

1. OUTLINE OF TRENCH EXCAVATION IS FOR ILLUSTRATIVE PURPOSES ONLY. ACTUAL TRENCH WIDTH AND SHAPE WILL VARY WITH SOIL CONDITIONS. TRENCH EXCAVATION SHALL BE IN ACCORDANCE WITH THE "FLORIDA TRENCH SAFETY ACT" AND OSHA TRENCH SAFETY STANDARDS.
2. TYPICAL TRENCH BACKFILL/BEDDING FOR WATER MAIN AND FORCE MAIN INSTALLATIONS SHALL BE CLASS "A" AS SHOWN IN DETAIL.
3. TYPICAL TRENCH BACKFILL/BEDDING FOR GRAVITY SEWER INSTALLATION SHALL BE CLASS "B" AS SHOWN IN DETAIL.
4. TRENCH BACKFILL/BEDDING CLASS "C" AND CLASS "D" SHALL BE USED FOR PIPE INSTALLATIONS WHERE UNSUITABLE TRENCH MATERIALS ARE ENCOUNTERED.
5. TRENCH ZONE BACKFILL SHALL BE MATERIAL TYPE 1 OR TYPES A THRU H, OR ANY MIXTURE THEREOF. WHERE SURFACE RESTORATION TYPE "1" IS APPLICABLE, TRENCH ZONE BACKFILL SHALL BE PLACED IN 12" LIFTS, COMPACTED TO 90% OF THE MATERIAL'S MAXIMUM DENSITY AS DETERMINED BY ASTM D-697 (AASHTO T-99). WHERE SURFACE RESTORATION TYPES "2", "3" AND "4" ARE APPLICABLE, TRENCH BACKFILL SHALL BE PLACED IN 8" LIFTS COMPACTED TO 98% OF THE MATERIAL'S DENSITY AS DETERMINED BY ASTM D-698 (AASHTO T-99).
6. BEDDING MATERIAL FOR TYPICAL WATER MAIN AND FORCE MAIN INSTAL-LATION SHALL BE TYPE C. BEDDING SHALL BE COMPACTED TO 95% OF THE MATERIAL'S MAXIMUM DENSITY AS DETERMINED BY ASTM D-1557 (AASHTO T-180).
7. BEDDING MATERIAL FOR TYPICAL GRAVITY SEWER INSTALLATION AND ANY INSTALLATION WHERE UNSUITABLE TRENCH BOTTOM CONDITIONS ARE FOUND SHALL BE TYPE E. BEDDING SHALL BE PLACED IN LIFTS NOT TO EXCEED 6" AND COMPACTED TO 95% OF THE MATERIAL'S MAXIMUM DENSITY AS DETERMINED BY ASTM D-1557 (AASHTO T-180).
8. UNSUITABLE MATERIAL SHALL BE REMOVED TO UNDISTURBED ROCK OR SAND OR TO DEPTH AS SPECIFIED BY ENGINEER. BACKFILL MATERIAL SHALL BE TYPE C. BACKFILL SHALL BE PLACED IN 8" LIFTS COMPACTED TO 95% OF THE MATERIAL'S MAXIMUM DENSITY AS DETERMINED BY ASTM D-1557 AASHTO T-180).

TRENCH BACKFILL / BEDDING NOTES

ENGINEERING STANDARDS 2022			
REVISIONS		ENGINEERING DIVISION	TRENCH BACKFILL / BEDDING
BY	DATE		
		CITY OF POMPAÑO BEACH	DATE: JUNE 2022 DWG. NO. 203-3
		SCALE: N.T.S.	

