

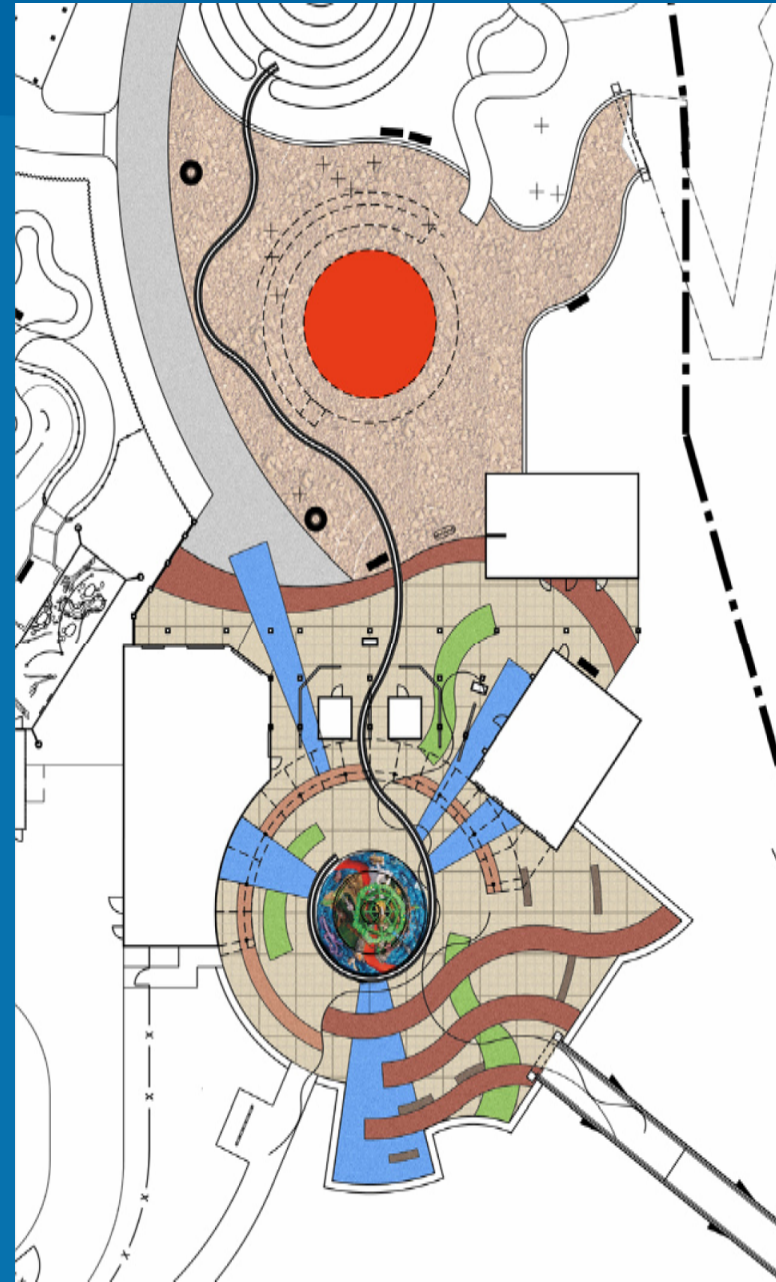
Innovative Detention and Conveyance



Happy Hollow Park and Zoo

Description

- 17 Acres
- 41 Million Construction
- Themed Circulation
- New Exhibits and Attractions
- LEED Certification Silver



