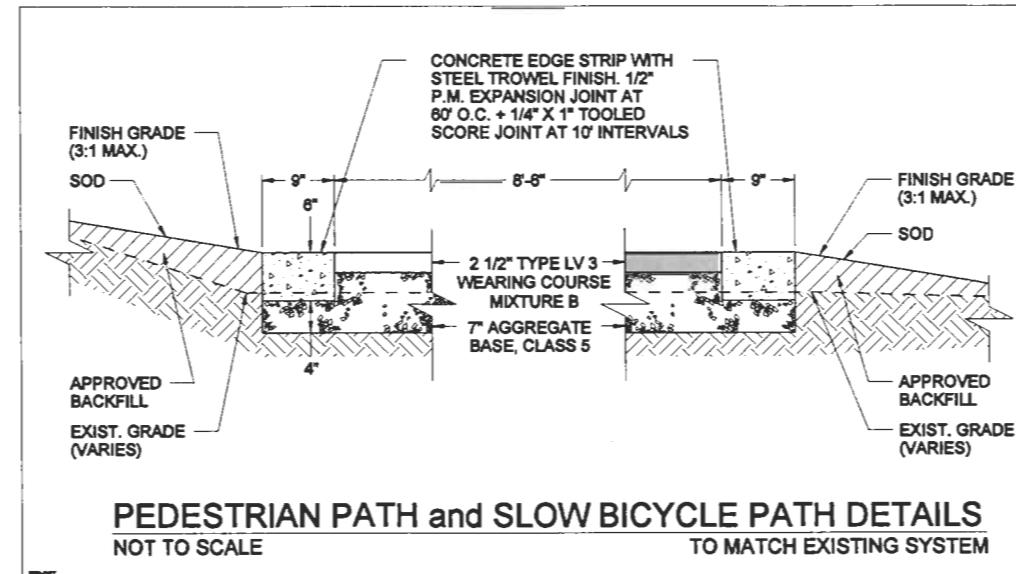
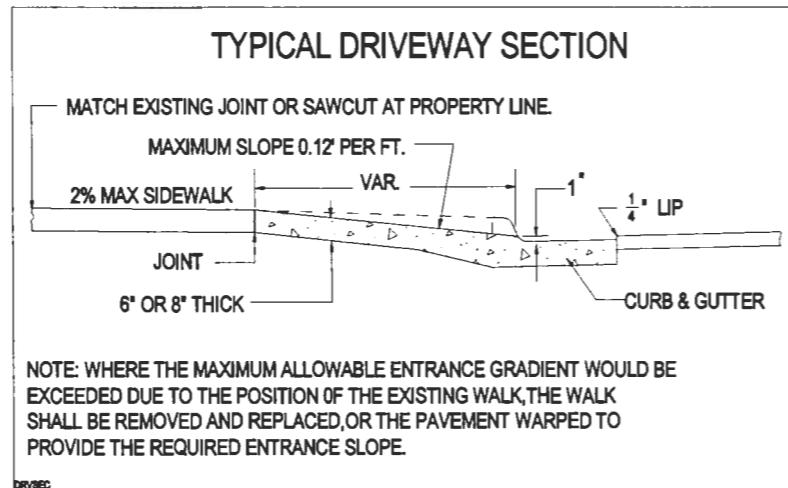
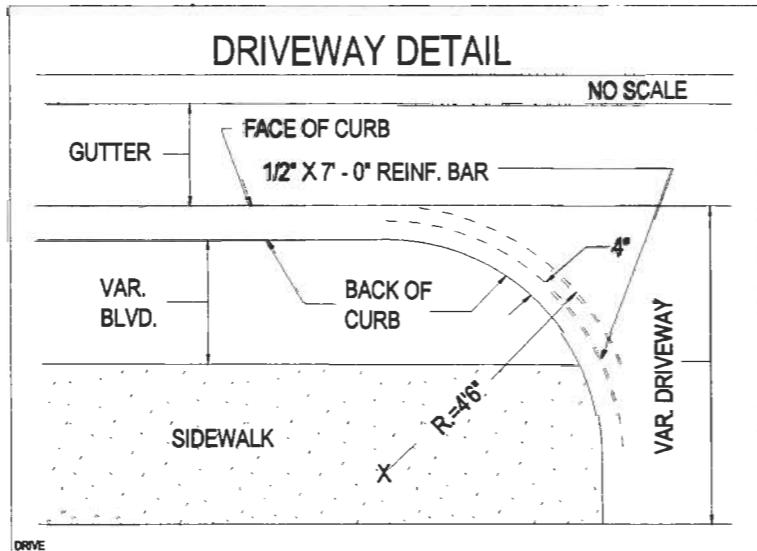


NOTES

- HIGH EARLY STRENGTH CONCRETE WILL BE USED IN LOCATIONS WHERE THE CURING TIME REQUIRED ON STANDARD STRENGTH CONCRETE WOULD SERIOUSLY INTERFERE WITH TRAFFIC OF PRIVATE BUSINESS.
- ALL DRIVEWAYS AND ALLEY APPROACHES EXTEND TO THE BACK EDGE OF SIDEWALK, EXCEPT WHERE OTHERWISE NOTED ON PLAN, AND A CONTRACTION JOINT SHALL BE PROVIDED IN THE CENTER IF THE DRIVEWAY WIDTH IS 16' OR GREATER.
- THE PITCH OF THE GUTTER AND HEIGHT OF THE CURB MAY BE ADJUSTED AND MINOR CHANGES MADE TO MEET EXISTING CONDITIONS AT THE DISCRETION OF THE PROJECT ENGINEER.
- ALL CURB RADII AT STREET INTERSECTIONS TO BE 18' EXCEPT WHERE OTHERWISE NOTED AND ALL RADII FOR ALLEYS AND PRIVATE DRIVES TO BE 4.5' EXCEPT WHERE OTHERWISE NOTED.
- ALL PRIVATELY OWNED UTILITY MANHOLES TO BE RESET BY OWNER.
- ALL DRIVEWAYS 12' MINIMUM AND 25' MAXIMUM WIDTH UNLESS OTHERWISE NOTED.
- A CONTRACTION JOINT SHALL BE CUT EVERY 10' IN THE SURFACE OF THE CONCRETE CURB AND GUTTER.
- EXPANSION JOINTS SHALL BE INSTALLED AT LEAST EVERY 300', WHEN TEMPERATURE IS 50 F OR ABOVE AND EVERY 60' IF THE TEMPERATURE IS BELOW 50 F.
- PREFORMED JOINT MATERIAL SHALL CONFORM TO SPEC. 3702  
HOT POURED JOINT MATERIAL SHALL CONFORM TO SPEC. 3723
- CONCRETE TO BE 8" THICK ON ALL ALLEY APPROACHES AND COMMERCIAL DRIVEWAYS.
- TOP OF CATCH BASIN GRATE TO BE SET 1" BELOW GUTTER.
- STATE LAW REQUIRES ANYBODY EXCAVATING OR DRILLING IN THE GROUND IN THE STATE OF MINNESOTA WITH POWER EQUIPMENT TO CALL GOPHER STATE 'ONE CALL' AT 651 - 454 - 0002 FOR UTILITY LOCATIONS, AT LEAST 48 HOURS BEFORE STARTING TO WORK.
- EACH END OF ABANDONED SEWER RUN MUST BE PLUGGED WITH BRICK WORK OR CONCRETE BLOCK, TYPE N CEMENT MORTAR.
- MOVE STOP BOX OR ADJUST VALVE BOX SHALL BE AS DIRECTED BY THE PROJECT ENGINEER.
- MANHOLES REQUIRING RECONSTRUCTION OR NEW CASTING SHALL BE SPECIFIED BY THE PROJECT ENGINEER.

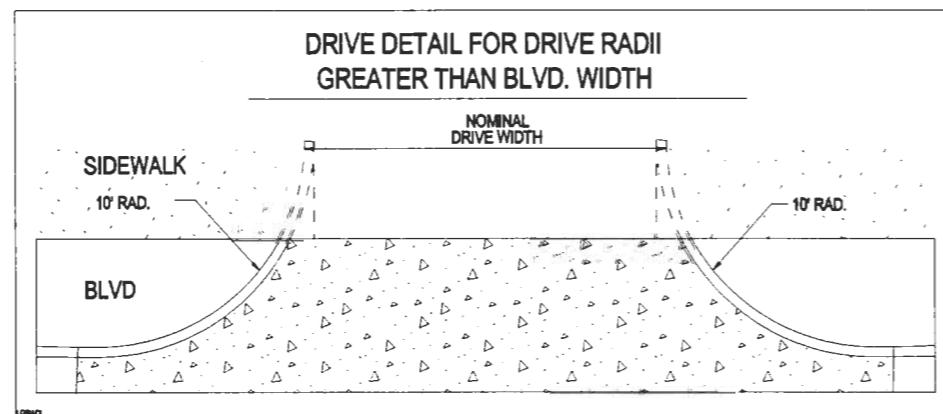
REINFORCING BARS REQUIRED					
TYPE	NO. REQD.	SIZE	NO.	LOCATION	WT. (LBS)
STRAIGHT		2 #	13	CONC. BASE (L2B)	
STRAIGHT		2 #	13	CONC. PAVT. (L1)	
STRAIGHT	128	6 #	13	M.H. IN CONC. BASE	513
STRAIGHT	0	4 #	13	M.H. & CB IN DR. PAVT	0
BENT	14	7 #	13	DRIVE RADII	68
STRAIGHT	17	4 #	13	CATCH BASIN	45
STRAIGHT	17	5 #	13	CATCH BASIN	57
STRAIGHT	102	8 #	13	CATCH BASIN	409
<b>TOTAL:</b>					<b>1090</b>

① - NOT TO BE INCLUDED IN EST. QUANTITIES  
 ② - NUMBER 13 REBAR WEIGHT = 0.668 POUNDS PER FOOT



NOTE: THE FOLLOWING STANDARD PLATES AS APPROVED BY THE F.H.W.A. SHALL APPLY

STANDARD DETAIL PLATES	
PLATE NO.	DESCRIPTION
1070L	REINFORCED PANEL OVER CULVERTS
1103J	TYPICAL DOWEL BAR ASSEMBLY
1141D	PAVEMENT KEYWAY FOR KEYED JOINT CONSTRUCTION
1150Q	CONSTRUCTION OF HEADER JOINTS
3000L	REINFORCED CONCRETE PIPE (C WALL ONLY)
3006G	GASKET JOINT FOR R.C. PIPE
3014J	REINFORCED CONCRETE PIPE ARCH
3100G	CONCRETE APRON FOR R.C. PIPE
3110G	CONCRETE APRON FOR R.C. PIPE - ARCH
3133C	RIPRAP AT R.C.P. OUTLETS
3145E	CONCRETE PIPE TIES
4000J	MANHOLE OR CATCH BASIN (MASONRY)
4003B	30\"/>



\* - USE ONLY SHORT CONE TYPE C ALTERNATE 4010H UNLESS SPECIFIED AS 4020I  
 \*\* - SEE TECHNICAL MEMORANDUM NO. 03-19-TS-02

NOT TO SCALE

I HEREBY CERTIFY THAT THIS PLAN 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.

*Lisa K. Cerney*  
 LISA K. CERNEY  
 42688  
 REGISTRATION NO.  
 2/19/04  
 DATE



**MINNEAPOLIS**  
 DEPARTMENT OF PUBLIC WORKS  
**Engineering Services**

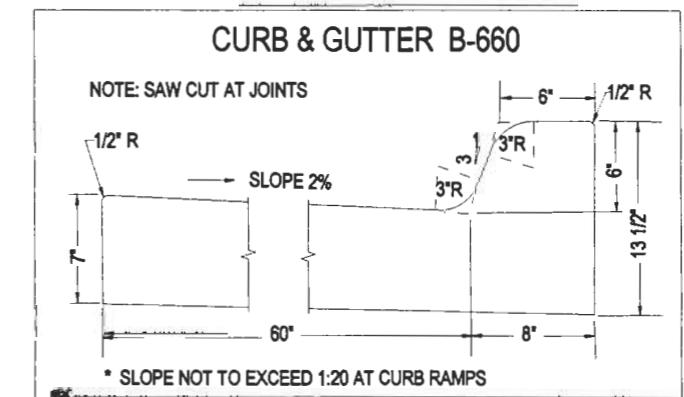
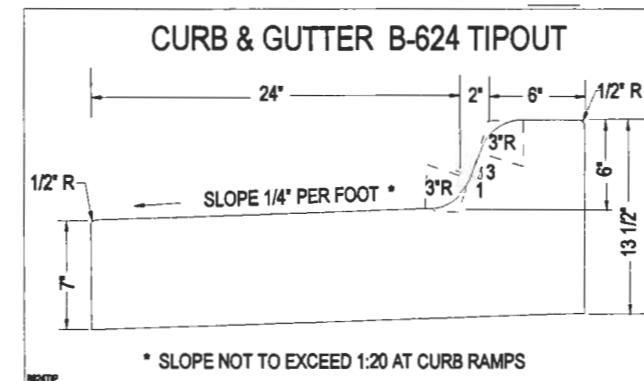
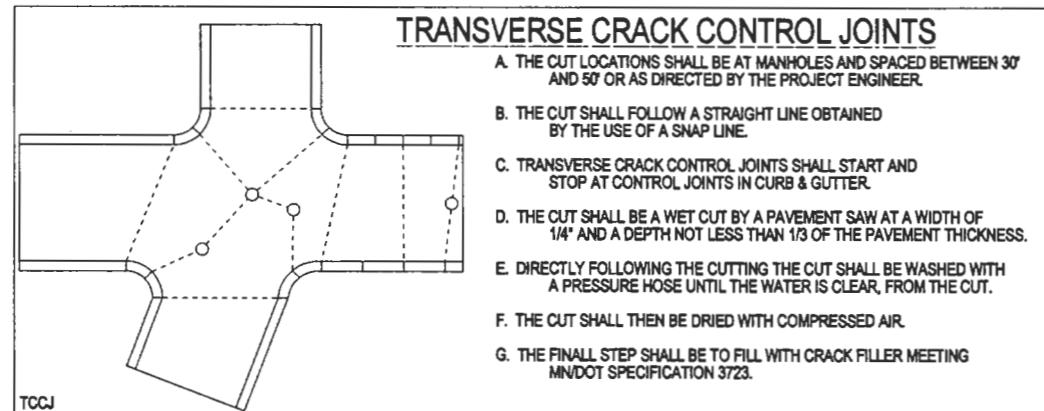
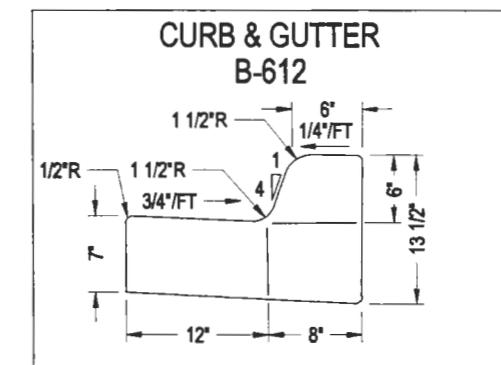
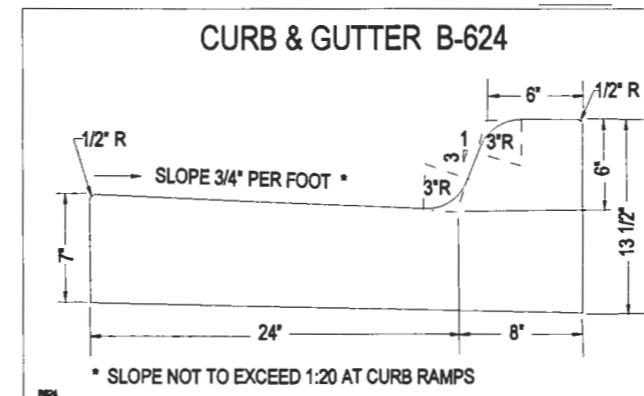
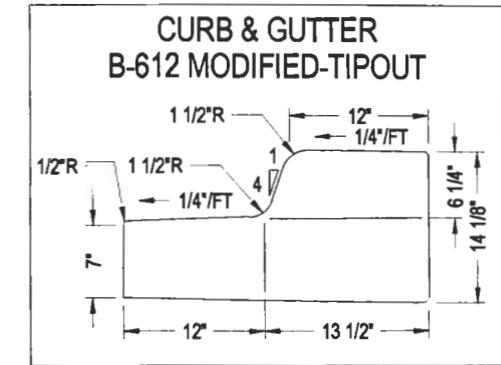
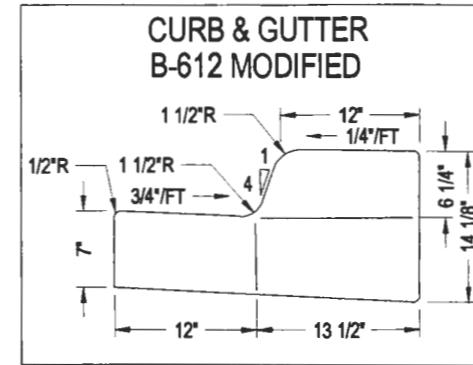
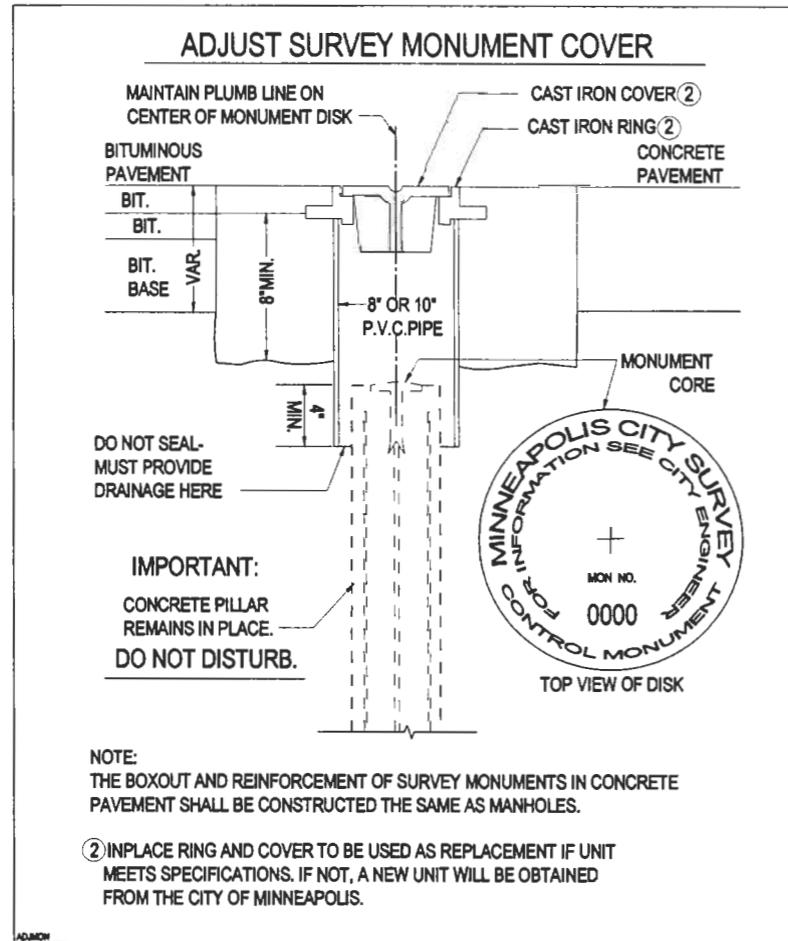
DETAILS AND STANDARD PLATE NOTES

