



RFQ INFORMATIONAL SESSION

**Allegheny River Tunnel (ART)
Near Surface Facilities (NSF) Package 6
Final Design Consultant (FDC) Services**

06/29/2022

2:00 PM

Location: MS Teams



Allegheny County Sanitary Authority

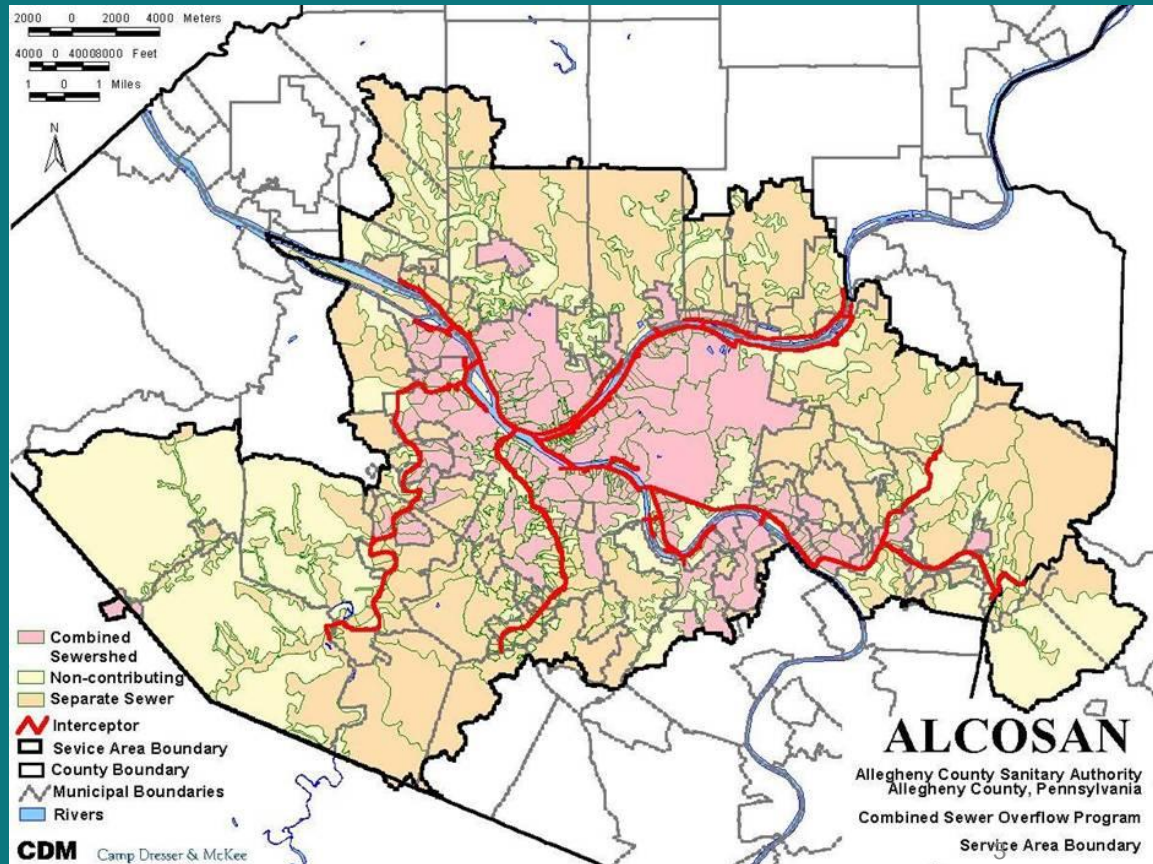


- One 250-MGD WWTP
- 83 Municipalities including the City of Pittsburgh
- Regional collection system
- Modified Consent Decree approved May 15, 2020
 - Demonstration Approach



Service Area

- Approximately 90 miles of interceptors (shown in red)
- Approximately 20% of the service area has combined sewers (shown in pink)
- 302 Regulators





UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION III
1650 Arch Street
Philadelphia, Pennsylvania 19103-2029

3/30/21

VIA EMAIL

Arletta Williams
Executive Director
ALCOSAN
3300 Preble Avenue
Pittsburgh, PA 15233-1092
arletta.williams@alcosan.org

Re: ALCOSAN Preliminary Basis of Design and Proposed Revisions to Interim Measures of the Wet Weather Plan
Modified Consent Decree, Docket No. Civ. No. 2:07-cv-00737

Dear Ms. Williams:

The U.S. Environmental Protection Agency, Region III ("EPA"), and the Pennsylvania Department of Environmental Protection ("PADEP"), in consultation with the Allegheny County Health Department ("ACHD") (collectively, the "Agencies"), provides this review of ALCOSAN's Preliminary Basis of Design Report for the Regional Conveyance Facilities of the Interim Wet Weather Plan ("PBOD"), submitted on October 1, 2020, and Proposed Revisions to Interim Measures of the Wet Weather Plan ("Revised IWWP"), submitted on November 12, 2020, with the comments below. The Agencies provide this response in accordance with Paragraph 100 of the Modified Consent Decree, which allows EPA and PADEP to approve or disapprove complete submissions or portions of the submission, and to specify conditions.

