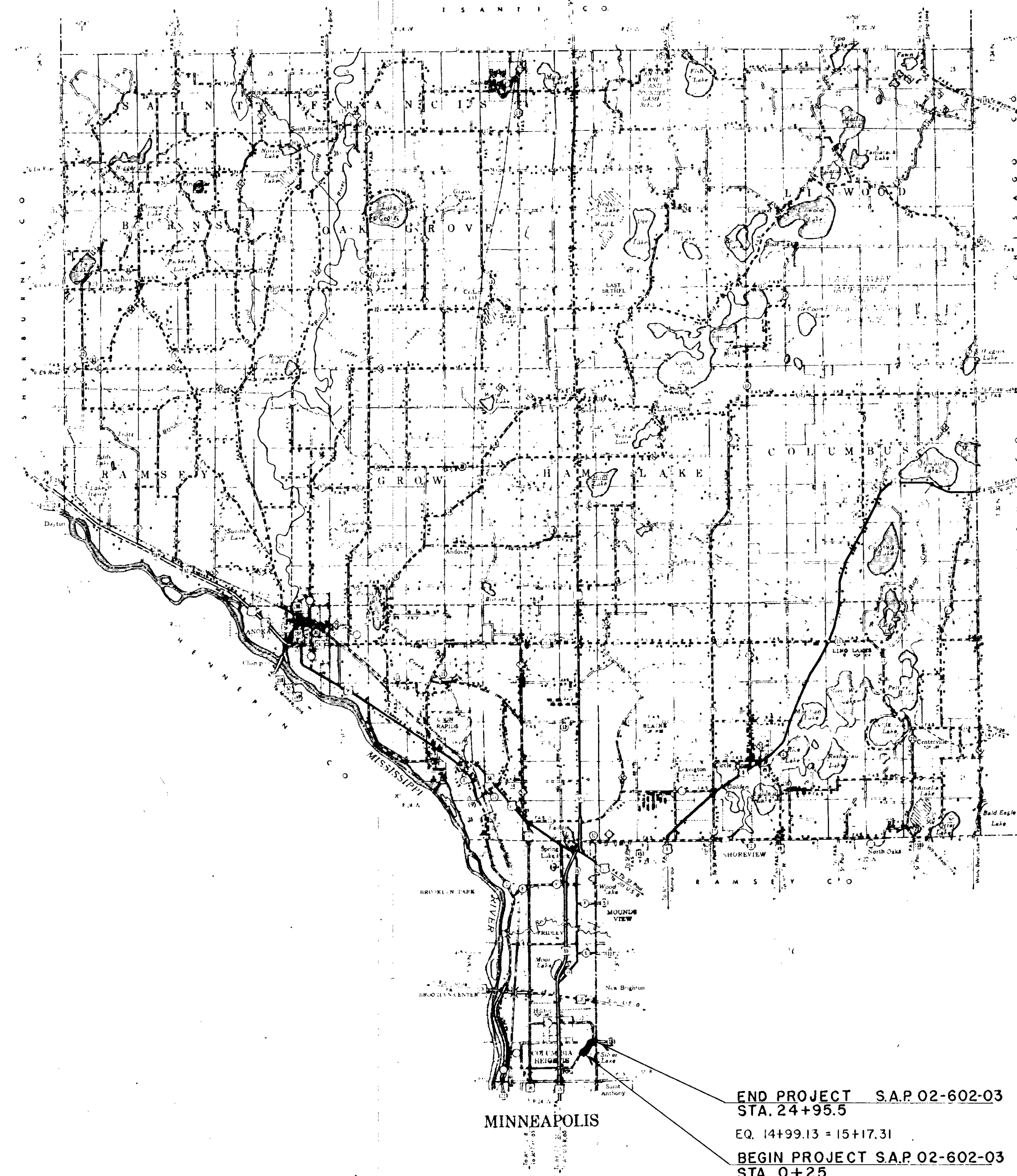


CONVENTIONAL SIGNS

NOTE: SECTION NUMBERS READ FROM THE SOUTH



END PROJECT S.A.P. 02-602-03  
STA. 24+95.5  
EQ. 14+99.13 = 15+17.31  
BEGIN PROJECT S.A.P. 02-602-03  
STA. 0+25

STATE OF MINNESOTA  
DEPARTMENT OF HIGHWAYS  
CONSTRUCTION PLAN FOR GRADING, BASE & BITUMINOUS SURFACE  
**County State Aid Highway No. 2**  
BETWEEN RESERVOIR BLVD. AND EAST COUNTY LINE  
A.P.T. APPROX 606° E. & 840° S. OF  
From N. 1/4 COR. SEC. 36 T. 30 N. R. 24 W. To N.E. COR. SEC. 36 T. 30 N. R. 24 W.

