

DEPARTMENT OF PUBLIC WORKS  
OFFICE OF COUNTY ENGINEER  
RAMSEY COUNTY

LAKE PHALEN RESTORATION PROJECT  
E.P.A. S-804690020

ARLINGTON AVENUE STORM SEWER  
DIVERSION AND HOLDING POND

WHELOCK FARKWAY STORM SEWER  
DIVERSION AND HOLDING POND

THIS PLAN SUBJECT TO MINOR REVISIONS

**ASBUILT PLAN**  
CONFORMING TO  
CONST. RECORDS  
DONE BY: *J. [Signature]*  
DATE: 7/10/81

**INDEX**

SHEET NO	DESCRIPTION
1	TITLE SHEET
2	ESTIMATED QUANTITIES, DETAILS & NOTES
3-4	DETAIL SHEETS (ARLINGTON AVE.)
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6	PROFILE SHEET (ARLINGTON AVE.)
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11	PROFILE AND DETAIL SHEET (WHELOCK PKWY.)
12	TREE PLANTING DETAIL

WHELOCK PKWY.  
PROJECT LOCATION

ARLINGTON AVE.  
PROJECT LOCATION

- RECOMMENDED FOR APPROVAL *David W. Scholt* DATE 5-8-80  
ENVIRONMENTAL ENGINEER
- RECOMMENDED FOR APPROVAL *Tommy E. [Signature]* DATE 5-15-80  
COUNTY ENGINEER
- APPROVED *Robert J. [Signature]* DATE 6-2-80  
CHAIRMAN OF THE RAMSEY COUNTY BOARD
- APPROVED \_\_\_\_\_ DATE \_\_\_\_\_
- APPROVED \_\_\_\_\_ DATE \_\_\_\_\_
- RECOMMENDED FOR APPROVAL *PJC* DATE 5-8-80  
TRAFFIC ENGR.
- RECOMMENDED FOR APPROVAL *DESS* DATE 5-8-80  
ENR ENGR
- RECOMMENDED FOR APPROVAL *MISSX* DATE 5-8-80  
ENR ENGR
- RECOMMENDED FOR APPROVAL *DESS* DATE 5-8-80  
ENR ENGR
- RECOMMENDED FOR APPROVAL \_\_\_\_\_ DATE \_\_\_\_\_  
DESIGN ENGR
- RECOMMENDED FOR APPROVAL *J.P.H.* DATE 5-8-80  
ENR ENGR
- APPROVED *W. [Signature]* DATE 5-8-80  
ENR ENGR

I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly licensed professional engineer in the State of Minnesota.  
*David W. Scholt*  
Date: 5-8-80 Reg. No. 11651

**PLANS 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 Long Lines)
- VACATED PLATTED PROPERTY
- CORPORATE OR CITY LIMITS
- TRUNK HIGHWAY CENTER LINE
- RETAINING WALL
- RAILROAD
- RAILROAD RIGHT OF WAY LINE
- RIVER OR CREEK
- DRY RUN
- DRAINAGE DITCH
- DRAIN TILE
- CULVERT
- DROP INLET
- GUARD RAIL
- BARBED WIRE FENCE
- WOVEN WIRE FENCE
- CHAIN LINK FENCE
- RAILROAD SHOW FENCE
- STONE WALL OR FENCE
- HEDGE
- RAILROAD CROSSING SIGN
- RAILROAD CROSSING BELL
- ELECTRIC WARNING SIGN
- CROSSING GATE
- MEANDER CORNER

**UTILITIES SYMBOLS**

- POWER POLE LINE
- TELEPHONE OR TELEGRAPH POLE LINE
- JOINT TELEPHONE AND POWER OR POWER POLES
- ANCHOR
- 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 OR STORM)
- SEWER MANHOLE

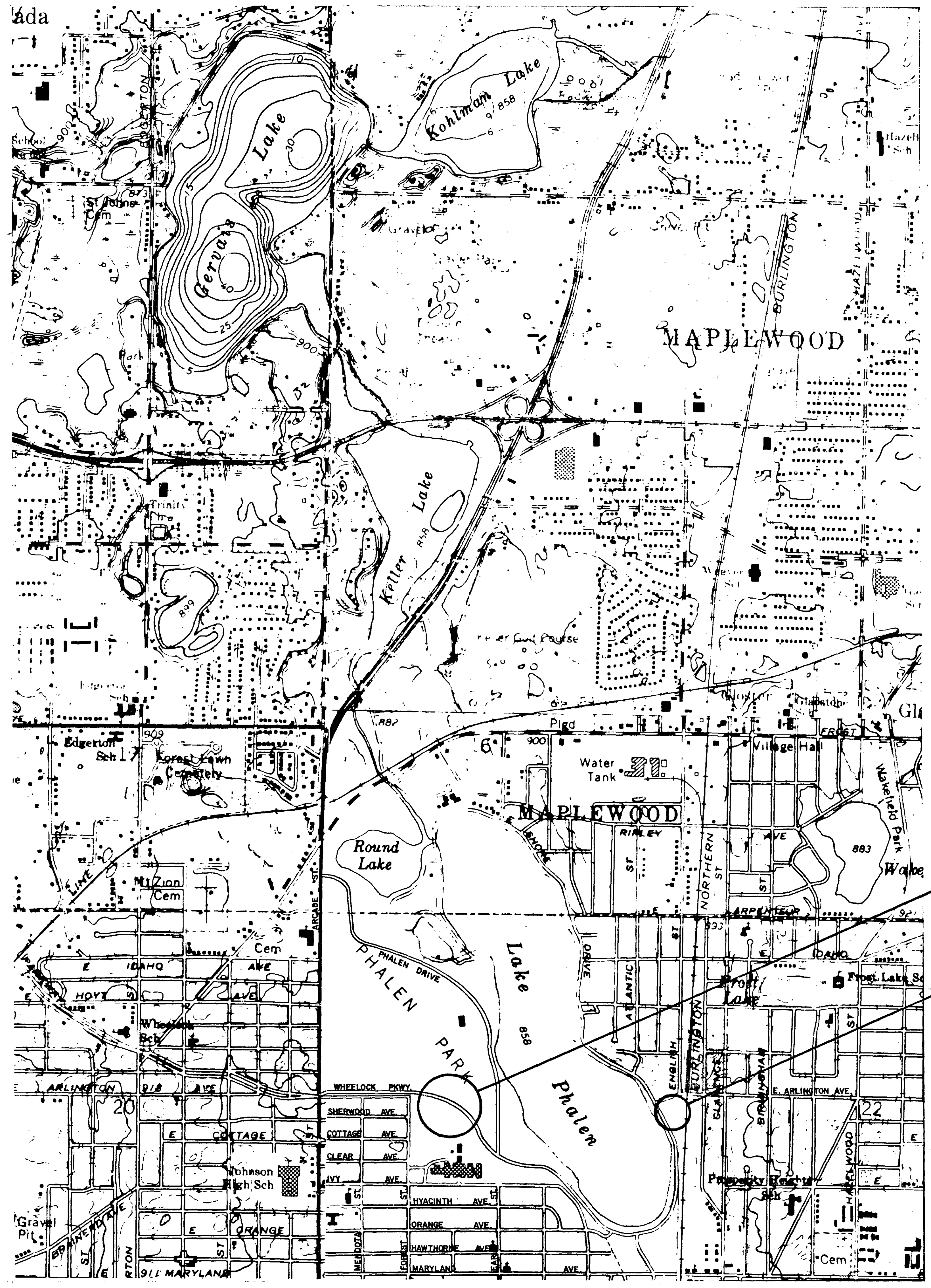
**PIT DATA**

PIT NO.	Location
---	Located in Dead Haul
---	Located in Dead Haul

ARLINGTON AVE.	WHELOCK PKWY.
PLAN = 0' 20' 40'	0' 30' 60'
PROFILE HORIZONTAL = 0' 20' 40'	0' 30' 60'
PROFILE VERTICAL = 0' 2' 4'	0' 5' 10'
CROSS SECTIONS = 0' 10' 20'	
LAYOUT MAP = 2,640'	2,640'

THE STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION DATED JANUARY 1, 1978 SHALL GOVERN.



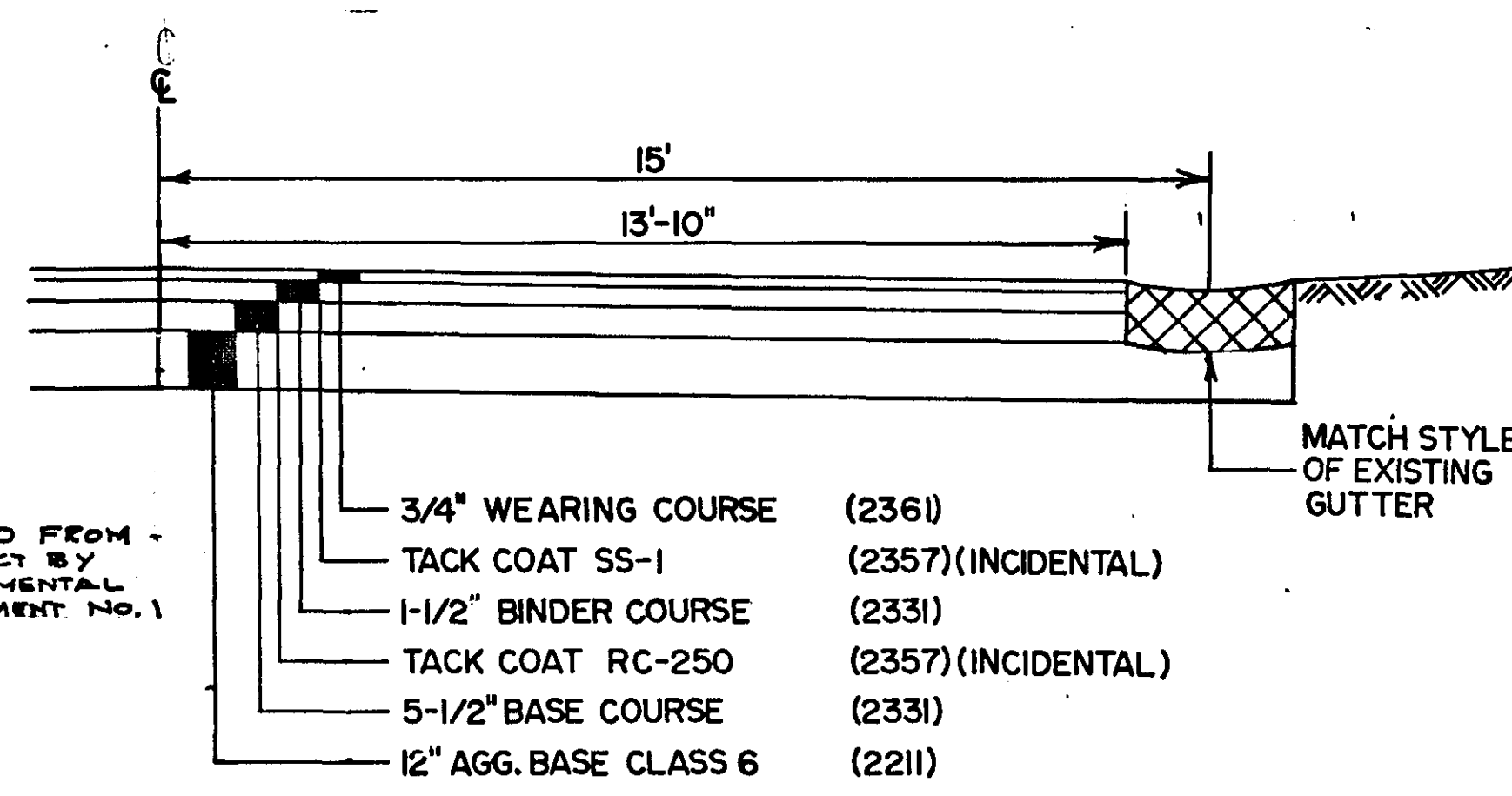


STATEMENT OF ESTIMATED QUANTITIES				ARLINGTON HOLDING POND	WHEELOCK HOLDING POND	TOTAL ESTIMATED QUANTITIES	FINAL ESTIMATED QUANTITIES
ITEM NO.	ITEM	UNIT	ESTIMATED QUANTITIES	ESTIMATED QUANTITIES			
2104.501	REMOVE CONC. CURB & GUTTER	L.F.	40		40	34	
2104.505	REMOVE CONCRETE PAVEMENT	S.Y.	53		53	28	
2101.502	CLEARING (4" to 18" TREE)	TREE	30		30	25	
2101.507	GRUBBING (4" to 18" TREE)	TREE	30		30	25	
2104.501	REMOVE 24" R.C.P.	L.F.		15	15	13	
2104.509	REMOVE 12" R.C.P. APRON	EACH		1	1	1	
2104.509	REMOVE JUNCTION STRUCTURE	EACH		1	1	1	
2104.509	REMOVE 24" R.C.P. APRON	EACH		1	1	1	
2105.501	COMMON EXCAVATION	C.Y.	13,500		13,500	13,500	
2105.525	TOP SOIL BORROW	C.Y.	400	81.5	481.5	0	
2105.509	REMOVE MANHOLE	EACH		1	1	1	
2331.504	BITUMINOUS MATERIAL FOR MIXTURE	TON	3		3	3.18	
2331.508	WEARING COURSE MIXTURE	TON	15		15	17.8	
2331.510	BINDER COURSE MIXTURE	TON	15		15	15.4	
2331.514	BASE COURSE MIXTURE	TON	29		29	30.35	
2211.501	AGG. BASE CLASS 6	TON	35		35	0	
2402.583	ORNAMENTAL METAL RAILING	L.F.	48	35	83	57.4	
2411.507	CONCRETE HEADWALL	EACH		1	1	1	
2451.501	STRUCTURE EXCAVATION, CLASS U (CV)	C.Y.	110		110	110	
2451.507	GRANULAR BEDDING	C.Y.	106		106	106	
2461.501	STRUCTURAL CONCRETE	C.Y.	61		61	61	
2472.501	REINFORCEMENT BARS	POUND	5550		5550	6,315	
2361.504	ASPHALT CEMENT	TON	0.2		0.2	0.11	
2361.508	WEARING COURSE MIXTURE	TON	2.0		2.0	1.7	
2503.511	60" R.C. PIPE SEWER, CLASS II	L.F.	8		8	8	
2503.511	42" R.C. ARCH PIPE SEWER CLASS V A	L.F.		65	65	65	
2501.515	42" R.C. PIPE APRON	EACH	2	1	3	3	
2503.511	42" R.C. ARCH PIPE SEWER CLASS II A	L.F.		125	125	133	
2503.511	42" R.C. PIPE SEWER, CLASS II	L.F.	274	30	304	314	
2503.511	30" R.C. PIPE SEWER, CLASS II	L.F.		248	248	250	
2503.511	36" R.C. PIPE SEWER, CLASS II	L.F.		20	20	34	
2575.501	ROADSIDE SEEDING	ACRE	1		1	0	
2575.502	SEED, MIXTURE 6	POUND	75		75	0	
2575.511	MULCH MATERIAL, TYPE I	TON	2		2	0	
2575.531	COMMERCIAL FERTILIZER, ANALYSIS 12-12-12	TON	0.2		0.2	0	
2575.505	SODDING	S.Y.		1000	1,000	0	
2503.511	42" R.C. PIPE SEWER, CLASS V	L.F.		65	65	65	
2571.502	F. & P. SHADE TREES (2 1/2" QUAKING ASPEN)	TREE	13		13	13	
2571.502	F. & P. SHADE TREES (2 1/2" SUGAR MAPLE)	TREE	8		8	8	
2531.501	CONC. CURB & GUTTER	L.F.	40		40	34	
2501.519	FLAP GATE FOR CONCRETE WALL	EACH	1		1	1	
2506.508	CONSTRUCT MANHOLES, DESIGN DS	EACH		2	2	2	
2506.508	CONSTRUCT MANHOLES, DESIGN TYPE III	EACH		4	4	4	
503.602	F. & P. TRASH GUARD FOR CONCRETE HEADWALL	EACH		1	1	1	
503.602	F. & P. TRASH GUARD FOR 42" R.C.P. APRON	EACH	2	1	3	3	
506.601	CONSTRUCT TIMBER BAFFLE	EACH		1	1	1	

