

Ramsey County Public Works
Construction Plan for
Bituminous Milling, Resurfacing
and Related Improvements

11 X 17

Originals

1988
BIT
OVERLAY

27-126

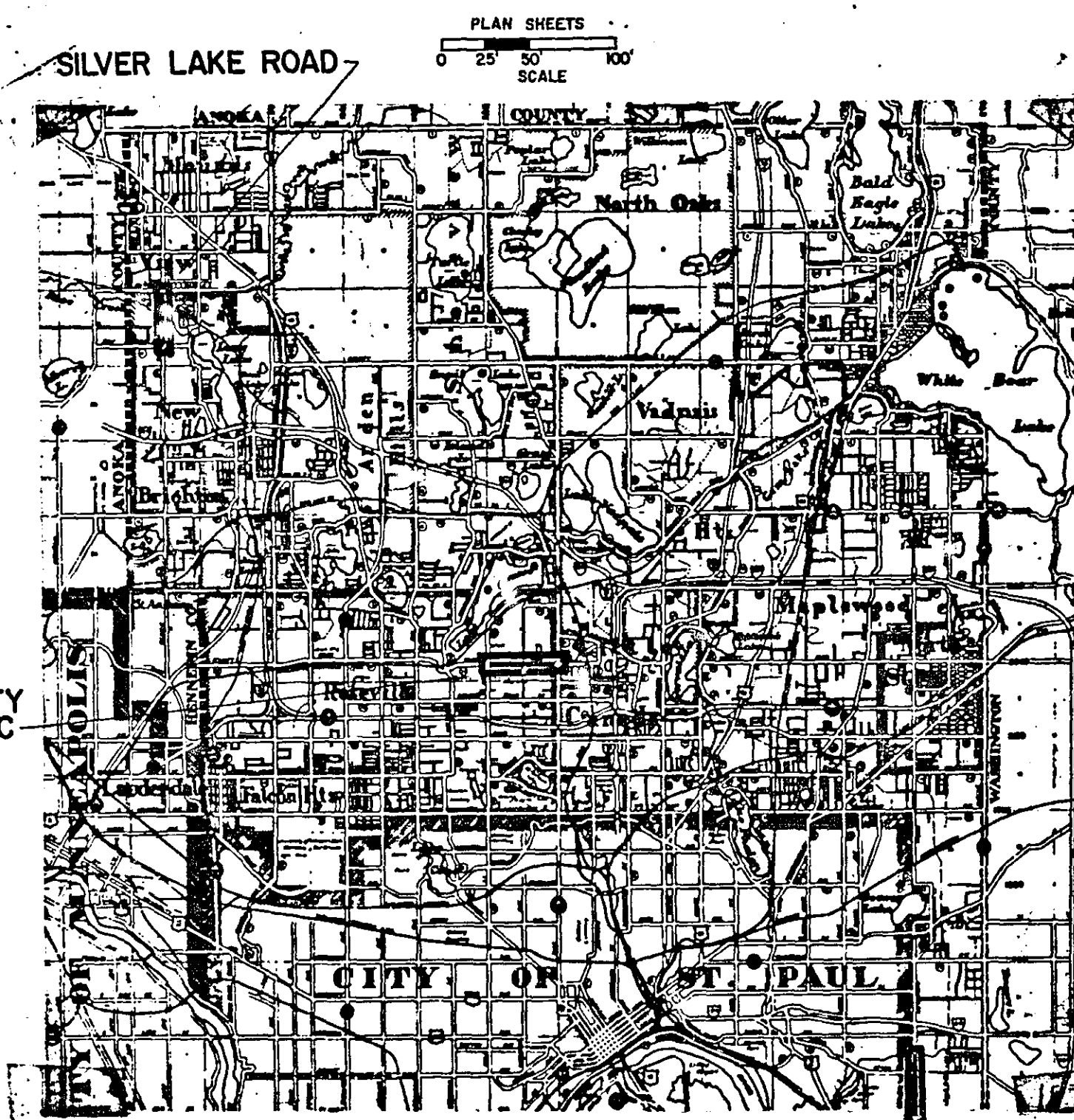
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	COUNTY ROAD C		SILVER LAKE ROAD		McKNIGHT ROAD	
	FEET	MILES	FEET	MILES	FEET	MILES
COUNTY PROJECT NO.						
GROSS LENGTH	5,489	1.039	3,920	0.746	4,715	0.893
BRIDGES LENGTH	0.0	0.0	0.0	0.0	0.0	0.0
EXCEPTIONS LENGTH	0.0	0.0	0.0	0.0	0.0	0.0
NET LENGTH	5,489	1.039	3,920	0.746	4,715	0.893

COMBINED LENGTH OF COUNTY PROJECTS 14,124 FEET , 2.674 MILES

RAMSEY COUNTY
DEPARTMENT OF PUBLIC WORKS

CONSTRUCTION PLAN FOR BITUMINOUS MILLING, RESURFACING AND RELATED IMPROVEMENTS



COUNTY ROAD C (C.S.A.H. 23) BETWEEN DALE STREET AND
RICE STREET (T.H. 49)

**SILVER LAKE ROAD (C.S.A.H. 44) BETWEEN RICE CREEK ROAD
AND COUNTY ROAD H**

**MCKNIGHT ROAD (C.S.A.H. 68) BETWEEN LOWER AFTON ROAD
AND 250 FEET NORTH OF NORTH PARK DRIVE**

COUNTY PROJECT NO. 47404

INDEX OF SHEETS

SHEET NO.	DESCRIPTION
1	TITLE SHEET
2	STATEMENT OF ESTIMATED QUANTITIES
3	TYPICAL SECTIONS
4	NOTES, CHARTS AND DETAILS
5	COUNTY ROAD C PLAN SHEET
6	SILVER LAKE ROAD PLAN SHEET
7	MCKNIGHT ROAD PLAN SHEET

DESIGN BY LKF DATE 1-15-08 I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT
SUPERVISION AND THAT I AM A DULY REGISTERED PROFESSIONAL ENGINEER UNDER
THE LAWS OF THE STATE OF MINNESOTA.