GROSS LENGTH	2471	FEET	0.47	MILES
BRIDGES LENGTH	0.0	FEET	0.0	MILES
EXCEPTIONS LENGTH	0.0	FEET	0.0	MILES
NET LENGTH	2471	FEET	0.47	MILES

Plan 1 inch = 200 Feet  
PROFILE Horiz 1 inch = 700 Feet Vert 1 inch = 70 Feet  
WORKING PLANS Horiz 1 inch = 100 Feet Vert 1 inch = 10 Feet  
Cross Section 1 inch = 10 FEET  
LAYOUT Scale 1 inch = Feet

MINN. PROJ.

INDEX OF SHEETS

Sheet No. 1	Title Sheet & Layout Map
No. 2	Est. Quantities & Typical Sec.
No. 3 To 4	Plan & Profile
No. 5 To 7	Cross Sections

DESIGN DATA

ADT (CURRENT YEAR)	2704
ADT (20-YEAR PROJECTION)	6219
SOIL TYPE (SUBGRADE)	CLASS A-6
STRUCTURAL DESIGN	9 TONS

DESIGN SPEED NOT RATED

ALL APPLICABLE FEDERAL, STATE AND LOCAL LAWS AND ORDINANCES WILL BE COMPLIED WITH IN THE CONSTRUCTION OF THIS PROJECT.

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A FULLY REGISTERED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

*Erling J. Lundheim* DATE April 24, 1965  
CL. 1965-101

ANOKA DISTRICT ENGINEER REG. NO. 2551

RECOMMENDED FOR APPROVAL *Edgar C. Pearson* 4-29 1965  
DISTRICT ENGINEER

RECOMMENDED FOR APPROVAL *J. F. Boyford* 5-7 1965

APPROVED 5-7 1965 *J.M. Evers* STATE AID ENGINEER

DEPARTMENT OF COMMERCE  
BUREAU OF PUBLIC ROADS

DISTRICT ENGINEER \_\_\_\_\_ DATE \_\_\_\_\_

MICRO-FILMED

Minn. Project No. \_\_\_\_\_ S.A.P. 02-602-03  
State Project No. \_\_\_\_\_

**ESTIMATED QUANTITIES**

SPECIFICATION NO.	ITEM	UNIT	MUNICIPAL	RURAL	TOTAL ESTIMATED QUANTITIES
2101.502	CLEARING	TREE			27
2101.507	GRUBBING	TREE			21
① 2104.502	REMOVE PAVEMENT	SQ. YD.			63
2104.503	REMOVE CURB & GUTTER	LIN. FT.			686
2104.506	REMOVE SIDEWALK	SQ. YD.			19
② 2104.507	REMOVE MASONRY STRUCTURE	CU. YD.			12
2104.510	REMOVE FENCE	LIN. FT.			163
597.621	RESET FENCE	LIN. FT.			148
2104.511	REMOVE MANHOLES & CATCH BASINS	STRUCTURE			3
2105.501	CLASS "A" EXCAVATION	CU. YD.			9799
2130.501	WATER	M-GAL.			160
2201.526	GRAVEL SUB-BASE INP.	TON			7833
2204.503	BITUMINOUS MATERIAL FOR MIXTURE	GAL.			26433
2204.507	BITUMINOUS MIXTURE (CLASS 5 AGGREGATE)	TON			2937
2331.502	BITUMINOUS MATERIAL FOR TACK COAT	GAL.			1244
2331.504	BITUMINOUS MATERIAL FOR MIXTURE	TON			84
2331.514	BASE COURSE MIXTURE	TON			2393
2341.502	BITUMINOUS MATERIAL FOR TACK COAT	GAL.			1244
2341.504	BITUMINOUS MATERIAL FOR MIXTURE	TON			118
2341.509	WEARING COURSE MIXTURE & FILLER	TON			1026
2341.510	BINDER COURSE MIXTURE	TON			1367
2503.512	F&I 10" RCP SEWER (CLASS 2)	LIN. FT.			12
2503.512	F&I 12" RCP SEWER (CLASS 2)	LIN. FT.			20
2503.512	F&I 15" RCP SEWER (CLASS 2)	LIN. FT.			12
2506.507	CONSTRUCT CATCH BASINS (C OR G)	LIN. FT.			9.2
2506.512	RECONSTRUCT CATCH BASINS	LIN. FT.			15.2
2506.516	F&I CASTING ASSEMBLIES	ASSEMBLY			1
2506.522	ADJ. FRAME & RING CASTINGS	ASSEMBLY			13
504.685	ADJ. WATER GATE HOUSING	ASSEM.			7
③ 2521.501	CONCRETE WALK (4" THICK)	SQ. FT.			100
④ 2531.507	CONCRETE DRIVEWAY PAVEMENT (6" THICK)	SQ. YD.			22
2531.501	CONCRETE CURB & GUTTER (DESIGN S-512)	LIN. FT.			4932
2576.501	SODDING	SQ. YD.			3023
⑤ 2421.514	DRY RUBBLE MASONRY	CU. YD.			15

