

EXHIBIT "E"
SEACOAST UTILITY AUTHORITY
RECORD DRAWING SUBMITTAL GUIDE

The following shall be used as a guide for submittal of record drawings to the Authority.

1. EOR shall submit all Record Drawings electronically in PDF, (CAD files to be provided with first submittal and after approved) to the Authority for review prior to scheduling inspections such as, but not limited to, pressure test, sanitary sewer lamping or any other element of the system which is determined necessary by the Authority. The drawings shall have been reviewed by the EOR for deficiencies.
2. The drawings will be reviewed by the Authority for deficiencies. Deficiencies will be indicated on the PDF which will be returned to the EOR for necessary corrective action.
3. Elevations shall be provided in NAVD 1988 Datum. A conversion table to NGVD 1929 shall be provided on each plan sheet of the drawing set.
4. Upon acceptance of as-built data and before final inspection is scheduled, the following will be required, one (1) print (signed and sealed by a Florida registered land surveyor) one set of mylars, a PDF file and a CADD file (DWG or DXF) of the record drawing rotated and translated to state plane coordinates to the nearest hundredth's (2 decimal places) NAD 83, Florida East Zone.
5. No disclaimers on drawings will be accepted.
6. Surveyor's Certification must be included on Final Prints and Mylars (See Page 4).
7. When applicable, EOR shall show retired Authority facilities on record drawing with as-built grout points, quantity in the amount of linear feet, size, type, material, of water, gravity, pressure pipe, and reclaimed mains, fire hydrant assemblies, manholes, lift station, backflow devices and meters.

The attached list of required information is to be used as guide for submittal of Record Drawings to the Authority. Additional information may be required by the Authority if it is determined by the Authority that the information supplied would be insufficient for a utility worker, with no surveying experience, to be able to locate mains, fittings, etc. The goal is to be able to accurately record utility improvements and to be able to easily locate these improvements with or without using specialized equipment. The submitted record drawings shall meet Chapter 61 G17-6 Minimum Technical Standards. As noted in Section 61 G17-6.003, the public must be able to rely on the accuracy as noted in Section 61 G17-6.005

- (a) When performing as-built or record surveys, the surveyor and mapper shall obtain field measurements of vertical or horizontal dimensions of constructed improvements so that the constructed facility can be delineated in such a way that the location of the construction may be compared with the construction plans, and when the surveyor and mapper prepares as-built maps they will clearly show by symbols, notations, or delineations, those constructed improvements located by the survey. All maps prepared shall meet applicable minimum technical standards.
- (b) The vertical and horizontal accuracy shall be such that it may be determined whether the improvements were constructed consistent with planned locations.
- (c) Northerly and Easterly coordinates on all field obtained measurements and provided on all record drawing submittals.

- (d) The surveyor shall show actual location and elevation of all pressure mains at 100-foot intervals, tees, wyes, crosses, bends, reducers, sleeves, terminal ends, corporation stops, valves, fire hydrants, air release valves, restraints, casing pipes, sampling points, ends, connections points, and anywhere that cover is less than 30" or more than 48", etc. A complete point data file shall also be submitted in Excel format.
- (e) Fonts, line-types and line weights must be such that different lines are distinguishable, and the Record Drawing information is the most prominent information on the sheet. (mains cannot look like sidewalks, edge of payment, etc.)

REQUIRED INFORMATION ON RECORD DRAWINGS

GENERAL

1. Drawings on 24" x 36" 3-mil mylar that will reproduce legibly.
2. "RECORD DRAWING" labeled in 1-inch letter on each page - with current date.
3. Complete title block with current file name and the Authorities Engineering project number, consisting of two alphabetic letters, followed by a five number sequence.
4. Location Sketch, North Arrow, and Graphic Scale on each sheet.
5. Correct Street/Road names.
6. Authority provided Surveyor's Certification added to as-built, certification filled out, signed and sealed, and dated by surveyor/mapper. (See Page 4)
7. GPS collected as-built information to be in DFX file format.
8. All record information shall be denoted by either a cloud or bold print. Design or proposed construction information shall be removed or crossed out and redrawn as constructed.
9. Profile as-builts required on projects where profiles were part of approved construction plans.
10. EOR shall provide right-of-way, lot lines, and pertinent easement information with ties or dimensions of facilities to easement lines or nearby permanent object.
11. EOR shall provide all easements (existing and proposed) and label each with Official Records Book and Page for the recorded easement deed or plat.
12. The EOR shall label the point of service for all potable water, fire lines, wastewater, and reclaimed water services.
13. Master Plan showing phasing for entire the development.
14. Match lines shown for continuation to other sheets.

