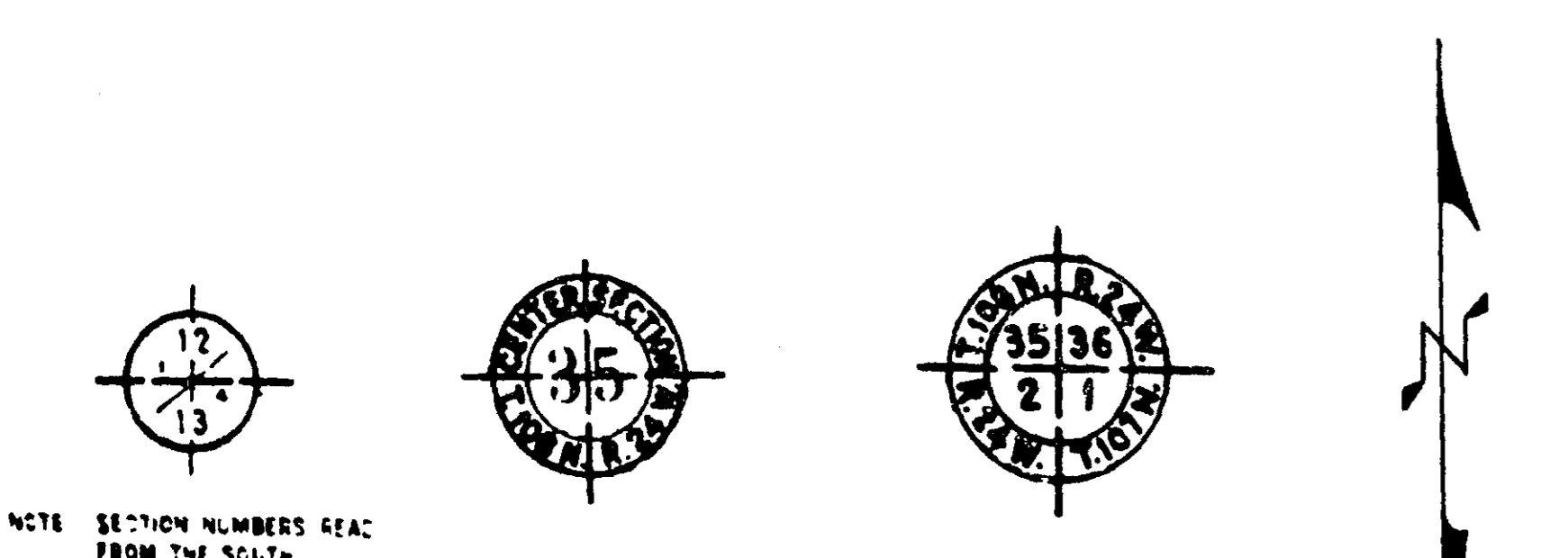


**PLANS SYMBOLS**

STATE LINE	SPRINGS
COUNTY LINE	MARSH
TOWNSHIP OR RANGE LINE	TIMBER
SECTION LINE	ORCHARD
QUARTER LINE	BRUSH
SIXTEENTH LINE	NURSERY
RIGHT OF WAY LINE	CATCH BASIN
PRESENT RIGHT OF WAY LINE	FIRE HYDRANT
CONTROL OF ACCESS LINE	CATTLE GUARD
PROPERTY LINE (Except Land Lines)	OVERPASS (Highway Over)
VACATED PLATTED PROPERTY	UNDERPASS (Highway Under)
CORPORATE OR CITY LIMITS	BRIDGE
TRUNK HIGHWAY CENTER LINE	BUILDING (One Story Frame)
RETAINING WALL	F. FRAME   C. CONCRETE
RAILROAD	S. STONE   T. TILE
RAILROAD RIGHT OF WAY LINE	B. BRICK   ST. STUCCO
RIVER OR CREEK	IRON PIPE OR ROD
DRY RUN	MONUMENT (STONE, CONCRETE, OR METAL)
DRAINAGE DITCH	WOODEN HUB
DRAIN TILE	GRAVEL PIT
CULVERT	SAND PIT
DROP INLET	BORROW PIT
GUARD RAIL	ROCK QUARRY
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 CORNER	

