MINNESOTA DEPARTMENT OF TRANSPORTATION

THE COUNTY OF OLMSTED

CONSTRUCTION PLAN FOR GRADING, AGGREGATE BASE, SURFACING & BR. NO. 55542

LOCATED ON C.R. 143 **BETWEEN** C.S.A.H. 36 **AND** C.S.A.H. 11 2.0 MILES SE. ROCH. **(GEOGRAPHIC DESCRIPTION)**

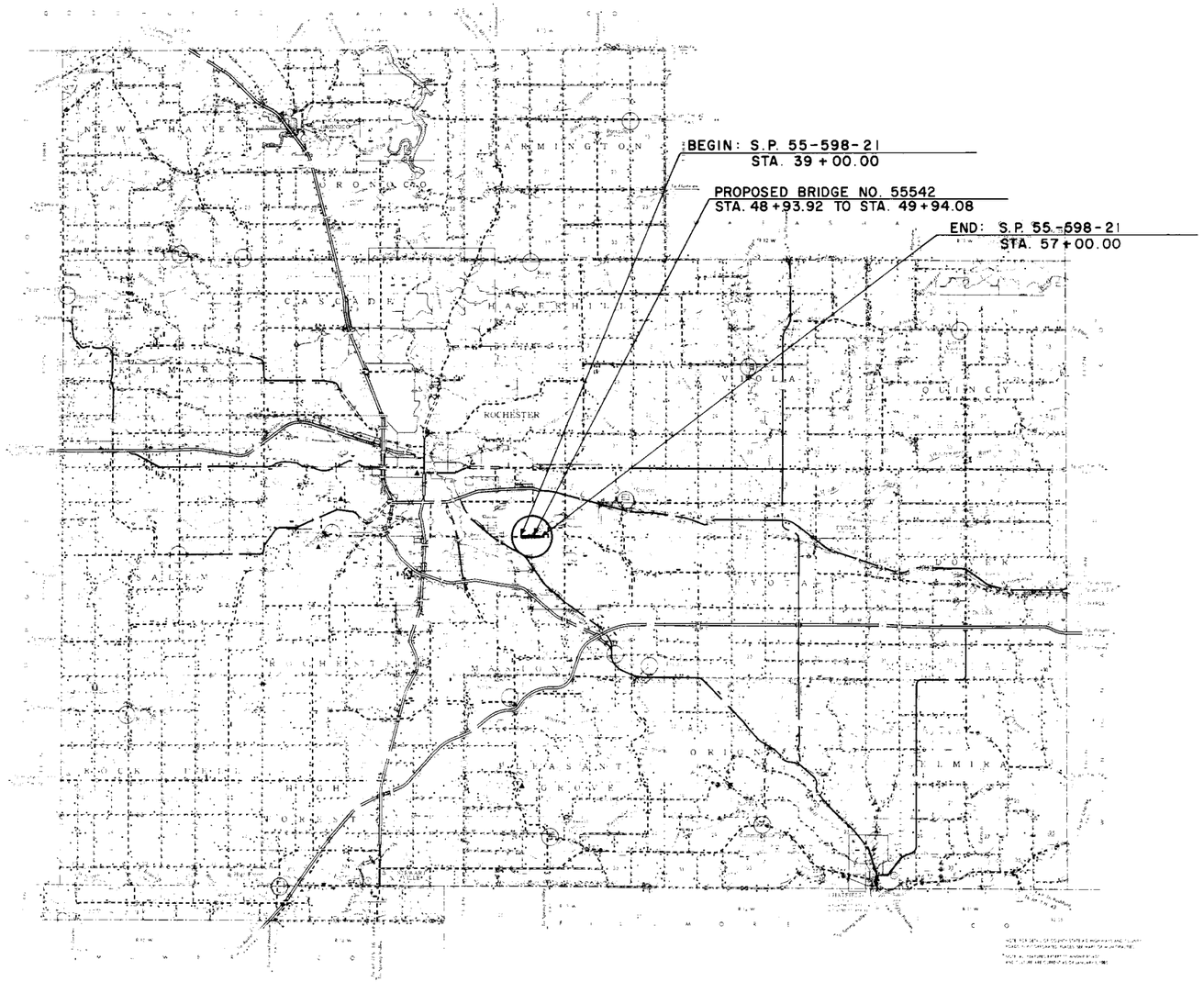
FROM 500.00' E. 1/4 COR. 8-17 MARION TWP T106N-R13W **TO** 353.00' W. SEC. COR. 8-9-16-17 MARION TWP T106N-R13W **(LEGAL DESCRIPTION)**

STATE PROJ. NO. 55-598-21

GROSS LENGTH	1800.00	FEET	0.3409 MILES
BRIDGES-LENGTH	100.16	FEET	0.01897 MILES
EXCEPTIONS-LENGTH	0	FEET	0 MILES
NET LENGTH	1800.00	FEET	0.3409 MILES

STATE PROJ. NO. .....

GROSS LENGTH		FEET	MILES
BRIDGES-LENGTH		FEET	MILES
EXCEPTIONS-LENGTH		FEET	MILES
NET LENGTH		FEET	MILES



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 Land 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
SHOP OVER
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 CORNER
SPRINGS
MARSH
TIMBER
ORCHARD
BRUSH
NURSERY
CATCH BASIN
FIRE HYDRANT
CATTLE GUARD
OVERPASS (Highway Over)
UNDERPASS (Highway Under)
BRIDGE
BUILDING (One Story Frame)
F-FRAME C-CONCRETE
S-STONE T-TILE
B-BRICK ST-STUCCO
IRON PIPE OR ROD
MONUMENT (STONE, CONCRETE OR METAL)
WOODEN HUB
GRAVEL PIT
SAND PIT
BORROW PIT
ROCK QUARRY
SLOPE EASEMENT

UTILITIES SYMBOLS

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

SCALES

PLAN 0 100'
PROFILE 0 100' HOR. 0 10' VERT.
INDEX MAP 0 2 MILES
CROSS SECTIONS 0 10'

ALBERTSON MPLS 55435

MINN. PROJ. NO. .....

GOVERNING SPECIFICATIONS

THE 1988 EDITION OF THE MINNESOTA DEPARTMENT OF TRANSPORTATION "STANDARD SPECIFICATIONS FOR CONSTRUCTION" SHALL GOVERN.

INDEX

SHEET NO. 1	TITLE SHEET AND LAYOUT MAP
SHEET NO. 2	ESTIMATE OF QUANTITIES & TYPICAL SECTIONS
SHEET NO. 3	PLAN AND PROFILE
SHEET NO. 4-6	CROSS SECTIONS
SHEET NO.	BRIDGE SHEETS

DESIGN DESIGNATION

R 45 M.P.H. SPEED ZONE

ADT (Current Year)	= 1406 (1989)	Design Speed	55 MPH
ADT (Future Year)	= 2531 (2009)	Based on STOPPING	Sight Distance
DHV (Design Hr. Vol.)	=	Height of eye	3.5' Height of object 0.5'
D (Directional Distr.)	= %	Design Speed not achieved at:	
T (Heavy Commercial)	= EST. 5 %	STA. 53+25 TO STA. 57+00	MPH 49
SOIL FACTOR	130 %	STA.	TO STA. MPH
SHOULDER WIDTH	8'	STA.	TO STA. MPH
9 TON DESIGN			

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 5/31/89 REG. NO. 10397 ENGR. Michael Sheehan

COUNTY Olmsted

Recommended for Approval _____ 5-1 19 89
DISTRICT STATE AID ENGINEER

Recommended for Approval _____ 19 .....
STATE AID PLANS AND SPECS ENGINEER

Approved ..... 19 .....
STATE AID ENGINEER

DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
APPROVED

....
DIVISION ADMINISTRATOR DATE

~~STATE AID PROJ. NO.~~

STATE PROJ. NO. 55-598-21 OLMSTED COUNTY C.R. 143 **SHEET NO.** 1 **OF** ..... **SHEETS**

ESTIMATED QUANTITIES

	SPECIFICATION NO.	ITEM	UNIT	PARTICIPATING	NON PARTICIPATING	TOTAL ESTIMATED QUANTITIES
	2101.501	CLEARING	ACRE		1.75	1.75
	2101.502	CLEARING	TREE		4	4
	2101.506	GRUBBING	ACRE		1.75	1.75
	2101.507	GRUBBING	TREE		4	4
	2104.501	REMOVE PIPE CULVERTS	LIN. FT.		230	230
	2105.515	UNCLASSIFIED EXCAVATION	CU. YD.		2926 (P)	2926 (P)
	2105.523	COMMON BORROW (LV)	CU. YD.		11354	11354
	2105.525	TOPSOIL BORROW (LV)	CU. YD.		53	53
	2105.535	SALVAGED TOPSOIL (EV)	CU. YD.		830 (P)	830 (P)
	2211.501	AGGREGATE BASE CLASS 5 (MOD.)	TON		2495	2495
①	2211.501	AGGREGATE BASE CLASS 2	TON		3080	3080
②	2221.501	AGGREGATE SHOULDERING CLASS 2	TON		940	940
	2331.504	BITUMINOUS MATERIAL FOR MIXTURE	TON		107	107
③	2331.508	WEARING COURSE MIXTURE (MOD.)	TON		435	435
	2331.514	BASE COURSE MIXTURE (MOD.)	TON		1122	1122
	2331.516	SHOULDER MIXTURE (MOD.)	TON		336	336
	2357.502	BITUMINOUS MATERIAL FOR TACK COAT	GALLON		453	453
	2501.511	18" C.S. PIPE CULVERT	LIN. FT.		224	224
	2501.511	30" C.S. PIPE CULVERT	LIN. FT.		132	132
④	2501.567	18" C.S. SAFETY APRONS	EACH		6	6
	2501.567	30" C.S. SAFETY APRONS & GRATES	EACH		2	2
	2531.501	CONCRETE CURB & GUTTER DESIGN B624	LIN. FT.		404	404
	2575.501	SEEDING	ACRE		3 (P)	3 (P)
⑤	2575.502	SEED, MIXTURE 500	POUND		150	150
⑥	2575.502	SEED, MIXTURE 1100	POUND		240	240
	2575.505	SODDING, TYPE EROSION	SQ.YD.		1000	1000
⑦	2575.511	MULCH MATERIAL TYPE 1	TON		6	6
	2575.519	DISK ANCHORING	ACRE		3 (P)	3 (P)
⑧	2575.532	COMMERCIAL FERTILIZER, ANALYSIS 12-12-12	POUND		600	600

① ITEM 2211.501 AGGREGATE BASE CLASS 2 INCLUDES 750 TONS FOR 8 APPROACHES & ENTRANCES.
② ITEM 2211.501 AGGREGATE SHOULDERING CLASS 2 INCLUDES 130 TONS FOR 8 APPROACHES & ENTRANCES.
③ ITEM 2231.508 WEARING COURSE MIXTURE INCLUDES 61 TONS FOR 5 APPROACHES & ENTRANCES.
④ GRATES NOT REQUIRED.
⑤ APPLICATION RATE 50 POUNDS PER ACRE.
⑥ APPLICATION RATE 80 POUNDS PER ACRE.
⑦ APPLICATION RATE 2 TONS PER ACRE.
⑧ APPLICATION RATE 200 POUNDS PER ACRE.

STANDARD PLATES

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

PLATE NO	DESCRIPTION
0005 A	SPECIFICATION REFERENCE TO STANDARD PLATES.
3040 F	CORRUGATED METAL PIPE CULVERT.
3124 B	METAL APRON CONNECTION.
3128 D	SAFETY APRON.
3221 C	CORRUGATED STEEL PIPE COUPLING BAND.
7100 F	CONCRETE CURB AND GUTTERS DESIGN B624.
8000 I	STANDARD BARRICADES.
8003 B	BREAKAWAY SIGN SUPPORT (PLASTIC).
9000 B	APPROACHES AND ENTRANCES.
7035 J	CONCRETE WALK & CURB RETURNS AT ENTRANCES.

NOTE: ALL DIMENSIONS AND SLOPES SHOWN ON TYPICAL SECTIONS ARE APPROXIMATE.

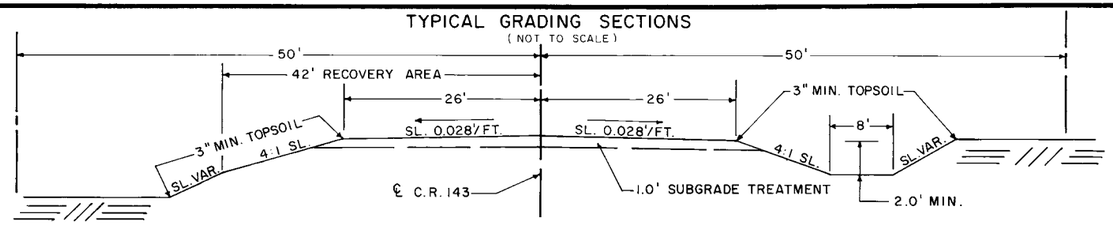
NOTE: SALVAGED TOPSOIL SHALL BE PLACED ON SLOPES AS SHOWN ON PLANS AND AS DIRECTED BY THE ENGINEER.

NOTE: BITUMINOUS WEARING COURSE 2331 (MOD).
BITUMINOUS MATERIAL - 6.2% OF MIXTURE BY WEIGHT
BITUMINOUS MIXTURE - 110 POUNDS/SQ.YD./INCH OF DEPTH

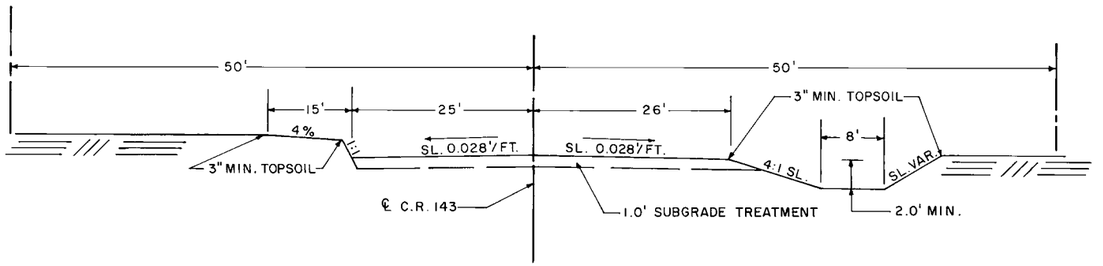
BITUMINOUS BASE COURSE 2331 (MOD).
BITUMINOUS MATERIAL - 5.3% OF MIXTURE BY WEIGHT
BITUMINOUS MIXTURE - 110 POUNDS/SQ.YD./INCH OF DEPTH

SHOULDER MIXTURE 2331 (MOD).
BITUMINOUS MATERIAL - 6.2% OF MIXTURE BY WEIGHT
BITUMINOUS MIXTURE - 110 POUNDS/SQ.YD./INCH OF DEPTH

TYPICAL GRADING SECTIONS
(NOT TO SCALE)

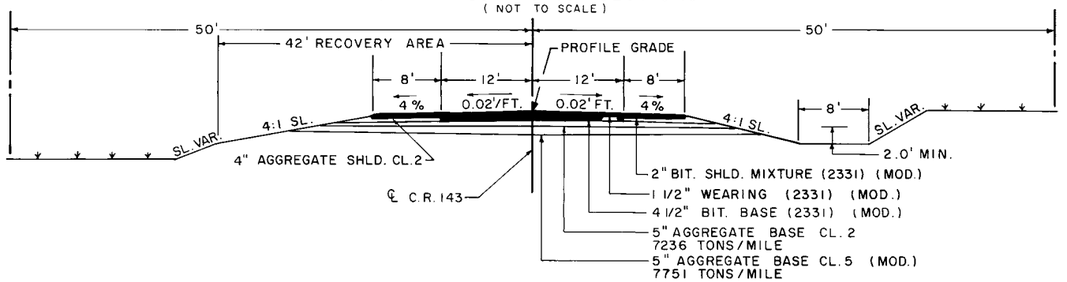


STA. 39+00 TO STA. 39+46
STA. 43+50 TO STA. 48+93.92
STA. 49+94.08 TO STA. 57+00

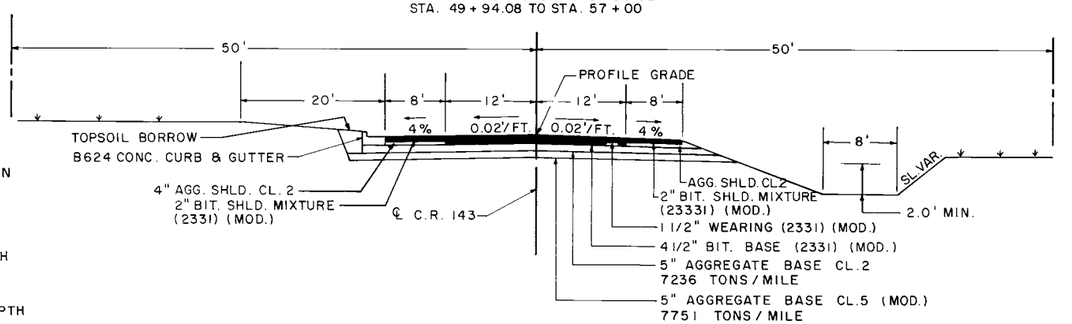


STA. 39+46 TO STA. 43+50

TYPICAL SURFACING SECTIONS
(NOT TO SCALE)



STA. 39+00 TO STA. 39+46
STA. 43+50 TO STA. 48+93.92
STA. 49+94.08 TO STA. 57+00



STA. 39+46 TO STA. 43+50

NOTE: ALL UTILITY POLES AND UNYIELDING OBJECTS SHALL BE REMOVED AND RELOCATED OUTSIDE THE 42' RECOVERY AREA.

