

SECTION VII
ROADWAY AND SITE
IMPROVEMENTS

**TABLE OF CONTENTS ROADWAY
AND SITE IMPROVEMENTS**

<u>No.</u>	<u>Title</u>
I-1	Alley Intersection (Commercial Areas)
I-2	Valley Gutter for Intersection
I-3	Typical Driveway Entrance – Urban (Space Between Sidewalk And Curb)
I-4	Typical Driveway Entrance – Urban (Space Between Sidewalk And Curb)
I-5A	ADA Driveway/Entrance Ramped – With Buffer
I-5B	ADA Driveway/Entrance 5 Ft. Min Apron – No Buffer
I-5C	ADA Driveway/Entrance <5 Ft. Apron – No Buffer
I-6	Typical Driveway Entrance-Rural (With Drainage Pipe)
I-6A	Typical Driveway Entrance – Rural (Without Drainage Pipe)
I-7	Channelization of Commercial Entrances (Urban)
I-8	Channelization of Commercial Entrances At Road Intersections-(Rural Dual)
I-9	Channelization of Commercial Entrances Mid Block – (Rural Dual)
I-10	Channelization of Commercial Entrances (Rural & Urban Undivided Highway)
I-11	Driveways to A Public Building – Rural
I-12	Single Driveway Commercial Establishment (Rural)
I-13	Simple Monumental Entrance
I-14 to I- 23	Not Used
I-24	Standard Combination Curb & Gutter
I-25	Standard Median Curbs
I-26	Mountable Curb and Gutter

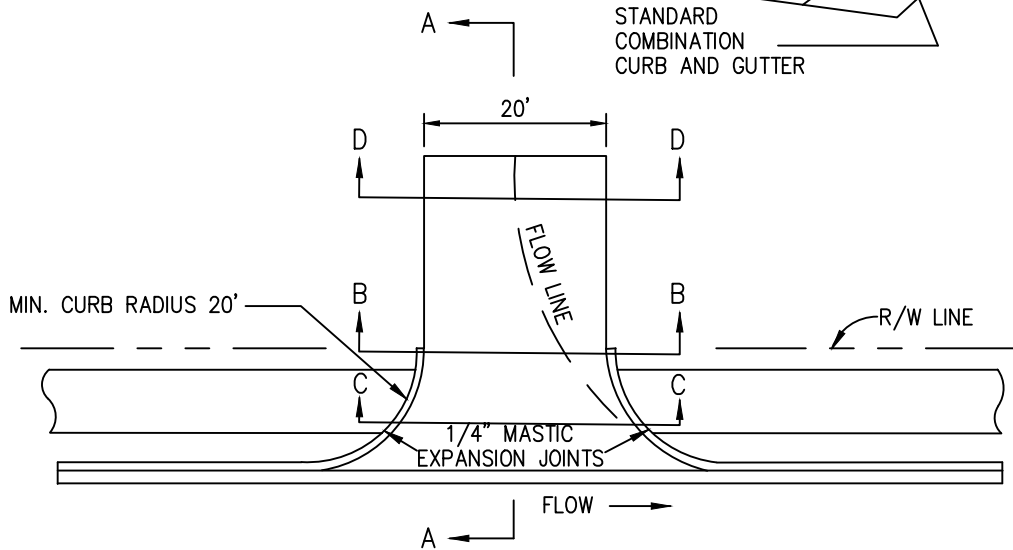
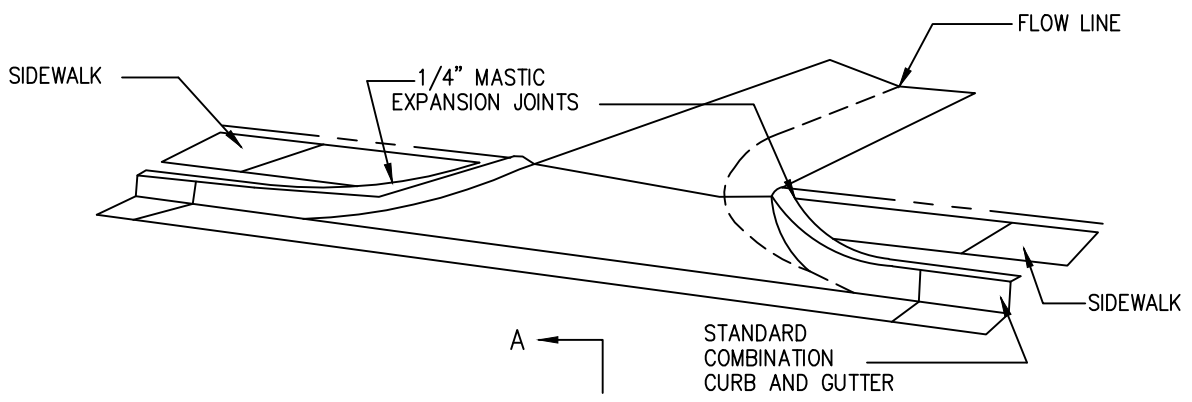
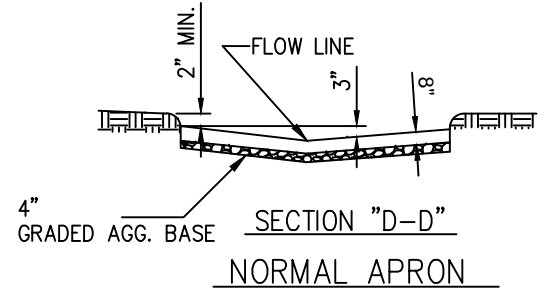
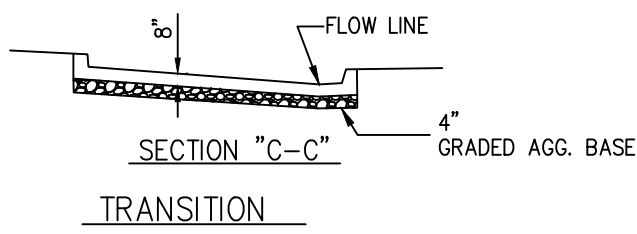
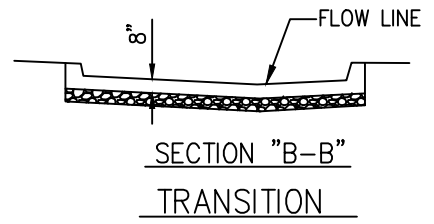
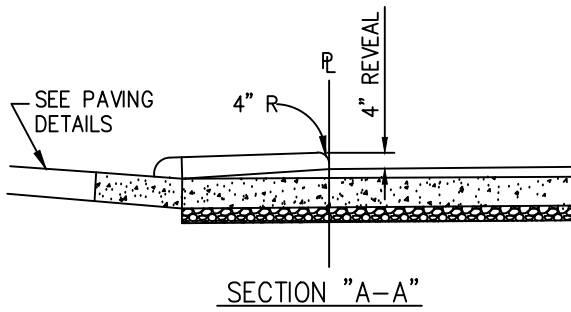
TABLE OF CONTENTS

ROADWAY AND SITE IMPROVEMENTS

<u>No.</u>	<u>Title</u>
I-27	Standard Bituminous Concrete Curb
I-28	Chain Link Fence Typical 5 Ft. Rural 6 Ft. & 8 Ft.
I-29	Chain Link Fence At Grade Changes & Depressions
I-30	Chain Link Fence Brace & Rod Attachments – Round Construction
I-31	Chain Link Fence Brace & Rod Attachments – Square Construction
I-32	Chain Link Fence Drive Anchor & Post Attachment At Bridge
I-33	Chain Link Fence Alternate Terminal Post
I-34	Chain Link Fence Double Drive Anchor & Ditch Treatment
I-35	Chain Link Fence Drive Anchor Shoe Assembly
I-36	Chain Link Fence Gate Details
I-37	Standard Monolithic Concrete Median
I-38	Standard Concrete Barrier Single Face
I-39	Standard Concrete Barrier Double Face
I-40	Temporary Precast Concrete Barrier Double Face
I-41	Not Used
I-42	Precast Concrete Wheel Stops
I-43	Standard Timber Barricade
I-44	Barricade
I-45	Guard Rail W Beam Standards
I-46 to I-61	Not Used

TABLE OF CONTENTS**ROADWAY AND SITE IMPROVEMENTS**

<u>No.</u>	<u>Title</u>
I-62	Standard Stairways
I-63	Standard Ornamental Handrail
I-64	Underground Storage Tank for Fire Suppression
I-64A	Underground Storage Tank for Fire Suppression
I-65	Bike Path Removeable Wood Bollard
I-66	Trench Detail Frame and Cover
I-67	Temporary Street Name Sign
I-68	Small Pavement Hole Repair
I-69	Utility Patch Pavement Restoration

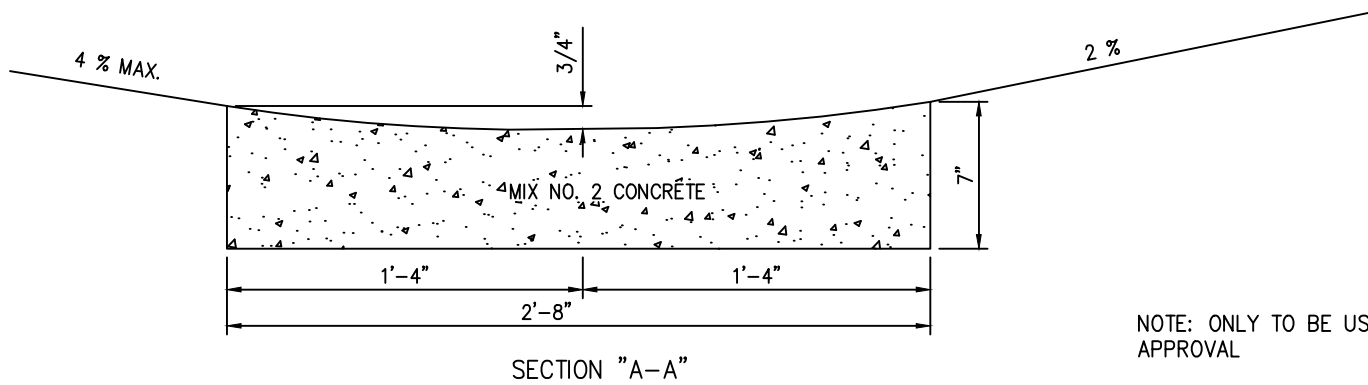
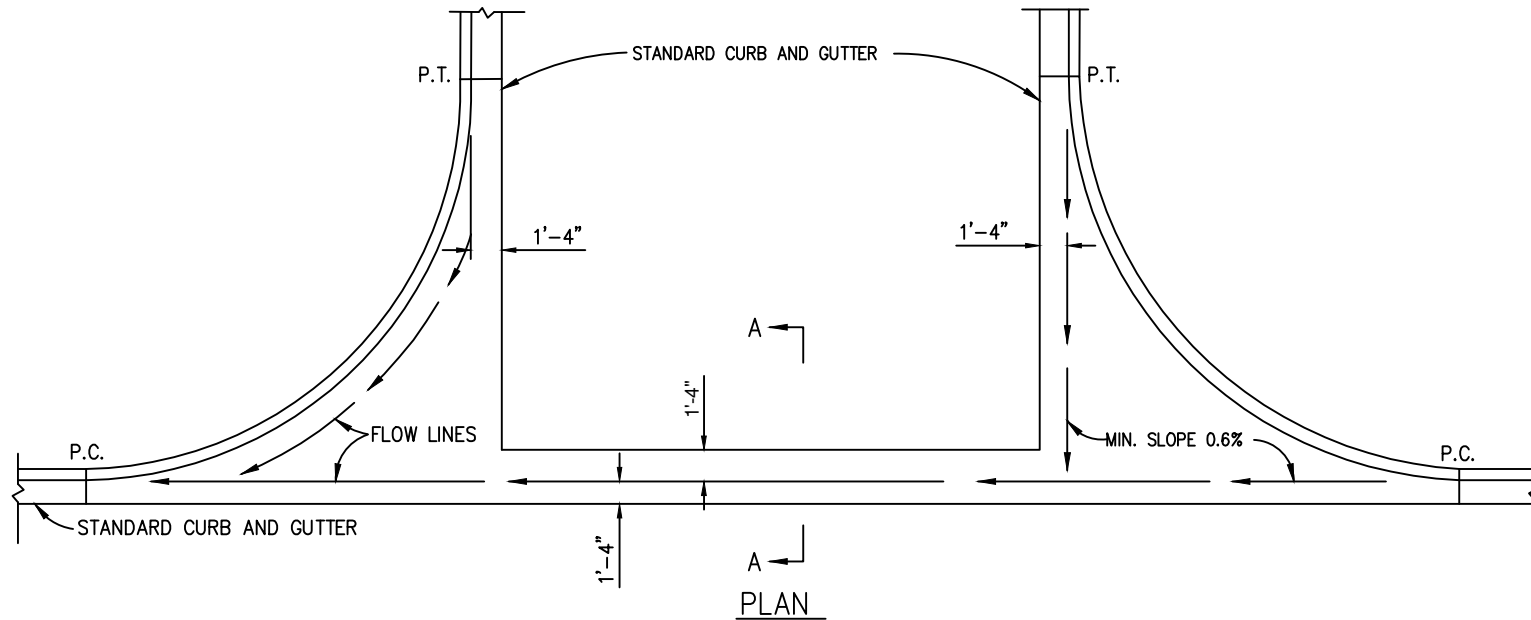


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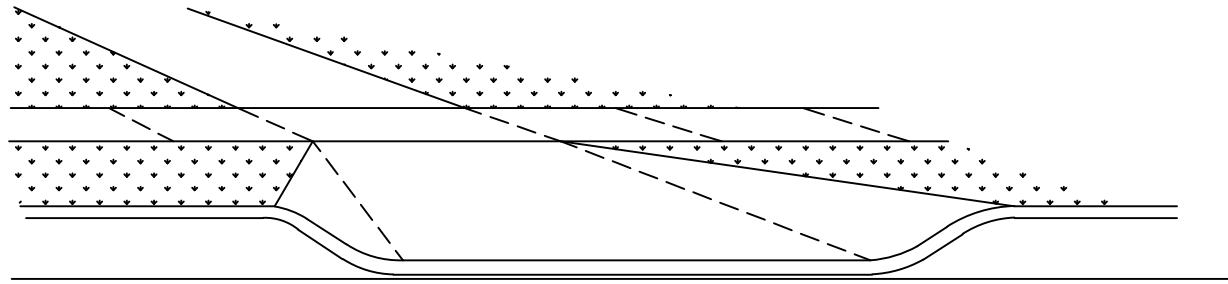
1. CONCRETE FOR ALLEY AND ALLEY APRON TO BE 8" PLAIN PORTLAND CEMENT CONCRETE MIX NO. 7.
2. NO LONGITUDINAL CONSTRUCTION JOINTS WILL BE PERMITTED.

PLAN
(NO SCALE)

ANNE ARUNDEL COUNTY DEPARTMENT OF PUBLIC WORKS	APPROVED	STANDARD ROADWAY AND SITE IMPROVEMENT DETAILS ALLEY INTERSECTION (COMMERCIAL AREAS)	REVISED	 1
	_____ CHIEF ENGINEER		04/2024	
	_____ DESIGN ENGINEER			
	DATE:			



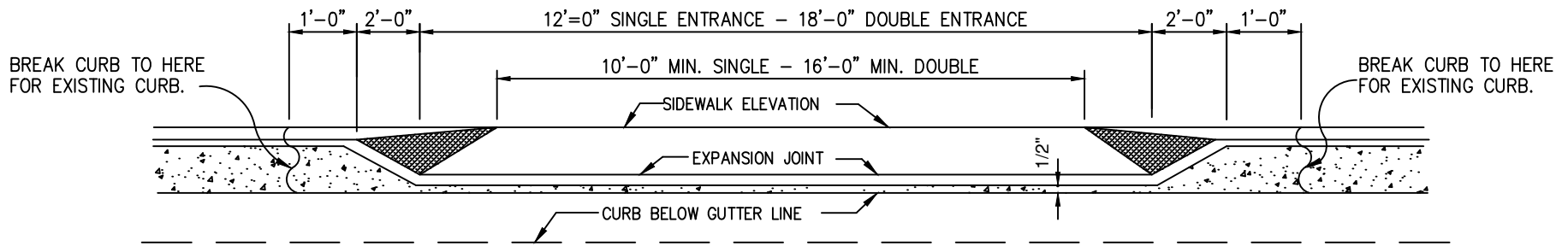
ANNE ARUNDEL COUNTY DEPARTMENT OF PUBLIC WORKS	APPROVED _____ CHIEF ENGINEER	STANDARD ROADWAY AND SITE IMPROVEMENT DETAILS VALLEY GUTTER FOR INTERSECTION	REVISED 04/2024	$\frac{1}{2}$
	_____ DESIGN ENGINEER		_____	
	DATE:		_____	
	_____		_____	



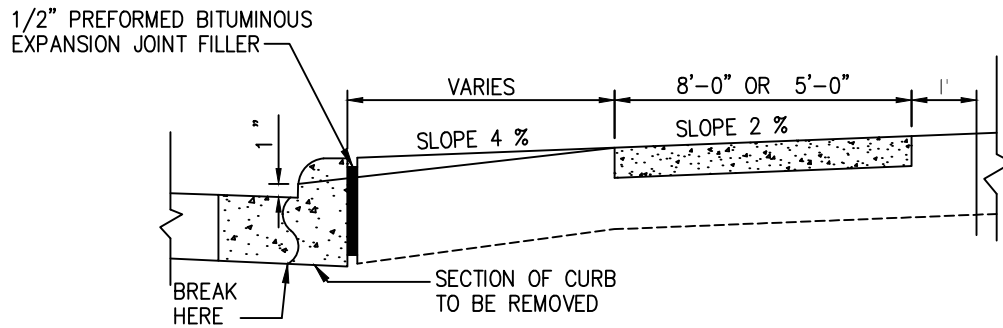
DRIVEWAY ENTRANCE

NOTE:

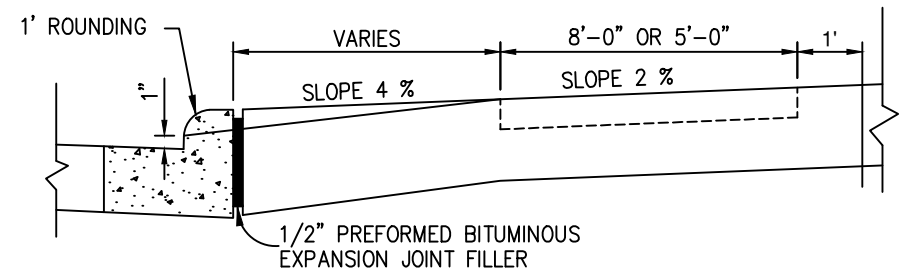
THIS STANDARD DETAIL APPLIES FOR DRIVEWAYS TO DETACHED HOUSES. FOR MINIMUM PAVING ON DRIVEWAYS IN COUNTY RIGHT-OF-WAY SEE LOCAL ROAD PAVING SURFACES GUIDELINES, DETAIL P/10.



FRONT VIEW



SECTION-DRIVEWAY IN EXISTING CURB



SECTION-DRIVEWAY IN NEW CURB

ANNE ARUNDEL
COUNTY
DEPARTMENT OF
PUBLIC WORKS

APPROVED

CHIEF ENGINEER

DESIGN ENGINEER

DATE:

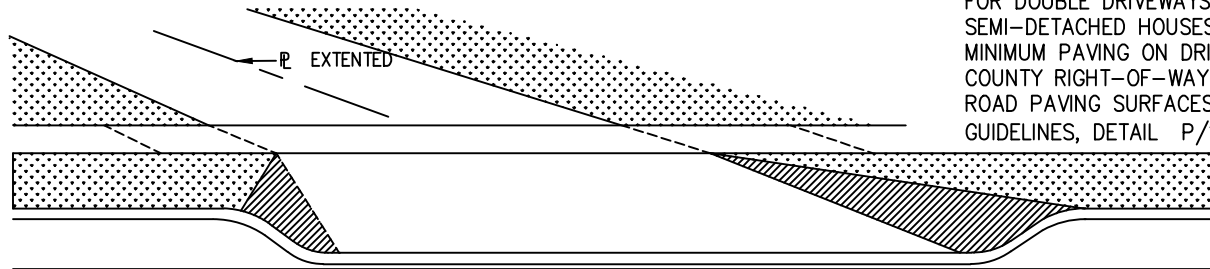
STANDARD ROADWAY AND
SITE IMPROVEMENT DETAILS
TYPICAL DRIVEWAY ENTRANCE-URBAN
(SPACE BETWEEN SIDEWALK AND CURB)

REVISED

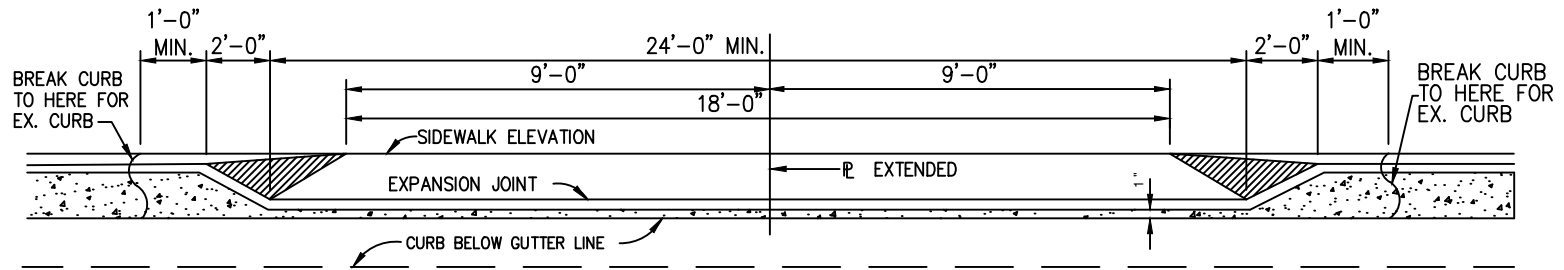
04/2024

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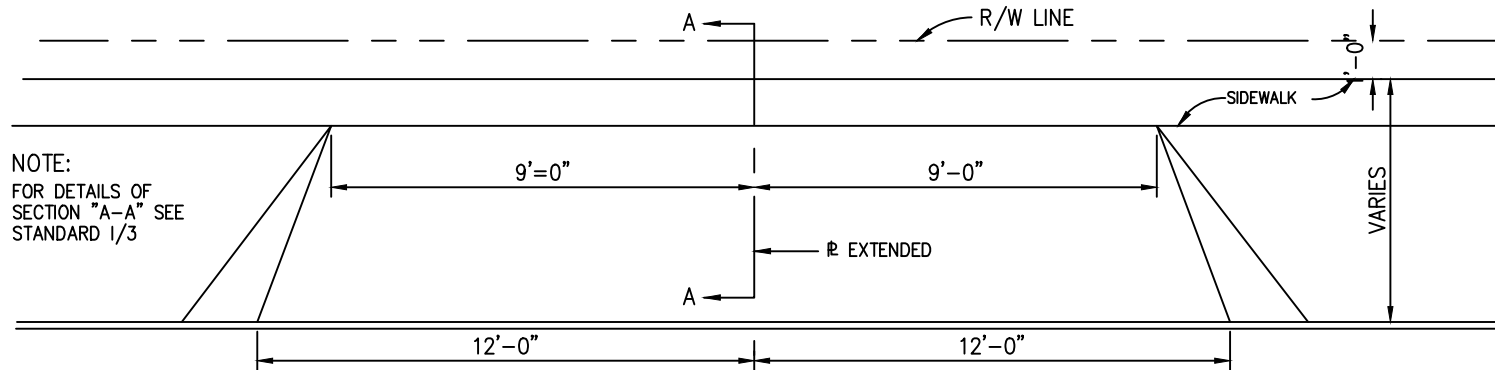
NOTE: THIS STANDARD DETAIL APPLIES FOR DOUBLE DRIVEWAYS TO SEMI-DETACHED HOUSES. FOR MINIMUM PAVING ON DRIVEWAYS IN COUNTY RIGHT-OF-WAY SEE LOCAL ROAD PAVING SURFACES GUIDELINES, DETAIL P/10.



