

STRONGWELL

APPLICATION PROFILE

FIBERGLASS SUPPORTS HOLD 54" DIAMETER PIPES

EXTREN® fiberglass structural shapes are the supports of 1,000 lineal feet of 54" diameter FRP pipes at the Metro Wastewater Treatment Plant in St. Paul, MN.

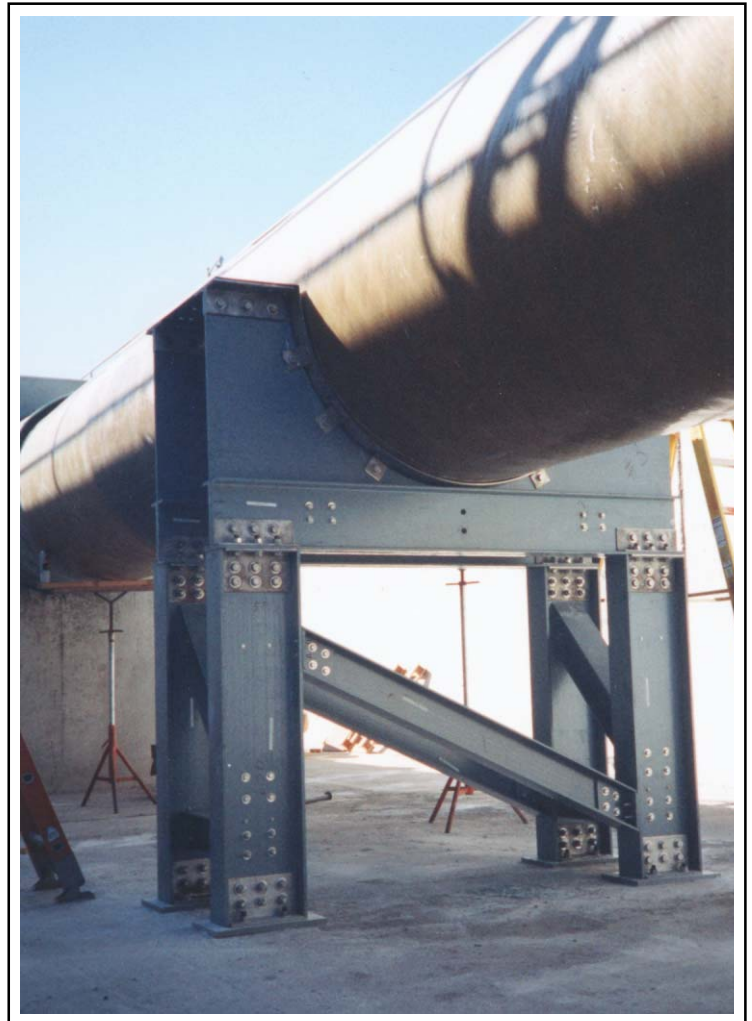
This project, part of the new secondary treatment improvement process, was originally planned to be fabricated from stainless steel supports. Strongwell-Chatfield Division was able to show that fabricated FRP pipe supports could be designed to hold 21,000 lbs. (the weight of the 54" diameter pipes when filled to capacity) as well as providing these additional benefits:

- corrosion resistant - impervious to surrounding environment
- maintenance free
- lightweight - ease to install
- prefabricated - time savings
- cost savings

The support cradles were fabricated from EXTREN® Series 525 10" channel, 3/4" plate, 10" wide flange beams and 6" wide flange beams. The design work and prefabrication were all done at Strongwell-Chatfield Division. In all, 84 different pipe supports of various designs were fabricated and shipped in less than six weeks.

Some of the special engineering concerns with this application were the dynamic thrust loading when the pipes are changed and designing for the thermal expansion/contraction with 120° differential.

The remaining 75% of the project is scheduled to be constructed in 1997.



TECHNICAL DATA

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| Product: | Fiberglass Pipe Supports |
| Process: | Pultrusion, Fabrication |
| Materials: | EXTREN® Series 525 fiberglass reinforced polyester, fire retardant |
| Sizes: | EXTREN® structural shapes: 10" x 2-3/4" x 1/2" Channel 3/4" Plate 12" x 6" x 1/2" I-beam columns 6" x 6" x 3/8" Wide flange beam—bracing |

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| For: | Brown & Caldwell, Engineering Firm Metropolitan Council of Environmental Services |
| User: | Metro Wastewater Treatment Plant, |

STRONGWELL



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