

MINNESOTA DEPARTMENT OF TRANSPORTATION

CITY OF NEW BRIGHTON

CITY OF ST. ANTHONY
RAMSEY COUNTY, MINNESOTACONSTRUCTION PLAN FOR GRADING, SURFACING, DRAINAGE,
RETAINING WALLS, LIGHTING, SIGNAL SYSTEMS, LANDSCAPING
AND MISC. CONSTRUCTION

SILVER LAKE ROAD (C.S.A.H. 44)

BETWEEN SILVER LAKE AND T.H. 694
IN THE CITIES OF NEW BRIGHTON AND ST. ANTHONYGROSS LENGTH 7600.00 FEET 1.439 MILES
BRIDGES-LENGTH 0.00 FEET 0.00 MILES
EXCEPTIONS-LENGTH 0.00 FEET 0.00 MILES
NET LENGTH 7600.00 FEET 1.439 MILES
LENGTH BASED ON S.P. 62-644-13BEGINNING AT A POINT DISTANT 264 FEET SOUTH AND 32 FEET EAST OF THE NORTHWEST CORNER OF
THE SOUTHEAST QUARTER OF SECTION 31, TOWNSHIP 30, RANGE 23, RAMSEY COUNTY, MINNESOTA.ENDING AT A POINT DISTANT 534 FEET SOUTH AND 109 FEET EAST OF THE NORTHWEST CORNER OF
THE NORTHEAST QUARTER OF SECTION 30, TOWNSHIP 30, RANGE 23, RAMSEY COUNTY, MINNESOTA.

PLAN SYMBOLS

STATE LINE
COUNTY LINE
TOWNSHIP OR RANGE LINE
SECTION LINE
QUARTER LINE
SIXTEENTH LINE
RIGHT-OF-WAY LINE
PRESENT RIGHT-OF-WAY LINE
CONTROL OF ACCESS LINE
PROPERTY LINE (Except Land Lines)
VACATED PLATTED PROPERTY
CORPORATE OR CITY LIMITSTRUNK HIGHWAY CENTER LINE
RETAINING WALL
RAILROAD
RAILROAD RIGHT-OF-WAY LINE
RIVER OR CREEK
DRY RUNDRAINAGE DITCH
DRAIN TILE
CULVERT
DROP INLET
GUARD RAIL
BARBED WIRE FENCE
WOVEN WIRE FENCE
CHAIN LINK FENCE
RAILROAD SNOW FENCE
STONE WALL OR FENCE
HEDGE
RAILROAD CROSSING SIGN
RAILROAD CROSSING BELL
ELECTRIC WARNING SIGN
CROSSING GATE
MEANDER CORNERSPRINGS
MARSHTIMBER
ORCHARD
BRUSH
NURSERYCATCH BASIN
FIRE HYDRANT
CATTLE GUARDOVERPASS (Highway Over)
UNDERPASS (Highway Under)
BRIDGEBUILDING (One Story Frame)
F-FRAME
S-STONE
B-BRICK
C-CONCRETE
T-TILE
ST-STUCCOIRON PIPE OR ROD
MONUMENT (STONE, CONCRETE, OR METAL)
WOODEN HUB
GRAVEL PIT
SAND PIT
BORROW PIT
ROCK QUARRY

UTILITY SYMBOLS

POWER POLE LINE
TELEPHONE OR TELEGRAPH
POLE LINE
JOINT TELEPHONE AND POWER
ON POWER POLES
ON TELEPHONE POLESANCHOR
STEEL TOWER
STREET LIGHT
PEDESTAL (TELEPHONE CABLE
TERMINAL)GAS MAIN
WATER MAIN
CONDUIT
TELEPHONE CABLE IN CONDUIT
ELECTRIC CABLE IN CONDUIT
TELEPHONE MANHOLE
ELECTRIC MANHOLE
BURIED TELEPHONE CABLE
BURIED ELECTRIC CABLE
AERIAL TELEPHONE CABLE
SEWER (SANITARY)
SEWER (STORM)
SEWER MANHOLE
SUBSURFACE DRAIN
HANDHOLE

SCALES :

PLAN 50'

PROFILE HORIZ. 50'

VERT. 5'

INDEX MAP NO SCALE

CROSS SECTIONS HORIZ. 10'

VERT. 10'

END S.P. 62-644-13

END S.A.P. 147-020-21

Q N.B. SILVER LAKE ROAD
STA. 99+50.00

S.P. 147-103-10

SIGNAL SYSTEM "G"

PROJECT
LOCATION

S.P. 62-615-20

SIGNAL SYSTEM "E"

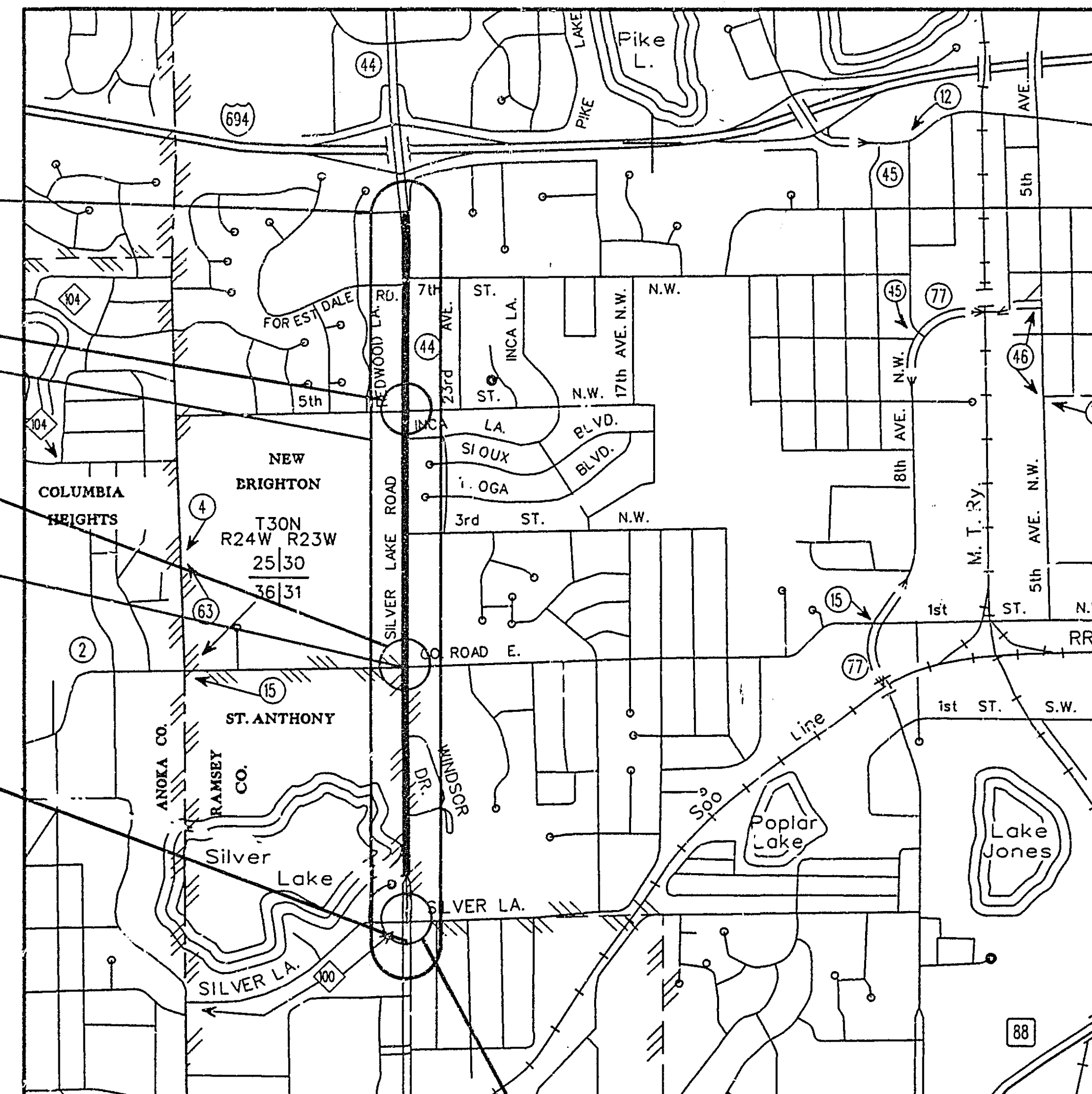
END S.P. 161-020-07

Q N.B. SILVER LAKE ROAD
STA. 52+28.25

BEGIN S.P. 62-644-13

BEGIN S.P. 147-020-21

BEGIN S.P. 161-020-07

Q N.B. SILVER LAKE ROAD
STA. 23+50.00S.P. 161-108-01
SIGNAL SYSTEM "C"SRF STRGAR-ROSCOE-FAUSCH, INC.
CONSULTING ENGINEERS LAND SURVEYORS

MINN. PROJ. NO. STP 6296 (200)

GOVERNING SPECIFICATIONS:

THE 1988 EDITION OF THE MINNESOTA DEPARTMENT OF TRANSPORTATION
"STANDARD SPECIFICATIONS FOR CONSTRUCTION" AS AMENDED BY
"SUPPLEMENTAL SPECIFICATIONS" DATED MAY 02, 1994, SHALL GOVERN.

INDEX : (THIS PLAN CONTAINS 160 SHEETS)

SHEET NO.	DESCRIPTION
1	TITLE SHEET
2	GENERAL LAYOUT
3-6A	STATEMENT OF ESTIMATED QUANTITIES
7	CONSTRUCTION/SOILS NOTES, STD. PLATES
8	CONSTRUCTION SEQUENCE
9-19	TRAFFIC CONTROL PLANS
20-23	DETAILS
24-25	TYPICAL SECTIONS
26-27B	TABULATION OF QUANTITIES
28	ALIGNMENT PLAN
29-30	ALIGNMENT TABULATION
31-36	TOPOGRAPHY AND CONSTRUCTION PLANS
37-40	PROFILES
41-45	STORM SEWER TABULATIONS AND PROFILES
46	LIGHTING DETAILS
47-50	LIGHTING PLANS
51-53	SIGNING AND STRIPING PLANS
54-86	TRAFFIC SIGNAL PLANS AND DETAILS
87-88	RETAINING WALL PLANS AND PROFILES
89-96	RETAINING WALL DETAILS
97-100	EROSION CONTROL DETAILS
101-103	TURF ESTABLISHMENT AND EROSION CONTROL PLANS
104-105A	PLANTING DETAILS
106-110	LANDSCAPE PLANS
111-112	CONTOUR PLANS
113-155	CROSS SECTIONS
112A	EARTHWORK STATION QUANTITIES

DESIGN DATA

R	19
ADT 1995	23,650
ADT 2015	26,500
PAVEMENT DESIGN	10 TON
FUNCTIONAL CLASSIFICATION	HIGH DENSITY ARTERIAL
NO. OF TRAFFIC LANES	4
SIGMA N 18 (20)	3,999,000
DESIGN SPEED	40 M.P.H.
BASED ON SIGHT DISTANCE	STOPPING
HEIGHT OF EYE	3.5 FT.
HEIGHT OF OBJECT	0.5 FT.
NO. OF PARKING LANES	0

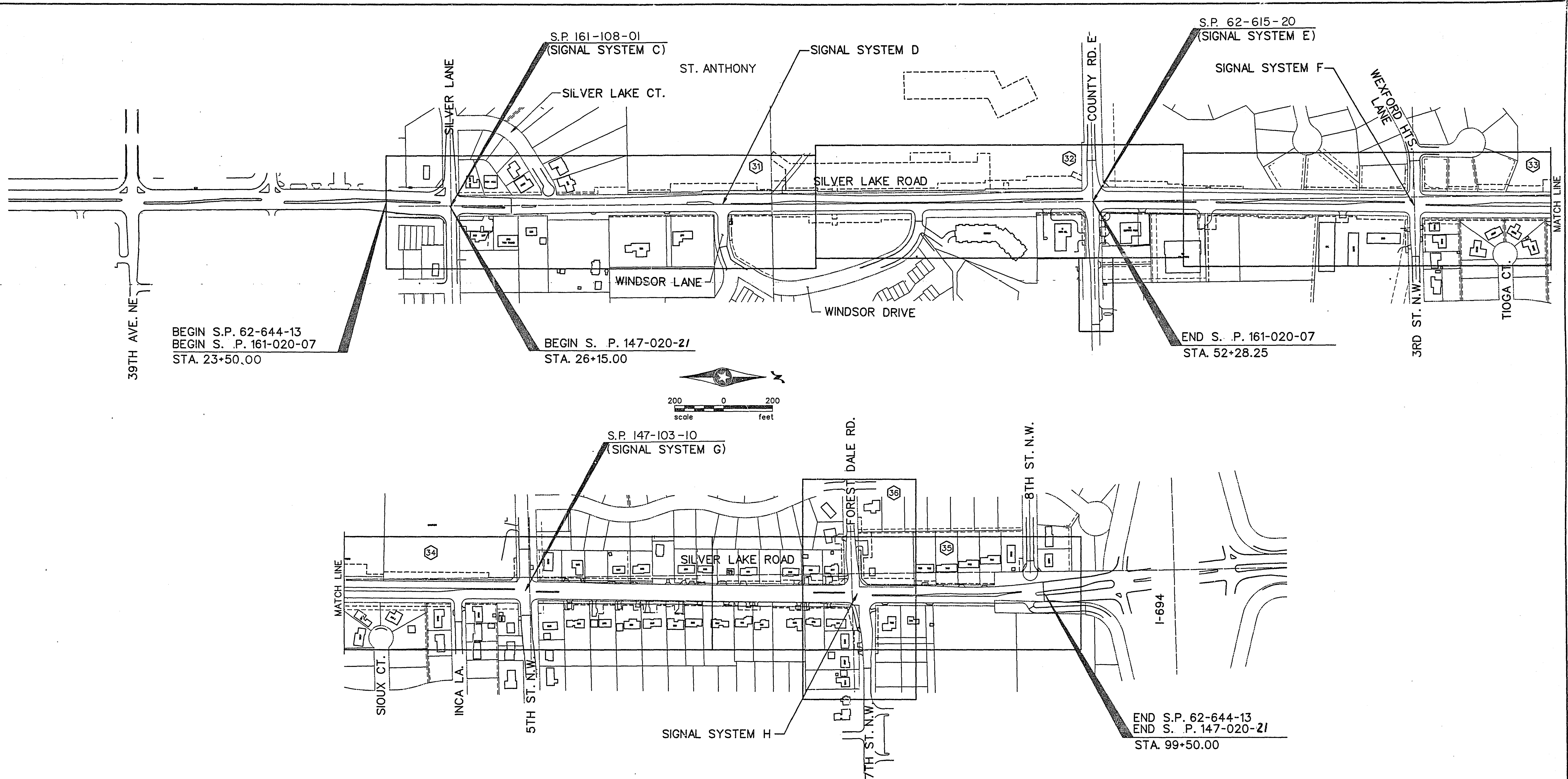
I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR
UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY REGISTERED
PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.ENGR. Sergio Gilman
Reg. No. 14546 Date 12/14/94STRGAR-ROSCOE-FAUSCH, INC.
CONSULTING ENGINEERS

APPROVED:	<u>Luis Propper</u>	12-15-94
	CITY OF NEW BRIGHTON	DATE
APPROVED:	<u>Mark Adams</u>	1/13/95
	CITY OF ST. ANTHONY	DATE
RECOMMENDED FOR APPROVAL:	<u>Paul H. Stue</u>	12/14/94
	RAMSEY COUNTY ENGINEER	DATE
APPROVED:	RAMSEY COUNTY BOARD	DATE
RECOMMENDED FOR APPROVAL:	<u>Mary Stieringer</u>	1/13/95
	METRO ASSIST. DIVISION ENGINEER-STATE AID	DATE
RECOMMENDED FOR APPROVAL:	<u>Paul H. Stue</u>	5/3/95
	STATE TRAFFIC ENGINEER	DATE
RECOMMENDED FOR APPROVAL:	<u>Mark Adams</u>	5/3/95
	FOR STATE AID DIVISION	DATE
APPROVED:	<u>Paul H. Stue</u>	5/3/95
	FOR STATE AID ENGINEER	DATE

I HEREBY CERTIFY THAT THE FINAL REVISIONS, IF ANY, OF THIS PLAN
WERE MADE BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I
AM A DULY REGISTERED PROFESSIONAL ENGINEER UNDER THE LAWS
OF THE STATE OF MINNESOTA.

DATE _____ REG. NO. _____

STATE PROJ. NO. 62-644-13, S.P. 62-615-20, S.P. 147-020-21, S.P. 147-103-10, S.P. 161-020-07, S.P. 161-108-01
SHEET NO. 1 OF 155 SHEETS



LEGEND	
(X)	CONSTRUCTION PLAN SHEET NO.

28-153

1	12-28-94	MCI	LAE	REVISE WINDOW LIMITS
2	3-9-95	MCI	SNB	REVISE PER STATE AID REVIEW
NO	DATE	BY	CKD	APPR

SRF

STRGAR-ROSCOE-FAUSCH, INC.
CONSULTING ENGINEERS ■ LAND SURVEYORS

I hereby certify that this plan, specification or report 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.
Sam G. Edm
Date 12/14/94 Reg. No. 14546

CITY OF NEW BRIGHTON
GENERAL LAYOUT
SILVER LAKE ROAD

STATE PROJ. NO.
62-644-13
CITY PROJ. NO.

DRAWN BY
B. DOYLE
DESIGNED BY
J. ROSENOW
CHECKED BY

SHEET **2**
OF **155**
COMM. NO.
0931880

STATEMENT OF ESTIMATED QUANTITIES																						
TAB	NOTES	ITEM NO.	ITEM	UNIT	TOTAL ESTIMATED QUANTITY	TOTAL FINAL QUANTITY	FEDERAL PARTICIPATION															
							RAMSEY COUNTY GROUP 1 S.P. 62-644-13		NEW BRIGHTON GROUP 2 S.P. 147-020-21		ST. ANTHONY GROUP 3 S.P. 161-020-07		GROUP 4 (2) STORM SEWER		GROUP 5 STORM WATER PONDS & WETLAND MITIGATION S.P. 62-644-13		GROUP 6 RAMSEY COUNTY LOCAL FUNDS		GROUP 7 NEW BRIGHTON LOCAL FUNDS		GROUP 8 ST. ANTHONY LOCAL FUNDS	
							ESTIMATED QUANTITY	FINAL QUANTITY	ESTIMATED QUANTITY	FINAL QUANTITY	ESTIMATED QUANTITY	FINAL QUANTITY	ESTIMATED QUANTITY	FINAL QUANTITY	ESTIMATED QUANTITY	FINAL QUANTITY	ESTIMATED QUANTITY	FINAL QUANTITY	ESTIMATED QUANTITY	FINAL QUANTITY	ESTIMATED QUANTITY	FINAL QUANTITY
		0041.606	TRAINEES	HOUR	2250		2250															
		2021.501	MOBILIZATION	LUMP SUM	1		0.57		0.13		0.02		0.09		0.03		0.03		0.03		0	
		2031.501	FIELD OFFICE TYPE D	EACH	1		0.67		0.13		0.02		0.09		0.03		0.03		0.03		0	
	(1)	2101.501	CLEARING	ACRE	2.63		1.43								1.20							
	(1)	2101.506	GRUBBING	ACRE	2.63		1.43								1.20							
G	(4)	2101.502	CLEARING	TREE	33		33															
G	(4)	2101.507	GRUBBING	TREE	33		33															
	(3)	2102.501	PAVEMENT MARKING REMOVAL	SQ FT	150		150															
	(3)	2102.502	PAVEMENT MARKING REMOVAL	LIN FT	11700		11700															
O		2104.501	REMOVE PIPE CULVERTS	LIN FT	35		35															
O		2104.501	REMOVE PIPE SEWERS	LIN FT	1310		1310															
C		2104.501	REMOVE CURB AND GUTTER	LIN FT	5230		5230															
K		2104.501	REMOVE SILT CURTAIN	LIN FT	1650		1650															
K		2104.501	REMOVE WOOD FENCE	LIN FT	410		410															
K		2104.501	REMOVE CHAIN LINK FENCE	LIN FT	1900		1900															
	(34)	2104.503	REMOVE RETAINING WALL	SQ FT	220		220															
B		2104.503	REMOVE CONCRETE WALK	SQ FT	38730		38730															
	(3)	2104.505	REMOVE BITUMINOUS PAVEMENT	SQ YD	40775		40775															
	(18)	2104.505	REMOVE CONCRETE PAVEMENT	SQ YD	680		680															
O		2104.509	REMOVE PIPE APRON	EACH	9		9															
O		2104.509	REMOVE MANHOLE OR CATCH BASIN	EACH	18		18															
		2104.511	SAWING CONCRETE PAVEMENT	LIN FT	740		740															
		2104.513	SAWING BITUMINOUS PAVEMENT	LIN FT	2440		2350								90							
K		2104.521	SALVAGE CHAIN LINK FENCE	LIN FT	180		180															
K		2104.521	SALVAGE WOODEN FENCE	LIN FT	460		460															
	(32)	2104.523	SALVAGE CASTING	EACH	14		14															
K		2104.523	SALVAGE VEHICULAR GATE	EACH	2		2															
	(24)	0412.601	RELOCATE BUS SHELTER	Lump Sum	1		1															
	(25)	0412.602	RELOCATE BENCH	EACH	5		5															
	(2)	0564.602	RELOCATE SIGN	EACH	1		1															
	(15)	2104.523	SALVAGE MASONRY STRUCTURE	EACH	2		2															
O	(27)	2104.525	ABANDON PIPE SEWER	EACH	1		1															
A		2105.501	COMMON EXCAVATION	CU YD	69489(P)		69489															
A		2105.507	SUBGRADE EXCAVATION	CU YD	21039		21039															
A		2105.511	COMMON CHANNEL EXCAVATION	CU YD	5400										5400							
A		2105.522	SELECT GRANULAR BORROW (CV)	CU YD	24752		24752															
	(19)	0105.601	EXCAVATION SPECIAL 1	LUMP SUM	1										1							
	(29)	0105.602	BOULDER	EACH	3		3															
J		2118.502	AGGREGATE SURFACING CLASS 6	CU YD	200		200															
	(4)	2130.501	WATER	M GAL	1500		1500															
J		2211.503	AGGREGATE BASE (CV), CLASS 6	CU YD	22900(P)		22900															
J		2340.508	TYPE 41 WEARING COURSE MIXTURE	TON	850		850															
J		2340.508	TYPE 47 WEARING COURSE MIXTURE	TON	4650		4650															
J		2340.510	TYPE 47 BINDER COURSE MIXTURE	TON	7650		7650															
J		2340.514	TYPE 31 BASE COURSE MIXTURE	TON	11800		11800															
J		2357.502	BITUMINOUS MATERIAL FOR TACK COAT	GALLON	6200		6200															
Q R	(20)	2411.501	STRUCTURAL CONCRETE (3Y46)	CU YD	56 (P)		29		27													
Q R		2402.585	PIPE RAILING	LIN FT	652 (P)		339		313													
Q R		2411.501	STRUCTURAL CONCRETE (1A43)	CU YD	191 (P)		119.3		71.7													
Q R		2411.501	STRUCTURAL CONCRETE (3Y43)	CU YD	315 (P)		180.5		134.5													
Q R	(11)	2411.521	GRANULAR BACKFILL MOD (CV)	CU YD	847		435		412													
Q R		2411.541	REINFORCEMENT BARS	POUND	18044 (P)		10321		7723													
Q R		2411.541	REINFORCEMENT BARS (EPOXY COATED)	POUND	39146 (P)		24345		14801													
1	12-28-94	MCI	LAE	REVISE ESTIMATED QUANTITIES AND ADD LOCAL FUNDS																		
2	3-9-95	MCI	LAE	REVISE PER STATE AID REVIEW																		
NO	DATE	BY	CKD	APPR	REVISION																	

28-153

STATEMENT OF ESTIMATED QUANTITIES																						
TAB	NOTES	ITEM NO.	ITEM	UNIT	TOTAL ESTIMATED QUANTITY	TOTAL FINAL QUANTITY	FEDERAL PARTICIPATION															
							RAMSEY COUNTY GROUP 1 S.P. 62-644-13		NEW BRIGHTON GROUP 2 S.P. 147-020-21		ST. ANTHONY GROUP 3 S.P. 161-020-07		GROUP 4 ⑩ STORM SEWER		GROUP 5 STORM WATER PONDS & WETLAND MITIGATION S.P. 62-644-13		GROUP 6 RAMSEY COUNTY LOCAL FUNDS		GROUP 7 NEW BRIGHTON LOCAL FUNDS		GROUP 8 ST. ANTHONY LOCAL FUNDS	
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A	②②	0411.601	STRUCTURE EXCAVATION	LUMP SUM	1		0.65		0.35													
	②③	0411.603	CONC BLOCK RETAINING WALL	SQ FT	4850		4850															
	②③	0412.602	RELOCATE PLANTER	EACH	1									1								
	⑤	0451.602	AGGREGATE FOUNDATION	TON	340							340										
	②③	2452.503	TREATED TIMBER PILING DELIVERED	LIN FT	870		870															
	②③	2452.504	TREATED TIMBER PILING DRIVEN	LIN FT	870		870															
	②③	2452.517	TREATED TIMBER TEST PILE 40 FT. LONG	EACH	1		1															
H	⑥	0501.602	TRASH GUARD FOR 30" PIPE APRON	EACH	3							3										
H	⑥	0501.602	TRASH GUARD FOR 36" PIPE APRON	EACH	1									1								
H	⑥	0501.602	TRASH GUARD FOR 66" PIPE APRON	EACH	1							1										
H		2501.511	12" CS PIPE CULVERT	LIN FT	99									99								
H		2501.515	12" GS PIPE APRON	EACH	2									2								
H		2501.515	12" RC PIPE APRON	EACH	3							3										
H		2501.515	15" RC PIPE APRON	EACH	2							2										
H		2501.515	18" RC PIPE APRON	EACH	1									1								
H		2501.515	30" RC PIPE APRON	EACH	3							3										
H		2501.515	36" RC PIPE APRON	EACH	1									1								
H		2501.515	66" RC PIPE APRON	EACH	1							1										
H		2501.561	12" RC PIPE CULVERT DES 3006 CL III	LIN FT	55									55								
I		2502.541	4" PERF TP PIPE DRAIN	LIN FT	13250		13250															
H		2503.541	12" RC PIPE SEWER DESIGN 3006 CL III	LIN FT	283									283								
H		2503.541	15" RC PIPE SEWER DESIGN 3006	LIN FT	2532							2532										
H		2503.541	15" RC PIPE SEWER DESIGN 3006 CL III	LIN FT	539							539										
H		2503.541	18" RC PIPE SEWER DESIGN 3006																			

SRF STRGAR-ROSCOE-FAUSCH, INC.
CONSULTING ENGINEERS ■ LAND SURVEYORS

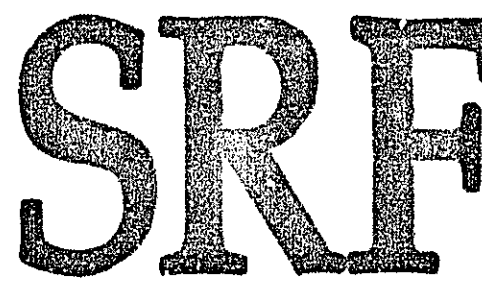
Date _____ Reg. No. _____

SHEET 4
OF 155
COMM. NO.
0931880

STATEMENT OF ESTIMATED QUANTITIES

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H		0506.602	CONSTRUCT CONTROL STRUCTURE A	EACH	1									1								
H		0506.602	CONSTRUCT CONTROL STRUCTURE B	EACH	1									1								
H		0506.602	CONSTRUCT CONTROL STRUCTURE C	EACH	1																	
H	(7)	2511.501	RANDOM RIPRAP CLASS II	CU YD	29.4								1									
H	(7)	2511.501	RANDOM RIPRAP CLASS III	CU YD	27.0								16.7		12.7							
													27.0									
B		2521.501	3" CONCRETE WALK	SQ FT	28000		28000															
B		2521.501	4" CONCRETE WALK	SQ FT	40400		29100			11300												
B		0521.602	SPECIAL SURFACE TREATMENT	SQ FT	28000													28000				
C		2531.501	CONCRETE CURB & GUTTER DESIGN B612	LIN FT	2600		2600															
C		2531.501	CONCRETE CURB & GUTTER DESIGN B618	LIN FT	1300		1300															
C		2531.501	CONCRETE CURB & GUTTER DESIGN B624	LIN FT	22500		5625		15750		1125											
C		2531.501	CONCRETE CURB & GUTTER DESIGN D412	LIN FT	1000		1000															
	(18)	2531.507	6" CONCRETE DRIVEWAY PAVEMENT	SQ YD	410		410															
		0531.602	PEDESTRIAN CURB RAMP	EACH	28		28															
	(17)	2535.501	BITUMINOUS CURB	LIN FT	1040		1040															
E		2545.501	ELECTRIC LIGHTING SYSTEM	LUMP SUM	1				0.90		0.10											
	(8)	0545.602	RELOCATE LIGHTING UNIT	EACH	3		3															
H		2554.509	GUIDE POST TYPE B	EACH	12								10		2							
K		2557.501	WIRE FENCE DESIGN 72-9322	LIN FT	1870		1870															
K		2557.517	VEHICULAR GATE-DOUBLE	EACH	1		1															
K		2557.522	METAL BRACE ASSEMBLY	EACH	14		14															
K		2557.527	ELECTRICAL GROUND	EACH	2		2															
K		0557.602	INSTALL VEHICULAR GATE	EACH	2		2															
K		0557.603	INSTALL CHAIN LINK FENCE	LIN FT	180		180															
K		0557.603	INSTALL WOODEN FENCE	LIN FT	460		460															
G		0563.601	TRAFFIC CONTROL	LUMP SUM	1		0.67		0.13		0.02		0.09		0.03		0.03		0.03			
M		0563.603	RAISED PAVEMENT MARKERS TEMPORARY	EACH	2500		2500															
N		2564.531	F&I SIGN PANELS TYPE C	SQ FT	600		600															
N		2564.531	F&I SIGN PANELS TYPE D--SIGNALS	SQ FT	346		346															
N		2564.541	DELINEATOR TYPE IXB (X4-2)	EACH	17		17															
		0564.602	PAVEMENT MESSAGE (LEFT ARROW) POLY-PREFORMED	EACH	31		31															
		0564.602	PAVEMENT MESSAGE (RIGHT ARROW) POLY-PREFORMED	EACH	2		2															
		0564.602	PAVEMENT MESSAGE (ONLY) POLY-PREFORMED	EACH	13		13															
M		0564.603	4" SOLID LINE WHITE-PAINT TEMP	LIN FT	26600		26600															
M		0564.603	4" DOUBLE SOLID LINE YELLOW-PAINT TEMP	LIN FT	13300		13300															
		0564.603	4" SOLID LINE WHITE-POLY PREFORMED	LIN FT	2000		2000															
		0564.603	4" BROKEN LINE WHITE-POLY PREFORMED	LIN FT	3600		3600															
		0564.603	4" SOLID LINE YELLOW-POLY PREFORMED	LIN FT	1800		1800															
		0564.603	4" DOUBLE SOLID LINE YELLOW-POLY PREFORMED	LIN FT	3600		3600															
		0564.603	4" BROKEN LINE YELLOW-POLY PREFORMED	LIN FT	450		450															
		0564.603	12" SOLID LINE YELLOW-POLY PREFORMED	LIN FT	200		200															
		0564.604	ZEBRA CROSSWALK-WHITE POLY PREFORMED	SQ FT	3500		3500															
	(9)	2565.511	FULL T ACT T CONTROL SIGNAL SYSTEM D	SIG SYS	1																	
	(9)	2565.511	FULL T ACT T CONTROL SIGNAL SYSTEM E	SIG SYS	1		1															
	(9)	2565.511	FULL T ACT T CONTROL SIGNAL SYSTEM F	SIG SYS	1		1															
	(9)	2565.511	FULL T ACT T CONTROL SIGNAL SYSTEM G	SIG SYS	1		0.5		0.5													
	(9)	2565.511	FULL T ACT T CONTROL SIGNAL SYSTEM H	SIG SYS	1		0.5									0.25		0.25				
	(9)	0565.601	EMERGENCY VEHICLE PREEMPTION SYS D	LUMP SUM	1																	
	(9)	0565.601	EMERGENCY VEHICLE PREEMPTION SYS F	LUMP SUM	1				0.5										1			
																			0.5			

1	12-28-94	MCI	LAE	REVISE ESTIMATED QUANTITIES AND LOCAL FUNDS
2	3-9-95	MCI	LAE	REVISE PER STATE AD REVIEW
NO	DATE	BY	CKD APPR	REVISION



STRGAR-ROSCOE-FAUSCH, INC.
CONSULTING ENGINEERS ■ LAND SURVEYORS

I hereby certify that this plan, specification or report 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.
Sam A. Carlson
Date 3/16/95 Reg. No. 14546

CITY OF NEW BRIGHTON
STATEMENT OF ESTIMATED QUANTITIES
SILVER LAKE ROAD

STATE PROJ. NO.	DRAWN BY	DATE	SHEET
62-644-13	B. DOYLE	9-94	5
	DESIGNED BY	9-94	OF 155
	J. ROSENOW		
	CHECKED BY	12-94	COMM. NO.
	S. BOWERS		0931880

STATEMENT OF ESTIMATED QUANTITIES																						
TAB	NOTES	ITEM NO.	ITEM	UNIT	TOTAL ESTIMATED QUANTITY	TOTAL FINAL QUANTITY	FEDERAL PARTICIPATION															
							RAMSEY COUNTY GROUP 1 S.P. 62-644-13		NEW BRIGHTON GROUP 2 S.P. 147-020-21		ST. ANTHONY GROUP 3 S.P. 161-020-07		GROUP 4 ⑫ STORM SEWER		GROUP 5 STORM WATER PONDS & WETLAND MITIGATION S.P. 62-644-13		GROUP 6 RAMSEY COUNTY LOCAL FUNDS		GROUP 7 NEW BRIGHTON LOCAL FUNDS		GROUP 8 ST. ANTHONY LOCAL FUNDS	
							ESTIMATED QUANTITY	FINAL QUANTITY	ESTIMATED QUANTITY	FINAL QUANTITY	ESTIMATED QUANTITY	FINAL QUANTITY	ESTIMATED QUANTITY	FINAL QUANTITY	ESTIMATED QUANTITY	FINAL QUANTITY	ESTIMATED QUANTITY	FINAL QUANTITY	ESTIMATED QUANTITY	FINAL QUANTITY	ESTIMATED QUANTITY	FINAL QUANTITY
	⑨	0565.601	REVISE EMERGENCY VEHICLE PREEMPTION SYS E	LUMP SUM	1			1														
	⑨	0565.601	REVISE EMERGENCY VEHICLE PREEMPTION SYS G	LUMP SUM	1			1														
	⑨	0565.601	REVISE EMERGENCY VEHICLE PREEMPTION SYS H	LUMP SUM	1			0.5											0.5			
	⑨	0565.602	HANDHOLE TYPE C-	EACH	17		17															
	⑨	0565.603	2" NON METALLIC CONDUIT-INTERCONNECT	LIN FT	4900		4900															
	⑨	0565.603	6/C FIBER OPTIC CABLE-INTERCONNECT	LIN FT	7650		7650															
	⑨	0565.603	1/C • 14- INTERCONNECT	LIN FT	7650		7650															
	⑨	0565.604	REVISE SIGNAL SYSTEM C	SYSTEM	1		0.5		0.125		0.125						0.25					
D		2571.501	CONIFEROUS TREE 5' HT B&B	TREE	63		63															
D		2571.502	DECIDUOUS TREE 1" CAL BR	TREE	12		12															
D		2571.502	DECIDUOUS TREE 2" CAL B&B	TREE	134		134															
D		2571.502	DECIDUOUS TREE 2.5" CAL B&B	TREE	3		3															
D		2571.502	DECIDUOUS TREE 3.5" CAL B&B	TREE	38				38													
D		2571.503	ORNAMENTAL TREE 2" CAL B&B	TREE	6		6															
D		2571.506	VINES 2 YR MED CONT	VINE	62				62													
	⑩	2572.501	TEMPORARY FENCE	LIN. FT.	1865		1865															
P	⑩	2573.501	BALE CHECK	EACH	500		485								15							
P	⑩	2573.502	SILT FENCE TYPE HEAVY DUTY MAINTAINED	LIN FT	4000		2890								1110							
P		2573.505	FLOTATION SILT CURTAIN	LIN FT	360		360															
P		2575.501	SEEDING	ACRE	2.5 (P)		1.4								1.1							
P		2575.502	SEED MIXTURE 500	POUND	40		40															
P		2575.502	SEED MIXTURE SPECIAL	POUND	85		30								55							
P		2575.505	SODDING TYPE LAWN	SQ YD	19810		19000								810							
P		2575.505	SODDING TYPE EROSION	SQ YD	580		580															
P		2575.511	MULCH MATERIAL TYPE 1	TON	5.0		2.8								2.2							
P		2575.519	DISK ANCHORING	ACRE	2.5 (P)		1.4								1.1							
P		2575.513	MULCH MATERIAL TYPE AGGREGATE	CU YD	88				88													
P		2575.532	COMMERCIAL FERT ANALYSIS 10-20-20	POUND	3020		2450								570							
M		2581.501	REMOVABLE PREFORMED PLASTIC MARKING	LIN FT	11600		11600															

COST PARTICIPATION - TRAFFIC SIGNAL ITEMS										
ITEM NO.	ITEM	UNIT	TOTAL ESTIMATED QUANTITIES	PARTICIPATION (%)						
				FED	C.S.A.H.	COUNTY	ST. ANTHONY M.S.A.H.	NEW BRIGHTON		
								M.S.A.H.	MSA OFF SYSTEM	LOCAL
2565.511	FULL T ACT T CONTROL SIGNAL SYSTEM D	SIG. SYS.	1	0	0	67 0	0	0	0	33
2565.511	FULL T ACT T CONTROL SIGNAL SYSTEM E	SIG. SYS.	1	80	20	0	0	0	0	0
2565.511	FULL T ACT T CONTROL SIGNAL SYSTEM F	SIG. SYS.	1	0	0	50	0	0	0	50
2565.511	FULL T ACT T CONTROL SIGNAL SYSTEM G	SIG. SYS.	1	80	10	0	0	10	0	0
2565.511	FULL T ACT T CONTROL SIGNAL SYSTEM H	SIG. SYS.	1	80	10	5	0	0	0	5
0565.601	EMERGENCY VEHICLE PREEMPTION SYS D	LUMP SUM	1		0	0	0	0		100
0565.601	EMERGENCY VEHICLE PREEMPTION SYS F	LUMP SUM	1		0	0	0	0		100
0565.601	REVISE EMERGENCY VEHICLE PREEMPTION SYS E	LUMP SUM	1	80	0	0	0	0	20	0
0565.601	REVISE EMERGENCY VEHICLE PREEMPTION SYS G	LUMP SUM	1	80	0	0	0	0	20	0
0565.601	REVISE EMERGENCY VEHICLE PREEMPTION SYS H	LUMP SUM	1	80	0	0	0	0	10	10
0565.602	HANDHOLE TYPE C-INTERCONNECT	EACH	17	80	20	0	0	0	0	0
0565.603	2" NON METALIC CONDUIT-INTERCONNECT	LIN. FT.	4900	80	20	0	0	0	0	0
0565.603	HANDHOLE TYPE C-INTERCONNECT	LIN. FT.	7650	80	20	0	0	0	0	0
0565.603	1/C *14- INTERCONNECT	LIN. FT.	7650							
0565.604	REVISE SIGNAL SYSTEM C	SYSTEM	1	80	10	5	2.5	2.5	0	0

1	12-28-94	MCI	LAE		REVISE ESTIMATED QUANTITIES, NOTES AND LOCAL FUNDS
2	3-9-95	MCI	LAE		REVISE PER STATE AID REVIEW
NO	DATE	BY	CKD	APPR	REVISION

SRF

STRGAR-ROSCOE-FAUSCH, INC.
CONSULTING ENGINEERS ■ LAND SURVEYORS

I hereby certify that this plan, specification or report 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.
Sgt. J. E. Fausch
Date 3/16/95 Reg. No. 14546

CITY OF NEW BRIGHTON
STATEMENT OF ESTIMATED QUANTITIES
SILVER LAKE ROAD

STATE PROJ. NO.
62-644-13

DRAWN BY
B. DOYLE
DESIGNED BY
J. ROSENOW
CHECKED BY
S. BOWERS

DATE
9-94
9-94
12-94
SHEET
6
OF
155
COMM. NO.
0931880

28-153

CONSTRUCTION/SOILS NOTES

1. CLEARING AND GRUBBING SHALL BE RESTRICTED TO AREAS INDENTIFIED WITHIN THE GRADING LIMITS OF THE PROJECT.
2. REGULAR ENBANKMENT SHALL CONSIST OF SUITABLE GRADING MATERIAL.
3. SUITABLE GRADING MATERIAL ON THIS PROJECT SHALL CONSIST OF ALL SOILS ENCOUNTERED WITH THE EXCEPTION OF TOPSOIL, DEBRIS, ORGANIC MATERIAL, MUCK AND OTHER UNSTABLE MATERIAL.
4. SELECT GRANULAR MATERIAL SHALL MEET THE REQUIREMENTS OF SPEC. 3149.2B
5. STRIP AND REUSE AS SLOPE DRESSING ALL TOPSOIL AND EXISTING SLOPE DRESSING WHERE PRESENT IN AREAS TO BE DISTURBED BY CONSTRUCTION. TOPSOIL STRIPPING IS CONSIDERED TO BE COMMON EXCAVATION.
6. SUBGRADE EXCAVATION SHALL BE BACKFILLED IMMEDIATELY AFTER EXCAVATION TO HELP OFF SET ANY STABILITY PROBLEMS DUE TO WATER SEEPAGE OR STEEP BACKSLOPES.
7. BITUMINOUS SURFACING, CONCRETE ITEMS AND OTHER UNSUITABLE MATERIAL REMOVED BY CONSTRUCTION SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE DISPOSED OF OFF THE PROJECT, IN THE ACCORDANCE WITH THE PROVISIONS OF SPEC. 2104.3C3 & 2105.3D.
8. WHERE MATCHING INTO EXISTING ROADWAYS OR AT THE ENDS OF CONSTRUCTION, CUT VERTICALLY TO THE SUBGRADE AND THEN AT A 20:1 TAPER TO THE THE BOTTOM OF THE THE RECOMMENDED SUBCUT.
9. COMPACTION OF AGGREGATE BASE SHALL BE BY THE "QUALITY COMPACTION METHOD."
10. COMPACTION OF THE GRADING PORTION OF THE PROJECT SHALL BE BY THE "QUALITY COMPACTION METHOD."
11. COMPACTION OF ALL PERMANENT BITUMINOUS ITEMS SHALL BE IN ACCORDANCE WITH THE "MODIFIED SPECIFIED DENSITY METHOD." ORDINARY COMPACTION SHALL BE REQUIRED ON ALL TEMPORARY BITUMINOUS SURFACING.
12. USE TACK BETWEEN ALL BITUMINOUS MIXTURES AND ON THE FRONT FACE OF CONCRETE GUTTER. THE BITUMINOUS TACK COAT MATERIAL SHALL BE APPLIED AT A UNIFORM RATE OF .03 TO .05 GAL/SQ. YD. THE APPLICATION RATE IS FOR UNDILUTED EMULSIONS (AS SUPPLIED FROM THE REFINERY). THE ASPHALT EMULSION MAY BE FURTHER DILUTED IN THE FIELD IN ACCORDANCE WITH SPEC. 2357
13. FOR EACH STAGE OF CONSTRUCTION, BITUMINOUS PAVEMENT SHALL BE PLACED FIRST ALONG MAINLINE SILVER LAKE ROAD. INTERSECTION AREAS, SIDE STREETS AND DRIVEWAY ENTRANCES SHALL BE PAVED SUBSEQUENT TO MAINLINE PAVING.
14. MAXIMUM WIDTH OF BITUMINOUS PAVING IN EACH INDIVIDUAL PASS SHALL BE 14'.
15. SEED MIXTURE 500 AND SEED MIXTURE SPECIAL SHALL BE APPLIED AT A RATE OF 50 POUNDS/ACRE. PROVIDE TYPE 1 MULCH AT A RATE OF 2 TONS/ACRE AND DISK ANCHOR.
16. ALL SEEDED AND SODDED AREAS SHALL BE FERTILIZED WITH COMMERCIAL FERTILIZER (10-20-20) AT A RATE OF 450 POUNDS/ACRE.
17. GRANULAR BACKFILL (MOD.) FOR PLACEMENT BEHIND RETAINING WALLS SHALL MEET THE REQUIREMENTS OF SPEC. 3149.2B MODIFIED TO LESS THAN 10% PASSING THE NO. 200 SIEVE.

INDEX OF TABULATIONS

CODE	DESCRIPTION	SHEET NUMBER
A	EARTHWORK	26
B	SIDEWALK	26
C	CURB AND GUTTER	26
D	PLANT STOCK	27
E	LIGHTING	27
F	CASTING ASSEMBLIES	27
G	CLEARING AND GRUBBING	27
H	STORM SEWER	41 - 45
I	SUBDRAINS	27
J	AGGREGATE AND BITUMINOUS	26
K	FENCING	26
L	WATERMAIN	27A
M	TRAFFIC CONTROL MARKING	27A
N	TYPE "C" AND TYPE "D" SIGNS	27A
O	INPLACE DRAINAGE	27B
P	TURF ESTABLISHMENT / EROSION CONTROL	27B
Q	RETAINING WALL A QUANTITIES	87
R	RETAINING WALL B QUANTITIES	90

EARTHWORK SUMMARY

(CU. YD.)(E.V.) EXCAVATION	COMMON 69,489 SUBGRADE 21,039 COMMON CHANNEL 5,400	SUITABLE GRADING MATERIAL 60,485	
		TOPSOIL 9,004	OTHER GRADING MATERIAL 5,556
			REQUIRED 3,448
(CU. YD.)(C.V.) EMBANKMENT	SUITABLE GRADING MATERIAL 5,703 (6,844 E.V.) SELECT GRANULAR MATERIAL 24,752 (35,890 L.V.) TOPSOIL (SLOPE DRESSING) 3,448 (3,448 E.V.)		

NOTES:
COMMON EXCAVATION INCLUDES REMOVAL OF BITUMINOUS PAVEMENTS LESS THAN 6" THICK AND INCLUDES 0.5' OF TOPSOIL STRIPPING IN FILL AREAS.
ALL BITUMINOUS MATERIALS REMOVED SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE DISPOSED OF OFF THE PROJECT SITE. IN NO CASE SHALL BITUMINOUS MATERIALS BE BURIED ON THE PROJECT.

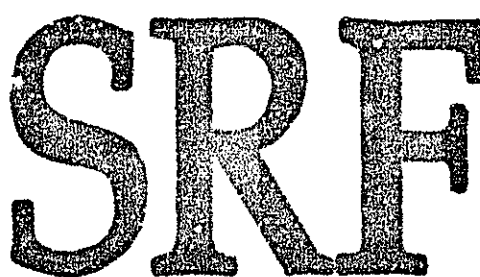
120% SHRINKAGE FACTOR USED FROM EXCAVATED VOLUME (E.V.) TO COMPACTED VOLUME (C.V.), WITH THE EXCEPTION OF TOPSOIL.

145% SHRINKAGE FACTOR USED FROM LOOSE VOLUMES (L.V.) TO COMPACTED VOLUME (C.V.), WITH THE EXCEPTION OF TOPSOIL. SHRINKAGE FACTORS ARE ASSUMED VALUES USED ONLY FOR THE PURPOSE OF ESTIMATED QUANTITIES.

THE FOLLOWING STANDARD PLATES APPROVED BY THE FEDERAL HIGHWAY ADMINISTRATION SHALL APPLY ON THIS PROJECT.

PLATE NO.	DESCRIPTION
3000 L	REINFORCED CONCRETE PIPE
3006 G	GASKET JOINT FOR R.C. PIPE
3007 B	SHEAR REINFORCEMENT FOR PRECAST DRAINAGE STRUCTURES
3040 F	CORRUGATED METAL PIPE CULVERT
3100 G	CONCRETE APRON FOR REINFORCED CONCRETE PIPE
3123 J	METAL APRON FOR C.S. PIPE
3124 B	METAL APRON CONNECTION
3133 B	RIPRAP AT RCP OUTLETS
3134 B	RIPRAP AT CMP OUTLETS
3136 A	SLOTTED VANE DRAIN
3145 E	CONCRETE PIPE TIES
3221 C	CORRUGATED STEEL PIPE COUPLING BAND
4000 J	MANHOLE OR CATCH BASIN
4002 F	MANHOLE OR CATCH BASIN
4005 K	MANHOLE OR CATCH BASIN
4006 K	MANHOLE OR CATCH BASIN
4010 G	CONC. SHORT CONE & ADJUSTING RING
4011 E	PRECAST CONCRETE BASE
4020 G	MANHOLE OR CATCH BASIN COVER
4021 D	PRECAST CURB OPENING CATCH BASIN
4101 C	RING CASTING FOR MANHOLE OR CATCH BASIN
4108 F	ADJUSTING RINGS
4110 E	COVER CASTING FOR MANHOLE
4129 F	CATCH BASIN FRAME CASTING
4143 D	STOODL GRATE & CONCRETE FRAME
4154 B	CATCH BASIN GRATE CASTING
4160 D	CURB BOX CASTING FOR CATCH BASIN
4180 H	MANHOLE OR CATCH BASIN STEP
7035 J	CONCRETE WALK & CURB RETURNS AT ENTRANCES
7065 C	BITUMINOUS CURB
7100 G	CONCRETE CURB AND GUTTERS
7111 H	INSTALLATION & REINFORCEMENT OF CATCH BASIN CASTINGS
8000 I	STANDARD BARRICADES
8110 C	TRAFFIC SIGNAL BRACKETING (POLE MOUNTED)
8111 B	TRAFFIC SIGNAL BRACKETING (PEDESTAL MOUNTED)
8112 C	PEDESTAL FOUNDATION
8115 C	PEDESTRIAN PUSHBUTTON INSTALLATION
8117 F	PRECAST CONCRETE HANDHOLE
8119 C	GROUND MOUNTED CABINET FOUNDATION
8120 J	PA-85 & 90 POLE FOUNDATION
8121 C	TRANSFORMER BASE WITH POLE BASE PLAT
8122 C	PEDESTAL AND PEDESTAL BASE
8123 C	POLE AND MAST ARM (LUMINAIRE AND TRAFFIC LIGHTS)
8124 D	MAST ARM SIGNAL HEAD MOUNTS
8130 D	SAW CUT LOOP DETECTORS
8150 B	INSTALLATION OF CULVERT MARKERS
9102 D	TURF ESTABLISHMENT AREAS (AT PIPE CULVERT ENDS)
9322 J	CHAIN LINK FENCE
4151 B	GRATE CASTING FOR CATCH BASIN
7036 D	PEDESTRIAN CURB RAMP
4016 D	CURB OPENING CATCH BASIN

1	12-28-94	MCI	LAE		REVISE STANDARD PLATE NUMBERS
2	3-9-95	MCI	LAE		REVISE PER STATE AID REVIEW
NO	DATE	BY	CKD	APPR	REVISION



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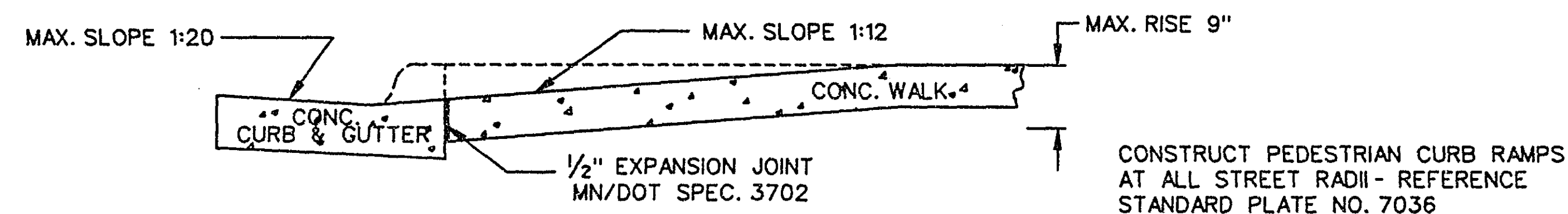
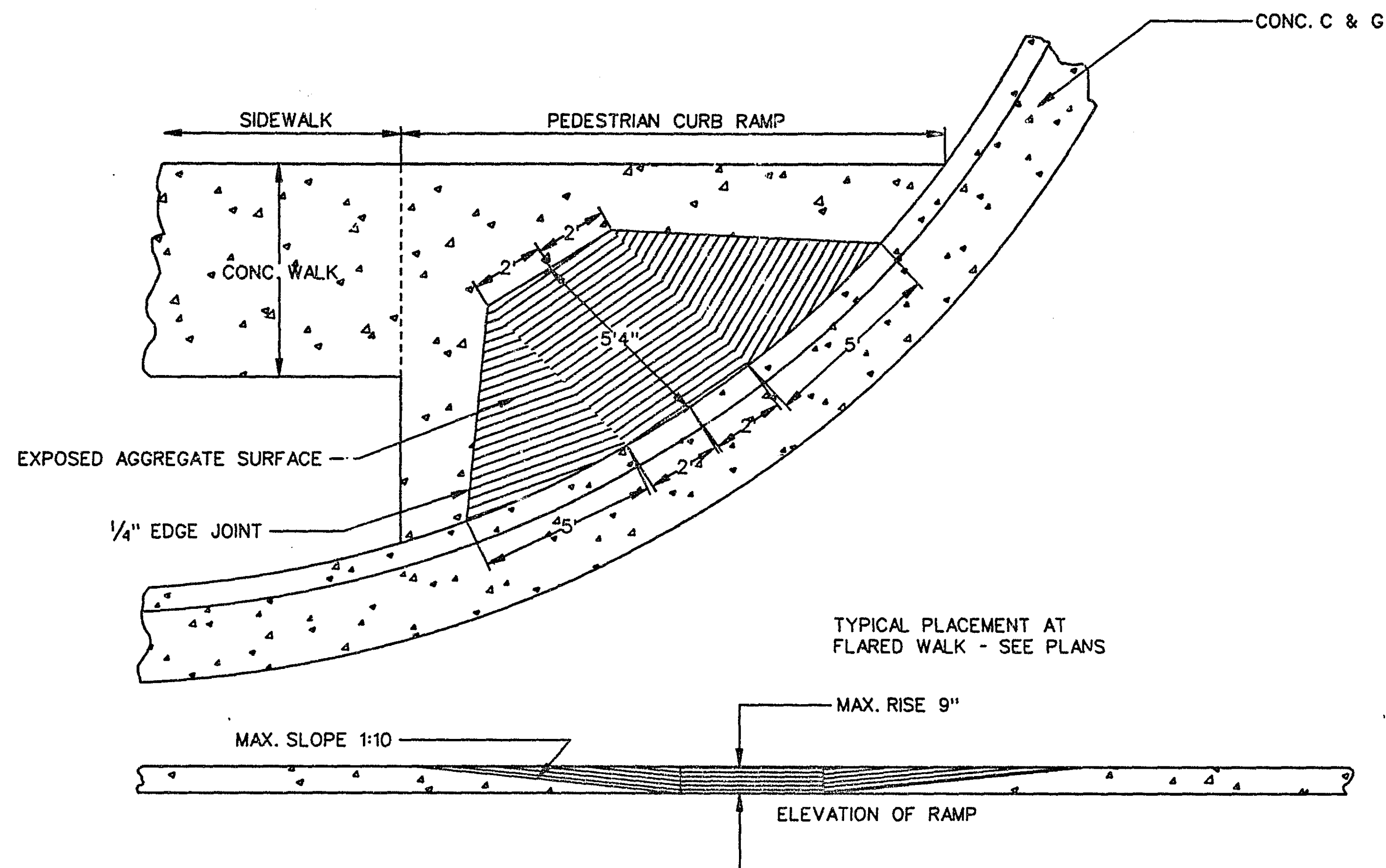
I hereby certify that this plan, specification or report was prepared by me or under my direct supervision and that I am a duly Registered Professional Engineer under the laws of the State of Minnesota.
[Signature]
Date 3/10/95 Reg. No. 17546

CITY OF NEW BRIGHTON
CONSTRUCTION / SOILS NOTES,
STANDARD PLATES, EARTHWORK SUMMARY
SILVER LAKE ROAD

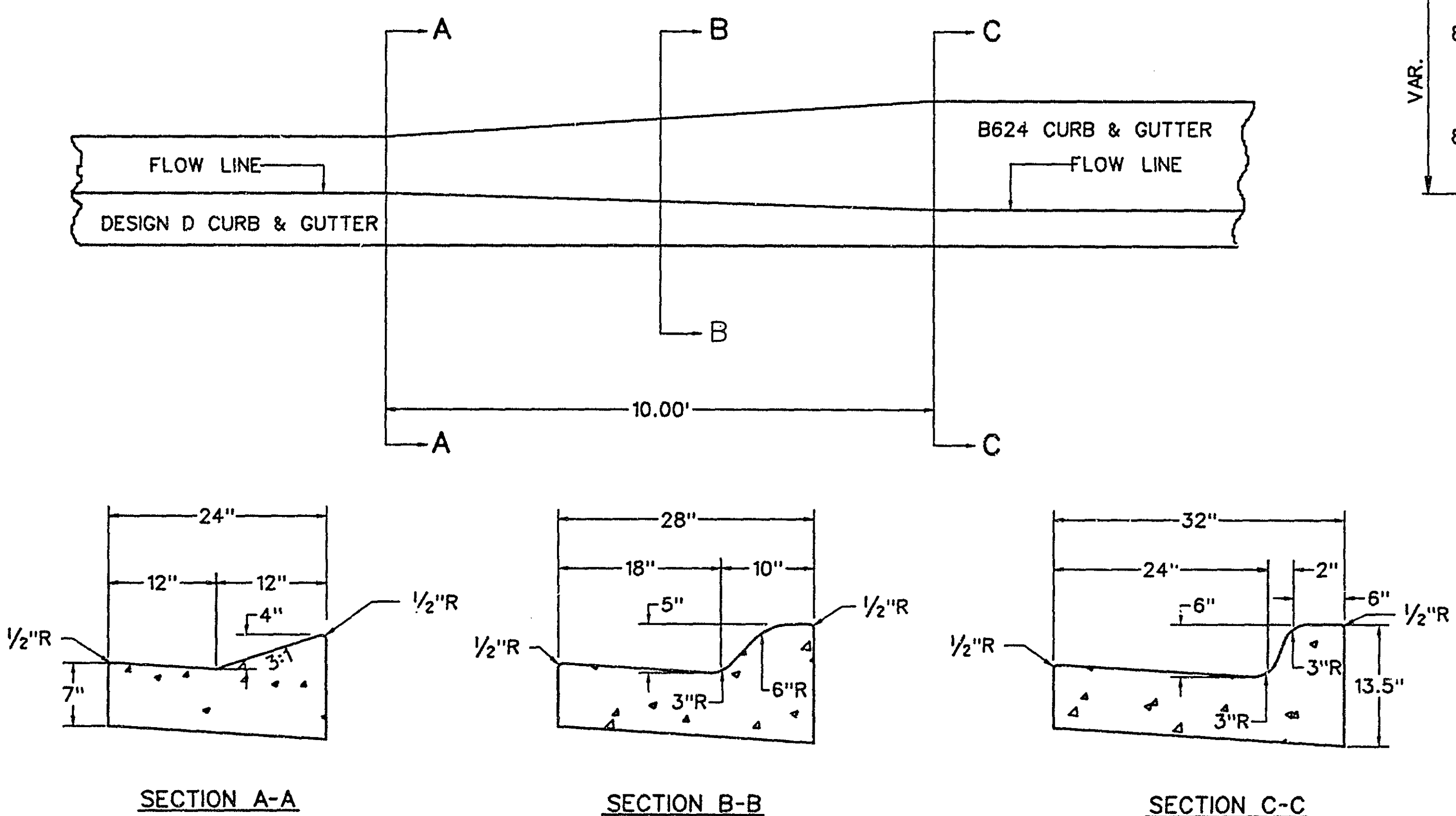
STATE PROJ. NO.	DRAWN BY	DATE	SHEET
62-644-13	B. DOYLE	7-94	7
	DESIGNED BY		OF
	J. ROSENOW	7-94	155
	CHECKED BY		COMM. NO.
			0931880

NO SHEETS

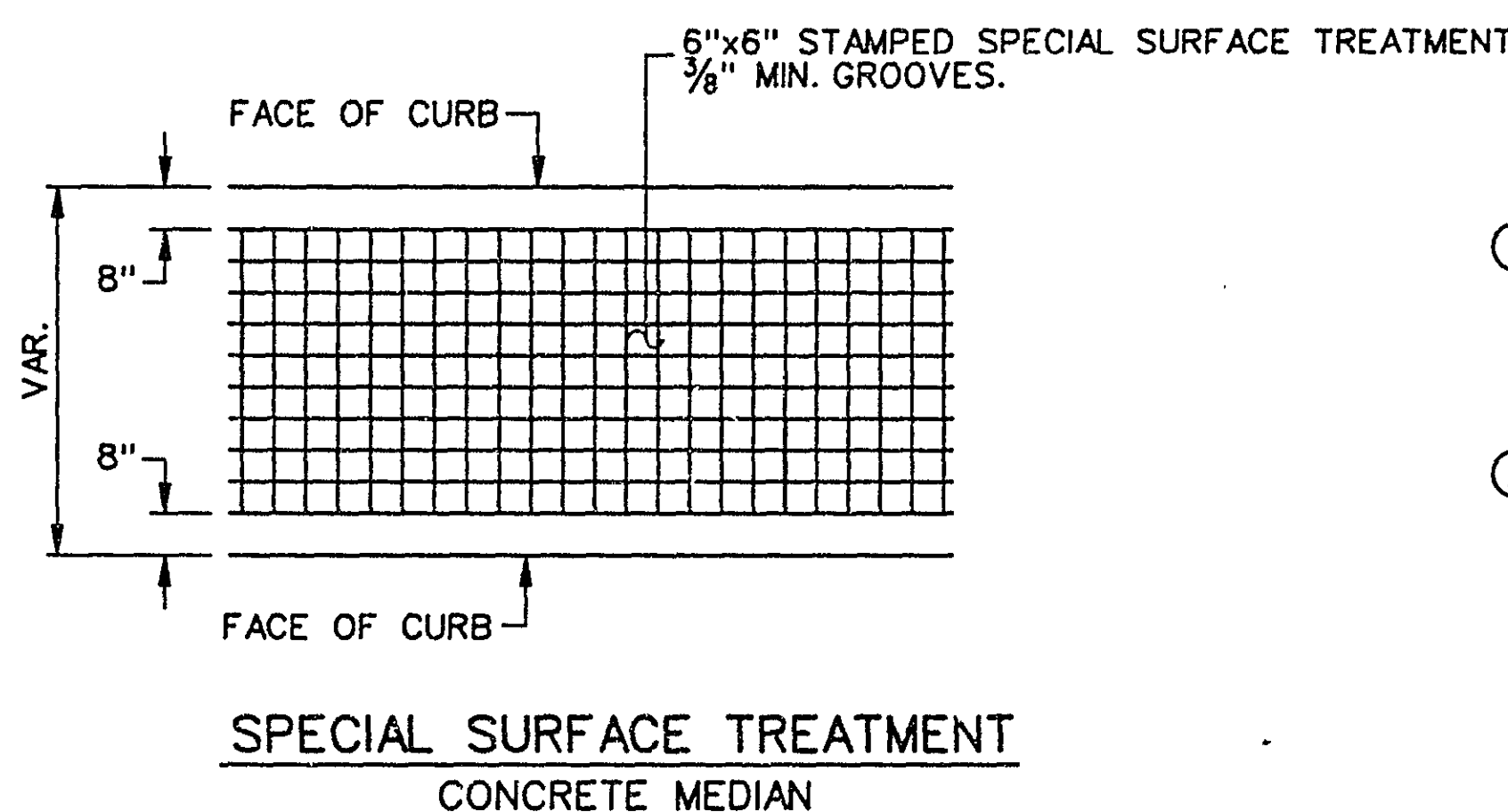
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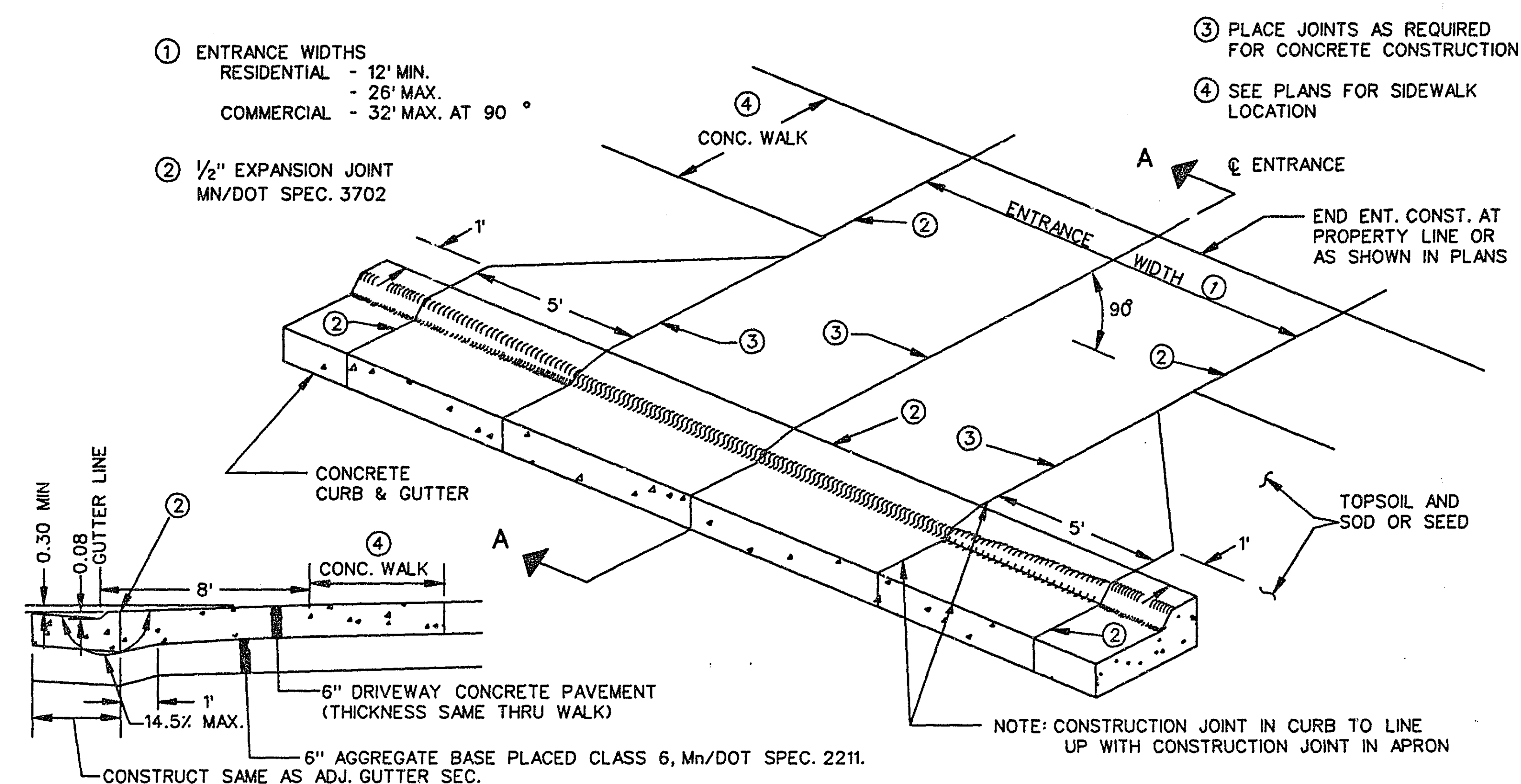
PEDESTRIAN CURB RAMP DETAIL



