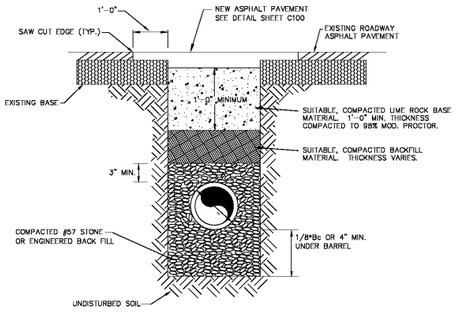
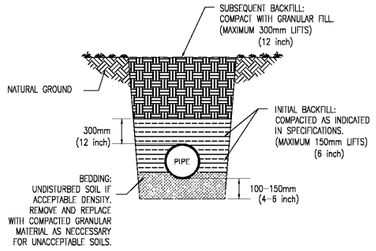


TYPICAL WATER MAIN ROAD CUT

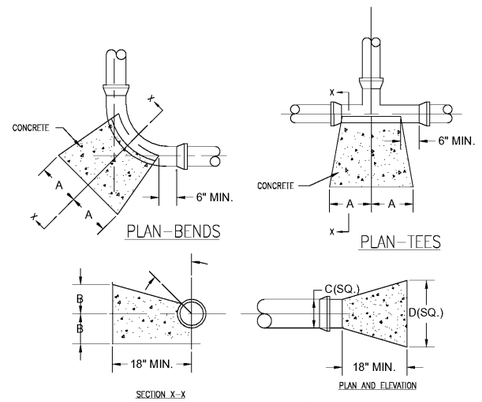
TYPICAL PIPE LAYING WITH ROAD CUT DETAIL

SCALE: N.T.S.



PIPE BEDDING IN SOIL

SCALE: N.T.S.

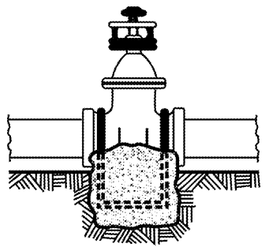


TYPE	SIZE	1/4"BENDS A	1/4"BENDS B	1/8"BENDS A	1/8"BENDS B	1/16"BENDS A	1/16"BENDS B	TEES A	TEES B	PLUGS C	PLUGS D
TYPE 1 4000 PSF SOIL											
TYPE 2 2000 PSF SOIL	4"	16"	10"	9"	10"	6"	8"	10"	12"	10"	21"

NOTE: BASED ON 100 PSI STATIC PRESSURE PLUS 200PSI WATER HAMMER. ALL BEARING SURFACES TO BE CARRIED TO UNDISTURBED GROUND. APPLIES TO JOINTS PLACED IN THE VERTICAL AND HORIZONTAL PLANES.

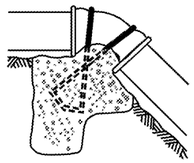
WATER THRUST BLOCK DETAILS

SCALE: N.T.S.



TYPICAL INLINE VALVE THRUST BLOCK

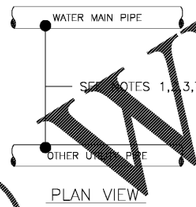
SCALE: N.T.S.



TYPICAL VERTICAL ALIGNMENT CHANGE THRUST BLOCK

SCALE: N.T.S.

WATER UTILITY SEPARATION REQUIREMENTS



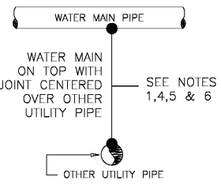
PLAN VIEW

OTHER PIPING TYPE	MINIMUM HORIZONTAL SEPARATION (FEET)	
1. GRAVITY SANITARY SEWER	10	
2. GRAVITY SANITARY SEWER SPECIAL CASE, NOTE #3	3	N/A
3. SEWAGE FORCE MAIN	10	
4. GRAVITY STORM SEWER	10	
5. RECLAIMED WATER	10	
6. ELECTRIC	3	

NOTE:

1. THE PLANTING OF HARDWOOD TREE WITHIN 10'-0" (HORIZONTAL CLEARANCE) OF THE MAIN SHALL BE PROHIBITED.

MINIMUM HORIZONTAL SEPARATION REQUIREMENTS



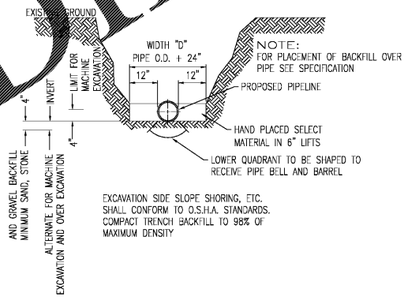
SECTION VIEW

OTHER PIPING TYPE	MINIMUM VERTICAL SEPARATION EIGHTEEN (18) (INCHES)
1. GRAVITY SANITARY SEWER	18
2. SEWAGE FORCE MAIN	18
3. GRAVITY STORM SEWER	18
4. RECLAIMED WATER	18
5. ELECTRIC	18

NOTE:

IF THE WATER MAIN IS BELOW THE SEWER PIPE, A MINIMUM OF 18" VERTICAL SEPARATION IS REQUIRED

MINIMUM VERTICAL SEPARATION REQUIREMENTS

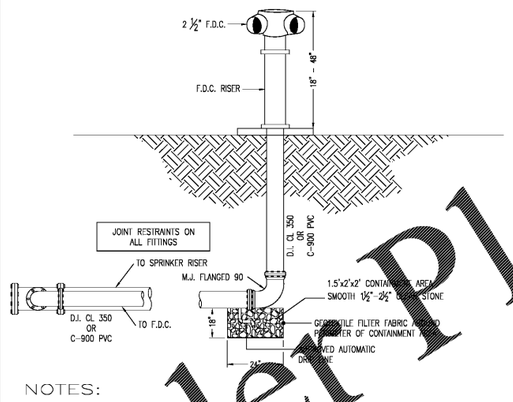


STANDARD TRENCHING PROCEDURE

SCALE: N.T.S.

