

APPENDIX 4

SOUTH ARAPAHOE SANITATION DISTRICT SANITARY SEWER NOTES

1. ALL SANITARY SEWER MAINS AND SYSTEM PLANS AND CONSTRUCTION SHALL CONFORM TO SOUTH ARAPAHOE SANITATION DISTRICT AND THE CITY OF ENGLEWOOD STANDARDS AND SPECIFICATIONS, AND BE SUBJECT TO CONSTRUCTION OBSERVATION BY DISTRICT PERSONNEL OR REPRESENTATIVES. COPIES OF THE DISTRICT STANDARDS AND SPECIFICATIONS MAY BE OBTAINED FROM THE DISTRICT. THE OWNER, DEVELOPER, HIS ENGINEER OR CONTRACTOR SHALL SCHEDULE A PRECONSTRUCTION MEETING WITH THE DISTRICT ENGINEER AT LEAST 48 HOURS PRIOR TO THE START OF CONSTRUCTION. PLANS WITH THE DISTRICT REVIEW STAMP WILL BE DISTRIBUTED AT THE PRECONSTRUCTION MEETING. NO CONSTRUCTION WILL BE PERMITTED PRIOR TO THE PRECONSTRUCTION MEETING.
2. PROBATIONARY ACCEPTANCE OF THE NEW SANITARY SEWER MAINS IS CONTINGENT UPON RECEIVING COPIES OF:
 - A. SANITARY SEWER TRENCH COMPACTION TEST RESULTS,
 - B. RECORD DRAWINGS, AND
 - C. COMPLETION OF SYSTEM PIPE AND MANHOLE TESTING.
3. THE SANITARY SEWER SYSTEM WILL BE TESTED IN ACCORDANCE WITH THE DISTRICT STANDARDS AND SPECIFICATIONS. THE DISTRICT WILL REQUIRE THE OWNER/DEVELOPER TO:
 - A. LOW PRESSURE AIR TEST 100% OF THE NEW SYSTEM, AND
 - B. DEFLECTION TEST, AT A MINIMUM 33% OF THE SYSTEM FIFTEEN (15) FEET OR LESS IN DEPTH, AND 100% OF THE SYSTEM GREATER THAN FIFTEEN (15) FEET IN DEPTH.
 - C. *JET AND TV/VIDEOTAPE 100% OF THE SYSTEM, OR LAMP 100% OF THE SYSTEM*
4. MANHOLE RIMS SHALL BE SET AT AN ELEVATION RELATIVE TO THE PAVEMENT, IN ACCORDANCE WITH COUNTY STANDARDS. THE MAXIMUM ACCEPTABLE VERTICAL ADJUSTMENT UTILIZING BRICK OR CONCRETE RINGS IS TWELVE (12) INCHES.
5. CONNECTIONS TO EXISTING DISTRICT LINES WILL BE PERMITTED UPON ACCEPTANCE OF THE NEW SANITARY SEWER SYSTEM. EXISTING PIPE AT THE POINT OF CONNECTION SHALL NOT BE "BROKEN OUT" UNTIL THE NEW SYSTEM IS ACCEPTED FOR ACTIVE SERVICE.