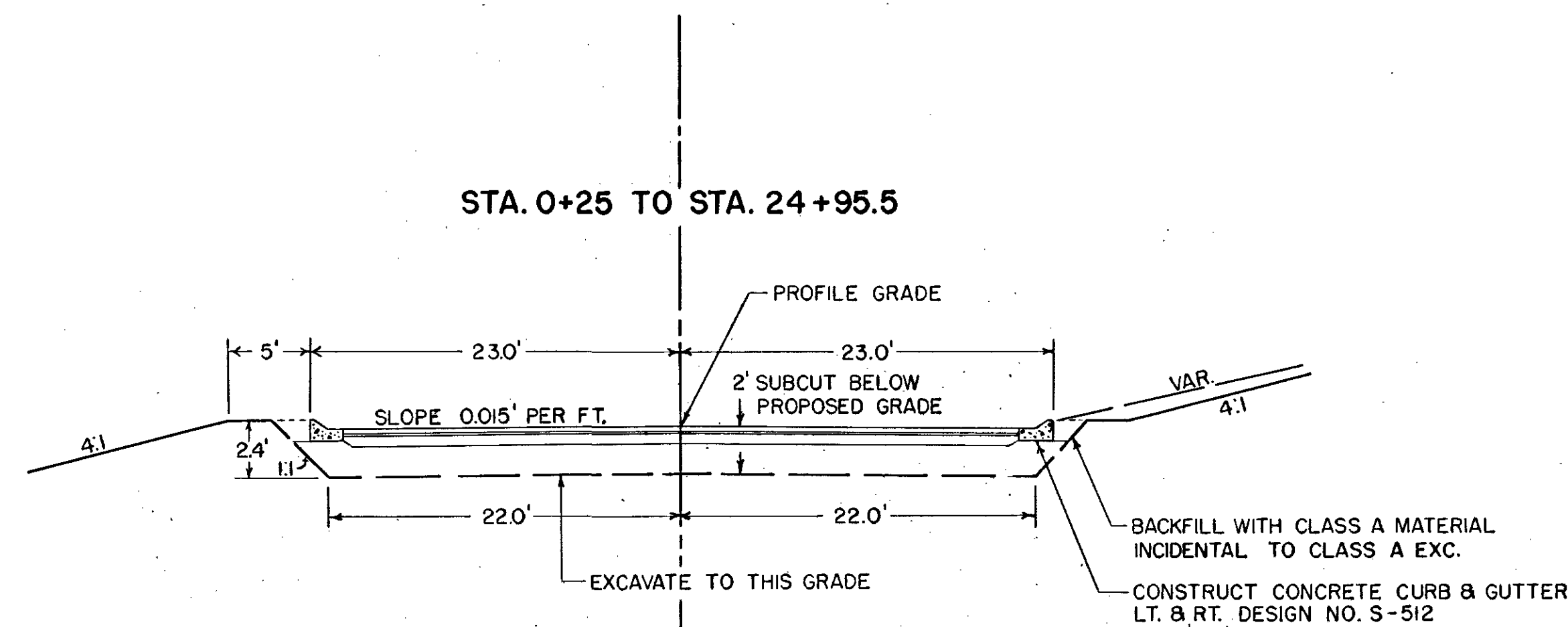
- ① FOR REMOVAL OF CONC. DRIVEWAYS THAT EXTEND BEYOND THE PROPOSED CURB
- ② FOR REMOVAL OF RETAINING WALLS THAT EXTEND BEYOND THE PROPOSED CURB
- ③ TO REPLACE CONCRETE SIDEWALKS
- ④ TO REPLACE CONCRETE DRIVEWAYS
- ⑤ FOR CONSTRUCTION OF STONE MASONRY RETAINING WALL

**STANDARD DETAIL PLATES**

THE FOLLOWING STANDARD DETAIL PLATES, APPROVED BY THE BUREAU OF PUBLIC ROADS, SHALL APPLY ON THIS PROJECT.

PLATE NO.	DESCRIPTION
7102 B	CONCRETE CURB & GUTTER DISIGN S-512
7110 D	CURB & GUTTER CONSTRUCTION AT CATCH BASIN
7200 B	CONCRETE WALK
8000 A, 8001	
8003 & 8008 A	SIGNS & BARRICADES