~~S.A.P.~~

State Proj. No. 55-598-21 OLMSTED COUNTY C.R.143 **Sheet No.** 2 **of** **Sheets**

A. ROBINSON INC. MINNEAPOLIS 55401

Fed. Proj. No.

℄ CULV. 34+39
INPL. 24"x40' CMP
NO CHANGE

RES. DR. LT. 36+33
NO CULV. INPL.
NO CHANGE

RES. DR. LT. 37+19
NO CULV. INPL.
NO CHANGE

RES. DR. LT. 38+18
NO CULV. INPL.
NO CHANGE

RES. DR LT. 38+84
NO CULV. INPL.
NO CHANGE

F. ENT. LT. 45+70
INPL. 15"x16' CMP.
REMOVE

CONST. B624 CONC. CURB & GUTTER LT. STA. 39+46 TO STA. 43+50
BACKFILL CURB WITH TOPSOIL BORROW (LV) 53 CU. YDS.
CONST. BIT. SPILLWAY LT. STA. 43+60.

18"x 50' C.S. PIPE CULV.
2-18" C.S. PIPE SAFETY APRONS

RIPRAP AS NEEDED
TO BE COMPUTED ON BR. PLANS

MEADOW VIEW ESTATES FIRST SUBDIVISION

PARK

CHANNEL CHANGE

CREEK

WOODS

OAK VIEW ROAD

LAKES SUBDIVISION

12 11 10 9 8 7 6 5 4 3 2 1

HO.

37 AVE.

T.E.

BR 55542

BITUMINOUS SURFACE INPLACE

C.R. 143

END: S.P. 55-598-21
STA. 57+00.00

P.I. 34+00.00
INPL. C.I.M.

P.I. 60+53.00
INPL. C.I.M.

T 106 N R 13 W
T 105 N R 13 W

BEGIN: S.P. 55-598-21
STA. 39+00.00

FAIR OAKS FIRST SUBDIVISION

LOT 1 BLOCK 1

LOT 1 BLOCK 2

LOT 2

39 AVE. S.E.

40 AVE. S.E.

BEAR

F.E. RT. 37+16
NO CULV. INPL.
NO CHANGE

37 ST. LT. 39+86
INPL. 15"x32' CMP
W/APRONS.
REMOVE 36 LIN. FT.

NO CULV. REQ'D.

RES. DR. LT. 40+99
INPL. 15"x32' CMP.
W/APRONS
REMOVE 36 LIN. FT.

NO CULV. REQ'D.

F.E. RT. 41+02
NO CULV. INPL.
18"x 30' C.S. PIPE CULV.
2-18" C.S. PIPE SAFETY APRONS

RES. LT. 41+49
INPL. 24"x 28' CMP.
W/APRONS
REMOVE 35 LIN. FT.

NO CULV. REQ'D.

F.E. LT. 46+71
INPL. 15"x16' CMP.
REMOVE

RES. DR. 47+39 LT.
INPL. 15"x 26' CMP.
REMOVE

18"x 144' C.S. PIPE CULV.
2-18" C.S. PIPE SAFETY APRONS
INL. APRON STA. 46+30.25 LT.
OUTL. APRON STA. 47+87.75 LT.

39 AVE. SE. 54+28 RT.
INPL. 30"x 65' CMP.
REMOVE

40 AVE. S.E. 60+53 RT.
INPL. 30"x 55' CMP.
NO CHANGE

30"x 132' C.S. PIPE CULV.
2-30" C.S. PIPE SAFETY APRONS W/GRATES
INLET APRON STA. 54+76.25 RT.
OUTL. APRON STA. 53+18.75 RT.

CL. 4 TREES — GR. 4 TREES — CL. 1.75 ACRES — GR. 1.75 ACRES

B.M. EL. 1032.54
SPK. IN P.P. LT.
32' STA. 34+01

B.M. EL. 1066.26
SPK. IN G.R. LT.
18' STA. 60+41

FINISHED ℄ SURFACING ELEVATION

℄ PROFILE
PROFILE 75' LT.
PROFILE 75' RT.

P.I. +00
ELEV. 34.45
300' V.C.
M = 0.6375

P.I. +00
ELEV. 38.50
300' V.C.
M = 0.35625

P.I. +00
ELEV. 42.10
550' V.C.
M = 3.575

P.V.C. +50 ELEV.

P.V.T. +50 ELEV.

P.V.C. +25 ELEV. 41.0

P.V.T. +75 ELEV. 57.50

WEST END BR. STA. 48+93.92

EAST END BR. STA. 49+04.08

-0.35%

+1.35%

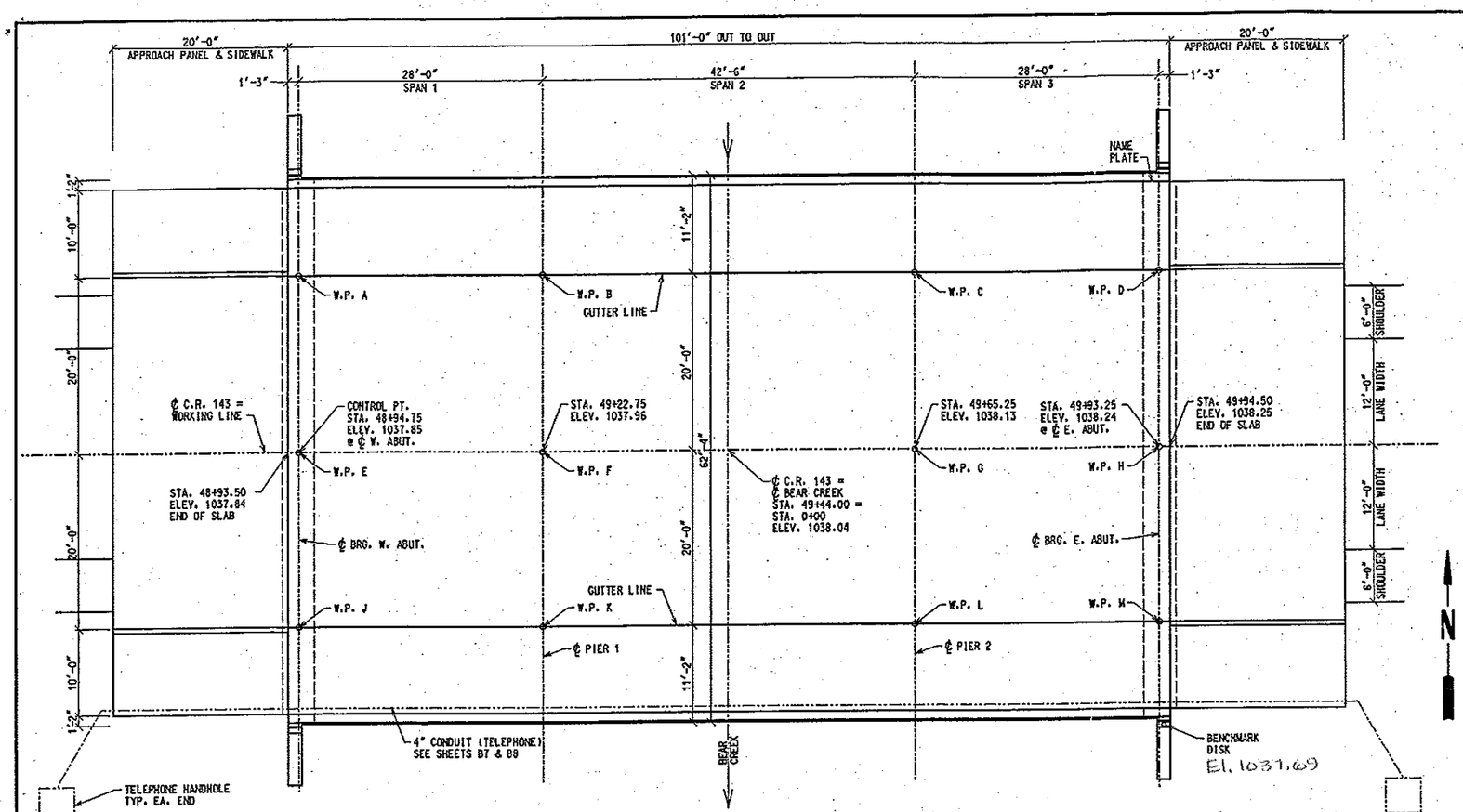
+0.4%

+5.6%

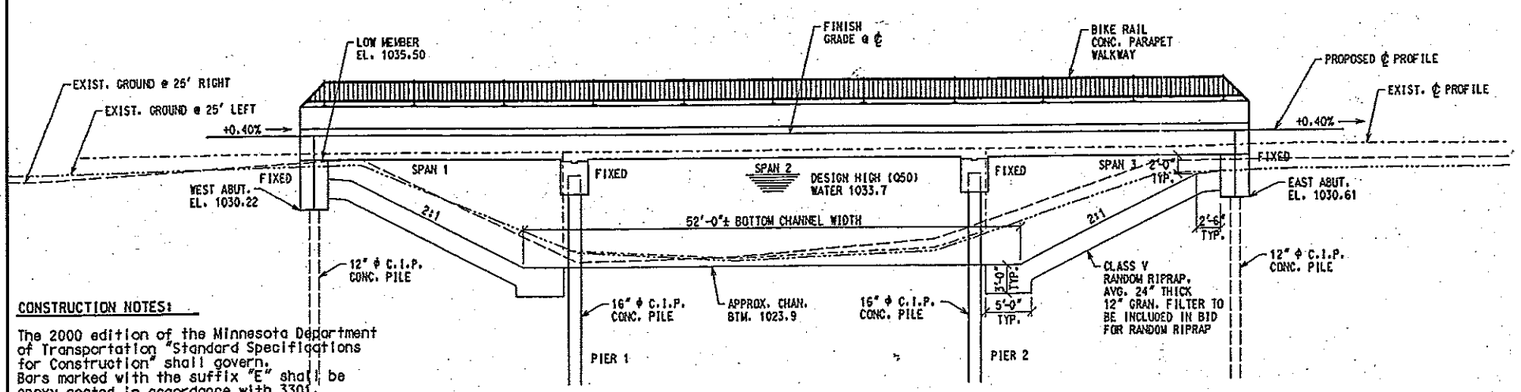
SUBGRADE TREATMENT:
EXCAVATE 1.0' BELOW SUBGRADE ELEVATION
STA. 39+00 TO STA. 46+00 AND
STA. 54+00 TO STA. 57+00

UNCLASSIFIED EXC.	2926	CU. YDS.
SALVAGE TOPSOIL (EV)	830	CU. YDS.
COMMON BORROW (LV)	11354	CU. YDS.
EMBANKMENT	9963	CU. YDS.

State Proj. No. 55-598-21 OLMSTED COUNTY C.R. 143 Sheet No. 3 of Sheets



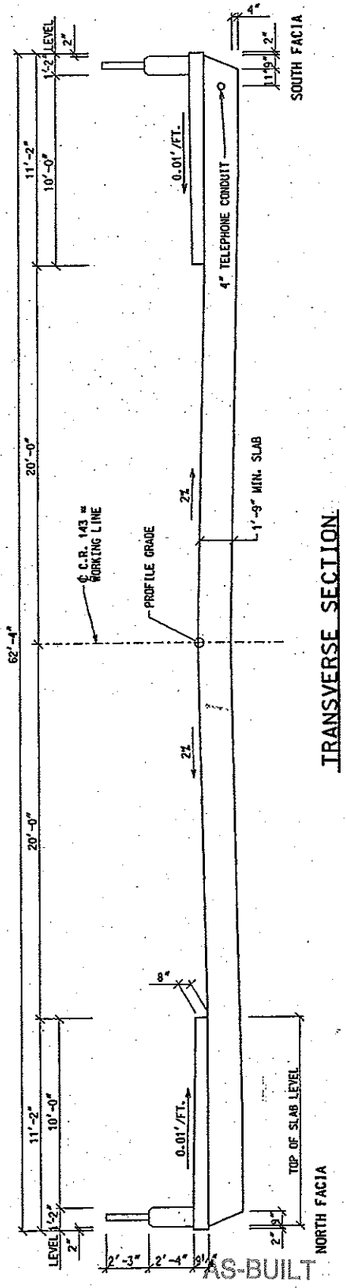
GENERAL PLAN



GENERAL ELEVATION

CONSTRUCTION NOTES:

The 2000 edition of the Minnesota Department of Transportation "Standard Specifications for Construction" shall govern.
Bars marked with the suffix "E" shall be epoxy coated in accordance with 3301.
The first two digits of each bar mark indicate the bar size. All reinforcement shall be 2" clear, unless shown or noted otherwise. Reinforcement bars are identified by metric designation.



TRANSVERSE SECTION

DESIGN DATA

1996 and Current Interim AASHTO Design Specifications
Load Factor Design Method HS 25 Loading
Includes 17 P.S.F. Dead Load Allowance for future wearing course modifications.
Maximum Allowable Design Stresses:
Reinforced Concrete:
f'c = 4000 psi n = 8 fy = 60,000 psi Reinf
Structural Steel:
fy = 36 ksi (Spec. 3306)
fy = 50 ksi (Spec. 3309)
Deck Area 6296 SQ. FT.
2350 Current ADT
Operating Rating HS 51
Design Speed 40 mph

LIST OF SHEETS

NO.	DESCRIPTION
B1	TITLE SHEET
B2	GENERAL PLAN AND ELEVATION
B3	BRIDGE LAYOUT
B4	ABUTMENT PLAN
B5	ABUTMENT DETAILS AND REINFORCEMENT
B6	PIER DETAILS AND REINFORCEMENT
B7	SUPERSTRUCTURE PLAN & LONG. SECTION
B8	TRANSVERSE SECTION AND RAIL
B9	PARAPET RAIL (TYPE P-1) & METAL RAILING (TYPE M-3)
B10	NAME PLATE AND PILE SPLICE
B11	BRIDGE SURVEY
B12	BRIDGE SURVEY PLAN AND PROFILE
B13	APPROACH PANEL

B.M. ELEV. 1033.63 (M.S.L. 1929 ADJ.)
PT. ON SO. PIER TOP

NOTE:
SEE SHT. 13 FOR APPROACH PANELS AND SIDEWALK.

APPROVED: Richard E. Sherland
DATE: 3/12/02 OLMSTED COUNTY ENGINEER

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 under the laws of the state of Minnesota.
Printed Name: Harland C. Zenk Lic. No. 7543
Signature: Harland C. Zenk Date: 2/7/2003

Zenk•Read•Trygstad & ASSOCIATES, INC.
Engineers/Architects
Box 689, Albert Lea, MN 56007 507/373-6699

COUNTY ROAD 143 OLMSTED CO.
STATE OF MINNESOTA
DEPARTMENT OF TRANSPORTATION

BRIDGE NO. 55542

C.R. 143 OVER BEAR CREEK
1.0 MILES EAST OF C.S.A.H. 36
28-42-28 SPAN 40'-0" ROADWAY
BARRIER & BIKE RAILING IDENTIFICATION NUMBER 209