Preliminary Basis of Design Report

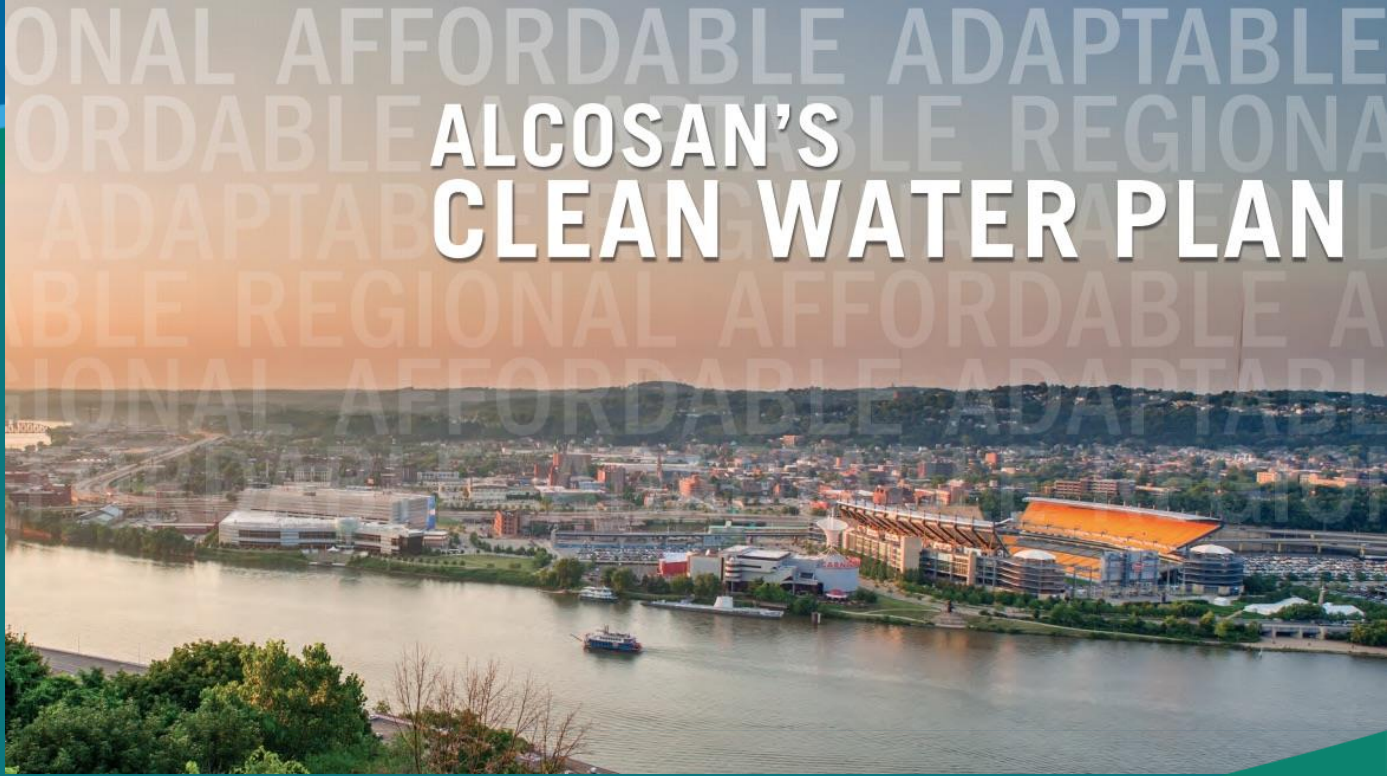
Pursuant to Appendix Z of the Modified Consent Decree, ALCOSAN submitted the PBOD to the Agencies. The Agencies have reviewed this PBOD and approve it with the following comments:

The PBOD accounts for municipal improvements and future wastewater flow projections to reflect conditions in 2046. This is consistent with the approved Wet Weather Plan and with the requirements of Appendix Z. ALCOSAN is reminded that pursuant to Paragraph 18 of the Modified Consent Decree, it must ultimately, among other things, construct facilities sufficient to capture and treat flows from the Combined Sewer System for at least twenty years after completion of construction of the remedial controls.