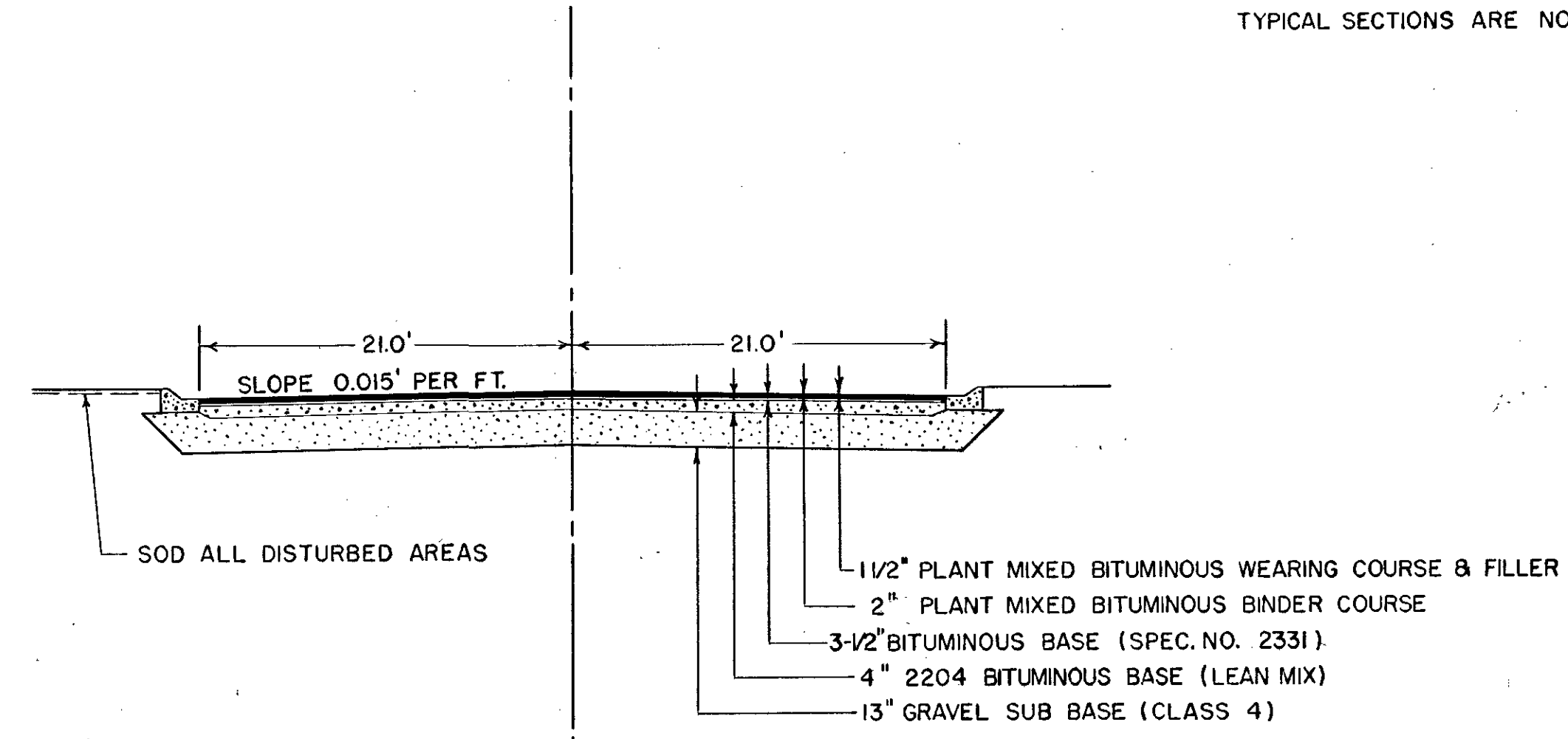
**TYPICAL GRADING SECTIONS**



**SPECIAL DETAILS**

BITUMINOUS MATERIAL INPLACE (PRESENT DRIVING SURFACE) INCLUDED IN QUANTITY OF CLASS 'A' EXCAVATION SHALL BE SALVAGED AND PLACED IN WITH SUB-BASE MATERIAL. THIS WILL BE CONSIDERED INCIDENTAL TO CLASS 'A' EXCAVATION EXCESS CLASS 'A' EXCAVATION, APPROXIMATELY 8800 CU. YD. SHALL BE DESPOSED OF AT SITE SELECTED BY CITY OF COL. HGTS., LOCATED 1/4 MILE SOUTH OF STA. 24+95 USING STINSON BLVD. AS A HAUL ROAD.