CURB TRANSITION - B624 C & G TO DESIGN D C & G

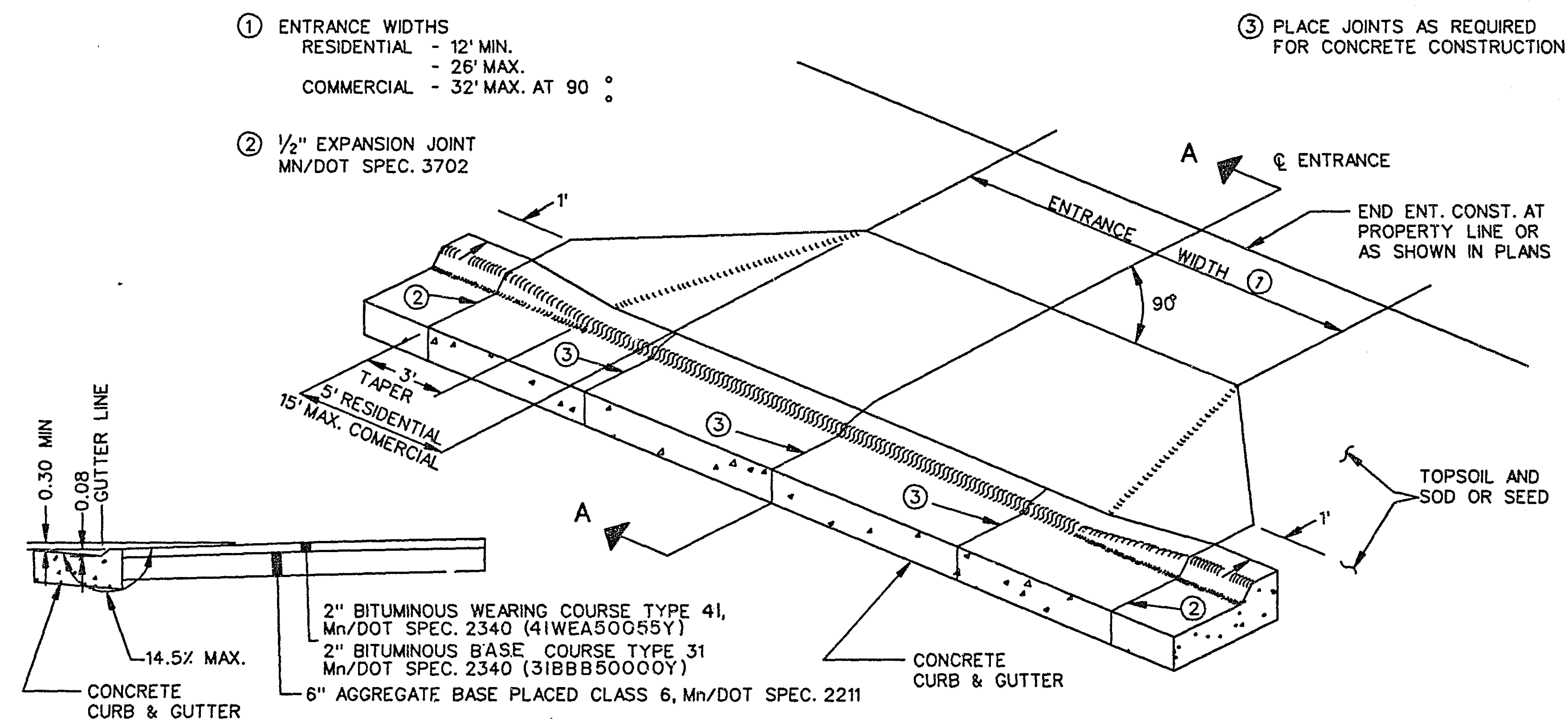


SPECIAL SURFACE TREATMENT
CONCRETE MEDIAN



SECTION A-A

CONCRETE ENTRANCE DETAIL



SECTION A-A

BITUMINOUS ENTRANCE DETAIL

1	3-9-95	MCI	SNB	REVISE PER STATE AID REVIEW
NO	DATE	BY	CKD	APPR
REVISION				

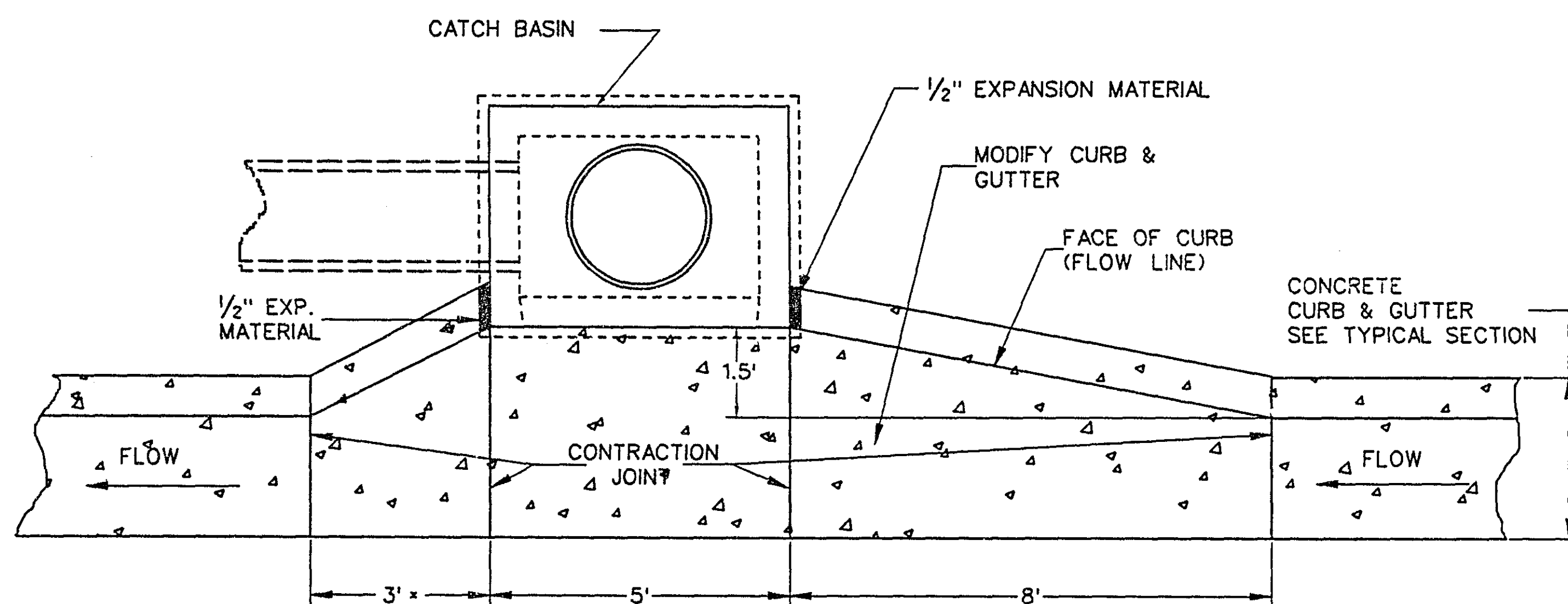
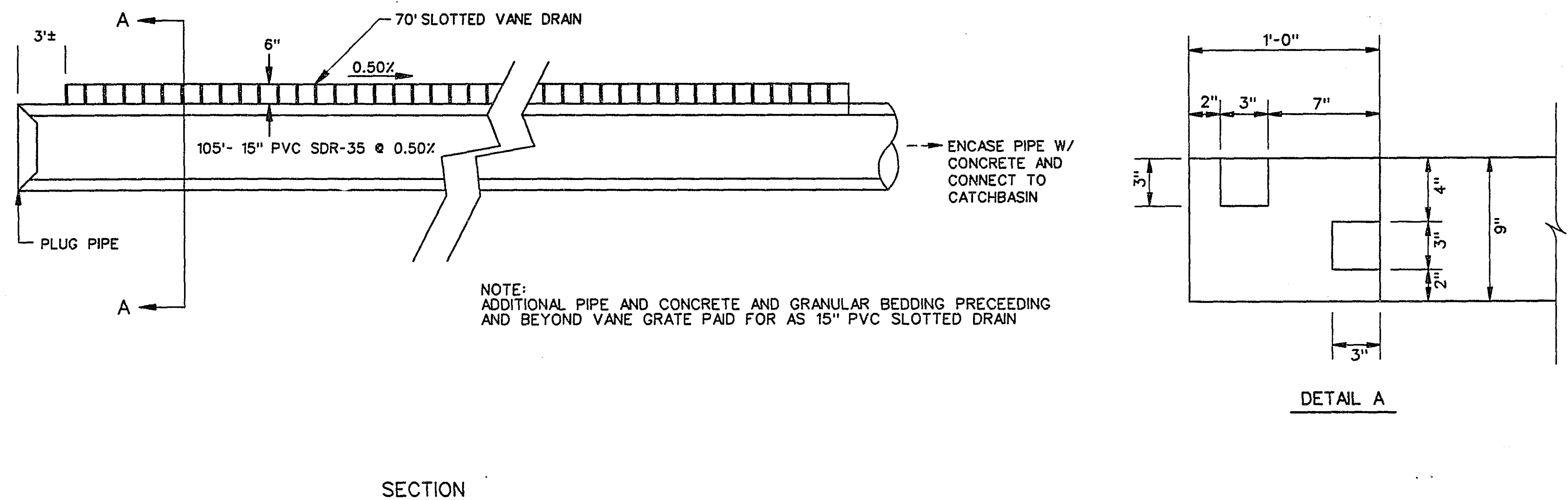
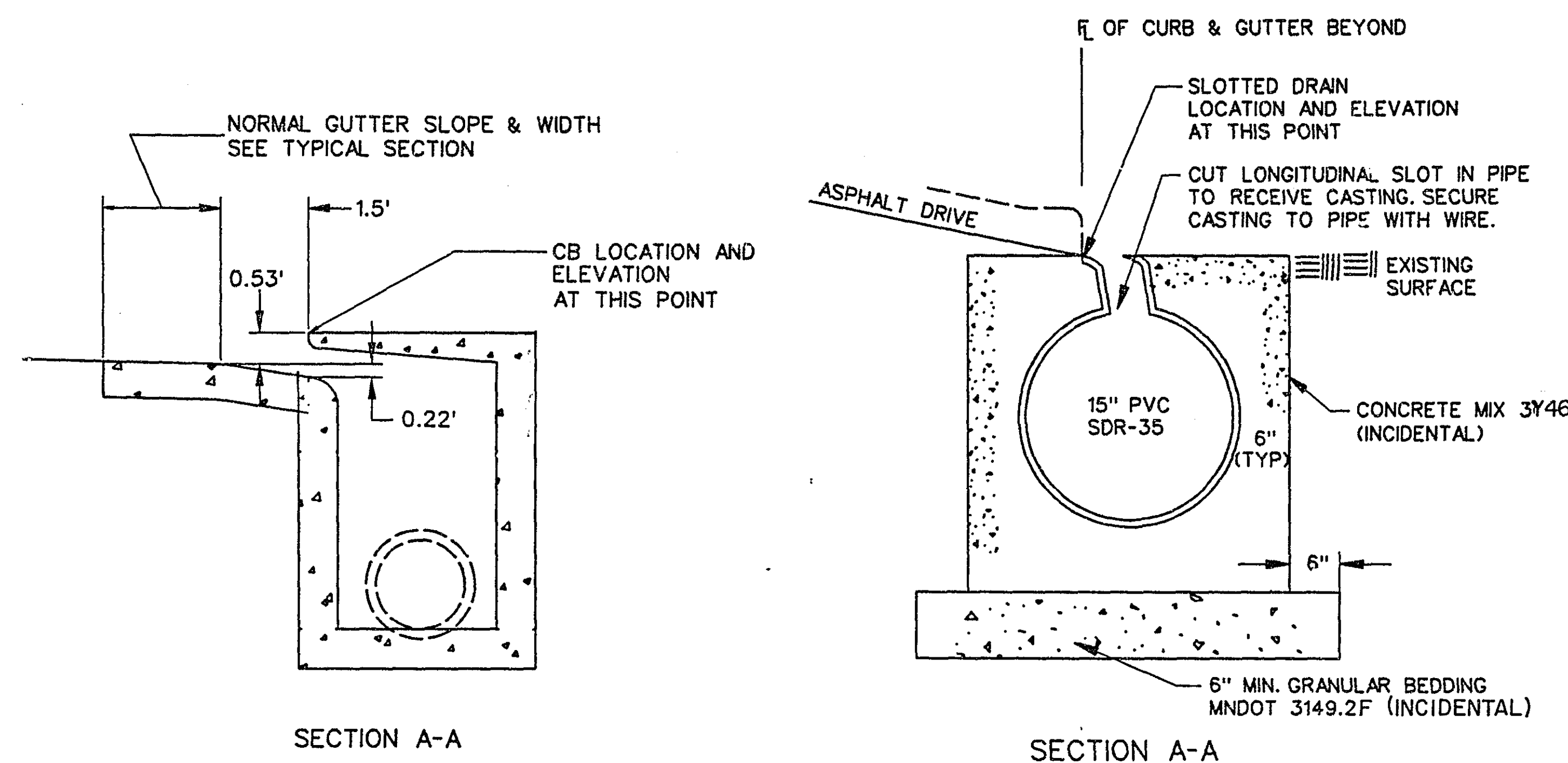
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CONSULTING ENGINEERS ■ LAND SURVEYORS

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Signature
Date 9/21/94 Reg. No. 14546

CITY OF NEW BRIGHTON
DETAILS
SILVER LAKE ROAD

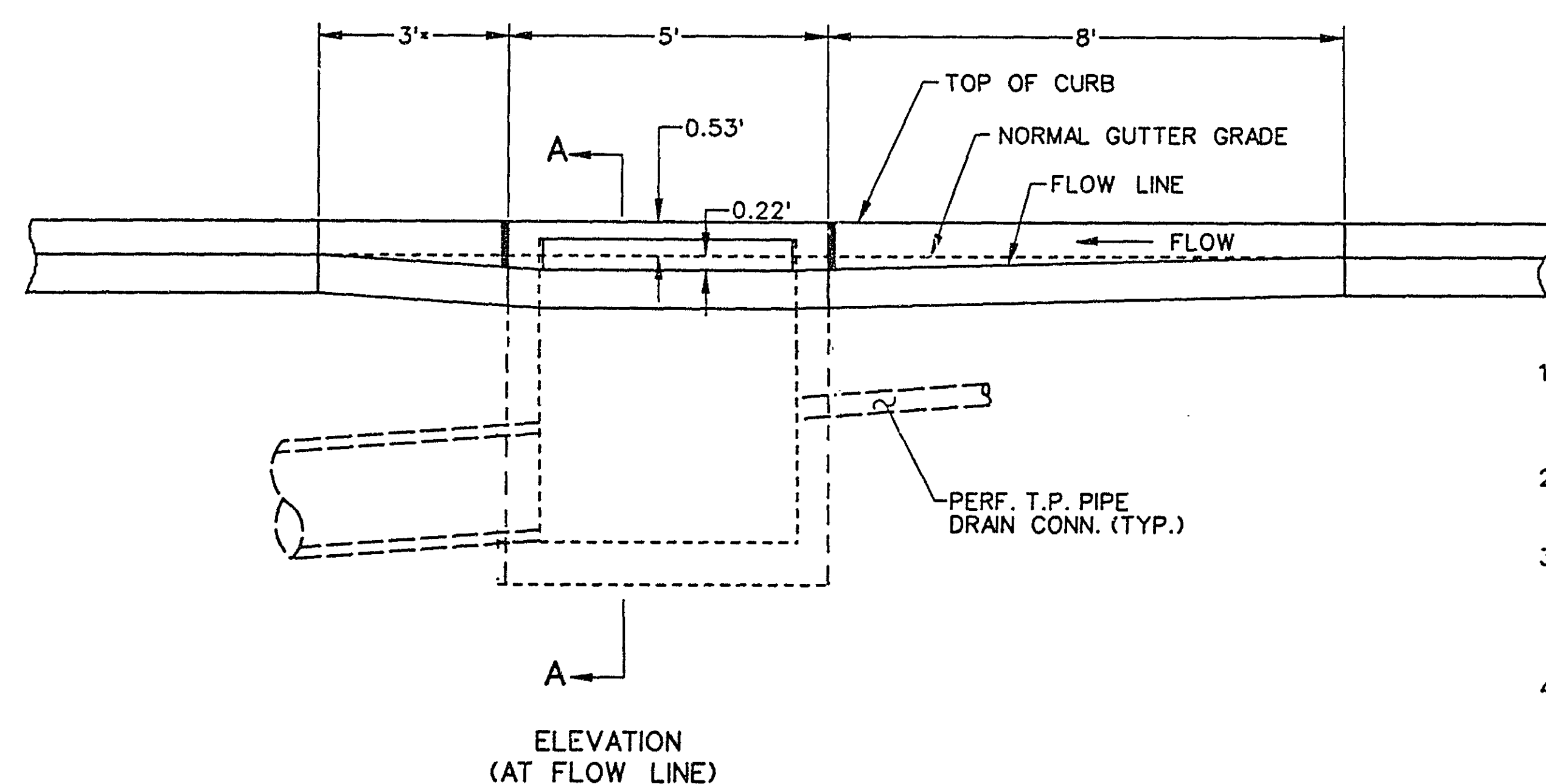
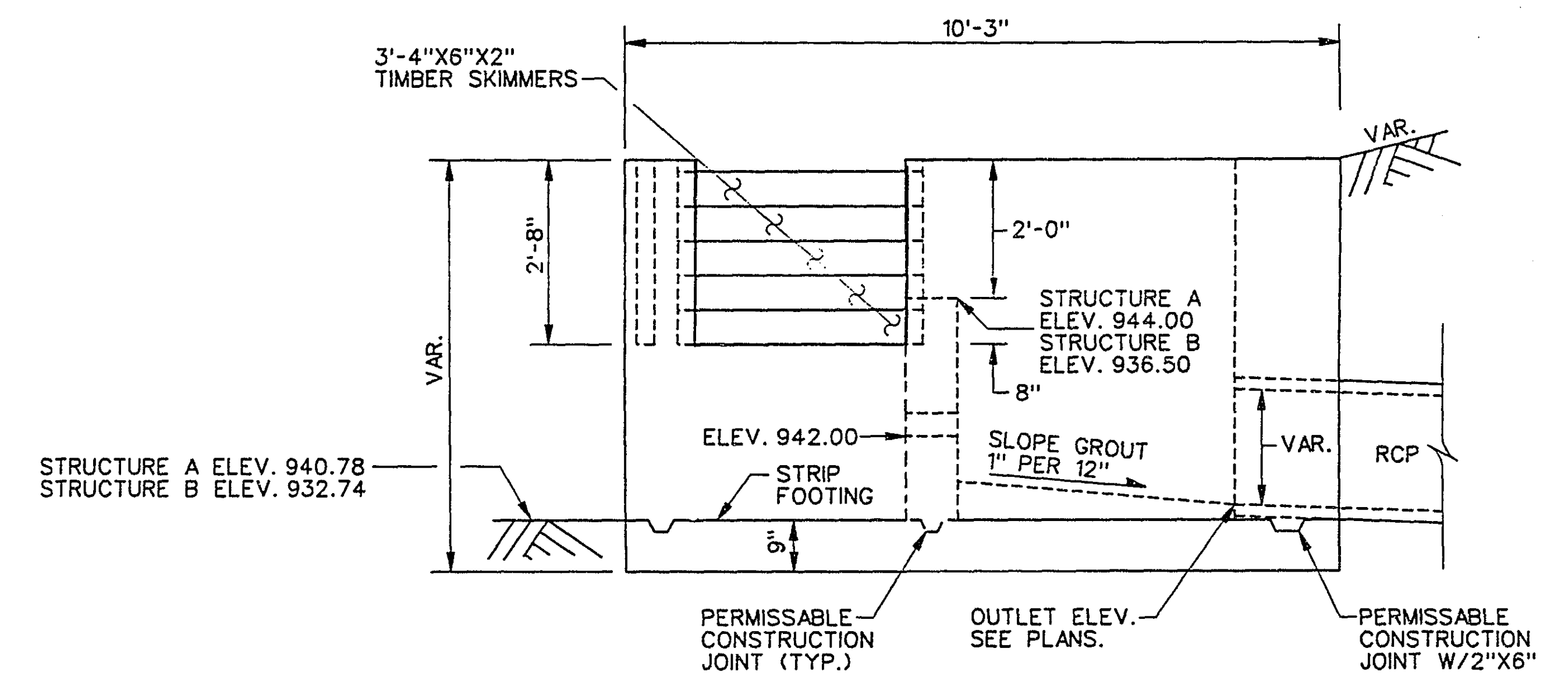
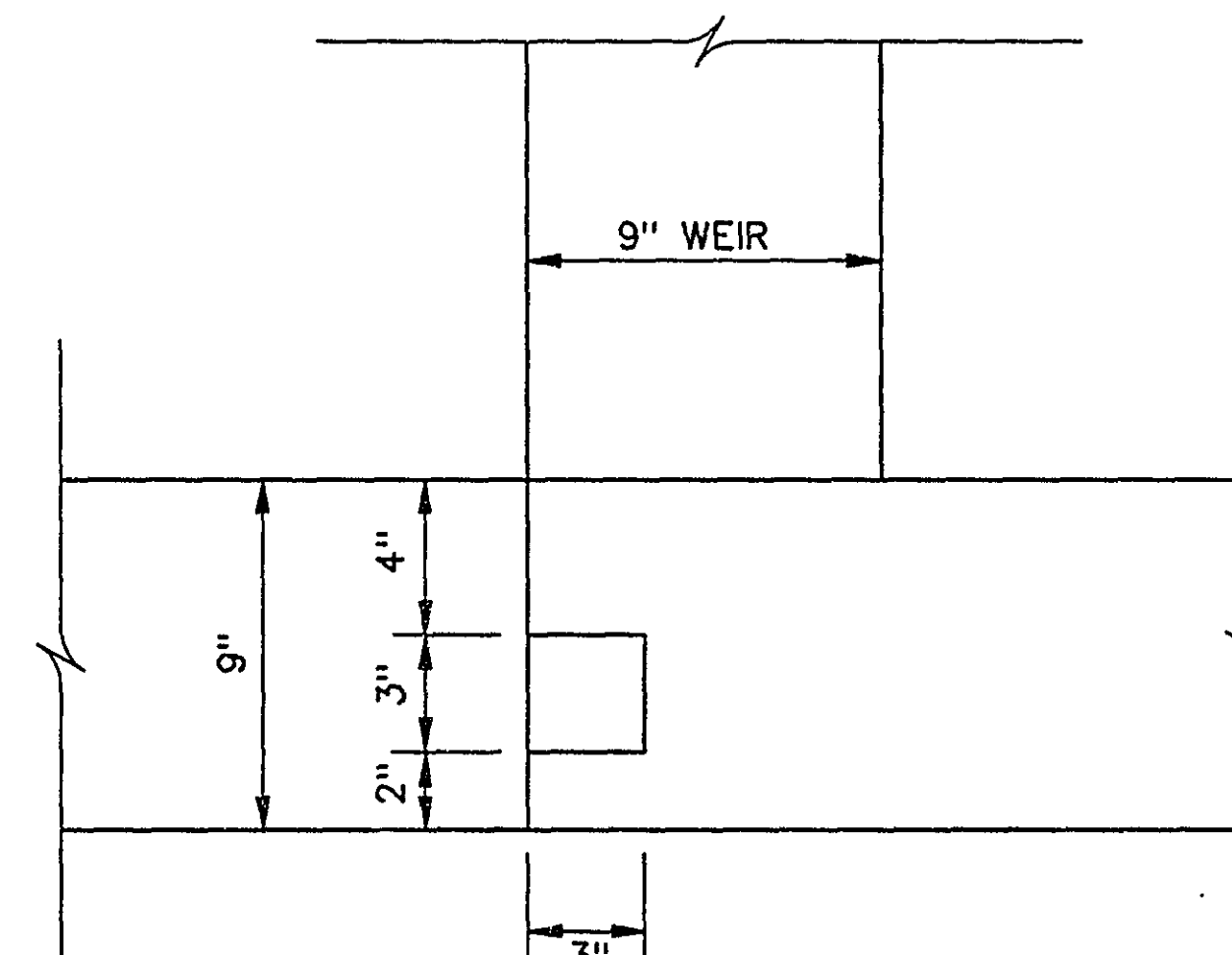
STATE PROJ. NO. 62-644-13	DRAWN BY B. DOYLE	DATE 4-94	SHEET 20
	DESIGNED BY L. ERICKSON	DATE 4-94	OF 155
	CHECKED BY		COMM. NO. 0931880

28-153



SLOTTED VANE DRAIN DETAIL

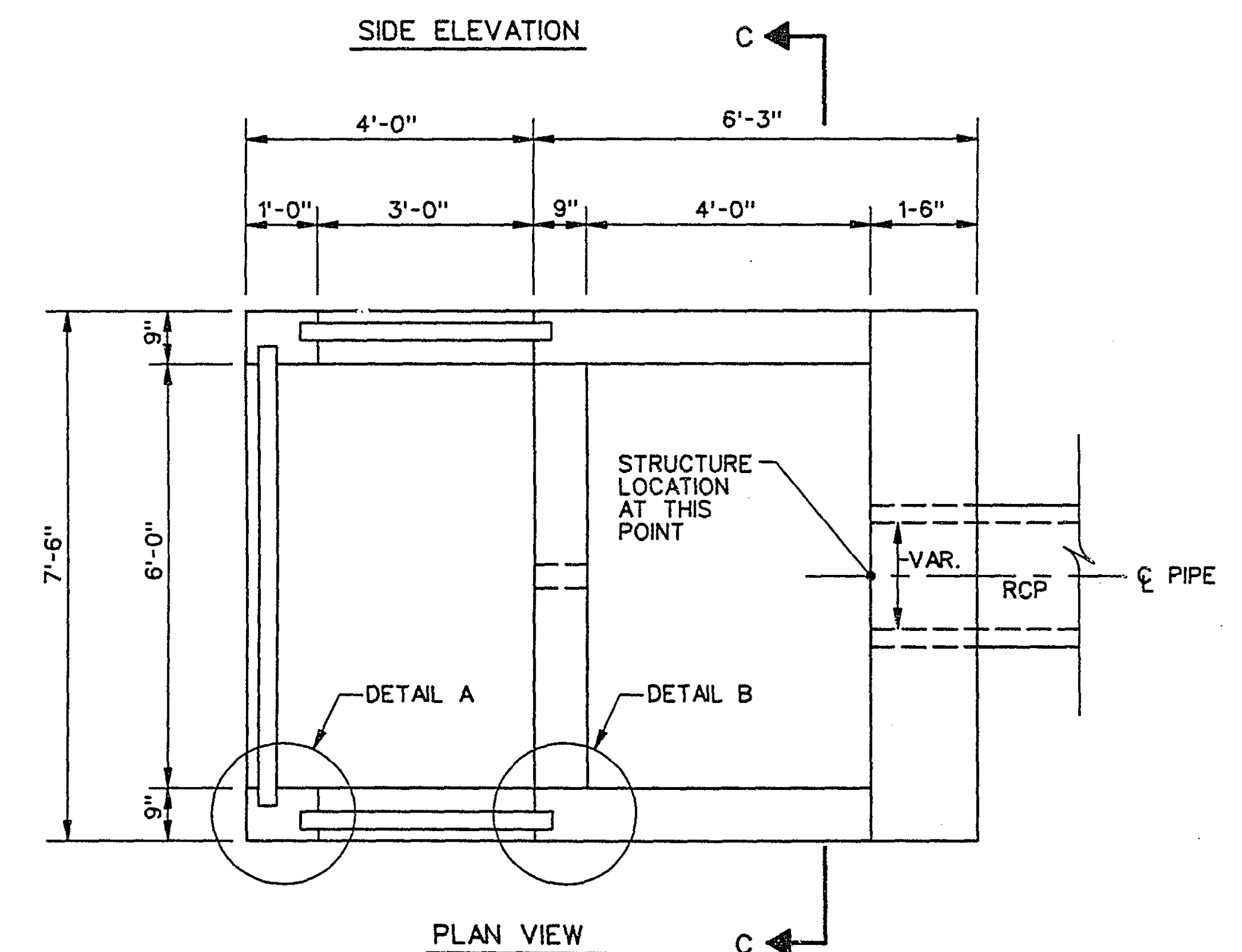
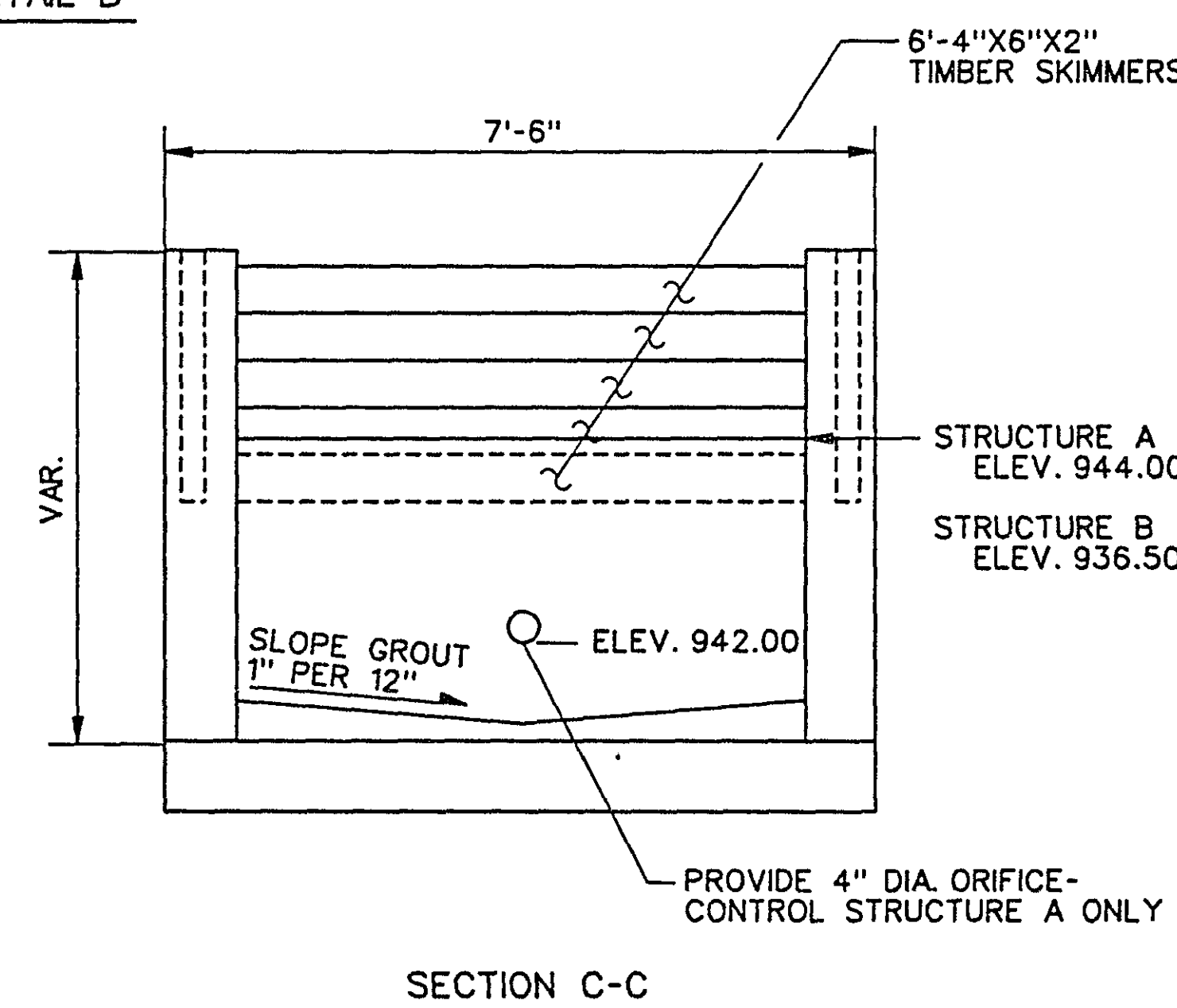
(SEE MN/DOT STD. PLATE NO. 3136A)
(PAID FOR UNDER ITEM 0503.603- 15" PVC SLOTTED DRAIN)



CURB OPENING CATCH BASIN - DESIGN LP 4
INSTALLATION DETAIL

NOTES

1. DIMENSION SHALL BE 8' WHEN STRUCTURE IS INSTALLED AT LOW POINT IN GRADE.
2. CATCH BASIN - DESIGN LP - SEE MN/DOT STD. PL. NO. 4016.
3. TOP OF CATCH BASIN SHALL BE INSTALLED AT SAME SLOPE AS BLVD. GRADES AND TOP OF CURB GRADE EACH SIDE OF STRUCTURE.
4. ELEVATION OF STRUCTURE IS COMPUTED AT LOCATION SHOWN IN SEC. A-A AT C. OF C.B. OPENING.
5. TIMBER SKIMMERS SHALL BE TONGUE AND GROVE, INSTALLED WITH TONGUE UPWARD.
6. ALL CONSTRUCTION JOINTS TO HAVE 2"x4" KEYWAYS UNLESS NOTED OTHERWISE. STRUCTURE A & B
7. SEE SHEET 22 FOR REINFORCEMENT DETAIL. STRUCTURE A & B



CONTROL STRUCTURES A & B

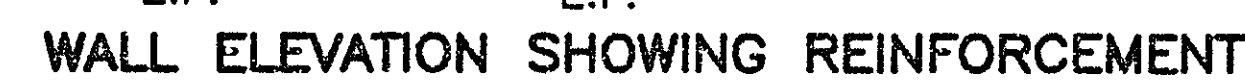
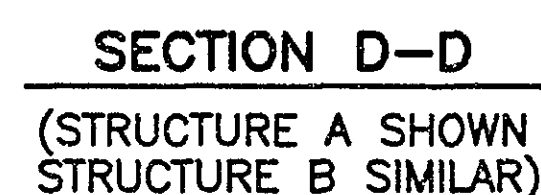
1	12-28-94	MCI	LAE	REVISE CONTROL STRUCTURE A & B DETAIL
2	3-9-95	MCI	SNB	REVISE PER STATE AID REVIEW
NO	DATE	BY	CKD APPR	REVISION

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CONSULTING ENGINEERS ■ LAND SURVEYORS

I hereby certify that this plan, specification or report 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.
S. J. Eide
Date 12/12/94 Reg. No. 4546

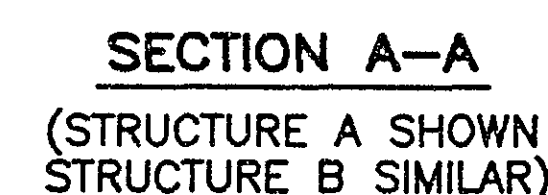
CITY OF NEW BRIGHTON
DETAILS
SILVER LAKE ROAD

STATE PROJ. NO.	DATE	SHEET
62-644-13	9-94	21
DRAWN BY S. MARTINS	DESIGNED BY J. ROSENOW	OF 155
CHECKED BY		COMM. NO.
		0931880



A diagram showing a right-angled corner. A vertical line segment is labeled 'A' with a double-headed arrow indicating its length. A horizontal line segment is labeled 'B' with a double-headed arrow indicating its length. The two segments meet at a right angle, forming an L-shape.

W404E, W405E
W412E. & W413E



1. ALL REINFORCEMENT BARS TO HAVE 2" MIN. COVER UNLESS NOTED OTHERWISE.
2. E.F. DENOTES EACH FACE

28-154

[illegible]

I hereby certify that this plan, specification or report 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.

Sam A. Eshen

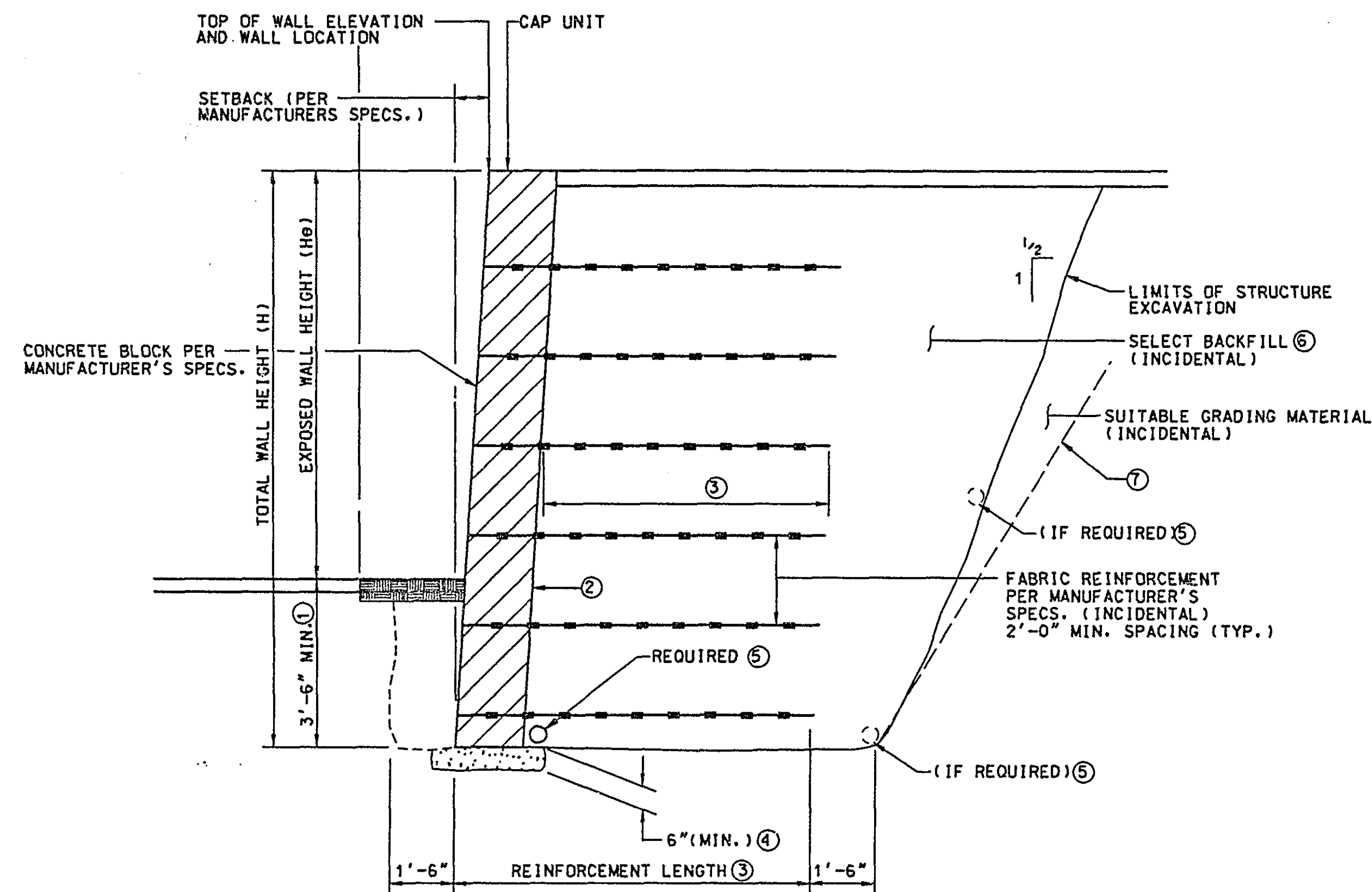
Date 12/4/94 Reg. No. 14526

DETAILS
SILVER LAKE ROAD

S.P. 62-644-13

-13	DRAWN BY	DATE
	J. HOFFMAN	10-94
	DESIGNED BY	
	L. ERICKSON	10-94
	CHECKED BY	
	J. ROSENOW	10-94

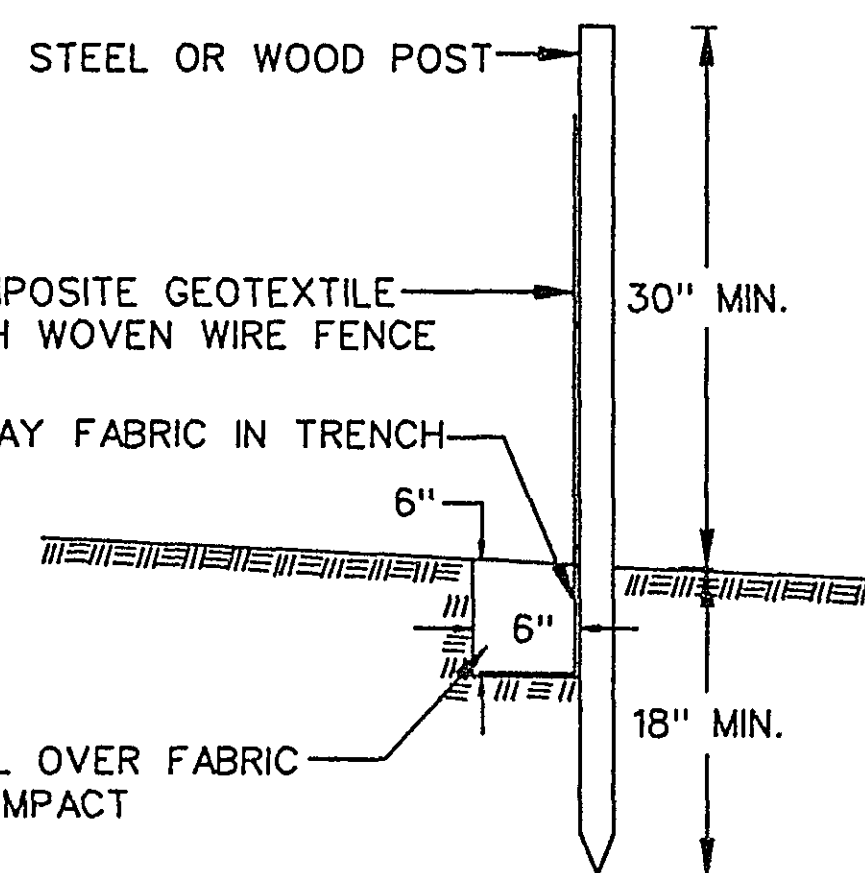
E 94 94 94	SHEET 22
	OF 155
	COMM. NO. 0931880



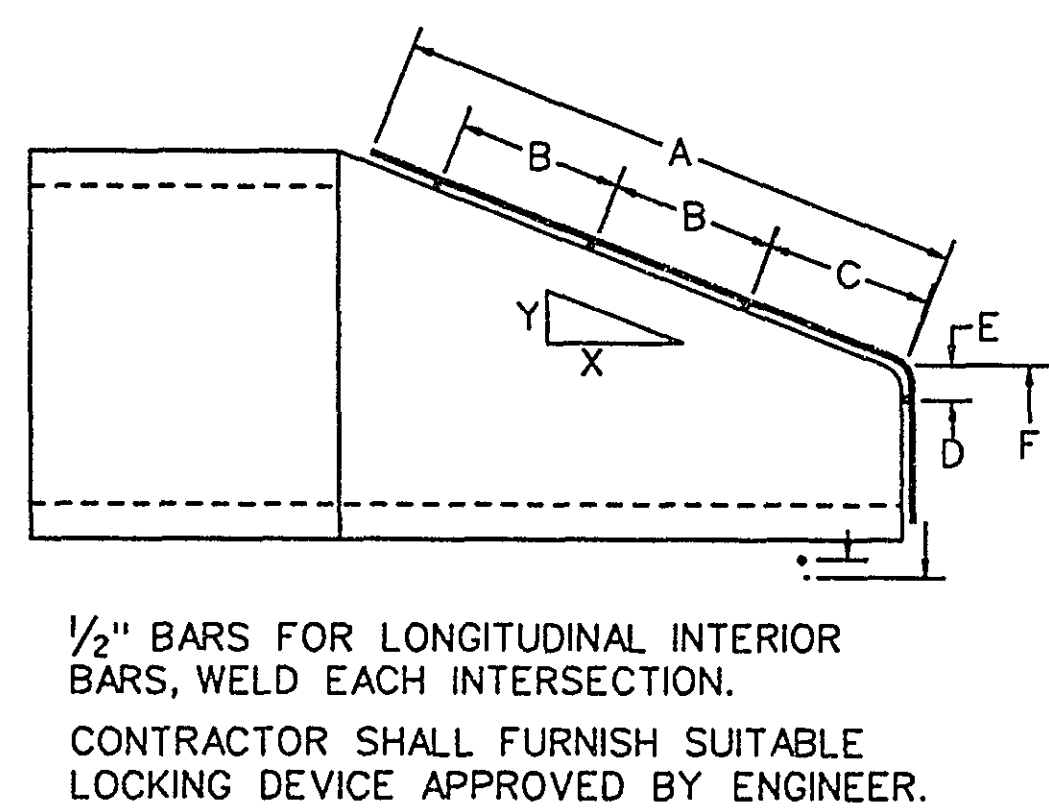
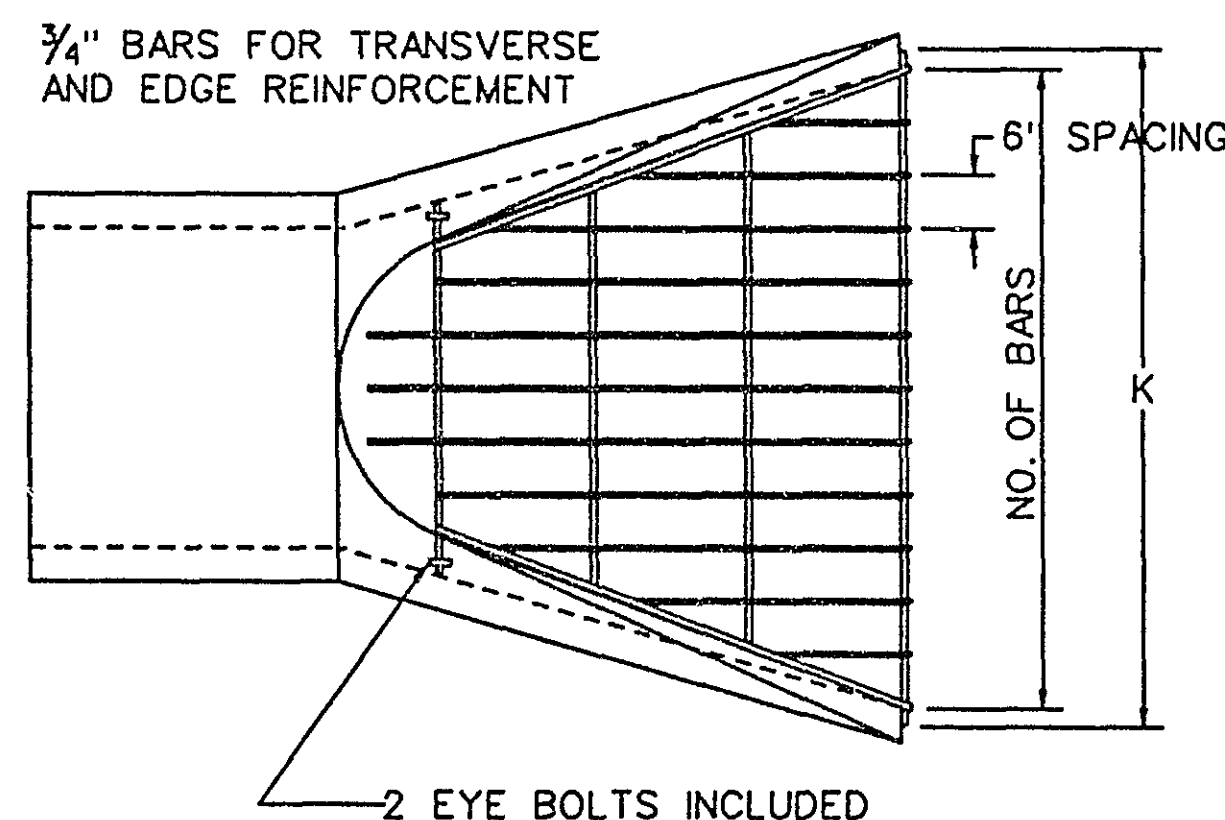
CONCRETE BLOCK RETAINING WALL DETAIL

NOTES:

- FOR WALLS WITH (H_e) LESS THAN 4 FT., MINIMUM EMBEDMENT SHALL BE PER MANUFACTURER'S RECOMMENDATION. FOR WALLS WITH (H_e) GREATER THAN 4 FT., THE MINIMUM EMBEDMENT SHALL BE 3.5 FT.
- TYPE 1 GEOTEXTILE TO BE PLACED ON BACKSIDE OF WALL.
- THE MINIMUM REINFORCEMENT LENGTH SHALL BE 8 FEET UNLESS A DETAILED ANALYSIS SHOWS A LONGER LENGTH IS REQUIRED. FOR WALLS WITH (H_e) LESS THAN 4 FT., THE MINIMUM LENGTH SHALL BE PER MANUFACTURER'S RECOMMENDATION.
- AGGREGATE BASE OR OPTIONAL NON-REINFORCED CONCRETE LEVELING PAD AS APPROVED BY THE ENGINEER, 6" MIN. (INCIDENTAL)
- 4" T.P. PERF. DRAIN PIPE, MN/DOT 3278, W/ TYPE 1 GEOTEXTILE, MN/DOT 3733, PROJECT ENGINEER SHALL HAVE ADDITIONAL DRAINS PLACED TO INTERCEPT ANY WATER-BEARING SOIL STRATA DISCOVERED DURING CONSTRUCTION. (INCIDENTAL)
- SELECT BACKFILL TO MEET MN/DOT 3149-28 MODIFIED TO 10% OR LESS PASSING THE #200 SIEVE, 100% MUST PASS THE 4" SIEVE. (INCIDENTAL TO CONCRETE BLOCK RETAINING WALL)
- SLOPE IS DETERMINED BY OSHA REGULATIONS AND IN-SITU SOILS; EXCAVATION BEYOND "PAY LIMITS OF STRUCTURE EXCAVATION" SHALL BE PAID FOR AT CONTRACTOR'S EXPENSE.
- SUBGRADE PREPARATION AND MODIFIED DEPTH WILL BE CONSIDERED TO BE INCIDENTAL TO COMMON EXCAVATION.



HEAVY DUTY SILT FENCE INSTALLATION

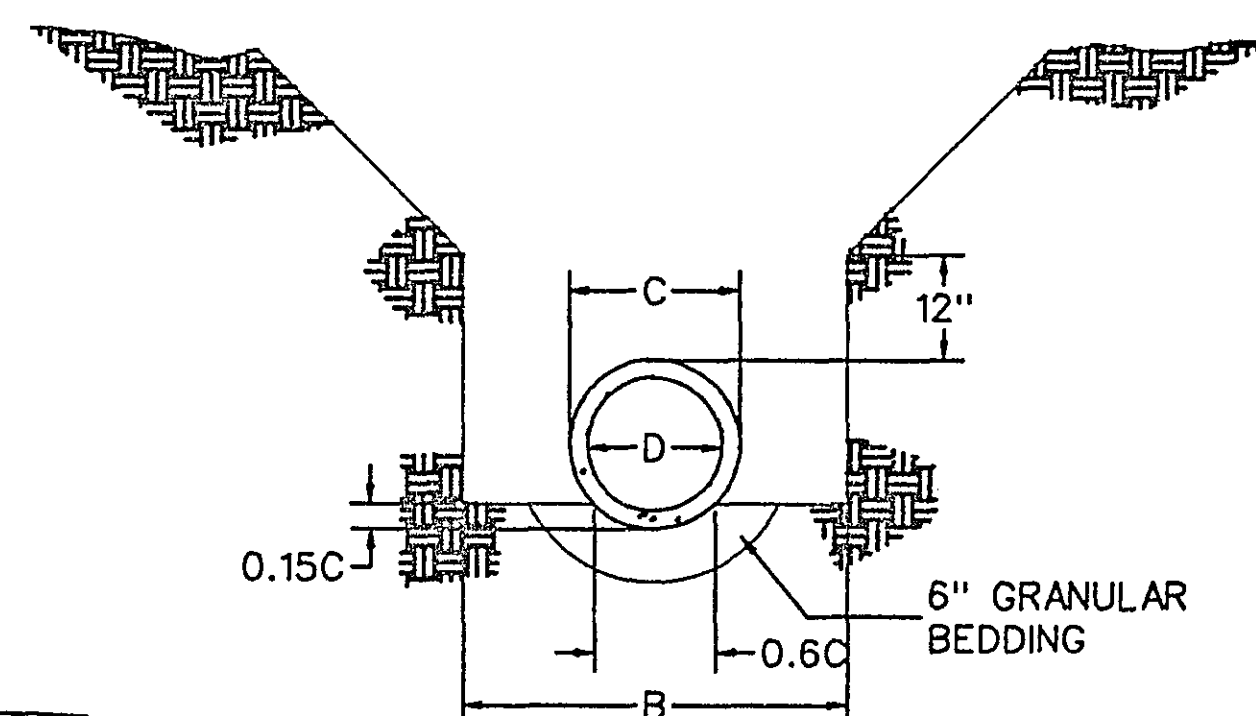


SIZE	NO. OF BARS	X-Y SLOPE	A	B	C	D	E	F	K
12"	5	3 to 1	24"	7"	6"	5"	2"	8"	30"
15"	6	3 to 1	24"	7"	6"	6"	2"	10"	34"
18"	7	3 to 1	24"	7"	6"	6"	3"	12"	40"
21"	8	3 to 1	36"	11"	10"	7"	3"	12"	50"
24"	9	3 to 1	44"	14"	12"	10"	4"	16"	52"
27"	10	3 to 1	50"	16"	14"	10"	4"	16"	58"
30"	11	3 to 1	56"	18"	16"	12"	4"	18"	64"
36"	13	3 to 1	64"	20"	20"	12"	4"	18"	76"
42"	15	3 to 1	68"	22"	20"	14"	8"	26"	88"
48"	16	3 to 1	76"	24"	24"	16"	10"	28"	92"
54"	17	2.4:1	76"	24"	24"	16"	12"	32"	96"
66"	18	1.7:1	84"	24"	24"	18"	14"	36"	110"

TRASH GUARD (GALVANIZED)
(FOR CONCRETE APRON)

NOTE: BORE OR BREAK OUT AND FORM, 6" (1 1/2") DIAMETER HOLE FOR EACH POST.

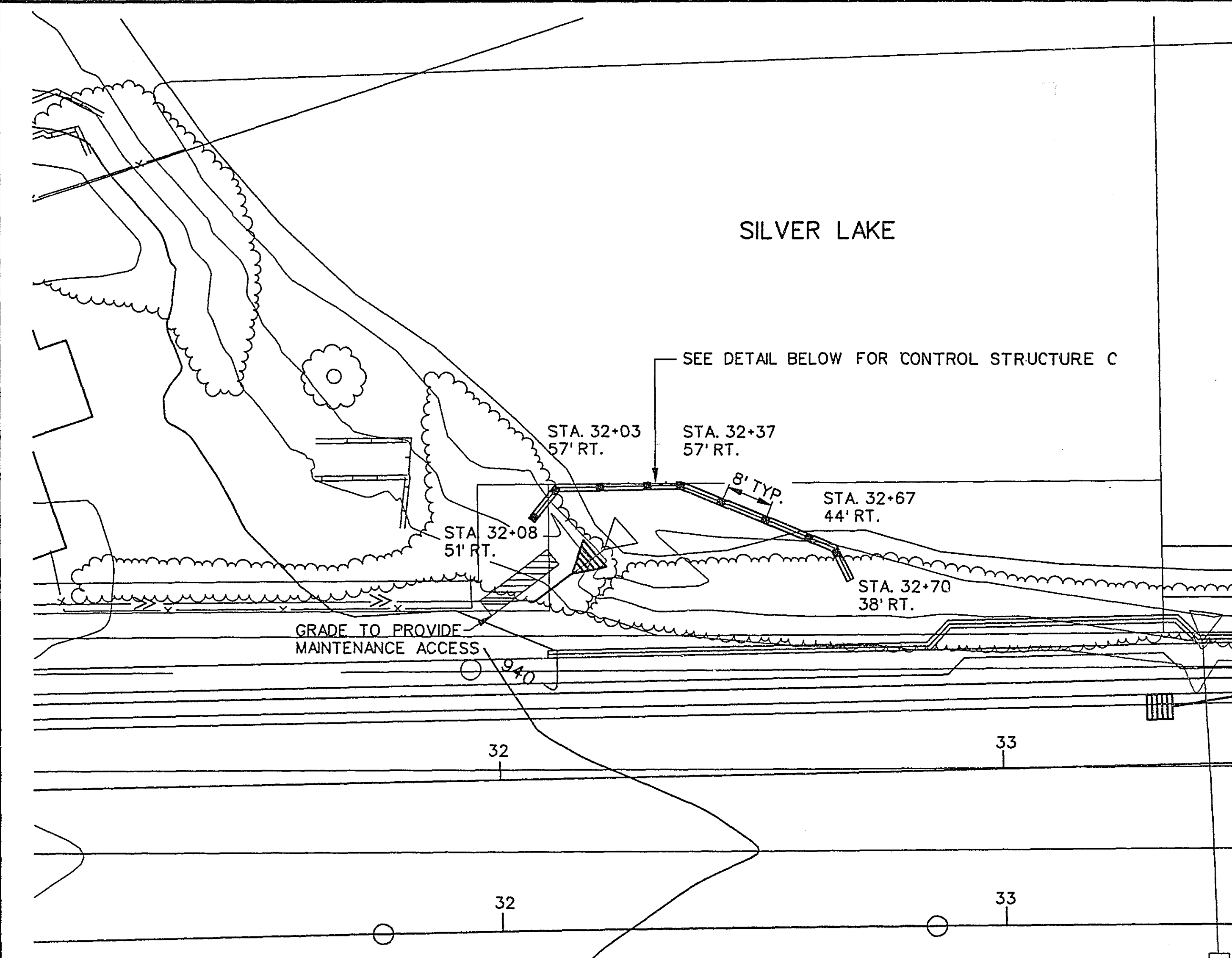
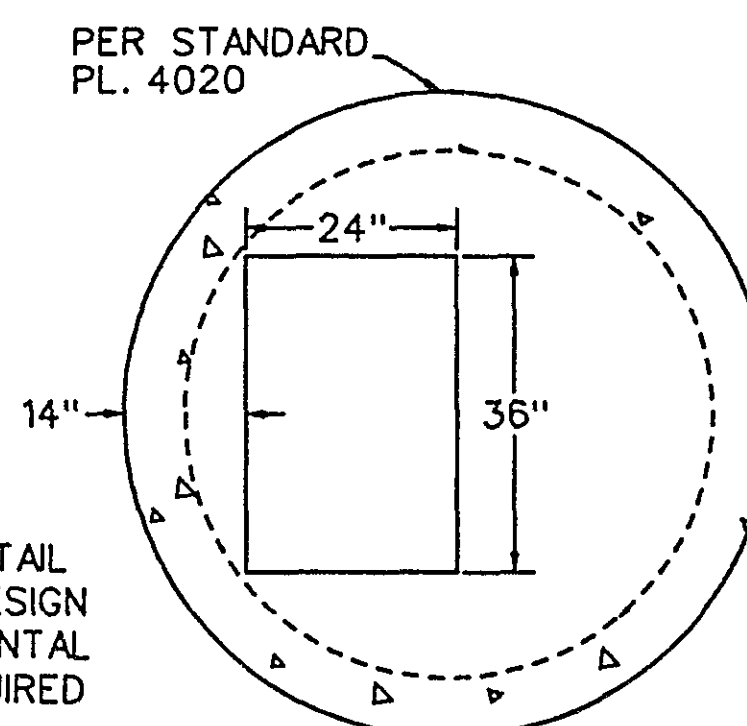
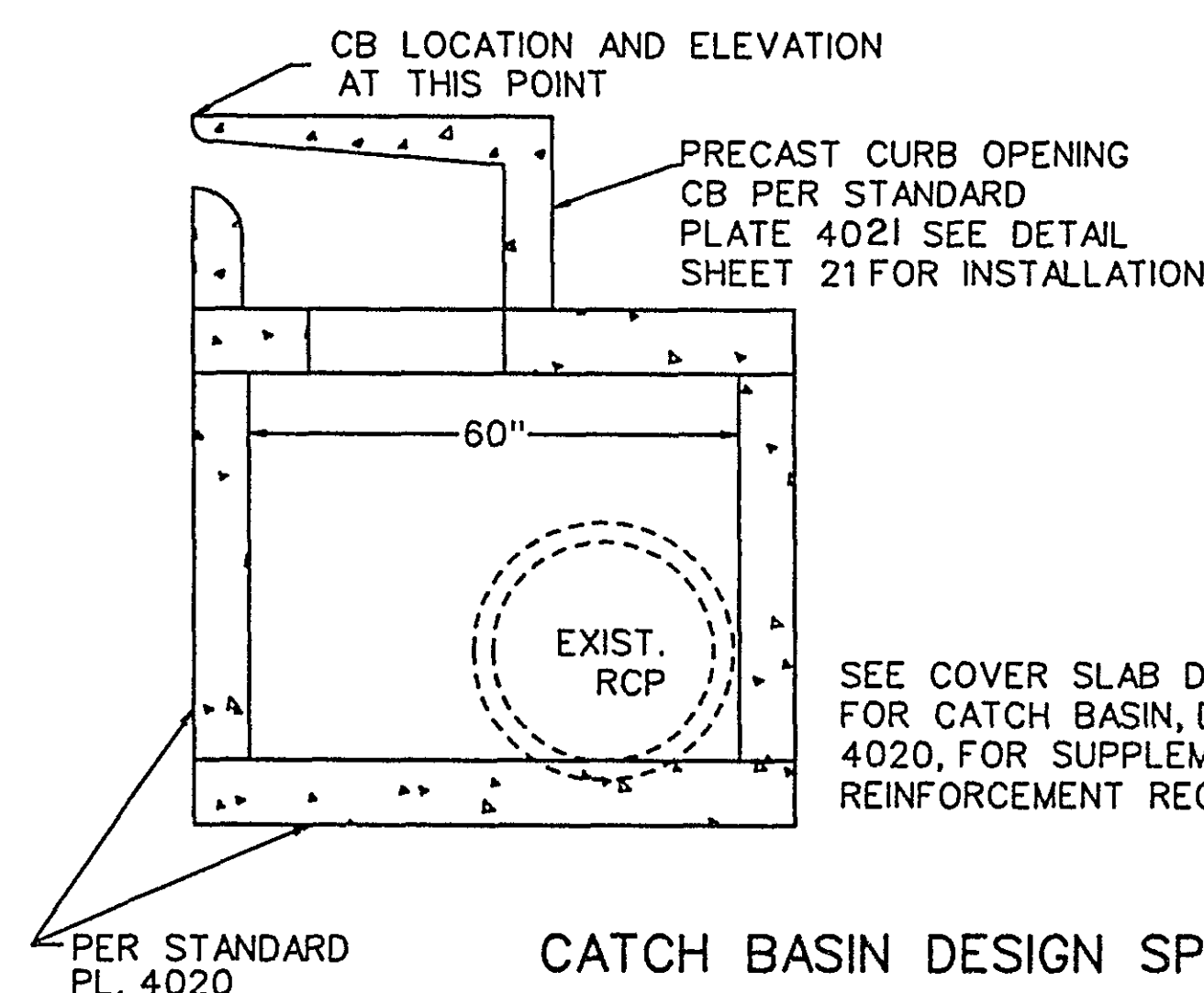
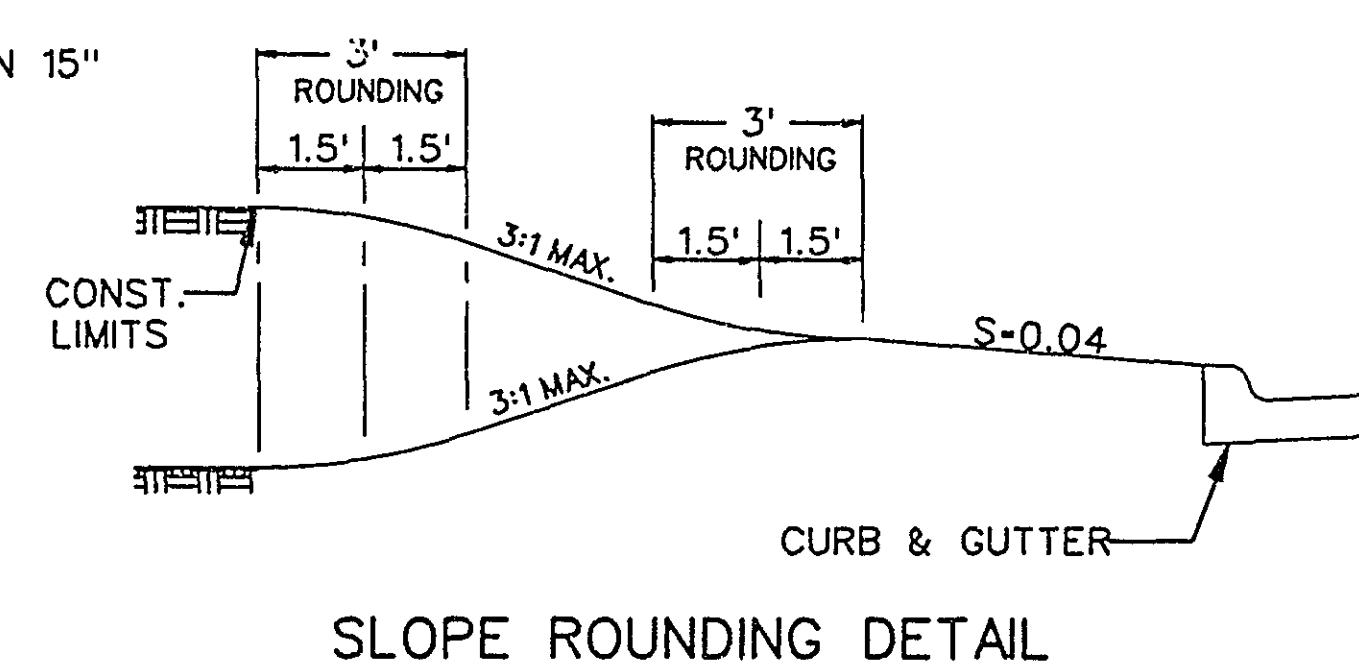
FLANGED CHANNEL POST MOUNTED THROUGH SURFACED MEDIAN OR SIDEWALK



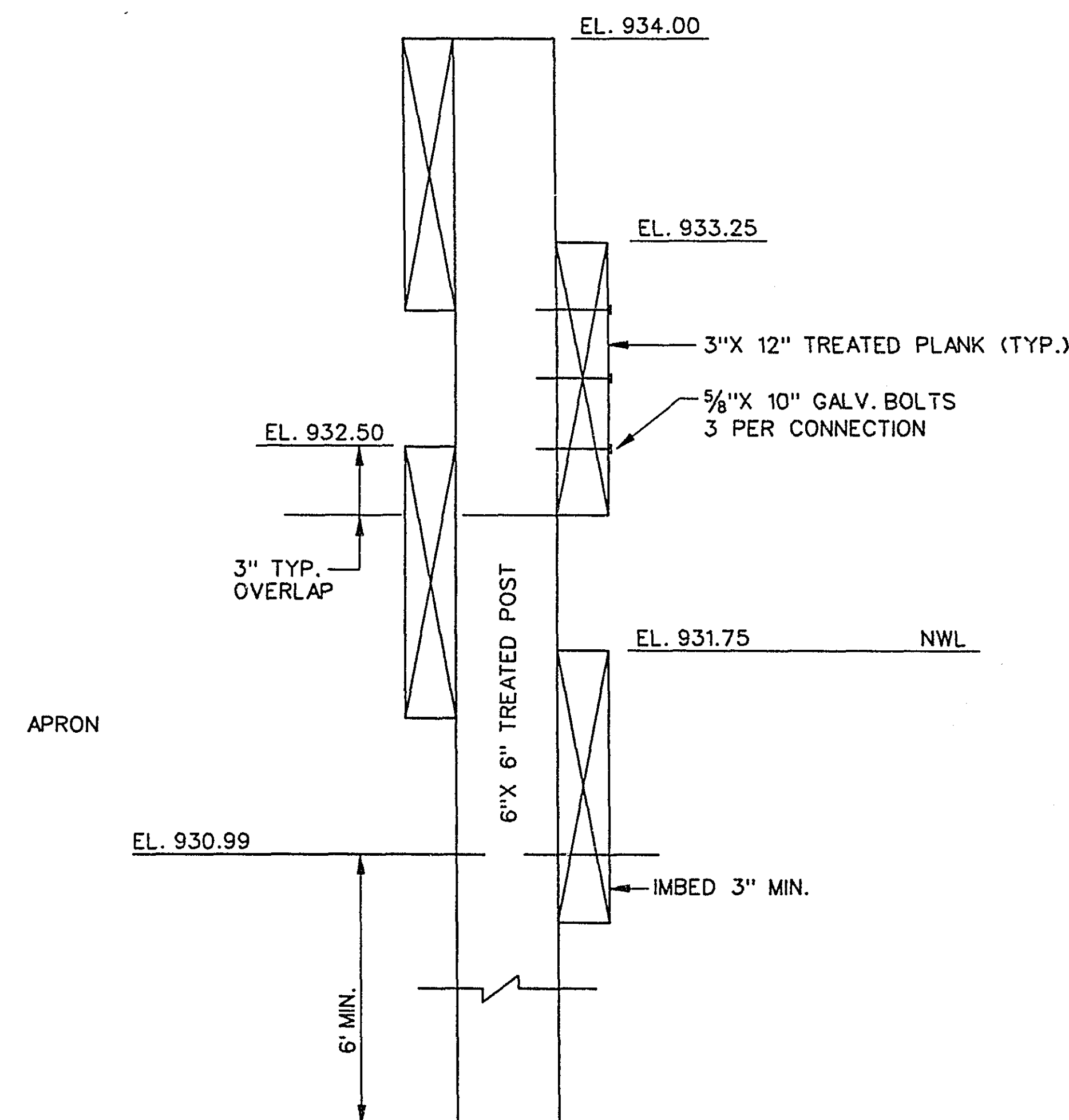
PIPE DIA.	B
36" OR LESS	C+24"
42" TO 54"	1.5XC
60" OR OVER	C+36"

TRENCH WIDTH REQUIREMENTS AS SHOWN
DO NOT APPLY FOR OVERFILLS LESS THAN 15"

PIPE BEDDING DETAIL



CONTROL STRUCTURE C PLAN



CONTROL STRUCTURE C ELEVATION

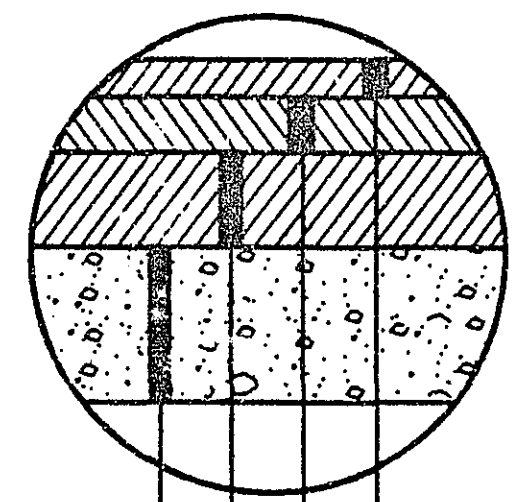
1	3-9-95	MCI	LAE		REVISE PER STATE AID REVIEW
NO	DATE	BY	CKD	APPR	REVISION

SRF STRGAR-ROSCOE-FAUSCH, INC.
CONSULTING ENGINEERS ■ LAND SURVEYORS

I hereby certify that this plan, specification or report 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.
Date 9/22/94 Reg. No. 14546

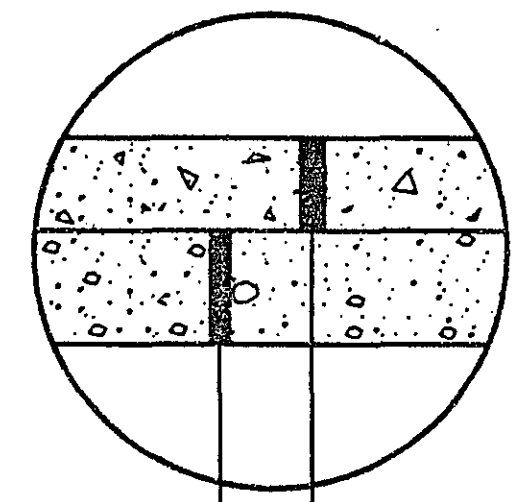
CITY OF NEW BRIGHTON
DETAILS
SILVER LAKE ROAD

STATE PROJ. NO.	62-644-13	DRAWN BY	B. DOYLE	DATE	4-94	SHEET	23
		DESIGNED BY	L. ERICKSON		4-94	OF	155
		CHECKED BY				COMM. NO.	0931880



- 1/2" BITUMINOUS WEARING COURSE
MN/DOT SPEC. 2340, TYPE 47 (47WEA75070X)
- 2 1/2" BITUMINOUS BINDER COURSE
MN/DOT SPEC. 2340, TYPE 47 (47BIB50070X)
- 3 1/2" BITUMINOUS BASE COURSE
MN/DOT SPEC. 2340, TYPE 31 (31BBB50000Y)
- 12" AGG. BASE CLASS 6
MN/DOT SPEC. 2211

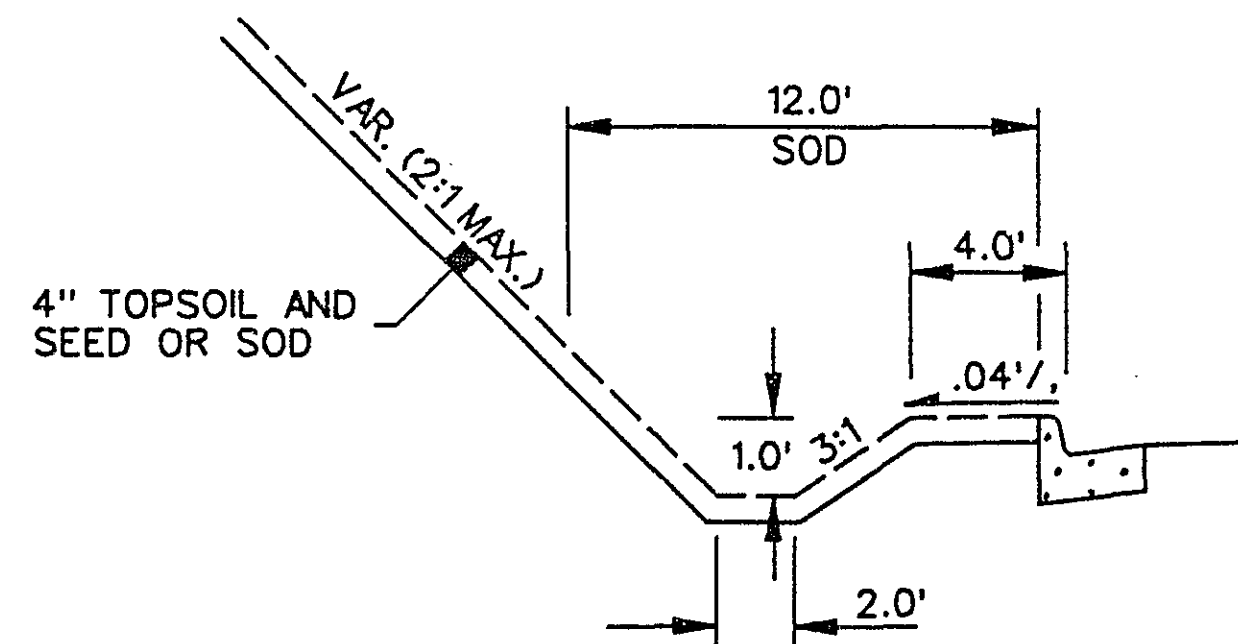
DETAIL A



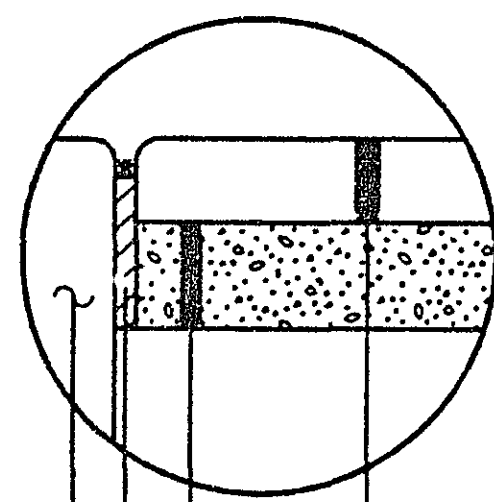
- 4" CONCRETE WALK
MN/DOT SPEC. 2521
- 6" SELECT GRANULAR MATERIAL
MN/DOT SPEC. 3149, 2B