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Preliminary Basis of Design
(PBOD) and Interim Wet
Weather Plan (IWWP)
Revisions
Approved
March 30, 2021



ALCOSAN'S CLEAN WATER PLAN

- Approved in 2020
- First phase projects must be completed by the end of 2036
- Involves \$2 billion* in investment
- Reduce overflows for improved water quality
- Other benefits to region include jobs

* 2010 dollars.



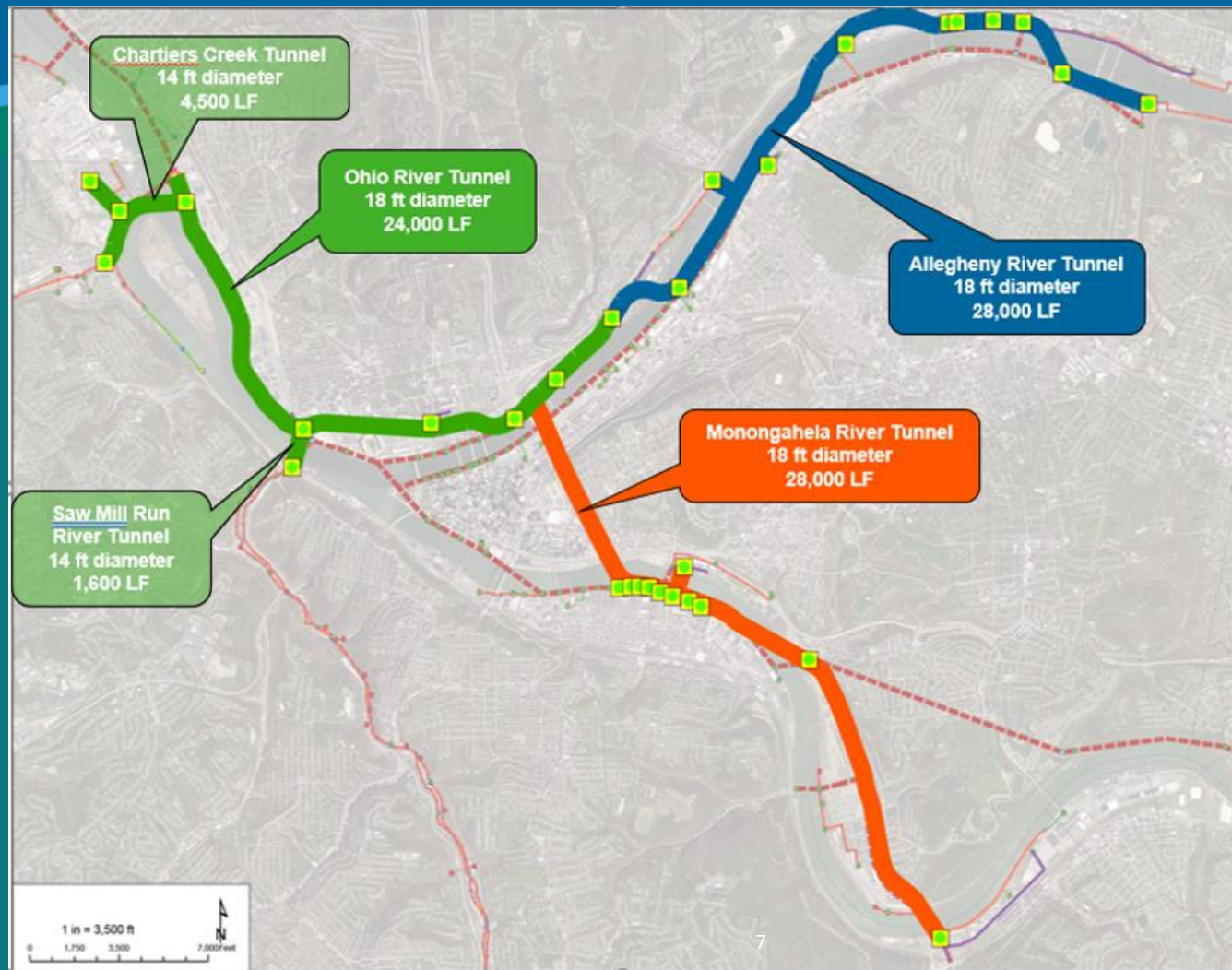
Overall Program Coordination

- ALCOSAN STAFF
- Clean Water Program Director (CDM Smith)
- Tunnel Program Management Consultant (Jacobs)
- Developer (Allegheny Shores)
- Outside Utilities and Stakeholders
- ART Final Design Consultant (TBD)



