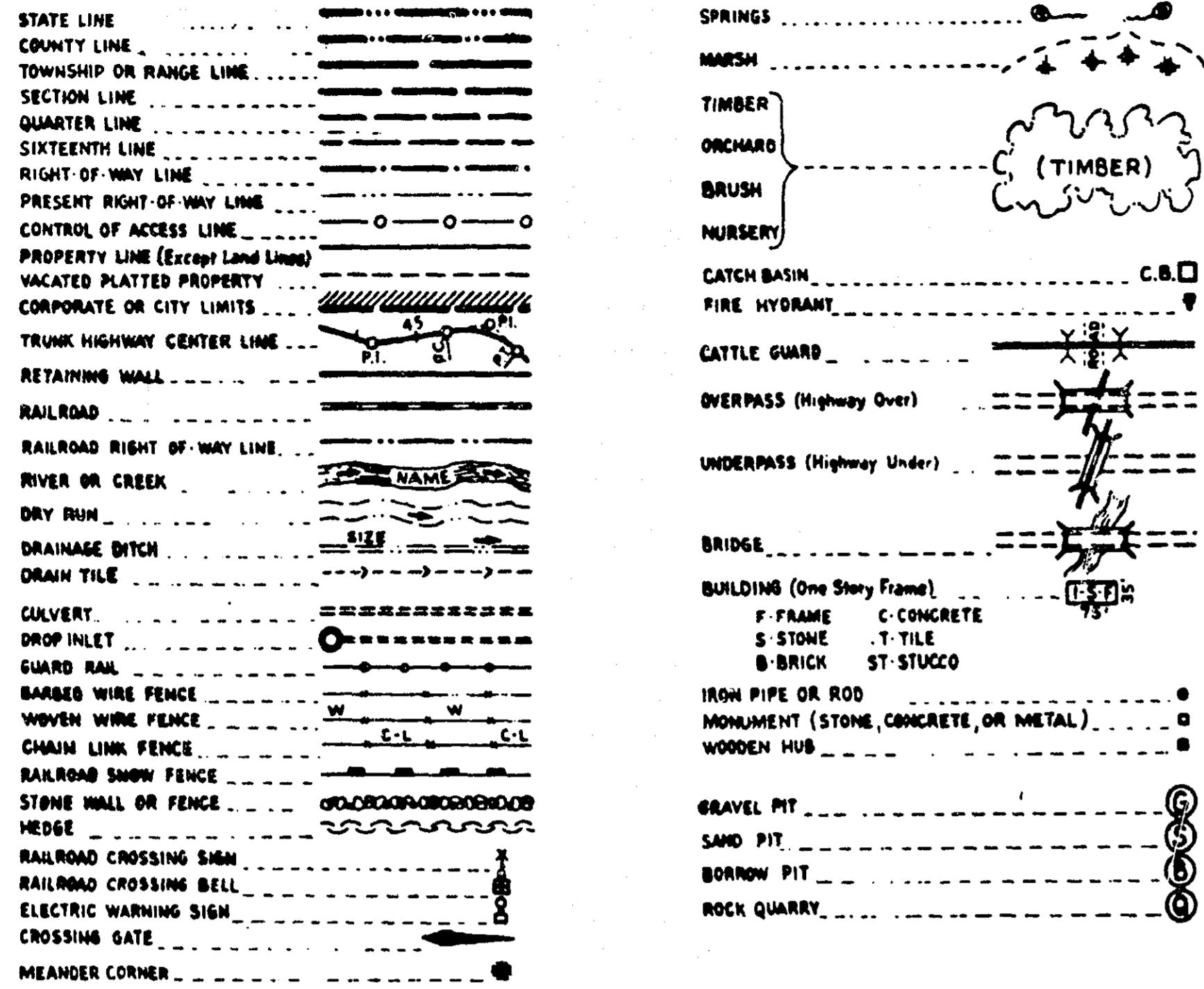
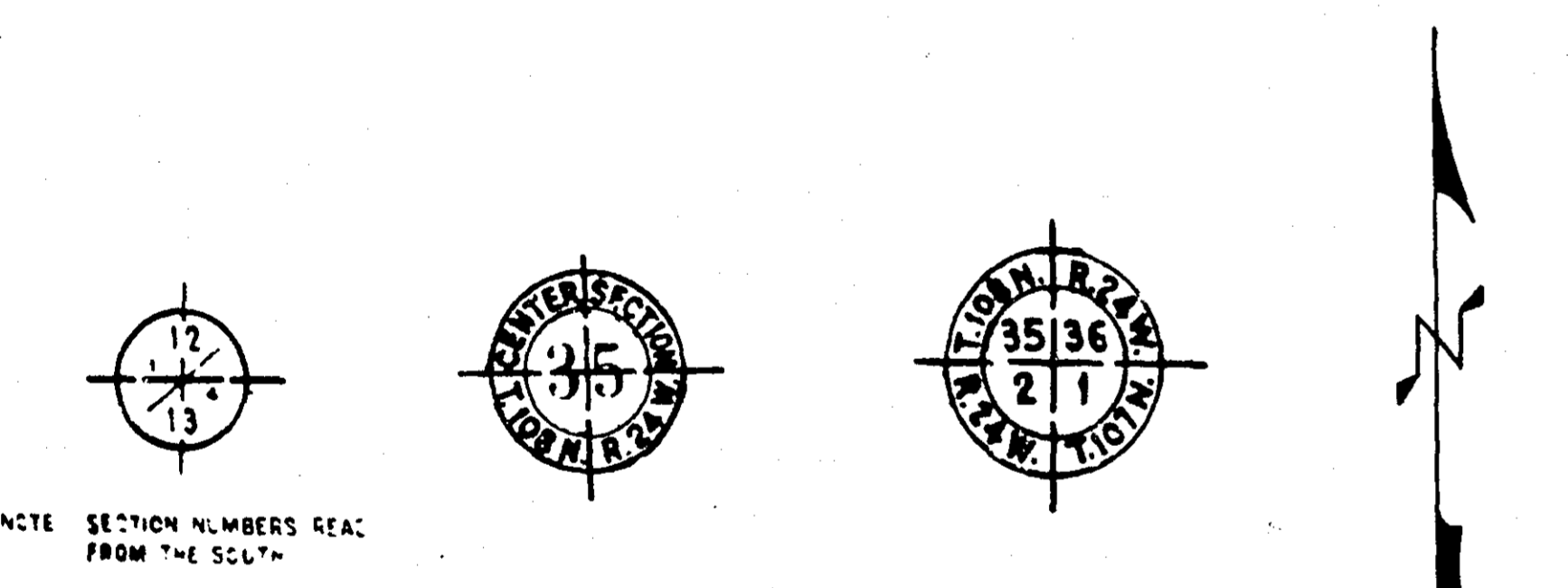