DRIVEWAY ENTRANCE



FRONT VIEW



NOTE: FOR DETAILS OF SECTION "A-A" SEE STANDARD 1/3

PLAN VIEW

ANNE ARUNDEL
COUNTY
DEPARTMENT OF
PUBLIC WORKS

APPROVED

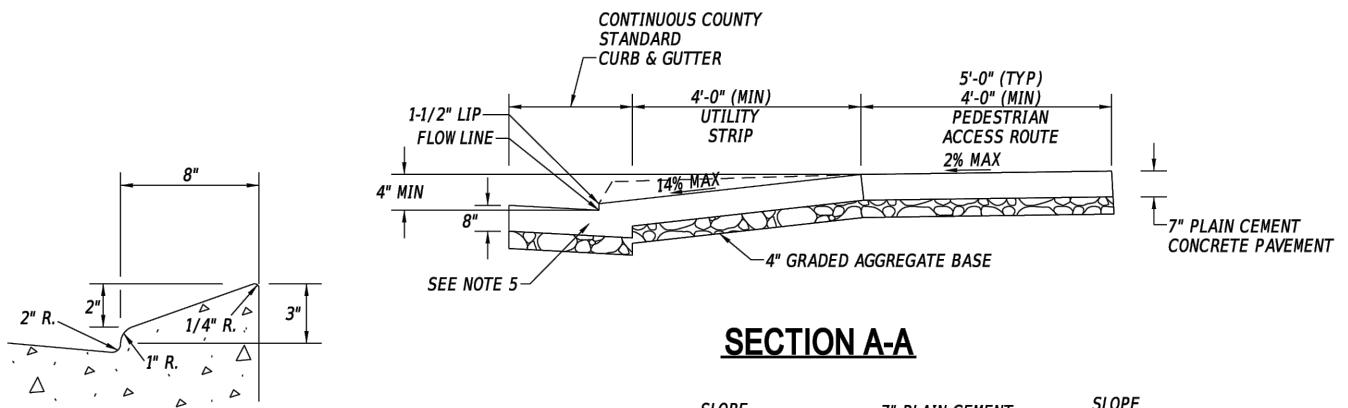
CHIEF ENGINEER

DESIGN ENGINEER
DATE:

STANDARD ROADWAY AND
SITE IMPROVEMENT DETAILS
TYPICAL DOUBLE DRIVEWAY ENTRANCE-URBAN
(SPACE BETWEEN SIDEWALK AND CURB)

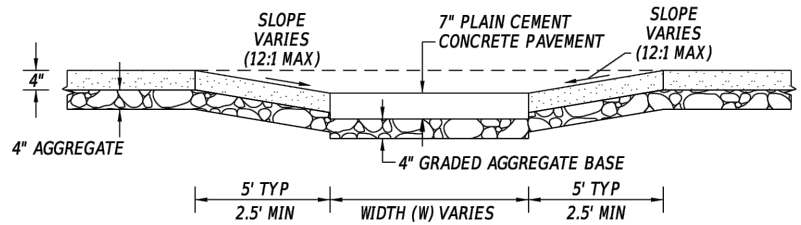
REVISED
04/2024

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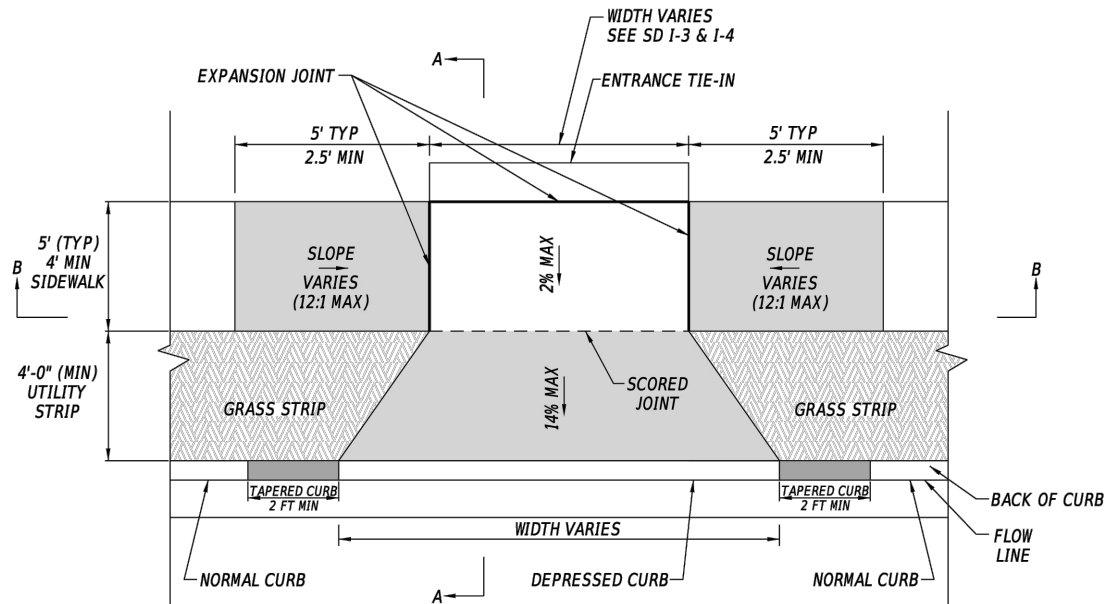


DEPRESSED CURB FOR DRIVEWAY/ENTRANCE

SECTION A-A



SECTION B-B



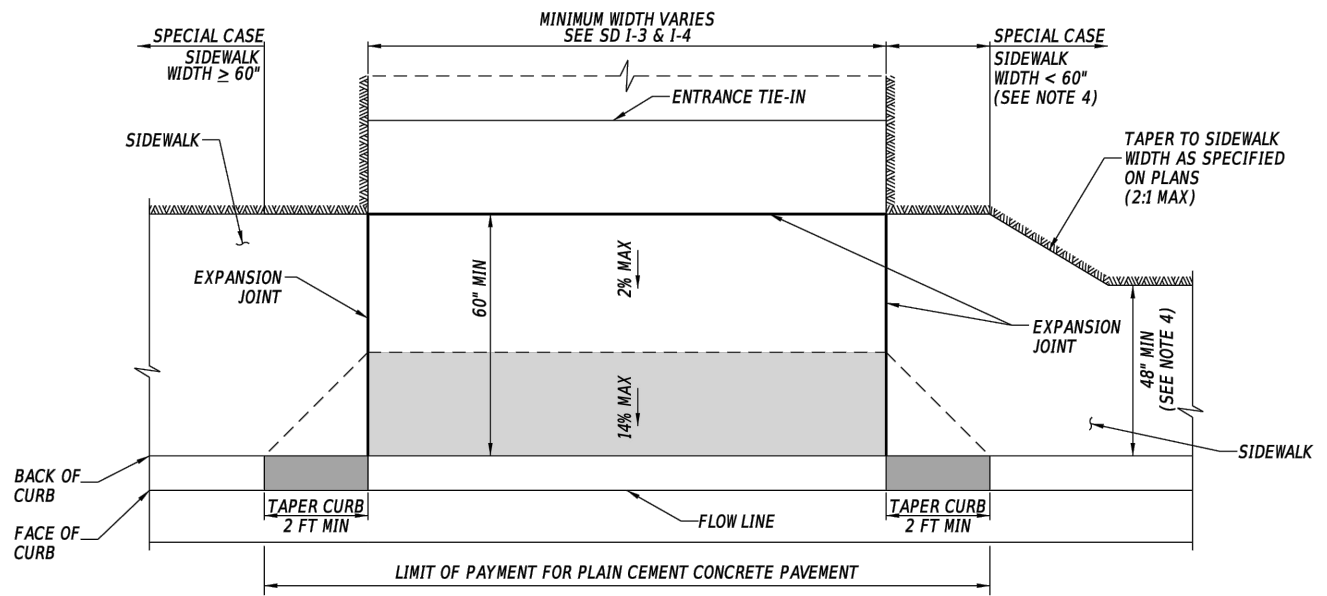
PLAN

NOTES:

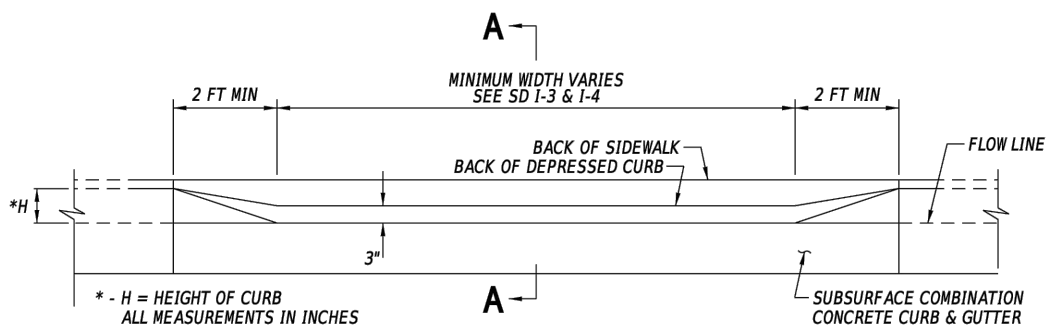
- FOR USE IN AREAS WHERE THERE IS SIDEWALK SEPARATED FROM THE CURB BY A BUFFER (UTILITY STRIP) OR WHERE IT IS EXPECTED THAT SIDEWALK WILL BE ADDED IN THE FUTURE.
- WHEN AN EXISTING ENTRANCE IS LESS THAN THE MINIMUM WIDTH, A UNIFORM TAPER SHALL BE CONSTRUCTED TO TIE INTO THE EXISTING ENTRANCE AS DIRECTED BY THE ENGINEER.
- EXPANSION JOINT MATERIAL TO BE INSTALLED IN ACCORDANCE WITH PED. FAC. STD. DETAIL PF-27 - SIDEWALK JOINTS.
- WHERE 60" SIDEWALK CAN NOT BE PROVIDED, 48" MIN. MAY BE USED WHERE PASSING ZONES ARE PROVIDED IN ACCORDANCE WITH PED. FAC. STD. DETAIL PF-26 - SIDEWALK PASSING ZONES.
- CURB AND COMBINATION CURB AND GUTTER SHALL BE DEPRESSED AS SHOWN ABOVE. PAYMENT FOR DEPRESSING THE CURB SHALL BE INCIDENTAL TO THE PRICE OF THE SPECIFIED CURB.
- TRANSITION PANELS TO TIE INTO EXISTING SIDEWALK SHALL BE INSTALLED IN ACCORDANCE WITH PED. FAC. STD. DETAIL PF-28 - SIDEWALK TRANSITION PANEL.

LEGEND	
	LANDING/TURNING SPACE SEE ADA NOTES C-2
	RAMP SURFACE SEE ADA NOTES C-1
	TAPERED CURB SEE ADA NOTES C-3
	DETECTABLE WARNING SURFACE SEE ADA NOTES D-1

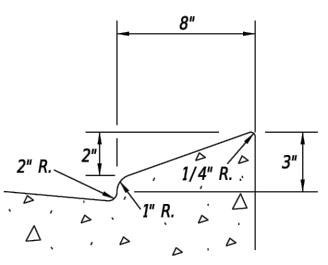
ANNE ARUNDEL COUNTY DEPARTMENT OF PUBLIC WORKS	APPROVED	STANDARD ROADWAY AND SITE IMPROVEMENT DETAILS	REVISED	1 5A
	_____ CHIEF ENGINEER		04/2024	
	_____ DESIGN ENGINEER			
	DATE:			



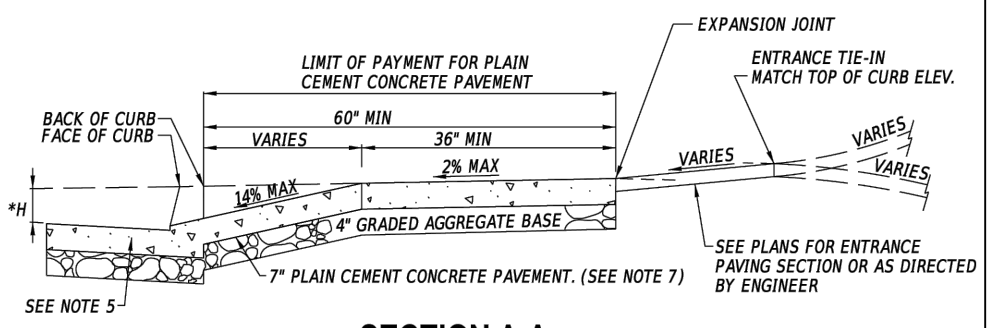
PLAN



ELEVATION



DEPRESSED CURB FOR DRIVEWAY/ENTRANCE



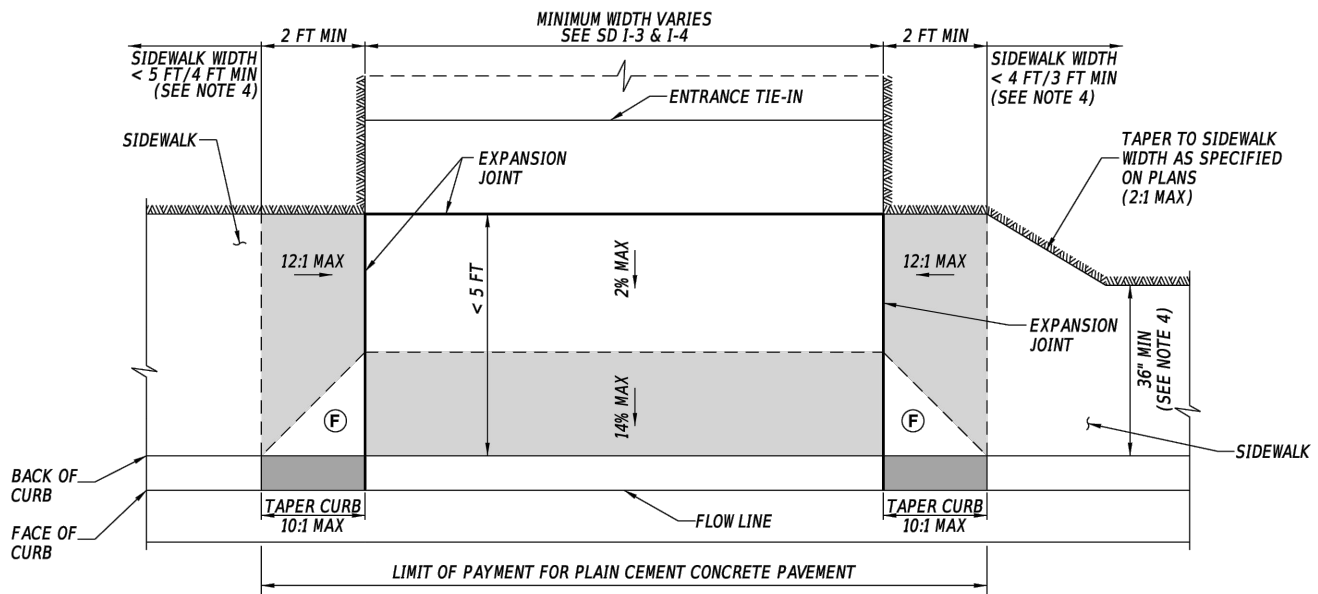
SECTION A-A

NOTES:

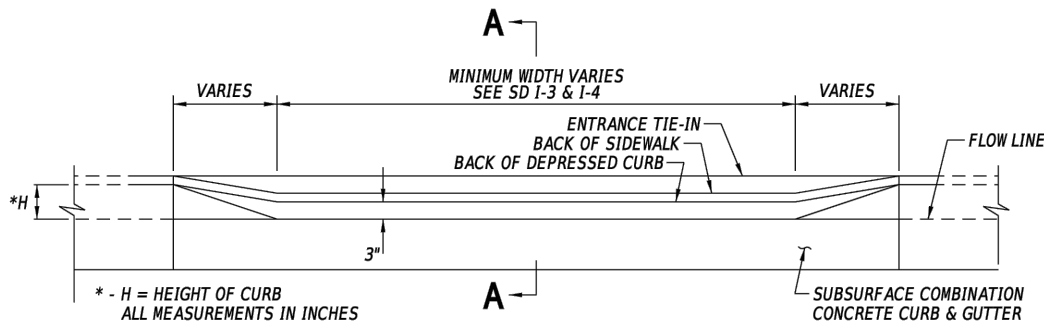
1. FOR USE IN AREAS WHERE THERE IS SIDEWALK ADJACENT TO THE BACK OF CURB OR WHERE IT IS EXPECTED THAT SIDEWALK WILL BE ADDED IN THE FUTURE.
2. WHEN AN EXISTING ENTRANCE IS LESS THAN THE MINIMUM WIDTH, A UNIFORM TAPER SHALL BE CONSTRUCTED TO TIE INTO THE EXISTING ENTRANCE AS DIRECTED BY THE ENGINEER.
3. EXPANSION JOINT MATERIAL TO BE INSTALLED IN ACCORDANCE WITH PED. FAC. STD. DETAIL PF-27 - SIDEWALK JOINTS.
4. WHERE 60" SIDEWALK CAN NOT BE PROVIDED, 48" MIN. MAY BE USED WHERE PASSING ZONES ARE PROVIDED IN ACCORDANCE WITH PED. FAC. STD. DETAIL PF-26 - SIDEWALK PASSING ZONES.
5. CURB AND COMBINATION CURB AND GUTTER SHALL BE DEPRESSED AS SHOWN ABOVE. PAYMENT FOR DEPRESSING THE CURB SHALL BE INCIDENTAL TO THE PRICE OF THE SPECIFIED CURB.
6. TRANSITION PANELS TO TIE INTO EXISTING SIDEWALK SHALL BE INSTALLED IN ACCORDANCE WITH PED. FAC. STD. DETAIL PF-28 - SIDEWALK TRANSITION PANEL.

LEGEND	
	LANDING/TURNING SPACE SEE ADA NOTES C-2
	RAMP SURFACE SEE ADA NOTES C-1
	TAPERED CURB SEE ADA NOTES C-3
	DETECTABLE WARNING SURFACE SEE ADA NOTES D-1

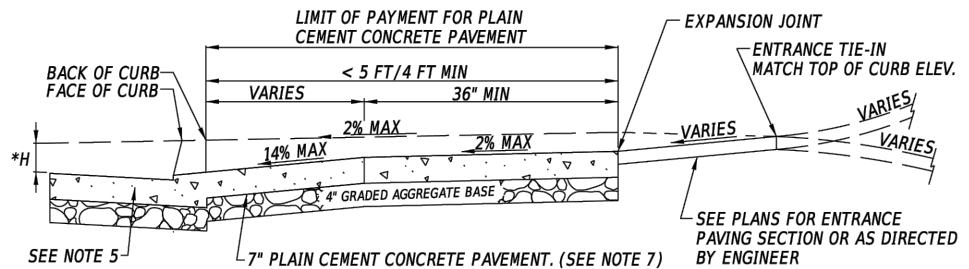
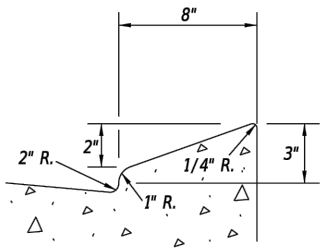
ANNE ARUNDEL COUNTY DEPARTMENT OF PUBLIC WORKS	APPROVED	STANDARD ROADWAY AND SITE IMPROVEMENT DETAILS ADA DRIVEWAY/ENTRANCE 5FT MIN APRON- NO BUFFER	REVISED	1 5B
	_____ CHIEF ENGINEER		04/2024	
	_____ DESIGN ENGINEER			
	DATE:			



PLAN



ELEVATION



DEPRESSED CURB FOR DRIVEWAY/ENTRANCE

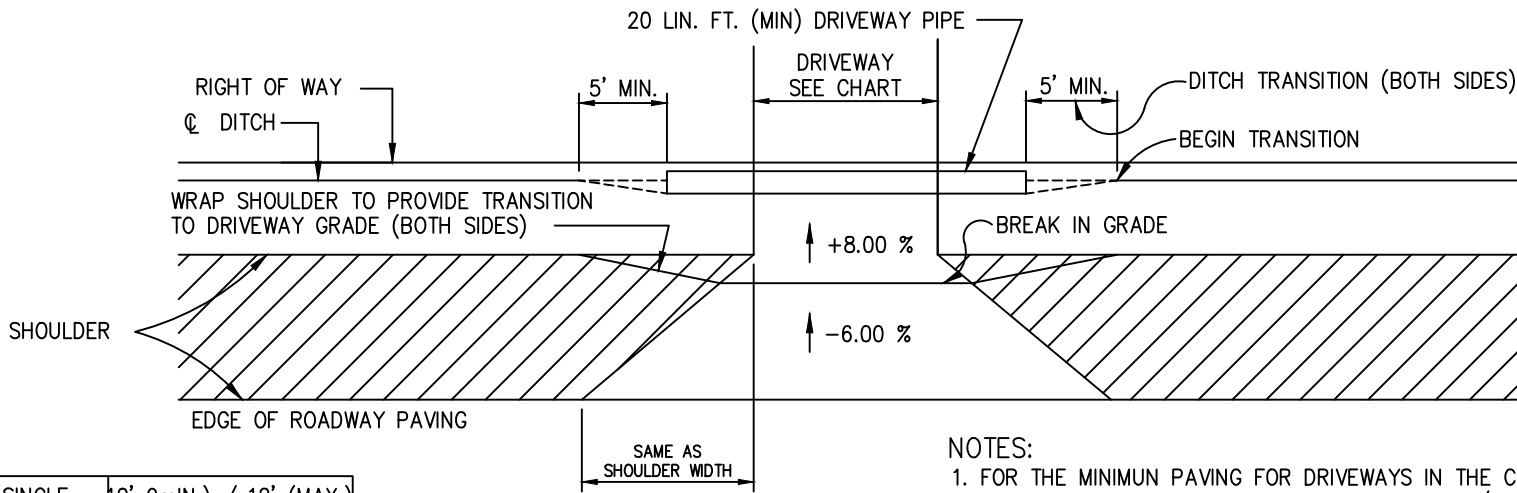
SECTION A-A

NOTES:

- FOR USE IN AREAS WHERE THERE IS SIDEWALK ADJACENT TO THE BACK OF CURB OR WHERE IT IS EXPECTED THAT SIDEWALK WILL BE ADDED IN THE FUTURE.
- WHEN AN EXISTING ENTRANCE IS LESS THAN THE MINIMUM WIDTH, A UNIFORM TAPER SHALL BE CONSTRUCTED TO TIE INTO THE EXISTING ENTRANCE AS DIRECTED BY THE ENGINEER.
- EXPANSION JOINT MATERIAL TO BE INSTALLED IN ACCORDANCE WITH PED. FAC. STD. DETAIL PF-27 - SIDEWALK JOINTS.
- WHERE 60" SIDEWALK CAN NOT BE PROVIDED, 48" MIN. MAY BE USED WHERE PASSING ZONES ARE PROVIDED IN ACCORDANCE WITH STD. DETAIL PF-26 - SIDEWALK PASSING ZONES. 36" MIN SIDEWALK WITH PASSING ZONES ONLY ON ALTERATIONS WITH COUNTY APPROVAL.
- CURB AND COMBINATION CURB AND GUTTER SHALL BE DEPRESSED AS SHOWN ABOVE. PAYMENT FOR DEPRESSING THE CURB SHALL BE INCIDENTAL TO THE PRICE OF THE SPECIFIED CURB.
- TRANSITION PANELS TO TIE INTO EXISTING SIDEWALK SHALL BE INSTALLED IN ACCORDANCE WITH PED. FAC. STD. DETAIL PF-28 - SIDEWALK TRANSITION PANEL

LEGEND	
	LANDING/TURNING SPACE SEE ADA NOTES C-2
	RAMP SURFACE SEE ADA NOTES C-1
	TAPERED CURB SEE ADA NOTES C-3
	DETECTABLE WARNING SURFACE SEE ADA NOTES D-1
	RAMP FLARE SEE ADA NOTES C-3

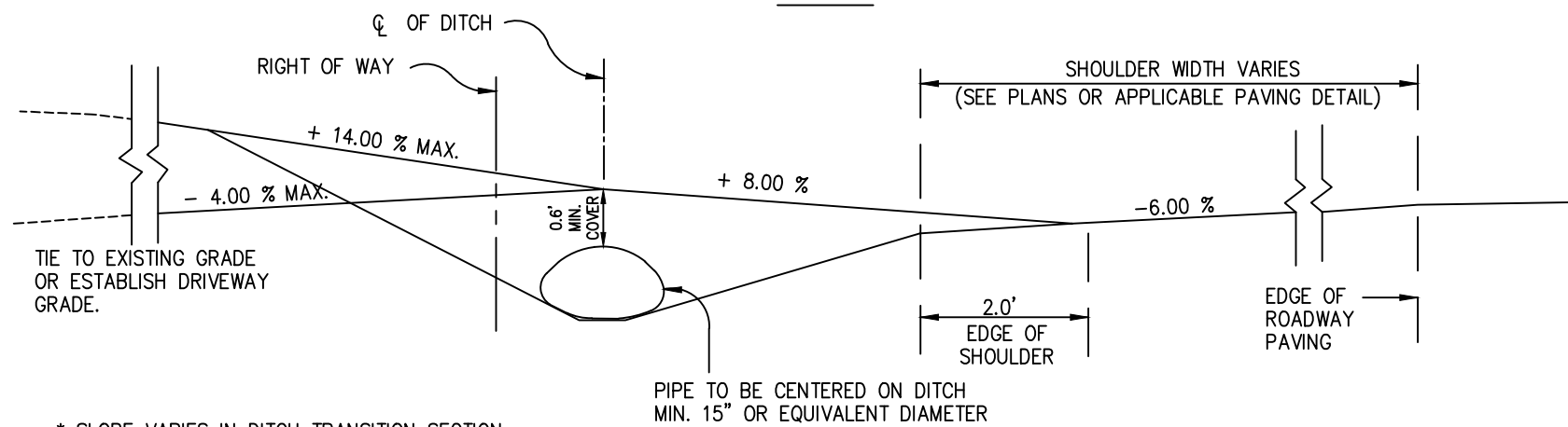
ANNE ARUNDEL COUNTY DEPARTMENT OF PUBLIC WORKS	APPROVED	STANDARD ROADWAY AND SITE IMPROVEMENT DETAILS ADA DRIVEWAY/ENTRANCE <5FT MIN APRON- NO BUFFER	REVISED	1 5C
	_____ CHIEF ENGINEER		04/2024	
	_____ DESIGN ENGINEER			
	DATE:			



SINGLE	10' 9m(IN.) / 12' (MAX.)
DOUBLE	18' (MIN.) / 20' (MAX.)

- NOTES:
1. FOR THE MINIMUM PAVING FOR DRIVEWAYS IN THE COUNTY RIGHT OF WAY, SEE LOCAL ROAD PAVING GUIDELINES, DETAIL P/10.
 2. A MINIMUM OF 20 LIN. FT. OF METAL PIPE (16 GAUGE MINIMUM) TO BE INSTALLED.
 3. DITCH LINING AND VELOCITY DISSIPATORS TO BE PROVIDED AS REQUIRED.

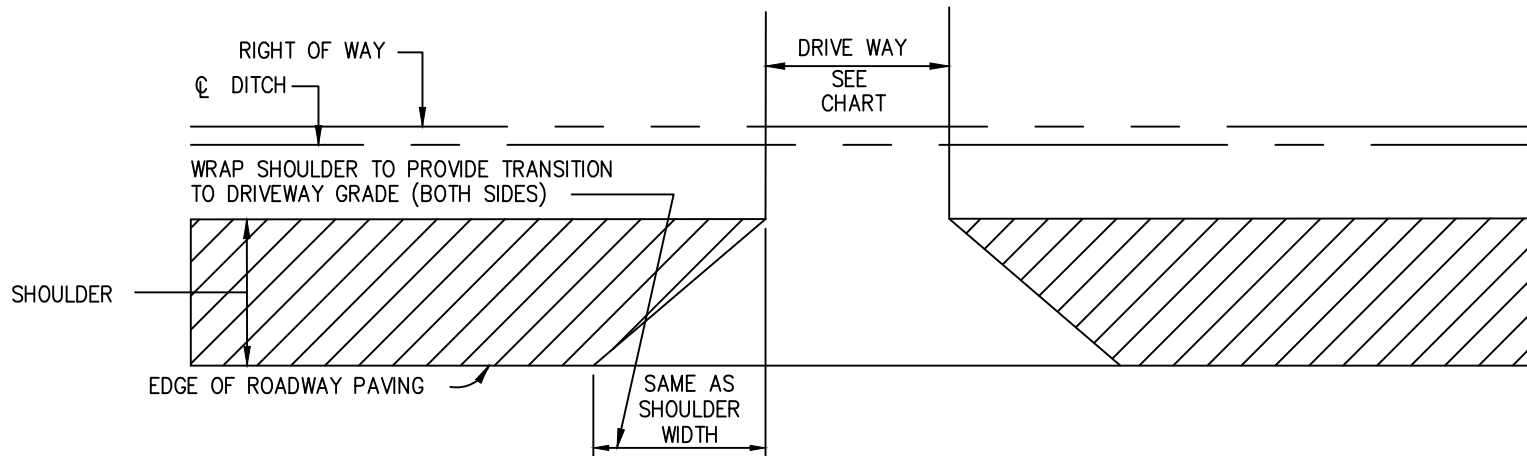
PLAN



- * SLOPE VARIES IN DITCH TRANSITION SECTION FROM MAX. 1.5:1 AT FACE OF PIPE TO 2:1 AT BEGING OF TRANSITION.
- ** SLOPE VARIES IN DITCH TRANSITION SECTION FROM MAX. OF 3.5:1 AT FACE OF PIPE TO 4:1 AT BEGING OF TRANSITION.

SECTION

ANNE ARUNDEL COUNTY DEPARTMENT OF PUBLIC WORKS	APPROVED _____ CHIEF ENGINEER	STANDARD ROADWAY AND SITE IMPROVEMENT DETAILS TYPICAL DRIVEWAY ENTRANCE—RURAL (WITH DRAINAGE PIPE)	REVISED 04/2024	1 <hr style="width: 100%;"/> 6
	_____ DESIGN ENGINEER		_____	
	DATE:		_____	
	_____		_____	

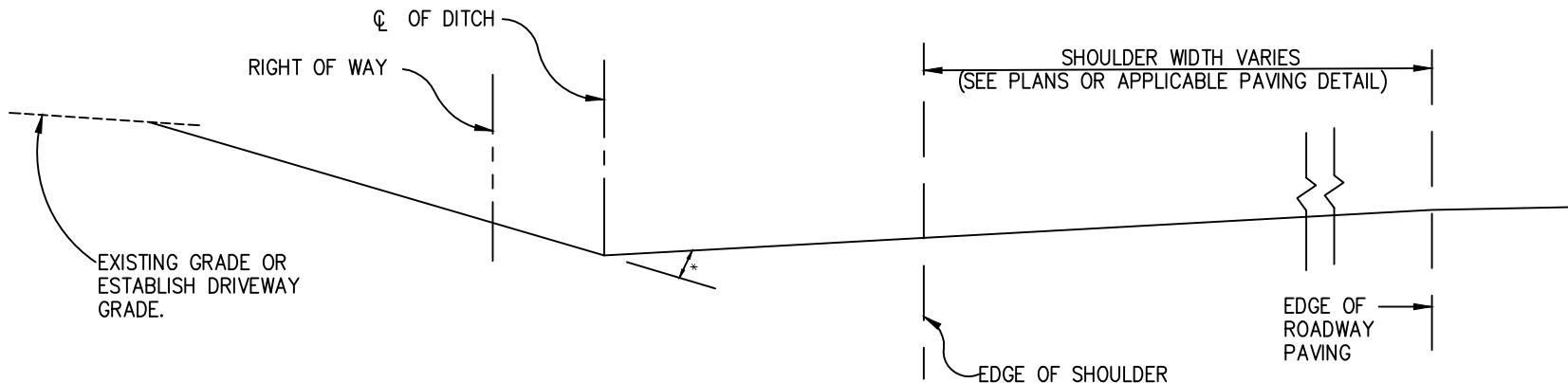


PLAN

SINGLE	10' (MIN.) / 12' (MAX.)
DOUBLE	18' (MIN.) / 20' (MAX.)

