STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
4990-0-10	M 1210 (3)	1
4990-0-11	M 1210 (3)	2

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PLAN OF PROPOSED IMPROVEMENT

NORTH STREET, VILLAGE OF LITTLE CHUTE

(W. VILLAGE LIMITS — BUCHANAN ST.)

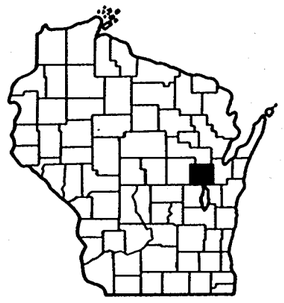
C.T.H "00"

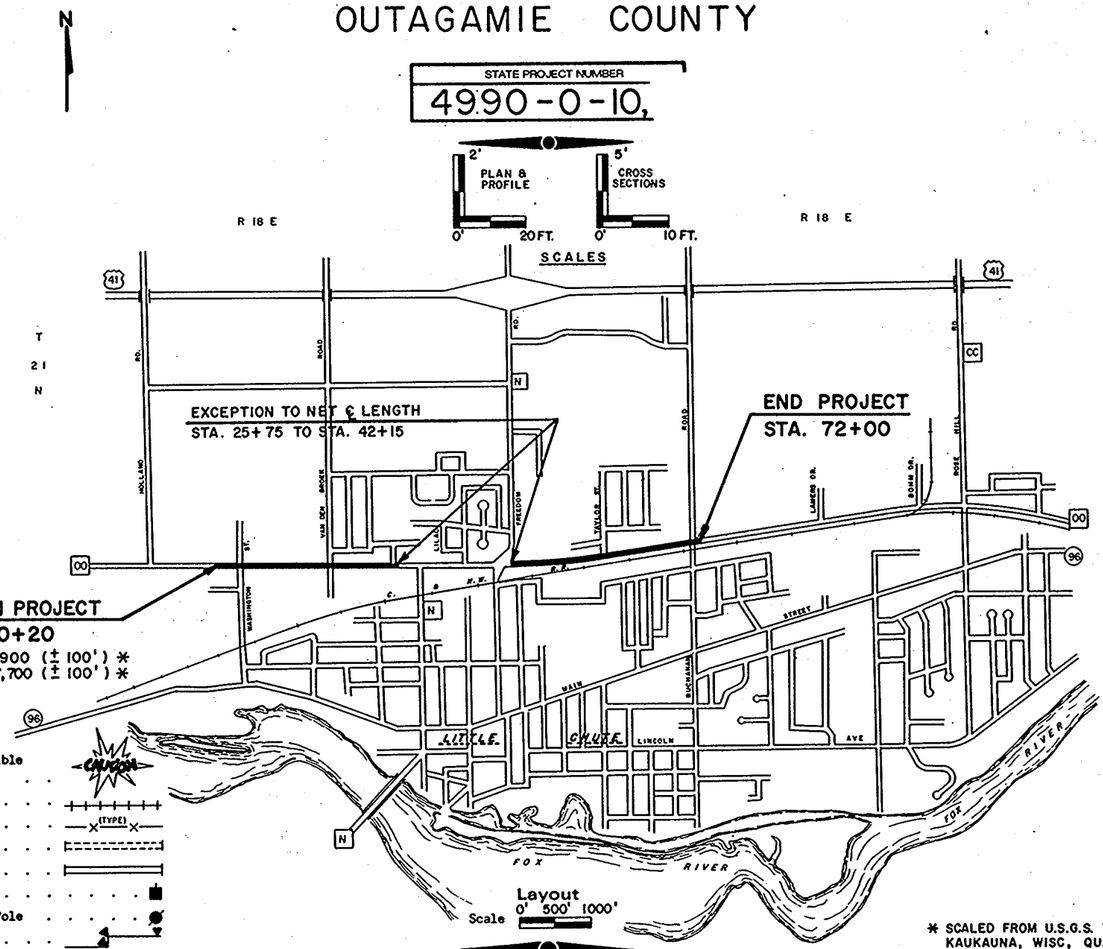
OUTAGAMIE COUNTY

Index of Sheets

Sheet No.	1	Title
Sheet No.	2-2.1	Typical Sections and Details
Sheet No.	3-3.1	Estimate of Quantities
Sheet No.	3A	Miscellaneous Quantities
Sheet No.	———	Right of Way Plat
Sheet No.	5-5.10	Plan and Profile
Sheet No.	6-6.8	Standard Detail Drawings
Sheet No.	———	Standard Sign Plates
Sheet No.	———	Structure Plans
Sheet No.	———	Computer Earthwork Data
Sheet No.	9-9.16	Cross Sections

TOTAL SHEETS = 43





* SCALED FROM U.S.G.S. TOPOGRAPHIC MAP, KAUKAUNA, WISC, QUADRANGLE FOR IDENTIFICATION ONLY.

Total Net Length of Centerline = 1.049 Mi. URBAN

Design Designation

	WEST SEG.	EAST SEG.
A.D.T. 1985	= 10,600	7,700
A.D.T. 2005	= 15,400	11,100
D.H.V. (ONE WAY)	= 583	424
D.	= 55/45	55/45
T.	= 7.9 %	7.9 %
V.	= 45 M.P.H.	45 M.P.H.

Conventional Signs

County Line	Caution Symbol (Combustible fluids under pressure)
Township or Range Line	Railroads
Section Line	Fence
Corporate or City Limits	Culverts in Place
Property line	Culverts Required
Lot Line	Power Pole
Existing Right of Way Line	Telephone or Telegraph Pole
New Right of Way Line	Right of Way Markers
Base or Survey Line	Marsh
Slope Intercept	Wooded Area
Existing Roadway or Private Entrance	Grade Elevation
	Benchmark

APPROVED
FOR
OUTAGAMIE COUNTY

1-4-84 DATE — COMMISSIONER

ORIGINAL
PLANS PREPARED BY
Mc MAHON ASSOCIATES INC.

WISCONSIN — BENJAMIN J. COOPMAN, JR. E-16458 MENASHA, WIS. — PROFESSIONAL ENGINEER

Nov. 15, 1983 DATE — SIGNATURE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

Surveyor ____ District Checker ____
Designer ____ C.O. Checker MRA
District Supervisor ____ C.O. Coordinator MWT

Approved:
Date 12/23/84 — District Transportation Director

Approved:
Date 12-6-84 — Chief Design Engineer

Approved:
Date 12/7/84 — Director of Development

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
REGION 5 WISCONSIN DIVISION

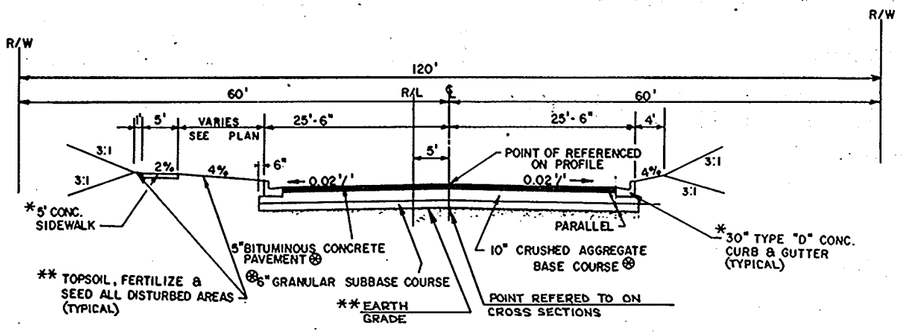
Approved:
Date ____ Division Administrator

Cat. No. 2130 – 0110

OUTAGAMIE
4990-0-10, 11 w/4676-1-71
FED HWY
00-10-00

STATE PROJECT NUMBER	SHEET NO.
4990-0-10, 11	2

TYPICAL CROSS SECTIONS
FOR
NORTH STREET — OUTAGAMIE COUNTY



TYPICAL CROSS SECTION

C.T.H. "00"

STA. 0+20 TO STA. 25+70
STA. 42+15 TO STA. 72+00

* PROJECT 4990-0-10
** PROJECT 4990-0-11

⊛ PRODUCING AND HAULING, PROJ. 4990-0-10
SHAPING AND COMPACTING, PROJ. 4990-0-11

GENERAL NOTES

PRIVATE UTILITY COMPANIES SHALL ADJUST OR MOVE ALL PRIVATELY OWNED FACILITIES TO FIT NEW CONSTRUCTION.

THE LOCATIONS OF EXISTING AND PROPOSED UTILITY INSTALLATIONS AS SHOWN ON THE PLANS ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT AREA THAT ARE NOT SHOWN.

ALL DISTURBED AREAS WITHIN THE RIGHT-OF-WAY ARE TO BE TOPSOILED, FERTILIZED AND SEEDED.

NO TREES AND/OR SHRUBS SHALL BE REMOWED WITHOUT THE APPROVAL OF THE ENGINEER.

VERTICAL DATUM IS BASED ON USGS DATUM OF 1929.

REMOVING CONCRETE DRIVEWAY TO BE PAID FOR AS REMOVING CONCRETE SIDEWALK.

CONCRETE DRIVEWAYS SHALL BE 6" THICK. DISTURBED DRIVEWAYS SHALL BE REPLACED IN KIND.

BEARINGS AS SHOWN IN THE PLANS ARE GRID BEARINGS.

THE EXACT LOCATION AND LIMITS OF PRIVATE ENTRANCES AND FIELD ENTRANCES SHALL BE DETERMINED BY THE ENGINEER IN THE FIELD.

ALL CURB AND GUTTER RADII ARE TO THE FRONT FACE OF CURB.

INLET AND DISCHARGE ELEVATIONS FOR DRAINAGE STRUCTURES ARE APPROXIMATE AND SHALL BE DETERMINED BY THE ENGINEER IN THE FIELD.

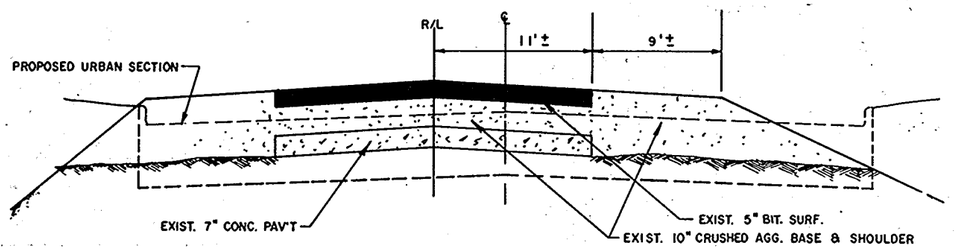
CURB HEIGHTS AT ENDS OF CURB AND GUTTER SHALL BE TAPERED FROM 0 TO 6 INCHES IN 10 FEET.

TRANSITION BETWEEN VARIOUS PAVEMENT WIDTHS AND TYPICAL CROSS SECTIONS THROUGHOUT THE PROJECT SHALL BE AS DETERMINED BY THE ENGINEER IN THE FIELD.

GRAVEL AND ASPH., AS NOTED THROUGHOUT THE PLAN SHEETS, IS CRUSHED AGGREGATE BASE COURSE AND BITUMINOUS RESPECTIVELY.

STANDARD ABBREVIATIONS

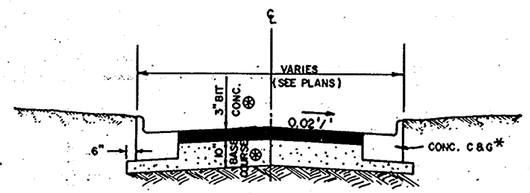
∢	ANGLE	MIN	MINIMUM
AH	AHEAD	N	NORTH
BK	BACK	NO.	NUMBER
℄	CENTERLINE	P.C.	POINT OF CURVATURE
C.M.C.P.	CORRUGATED METAL CULVERT PIPE	P.E.	PRIVATE ENTRANCE
C.T.H.	COUNTY TRUNK HIGHWAY	P.I.	POINT OF INTERSECTION
CL.	CLASS	P.T.	POINT OF TANGENCY
CU.YD.	CUBIC YARD	P/L	PROPERTY LINE
△	DELTA	PAVM'T	PAVEMENT
D.	DEGREE OF CURVE	R	RADIUS
D.G.	DITCH GRADE	R.C.C.P.	REINFORCED CONCRETE CULVERT PIPE
E	EAST	R.H.F.	RIGHT HAND FORWARD
E.	EXTERNAL DISTANCE	R/L	REFERENCE LINE
FL	FLOWLINE	R/W	RIGHT OF WAY
FT./FT.	FOOT PER FOOT	RD.	ROAD
G.V.	GAS VALVE	RDWY	ROADWAY
H	HOUSE	REQ'D	REQUIRED
HYD.	FIRE HYDRANT	RT.	RIGHT
INL.	INLET	S	SOUTH
L.	LENGTH OF CURVE	S.T.H.	STATE TRUNK HIGHWAY
L.H.F.	LEFT HAND FORWARD	SQ.FT.	SQUARE FEET
L.S.	LUMP SUM	SQ.YD.	SQUARE YARD
LIN. FT.	LINEAL FEET	STA.	STATION
LT.	LEFT	T.	TANGENT LENGTH OF CURVE
M.H.	MANHOLE	VC	VERTICAL CURVE
MAX	MAXIMUM	W	WEST
		W.V.	WATER VALVE/SHUTOFF



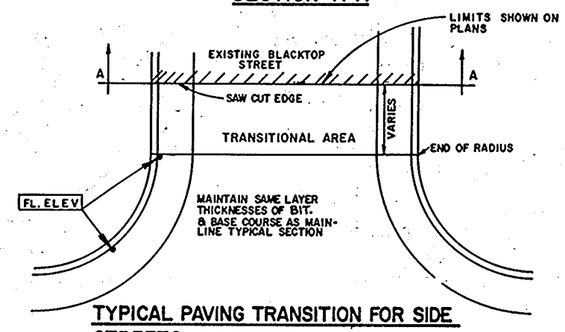
TYPICAL PAVEMENT REMOVAL** DETAIL

STANDARD DETAIL DRAWINGS

SDD NUMBER	TITLE
8A5-3A&B	CATCH BASIN, MANHOLE, AND INLET COVERS
8B6-3	MANHOLES, TYPE 1
8C1-4	INLETS, TYPES 1, 2 AND 3
8D5-8	CURB RAMPS
8F1-9	APRON END WALLS FOR CULVERT PIPE AND PIPE ARCHES
16A1-4	LANDMARK REFERENCE MONUMENTS
8D1-8	CONCRETE CURB, CONCRETE CURB & GUTTER AND PAVEMENT TIES
15C1-7	CONSTRUCTION BARRICADES AND STANDARD SIGNS



SECTION A-A



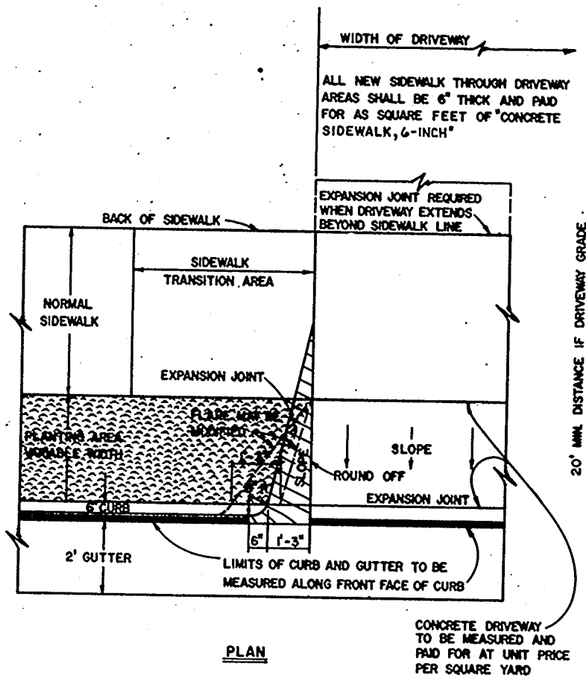
TYPICAL PAVING TRANSITION FOR SIDE STREETS NO SCALE

UTILITIES

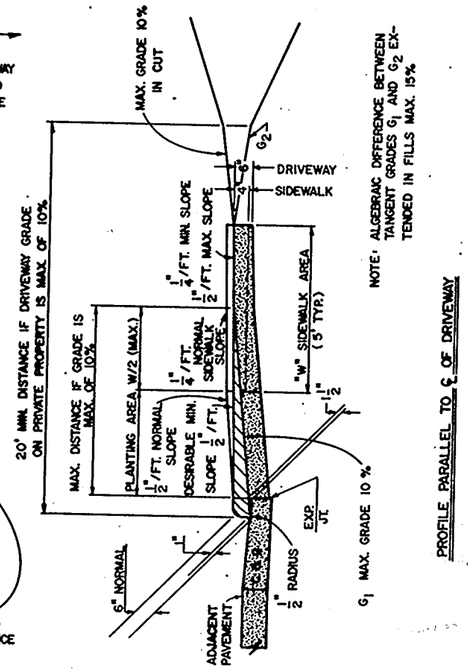
WISCONSIN BELL, INC. MR. ROGER POST 221 WEST WASHINGTON APPLETON, WI 54913	CALL CABLE LOCATING 1-(800)242-3316 (TOLL FREE)
WISCONSIN GAS COMPANY MR. DEAN SULLIVAN 1921 8TH STREET SOUTH P.O. BOX 789 WISCONSIN RAPIDS, WI 54494	(715)423-2800
CITY OF KAUKAUNA ELECTRIC & WATER DEPARTMENT MR. CARL VERHAGEN 500 EAST DODGE STREET P.O. BOX 30 KAUKAUNA, WI 54130	(414) 766-5721
CHICAGO & NORTHWESTERN TRANSPORTATION CO. MR. J.E. TERBELL 4823 NORTH 119 TH STREET MILWAUKEE, WI 53225	(414)535-4155
VILLAGE OF LITTLE CHUTE MR. MARTY JANSEN, STREET COMMISSIONER P.O. BOX 163 LITTLE CHUTE, WI 54140	(414)788-1885
VILLAGE OF LITTLE CHUTE WATER DEPT. MR. ROBERT HUSS, SUPERINTENDENT P.O. BOX 163 LITTLE CHUTE, WI 54140	(414)788-3609