### CONSTRUCTION NOTES

#### SPECIAL DROP STRUCTURES 1 & 2, DIVERSION STRUCTURES 1 & 2, AND CONCRETE HEADWALL

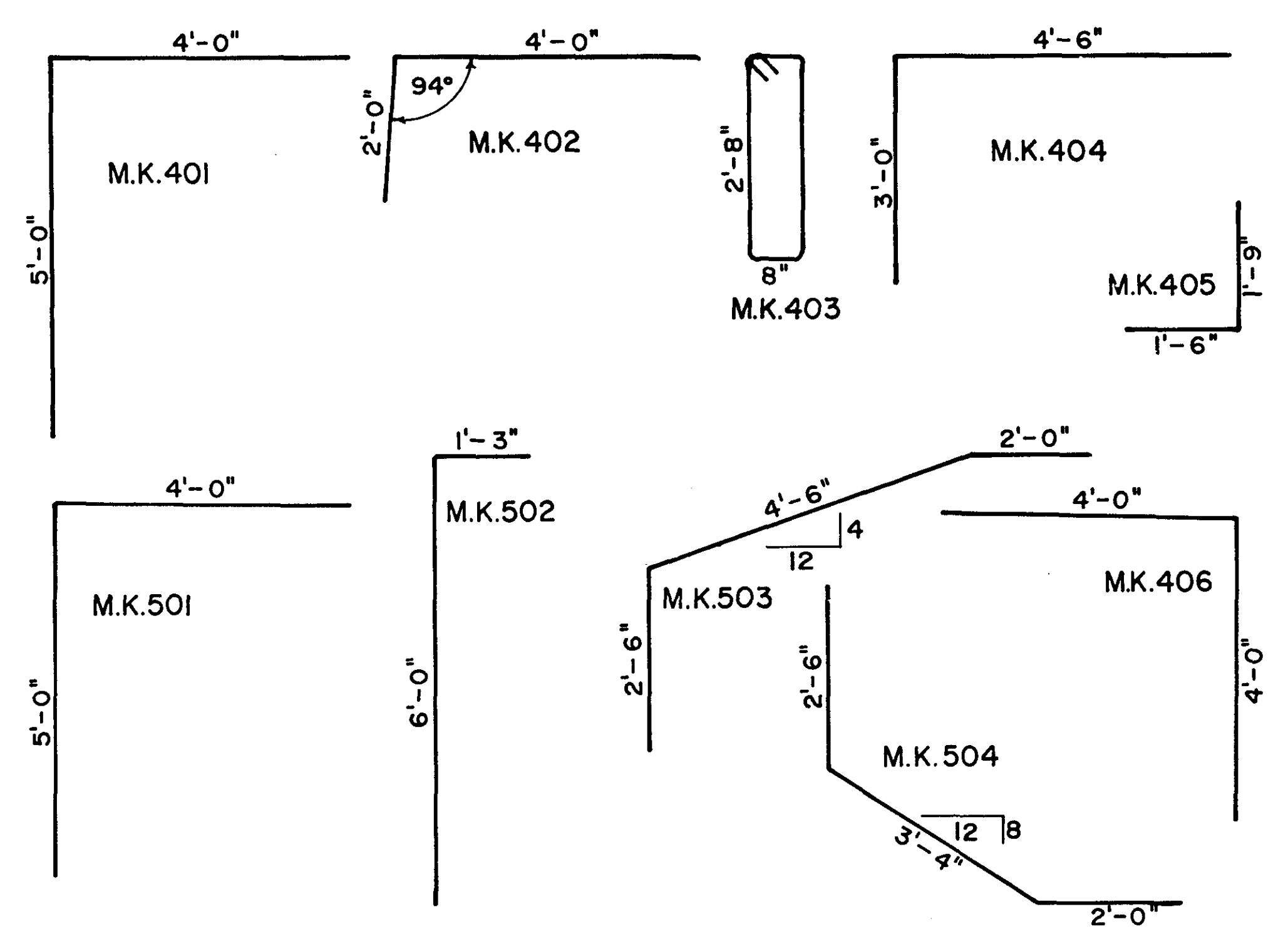
- CONCRETE MIX SHALL BE 3Y43
- REINFORCEMENT BARS SHALL BE BILLET STEEL BARS MEETING THE REQUIREMENTS FOR GRADE 60 (AASHTO M31) AS PER Mn/DOT SPEC. 3301
- MAINTAIN 2" COVER OVER REINFORCEMENT BARS
- MANHOLE CASTING: S. STRUCTURE 1 - USE RING CASTING No. 790-2 (SEE Mn/DOT STD. PLT. 4103) MODIFIED BY ADDITION OF LUGS AT QUARTER POINTS OR APPROVED EQUAL (SEE Mn/DOT STD. PLT. 4014 FOR DETAIL OF LUG)
- S. STRUCTURE 2 - USE COVER CASTING No. 712 (SEE Mn/DOT STD. PLT. 4110)
- CHAMFER ALL EDGES OF STRUCTURE PER Mn/DOT SPEC. 2401.3B
- CONSTRUCTION JOINTS TO HAVE KEYWAYS AS DIRECTED BY THE ENGINEER
- PIPE RAILING - S.S. No. 2; HEADWALL: TO BE CONSTRUCTED PER STD. PLT. 84000
- THE CONTRACTOR SHALL FURNISH THE ENGINEER WITH SHOP DRAWINGS AND FABRICATION SCHEDULES PER Mn/DOT SPEC. 2471.2B
- THE APPLICABLE PROVISIONS OF SPECIFICATION 2401. CONCRETE BRIDGE CONSTRUCTION SHALL GOVERN.



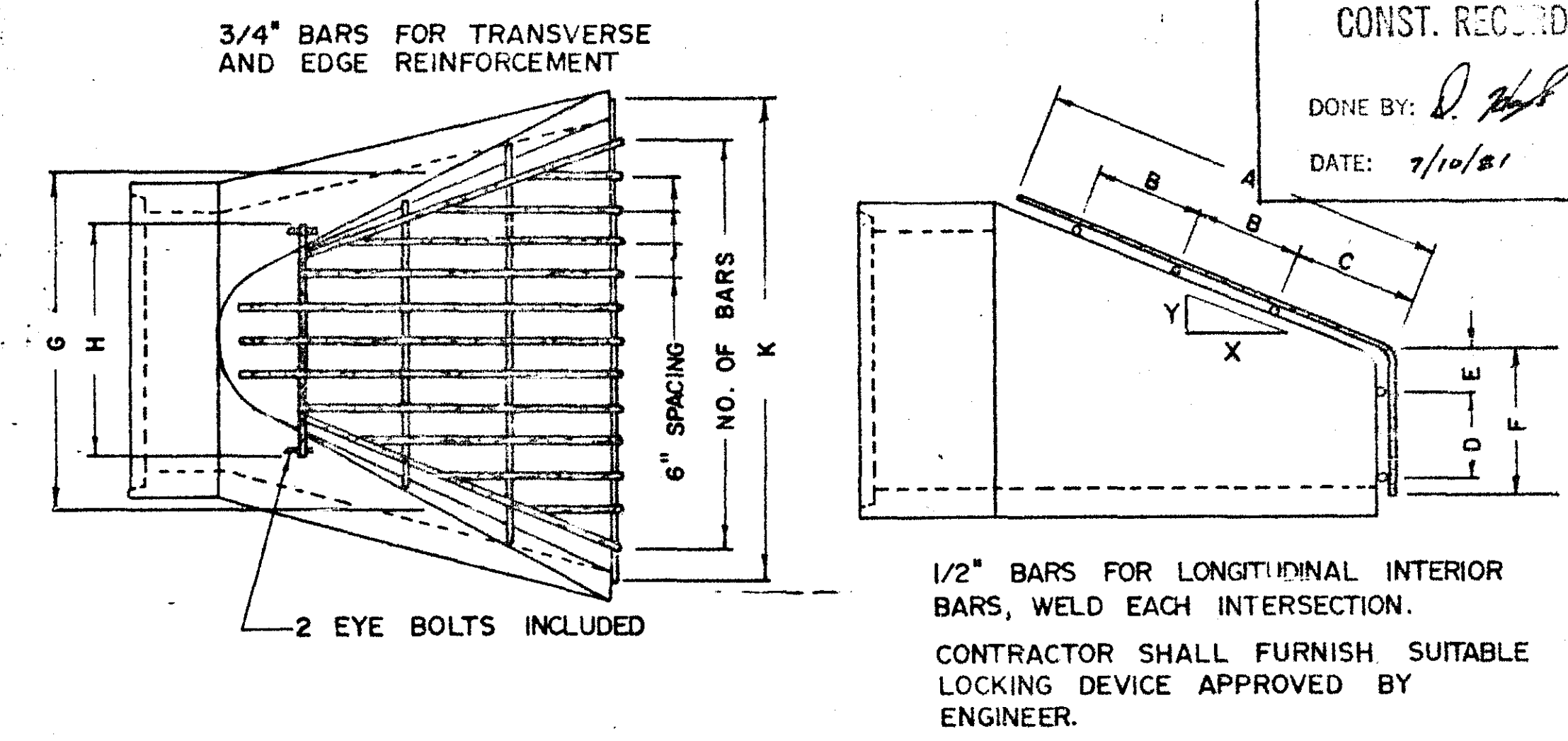
TYPICAL SECTION - EASTSHORE DRIVE (SPECIAL STRUCTURE # 2)

STANDARD DETAIL PLATES	
0003A	SPECIFICATION REFERENCE TO STANDARD PLATES
3000H	REINFORCED CONCRETE PIPE
3006C	GASKET JOINT FOR R.C. PIPE
3145A	CONCRETE PIPE JOINT TIES
4014A	LUG DETAIL (ONLY)
4108D	MANHOLE ADJUSTING RING (CAST IRON)
4110D	COVER CASTING FOR MANHOLE
8400D	ORNAMENTAL METAL RAILING
CITY OF ST. PAUL STANDARD DETAIL PLATES	
2103A	MANHOLE DESIGN TYPE III
2201	FRAME CASTING 'A'
2202	COVER CASTING 'B'
2315	PRECAST REINF. CONC. COVER FOR TYPE III MANHOLE

#### SPECIAL DROP INLET STRUCTURE WITH BAFFLED WEIR, REBAR BENDING. STRUCTURE No.2



SCALE: 1" = 2'



SIZE	NO. OF BARS	SLOPE	A	B	C	D	E	F	G	H	K
12"	5	3 to 1	24	10	10	5	2	6	24		30
16"	6	"	24	"	10	6	2	10	26		34
16"	7	"	24	12	10	6	3	12	28		38
21"	8	"	36	16	16	7	3	12	34		42
24"	9	"	44	20	20	10	4	16	36		48
27"	10	"	50	24	24	10	4	16	38		54
30"	11	"	60	30	30	12	4	18	42		60
36"	13	"	64	36	36	12	4	18	48		72
42"	15	3 to 1	68	32	32	16	8	26	60		84
48"	16	"	76	36	36	16	8	28	62		90
54"	17	3 to 1	76	36	36	16	12	32	68		96

#### TRASH GUARD (GALVANIZED) (FOR CONCRETE APRON)

REVISED	DATE	DESIGNED BY	
EST. QUANTITIES	4/3/00	DRAWN BY	
6.5. TYPICAL	4/3/00	CHECKED BY	

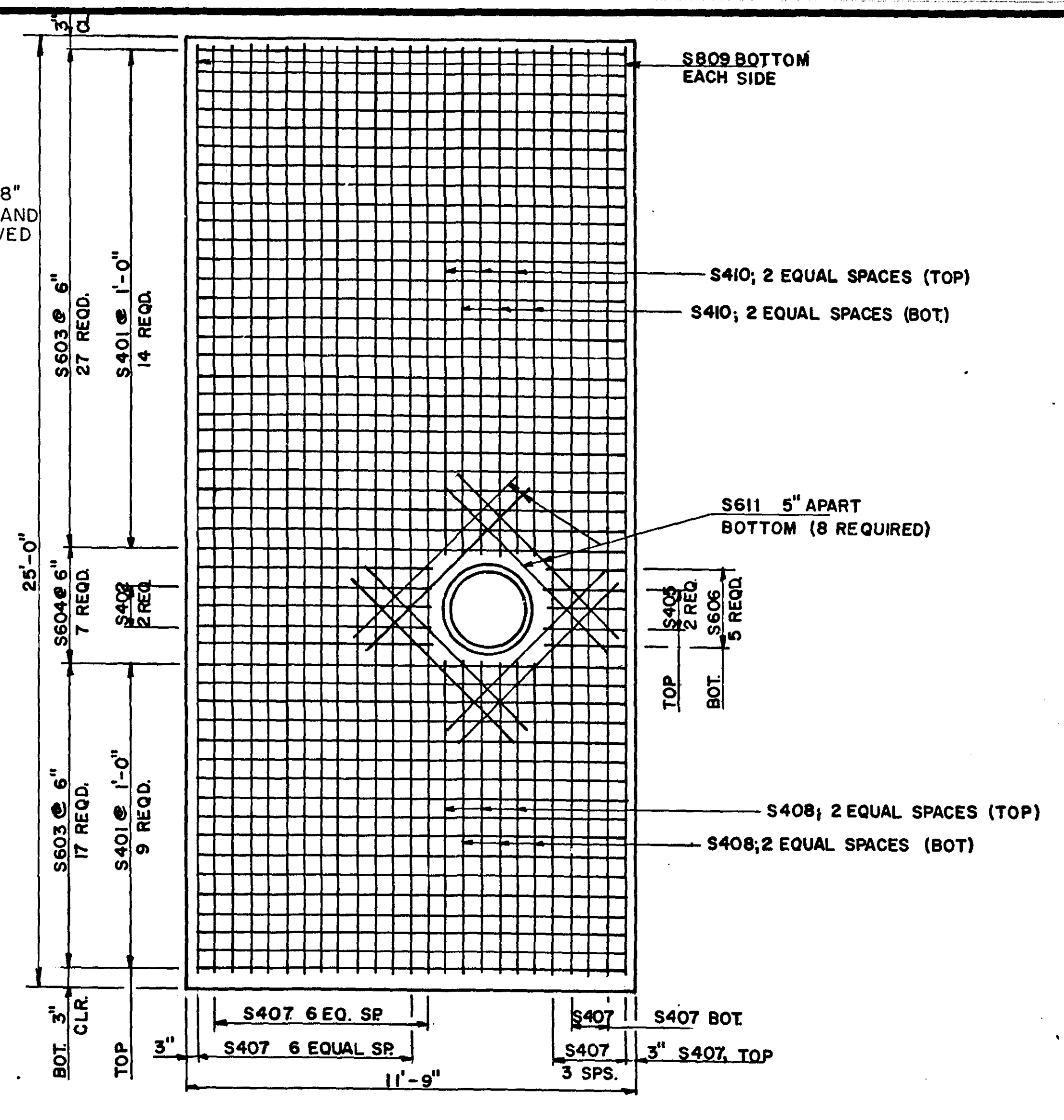
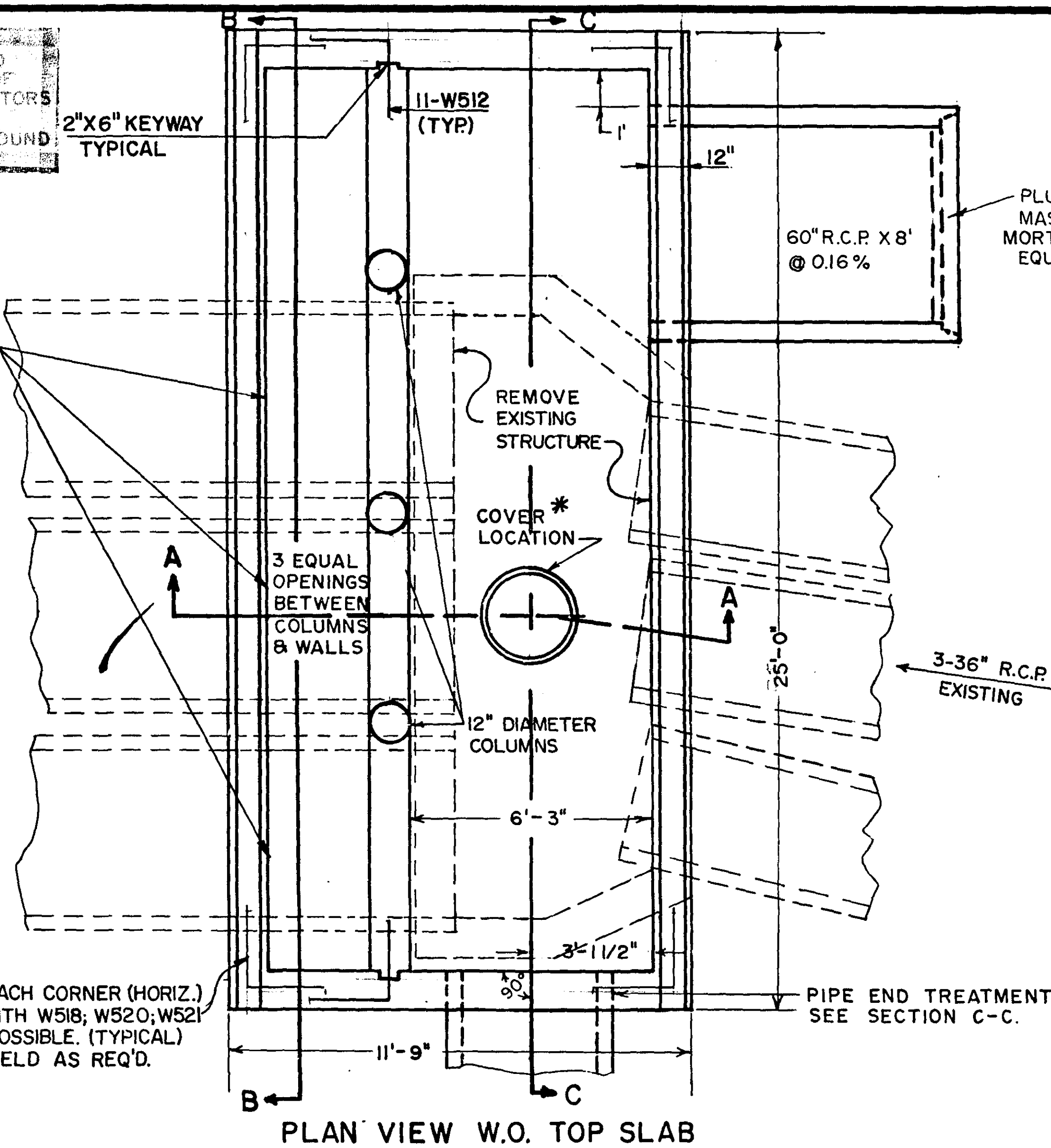
**ASBUILT PLAN**  
CONFORMING TO  
CONST. RECORDS  
DONE BY: *D. Schadt*  
DATE: 7/10/01