DRAWN BY: N.B, E.J, B.P, E.O  
 CHECKED BY: L.C  
 DATE: 09/10/03  
 DATE: 09/30/03

RICHFIELD ROAD

S.P. 141-201-02

SHEET  
**5 OF 151**  
 SHEETS



NOT TO SCALE

I HEREBY CERTIFY THAT THIS PLAN 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.

*Lisa K. Cerney*  
LISA K. CERNEY 42588 2/19/04  
REGISTRATION NO. DATE



**MINNEAPOLIS**  
DEPARTMENT OF PUBLIC WORKS  
**Engineering Services**

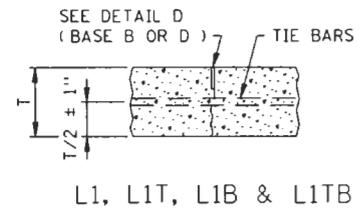
DETAILS

DRAWN BY: N.B, E.J, B.P, E.O DATE: 09/10/03  
CHECKED BY: L.C DATE: 09/30/03

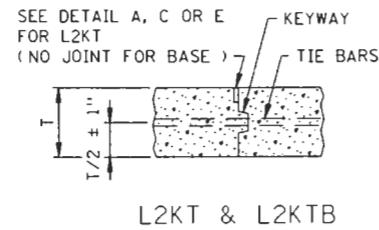
RICHFIELD ROAD

S.P. 141-201-02

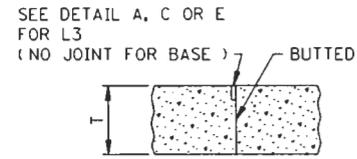
SHEET  
6 OF 151  
SHEETS



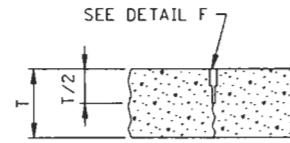
L1, L1T, L1B & L1TB



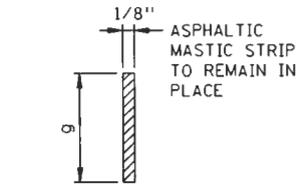
L2KT & L2KTB



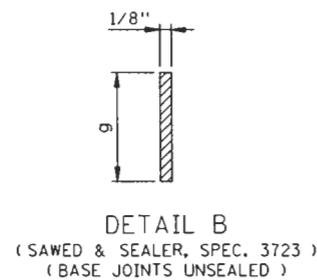
L3 & L3B



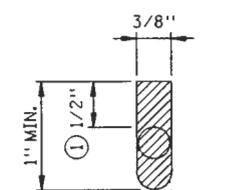
L4



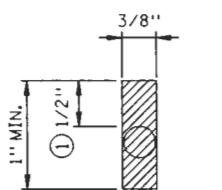
DETAIL A  
(FORMED & UNSEALED)



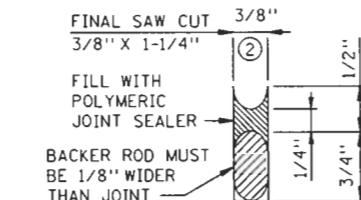
DETAIL B  
(SAWED & SEALER, SPEC. 3723)  
(BASE JOINTS UNSEALED)



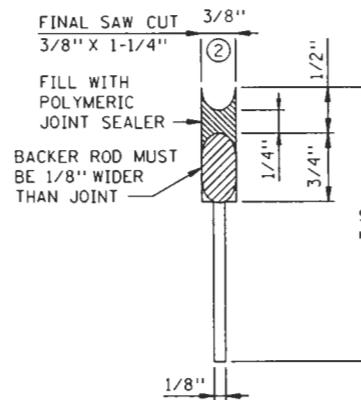
DETAIL D  
(FORMED & SEALED  
SPEC. 3723)



DETAIL E  
(SAWED & SEALER  
SPEC. 3723)



DETAIL C  
(SAWED)



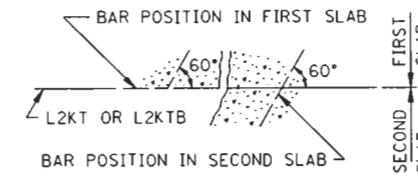
DETAIL F  
(SAWED)

LONGITUDINAL JOINT CLASS DESIGNATION,  
DETAIL & SEALER SPECIFICATION TABLE

CLASS DESIGNATION				JOINT DETAIL	JOINT SEALER SPECIFICATION
WITHOUT TIE BARS	WITH TIE BARS	WITH KEYWAY & TIE BARS	BUTTED		
L1H L1BU	L1T L1TB	L2KTH L2KTS		B A OR B D OR E C D OR E C	3723 UNSEALED 3723 POLYMERIC 3723 POLYMERIC
L4S			L3H L3S	C F	POLYMERIC POLYMERIC

LEGEND  
L = LONGITUDINAL JOINT  
NO. = JOINT REFERENCE  
K = KEYWAY  
T = TIE BARS  
B = CONCRETE BASE  
U = UNSEALED  
H = HOT POUR  
S = MOISTURE CURED  
POLYMERIC

JOINT REFERENCE NUMBERS  
1 = SAWED TO A DEPTH OF  $\pm 3$   
2 = KEYED CONSTRUCTION JOINT  
3 = BUTTED CONSTRUCTION JOINT  
4 = SAWED TO A DEPTH OF  $\pm 2$



TIE BAR BENDING DETAIL

LONGITUDINAL JOINT  
DEPTH TABLE ③

PAVEMENT THICKNESS T	CONCRETE BASE JOINT DEPTH g
6"-6-1/2"	2"
7"-7-1/2"	2-1/4"
8"-8-1/2"	2-1/2"
9"-9-1/2"	3"

LONGITUDINAL JOINT NOTES:

ALL REBARS ARE IN METRIC DESIGNATIONS

TIE BARS FOR L1TB JOINTS SHALL BE THE SAME SIZE AND SPACING AS SHOWN ON STANDARD PLAN SHEETS 5-297.217 & .219.

EXCEPT WHEN NOTED OTHERWISE IN THE PLANS, THE TIE BAR SPACING FOR ALL L2KT AND L2KTB JOINTS SHALL BE 2'6" C. TO C. AND BENT 60° AS SHOWN.

TIE BARS IN THE L2KT AND L2KTB JOINTS SHALL BE THE SAME SIZE AND LENGTH AS USED FOR THE L1T OR L1TB JOINTS, WHEN TYING PAVEMENT TO PAVEMENT OR BASE TO BASE. TIE BARS IN THE L2KT OR L2KTB JOINTS SHALL BE NO. 13 X 2'6"; WHEN TYING CURB & GUTTER TO PAVEMENT OR BASE.

ALL TIE BARS SHALL MEET THE REQUIREMENTS OF GRADE 60 FOR AASHTO M-31 OR M-53.

NORMALLY, TIED PAVEMENT WIDTHS SHALL NOT EXCEED 4 LANES, EXCEPT BRIDGE APPROACH PANELS AND PAVEMENT TAPERS.

JOINT WIDTH TOLERANCE IS + 1/16 IN. TO - 1/32 IN.  
SPEC. 3723 SEALER - TOP OF SEALER FLUSH TO - 3/16 IN. BELOW TOP OF PAVEMENT SURFACE.

- ① THE JOINT FACES SHALL BE CLEANED AND DRIED BY SANDBLASTING AND AIR BLASTING. PRIOR TO SEALING THE JOINT, A CLOSED CELL BACKER ROD CAPABLE OF WITHSTANDING SEALANT TEMPERATURES OF 400 DEGREES F, WITH A DIAMETER 1/8 IN. LARGER THAN THE JOINT OPENING, MAY BE PLACED 1/2 IN. BELOW THE TOP OF THE PAVEMENT.
- ② THE JOINT FACES SHALL BE CLEANED AND DRIED BY SANDBLASTING AND AIR BLASTING. PRIOR TO SEALING THE JOINT, A 1/2 IN. DIAMETER CLOSED CELL BACKER ROD SHALL BE PLACED SUCH THAT THE TOP OF THE BACKER ROD IS 1/2 IN. BELOW THE SURFACE OF THE PAVEMENT. POLYMERIC SHALL BE TOOLED INTO THE JOINT MAINTAINING A SEALANT BEAD THICKNESS OF 1/4 IN.
- ③ FOR CONCRETE PAVEMENT THE JOINT DEPTH "g" SHALL BE T/3 INCHES.

GENERAL NOTES:

SEE THE FOLLOWING STANDARD PLATES AND STANDARD PLAN SHEETS FOR ADDITIONAL DETAILS: DOWEL BAR ASSEMBLY 1103, PAVEMENT KEYWAY 1141 AND CONCRETE MAINLINE/RAMP PAVEMENT 5-297.217 & .219.

SEE PAVING LAYOUTS IN THE PLANS FOR JOINT CLASS DESIGNATIONS TO BE USED & SPECIAL REINFORCEMENT REQUIRED.

REVISION DATE  
4-3-2000

STANDARD SHEET NO.  
5-297.221 (2 OF 2)  
STANDARD APPROVED:  
JANUARY 25, 1993

TITLE:

PAVEMENT JOINTS  
LONGITUDINAL (DESIGN L)

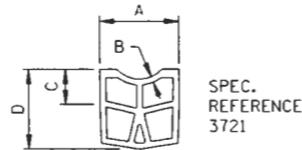
STATE PROJ. NO.

141-201-02

SHEET NO. 9 OF 151 SHEETS

REQUIRED DIMENSIONS

JOINT TYPE	TRANSVERSE
NOMINAL SEALER SIZE	1 1/16"
A	0.80" +0.14" -0.05"
B	0.08" ± 0.02"
C	0.60" MIN.
D	0.80" MIN.
WEB AND WALL THICKNESS, UNLESS NOTED	0.03" MIN.



TYPICAL SHAPE FOR SATISFACTORY INSTALLATION IN JOINT (5 CELL MIN.)

CONTRACTION JOINT SEALER  
PREFORMED ELASTIC TYPE

NOTES:

"A" DIMENSION SHALL APPLY AT ANY POINT THROUGHOUT "C" DEPTH. IN ITS FINAL POSITION, THE TOP CORNERS OF THE PREFORMED JOINT SEALER SHALL BE PLACED NOT LESS THAN 1/8 IN., NOR MORE THAN 5/16 IN. BELOW THE PAVEMENT SURFACE.

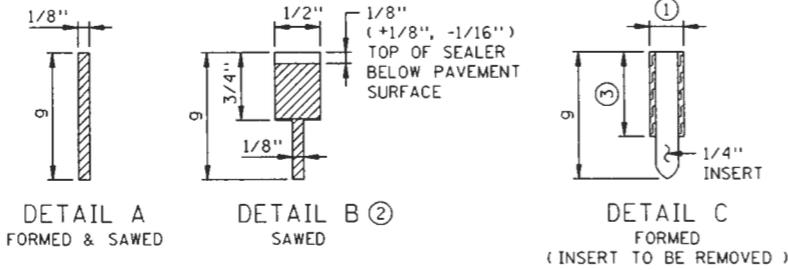
SHARP INTERNAL CORNERS WILL NOT BE PERMITTED. ALL CORNERS SHALL BE PROVIDED WITH SUITABLE FILLET. CURRENTLY APPROVED CONFIGURATIONS ARE ON FILE IN THE MATERIALS ENGINEERING SECTION, MINNESOTA DEPARTMENT OF TRANSPORTATION.