NOTES:

1. FOR THE MINIMUM PAVING FOR DRIVEWAYS IN THE COUNTY RIGHT OF WAY, SEE LOCAL ROAD PAVING SECTIONS, DETAIL P/10.
2. DITCH LINING AND VELOCITY DISSIPATORS TO BE PROVIDED AS REQUIRED.
3. ALLOWING SURFACE DRAINAGE TO CROSS A PAVED DRIVEWAY ON THE SURFACE IS SUBJECT TO THE APPROVAL OF THE DEPARTMENT OF PUBLIC WORKS.
- * 4. MAXIMUM ALGEBRAIC GRADE DIFFERENCE IS 14 %.



SECTION

ANNE ARUNDEL
COUNTY
DEPARTMENT OF
PUBLIC WORKS

APPROVED

CHIEF ENGINEER

DESIGN ENGINEER

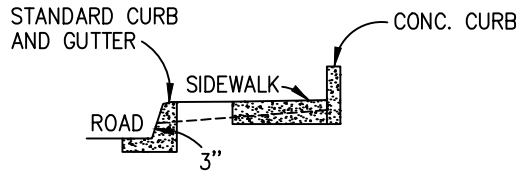
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STANDARD ROADWAY AND
SITE IMPROVEMENT DETAILS
TYPICAL DRIVEWAY ENTRANCE—RURAL
(WITHOUT DRAINAGE PIPE)

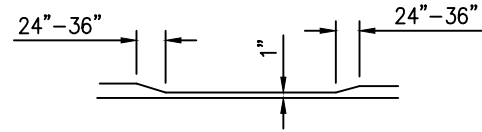
REVISED

04/2024

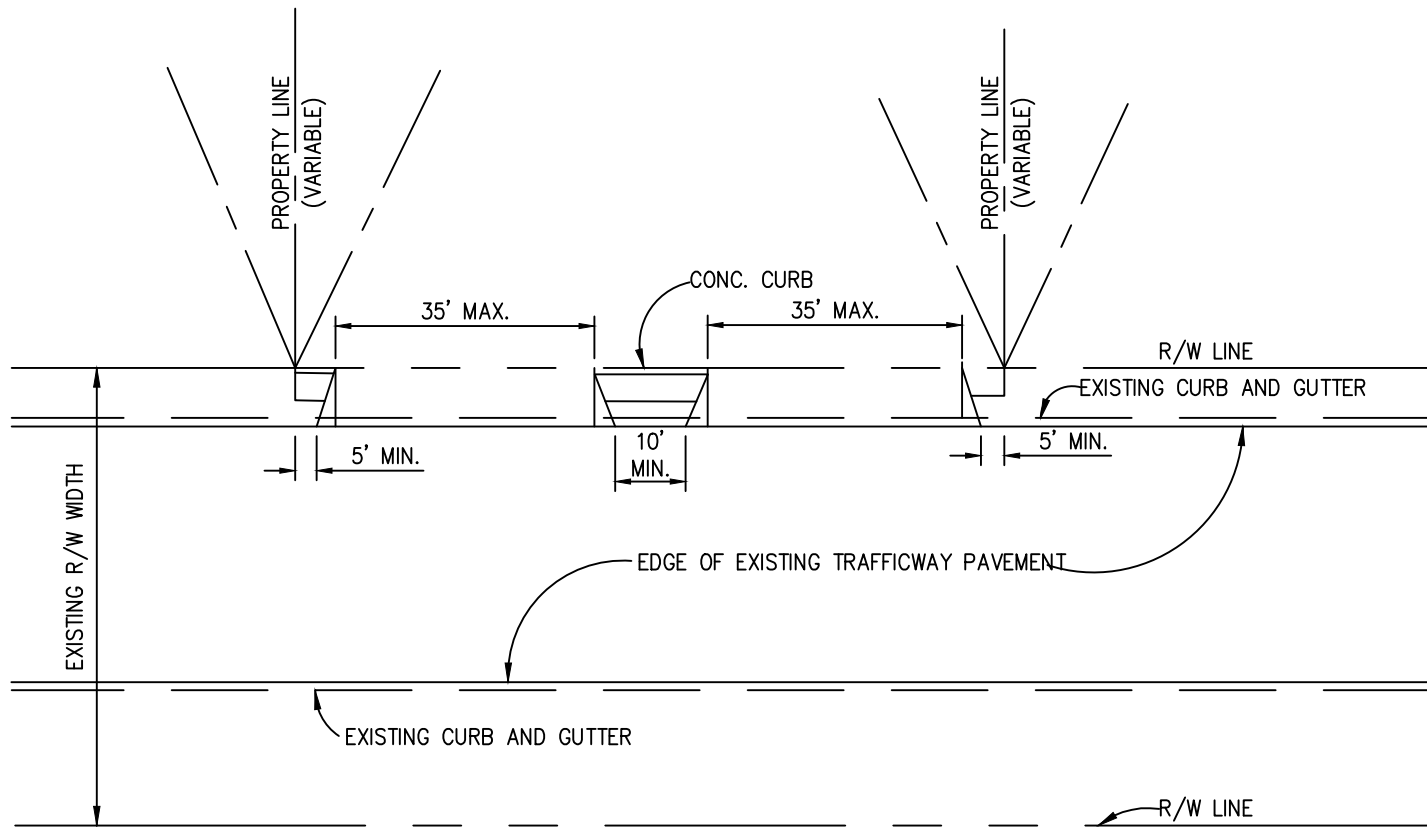
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SIDE VIEW



FRONT VIEW



ANNE ARUNDEL
COUNTY
DEPARTMENT OF
PUBLIC WORKS

APPROVED

CHIEF ENGINEER

DESIGN ENGINEER

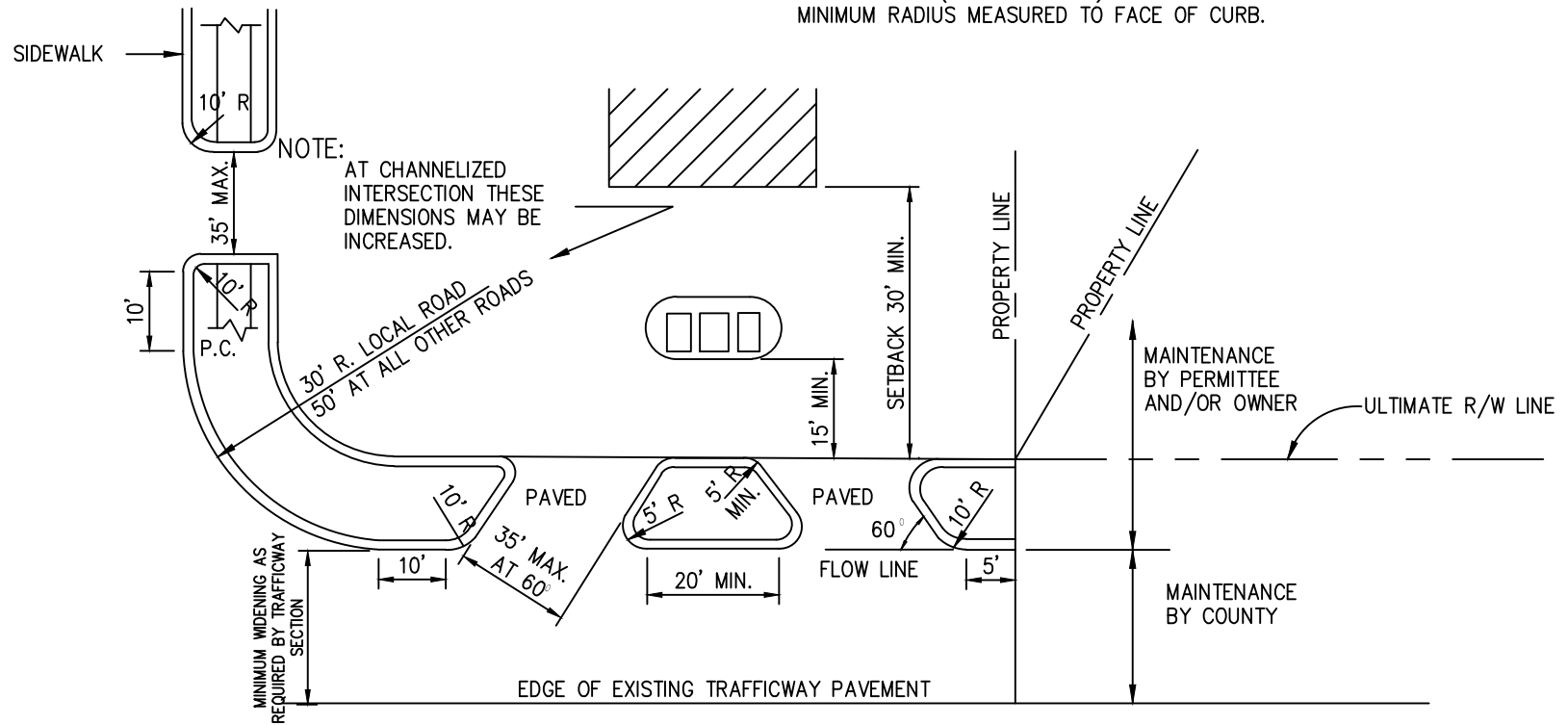
DATE:

STANDARD ROADWAY AND
SITE IMPROVEMENT DETAILS
CHANNELIZATION OF COMMERCIAL
ENTRANCES (URBAN)

REVISED
04/2024

1
7

NOTE:
 FINAL PLANS SHALL INDICATE STRUCTURES
 TRAFFIC PATTERN, TOPO, (EX. AND PROP.) DIMENSIONS,
 STORM DRAIN (EX. AND PROP.) AND ETC.
 MINIMUM RADIUS MEASURED TO FACE OF CURB.



ANNE ARUNDEL
 COUNTY
 DEPARTMENT OF
 PUBLIC WORKS

APPROVED

 CHIEF ENGINEER

 DESIGN ENGINEER

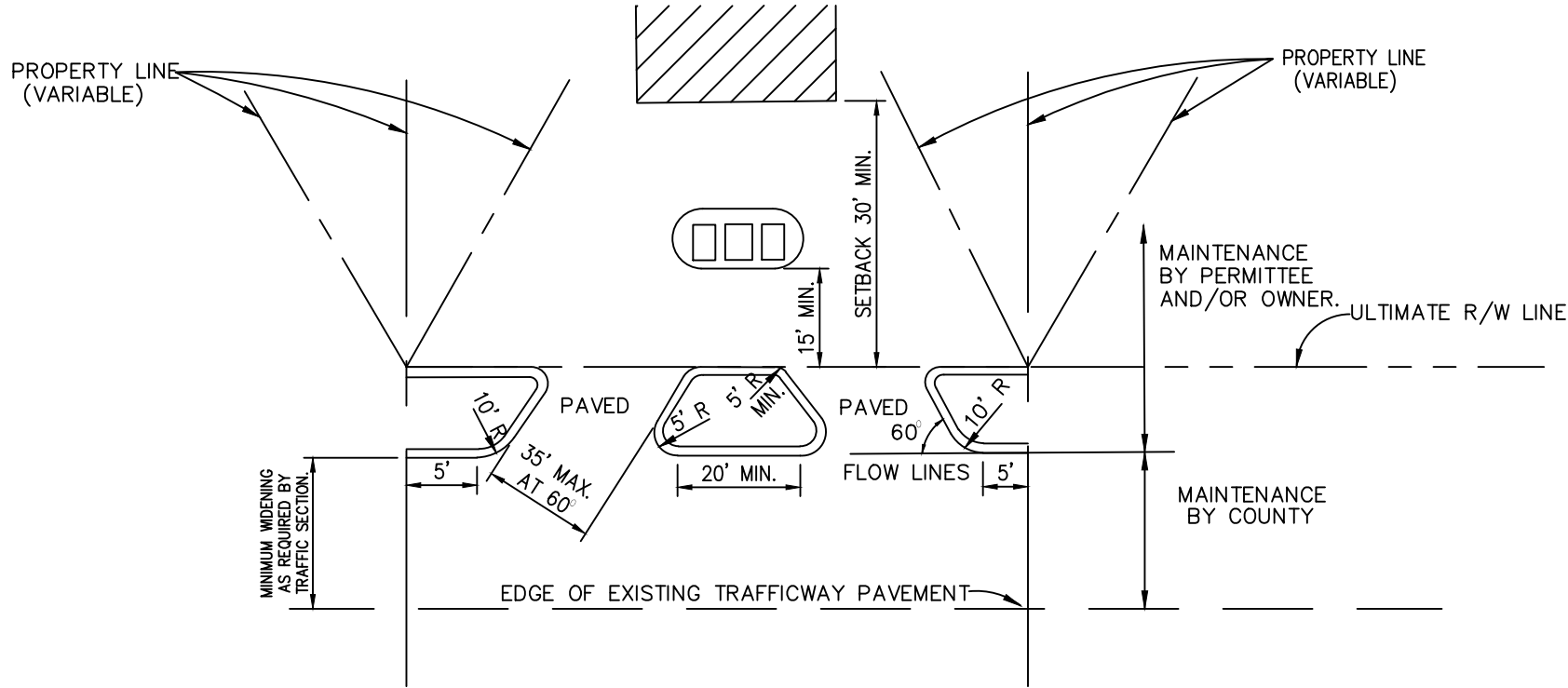
DATE:

STANDARD ROADWAY AND
 SITE IMPROVEMENT DETAILS
 CHANNELIZATION OF COMMERCIAL ENTRANCES
 AT ROAD INTERSECTIONS--(RURAL DUAL)

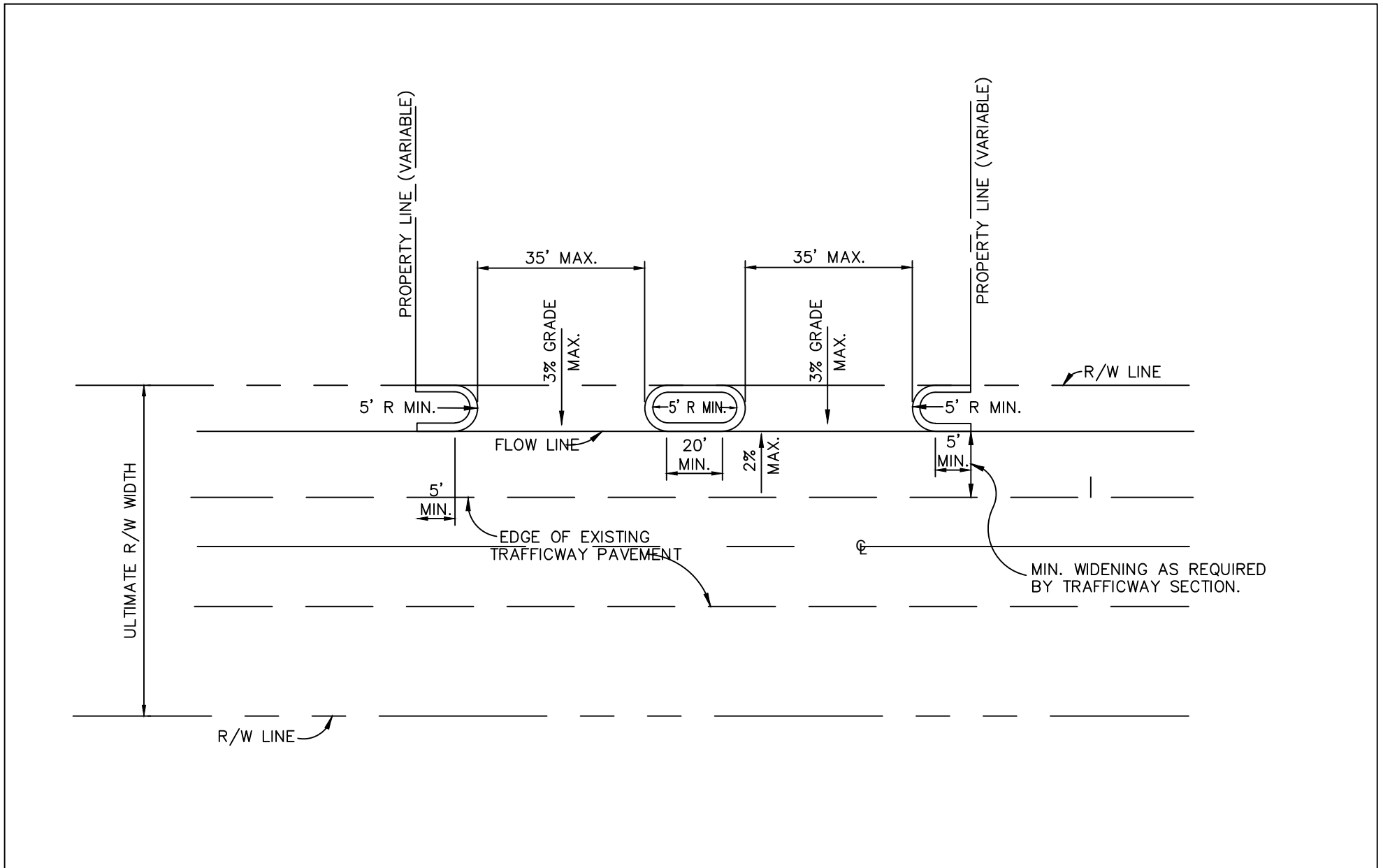
REVISED
 04/2024

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NOTE:
 FINAL PLANS SHALL INDICATE STRUCTURES,
 TRAFFIC PATTERNS, TOPO (EX. AND PROP.) DIMENSIONS,
 STORM DRAINS (EX. AND PROP.) AND ETC.
 MINIMUM RADIUS MEASURED TO FACE OF CURB.



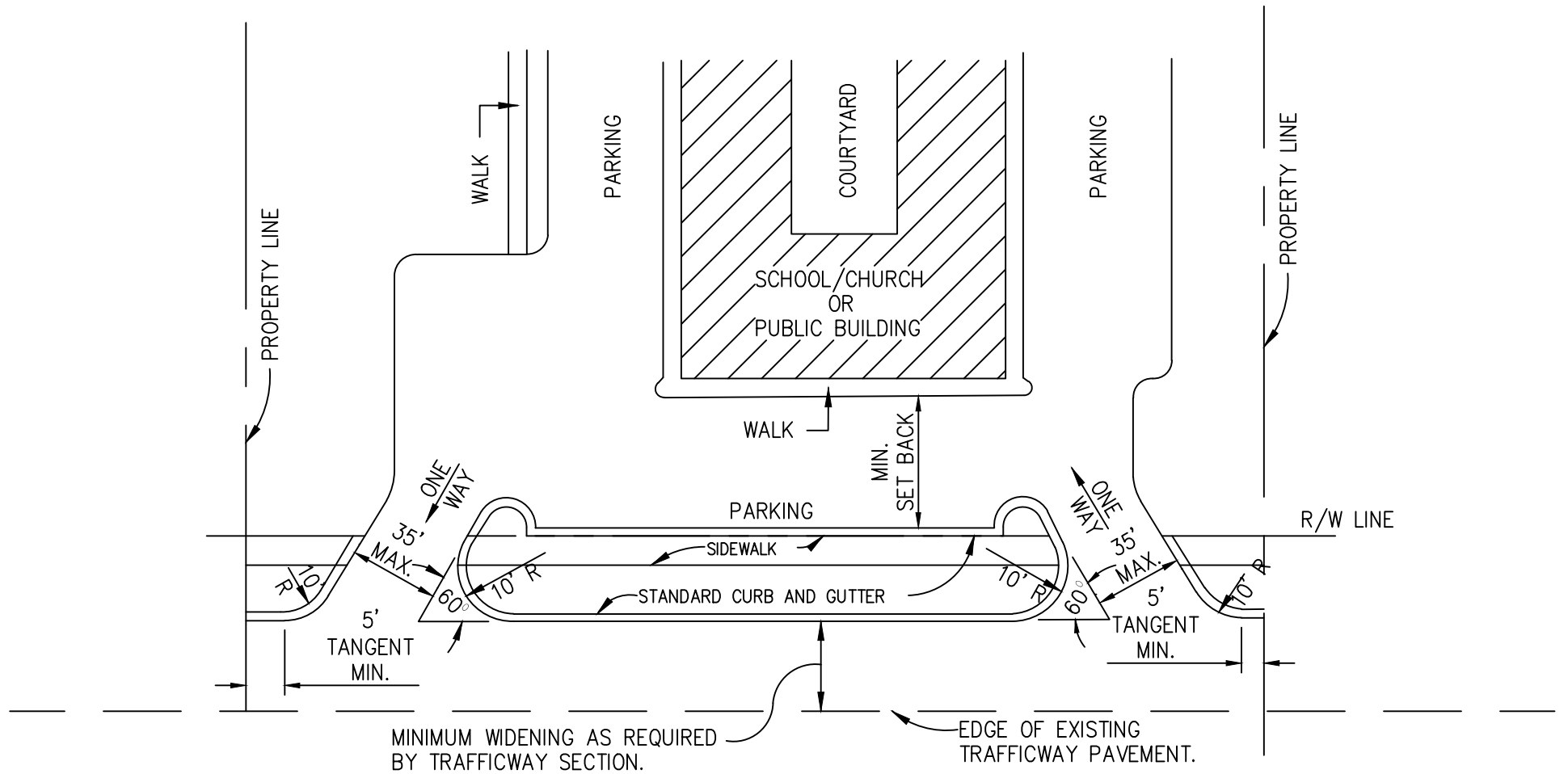
ANNE ARUNDEL COUNTY DEPARTMENT OF PUBLIC WORKS	APPROVED _____ CHIEF ENGINEER	STANDARD ROADWAY AND SITE IMPROVEMENT DETAILS CHANNELIZATION OF COMMERCIAL ENTRANCE MID BLOCK-(RURAL DUAL)	REVISED 04/2024	1 — 9
	_____ DESIGN ENGINEER		_____	
	DATE:		_____	
	_____		_____	



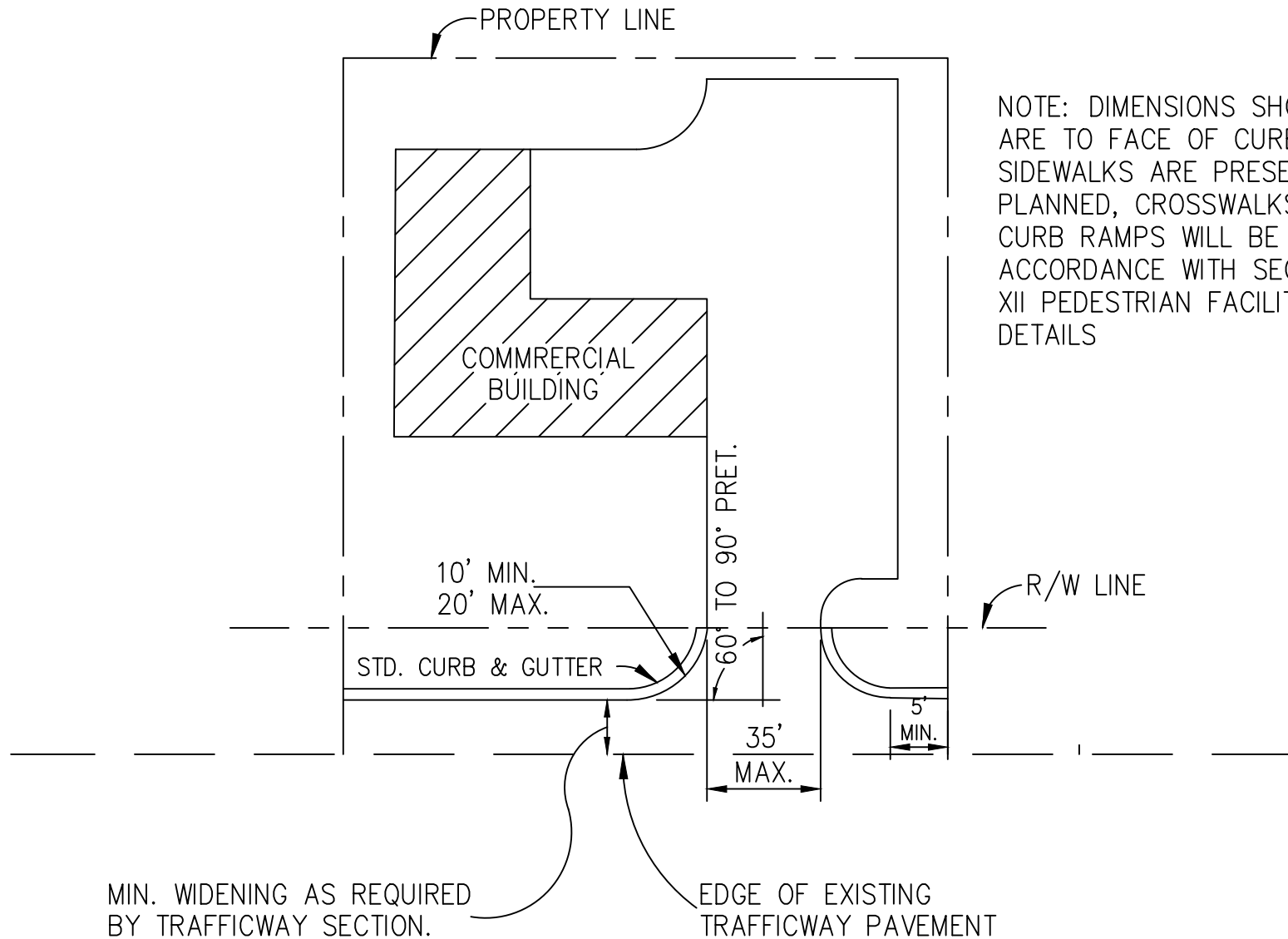
ANNE ARUNDEL COUNTY DEPARTMENT OF PUBLIC WORKS	APPROVED _____ CHIEF ENGINEER	STANDARD ROADWAY AND SITE IMPROVEMENT DETAILS CHANNELIZATION OF COMMERCIAL ENTRANCES (RURAL UNDIVIDED HIGHWAY)	REVISED 04/2024	1 10
	_____ DESIGN ENGINEER		_____	
	DATE:		_____	
	_____		_____	

NOTE:

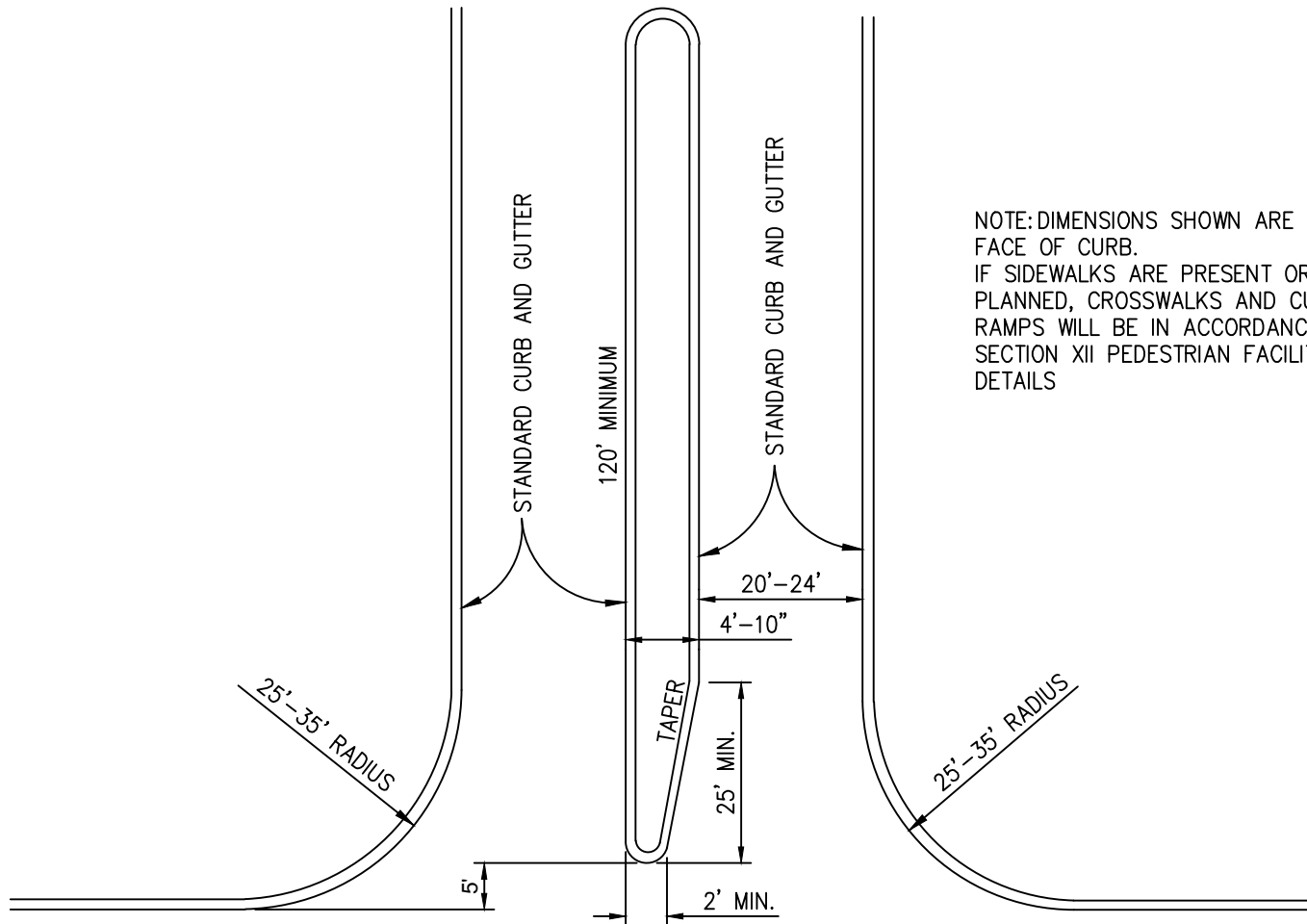
MINIMUM RADIUS = 10'
 MAXIMUM RADIUS = 20'
 FOR CURB RADIUS; MEASURED TO FACE OF CURB.