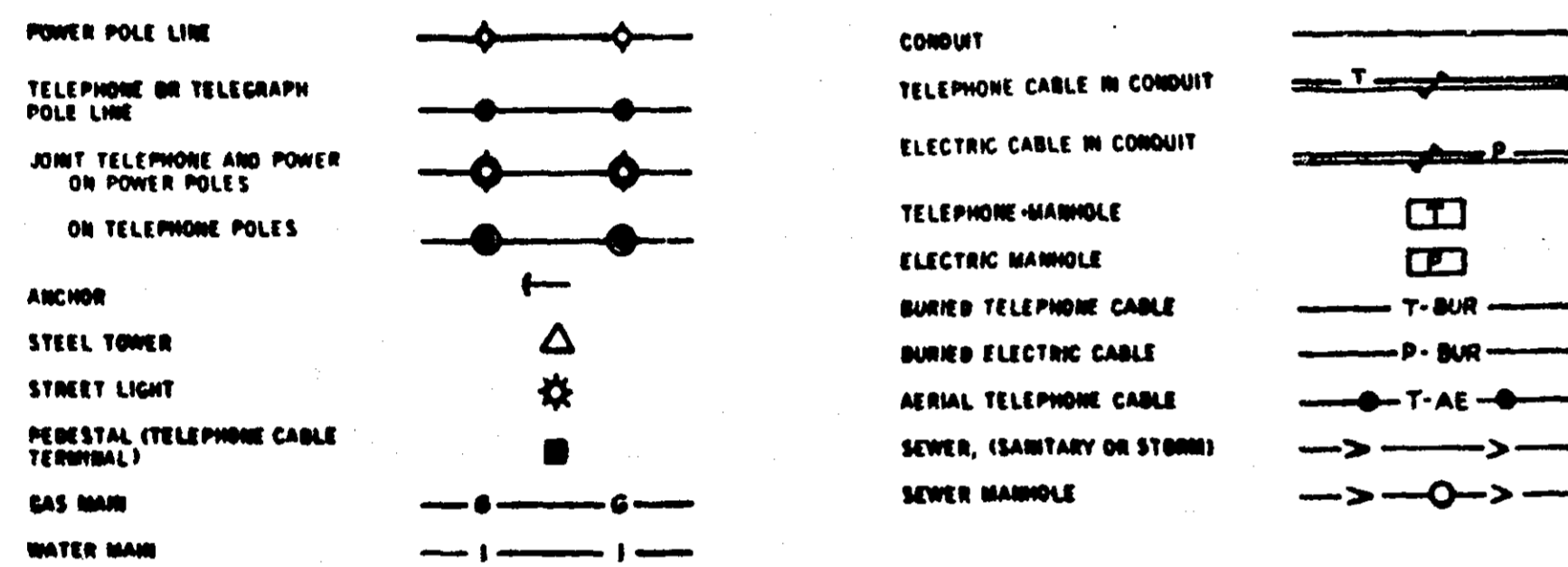


