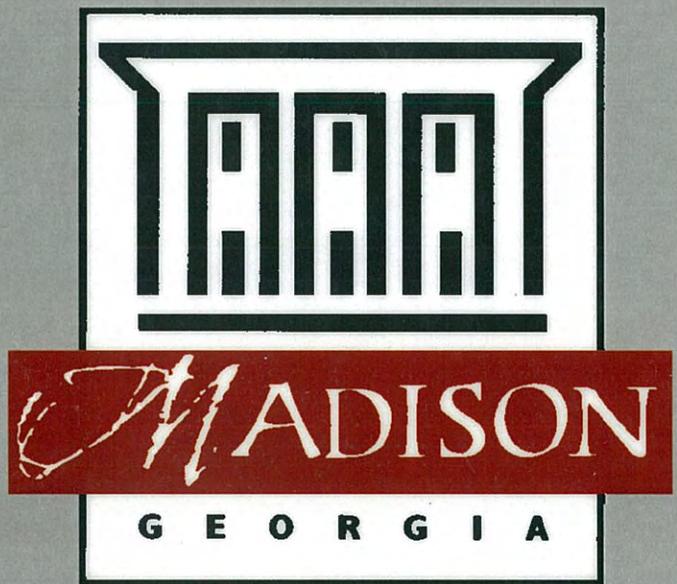


Construction and Design Standard Details



December 1998

Construction and Design Standard Details



December 1998

Updated June 2001

D – Drainage Pipes, Ditches and Structures

D01	Location Of Catch Basins
D02.01	Standard 1033G Catch Basin
D02.02	Precast 1033G Catch Basin
D02.03	Standard 1034D Catch Basin
D02.04	Precast 1034D Catch Basin
D02.05	Standard 1034F Catch Basin
D02.06	Precast 1034F Catch Basin
D03.01	Round Precast Concrete Catch Basin
D03.02	Round Precast Concrete Catch Basin
D03.03	Round Precast Concrete Catch Basin
D04	Curb Transition at Catch Basin
D05.01	Standard 1019A Drop Inlet
D05.02	Precast 1019A Drop Inlet
D06.01	Standard Pipe Culverts
D06.02	Standard Pipe Culverts
D06.03	Standard Pipe Culverts
D07.01	Precast Concrete Headwalls
D07.02	Precast Concrete Headwalls
D08	Cast Concrete Headwall
D09	Standard Flared End Sections
D10	Drainage Channels and Flumes
D11	Chain Link Fence

E – Erosion Control

E01	Construction Exit
E02	Silt Fence Installation
E03.01	Stone Check Dam
E03.02	Straw Bale Check Dam
E04	Storm Drain Outlet Protection
E05	Rip Rap
E06	Major Channel Stabilization
E07	Silt Gates
E08.01	Grassing Schedule – Temporary
E08.02	Grassing Schedule – Permanent



City of Madison

Detail Index

CONSTRUCTION AND DESIGN STANDARD DETAILS

DATE: DECEMBER 1998

L – Landscaping

L01	Groundcover Planting
L02	Shrub Planting
L03.01	Deciduous Tree Planting
L03.02	Deciduous Tree Planting
L04	Evergreen Tree Planting
L05	Multi-Trunk Tree Planting
L06	Tree Protection
L07	Dumpster Screen

R – Roadway and Street Grading, Construction and Design

R01.01	Typical Roadway Design
R01.02	Typical Roadway Design
R02	Curb and Gutter
R03	Length of Vertical Curve for Crest
R04	Length of Vertical Curve for Sag
R05	Landing Requirements for Residential Street Intersections
R06.01	Standard Residential Cul-de-sacs
R06.02	Standard Residential Cul-de-sacs
R07	Cul-de-sac Minimum Lengths
R08	Temporary Vehicular Turnaround
R09	Obstructing Visibility at Intersections
R10	Intersection Sight Distance
R11	"T" Intersection – Collector/Arterial
R12	Intersection – Collector/Arterial Street
R13	Industrial Driveway
R14	Commercial Driveway
R15	Residential Driveway
R16	Concrete Valley Gutter
R17	Typical Concrete Sidewalk
R18	Wheelchair Ramp
R19	Roadway Widening Sections
R20	Beam Type Guardrail
R21	Location of Street Utilities
R22	Standard Road Barricade
R23	Concrete Joints
R24	Street Sign Post
R25	Streetlights



City of Madison

Detail Index

CONSTRUCTION AND DESIGN STANDARD DETAILS

DATE: DECEMBER 1998

S – Sanitary Sewer Systems

S01	Standard Shallow Manhole
S02	Standard Manhole
S03	Manhole Inside Drop
S04	Manhole Outside Drop
S05	Manhole Inverts
S06	Manhole Frame and Cover
S07	Watertight Manhole Frame and Cover
S08	Sewer Pipe Bedding
S09	Pavement Replacement
S10	Manhole Frame Grade Adjustment
S11	Manhole Raising – In Pavement
S12	Manhole Raising – In Ground
S13	Cleanout

- **Sewer Specifications**

W – Water Systems

W01	Fire Hydrant Installation
W02	Gate Valve Installation
W03.01	Line Abandonment Valve
W03.02	Thrust Collar Details
W04	Water Service Connection
W05	Water Meter Location (Subdivision)
W06	Water Line Valving at Intersections
W07	Cul-de-sac Fire Hydrant Location
W08	Utility Location – Subdivisions
W09	Backflow Preventer Vault
W10	Thrust Blocking
W11	Water Main Bedding

- **Water Specifications**

- **Madison Lakes Plan**



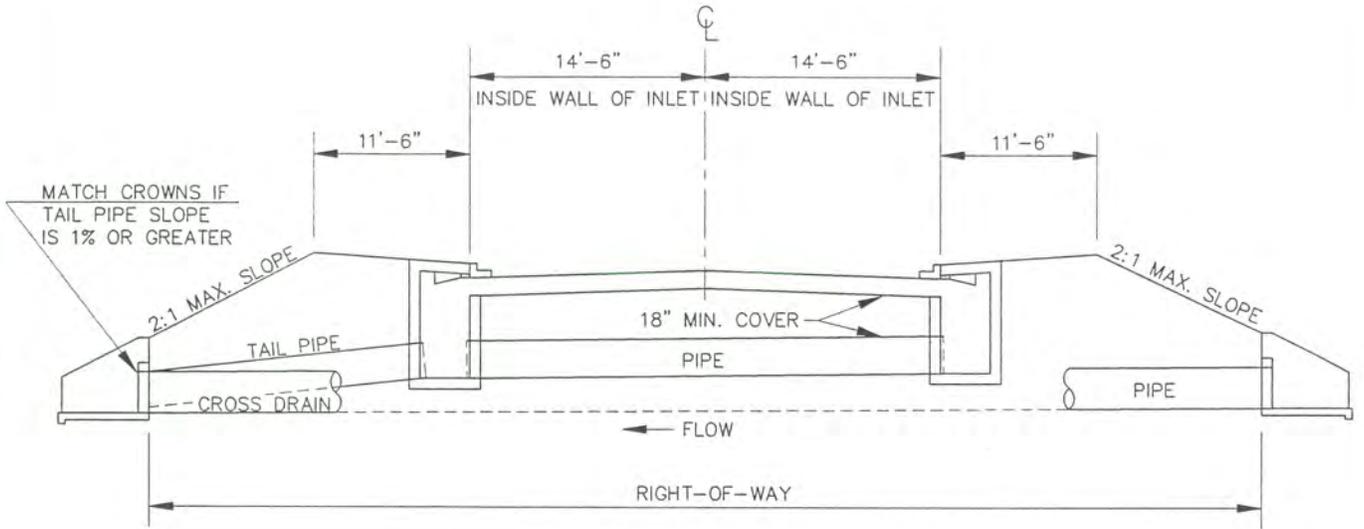
City of Madison

Detail Index

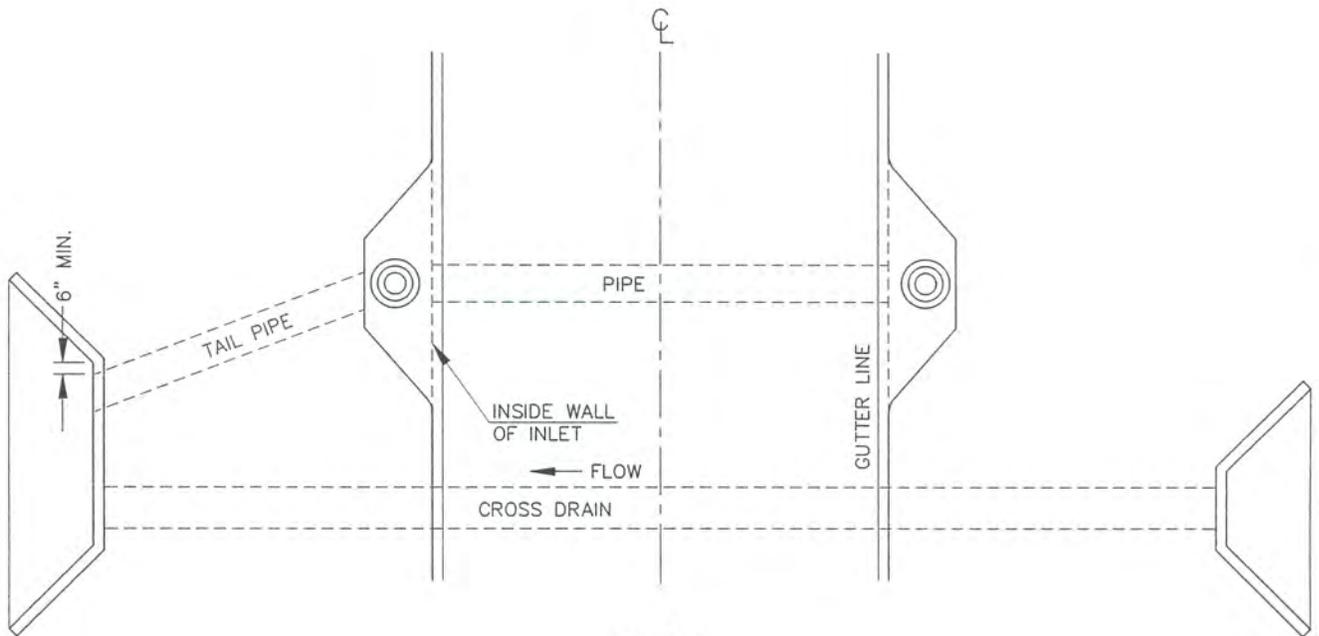
CONSTRUCTION AND DESIGN STANDARD DETAILS

DATE: DECEMBER 1998

Drainage Pipes, Ditches and Structures - D



SECTION



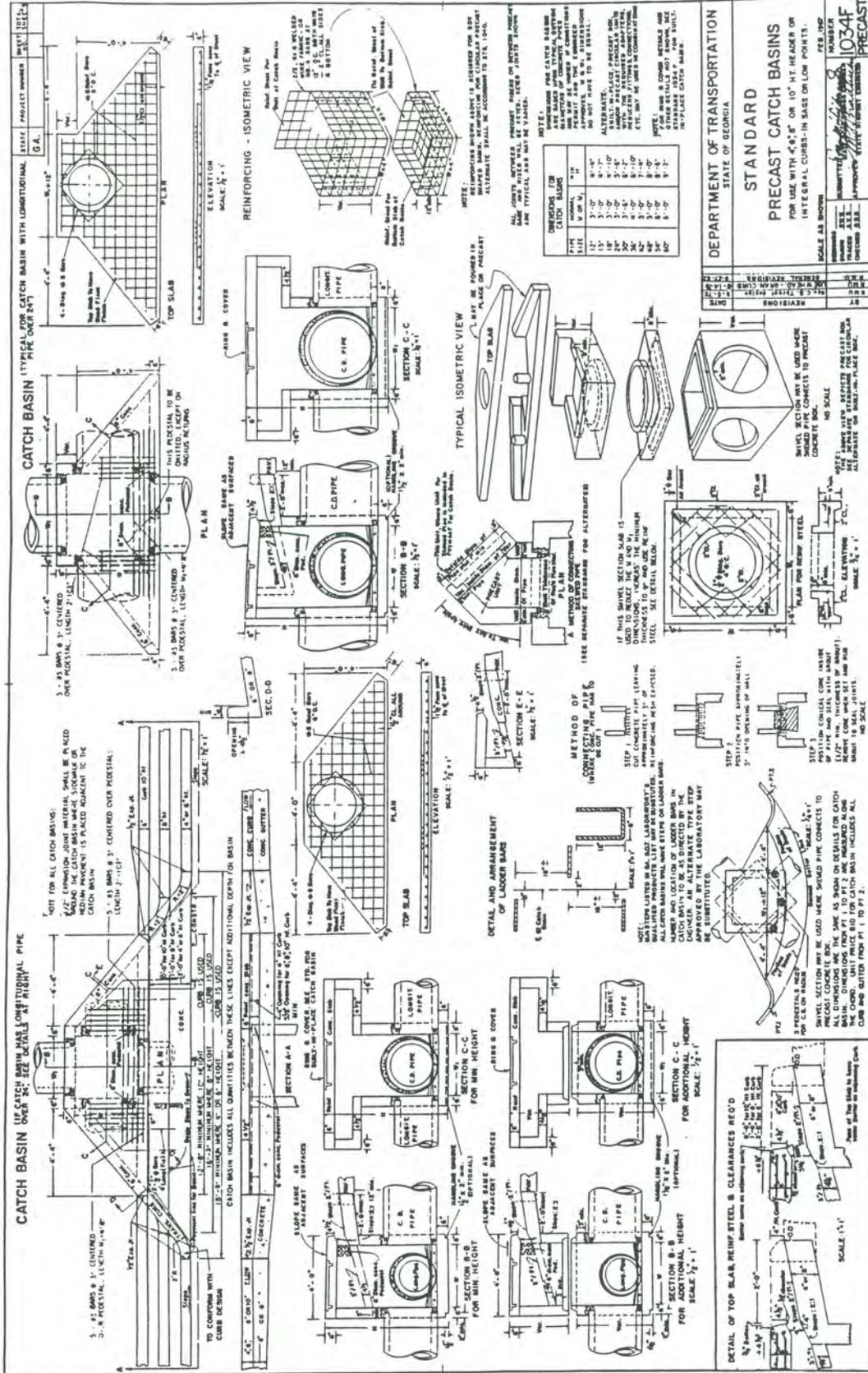
PLAN



City of Madison

Location of Catch Basins

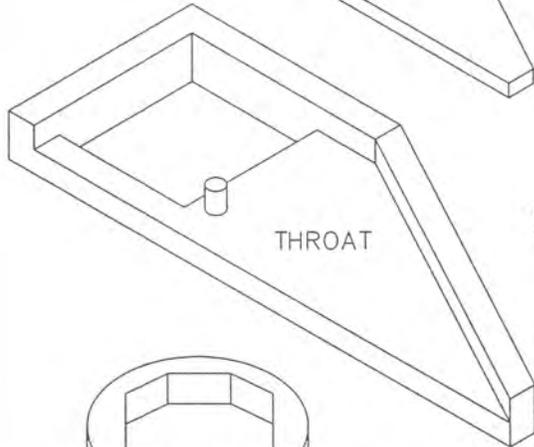
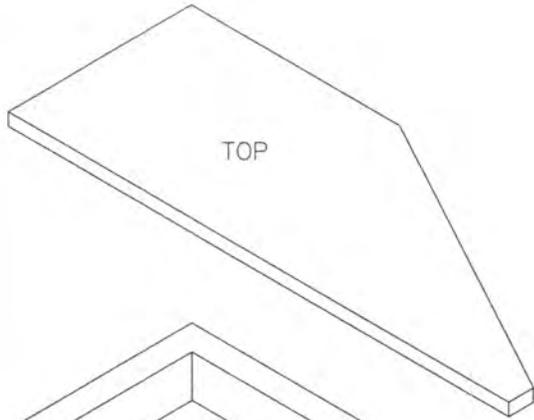
CONSTRUCTION AND DESIGN STANDARD DETAILS
SCALE: NONE DATE: DECEMBER 1998



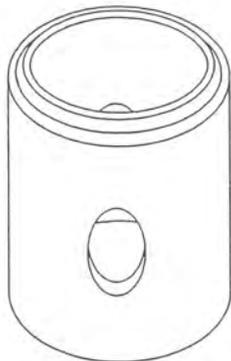
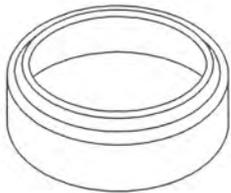
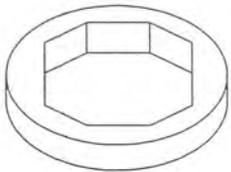
City of Madison

Precast 1034F Catch basins

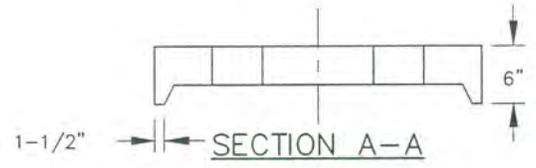
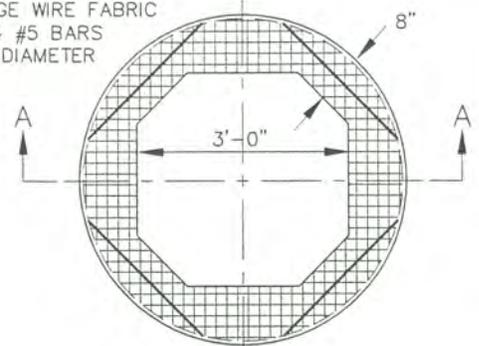
CONSTRUCTION AND DESIGN STANDARD DETAILS
SCALE: NONE DATE: DECEMBER 1998



GROUT ALL JOINTS

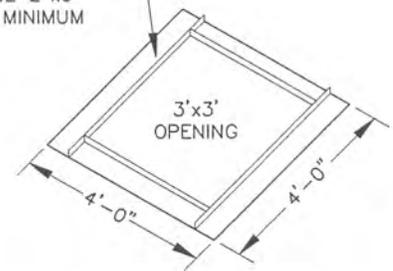


REINFORCING TO BE
2/2 6X6 WELDED
10 GAGE WIRE FABRIC
WITH 4 #5 BARS
4'-8" DIAMETER



ROUND TO SQUARE ADAPTER

LIGHT WEIGHT STEEL
12 GAUGE 2"x6"
FLANGE MINIMUM



OPTIONAL METAL ADAPTER



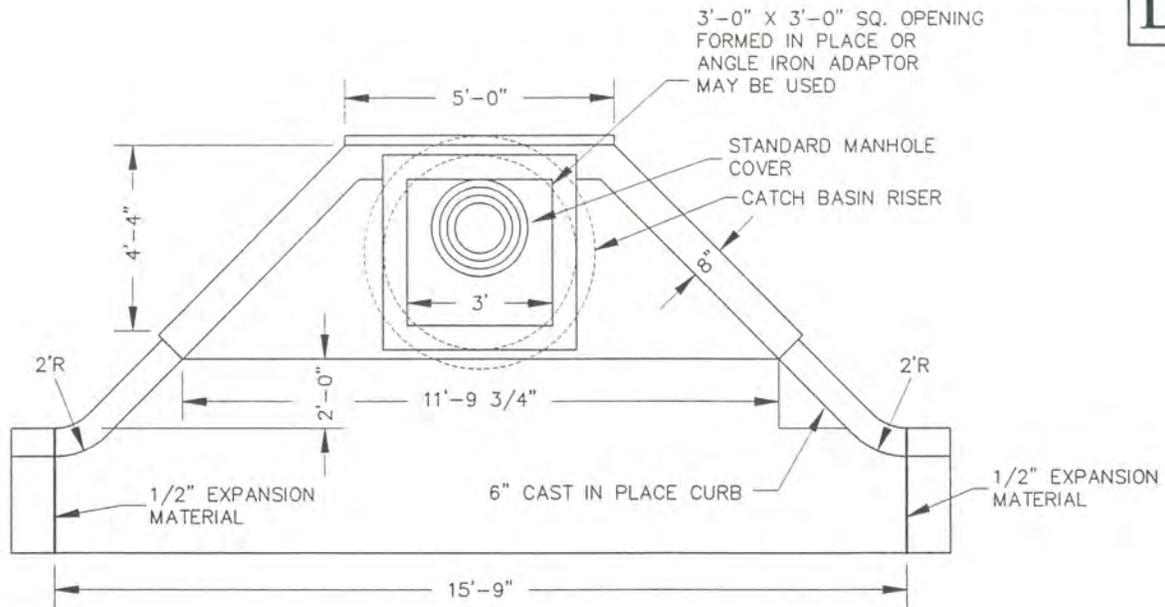
City of Madison

Round Precast Concrete Catch Basins

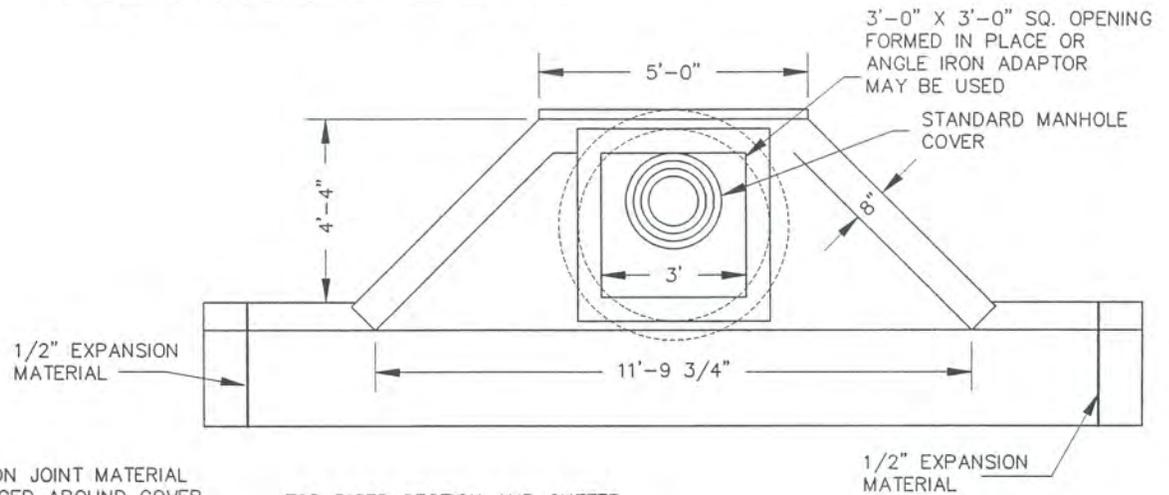
CONSTRUCTION AND DESIGN STANDARD DETAILS

SCALE: NONE

DATE: DECEMBER 1998



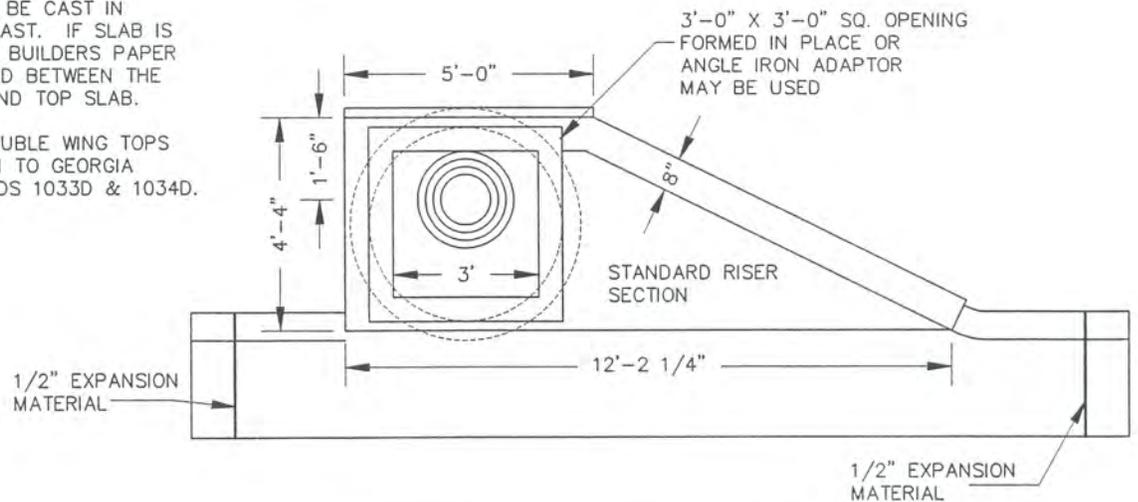
LOCAL CUL-DE-SSAC ONLY



TOP RISER SECTION AND GUTTER
CAST IN PLACE INTEGRAL WITH
CURB.

NOTES:

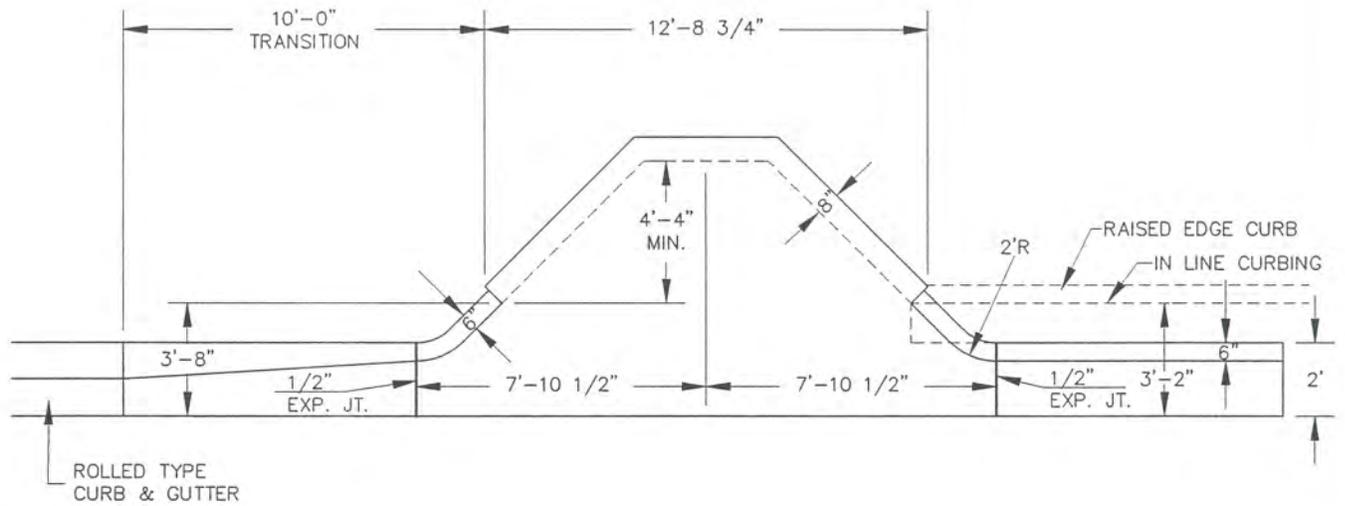
1. 1/2' EXPANSION JOINT MATERIAL SHALL BE PLACED AROUND COVER WHERE SIDEWALK IS PLACED ADJACENT TO CATCH BASIN.
2. TOP SLAB MAY BE CAST IN PLACE OR PRECAST. IF SLAB IS CAST IN PLACE, BUILDERS PAPER IS TO BE PLACED BETWEEN THE CATCH BASIN AND TOP SLAB.
3. SINGLE AND DOUBLE WING TOPS SHALL CONFORM TO GEORGIA D.O.T. STANDARDS 1033D & 1034D.



City of Madison

Round Precast Concrete Catch Basin

CONSTRUCTION AND DESIGN STANDARD DETAILS
SCALE: NONE DATE: DECEMBER 1998



City of Madison

Curb Transition at Catch Basin

CONSTRUCTION AND DESIGN STANDARD DETAILS
 SCALE: NONE DATE: DECEMBER 1998

TYPE 'A'
LONGITUDINAL SECTION
CROSS SECTION
PLAN

TYPE 'B' WITH WEIR
LONGITUDINAL SECTION
CROSS SECTION
PLAN

TYPE 'C'
LONGITUDINAL SECTION
CROSS SECTION
PLAN

TYPE 'D'
LONGITUDINAL SECTION
CROSS SECTION
PLAN

TYPE 'E' WITH HOOD
LONGITUDINAL SECTION
CROSS SECTION
PLAN

DETAILS OF CL GRATING & FRAME
PLAN

DETAIL OF HOOD (mountable)
DETAIL OF HOOD (non-mountable)

TABLE OF MINIMUM DIMENSIONS FOR DROP INLETS

D	TYPE 'C' OR 'D' (BRICK)			TYPE 'E' (BRICK)			TYPE 'D' OR 'E' (REINFORCED CONCRETE)		
	W ₁	W ₂	H	W ₁	W ₂	H	W ₁	W ₂	H
18"	2'-0"	2'-0"	3'-0"	2'-0"	2'-0"	3'-0"	2'-0"	2'-0"	3'-0"
24"	2'-0"	2'-0"	3'-0"	2'-0"	2'-0"	3'-0"	2'-0"	2'-0"	3'-0"
30"	2'-0"	2'-0"	3'-0"	2'-0"	2'-0"	3'-0"	2'-0"	2'-0"	3'-0"
36"	2'-0"	2'-0"	3'-0"	2'-0"	2'-0"	3'-0"	2'-0"	2'-0"	3'-0"
42"	2'-0"	2'-0"	3'-0"	2'-0"	2'-0"	3'-0"	2'-0"	2'-0"	3'-0"
48"	2'-0"	2'-0"	3'-0"	2'-0"	2'-0"	3'-0"	2'-0"	2'-0"	3'-0"
54"	2'-0"	2'-0"	3'-0"	2'-0"	2'-0"	3'-0"	2'-0"	2'-0"	3'-0"
60"	2'-0"	2'-0"	3'-0"	2'-0"	2'-0"	3'-0"	2'-0"	2'-0"	3'-0"

GENERAL NOTES:
 1. REINFORCEMENT SHOULD BE AS SHOWN UNLESS OTHERWISE SPECIFIED.
 2. CONCRETE SHOULD BE 3000 PSI STRENGTH WITH 4% MINIMUM AIR ENTRAINMENT.
 3. ALL DIMENSIONS ARE UNLESS OTHERWISE SPECIFIED.
 4. ALL TYPE HOOD INLETS SHALL BE CONSTRUCTED AS SHOWN, SO THAT THE HOOD IS PERPENDICULAR TO THE FLOW OF TRAFFIC EXCEPT ON LIMITED ACCESS FACILITIES OR WHERE OTHERWISE SPECIFIED.
 5. ALL TYPE HOOD INLETS SHALL BE CONSTRUCTED AS SHOWN, BOTTOM BARS MAY BE 3" DIA. NON-REINFORCED CONCRETE, 2" BACK OF 4" DIA. REINFORCED CONCRETE. SEE DETAIL FOR REINFORCEMENT.
 6. ALL TYPE HOOD INLETS SHALL BE CONSTRUCTED AS SHOWN, BOTTOM BARS MAY BE 3" DIA. NON-REINFORCED CONCRETE, 2" BACK OF 4" DIA. REINFORCED CONCRETE. SEE DETAIL FOR REINFORCEMENT.

SPECIAL NOTE:
 STANDARD 1019A INLETS ARE FOR USE AT LOW POINTS & WHERE HYDRAULIC LOW CAPACITY GRATES ARE SUFFICIENT. WHERE HIGHER CAPACITY GRATES ARE NEEDED ON A CONTINUOUS GRADE, STANDARD 1019B IS RECOMMENDED.

CONSTRUCTION ALTERNATES:
 TYPE 'C' OR 'D'
 TYPE 'E' OR 'F'

DEPARTMENT OF TRANSPORTATION
 STATE OF GEORGIA
STANDARD
DROP INLETS
 (BUILT-IN-PLACE)

NO SCALE
 DATE: APRIL, 1981
 NUMBER: 1019A



City of Madison

Standard 1019A Drop Inlet

CONSTRUCTION AND DESIGN STANDARD DETAILS
 SCALE: NONE
 DATE: DECEMBER 1998

ROUND PIPE - 1-2/3" x 1/2" CORRUGATION							
D (IN.)	AREA (SQ. FT.)	MAXIMUM HEIGHT OF COVER (FEET)					MIN. HEIGHT OF COVER (FT.)
		SHEET THICKNESS IN INCHES (GAGE)					
		0.064 (16)	0.079 (14)	0.109 (12)	0.138 (10)	0.168 (8)	
12	0.79	100+	100+	NA	NA	NA	1.5
15	1.23	100+	100+	NA	NA	NA	1.5
18	1.77	100+	100+	100+	NA	NA	1.5
21	2.40	100+	100+	100+	NA	NA	1.5
24	3.14	100+	100+	100+	NA	NA	1.5
30	4.91	85	100+	100+	NA	NA	1.5
36	7.10	71+	88	100+	100+	NA	1.5
42	9.60	NS	76	100+	100+	NA	1.5
48	12.60	NS	66	93	100+	100+*	1.5
54	16.00	NS	NS	82	100+	100+*	1.5
60	19.60	NS	NS	74	95	100+*	1.5
66	23.80	NS	NS	NS	87	100+*	1.5
72	28.30	NS	NS	NS	79	97*	1.5
78	33.20	NS	NS	NS	NS	90*	1.5
84	38.50	NS	NS	NS	NS	83*	1.5

* AVAILABILITY SHOULD BE QUALIFIED BEFORE SPECIFYING

NA - NOT AVAILABLE

NS - NOT APPROVED (FOR HIGHWAY H-20 LOADINGS)



City of Madison

Standard Pipe Culverts

CONSTRUCTION AND DESIGN STANDARD DETAILS
SCALE: NONE DATE: DECEMBER 1998

ROUND PIPE – 3" x 1" CORRUGATION							
D (IN.)	AREA (SQ. FT.)	MAXIMUM HEIGHT OF COVER (FEET)					MIN. HEIGHT OF COVER (FT.)
		SHEET THICKNESS IN INCHES (GAGE)					
		0.064 (16)	0.079 (14)	0.109 (12)	0.138 (10)	0.168 (8)	
36	7.10	81	100+	100+	NA	NA	1.5
42	9.60	70	87	100+	NA	NA	1.5
48	12.60	61	76	100+	100+	NA	1.5
54	16.00	54	68	95	100+	NA	1.5
60	19.60	48	61	85	100+	NA	1.5
66	23.80	44	55	78	100+	100+*	1.5
72	28.30	NS	51	71	91	100+*	1.5
78	33.20	NS	47	66	84	100+*	1.5
84	38.50	NS	43	61	78	100+*	1.5
90	44.20	NS	40	57	73	90*	2.0
96	50.30	NS	NS	53	68	84*	2.0
102	56.70	NS	NS	50	64	79*	3.0
108	63.60	NS	NS	47	61	75*	3.0
114	70.90	NS	NS	NS	58	71*	3.0
120	78.5	NS	NS	NS	55	67*	4.0
132	95.00	NS	NS	NS	50	61*	4.0

ROUND PIPE – 5" x 1" CORRUGATION							
D (IN.)	AREA (SQ. FT.)	MAXIMUM HEIGHT OF COVER (FEET)					MIN. HEIGHT OF COVER (FT.)
		SHEET THICKNESS IN INCHES (GAGE)					
		0.064 (16)	0.079 (14)	0.109 (12)	0.138 (10)	0.168 (8)	
36	7.10	72	90	100+	NA	NA	1.5
42	9.60	62	77	100+	NA	NA	1.5
48	12.60	54	76	95	100+	NA	1.5
54	16.00	48	68	84	100+	NA	1.5
60	19.60	43	60	76	98	NA	1.5
66	23.80	39	54	69	89	100+*	1.5
72	28.30	NS	49	63	81	100+*	1.5
78	33.20	NS	45	58	75	92*	1.5
84	38.50	NS	41	54	70	85*	1.5
90	44.20	NS	38	50	65	80*	2.0
96	50.30	NS	36	47	61	75*	2.0
102	56.70	NS	NS	44	57	70*	3.0
108	63.60	NS	NS	42	54	66*	3.0
114	70.90	NS	NS	NS	51	63*	3.0
120	78.50	NS	NS	NS	49	60*	4.0
132	95.00	NS	NS	NS	44	54*	4.0

* AVAILABILITY SHOULD BE QUALIFIED BEFORE SPECIFYING

NA – NOT AVAILABLE

NS – NOT APPROVED (FOR HIGHWAY H-20 LOADINGS)



City of Madison

Standard Pipe Culverts

CONSTRUCTION AND DESIGN STANDARD DETAILS
SCALE: NONE DATE: DECEMBER 1998

PIPE ARCH - 2-2/3" x 1/2" CORRUGATION

SPAN (IN.)	RISE (IN.)	EQUIV. ROUND PIPE (IN.)	AREA (SQ. FT.)	MAXIMUM SHEET THICKNESS REQUIRED (IN.) (GA.)	MAXIMUM HEIGHT OF COVER (FEET)		MIN. HEIGHT OF COVER (FT.)
					MAXIMUM CORNER PRESSURE (LBS/SQ. FT.)		
					4000	6000	
17	13	15	1.1	0.064 (16)	12	14	1.5
21	15	18	1.6	0.064 (16)	10	14	1.5
24	18	21	2.2	0.064 (16)	7	13	1.5
28	20	24	2.9	0.064 (16)	5	11	1.5
35	24	30	4.5	0.064 (16)	NS	7	1.5
42	29	36	6.5	0.079 (14)	NS	7	1.5
49	33	42	8.9	0.079 (14)	NS	6	1.5
57	38	48	11.6	0.109 (12)	NS	8	1.5
64	43	54	14.7	0.109 (12)	NS	9	1.5
71	47	60	18.1	0.138 (10)	NS	10	1.5
77	52	66	21.9	0.168 (8)*	5	10	1.5
83	57	72	26.0	0.168 (8)*	5	10	1.5

PIPE ARCH - 3" x 1" AND 5" x 1" CORRUGATION

SPAN (IN.)	RISE (IN.)	EQUIV. ROUND PIPE (IN.)	AREA (SQ. FT.)	MAXIMUM SHEET THICKNESS REQUIRED (IN.) (GA.)	MAXIMUM HEIGHT OF COVER (FEET)		MIN. HEIGHT OF COVER (FT.)
					MAXIMUM CORNER PRESSURE (LBS/SQ. FT.)		
					4000	6000	
40	31	36	7.0	0.079 (14)	8	12	1.5
46	36	42	9.4	0.079 (14)	8	13	1.5
53	41	48	12.3	0.079 (14)	8	13	1.5
60	46	54	15.6	0.079 (14)	8	13	1.5
66	51	60	19.3	0.079 (14)	9	13	1.5
73	55	66	23.2	0.079 (14)	11	16	1.5
81	59	72	27.4	0.079 (14)	11	17	1.5
87	63	78	32.1	0.109 (12)	10	16	2.0
95	67	84	37.0	0.109 (12)	11	17	2.0
103	71	90	42.4	0.109 (12)	10	15	3.0
112	75	96	48.0	0.109 (12)	10	16	3.0
117	79	102	54.2	0.109 (12)	10	15	3.0
128	83	108	60.5	0.138 (10)	9	14	3.0
137	87	114	67.4	0.138 (10)	8	13	4.0
142	91	120	74.5	0.168 (8)*	7	12	4.0

* AVAILABILITY SHOULD BE QUALIFIED BEFORE SPECIFYING

NA - NOT AVAILABLE

NS - NOT APPROVED (FOR HIGHWAY H-20 LOADINGS)

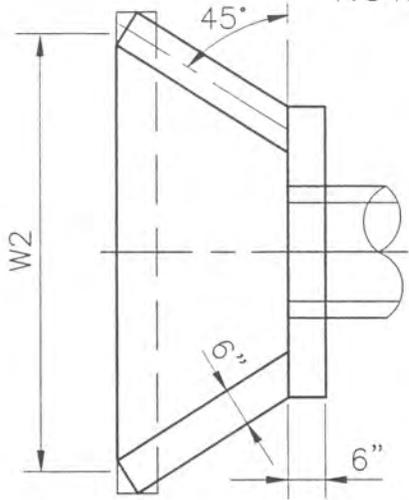


City of Madison

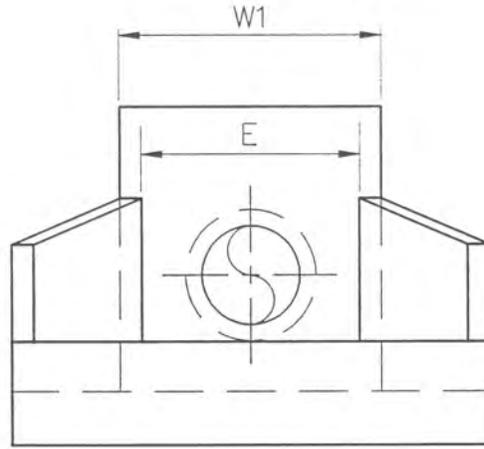
Standard Pipe Culverts

CONSTRUCTION AND DESIGN STANDARD DETAILS
SCALE: NONE DATE: DECEMBER 1998

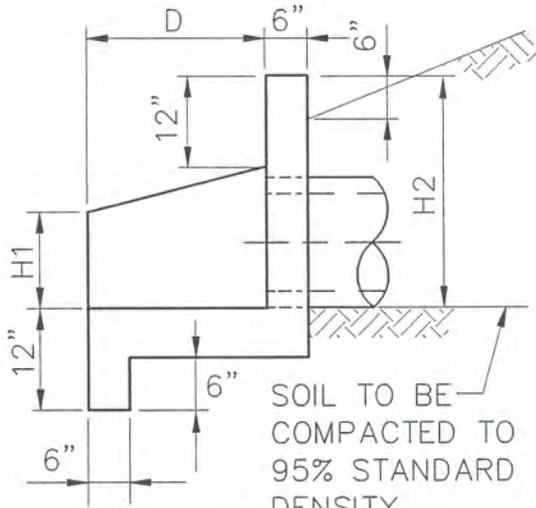
NOTE: SEE D07.02 FOR DIMENSIONS.