ANNE ARUNDEL COUNTY DEPARTMENT OF PUBLIC WORKS	APPROVED _____ CHIEF ENGINEER	STANDARD ROADWAY AND SITE IMPROVEMENT DETAILS DRIVEWAYS TO A PUBLIC BUILDING—RURAL	REVISED 04/2024	 11
	_____ DESIGN ENGINEER		_____	
	DATE:		_____	
	_____		_____	

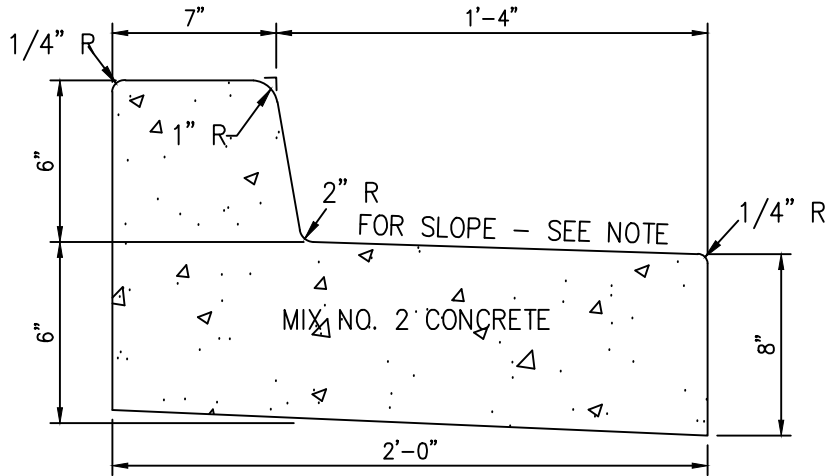


ANNE ARUNDEL COUNTY DEPARTMENT OF PUBLIC WORKS	APPROVED _____ CHIEF ENGINEER	STANDARD ROADWAY AND SITE IMPROVEMENT DETAILS SINGLE DRIVEWAY COMMERCIAL ESTABLISHMENT (RURAL)	REVISED 04/2024	1 12
	_____ DESIGN ENGINEER		_____	
	DATE:		_____	
	_____		_____	



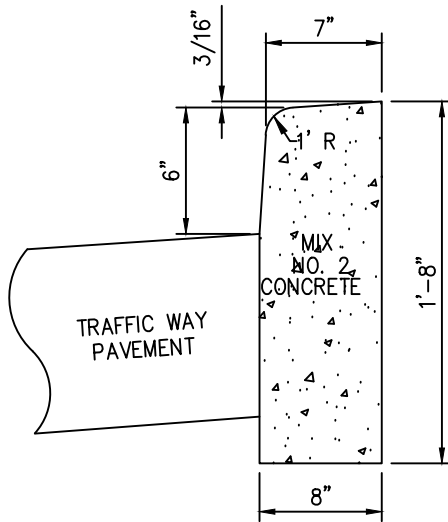
NOTE: DIMENSIONS SHOWN ARE TO FACE OF CURB.
 IF SIDEWALKS ARE PRESENT OR PLANNED, CROSSWALKS AND CURB RAMPS WILL BE IN ACCORDANCE WITH SECTION XII PEDESTRIAN FACILITIES DETAILS

ANNE ARUNDEL COUNTY DEPARTMENT OF PUBLIC WORKS	APPROVED _____ CHIEF ENGINEER	STANDARD ROADWAY AND SITE IMPROVEMENT DETAILS SIMPLE MONUMENTAL ENTRANCE	REVISED 04/2024	1 13
	_____ DESIGN ENGINEER		_____	
	DATE:		_____	
	_____		_____	

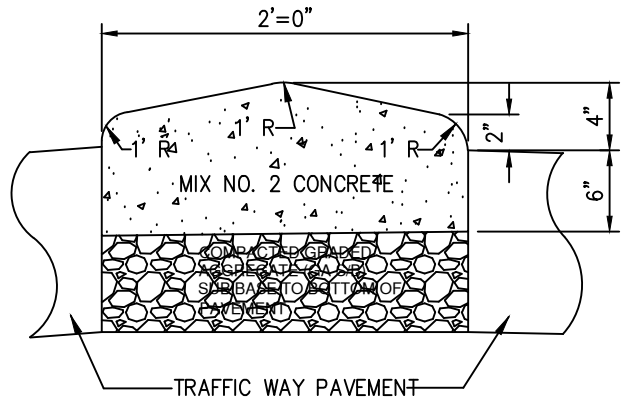


NOTE:
SLOPE AT SAME RATE AS LINEAR SLOPE ACROSS PAVING.

REVERSE SLOPE CURB AND GUTTER



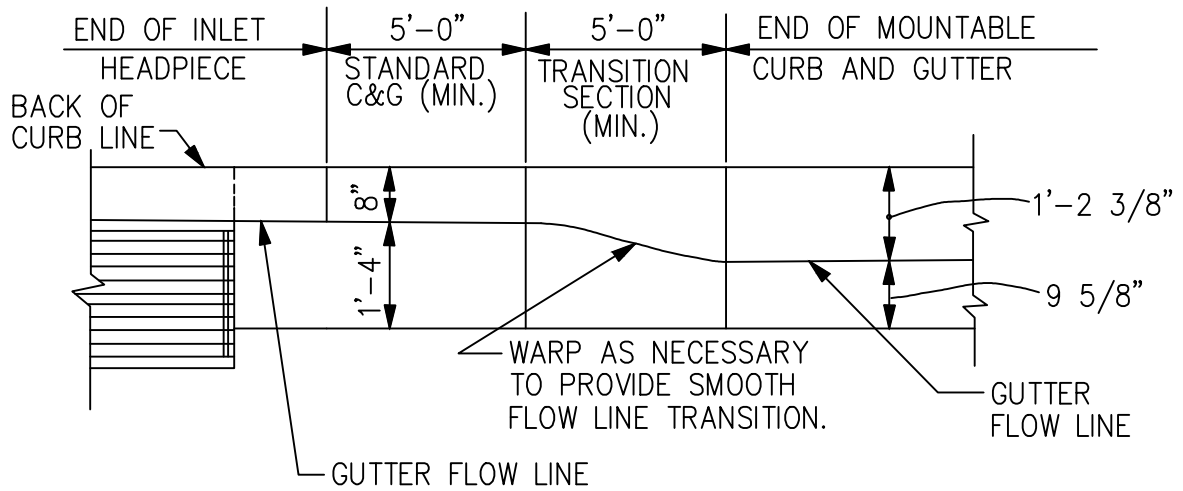
TYPE "A"



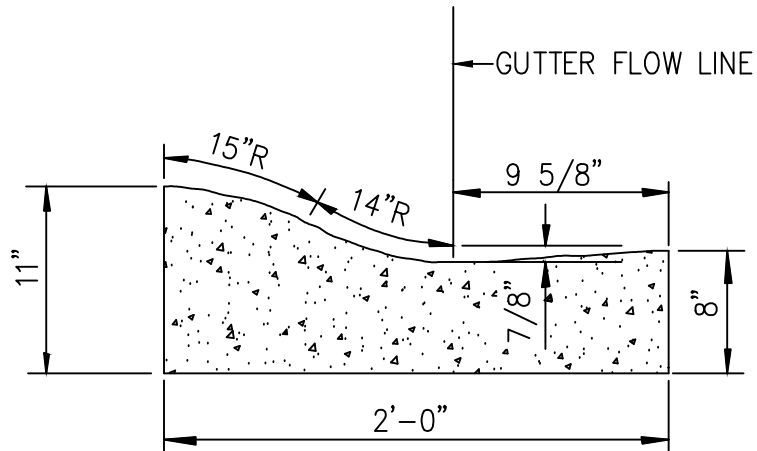
TYPE "B"

NOTE:
TYPE "A" AND TYPE "B" MEDIAN CURBS TO BE USED ONLY UPON APPROVAL OF THE DEPARTMENT OF PUBLIC WORKS.

ANNE ARUNDEL COUNTY DEPARTMENT OF PUBLIC WORKS	APPROVED	STANDARD ROADWAY AND SITE IMPROVEMENT DETAILS STANDARD MEDIAN CURBS	REVISED	1 25
	_____		04/2024	
	CHIEF ENGINEER		_____	
	DESIGN ENGINEER		_____	
	DATE:			

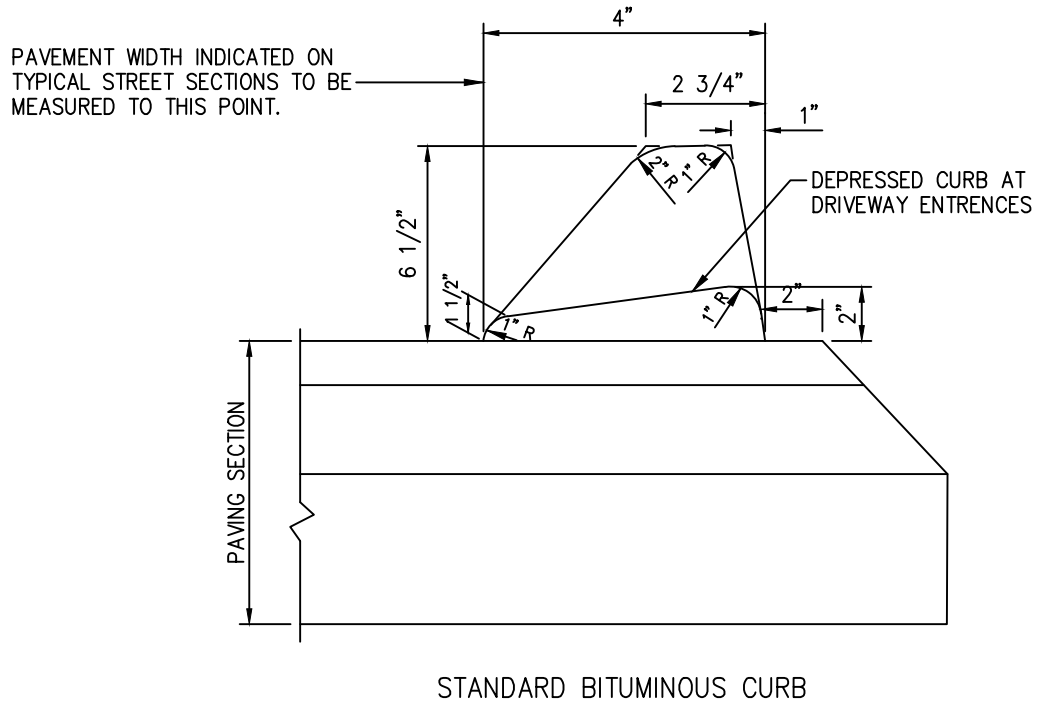


TYPICAL TRANSITION STANDARD CURB AND GUTTER TO MOUNTABLE CURB AND GUTTER

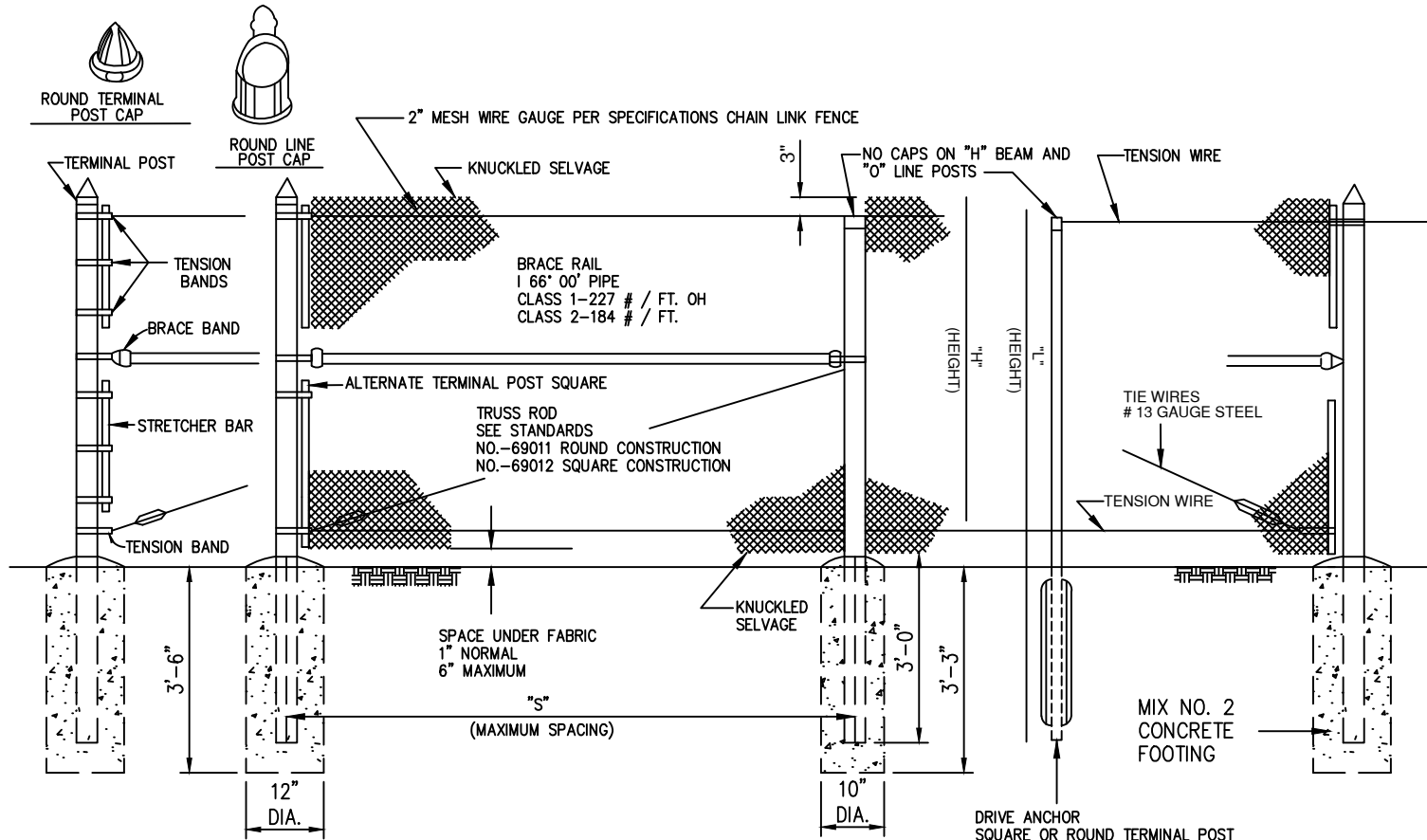


MOUNTABLE CURB AND GUTTER

ANNE ARUNDEL COUNTY DEPARTMENT OF PUBLIC WORKS	APPROVED	STANDARD ROADWAY AND SITE IMPROVEMENT DETAILS MOUNTABLE CURB AND GUTTER	REVISED	1 26
	_____		04/2024	
	CHIEF ENGINEER		_____	
	DESIGN ENGINEER		_____	
	DATE:		_____	



ANNE ARUNDEL COUNTY DEPARTMENT OF PUBLIC WORKS	APPROVED _____ CHIEF ENGINEER	STANDARD ROADWAY AND SITE IMPROVEMENT DETAILS STANDARD BITUMINOUS CONCRETE CURB	REVISED 04/2024	1 27
	_____ DESIGN ENGINEER		_____	
	DATE:		_____	
	_____		_____	
	_____		_____	



"H" HEIGHT OF FENCE	5'-0" RURAL	6'-0"	8'-0"	
"S" POST SPACING MAX.	12'-0"	10'-0"	10'-0"	
"L" LENGTH INCL CAP	7'-8" MIN.	8'-8" MIN.	10'-8"	
LINE POSTS	ROUND-CLASS 1	1.90" O.D @ 2.27 #/FT.	2.375" O.D. @ 3.65 #/FT.	2.375" O.D. @ 3.65 #/FT.
	ROUND-CLASS 2	1.90" O.D @ 2.28 #/FT.	2.375" O.D. @ 3.12 #/FT.	2.375" O.D. @ 3.12 #/FT.
	H BEAM-STEEL	2.25"x1.17"@3.26 #/FT.	2.25"x1.17"@3.26 #/FT.	2.25"x1.17"@3.26 #/FT.
	H BEAM-ALUM.	2.25"x1.95"@1.25 #/FT.	2.25"x1.95"@1.25 #/FT.	2.25"x1.95"@1.25 #/FT.
TERM POSTS	C POST-STEEL	2.25"x1.70"@2.73 #/FT.	2.25"x1.70"@2.73 #/FT.	2.25"x1.70"@2.73 #/FT.
	ROUND-CLASS 1	2.375" O.D. @ 3.65 #/FT.	2.875" O.D. @ 5.79 #/FT.	2.875" O.D. @ 5.79 #/FT.
	ROUND-CLASS 2	2.375" O.D. @ 3.12 #/FT.	2.875" O.D. @ 4.64 #/FT.	2.875" O.D. @ 4.64 #/FT.
	SQUARE-ALT.	2.00" SQ. @ 3.60 #/FT.	2.00" SQ. @ 5.70 #/FT.	2.00" SQ. @ 5.70 #/FT.

NOTES:

1. ALL ROUND LINE POSTS TO BE CAPPED WITH LOOP CAPS TENSION WIRE TO RUN THROUGH LOOP CAPS TO BE FASTENED TO ALL TERMINAL POSTS WITH TENSION BANDS.
2. FASTEN FABRIC TO TENSION WIRE WITH HOG RINGS @ 18" C/C HOG RINGS TO BE 12 1/2" GAUGE GALVANIZED STEEL WIRE.
3. MATERIALS TO MEET REQUIREMENTS OF AASHTO M 181.
4. COLOR OF VINYL SHALL BE WARM GRAY OR BLACK BLACK SEE SPECIAL PROVISIONS.

ANNE ARUNDEL
COUNTY
DEPARTMENT OF
PUBLIC WORKS

APPROVED

CHIEF ENGINEER

DESIGN ENGINEER

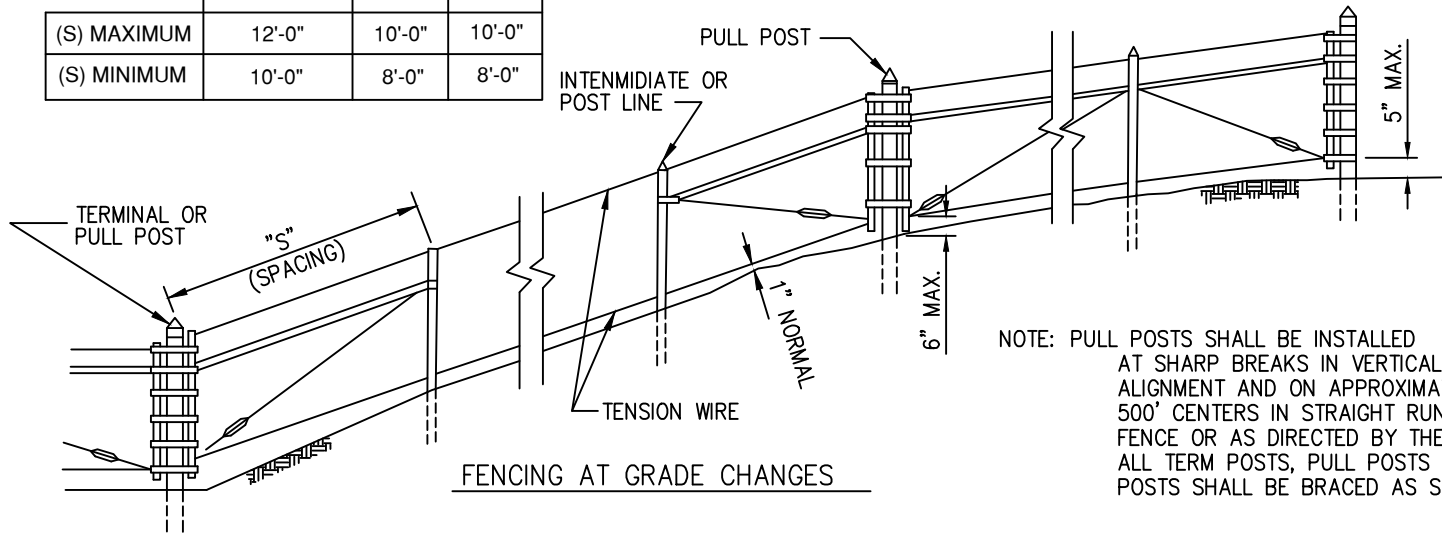
DATE:

STANDARD ROADWAY AND
SITE IMPROVEMENT DETAILS
CHAIN LINK FENCE TYPICAL
5FT. RURAL 6FT. & 8FT.

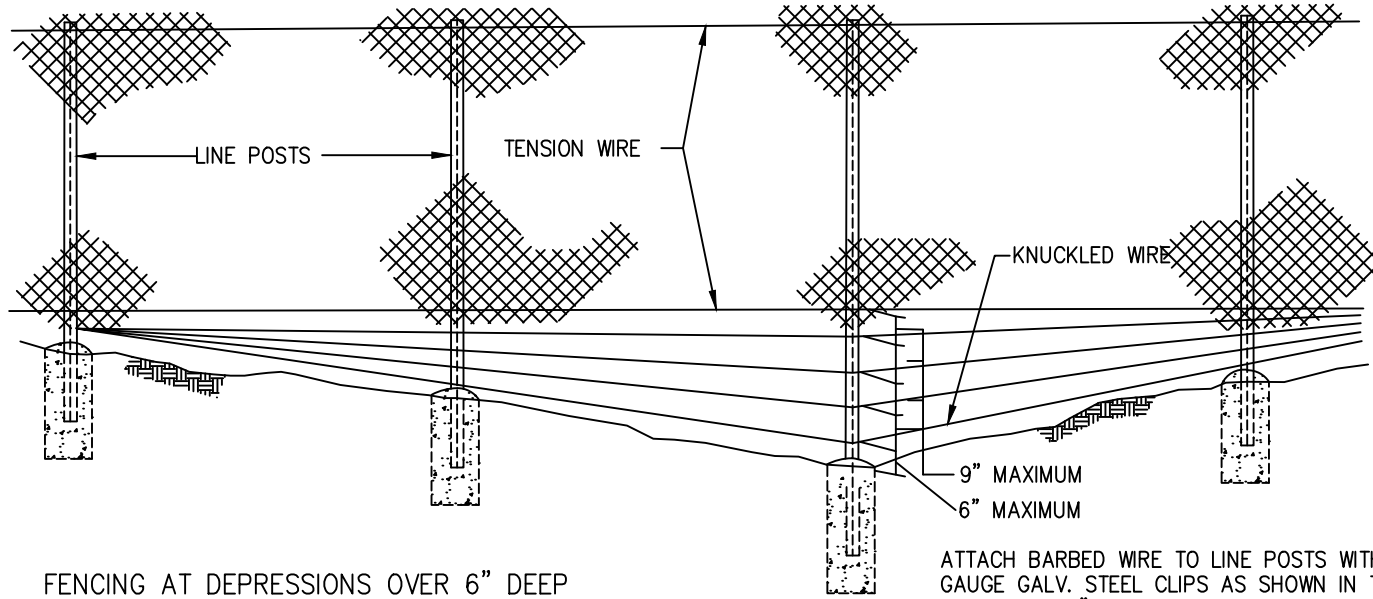
REVISED
04/2024

1
28

	5'-0" RURAL	6'-0"	8'-0"
(S) MAXIMUM	12'-0"	10'-0"	10'-0"
(S) MINIMUM	10'-0"	8'-0"	8'-0"



NOTE: PULL POSTS SHALL BE INSTALLED AT SHARP BREAKS IN VERTICAL ALIGNMENT AND ON APPROXIMATE 500' CENTERS IN STRAIGHT RUNS OF FENCE OR AS DIRECTED BY THE ENGINEER. ALL TERM POSTS, PULL POSTS AND CORNER POSTS SHALL BE BRACED AS SHOWN.



ATTACH BARBED WIRE TO LINE POSTS WITH NO. 9 GAUGE GALV. STEEL CLIPS AS SHOWN IN THE DETAILS FOR "TIE WIRE ATTACHMENT FOR LINE POST" ON DETAIL 1/32.

