MINNESOTA DEPARTMENT OF TRANSPORTATION

THE COUNTY OF OLMSTED

CONSTRUCTION PLAN FOR AGGREGATE BASE, PAV'T EDGE DRAINS & BITUMINOUS SURFACING

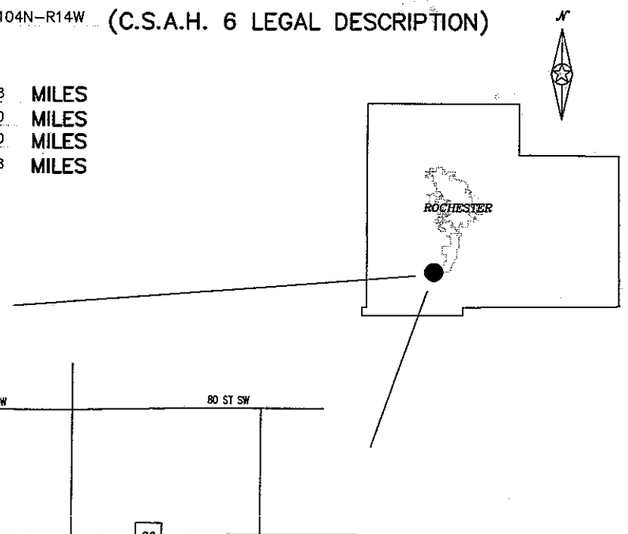
50' EAST OF JCT.

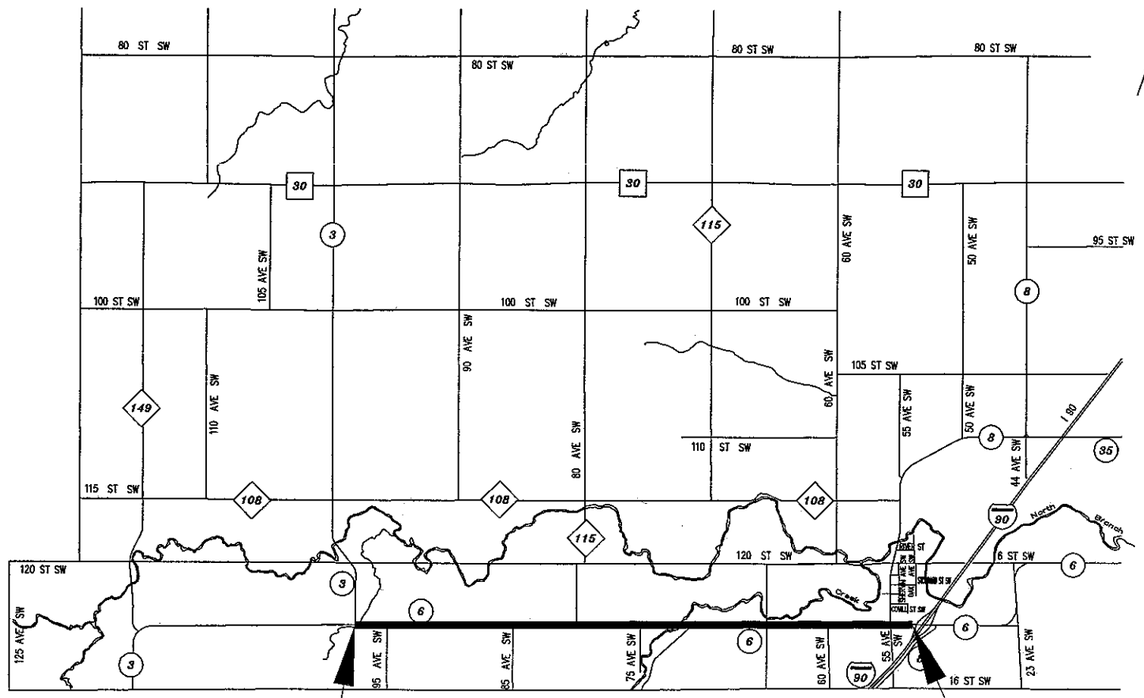
LOCATED ON C.S.A.H. 6 BETWEEN C.S.A.H. 6 & C.S.A.H. 3 AND JCT. C.S.A.H. 6. & I 90 (GEOGRAPHIC DESCRIPTION)

FROM 1418 FT WEST SECT. 3 & 4 T104N–R15W TO 1024' EAST SECT. 5 & 6 T104N–R14W (C.S.A.H. 6 LEGAL DESCRIPTION)

S.A.P. NO. 55–606–05

GROSS LENGTH	23,590.000	FEET	4.468	MILES
BRIDGE–LENGTH	0.000	FEET	0.000	MILES
EXCEPTIONS–LENGTH	0.000	FEET	0.000	MILES
NET LENGTH	23,590.000	FEET	4.468	MILES





BEGIN: 55–606–05
STA 114+50

END: 55–606–05
STA 350+40

MINN. PROJ. NO. .....