GENERAL PLAN AND ELEVATION
SEC. 8 & 17 T106N R13W
MARION TOWNSHIP OLMSTED COUNTY

APPROVED: Kevin L. Western 1/12/04
FOR STATE BRIDGE ENGINEER

DES: HCZ	DR: MKB
CHK: DDS	CHK: HCZ

AS-BUILT
FEB 14 2005
ENGINEERING

① STA. 49+44 NON-PARTICIPATING
② SEE SHEET 8 FOR REQUIREMENTS
③ SEE SHEET 13 FOR REQUIREMENTS

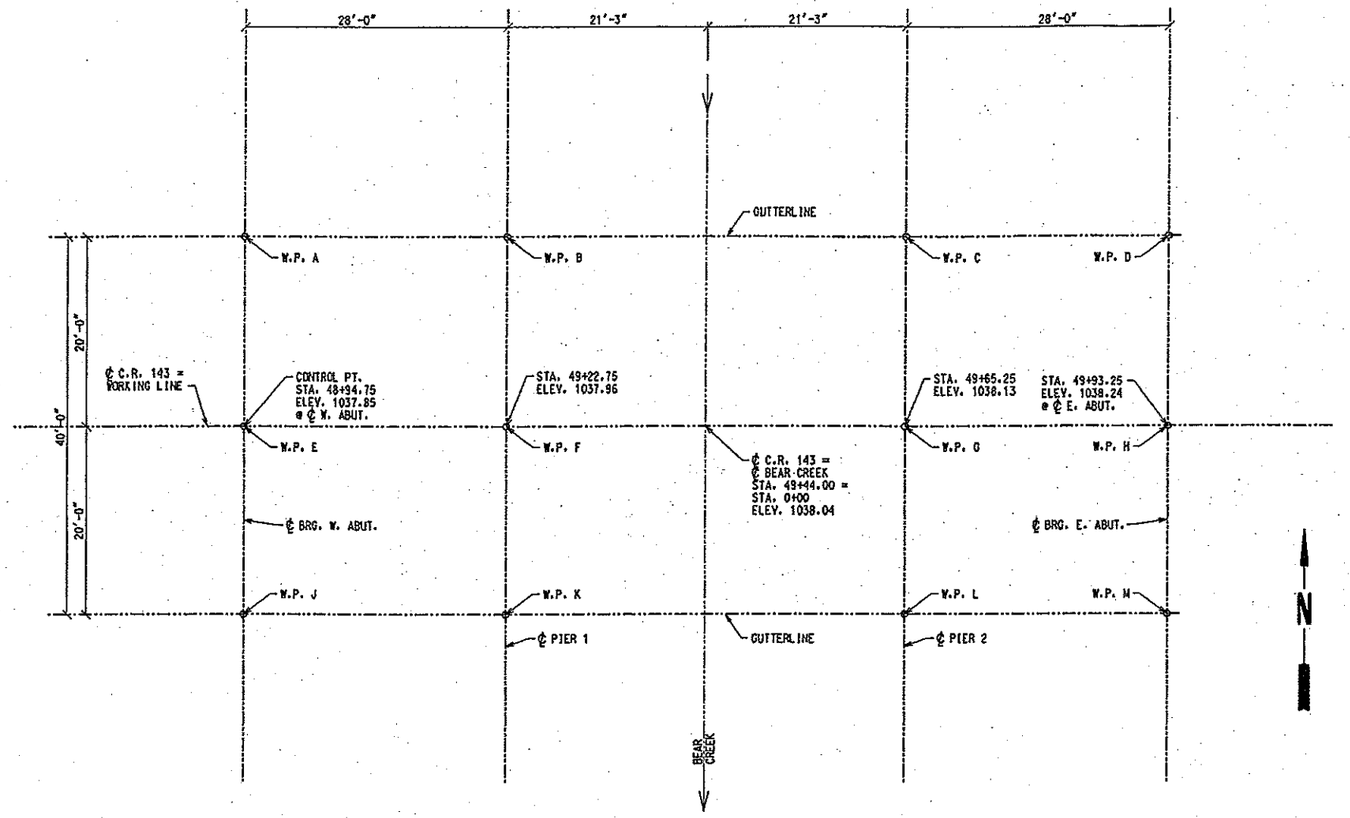
SCHEDULE OF QUANTITIES FOR ENTIRE BRIDGE

ITEM NO.	2021.501	2401.501	2401.512	2401.513	2401.541	2402.583	2452.507	2452.508	2452.519	2452.507	2452.508	2452.519	2511.501	2442.501	2401.601	2401.601	2401.515	2301.601	2545.509	2105.522
ITEM	MOBILIZATION	STRUCTURE CONCRETE (3Y43)	BRIDGE SLAB CONCRETE (3Y35A)	TYPE P-1 RAILING CONCRETE (3Y46A)	REINFORCEMENT BARS (EPOXY COATED	METAL RAILING TYPE M-F	C.I.P. CONCRETE PILING 12" DELIVERED	C.I.P. CONCRETE PILING 12" DRIVEN	C.I.P. CONCRETE TEST PILE 12" 60 FT. LONG	C.I.P. CONCRETE PILING 16" DELIVERED	C.I.P. CONCRETE PILING 16" DRIVEN	C.I.P. CONCRETE TEST PILE 16" TO FT. LONG	RANDOM RIPRAP CLASS V	REMOVE OLD BRIDGE ①	STRUCTURE EXCAVATION ③	SLOPE PREPARATION	SIDEWALK CONCRETE 3Y46A ③	BRIDGE APPROACH PANEL ③	CONDUIT SYSTEM (TELEPHONE) ② ③	SELECT GRANULAR BORROW ③
UNIT	LUMP SUM	CU.YD.	SQ.FT.	LIN.FT.	LB.	LIN.FT.	LIN.FT.	LIN.FT.	EACH	LIN.FT.	LIN.FT.	EACH	CU.YD.	LUMP SUM	LUMP SUM	LUMP SUM	SQ. FT.	EACH	LUMP SUM	CU. YD.
QUANTITY	1	127 (P)	6296 (P)	202 (P)	92510 (P)	202 (P)	700 630	700 512	2	1320 1011	1320 985	2	423 390	1	1	1	763 800	2	1	320

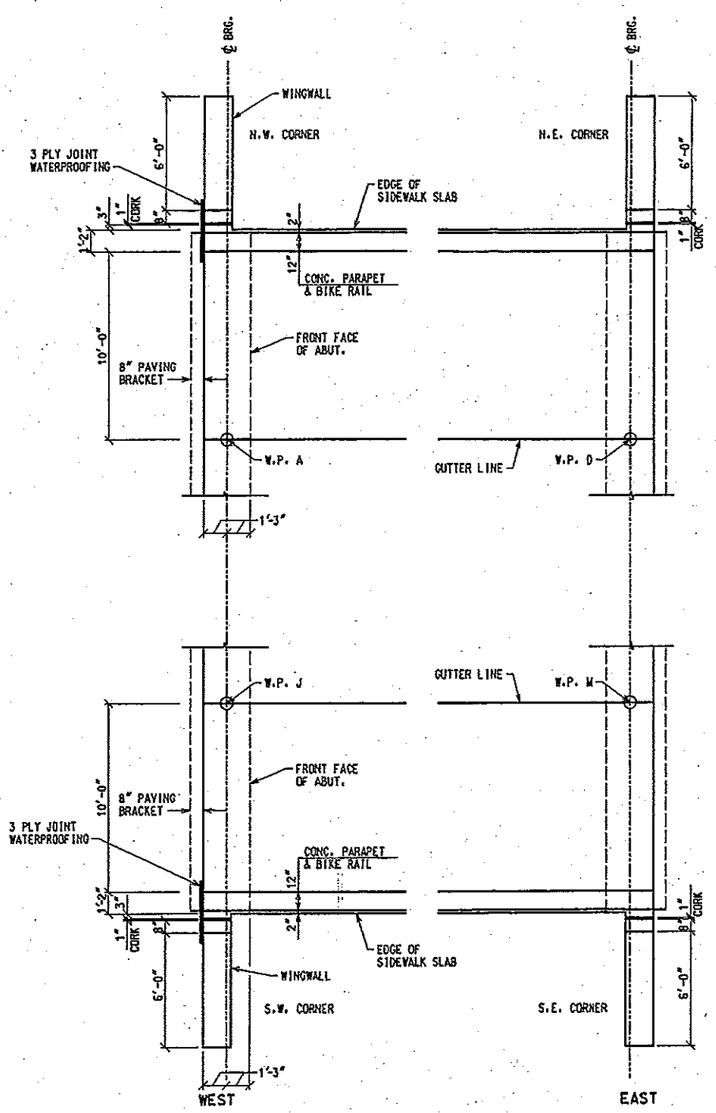
BR. NO. 55542 STATE AID PROJ. NO. S.A.P. 55-598-21 SHEET NO. B2 OF B13 SHEETS

DATE: 2/7/03
FILE NAME: 6813b2.dgn
REF. FILES: 6813sil 6813dtl

...\6800-6849\6813olco\6813b2.dgn Feb. 07, 1998 10:59:13



BRIDGE LAYOUT



CORNER LAYOUT DETAIL

POINT	STATION	X-COORD	Y-COORD	A	B	C	D	E	F	G	H	J	K	L	M	N
A	48+94.75				28.00			20.00	34.41				48.83	81.06		
B	49+22.75					42.50			20.00	46.97		48.83			81.06	
C	49+65.25						28.00			20.00	34.41	81.06	58.36		48.83	
D	49+93.25										20.00		81.06	48.83		
E	48+94.75								28.00			20.00	34.41			
F	49+22.75									42.50			20.00	46.97		
G	49+65.25										28.00			20.00	34.41	
H	49+93.25														20.00	
J	48+94.75												28.00			
K	49+22.75													42.50		
L	49+65.25														28.00	
M	49+93.25															

DIMENSIONS BETWEEN WORKING POINTS

TOP OF ROWY	TOP OF ROWY TO BR SEAT	BRIDGE SEAT	POINT
1037.45	2.00	1035.45	A
1037.56	1.92	1035.64	B
1037.73	1.92	1035.81	C
1037.84	2.00	1035.84	D
1037.85	2.00	1035.85	E
1037.96	1.92	1036.04	F
1038.13	1.92	1036.21	G
1038.24	2.00	1036.24	H
1037.45	2.00	1035.45	J
1037.56	1.92	1035.64	K
1037.73	1.92	1035.81	L
1037.84	2.00	1035.84	M

AS-BUILT

FEB 14 2005

ENGINEERING

CERTIFIED BY _____ PROFESSIONAL ENGINEER LIC. NO. 7543 2/7/2003

S.A.P. 55-598-21

TITLE: BRIDGE LAYOUT

DES: HCZ DR: MKB APPROVED:

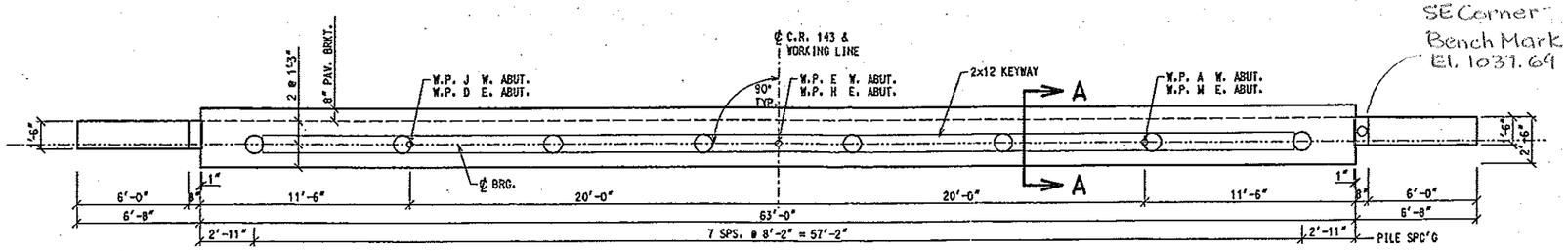
CHK: DDS CHK: HCZ

Sheet No. B3 of B13 Sheets

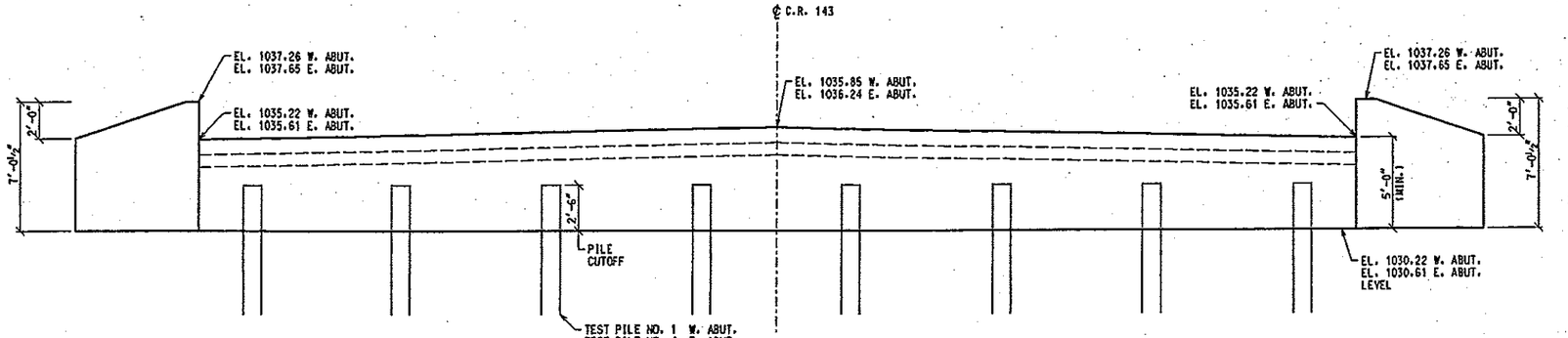
Bridge No. 55542

DATE:2/7/03
FILENAME:6801303
REF. FILES:1808003

...\6800-6849\6813olco\6813b3.dgn Feb. 07, 1998 08:54:20



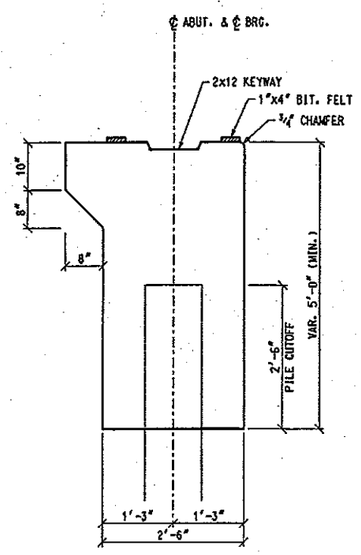
PLAN VIEW



ELEVATION

ABUTMENT

SCALE: ¼" = 1'-0"



SECTION A-A

SUMMARY OF QUANTITIES FOR TWO ABUTMENTS

	STRUCTURE CONCRETE (3Y43)	75 CU. YD.
	REINFORCEMENT BARS (EPOXY COATED)	7770 LB.
(1)	STRUCTURE EXCAVATION	1 LUMP SUM
(2)	B.M. DISK (STANDARD PLATE NO 9300)	1 EACH
(3)	C.I.P. CONC. PILING DELIVERED, 12" 630 ~~700~~	LIN. FT.
(3)	C.I.P. CONC. PILING DRIVEN, 12" 512 ~~700~~	LIN. FT.
	C.I.P. CONC. TEST PILE 60 FT. LONG, 12"	2 EACH

(1) SEE SPECIAL PROVISIONS

(2) COUNTY WILL FURNISH DISK. PAYMENT FOR PLACING IS TO BE INCLUDED IN PRICE BID FOR OTHER ITEMS.

(3) DOES NOT INCLUDE TEST PILES.

COMPUTED PILE LOAD - TONS/PILE

DEAD LOAD	24.4
LIVE LOAD	14.9
DESIGN LOAD	39.3

PILE NOTES

2 - C.I.P. CONCRETE TEST PILES, 60' LONG
14 - C.I.P. CONCRETE PILES EST. LGTH 50' LONG
16 - C.I.P. CONCRETE PILES REQ'D FOR 2 ABUTS.

ALL PILES ARE TO HAVE A NOMINAL DIAMETER OF 12"

SEE DETAIL B201 FOR SPLICES.

SEE SURVEY SHEET FOR TEST PILE LOCATIONS.

AS-BUILT
FEB 14 2005
ENGINEERING

DATE: 2/7/03
FILENAME: 6813b4
REF. FILES: 6813olco

CERTIFIED BY Herbert C. Cook PROFESSIONAL ENGINEER LIC. NO. 7543 2/7/2003

S.A.P. 55-598-21

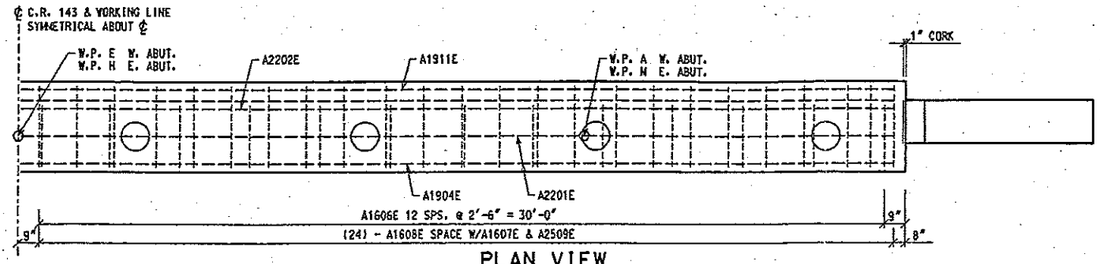
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DES: HCZ DR: MKB APPROVED:
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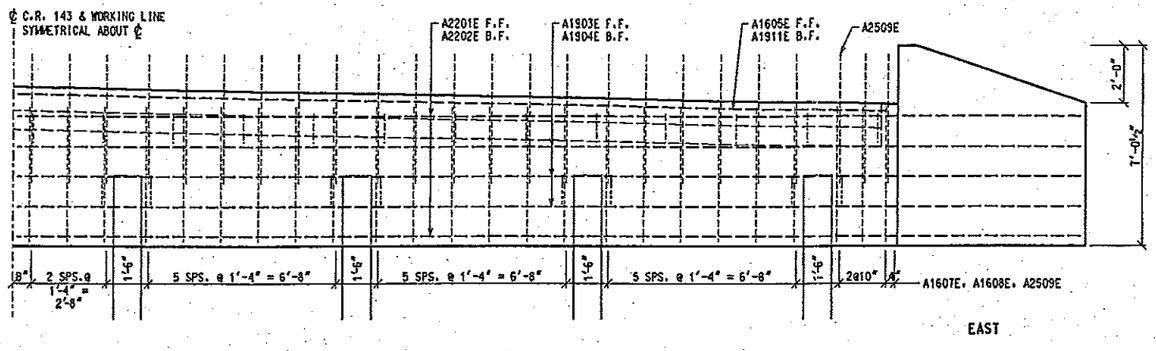
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Bridge No. 55542

