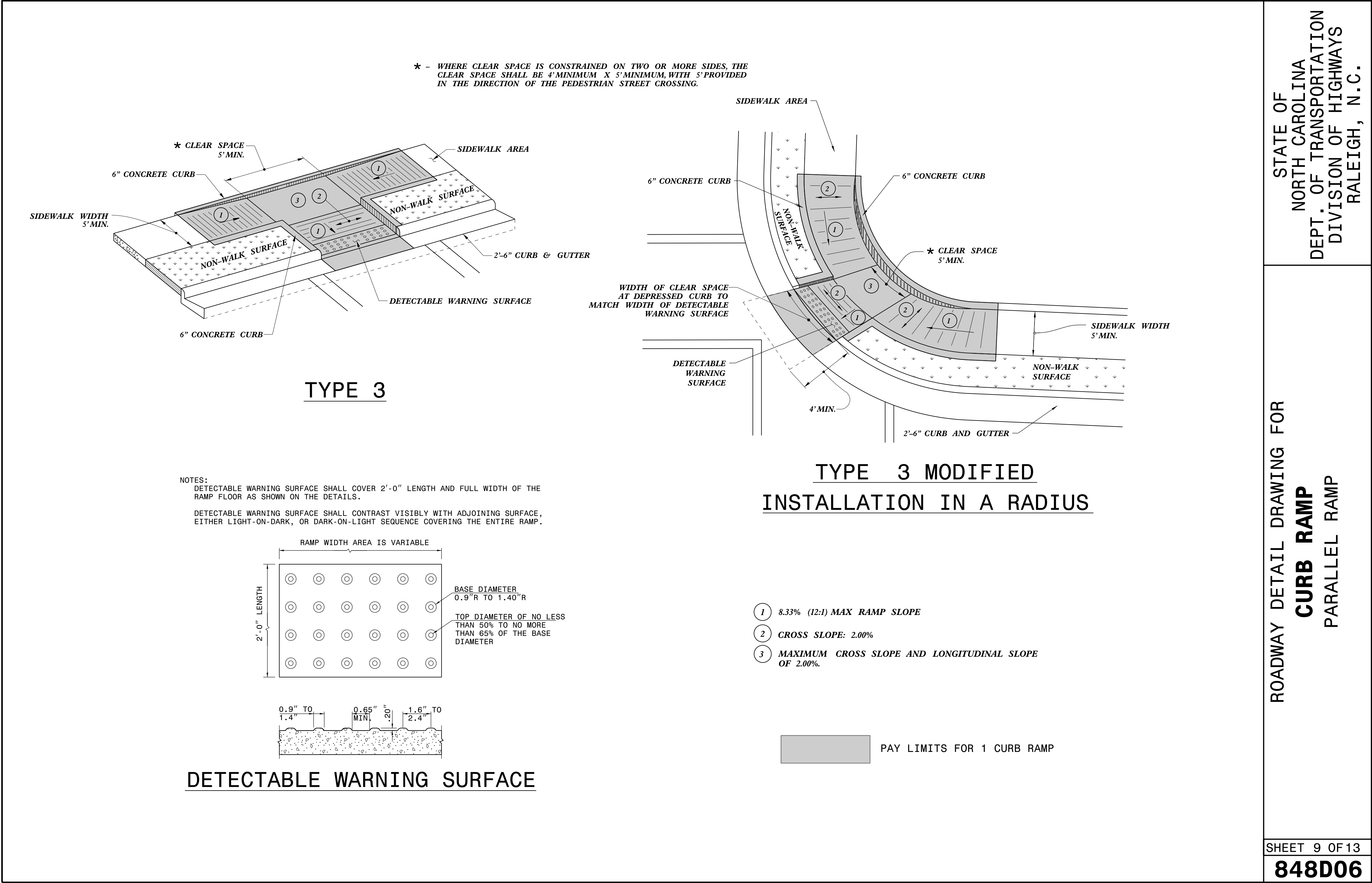
DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED

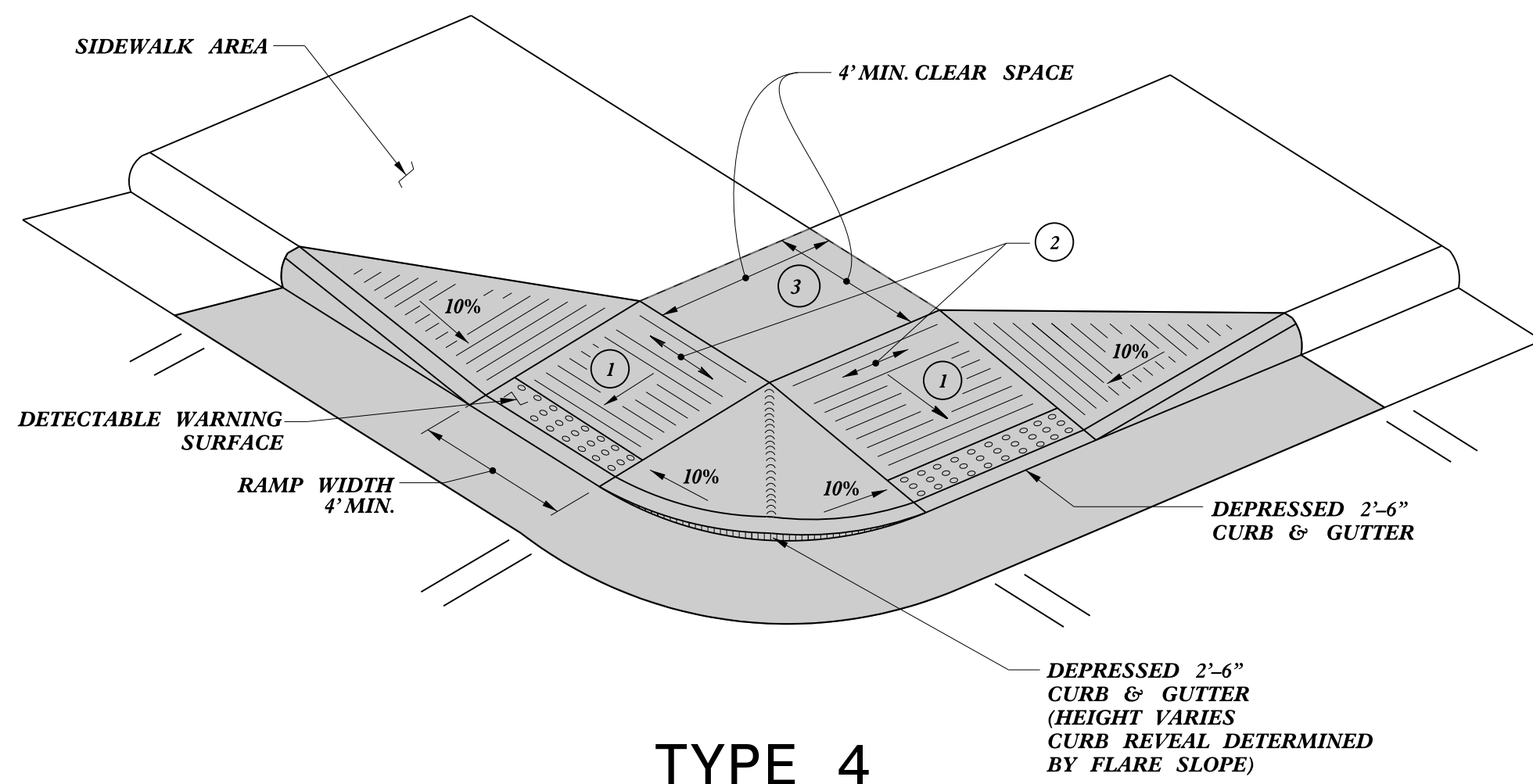
**CONTRACTS STANDARDS
AND DEVELOPMENT UNIT**