DETAIL B

4" CONCRETE WALK

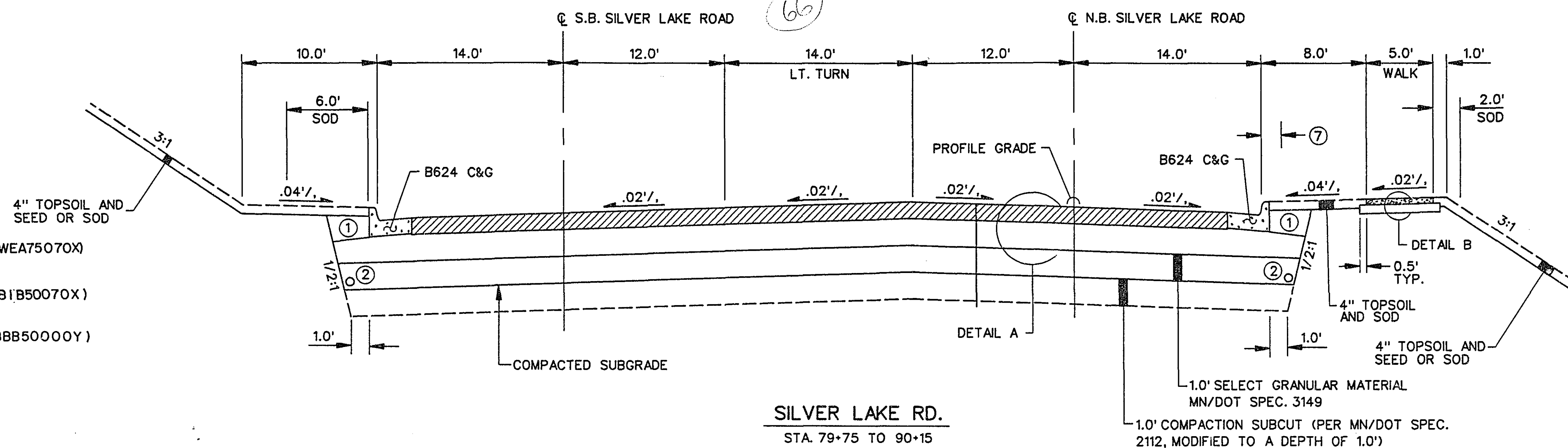


DITCH SECTION LT.
STA. 65+90 TO 70+00

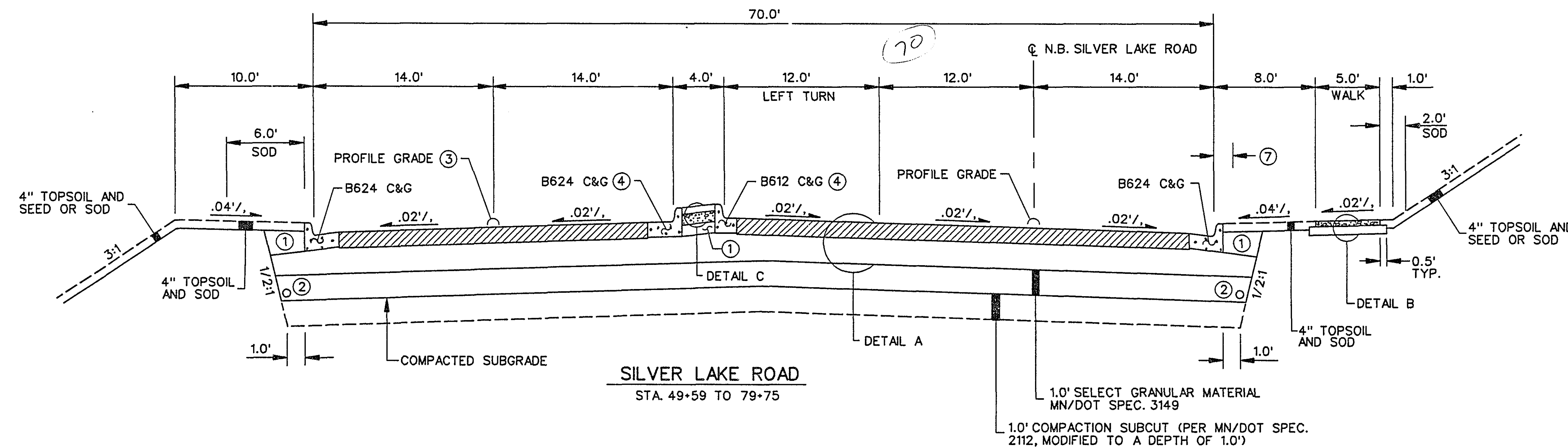


- 3" CONCRETE WALK (6)
- 4" AGG. BASE CLASS 6
MN/DOT SPEC. 2211
- 1/2" EXPANSION JOINT
MN/DOT SPEC. 3702
- CONCRETE CURB AND GUTTER

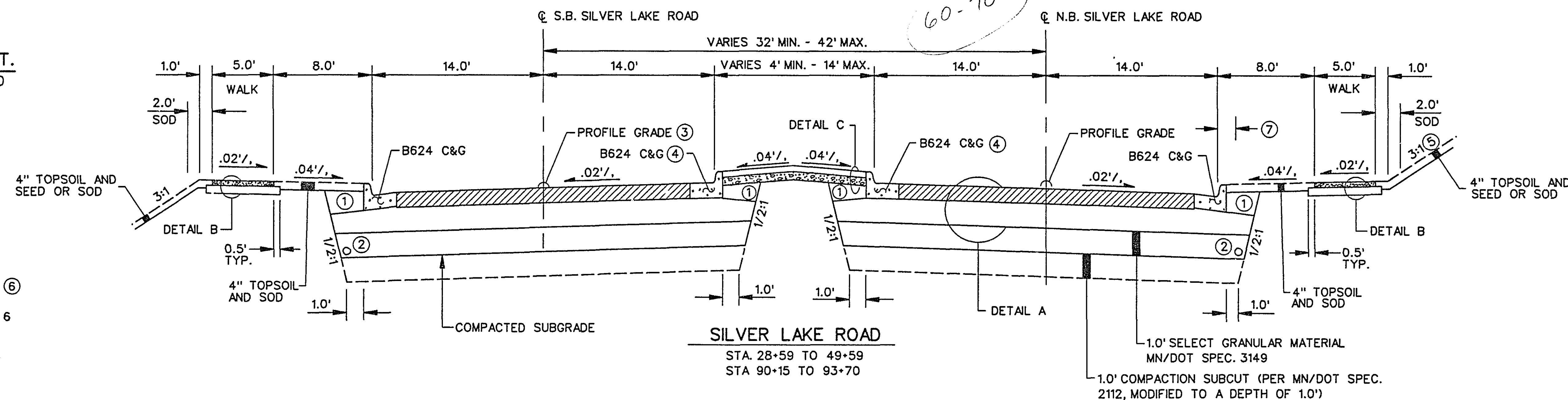
DETAIL C
3" CONCRETE WALK



SILVER LAKE RD.
STA. 79+75 TO 90+15



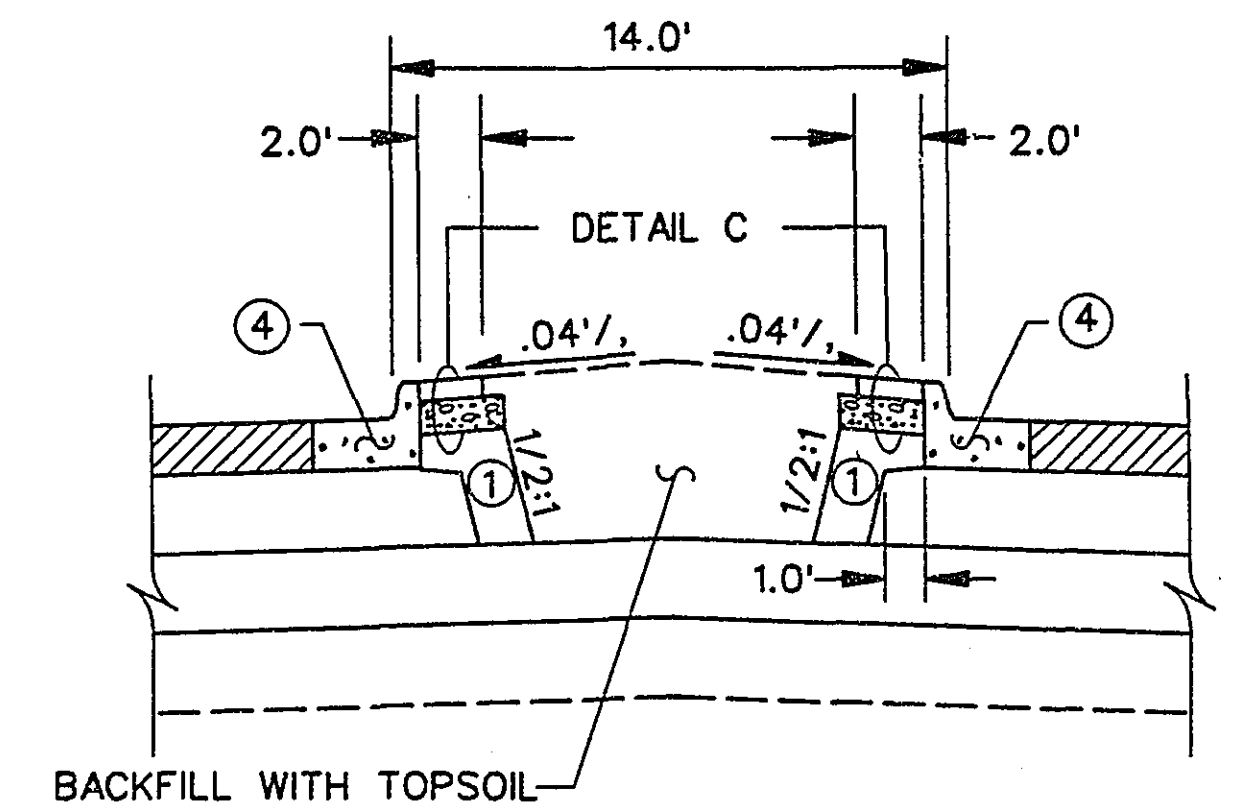
SILVER LAKE ROAD
STA. 49+59 TO 79+75



SILVER LAKE ROAD
STA. 28+59 TO 49+59
STA. 90+15 TO 93+70

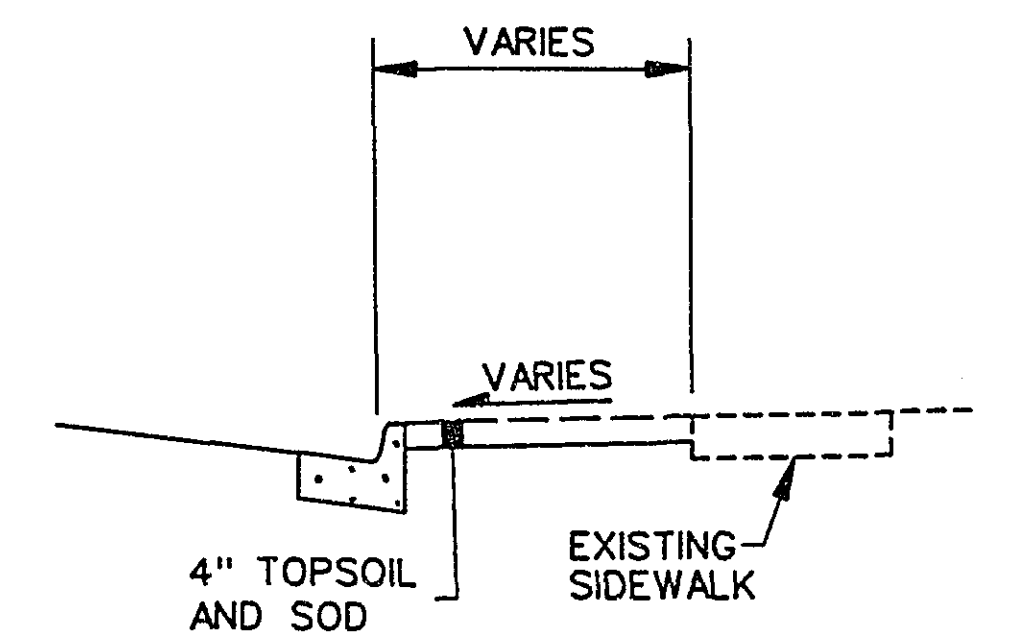
DRIVEWAY SECTIONS

- GRAVEL SURFACED:
6" AGGREGATE SURFACING CLASS 6, Mn/DOT SPEC. 2118.
- BITUMINOUS SURFACED:
2" BITUMINOUS WEARING COURSE TYPE 41, Mn/DOT SPEC. 2340.
2" BITUMINOUS BASE COURSE TYPE 31, Mn/DOT SPEC. 2340.
6" AGGREGATE BASE CLASS 6, Mn/DOT SPEC. 2211.
- CONCRETE SURFACED:
6" CONCRETE DRIVEWAY PAVEMENT, Mn/DOT SPEC. 2531
6" AGGREGATE BASE CLASS 6, Mn/DOT SPEC. 2211.



FULL MEDIAN DETAIL

STA. 59+35 TO 62+55
STA. 68+65 TO 74+95



BOULEVARD DETAIL RT.
STA. 28+59 TO 36+87

NOTE:

- BACKFILL WITH SUITABLE GRADING MATERIAL.
- 4" PERFORATED T.P. PIPE DRAIN - MN/DOT SPEC. 3245, WITH TYPE 1 GEOTEXTILE WRAP - MN/DOT SPEC. 3733. PROVIDE 2" MINIMUM FINE FILTER AGGREGATE AT ALL POINTS AROUND THE PIPE. GEOTEXTILE AND FINE FILTER AGGREGATE SHALL BE CONSIDERED INCIDENTAL. SEE DETAIL F.
- PROFILE ELEVATION TO BE EQUIVALENT TO THAT OF N.B. SILVER LAKE ROAD.
- MODIFY GUTTER TO MATCH SLOPE OF ADJACENT LANE.
- VARY SLOPE STA. 46+00 TO 49+00 WHERE NECESSARY TO AVOID REMOVAL OF EXISTING TREES.
- SPECIAL SURFACE TREATMENT. SEE DETAIL ON SHEET 20.
- A 1.5' OBSTACLE-FREE CLEAR ZONE IS REQUIRED FROM FACE OF CURB (TYP.)

NO	DATE	BY	CKD	APPR	REVISION
1	12-28-94	MC	LAE		ADD BIT. DESIGNATION

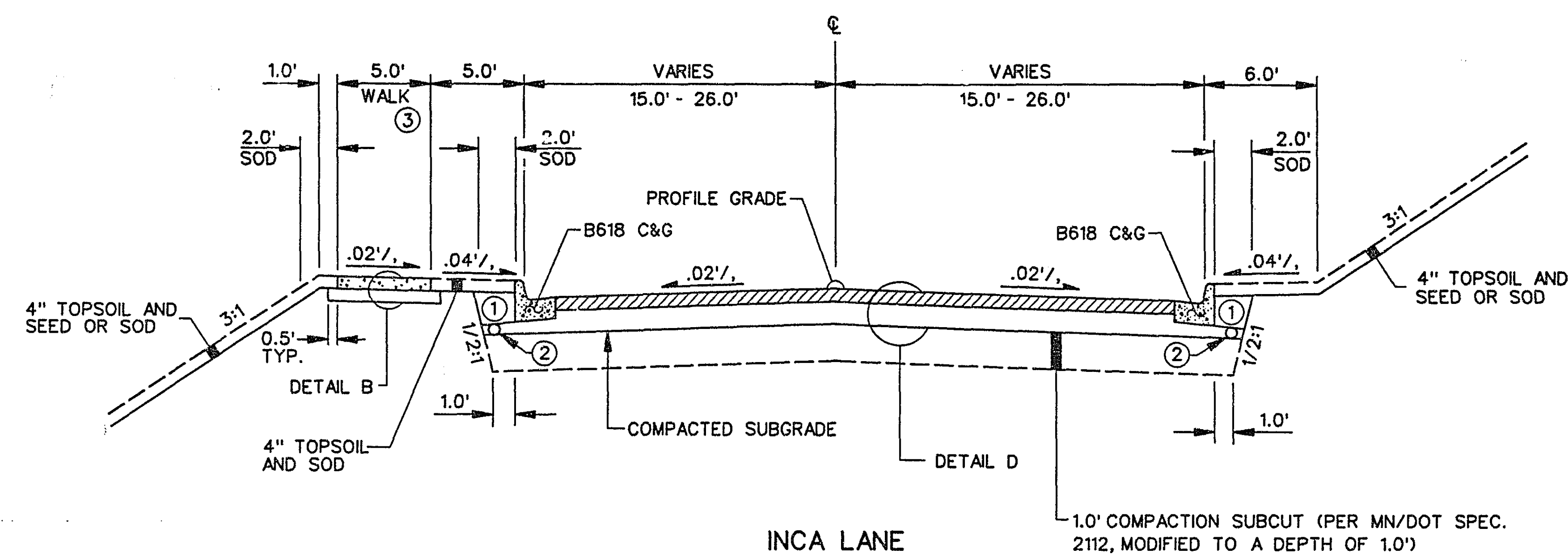
SRF

STRGAR-ROSCOE-FAUSCH, INC.
CONSULTING ENGINEERS ■ LAND SURVEYORS

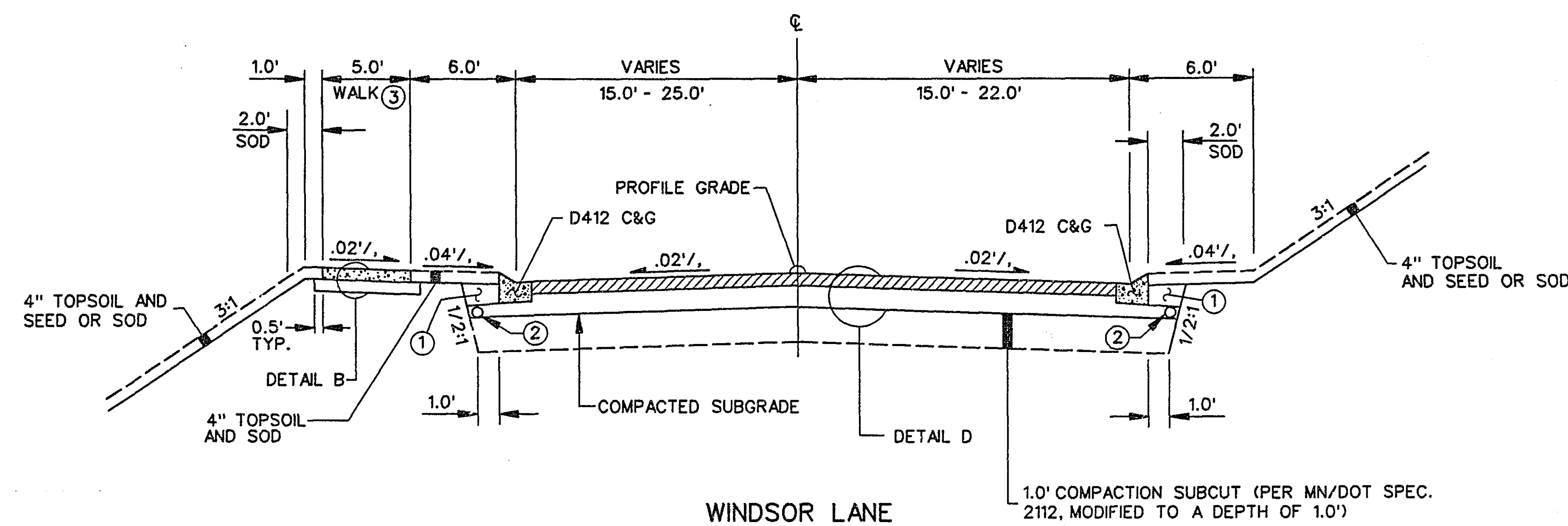
I hereby certify that this plan, specification or report was prepared by me or under my direct supervision and that I am a duly Registered Professional Engineer under the laws of the State of Minnesota.
Signature
Date 12/14/94 Reg. No. 18546

CITY OF NEW BRIGHTON
TYPICAL SECTIONS
SILVER LAKE ROAD

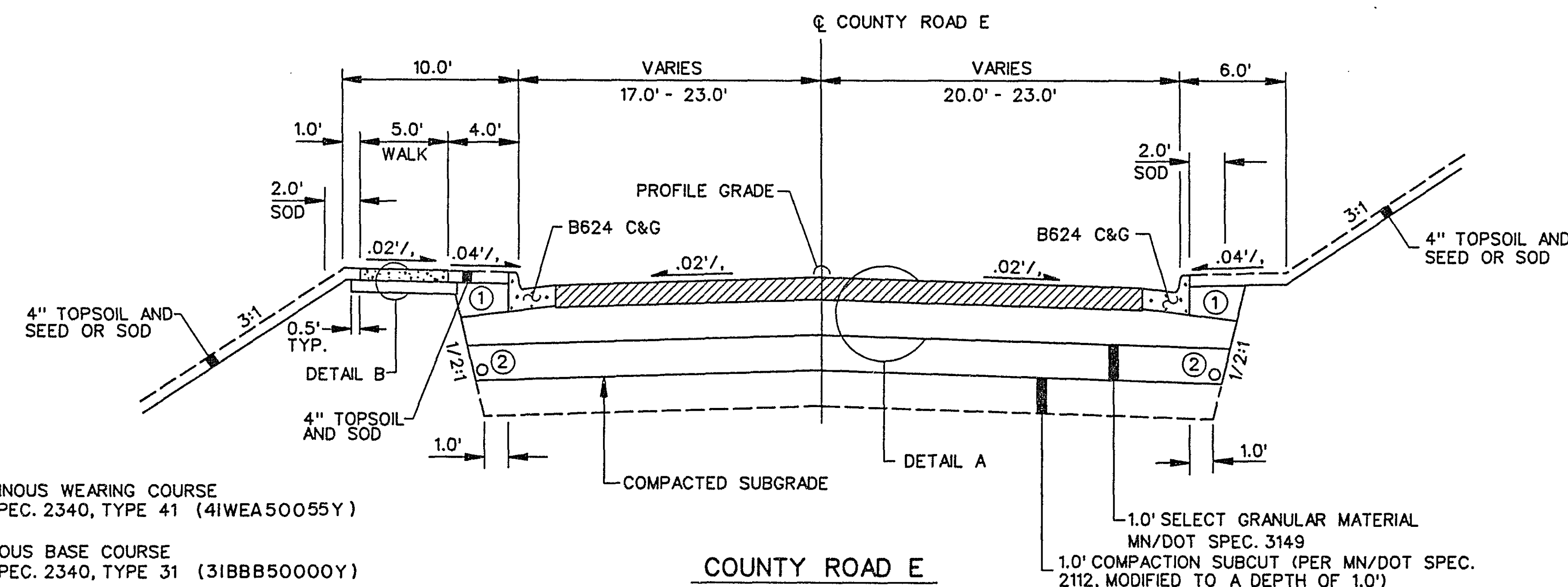
STATE PROJ. NO.	DRAWN BY	DATE	SHEET
62-644-13	V. GRAF	6-94	24
	DESIGNED BY	9-93	OF 155
	CHECKED BY	5-94	COMM. NO.
			0931880



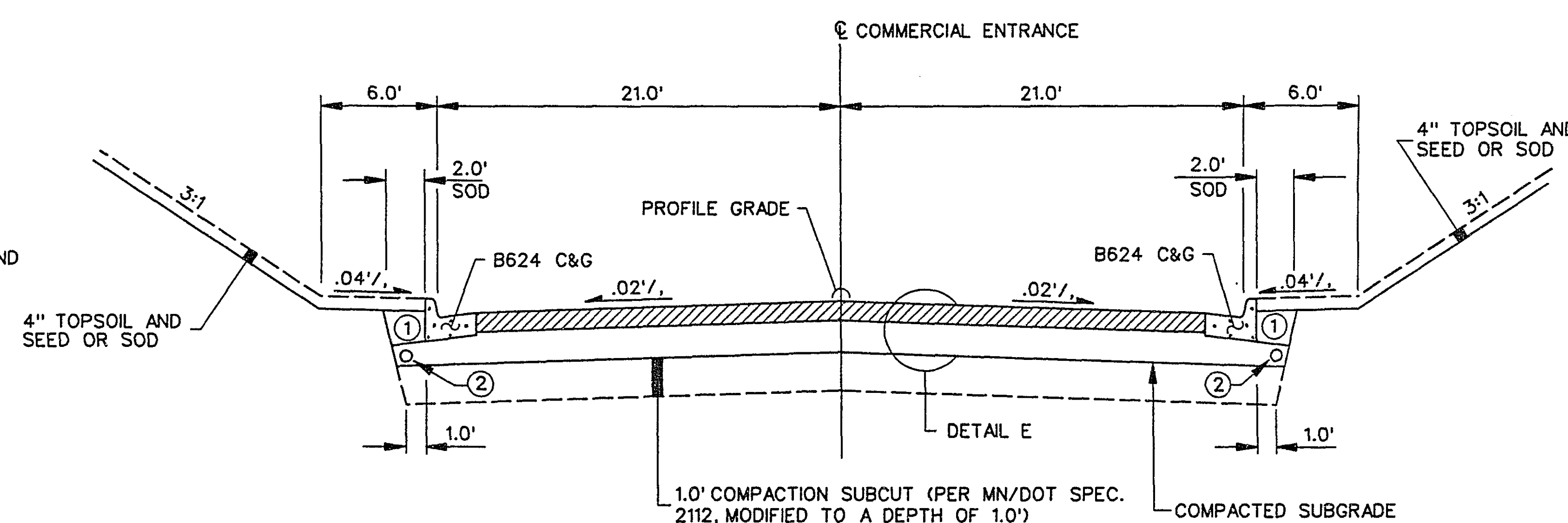
INCA LANE
FOREST DALE ROAD
7TH ST. N.W.
8TH ST. N.W.
5TH ST. N. W. (EAST OF SILVER LAKE RD.)



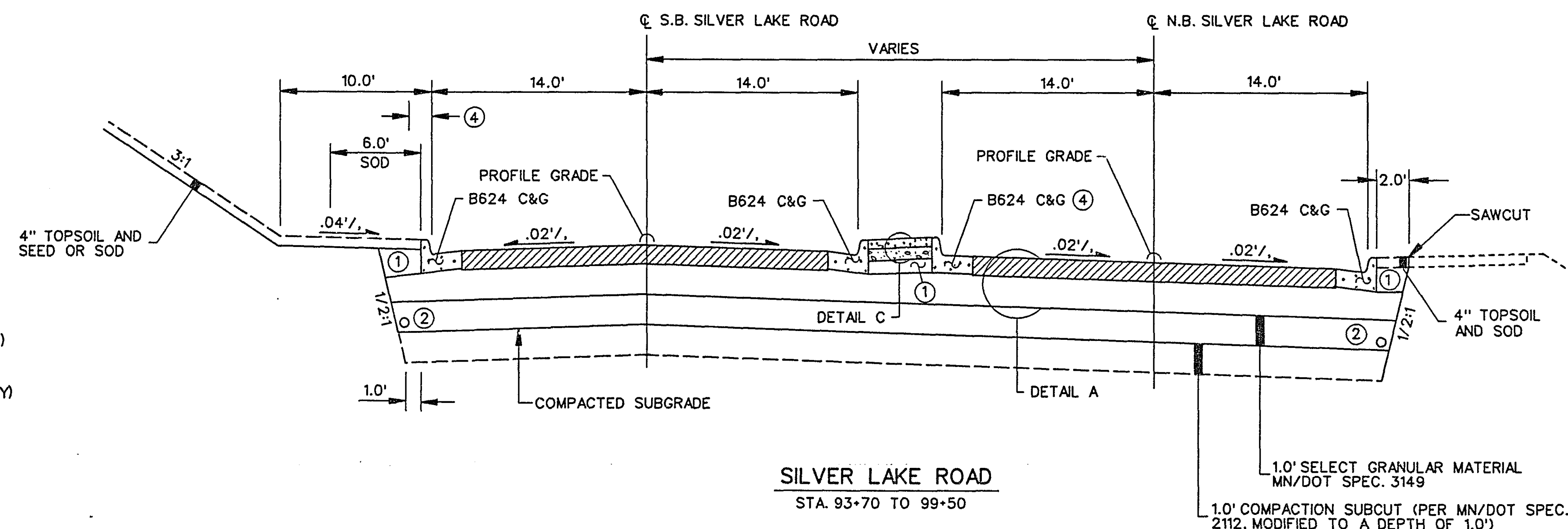
WINDSOR LANE
WINDSOR DRIVE
WEXFORD HEIGHTS LANE
3RD ST. N.W.
5TH ST. N. W. (WEST OF SILVER LAKE RD.)



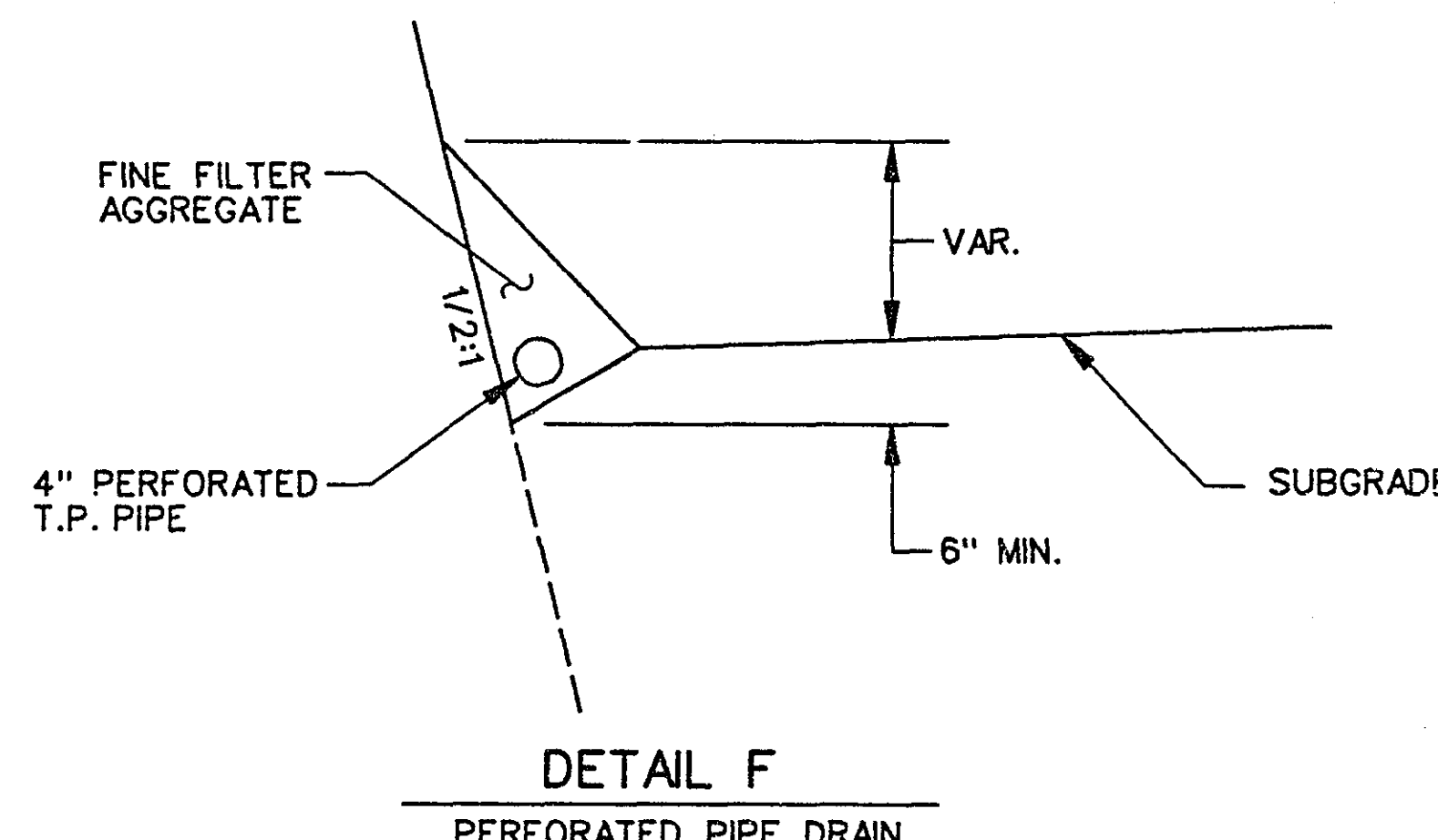
COUNTY ROAD E



COMMERCIAL ENTRANCE



SILVER LAKE ROAD
STA. 93+70 TO 99+50



- NOTE:
- BACKFILL WITH SUITABLE GRADING MATERIAL.
 - 4" PERFORATED T.P. PIPE DRAIN - MN/DOT SPEC. 3245, WITH TYPE 1 GEOTEXTILE WRAP - MN/DOT SPEC. 3733. PROVIDE 2" MINIMUM FINE FILTER AGGREGATE AT ALL POINTS AROUND PIPE. GEOTEXTILE WRAP AND FINE FILTER AGGREGATE SHALL BE CONSIDERED INCIDENTAL. SEE DETAIL F.
 - APPLIES ONLY TO 5TH ST. N.W. AND 7TH ST. N.W. IN ABSENCE OF WALK, CONSTRUCT BERM SAME AS RIGHT OF CENTERLINE.
 - A 1.5' OBSTACLE-FREE CLEAR ZONE IS REQUIRED FROM FACE OF CURB (TYP.)

28-153

1	12-28-94	MCI	LAE	ADD BIT. DESIGNATION
2	3-9-95	MCI	SNB	REVISE PER STATE AID REVIEW
NO	DATE	BY	CKD	APPR
REVISION				

SRF STRGAR-ROSCOE-FAUSCH, INC.
CONSULTING ENGINEERS ■ LAND SURVEYORS

I hereby certify that this plan, specification or report 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.
Sara E. Eide
Date 9/14/94 Reg. No. 14596

CITY OF NEW BRIGHTON

TYPICAL SECTIONS
SILVER LAKE ROAD

STATE PROJ. NO.
62-644-13

DRAWN BY
V. GRAF
DESIGNED BY
J. ROSENOW
CHECKED BY

SHEET 25
OF 155
COMM. NO.
0931880

A EARTHWORK								
ALIGNMENT	EXCAVATION (E.V.)					EMBANKMENT (C.V.)		
	STRUCTURE	COMMON		SUBGRADE	COMMON CHANNEL	SUITABLE GRADING MATERIAL	TOPSOIL (SLOPE DRESSING)	SELECT GRANULAR MATERIAL
	SUITABLE GRADING MATERIAL	SUITABLE GRADING MATERIAL	TOPSOIL & OTHER MATERIAL	SUITABLE GRADING MATERIAL	OTHER MATERIAL			
	LUMP SUM	CU. YD.	CU. YD.	CU. YD.	CU. YD.	LUMP SUM	CU. YD.	CU. YD.
SILVER LAKE RD.	1	55446	8244	18400	5400	5627	3044	23862
WINDSOR LANE		239	40	171			17	
WINDSOR DRIVE		33	8	51			2	
COUNTY ROAD E		2620	348	913		20	164	870
WEXFORD / 3RD ST. N.W.		1160	174	608		1	74	
INCA LANE		59	13	76			9	
5TH ST. N.W.		173	36	197			17	20
FOREST DALE / 7TH ST. N.W.		646	122	533		55	110	
8TH ST. N.W.		109	19	90			11	
TOTAL	1	60485	9004	21039	5400	5703	3448	24752

B CONCRETE SIDEWALK				
STATION - STATION	REMOVE	FURNISH AND INSTALL		
	CONC. WALK	4" CONC. WALK	3" CONC. WALK	SPEC. SURFACE TREATMENT
	SQ. FT.	SQ. FT.	SQ. FT.	SQ. FT.
SILVER LAKE RD.				
MEDIAN ISLANDS	6690		28000	28000
STA. 28+59 TO STA. 52+28 LT		11300		
STA. 28+59 TO STA. 52+28 RT	7050	6725		
STA. 52+28 TO STA. 99+50	21675	19225		
COUNTY RD. E	915	1000		
5TH ST. NW	1050	900		
7TH ST. NW	1350	1250		
PROJECT TOTAL	38730	40400	28000	28000

J AGGREGATE AND BITUMINOUS SUMMARY								
ALIGNMENT	AGGREGATE			BITUMINOUS				2357.505 TACK GALLON
	BASE CLASS 6	SURFACING CLASS 6		TYPE 31 BASE	TYPE 47 BINDER	TYPE 41 WEAR	TYPE 47 WEAR	
	CU. YD. (CV)	CU. YD. (CV)		TON	TON	TON	TON	
SILVER LAKE ROAD	20050			10304	7340		4450	5475
WINDSOR LANE	120			56		44		27
WINDSOR DRIVE	20			8		7		4
COUNTY ROAD E	880			448	310		200	240
WEXFORD HEIGHTS LANE / 3RD STREET NORTHWEST	300			136		107		63
INCA LANE	80			25		20		12
5TH STREET NORTHWEST	190			87		69		40
FOREST DALE ROAD / 7TH STREET NORTHWEST	480			222		175		104
8TH STREET NORTHWEST	100			45		36		22
COMMERCIAL ENTRANCE	80			59		32		28
BITUMINOUS DRIVEWAYS	340			210		210		95
CONCRETE DRIVEWAYS	80							
AGGREGATE DRIVEWAYS		200						
TEMPORARY BITUMINOUS PAVEMENT (1)	200			200		150		90
PROJECT TOTALS	22900	200		11800	7650	850	4650	6200

(1) FOR USE IN SILVER LAKE ROAD TRAFFIC CONTROL STAGING, SEE TRAFFIC CONTROL PLANS.

C CONCRETE CURB AND GUTTER					
STATION - STATION	REMOVE	B624	B618	B612	D412
	LIN. FT.	LIN. FT.	LIN. FT.	LIN. FT.	LIN. FT.
SILVER LAKE RD.					
STA. 28+59 TO STA. 52+28 LT	230	3720		260	
STA. 28+59 TO STA. 52+28 RT	230	3570		310	
STA. 52+28 TO STA. 99+50	2340	14030		2030	
WINDSOR LN.	320				230
WINDSOR DR.	120				30
COUNTY RD. E		1180			
WEXFORD HTS. LN./3RD ST. NW	750				530
INCA LN.			140		
5TH ST. NW	540		90		210
FOREST DALE RD./7TH ST. NW	480		860		
8TH ST. NW	220		210		
PROJECT TOTAL	5230	22500	1300	2600	1000

K FENCE SUMMARY													
ALIGNMENT	STA. TO STA.	REMOVE		SALVAGE				INSTALL		FURNISH AND INSTALL			
		SILT CURTAIN	WOOD FENCE	CHAIN-LINK FENCE	WOOD FENCE	CHAIN-LINK FENCE	VEHICULAR GATE	WOOD FENCE	CHAIN-LINK FENCE	VEHICULAR GATE	WIRE FENCE	TEMPORARY FENCE	METAL BRACE ASSEMBLY
		(LIN. FT.)	(LIN. FT.)	(LIN. FT.)	(LIN. FT.)	(LIN. FT.)	(EACH)	(LIN. FT.)	(LIN. FT.)	(EACH)	DES. 72-9322 (LIN. FT.)	(LIN. FT.)	(EACH)
SILVER LAKE ROAD	33+50 TO 52+00, LT.			1885							1870	1885	14
	39+50, LT.						1			1			2
	52+50 TO 56+00, LT.	450											
	56+00 TO 68+50, LT.	1200											
	67+25 TO 70+75, RT.		325		20			20					
	72+50 TO 74+50, RT.				195			195					
	79+50 TO 80+00, LT.			15		40			40				
	87+00 TO 87+50, RT.		30										
	91+00 TO 91+50, LT.		20		30			30					
	91+00 TO 804+00, RT.		35		150			150					
FOREST DALE ROAD	800+75 TO 801+50, RT.				65			65					
	800+25 TO 802+00, LT.					140			140				
	801+10, LT.						1			1			
	800+50, LT.												
PROJECT TOTALS		1650	410	1900	460	180	2	460	180	2	1870	1885	14

- J

AGGREGATE AND BIT. SUMMARY
- A

EARTHWORK
- B

CONCRETE SIDEWALK
- K

FENCE SUMMARY
- C

CONCRETE CURB AND GUTTER

28-153

1	3-9-95	MCI	SNB		REVISE PER STATE AID REVIEW
NO	DATE	BY	CKD	APPR	REVISION

SRF

STRGAR-ROSCOE-FAUSCH, INC.
CONSULTING ENGINEERS ■ LAND SURVEYORS

I hereby certify that this plan, specification or report 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.

Heather M. Brown
Date 3/16/95 Reg. No. 21817

CITY OF NEW BRIGHTON
TABULATION OF QUANTITIES
SILVER LAKE ROAD

STATE PROJ. NO.
62-644-13

DRAWN BY
B. DOYLE
DESIGNED BY
J. ROSENOW
CHECKED BY

DATE
7-94
7-94

SHEET 26
OF 155
COM. A. NO.
0931880

L WATERMAIN SUMMARY									
ALIGNMENT	STA. TO STA.	6" D.I.P. WATERMAIN CL52 (LIN. FT.)	RELOCATE HYDR. AND VALVE (EACH)	RELOCATE HYDRANT (EACH)	WATERMAIN FITTINGS (POUND)	ADJUST VALVE BOX (EACH)	RELOCATE WATER SERVICE VALVE (EACH)	1" TYPE K COPPER PIPE (LIN. FT.)	4" INSULATION (SQ. YD.)
SILVER LAKE ROAD	29+00					1			
	29+09, RT.	3		1	52				
	33+99, RT.	5	1		52				
	34+00 TO 39+00, LT.					1			445
	37+50								
	37+70, RT.	38	1		189				
	39+36					1			
	39+37					1			
	45+97					1			
	46+70					1			
	47+02					1			
	51+96					1			
	52+59					1			
	54+50 TO 58+50, RT.								178
	55+70 LT. TO 55+70 RT.								71
	55+73, LT.					1			
	55+73, RT.					1			
	58+90, LT.					1			
	58+90, RT.					1			
	59+17					1			
	59+17, RT.	7		1	52				
	62+00 TO 66+50, RT.								200
	62+20 LT. TO 62+20 RT.								31
	62+23, LT.					1			
	62+23, RT.					1			
	65+21					1			
	65+25					1			
	65+53					1			
	65+62					1			
	65+78					1			
	69+19					1			
	69+94, LT.	10	1		52				
	72+20					1			
	72+25 TO 74+75, LT.								223
	72+40					1			
	75+51					1			
	75+51, LT.					1			
	75+51, LT.					1			
	75+56					1			
	78+16					1			
	78+30					1			
	78+42					1			
	78+47					1			
	78+83, LT.	15	1		52				
	79+35						1	7	
	80+45						1	11	
	80+90						1	7	
	81+60						1	12	
	82+15						1	7	
	82+70						1	12	
	83+10						1	7	
	83+85						1	12	
	84+60						1	12	
	85+10						1	12	
	85+36, LT.	5	1		52				
	86+10						1	18	
	87+30						1	18	
	87+42					1			
	87+90						1	18	
	89+30						1	18	
	90+15						1	16	
	91+00						1	13	
	92+65					1			
	93+06					1			
	98+95					1			
	99+09					1			
	99+20, LT.	18	1		52				
WINDSOR DRIVE	300+25					1			
COUNTY ROAD E	402+19					1			
WEXFORD HTS. LANE	501+00 TO 502+00, RT.								89
3RD STREET N.W.	502+00 TO 504+00, LT.								89
	503+15					1			
	503+15, LT.	13	1		52				
INCA LANE	600+28					1			
	600+33					1			
5TH STREET N.W.	701+49					1			
FOREST DALE ROAD	800+00 TO 801+00, LT.								134
	800+00 TO 801+00, LT.								143
	800+00 TO 802+25, LT.								200
	802+14					1			
7TH STREET N.W.	803+23, LT.	10	1		179				
	803+26					1			
	803+31					1			
8TH STREET N.W.	900+50 TO 900+75, LT.								11
	900+50 TO 900+90, LT.								36
PROJECT TOTALS		124	8	2	784	46	16	200	1850

M TEMPORARY TRAFFIC CONTROL MARKING				
LOCATION	0563.603 TEMPORARY RAISED PAVEMENT MARKERS (EACH)	2581.501 REMOVABLE PREFORMED PLASTIC MARKING (LIN. FT.)	0564.603 4" SOLID LINE WHITE PAINT - TEMP. (LIN. FT.)	0564.603 4" DOUBLE SOLID LINE YELLOW PAINT - TEMP. (LIN. FT.)
STAGE 1:				
SOUTH OF SILVER LANE	195	1950	-	-
SOUTH END BYPASS TRANSITION	180	1620	-	-
SILVER LAKE ROAD STA. 30+50 TO STA. 97+00	665	-	13300	6650
NORTH END BYPASS TRANSITION	170	1710	-	-
NORTH OF T.H. 694 SOUTH RAMPS	75	730	-	-
SUBTOTAL	1265	6010	13300	6650
STAGE 2:				
SOUTH OF SILVER LANE	(INPLACE)	(INPLACE)	-	-
SOUTH END BYPASS TRANSITION	160	1580	-	-
SILVER LAKE ROAD STA. 30+50 TO STA. 97+50	670	-	13300	6650
7TH STREET / FOREST DALE ROAD	175	1740	-	-
NORTH END BYPASS TRANSITION	230	2270	-	-
NORTH OF T.H. 694 SOUTH RAMPS	(INPLACE)	(INPLACE)	-	-
SUBTOTAL	1235	5590	13300	6650
PROJECT TOTAL	2500	11600	26600	13300

N TYPE "C" AND TYPE "D" SIGNS						
SIGN PANEL DESIGNATION	SIGN PANEL SIZE	SIGN PANEL AREA (SQ. FT.)	SIGN PANEL LEGEND	NUMBER OF INSTALLATIONS	TOTAL SIGN AREA - TYPE "C"	TOTAL SIGN AREA - TYPE "D"
				(EACH)	(SQ. FT.)	(SQ. FT.)
R1-1	30" X 30"	6.25	STOP	3	18.75	
R2-1	24" X 30"	5.00	SPEED LIMIT	16	80.00	
R3-X1	30" X 30"	6.25	RIGHT TURN LANE	1	6.25	
R3-X2	30" X 30"	6.25	LEFT TURN LANE	10	62.50	
R3-9B	24" X 36"	6.00	CENTER LANETURN ONLY ARROWS	4	24.00	
R4-7	24" X 30"	5.00	KEEP RIGHT	17	85.00	
R6-1(R)	36" X 12"	3.00	ONE WAY (RIGHT)	2	6.00	
R8-3A	18" X 18"	2.25	NO PARKING	80	180.00	
R10-12	36" X 48"	12.00	LEFT TURN YIELD ON GREEN	11	132.00	
S30P	30" X 30"	6.25	SCHOOL X-ING	1	6.25	
X4-2	18" X 18"	2.25	TYPE IXB DELINEATOR	17		
D-1	108" X 30"	13.50	SILVER LAKE RD	11		148.50
D-2	96" X 18"	12.00	WINDSOR LANE	2		24.00
D-3	72" X 18"	9.00	COUNTY E	2		18.00
D-4	78" X 18"	9.75	5TH ST NW	2		19.50
D-5	156" X 30"	32.50	WEXFORD HEIGHTS DR / 3RD ST NW	1		32.50
D-6	156" X 30"	32.50	3RD ST NW / WEXFORD HEIGHTS DR	1		32.50
D-7	120" X 30"	25.00	FOREST DALE RD / 7TH ST NW	1		25.00
D-8	120" X 30"	25.00	7TH ST NW / FOREST DALE RD	1		25.00
D-9	84" X 18"	10.50	SILVER LANE	2		21.00
PROJECT TOTALS				185	600.00	346.00

L WATERMAIN 28-153
M TRAFFIC CONTROL MARKING
N TYPE "C" AND TYPE "D" SIGNS

1	3-9-95	MCI	SNB		REVISED PER STATE AID REVIEW
NO	DATE	BY	CKD	APPR	REVISION

SRF STRGAR-ROSCOE-FAUSCH, INC.
CONSULTING ENGINEERS ■ LAND SURVEYORS

I hereby certify that this plan, specification or report 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.
Stephen M. Bowers
Date 3/16/95 Reg. No. 21817

CITY OF NEW BRIGHTON
TABULATION OF QUANTITIES
SILVER LAKE ROAD

STATE PROJ. NO.	DRAWN BY D. FICK	DATE 3-95	SHEET 27A
62-644-13	DESIGNED BY D. FICK	3-95	OF 155
	CHECKED BY S. BOWERS	3-95	COMM. NO. 0931880

INPLACE DRAINAGE							REMARKS
STA. TO STA.	LOCATION	REMOVE PIPE CULVERT	REMOVE PIPE SEWER	REMOVE PIPE APRON	REMOVE MANHOLE OR CATCH BASIN	ABANDON PIPE SEWER	
		(LIN. FT.)	(LIN. FT.)	(EACH)	(EACH)	(EACH)	
32+20	75' LT.		8	1			
33+40	57' LT.			1			
33+40	57' LT. TO 7' RT.		64				
33+40	7' RT.				1		
37+75 TO 40+50	28' RT.		280				
37+75	28' RT.						RECONSTRUCT EXISTING MANHOLE. SALVAGE AND INSTALL EXISTING CASTING.
				1			
40+50	28' RT.			1			
42+00	55' LT.			1			
42+00	55' LT. TO 25' RT.		80				
42+00	7' RT.				1		
42+00	25' RT.			1			
44+91 TO 45+66	27' RT.		75				
44+91	27' RT.			1			
45+06	27' RT.				1		
45+38	27' RT.				1		
45+66	27' RT.						ADJUST CASTING
51+62 TO 55+28	88' LT. TO 40' LT.		380				
51+62	88' LT.			1			
52+47	71' LT.				2		
52+75	11' LT.				1		
52+75	15' LT.				1		
52+75	43' LT.				1		
52+75	43' LT. TO 15' RT.		58				
55+28	40' LT.				1		
65+05 TO 65+23	52' LT. TO 68' LT.		25				
65+05	68' LT.				1		
65+23	80' LT. TO 68' LT.		12				
65+23	80' LT.				1		
65+23	68' LT.						RECONSTRUCT EXISTING CATCH BASIN LEAVE AS IS
65+23 TO 65+63	68' LT.						
65+63	200' LT. TO 68' LT.		132				
65+63	200' LT.						LEAVE AS IS
65+63	80' LT.				1		
65+63	68' LT.						RECONSTRUCT EXISTING CATCH BASIN
68+50	34' LT. TO 32' RT.		66				
68+50	22' LT.				1		
68+50	10' RT.				1		
68+50	33' RT.						LEAVE AS IS
70+07 TO 70+42	84' LT. TO 70' LT.	35					
70+07	64' LT.			1			
70+42	70' LT.			1			
78+06 TO 78+87	10' RT.		80				
78+06	10' RT.				1		
78+80 TO 78+87	39' LT. TO 10' RT.		50				
78+80	39' LT.				1		
78+80	LT.					1	
78+87	10' RT.				1		
PROJECT TOTALS		35	1310	9	18	1	

TURF ESTABLISHMENT / EROSION CONTROL												
ALIGNMENT	TOTAL SEEDING	SEED MIXTURE		MULCH MATERIAL TYPE I	MULCH MATERIAL TYPE AGGREGATE	BALE CHECK	SILT FENCE HEAVY DUTY	DISK ANCHORING	FLOTATION SILT CURTAIN	SODDING TYPE		COMMERCIAL FERTILIZER ANAL. 10 - 20 - 20 (POUND)
		500	SPECIAL							EROSION	LAWN	
	(ACRE)	(POUND)	(POUND)	(TON)	(CU. YD.)	(EACH)	(LIN. FT.)	(ACRE)	(LIN. FT.)	(SQ. YD.)	(SQ. YD.)	
SALVATION ARMY SITE	1.10		55	2.20		15	1110	1.10			810	570
SILVER LAKE ROAD												
STA. 28+59 TO STA. 52+28, LT.	0.80	10	30	1.60		55	625	0.80	360		2200	565
STA. 28+59 TO STA. 52+28, RT.	0.08	4		0.16		75	700	0.08			2150	235
STA. 52+28 TO STA. 99+50	0.50	25		1.00		245	1190	0.50		580	10340	1240
MEDIAN ISLANDS					88							
WINDSOR LANE						7					250	23
WINDSOR DRIVE						14					60	6
COUNTY ROAD E	0.02	1		0.04		27	375	0.02			1410	140
WEXFORD HTS. LANE / 3RD ST. NW						14					710	66
INCA LANE						7					140	13
5TH STREET NW						27					340	32
FOREST DALE RD. / 7TH ST. NW						14					1200	111
8TH STREET NW											200	19
PROJECT TOTALS	2.50	40	85	5.00	88	500	4000	2.50	360	580	19810	3020

① QUANTITIES IN THIS TABULATION ARE BASED
ON THE FOLLOWING APPLICATION RATES:
SEED MIXTURE 500 = 50 LBS./ACRE
SEED MIXTURE SPECIAL = 50 LBS./ACRE
MULCH MATERIAL TYPE I = 2 TONS/ACRE
COMM. FERT. ANAL. 10 - 10 - 20 = 450 LBS./ACRE

① INPLACE DRAINAGE
② TURF ESTABLISHMENT/
EROSION CONTROL

28-153

1	3-9-95	MCI	SNB		REVISED PER STATE AID REVIEW
NO	DATE	BY	CKD	APPR	REVISION

SRF

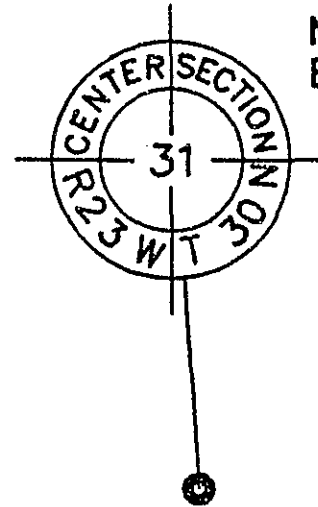
STRGAR-ROSCOE-FAUSCH, INC.

CONSULTING ENGINEERS ■ LAND SURVEYORS

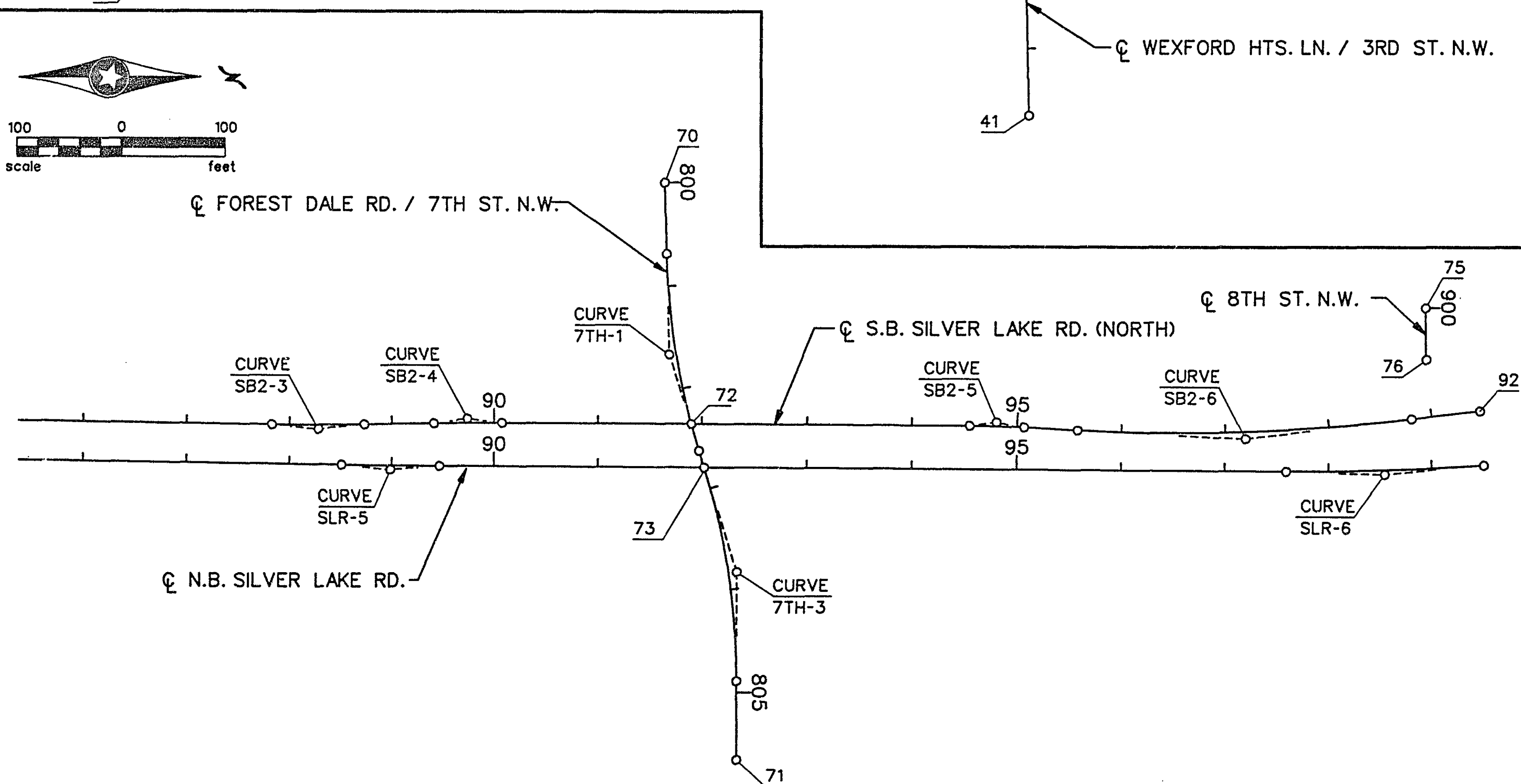
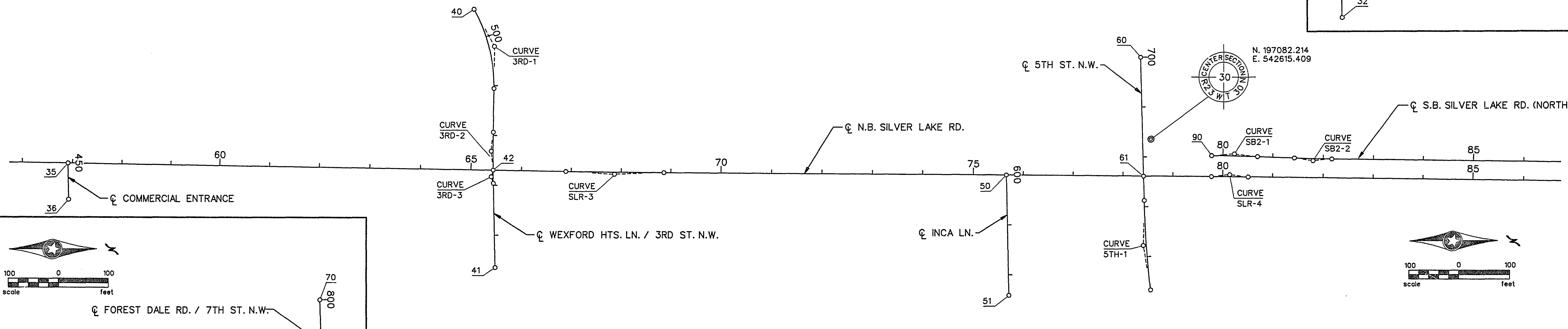
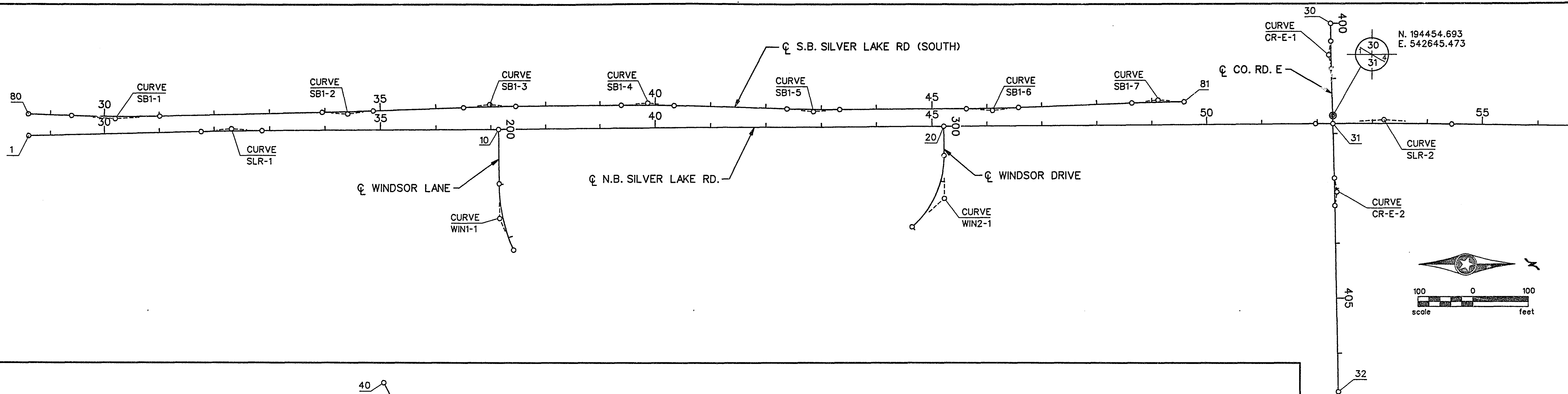
I hereby certify that this plan, specification or report was prepared by me or under my direct supervision and that I am a duly Registered Professional Engineer under the laws of the State of Minnesota.

S. D. DOWERS
Date 3/16/95 Reg. No. 21817

CITY OF NEW BRIGHTON		STATE PROJ. NO.	DRAWN BY D. FICK	DATE 3-95	SHEET 27B
TABULATION OF QUANTITIES SILVER LAKE ROAD		62-644-13	DESIGNED BY D. FICK	3-95	
			CHECKED BY S. DOWERS	3-95	COMM. NO. 0931880



N. 191840.162
E. 542661.488



HORIZONTAL DATUM: RAMSEY COUNTY COORDINATE SYSTEM.

28-153

NO	DATE	BY	CHKD	APPR	REVISION

SRF STRGAR-ROSCOE-FAUSCH, INC.
CONSULTING ENGINEERS ■ LAND SURVEYORS

I hereby certify that this plan, specification or report 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.
Supa E. Salm
Date 12/14/94 Reg. No. 14546

CITY OF NEW BRIGHTON

ALIGNMENT PLAN
SILVER LAKE ROAD

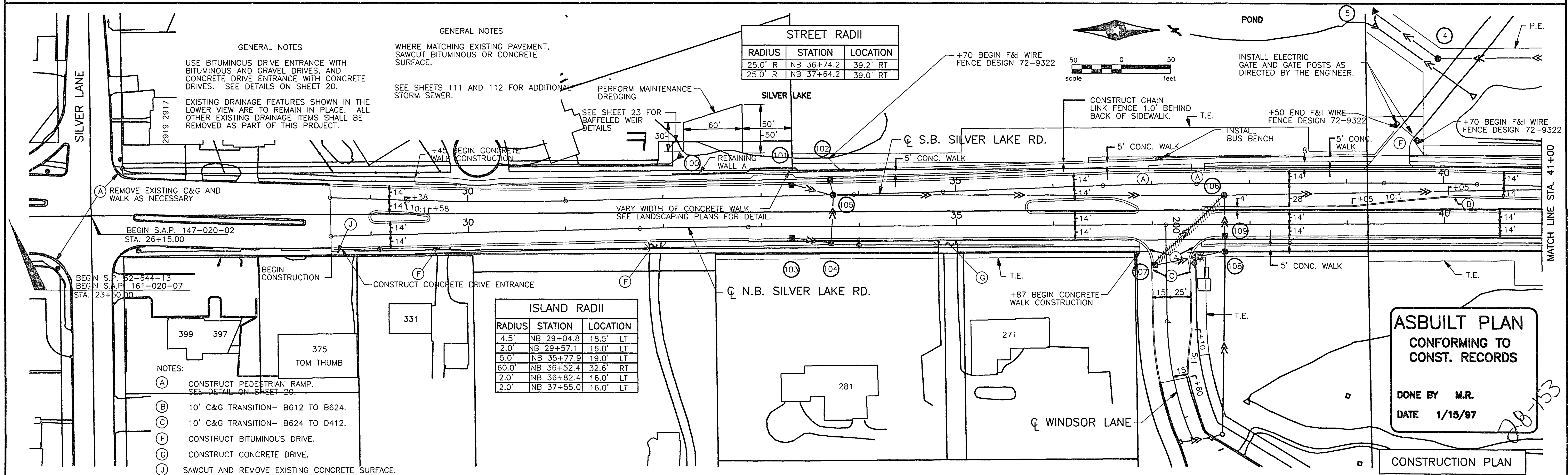
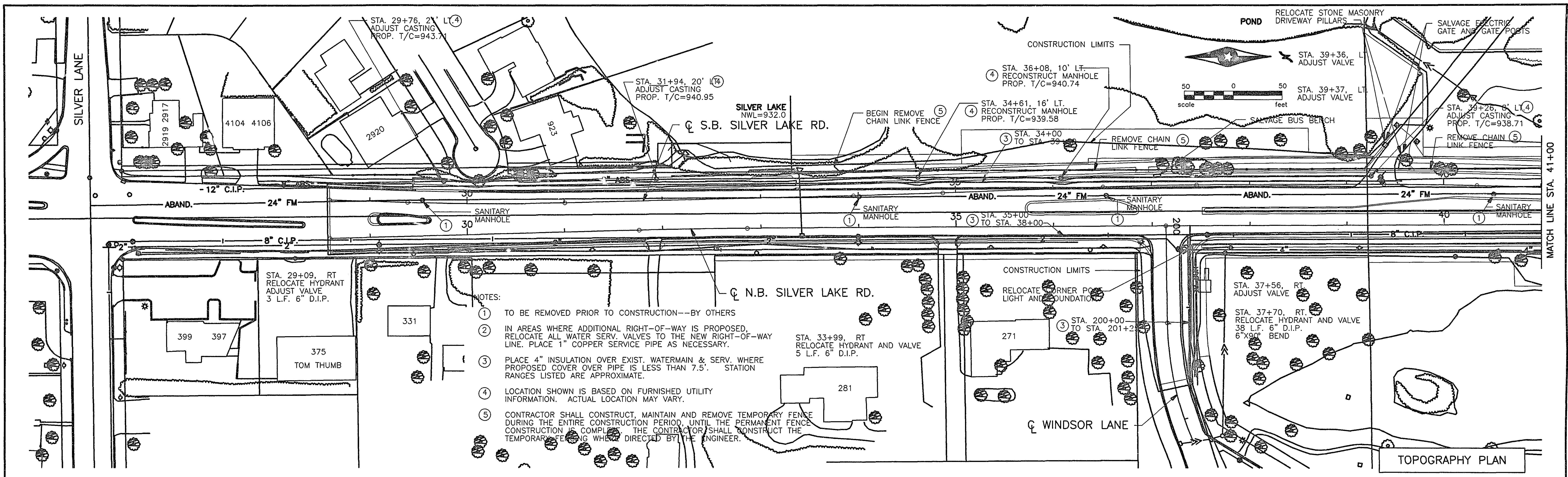
STATE
PROJ. NO.
62-644-13

DRAWN BY
B. DOYLE
DESIGNED BY
J. ROSENOW
CHECKED BY

SHEET 28
OF 155
COMM. NO.
0931880

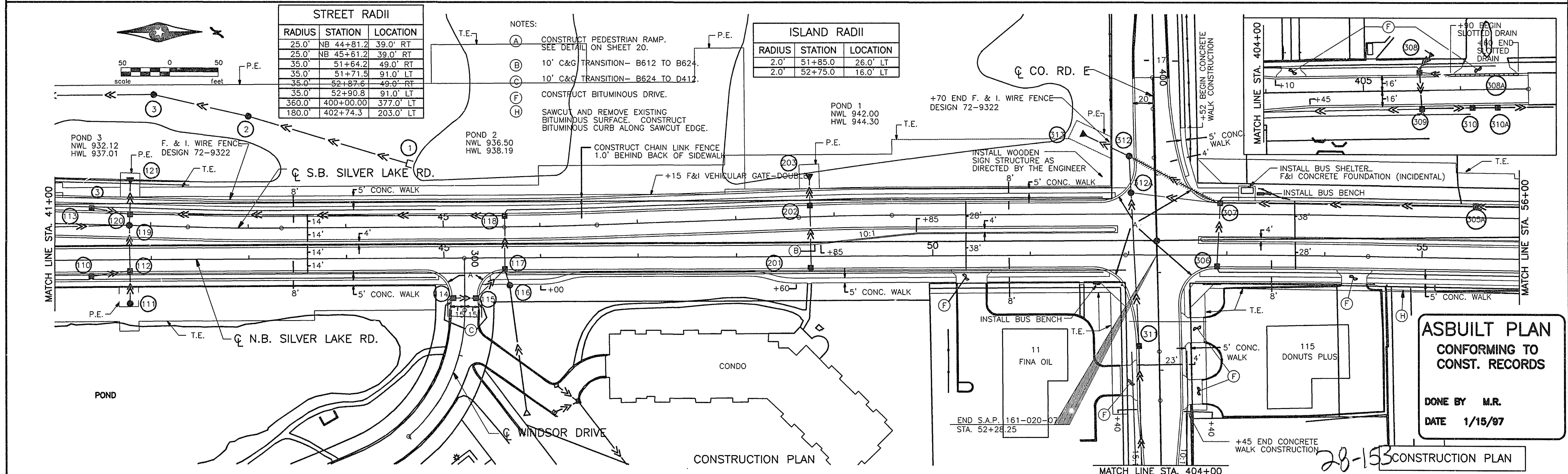
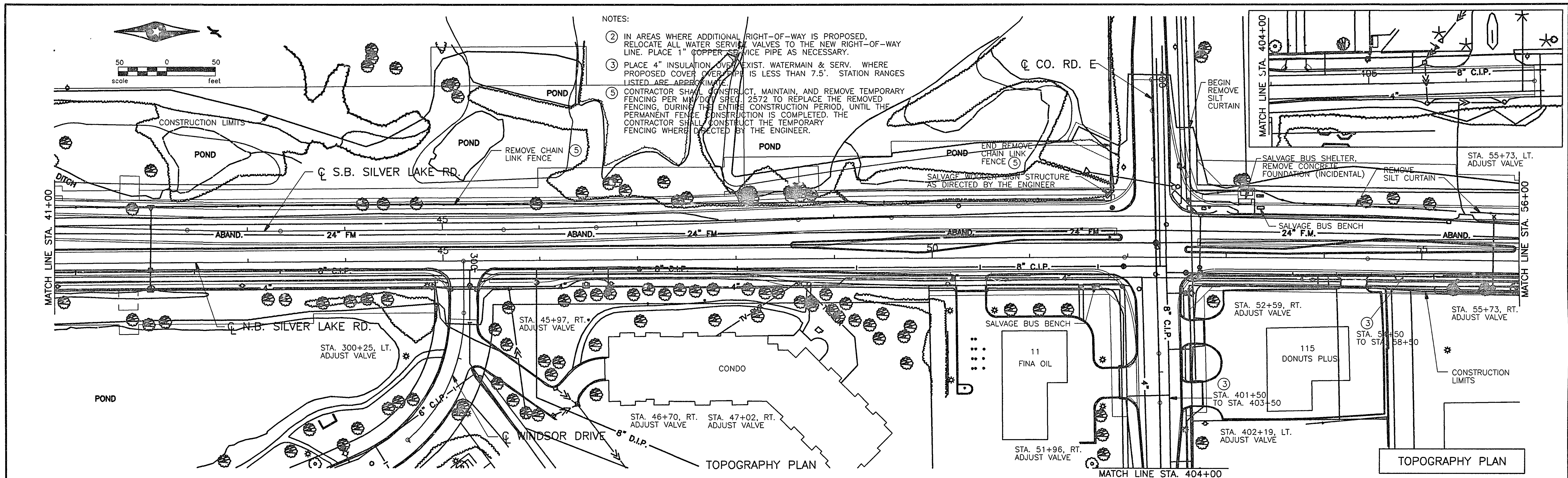
PT. NO.	POINT	STATION	CURVE DATA					COORDINATES		AZIMUTH
			Δ	D	R	T	L	X	Y	
C/L WINDSOR LANE										
10	PT. ON	C/L N.B. SILVER LAKE RD.	37+13.95=							
	POT	C/L WINDSOR LANE	200+00.00						542,669.652	192,940.282
	PC		200+99.14						542,768.788	192,941.617
WIN1-1	PI		201+62.60	22° 49' 43" LT	18° 13' 51"	314.28'	63.45'	125.22'	542,832.234	192,942.471
	PT	C/L WINDSOR LANE	202+24.36						542,890.379	192,967.874
C/L WINDSOR DRIVE										
20	PT. ON	C/L N.B. SILVER LAKE RD.	45+21.19=							
	POT	C/L WINDSOR DRIVE	300+00.00						542,664.627	193,747.505
	PC		300+53.18						542,717.803	193,747.833
WIN2-1	PI		301+31.37	48° 46' 43" RT	33° 13' 22"	172.46'	78.19'	146.82'	542,795.994	193,748.315
	PT	C/L WINDSOR DRIVE	302+00.00						542,847.882	193,689.821
C/L CO. RD. E										
30	POT	C/L CO. RD. E	400+00.00						542,478.257	194,450.453
	PC		400+32.02						542,510.277	194,450.982
CR-E-1	PI		400+57.03	0° 30' 01" LT	1° 00' 00"	5,729.58'	25.01'	50.02'	542,535.281	194,451.395
	PT		400+82.04						542,560.281	134,452.026
31	POT	C/L CO. RD. E	401+82.06=						542,660.265	194,454.551
	PT. ON	C/L N.B. SILVER LAKE RD.	52+28.25							
	PC	C/L CO. RD. E	402+80.94						542,759.118	194,457.048
CR-E-2	PI		403+10.51	0° 35' 29" RT	1° 00' 00"	5,729.58'	29.57'	59.15'	542,788.682	194,457.794
	PT	C/L CO. RD. E	403+40.09						542,818.253	194,458.236
C/L I.G.A. ENTRANCE										
35	PT. ON	C/L N.B. SILVER LAKE RD.	56+90.85=							
	POT	C/L I.G.A. ENTRANCE	450+00.00						542,665.340	194,917.116
36	POT	C/L I.G.A. ENTRANCE	450+73.04						542,738.372	194,918.429
C/L WEXFORD HEIGHTS RD. / 3RD ST. N.W.										
40	POT	C/L WEXFORD HTS.RD/3RD ST.	499+40.00						542,355.264	195,732.574
	PC		499+40.00						542,355.264	195,732.574
3RD-1	PI		500+24.73	29° 13' 30" RT	17° 37' 46"	325.00'	84.73'	165.77'	542,429.842	195,772.794
	PT		501+05.77						542,514.564	195,771.482
	PC		501+93.61						542,602.394	195,770.122
3RD-2	PI		502+31.65	1° 31' 17" LT	2° 00' 00"	2,864.79'	38.04'	76.07'	542,640.425	195,769.533
42	PT		502+69.68=						542,678.458	195,769.954
	PT. ON	C/L N.B. SILVER LAKE RD.	65+43.79							
	PC		502+69.68						542,678.458	195,769.954
3RD-3	PI		502+82.93	0° 31' 48" LT	2° 00' 00"	2,864.79'	13.25'	26.50'	542,691.707	195,770.101
	PT		502+96.18						542,704.955	195,770.370
41	POT	C/L WEXFORD HTS.RD/3RD ST.	504+65.00						542,873.740	195,773.800
C/L INCA LANE										
50	PT. ON	C/L N.B. SILVER LAKE RD.	75+66.08=							
	POT	C/L INCA LANE	600+00.00						542,687.513	196,792.193
51	POT	C/L INCA LANE	602+41.37						542,928.827	196,797.364

NAME: 1880AT1.DGN DATE: Sep. 27, 1994



1	12-28-94	MCI	LAE	REVISE S.A.P. NUMBER LOCATION NOTES
NO	DATE	BY	CKD APPR	REVISION

DESIGNED BY STRGAR - ROSCOE - FAUSH, INC.		I hereby certify that this plan, specification or report 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 Illinois.		CITY OF NEW BRIGHTON TOPOGRAPHY AND CONSTRUCTION PLAN SILVER LAKE ROAD STA. 28+59 TO STA. 41+00		STATE PROJ. NO. 62-644-13		DRAWN BY B. DOYLE DESIGNED BY L. ERICKSON CHECKED BY J. ROSENOW		DATE 4-94 3-93 4-94		SHEET 31 OF 155 COMM. NO. 0931880	
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NO	DATE	BY	CHK	APPR	REVISION

DESIGNED BY STRGAR - ROSCOE - FAUSH, INC.

