Fifth and Dinwiddie Development
Sewage Facilities Planning Module Application

City of Pittsburgh
Allegheny County, Pennsylvania

Prepared for:

Fifth and Dinwiddie Development, LLC on behalf of URA

by:

Michael Baker INTERNATIONAL

100 Airside Drive
Moon Township, PA 15108
(412) 269-6300

July 2021

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List of Attachments

Fifth and Dinwiddie Development, LLC
Fifth and Dinwiddie – East Site
Pittsburgh, Pennsylvania

Sanitary Sewer Planning Module

1.0 PROJECT NARRATIVE (SECTION F)

1.1 Nature of Development Project

This project is proposing the renovation and expansion of an existing building located in the northeast quadrant of the intersection of Fifth Avenue and Dinwiddie Street. The proposed uses are anticipated to be retail, office, and commercial. Tenants that will occupy the spaces are currently unknown.

1.2 Number of Lots or EDUs in the Development Project

The site was originally 3 lots; however, a lot consolidation plan is being approved to consolidate these down to 1 lot. The projected site flows are as follows:

Type of Sanitary Flow	Definition	Flow, gpd	EDUs*
Project Flow	Peak daily flow associated with the Project	4495	12
Existing Flow	Peak daily flow within the past five years	2139	6
Net Flow	= Project Flow – Existing Flow	2356	6

*Note: EDUs is based on DEPs definition of 1 EDU = 400 gpd.

1.3 Proposed Sewer Disposal Method

The proposed method of sewer disposal is to connect into the existing combined sewer system provided under Fifth Avenue. The connection will mimic the existing connection from the existing building that is being renovated.

1.4 Projected Population and Sewage Flows

The project sewage flows were completed in compliance with PWSA's Table 1: Water Use and Sanitary Flow Estimates found in the PWSA Developer's Manual. The calculations can be found in Attachment E of this submission. Existing flows were also determined using a flow meter installed in Manhole MH002H102 for a period of 30 days. The results of the metering can be found in Attachment F. The existing sewer slope was determined based on information provided by PWSA.

1.5 Location of Discharge

The proposed discharge location is proposed to replace the existing connection point from the of the renovated building. The discharge point coordinates have been approximated to be:

Latitude: N40.43838159
Longitude: W79.98043067

1.6 Total Acreage of the Proposed Land Development Project

The total acreage of the proposed land development is:

Lot Size: 0.39 acres
Disturbed Area: 0.78 acres

1.7 Use of any Acreage or Parcels Under the Same Ownership and Adjacent to the Property

The Applicant is currently working on a project development adjacent to this site; Fifth and Dinwiddie – West Site. This project is on the northwest corner of the intersection of Fifth Avenue and Dinwiddie Street. While the two projects are planned to have overlapping construction schedules, they are being permitted separately through the City and a separate sanitary sewer planning process will be undertaken for the West Site project.

1.8 Pervious Act 537 Planning

There are no known previously completed Act 537 planning applications for the subject site.

2.0 ALTERNATIVES ANALYSIS (SECTION H)

The site is located within the City limits adjacent to existing sewer collection infrastructure that is planned to accept sanitary flow from the subject site. The property in question is also proposed to be completely developed (in compliance with the zoning code) which prevents the use of onsite treatment facilities. As such it is our opinion that no alternative exists for the site other than to connect into the existing combined sewer system adjacent to the site.

Pittsburgh Water & Sewer Authority

August 16, 2021

Brandon Fombelle
Michael Baker International
100 Airside Drive, Airside Business Park
Moon Township, PA 15108

Subject: Sewage Facilities Planning Module (SFPM)
Approval for Collection System Flows
Project Name: 20013.63 Fifth and Dinwiddie (Project)
PWSA Project No.: 20013.63

Dear Brandon:

Pursuant to your request, we have reviewed the SFPM and determined that the Project will not create a dry-weather hydraulic overload within the next five (5) years for any collection facility owned by the Pittsburgh Water and Sewer Authority (PWSA). We have enclosed for your use the electronically signed "Section J – Chapter 94 Consistency Determination". Please be advised that this approval is limited to the collection system portion of the SFPM.

Our review was based on information provided by others under the assumption that this information was accurate and complete. Should you have any questions, please do not hesitate to contact me directly at x5543 or BGrunauer@pgh2o.com.