ANNE ARUNDEL
COUNTY
DEPARTMENT OF
PUBLIC WORKS

APPROVED

CHIEF ENGINEER

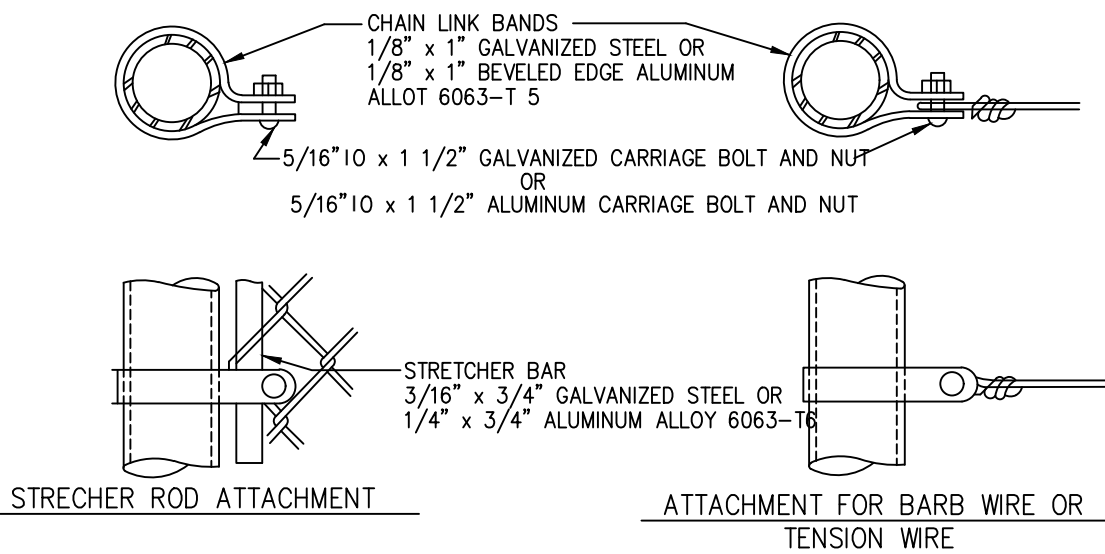
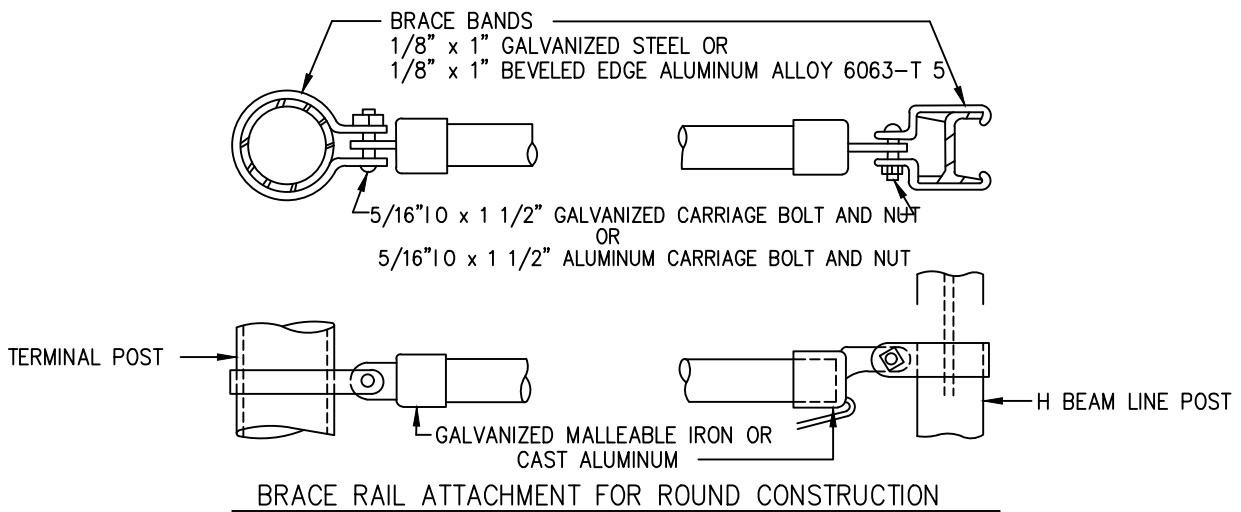
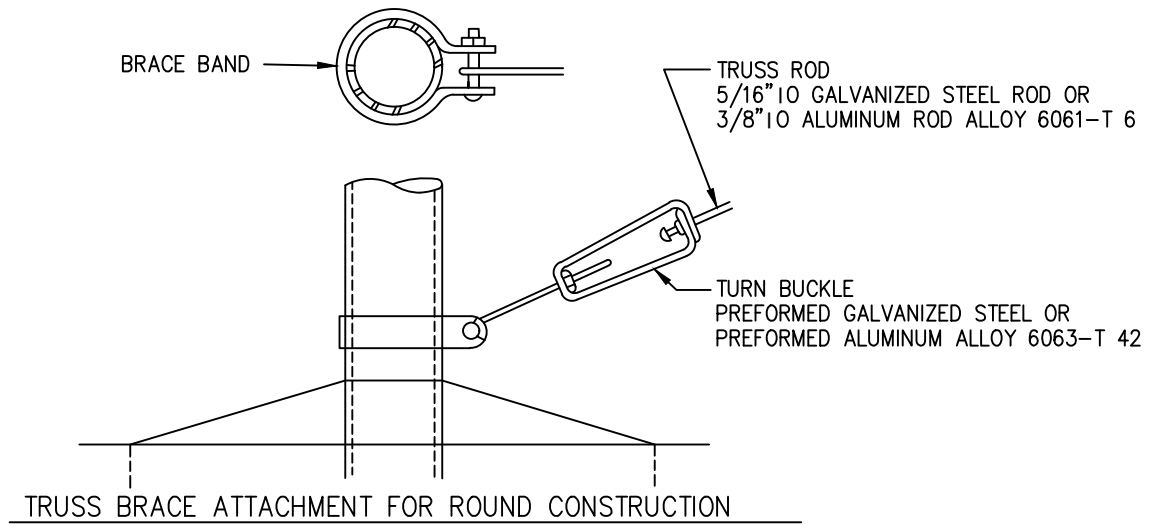
DESIGN ENGINEER

DATE:

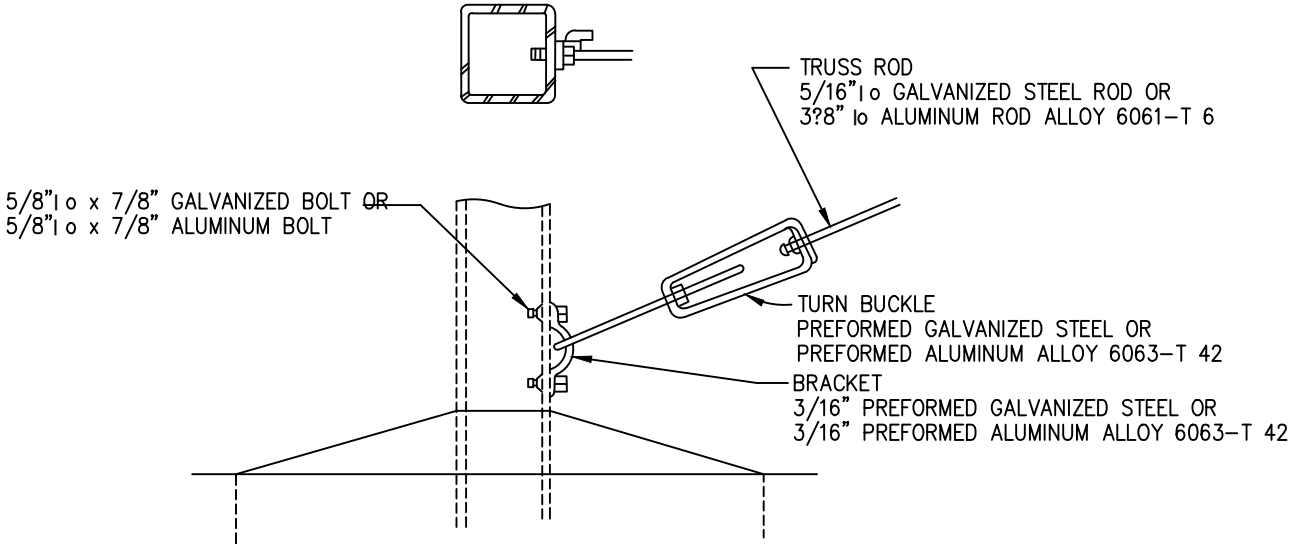
STANDARD ROADWAY AND
SITE IMPROVEMENT DETAILS
CHAIN LINK FENCE AT GRADE
CHANGES AND DEPRESSIONS

REVISED
04/2024

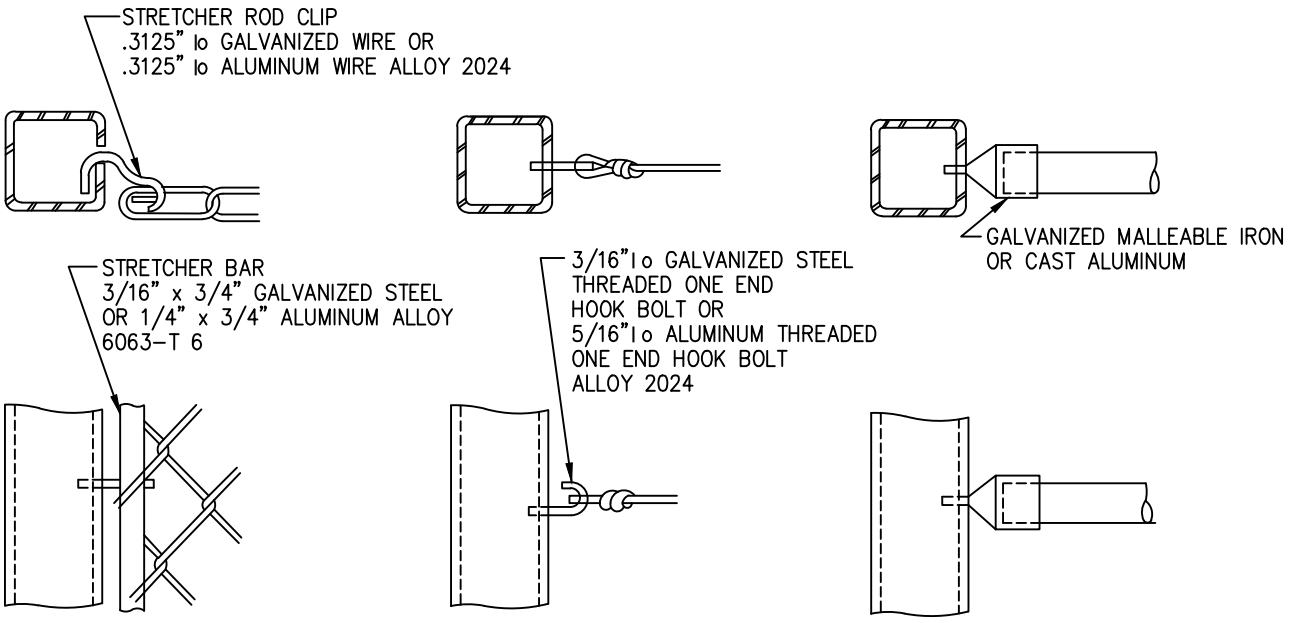
1
29



ANNE ARUNDEL COUNTY DEPARTMENT OF PUBLIC WORKS	APPROVED	STANDARD ROADWAY AND SITE IMPROVEMENT DETAILS CHAIN LINK FENCE BRACE AND ROD ATTACHMENTS-ROUND SITE IMPROVEMENT DETAILS	REVISED	1 30
	_____ CHIEF ENGINEER		04/2024	
	_____ DESIGN ENGINEER			
	DATE:			



ALTERNATE TRUSS BRACE ATTACHMENT FOR SQUARE CONSTRUCTION



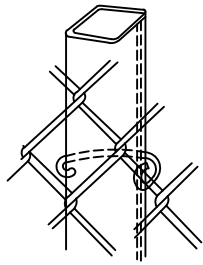
ALTERNATE STRETCHER
ROD ATTACHMENT

ALTERNATE ATTACHMENT
FOR BARB WIRE
OR
TENSION WIRE

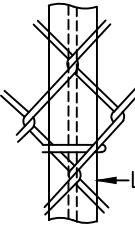
ALTERNATE BRACE RAIL ATTACHMENT
FOR SQUARE CONSTRUCTION

ANNE ARUNDEL COUNTY DEPARTMENT OF PUBLIC WORKS	APPROVED _____ CHIEF ENGINEER	STANDARD ROADWAY AND SITE IMPROVEMENT DETAILS CHAIN LINK FENCE BRACE AND ROD ATTACHMENTS—SQUARE CONSTRUCTION	REVISED 04/2024	1 31
	_____ DESIGN ENGINEER		_____	
	DATE:		_____	
	_____		_____	
	_____		_____	

"H" POST OR "ROUND" POST

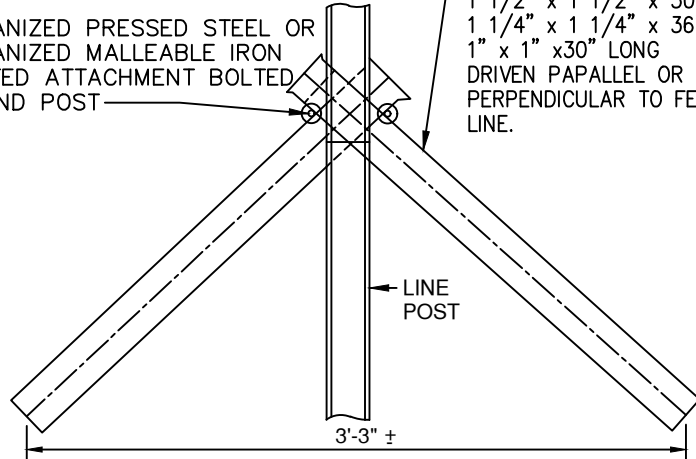


LINE POST TIES ON
12" C/C # 9 GAUGE
GALVANIZED STEEL
CLIP



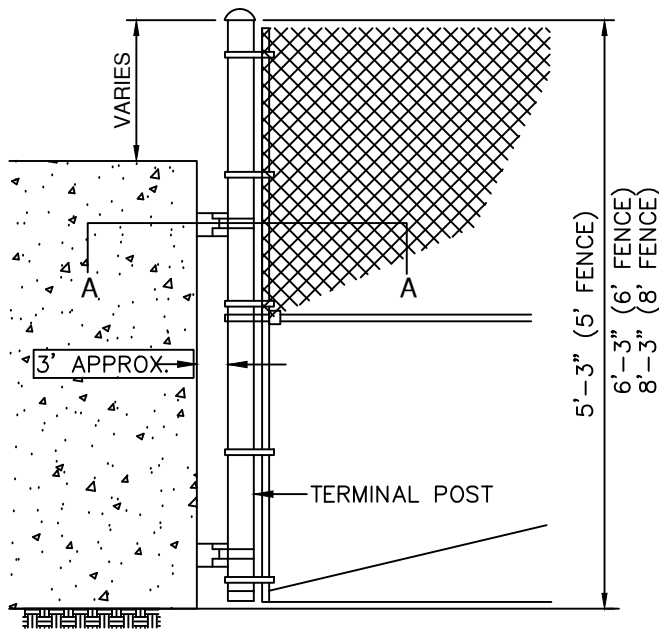
TIE WIRE ATTACHMENT
FOR LINE POST

GALVANIZED PRESSED STEEL OR
GALVANIZED MALLEABLE IRON
SLOTTED ATTACHMENT BOLTED
AROUND POST

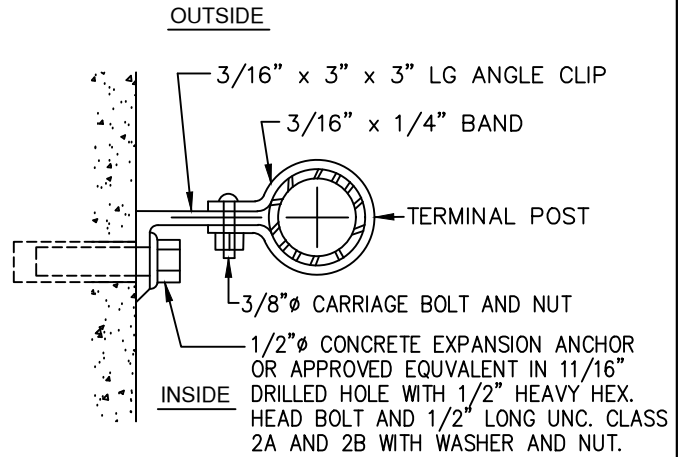


DRIVE ANCHOR BLADE
GALVANIZED STEEL ANGLE
1 1/2" x 1 1/2" x 30" LONG OR
1 1/4" x 1 1/4" x 36" LONG OR
1" x 1" x 30" LONG
DRIVEN PARALLEL OR
PERPENDICULAR TO FENCE
LINE.

DRIVE ANCHOR FOR LINE POST
ALTERNATE TO CONCRETE FOOTING

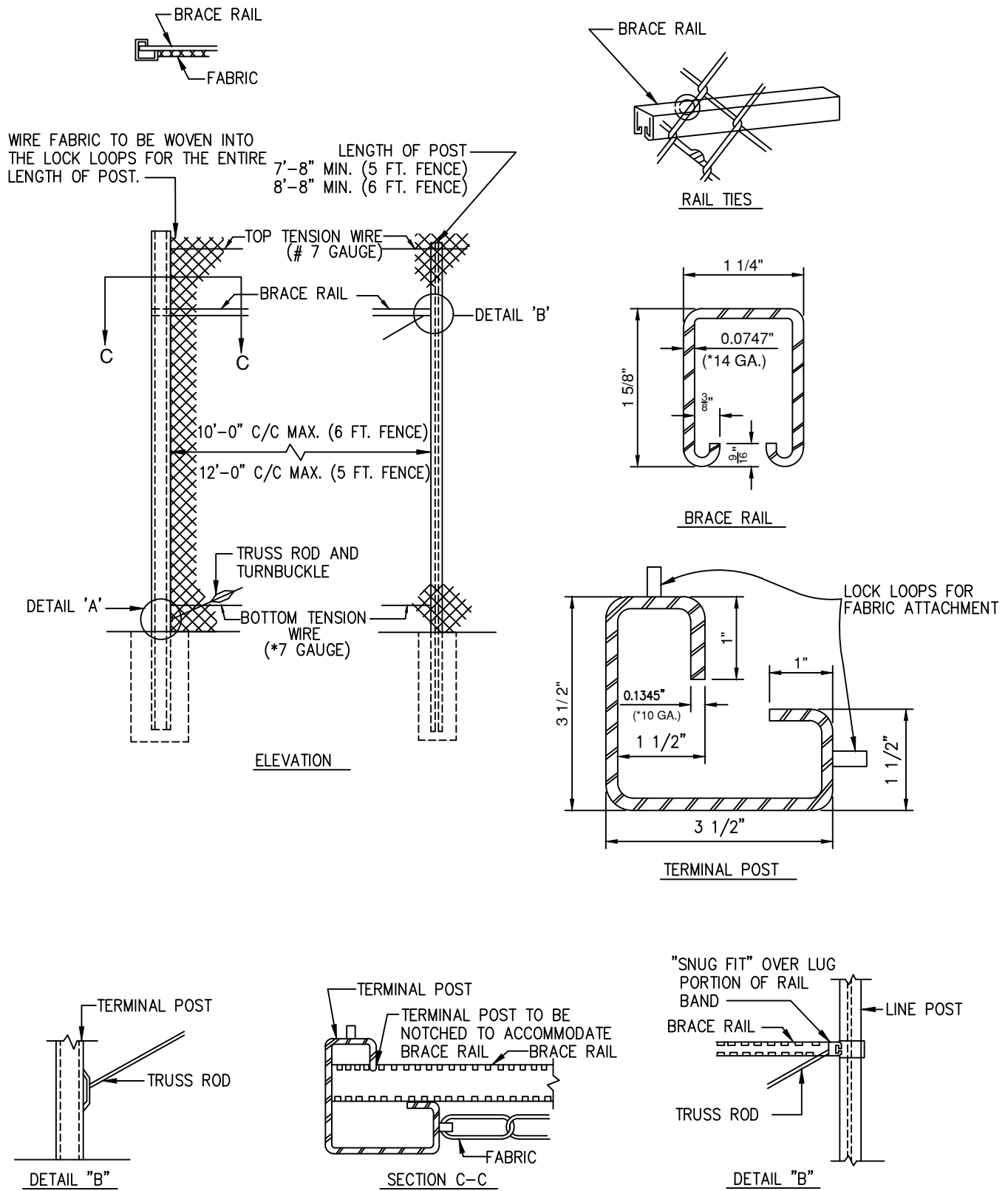


ALTERNATE POST ATTACHMENT BRIDGE END

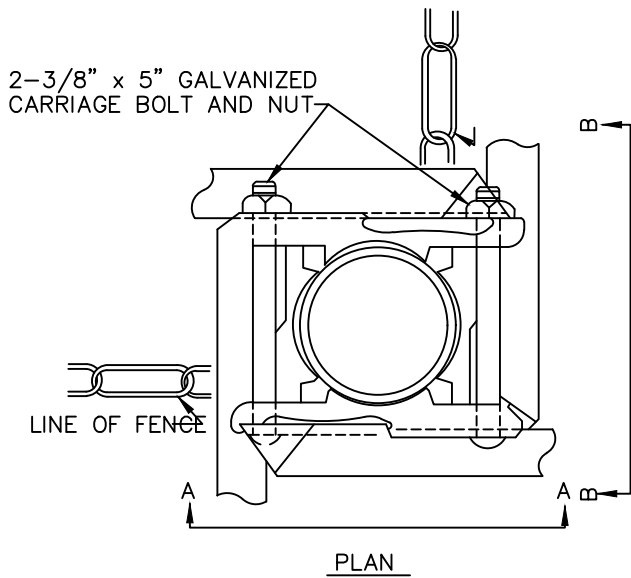
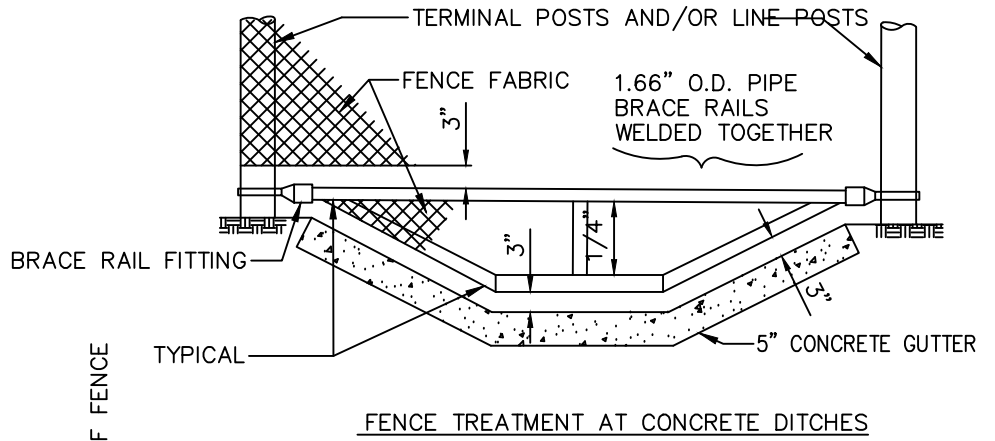


SECTION A-A

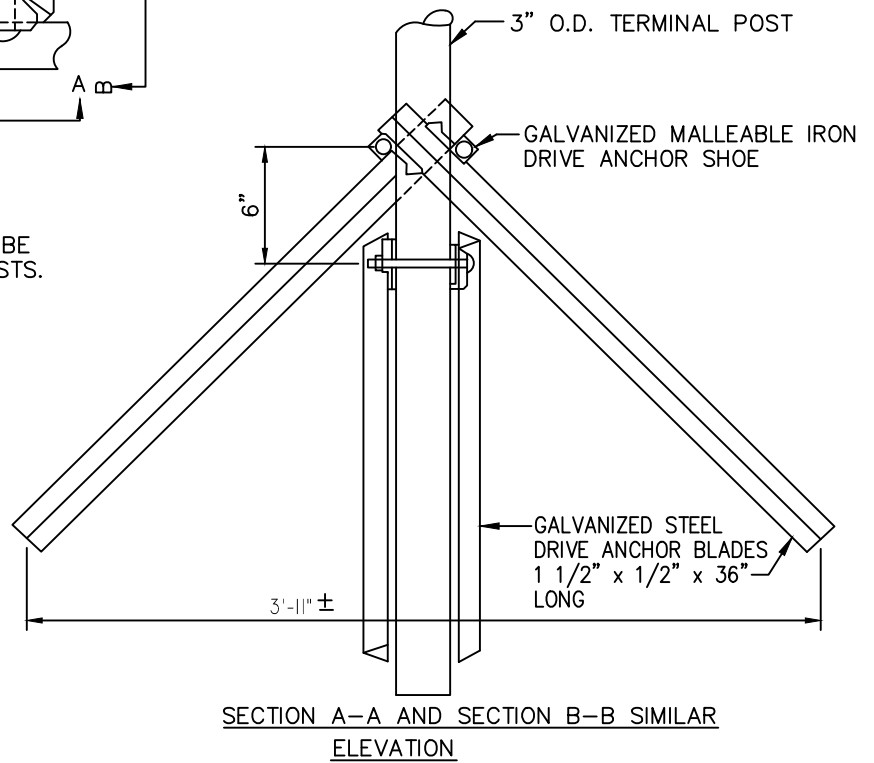
ANNE ARUNDEL COUNTY DEPARTMENT OF PUBLIC WORKS 6/2018	APPROVED _____ CHIEF ENGINEER	STANDARD ROADWAY AND SITE IMPROVEMENT DETAILS CHAIN LINK FENCE DRIVE ANCHOR AND POST ATTACHMENT AT BRIDGE	REVISED 04/2024	1 32
	_____ DESIGN ENGINEER		_____	
	DATE:		_____	
	_____		_____	
	_____		_____	



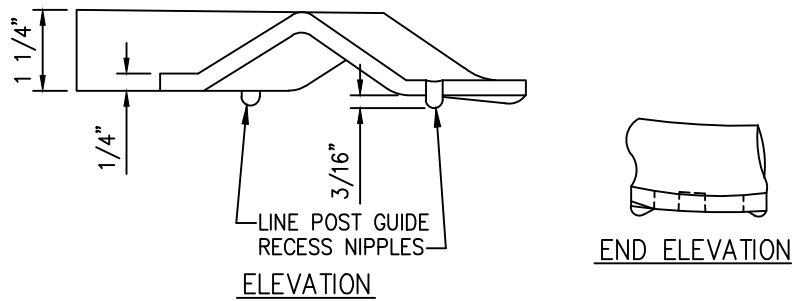
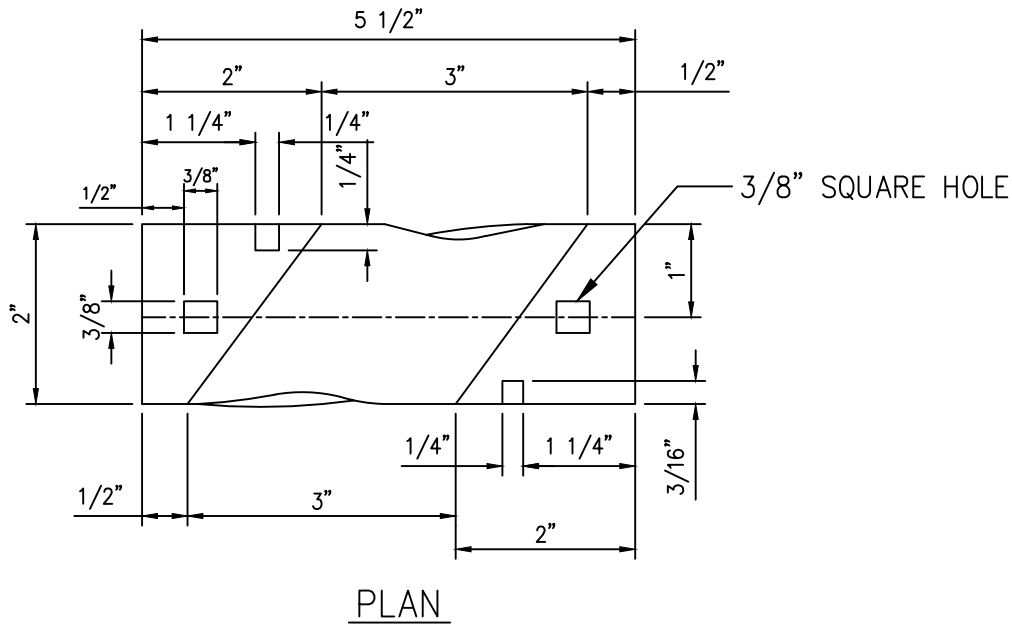
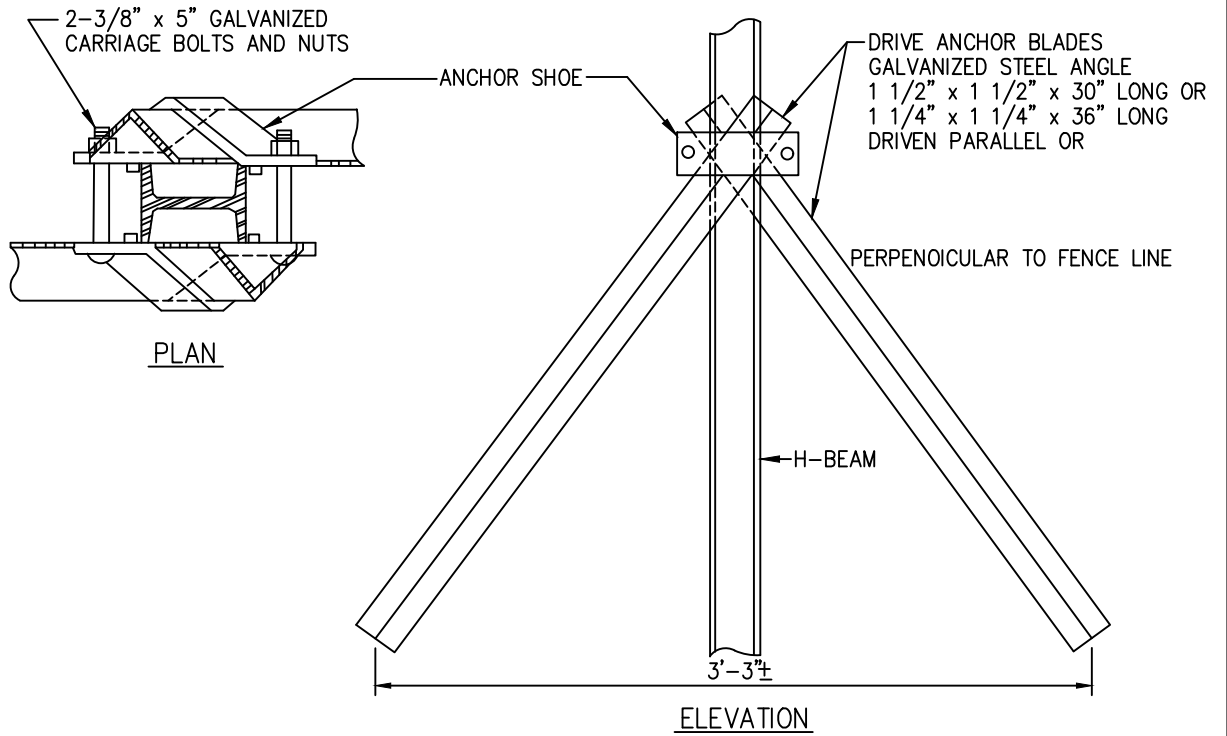
ANNE ARUNDEL COUNTY DEPARTMENT OF PUBLIC WORKS	APPROVED _____ CHIEF ENGINEER	STANDARD ROADWAY AND SITE IMPROVEMENT DETAILS CHAIN LINK FENCE ALTERNATE TERMINAL POST	REVISED 04/2024	1 / 33
	_____ DESIGN ENGINEER		_____	
	DATE:		_____	
	_____		_____	



NOTE:
DOUBLE DRIVE ANCHOR TO BE USED AT ALL TERMINAL POSTS.

