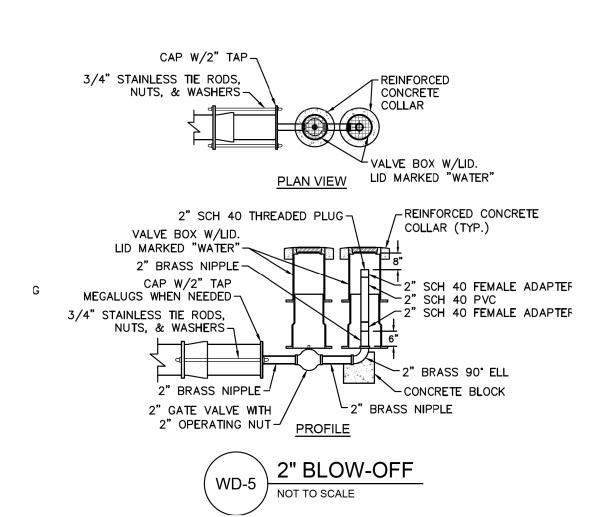
SHEET NO.

PROJECT REFERENCE NO.

UTILITY CONSTRUCTION PLANS

**DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED** 



PRE CAST CONC.
METER VAULT METER VAULT SECTION A-A GATE VALVE W/ HAND WHEEL, TYP. OF 2 - STRAINER BASKET ASSEMBLY SENSUS WATER METER VALVE W/ TOUCH READ SYSTEM COMPATIBLE WITH CFPUA SPECS SIZE AS REQUIRED BY ENGINEER. (SEE SPECS.) IF A 4x3 REDUCER IS REQUIRED IT MUST BE INSTALLED INSIDE THE - DRESSER COUPLING \*DISTANCE BETWEEN FLANGES MUST BE TWICE THE LENGTH OF THE DRESSER COUPLING FLANGES FROM WALLS

BYPASS (FOR 3" OR

LARGER METERS)

NOT TO SCALE

METER VAULT PLAN

FOR WATER METERS LARGER THAN 2"

WATER METER VAULT

PRE CAST CONC.
METER VAULT

-TAPPING VALVE, PER SPECIFICATIONS

TYPICAL WATER SERVICE CONNECTION FOR RESIDENTIAL SINGLE FAMILY HOME ON CFPUA WATER SYSTEM

SINGLE SERVICE CONNECTION NOT TO SCALE

CORPORATION STOP McDONALD

STIFFENERS MCDONALD MODEL 6133T.

CORPORATION STOP McDONALD SERVICE STOP

STEEL STIFFENERS McDONALD MODEL 6133T.

MODEL 74701B-22 OR EQUIVALENT WITH STAINLESS

SECTION VIEW

SERVICE STOP MODEL 74701B-22 OR

EQUIVALENT WITH STAINLESS STEEL

STIFFENERS McDONALD MODEL 6133T.

3/4" SERVICE ANGLE STOP: SHALL BE McDONALD MODEL 74642B-22, OR

APPROVED EQUIVALENT, WITH STAINLESS STEEL

PAVED 5' MIN. STREET (TYP.)

ANCHOR STRAPS-

|---D(SQ)---|

\_5/8"x3/4" METER OR 1" METER

**EXISTING** 

GRADE

SINGLE F

PLAN VIEW

SERVICE

-SINGLE METER BOX

<u> 4" SERVICE ANGLE STOP:</u> SHALL BE McDONALD MODEL

MCDONALD MODEL 6133T.

CARSON 1015-12 BLACK

METER BOX WITH 2/6 MsHI

WITH STAINLESS STEEL STIFFENERS

METER BOX (SEE ABOVE)

-3" CLEAN FILL ALL AROUND LINE

" SERVICE LINE. CTS-PE TUBING,

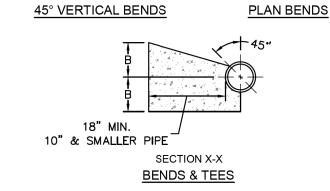
SDR 9 ASTM D2737 (TYP.)

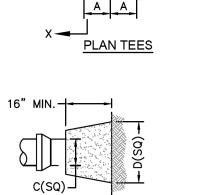
-BEDDING, AS SPECIFIED

SHORT SIDE SERVICE

1" SERVICE LINE, BY CUSTOMER

74642B-22, OR APPROVED EQUIVALENT,





PLAN & ELEVATION PLUGS

SIZE	90 BENDS		45 BENDS		22-1/2 BENDS		TEES/PLUGS		45 VERT. BENDS
SIZE	Α	В	Α	В	A	В	Α	В	
7" 0" 0" 0" 0" 0"									
3"	8"	6"	5"	6"	3"	7"	6"	8"	27"
4"	8"	9"	5"	8"	3"	11"	6"	9"	28"
6"	14"	11"	9"	9"	8"	8"	12"	9"	36"
8"	16"	16"	12"	12"	10"	13"	14"	13"	42"
10"	18"	22"	15"	14"	14"	16"	18"	15"	50"
12"	20"	28"	18"	17"	16"	16"	22"	18"	62"
14"	26"	29"	21"	19"	18"	18"	26"	20"	72"
16"	33"	29"	25"	21"	20"	21"	32"	21"	83"
18"	40"	30"	28"	24"	22"	23"	36"	24"	88"

NOTES:

1. BASED ON 160 PSI TEST PRESSURE AND 2000 PSF SOIL BEARING CAPACITY. 2. ALL BEARING SURFACES TO BE CARRIED TO UNDISTURBED GROUND. 3. USE MEG-A-LUG (PREFERRED) IN LIEU OF BLOCKING AND RODDING.