Sincerely,

Ben Grunauer

Benjamin Grunauer, E.I.T.
Engineer III

Enclosures
cc: Barry King, P.E. – PWSA (via email)
Kate Mechler, P.E. – PWSA (via email)
Robert Herring, P.E. – PWSA (via email)
Thomas Flanagan – DEP (via email)
eBuilder – Filing System (via email)

PGH2O Pittsburgh Water & Sewer Authority

MEMO

To: Barry King, P.E. - Director of Engineering and Construction

From: Benjamin Grunauer, E.I.T.

Date: August 11, 2021

Subject: Department of Environmental Protection (DEP) - Sewage Facilities Planning Module (SFPM)

Chapter 94 Consistency Determination

Project Name: 20013.63 Fifth and Dinwiddie (Project)

Project Address: 112 Dinwiddie Street, Pittsburgh, PA

PWSA Project Number: 20013.63

Dear Barry,

The Pittsburgh Water and Sewer Authority (PWSA) received a SFPM application for the aforementioned Project. In accordance with Title 25 of the Pennsylvania Code, the PWSA is required to prepare an annual Wasteload Management Report on the collection and conveyance of wastewater relative to available capacity. Our review of the SFPM was conducted to understand how the Project will impact available dry-weather capacity and whether the proposed flows will contribute to a dry-weather hydraulic overload within the next five (5) years. Please note that a dry-weather hydraulic overload shall require both the denial of the SFPM and the submission of a Corrective Action Plan to the DEP.

We have determined that the Project will not contribute to a dry-weather hydraulic overload within the next five years. Please refer to the enclosed hydraulic calculations for additional information. Upon your approval, please sign and return the enclosed "Section J - Chapter 94 Consistency Determination" page from the SFPM.

Our review was based on information provided by others under the assumption that this information was accurate and complete. Should you have any questions, please do not hesitate to contact me directly.

Yours truly,

Ben Grunauer

Benjamin Grunauer, E.I.T.
Engineer III

Enclosures
cc: Robert Herring, P.E. - PWSA
e-Builder – Filing System

Penn Liberty Plaza I
1200 Penn Avenue
Pittsburgh PA 15222

info@pgh2o.com
T 412.255.2423
F 412.255.2475

www.pgh2o.com
@pgh2o

Customer Service /
Emergencies:
412.255.2423

☐ J. CHAPTER 94 CONSISTENCY DETERMINATION (See Section J of instructions)

Projects that propose the use of existing municipal collection, conveyance or wastewater treatment facilities, or the construction of collection and conveyance facilities to be served by existing municipal wastewater treatment facilities must be consistent with the requirements of Title 25, Chapter 94 (relating to Municipal Wasteload Management). If not previously included in Section F, include a general map showing the path of the sewage to the treatment facility. If more than one municipality or authority will be affected by the project, please obtain the information required in this section for each. Additional sheets may be attached for this purpose.

1. Project Flows 4495 gpd
2. Total Sewage Flows to Facilities (pathway from point of origin through treatment plant)

   When providing "treatment facilties" sewage flows, use Annual Average Daily Flow for "average" and Maximum Monthly Average Daily Flow for "peak" in all cases. For "peak flows" in "collection" and "conveyance" facilities, indicate whether these flows are "peak hourly flow" or "peak instantaneous flow" and how this figure was derived (i.e., metered, measured, estimated, etc.).

   a. Enter average and peak sewage flows for each proposed or existing facility as designed or permitted.

   b. Enter the average and peak sewage flows for the most restrictive sections of the existing sewage facilities.

   c. Enter the average and peak sewage flows, projected for 5 years (2 years for pump stations) through the most restrictive sections of the existing sewage facilities. Include existing, proposed (this project) and future project (other approved projects) flows.

   To complete the table, refer to the instructions, Section J.

	a. Design and/or Permitted Capacity (gpd)		b. Present Flows (gpd)		c. Projected Flows in 5 years (gpd) (2 years for P.S.)	
	Average	**Peak**	**Average**	**Peak**	**Average**	**Peak**
Collection	98433919	344518718	781000	6346000	1905149	6668020
Conveyance						
Treatment						

3. Collection and Conveyance Facilities

   The questions below are to be answered by the sewer authority, municipality, or agency responsible for completing the Chapter 94 report for the collection and conveyance facilities. These questions should be answered in coordination with the latest Chapter 94 annual report and the above table. The individual(s) signing below must be legally authorized to make representation for the organization.

   YES NO

   a. ☐ ☐ This project proposes sewer extensions or tap-ins. Will these actions create a hydraulic overload within five years on any existing collection or conveyance facilities that are part of the system?

   If yes, this sewage facilities planning module will not be accepted for review by the municipality, delegated local agency and/or DEP until all inconsistencies with Chapter 94 are resolved or unless there is an approved Corrective Action Plan (CAP) granting an allocation for this project. A letter granting allocations to this project under the CAP must be attached to the module package.

