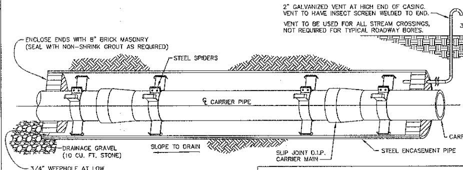
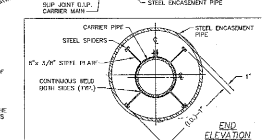




NOTES:

1. STEEL "SPIDERS" SHALL BE USED FOR SUPPORT OF THE CARRIER PIPE WITHIN THE CASING PIPE.
2. A MINIMUM SPACING OF 2 SPIDERS PER JOINT OF CARRIER PIPE SHALL BE REQUIRED.
3. THE SPIDERS SHALL BE SPACED EVENLY ALONG THE CARRIER PIPE SUCH THAT EACH SPIDER SUPPORTS THE SAME UNIT WEIGHT OF THE CARRIER MAIN.
4. FOR CASING SIZE SEE STANDARD SPECIFICATION SECTION 05000.

EFFECTIVE: 09/08/05

CARRIER PIPE

DETAIL No. 05000.02 SHEET 1 OF 1

GENERAL NOTES:
METER AND BYPASS ASSEMBLY TO BE DUCTILE IRON FLANGED PIPE.

METER FACE TO BE A MAXIMUM OF 3.5' BELOW FINISHED GRADE.

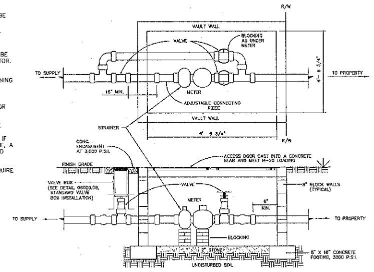
ADJUSTABLE CONNECTING PIECE TO BE CLOW F-1439 ADJUSTABLE CONNECTOR.

ACCESS DOOR SHALL BE ALUMINUM DOUBLE DOOR WITH A MINIMUM OPENING OF 42" X 36".

VALVES SHALL BE IRON BODY TYPE. EITHER SOLID BRICK, SOLID BLOCK OR PRECAST CONCRETE MAY BE USED.

TO ENSURE POSITIVE DRAINAGE, THE VAULT SHALL BE TIED INTO THE EXISTING STORM DRAINAGE SYSTEM. IF POSITIVE DRAINAGE IS UNOBTAINABLE, A SUMP PUMP SHALL BE LOCATED AND OPERATED IN THE VAULT.

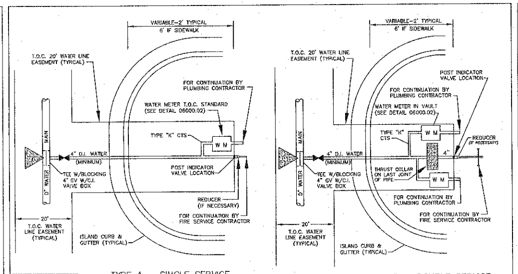
ALL COMMERCIAL APPLICATIONS REQUIRE AN ABOVE GROUND BACKFLOW PREVENTER.



EFFECTIVE: 09/08/05

STANDARD 3" & 4" METER INSTALLATION & VAULT

DETAIL No. 06000.03 SHEET 1 OF 1



TYPE A - SINGLE SERVICE

NOTE: SYSTEM TO BE MAINTAINED BY THE OWNER PAST THE EASEMENT LINE.

TYPE B - DOUBLE SERVICE

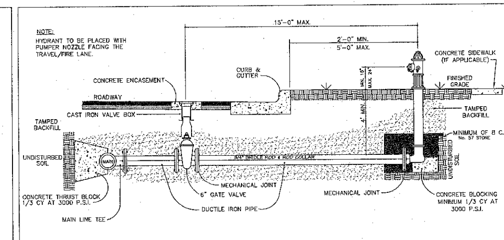
NOTE: SYSTEM TO BE MAINTAINED BY THE OWNER PAST THE EASEMENT LINE.

EFFECTIVE: 07/01/04

STANDARD COMBINED FIRE & DOMESTIC WATER SERVICE

DETAIL No. 06000.05 SHEET 1 OF 1

NOTE:
HYDRANT TO BE PLACED WITH PUMPER NOZZLE FACING THE TRAVEL/FIRE LANE.



