

## PART 2 - APPENDIX

### CROSS SECTIONS

**Figure 1:** Street Design and Construction Standards

**Figure 1-a:** Minor Street Typical Cross Section

**Figure 1-b:** Secondary Street Typical Cross Section

**Figure 1-c:** Major Street Typical Cross Section

**Figure 2:** Cross Section for Precast Concrete Catch Basin

**Figure 3:** Cross Section for Precast Concrete Manhole

**Figure 4:** Cross Section for Vertical Granite Curb

**Figure 5:** Cross Section for Low Retaining Walls

**Figure 6:** Fire Cistern Detail

FIGURE 1

## STREET DESIGN and CONSTRUCTION STANDARDS

Town of Berkley, MA - November 1997

	Minor Street	Secondary (local) Street	Major Street	Remarks
Right of Way	50'	50'	50'	
Approximate # Lots Served	< 9	9 +	9 +	
Paved Width	24' – 26'	26'	32'	
Grade: Min:	0.6%	0.6%	0.6%	50' leveling area 1.5% at intersection
Max:	8%	8%	6%	
Transverse Grade	<-----3/8' per ft. -----> <-----also sidewalk----->			
Sidewalks	<-----One----->			
Roadway Base	<-----12" Gravel (screened, graded, rolled per MDPW)----->			
Roadway Surface	<-----3" Bituminous Concrete----->			
Sidewalk Base	<-----6" Gravel (screened, graded, rolled per MDPW)----->			
Sidewalk Construction	<-----2" Bituminous Concrete----->			
Sidewalk Width	4 ft.	4 ft.	5 ft.	
Grass Lot	3' Walk to St. Line, 5' Walk to Roadway	3' Walk to St. Line, 5' Walk to Roadway	9' Between Walk and Road	Roadway to where no walk
Loam	<-----6" Deep Seeded----->			
Curbing	Cape Cod	Cape Cod	Granite	See Typical Cross Section – Granite Curbs shall be required in Non-Residential
Curb Inlets	<-----Granite 6" Recessed----->			
Guard Rails	DPW approved on slopes exceeding 1:1			
Street Signs	4" Letters on Green - 8.5 ft. high			

Maximum roadside slope to sidewalk or pavement 2.5 horizontally, except in ledge. Stone masonry retaining walls to be used where grade difference would require a steeper slope.