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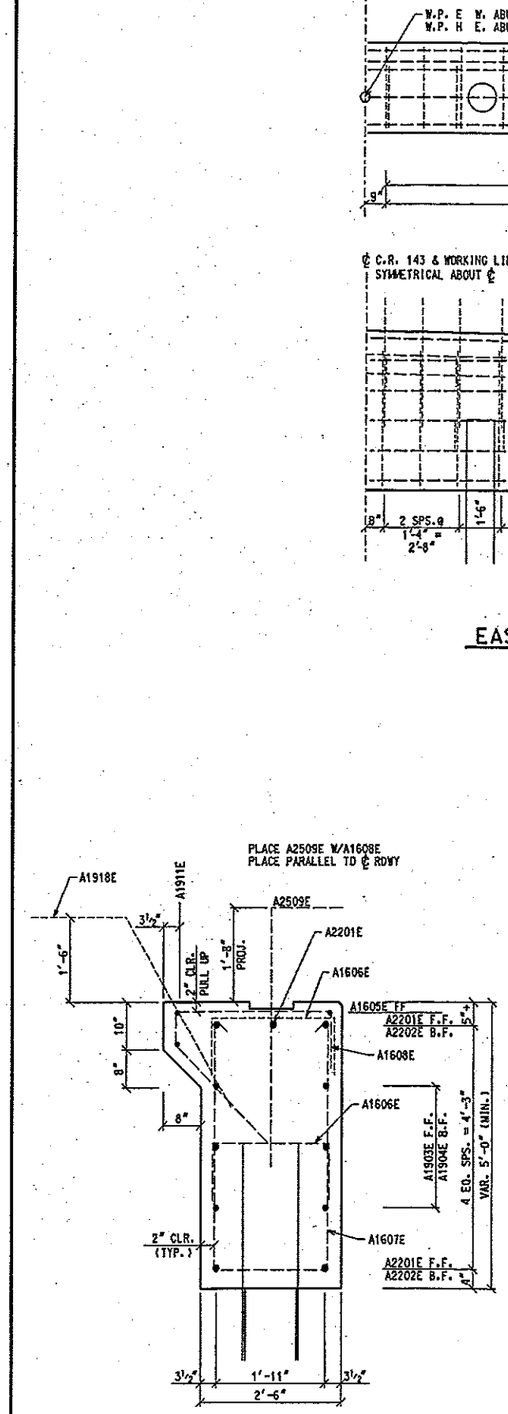
PLAN VIEW



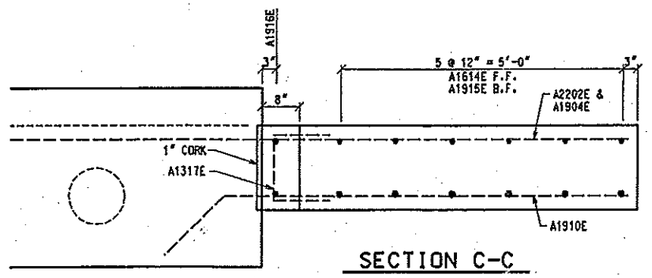
ELEVATION

EAST ABUTMENT (Looking East) & WEST ABUTMENT (Looking West)

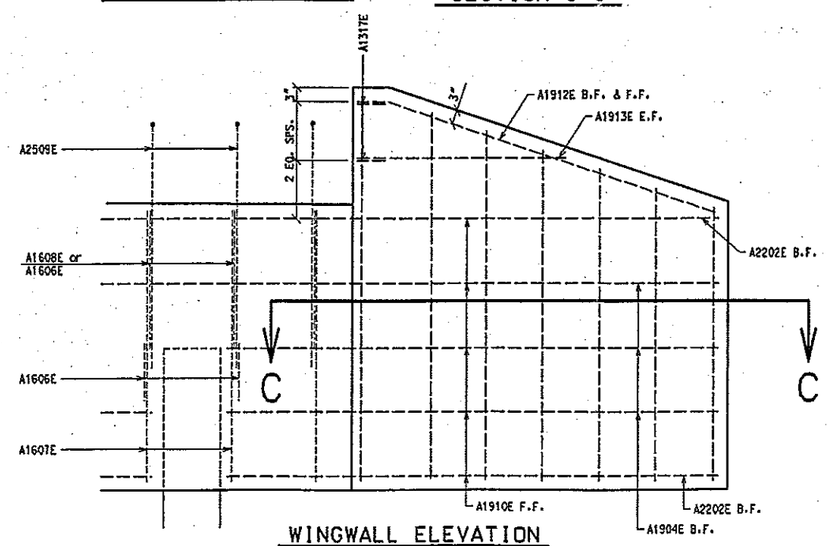
SCALE: ⅜" = 1'-0"



SECTION B-B



SECTION C-C

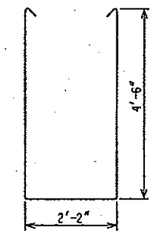


WINGWALL ELEVATION

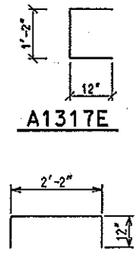
BILL OF REINFORCEMENT
FOR TWO ABUTMENTS

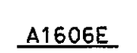
BAR	NO.	LENGTH	SHAPE	LOCATION
A2201E	12	31'-1"	STRT.	CAP HORZ.
A2202E	8	37'-9"	STRT.	CAP HORZ.
A1903E	12	31'-1"	STRT.	CAP HORZ.
A1904E	12	37'-9"	STRT.	CAP HORZ.
A1605E	4	31'-1"	STRT.	CAP HORZ.
A1606E	84	4'-2"	BENT	CAP TIE
A1607E	96	12'-1"	BENT	CAP STIRRUP
A1608E	96	6'-11"	BENT	CAP TIE
A2509E	96	5'-11"	BENT	CAP TIE @ SLAB
A1910E	20	8'-4"	BENT	WING WALL HORZ.
A1911E	8	31'-5"	STRT.	PAVING BLOCK HORZ.
A1912E	8	6'-10"	BENT	WING WALL TOP
A1913E	8	5'-2"	STRT.	WING WALL HORZ.
① A1614E	12	12'-0"	STRT.	WING WALL VERT.
① A1915E	12	12'-0"	STRT.	WING WALL VERT.
A1916E	8	6'-8"	STRT.	WING WALL VERT.
A1317E	8	3'-2"	BENT	WING WALL TIE
A1918E	80	5'-6"	BENT	PAVING BRACKET DOWEL

① CUT TWO FROM ONE

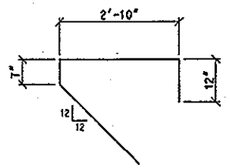


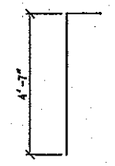
A1317E



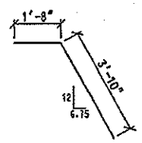


A1607E A1606E

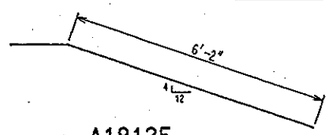




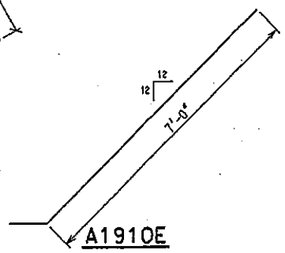
A1608E A2509E



A1918E



A1912E



A1910E

AS-BUILT
FEB 14 2005
ENGINEERING

CERTIFIED BY [signature] PROFESSIONAL ENGINEER LIC. NO. 7543 2/7/2003 | S.A.P. 55-598-21

TITLE: ABUTMENT DETAILS AND REINFORCEMENT

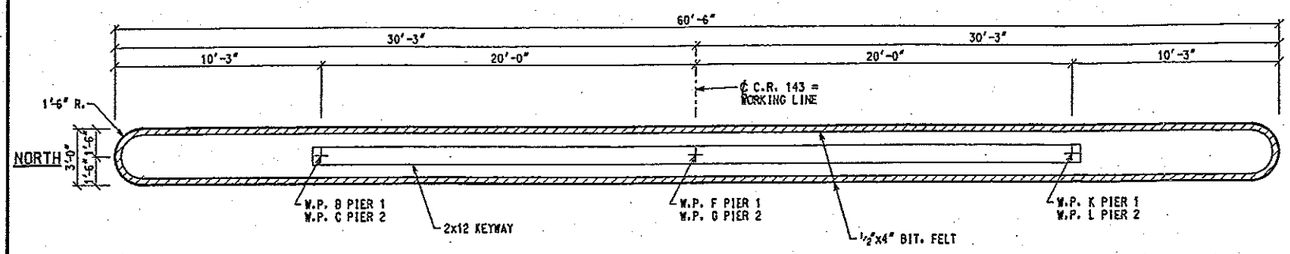
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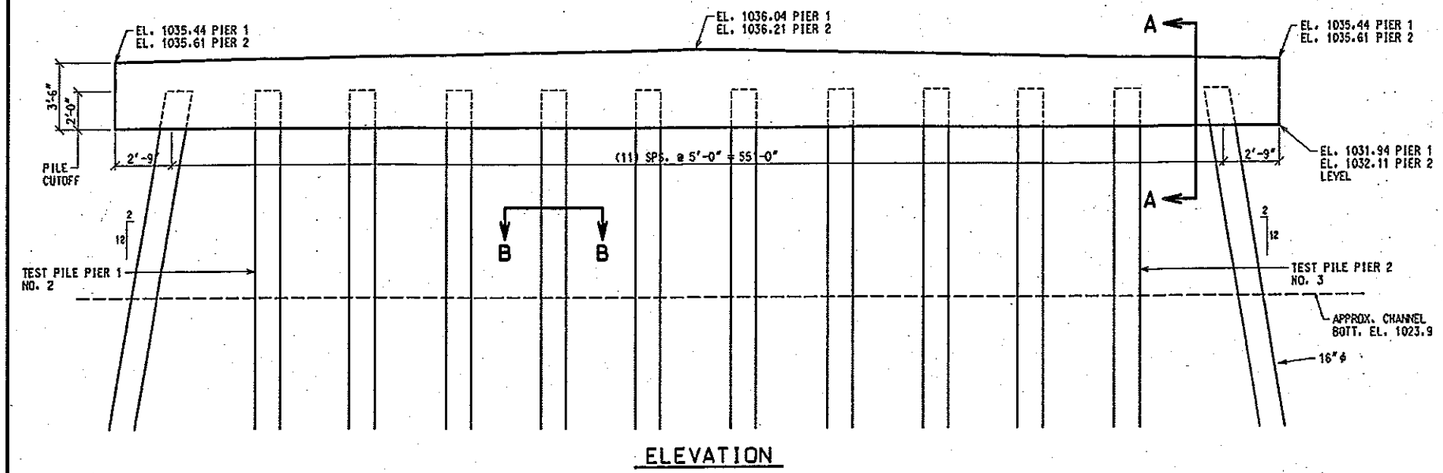
Bridge No. 55542

DATE:12/7/05
FILENAME:6813b5
REF. FILES:6800035

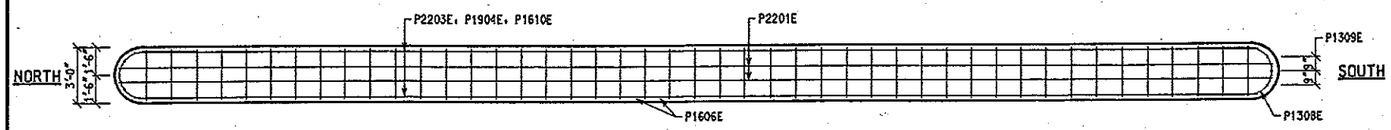
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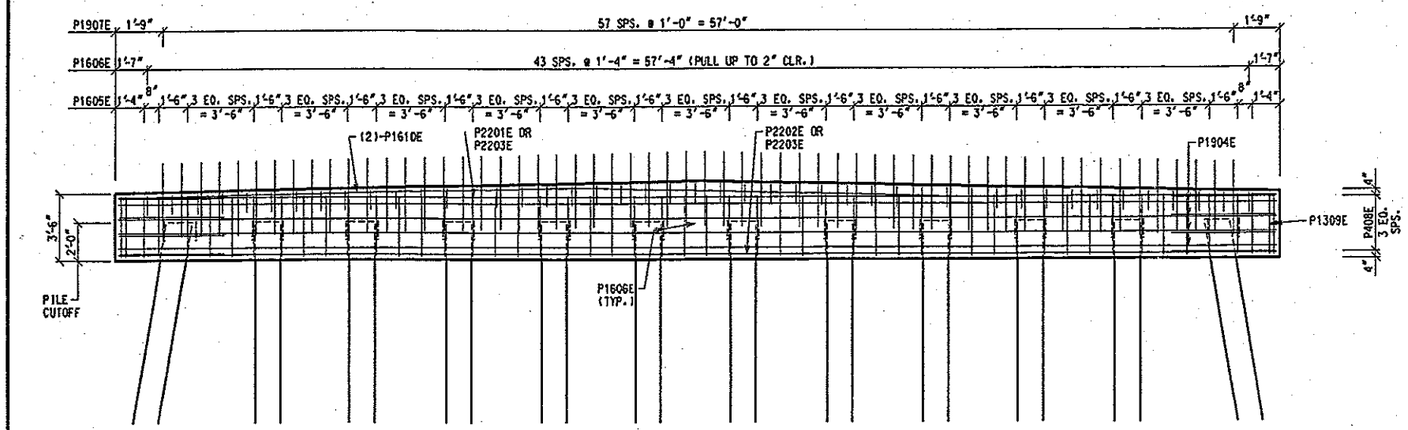
PLAN VIEW



ELEVATION

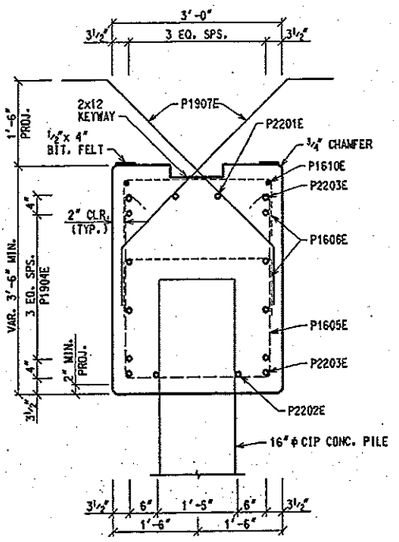


PLAN VIEW



ELEVATION

PULL TOP P1606E UP TO WITHIN 2 INCHES OF TOP OF PIER.



SECTION A-A

SUMMARY OF QUANTITIES FOR TWO PIERS

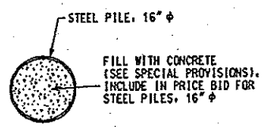
	STRUCTURE CONCRETE (3Y43)		52 CU. YD.
	REINFORCEMENT BARS (EPOXY COATED)		7380 LB.
(1)	CIP CONC. PILING DELIVERED 16"℄	~~1011~~	~~1320~~ LIN. FT.
(1)	CIP CONC. PILING DRIVEN 16"℄	~~9615~~	~~1320~~ LIN. FT.
	TEST PILES 70 FT. LONG 16"℄		2 EACH

(1) DOES NOT INCLUDE TEST PILES.

BILL OF REINFORCEMENT FOR TWO PIERS

	BAR	NO.	LENGTH	SHAPE	LOCATION
	P2201E	4	60'-2"	STRT.	CAP LONG.
	P2202E	4	60'-0"	STRT.	CAP LONG.
	P2203E	8	57'-6"	STRT.	CAP LONG.
	P1904E	16	57'-6"	STRT.	CAP LONG.
	P1605E	96	9'-11"	BENT	CAP STIRRUP
	P1606E	136	4'-8"	BENT	CAP TIE
(2)	P1907E	232	5'-11"	BENT	CAP DOWEL
	P1308E	16	9'-6"	BENT	CAP TIE @ END
	P1309E	12	3'-2"	STRT.	CAP END VERT.
	P1610E	4	57'-6"	STRT.	CAP LONG. TOP

(2) PLACE P1907E PARALLEL TO ℄ OF ROAD.



COMPUTED PILE LOAD - TONS/PILE

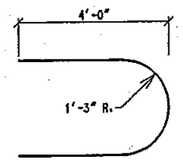
DEAD LOAD	36.2
LIVE LOAD	16.7
DESIGN LOAD	52.9

PILE NOTES:

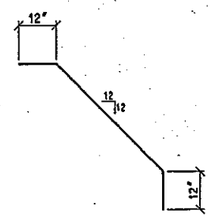
2 - 16"℄ C.I.P. TEST PILES, 70' LONG.
22 - 16"℄ C.I.P., 60' EST. LENG.
24 - 16"℄ C.I.P. REQ'D FOR 2 PIERS

ALL PILES ARE TO BE 16" C.I.P.
PILE SPACING SHOWN IS AT BOTTOM OF CAP.
END PILES ARE TO BE BATTERED 2" PER FOOT IN DIRECTION SHOWN.
SEE DETAIL B201 FOR SPLICES.
STEEL PILE ARE TO BE PAINTED PER SPEC. 2452.3.
ALL PIER PILES TO BE DRIVEN TO ELEVATION 1000.0 OR BELOW.
SEE SURVEY SHEET FOR TEST PILE LOCATIONS.