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.  
*Daniel W. Schadt*  
Reg. No. 11659



REVISED	DATE	DESIGNED BY	L.K.F.
R.J.O.	5/2/80	DRAWN BY	
	10/15/80	CHECKED BY	

NOTE: THE EXACT LOCATION OF THIS STRUCTURE WILL BE DETERMINED BY THE ENGINEER AT THE TIME OF CONSTRUCTION. INFORMATION & DRAWING OF THE EXISTING STRUCTURE IS TO BE FOUND IN THE SPECIFICATIONS.



**CONSTRUCTION NOTES:**

ALL WALLS, BASE SLAB AND TOP SLAB SHALL BE 12" THICK.

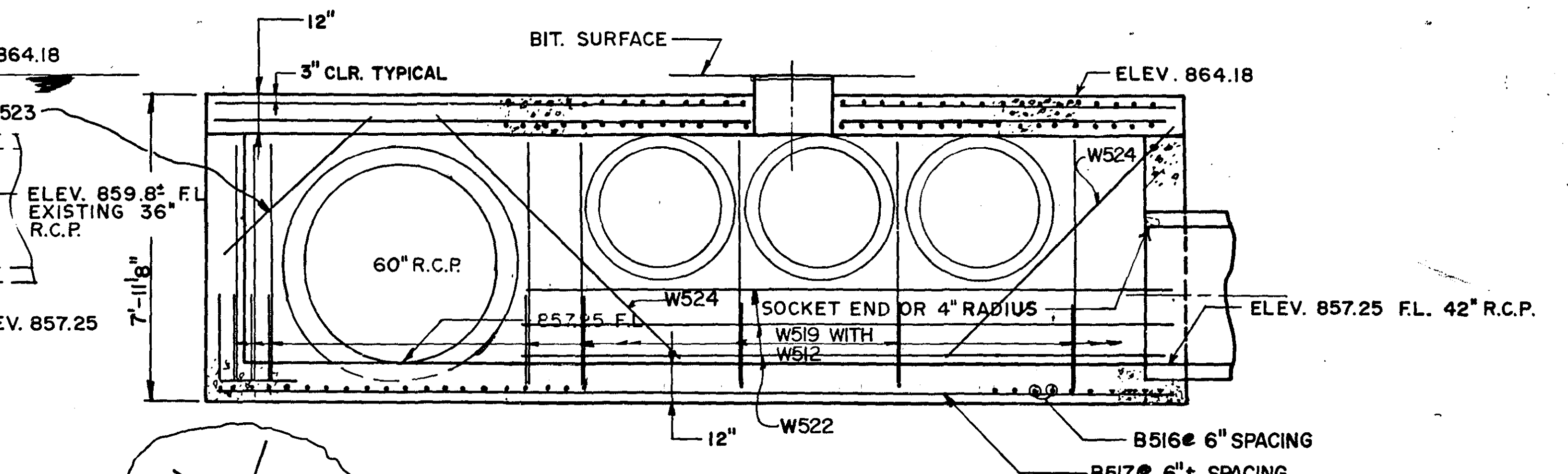
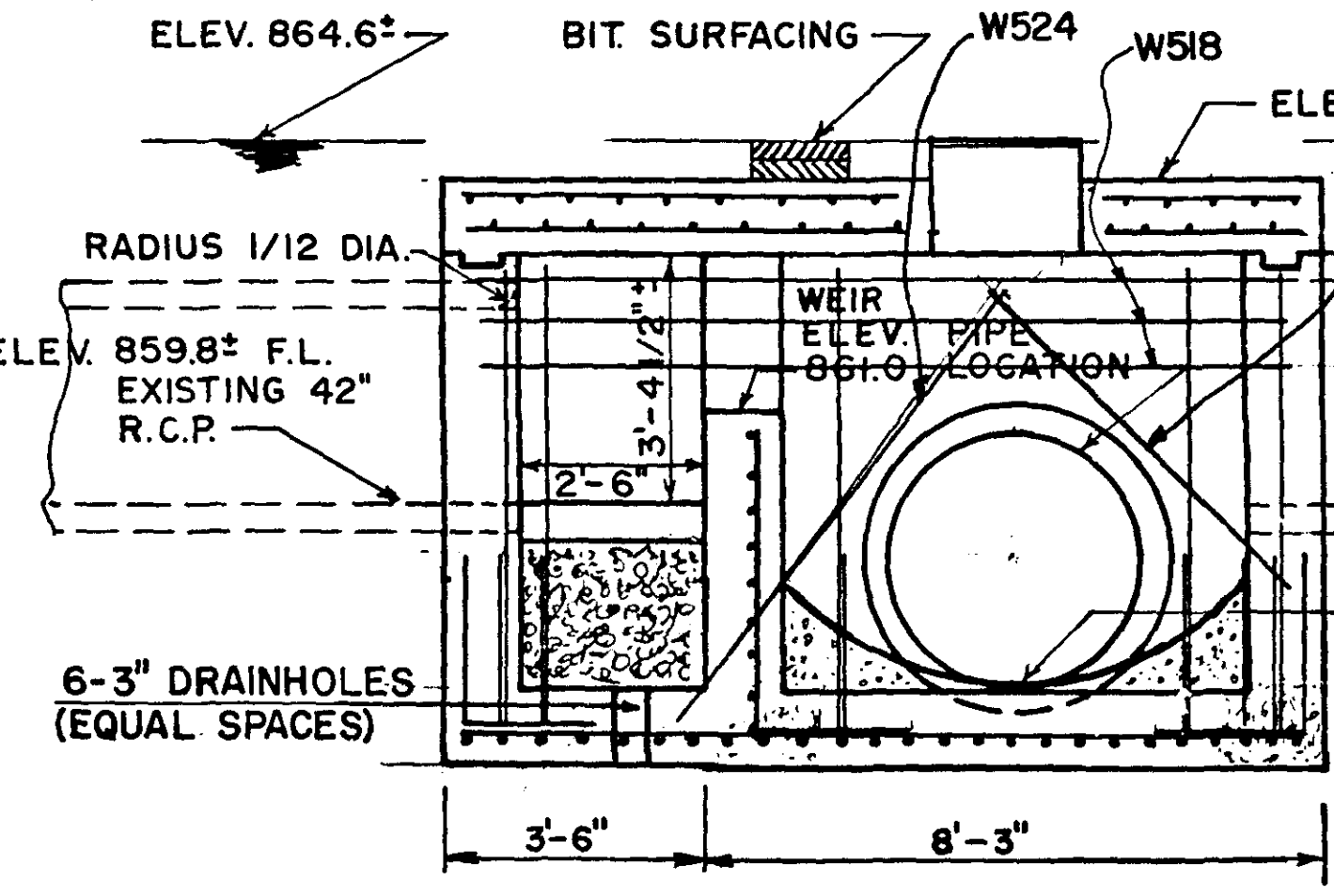
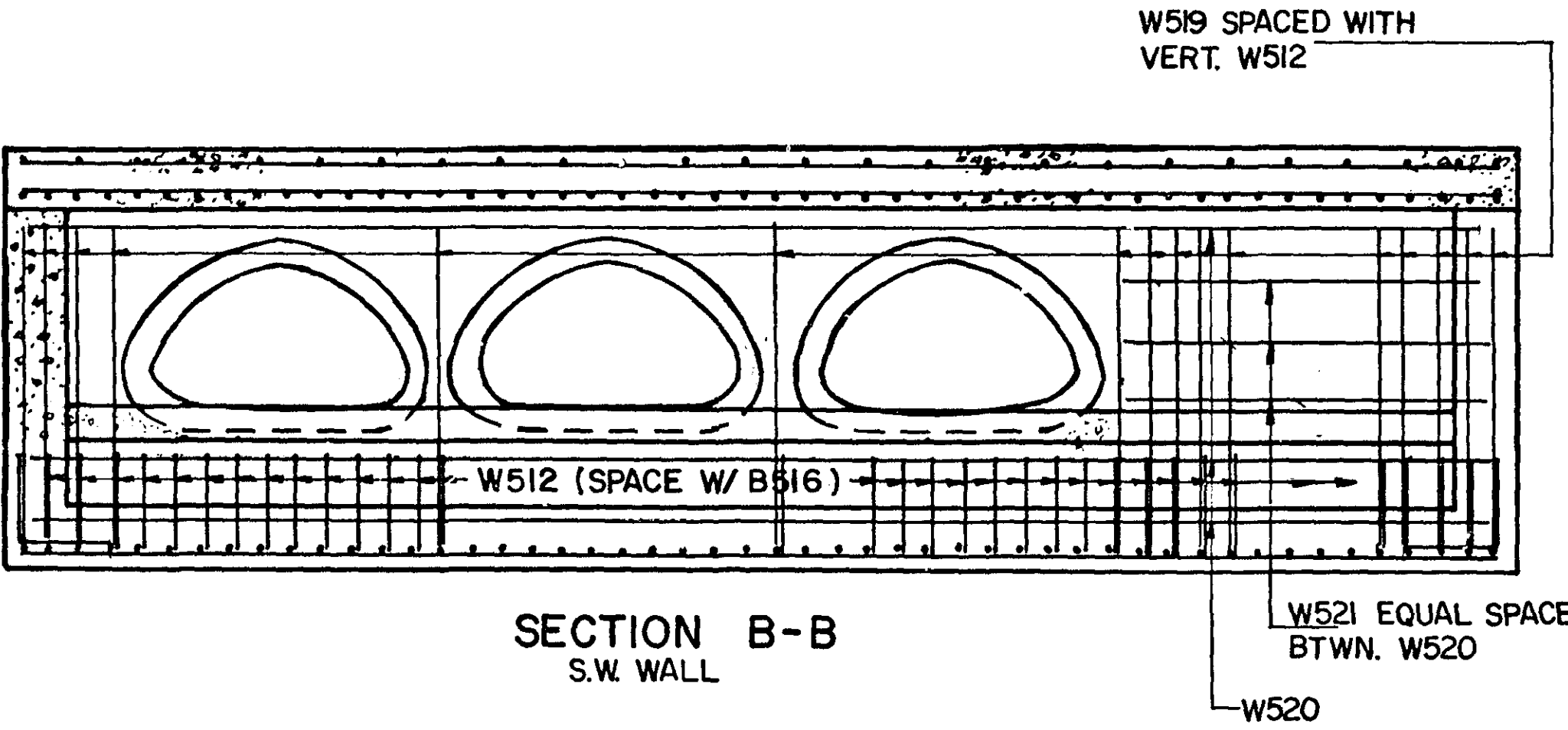
PAYMENT FOR SPECIAL STRUCTURE \* 1 AS STRUCTURAL CONCRETE - C.Y. AND REINFORCEMENT BARS - LB. WILL INCLUDE ALL INCIDENTAL WORK INCLUDING BUT NOT LIMITED TO CLEANING EXISTING PIPES AFTER STRUCTURE REMOVAL, CUTTING OFF PIPES, CONSTRUCTING ROUNDED PIPE ENTRANCES, SLAB STRUCTURE BEDDING.

\* MANHOLE COVER - EXACT LOCATION TO BE DETERMINED AT TIME OF CONSTRUCTION REFER TO SHEET No. 2 FOR ADDITIONAL CONSTRUCTION NOTES

