

# Arapahoe County Water & Wastewater Authority

## Engineering Department

### **Requirements on electronic as-builts:**

An As-Built set is required for probationary acceptance. Use the following guidelines when preparing the plans.

1. **Original Design Plans-** The as-built plan set should be the original design plans with the design information crossed out. Add the as constructed information next to the crossed out design information.
2. **Preparer's Statement-** On the title sheet, include a statement of who provided the survey points, the contractor's redlines, and who prepared the As-Built plan set. The As-Built title sheet should be a copy of the title sheet from the original *approved* design plans with all approval signatures shown.
3. **Survey Points-** Insert points into As-Built production drawings. Every surface feature must have a survey point.
4. **NO XREFS-**None allowed
5. All As-Builts must be in AutoCAD or ESRI interchange file format.
6. **Submittal Package-** A complete As-Built plan set submittal must include 1 bond plan set with survey point file inserted, 1 digital copy of the As-Built plan set. Once the As-Builts are approved, a reproducible mylar plan set must be submitted.

### **General**

**All of these following features must be on their own layer.**

#### **Lots:**

- \_\_\_\_\_ Outline
- \_\_\_\_\_ Lot number
- \_\_\_\_\_ Block number
- \_\_\_\_\_ Address

#### **Streets:**

- \_\_\_\_\_ Centerline
- \_\_\_\_\_ Full name
- \_\_\_\_\_ Right of way

**Easements:**

- \_\_\_\_\_ Outlines
- \_\_\_\_\_ Size (30', 50', etc.)
- \_\_\_\_\_ Type (utility, HOA, etc.)

**Sections:**

- \_\_\_\_\_ Corners
- \_\_\_\_\_ Lines

**Water**

\_\_\_\_\_ **(Y or N) Pressurized Mains:**

- \_\_\_\_\_ Pipe class (DR 14, DR 18, etc.)
- \_\_\_\_\_ Diameter
- \_\_\_\_\_ Depth
- \_\_\_\_\_ Pressure rating (150 psi, 250 psi, etc.)

\_\_\_\_\_ **(Y or N) System Valve:**

- \_\_\_\_\_ Type (butterfly, gate, plug, etc.)
- \_\_\_\_\_ Elevation
- \_\_\_\_\_ Manufacture
- \_\_\_\_\_ Diameter
- \_\_\_\_\_ Open left or right

\_\_\_\_\_ **(Y or N) Lateral Service Line:**

- \_\_\_\_\_ Type (commercial, domestic, fire, hydrant line, irrigation, multi-family, etc.)
- \_\_\_\_\_ Length
- \_\_\_\_\_ Material
- \_\_\_\_\_ Diameter

\_\_\_\_\_ **(Y or N) Underground Enclosure:**

- \_\_\_\_\_ Type (valve vault, vault, well valve, etc.)

\_\_\_\_\_ **(Y or N) Control Valve:**

- \_\_\_\_\_ Type (air release, PRV, Reduced Pressure Backflow, Vacuum, etc.)
- \_\_\_\_\_ Top of valve elevation
- \_\_\_\_\_ Manufacture
- \_\_\_\_\_ Diameter
- \_\_\_\_\_ Model
- \_\_\_\_\_ Pressure setting

\_\_\_\_\_ **(Y or N) Production Well:**

- \_\_\_\_\_ Name
- \_\_\_\_\_ Source (alluvial, groundwater, etc.)
- \_\_\_\_\_ Capacity
- \_\_\_\_\_ Elevation at ground

- \_\_\_\_\_ Depth maximum
- \_\_\_\_\_ Average flow
- \_\_\_\_\_ Peak flow
- \_\_\_\_\_ System (raw water, potable, JWPP, etc.)

\_\_\_\_\_ **(Y or N) Enclosed Storage Facility:**

- \_\_\_\_\_ Type (tank, tower, etc.)
- \_\_\_\_\_ Capacity
- \_\_\_\_\_ Elevation at top
- \_\_\_\_\_ Elevation at bottom
- \_\_\_\_\_ Overflow elevation
- \_\_\_\_\_ Material
- \_\_\_\_\_ Level sensor type (air bubbler, electrode, float, micro processor, transducer, ultrasonic, etc.)
- \_\_\_\_\_ Elevation at ground

