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COTTONWOOD IMPROVEMENT DISTRICT  
SALT LAKE COUNTY SERVICE AREA #3  
SOLITUDE IMPROVEMENT DISTRICT  
TOWN OF ALTA  
WATERSHED SERVICE LINE SPECIFICATIONS

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WATERSHED AREA:

The entire area in any canyon above the intake and culinary waterworks system within which water drains into any stream, tributary, or aquifer within Salt Lake County, including the anti-degradation segments of each stream identified as such in the Utah State Water Quality Standards.

It is a violation of the rules and regulations of the Cottonwood Improvement District, the Salt Lake City-County Board of Health, the Town of Alta, Salt Lake County Service Area #3 and the Solitude Improvement District to connect any sewer system of any type to a sewer collection system connected to a public sewer except in strict compliance with the terms of the specifications contained herein.

COTTONWOOD IMPROVEMENT DISTRICT  
8620 HIGHLAND DRIVE  
SANDY, UTAH 84093  
943-7671  
April 24, 2014

Regulations for the installation of sewer service lines from the property line to the house to be installed by the property owner of a bonded contractor for all WATERSHED AREAS

(ALL REGULATIONS ISSUED PRIOR TO THIS DATE ARE CANCELLED)

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5.	PIPE INSTALLATION 3A. EXCAVATION 3B. BEDDING 3C. BLINDING 3D. BACKFILL 3E. CLEANOUTS 3F. DRIVEWAY CLEANOUTS 3G. INSPECTION 3H. TESTING 3I. CONNECTION OF DOMESTIC WATER & GREY WATER 3J. MINIMUM DEPTHS 3K. INDIVIDUAL SERVICE LATERALS RESPONSIBILITY OF PROPERTY OWNER OR CONTRACTOR
10.	GRADE 2% (LESS THAN 2%)

- 2A. Any building constructed or used for residential, commercial or industrial purposes shall have a wastewater disposal system approved by the Salt Lake County Cottonwood Sanitary District in conformance with the district or municipal waste disposal code in effect where such building is located.
- 2B. If the property line of any property having any building used for human habitation is within 300 feet (91.5 meters) of a public sewer line, the plumbing of such building shall be connected to the approved sewer system. Cottonwood Improvement District shall have the authority to inspect all connections and such connections shall be in conformance with the enclosed specifications.
- 2C. ALL NEW PROPERTIES FROM AUGUST 1, 1990 will install a system to the enclosed specifications and will install the SDR #17 Polyethylene pipe (HDPE) completely, which includes extending inside the foundation or footings at least (6") six inches, then connect to ABS pipe with a (6") six inch length repair coupling. Power seal 4.45-4.73 or other acceptable alternative.
- ALL OLD BUILDINGS will install a system to the enclosed specifications which includes the installation of SDR #17 Polyethylene pipe (HDPE) but may stop within (6") six inch of the footing or foundation and connect to their existing pipe with a minimum (6") six inch repair coupling. Power seal 4.45-4.73 or other acceptable alternative.
- 2D. In unusual circumstances or where sewer service is not available, an alternate waste disposal system may be approved by the Departments. Any waste disposal system on property in the watershed area shall conform to the provisions of the Department's Health Regulations – Watersheds

2E. It shall be the responsibility of the contractor to secure the necessary bonds to work within the watershed area.

2F. It shall be the responsibility of the owner to submit the required plans for approval before he can proceed.

2G. CLOSURE OF OLD SYSTEM

It shall be the responsibility of the owner or contractor to see that the existing holding tanks, septic tanks, or drain fields be properly disposed of or removed.

Holding tanks or septic tanks, if concrete, may be pumped clean then lids removed and filled with proper backfill sand, etc. If the holding tanks are of any other material, and could deteriorate, they will have to be removed from the site and disposed of at an authorized location.

DRAIN FIELDS: Must be disconnected from the building. All wastewater must flow to the approved sewer system

*PIPE SPECIFICATIONS*

2H. All pipe and fittings installed in watershed area will be high density polyethylene (HDPE) DR17 PE4710. The minimum pipe size for building sewers with gravity systems is four (4") four inches.

All jointing of the pipe shall be made using butt fusion welds or electrofusion couplers.