   If no, a representative of the sewer authority, municipality, or agency responsible for completing the Chapter 94 report for the collection and conveyance facilities must sign below to indicate that the collection and conveyance facilities have adequate capacity and are able to provide service to the proposed development in accordance with both §71.53(d)(3) and Chapter 94 requirements and that this proposal will not affect that status.

   b. Collection System

   Name of Agency, Authority, Municipality PWSA

   Name of Responsible Agent Barry King, PE, PMP

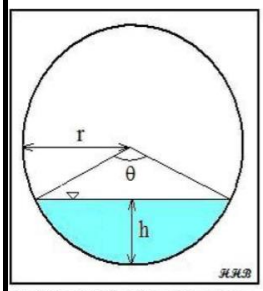
   Agent Signature  Date 8/16/2021

Sewage Facilities Planning Module
Chapter 94 Consistency Determination
Hydraulic Calculations Spreadsheet for Flow Monitoring Measurements

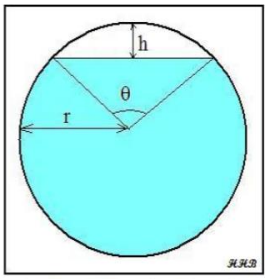
PROJECT NAME:	20013.63 Fifth and Dinwiddie
PWSA PROJECT NUMBER:	20013.63
PWSA REVIEWER:	Benjamin Grunauer, E.I.T.
DATE:	August 11, 2021

LEGEND: Input Data | Output Data

Section A: Manning Equation for Partially Filled Pipes



Partially Full Pipe Flow Parameters (Less Than Half Full)



Partially Full Pipe Flow Parameters (More Than Half Full)

Variable	*Units*	*Description*
Q	ft^3	Volumetric flowrate
n	Unitless	Manning Roughness Coeff.
A	ft^2	Cross-Sectional Area of Flow
R	ft	Hydraulic Radius
S	ft/ft	Slope of Hydraulic Grade Line
P	ft	Wetted Perimeter of "A"
r	ft	Radius
h	ft	Depth of Flow or Headspace
Θ	radians	Central Angle

$$Q = \left(\frac{1.49}{n}\right) \times A \times R^{2/3} \times S^{1/2} \qquad R = \frac{A}{P} \qquad \Theta = 2 \times \cos^{-1}\left(\frac{r-h}{r}\right)$$

$$A_{<50\%\ Full} = \frac{r^2(\Theta - \sin\Theta)}{2} \qquad P_{<50\%\ Full} = r \times \Theta$$

OR

$$A_{>50\%\ Full} = \pi \times r^2 \times \frac{r^2(\Theta - \sin\Theta)}{2} \qquad P_{>50\%\ Full} = (2 \times \pi \times r) - (r \times \Theta)$$

Section B: Data for Calculations

Peaking Factor, P.F.	
Sanitary Sewers	3
Combined Sewers	3.5

Proposed Project Flows		
Variable	Value	Units
Q_p	4,495	gpd

Variable	*Value*	*Units*
Material	Brick	
n	0.016	unitless
S	0.024	ft/ft
h	2.200	ft
D	6.00	ft
P.F.	3.5	unitless

Section C: Calculations for Design and/or Permitted Capacities

Variable	Description	Definition
$Q_{d, avg}$	Design Capacity, Average	= full pipe flow conditions / peaking factor
$Q_{d, peak}$	Design Capacity, Peak	full pipe flow conditions

Design Capacity, Average		
Variable	Value	Unit
$Q_{d, avg}$	97,670,684	gpd

Design Capacity, Peak		
Variable	Value	Unit
D	6.000	ft
r	3.000	ft
A	28.274	ft^2
P	18.850	ft
R	1.500	ft
$Q_{d, peak}$	529	cfs
$Q_{d, peak}$	341,847,393	gpd

Section D: Calculations for Present Flows

Variable	Description	Definition
$Q_{ex, avg}$	Present Flows, Average	determined via flow monitoring data
$Q_{ex, peak}$	Present Flows, Peak	determined via flow monitoring data

Present Flows, Average		
Variable	Value	Unit
$Q_{ex, avg}$	781,000	gpd

Present Flows, Peak		
Variable	Value	Unit
$Q_{ex, peak}$	6,346,000	gpd

Section E: Calculations for Projected Flows in Five (5) Years

Variable	Description	Definition
$Q_{proj, avg}$	Projected Flows in Five (5) Years, Average	= $Q_{proj, peak}$ ÷ P.F.
$Q_{proj, peak}$	Projected Flows in Five (5) Years, Peak	= ($Q_{ex, peak}$ + Q_p) x 1.05