**APPROXIMATE QUANTITIES: SPECIAL STRUCTURE I**

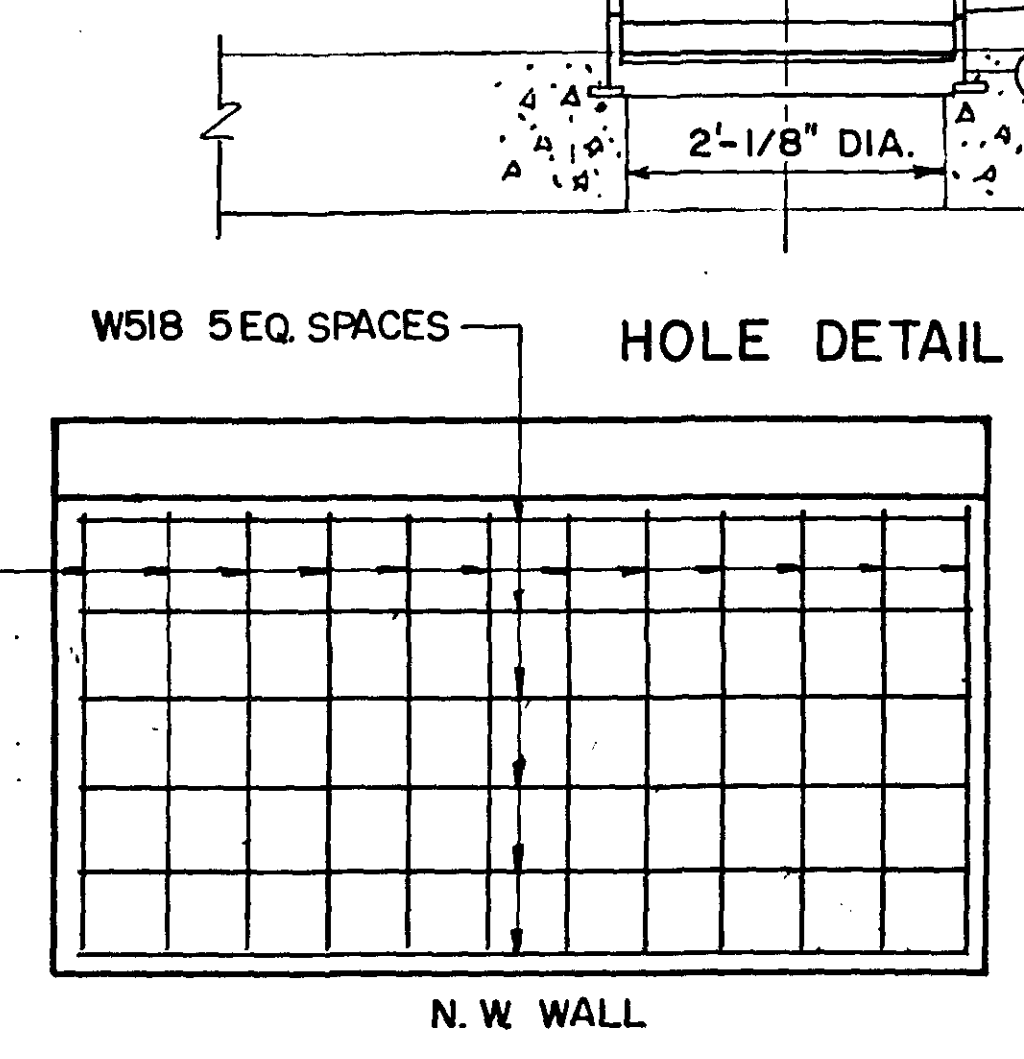
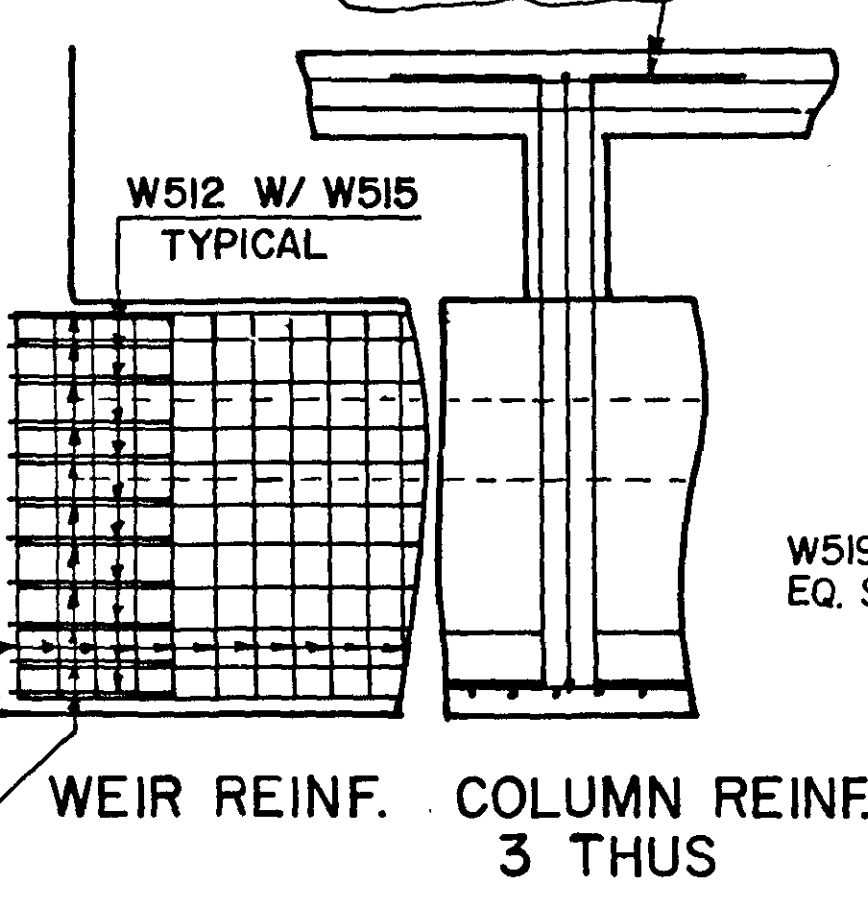
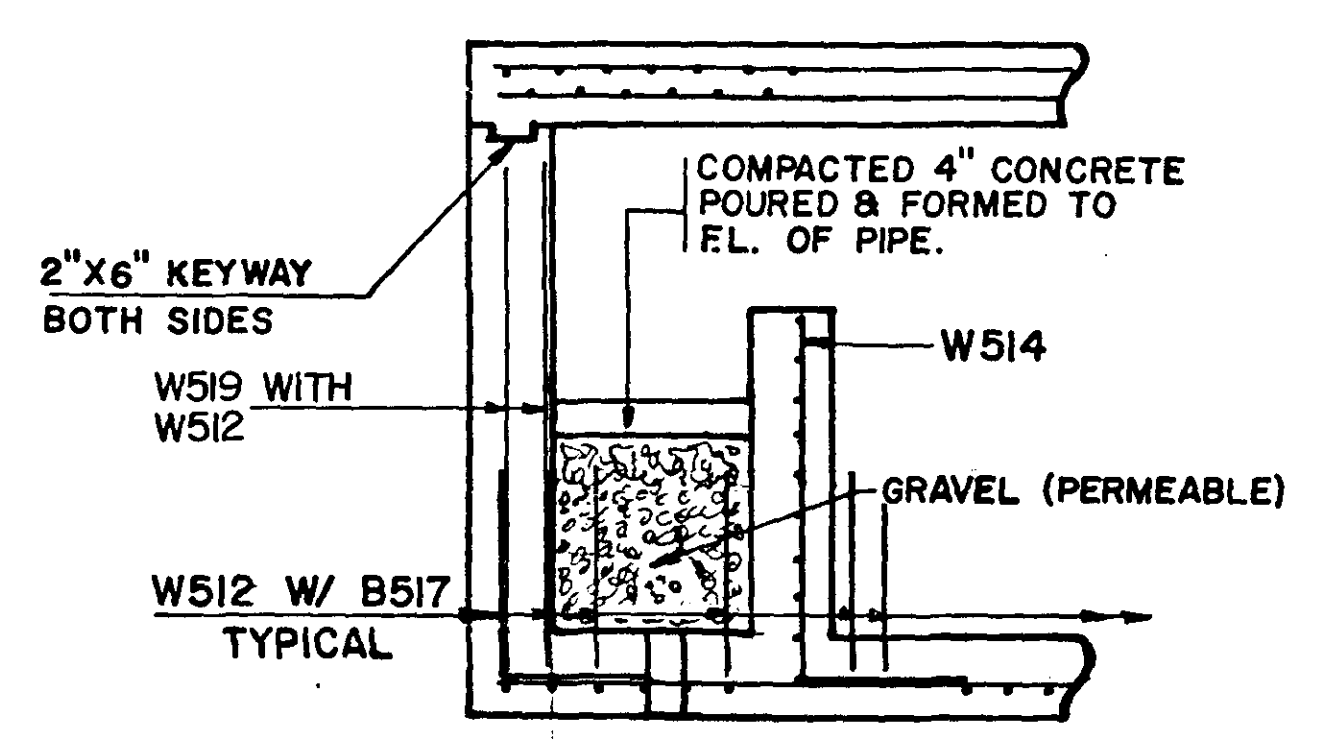
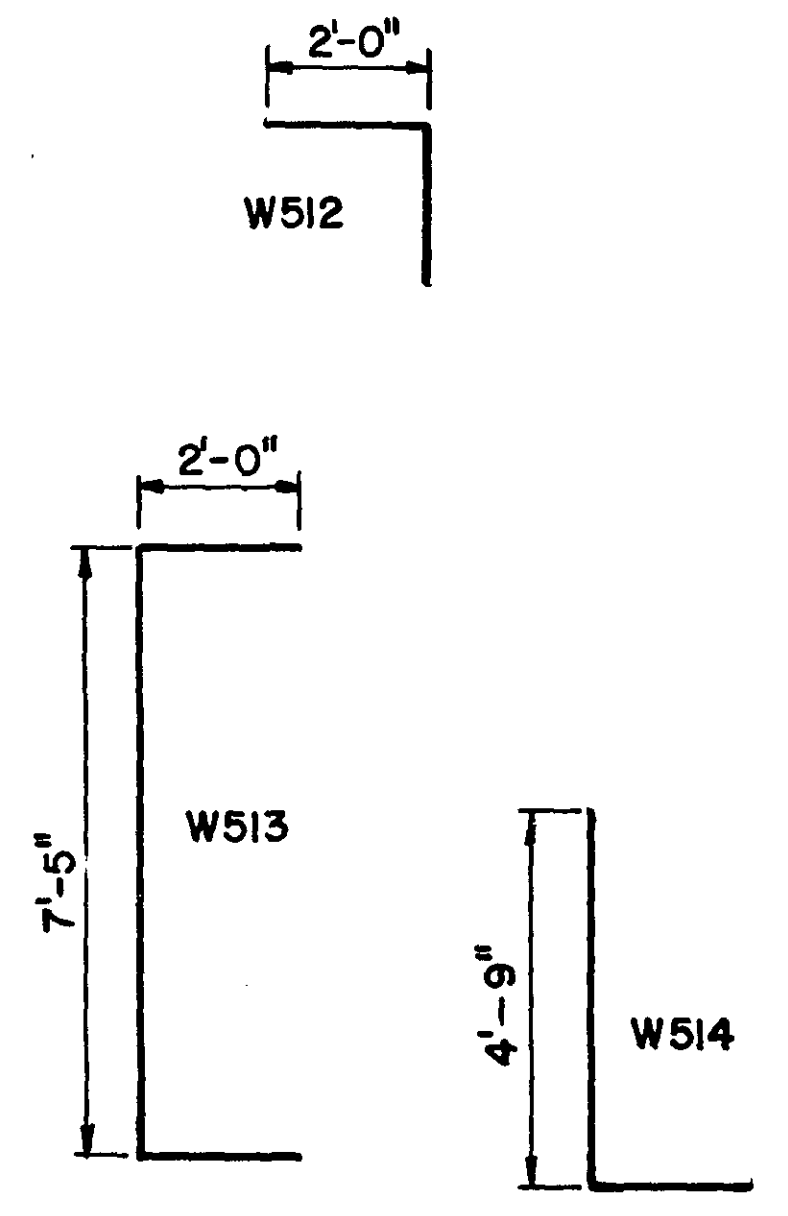
STRUCTURAL CONCRETE	43 C.Y. (3Y43)
REINFORCEMENT BARS	4710 LB.
CASTINGS: " 712 COVER	1 CASTING
" 790-2 RING	1 CASTING
STEEL OR CAST IRON ADJUSTING RINGS	AS NEEDED

PAYMENT TO BE INCIDENTAL



**BILL OF REINFORCEMENT**

MARK	NUMBER	LENGTH	LOCATION
S401	23	11'-3"	TOP TRANSVERSE
S402	2	6'-0"	" "
S603	44	11'-3"	BOTTOM TRANSVERSE
S604	7	6'-0"	" "
S405	2	2'-3"	TOP TRANSVERSE
S406	5	2'-3"	BOTTOM TRANSVERSE
S407	19	24'-6"	TOP & BOT. LONGITUDINAL
S408	6	8'-0"	" " "
S809	2	24'-6"	BOTTOM " "
S410	6	13'-3"	TOP & BOT. " "
S611	8	6'-0"	MANHOLE AREA-BOTTOM
W512	167	4'-0"	WALL TIES
W513	15	11'-5"	COLUMN TIES
W514	38	6'-9"	WEIR VERTICAL
W515	11	18'-6"	" HORIZONTAL
B516	49	11'-3"	BOTTOM SLAB TRANSVERSE
B517	23	24'-6"	" " LONGITUDINAL
W518	9	10'-9"	END WALL HORIZONTAL
W519	63	5'-9"	SIDES VERTICAL
W520	3	24'-0"	SIDES HORIZONTAL



MARK	NUMBER	LENGTH	LOCATION
W521	3	6'-3"	SIDE HORIZ.
W522	3	16'-0"	" "
W523	2	5'-0"	DIAGONAL
W524	3	8'-0"	" "

**ASBUILT PLAN**  
CONFORMING TO  
CONST. RECORDS

DONE BY: *[Signature]*

DATE: 7/10/81

- ① RING CASTING NO. 790-2 (Std. Plate 4108) MODIFIED BY ADDITION OF LUGS AT QUARTER POINTS OR APPROVED EQUAL. SEE Std. Plate 4014 FOR DETAIL OF LUG.
- ② COVER CASTING NO. 712 (Std. Plate 4110)
- ③ STEEL OR CAST IRON ADJUSTING RINGS WELDED INTO PLACE. STANDARD PLATE 4108D AS DIRECTED BY THE ENGINEER.

SCALE: 1" = 3'

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.

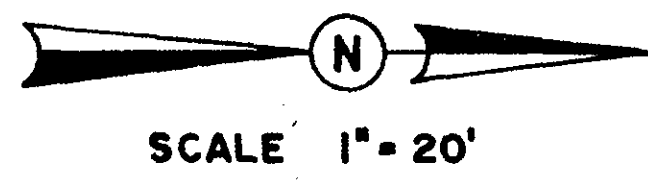
*David L. Schaub*

Date: 5-8-80 Reg. No. 11659

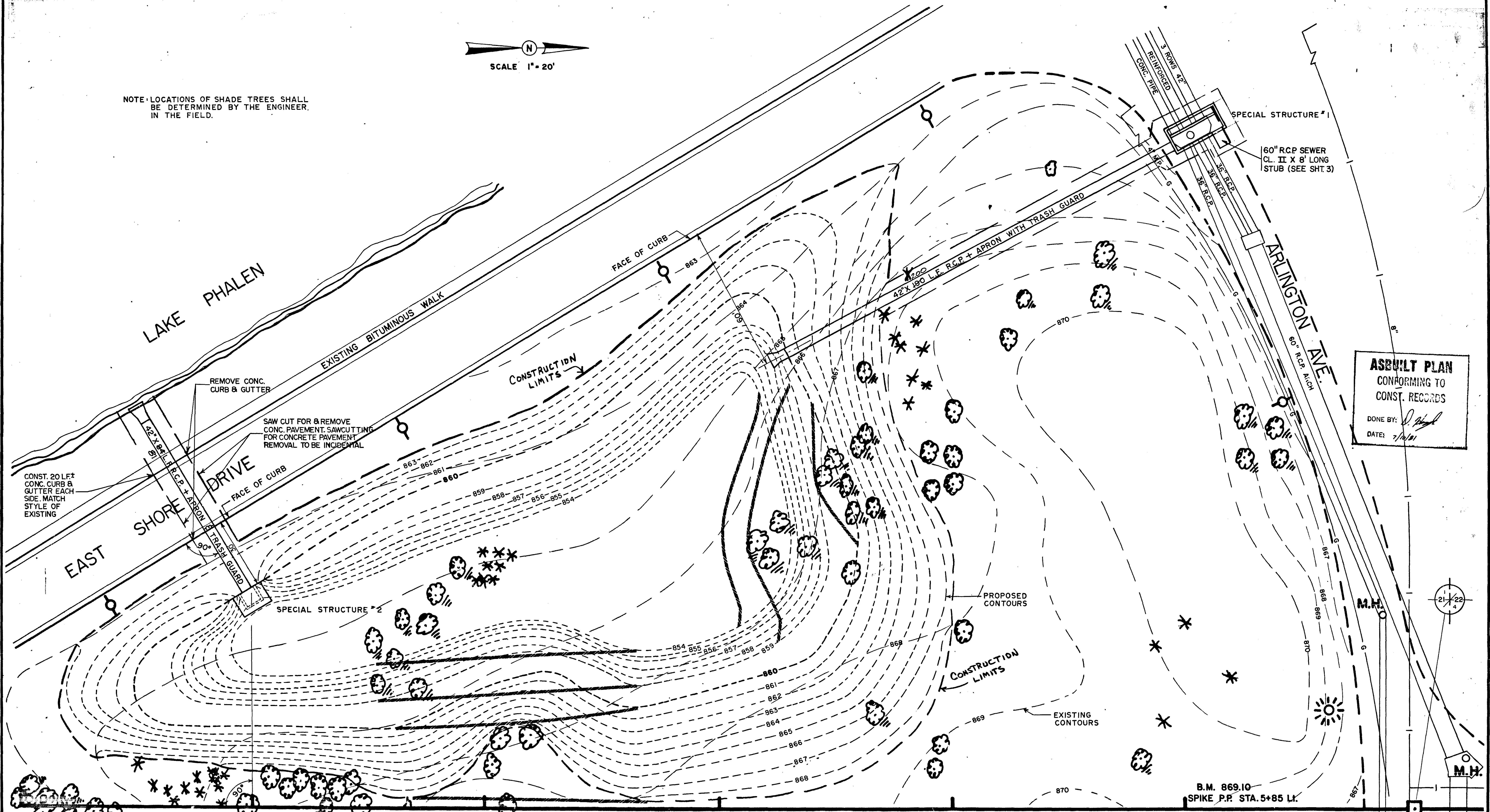
**SPECIAL STRUCTURE I**







NOTE: LOCATIONS OF SHADE TREES SHALL BE DETERMINED BY THE ENGINEER IN THE FIELD.