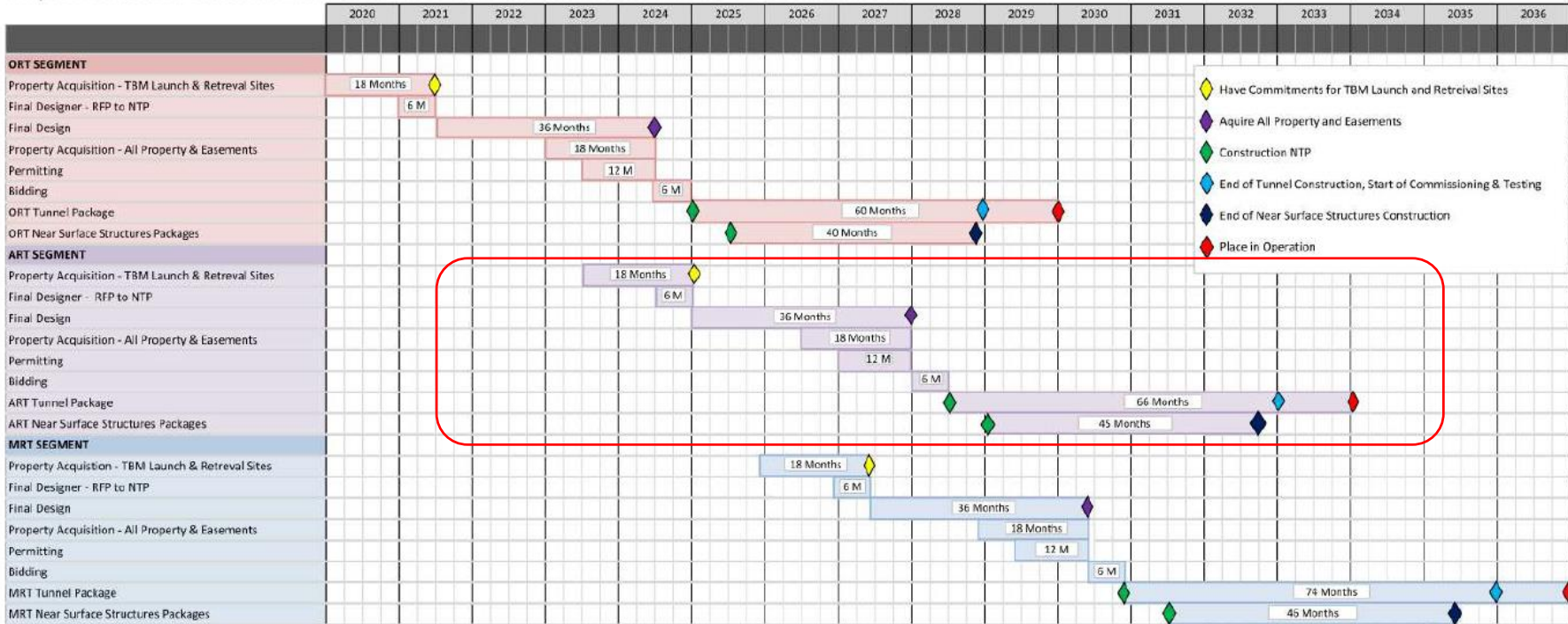
Current Horizontal Alignment

Three main
tunnel phases



Implementation Schedule

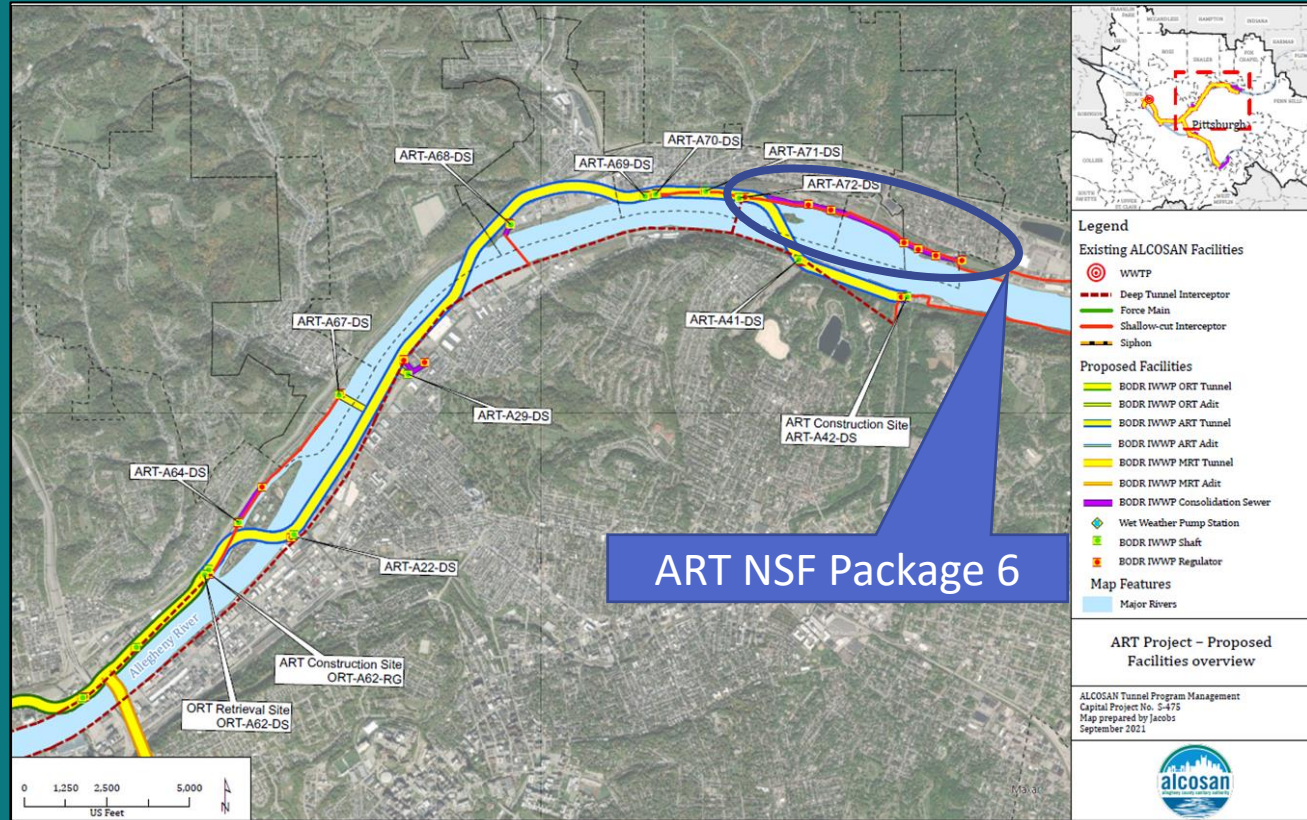
Implementation Schedule and Cash Flow for ALCO SAN's Interim Wet Weather Plan





Current ART Alignment

Early implementation of ART NSF Package 6





Final Design Consultant Services: ART NSF Package 6