FIGURE 1

FIGURE1-a

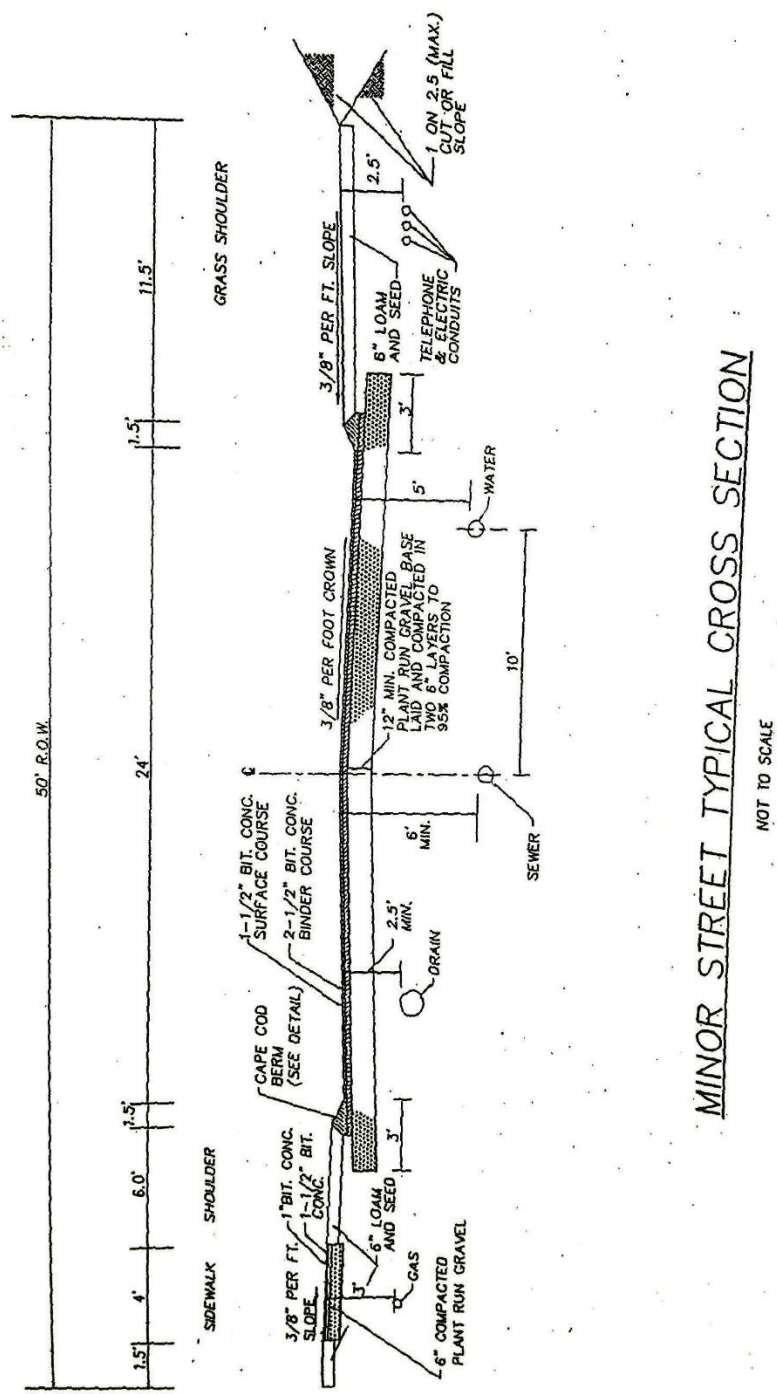
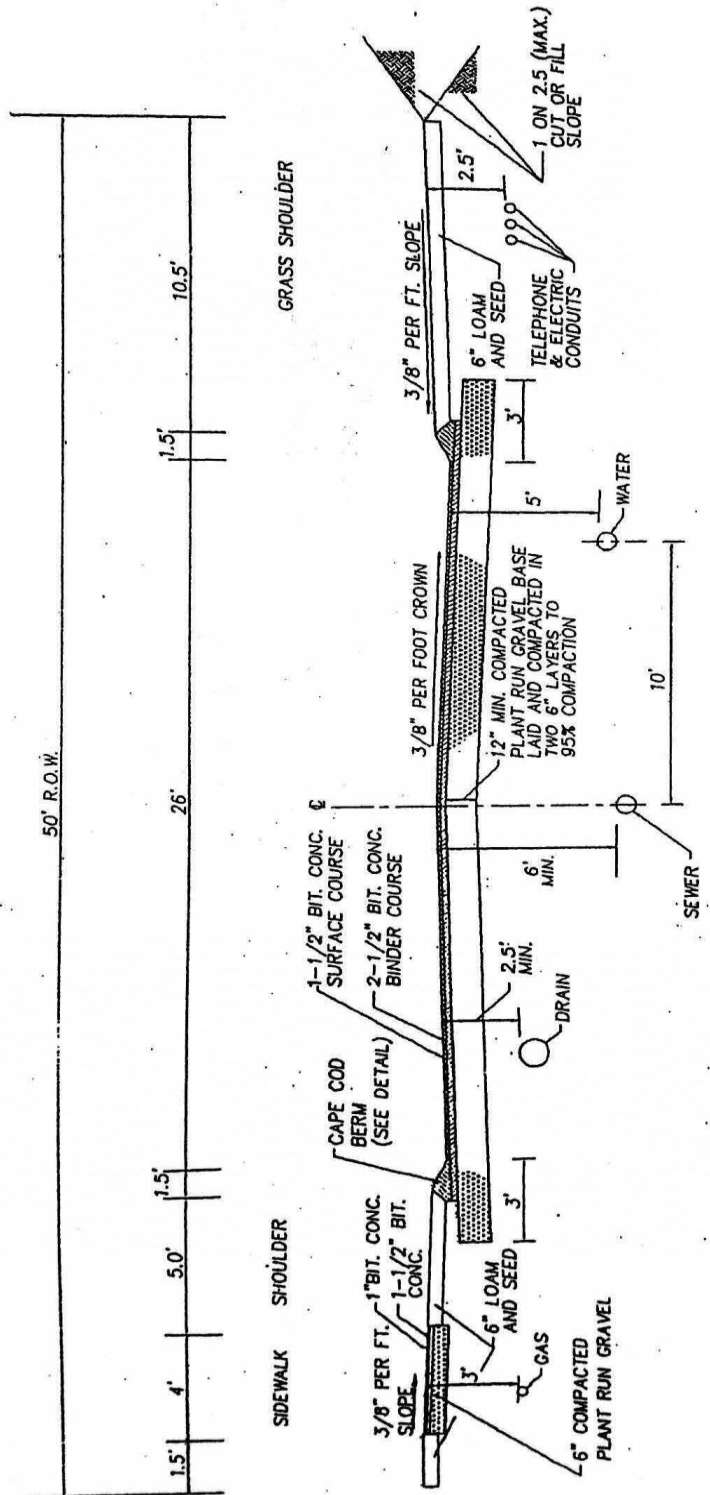