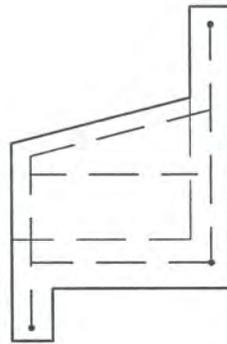
PLAN



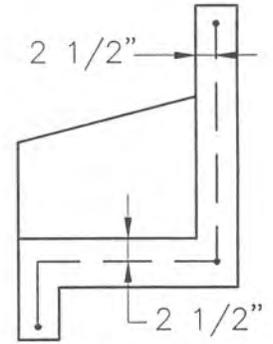
FRONT ELEVATION



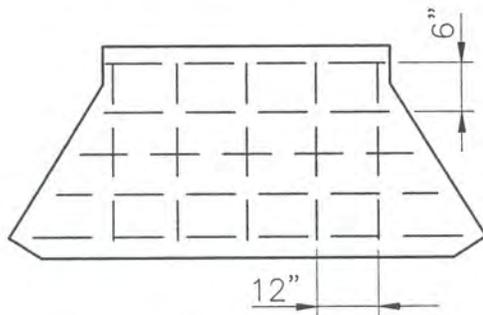
SIDE



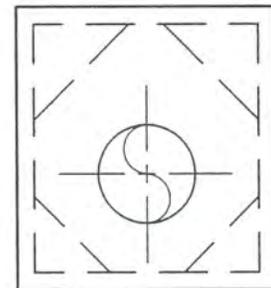
WING SECTION



BASE &
WALL SECTION



BASE SECTION



WALL SECTION



City of Madison

Precast Concrete Headwalls

CONSTRUCTION AND DESIGN STANDARD DETAILS
SCALE: NONE DATE: DECEMBER 1998

HEADWALL DIMENSIONS (METAL PIPE)

USE NEXT LARGEST SIZE FOR CONCRETE PIPE

PIPE INSIDE DIA.	W1	W2	H1	H2	D	E	WT.	SQ. FT. BASE AREA
12", 15", 18"	3'-2"	4'-10"	1'-3"	3'-2"	1'-3"	1'-9"	1550	7.34
21", 24"	3'-8"	6'-1"	1'-9"	3'-8"	1'-6"	2'-3"	2100	9.90
30"	4'-2"	7'-2"	2'-0"	4'-2"	1'-10"	2'-9"	2850	13.50
36"	4'-8"	8'-4"	2'-4"	4'-8"	2'-2"	3'-3"	3700	17.65
42", 48"	5'-8"	10'-10"	3'-3"	5'-8"	2'-11"	4'-3"	5600	28.60
54", 60"	6'-8"	11'-11"	3'-8"	6'-8"	3'-4"	5'-3"	7500	35.60

NOTES:

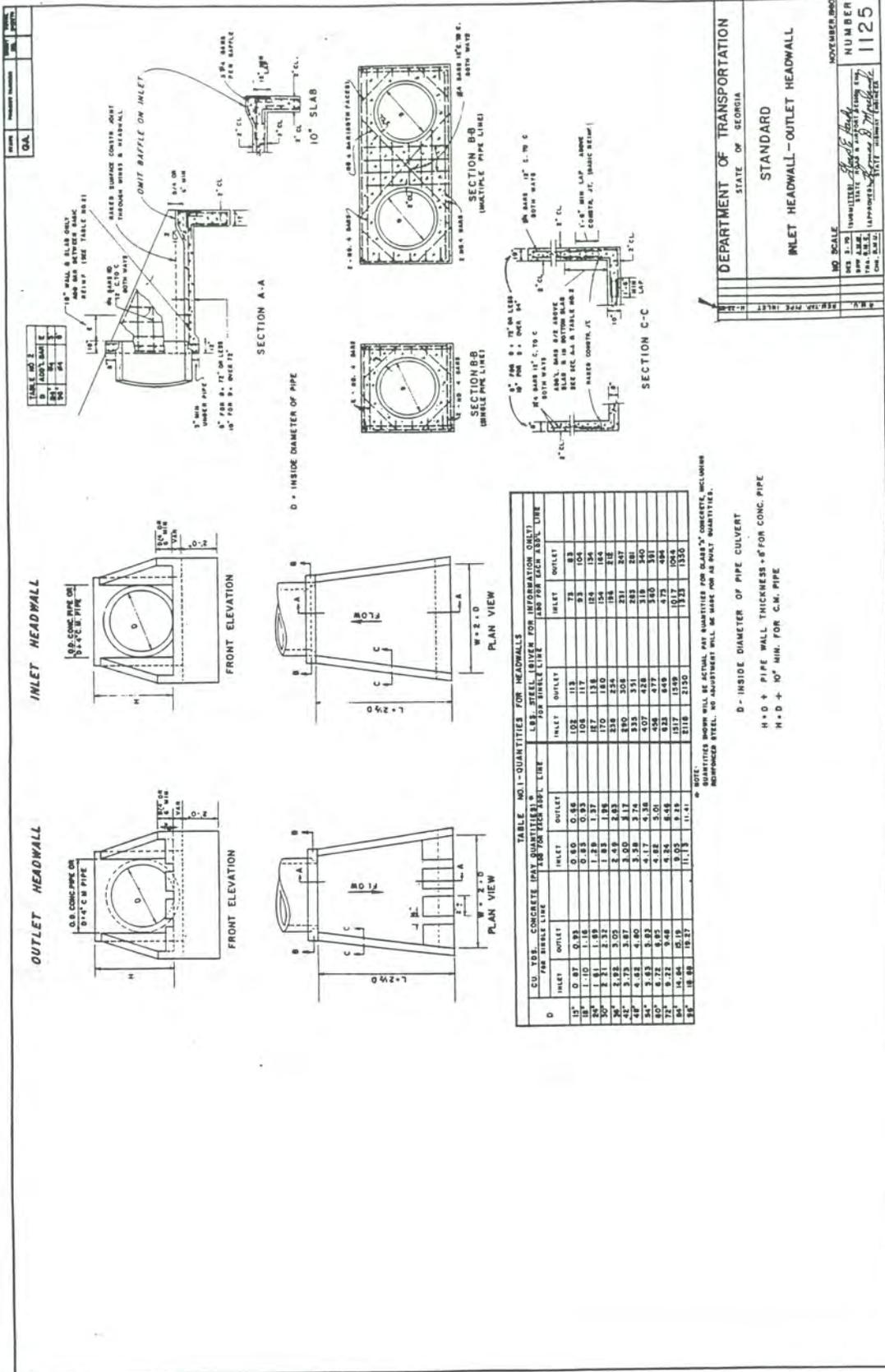
1. ALL CONCRETE SHALL BE CLASS A
2. REINFORCEMENT STEEL SHALL BE 1/2" DIA. OF INTERMEDIATE GRADE.
3. CHAMFER ALL EXPOSED EDGES 3/4".



City of Madison

Precast Concrete Headwalls

CONSTRUCTION AND DESIGN STANDARD DETAILS
SCALE: NONE DATE: DECEMBER 1998



METAL FLARED END SECTION

WALL ONLY WITH CON. METAL PIPE

PIPE SIZE	THICKENESS	A	B	H	L	W
12"	.084"	A-0.40	B-0.30	H-0.20	L-1.87D	W-2.00
14"	.084"	A-0.40	B-0.30	H-0.20	L-1.87D	W-2.00
16"	.084"	A-0.40	B-0.30	H-0.20	L-1.87D	W-2.00
18"	.084"	A-0.40	B-0.30	H-0.20	L-1.87D	W-2.00
20"	.084"	A-0.40	B-0.30	H-0.20	L-1.87D	W-2.00
24"	.084"	A-0.40	B-0.30	H-0.20	L-1.87D	W-2.00
30"	.084"	A-0.40	B-0.30	H-0.20	L-1.87D	W-2.00
36"	.084"	A-0.40	B-0.30	H-0.20	L-1.87D	W-2.00
42"	.084"	A-0.40	B-0.30	H-0.20	L-1.87D	W-2.00

NOTE: GALVANIZED STEEL FLARED END SECTIONS ARE TO BE USED UNLESS OTHERWISE SPECIFIED. ALUMINUM FLARED END SECTIONS ARE TO BE USED ONLY WITH COMMERCIALIZED ALUMINUM PIPE UNLESS OTHERWISE APPROVED BY DOT OFFICE OF MATERIALS AND TESTS.

NOTE: WHERE METAL FLARED END SECTIONS ARE USED WITH MULTIPLE PIPE LINES, THE STANDARD FACTORY CONNECTION SHALL BE USED. SEE RELEASED 1-11-75 TYPICAL TO PARALLEL TOP LAP OF END SECTION WRISTING. SEE ALSO STD 1000B.

CONCRETE FLARED END SECTION

CONCRETE FLARED END SECTION

INSTALLATION (OVER 50'): WALLS SHALL BE CONSTRUCTED WITH 1/2" HOLE WITH REINFORCING BARS TO BE PLACED IN THE CONCRETE SECTION TO PROVIDE ADEQUATE BEARING AREA. REINFORCING BARS SHALL BE PLACED TO PROVIDE 3 LAYERS OF REINFORCING BARS. REINFORCING BARS SHALL BE PLACED TO PROVIDE 3 LAYERS OF REINFORCING BARS. REINFORCING BARS SHALL BE PLACED TO PROVIDE 3 LAYERS OF REINFORCING BARS.

NOTE: DO NOT CUT CONCRETE PIPE. SEE WALL VENTRY SECTION ONLY. STRIP SLOPE TO CONFORM WITH PIPE SLOPE AND END SECTION.

NOTE 2: CONTRACTOR SHALL PROVIDE REINFORCING BARS AS SHOWN IN SECTION X-X AND SECTION Y-Y. REINFORCING BARS SHALL BE PLACED IN THE CONCRETE SECTION TO PROVIDE ADEQUATE BEARING AREA. REINFORCING BARS SHALL BE PLACED TO PROVIDE 3 LAYERS OF REINFORCING BARS. REINFORCING BARS SHALL BE PLACED TO PROVIDE 3 LAYERS OF REINFORCING BARS.

DEPARTMENT OF TRANSPORTATION

STATE OF GEORGIA

STANDARD

FLARED END SECTIONS FOR PIPES

NO. SCALE: NONE
REV. DATE: MARCH, 1981
APPROVED BY: *[Signature]*
DRAWN BY: *[Signature]*
CHECKED BY: *[Signature]*
DATE: 11/20

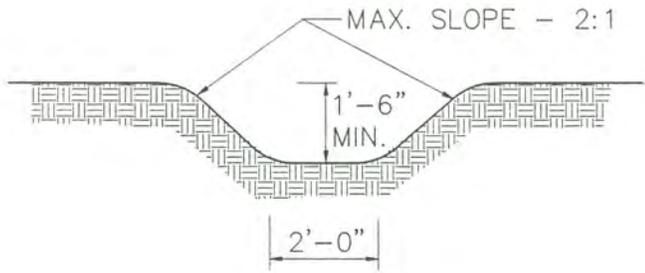


City of Madison

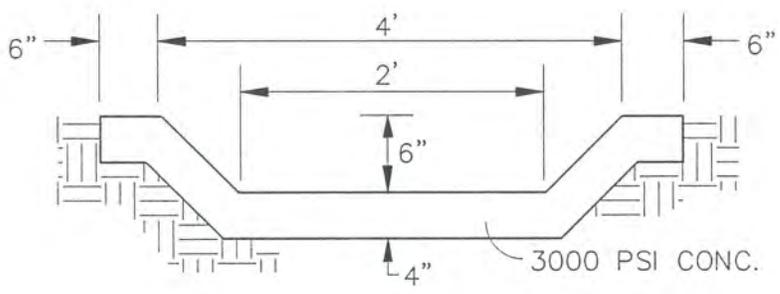
Standard Flared End Sections

CONSTRUCTION AND DESIGN STANDARD DETAILS

SCALE: NONE DATE: DECEMBER 1998

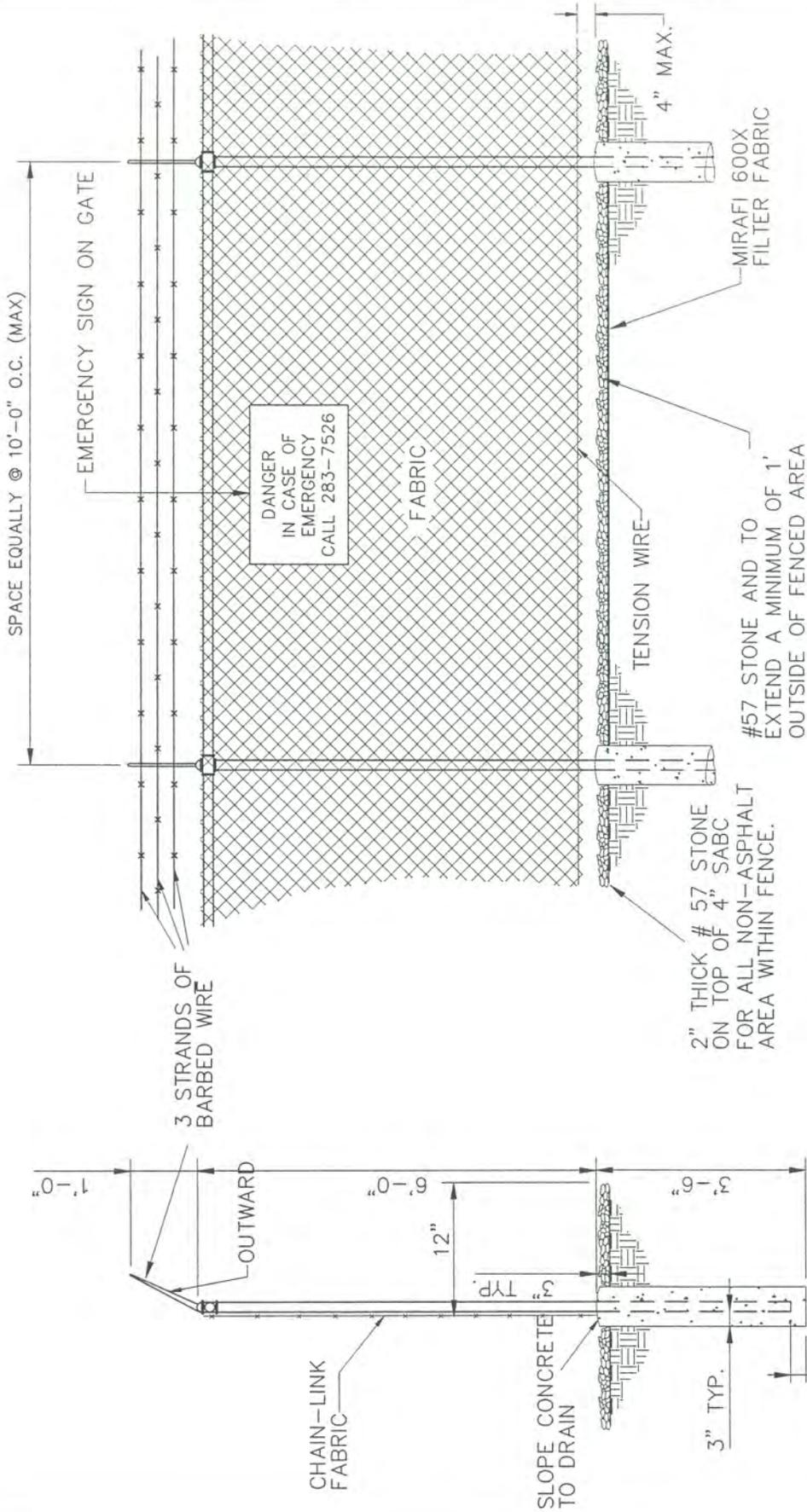


GRASSED SWALE



CONCRETE FLUME DETAIL



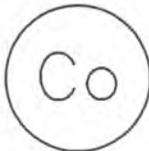
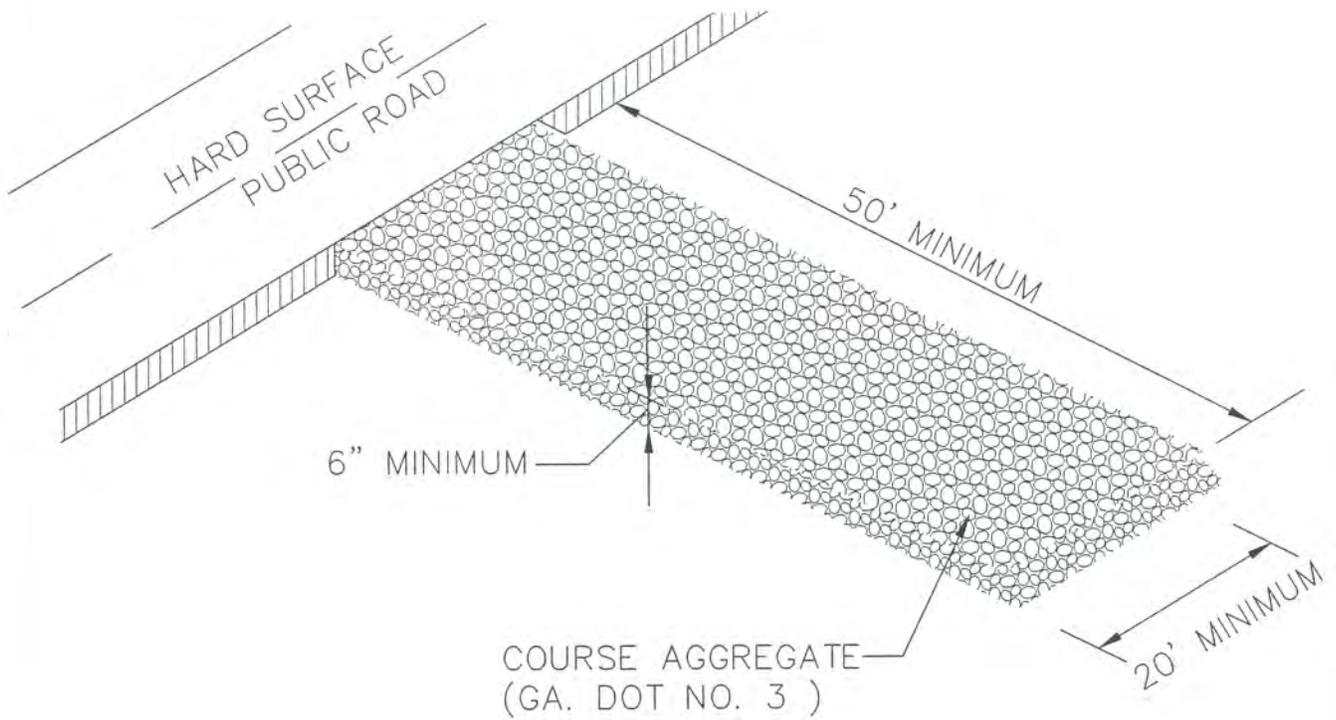


City of Madison

Chain Link Fence

CONSTRUCTION AND DESIGN STANDARD DETAILS
SCALE: NONE
DATE: DECEMBER 1998

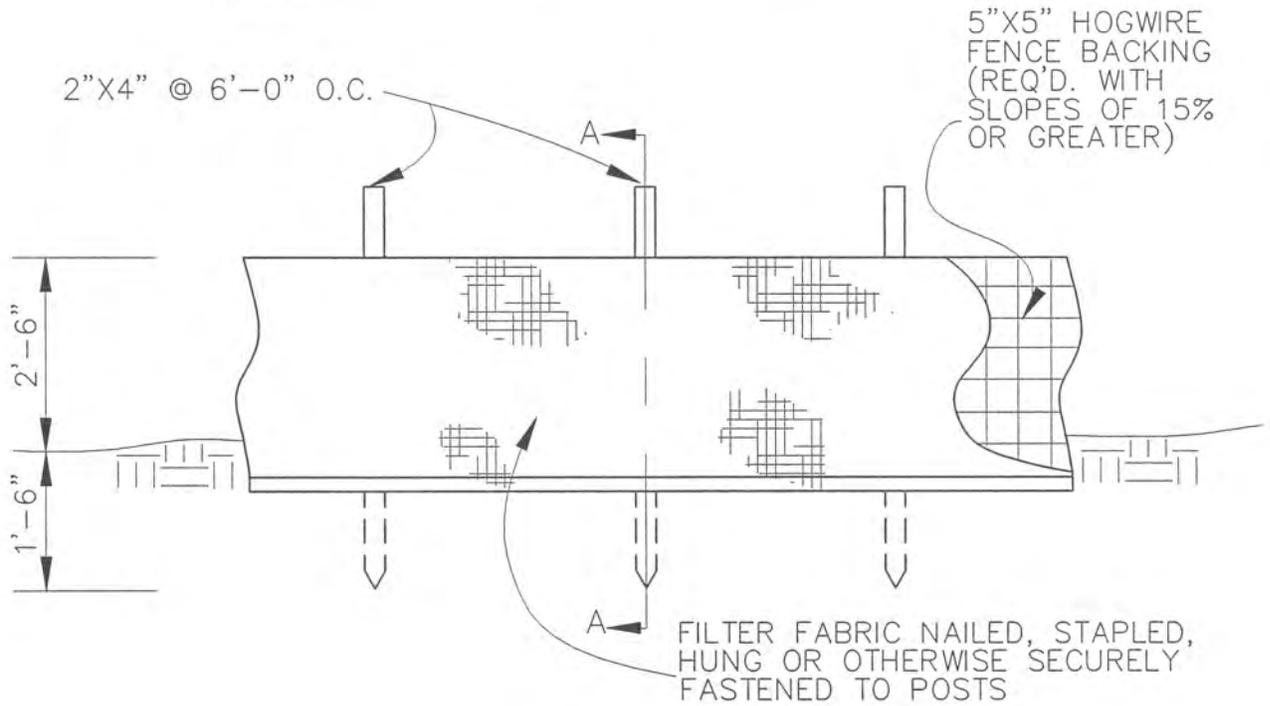
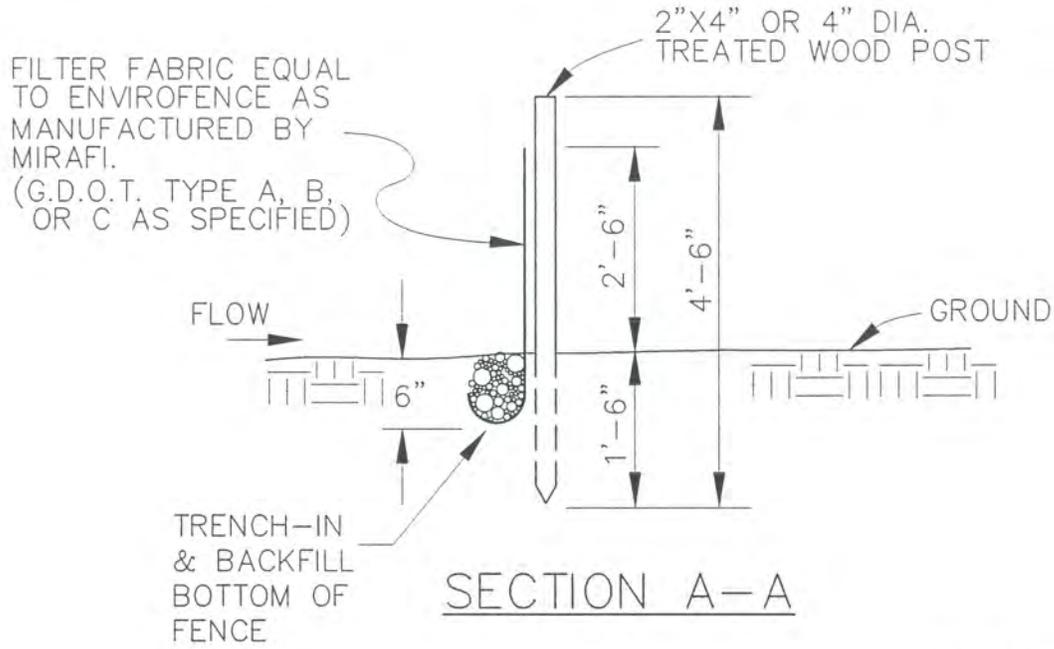
Erosion Control - E



City of Madison

Construction Exit

CONSTRUCTION AND DESIGN STANDARD DETAILS
SCALE: NONE DATE: DECEMBER 1998



ELEVATION

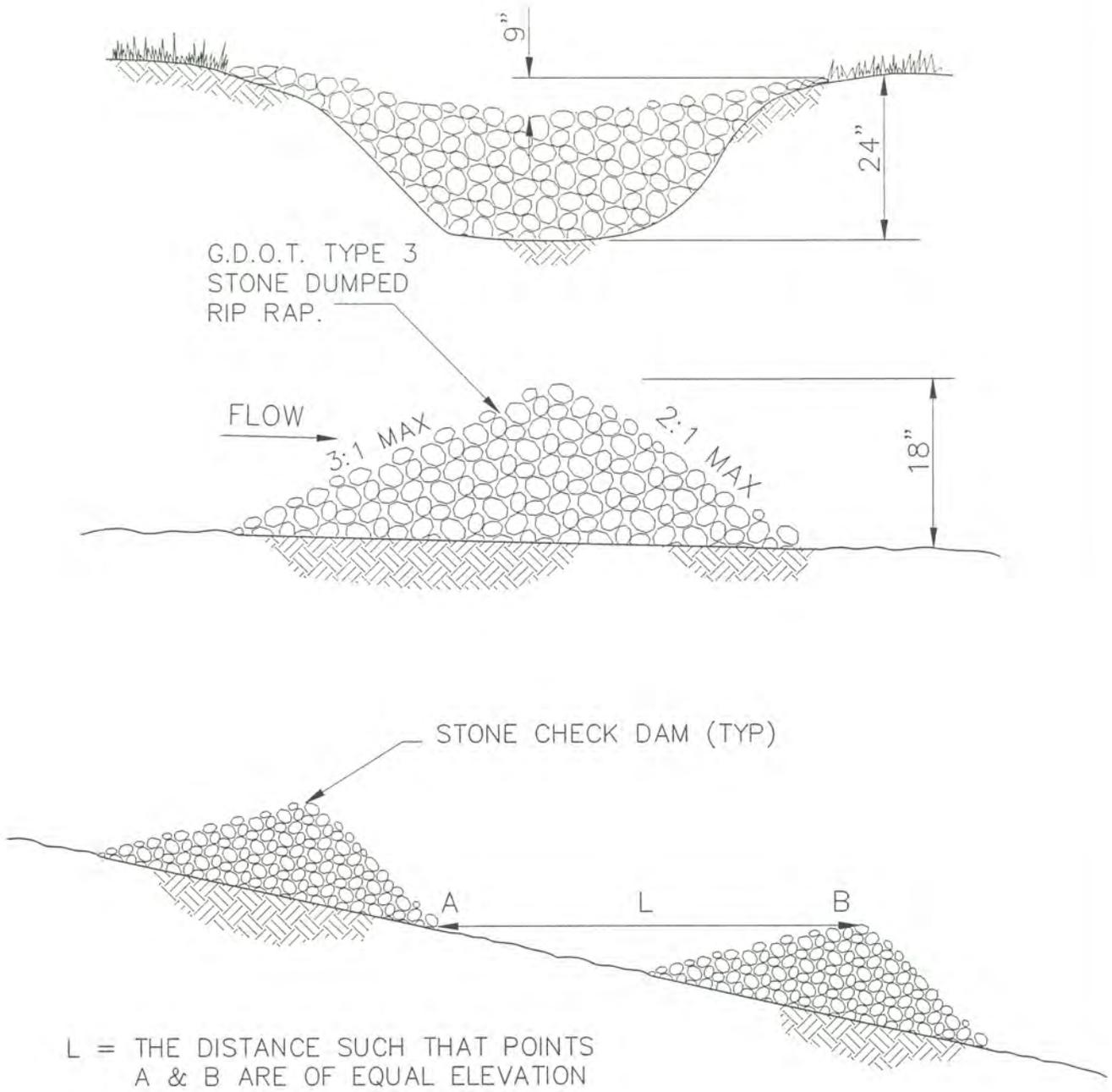
Sd1



City of Madison

Silt Fence Installation

CONSTRUCTION AND DESIGN STANDARD DETAILS
SCALE: NONE DATE: DECEMBER 1998



L = THE DISTANCE SUCH THAT POINTS A & B ARE OF EQUAL ELEVATION

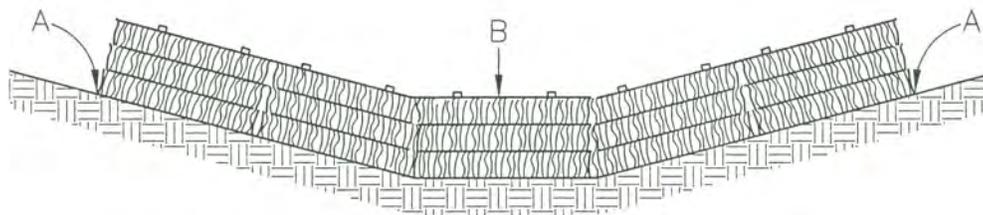
Cd



City of Madison

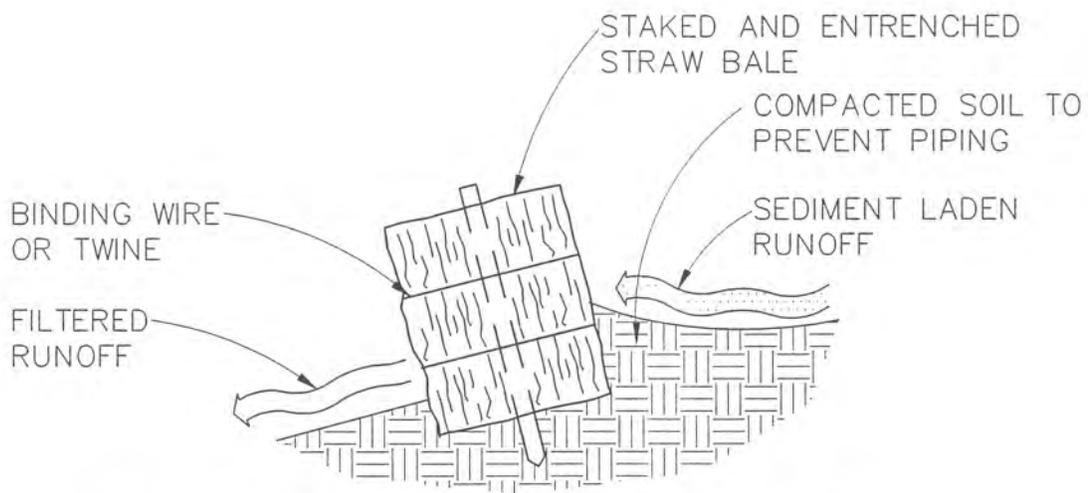
Stone Check Dam

CONSTRUCTION AND DESIGN STANDARD DETAILS
 SCALE: NONE DATE: DECEMBER 1998



POINTS "A" SHOULD BE HIGHER THAN POINT "B".

PROPER PLACEMENT OF STRAW BALE BARRIER IN DRAINAGE WAY



NOTE: EMBED HAY BALES A MINIMUM OF 4 INCHES.

CROSS-SECTION OF A PROPERLY INSTALLED STRAW BALE

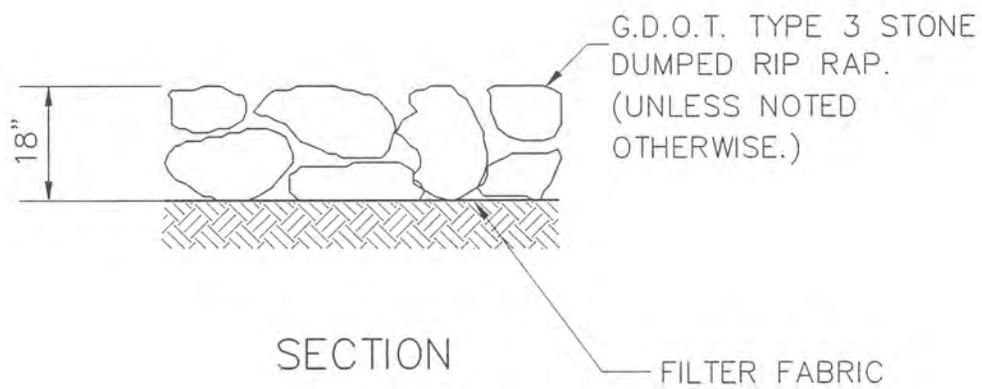
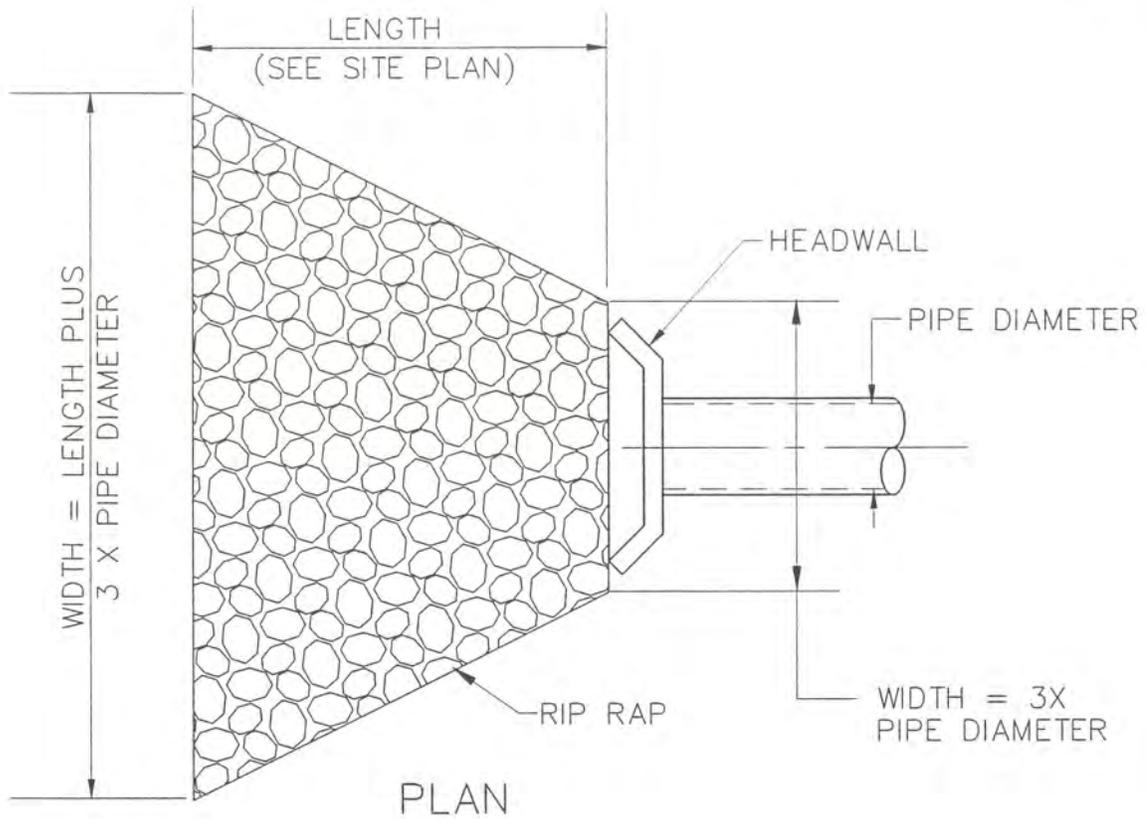
Cd



City of Madison

Straw Bale Check Dam

CONSTRUCTION AND DESIGN STANDARD DETAILS
SCALE: NONE DATE: DECEMBER 1998



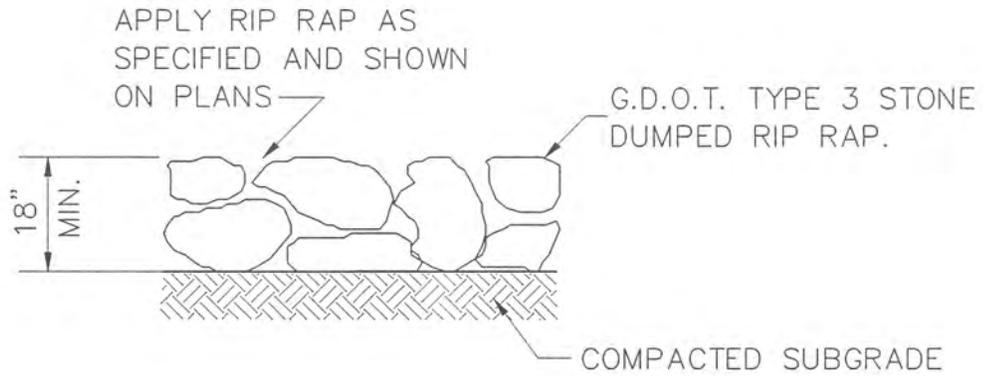
St



City of Madison

Storm Drain Outlet Protection

CONSTRUCTION AND DESIGN STANDARD DETAILS
SCALE: NONE DATE: DECEMBER 1998



NOTE: DITCH SLOPES MUST BE LINED WITH RIP RAP MINIMUM OF 75% OF DITCH HEIGHT.