**UTILITIES SYMBOLS**

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



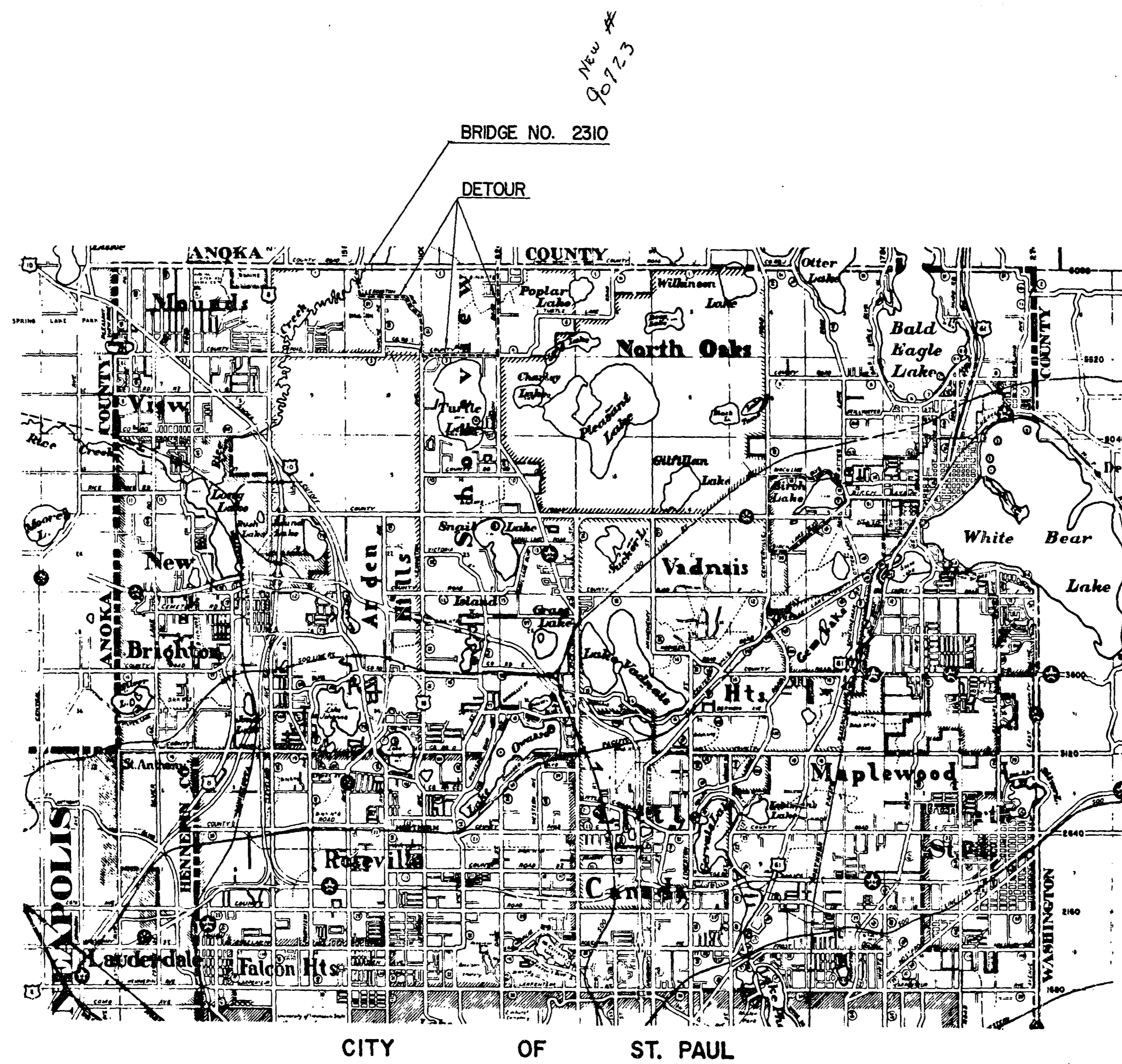
**PIT DATA**

PIT NO. \_\_\_\_\_ Located in \_\_\_\_\_ Dead Maul \_\_\_\_\_

PIT NO. \_\_\_\_\_ Located in \_\_\_\_\_ Dead Maul \_\_\_\_\_

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

**OFFICE OF COUNTY ENGINEER  
RAMSEY COUNTY  
PLAN FOR  
WIDENING EXISTING BRIDGE - NO. 2310  
ON: COUNTY RD. J. 300' EAST OF LEXINGTON AVE.**



**INDEX**

SHEET NO.	DESCRIPTION
1	TITLE SHEET
2	GENERAL PLAN & ELEVATION
3	ABUTMENT DETAILS
4	WIDENING DETAILS

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.