## PIPE INSTALLATION

### 3A. EXCAVATION

The excavation and installation, including all labor and materials shall be the responsibility of the property owner or his designated contractor.

### 3B. BEDDING

All trenches will be excavated to a depth of 4" to 6" below the bottom of the pipe and then refilled to grade with ¾" crushed gravel and compacted in to place. Gravel shall conform to the following gradation:

<u>Sieve Size</u>	<u>Percent Passing</u>
¾"	90-100
⅜"	20-55
#4	0-10
#8	0-5

### 3C. BLINDING

After the pipeline has been properly installed and inspected by the District, the property owner or contractor shall place ¾" minus crushed gravel with the above gradation to a minimum of twelve (12") inches above the pipe, bank to bank, and thoroughly compacted in place.

### 3D. BACKFILL

Backfilling of the trenches after proper inspection and bedding and blinding shall be done in such a manner as not to disturb the pipe that has been bedded and tested. All material used for backfill shall be free of asphalt, lumber, trash, and any foreign material and brought to the level of the original surface.

3E. CLEANOUTS AND COUPLINGS

Cleanouts shall be installed in accordance with the attached details.

Cleanouts shall be installed on the property line, at all changes of grade, and all angles in excess of 45° and at every ninety (90) feet of pipeline extending into the property.

Any old building that does not have an approved cleanout inside the building will install a cleanout immediately outside the building.

3F. DRIVEWAY CLEANOUTS

All cleanouts located in concrete or blacktop driveways or in traffic areas shall be installed with a traffic rated lid, in accordance with the attached detail drawings.

3G. INSPECTIONS

Installation of all sewer service lines from the property lines to the house (or unit) shall be inspected by the District Inspector. It is the responsibility of the property owner or the contractor to notify the District before construction begins and to notify them when the line is ready for inspection twenty-four (24) hours prior to the inspection. Any line backfilled without an inspection or proper permits will not be accepted for service.

## TESTING

3H. The line may be filled with water to an elevation equal to 4 to 5 pounds air pressure, and there shall be no visual signs of leakage and the elevation of the water shall not drop.

2. The sewer line shall be tested by air with a pressure of 4 PSI under the following recommendations:

- (a) After an internal pressure of 4 PSI is obtained, allow at least two minutes for air temperature to stabilize; adding only the amount of air required to maintain pressure.
- (b) When pressure decreases to 3.5 PSI, start stop watch. Determine the time in seconds that is required for the internal air pressure to reach 2.5 PSI. Minimum permissible pressure holding times for a run of single pipe diameter and for systems of 4 inch, 6 inch, or 8 inch lateral is in combination with trunk lines and are indicated on the following table in seconds.

Time in seconds required for pressure drop for 3.5 to 2.5 PSI  
 (Based on .005 cfm per sq. ft. and 3.5 cfm)

SEC	PIPE DIAMETER INCHES					
	4	6	8	10	12	
25	2.5	5.7	10.2	15.9	22.9	
50	5.1	11.4	20.3	31.7	45.7	
75	7.4	17.1	30.3	47.6	68.4	
100	10.2	22.9	40.4	63.5	91.4	
125	12.7	28.4	50.8	79.3	114.3	
150	15.2	34.3	61.0	95.3	137.2	
175	17.8	40.0	71.1	111.1	160.0	
200	20.3	45.7	81.3	127.0	187.9	
225	22.9	51.4	91.4	142.1	205.4	
250	25.4	57.1	101.6	158.1		
275	27.9	62.8	111.8	174.4		
300	30.5	68.6	121.9			
325	33.0	80.1	132.8			
350	35.4	91.4	142.2			
375	38.1	102.8				
400	40.1					
450	45.7					
500	50.8					
550	55.9					
600	60.9					
650	64.0					
675	68.5					



3I. CONNECTION OF BLACK WATER (SEWAGE) AND GREY WATER PIPE TO NEW SANITARY SYSTEM

For buildings with separate waste lines for “black” water and “gray” water, the two lines may be connected outside of the building if it is not practical to connect the lines before exiting the building. The connection to the sewer must be made in accordance with the attached detail as close to the building as possible. Clean-outs shall be installed in accordance with Section 3E.