**ASBUILT PLAN**  
CONFORMING TO  
CONST. RECORDS  
DONE BY: *[Signature]*  
DATE: 7/1/01

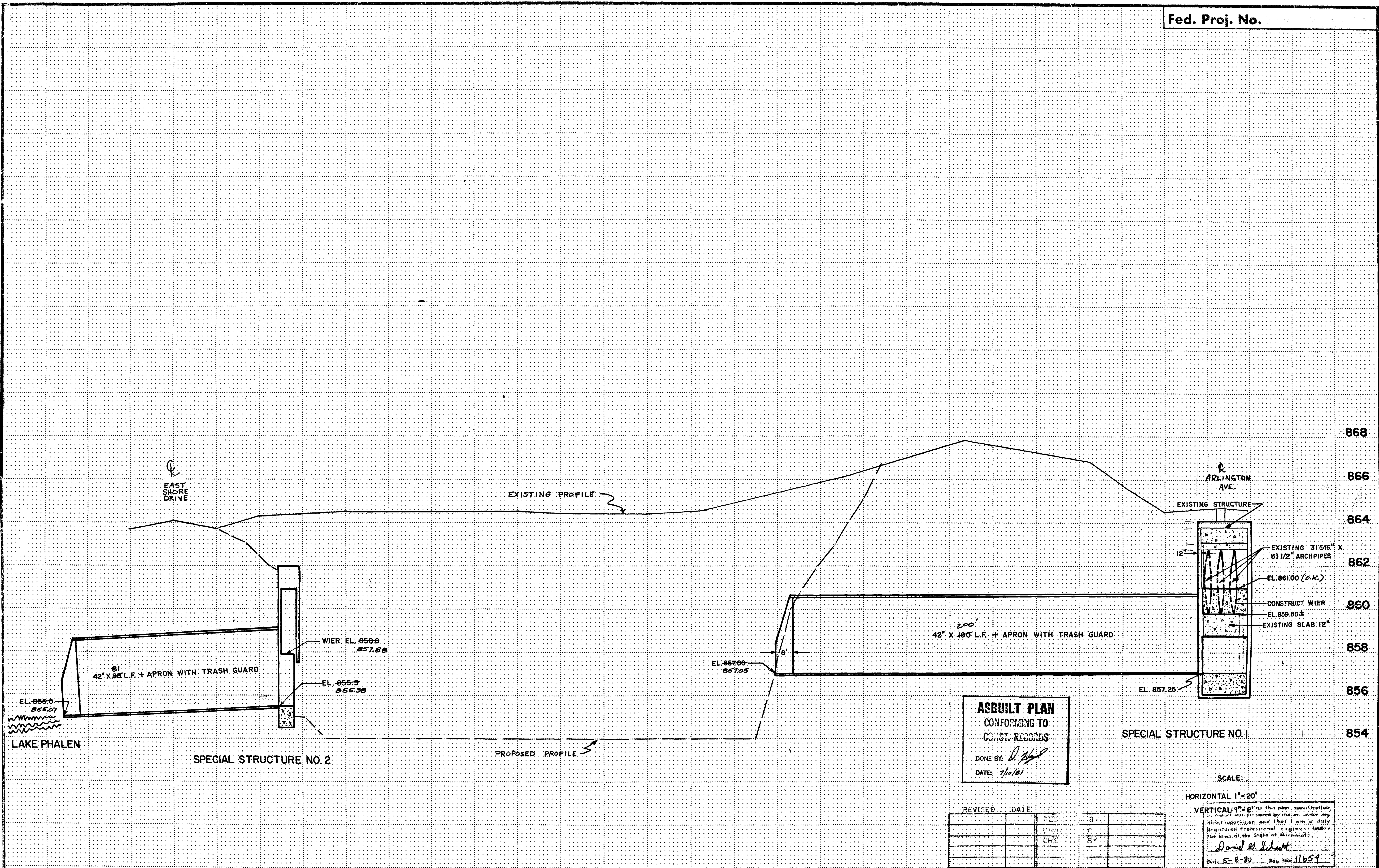
--- SHAPE CHANGED TO MINIMIZE DAMAGE OF TREES

REVISED	DATE	DESIGNED BY	
E.S. RESTORATION	4/3/00		
		DRAWN BY	
		CHECKED BY	

HO.  
**PHALEN LAKE RESTORATION**  
ARLINGTON AVE. HOLDING POND

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.  
*Daniel J. Scholt*  
Date 5-8-80 Reg. No. 11654





**ASBUILT PLAN**  
 CONFORMING TO  
 CONST. RECORDS  
 DONE BY: *D. Scholt*  
 DATE: 7/10/81

REVISED	DATE	BY	CHKD

SCALE:  
 HORIZONTAL 1" = 20'  
 VERTICAL 1/4" = 2'  
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.  
*David E. Scholt*  
 Date: 5-8-80 Reg. No. 11659

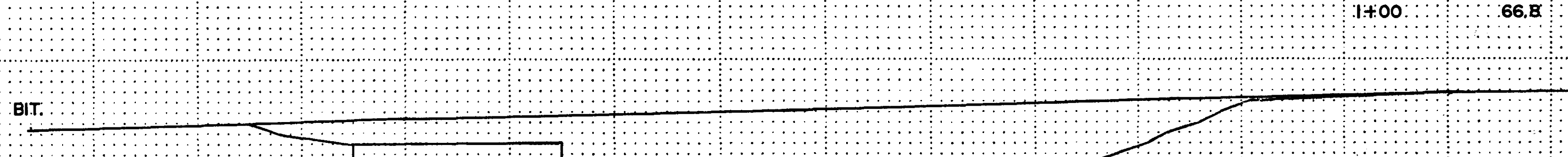
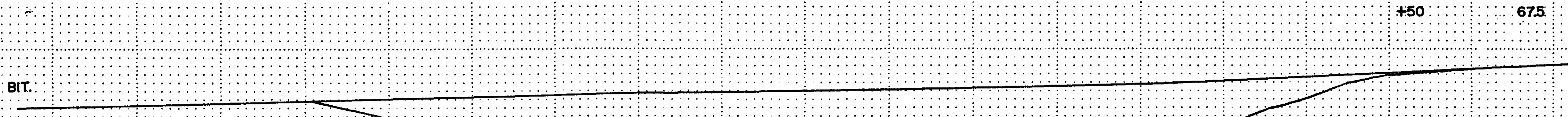
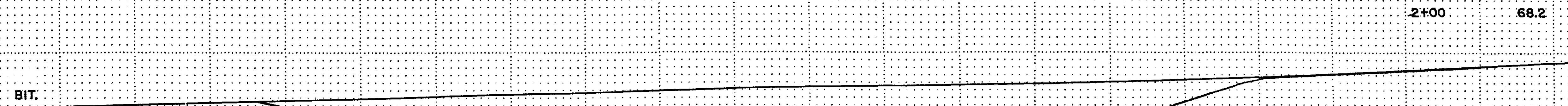
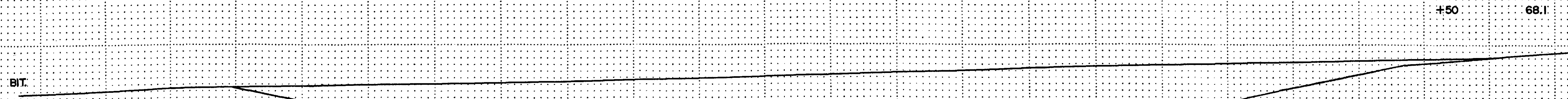
**PHALEN LAKE RESTORATION**

ARLINGTON AVE. HOLDING POND

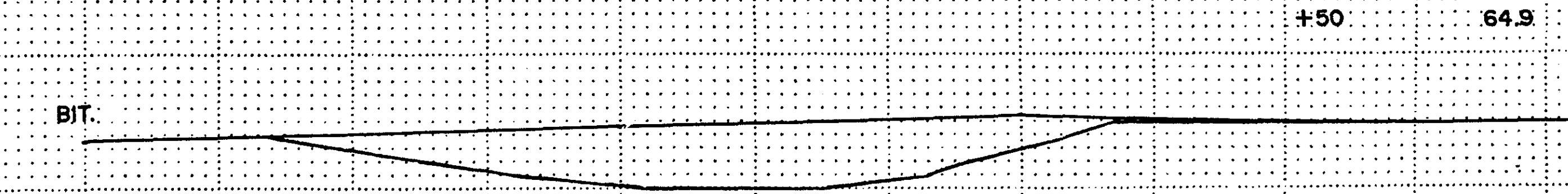
Copy Equipment Form 21



6



SPECIAL STRUCTURE NO. 2



**ASBUILT PLAN**  
 CONFORMING TO  
 CONST. RECORDS  
 DONE BY: *D. Scholt*  
 DATE: 7/10/81

0+00 863.5

REVISED	DATE	DESIGNED BY	CHECKED BY

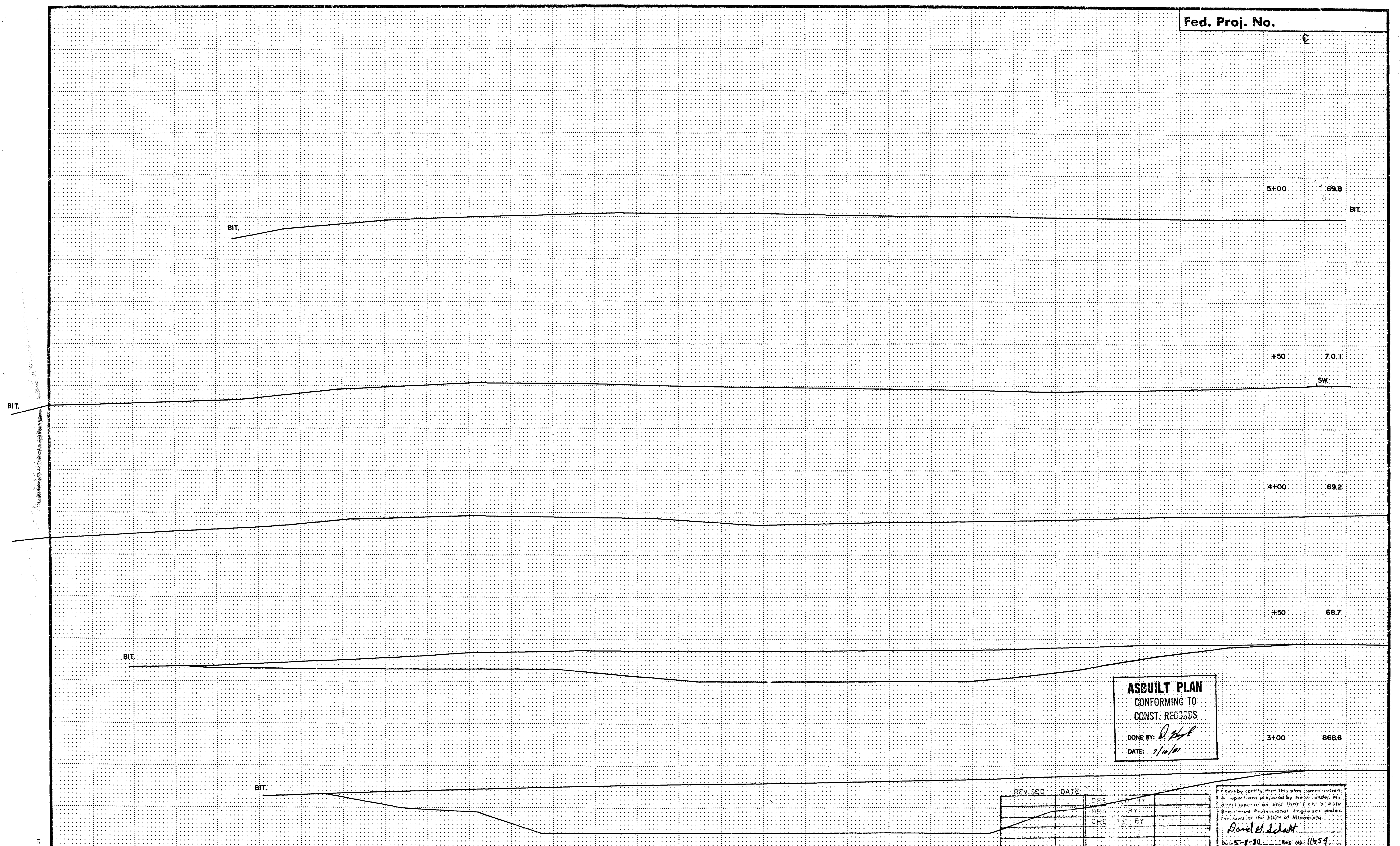
I hereby certify that this plan, specification, or contract was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the State of Minnesota.  
*David M. Scholt*  
 Date: 5-8-80 Reg. No. 11654

PHALEN LAKE RESTORATION

ARLINGTON AVE. HOLDING POND

Copy Equipment Form #1





**ASBUILT PLAN**  
 CONFORMING TO  
 CONST. RECORDS  
 DONE BY: *D. Schott*  
 DATE: 7/10/01

REVISED	DATE	DES	BY
		CHE	BY

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.  
*David E. Schott*  
 No. 5-8-10 REG. No. 11659

COPY EQUIPMENT PER 21



Fed. Proj. No.

ARLINGTON AVE.  
6+00 66.9

+80 66.7

**ASBUILT PLAN**  
CONFORMING TO  
CONST. RECORDS  
DONE BY: *D. Scholt*  
DATE: 7/10/01

5+50 667.8

REVISED	DATE	BY	REASON
		DRW	
		BY	
		CHK	

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 Mississippi.  
*David H. Scholt*  
Date: 5-8-00 Reg. No. 11659

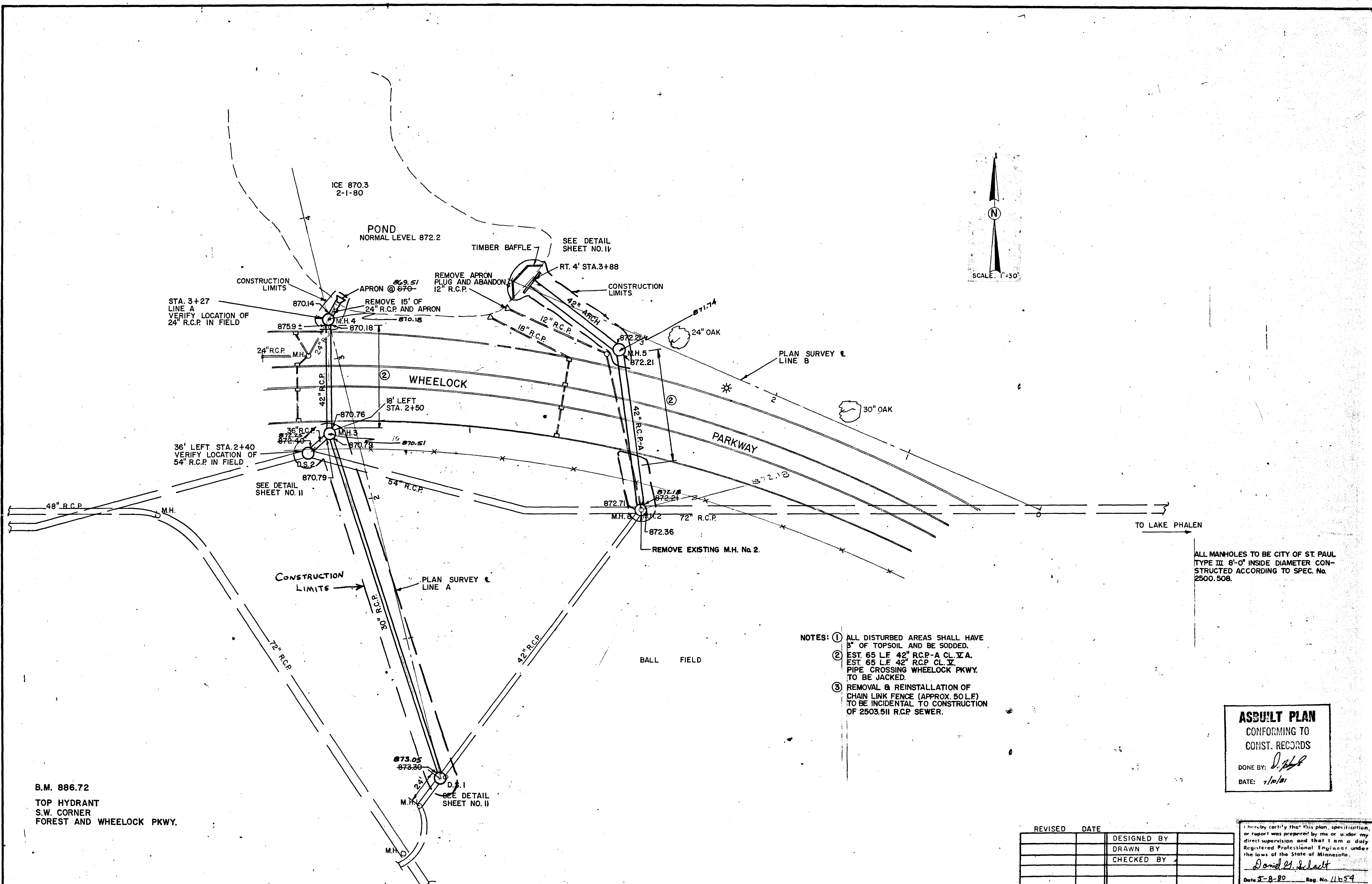
PHALEN LAKE RESTORATION

ARLINGTON AVE. HOLDING POND

Sheet No. 9 of 12 Sheets

City Equipment Form #1





B.M. 886.72  
 TOP HYDRANT  
 S.W. CORNER  
 FOREST AND WHEELLOCK PKWY.