STATE PROJECT NUMBER	SHEET NO
4990-0-10,11.	2.1

CONSTRUCTION DETAILS
FOR DRIVEWAYS



PLAN



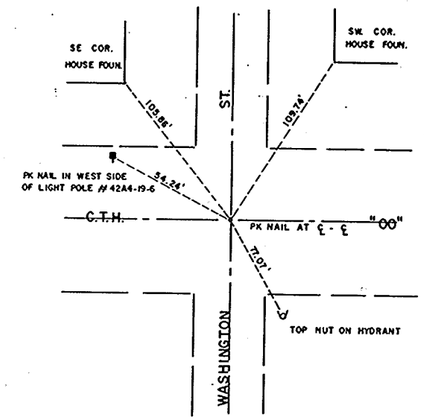
NOTE: ALGEBRAIC DIFFERENCE BETWEEN TANGENT GRADES G_1 AND G_2 EXTENDED IN FILLS MAX. 15%

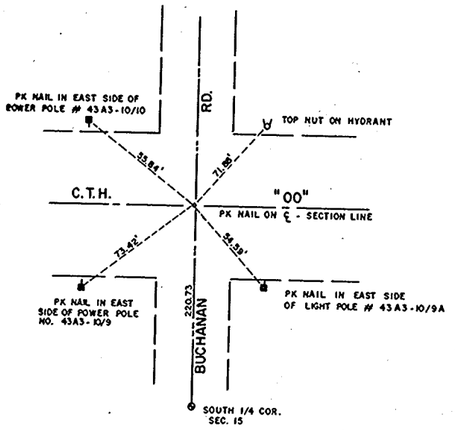
PROFILE PARALLEL TO ℄ OF DRIVEWAY

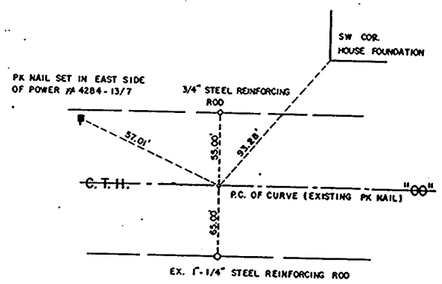
WIDTH OF DRIVEWAYS

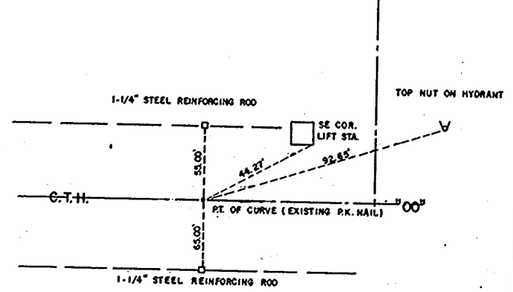
SINGLE OR COMBINATION MEASURED AT RIGHT ANGLES TO CENTERLINE OF DRIVEWAY.

RURAL - NON COMMERCIAL	24 FT. MAX.
URBAN - NON COMMERCIAL	24 FT. MAX.
URBAN - COMMERCIAL	35 FT. MAX.

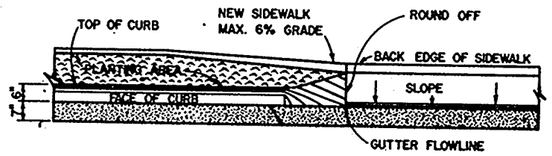








WHEN SIDEWALK IS SEPARATED FROM CURB BY PLANTING AREA



PROFILE PARALLEL TO CENTERLINE OF ROADWAY

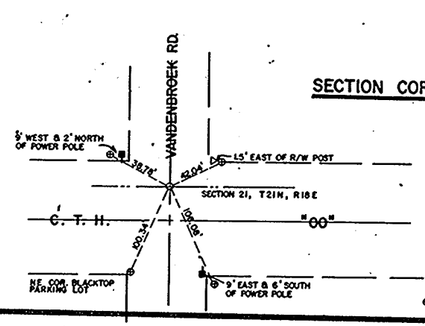
GENERAL NOTES

FOR ALL OTHER CONSTRUCTION DETAILS AND REQUIREMENTS FOR THE WORK DETAILED ON THIS DRAWING SEE STANDARD SPECIFICATIONS

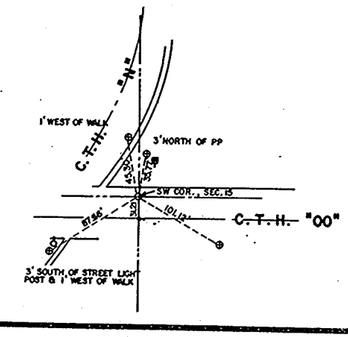
FOR CR. AGG. DRIVEWAYS USE 8" DEPTH CRUSHED AGGREGATE BASE COURSE.

FOR BITUMINOUS DRIVEWAYS USE 8" CRUSHED AGGREGATE BASE COURSE AND 2" BITUMINOUS SURFACE

DRIVEWAY DETAILS



SECTION CORNER TIES



LEGEND
⊕ = WITNESS MONUMENT

ESTIMATE OF QUANTITIES

DATE 12/12/84

PROJECT ID: 4990-00-10
OUTAGAMIE COUNTY
NORTH STREET, VILLAGE OF LITTLE CHUTE
WEST VILLAGE LIMITS - BUCHANAN STREET
C.T.H. OO

ITEM	ITEM DESCRIPTION	UNIT	TOTAL	4990-00-10 QUANTITY
40501	BITUMINOUS MATERIAL FOR PLANT MIXES	TON	457.00	457.00
40931	CONCRETE DRIVEWAY	S.Y.	800.00	800.00
60133	CONCRETE CURB AND GUTTER, 30-INCH, TYPE D	L.F.	10,235.00	10,235.00
60170	CONCRETE CURB AND GUTTER, 36-INCH, TYPE D	L.F.	130.00	130.00
60204	CONCRETE SIDEWALK, 4-INCH	S.F.	24,521.00	24,521.00
60206	CONCRETE SIDEWALK, 6-INCH	S.F.	1,145.00	1,145.00
60825	REINFORCED CONCRETE PIPE, CLASS III, STORM SEWER, 12-INCH	L.F.	529.00	529.00
60826	REINFORCED CONCRETE PIPE, CLASS III, STORM SEWER, 15-INCH	L.F.	963.00	963.00
60827	REINFORCED CONCRETE PIPE, CLASS III, STORM SEWER, 18-INCH	L.F.	1,107.00	1,107.00
60828	REINFORCED CONCRETE PIPE, CLASS III, STORM SEWER, 21-INCH	L.F.	898.00	898.00
60829	REINFORCED CONCRETE PIPE, CLASS III, STORM SEWER, 24-INCH	L.F.	908.00	908.00
61110	MANHOLES, TYPE 1	EACH	11.00	11.00
61121	INLETS, TYPE 1	EACH	4.00	4.00
61122	INLETS, TYPE 3	EACH	30.00	30.00
61128	RECONSTRUCTING MANHOLES	EACH	2.00	2.00
61147	INLETS, TYPE 2	EACH	1.00	1.00
61151	MANHOLE COVERS, TYPE J	EACH	12.00	12.00
61161	INLET COVERS, TYPE A	EACH	4.00	4.00
61162	INLET COVERS, TYPE B	EACH	1.00	1.00
61167	INLET COVERS, TYPE H	EACH	30.00	30.00
61183	ADJUSTING INLET COVERS	EACH	2.00	2.00
61911	MOBILIZATION, PROJECT 4990-0-10	L.S.	1.00	1.00
64302	TRAFFIC CONTROL, PROJECT 4990-0-10	L.S.	1.00	1.00
90001	PRODUCING AND HAULING CRUSHED AGGREGATE BASE COURSE	TON	14,026.00	14,026.00
90002	PRODUCING AND HAULING GRANULAR SUBBASE COURSE	TON	10,906.00	10,906.00
90003	PRODUCING AND HAULING BITUMINOUS CONCRETE PAVEMENT	TON	8,318.00	8,318.00

SHEET 3

DETAIL SUMMARY OF MISCELLANEOUS QUANTITIES

STATE PROJECT NUMBER	SHEET NUMBER
4990-0-10,11	3A

⊛ PROJECT 4990-0-10
⊛⊛ PROJECT 4990-0-11

PROJECT 4990-0-10

STORM SEWER

LOCATION FROM	TO	DIA. INCH	L.F.	TYPE	ELEVATION INLET	ELEVATION DISCHARGE
5A	5	15"	15'	RCP, CLASS III	732.00	727.58
5	6	15"	33'	RCP, CLASS III	727.58	727.41
6	7	15"	41'	RCP, CLASS III	727.41	727.20
7	8	15"	48'	RCP, CLASS III	727.20	726.96
8	11	15"	7'	RCP, CLASS III	726.96	726.92
9	10	18"	38'	RCP, CLASS III	727.58	727.39
9A	9	18"	180'	RCP, CLASS III	730.50	727.58
10	11	18"	38'	RCP, CLASS III	727.39	726.92
11	13	18"	300'	RCP, CLASS III	726.92	723.90
14	15	12"	48'	RCP, CLASS III	724.17	723.93
15	13	15"	6'	RCP, CLASS III	723.93	723.90
17	18	12"	48'	RCP, CLASS III	723.47	722.99
18	16	15"	6'	RCP, CLASS III	722.99	722.16
13	16	21"	496'	RCP, CLASS III	723.90	722.16
16	20	24"	123'	RCP, CLASS III	722.16	721.76
21	22	12"	48'	RCP, CLASS III	722.06	721.82
22	20	15"	12'	RCP, CLASS III	721.82	721.76
23	24	12"	34'	RCP, CLASS III	725.20	725.03
24	25	15"	42'	RCP, CLASS III	725.03	724.82
25	26	21"	48'	RCP, CLASS III	724.82	724.58
25A	25	18"	30'	RCP, CLASS III	728.20	724.82
26	27	21"	6'	RCP, CLASS III	724.58	724.55
27	20	24"	400'	RCP, CLASS III	724.55	721.76
27A	27	15"	25'	RCP, CLASS III	727.20	724.70
29	28	15"	5'	RCP, CLASS III	728.84	728.80
32	28	15"	232'	RCP, CLASS III	731.75	728.80
28	27	18"	425'	RCP, CLASS III	728.80	724.55
30	29	12"	48'	RCP, CLASS III	729.08	728.84
31	32	12"	15'	RCP, CLASS III	731.85	731.75
33	32	15"	167'	RCP, CLASS III	735.41	731.75
34	33	15"	66'	RCP, CLASS III	735.74	735.41
40	41	12"	48'	RCP, CLASS III	725.43	725.19
41	42	15"	148'	RCP, CLASS III	725.19	724.45
43	44	12"	48'	RCP, CLASS III	723.00	722.77
44	45	15"	17'	RCP, CLASS III	722.77	722.60
47	48	12"	48'	RCP, CLASS III	716.77	716.53
48	49	15"	40'	RCP, CLASS III	716.53	716.33
49	50	18"	40'	RCP, CLASS III	716.33	716.13
49A	49	15"	27'	RCP, CLASS III	720.00	716.33
50	51	18"	38'	RCP, CLASS III	716.13	715.94
54	55	12"	48'	RCP, CLASS III	716.01	715.77
55	56	15"	6'	RCP, CLASS III	715.77	715.74
57	58	12"	48'	RCP, CLASS III	715.51	715.27
58	59	15"	6'	RCP, CLASS III	715.27	715.24
51	56	21"	100'	RCP, CLASS III	715.94	715.44
56	59	21"	248'	RCP, CLASS III	715.44	714.20
59A	59	18"	20'	RCP, CLASS III	719.75	715.24
59	63	24"	385'	RCP, CLASS III	714.20	712.28
61	62	12"	48'	RCP, CLASS III	714.78	714.54
62	63	15"	14'	RCP, CLASS III	714.54	714.47

PROJECT 4990-0-10

INLETS, MANHOLES, CATCH BASINS AND COVERS SUMMARY

Structure Number	Station	Location	Structure	Type-Cover	Gutter F.L. Elev.	F.L. Elev.	Depth
5A	2+82	47'L	APRON			732.00	—
5	2+82	47'L	INL	1-A	732.35	727.58	3.77
6	3+17	47'L	INL	1-A	732.65	727.41	4.24
7	3+47	19'L	INL	3-H	731.92	727.20	3.72
8	3+47	30'R	INL	3-H	731.92	726.96	3.96
9	2+80	59'R	INL	1-A	732.35	727.58	3.77
9A	1+00	48'R	APRON			730.50	
10	3+20	59'R	INL	1-A	732.85	727.39	4.46
11	3+47	36'R	MH	1-J	732.42	726.92	4.50
13	6+49	36'R	MH	1-J	729.30	723.90	4.40
14	6+49	18'L	INL	3-H	728.79	724.17	3.62
15	6+49	30'R	INL	3-H	728.79	723.93	3.86
16	11+45	35'R	MH	1-J	728.69	722.16	5.53
17	11+45	19'L	INL	3-H	728.16	723.47	3.69
18	11+45	30'R	INL	3-H	728.16	722.99	4.97
20	12+68	36'R	MH	1-J	728.40	721.76	5.64
21	12+80	19'L	INL	3-H	727.78	722.06	4.72
22	12+80	30'R	INL	3-H	727.78	721.82	4.96
23	16+00	49'L	INL	3-H	729.44	725.20	3.24
24	16+33	49'L	INL	3-H	729.44	725.03	3.41
25	16+64	19'L	INL	3-H	729.00	724.82	3.18
26	16+66	30'R	INL	3-H	729.00	724.58	3.42
27	16+66	36'R	MH	1-J	729.97	724.55	4.42
27A	16+65	54'R	APRON			727.20	
25A	16+65	55'L	APRON			728.20	
28	20+89	30'R	INL	3-H	733.74	728.80	3.94
29	20+89	19'L	INL	3-H	733.74	728.84	3.69
30	20+89	35'R	MH	1-J	734.20	729.08	4.12
31	23+21	37'R	INL	2-B	737.45	731.85	5.60
32	23+21	51'R	INL	3-H	736.75	731.75	4.00
33	24+88	33'L	MH	1-J	740.90	735.41	4.49
34	24+97	33'R	INL	3-H	740.56	735.74	3.82
40	43+51	30'R	INL	3-H	728.15	725.43	1.72
41	43+51	18'L	INL	3-H	728.15	725.19	1.96
43	50+94	19'L	INL	3-H	726.79	723.00	2.79
44	50+94	29'R	INL	3-H	726.79	722.77	3.02
45	50+94	62'R	APRON			722.60	
47	55+54	29'R	INL	3-H	721.92	716.77	4.15
48	55+54	19'L	INL	3-H	721.92	716.53	4.39
49	55+84	46'L	INL	3-H	721.30	716.33	3.97
49A	55+55	51'L	APRON			720.00	
50	56+24	50'L	INL	3-H	721.67	716.13	4.54
51	56+52	24'L	MH	1-J	721.44	715.94	4.50
54	57+52	29'R	INL	3-H	720.47	716.01	3.46
55	57+52	19'L	INL	3-H	720.47	715.77	3.70
56	57+52	25'L	MH	1-J	721.00	715.44	4.56
57	60+00	30'R	INL	3-H	721.63	715.51	5.12
58	60+00	19'L	INL	3-H	721.63	715.27	5.36
59	60+00	25'L	MH	1-J	722.50	714.20	7.30
59A	60+00	46'L	APRON			719.75	
61	63+95	30'R	INL	3-H	723.76	714.78	7.98
62	63+95	19'L	INL	3-H	723.76	714.54	8.22
63	63+84	25'L	MH	1-J	724.60	712.28	11.32

PROJECT 4990-0-11

REMOVING PAVEMENT

LOCATION	QTY. (S.Y.)
0+20 to 25+75 =	6,245
42+15 to 72+00 =	7,297
TOTAL	13,542

PROJECT 4990-0-11

REMOVING CURB & GUTTER

LOCATION	QTY. (L.F.)
Washington Street	205
Vanden Broek Road	150
TOTAL	355

PRODUCING AND HAULING⊛ & SHAPING AND COMPACTING⊛⊛ GRANULAR SUB-BASE COURSE (6")

LOCATION	TON
0+20 to 2+50	420
Washington Street	316
3+47 to 15+70	2,356
Vanden Broek Road	338
16+65 to 24+81	1,572
24+81 to 25+75	74
42+15 to 55+55	2,580
Taylor Street	268
56+57 to 68+83	2,362
Buchanan Street	292
69+77 to 72+00	330
TOTAL	10,906

PRODUCING AND HAULING⊛ & SHAPING AND COMPACTING⊛⊛ CRUSHED AGG. BASE COURSE (10")

LOCATION	TON
0+48 to 2+50	380
Washington Street	526
13+47 to 15+70	660
Vanden Broek Road	598
16+65 to 24+81	2,418
24+81 to 25+75	110
42+15 to 55+55	4,120
Taylor Street	446
56+57 to 68+83	3,782
Buchanan Street	486
69+77 to 72+00	500
	14,026

PROJECT 4990-0-10

CONCRETE C & G, 30", TYPE D

LOCATION	QTY. (L.F.)
Washington Street	320
3+45 - 6+00 Left & Right	510
6+00 - 15+70 Left & Right	1,940
Vanden Broek Street	260
18+65 - 24+80 Left	815
18+65 - 25+75 Right	910
42+15 - 55+55 Left	1,340
42+15 - 68+85 Right	2,670
Taylor Street	120
56+55 - 68+85 Left	1,230
Buchanan Street	120
TOTAL	10,235

PROJECT 4990-0-10

CONCRETE C & G, 38", TYPE D

	L.F.
Buchanan Street	130
TOTAL	130

PROJECT 4990-0-11

REMOVING INLETS

LOCATION	QUANTITY (Each)
2+80, 51'R	1
3+18, 52'R	1

PROJECT 4990-0-10

ADJUSTING INLETS

LOCATION	OLD ELEVATION	NEW ELEVATION	ADJUSTMENT
24+20, 47'L	740.03	740.40	+0.37'
63+85, 46'L	718.25	717.55	−0.70'

PROJECT 4990-0-10

RECONSTRUCTING MANHOLES

	OLD ELEVATION	NEW ELEVATION	ADJUSTMENT
12+69, 55'R	727.08	728.75	+1.67' *
24+92, 27'R	740.32	741.00	+0.68' **

* Remove existing cover, new type J cover req'd.
** adjust cone.