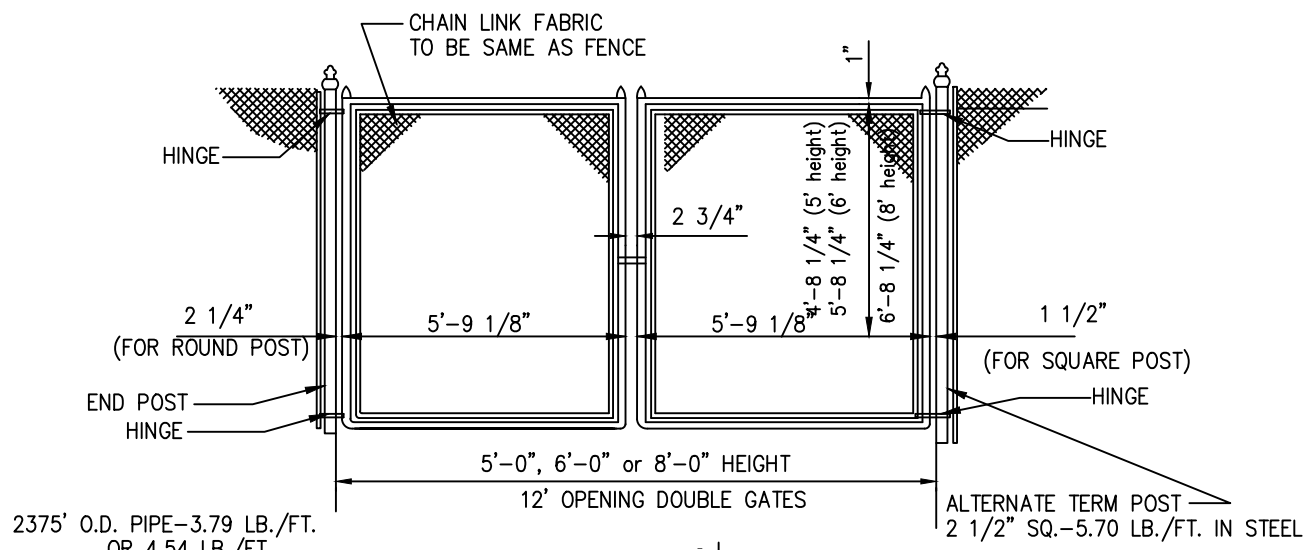


ANNE ARUNDEL COUNTY DEPARTMENT OF PUBLIC WORKS	APPROVED	STANDARD ROADWAY AND SITE IMPROVEMENT DETAILS CHAIN LINK FENCE DOUBLE DRIVE ANCHOR AND DITCH TREATMENT	REVISED	1/34
	_____ CHIEF ENGINEER		04/2024	
	_____ DESIGN ENGINEER			
	DATE:			



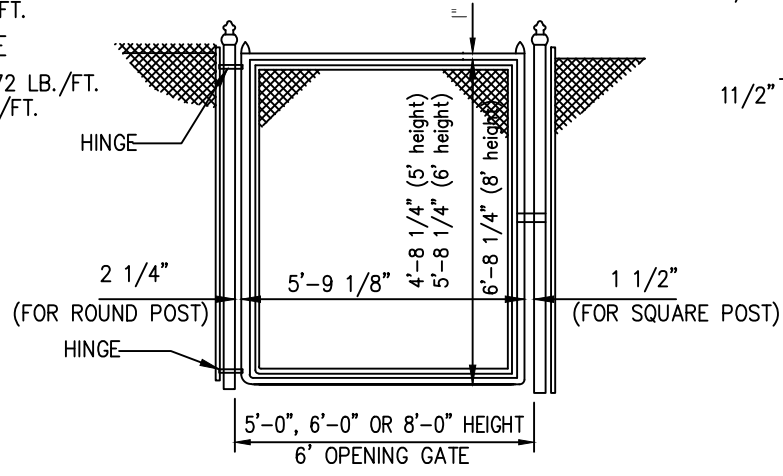
ANCHOR SHOE DETAILS

ANNE ARUNDEL COUNTY DEPARTMENT OF PUBLIC WORKS	APPROVED	STANDARD ROADWAY AND SITE IMPROVEMENT DETAILS	REVISED	1/35
	_____ CHIEF ENGINEER		08/2023	
	_____ DESIGN ENGINEER			
	DATE:			

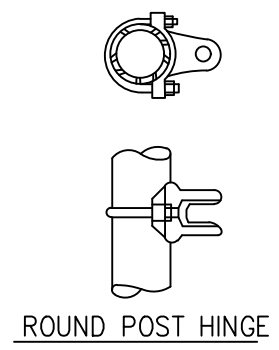
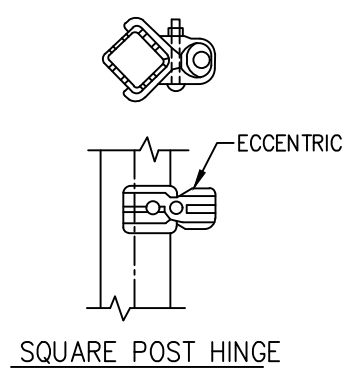


2375' O.D. PIPE-3.79 LB./FT.
OR 4.54 LB./FT.

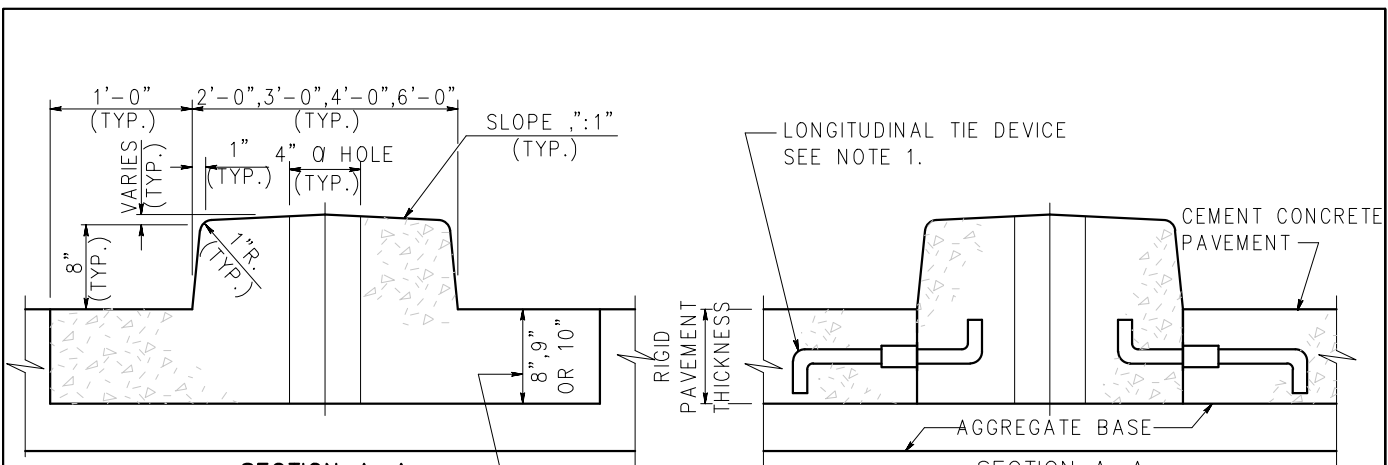
GATE FRAME
1-90" O.D. PIPE-2.72 LB./FT.
OR 2.28 LB./FT.



GATE FRAME
1 1/2" SQ. FRAME 2.05 LB./FT.



ANNE ARUNDEL COUNTY DEPARTMENT OF PUBLIC WORKS	APPROVED	STANDARD ROADWAY AND SITE IMPROVEMENT DETAILS CHAIN LINK FENCE GATE DETAILS	REVISED	1/36
	_____ CHIEF ENGINEER		04/2024	
	_____ DESIGN ENGINEER			
	DATE:			



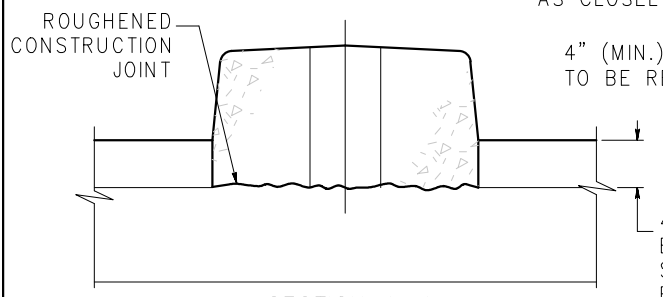
SECTION A-A

TYPE A-1
 PLACED WITH APPROVED ASPHALT MIX PAVEMENT

SECTION A-A

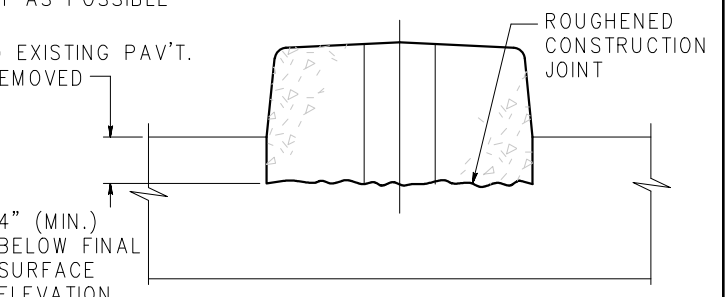
TYPE A-2
 PLACED WITH CEMENT CONCRETE PAVEMENT

DEPTH OF GUTTER PAN TO MATCH LAMINATIONS OF PROPOSED PAVING SECTION AS CLOSELY AS POSSIBLE



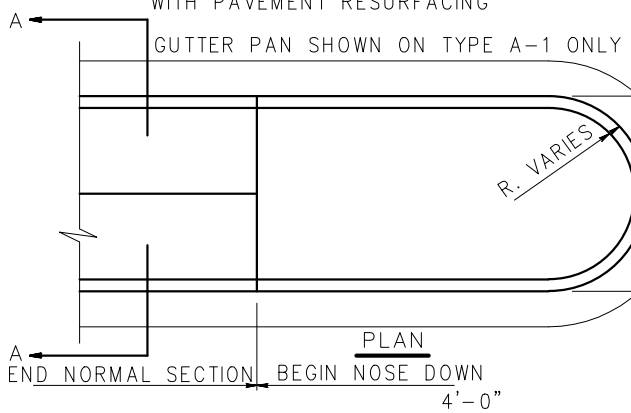
SECTION A-A

TYPE A-3
 PLACED IN COMBINATION WITH PAVEMENT RESURFACING



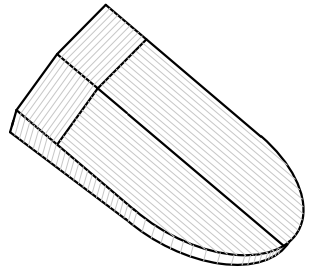
SECTION A-A

TYPE A-4
 PLACED ON EXISTING PAVEMENT

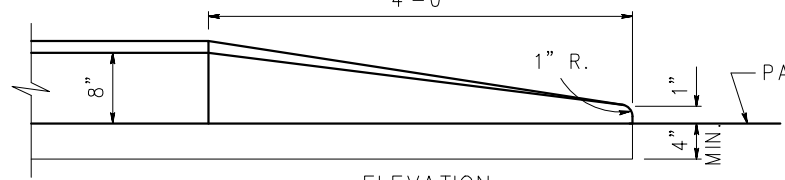


PLAN

END NORMAL SECTION



ISOMETRIC—NOSE DOWN
 (SHOWN WITHOUT GUTTER PAN)



ELEVATION

NOSE DOWN AT APPROACH END OF MEDIAN

NOTES

1. JOINT SPACING WILL BE A MAXIMUM OF 10'-0" APART, CONCRETE PAVEMENT, JOINTS SHALL MATCH PAVEMENT JOINTS.
2. ALLOW 4" O HOLES IN MEDIAN FOR SIGNS, SPACED AS SHOWN ON PLANS OR AS DIRECTED BY THE ENGINEER.

ANNE ARUNDEL COUNTY DEPARTMENT OF PUBLIC WORKS	APPROVED _____ CHIEF ENGINEER	STANDARD ROADWAY AND SITE IMPROVEMENT DETAILS STANDARD MONOLITHIC CONCRETE MEDIAN	REVISED 04/2024	1 37
	_____ DESIGN ENGINEER		_____	
	DATE:		_____	
	_____		_____	

COMPLY WITH THE REQUIREMENTS IN MD
 648.01, 648.02, 648.03, 648.03-01,
 648.04, 648.05, 648.06, 648.10, 648.45,
 648.46, 648.47, 648.48, 648.51,
 648.52, 648.53, 648.54, 648.55

NOTE: WHEN EPOXY COATING IS DESIRED, IT IS TO BE NOTED
 ON THE PLANS AND SHALL BE INCLUDED IN THE BID
 PRICE FOR THE ITEM " STANDARD CONCRETE BARRIER ".
 STANDARD CONCRETE BARRIER TO BE FIELD CONSTRUCTED.

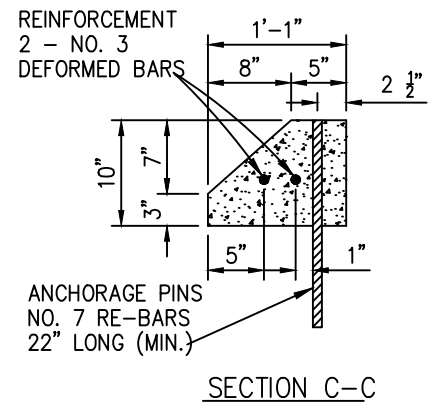
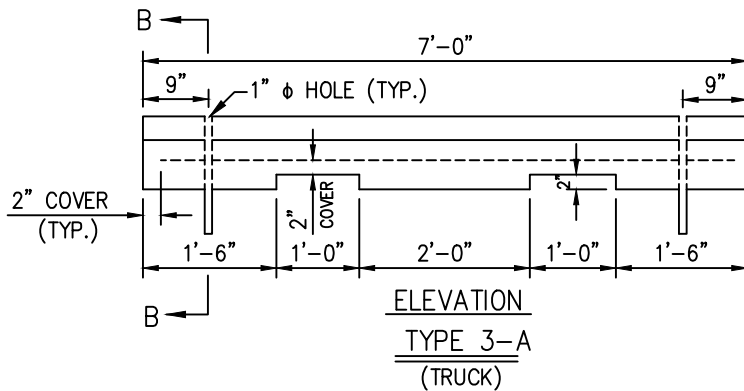
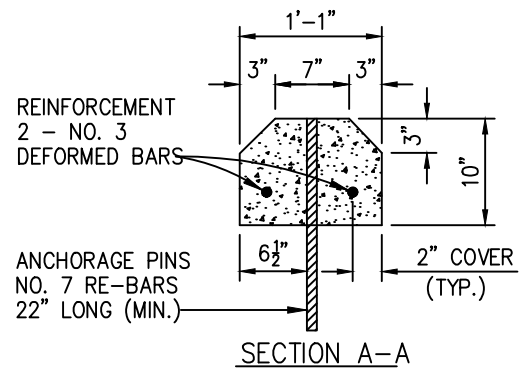
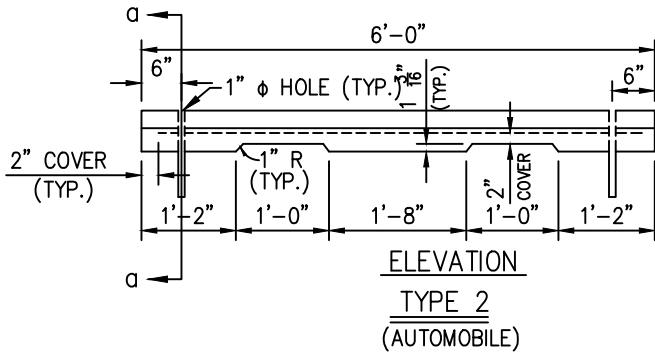
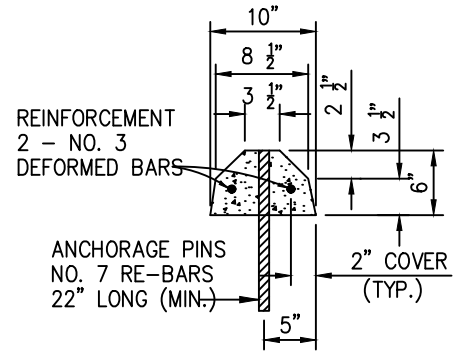
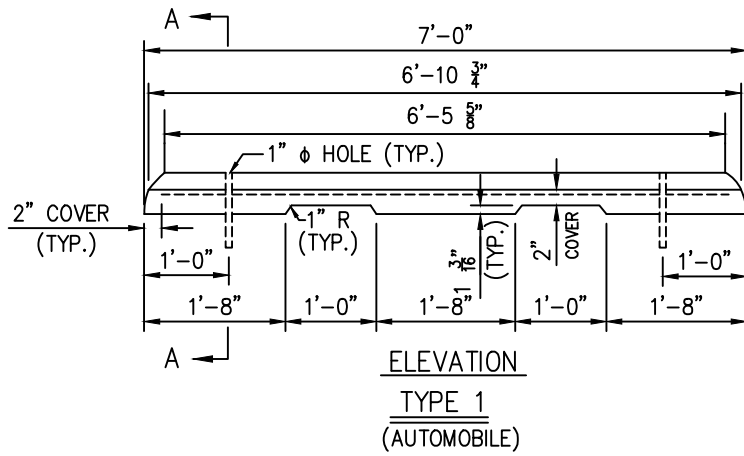
ANNE ARUNDEL COUNTY DEPARTMENT OF PUBLIC WORKS	APPROVED	STANDARD ROADWAY AND SITE IMPROVEMENT DETAILS STANDARD CONCRETE BARRIER SINGLE FACE	REVISED	 38
	_____		04/2024	
	CHIEF ENGINEER		_____	
	_____		_____	
	DATE: _____		_____	
	DESIGN ENGINEER			

COMPLY WITH THE REQUIREMENTS
 IN MD , 648.12, 648.13, 648.14, 648.15,
 648.18, 648.44 OF MDSHA BOOK OF
 STANDARDS.

ANNE ARUNDEL COUNTY DEPARTMENT OF PUBLIC WORKS	APPROVED	STANDARD ROADWAY AND SITE IMPROVEMENT DETAILS STANDARD CONCRETE BARRIER DOUBLE FACE	REVISED	 39
	_____		04/2024	
	CHIEF ENGINEER		_____	
	_____		_____	
	DATE: DESIGN ENGINEER			

FOR TEMPORARY OR ANY PRECAST CONCRETE BARRIER. COMPLY WITH THE REQUIREMENTS IN MD 104.01-54 THROUGH 104.01-54 OF MDSHA BOOK OF STANDARDS.

ANNE ARUNDEL COUNTY DEPARTMENT OF PUBLIC WORKS	APPROVED	STANDARD ROADWAY AND SITE IMPROVEMENT DETAILS TEMPORARY PRECAST CONCRETE BARRIER DOUBLE FACE	REVISED	1 40
	_____		04/2024	
	CHIEF ENGINEER		_____	
	_____		_____	
	DATE: DESIGN ENGINEER			



NOTE

1. PRECAST CONCRETE WHEEL STOPS SHALL BE LOCATED AS SHOWN ON THE PLANS, THEN SECURED IN PLACE WITH TWO (2) NO. 7 REINFORCEMENT BARS PER WHEEL STOP.
2. CONCRETE TO BE MIX NO. 2.

ANNE ARUNDEL COUNTY DEPARTMENT OF PUBLIC WORKS	APPROVED	STANDARD ROADWAY AND SITE IMPROVEMENT DETAILS PRECAST CONCRETE WHEEL STOPS	REVISED	1 42
	_____ CHIEF ENGINEER		04/2024	
	_____ DESIGN ENGINEER			
	DATE:			

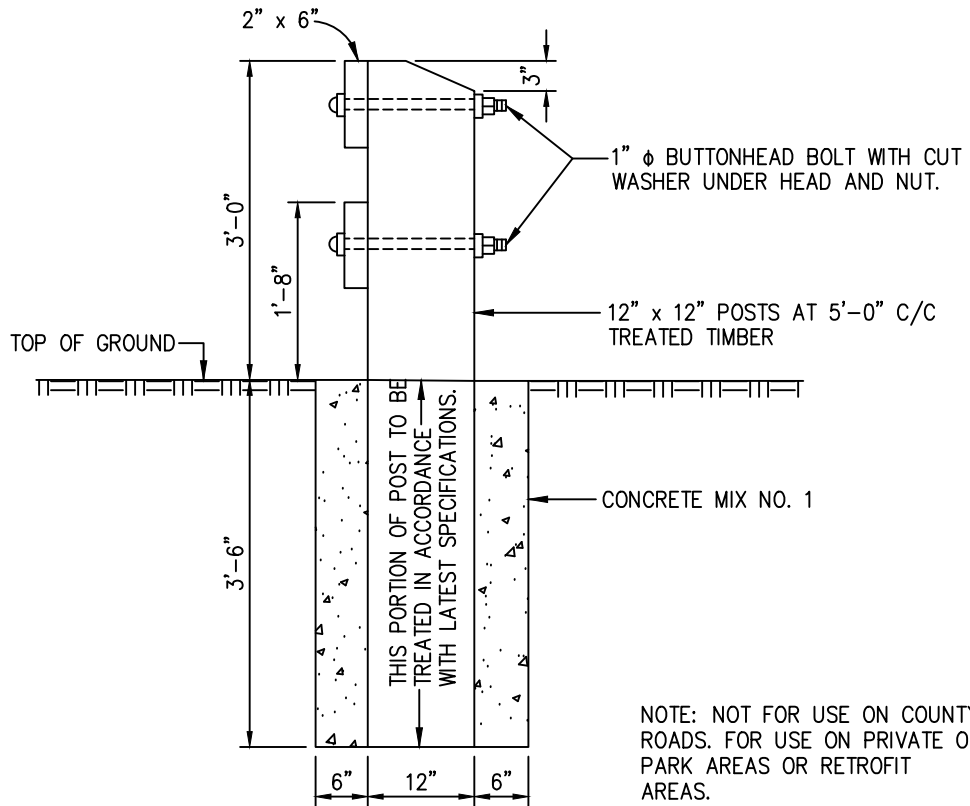
RAILS TO BE UNTREATED TIMBER.

POSTS TO BE TREATED TIMBER. WHERE PAINT IS CALLED FOR, TWO COATS TO BE APPLIED.

ALL LUMBER TO BE SOUTHERN YELLOW PINE OF 1400* STRESS GRADE OR BETTER.

TO BE PAINTED IN A COLOR SCHEME AND STRIPING DETAILS IN ACCORDANCE WITH THE LATEST "MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES."

* TO BE USED WHERE NOTED ON PLANS.

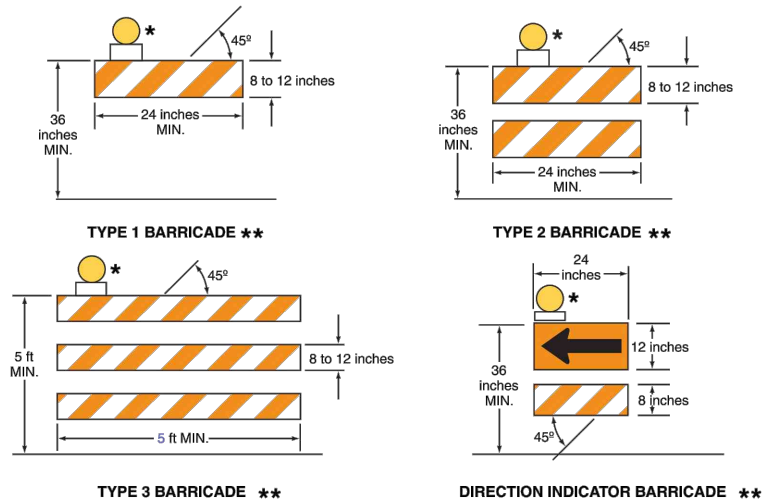


THE COST OF ALL EXCAVATION AND BACKFILL TO BE INCLUDED IN LUMP SUM PRICE BID FOR TIMBER BARRICADE.

THE LUMP SUM PRICE BID SHALL INCLUDE THE FURNISHING OF ALL MATERIALS, PRESERVATIVE TREATMENTS, TIMBER CONNECTIONS AND HARDWARE, PAINTING, GALVANIZING AND CONCRETE AS WELL AS ALL LABOR.

TOOLS AND EQUIPMENT AND ALL WORK INCIDENTAL THERE TO.

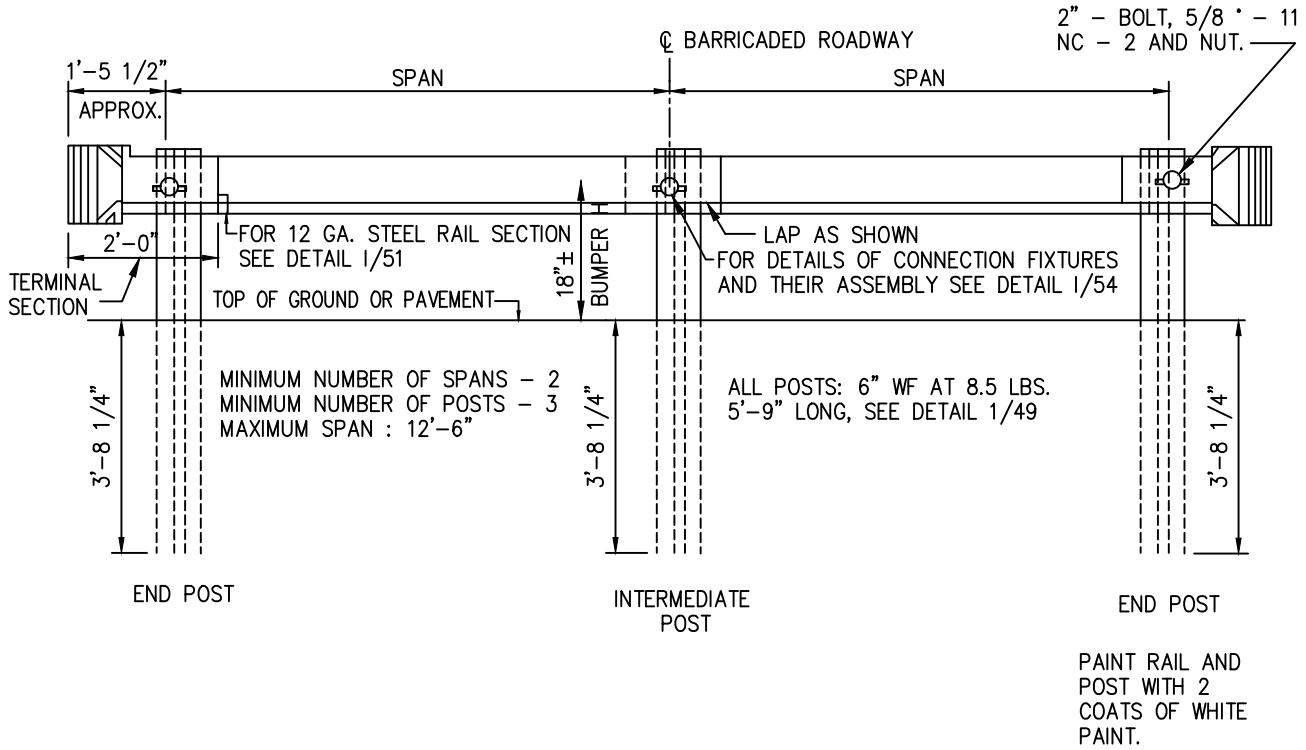
ANNE ARUNDEL COUNTY DEPARTMENT OF PUBLIC WORKS	APPROVED	STANDARD ROADWAY AND SITE IMPROVEMENT DETAILS STANDARD TIMBER BARRICADE	REVISED	1 43
	_____		04/2024	
	CHIEF ENGINEER		_____	
	_____		_____	
	DESIGN ENGINEER		_____	
DATE:				



* Warning lights (optional).