GOVERNING SPECIFICATIONS

THE 2000 EDITION OF THE MINNESOTA DEPARTMENT OF TRANSPORTATION "STANDARD SPECIFICATIONS FOR CONSTRUCTION" SHALL GOVERN

INDEX

SHEET NO. 1	TITLE SHEET
SHEET NO. 2	ESTIMATE OF QUANTITIES
SHEET NO. 3	TYPICAL SECTIONS
SHEET NO. 4	EDGE DRAIN DETAILS
SHEET NO. 5	ENTRANCE DETAILS
SHEET NO. 6 – 7	TRAFFIC CONTROL

THIS PLAN CONTAINS 7 SHEETS.

DESIGN DESIGNATION: RURAL
S.A.P. 55–606–05

R..... ΣN18 (20).....

ADT (Current Year)	= 666(2003)	STA. 108+50 TO STA. 337+55
ADT (Future Year)	=1066(2023)	STA. 108+50 TO STA. 337+55
ADT (Current Year)	= 1333(2003)	STA. 337+55 TO STA. 350+40
ADT (Future Year)	=2133(2023)	STA. 337+55 TO STA. 350+40
DHV (Design Hr. Vol.)	=	Design Speed 55 MPH
D (Directional Distr.)	=	Based on STOPPING Sight Distance
T (Heavy Commercial)	=	Height of eye 3.5 FT. Height of object 0.5 FT
SUBGRADE	= K=150	Design Speed not achieved at:
SOIL FACTOR	= 130%	STA. 160+29 TO STA. 171+51 MPH 50
LANE WIDTH 12 FT.		STA. 334+14 TO STA. 344+28 MPH 50
SHOULDER WIDTH 6 FT		STA. 344+96 TO STA. 350+40 MPH 40
MAJOR COLLECTOR		
10 TON DESIGN		

DESIGN ENGINEER: I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION, AND THAT I AM A DULY LICENCED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

DATE 10/8/03 REG. NO. 19917

PRINTED NAME: KAYE M. BIENIEK

SIGNED NAME: Kaye M Bieniek
COUNTY DESIGN ENGINEER

DESIGNED BY: ROSS

DATE 10/8/03 REG. NO. 10399

Michael Sheridan
APPROVED: OLMSTED COUNTY ENGINEER

AS-BUILT

FEB 14 2005

ENGINEERING

STATE AID APPROVALS:

Judy Schmidt DATE: 10-16-03
ASST DISTRICT STATE AID ENGINEER: REVIEWED FOR COMPLIANCE WITH STATE AID RULES/POLICY

Judy Schmidt DATE: 10-16-03
APPROVED FOR STATE AID FUNDING:
STATE AID ENGINEER

PLAN SYMBOLS

STATE LINE
COUNTY LINE
TOWNSHIP OR RANGE LINE
SECTION LINE
QUARTER LINE
SIXTEENTH LINE
RIGHT-OF-WAY LINE
PRESENT RIGHT-OF-WAY LINE
CONTROL OF ACCESS LINE
PROPERTY LINE (Except Land Lines)
VACATED PLATTED PROPERTY
CORPORATE OR CITY LIMITS
TRUNK HIGHWAY CENTER LINE
RETAINING WALL
RAILROAD
RAILROAD RIGHT-OF-WAY
RIVER OR CREEK
DRY RUN
DRAINAGE DITCH
DRAIN TILE
CULVERT
DROP INLET
GUARD RAIL
BARBED WIRE FENCE
WOVEN WIRE FENCE
CHAIN LINK FENCE
RAILROAD SNOW FENCE
STONE WALL OR FENCE
HEDGE
RAILROAD CROSSING SIGN
RAILROAD CROSSING BELL
ELECTRIC WARNING SIGN
CROSSING GATE
MEANDER 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 POLE
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
ELECTRICAL MANHOLE
BURIED TELEPHONE CABLE
BURIED ELECTRICAL CABLE
AERIAL TELEPHONE CABLE
SEWER (SANITARY OR SEWER)
SEWER MANHOLE

EROSION CONTROL SYMBOLS

TEMPORARY SILT FENCE
RIP RAP DITCH CHECKS

SCALES

PLAN 0 100'
PROFILE 0 100' HORIZ. 0 10' 20' VERT.
CROSS SECTIONS 0 10' 20' HORIZ. 0 5' 10' VERT.