ENGINEER \_\_\_\_\_ REG. NO. \_\_\_\_\_ DATE \_\_\_\_\_

RECOMMENDED FOR APPROVAL \_\_\_\_\_ DATE \_\_\_\_\_  
DIRECTOR OF SAFETY

APPROVED \_\_\_\_\_ DATE \_\_\_\_\_  
CHAIRMAN OF THE RAMSEY COUNTY BOARD

APPROVED \_\_\_\_\_ DATE \_\_\_\_\_  
MAYOR

APPROVED \_\_\_\_\_ DATE \_\_\_\_\_  
MAYOR

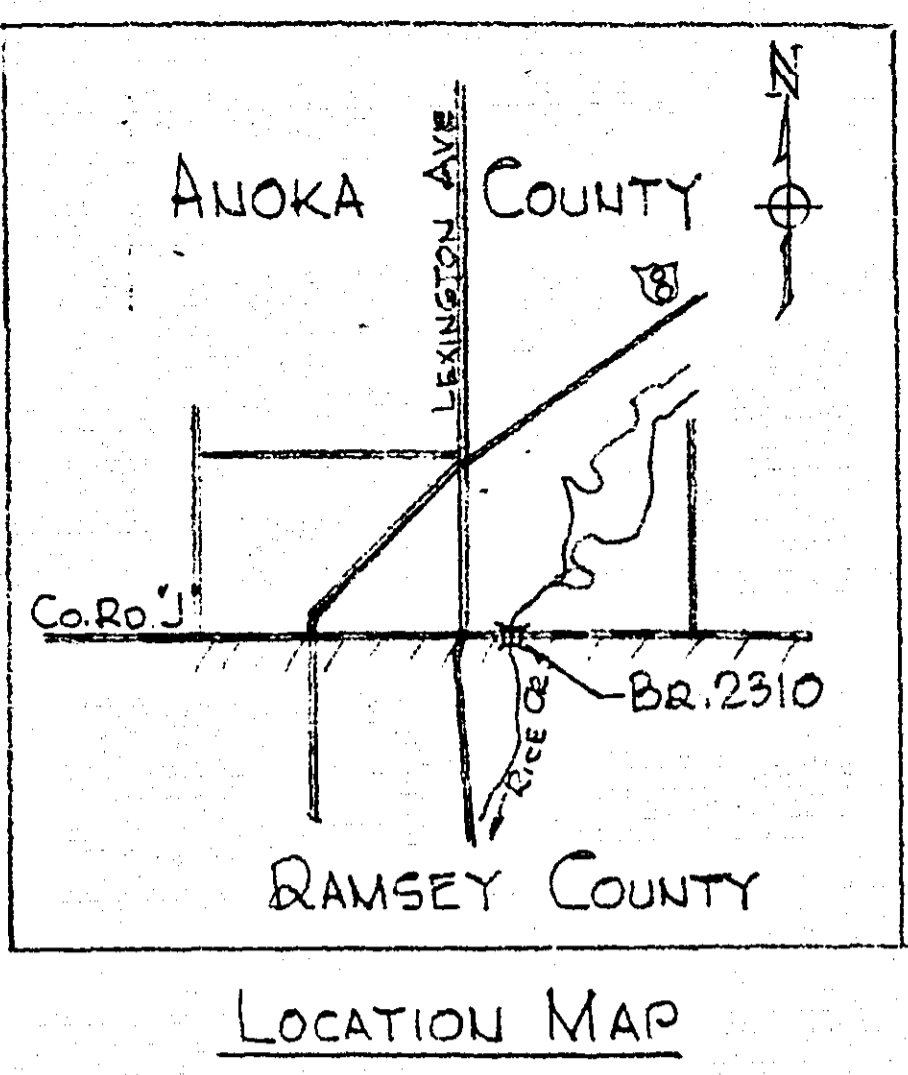
MINNESOTA STATE HIGHWAY DEPARTMENT

RECOMMENDED FOR APPROVAL \_\_\_\_\_ DATE \_\_\_\_\_

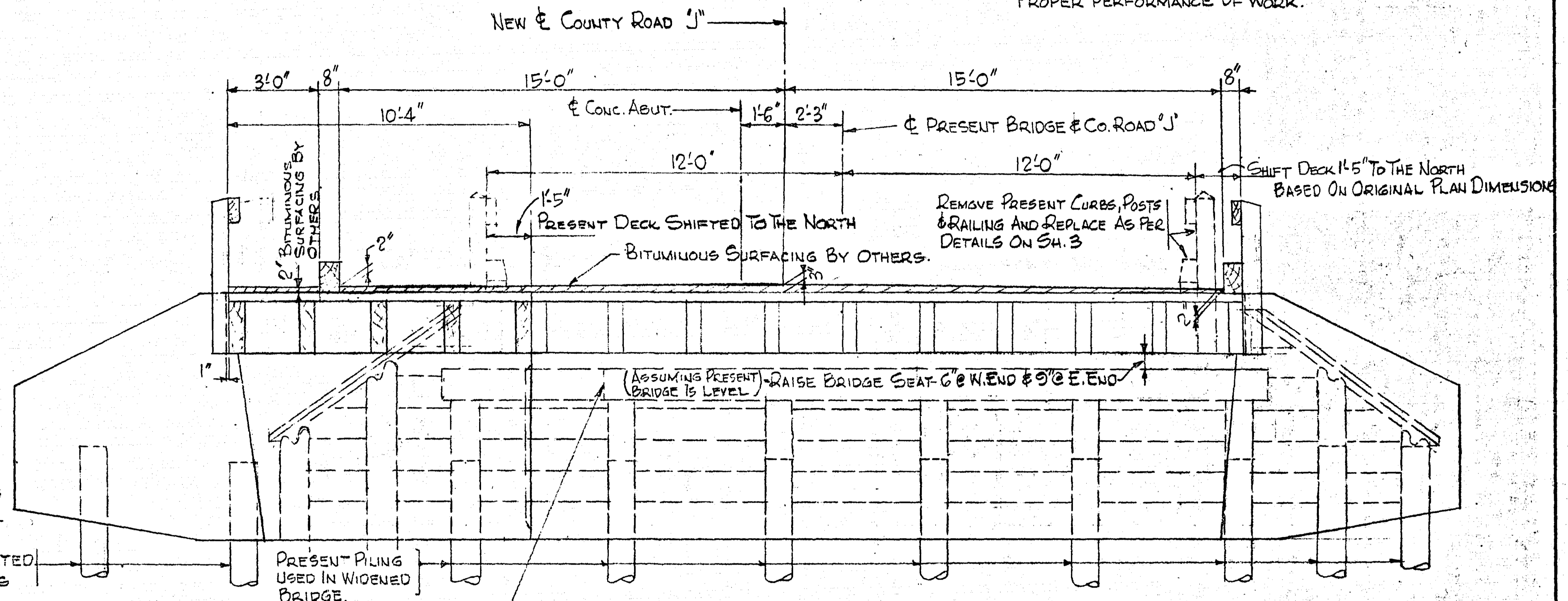
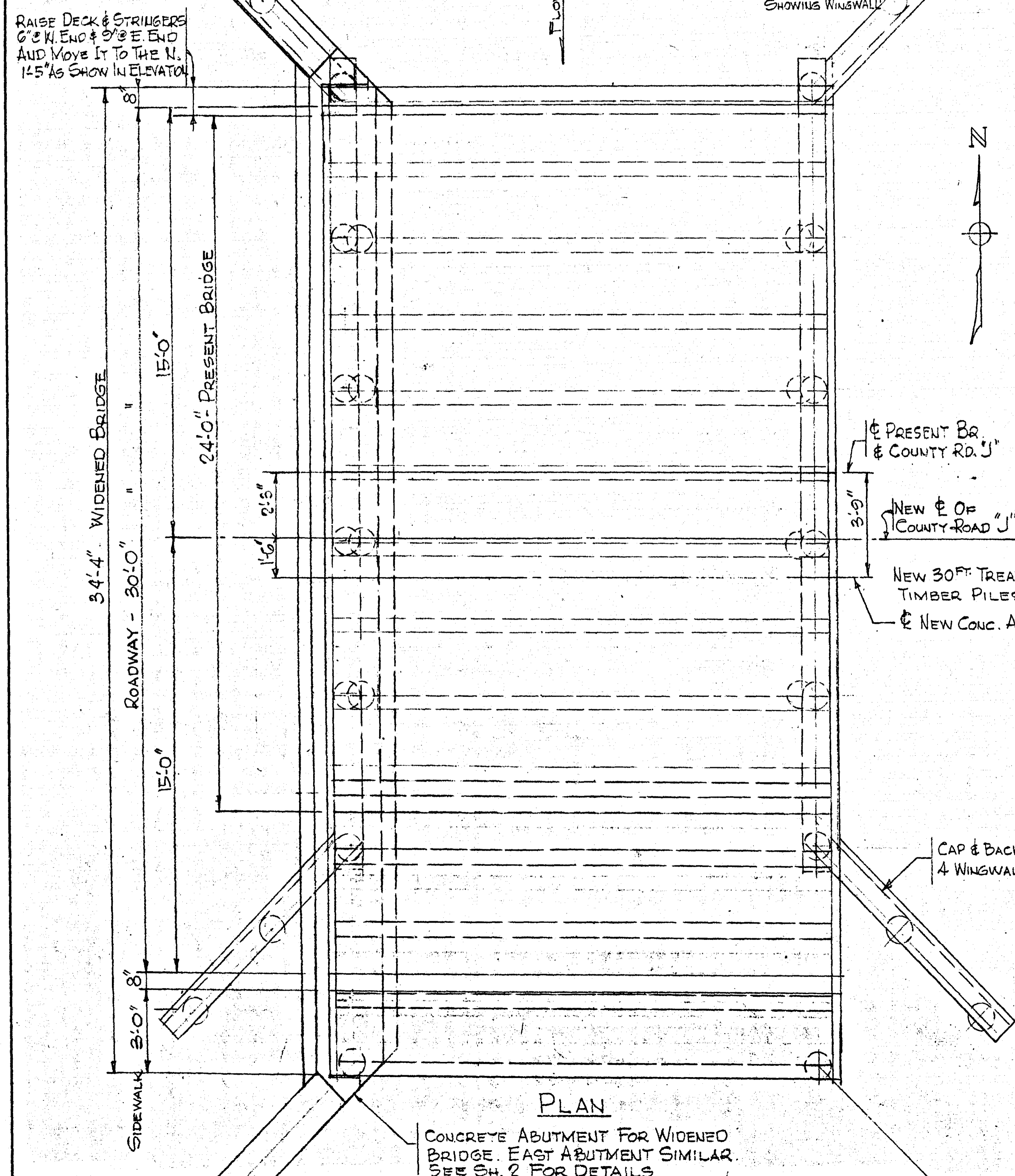
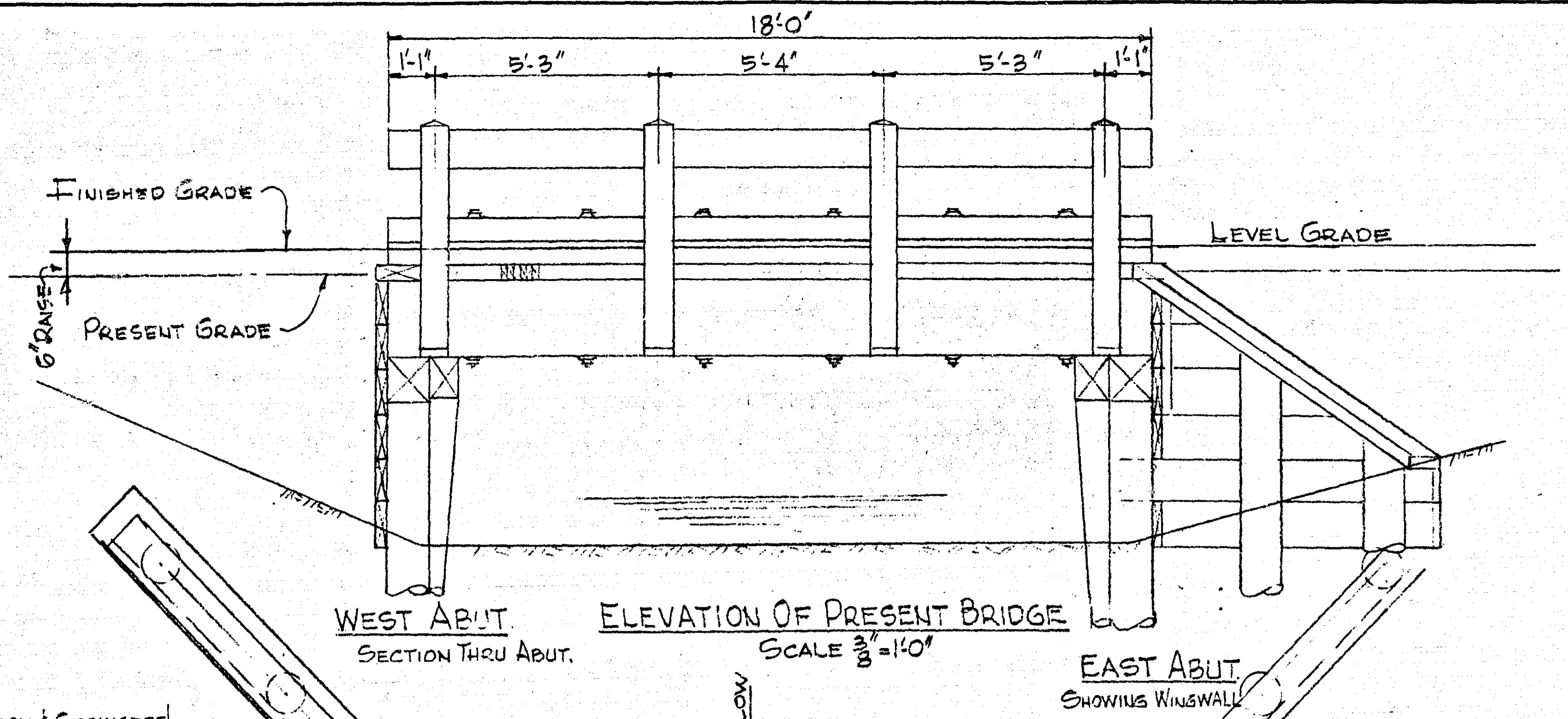
RECOMMENDED FOR APPROVAL \_\_\_\_\_ DATE \_\_\_\_\_  
DISTRICT STATE AID ENGINEER