Office 919-707-6950 FAX 919-250-4119

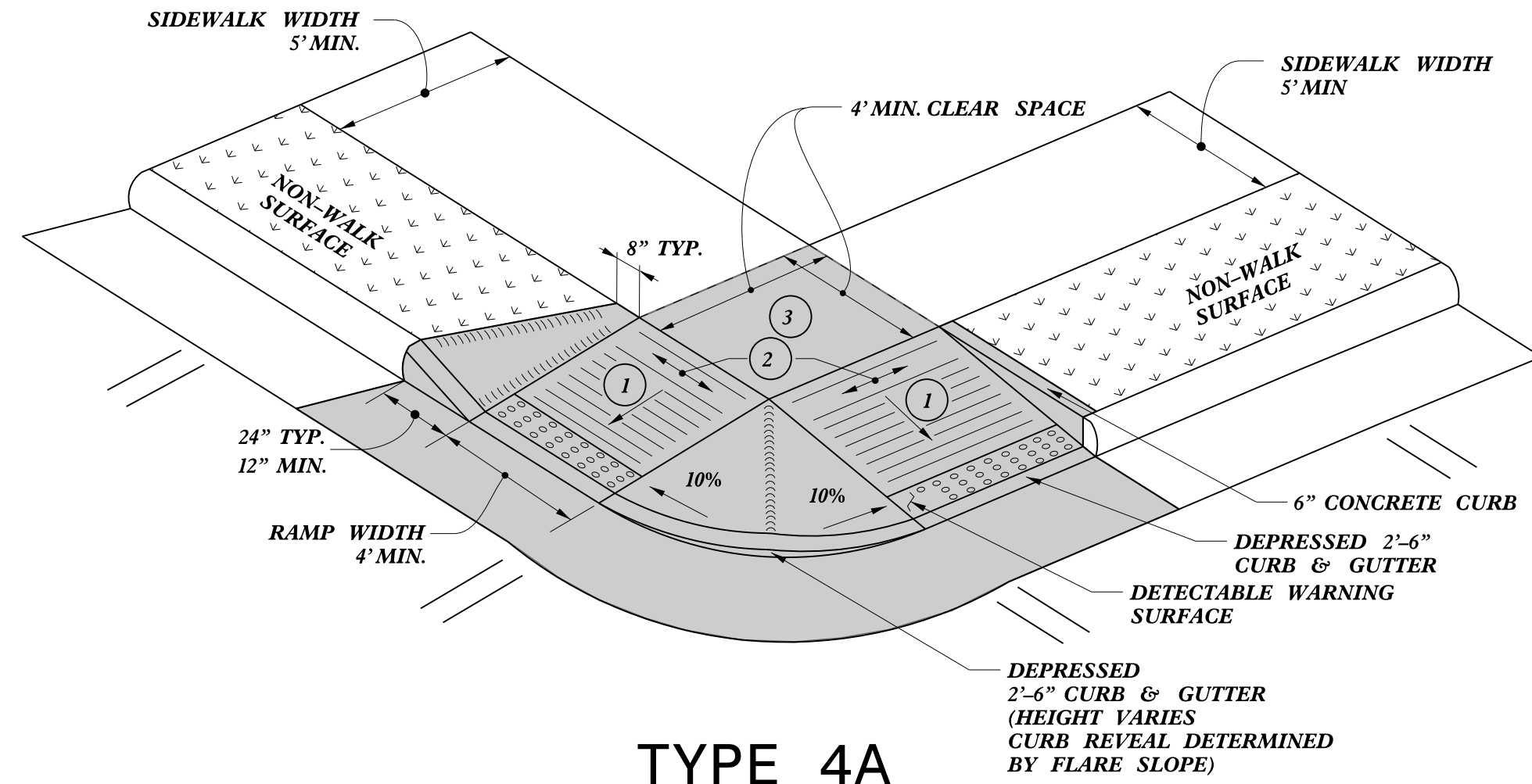
SEE TITLE BLOCK

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MODIFIED BY: DATE:
CHECKED BY: DATE:
FILE SPEC.: DATE:

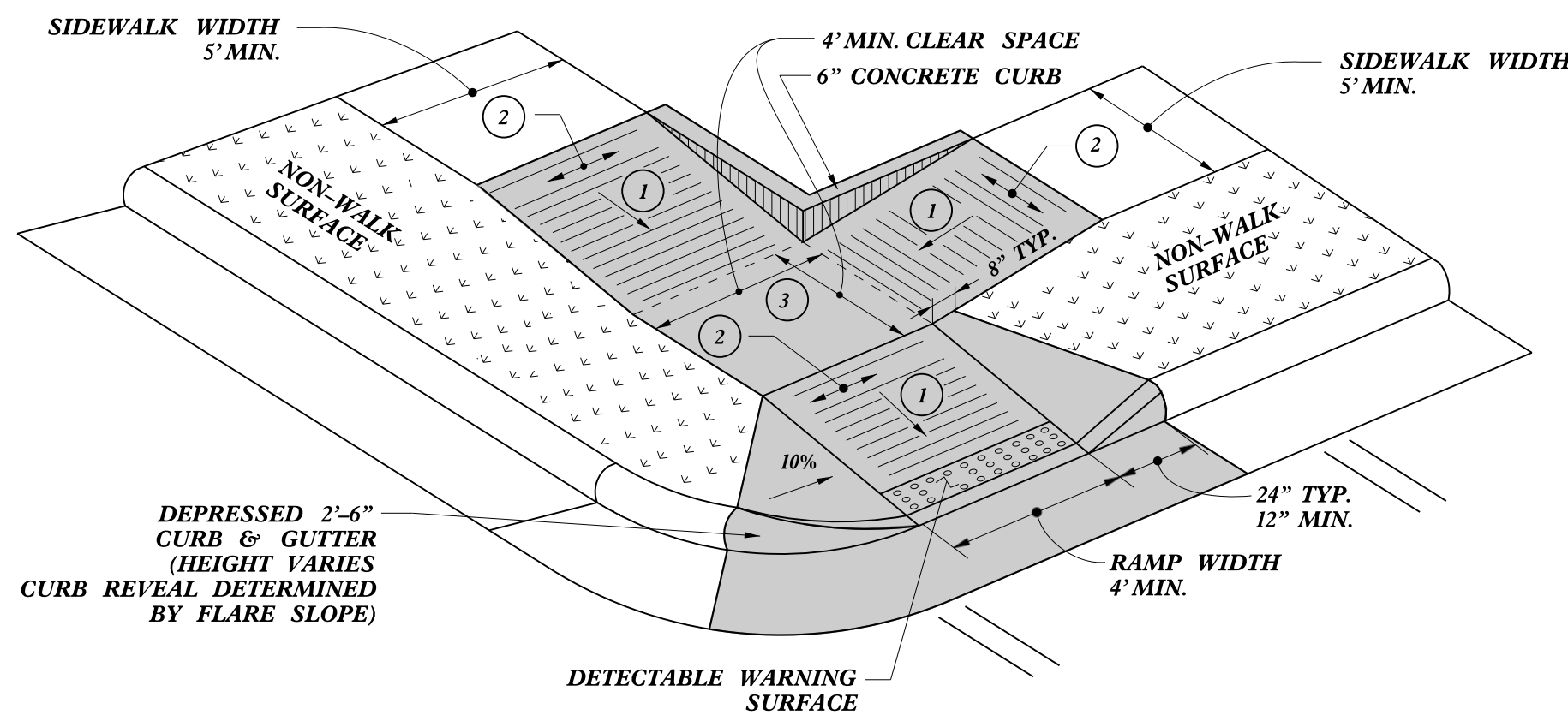




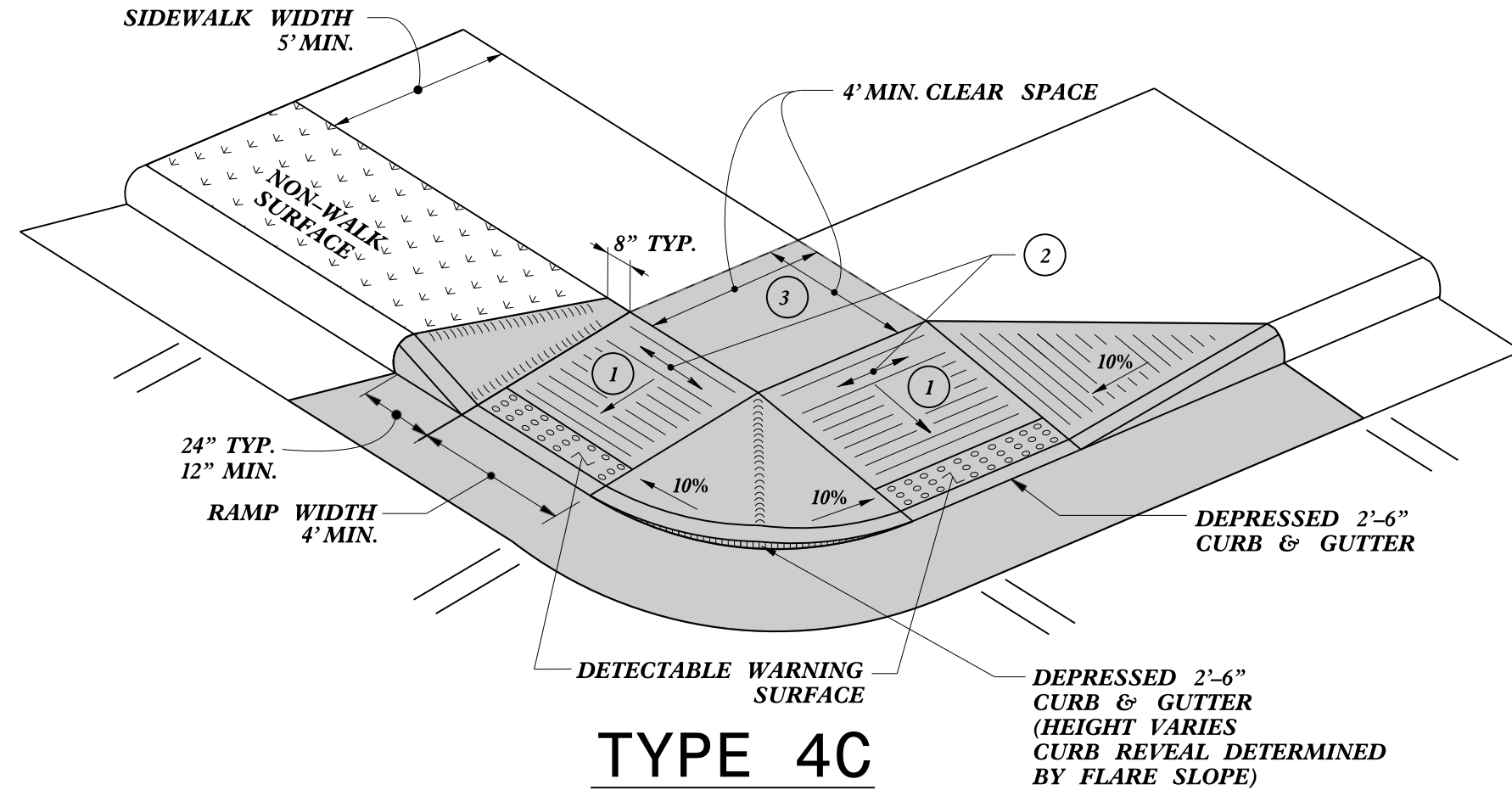
TYPE 4



TYPE 4A

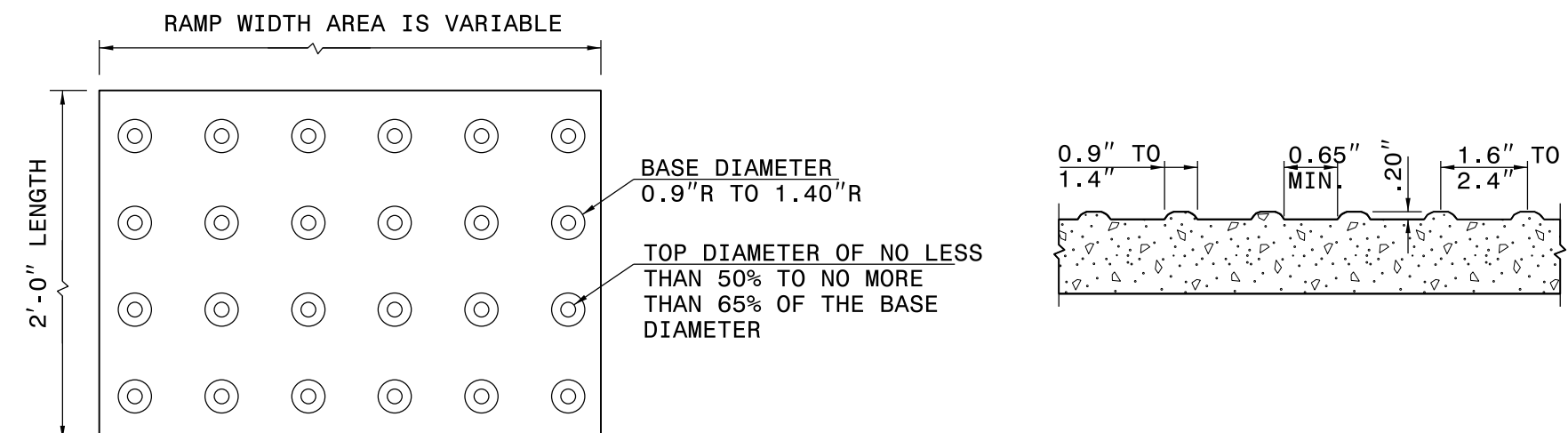


TYPE 4B



TYPE 4C

NOTES:
DETECTABLE WARNING SURFACE SHALL COVER 2'-0" LENGTH AND FULL WIDTH OF THE RAMP FLOOR AS SHOWN ON THE DETAILS.
DETECTABLE WARNING SURFACE SHALL CONTRAST VISIBLY WITH ADJOINING SURFACE, EITHER LIGHT-ON-DARK, OR DARK-ON-LIGHT SEQUENCE COVERING THE ENTIRE RAMP.



