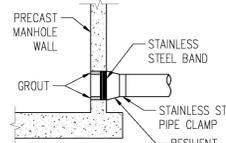


- NOTES:**
- DROP CONNECTIONS ARE REQUIRED WHENEVER INVERT OF INFLUENT SEWER IS 24" OR MORE ABOVE THE INVERT OF THE MANHOLE. SEE MANHOLE CONNECTION DETAILS. ALL DROPS TO BE OUTSIDE OF THE MANHOLE.
 - E-Z RAPP OUTSIDE ALL JOINTS
 - GROUT WITH NON-SHRINKING GROUT INSIDE JOINTS
 - NO CONES OVER 3 FT. TALL
 - ALL PRECAST CONCRETE SHALL BE COATED INSIDE AND OUTSIDE WITH COAL TAR EPOXY, MINIMUM 16 MIL DMT.

1 PRECAST CONCRETE SANITARY MANHOLE
N.T.S.



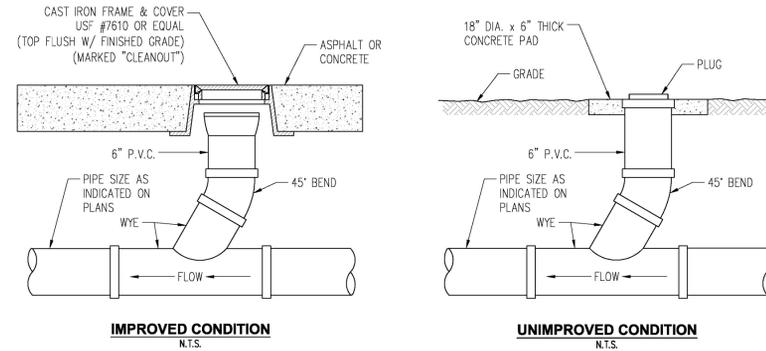
STANDARD DROP CONNECTION



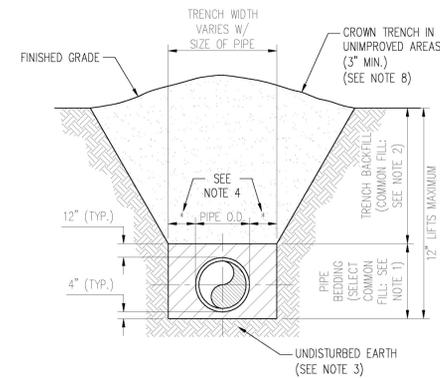
PRECAST MANHOLE CONNECTION

- NOTES:**
- DROP PIPE AND FITTINGS SHALL BE OF EQUAL SIZE AND MATERIAL AS THE INFLUENT SEWER.
 - AN OUTSIDE DROP CONNECTION SHALL BE REQUIRED FOR ALL INFLUENT WHICH HAVE AN INVERT 2" OR MORE ABOVE THEN MANHOLE INVERT.