GRAVITY SEWER

1. As-built distance of gravity main from centerline of road or easement right-of-way line, buildings, or as determined by Authority. Extensions of an imaginary line will not be acceptable as reference points.
2. Type and size of materials installed - mains and services.
3. Stationing and Northerly and Easterly coordinates for each manhole.
4. Stationing of each sewer service wye from sewer nearest manhole and off set distance and stationing of cleanout from sewer main. Indicate single or double sewer service with its size at property line.

5. As-built elevations - each invert.
6. As-built rim elevation.
7. As-built sewer slope.
8. As-built sewer inverts and finished grade at clean outs.
9. As-built crossing elevations including sewer service lines.
10. Complete lift station including details.
11. Grease traps sizes in gallons, and in the event multiple grease traps are used, indicate the name, building, suite, or unit it serves.
12. As-built information shall include plan and profile showing pipe and manholes.

LIFT STATION

1. All pump station data/information on the station layout with measurements, elevations, and GPS coordinates.
2. Elevations (and GPS coordinates) indicated at:
 - Invert(s)
 - Wet well Top (rim elevation)
 - Wet well Bottom
 - Concrete slab station corners
 - Underground piping, valves, and fittings
3. Measurements of panels and equipment relative to the concrete edges of the station.
4. Above and below-ground piping.
5. The driveway is shown and dimensioned from the property lines.
6. All materials, sizes of lines, and fittings associated with the pump station shall be indicated on drawings.
7. All buried electrical conduits are labeled and located, including electrical service from the utility transformer to the station meter and to the control panel.
8. Station physical address
9. Privately owned pump stations will provide pump model information for modeling purposes.
10. GPS coordinates for Backflow Preventer.

PRESSURE PIPE

1. As-built distance of mains at 100' intervals from centerline of paved road, and rights of way, 50' intervals at edge of easements, rights-of-way, buildings, sewer main, or as determined by Seacoast Utility Authority. Extensions of an imaginary line will not be acceptable as reference points.
2. As-built elevations at 100' intervals as well as any change in direction and/or elevation. Elevations shown at these intervals and changes must show top of pipe elevation and finished grade elevation at that location.
3. Stationing offset, top of pipe, and finished grade of each valve, fitting, air release valve, service line, taps, plugs, etc. and radial dimensions from a nearby permanent object.
4. Type of materials installed - pipe and appurtenances. Indicate all locations of change of material including joint type (MJ, slip, restrained).
5. Valve type (butterfly, gate, and plug).
6. As-built length of all jack and bore casings indicating distance from centerline of paving to each end of casing. As-built invert and top of casing elevation of each end of casing as-built finish grade of each end of casing. As-built distance from each end of casing to limits of mechanical joint pipe is also required.
7. As-build all crossing information between utilities including bottom of pipe, top of pipe, size and type.
8. Provide as-built information on plan and profile when profile is included in original plans.
9. As-built tap locations, size and length of water service lines.
10. As-built fire hydrant locations and type of hydrant used, including flange grade.
11. As-built all flush hydrants and size, if any.
12. Size of mains, service lines, backflows, meters, etc.
13. As-built blow-up detail may be required of congested areas to ensure legibility.
14. Horizontal directional drill bore log includes showing:
 - Bore in plan and profile view
 - Bore log on 24" x 36" sheets
 - Certified by HDD contractor
 - Horizontal and vertical location data

SURVEYOR'S CERTIFICATION

KNOWN ALL PERSONS BY THESE PRESENTS, that the undersigned, _____ has prepared the record drawings for water, sewer and reclaimed facilities and does hereby CERTIFY, in their professional opinion, that the water, sewer, and/or reclaimed water mains and related appurtenances shown on the RECORD DRAWINGS, sheets _____ dated _____ and observed by _____ in their constructed locations at the project known as _____ being dedicated to SEACOAST UTILITY AUTHORITY for ownership and maintenance, were installed within the limits of the following parcels of land:

Easements and/or Tracts as dedicated for utility purposes on the Plat of _____.

Plat Book _____, Pages _____, Public Records of Palm Beach County, Florida

Easement as dedicated to Authority in Official Record Book _____, Pages _____, Public Records of Palm Beach County, Florida

and that the facilities that have been located and depicted on the record drawings do not encroach onto adjacent parcels of land or outside the boundaries of easements.

Signed _____ Florida Registration No. _____

Name _____ AFFIX SEAL
(Please Type)

Company Name: _____

Address: _____

Telephone: _____

The above **must** appear on the Final Record Drawings and Mylars.