DRAWN BY _____ DATE _____

CHECKED BY _____ DATE 01-15-08 REG. NO. 13501 EXPIR. 06-01-2011

RECOMMENDED FOR APPROVAL DES DATE 2/4/88 RECOMMENDED FOR APPROVAL Handwritten Signature DATE 2/23/88
COUNTY ENGINEER

RECOMMENDED FOR APPROVAL [Signature] DATE 3/2/80 APPROVED [Signature] DATE _____
CHAIRPERSON OF THE HAMSBY COUNTY BOARD

RECOMMENDED FOR APPROVAL 924 DATE 03-03-88 APPROVED Charles F. Marshall DATE 1-25-88
CITY OF ROSEVILLE

RECOMMENDED FOR APPROVAL RHP DATE 02-03-08 APPROVED Leslie Proper DATE 1-22-08
CITY OF NEW BRIGHTON

RECOMMENDED FOR APPROVAL DLR INT. 02-03-88 APPROVED Kent E. Hurd DATE 1/25/88
CITY OF BAINBRIDGE

RECOMMENDED FOR APPROVAL _____ DATE _____
W. L. Connel 2-6-88 APPROVED Daniel J. Simpson DATE 2-8-88

PLAN REVISIONS		
DATE	SHEET NO.	BY

DESIGN		DESIGNATION	
	COUNTY ROAD C	SILVER LAKE ROAD RICE CREEK ROAD TO COUNTY ROAD H	McKNIGHT ROAD LOWER AFTON ROAD TO NORTH PARK DR
A.D.T. CURRENT YEAR	8,135	12,785	11,305
DESIGN LOAD	9 TON	9 TON	9 TON

MCKNIGHT ROAD

COUNTY PROJECT 47404

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STATEMENT OF ESTIMATED QUANTITIES

STATEMENT OF ESTIMATED QUANTITIES			TOTALS		COUNTY ROAD C		SILVER LAKE ROAD		Mc KNIGHT ROAD	
ITEM NO.	CONTRACT ITEM	UNIT	ESTIMATED QUANTITIES	FINAL QUANTITIES	ESTIMATED QUANTITIES	FINAL QUANTITIES	ESTIMATED QUANTITIES	FINAL QUANTITIES	ESTIMATED QUANTITIES	FINAL ESTIMATED
2021.501	MOBILIZATION	LB			0.38		0.23		0.39	
2104.501	REMOVE CONCRETE CURB (1)	LF	174		0		0		174	
2104.501	REMOVE CURB & GUTTER (1)	LF	510		210		500		0	
0104.604	HILL BITUMINOUS SURFACE TYPE 1 (2,3,4)	SV	11,790		6,790		5,090		0	
0104.604	HILL BITUMINOUS SURFACE TYPE 3 (2,3,4,5)	SV	5,035		177		689		635	
2211.501	AGG. BASE (C. & (C. 3 100% CR.) (6)	TON	30		12		18		0	
2231.501	BITUMINOUS PATCHING MIXTURE (7,8,9)	TON	96		20		16		69	
2331.504	BITUMINOUS MATERIAL FOR MIXTURE (10)	TON	77		20		0		57	
2331.512	LEVELING COURSE MIXTURE (MOD)	TON	1,475		375		0		1,100	
2357.502	BITUMINOUS MAT. FOR TRUCK DRIVE	TON	3551		1,020		350		1,501	
2361.504	ASPHALT CEMENT (10)	TON	235		97		71		87	
2361.508	WEARING COURSE MIXTURE (MOD)	TON	3,752		1,425		1,049		1,278	
2504.602	ADJUST VALVE BOX (11)	EACH	4		2		2		0	
2506.512	RECONSTRUCT CATCH BASINS	LF	18		5		0		13	
2506.516	CASTING ASSEMBLIES (12)	EACH	3		3		0		0	
2506.522	ADJUST FRAME AND RING CASTING (12,14)	EACH	3		25		4		0	
2531.501	CONC. CURB & GUTTER DES. B61B	LF	300		0		300		0	
2531.501	CONC. CURB & BUTTER DES. B624	LF	210		210		0		0	
2531.502	CONC. CURB DES. B6	LF	174		0		0		174	
2535.501	BITUMINOUS CURB (16)	LF	100		0		0		100	
0565.602	LOOP DETECTOR 6' X 6" (13)	EACH	4		4		0		0	
0565.602	LOOP DETECTOR 6' X 20" (13)	EACH	2		2		0		0	