3J. MINIMUM DEPTHS

The minimum depths for sewer laterals to be installed in the watershed areas will be five (5) feet. If that depth cannot be maintained, then a heating device or insulation must be installed at the time of construction. The type of heating system or insulation must be approved by the District Engineer or Inspector.

3K. All units\* built or to be built in the watershed area will have their own individual service lateral. No unit will share a service lateral with another unit.

\* (Unit defined as a dwelling that can be sold individually or as a separate detached structure).

4A. ADDITIONAL OWNER/CONTRACTOR  
RESPONSIBILITIES

It shall be the responsibility of the property owner or contractor to see that all permits are obtained, including road cutting permits, when excavation is made into the public street.

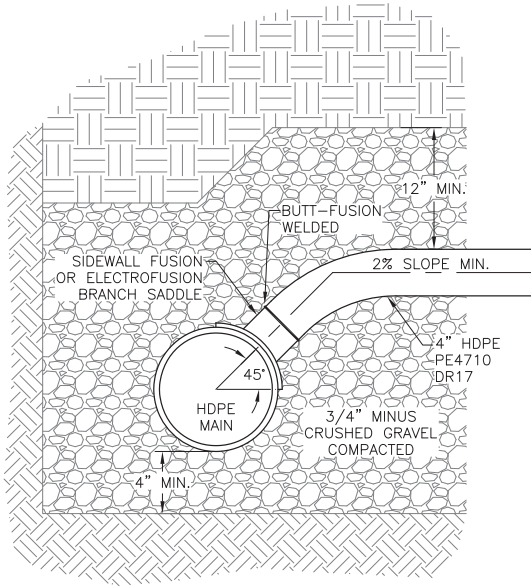
It shall be the responsibility of the property owner or contractor to see that the proper locations are obtained and that the lateral from the main to the property line is free from any obstruction before connecting their system to the service lateral existing.

It shall be the responsibility of the property owner or contractor to see that all safety standards and laws pertaining to the Federal Government (OSHA), and local government (State, County and District) are maintained.

All 4" service laterals must be laid on no less than 2% grade. All 6" service laterals must be laid on no less than 1% grade. If these minimum grades can not be met, the owner or his representative must install a sewer ejection pump to connect to the sewer main.

## DETAIL DRAWINGS

- NOTES:
1. IF SPECIAL CIRCUMSTANCES SUGGEST DEVIATING FROM THIS DETAIL, THE DISTRICT INSPECTOR OR ENGINEER MUST APPROVE CHANGES.
  2. SLICE UNDER HAUNCHES OF PIPE TO FILL VOIDS. MECHANICALLY COMPACT GRAVEL.

