

FULL DEPTH RECONSTRUCTION OF UNION AVENUE (C.R. #615)

FROM MAPLE AVENUE (CR 537) TO PARK AVENUE (CR 621)

TOWNSHIP OF PENNSAUKEN CAMDEN COUNTY, NEW JERSEY

BID No. B20-xx

UTILITIES

GAS & ELECTRIC:

PUBLIC SERVICE ENTERPRISE GROUP
ADDRESS
ADDRESS
CONTACT NAME
PHONE NUMBER

TELEPHONE & CABLE:

VERIZON
ADDRESS
ADDRESS
CONTACT NAME
PHONE NUMBER

COMCAST CABLE
1250 HADDONFIELD-BERLIN ROAD
CHERRY HILL, NJ 08034
CARMINE POLO IV
856-669-0122

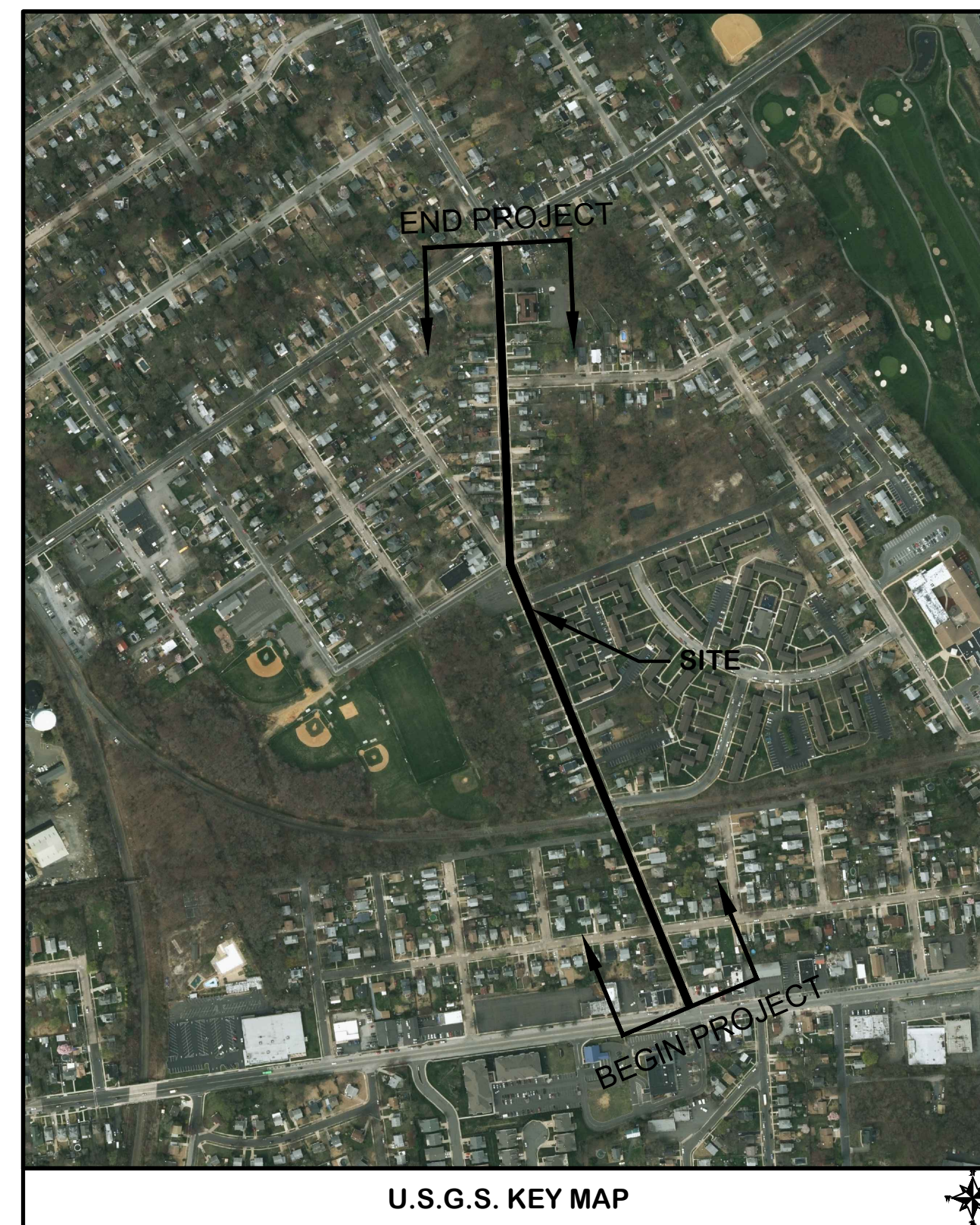
WATER:

MERCHANTVILLE PENNSAUKEN WATER COMMISSION
6751 WESTFIELD AVENUE
PENNSAUKEN, NJ 08110
JIM GARGUSO
856-663-0043

WATER &
SANITARY SEWER:

CAMDEN COUNTY MUNICIPAL UTILITIES AUTHORITY
1645 FERRY AVENUE
CAMDEN, NJ 08104
ANDREW KRICUN
856-541-3700

PENNSAUKEN SEWERAGE AUTHORITY
1250 JOHN TIPTON BOULEVARD
PENNSAUKEN, NJ 08110
ALAN GUDIS
PHONE NUMBER



SOURCE: PENNSAUKEN, NJ USGS QUADRANGLE SCALE: 1"=500'

LENGTH OF PROJECT

2,800 FEET = 0.530 MILES

SHEET No.	DESCRIPTION
X	COVER SHEET
X	TYPICAL SECTIONS
X	CONSTRUCTION PLANS
X	GRADING PLAN
X	STRIPING PLAN
X	HANDICAP RAMP DETAILS
X	CONSTRUCTION DETAILS

THE CONTRACTOR WILL DESIGNATE AN INDIVIDUAL RESPONSIBLE FOR CONSTRUCTION SITE SAFETY DURING THE COURSE OF CONSTRUCTION IN ACCORDANCE WITH NJAC 9:23-2.1 (g) OF THE NEW JERSEY UNIFORM CONSTRUCTION CODE.


THE CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING ALL EXISTING STRUCTURES AND UTILITIES, WHICH HE DEEMS NECESSARY, BOTH ABOVE AND BELOW THE GROUND SURFACE BEFORE EQUIPMENT ENTERS THE CONSTRUCTION SITE.

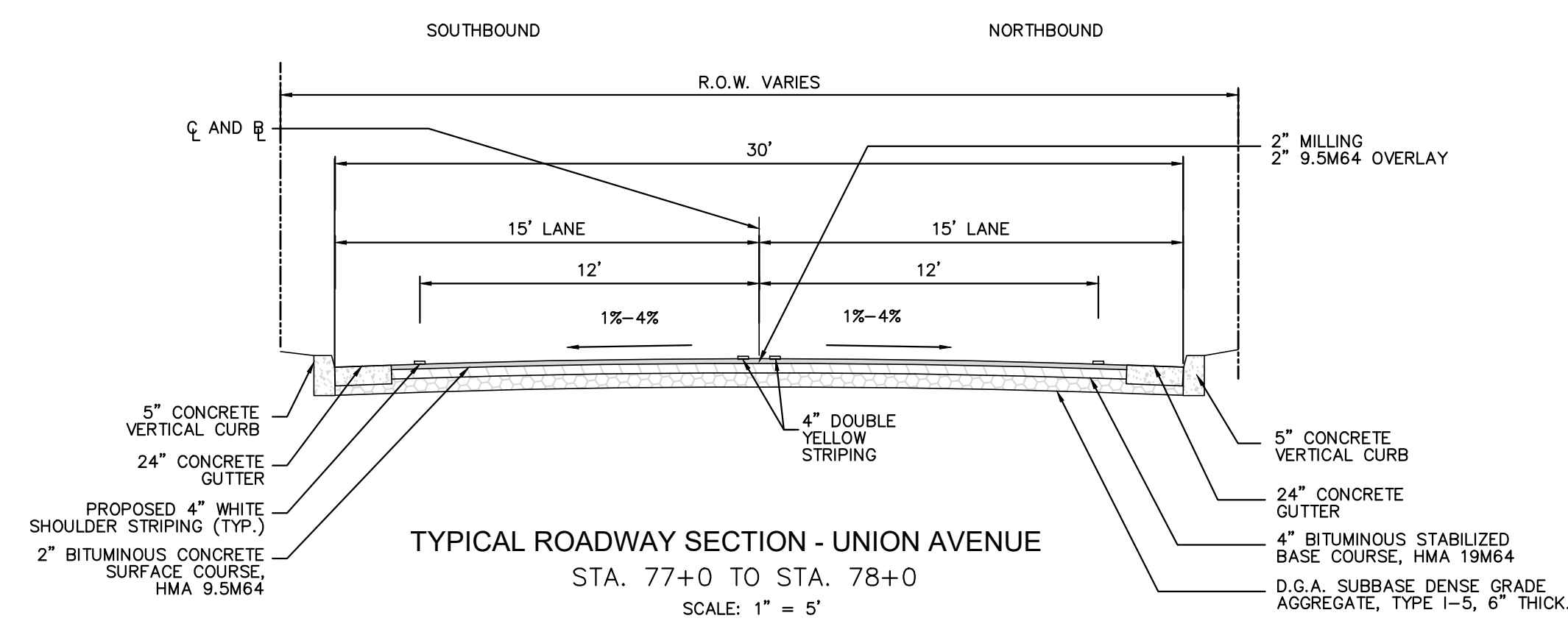
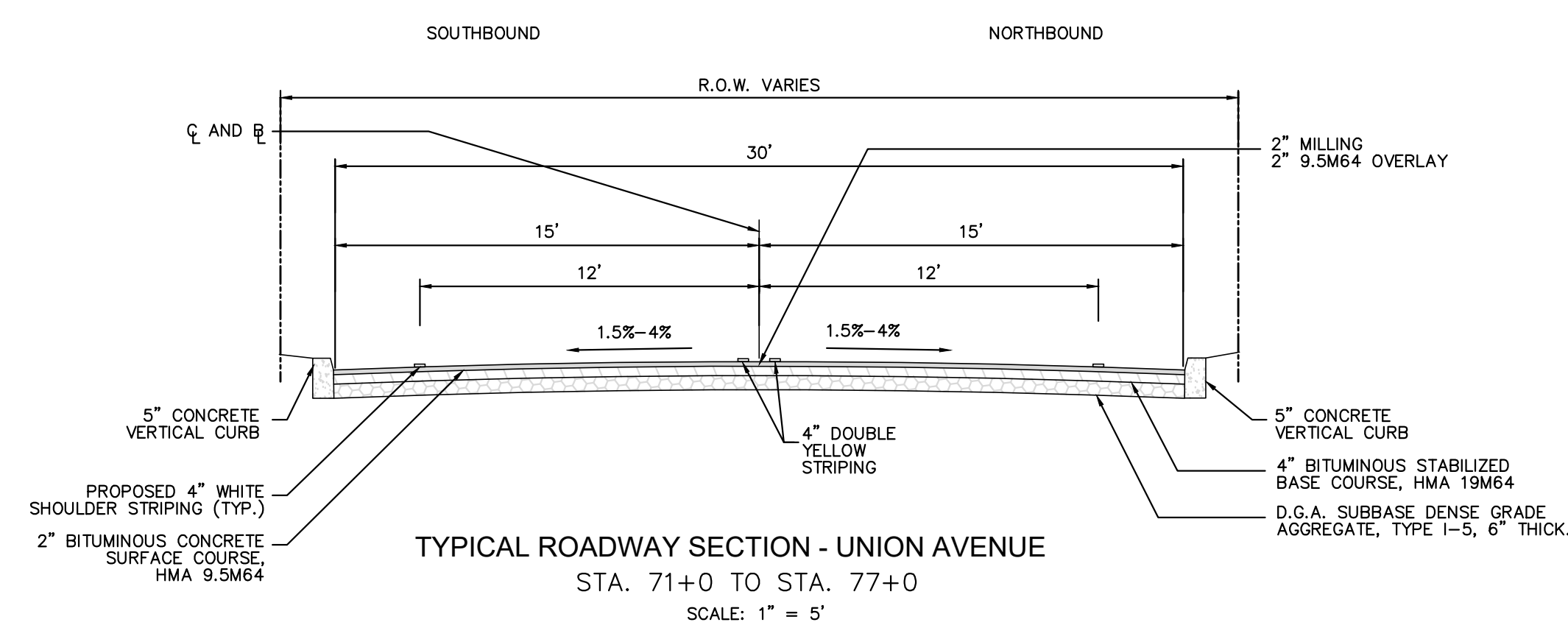
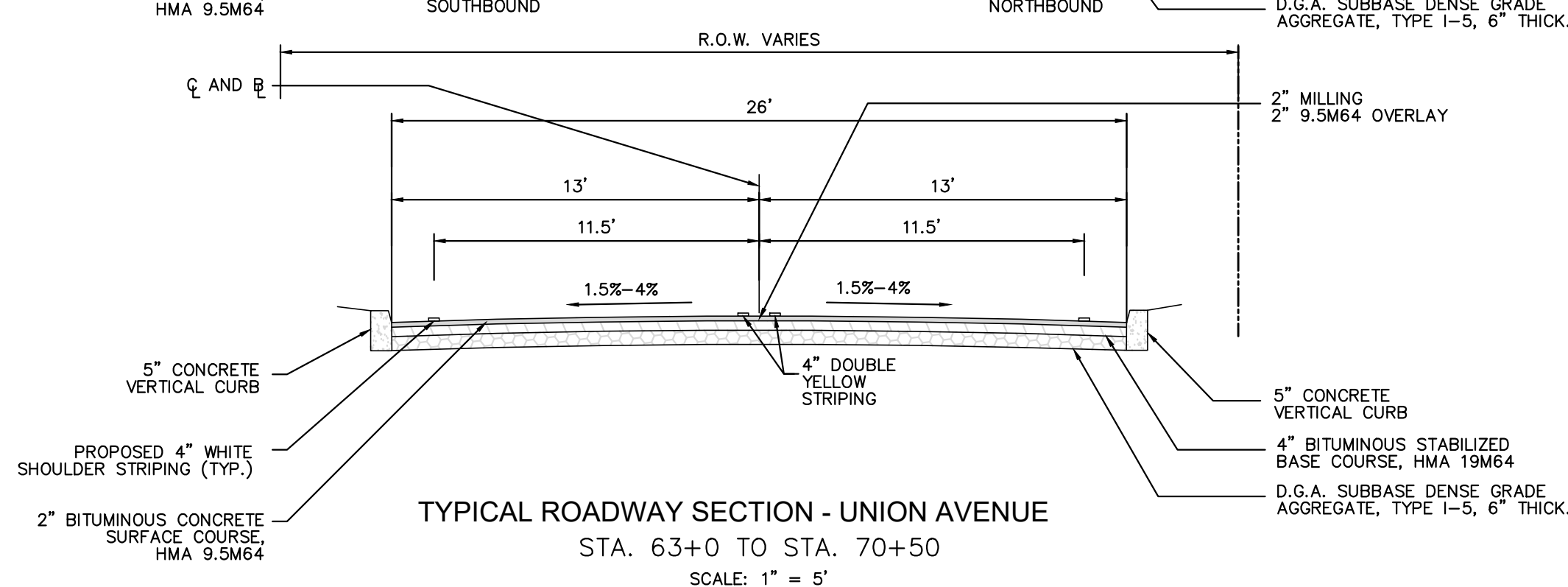
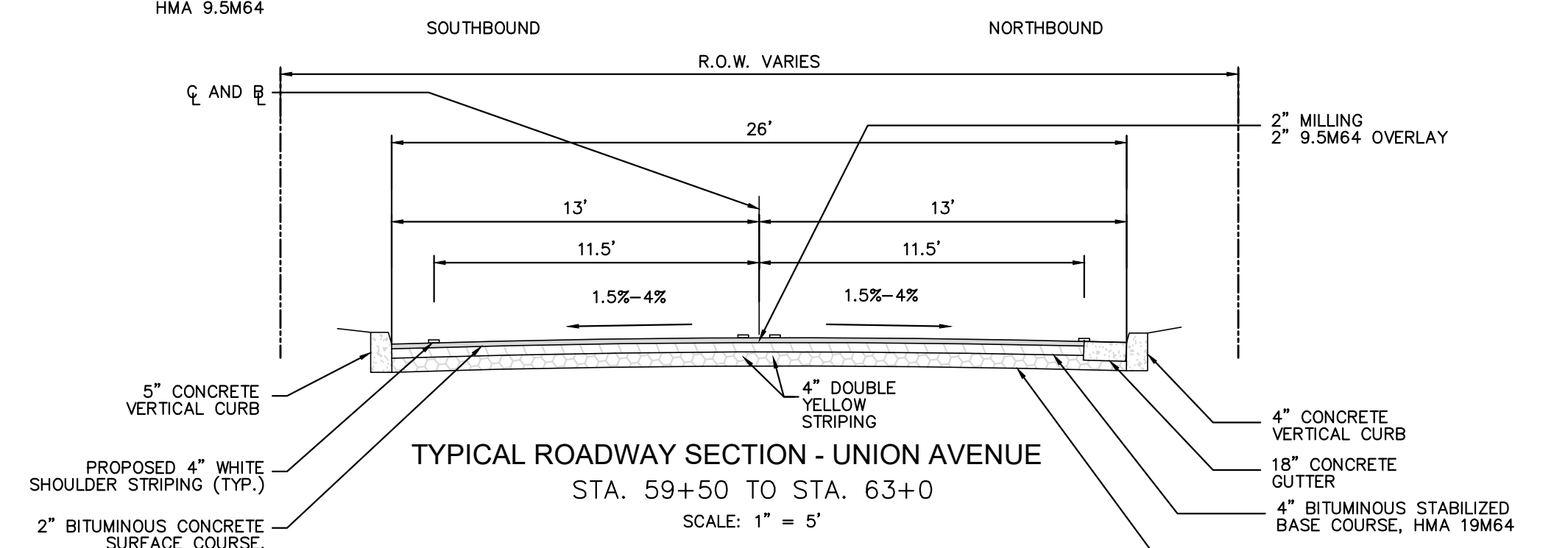
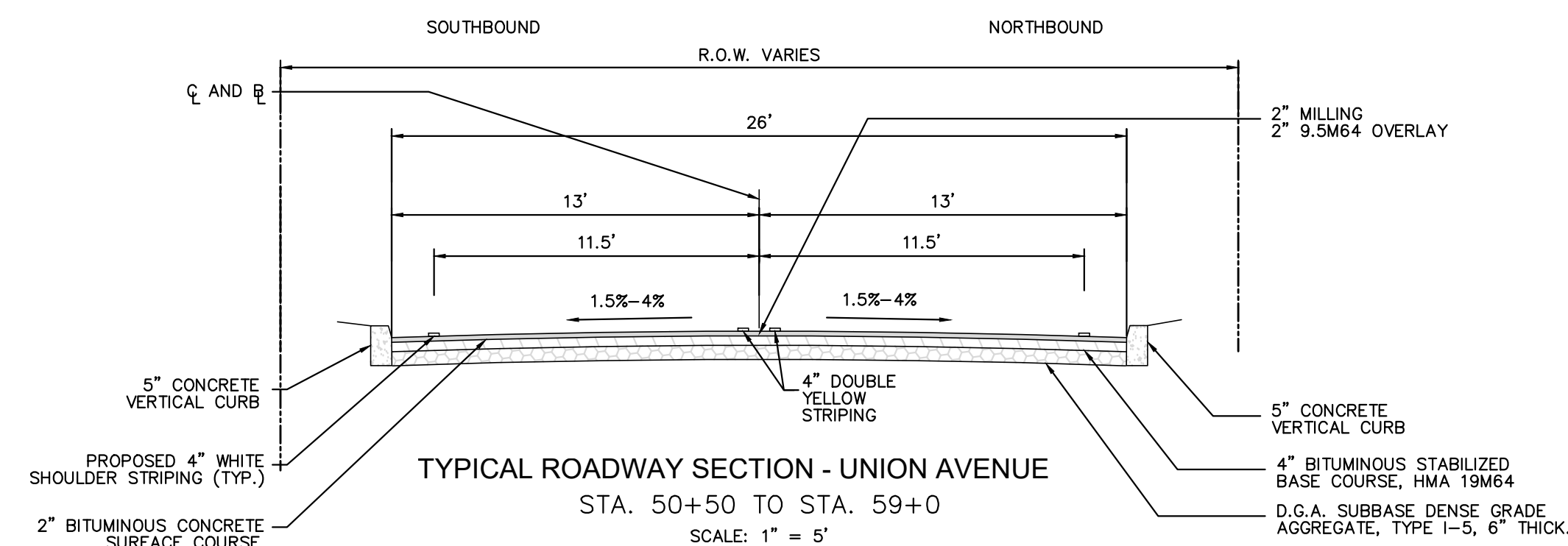
FINAL INQUIRIES TO "U.G. UTILITIES MARK-OUT" TELEPHONE NUMBER: 1-800-272-1000 AND TO "FIBER OPTIC MARK-OUT" TELEPHONE NUMBER: 1-800-272-1000 SHALL BE MADE BY THE CONTRACTOR WITHIN SEVEN (7) DAYS OF ENTERING THE SITE. THE CONTRACTOR SHALL COORDINATE AND VERIFY THE METHOD OF UTILITY LOCATION WITH THE APPROPRIATE UTILITY COMPANIES.

UTILITY LOCATIONS SHOWN ON THE PLANS ARE APPROXIMATE, AND BASED ON EXISTING INFORMATION RECEIVED FROM UTILITY COMPANIES.

Standard construction details shall conform to the latest requirements of the Department of Transportation

REVISIONS		REVISIONS	
No.	DATE	No.	DATE

<i>Kevin Becica</i>	<i>Christopher J. Noll</i>	 ENVIRONMENTAL RESOLUTIONS, INC. <small>Engineers • Planners • Scientists • Surveyors</small> 815 East Gate Drive - Suite 103 Mount Laurel, New Jersey 08054-3415 Tel. 856-233-7170 Fax 856-273-9239	COVER SHEET		
Camden County Engineer	N.J. Professional Engineer No. 32206		FULL DEPTH RECONSTRUCTION OF UNION AVENUE COUNTY ROUTE #615 TOWNSHIP OF PENNSAUKEN CAMDEN COUNTY, NEW JERSEY		
N.J. Professional Engineer No. 29940	N.J. Professional Engineer No. 32206	CERTIFICATE OF AUTHORIZATION NUMBER: 24GA27974500	FILE: 30750-50_COVER.DWG PROJECT No. 30750-50	DRAWN: RGM DESIGNED: JN DATE: 2/6/20	SCALE: AS NOTED SHEET 1 OF 10

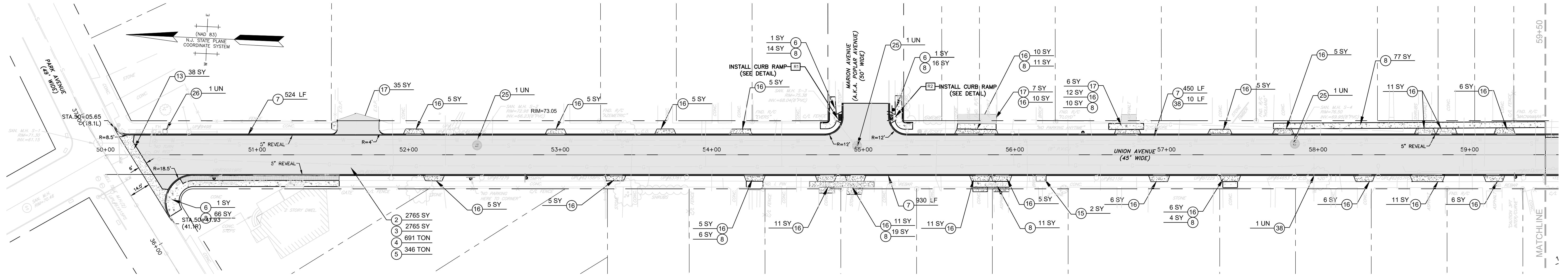


REVISIONS		REVISIONS	
No.	DATE	No.	DATE

TYPICAL SECTIONS

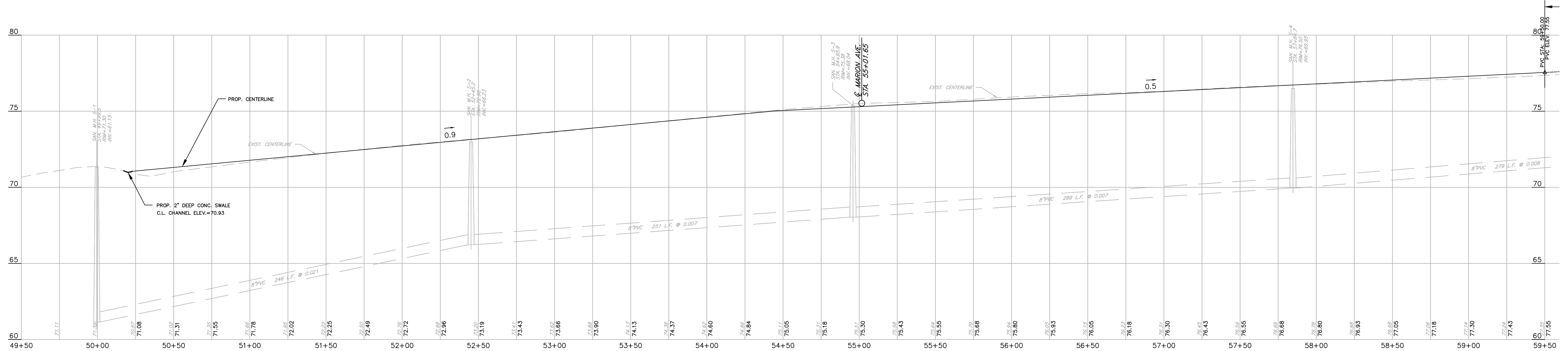
UNION AVENUE
COUNTY ROUTE #615
TOWNSHIP OF PENNSAUKEN
CAMDEN COUNTY, NEW JERSEY

CERTIFICATE OF AUTHORIZATION NUMBER: 246A27974500	FILE: 30750-50_Standard_Details.DWG	DRAWN: KW	DESIGNED: JN	DATE: 2/4/20
	PROJECT No: 30750-50	SCALE: NTS		SHEET 2 OF 10



UNION AVE. (STA. 49+50 - 59+50)
SCALE 1" = 30'

TOWNSHIP OF PENNSAUKEN



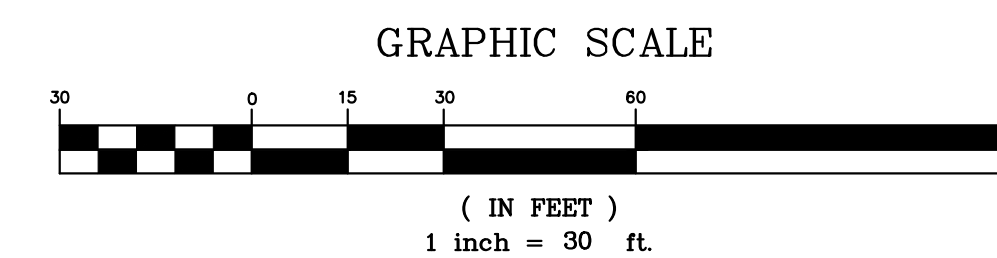
UNION AVE. PROFILE (STA. 49+50 - 59+50)
HORIZONTAL 1" = 30'
VERTICAL 1" = 3'

UNION AVENUE (CR 615) RECONSTRUCTION PROJECT
PARK AVENUE (CR 621) TO MAPLE AVENUE (CR 537)
65% ENGINEER'S ESTIMATE

Pay Item No.	DESCRIPTION	Unit	Sheet Quantity
2	Cement Subbase Soil Stabilization	SY	2765
3	#57 Stone, 2" Thick	SY	2765
4	HMA 25M64 Base Course, 4" Thick	Ton	664
5	HMA 9.5M64 Surface Course, 2" Thick	Ton	346
6	Detectable Warning Surface	SY	3
7	6" x 9"x18" Concrete Vertical Curb	LF	1904
8	Concrete Sidewalk, 4" Thick	SY	234
13	Concrete Gutter	SY	38
15	Reset Brick Pavers	SF	2
16	Reinforced Concrete Apron, 6" Thick	SY	167
17	HMA Driveway Apron, 3" Thick	SY	48
25	Remove Sanitary Sewer Casting and Replace with New Casting	UN	3
26	Reset Existing Casting	UN	1
38	Steel Tree Plate	UN	2

LEGEND

- DENOTES FULL DEPTH HMA PAVEMENT
- DENOTES CONCRETE
- DENOTES VEHICLE GRADE PAVERS



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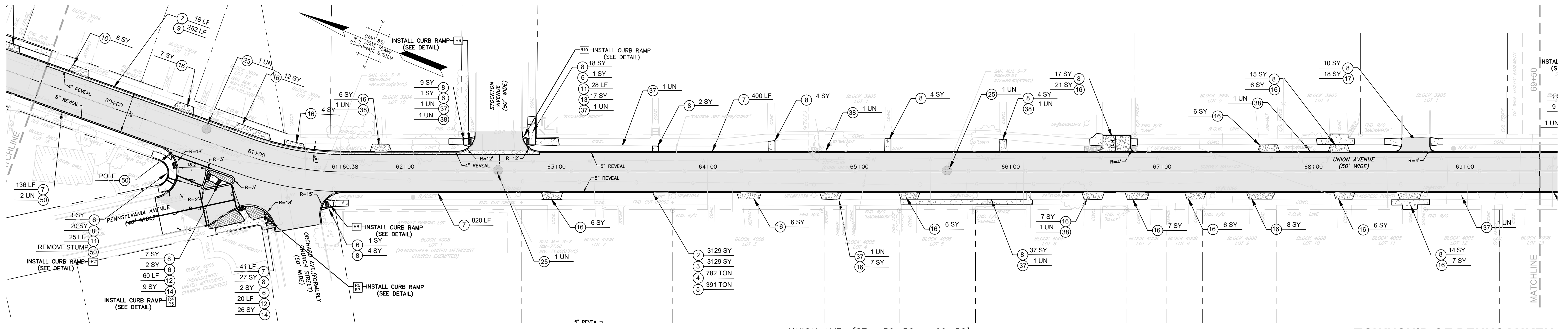
CONSTRUCTION PLANS & PROFILES