- Prepare final design and bid documents for new consolidation sewer to replace existing interceptor from A-72 to A-78, including replacement regulators
- Evaluate alternative alignments and optimizations: coordinate with development in the corridor
- Perform hydraulic, geotechnical and structural design
- Provide necessary field services and survey to support design



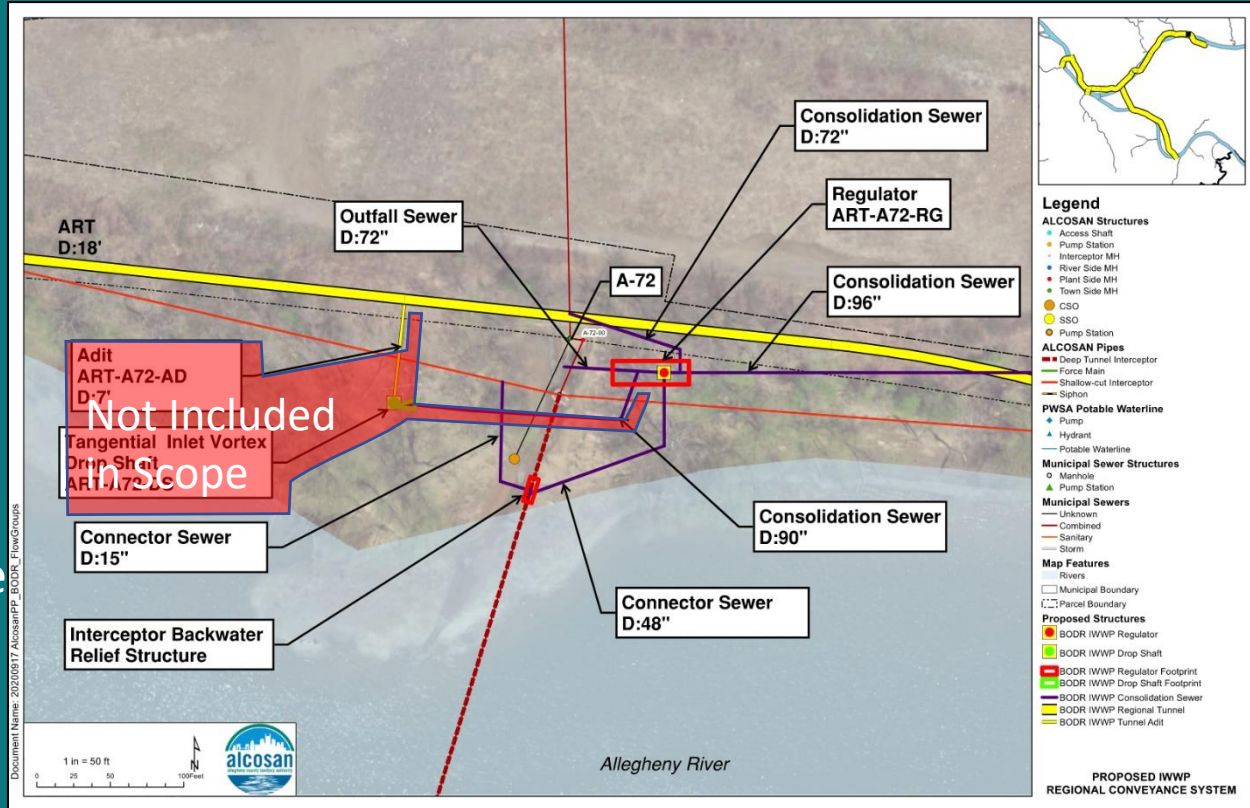
Final Design Consultant Services: ART NSF Package 6 (cont.)