WATER UTILITY SEPARATION REQUIREMENTS

1. IT IS REQUIRED THAT "WATER MAINS" BE INSTALLED, CLEANED, DISINFECTED AND HAVE A SATISFACTORY BACTERIOLOGICAL SURVEY PERFORMED IN ACCORDANCE WITH THE LATEST APPLICABLE AWWA STANDARDS, FOR THE PURPOSE OF THIS SECTION, THE PHRASE "WATER MAINS" SHALL MEAN MAINS, INCLUDING TREATMENT PLANT PROCESS PIPING, CONVEYING EITHER RAW, PARTIALLY TREATED, OR FINISHED DRINKING WATER; FIRE HYDRANT LEADS; AND SERVICE LINES THAT HAVE AN INSIDE DIAMETER OF THREE (3) INCHES OR GREATER.
2. NEW UNDERGROUND WATER MAINS SHALL BE LAID TO PROVIDE A HORIZONTAL DISTANCE OF AT LEAST TEN (10) FEET BETWEEN THE OUTSIDE OF THE WATER MAIN AND THE OUTSIDE OF ANY EXISTING OR PROPOSED STORM SEWER, OR PIPELINE CONVEYING RECLAIMED WATER.
3. NEW UNDERGROUND WATER MAINS SHALL BE LAID TO PROVIDE A HORIZONTAL DISTANCE OF AT LEAST TEN (10) FEET, BETWEEN THE OUTSIDE OF THE WATER MAIN AND THE OUTSIDE OF ANY EXISTING OR PROPOSED GRAVITY OR PRESSURE-TYPE SANITARY SEWER OR WASTEWATER FORCE MAIN. THE MINIMUM HORIZONTAL SEPARATION DISTANCE BETWEEN WATER MAINS AND GRAVITY-TYPE SANITARY SEWERS MAY BE REDUCED TO THREE (3) FEET WHERE THE BOTTOM OF THE WATER MAIN IS LAID AT LEAST SIX (18) INCHES ABOVE THE TOP OF THE SEWER (SPECIAL CASE).
4. NEW UNDERGROUND WATER MAINS CROSSING ANY EXISTING OR PROPOSED GRAVITY OR VACUUM-TYPE SANITARY SEWER OR STORM SEWER SHALL BE LAID SO THE OUTSIDE OF THE WATER MAIN IS AT LEAST EIGHTEEN (18) INCHES, ABOVE OR BELOW THE OUTSIDE OF THE OTHER PIPELINE. IT IS PREFERABLE TO LAY THE WATER MAIN ABOVE THE OTHER PIPELINE.
5. NEW UNDERGROUND WATER MAINS CROSSING ANY EXISTING OR PROPOSED PRESSURE-TYPE SANITARY SEWER, WASTEWATER, OR PIPELINE CONVEYING RECLAIMED WATER SHALL BE LAID SO THE OUTSIDE OF THE WATER MAIN IS AT LEAST EIGHTEEN (18) INCHES ABOVE OR BELOW THE OUTSIDE OF THE OTHER PIPELINE. IT IS PREFERABLE TO LAY THE WATER MAIN ABOVE THE OTHER PIPELINE.
6. AT THE UTILITY CROSSINGS DESCRIBED IN NOTES 4 AND 5 ABOVE, ONE FULL LENGTH OF WATER MAIN PIPE SHALL BE CENTERED ABOVE OR BELOW THE OTHER PIPELINE SO THE WATER MAIN JOINTS WILL BE AS FAR AS POSSIBLE FROM THE OTHER PIPELINE.
7. NEW FIRE HYDRANTS SHALL BE LOCATED SO THAT THE HYDRANTS ARE AT LEAST TEN (10) FEET FROM ANY EXISTING OR PROPOSED STORM SEWER, OR PIPELINE CONVEYING RECLAIMED WATER; AT LEAST TEN (10) FEET, FROM ANY EXISTING OR PROPOSED VACUUM-TYPE SANITARY SEWER; AT LEAST TEN (10) FEET, FROM ANY EXISTING OR PROPOSED GRAVITY OR PRESSURE-TYPE SANITARY SEWER OR WASTEWATER FORCE MAIN.
8. WHERE AN UNDERGROUND WATER MAIN IS BEING LAID LESS THAN THE REQUIRED MINIMUM HORIZONTAL DISTANCE FROM ANOTHER PIPELINE AND WHERE AN UNDERGROUND WATER MAIN IS CROSSING ANOTHER PIPELINE AND JOINTS IN THE WATER MAIN ARE BEING LOCATED LESS THAN THE REQUIRED MINIMUM DISTANCE FROM JOINTS IN THE OTHER PIPELINE, THE CONTRACTOR SHALL CONSULT THE DESIGN ENGINEER TO OBTAIN APPROVAL OF ANY ALTERNATIVE CONSTRUCTION METHODS, PRIOR TO CONSTRUCTION.
9. ALL INSTALLATIONS SHALL COMPLY WITH "RECOMMENDED STANDARDS FOR WATER WORKS (TEN STATE STANDARDS) PART 8.8"

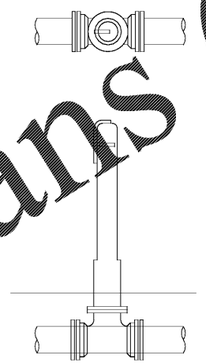


NOTES:

1. THE PIPING BETWEEN THE CHECK VALVE AND THE OUTSIDE HOSE COUPLING SHALL BE EQUIPPED WITH AN APPROVED AUTOMATIC DRIP DRAIN VALVE LOCATED AT THE LOWEST PORTION OF THE PIPING. UNDERGROUND PIPE SHALL BE SLOPED TO DRAIN.
2. PIPE SHALL BE TESTED IN ACCORDANCE WITH NFPA 13.
3. FIRE DEPARTMENT CONNECTION SHALL CONSIST OF TWO 2 1/2" CONNECTIONS USING NST INTERNAL THREAD SWIVEL FITTINGS.
4. GEOTEXTILE CONTAINMENT AREA MAY BE SUBSTITUTED WITH CONCRETE VAULT. DRIP LINE MUST BE PROTECTED FROM DIRT AND DEBRIS TO ENSURE LINE DOES NOT CLOG.