I hereby certify that this plan, specification or report 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.

Date _____ Reg. No. _____

CITY OF NEW BRIGHTON
TOPOGRAPHY AND CONSTRUCTION PLAN
SILVER LAKE ROAD
STA. 41+00 TO STA. 56+00

STATE PROJ. NO.
62-644-13

DRAWN BY
B. DOYLE
DESIGNED BY
L. ERICKSON
CHECKED BY
J. ROSENOW

DATE
4-94
9-93
4-94

SHEET
32
OF
155

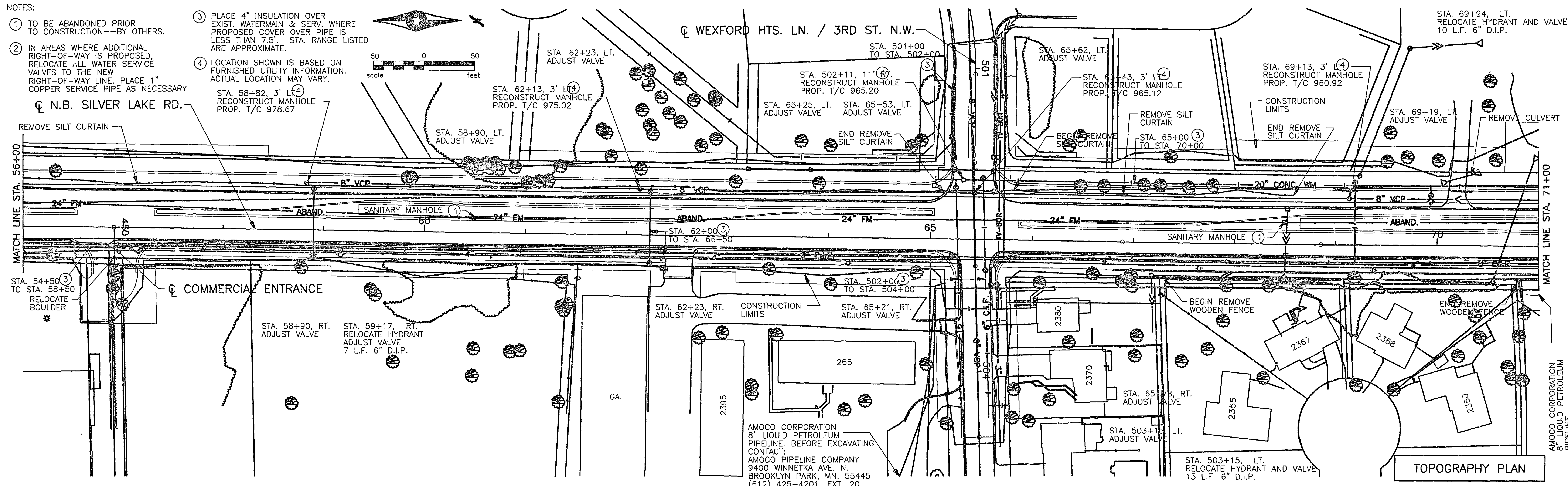
COMM. NO.
0931880

NOTES:

- ① TO BE ABANDONED PRIOR TO CONSTRUCTION--BY OTHERS.
- ② IN AREAS WHERE ADDITIONAL RIGHT-OF-WAY IS PROPOSED, RELOCATE ALL WATER SERVICE VALVES TO THE NEW RIGHT-OF-WAY LINE. PLACE 1" COPPER SERVICE PIPE AS NECESSARY.

- ③ PLACE 4" INSULATION OVER EXIST. WATERMAIN & SERV. WHERE PROPOSED COVER OVER PIPE IS LESS THAN 7.5'. STA. RANGE LISTED ARE APPROXIMATE.
- ④ LOCATION SHOWN IS BASED ON FURNISHED UTILITY INFORMATION. ACTUAL LOCATION MAY VARY.

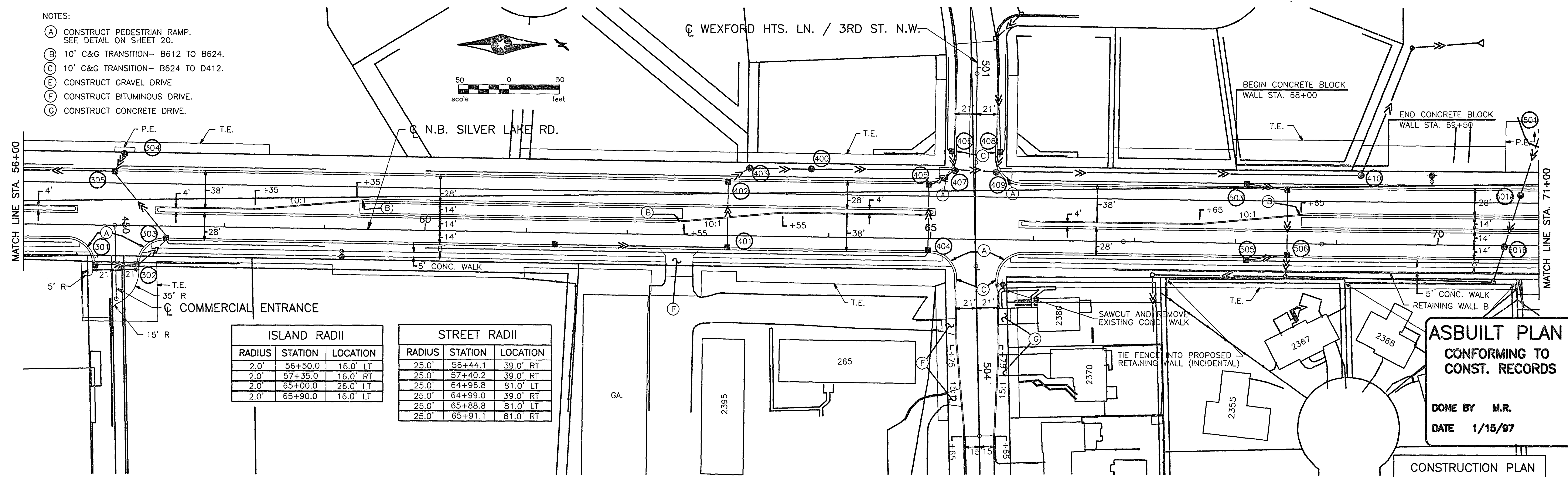
CL N.B. SILVER LAKE RD.



TOPOGRAPHY PLAN

NOTES:

- (A) CONSTRUCT PEDESTRIAN RAMP. SEE DETAIL ON SHEET 20.
- (B) 10' C&G TRANSITION-- B612 TO B624.
- (C) 10' C&G TRANSITION-- B624 TO D412.
- (E) CONSTRUCT GRAVEL DRIVE
- (F) CONSTRUCT BITUMINOUS DRIVE.
- (G) CONSTRUCT CONCRETE DRIVE.



**ASBUILT PLAN
CONFORMING TO
CONST. RECORDS**

DONE BY **M.R.**
DATE **1/15/97**

CONSTRUCTION PLAN

DESIGNED BY STRGAR - ROSCOE - FAUSH, INC.

I hereby certify that this plan, specification or report 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.

Date _____ Reg. No. _____

CITY OF NEW BRIGHTON

TOPOGRAPHY AND CONSTRUCTION PLAN

SILVER LAKE ROAD

STA. 56+00 TO STA. 71+00

STATE PROJ. NO.

62-644-13

DRAWN BY

B. DOYLE

DESIGNED BY

L. ERICKSON

CHECKED BY

J. ROSENOW

DATE

4-94

9-93

4-94

SHEET

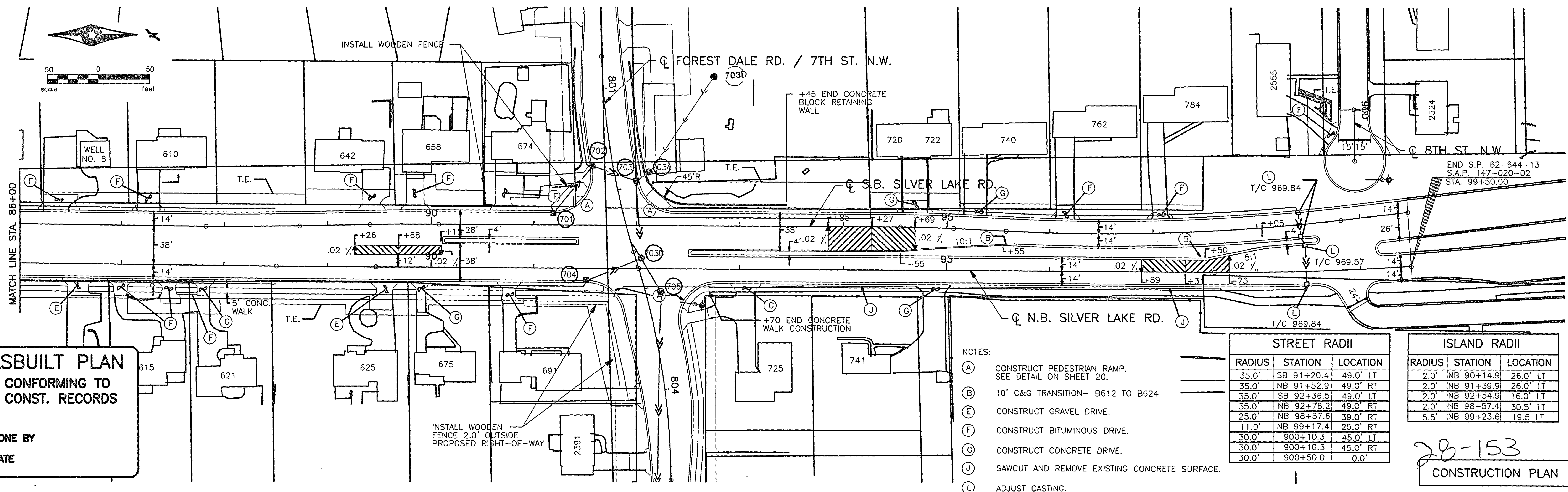
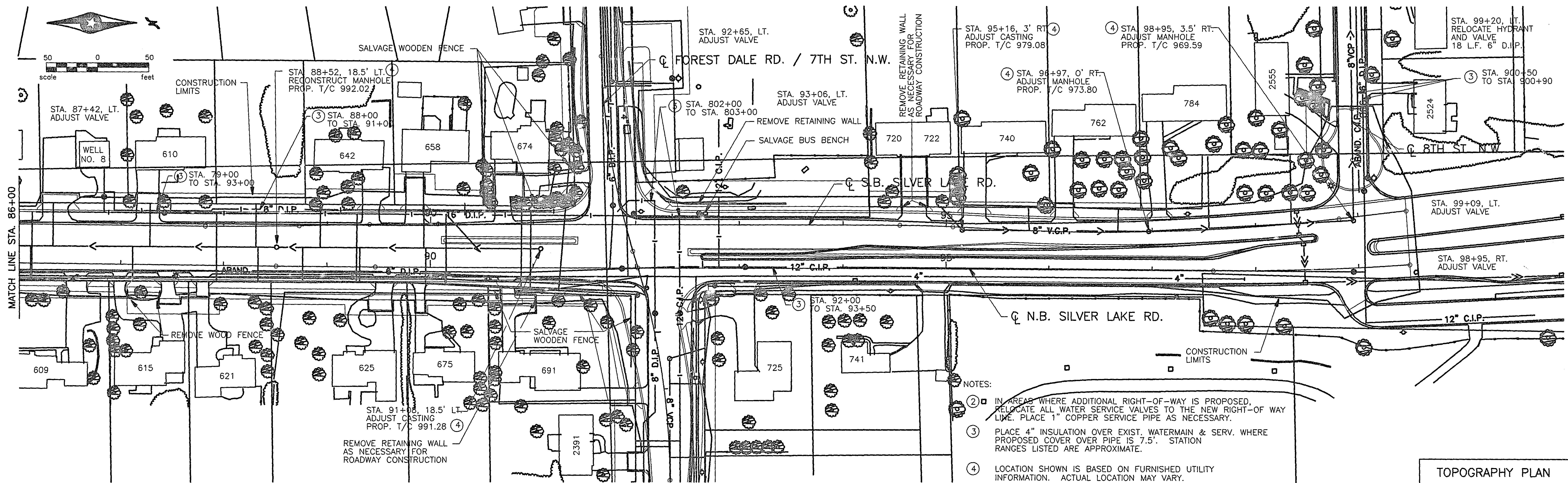
33

OF

155

COMM. NO.

0931880



**ASBUILT PLAN
CONFORMING TO
CONST. RECORDS**

DONE BY
DATE

NO	DATE	BY	CHKD	APPR	REVISION

DESIGNED BY STRGAR - ROSCOE - FAUSH, INC.

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Date _____ Reg. No. _____

CITY OF NEW BRIGHTON

TOPOGRAPHY AND CONSTRUCTION PLAN

SILVER LAKE ROAD

STA. 86+00 TO STA. 99+50

STATE PROJ. NO. 62-644-13

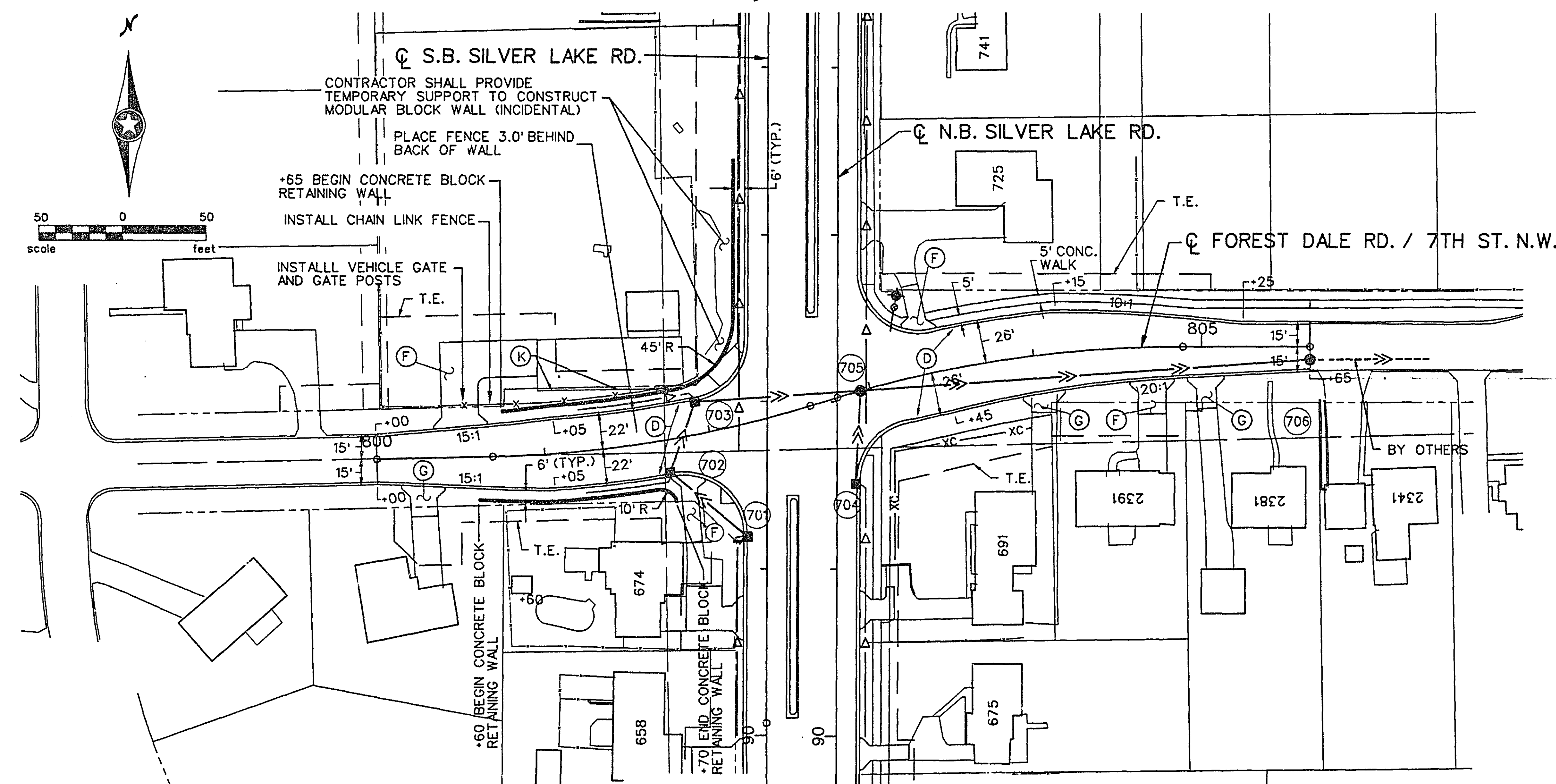
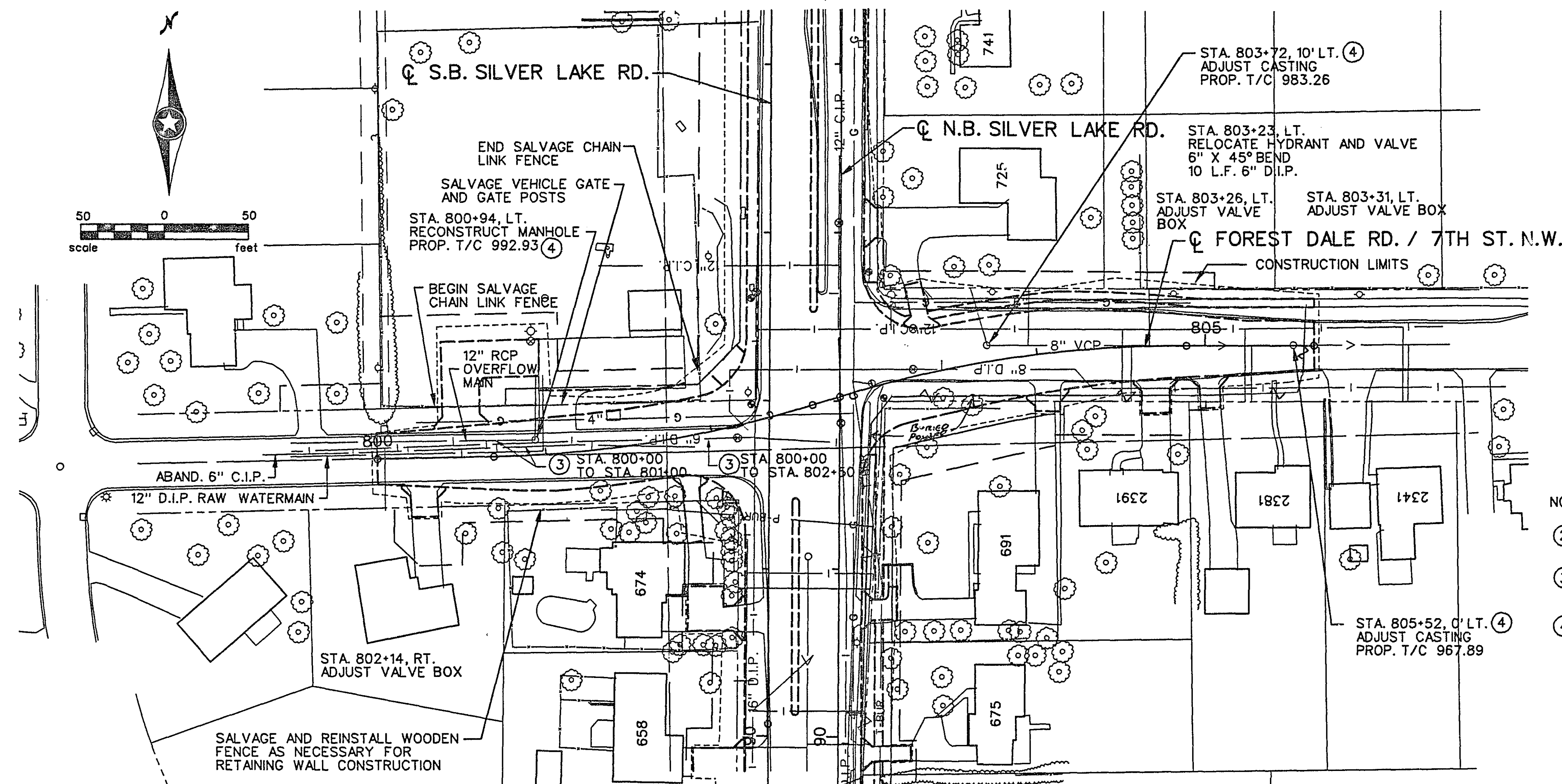
DRAWN BY B. DOYLE DATE 4-94

DESIGNED BY L. ERICKSON DATE 9-93

CHECKED BY J. ROSENOW DATE 4-94

SHEET 35 OF 155

COMM. NO. 0931880



1	3-9-95	MCI	SNB		REVISE PER STATE AID REVIEW
NO	DATE	BY	CKD	APPR	REVISION

SRF **STRGAR-ROSCOE-FAUSCH, INC.**
CONSULTING ENGINEERS ■ LAND SURVEYORS

I hereby certify that this plan, specification or report 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.

Eugene E. Eicher

Date 12/28/99 Reg. No. 14546

CITY OF NEW BRIGHTON
TOPOGRAPHY AND CONSTRUCTION PLAN
SILVER LAKE ROAD
FOREST DALE RD. / 7TH ST. N.W.

STATE PROJ. NO.	62-644-13
--------------------	-----------

DRAWN BY	DATE
B. DOYLE	4-94
DESIGNED BY	
L. ERICKSON	9-93
CHECKED BY	
J. ROSENOW	4-94

SHEET	36
OF	155
COMM. NO.	
0931880	



NO	DATE	BY	CHKD	APPR	REVISION

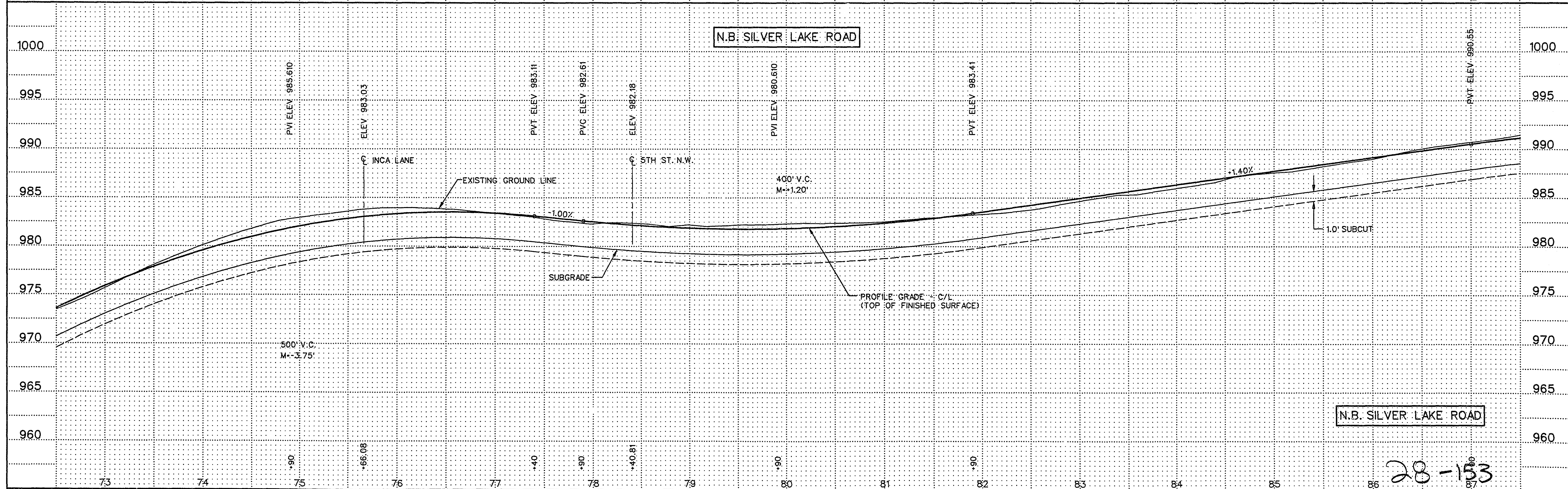
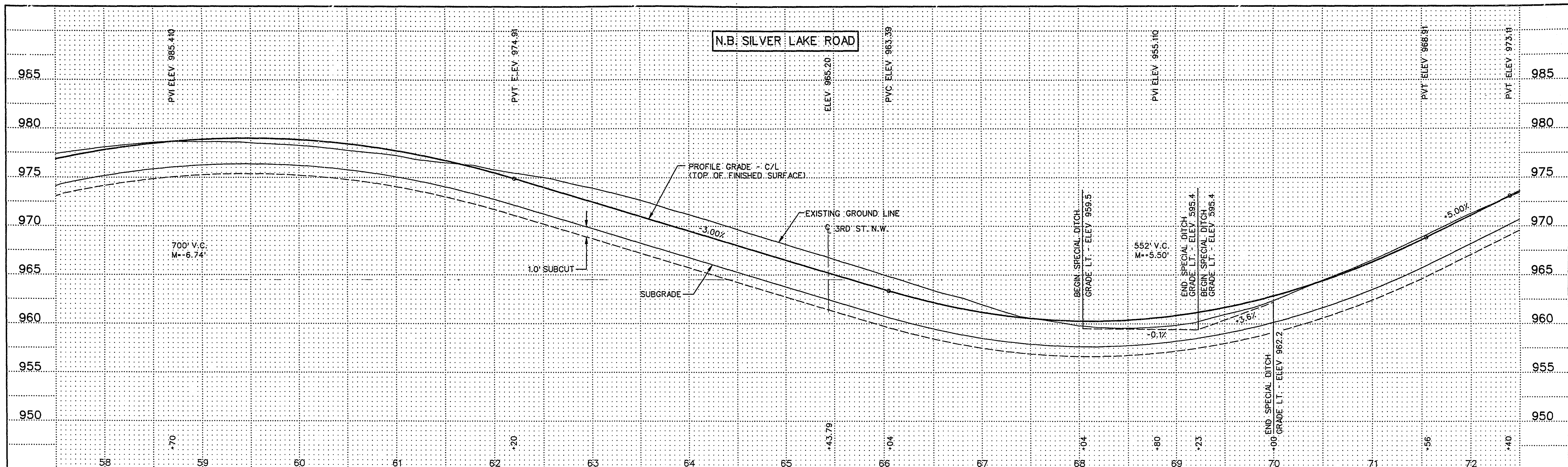
SRF STRGAR-ROSCOE-FAUSCH, INC.
CONSULTING ENGINEERS ■ LAND SURVEYORS

I hereby certify that this plan, specification or report 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.

Signature
Date 12/13/94 Reg. No. 17546

CITY OF NEW BRIGHTON
PROFILES
SILVER LAKE ROAD
STA. 28+59 TO STA. 57+50

STATE PROJ. NO. 62-644-13	DRAWN BY B. DOYLE DESIGNED BY L. ERICKSON CHECKED BY J. ROSENOW	DATE 9-93 9-93 5-94	SHEET 37 OF 155 COMM. NO. 0931880
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1	12-28-94	MCI	LAE	REVISE PROFILE LENGTH
NO	DATE	BY	CKD	APPR

SRF STRGAR-ROSCOE-FAUSCH, INC.
CONSULTING ENGINEERS ■ LAND SURVEYORS

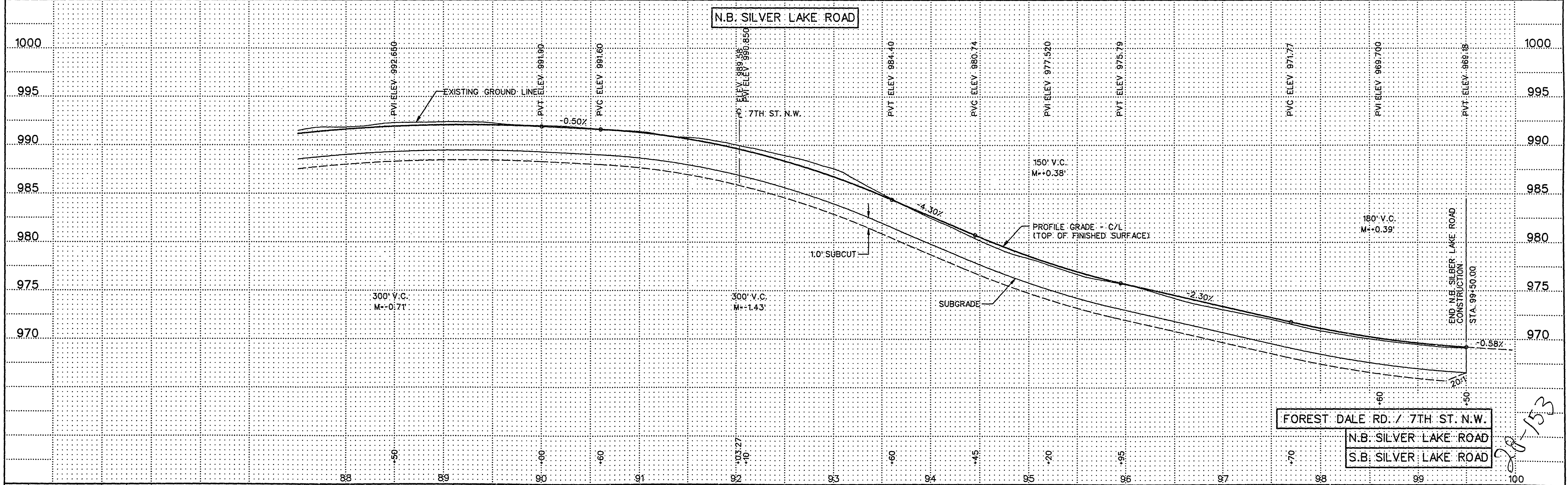
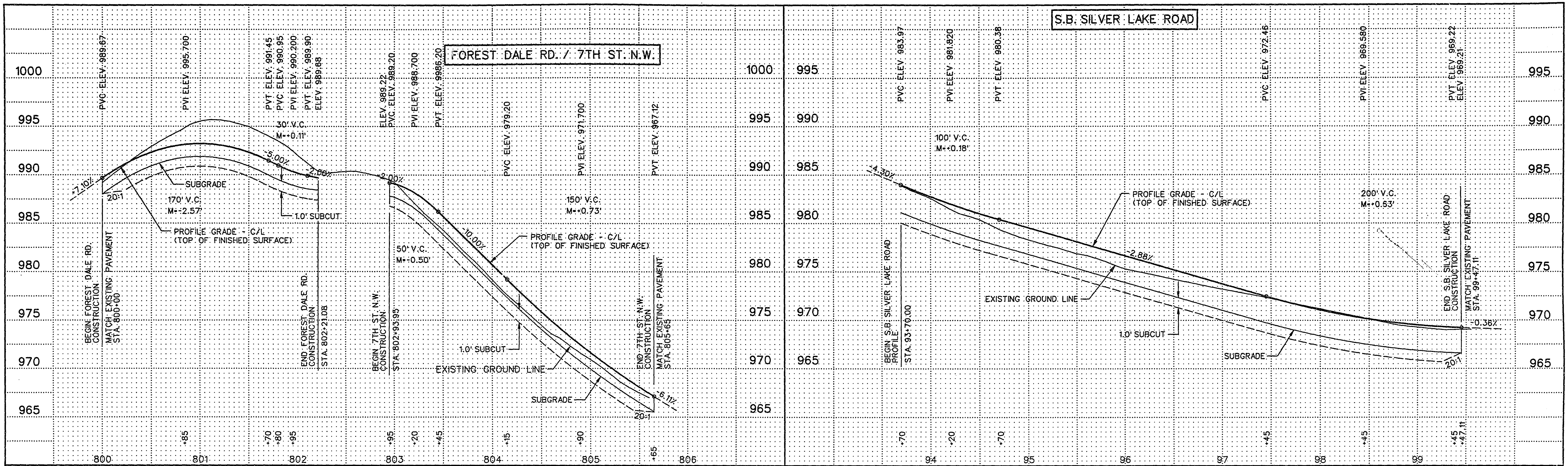
I hereby certify that this plan, specification or report was prepared by me or under my direct supervision and that I am a duly Registered Professional Engineer under the laws of the State of Minnesota.

Signature
Date 12/14/94 Reg. No. 18576

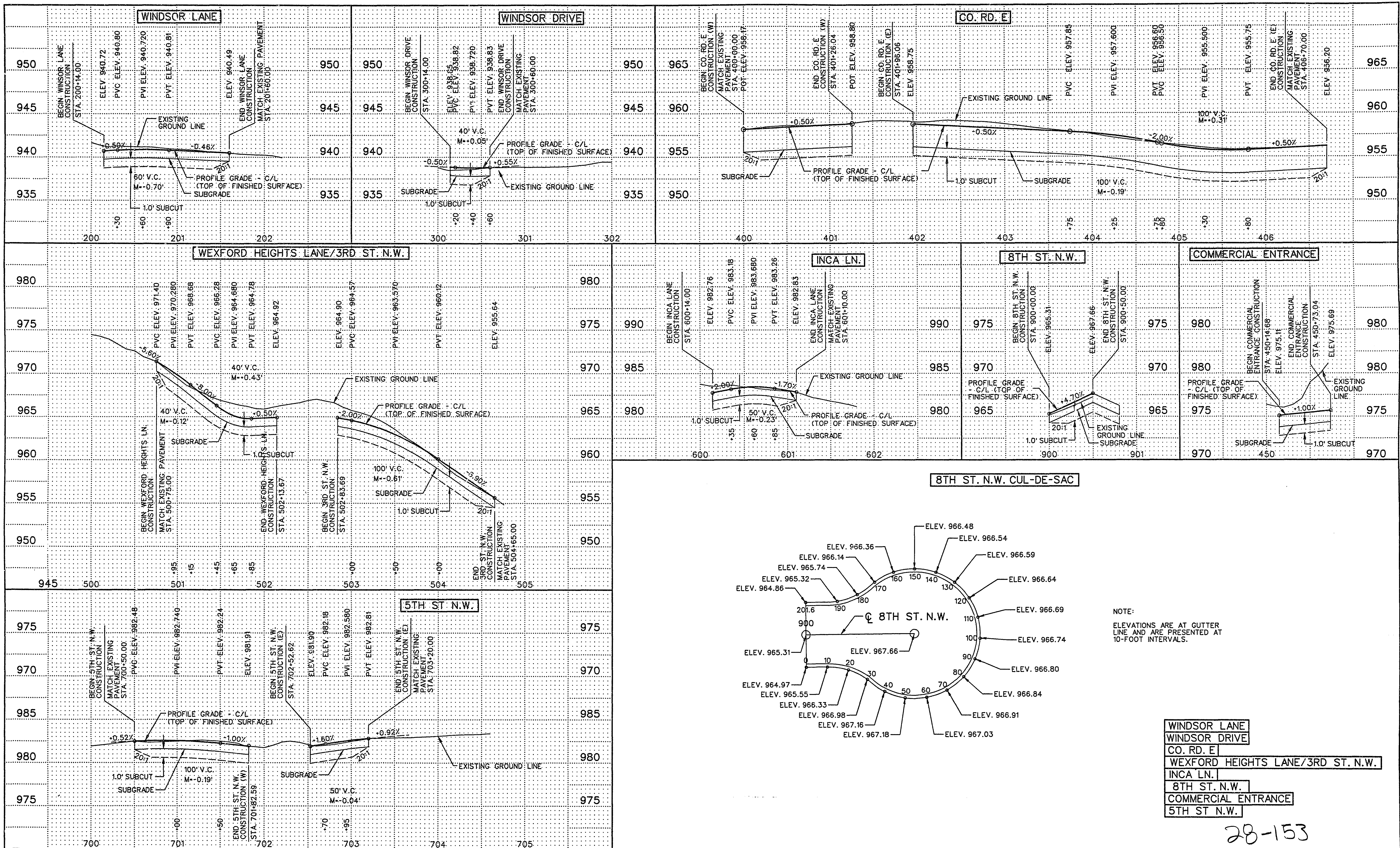
CITY OF NEW BRIGHTON

PROFILES
SILVER LAKE ROAD
STA. 57+50 TO STA. 87+50

STATE PROJ. NO.	DRAWN BY	DATE	SHEET
62-644-13	B. DOYLE	9-93	38
	DESIGNED BY	6-93	OF
	L. ERICKSON		155
	CHECKED BY	5-94	COMM. NO.
	J. ROSENOW		0931880



SRF STRGAR-ROSCOE-FAUSCH, INC. CONSULTING ENGINEERS ■ LAND SURVEYORS					I hereby certify that this plan, specification or report 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. <i>S. G. E. E.</i> Date 12/24/94 Reg. No. 19976		CITY OF NEW BRIGHTON PROFILES SILVER LAKE ROAD STA. 87+50 TO STA. 99+50		STATE PROJ. NO. 62-644-13		DRAWN BY B. DOYLE DESIGNED BY S. BOWERS CHECKED BY J. ROSENOW		DATE 5-94 5-94 5-94		SHEET 39 OF 155 COMM. NO. 0931880	
NO	DATE	BY	CKD	APPR	REVISION											



NOTE:
 ELEVATIONS ARE AT GUTTER
 LINE AND ARE PRESENTED AT
 10-FOOT INTERVALS.

- WINDSOR LANE
- WINDSOR DRIVE
- CO. RD. E
- WEXFORD HEIGHTS LANE/3RD ST. N.W.
- INCA LN.
- 8TH ST. N.W.
- COMMERCIAL ENTRANCE
- 5TH ST. N.W.

28-153

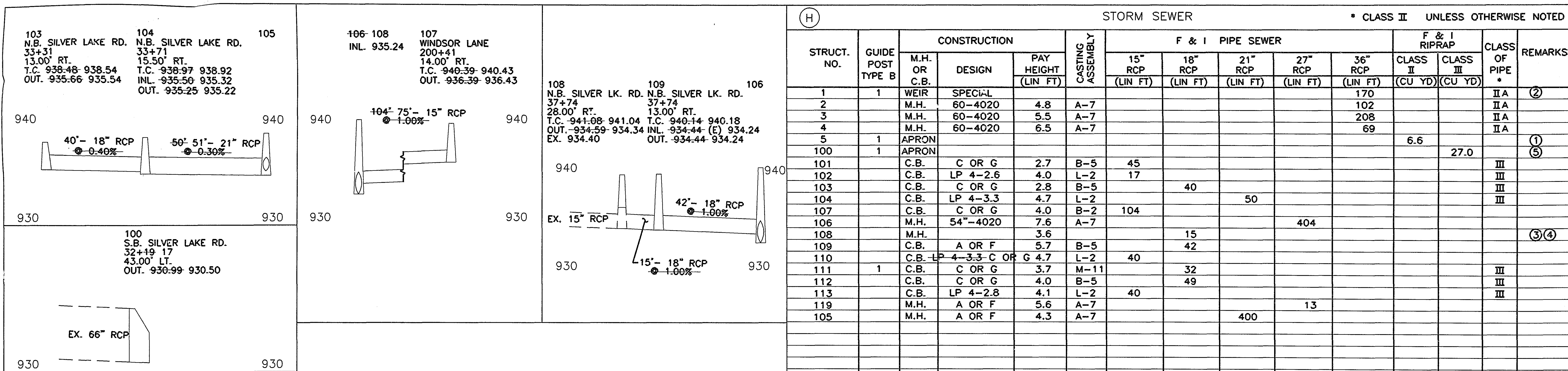
NO	DATE	BY	CKD	APPR	REVISION

SRF STRGAR-ROSCOE-FAUSCH, INC.
 CONSULTING ENGINEERS ■ LAND SURVEYORS

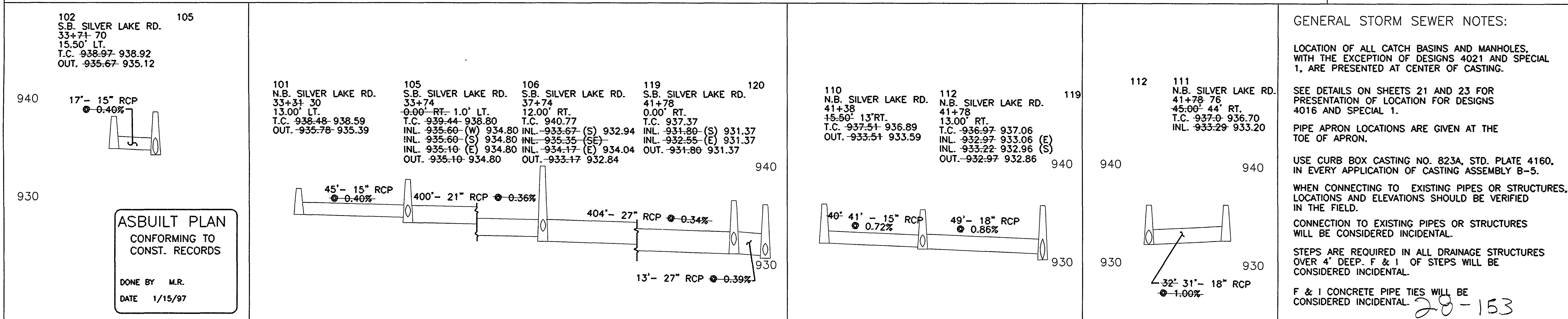
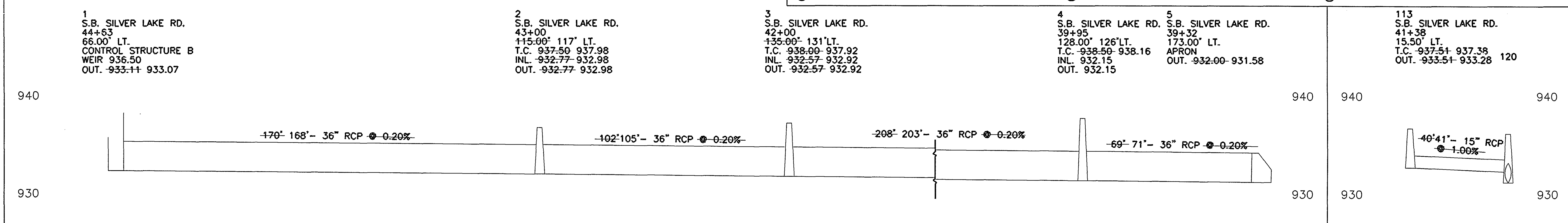
I hereby certify that this plan, specification or report was prepared by me or under my direct supervision and that I am a duly Registered Professional Engineer under the laws of the State of Minnesota.
Sgt. E. J. ...
 Date 12/14/94 Reg. No. 14546

CITY OF NEW BRIGHTON
 PROFILES
 SILVER LAKE ROAD

STATE PROJ. NO.	DRAWN BY	DATE	SHEET
62-644-13	B. DOYLE	6-94	40
	DESIGNED BY	6-94	OF 155
	CHECKED BY	6-94	COMM. NO.
			0931880



- ① TIE APRON AND LAST 3 PIPE JOINTS. ③ RECONSTRUCT EXIST. DRAINAGE STRUCTURE. SEE GENERAL NOTES BELOW.
② SEE SHEET 21 FOR CONTROL STRUCTURE DETAIL. ④ SALVAGE AND INSTALL EXIST. CASTING. ⑤ REMOVE PIPE APRON & 8 LIN.FT. PIPE SEWER.



GENERAL STORM SEWER NOTES:

LOCATION OF ALL CATCH BASINS AND MANHOLES, WITH THE EXCEPTION OF DESIGNS 4021 AND SPECIAL 1, ARE PRESENTED AT CENTER OF CASTING.

SEE DETAILS ON SHEETS 21 AND 23 FOR PRESENTATION OF LOCATION FOR DESIGNS 4016 AND SPECIAL 1.

PIPE APRON LOCATIONS ARE GIVEN AT THE TOE OF APRON.

USE CURB BOX CASTING NO. 823A, STD. PLATE 4160, IN EVERY APPLICATION OF CASTING ASSEMBLY B-5.

WHEN CONNECTING TO EXISTING PIPES OR STRUCTURES, LOCATIONS AND ELEVATIONS SHOULD BE VERIFIED IN THE FIELD.

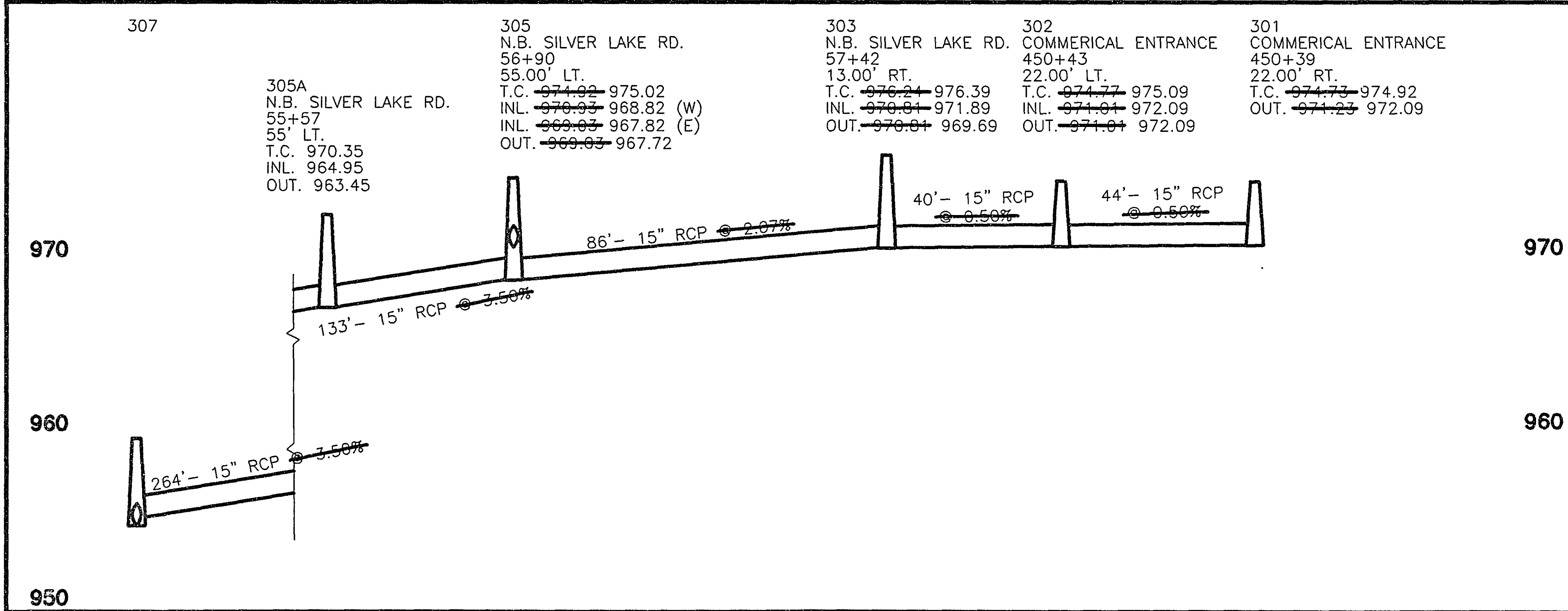
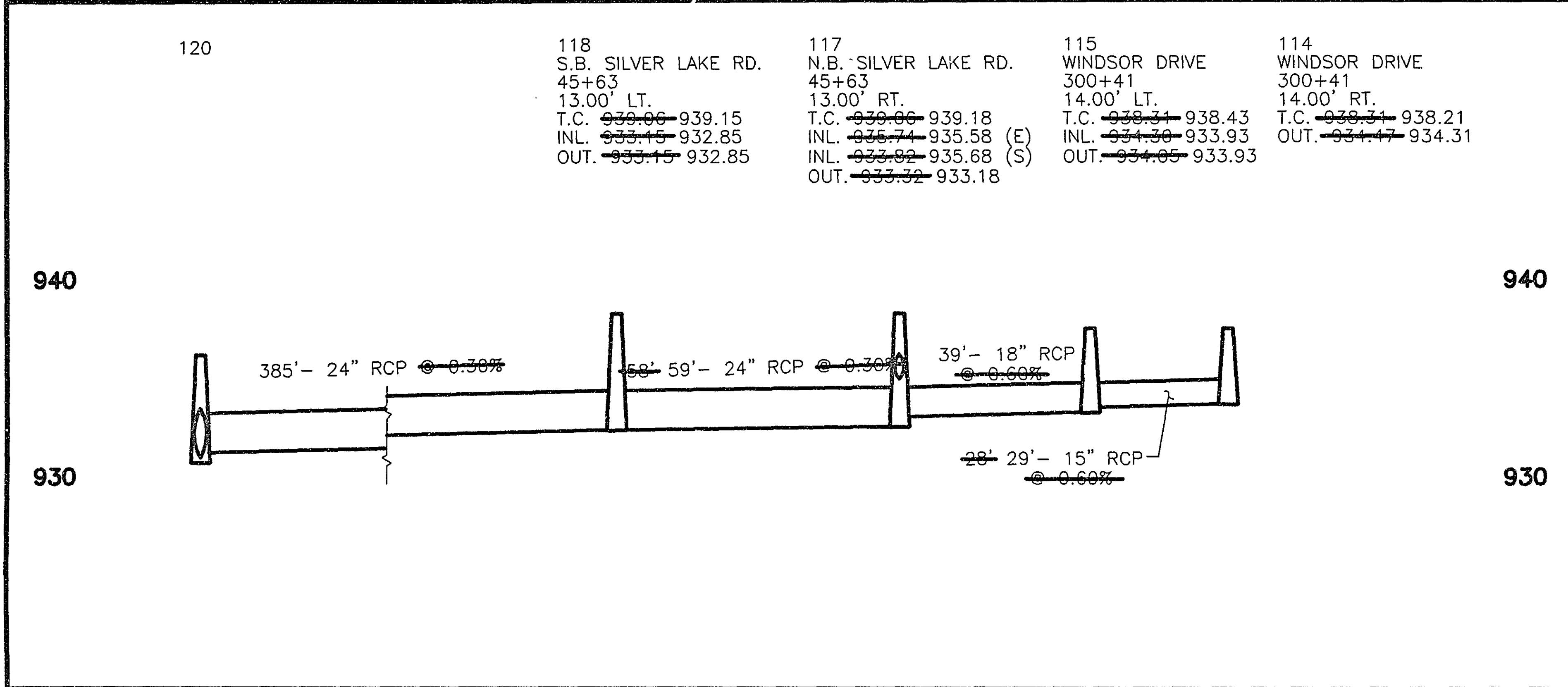
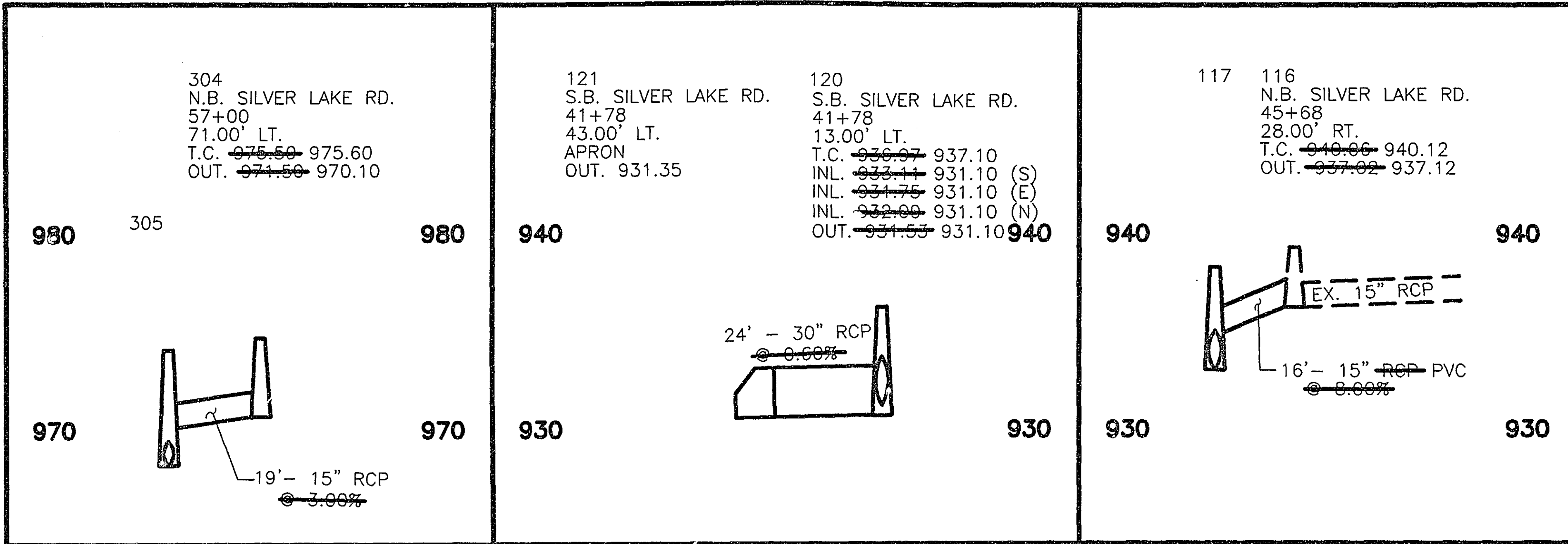
CONNECTION TO EXISTING PIPES OR STRUCTURES WILL BE CONSIDERED INCIDENTAL.

STEPS ARE REQUIRED IN ALL DRAINAGE STRUCTURES OVER 4' DEEP. F & I OF STEPS WILL BE CONSIDERED INCIDENTAL.

F & I CONCRETE PIPE TIES WILL BE CONSIDERED INCIDENTAL.

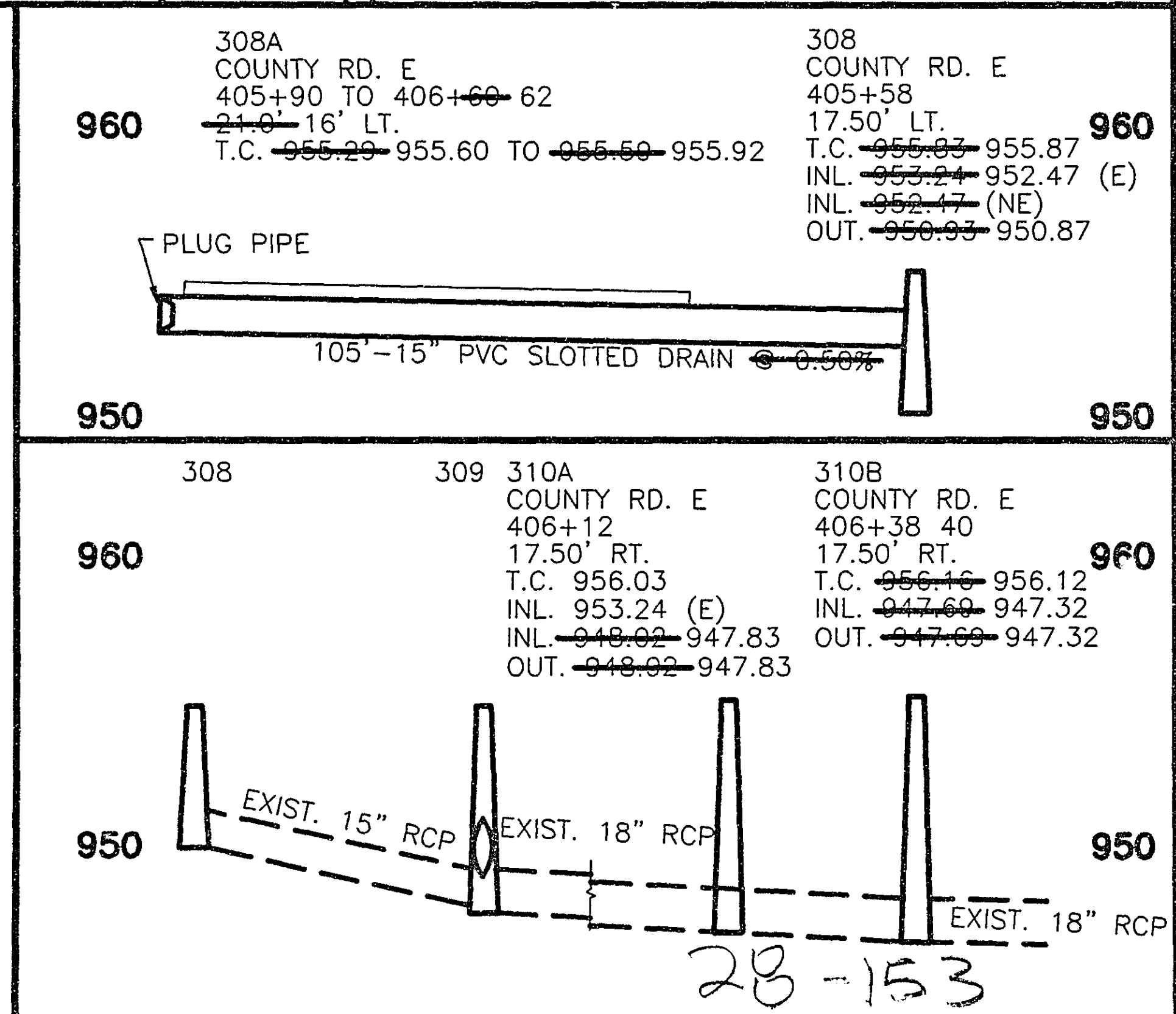
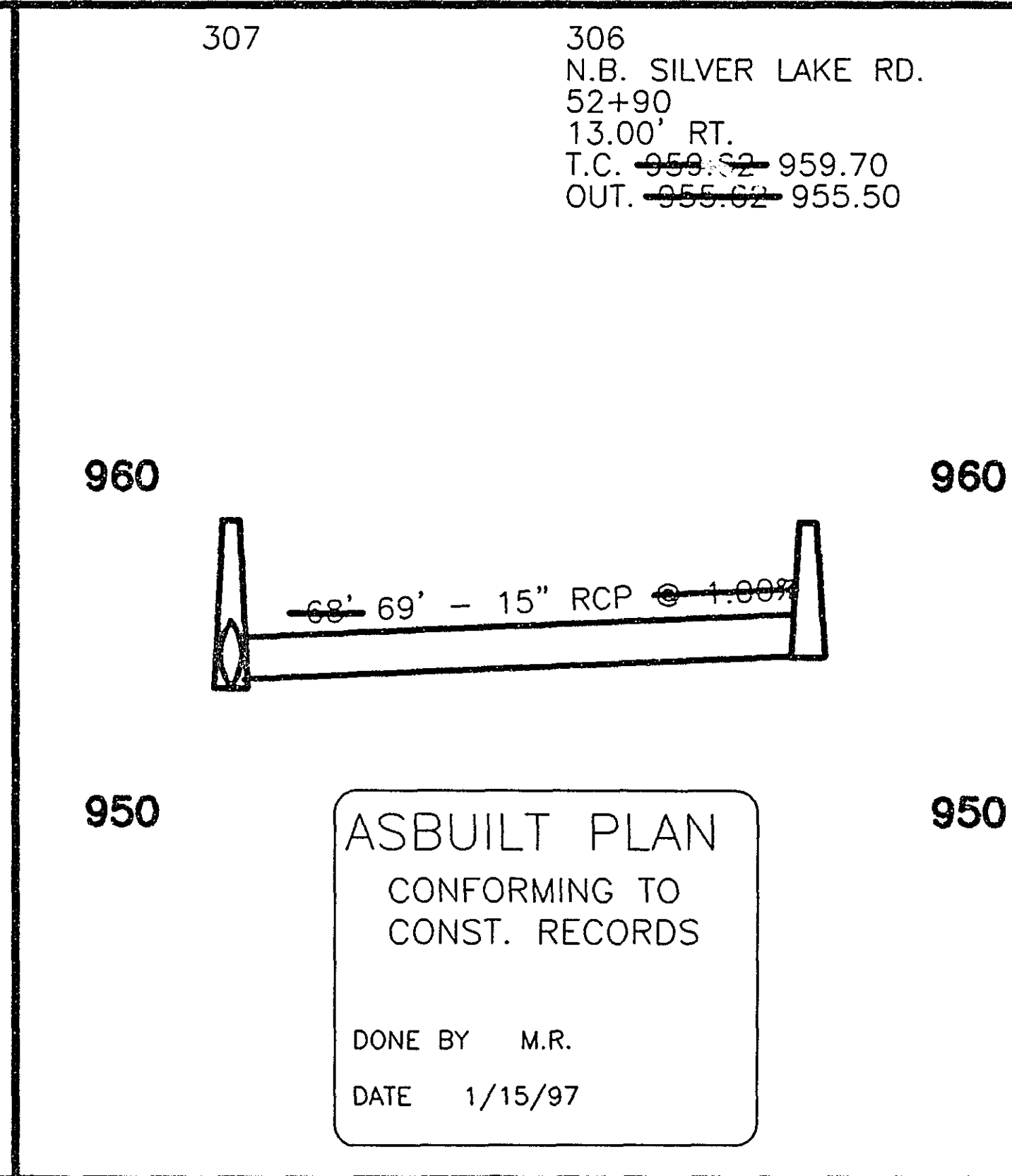
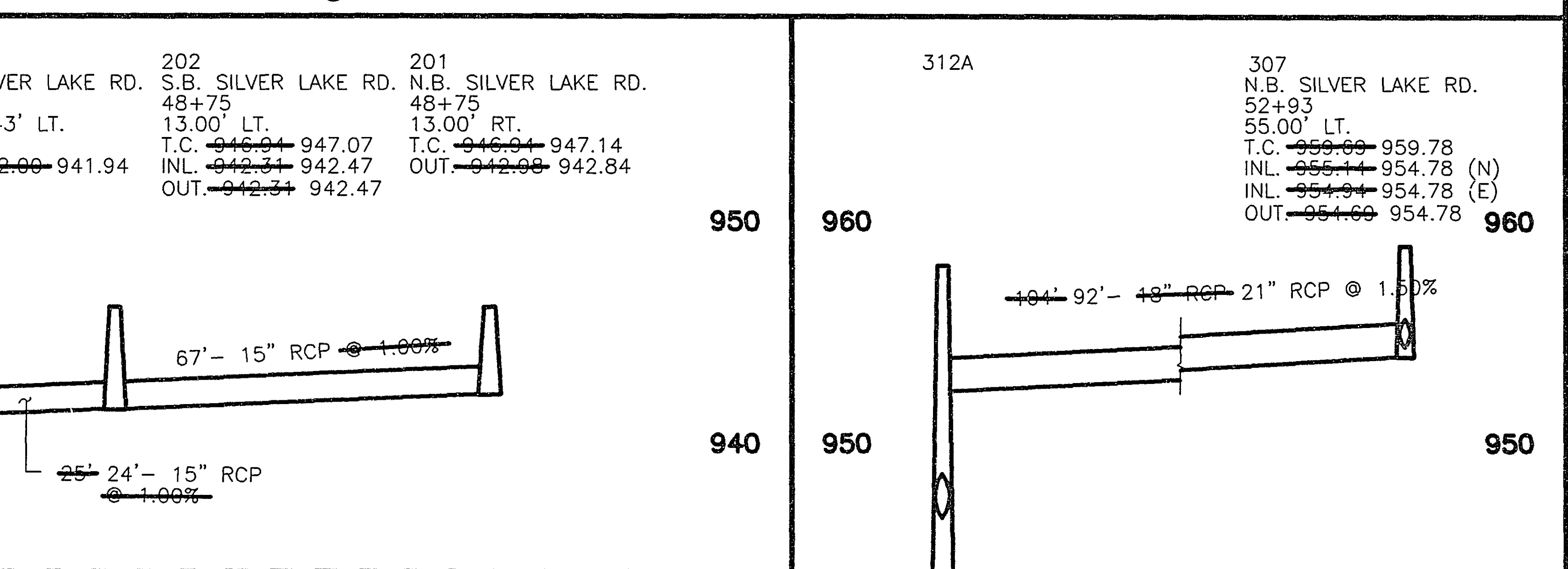
28-153

DESIGNED BY STRGAR - ROSCOE - FAUSH, INC.				I hereby certify that this plan, specification or report 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. GARY A. ERICKSON Date _____ Reg. No. 14546				CITY OF NEW BRIGHTON STORM SEWER PROFILE & TABULATION SILVER LAKE ROAD				STATE PROJ. NO. 62-644-13		DRAWN BY J. HAMRE DESIGNED BY J. ROSE CHECKED BY L. ROBJENT		DATE 6-94 6-94 12-94		SHEET 41 OF 155 COMM. NO. 0931880	
NO	DATE	BY	CKD	APPR	REVISION														

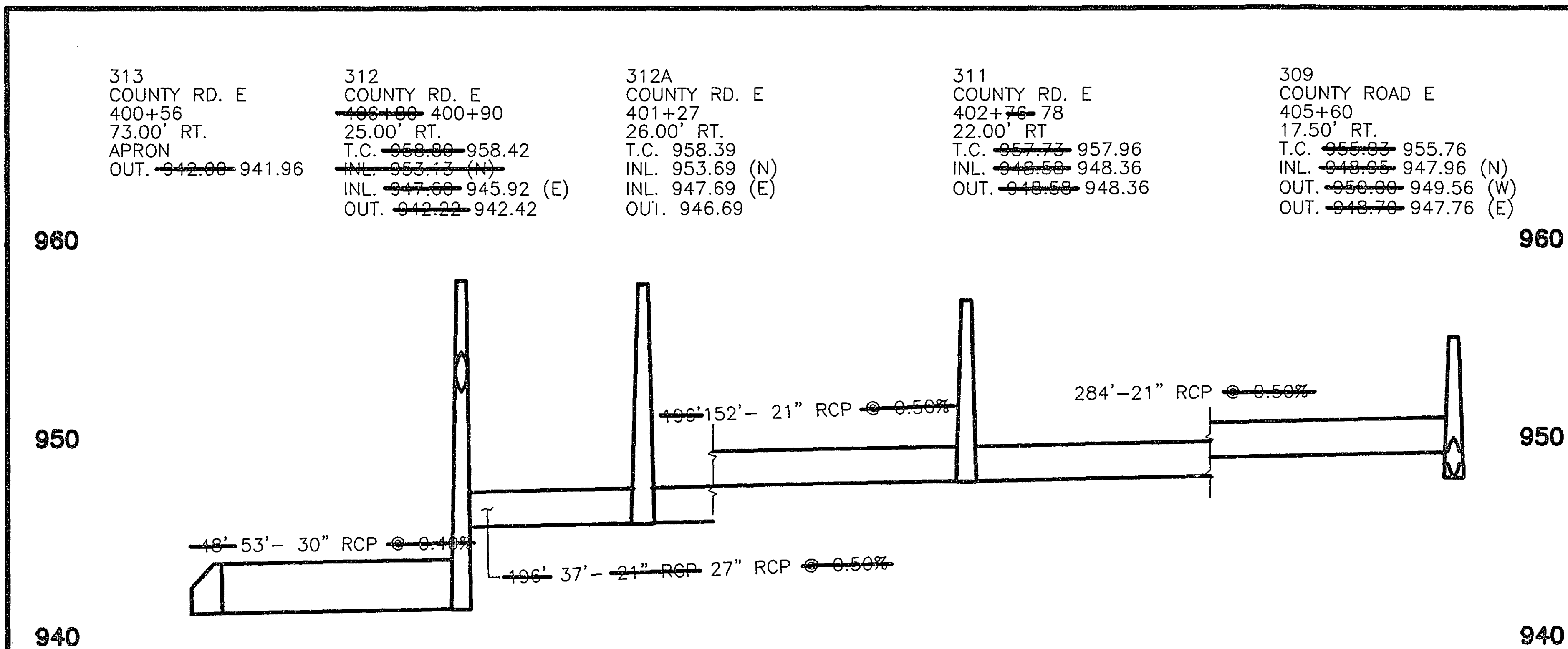


STORM SEWER												* CLASS II UNLESS OTHERWISE NOTED	
STRUCT. NO.	GUIDE POST TYPE B	CONSTRUCTION			CASTING ASSEMBLY	F & I PIPE SEWER					F & I RIPRAP CLASS II	CLASS OF PIPE *	REMARKS
		M.H. OR C.B.	DESIGN	PAY HEIGHT (LIN FT)		15" RCP (LIN FT)	18" RCP (LIN FT)	24" RCP (LIN FT)	30" RCP (LIN FT)				
114		C.B.	C OR G	3.8	B-5	28						III	
115		C.B.	C OR G	4.2	B-2		39						
116						16						III	(2)
117		C.B.	54-4020	5.7	B-5			58					
118		C.B.	A OR F	5.9	B-5			385					
120		C.B.	66-4020	5.4	B-5				24				
121	1	APRON									5.0		(1)
201		C.B.	C OR G	3.9	B-5	67							
202		C.B.	C OR G	4.6	B-5	25							
203	1	APRON									1.7		(1)
301		C.B.	C OR G	3.5	B-5	44						III	
302		C.B.	C OR G	3.8	B-2	40							
303		C.B.	A OR F	5.4	B-5	86							
304	1	C.B.	C OR G	3.9	M-11	19							
305		C.B.	A OR F	5.9	B-5	397							
306		C.B.	C OR G	4.0	B-5	68							
307		C.B.	C OR G	5.0	B-5		104						
308		C.B.	LP 4-4.2	5.6	L-2								(3)
310A		C.B.	SPECIAL 1	8.7	L-2								(3)
310B		C.B.	SPECIAL 1	9.2	L-2								(3)
308A		STOPPED											(4)