UNION AVENUE
COUNTY ROUTE #615
TOWNSHIP OF PENNSAUKEN
CAMDEN COUNTY, NEW JERSEY

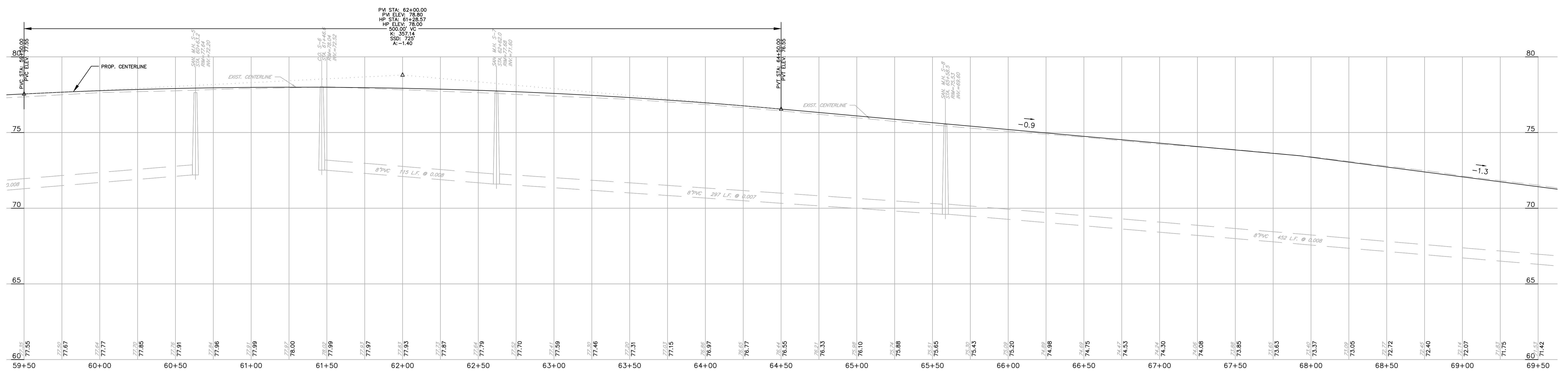
CERTIFICATE OF AUTHORIZATION
NUMBER: 24GA27974500

PROJECT No. 30750-50
DRAWN: [] DESIGNED: [] DATE: 2/7/20
SCALE: 1"=30' SHEET 3 OF 9

COUNTY OF CAMDEN



UNION AVE. (STA. 59+50 - 69+50)
SCALE 1" = 30'



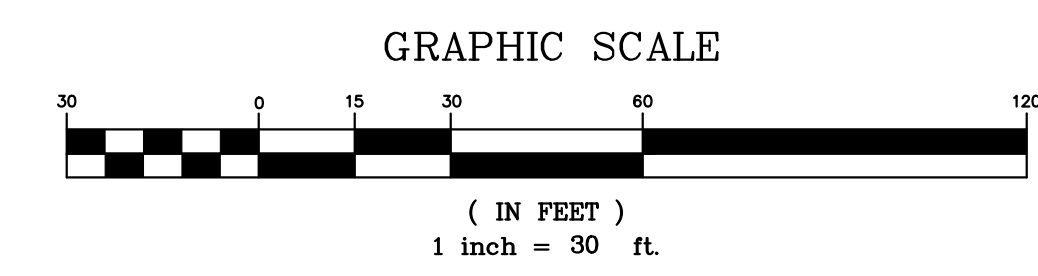
UNION AVE. PROFILE (STA. 59+50 - 69+50)
HORIZONTAL 1" = 30'
VERTICAL 1" = 3'

UNION AVENUE (CR 615) RECONSTRUCTION PROJECT
PARK AVENUE (CR 621) TO MAPLE AVENUE (CR 537)
65% ENGINEER'S ESTIMATE

Pay Item No.	DESCRIPTION	Unit	Sheet Quantity
2	Cement Subbase Soil Stabilization	SY	3129
3	#57 Stone, 2" Thick	SY	3129
4	HMA 25M64 Base Course, 4" Thick	Ton	782
5	HMA 9.5M64 Surface Course, 2" Thick	Ton	391
6	Detectable Warning Surface	SY	8
7	6" x 9"x18" Concrete Vertical Curb	LF	1415
8	Concrete Sidewalk, 4" Thick	SY	187
9	Monolithic Concrete Curb & Gutter, 18" Wide	SY	282
11	Header Curb	LF	28
12	Mountable Curb	LF	80
13	Concrete Gutter	SY	17
14	Vehicular Pavers	SY	35
16	Reinforced Concrete Apron, 6" Thick	SY	134
17	HMA Driveway Apron, 3" Thick	SY	18
25	Remove Sanitary Sewer Casting and Replace with New Casting	UN	3
37	Remove Tree (24" - 36" Dia.), Replace If & Where Directed	UN	4
38	Steel Tree Plate	UN	6

LEGEND

- DENOTES FULL DEPTH HMA PAVEMENT
- DENOTES CONCRETE
- DENOTES VEHICLE GRADE PAVERS



No.	DATE	REVISIONS

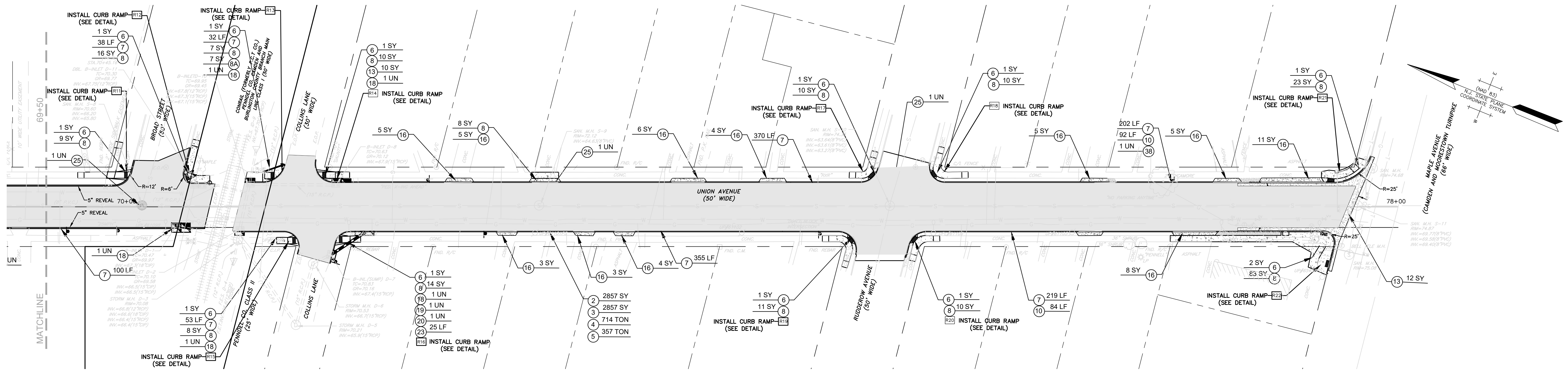
CONSTRUCTION PLANS & PROFILES

**UNION AVENUE
COUNTY ROUTE #615
TOWNSHIP OF PENNSAUKEN
CAMDEN COUNTY, NEW JERSEY**

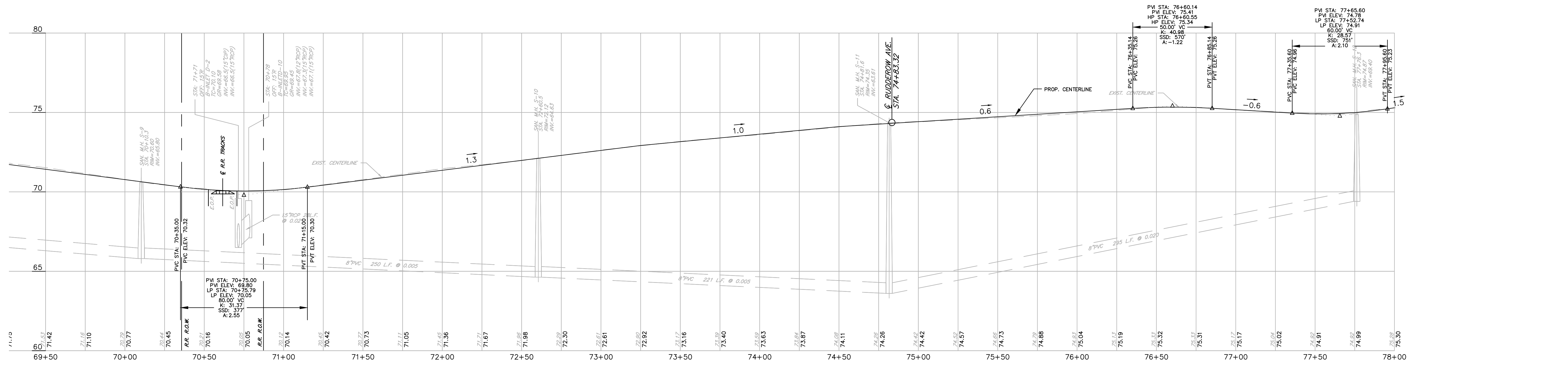
CERTIFICATE OF AUTHORIZATION
NUMBER: 24GA27974500

PROJECT No. 30750-50
DRAWN: [] DESIGNED: [] DATE: 2/7/20
SCALE: 1"=30'
SHEET 4 OF 9

COUNTY OF CAMDEN



UNION AVE. (STA. 69+50 - 78+01.97)
SCALE 1" = 30'



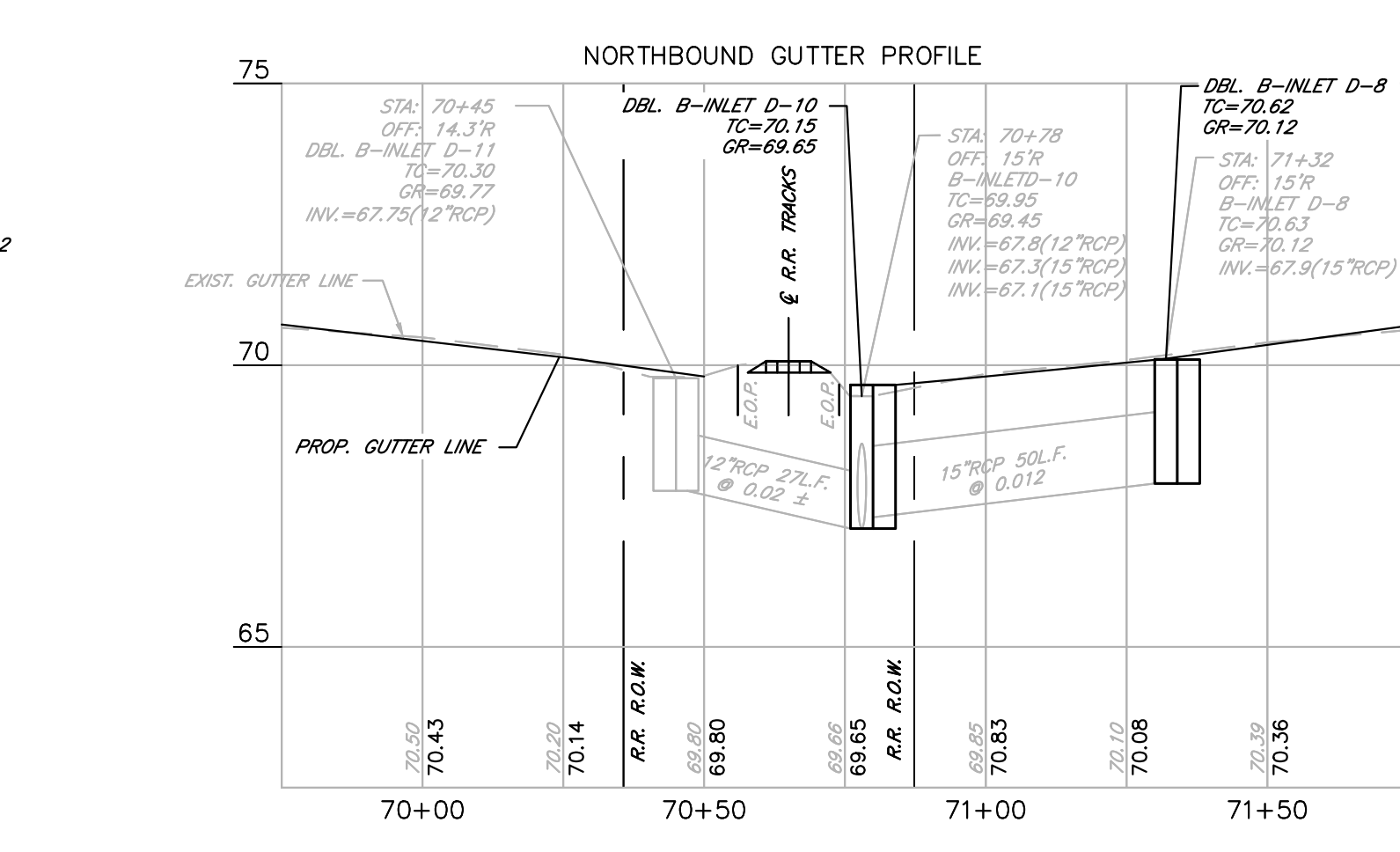
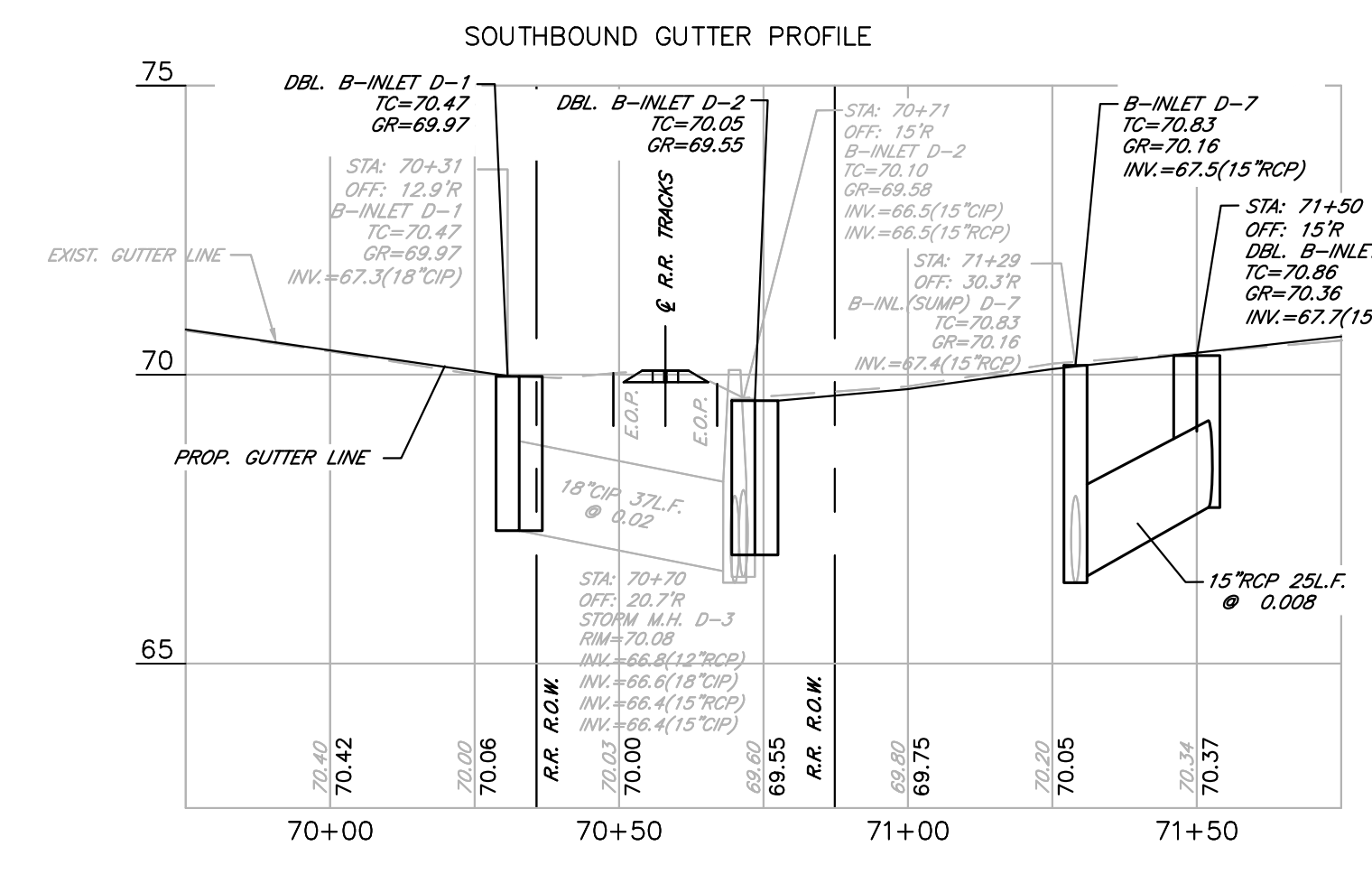
UNION AVE. PROFILE (STA. 69+50 - 78+01.97)
HORIZONTAL 1" = 30'
VERTICAL 1" = 3'

LEGEND

- DENOTES FULL DEPTH HMA PAVEMENT
- DENOTES CONCRETE
- DENOTES VEHICLE GRADE PAVERS

**UNION AVENUE (CR 615) RECONSTRUCTION PROJECT
PARK AVENUE (CR 621) TO MAPLE AVENUE (CR 537)
65% ENGINEER'S ESTIMATE**

Pay Item No.	DESCRIPTION	Unit	Sheet Quantity
2	Cement Subbase Soil Stabilization	SY	2857
3	#57 Stone, 2" Thick	SY	2857
4	HMA 25M64 Base Course, 4" Thick	Ton	714
5	HMA 9.5M64 Surface Course, 2" Thick	Ton	357
6	Detectable Warning Surface	SY	13
7	6" x 9" x 18" Concrete Vertical Curb	LF	1372
8	Concrete Sidewalk, 4" Thick	SY	207
8A	HMA Sidewalk	SY	7
10	Monolithic Concrete Curb & Gutter, 24" Wide	SY	176
13	Concrete Gutter	SY	12
16	Reinforced Concrete Apron, 6" Thick	SY	54
18	Inlet Type Double 'B'	UN	5
19	Curb Piece, Type 'N'	UN	1
20	Reconstruct 'B' Inlet Using Existing Casting	UN	1
23	15" RCP	LF	25
25	Remove Sanitary Sewer Casting and Replace with New Casting	UN	3



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REVISIONS		REVISIONS	
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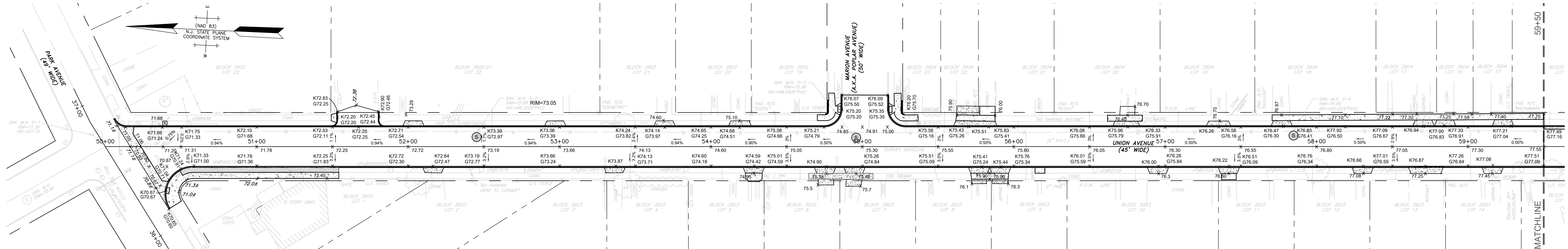
CONSTRUCTION PLANS & PROFILES

**UNION AVENUE
COUNTY ROUTE #615
TOWNSHIP OF PENNSAUKEN
CAMDEN COUNTY, NEW JERSEY**

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NUMBER: 246A27974500

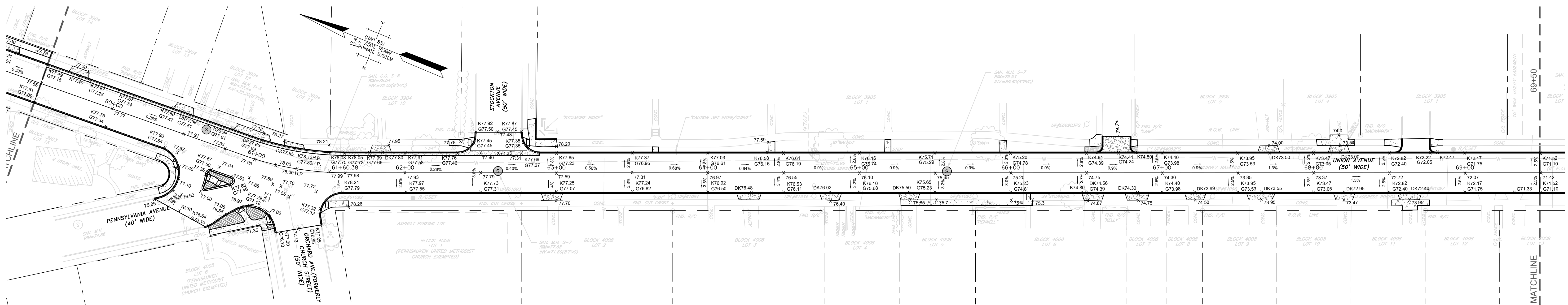
FILE: 30750-50_Constr_Plans.rvt
PROJECT No. 30750-50
DRAWN: [] DESIGNED: [] DATE: 2/7/20
SCALE: 1" = 30' SHEET 5 OF 9

COUNTY OF CAMDEN



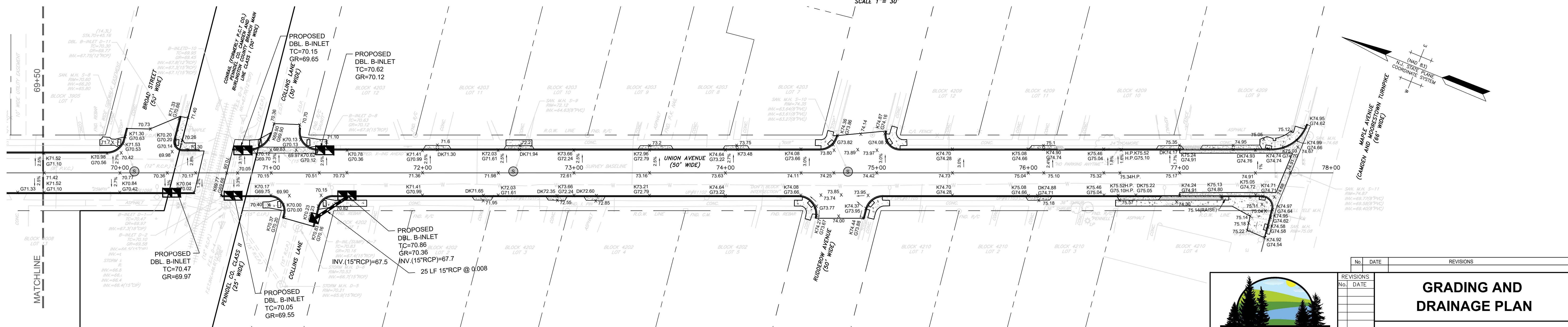
UNION AVE. (STA. 49+50 - 59+50)
SCALE 1" = 30'

TOWNSHIP OF PENNSAUKEN



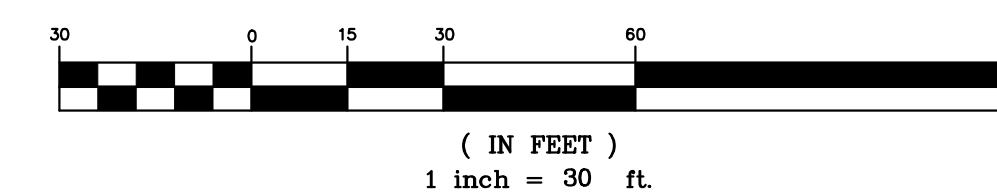
UNION AVE. (STA. 59+50 - 69+50)
SCALE 1" = 30'

TOWNSHIP OF PENNSAUKEN



UNION AVE. (STA. 69+50 - 78+01.97)
SCALE 1" = 30'

GRAPHIC SCALE



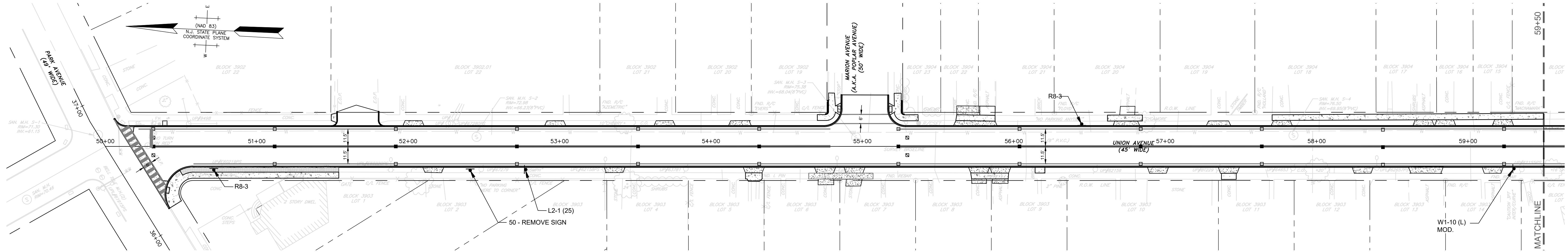
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REVISIONS		REVISIONS	
No.	DATE	No.	DATE

GRADING AND DRAINAGE PLAN

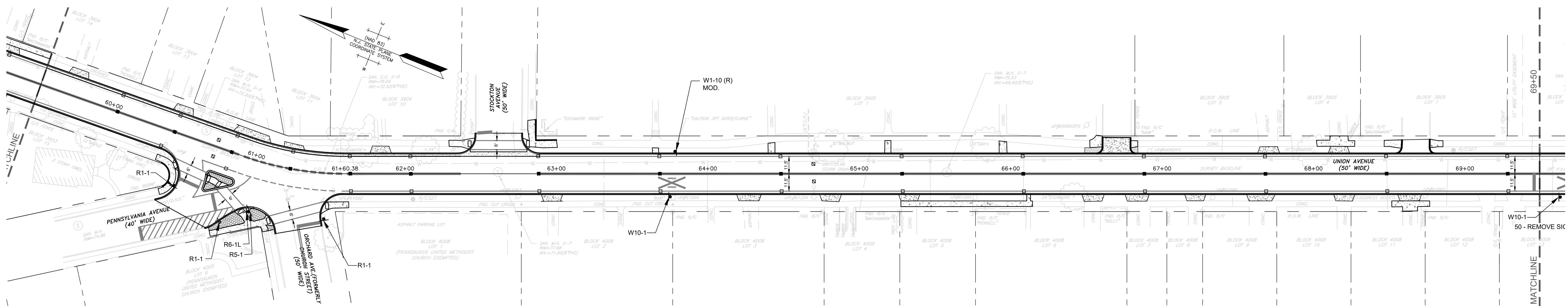
UNION AVENUE
COUNTY ROUTE #615
TOWNSHIP OF PENNSAUKEN
CAMDEN COUNTY, NEW JERSEY

COUNTY OF CAMDEN



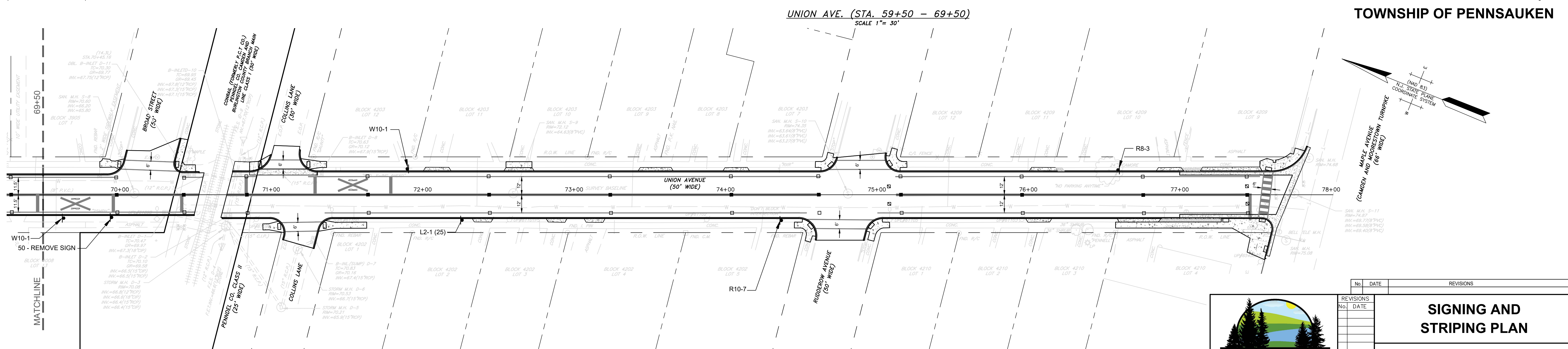
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SCALE 1" = 30'

TOWNSHIP OF PENNSAUKEN



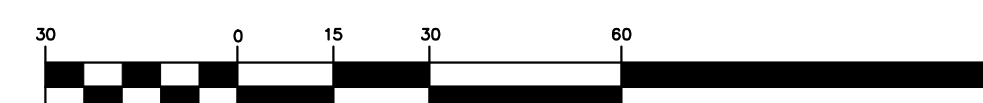
UNION AVE. (STA. 59+50 - 69+50)
SCALE 1" = 30'

TOWNSHIP OF PENNSAUKEN



UNION AVE. (STA. 69+50 - 78+01.97)
SCALE 1" = 30'

GRAPHIC SCALE



(IN FEET)
1 inch = 30 ft.