Drainage Design

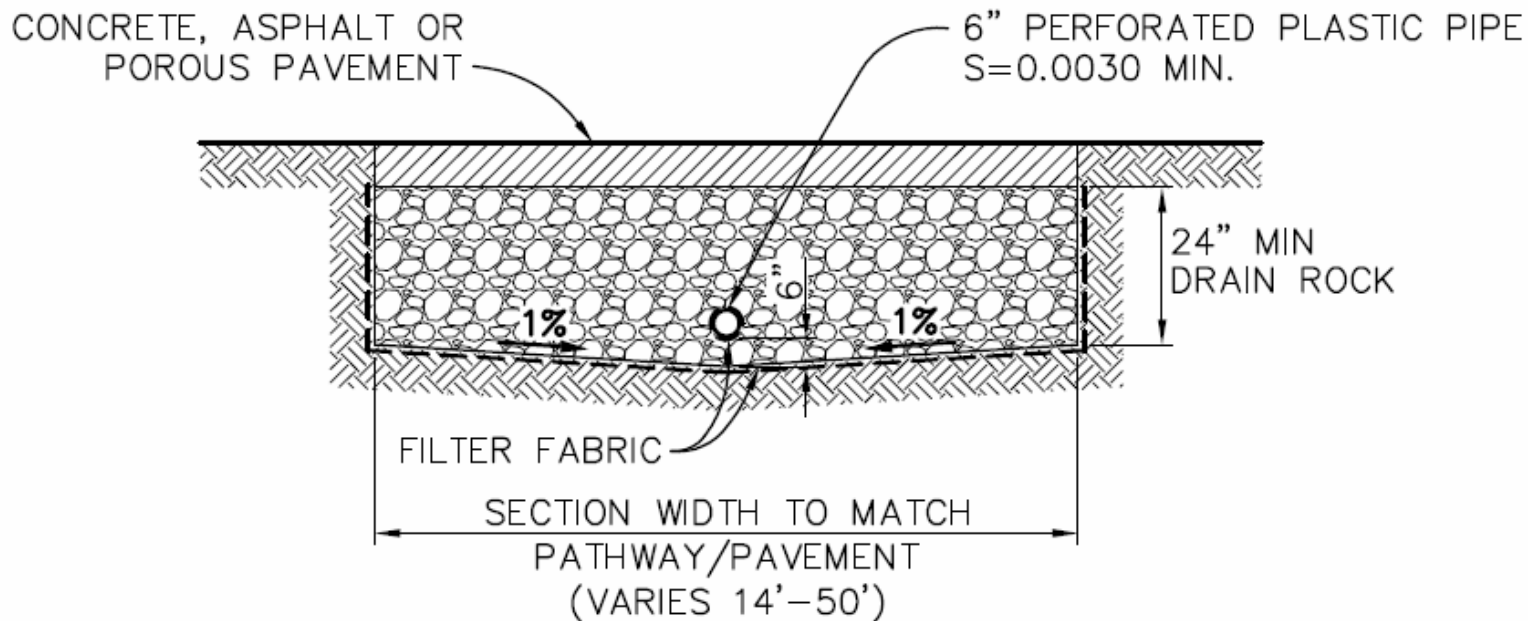
- Issues
 - Limiting Peak Flow
 - Water Quality
 - High Visibility
 - Integration into Park Theme
- Alternatives
 - Swales
 - Detention / Wetlands
 - Pervious Pavement

Pervious Pavement

- Benefits
 - Roadways are subsurface drainage system
 - Detention
 - Extended time of concentration
- Downsides
 - Aesthetics of finished surface
 - Cost of materials