\_\_\_\_\_ **(Y or N) Fitting:**

- \_\_\_\_\_ Type (degree of bend, cap, cross, reducer, riser, saddle, sleeve, tap, tee, weld, wye, etc.),
- \_\_\_\_\_ Manufacture
- \_\_\_\_\_ Material (ductile iron, PVC, etc.)
- \_\_\_\_\_ Depth buried
- \_\_\_\_\_ If removed from design during construction, show extent of pipe deflection

\_\_\_\_\_ **(Y or N) Hydrant:**

- \_\_\_\_\_ Flange elevation
- \_\_\_\_\_ Manufacture
- \_\_\_\_\_ Seat diameter
- \_\_\_\_\_ Model
- \_\_\_\_\_ Serial number

\_\_\_\_\_ **(Y or N) Meter Pits:**

- \_\_\_\_\_ RIM elevation
- \_\_\_\_\_ Yoke model #

**Pump Station:**

\_\_\_\_\_ **(Y or N) Clear Well:**

- \_\_\_\_\_ Elevation
- \_\_\_\_\_ Manufacture
- \_\_\_\_\_ Capacity
- \_\_\_\_\_ Depth
- \_\_\_\_\_ Diameter
- \_\_\_\_\_ Operating maximum and minimum

\_\_\_\_\_ **(Y or N) Pump:**

- \_\_\_\_\_ Type (axial flow, centrifugal, jet, reciprocating, rotary, turbine)
- \_\_\_\_\_ Elevation at flanges
- \_\_\_\_\_ Manufacture
- \_\_\_\_\_ Inlet diameter
- \_\_\_\_\_ Discharge diameter
- \_\_\_\_\_ Rated flow
- \_\_\_\_\_ Rated pressure
- \_\_\_\_\_ Total dynamic head
- \_\_\_\_\_ Low set point
- \_\_\_\_\_ High set point
- \_\_\_\_\_ Model
- \_\_\_\_\_ Serial number

**Sewer**

\_\_\_\_\_ **(Y or N) Manhole:**

- \_\_\_\_\_ Type (drop, split, standard, summit, control, sampling, etc.),
- \_\_\_\_\_ Access diameter
- \_\_\_\_\_ Access type (door, grate, manhole cover, etc.)
- \_\_\_\_\_ RIM elevation
- \_\_\_\_\_ Barrel diameter
- \_\_\_\_\_ Invert elevations
- \_\_\_\_\_ Flume type

\_\_\_\_\_ **(Y or N) Lift Station:**

- \_\_\_\_\_ Name
- \_\_\_\_\_ Capacity
- \_\_\_\_\_ Elevation at bottom
- \_\_\_\_\_ Level sensor type (air bubbler, electrode, float, micro processor, transducer, ultrasonic, etc.)
- \_\_\_\_\_ Average flow
- \_\_\_\_\_ Peak flow
- \_\_\_\_\_ Wet well capacity
- \_\_\_\_\_ Wet well rim elevation
- \_\_\_\_\_ Wet well depth
- \_\_\_\_\_ Wet well access type
- \_\_\_\_\_ Wet well access diameter

\_\_\_\_\_ **(Y or N) Pump:**

- \_\_\_\_\_ Type (axial flow, centrifugal, jet, reciprocating, rotary, turbine)
- \_\_\_\_\_ Manufacture
- \_\_\_\_\_ Inlet diameter
- \_\_\_\_\_ Discharge diameter
- \_\_\_\_\_ Rated flow
- \_\_\_\_\_ Rated pressure

- \_\_\_\_\_ Total dynamic head
- \_\_\_\_\_ Low set point
- \_\_\_\_\_ High set point
- \_\_\_\_\_ Model
- \_\_\_\_\_ Serial number

\_\_\_\_\_ **(Y or N) Treatment Plant**

- \_\_\_\_\_ Name
- \_\_\_\_\_ Capacity
- \_\_\_\_\_ Average capacity
- \_\_\_\_\_ Maximum capacity
- \_\_\_\_\_ Minimum capacity
- \_\_\_\_\_ Elevation at headworks

\_\_\_\_\_ **(Y or N) Grease Separator**

- \_\_\_\_\_ Type (grease interceptor, grease trap, sand/oil, etc.)
- \_\_\_\_\_ Invert elevation
- \_\_\_\_\_ Manufacture
- \_\_\_\_\_ Model
- \_\_\_\_\_ Capacity
- \_\_\_\_\_ Depth buried
- \_\_\_\_\_ Maximum flow cap