PROJECT 4990-0-11

ADJUSTING MANHOLE COVERS

LOCATION	OLD ELEVATION	NEW ELEVATION	ADJUSTMENT
3+07, 32'L	734.12	732.65	−1.47'
3+02, 43'R	733.74	732.90	−0.84'
7+06, 32'L	729.03	729.51	+0.48'
6+52, 43'R	730.38	729.53	−0.85'
12+40, 43'R	730.31	728.35	−1.96'
18+20, 42'R	732.38	729.91	−2.47'
16+20, 33'L	731.86	729.83	−2.03'
22+67, 27'R	737.91	735.95	−1.95'
24+20, 46'L	740.03	740.60	+0.57'
44+54, 21'R	730.72	728.62	−2.10'
55+95, 48'L	722.23	722.51	+0.28'
63+81, 50'R	719.27	718.27	−1.00'

PROJECT 4990-0-10

CONCRETE DRIVEWAY (6-INCH)

LOCATION	QTY. (S.Y.)
1+00 LT	18.5
1+55 RT	42.5
2+25 RT	9.5
4+13 LT	26.5
5+12 RT	26.5
5+65 LT	13.3
6+60 RT	26.5
7+13 RT	16.0
7+70 RT	25.3
9+07 RT	29.3
9+70 RT	26.5
12+40 RT	13.3
13+91 RT	22.5
14+05 LT	20.0
14+70 LT	26.5
21+25 RT	63.0
23+00 RT	47.0
25+30 RT	44.0
43+05 RT	44.0
44+40 RT	46.5
45+15 RT	44.0
45+45 LT	20.0
45+68 LT	28.0
47+12 LT	34.5
48+63 LT	18.5
49+55 LT	37.3
50+72 LT	30.5
	800

STATE PROJECT NUMBER	SHEET NO.
4990-0-10,11	5

BENCH MARK

No.	STA.	DESC.	ELEV.
1	3+22	TOP OF HYD. 72' RT	735.42

N

3+00

36' CLEAR

2+80

SAW CUT REQ'D

STREET

CONC. P.E.

R/W

P.E.

18" R.C.C.P. (TO REMAIN)

GRAVEL

NEW CONC.

TAPER PAVEMENT FROM URBAN TO RURAL SECTION IN 150'. MATCH EXISTING PAVEMENT EDGE.

TYPE I RAMP OPENING

28' R. (TYP.)

TELEPHONE PEDESTAL

W.V.

NEW GRAVEL

(REPLACE) 18" C.M.C.P.

18" C.M.C.P. (REMOVE)

ADJUST MH

TYPE I RAMP

SLOPE INTERCEPT

5' CONC. SIDEWALK

NEW CONC.

60'

12'

SAW CUT REQ'D

R/L

NORTH

STREET

(C.T.H. "00")

50' CLEAR

25'

SAN.

STA. 3+00 C.T.H. "00" = STA. 2+00 WASHINGTON ST.

ASPH. P.E.

GRASS

64" R.C.C.P. (REMOVE)

18" C.M.C.P. (REMOVE)

REMOVE INLETS

12' WHERE NO NEW SIDEWALK WILL BE PLACED (TYPICAL)

R/W POST

120'

BLACKTOP PARKING LOT

WASHINGTON ST.

40' CLEAR

66'

1+00

BEGIN PROJECT STA. 0+20

WASHINGTON ST. PROFILE

EXISTING R/L PROFILE

PROPOSED ℄ PROFILE

EXIST. R/L PROFILE

PROPOSED NORTH DITCH

P.I. 0+20 EL. 735.80

P.I. 0+50 EL. 735.80

P.I. ±0 EL. 733.90

P.I. 1+75 EL. 732.80

P.I. 1+95 EL. 732.90

P.I. 2+15 EL. 732.80

P.I. 2+80 EL. 733.50

P.I. 3+00 N.D.G. 729.91

P.C. 3+60 EL. 729.884

2.00%

1.59%

1.80%

1.58%

S = 1.16%

S = 0.34%

150' VC

735.80 735.80

735.55 735.22

735.27 734.64

735.00 734.06

734.72 733.48

734.49 732.90

734.21 732.32

733.93 731.74

733.64 731.16

733.42 730.58

733.13 730.00

732.92 729.50

Cat. No. 2030 – DM2

STATE PROJECT NUMBER	SHEET NO.
4990-0-10,11	5.1

BENCH MARK

No.	STA.	DESC.	ELEV.
2	7+37	TOP OF HYD. 27'LT	733.56

N

R/W
I.P.
SLOPE INTERCEPT
SAN
MH (ADJUST)
ELECTRIC PEDESTAL
G.V.
SMALL TREES
NEW 5' CONC. SIDEWALK
60'
12'
25'
50' CLEAR
R/L
NORTH STREET
(C.T.H. "00")
NEW GRAVEL
P.E.
18" C.M.C.P. (REMOVE)
GRASS
NEW CONC.
GRAVEL
ASPH.
(REMOVE)
21" R.C.C.P.
W.V.
24" C.M.C.P. (REMOVE)
CAUTION
CONC.
24" C.M.C.P.
120'

100' V.C.
150' V.C.
PC 8+00 EL. 729.674
PT 7+10 EL. 729.514
P.I. 8+50 EL. 729.77
P.T. 9+00 EL. 729.67
EXIST. R/L PROFILE
PROPOSED ℄ PROFILE
PROPOSED NORTH DITCH
S = 0.40 %
S = 0.34 %
P.I. 6+35 EL. 729.014

6	7	8	9	10	11
732.92 / 729.50	732.47 / 729.28	732.06 / 729.67	731.91 / 729.67	731.96 / 729.27	732.06 / 728.87
729.31	732.72 / 729.26	732.20 / 729.47	731.97 / 729.77	731.94 / 729.47	731.95 / 729.07	732.04 / 728.63

734
732
730
728

5.1

STATE PROJECT NUMBER	SHEET NO.
4990-0-10,11	5.2

BENCH MARK

No.	STA.	DESC.	ELEV.
3	16+55	TOP OF HYD. 28' LT.	734.31

N

T 21 N R 18 E (15, 21)

SAW CUT REQ'D

R/W

60'

36' CLEAR

R/W

SMALL TREES

I.P.

30" SS

INL/MH

INL/MH

30" SS

SLOPE INTERCEPT

ASPH. P.E.

(TO REMAIN) 18" C.M.C.P

GRAVEL P.E.

(TO REMAIN) 18" C.M.C.P

3" CONC. WALK

NEW ASPH.

NEW GRAVEL

NEW CONC.

TYPE I RAMP

NEW 5' CONC. SIDEWALK

12'

60'

W.V.

29.44

29.81

SAN

CAUTION

(REMOVE) 18" C.M.C.P

25' R. TYP.

TELEPHONE PEDESTAL

R/W

NEW 5' CONC. SIDEWALK

SAN

29.10

MH. (ADJUST)

TYPE I RAMP

29.00 W

29.15

W.V.

29.15

29.25

88°45'

29.84

29.55

92°14'

29.31

29.96

R/L

12 13 14 15 16 17

NORTH (C.T.H. "00") STREET

25' 50' CLEAR

R/L

29.25

28.84

29.15

29.00

29.00

29.15

29.10

STA. 16+18.60 C.T.H. "00" = STA. 2+00 VANDEN BROEK RD.

CAUTION

M.H. (ADJUST)

TYPE I RAMP OPENING

NEW CONC.

GRAVEL

(ADJUST) MH

NEW GRAVEL

24" R.C.C.P. (REMOVE)

BULKHEAD

(RECONSTRUCT) INL/MH

24" C.M.C.P (REMOVE)

SLOPE INTERCEPT

W.V.

G.V.

W.V.

I.P.

NEW CONC.

SAN

NEW GRAVEL

(REMOVE) 18" C.M.C.P

W.V.

I.P.

18" C.M.C.P (REMOVE)

30.12

I.P.

36' CLEAR

30.49

30.12

I.P.

R/W

R/W

CONC. P.E.

36" SS

CONC. P.E.

TYPE I RAMP OPENING

EXISTING BLACKTOP PARKING LOT

VANDEN BROEK

60'

120'

1+00

NORTH ST R/L

SAW CUT REQ'D

SOUTH NORTH

734

732

730

EXIST. ℄ PROFILE

P.I. 1+00 EL. 731.90

P.I. 1+75 EL. 729.35

P.I. 1+95 EL. 729.34

P.I. 2+15 EL. 729.29

P.I. 2+90 EL. 730.45

2.45%

1.45%

1.45%

1.80%

PROPOSED ℄ PROFILE

2+00

VANDEN BROEK RD PROFILE

734

732

730

728

100' V.C.

P.C. 12+30 728.35

P.I. 12+90 EL. 728.154

P.T. 13+30 728.35

L.F. 72+70 N.D.G 726.70

EXIST. R/L PROFILE

50' V.C.

P.C. 15+95 EL. 729.414

P.I. 16+20 EL. 729.514

P.T. 16+45 EL. 729.364

P.I. 16+46.65 NOS. 728.23 S.D.G. 727.20

PROPOSED ℄ PROFILE

S = -0.44 %

S = +0.40 %

S = +0.37 %

PROPOSED NORTH DITCH

PROPOSED NORTH DITCH

S = +0.37 %

S = +0.57 %

PROPOSED SOUTH DITCH

	12	13	14	15	16	17
	732.04 / 728.67	732.11 / 728.47	732.16 / 728.29	728.25	732.32 / 728.27	732.32 / 728.43
	732.41 / 728.63	732.45 / 728.83	732.45 / 729.03	732.49 / 729.23	732.63 / 729.44	729.55
	732.77 / 729.81	733.14 / 730.31	733.51 / 730.81			

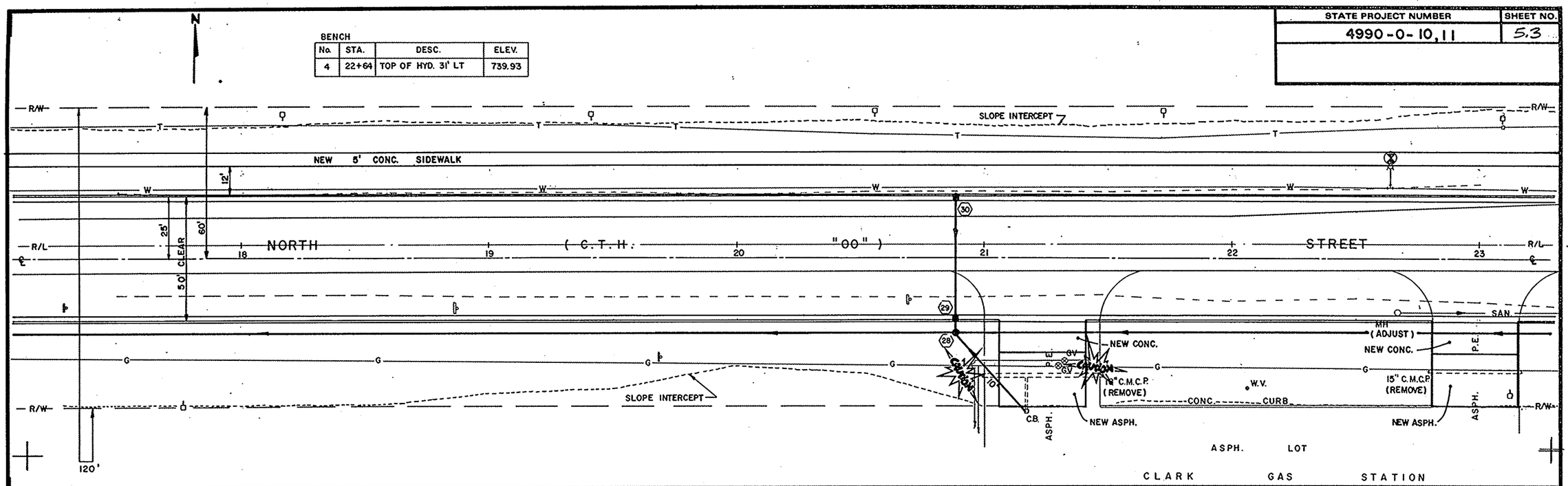
52

Cat. No. 22130 — 10142

STATE PROJECT NUMBER	SHEET NO.
4990-0-10,11	53

BENCH

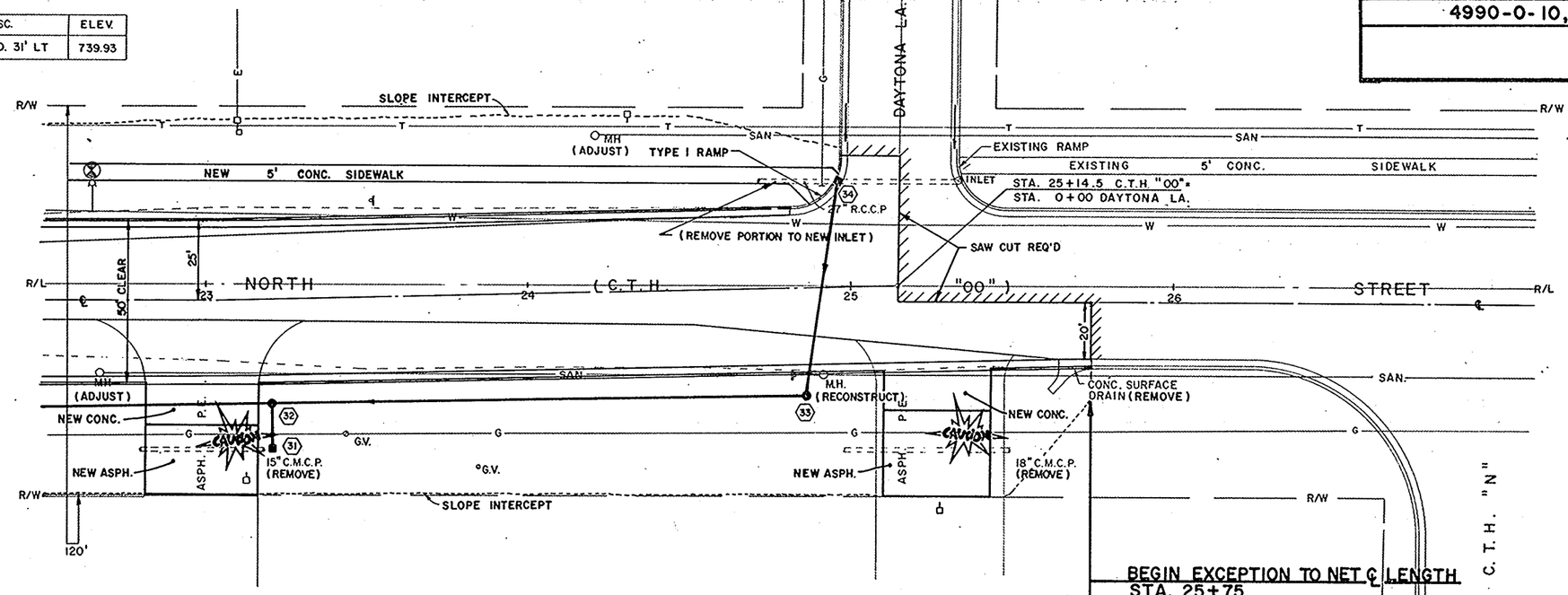
No.	STA.	DESC.	ELEV.
4	22+64	TOP OF HYD. 31' LT	739.93