Projected Flow Calculations		
Variable	Value	Unit
$Q_{proj, avg}$	1,905,149	gpd
$Q_{proj, peak}$	6,668,020	gpd

Section F: Compare Results with Applicant's Submission

Variable	PWSA, gpd	Applicant, gpd	Difference, gpd	Difference, %
$Q_{d, avg}$	97,670,684	98,433,919	-763,235	-1%
$Q_{d, peak}$	341,847,393	344,518,718	-2,671,325	-1%
$Q_{ex, avg}$	781,000	781,000	0	0%
$Q_{ex, peak}$	6,346,000	6,346,000	0	0%
$Q_{proj, avg}$	1,905,149	1,905,149	-1	0%
$Q_{proj, peak}$	6,668,020	6,668,020	0	0%

September 30, 2021

Brandon R. Fombelle
Michael Baker International
100 Airside Drive
Moon Township, PA 15108

Re: Fifth and Dinwiddie – East Site
112 Dinwiddie Street, Pittsburgh, PA 15219
PA DEP Sewage Facilities Planning Module
ALCOSAN Regulator Structure M-05-00

Dear Mr. Fombelle:

We have reviewed the Component 3 Planning Module for the referenced project to be located in the City of Pittsburgh. The project will generate a peak flow of 4,495 GPD in the ALCOSAN Monongahela River Interceptor and Woods Run Treatment Plant.

The capacity of the ALCOSAN regulator at M-05-00 is approximately 20.6 MGD. The estimated peak dry weather flow is approximately 3.26 MGD. Dry weather capacity exists for this connection. However, the ALCOSAN Monongahela River Interceptor and the Woods Run Treatment Plant do not have the capacity for the flows generated during wet weather periods. This limitation will be addressed as ALCOSAN implements its Clean Water Plan.

ALCOSAN has completed and signed the sections required in the Component 3 module and requests that this letter be made part of the planning module submission. If you have any questions regarding this matter, please contact me at 412-732-8046.

Sincerely,

ALLEGHENY COUNTY SANITARY AUTHORITY

Joseph Sparbanie

Joseph A. Sparbanie, P.E.
Civil Engineer

Attachment

cc: T. Dean (w/o attachment)
D. Thornton (w/o attachment)
M. Lichte (w/o attachment)
B. King/ PWSA (w/o attachment)
T. Flanagan/ PaDEP (w/o attachment)
F. Fields/ ACHD (w/o attachment)

pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF CLEAN WATER

INSTRUCTIONS FOR COMPLETING COMPONENT 4A
MUNICIPAL PLANNING AGENCY REVIEW

Remove and recycle these instructions prior to mailing component to the approving agency.

Background

This component, Component 4, is used to obtain the comments of planning agencies and/or health departments having jurisdiction over the project area. It is used in conjunction with other planning module components appropriate to the characteristics of the project proposed.

Who Should Complete the Component?

The component should be completed by any existing municipal planning agency, county planning agency, planning agency with areawide jurisdiction, and/or health department having jurisdiction over the project site. It is divided into sections to allow for convenient use by the appropriate agencies.

The project sponsor must forward copies of this component, along with supporting components and data, to the appropriate planning agency(ies) and health department(s) (if any) having jurisdiction over the development site. These agencies are responsible for responding to the questions in their respective sections of Component 4, as well as providing whatever additional comments they may wish to provide on the project plan. After the agencies have completed their review, the component will be returned to the applicant. The agencies have 60 days in which to provide comments to the applicant. If the agencies fail to comment within this 60 day period, the applicant may proceed to the next stage of the review without the comments. The use of registered mail or certified mail (return receipt requested) by the applicant when forwarding the module package to the agencies will document a date of receipt.

After receipt of the completed Component 4 from the planning agencies, or following expiration of the 60 day period without comments, the applicant must submit the entire component package to the municipality having jurisdiction over the project area for review and action. If approved by the municipality, the proposed plan, along with the municipal action, will be forwarded to the approving agency (Department of Environmental Protection or delegated local agency). The approving agency, in turn, will either approve the proposed plan, return it as incomplete, or disapprove the plan, based upon the information provided.

Instructions for Completing Planning Agency and/or Health Department Review Component

Section A. Project Name

Enter the project name as it appears on the accompanying sewage facilities planning module component (Component 2, 2m, 3, 3s or 3m).

Section B. Review Schedule

Enter the date the package was received by the reviewing agency, and the date that the review was completed.

