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[BUILDING RELATIONSHIPS.
DESIGNING SOLUTIONS.]

THE HARRISBURG AUTHORITY
BOARD OF DIRECTORS – REGULAR MEETING

GIS DATA COLLECTION AND IMPLEMENTATION PLAN

FEBRUARY 27, 2013

BACKGROUND

- April 2011 – 36” Water Main Break - HARSCO
- Combined Sewer Overflow (CSO) – Long Term Control Plan (LTCP) Update
- Capital Improvement Plans
- Storm Water & MS4 Regulations
- “Sinkholes”
- Overall Asset Management

WORK PERFORMED TO DATE

- PENNVEST Funding Offer
- Project Understanding/Geodatabase Requirements
- Existing Data & Mapping Review
- Pilot Project
- Orthophotography Flight Development
- Front St. Interceptor Investigation
- Strategy Meetings with THA & COH
- SUE RFP & Proposals – Water System

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UTILITY DESIGNATION & LOCATION TECHNOLOGY

- ASCE 38-02 – Standard Guideline for the Collection and Depiction of Existing Subsurface Utility Data
  - Utility Quality Level B: Designation
  - Utility Quality Level A: Location
- Water System Technology
  - Electromagnetic Locating (UQL B)
  - Ground-Penetrating Radar (UQL B)
  - Vacuum Excavation (UQL A)

ELECTROMAGNETIC LOCATING

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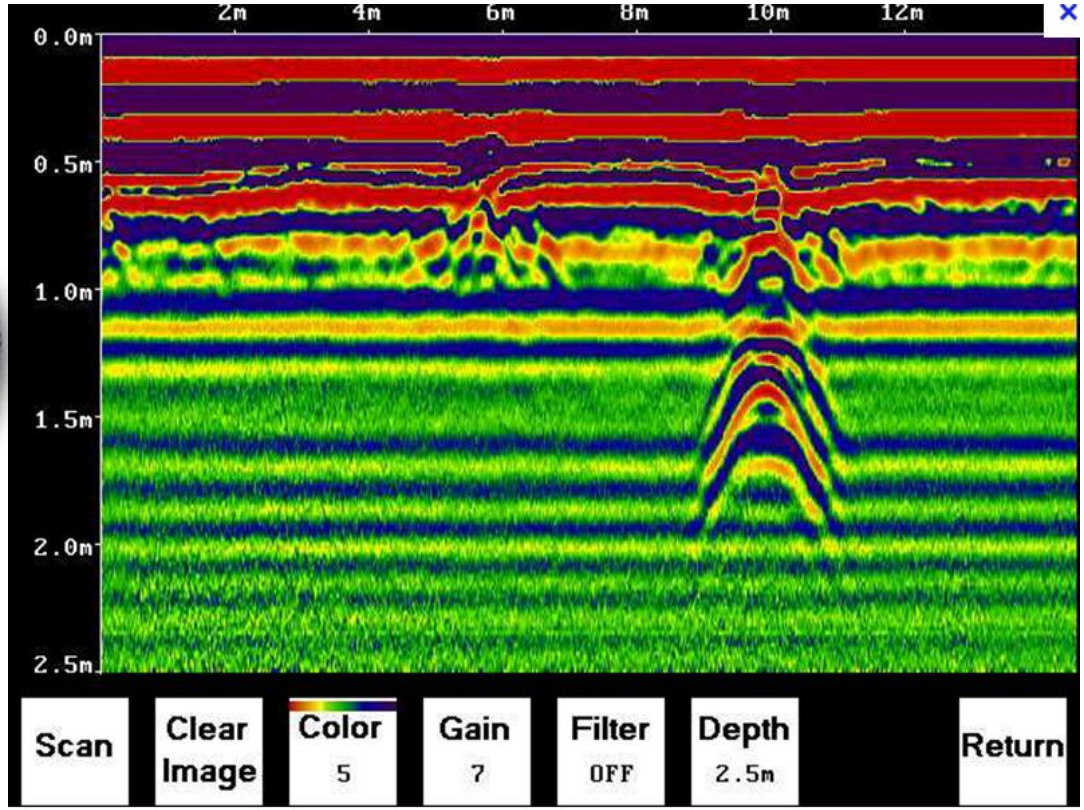
GROUND PENETRATING RADAR