PLANS SYMBOLS



UTILITIES SYMBOLS



PIT DATA

PIT NO. _____ Located in _____
 Dead Haul _____

PIT NO. _____ Located in _____
 Dead Haul _____

SPECIFICATIONS

THE "STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION" DATED JANUARY 1, 1968 SHALL GOVERN.

**OFFICE OF COUNTY ENGINEER
 RAMSEY COUNTY**

FOR RECONSTRUCTION & TURNING LANES
WHITE BEAR AVENUE S.A.P. 62-665-09

BETWEEN: LARPEN TEUR AVE. & NO. ST. PAUL ROAD
 GROSS LENGTH 335 FEET 0.06 MILES
 NET LENGTH 335 FEET 0.06 MILES

WHITE BEAR AVENUE S.A.P. 64-020-09

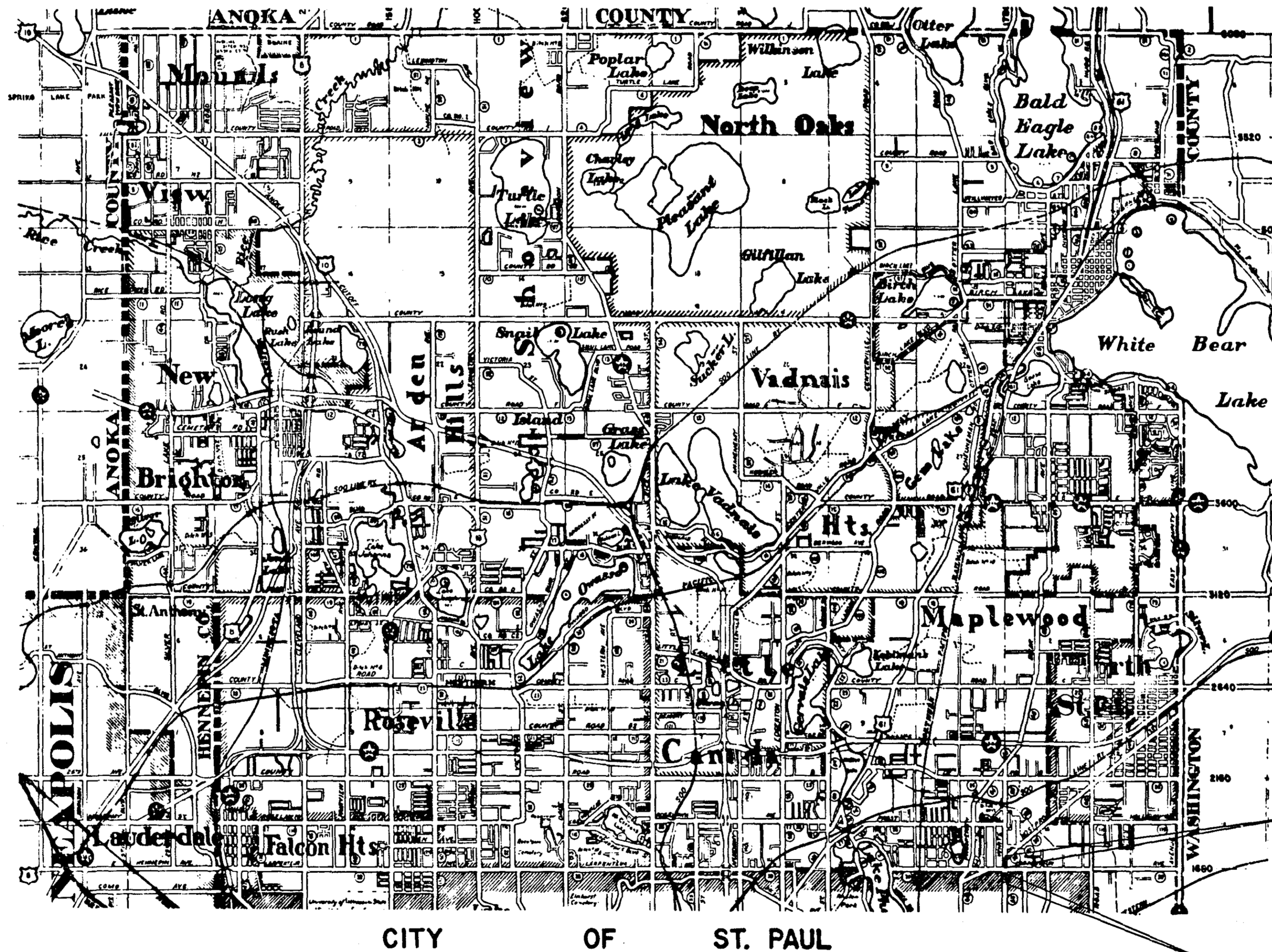
BETWEEN: IDAHO AVE. & LARPEN TEUR AVE.
 GROSS LENGTH 707 FEET 0.13 MILES
 NET LENGTH 707 FEET 0.13 MILES

SCALES: PLAN, 1 Inch = 50 Feet
 PROFILE, Horiz. 1 Inch = 50 Feet Vert. 1 Inch = 5 Feet
 CROSS-SECTIONS, 1 Inch = 10 Feet
 LAYOUT, 1 Inch = 5280 Feet

DESIGN DESIGNATION

A.D.T. 1969 = 16,260
 A.D.T. 196 =
 DHV =
 D(DIRECTIONAL DISTRIBUTION) =
 T(HEAVY COMMERCIAL) 1985 =
 DESIGN SPEED = 30-M.P.H.
 DESIGN LOAD = 9 TON
 SOIL FACTOR = 100 %

DESCRIPTION	SHEET INDEX	
	S.A.P. 62-665-09 SHEET NO.	S.A.P. 64-020-09 SHEET NO.
TITLE SHEET	1	1
ESTIMATED QUANTITIES & TYPICAL SECTIONS	2	2
DRAINAGE CHART		3
PLAN SHEETS	5	4
CROSS SECTIONS	6-7-8	9



S.A.P. No. 62-665-09

S.A.P. No. 64-020-09

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.
Monte Acker REG. NO. 2042 DATE 6-18-69
 ENGINEER

RECOMMENDED FOR APPROVAL Dean K. Grubb DATE 6-20-69
 COUNTY ENGINEER

APPROVED Thomas R. Byrne DATE 6-23-69
 CHAIRMAN OF THE RAMSEY COUNTY BOARD

APPROVED Thomas R. Byrne DATE 6-23-69
 MAYOR

APPROVED _____ DATE _____
 MINNESOTA STATE HIGHWAY DEPARTMENT

RECOMMENDED FOR APPROVAL C.E. Wickelbauer DATE 6-24-69

RECOMMENDED FOR APPROVAL C.E. Wickelbauer DATE 6-23-69
 ACTING DISTRICT STATE AID ENGINEER

APPROVAL Walter M. Fay DATE 6/24/69
 STATE AID ENGINEER

CITY OF ST. PAUL
 APPROVED John J. ... DATE 6/23/69
 CHIEF ENGINEER, CITY OF ST. PAUL

APPROVED C. J. ... DATE 6/24/69
 DESIGN ENGINEER, CITY OF ST. PAUL

RECOMMENDED FOR APPROVAL W.L. ... DATE 6-25-69
 DIRECTOR OF SAFETY

RECOMMENDED FOR APPROVAL Hawthorn DATE 6/25/69
 MAINTENANCE ENGINEER

RECOMMENDED FOR APPROVAL _____ DATE _____
 CONSTRUCTION ENGINEER

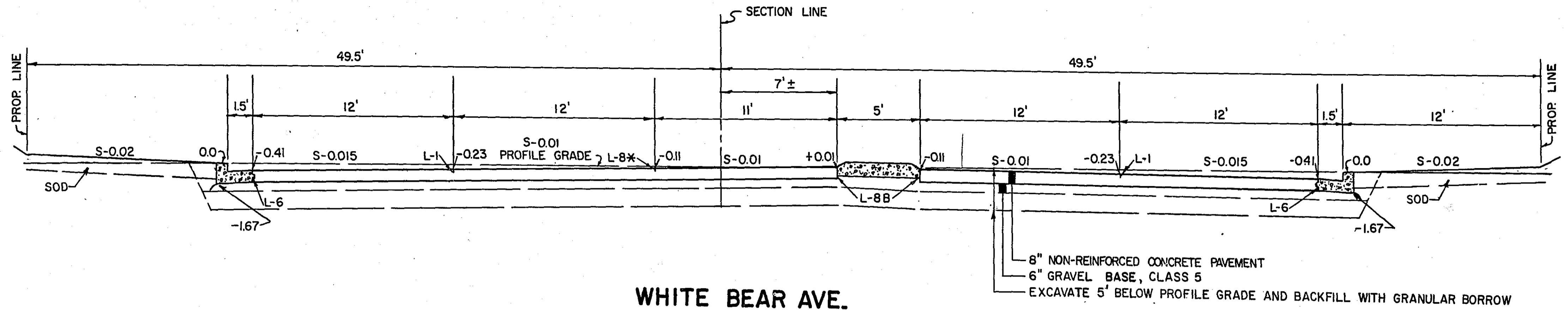
RECOMMENDED FOR APPROVAL _____ DATE _____
 MAINTENANCE ENGINEER