Section C. Agency Review

1. Answer the yes/no questions and provide any descriptive information necessary on the lines provided. Attach additional sheets, if necessary.

2. Complete the name, title, and signature block.

Section D. Additional Comments

The Agency may provide whatever additional comment(s) it deems necessary, as described in the form. Attach additional sheets, if necessary.

pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF CLEAN WATER

DEP Code #:

SEWAGE FACILITIES PLANNING MODULE
COMPONENT 4A - MUNICIPAL PLANNING AGENCY REVIEW

Note to Project Sponsor: To expedite the review of your proposal, one copy of your completed planning module package and one copy of this *Planning Agency Review Component* should be sent to the local municipal planning agency for their comments.

SECTION A. PROJECT NAME (See Section A of instructions)

Project Name
Fifth and Dinwiddie

SECTION B. REVIEW SCHEDULE (See Section B of instructions)

1. Date plan received by municipal planning agency August 30, 2021
2. Date review completed by agency September 17, 2021

SECTION C. AGENCY REVIEW (See Section C of instructions)

Yes	No		
☐	☒	1.	Is there a municipal comprehensive plan adopted under the Municipalities Planning Code (53 P.S. 10101, *et seq*.)?
☐ N/A	☐	2.	Is this proposal consistent with the comprehensive plan for land use? If no, describe the inconsistencies _____
☒	☐	3.	Is this proposal consistent with the use, development, and protection of water resources? If no, describe the inconsistencies _____
☒	☐	4.	Is this proposal consistent with municipal land use planning relative to Prime Agricultural Land Preservation?
☐	☒	5.	Does this project propose encroachments, obstructions, or dams that will affect wetlands? If yes, describe impacts _____
☐	☒	6.	Will any known historical or archaeological resources be impacted by this project? If yes, describe impacts _____
☐	☒	7.	Will any known endangered or threatened species of plant or animal be impacted by this project? If yes, describe impacts _____
☒	☐	8.	Is there a municipal zoning ordinance?
☒	☐	9.	Is this proposal consistent with the ordinance? If no, describe the inconsistencies _____
☐	☒	10.	Does the proposal require a change or variance to an existing comprehensive plan or zoning ordinance?
☒	☐	11.	Have all applicable zoning approvals been obtained?
☒	☐	12.	Is there a municipal subdivision and land development ordinance?

SECTION C. AGENCY REVIEW (continued)

Yes	No		
☒	☐	13.	Is this proposal consistent with the ordinance? If no, describe the inconsistencies _____
☒	☐	14.	Is this plan consistent with the municipal Official Sewage Facilities Plan? If no, describe the inconsistencies _____
☐	☒	15.	Are there any wastewater disposal needs in the area adjacent to this proposal that should be considered by the municipality? If yes, describe _____
☐	☒	16.	Has a waiver of the sewage facilities planning requirements been requested for the residual tract of this subdivision?
☐	☐		If yes, is the proposed waiver consistent with applicable ordinances? If no, describe the inconsistencies

17. Name, title and signature of planning agency staff member completing this section:

Name: Martina Wolf Battistone

Title: Principal Environmental Planner

Signature: Martina Wolf Battistone

Date: September 17, 2021

Name of Municipal Planning Agency: City of Pittsburgh Department of City Planning

Address 200 Ross Street 4th Floor Pittsburgh, PA 15219

Telephone Number: (412) 255-2516

SECTION D. ADDITIONAL COMMENTS (See Section D of instructions)

This component does not limit municipal planning agencies from making additional comments concerning the relevancy of the proposed plan to other plans or ordinances. If additional comments are needed, attach additional sheets.

The planning agency must complete this component within 60 days.

This component and any additional comments are to be returned to the applicant.

APPLICATION

3800-FM-BPNPSM0353 Rev. 2/2015
Form

pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Code No.

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF POINT AND NON-POINT SOURCE MANAGEMENT

SEWAGE FACILITIES PLANNING MODULE

Component 3. Sewage Collection and Treatment Facilities

(Return completed module package to appropriate municipality)

DEP USE ONLY				
DEP CODE #	**CLIENT ID #**	**SITE ID #**	**APS ID #**	**AUTH ID #**

This planning module component is used to fulfill the planning requirements of Act 537 for the following types of projects: (1) a subdivision to be served by sewage collection, conveyance or treatment facilities, (2) a tap-in to an existing collection system with flows on a lot of 2 EDU's or more, or (3) the construction of, or modification to, wastewater collection, conveyance or treatment facilities that will require DEP to issue or modify a Clean Streams Law permit. Planning for any project that will require DEP to issue or modify a permit cannot be processed by a delegated agency. Delegated agencies must send their projects to DEP for final planning approval.