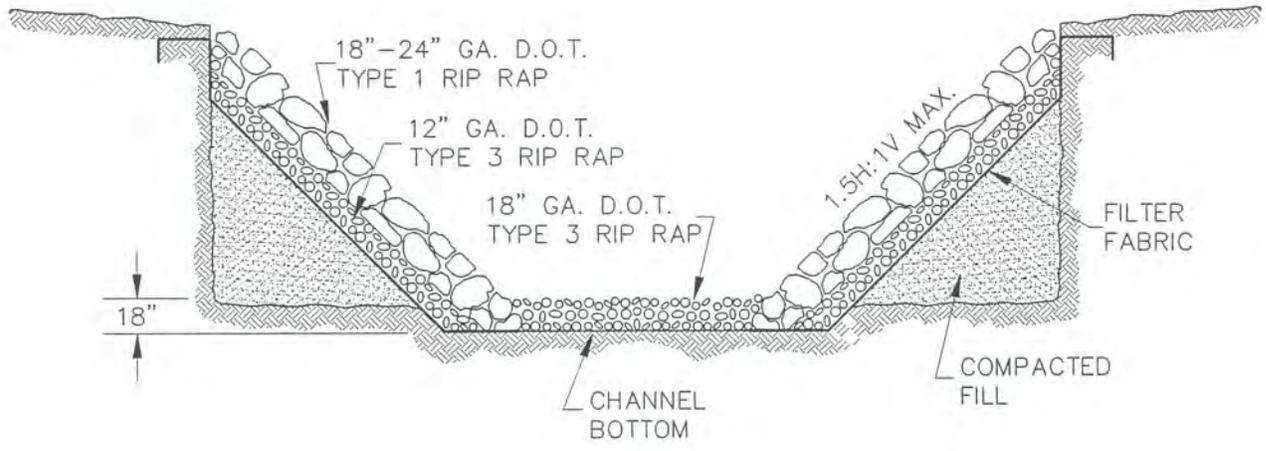
SECTION



City of Madison

Rip Rap

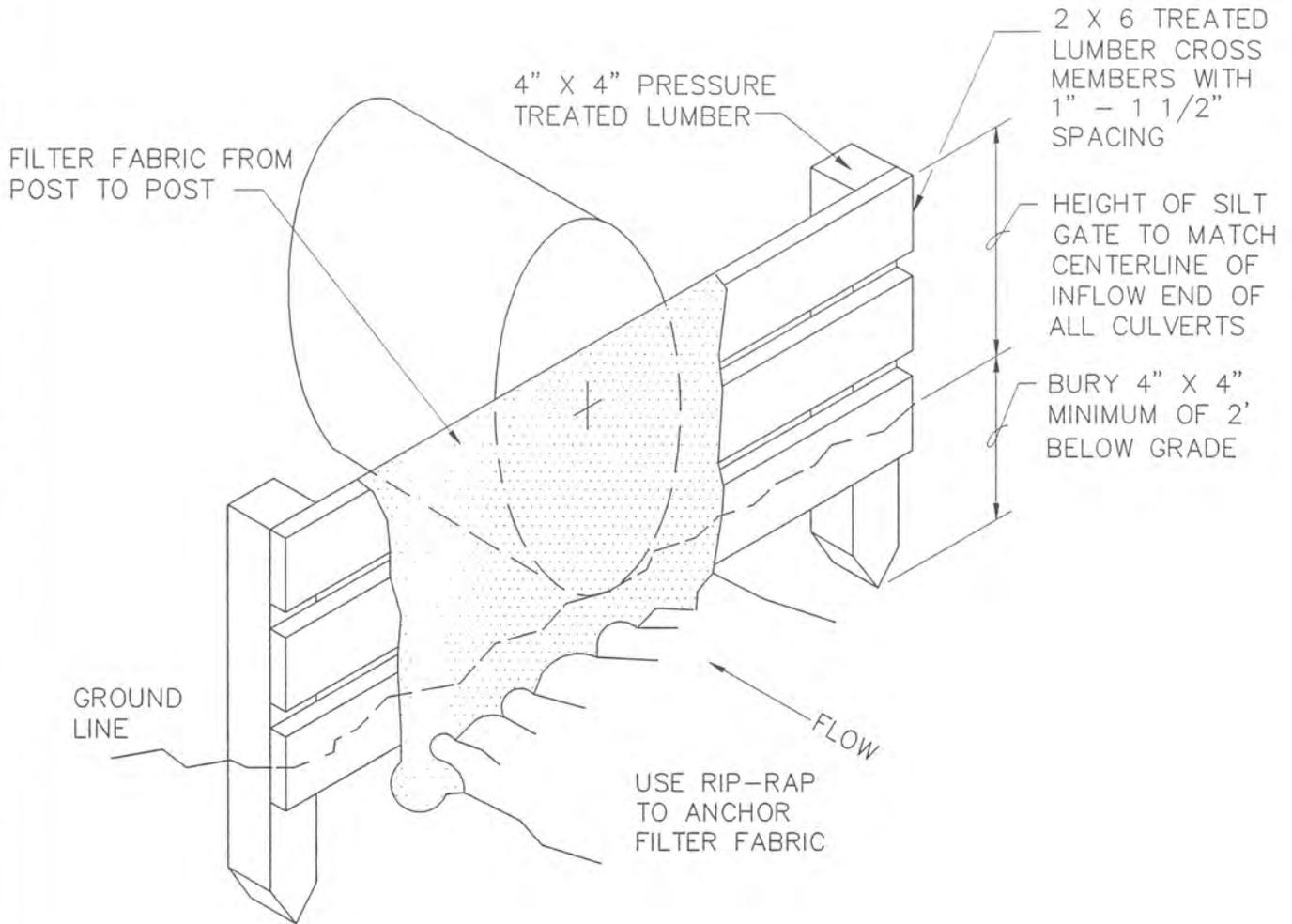
CONSTRUCTION AND DESIGN STANDARD DETAILS
 SCALE: NONE DATE: DECEMBER 1998



City of Madison

Major Channel Stabilization

CONSTRUCTION AND DESIGN STANDARD DETAILS
SCALE: NONE DATE: DECEMBER 1998



NOTE: SILT GATES SHALL BE PLACED AT THE INLET END OF STORM PIPES OR DOWN DRAINS.



City of Madison

Silt Gates

CONSTRUCTION AND DESIGN STANDARD DETAILS
 SCALE: NONE DATE: DECEMBER 1998

PLANTING RATES IN LBS. PER ACRE

CONDITION 1 – FLAT TO MODERATE SLOPES 0% – 3%

GRASS	SPRING	SUMMER	FALL	WINTER
RYEGRASS			40	40
RYE			170	170
WHEAT			180	180
WEeping LOVEGRASS	4	4		
BROWNTOP MILLET	40	40		
FESCUE	50		50	

CONDITION 2 – MODERATE TO STEEP SLOPE 3% – 25%

GRASS	SPRING	SUMMER	FALL	WINTER
RYEGRASS			40	40
RYE			170	170
WHEAT			180	180
LESPEDEZA ANNUAL	40			
WEeping LOVEGRASS	4	4		
BROWNTOP MILLET	40	40		
SUDANGRASS	45	45		
FESCUE	50		50	

CONDITION 3 – CONCENTRATED WATER AREAS

GRASS	SPRING	SUMMER	FALL	WINTER
RYEGRASS			40	40
RYE			170	170
WHEAT			180	180
LESPEDEZA ANNUAL	40			
BROWNTOP MILLET	40	40		
SUDANGRASS	45	45		
PEARL MILLET	50	50		
FESCUE	50		50	

NOTE: ALL SEEDING RATES FOR SINGLE SPECIES, MIXTURES CAN RESULT IN LOWER RATES, CONSULT MANUAL FOR EROSION AND SEDIMENT CONTROL IN GEORGIA FOR MIXING RATES.

NOTE: ON LOW FERTILITY SOILS USE 500 LBS/ACRE OF 10-10-10 OR 12 LBS/1000 S.F.. APPLY BEFORE LAND PREPARATION.

Ds2



City of Madison

Grassing Schedule – Temporary

CONSTRUCTION AND DESIGN STANDARD DETAILS
SCALE: NONE DATE: DECEMBER 1998

JAN 1 TO FEB 31

SERICEA LESPEDEZA (UNSCARIFIED) – 75 LBS/ACRE
 COMMON BERMUDA (UNHULLED) – 10 LBS/ACRE

MAR 1 TO JUNE 31

SERICEA LESPEDEZA (SCARIFIED) – 60 LBS/ACRE
 COMMON BERMUDA (HULLED) – 10 LBS/ACRE
 WEEPING LOVEGRASS – 4 LBS/ACRE

JULY 1 TO AUG 15

BERMUDA SPRIGS
 COASTAL, COMMON OR TIFT 44 – 32 BUSHELS/ACRE

AUG 15 TO DEC 31

TALL FESCUE – (WITH COMMON BERMUDA – UNHULLED & RYE)
 (FESCUE–30 LBS/ACRE, BERMUDA–6 LBS/ACRE, RYE–1/2 BU/ACRE)
 SERICEA LESPEDEZA (UNSCARIFIED) – 75 LBS/ACRE

FERTILIZER RATE

NITROGEN	5–10%	90	LBS/ACRE
PHOSPHORUS	10–15%	180	LBS/ACRE
POTASSIUM	10–15%	180	LBS/ACRE
MULCH		2.5	TONS/ACRE
N TOP DRESS		50–100	LBS/ACRE
LIME		2	TONS/ACRE

Ds3

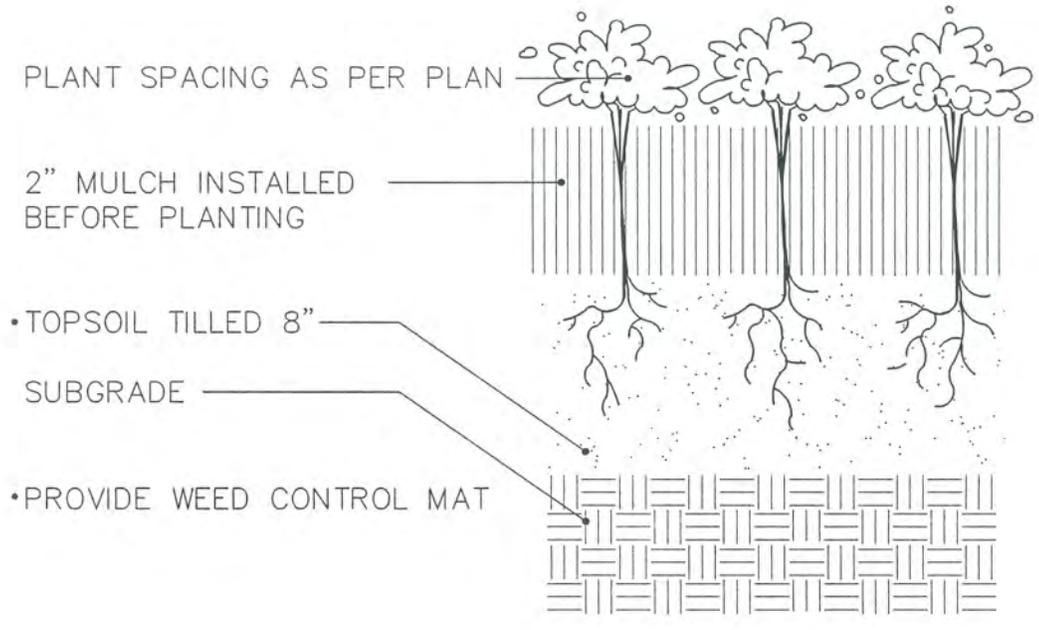


City of Madison

Grassing Schedule – Permanent

CONSTRUCTION AND DESIGN STANDARD DETAILS
 SCALE: NONE DATE: DECEMBER 1998

Landscaping - L



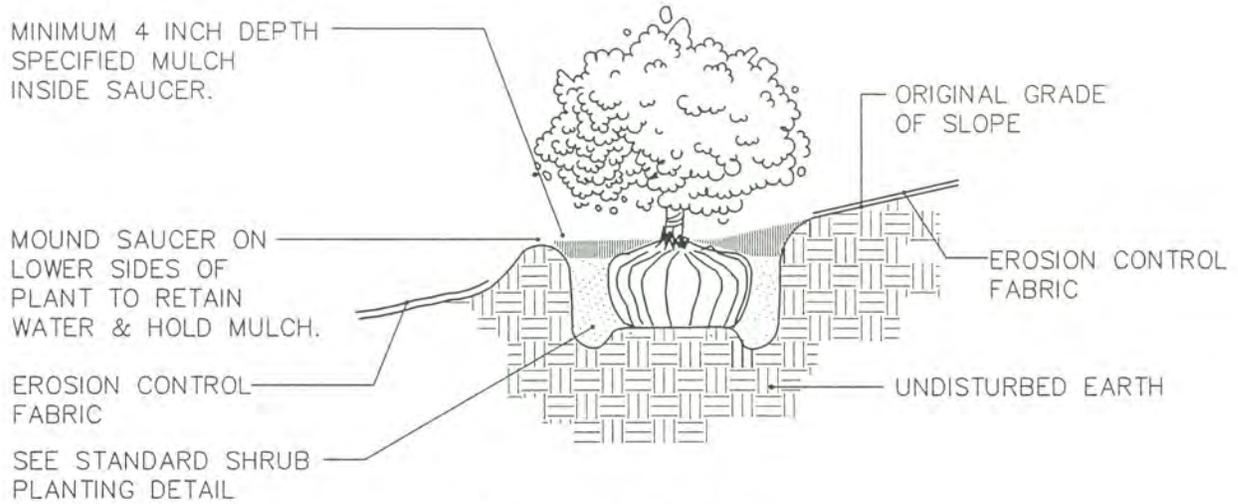
- PLANT SPACING AS PER PLAN
- 2" MULCH INSTALLED BEFORE PLANTING
- TOPSOIL TILLED 8"
- SUBGRADE
- PROVIDE WEED CONTROL MAT



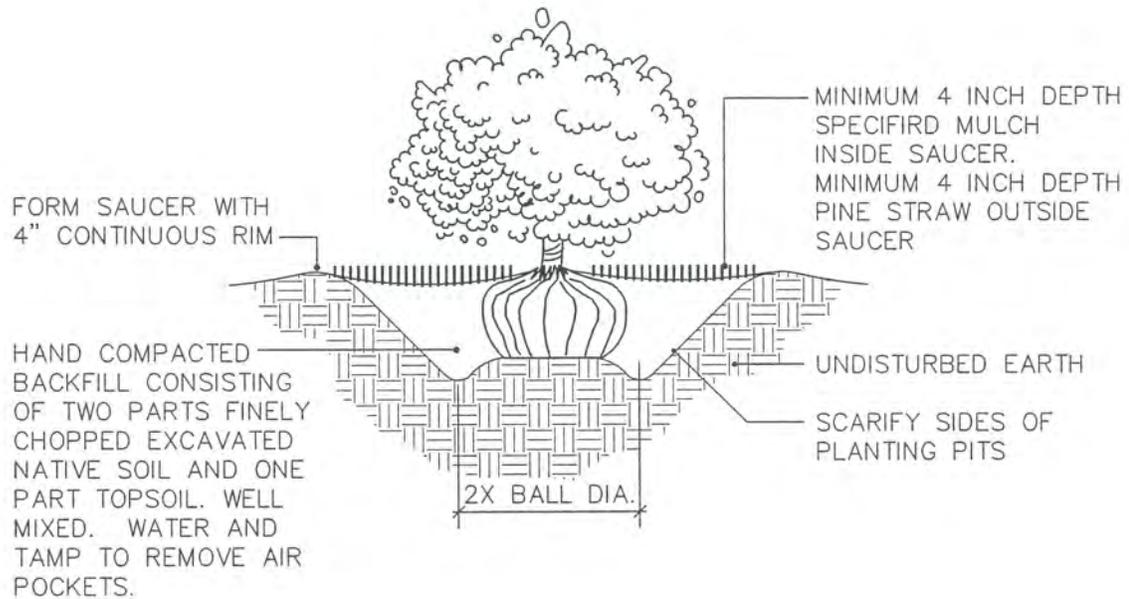
City of Madison

Groundcover Planting

CONSTRUCTION AND DESIGN STANDARD DETAILS
SCALE: NONE DATE: DECEMBER 1998



ON SLOPES



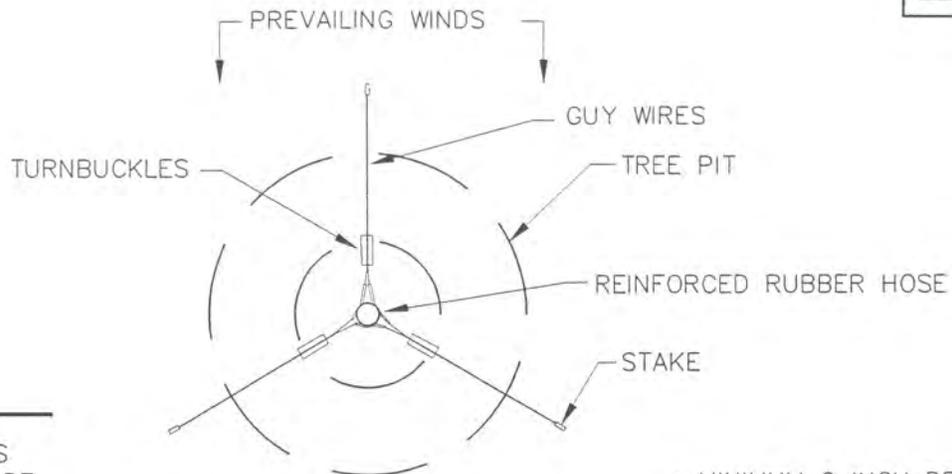
STANDARD SHRUB PLANTING



City of Madison

Shrub Planting

CONSTRUCTION AND DESIGN STANDARD DETAILS
SCALE: NONE DATE: DECEMBER 1998



NOTES:

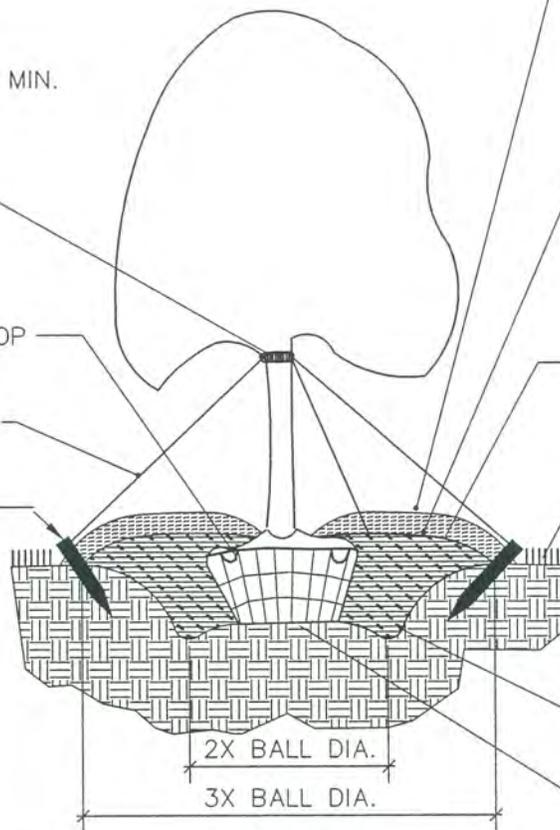
- FLAG GUYING WIRES WITH SURVEYOR TAPE WAIST HIGH.
- TREE SHALL BEAR SAME RELATION TO FINISH GRADE AS NECESSARY.
- MULCHED AREA SHALL BE A UNIFORM CIRCLE 5' MIN. IN DIAMETER TO INCLUDE ALL DISTURBED SOIL.

RUBBER HOSE 1" DIA. REMOVE STRAPS, BEND WIRE LOOPS DOWN AND CUT OFF.

REMOVE BURLAP FROM TOP THIRD OF ROOT BALL.

GUYING WIRES 2 STRAND TWIST 18 GAUGE WIRE

MIN. THREE 2"x4"x24" PRESSURE TREATED STAKES DRIVEN INTO UNDISTURBED EARTH WITH 6 INCHES OF STAKE EXPOSED ABOVE EXISTING GRADE.



MINIMUM 6 INCH DEPTH SPECIFIED MULCH INSIDE SAUCER. MINIMUM 4 INCH DEPTH PINE STRAW OUTSIDE SAUCER. TAPER MULCH AT BASE OF TREE SO MULCH DOES NOT CONTACT TREE.

HAND COMPACTED BACKFILL CONSISTING OF TWO PARTS FINELY CHOPPED EXCAVATED NATIVE SOIL AND ONE PART TOPSOIL. WELL MIXED. WATER AND TAMP TO REMOVE AIR POCKETS.

FORM BROAD ROUNDED SAUCER, MIN. 4" HIGH ABOVE TOP OF BALL. COMPACT WELL.

GRASS/GROUNDCOVER

• PLANT SO THAT TOP OF ROOTBALL IS EVEN WITH FINISH GRADE AFTER SETTLING.

SCARIFY SIDES OF PLANTING PITS

TREE BALL SHALL BE SET ON UNDISTURBED EARTH.

PLAN

ELEVATION

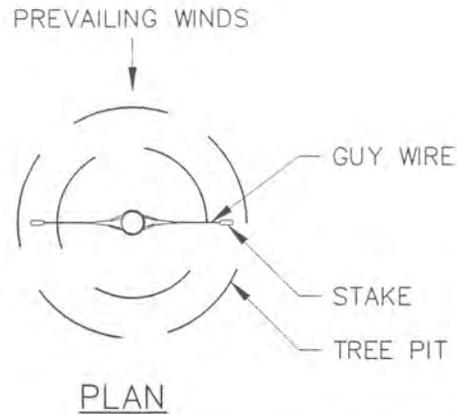
**TREE PLANTING – GUY WIRES – 2"+ CAL.
FOR TREES OVER 14'-0" IN HEIGHT**



City of Madison

Deciduous Tree Planting

CONSTRUCTION AND DESIGN STANDARD DETAILS
SCALE: NONE DATE: DECEMBER 1998



NOTES:

• WIRE SHALL NOT TOUCH OR RUB ADJACENT TRUNKS OR BRANCHES

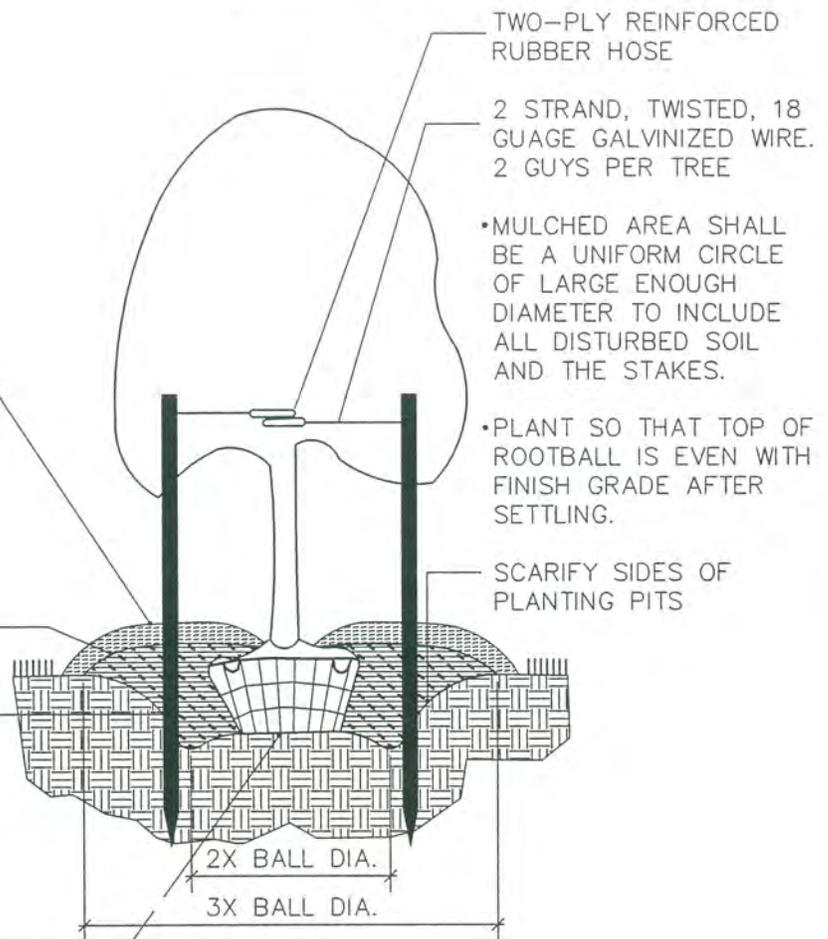
• SINGLE STAKING OF TREES IS NOT PERMITTED. STAKE ABOVE FIRST BRANCHES OR AS NECESSARY FOR FIRM SUPPORT

MINIMUM 6 INCH DEPTH SPECIFIED MULCH INSIDE SAUCER. MINIMUM 4 INCH DEPTH PINE STRAW OUTSIDE SAUCER. TAPER MULCH AT BASE OF TREE SO MULCH DOES NOT CONTACT TREE.

FORM BROAD ROUNDED SAUCER, COMPACT WELL.

HAND COMPACTED BACKFILL CONSISTING OF TWO PARTS FINELY CHOPPED EXCAVATED NATIVE SOIL AND ONE PART TOPSOIL. WELL MIXED. WATER AND TAMP TO REMOVE AIR POCKETS.

TREE BALL SHALL BE SET ON UNDISTURBED EARTH.



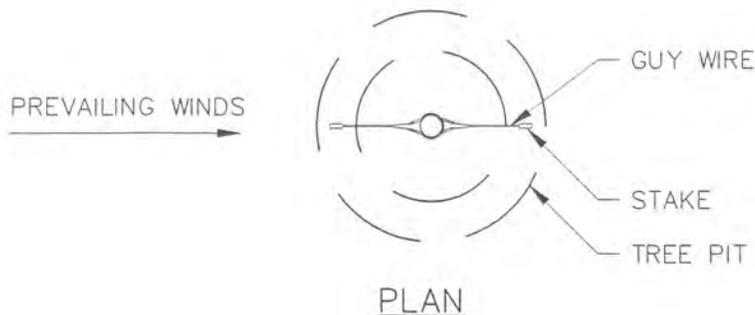
TREE PLANTING – VERTICAL STAKES FOR TREES UNDER 14'-0" IN HEIGHT



City of Madison

Deciduous Tree Planting

CONSTRUCTION AND DESIGN STANDARD DETAILS
 SCALE: NONE DATE: DECEMBER 1998



NOTES:

- WIRE SHALL NOT TOUCH OR RUB ADJACENT TRUNKS OR BRANCHES

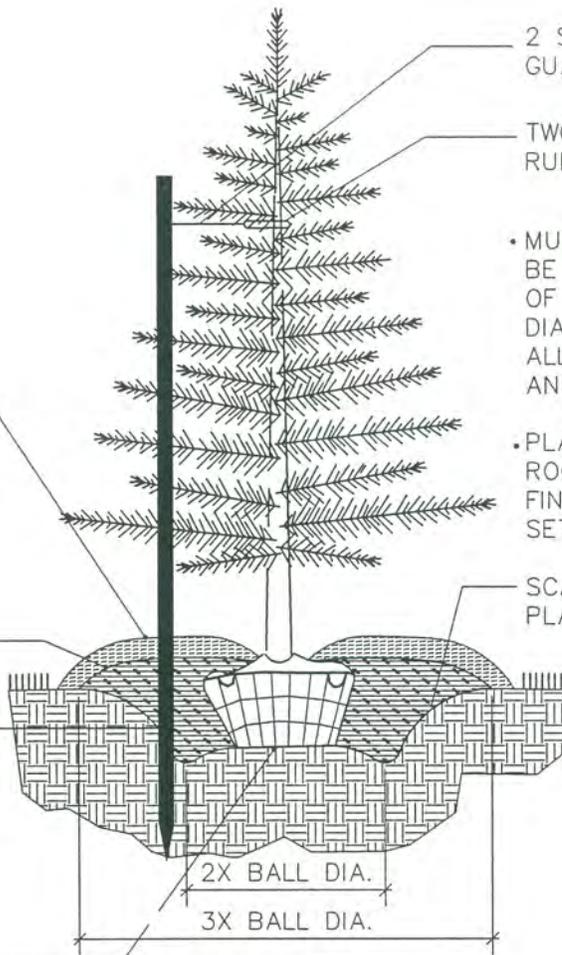
STAKE ABOVE FIRST BRANCHES OR AS NECESSARY FOR FIRM SUPPORT

MINIMUM 6 INCH DEPTH SPECIFIED MULCH INSIDE SAUCER. MINIMUM 4 INCH DEPTH PINE STRAW OUTSIDE SAUCER. TAPER MULCH AT BASE OF TREE SO MULCH DOES NOT CONTACT TREE.

FORM BROAD ROUNDED SAUCER, COMPACT WELL.

HAND COMPACTED BACKFILL CONSISTING OF TWO PARTS FINELY CHOPPED EXCAVATED NATIVE SOIL AND ONE PART TOPSOIL. WELL MIXED. WATER AND TAMP TO REMOVE AIR POCKETS.

TREE BALL SHALL BE SET ON UNDISTURBED EARTH.



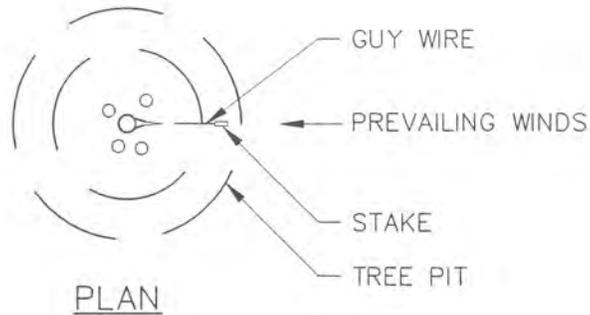
FOR TREES UNDER 14'-0" IN HEIGHT



City of Madison

Evergreen Tree Planting

CONSTRUCTION AND DESIGN STANDARD DETAILS
 SCALE: NONE DATE: DECEMBER 1998



NOTES:

- STAKE TO FIRST BRANCHES AS NECESSARY FOR FIRM SUPPORT

- WIRE SHALL NOT TOUCH OR RUB ADJACENT TRUNKS OR BRANCHES

- MULCHED AREA SHALL BE A UNIFORM CIRCLE OF LARGE ENOUGH DIAMETER TO INCLUDE ALL DISTURBED SOIL AND THE STAKES. TUCK IN MULCH AT EDGE.

MINIMUM 6 INCH DEPTH SPECIFIED MULCH INSIDE SAUCER. MINIMUM 4 INCH DEPTH PINE STRAW OUTSIDE SAUCER. TAPER MULCH AT BASE OF TREE SO MULCH DOES NOT CONTACT TREE.

2" x 2" STAKES DRIVEN FIRMLY A MINIMUM OF 18" INTO THE SUBGRADE PRIOR TO BACKFILLING. STAKES SHALL NOT DISTURB ROOTBALL.

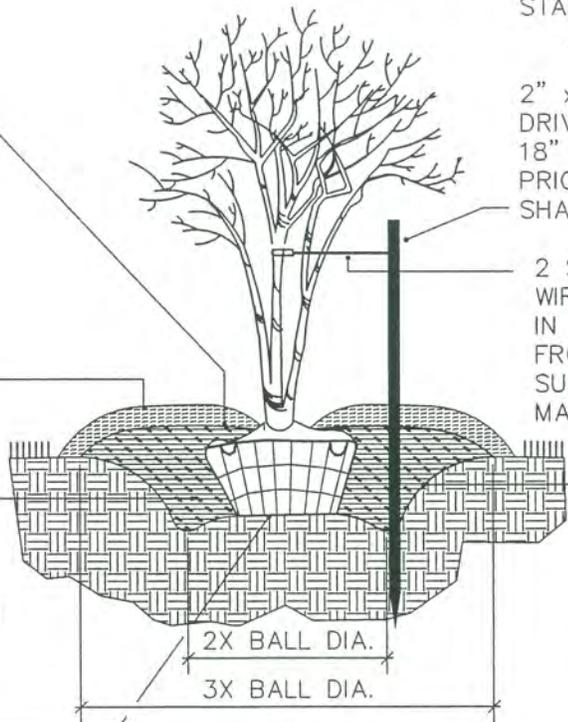
FORM BROAD ROUNDED SAUCER, COMPACT WELL.

2 STRAND 18 GAUGE GALV. WIRE TWISTED AND ENCASED IN RUBBER HOSE 6 - 9" FROM TOP OF STAKE 2 WIRE SUPPORTS SHALL BE USED ON MAIN STRUCTURAL BRANCHES.

HAND COMPACTED BACKFILL CONSISTING OF TWO PARTS FINELY CHOPPED EXCAVATED NATIVE SOIL AND ONE PART TOPSOIL. WELL MIXED. WATER AND TAMP TO REMOVE AIR POCKETS.

SCARIFY SIDES OF PLANTING PITS

TREE BALL SHALL BE SET ON UNDISTURBED EARTH.



ELEVATION

- PLANT SO THAT TOP OF ROOTBALL IS EVEN WITH FINISH GRADE AFTER SETTLING.



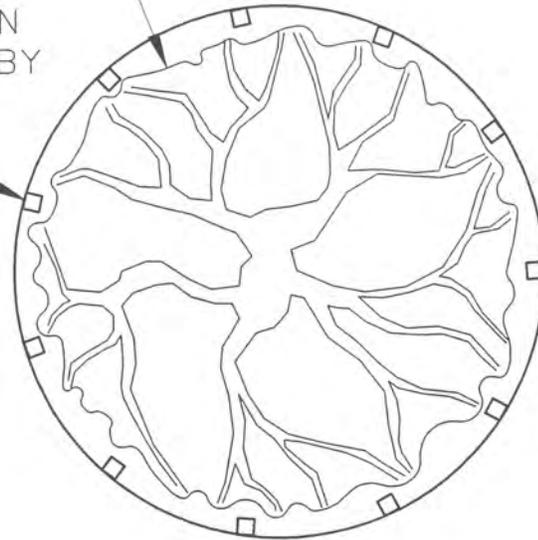
City of Madison

Multi-Trunk Tree Planting

CONSTRUCTION AND DESIGN STANDARD DETAILS
 SCALE: NONE DATE: DECEMBER 1998

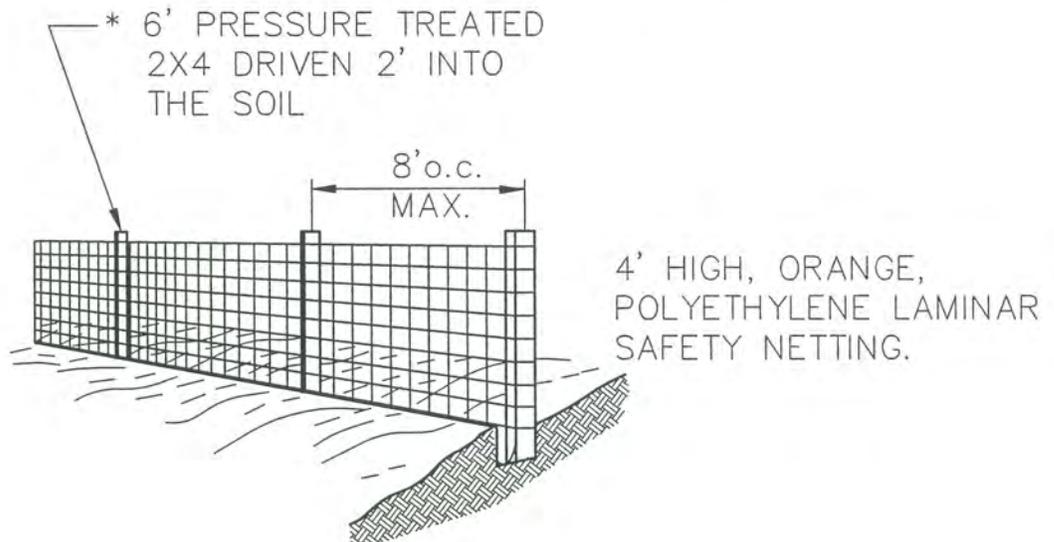
INSTALL FENCE NO CLOSER THAN THE DRIPLINE OR AS DIRECTED BY THE ENGINEER.

DRIPLINE - EXTENT OF OVERHEAD VEGETATION



* PRESSURE TREATED 2X4 SUBSTITUTED WITH 6' LONG #5 REBAR DRIVEN 2' INTO GROUND AND SECURED BY WEAVING INTO FENCING FABRIC, SPACE 8' TO 10' APART MAX.

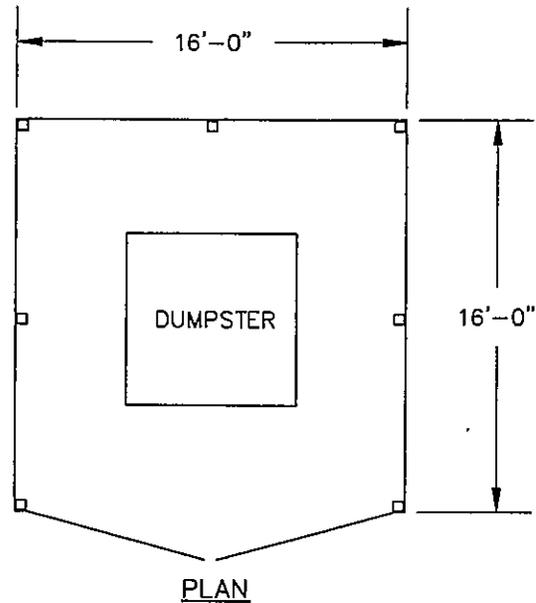
PLAN



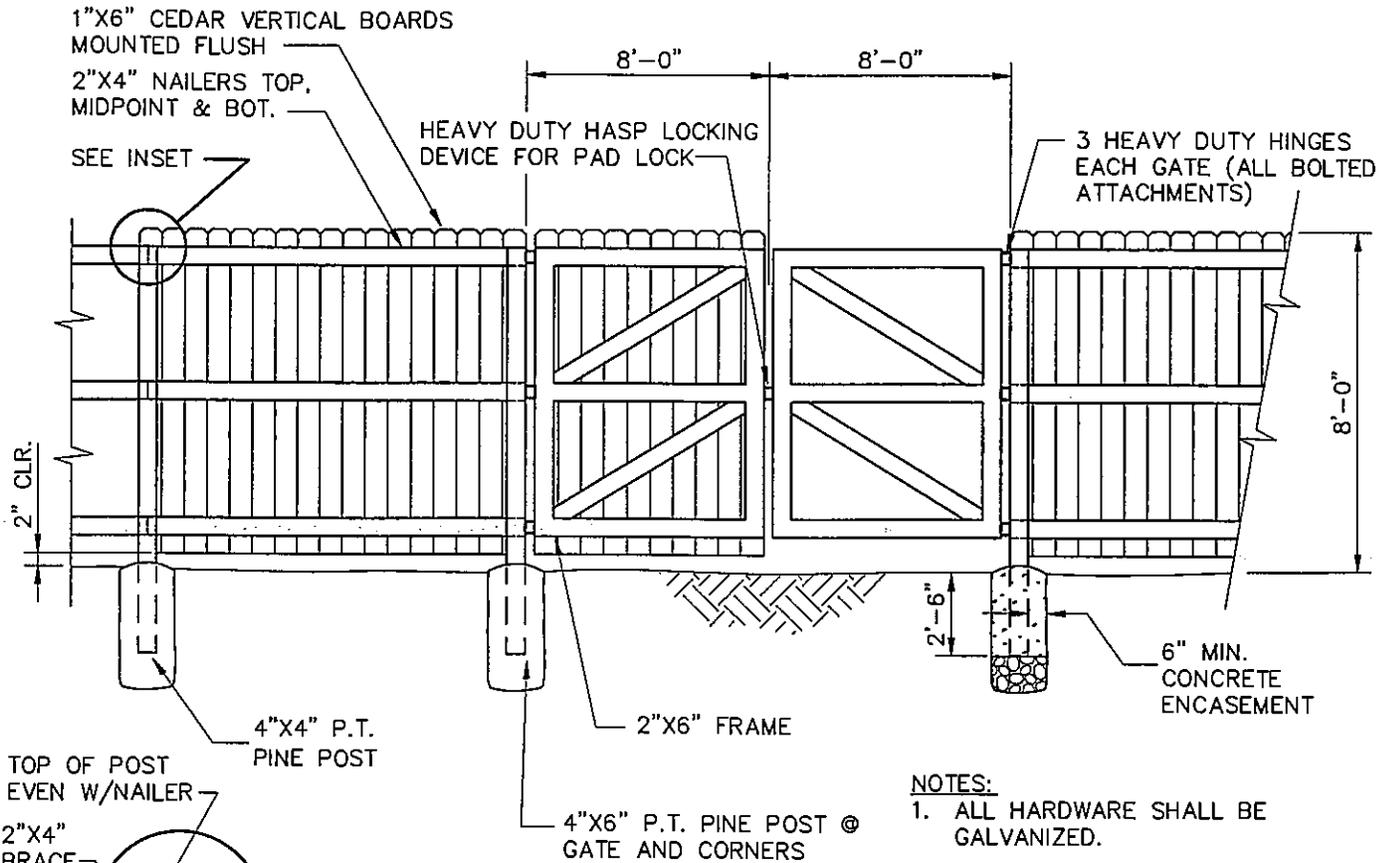
City of Madison

Tree Protection

CONSTRUCTION AND DESIGN STANDARD DETAILS
SCALE: NONE DATE: DECEMBER 1998



NOTE:
DETAIL SHOWN FOR
SINGLE 8 C.Y. CONTAINER.



NOTES:

1. ALL HARDWARE SHALL BE GALVANIZED.
2. HINGES & HASP MAY HAVE OPTIONAL FLAT BLACK FINISH.
3. ALL PINE SHALL BE MIN. #2 SOUTHERN YELLOW PINE PRESSURE TREATED FOR IN GROUND USE.