QUANTITY NOTES

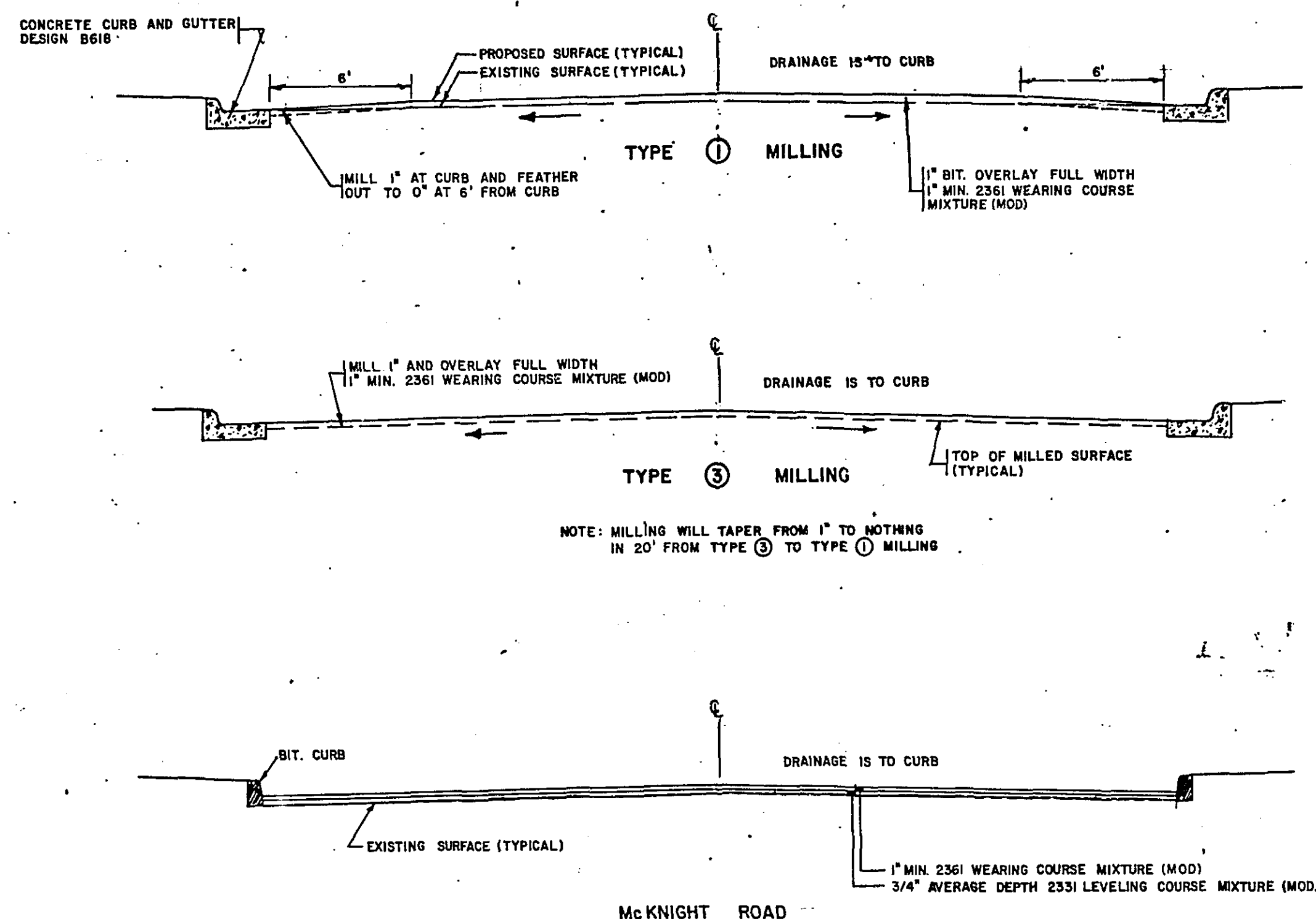
- (1) FINAL LOCATIONS FOR CURB & GUTTER AND REPLACEMENT WILL BE DETERMINED IN THE FIELD BY THE ENGINEER; REPLACEMENT OF DAMAGED BUILTUP AREAS WILL BE DETERMINED LIMITED TO THE WORK.
- (2) PROVIDE WATER FOR MILLING OPERATIONS; INCLUDE IN PRICE OF OTHER ITEMS.
- (3) THE CONTRACTOR WILL NOTIFY THE COUNTY BEFORE MILLING OVER ANY OTHER DEPOSITS.
- (4) DELIVER THE MILLED BITUMINOUS GRAPING TO THE BUREAU COUNTY DETENTION PIT STORAGE AREA AT KENT CITIES AND LAURENCE AVENUE; INCLUDE DELIVERY IN PRICE OF OTHER ITEMS.
- (5) THE FIRST AND LAST 20 FEET OF EACH ROAD WILL BE TYPE 3 MIXED TO PROVIDE SMOOTH TRANSITIONS AT BEGINNING AND END OF PAVED AREAS.
- (6) TO BE USED UNDER CONCRETE & G. PLACE " IN COMPACTED CHORDICES.
- (7) TOP ROADWAY ADVANCEMENT TO CURBS OF CURB AND GUTTER CONSTRUCTION SHALL BE PATCHED WITH BITUMINOUS PATCHING MIXTURE TO THE TOP OF FINISHED GRADE IMMEDIATELY AFTER THE CURB AND GUTTER CONSTRUCTION AND FINISHING MIXTURE.
- (8) CRACKS IN ROADWAY WILL BE CLEANED BY POWER MATTED, TACKED, AND FILLED WITH TYPE NO 2231 BITUMINOUS PATCHING MIXTURE.
- (9) TACK PATCH AND B. PATCHING MIXTURE SHALL BE USED TO PATCH DAMAGED AREAS IN THE ROADWAYS BEFORE OPERATING.
- (10) WEAR COURSE COMPUTED AT 6.85; LAYDOWN COURSE COMPUTED AT 5.25.
- (11) VALVE BOXES LOCATED IN THE PAVEMENT WILL BE RAISED TO 4" BELOW FINISHED GRADE.
- (12) STEEL HARKNELL ADJUSTING RINGS SHALL BE USED AS SPECIFIED FOR HARKNELL LOCATED IN THE PAVEMENT; CONTRACTOR SHALL BE RESPONSIBLE FOR THE TYPE OF RINGS AS DETERMINED BY USING A 10" STRAIGHT EDGE; CONTRACTOR AND ENGINEER SHALL MEETING WITHIN 7 WORKING DAYS; THIS HEIGHT, WHEN SPECIALLY FORMULATED EXIST IS USED PATCHING MATERIALS SHALL BE CONSIDERED TO RAISEG PAVTAL.
- (13) THE CONTRACTOR SHALL PROTECT OR REPLACE EXISTING LOOP INTRUSIONS DURING PAVEMENT REPAIR OPERATIONS; DAMAGE TO THE EXISTING LOOP OF CURE STRUCTURES WILL BE LOCATED BY THE COUNTY DOW REQUEST; AND REPAIR IF DAMAGE TO EXISTING WITHIN 7 WORKING DAYS.
- (14) METHOD OF ATTACHMENT OF STEEL OR CAST IRON INSIDE ADJUSTING RING SHALL BE ASKREABLE TO THE OWNER OF TACK STRUCTURE.
- (15) CASTING ASSEMBLY SHALL BE MINIMUM HEAVY FRAMES, CHORD AND CURB NO. 10, 10.5" X 1.0" OR EQUIV.
- (16) REMOVAL OF EXISTING B. CURB IS INCIDENTAL.