2 MANHOLE CONNECTION DETAIL
N.T.S.

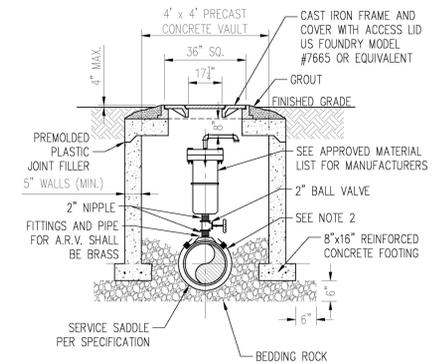


3 MANHOLE FRAME AND COVER
N.T.S.



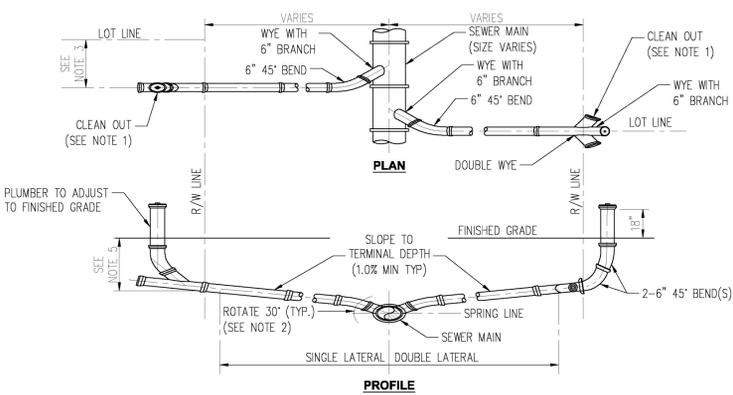
- NOTES:**
- PIPE BEDDING: SELECT COMMON FILL COMPACTED TO 98% OF THE MAXIMUM DENSITY AS PER AASHTO T-180 AND CONTAINING NO MORE THAN 5% PASSING #200 SIEVE.
 - TRENCH BACKFILL: COMMON FILL COMPACTED TO 98% OF THE MAXIMUM DENSITY AS PER AASHTO T-180 AND CONTAINING NO MORE THAN 5% PASSING #200 SIEVE.
 - PIPE BEDDING UTILIZING SELECT COMMON FILL OR BEDDING ROCK IN ACCORDANCE WITH TYPE A BEDDING AND TRENCHING MAY BE REQUIRED AS DIRECTED BY THE CITY OF WINTER GARDEN.
 - (*) 15" MAX. FOR PIPE DIAMETER LESS THAN 24", AND 24" MAX. FOR PIPE DIAMETER 24" LARGER.
 - WATER SHALL NOT BE PERMITTED IN THE TRENCH DURING CONSTRUCTION.
 - ALL PIPE TO BE INSTALLED WITH BELL FACING UPSTREAM TO THE DIRECTION OF THE FLOW.
 - REFER TO SECTION 32.5 OF THE CITY OF WINTER GARDEN MANUAL OF STANDARDS AND SPECIFICATIONS FOR WASTEWATER AND WATER MAIN CONSTRUCTION FOR SHEETING AND BRACING IN EXCAVATIONS.
 - FINAL RESTORATION IN IMPROVED AREAS SHALL BE IN COMPLIANCE WITH ALL APPLICABLE REGULATIONS OF GOVERNING AGENCIES. SURFACE RESTORATION WITHIN CITY OF WINTER GARDEN RIGHT-OF-WAY SHALL COMPLY WITH REQUIREMENTS OF RIGHT-OF-WAY UTILIZATION REGULATIONS AND ROAD CONSTRUCTION SPECIFICATIONS.

4 STANDARD BEDDING DETAIL
N.T.S.



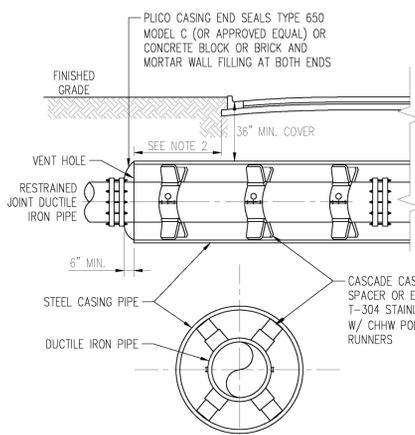
- NOTES:**
- THE MINIMUM DIMENSION FROM TOP OF PIPE TO FINISHED GRADE SHALL BE 3.0 FEET.
 - DOUBLE STRAP SADDLE AND WRAP WITH TWO LAYERS OF WIDE PLASTIC OR POLY TAPE WITH STAINLESS STEEL STRAP.
 - PIPE INSTALLATION SHALL BE SUCH THAT THE A.R.V. IS LOCATED AT THE HIGHEST POINT IN THE RESPECTIVE SEGMENT.
 - INTERIOR AND EXTERIOR CONCRETE SURFACES SHALL RECEIVE PROTECTIVE COATING AS SPECIFIED FOR VALVE VAULTS.
 - CAST IRON FRAME, COVER AND ACCESS LID SHALL BE INSTALLED FLUSH WITH FINISHED GRADE.
 - COVER SHALL READ "WINTER GARDEN UTILITIES DIVISION AND "WASTEWATER".
 - NO GALVANIZED PIPE/VALVES.

5 AIR RELEASE VALVE & VAULT
N.T.S.



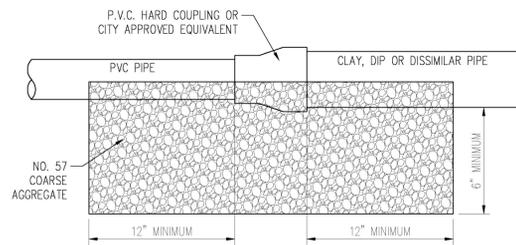
- NOTES:**
- CLEANOUT SHALL BE INSTALLED BY THE CONTRACTOR IN ACCORDANCE WITH STANDARD PLUMBING CODE.
 - INVERT OF SERVICE LATERAL SHALL NOT ENTER SEWER MAIN BELOW SPRING LINE.
 - WYES AND 45° BENDS SHALL BE PVC (SDR 26).
 - LOCATE SINGLE LATERAL AS CLOSE TO LOT LINE AS POSSIBLE, 25' MAXIMUM.
 - 4" TYP TERMINAL DEPTH (3" MIN) REQUIRED FOR SERVICE AT RIGHT-OF-WAY.