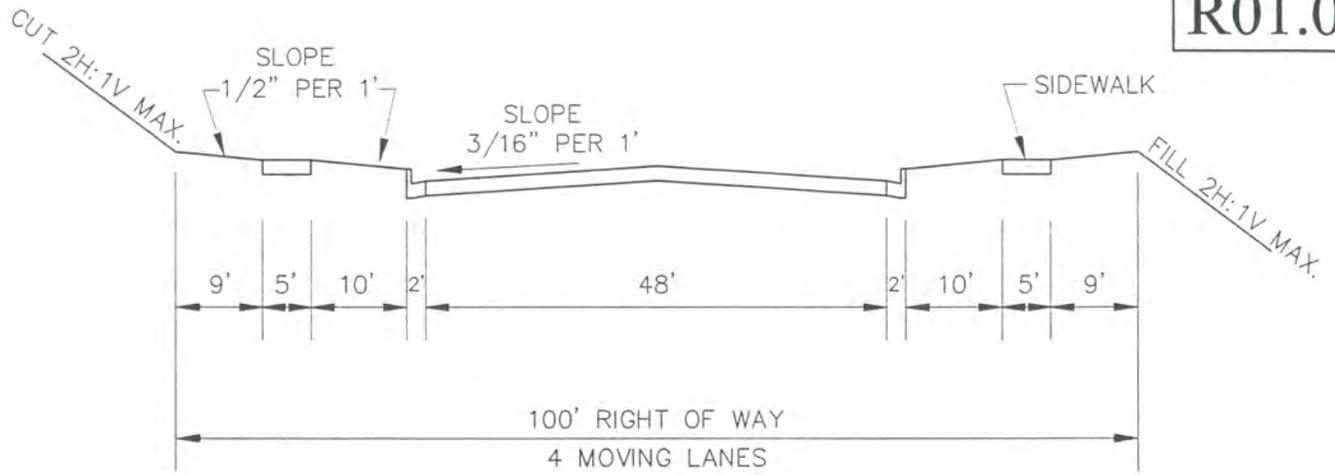


City of Madison

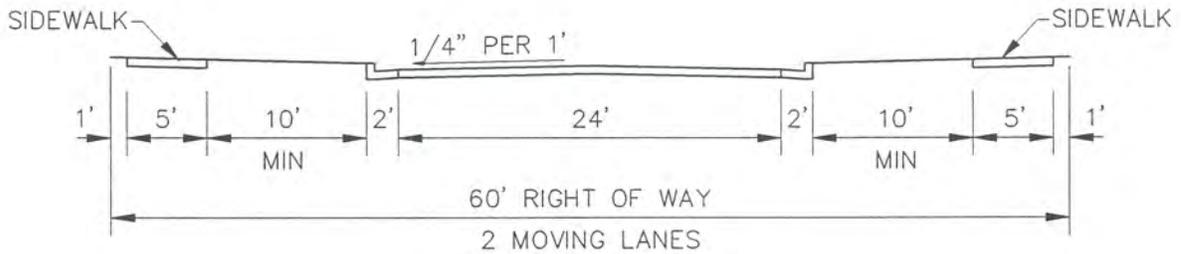
DUMPSTER SCREEN

CONSTRUCTION AND DESIGN STANDARD DETAILS
SCALE: NONE DATE: DECEMBER 1998

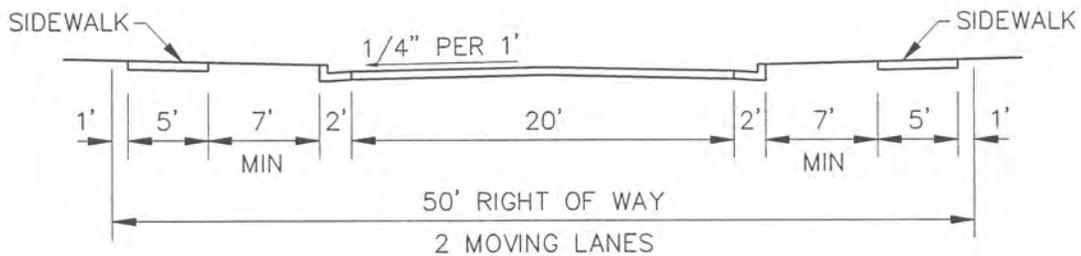
Roadway and Street Grading, Construction and Design - R



ARTERIAL



COLLECTOR



LOCAL STREET



City of Madison

Typical Roadway Design

CONSTRUCTION AND DESIGN STANDARD DETAILS
SCALE: NONE DATE: DECEMBER 1998

MINIMUM STREET DESIGN STANDARDS:

	ARTERIAL ¹	COLLECTOR	LOCAL STREET	MARGINAL ACCESS STREET	ALLEYS AND DRIVES
MINIMUM RIGHT-OF-WAY, IN FEET	100	60	50	60	30
MINIMUM PAVEMENT WIDTH, IN FEET ²	48	24	20	26	20, 12 ³
MAXIMUM GRADE	6%	12%	12%	12%	12%
MINIMUM STOPPING SIGHT DISTANCE, IN FEET	550	300	200	200	50
DESIGN SPEED, IN MPH	55	30	25	25	10
MINIMUM CENTERLINE RADIUS, IN FEET	885	380	165	100	50
MINIMUM LENGTH OF TANGENT, BETWEEN REVERSE CURVES, IN FEET	300	100	100	---	---
PAVEMENT RADIUS AT INTERSECTIONS, IN FEET	25	15	10	15	10
MINIMUM FINISHED GRADE	0.5%	0.5%	0.5%	0.5%	0.5%

FOOTNOTES:

- 1 GEOMETRICAL DESIGN STANDARDS OF THE GEORGIA DEPARTMENT OF TRANSPORTATION SHALL REPRESENT MINIMUM REQUIREMENTS FOR ARTERIAL STREET DESIGN AND CONSTRUCTION.
- 2 PAVEMENT WIDTH DOES NOT INCLUDE CURB AND GUTTER.
- 3 ONE WAY STREET.

REQUIRED BASE AND PAVEMENT THICKNESSES:

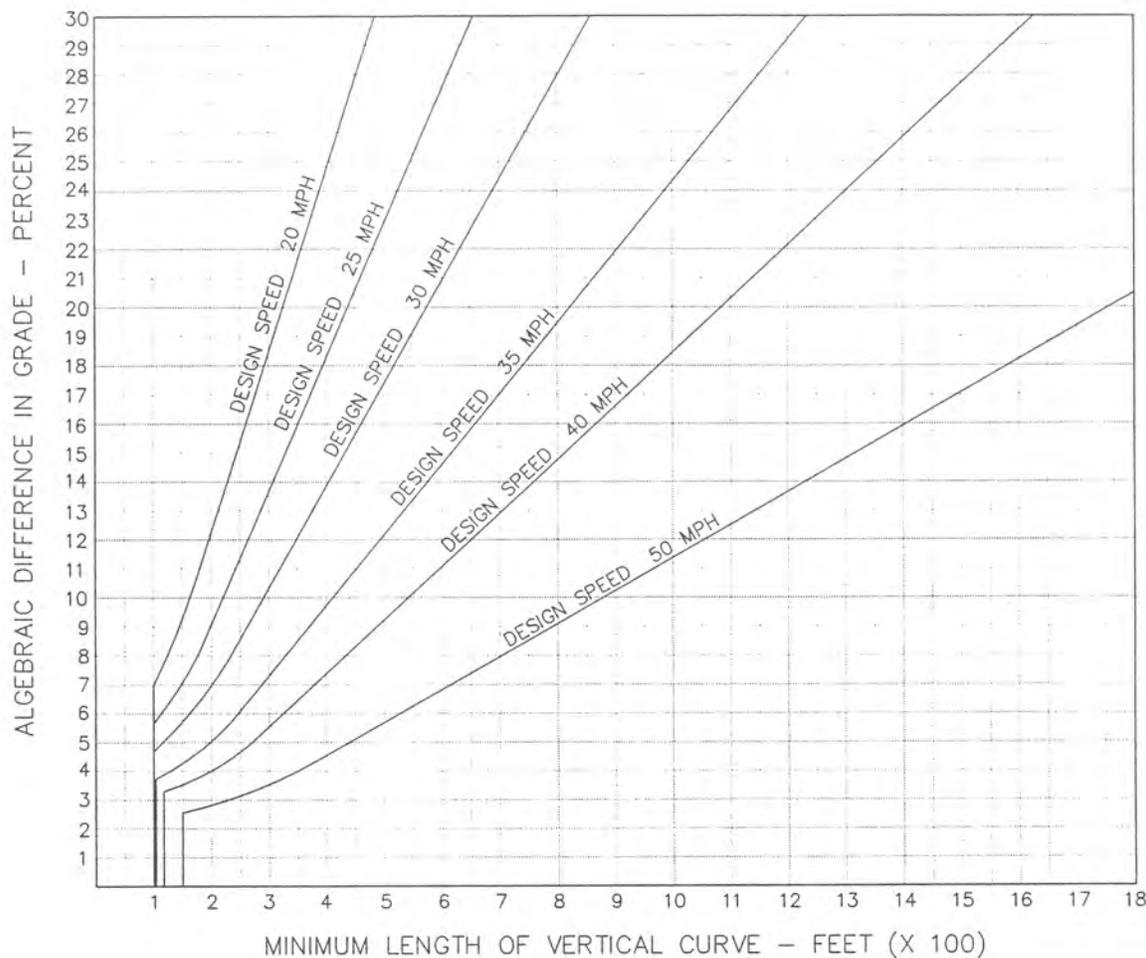
	ARTERIAL	COLLECTOR	LOCAL STREET	MARGINAL ACCESS STREET	ALLEYS AND DRIVES
GRADED AGGREGATE BASE	8"	6"	6"	6"	4"
BINDER	2-1/2" TYPE B	2" TYPE B	2" TYPE B	2" TYPE B	2" TYPE B
SURFACE	1-1/2" TYPE E	1-1/2" TYPE E	1-1/2" TYPE E	2" TYPE F	2" TYPE F



City of Madison

Typical Roadway Design

CONSTRUCTION AND DESIGN STANDARD DETAILS
SCALE: NONE DATE: DECEMBER 1998



BASIC FORMULAS FOR LENGTH OF A PARABOLIC CURVE IN TERMS OF ALGEBRAIC DIFFERENCE GRADE AND SIGHT DISTANCE ARE;

WHEN S LESS THAN L

$$L = \frac{AS^2}{1398}$$

WHEN S GREATER THAN L

$$L = \frac{25-1398}{A}$$

WHERE L = LENGTH OF VERTICAL CURVE, FT.

S = SIGHT DISTANCE, FT.

A = ALGEBRAIC DIFFERENCE IN GRADE, %.

CONSTANT FACTORS USED ARE:

HEIGHT OF EYE : 3.75 FT.

HEIGHT OF OBJECT: 6 IN.

20 MPH DESIGN= 150 FT. SIGHT DISTANCE

25 MPH DESIGN= 175 FT. SIGHT DISTANCE

30 MPH DESIGN= 200 FT. SIGHT DISTANCE

35 MPH DESIGN= 240 FT. SIGHT DISTANCE

40 MPH DESIGN= 275 FT. SIGHT DISTANCE

50 MPH DESIGN= 350 FT. SIGHT DISTANCE

MINIMUM ALLOWABLE VERTICAL CURVE = 3V
BUT NOT LESS THAN 100 FT.



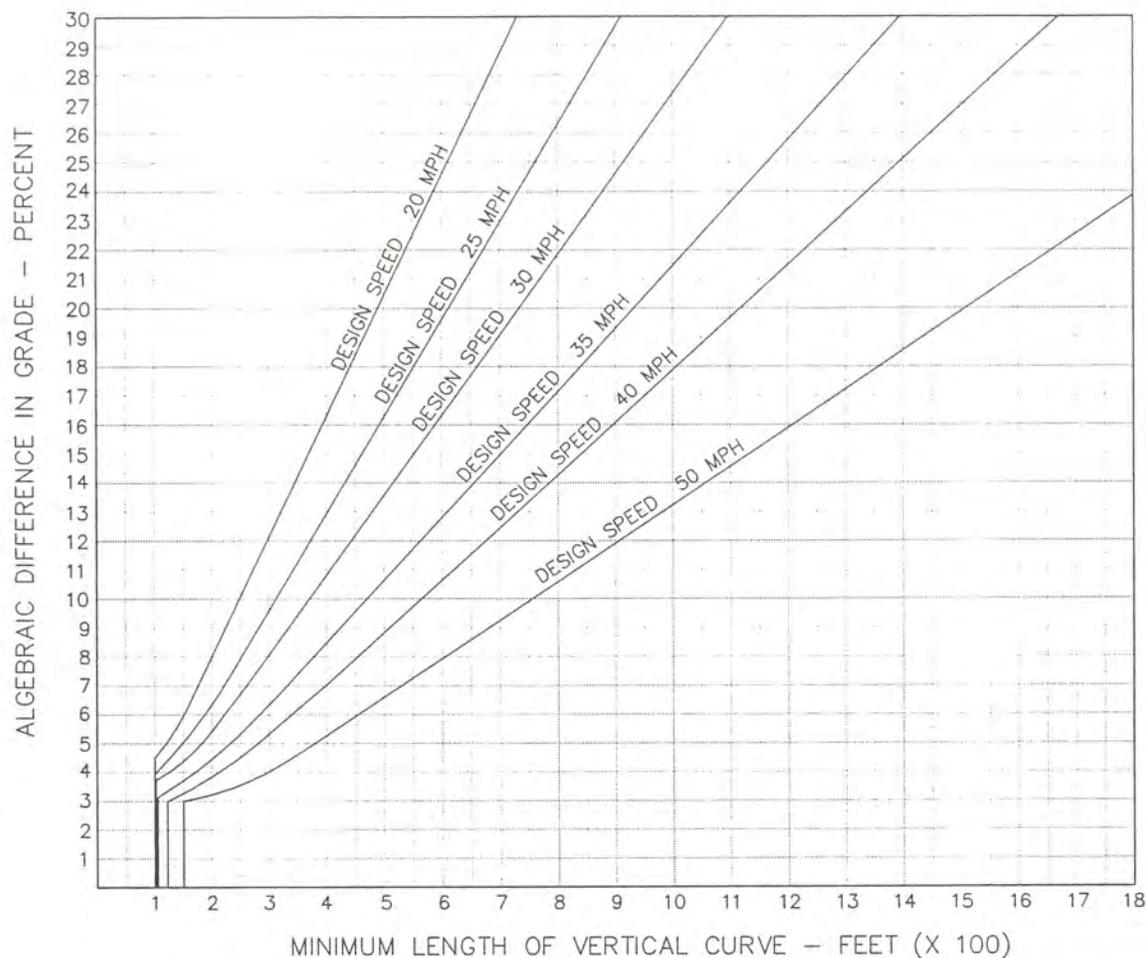
City of Madison

Length of Vertical Curve for Crest

CONSTRUCTION AND DESIGN STANDARD DETAILS

SCALE: NONE

DATE: DECEMBER 1998



BASIC FORMULAS FOR LENGTH OF A PARABOLIC CURVE IN TERMS OF ALGEBRAIC DIFFERENCE GRADE AND SIGHT DISTANCE ARE;

WHEN S LESS THAN L

$$L = \frac{AS^2}{400 + 3.5S}$$

WHEN S GREATER THAN L

$$L = \frac{2S - 400 + 3.5S}{A}$$

WHERE L = LENGTH OF VERTICAL CURVE, FT.

S = SIGHT DISTANCE, FT.

A = ALGEBRAIC DIFFERENCE IN GRADE, %.

CONSTANT FACTORS USED ARE:

HEIGHT OF EYE : 4.5 FT.

HEIGHT OF OBJECT: 4 IN.

20 MPH DESIGN= 150 FT. SIGHT DISTANCE

25 MPH DESIGN= 175 FT. SIGHT DISTANCE

30 MPH DESIGN= 200 FT. SIGHT DISTANCE

35 MPH DESIGN= 240 FT. SIGHT DISTANCE

40 MPH DESIGN= 275 FT. SIGHT DISTANCE

50 MPH DESIGN= 350 FT. SIGHT DISTANCE

MINIMUM ALLOWABLE VERTICAL CURVE = 3V
BUT NOT LESS THAN 100 FT.



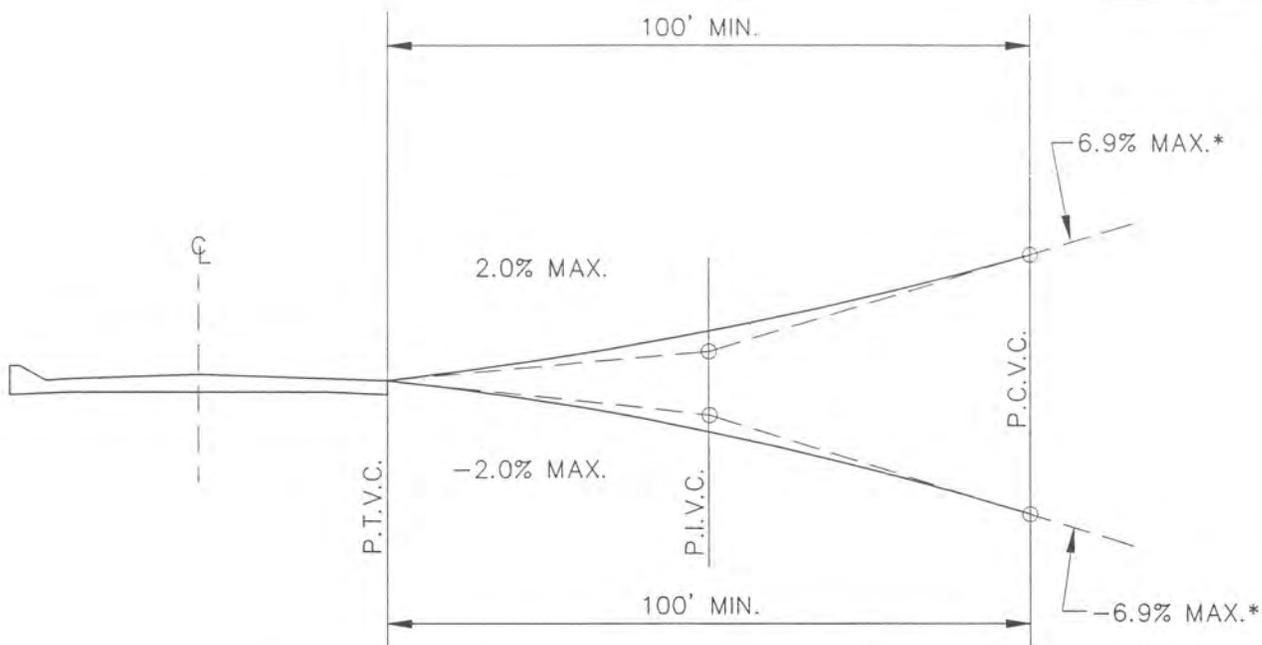
City of Madison

Length of Vertical Curve for Sag

CONSTRUCTION AND DESIGN STANDARD DETAILS

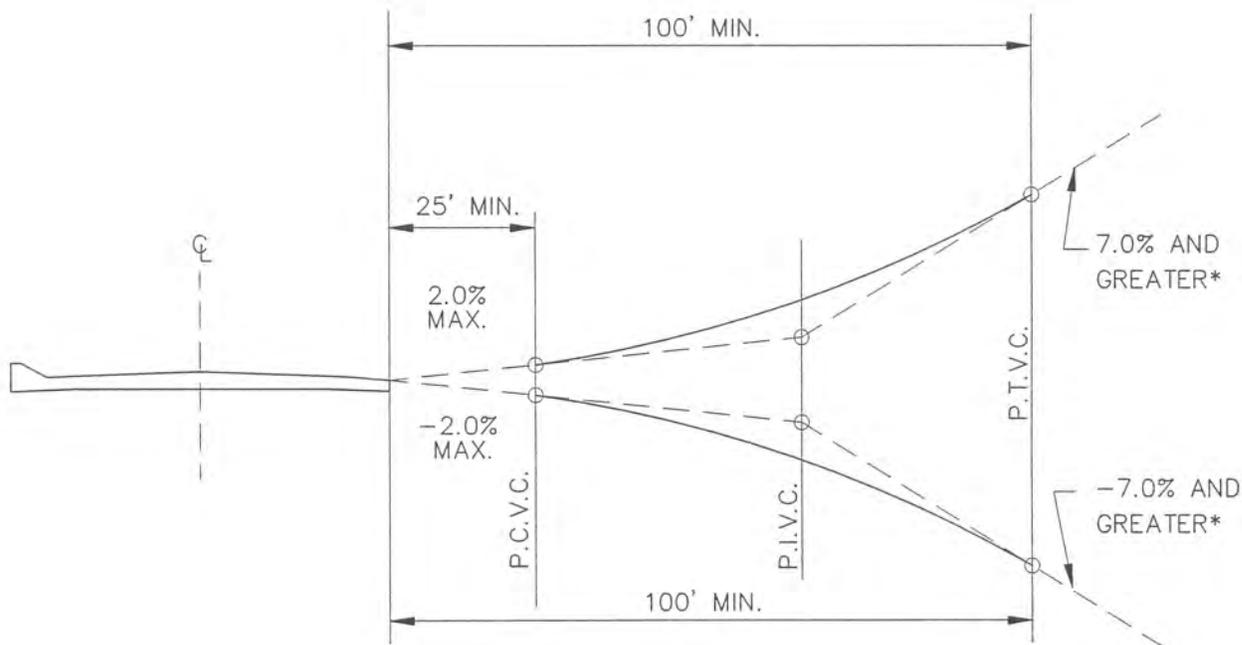
SCALE: NONE

DATE: DECEMBER 1998



LANDING REQUIREMENTS FOR GRADES 7.0% OR LESS

*MAX./MIN. GRADE MAY INCREASE TO 8.0% FOR RESIDENTIAL STREETS.



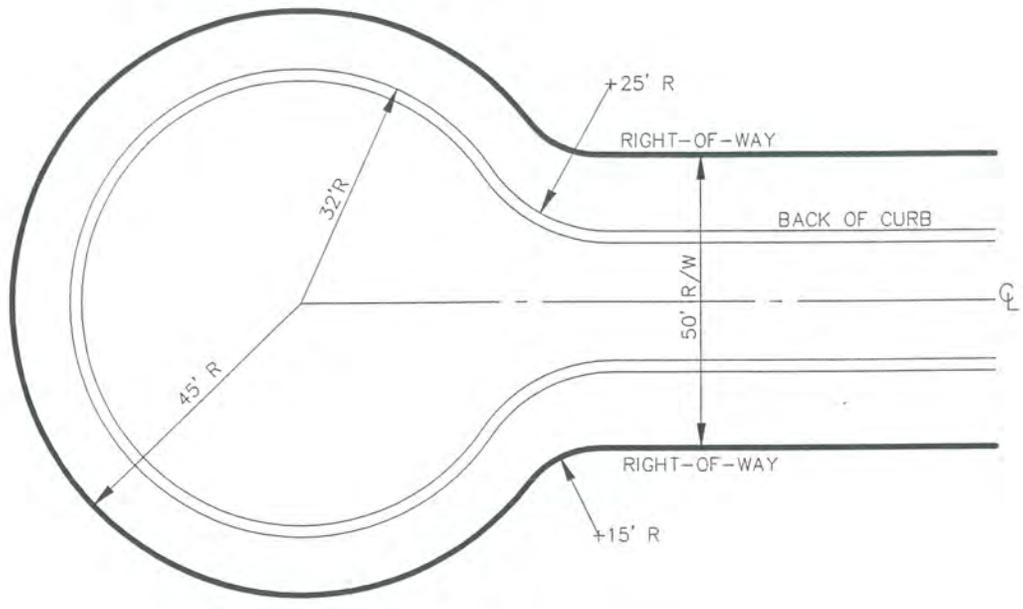
LANDING REQUIREMENTS FOR GRADES 7.0% OR LARGER



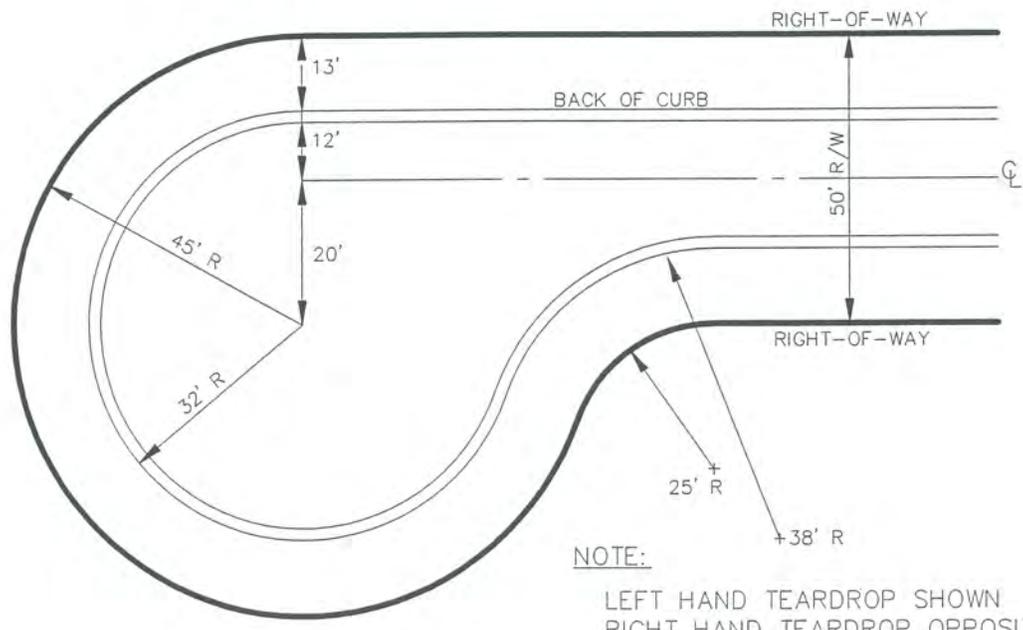
City of Madison

Landing Requirements for Residential Street Intersections

CONSTRUCTION AND DESIGN STANDARD DETAILS
SCALE: NONE DATE: DECEMBER 1998



CENTERED



NOTE:
 LEFT HAND TEARDROP SHOWN
 RIGHT HAND TEARDROP OPPOSITE

TEARDROP



City of Madison

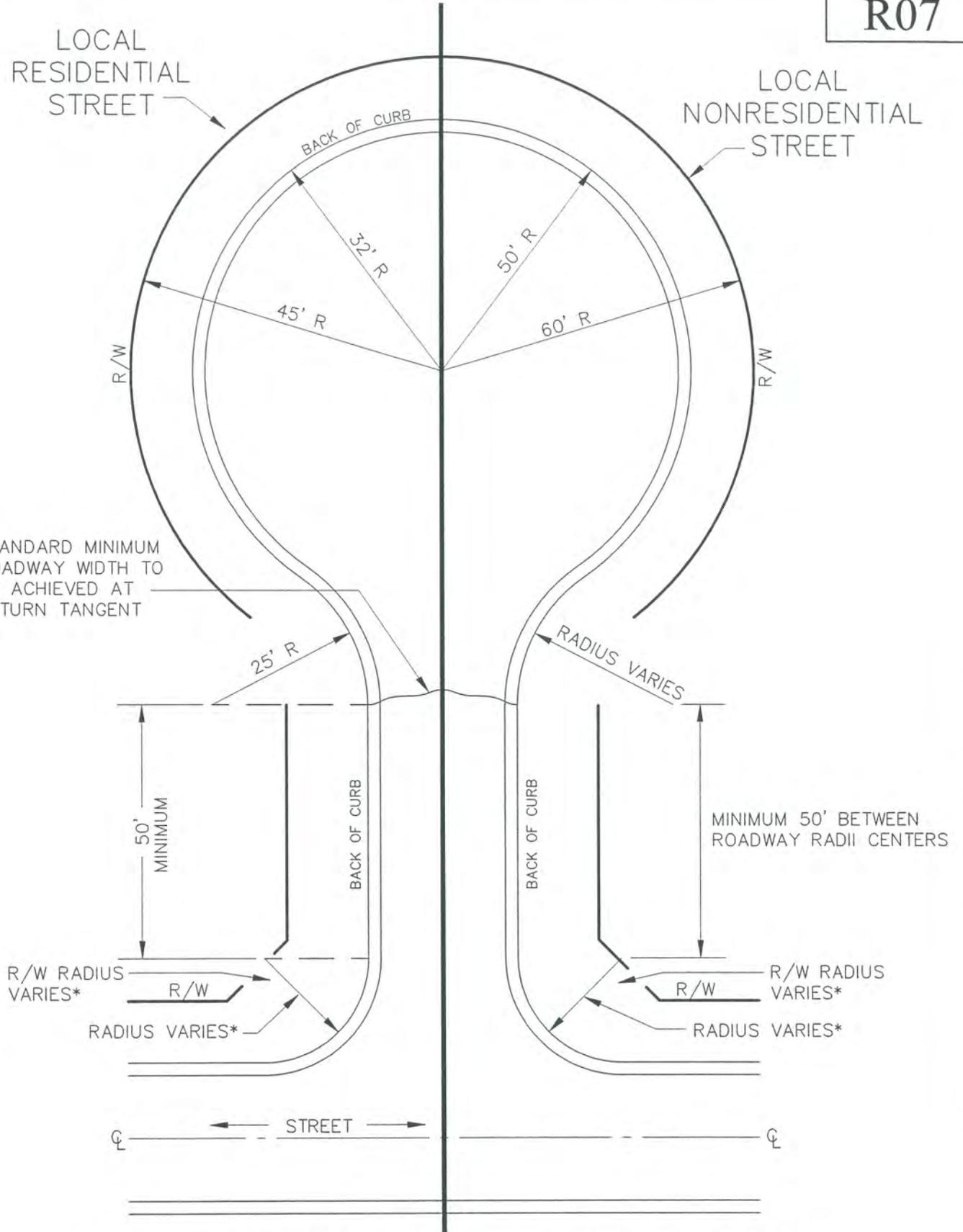
Standard Residential Cul-de-sacs

CONSTRUCTION AND DESIGN STANDARD DETAILS
 SCALE: NONE DATE: DECEMBER 1998

LOCAL RESIDENTIAL STREET

LOCAL NONRESIDENTIAL STREET

STANDARD MINIMUM ROADWAY WIDTH TO BE ACHIEVED AT RETURN TANGENT



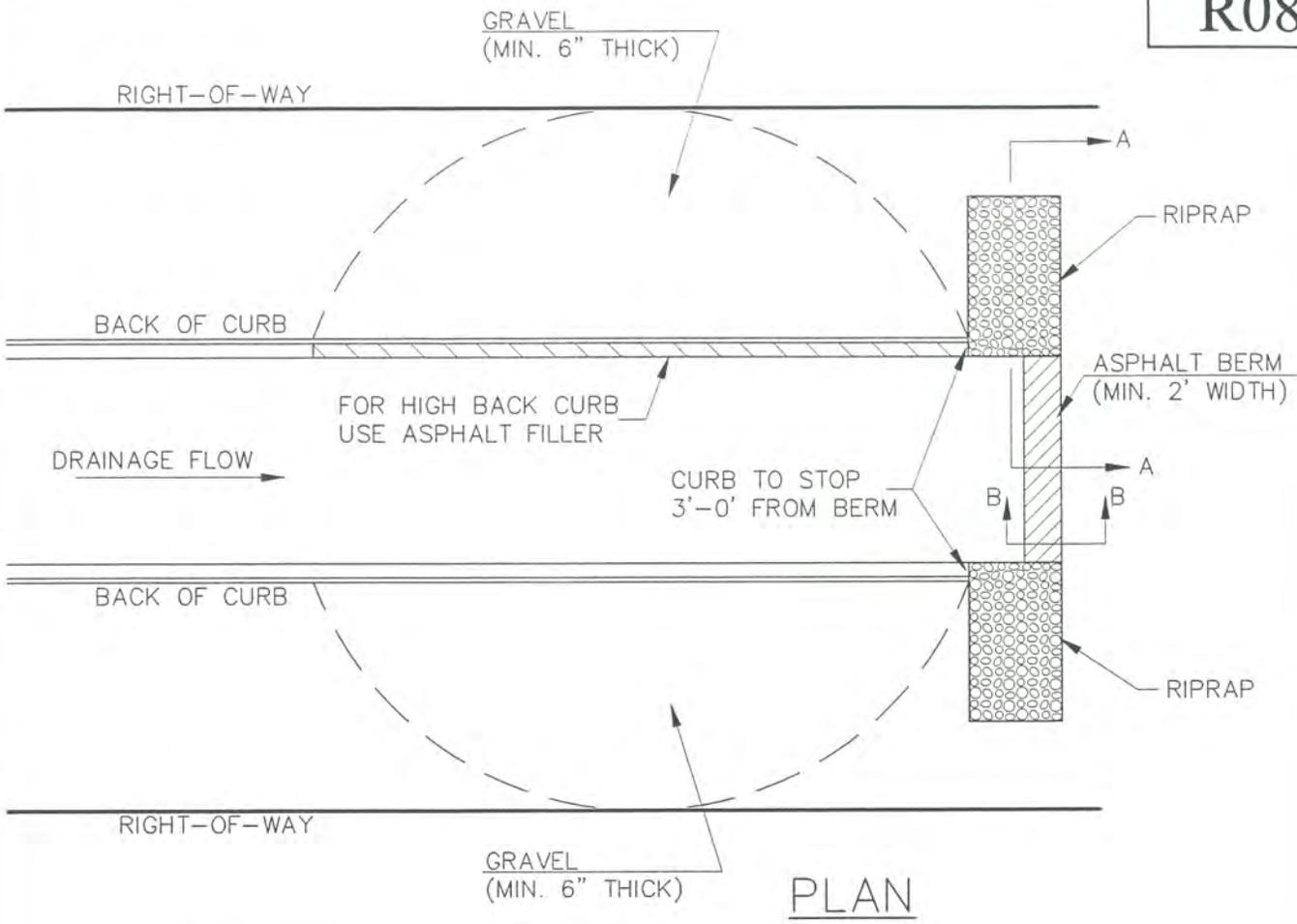
* SEE MINIMUM INTERSECTION RADII REQUIREMENTS IN DEVELOPMENT REGULATIONS.



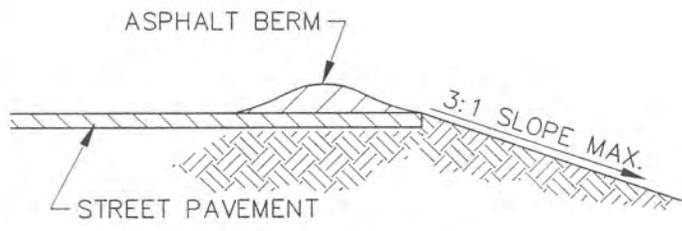
City of Madison

Cul-de-sac Minimum Lengths

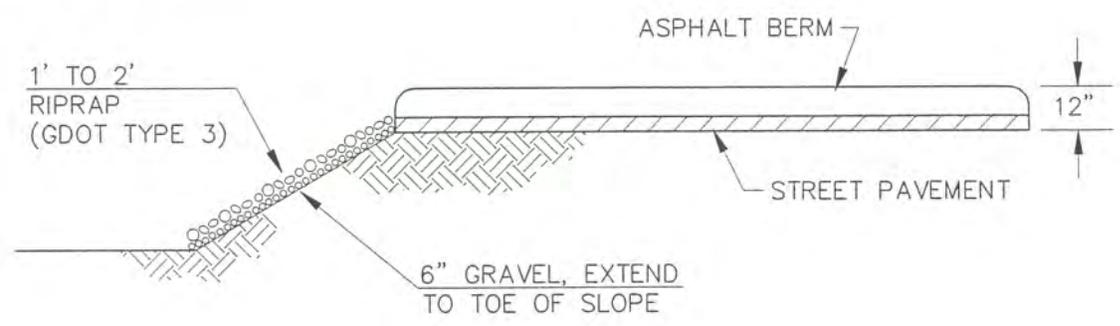
CONSTRUCTION AND DESIGN STANDARD DETAILS
SCALE: NONE DATE: DECEMBER 1998



PLAN



SECTION B-B



SECTION A-A

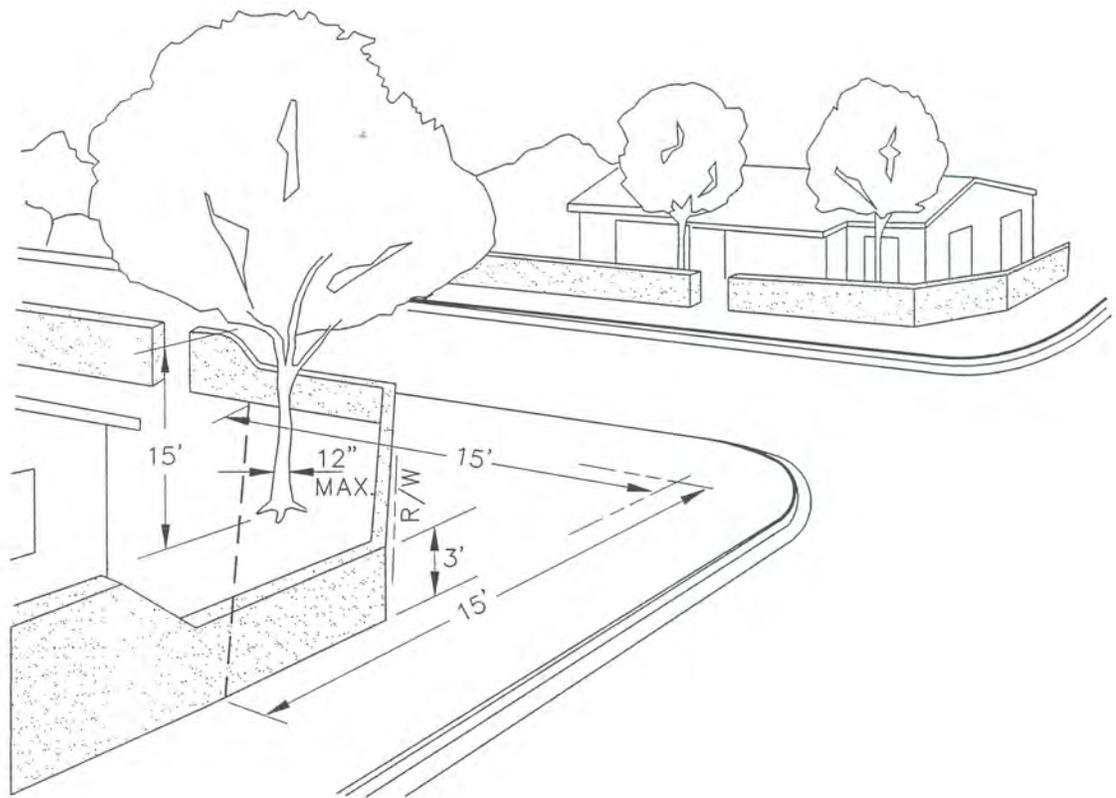


City of Madison

Temporary Vehicular Turnaround

CONSTRUCTION AND DESIGN STANDARD DETAILS
SCALE: NONE DATE: DECEMBER 1998

ON A CORNER LOT THERE SHALL BE NO FENCE OR WALL OR HEDGE HIGHER THAN 3 FEET, NOR ANY OBSTRUCTION TO VISION OTHER THAN A POST OR COLUMN OR TREE NOT EXCEEDING ONE FOOT IN GREATEST CROSS-SECTIONAL DIMENSION BETWEEN A HEIGHT OF 3 FEET AND A HEIGHT OF 15 FEET ABOVE THE ESTABLISHED GRADE OF EITHER STREET WITHIN AN AREA FORMED BY THE LOT LINES ON THE STREET SIDES OF SUCH LOT AND A LINE JOINING THE POINTS ON SUCH LOT LINES LOCATED AT A DISTANCE OF 15 FEET FROM THE POINT OF THEIR INTERSECTION.



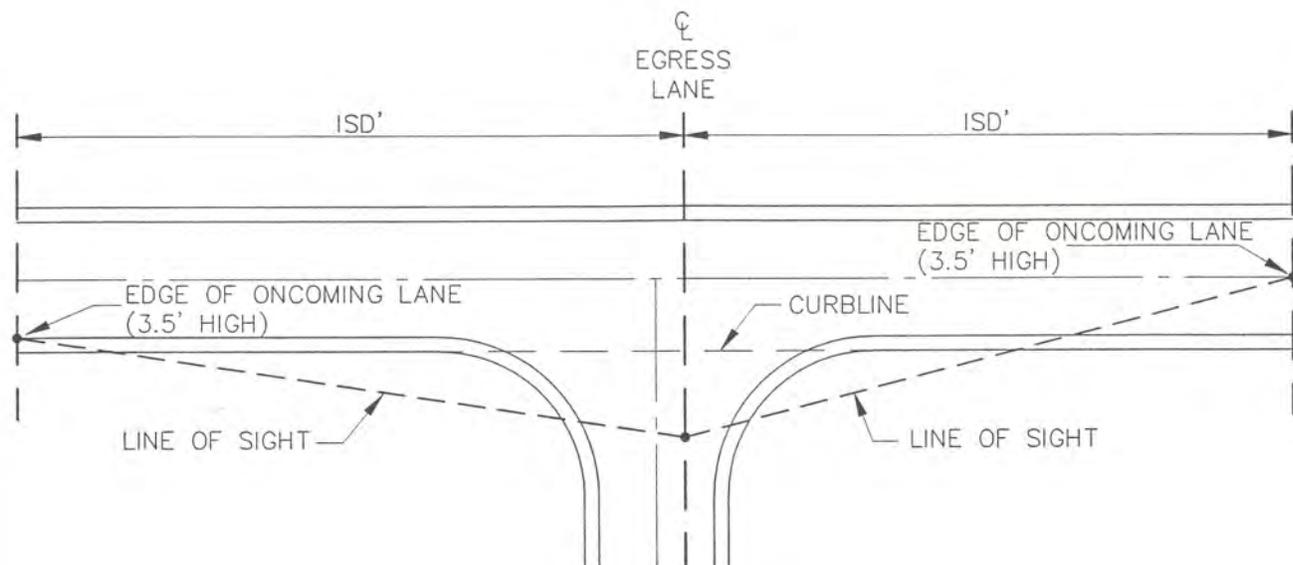
NOTE: MINIMUM INTERSECTION SIGHT DISTANCE REQUIREMENTS SHALL BE MET REGARDLESS OF BLOCK OUT ZONE.