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VACUUM EXCAVATION

UTILITY DATA COLLECTION TECHNOLOGY

- Sewer System Technology
  - Pipe
    - CCTV Pipe Inspection
    - Gyroscopic Mapping Probe
    - Sonar
    - Laser Profiling
  - Manholes
    - Pole-Mounted Camera
    - Digital Optical Manhole Scanner

CCTV (DIGITAL)

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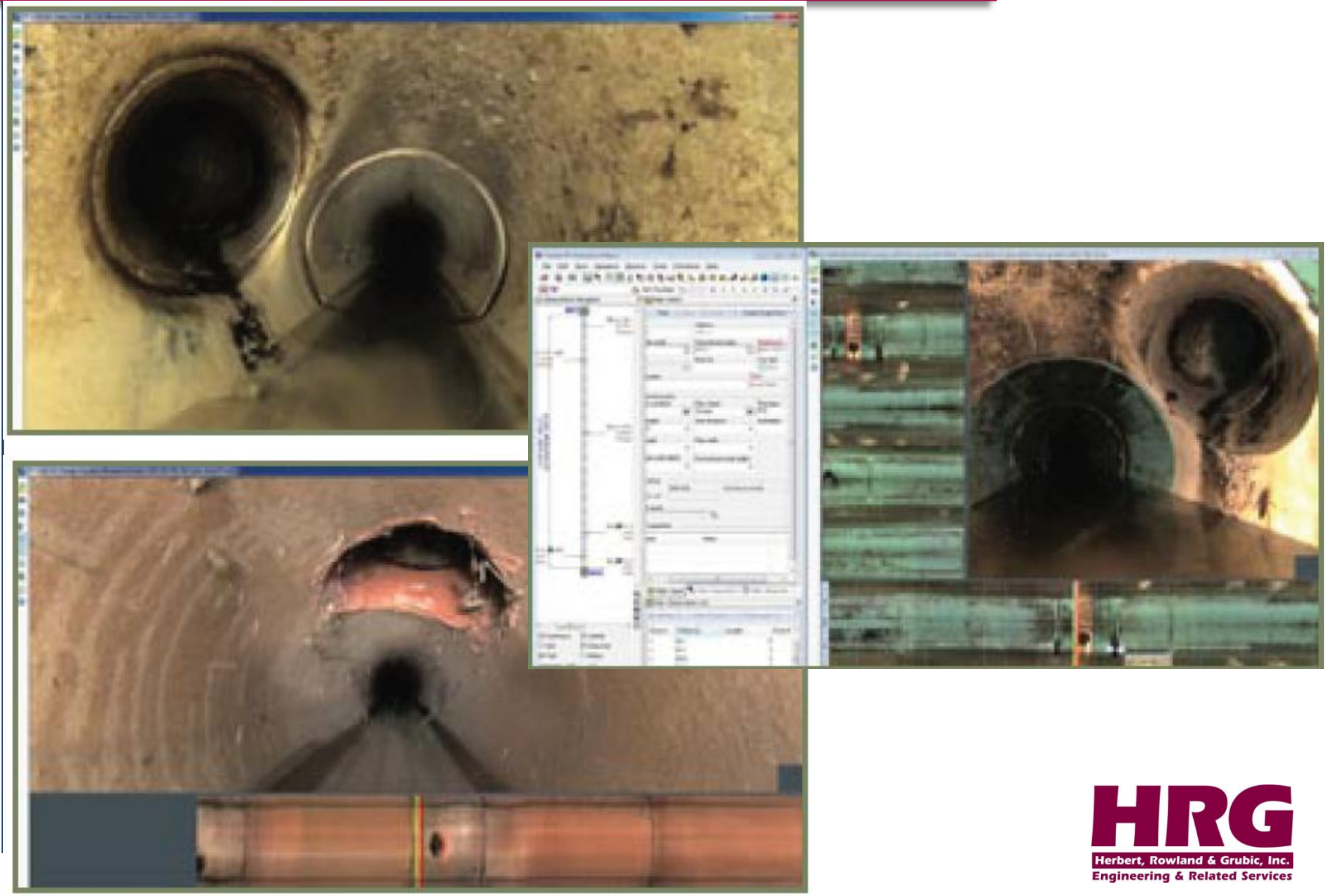
CCTV (DIGITAL)