FIGURE 1-a

FIGURE 1-b

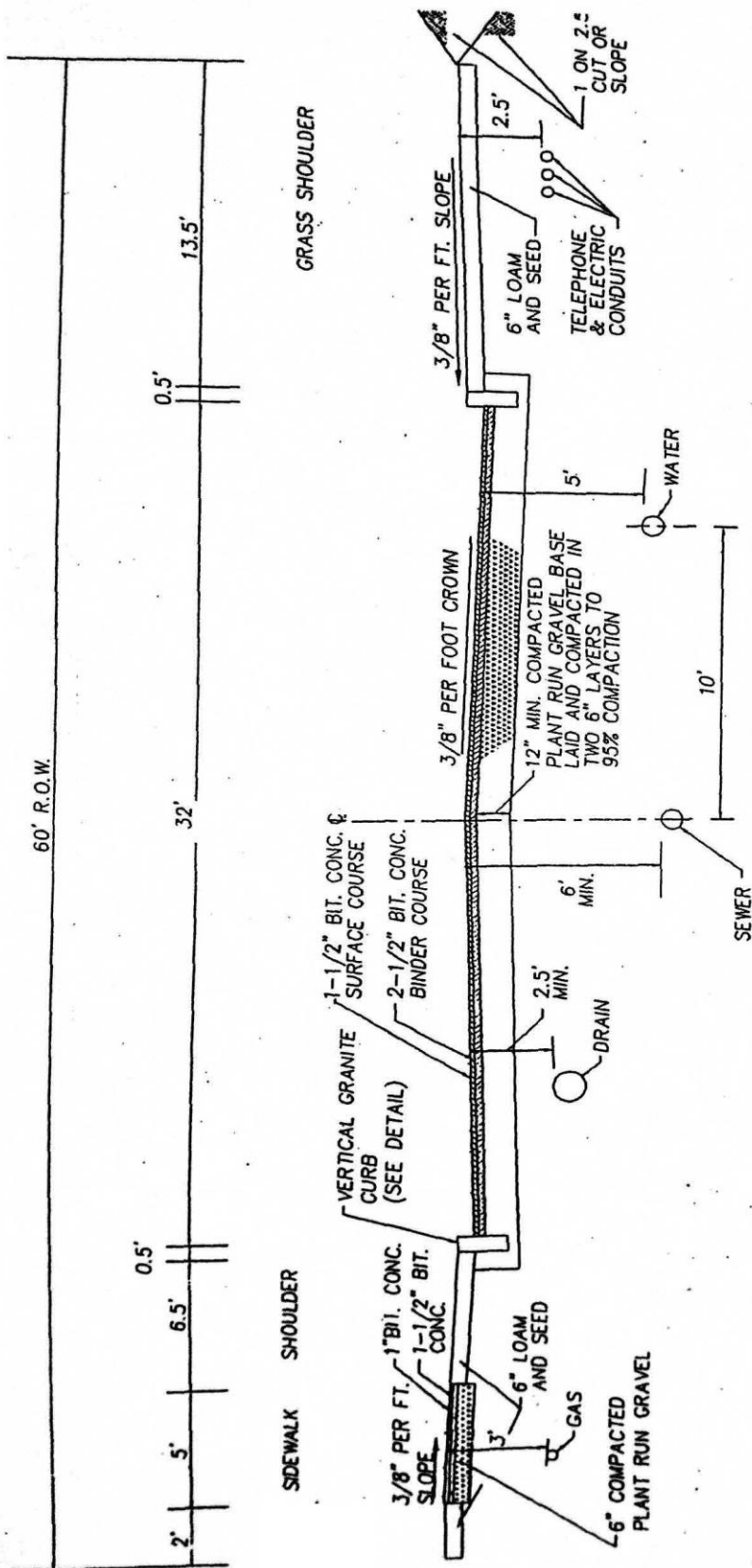


# SECONDARY STREET TYPICAL CROSS SECTION

NOT TO SCALE

FIGURE 1-b

FIGURE 1-c



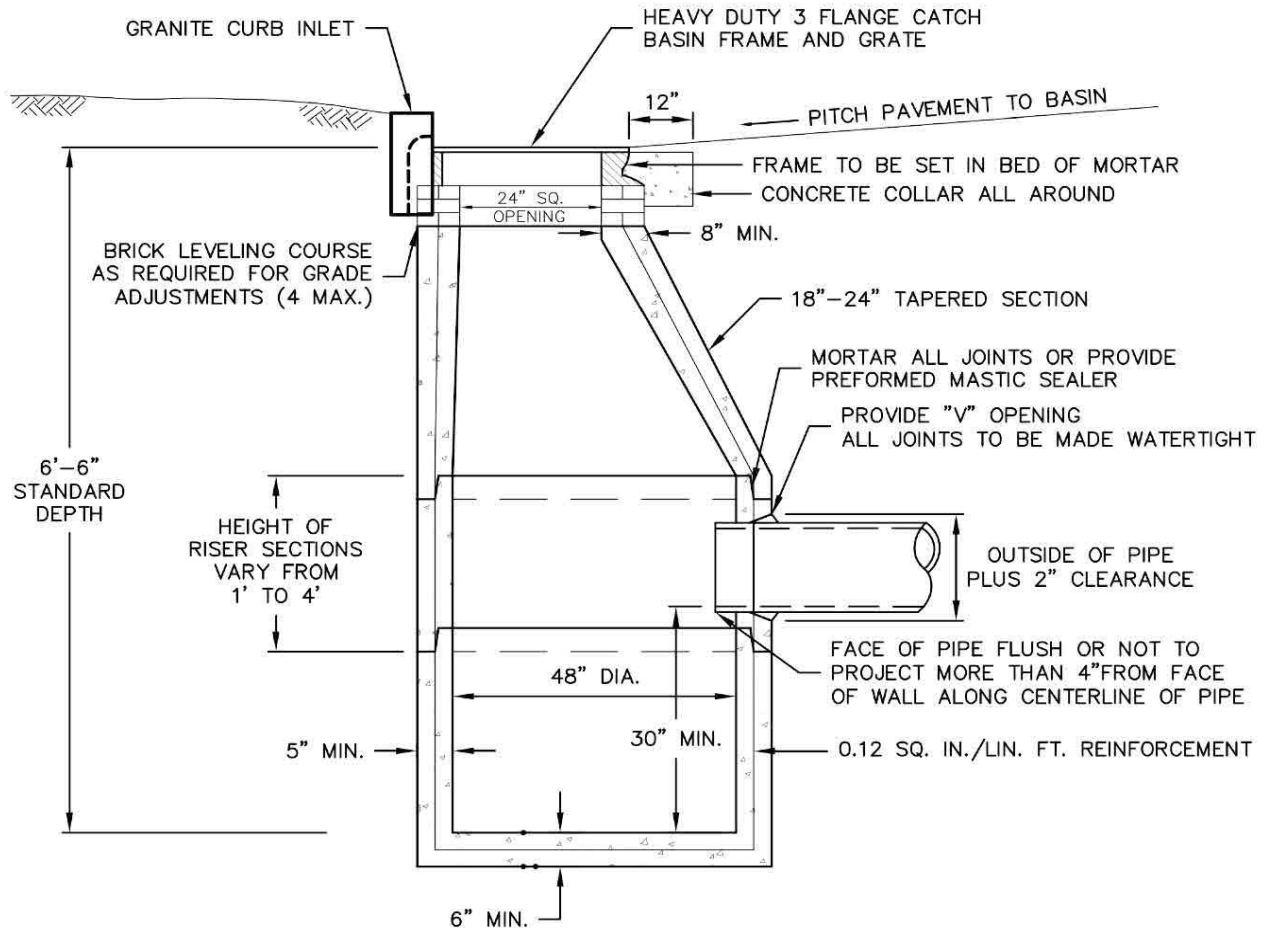
# MAJOR STREET TYPICAL CROSS SECTION

NOT TO SCALE

FIGURE 1-c

FIGURE 2

# TOWN OF BERKLEY, MASSACHUSETTS TYPICAL SECTION & DETAILS



## NOTES:

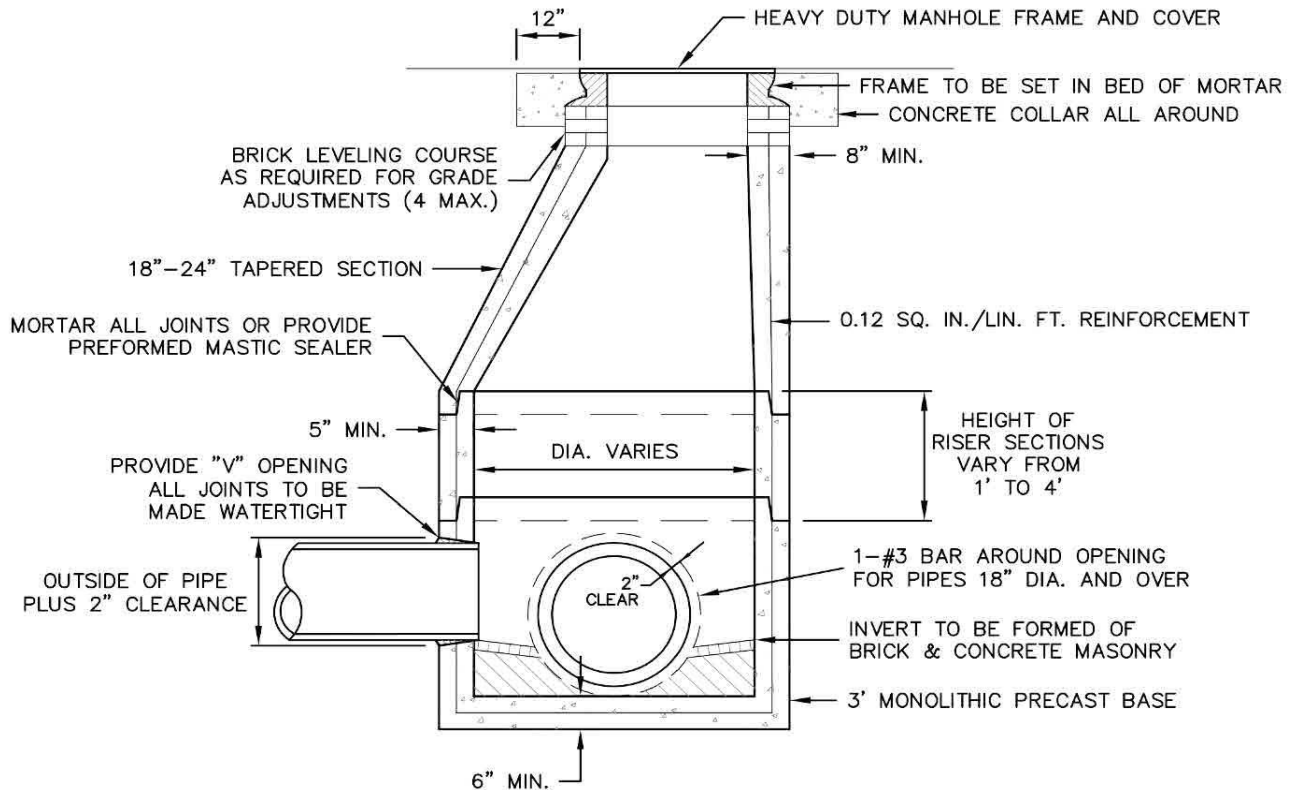
1. CONCRETE: 4,000 PSI MIN, AFTER 28 DAYS.