6. THE DISTRICT, ITS REPRESENTATIVE, AND/OR THE DISTRICT ENGINEER, IS NOT A GUARANTOR OF THE CONSTRUCTION CONTRACTOR'S OBLIGATIONS AND PERFORMANCE OF CONTRACT.
7. OBSERVATION OF WORK IN PROGRESS AND ON-SITE VISITS ARE NOT TO BE CONSTRUED AS A GUARANTEE BY THE DISTRICT OR DISTRICT ENGINEER OF THE CONTRACTOR'S CONTRACTUAL COMMITMENT.
8. THE DISTRICT AND/OR DISTRICT ENGINEER IS NOT RESPONSIBLE FOR SAFETY IN, ON, OR ABOUT THE PROJECT SITE, NOR FOR COMPLIANCE BY THE APPROPRIATE PARTY OF ANY REGULATIONS RELATING THERETO.
9. THE DISTRICT AND/OR DISTRICT ENGINEER EXERCISES NO CONTROL OF THE SAFETY OR ADEQUACY OF ANY EQUIPMENT, BUILDING COMPONENTS, SCAFFOLDING, FORMS, OR ANY OTHER WORK AIDS USED IN OR ABOUT THE PROJECT, OR IN THE SUPERINTENDING OF THE SAME.
10. THE OWNER/DEVELOPER IS RESPONSIBLE FOR ALL COSTS ASSOCIATED WITH PLAN REVIEW AND CONSTRUCTION OBSERVATION.
11. THE CONTRACTOR SHALL VERIFY EXISTING MANHOLE INVERTS TO BE CONNECTED TO PRIOR TO CONSTRUCTION STAKING AND CONSTRUCTION.
12. THE CONTRACTOR SHALL TAKE CARE TO PROPERLY SHAPE ALL MANHOLE INVERTS AND BENCHES IN ACCORDANCE WITH DISTRICT STANDARDS AND SPECIFICATIONS, TO PROMOTE SMOOTH FLOW THROUGH THE MANHOLE. INVERTS OF LINES INTERSECTING AT 90 DEGREES AND AT HIGHLY DIVERGENT OR FLAT SLOPES ARE ESPECIALLY CRITICAL. MANHOLE INVERTS SHALL BE CONSTRUCTED WITH A SMOOTH TROWEL FINISH, AND BENCHES FINISHED WITH A LIGHT BROOM, NON-SKID FINISH.
13. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROCUREMENT OF ALL PERMITS NECESSARY FOR THE CONSTRUCTION OF THE SANITARY SEWER LINE WORK.
14. UNDERGROUND UTILITIES IN THE AREA OF CONSTRUCTION HAVE BEEN LOCATED FROM FIELD INVESTIGATION AND THE BEST AVAILABLE UTILITY RECORDS AND ARE APPROXIMATE ONLY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF ALL UTILITY LINES WHETHER SHOWN ON THE PLANS OR NOT. THE CONTRACTOR SHALL COORDINATE HIS ACTIVITIES WITH THE AFFECTED UTILITY COMPANIES AND SHALL NOTIFY

THE UTILITY NOTIFICATION CENTER, PHONE NO. 1-800-922-1987, 48 HOURS PRIOR TO STARTING CONSTRUCTION.

15. THE PIPE USED FOR SANITARY SEWER MAINS SHALL BE IN ACCORDANCE WITH ASTM D-3034 SDR 35 PVC PIPE IN PAVED RIGHTS-OF-WAY AND EASEMENTS, AND AWWA C-900 CLASS 150 IN UNPAVED EASEMENTS OR AS NOTED ON THE PROJECT PLANS.
16. MAINTAIN MINIMUM OF 10 FEET SEPARATION BETWEEN WATER AND SANITARY SEWER MAINS.
17. THE LENGTH OF SANITARY SEWER IS THE HORIZONTAL DISTANCE BETWEEN CENTERS OF MANHOLE. THEREFORE DISTANCES SHOWN ON THE PLANS ARE APPROXIMATE AND COULD VARY DUE TO VERTICAL GRADES, ALIGNMENT OF PIPE AND MANHOLE DIMENSIONS.
18. THE SANITARY SEWER SERVICE SHALL BE STUBBED OUT. THE END OF THE STUB SHALL BE WITNESSED BY A WOOD POST AT LEAST FOUR FEET LONG, BURIED TO EXPOSE ONE FOOT AND A METAL POST SET NEXT TO THE EXPOSED WOOD POST ABOVE GROUND. THE CONTRACTOR SHALL FURNISH THE AUTHORITY WITH AN AS-BUILT LOCATION OF THE WYE AND DISTANCE OF SERVICE PIPE TO THE END OF STUB.
19. THE CONTRACTOR SHALL HAVE IN ITS POSSESSION AT ALL TIMES ONE (1) COPY OF THE PROJECT PLANS SIGNED BY THE DISTRICT.
20. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVING AND REPLACING ANY EXISTING SIGNS, STRUCTURES, FENCES, ETC ENCOUNTERED ON THE JOB AND RESTORING THEM TO THEIR ORIGINAL CONDITION.
21. THE CONTRACTOR IS RESPONSIBLE FOR:
 - A. NOTIFYING THE DISTRICT 48 HOURS IN ADVANCE OF ANY NEED TO SHUT DOWN ANY PORTION OF THE EXISTING SANITARY SEWER SYSTEM.
 - B. NOTIFYING THE DISTRICT 48 HOURS IN ADVANCE OF THE WORK.
 - C. IN CASE OF AN EMERGENCY AFTER WORKING HOURS, CALL (303) 985-3636 FOR RECORDED INSTRUCTIONS.
22. PRIOR TO INSTALLATION OF SANITARY SEWER MAINS, ROAD CONSTRUCTION MUST HAVE PROGRESSED TO AT LEAST THE SUB-GRADE STAGE. SUB-GRADE IS DEFINED AS AN ELEVATION OF NO MORE THAN SEVEN (7) INCHES BELOW THE FINISHED STREET GRADE. THE CONTRACTOR SHALL ADJUST ALL MANHOLE COVERS TO THE FINAL FINISHED GRADE.

23. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVING ANY GROUNDWATER ENCOUNTERED DURING THE CONSTRUCTION OF ANY PORTION OF THIS PROJECT. GROUNDWATER SHALL BE PUMPED, PIPED, REMOVED AND DISPOSED OF IN A MANNER WHICH DOES NOT CAUSE FLOODING OF EXISTING STREETS NOR EROSION ON ABUTTING PROPERTIES IN ORDER TO CONSTRUCT THE IMPROVEMENTS SHOWN ON THESE PLANS. NO CONCRETE SHALL BE PLACED WHERE GROUNDWATER IS VISIBLE OR UNTIL THE GROUNDWATER TABLE HAS BEEN LOWERED BELOW THE PROPOSED IMPROVEMENTS. ANY UNSTABLE AREAS, AS A RESULT OF GROUNDWATER ENCOUNTERED DURING THE CONSTRUCTION OF THE PROPOSED IMPROVEMENTS SHALL BE STABILIZED AS AGREED UPON BY THE CONTRACTOR, DISTRICT AND THE DESIGN ENGINEER AT THE TIME OF THE OCCURRENCE. THIS COULD REQUIRE THE CONTRACTOR TO OBTAIN A STATE OF COLORADO DISCHARGE PERMIT.
24. IT SHALL BE THE DESIGN ENGINEER'S RESPONSIBILITY TO RESOLVE CONSTRUCTION PROBLEMS WITH THE DISTRICT DUE TO CHANGED CONDITIONS ENCOUNTERED DURING THE PROGRESS OF ANY PORTION OF THE PROPOSED WORK. IF, IN THE OPINION OF THE DISTRICT, PROPOSED ALTERATIONS TO THE SIGNED CONSTRUCTION PLANS INVOLVES SIGNIFICANT CHANGES TO THE CHARACTER OF THE WORK, OR TO FUTURE CONTIGUOUS PUBLIC OR PRIVATE IMPROVEMENTS, THE DESIGN ENGINEER SHALL BE RESPONSIBLE FOR SUBMITTING REVISED PLANS TO THE DISTRICT FOR REVIEW PRIOR TO ANY FURTHER CONSTRUCTION RELATED TO THAT PORTION OF THE WORK.
25. THE CONTRACTOR AGREES THAT HE SHALL ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THE PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY; THAT THIS REQUIREMENT SHALL APPLY CONTINUOUSLY, AND NOT BE LIMITED TO NORMAL WORKING HOURS; AND THAT THE CONTRACTOR SHALL DEFEND, INDEMNIFY AND HOLD HARMLESS THE DISTRICT AND IT'S REPRESENTATIVE FROM ANY AND ALL LIABILITY, REAL OR ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT, EXCEPTING FOR LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF THE DISTRICT, ITS REPRESENTATIVE, OR THE COUNTY.
26. THE APPROVAL OF SANITARY SEWER SYSTEM CONSTRUCTION PLANS SIGNIFIES ONLY THAT THE PLANS MEET THE MINIMUM REQUIREMENTS OF THE DISTRICT'S STANDARDS AND SPECIFICATIONS BASED ON THE INFORMATION PROVIDED BY THE DESIGN ENGINEER, OWNER-DEVELOPER,