\_\_\_\_\_ **(Y or N) Cleanout Structure**

- \_\_\_\_\_ RIM elevation
- \_\_\_\_\_ Diameter
- \_\_\_\_\_ Invert elevation

\_\_\_\_\_ **(Y or N) Pressurized Main**

- \_\_\_\_\_ Length
- \_\_\_\_\_ Material (PVC, etc.)
- \_\_\_\_\_ Exterior coating (tar, paint, zinc, aluminum, etc.)
- \_\_\_\_\_ Pipe class
- \_\_\_\_\_ Roughness
- \_\_\_\_\_ Diameter

\_\_\_\_\_ **(Y or N) Gravity Main**

- \_\_\_\_\_ Type (collector, interceptor, etc.)
- \_\_\_\_\_ Length
- \_\_\_\_\_ Material (PVC, etc.)
- \_\_\_\_\_ Exterior coating (tar, paint, zinc, aluminum, etc.)
- \_\_\_\_\_ Pipe class
- \_\_\_\_\_ Roughness
- \_\_\_\_\_ Diameter
- \_\_\_\_\_ Lining type (cement-mortar, sliplining, etc.)

\_\_\_\_\_ **(Y or N) Lateral Line**

\_\_\_\_\_ Type (commercial, single family, industrial, multifamily, etc.)

\_\_\_\_\_ Length

\_\_\_\_\_ Material

\_\_\_\_\_ Diameter

**Regional Stormwater:**

\_\_\_\_\_ **(Y or N) Regional Stormwater**

\_\_\_\_\_ ACWWA's Regional Stormwater System

\_\_\_\_\_ Dove Creek

\_\_\_\_\_ Windmill Creek

\_\_\_\_\_ Lonetree Creek

\_\_\_\_\_ Pond/s

\_\_\_\_\_ Channel/s

\_\_\_\_\_ Pipe/s

\_\_\_\_\_ Manhole/s

\_\_\_\_\_ Outfall/s

\_\_\_\_\_ Inlet/s

\_\_\_\_\_ Capacities & Volumes

\_\_\_\_\_ Surface acres

\_\_\_\_\_ All Grade Elevations at tops and bottoms

\_\_\_\_\_ Elevations of Spillways and Overflows tops and bottoms

\_\_\_\_\_ Depths maximums minimums and averages

\_\_\_\_\_ Lengths and Widths / Cross sections of all ponds and channels

\_\_\_\_\_ Stormwater runoff drainage/s points

\_\_\_\_\_ Stormwater discharge/s points

\_\_\_\_\_ Types of materials used for construction

\_\_\_\_\_ **(Y or N) Stormwater Facilities / Structures / PBMPs**

\_\_\_\_\_ Facility / structures (circle as needed)

\_\_\_\_\_ Detention Pond

\_\_\_\_\_ Extended Detention Pond

\_\_\_\_\_ Constructed Wetland

\_\_\_\_\_ Pollution Removal Facility

\_\_\_\_\_ Phosphorus Removal Facility

\_\_\_\_\_ Sediment Removal Basin Structure

\_\_\_\_\_ Trash and Debris Removal Structure

\_\_\_\_\_ PBMP Permanent Best Management Practice

\_\_\_\_\_ Forebay/s

\_\_\_\_\_ Micro pool/s

\_\_\_\_\_ Stilling Basins

\_\_\_\_\_ Drop structures

\_\_\_\_\_ Trickle Channels

\_\_\_\_\_ **(Y or N) Stormwater Easements**

\_\_\_\_\_ ACWWA's easement

\_\_\_\_\_ Drainage easement

\_\_\_\_\_ Shared utility easement (Elec., Gas, Phone, Cable, access.) \_\_\_\_\_

\_\_\_\_\_ Other/s easements, list \_\_\_\_\_

\_\_\_\_\_ Floodplain delineation 100 year

\_\_\_\_\_ FEMA

\_\_\_\_\_ Other, list \_\_\_\_\_

**Coordinate System:**

All CAD and GIS files shall be registered to the North American Datum 83 (NAD 83) Colorado State Plane Central Zone coordinate system (Grid), units feet with ties to the monumented High Accuracy Reference Network System (HARN) points.