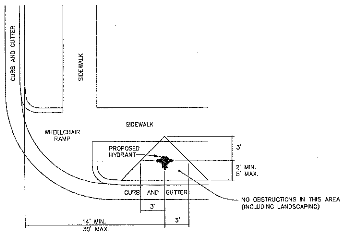
NOTES:

1. TOP OF BLOCKING TO BE 2" FROM HYDRANT WEEP HOLES.
2. HYDRANT TEE MAY BE SUBSTITUTED FOR D.I.P. NIPPLE AND RODDING TO VALVE.
3. TAPPING SADDLES MAY BE USED INSTEAD OF A TEE FOR WATER LINES LARGER THAN 16 INCHES.
4. IF HYDRANT IS LOCATED ON A DOT ROADWAY USE DOT STANDARDS FOR LOCATION OF HYDRANT
5. STD. RODDING AND BLOCKING FROM GATE VALVE TO HYDRANT MAY BE SUBSTITUTED WITH A CONCENTRIC RING RESTRAINT SYSTEM SUCH AS MUELLER AQUAGRIP OR AN APPROVED EQUAL PRODUCT PROVIDED ALL PIPE SEGMENTS ARE RESTRAINED.

EFFECTIVE: 09/08/05

STANDARD HYDRANT INSTALLATION

DETAIL No. 06000.06 SHEET 1 OF 1

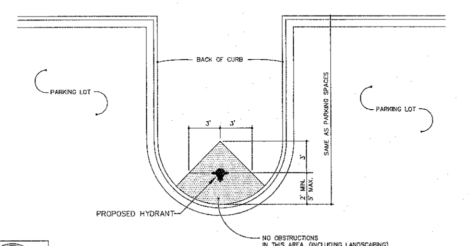


NOTE: LOCATION SHOULD BE COORDINATED WITH NCDOT ALONG STATE MAINTAINED ROADWAYS.

EFFECTIVE: 07/01/04

STANDARD HYDRANT LOCATION

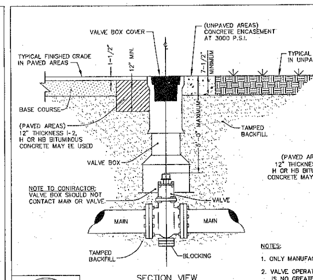
DETAIL No. 06000.07 SHEET 1 OF 2

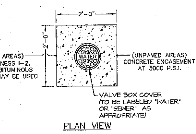


EFFECTIVE: 07/01/04

STANDARD HYDRANT LOCATION (FOR PARKING LOT)

DETAIL No. 06000.07 SHEET 2 OF 2





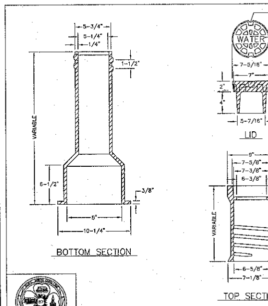
NOTES:

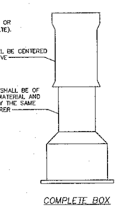
1. ONLY MANUFACTURED VALVE BOX EXTENSIONS SHALL BE ALLOWED.
2. VALVE OPERATING NUT MUST BE EXTENDED SO THAT THE DEPTH IS NO GREATER THAN 5' (ft.) FROM THE SURFACE USING A MANUFACTURER APPROVED EXTENSION KIT.
3. PRECAST CONCRETE ENCASEMENT IS ALLOWED OUTSIDE OF PAVED AREAS.

EFFECTIVE: 07/01/04

STANDARD VALVE BOX INSTALLATION

DETAIL No. 06000.08 SHEET 1 OF 2





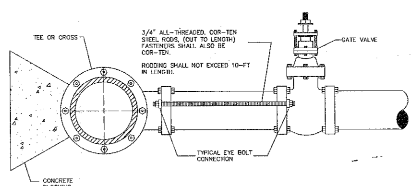
NOTES:

1. VALVE BOX COVER SHALL WEIGH A MINIMUM 26 lbs.
2. ENTIRE VALVE BOX ASSEMBLY & COVER SHALL BE CAST FROM CLASS 35 GRAY IRON.
3. ASSEMBLY SHALL BE DOMESTICALLY MADE AND MANUFACTURED IN THE U.S.A.