This component, along with any other documents specified in the cover letter, must be completed and submitted to the municipality with jurisdiction over the project site for review and approval. All required documentation must be attached for the Sewage Facilities Planning Module to be complete. Refer to the instructions for help in completing this component.

REVIEW FEES: Amendments to the Sewage Facilities Act established fees to be paid by the developer for review of planning modules for land development. These fees may vary depending on the approving agency for the project (DEP or delegated local agency). Please see section R and the instructions for more information on these fees.

NOTE: All projects must complete Sections A through I, and Sections O through R. Complete Sections J, K, L, M and/or N if applicable or marked ☒.

A. PROJECT INFORMATION (See Section A of instructions)

1. Project Name Fifth and Dinwiddie - East Site

2. Brief Project Description Renovation and Expansion of Existing Building

B. CLIENT (MUNICIPALITY) INFORMATION (See Section B of instructions)

Municipality Name	County	City	Boro	Twp
City of Pittsburgh	Allegheny	☒	☐	☐

Municipality Contact Individual - Last Name	First Name	MI	Suffix	Title
Battistone	Martina		CFM	Senior Environmental Planner

Additional Individual Last Name	First Name	MI	Suffix	Title

Municipality Mailing Address Line 1	Mailing Address Line 2
City of Pittsburgh, Department of City Planning	200 Ross Street, 4th Floor

Address Last Line -- City	State	ZIP+4
Pittsburgh	PA	15219

Area Code + Phone + Ext.	FAX (optional)	Email (optional)
412-255-2516		martina.battistone@pittsburghpa.gov

C. SITE INFORMATION (See Section C of instructions)

Site (Land Development or Project) Name

Fifth and Dinwiddie - East Site

Site Location Line 1	Site Location Line 2
112 Dinwiddie Street	

Site Location Last Line -- City	State	ZIP+4	Latitude	Longitude
Pittsburgh	PA	15219	40.43856111	79.98037500

Detailed Written Directions to Site Drive south on State Route 28. Take the ramp on the right to merge onto I-579 (Veterans Bridge). After crossing Veterans Bridge take the 6th/7th Ave Exit toward downtown but keep left toward PPG Areana. Take a slight left onto Bigelow Blvd. Then continue straight onto Chatham Street. Turn left onto Centre Ave. Then turn right onto Dinwiddie Street

Description of Site The existing site is the existing Pittsburgh Public Works building and assocatied parking lot. The proposed building includes renovation of the existing building and a building expansion that will cover the area of the existing parking lot.

Site Contact (Developer/Owner)

Last Name	First Name	MI	Suffix	Phone	Ext.
Tillman	Derrick			(412) 583-1447	

Site Contact Title	Site Contact Firm (if none, leave blank)
	Fifth and Dinwiddie Development, LLC
FAX	Email
	dtillman@btgdevelopment.net
Mailing Address Line 1	Mailing Address Line 2
Energy Innovation Center	1435 Bedford Ave

Mailing Address Last Line -- City	State	ZIP+4
Pittsburgh	PA	15219

D. PROJECT CONSULTANT INFORMATION (See Section D of instructions)

Last Name	First Name	MI	Suffix
Fombelle	Brandon	R	

Title	Consulting Firm Name
Project Manager	Michael Baker International
Mailing Address Line 1	Mailing Address Line 2
100 Airside Drive	

Address Last Line – City	State	ZIP+4	Country
Moon Township	PA	15108	United States

Email	Area Code + Phone	Ext.	Area Code + FAX
brandon.fombelle@mbakerintl.com	412-375-3081		

E. AVAILABILITY OF DRINKING WATER SUPPLY

The project will be provided with drinking water from the following source: (Check appropriate box)

☐ Individual wells or cisterns.

☐ A proposed public water supply.

☒ An existing public water supply. (existing connections to be updated)

If existing public water supply is to be used, provide the name of the water company and attach documentation from the water company stating that it will serve the project.

Name of water company: Pittsburgh Water and Sewer Authority (PWSA)

F. PROJECT NARRATIVE (See Section F of instructions)

☒ A narrative has been prepared as described in Section F of the instructions and is attached.

The applicant may choose to include additional information beyond that required by Section F of the instructions.

G. PROPOSED WASTEWATER DISPOSAL FACILITIES (See Section G of instructions)

Check all boxes that apply, and provide information on collection, conveyance and treatment facilities and EDU's served. This information will be used to determine consistency with Chapter 93 (relating to wastewater treatment requirements).