- Evaluate and recommend construction methods/technologies
- Develop interim 30%, 60% and 90% design packages, including cost estimates; address ALCOSAN, TPMC review comments at each stage
- Identify and obtain all necessary permits
- Identify require construction and permanent easements; work with Property Acquisition Consultants to acquire



A-72 Site Detail

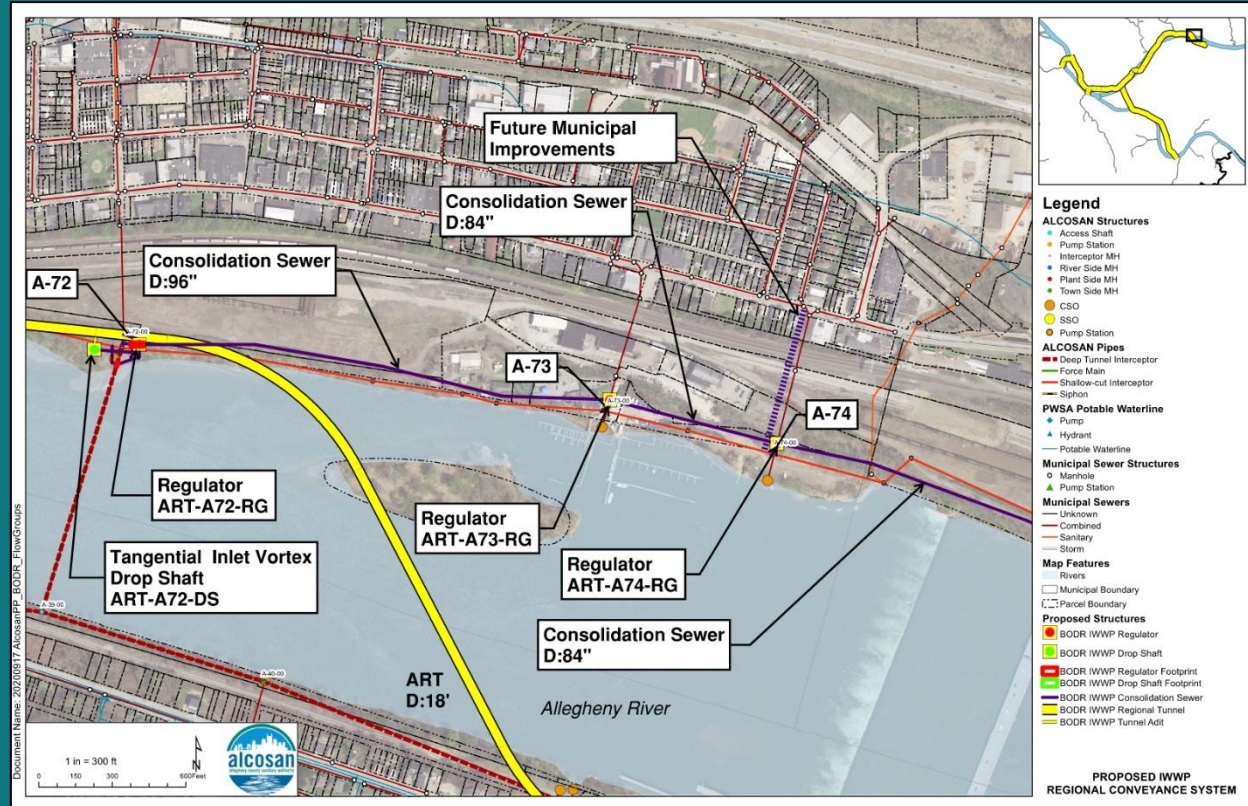
- Package includes 7 new regulators
 - (ART-A72-RG through ART-A78-RG)
- Consolidation sewer/s
- Modified A-72 outfall
- Connector sewer/s
- Backwater relief structure





