

Reviving Troost

Using Phytotechnology to Decontaminate Troost Avenue's Vacant Lots

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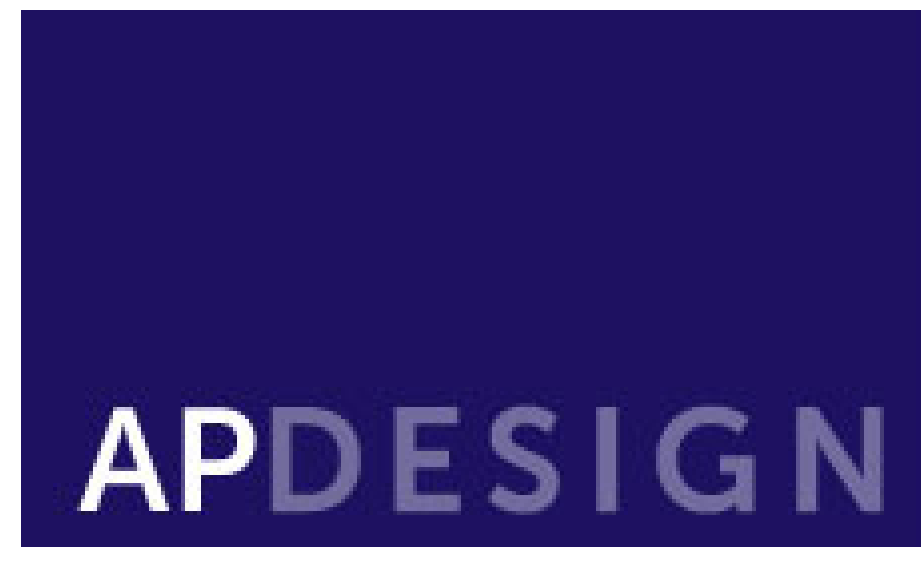


Figure 1. Vacant lots on Troost Avenue, between 30th and 45th Street.



Figure 2. Christmas celebration on Troost Ave. in 1929.



Figure 3. A 1925 postcard shows the site with a hotel.

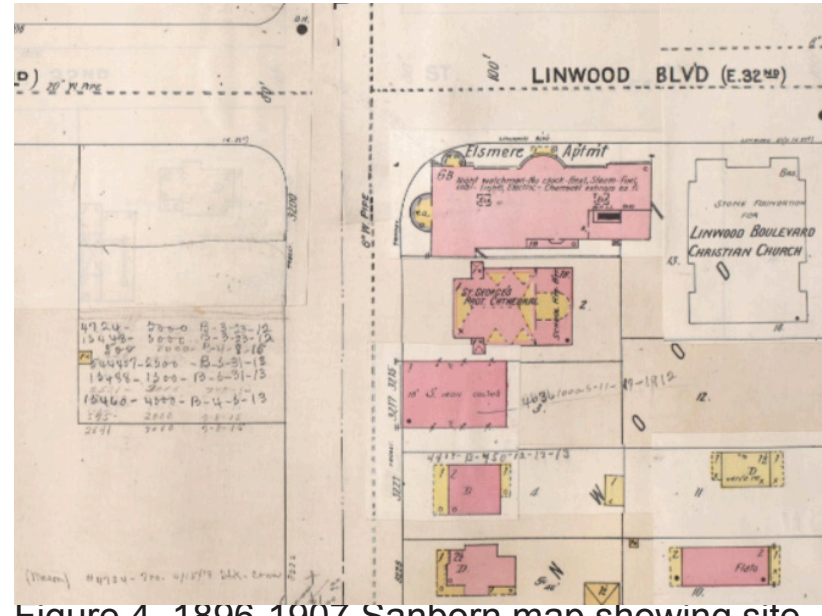


Figure 4. 1896-1907 Sanborn map showing site with apartment building.



Figure 5. 1920 rooftop view looking east along Linwood from Troost.



Figure 6. Troost and 31st.



Figure 7. Firestone Building, Linwood Blvd, across from site in the 1980s.



Figure 8. Vacant lot on Troost Avenue and 36th.



Figure 9. Vacant lot on Troost Avenue and Armour Blvd.



Figure 10. Site looking south along Troost.



Figure 11. Site looking east along Linwood Blvd.



Figure 12. Looking southeast across site.



Figure 13. Site looking west towards Troost.



Figure 14. Weeds growing through cracked pavement on the site.