CONTRACTION JOINT CLASS DESIGNATION, DETAIL & SEALER SPEC. TABLE

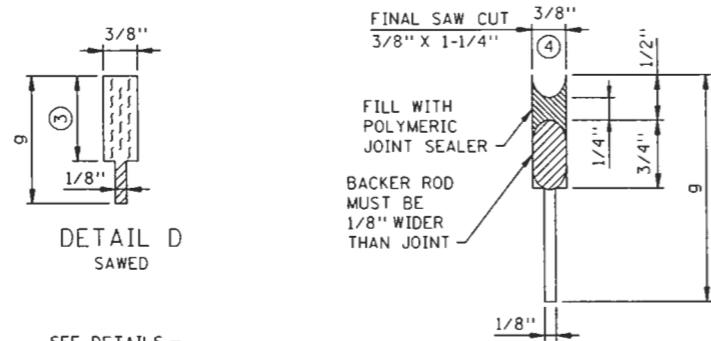
CLASS DESIGNATION		JOINT DETAIL	JOINT SEALER SPEC.
WITHOUT DOWELS	WITH DOWELS		
C1A	C1A-D	A	UNSEALED
C2B	C2B-D	B	3725
C2X	C2X-D	B OR C	3725
C3D	C3D-D	D	3721
C3X	C3X-D	C OR D	3721
C4E	C4E-D	E	POLYMERIC

CONTRACTION JOINT DEPTH & DOWEL BAR TABLE ⑤

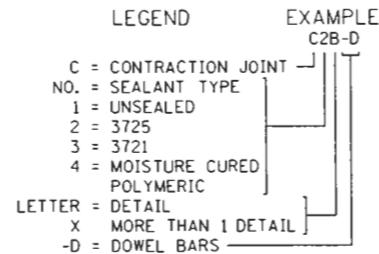
PAVEMENT THICKNESS T	CONCRETE BASE JOINT DEPTH g	DOWEL BAR DIAMETER
6"- 6-1/4"	1-1/4"	1"
6-1/2"-10-1/4"	2"	1-1/4"
10-1/2"-12-1/2"	—	1-1/2"
13"-14"	—	1-3/4"



DETAIL A FORMED & SAWED  
DETAIL B ② SAWED  
DETAIL C FORMED (INSERT TO BE REMOVED)



DETAIL D SAWED  
DETAIL E SAWED



LEGEND  
EXAMPLE C2B-D

CONTRACTION JOINT NOTES:

IN CONCRETE BASE CONSTRUCTION THE CONTRACTION JOINTS SHALL BE SPACED AT 30 FT. INTERVALS AND AT RIGHT ANGLES TO THE LONGITUDINAL JOINTS, EXCEPT AS NOTED BELOW. WHERE THE CONCRETE BASE IS CONSTRUCTED ADJACENT TO EXISTING PAVEMENT OR BASE, THE CONTRACTION JOINTS IN THE NEW BASE SHALL MATCH THOSE IN THE EXISTING PAVEMENT OR BASE, EXCEPT THAT THE SPACING SHALL NOT BE LESS THAN 15 FT., NOR MORE THAN 30 FT.

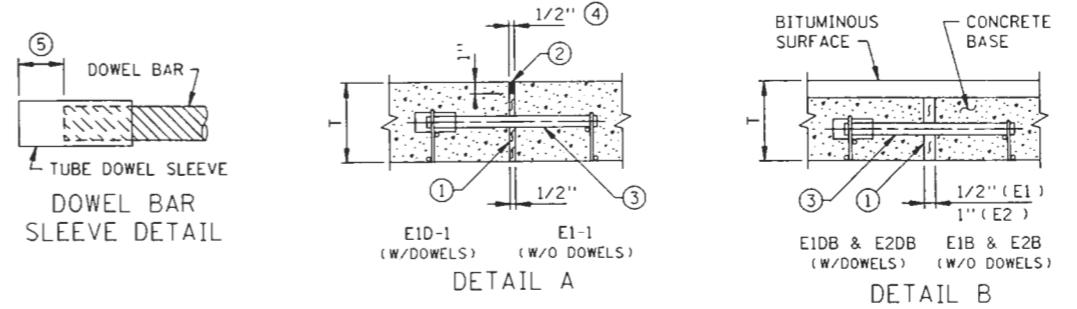
JOINT WIDTH TOLERANCES: + 1/16 IN. AND - 1/32 IN.

GENERAL NOTES:

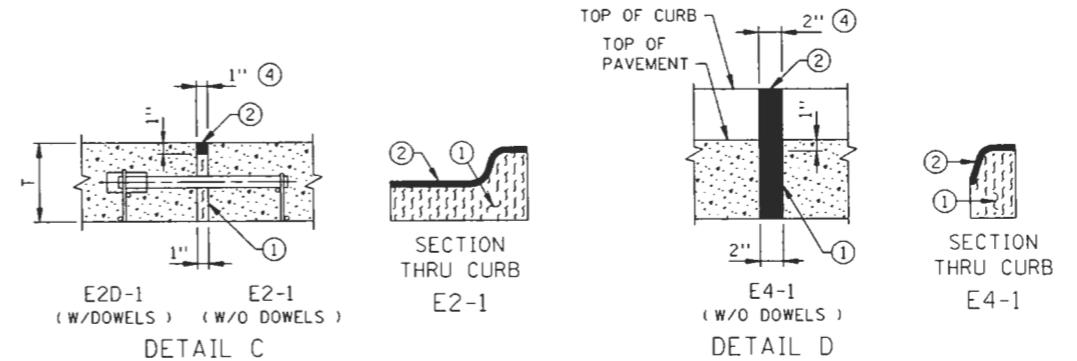
SEE THE FOLLOWING STANDARD PLATES AND STANDARD PLAN SHEET FOR ADDITIONAL DETAILS: DOWEL BAR ASSEMBLY, 1103; CONSTRUCTION OF HEADER JOINTS, 1150; AND CONCRETE MAINLINE/RAMP PAVEMENT, 5-297.217 & .219.

SEE PAVING LAYOUTS IN THE PLANS FOR JOINT CLASS DESIGNATION TO BE USED AND SPECIAL REINFORCEMENT REQUIRED.

CONTRACTION JOINTS  
DESIGN C



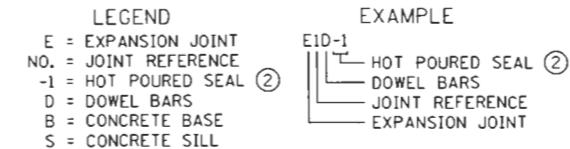
DOWEL BAR SLEEVE DETAIL  
DETAIL A  
DETAIL B



DETAIL C  
DETAIL D  
DETAIL E

EXPANSION JOINTS

CLASS DESIGNATION		JOINT DETAIL	JOINT SEALER SPEC.
WITH DOWELS	WITHOUT DOWELS		
E1D-1	E1-1	A	②
E1DB	E1B	B	UNSEALED
E2D-1	E2-1	C	②
E2DB	E2B	B	UNSEALED
E4D-1	E4-1	D	②
		E	②



LEGEND  
EXAMPLE E1D-1

NOTES:

- PREFORMED JOINT FILLER MATERIAL. SPEC. 3702.
- JOINT SEALER SPEC. 3723. TOP OF SEALER, FLUSH TO 1/8 IN. BELOW TOP OF PAVEMENT SURFACE. MAKE TOP OF SEALER FOR CURB SECTION E JOINTS FLUSH WITH SURFACE ± 1/8 IN.
- DOWEL BAR ASSEMBLY, SEE STANDARD PLATE 1103.
- JOINT WIDTH IS EQUAL TO HALF OF THE JOINT NUMBER IN 1/2 IN. INTERVALS (i.e. E1 = 1/2 IN., E2 = 1 IN., E3 = 1-1/2 IN., E4 = 2 IN., E8 = 4 IN.).
- SPACE FROM END OF DOWEL BAR TO END OF SLEEVE TO BE EQUAL TO EXPANSION JOINT WIDTH.

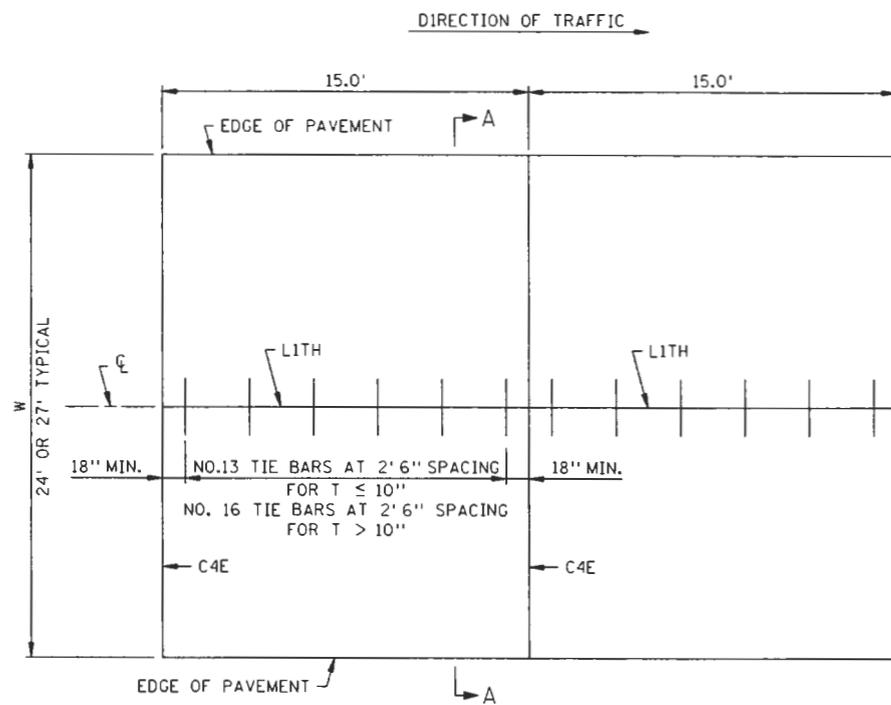
EXPANSION JOINTS  
DESIGN E

STANDARD SHEET NO.  
5-297.221 (1 OF 2 )  
STANDARD APPROVED:  
JANUARY 25, 1993

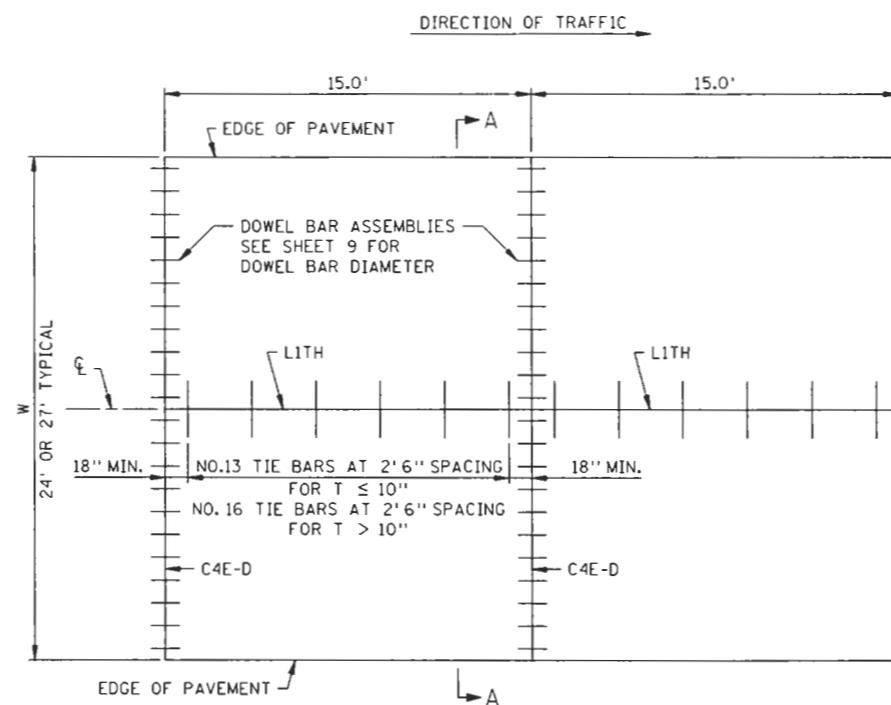
TITLE:  
PAVEMENT JOINTS  
CONTRACTION (DESIGN C) AND EXPANSION (DESIGN E)

REVISION DATE  
12-21-99

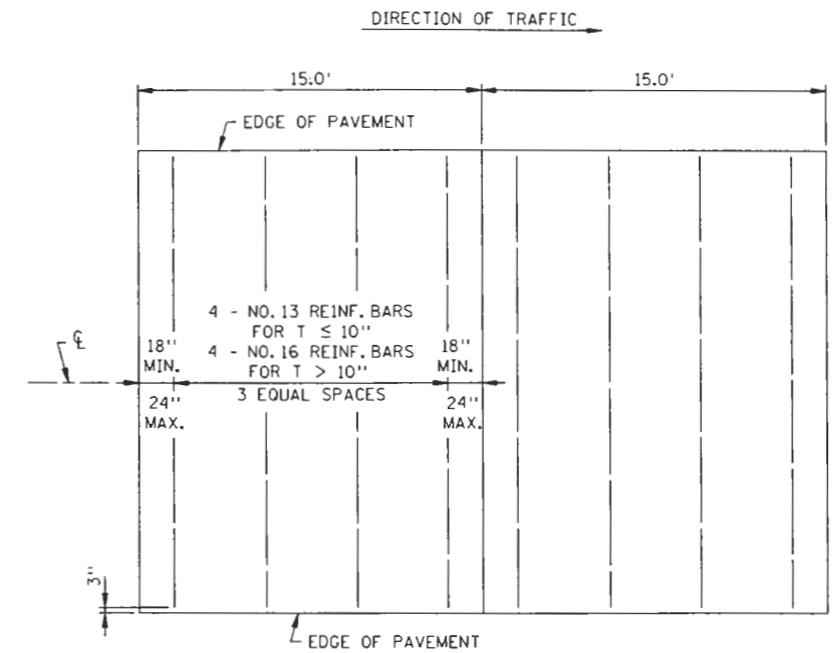
STATE PROJ. NO. 141-201-02 SHEET NO. 10 OF 151 SHEETS



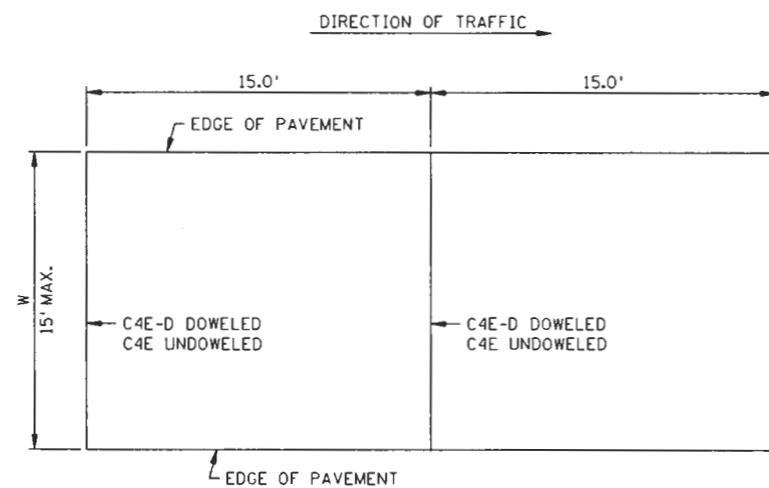
MAINLINE PAVEMENT  
UNDOWELED



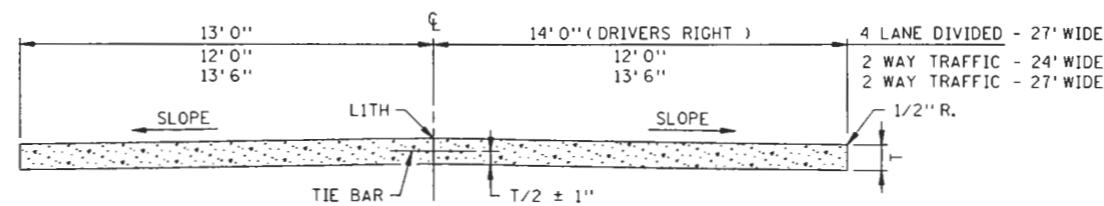
MAINLINE PAVEMENT  
DOWELED



SUPPLEMENTAL PANEL REINFORCEMENT



PAVEMENT 2 FT. THRU 15 FT. WIDTH



SECTION A-A

GENERAL NOTES:

ALL REBARS ARE IN METRIC DESIGNATIONS

SEE TYPICAL SECTIONS AND PLAN SHEETS FOR CROSS SLOPES AND PAVEMENT THICKNESS, T.