City of Madison

Obstructing Visibility at Intersections

CONSTRUCTION AND DESIGN STANDARD DETAILS
SCALE: NONE DATE: DECEMBER 1998



INTERSECTION SIGHT DISTANCE SHALL BE MEASURED FROM A POINT OF BEGINNING ESTABLISHED 10 FEET BEHIND THE BACK OF CURBLINE ON THE CENTERLINE OF THE EGRESS LANE, AT A HEIGHT OF 3.5 FEET ABOVE FINISH GRADE ELEVATION. THE LINE OF SIGHT IS THEN EXTENDED THE MINIMUM REQUIRED DISTANCE TO EITHER SIDE OF THE ABUTTING STREET ALONG THOROUGHFARE TO THE EDGE OF THE ONCOMING TRAFFIC LANE (LANE OF THREAT), TERMINATING AT A POINT 3.5 FEET ABOVE FINISH GRADE ELEVATION. MAINTAIN 0.5 FEET OF CLEARANCE FROM LINE OF SIGHT AND OBSTRUCTION.

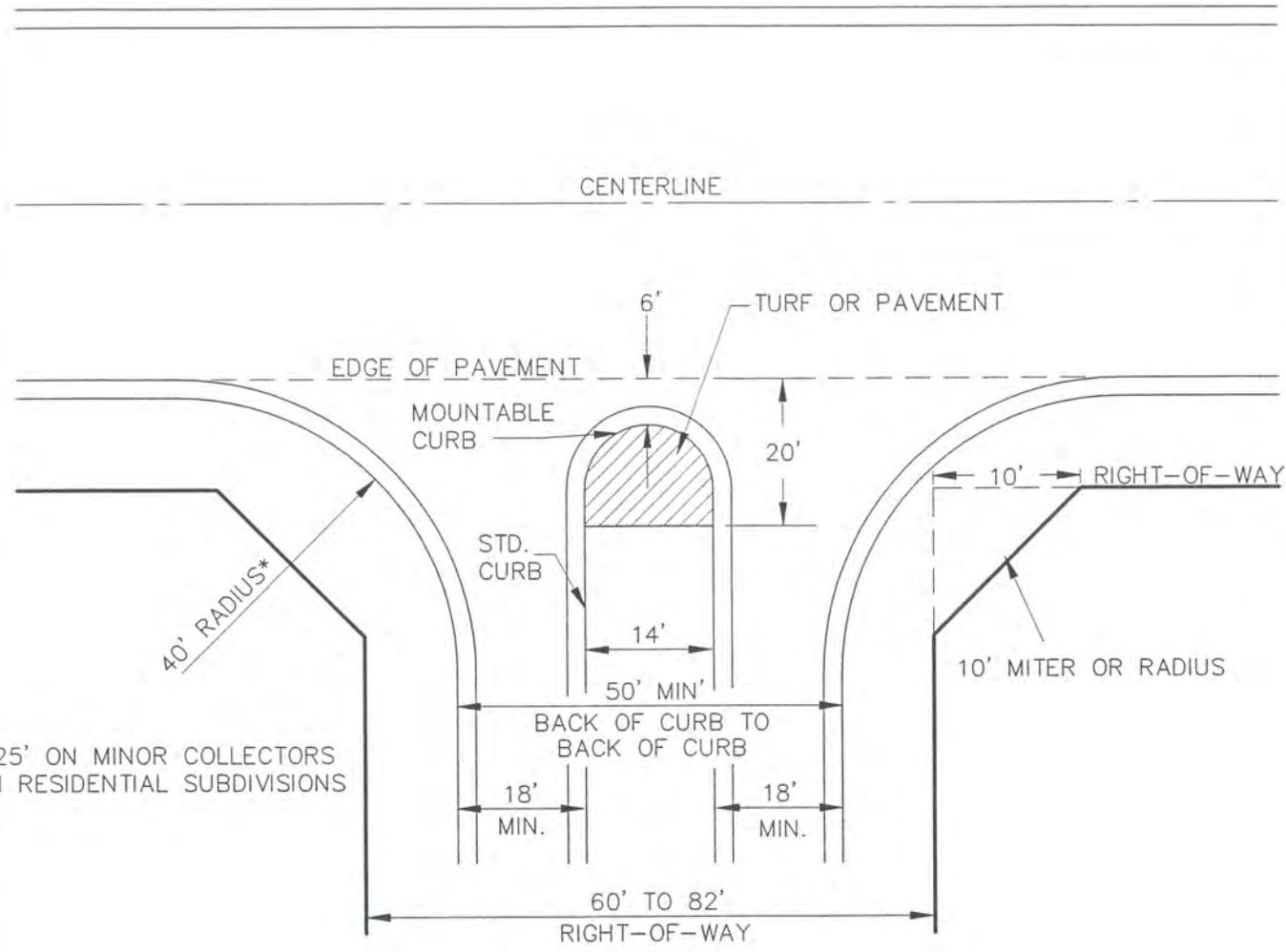
STREET TYPE (THOROUGHFARE)	ISD - SIGHT DISTANCE (EACH WAY)
ARTERIAL	475.0'
MAJOR COLLECTOR	350.0'
MINOR COLLECTOR	312.5'
LOCAL	200.0'



City of Madison

Intersection Sight Distance

CONSTRUCTION AND DESIGN STANDARD DETAILS
 SCALE: NONE DATE: DECEMBER 1998



*25' ON MINOR COLLECTORS IN RESIDENTIAL SUBDIVISIONS

NOTE: NO MEDIAN WITH 60' R/W.

NOTES:

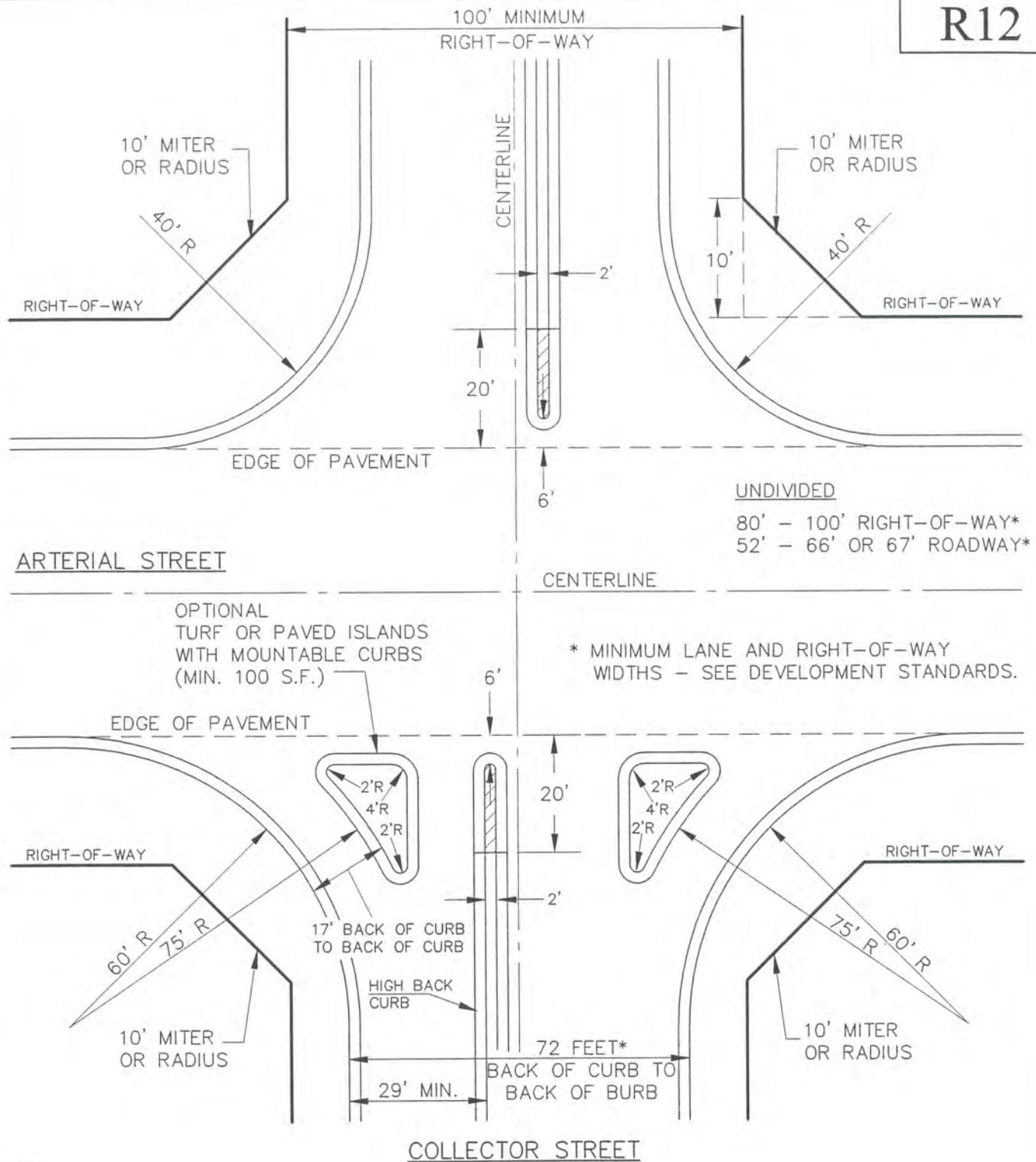
1. INSIDE OF ISLANDS ARE TO BE BACKFILLED WITH PORTLAND CEMENT CONCRETE, OR GRASSED, OR PLANTED WITH VEGETATION NOT EXCEEDING TWENTY-FOUR INCHES IN HEIGHT.
2. DEVELOPER TO MAINTAIN GRASSED OR PLANTED ISLAND
3. LARGER RADII FOR RIGHT-OF-WAY OR ROADWAY CONNECTIONS MAY BE REQUIRED FOR STREETS INTERSECTING AT ANGLES LESS THAN 90 DEGREES.
4. ISLANDS AT INTERSECTIONS ARE THE OPTION OF THE DEVELOPER, EXCEPT FOR GEORGIA D.O.T. CONTROLLED ROUTS.



City of Madison

"T" Intersection - Collector / Arterial

CONSTRUCTION AND DESIGN STANDARD DETAILS
 SCALE: NONE DATE: DECEMBER 1998



NOTES:

1. A COMBINATION OF THESE TWO DESIGNS MAY BE USED.
2. INSIDE OF ISLANDS ARE TO BE BACKFILLED WITH PORTLAND CEMENT CONCRETE, OR GRASSED, OR PLANTED WITH VEGETATION NOT EXCEEDING TWENTY-FOUR INCHES IN HEIGHT.
3. DEVELOPER TO MAINTAIN GRASSED OR PLANTED ISLAND
4. LARGER RADII FOR RIGHT-OF-WAY OR ROADWAY CONNECTIONS MAY BE REQUIRED FOR STREETS INTERSECTING AT ANGLES LESS THAN 90 DEGREES.
5. ISLANDS AT INTERSECTIONS ARE THE OPTION OF THE DEVELOPER, EXCEPT FOR GEORGIA D.O.T. CONTROLLED ROUTS.



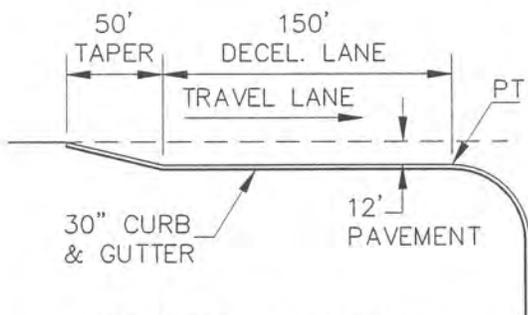
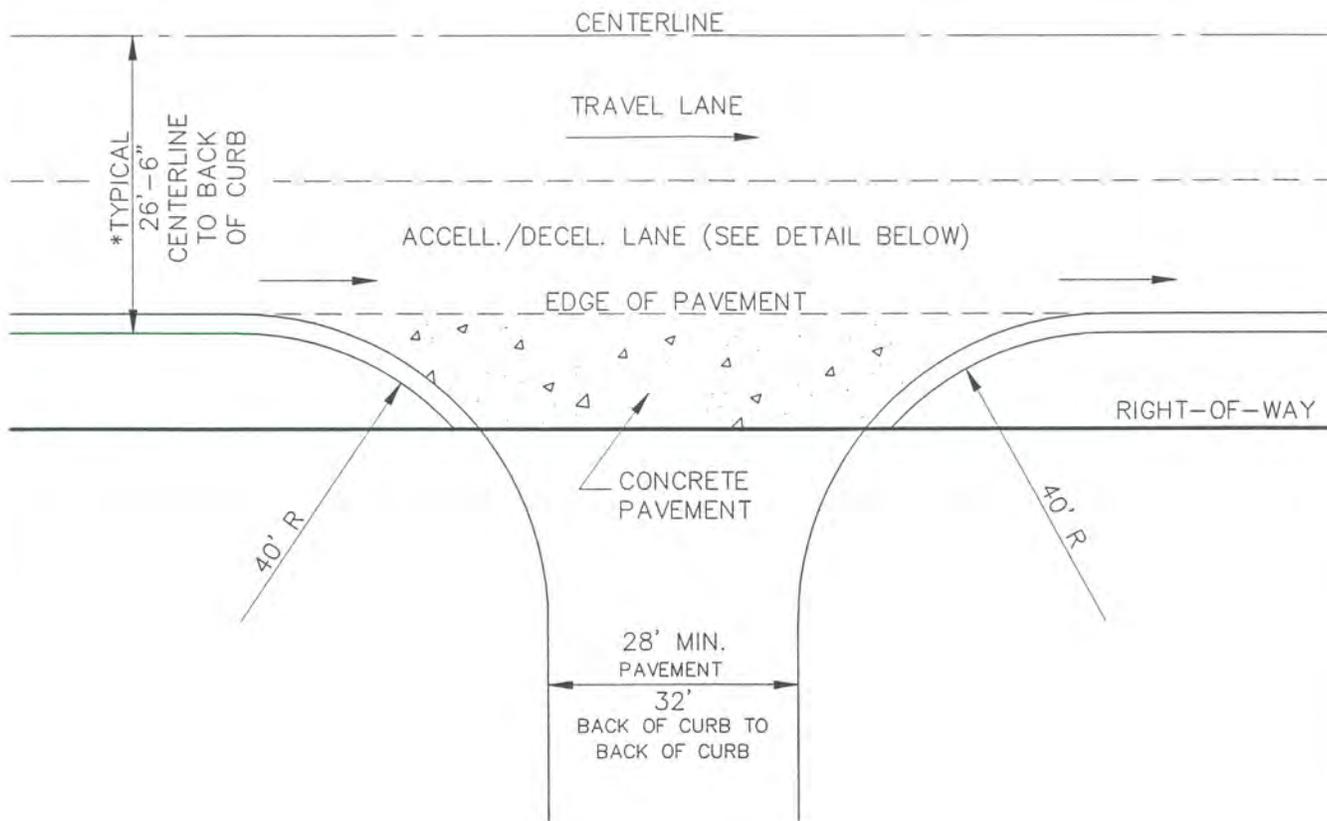
City of Madison

Intersection - Collector/Arterial Street

CONSTRUCTION AND DESIGN STANDARD DETAILS
SCALE: NONE DATE: DECEMBER 1998

DRIVEWAY FOR:

- SERVICE STATIONS
- COMMERCIAL SITES (OVER 80,000 SQ. FT.)
- OFFICE INSTITUTIONAL COMPLEXES (OVER 100,000 SQ.FT.)
- APARTMENT/CONDO COMPLEXES (OVER 200 UNITS)
- MOBILE HOME COMPLEXES (OVER 200 LOTS)



NOTE: DECEL. LANE SHOWN.
ACCELL LANE IS OPPOSITE.

ACCELL/DECEL. LANE

DRIVEWAY NOTES:

1. 28 FT. OF PAVEMENT WIDTH.
2. 8" X 24" X 14" @ 3000 PSI CURB AND GUTTER.
3. 40 FOOT RADII ON CURBS.
4. CONCRETE PAVEMENT - 8" THICK, 3500 PSI.

* ADDITIONAL WIDENING MAY BE REQUIRED.

ISLANDS AT INTERSECTIONS ARE AT THE OPTION OF THE DEVELOPER, EXCEPT FOR GEORGIA D.O.T. CONTROLLED ROUTES.



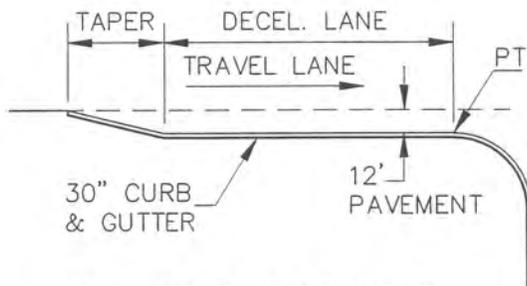
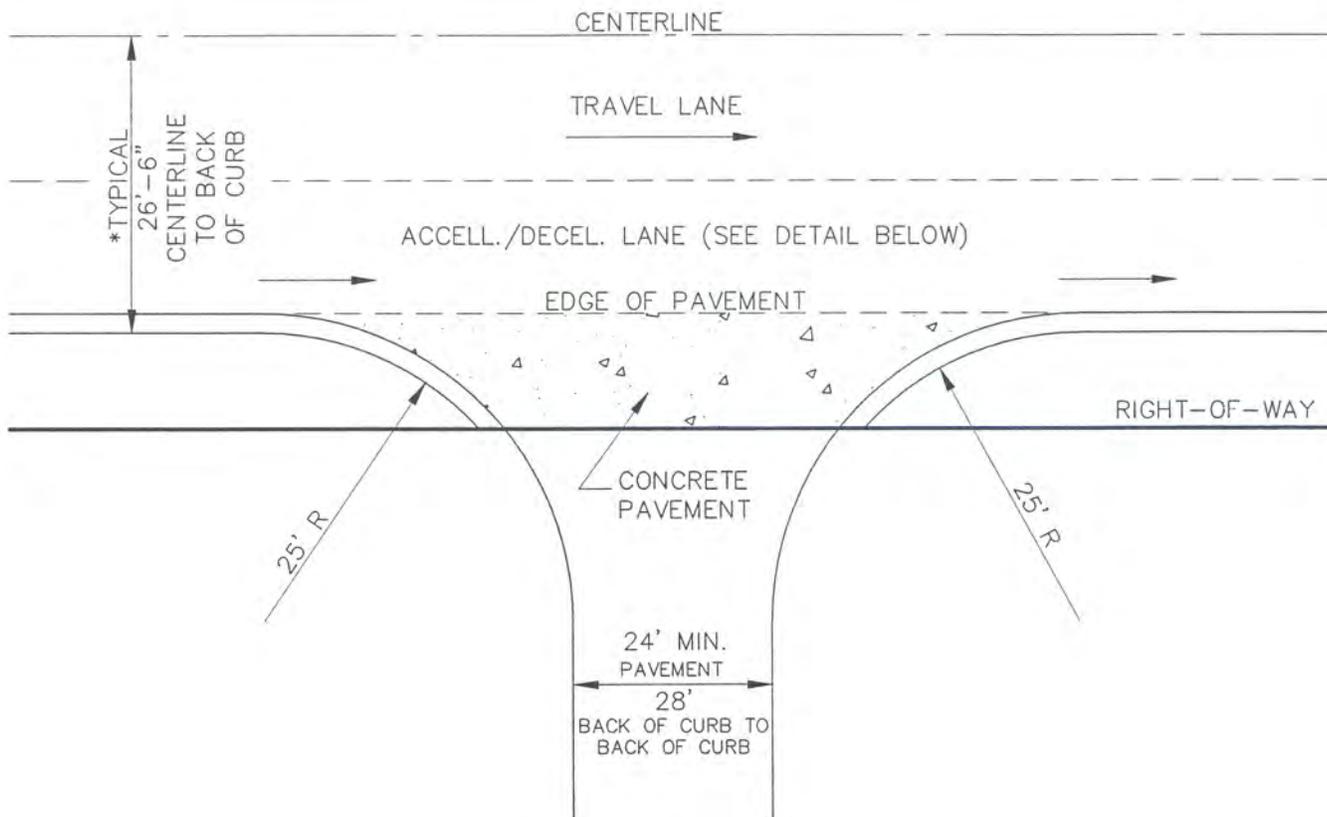
City of Madison

Industrial Driveway

CONSTRUCTION AND DESIGN STANDARD DETAILS
SCALE: NONE DATE: DECEMBER 1998

DRIVEWAY FOR:

- COMMERCIAL SITES (80,000 SQ. FT. OR LESS)
- OFFICE INSTITUTIONAL COMPLEXES (100,000 SQ.FT. OR LESS)
- APARTMENT/CONDO COMPLEXES (200 UNITS OR LESS)
- MOBILE HOME COMPLEXES (200 LOTS OR LESS)



NOTE: DECEL. LANE SHOWN.
ACCELL. LANE IS OPPOSITE.

ACCELL./DECEL. LANE

DRIVEWAY NOTES:

1. 24 FT. OF PAVEMENT WIDTH.
2. 8" X 24" X 14" @ 3000 PSI CURB AND GUTTER.
3. 25 FOOT RADII ON CURBS.
4. CONCRETE PAVEMENT - 8" THICK, 3500 PSI.

* ADDITIONAL WIDENING MAY BE REQUIRED.

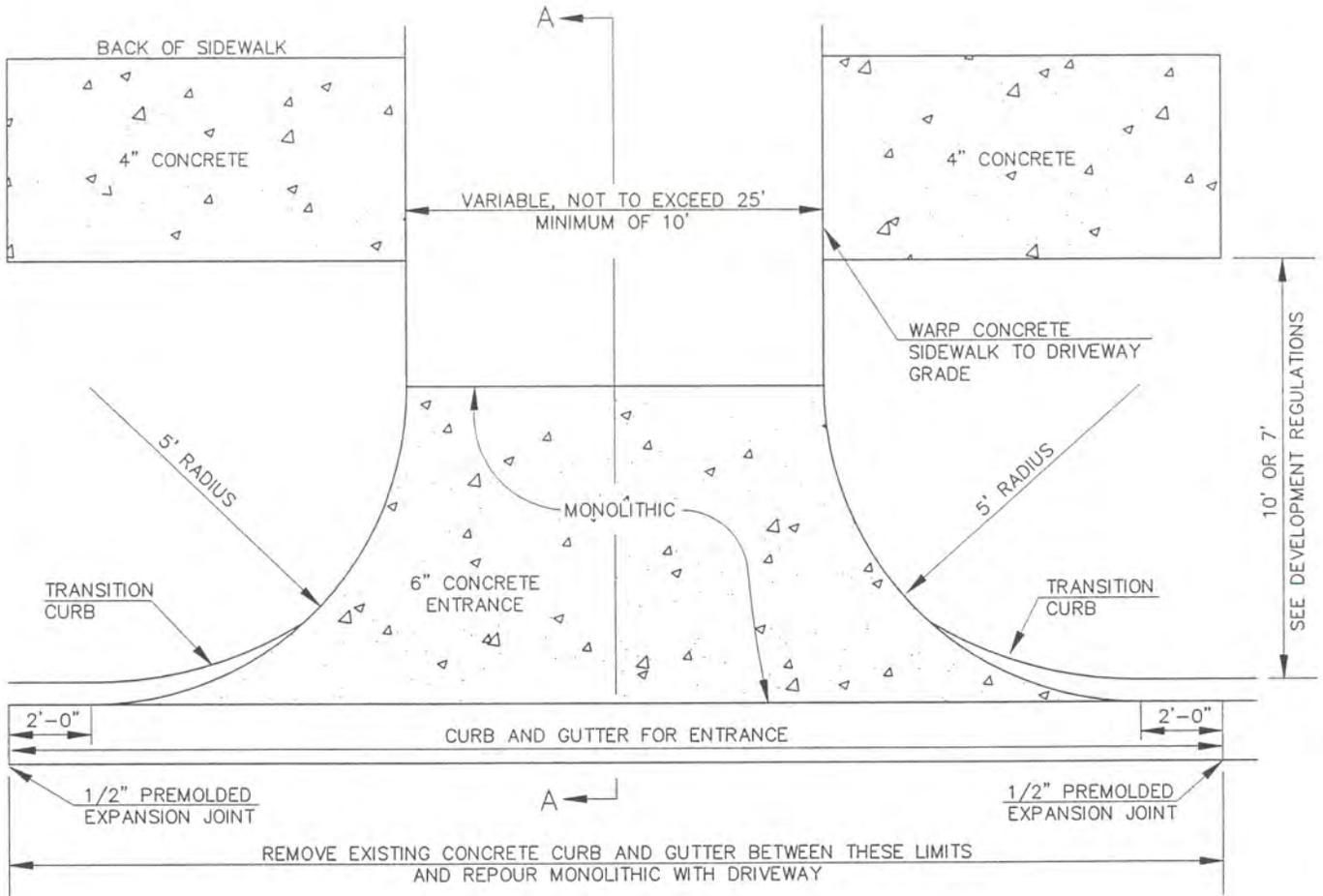
ISLANDS AT INTERSECTIONS ARE AT THE OPTION OF THE DEVELOPER, EXCEPT FOR GEORGIA D.O.T. CONTROLLED ROUTES.



City of Madison

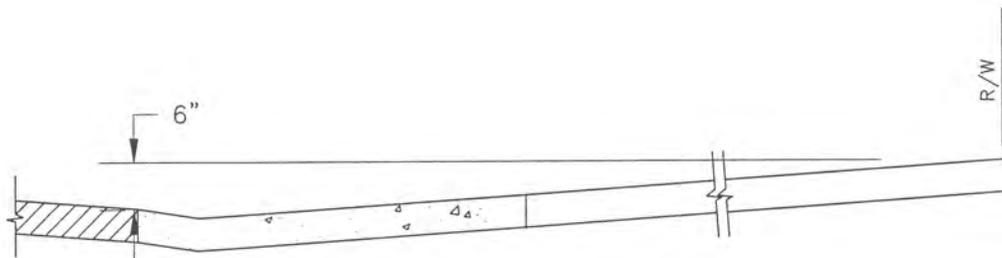
Commercial Driveway

CONSTRUCTION AND DESIGN STANDARD DETAILS
SCALE: NONE DATE: DECEMBER 1998



NOTE: ALL CONCRETE TO BE 3000 PSI. MINIMUM.

PLAN



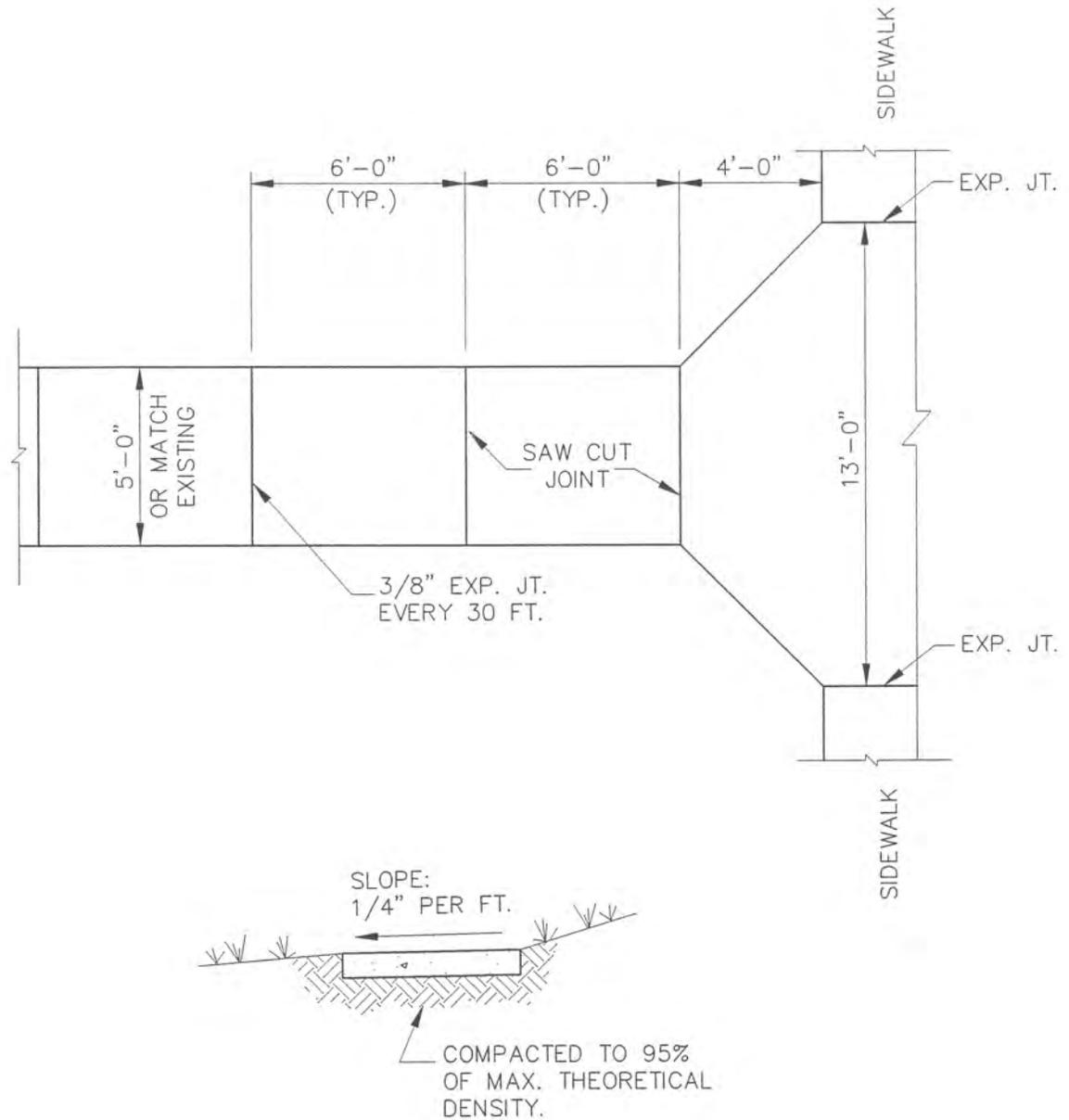
SECTION A-A



City of Madison

Residential Driveway

CONSTRUCTION AND DESIGN STANDARD DETAILS
SCALE: NONE DATE: DECEMBER 1998



NOTES:

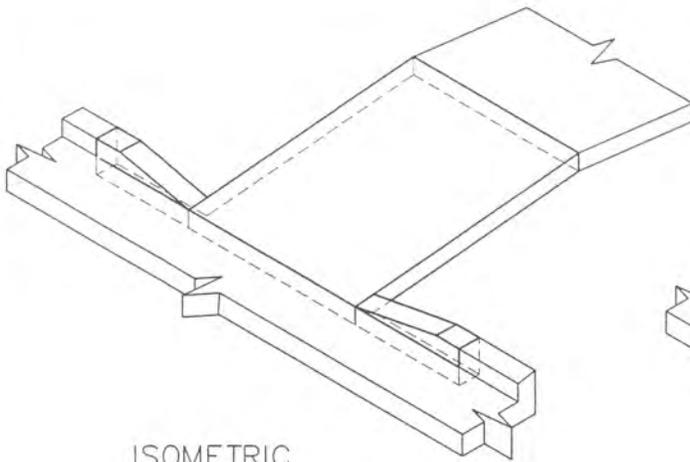
1. MIN. SLAB THICKNESS = 4".
2. PROVIDE 1/2" EXPANSION JOINT AT THE INTERSECTION OF SIDEWALK W/STRUCTURES UNLESS OTHERWISE NOTED.
3. SIDEWALK TO BE CONSTRUCTED OF 3000 PSI MIN. @ 28 DAYS.



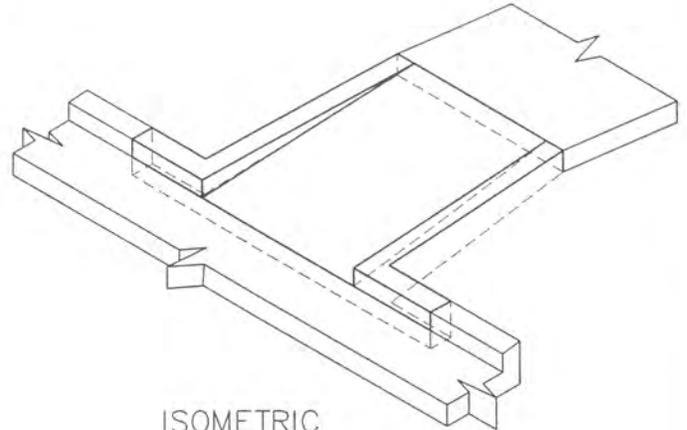
City of Madison

Typical Concrete Sidewalk

CONSTRUCTION AND DESIGN STANDARD DETAILS
 SCALE: NONE DATE: DECEMBER 1998



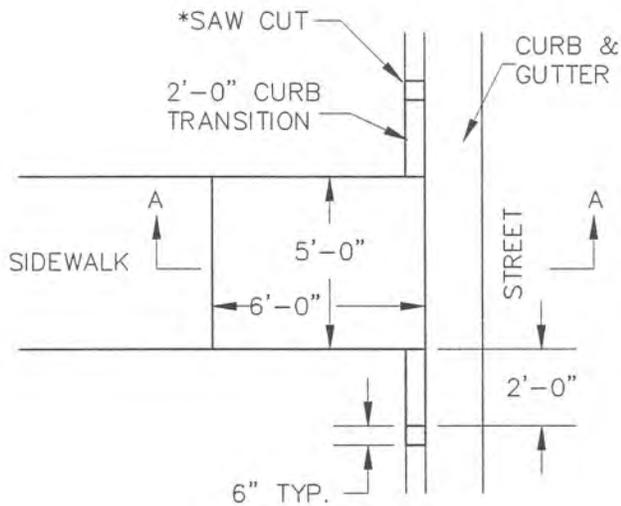
ISOMETRIC



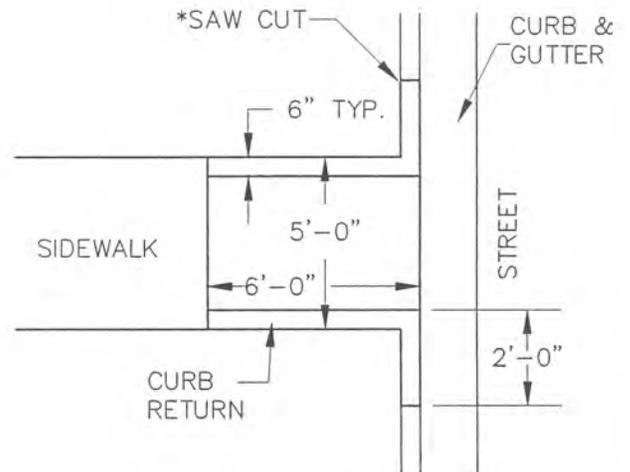
ISOMETRIC

SAW CUT

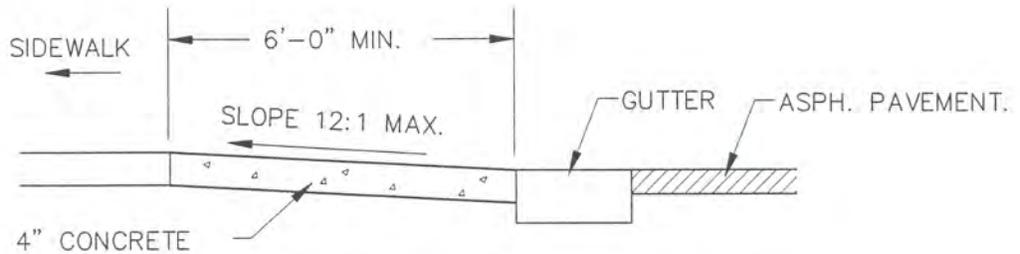
* SAW CUT EXISTING CURB & GUTTER WHEN CONNECTING NEW RAMP TO EXISTING CURB & GUTTER.



TYPE "A" - PLAN



TYPE "B" - PLAN



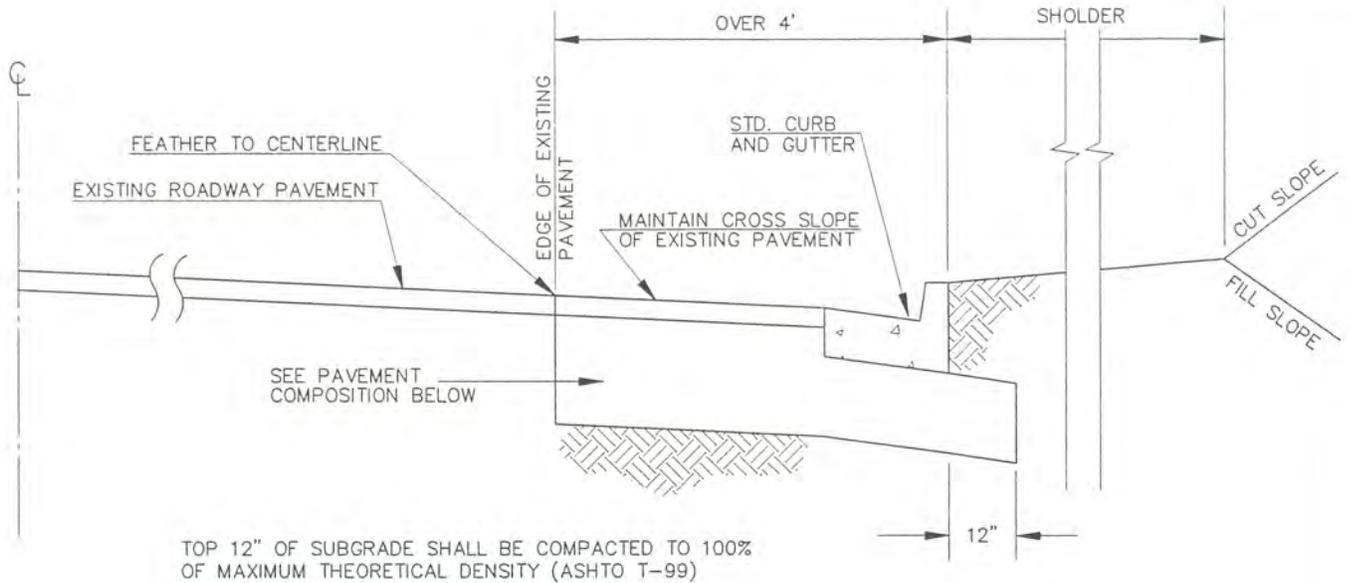
SECTION A-A



City of Madison

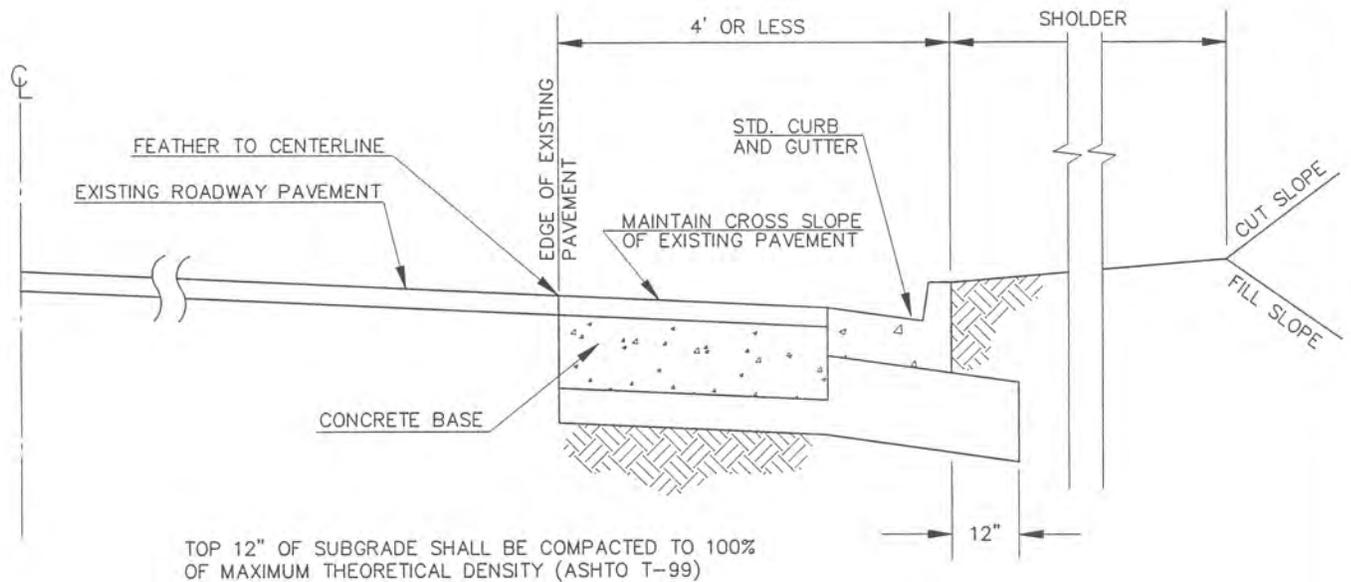
Wheelchair Ramp

CONSTRUCTION AND DESIGN STANDARD DETAILS
SCALE: NONE DATE: DECEMBER 1998



PAVEMENT COMPOSITION

ROADWAY WIDENING SECTIONS OVER 4' SHALL COMPLY WITH THE CONSTRUCTION STANDARDS FOR NEW STREETS.