APPROVAL \_\_\_\_\_ DATE \_\_\_\_\_  
STATE AID ENGINEER

**DESIGN DATA**  
 1965 A.A.S.H.O. DESIGN SPECIFICATIONS.  
 H-20 LOADING 2 LANES  
 $F_c = 1600$  P.S.I.  $n = 8$   
 $F_s = 20000$  P.S.I. REINFORCEMENT  
 $F_s = 20000$  P.S.I. STRUCT. STEEL M.H.D. 3306



**CONSTRUCTION NOTES**  
 THE MINNESOTA HIGHWAY DEPARTMENT'S 'STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION' DATED JAN. 1, 1968 SHALL APPLY.  
 CONSTRUCTION REQUIREMENTS SHALL CONFORM TO M.H.D. 2403.3.  
 TIMBER 4" THICK OR LESS SHALL BE 1500\*F M.H.D. 3426, TIMBER MORE THAN 4" THICK SHALL BE 1500\*C M.H.D. 3426.  
 ALL TIMBER IS ROUGH UNLESS OTHERWISE NOTED.  
 ALL PILING AND TIMBER TO BE CREOSOTE PRESSURE TREATED PER M.H.D. 3491.  
 ALL PILING TO MEET THE REQUIREMENTS OF M.H.D. 3471.  
 ALL HARDWARE SHALL BE GALVANIZED PER M.H.D. 3392.  
 THE ENGINEER WILL SET STAKES AT THE  $\pm$  OF SUBSTRUCTURE AND WILL RESET THESE POINTS AS HE DEEMS NECESSARY FOR PROPER PERFORMANCE OF WORK.



