



Project Santisuk



Included two design projects:

- Leachfield
- Drinking Water System

8 UNH students and 1 from University of Colorado worked in two groups

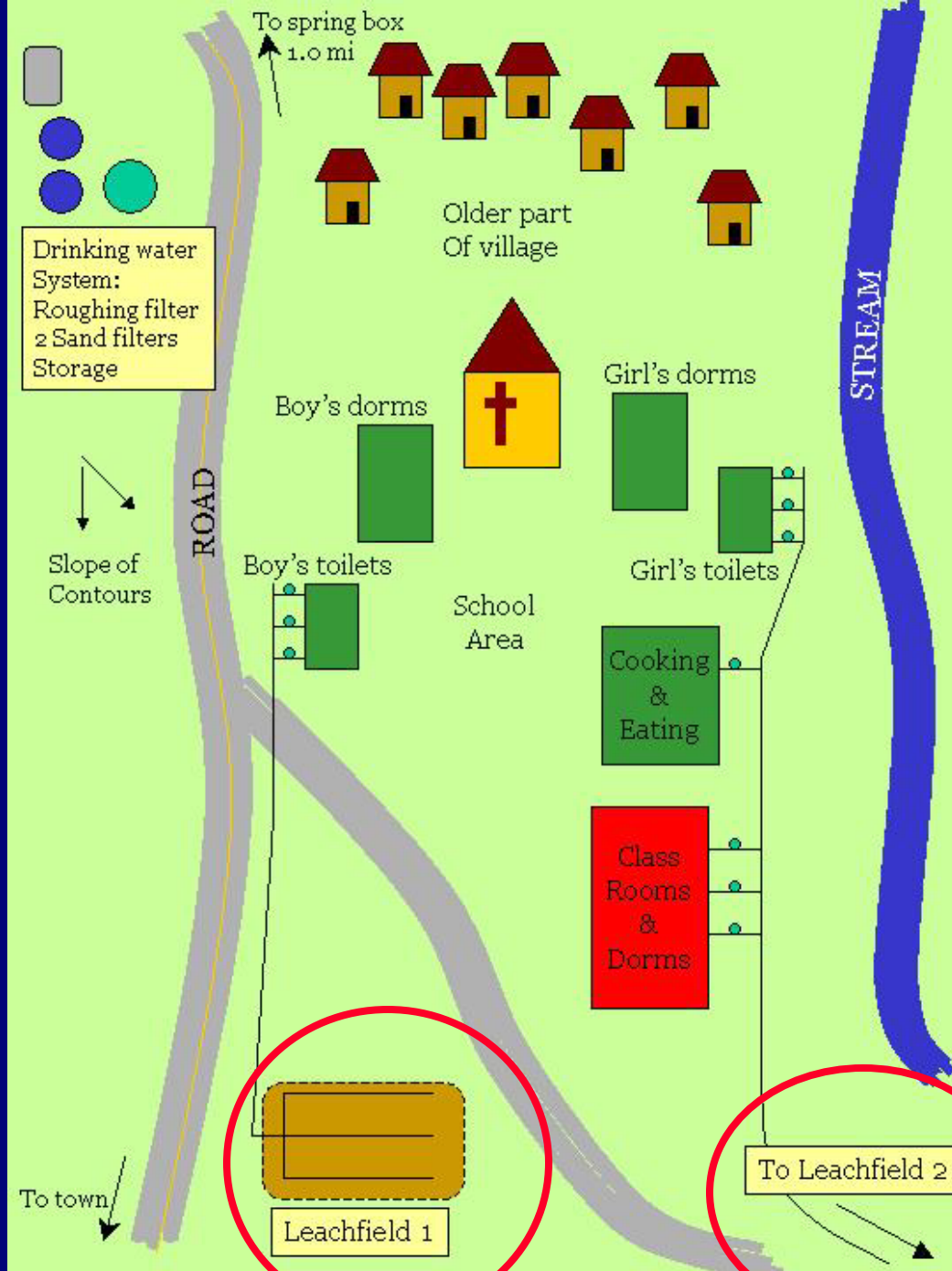
The project needed to be designed in 3 months and constructed in 4 days





The Leachfield Project





Map of Santisuk –
Proposed Leachfield
Sites



Former Waste Management



- No treatment for gray water disposal
- Septic Tank outflow pipe is buried adjacent to the tanks
- Possible infection from pathogens associated with wastewater for Santisuk and downstream communities.





Project Objectives



- Protection of natural water source from contamination
- Minimization of health and environmental risks associated with standing wastewater
- Improvement of wastewater management in rural communities in the Chiang Mai Province through the introduction of appropriate designs.





Gray water pipes disposing behind the boys' toilets



Septic tanks behind the girls dormitories





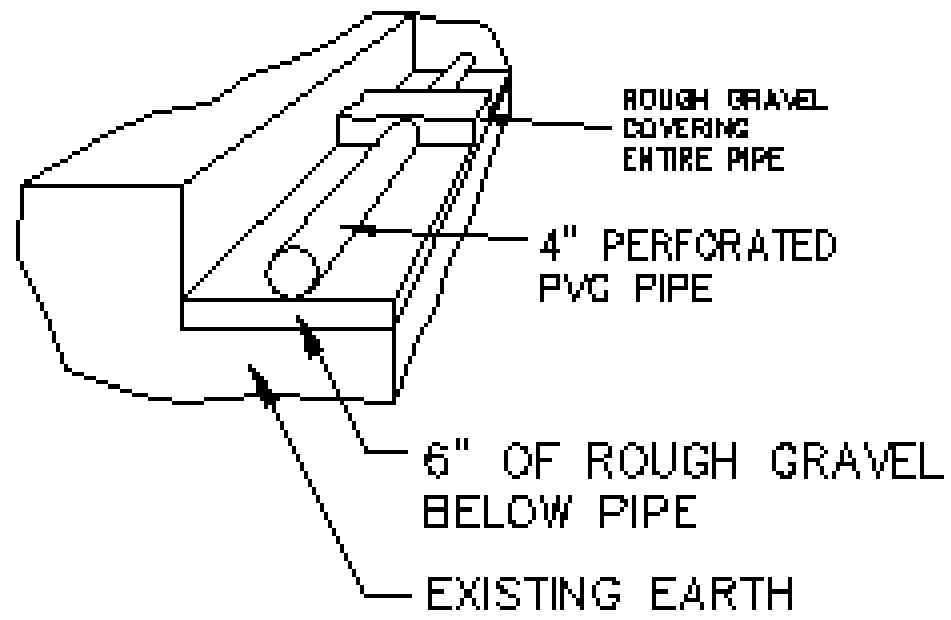
Solution for Waste Management



- Connecting all gray water pipes into the leachfields
- Installing new outflow pipes into the holding tanks and channel into the leachfields
- Building two leachfields to accommodate separate flows for the boys' and girls' dorms and the cooking area.



Leachfield Schematic



Trench lengths = 30' for the boy's toilets and 35' for the girl's toilets.

Trench Depth = 3'

Trench Width = 3', separated by 6'



Difficulties Encountered



- Leachfield Location
- Keeping the piping system to the leachfield on a slope
- Even distribution of the waste into the trenches
- Communication





Sloping Difficulties



Piping the wastewater to the second leachfield





Project Outcome



- All gray and black water is piped into the leachfield
- Design will be able to handle increased loading as the population of Santisuk increases
- Design was taught to the villagers during construction in order to improve waste management in the surrounding communities