INDEX MAP: NOT TO SCALE

ESTIMATED QUANTITIES

	SPECIFICATION NO.	ITEM	UNIT	55-606-05 NON PARTICIPATING RURAL	55-606-05 PARTICIPATING RURAL	TOTAL ESTIMATED QUANTITIES
①	2104.513	SAW BITUMINOUS PAVEMENT (FULL DEPTH)	LIN. FT.		72	72
②	2112.501	SUBGRADE PREPARATION	RD. STA.		239 (P)	239 (P)
③	2130.501	WATER	M-GAL.		153	153
④	2211.501	AGGREGATE BASE CL. 5	TON		37,420	37,420
⑤	2221.501	AGGREGATE SHOULDERING CL. 2	TON		10,646	10,646
⑥	2232.501	MILL BITUMINOUS SURFACE	SQ. YD.		92	92
⑦	2350.501	TYPE MV4 WEARING COURSE MIXTURE (MVWE45035C)	TON		8,390	8,390
⑧	2350.502	TYPE MV3 NON WEARING COURSE MIXTURE (MVNW35035C)	TON		10,482	10,482
⑨	2350.502	TYPE MV2 NON WEARING COURSE MIXTURE (MVNW25035B)	TON		9,802	9,802
	2502.501	4" PRECAST CONCRETE HEADWALL	EACH		~~86~~	~~86~~ 83
	2502.521	4" TP PIPE DRAIN	LIN FT		1106	1106
	2502.541	4" PERF PE PIPE DRAIN	LIN FT		46,300	46,300
	2563.601	TRAFFIC CONTROL	LUMP SUM		1	1
	2564.603	4" SOLID LINE WHITE - EPOXY	LIN. FT.		48,344	48,344
	2564.603	4" SOLID LINE YELLOW - EPOXY	LIN. FT.		13,390	13,390
	2564.603	4" DOUBLE SOLID LINE YELLOW - EPOXY	LIN. FT.		3,782	3,782
	2564.603	4" BROKEN LINE YELLOW - EPOXY	LIN. FT.		4,780	4,780
	2580.603	INTERIM PAVEMENT MARKINGS	LIN. FT.		5,736	5,736

(P) PLAN QUANTITY

QUANTITY NOTES

① SPEC. NO. 1903 DOES NOT APPLY TO ITEM NO. 2104.513

② INCLUDES: C.S.A.H 6 - 236 RD. STA. AND C.S.A.H. 8 - 3 RD. STA.

③ WATER TO BE USED AS A DUST PREVENTATIVE AS DIRECTED BY THE ENGINEER. SPEC. NO. 1903 DOES NOT APPLY TO ITEM NO. 2123.503

④
MAINLINE C.S.A.H 6	36,697 TON
MAINLINE C.S.A.H. 8	473 TON
ROBINSON CREEK	250 TON

⑤
MAINLINE C.S.A.H 6	8,216 TON
MAINLINE C.S.A.H. 8	99 TON
ENTRANCES	2,331 TON

⑥ STA. 350+10 TAPER TO 1-1/2" DEPTH AT BRIDGE STA. 350+40 & RAMPS RT. & LT. STA. 348+60 1-1/2" DEEP TAPER 4' LONG.

⑦
MAINLINE C.S.A.H 6	7,753 TON (INCLUDES 64 TON FOR 1-1/2" OVERLAY STA. 347+50 TO STA.350+40)
MAINLINE C.S.A.H. 8	93 TON
ENTRANCES & TURN LANES	544 TON

⑧
MAINLINE C.S.A.H 6	10,252 TON
MAINLINE C.S.A.H. 8	124 TON
TURN LANES	106 TON

⑨
MAINLINE C.S.A.H 6	9,398 TON
MAINLINE C.S.A.H. 8	114 TON
TURN LANES	290 TON

STANDARD PLATES

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

PLATE NO.	DESCRIPTION
	NUMERICAL INDEX OF STANDARD PLATES
3131C	PRECAST CONCRETE HEADWALL FOR SUBSURFACE DRAINS
8000I	STANDARD BARRICADES
9000D	APPROACHES AND ENTRANCES

BASIS OF PLANNED QUANTITIES

AGGREGATE BASE CLASS 5 -	140 LBS / CU. FT. COMPACTED
AGGREGATE SHOULDER CLASS 2 -	140 LBS / CU FT. COMPACTED
BITUMINOUS MIXTURE -	110 LBS / SQ. YD / 1 INCH DEPTH

