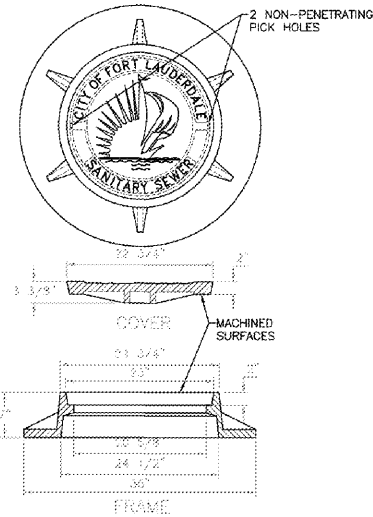
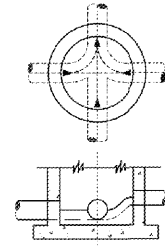


SEWER DETAILS PLAN



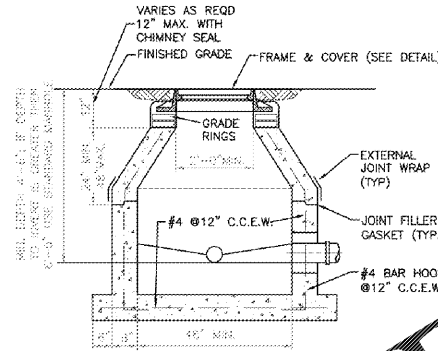
- NOTES:
1. MATERIAL: FRAME AND COVER AS SPECIFIED.
 2. ADDITIONAL GRADE RINGS MAY BE USED TO ELEVATE EXISTING MANHOLE FRAMES TO RESURFACED GRADE (MAX. 4" HEIGHT).
 3. ALL DIMENSIONS ARE NOMINAL.
 4. OPTIONAL: HINGED FRAME AND COVER AS SPECIFIED.

200 MANHOLE FRAME & COVER
PAVED AREAS
N.T.S.



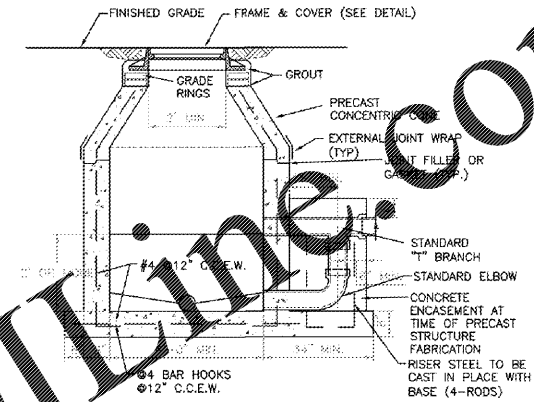
- NOTE:
1. ALL INVERT CHANNELS ARE TO BE CONSTRUCTED FOR SMOOTH FLOW WITHOUT OBSTRUCTION.
 2. PROPERLY SHAPED SPILLWAYS SHALL BE CONSTRUCTED BETWEEN PIPES WITH DIFFERENT INVERT ELEVATIONS TO PROVIDE FOR SMOOTH FLOWS.
 3. SURFACE LATERALS SHALL NOT ENTER MANHOLES UNLESS SPECIFIED ON PLANS AND THEN MUST BE TREATED AS MAINS. (ELEVATIONS SHOWN, PRECAST HOLE, FLOW CHANNEL)
 4. BRICK RUBBLE PERMITTED AS FLOW CHANNEL BUILDUP.
 5. SIDEWALLS OF FLOW CHANNEL SHALL BE AT LEAST HALF OF PIPE HEIGHT AT ALL POINTS.
 6. NO INSIDE DROP LARGER THAN 6" SHALL BE ALLOWED WITH 3 OR 4 INVERTS AND MANHOLES WITH A CHANGE OF DIRECTION OF FLOW OF MORE THAN 45 DEGREES.

202 INVERT FLOW CHANNELS
N.T.S.



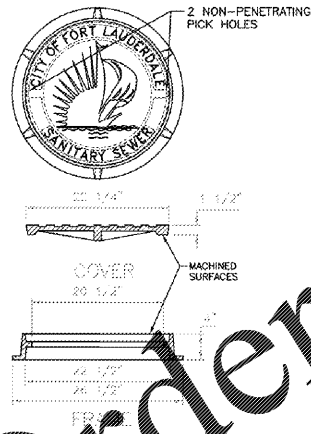
- NOTE:
- ALL STANDARD MANHOLE NOTES AND DETAILS ARE APPLICABLE.