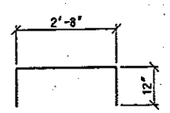
SECTION B-B



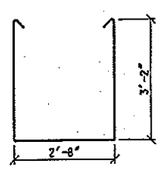
P1308E



P1907E



P1606E



P1605E

AS-BUILT
FEB 14 2005
ENGINEERING

CERTIFIED BY Raymond C. Evans PROFESSIONAL ENGINEER LIC. NO. 7543 2/7/2003 | S.A.P. 55-598-21

TITLE: PIER DETAILS AND REINFORCEMENT

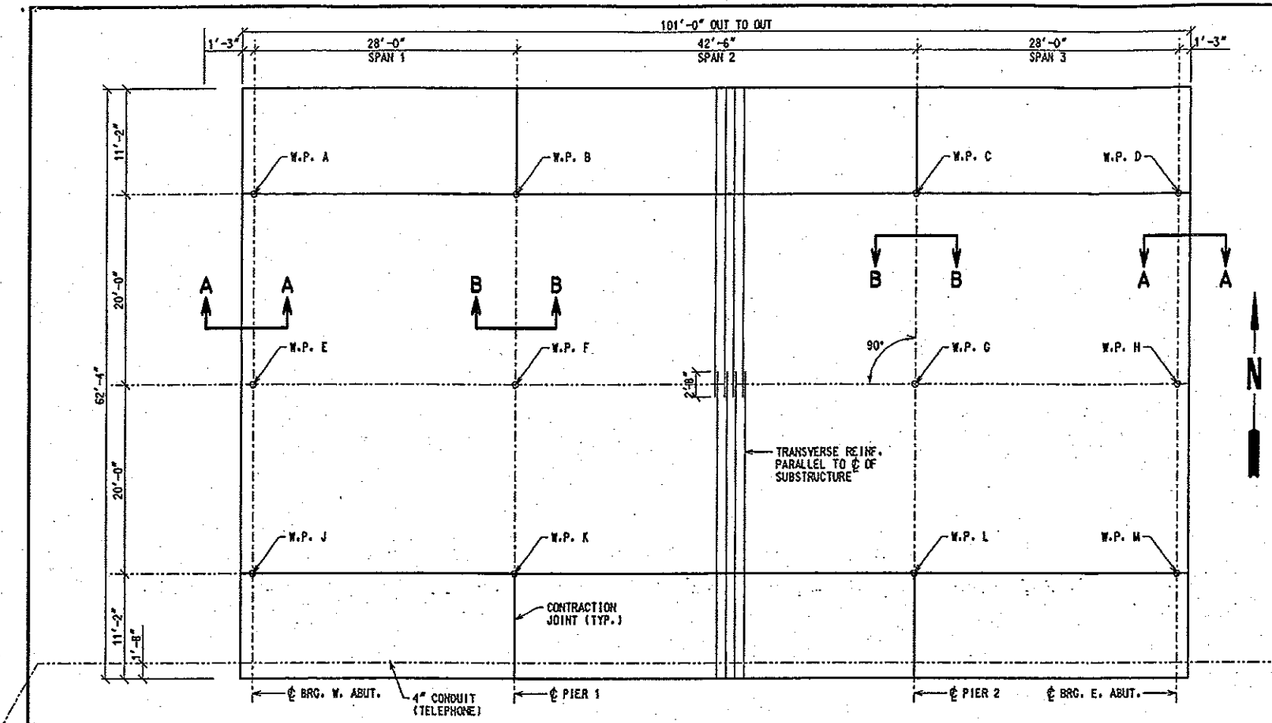
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Sheet No. B6 of B13 Sheets

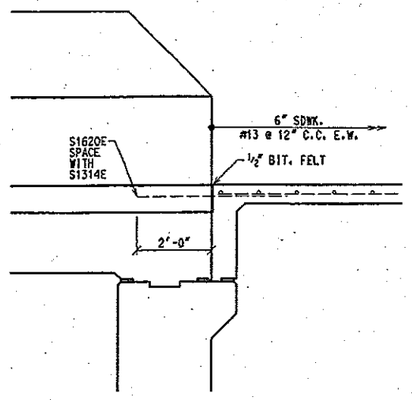
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DATE:2/7/03
FILENAME:6813B6
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DECK PLAN

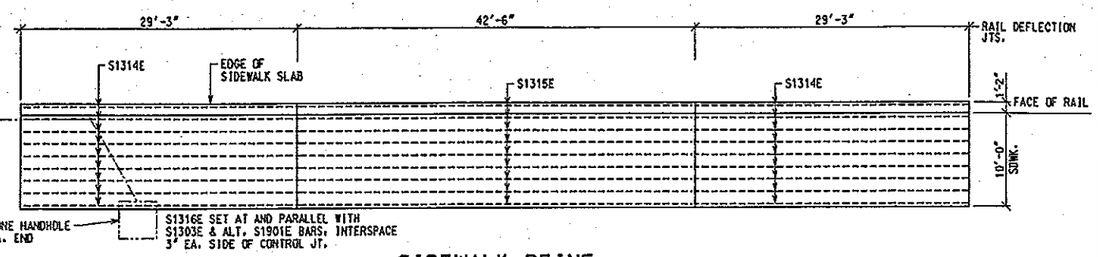


DOWELING @ SIDEWALK

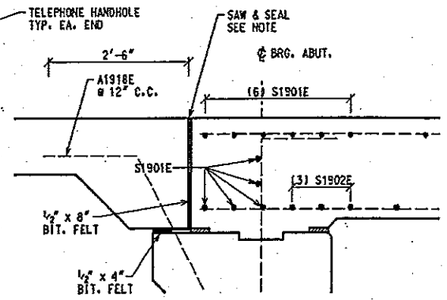
SCALE: ½" = 1'-0"

BILL OF REINFORCEMENT FOR SUPERSTRUCTURE

BAR	NO.	LENGTH	SHAPE	LOCATION
S1901E	44	32'-1"	STRT.	T. & B. TRANS. @ END
S1902E	12	31'-6"	STRT.	BOTT. TRANS. @ END
S1303E	168	32'-1"	STRT.	TOP TRANS.
S1604E	228	31'-6"	STRT.	BOTT. TRANS.
S2505E	65	33'-0"	STRT.	BOTT. LONG. END SPAN
S2506E	65	46'-5"	STRT.	BOTT. LONG. CTN. SPAN
S2507E	65	29'-1"	STRT.	BOTT. LONG. END SPAN
S2508E	128	22'-7"	STRT.	BOTT. LONG. END SPAN
S2509E	64	27'-6"	STRT.	BOTT. LONG. CTN. SPAN
S2910E	124	36'-0"	STRT.	TOP LONG. @ PIER
S2911E	122	17'-0"	STRT.	TOP LONG. @ PIER
S1612E	124	13'-1"	STRT.	TOP LONG. END SPAN
S1613E	62	13'-5"	STRT.	TOP LONG. CTN. SPAN
S1314E	36	28'-11"	STRT.	SDWK. LONG.
S1315E	18	42'-2"	STRT.	SDWK. LONG.
S1316E	174	10'-9"	STRT.	SDWK. TRANS.
S1317E	174	3'-6"	BENT	SDWK. VERT.
S1618E	174	4'-6"	BENT	SLAB EDGE VERT.
S1619E	36	4'-0"	STRT.	DOWELS - APPROACH SDWK.

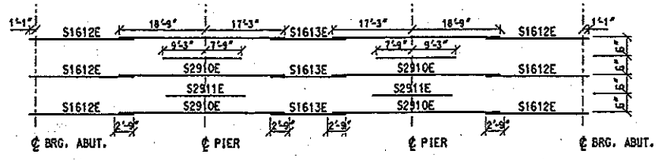


SIDEWALK REINF.

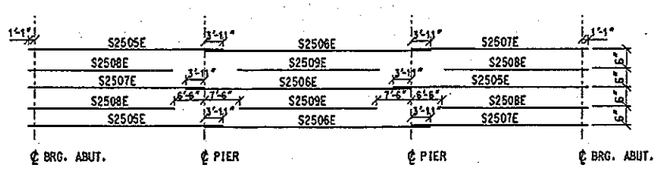


ENLARGED SECTION

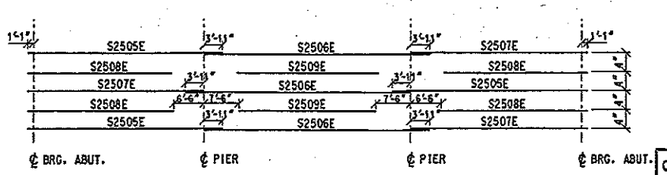
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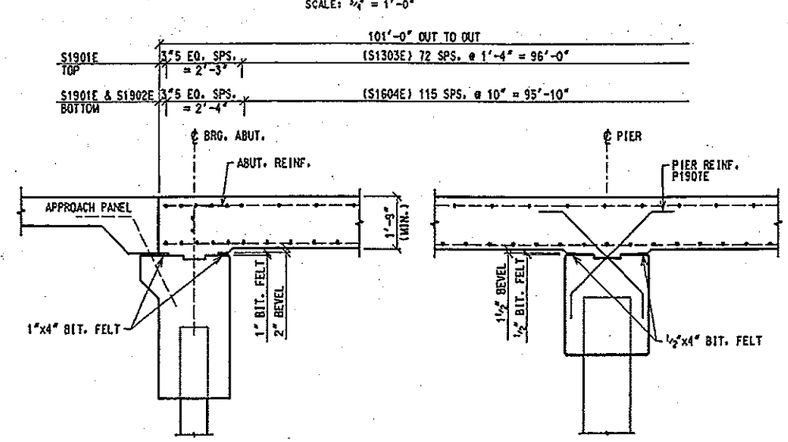
TOP LONG. REINF.



BOTT. LONG. REINF. @ INTERIOR



BOTT. LONG. REINF. @ EDGE BEAM

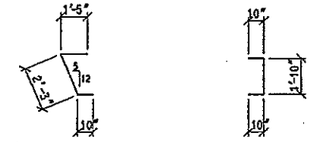


SECTION A-A

SCALE: ⅜" = 1'-0"

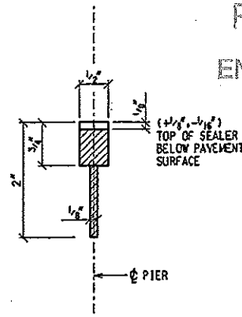
SECTION B-B

SCALE: ⅜" = 1'-0"



S1618E S1317E

PROVIDE C2X CONTRACTION JOINTS PER STD. SHT. 5-297.221 AT APPROACH PANELS & SIDEWALK. JOINT SEALER 3720. FORMED JOINT AT OUTER 1'-2" SDWK. ½" CHAMFER CURB FACE & FACIA.



DETAIL B (SIDEWALK JOINT) SAWED

AS-BUILT

FEB 14 2005

ENGINEERING

CERTIFIED BY _____ PROFESSIONAL ENGINEER LIC. NO. 7543 2/7/2003

S.A.P. 55-598-21

TITLE: SUPERSTRUCTURE PLAN & LONG. SECTION

DES: HCZ DR: MKB APPROVED:

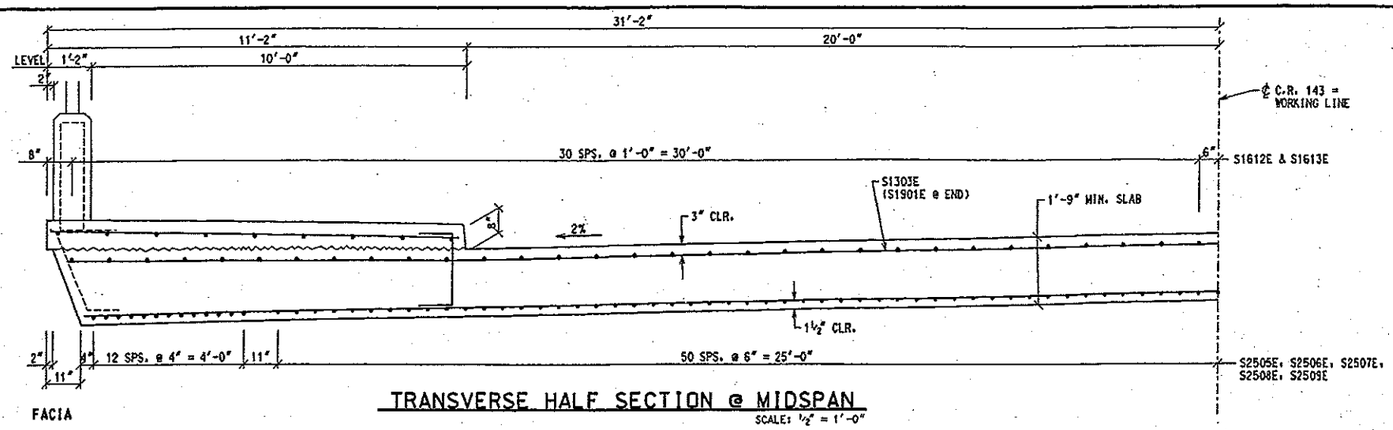
CHK: DDS CHK: HCZ

Sheet No. B7 of B13 Sheets

Bridge No. 55542

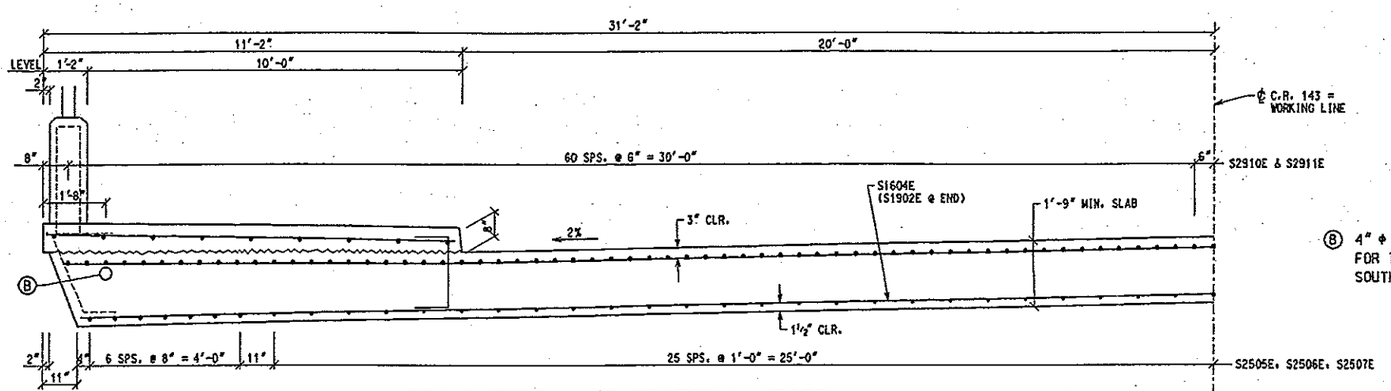
DATE:2/7/03
FILENAME:6813b7
REF. FILES:13DD006

...\6800-6849\6813olco\6813b7.dgn Feb. 07, 1998 10:02:15



TRANSVERSE HALF SECTION @ MIDSPAN

SCALE: ½" = 1'-0"

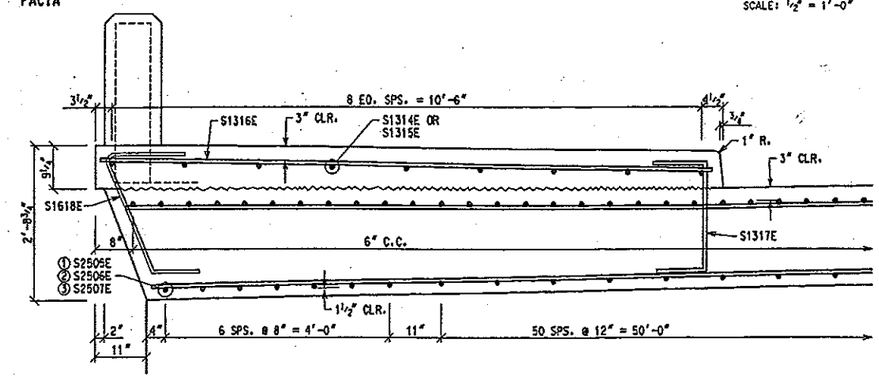


NOTE:
RAILING & SIDEWALK CONCRETE SHALL NOT BE PLACED WHILE SLAB IS SUPPORTED ON FORM WORK.

Ⓑ 4" ϕ I.M.C. CONDUIT FOR TELEPHONE SOUTH FACIA ONLY

TRANSVERSE HALF SECTION @ PIER

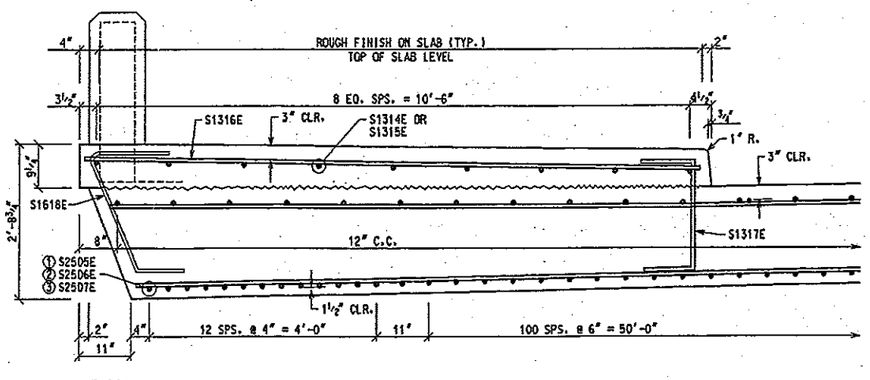
SCALE: ½" = 1'-0"



SEE BAR COMBINATION SCHEDULES SHT. 7 FOR LONG. REINF.