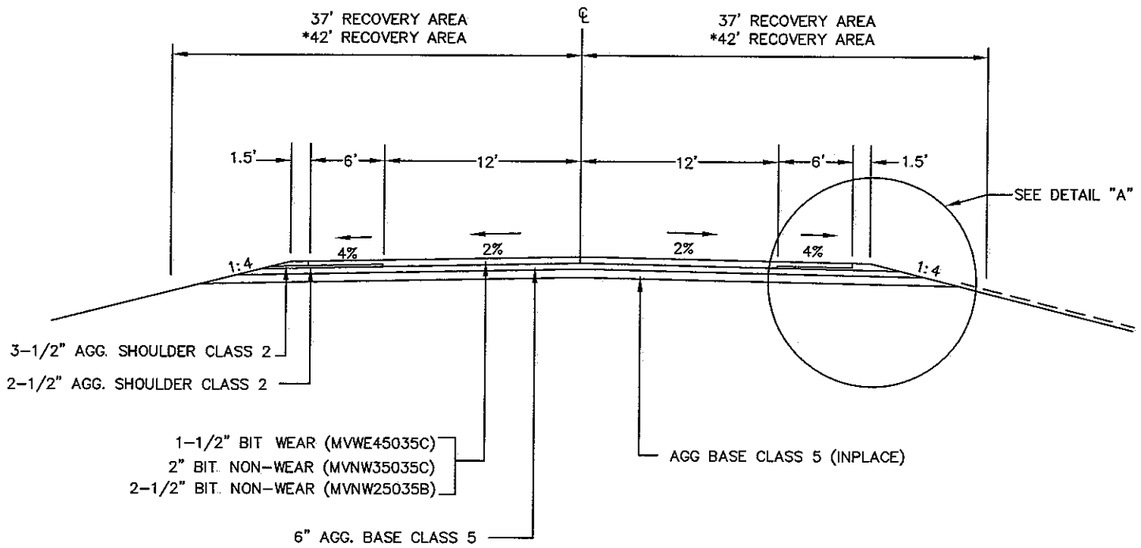
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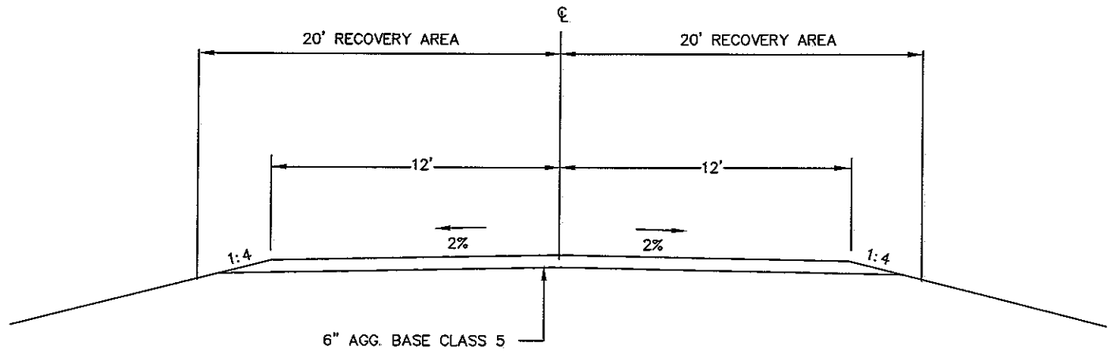
ENGINEERING

ESTIMATED QUANTITIES

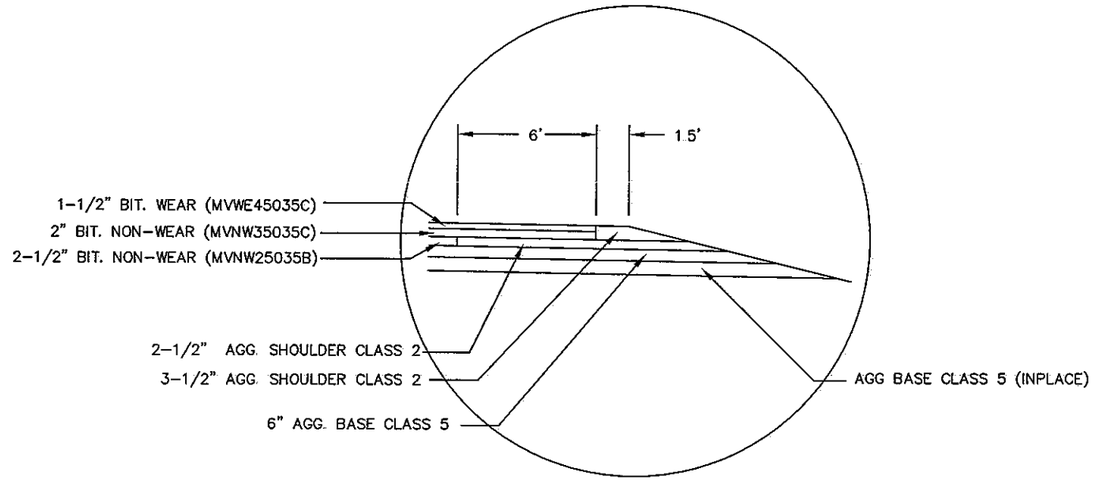
CERTIFIED BY Kevin M Brenner REG. NO. 19917 10/8 2003
LICENSED PROFESSIONAL ENGINEER