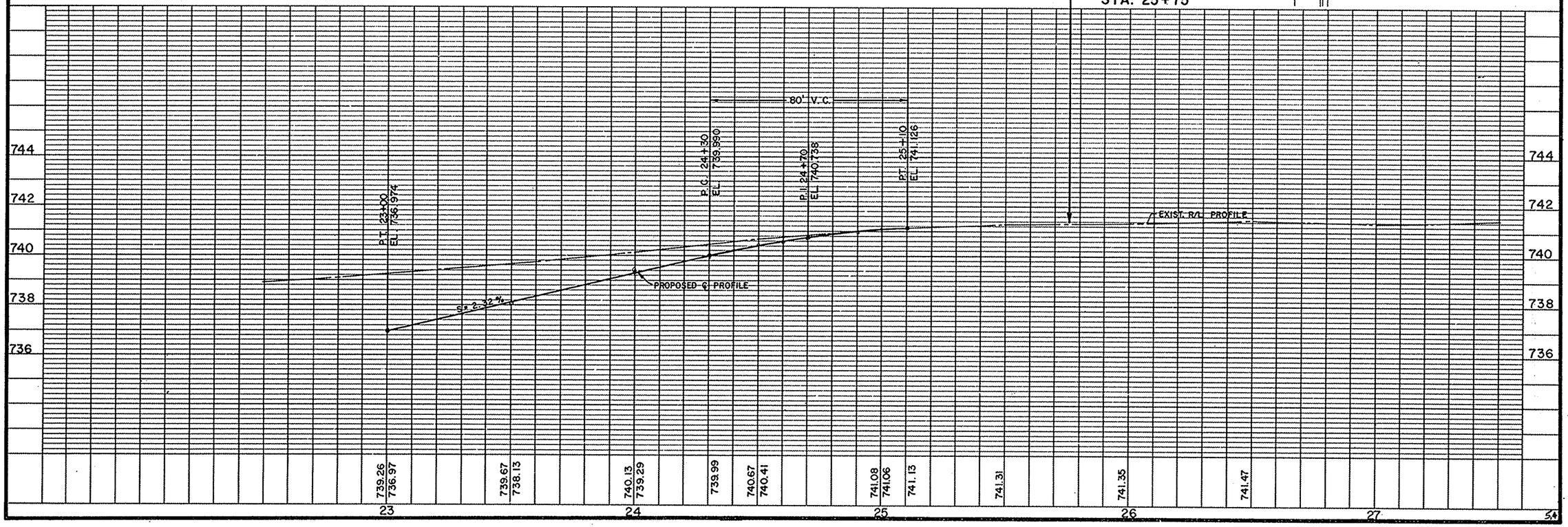


STATE PROJECT NUMBER	SHEET NO.
4990-0-10, 11	5.4

BENCH

No.	STA.	DESC.	ELEV.
4	22+64	TOP OF HYD. 31' LT	739.93





Cat. No. 2130 – D142

STATE PROJECT NUMBER	SHEET NO.
4990 - 0 - 10,11	5.5

No.	STA.	DESC.	ELEV.
5	43+49	TOP OF HYD. 50' LT.	730.35

N

T 2 N
16 15
21 22
R 8 E

FREEDOM ROAD
(C.T.H. "N")

DEPOT STREET

NORTH STREET (C.T.H. "00")

REMOVE SIDEWALK
TYPE I RAMP
SIDEWALK
SAW CUT REQ'D
REMOVE SIDEWALK
TYPE I RAMP
SAN
G.V.
NEW CONC.
POSTS (REMOVE)
POSTS (REMOVE)
GRASS ISLAND
NEW ASPH.
NEW CONC.
NEW ASPH
(ADJUST) MH
GRASS ISLAND
POSTS (REMOVE)
NEW ASPH.
NEW CONC.
SLOPE INTERCEPT
NEW ASPH.
NEW GRAVEL
NEW CONC
NEW 5' CONC. SIDEWALK
SLOPE INTERCEPT
GRAVEL
GRAVEL
CONC. SLAB
G.P.
GAS STATION
CONC. SIDEWALK
R/W
ASPH. P.E.
GRAVEL P.E.
FM
50' CLEAR
60'
25'
12'
120'

END EXCEPTION TO NET ℄ LENGTH
STA. 42+15

150' V.C.

P.I. 42+15
EL. 729.799

P.C. 42+75
EL. 729.133

P.I. 43+00
N.O.G. 728.00

P.I. 43+50
EL. 728.300

P.T. 44+25
EL. 728.750

P.I. 45+00
N.O.G. 727.60

S = -1.11%

S = 0.30%

S = 0.60%

EXISTING R/L PROFILE

PROPOSED ℄ PROFILE

PROPOSED NORTH DITCH

	41	42	43	44	45	46	55
EXISTING R/L		729.80	729.67 / 729.41	730.07 / 728.89	730.43 / 728.62	730.72 / 728.64	731.15 / 728.90	731.43 / 729.20	731.67 / 729.50	731.65 / 729.80

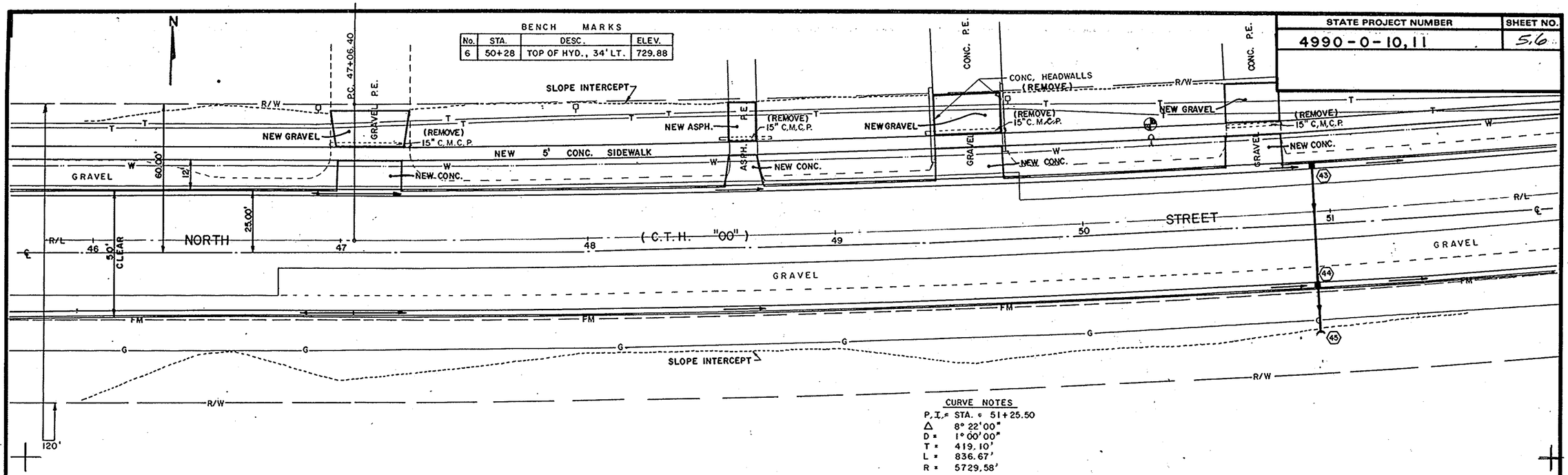
732
730
728
726

Cat. No. 27130 — 13142

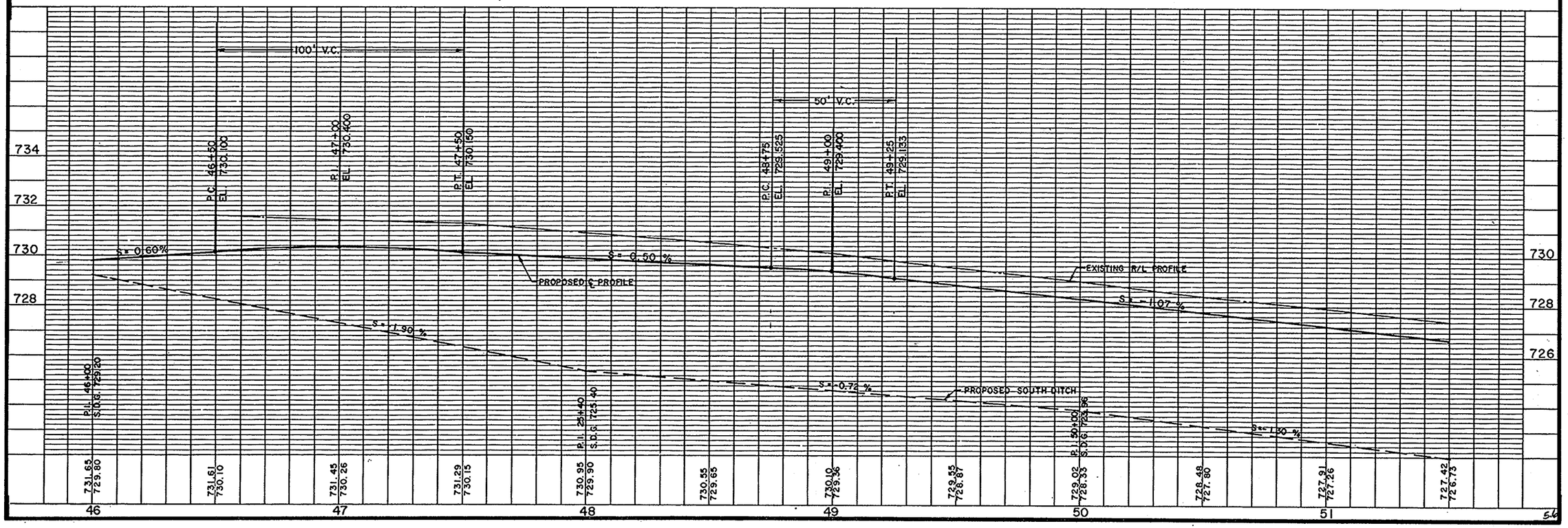
STATE PROJECT NUMBER	SHEET NO.
4990-0-10,11	5.6

BENCH MARKS

No.	STA.	DESC.	ELEV.
6	50+28	TOP OF HYD., 34' LT.	729.88



CURVE NOTES
P.I. = STA. = 51+25.50
Δ = 8° 22' 00"
D = 1° 00' 00"
T = 419.10'
L = 836.67'
R = 5729.58'



Cat. No. 2130 - 1041

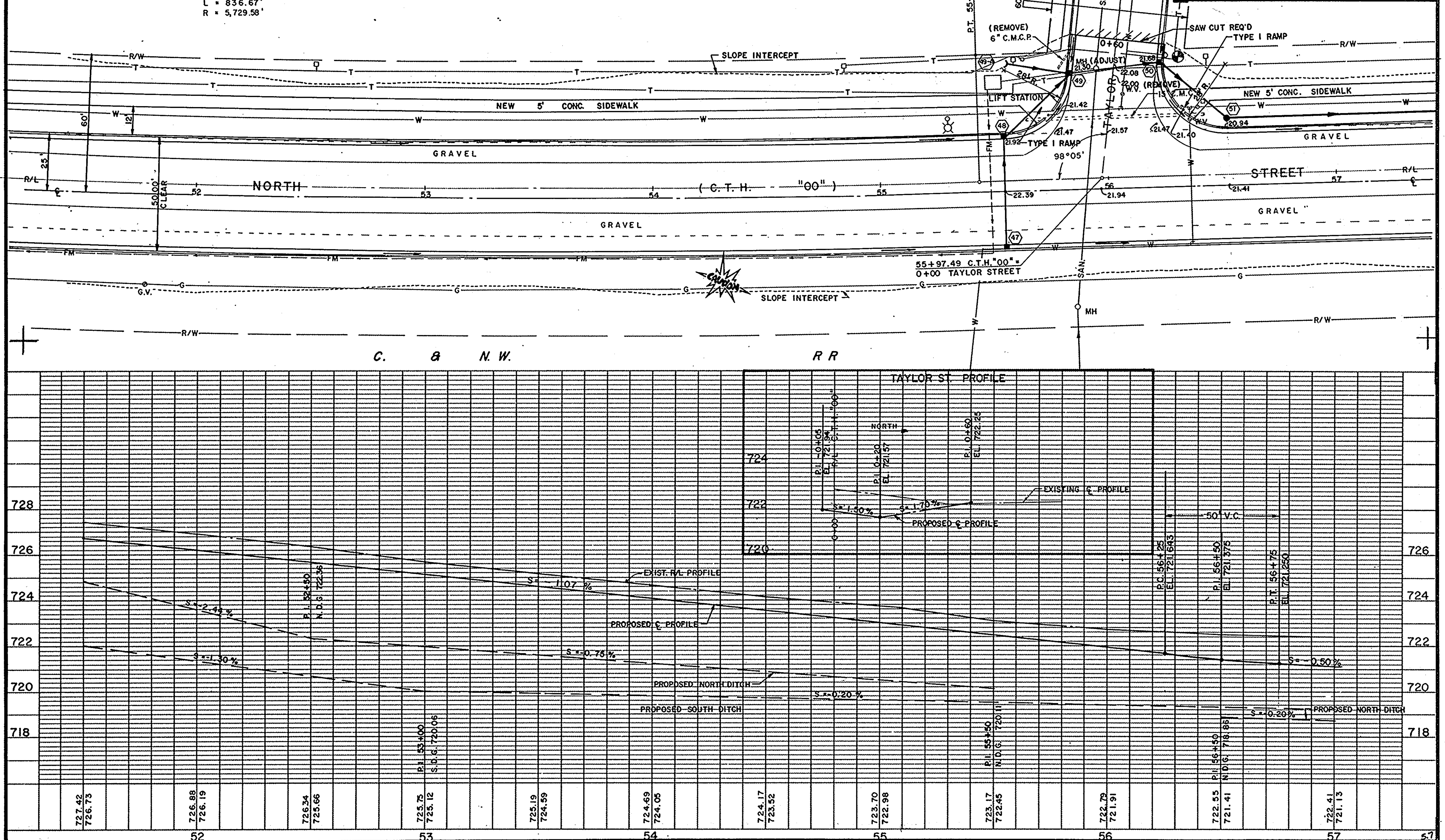
STATE PROJECT NUMBER	SHEET NO.
4990-0-10,11	57

CURVE NOTES

P.I. STA. = 51+25.50
Δ = 8° 22' 00"
D = 1° 00' 00"
T = 419.10'
L = 836.67'
R = 5,729.58'

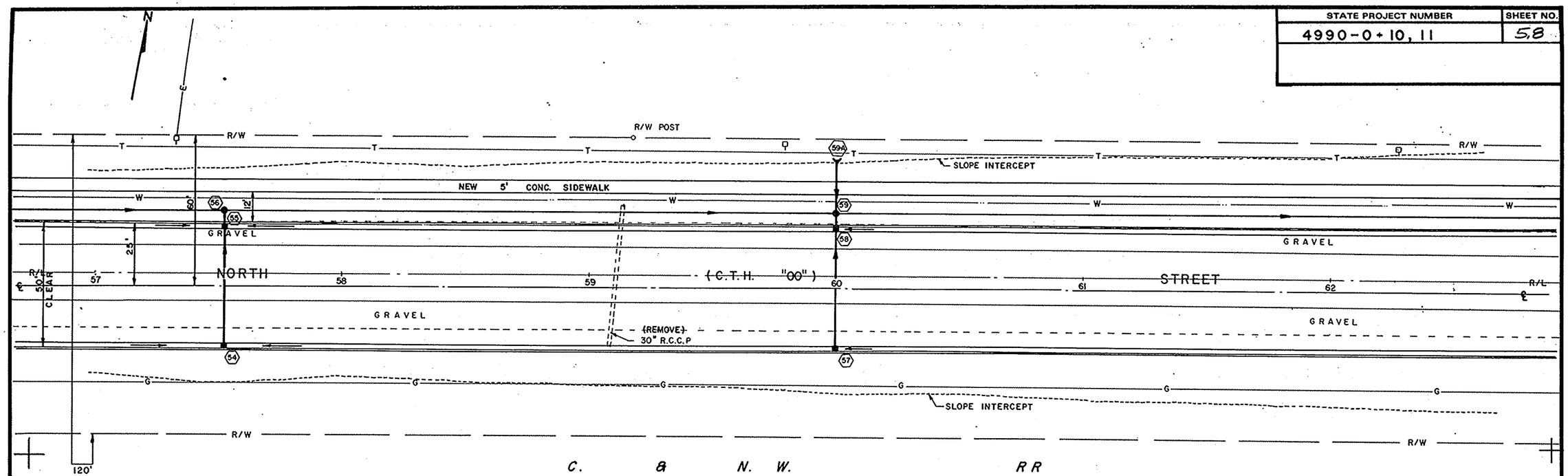
BENCH MARKS

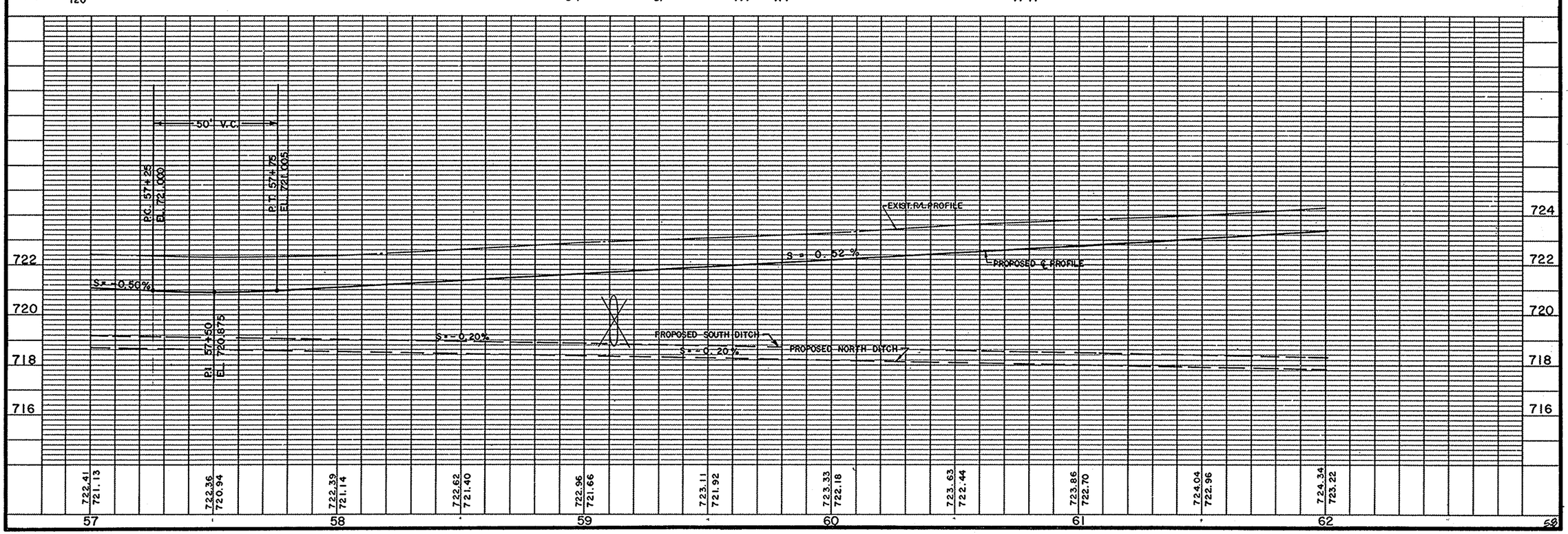
NO	STA.	DESC.	ELEV.
7	56+19	TOP OF HYD., 53' LT.	724.80



Cat. No. 2130 – D142

STATE PROJECT NUMBER	SHEET NO.
4990-0+10, 11	58





Cat. No. 2130 – DI42

STATE PROJECT NUMBER	SHEET NO.
4990-0-10, 11	5.9

N

48" SS

INLET (ADJUST)

SLOPE INTERCEPT

SLOPE INTERCEPT

NEW 5' CONC. SIDEWALK

R/W

60'

12' W

GRAVEL

GRAVEL

GRAVEL

GRAVEL

R/L 30' CLEAR

125'

NORTH (C. T. H. "00") STREET

62 63 64 65 66 67

63 62 61

48" SS

54" SS

54" SS

54" SS

MH (ADJUST)

120'

30" SS

C. & N. W. R. R.

EXIST. R/L PROFILE

0.52%

PROPOSED ℄ PROFILE

PROPOSED SOUTH DITCH

PROPOSED NORTH DITCH

S = - 0.20%

S = - 0.20%

S = + 0.75%

S = + 0.76%

1.07%

P.I. 63+70
S.D.G. 718.00

P.I. 65+75
N.D.G. 717.50

P.I. 66+50
D.G. N. 719.50

724.34 723.22
724.62 723.48
724.81 723.74
725.06 724.00
725.35 724.26
725.54 724.52
725.87 724.78
726.11 725.04
726.37 725.30
726.58 725.56
726.85 725.82

726 724 722 720 718 716

728 726 724 722 720 718 716

62 63 64 65 66 67 5.9

Cat. No. 2130 - 0142

STATE PROJECT NUMBER	SHEET NO.
4990-0-10,11	5.10

BENCH MARKS

NO.	STA.	DESC.	ELEV.
8	69+71	TOP OF HYD., 53' LT.	728.88

N

R/W

STREET

SAW CUT REQ'D

2+80

2+55

36' CLEAR

26.67

27.03

26.67

(TO REMAIN) R.C.C.P.

