

**ACSA PLAN REVIEW CHECKLIST**  
**(Guideline Only)**

**General**

- (1) Proper Title
- (2) Vicinity map on first sheet.
- (3) Date and latest plan revision.
- (4) Standard water and sewer general plan notes (attached).
- (5) Appropriate scale on all plan and profile sheets.
- (6) North arrow on all plan sheets.
- (7) Place a P.E. or Land Surveyor's stamp on all sheets; original stamp and signature on the first sheet.
- (8) Designate fill areas on all profile views. Indicate required compaction.
- (9) Note on all profile sheets the three and a half (3.5) foot minimum cover requirement over centerline of pipe.
- (10) Note all known utility and storm drain crossings on both the plans and profiles, along with the minimum separation requirements.
- (11) Stream crossings:
  - (a) Under – use ductile iron pipe
  - (b) Over – use long-span ductile iron pipe or approved equal
- (12) Are public pumping stations proposed? (See pump station review checklist).
- (13) Review water and/or sewer data sheets.
- (14) Public or private roads?
- (15) Show all easements where lines are not in proposed or existing VDOT rights-of-way.

- (16) Check the landscaping plan to see if there are any conflicts with required easements and/or utility locations.
- (17) Check with the maintenance department to see if there are any known problems existing in connecting to receiving lines for water or sewer.
- (18) If this review is beyond the scope of local review program, then include in the approval letter-State Health Department or Department of Environmental Quality approval (whichever is applicable) is required.
- (19) Do off-site credits or over-sizing reimbursements apply? (See those respective checklists).

### **Water**

- (1) Acceptable location.
- (2) Are there allowances for possible future extensions?
- (3) Adequate line size when domestic and fire uses are combined:
  - (a) One (1) hydrant-6" line minimum
  - (b) Two (2) or more hydrants-8" line minimum or possibly a 6" loop or grid if hydraulic calculations demonstrate adequate flow.
  - (c) Are fire flow calculations necessary?
- (4) Check for high (greater than 80 psi) and low (less than 30 psi) pressures at meter locations. If greater than 80 psi, add a statement to the approval letter that some lots may experience pressures in excess of 80 psi. If less than 30 psi add a statement to the approval letter that some lots may experience pressures less than 30 psi. In no case shall pressure be less than 20 psi at meters at a flow rate of 3 gpm.
- (5) Water meter locations:
  - (a) Near the property line and within VDOT right-of-way or easement
  - (b) Out of the driveways and sidewalks, or other traffic areas
  - (c) On the roadside of all sidewalks, if possible.
  - (d) Out of drainage ditches.
  - (e) Are all lots served?
  - (f) Additional meter if irrigation desired.
- (6) Separate the water service lines from the sewer manholes by at least five (5) feet.

- (7) Fire hydrant locations:
- (a) 500 ft. separation along the centerline of the roadway
  - (b) within 250 ft. of all structures
  - (c) no closer than 40 ft. to any structure
  - (d) if possible, not located in fills (poor support)
- (8) Check the blow-off locations: Type A and Type B.
- (9) Adequate valving:
- (a) Minimum of 3 valves at a cross (additional valve required in looped systems)
  - (b) Minimum of 2 valves at a tee (additional valve required in looped systems)
  - (c) Minimum of 1 valve every 1,000 ft.
- (10) Note all bends, reducers, fittings, etc. on both the plan and profile views.
- (11) Check the connection to the existing system; will service be interrupted?
- (12) Is RWSA approval necessary?
- (13) Check for the 10' horizontal separation with sewer lines; check for the 18" vertical separation with sewer lines.
- (14) Check for the proper locations of automatic air release valves.
- (15) Check the proper separation with the storm sewers:
- (a) open-ended storm sewers:
    - 12" minimum separation with insulation
    - 3' minimum separation without insulation
  - (b) closed-ended storm sewers:
    - 12" minimum separation
- (16) Any existing problems or limitations with the present public system? (Schedule a flow test if necessary).
- (17) Has the connecting line been accepted into our system?