FIRE DEPARTMENT CONNECTION DETAIL

SCALE: N.T.S.



NOTES:

(PLEASE REFER TO WRITTEN SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS)

1. MECHANICAL JOINT FITTINGS SHALL BE REQUIRED UNDERGROUND AND FLANGED FITTINGS FOR ABOVE GROUND USE, NO UNIFLANGES PERMITTED.
2. PAINT THE ABOVE GROUND ASSEMBLY, INCLUDING ENTIRE LENGTH OF TIE RODS, AFTER MANUFACTURERS RECOMMENDED SURFACE PREP IS COMPLETED. DO NOT PAINT OVER NAME/SERIAL PLATE, STAINLESS STEEL OR BRASS FITTINGS.

POST INDICATOR VALVE DETAIL

SCALE: N.T.S.

MARCH 9, 2018
100% DESIGN SUBMITTAL
NOT APPROVED FOR CONSTRUCTION

GSA
GENERAL SERVICES ADMINISTRATION
PUBLIC BUILDING SERVICE
DESIGN & CONSTRUCTION DIVISION
77 FORSYTH STREET, SW, SUITE G41
ATLANTA, GA 30303

AKEA INC.
3503 NW 98th Street, STE B
Gainesville, FL 32606
Phone: (352) 474-6124
COA: FL #26693 EXP 02/28/19
Project Number: 121-16

KEY PLAN

CAD FILE INFORMATION

REVISION NUMBER	REVISION DESCRIPTION	REVISION DATE

GRAPHIC SCALE

CONTRACT	A/E	GS-04P-16-EX-C-7070
	CONSTRUCT.	FQ4PC1-16-5002
ARCHITECT/ENGINEER	PRIME A/E	AKEA, INC.
	ADDRESS	STREET 3503 NW 98TH STREET
		CITY GAINESVILLE STATE FL ZIP CODE 32606
	PRIME A/E PROJ. MGR.	JAMEY CLAYTON
	SUB A/E	NEPTUNE FIRE PROTECTION ENG. LLC
	ADDRESS	STREET 60 OCEAN BLVD., STE. 15
		CITY ATLANTIC BEACH STATE FL ZIP CODE 32233
	SUB A/E	
	ADDRESS	STREET
		CITY STATE
BUILDING	NAME	J. ROY ROWLAND CT
	ADDRESS	STREET 300 NORTH FRANKLIN ST.
		CITY DUBLIN STATE GA ZIP CODE 31021
	BLDG NO.	GA003362Z
	ADDL FACILITY	OTHER_FACILITY_NAME
PROJECT	TITLE	INSTALL FIRE SPRINKLER SYSTEM
	DESCRIPTION	DESIGN-BUILD (DB)
		FIRE SPRINKLER SYSTEM
	SUBMISSION	100% SUB. DATE 11/17/2017
	GSA PROJ. MGR.	MICHAEL POPE
	A/E PROJ. MGR.	ARNOLD J. HEIDT, III
	PROJ. NO.	VGA00038 / FQ4PC1-16-5002
DRAWING	DRAWN BY	MDT DATE DRAWN 11/17/2017
	CKD BY	SH DATE CKD 11/17/2017
	FILE NAME	C300
	FLOOR NO.	GROUND
	TITLE	UTILITY PLAN-CIVIL DETAILS
	NUMBER	C400 17 of 20
		DISCIPLINE SHEET TYPE SEQUENCE

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