28' R.

36" C & G TYPE "D"

STA. 69+24.25 C.T.H. "00"

STA. 2+00 BUCHANAN STREET

27.07

NEW 5' CONC. SIDEWALK

TYPE I RAMP

26.45

CAUTION

26.90

98°02'19"

60'

12'

50.00' CLEAR

25'

NORTH STREET (C.T.H. "00")

67 68 69 70 71 72

26.92 27.20 27.30 27.54

TAPER TO MATCH EXISTING PAVEMENT IN 213'

26.83

20'

30' R.

15" C.M.C.P. (TO REMAIN)

28.22

27.88

11.95

33'

54" SS

TYPE I RAMP OPENING

G.V.

SAW CUT REQ'D

BUCHANAN

120'

C. & N. W. R. R.

50'

BUCHANAN ST. PROFILE

SOUTH

NORTH

P.I. 1+45 EL. 728.220

P.I. 1+75 EL. 726.900

P.I. 1+85 EL. 727.200

P.I. 2+15 EL. 726.900

P.I. 2+80 EL. 727.15

EXISTING ℄ PROFILE

S = 3.30%

S = 1.50%

S = 1.50%

S = 0.38%

PROPOSED ℄ PROFILE

730

728

726

P.C. 67+75 EL. 726.208

50' V.C.

P.I. 68+00 EL. 728.335

E.T. 68+25 EL. 728.508

EXIST. R/L PROFILE

S = 0.52%

S = 0.69%

P.I. 68+00 N.D.G. 721.2

P.I. 69+00 N.D.G. 723.20

P.I. 70+00 N.D.G. 724.00

P.C. 70+75 EL. 728.230

P.I. 71+00 EL. 728.406

P.T. 71+25 EL. 728.530

END PROJECT STA. 72+00

S = 0.50%

PROPOSED ℄ PROFILE

S = 0.35%

PROPOSED NORTH DITCH

S = 1.07%

S = 0.75%

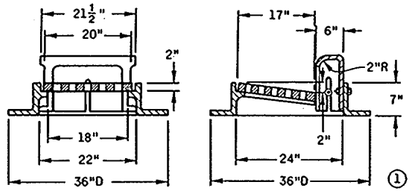
PROPOSED SOUTH DITCH

S = 0.76%

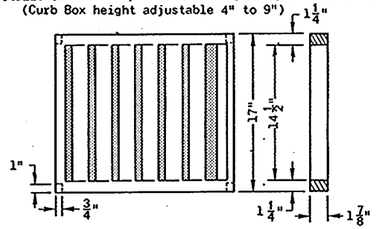
PROPOSED NORTH DITCH

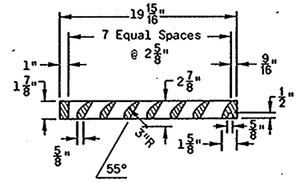
726.85 / 725.82	727.11 / 726.08	727.43 / 726.35	727.61 / 726.68	728.04 / 727.03	728.20 / 727.30	728.47 / 727.72
728.69 / 728.06	728.81 / 728.39	728.89 / 728.66	728.87 / 728.90			

Cat. No. 2130 – 0142



Details of Curb Box, Frame and Diagonally Slotted Grate
(Curb Box height adjustable 4" to 9")

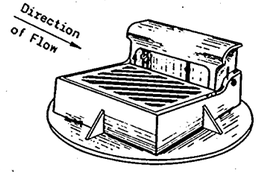




SPECIAL GRATE NO. 1
FOR TYPE "A" COVER

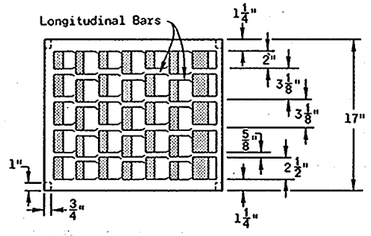
(Approximate Weight 70 lbs.)

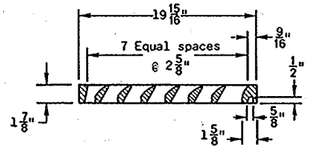
1" Diagonal Bars
with 1½" Openings



TYPE "A"

(Approximate Weight 405 lbs.)
Frame Weight 250 lbs.
Grate Weight 85 lbs.
Box Weight 70 lbs.

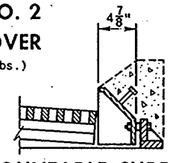




SPECIAL GRATE NO. 2
FOR TYPE "A" COVER

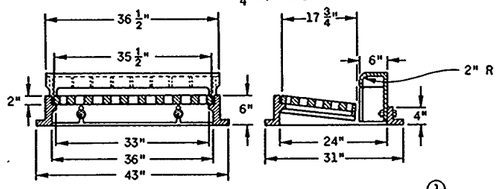
(Approximate Weight 84 lbs.)

① TYPES "A" AND "H" COVERS SHALL BE FURNISHED WITH DIAGONALLY SLOTTED GRATES UNLESS OTHERWISE SPECIFIED IN THE CONTRACT

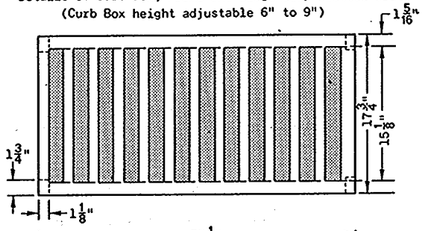


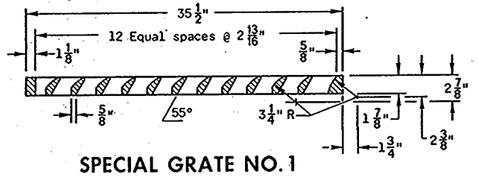
MOUNTABLE CURB BOX
FOR TYPES "A" & "H" COVERS

1⅜" Diagonal Bars
with 1¼" Openings



Details of Curb Box, Frame and Diagonally Slotted Grate
(Curb Box height adjustable 6" to 9")



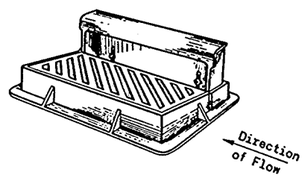


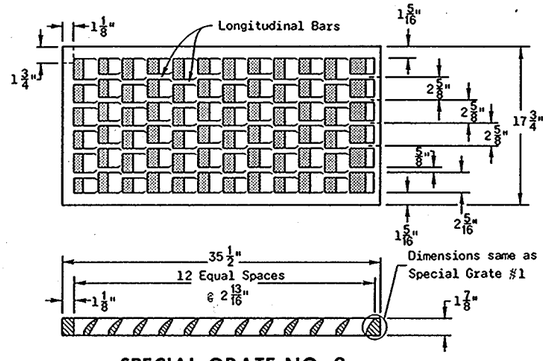
SPECIAL GRATE NO. 1
FOR TYPE "H" COVER

(Approximate Weight 140 lbs.)

TYPE "H"

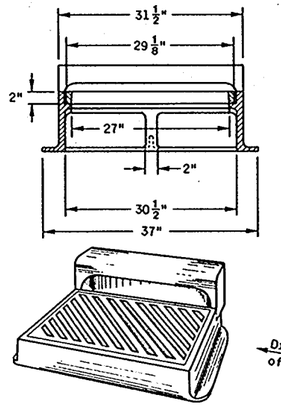
(Approximate Weight 510 lbs.)
Frame Weight 220 lbs.
Grate Weight 175 lbs.
Box Weight 115 lbs.

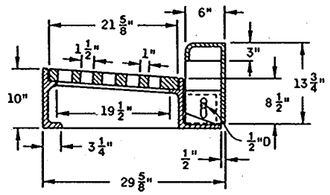




SPECIAL GRATE NO. 2
FOR TYPE "H" COVER

(Approximate Weight 165 lbs.)



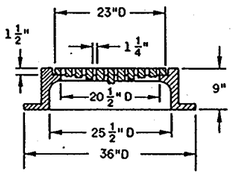


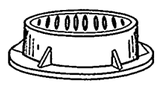
NOTE: Curb Box height adjustable 6" to 9"

TYPE "WM"

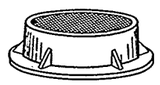
(Approximate Weight 670 lbs.)
Frame Weight 350 lbs.
Grate Weight 185 lbs.
Box Weight 135 lbs.

CAUTION: DO NOT USE GRATES WITH LONGITUDINAL SLOTS WHERE BICYCLE TRAFFIC IS PERMITTED.





TYPE "C"
Slotted Grate

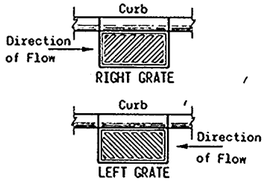


TYPE "J"
Solid Cover

TYPE "C" - TYPE "J"

Frame Weight 250 lbs.
Slotted Grate Weight 125 lbs.
Solid Cover Weight 150 lbs.

Diagonal Slots shall be oriented to the direction of flow. RIGHT and LEFT grates or grates that are manufactured to be reversible and can be used as either RIGHT or LEFT grates shall be furnished depending on direction of flow (See sketch below)



GENERAL NOTES

Details of construction, materials and workmanship not shown on this drawing shall conform to the pertinent requirements of the Standard Specifications and the applicable Special Provisions.

Detail drawings for proposed alternate designs for Catch Basin, Manhole and Inlet Covers shall be submitted to the Engineer for approval providing that such alternate designs make provision for equivalent capacity and strength.

All Catch Basin, Manhole and Inlet Covers which are placed in vehicular traffic areas shall be "Non-Rocking" type.

Adjustment of the cover to grade may be accomplished by the use of mortar and brick, or by precast concrete grade rings. Precast concrete grade rings shall conform to the specifications for Precast Reinforced Concrete Manhole Sections, AASHTO Designation M199, except that when such units are wet cast, they shall be made with air-entraining portland cement. Maximum adjustment shall be 8 inches.

The actual weight of covers may vary within 5 percent, plus or minus, of the approximate weight.

CATCH BASIN
MANHOLE AND
INLET COVERS

State of Wisconsin
Department of Transportation
Division of Highways

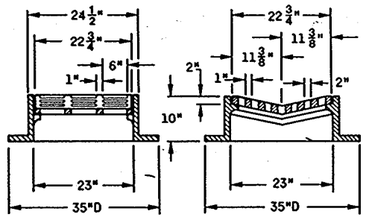
APPROVED 11-23-77 DATE — SUPERVISING DEVELOPMENT ENGINEER

APPROVED 11-25-77 DATE — CHIEF OF FACILITIES DEVELOPMENT

FHWA

S.D.D. 8 A5-3a

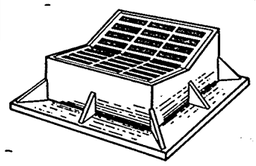
S.D.D 8 A5-3a



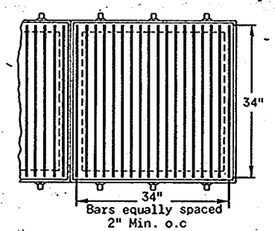
TYPE "B"

(Approximate Weight 395 lbs.)
Frame Weight 285 lbs.
Grate Weight 110 lbs.

Round Frame

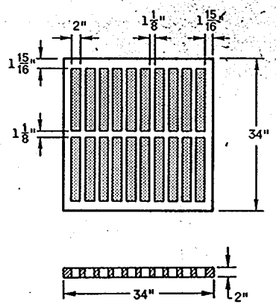


Alternate Frame
(Square type)
35" Square



STEEL GRATE

(Approximate Weight 209 lbs.)



CAST IRON GRATE

(Approximate Grate Weight 285 lbs)

GENERAL NOTES

Details of construction, materials and workmanship not shown on this drawing shall conform to the pertinent requirements of the Standard Specifications and the applicable Special Provisions.

Detail drawings for proposed alternate designs for Catch Basin, Manhole and Inlet Covers shall be submitted to the Engineer for approval providing that such alternate designs make provision for equivalent capacity and strength.

All Catch Basin, Manhole and Inlet Covers which are placed in vehicular traffic areas shall be "Non-Rocking" type.

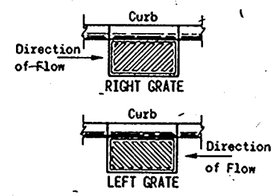
Adjustment of the cover to grade may be accomplished by the use of mortar and brick, or by precast concrete grade rings. Precast concrete grade rings shall conform to the specifications for Precast Reinforced Concrete Manhole Sections, AASHTO Designation M199, except that when such units are wet cast, they shall be made with air-entraining portland cement. Maximum adjustment shall be 8 inches.

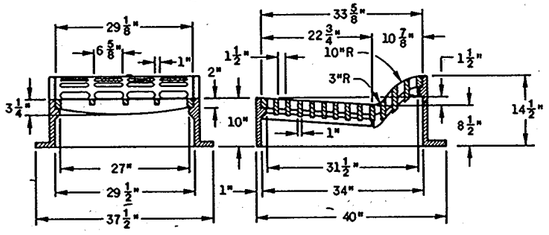
The actual weight of covers may vary within 5 percent, plus or minus, of the approximate weight.

The Type "MS" cover may either be a cast iron grate or a steel grate and frame at the contractors option. A frame is not required with the cast iron cover.

The steel grating shall be capable of carrying an H20 load on a 2'- 10" max. clear span and shall have a minimum section modulus thru the main bearing bars of 3.80 inches^3 per ft. of width. The grating shall be cut in such a manner that all riveted or welded connections are left intact. End banding with a $\frac{3}{8}$" min. thickness is required. The size of the frame shall be such that when the grate is in place, the clearance between the grate and the frame will not exceed $\frac{5}{8}$" on any side. Main bars shall be laterally supported by transverse bars. Grating and frame shall be galvanized as specified in AASHTO Designation M-111 after fabrication. Grating shall be approved by the Engineer.

Diagonal Slots shall be oriented to the direction of flow. RIGHT and LEFT grates or grates that are manufactured to be reversible and can be used as either RIGHT or LEFT grates shall be furnished depending on direction of flow. (See sketch below)



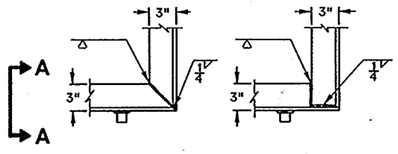


TYPE "MS"

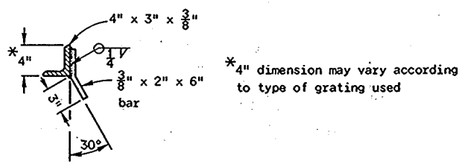
CAUTION: DO NOT USE GRATES WITH LONGITUDINAL SLOTS WHERE BICYCLE TRAFFIC IS PERMITTED.

TYPE "F"

(Approximate Weight 850 lbs.)
Frame 515 lbs.
Back grate 160 lbs.
Front grate 175 lbs.