** Rail stripe widths shall be 6 inches, except that 4-inch wide stripes may be used if rail lengths are less than 36 inches. The sides of barricades facing traffic shall have retroreflective rail faces.

PORTABLE BARRICADE



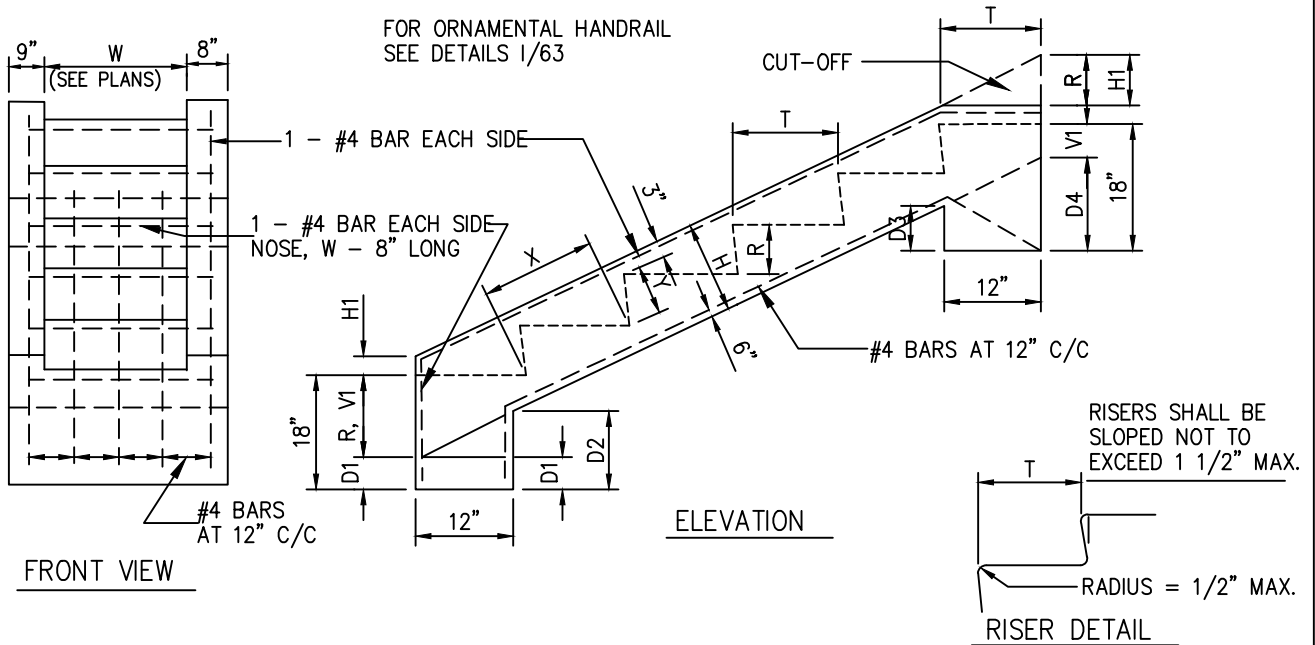
BEAM TYPE BARRICADE (12 GAGE)

ANNE ARUNDEL COUNTY DEPARTMENT OF PUBLIC WORKS	APPROVED	STANDARD ROADWAY AND SITE IMPROVEMENT DETAILS BARRICADE	REVISED	 44
	_____ CHIEF ENGINEER		04/2024	
	_____ DESIGN ENGINEER			
	DATE:			

COMPLY WITH THE REQUIREMENTS
 IN MD 605.01 THROUGH MD 605.52
 OF MDSHA BOOK OF STANDARDS.
 REFER TO MDSHA SPECIFICATIONS FOR
 TRAFFIC BARRIER W-BEAM

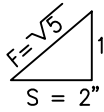
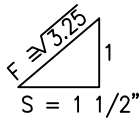
ANNE ARUNDEL COUNTY DEPARTMENT OF PUBLIC WORKS	APPROVED _____	STANDARD ROADWAY AND SITE IMPROVEMENT DETAILS GUARDRAIL W BEAM STANDARDS	REVISED	$\frac{1}{45}$
	CHIEF ENGINEER		04/2024	
	_____ DESIGN ENGINEER			
	DATE:			

NOTE:
 ALL REINFORCING TO BE #4 BARS, CONFORMING TO
 AASHTO. DESIGNATION M31 GRADE 40.1" MIN. COVER.



STANDARD SLOPES, DIMENSION AND FORMULA

SLOPE RATIO S:1 VALUES OF S	R	T	F	H1	X	Y	H	V1	V2	D1	D2	D3	D4
1 1/2	7"	11"	$\sqrt{3.25}$	3.61"	3.04"	5.91"	14.91"	7.21"	8"	3.79"	11.79"	2.79"	10.79"
2	4"	12"	$\sqrt{5}$	3.36"	3.44"	5.34"	14.34"	4.72"	6"	5.28"	11.28"	5.29"	1.28"
4	3 1/2"	14"	$\sqrt{17}$	3.08"	4.44"	5.34"	12.39"	6.10"	3"	6.31"	11.31"	6.31"	1.31"



CONCRETE REQUIRED FOR STANDARD STAIRWAYS
 TABLE OF UNIT QUANTITIES

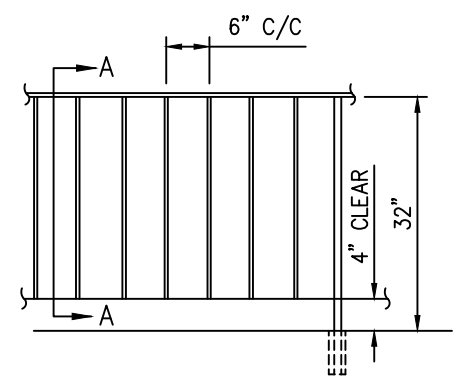
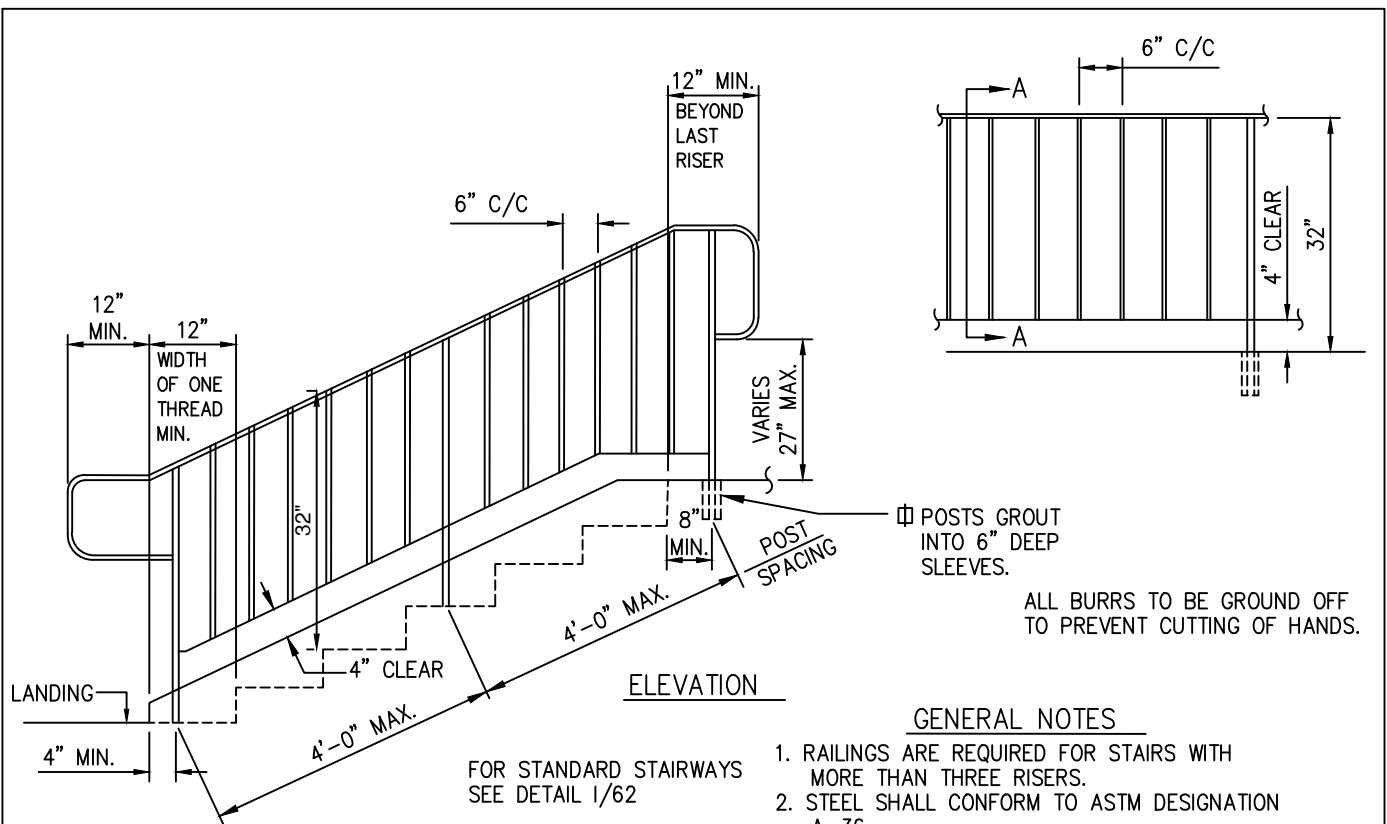
ITEM - UNIT OF STAIRWAY	SLOPE RATIO S-T-R			VOLUMES PER STAIRWAY
	1 1/2 : 1	2 : 1	4 : 1	
VOL. OF 1 STEP + BOTTOM SLAB PER 1" WIDTH OF W	.0651	.0475	.0643	MULTIPLIED BY (NW) = A
VOL. OF 2 SIDE WALLS PER STEP OR TREAD	1.7317	1.7870	1.6504	MULTIPLIED BY (N) = B
VOL. OF UPPER AND LOWER FOOTINGS PER 1" OF TOTAL WIDTH	.1012	.1130	.1397	MULTIPLIED BY (W + NW) = C
VOL. OF 2 UPPER SIDE WALL CUT - OFFS TO DEDUCT	-.3403	-.3333	-.2269	MULTIPLIED BY 1 = 0

CONCRETE MIX NO. 2 (VOLUMES SHOWN IN TABLE ABOVE ARE IN CUBIC FEET)
 TOTAL VOLUME IN CUBIC YARDS/STAIRWAY = $\frac{A+B+C-D}{27}$

NUMBER OF STEPS OR TREADS = N
 TREAD WIDTH (IN INCHES 1 = W)

ANNE ARUNDEL COUNTY DEPARTMENT OF PUBLIC WORKS	APPROVED	STANDARD ROADWAY AND SITE IMPROVEMENT DETAILS STANDARD STAIRWAYS	REVISED	1 62
	_____		04/2024	

	DATE: _____			



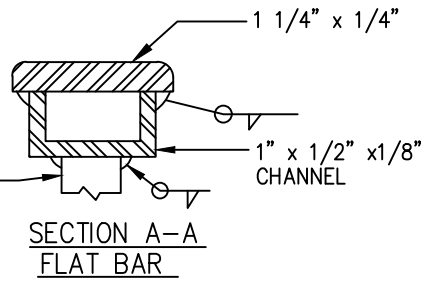
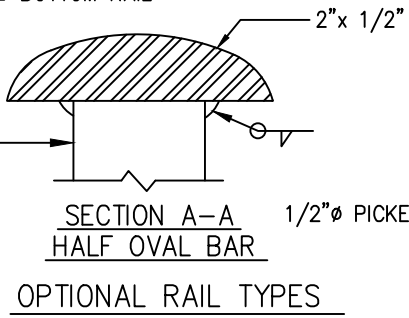
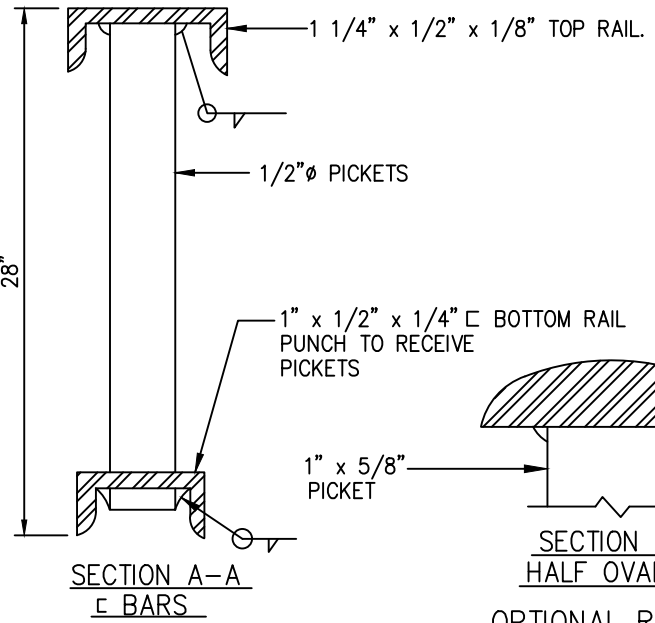
POSTS GROUT INTO 6" DEEP SLEEVES.

ALL BURRS TO BE GROUND OFF TO PREVENT CUTTING OF HANDS.

GENERAL NOTES

1. RAILINGS ARE REQUIRED FOR STAIRS WITH MORE THAN THREE RISERS.
2. STEEL SHALL CONFORM TO ASTM DESIGNATION A-36.
3. WELDMENTS SHALL BE THOROUGHLY CLEANED AFTER FABRICATION.
4. ENTIRE RAILING SHALL BE GALVANIZED OR PAINTED AS FOLLOWS:
 STEP 1 PRIMER PRETREATMENT CONFORMING TO FEDERAL SPECIFICATION MIL-P-15328 B (FORMULA 117 FOR METALS).
 STEP 2 ONE COAT OF RED LEAD LINSEED OR SHOP COAT.
 STEP 3 ONE COAT OF RED LEAD IRON OXIDE - FIRST FIELD COAT.
 STEP 4 PNE COAT OF GRAY ALKYD - SECOND FIELD COAT
 STEP 5 A FRESH COAT OF BLACK EQUIPMENT ENAMEL.
 ALL BURRS TO BE GROUND OFF TO PROVIDE A SMOOTH FINISH.

FOR STANDARD STAIRWAYS SEE DETAIL 1/62



ANNE ARUNDEL COUNTY
DEPARTMENT OF PUBLIC WORKS

APPROVED

CHIEF ENGINEER

DESIGN ENGINEER
DATE:

STANDARD ROADWAY AND SITE IMPROVEMENT DETAILS
STANDARD ORNAMENTAL HANDRAIL

REVISED
04/2024

NOTES:

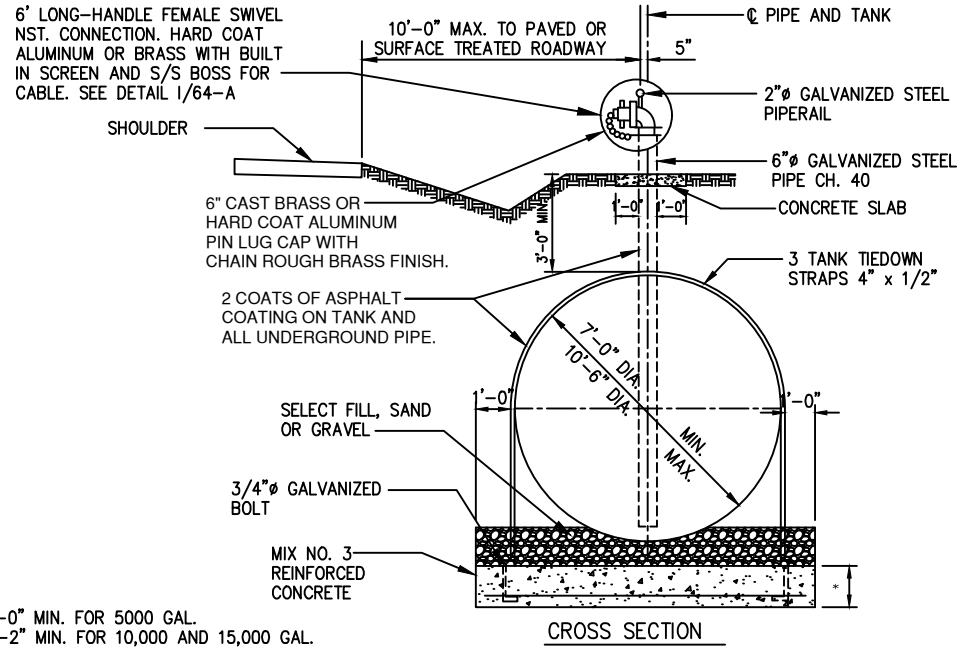
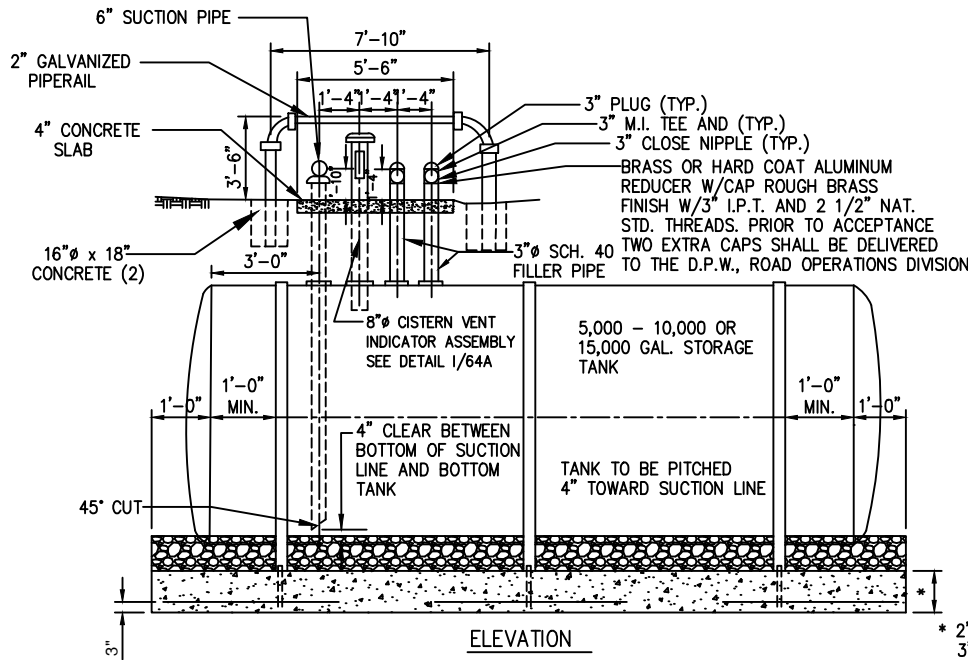
1. ALL JOINTS AND FITTINGS FOR SUCTION PIPE SHALL BE AIRTIGHT.
2. TANK AND SUCTION PIPE WITH FITTINGS SHALL BE AIRTESTED AT A PRESSURE OF 1/2 P.S.I. FOR 20 MIN. BEFORE TANK IS COVERED.
3. REINFORCING SHALL BE #4 BARS 8" C.C. OR #5 BARS 12" C.C.
4. THE CONCRETE SLAB WILL NOT BE REQUIRED WHERE IT HAS BEEN DEMONSTRATED THAT FLOATATION WILL NOT OCCUR.
5. SELECT BACKFILL MAY BE REQUIRED IN ACCORDANCE WITH THE LATEST STANDARD SPECIFICATIONS.
6. THE FOLLOWING ITEMS SHALL BE PAINTED WITH TWO (2) COATS OF INDUSTRIAL ENAMEL B54 SERIES Y27 LEAD FREE SAFTY YELLOW (MANUFACTURED BY SHERWIN WILLIAMS) OR APPROVED EQUAL.
(A) SUCTION CONNECTION, (B) VENT PIPE, (C) FILL PIPE (TWO).
7. PAINTING SHALL BE IN ACCORDANCE WITH STANDARD SPECIFICATIONS.

* IN CALCULATING THIS INFORMATION, THE FOLLOWING ASSUMPTIONS WERE MADE.

- | | |
|---|--|
| (1) THE GROUNDWATER TABLE IS AT SURFACE | (6) ALL STRAPS ARE TIGHTENED TO PRODUCE UNIFORM LOADING UPON EACH STRAP. |
| (2) THE TANK EXCAVATION HAS NOT BEEN BACKFILLED | (7) ALL STRAPS ARE VERTICAL AT THE POINT OF ANCHORAGE. |
| (3) THE TANK IS EMPTY. | (8) A FACTOR OF SAFETY OF 2 IS USED FOR THE |
| (4) THE YIELD STRESS OF ALL STEEL IS $FY = 36$ KSI. | (9) WEIGHT OF WATER 8.33 POUNDS PER GALLON. |
| (5) THE ALLOWABLE STRESS ON STEEL IN TENSION IS $FT. = .6 \times FT. = 21.6$ KSI. | (10) WEIGHT OF SUBMERGED CONCRETE IS 80 POUNDS PER CUBIC FOOT. |

NOTE:

UNDERGROUND TANK TIE DOWN SYSTEMS SHOULD BE DESIGNED BY A LICENSED STRUCTURAL ENGINEER, DUE TO THE COMPLEXITY OF SOIL CONDITIONS, MATERIAL LISTED IS ONLY INTENDED AS A GUIDE.



* 2'-0" MIN. FOR 5000 GAL.
3'-2" MIN. FOR 10,000 AND 15,000 GAL.

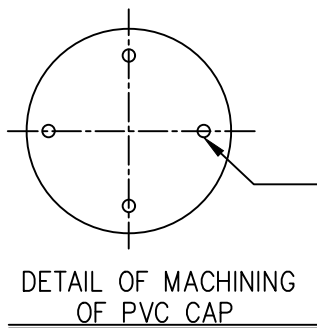
ANNE ARUNDEL COUNTY DEPARTMENT OF PUBLIC WORKS	APPROVED _____ CHIEF ENGINEER	STANDARD ROADWAY AND SITE IMPROVEMENT DETAILS UNDERGROUND STORAGE TANK FOR FIRE SUPPRESSION	REVISED 04/2024	1 64
	_____ DESIGN ENGINEER		_____	
	DATE:		_____	
	_____		_____	
	_____		_____	

ATTACHMENT " A "

ITEM	DESCRIPTION
1	LENS
2	WINDOW FRAME
3	8" UPPER VENT PIPE
1 ▽	4 5/16"-18 UNC-2A x 1.05 LONG BOLT
5	8" SUPPORT FLANGE
2 ▽	6 8" COUPLING PIPE
2 ▽	7 8" LOWER VENT PIPE

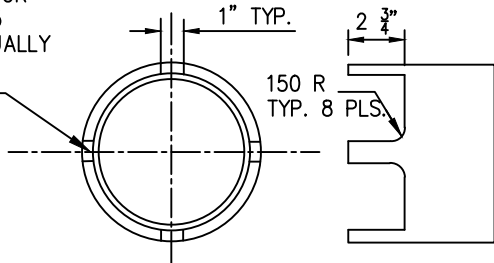
NOTES:

- 1 ▽ DRILL AND TAP FOR 5/16" - 18 UNC 2 PLACES AS SHOWN 180° APART.
- 2 ▽ PRIME WITH SCHLUMBERGER P/N 96018-062 PRIOR TO GLUING WITH SCHLUMBERGER P/96018-060. FOR ASSEMBLING ITEM 6 TO ITEM 7.

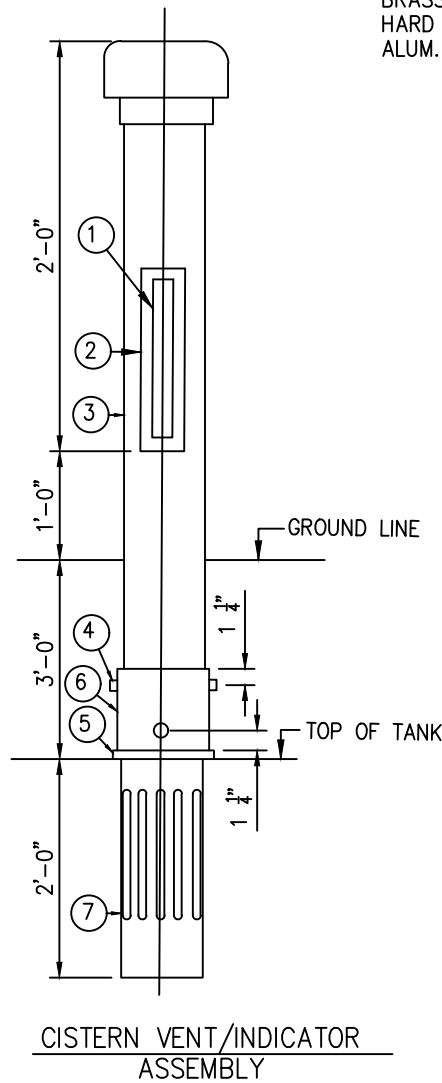


DRILL .166 DIA. THRU AND C SINK .340 DIA. 4 PLS. EQUALLY SPACED ON 9.00 DIA. B.C.

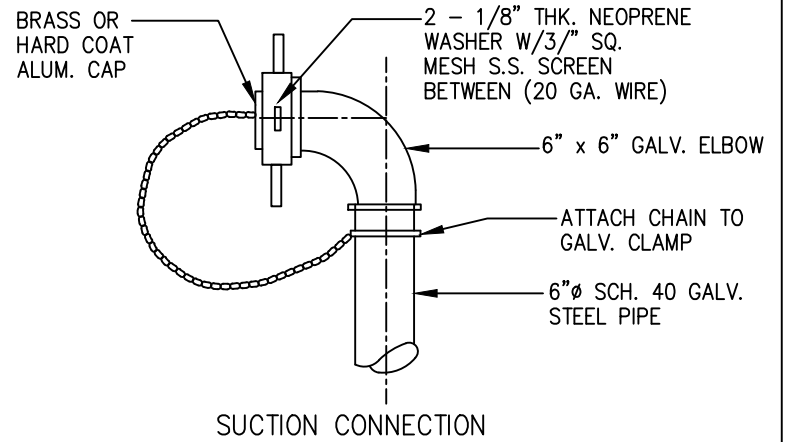
DRILL AND TAP FOR 8-32 UNC-2B.75 DEEP 4 PLS. EQUALLY SPACED ON 9.00 DIA. B.C.