Abstract

Kansas City is a divided city, split along its north-south axis by Troost Avenue. Most African-American residents live on the east side of Troost, while on the west side are primarily white and upper-middle class residents. Troost Avenue was once an attractive and desirable place to have a business. Today, the street is run-down, with many vacant lots and buildings and exclusively serves as an artery of the local bus route. My aim is to find a way to improve Troost's streetscape in an attempt to unify the city aesthetically and culturally. The question that drives this project is: **What design interventions could bring Troost Avenue back to being an asset for the community?** To answer this, I have done archival research at Kansas State University and the Kansas City Public Libraries to better understand the role of Troost Avenue in the past. I have also delved into the world of phytotechnology via the book *Phyto: Principles and Resources for Site Remediation and Landscape Design*. Phytotechnology is a design tool that uses vegetation to contain or prevent the movement of contaminants in soils, sediments and groundwater. With this information I am proposing a demonstration neighborhood park at the corner of Troost and Linwood to show how the existing vacant lots could be improved to better meet the expectations of the community. This entails documentation of the current conditions of the street and a proposed design for improvements.

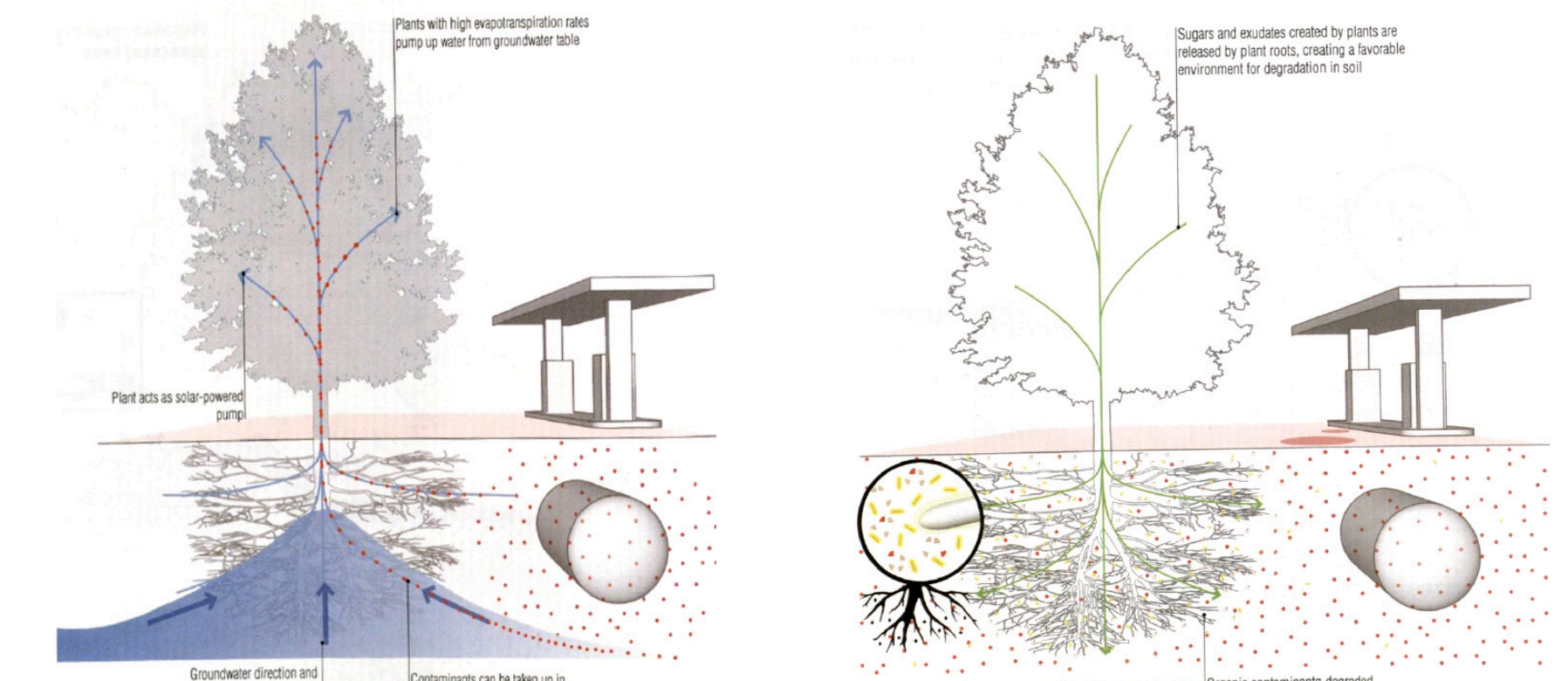


Figure 15. Phytodegradation: Plants take up water and contaminants

Figure 16. Rhizodegradation: Soil microbes destroy contaminants

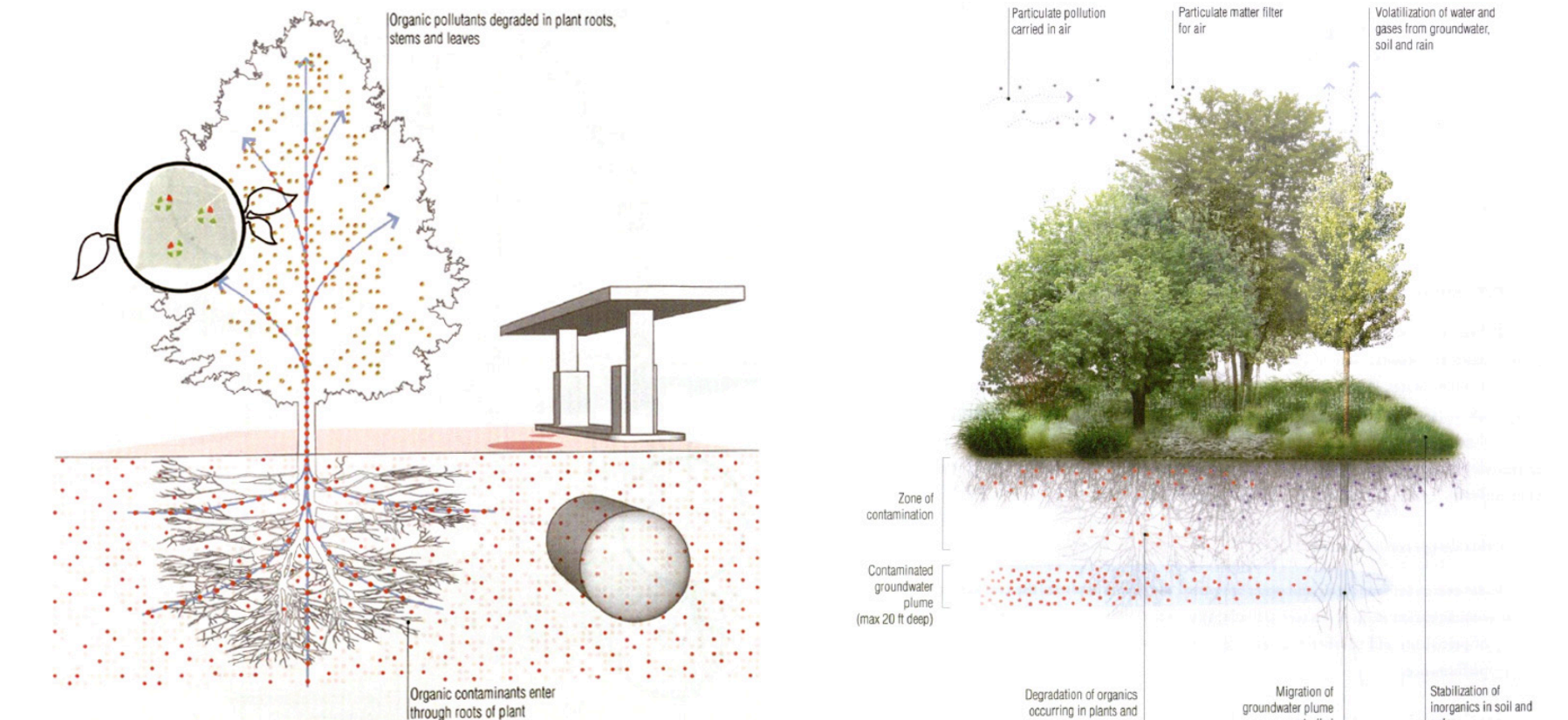


Figure 17. Phytodegradation: Plant destroys contaminant

Figure 18. Multi-mechanism Buffer: Incorporates multiple strategies

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Figure 19. The empty lot would be transformed into a demonstration neighborhood park, using phytotechnology for site remediation. The plants will slowly remove contaminants from the soil.



Figure 20. Looking out from the park towards the northwest entrance.



Figure 21. Southwest entrance to the new neighborhood park.



Figure 22. Western Wheat Grass (*Pascopyrum smithii*)



Figure 23. Hackberry (*Celtis occidentalis*)



Figure 24. Jack Pine (*Pinus banksiana*)



Figure 25. Canada Goldenrod (*Solidago*)
Figure 26. Red Fescue (*Festuca rubra*)



Figure 27. Little Bluestem (*Schizachyrium scoparium*)



Figure 28. Canada Wild Rye (*Elymus canadensis*)



Figure 29. Blue Grama (*Bouteloua gracilis*)



Figure 30. Bottlebrush (*Elymus hystrix*)