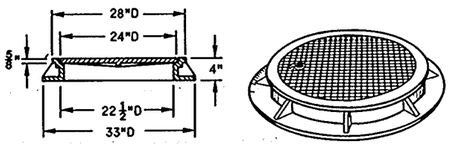


TYPICAL CORNER OF FRAME FOR STEEL GRATE



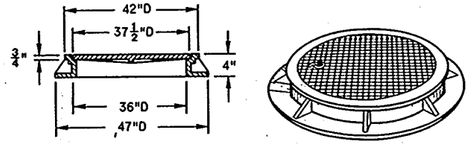
SECTION A-A

*4" dimension may vary according to type of grating used



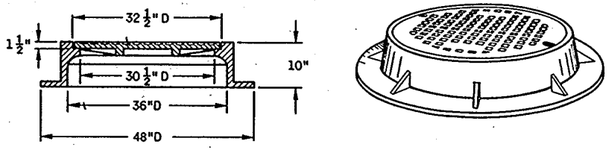
TYPE "L"

(Approximate Weight 220 lbs.)



TYPE "M"

(Approximate Weight 535 lbs.)



TYPE "K"

(Approximate Weight 785 lbs.)

CATCH BASIN
MANHOLE AND
INLET COVERS

State of Wisconsin
Department of Transportation
Division of Highways

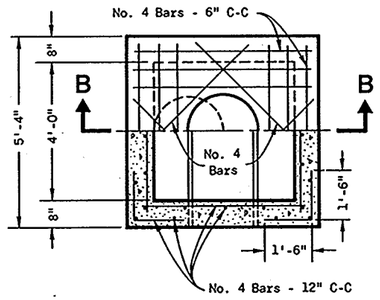
APPROVED 11-23-77 DATE — SUPERVISING DEVELOPMENT ENGINEER

APPROVED 11-25-77 DATE — CHIEF OF FACILITIES DEVELOPMENT

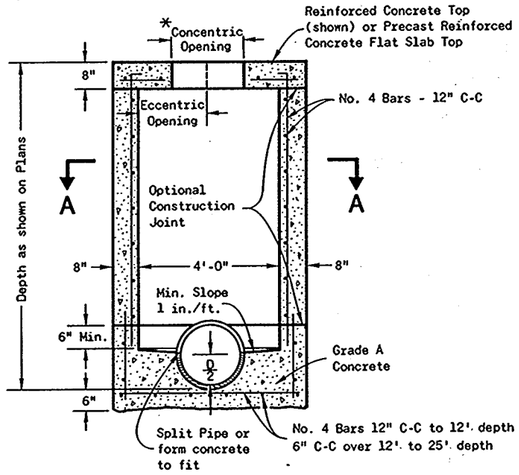
FHWA

S.D.D. 8 A5-3b

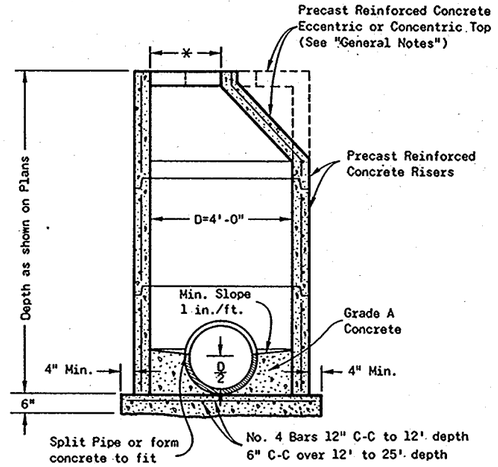
S.D.D. 8 A5-3b



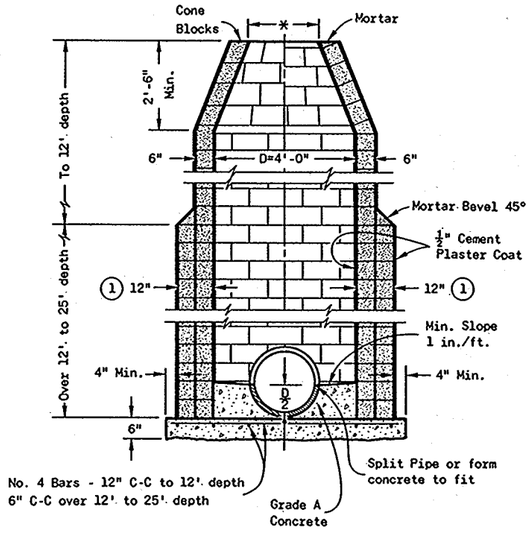
HALF SECTION A-A



SECTION B-B
REINFORCED CONCRETE



PRECAST REINFORCED CONCRETE



CONCRETE BLOCK

GENERAL NOTES

Details of construction, materials and workmanship not shown on this drawing shall conform to the pertinent requirements of the Standard Specifications and the applicable Special Provisions.

Detailed drawings for proposed alternate designs for underground drainage structures shall be submitted to the Engineer for approval providing that such alternate designs make provision for equivalent capacity and strength.

All drainage structures are designated on the plans as "Manholes 1-C", "Catch Basins 1-B", "Inlets 3-H", etc. The first digit designates the masonry portion of the structure, and the following letter designates the type of cover to be used to comprise the complete unit.

Precast Reinforced Bases shall be placed on a bed of material at least 6 inches in depth, which meets the requirements for Granular Backfill. This bedding shall be compacted and provide uniform support for the entire area of the base.

Precast Reinforced Concrete Cone Tops (Eccentric or Concentric) may be used on concrete block structures. The Cone Tops shall be installed on a bed of mortar.

Eccentric Cone Tops may be used on all structures, and Concentric Cone Tops shall be used only on structures 5 feet or less in depth, unless otherwise directed by the Engineer.

Steps meeting the following requirements shall be installed in all structures over 5 feet in depth: 16 inch C-C maximum spacing; project a minimum clear distance of 4 inches from the wall at the point of embedment; minimum length of 10 inches; minimum wall embedment of 3 inches; and be capable of supporting a concentrated load of 300 lbs. Ferrous metal steps not painted or treated to resist corrosion shall have a minimum cross sectional dimension of 1 inch.

Solid Aluminum steps shall have a minimum cross sectional dimension of 0.75 inch. Aluminum surfaces to be embedded in concrete shall be given one coat of suitable quality paint, such as zinc chromate primer conforming to Federal Specification TT-P-645 or equivalent. Steps of approved Polypropelene plastic coated reinforcement bar will be acceptable.

All bar steel reinforcement shall be embedded 2 inches clear unless otherwise shown or noted.

Precast Reinforced Concrete Risers may be placed with tongue up or down.

All Precast Inlet Units shall conform to the pertinent requirements of AASHTO Designation M 199.

* Use 2'-0" diameter opening with Type "C", "L" and "J" covers, or 3'-0" diameter with Type "K" and "M" covers.

(1) 2 courses 6" block.

MANHOLES TYPE 1

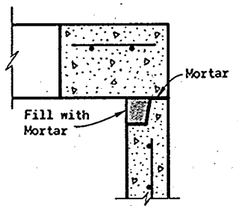
State of Wisconsin
Department of Transportation

APPROVED 4-13-82
DATE
CHIEF DESIGN ENGINEER
FHWA

S.D.D. 8 B 6-3

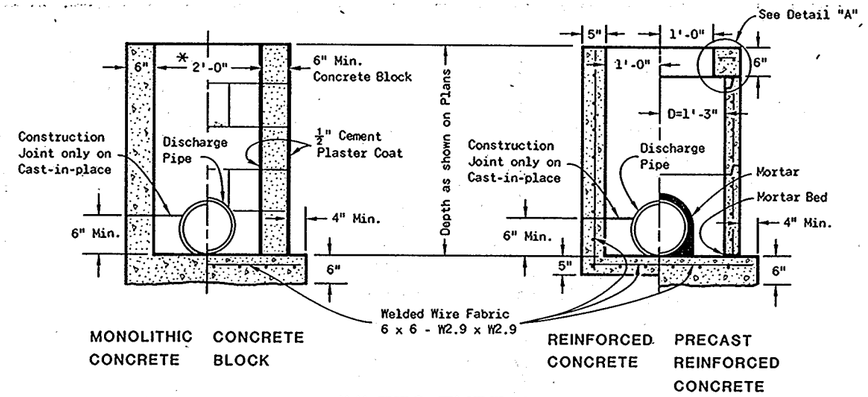
MANHOLES TYPE 1

S.D.D. 8 B 6-3



DETAIL "A"

*Selection of square or circular design will be based on the pipe sizes and the Inlet Cover being utilized.



MONOLITHIC CONCRETE BLOCK

REINFORCED CONCRETE PRECAST REINFORCED CONCRETE

INLETS TYPE 1

GENERAL NOTES

Details of construction, materials and workmanship not shown on this drawing shall conform to the pertinent requirements of the Standard Specifications and the applicable Special Provisions.

Detailed drawings for proposed alternate designs for underground drainage structures shall be submitted to the Engineer for approval providing that such alternate designs make provision for equivalent capacity and strength.

All Precast Inlet units shall conform to the pertinent requirements of AASHTO Designation M 199.

All drainage structures are designated on the plans as "Manholes 1-C", "Catch Basins 1-B", "Inlets 3-H", etc. The first digit designates the masonry portion of the structure, and the following letter designates the type of cover to be used to comprise the complete unit.

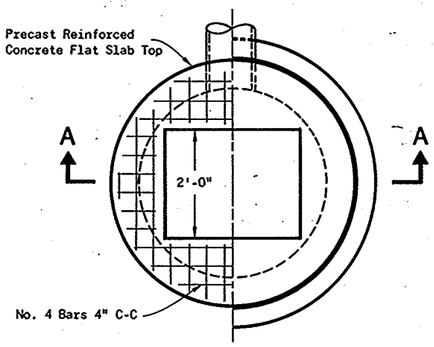
Precast Reinforced Bases shall be placed on a bed of material at least 6 inches in depth, which meets the requirements for Granular Backfill. This bedding shall be compacted and provide uniform support for the entire area of the base.

Precast Reinforced Concrete Flat Slab Tops may be used on the structures. The Tops shall be installed on a bed of mortar.

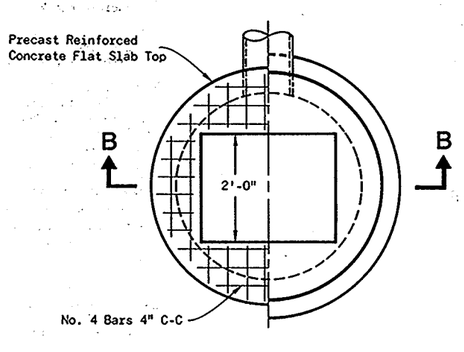
All Bar Steel reinforcement shall be embedded 2 inches clear unless otherwise shown or noted.

Precast Reinforced Concrete Risers shall be placed with tongue down.

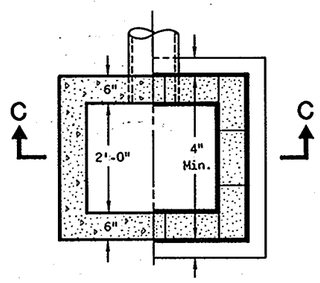
(1) Use 2'-6" opening for Type 2 Inlets and 3'-0" opening for Type 3 Inlets.



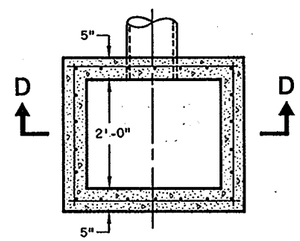
PLAN VIEW



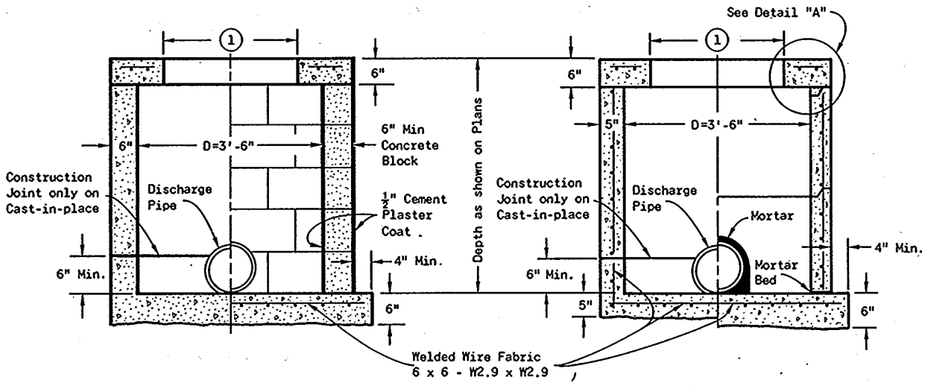
PLAN VIEW



PLAN VIEW



PLAN VIEW

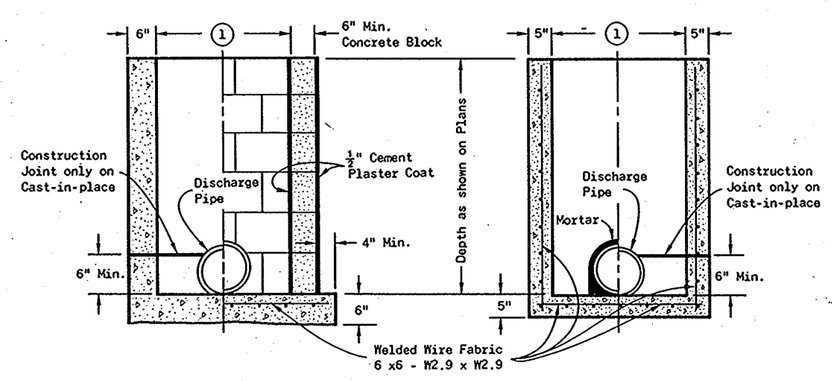


MONOLITHIC CONCRETE BLOCK

REINFORCED CONCRETE PRECAST REINFORCED CONCRETE

SECTION A-A

SECTION B-B



MONOLITHIC CONCRETE BLOCK

PRECAST REINFORCED CONCRETE REINFORCED CONCRETE

SECTION C-C

SECTION D-D

INLETS TYPE 2 & 3

INLETS TYPE 1, 2 & 3

State of Wisconsin
Department of Transportation

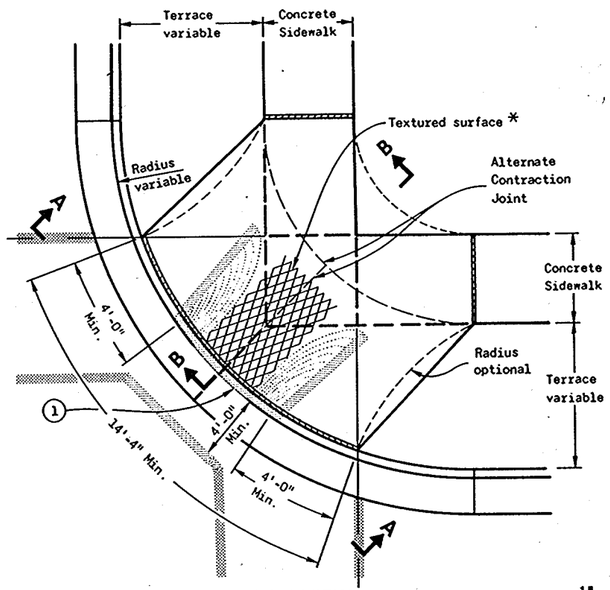
APPROVED 4-13-82 DATE

D. J. Ahrandt CHIEF DESIGN ENGINEER

FHWA

S.D.D. 8 C 1-4

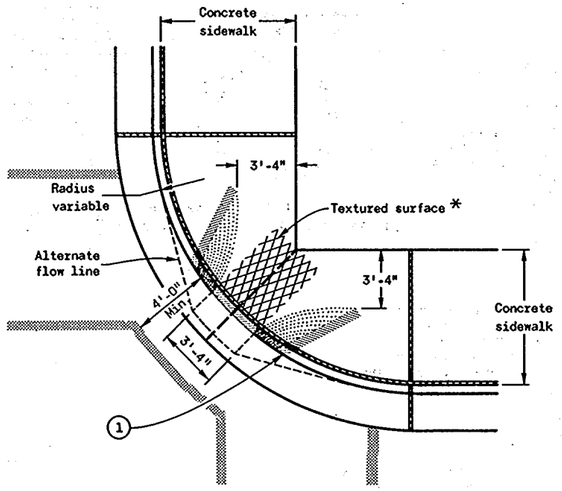
S.D.D. 8 C 1-4



PLAN VIEW

TYPE 1 RAMP

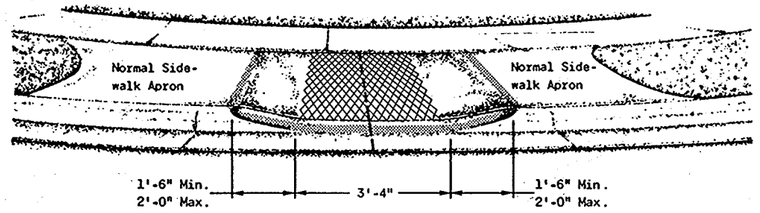
(CENTER OF CORNER RADIUS)



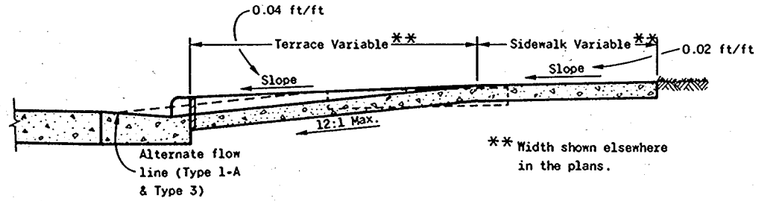
PLAN VIEW

TYPE 1-A RAMP

(NO TERRACE)



VIEW **A-A**

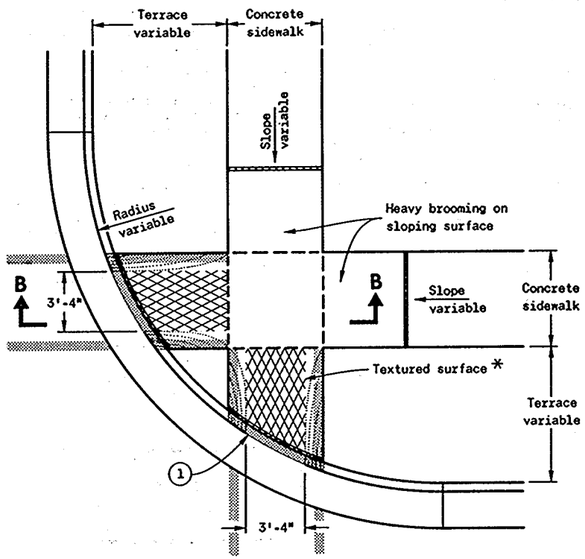


SECTION **B-B**

½" EXPANSION JOINTS - SIDEWALK

CONTRACTION JOINTS

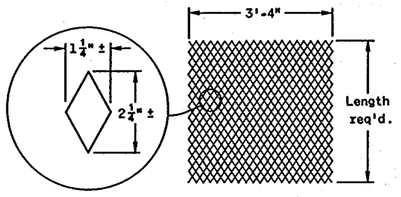
Location of joints may be varied from those shown to better fit site conditions and/or local government preference.