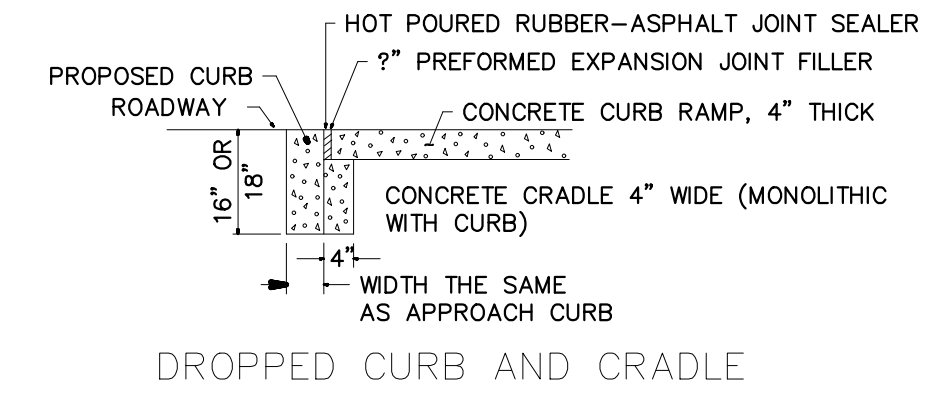
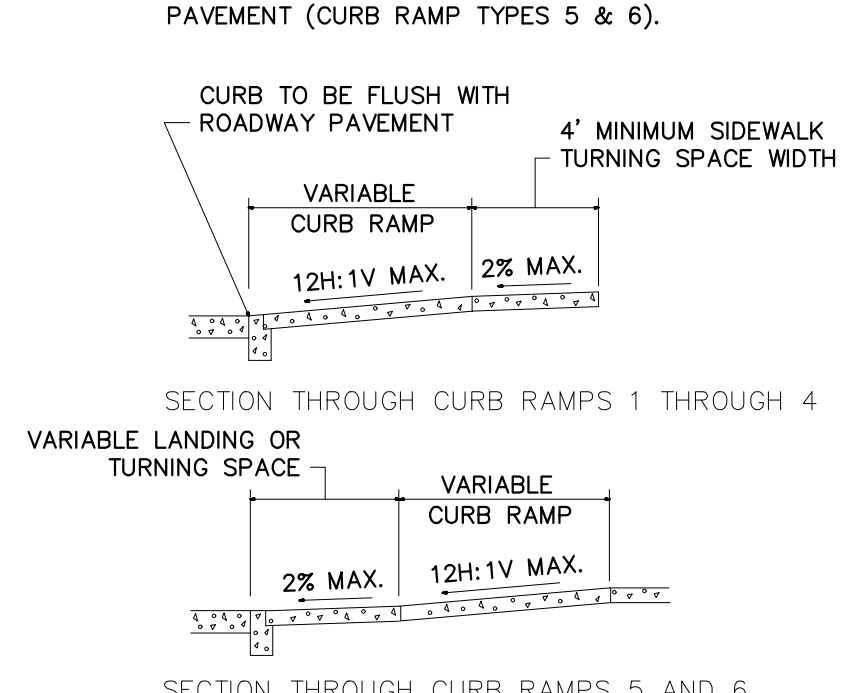
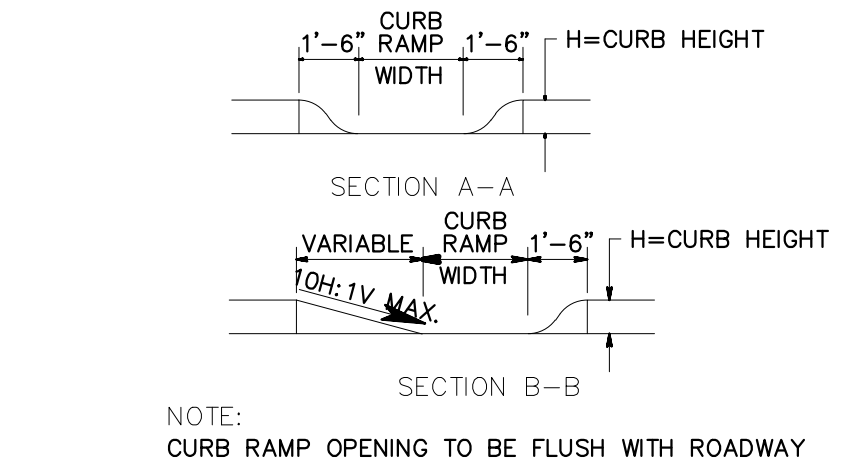
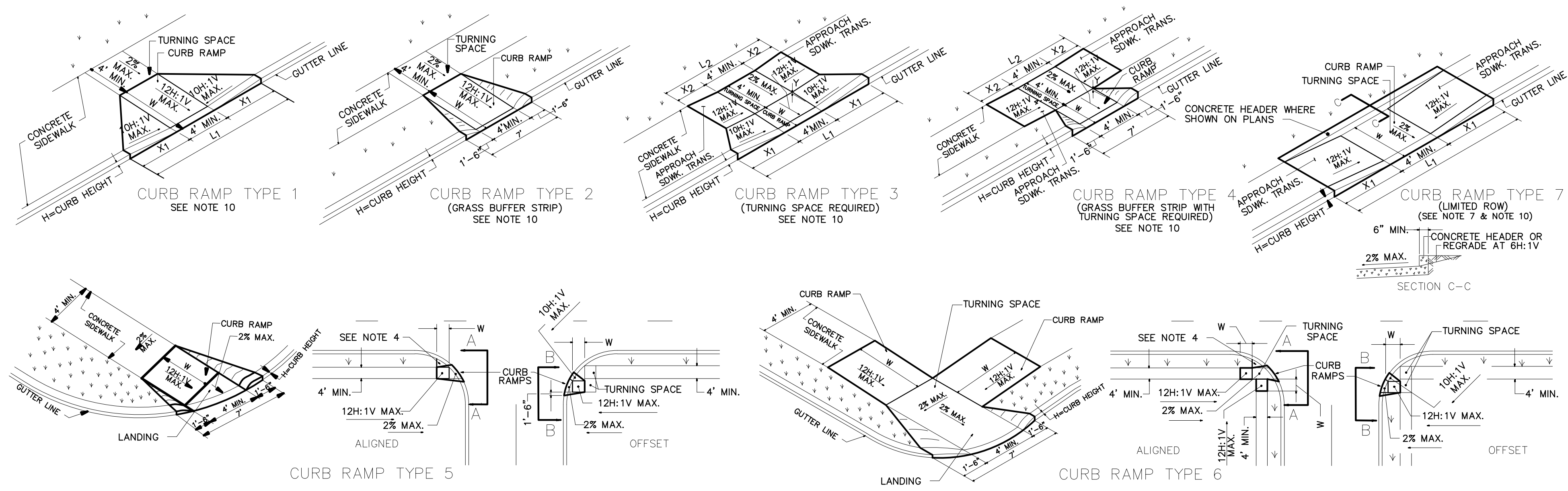
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REVISIONS		REVISIONS	
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SIGNING AND STRIPING PLAN

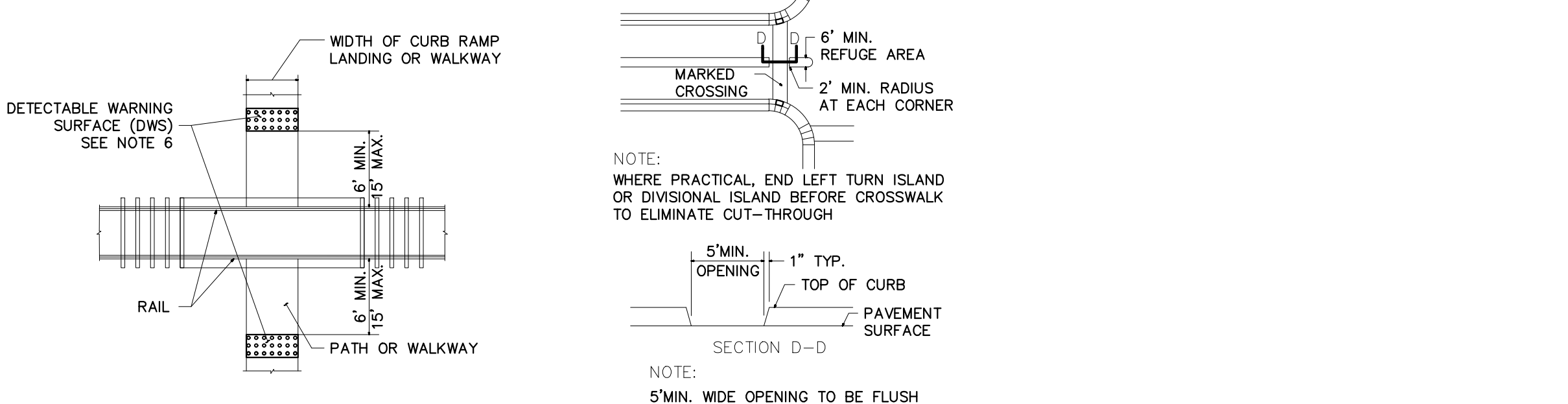
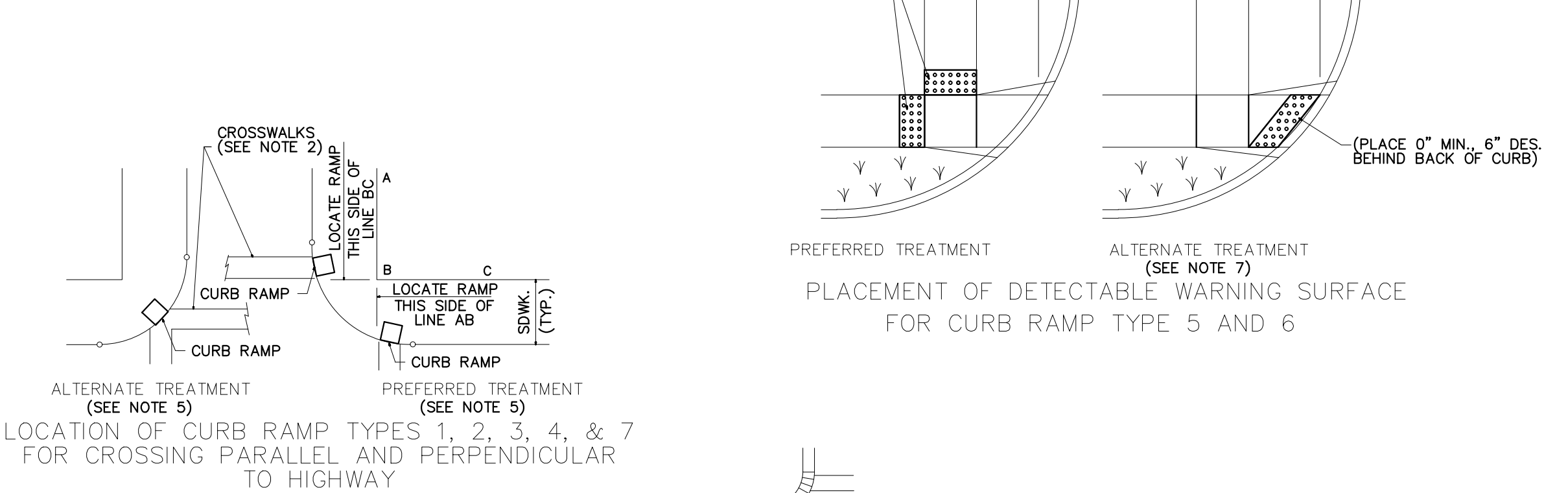
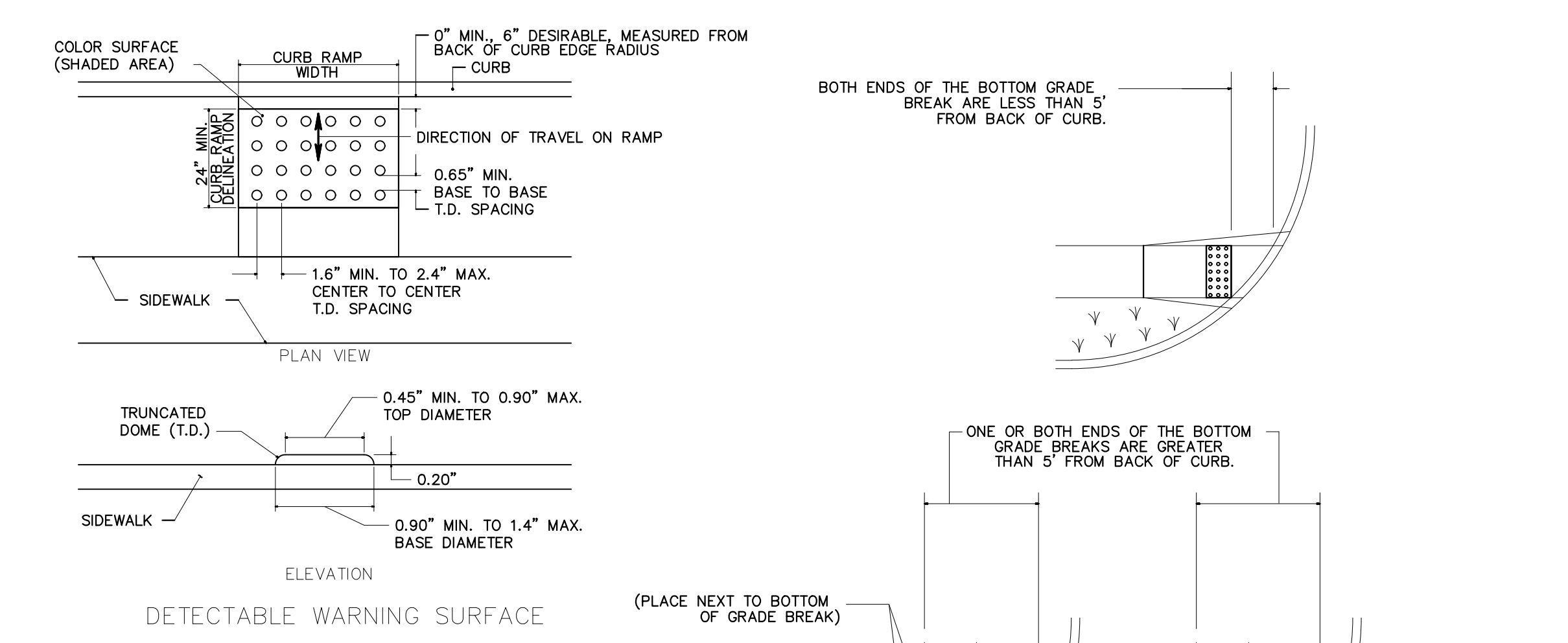
UNION AVENUE
COUNTY ROUTE #615
TOWNSHIP OF PENNSAUKEN
CAMDEN COUNTY, NEW JERSEY

FILE: 30750-50_Camden_Plan2.DWG
PROJECT No. 30750-50
DRAWN: [] DESIGNED: [] DATE: 2/7/20
SCALE: 1"=30' SHEET 7 OF 9



- NOTES:**
- KEEP TURNING SPACE, APPROACH SIDEWALK TRANSITIONS, AND CURB RAMP CLEAR OF OBSTRUCTIONS THAT PROTRUDE ABOVE THE SURFACE.
 - FOR DIMENSIONS SEE CD-606-3 AND CD-606-4
 - CURB (DROPPED CURB) GUTTERLINE TO BE FLUSH WITH ROADWAY PAVEMENT THE ENTIRE WIDTH OF THE RAMP (4 FEET MIN.) AT ALL CURB RAMP.
 - FOR CURB RAMP TYPES 5 AND 6, IF A GRASS BUFFER DOES NOT EXIST, SLOPE CURB TO EQUAL SLOPE OF ADJACENT CURB RAMP.
 - SIDEWALK AND CURB RAMP WITHIN AREA ENCLOSED BY HEAVY LINES INDICATES THE PAY LIMIT FOR CONCRETE SIDEWALK OF THE APPROPRIATE ADJACENT THICKNESS.
 - CURB AND HEADER WITHIN AREA ENCLOSED BY HEAVY LINES INDICATES THE PAY LIMIT FOR VERTICAL CURB OR SLOPING CURB OF THE APPROPRIATE ADJACENT SIZE AND KIND.
 - WHERE THE DISTANCE FROM THE GUTTER LINE TO THE OUTSIDE EDGE OF SIDEWALK IS 6 FEET OR LESS, USE CURB RAMP TYPE 7, INSTEAD OF CURB RAMP TYPE 1 THROUGH 4.
 - CROSSWALKS AND STOP LINES MAY BE MARKED OR UNMARKED. SEE PLANS.
 - THE 12H:1V MAX SLOPE IS THE RUNNING SLOPE FOR CURB RAMP, BUT ONLY THE 12H:1V SLOPE MEASURED AS X IS THE RUNNING SLOPE FOR TYPE 3 AND TYPE 4 CURB RAMP. ENSURE THE RUNNING SLOPE OF CURB RAMP DOES NOT REQUIRE ITS LENGTH TO EXCEED 15 FEET. THE RUNNING SLOPE MAY EXCEED THE 12H:1V MAX SLOPE SO AS NOT TO EXCEED THE 15 FEET MAXIMUM LENGTH.
 - CURB RAMP TYPE 1 THROUGH 7 ARE NORMALLY PLACED ON THE RADIUS RETURN AT THE INTERSECTION AND ON A TANGENT SECTION AS DRAWN.

PUBLIC SIDEWALK CURB RAMP DETECTABLE WARNING SURFACE



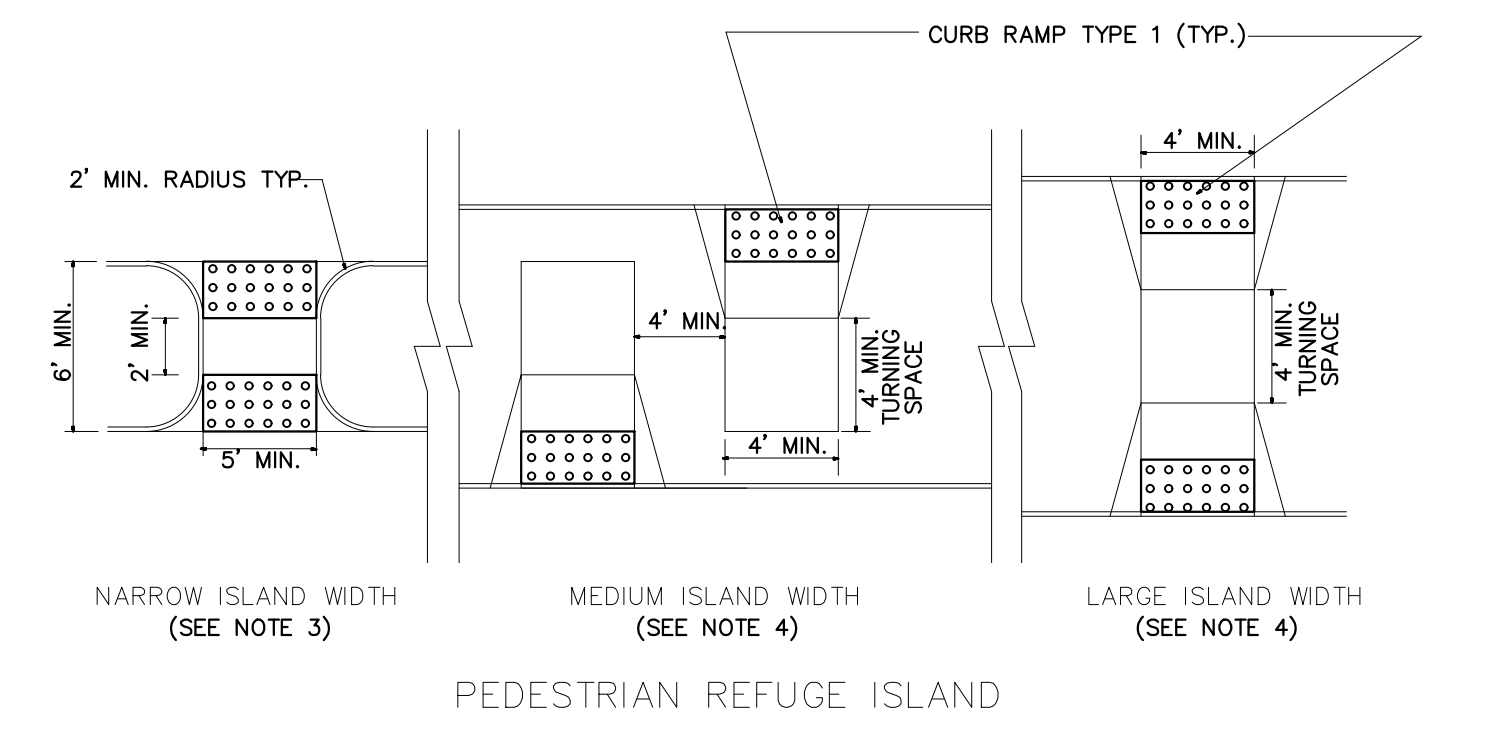
CURB RAMP TYPE 3							
W FEET	H INCHES	X1 FEET	L1 FEET	Y INCHES	X2 FEET	L2 FEET	
2.5	3	2.5	9	2.5	0.5	5	
	4	3.3	10.6	2.5	1.5	7	
	5	4.2	12.4	2.5	2.5	9	
	6	5.0	14.0	2.5	3.5	11	
	7	5.8	15.6	2.5	4.5	13	
	8	6.7	17.4	2.5	5.5	15	
	9	7.5	19.0	2.5	6.5	17	
	3	*	*	*	*	*	*
	4	3.3	10.6	3.0	1	6	
5	4.2	12.4	3.0	2	8		
6	5.0	14.0	3.0	3	10		
7	5.8	15.6	3.0	4	12		
8	6.7	17.4	3.0	5	14		
9	7.5	19.0	3.0	6	16		
3	*	*	*	*	*	*	
4	3.3	10.6	3.5	0.5	5		
5	4.2	12.4	3.5	1.5	7		
6	5.0	14.0	3.5	2.5	9		
7	5.8	15.6	3.5	3.5	11		
8	6.7	17.4	3.5	4.5	13		
9	7.5	19.0	3.5	5.5	15		
3	*	*	*	*	*	*	
4	*	*	*	*	*	*	
5	4.2	12.4	4.0	1	6		
6	5.0	14.0	4.0	2	8		
7	5.8	15.6	4.0	3	10		
8	6.7	17.4	4.0	4	12		
9	7.5	19.0	4.0	5	14		

CURB RAMP TYPE 4					
W FEET	H INCHES	Y INCHES	X2 FEET	L2 FEET	
2.5	3	2.5	0.5	5	
	4	2.5	1.5	7	
	5	2.5	2.5	9	
	6	2.5	3.5	11	
	7	2.5	4.5	13	
	8	2.5	5.5	15	
	9	2.5	6.5	17	
	3	**	**	**	**
	4	3.0	1	6	
5	3.0	2	8		
6	3.0	3	10		
7	3.0	4	12		
8	3.0	5	14		
9	3.0	6	16		
3	**	**	**	**	
4	3.5	0.5	5		
5	3.5	1.5	7		
6	3.5	2.5	9		
7	3.5	3.5	11		
8	3.5	4.5	13		
9	3.5	5.5	15		
3	**	**	**	**	
4	**	**	**	**	
5	4.0	1	6		
6	4.0	2	8		
7	4.0	3	10		
8	4.0	4	12		
9	4.0	5	14		

CURB RAMP TYPE 2, 5 OR 6		
H INCHES	W FEET	
3	3	
4	4	
5	5	
6	6	
7	7	
8	8	
9	9	

CURB RAMP TYPE 1			
H INCHES	X1 FEET	L1 FEET	W FEET
3	2.5	9.0	3
4	3.3	10.6	4
5	4.2	12.4	5
6	5.0	14.0	6
7	5.8	15.6	7
8	6.7	17.4	8
9	7.5	19.0	9

CURB RAMP TYPE 7			
W FEET	H INCHES	X1 FEET	L1 FEET
4 MIN.	3	3	11
6 MAX.	4	4	13
	5	5	15
	6	6	17
	7	7	19
	8	8	21
	9	9	23



DETECTABLE WARNING SURFACE

* TYPE 3 RAMP IS NOT APPLICABLE, USE TYPE 1. ** TYPE 4 RAMP IS NOT APPLICABLE, USE TYPE 2.

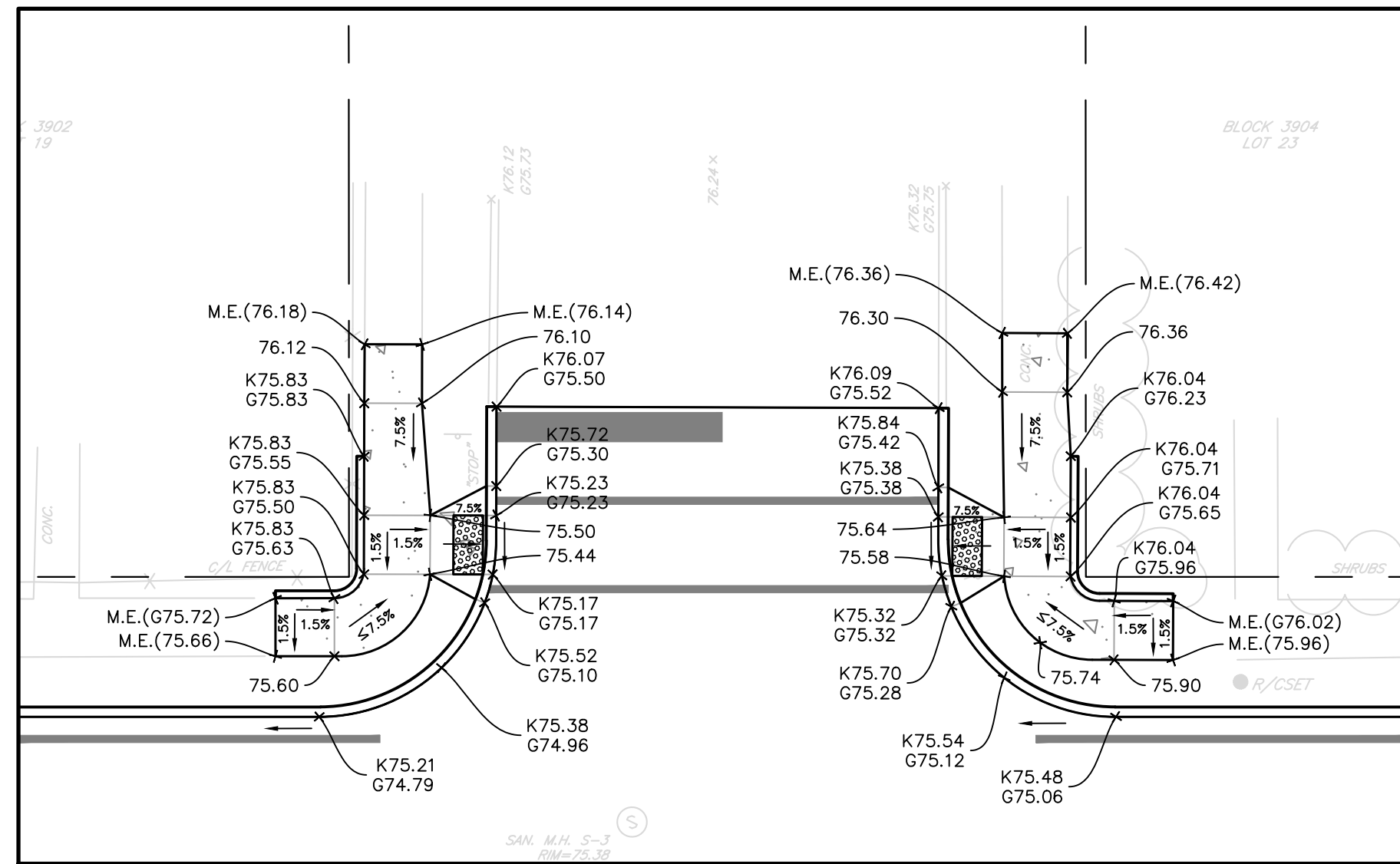
No.	DATE	REVISIONS

ENVIRONMENTAL RESOLUTIONS, INC.
Engineers • Planners • Scientists • Surveyors
815 East Gate Drive • Suite 103
Mount Laurel, New Jersey 08054-3415
Tel. 856-235-7170 Fax 856-273-9239