- NOTES: ① ALL DISTURBED AREAS SHALL HAVE 3" OF TOPSOIL AND BE SODDED.  
 ② EST. 65 L.F. 42" R.C.P.-A CL. V.A.  
 EST. 65 L.F. 42" R.C.P. CL. V.  
 PIPE CROSSING WHEELLOCK PKWY. TO BE JACKED.  
 ③ REMOVAL & REINSTALLATION OF CHAIN LINK FENCE (APPROX. 50 L.F.) TO BE INCIDENTAL TO CONSTRUCTION OF 2503.511 R.C.P. SEWER.

ALL MANHOLES TO BE CITY OF ST. PAUL TYPE III 8'-0" INSIDE DIAMETER CONSTRUCTED ACCORDING TO SPEC. No. 2500.508.

**ASBUILT PLAN**  
 CONFORMING TO  
 CONST. RECORDS  
 DONE BY: *D. Scholt*  
 DATE: 7/10/01

REVISED	DATE	DESIGNED BY	DRAWN BY	CHECKED BY

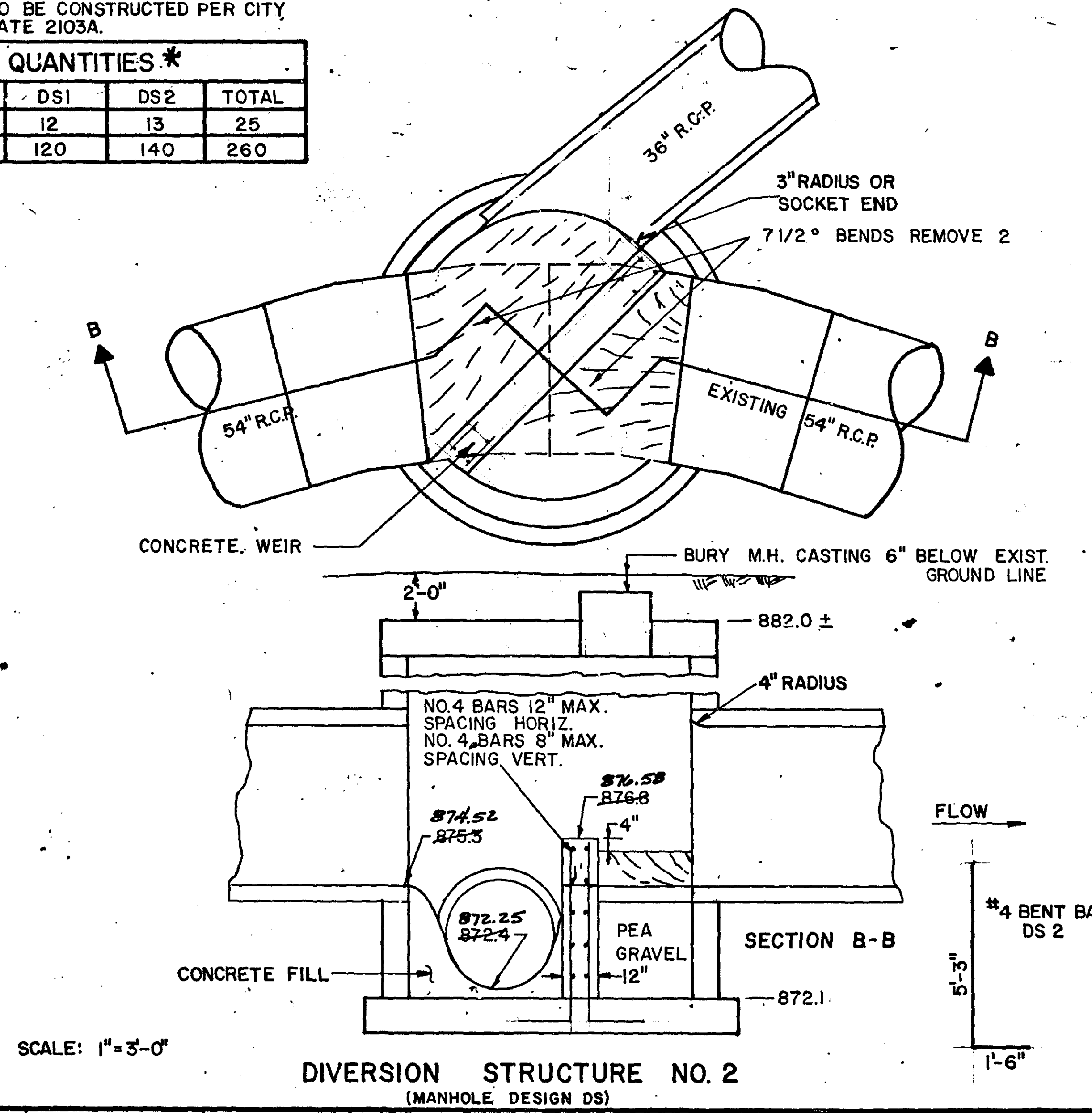
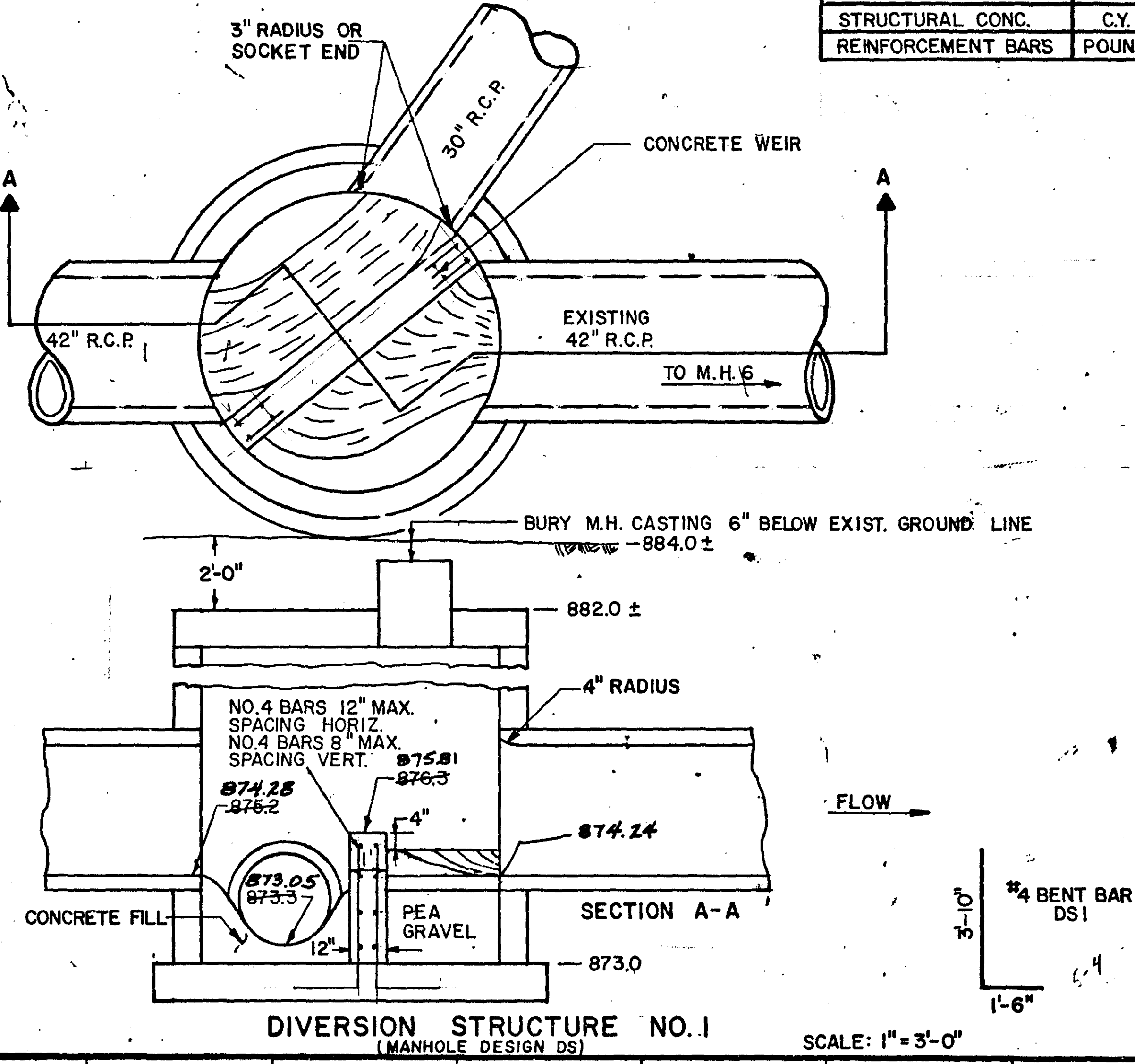
I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Registered Professional Engineer under the laws of the State of Minnesota.  
*Daniel W. Scholt*  
 Date 5-8-02 Reg. No. 11654



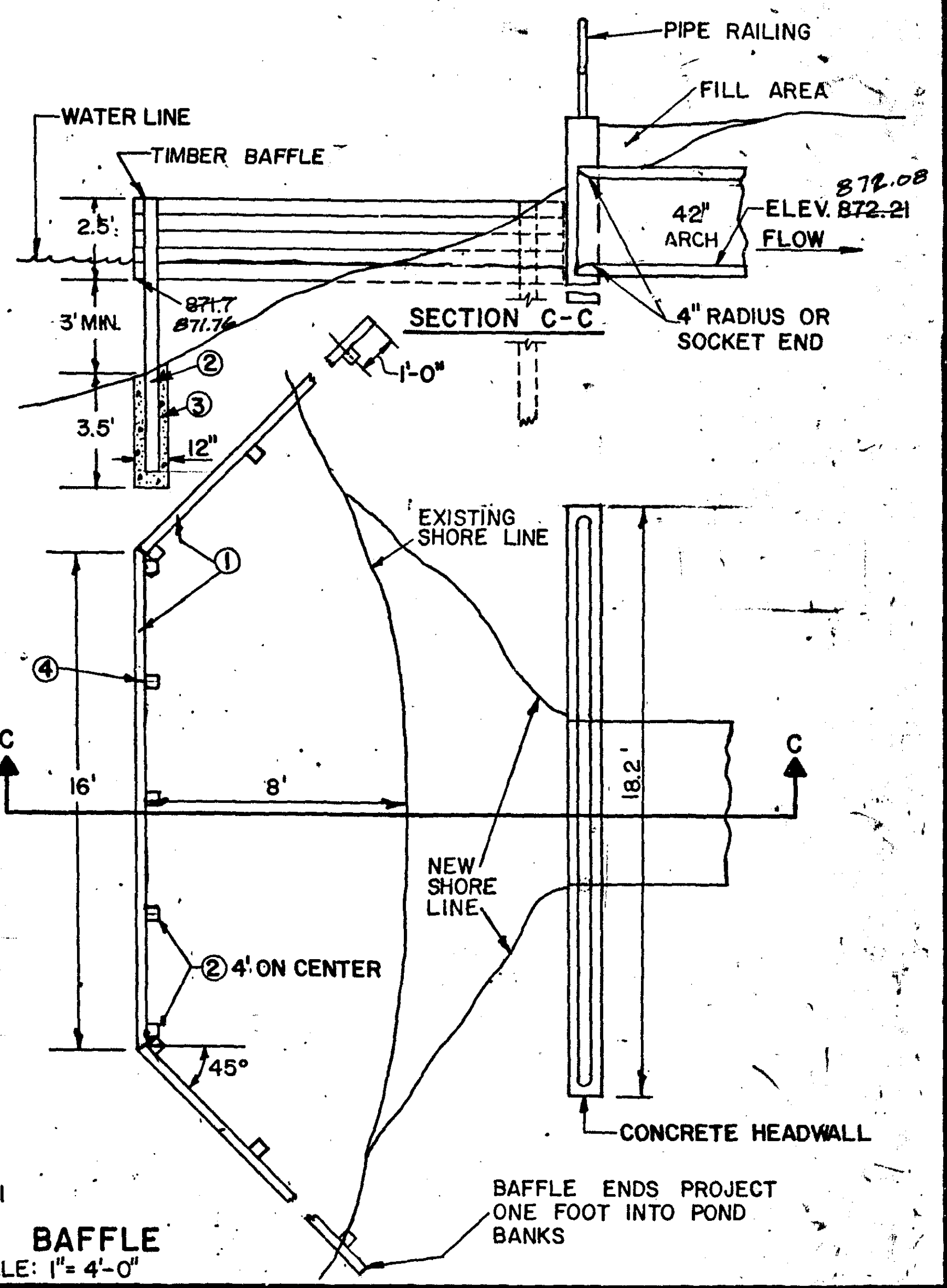
TOPOGRAPHY	PLOTTED BY DATE	CHECKED BY DATE
UTILITIES	PLOTTED BY DATE	CHECKED BY DATE
PROFILE	PLOTTED BY DATE	CHECKED BY DATE

DIVERSION STRUCTURES TO BE CONSTRUCTED PER CITY OF ST. PAUL STANDARD PLATE 2103A.