**LIST OF SHEETS**

NO	TITLE
1	GENERAL PLAN & ELEVATION
2	ABUTMENT DETAILS
3	WIDENING DETAILS

**SCHEDULE OF QUANTITIES FOR WIDENING BRIDGE**

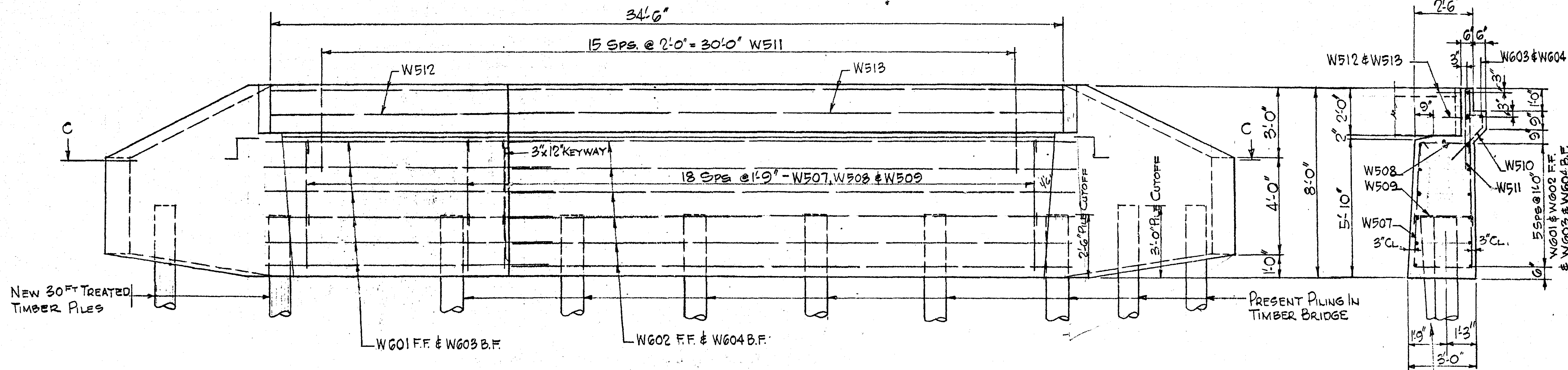
ITEM NO	ITEM	QUANTITY	UNIT
2401.501	CONCRETE MIX, N2 3Y43	56	CU. YD.
2401.541	REINFORCEMENT BARS	3950	POUND
2401.521	STRUCTURAL EXCAVATION, CLASS DE	93	CU. YD.
2401.521	STRUCTURAL EXCAVATION, CLASS WE	66	CU. YD.
2452.503	TREATED TIMBER PILING DELIVERED	120	LIN. FT.
2452.504	TREATED TIMBER PILING DRIVEN	112	LIN. FT.
2403.502	TREATED TIMBER	2.45	M.B.M.
2403.506	HARDWARE	375	POUND

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.

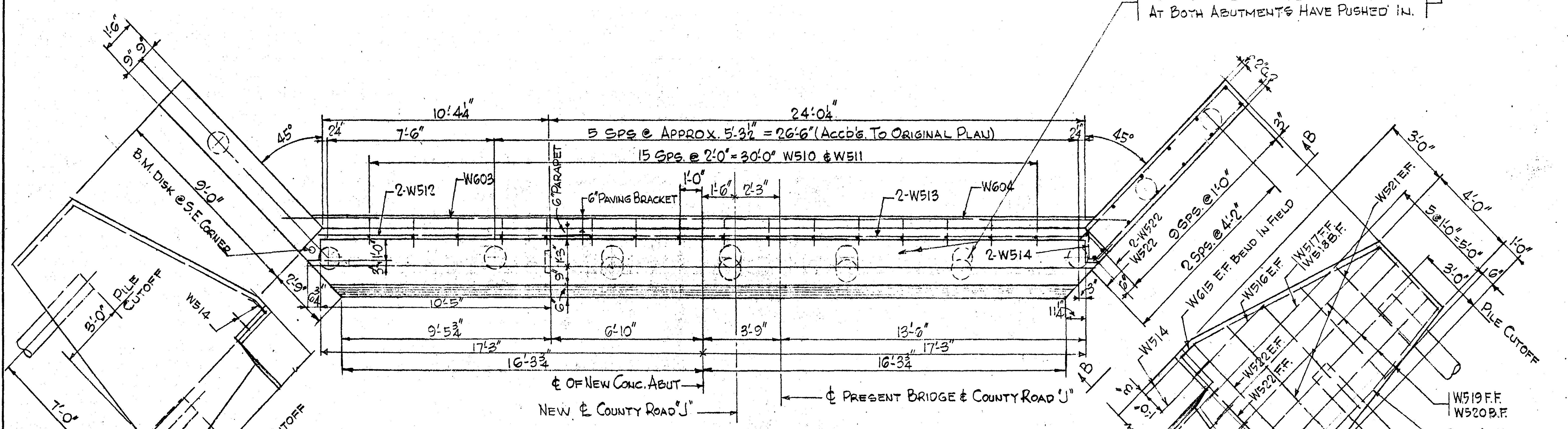
DATE 5-20-69 *J. M. Gustafson* REG. NO. 3452  
 APPROVED *James R. Gindler* ANOKA COUNTY REGISTERED PROFESSIONAL ENGINEER  
 DATE 7/14/69

PLANS PREPARED BY  
 ROBERT E. ERICKSON ENGINEERING CO.  
 3340 REPUBLIC AVE. ST. LOUIS PARK, MINN.