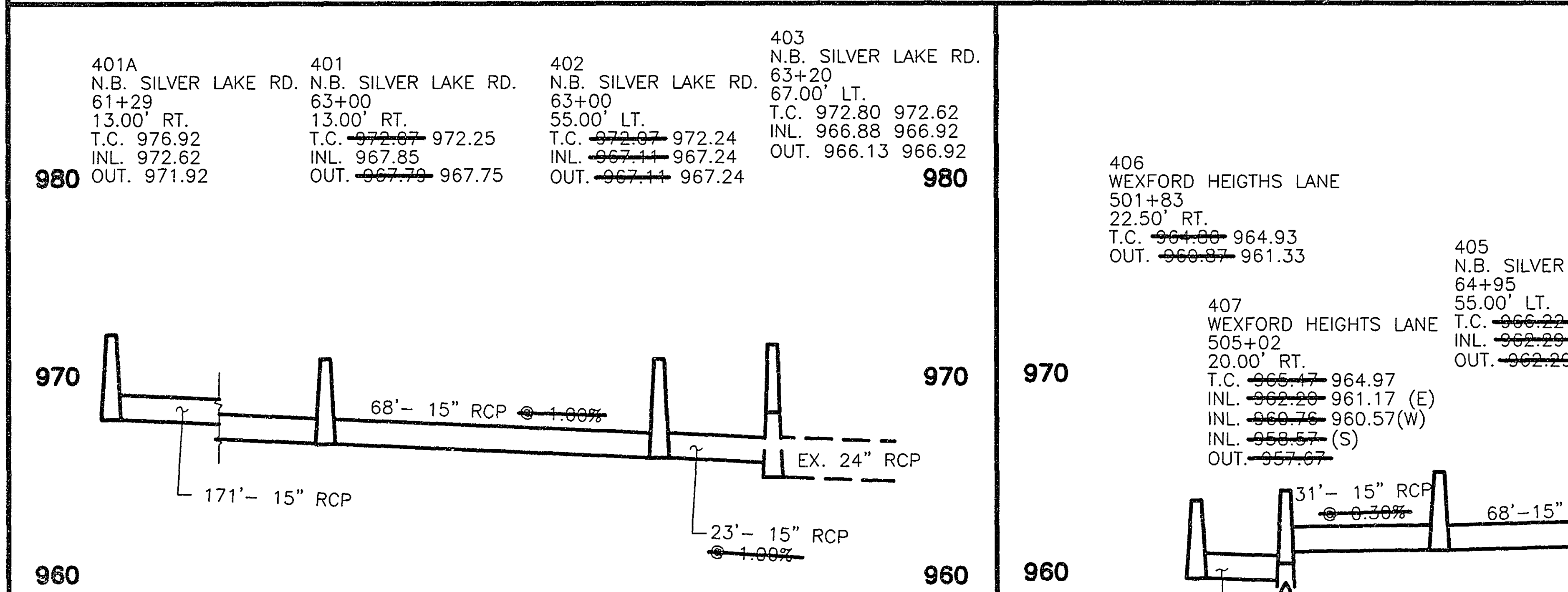
- ① TIE APRON AND LAST 3 PIPE JOINTS ③ CONSTRUCT DRAINAGE STRUCTURE OVER EXISTING PIPE SEE GENERAL NOTES ON SHEET 41.
② ADJUST CASTING ④ SEE SHEET 21 FOR SLOTTED VANE DRAIN DETAIL



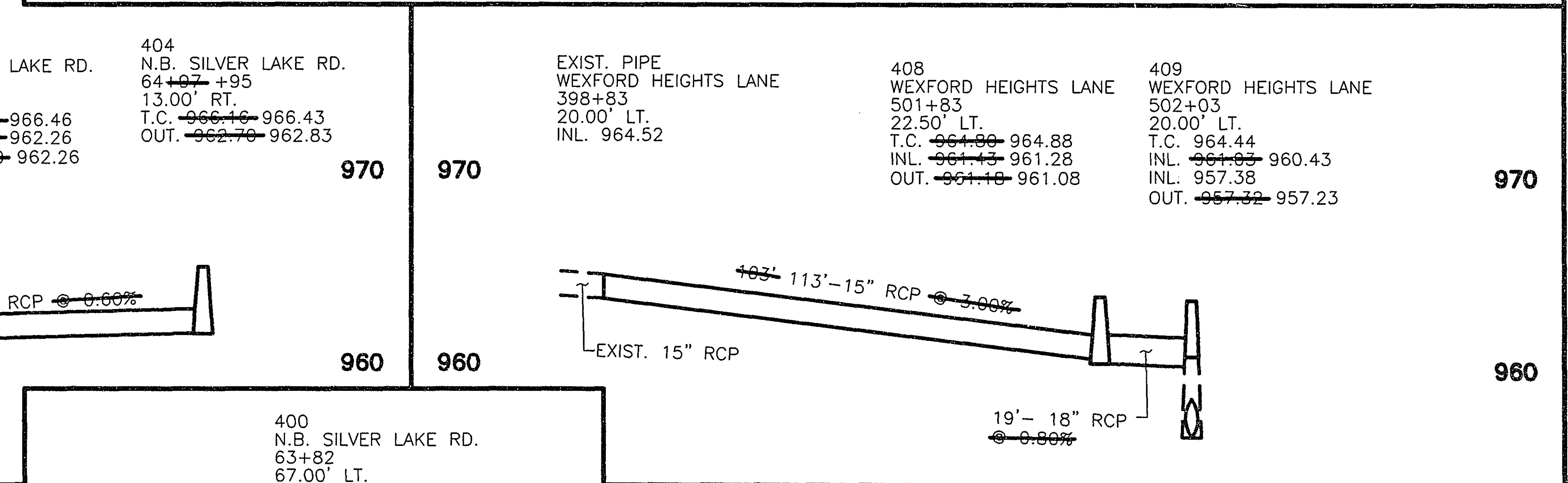
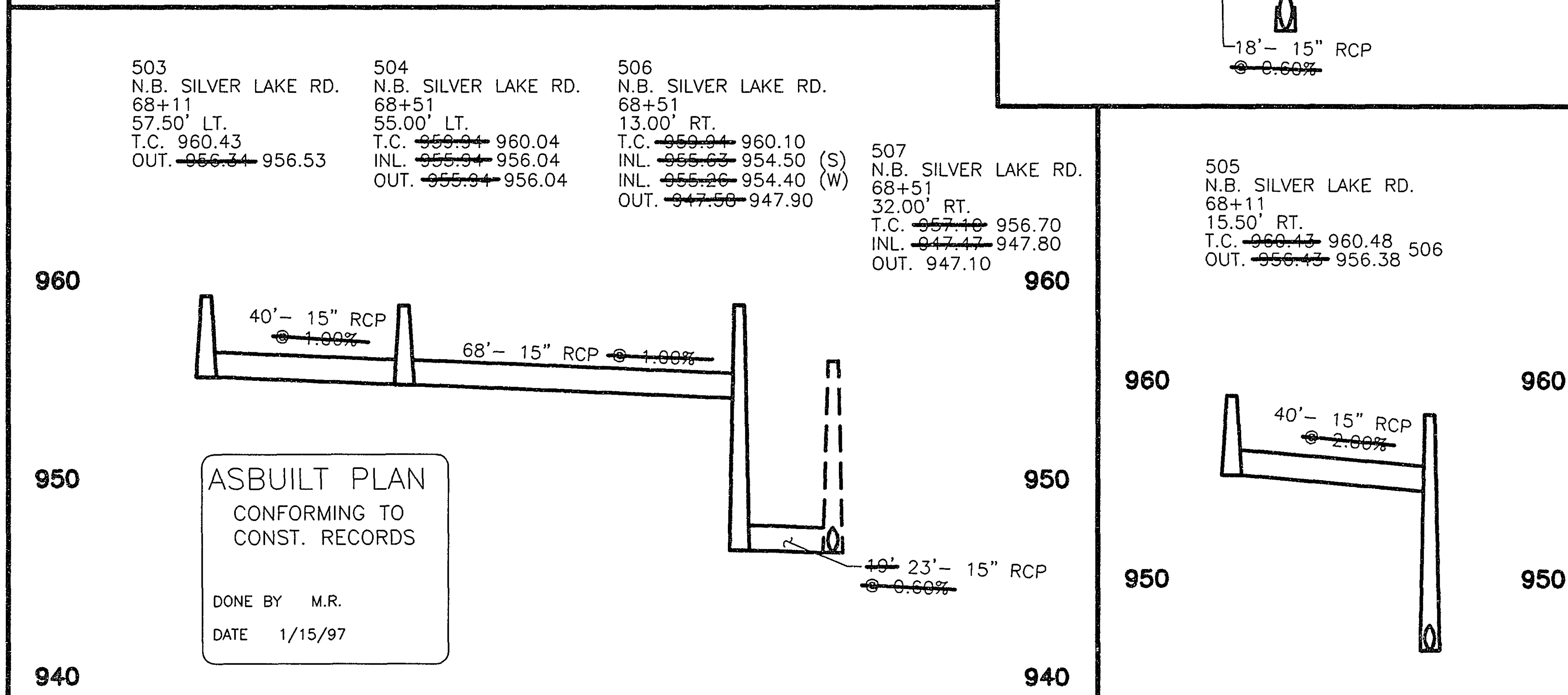
					DESIGNED BY STRGAR - ROSCOE - FAUSH, INC.					I hereby certify that this plan, specification or report was prepared by me or under my direct supervision and that I am a duly Registered Professional Engineer under the laws of the State of Minnesota.					CITY OF NEW BRIGHTON					STATE PROJ. NO. 62-644-13		DRAWN BY J. HAMRE DATE 6-94		SHEET 42					
															STORM SEWER PROFILE & TABULATION							DESIGNED BY J. ROSENOW DATE 6-94		OF 155					
															SILVER LAKE ROAD							CHECKED BY L. ROBJENT DATE 12-94		COMM. NO. 0931880					
										GARY A ERICKSON																			
										Date _____ Reg. No. 14548																			
NO					DATE					BY					CHKD					APPR					REVISION				



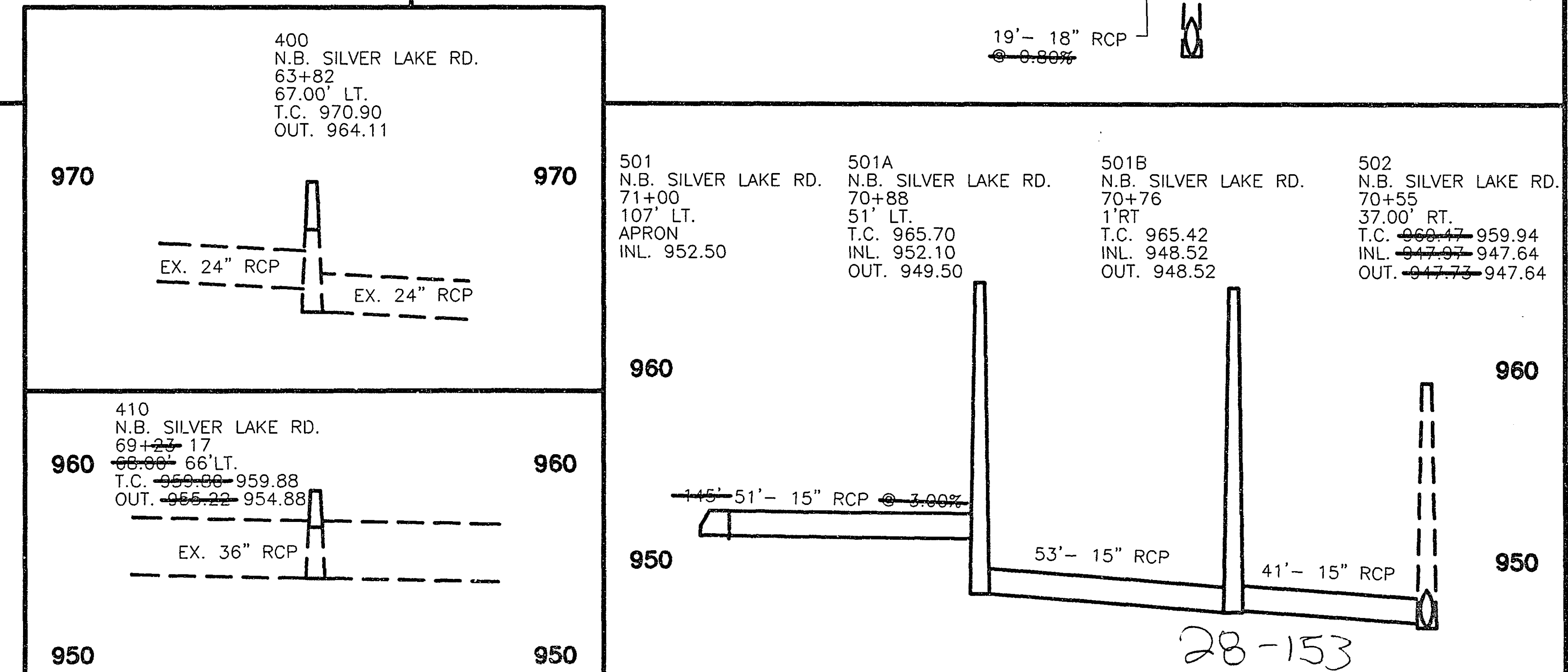
STORM SEWER											* CLASS II UNLESS OTHERWISE NOTED	
STRUCT. NO.	GUIDE POST TYPE B	CONSTRUCTION			CASTING ASSEMBLY	F & I PIPE SEWER					CLASS II	REMARKS
		M.H. OR C.B.	DESIGN	PAY HEIGHT (LIN FT)		15" RCP (LIN FT)	18" RCP (LIN FT)	21" RCP (LIN FT)	30" RCP (LIN FT)			
309		C.B.	SPECIAL 1	7.8	L-2			284				(6)
311		C.B.	A OR F	9.1	B-5			196				
312		M.H.	A OR F	16.7	B-5				48		IV	
313	1	APRON								5.0		(1)
400		M.H.		1.9								(2) (3)
401		C.B.	C OR G	4.2	B-5	68						
402		C.B.	C OR G	4.9	B-5	23						
403		M.H.		2.8								(2) (3)
404		C.B.	C OR G	3.4	B-5	68					III	
405		C.B.	C OR G	3.9	B-5	31					III	
406		C.B.	LP 4-3.3	4.6	L-2	18						
407		M.H.		3.1	A-7							(2)
EXIST. PIPE						103					III	(4)
408		C.B.	LP 4-3.0	4.3	L-2		19				III	
409		M.H.		2.2	A-7							(2)
410		C.B.		1.5	M-11							(2)
501	1	APRON				145						(1)
502												(5)
503		C.B.	LP 4-3.4	4.8	L-2	40						
504		C.B.	C OR G	4.0	B-5	68						
505		C.B.	LP 4-3.3	4.7	L-2	40						
506		C.B.	A OR F	12.3	B-5	19					III	
507												(5)

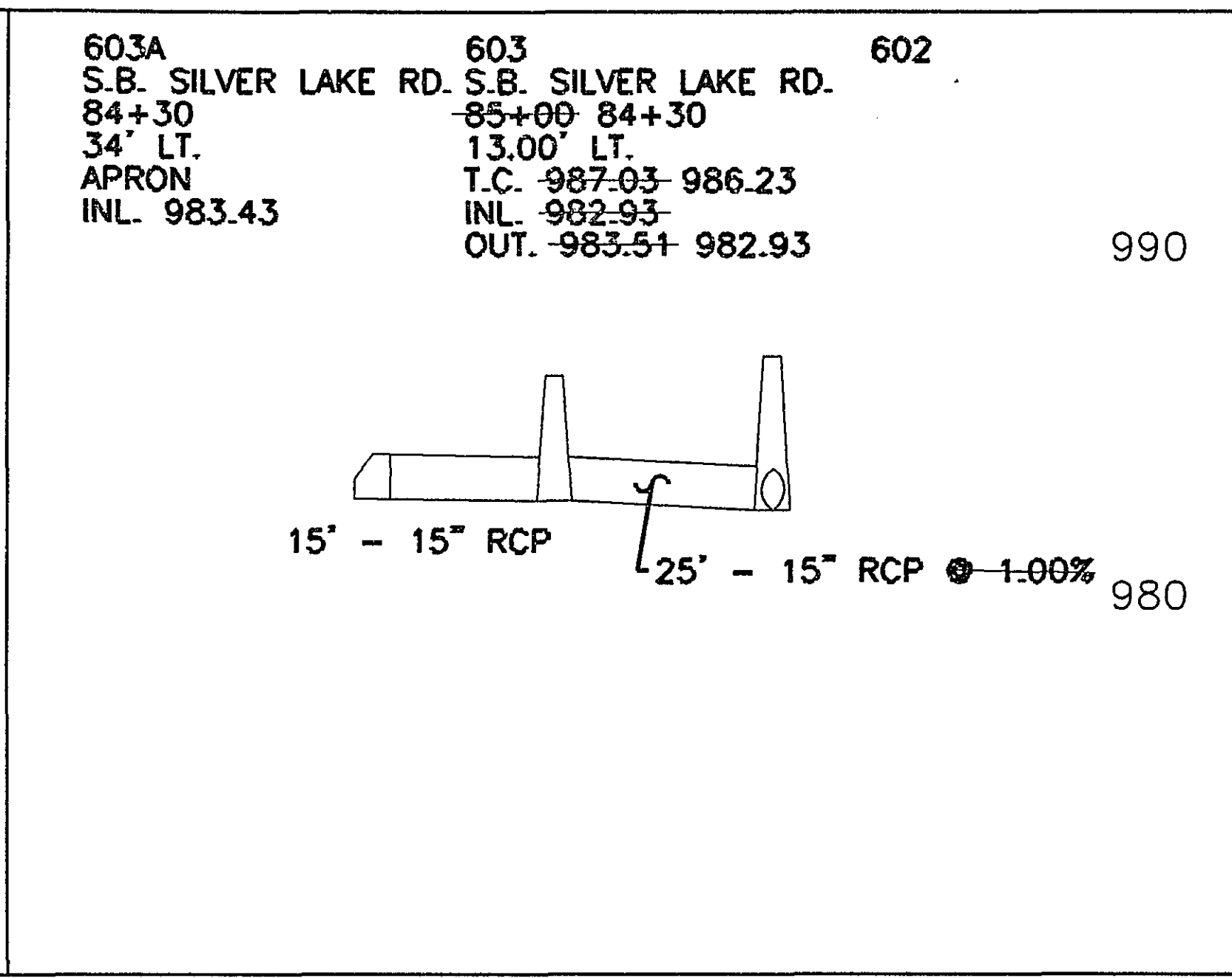
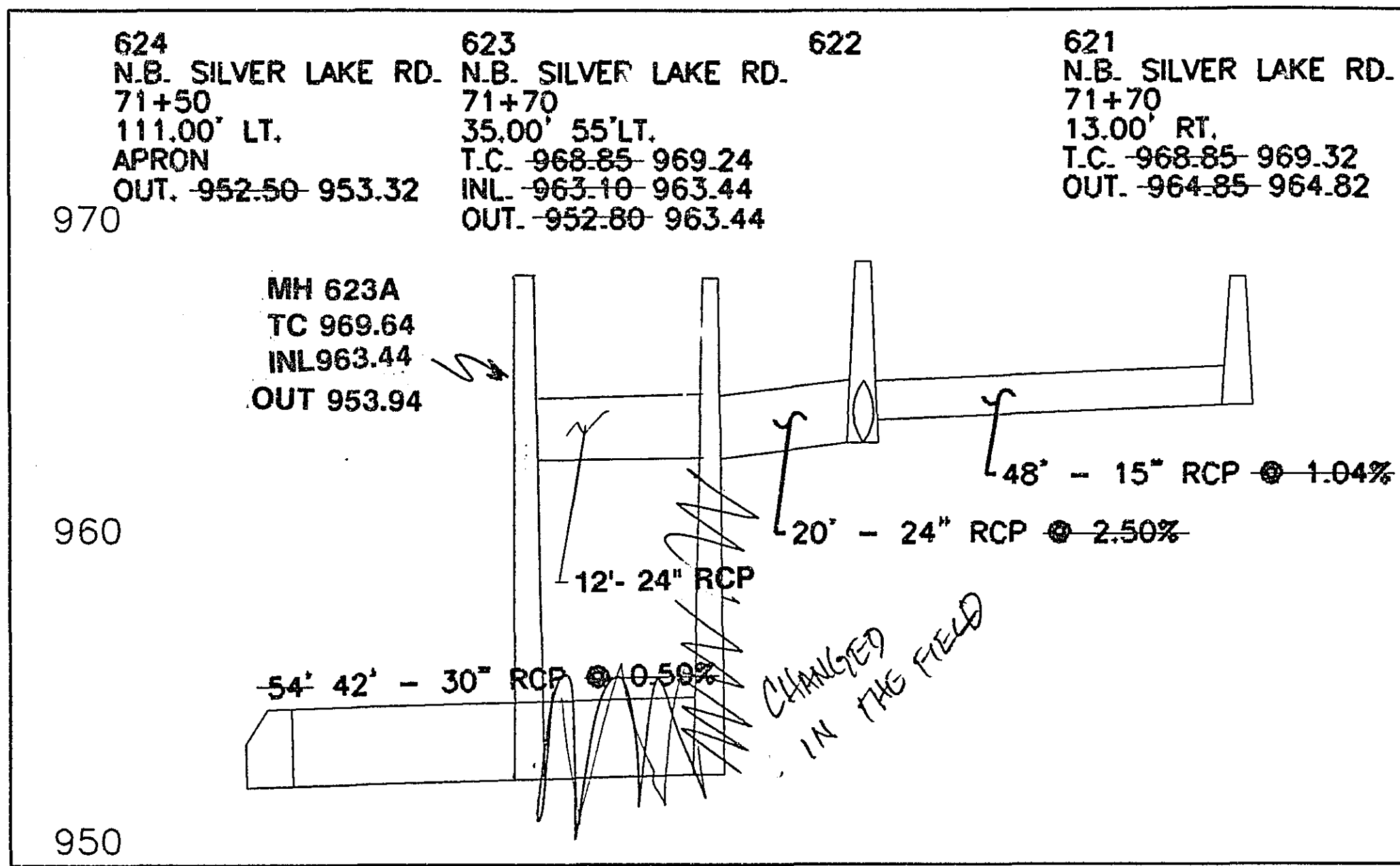


- ① TIE APRON AND LAST 3 PIPE JOINTS
② RECONSTRUCT EXISTING DRAINAGE STRUCTURE
③ SALVAGE AND INSTALL EXISTING CASTING
- ④ CONNECT TO EXISTING PIPE
⑤ LEAVE AS IS
⑥ CONSTRUCT DRAINAGE STRUCTURE OVER EXISTING PIPE
- SEE GENERAL NOTES ON SHEET NO. 41

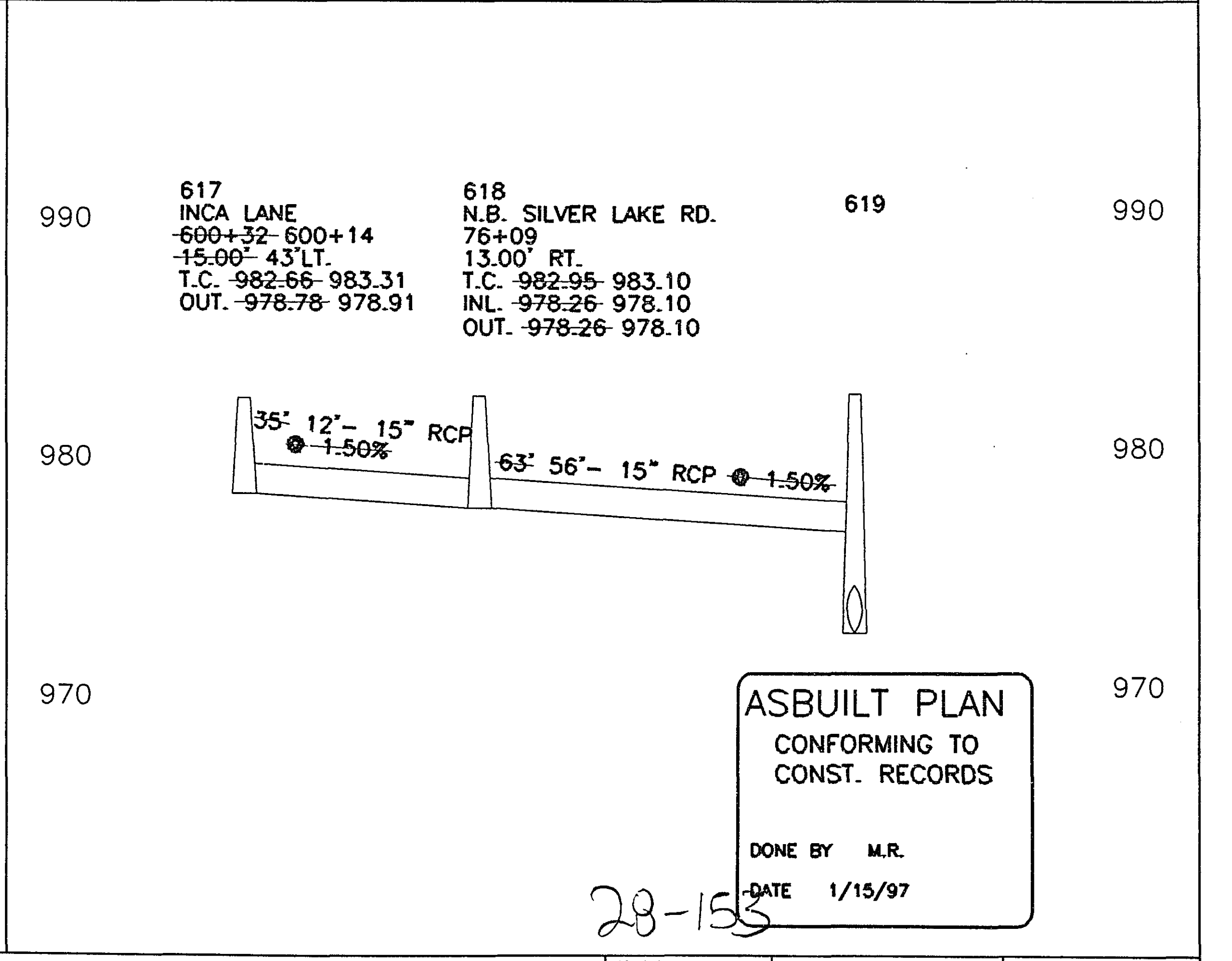
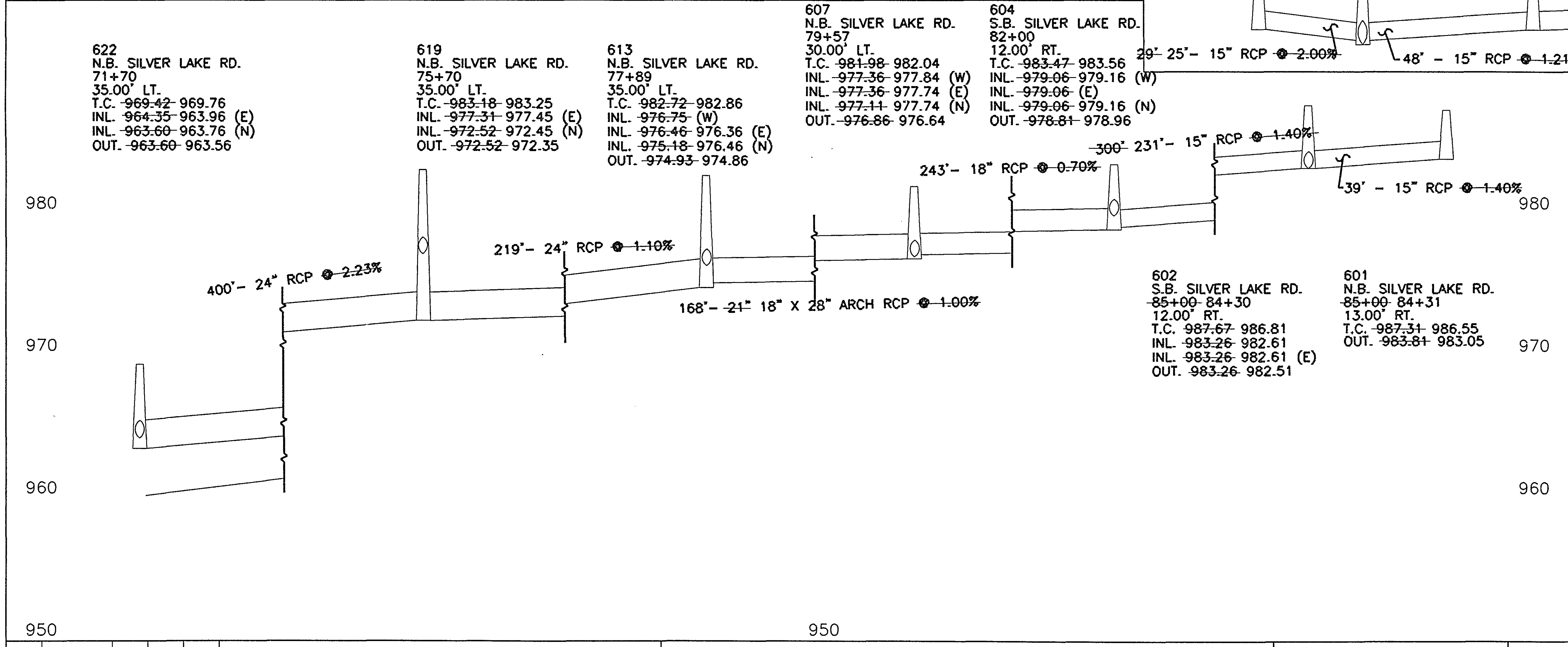
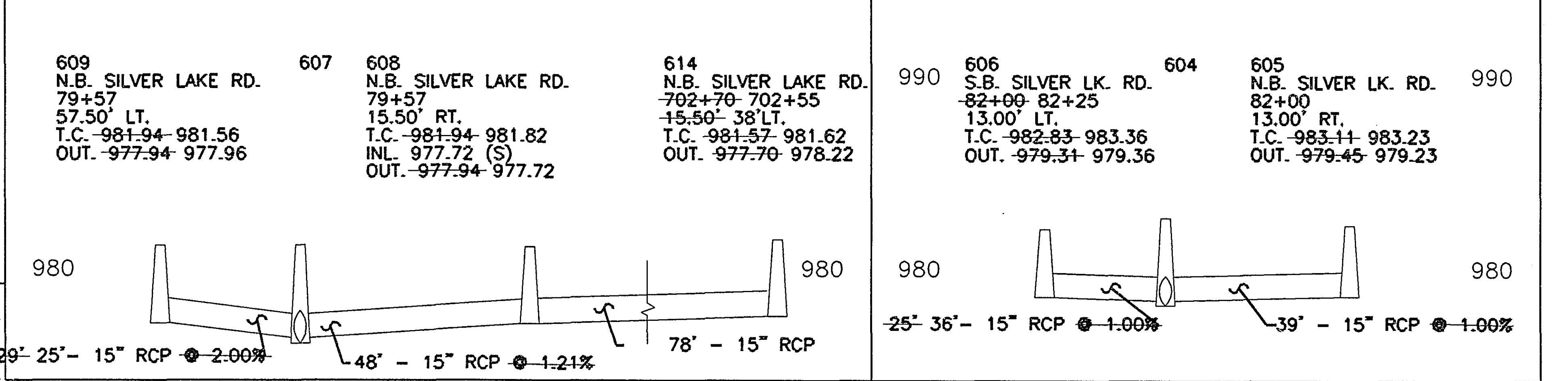
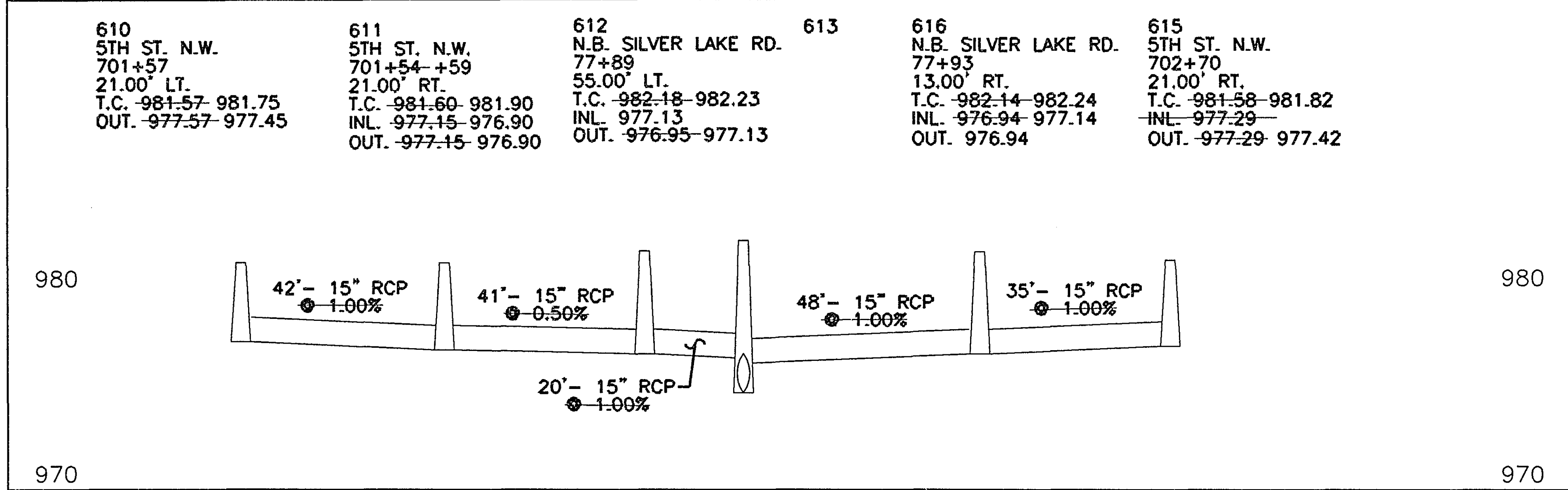


NO				DATE	BY	CHKD	APPR	REVISION

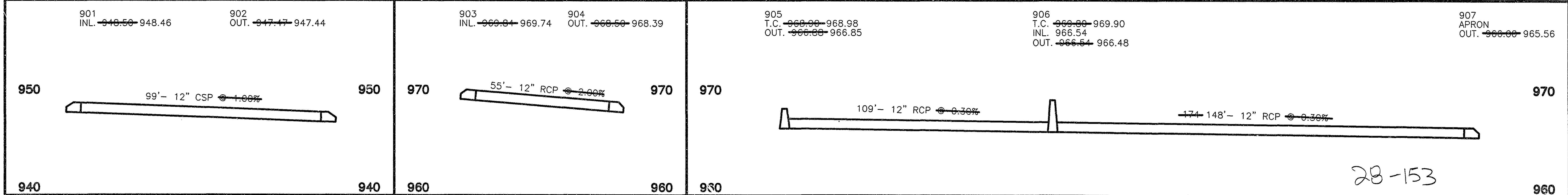
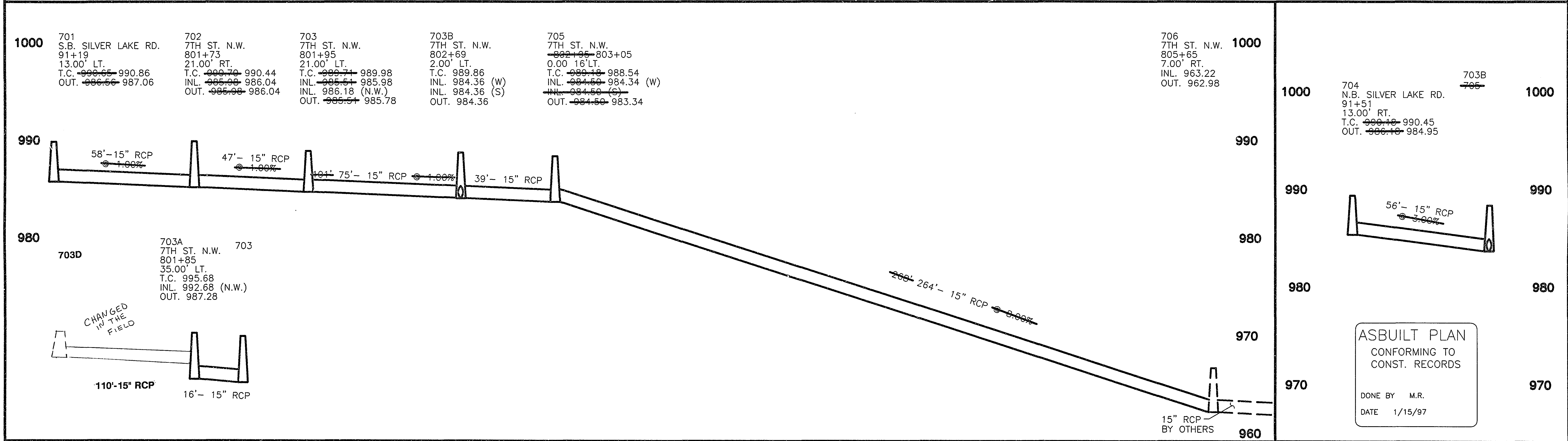
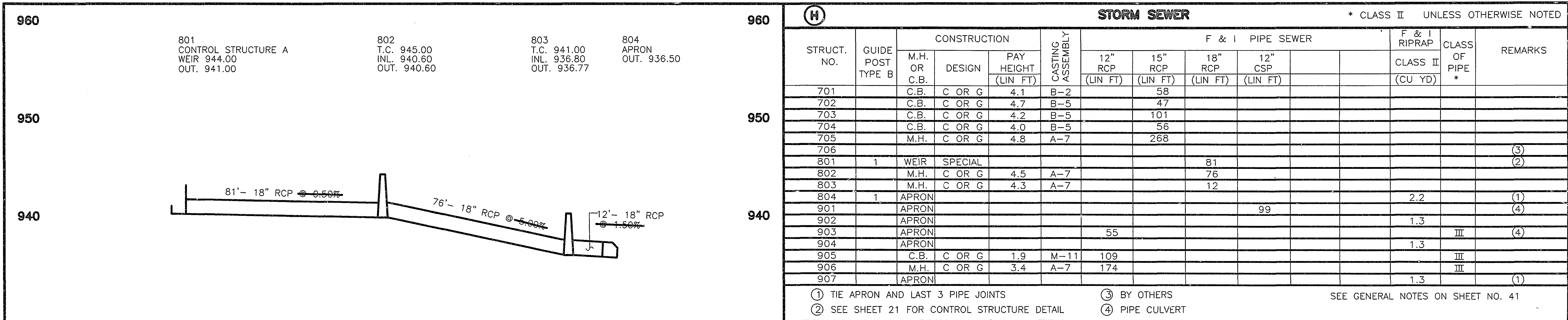




(H)		STORM SEWER										* CLASS II UNLESS OTHERWISE NOTED	
STRUCT. NO.	GUIDE POST TYPE B	CONSTRUCTION			CASTING ASSEMBLY	F & I PIPE SEWER					F & I RIPRAP CLASS II	CLASS OF PIPE *	REMARKS
		M.H. OR C.B.	DESIGN	PAY HEIGHT (LIN FT)		15" RCP (LIN FT)	18" RCP (LIN FT)	21" RCP (LIN FT)	24" RCP (LIN FT)	30" RCP (LIN FT)			
601		C.B.	C OR G	3.5	B-5	39						III	
602		M.H.	A OR F	4.4	A-7	300						III	
603		C.B.	C OR G	3.5	B-5	25						III	
604		M.H.	A OR F	4.7	A-7		243					III	
605		C.B.	C OR G	4.0	B-5	39						III	
606		C.B.	C OR G	3.5	B-5	25						III	
607		M.H.	A OR F	5.1	A-7			168					
608		C.B.	LP 4-3.3	4.7	L-2	48							
609		C.B.	LP 4-3.3	4.7	L-2	29							
610		C.B.	C OR G	4.0	B-5	42							
611		C.B.	C OR G	4.4	B-2	41							
612		C.B.	66-4020	8.0	B-5	20							
613		M.H.	A OR F	7.8	A-7				219				
614		C.B.	C OR G	3.9	B-5	41							
615		C.B.	C OR G	4.3	B-2	35							
616		C.B.	C OR G	5.2	B-5	48							
617		C.B.	C OR G	3.9	B-2	39							
618		C.B.	C OR G	4.7	B-5	63							
619		M.H.	A OR F	10.7	A-7			400					
621		C.B.	C OR G	4.0	B-5	48							
622		M.H.	A OR F	5.8	A-7				20				
623		C.B.	A OR F	16.0	B-5					54		IV	
624	1	APRON									5.0		(1)



DESIGNED BY STRGAR - ROSCOE - FAUSH, INC.				I hereby certify that this plan, specification or report 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. GARY A. ERICKSON Date _____ Reg. No. 14546		CITY OF NEW BRIGHTON STORM SEWER PROFILE & TABULATION SILVER LAKE ROAD		STATE PROJ. NO. 62-644-13	DRAWN BY J. HAMRE DESIGNED BY J. ROSENOW CHECKED BY L. ROBJENT	DATE 6-94 6-94 12-94	SHEET 44 OF 155 COMM. NO. 0931880	
NO	DATE	BY	CKD	APPR	REVISION							



NO	DATE	BY	CHK	APPR	REVISION

DESIGNED BY STRGAR - ROSCOE - FAUSH, INC.

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GARY A. ERICKSON
Date _____ Reg. No. 14548

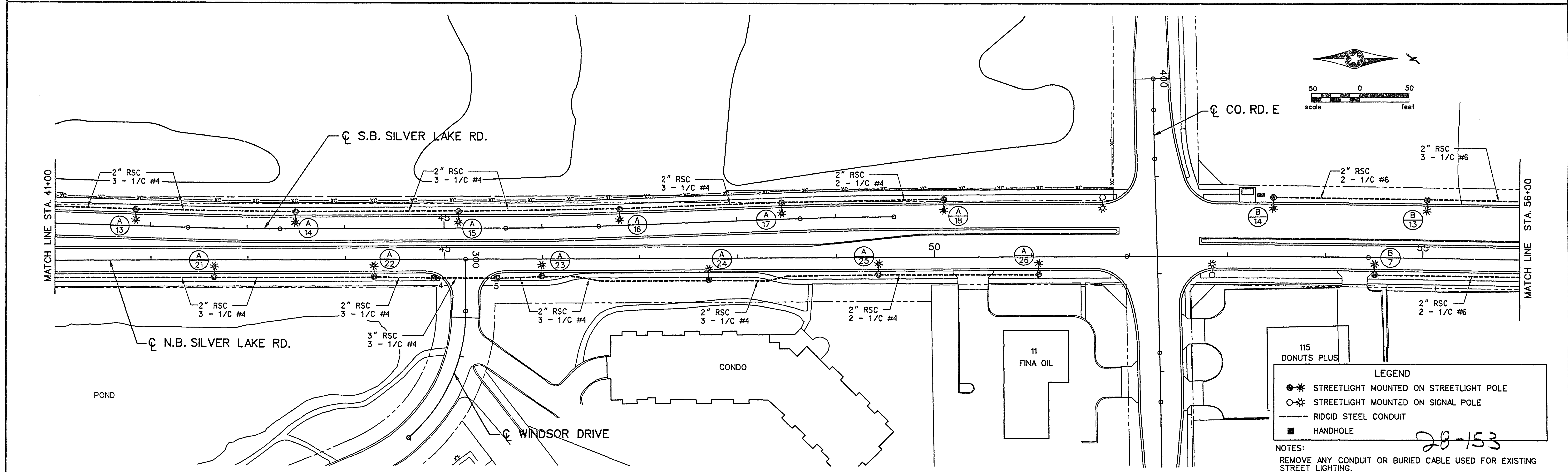
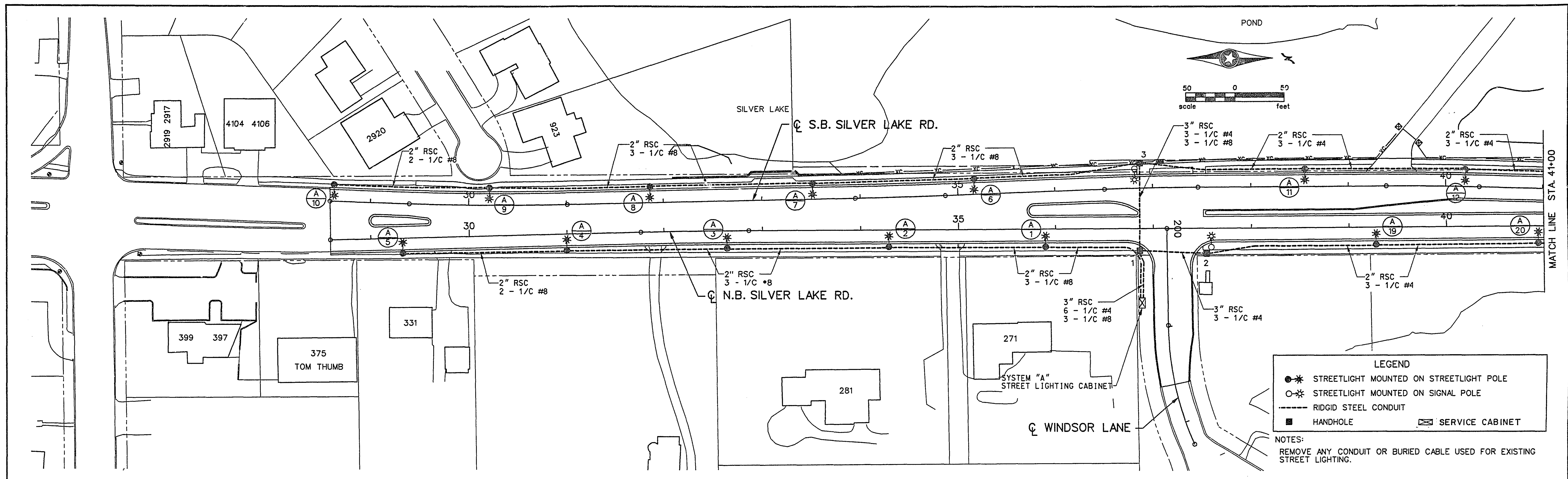
CITY OF NEW BRIGHTON
STORM SEWER PROFILE & TABULATION
SILVER LAKE ROAD

STATE PROJ. NO.
62-644-13

DRAWN BY
J. HAMRE
DESIGNED BY
J. ROSENOW
CHECKED BY
L. ROBJENT

DATE
6-94
6-94
12-94

SHEET
45
OF
155
COMM. NO.
0931880



1	3-9-95	MCI	SNB	REVISE PER STATE AID REVIEW
NO	DATE	BY	CKD APPR	REVISION

SRF STRGAR-ROSCOE-FAUSCH, INC.
CONSULTING ENGINEERS ■ LAND SURVEYORS

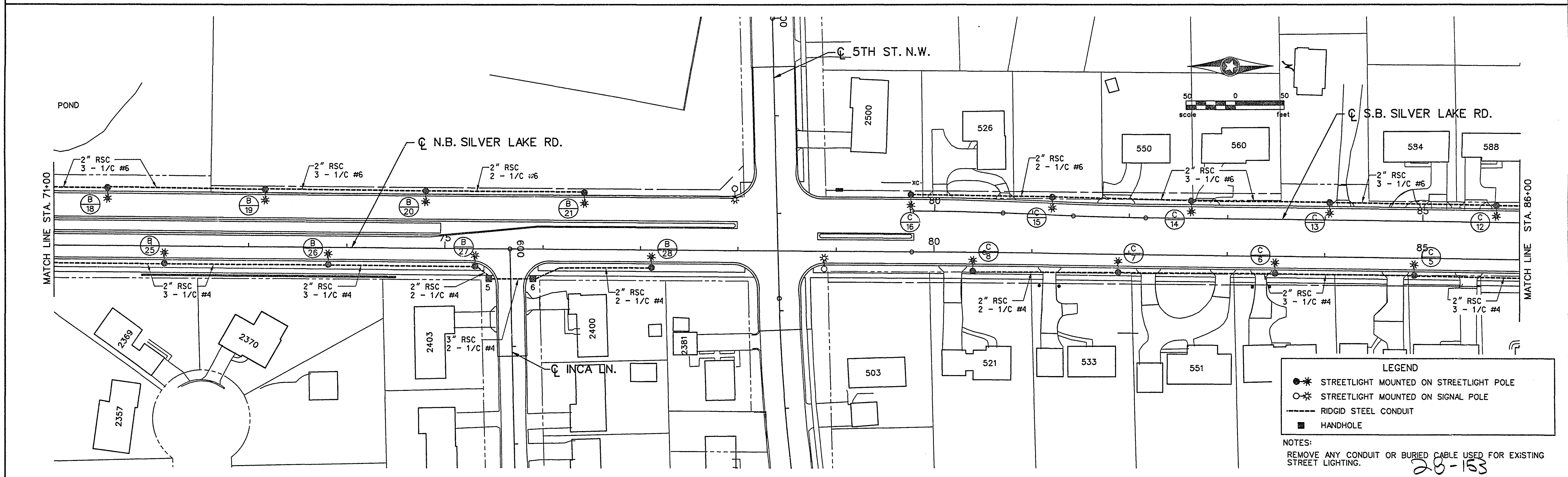
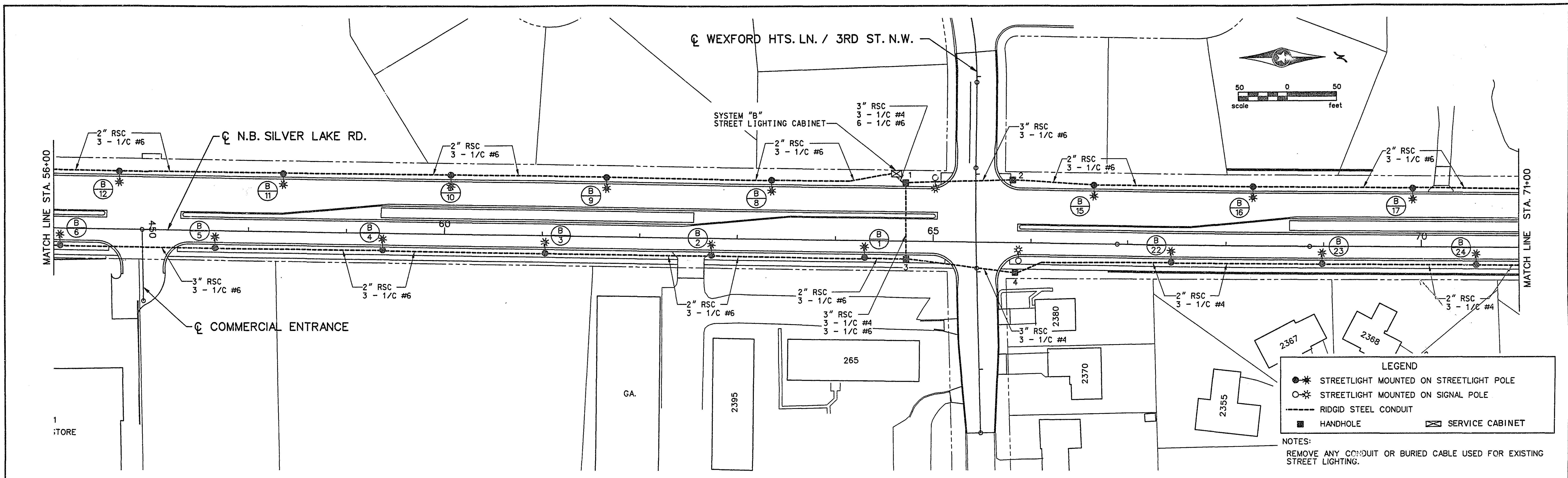
I hereby certify that this plan, specification or report was prepared by me or under my direct supervision and that I am a duly Registered Professional Engineer under the laws of the State of Minnesota.
Date 12.14.94 Reg. No. 23412

CITY OF NEW BRIGHTON
LIGHTING PLAN
SILVER LAKE ROAD

STATE AID
PROJ. NO.
62-644-17

DRAWN BY
B. DOYLE 9-94
DESIGNED BY
D. MICHALKO 9-94
CHECKED BY
D. EYLER 9-94

SHEET **47**
OF **155**
COMM. NO.
0931880



1	3-9-95	MCI	SNB	REVISE PER STATE AID REVIEW
NO	DATE	BY	CKD	APPR
				REVISION

SRF STRGAR-ROSCOE-FAUSCH, INC.
CONSULTING ENGINEERS ■ LAND SURVEYORS

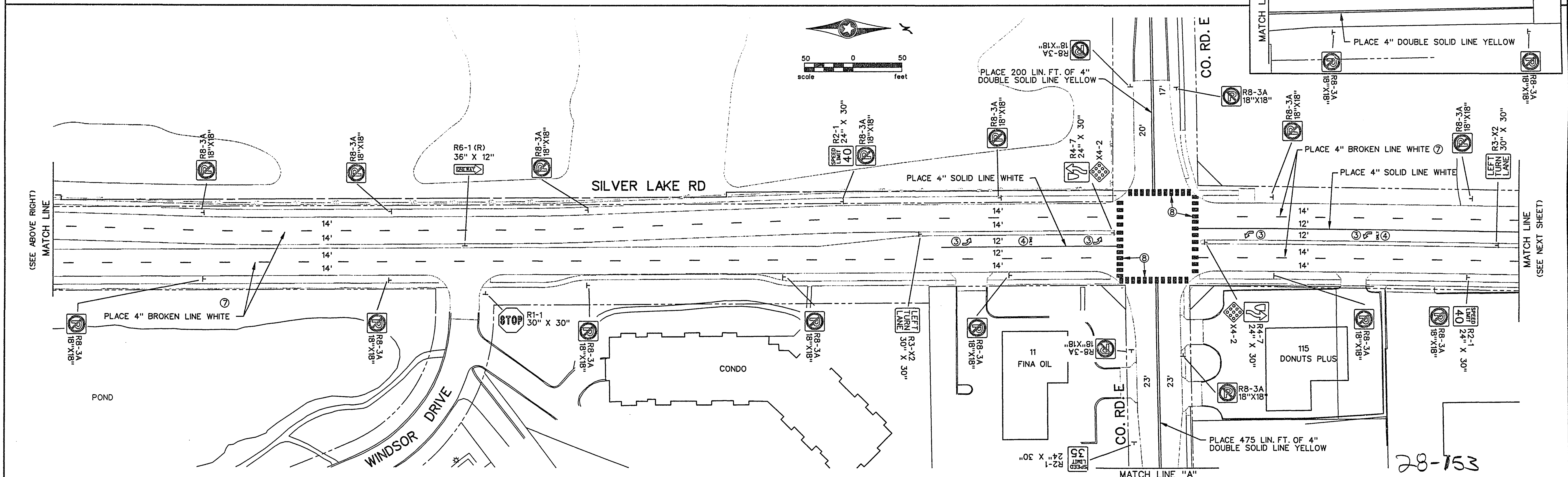
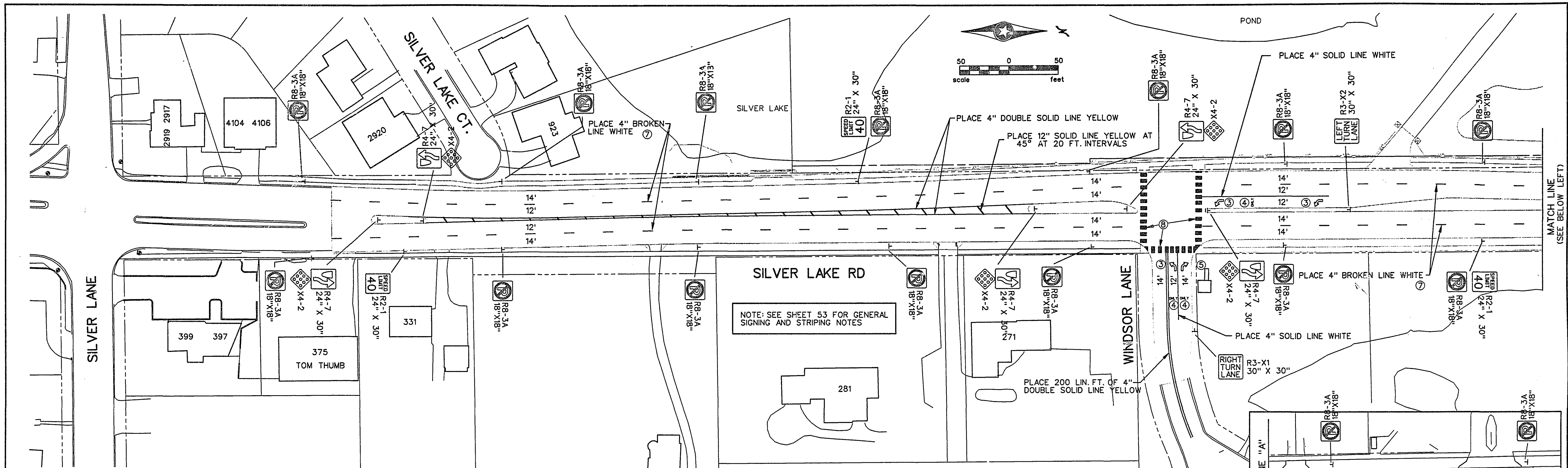
I hereby certify that this plan, specification or report was prepared by me or under my direct supervision and that I am a duly Registered Professional Engineer under the laws of the State of Minnesota.
Date 12-14-94 Reg. No. 23417

CITY OF NEW BRIGHTON
LIGHTING PLAN
SILVER LAKE ROAD

STATE AID PROJ. NO.	62-644-17	DRAWN BY B. DOYLE	DATE 9-94	SHEET 48
		DESIGNED BY D. MICHALKO	9-94	OF 155
		CHECKED BY D. EYLER	9-94	COMM. NO. 0931880

NO SHEET

50



NO	DATE	BY	CKD	APPR	REVISION

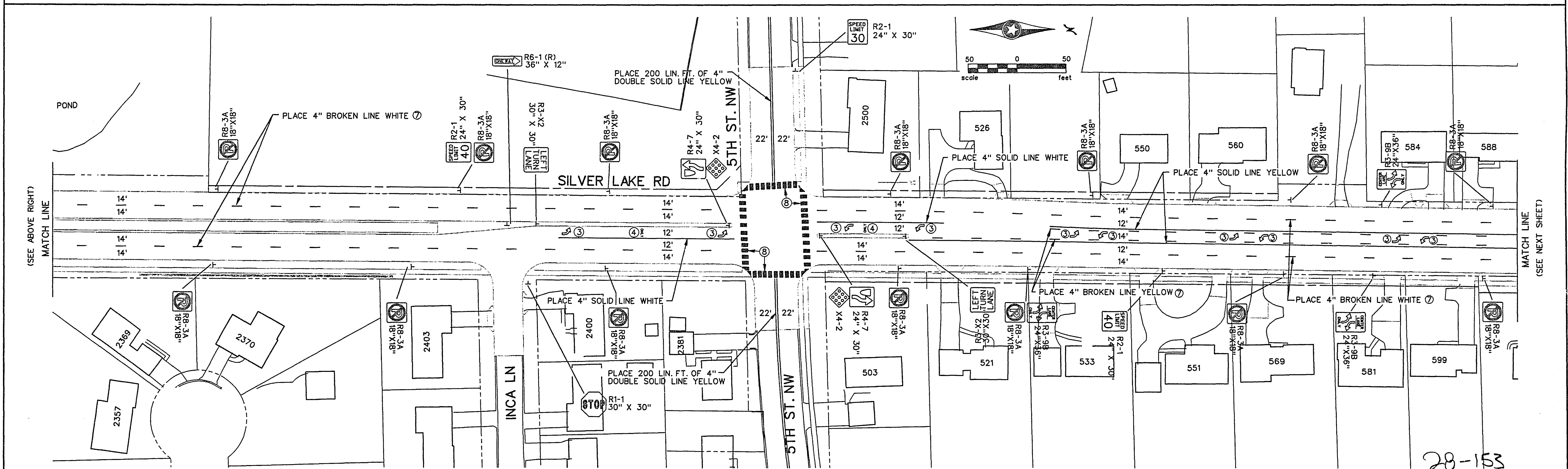
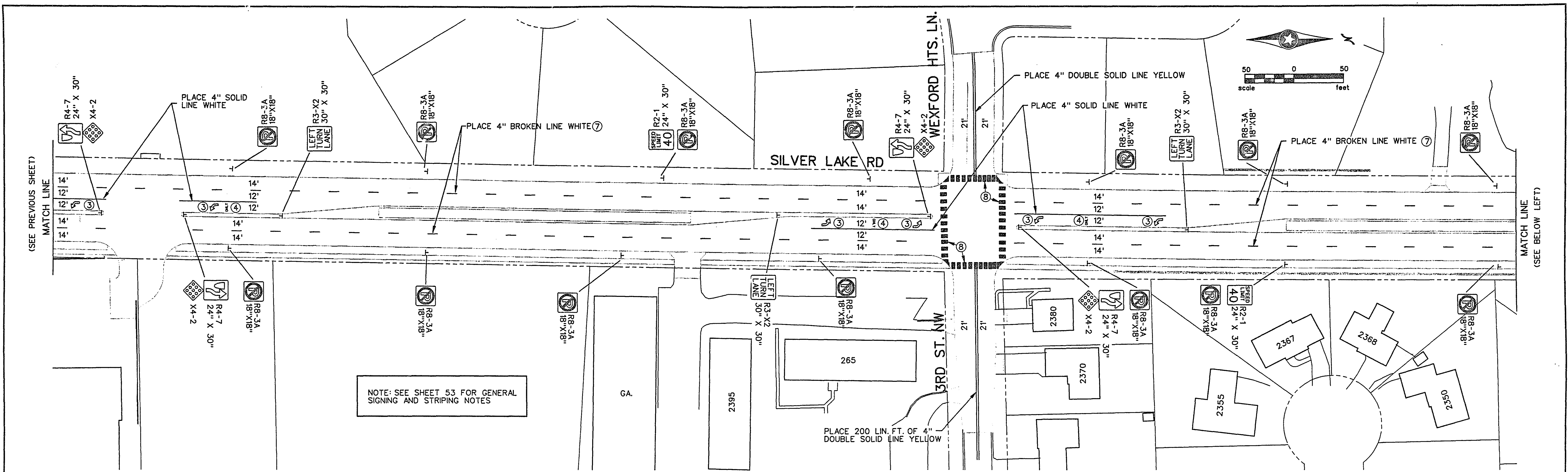
SRF STRGAR-ROSCOE-FAUSCH, INC.
CONSULTING ENGINEERS ■ LAND SURVEYORS

I hereby certify that this plan, specification or report 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.

Date 12.14.94 Reg. No. 23417

CITY OF NEW BRIGHTON
SIGNING AND STRIPING PLAN
SILVER LAKE ROAD

STATE PROJ. NO. 62-644-13	DRAWN BY M. SOBOTA	DATE 7-94	SHEET 51
	DESIGNED BY S. BOWERS	DATE 7-94	OF 155
	CHECKED BY		COMM. NO. 0931880



NO	DATE	BY	CKD	APPR	REVISION

SRF

STRGAR-ROSCOE-FAUSCH, INC.
CONSULTING ENGINEERS ■ LAND SURVEYORS

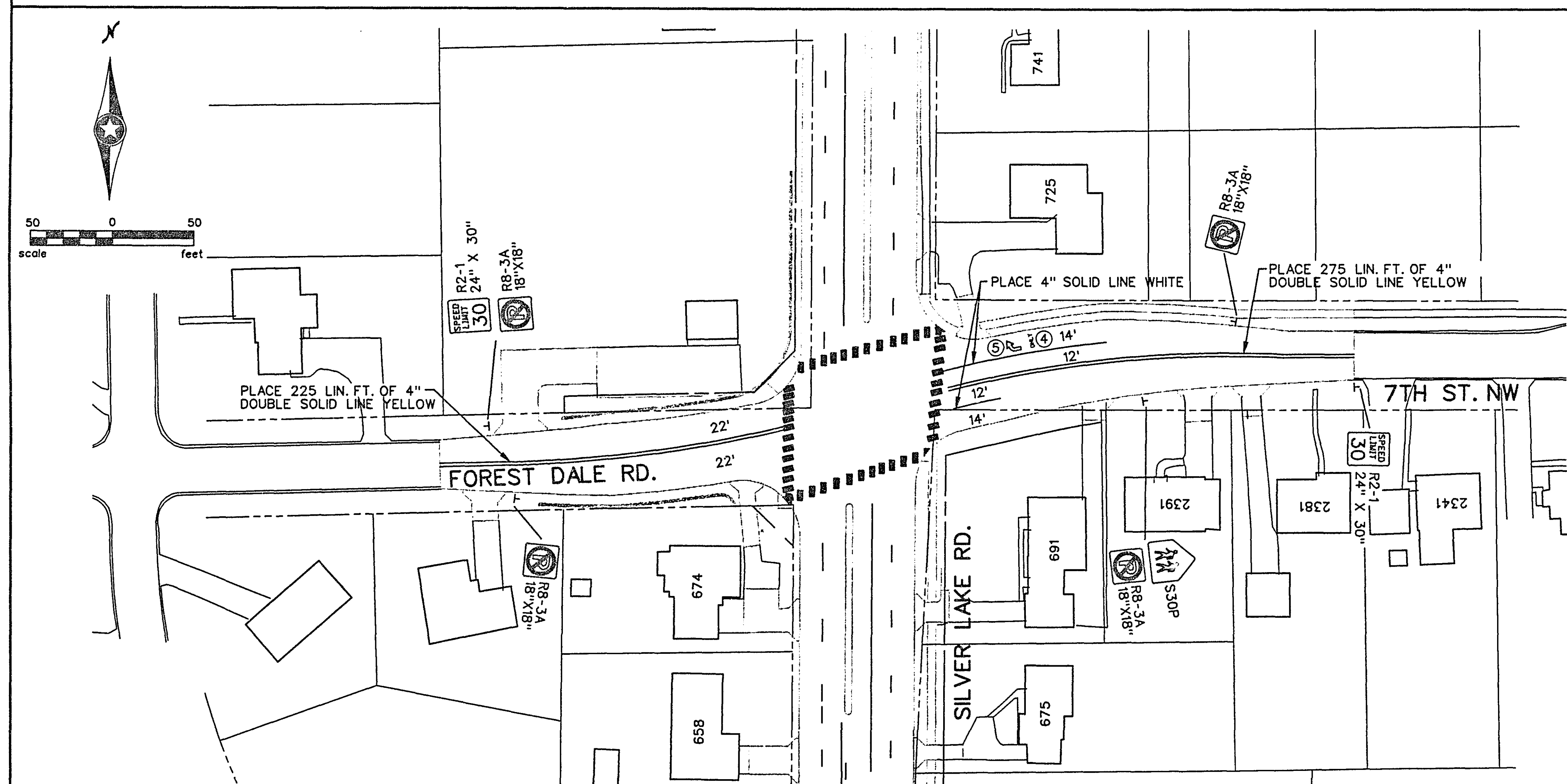
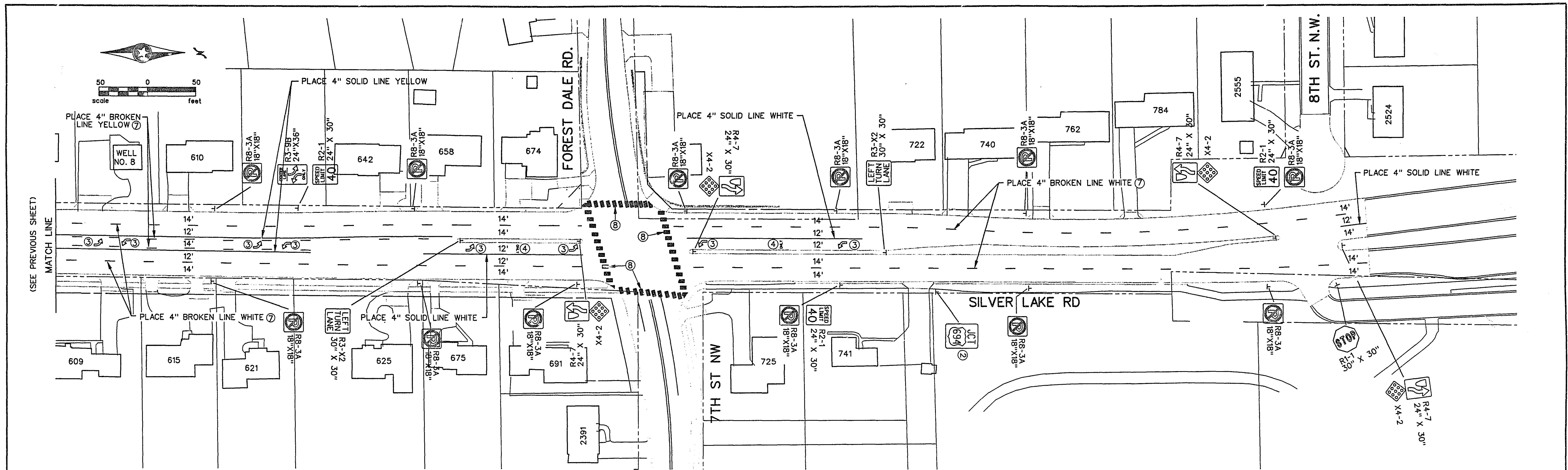
I hereby certify that this plan, specification or report was prepared by me or under my direct supervision and that I am a duly Registered Professional Engineer under the laws of the State of Minnesota.

Kevin M. Bowers
Date 3/16/95 Reg. No. 21817

CITY OF NEW BRIGHTON

SIGNING AND STRIPING PLAN
SILVER LAKE ROAD

STATE PROJ. NO. 62-644-13	DRAWN BY M. SOBOTA	DATE 7-94	SHEET 52 OF 155 COMM. NO. 0931880
	DESIGNED BY S. BOWERS	DATE 7-94	
	CHECKED BY		



SIGNING AND STRIPING NOTES:

- ① ALL PAVEMENT MARKINGS SHALL BE POLYMER PREFORMED EXCEPT WHERE NOTED OTHERWISE.
- ② EXISTING SIGN--CONTRACTOR SHALL ADJUST OR RELOCATE AS NECESSARY.
- ③ PLACE PAVEMENT MESSAGE (LT ARROW) POLYMER PREFORMED.
- ④ PLACE PAVEMENT MESSAGE (ONLY) POLYMER PREFORMED.
- ⑤ PLACE PAVEMENT MESSAGE (RT ARROW) POLYMER PREFORMED.
- ⑥ FOR SIGN INSTALLATION IN CONCRETE MEDIAN OR WALK AREAS, SEE DETAIL SHEET 23.
- ⑦ SKIP RATIO FOR BROKEN LINES SHALL BE 10.0' OF STRIPE FOLLOWED BY 30.0' OF GAP.
- ⑧ 6' WIDE ZEBRA STYLE CROSSWALK--POLYMER PREFORMED. CONTRACTOR SHALL PLACE MARKINGS AS DETAILED IN FIGURE 7.26 OF THE Mn/DOT TRAFFIC ENGINEERING MANUAL.