WHEN RIGID PAVEMENT ADJOINS FLEXIBLE PAVEMENT, BRIDGE APPROACHES, R. R. CROSSINGS OR OTHER TYPES OF FREE ENDS, THE FOLLOWING MODIFICATIONS SHALL BE MADE: THE FIRST OR LAST 10 JOINTS SHALL BE DOWELED CONTRACTION JOINTS, C4E-D.

DOWEL BAR ASSEMBLIES, WHEN REQUIRED, SHALL BE SIMILAR TO THOSE SHOWN ON STANDARD PLATE 1103.

ALL REINFORCING BARS SHALL BE EPOXY COATED IN ACCORDANCE WITH SPEC. 3301 AND SHALL MEET THE REQUIREMENTS OF GRADE 60 FOR AASHTO M-31 OR M-53. FOR ADDITIONAL REINFORCEMENT OVER CULVERTS, SEE STANDARD PLATE 1070.

TIE BARS:  
USE NO. 13 BARS 2'6\"/>

SUPPLEMENTAL PANEL REINFORCEMENT:  
PLACE IN PANELS WHERE PAVEMENT WIDTH EXCEEDS 15.0' WITHOUT A LONGITUDINAL JOINT, AND IN THE MIDDLE LANE(S) WHERE TIED PAVEMENT WIDTH EXCEEDS 4 LANES. USE NO. 13 BARS FOR PAVEMENT THICKNESS 10\"/>

NO MORE THAN TWO LANES SHALL BE PAVED AT THE SAME TIME.

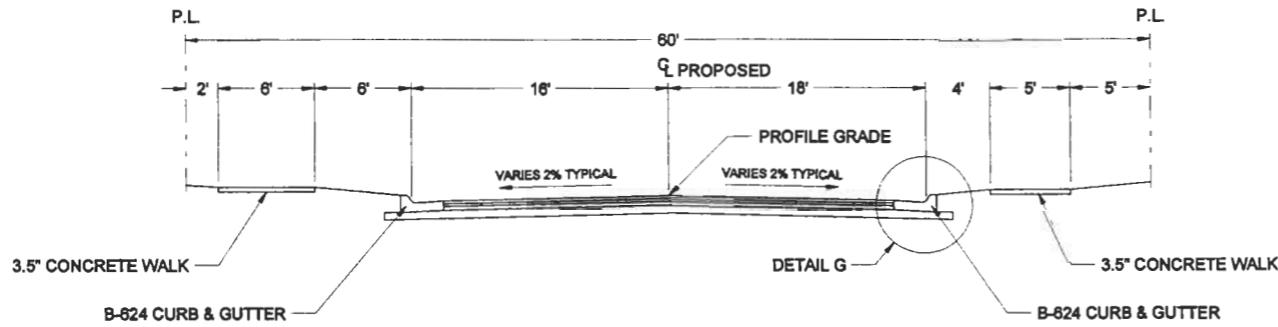
STANDARD SHEET NO.  
5-297.217  
STANDARD APPROVED:  
OCTOBER 1, 1998

TITLE:  
CONCRETE MAINLINE PAVEMENT  
15.0 FT. PANEL LENGTH

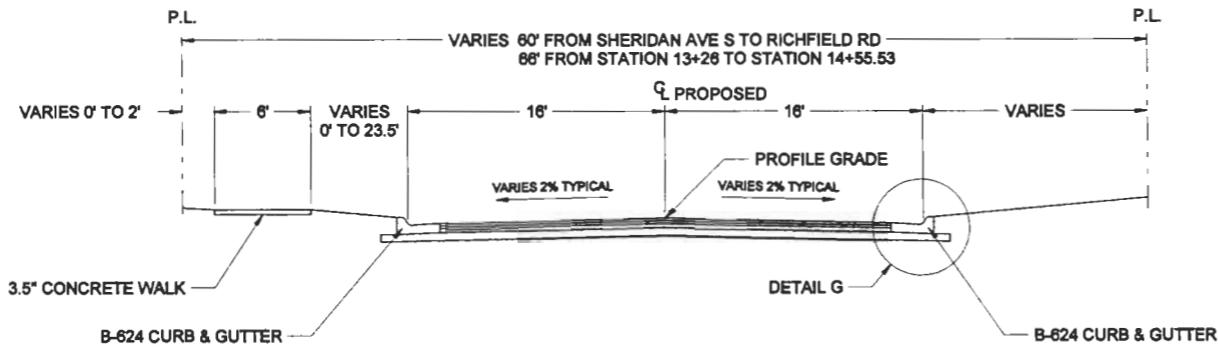
REVISION DATE  
1-21-2000

STATE PROJ. NO. 141-201-02 SHEET NO. 11 OF 151 SHEETS

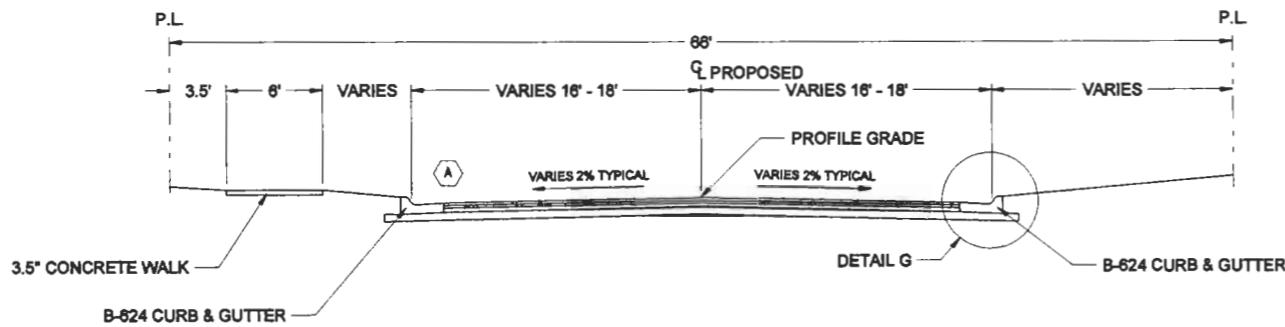
W 39TH ST  
FROM SHERIDAN AVE S TO RICHFIELD RD



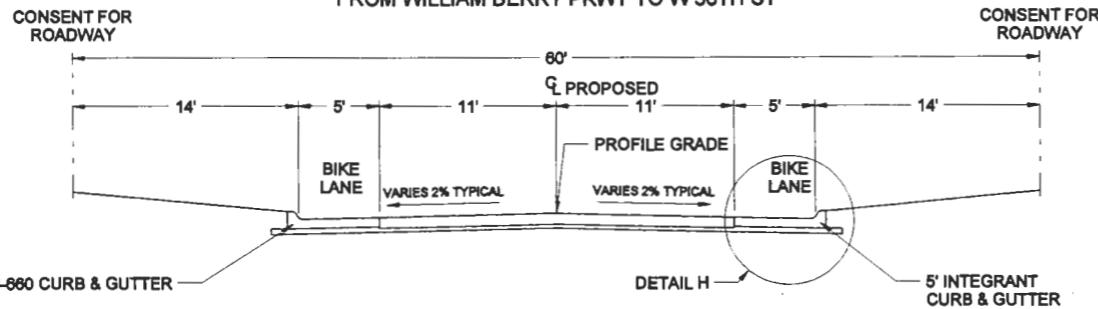
RICHFIELD RD  
FROM W 39TH ST TO STATION 14+55.33



RICHFIELD RD  
FROM STATION 14+55.53 TO WILLIAM BERRY PKWY

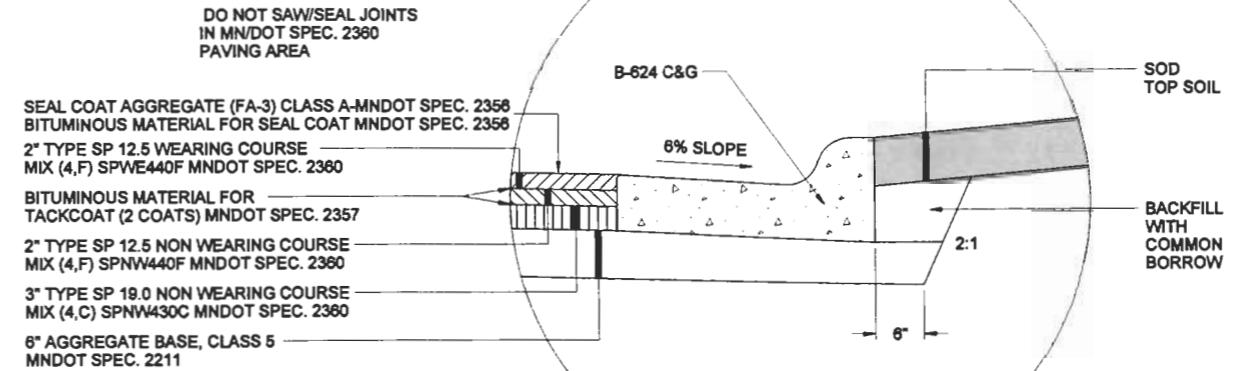


RICHFIELD RD  
FROM WILLIAM BERRY PKWY TO W 36TH ST

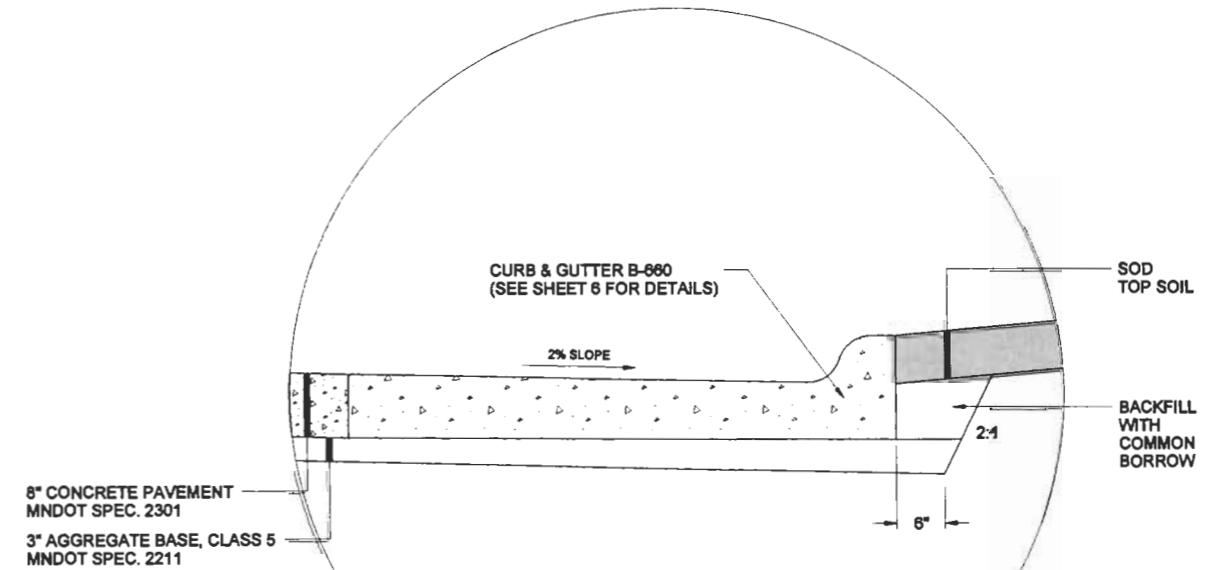


(A) NOTE: 10' PARKING LANE FROM APPROXIMATELY STATION 15+98 TO 18+10

DETAIL G



DETAIL H



NOT TO SCALE

I HEREBY CERTIFY THAT THIS PLAN 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.

*Lisa K. Cerney*  
LISA K. CERNEY  
42688  
REGISTRATION NO.  
2/19/04  
DATE



**MINNEAPOLIS**  
DEPARTMENT OF PUBLIC WORKS  
**Engineering Services**

PROPOSED TYPICAL SECTIONS

DRAWN BY: N.B, E.J, B.P, E.O  
CHECKED BY: L.C  
DATE: 09/10/03  
DATE: 09/30/03

RICHFIELD ROAD

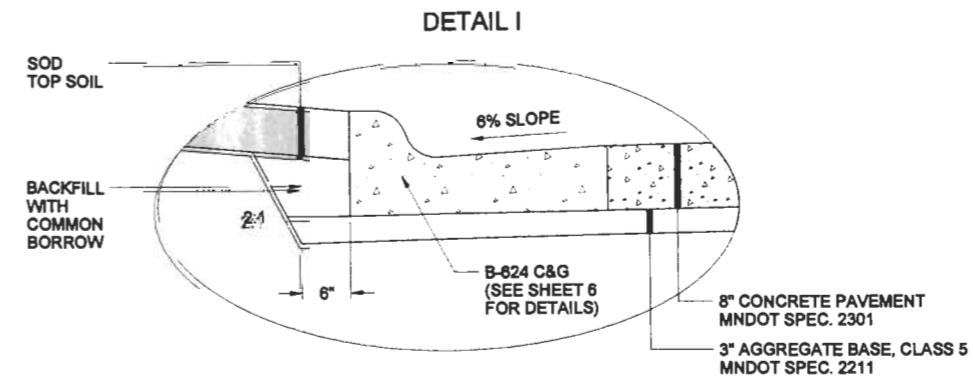
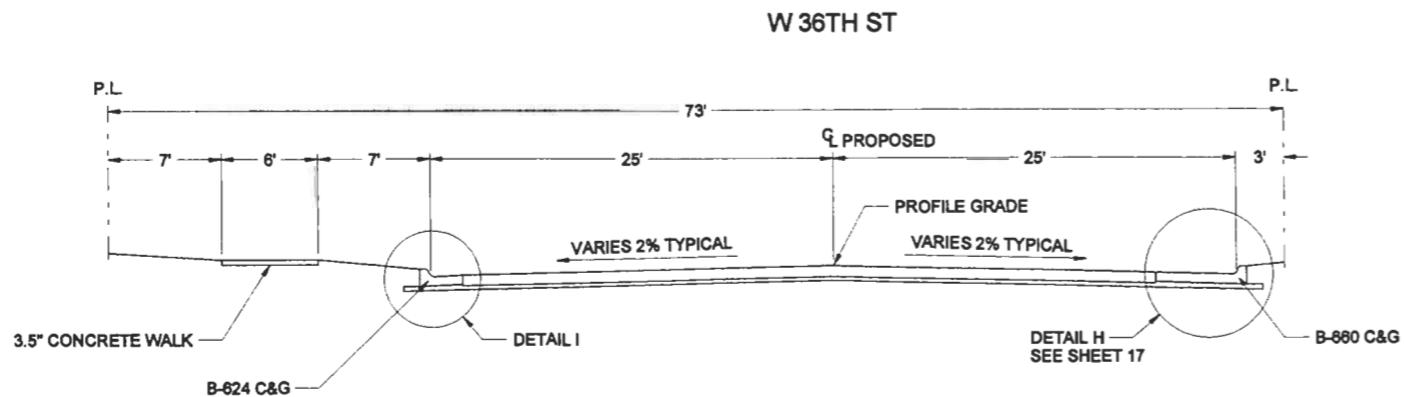
S.P. 141-201-02