APPROXIMATE QUANTITIES *				
ITEM	UNIT	DS1	DS2	TOTAL
STRUCTURAL CONC.	C.Y.	12	13	25
REINFORCEMENT BARS	POUND	120	140	260

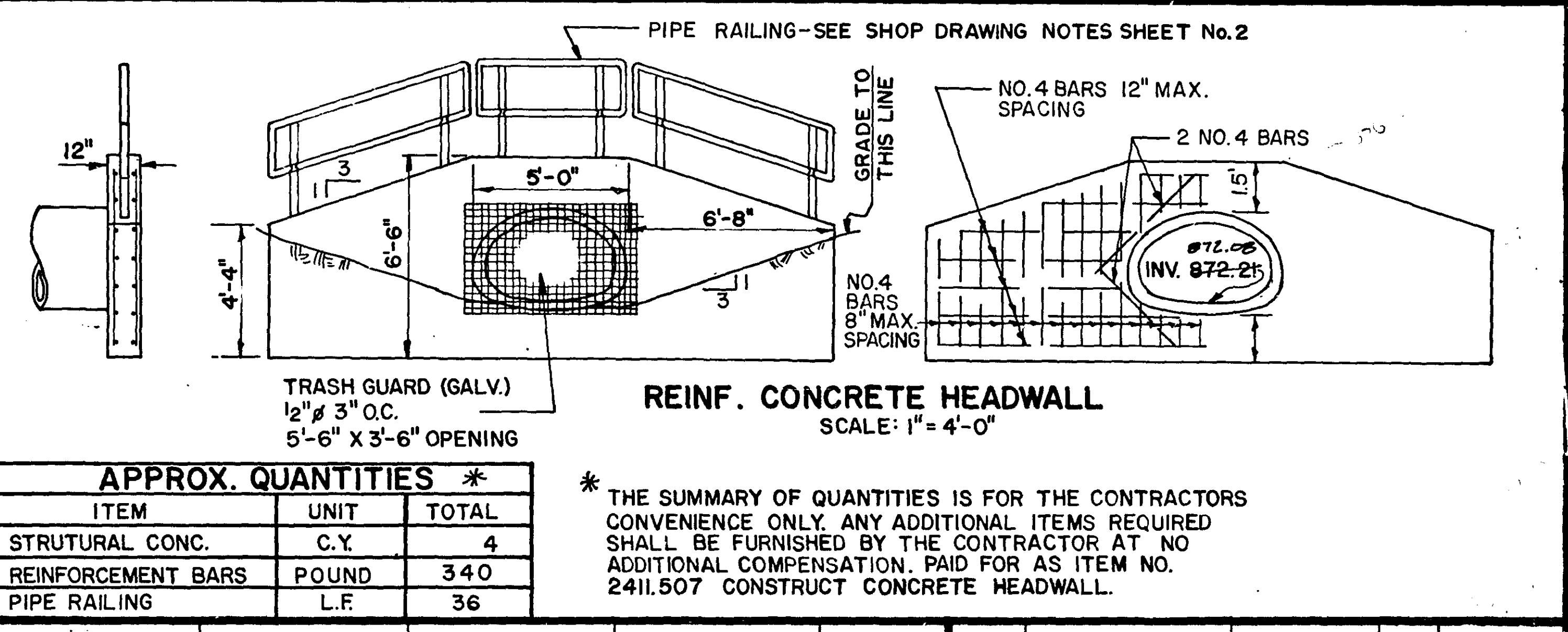
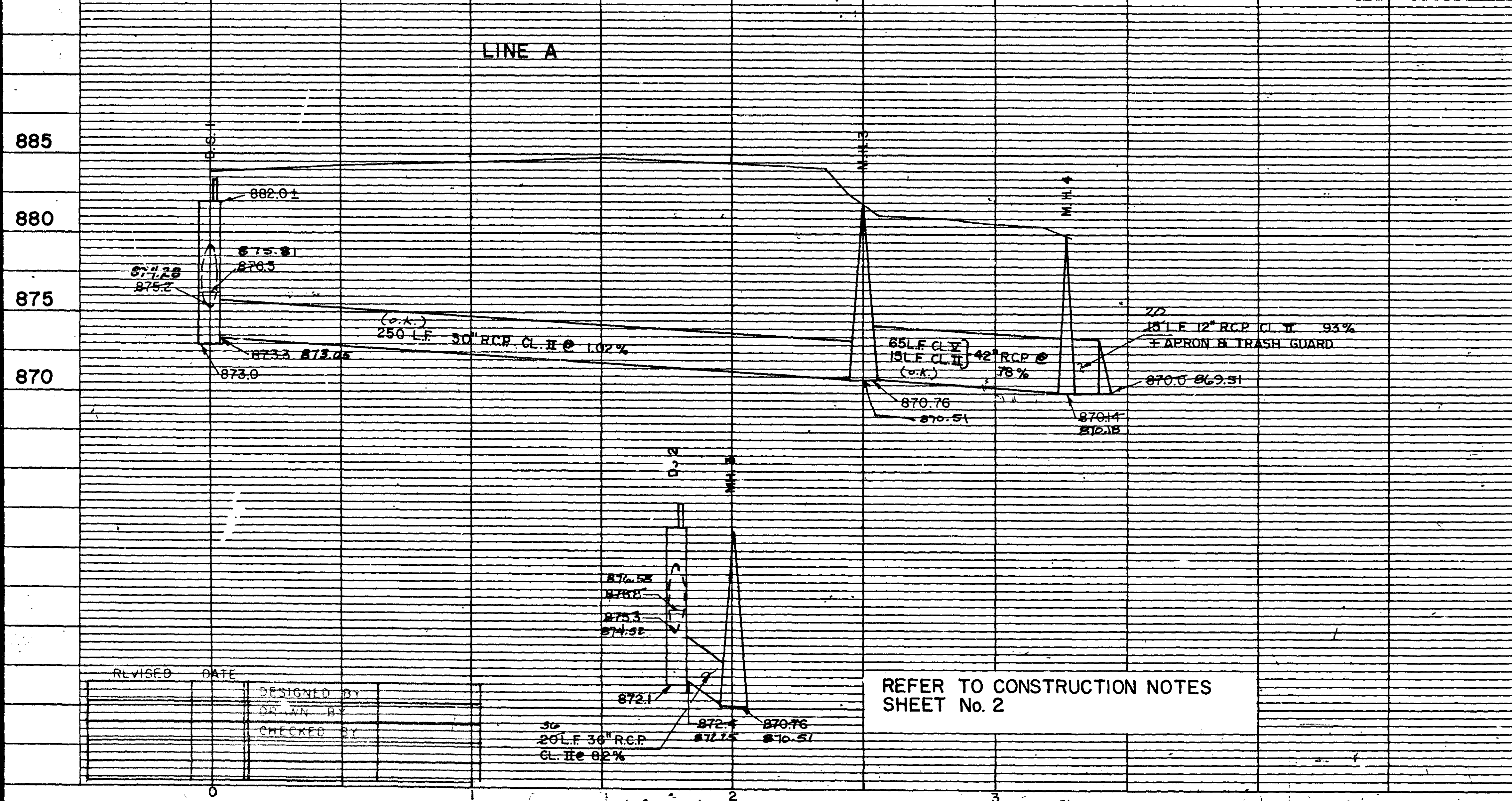


- 2" X 6" X 16' PENTA TREATED DOUGLAS FIR.
- 6" X 6" X 10' PENTA TREATED DOUGLAS FIR POSTS SET IN CONCRETE.
- CONCRETE SHALL MEET THE REQUIREMENTS FOR GRADE B, TYPE 3 CONCRETE AS IN 2461 OF SPECS.
- BOLT 2 X 6 TO POST 3/8" GALV. BOLT W/ WASHER (2 BOLTS PER BOARD PER POST.)



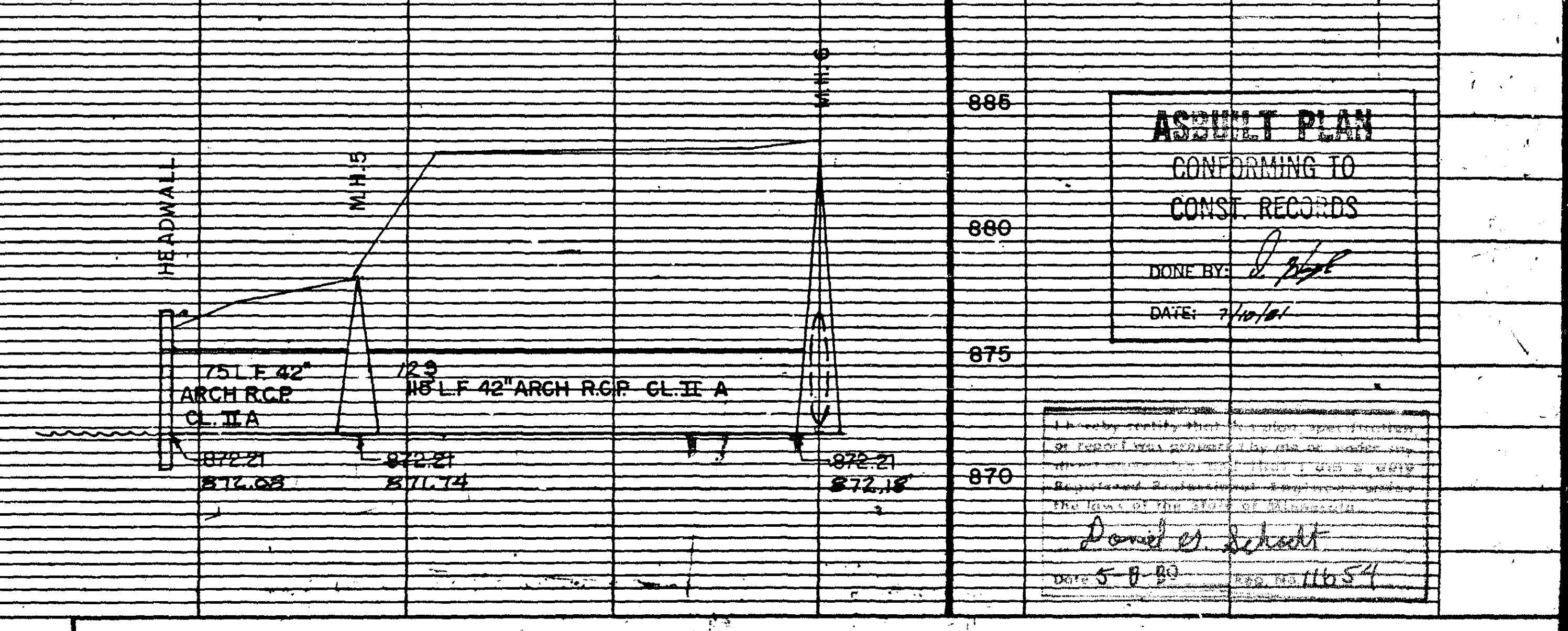
APPROX. QUANTITIES *	
2" X 6" X 16' FIR	240 L.F.
6" X 6" X 10' POST	11 EACH
CONCRETE FOR POSTS	1 C.Y.
BOLT, GALV. 3/8" X 10"	110 EACH

\* THE SUMMARY OF QUANTITIES IS FOR THE CONTRACTOR'S CONVENIENCE ONLY. ANY ADDITIONAL ITEMS REQUIRED SHALL BE FURNISHED BY THE CONTRACTOR WITH NO ADDITIONAL COMPENSATION. PAID FOR AS ITEM 506.601 CONSTRUCT TIMBER BAFFLE.



APPROX. QUANTITIES *		
ITEM	UNIT	TOTAL
STRUCTURAL CONC.	C.Y.	4
REINFORCEMENT BARS	POUND	340
PIPE RAILING	L.F.	36

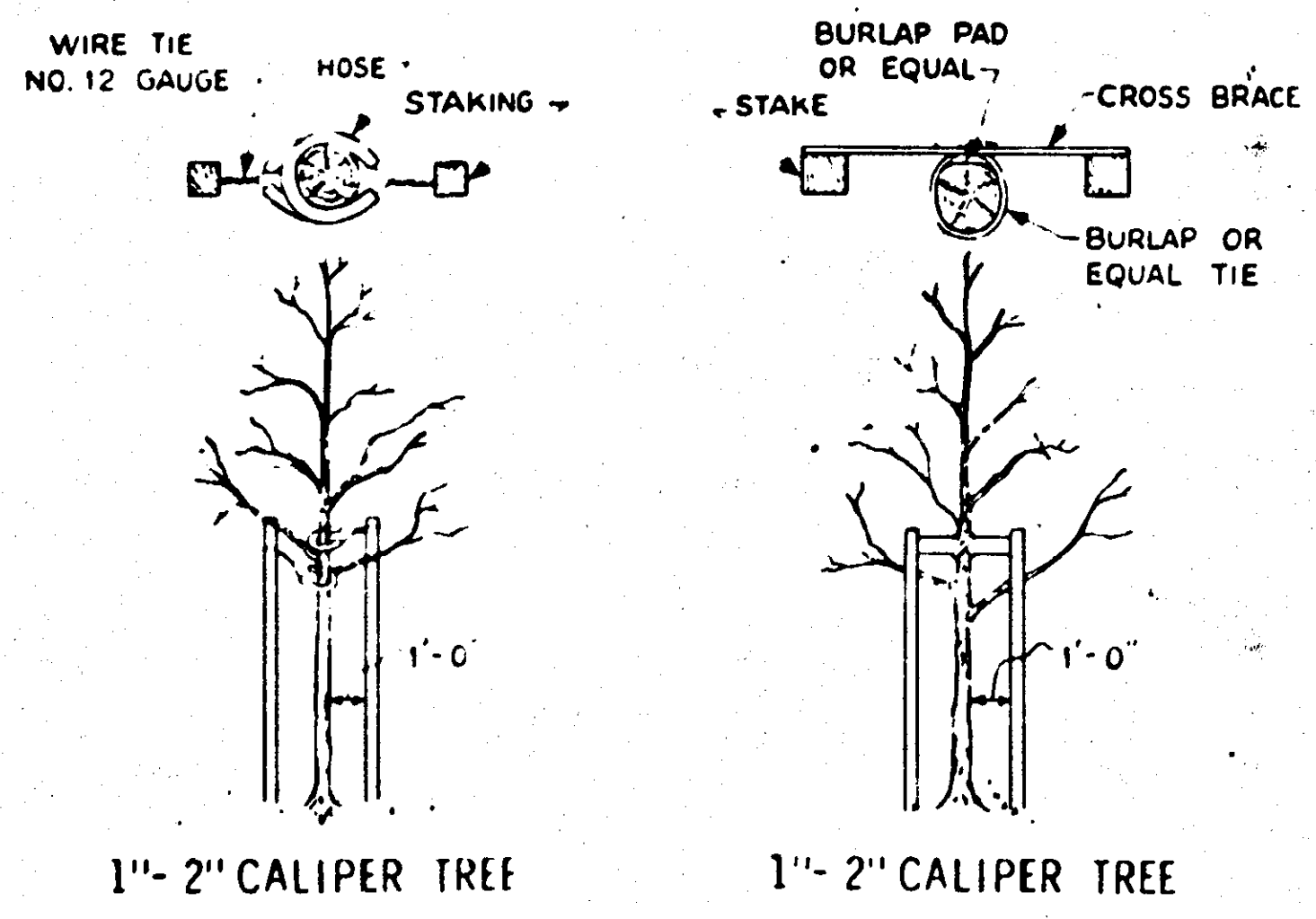
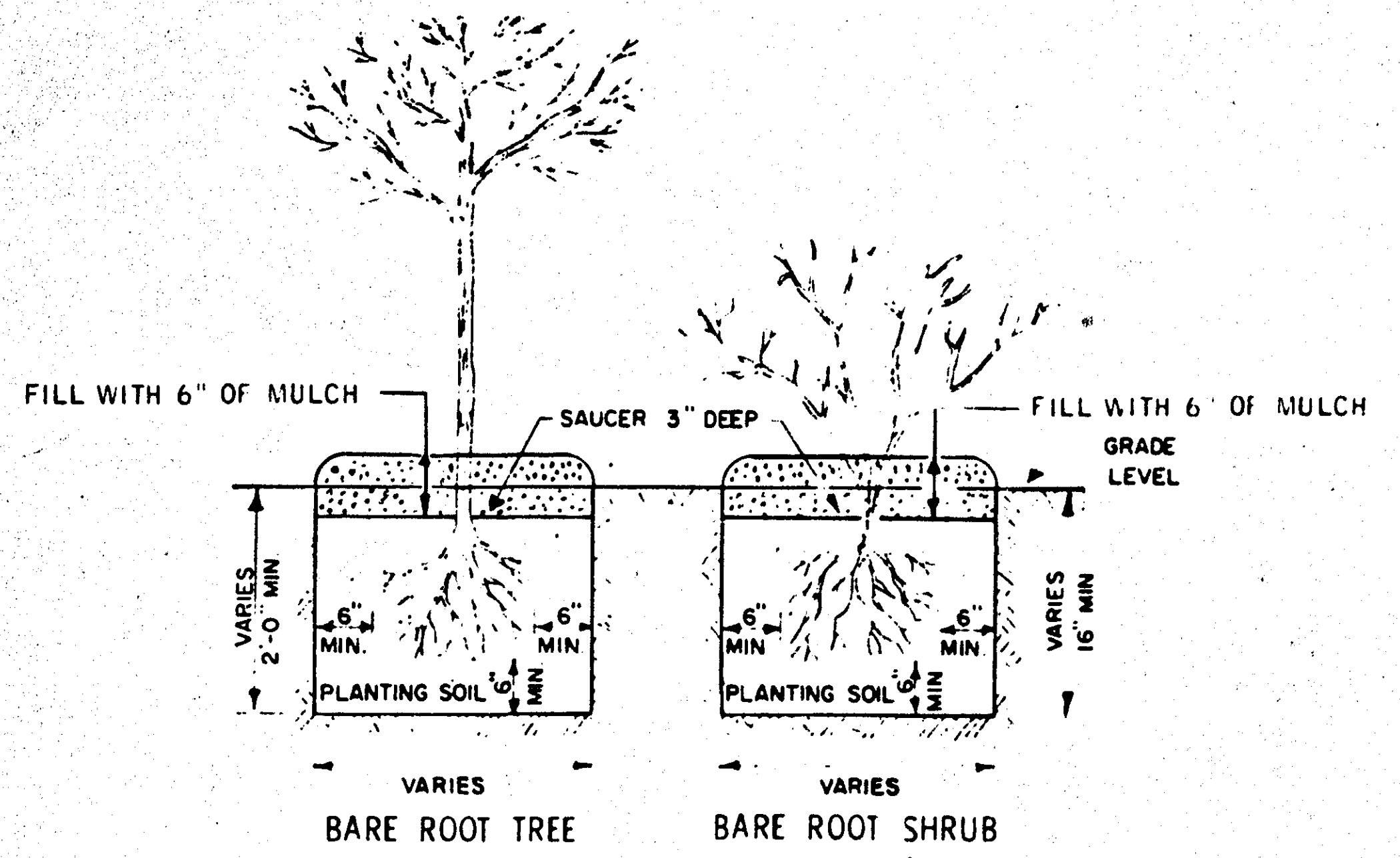
\* THE SUMMARY OF QUANTITIES IS FOR THE CONTRACTOR'S CONVENIENCE ONLY. ANY ADDITIONAL ITEMS REQUIRED SHALL BE FURNISHED BY THE CONTRACTOR AT NO ADDITIONAL COMPENSATION. PAID FOR AS ITEM NO. 2411.507 CONSTRUCT CONCRETE HEADWALL.