PAVEMENT COMPOSITION

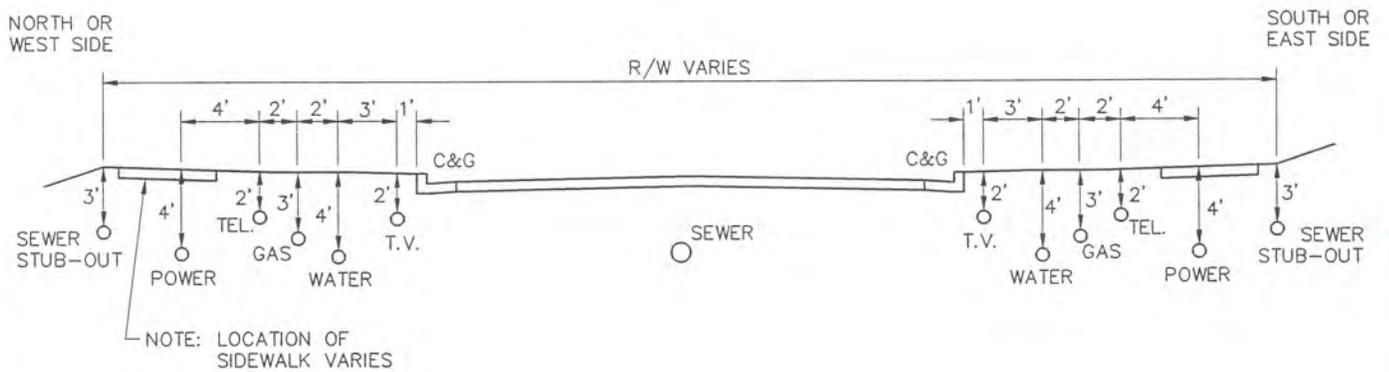
- 1 1/2" TYPE "E" OF "F" WEARING COURSE
- 5" 3000 PSI CONCRETE BASE (LOCAL STREETS AND MINOR COLLECTORS) OR
- 7" 3000 PSI CONCRETE BASE (MAJOR COLLECTORS AND ARTERIALS)



City of Madison

Roadway Widening Sections

CONSTRUCTION AND DESIGN STANDARD DETAILS
SCALE: NONE DATE: DECEMBER 1998



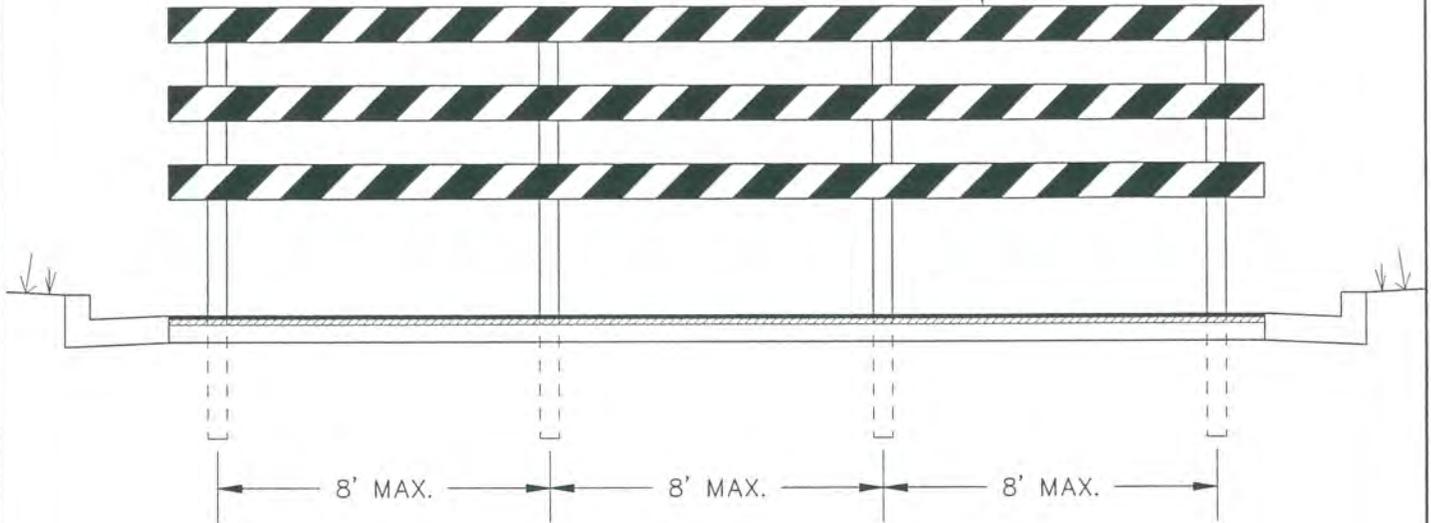
City of Madison

Location of Street Utilities

CONSTRUCTION AND DESIGN STANDARD DETAILS
SCALE: NONE DATE: DECEMBER 1998

POSTS AND PLANKS SHALL BE OF SOTHERN YELLOW PINE, FREE OF KNOTS AND SHAKES.

FOR BOARD SPACING SEE ILLUSTRATION BELOW



NOTE:

BARRICADES MAY BE OF VARIABLE LENGTH AS DETERMINED BY STREET WIDTH. THE CLASS "A" BARRICADE IS THE TYPE NORMALLY REQUIRED FOR MAJOR OPERATIONS, WHERE THE BARRICADE MUST REMAIN IN PLACE FOR EXTENDED PERIODS. HOWEVER, IN ANY LENGTH BARRICADE 10 FEET OR LONGER, VERTICAL UP-RIGHTS SHOULD NOT EXCEED A CENTER TO CENTER DIMENSION OF 8 FEET WITH ONE FOOT OVERHANG ON EACH END. THE DIRECTION OF STRIPES CANNOT ALWAYS SLANT DOWNWARD TOWARD THE SIDE ON WHICH THE TRAFFIC IS TO PASS, AS MANY BARRICADES MUST NOT BE PASSED ON EITHER SIDE. WHERE A BARRICADE EXTENDS ENTIRELY ACROSS A ROADWAY, IT IS SUGGESTED THAT THE STRIPING SLOPE DOWNWARD IN THE DIRECTION TOWARD WHICH TRAFFIC MUST TURN IN DETOURING. WHERE BOTH RIGHT AND LEFT TURNS ARE PROVIDED FOR, THE STRIPING SHOULD SLOPE DOWNWARD IN BOTH DIRECTIONS FROM THE CENTER. SLOPE ANGLE FOR THE STRIPES SHOULD ALWAYS BE 45°. ALL BARRICADES USED AT NIGHT SHALL BE EFFECTIVELY REFLECTORIZED.

COLORS TO BE BLACK ON WHITE OR WHITE ON BLACK.

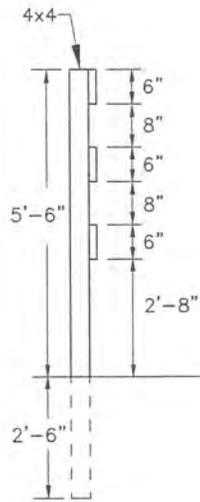
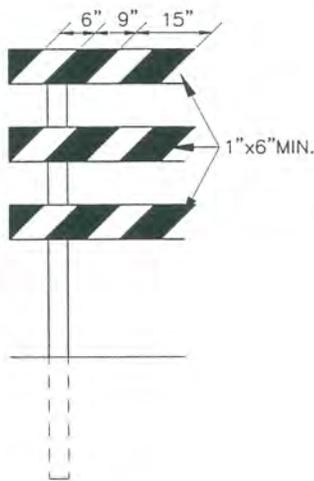
FOR OTHER TRAFFIC CONTROL DEVICES, REFER TO THE LATEST VERSION OF "THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES".

NOTE:

REFLECTING ELEMENTS OR MATERIAL PLACED ON 4' SPACING ACROSS BARRICADE.

NOTE:

ALL LUMBER(PLANKS AND BOARDS) TO BE OF TREATED MATERIAL, I.E. CHROMATED ZINC CHLORIDE(C.Z.C.) OR WOLMAN SALTS. "TREATED MATERIAL" TO BE CONSTRUED AS "PRESSURE TREATED">



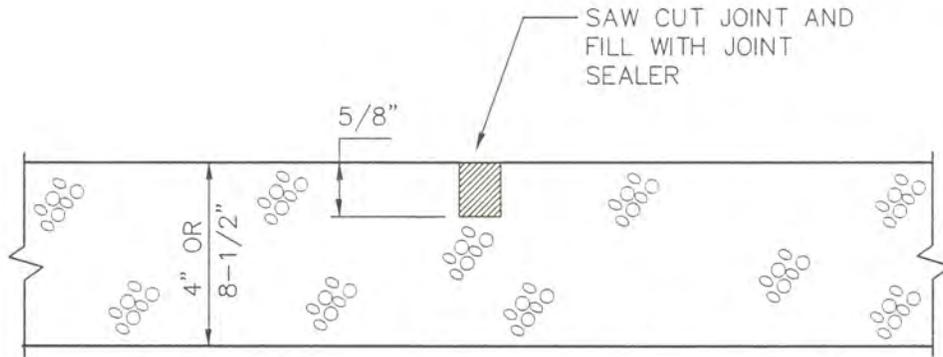
City of Madison

Standard Road Barricade

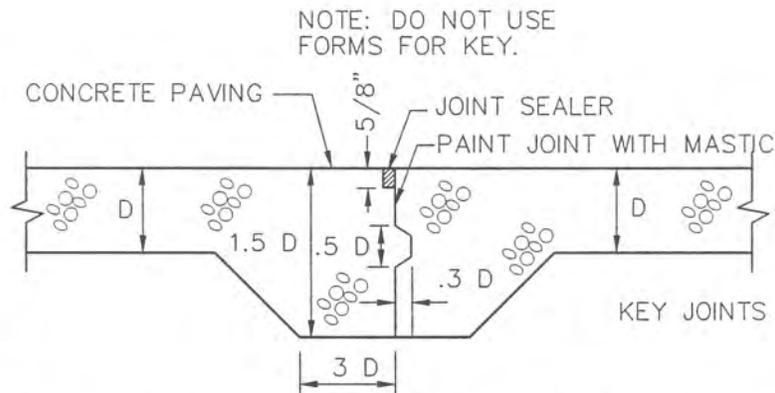
CONSTRUCTION AND DESIGN STANDARD DETAILS

SCALE: NONE

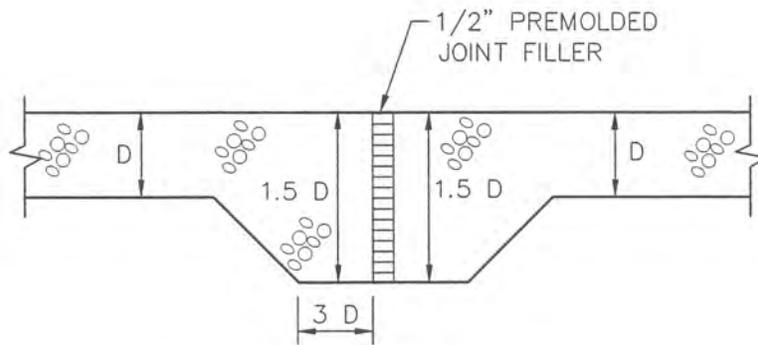
DATE: DECEMBER 1998



TYPICAL CONTRACTION JOINT



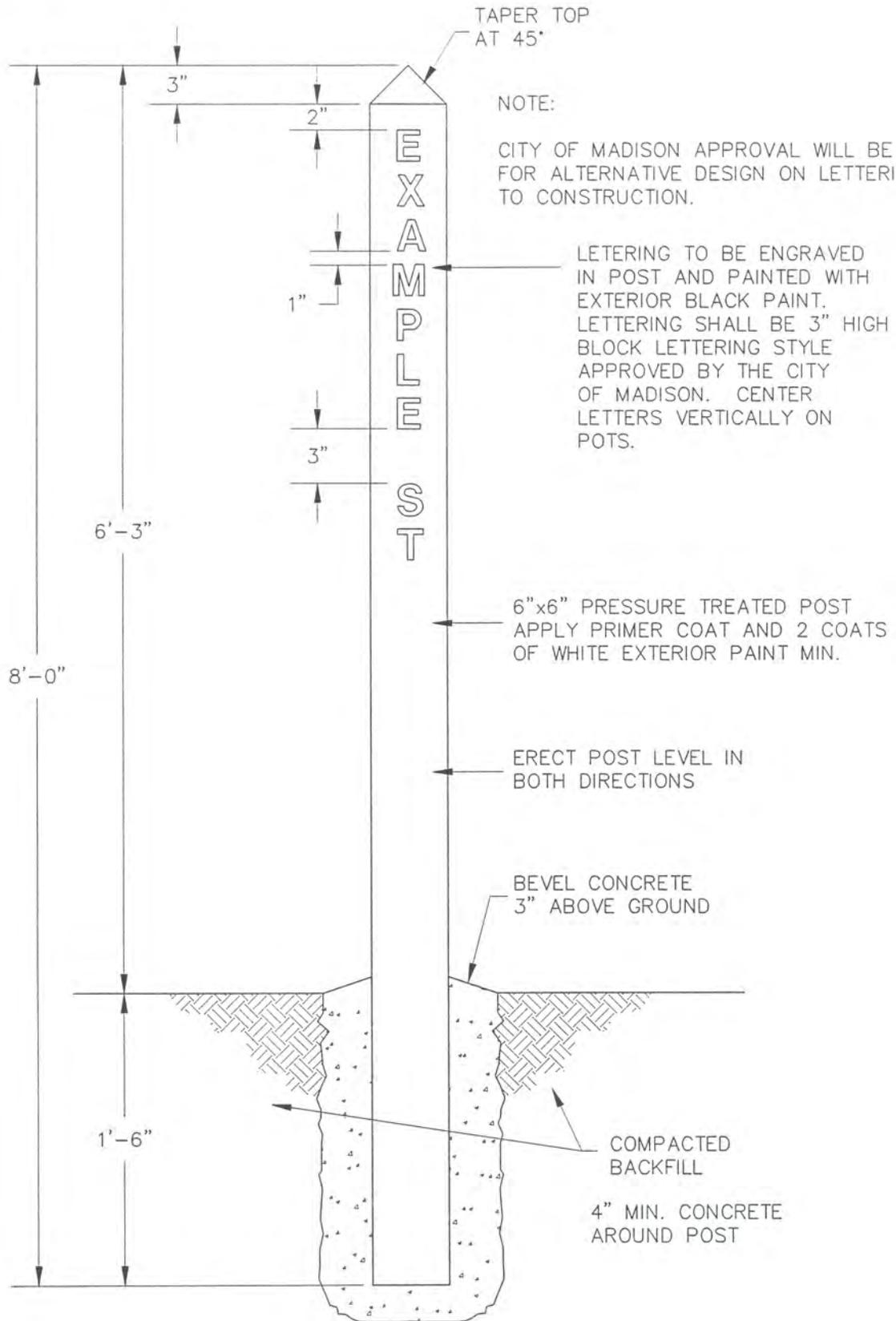
TYPICAL CONSTRUCTION JOINT



NOTE: EXPANSION JOINTS SHALL BE USED WHEN CONCRETE POUR ABUTTS ANOTHER POUR, CURB, SIDEWALK OR OTHER RIGID STRUCTURE.

TYPICAL EXPANSION JOINT

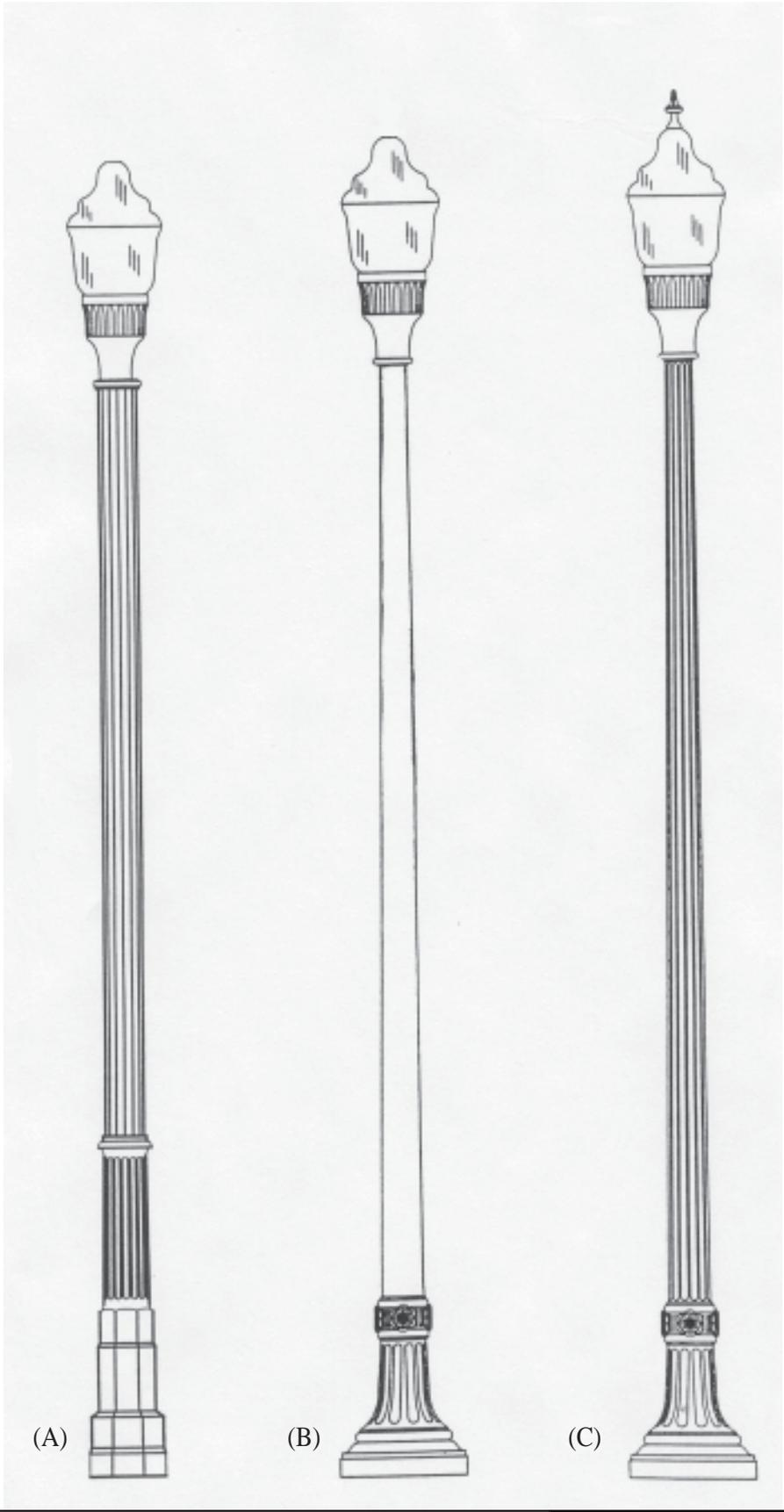




City of Madison

Street Sign Post

CONSTRUCTION AND DESIGN STANDARD DETAILS
SCALE: NONE DATE: DECEMBER 1998



STREETLIGHTS

(A) STANDARD

Utility GranVille luminaire

- high pressure sodium
- 100 watt bulb
- fluted casting, no finial
- Holophane

[GVU-10DHP-12-B-5-N-N-B]

Embedded Pedestal Pole

- extruded aluminum, black
- 12' height
- 4" diameter, fluted shaft
- Holophane [OS12F4/10-CA-BK]
- Hapco [7751B-002P43]*

*benefit of being direct burial

(B) CORRIDOR DISTRICT

GranVille luminaire

- metal halide
- 175 watt bulb
- fluted casting, no finial
- Holophane

[GV1A-175MHMT-12-F-B-5-N-N-B]

North Yorkshire Decorative Post

- cast aluminum, black
- 12' height
- 5"/17" diameter, tapered shaft
- Holophane [NY12S5/17-CA-BK]

(C) HISTORIC DISTRICT

GranVille luminaire

- high pressure sodium*
- 100 watt bulb*
- fluted casting, 5" cast aluminium finial, black
- Holophane

[GV1A-10DHP-12-F-B-5-N-ST-B]

**Downtown (C-1) only:

[GV1A-175MHMT-12-F-B-5-N-ST-B]

North Yorkshire Decorative Post

- cast iron, black
- 12' height
- 5"/17" diameter, fluted and tapered shaft
- Holophane [NY12FT5/17-CA-BK]

**Downtown (C-1) only:

[NY12FT5/17-CA-BK-WPRT]

w/outlets, flag & banner mounts

(A)

(B)

(C)

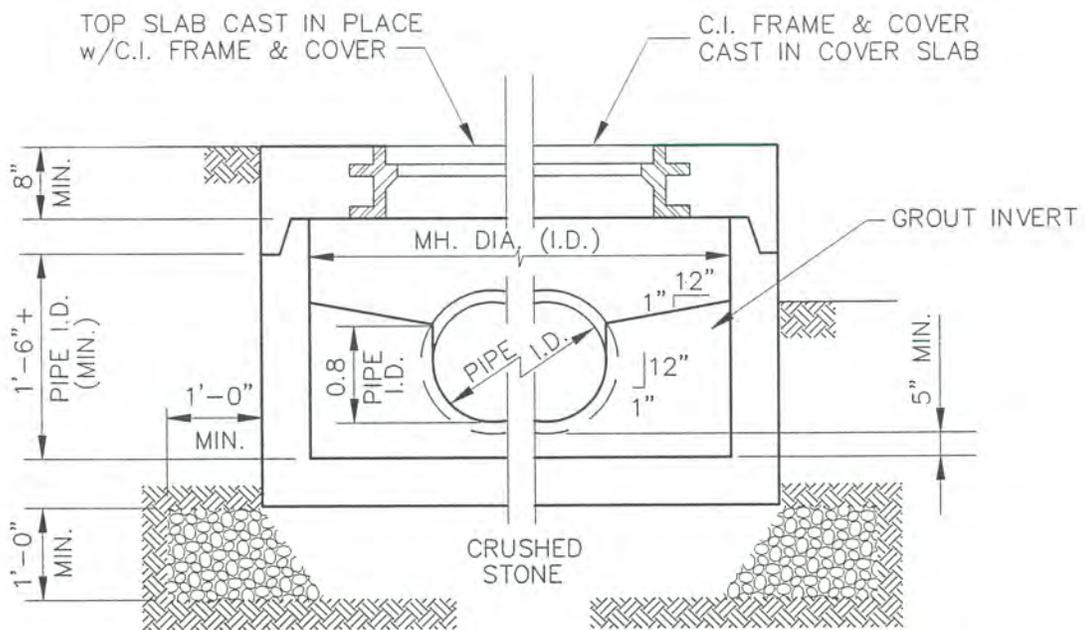


City of Madison

STREETLIGHTS - (A) STANDARD, (B) CORRIDOR DISTRICT
(C) HISTORIC DISTRICT - RESIDENTIAL & DOWNTOWN

CONSTRUCTION AND DESIGN STANDARD DETAILS
SCALE: NONE DATE: JUNE 2001

Sanitary Sewer Systems - S



TOP AT GRADE

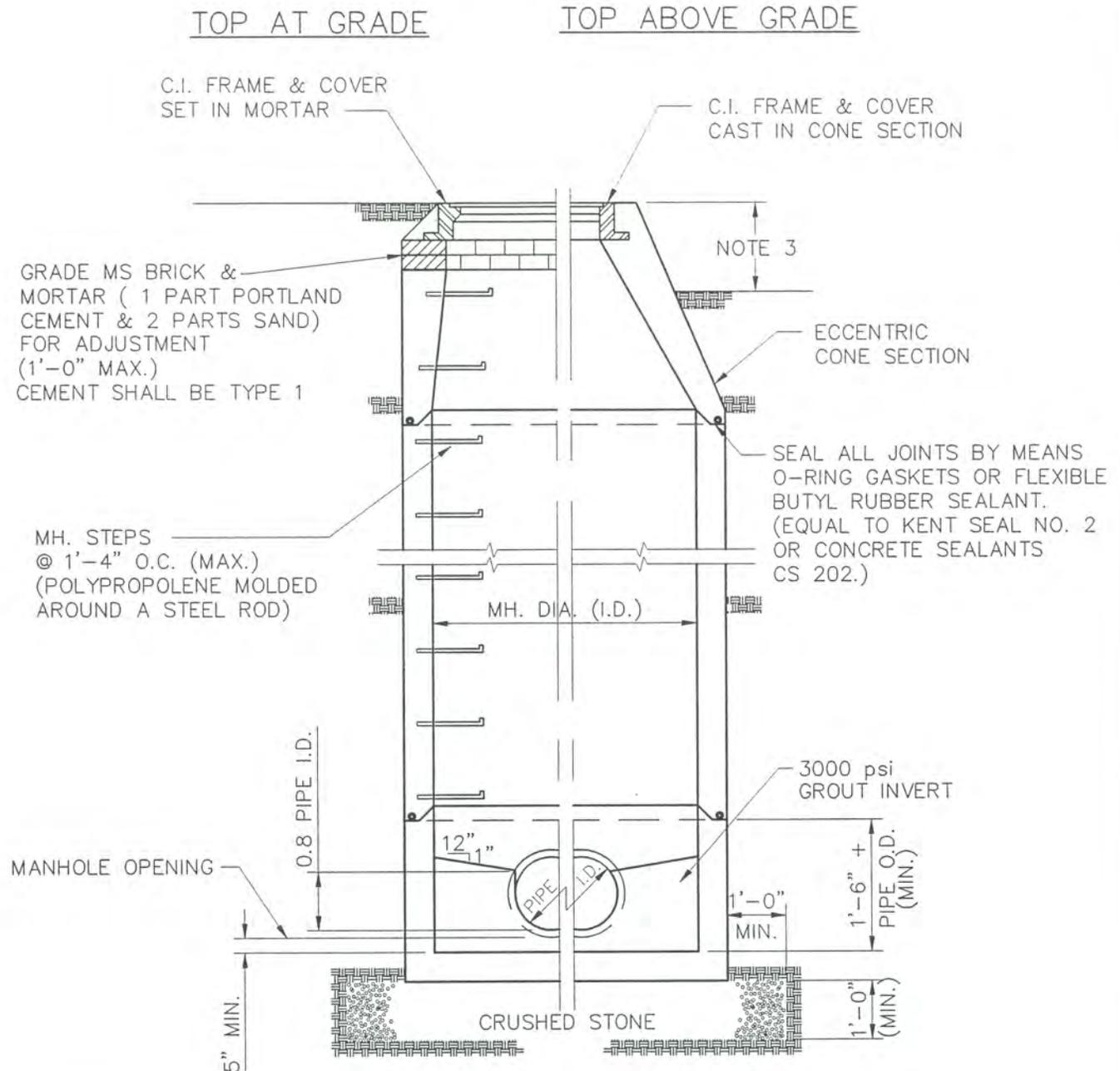
TOP ABOVE GRADE



City of Madison

Standard Shallow Manhole

CONSTRUCTION AND DESIGN STANDARD DETAILS
SCALE: NONE DATE: DECEMBER 1998



NOTES:

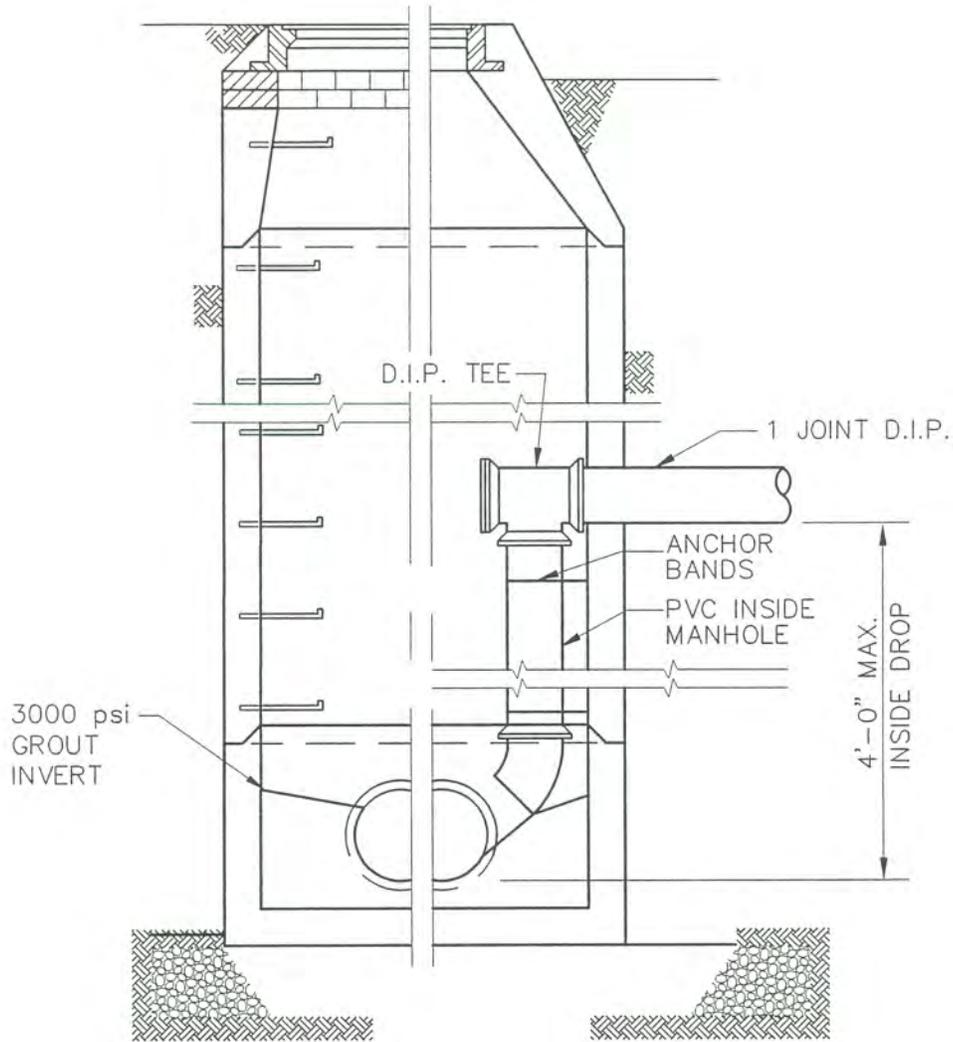
1. CONSTRUCT MANHOLES AS SHOWN ON DRAWINGS.
2. PRECAST CONCRETE SECTIONS SHALL MEET THE REQUIREMENTS OF ASTM C 478. MINIMUM COMPRESSIVE STRENGTH OF THE CONCRETE IN PRECAST SECTIONS SHALL BE 4000 PSI.
3. BUILD MANHOLES OUTSIDE OF PAVED AREAS TO 18" ABOVE GRADE UNLESS OTHERWISE SHOWN ON THE DRAWINGS OR DIRECTED BY THE ENGINEER.
4. SEAL ALL JOINTS AND LIFT HOLES, BOTH INSIDE AND OUT, WITH GROUT. THIS IS IN ADDITION TO JOINT SEALANT BETWEEN SECTIONS.
5. PROVIDE UNIFORM BEDDING OF THE BOTTOM TO PREVENT UNEVEN LOADING.



City of Madison

Standard Manhole

CONSTRUCTION AND DESIGN STANDARD DETAILS
SCALE: NONE DATE: DECEMBER 1998



NOTES:

- 1. SEE DETAIL S02 FOR MANHOLE SPECIFICATIONS AND DIMENSIONS.



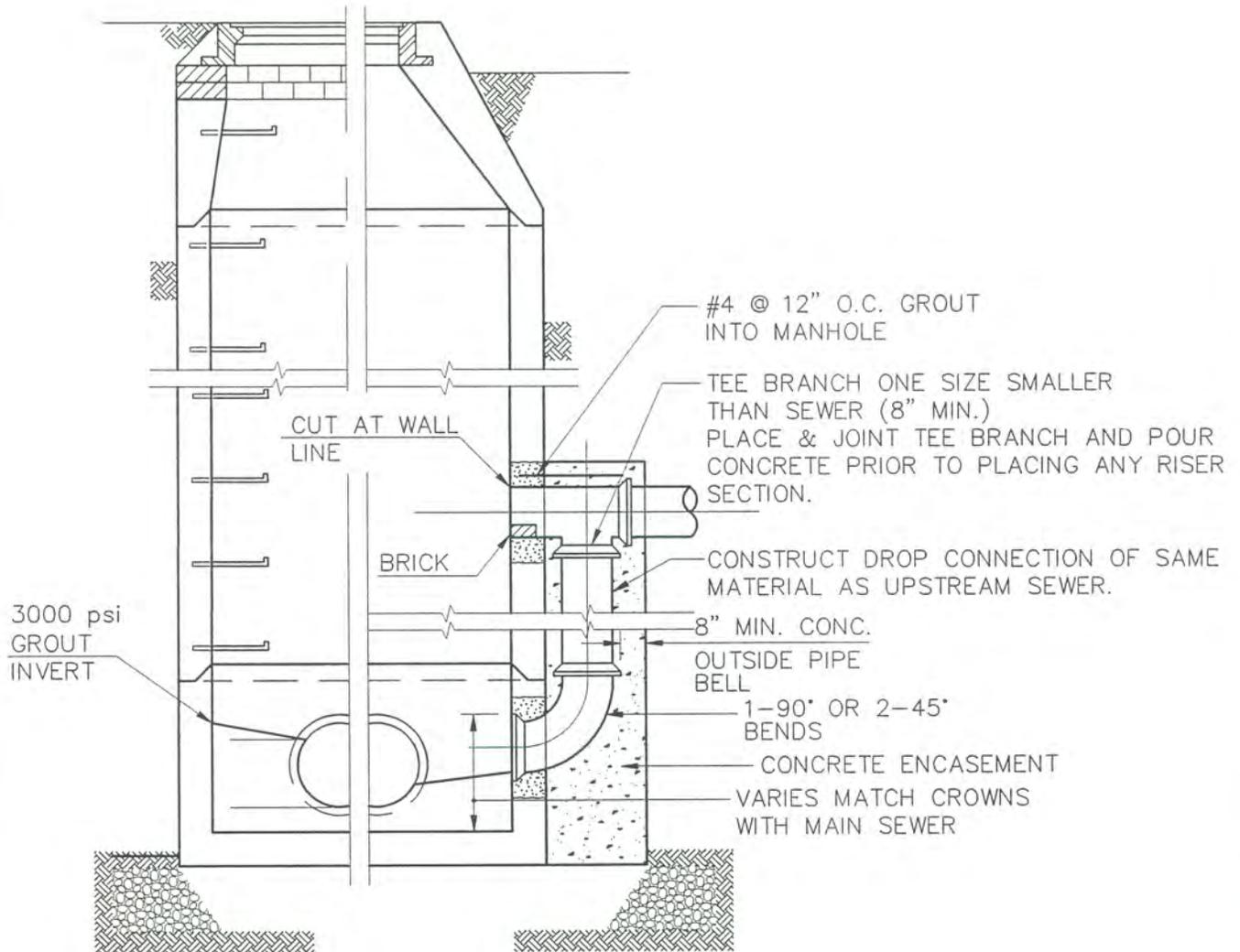
City of Madison

Manhole Inside Drop

CONSTRUCTION AND DESIGN STANDARD DETAILS

SCALE: NONE

DATE: DECEMBER 1998



NOTES:

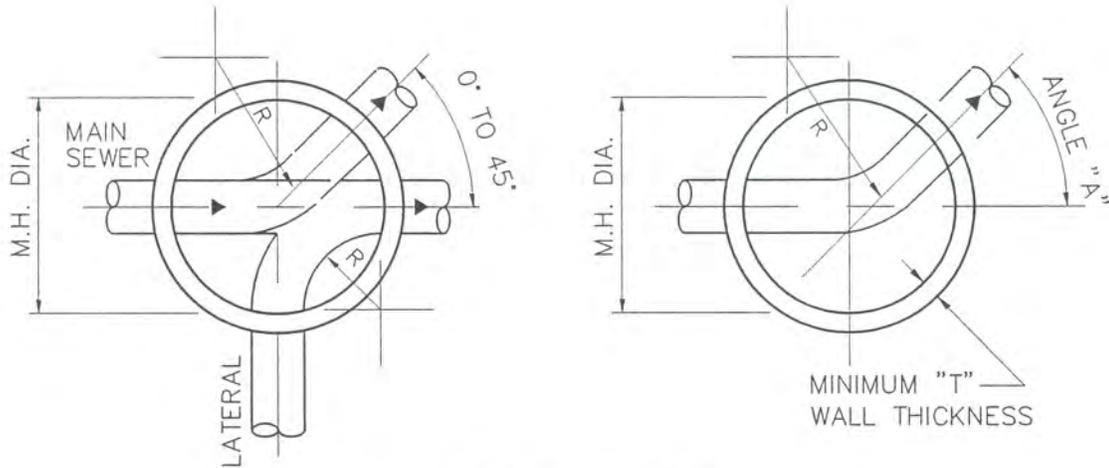
1. SEE DETAIL S02 FOR MANHOLE SPECIFICATIONS AND DIMENSIONS.



City of Madison

Manhole Outside Drop

CONSTRUCTION AND DESIGN STANDARD DETAILS
SCALE: NONE DATE: DECEMBER 1998



TYPICAL PLANS

STANDARD MANHOLE SCHEDULE
OF GOVERNING DIMENSIONS

PIPE SIZE	ANGLE "A"	MH. DIA.	"T"	
6" TO 16"	0° TO 90°	4'-0"	5"	
18" TO 24"	0° TO 60°	4'-0"	5"	
18" TO 24"	60° TO 90°	5'-0"	6"	

NOTES:

1. MINIMUM C RADIUS OF M.H. INVERT $R = 1.5 \times \text{PIPE DIAMETER}$.
2. ROUND & TROWEL INVERTS SMOOTH.



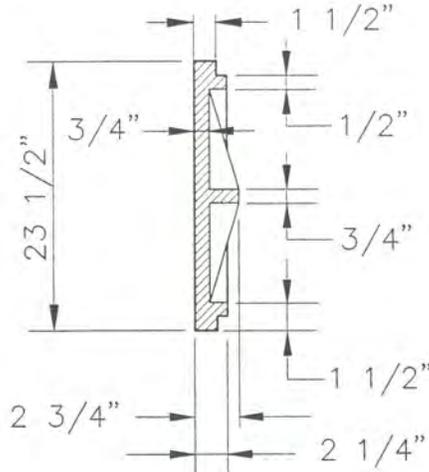
City of Madison

Manhole Inverts

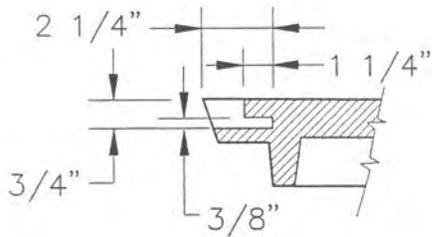
CONSTRUCTION AND DESIGN STANDARD DETAILS
SCALE: NONE DATE: DECEMBER 1998



COVER BACK

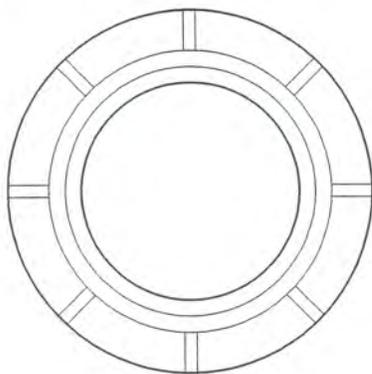


COVER FACE

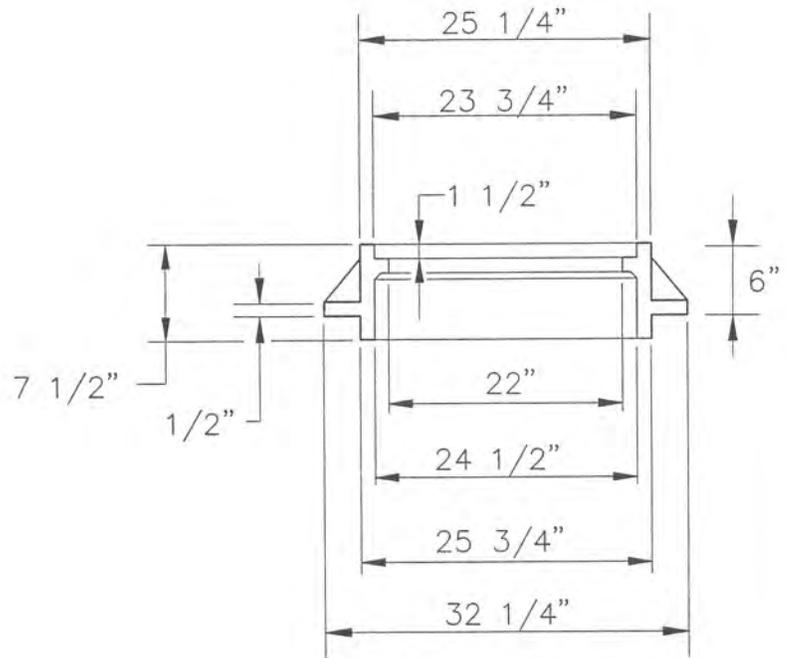


(2) TYPE TWO NON-PENETRATING PICKHOLES

PICKHOLE DETAIL



FRAME PLAN



FRAME SECTION

NOTE:
COVER SHALL BE VULCAN V-1349, NEENAH R-1642,
OR APPROVED EQUAL.