9. BEDDING TYPES -- THE FOLLOWING TYPES OF SUITABLE MATERIALS ARE DESIGNATED AND DEFINED AS FOLLOWING:
- TYPE A: CRUSHED LIMEROCK OR SAND WITH 100 PERCENT PASSING A 1 INCH SIEVE AND A SAND EQUIVALENT VALUE NOT LESS THAN 50.
- TYPE B: CRUSHED LIMEROCK OR SAND WITH 100 PERCENT PASSING A 1/2 INCH SIEVE AND A SAND EQUIVALENT VALUE NOT LESS THAN 50.
- TYPE C: SAND WITH 100 PERCENT PASSING A 3/8 INCH SIEVE, AT LEAST 90 PERCENT PASSING A NUMBER 4 SIEVE, AND A SAND EQUIVALENT VALUE NOT LESS THAN 30.
- TYPE D: CRUSHED LIMEROCK WITH 100 PERCENT PASSING A 1 INCH SIEVE AND NOT MORE THAN 10 PERCENT A NUMBER 4 SIEVE.
- TYPE E: CRUSHED LIMEROCK OR SAND WITH 100 PERCENT PASSING A 3/4 INCH SIEVE AND NOT MORE THAN 10 PERCENT PASSING A NUMBER 4 SIEVE.
- TYPE F: CRUSHED LIMEROCK MEETING THE FOLLOWING GRADATION REQUIRE-MENTS.
- | SIEVE SIZE | PERCENTAGE PASSING |
|------------|--------------------|
| 2 INCH     | 100                |
| 1-1/2 INCH | 90-100             |
| 1 INCH     | 20-55              |
| 3/4 INCH   | 0-15               |
| NO. 200    | 0-3                |

TRENCH BACKFILL / BEDDING NOTES

ENGINEERING STANDARDS 2022			
REVISIONS		ENGINEERING DIVISION	TRENCH BACKFILL / BEDDING
BY	DATE		
		CITY OF POMPAÑO BEACH	DATE: JUNE 2022 DWG. NO. 203-4
		SCALE: N.T.S.	

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- GENERAL NOTES:
1. ALL UTILITY PIPE SHALL BE INSTALLED WITH 4" MARKING BALLS PLACED EVERY 40' AND AT EVERY FITTING, FOR IDENTIFICATION AND WARNING PURPOSES, BURIED ABOVE THE PIPE AT A MAXIMUM DEPTH OF 24 INCHES OR AS APPROVED BY THE OWNER. IT SHALL BE COLOR CODED AND WORDED AS FOLLOWS:
- SEWER SYSTEM
- A. COLOR: GREEN
- B. LETTERING: SANITARY SEWER
- C. FREQUENCY OF MARKER BALLS SHALL BE 121.6 Khz.
- D. THE MARKER BALLS CAN BE BURIED IN ANY ORIENTATION.
- THE MARKER BALLS SHALL BE DETECTABLE BY STANDARD METAL DETECTION EQUIPMENT AND SHALL BE MANUFACTURED BY TEMPO OR 3M LOCATOR SYSTEM OR EQUIVALENT (FREQUENCY 121.6 Khz )
2. FOR LARGE DIAMETER PIPE INSTALLED AT DEPTHS BELOW 4'-0" MARKER BALLS SHALL BE PLACED AT A MAXIMUM DEPTH OF 4'-0" BELOW GRADE \*.

SEWER PIPE IDENTIFICATION

ENGINEERING STANDARDS 2022			
REVISIONS		ENGINEERING DIVISION	SEWER PIPE IDENTIFICATION
BY	DATE		
S.S.	01/30/12	CITY OF POMPAÑO BEACH	DATE: JUNE 2022 DWG. NO. 207-1
		SCALE: N.T.S.	

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- GENERAL NOTES:
1. ALL NONMETALLIC PIPE SHALL BE INSTALLED WITH 12 THHN SOLID COPPER TRACING WIRE.
2. THE MARKER BALLS MUST BE INSTALLED DIRECTLY ABOVE THE PIPE.
3. MARKER BALLS SHALL BE INSTALLED AT 40' O.C.
4. BALL COLOR CODING:  
SANITARY SEWER SYSTEM: GREEN

UTILITY PIPE AND MARKER BALLS LOCATION

ENGINEERING STANDARDS 2022			
REVISIONS		ENGINEERING DIVISION	UTILITY PIPE AND MARKER BALLS LOCATION
BY	DATE		
S.S.	01/30/12	CITY OF POMPAÑO BEACH	DATE: JUNE 2022 DWG. NO. 208-1
		SCALE: N.T.S.	