RECOMMENDED FOR APPROVAL _____ DATE _____
 CONSTRUCTION ENGINEER

APPROVED _____ DATE _____
 COUNTY ENGINEER

STANDARD DETAIL PLATES

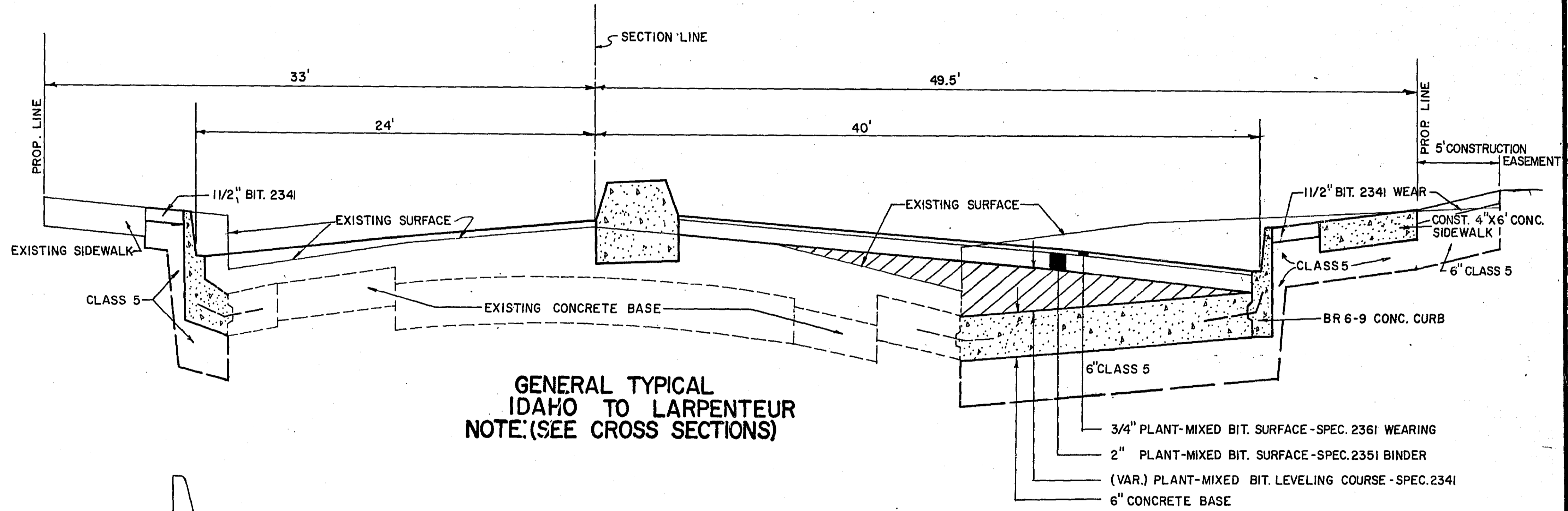
0001 A	SPECIFICATION REFERENCE TO STANDARD PLATES
1016 B	CONCRETE PAVEMENTS NON-REINFORCED
1120 J	CONTRACTION JOINTS
1140 I	LONGITUDINAL JOINTS
1141 B	PAVEMENT KEYWAY FOR KEYED JOINT CONSTRUCTION
3000 F	REINFORCED CONCRETE PIPE
3014 D	REINFORCED CONCRETE PIPE-ARCH
4000 G	MANHOLE OR CATCH BASIN
4005 H	MANHOLE OR CATCH BASIN
4016 C	CURB OPENING CATCH BASIN
4101 B	RING CASTING FOR MANHOLE OR CATCH BASIN
4110 D	COVER CASTING FOR MANHOLE
4180 F	MANHOLE STEP CASTING
7020 D	CONCRETE CURBS
7100 D	CONCRETE CURB AND GUTTERS
7102 C	CONCRETE CURB AND GUTTERS
8000 C	STANDARD BARRICADES
8008 C	CONTRACTORS' SIGN



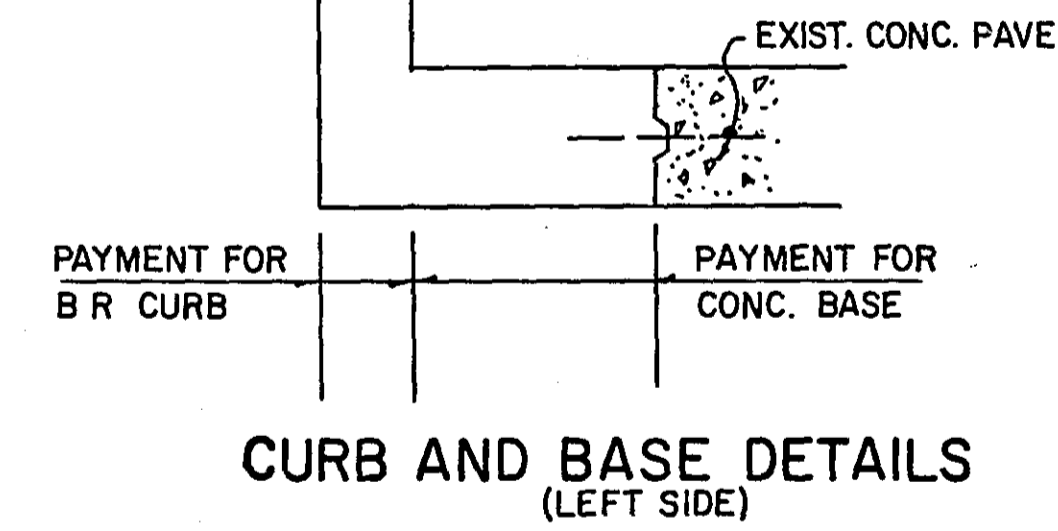
WHITE BEAR AVE.
 LARPEUTEUR TO NO. ST. PAUL
 STA. 0+60 TO STA. 2+60 RT. (SO FAR AS IT APPLIES)
 STA. 0+60 TO STA. 1+20 LT.