## Sewer

- (1) Check the location and size of the lines (minimum gravity sewer main diameter is 8-inches).
- (2) Are there allowances for possible future extensions?
- (3) 400' maximum separation between manholes.
- (4) Are the manhole connections acceptable?
  - (a) no more than 3 connections in one manhole entering within the lower 2'
  - (b) entering in the same direction as the flow.
- (5) Are all lots served? Indicate all lots to be served by private grinder pumps, if necessary.
- (6) Check the minimum slopes (0.5% for 8-inch).
- (7) Check the maximum slopes:
  - (a) Greater than or equal to 20% requires bracing.
  - (b) Velocities greater than 15 fps (greater than or equal to 18.77% for 8" mains) use ductile iron pipe.
- (8) Is RWSA approval necessary?
- (9) Based on projected flows, is a Flow Acceptance from the RWSA or the City of Charlottesville required?
- (10) Internal Drop manholes (greater than 2 ft. of drop).
  - a) Minimum MH Diameter of 60-inches for one internal drop (8-inch or 10-inch drop pipe)
  - b) Minimum MH Diameter of 72-inches for one 12-inch internal drop pipe or two internal drops (8-inch or 10-inch drop pipe)
- (11) Greater than or equal to 90° turns at the manholes.
- (12) Make a checklist of all of the slopes and elevations and check the flow if necessary.
- (13) Show the 100 year flood plain, if applicable (move if possible).
- (14) Show watertight covers in the flood plain.

- (15) Show vents from the manholes every 1,000 ft., if watertight covers are used.
- (16) Show a minimum drop through manholes of 0.2'.
- (17) Check for the proper separation of water and sewer lines as before.
- (18) Check for the proper separation of sanitary sewers and storm sewers (12-inch minimum vertical separation).
- (19) Any existing problems or limitations with the present public system?
- (20) Has the connecting line been accepted into our system?

November 16, 2015

**ACSA GENERAL WATER & SEWER CONDITIONS**

1. WORK SHALL BE SUBJECT TO INSPECTION BY ALBEMARLE COUNTY SERVICE AUTHORITY (ACSA) INSPECTORS. THE CONTRACTOR WILL BE RESPONSIBLE FOR NOTIFYING THE PROPER ACSA OFFICIALS AT THE START OF THE WORK.
2. THE LOCATION OF EXISTING UTILITIES ACROSS THE LINE OF THE PROPOSED WORK ARE NOT NECESSARILY SHOWN ON THE PLANS AND WHERE SHOWN ARE ONLY APPROXIMATELY CORRECT. THE CONTRACTOR SHALL, ON HIS OWN INITIATIVE, LOCATE ALL UNDERGROUND LINES AND STRUCTURES, AS NECESSARY.
3. ALL MATERIALS AND CONSTRUCTION SHALL COMPLY WITH THE CURRENT EDITION OF THE GENERAL WATER AND SEWER CONSTRUCTION SPECIFICATIONS, AS ADOPTED BY THE ACSA.
4. DATUM FOR ALL ELEVATIONS SHOWN IN NATIONAL GEODETIC SURVEY.
5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR NOTIFYING MISS UTILITY (1-800-552-7001).
6. ALL WATER AND SEWER PIPES SHALL HAVE A MINIMUM OF THREE AND A HALF (3.5) FEET OF COVER MEASURED FROM THE TOP OF PIPE, OVER THE CENTERLINE OF PIPE. THIS INCLUDES ALL FIRE HYDRANT LINES, SERVICE LATERALS AND WATER LINES, ETC.
7. ALL WATER AND SEWER APPURTENANCES ARE TO BE LOCATED OUTSIDE OF ROADSIDE DITCHES.
8. VALVES ON DEADEND LINES SHALL BE RODDED TO PROVIDE ADEQUATE RESTRAINT FOR THE VALVE DURING A FUTURE EXTENSION OF THE LINE.
9. TREES ARE NOT PERMITTED IN THE ACSA EASEMENT.
10. THE CONTRACTOR SHALL BE RESPONSIBLE TO COMPLY WITH THE NO-LEAD REGULATION REGARDING BRASS FITTINGS EFFECTIVE JANUARY 4, 2014 (SENATE BILL 3874 WHICH AMENDS THE SAFE DRINKING WATER ACT).