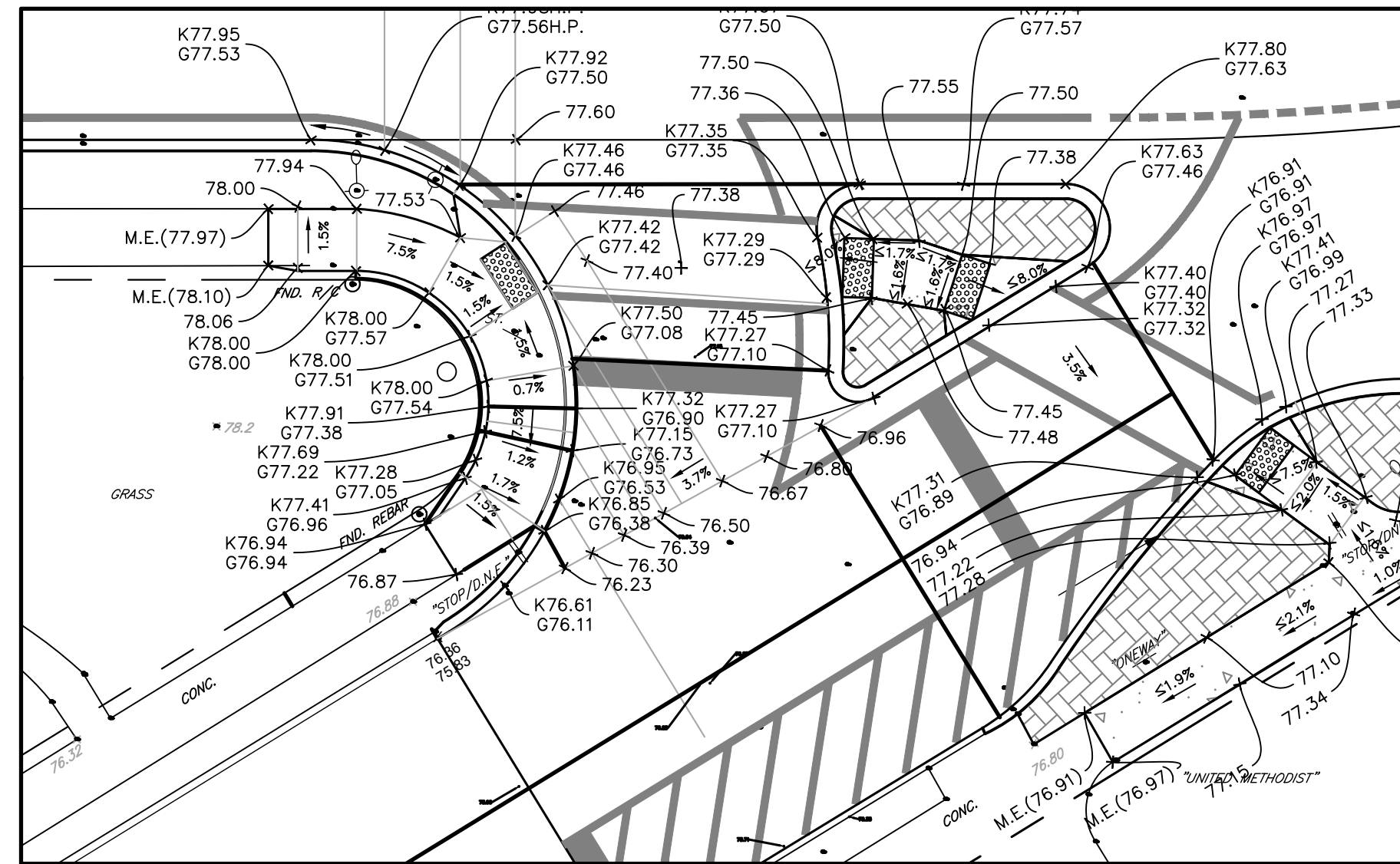
HANDICAP RAMP DETAILS

UNION AVENUE
COUNTY ROUTE #615
TOWNSHIP OF PENNSAUKEN
CAMDEN COUNTY, NEW JERSEY

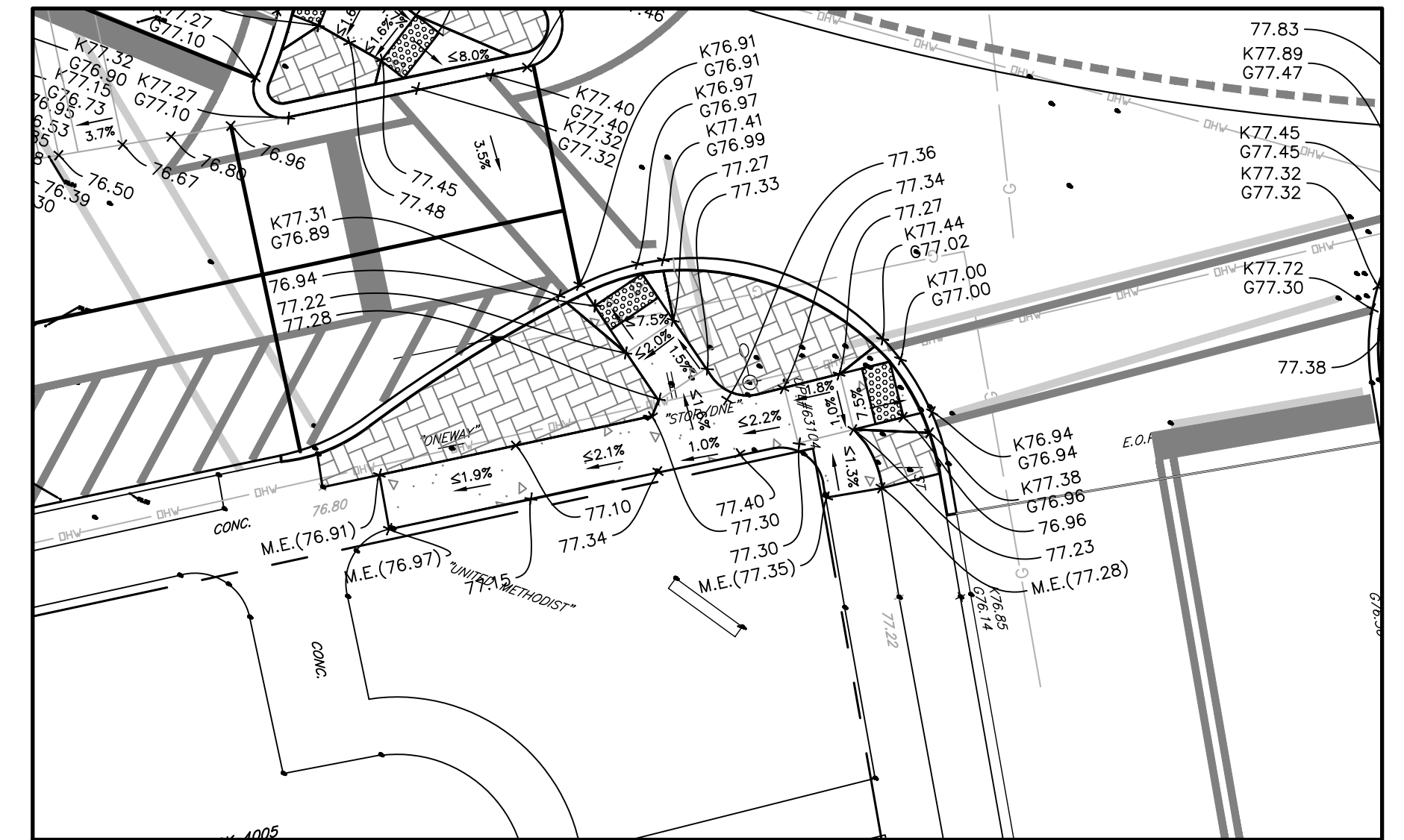
CERTIFICATE OF AUTHORIZATION NUMBER: 246A27974500	FILE: 30750-50_Corral_Planes.DWG PROJECT No. 30750-50	DRAWN: [] DESIGNED: [] DATE: 2/4/20	SCALE: NTS SHEET 8 OF 10
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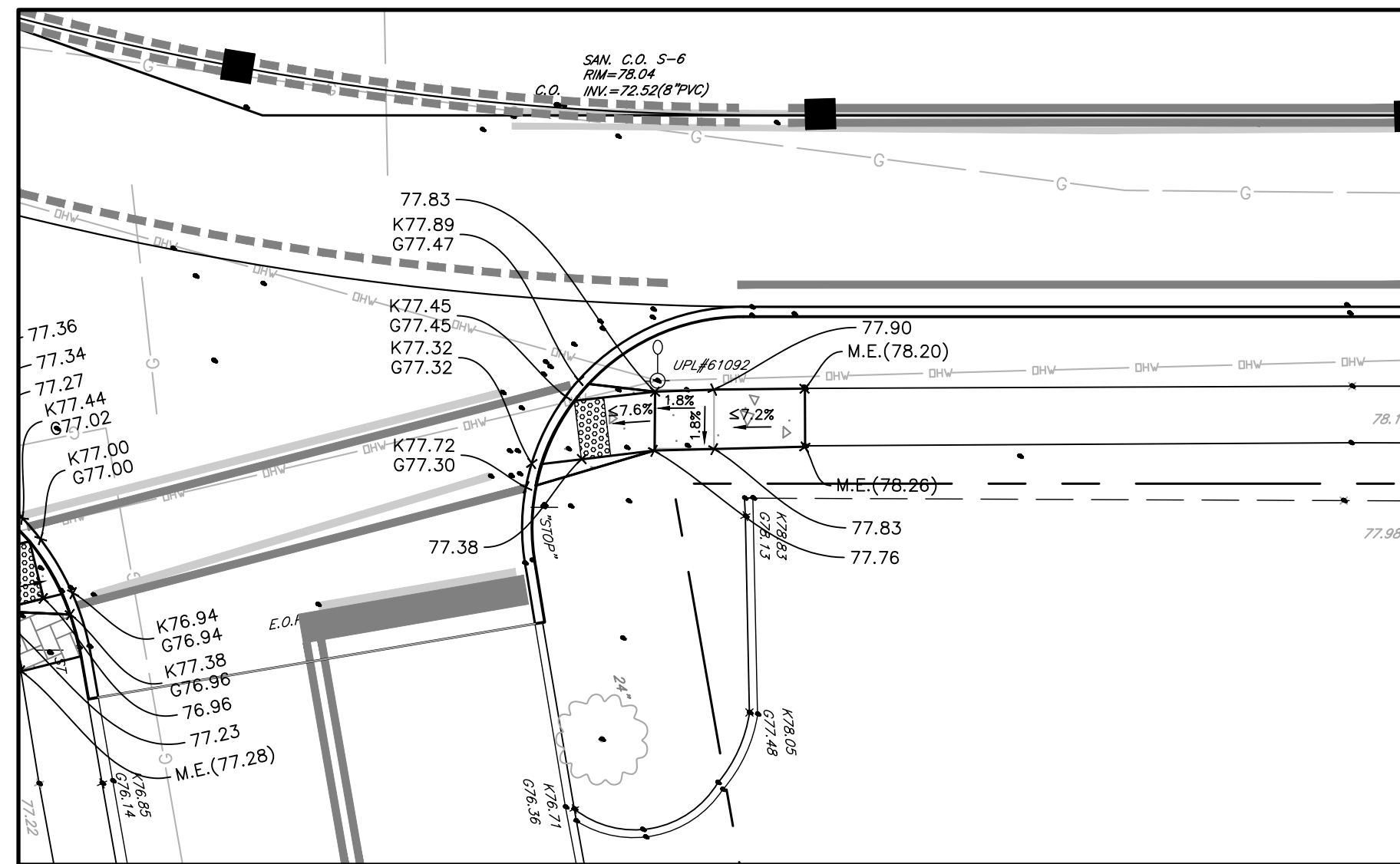
CURB RAMP DETAIL R1, R2



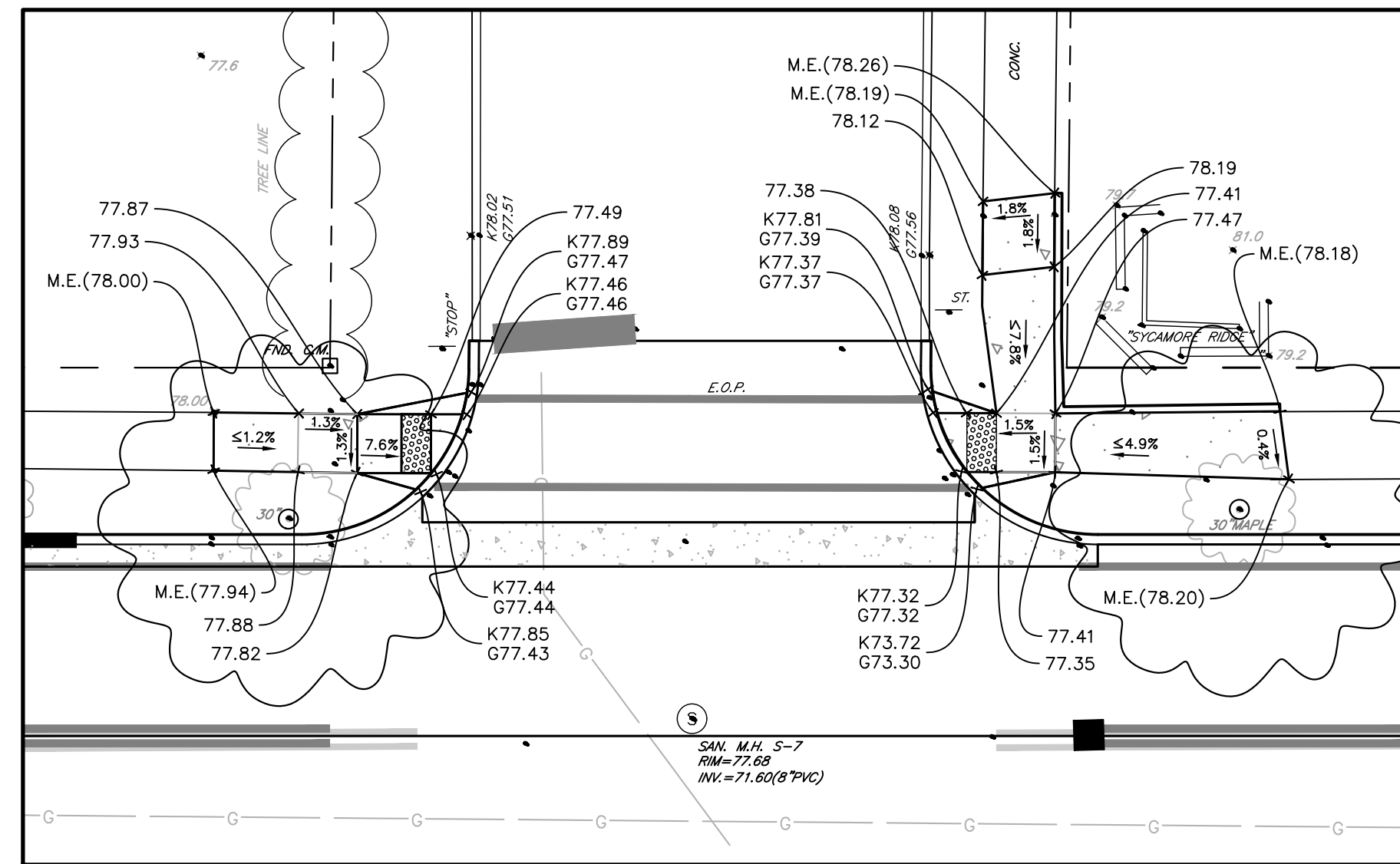
CURB RAMP DETAIL R3, R4, R5, R6



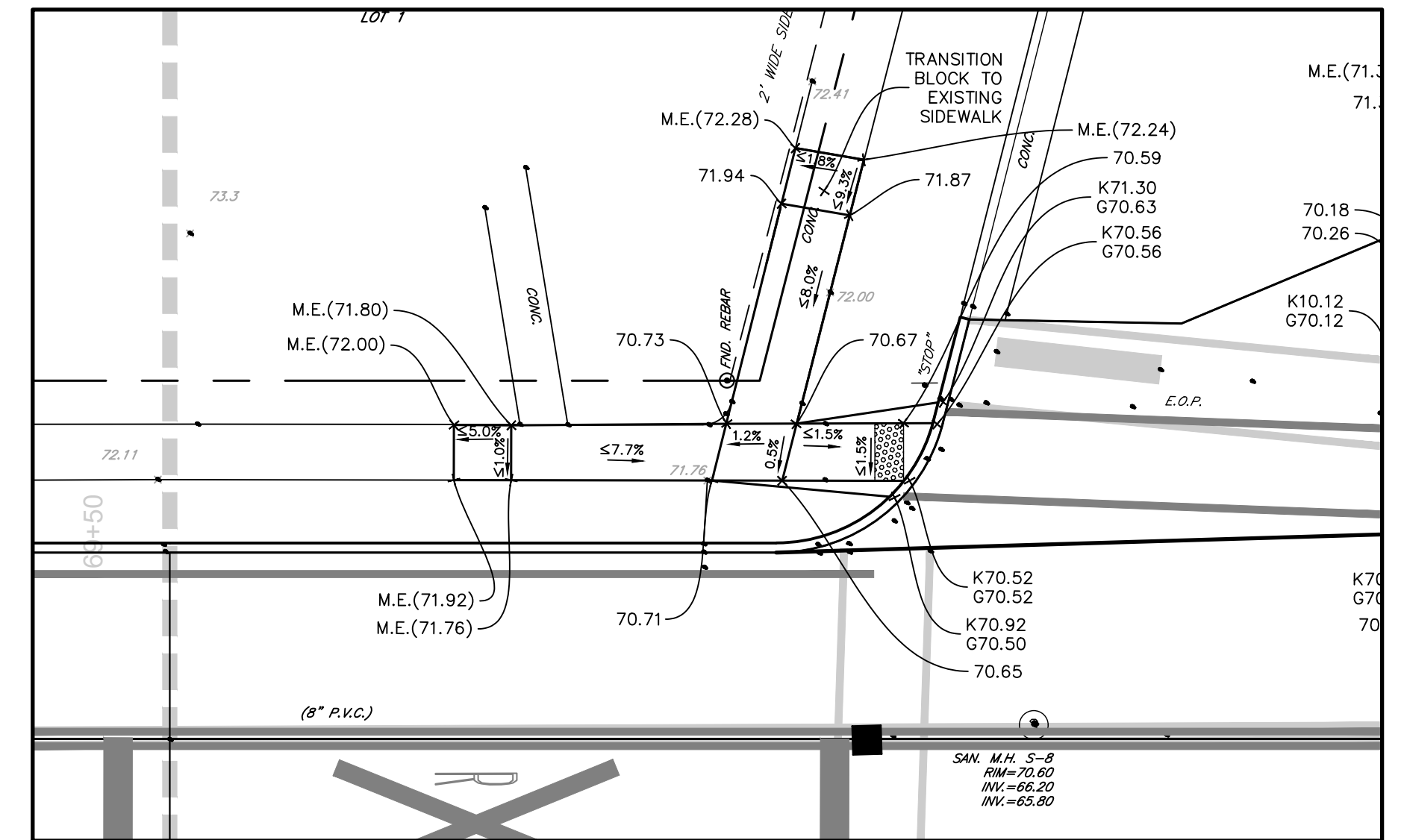
CURB RAMP DETAIL R7



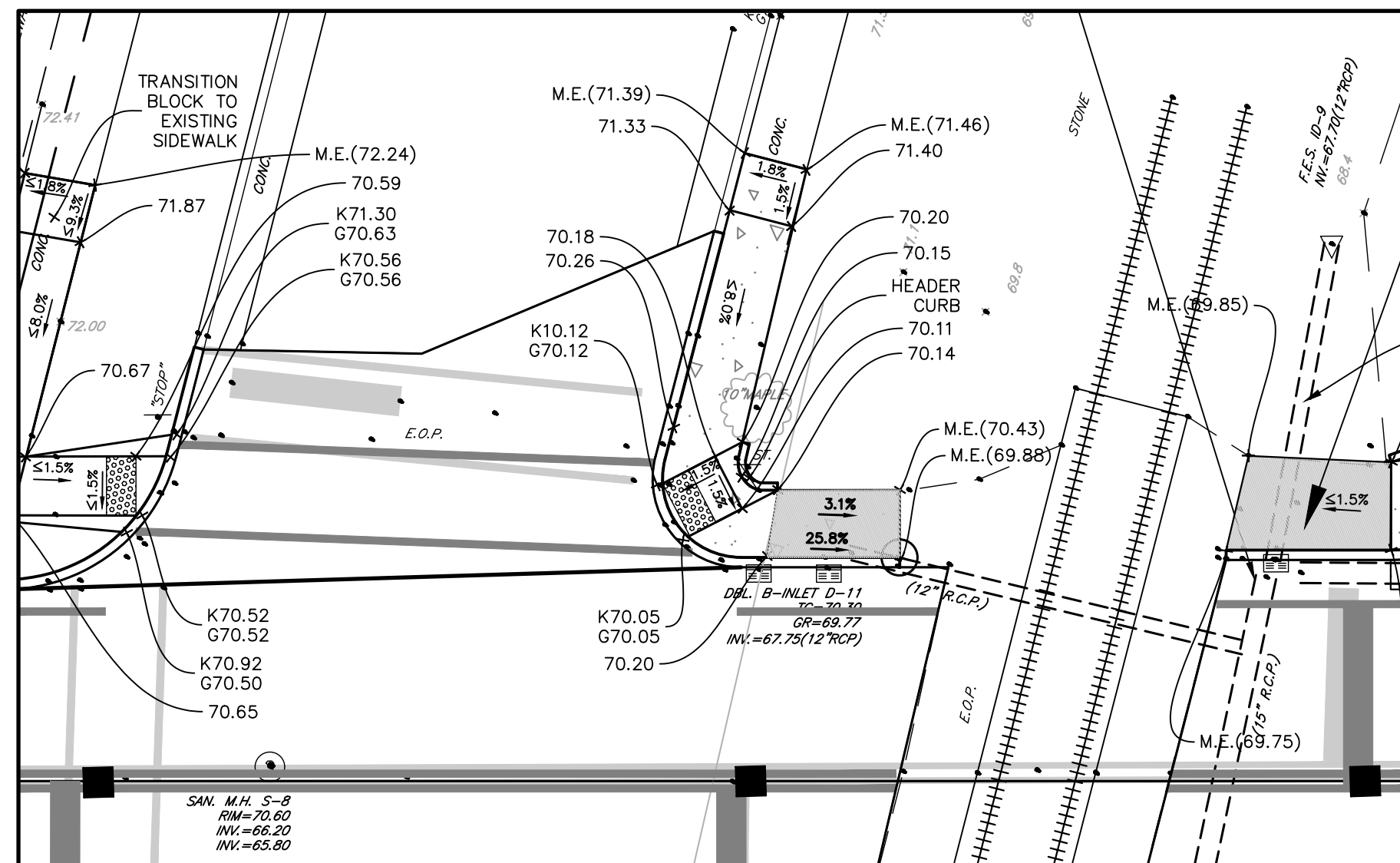
CURB RAMP DETAIL R8



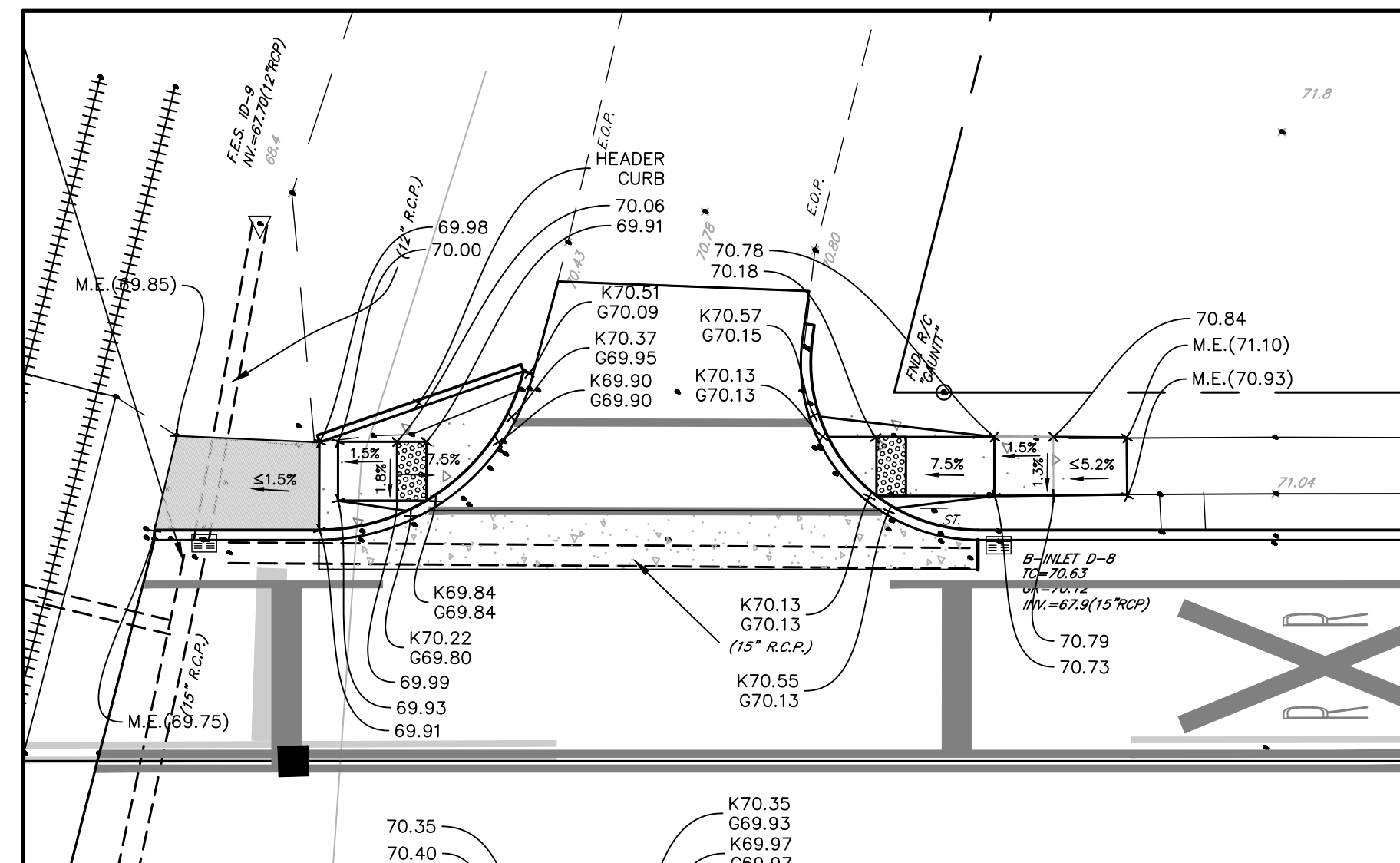
CURB RAMP DETAIL R9, R10



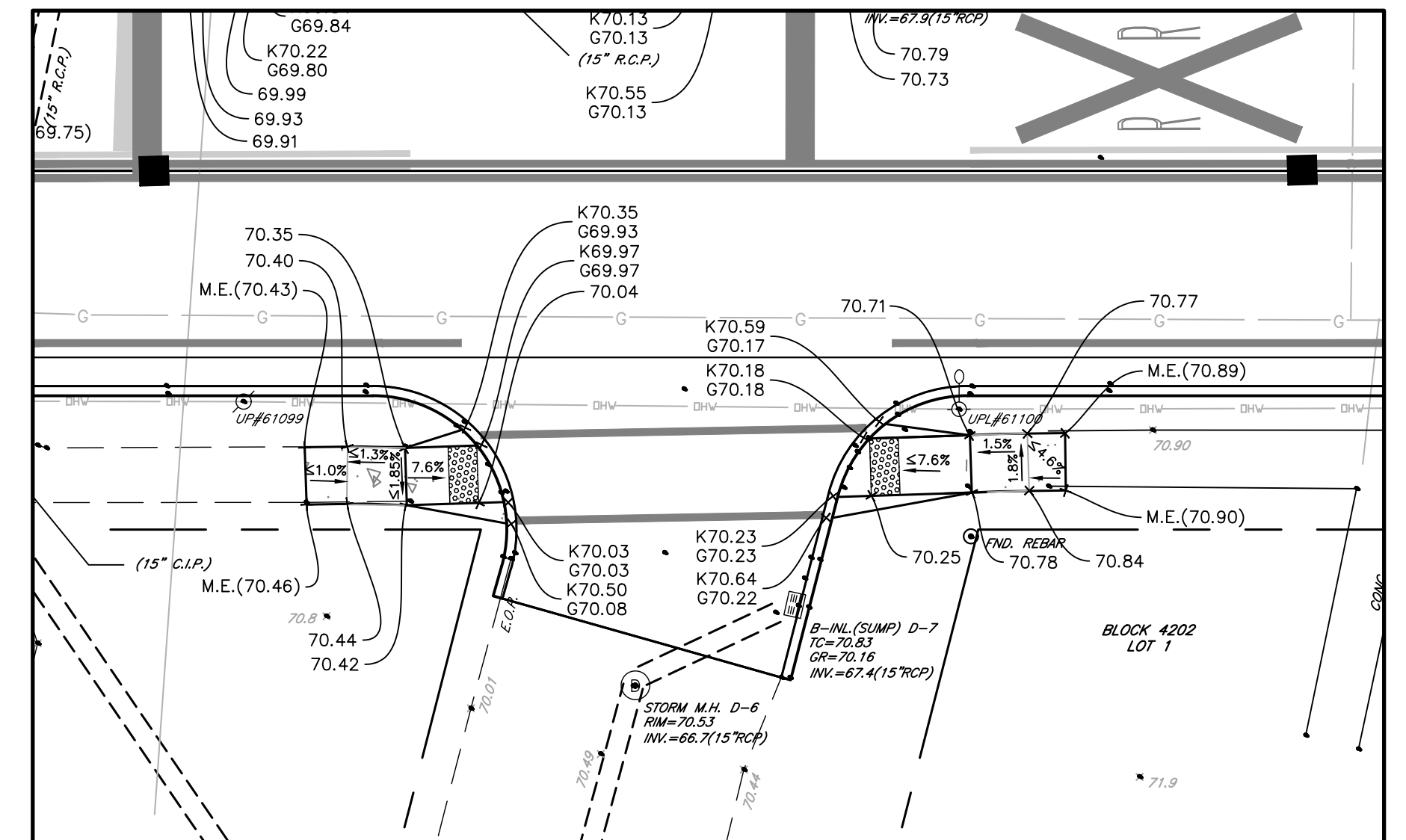
CURB RAMP DETAIL R11



CURB RAMP DETAIL R12



CURB RAMP DETAIL R13, 14



CURB RAMP DETAIL R15, R16



REVISIONS		DATE	

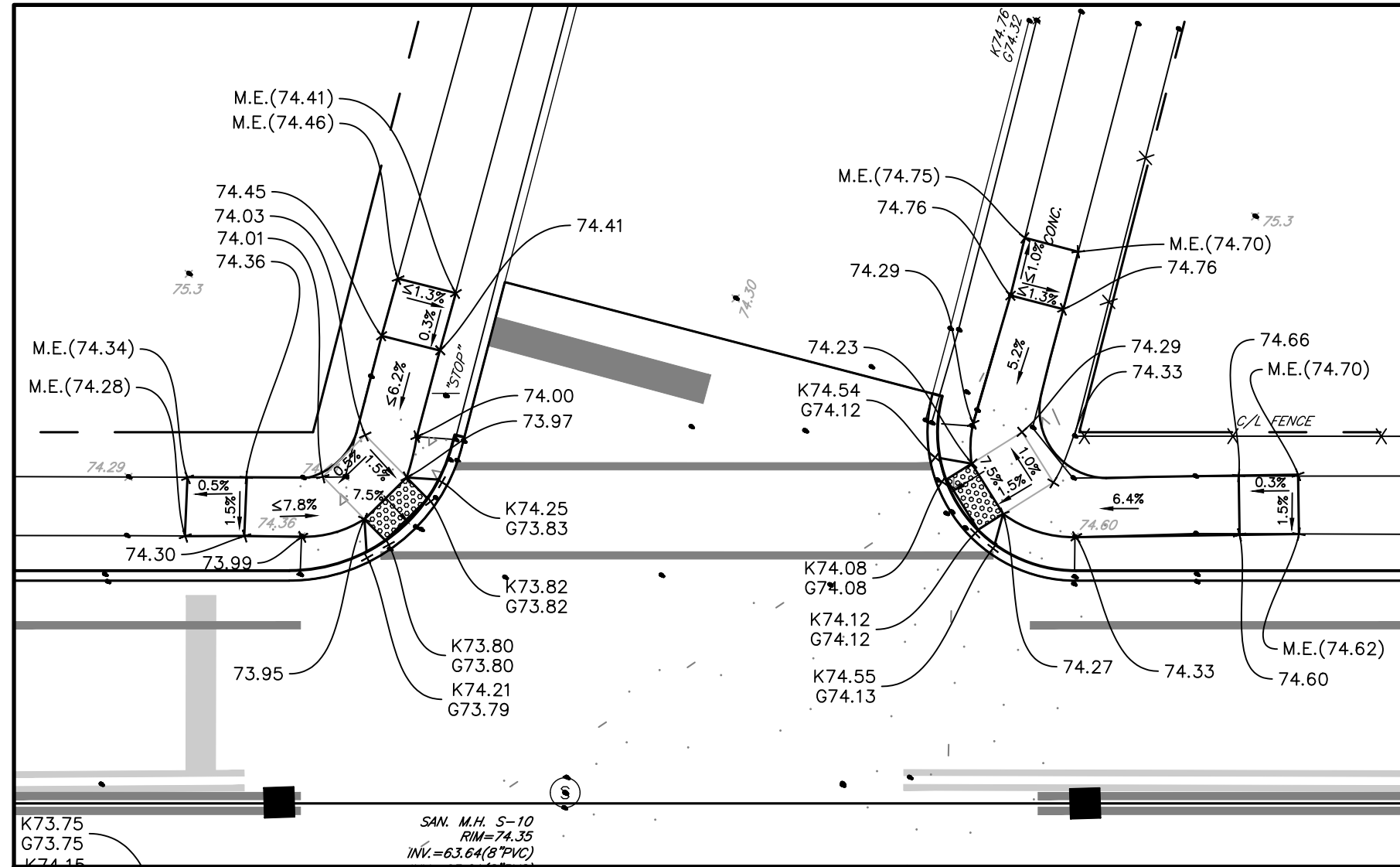
HANDICAP RAMP DETAILS

**UNION AVENUE
 COUNTY ROUTE #615
 TOWNSHIP OF PENNSAUKEN
 CAMDEN COUNTY, NEW JERSEY**

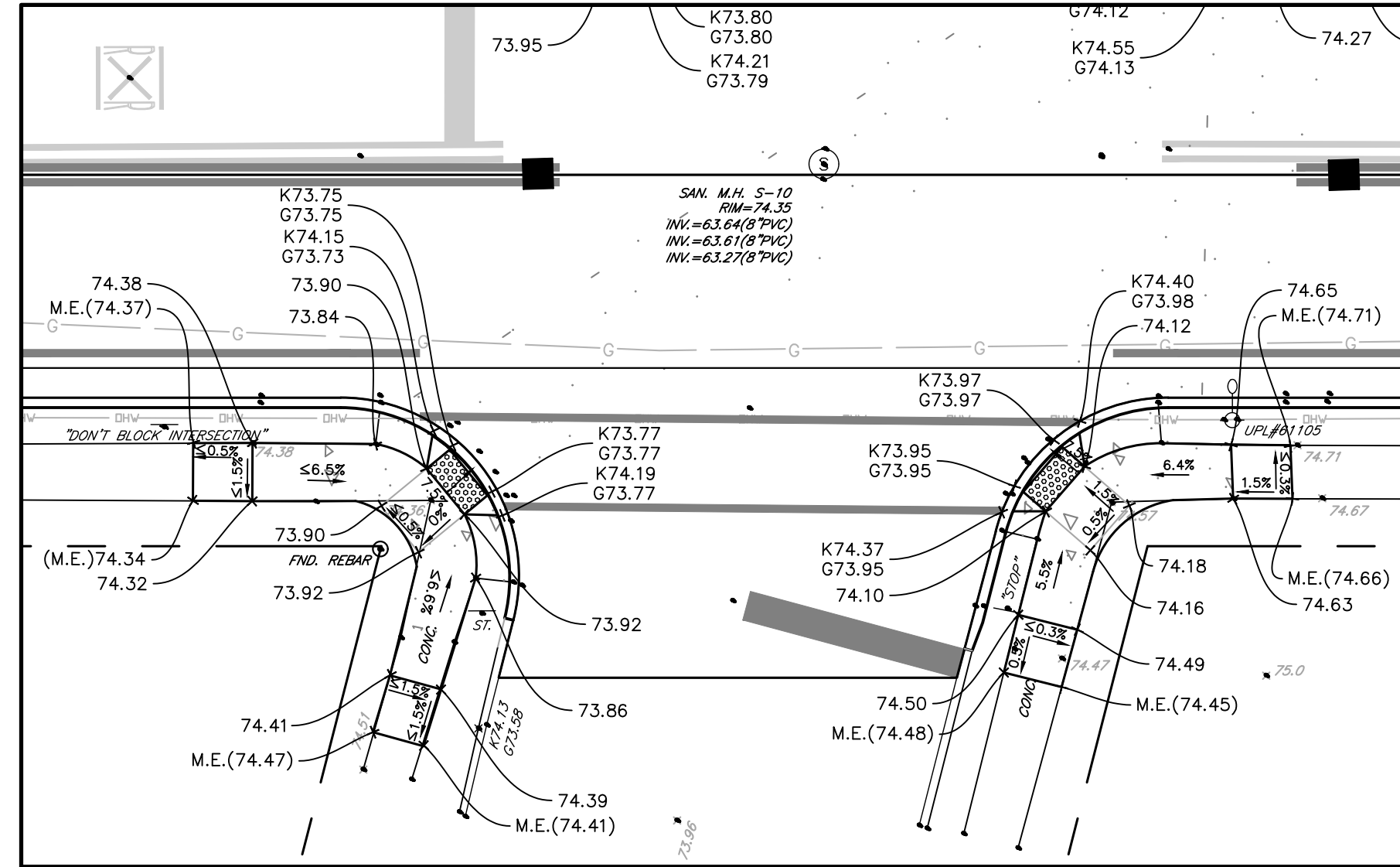
CERTIFICATE OF AUTHORIZATION
 NUMBER: 246A27974500