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- A MINIMUM HORIZONTAL SEPARATION: 3' (OUTSIDE TO OUTSIDE). SHALL BE MAINTAINED BETWEEN POTABLE WATER MAINS AND STORMWATER SEWERS, STORMWATER FORCE MAINS AND REGULATED REUSE WATER MAINS.
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- A MINIMUM HORIZONTAL SEPARATION: 3' (OUTSIDE TO OUTSIDE). SHALL BE MAINTAINED BETWEEN EXISTING OR PROPOSED VACUUM-TYPE SANITARY SEWER. \* SEE NOTE D(1)(B).
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- A MINIMUM HORIZONTAL SEPARATION OF 6' (OUTSIDE TO OUTSIDE). SHALL BE MAINTAINED BETWEEN POTABLE WATER MAINS AND EXISTING OR PROPOSED GRAVITY-OR PRESSURE TYPE SANITARY SEWER, WASTEWATER FORCE MAIN OR NOT REGULATED REUSE WATER MAIN. \*\* SEE NOTE D(1)(C).
- MINIMUM HORIZONTAL SEPARATION REQUIREMENTS FOR POTABLE WATER, REUSE, STORMWATER AND SEWER LINES

ENGINEERING STANDARDS 2022			
REVISIONS		ENGINEERING DIVISION	MIN. HORIZONTAL SEPARATION FOR SANITARY SEWER
BY	DATE		
S.S.	01/30/12	CITY OF POMPAÑO BEACH	DATE: JUNE 2022 DWG. NO. 209-1
		SCALE: N.T.S.	

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- SAMPLE POINT ( MAIN )
- ALL D.I.P. TO BE PAINTED BLUE ON TOP HALF OF PIPE.

ENGINEERING STANDARDS 2022			
REVISIONS		ENGINEERING DIVISION	SAMPLE POINT (MAIN)
BY	DATE		
S.S.	04-2005	CITY OF POMPAÑO BEACH	DATE: MAY 2022 DWG. NO. 100-1
		SCALE: N.T.S.	

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- SAMPLE POINT ( HYDRANT )
- ALL POMPAÑO BEACH HYDRANTS SHALL BE PAINTED RED.
- ALL D.I.P. TO BE PAINTED BLUE ON TOP HALF OF PIPE.

ENGINEERING STANDARDS 2022			
REVISIONS		ENGINEERING DIVISION	SAMPLE POINT (HYDRANT)
BY	DATE		
S.S.	04-2005	CITY OF POMPAÑO BEACH	DATE: MAY 2022 DWG. NO. 101-1
		SCALE: N.T.S.	



A CIVIL ENGINEERING FIRM  
EXPEDITING DEVELOPMENT

801 Brickell Avenue  
Suite 800  
Miami, Florida 33131  
PH: 786.284.8828  
FAX: 866.312.8730

FLORIDA CERTIFICATE OF AUTHORIZATION # 27431

PROJECT NUMBER: 23106

DRAWN BY: AH DESIGN BY: AH CHECK BY: LAB

ORIGINAL DRAWING DATE: 01/04/2023

REVISIONS:		
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PROJECT NAME:

TOWNHOMES  
CANAL  
DRIVE  
POMPAÑO

LOCATION:

3233 - 3237 CANAL DRIVE  
POMPAÑO BEACH, FL 33062

FOR:

MR. SERGE MICHAUD

3018 NE 20TH COURT  
FT. LAUDERDALE, FL 33305

PLAN STATUS:  
SUBMITTAL SET:  
FOR AGENCY REVIEW  
AND APPROVAL

JANUARY 28, 2025  
LUIS A. BETALLELUZ, JR., P.E. FL P.E.# 65882  
(NOT VALID WITHOUT SIGNATURE AND PROPER SEAL)

SHEET NAME:

CITY DETAILS

SHEET NUMBER: C 10.0



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Check positive response codes before you dig!