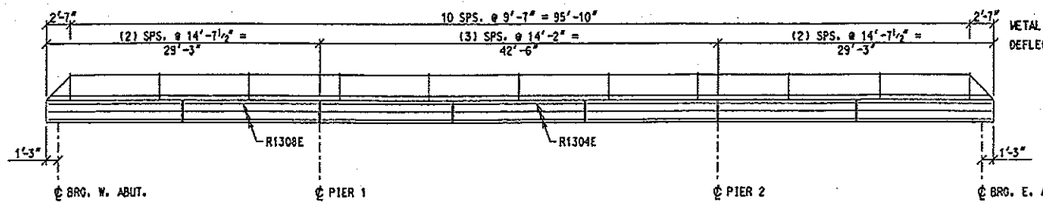
ENLARGED SECTION @ PIER

SCALE: ¾" = 1'-0"



ENLARGED SECTION @ MIDSPAN

SCALE: ¾" = 1'-0"



RAILING ELEVATION (TYPE P-1) & METAL RAILING (TYPE M-3)

SCALE: ⅛" = 1'-0"

LIST OF PREFORMED JOINT FILLER

	TYPE	LIN.FT.	SIZE	LOCATION
	CORK	28'-0"	1"x11"	P-1 RAIL DEFL. JT.
	CORK	9'-0"	1"x18"	ABUT. WING WALL
	BIT.FELT.	230'-0"	½"x4"	PIER
	BIT.FELT.	250'-0"	1"x4"	ABUT. SEAT
	BIT.FELT.	40'-0"	½"x8"	SIDEWALK
	BIT.FELT.	80'-0"	½"x8"	APPROACH PANEL
	BIT.FELT.	80'-0"	½"x4"	APPROACH PANEL
Ⓐ	BIT.FELT.	19'-0"	½"x4"	PIER

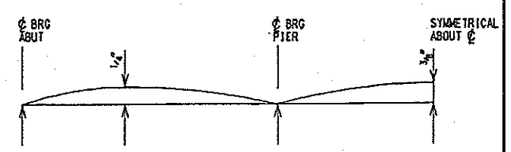
ⒶRADIAL SEC. 3' O.D. (4 REQ'D)

① SUMMARY OF QUANTITIES FOR SUPERSTRUCTURE

	ITEM	QUANT.	UNIT
②	BRIDGE SLAB CONCRETE (3Y33A)	6296	SQ.FT.
③	TYPE P-1 RAILING CONCRETE (3Y46A)	202	LIN.FT.
	METAL RAILING TYPE M-3	202	LIN.FT.
	REINFORCEMENT BARS (EPOXY COATED)	65660	POUND
④	NAME PLATE (DETAIL B101)	1	EA.
④	PREFORMED JOINT FILLER (SEE LIST)	-----	EA.
⑤	CONDUIT SYSTEM (TELEPHONE)	1	LUMP SUM
④	THREE PLY WATERPROOFING	12	LIN.FT.

① INCLUDES RAILING QUANTITIES
② APPROXIMATE VOLUME 476 C.Y. (INCLUDES 61 C.Y. SDWK.)
③ APPROXIMATE VOLUME 18 C.Y.
④ INCLUDED IN PRICE BID FOR OTHER ITEMS
⑤ INCLUDES 165' OF 4" DIA. NON-METALLIC TYPE II CONDUIT, (2)-60° ELBOWS AND 2 TELEPHONE HANDHOLES. PRECAST CONCRETE HANDHOLE STD. PLATE 8117. ALL MATERIALS TO BE FURNISHED AND INSTALLED BY THE CONTRACTOR.

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DEFLECTION MEASURED FROM STRAIGHT LINE EXTENDING FROM ℄ SUBSTRUCTURE TO ℄ SUBSTRUCTURE AT TOP OF SLAB.
CONSTRUCT FORMWORK TO COMPENSATE FOR 100% OF D.L. DEFLECTIONS. THESE FIGURES DO NOT INCLUDE ANY ALLOWANCE FOR SETTLEMENT OF FORMS.

CERTIFIED BY _____ PROFESSIONAL ENGINEER LIC. NO. 7543 2/7/2003 | S.A.P. 55-598-21

TITLE: SUPERSTRUCTURE TRANSVERSE SECTION & RAIL

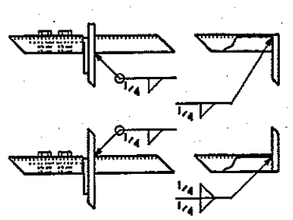
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CHK: DDS | CHK: HCZ

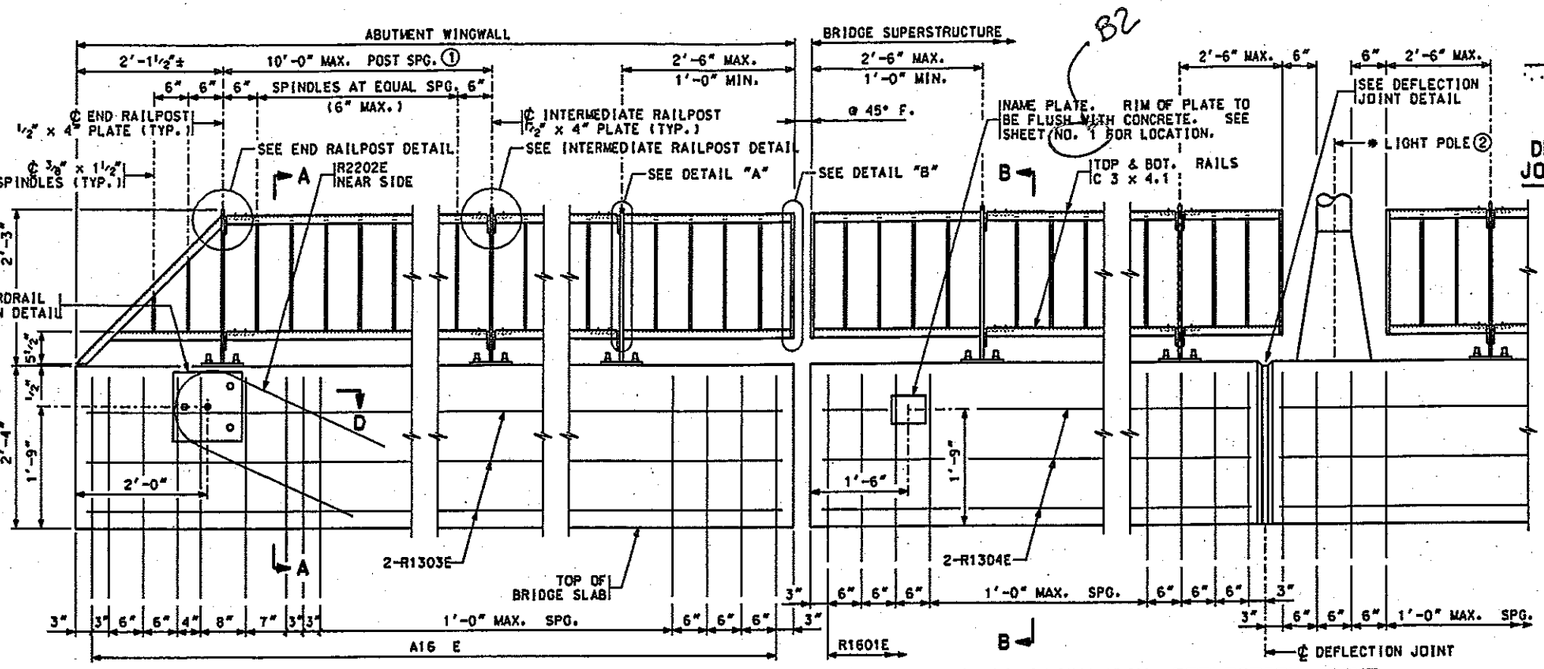
Sheet No. B8 of B13 Sheets

Bridge No. 55542

DATE:2/7/03
FILENAME:6813b8
REF. FILES:HBR006

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AS-BUILT

FEB 14 2005

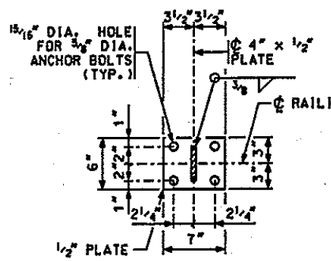
ENGINEERING

SECTION A-A

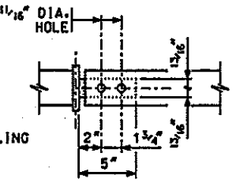
EXPANSION JOINT
EXP. DEVICE NOT SHOWN

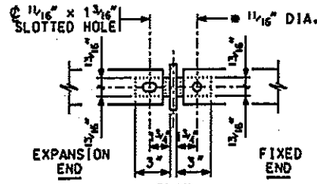
INSIDE ELEVATION OF RAILING

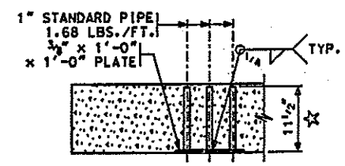
DEFLECTION JOINT



RAILPOST BASE PLATE

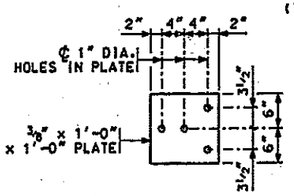


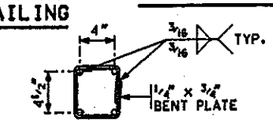




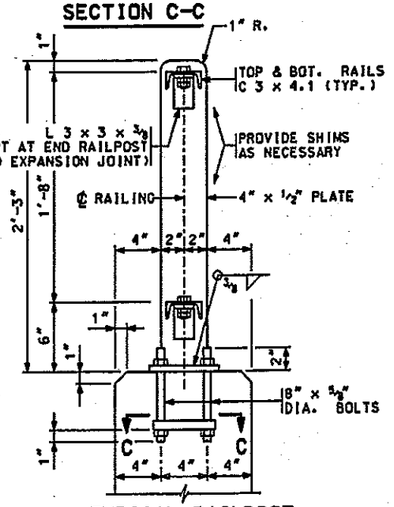
SECTION D-D

(REINFORCEMENT NOT SHOWN)
☆ DIMENSION INCLUDES ⅜" PLATE



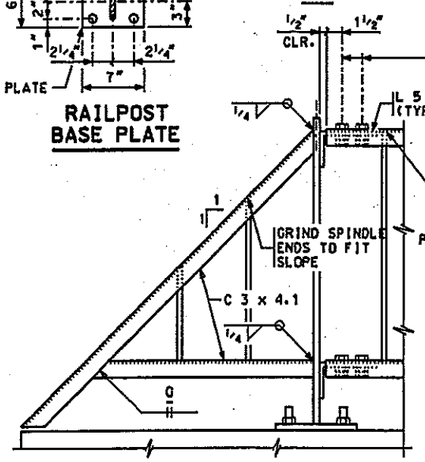


SECTION C-C



TYPICAL RAILPOST

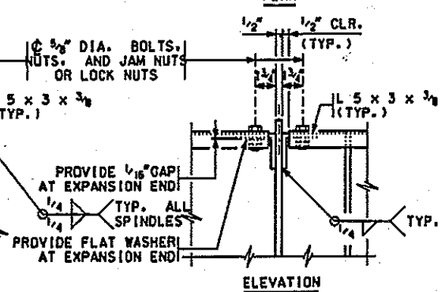
SPINDLE NOT SHOWN



ELEVATION

END RAILPOST DETAIL

TOP AND BOTTOM RAIL CONNECTIONS SIMILAR



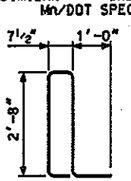
ELEVATION

INTERMEDIATE RAILPOST DETAIL

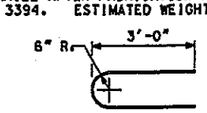
TOP AND BOTTOM RAIL CONNECTIONS SIMILAR

GUARDRAIL CONNECTION DETAIL

GALVANIZE AFTER FABRICATION PER Mn/DOT SPEC. 3394. ESTIMATED WEIGHT = 22 LBS.



R1601E



R2202E

BILL OF REINFORCEMENT FOR PARAPET

BAR	NO.	LENGTH	SHAPE	LOCATION
R1601E	260	7'-5"		RAIL BASE VERTICAL
R2202E	4	6'-6"		RAIL BASE VERTICAL
R1303E	48	14'-4"		RAIL BASE LONGIT.
R1304E	36	13'-10"		RAIL BASE LONGIT.

GENERAL NOTES

LENGTH OF "TYPE P-1 RAILING CONCRETE (3Y46)" FOR PAYMENT SHALL BE MEASURED BETWEEN THE OUTSIDE FACES OF THE CONCRETE RAILING.

LENGTH OF "METAL RAILING FOR BIKEWAYS, TYPE M-1" FOR PAYMENT SHALL BE MEASURED BETWEEN THE OUTSIDE FACES OF THE CONCRETE RAILING.

CONCRETE PARAPET = 350 LBS./FT. (0.086 CU. YDS./FT.)

FINISH ALL EDGES OF CONCRETE PARAPET WITH ½" YEE. EXCEPT WHERE OTHERWISE NOTED.

MAXIMUM SPACING OF CONCRETE DEFLECTION JOINTS SHALL BE 20 FT.

SEE SUPERSTRUCTURE SHEET FOR JOINT SPACING.

ANCHORAGES SHALL BE ACCURATELY PLACED TO PROVIDE CORRECT ALIGNMENT OF METAL RAILING. SET NORMAL TO GRADE.

DRILLED IN ANCHORAGES WILL BE PERMITTED IN LIEU OF ANCHORAGE SHOWN.

RAILPOSTS AND SPINDLES SHALL BE NORMAL TO GRADE.

ALL STRUCTURAL STEEL MATERIAL SHALL COMPLY WITH Mn/DOT SPEC. 3306.

GALVANIZE BOLTS, NUTS AND WASHERS PER Mn/DOT SPEC. 3392.

GALVANIZE ALL OTHER STRUCTURAL STEEL PER Mn/DOT SPEC. 3394 AFTER FABRICATION.

ALL RAILING MEMBERS SHALL BE FLAT AFTER FABRICATION AND GALVANIZING TO WITHIN ⅛" IN 10 FT. VERTICALLY AND HORIZONTALLY BY MECHANICAL MEANS WITHOUT DAMAGE TO THE ZINC COATING.

SEE SPECIAL PROVISIONS FOR PAINT TO BE APPLIED TO METAL RAILING.

GUARDRAIL CONNECTION TO BE INCLUDED IN PRICE BID FOR OTHER ITEMS.

PRICE BID FOR METAL RAILING INCLUDES ANCHORAGES AND ALL MATERIAL ABOVE TOP OF CONCRETE PARAPET.

RAIL QUANTITIES ARE INCLUDED IN SUMMARY OF QUANTITIES FOR SUPERSTRUCTURE.

① SPACE LIGHT AND RAILPOST ANCHORAGE TO CLEAR REINFORCEMENT IN CONCRETE PARAPET.

② SEE STANDARD BRIDGE DETAIL B950 FOR LIGHT POLE ANCHORAGE IF REQUIRED.

DATE: 12/7/03
FILENAME: 6813b9.dgn
REF. FILE(S): 1880083, 6449010

REVISION: 06-20-01

APPROVED: SEPTEMBER 18, 1989

STATE BRIDGE ENGINEER

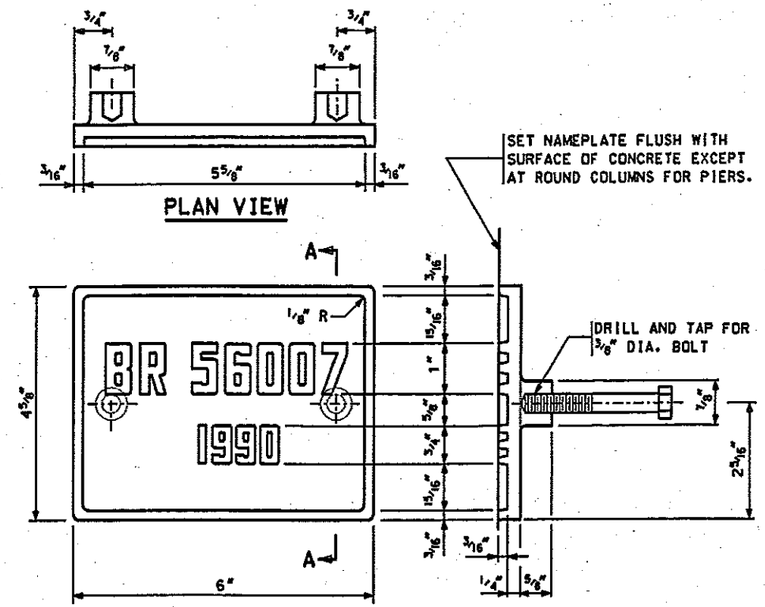
CERTIFIED BY: PROFESSIONAL ENGINEER — 2/7/2003 DATE

NAME: Harland C. Zenk LIC. NO. 7543

METAL RAILING FOR BIKEWAYS (TYPE M-1) AND CONCRETE PARAPET (TYPE P-1) (WITH INTEGRAL END POST)

DES: HCZ	DR: MKB	APPROVED: MODIFIED	FIG. 5-397.154
CHK: MDR	CHK: HCZ		BRIDGE NO. 55542
SHEET NO. B9 OF B13 SHEETS			

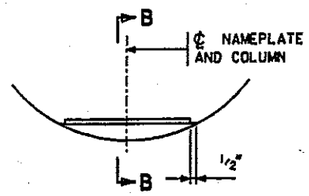
...\6800-6849\6813olco\6813b9.dgn Feb. 14, 1998 12:25:08



THE DASHED NUMBERS SHOWN ABOVE ARE FOR ILLUSTRATION. DATA TO BE SHOWN ON NAMEPLATE IS AS FOLLOWS:

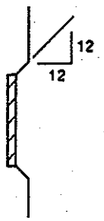
BRIDGE 55542

YEAR 2002



NAMEPLATE PLACEMENT

(ROUND CONCRETE PIER COLUMNS)



SECTION B-B

1234567890 — 3/16" — 1"

NUMBERS FOR NAMEPLATE

NOTES:

NO SHOP DRAWING REQUIRED.