False Easting: 3,000,000.000000

False Northing: 1,000,000.000000

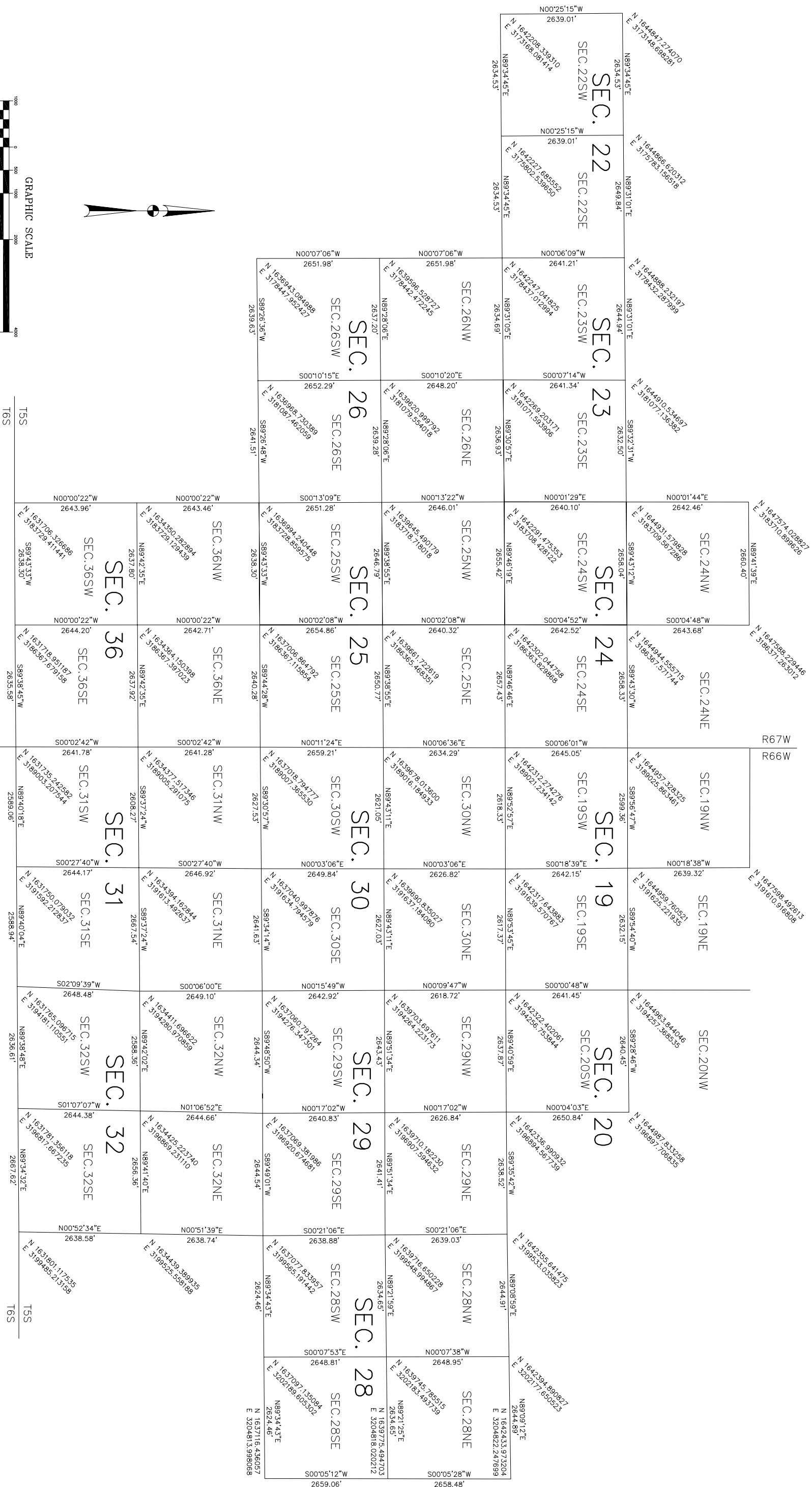
Central Meridian: -105.500000 (Decimal)

Standard Parallel 1: 38.450000 (Decimal)

Standard Parallel 2: 39.750000 (Decimal)

Latitude of origin: 37.833333 (Decimal)

# ARAPAHOE COUNTY WATER AND WASTEWATER AUTHORITY ARAPAHOE COUNTY SERVICE AREA CONTROL DIAGRAM



THE BEARING, DISTANCE AND COORDINATE VALUES SHOWN HEREON ARE PER THE ARAPAHOE COUNTY CONTROL NETWORK, PHASE 1 REVISED, AND ARE IN COLORADO STATE PLANE, COLORADO COORDINATE SYSTEM OF 1983-1992, CENTRAL ZONE. DATE OF DRAWING PREPARATION: AUGUST, 2005