FILE: 30750-SU-PLAYOUTS
 PROJECT No. 30750-50

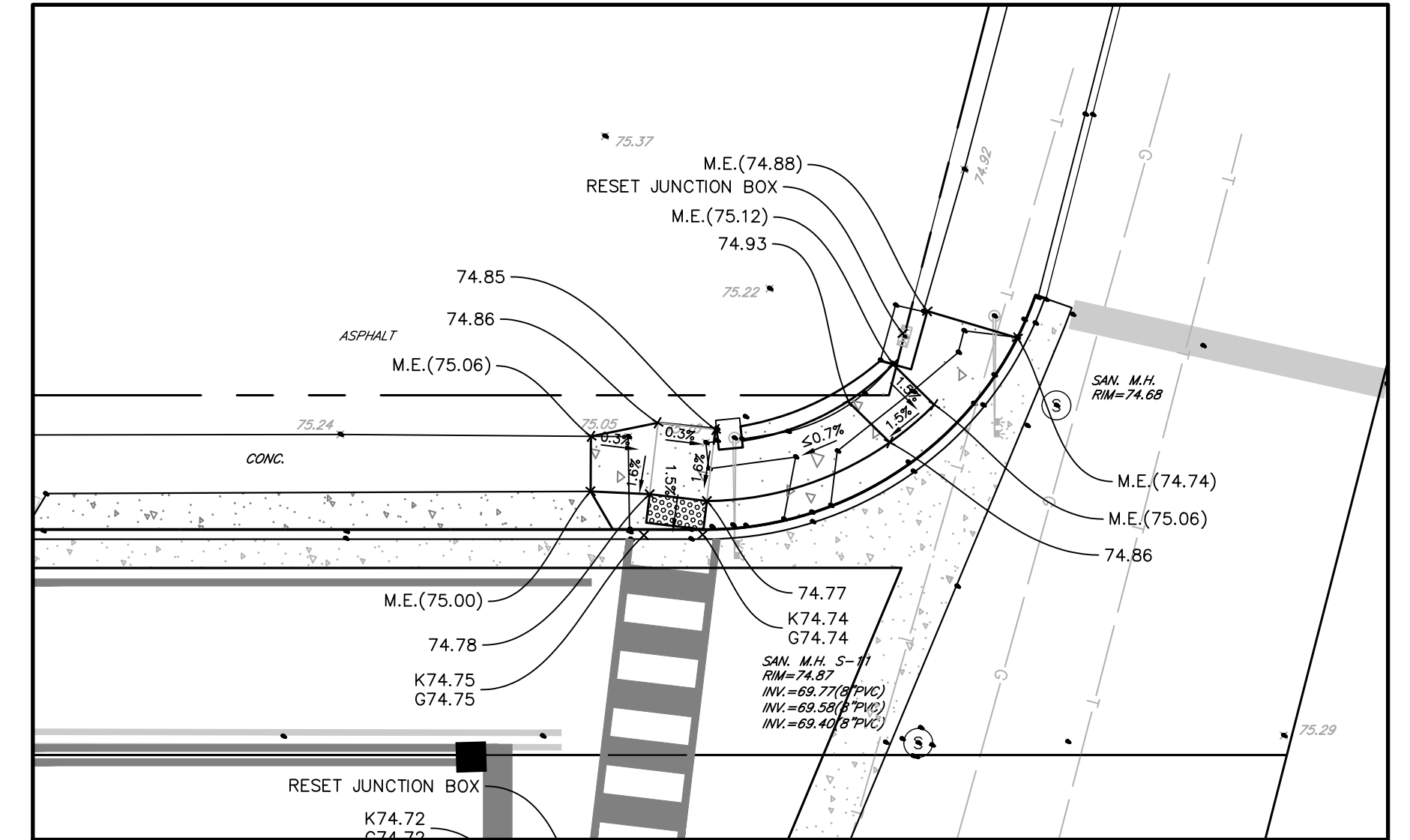
DRAWN: RGM
 DESIGNED: []
 DATE: 12/1/20
 SCALE: 1"=10'
 SHEET X OF Y



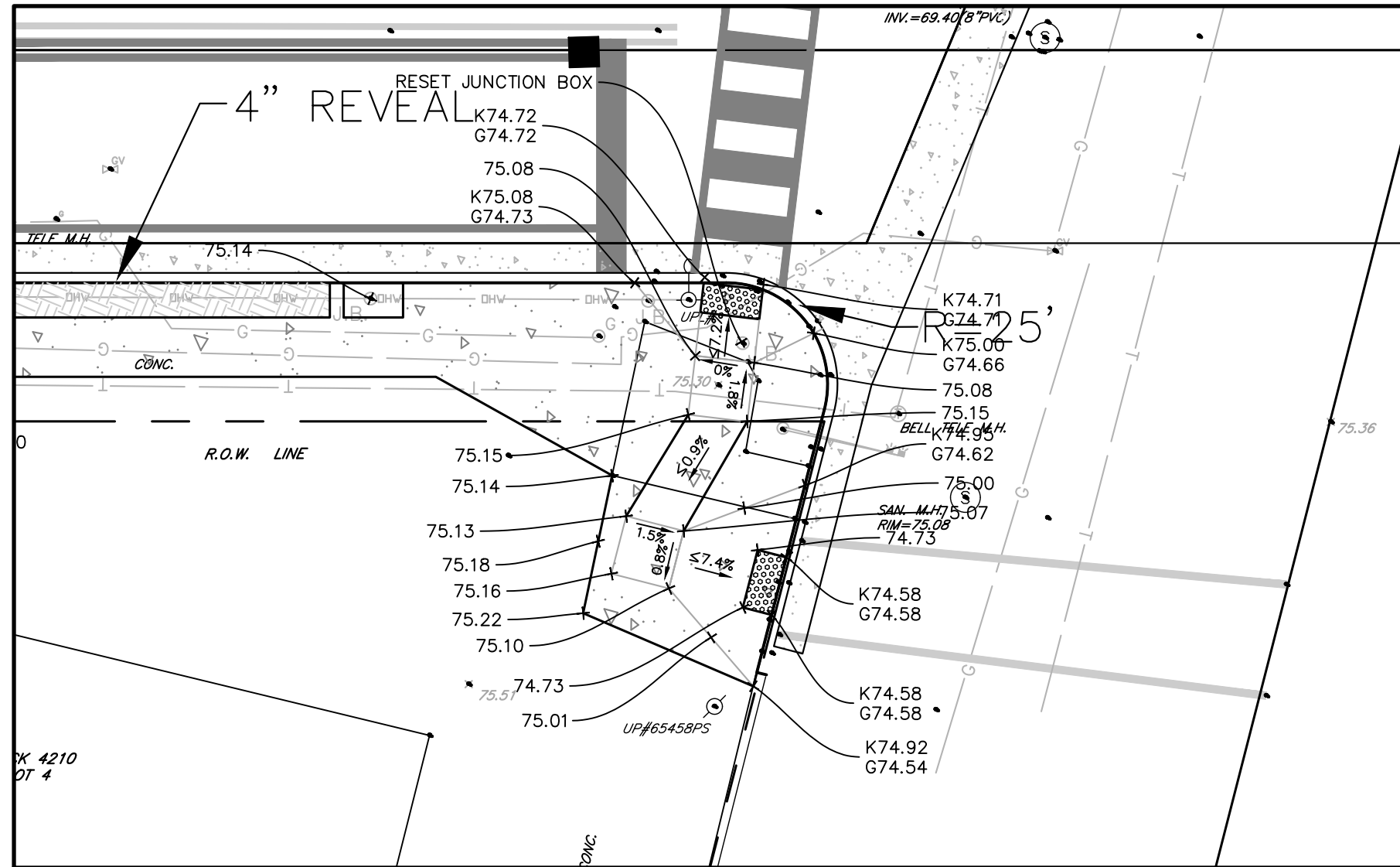
CURB RAMP DETAIL R17, R18



CURB RAMP DETAIL R19, R20



CURB RAMP DETAIL R21



CURB RAMP DETAIL R22



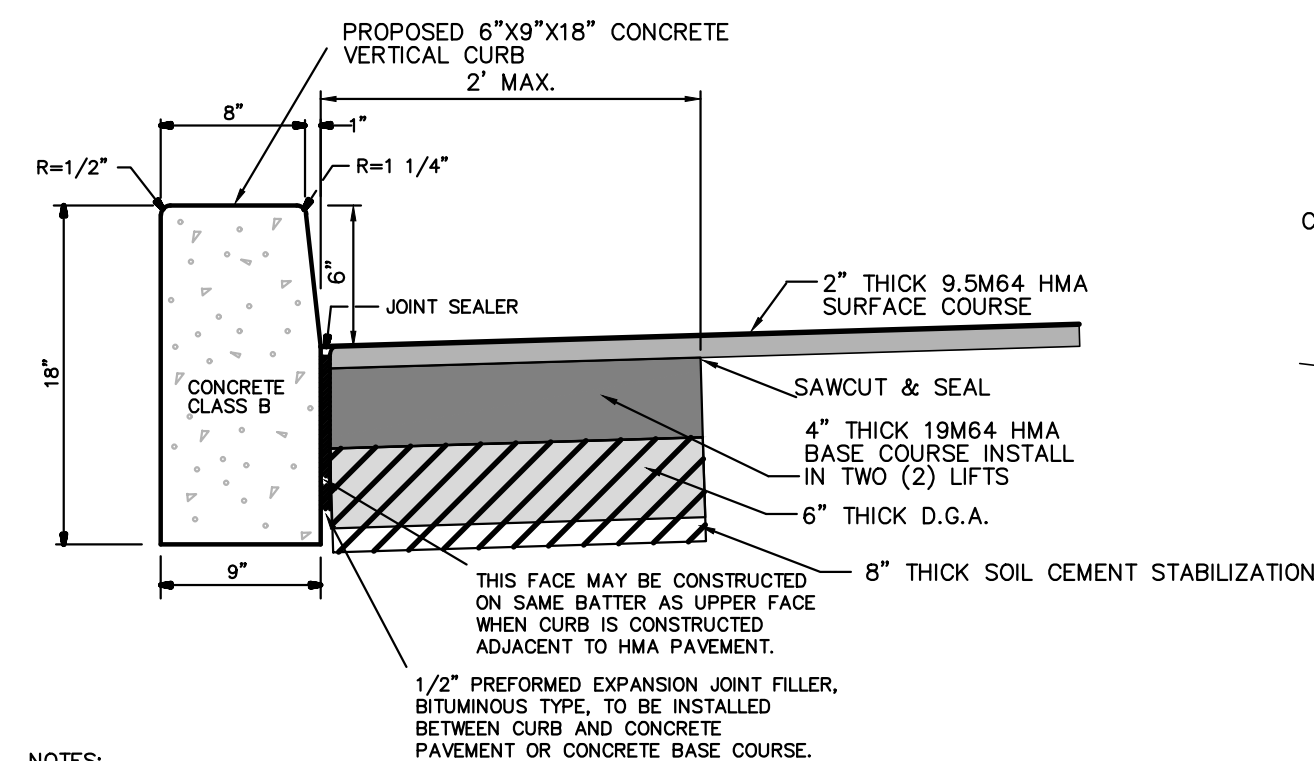
CERTIFICATE OF AUTHORIZATION
NUMBER: 24GA27974500

REVISIONS	
No.	DATE

HANDICAP RAMP DETAILS

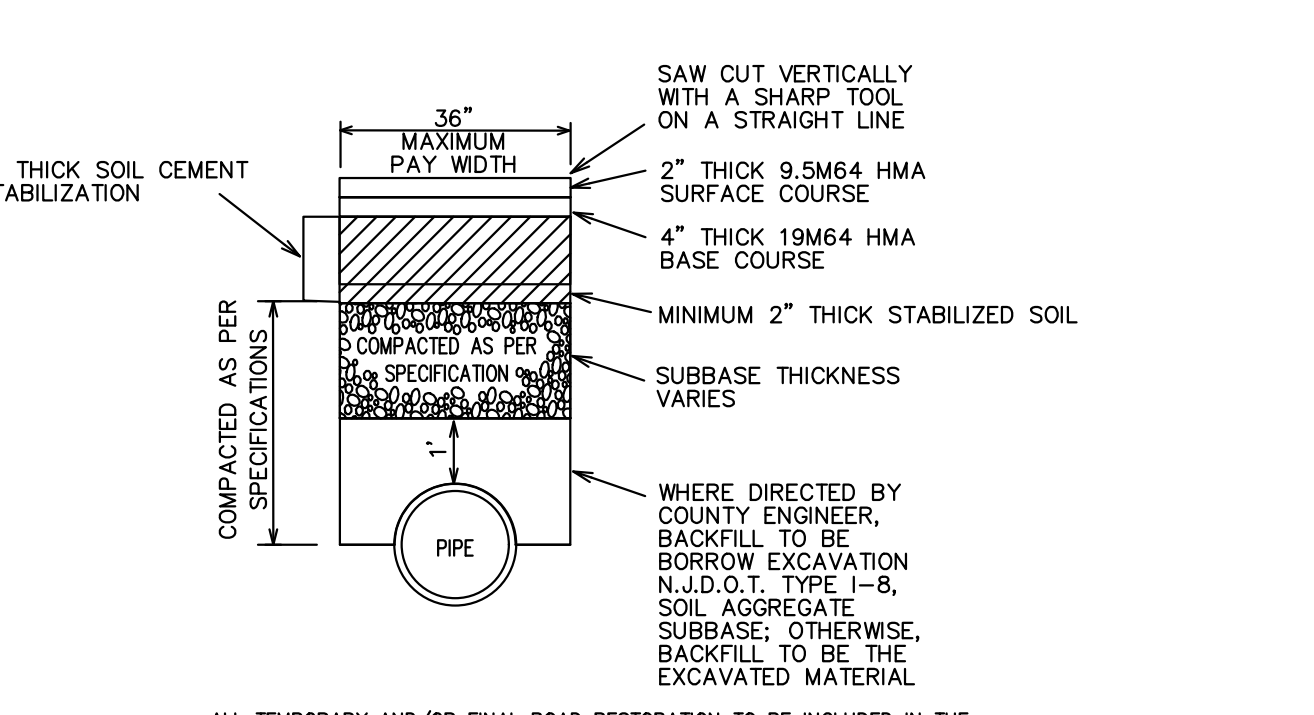
UNION AVENUE
COUNTY ROUTE #615
TOWNSHIP OF PENNSAUKEN
CAMDEN COUNTY, NEW JERSEY

FILE: 30750-50_PLAYOUT.DWG	DRAWN: RGM	DESIGNED:	DATE: 12/1/20
PROJECT No: 30750-50	SCALE: 1"=10'	SHEET X OF Y	

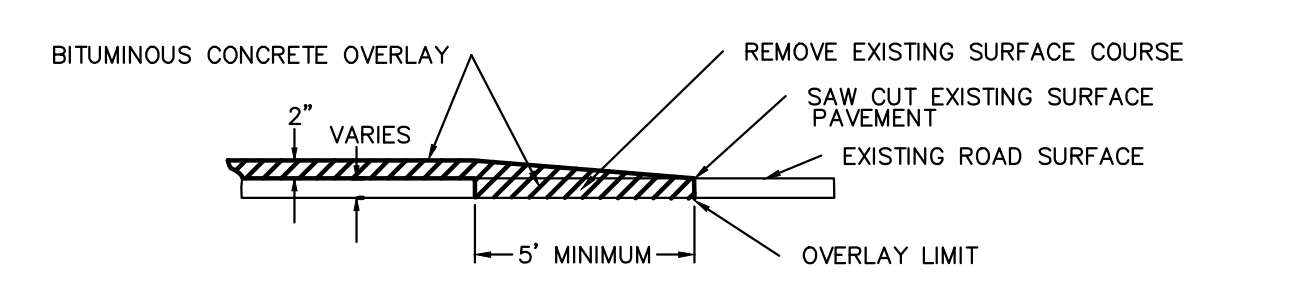


NOTES:
 TRANSVERSE JOINTS 1/2" WIDE SHALL BE INSTALLED IN THE CURB 20 FEET APART AND SHALL BE FILLED WITH PRE-FORMED BITUMINOUS-IMPREGNATED FIBER JOINT FILLER RECESSED 1/2" IN FROM FRONT FACE AND TOP OF CURB. EXPANSION JOINTS THRU AND ADJACENT TO THE CURB SHALL BE INCLUDED IN THE UNIT PRICE BID FOR CURB. ALL TEMPORARY AND/OR FINAL ROAD RESTORATION TO BE INCLUDED IN THE PRICE BID PER LINEAR FOOT OF CURB.

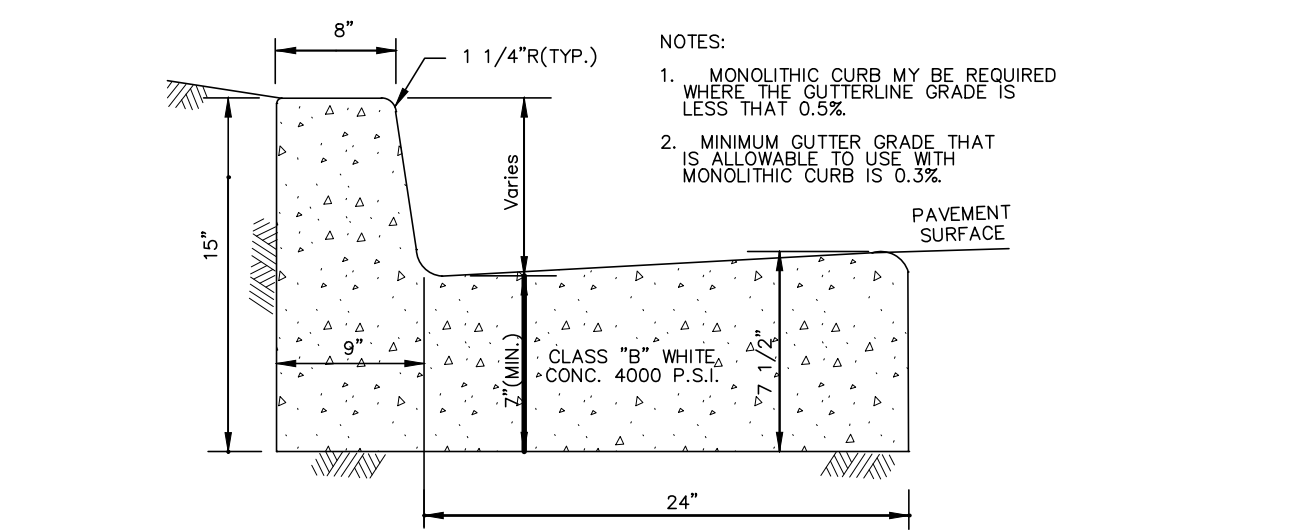
**COUNTY CURB
 6'X9'X18' VERTICAL CURB INSTALLATION
 IN FULL DEPTH RECONSTRUCTION AREAS**
 N.T.S.



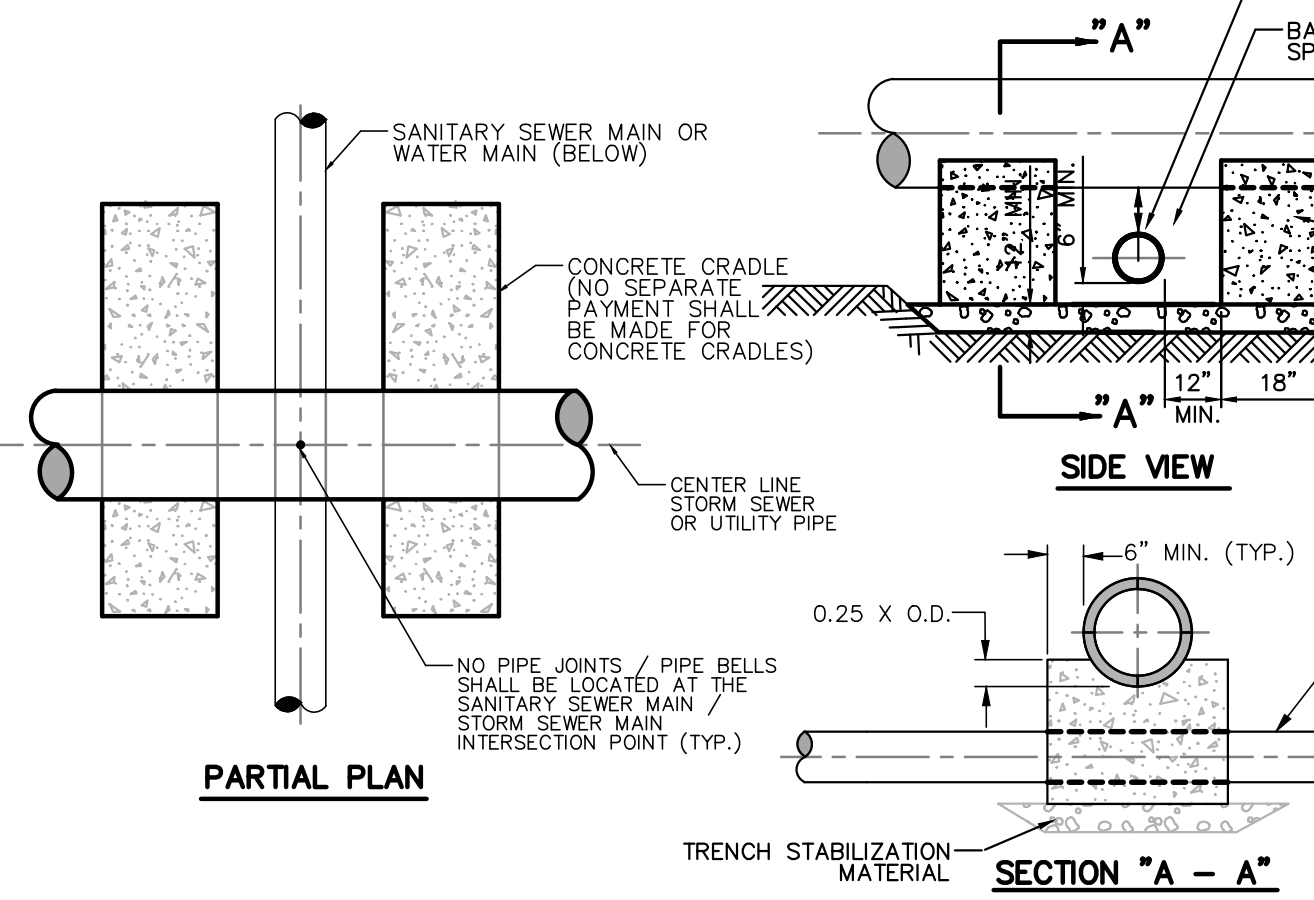
**TRENCH TYPE I
 LONGITUDINAL**
 N.T.S.



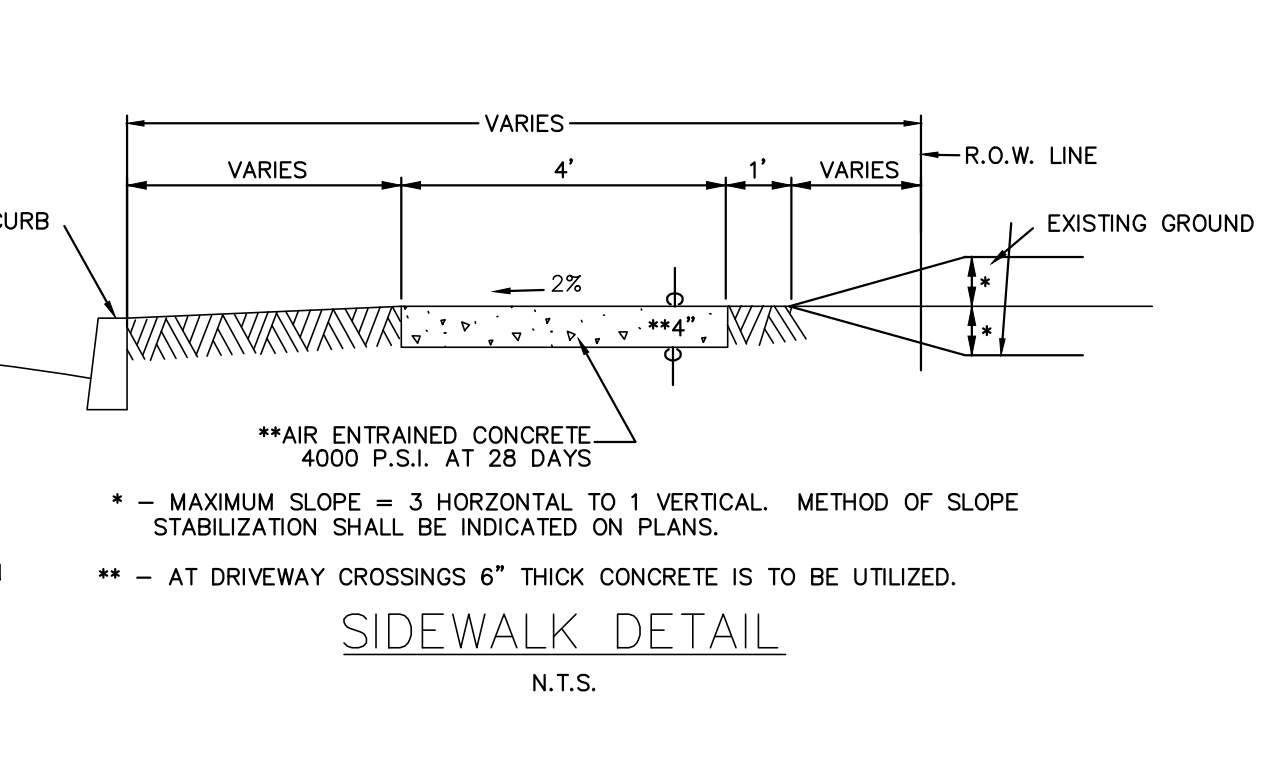
BUTT JOINT DETAIL
 NOT TO SCALE



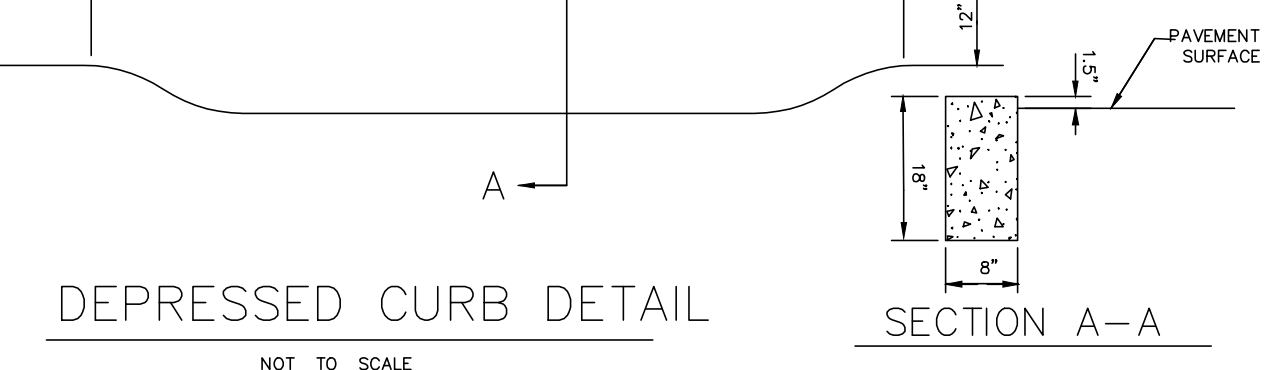
MONOLITHIC CURB & GUTTER
 NOT TO SCALE



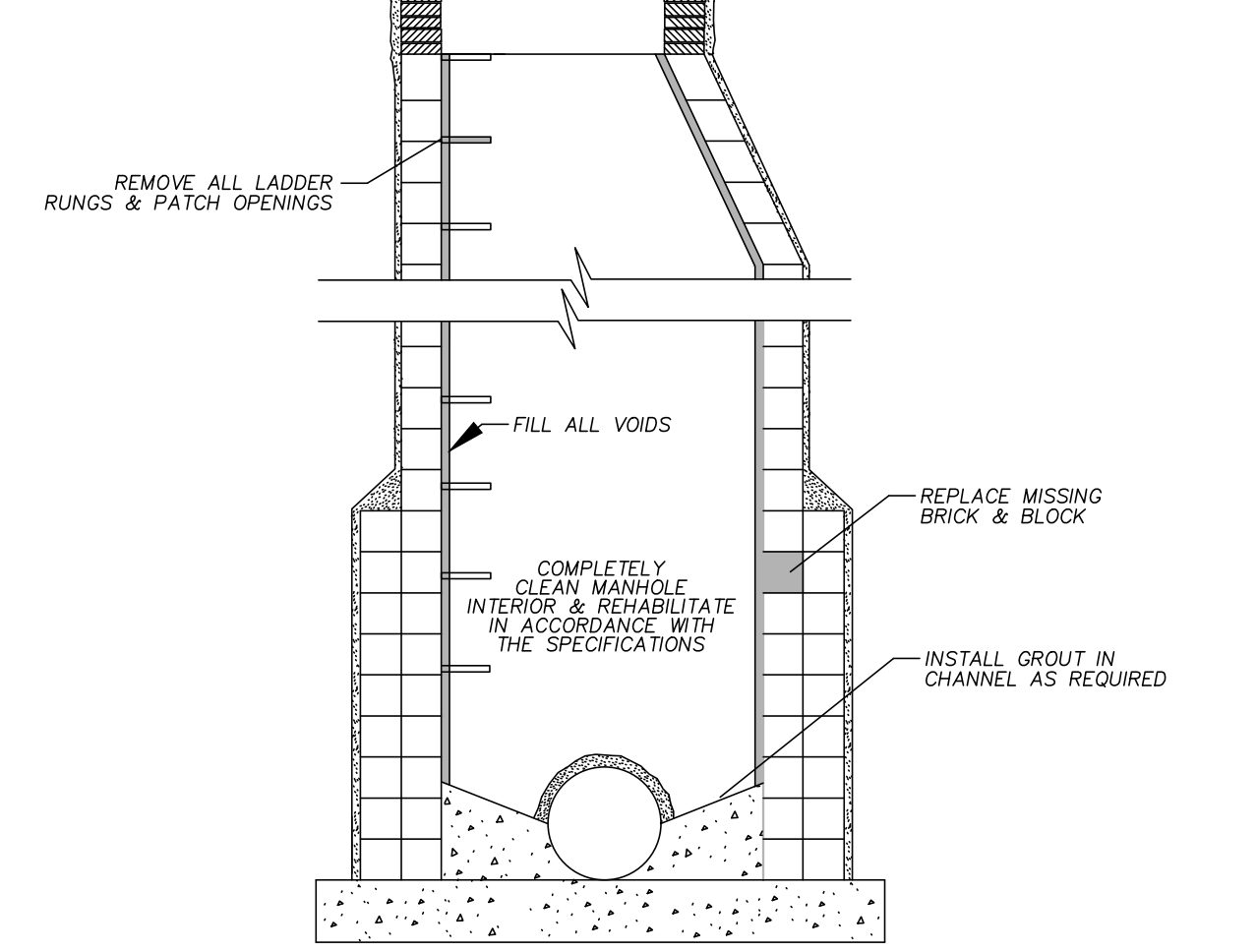
TYPICAL CONCRETE CRADLE DETAIL
 NOT TO SCALE