STATEMENT OF ESTIMATED QUANTITIES

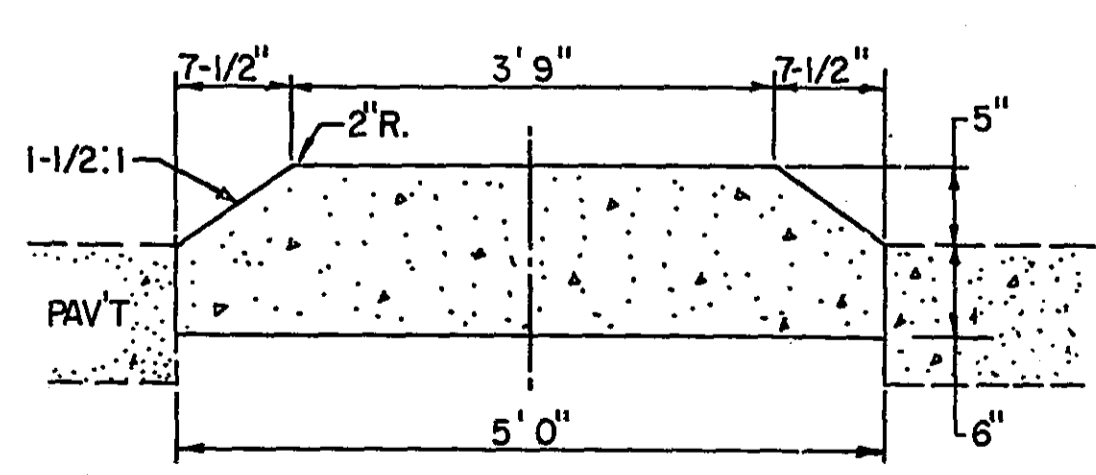
ITEM NO.	ITEM	UNIT	RAMSEY CO.	CITY OF ST. PAUL	TOTAL
2104.503	FIELD LABORATORY, TYPE C.	LUMP SUM	1		1
2104.502	REMOVE PAVEMENT	S.Y.	707	598	1,305
2104.503	REMOVE CURB AND GUTTER	L.F.	420		420
2104.504	REMOVE CURB	L.F.	109	1,051	1,160
2104.506	REMOVE SIDEWALK	S.F.		5,077	5,077
2104.511	REMOVE MANHOLES AND CATCH BASINS	STRUCTURE		5	5
2104.509	REMOVE GUARD RAIL	L.F.		171	171
2104.516	REMOVE PAVEMENT FOR TRENCH	S.Y.		49	49
2104.518	REMOVE BITUMINOUS PAVEMENT SURFACING	S.Y.		1,332	1,332
2105.501	COMMON EXCAVATION	C.Y.		1,187	1,187
2105.507	SUBGRADE EXCAVATION	C.Y.	1,956	275	2,231
2105.521	GRANULAR BORROW	C.Y.	1,777		1,777
2105.523	COMMON BORROW	C.Y.		358	358
2201.501	CONCRETE BASE	S.Y.		1,716	1,716
2201.511	STRUCTURAL CONCRETE	C.Y.		286	286
2201.521	BASE REINFORCEMENT	S.Y.		74	74
2201.529	REINFORCEMENT BARS	POUND		575	575
2201.531	STANDARD JOINTS, DESIGN C1D	L.F.		700	700
2201.531	STANDARD JOINTS, DESIGN L7B	L.F.		743	743
2211.501	AGGREGATE BASE, CLASS 5	TON	397	767	1,164
2301.502	CONCRETE PAVEMENT, STANDARD WIDTH	S.Y.	587		587
2301.503	CONCRETE PAVEMENT, IRREGULAR WIDTH	S.Y.	395		395
2301.511	STRUCTURAL CONCRETE	C.Y.	219		219
2301.529	REINFORCEMENT BARS	POUND	550		550
2301.531	STANDARD JOINTS, DESIGN L1	L.F.	300		300
2301.531	STANDARD JOINTS, DESIGN L8	L.F.	340		340
2301.531	STANDARD JOINTS, DESIGN L6	L.F.	293		293
2301.531	STANDARD JOINTS, DESIGN C	L.F.	390		390
2341.504	BITUMINOUS MATERIAL FOR MIXTURE	TON		47	47
2341.508	WEARING COURSE MIXTURE	TON		67	67
2341.512	LEVELING COURSE MIXTURE	TON		944	944
2351.504	ASPHALT CEMENT	TON		19.8	19.8
2351.510	ASPHALTIC CONCRETE BINDER COURSE	TON		396	396
2357.502	BITUMINOUS MATERIAL FOR TACK COAT	GALLON		630	630
2358.501	BITUMINOUS MATERIAL FOR PRIME COAT	GALLON		200	200
2361.504	ASPHALT CEMENT	TON		13.2	13.2
2361.508	WEARING COURSE	TON		165	165
2501.524	28" SPAN CONCRETE PIPE-ARCH CULVERT, CL. II	L.F.		136	136
2503.502	12" REINFORCED CONCRETE SEWER, CL. II	L.F.		80	80
2503.502	33" REINFORCED CONCRETE SEWER, CL. II	L.F.		80	80
2503.502	36" REINFORCED CONCRETE SEWER, CL. II	L.F.		12	12
2503.502	42" REINFORCED CONCRETE SEWER, CL. II	L.F.		247	247
2506.506	CONSTRUCT MANHOLES, DESIGN A OR F	L.F.		18.6	18.6
2506.507	CONSTRUCT CATCH BASINS, DESIGN LP4-H	L.F.		14.5	14.5
2506.507	CONSTRUCT CATCH BASINS, DESIGN LP6-H	L.F.		160	160
2506.516	CASTING ASSEMBLIES	ASSEMBLY		2	3
2506.522	ADJUST FRAME AND RING CASTING	ASSEMBLY		1	3
2521.501	4" CONCRETE WALK	S.F.		4,654	4,654
2531.501	CONCRETE CURB AND GUTTER, DESIGN B624	L.F.		48	48
2531.501	CONCRETE CURB AND GUTTER, DESIGN B618	L.F.		260	260
2531.501	CONCRETE CURB AND GUTTER, DESIGN B660	L.F.		255	255
2531.502	CONCRETE CURB, DESIGN S-6	L.F.		80	80
2531.502	CONCRETE CURB, DESIGN BR6-9	L.F.		1,347	1,347
2531.503	CONCRETE MEDIAN	L.F.		154	477
2531.503	CONCRETE MEDIAN, TYPE A	L.F.		160	160
2531.507	8" CONCRETE DRIVEWAY PAVEMENT	S.Y.		80	80
2531.507	7" CONCRETE DRIVEWAY PAVEMENT (TYPE 3)	S.Y.		98	98
2575.505	SODDING	S.Y.	400		400
504.679	ADJUST VALVE BOX	BOX		10	10