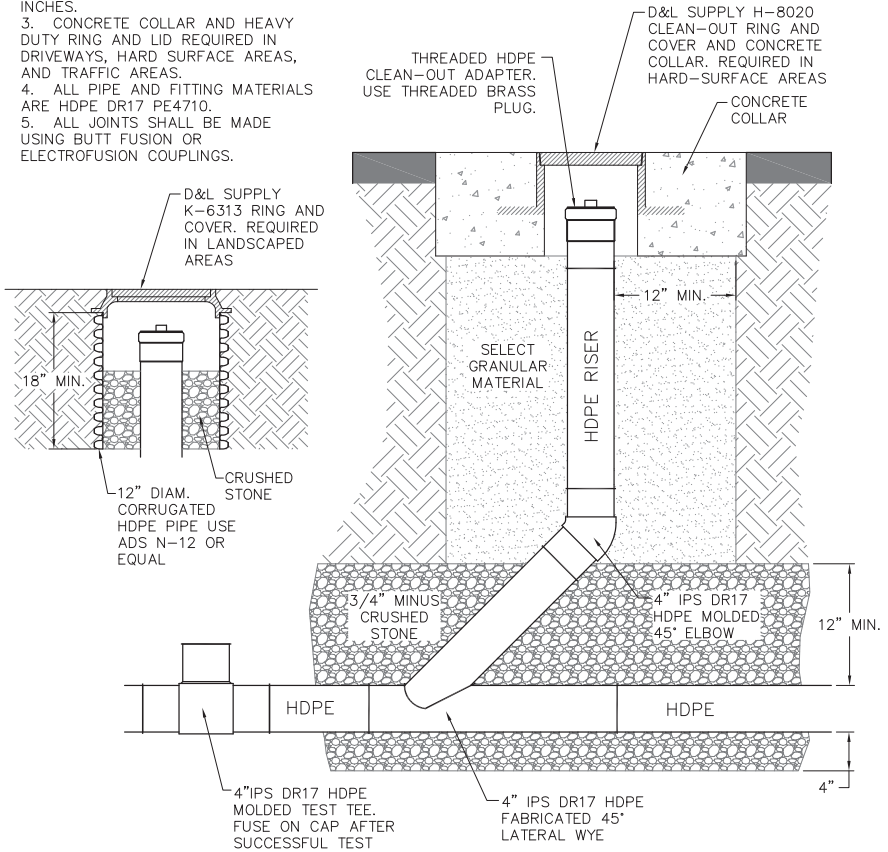


SECTION

COTTONWOOD IMPROVEMENT DISTRICT	DATE: 5/7/2014	DWG. NO.
	REVISIONS:	
WATERSHED SERVICE LINE CONNECTION	SCALE: NO SCALE	D8A

NOTES:

1. ONLY SELECT GRANULAR MATERIAL SHALL BE PLACED AROUND RISER PIPE TO A THICKNESS OF 12". NO PARTICLES LARGER THAN 1.5" IN DIAMETER SHALL BE ALLOWED.
2. 3/4" MINUS CRUSHED STONE IS REQUIRED UNDERNEATH PIPE TO A MINIMUM DEPTH OF 4" AND ABOVE THE PIPE NOT LESS THAN 12" INCHES.
3. CONCRETE COLLAR AND HEAVY DUTY RING AND LID REQUIRED IN DRIVEWAYS, HARD SURFACE AREAS, AND TRAFFIC AREAS.
4. ALL PIPE AND FITTING MATERIALS ARE HDPE DR17 PE4710.
5. ALL JOINTS SHALL BE MADE USING BUTT FUSION OR ELECTROFUSION COUPLINGS.



DETAIL - HDPE  
WATERSHED CLEAN-OUT

COTTONWOOD IMPROVEMENT DISTRICT

DATE: 4/23/2014

DWG. NO.

HDPE WATERSHED CLEAN-OUT

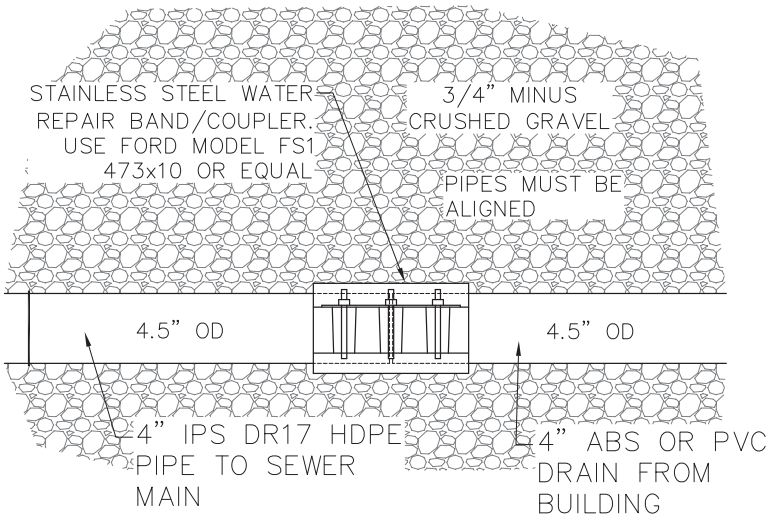
REVISIONS:

SCALE: NO SCALE

D4B

NOTES:

1. CONNECTION MUST BE MADE WITHIN 5 FEET OF BUILDING FOUNDATION.
2. PIPES MUST BE CAREFULLY ALIGNED.



DETAIL – WATERSHED BUILDING SEWER CONNECTION

<p>COTTONWOOD IMPROVEMENT DISTRICT</p> <p>WATERSHED BUILDING CONNECTION</p>	DATE: 4/23/2014	<p>DWG. NO.</p> <p><b>D4C</b></p>
	REVISIONS:	
	SCALE: NO SCALE	