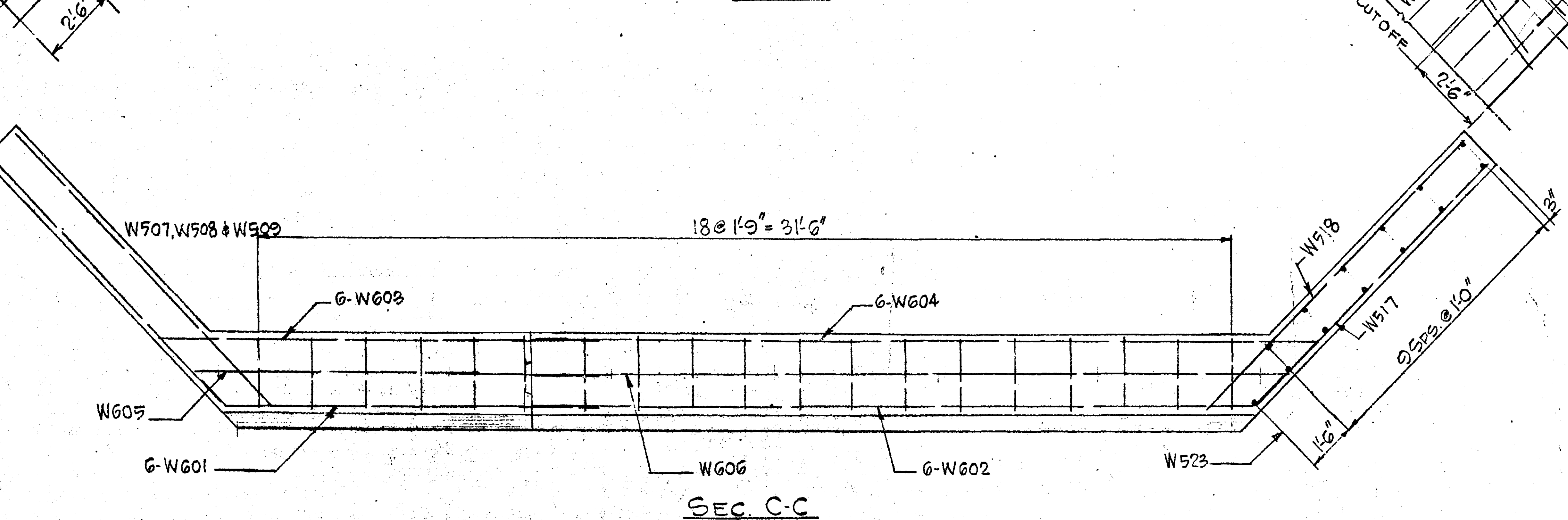
STATE OF MINNESOTA  
 DEPARTMENT OF HIGHWAYS  
 BRIDGE NO 2310  
 OVER RICE CREEK ON COUNTY ROAD 'J'  
 EAST OF LEXINGTON AVE.  
 WIDENING OF TRANSVERSE LAM. DECK  
 BRIDGE TO 30 FT. ROADWAY  
 GENERAL PLAN & ELEVATION  
 SEC. 36/3 TWP. 30 N R 23 W  
 CENTERVILLE & MOUNDS VIEW TWP.  
 ANOKA & RAMSEY COUNTY 6881



ELEVATION  
SCALE 3/8" = 1'-0"