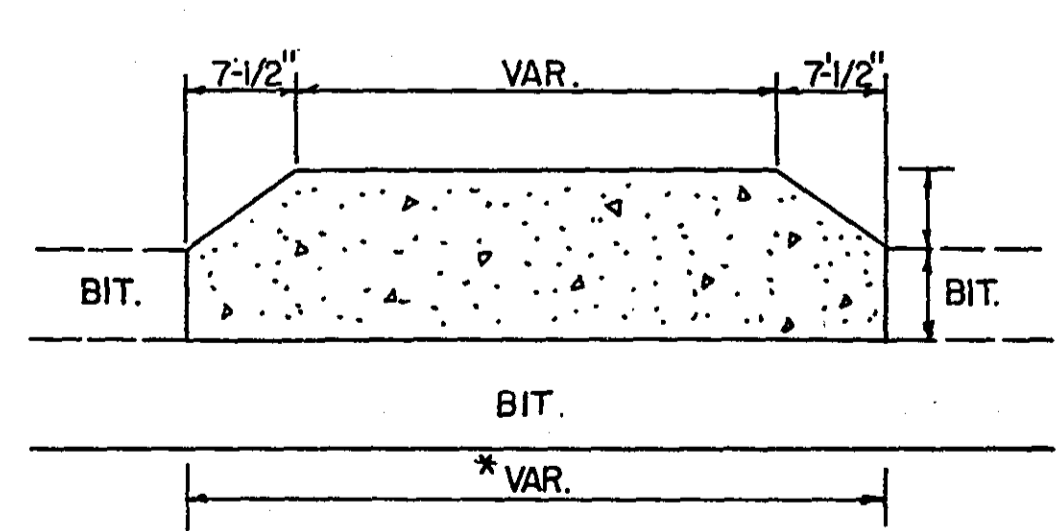
**GENERAL TYPICAL
 IDAHO TO LARPEUTEUR
 NOTE: (SEE CROSS SECTIONS)**



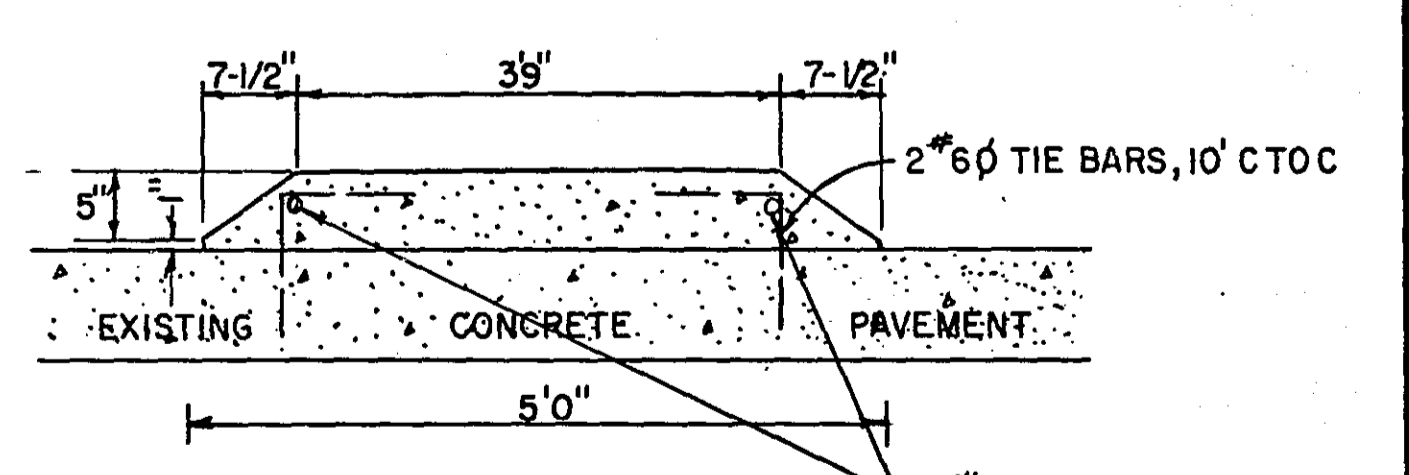
**CURB AND BASE DETAILS
 (LEFT SIDE)**



STA. 0+60 TO STA. 2+40



**BETWEEN IDAHO AND LARPEUTEUR
 (SEE PLAN SHEET)**



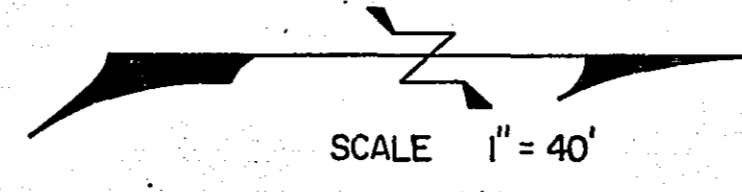
STA. 2+40 TO STA. 4+00

① FOR SUBGRADE CORRECTION BACKFILL ONLY.