**TYPICAL BASE & SURFACE SECTIONS**



NOTE: ALL DIMENSIONS & SLOPES SHOWN ON TYPICAL SECTIONS ARE NOMINAL

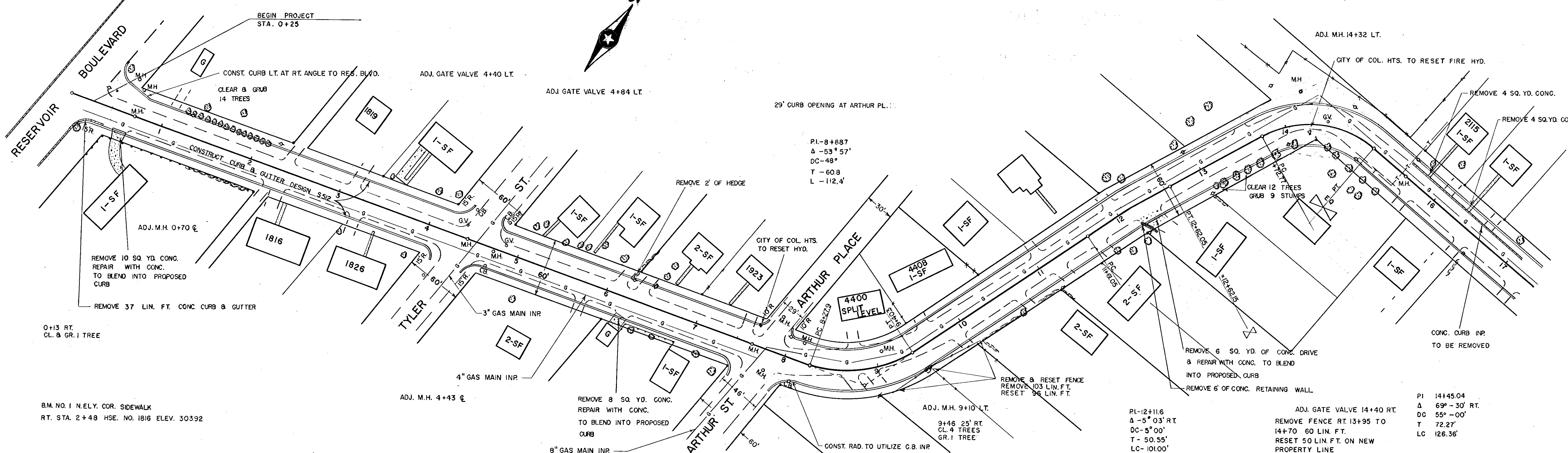
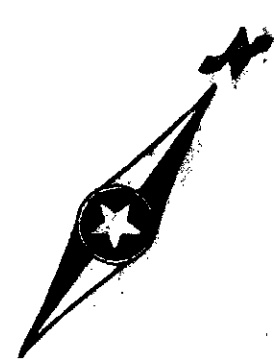
**BASIS OF PLANNED QUANTITIES**

- WATER 20 GAL. PER TON OF AGGREGATE
- GRAVEL SUB BASE 135 LB. PER CU. FT. DRY DENSITY 3% MOISTURE IN PIT
- GRAVEL BASE 140 LB. PER CU. FT. DRY DENSITY 3% MOISTURE IN PIT
- BIT. MATL. FOR MIX (2204) 0.45 GAL. PER 100 LB. OF AGGREGATE
- BIT. MATL. FOR TACK COAT 0.05 GAL. PER SQ. YD.
- BIT. MATL. FOR MIX 2341 BINDER COURSE 4.5% OF MIXTURE BY WT.
- BIT. MATL. FOR MIX 2341 WEARING COURSE 5.5% OF MIXTURE BY WT.
- BIT. MIXTURE FOR 2341 BINDER COURSE 220 LB. PER SQ. YD.
- BIT. MIXTURE FOR 2341 WEARING COURSE 165 LB. PER SQ. YD.
- BIT. MIXTURE FOR 2331 BASE COURSE 385 LB. PER SQ. YD.
- BIT. MATL. FOR MIX 2331 BASE COURSE 3.5% OF MIXTURE BY WT.

Minn. Project No. \_\_\_\_\_ S.A.P. **02-602-03**  
State Project No. \_\_\_\_\_

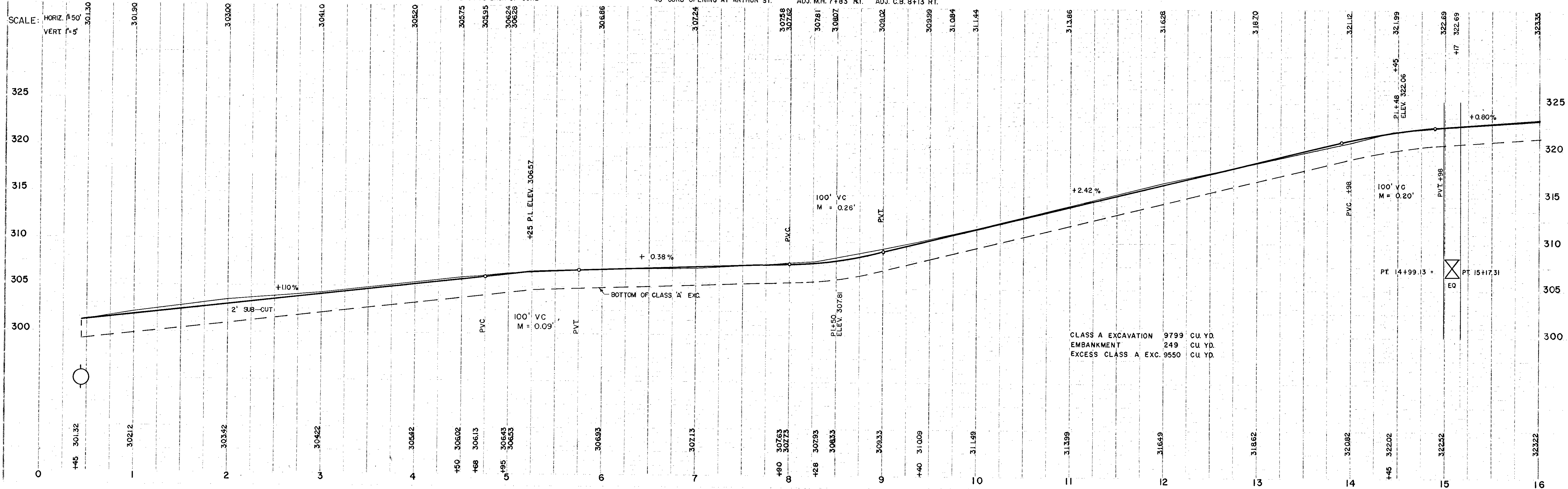
B.M. NO. 2 TOP PROP. MARKER  
RT. 8+95 ELEV. 309.44