Consolidation Sewer A-72 to A-74 detail

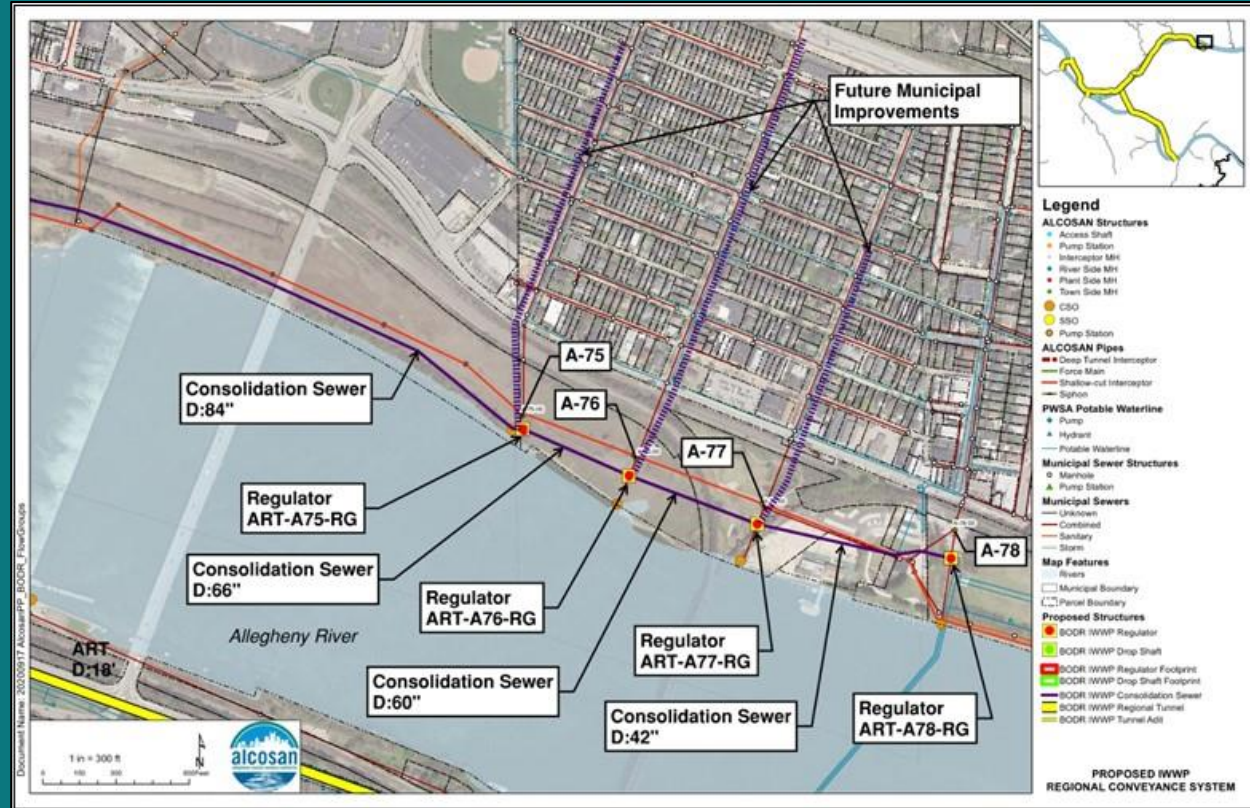
- Approximately 7,350 LF of new sewers
- Diameters 42" to 96"
- Proposed consolidation sewer adjacent to existing interceptor





Consolidation Sewer A-75 to A-78 detail

- Coordination with existing and proposed developers
- Coordination with Stakeholders
 - Lock and Dam No. 2
 - PennDOT (Highland Park Bridge)
 - Existing Aspinwall park





Hydraulics Considerations

- Flows to be provided by TPMC
- Project involves replacing existing 36" interceptor
- New regulators will convey municipal flows to new consolidation sewer
- Proposed regulator with new connection to existing river crossing at A-72 and modified outfall
- Perform detailed hydraulic analysis of relevant hydraulic structures, the outfall and the connection to the river crossing
- Use and update Authority models to support final design
- Final model and relevant calculations to be provided to ALCOSAN