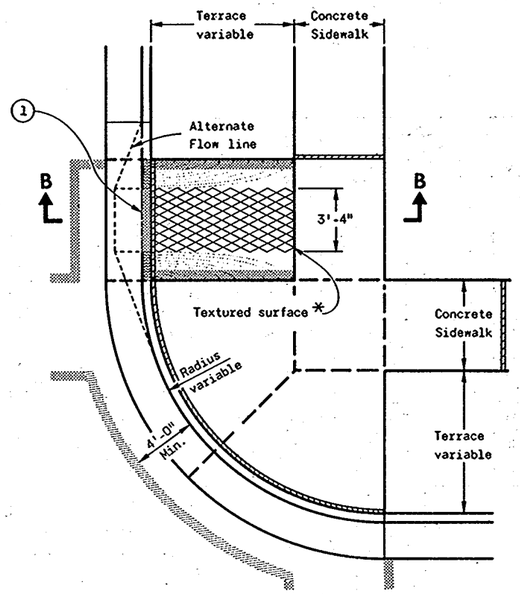
PLAN VIEW

TYPE 2 RAMP

(ON LINE WITH SIDEWALK)



DETAIL OF DIAMOND PATTERN *



PLAN VIEW

TYPE 3 RAMP

(OUTSIDE OF CROSSWALK AREA)

GENERAL NOTES

Details of construction, materials and workmanship not shown on this drawing shall conform to the pertinent requirements of the Standard Specifications and the applicable Special Provisions.

Ramps shall be built at 12:1 or flatter. When necessary, the sidewalk elevation may be lowered to meet the high point on the ramp.

Type 1 or Type 1-A Ramps shall have a normal sidewalk apron and curb on both sides of ramp

Curb ramps shall be measured and paid for as Concrete Sidewalk and Concrete Curb and Gutter.

Surface texturing shall consist of linear impressions approximately ¼ inch to ⅜ inch in depth and width, oriented to provide a uniform pattern of diamond shapes measuring approximately 1¼ inches in width by 2¼ inches in length, with the length being parallel to the direction of pedestrian movement. This surface texture may be achieved by impressing and removing a piece of expanded metal regular industrial mesh into the surface of the ramp while the concrete is in a plastic state.

(1) The ramp shall be bordered on both sides and on the curb line with a 4 inch wide yellow stripe or with brick of a contrasting color. Normally the paint stripe alternate will be used. The municapality or the department will apply this striping unless otherwise specified in the contract.

If a municapality requires the brick alternate, special details and provisions are shown elsewhere in the plans.

CURB RAMPS

State of Wisconsin
Department of Transportation

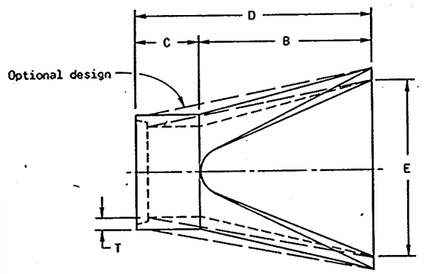
APPROVED 10-23-84 DATE

CHIEF DESIGN ENGINEER

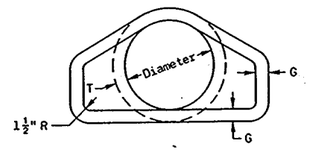
FHWA

S.D.D. 8 D 5-8

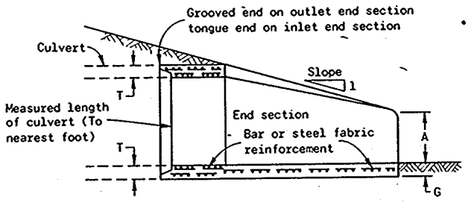
S.D.D. 8 D 5-8



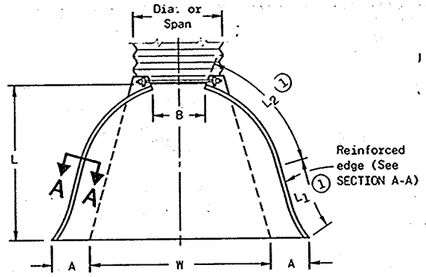
PLAN



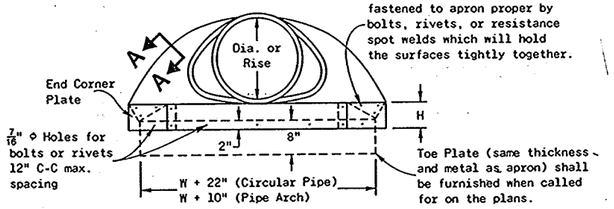
END VIEW



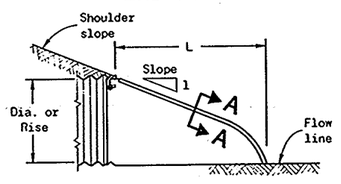
LONGITUDINAL SECTION



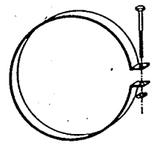
PLAN



END VIEW

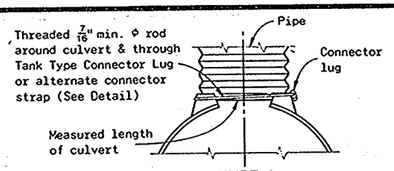


SIDE ELEVATION



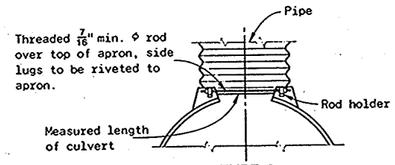
1" Wide, 12 Ga. (0.109" thick), galvanized strap with standard 6" x ½" band bolt and nut.

Alternate for Type 1 Connection
END SECTION CONNECTOR STRAP



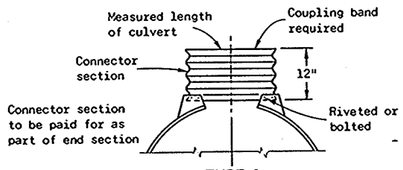
TYPE 1

For 12" thru 24" only (Circular pipe)



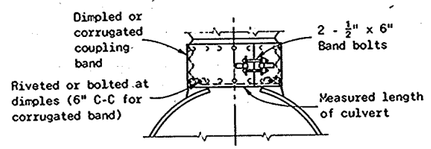
TYPE 2

For 30" & 36" only (Circular pipe)
For 17"x13" thru 57"x38" only (Pipe arch)



TYPE 3

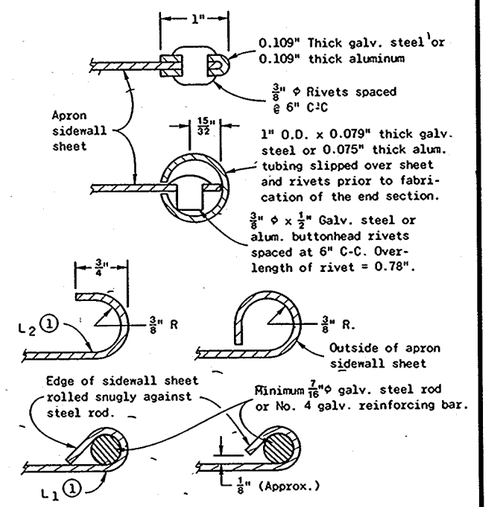
For 42" thru 84" only (Circular pipe)
For 64"x43" & 71"x47" (Pipe arch)



TYPE 5

Alternate for:
All sizes corrugated circular pipe & pipe arches

NOTE: Dimpled band fits over outside of endwall, and corrugated band fits inside endwall. Dimpled band may be used with helically corrugated pipe.



SECTION A-A

GENERAL NOTES

Details of construction, materials and workmanship not shown on this drawing shall conform to the pertinent requirements of the Standard Specifications and the applicable Special Provisions.

Variations of the dimensions and designs shown hereon will be permitted providing equivalent capacity and structural integrity are attained, and prior approval of the Engineer is obtained.

Concrete culvert endwalls may not be used with galvanized steel or aluminum culvert pipe or vice versa.

Galvanized steel or aluminum endwalls shall normally be installed on culvert pipe of the same metal. The use of galvanized steel endwalls on aluminum pipes is permitted, provided the two metals at the joint interface are kept separated by a suitable insulating material approximately 1/16" thick or greater. Such material would be an asphalt impregnated fabric, a sheet plastic, a rubber gasket or other non-degradable material of substantial strength.

When two or more pipe arches with apron endwalls are to be laid adjacent to each other, they shall be separated by the following amount:

PIPES: Total width of apron endwall less the diameter of pipe plus 6 inches.

PIPE ARCHES: Total width of apron endwall less the span dimension of the pipe arch plus 6 inches.

(1) A combination of steel rod rolled into edge sidewall (L_1), and 180° roll on edge of sidewall (L_2), is permitted for metal apron endwalls up to 60" diameter for circular pipe, and 77" x 52" for pipe arches.

CONNECTION DETAILS

CIRCULAR PIPE

For circumferentially corrugated pipe use Endwall Connection Details 1, 2, 3 or 5 as applicable.

For helically corrugated pipe use Endwall Connection Details 1, 2 or 5.

For helically corrugated pipes with two circumferential corrugations at each end use Endwall Connection Details 1, 2 or 3.

PIPE ARCH

Use Endwall Connection Details 2, 3 or 5 as applicable.

PIPE DIA. (In.)	APPROX. WEIGHT PER SECTION	DIMENSIONS (Inches)							APPROX. SLOPE
		T	A	B	C	D	E	G	
12	530	2	4	24	$48\frac{7}{8}$	$72\frac{7}{8}$	24	2	3 to 1
15	740	$2\frac{1}{4}$	6	27	46	73	30	$2\frac{1}{4}$	↑
18	990	$2\frac{1}{2}$	9	27	46	73	36	$2\frac{1}{2}$	
21	1,280	$2\frac{3}{4}$	9	36	$37\frac{1}{2}$	$73\frac{1}{2}$	42	$2\frac{3}{4}$	
24	1,520	3	$9\frac{1}{2}$	$43\frac{1}{2}$	30	$73\frac{1}{2}$	48	3	
27	1,930	$3\frac{1}{4}$	$10\frac{1}{2}$	$49\frac{1}{2}$	24	$73\frac{1}{2}$	54	$3\frac{1}{4}$	
30	2,190	$3\frac{1}{2}$	12	54	$19\frac{3}{4}$	$73\frac{3}{4}$	60	$3\frac{1}{2}$	
36	4,100	4	15	63	$34\frac{3}{4}$	$97\frac{3}{4}$	72	4	
42	5,380	$4\frac{1}{2}$	21	63	35	98	78	$4\frac{1}{2}$	↓
48	6,550	5	24	72	26	98	84	5	3 to 1
54	8,040	$5\frac{1}{2}$	27	65	* $33\frac{1}{4}$ - 35	** $98\frac{1}{4}$ - 100	90	5	$2\frac{2}{3}$ to 1
60	8,730	6	* 30 - 35	60	39	99	96	5	2 to 1
66	10,630	$6\frac{1}{2}$	* 24 - 30	** 72 - 78	* 21 - 27	**	102	$5\frac{1}{2}$	↑
72	12,520	7	* 24 - 36	**	21	↓	108	6	
78	14,430	$7\frac{1}{2}$	* 24 - 36	**	21	99	114	$6\frac{1}{2}$	2 to 1
84	18,160	8	36		$90\frac{1}{2}$	$111\frac{1}{2}$	120	$6\frac{1}{2}$	$1\frac{1}{2}$ to 1

* Minimum ** Maximum

REINFORCED CONCRETE APRON ENDWALLS

PIPE DIA. (In.)	MIN. THICKNESS (Inches)		DIMENSIONS (Inches)							APPROX. SLOPE
	STEEL	ALUM.	A ±1"	B MAX.	H ±1"	L ±1½"	L_1 (1)	L_2 (1)	W ±2"	
12	0.064	0.060	6	6	6	21	12	$17\frac{1}{2}$	24	$2\frac{1}{2}$ to 1
15	↑	↑	7	8	↑	26	14	$21\frac{3}{8}$	30	↑
18	↓	↓	8	10	↓	31	15	$28\frac{1}{4}$	36	
21		0.060	9	12		36	18	$29\frac{5}{8}$	42	
24	0.064	0.075	10	13	6	41	18	$37\frac{1}{4}$	48	
30	0.079	0.075	12	16	8	51	18	$52\frac{1}{4}$	60	
36	0.079	0.105	14	19	9	60	24	$59\frac{3}{4}$	72	↓
42	0.109	0.105	16	22	11	69	24	$76\frac{5}{8}$	84	$2\frac{1}{2}$ to 1
48	↑	0.135	18	27	12	78	24	81	90	$2\frac{1}{4}$ to 1
54		0.135	↑	30	↑	84	30	$85\frac{1}{2}$	102	2 to 1
60		0.164		33		87	–	–	114	$1\frac{3}{4}$ to 1
66		↑		36		87	–	–	120	$1\frac{1}{2}$ to 1
72				39		87	–	–	126	$1\frac{1}{3}$ to 1
78				42		87	–	–	132	$1\frac{1}{4}$ to 1
84	0.109	0.164	18	45	12	87	–	–	138	$1\frac{1}{4}$ to 1

NOTE: All splices to be lap riveted or bolted.

METAL APRON ENDWALLS
FOR CIRCULAR PIPE

PIPE-ARCH DIMENSIONS (Inches)		MIN. THICK. (Inches)		DIMENSIONS (Inches)							APPROX. SLOPE
SPAN	RISE	STEEL	ALUM.	A ±1"	B MAX.	H ±1"	L ±1½"	L_1 (1)	L_2 (1)	W ±2"	
17	13	0.064	0.060	7	9	6	19	14	16	30	$2\frac{1}{2}$ to 1
21	15	↑	0.060	7	10	↑	23	14	$19\frac{3}{8}$	36	↑
24	18	↓	0.060	8	12	↓	28	18	$21\frac{3}{4}$	42	
28	20	0.064	0.075	9	14		32	18	$27\frac{1}{2}$	48	
35	24	0.079	0.075	10	16	6	39	18	$37\frac{5}{8}$	60	
42	29	0.079	0.105	12	18	8	46	24	$45\frac{3}{8}$	75	
49	33	0.109	0.105	13	21	9	53	↑	$54\frac{3}{4}$	85	↓
57	38	↑	0.135	18	26	12	63	↓	68	90	$2\frac{1}{2}$ to 1
64	43		0.135	↑	30	↑	70	24	$72\frac{3}{4}$	102	$2\frac{1}{2}$ to 1
71	47		0 164		33		77	30	$82\frac{1}{4}$	114	$2\frac{1}{4}$ to 1
77	52	↓	0.164	↓	36	↓	77	–	–	126	2 to 1
83	57	0.109	0.164	18	39	12	77	–	–	138	2 to 1

NOTE: All splices to be lap riveted or bolted.

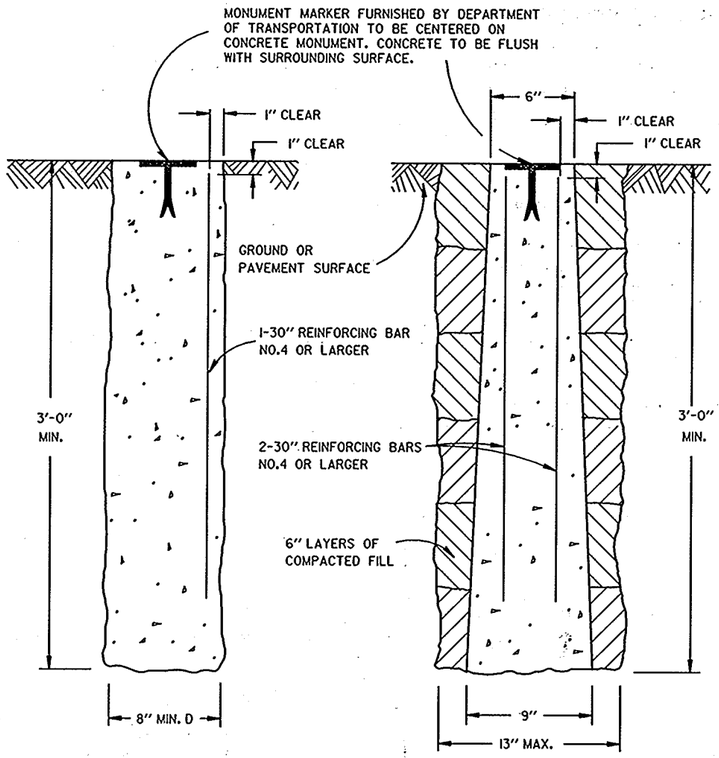
METAL APRON ENDWALLS
FOR PIPE ARCHES

APRON ENDWALLS FOR
CULVERT PIPE AND PIPE ARCHES

State of Wisconsin
Department of Transportation

APPROVED 2-15-82 DATE
CHIEF DESIGN ENGINEER
FHWA

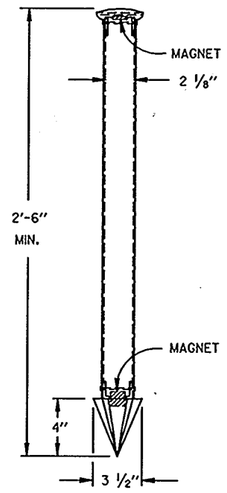
S.D.D. 8 F 1-9



CAST-IN-PLACE PRECAST

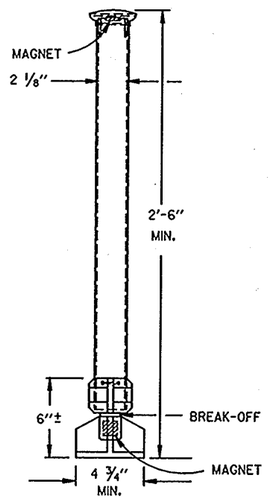
CONCRETE MONUMENTS

TYPE A



TYPE C

DRIVE-IN MONUMENT



TYPE D

BREAK-OFF MONUMENT

ALUMINUM MONUMENTS

(INCLUDES MARKER)

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

DETAILED DRAWINGS OF PROPOSED ALTERNATE DESIGNS FOR METAL MONUMENTS OR MONUMENT COVERS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL.