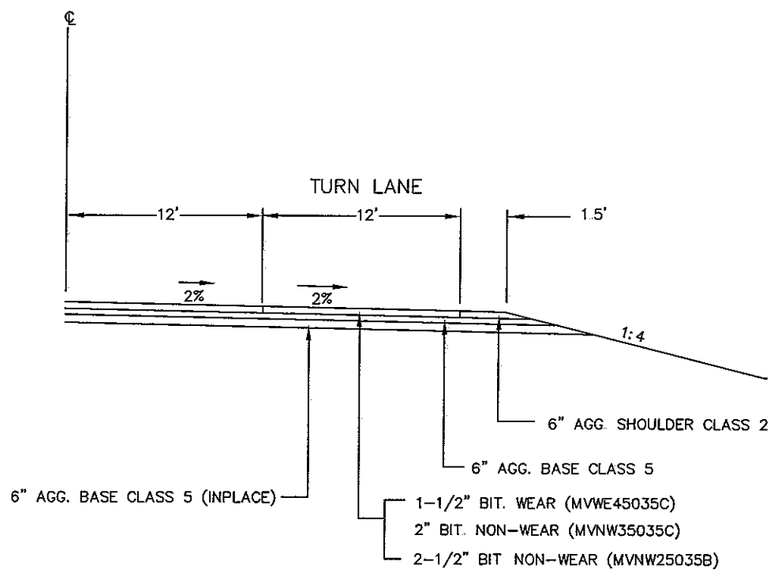
STA. 114+50 TO STA. 337+55
*STA. 337+55 TO STA. 350+40
*STA. 1000+25.5 TO STA. 1003+00 (C.S.A.H. 8)

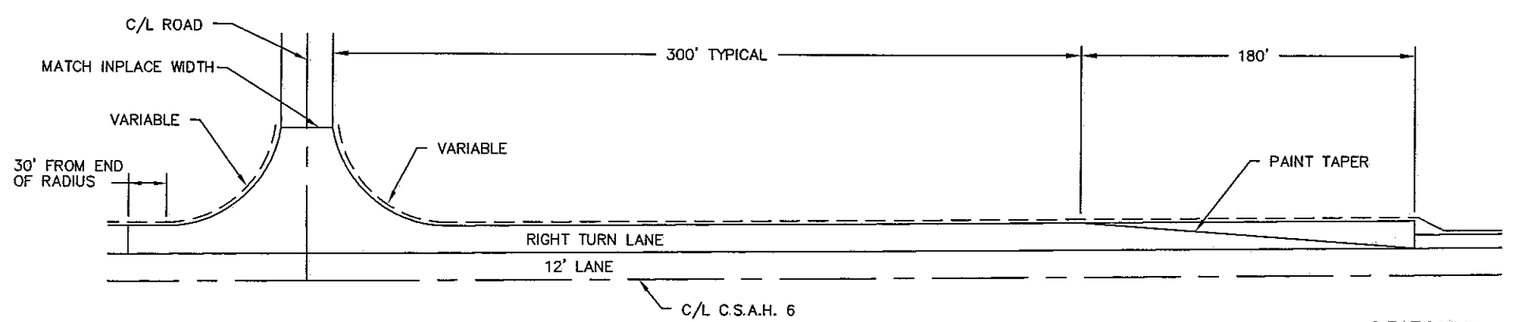


STA. 13+00 TO STA. 15+74.5
ROBINSON CREEK ROAD



DETAIL "A"





RIGHT TURN LANE TYPICAL
STA. 114+50 TO STA. 118+92 (C.S.A.H. 3)
STA. 206+51TO STA. 211+31 (C.R. 115)
STA. 337+67 TO STA. 342+47 (C.S.A.H. 8)

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TYPICAL SECTIONS

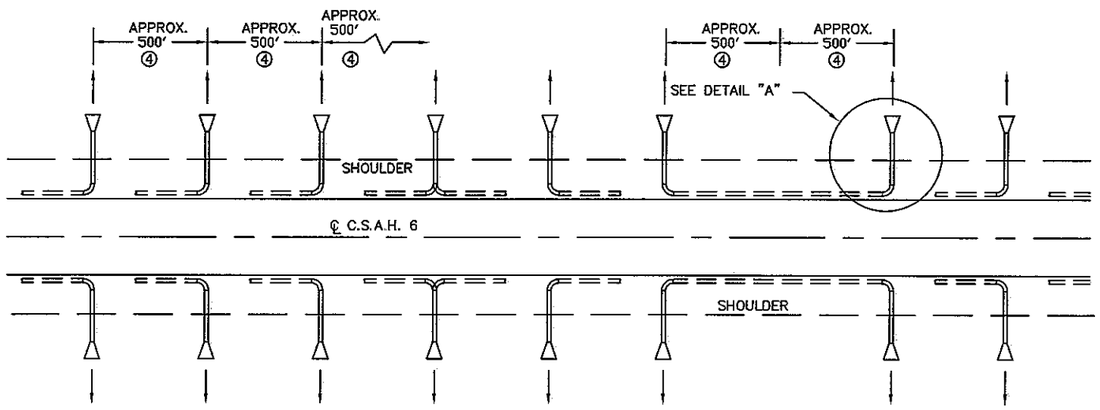
CERTIFIED BY Kaye M Boienick REG. NO 19917 10/8 2003
LICENSED PROFESSIONAL ENGINEER