2. REINFORCED STEEL CONFORMS TO LATEST ASTM A185 SPEC. 0.12 SQ. IN./LINEAL FT. AND 0.12 SQ. IN. (BOTH WAYS) BASE BOTTOM.
3. H-20 DESIGN LOADING; ASTM C478 SPEC FOR "PRECAST REINFORCED CONCRETE MANHOLE SECTIONS".

TYPICAL PRECAST CONCRETE CATCH BASIN DETAIL  
NOT TO SCALE

FIGURE 2

FIGURE 3

# TOWN OF BERKLEY, MASSACHUSETTS TYPICAL SECTION & DETAILS



## NOTES:

1. CONCRETE: 4,000 PSI MIN, AFTER 28 DAYS.
2. REINFORCED STEEL CONFORMS TO LATEST ASTM A185 SPEC. 0.12 SQ. IN./LINEAL FT. AND 0.12 SQ. IN. (BOTH WAYS) BASE BOTTOM.
3. H-20 DESIGN LOADING; ASTM C478 SPEC FOR "PRECAST REINFORCED CONCRETE MANHOLE SECTIONS".

TYPICAL PRECAST CONCRETE MANHOLE DETAIL  
NOT TO SCALE

FIGURE 3

© 2016 - GZA GeoEnvironmental, Inc. GZA-C:\Users\matthew.grosschedl\appdata\local\temp\AcPublish\_4460\berkley planning board figures.dwg [gutter inlet] June 20, 2016 - 11:21am matthew.grosschedl

Technical drawing showing the front and top views of a rectangular plate with a semi-circular hole.

