

CASTOR PROJECT

EPA RAIN WORKS CHALLENGE GROUP M5



62 miles of streams once ran through Manhattan naturally fulfilling the hydrological services and demands we aim to achieve. The proposed dry creek on campus is an homage to the 327 meters of rocky headwater stream that once ran through what is now The City College Campus. The dry creek runs exactly the same course the stream ran in 1609 bisecting the North Quad.

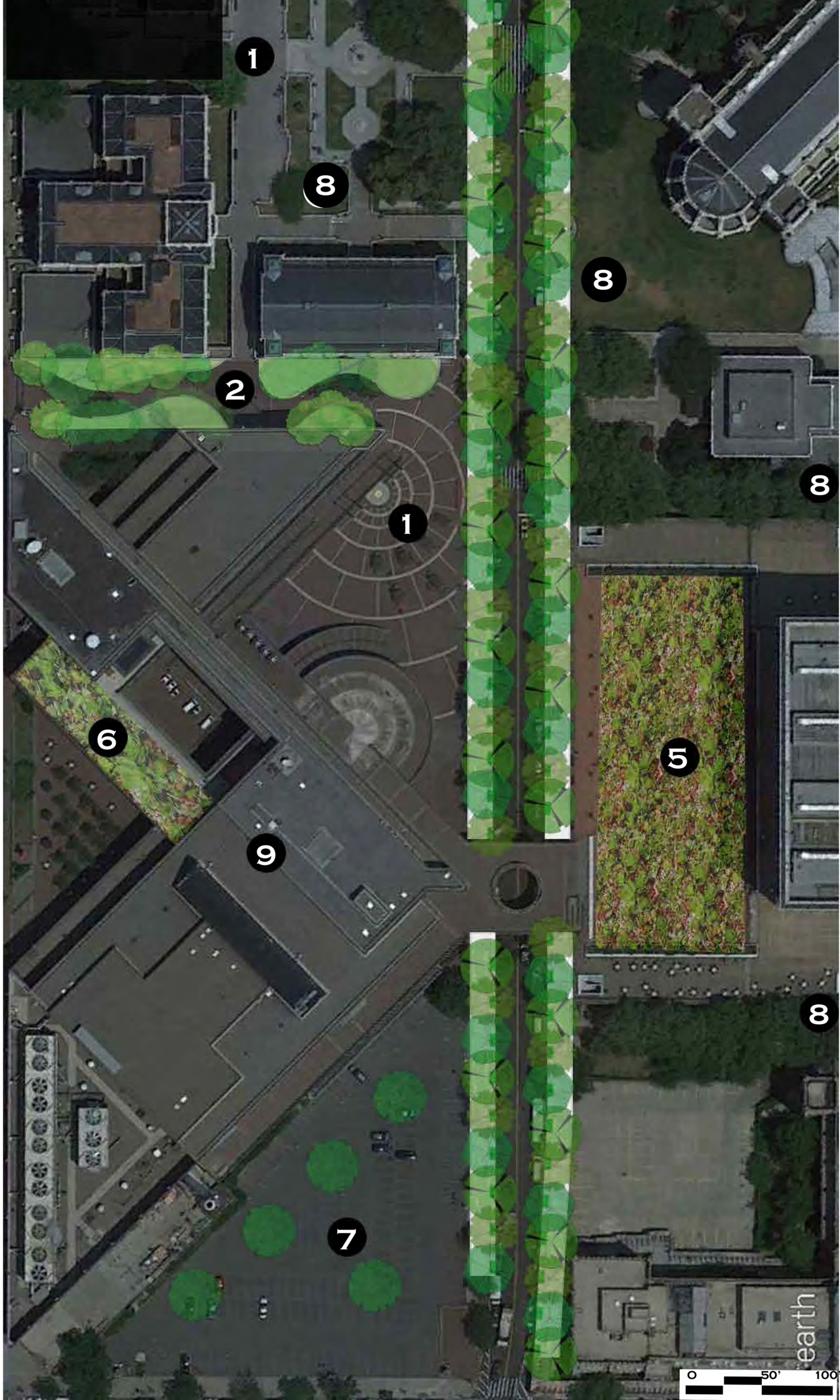
This stream would not only provide the ecological benefits of added plant diversity and slowing the flow of water thus improving the infiltration of storm water, but begin a dialog about th history and state of ecological hydrology in New York City.