DETECTABLE WARNING SURFACE

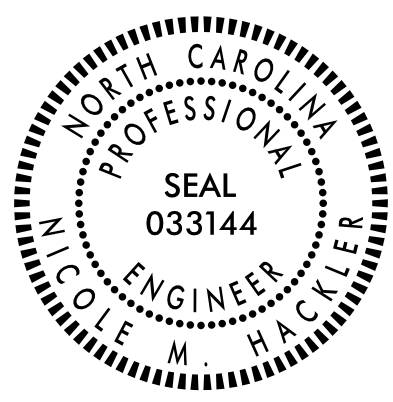
- 1 8.33% (12:1) MAX RAMP SLOPE
- 2 CROSS SLOPE: 2.00%
- 3 MAXIMUM CROSS SLOPE AND LONGITUDINAL SLOPE OF 2.00%

PAY LIMITS FOR 1 OR 2 CURB RAMPS
(CALCULATE BASED ON NUMBER OF SETS OF DETECTABLE WARNING SURFACES)

STATE OF
NORTH CAROLINA
DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.

ROADWAY DETAIL DRAWING FOR
CURB RAMP
SHARED LANDING

SHEET 10 OF 13
848D06



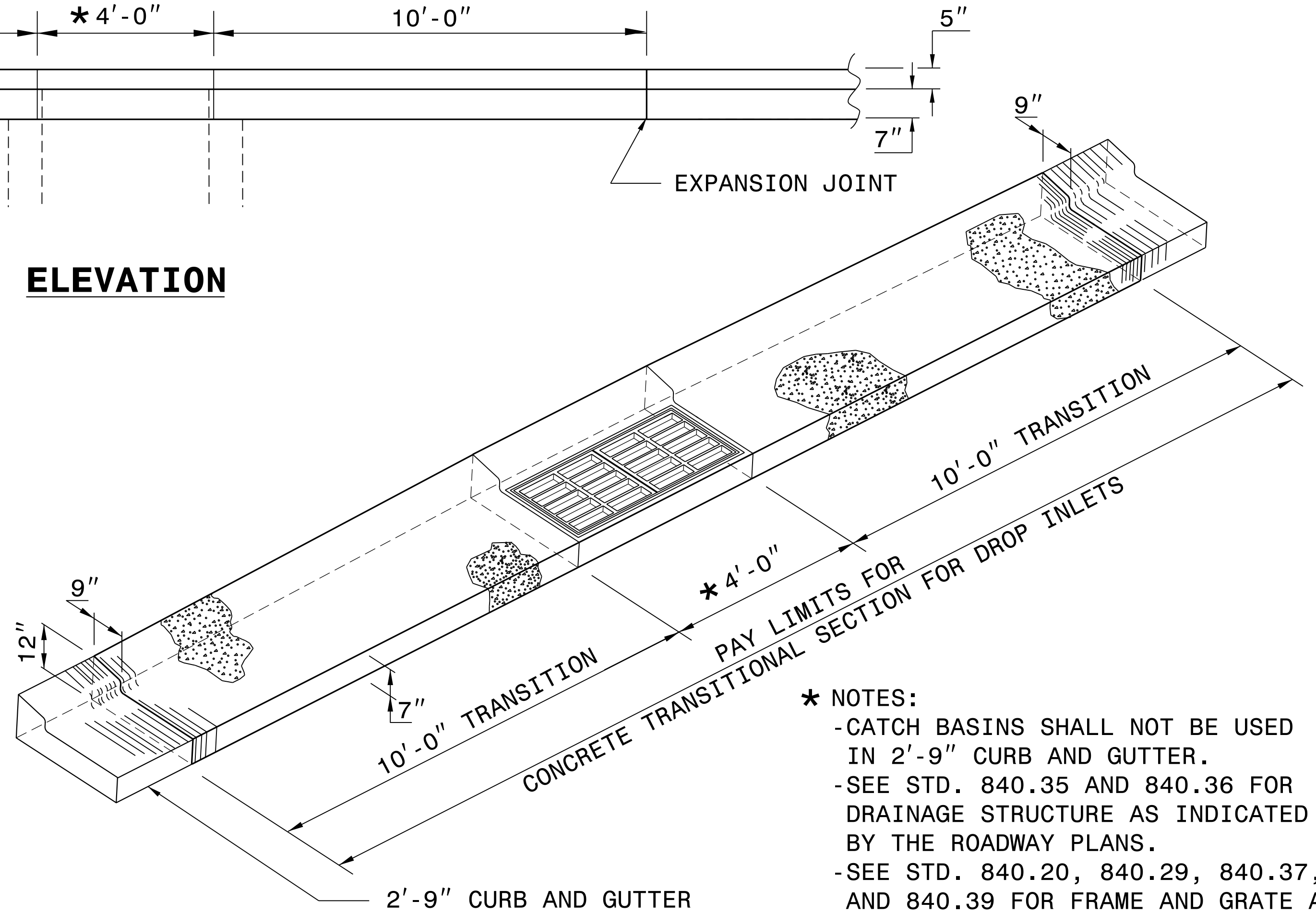
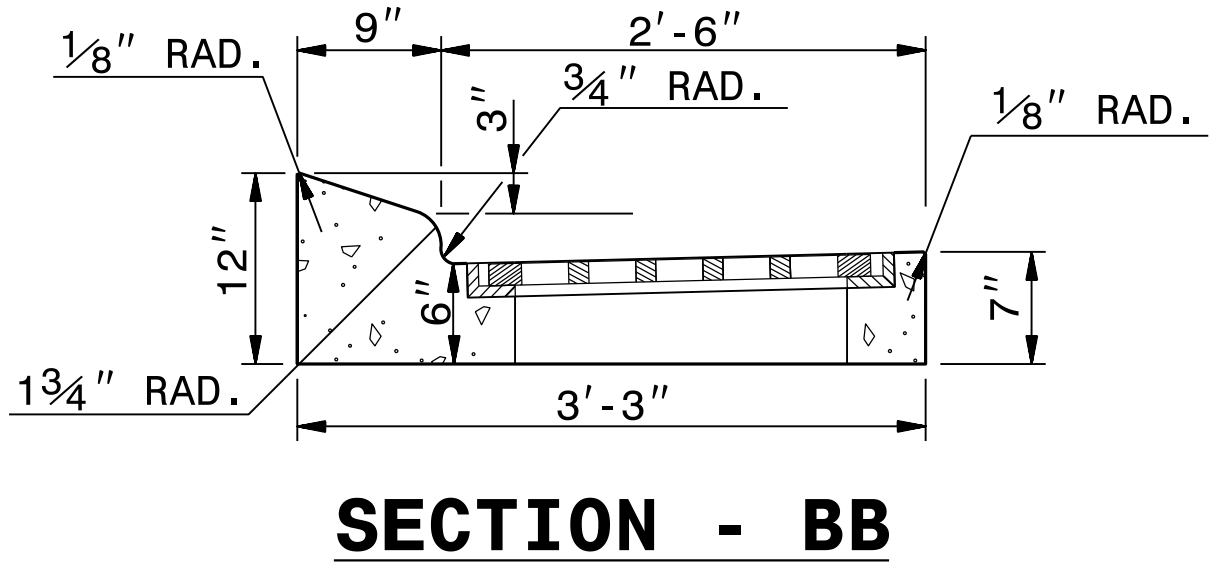