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MILLING AND OVERLAY DETAILS (2-TYPES)



TYPICAL SECTION NOTES
THE EXACT TYPE AND LOCATION OF MILLING WILL BE DETERMINED IN THE FIELD BY THE ENGINEER.
NO EXTRA COMPENSATION FOR INCREASED OR DECREASED QUANTITIES OF MILLING.
THE FIRST AND LAST 20 FEET OF EACH ROAD WILL BE TYPE 3 MILLED TO PROVIDE A SMOOTH TRANSITION AT THE BEGINNING AND END OF EACH PROJECT.

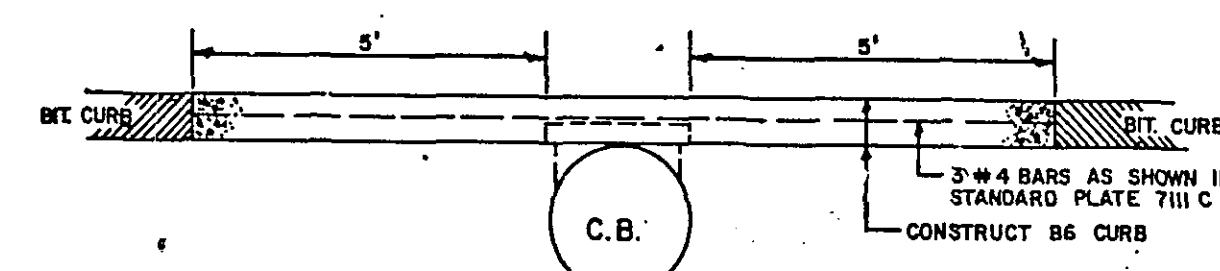
DESIGN SPEED - 40 MPH
DESIGN LOAD - 9 TON
PROTECTED TRAFFIC COUNT - 2000 VPD

CONSTRUCTION TYPICAL SECTIONS

COUNTY PROJECT 47404

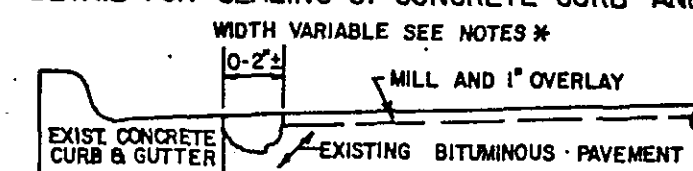
Sheet No. 3 of 7 Sheets

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CURB DETAIL AT CATCH BASINS TYPE C OR G
(TO BE USED WITH CASTING NO. 872 AND 821B)
McKNIGHT ROAD

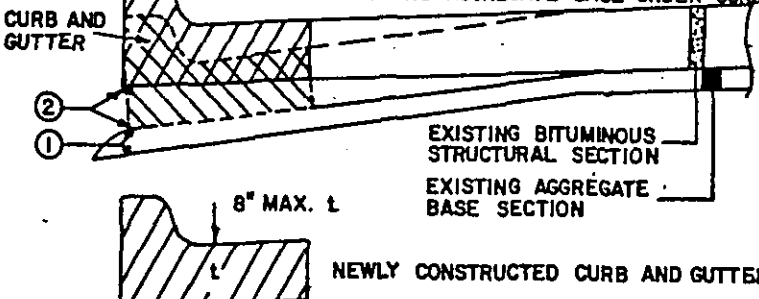
DETAIL FOR SEALING OF CONCRETE CURB AND BITUMINOUS JOINTS