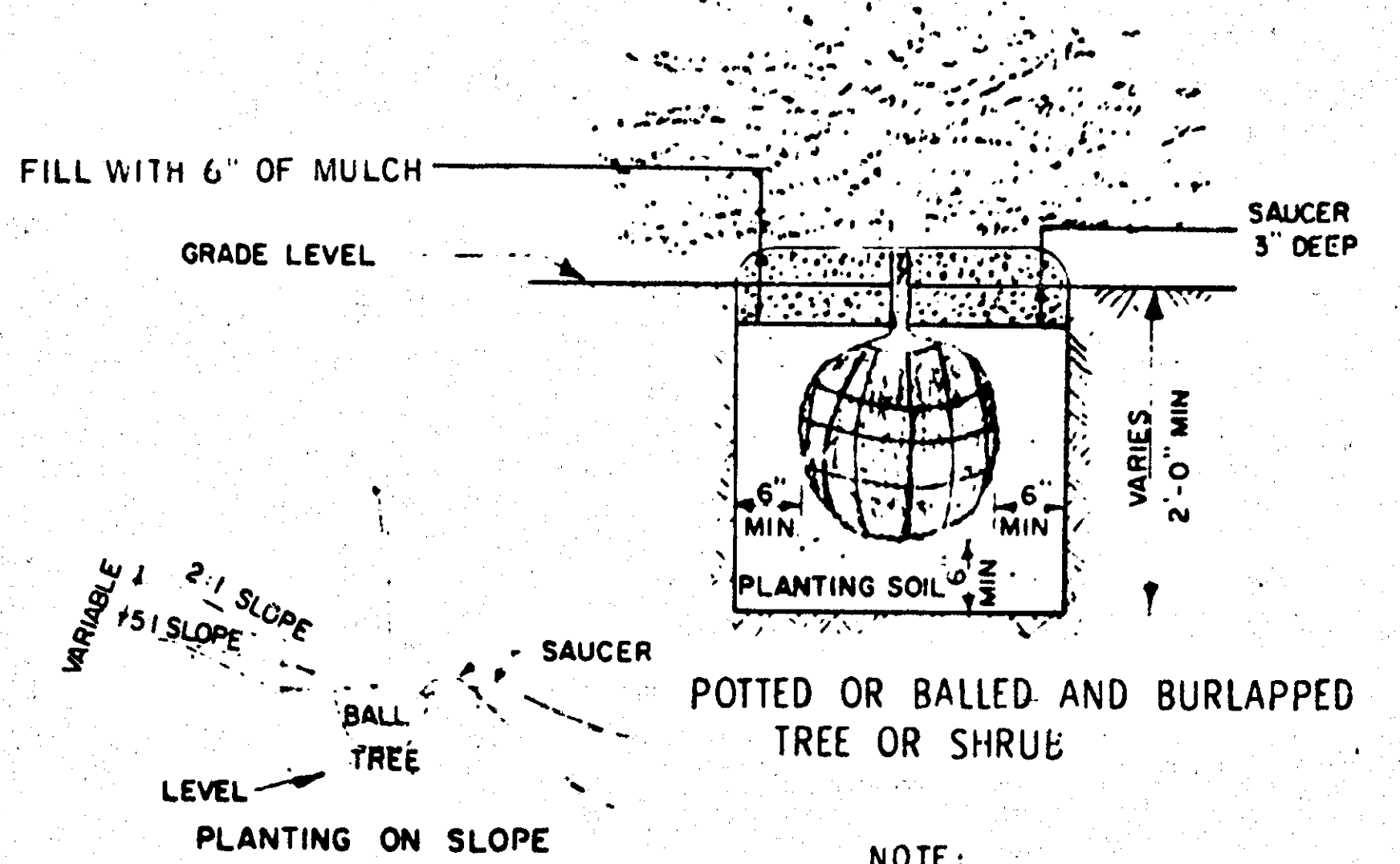






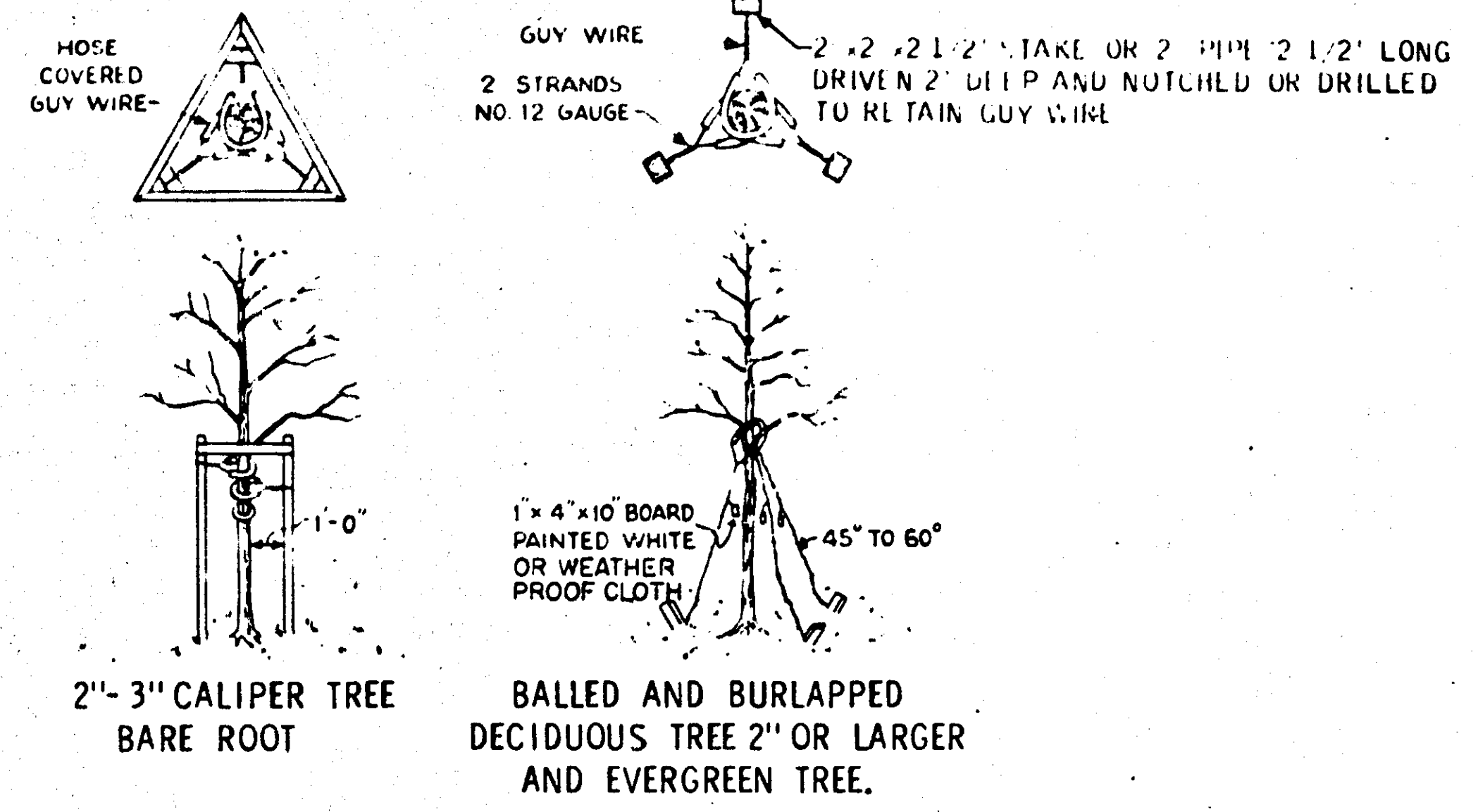


ALL STAKES ARE NOMINAL 2 x 2 OR 2 1/2 x 2 1/2" DIA. TIE, 8' LONG WITH 2" IN THE GROUND. CROSS BRACES ARE NOMINAL 1 x 3" MATERIAL

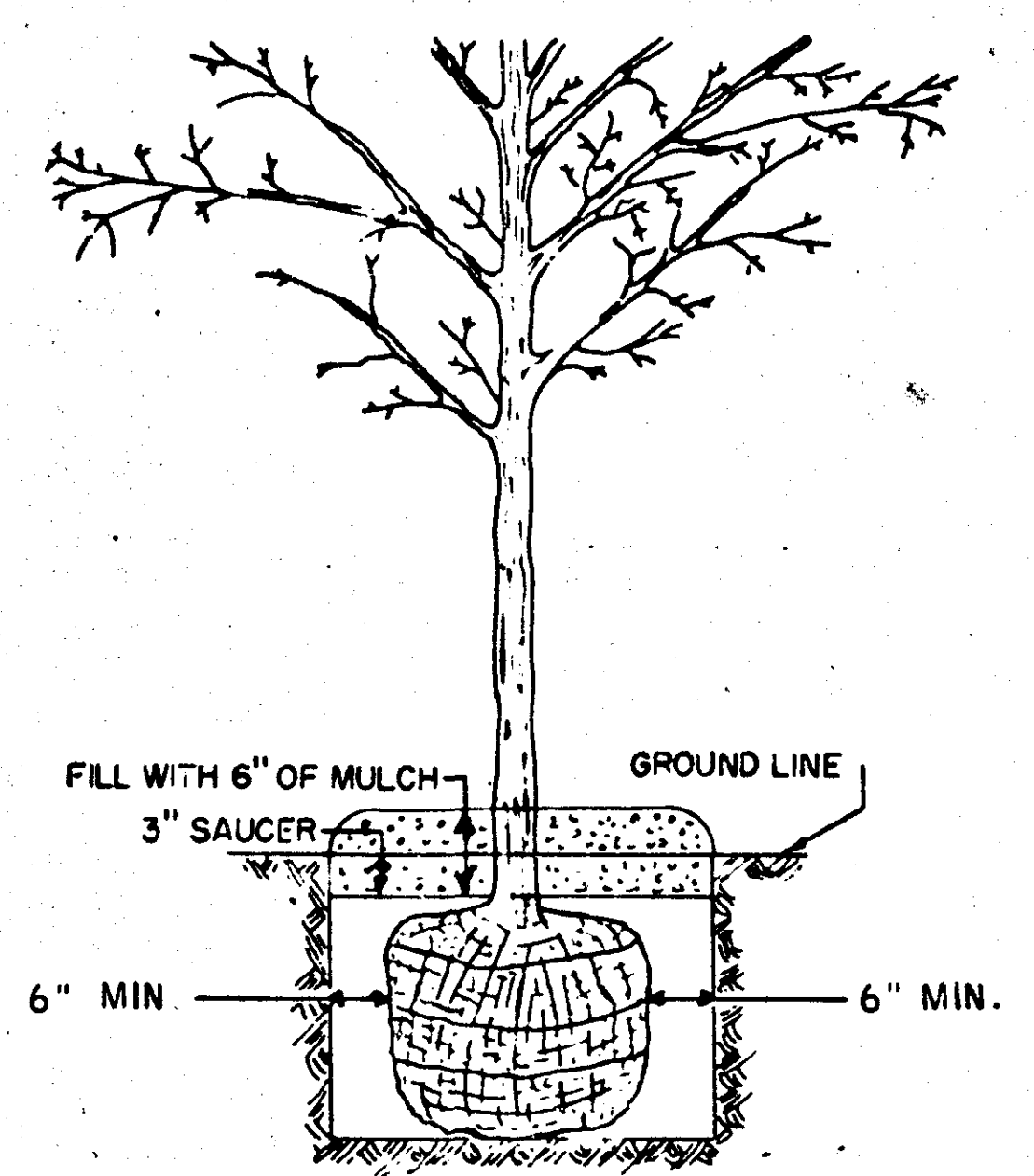


NOTE:  
SLT PLANTS AT THE SAME OR SLIGHTLY LOWER DEPTH AS THEY GREW IN THE NURSERY OR FIELD. ALL PLANTS SHALL BE PLACED IN A PLUMB POSITION.

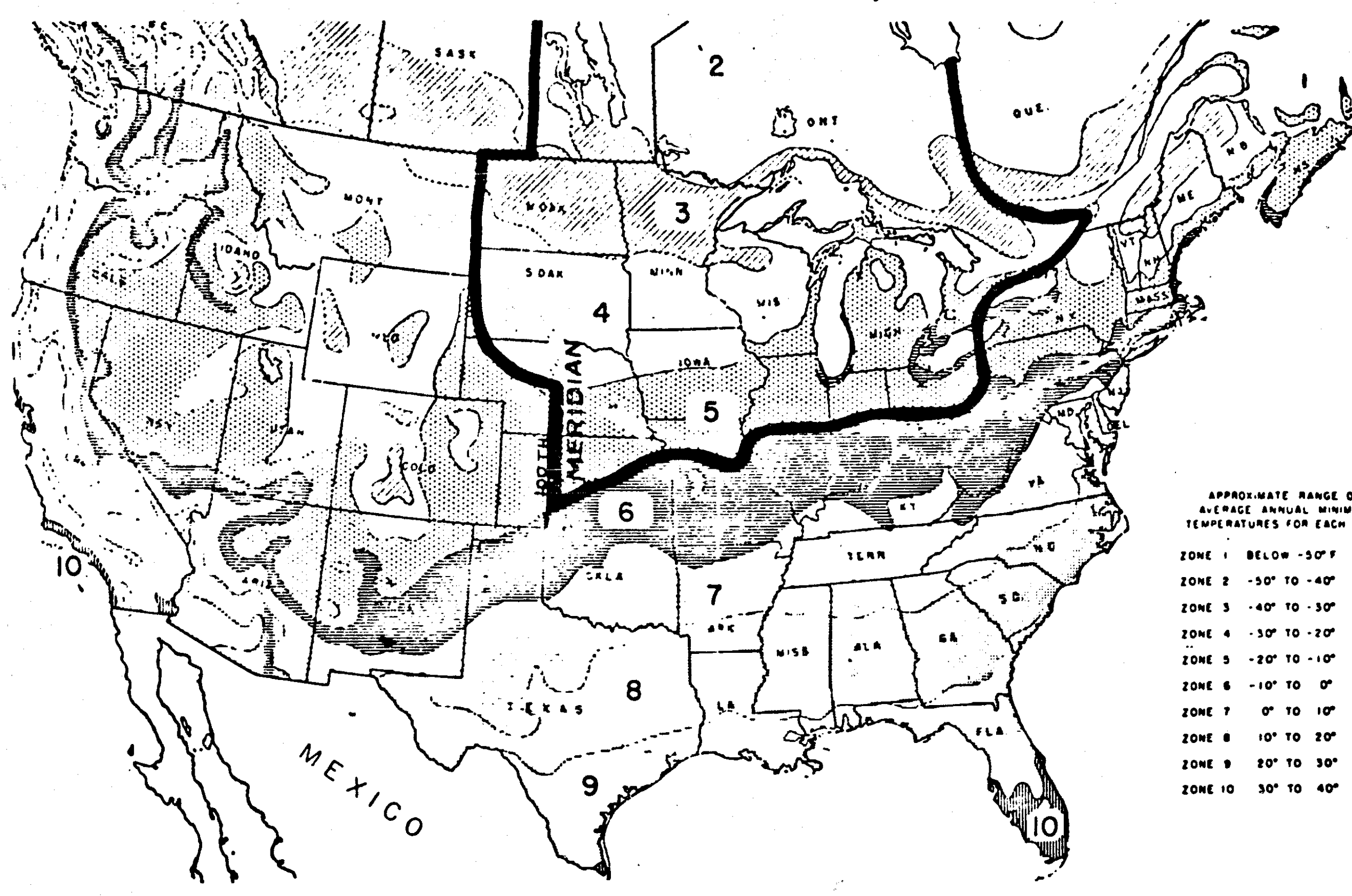
PLANTING METHODS



STAKING AND GUYING METHODS



BALLED AND BURLAPPED DECIDUOUS TREES 2" CALIPER OR LARGER



The Zones of Plant Hardiness—This is an adapted version of the color map on the reverse side. It may be useful for small-scale reproduction in books, magazines, and nursery catalogs. This map is not copyrighted, and permission for reproducing it is not required.

APPROVED FEB. 67  
V. J. [Signature]  
Design Standards Engineer  
ENGINEERING STANDARDS DIVISION

ASBUILT PLAN  
CONFORMING TO  
CONST. RECORDS  
DONE BY: [Signature]  
DATE: 2/10/67

GENERAL NOTES

- PLANTING: Locations shall be determined by the engineer in the field. All trees shall be balled, burlapped, & staked.
- MULCH MATERIAL: All plant installations shall be mulched to a minimum depth of 6 inches and 24 inches in diameter with wood chips, unless noted otherwise on this plan.

REVISED	DATE	DESIGNED BY	DRAWN BY	CHECKED BY

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.  
David M. Scholtz  
Date 5-8-80 Reg. No. 11659