*SEE X SEC. SHEETS

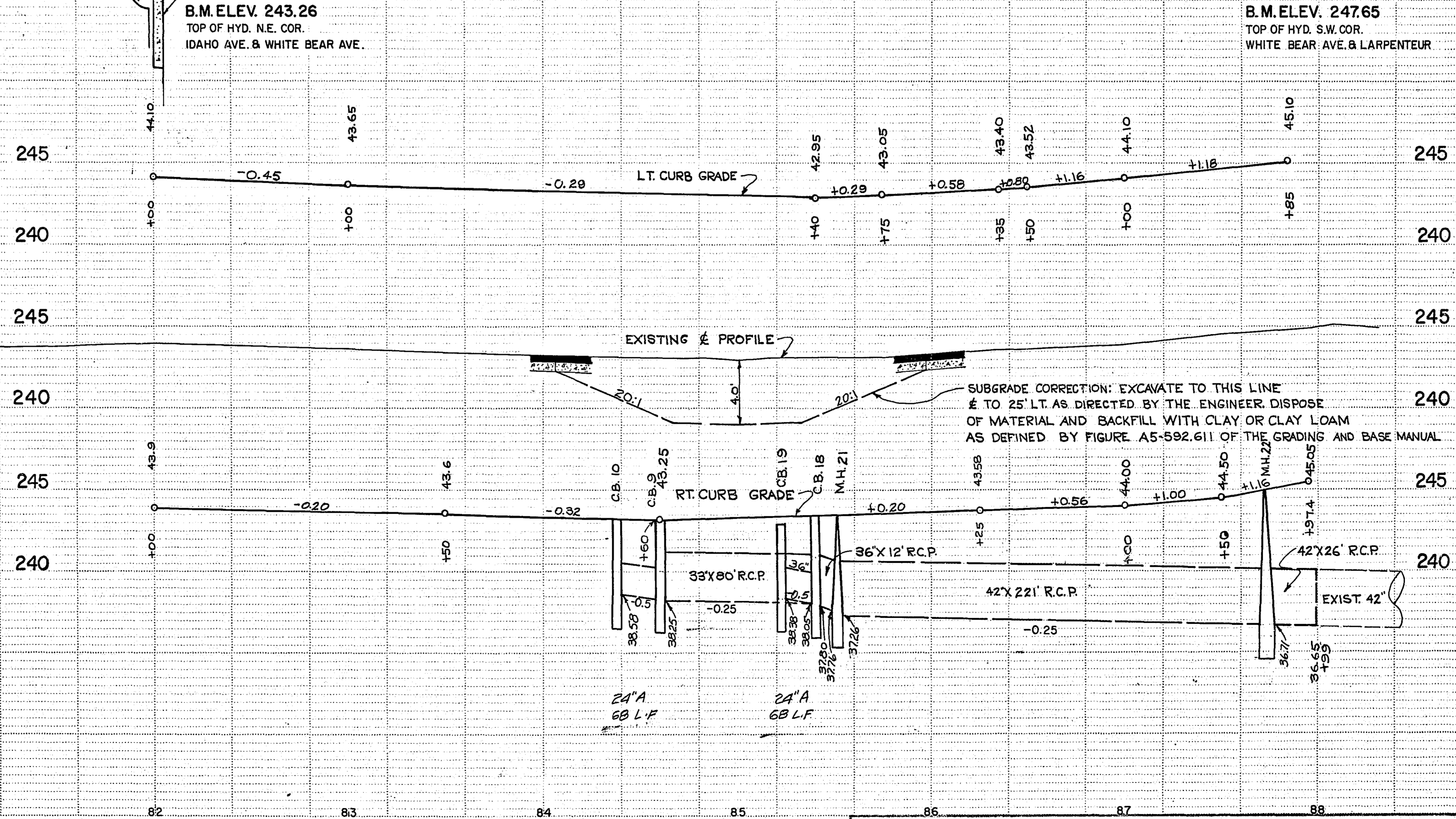
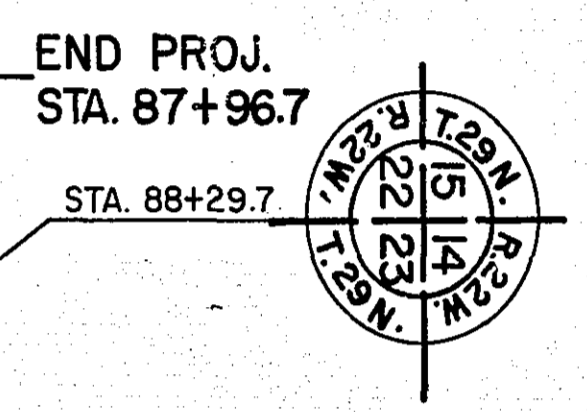
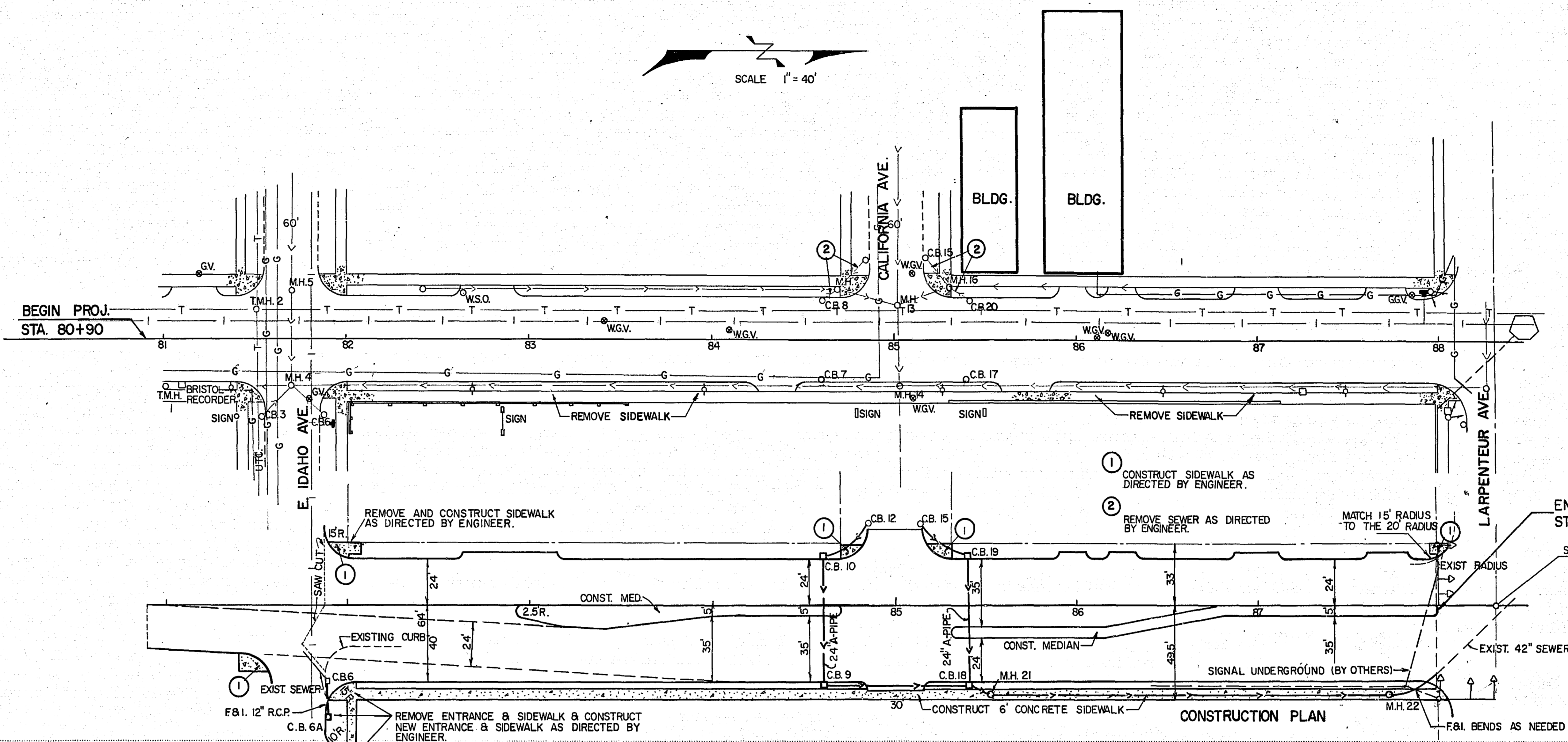
CONCRETE MEDIAN TIE BARS
 DRILL 1" DIAMETER HOLES FOR TIE BARS. BACKFILL HOLES WITH GROUT CONSISTING OF 2 PARTS CEMENT SAND AND 1 PART PORTLAND CEMENT. POUND TIE BARS INTO THE HOLES IMMEDIATELY AFTER GROUT IS PLACED. GROUTING AND PLACING TIE BARS SHALL BE DONE IN CONJUNCTION WITH PLACEMENT OF CONCRETE FOR CONCRETE MEDIAN.
 (TYPE A)