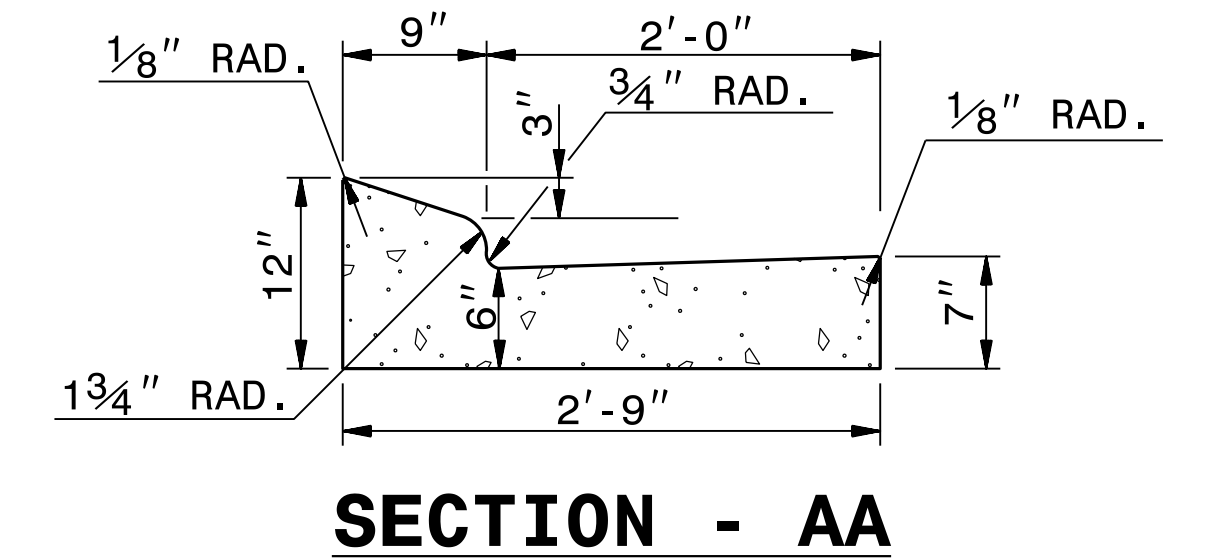
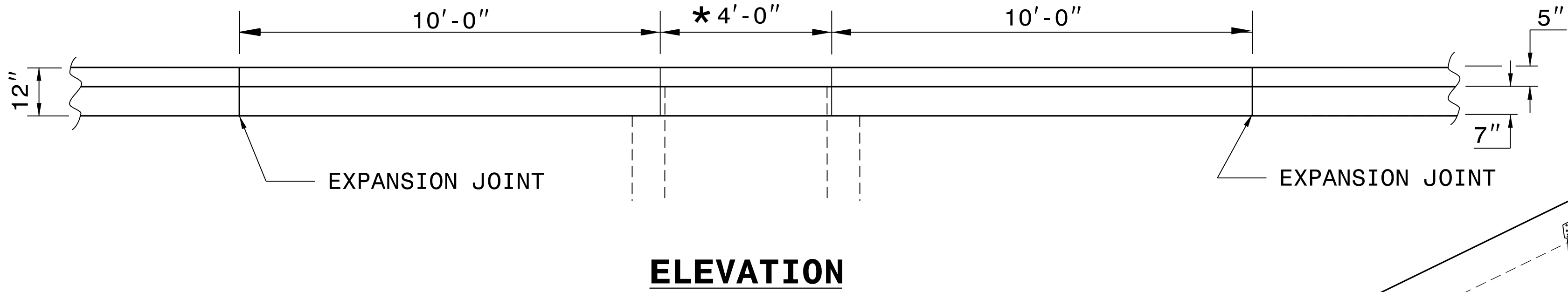
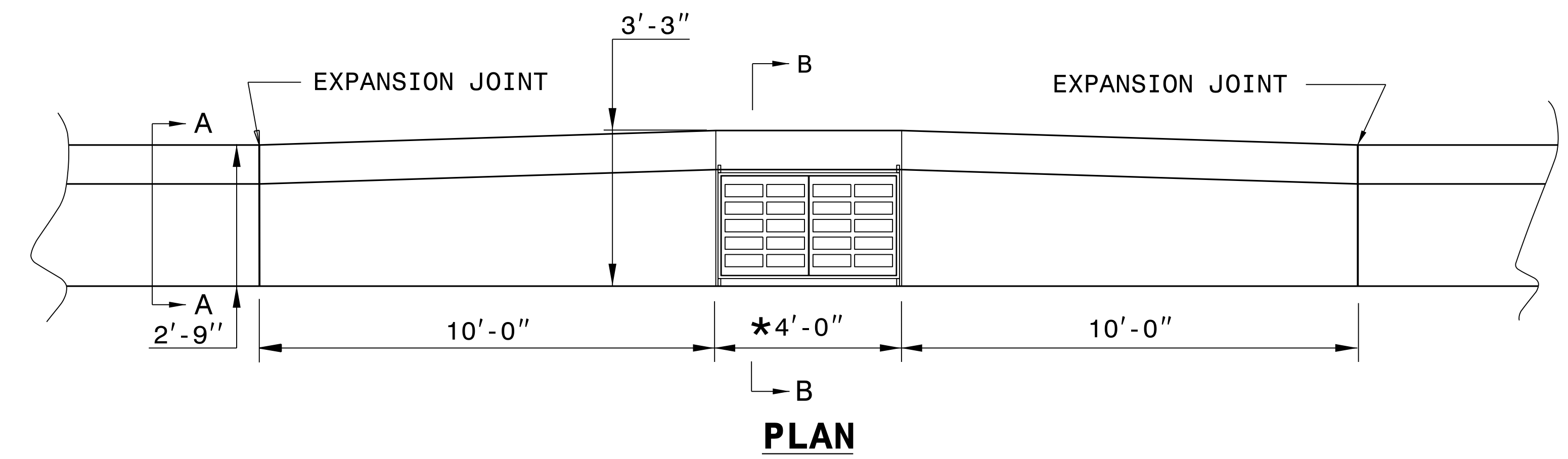
DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED

CONTRACTS STANDARDS AND DEVELOPMENT UNIT	
Office 919-707-6950	FAX 919-250-4119
SEE TITLE BLOCK	
ORIGINAL BY: S.CALHOUN	DATE: 12-22-2023
MODIFIED BY:	DATE:
CHECKED BY:	DATE:
FILE SPEC.: special_details\nmhackler\848D0610.dgn	

STATE OF
NORTH CAROLINA
DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.