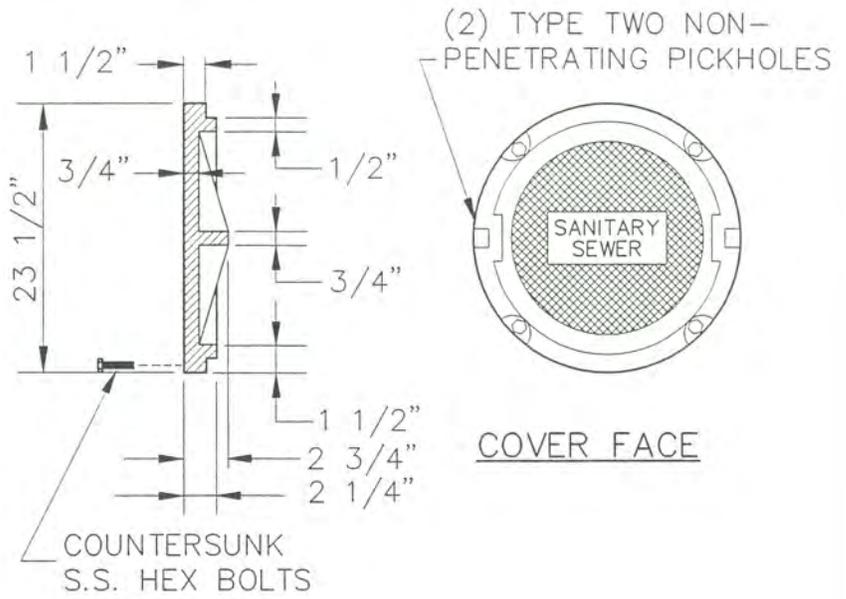
City of Madison

Manhole Frame and Cover

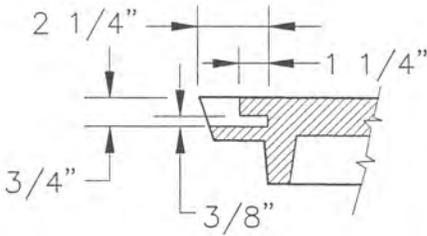
CONSTRUCTION AND DESIGN STANDARD DETAILS
SCALE: NONE DATE: DECEMBER 1998



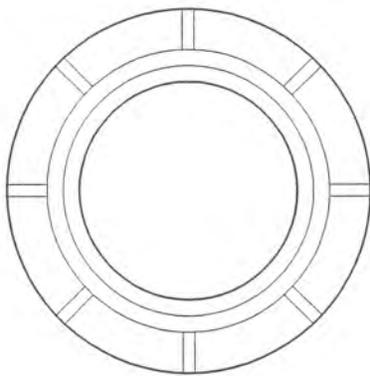
COVER BACK



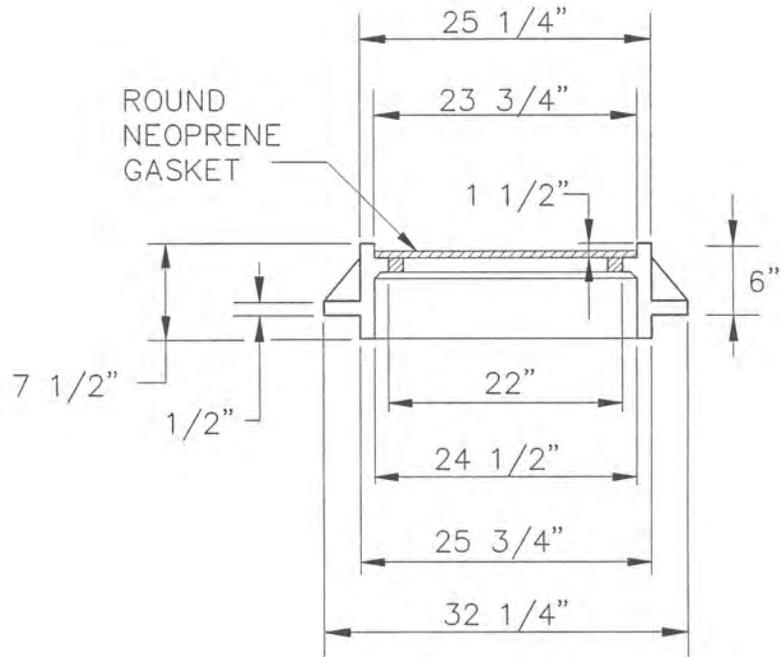
COVER FACE



PICKHOLE DETAIL



FRAME PLAN



FRAME SECTION

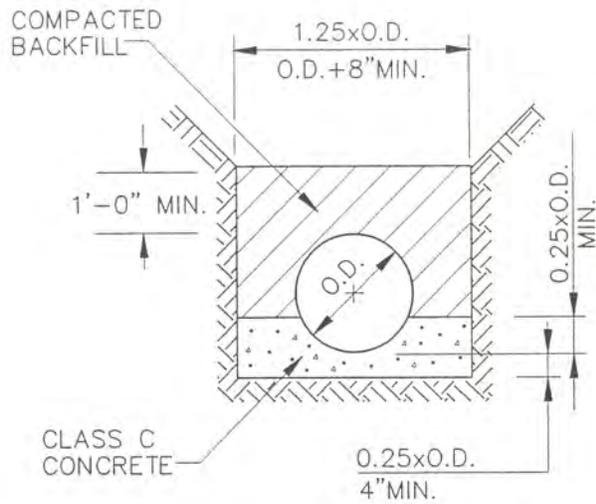
NOTE:
COVER SHALL BE VULCAN V-1349, NEENAH R-1642,
OR APPROVED EQUAL.



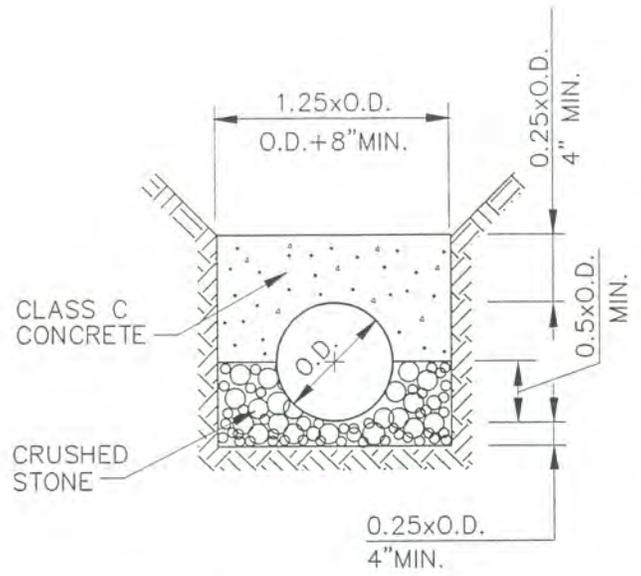
City of Madison

Watertight Manhole Frame and Cover

CONSTRUCTION AND DESIGN STANDARD DETAILS
SCALE: NONE DATE: DECEMBER 1998

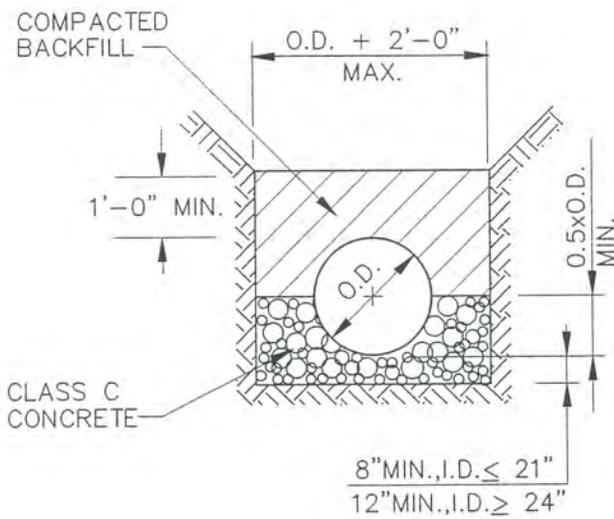


CONCRETE CRADLE

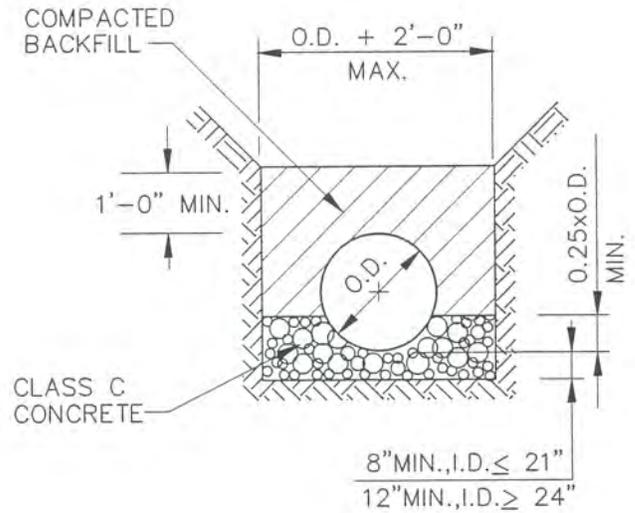


CONCRETE ARCH.

CLASS "A"



CLASS "B"



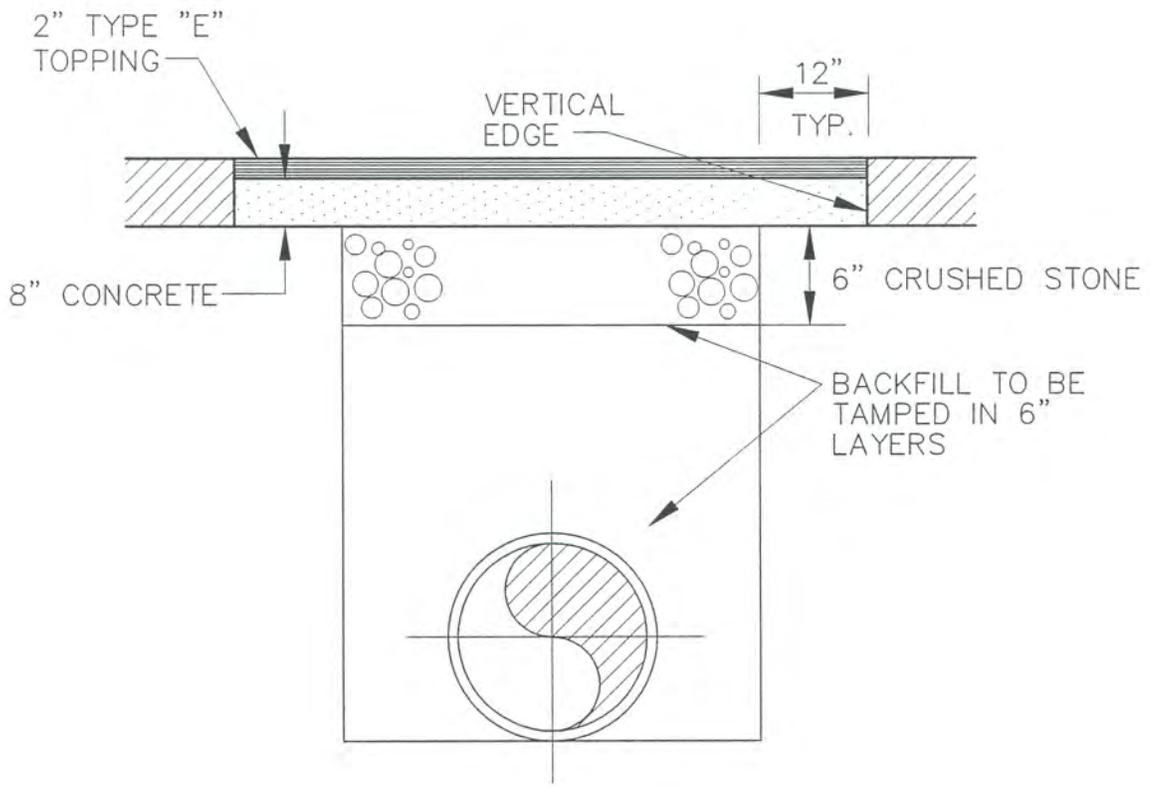
CLASS "C"



City of Madison

Sewer Pipe Bedding

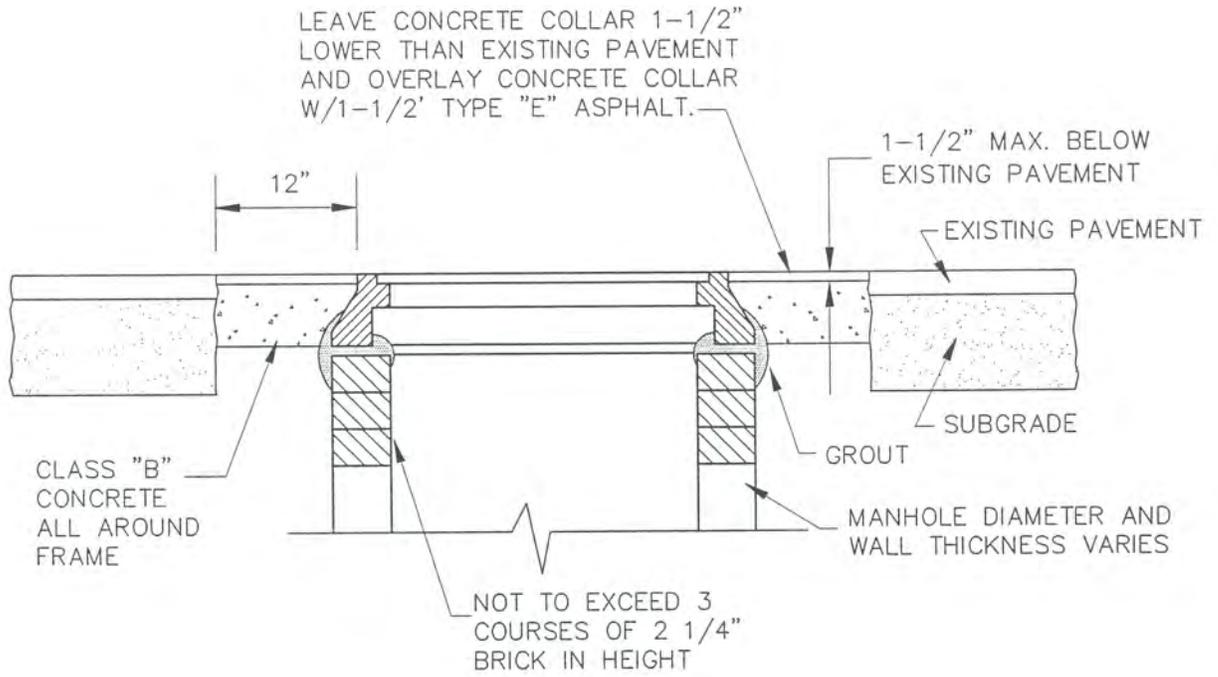
CONSTRUCTION AND DESIGN STANDARD DETAILS
SCALE: NONE DATE: DECEMBER 1998



City of Madison

Pavement Replacement

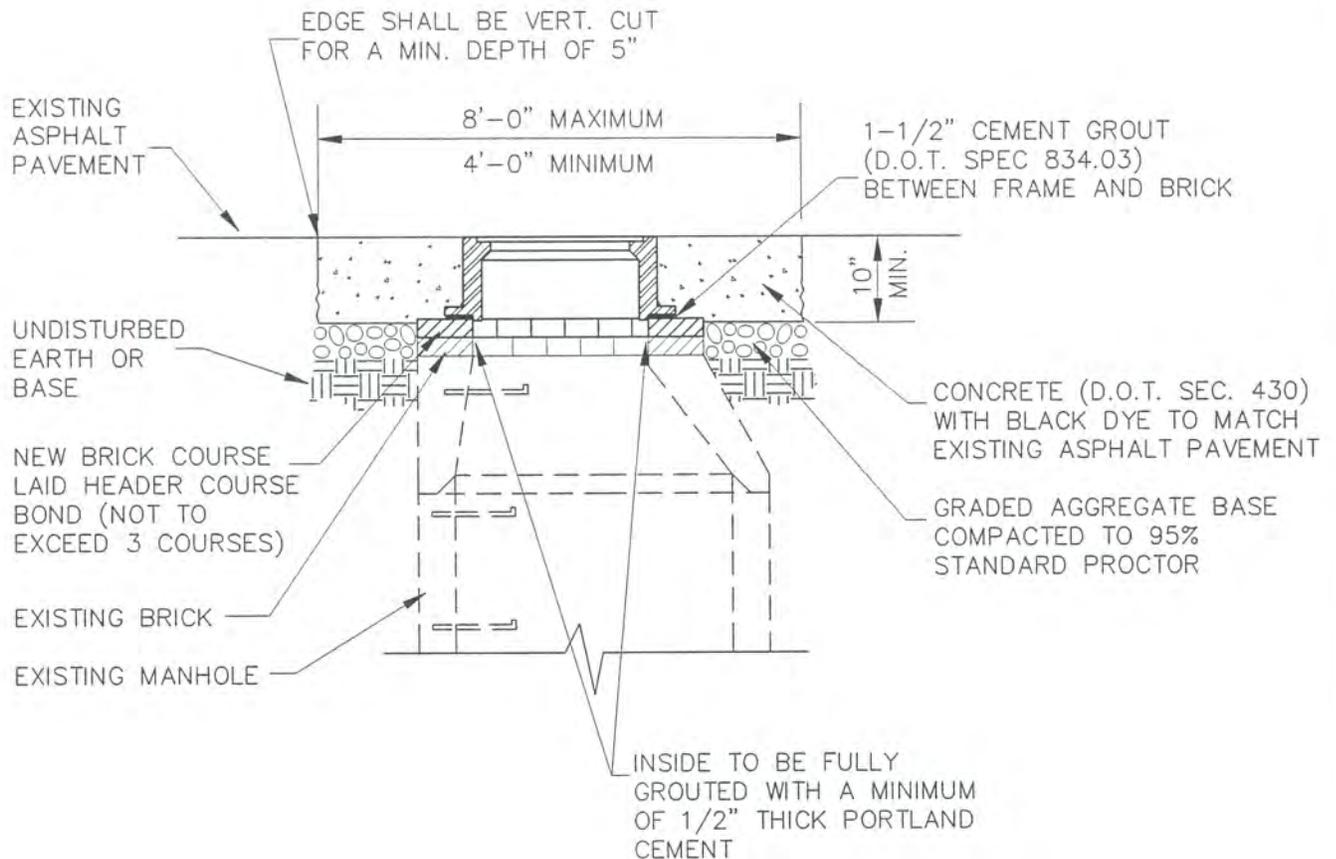
CONSTRUCTION AND DESIGN STANDARD DETAILS
SCALE: NONE DATE: DECEMBER 1998



City of Madison

Manhole Frame Grade Adjustment

CONSTRUCTION AND DESIGN STANDARD DETAILS
 SCALE: NONE DATE: DECEMBER 1998

NOTES:

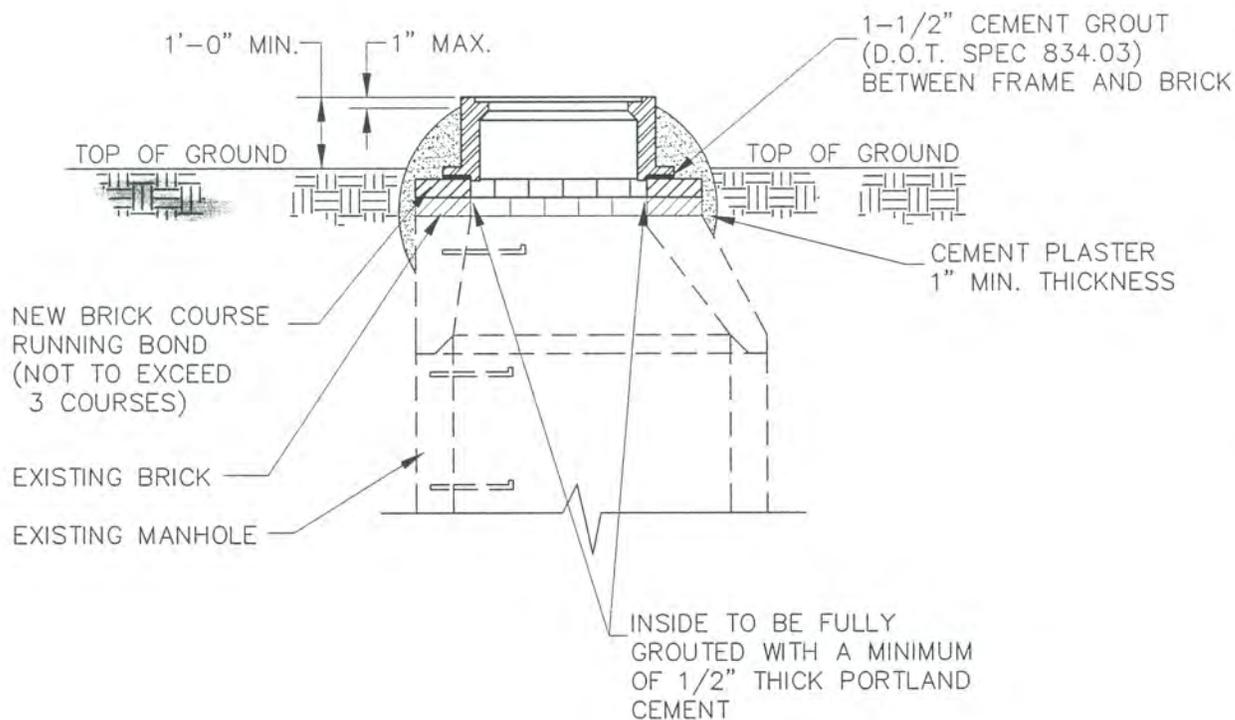
1. CONCRETE FOR COLLAR SHALL BE A MINIMUM OF 10" THICK AND SHALL EXTEND FROM THE MIDDLE OF THE LAST NEW COURSE OF BRICK TO THE TOP OF THE RING AND COVER.
2. IF REPLACEMENT OF THE FRAME AND COVER IS NECESSARY, THE NEW FRAME AND COVER SHALL BE AS PER DETAIL S06 OR S07.



City of Madison

Manhole Raising – In Pavement

CONSTRUCTION AND DESIGN STANDARD DETAILS
SCALE: NONE DATE: DECEMBER 1998

NOTES:

1. IF REPLACEMENT OF THE FRAME AND COVER IS NECESSARY, THE NEW FRAME AND COVER SHALL BE AS PER DETAIL S06 OR S07.



City of Madison

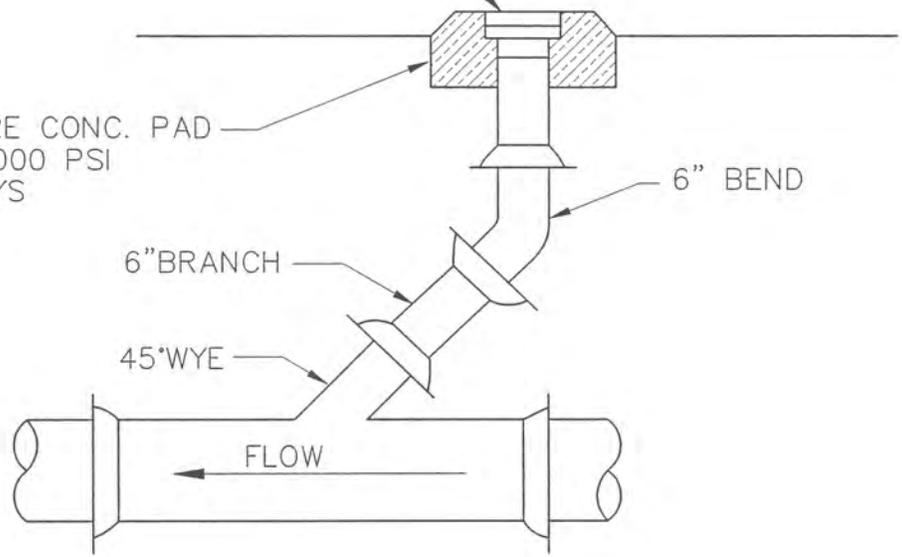
Manhole Raising – In Ground

CONSTRUCTION AND DESIGN STANDARD DETAILS
SCALE: NONE DATE: DECEMBER 1998

COUNTERSUNK BRASS CLEANOUT PLUG

NOTE: ALL SERVICE LINES AND CLEANOUT MATERIALS EXCEPT PLUG SHALL BE SOLVENT WELD PVC.

18" SQUARE CONC. PAD
4" THK. 3000 PSI
AT 28 DAYS



City of Madison

Cleanout

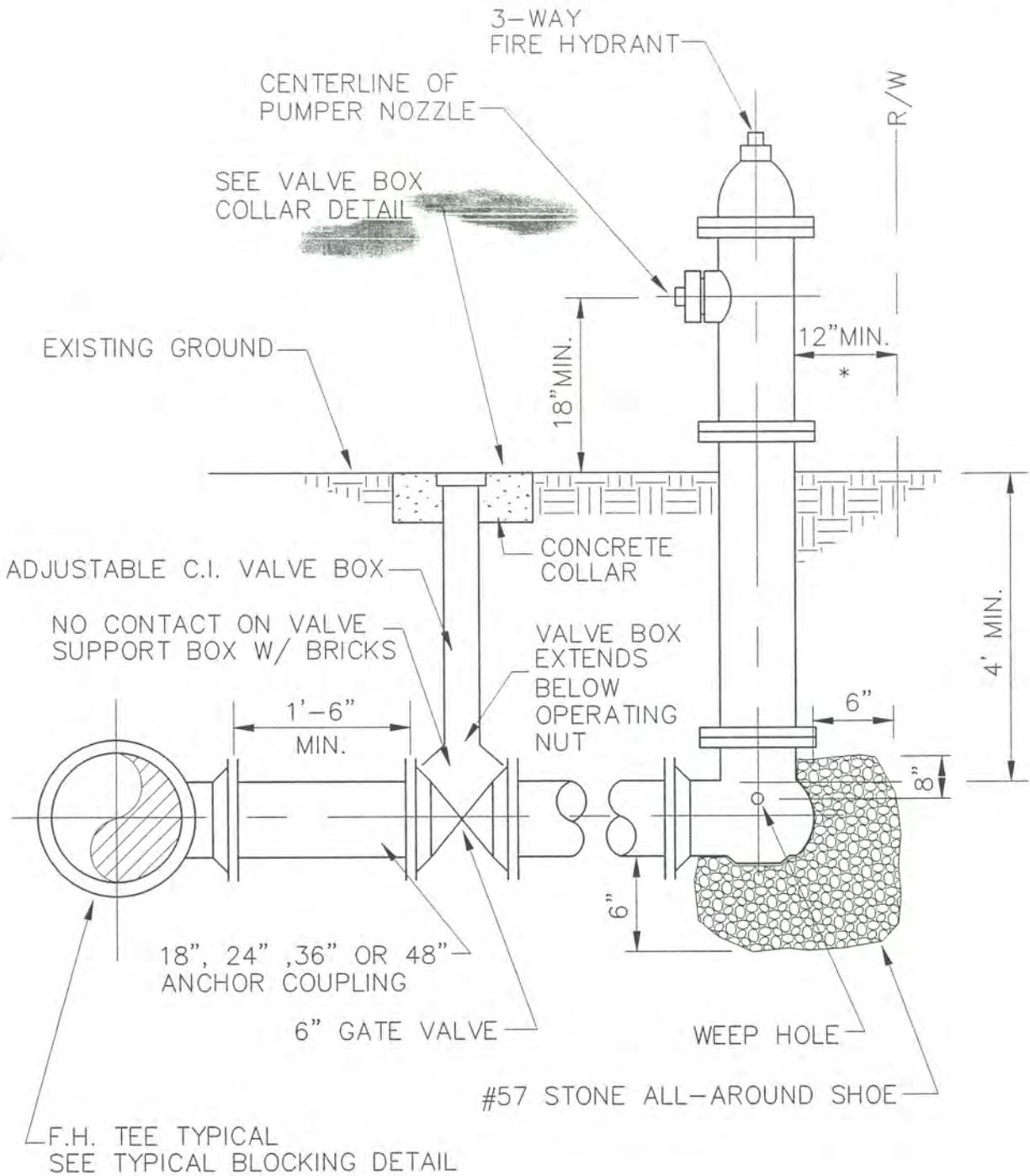
CONSTRUCTION AND DESIGN STANDARD DETAILS
SCALE: NONE DATE: DECEMBER 1998

CITY OF MADISON

SEWER SPECIFICATIONS

1. All mains shall be SDR 35, SDR 26, or Ductile Iron.
2. All mains that are SDR 35 shall be bedded with 4" under and up the sides of the pipe to the spring line with No. 57 stone.
3. All mains over 16' in depth shall be ductile iron.
4. All mains with less than 4' cover shall be ductile iron.
5. All PVC mains shall have a # 12 copper tracer wire and a detector tape installed along with the pipe. (Tracer wire within 2" of pipe and the detector tape within 2' of finished grade of ground.
6. The City of Madison before installation to insure quality shall inspect all manholes, (free of broken lips, honey combs, etc).
7. All manholes shall be bedded in # 57 stone and sealed to prevent infiltration.
8. All manholes shall be installed flush with finished grade unless otherwise approved by the inspector.
- 9.
10. All manholes in traffic areas shall have traffic approved ring and cover.
11. All inverts shall be with constructed with a 3000 p.s.i. concrete or grout with no filler material.
12. Service "Tee Wyes" should be installed whenever practical, but an approved saddle can be used in certain situations, on the lower elevation side of the lot.
13. All services shall be schedule 40 PVC.
14. All services shall have a combination "tee wye" and clean out plug to finished grade installed at the property line with a minimum 5' leader onto lot with a permanent plug installed at the end.
15. All mains and services shall be leak tested to 4 p.s.i. for 5 minutes.
16. All manholes shall be vacuum tested for 5 minutes.
17. An as-build drawing showing the exact locations of all mains, services, cleanout locations and other vital information about the system shall be furnished to the City of Madison before the job can be deemed completed.

Water Systems - W



NOTE: USE TAPPING SADDLE IF MAIN IS 16" DIA. OR LARGER.

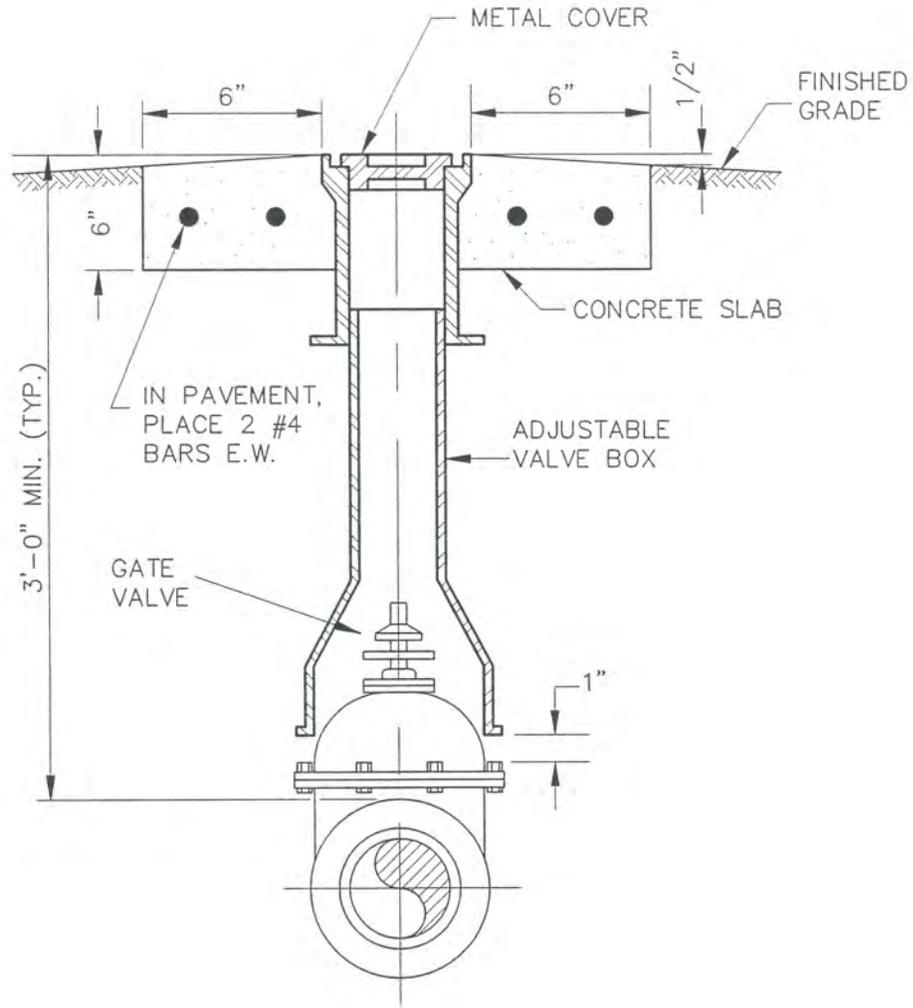
* FOR SUBDIVISIONS, FIRE HYDRANT TO BE LOCATED WITHIN 5 FEET OF THE BACK OF THE CURB



City of Madison

Fire Hydrant Installation

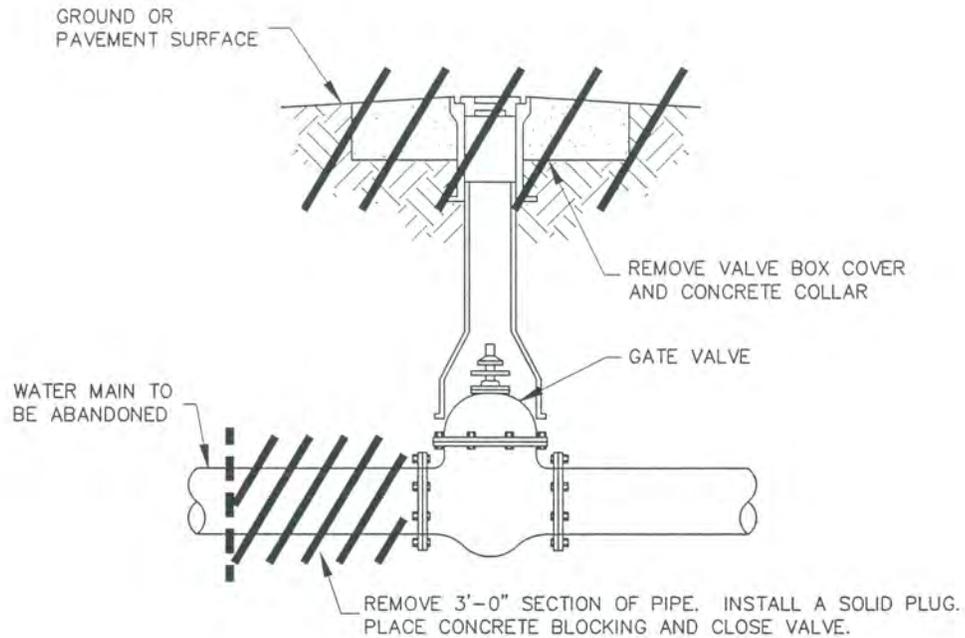
CONSTRUCTION AND DESIGN STANDARD DETAILS
 SCALE: NONE DATE: DECEMBER 1998



City of Madison

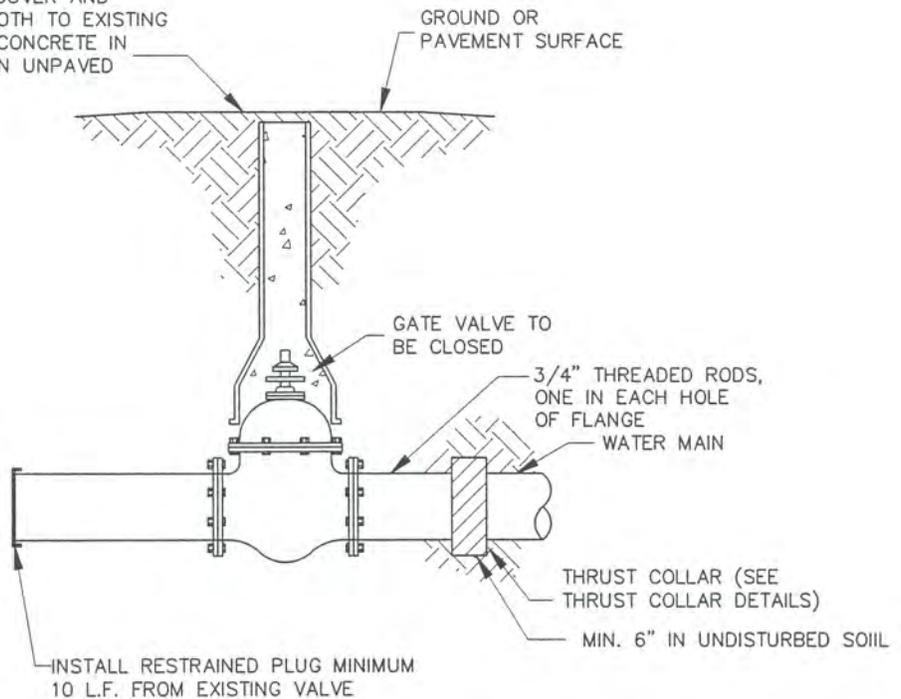
Gate Valve Installation

CONSTRUCTION AND DESIGN STANDARD DETAILS
SCALE: NONE DATE: DECEMBER 1998



EXISTING SECTION

REMOVE VALVE BOX COVER AND FILL FLUSH AND SMOOTH TO EXISTING GROUND. FILL WITH CONCRETE IN ROADWAY AND SOIL IN UNPAVED AREAS.



REVISED SECTION



City of Madison

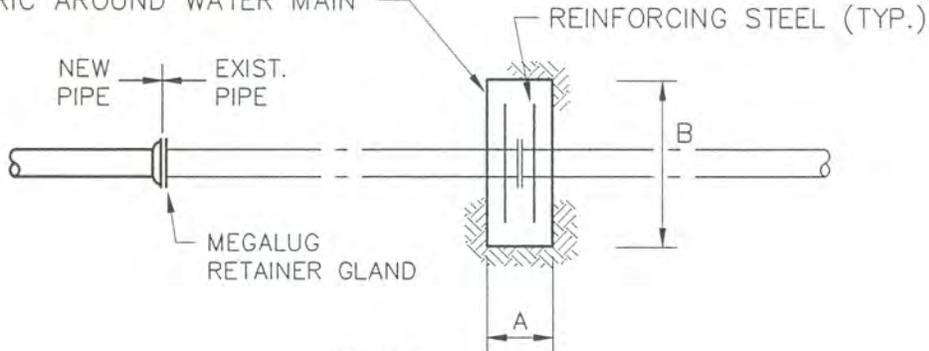
Line Abandonment Valve

CONSTRUCTION AND DESIGN STANDARD DETAILS

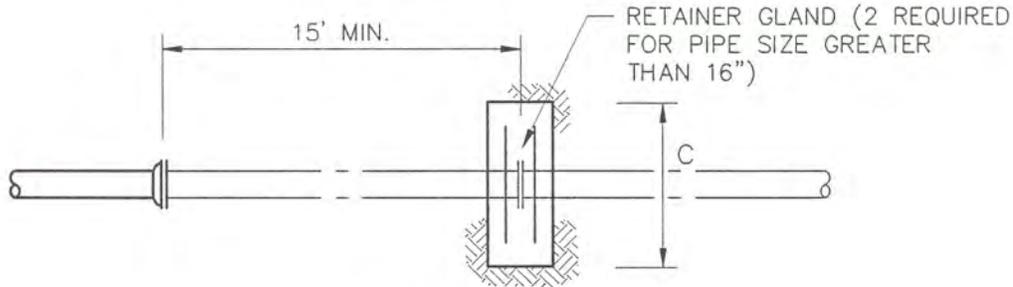
SCALE: NONE

DATE: DECEMBER 1998

POUR CONCRETE THRUST BLOCKING
AGAINST UNDISTURBED EARTH
CONCENTRIC AROUND WATER MAIN



PLAN



SECTION

WATER MAIN DIAM.	CONC. COLLAR DIM.			STEEL REINFORCING
	A	B	C	
24"	1'-9"	9'-0"	9'-0"	#9 @ 12" O.C. EW EF
20"	1'-6"	7'-8"	7'-8"	#9 @ 12" O.C. EW EF
16"	1'-3"	6'-6"	6'-6"	#8 @ 12" O.C. EW EF
12"	1'-2"	5'-3"	5'-3"	#7 @ 12" O.C. EW EF
6" OR 8"	1'-0"	4'-0"	4'-0"	#6 @ 12" O.C. EW EF

TEST PRESSURE: 250 PSI
SOIL BEARING PRESSURE: 3000 PSF

EXISTING WATER LINE
CONCRETE THRUST COLLAR DETAIL
N.T.S.