7 SANITARY SEWER SERVICE LATERAL DETAIL
N.T.S.



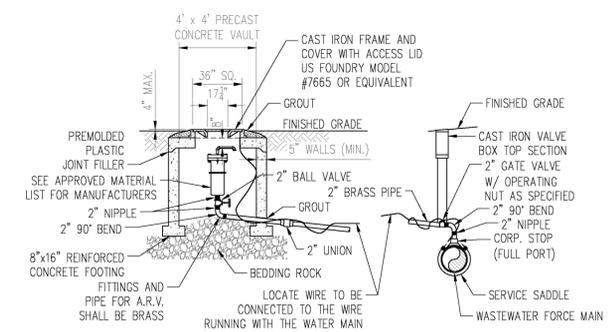
- NOTES:**
- WHERE PRACTICAL, CASING SHALL EXTEND 8' BEYOND EDGE OF PAYMENT AND SHALL NOT BE LESS THAN 6' BEYOND EDGE OF PAYMENT IN ANY CASE.
 - CASING SPACERS AND END SEALS TO BE INSTALLED PER MANUFACTURER'S RECOMMENDATIONS.
 - DESIGN ENGINEER TO DETERMINE NEED FOR SACRIFICIAL ANODE (S) FOR CORROSION CONTROL.

8 SEWER MAIN STEEL CASING DETAIL
N.T.S.



- NOTE:**
- FIELD VERIFY MATERIALS OF EXISTING PIPES TO SELECT PROPER CONNECTOR.
 - HARBICO COUPLING OR APPROVED EQUIVALENT FOR ALL PIPE MATERIALS, UNLESS APPROVED IN WRITING BY THE CITY.

9 SEWER MAIN CONNECTION DETAIL
N.T.S.



- NOTES:**
- THE MINIMUM DIMENSION FROM TOP OF PIPE TO FINISHED GRADE SHALL BE 4.0 FEET.
 - DOUBLE STRAP SADDLE AND WRAP WITH TWO LAYERS OF WIDE PLASTIC OR POLY TAPE WITH STAINLESS STEEL STRAP.
 - PIPE INSTALLATION SHALL BE SUCH THAT THE A.R.V. IS LOCATED AT THE HIGHEST POINT IN THE RESPECTIVE SEGMENT.
 - INTERIOR AND EXTERIOR CONCRETE SURFACES SHALL RECEIVE PROTECTIVE COATING AS SPECIFIED FOR VALVE VAULTS.
 - CAST IRON FRAME, COVER AND ACCESS LID SHALL BE INSTALLED FLUSH WITH FINISHED GRADE.
 - COVER SHALL READ "WINTER GARDEN UTILITIES DIVISION, "SEWER" "RECLAIMED WATER OR POTABLE WATER".
 - NO GALVANIZED PIPE/VALVES.
 - LOCATE WIRE IN THE ARV VAULT SHALL BE SPLICED TO THE WIRE RUNNING WITH THE MAIN AND EXCESS WIRE TO BE PLACED IN ARV VAULT. THE POINT OF CONNECTION AT THE MAIN SHALL HAVE A WATER PROOF CONNECTOR.

10 OFFSET AIR RELEASE VALVE ASSEMBLY
N.T.S.

WINTER GARDEN STANDARDS INCORPORATED WITH DESIGN ENGINEERS' DOCUMENTS.

THE DETAILS, NOTES AND SPECIFICATIONS SHOWN ON THIS SHEET REPRESENT THE NOTED STANDARDS OF THE CITY OF WINTER GARDEN FOR CONSTRUCTION OF PUBLIC WORKS AND UTILITY INFRASTRUCTURE. BY INCLUDING THE STANDARDS, THE DESIGN ENGINEER HAS ACKNOWLEDGED THAT THEY ARE EFFECTIVE TO THE PROJECT AND THAT DETAILS, NOTES, OR SPECIFICATIONS ARE AS PROVIDED BY THE CITY AND HAVE NOT BEEN REVISED OR MODIFIED WITHOUT WRITTEN APPROVAL FROM THE CITY ENGINEER OR UTILITY DIRECTOR.

DATE	4/7/14
ITEM	Sanitary Manhole
Offset ARV Detail	4/7/14
No.	1
	2
	3
	4
	5
	6
	7
	8
	9
	10

CITY OF WINTER GARDEN, FLORIDA
STANDARDS AND SPECIFICATIONS
FOR UTILITIES CONSTRUCTION



STANDARD DETAILS
FOR
WASTEWATER SYSTEMS

DATE
JUNE 2018
SHEET

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