MICROFILMED
 RAMSEY CO. ENGR.



NOTE: REMOVE CONC. BASE FROM STA. 87+87 TO 87+97.40, CONST. NEW CONC. BASE AND BIT. SURFACE AND MATCH TO EXISTING CONC. SURFACE AT END OF PROJECT.

TOP OF TELEPHONE CONDUIT APPROX. 30" BELOW ROAD SURFACE.



B.M. ELEV. 243.26
TOP OF HYD. N.E. COR.
IDAHO AVE. & WHITE BEAR AVE.

B.M. ELEV. 247.65
TOP OF HYD. S.W. COR.
WHITE BEAR AVE. & LARPEL AVE.

MINNESOTA ENGINEERING & SURVEYING COMPANY

MINNESOTA ENGINEERING & SURVEYING COMPANY
RAMSEY CO. ENGR.

STA 0+60 TO STA 1+20 CONSTRUCT REINFORCED CONCRETE PAVEMENT.

SCALE: 1" = 30'

AVENUE

LARPELLEUR

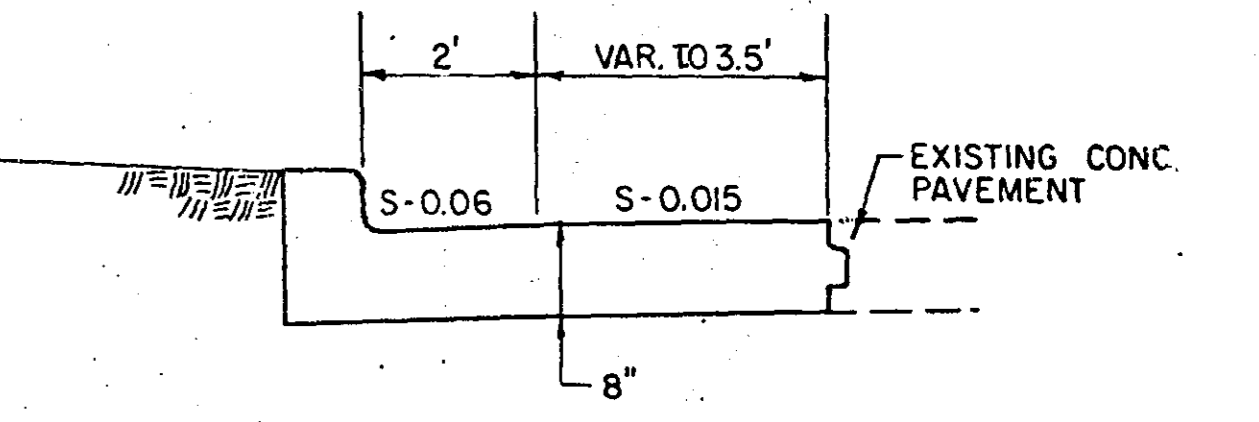
WHITE BEAR AVENUE

BEAR AVENUE

AVENUE

NORTH

ST. PAUL ROAD



B6 60 CONCRETE CURB & GUTTER (SPECIAL)
WHITE BEAR AVE.
LT. STA. 0+60 TO 3+20

NOTES: ① Remove Entrance
② Construct Entrance
Remove Concrete Pavement
CONSTRUCT 8" CONCRETE PAVEMENT, MEDIAN AND CURB & GUTTER

P.I. 0+9756
Δ = 22° 07'
D = 14° 06'
T = 79.30
L = 156.86
R = 406.39

Remove Concrete Pavement & Construct Concrete Pavement 8" Thick. (NOT PART OF THIS PROJECT)
③ CONSTRUCT CURB & GUTTER, B642 TO B618

BLDG.

B.M. ELEV. 941.82
TOP OF HYD. S.W. COR.
WHITE BEAR AVE. & LARPELLEUR