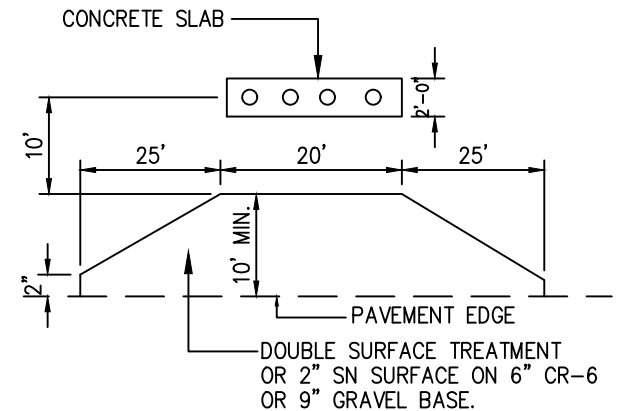
DETAIL OF MACHINING OF PVC CAP



CISTERN VENT/INDICATOR ASSEMBLY



SUCTION CONNECTION



NOTE:
THE WORK TO BE INCLUDED IN THE COST OF THE TANK.

ACCESS PAD

ANNE ARUNDEL COUNTY
DEPARTMENT OF PUBLIC WORKS

APPROVED

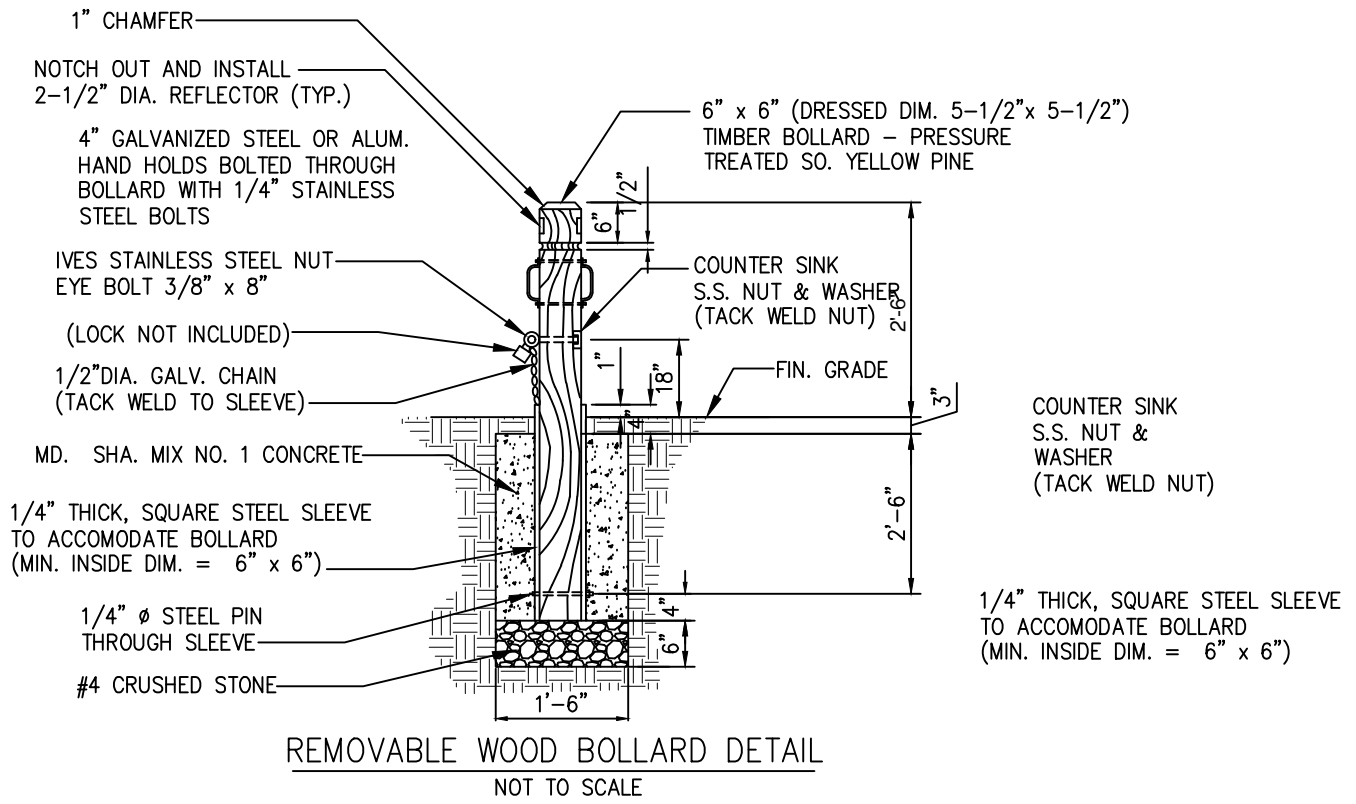
CHIEF ENGINEER

DESIGN ENGINEER
DATE:

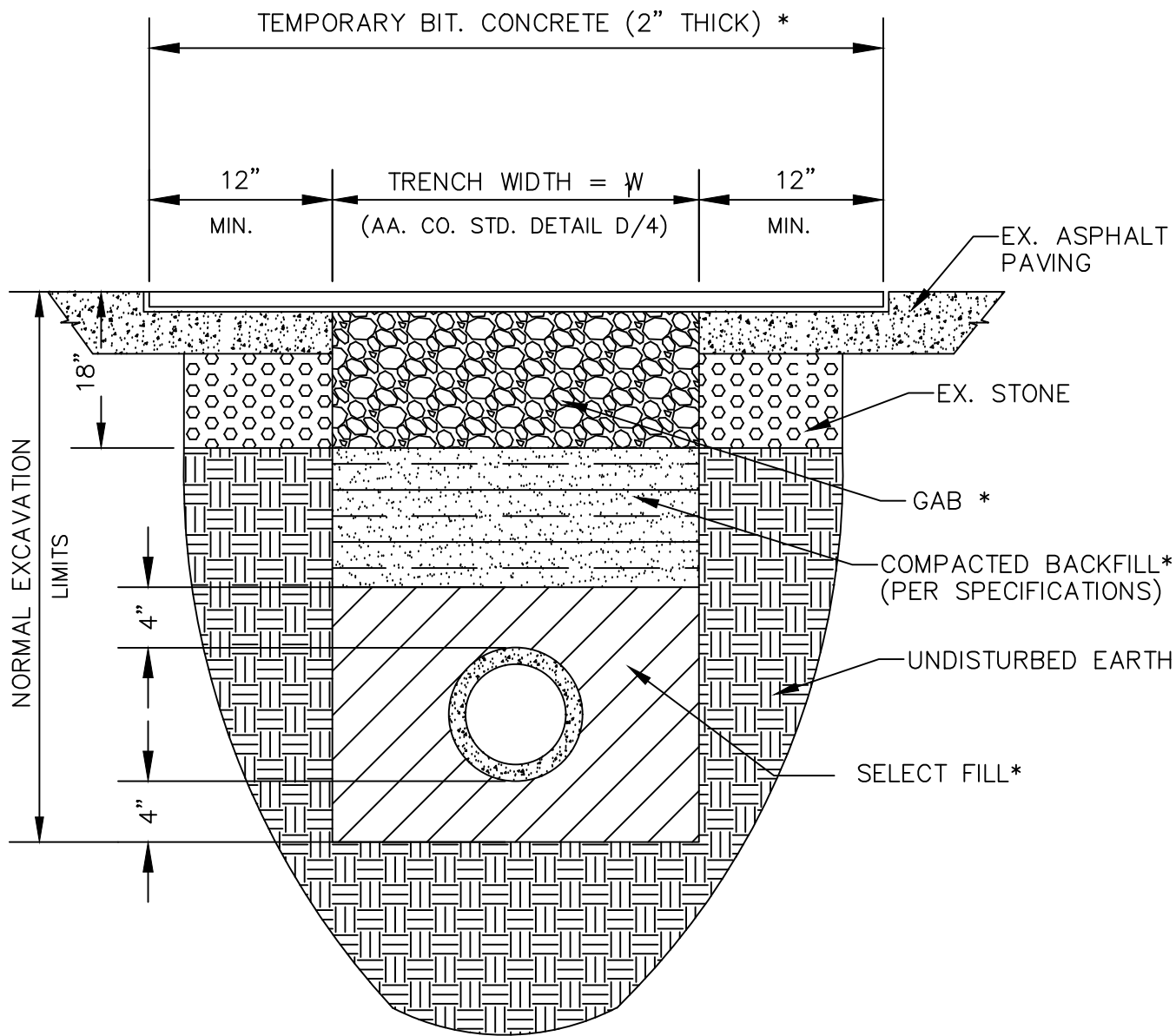
STANDARD ROADWAY AND SITE IMPROVEMENT DETAILS
UNDERGROUND STORAGE TANK FOR FIRE SUPPRESSION

REVISED
04/2024

1
64A



ANNE ARUNDEL COUNTY DEPARTMENT OF PUBLIC WORKS	APPROVED	STANDARD DRAINAGE DETAILS BIKE PATH REMOVEABLE WOOD BOLLARD	REVISED	1 65
	_____ CHIEF ENGINEER		04/2024	
	_____ DESIGN ENGINEER			
	DATE:			

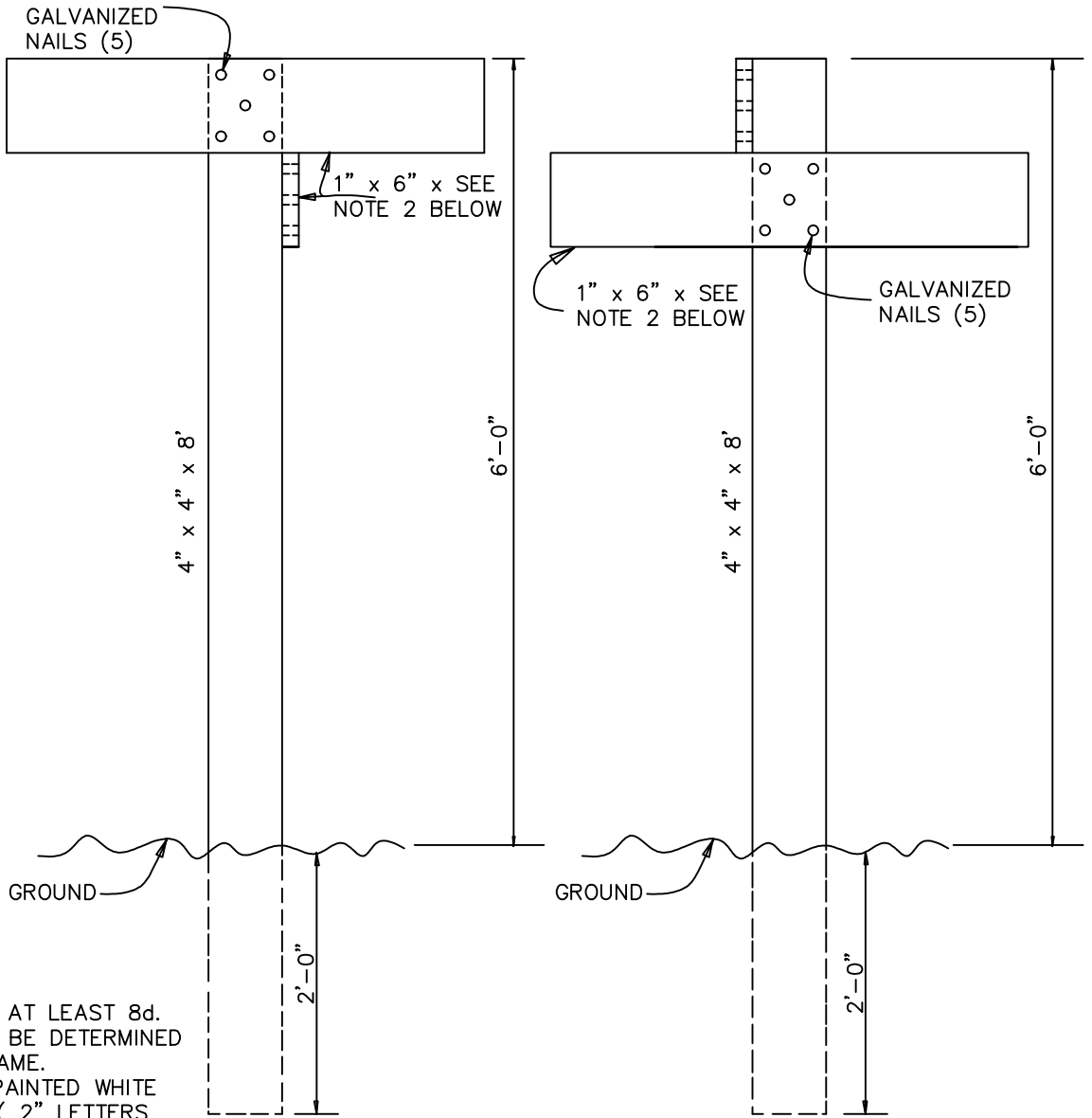


* INCIDENTAL TO UNIT BID COST OF PIPE.

ANNE ARUNDEL COUNTY DEPARTMENT OF PUBLIC WORKS	APPROVED	STANDARD ROADWAY AND SITE IMPROVEMENT DETAILS TRENCH DETAIL FRAME AND COVER	REVISED	 66
	CHIEF ENGINEER		04/2024	
	DESIGN ENGINEER			
	DATE:			

STANDARD ABBREVIATIONS FOR STREET NAME SUFFIX

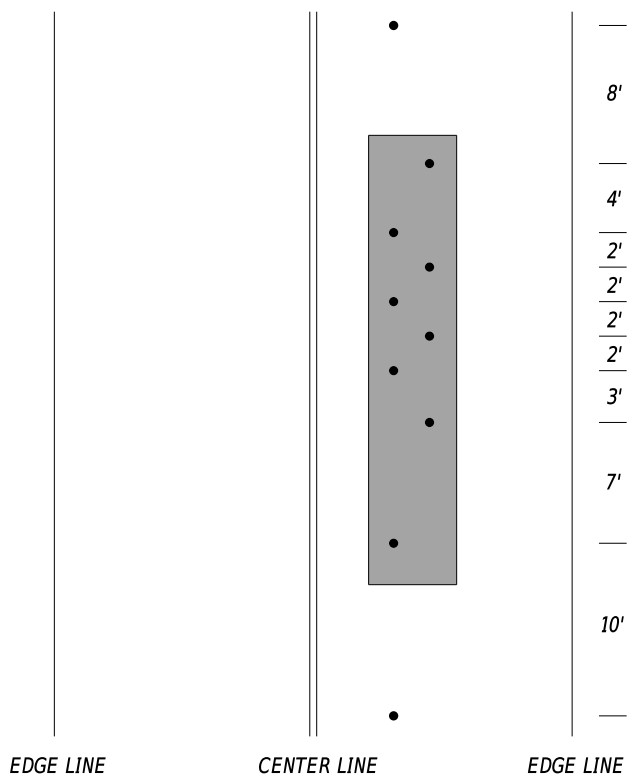
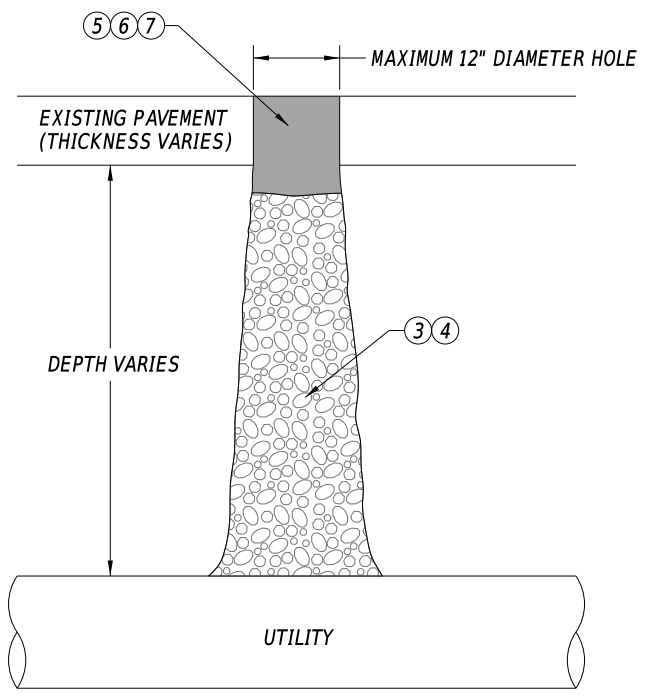
ALLEY	AL	SAIN	ST
APPROACH	APP	SOUTH	S
AVENUE	AV	SOUTHEAST	SE
BEACH	BCH	SOUTHWEST	SW
BOULEVARD	BLVD	SQUARE	SQ
BRANCH	BR	STATION	STA
BYPASS	BYPS	STREET	ST
BYROAD	BYRD	TERRACE	TER
CHURCH	CH	THRUWAY	TWY
CIRCLE	CIR	TRAIL	TR
CORNER	COR	TURNPIKE	TNPK
CORPORATION	CORP	VIEW	VIEW
COURT	CT	WAY	WAY
COVE	COVE	WEST	W
CREEK	CR		
CROSSOVER	XOVR		
DRIVE	DR		
EAST	E		
EXIT	EXIT		
EXPRESSWAY	XWY		
FOREST	FOR		
FORT	FT		
FREEWAY	FRWY		
GARTH	GAR		
HEIGHTS	HGTS		
HIGHROAD	HYRD		
HIGHWAY	HWY		
HILL	HILL		
ISLAND	IS		
JUNCTION	JCT		
LANE	LA		
MOUNT	MT		
NORTH	N		
NORTHEAST	NE		
NORTHWEST	NW		
PARK	PK		
PARKWAY	PKWY		
PATH	PATH		
PLACE	PL		
PLAZA	PLZ		
POINT	PT		
PROMENADE	PROM		
ROAD	RD		
ROUTE	RTE		



NOTES:

1. GALVANIZED NAILS TO BE AT LEAST 8d.
2. LENGTH OF 1"x 6" SHALL BE DETERMINED BY LENGTH OF STREET NAME.
3. NAME BOARD SHALL BE PAINTED WHITE WITH 4" BLACK LETTERS (2" LETTERS FOR DR., CT., ETC.)

ANNE ARUNDEL COUNTY DEPARTMENT OF PUBLIC WORKS	APPROVED _____ CHIEF ENGINEER	STANDARD ROADWAY AND SITE IMPROVEMENT DETAILS TEMPORARY STREET NAME SIGN	REVISED 04/2024	1 / 67
	_____ DESIGN ENGINEER		_____	
	DATE:		_____	
	_____		_____	



SMALL HOLE REPAIR

SURFACE PATCH
(SEE NOTE 2)

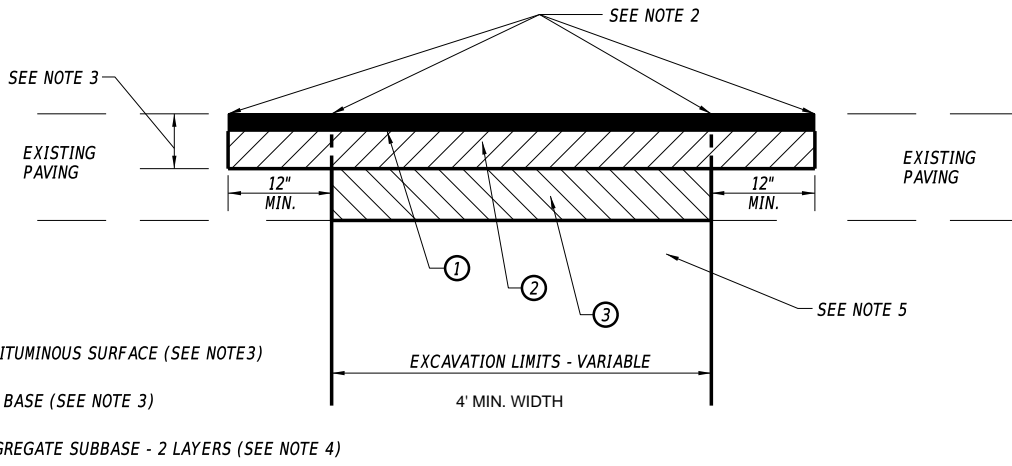
NOTES:

1. THIS DETAIL IS INTENDED FOR ANY SMALL PAVEMENT HOLE REPAIRS RESULTING FROM CORE HOLES, HYDRO EXCAVATION, BAR HOLES, ETC. UP TO 12" IN DIAMETER OR MAX 12" X 12" SQUARE.
2. FOR SMALL PAVEMENT HOLES LESS THAN 3" DIAMETER, INCLUDING BAR HOLES, FILL COMPLETELY WITH APPROVED FLOWABLE FILL (PER SECTION 02250) TO THE SURFACE OF THE EXISTING PAVEMENT. WHEN THE DENSITY OF MULTIPLE SMALL HOLES EXCEEDS ONE (1) HOLE PER 8' MEASURED LONGITUDINALLY IN THE DIRECTION OF TRAVEL, A RECTANGULAR SURFACE PATCH EXTENDING 1' IN ALL DIRECTIONS BEYOND THE OUTERMOST EXTENT OF ALL HOLES SHALL BE PERFORMED.
3. FOR SMALL PAVEMENT HOLES 3" DIAMETER OR GREATER, FILL HOLES WITH APPROVED FLOWABLE FILL (PER SECTION 02250) TO AN ELEVATION BELOW BUT WITHIN 2 INCHES OF THE BOTTOM OF THE EXISTING PAVEMENT.
4. IF APPROVED BY THE ENGINEER, IN LIEU OF FLOWABLE FILL, SUBGRADE MAY BE TAMPED TO PROVIDE SUPPORT THEN FILLED TO WITHIN 2 INCHES OF THE BOTTOM OF THE EXISTING PAVEMENT WITH APPROVED GRADED AGGREGATE SUBBASE MATERIAL PLACED AND COMPACTED IN MAX 4-INCH LIFTS.
5. RESTORE SMALL PAVEMENT HOLES BY PLACING AND COMPACTING AN APPROVED ASPHALT REPAIR MATERIAL IN MAX 2-INCH LIFTS, FLUSH WITH EXISTING SURFACE, AND SEAL WITH APPROVED ASPHALTIC SEALER.
6. IF APPROVED BY THE ENGINEER, IN LIEU OF ASPHALT REPAIR, SMALL PAVEMENT HOLES MAY BE FILLED WITH CONCRETE OR NON-SHRINK GROUT HAVING A COMPRESSIVE STRENGTH OF 4500 PSI AFTER 28 DAYS. REPAIR SHALL BE FLUSH WITH EXISTING SURFACE, FINISHED WITH BLACK DYE/COLORANT, AND PROTECTED FROM TRAFFIC UNTIL REACHING A COMPRESSIVE STRENGTH OF 2500 PSI.
7. IF APPROVED BY THE ENGINEER, IN LIEU OF ASPHALT REPAIR, A REMOVED CORE MAY BE RESET INTO THE CORE HOLE IF INTACT, STABLE, AND FREE OF FRACTURES. REPLACED CORE SHALL BE ORIENTED TO ITS ORIGINAL POSITION AND ALL RESULTING ANNULAR SPACE FILLED WITH AN APPROVED BONDING MATERIAL TO ENSURE WATER-TIGHT SEAL.

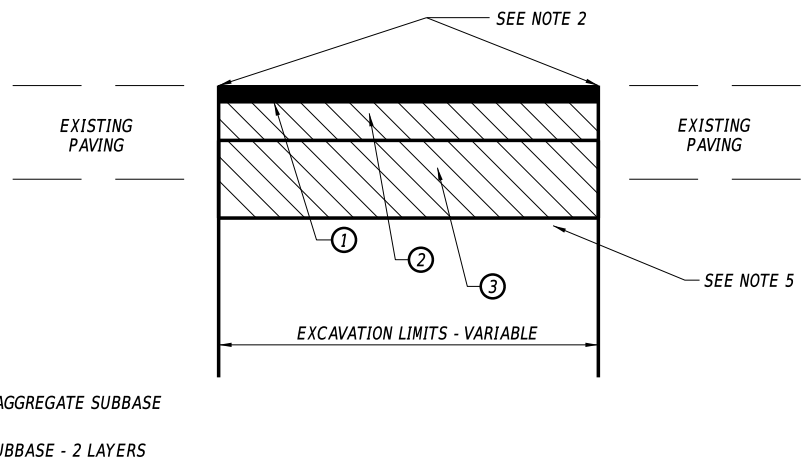
ANNE ARUNDEL COUNTY DEPARTMENT OF PUBLIC WORKS	APPROVED	STANDARD ROADWAY AND SITE IMPROVEMENT DETAILS SMALL PAVEMENT HOLE REPAIR ≤ 12-INCH DIAMETER OR 12" X 12" SQAURE	REVISED	1 — 68

	CHIEF ENGINEER			

	DESIGN ENGINEER			
	DATE: _____			



PERMANENT RESTORATION



TEMPORARY RESTORATION

(SEE NOTE 6)

NOTES:

1. REFER TO SECTION 002250 TRENCH EXCAVATION, BACKFILL, AND COMPACTION FOR MATERIALS AND METHODS OF CONSTRUCTION.
2. EXISTING PAVEMENT MUST BE SAW CUT FULL DEPTH PRIOR TO EXCAVATION. SECONDARY FULL DEPTH CUTBACKS ARE REQUIRED AT TIME OF PERMANENT PATCH. PERMANENT SURFACE AND BASE COURSE PATCH PAVING SHALL EXTEND A MINIMUM 1'-0" BEYOND ANY PAVEMENT DISTURBANCE.
3. BITUMINOUS SECTION SHALL CONFORM TO APPROPRIATE ROADWAY CLASSIFICATION DESIGN STANDARD OR WHATEVER IS EXISTING, WHICHEVER IS GREATER. FOR ANY PATCH LESS THAN 10' WIDE IN BOTH LENGTH AND WIDTH, 12.5 MM BITUMINOUS SURFACE COURSE MAY BE SUBSTITUTED FOR BITUMINOUS BASE COURSE IF PLACED IN EQUAL LIFTS OF MIN. 1.5" TO MAX 3" PER LIFT.
4. GRADED AGGREGATE SUBBASE MATERIAL THICKNESS SHALL CONFORM TO APPROPRIATE ROADWAY CLASSIFICATION DESIGN STANDARD OR WHATEVER IS EXISTING, WHICHEVER IS GREATER. MDOT SHA APPROVED CR-6 MAY BE SUBSTITUTED FOR GRADED AGGREGATE SUBBASE.
5. EXISTING EXCAVATED SUBGRADE MATERIAL MAY BE REUSED AS FILL IF DRY AND CONFORMING TO THE REQUIREMENTS IN SECTION 02250 TRENCH EXCAVATION, BACKFILL, AND COMPACTION. THE PERMITEE SHALL BE RESPONSIBLE FOR VERIFYING MATERIAL CONFORMITY AND COMPACTION.
6. TEMPORARY PATCH SHALL CONSIST OF MIN. 2" OF BITUMINOUS SURFACE ON VARIABLE DEPTH GRADED AGGREGATE BASE COURSE SUBSTITUTED FOR BITUMINOUS BASE (PER NOTE 3), ON 12" ADDITIONAL GRADED AGGREGATE SUBBASE COURSE MEETING REQUIREMENTS SPECIFIED IN SECTION 02621.02. ALL TEMPORARY PATCHES SHALL BE MAINTAINED BY THE PERMITEE UNTIL PERMANENT RESTORATION IS COMPLETED.
7. PRIOR TO PLACING PERMANENT PAVEMENT MATERIAL, GRADED AGGREGATE SUBBASE SHALL BE TRIMMED TO REQUIRED DEPTH, CLEANED, AND THOROUGHLY COMPACTED PER SECTION 02621.03 TO NOT LESS THAN 95% OF MAXIMUM DRY DENSITY.
8. CONTRACTOR MAY ELECT TO MILL AND PATCH BITUMINOUS SURFACE 12" BEYOND LIMITS OF DISTURBANCE IF BITUMINOUS CONCRETE BASE WAS PREVIOUSLY PLACED TO THE PRESCRIBED DEPTH IN LIEU OF TEMPORARY PATCHING.

ANNE ARUNDEL COUNTY DEPARTMENT OF PUBLIC WORKS	APPROVED _____ CHIEF ENGINEER	STANDARD ROADWAY AND SITE IMPROVEMENT DETAILS UTILITY PATCH PAVEMENT RESTORATION	REVISED	1 <hr/> 69
	_____ DESIGN ENGINEER		_____	
	DATE:		_____	
	_____		_____	