CONSTRUCT RETAINING WALL  
28' RT. STA. 13+00 TO 14+50

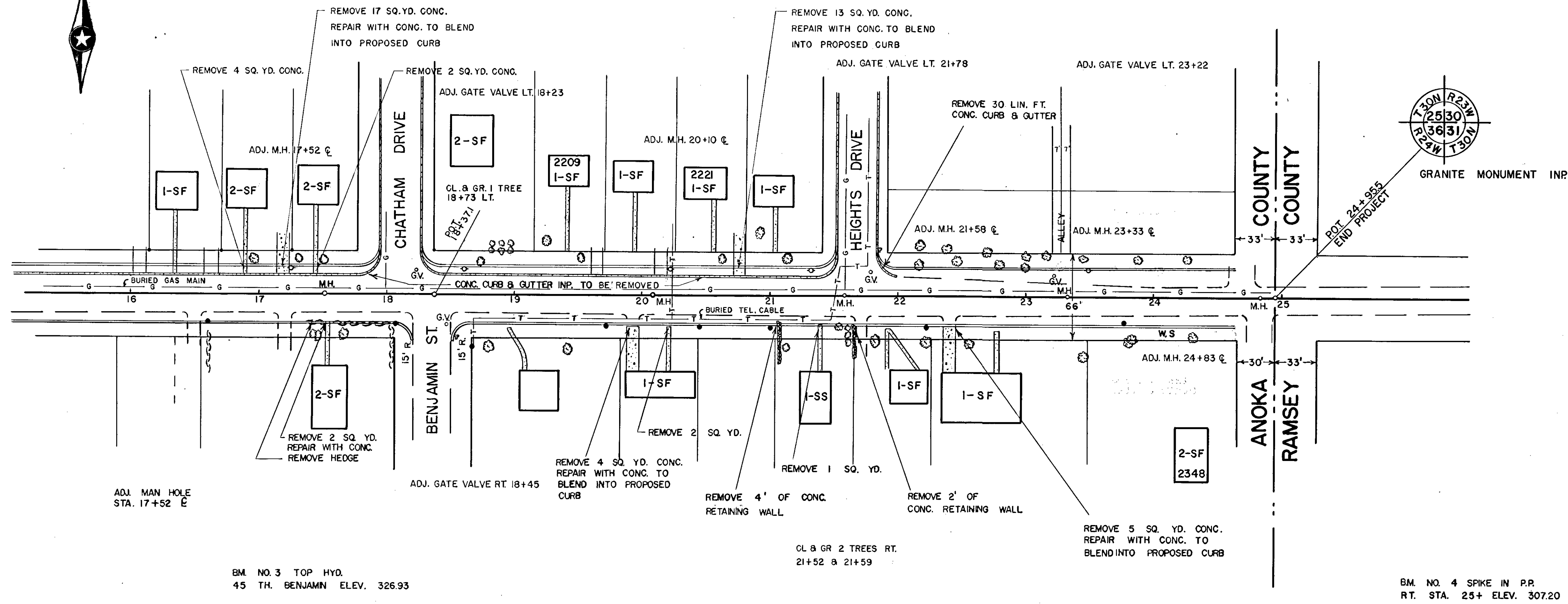


NOTE: STAKE TOP OF CURB THE SAME ELEV AS  $\text{E}$

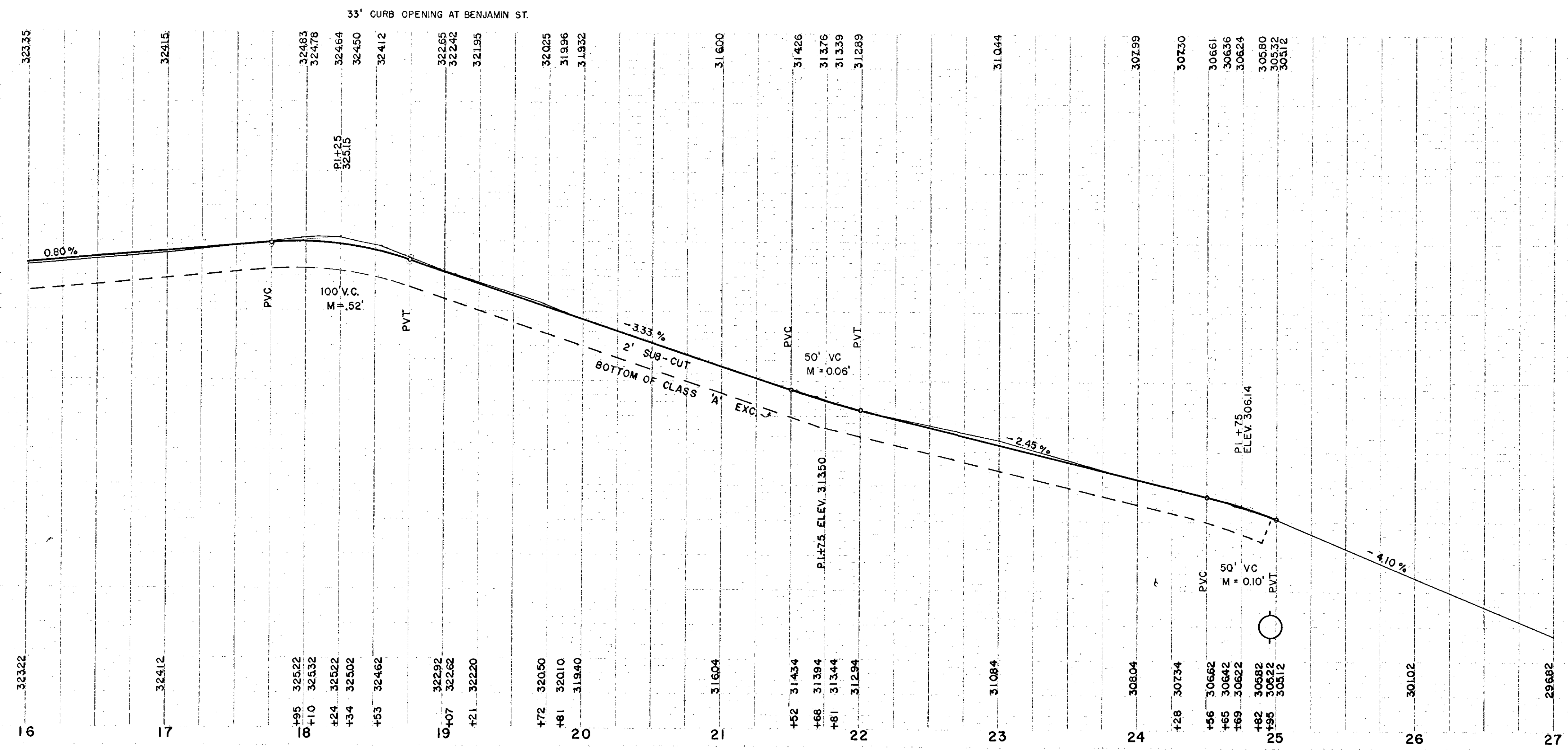