SHEET

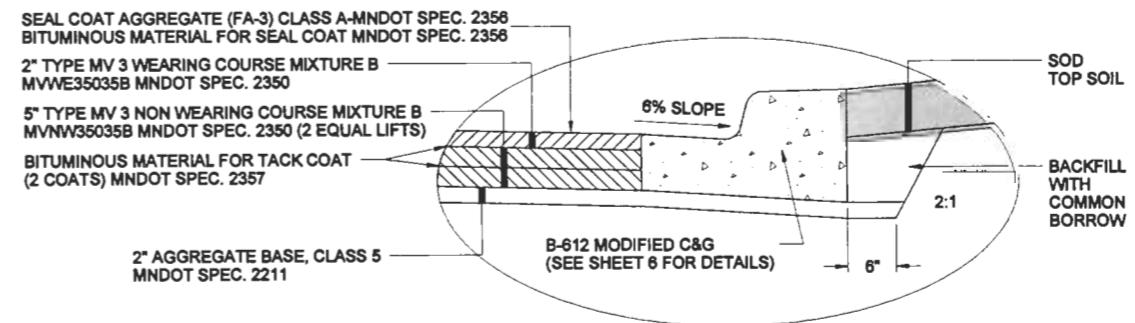
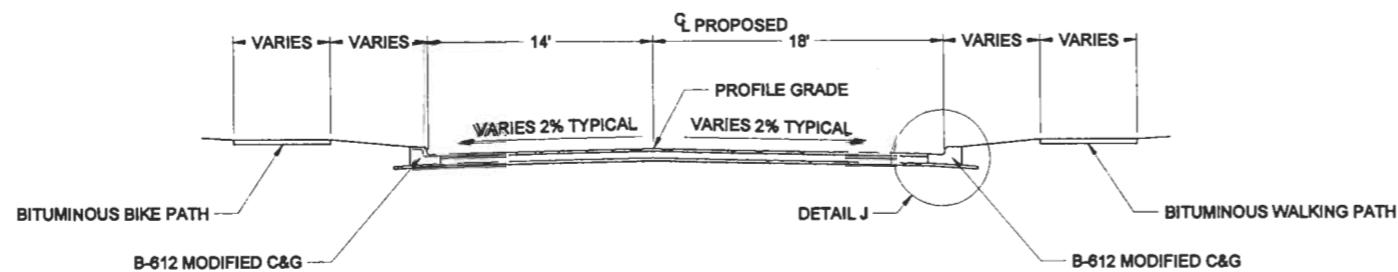
17 OF 151

SHEETS

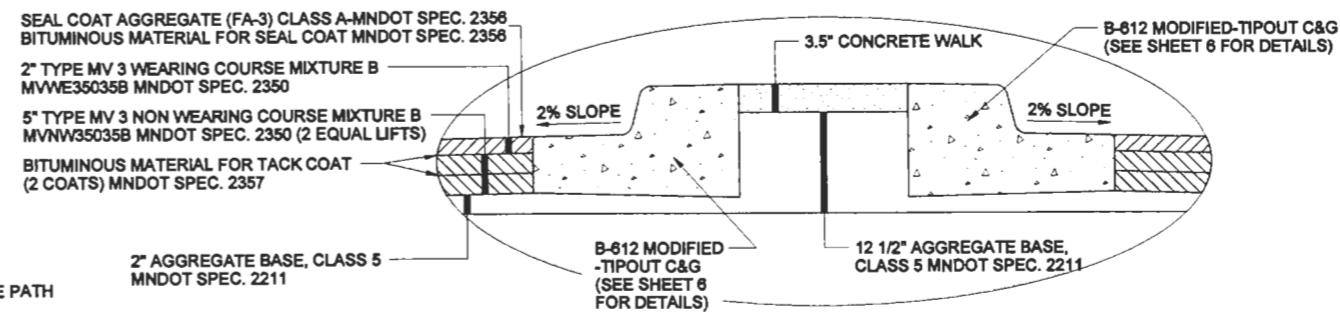
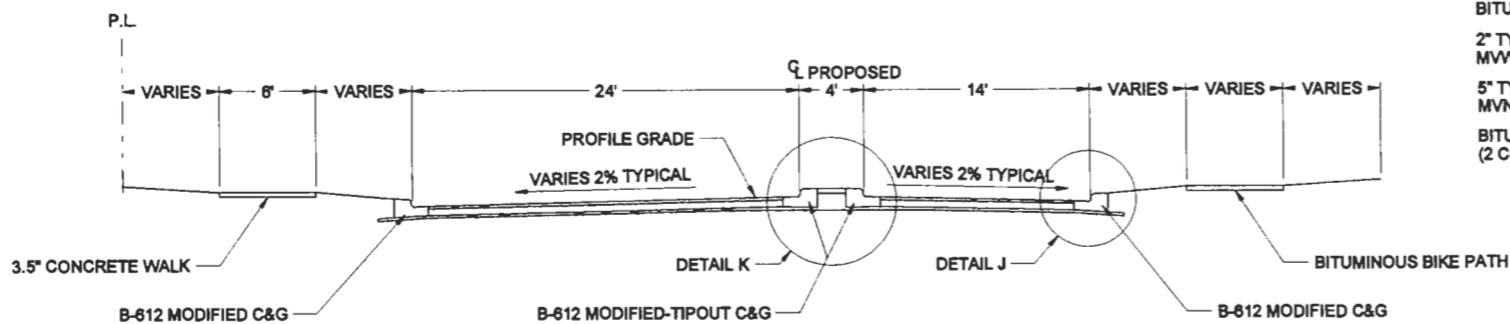
Date Printed = 2/19/04 10:17 AM File Name = 0014-SECT-004.dgn



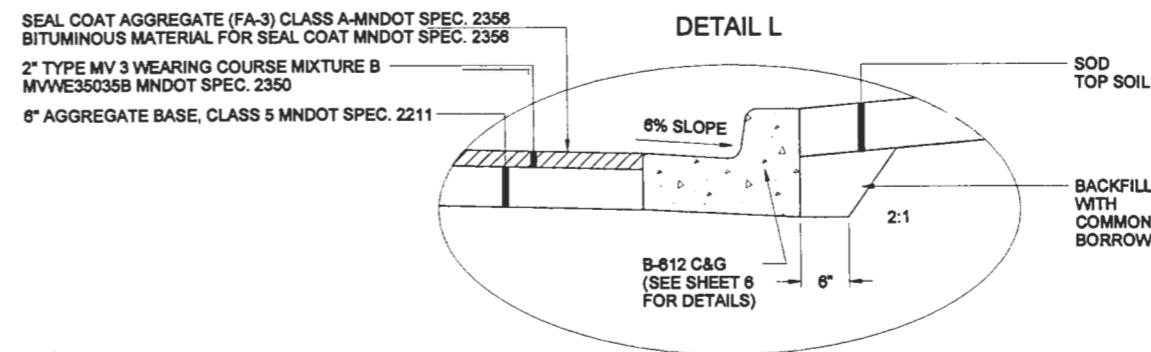
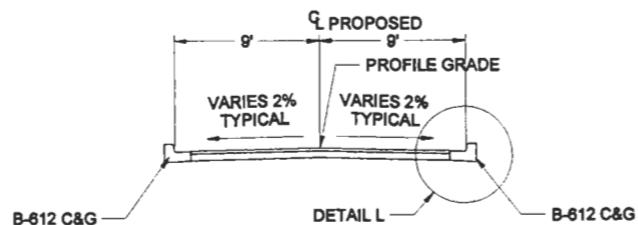
**WILLIAM BERRY PKWY**



**W CALHOUN PKWY**



**PARKING LOT AT W 36TH ST**



NOT TO SCALE

I HEREBY CERTIFY THAT THIS PLAN 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.

*Lisa K. Cerney* 42688 2/19/04

LISA K. CERNEY REGISTRATION NO. DATE



**MINNEAPOLIS**  
DEPARTMENT OF PUBLIC WORKS  
**Engineering Services**

PROPOSED TYPICAL SECTIONS

DRAWN BY: N.B, E.J, B.P, E.O DATE: 09/09/03

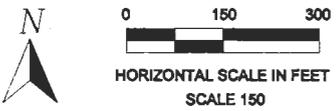
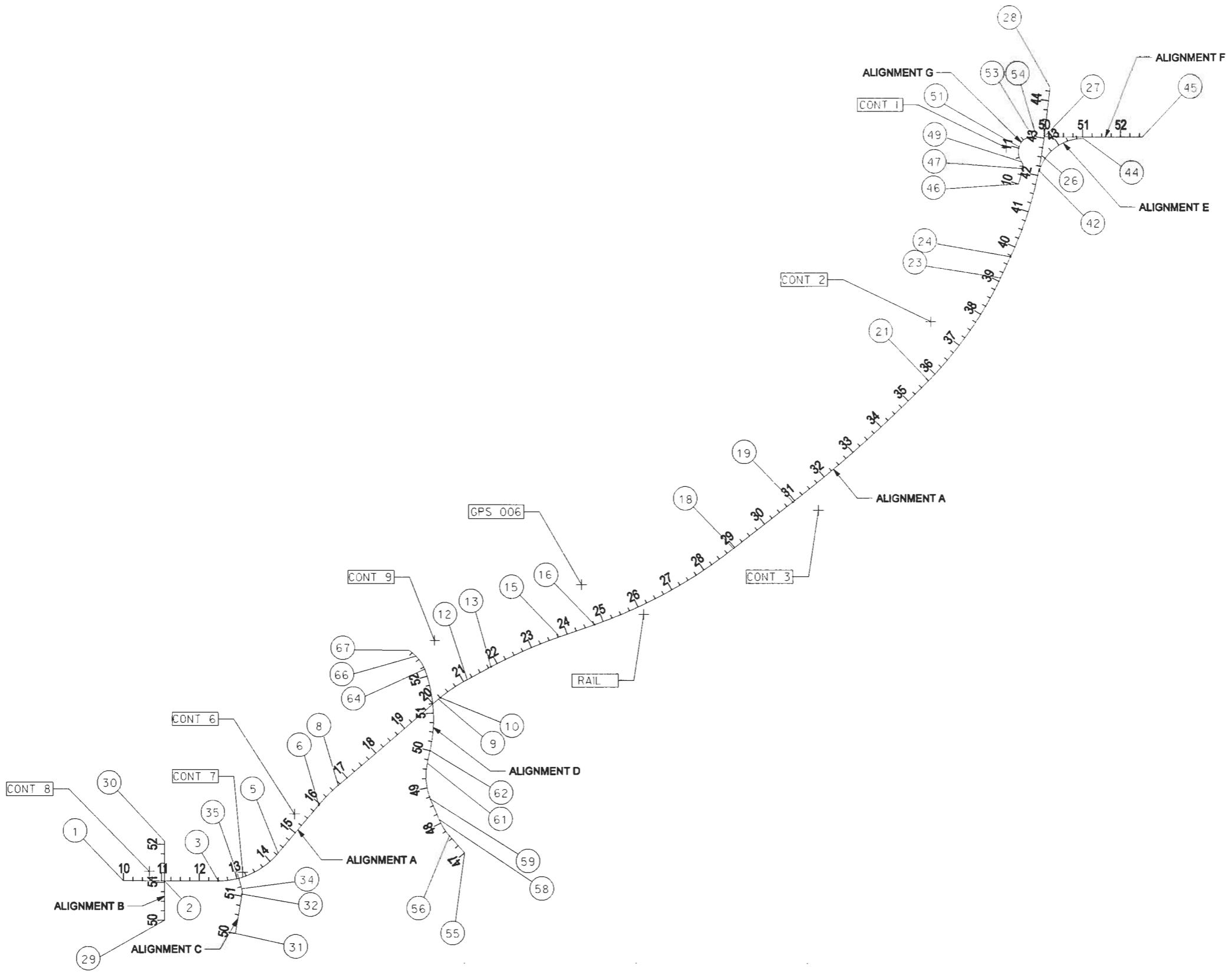
CHECKED BY: L.C DATE: 09/30/03

RICHFIELD ROAD

S.P. 141-201-02

SHEET  
18 OF 151  
SHEETS

Date Printed = 2/18/04 10:18 AM  
File Name = 0014-alignments.dgn



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*Lisa K. Cerney*  
 LISA K. CERNEY      42688      2/19/04  
 REGISTRATION NO.      DATE



**MINNEAPOLIS**  
 DEPARTMENT OF PUBLIC WORKS  
**Engineering Services**

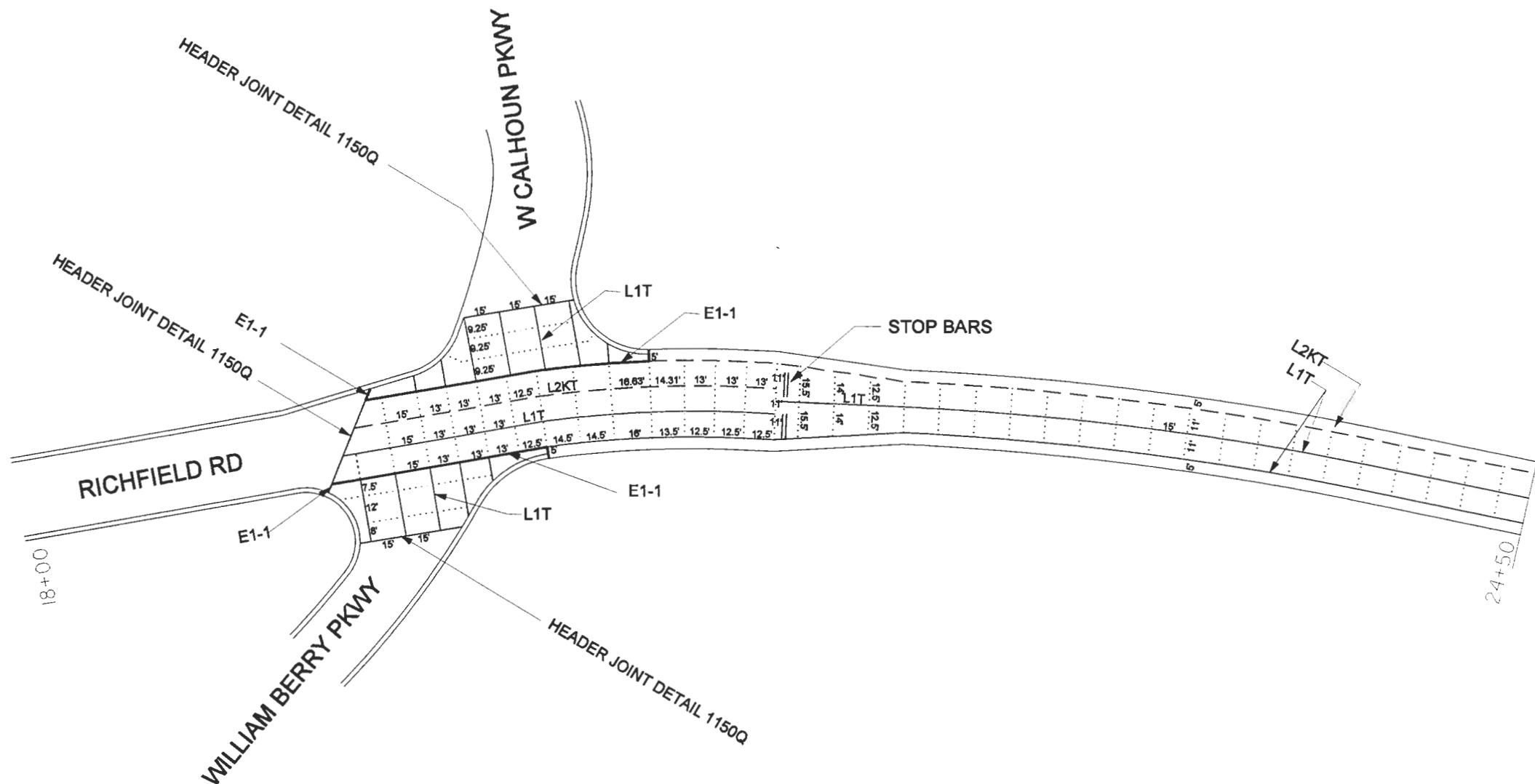
ALIGNMENT	
DRAWN BY:	N.B, E.J, B.P, E.O
DATE:	09/10/03
CHECKED BY:	L.C
DATE:	09/30/03

RICHFIELD ROAD
S.P. 141-201-02

SHEET  
**20 OF 151**  
 SHEETS

GENERAL NOTES

- (1) ALL TRANSVERSE JOINTS ARE C2A-D UNLESS OTHERWISE NOTED.
- (2) ALL REINFORCING BARS SHALL BE EPOXY COATED IN ACCORDANCE WITH MN/DOT SPEC. 3301 UNLESS OTHERWISE NOTED.
- (3) FURNISH AND INSTALL REINFORCEMENT FOR CATH BASINS, MANHOLES, GATE VALVES AND OTHER APPURTENANCES IN CONCRETE PAVEMENT AS PER MN/DOT STANDARD PLATE M7112C.
- (4) LIT JOINTS  
PLACE NO. 13 TIE BARS 2'-6" LONG AT 2'-6" SPACING
- (5) L2KT JOINTS  
PLACE NO. 13 TIE BARS 2'-6" SPACING AND BENT 60 DEG.
- (6) 2 NO. 13 BARS AT ACUTE ANGLES



CONCRETE PAVEMENT JOINTS		
LEGEND	TYPE	LENGTH
=====	L2KT	3049.5
-----	L1T	5268.3
.....	C2A-D	3042.5
=====	E1-1	277
	REINFORCED CONCRETE	6692 SQ. FT.