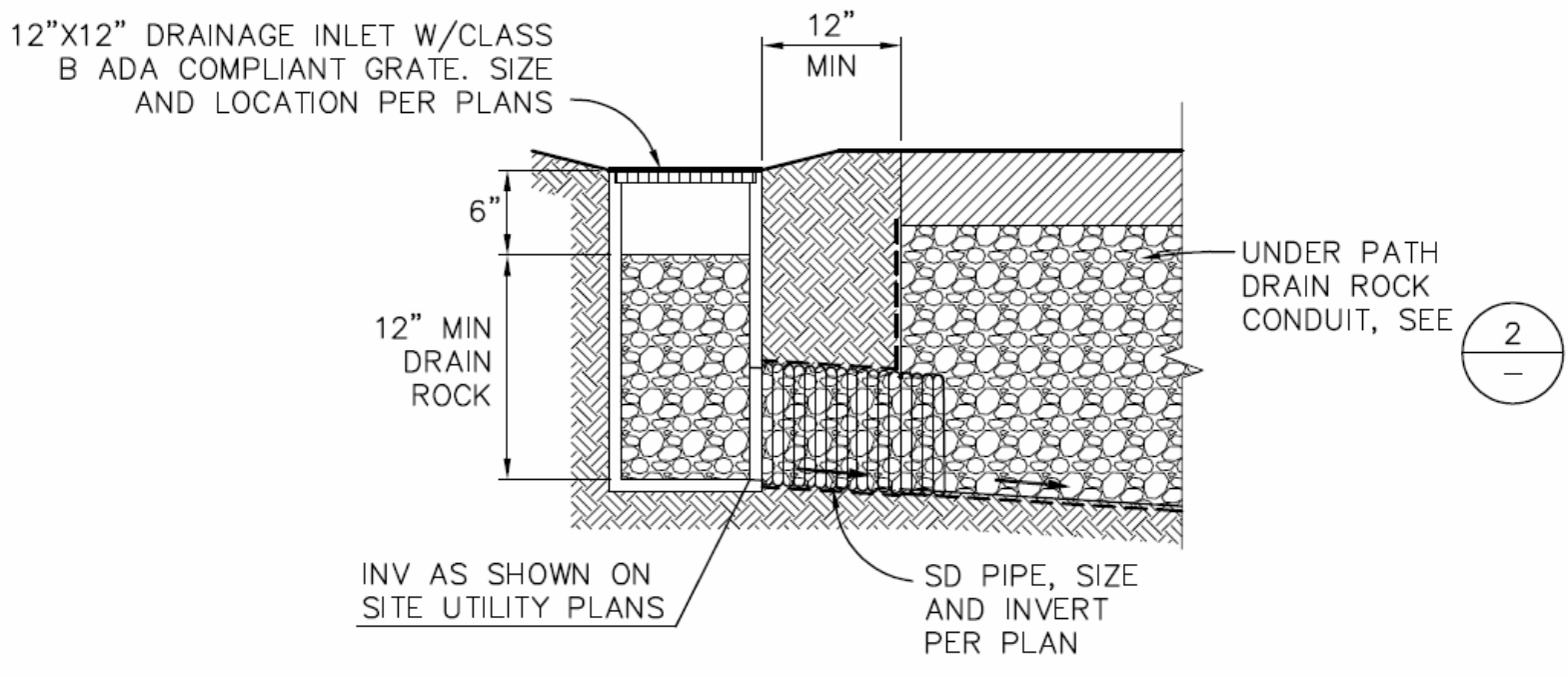
Implementing Pervious Pavement

- (Without using pervious pavement)
- Typical cross-section



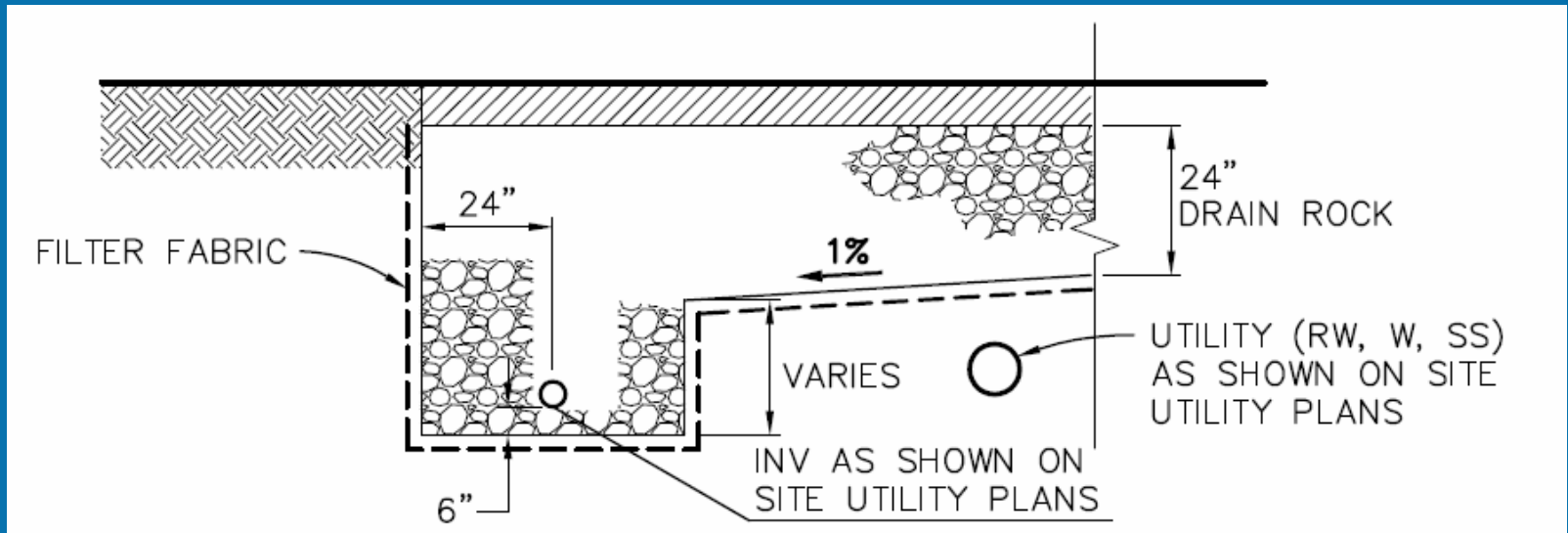
Implementing Pervious Pavement

- (Without using pervious pavement)
- Inlet configuration



Lessons Learned

- Clearance / coordination with piped utilities



Lessons Learned

- Coordination with surface design of site