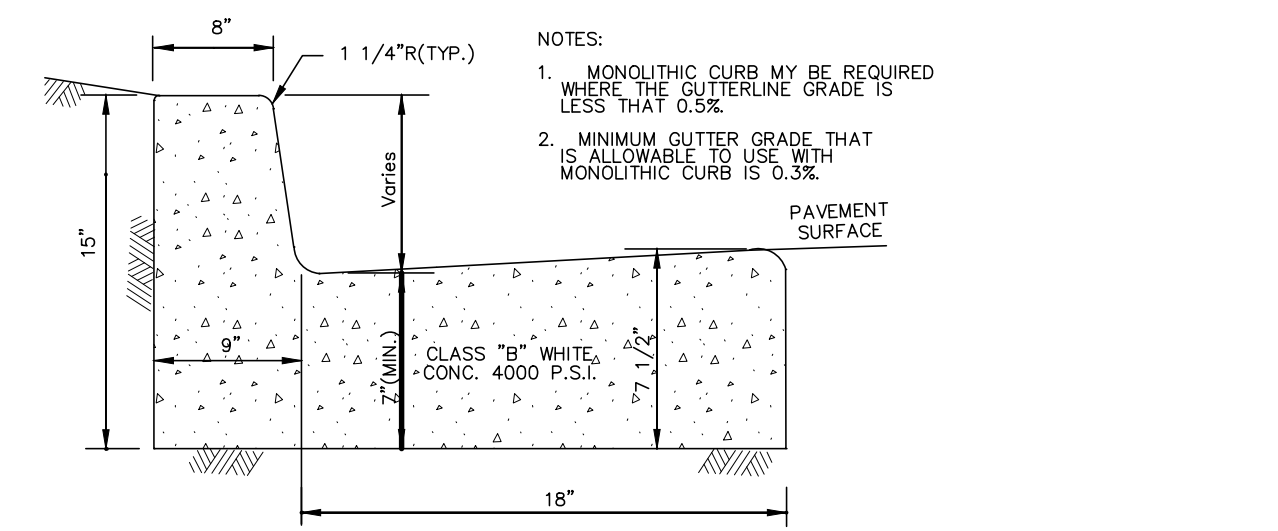
SIDEWALK DETAIL
 N.T.S.



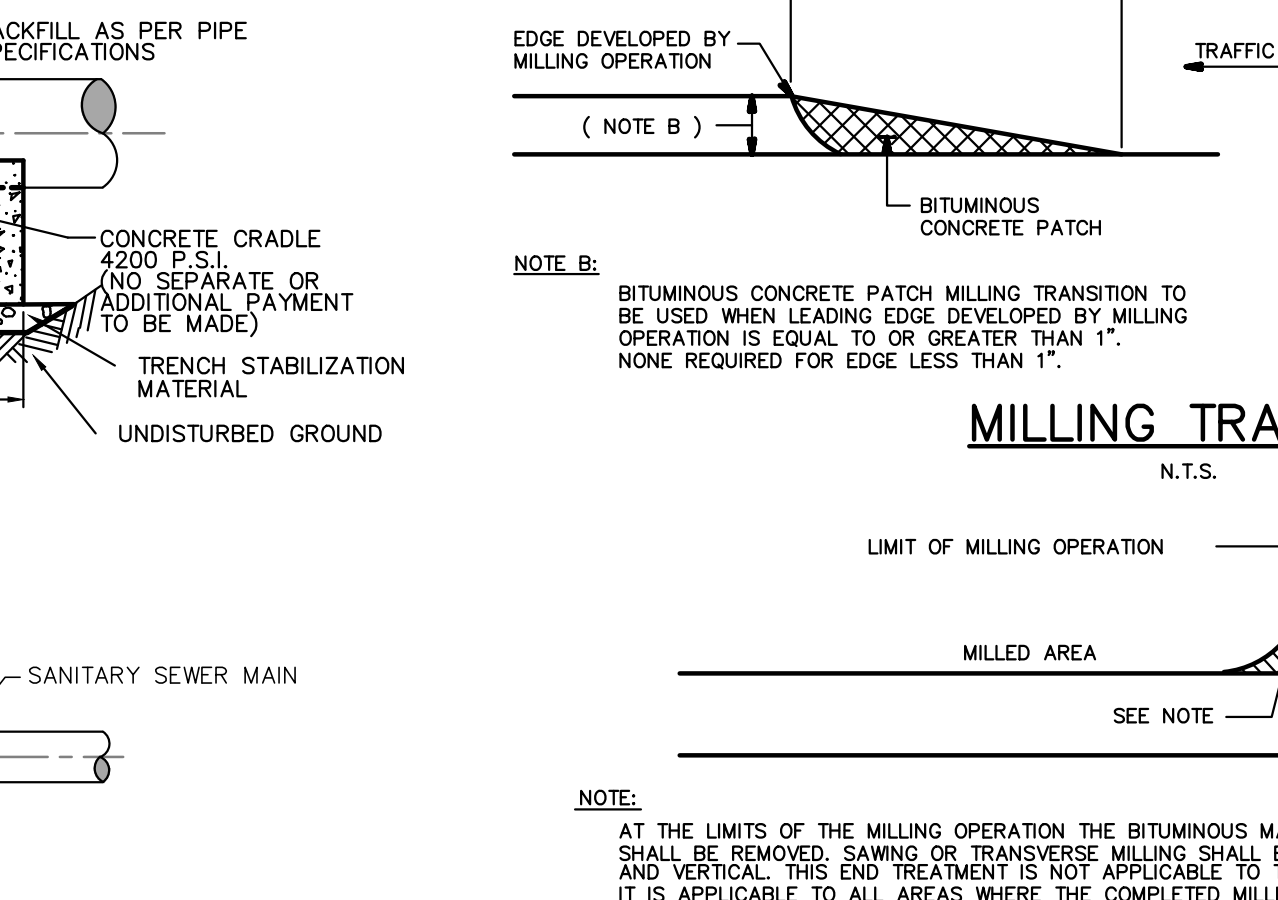
DEPRESSED CURB DETAIL
 NOT TO SCALE



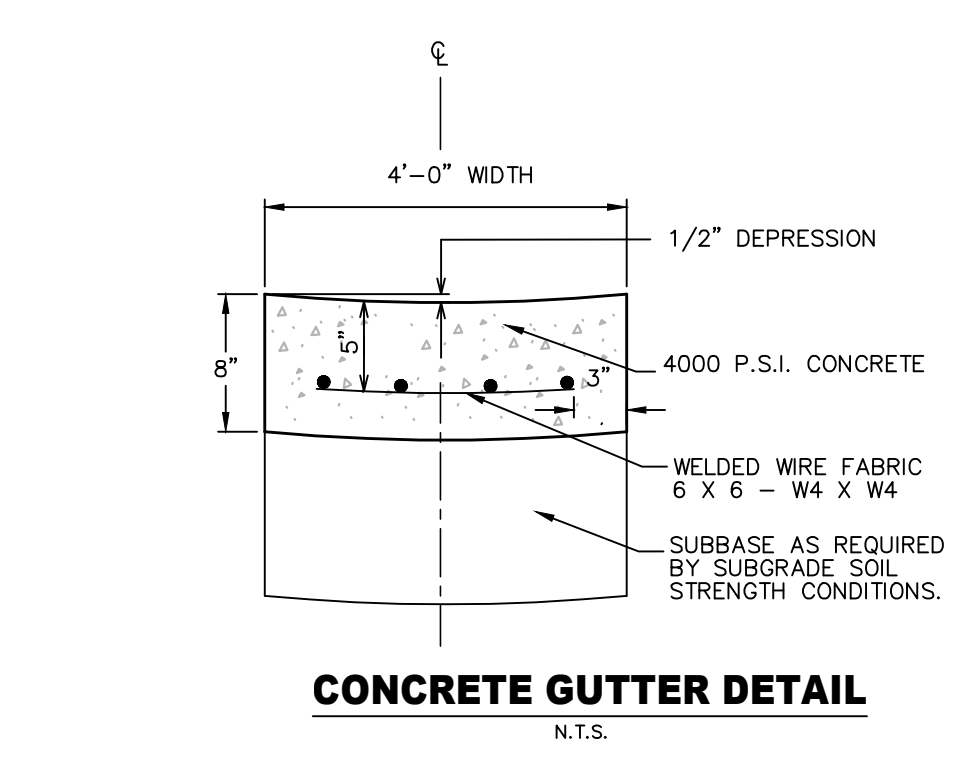
TYPICAL RECONSTRUCT MANHOLE DETAIL
 NOT TO SCALE



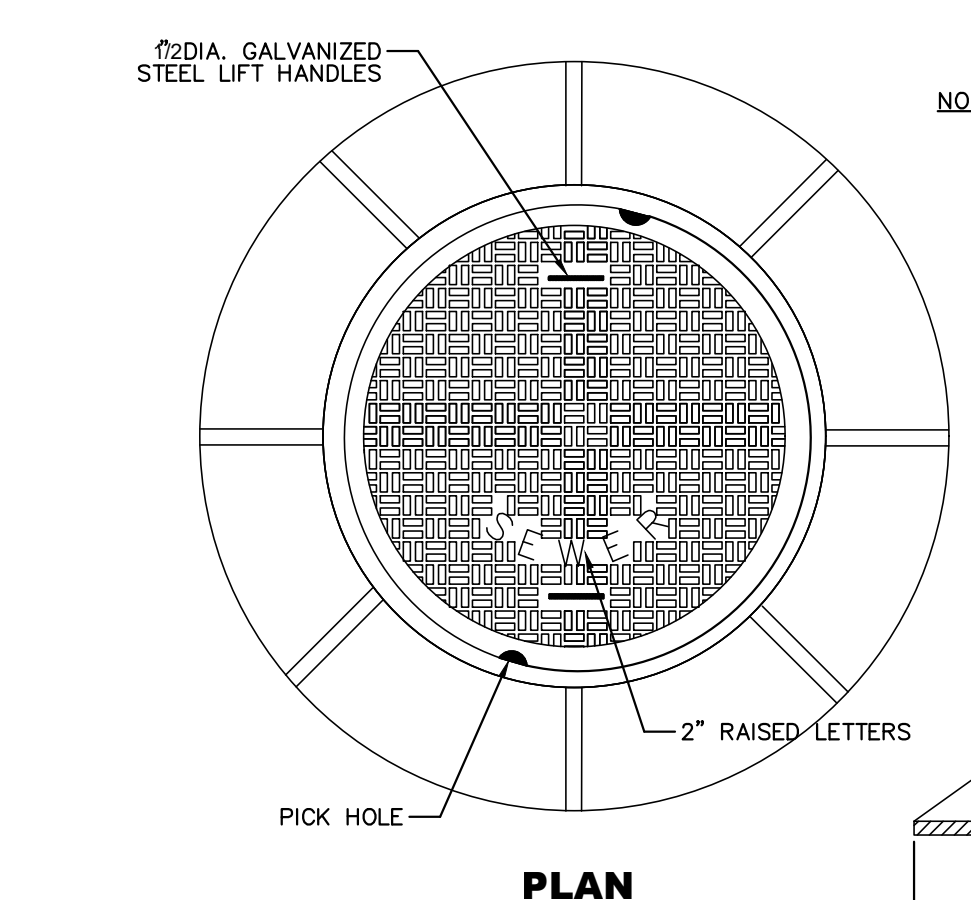
MONOLITHIC CURB & GUTTER
 NOT TO SCALE



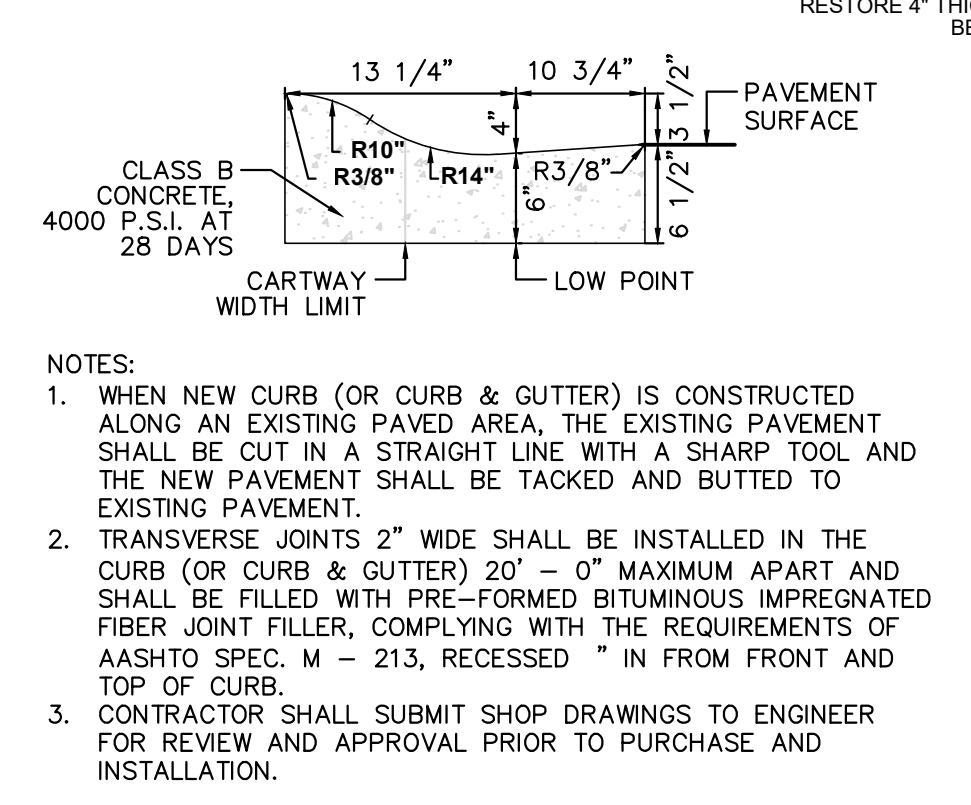
MILLING TRANSITIONS
 N.T.S.



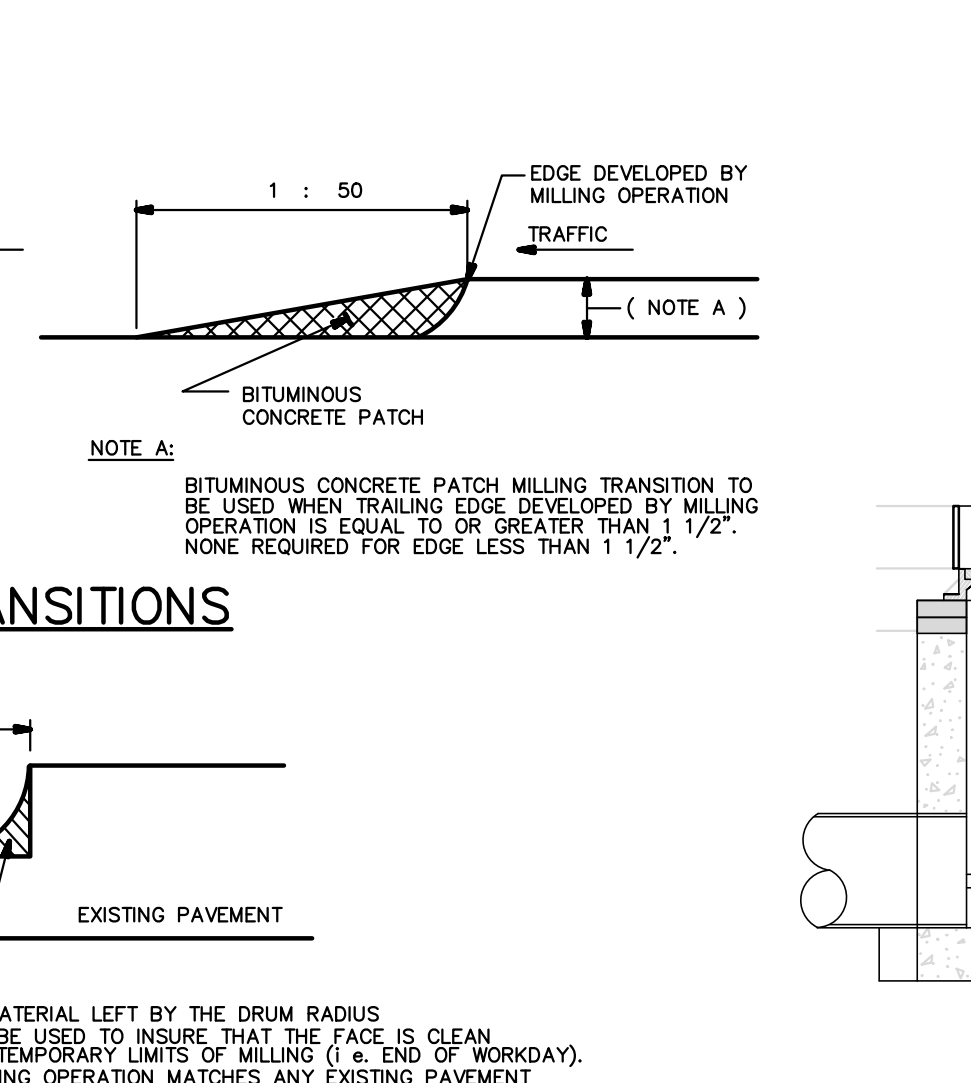
CONCRETE GUTTER DETAIL
 N.T.S.



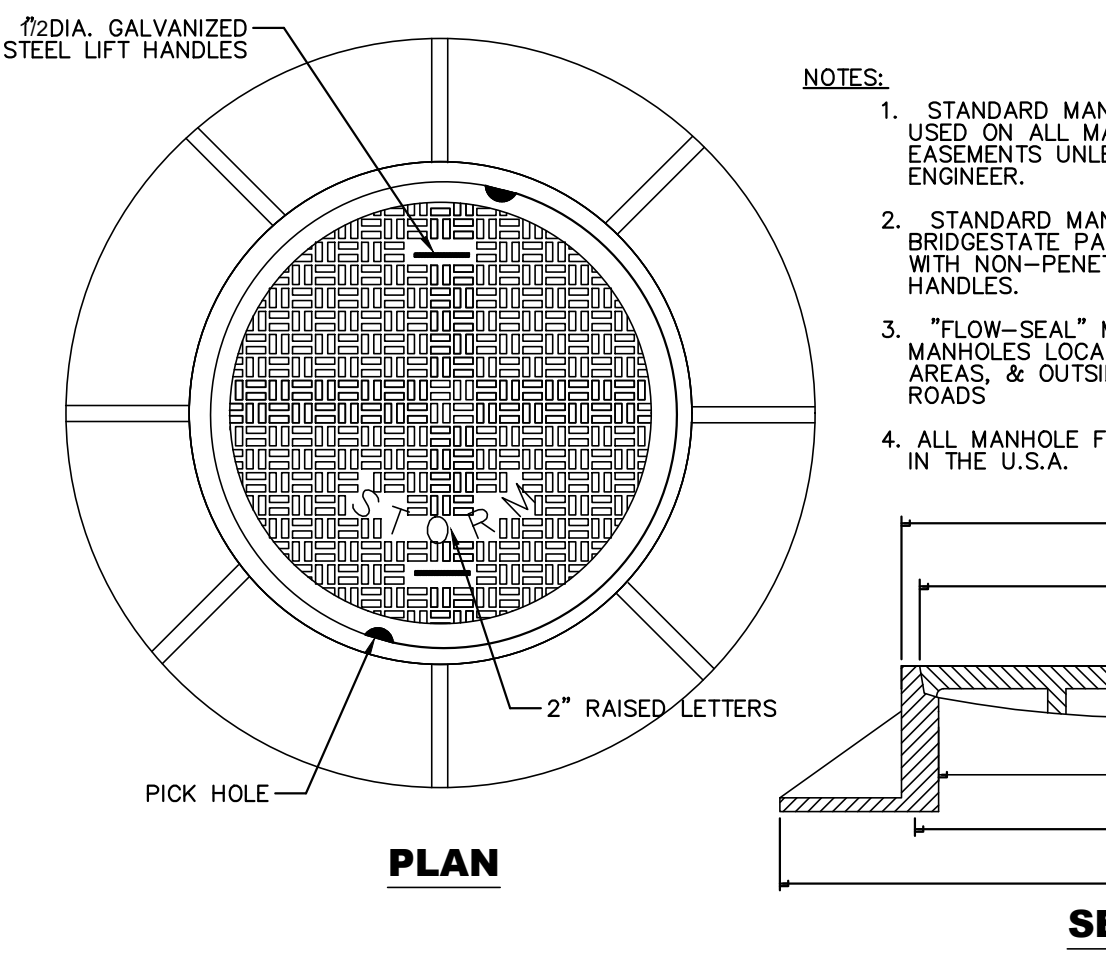
STANDARD MANHOLE FRAME AND COVER
 NOT TO SCALE



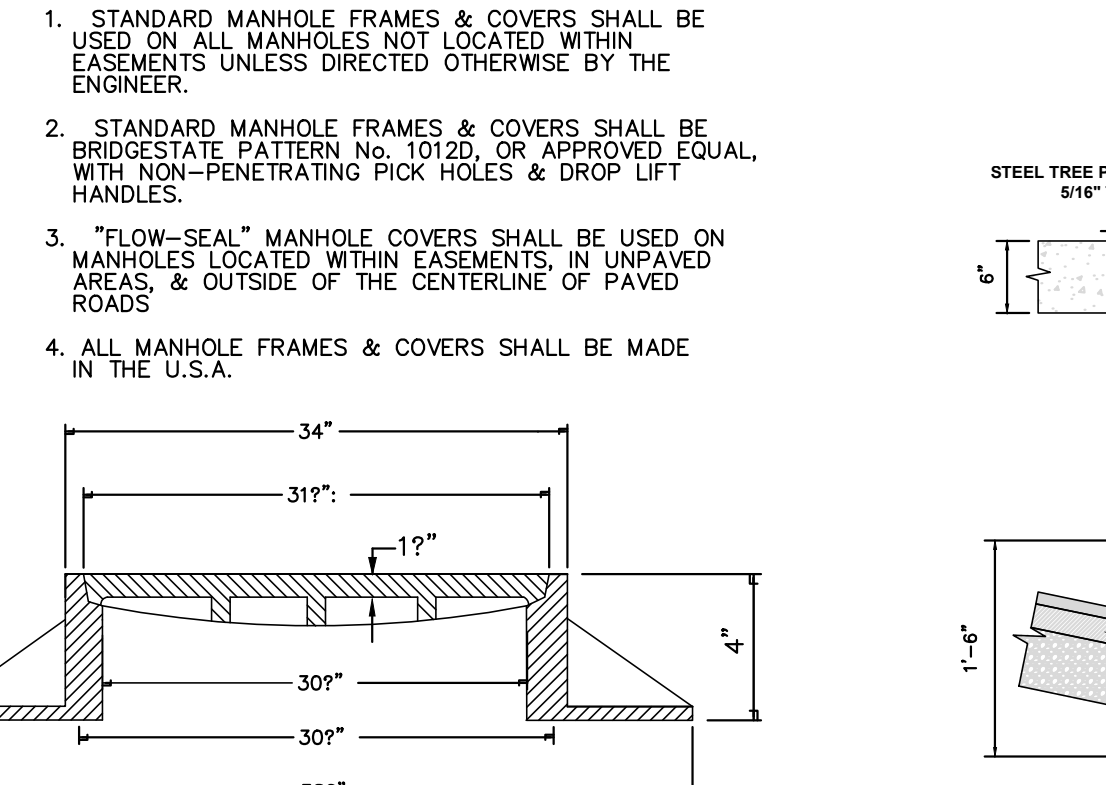
MOUNTABLE CURB AND GUTTER
 NOT TO SCALE



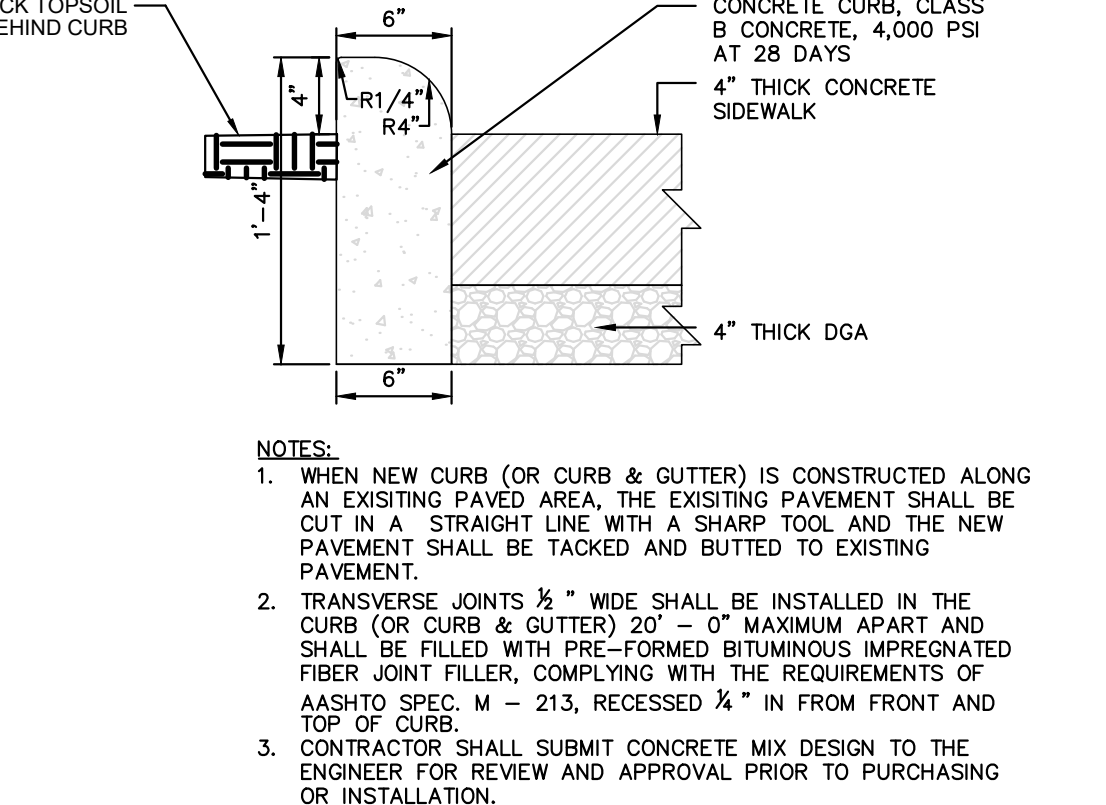
END TREATMENT FOR MILLING OPERATIONS
 N.T.S.



