

preprocessinc

Chemical Engineering for Entrepreneurs

Process Design Documents at Revision 0 **(Equivalent IFC Revision)**

Process Design Basis Documents

1. PFDs
2. P&IDs
3. General Arrangement and Layouts
4. 3D Model
5. Functional Requirement Document

Issue for Construction (IFC) Package Minimum Content

- 1 AR. Architectural – must have a CA architect’s stamp on every drawing
 - ar - Architectural site plan
 - gp - Egress plan
 - rd - Roof details
 - fp - Floor plans
 - el - Elevations
 - fs - Finish Schedule
 - ds - Door Schedule
 - en - Envelope thermal energy compliance documentation
 - hz - Hazardous materials and occupancy classification
 - al - Area lighting plan
 - hm - Details for the hazardous materials (UPS battery room)
 - ss - Safety shower plumbing
 - dr – Drains and sewer plumbing
- 2 FO. Foundations – must have a CA structural or civil engineer stamp on each drawing
 - ep - Equipment pedestals
 - ls - Foundations for large structure equipment
 - pf - Joint and penetration finishing and caulking details
 - rb - Re-bar calculations
 - us - Undergrounds and underslab electrical and piping
- 3 SS. Structural Steel – must have a CA structural of civil engineer stamp on each drawing
 - cd - Connection details for any structures

- em - Detail for any equipment mounting
 - ss - Steel structure equipment supports embedded into other parts of the system
 - op - Detail for any outside penetrations
 - cd - Structural connection details
 - ab - Anchor bolt details
 - sc - Structural calculations both modular shop fabricated and field erected
- 4 BM. Building and Area Mechanical – must have a CA mechanical engineers stamp on each drawing
- bh - Building HVAC
 - bp - Building plumbing
 - bf - Building fire protection
- 5 PM. Process Mechanical – no stamp, not submitted to AHJ
- md - Equipment mounting details
 - ad - Equipment assembly details
 - ca - Equipment connection assemblies
- 6 PI. Piping – process equipment – no stamp, not submitted to AHJ
- pd - "All detail piping at pumps, tanks through typicals and use spreadsheets to identify the needed application details "
 - is - Isometrics - Issue typicals and then a line list with general arrangements
 - bo - Commodity BOMs
 - ll - Line list
 - hv - Hand valve list
 - sp - Specialty item list
- 7 BE. Building or Area Electrical – must have a CA electrical engineers stamp on each drawing
- be - Building lighting
 - bo - Building outlets
 - bp - Building power distribution single line
 - nt - Network room interconnection diagrams including: SCADA, Business, Fire Alarm, Security *
 - nr - Network room BOMs *
 - be - All building system electrical single lines and elementaries
- 8 PE. Process Electrical – Process equipment – no stamp, not submitted to AHJ
- sl - Single lines
 - el - Elementaries
 - cl - Conduit layouts
 - io - I/O lists
 - co - Commodity BOM
 - pl - Panel layouts
 - pa - Panel architecture
 - cd - Connection diagrams
 - ld - Loop diagrams