AND CONTRACTOR. APPROVAL IS NOT A REPRESENTATION OR WARRANTY THAT THE SYSTEM AND ASSOCIATED COMPONENTS WILL PERFORM ANY CERTAIN FUNCTIONS.

27. UNDERDRAINS, IF ANY, ARE NOT PART OF THE SANITARY SEWER LINES OR SYSTEM. UNDERDRAINS SHALL NOT BE ACCEPTED, MAINTAINED OR SUBJECT TO CONSTRUCTION OBSERVATION BY THE DISTRICT. THE DISTRICT HAS NO SPECIFICATIONS FOR UNDERDRAINS AND WILL ONLY REVIEW THEIR PROPOSED LOCATION RELATIVE TO THE SANITARY SEWER LINES.
28. ALL COMPACTION TESTS MUST BE TAKEN AND RESULTS MUST BE REVIEWED AND ACCEPTED BY THE DISTRICT PRIOR TO FLUSHING, DEFLECTION, LOW PRESSURE AIR AND LAMP TESTING. RE-TESTS SHALL BE MAIDE BY THE DEVELOPER/OWNER UNTIL THE TESTS RESULTS ARE ACCEPTED BY THE DISTRICT ENGINEER. EVEN WITH PASSING COMPACTION TESTS AND PROBATIONARY ACCEPTANCE OF THE WORK, THE DISTRICT IS NOT RESPONSIBLE FOR SETTLEMENT SHOULD IT OCCUR.

Place the following statement on the cover sheet:

STATEMENT:

IT IS UNDERSTOOD AND AGREED THAT A REVIEW OF THESE PLANS AND SPECIFICATIONS BY OR ON BEHALF OF THE SOUTH ARAPAHOE SANITATION DISTRICT IS ONLY FOR PURPOSES OF THE DISTRICT AND IN NO WAY RELATE TO AN APPROVAL OF MATERIALS USED OR THE END PRODUCT OF THE OWNER/DEVELOPER'S WORK. THE OWNER/DEVELOPER CERTIFIES THAT IT HAS THOROUGHLY REVIEWED ALL PLANS, NOTES AND SPECIFICATIONS, EXAMINED THE PROJECT SITE AND ASCERTAINED ALL SOIL, GEOLOGICAL, GROUND WATER AND OTHER CONDITIONS TO BE ENCOUNTERED THAT MIGHT AFFECT THE CONSTRUCTION AND FUTURE MAINTENANCE OF THE PROJECT. THE OWNER/DEVELOPER FURTHER CERTIFIES THAT WORK CONTEMPLATED UNDER SUCH PLANS AND SPECIFICATIONS HAS BEEN PREPARED BY OR ON BEHALF OF THE OWNER/DEVELOPER, THAT THE PROJECT IS THE RESPONSIBILITY OF THE OWNER/DEVELOPER, AND THAT WORK IS UNDERTAKEN THEREON ONLY IN RELIANCE ON ITS OWN INVESTIGATION AND INFORMATION AND NOT ON ANY STATEMENTS, REPRESENTATIONS OR REPORTS IF ANY, THAT MAY HAVE BEEN MADE OR FURNISHED BY THE DISTRICT ITS OFFICERS, AGENTS, OR EMPLOYEES.