NOTES:
1. 0" TO 3/4" JOINT REPAIR SHALL BE PAID FOR AS 2357 TACK COAT
2. 3/4" TO 2" JOINT REPAIR SHALL BE PAID FOR AS 2231 PATCHING MIXTURE
3. 2" TO 4" JOINT REPAIR SHALL BE PAID FOR AS 2231 PATCHING MIXTURE
4. JOINTS 2" IN WIDTH SHALL BE MILLED 1" WIDE PRIOR TO PATCH

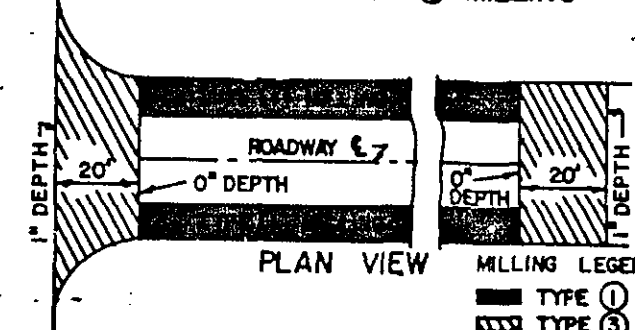
CURB AND GUTTER TREATMENT DETAIL

NOTE: THE CONTRACTOR WILL USE ONLY CURB REMOVAL METHODS WHICH DO NOT DISTURB AGGREGATE BASE UNDER CURB AND GUTTER



- DO NOT REMOVE AGGREGATE BASE UNDER CURB AND GUTTER
- THE CONTRACTOR SHALL PLACE AND COMPACT AGGREGATE BASE IN THIS AREA AS REQUIRED FOR AN 8" MAXIMUM THICKNESS OF GUTTER

MILLING DETAIL AT ENDS OF PROJECT FOR TYPE 1 MILLING



TYPE 1 MILLING AT SIDE STREET APPROACHES

APPLIES TO COUNTY ROAD C AND SILVER LAKE ROAD BETWEEN RICE CREEK RD AND CO. RD. H ONLY

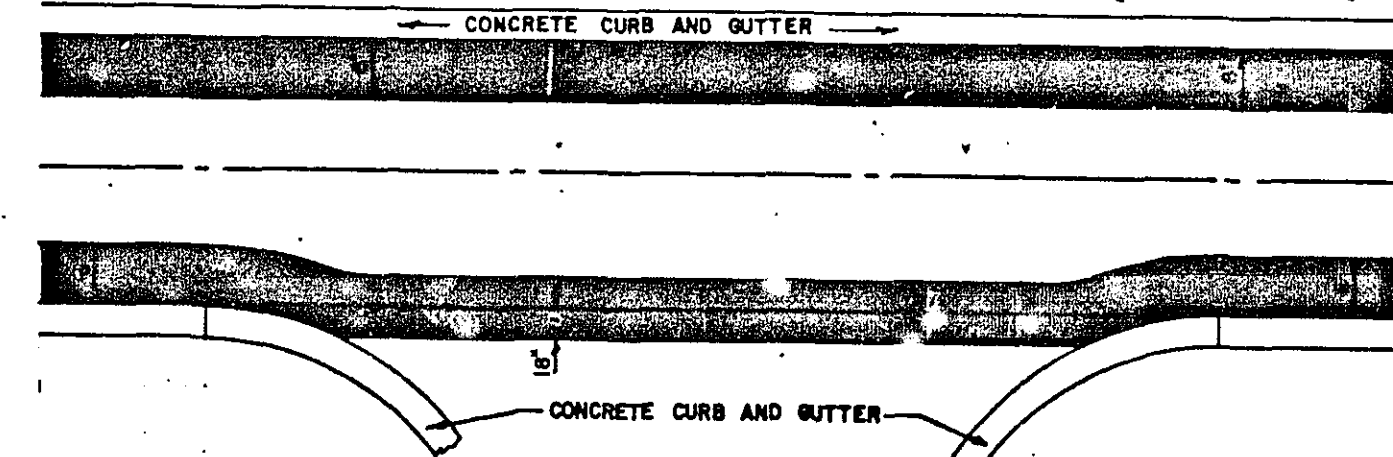
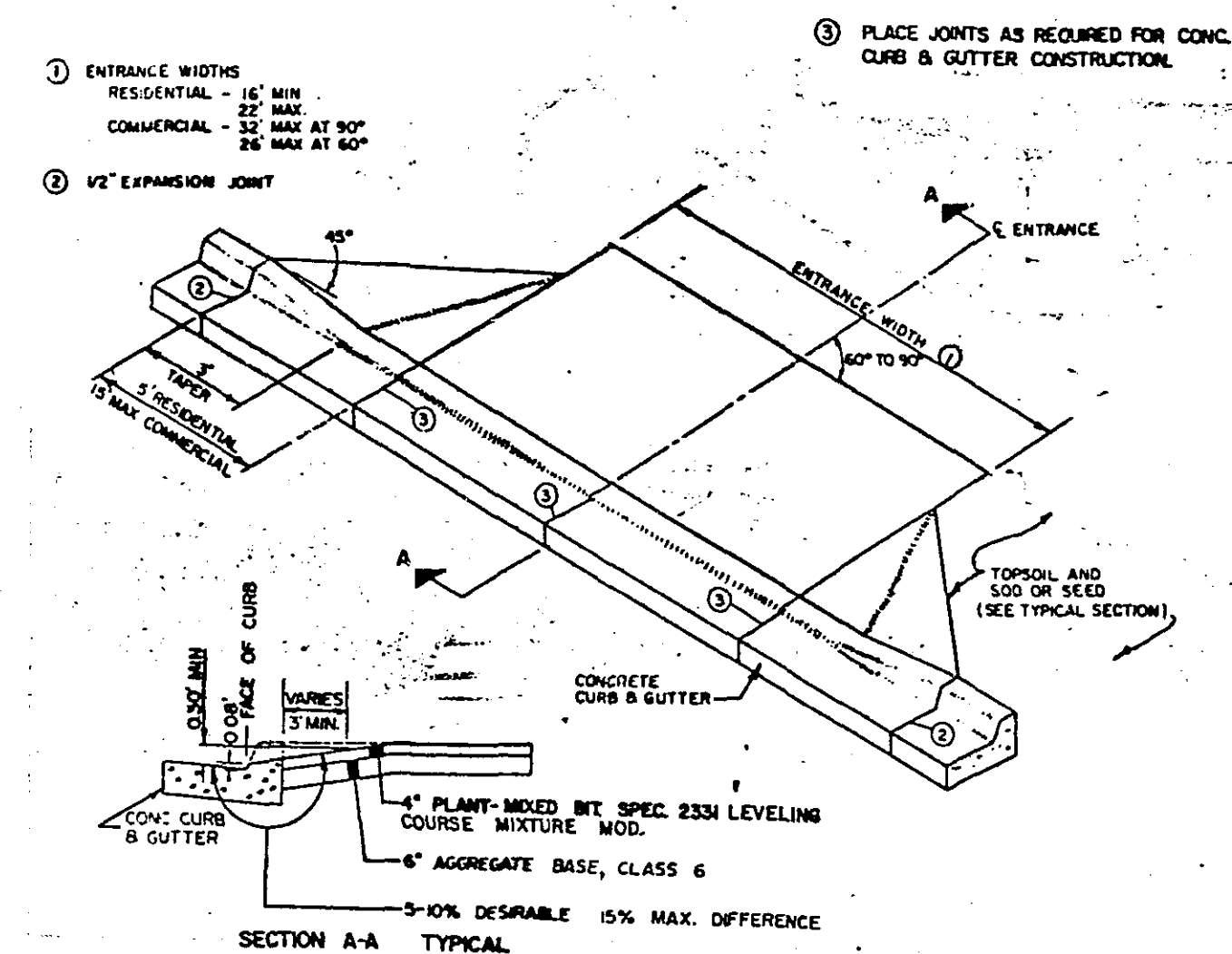