-MATCH EXISTING ASPHALT **EXISTING** OR 2" MIN SUPERPAVE CLEAN SQUARE PAVEMENT -S-9.5A OR B IN LIFTS CUT W/ TACK 8" MIN. 8" ABC BASE 1'-0" 12" SUBBASE CUTBACK CUTBACK -SLOPE WALLS TO ANGLE OF BACKFILL REPOSE OR SHORING, AS APPROVED BY ENGINEER EMBEDMENT PIPE -PIPE BEDDING

LUM. DOOR & FRAME W/ STAINLESS

STEEL SLAM LOCK AS PER CFPUA SPEC

) DOOR OPENING MUST CLEAR ALL

(2) MUST MEET H20 LOADING REQUIRED IF IN TRAFFIC AREA.

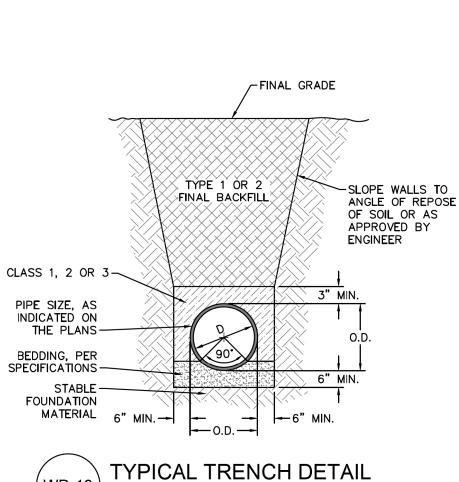
COMPONENTS.

ASPHALT DENSITY IS 90%.

- BACKFILL SHALL BE SUITABLE MATERIAL THAT IS FREE FROM HEAVY CLAY, GUMBOS, DEBRIS, ORGANICS AND LITTLE TO NO EXCESSIVE MOISTURE. 2. SELECT BACKFILL MAY BE SUBSTITUTED OR REQUIRED BY CITY TO ACHIEVE COMPACTION,
- (I.E. #57, ABC, CRUSHED LIMESTONE, CLEAN SAND, FLOWABLE FILL, ETC). 8-INCH OF ABC BASE MATERIAL SHALL BE USED ON CITY STREETS. 4. BACKFILL AND BASE MATERIALS SHALL BE COMPACTED 12" MINIMUM LIFTS 5. SOIL SHALL BE COMPACTED BY A MECHANIZED TAMPER (I.E JUMPING JACK), HOWEVER,
- VIBRATORY ROLLERS > 18" WIDTH MAY BE USED FOR LARGER EXCAVATIONS. THE PLATE TAMP METHOD SHALL NOT BE USED. 6. ALL APPROVED CASTINGS SHALL BE SET FLUSH TO GRADE AND SUPPORTED IF
- ABC BASE AND SUBBASE COMPACTED TO 98% AND BACKFILL AND EMBEDMENT COMPACTED TO 90% AS DETERMINED BY THE MODIFIED PROCTOR AASHTO METHOD T-99. 8. 1-FOOT CUTBACKS OF ASPHALT SHALL BE PREPARED ON UNDISTURBED SOIL. MINIMUM

(FOR PRIVATE ROADS AND PAVED AREAS; CONTRACTOR TO MEET MIN. REQUIREMENTS AS DEFINED BY RIGHT-OF-WAY OWNER FOR PUBLIC ROAD REPAIRS)





WD-13 } NOT TO SCALE

## CAPE FEAR PUBLIC UTILITY AUTHORITY STANDARD NOTES:

BY EBAA IRON, SIGMA, STAR PIPE PRODUCTS OR APPROVED EQUAL.

USED WITH COR-BLUE MJ T-BOLT AND GASKET KITS, AS AN ALTERNATIVE.

SHALL HAVE 316 STAINLESS STEEL HARNESS AND FASTENERS.