204 SHALLOW MANHOLE
N.T.S.



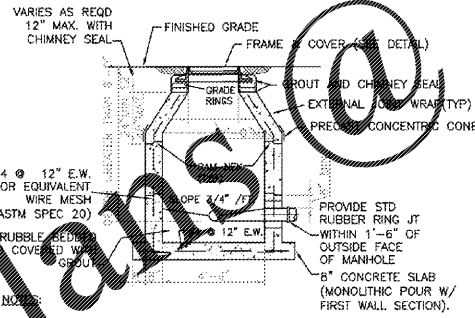
- NOTES:
1. ALL DETAILS AND SPECIFICATIONS FOR STANDARD MANHOLES ARE APPLICABLE EXCEPT FOR REFERENCES TO DROP ASSEMBLY.
 2. DROP CONNECTIONS SHALL BE REQUIRED WHENEVER AN INFLUENT INVERT IS LOCATED 2.0 FEET OR MORE ABOVE THE MAIN INVERT CHANNEL. DROP CONNECTIONS SHOULD NOT BE DESIGNED FOR LESS THAN A 2.0 FOOT DROP.
 3. SOLVENT TYPE JOINT PVC FITTINGS TO BE UTILIZED IN THE DROP ASSEMBLY ONLY.
 4. THE PRECAST BASE SHALL EXTEND FULLY UNDER THE DROP ASSEMBLY AND BE CONSTRUCTED MONOLITHICALLY WITH THE BASE SECTION.
 5. BRICK AND CONCRETE RUBBLE ARE PERMITTED AS FILLER IN DROP ENCASEMENT.

206 OUTSIDE DROP CONNECTION
PRECAST MANHOLE - TYPE B
N.T.S.



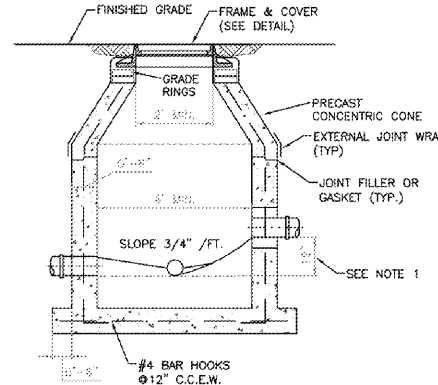
- NOTES:
1. MATERIAL: FRAME AND COVER AS SPECIFIED.
 2. ADDITIONAL GRADE RINGS MAY BE USED TO ELEVATE EXISTING MANHOLE FRAMES TO RESURFACED GRADE (MAX. 4" HEIGHT).
 3. ALL DIMENSIONS ARE NOMINAL.
 4. OPTIONAL: HINGED FRAME AND COVER AS SPECIFIED.

201 MANHOLE FRAME & COVER
UNPAVED AREAS
N.T.S.



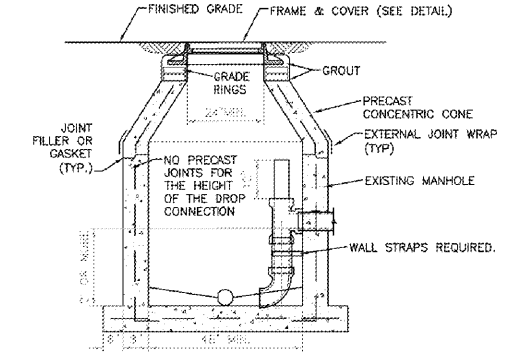
- NOTES:
1. PRECAST CONCRETE TYPE II 4000 P.S.I.
 2. "RAM-NEK" OR EQUAL AT ALL RISER JOINTS (1/2" THICK WITH THE WIDTH AT LEAST 1/2 THE WALL THICKNESS).
 3. ALL OPENINGS SHALL BE SEALED WITH A WATERPROOF NON-SHRINKING GROUT.
 4. FLOW CHANNELS SHALL BE CONSTRUCTED TO DIRECT INFLUENT INTO FLOW STREAM. (SEE DETAIL)
 5. LIFT HOLES ARE PERMITTED.
 6. ALL PIPE HOLES SHALL BE PRECAST OR CORE DRILLED.
- A. FOR PVC PIPE ENTERING MANHOLE WITH PRECAST HOLES USE THE APPROVED NON-ASBESTOS PVC-MANHOLE ADAPTER OR PRECAST FLEXIBLE MANHOLE SLEEVE FOR THE APPROPRIATE PIPE DIAMETER AND DIMENSION RATIO. THE ADAPTER SHALL NOT EXTEND MORE THAN 1" INTO THE MANHOLE. DOUBLE BANDING IS REQUIRED FOR FLEXIBLE MANHOLE SLEEVE.
- B. CONNECTION TO A MANHOLE WITH A CORE DRILLED HOLE SHALL BE MADE USING A 5" MIN. DUCTILE IRON PIPE SECTION (EPOXY LINED) OR THE APPROVED PVC-MANHOLE ADAPTER.
7. INSIDE DROPS SHALL NOT BE DESIGNED TO EXCEED 1.80 FEET AND NOT CONSTRUCTED TO EXCEED 2.0 FEET. MAX. 6" INSIDE DROP IS PERMITTED FOR MANHOLES WITH 3 OR MORE INVERTS AND MANHOLES WITH A CHANGE IN FLOW DIRECTION OF MORE THAN 45 DEGREES.
 8. MANHOLE FABRICATION SHALL BE IN ACCORDANCE WITH ASTM C-478, LATEST STANDARD.
 9. MINIMUM 5 FEET IS REQUIRED BETWEEN OUTSIDE OF MANHOLE AND SERVICE WYE.
 10. MANHOLES TO BE PAINTED INSIDE AND OUTSIDE WITH 2 COATS OF AN APPROVED PROTECTIVE COATING. (ONE COAT RED, ONE COAT BLACK) MIN. 8-10 MILS D.F.T. PER COAT.
 11. MANHOLE SHALL BE SET PLUMB TO LINE AND GRADE.