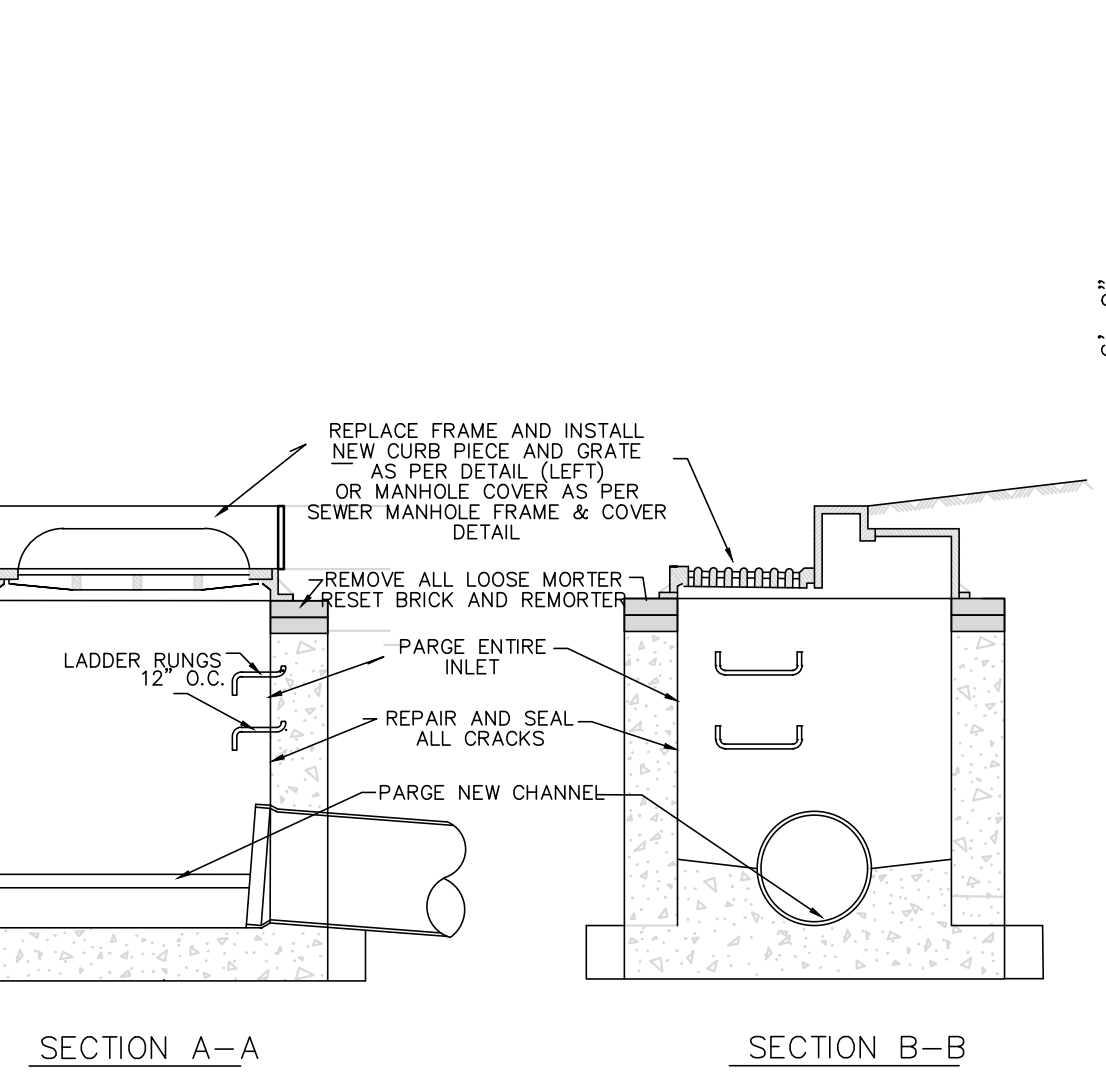
STANDARD MANHOLE FRAME AND COVER
 NOT TO SCALE



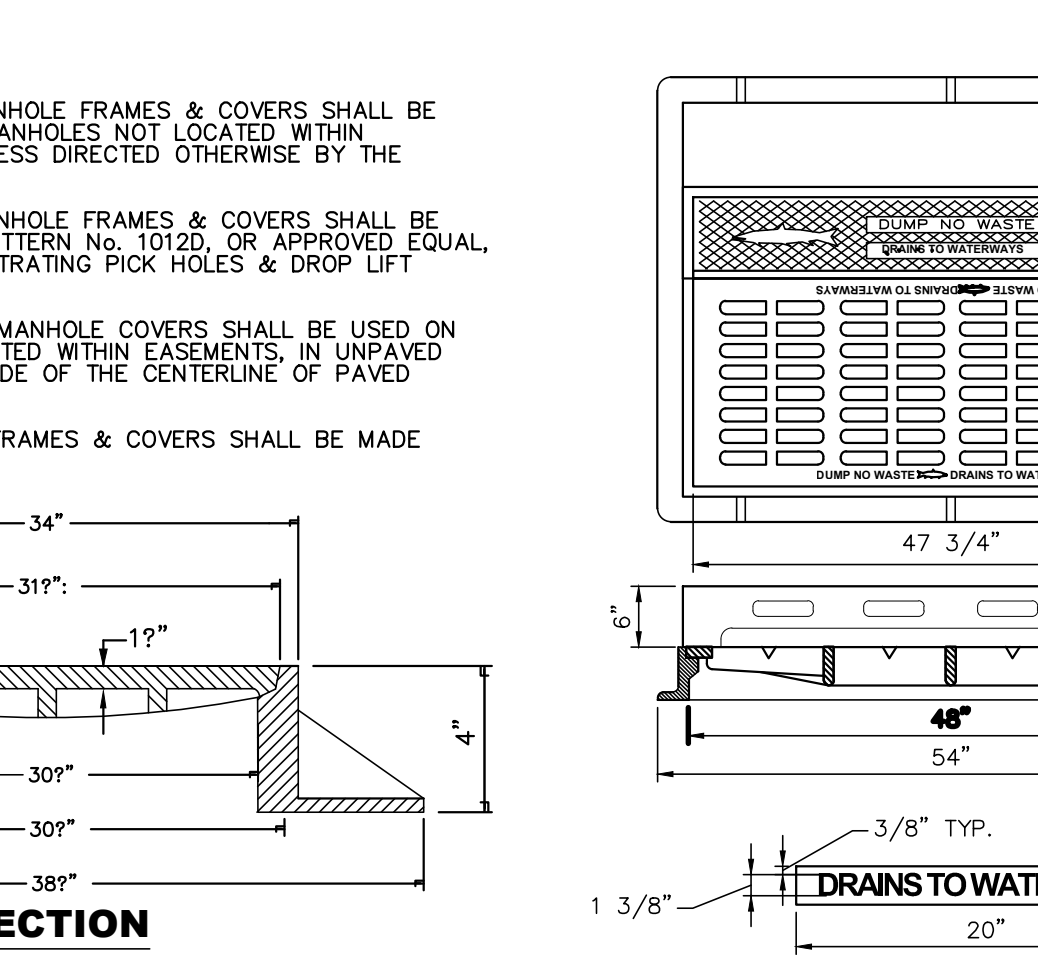
STANDARD MANHOLE FRAME AND COVER
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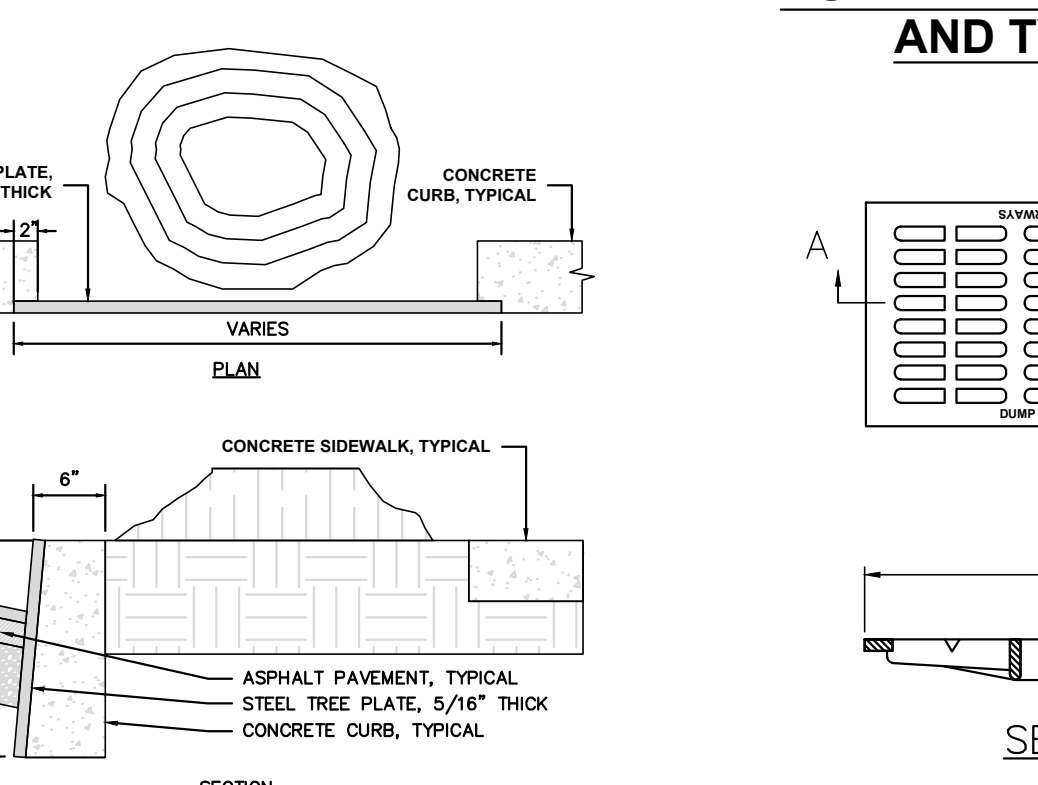
HEADER CURB
 NOT TO SCALE



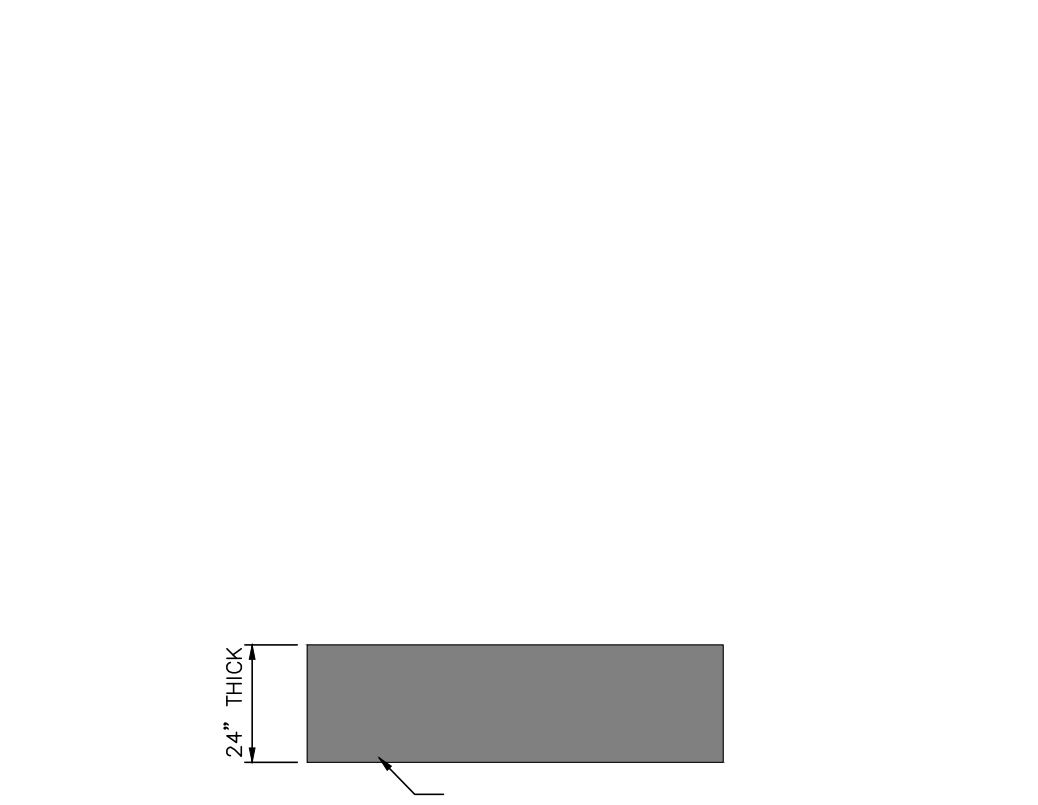
RECONSTRUCT INLET DETAIL
 SECTION A-A SECTION B-B



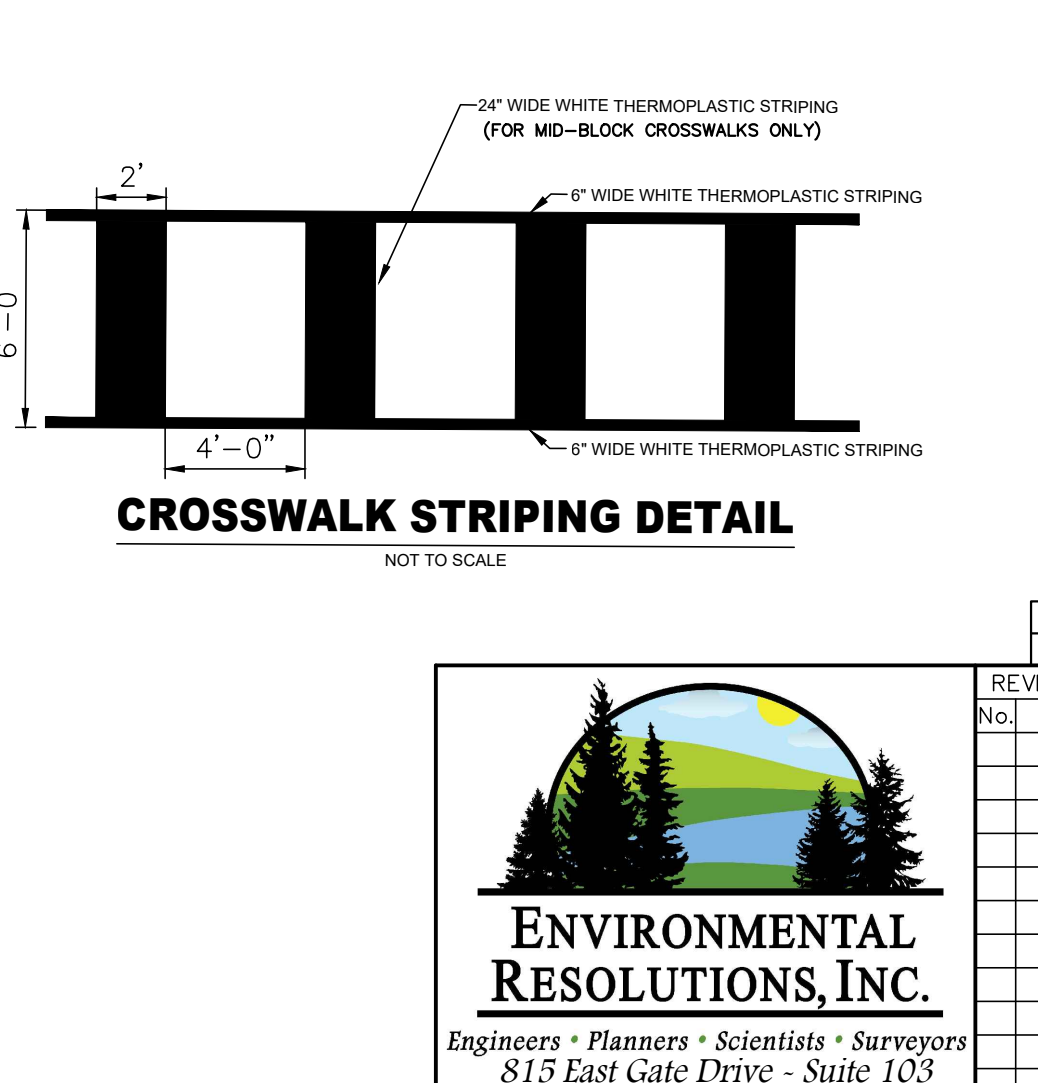
STEEL TREE PLATE
 NOT TO SCALE



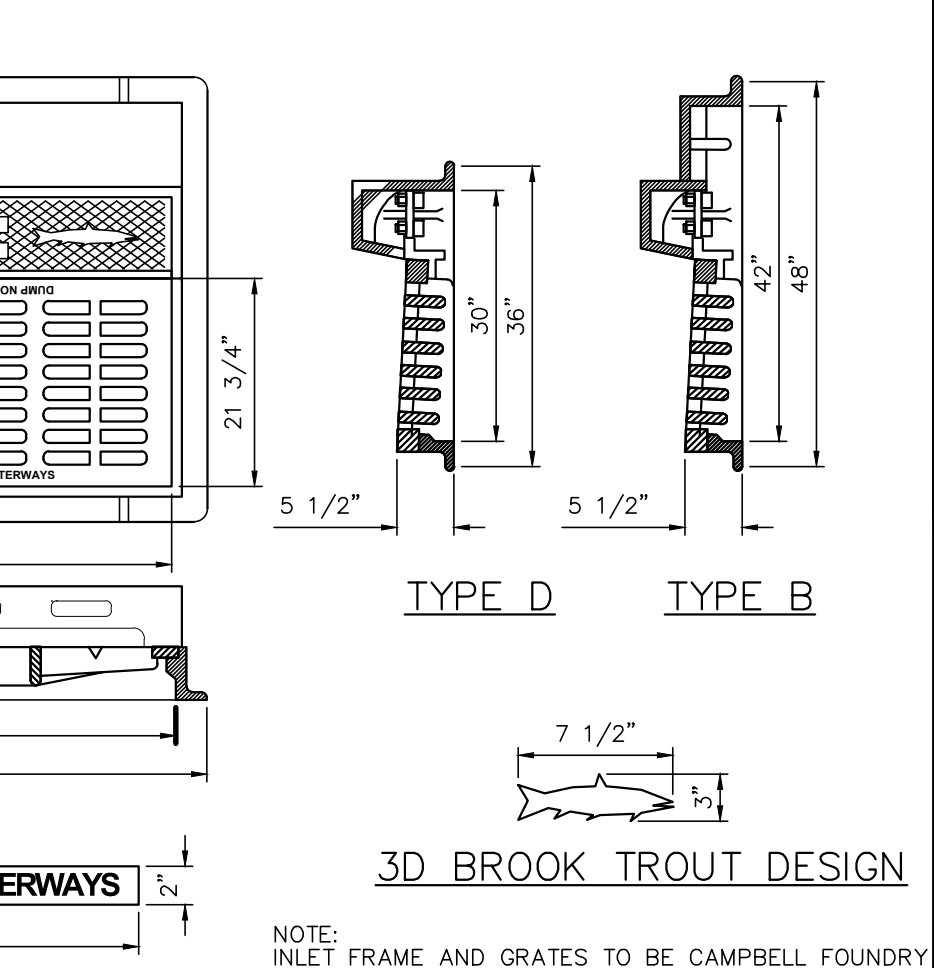
STEEL TREE PLATE
 NOT TO SCALE



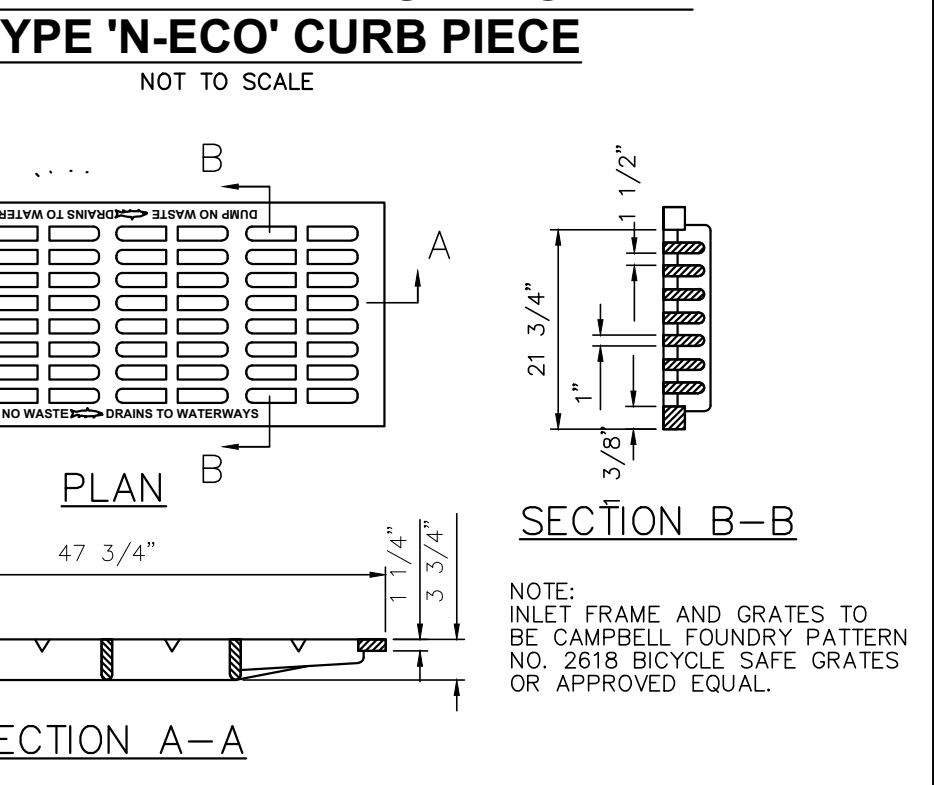
STOP BAR DETAIL
 NOT TO SCALE



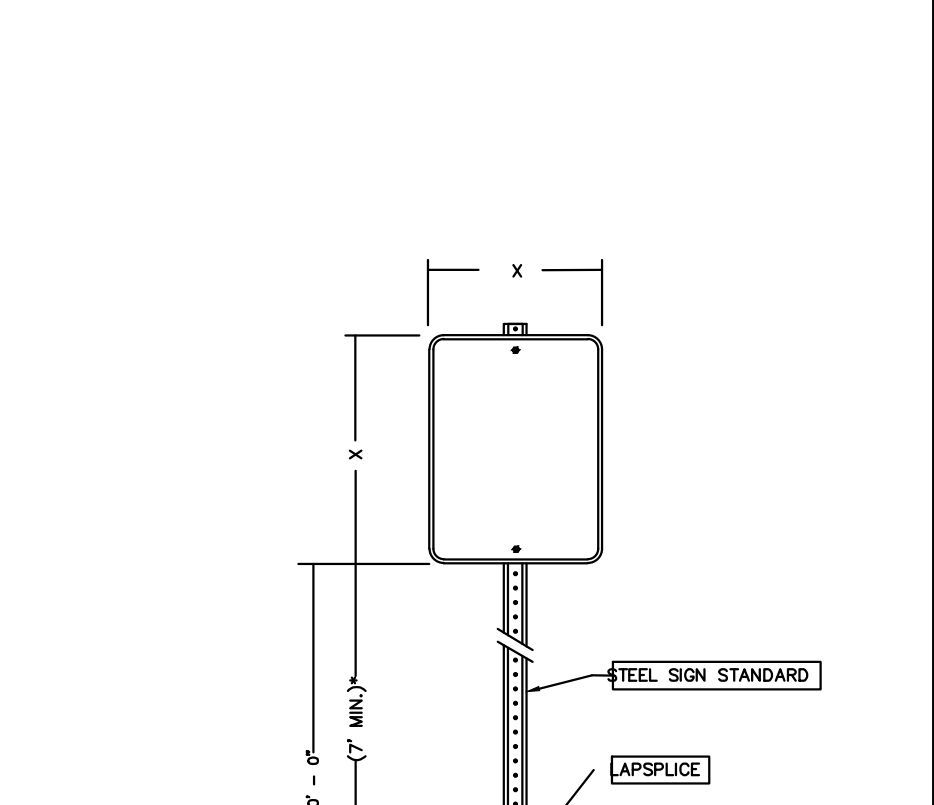
CROSSWALK STRIPING DETAIL
 NOT TO SCALE



**CURB INLET WITH BICYCLE SAFE GRATE
 AND TYPE 'N-ECO' CURB PIECE**
 NOT TO SCALE

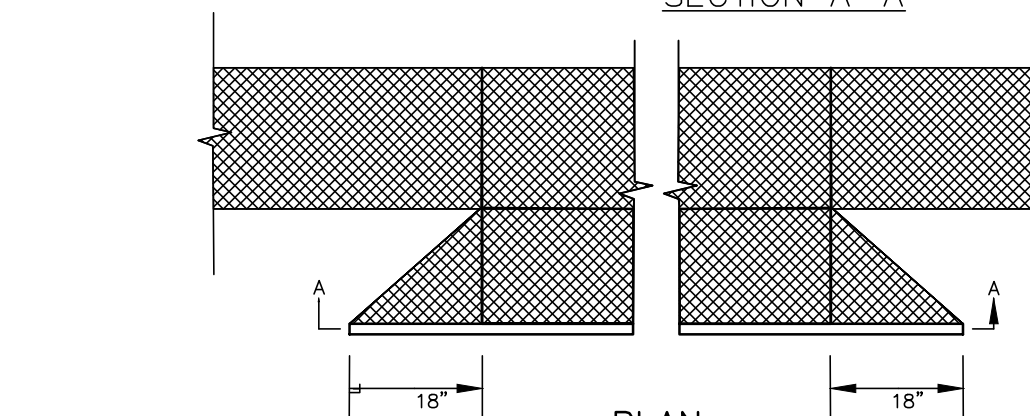
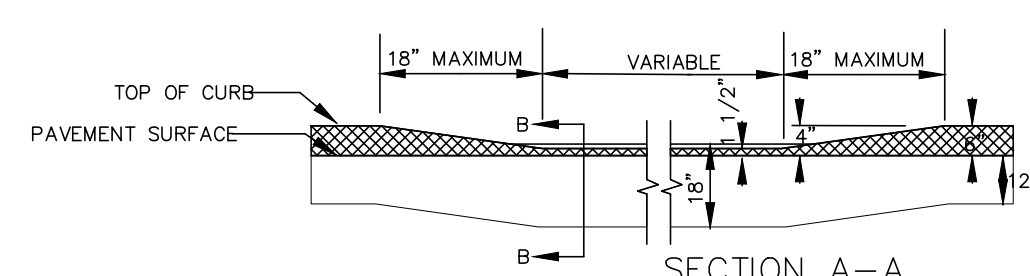
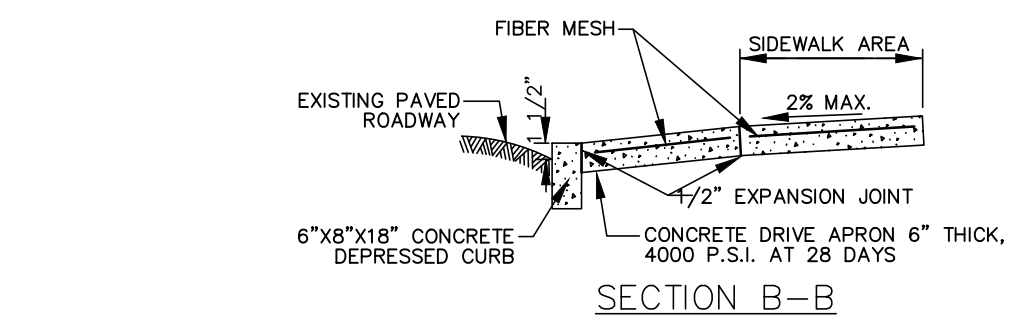


HEAVY DUTY BICYCLE SAFE GRATE
 NOT TO SCALE



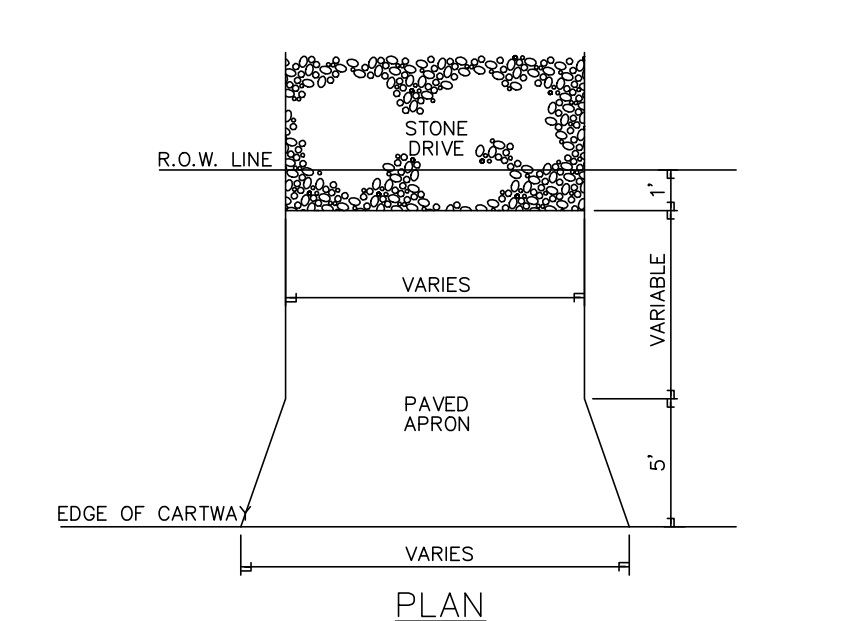
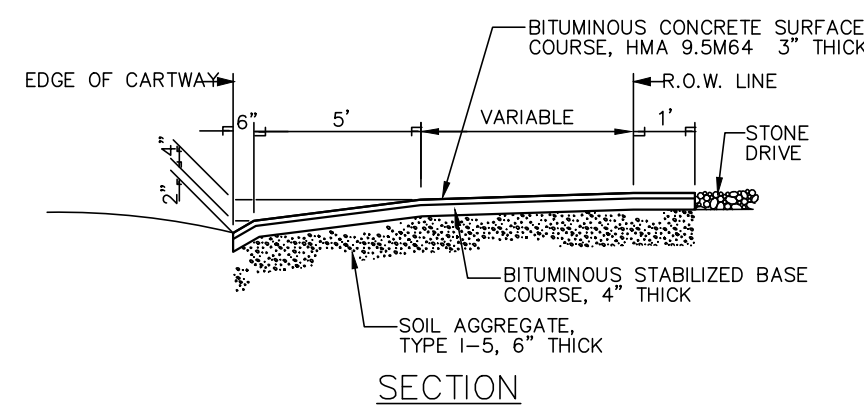
TRAFFIC CONTROL SIGN DETAIL
 (NOT TO SCALE)

<p>ENVIRONMENTAL RESOLUTIONS, INC. <i>Engineers • Planners • Scientists • Surveyors</i> 815 East Gate Drive - Suite 103 Mount Laurel, New Jersey 08054-3415 Tel. 856-235-1170 Fax 856-273-9239</p>	No. DATE REVISIONS REVISIONS No. DATE	CONSTRUCTION DETAILS UNION AVENUE COUNTY ROUTE #615 TOWNSHIP OF PENNSAUKEN CAMDEN COUNTY, NEW JERSEY
	CERTIFICATE OF AUTHORIZATION NUMBER: 24GA2794500	DRAWN: DESIGNED: DATE: 2/4/20 SCALE: NTS SHEET 9 OF 10

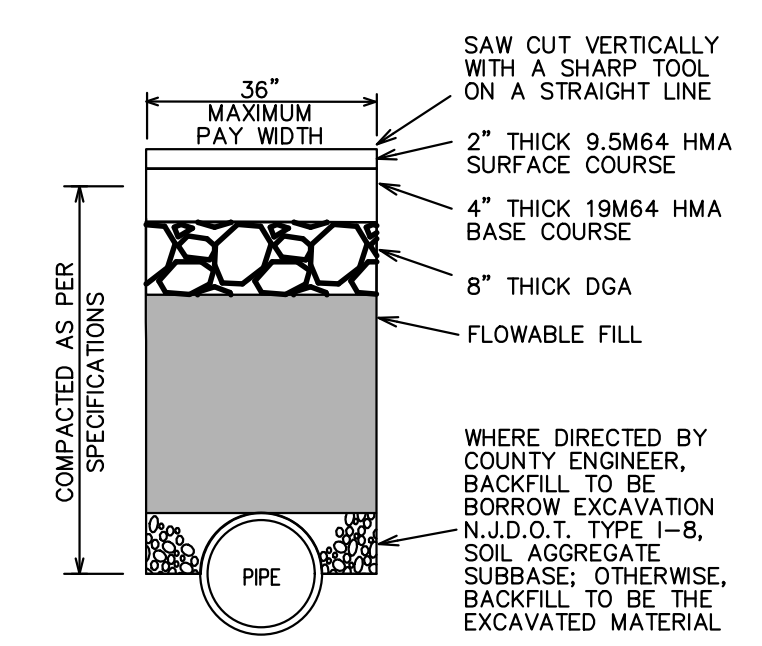


NOTE:
THE CONSTRUCTION OF A DRIVEWAY APRON SHALL INCLUDE THE CONSTRUCTION OF THE APRON, THE DEPRESSED CURB AND ALL CONCRETE SIDEWALK BEHIND THE APRON NECESSARY FOR CONSTRUCTION, AND SHALL BE UNDER A SINGLE PAY ITEM.