REINFORCING BARS REQUIRED						
TYPE	NO. REQD.	LENGTH	NO.	LOCATION	SUB-TOTAL	WEIGHT(LBS)
BENT 60°	1218	2' 6"	13	L2KT	3045	2034
STRAIGHT	2107	2' 6"	13	L1T	5268	3519
STRAIGHT	38	2' 6"	13	ACUTE ANGLE	95	64
STRAIGHT	14	2' 6"	13	STOPBAR	35	16
STRAIGHT	40	5' 0"	13	REINFORCE PANEL	200	134
STRAIGHT	104	7' 0"	13	REINFORCE PANEL	760	524
STRAIGHT	40	9' 0"	13	REINFORCE PANEL	360	241
STRAIGHT	78	10' 0"	13	REINFORCE PANEL	780	524
STRAIGHT	20	11' 0"	13	REINFORCE PANEL	220	147
STRAIGHT	114	12' 0"	13	REINFORCE PANEL	1368	914
				TOTAL		8410
DOWEL BAR	4367			C2A-D	EA	4367

NOTE: SEE SHEET 29 FOR HEADER LOCATIONS.



I HEREBY CERTIFY THAT THIS PLAN 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.

*Lisa K. Cerney* 42688 4/5/04  
LISA K. CERNEY REGISTRATION NO. DATE



**MINNEAPOLIS**  
DEPARTMENT OF PUBLIC WORKS  
**Engineering Services**

CONCRETE PANEL PLAN

DRAWN BY: N.B, B.P, E.J, E.O DATE: 09/10/03  
CHECKED BY: L.C DATE: 09/12/03

RICHFIELD ROAD

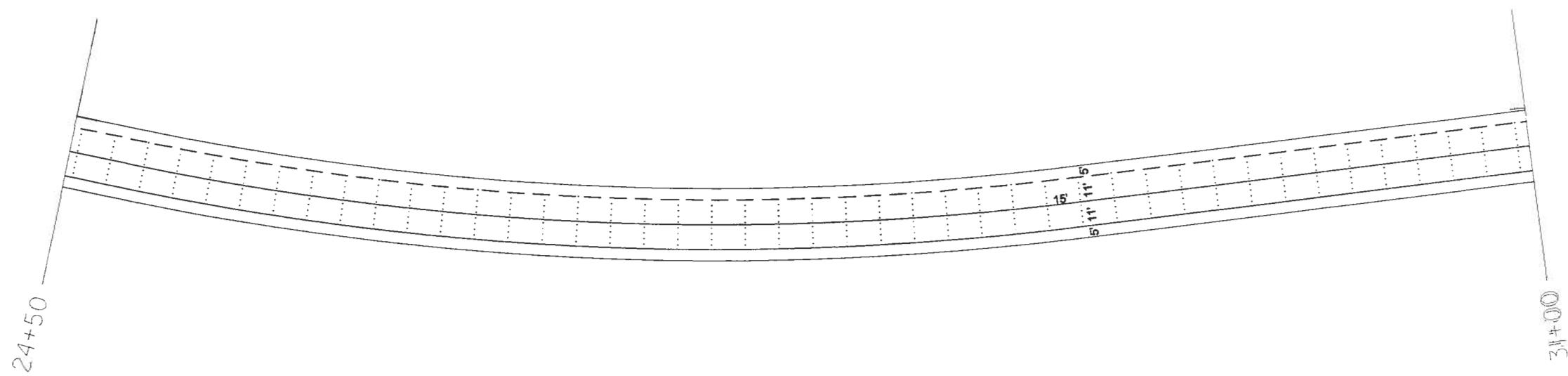
S.P. 141-201-02

SHEET  
21 OF 151  
SHEETS

File Name = 0014\_CONC PANEL1.dgn Date Printed = 3/31/04 8:19 AM

GENERAL NOTES

- (1) ALL TRANSVERSE JOINTS ARE C2A-D UNLESS OTHERWISE NOTED.
- (2) ALL REINFORCING BARS SHALL BE EPOXY COATED IN ACCORDANCE WITH MN/DOT SPEC. 3301 UNLESS OTHERWISE NOTED.
- (3) FURNISH AND INSTALL REINFORCEMENT FOR CATH BASINS, MANHOLES, GATE VALVES AND OTHER APPURTENANCES IN CONCRETE PAVEMENT AS PER MN/DOT STANDARD PLATE M7112C.
- (4) LIT JOINTS  
PLACE NO. 13 TIE BARS 2'-6" LONG AT 2'-6" SPACING
- (5) L2KT JOINTS  
PLACE NO. 13 TIE BARS 2'-6" SPACING AND BENT 60 DEG.
- (6) 2 NO. 13 BARS AT ACUTE ANGLES



File Name = 0014\_CONC PANEL2.dgn Date Printed = 3/31/04 8:43 AM



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*Lisa K. Cerney*  
LISA K. CERNEY  
42688 REGISTRATION NO.  
4/5/04 DATE



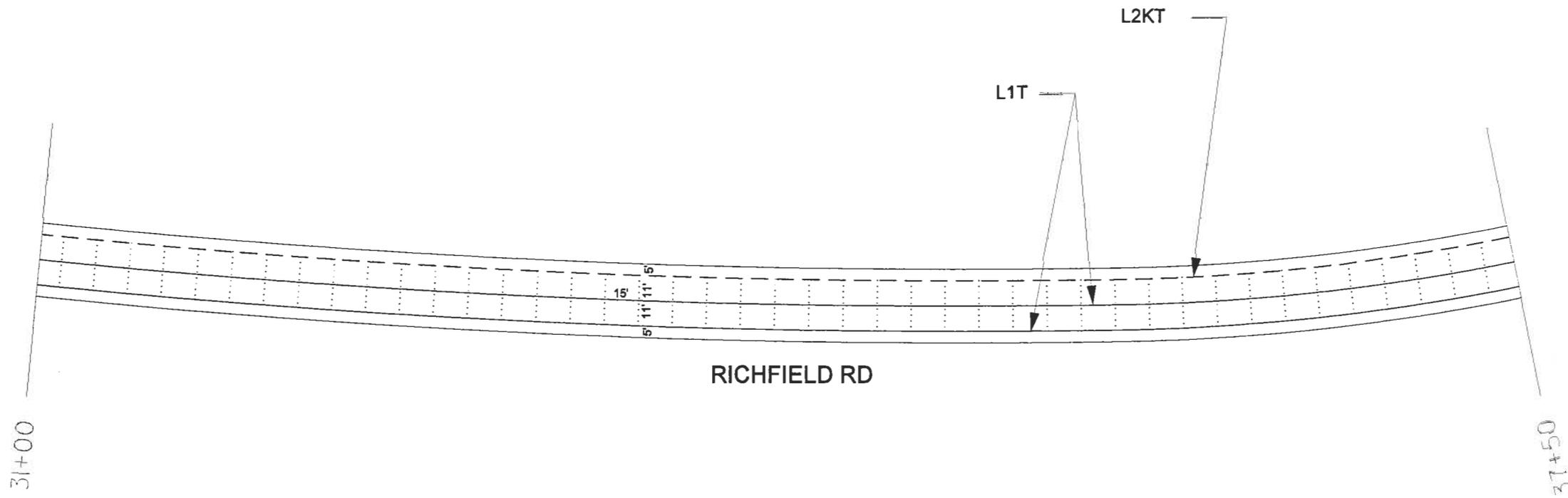
**MINNEAPOLIS**  
DEPARTMENT OF PUBLIC WORKS  
**Engineering Services**

CONCRETE PANEL PLAN			
DRAWN BY:	N.B, B.P, E.J, E.O	DATE:	09/10/03
CHECKED BY:	L.C	DATE:	09/12/03

RICHFIELD ROAD	SHEET
S.P. 141-201-02	22 OF 151
	SHEETS

GENERAL NOTES

- (1) ALL TRANSVERSE JOINTS ARE C2A-D UNLESS OTHERWISE NOTED.
- (2) ALL REINFORCING BARS SHALL BE EPOXY COATED IN ACCORDANCE WITH MN/DOT SPEC. 3301 UNLESS OTHERWISE NOTED.
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- (4) LIT JOINTS  
PLACE NO. 13 TIE BARS 2'-6" LONG AT 2'-6" SPACING
- (5) L2KT JOINTS  
PLACE NO. 13 TIE BARS 2'-6" SPACING AND BENT 60 DEG.
- (6) 2 NO. 13 BARS AT ACUTE ANGLES



File Name = 0014\_CONC PANEL3.dgn Date Printed = 3/3/04 8:55 AM



I HEREBY CERTIFY THAT THIS PLAN 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.

*Lisa K. Cerney*  
LISA K. CERNEY  
REGISTRATION NO. 42688  
DATE 4/5/04



**MINNEAPOLIS**  
DEPARTMENT OF PUBLIC WORKS  
**Engineering Services**

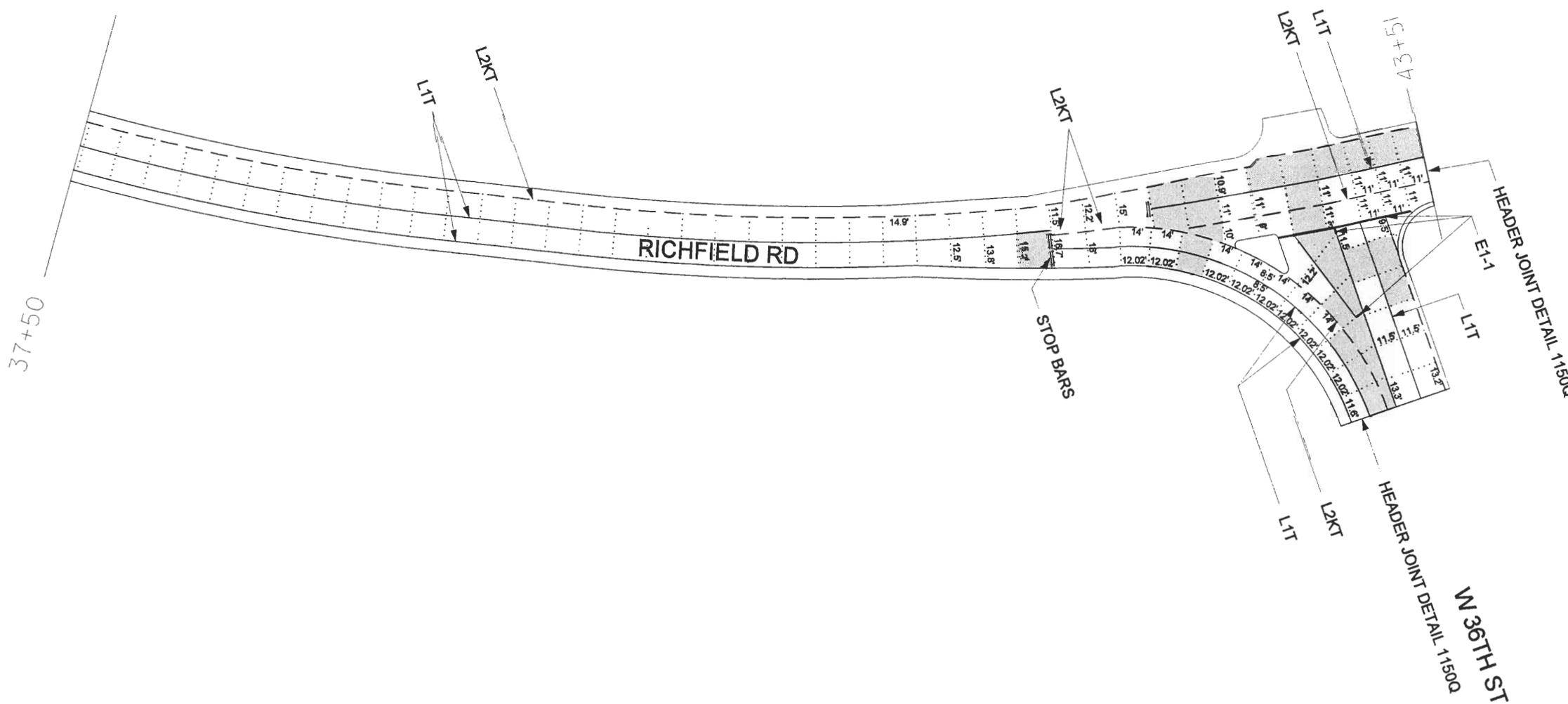
CONCRETE PANEL PLAN	
DRAWN BY: N.B, B.P, E.J, E.O	DATE: 09/10/03
CHECKED BY: L.C	DATE: 09/12/03

RICHFIELD ROAD
S.P. 141-201-02

SHEET  
**23 OF 151**  
SHEETS

GENERAL NOTES

- (1) ALL TRANSVERSE JOINTS ARE C2A-D UNLESS OTHERWISE NOTED.
- (2) ALL REINFORCING BARS SHALL BE EPOXY COATED IN ACCORDANCE WITH MN/DOT SPEC. 3301 UNLESS OTHERWISE NOTED.
- (3) FURNISH AND INSTALL REINFORCEMENT FOR CATH BASINS, MANHOLES, GATE VALVES AND OTHER APPURTENANCES IN CONCRETE PAVEMENT AS PER MN/DOT STANDARD PLATE M7112C.
- (4) LIT JOINTS  
PLACE NO. 13 TIE BARS 2'-6" LONG AT 2'-6" SPACING
- (5) L2KT JOINTS  
PLACE NO. 13 TIE BARS 2'-6" SPACING AND BENT 60 DEG.
- (6) 2 NO. 13 BARS AT ACUTE ANGLES



File Name = 0014\_CONC\_PANEL4.dgn Date Printed = 3/31/04 10:26 AM



I HEREBY CERTIFY THAT THIS PLAN 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.