THE INSTALLED METAL MONUMENT MUST BE EASILY DETECTED WITH A DIP NEEDLE. INERT PERMANENT MAGNETS SHALL BE ATTACHED NEAR THE TOP AND BOTTOM OF THOSE MONUMENTS CONSTRUCTED OF A METAL ALLOY WHICH IS NOT ATTRACTIVE TO A DIP NEEDLE.

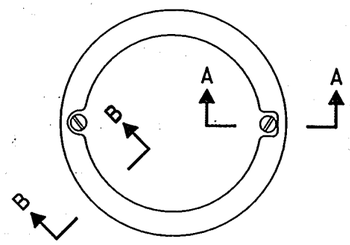
TYPE A AND TYPE D MONUMENTS ARE EQUAL ALTERNATES UNLESS OTHERWISE SPECIFIED.

THE CAST IRON MONUMENT COVER SHALL BE A "NON-ROCKING" TYPE. ADJUSTMENT OF THE COVER TO GRADE MAY BE ACCOMPLISHED BY THE USE OF MORTAR AND BRICK, OR BY EITHER PRECAST OR CAST-IN-PLACE REINFORCED CONCRETE GRADE RINGS.

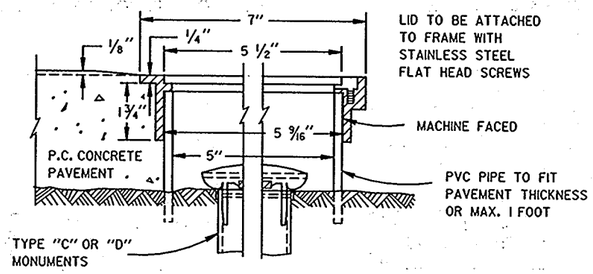
MONUMENTS SHALL BE LOCATED AND PLACED AT THE DIRECTION OF THE ENGINEER.

ALUMINUM MONUMENTS AND MONUMENT COVERS SHALL BE MADE FROM AN ALUMINUM AND MAGNESIUM ALLOY AS DETERMINED BY THE MANUFACTURER.

THE MONUMENT COVERS DETAILED ON THIS DRAWING ARE NOT EQUAL ALTERNATES. MONUMENT COVERS SHALL BE CAST IRON UNLESS ALUMINUM IS SPECIFIED ELSEWHERE IN THE CONTRACT.



TOP VIEW

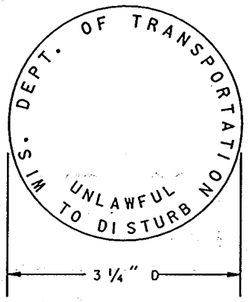


SECTION B-B SECTION A-A

ALUMINUM MONUMENT COVER

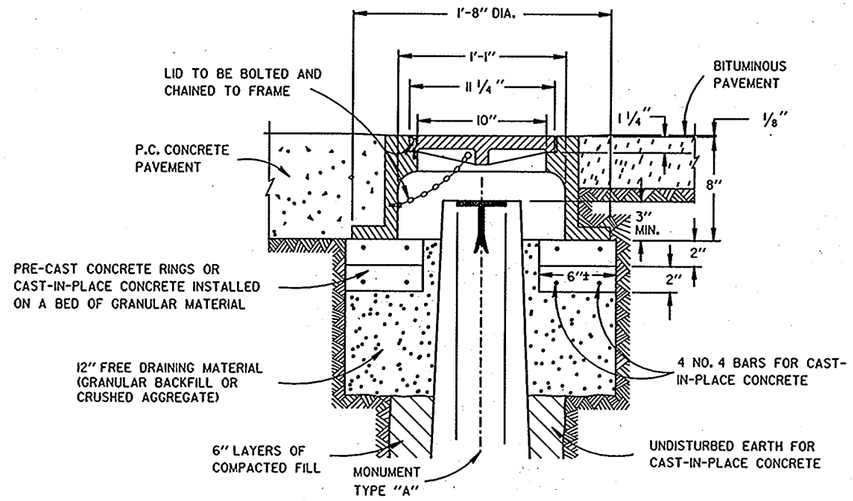
(APPROXIMATE WEIGHT 2 LBS)

(FOR CONCRETE PAVEMENT ONLY)



MONUMENT MARKER LOGO

FOR TYPES "A", "C" & "D"



CAST IRON MONUMENT COVER

(APPROXIMATE WEIGHT - 95 LBS.)

LANDMARK REFERENCE MONUMENTS AND COVERS

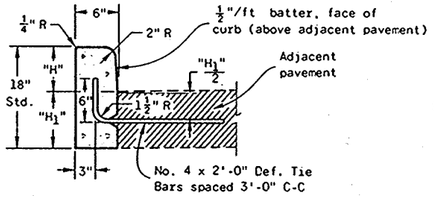
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
6-18-84
DATE
CHIEF DESIGN ENGINEER
FHWA

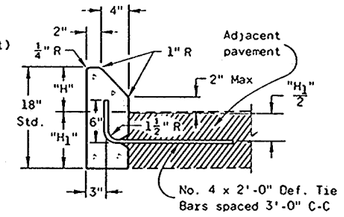
S.D.D. 16 A 1-4

S.D.D. 16 A 1-4

ORIGINATOR: DENNIS HOAGLAND ROOM 651 DESIGN
FILE NAME: SDD16A1
PLOT SCALE: 0.40
PLOT NAME: SDD 16A1



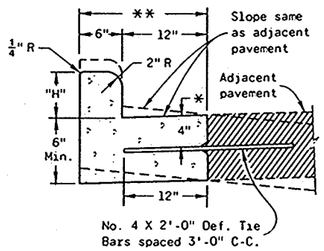
"H" = 9" Max. and 3½" Min. and shall be 6" unless otherwise shown on the plans.
"H1" = Same as adjacent pavement thickness for rigid pavement and 12" for non-rigid pavement (Tie Bars omitted).



"H" = 6" Max. and 4" Min. and shall be 6" unless otherwise shown on the plans.
"H1" = Same as adjacent pavement thickness for rigid pavement and 12" for non-rigid pavement (Tie Bars omitted).

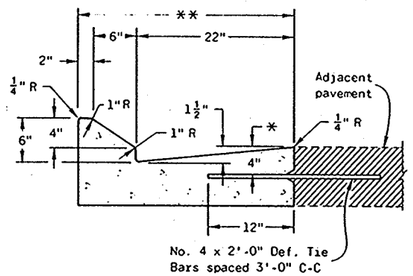
TYPE "A" (INCLUDING TIE BARS) | TYPE "D" (EXCLUDING TIE BARS) | TYPE "G" (INCLUDING TIE BARS) | TYPE "J" (EXCLUDING TIE BARS)

CONCRETE CURB



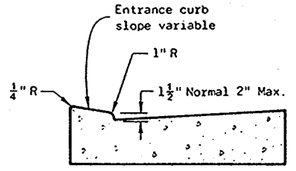
TYPE "A" (INCLUDING TIE BARS) | TYPE "D" (EXCLUDING TIE BARS)

CONCRETE CURB & GUTTER 18"

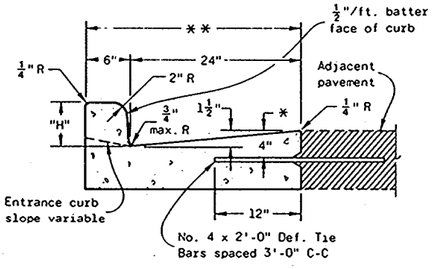


TYPE "G" (INCLUDING TIE BARS) | TYPE "J" (EXCLUDING TIE BARS)

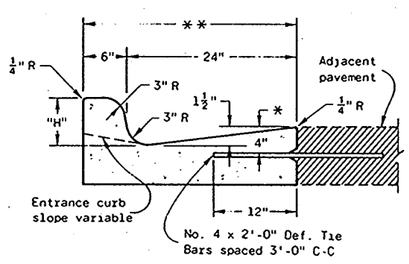
CONCRETE CURB & GUTTER 30"



ALTERNATE ENTRANCE CURB
(When directed by the Engineer)



TYPE "A" (INCLUDING TIE BARS) | TYPE "D" (EXCLUDING TIE BARS)

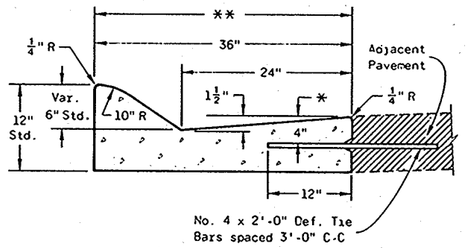


TYPE "K" (INCLUDING TIE BARS) | TYPE "L" (EXCLUDING TIE BARS)

CONCRETE CURB & GUTTER 30"

"H" = 9" Max. 3½" Min and shall be 6" unless otherwise shown on the plans.

CONCRETE CURB & GUTTER



TYPE "A" (INCLUDING TIE BARS) | TYPE "D" (EXCLUDING TIE BARS)

CONCRETE CURB & GUTTER 36"

GENERAL NOTES

Details of construction, materials and workmanship not shown on this drawing shall conform to the pertinent requirements of the Standard Specifications and the applicable Special Provisions.

Joints shall not be sealed in Concrete Curb or Concrete Curb & Gutter

Where Concrete Curb, Concrete Curb & Gutter or Concrete Pavement is poured adjacent to existing concrete, "Pavement Ties" shown on this drawing are required

Pavement Ties and Tie Bars shall be epoxy coated in conformance with Subsection 505.2.4 of the Standard Specifications

The bottom of the curb and gutter may be constructed parallel to subgrade or base course provided a minimum of 6 inches depth of concrete is maintained at the flow line.

The thickness of curb and gutter at the pavement edge shall be 7½" min.

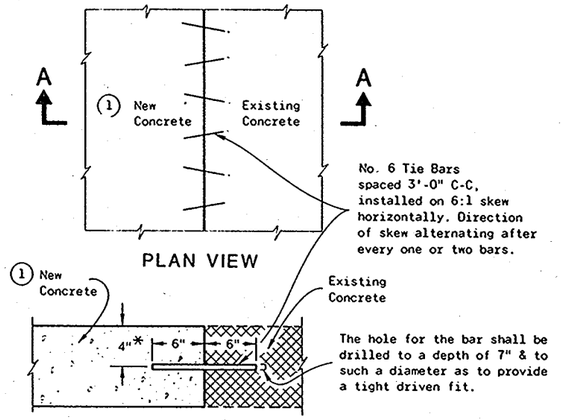
Integral Curb & Gutter when used shall be measured and paid for as Curb & Gutter and shall conform to the details for Concrete Curb & Gutter including the Transverse Gutter Slope. Tie Bars are not required with this alternate.

The limits of the base course, if used, are shown on the typical cross sections elsewhere in the plans. Any additional width of base course necessary to accomodate paving equipment will be at the contractors expense.

(1) = New Curb & Gutter, Surface Drains, Concrete Pavement or other New Concrete.

* = Or center of pavement, whichever is less.

** = Pay limits for Concrete Integral Curb & Gutter



SECTION A-A

PAVEMENT TIES

CONCRETE CURB, CONCRETE CURB & GUTTER AND PAVEMENT TIES

State of Wisconsin
Department of Transportation

APPROVED 9-24-84 DATE
CHIEF DESIGN ENGINEER
FHWA

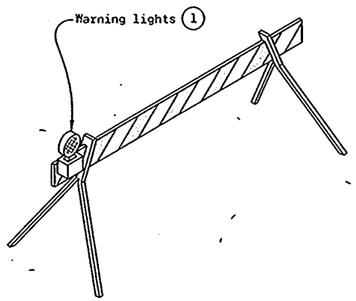
S.D.D. 8 D 1-8

S.D.D. 8 D 1-8

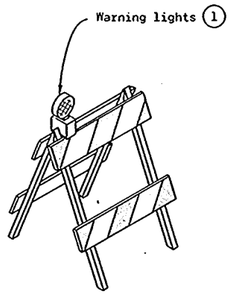
TABLE OF BARRICADE CHARACTERISTICS

BARRICADE TYPE	I	II	III
Height	3' Minimum		5' Minimum
*Rail Width	8" Minimum to 12" Maximum		
Rail Length	2' Minimum		4' Minimum
**Stripe Width	6" at 45° Angle		
Stripe Colors	Reflectorized Orange & White		

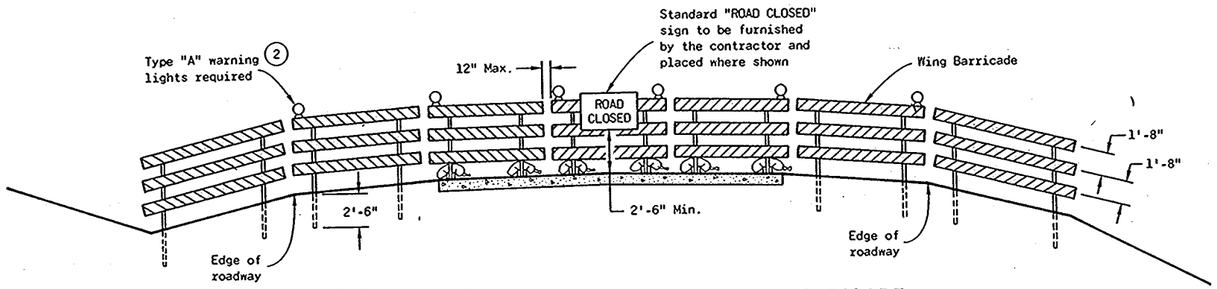
*Nominal dimensions when barricade is constructed of lumber.
**Shall be 4" for rail lengths less than 3'.



TYPICAL TYPE I BARRICADE



TYPICAL TYPE II BARRICADE



TYPICAL INSTALLATION SHOWING TYPE III BARRICADE

CONSTRUCTION BARRICADES

R11-2

48" x 30"

Black Lettering on Reflective White Background

Letter Series "D"
Letter height 8"

W20-3

48" x 48"

Black Lettering on Reflective Orange Background

Letter Series "D"
Letter height 7"

STANDARD SIGNS - TYPE II

GENERAL NOTES

The contractor shall furnish, erect and maintain barricades and signs. Details regarding location, spacing, dimensions, fabrication, material, sign lettering, lighting devices and color of barricades and signs shall conform to this drawing, the Manual On Uniform Traffic Control Devices, the Standard Specifications, Special Provisions and/or plans.

Type III Barricades and Signs shall be erected at the termini of projects and at other road or street locations where it is necessary to control or eliminate public access to the construction area.

Type I and II Barricades shall be used on projects when traffic is to be maintained through the construction area.

The actual field location of barricade installations and advance signs shall be as directed by the Engineer.

Each barricade shall have the name and telephone number of a person responsible for 24 hour emergency service printed in letters at least $\frac{3}{4}$ inch in height on the barricade rails. Prior to May 1, 1983, such information may be shown on either front or back faces of the barricade rails. After May 1, 1983, all printed information or identification markings shall be shown only on the back side of barricade rails.

Type I Barricades may include other unstriped horizontal panels necessary to provide stability.

On high speed expressways or in other situations where barricades may be susceptible to overturning in the wind, sandbags should be used for ballasting. Sandbags may be placed on lower parts of the frame or stays to provide the required ballast but shall not be placed on top of any striped rail.

(1) Unless otherwise provided elsewhere in the contract, warning lights are required on all barricades which will be located near traffic operations during periods of inclement weather or hours of darkness. Barricades used to shield isolated hazards shall be equipped with Type "A" (low intensity - flashing) lights unless Type "B" (high intensity)- flashing) lights are specified elsewhere in the contract documents. Barricades used for channelization or delineation of the travel path shall be equipped with Type "C" (steady burn) lights except for the initial barricade(s) in sequence, which shall be equipped with Type "A" or "B" lights as previously noted.

(2) Two warning lights shall be provided on the center barricade and at least one warning light shall be provided on each of the other barricades within the roadway limits. Spacing of the warning lights shall be uniform to the edge of roadway as shown.

CONSTRUCTION BARRICADES & STANDARD SIGNS

State of Wisconsin
Department of Transportation

APPROVED 9-14-81 DATE
FHWA

D. J. Ahrand
CHIEF DESIGN ENGINEER

S.D.D. 15 C 1-7

S.D.D. 15 C 1-7