SAP 55-606-05

SHEET NO. 3 OF 7 SHEETS

EDGE DRAIN DETAILS AND CONSTRUCTION NOTES

PLAN VIEW





LEGEND

- 4" PERFORATED PIPE DRAIN
- 4" NON–PERFORATED PIPE DRAIN
- PRECAST CONCRETE HEADWALL

EDGE DRAIN TABULATIONS

STATIONS	LOCATION	4" PERF PE PIPE DRAIN (LIN. FT.)	4" NON–PERF TP PIPE DRAIN (LIN. FT.)	CONCRETE HEADWALLS (EACH)	HEADWALL STATIONS
115+00 – 125+00	LT.&RT.	2000	53	4	115+00* & 120+00
125+00 – 139+00	LT.&RT.	2800	78	6	126+00*, 130+25 & 134+50
139+00 – 153+00	LT.&RT.	2800	78	6	144+00 ~~143+75~~, 148+50Lt& 153+00* 147+50Rt.
153+00 – 181+50	LT.&RT.	5700	102	8	157+50, 162+00, 171+50 & 176+50*
181+50 – 196+00	LT.&RT.	2900	78	6	186+50, 191+00 &196+00*
196+00 – 214+50	LT.&RT.	3700	53	4	211+50 200+75 & 208+00*
214+50 – 225+50	LT.&RT.	2200	53	4	218+00Rt. ~~218+50~~ & 222+~~50*00~~ 232+75
225+50 – 252+75	LT.&RT.	5450	152	12	~~228+75~~, ~~235+75~~, ~~238+00~~, ~~243+00~~, 248+00 & 252+75*
252+75 – 277+00	LT.&RT.	4850	127	10	257+00Lt 262+00Lt 267+00, ~~272+00~~ & 277+00*
277+00 – 294+00	LT.&RT.	3400	78	6	280+50, 289+00 & 294+00*
294+00 – 319+00	LT.&RT.	5000	127	10	~~298+50~~, 302+50Rt ~~310+75~~, 315+00 & 319+00*
319+00 – 346+50	LT.&RT.	5500	127	10	~~323+75~~, ~~328+50~~, ~~333+25~~, 342+25 & 346+50*
					236+00Rt, 237+40Lt, 241+00, 245+00, 256+50Rt
					259+50Rt, 299+00Rt, 300+50Lt, 311+00, 322+00Rt
TOTAL		46,300	1106	~~86~~ 83	324+75Lt, 327+50Rt, 330+80Lt, 332+40Rt

* LOWPOINT

CONSTRUCTION NOTES

① PAYMENT FOR 4" PERFORATED PIPE DRAIN SHALL BE FULL COMPENSATION FOR TRENCHING, FABRIC WRAPPED P.E. PIPE, INSTALLATION, FILTER AGGREGATE BACKFILL AND COMPACTION, BITUMINOUS OR AGGREGATE CAP, AND ALL OTHER ASSOCIATED WORK.

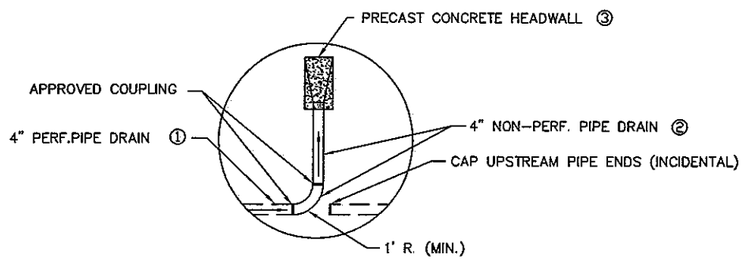
② PAYMENT FOR 4" NON–PERFORATED PIPE DRAIN SHALL BE FULL COMPENSATION FOR TRENCHING, FURNISHING AND PLACING PIPE AND CONNECTIONS, BACKFILL AND COMPACTION, AND ALL OTHER ASSOCIATED WORK.

③ PAYMENT FOR PRECAST CONCRETE HEADWALLS SHALL BE FULL COMPENSATION FOR PLACING HEADWALL, WOOD FIBER BLANKET AND SEED, AND ALL OTHER ASSOCIATED WORK.

④ IF AN OUTLET HAPPENS TO FALL WITHIN A CROSS–OVER OR DITCH–BLOCK INCREASE THE LENGTH OF THE PERFORATED PIPE TO A POINT WHERE AN OUTLET CAN BE SATISFACTORILY CONSTRUCTED AS DIRECTED BY THE ENGINEER.

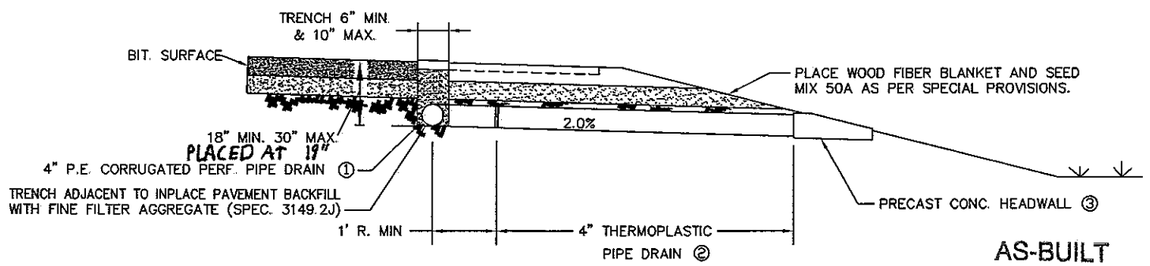
⑤ EXCESS EXCAVATED MATERIAL SHALL BE DISPOSED OF IN ACCORDANCE WITH MN/DOT SPEC. 2104.3C3.