203 STANDARD MANHOLE
N.T.S.



- NOTES:
1. INSIDE DROP TO BE USED WHEN DROP IS GREATER THAN 6 INCHES AND LESS THAN 24 INCHES AND/OR FOR LATERAL CONNECTIONS.
 2. A FLOW CHANNEL SHALL BE CONSTRUCTED INSIDE MANHOLE TO DIRECT INFLUENT INTO FLOW STREAM.
 3. CONSTRUCTION OF DROP SHALL PROVIDE AN OVERSIZED SLAB TO EXTEND UNDER THE DROP CONNECTION.
 4. MINIMUM PIPE SIZE FOR DROP IS 8".
 5. SEE "STANDARD MANHOLE" DETAIL FOR ADDITIONAL REQUIREMENTS.

205 DROP CONNECTION PRECAST
MANHOLE - TYPE A
N.T.S.



- NOTES:
1. ALL DETAILS AND SPECIFICATIONS FOR STANDARD MANHOLES ARE APPLICABLE EXCEPT FOR REFERENCES TO DROP ASSEMBLY.
 2. INSIDE DROP CONNECTION TO BE USED ONLY FOR A SINGLE DROP CONNECTION TO AN EXISTING MANHOLE.
 3. DROP CONNECTIONS SHALL BE REQUIRED WHENEVER AN INFLUENT INVERT IS LOCATED 2.0 FEET OR MORE ABOVE THE MAIN INVERT CHANNEL. DROP CONNECTIONS SHOULD NOT BE DESIGNED FOR LESS THAN A 2.4 FOOT DROP.
 4. SOLVENT TYPE JOINT PVC FITTINGS TO BE UTILIZED IN THE DROP ASSEMBLY ONLY.

207 INSIDE DROP CONNECTION
EXISTING MANHOLE - TYPE C
N.T.S.

| | |
|-------------------|---------------------|
| DATE: 09/17/20 | SCALE: AS SHOWN |
| CHECKED BY: G.Z. | PROJECT NO: 2020-17 |
| DESIGNED BY: G.Z. | SHEET NO: C-12 |

CITY OF FORT LAUDERDALE
PUBLIC WORKS DEPARTMENT
ENGINEERING & ARCHITECTURE
100 North Andrews Avenue, Fort Lauderdale, Florida 33301

| NO. | DATE | BY | DESCRIPTION |
|-----|------|----|-------------|
| | | | |
| | | | |
| | | | |

PROJECT # P0000
PROJECT NAME
DESCRIPTION
SHEET
PLACE PROJECT ADDRESS

Gerardo Zamora
Civil Engineer
No. 44207
FL. Reg. No. 44207
Civil Engineer

SSWR01
TOTAL: 0
CAD FILE: FTALD-SSWR01
DRAWING FILE NO: 4-XXX-XX

ZAMORA & ASSOCIATES, INC.
ENGINEERING LAND PLANNING
11410 N. KENDALL DRIVE SUITE 302
MIAMI, FLORIDA 33176 (305) 273-7801

PROJECT: ESTEL PLAZA
2890 - 2894 W. BROWARD BLVD
FT. LAUDERDALE, FLORIDA 33312
OWNER: ESTEL DEVELOPMENT LLC
763 NORTHEAST 193 TERRACE
MIAMI, FLORIDA 33179

| REVISIONS | DESCRIPTION |
|-----------|-------------|
| | |
| | |
| | |

Gerardo Zamora
Civil Engineer
No. 44207
FL. Reg. No. 44207
Civil Engineer

GERARDO ZAMORA P.E.
CIVIL ENGINEER
P.E. No. 44207
E.B. 0006791
STATE OF FLORIDA

THIS SHEET HAS BEEN OFFICIALLY SIGNED & SEALED BY GERARDO ZAMORA, P.E., ON THE DATE ADJACENT TO THE SEAL.
PRINTED COPIES OF THIS DOCUMENT ARE NOT CONSIDERED VALID UNLESS THEY ARE SIGNED AND SEALED BY THE ORIGINAL DESIGNER OR HIS ELECTRONIC COPIES.
PRINTED COPIES SHALL HAVE AN ORIGINAL SIGNATURE AND DATE.

For The Firm By: GERARDO ZAMORA, P.E.
FL. Reg. No. 44207
Civil Engineer

Scale: 1" = 20'
Designed By:
Drawn By:
Checked By: G.Z.
Date: 2/5/2020
Project No: 2020-17
SHEET No.
C-12

R:\STD TEMPLATES\STANDARD DETAIL TEMPLATES\SANITARY\FTALD-SSWR01.DWT

Order Plans

WWW.LDLINE.COM

NOT FOR CONSTRUCTION OR BID