MATERIAL SHALL COMPLY WITH Mn/DOT SPEC. 3327.

LETTERS AND NUMBERS SHALL CONFORM TO THOSE SHOWN.

DRAFT ON LETTERS AND NUMBERS SHALL NOT BE MORE THAN 3" IN 12".

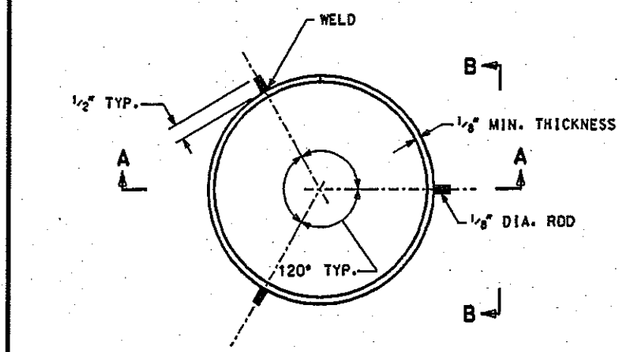
HORIZONTAL SPACING OF LETTERS AND NUMBERS SHALL PRODUCE A BALANCED LAYOUT IN PROPORTION TO SPACING SHOWN.

TOP SURFACE OF LETTERS, NUMBERS AND FRAMES SHALL BE BURNISHED.

FURNISH 2 STEEL BOLTS 3/8" DIA. x 3" LONG WITH EACH PLATE.

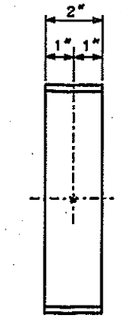
ALL DIMENSIONS FOR 3/4" HIGH LETTERS AND NUMBERS SHALL BE IN DIRECT PROPORTION TO THOSE SHOWN FOR THE 1" HIGH LETTERS AND NUMBERS.

APPROVED: JULY 30, 1999	STATE OF MINNESOTA DEPARTMENT OF TRANSPORTATION	REVISION	DETAIL NO.
Donald J. Flemming STATE BRIDGE ENGINEER	BRIDGE NAMEPLATE (FOR NEW BRIDGES)		B101



PLAN VIEW SPLICE

(PILE NOT SHOWN)



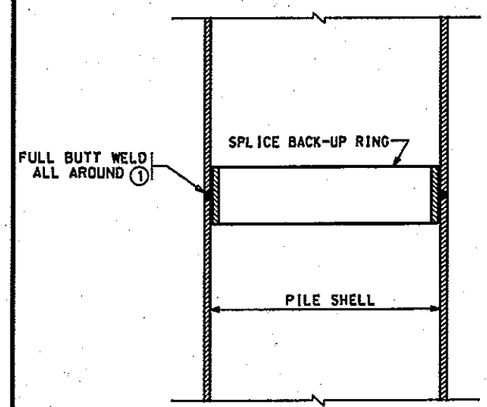
SECTION B-B

(PILE NOT SHOWN)

AS-BUILT

FEB 14 2005

ENGINEERING



SECTION A-A

NOTES:

APPROVED COMMERCIAL PILE SPLICE BACK-UP RING MAY BE USED IN LIEU OF THE TYPE DETAILED. BACK-UP RING SHALL HAVE A TIGHT FIT.

WELDING ELECTRODE SHALL BE A.W.S. TYPE E7016 OR E7018 (LOW-HYDROGEN).

LOW-HYDROGEN ELECTRODES SHALL BE SUPPLIED IN HERMETICALLY (AIR-TIGHT) SEALED CONTAINERS.

LOW-HYDROGEN ELECTRODES SHALL BE STORED IN HOLDING OVENS AT A TEMPERATURE OF NOT LESS THAN 250° F.

LOW-HYDROGEN ELECTRODES SHALL BE PLACED IN A HOLDING OVEN FOR AT LEAST 8 HOURS IF THEY HAVE BEEN EXPOSED TO THE ATMOSPHERE FOR MORE THAN 2 HOURS.

ELECTRODES WHICH HAVE BECOME WET, SOILED OR DAMAGED SHALL NOT BE USED.

WELDING SHALL NOT BE DONE WHEN THE AMBIENT TEMPERATURE IS LOWER THAN 0° F. OR WHEN THE PILE IS WET OR EXPOSED TO FALLING RAIN OR SNOW. WHEN THE PILE METAL TEMPERATURE IS BELOW 32° F., THE PILE METAL IN THE AREA OF THE WELD SHALL BE HEATED TO A MINIMUM TEMPERATURE OF 70° F. AND MAINTAINED AT THIS TEMPERATURE DURING WELDING.

(1) FOR PILE SHELL THICKNESSES GREATER THAN 1/2", USE A B-U4a WELD CONFIGURATION.

APPROVED: JULY 30, 1999	STATE OF MINNESOTA DEPARTMENT OF TRANSPORTATION	REVISION 12-01-00	DETAIL NO.
Donald J. Flemming STATE BRIDGE ENGINEER	PILE SPLICE (CAST-IN-PLACE CONCRETE PILES)		B201

DATE:2/7/03
FILENAME:6813b10
REF. FILES:6813B02

S.A.P. No. 55-598-21

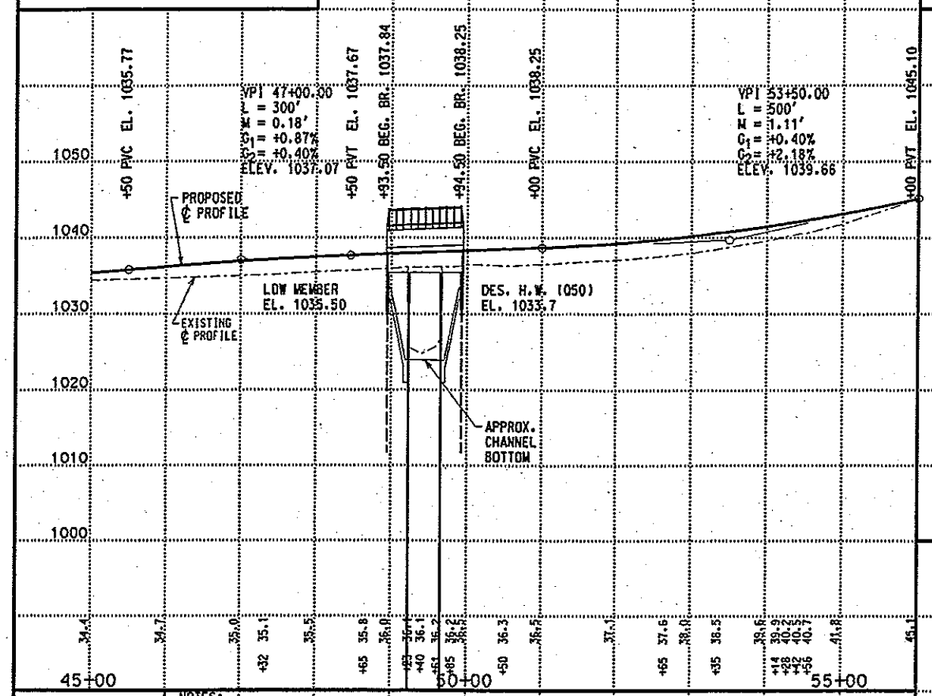
CERTIFIED BY Marshall S. Grim PROFESSIONAL ENGINEER LIC. NO. 7543 2/7/2003

TITLE:	DES: HCZ	DR: MKB	APPROVED:	Bridge No.
DETAILS	CHK: DDS	CHK: HCZ		55542
	Sheet No. B10 of B13 Sheets			

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CONTRACTED PROFILE

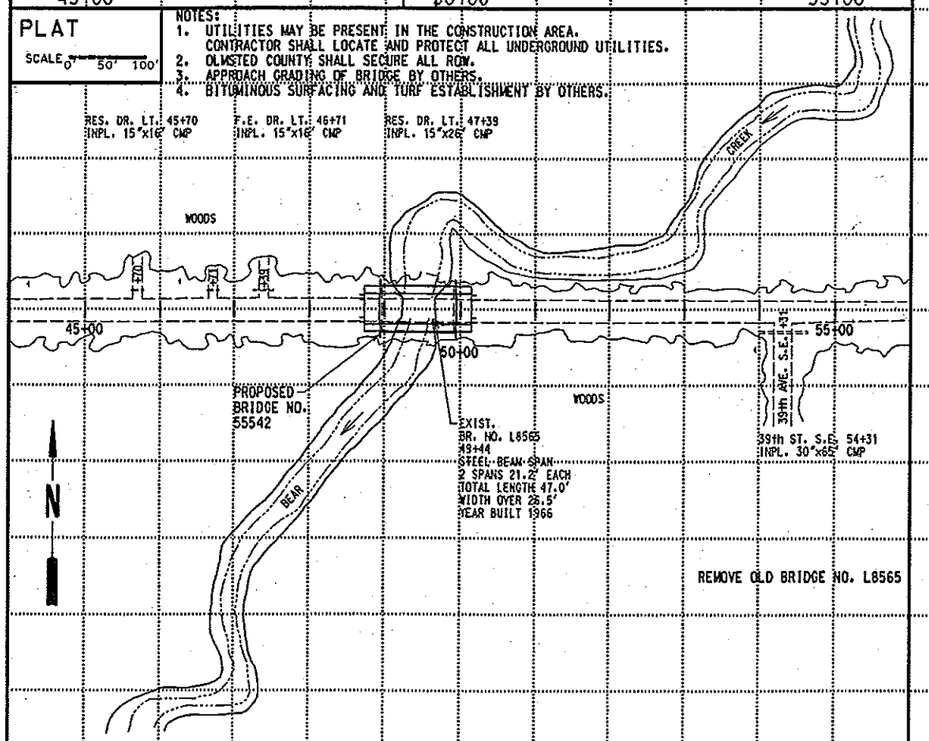
SCALE HORZ 0' 50' 100' VERT 0' 5' 10'



PLAT

SCALE 0' 50' 100'

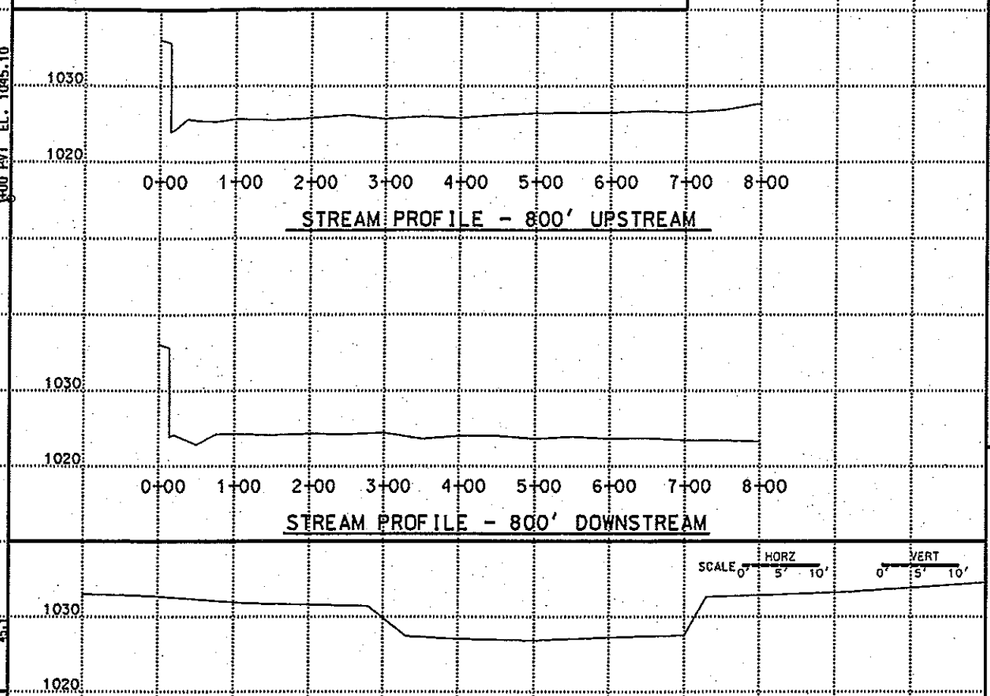
NOTES:
1. UTILITIES MAY BE PRESENT IN THE CONSTRUCTION AREA. CONTRACTOR SHALL LOCATE AND PROTECT ALL UNDERGROUND UTILITIES.
2. OLMSTED COUNTY SHALL SECURE ALL ROW.
3. APPROACH GRADING OF BRIDGE BY OTHERS.
4. BITUMINOUS SURFACING AND TURF ESTABLISHMENT BY OTHERS.



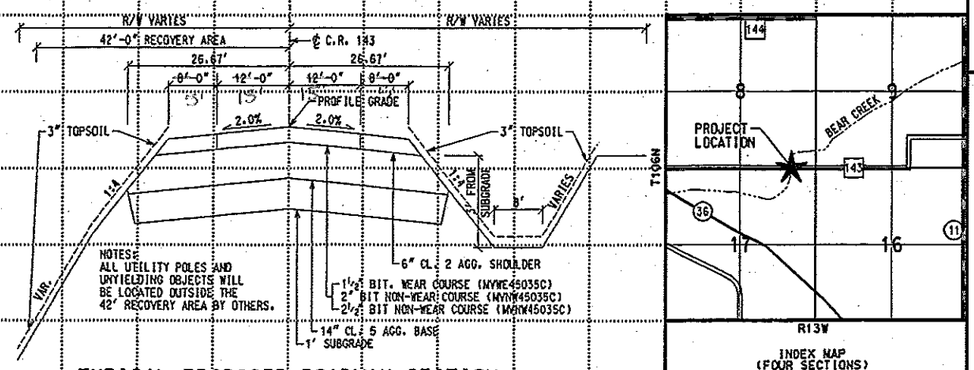
TYPICAL SECTIONS & PERTINENT DATA

SCALE AS SHOWN

SCALE HORZ 0' 50' 100' VERT 0' 5' 10'



SCALE HORZ 0' 5' 10' VERT 0' 5' 10'



TYPICAL PROPOSED ROADWAY SECTION

LOCATION ENGINEER'S OBSERVATIONS AT BRIDGE SITE

1. Special Features: Waterfalls, dams, floods, ice, debris, sliding banks, recreational boating.
   Heavily wooded upstream & down stream of Bridge in the vicinity of the stream.
2. Other bridges or culverts over the same stream (particularly structures which carry high water without overflow of roadway) Given location, type, length, height above high water, cross-sectional area etc.
3. Apparent highwater elevation 1035.1'
   Obtained from Observation by County. Observation prior to dam BR-1 project.
4. Other data: Approx. velocity of water at time of survey
   DNR permit noted blandings and wood turtles.
   No channel work May 1 - July 1.

HYDRAULIC ENGINEERS RECOMMENDATION

DATE: December 27, 1999
Stream or ditch designation: Bear Creek
Drainage area: (Uncontrolled) 19.14 sq. mi.
Max flood on record: UNKNOWN Design flood (50 yr. freq.) 4480 cfs
Max observed highwater elev. 1035.1 ft.
Design highwater elev.: 1033.7 ft.
Design mean velocity through structure: 6.87 fps
Low superstructure at or above elevation: 1034.7 ft.
Flowline elevation: 1023.9 ft. Skew Angle = 0°
Waterway opening req'd below elev. 1033.7 = 650 S.F.
at Right angles to channel.
In the interest of flood plain zoning the regional flood (100 yr freq.) is 5680 cfs at stage 1034.3 and mean velocity of 8.03 cfs with 0.69' evelihead.
The above recommendation will provide a structure of adequate waterway to pass the regional flood within criteria established by the Department of Natural Resources.

Est. Pier scour elev. 1018.3

SCOUR CODE: L

FOUNDATION ENGINEERS RECOMMENDATION

DATE _____

AS-BUILT
FEB 14 2005
ENGINEERING

Bridge survey sheets made from: Data Obtained March 1980 by Olmsted County Survey Party

Bench mark elevation B.M. ELEV. 1033.63 (M.S.L. 1929 ADJ.)
Location PT. ON SOUTH PIER TOP

BRIDGE SURVEY

AT MILE POINT _____ ON C.R. 143 (T.H., C.S.A.H., C.R., etc.)