**Front View (Right):**

- Overall width: 6'-0"
- Overall height: 17" TO 19"
- Hole width (diameter): 2'-0"

**Top View (Left):**

- Overall width: 7"
- Overall height: 4"
- The dashed line indicates the hole's position, centered along the width.

CAPE COD BERM  
18"

3/8" PER FOOT 6" MIN.

1.5" BIT. CONC. TOP COURSE  
2.5" BIT. CONC. BINDER

3/8" PER FT. FINISH GRADE  
6" LOAM & SEED

7-1/2"

12" MIN. COMPACTED PLANT RUN  
GRAVEL BASE LAID IN TWO 6" LAYERS  
COMPACTED TO 95% COMPACTION.

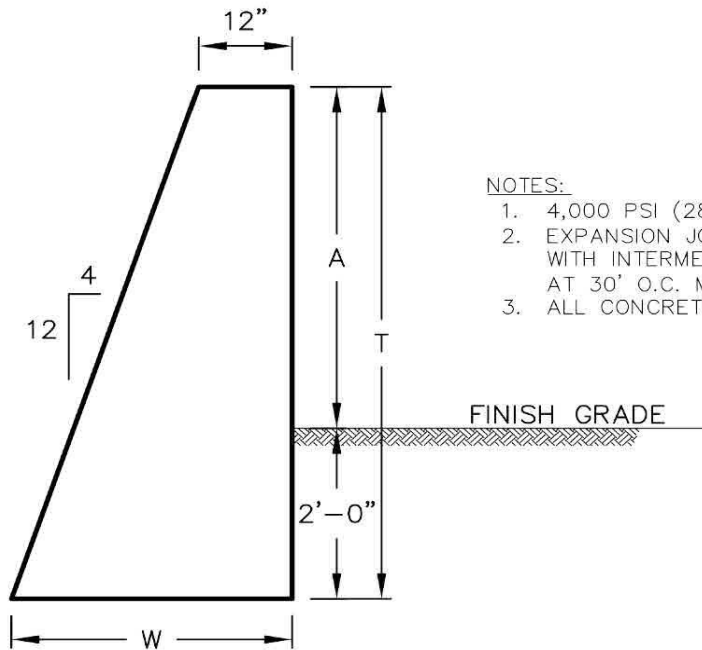
18"

GRAVEL TO EXTEND  
18" BEYOND BERM

FIGURE 4

FIGURE 5

# TOWN OF BERKLEY, MASSACHUSETTS TYPICAL SECTION & DETAILS



## NOTES:

1. 4,000 PSI (28 DAY) CEMENT CONCRETE TO BE USED.
2. EXPANSION JOINTS TO BE PLACED 90' O.C. MAXIMUM WITH INTERMEDIATE CONSTRUCTION JOINTS PLACED AT 30' O.C. MAXIMUM.
3. ALL CONCRETE DIMENSIONING SHOWN ARE MINIMUM.

HEIGHTS		WIDTH	AREA (SQ. FT.)	CU. YDS. PER LIN. FT. OF WALL
A	T	W		
2'-0"	4'-0"	2'-4"	6.667	0.247
2'-6"	4'-6"	2'-6"	7.875	0.292
3'-0"	5'-0"	2'-8"	9.175	0.339
3'-6"	5'-6"	2'-10"	10.541	0.390
4'-0"	6'-0"	3'-0"	12.00	0.444
4'-6"	6'-6"	3'-2"	13.541	0.502
5'-0"	7'-0"	3'-4"	15.162	0.562

## TYPICAL LOW RETAINING WALL DETAIL

NOT TO SCALE

FIGURE 5

FIGURE 6

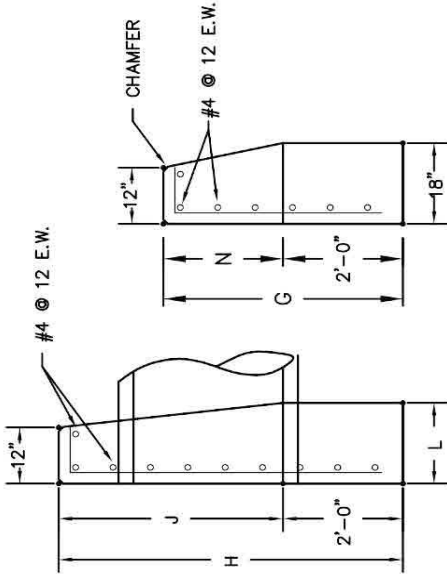
TOWN OF BERKLEY, MASSACHUSETTS  
TYPICAL SECTION & DETAILS