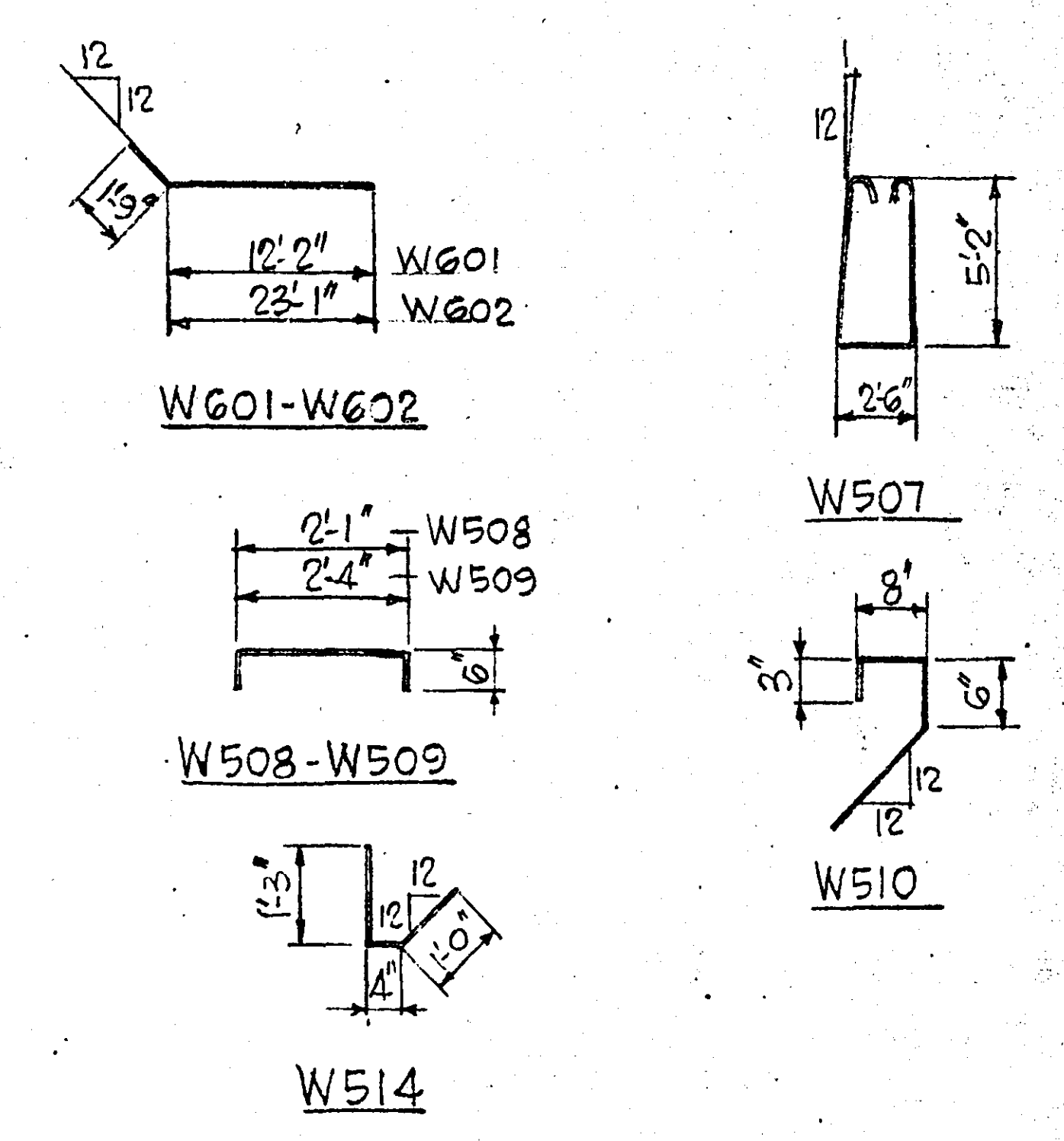
PLAN



SEC. C-C

BAR	SIZE	NO	LENGTH	SHAPE	LOCATION
W601	6	12	13'-11"	U	CAP. FRONT - LONGIT.
W602	6	12	24'-10"	U	" - " - " - "
W603	6	14	13'-11"	U	" - " - BACK - "
W604	6	14	25'-7"	U	" - " - " - "
W605	6	2	12'-8"	U	" - BRIDGE SEAT - "
W606	6	2	24'-7"	U	" - " - " - "
W507	5	38	13'-10"	U	" - STIRRUP
W508	5	38	3'-1"	U	" - TIES
W509	5	38	3'-4"	U	" - " - " - "
W510	5	32	3'-3"	U	BRACKET
W511	5	32	3'-3"	U	PARAPET - VERT
W512	5	4	12'-2"	U	" - HORIZ
W513	5	4	23'-10"	U	" - " - " - "
W514	5	8	2'-7"	U	" - " - @ CORNERS
W616	6	8	13'-6"	BEND IN FIELD	WINGWALL - TOP - E.F.
W515	5	8	4'-3"	U	" - HORIZ - E.F.
W517	5	4	8'-6"	U	" - " - " - F.F.
W518	5	4	9'-6"	U	" - " - " - F.F.
W519	5	20	10'-6"	U	" - " - " - F.F.
W520	5	20	11'-9"	U	" - " - " - B.F.
W521	5	20	11'-6"	U	" - VERT - E.F.
W522	5	12	7'-6"	U	" - " - " - E.F.
W523	5	4	5'-6"	U	" - " - " - F.F.

- ① CUT 2 FROM 1
- ② BEND IN FIELD



SUMMARY OF QUANTITIES FOR 2 ABUTMENTS	
CONCRETE MIX NO 3Y43	56 CU.YDS.
CLASS DE EXCAVATION	93 CU.YDS.
CLASS WE EXCAVATION	66 CU.YDS.
REINFORCEMENT BARS	3950 LBS.
TREATED TIMBER PILING 30FT LG	4 PILES
② B.M. DISK SEE STD. PLATE NO 9300	

② COUNTY WILL FURNISH DISK. PAYMENT FOR PLACING TO BE INCLUDED IN PRICES BID FOR OTHER ITEMS.  
B.M. 885.20  
S.E. CORNER WING WALL

**PILE NOTES**  
4-TREATED TIMBER PILES 30FT LG.  
ESTIMATED PENETRATION 2FT LESS THAN LENGTHS GIVEN.  
ALL PILES TO BE DRIVEN TO A BEARING OF NOT LESS THAN 15 TONS PER PILE.  
PRESENT PILE TO BE CUT DOWN TO GRADE SHOWN.

STATE OF MINNESOTA  
DEPARTMENT OF HIGHWAYS  
BRIDGE NO 2310  
ABUTMENT DETAILS