NO	DATE	BY	CKD	APPR	REVISION

SRF STRGAR-ROSCOE-FAUSCH, INC.
CONSULTING ENGINEERS ■ LAND SURVEYORS

I hereby certify that this plan, specification or report 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.
Stephen M. Bowers
Date 3/16/95 Reg. No. 21817

CITY OF NEW BRIGHTON

SIGNING AND STRIPING PLAN
SILVER LAKE ROAD

STATE PROJ. NO.
62-644-13

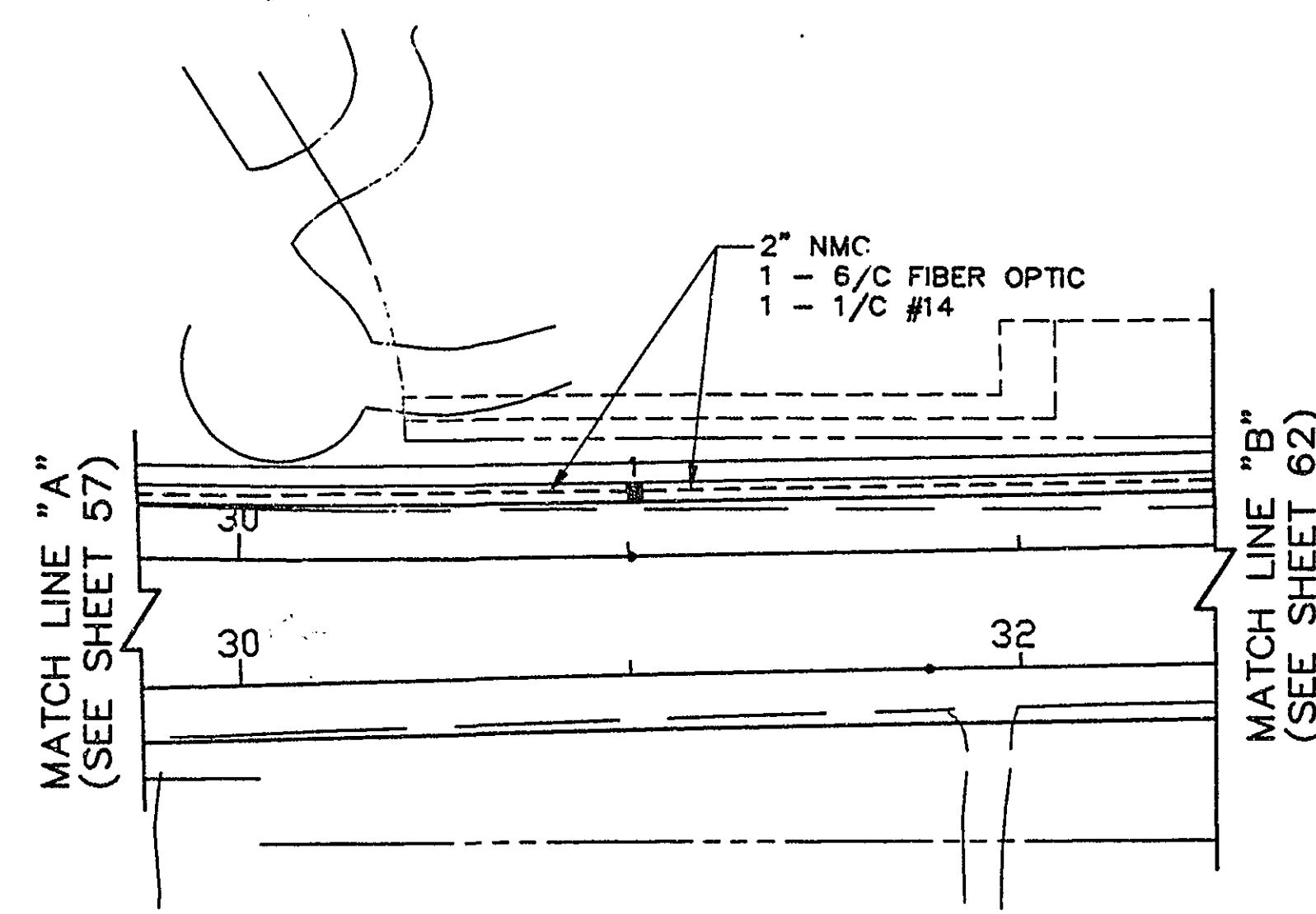
DRAWN BY
M. SOBOTA
DESIGNED BY
S. BOWERS
CHECKED BY

DATE
7-94
7-94
SHEET 53
OF 155
COMM. NO.
0931880

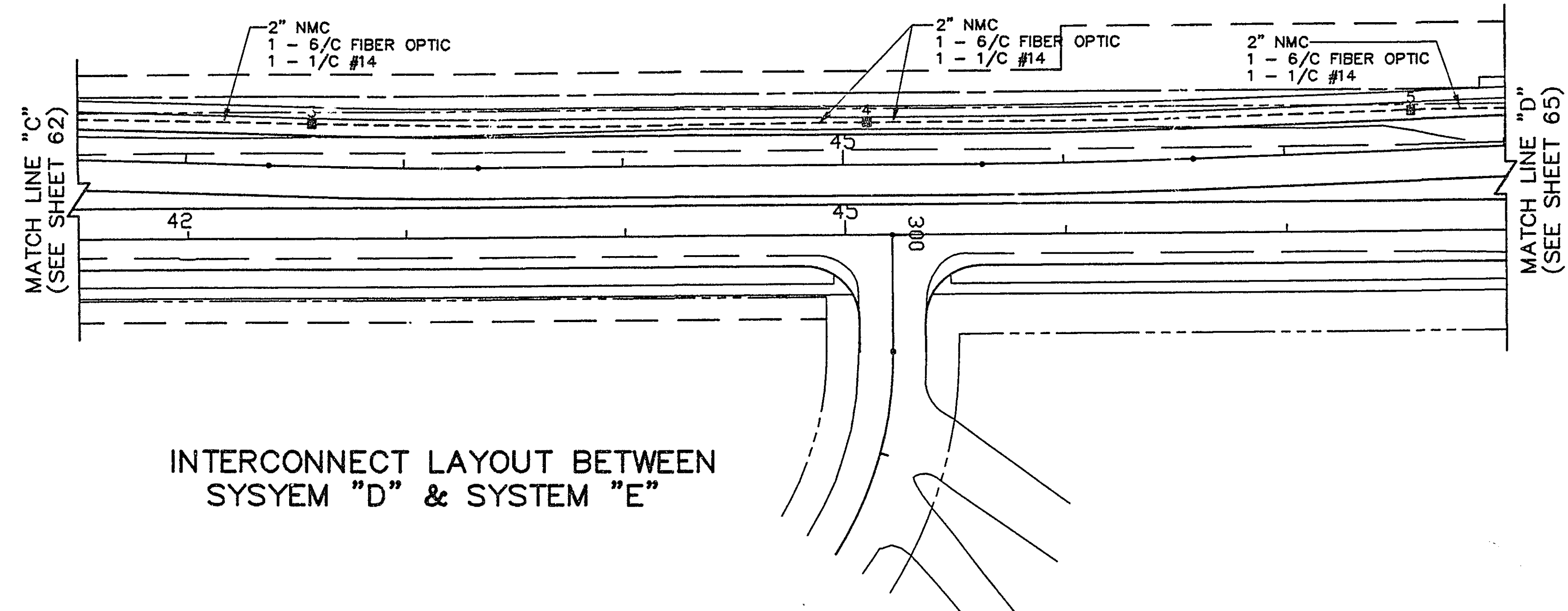
28-153

NO SHEET

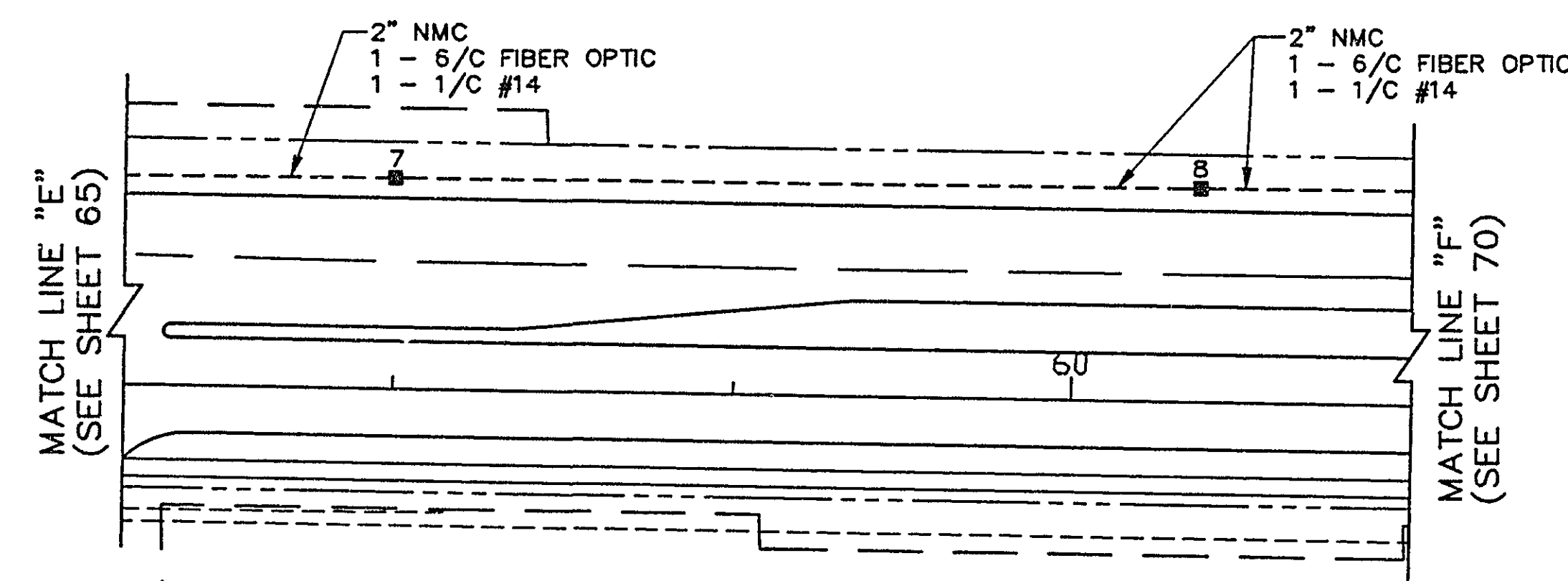
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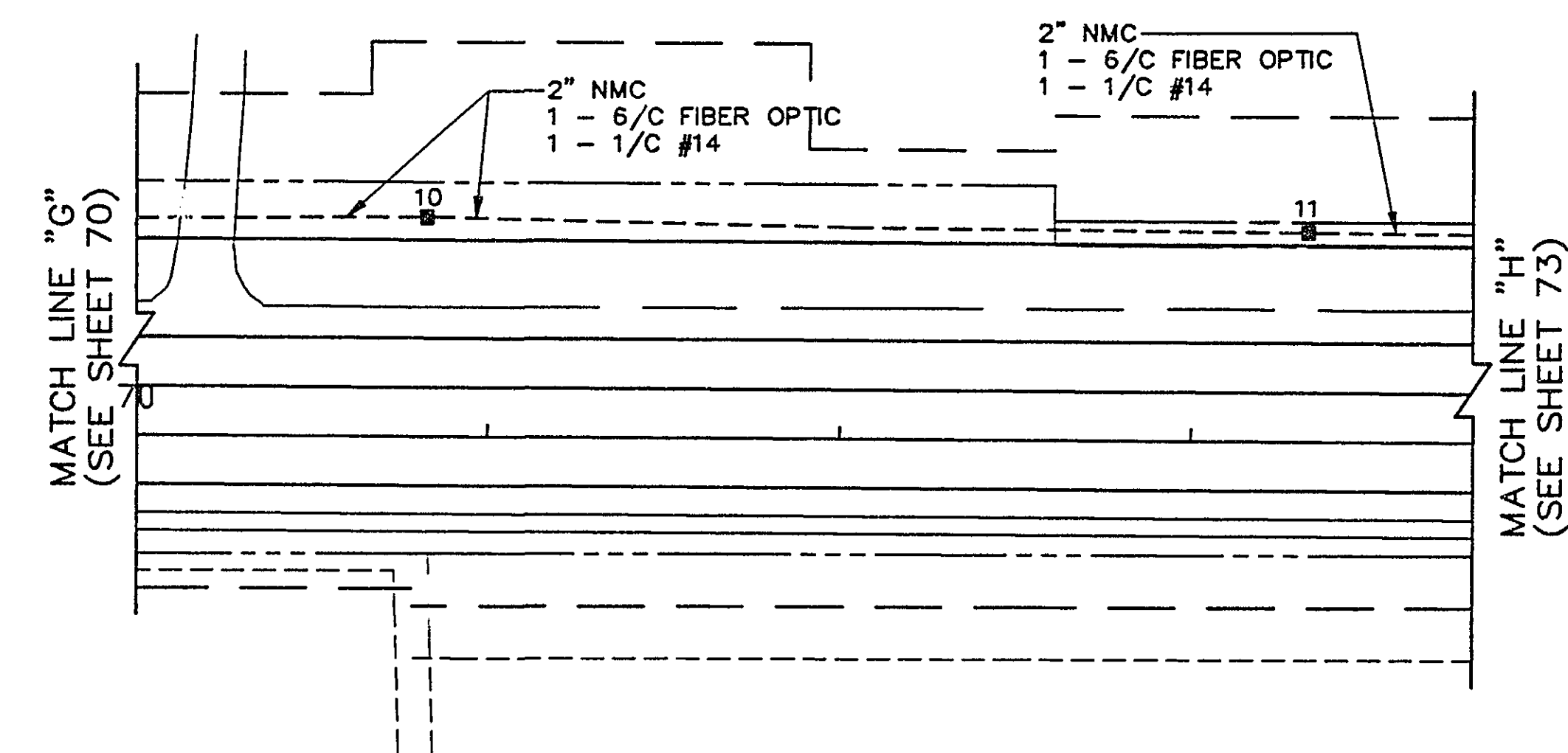
INTERCONNECT LAYOUT BETWEEN
SYSYEM "C" & SYSTEM "D"



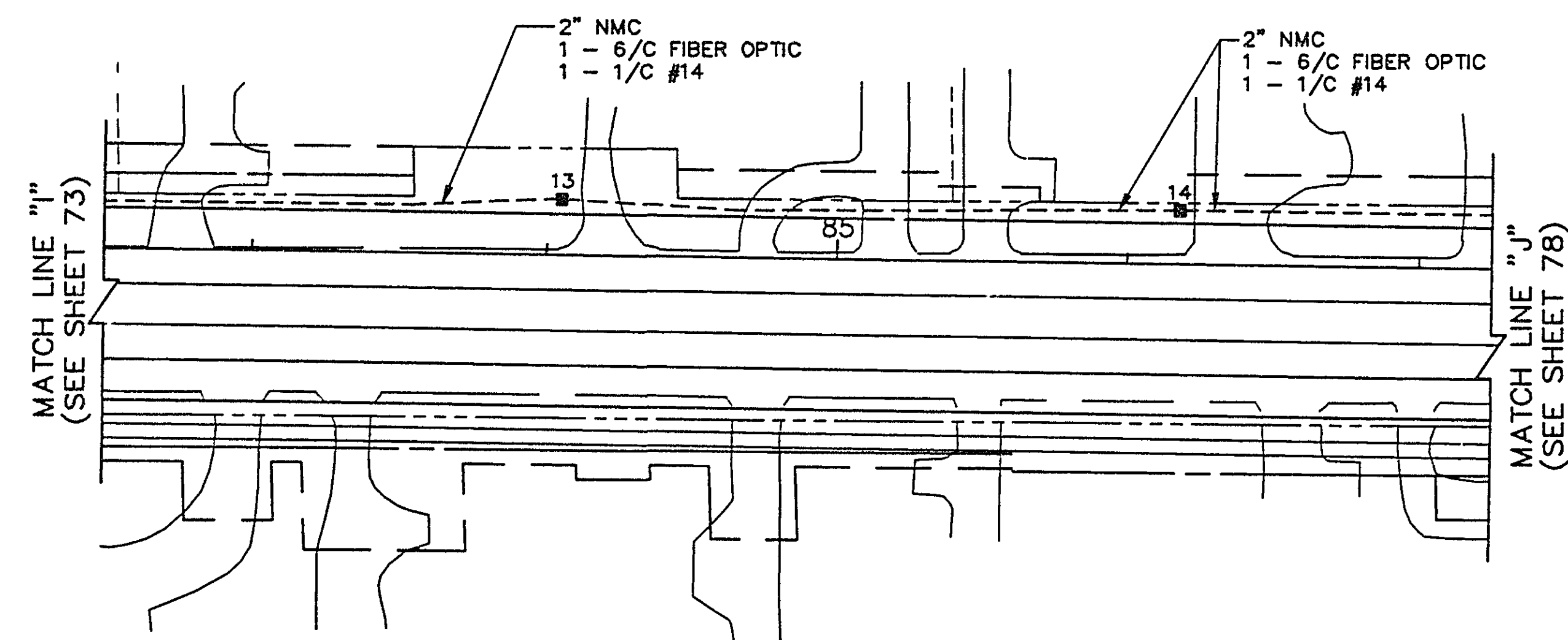
INTERCONNECT LAYOUT BETWEEN
SYSYEM "D" & SYSTEM "E"



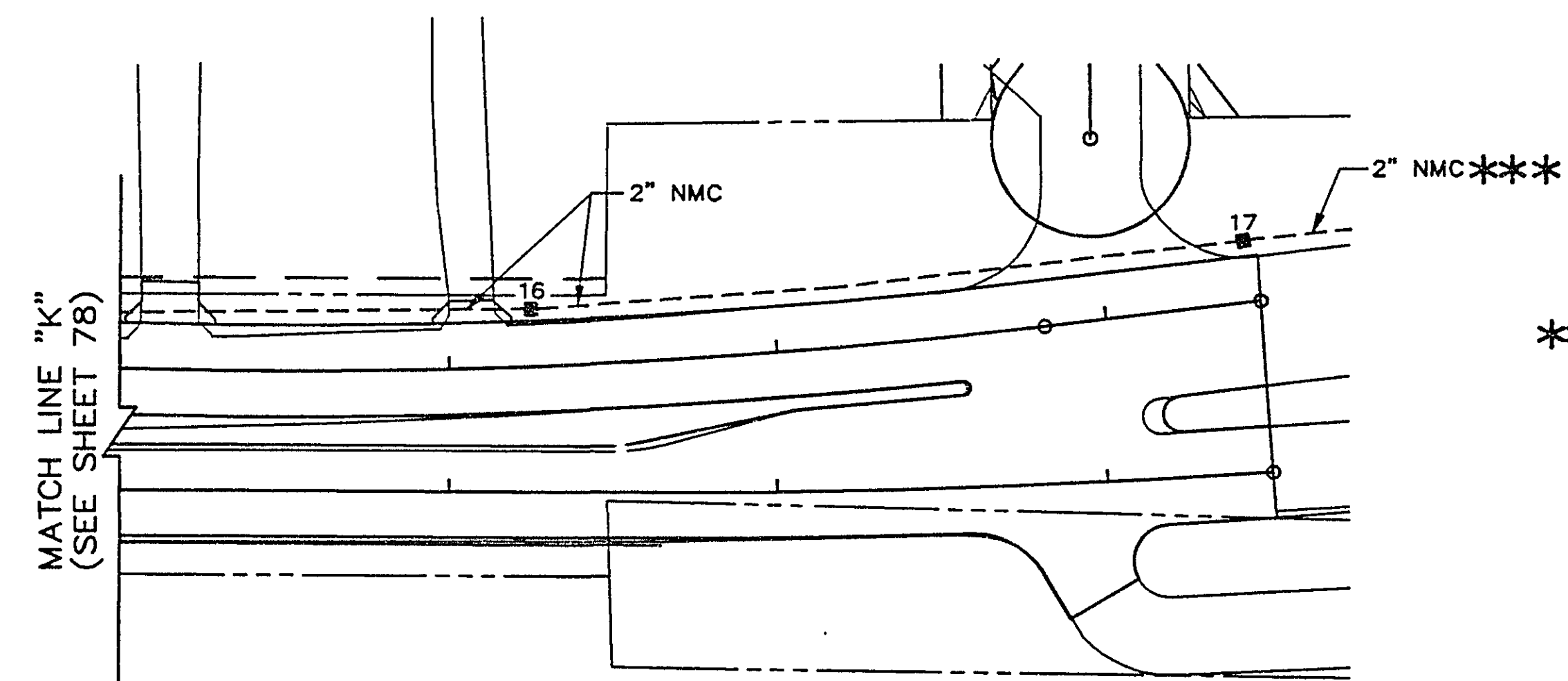
INTERCONNECT LAYOUT BETWEEN
SYSYEM "E" & SYSTEM "F"



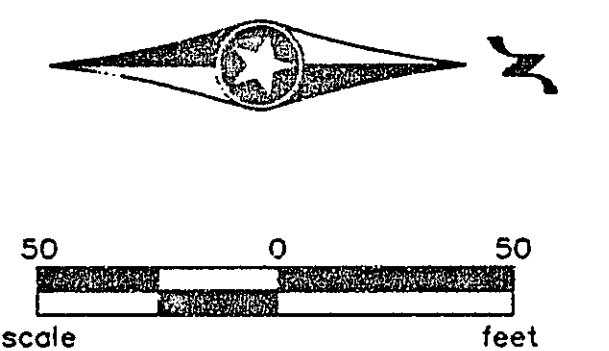
INTERCONNECT LAYOUT BETWEEN
SYSYEM "F" & SYSTEM "G"



INTERCONNECT LAYOUT BETWEEN
SYSYEM "G" & SYSTEM "H"



INTERCONNECT LAYOUT BETWEEN
SYSTEM "H" & PROJECT END



***THE CONTRACTOR SHALL FURNISH AND INSTALL 2" NMC TO THE NEAREST EXISTING HANDHOLE NORTH OF HANDHOLE 17. THE MAXIMUM SPACING BETWEEN HANDHOLES IS 250 FEET. ADDITIONAL HANDHOLE(S) MAY BE REQUIRED AS DIRECTED BY THE ENGINEER. THIS WORK SHALL BE INCLUDED IN THE INTERCONNECT SYSTEM PAY ITEM.

NOTES:

1. ALL ITEMS SHOWN ARE TO INCLUDED IN THE INTERCONNECT SYSTEM PAY ITEM.
2. ALL HANDHOLES SHALL BE PRECAST CONCRETE WITH TYPE C COVERS.

28-153

NO	DATE	BY	CKD	APPR	REVISION

SRF STRGAR-ROSCOE-FAUSCH, INC.
CONSULTING ENGINEERS ■ LAND SURVEYORS

I hereby certify that this plan, specification or report 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.
Dennis R. Eln
Date 12-13-94 Reg. No. 10792

CITY OF NEW BRIGHTON
INTERCONNECT LAYOUT
SILVER LAKE ROAD

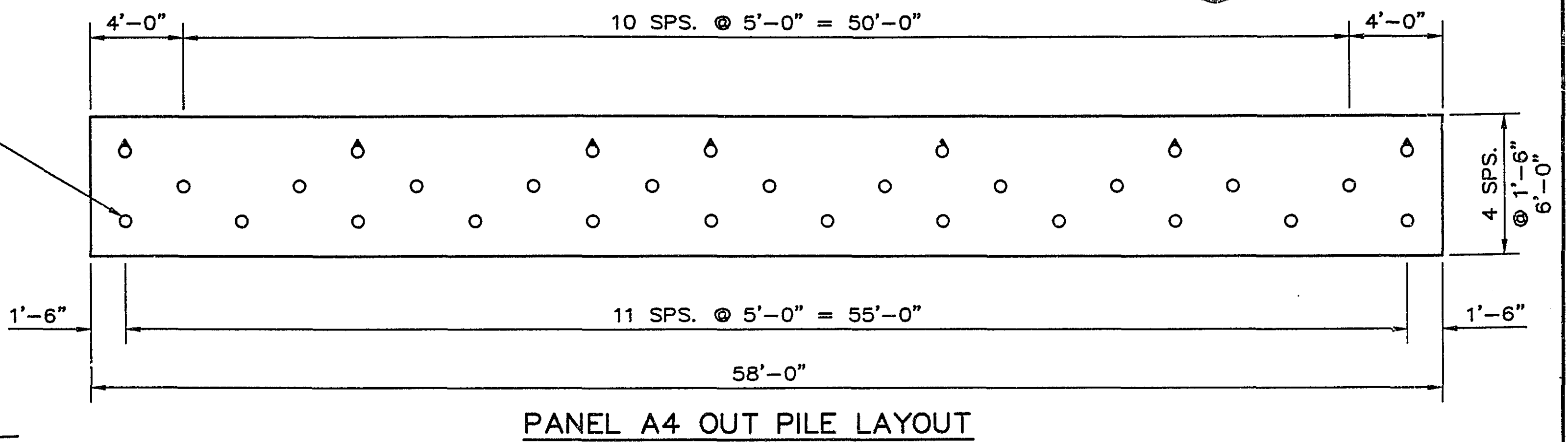
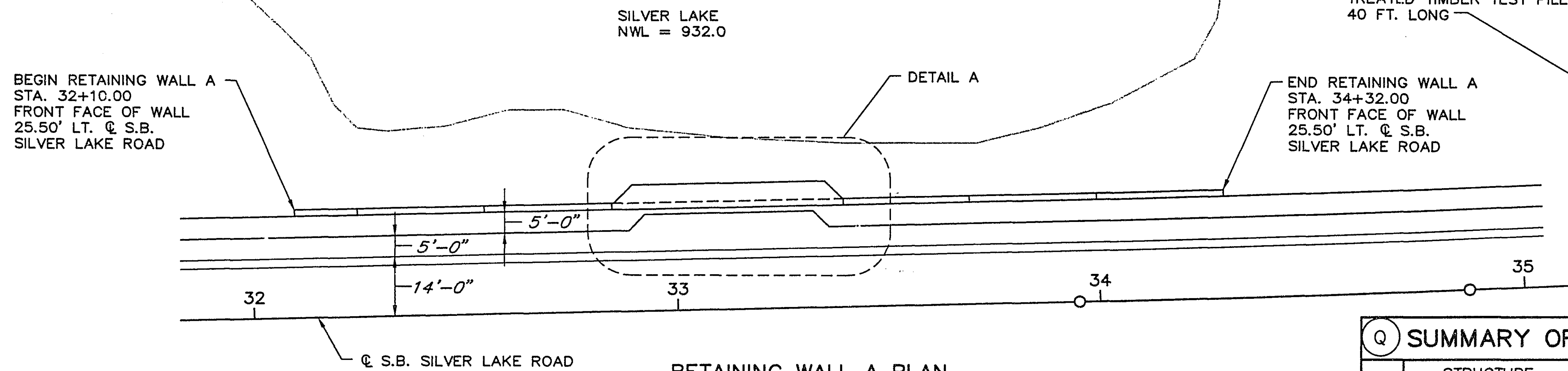
STATE
PROJ. NO.
62-644-13

DRAWN BY
M.BRESSLER
DESIGNED BY
T.MROZEK
CHECKED BY
D.EYLER

DATE
7-94
7-94
7-94
SHEET
84
OF
155
COMM. NO.
0931880

NO SHEET

#85-[#]86



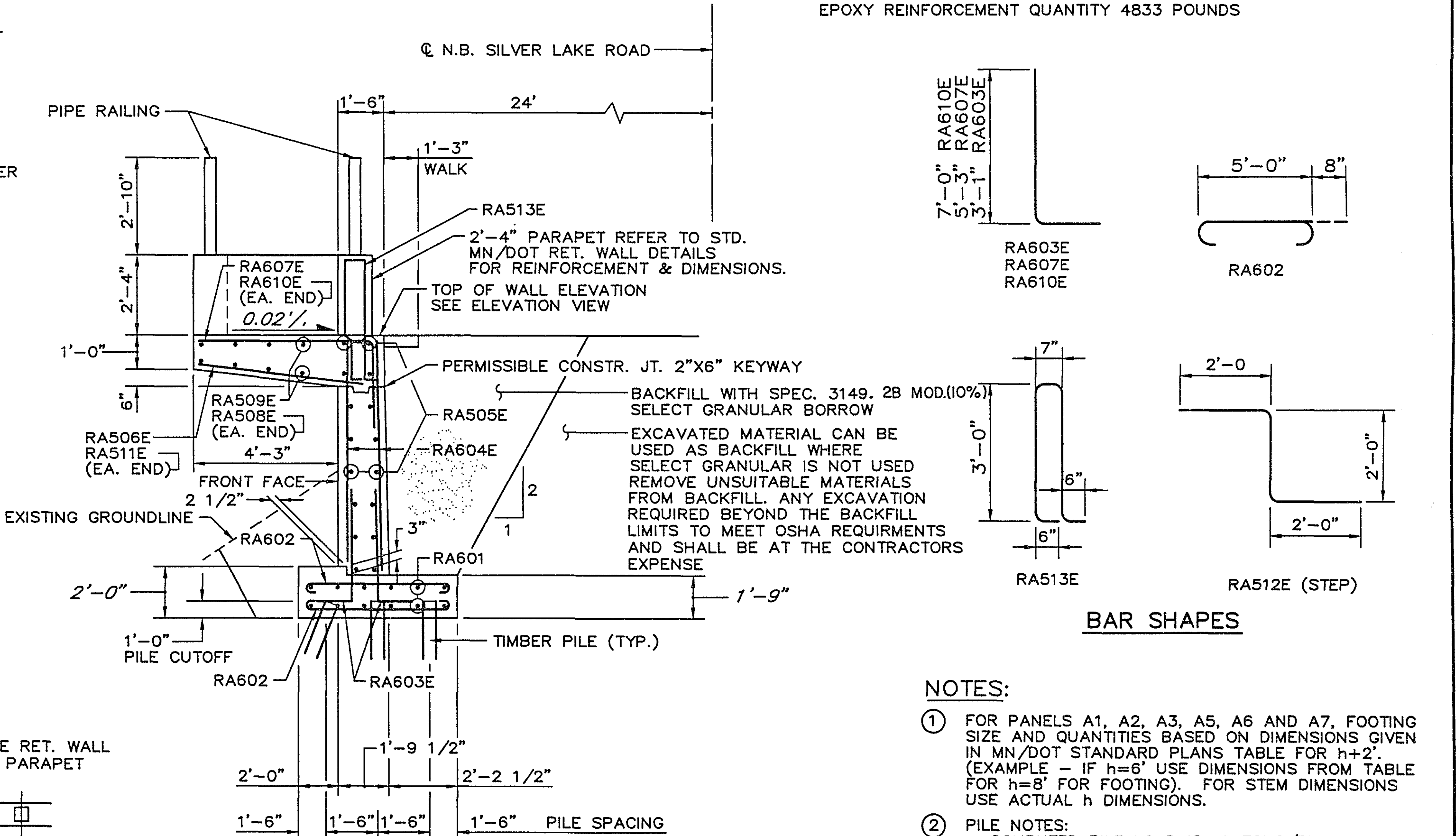
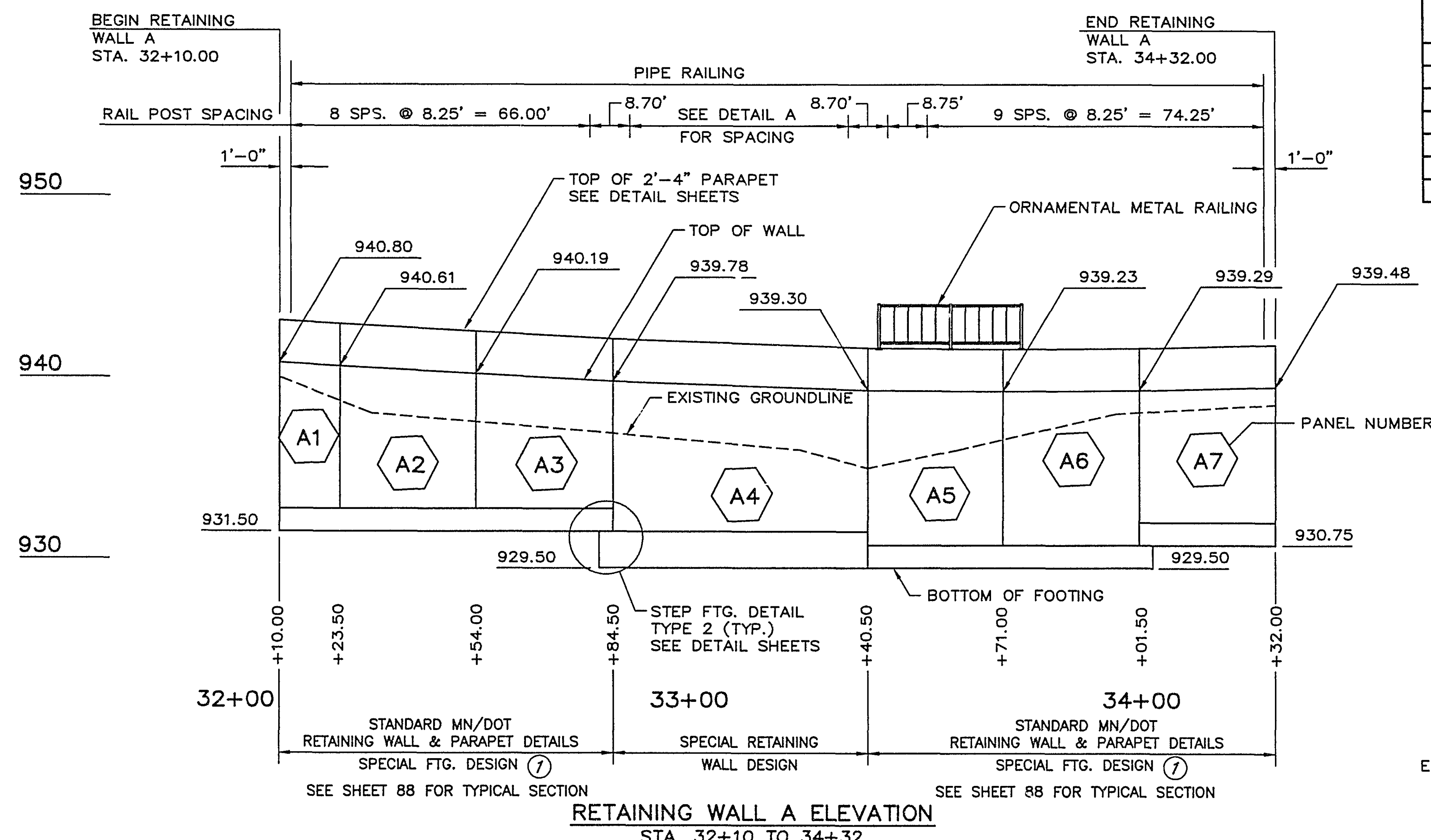
Q SUMMARY OF QUANTITIES FOR RETAINING WALL A

PANEL	STRUCTURE CONCRETE		REINFORCEMENT BARS		STRUCTURE EXCAVATION		SELECT GRANULAR BORROW (CV) MOD.	AGGREGATE BACKFILL (CV)
	1A43 (FOOTING)	3Y43 (STEM)	PLAIN	EPOXY	CLASS	CLASS		
	CU. YD.	CU. YD.	POUND	POUND	CU. YD.	CU. YD.		
A1	3.5	6.3	346	760			17	
A2	8.8	15.0	768	1606			40	
A3	8.0	13.0	736	1485			35	
A4	24.0	38.0	2217	4833			77	
A5	8.8	15.0	768	1606			46	
A6	9.4	15.0	839	1606			47	
A7	8.0	13.0	736	1489			36	

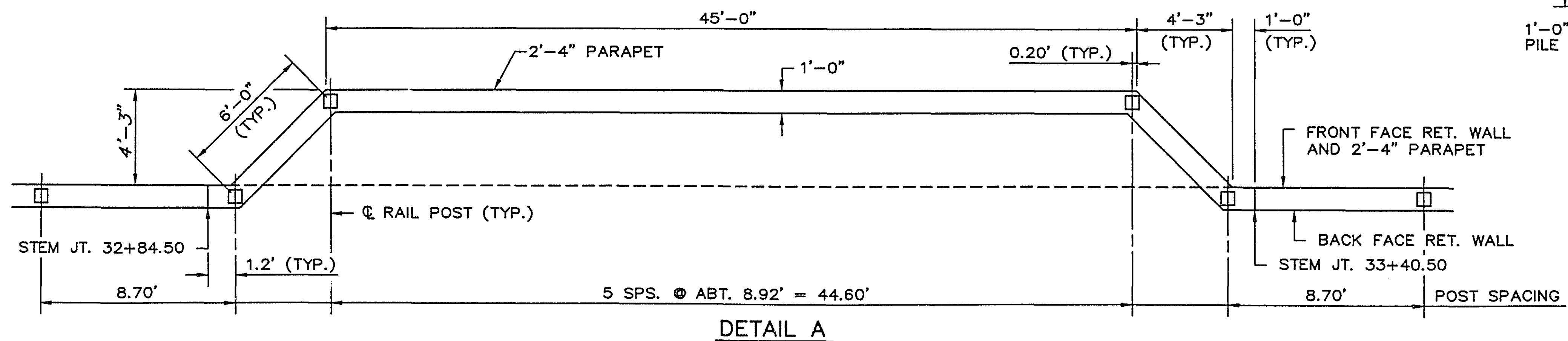
REINFORCEMENT FOR PANEL A4

BAR MARK	NO.	LENGTH	SPACING	POUNDS
RA601	24	31'-0"	EQ. SPS.	1116
RA602	116	6'-4"	12"	1101
RA603E	116	4'-1"	12"	475
RA604E	116	7'-10"	12"	1363
RA505E	32	30'-6"	12"	1018
RA506E	46	4'-9"	12"	228
RA607E	46	8'-3"	12"	570
RA508E	16	5'-9"	EQ. SPS.	96
RA509E	16	21'-6"	EQ. SPS.	359
RA610E	8	10'-0"	EQ. SPS.	120
RA511E	8	6'-6"	EQ. SPS.	54
RA512E	12	6'-0"	EQ. SPS.	75
RA513E	60	7'-7"	12"	475

PLAIN REINFORCEMENT QUANTITY 2217 POUNDS
EPOXY REINFORCEMENT QUANTITY 4833 POUNDS

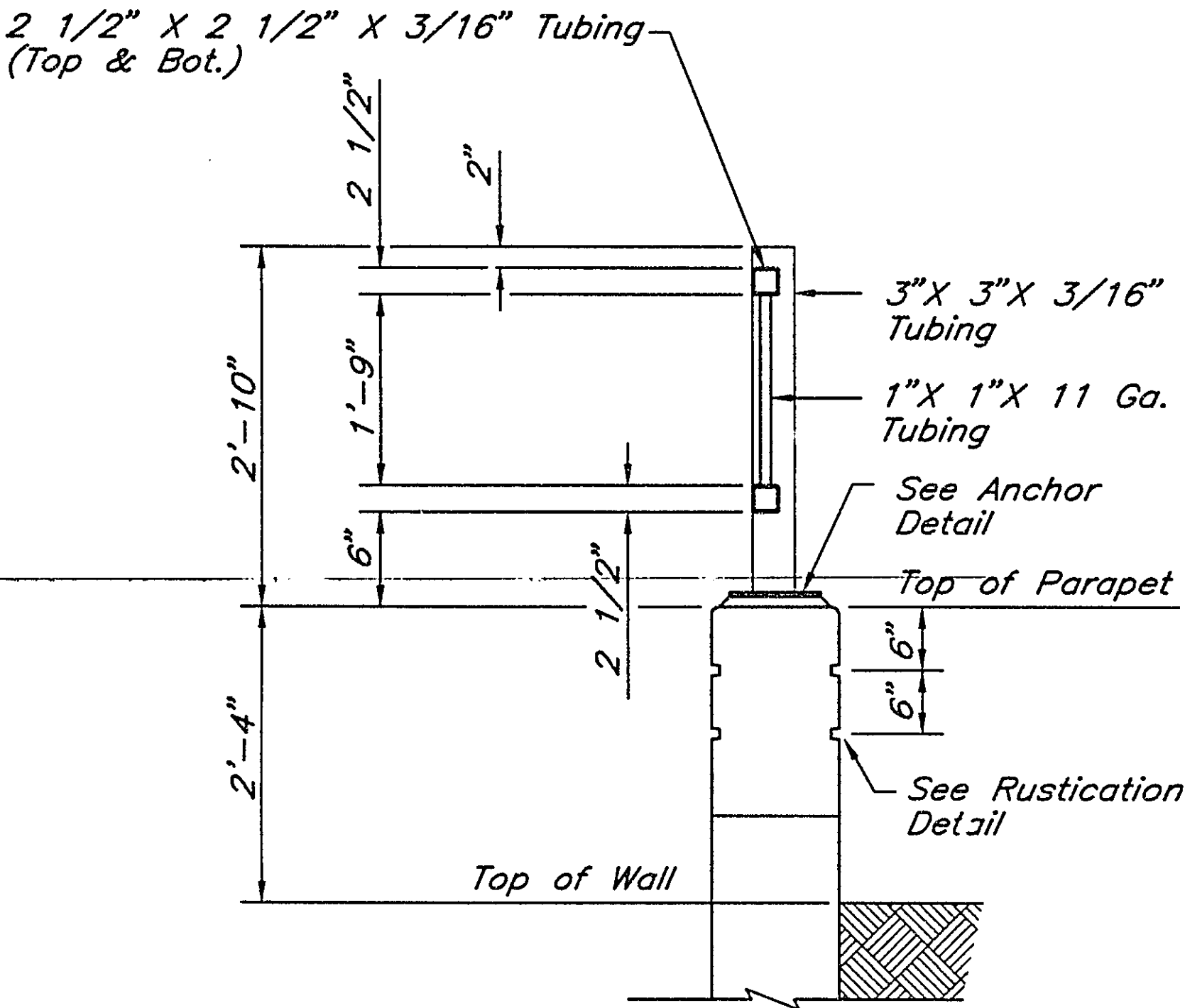


- NOTES:**
- FOR PANELS A1, A2, A3, A5, A6 AND A7, FOOTING SIZE AND QUANTITIES BASED ON DIMENSIONS GIVEN IN MN/DOT STANDARD PLANS TABLE FOR h+2'. (EXAMPLE - IF h=6' USE DIMENSIONS FROM TABLE FOR h=8' FOR FOOTING). FOR STEM DIMENSIONS USE ACTUAL h DIMENSIONS.
 - PILE NOTES:
- COMPUTED PILE LOAD IS 10 TONS/PILE
- ESTIMATED LENGTH FOR EACH PILE IS 30 FT.
- TEST PILE IS 40 FT. LONG
- TOTAL NUMBER OF PILES IS 30, ONE TEST PILE AT 40 FT. AND 29 PILES AT 30 FT.
 - DENOTES 2" TO 12" BATTER.

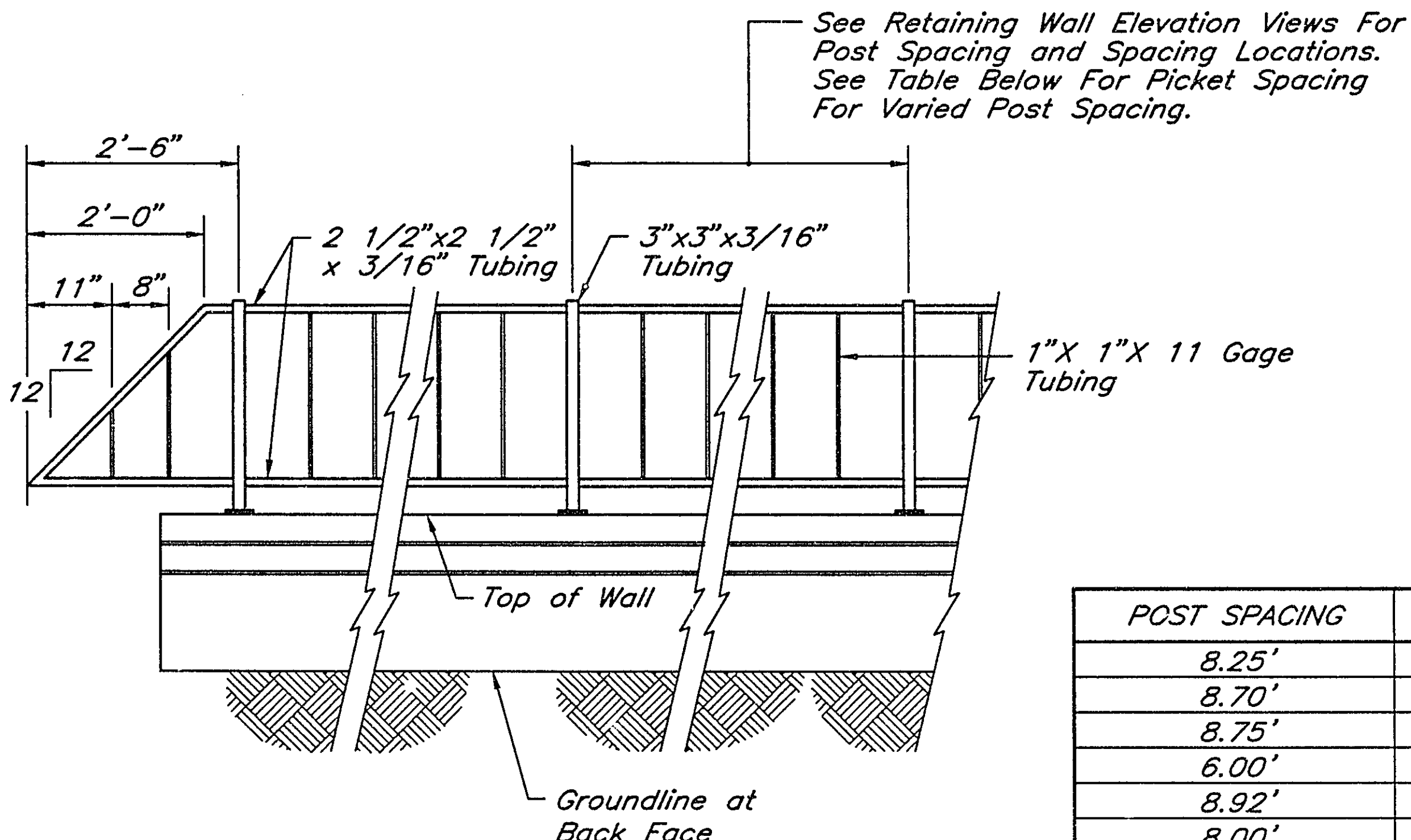


GENERAL NOTES

1. All Structural Steel Tubing in Rail Shall Be A500, Grade B And A513, Grade 2.
2. Material For Base Plates And Anchor Bolt Assemblies Shall Conform to Spec. 3306.
3. Anchor Bolt Assemblies, Nuts And Washers Shall Be Galvanized After Fabrication in Accordance With Spec. 3392 And Spec. 3394.
4. Rail Posts Shall Be Vertical.
5. The Railing, Base Plates, Protruding Portions of Bolts, Nuts and Washers Shall Be Painted in Accordance With The Special Provisions. See Spec. 2477.3B2 For Galv. Surface Requirements.
6. Railing Shall Be Grounded With 5/8" ϕ Copper Rod as Per Spec. 2557.
7. Horizontal Rails Shall Be Combined Where Applicable And Parallel to The Wall Profiles.
8. Deflection Joint Detail Applies to All Horizontal Rails at Deflection Joint Panel.
9. Rail Deflection Joints Shall Be Placed at Intervals Not to Exceed 40 Feet.
10. All Items Shown on This Sheet Are Included in Price Bid For Pipe Railing.

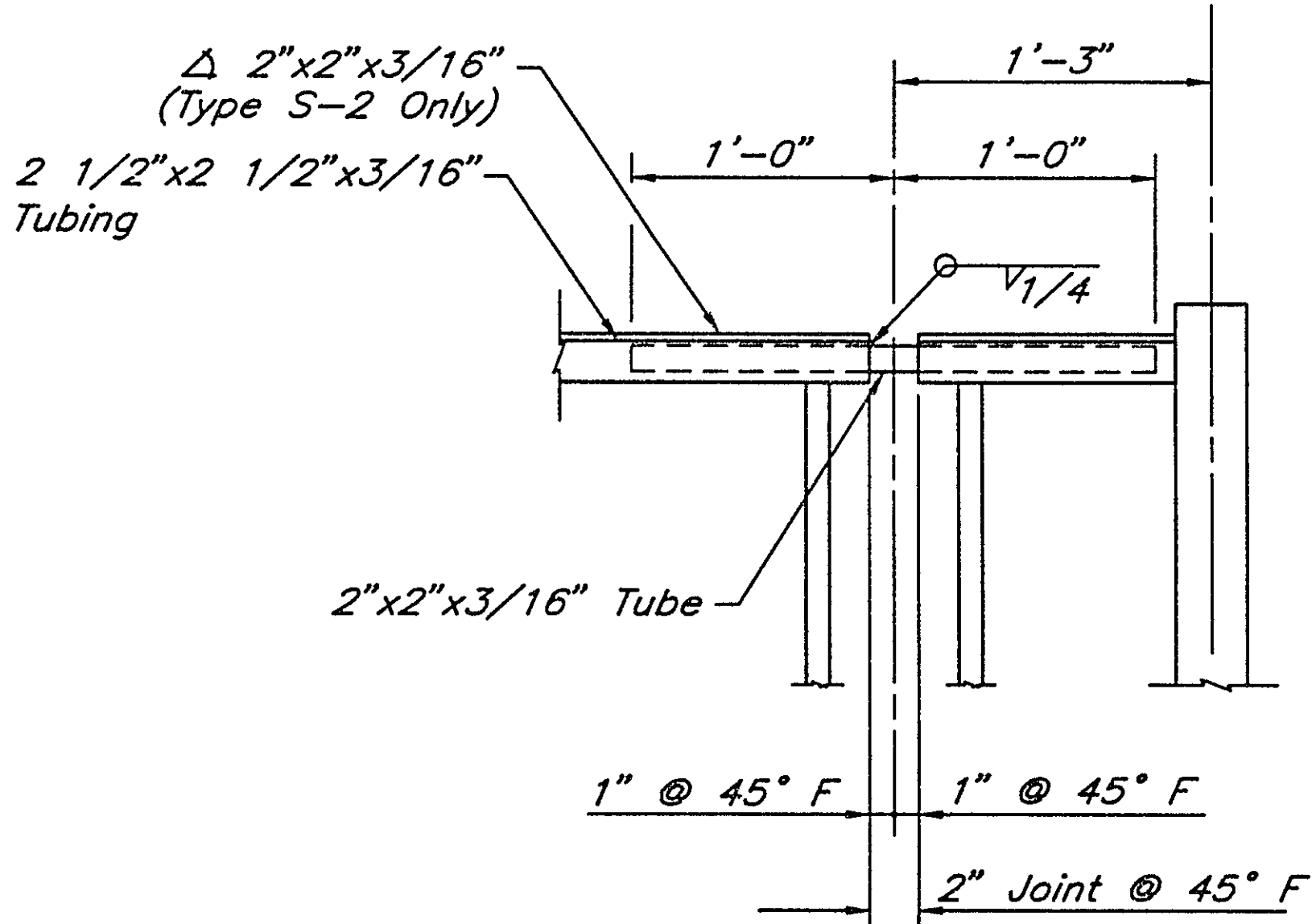


RAILING SECTION

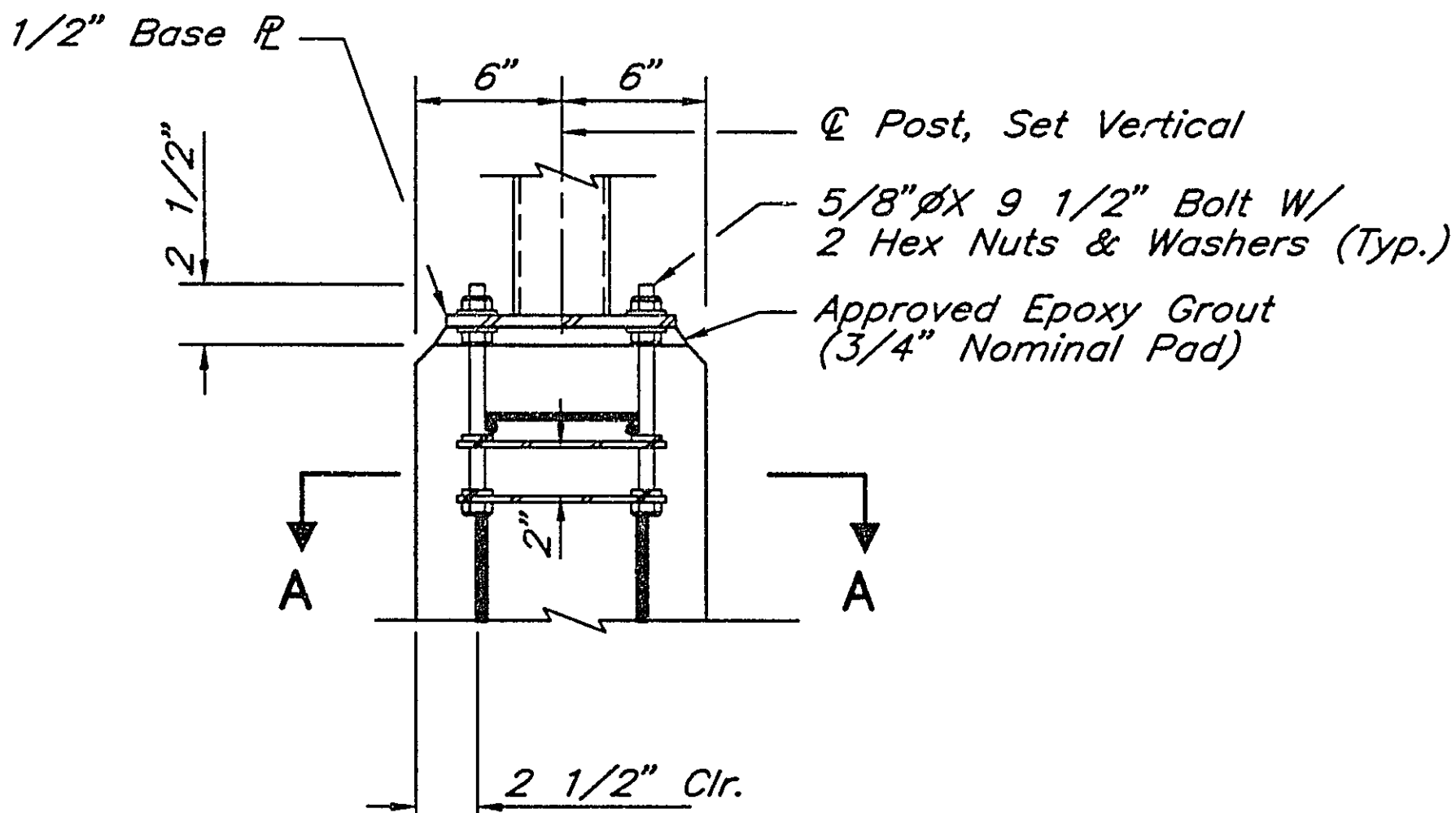


PIPE RAILING ELEVATION

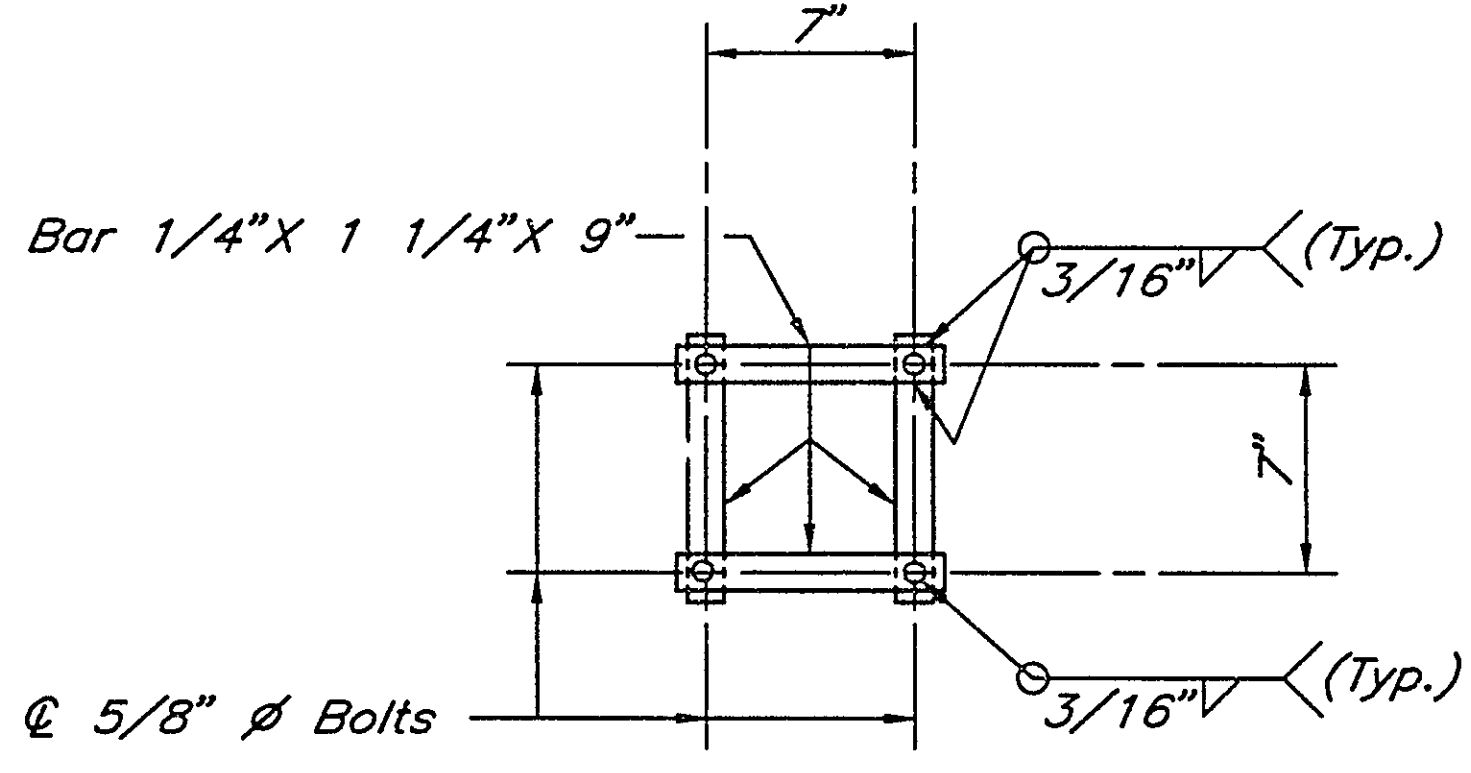
POST SPACING	PICKET SPACING
8.25'	17 EQ. SPS.
8.70'	18 EQ. SPS.
8.75'	18 EQ. SPS.
6.00'	12 EQ. SPS.
8.92'	18 EQ. SPS.
8.00'	16 EQ. SPS.
9.00'	18 EQ. SPS.



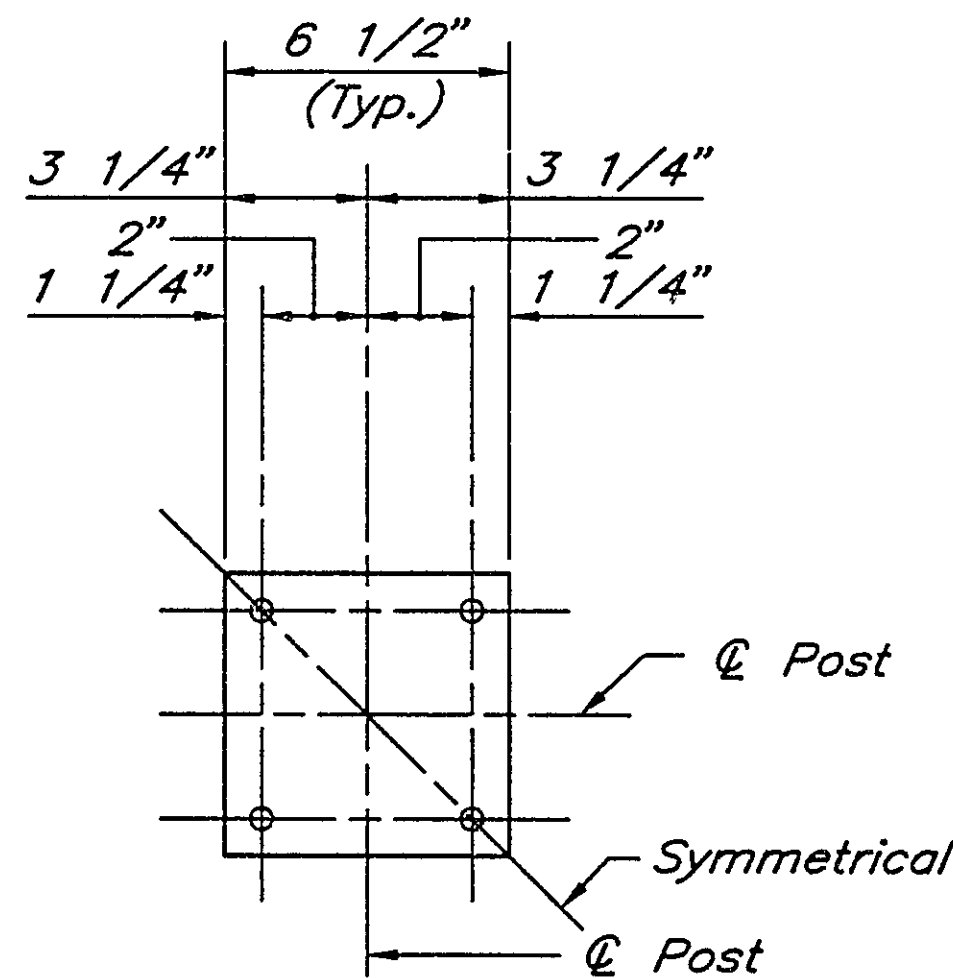
RAILING DEFLECTION JOINT DETAIL



ANCHOR DETAIL



SECTION A-A



BASE PLATE

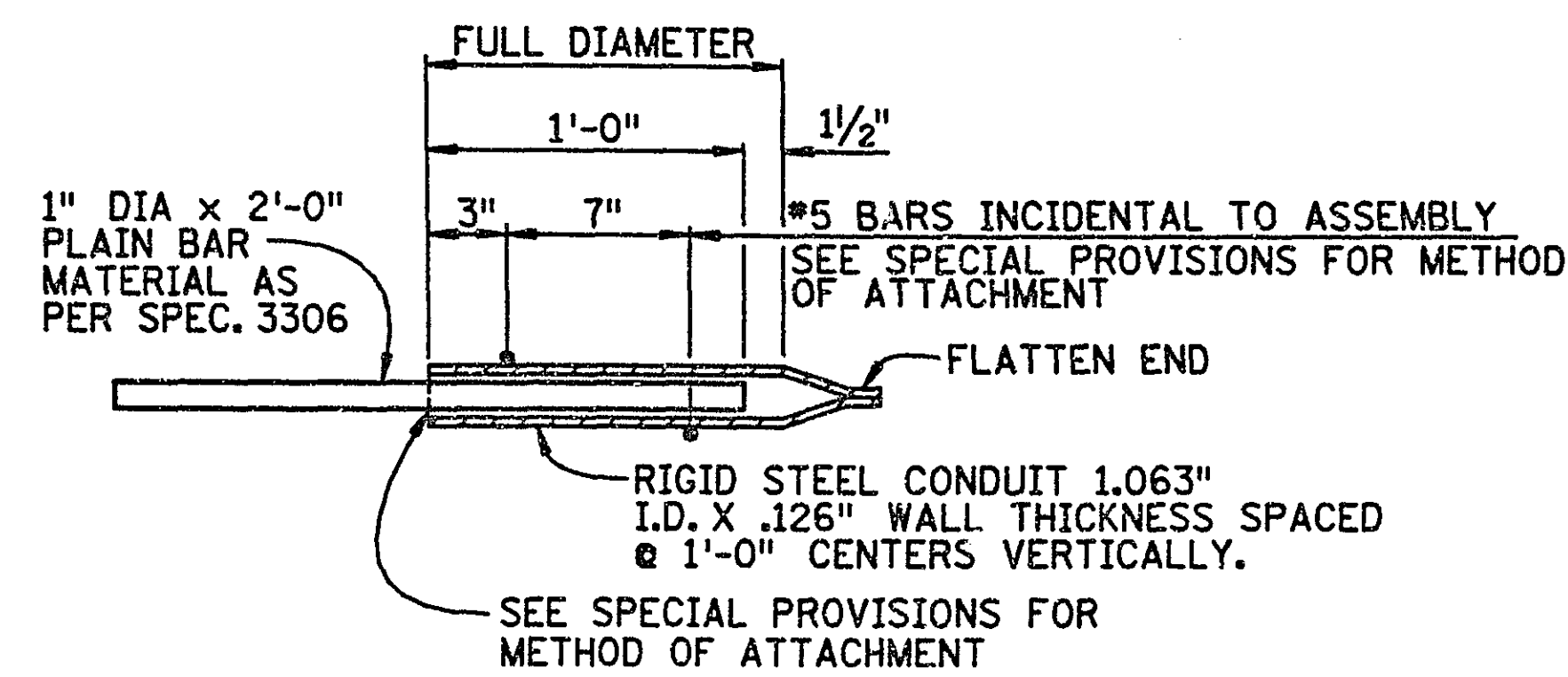
NO	DATE	BY	CKD	APPR	REVISION
1	12-28-94	MCI	LAE		REVISE RAILING TITLE

SRF STRGAR-ROSCOE-FAUSCH, INC.
CONSULTING ENGINEERS ■ LAND SURVEYORS

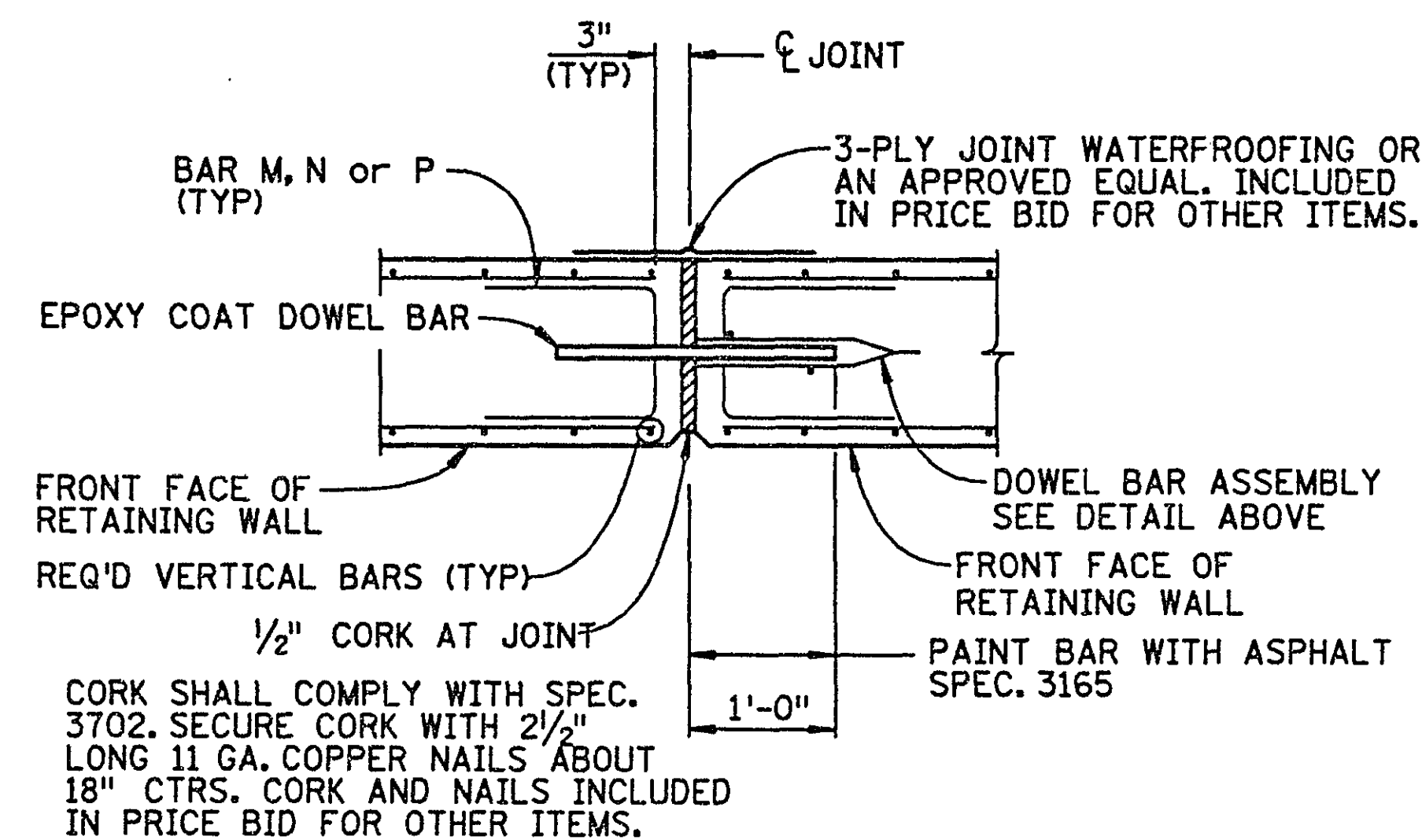
I hereby certify that this plan, specification or report was prepared by me or under my direct supervision and that I am a duly Registered Professional Engineer under the laws of the State of Minnesota.
[Signature]
Date 12/14/94 Reg. No. 14596

CITY OF NEW BRIGHTON
SILVER LAKE ROAD
PIPE RAILING DETAILS

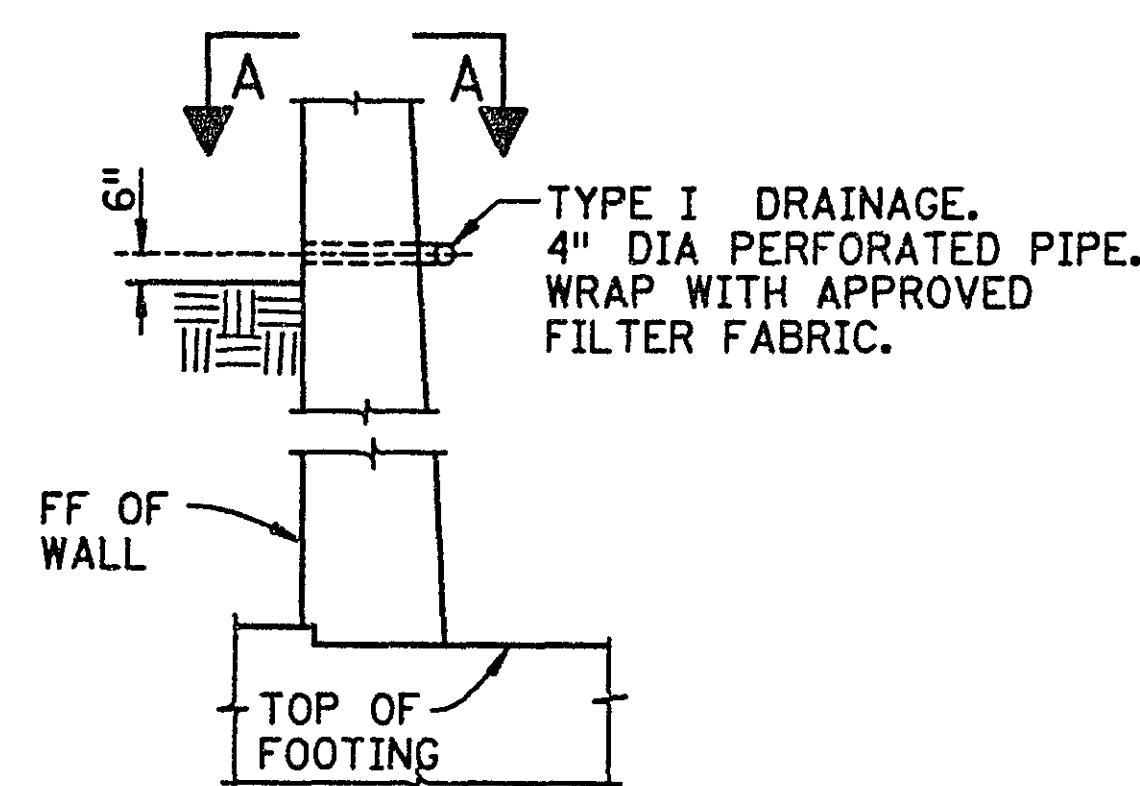
STATE PROJ. NO. 62-644-13	DRAWN BY J. HAMRE DESIGNED BY L. ERICKSON CHECKED BY D. THOMAS	DATE 7/94 7/94 7/94	SHEET 89 OF 155 SRF COMM. NO. 0931880
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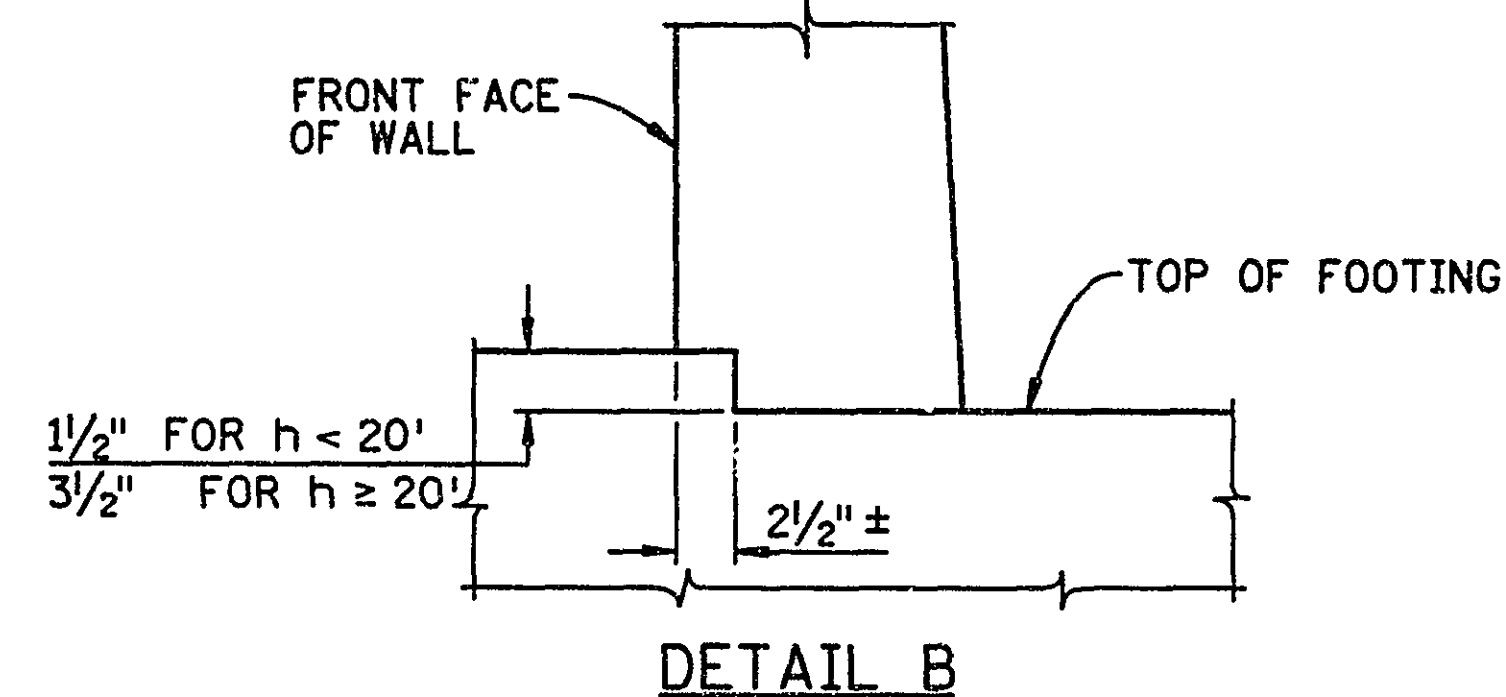
DOWEL BAR ASSEMBLY
MATERIAL AND PLACING TO BE INCLUDED
IN PRICE BID FOR OTHER ITEMS
ALL MATERIAL TO BE EPOXY COATED



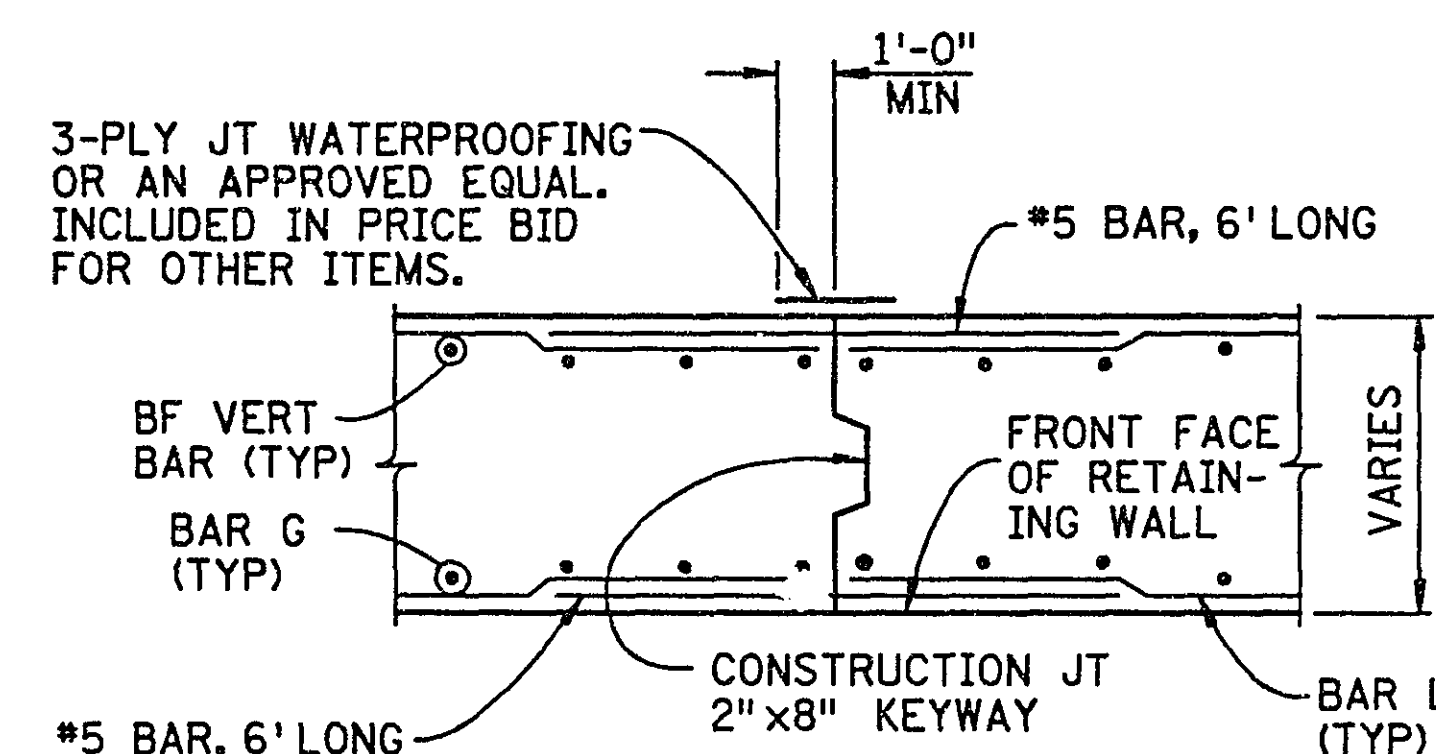
**TYPICAL SECTION THRU
CORK AND DOWEL JOINT**
SPACE @ ABOUT 90 FEET.