NORTH QUAD DRY CREEK

MASTER PLAN

- LEGEND**
1. NORTH QUAD CREEK
 2. NAC HILL
 3. NAC PLAZA
 4. CONVENT AVENUE BIOSWALE
 5. MARSHAK GREEN ROOF
 6. NAC GREEN ROOF
 7. PARKING LOT
 8. STORAGE TANKS
 9. NORTH ACADEMIC CENTER (NAC)



BIOSWALES ON CONVENT AVENUE



MULTIPLE BIO SWALES ADDED ON CONVENT AVENUE SEQUESTERING **56 TONS OF CO2/YR EACH**

490 SQR FT OF CANOPY AREA FOR EACH BIO SWALE

SILVA CELLS PREVENT SOIL COMPACTION

ADDING OVER **200 CUBIC FEET OF SOIL** BETWEEN BIO SWALES

RETAINING **50 CUBIC FEET OF STORM WATER** BETWEEN SWALES

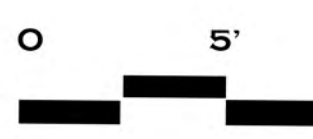
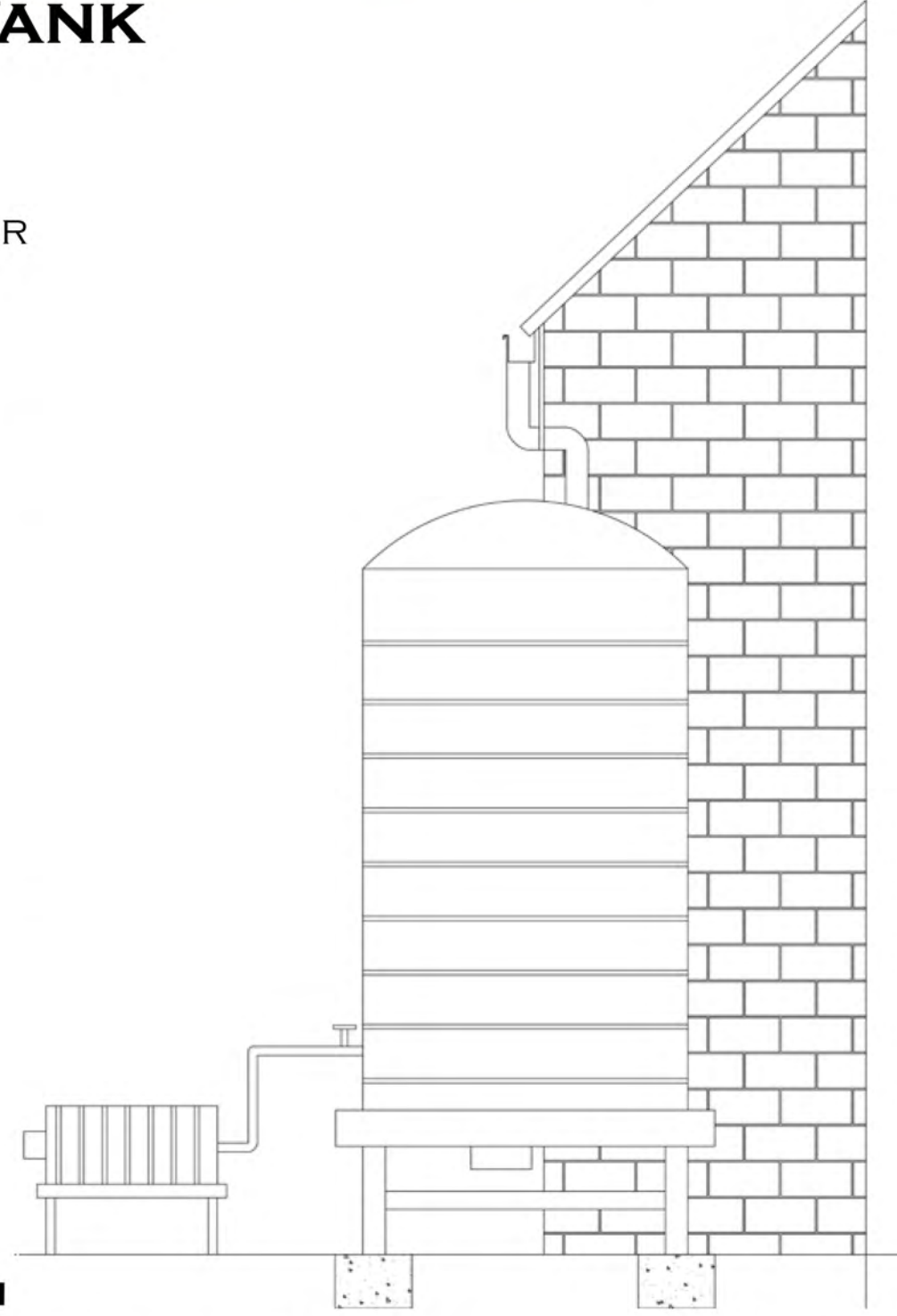
STORAGE TANK