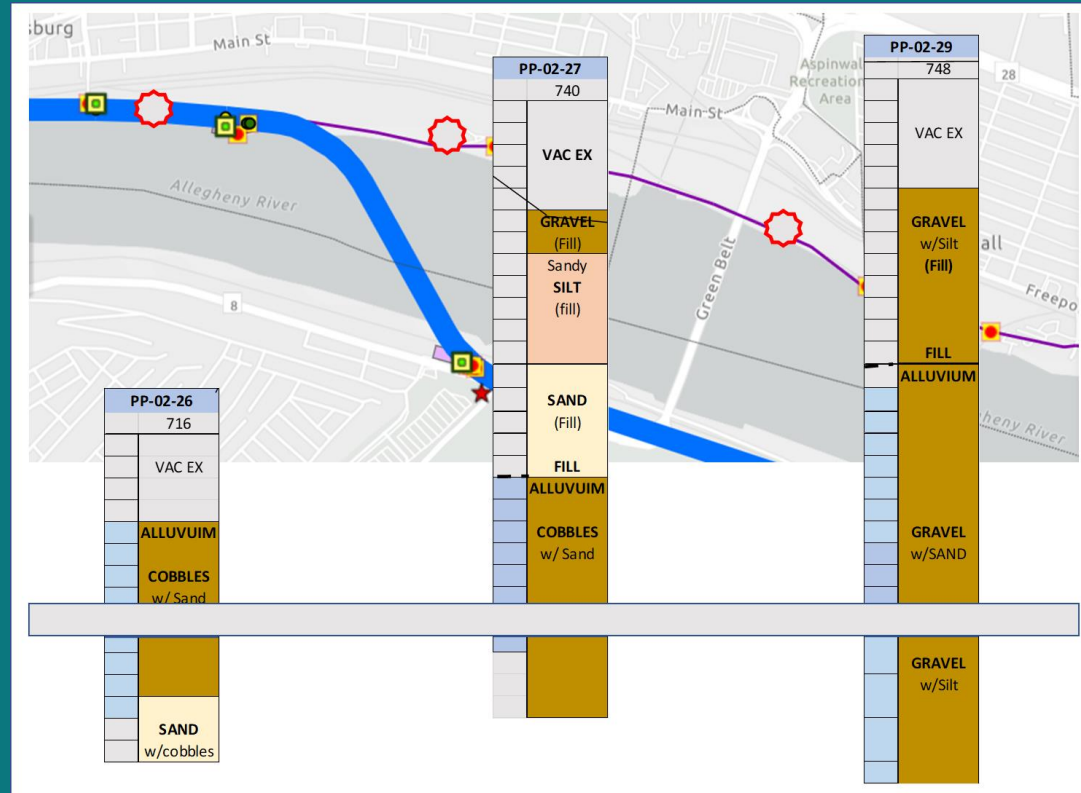
Geotechnical Considerations

- Geotechnical Program designed to evaluate open cut and trenchless construction methods and foundation designs
- Geotechnical program shall build upon select borings performed during preliminary planning to supplement any areas needing further investigation
- Program shall be performed in conformance with the latest Geotechnical Field Manual
- Geotechnical Data Report (GDR), Geotechnical Baseline Report (GBR) and Geotechnical Design Memorandum (GDM) are required to support detailed structural design of the proposed near surface facilities
- Geotechnical budgeting information shall be provided in the Request for Proposal phase



Geotechnical Considerations

- Three existing planning phase borings
- Gravel and Cobble Alluvium at the pipeline elevation which is below GW level.
- Special investigation methods:
 - Sonic drilling methods into rock (approx. 300-lf of alignment)
 - Large Diameter Auger Borings to investigate for cobbles-boulders





Developer Considerations

- Coordination with Allegheny Shores initial Phase which includes A-72 through A-74
- Other potential future projects include updates to Lock and Dam No. 2, Peoples Gas and PWSA

PARK MASTER PLAN



THIS IS THE FUTURE PARK SITE ALONG THE ALLEGHENY RIVER





Additional Considerations

- Coordinate design with Allegheny Shores developer
- Consider municipal improvements, and future design flows provided by TPMC in sizing of facilities
- Consider and advise on grit and sediment control measures
- Inspect and perform condition assessment of existing municipal sewers and outfalls
- Develop layout and easements (permanent, temporary, and access) for proposed near surface facilities, including coordination with TPMC for needs for proposed drop shaft
- *Drop shaft and sewer conveying flow to drop shaft not included in scope (part of future ART FDC scope)*



Key Schedule Considerations

- A detailed Work Breakdown Structure is required
- Use of Primavera P6 required
- Design to be coordinated as much as practical with developers' construction phases to minimize disturbance
- ART designer may be on board prior to 100% design
- Construction date will be dependent upon and coordinated with the developer's schedule



ART NSF Package 6 FDC Procurement Schedule

July 28, 2022	RFQ Submittal Deadline
September 2022	Shortlist
September 2022	Distribute RFP
October 2022	Submit Proposals
November 2022	Interviews/Consultant Selection
November 2022	Award Service Authorization
December 2022	Negotiate Fee, Issue NTP



ALCOSAN Communications

- Questions due by 2:00 PM EST, seven (7) days prior to the deadline to submit qualifications
- Send all communications to:

Suzanne Thomas at Suzanne.Thomas@alcosan.org



Questions / Comments?