ROADWAY DETAIL DRAWING FOR
MEDIAN CURB FOR TRAFFIC BEARING
GRADED DROP INLET
(FOR USE WITH 2'-9" CURB AND GUTTER)

SHEET 1 OF 1
852D07



- * NOTES:
- CATCH BASINS SHALL NOT BE USED IN 2'-9" CURB AND GUTTER.
 - SEE STD. 840.35 AND 840.36 FOR DRAINAGE STRUCTURE AS INDICATED BY THE ROADWAY PLANS.
 - SEE STD. 840.20, 840.29, 840.37, AND 840.39 FOR FRAME AND GRATE AS INDICATED BY THE ROADWAY PLANS.



DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED

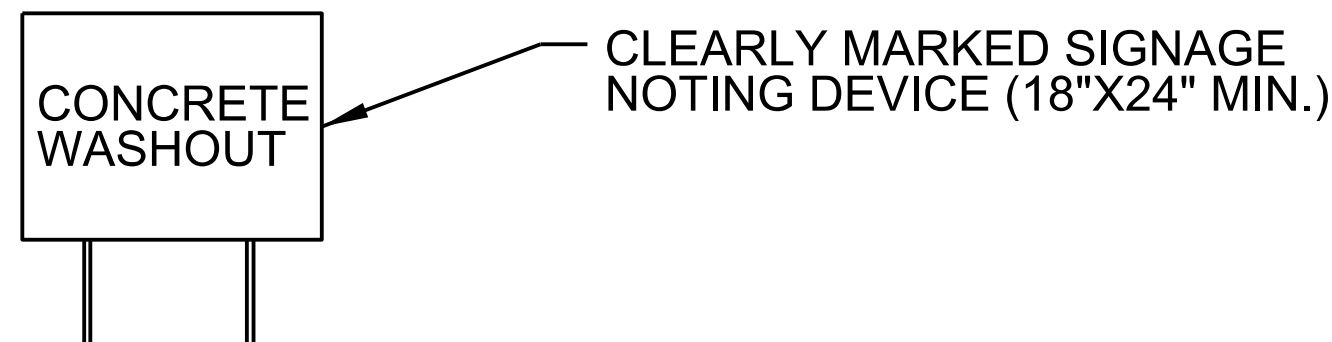
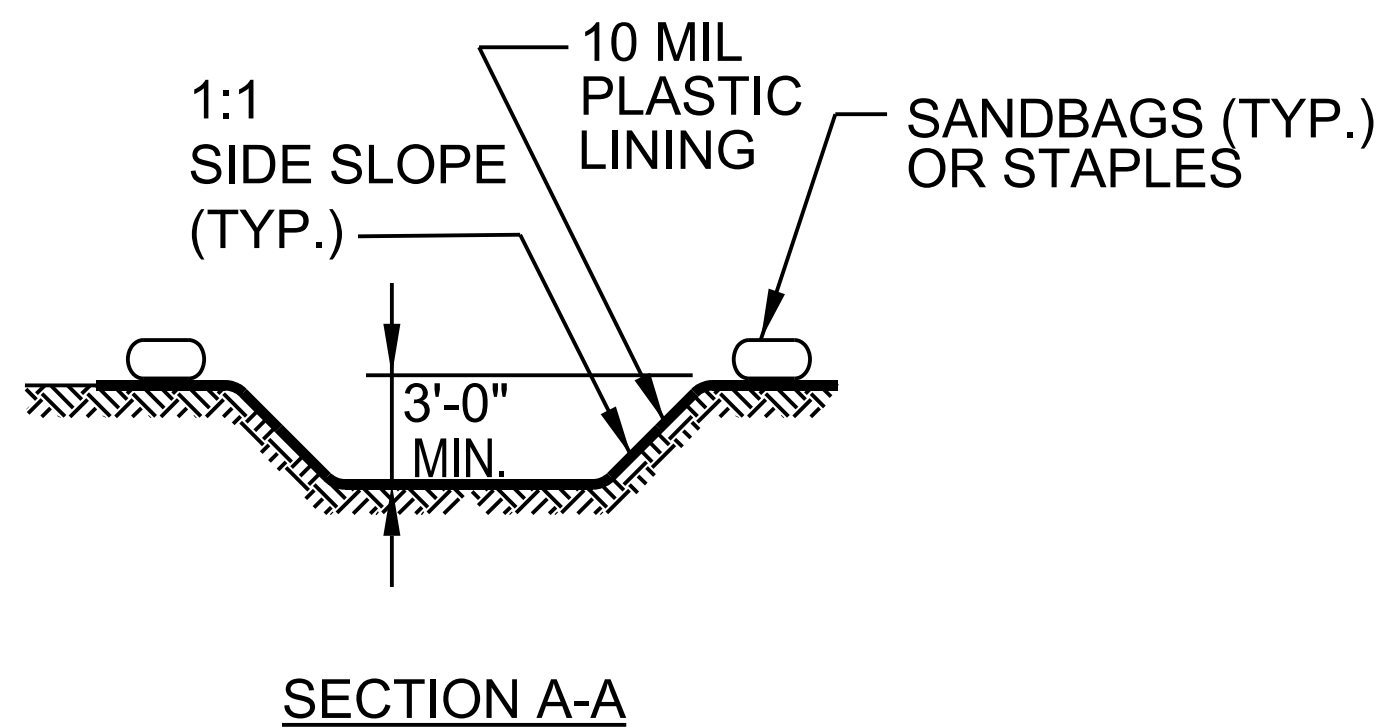
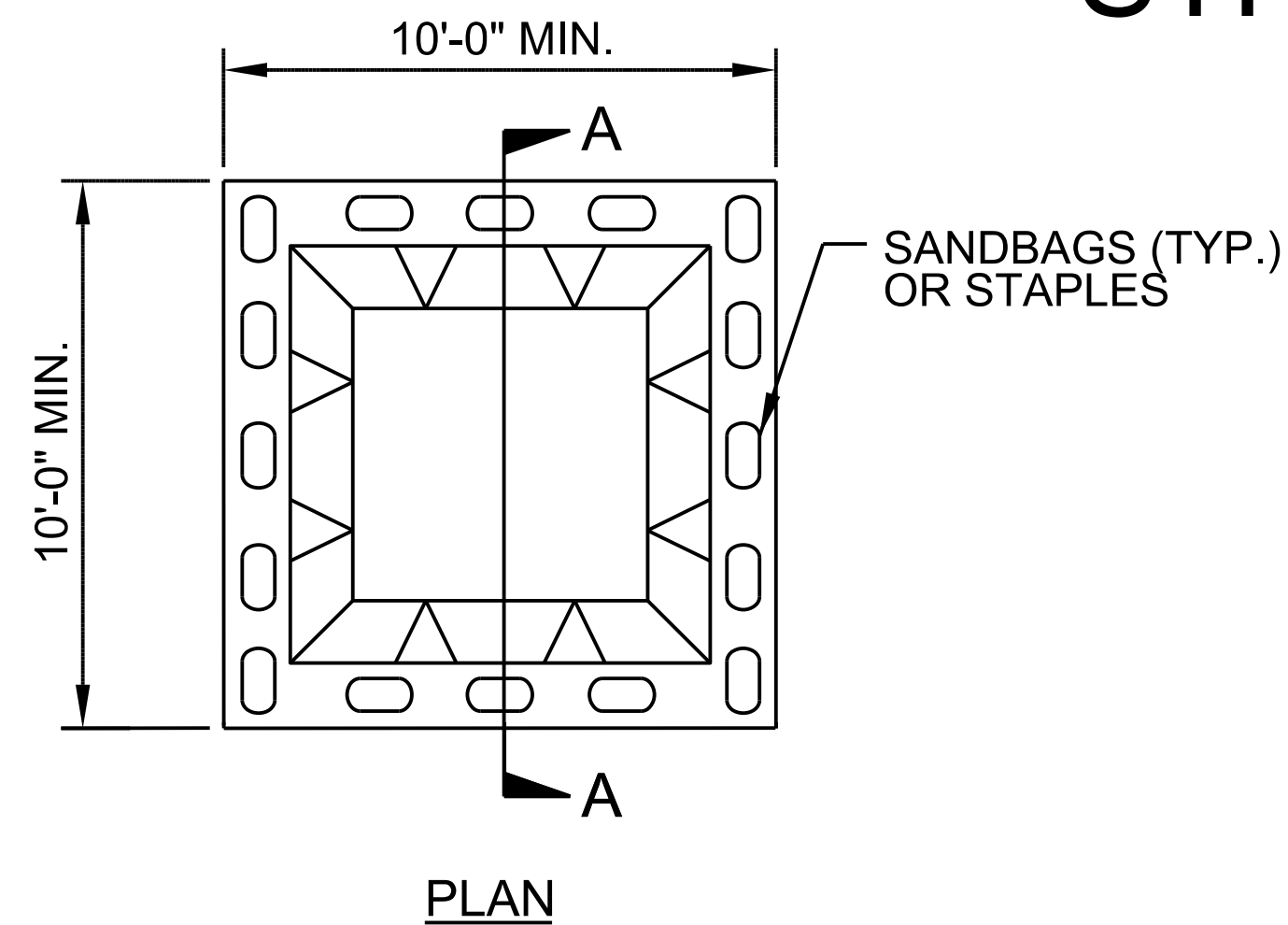
CONTRACT STANDARDS
AND DEVELOPMENT UNIT
Office 919-707-6950 FAX 919-250-4119