PLATE NO.	DESCRIPTION
0004A	SPECIFICATION REFERENCE TO STANDARD PLATES
4010 B	CONCRETE SHORT CONE AND ADJUSTING RING
4021 C	PRECAST CURB OPENING CATCH BASIN
4108 E	MANHOLE ADJUSTING RINGS
7036 C	PEDESTRIAN CURB RAMP
7087 S	BITUMINOUS CURB
7100 F	CONCRETE CURB AND GUTTERS
7102 E	CURB AND GUTTER CONSTRUCTION AT CATCH BASIN
7111 B	INSTALLATION OF CATCH BASIN WALLING
8000 I	STANDARD BARRICADE
8350 D	SWITCH LOCK DETECTORS

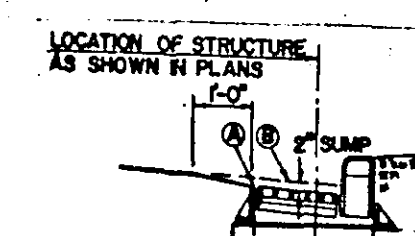
ENTRANCE DETAIL - CO. RD. C



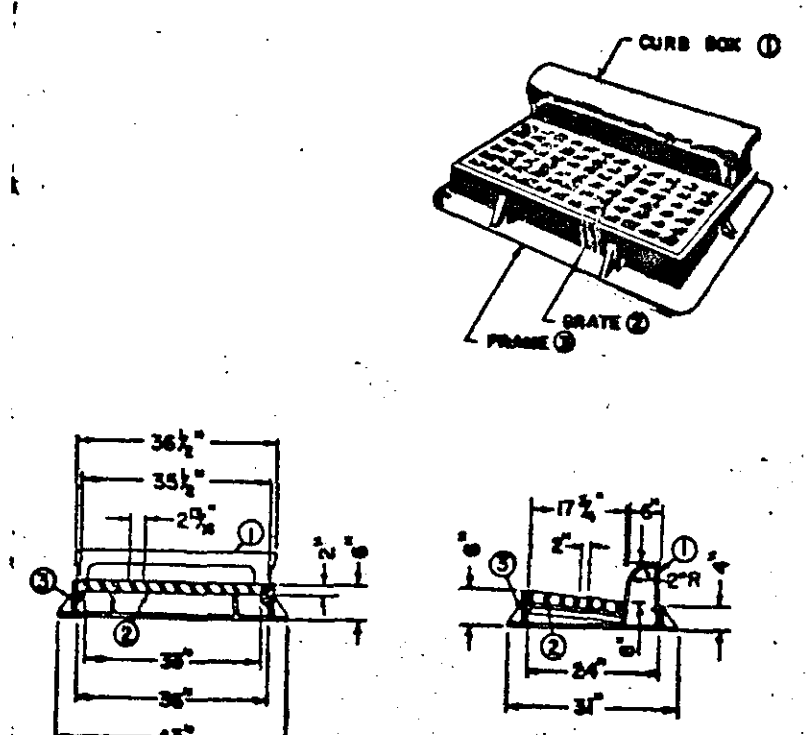
CO. RD. C

ADJUST CASTING ASSEMBLY DETAIL (FOR DESIGN SPECIAL 2 CATCH BASIN)