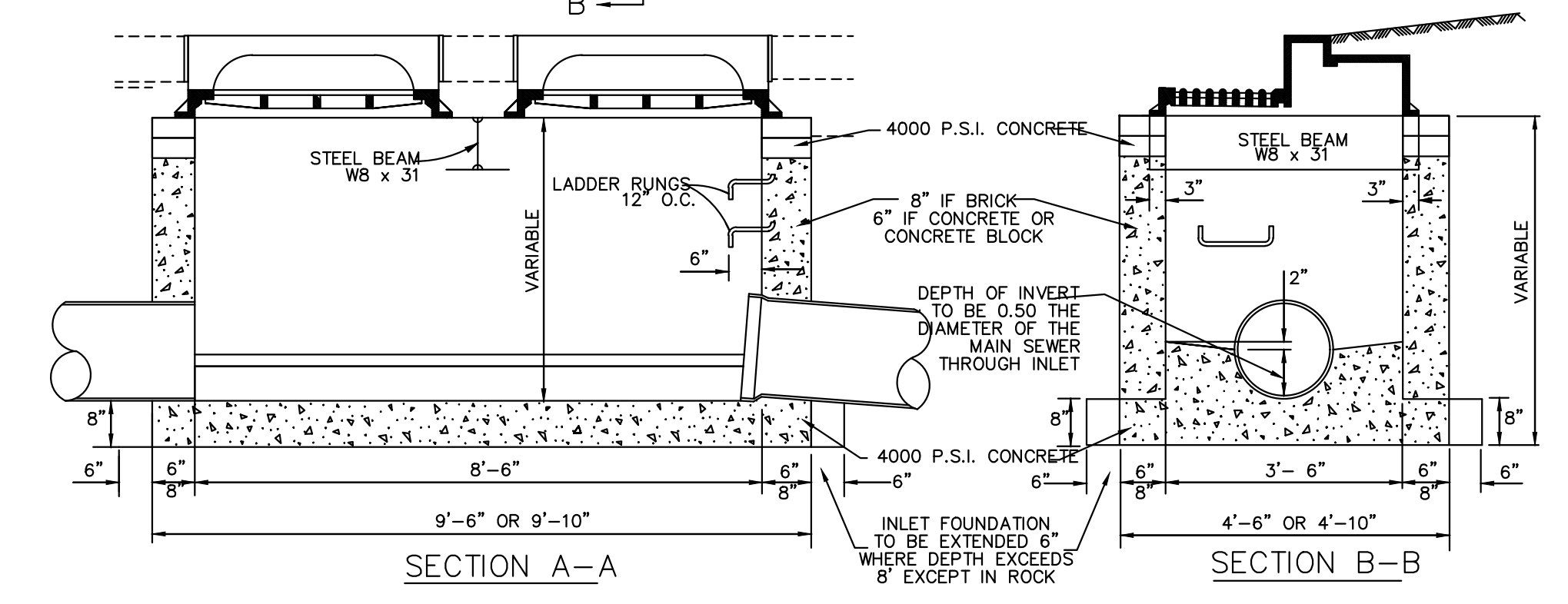
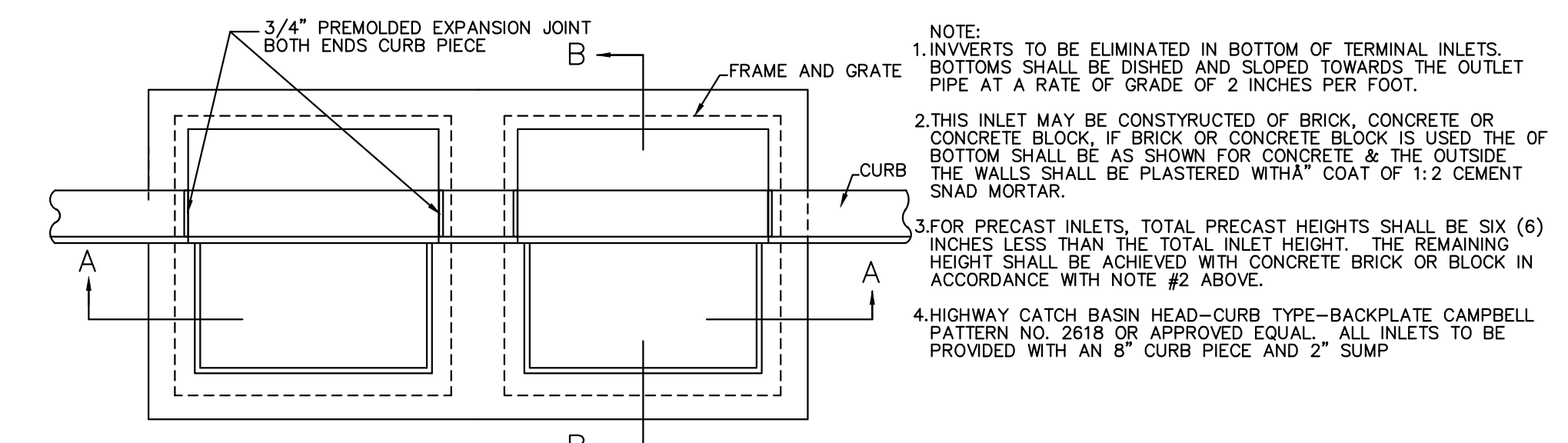
DEPRESSED CONCRETE CURB AND DRIVEWAY APRON
N.T.S.



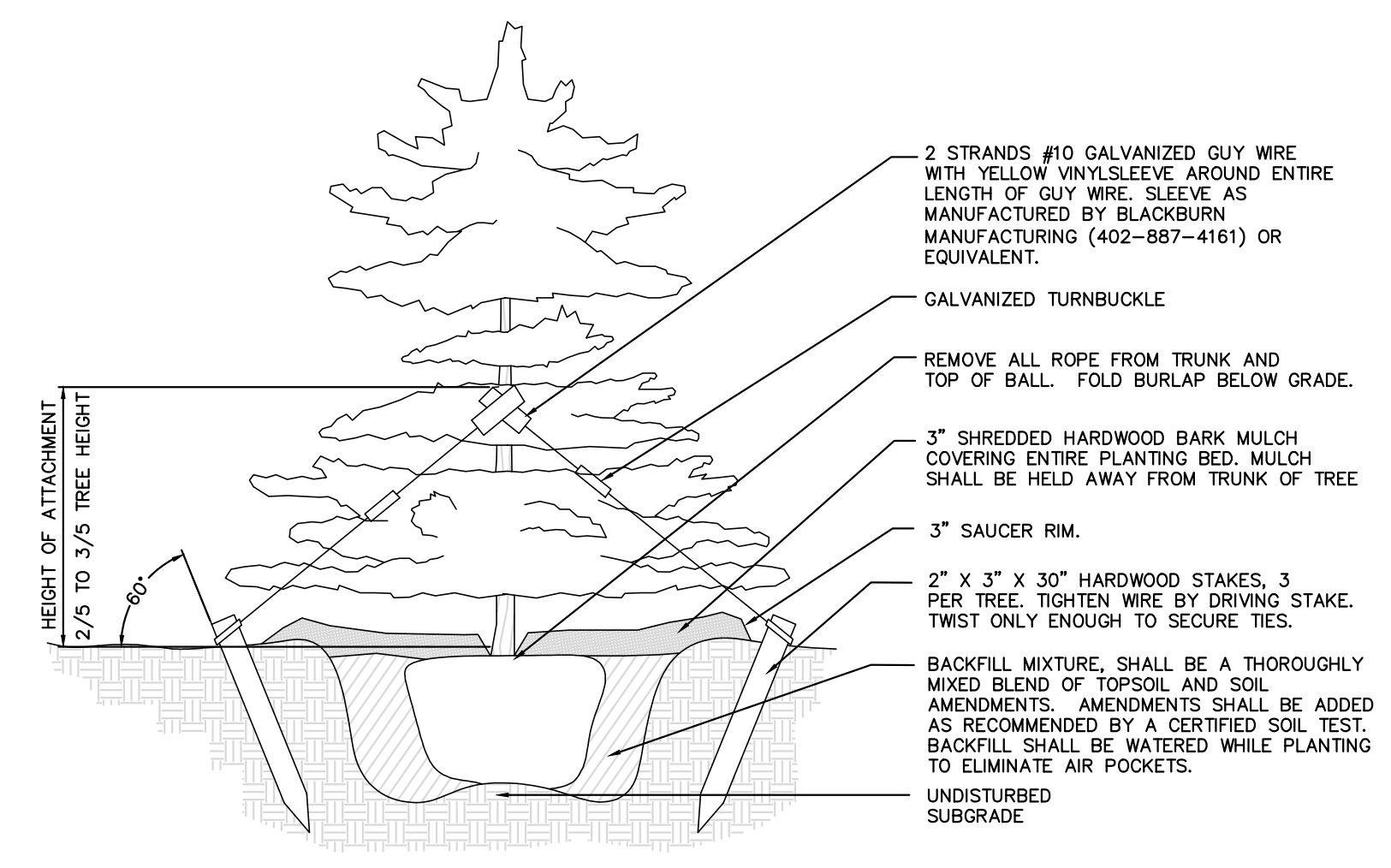
TYPICAL PAVED DRIVEWAY APRON
N.T.S.



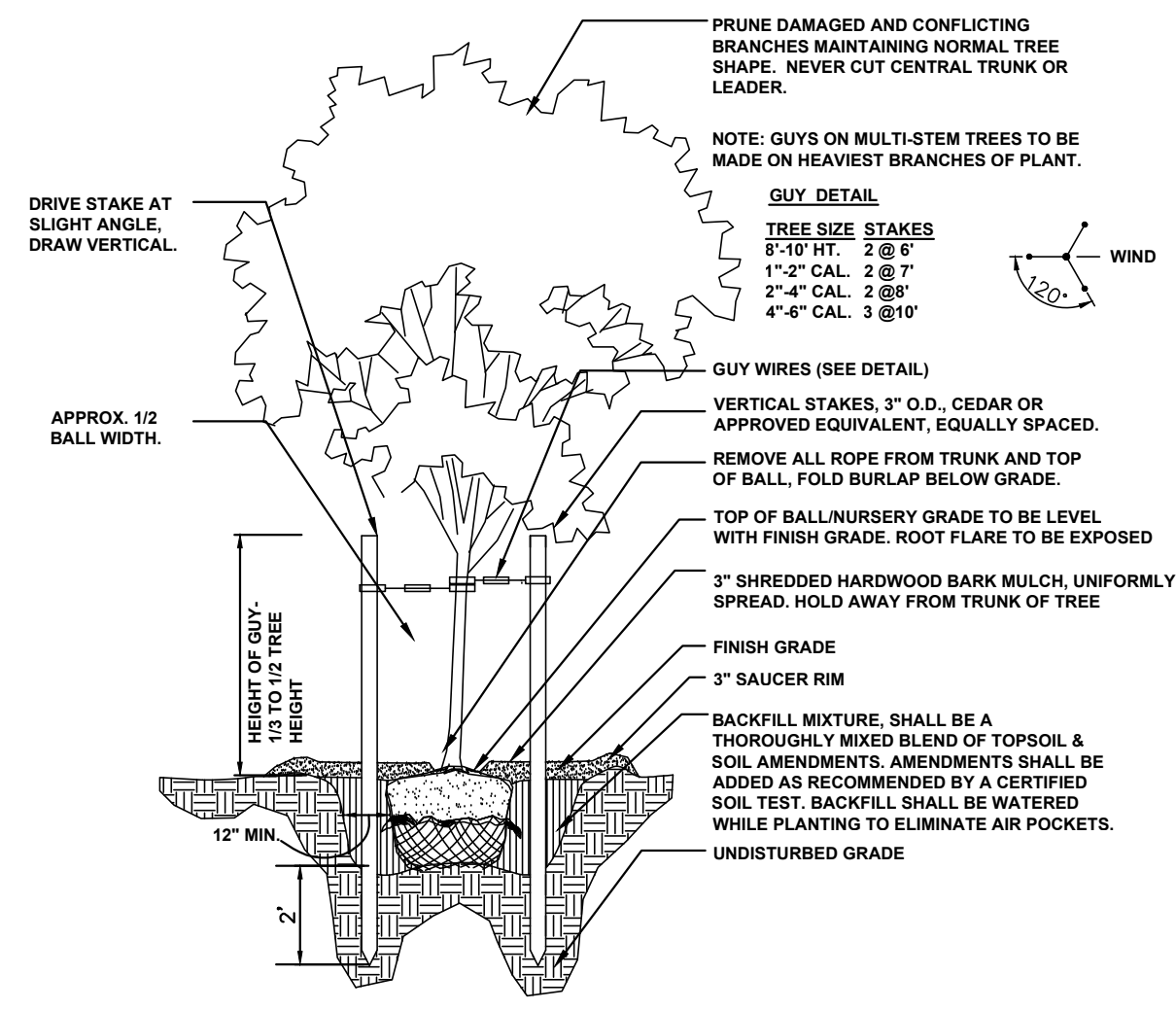
TRENCH TYPE 1
CROSSINGS ONLY
N.T.S.
ALL TEMPORARY AND/OR FINAL ROAD RESTORATION TO BE INCLUDED IN THE PRICE BID PER LINEAR FOOT OF CURB



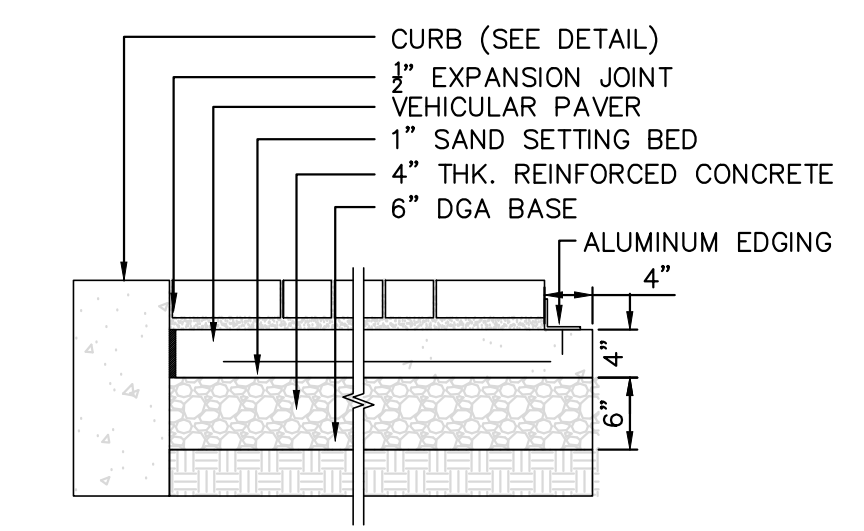
DOUBLE INLET TYPE "B"
NOT TO SCALE



EVERGREEN TREE DETAIL
N.T.S.



SHADE TREE DETAIL
N.T.S.



VEHICULAR PAVERS
N.T.S.

VEHICULAR PAVER SHALL BE MODEL LINEA AS MANUFACTURED BY TECO BLOC OR APPROVED EQUAL. PH. 1.877.832.4625 WWW.TECO-BLOC.COM

PAVERS SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS.

PAVER PATTERN SHALL BE SHOULDER COURSE 4"x9" AND VARIABLE SIZES RUNNING BOND AS SHOWN ON THE PLANS.

FINAL COLOR SHALL BE DETERMINED. SHOULDER COURSE SHALL AND MAIN FIELD WILL BE CONTRASTING COLORS.

ALUMINUM EDGING SHALL BE MODEL STRUCTUREDGE AS MANUFACTURER BY PERMALOC OR APPROVED EQUAL. PH: 1.616.399.9600 WWW.PERMLOC.COM

CONTRACTOR SHALL SUBMIT SHOP DRAWINGS TO ENGINEER FOR APPROVAL PRIOR TO INSTALLATION OR PURCHASE.

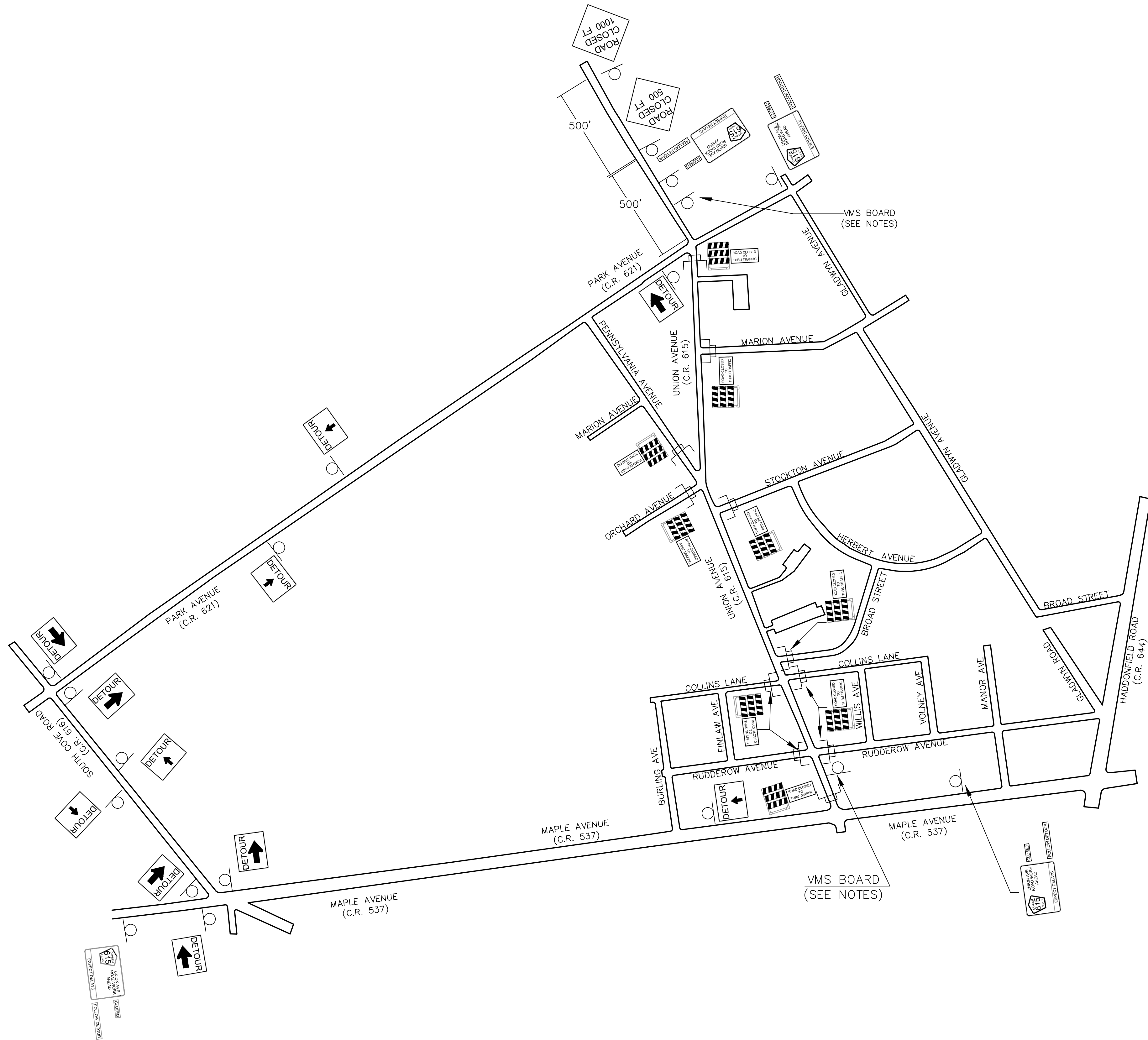
No.	DATE	REVISIONS

ENVIRONMENTAL RESOLUTIONS, INC.
Engineers - Planners - Scientists - Surveyors
815 East Gate Drive - Suite 103
Mount Laurel, New Jersey 08054-3415
Tel. 856-235-7170 Fax 856-273-9239

CONSTRUCTION DETAILS

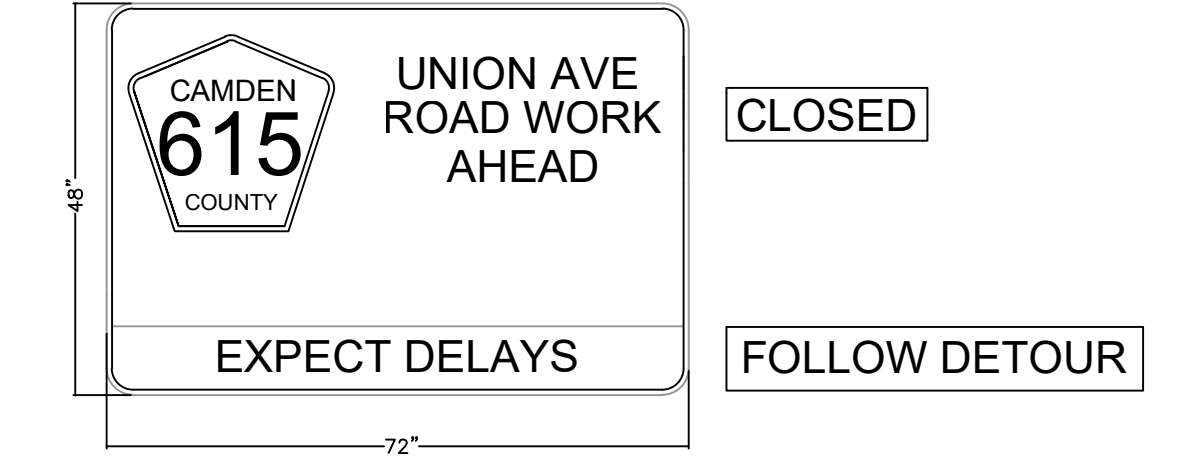
UNION AVENUE
COUNTY ROUTE #615
TOWNSHIP OF PENNSAUKEN
CAMDEN COUNTY, NEW JERSEY

FILE: 30750-50_Serial_Parade.DWG	DRAWN:	DESIGNED:	DATE: 2/4/20
PROJECT No: 30750-50	SCALE: NTS	SHEET 10 OF 10	

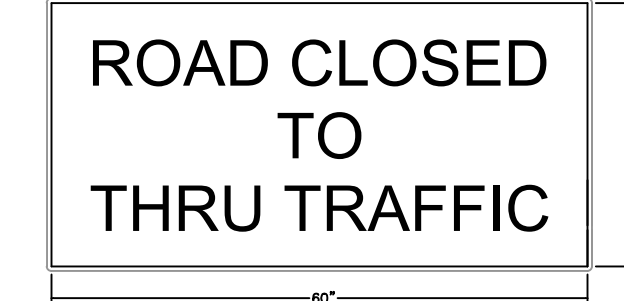
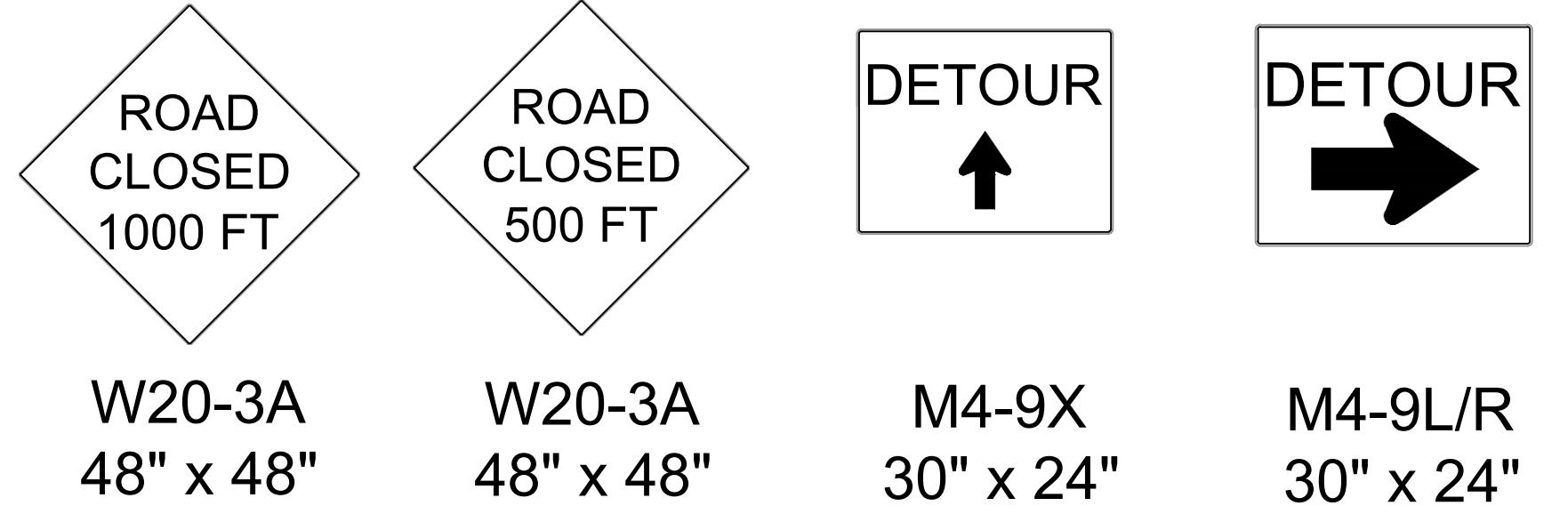


VARIABLE MESSAGE SIGN MESSAGE SEQUENCES	
MESSAGE SEQUENCE TO BE USED FOR A MINIMUM OF TWO WEEKS PRIOR TO CONSTRUCTION	MESSAGE SEQUENCE TO BE USED DURING CONSTRUCTION
RT 615 UNION AVE	RT 615 UNION AVE
WORK BEGINS XXX XX	ROAD WORK ONGOING
EXPECT DELAYS	FOLLOW DETOUR

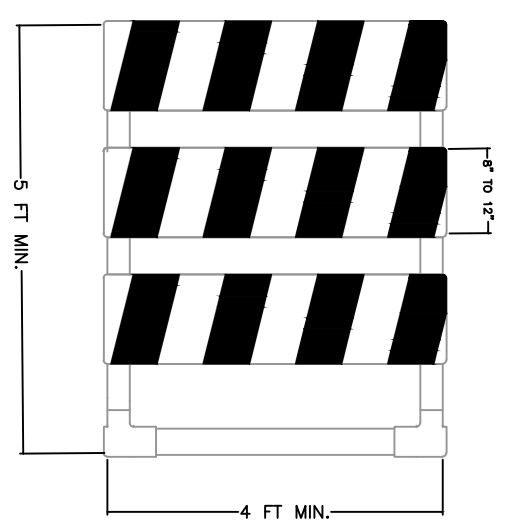
VMS BOARDS ARE TO BE INSTALLED AT NORTHERN AND SOUTHERN APPROACHES OF UNION AVENUE AT PARK AND MAPLE AVENUE INTERSECTIONS WITH UNION AVENUE.



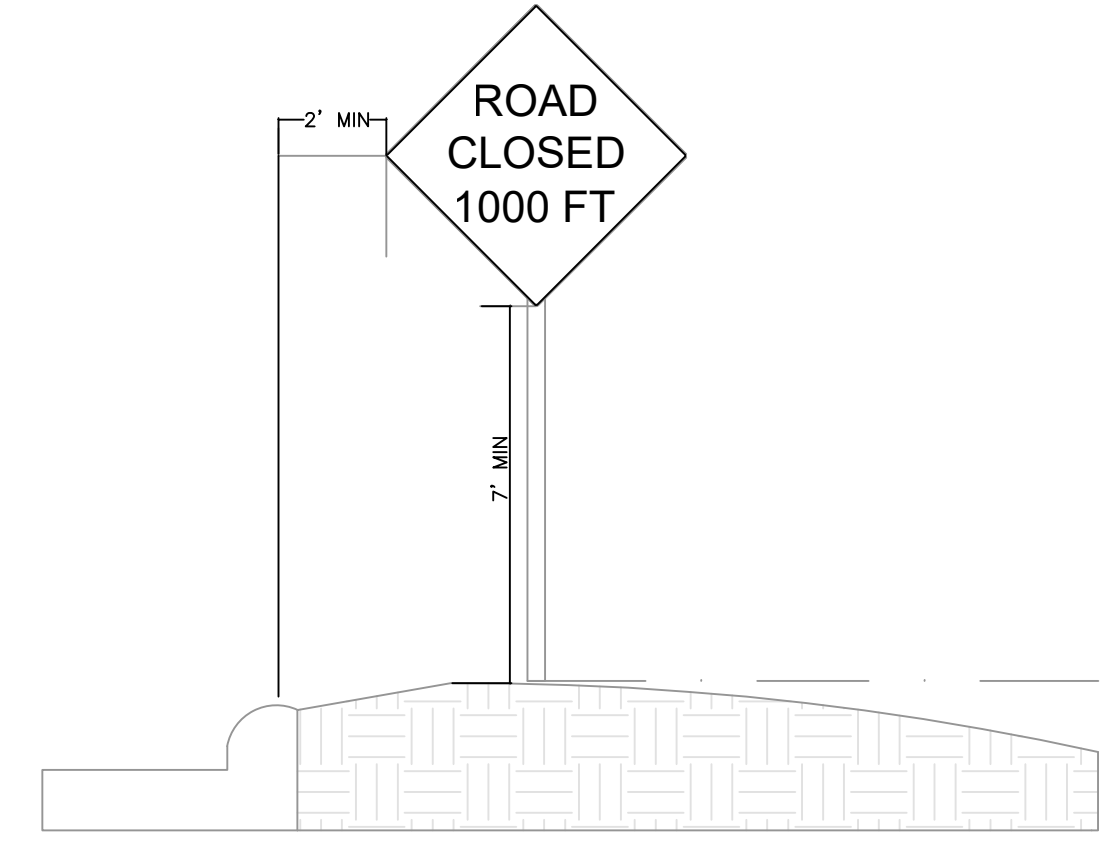
'SIGN A'
72" x 48"



R11-4
60" x 30"



TYPE 3 BARRICADE



HEIGHT AND LATERAL LOCATIONS OF SIGNS - TYPICAL INSTALLATIONS

Christopher J. Noll
N.J. Professional Engineer No. 32206

REVISIONS		REVISIONS	
No.	DATE	No.	DATE

TRAFFIC CONTROL DETAILS

**RECONSTRUCTION OF UNION AVENUE
COUNTY ROUTE #615
TOWNSHIP OF PENNSAUKEN
CAMDEN COUNTY, NEW JERSEY**

FILE: 30750-50_Detour_Plan.DWG
PROJECT No. 30750-50
DRAWN: BH
DESIGNED: JN
SCALE: AS NOTED
2/4/2020
SHEET xx OF xx