PROPOSED BRIDGE LOCATION 1.0 MILES East OF Junction C.S.A.H. 36

SEC. 8 & 17 TWP. 106 N R. 13 W

CITY MARION COUNTY OLMSTED

DATE: 2/7/03
FILENAME: 6813011
REF. FILES: 11 00 00 06

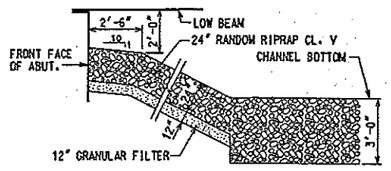
CERTIFIED BY _____ LIC. NO. 7543 2/7/2003
PROFESSIONAL ENGINEER

Bridge Survey	DES: HCZ	DR: MKB	APPROVED:
S.A.P. No. 55-598-21	CHK: DDS	CHK: HCZ	Bridge No. 55542
Sheet No. B11 of B13 Sheets			

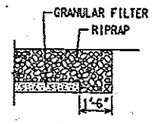
...\6800-6849\6813olco\6813b11.dgn Feb. 07, 1998 10:35:05

LIMITS OF RANDOM RIPRAP
ARE APPROXIMATE ONLY.
EXACT LIMITS TO BE DETERMINED
IN THE FIELD BY THE ENGINEER.

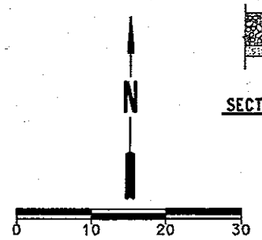
APPROXIMATE QUANTITY GRANULAR
FILTER 145 C.Y. INCLUDED IN
PRICE BID FOR GROUTED RIPRAP.

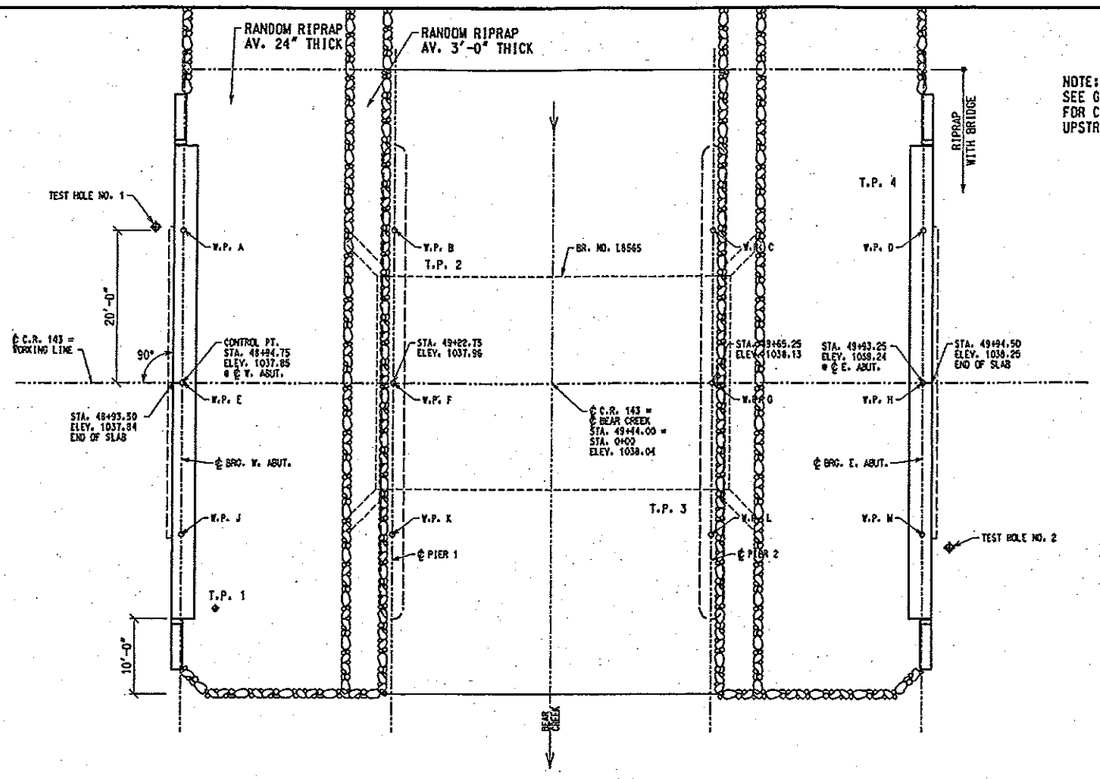


TYPICAL RIPRAP SECTION



SECTION A-A





NOTE:
SEE GRADING APPROACH PLAN
FOR CONTINUATION OF RIPRAP
UPSTREAM. INCLUDING WING DAM.

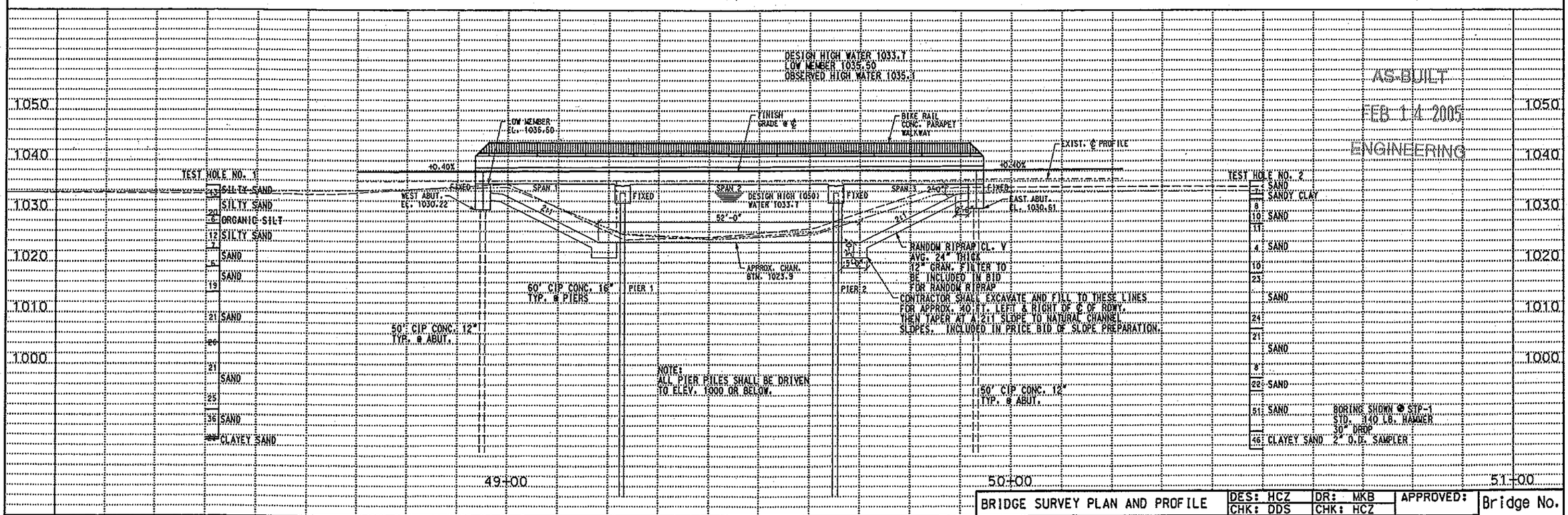
NOTE:
BR. L8565 REMOVE BRIDGE
REMOVE SUBSTRUCTURES TO
TWO FEET BELOW CHANNEL BOTTOM.

APPROACH GRADING AND
BITUMINOUS SURFACING TO
BE PERFORMED BY OTHERS.

SEE SHT. 13 FOR SUBGRADE
TREATMENT AT APPROACH
PANEL AND SIDEWALK.

SEE SHT. 13 FOR STRUCTURE
EXCAVATION AND SELECT
GRANULAR BORROW LIMITS.

B.M. ELEV. 1033.63 (M.S.L. 1929 ADJ.)
PT. ON SOUTH PIER TOP



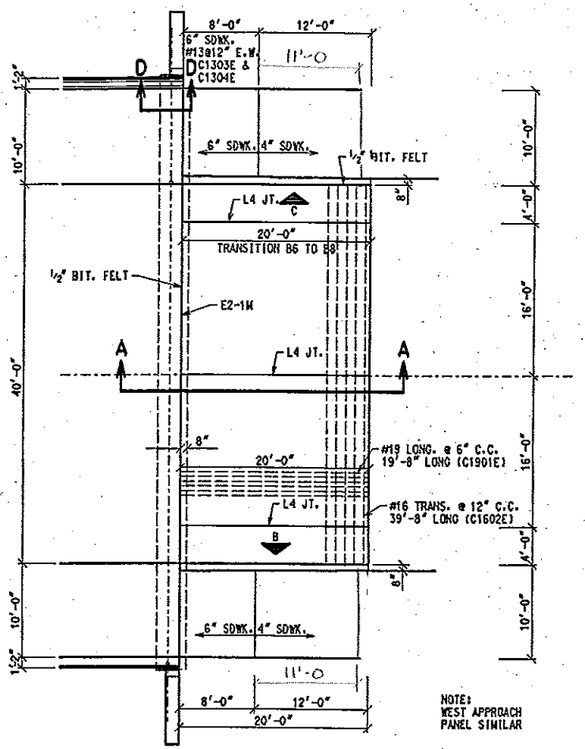
AS-BUILT
FEB 14 2005
ENGINEERING

CERTIFIED BY [signature] LIC. NO. 7543 2/7/2003
PROFESSIONAL ENGINEER

BRIDGE SURVEY PLAN AND PROFILE	DES: HCZ	DR: MKB	APPROVED:	Bridge No.
	CHK: DDS	CHK: HCZ		55542
State Aid Proj. No. 55-598-21	Sheet No. B12 of B13 Sheets			

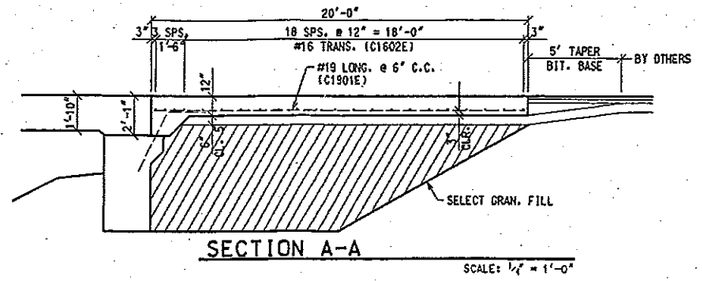
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REF. FILES:(NONE)

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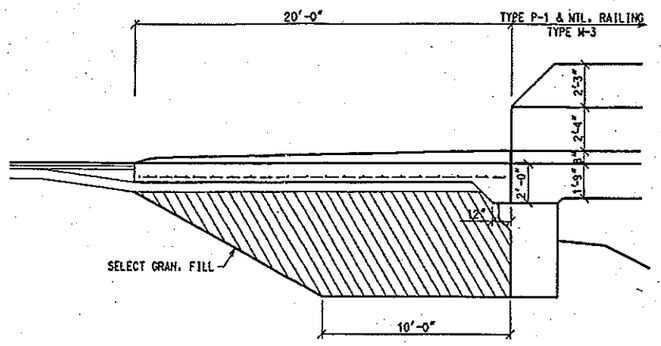
APPROACH PANEL

SCALE: 1/8" = 1'-0"



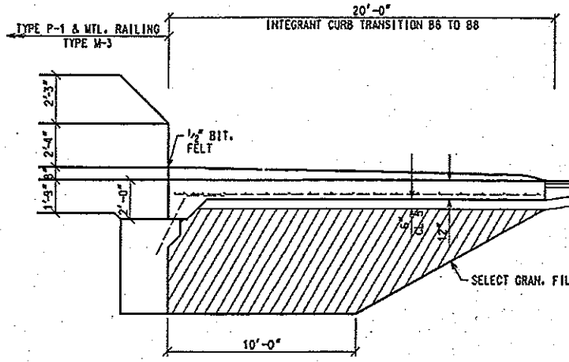
SECTION A-A

SCALE: 1/4" = 1'-0"



SECTION B

SCALE: 1/4" = 1'-0"

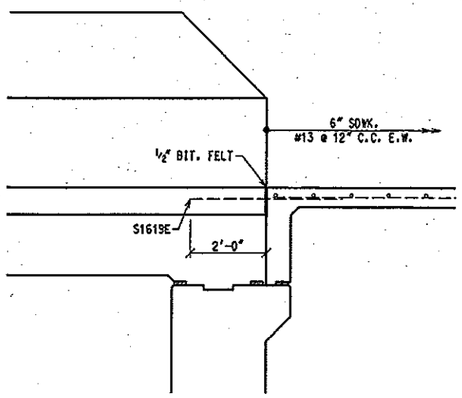


SECTION C

SCALE: 1/4" = 1'-0"

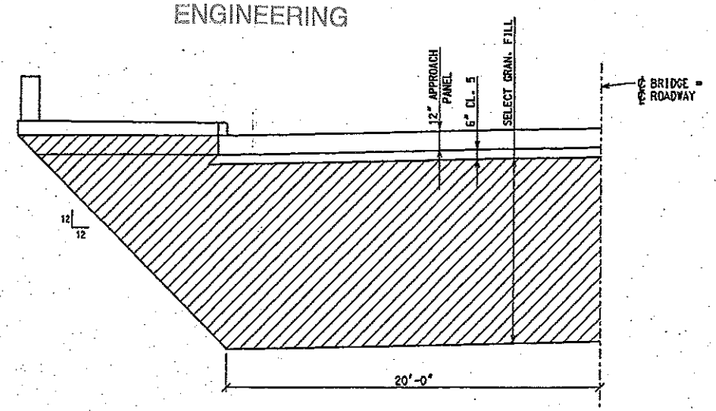
B6 TO B8 CURB TRANSITION

SCALE: 1/2" = 1'-0"



SECTION D-D

SCALE: 1/2" = 1'-0"



SELECT GRANULAR HALF SECTION

SCALE: 1/4" = 1'-0"

NOTES:

1. UNIT PRICE BID PER APPROACH PANEL SHALL INCLUDE F&I ALL CONCRETE, REINFORCEMENT STEEL AND CL. 5 AGG. BASE.
2. CONCRETE MIX DESIGN SHALL BE IN ACCORDANCE WITH SPEC. 2301.2A.
3. ALL REINFORCEMENT IN THE APPROACH PANEL AND CURB SHALL BE GRADE 60 AND EPOXY COATED PER SPEC. 3301.
4. THE APPROXIMATE VOLUME OF CONCRETE FOR 2 APPROACH PANELS, INCLUDING B6 INTEGRANT AND TRANSITION CURBS AT THE PANELS IS 68 CU. YD. SIDEWALK IN OTHER ITEMS.
5. THE APPROXIMATE WEIGHT OF REINFORCEMENT STEEL FOR 2 PANELS IS APPROXIMATELY 7620 POUNDS, AND DOES INCLUDE REINFORCEMENT AT CONCRETE SIDEWALK.
6. THE APPROXIMATE VOLUME OF CLASS 5 AGGREGATE BASE AT 2 APPROACH PANELS IS 41 C.Y.
7. THE APPROXIMATE VOLUME OF SELECT GRANULAR FILL FOR TWO APPROACH PANELS IS 320 CU. YD. THE UNIT PRICE BID FOR SELECT GRANULAR FILL SHALL INCLUDE EXCAVATION OF EXISTING SOILS AND SPREADING THE SAME, FURNISHING AND INSTALLING THE SELECT GRANULAR MATERIALS. SELECT GRANULAR FILL SHALL BE COMPACTED TO A MINIMUM OF 98% OF A STANDARD PROCTOR DENSITY. 3149.28 SELECT GRANULAR BORROW.
8. THE APPROXIMATE AREA OF SIDEWALK IS 600 S.F. WHICH INCLUDES 320 S.F. OF 6" WALK AND 480 S.F. OF 4" WALK. THE UNIT PRICE BID SHALL INCLUDE FURNISHING AND INSTALLING CONCRETE FOR THE SIDEWALK OFF OF THE BRIDGE STRUCTURE. THE REINFORCEMENT FOR WALK AND THE GRANULAR LEVELING MATERIALS ARE INCLUDED IN THE OTHER ITEMS.

BILL OF REINFORCEMENT
FOR TWO APPROACH PANELS

	BAR	NO.	LENGTH	SHAPE	LOCATION
	C1901E	124	19'-8"	STRT.	STRT. PANEL LONG.
	C1602E	44	39'-8"	STRT.	STRT. PANEL TRANS.
①	C1303E	6	19'-8"	STRT.	STRT. SDWK. LONG.
	C1304E	20	9'-4"	STRT.	STRT. SDWK. TRANS.

① CUT 2 FROM ONE (FOR INFORMATION ONLY)

AS-BUILT
FEB 14 2005
ENGINEERING

CERTIFIED BY _____ PROFESSIONAL ENGINEER LIC. NO. 7543 2/7/2003

S.A.P. 55-598-21

TITLE: APPROACH PANEL

DES: HCZ DR: MKB APPROVED:
CHK: DDS CHK: HCZ

Sheet No. B13 of B13 Sheets

Bridge No. 55542

DATE:2/13/03
FILENAME:6813b13
REF. FILES:6813BORDS.6444015

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