- NOTES
- MATERIALS: CAST GRAY IRON, CLASS 30, MN/DOT SPEC. REFERENCE 3321
 - CURB BOX HEIGHT SHALL BE ADJUSTABLE 6" TO 9"
 - SEE CATCH BASIN-DESIGN SPECIAL 2 DETAIL FOR CASTING INSTALLATION DETAIL
 - TOP OF CURB BOX TO CASTING DIMENSION SHALL BE 8" AS SHOWN
 - PROVIDE 2" SUMP AS SHOWN
 - USE EXISTING CASTING IF POSSIBLE



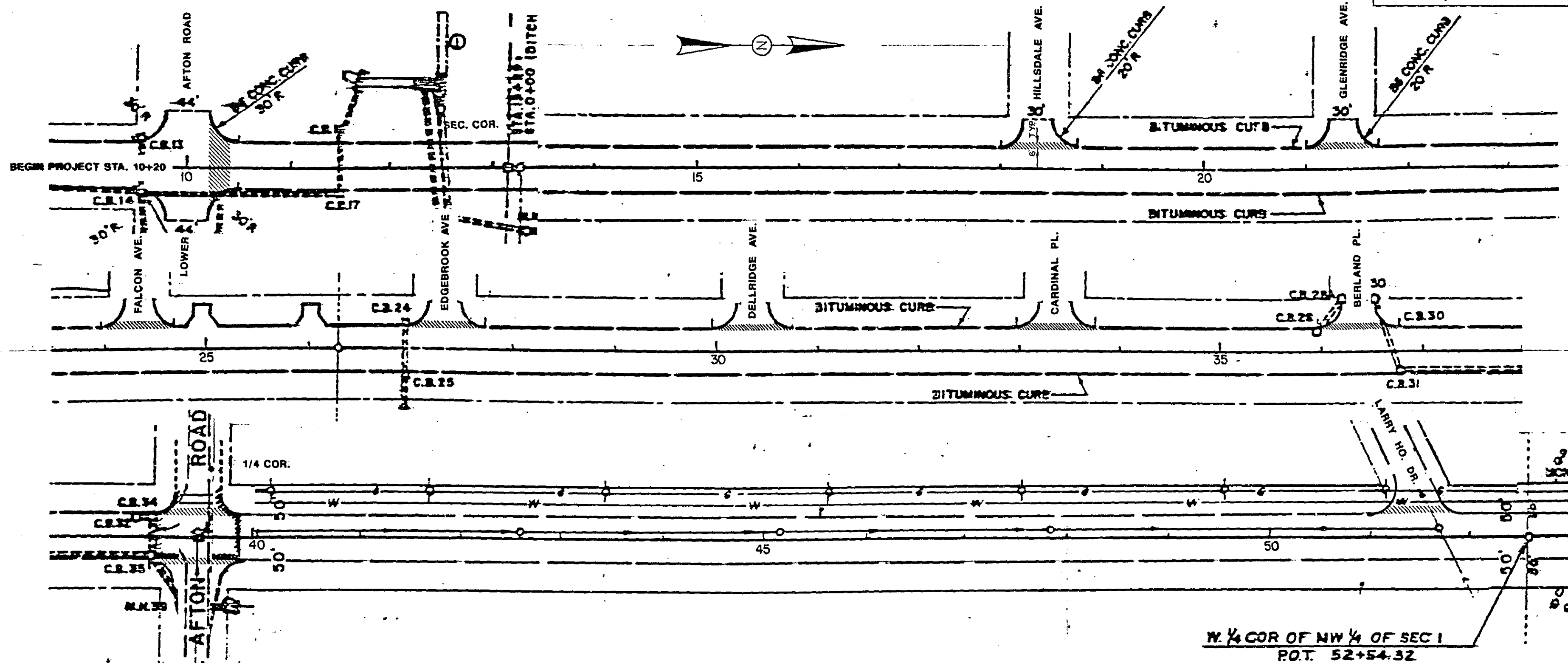
- ELEVATION OF STRUCTURE COMPUTED AT THIS LOCATION
- NORMAL GUTTER GRADE



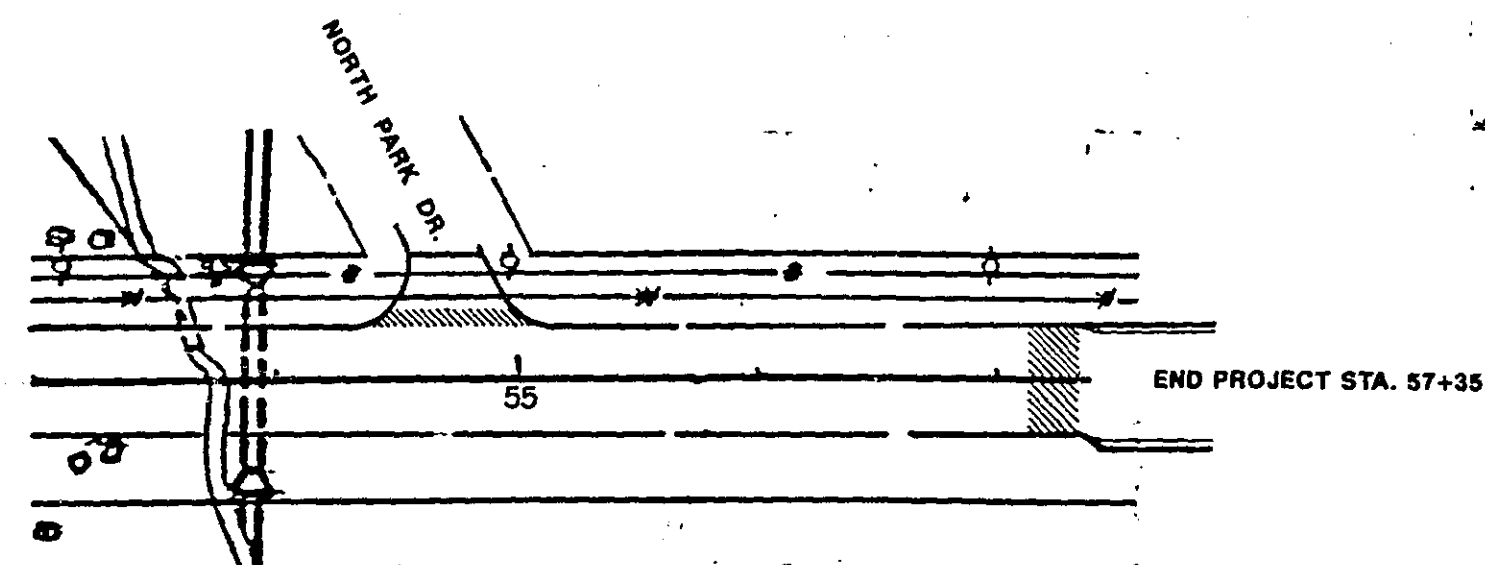
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B.M. ELEV. 916.66
TOP S.E. COR. LOWER STEP
HO. 2256