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ORIGINAL BY: K.A. KEMPF DATE: 7-20-23
MODIFIED BY: DATE:
CHECKED BY: DATE:
FILE SPEC.: 2024 details in lieu\852D0701.dgn

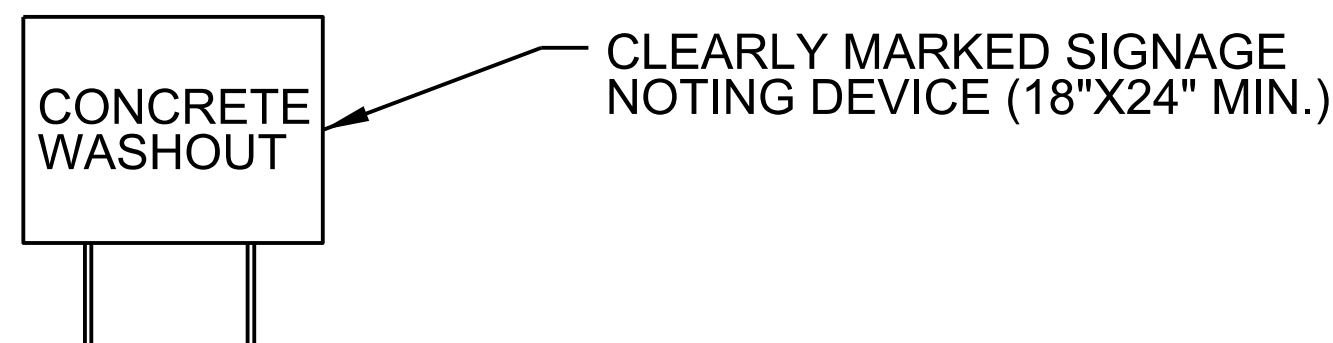
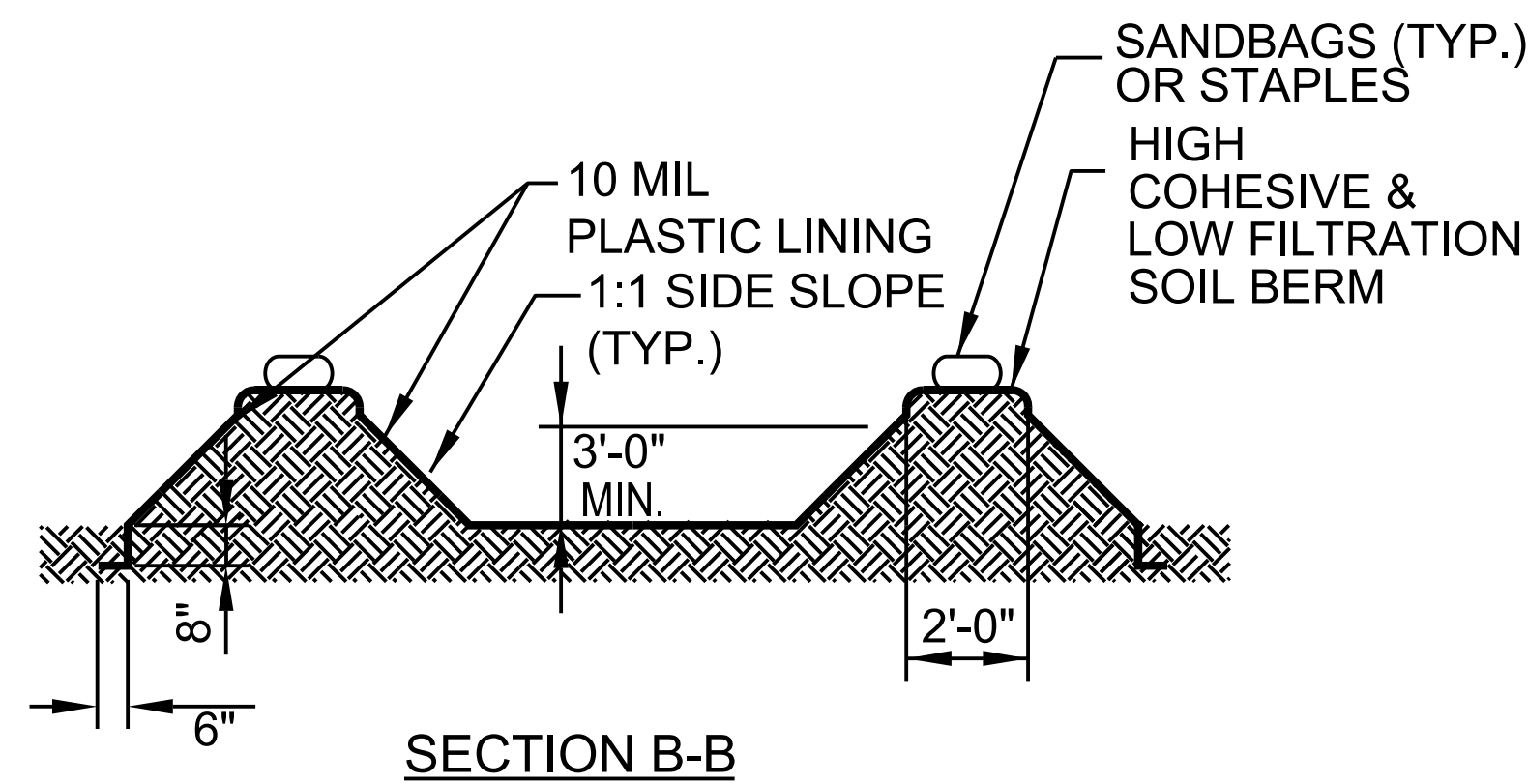
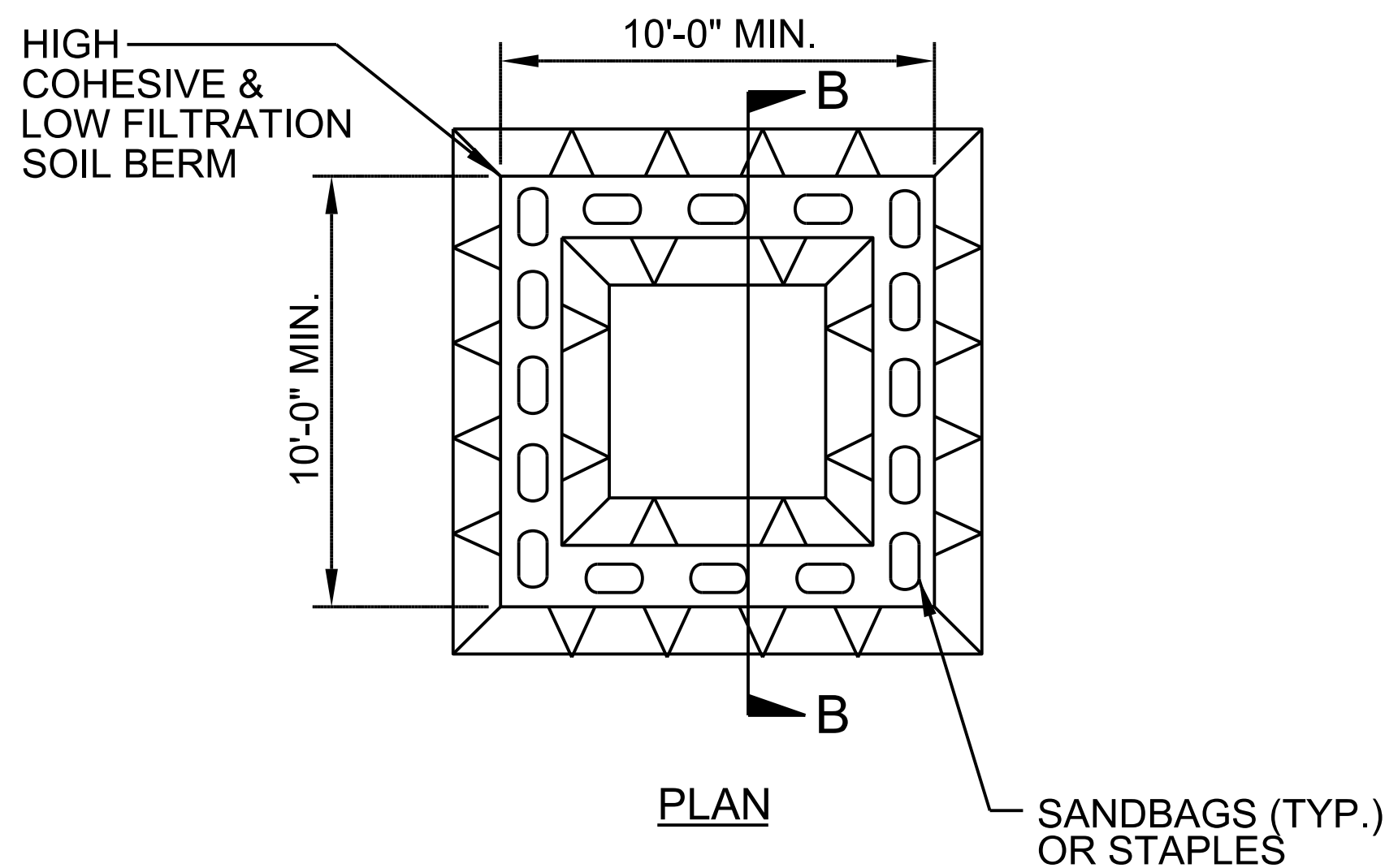
ONSITE CONCRETE WASHOUT STRUCTURE WITH LINER

PROJECT REFERENCE NO.	SHEET NO.
<i>X-XXXX</i>	<i>EC-2A</i>
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER



BELOW GRADE WASHOUT STRUCTURE
NOT TO SCALE

- NOTES:**
1. ACTUAL LOCATION DETERMINED IN FIELD
 2. THE CONCRETE WASHOUT STRUCTURES SHALL BE MAINTAINED WHEN THE LIQUID AND/OR SOLID REACHES 75% OF THE STRUCTURES CAPACITY TO PROVIDE ADEQUATE HOLDING CAPACITY WITH A MINIMUM 12 INCHES OF FREEBOARD.
 3. CONCRETE WASHOUT STRUCTURE NEEDS TO BE CLEARLY MARKED WITH SIGNAGE NOTING DEVICE.



ABOVE GRADE WASHOUT STRUCTURE
NOT TO SCALE

- NOTES:**
1. ACTUAL LOCATION DETERMINED IN FIELD
 2. THE CONCRETE WASHOUT STRUCTURES SHALL BE MAINTAINED WHEN THE LIQUID AND/OR SOLID REACHES 75% OF THE STRUCTURES CAPACITY TO PROVIDE ADEQUATE HOLDING CAPACITY WITH A MINIMUM 12 INCHES OF FREEBOARD.
 3. CONCRETE WASHOUT STRUCTURE NEEDS TO BE CLEARLY MARKED WITH SIGNAGE NOTING DEVICE.