*Lisa K. Cerney* 42688 4/5/04  
LISA K. CERNEY REGISTRATION NO. DATE



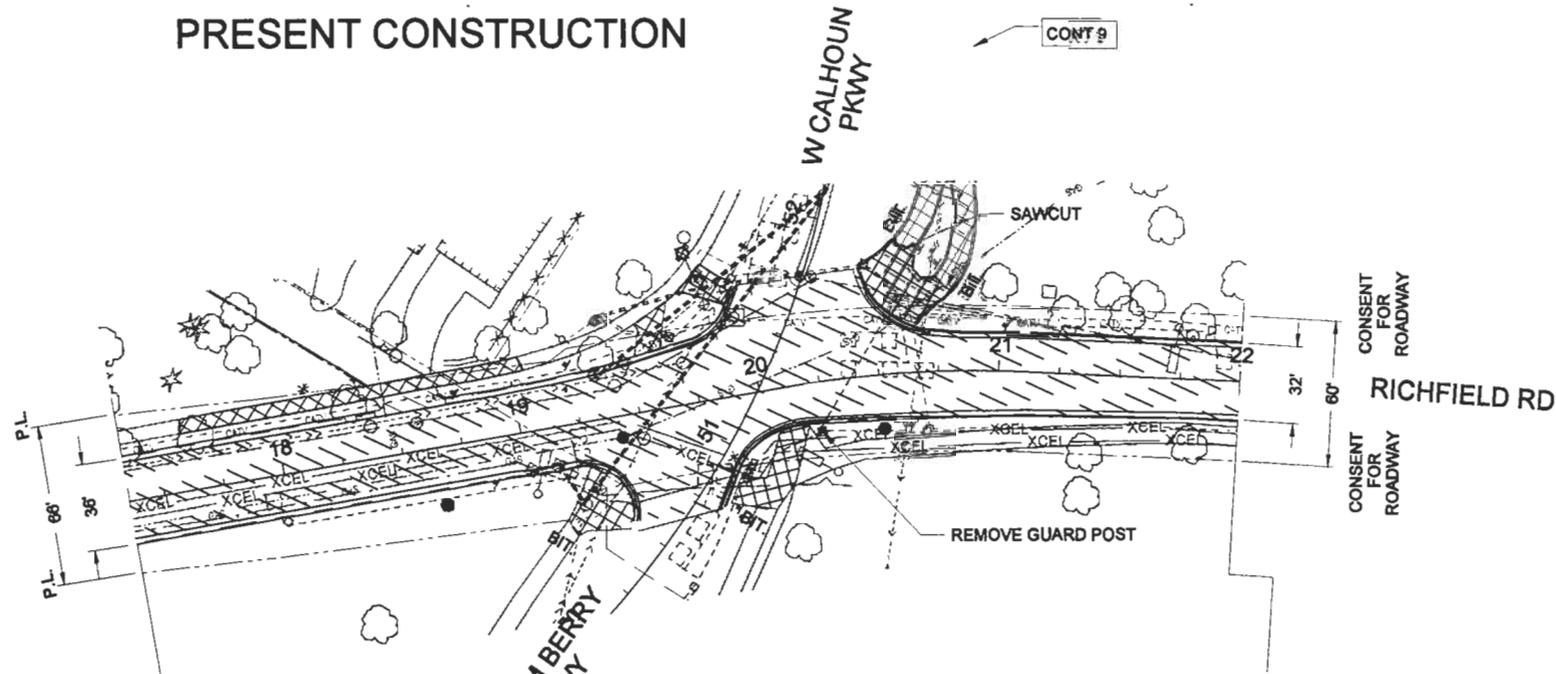
**MINNEAPOLIS**  
DEPARTMENT OF PUBLIC WORKS  
**Engineering Services**

CONCRETE PANEL PLAN		
DRAWN BY:	N.B, B.P, E.J, E.O	DATE: 09/10/03
CHECKED BY:	L.C	DATE: 09/12/03

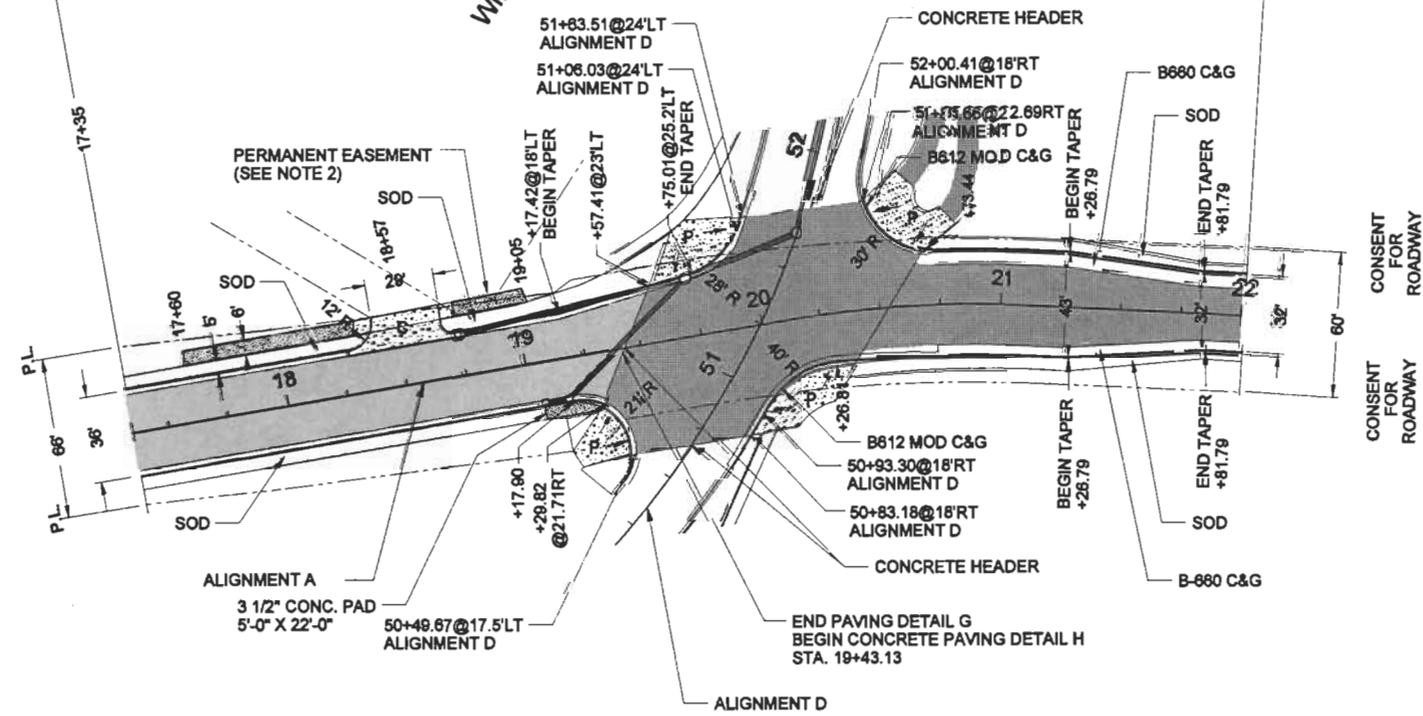
RICHFIELD ROAD
S.P. 141-201-02

SHEET  
**24 OF 151**  
SHEETS

PRESENT CONSTRUCTION



PROPOSED CONSTRUCTION



LEGEND	ITEM	UNIT	QUANTITY
	SALVAGE SIGN	EACH	6
	REMOVE GUARD POST	EACH	1
	REMOVE PAVEMENT	SQ YD	2120
	REMOVE CURB AND GUTTER	FT	889
	REMOVE SIDEWALK	SQ FT	1035
	REMOVE BITUMINOUS WALK	SQ FT	1815
	SAWING CONCRETE WALK	FT	12
	SAWING BITUMINOUS PAVEMENT	FT	38
	CONCRETE CURB DESIGN B660	FT	300
	CONCRETE CURB DESIGN B624	FT	458
	CONCRETE CURB DESIGN B612 MOD	FT	96
	BITUMINOUS PAVING DESIGN G	SQ YD	752
	CONCRETE PAVING DESIGN H	SQ YD	1314
	SODDING TYPE LAWN	SQ YD	424
	3.5" CONCRETE WALK	SQ FT	724
	6" CONCRETE WALK	SQ FT	2384
	8" CONCRETE DRIVEWAY PAVEMENT	SQ YD	47
	LOCATION & DIRECTION OF PEDESTRIAN RAMP	EACH	8
	REMOVE PIPE	FT	344

NOTE:  
1 CONSTRUCTION FENCE TO BE PLACED WITH ENGINEER & PARK BOARD FORESTER.

BENCHMARKS

CONT 9  
ELEV = 860.787  
PK ON PATH

- NOTES:
- 1) ALL B624 CURB AND GUTTER UNLESS OTHERWISE NOTED
  - 2) SEE SHEET 97 FOR RIGHT OF WAY EASEMENTS
  - 3) SEE SHEET 43 TO 49 FOR STORM DRAIN DESIGN
  - 4) SEE SHEET 56 TO 66 FOR SIGNAL AND LIGHTING DESIGN
  - 5) DIMENSIONS TO FACE OF CURB UNLESS OTHERWISE NOTED



I HEREBY CERTIFY THAT THIS PLAN 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.

*Lisa K. Cerney* 42688 2/19/04  
LISA K. CERNEY REGISTRATION NO. DATE



**MINNEAPOLIS**  
DEPARTMENT OF PUBLIC WORKS  
**Engineering Services**

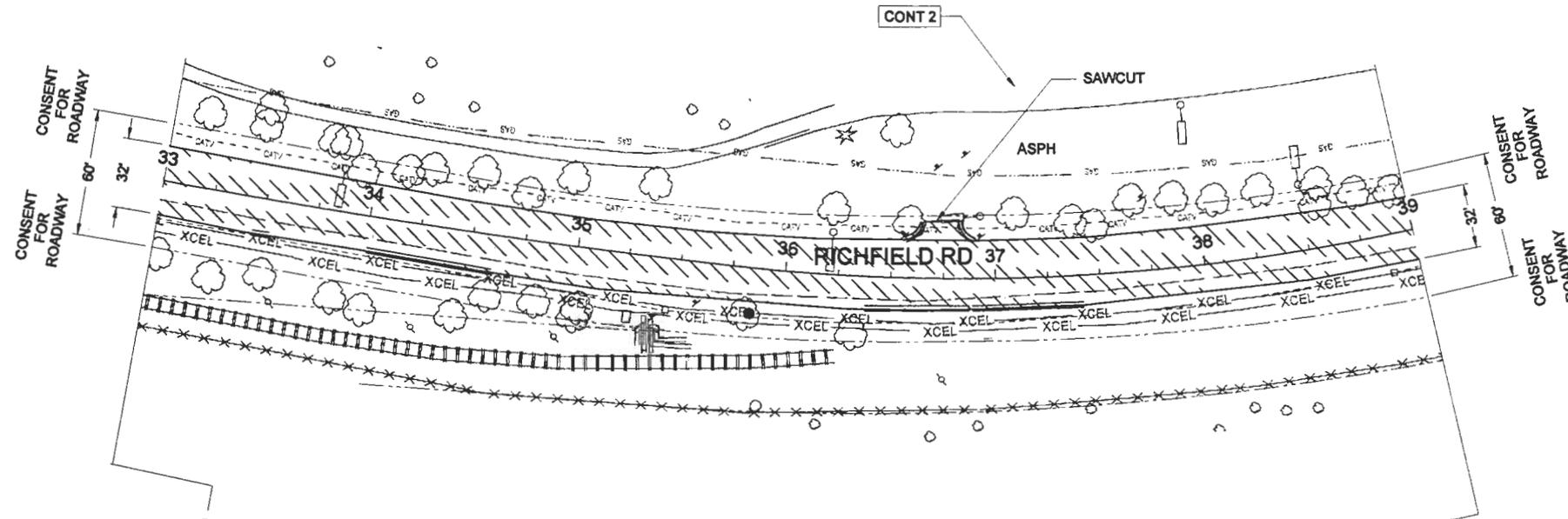
PLAN SHEET		
DRAWN BY:	N.B, B.P, E.J, E.O	DATE: 09/26/03
CHECKED BY:	L.C	DATE: 10/03/03

RICHFIELD ROAD		SHEET
S.P. 141-201-02		29 OF 151
		SHEETS

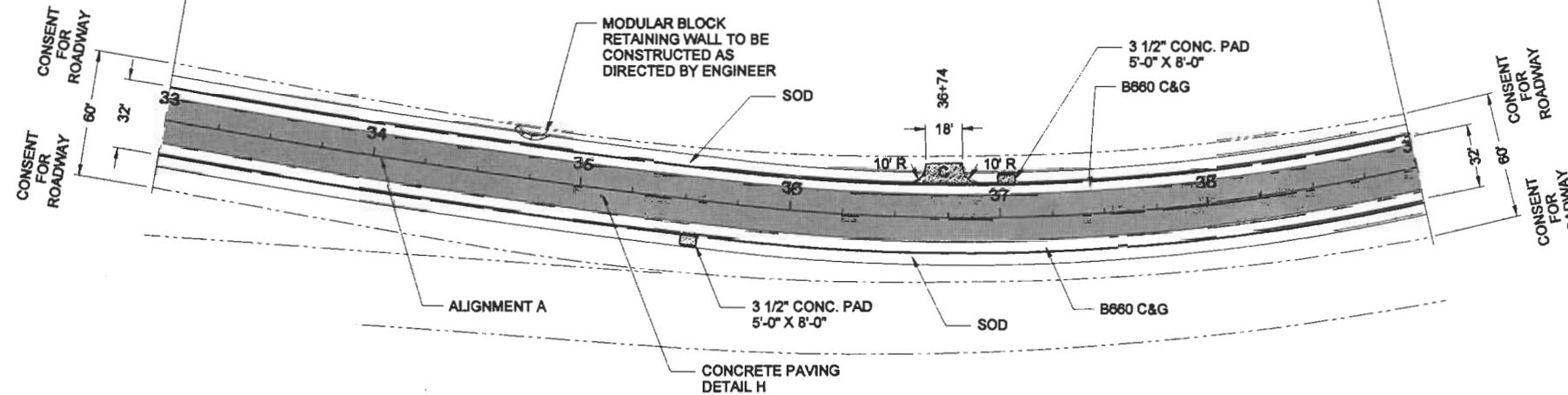
0014-PLAN-003.dgn Date Printed = 2/19/04 10:20 AM File Name = 0014-PLAN-003.dgn

RICHFIELD ROAD		FROM STATION	33+00	TO STATION	39+00
LEGEND	ITEM	UNIT	QUANTITY		
	SALVAGE SIGN	EACH	3		
	REMOVE PAVEMENT	SQ YD	2172		
	REMOVE CURB AND GUTTER	FT	195		
	SAWING BITUMINOUS PAVEMENT	FT	18		
	CONCRETE CURB & GUTTER B660	FT	1200		
	CONCRETE PAVING DESIGN H	SQ YD	1487		
	SODDING TYPE LAWN	SQ YD	696		
	3.5" CONCRETE WALK	SQ FT	80		
	8" CONCRETE DRIVEWAY PAVEMENT	SQ YD	25		

### PRESENT CONSTRUCTION



### PROPOSED CONSTRUCTION



NOTE:  
1 CONSTRUCTION FENCE TO BE PLACED WITH ENGINEER & PARK BOARD FORESTER.