DIMENSION TABLE FOR HEADWALLS

D	E	G	H	J	L	N	P	F	F'
12"	3'-6"	3'-9"	4'-6"	2'-6"	1'-4"	1'-9"	4'-8"	2'-6"	3'-6"
15"	3'-6"	3'-9"	4'-9"	2'-9"	1'-4"	1'-9"	4'-8"	2'-6"	3'-6"
18"	3'-6"	3'-9"	5'-0"	3'-0"	1'-4"	1'-9"	4'-8"	2'-6"	3'-6"
24"	3'-6"	3'-9"	5'-0"	3'-0"	1'-4"	1'-9"	4'-8"	2'-6"	3'-6"
36"	4'-6"	4'-3"	6'-0"	4'-0"	1'-8"	2'-3"	5'-11"	3'-6"	5'-0"
48"	5'-6"	4'-9"	7'-0"	5'-0"	2'-0"	2'-9"	7'-2"	4'-6"	6'-6"

USE F DIMENSION FOR 1 1/2:1 SLOPE  
USE F' DIMENSION FOR 2:1 SLOPE

FIELD STONE MASONRY IMBEDDED IN MORTAR  
ALTERNATE- AS SPECIFIED ON THE PLANS



SECTION A-A

SECTION B-B

HEADWALL WITH RIP-RAP SLOPE PROTECTION DETAIL

NOT TO SCALE

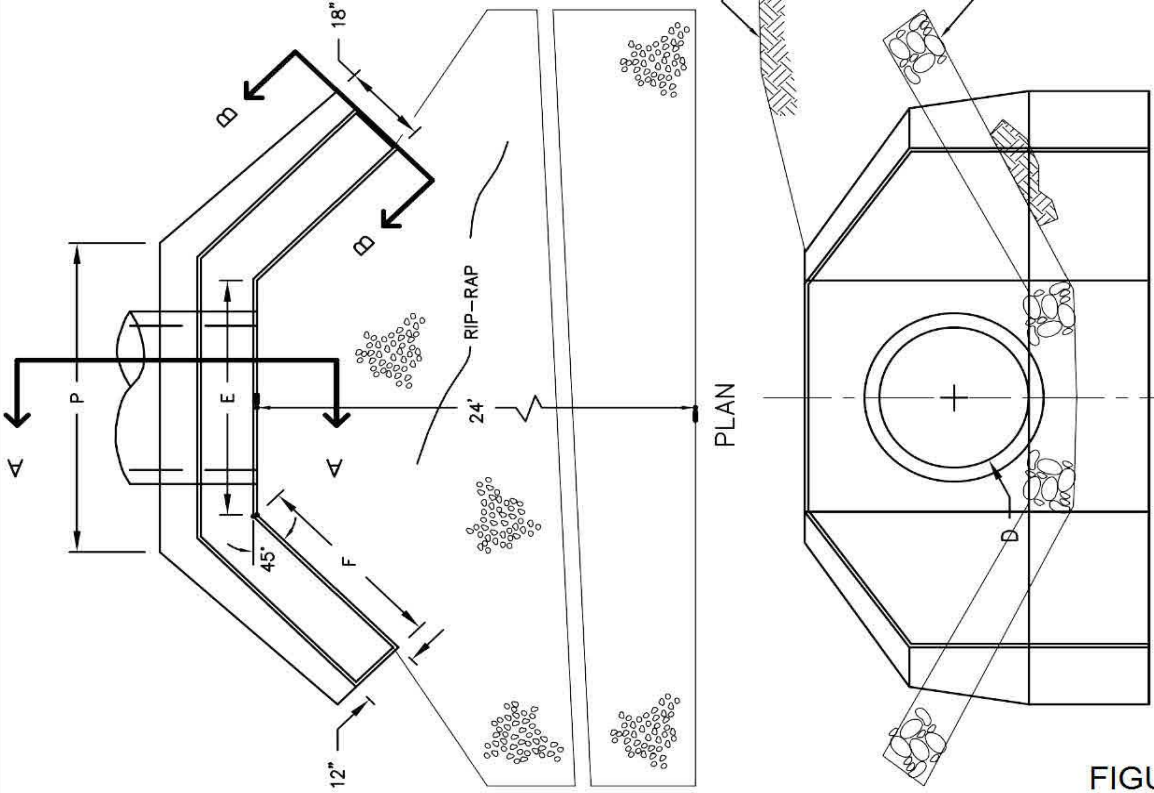


FIGURE 6

FIGURE 7



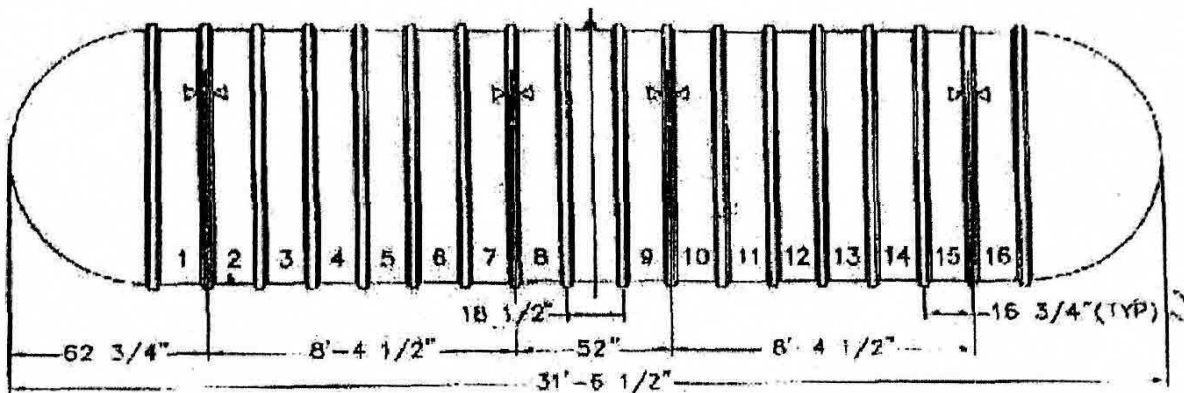
**TOWN OF BERKLEY  
MASSACHUSETTS**

**DEPARTMENT OF  
FIRE & RESCUE**

**FIRE CHIEF**

5 North Main St  
Berkley MA 02779

BUS. (508) 822-7516  
BUS. (508) 822-3303  
FAX (508) 828-1451



**XERXES CORPORATION**  
(OR APPROVED EQUAL)

**NOTES:**

1. Contractor shall obtain application and approval from the Berkley Fire Department prior to installation of the Fire Cistern. Application/inspection fee \$100.00
2. All materials and construction shall comply with the Berkley Fire Department regulations.
3. Tank to be minimum of 10,000 gallon fiberglass tank
4. All piping shall be schedule 80 PVC pipe and fittings, connections shall be made using Tetrahydrofuranes (THF) primer and between 800-1,000 centipoise viscosity cement
5. Tank to be installed per manufactures specifications.
6. 12" minimum ground cover over tank