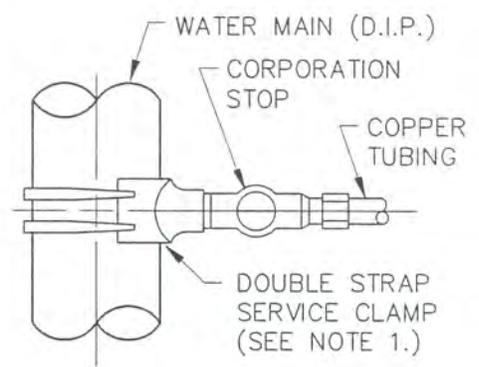
City of Madison

Thrust Collar Details

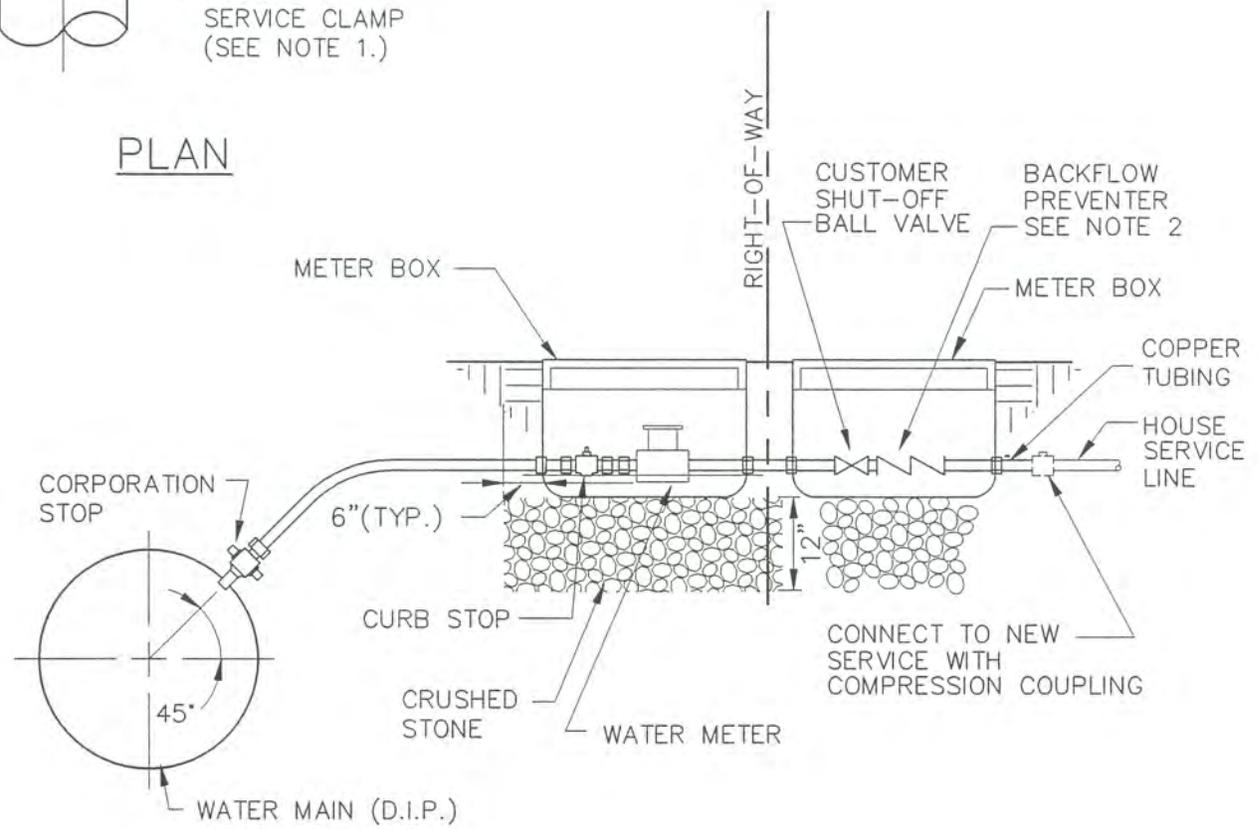
CONSTRUCTION AND DESIGN STANDARD DETAILS
SCALE: NONE DATE: DECEMBER 1998

NOTES :

1. SERVICE CLAMP REQUIRED ONLY ON CONNECTIONS LARGER THAN 1" DIAM. TO DIP WATER MAIN. ALL OTHER CONNECTIONS ARE TO BE DIRECT TAP TO DIP w/CORPORATION STOP.
2. WATER SERVICES LARGER THAN 3/4" REQUIRE DUAL CHECK BACKFLOW PREVENTER.



PLAN



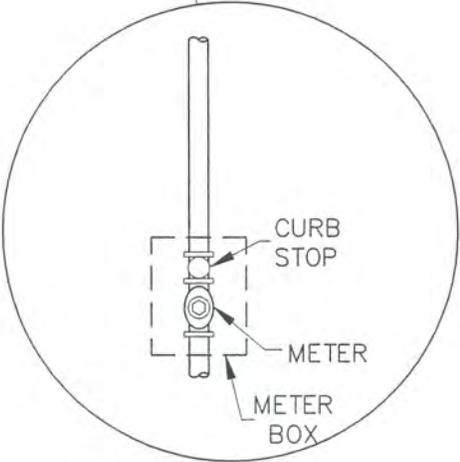
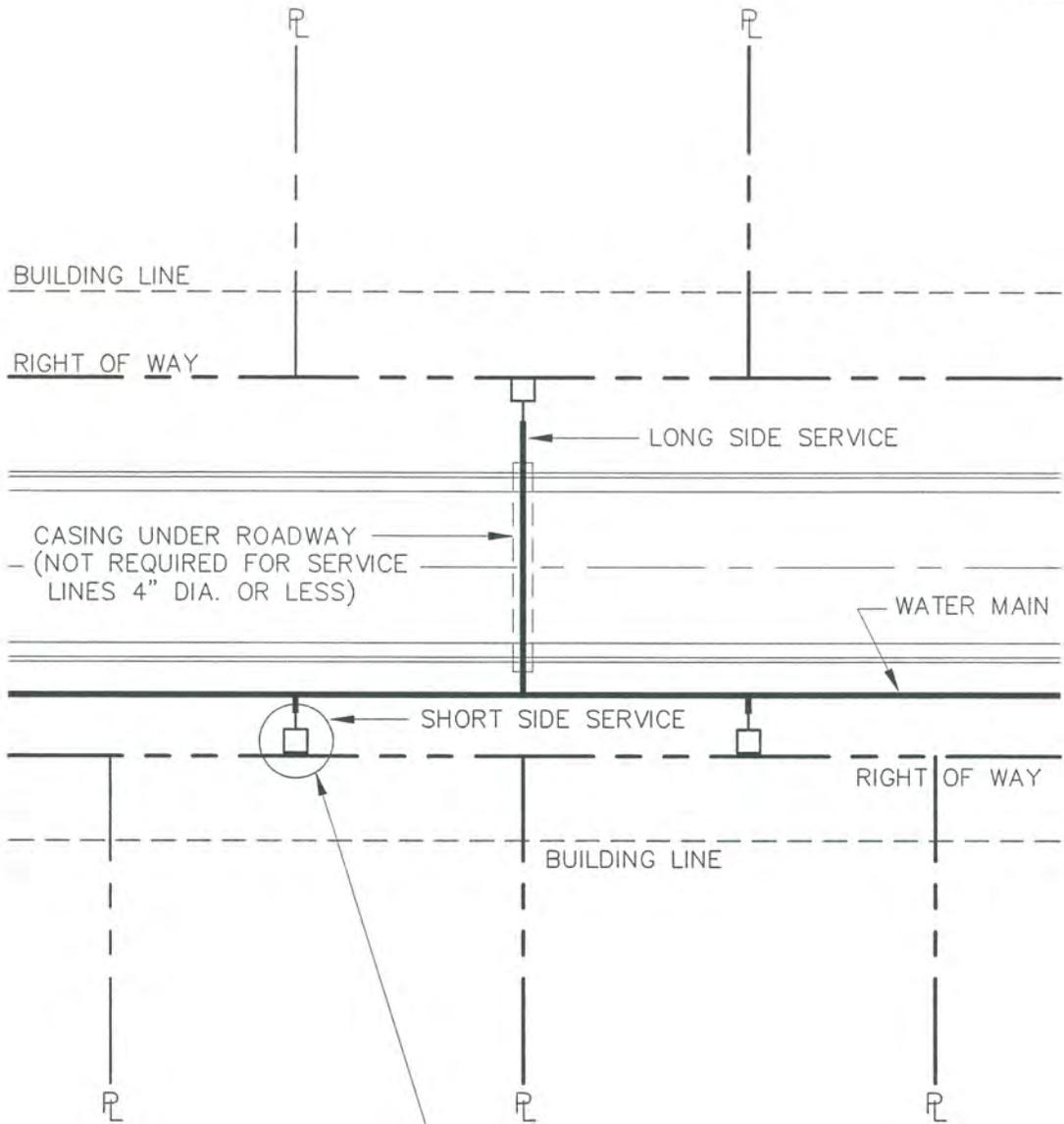
ELEVATION



City of Madison

Water Service Connection

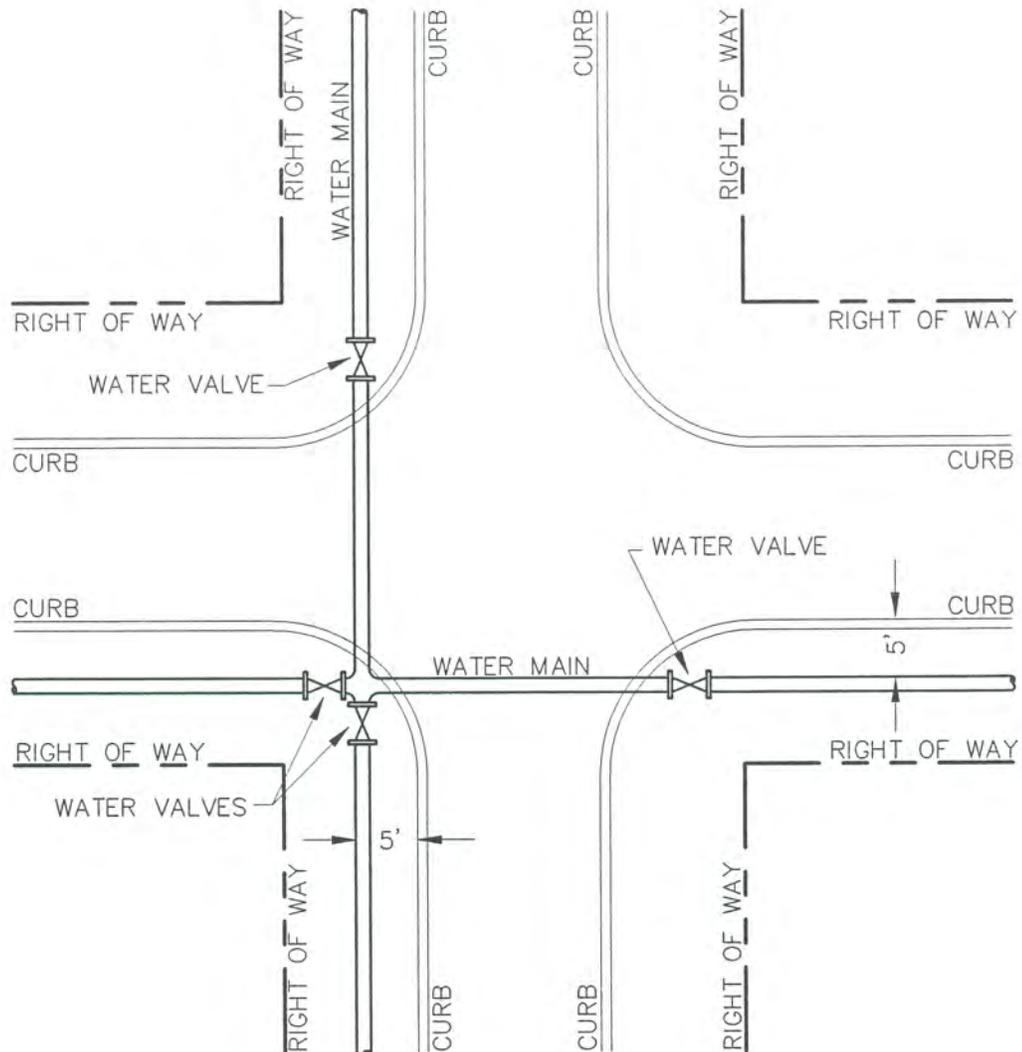
CONSTRUCTION AND DESIGN STANDARD DETAILS
 SCALE: NONE DATE: DECEMBER 1998



City of Madison

Water Meter Location (Subdivision)

CONSTRUCTION AND DESIGN STANDARD DETAILS
 SCALE: NONE DATE: DECEMBER 1998



NOTES:

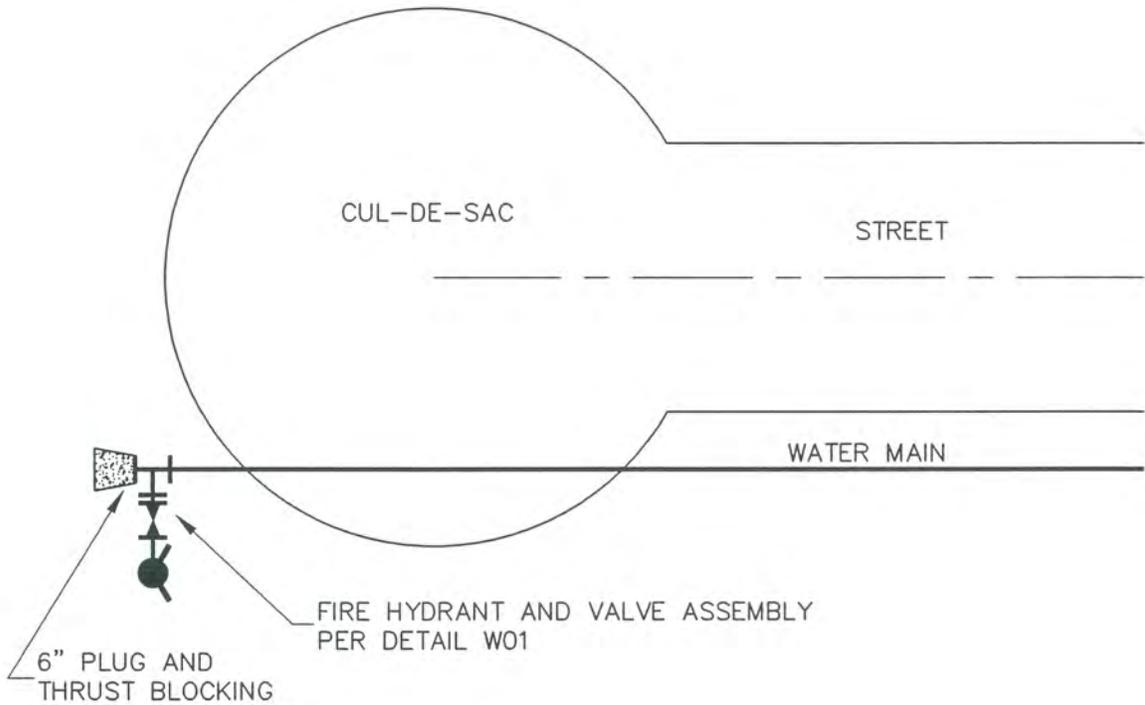
1. VALVES ARE TO BE LOCATED 5'-0" BEHIND THE CURB IN THE RIGHT OF WAY.
2. GATE VALVES ARE NOT REQUIRED ON DEAD-END LEGS LESS THAN 1000 LINEAR FEET IN LENGTH.
3. VALVES SHALL NOT BE LOCATED IN DITCH LINE.



City of Madison

Water Line Valving at Intersections

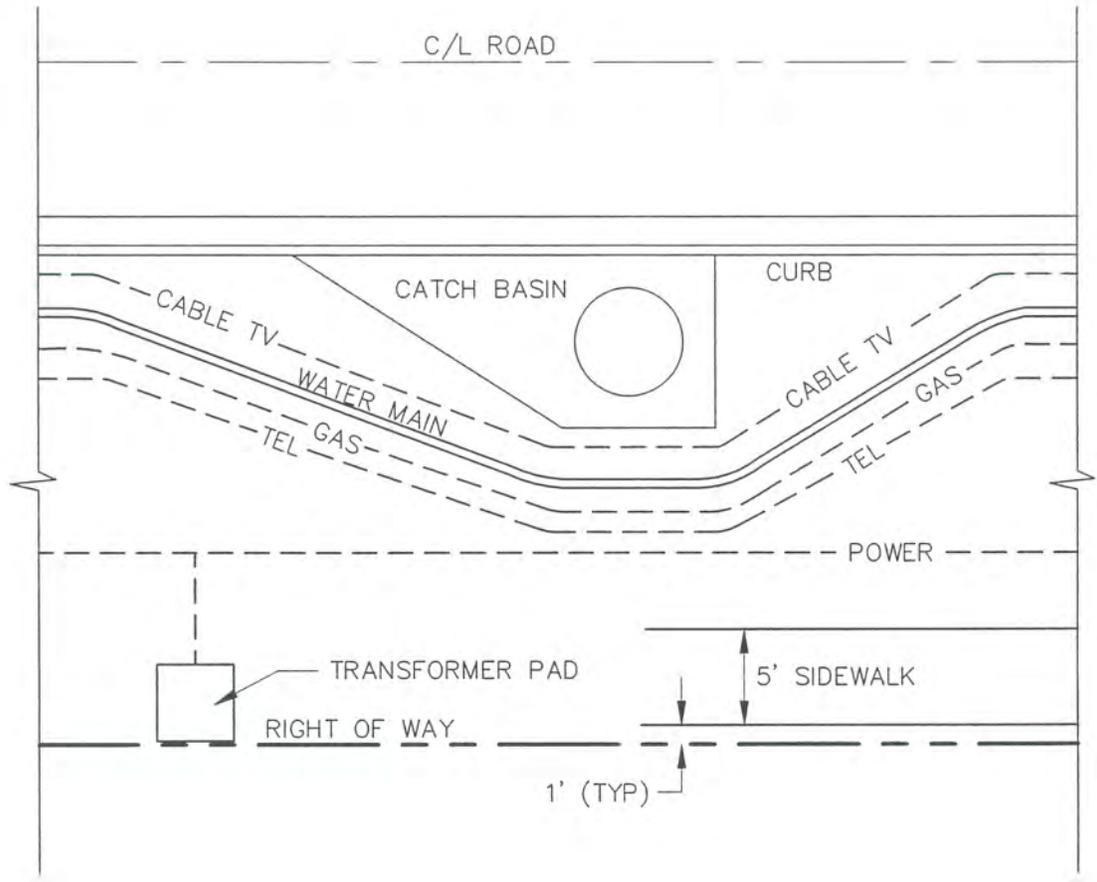
CONSTRUCTION AND DESIGN STANDARD DETAILS
SCALE: NONE DATE: DECEMBER 1998



City of Madison

Cul-de-sac Fire Hydrant Location

CONSTRUCTION AND DESIGN STANDARD DETAILS
 SCALE: NONE DATE: DECEMBER 1998



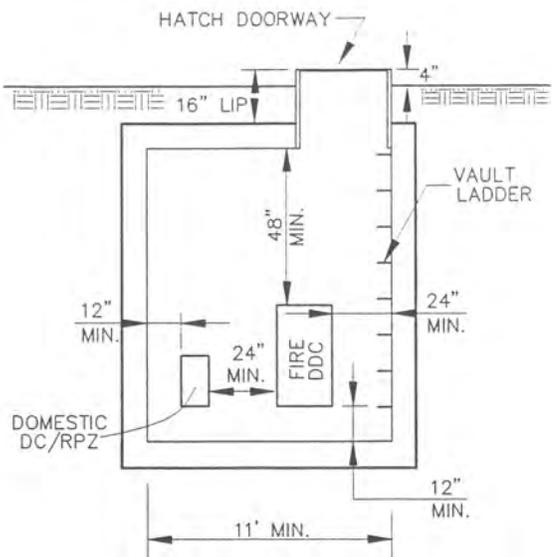
City of Madison

Utility Location – Subdivisions

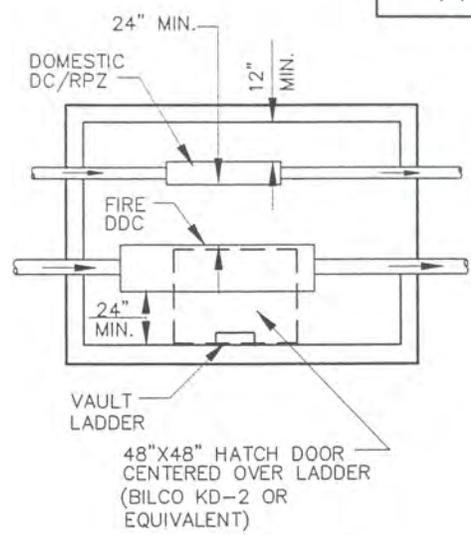
CONSTRUCTION AND DESIGN STANDARD DETAILS
 SCALE: NONE DATE: DECEMBER 1998

MAD03CDW.DWG

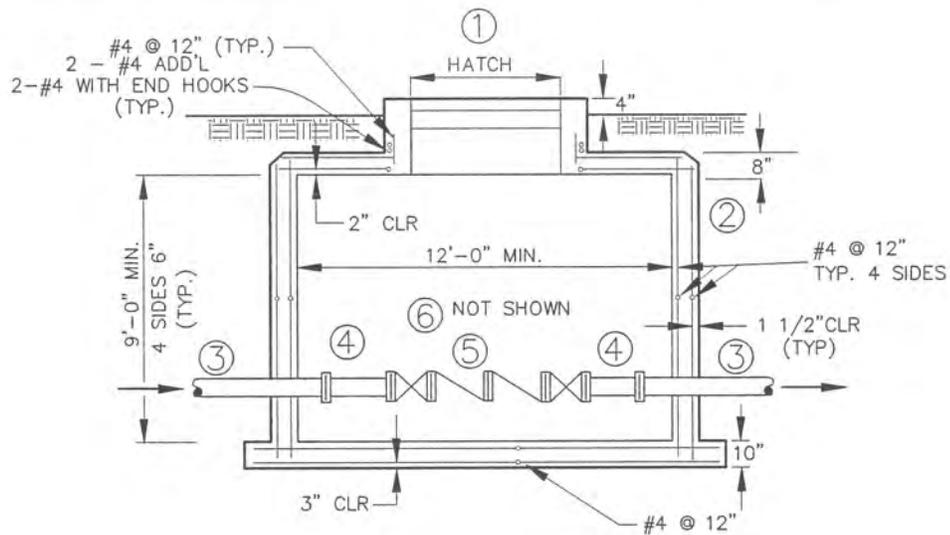
W09



(END SECTION)



(PLAN VIEW)



(CROSS SECTION)

LEGEND

- ① 4'x4' WATERTIGHT ACCESS DOOR. 1/4" DIAMOND PLATE ALUMINUM. 150 LB./SF. LIVE LOAD, EQUAL TO BILCO MODEL KD-2 W/16" LIP.
- ② CAST IN PLACE CONCRETE OR PRECAST CONCRETE VAULT EQUIVALENT TO TINDALL SC1012 SERIES. VAULT TO BE WATERTIGHT.
- ③ DUCTILE IRON MECHANICAL JOINT WALL SLEEVE.
- ④ DUCTILE IRON FLANGED SHORT JOINT.
- ⑤ FIRE LINE DOUBLE DETECTOR CHECK BACK FLOW PREVENTER ASSEMBLY, EQUAL TO WATTS SERIES 709DDC.
- ⑥ DOMESTIC LINE DOUBLE CHECK BACK FLOW PREVENTER (NOT SHOWN) EQUAL TO WATTS SERIES 007M1QT. INSTALL SIMILAR TO FIRE LINE DDC SEE PLAN AND END SECTION.

NOTE:

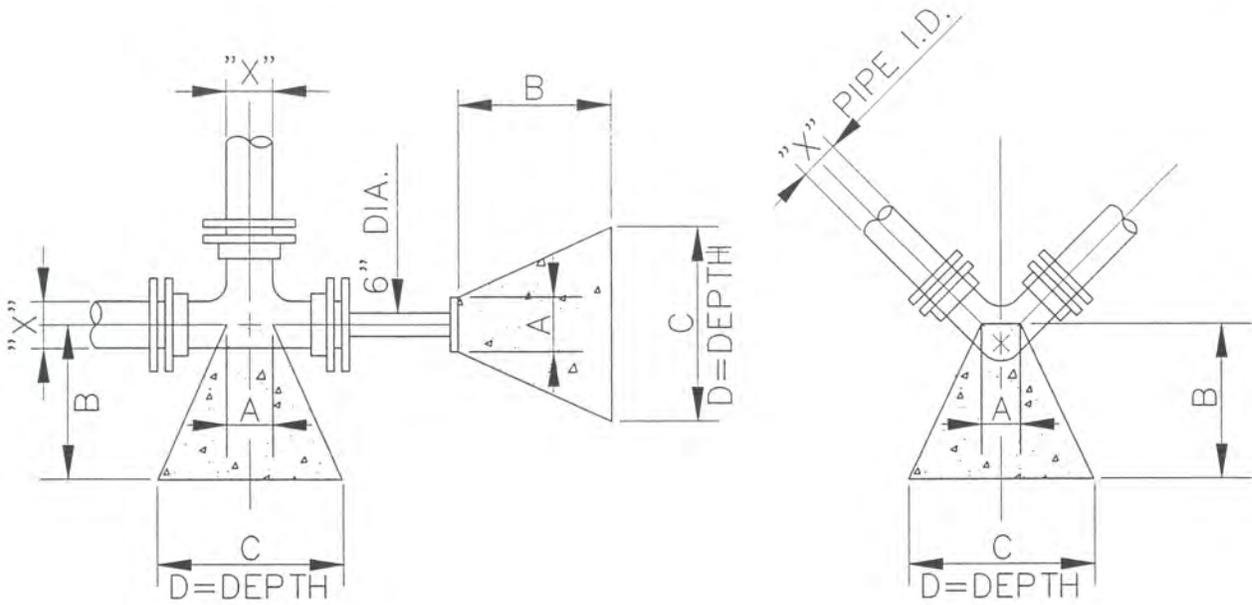
- 1. INSTALL VAULT SO THAT ONLY THE TOP 4" OF THE HATCH EXTENDS ABOVE FINISH GRADE.



City of Madison

Backflow Preventer Vault

CONSTRUCTION AND DESIGN STANDARD DETAILS
SCALE: NONE DATE: DECEMBER 1998



200 PSI TEST PRESSURE (MAXIMUM)
 2000 PSF SOIL BEARING (MINIMUM)

BLOCKING DIMENSIONS						
DEAD END & TEES	X*	A	B	C	D	
		10"	1'-0"	2'-6"	4'-0"	2'-6"
	8"	0'-10"	2'-3"	3'-3"	2'-0"	
	6"	0'-8"	1'-6"	2'-6"	1'-6"	
BENDS	90°	10"	1'-0"	3'-6"	5'-0"	2'-9"
		8"	0'-10"	2'-9"	4'-0"	2'-3"
		6"	0'-8"	2'-0"	3'-0"	1'-9"
	45°	10"	1'-0"	1'-9"	3'-0"	2'-6"
		8"	0'-10"	1'-6"	2'-6"	2'-0"
		6"	0'-8"	1'-3"	2'-0"	1'-6"
	1/2"	10"	1'-0"	1'-4"	2'-6"	1'-6"
		8"	0'-10"	1'-0"	2'-0"	1'-3"
		6"	0'-8"	0'-9"	1'-6"	1'-0"
		10"	1'-0"	0'-6"	1'-6"	1'-3"
		8"	0'-10"	0'-6"	1'-4"	1'-0"
		6"	0'-8"	0'-6"	1'-0"	0'-9"

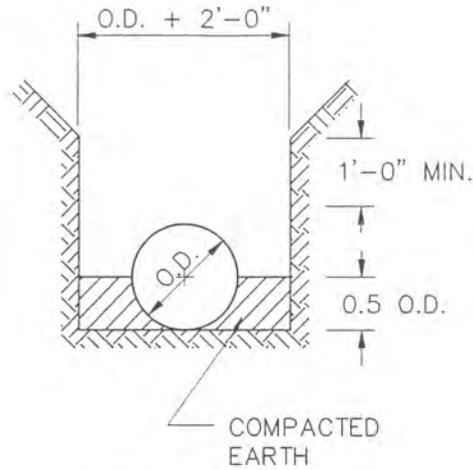
X* = DIAMETER OF PIPE TO BE BLOCKED



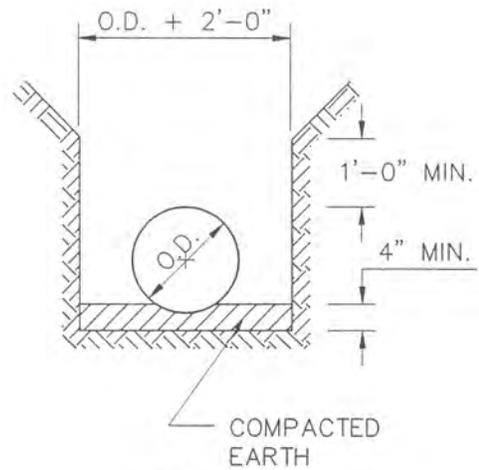
City of Madison

Thrust Blocking

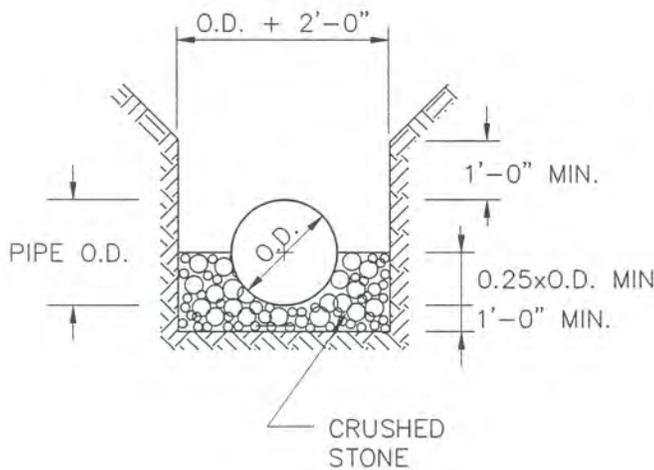
CONSTRUCTION AND DESIGN STANDARD DETAILS
 SCALE: NONE DATE: DECEMBER 1998



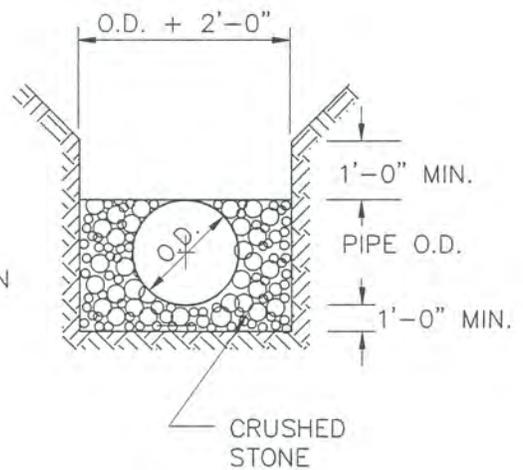
TYPE 2



TYPE 3



TYPE 4



TYPE 5



City of Madison

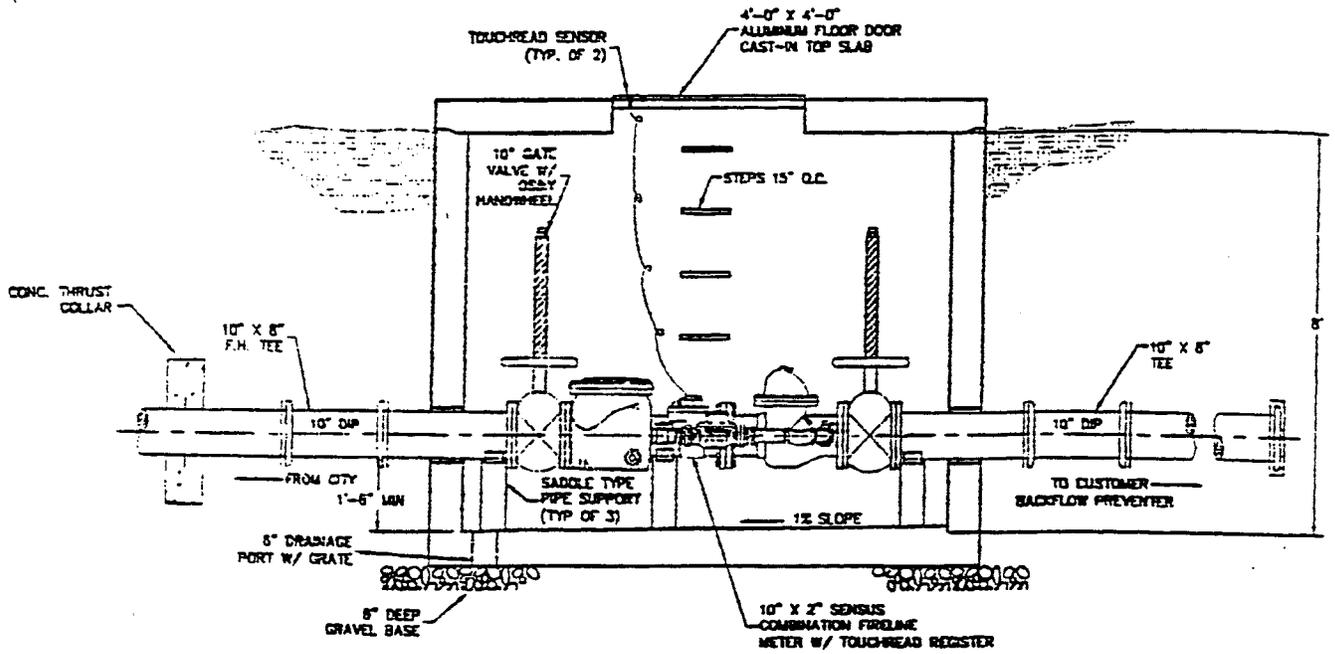
Water Main Bedding

CONSTRUCTION AND DESIGN STANDARD DETAILS
SCALE: NONE DATE: DECEMBER 1998

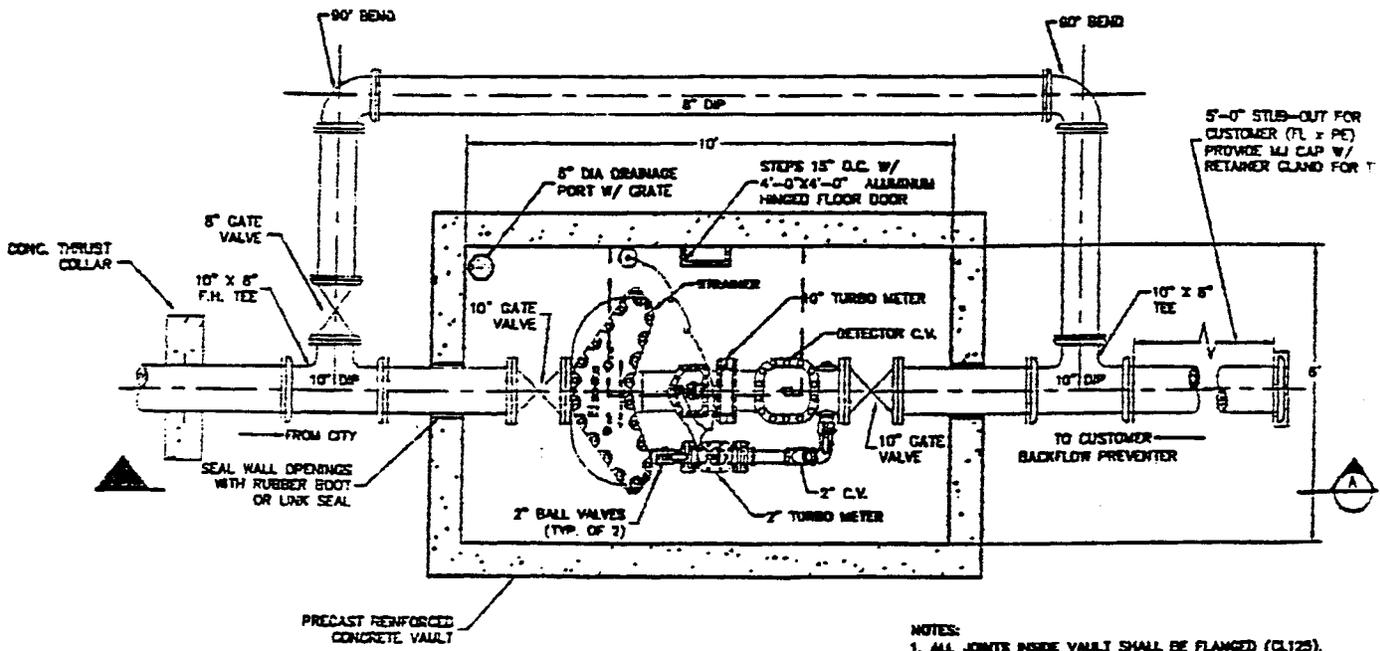
CITY OF MADISON

WATER SPECIFICATIONS

1. All mains operating at 100 psi or less shall be C900 PVC class 150 or Ductile Iron.
2. All mains operating at over 100 p.s.i. shall be determined on a case by case basis.
3. All mains and services shall have a minimum of 4' cover.
4. All PVC mains shall have a # 12 copper tracer wire and a detector tape installed along with the pipe. (Tracer wire within 2" of pipe and the detector tape within 2' of finished grade of ground.
5. All services shall be type "K" copper water service pipe.
6. All services shall be as close to the center of the lot as practical. (No common trench services at the property line.)
7. All service line joints shall be "Grip Nut" compression or "Flare" joint with no joints under the road.
8. All curb stops shall be 90° angle stops with locking wings.
9. All meters shall be "Sensus Touchread" with the touch pad extending through the meter lid.
10. All meter boxes not in a traffic area shall be plastic with a cast iron lid.
11. All meter boxes in traffic areas shall be cast iron with a cast iron lid.
12. All meter boxes shall be bedded in # 57 stone.
13. All fire hydrants shall be Mueller or M & H hydrants.
14. All hydrant assemblies shall include a hydrant valve.
15. All road intersections shall have a hydrant assembly installed as close as practical.
16. All road intersections that do not include a lateral main shall have a "tee", valve, and plug for future laterals.
17. All mains shall have a valve at the intersection with another main.
18. The City of Madison, prior to installation, shall approve all meter vaults and backflow preventers.
19. All mains and services shall be leak tested to a minimum of 150 p.s.i. or 150% of the operating pressure, whichever is greater.
20. All mains must have negative bacteria tests by a certified lab. (Minimum of three test locations) completed, with results given to the City of Madison, before the main is put into service. (The City of Madison does not provide testing facilities.)
21. An as-build drawing showing the exact locations of all mains, valves, services, meter locations and other vital information about the system shall be furnished to the City of Madison before the job can be deemed completed.



SECTION A



- NOTES:
1. ALL JOINTS INSIDE VAULT SHALL BE FLANGED (CL125).
 2. ALL BURIED JOINTS SHALL BE RESTRAINED OR MECHANICAL WITH MECA-LUG GLANDS.
 3. CONCRETE THRUST COLLAR MAY BE DELETED IF RESTRAINED JOINT PIPE IS USED.
 4. TOUCHREAD REGISTER SHALL READ AND RECORD IN GALLONS.

PLAN

BRUBERT



CITY OF MADISON, GEORGIA

MADISON LAKES

DATE : SEPT. 2000
 SCALE : N.T.S.
 JOB NO.: 2197.005