- NOTES:
- 1) ALL B824 CURB AND GUTTER UNLESS OTHERWISE NOTED
  - 2) SEE SHEET 97 FOR RIGHT OF WAY EASEMENTS
  - 3) SEE SHEET 43 TO 49 FOR STORM DRAIN DESIGN
  - 4) SEE SHEET 58 TO 66 FOR SIGNAL AND LIGHTING DESIGN
  - 5) DIMENSIONS TO FACE OF CURB UNLESS OTHERWISE NOTED

### BENCHMARKS

#### CONT 2

ELEV = 858.172  
REBAR BETWEEN PATHS

Date Printed = 2/18/04 10:21 AM  
File Name = 0014-PLAN-006.dgn



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*Lisa K. Cerney* 42688 2/19/04  
LISA K. CERNEY REGISTRATION NO. DATE



**MINNEAPOLIS**  
DEPARTMENT OF PUBLIC WORKS  
**Engineering Services**

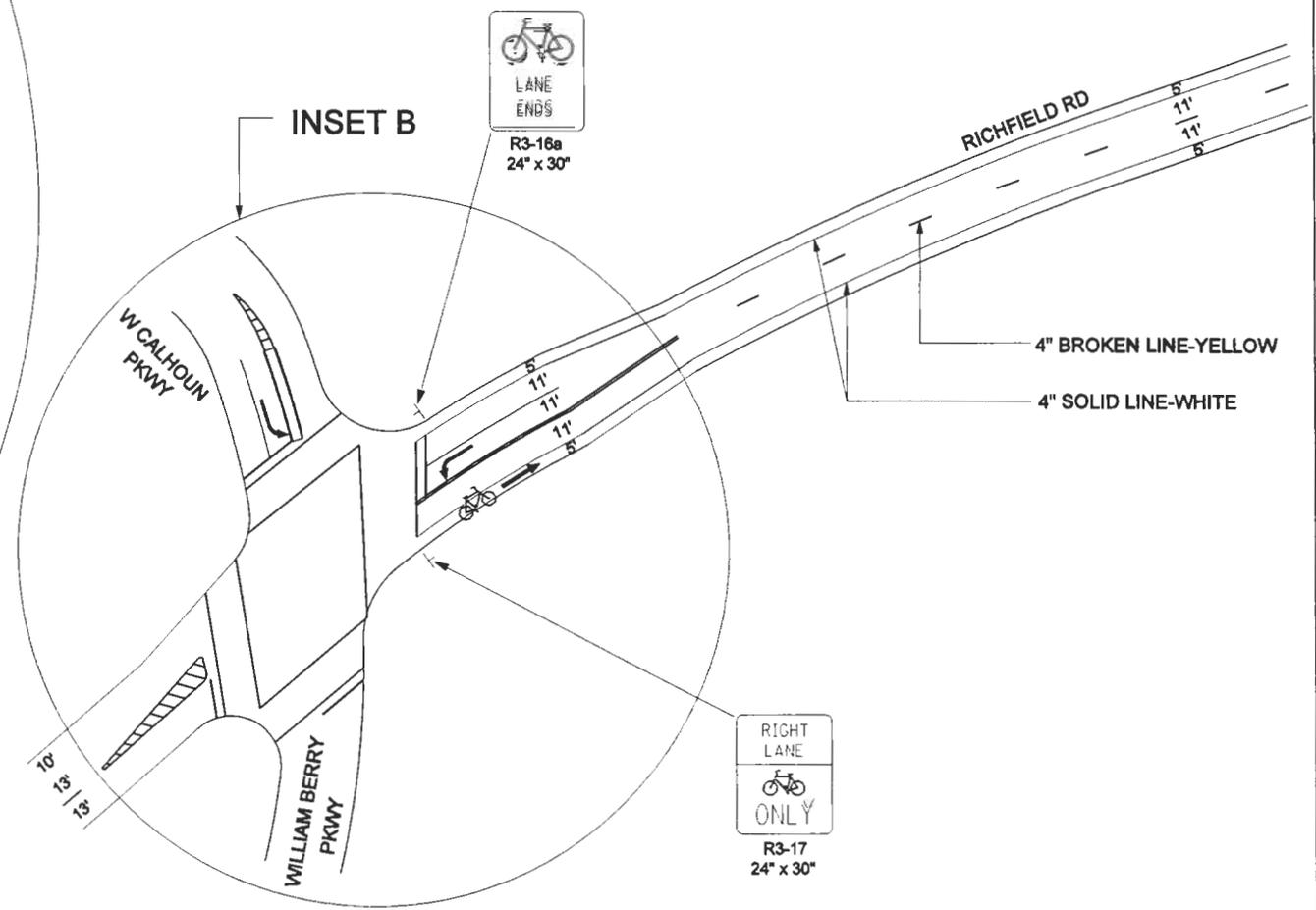
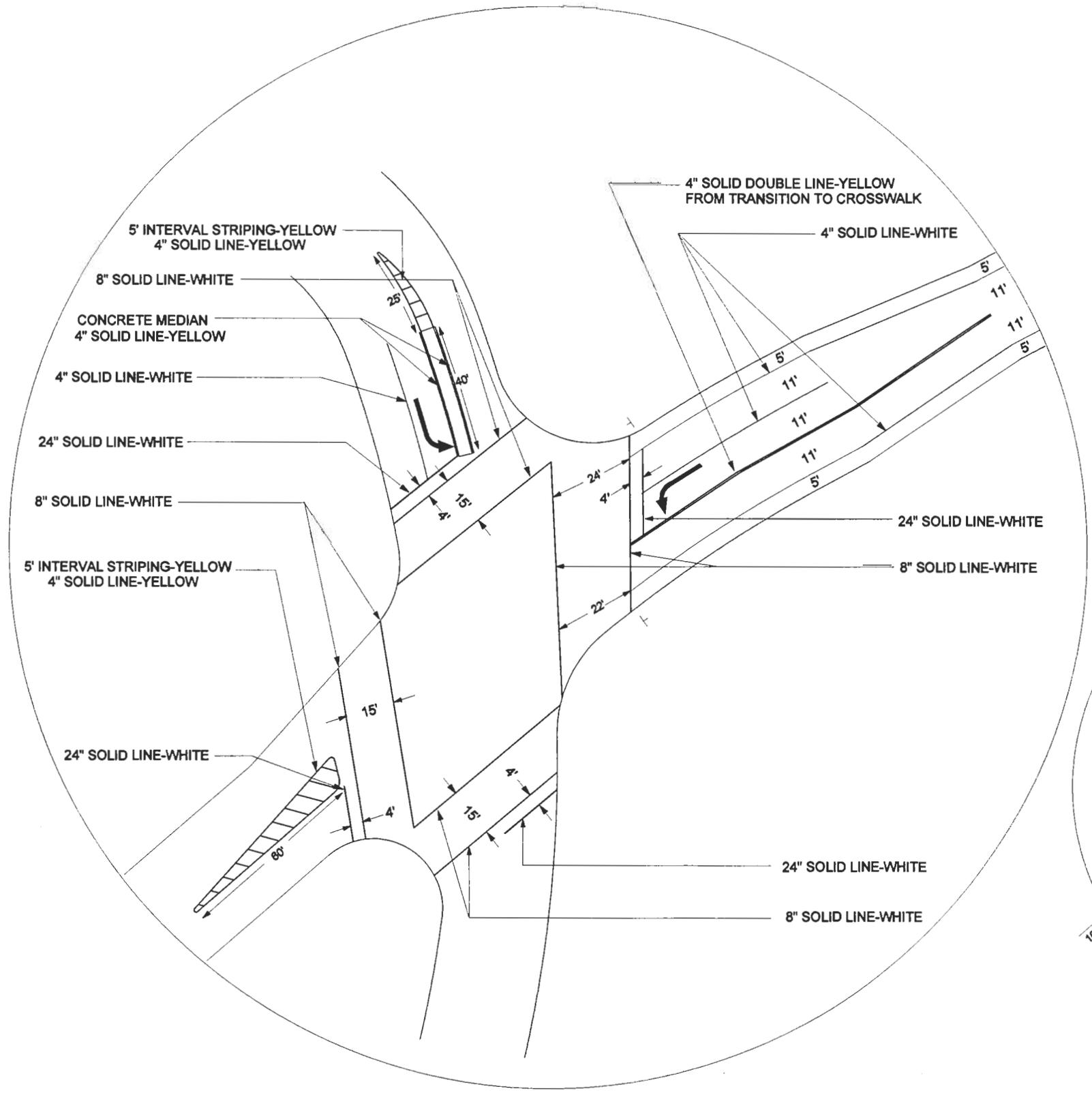
PLAN SHEET		
DRAWN BY:	N.B, B.P, E.J, E.O	DATE: 09/26/03
CHECKED BY:	L.C	DATE: 10/03/03

RICHFIELD ROAD	SHEET
S.P. 141-201-02	35 OF 151
	SHEETS



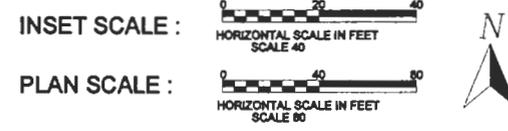
STRIPING MATERIAL	
BITUMINOUS	
TEMPORARY:	PAINT
PERMANENT:	POLYPREFORM
CONCRETE	
TEMPORARY:	NA
PERMANENT:	POLYPREFORM

# INSET B



STRIPING PATTERN: 10' LINE, 30' SKIP

Date Printed = 2/19/04 10:25 AM  
File Name = 0014-STRIPING-002.dgn



I HEREBY CERTIFY THAT THIS PLAN 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.

*Lisa K. Cerney*  
LISA K. CERNEY  
REGISTRATION NO. 42688  
DATE: 2/19/04



**MINNEAPOLIS**  
DEPARTMENT OF PUBLIC WORKS  
**Engineering Services**

SIGNING & STRIPING PLAN	
DRAWN BY: N.B, E.J, B.P, E.O	DATE: 9/10/03
CHECKED BY: L.C	DATE: 9/12/03

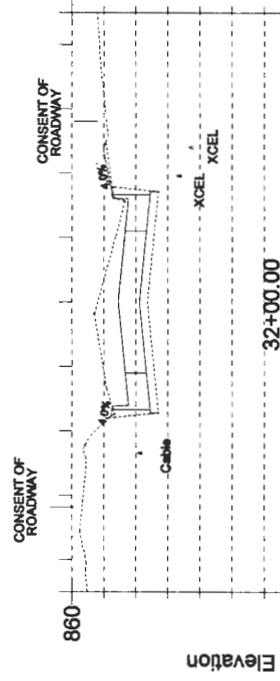
RICHFIELD ROAD	SHEET 51 OF 151
S.P. 141-201-02	SHEETS

**EXCAVATION (CU.YD)**

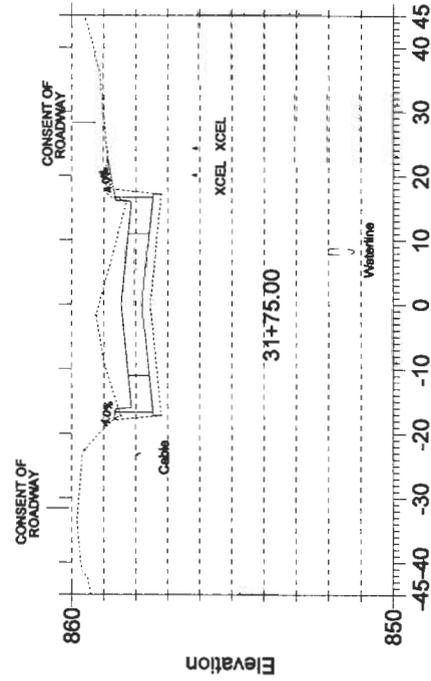
COMMON SUBTOTAL	90
SUBGRADE SUBTOTAL	0

**EMBANKMENT (CU.YD)**

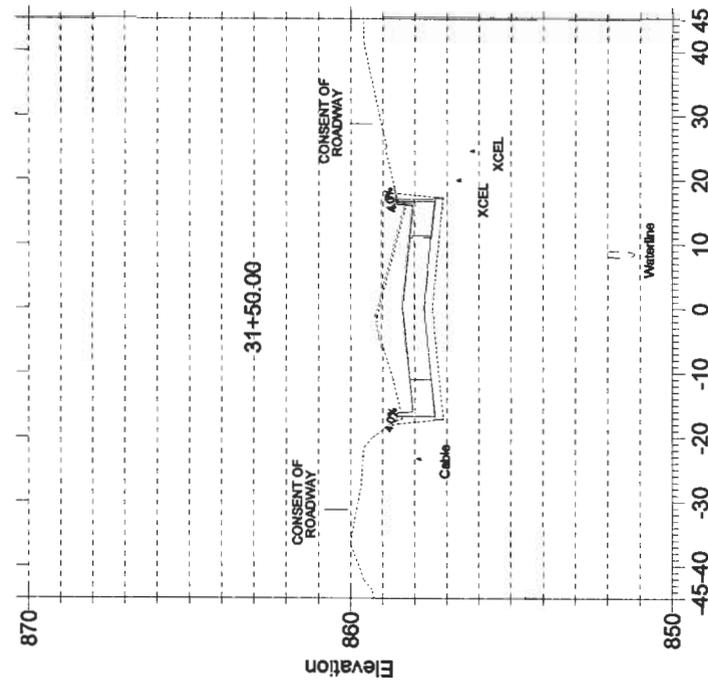
COMMON SUBTOTAL	0
SUBGRADE SUBTOTAL	0



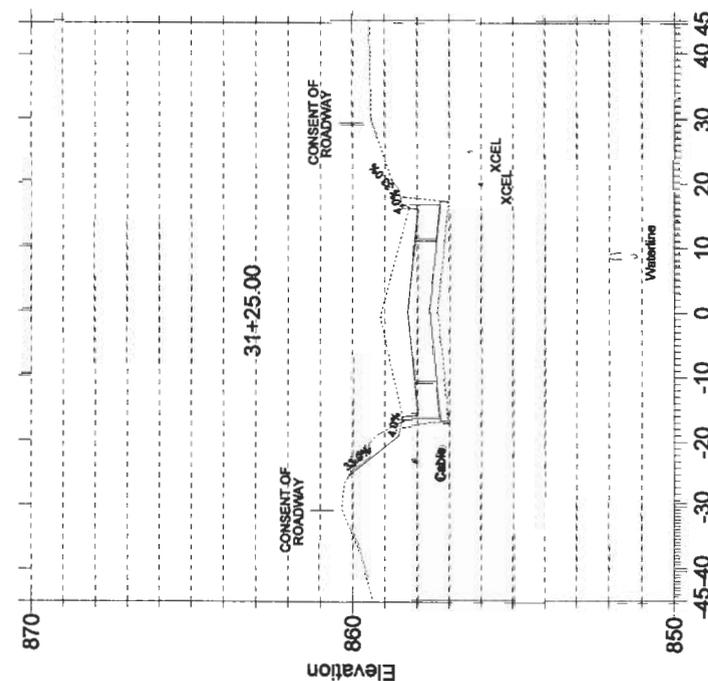
20



21



23



26

ALIGNMENT A

I HEREBY CERTIFY THAT THIS PLAN 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.

*Lisa K. Cerney*  
LISA K. CERNEY  
42888  
REGISTRATION NO.  
2/19/04  
DATE



**MINNEAPOLIS**  
DEPARTMENT OF PUBLIC WORKS  
**Engineering Services**

CROSS SECTIONS

DRAWN BY: N.B, E.J, B.P, E.O	DATE: 10/03/03
CHECKED BY: L.C	DATE: 10/06/03

RICHFIELD ROAD

S.P. 141-201-02

SHEET

122 OF 151

SHEETS