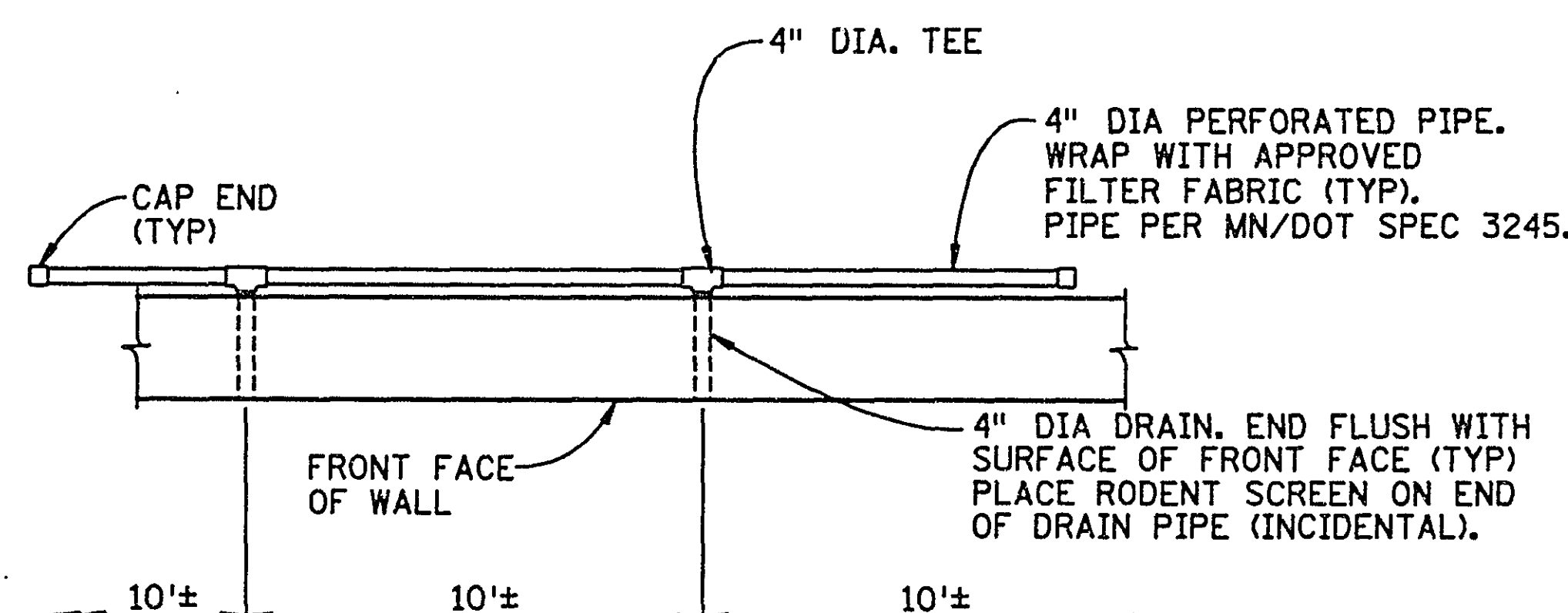
DETAIL A



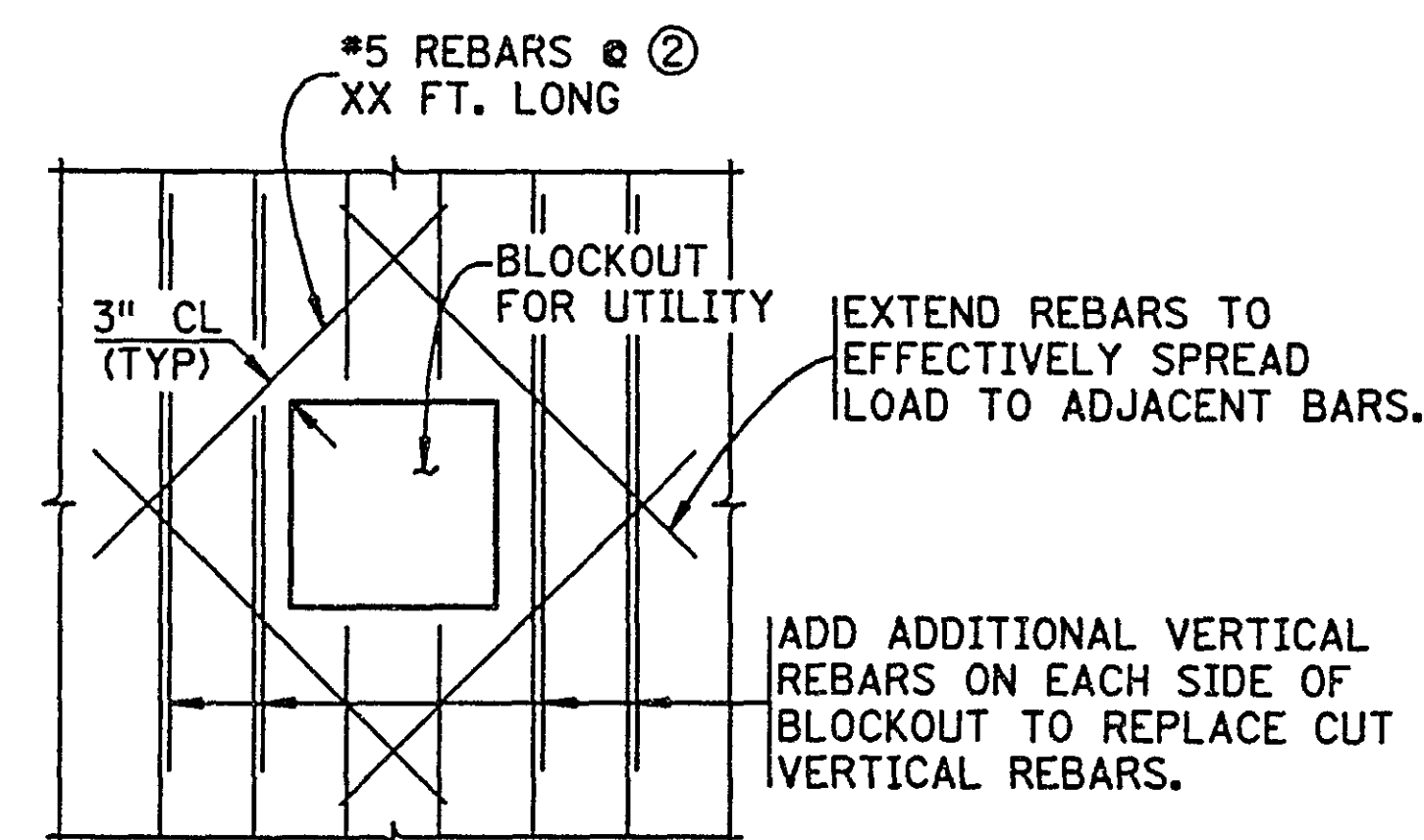
DETAIL B



CONSTRUCTION JOINT DETAIL
(STEM SHOWN)
USE AS OPTION FOR CORK AND DOWEL JOINTS
USE BETWEEN EXPANSION JOINTS.



SECTION A-A
(TYPE I DRAINAGE DETAIL)



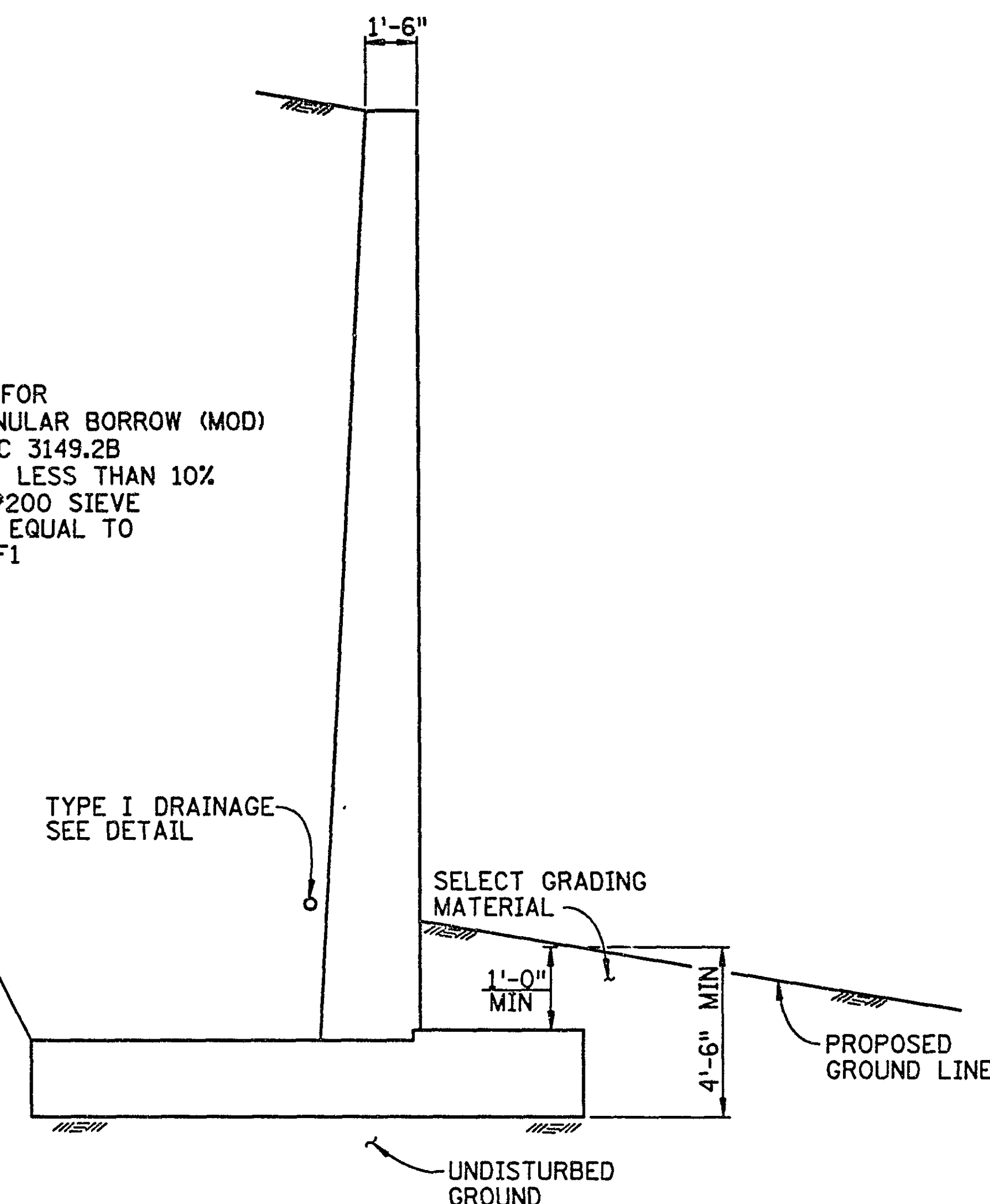
UTILITY BLOCKOUT DETAIL

② FIELD CUT/ADJUST VERTICAL AND HORIZONTAL
REINF. AS NECESSARY TO CLEAR BLOCKOUT. PLACE
REINFORCEMENT AS SHOWN.

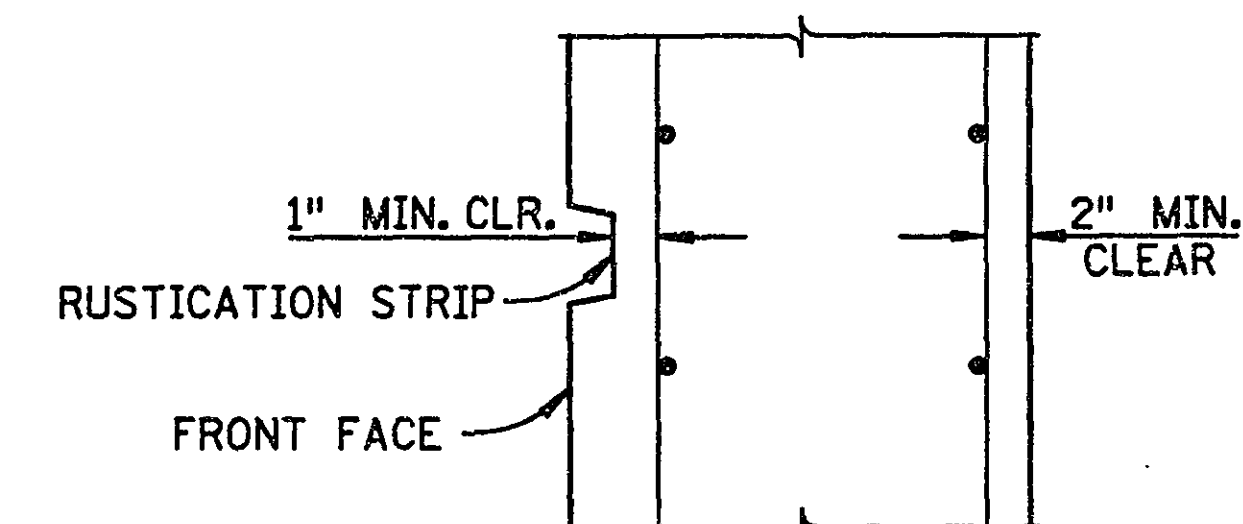
SUMMARY OF DRAINAGE QUANTITIES *		
4" DIA PERFORATED PIPE	626	LIN. FT.
4" DIA DRAIN PIPE	107	LIN. FT.
END CAP	42	EACH
LONG RADIUS 90° ELBOW	43	EACH

* DRAINAGE QUANTITIES SHALL BE INCIDENTAL TO
RETAINING WALL QUANTITIES.

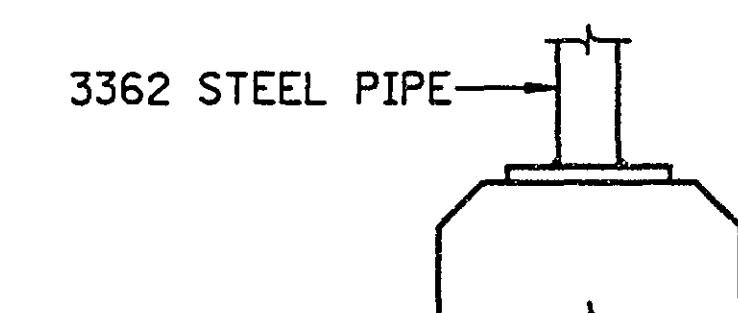
PAY LIMITS FOR
SELECT GRANULAR BORROW (MOD)
MN/DOT SPEC 3149.2B
MODIFIED TO LESS THAN 10%
PASSING A #200 SIEVE
COMPACTION EQUAL TO
SPEC. 2105.3F1



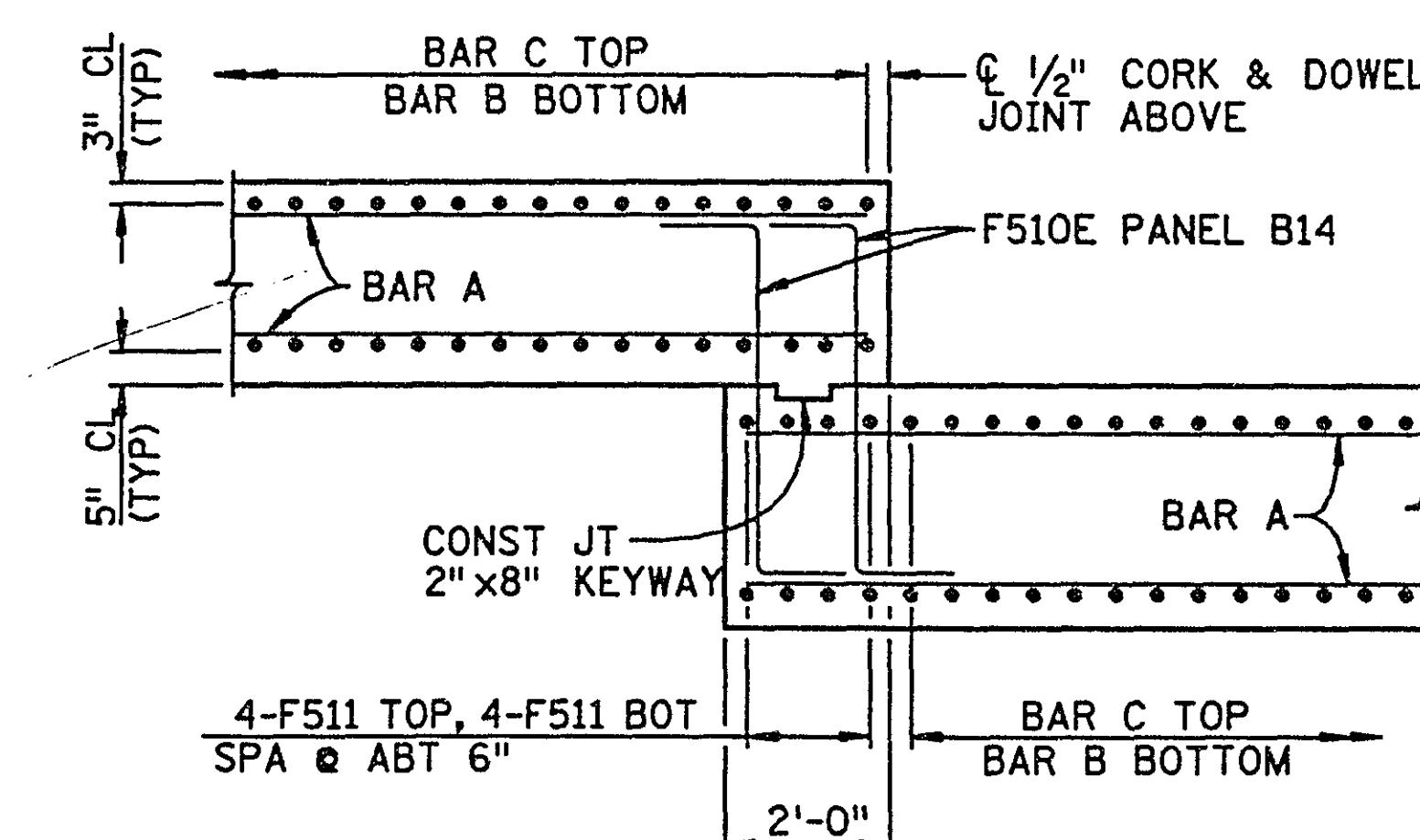
TYPICAL SECTION
(INPLACE SOIL OPTION SHOWN)



DETAIL C
(FOR WALLS WITH RUSTICATION OVER 1"
IN DEPTH, INCREASE STEM THICKNESS ACCORDINGLY.)



METAL RAILPOST DETAIL



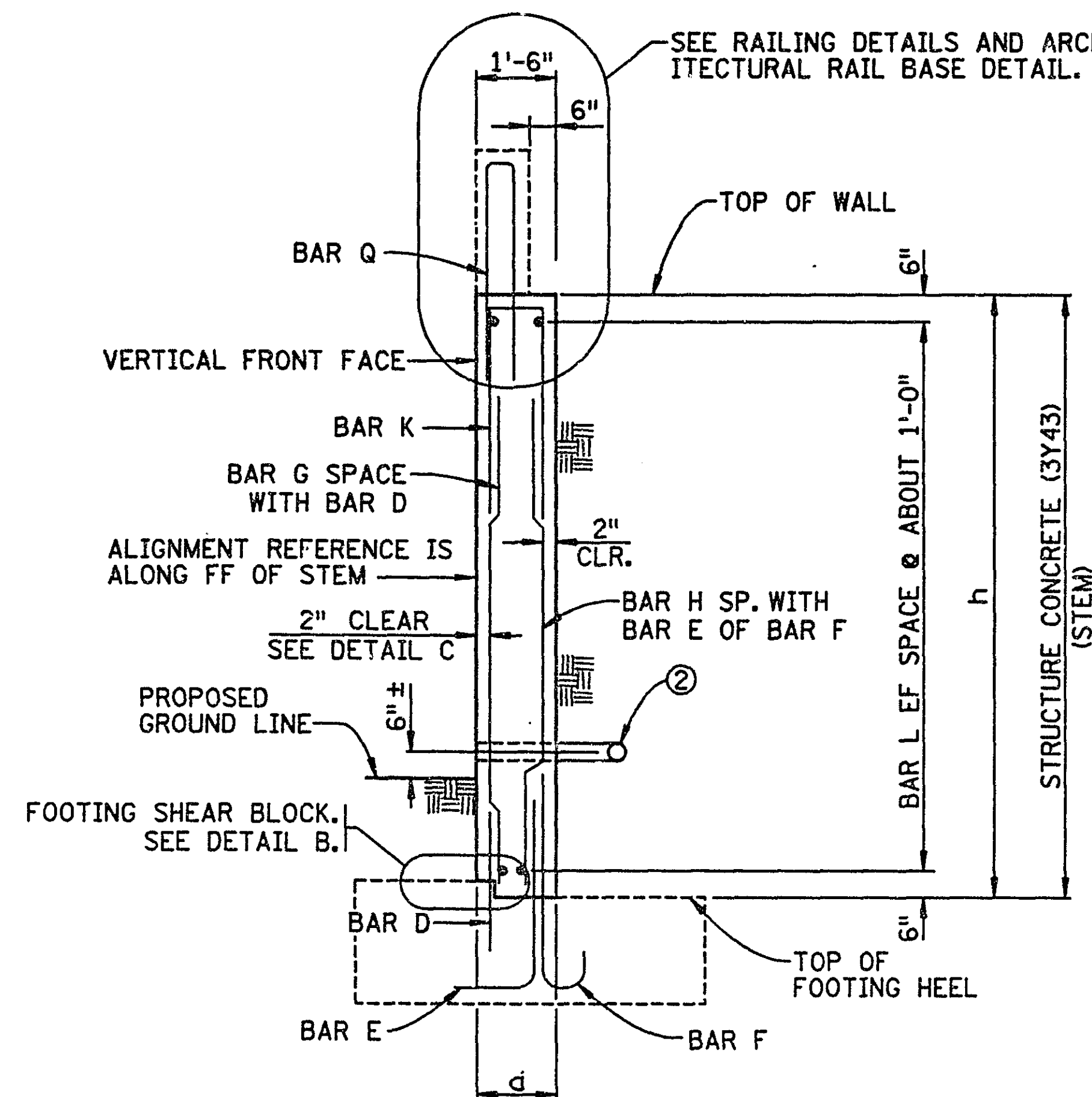
STEPPED FOOTING DETAIL
(TYPE 2)
(SPREAD FOOTING SHOWN)

MISCELLANEOUS DETAILS

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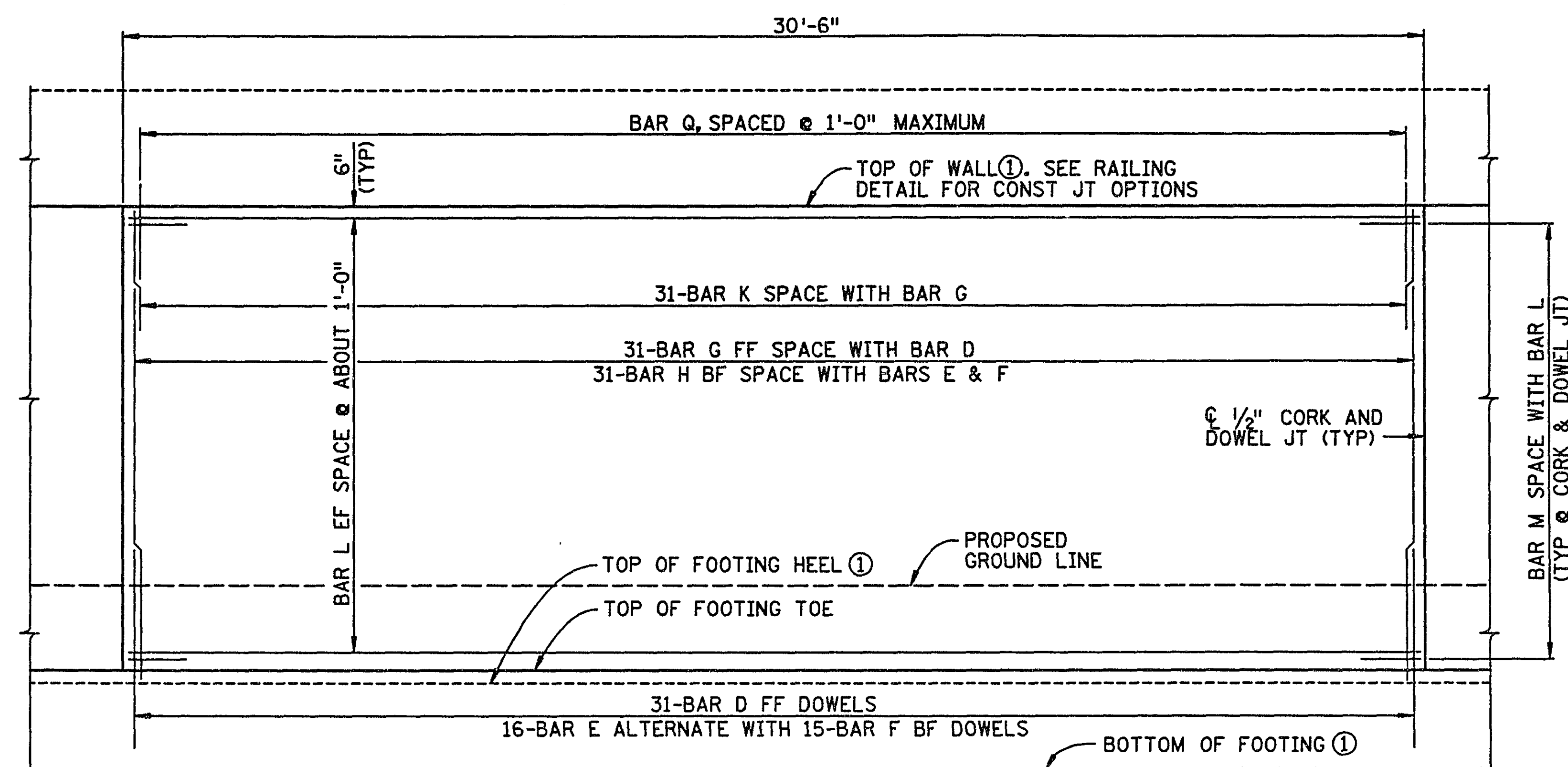
State Proj. No. 62-644-13

Sheet No. 91 of 155 Sheets



WALL SECTION
BARRIER OPTION SHOWN

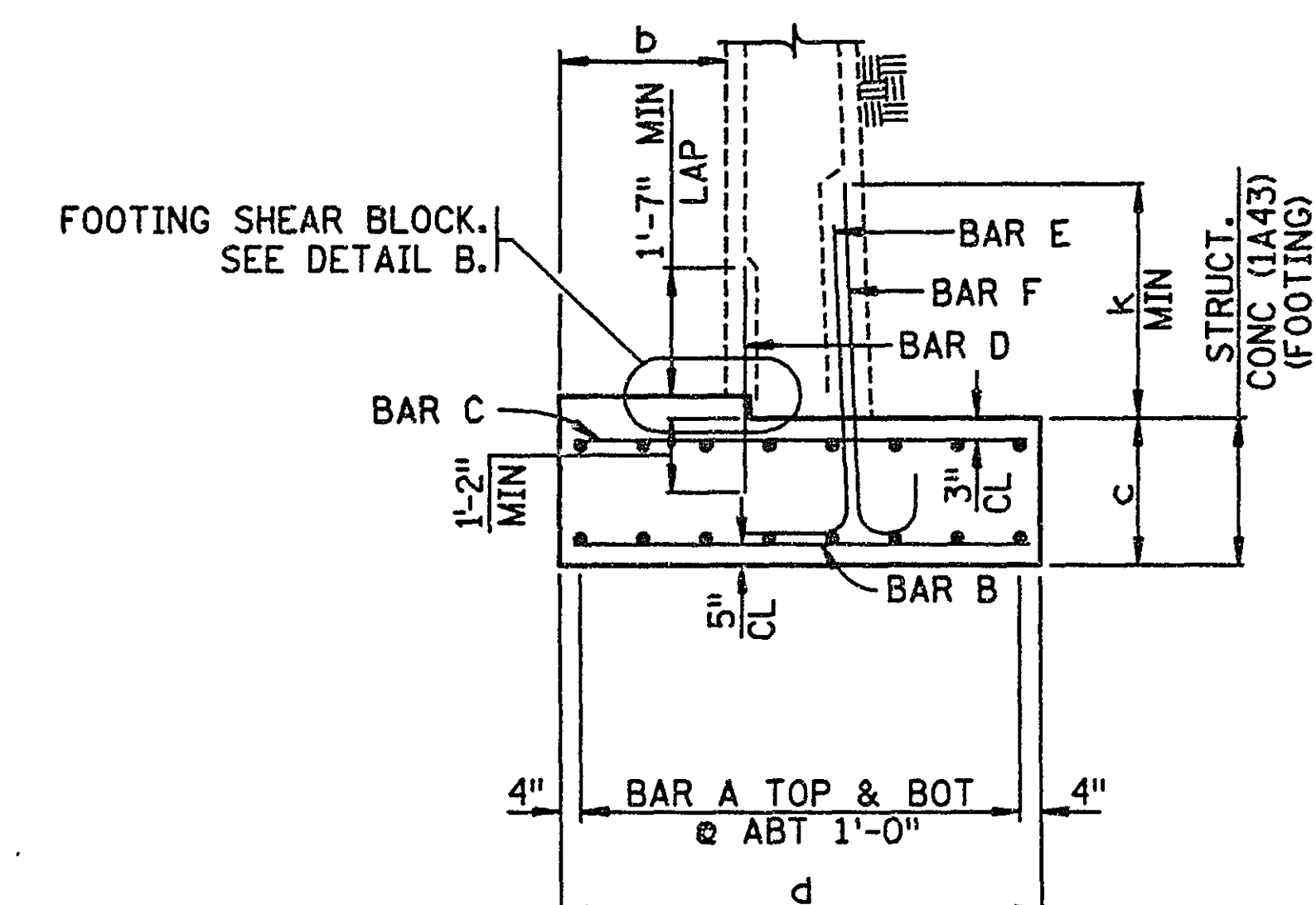
② TYPE I DRAIN, SEE DETAIL A ON SHEET MISCELLANEOUS DETAILS I.



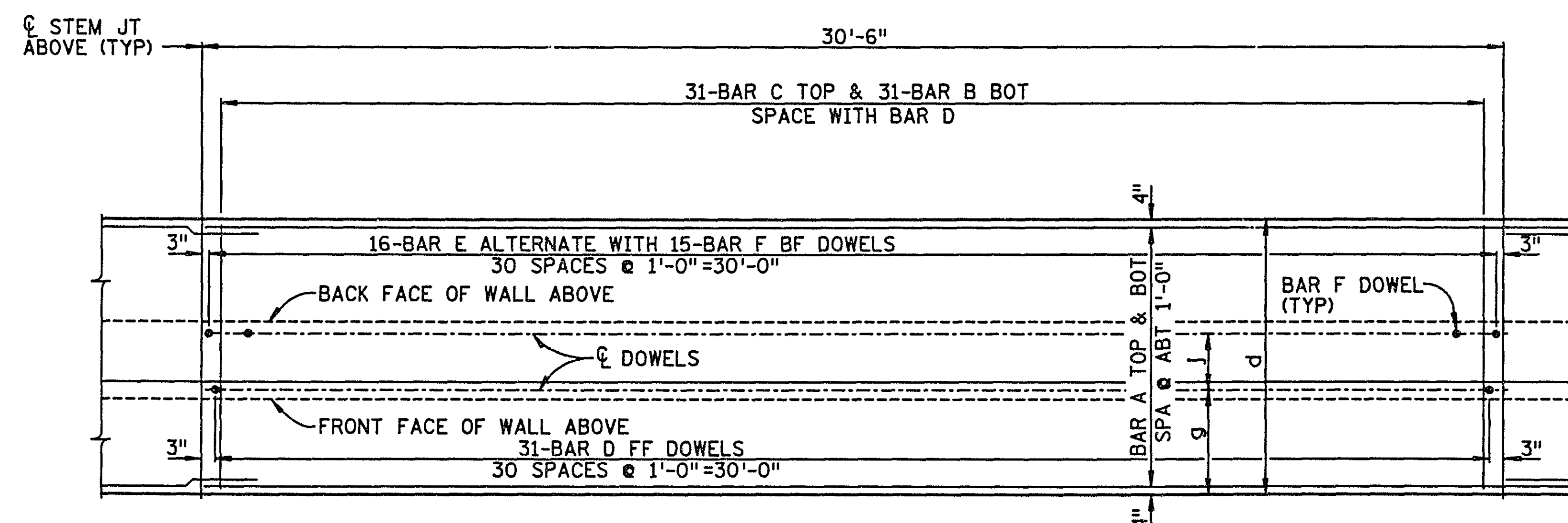
ELEVATION

NOTE:
STEM REINFORCEMENT IS TO BE SYMMETRICALLY/EQUALLY SPACED BETWEEN STEM JOINTS.

① STRAIGHT LINE BETWEEN ELEVATIONS SHOWN ON WALL ELEVATION (EXCEPT FOR STEPPED CONDITIONS). IF A BARRIER IS NOT USED, TOPS OF RETAINING WALL COULD BE STEPPED.

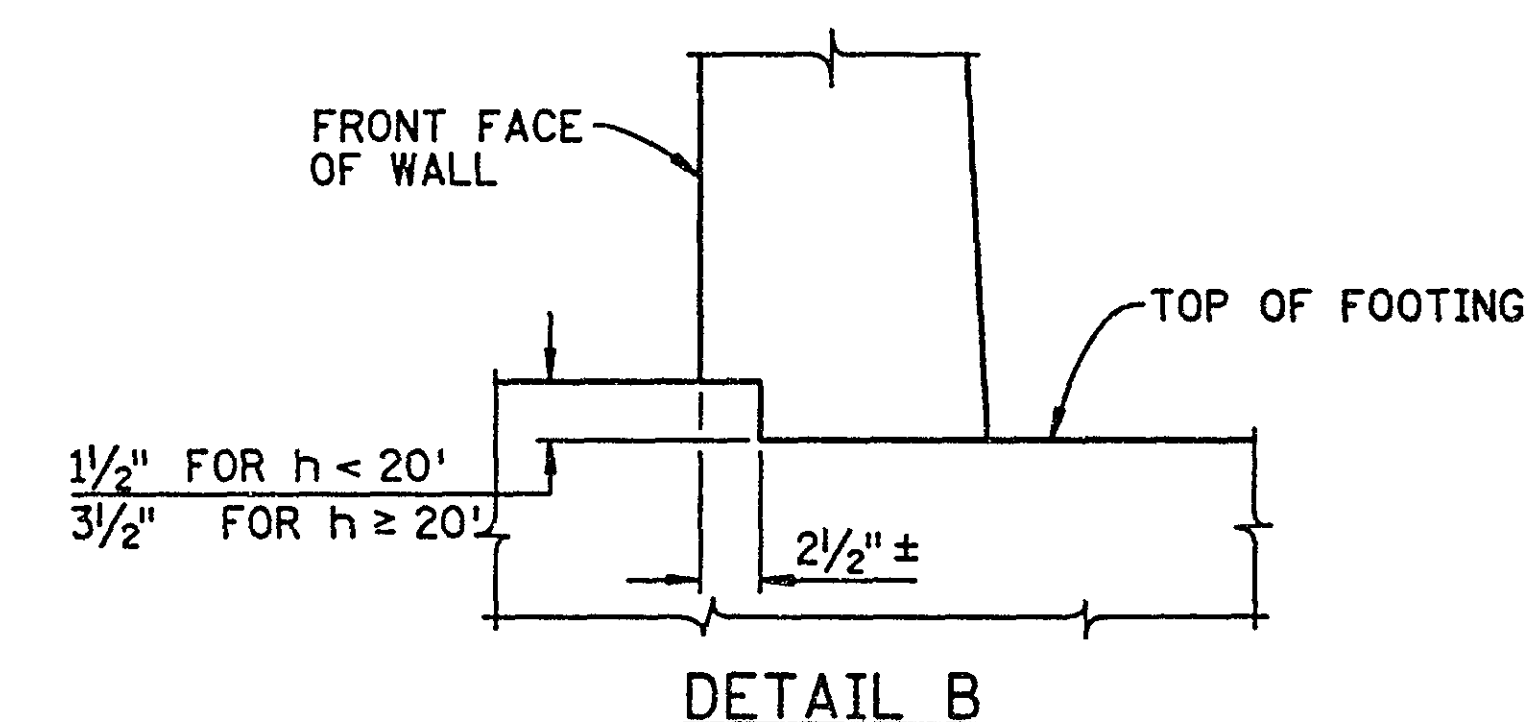


TYPICAL SECTION THRU SPREAD FOOTING



FOOTING REINFORCEMENT

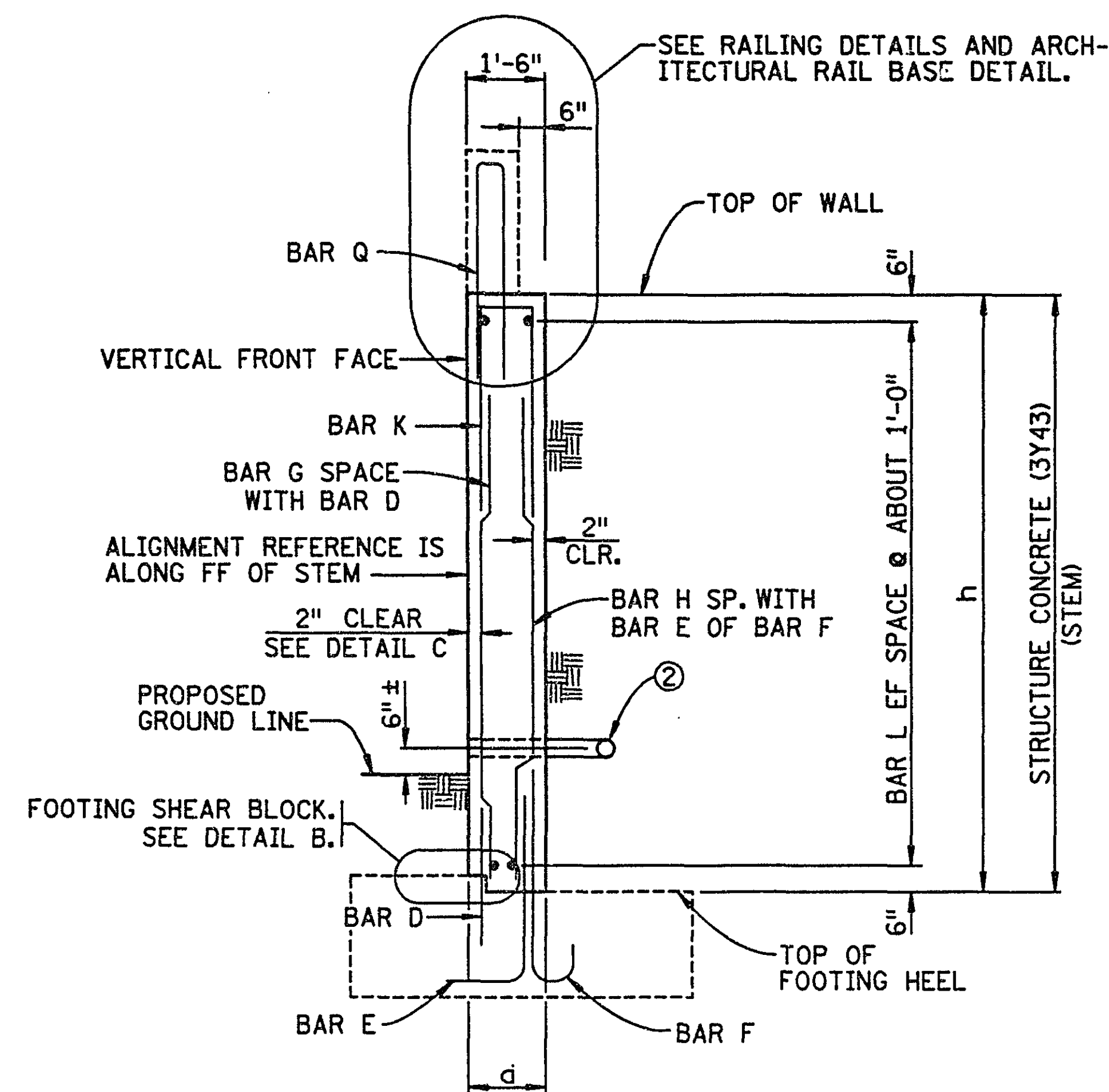
NOTES:
FOOTING REINFORCEMENT SYMMETRICAL ABOUT STEM JOINT ABOVE UNLESS OTHERWISE NOTED. SEE GENERAL PLAN FOR PILE SPACING AND LAYOUT.



NOTES:
F.F. = FRONT FACE
B.F. = BACK FACE
E.F. = EACH FACE

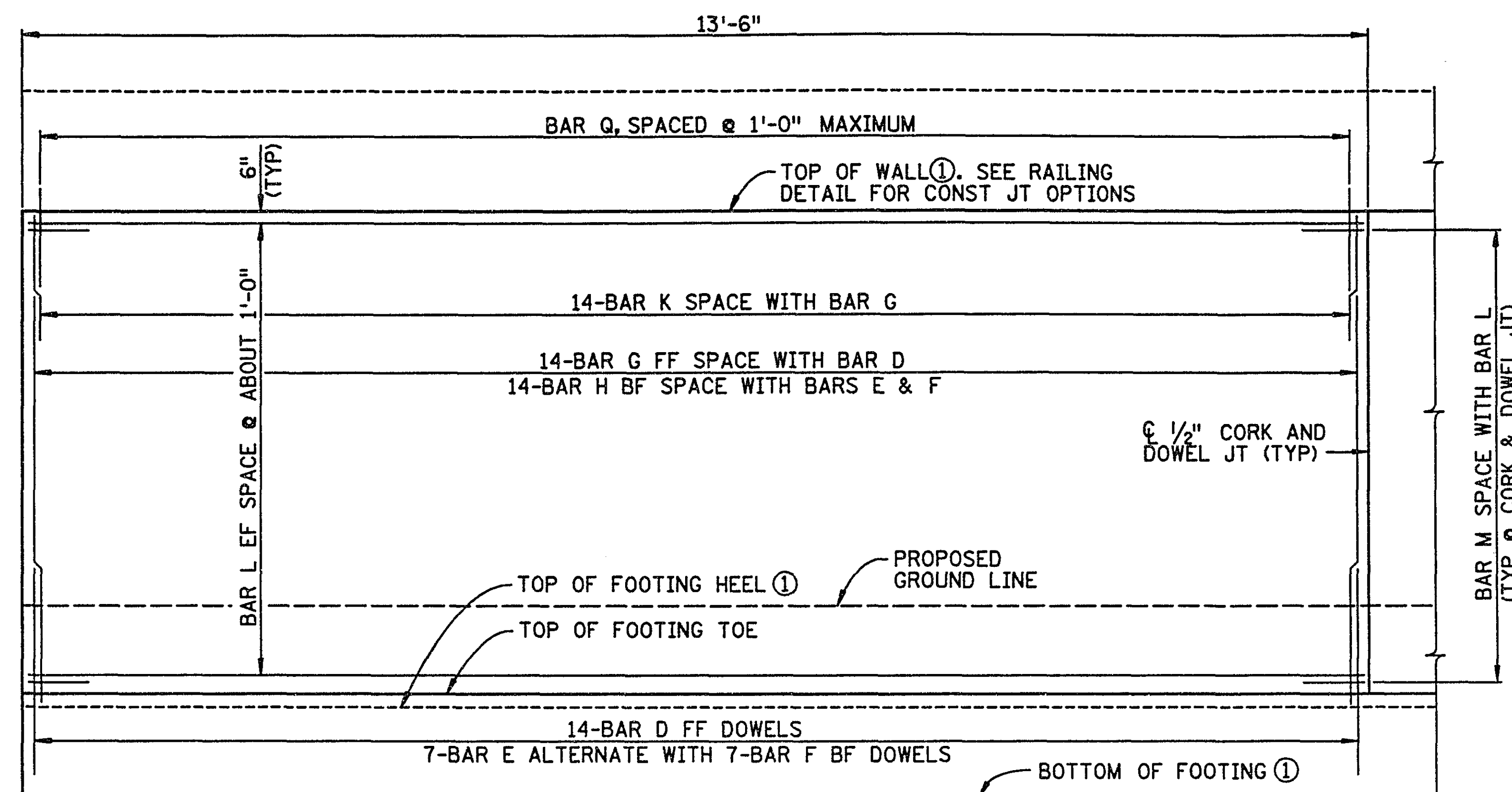
WALL REINFORCEMENT
(PANELS A2,A3,A5-A7,B1-B13)

28-153



WALL SECTION
BARRIER OPTION SHOWN

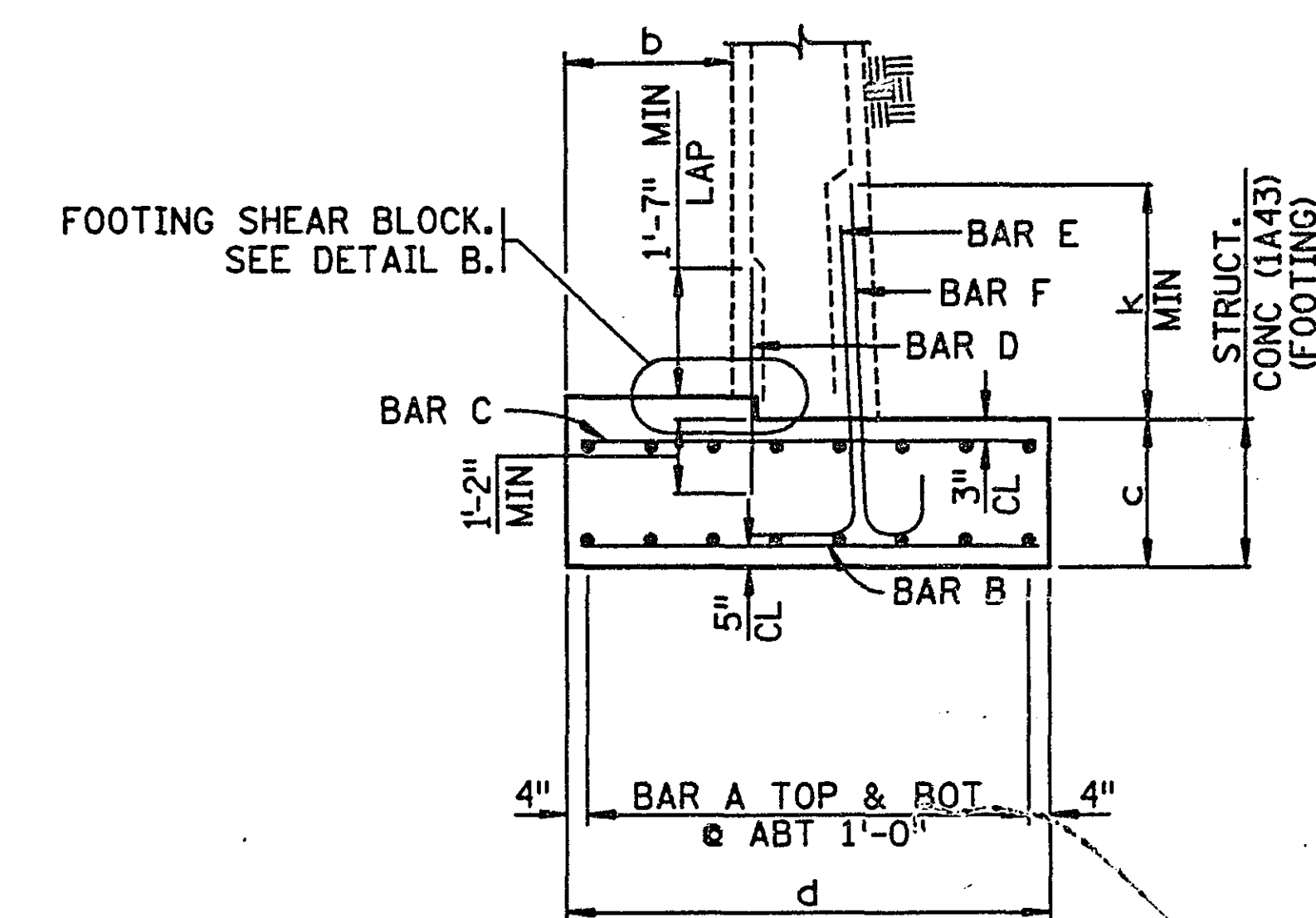
② TYPE I DRAIN, SEE DETAIL A ON SHEET MISCELLANEOUS DETAILS I.



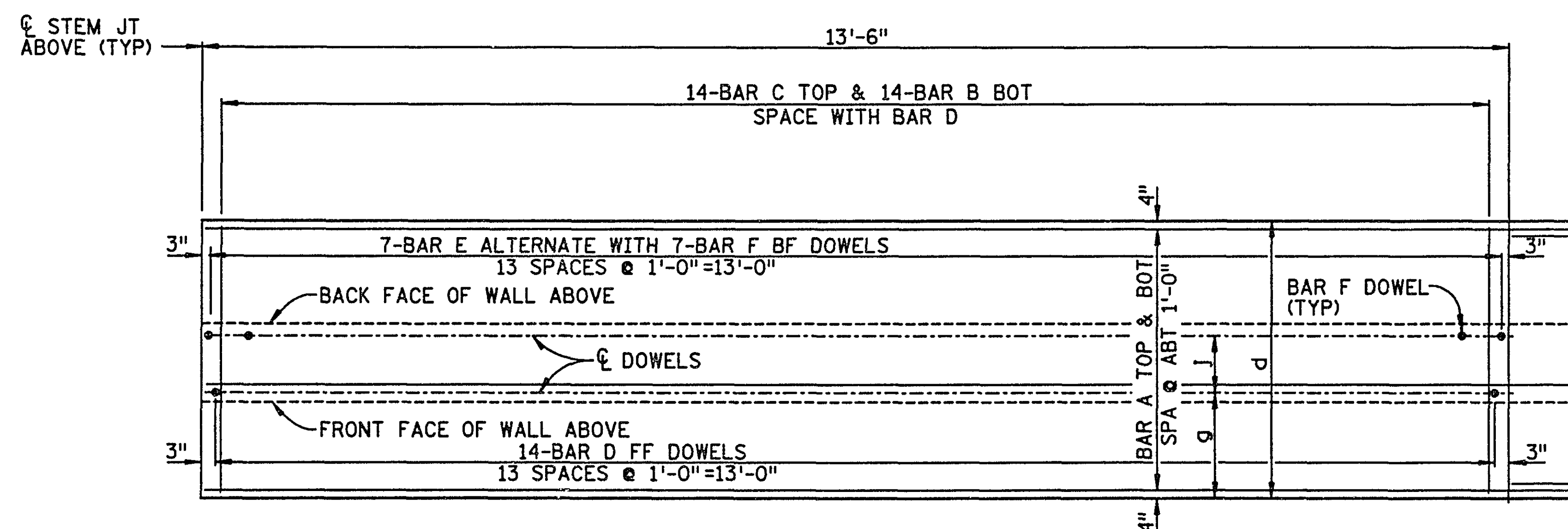
ELEVATION

NOTE:
STEM REINFORCEMENT IS TO BE SYMMETRICALLY/EQUALLY SPACED BETWEEN STEM JOINTS.

① STRAIGHT LINE BETWEEN ELEVATIONS SHOWN ON WALL ELEVATION (EXCEPT FOR STEPPED CONDITIONS). IF A BARRIER IS NOT USED, TOPS OF RETAINING WALL COULD BE STEPPED.

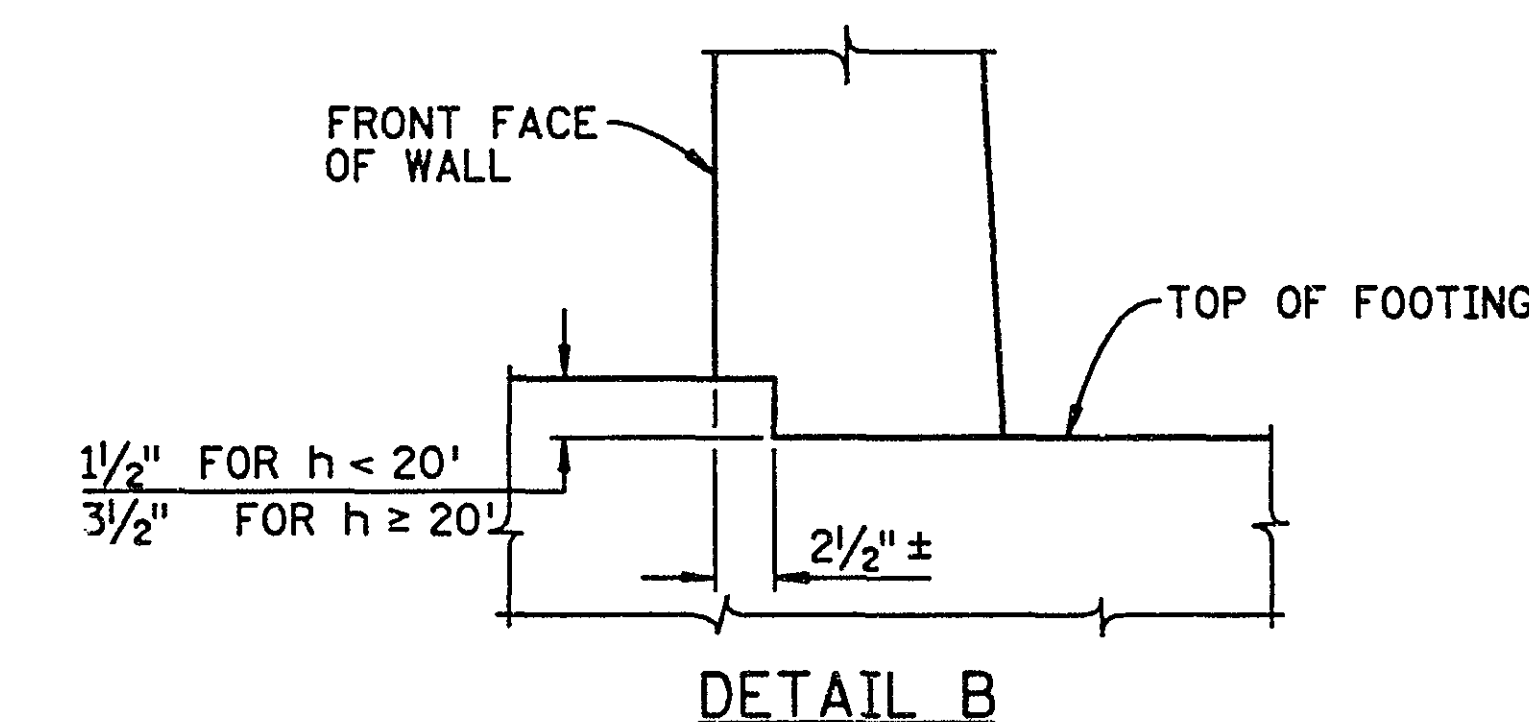


TYPICAL SECTION THRU SPREAD FOOTING



FOOTING REINFORCEMENT

NOTES:
FOOTING REINFORCEMENT SYMMETRICAL ABOUT STEM JOINT ABOVE UNLESS OTHERWISE NOTED. SEE GENERAL PLAN FOR PILE SPACING AND LAYOUT.



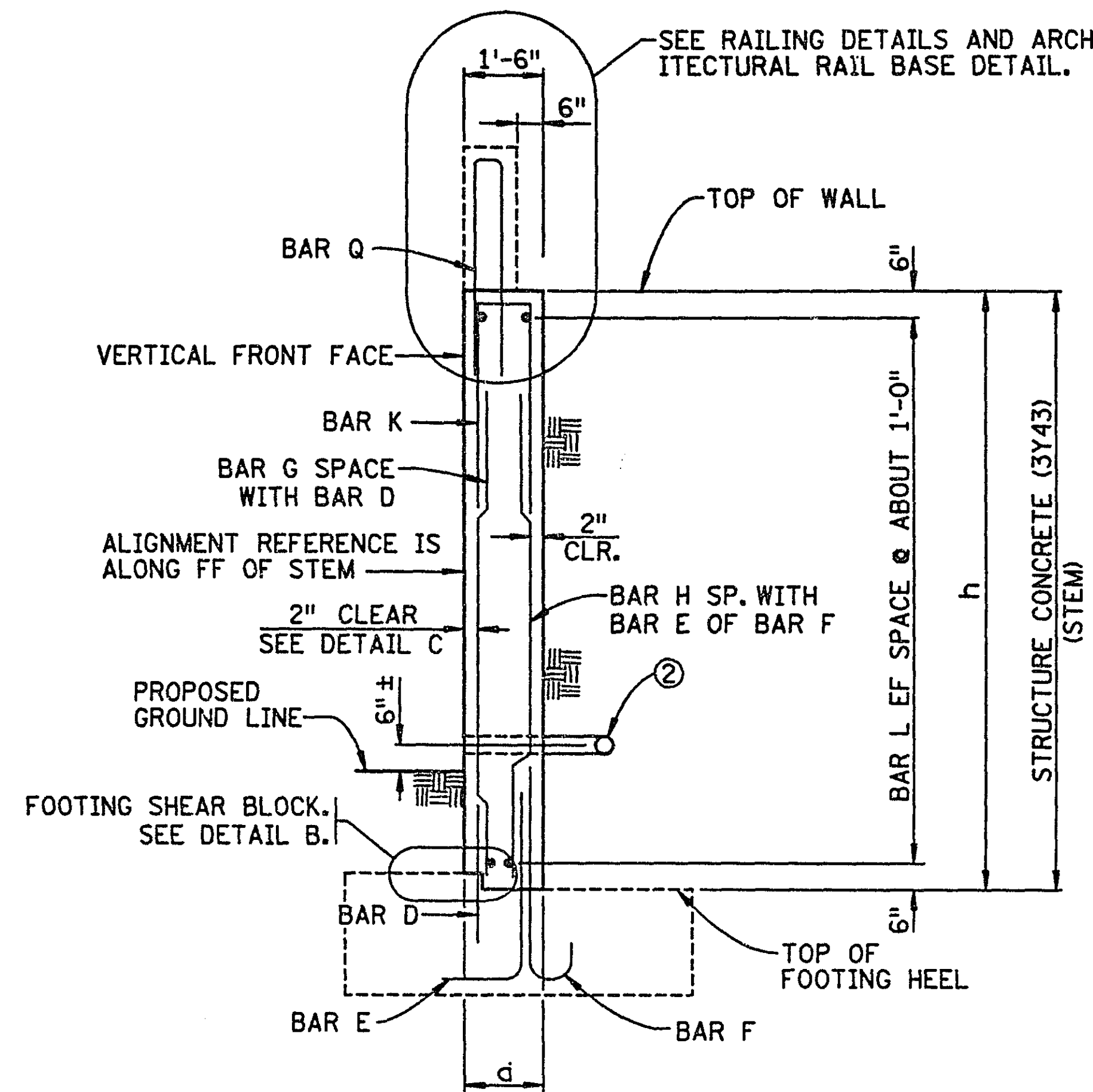
NOTES:
F.F. = FRONT FACE
B.F. = BACK FACE
E.F. = EACH FACE

WALL REINFORCEMENT
(PANELS A1)

20-153

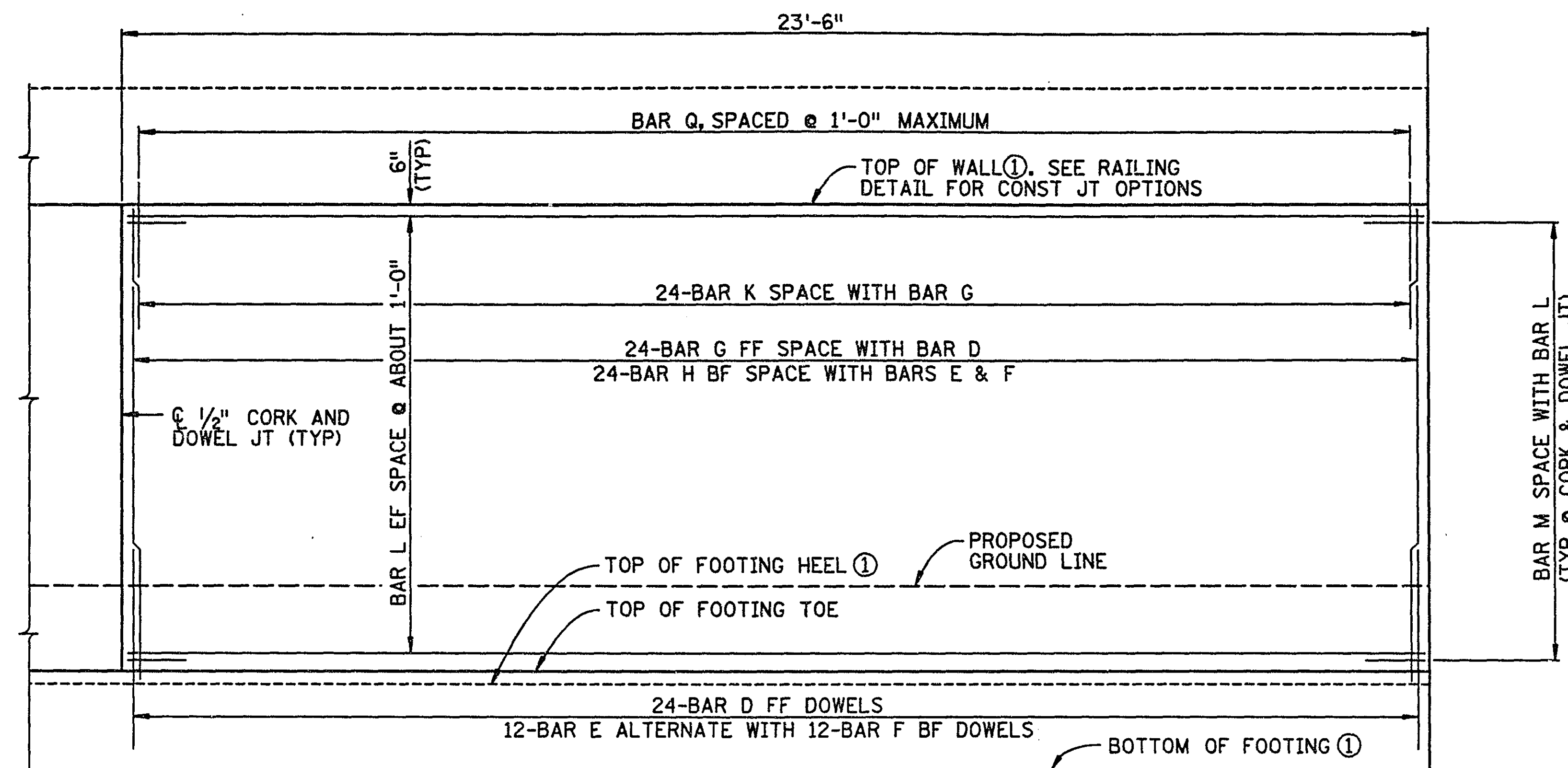
State Proj. No. 62-644-13

Sheet No. 93 of 155 Sheets



WALL SECTION
BARRIER OPTION SHOWN

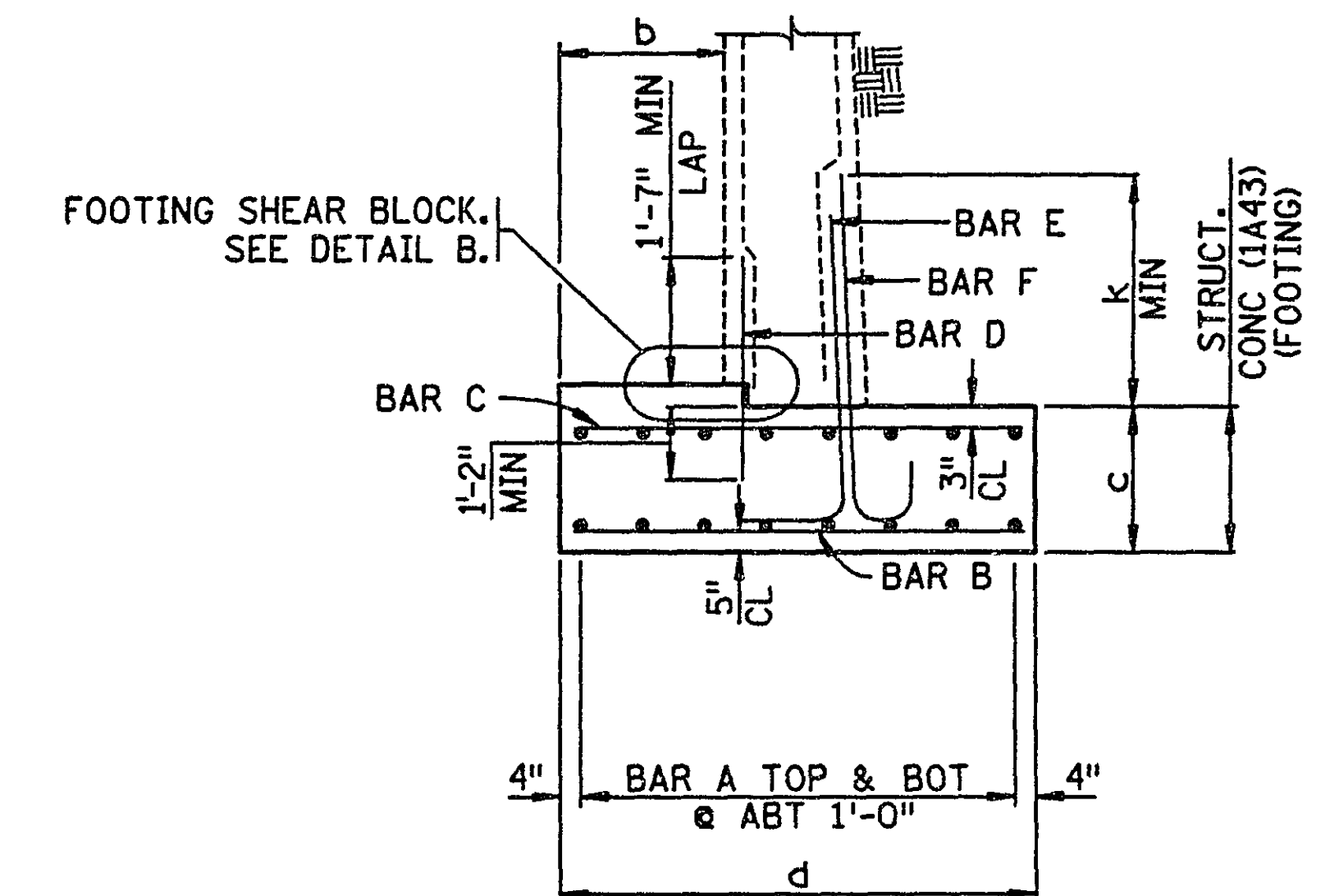
② TYPE I DRAIN, SEE DETAIL A ON SHEET MISCELLANEOUS DETAILS I.