EFFECTIVE: 07/01/04

STANDARD VALVE BOX INSTALLATION

DETAIL No. 06000.08 SHEET 2 OF 2



COR-TEN ROD REQUIREMENTS

BRANCH SIZE	NO. OF RODS
4"	2
6"	2
8"	4
12"	6
16"	8
24"	10

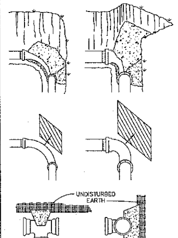
GENERAL NOTES:

1. SEE STANDARD THRUST BLOCK.
2. CONCRETE SHALL NOT CONTACT BOLTS OR ENDS OF MECHANICAL FITTINGS.

EFFECTIVE: 09/08/05

STANDARD VALVE RODDING

DETAIL No. 06000.09 SHEET 1 OF 1



MINIMUM CONCRETE BLOCKING (C.Y.) *

NOM. PIPE DIA. IN.	TEES & DEAD ENDS	90° BEND	45° BEND	22-1/2° BEND	11-1/4° BEND
4	1/3	1/3	1/3	1/3	1/3
6	1/3	1/3	1/3	1/3	1/3
8	1/3	1/2	1/3	1/3	1/3
10	2/3	3/4	1/2	1/3	1/3
12	3/4	1.0	2/3	1/3	1/3
14	1.0	1-1/2	3/4	1/2	1/3
16	1-1/3	2.0	1.0	1/2	1/3
18	1-2/3	2-1/3	1-1/3	2/3	1/3
20	2.0	3.0	1-2/3	3/4	1/2
24	3.0	4-1/3	2-1/3	1-1/3	2/3

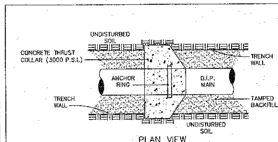
* CONCRETE SHALL BE 3000 P.S.I. MIX.

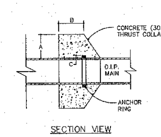
NOTE:
FITTING SHALL BE WRAPPED WITH A MINIMUM 4 MIL PLASTIC. NO CONCRETE SHALL COVER BOLTS OR GLANDS.

EFFECTIVE: 07/01/04

STANDARD REACTION BLOCKING

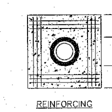
DETAIL No. 06000.13 SHEET 1 OF 1





SCHEDULE

PIPE DIAMETER	CONCRETE THRUST COLLAR A	CONCRETE THRUST COLLAR B	ANCHOR RING C	RINGS REQUIRED
6",8",12"	1'-0"	1'-0"	2"	ONE
16"	1'-4"	1'-0"	2"	ONE
20"	1'-4"	1'-0"	3"	ONE
24"	1'-4"	1'-0"	3"	TWO
30"	1'-4"	1'-2"	4"	TWO
36"	1'-4"	1'-4"	4"	TWO

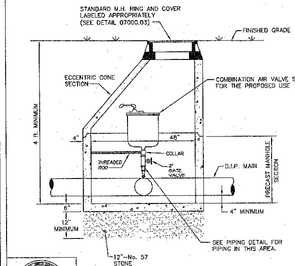


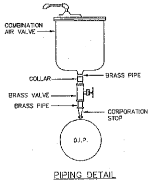
NOTE:
6" TO 16" MAINS = 12-NO. 7 BARS
20" TO 36" MAINS = 12-NO. 8 BARS
BARS PLACED AS SHOWN

EFFECTIVE: 07/01/04

STANDARD THRUST COLLAR INSTALLATION

DETAIL No. 06000.14 SHEET 1 OF 1





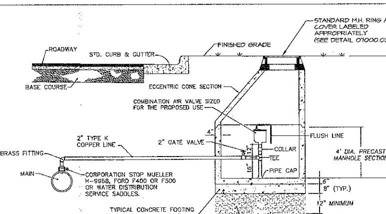
NOTES:

1. TAP SIZE AND ISOLATION VALVE TO BE SAME SIZE AS AIR VALVE.
2. ALL PIPING AND FITTINGS, IN THE MANHOLE, SHALL BE BRASS OR BRONZE UNLESS NOTED.
3. MANHOLE STEPS SHALL BE PLACED 16" O.C. AS SHOWN BY DETAIL 07000.02
4. CONCENTRIC CONES MAY BE USED FOR AIR VALVE MANHOLES LESS THAN 5' IN DEPTH.
5. MANHOLE INTERIOR SHALL BE EPOXY COATED FOR SEWER MANHOLES.