⑥ NO EDGE DRAINS WILL BE PLACED ON SUPERELEVATED SIDES AS DIRECTED BY ENGINEER.



DETAIL "A"

X–SECTION VIEW



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EDGE DRAIN DETAIL & TYPICAL

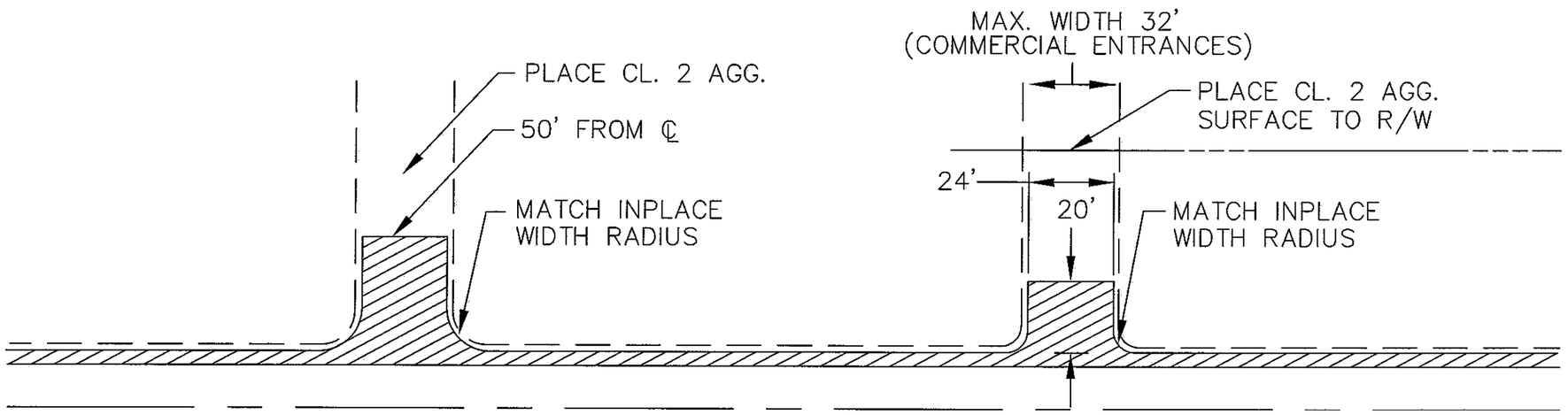
CERTIFIED BY Kaye M Buenish REG. NO 19917 10/8 2003
LICENSED PROFESSIONAL ENGINEER

S.A.P. 55–606–05

SHEET 4 OF 7 SHEETS

ROAD APPROACHES

COMMERCIAL ENTRANCES
FARM OR RESIDENTIAL ENTRANCES



PLACE 3–1/2" THICK WEARING COURSE

ROAD APPROACHES

5

FARM OR RESIDENTIAL ENTRANCES

34

C.S.A.H. 3, C.R. 115, & C.S.A.H. 8
ARE NOT INCLUDED ON THIS SHEET
SEE SHEET 3.

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FEB 14 2005
ENGINEERING

ENTRANCE DETAILS

CERTIFIED BY Kevin M Biernick LICENSED PROFESSIONAL ENGINEER REG. NO 19917 10/8 2003

S.A.P. 55–606–05

SHEET 5 OF 7 SHEETS

ESTIMATE OF TRAFFIC CONTROL DEVICES

DEVICE	NUMBER	SIZE (INCHES)	COLOR	QUANTITY	DEVICE	NUMBER	SIZE (INCHES)	COLOR	QUANTITY
DO NOT PASS	R4–1	24 x 30	BLK/WH	17	ROAD WORK NEXT 4.5 MILES	G20–1	60 x 24	BLK/OR	2
PASS WITH CARE	R4–2	24 X 30	BLK/WH	17	END ROAD WORK	G20–2A	48 x 24	BLK/OR	2
NO CENTER STRIPE	W8–12	48 x 48	BLK/OR	8					
ROAD WORK AHEAD	W20–1	48 x 48	BLK/OR	11					