1. **COLLECTION SYSTEM**

a. Check appropriate box concerning collection system

☐ New collection system ☐ Pump Station ☐ Force Main

☐ Grinder pump(s) ☐ Extension to existing collection system ☒ Expansion of existing facility

Clean Streams Law Permit Number _____

b. Answer questions below on collection system

Number of EDU's and proposed connections to be served by collection system. EDU's 12

Connections 1

Name of:

existing collection or conveyance system 42" Combined Concrete Sewer - Dinwiddie Street

owner Pittsburgh Water and Sewer Authority (PWSA)

existing interceptor _____

owner _____

2. **WASTEWATER TREATMENT FACILITY**

Check all boxes that apply, and provide information on collection, conveyance and treatment facilities and EDU's served. This information will be used to determine consistency with Chapter(s) 91 (relating to general provisions), 92 (relating to national Pollution Discharge Elimination System permitting, monitoring and compliance) and 93 (relating to water quality standards).

a. Check appropriate box and provide requested information concerning the treatment facility

☐ New facility ☒ Existing facility ☐ Upgrade of existing facility ☐ Expansion of existing facility

Name of existing facility ALCOSAN

NPDES Permit Number for existing facility PA0025984

Clean Streams Law Permit Number _____

Location of discharge point for a new facility. Latitude _____ Longitude _____

b. The following certification statement must be completed and signed by the wastewater treatment facility permitee or their representative.

As an authorized representative of the permittee, I confirm that the ALCOSAN (Name from above) sewage treatment facilities can accept sewage flows from this project without adversely affecting the facility's ability to achieve all applicable technology and water quality based effluent limits (see Section I) and conditions contained in the NPDES permit identified above.

Name of Permittee Agency, Authority, Municipality ALCOSAN

Name of Responsible Agent Joseph A. Sparbanie, P.E.

Agent Signature _____ Date 9/30/21

(Also see Section I. 4.)

G. PROPOSED WASTEWATER DISPOSAL FACILITIES (Continued)

3. **PLOT PLAN**

The following information is to be submitted on a plot plan of the proposed subdivision.

a. Existing and proposed buildings.
b. Lot lines and lot sizes.
c. Adjacent lots.
d. Remainder of tract.
e. Existing and proposed sewerage facilities. Plot location of discharge point, land application field, spray field, COLDS, or LVCOLDS if a new facility is proposed.
f. Show tap-in or extension to the point of connection to existing collection system (if applicable).
g. Existing and proposed water supplies and surface water (wells, springs, ponds, streams, etc.)
h. Existing and proposed rights-of-way.
i. Existing and proposed buildings, streets, roadways, access roads, etc.
j. Any designated recreational or open space area.
k. Wetlands - from National Wetland Inventory Mapping and USGS Hydric Soils Mapping.
l. Flood plains or Flood prone areas, floodways, (Federal Flood Insurance Mapping)
m. Prime Agricultural Land.
n. Any other facilities (pipelines, power lines, etc.)
o. Orientation to north.
p. Locations of all site testing activities (soil profile test pits, slope measurements, permeability test sites, background sampling, etc. (if applicable).
q. Soils types and boundaries when a land based system is proposed.
r. Topographic lines with elevations when a land based system is proposed

4. **WETLAND PROTECTION**

	YES	NO	
a.	☐	☒	Are there wetlands in the project area? If yes, ensure these areas appear on the plot plan as shown in the mapping or through on-site delineation.
b.	☐	☒	Are there any construction activities (encroachments, or obstructions) proposed in, along, or through the wetlands? If yes, Identify any proposed encroachments on wetlands and identify whether a General Permit or a full encroachment permit will be required. If a full permit is required, address time and cost impacts on the project. Note that wetland encroachments should be avoided where feasible. Also note that a feasible alternative **MUST BE SELECTED** to an identified encroachment on an exceptional value wetland as defined in Chapter 105. Identify any project impacts on streams classified as HQ or EV and address impacts of the permitting requirements of said encroachments on the project.

5. **PRIME AGRICULTURAL LAND PROTECTION**

YES	NO	
☐	☒	Will the project involve the disturbance of prime agricultural lands? If yes, coordinate with local officials to resolve any conflicts with the local prime agricultural land protection program. The project must be consistent with such municipal programs before the sewage facilities planning module package may be submitted to DEP. If no, prime agricultural land protection is not a factor to this project.
☐	☐	Have prime agricultural land protection issues been settled?