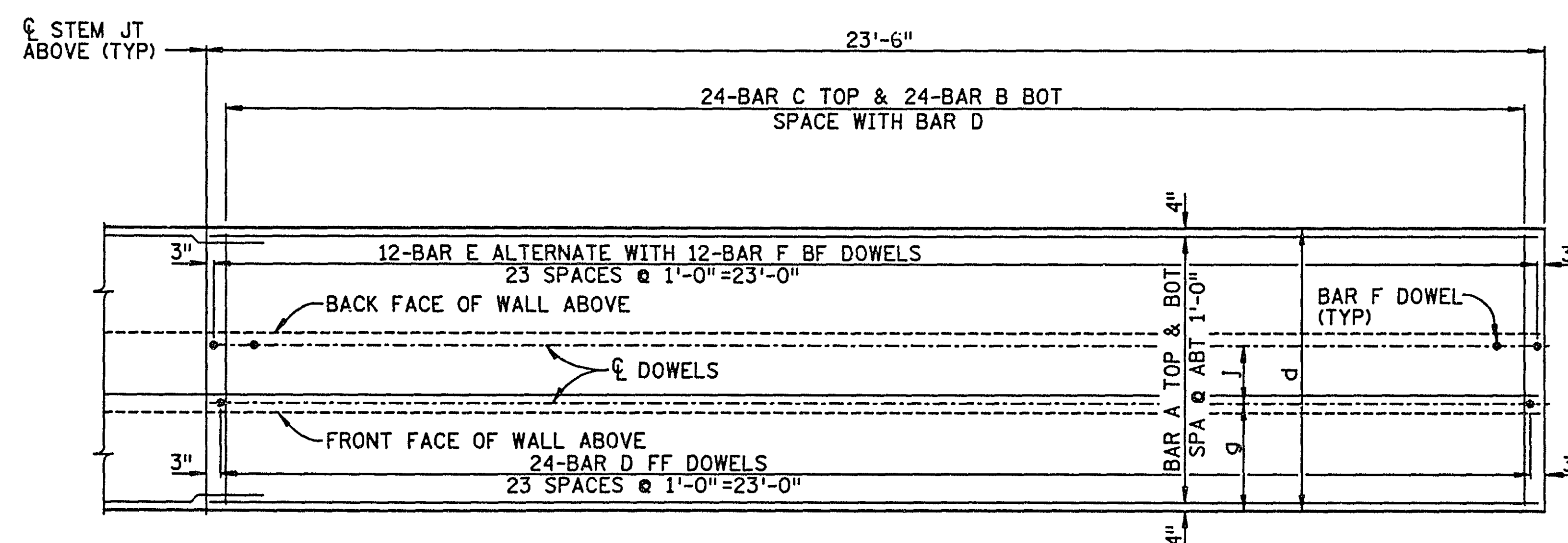
ELEVATION

NOTE:
STEM REINFORCEMENT IS TO BE SYMMETRICALLY/EQUALLY SPACED BETWEEN STEM JOINTS.

① STRAIGHT LINE BETWEEN ELEVATIONS SHOWN ON WALL ELEVATION (EXCEPT FOR STEPPED CONDITIONS). IF A BARRIER IS NOT USED, TOPS OF RETAINING WALL COULD BE STEPPED.

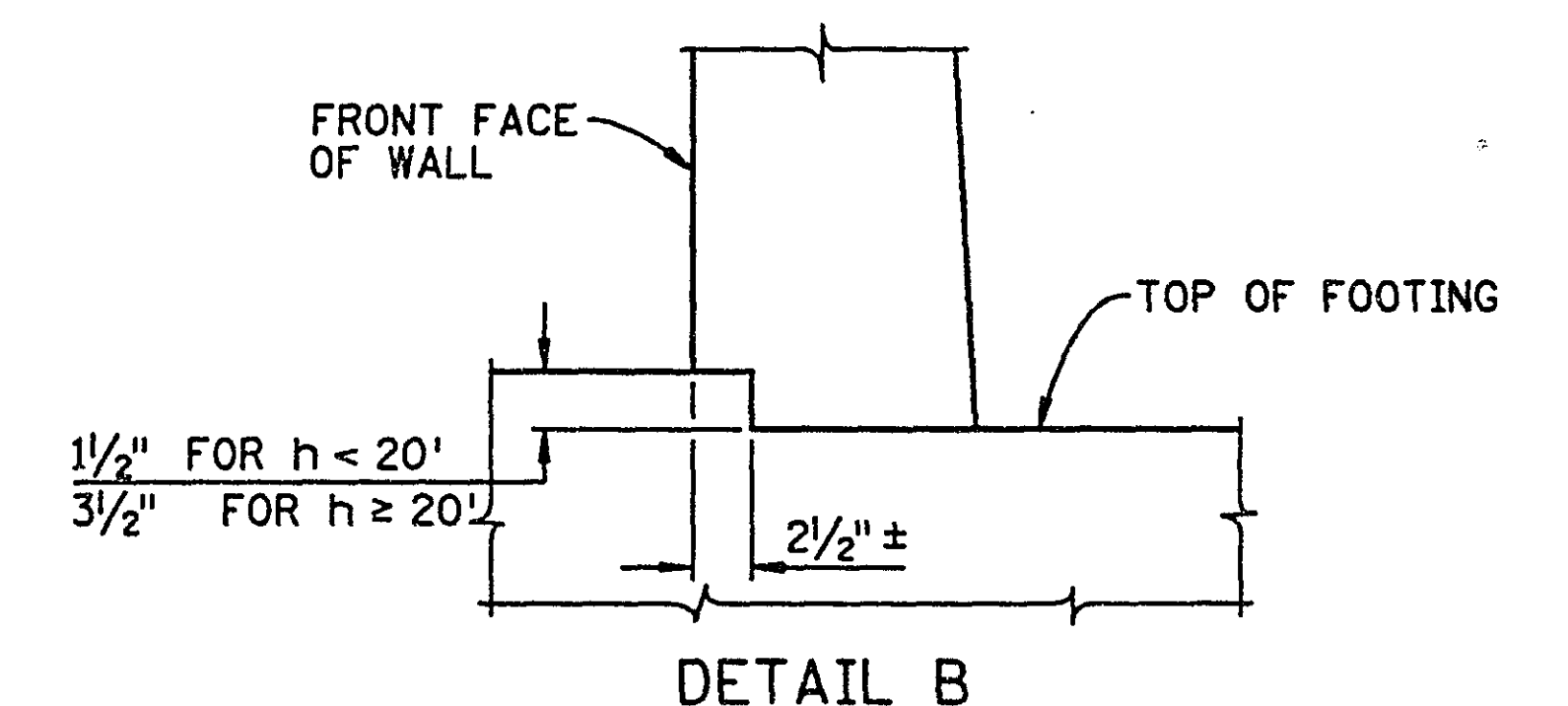


TYPICAL SECTION THRU SPREAD FOOTING



FOOTING REINFORCEMENT

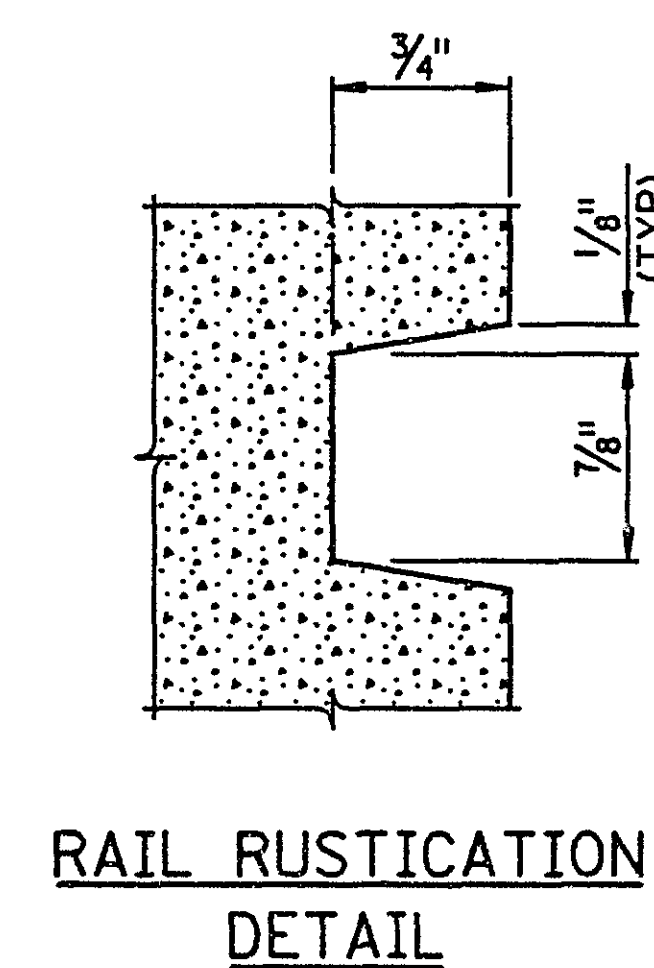
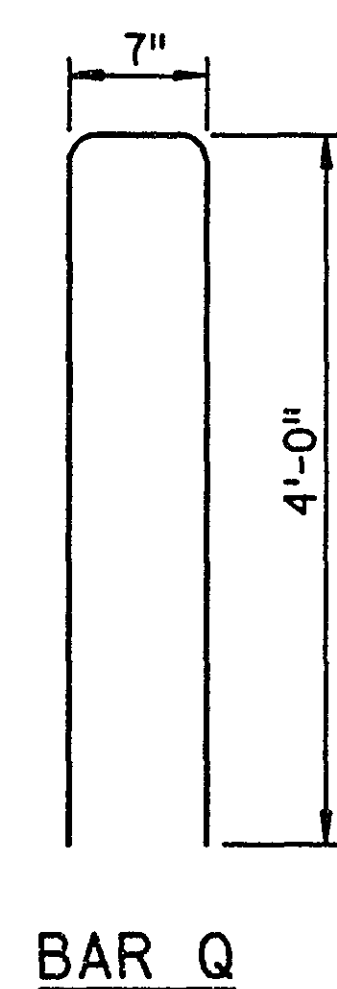
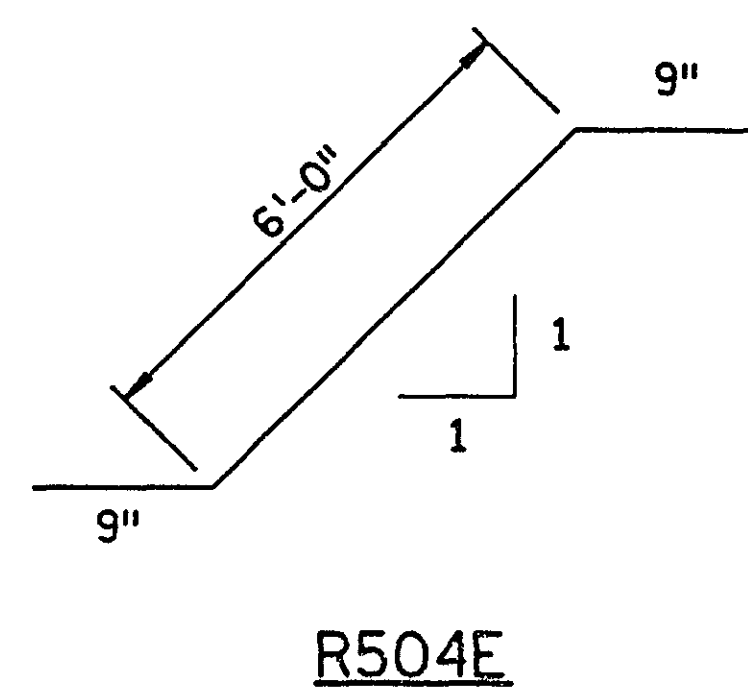
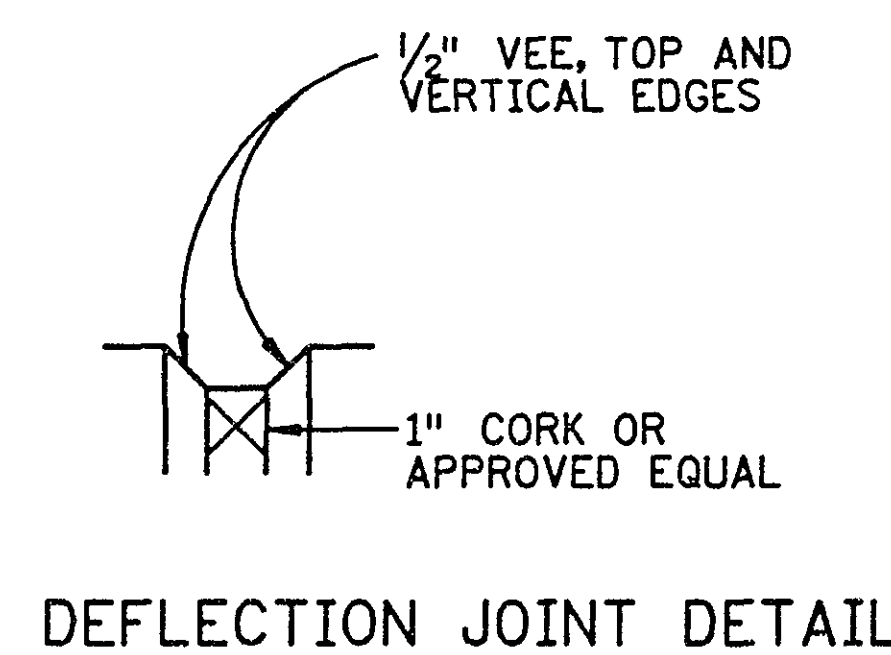
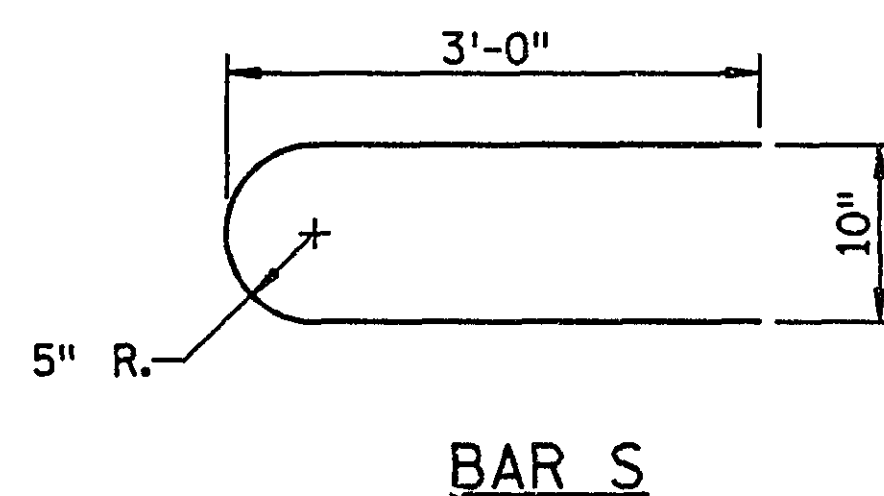
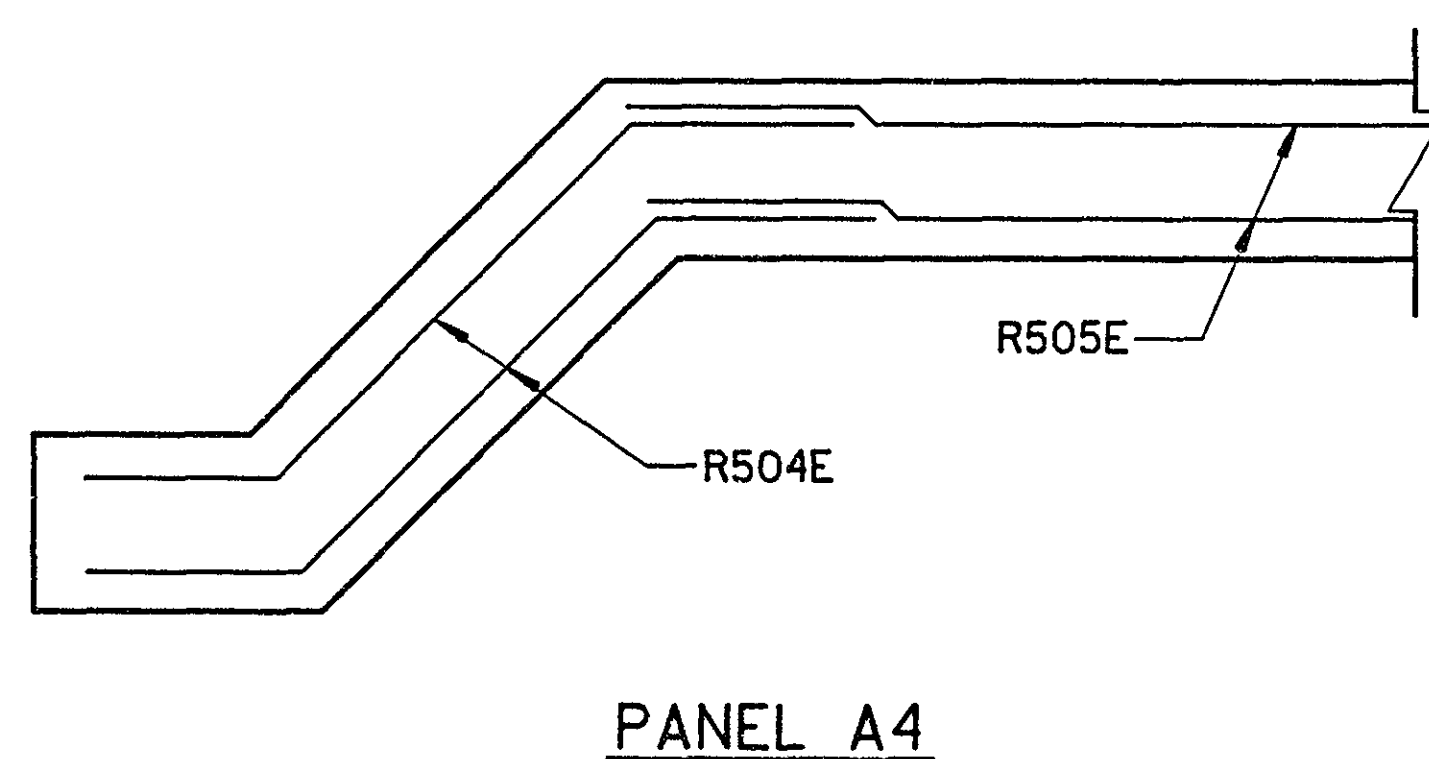
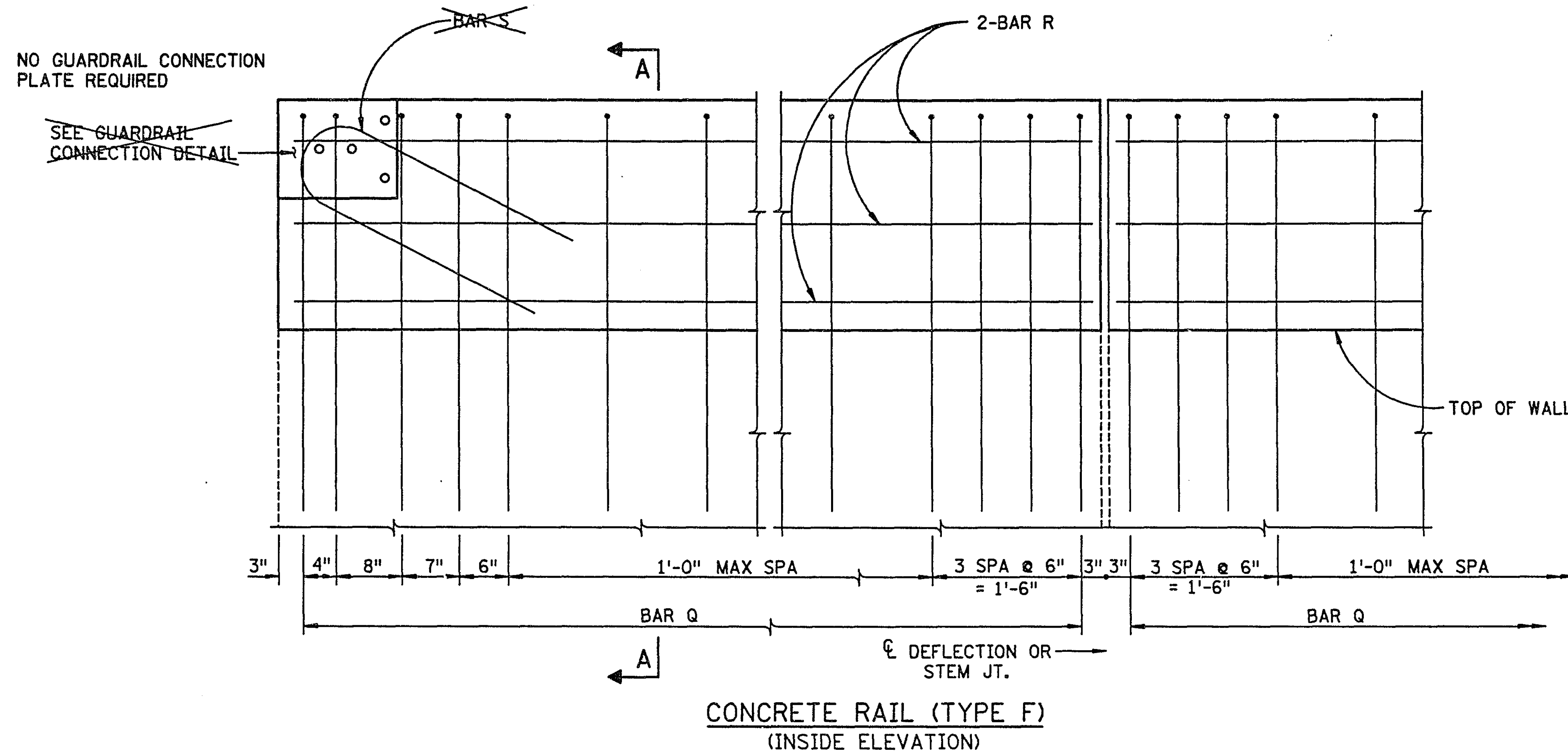
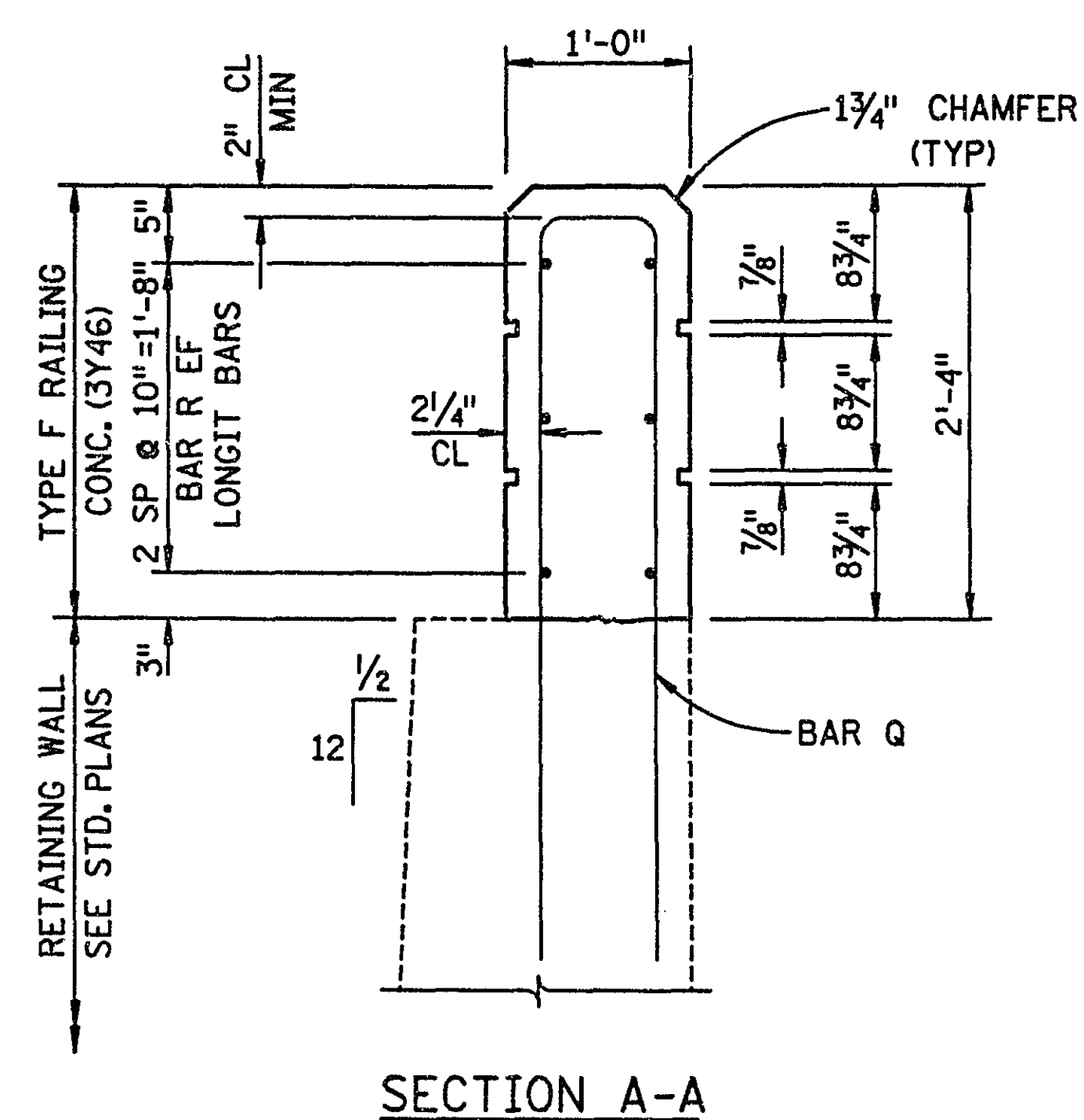
NOTES:
FOOTING REINFORCEMENT SYMMETRICAL ABOUT STEM JOINT ABOVE UNLESS OTHERWISE NOTED. SEE GENERAL PLAN FOR PILE SPACING AND LAYOUT.



NOTES:
F.F. = FRONT FACE
B.F. = BACK FACE
E.F. = EACH FACE

WALL REINFORCEMENT
(PANELS B14)

28-153



BILL OF REINFORCEMENT						
TYPICAL RAILING ON RETAINING WALL ②						
30'-6" PANEL LENGTH, PANELS: A2 - A6, B1 - B13						
BAR	MARK	NO.	LENGTH	SHAPE	LOCATION	
R	R501E	12	14'-11"	STR.	RAILING - HORIZONTAL	
TYPE F RAIL. CONC. (3Y46)				REINFORCEMENT BARS (EPOXY)		
2.6 CU. YD. ①				187 POUND		
30'-6" PANEL LENGTH ② WITH GUARDRAIL CONNECTION						
BAR	MARK	NO.	LENGTH	SHAPE	LOCATION	
Q	S509E	1	8'-7"	BENT	RAILING - VERTICAL	
R	R501E	12	14'-11"	STR.	RAILING - HORIZONTAL	
S	R702E	1	6'-6"	BENT	RAILING - VERTICAL	
TYPE F RAIL. CONC. (3Y46)				REINFORCEMENT BARS (EPOXY)		
2.6 CU. YD. ①				209 POUND		
TYPICAL RAILING ON RETAINING WALL A1, A4 & B14 PANEL LENGTH						
BAR	MARK	NO.	LENGTH	SHAPE	LOCATION	
A1	R	R502E	6	13'-0"	STR.	RAILING - HORIZONTAL
B14	R	R503E	6	23'-0"	STR.	RAILING - HORIZONTAL
A4	R	R504E	12	7'-6"	BENT	RAILING - HORIZONTAL
A4	R	R505E	12	24'-0"	STR.	RAILING - HORIZONTAL
TYPE F RAIL. CONC. (3Y46)				REINFORCEMENT BARS (EPOXY)		
CU. YD. ①				POUND ③		

- NOTES:
- FOR INFORMATIONAL PURPOSES ONLY. A1=1.2, B14=2.0
 - REINFORCEMENT SHOWN ASSUMES DEFLECTION JOINT LOCATED IN CENTER OF PANEL.
 - A1 = 82 LBS.
B14 = 144 LBS.
A4 = 395 LBS.

NOTES:

BARS MARKED WITH THE SUFFIX 'E' SHALL BE EPOXY COATED IN ACCORDANCE WITH SPEC. 330I.

THE GUARDRAIL CONNECTION IS INCLUDED IN THE PRICE BID FOR OTHER ITEMS.

MAXIMUM SPACING OF DEFLECTION JOINTS SHALL BE 20'-0".

FOR TYPICAL RETAINING WALL REINFORCEMENT AND DETAILS, SEE STANDARD RETAINING WALL SHEETS.

CONCRETE RAILING: 350 LBS/FT.

0.086 CU. YD./FT.

CONCRETE RAIL (TYPE F) SHALL BE PAID FOR ON A CUBIC YARD BASIS.

REINFORCEMENT INCLUDED IN REINFORCEMENT QUANTITIES.

CONCRETE RAILING (TYPE F) FOR RETAINING WALLS

28-153

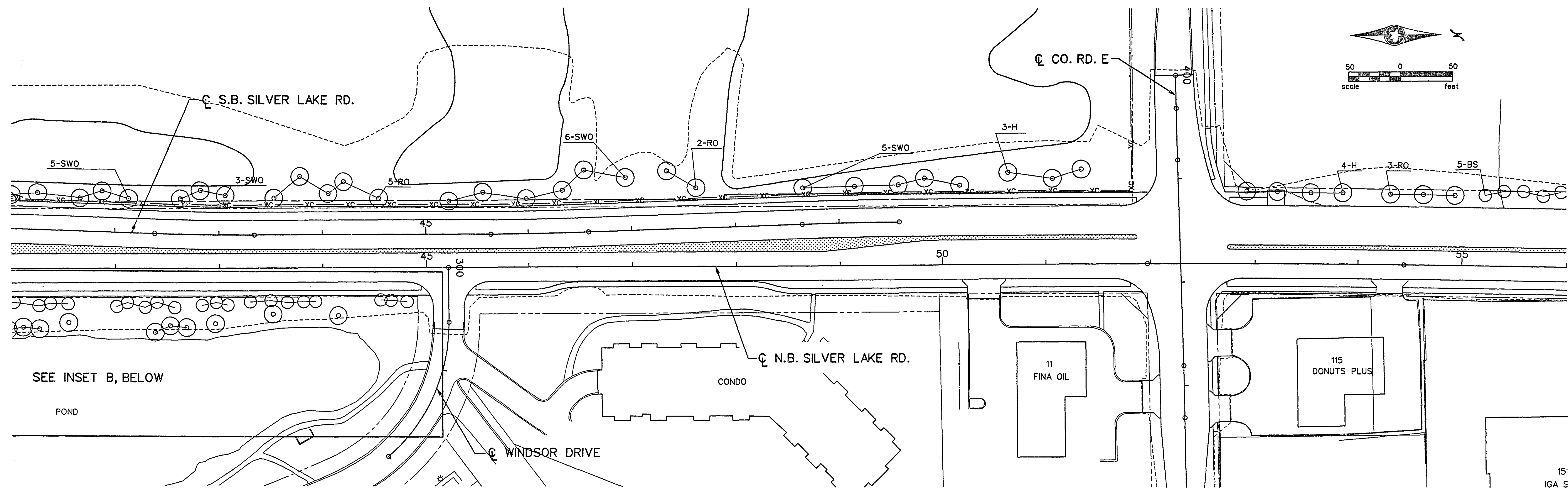
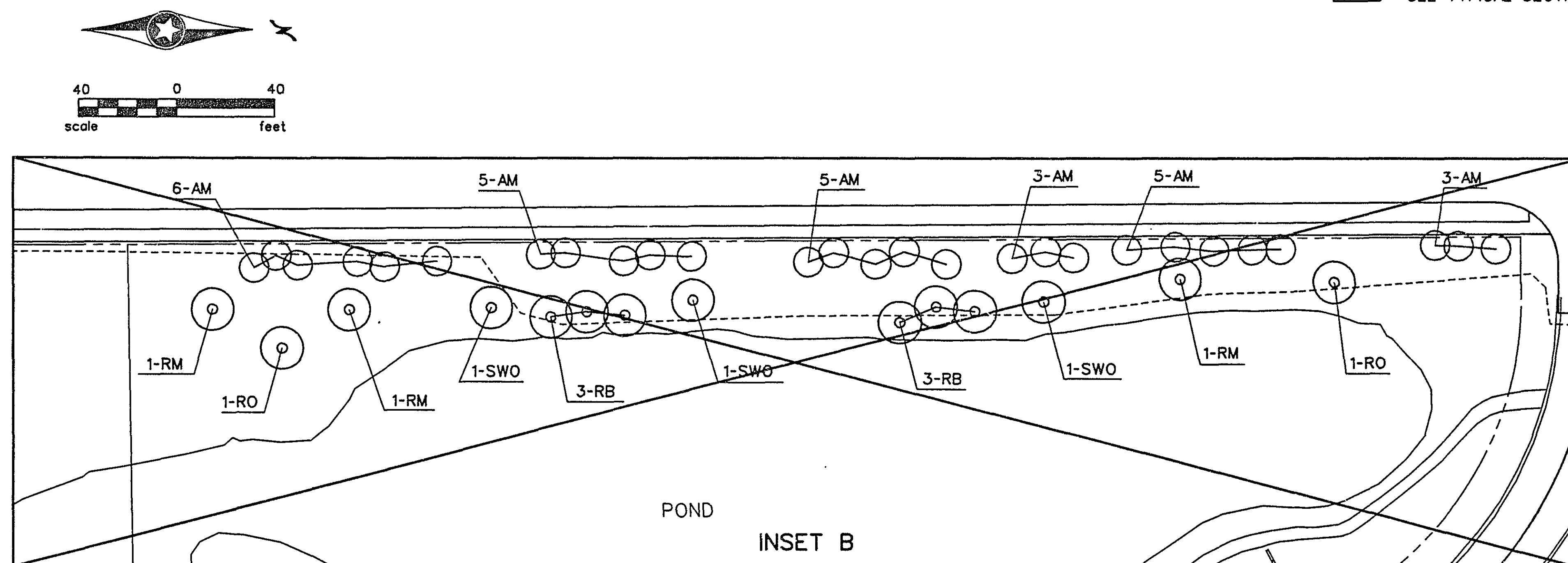
State Proj. No. 62-644-13

Sheet No. 95 of 155 Sheets

BAR	MARK	NO.	LENGTH	A	LOCATION	WT.	DIMENSIONS & QUANTITIES		BAR	MARK	NO.	LENGTH	A	LOCATION	WT.	DIMENSIONS & QUANTITIES		BAR	MARK	NO.	LENGTH	A	LOCATION	WT.	DIMENSIONS & QUANTITIES		BAR	MARK	NO.	LENGTH	A	LOCATION	WT.	DIMENSIONS & QUANTITIES									
PANELS: A1 L=13'-6"								h = 6' PANELS: L=30'-6"								h = 7' PANELS: STEMS A3, A7, B7 - B13 L=30'-6"								h = 8' PANELS: STEM A2, A5, A6, B1, B6 L=30'-6"																			
SPREAD FOOTING REINFORCEMENT								SPREAD FOOTING REINFORCEMENT								SPREAD FOOTING REINFORCEMENT								SPREAD FOOTING REINFORCEMENT																			
A	F501	12	15'-11"	STR.	LONG T & B	200	SPREAD FOOTING		A	F501	8	32'-11"	STR.	LONG T & B	275	SPREAD FOOTING		A	F501	10	32'-11"	STR.	LONG T & B	343	SPREAD FOOTING		A	F501	10	32'-11"	STR.	LONG T & B	343	SPREAD FOOTING									
B	F502	14	5'-0"	STR.	TRANS BOT	73	b	1'-6"	e							b	1'-2"	e							b	1'-4"	e						b	1'-6"	e								
C	F503	14	5'-0"	STR.	TRANS TOP	73	c	1'-3"	f							c	1'-3"	f							c	1'-3"	f						c	1'-3"	f								
							d	5'-6"	g	1'-10 ⁵ / ₁₆ "						d	4'-0"	g	1'-4 ⁵ / ₁₆ "						d	4'-6"	g	1'-6 ⁵ / ₁₆ "					d	5'-0"	g	1'-8 ⁵ / ₁₆ "							
PILE FOUNDATION REINFORCEMENT								PILE FOUNDATION REINFORCEMENT								PILE FOUNDATION REINFORCEMENT								PILE FOUNDATION REINFORCEMENT																			
A	F 01			STR.	LONG T & B		b		d							b	1'-9"	d	5'-9"						b	1'-9"	d	5'-9"					b	1'-9"	d	5'-9"							
B	F502		5'-3"	STR.	TRANS BOT		c		g	1'-11 ⁵ / ₁₆ "						c		g	1'-11 ⁵ / ₁₆ "						c		g	1'-11 ⁵ / ₁₆ "					c		g	1'-11 ⁵ / ₁₆ "							
C	F503		5'-3"	STR.	TRANS TOP																																						
STEM								STEM								STEM								STEM																			
							d	1'-9 ¹ / ₂ "	k	2'-0"						d	1'-9"	k	2'-0"						d	1'-9 ¹ / ₂ "	k	2'-0"					d	1'-10"	k	2'-0"							
							J	1'-4 ⁷ / ₈ "								J	1'-4 ³ / ₈ "							J	1'-4 ⁷ / ₈ "						J	1'-5 ³ / ₈ "											
FOOTING DOWELS & STEM REINFORCEMENT								FOOTING DOWELS & STEM REINFORCEMENT								FOOTING DOWELS & STEM REINFORCEMENT								FOOTING DOWELS & STEM REINFORCEMENT																			
D	F504E	14	3'-0"	STR.	DOWEL FF	44	STRUCTURE CONCRETE (1A43)		D	F504E	31	3'-0"	STR.	DOWEL FF	97	STRUCTURE CONCRETE (1A43)		D	F504E	31	3'-0"	STR.	DOWEL FF	97	STRUCTURE CONCRETE (1A43)		D	F504E	31	3'-0"	STR.	DOWEL FF	97	STRUCTURE CONCRETE (1A43)									
E	F505E	7	4'-1"	0'-10"	DOWEL BF	30	(FOOTING)		E	F505E	16	4'-1"	0'-10"	DOWEL BF	68	(FOOTING)		E	F505E	16	4'-1"	0'-10"	DOWEL BF	68	(FOOTING)		E	F505E	16	4'-1"	0'-10"	DOWEL BF	68	(FOOTING)									
F	F506E	7	4'-3"	3'-3"	DOWEL BF	31	SPREAD	3.5	CY	F	F506E	15	4'-3"	3'-3"	DOWEL BF	66	SPREAD	5.8	CY	F	F506E	15	4'-3"	3'-3"	DOWEL BF	66	SPREAD	6.86	CY	F	F506E	15	4'-3"	3'-3"	DOWEL BF	66	SPREAD	7.3	CY				
G	S401E	14	5'-10"	STR.	VERT FF	55	PILE		CY	G	S401E	31	4'-10"	STR.	VERT FF	100	PILE		CY	G	S401E	31	5'-10"	STR.	VERT FF	121	PILE		CY	G	S401E	31	6'-10"	STR.	VERT FF	142	PILE		CY				
H	S502E	14	5'-10"	STR.	VERT BF	85	STRUCTURE CONCRETE (3Y43)		H	S502E	31	4'-10"	STR.	VERT BF	156	STRUCTURE CONCRETE (3Y43)		H	S502E	31	5'-10"	STR.	VERT BF	189	STRUCTURE CONCRETE (3Y43)		H	S502E	31	6'-10"	STR.	VERT BF	221	STRUCTURE CONCRETE (3Y43)									
J	S 03E			STR.	VERT BF		(STEM)		J	S 03E			STR.	VERT BF		(STEM)		J	S 03E			STR.	VERT BF		(STEM)		J	S 03E			STR.	VERT BF		(STEM)									
K	S504E	14	7'-1"	3'-0"	TIE	104	6.3	CY	K	S504E	31	7'-1"	3'-0"	TIE	229	11.0	CY	K	S504E	31	7'-1"	3'-0"	TIE	229	13.0	CY	K	S504E	31	7'-1"	3'-0"	TIE	229	15.0	CY								
L	S405E	14	13'-0"	STR.	HORIZ EF	122	REINFORCEMENT (PLAIN)		L	S405E	12	30'-0"	STR.	HORIZ EF	240	REINFORCEMENT (PLAIN)		L	S405E	14	30'-0"	STR.	HORIZ EF	281	REINFORCEMENT (PLAIN)		L	S405E	16	30'-0"	STR.	HORIZ EF	321	REINFORCEMENT (PLAIN)									
M	S506E	14	7'-4"	1'-4"	EXP JT TIE	107	SPREAD	346	LB	M	S506E	12	7'-4"	1'-4"	EXP JT TIE	92	SPREAD	501	LB	M	S506E	14	7'-4"	1'-4"	EXP JT TIE	107	SPREAD	601	LB	M	S506E	16	7'-4"	1'-4"	EXP JT TIE	122	SPREAD	633	LB				
N	S507E			1'-9"	EXP JT TIE		PILE		LB	N	S507E			1'-9"	EXP JT TIE		PILE	1178	LB	N	S507E			1'-9"	EXP JT TIE		PILE		LB	N	S507E			1'-9"	EXP JT TIE		PILE		LB				
P	S508E			2'-2"	EXP JT TIE		REINFORCEMENT (EPOXY)		P	S508E			8'-2"	2'-2"	EXP JT TIE		REINFORCEMENT (EPOXY)		P	S508E			8'-2"	2'-2"	EXP JT TIE		REINFORCEMENT (EPOXY)		P	S508E			8'-2"	2'-2"	EXP JT TIE		REINFORCEMENT (EPOXY)						
Q	S509E	21	8'-7"	4'-0"	F-RAILDOWEL	182	760	LB	Q	S509E	38	8'-7"	4'-0"	F-RAILDOWEL	340	1489	LB	Q	S509E	38	8'-7"	4'-0"	F-RAILDOWEL	340	1489	LB	Q	S509E	38	8'-7"	4'-0"	F-RAILDOWEL	340	1606	LB								
Q	S509E	36	6'-0"	2'-8"	J-RAILDOWEL	225			Q	S509E	36	6'-0"	2'-8"	J-RAILDOWEL	225			Q	S509E	36	6'-0"	2'-8"	J-RAILDOWEL	225			Q	S509E	36	6'-0"	2'-8"	J-RAILDOWEL	225										
h = 9' PANELS: STEM B2, B3, B4, B5 FOOTING A3, A7, B7, B13 L=30'-6"								h = 10' PANELS: FOOTING A2, A5, A6, B1, B6 L=30'-6"								h = 11' PANELS: FOOTING B2 - B5 L=30'-6"								PANELS: B14 L= 23'-6"																			
SPREAD FOOTING REINFORCEMENT								SPREAD FOOTING REINFORCEMENT								SPREAD FOOTING REINFORCEMENT								SPREAD FOOTING REINFORCEMENT																			
A	F501	12	32'-11"	STR.	LONG T & B	412	SPREAD FOOTING		A	F501	12	32'-11"	STR.	LONG T & B	412	SPREAD FOOTING		A	F501	14	32'-11"	STR.	LONG T & B	481	SPREAD FOOTING		A	F501	12	23'-0"	STR.	LONG T & B	288	SPREAD FOOTING									
B	F502	31	5'-0"	STR.	TRANS BOT	162	b	①	e						b	①	e			b	F602	31	6'-0"	STR.	TRANS BOT	279	b	①	e			b	F502	24	5'-0"	STR.	TRANS BOT	125	b	1'-6"	e		
C	F503	31	5'-0"	STR.	TRANS TOP	162	c	1'-3"	f						c	1'-3"	f			c	F503	31	6'-0"	STR.	TRANS TOP	194	c	1'-3"	f			c	F503	24	5'-0"	STR.	TRANS TOP	125	c	1'-3"	f		
②	F510	12	5'-8"	1'-8"	STEP	71	d	5'-6"	g	1'-10 ⁵ / ₁₆ "					d	6'-0"	g	1'-11 ⁵ / ₁₆ "		⑤	F510	12	5'-8"	1'-8"	STEP	71	d	6'-6"	g	2'-2 ⁵ / ₁₆ "			F510	12	5'-8"	1'-8"	STEP	71	d	5'-6"	g	1'-10 ⁵ / ₁₆ "	
④	F511	8	5'-0"	STR.	STEP	42									③	F511	8	5'-6"	STR.	STEP					⑤	F511	8	6'-0"	STR.	STEP	50												
PILE FOUNDATION REINFORCEMENT								PILE FOUNDATION REINFORCEMENT								PILE FOUNDATION REINFORCEMENT								PILE FOUNDATION REINFORCEMENT																			
A	F701	12	34'-2"	STR.	LONG T & B	838	b	1'-9"	d	5'-9"					b	2'-0"	d	6'-0"		A	F 01	14		STR.	LONG T & B		b	2'-2"	d	6'-6"			A	F_01			STR.	LONG T & B		b		d	
B	F502	31	5'-3"	STR.	TRANS BOT	170	c		g	1'-11 ⁵ / ₁₆ "					c		g	2'-2 ⁵ / ₁₆ "		B	F502	31	6'-0"	STR.	TRANS BOT	194	c		g	2'-4 ⁵ / ₁₆ "			B	F_02			STR.	TRANS BOT		c		g	
C	F503	31	5'-3"	STR.	TRANS TOP	170									c					C	F503	31	6'-0"	STR.	TRANS TOP	194							C	F_03			STR.	TRANS TOP					
STEM								STEM								STEM								STEM																			
							d	1'-10 ¹ / ₂ "	k	2'-0"					d	1'-11"	k	2'-6"							d	1'-11 ¹ / ₂ "	k	2'-6"				d	1'-11 ¹ / ₂ "	k	2'-0"								
							J	1'-5 ⁷ / ₈ "							J	1'-6 ³ / ₈ "				J					J	1'-6 ⁷ / ₈ "				J	1'-6 ⁷ / ₈ "			J	1'-4 ⁷ / ₈ "								
FOOTING DOWELS & STEM REINFORCEMENT								FOOTING DOWELS & STEM REINFORCEMENT								FOOTING DOWELS & STEM REINFORCEMENT								FOOTING DOWELS & STEM REINFORCEMENT																			
D	F504E	31	3'-0"	STR.	DOWEL FF	97	STRUCTURE CONCRETE (1A43)		D	F504E	31	3'-0"	STR.	DOWEL FF	97	STRUCTURE CONCRETE (1A43)		D	F504E	31	3'-0"	STR.	DOWEL FF	97	STRUCTURE CONCRETE (1A43)		D	F504E	24	3'-0"	STR.	DOWEL FF	75	STRUCTURE CONCRETE (1A43)									
E	F505E	16	4'-4"	0'-10"	DOWEL BF	72	(FOOTING)		E	F505E	31	4'-10"	0'-10"	DOWEL BF	156	(FOOTING)		E	F505E	31	5'-7"	0'-10"	DOWEL BF	181	(FOOTING)		E	F505E	12	4'-1"	0'-10"	DOWEL BF	51	(FOOTING)									
F	F506E	15	4'-6"	3'-6"	DOWEL BF	70	SPREAD	8.0	CY	F	F506E	30	5'-0"	4'-0"	DOWEL BF	156	SPREAD	8.8	CY	F	F506E	30	5'-9"	4'-9"	DOWEL BF	180	SPREAD	9.5	CY	F	F506E	12	4'-3"	3'-3"	DOWEL BF	53	SPREAD	6.3	CY				
G	S401E	31	7'-10"	STR.	VERT FF	162	PILE		CY	G	S401E	31	7'-1"	STR.	VERT FF	147	PILE		CY	G	S401E	31	8'-1"	STR.	VERT FF	167	PILE		CY	G													

NO SHEET

#97 - #105

[illegible]

NOTE: CROSSED OUT PLANTINGS ON THIS PLAN ARE NOT INCLUDED IN THIS CONTRACT. THEY ARE FOR REFERENCE ONLY AND WILL BE INSTALLED UNDER SEPARATE CONTRACT.

1	3-9-95	MCI	TAT		REVISE PER STATE AID REVIEW
NO	DATE	BY	CKD	APPR	REVISION

SRF STRGAR-ROSCOE-FAUSCH, INC.
CONSULTING ENGINEERS ■ LAND SURVEYORS

I hereby certify that this plan, specification or report was prepared by me or under my direct supervision and that I am a duly Registered Landscape Architect under the laws of the State of Minnesota.

Thomas A. Thorsen

Date 12/14/94 Reg. No. 14021

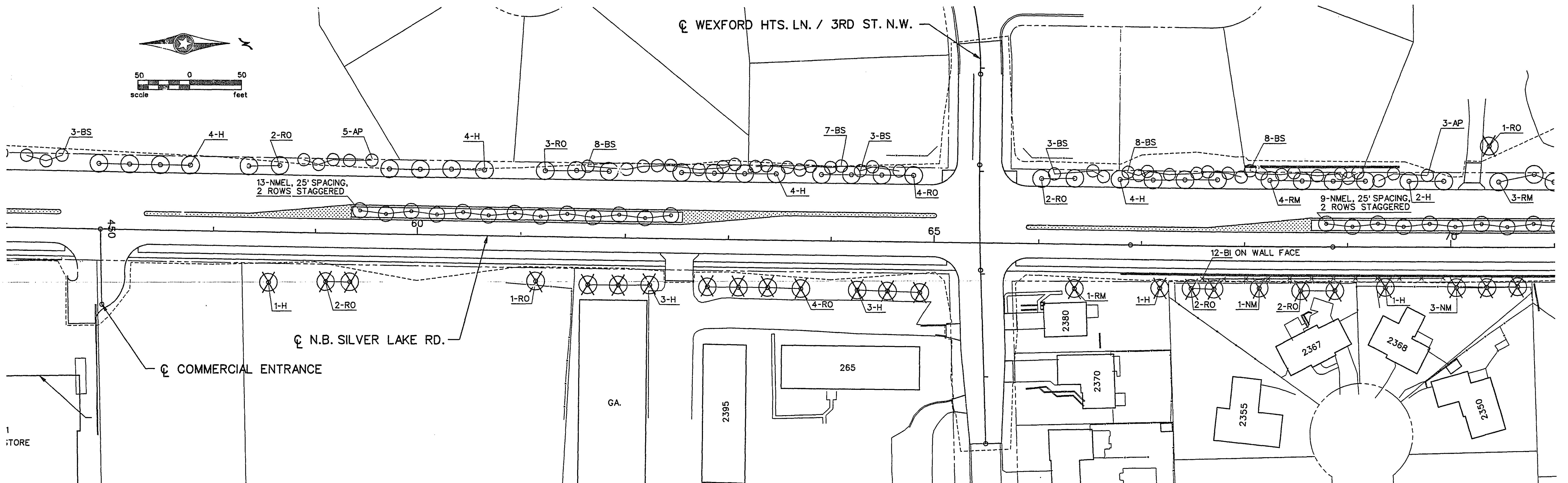
CITY OF NEW BRIGHTON

LANDSCAPING PLAN
SILVER LAKE ROAD

STATE PROJ. NO.	62-644-13
--------------------	-----------

DRAWN BY	DATE
B. DOYLE	4-94
DESIGNED BY	
T. THORSON	4-94
CHECKED BY	

SHEET	107
OF	155
COMM. NO.	
0931880	



LEGEND

	CONCRETE WALK WITH SPECIAL SURFACE TREATMENT. SEE TYPICAL SECTIONS.
---	--

NOTE:
MEDIAN PLANTINGS TO RECEIVE CRUSHED ROCK MULCH & FILTER FABRIC.
SEE SPECIAL PROVISIONS.

NOTE: CROSSED OUT PLANTINGS ON THIS PLAN ARE NOT INCLUDED IN THIS CONTRACT.
THEY ARE FOR REFERENCE ONLY AND WILL BE INSTALLED UNDER SEPARATE CONTRACT.

SRF **STRGAR-ROSCOE-FAUSCH, INC.**
CONSULTING ENGINEERS ■ LAND SURVEYORS

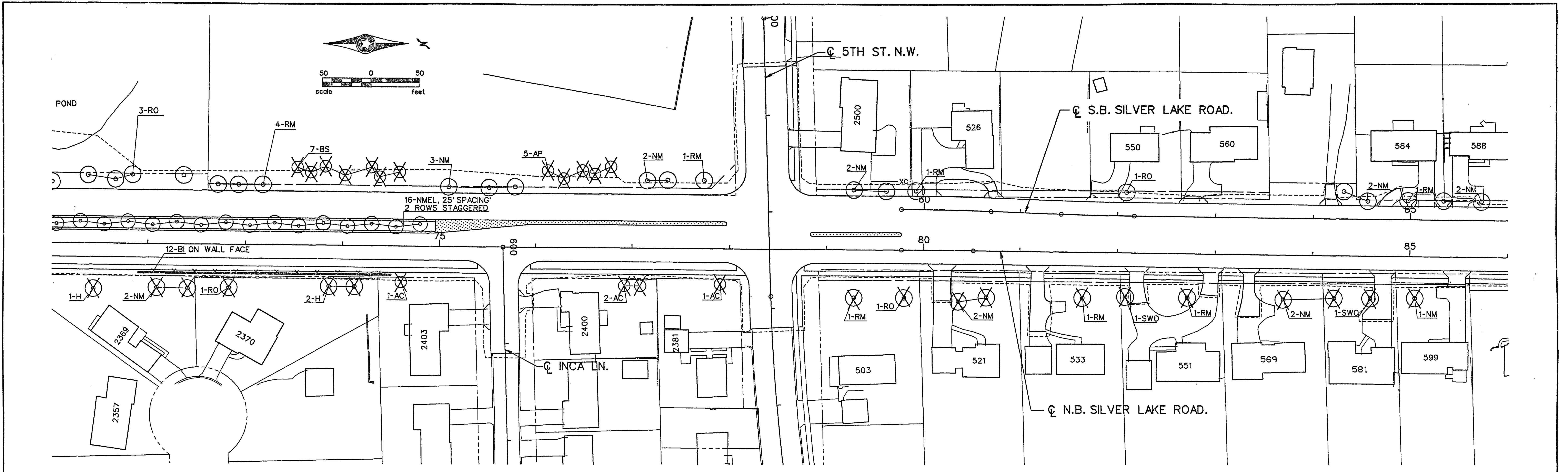
I hereby certify that this plan, specification or report was prepared by me or under my direct supervision and that I am a duly Registered Landscape Architect under the laws of the State of Minnesota.

Thomas A. Thorson

Date 12/14/94 Reg. No. 14021

LANDSCAPING PLAN
SILVER LAKE ROAD

STATE PROJ. NO.	DRAWN BY B. DOYLE	DATE 4-94	SHEET 108
62-644-13	DESIGNED BY T. THORSON	4-94	OF 155
	CHECKED BY		COMM. NO. 0931880



KEY	SPECIES	SIZE	QUANT.	SPACING
AP	PINE, AUSTRIAN	5' HT. B&B	0	
BS	SPRUCE, BLACK HILLS	5' HT. B&B	0	
H	HACKBERRY, COMMON	2" CAL. B&B	0	
NMEL	MAPLE, NORWAY EMERALD LUSTRE	3.5" CAL. B&B	16	
NM	MAPLE, NORWAY EMERALD QUEEN	2" CAL. B&B	11	
RM	MAPLE, RED	2" CAL. B&B	7	
RO	OAK, RED	2" CAL. B&B	4	
SWO	OAK, SWAMP WHITE	2" CAL. B&B	0	
AC	CHOKECHERRY, AMUR	2" CAL. B&B	0	
BI	IVY, BOSTON	2 YR. MED. CONT.	12	

LEGEND

CONCRETE WALK WITH SPECIAL SURFACE TREATMENT.
SEE TYPICAL SECTIONS.

NOTE:
MEDIAN PLANTINGS TO RECEIVE CRUSHED ROCK MULCH & FILTER FABRIC.
SEE SPECIAL PROVISIONS.

NOTE: CROSSED OUT PLANTINGS ON THIS PLAN ARE NOT INCLUDED IN THIS CONTRACT.
THEY ARE FOR REFERENCE ONLY AND WILL BE INSTALLED UNDER SEPARATE CONTRACT.

I	3-9-95	MCI	TAT	REVISE PER STATE AID REVIEW
NO	DATE	BY	CKD	APPR
				REVISION

SRF STRGAR-ROSCOE-FAUSCH, INC.
CONSULTING ENGINEERS ■ LAND SURVEYORS

I hereby certify that this plan, specification or report was prepared by me or under my direct supervision and that I am a duly Registered Landscape Architect under the laws of the State of Minnesota.
Thomas A. Thorson
Date 12/14/94 Reg. No. 14021

CITY OF NEW BRIGHTON
LANDSCAPING PLAN
SILVER LAKE ROAD

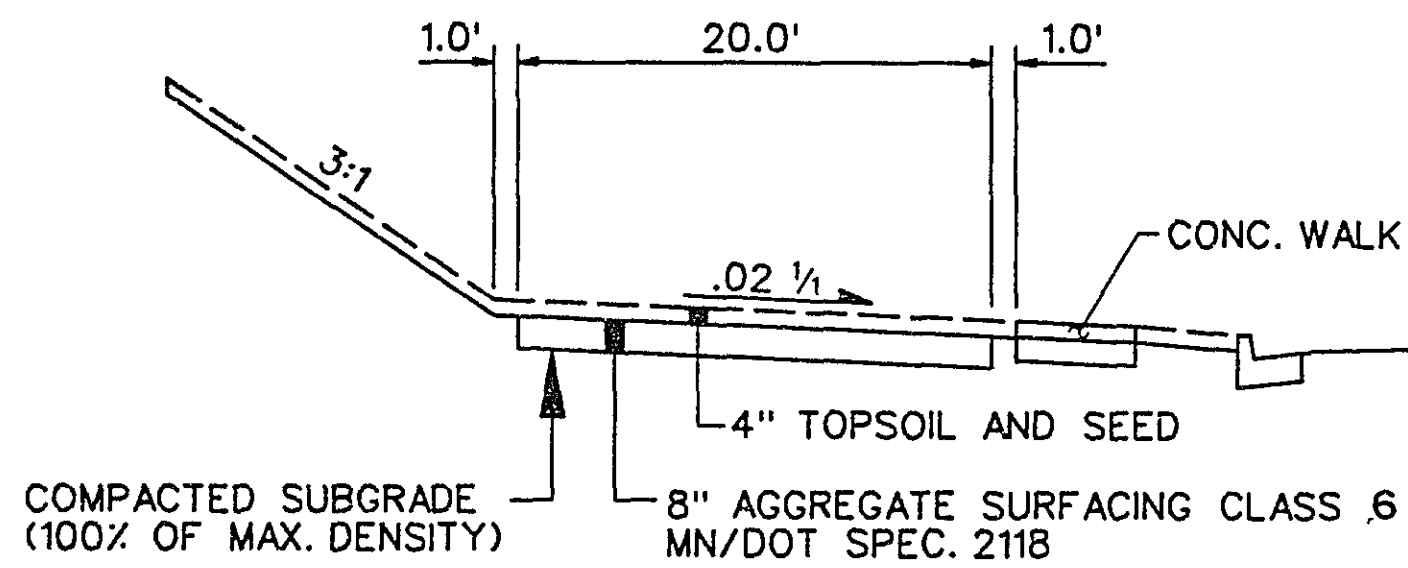
STATE PROJ. NO. 62-644-13
DRAWN BY B. DOYLE DATE 4-94
DESIGNED BY T. THORSON DATE 4-94
CHECKED BY
SHEET 109 OF 155
COMM. NO. 0931880

NOTE:
ALL DISTURBED AREAS ARE TO BE SEEDED
WITH SEED MIXTURE SPECIAL.

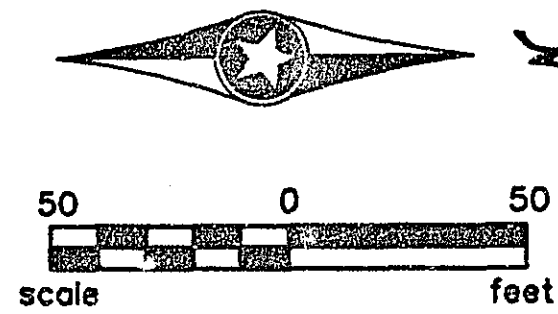
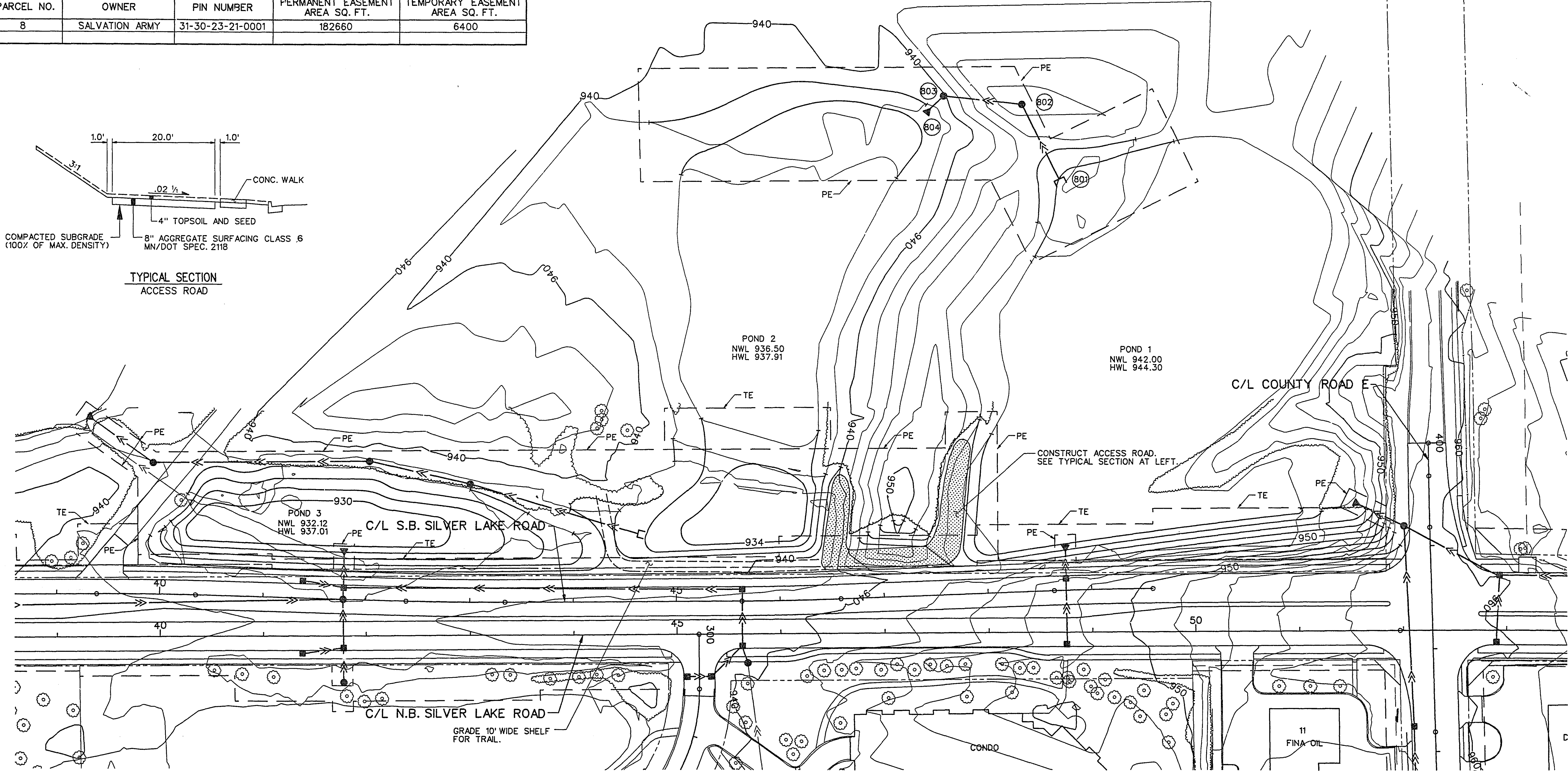
STORM SEWER / CULVERT LOCATIONS

STRUCTURE NO.	COORDINATES	
	X	Y
801	542222.28	194094.43
802	542149.78	194058.84
803	542141.53	193983.14
804	542153.90	193970.14

PARCEL NO.	OWNER	PIN NUMBER	PERMANENT EASEMENT AREA SQ. FT.	TEMPORARY EASEMENT AREA SQ. FT.
8	SALVATION ARMY	31-30-23-21-0001	182660	6400



TYPICAL SECTION
ACCESS ROAD



NO	DATE	BY	CHKD	APPR	REVISION

SRF STRGAR-ROSCOE-FAUSCH, INC.
CONSULTING ENGINEERS ■ LAND SURVEYORS

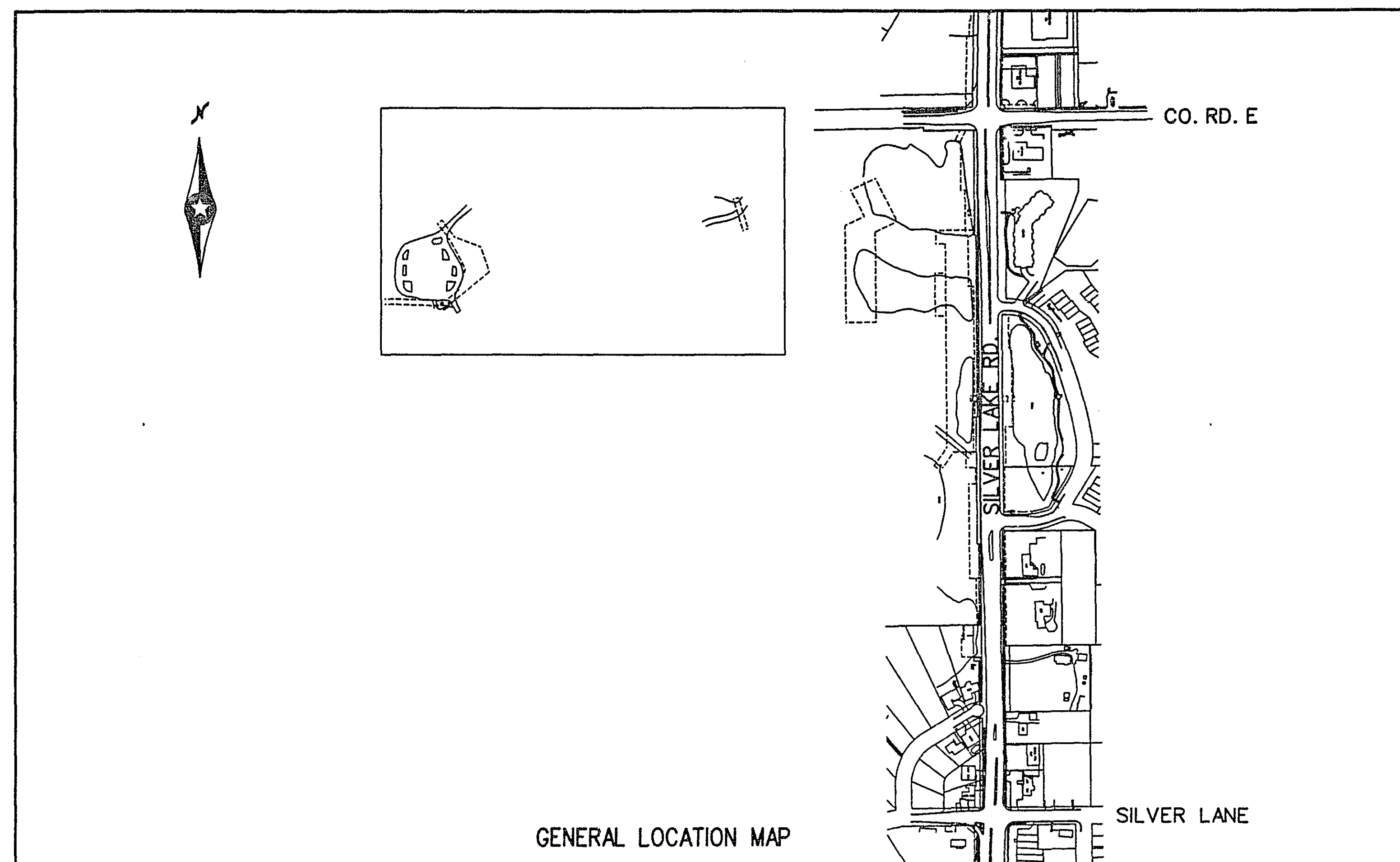
I hereby certify that this plan, specification or report was prepared by me or under my direct supervision and that I am a duly Registered Professional Engineer under the laws of the State of Minnesota.
Sam A. Fauch
Date 6/12/94 Reg. No. 14536

CITY OF NEW BRIGHTON
CONTOUR PLAN
SILVER LAKE ROAD

STATE
PROJ. NO.
62-644-13

DRAWN BY
B. DOYLE
DESIGNED BY
J. ROSENOW
CHECKED BY

DATE
6-94
SHEET
111
OF
155
COMM. NO.
0931880



STORM SEWER / CULVERT LOCATIONS		
STRUCTURE NO.	COORDINATES	
	X	Y
901	541709.29	194146.38
902	541739.91	194048.22
903	540617.21	194053.55
904	540657.99	194000.07
905	540719.55	193832.73
906	540635.52	193763.05
907	540455.58	193767.81

NOTES:

ALL DISTURBED AREAS ARE TO BE SEEDED
WITH SEED MIXTURE SPECIAL.

OPEN CUT EXISTING BITUMINOUS ROADWAYS
AS NECESSARY TO CONSTRUCT DRAINAGE ITEMS.
REPLACE WITH BITUMINOUS PAVEMENT SECTION -
SEE DETAIL D ON SHEET 25.