OVER **3000 CUBIC FEET** OF STORMWATER DETAINED

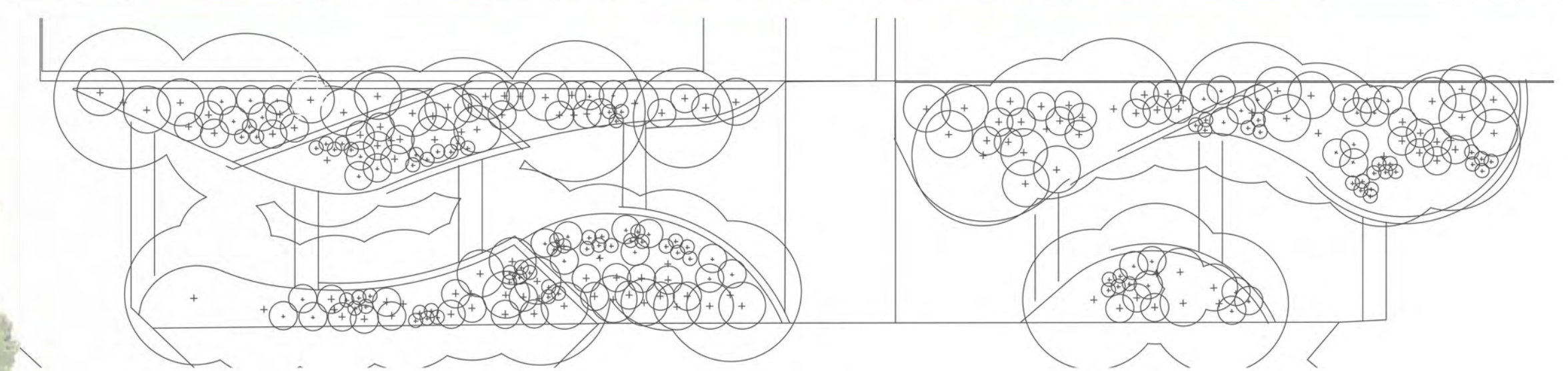
WATER COLLECTED CAN BE USED LATER FOR GREY WATER PURPOSES SUCH AS IRRIGATION

FED BY BUILDING SCUPPERS AND GUTTERS

PUMP INCLUDED TO REMOVE BUILT UP STORM WATER



NORTH ACADEMIC CENTER HILL PLAN



PLANT LIST

- | | | |
|------------------------------|--------------------------------|-----------------------------------|
| | | |
| <i>Amelanchier arborea</i> | <i>Lindera benzoin</i> | <i>Asclepius tuberosa</i> |
| <i>Cornus florida</i> | <i>Campsis radicans</i> | <i>Aquilegia canadensis</i> |
| <i>Hamamelis virginiana</i> | <i>Vaccinium angustifolium</i> | <i>Carex pensylvanicum</i> |
| <i>Virburnum prunifolium</i> | <i>Viburnum acerfolium</i> | <i>Caulophyllum thalictroides</i> |
| | <i>Viburnum dentatum</i> | <i>Corydalis sempervirens</i> |
| | | <i>Geranium maculatum</i> |
| | | <i>Helianthus divaricatus</i> |
| | | <i>Mainthenum canadense</i> |



NORTH ACADEMIC CENTER HILL SECTION



15,444 SQR FT OF ADDED PERMEABLE AREA

PLANT DIVERSITY INCREASED BY **9 TIMES. 18 ADDED PLANT SPECIES** NATIVE TO WHAT IS NOW CITY COLLEGE BASED ON THE MANAHATA DATABASE

20 TREES ADDED SEQUESTERING **1120 TONS OF CO2/YR**

TERRACED PLANTERS REDUCE RUNOFF BY ALLOWING STORMWATER TO INFILTRATE.

9000 SQR FT OF ADDED TREE CANOPY

earth