7. 6" PVC pipe and elbows and stainless steel suction strainer in tank, shall be used
8. FD drafting connection to be 5" NST female swivel with cap and chain made of brass or pyrolite material. FD connection to be cemented (same manor as piping) or threaded to PVC piping and to be within 8' of the payement with appropriate gravel access
9. Supply line and fill line into tank to be encased in concrete to prevent movement.
10. Supply line to be protected by 2 bollard type protectors
11. Tank to be filled with water upon placement to counteract buoyancy forces prior to backfilling
12. FD connection to be between 24" to 36" above grade.
13. Tank to have 36" manholes at grade with lockable cover.
14. Tank to be properly vented with a minimum of 6" PVC pipe
15. Tank to have a 2.5" NST female swivel or 4" Storz fill connection with cap and chain in top of tank approx. 24-36" high, located away from drafting connection
16. All PVC piping aboveground shall be painted with red epoxy paint to prevent ultraviolet degradation

## APPLICATION FORMS

PLEASE INCLUDE ALL APPLICABLE FORMS FOR YOUR SUBMISSION.

ALL APPLICANT & OWNER INFORMATION MUST BE COMPLETED  
AND SIGNED OR IT WILL BE RETURNED.

A FORM T THAT HAS BEEN SIGNED BY THE TAX COLLECTOR IS REQUIRED WITH ALL SUBMISSIONS.

### APPROVAL NOT REQUIRED (FORM A)

- ☐ FORM A
- ☐ FORM T

### PRELIMINARY SUBDIVISION

- ☐ FORM B
- ☐ FORM D
- ☐ FORM T
- ☐ AFFIDAVIT OF PLAN DISTRIBUTION

### DEFINITIVE SUBDIVISION

- ☐ FORM C
- ☐ FORM T
- ☐ FORM D
- ☐ AFFIDAVIT OF PLAN DISTRIBUTION

## MISC. FORMS

COVENANT - FORM F

COVENANT RELEASE - FORM F-1

APPLICATION FOR MODIFICATION