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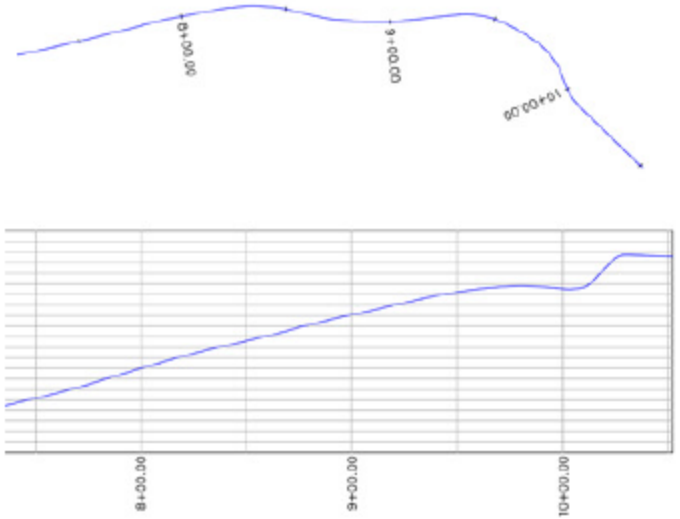
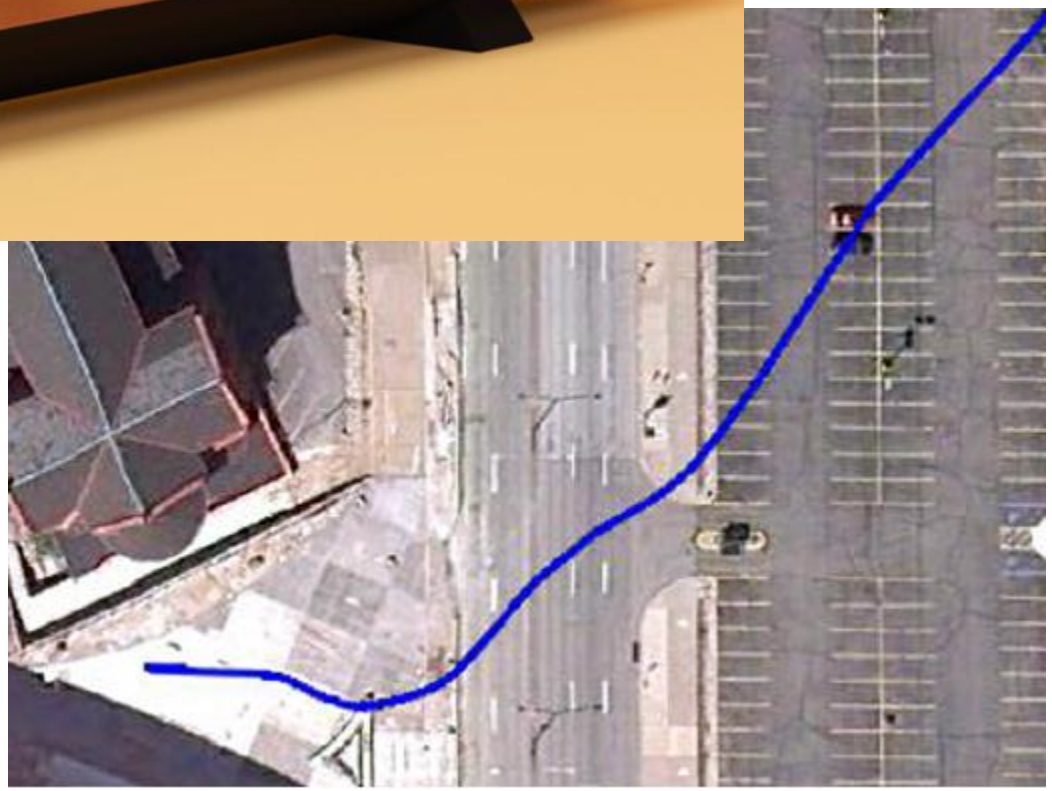
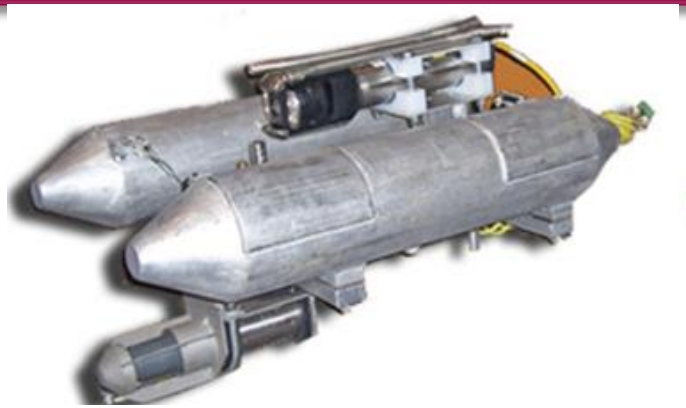
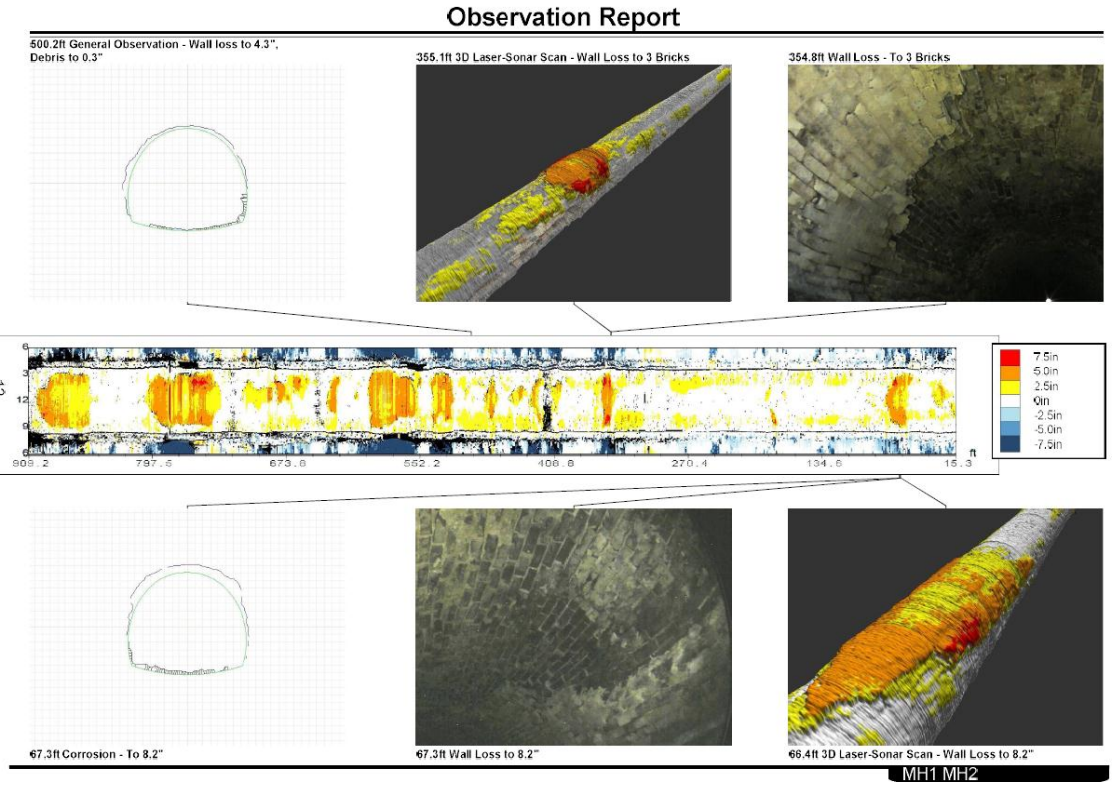
GYROSCOPIC MAPPING PROBE





LASER AND SONAR





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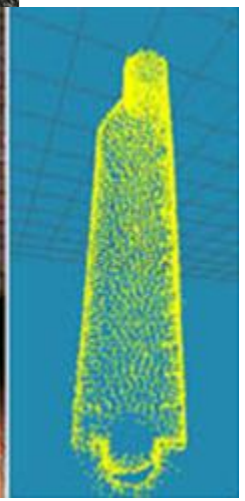
MANHOLE SCANNERS



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PROJECT PHASING APPROACH

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PHASE 1 – AREA 1 WORK

- SUE to “designate” and mark all water system features
- SUE to “locate” certain water system features
- HRG to collect using High Precision GPS Technology
- HRG to collect **above ground** sewer/storm features
- HRG to process all data in ESRI GIS software
- HRG & SUE QA/QC GIS data
- **Public Relations/Project Coordination**

OVERALL SCHEDULE & PHASING

2013
- Area 1
- Area 2
- Combined Sewer Interceptor Data Collection

2014
- Combined Sewer System Data Collection – Critical LTCP Components
- Water Transmission Mains
- Separate Sewer Interceptors Data Collection

2015
- Remaining Sanitary Sewer System Data Collection

2016+
- MS4 & Storm Sewer System Data Collection

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