TRAFFIC CONTROL NOTES

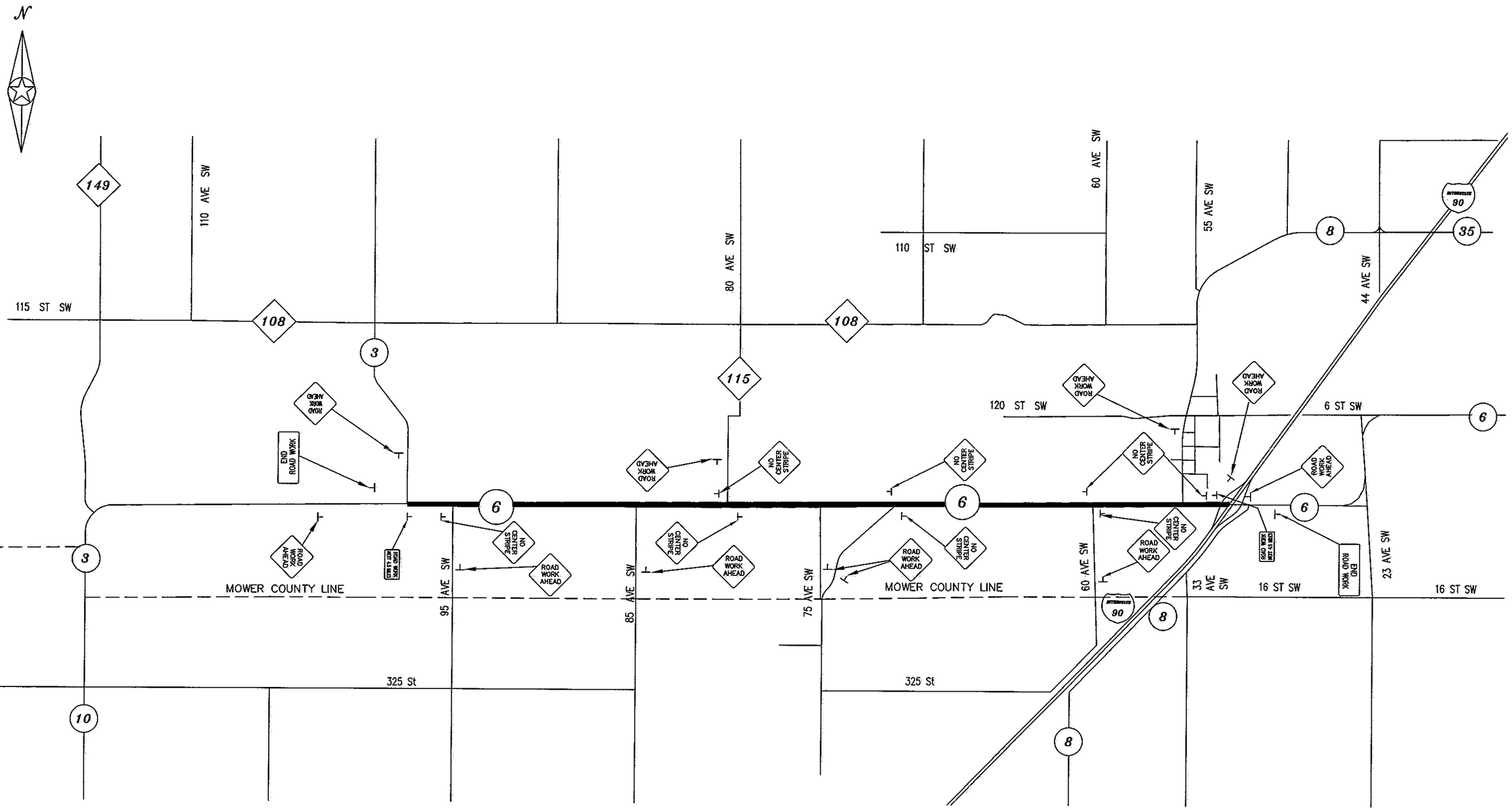
1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL TRAFFIC CONTROL FOR THIS PROJECT.
2. THE LOCATION OF SIGNS AND DEVICES WILL BE STAKED BY THE ENGINEER IN THE FIELD.
3. ALL TRAFFIC CONTROL DEVICES SHALL CONFORM TO THE MINNESOTA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES INCLUDING THE TEMPORARY TRAFFIC CONTROL ZONE LAYOUTS FIELD MANUAL DATED JANUARY 2001.
4. CONSTRUCTION ZONE SIGNING SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR AND WILL INCLUDE, BUT NOT BE LIMITED TO SIGNS FOR LANE CLOSURES, BUMP, DIP, LOOSE GRAVEL, ETC. THE NUMBER AND LOCATION WILL BE DETERMINED BY THE CONTRACTORS OPERATION

AS-BUILT

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ENGINEERING

TRAFFIC CONTROL



TRAFFIC CONTROL LEGEND

⊥ POST OR STAND MOUNTED SIGN

AS-BUILT

FEB 14 2005

ENGINEERING

TRAFFIC CONTROL PLAN

CERTIFIED BY Kaye M Briesch REG. NO 19917 10/8 2003
LICENSED PROFESSIONAL ENGINEER

S.A.P. 55-606-05

SHEET 7 OF 7 SHEETS