NOTE: ALL CURB OPENINGS GIVEN ARE FROM BACK TO BACK OF CURB



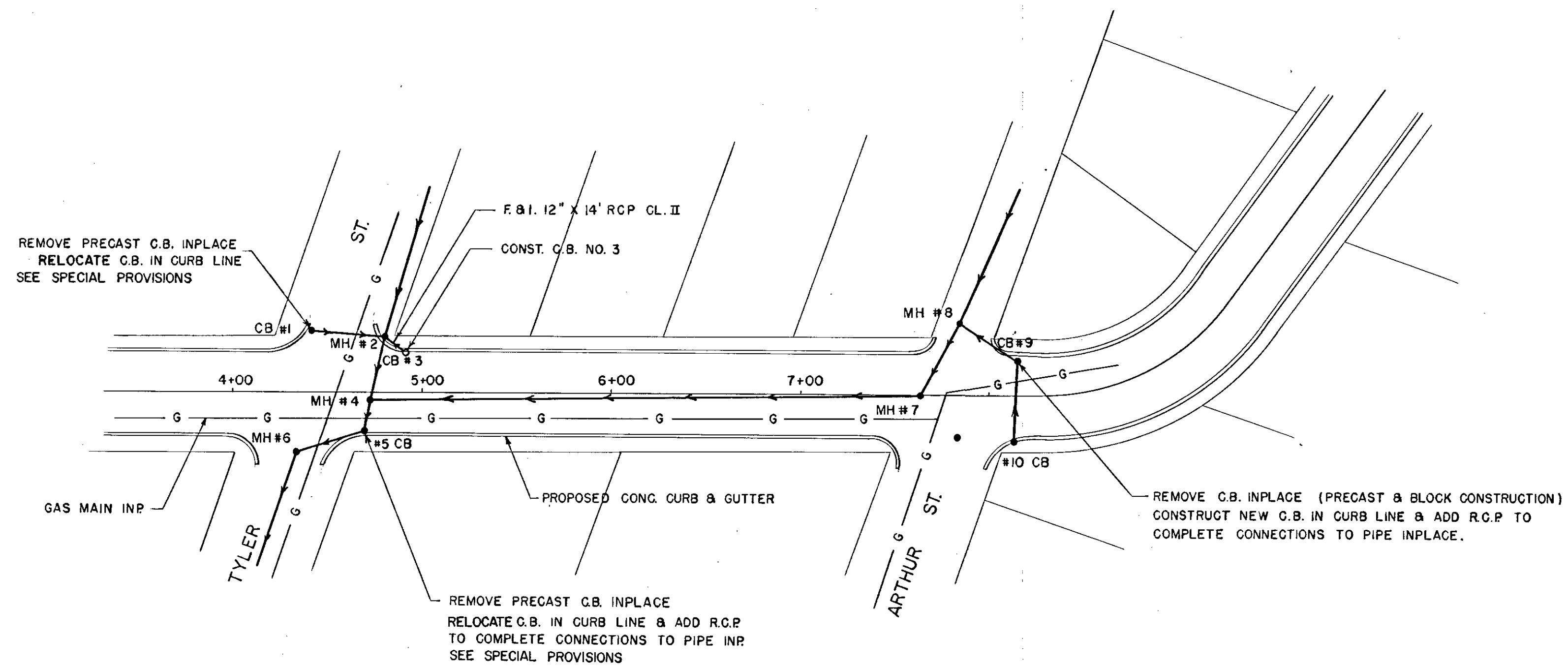
CLASS A EXCAVATION 9799 CU. YD.  
EMBANKMENT 249 CU. YD.  
EXCESS CLASS A EXC. 9550 CU. YD.