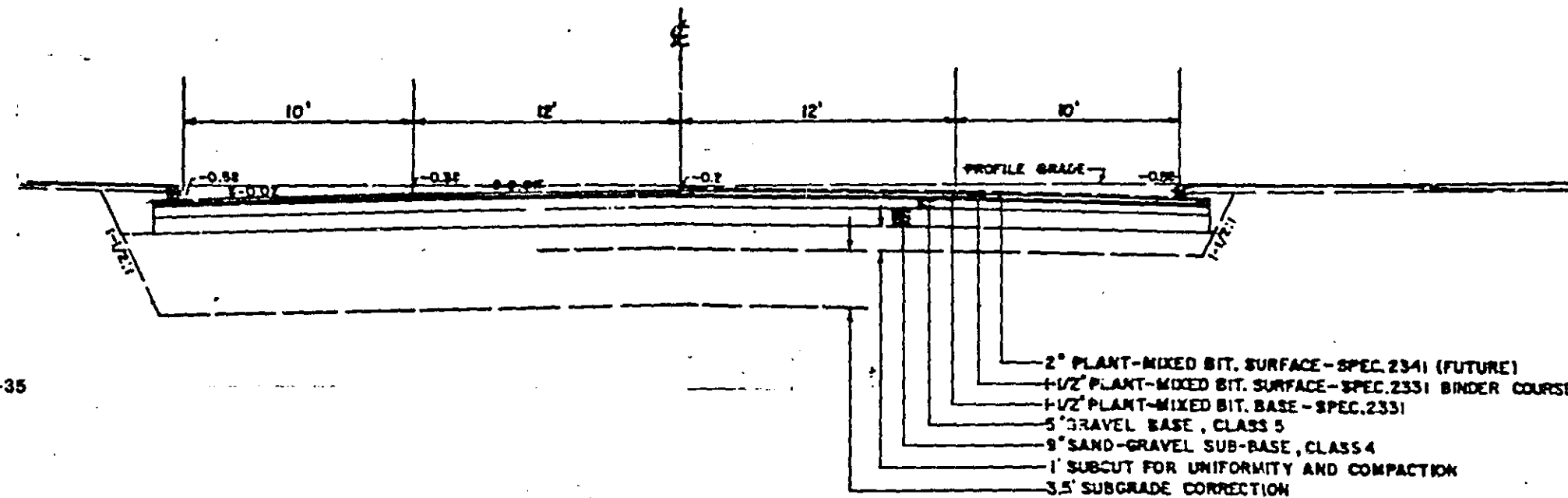


McKNIGHT ROAD CONSTRUCTION NOTES.

TYPE 3 MILLING SIDE STREET APPROACHES AS DIRECTED.

CONTRACT MILLING QUANTITIES BASED ON AVERAGE WIDTH OF 8'.

EXISTING TYPICAL SECTION



N. 1/4 COR OF NW 1/4 OF SEC 1
P.O.T. 52+54.32

MILLING LEGEND
TYPE ①
TYPE ③

- 2" PLANT-MIXED BIT. SURFACE-SPEC. 2341 (FUTURE)
- 1 1/2" PLANT-MIXED BIT. SURFACE-SPEC. 2331 BINDER COURSE
- 1 1/2" PLANT-MIXED BIT. BASE-SPEC. 2331
- 5" GRAVEL BASE, CLASS 5
- 9" SAND-GRAVEL SUB-BASE, CLASS 4
- 1" SUBCUT FOR UNIFORMITY AND COMPACTION
- 3.5' SUBGRADE CORRECTION

McKNIGHT ROAD PLAN