4. HYDRANT AND VALVE SHALL BE PLACED OUTSIDE DITCH LIMITS.

NOT TO SCALE

5. WEEP HOLES OPEN AND UNBLOCKED TO DRAIN.

1. SEWER GUARDS REQUIRED AT ALL MANHOLES. STAINLESS STEEL SEWER GUARDS REQUIRED AT MANHOLES LOCATED IN TRAFFIC AREAS. 2. WATER AND SEWER SERVICES SHALL BE PERPENDICULAR TO

NOTES:

1. NO JOINT SHALL BE INSTALLED BETWEEN THE MAIN SERVICE TAP AND

2. SERVICE SADDLES ON PVC MAINS SHALL BE WIDE BAND BRASS BODY

A48, CLASS 30B AND AASHTO H20 LOAD RATING STANDARDS (SIP

EXISTING

LONG SIDE SERVICE

1" SERVICE LINE, BORED -

PUMPING AND HOSE FIRE HYDRANT CONNECTION EQUAL TO CFPUA

> \_\_24"x24"x4" THICK CONCRETE COLLAR

> > -VALVE BOX W/LID,

LID MARKED "WATER"

-6" M.J. GATE VALVE

(OPEN LEFT)

\_SEE NOTE 3

STANDARD WITH 5" STORZ CONNECTION FACING ROADWAY

2' MINIMUM BURY

(SEE NOTE 4)

NOTES:

1. JOINT RESTRAINT SYSTEMS SHALL BE WEDGE ACTION STYLE FOR DI PIPE AS MANUFACTURED

2. WHEN HYDRANT LEGS REQUIRE FULL LENGTH PIPE SECTIONS, OVER BELL RESTRAINT SYSTEM

3. CONTINUOUS 316 STAINLESS STEEL RODS (TEE TO VALVE AND VALVE TO HYDRANT) MAY BE

FIRE HYDRANT ASSEMBLY

DI PIPE

FIELD APPLIED JOINT RESTRAINT -(SEE NOTE 1)

3. METER BOXES SUSCEPTIBLE TO TRAFFIC SHALL CONFORM TO ASTM

THE METER STOP. ALL SERVICES SHALL BE INSTALLED

SADDLE McDONALD 3801 OR EQUIVALENT.

MODEL 4242, OR APPROVED EQUIVALENT).

PERPENDICULAR TO MAIN.

1' MIN./

18" MAX.

BREAK RING -

COMPACTED

#57 STONE FILL

(7 CF MIN.)-

BACK FILL -

- MAIN AND TERMINATE AT RIGHT-OF-WAY LINE. SEWER SERVICES IN CUL-DE-SACS ARE REQUIRED TO BE PERPENDICULAR, OR MUST ORIGINATE IN END OF LINE MANHOLE AND TERMINATE AT RIGHT-OF-WAY LINE. 3. ALL SERVICES TYING INTO DUCTILE IRON MAINS SHALL BE CONSTRUCTED OF CLASS 50, DIP, WITH PROTECTO 401
- CERAMIC EPOXY LINING. 4. MINIMUM 10' UTILITIES EASEMENT PROVIDED ALONG THE FRONTAGE OF ALL LOTS AND AS SHOWN FOR NEW
- DEVELOPMENTS. 5. NO FLEXIBLE COUPLINGS SHALL BE USED. 6. ALL STAINLESS STEEL FASTENERS SHALL BE 316. 7. CLEANOUTS SHALL BE LOCATED A MINIMUM OF 12 FEET FROM ALL PROPERTY CORNERS. WATER METER BOXES ARE TO BE A MINIMUM OF 5 FEET FROM THE PROPERTY CORNER.

STANDARD NOTES (REQUIRED ON ALL PLAN AND PROFILE SHEETS)

## GENERAL NOTES: 1. NO EXCAVATED MATERIAL SHALL BE PLACED IN ANY STREAM, DITCH OR DRAINAGE—WAY. 2. THE CONTRACTOR IS RESPONSIBLE FOR LOCATING ALL UNDERGROUND UTILITIES BEFORE ANY

- CONSTRUCTION BEGINS. 3. THE CONTRACTOR IS RESPONSIBLE FOR TEMPORARY SEDIMENT AND EROSION CONTROL
- MEASURES WHILE CONSTRUCTION IS IN PROGRESS.
- 4. THE CONTRACTOR IS RESPONSIBLE FOR STABILIZATION OF ALL DISTURBED AREAS. 5. THE CONTRACTOR IS RESPONSIBLE FOR LAY DOWN AND STOCKPILE AREAS (TO ARRANGE AND ENSURE COMPLIANCE WITH ALL LOCAL AND STATE REGULATIONS).

THE DETAILS SHOWN HEREON SUPERCEDE CFPUA WRITTEN TECHNICAL SPECIFICATIONS VERSIONS 1.00 - 1.04

## **CFPUA WATER DISTRIBUTION SYSTEM**

STANDARD DETAILS



CAPE FEAR PUBLIC UTILITY AUTHORITY 235 GOVERNMENT CENTER DRIVE WILMINGTON, NC 28403 OFFICE: (910)332-6560

PLANS PREPARED BY: 900 RIDGEFIELD DRIVE SUITE 350 RALEIGH, NORTH CAROLINA 27609–3960 NC LICENSE NO. F-0112 • (919) 878-9560