SCALE: HORIZ. 1" = 50'  
VERT. 1" = 5'



STORM SEWER SYSTEM



- STRUCTURE INPLACE
- NEW STRUCTURE

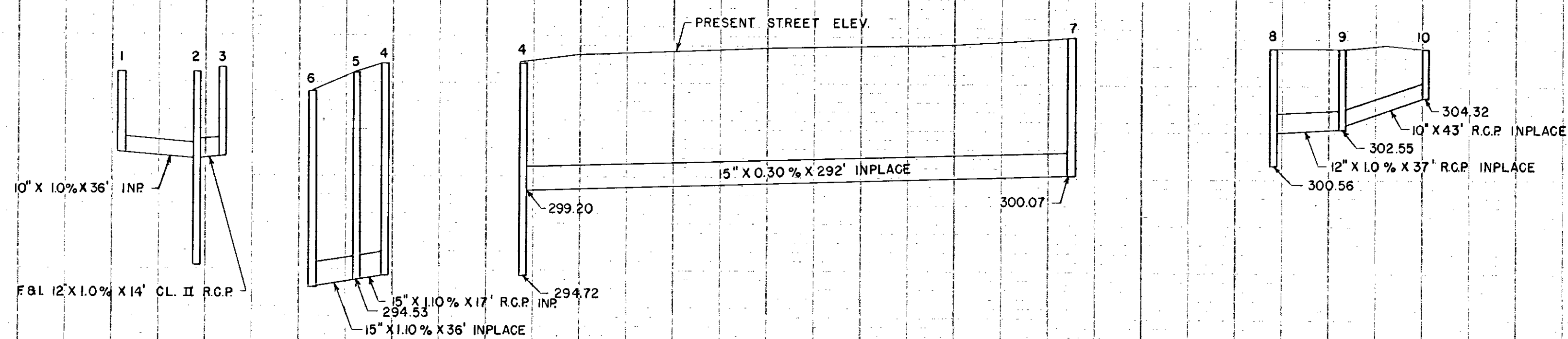
CASTINGS

	GRATE	FRAME	CURB BOX
A	810	801	822

STORM SEWER SYSTEM

NO.	STATION	LOCATION	REMOVE	TYPE	DESIGN	LIN. FT.	TOP CASTING	OUTLET	F&I CAST ASSEMBLY	F&I RCP SEWER
1	4+42	33' LT.	1 C.B.	CB	RELOCATE	4.3	305.70	301.40		10" X 6' RCP CL. II
2	4+80	30' LT.		MH			ADJ. FRAME & RING CASTING			
3	4+91	21.5' LT.		CB	C OR G	4.6	305.64	301.00	A	12" X 14' RCP CL. II
4	4+73	4' RT.		MH			ADJ. FRAME & RING CASTING			
5	4+70	20' RT.	1 C.B.	CB	RELOCATE	10.9'	305.42	294.53		15" X 12' RCP CL. II
6	4+34	30' RT.		MH			ADJ. FRAME & RING CASTING			
7	7+63	¢		MH			ADJ. FRAME & RING CASTING			
8	7+84	38' LT.		MH			ADJ. FRAME & RING CASTING			
9	8+15	19' LT.	1 C.B.	CB	C OR G	4.6'	307.13	302.55		10" X 6' RCP CL. II 12" X 6' RCP CL. II
10	8+13	24' RT.		CB			ADJ. FRAME & RING CASTING			

310.0  
305.0  
300.0  
295.0



310.0  
305.0  
300.0  
295.0