EFFECTIVE: 09/08/05

STANDARD COMBINATION AIR VALVE MANHOLE (FOR WATER, RECLAIMED WATER, OR SEWER MAINS)

DETAIL No. 06000.15 SHEET 1 OF 2



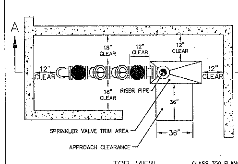
NOTES:

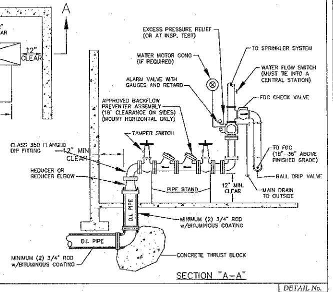
1. ALL PIPING AND FITTINGS, IN THE MANHOLE, SHALL BE BRASS.
2. CORPORATION STOP SHALL BE LOCATED IN THE TOP OF MAIN.
3. MANHOLE STEPS SHALL BE PLACED 16" O.C. WHEN DEPTH OF MANHOLE EXCEEDS 5 FEET.
4. SEE DETAIL 07000.02 FOR MANHOLE STEP SPECIFICATIONS.
5. MANHOLE INTERIOR SHALL BE EPOXY COATED.

EFFECTIVE: 09/08/05

STANDARD COMBINATION AIR VALVE MANHOLE OFFSET FROM MAIN (FOR WATER, RECLAIMED WATER, OR SEWER MAINS)

DETAIL No. 06000.15 SHEET 2 OF 2

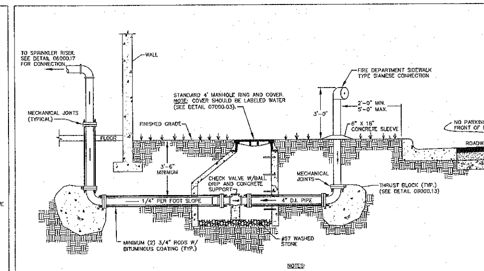




EFFECTIVE: 09/08/05

STANDARD SPRINKLER RISER

DETAIL No. 06000.17 SHEET 1 OF 1



NOTES:

1) ALL SIAMESE CONNECTION'S MUST BE WITHIN 50 FEET OF A FIRE HYDRANT.
2) SIAMESE CONNECTION CAN BE ATTACHED TO BUILDING. CHECK VALVE W/ BALL DRIP NOT REQUIRED IF SIAMESE CONNECTION IS TIED DIRECTLY TO THE BUILDING.

EFFECTIVE: 07/01/04

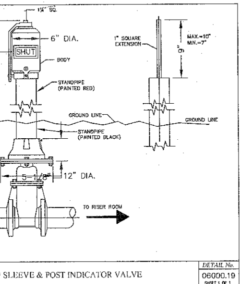
CURB SIDE FIRE DEPARTMENT CONNECTION

DETAIL No. 06000.18 SHEET 1 OF 1

FIELD ADJUSTMENT INSTRUCTIONS

1. REMOVE THE BODY FROM THE TOP OF THE INDICATOR POST ASSEMBLY.
2. CUT THE REQUIRED LENGTH OFF THE BOTTOM OF THE STANDPIPE FOR THE GROUND LINE TO MATCH UP WITH STANDPIPE GROUND LINE MARK.
3. CUT THE 1" SQ. EXTENSION AT A DISTANCE OF 9" ABOVE THE TOP OF THE STANDPIPE.
4. SET THE "OPEN" AND "SHUT" TARGETS FOR THE APPROPRIATE VALVE SIZE.
5. RE-ATTACH THE BODY TO THE TOP OF THE INDICATOR POST ASSEMBLY.
6. ALL PIV(s) SHALL BE INSTALLED WITH AN ELECTRONICALLY CONTROLLED TAMPER SWITCH.

NOTE:
POST INDICATOR VALVE SHALL BE LOCATED AT A MINIMUM 5-ft FROM BUILDING



EFFECTIVE: 09/08/05

STANDARD TAPPING SLEEVE & POST INDICATOR VALVE

DETAIL No. 06000.19 SHEET 1 OF 1

07-SP-015
APPROVED
TOWN OF CARY
Approved by DRC Date 04 23 07
Planning JGB Date 05 18 07
Engineering TS Date 5·21·07

Chandler Palmer Speight engineers, p.a.
7621 Purfoy Road, Suite 201
Fuquay-Varina, NC 27526
Tel:919-552-4845
Fax:919-552-6962

SEALS

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 025493 BRIAN D. SPEIGHT 3.29.07

REVISIONS

DATE	COMMENTS
03-29-07	TOWN OF CARY REVIEW COMMENTS

CONSTRUCTION DOCUMENT

CARY ALLIANCE CHURCH
4108 TEN TEN ROAD
CARY, NORTH CAROLINA

REVIEWED BY:	JFC
DESIGNED BY:	CPS
DRAWN BY:	CPS
DATE:	2/8/07
PROJECT NUMBER:	06-016

SITE DETAILS

C9.03

SHEET 19 OF 27

FEBRUARY 2007