6. **HISTORIC PRESERVATION ACT**

YES	NO	
☐	☐	Sufficient documentation is attached to confirm that this project is consistent with DEP Technical Guidance 012-0700-001 *Implementation of the PA State History Code* (available online at the DEP website at www.dep.state.pa.us, select “subject” then select “technical guidance”). As a minimum this includes copies of the completed Cultural Resources Notice

(CRN), a return receipt for its submission to the PHMC and the PHMC review letter.

7. **PROTECTION OF RARE, ENDANGERED OR THREATENED SPECIES**

Check one:

☒ The "Pennsylvania Natural Diversity Inventory (PNDI) Project Environmental Review Receipt" resulting from my search of the PNDI database and all supporting documentation from jurisdictional agencies (when necessary) is/are attached.

☐ A completed "Pennsylvania Natural Diversity Inventory (PNDI) Project Planning & Environmental Review Form," (PNDI Form) available at www.naturalheritage.state.pa.us , and all required supporting documentation is attached. I request DEP staff to complete the required PNDI search for my project. I realize that my planning module will be considered incomplete upon submission to the Department and that the DEP review will not begin, and that processing of my planning module will be delayed, until a "PNDI Project Environmental Review Receipt" and all supporting documentation from jurisdictional agencies (when necessary) is/are received by DEP.

Applicant or Consultant Initials BRF_____.

H. ALTERNATIVE SEWAGE FACILITIES ANALYSIS (See Section H of instructions)

☒ An alternative sewage facilities analysis has been prepared as described in Section H of the attached instructions and is attached to this component.

The applicant may choose to include additional information beyond that required by Section H of the attached instructions.

I. COMPLIANCE WITH WATER QUALITY STANDARDS AND EFFLUENT LIMITATIONS (See Section I of instructions) (Check and complete all that apply.)

1. **Waters designated for Special Protection**

☐ The proposed project will result in a new or increased discharge into special protection waters as identified in Title 25, Pennsylvania Code, Chapter 93. The Social or Economic Justification (SEJ) required by Section 93.4c. is attached.

2. **Pennsylvania Waters Designated As Impaired**

☐ The proposed project will result in a new or increased discharge of a pollutant into waters that DEP has identified as being impaired by that pollutant. A pre-planning meeting was held with the appropriate DEP regional office staff to discuss water quality based discharge limitations.

3. **Interstate and International Waters**

☐ The proposed project will result in a new or increased discharge into interstate or international waters. A pre-planning meeting was held with the appropriate DEP regional office staff to discuss effluent limitations necessary to meet the requirements of the interstate or international compact.

4 **Tributaries To The Chesapeake Bay**

☐ The proposed project result in a new or increased discharge of sewage into a tributary to the Chesapeake Bay. This proposal for a new sewage treatment facility or new flows to an existing facility includes total nitrogen and total phosphorus in the following amounts: _____ pounds of TN per year, and _____ pounds of TP per year. Based on the process design and effluent limits, the total nitrogen treatment capacity of the wastewater treatment facility is _____ pounds per year and the total phosphorus capacity is _____ pounds per year as determined by the wastewater treatment facility permitee. The permitee has determined that the additional TN and TP to be contributed by this project (as modified by credits and/or offsets to be provided) will not cause the discharge to exceed the annual total mass limits for these parameters. Documentation of compliance with nutrient allocations is attached.

Name of Permittee Agency, Authority, Municipality _____

Initials of Responsible Agent (See Section G 2.b) _____

See *Special Instructions* (Form 3800-FM-BPNPSM0353-1) for additional information on Chesapeake Bay watershed requirements.

☐ J. CHAPTER 94 CONSISTENCY DETERMINATION (See Section J of instructions)

Projects that propose the use of existing municipal collection, conveyance or wastewater treatment facilities, or the construction of collection and conveyance facilities to be served by existing municipal wastewater treatment facilities must be consistent with the requirements of Title 25, Chapter 94 (relating to Municipal Wasteload Management). If not previously included in Section F, include a general map showing the path of the sewage to the treatment facility. If more than one municipality or authority will be affected by the project, please obtain the information required in this section for each. Additional sheets may be attached for this purpose.

1. Project Flows 4495 gpd
2. Total Sewage Flows to Facilities (pathway from point of origin through treatment plant)

   When providing "treatment facilties" sewage flows, use Annual Average Daily Flow for "average" and Maximum Monthly Average Daily Flow for "peak" in all cases. For "peak flows" in "collection" and "conveyance" facilities, indicate whether these flows are "peak hourly flow" or "peak instantaneous flow" and how this figure was derived (i.e., metered, measured, estimated, etc.).

   a. Enter average and peak sewage flows for each proposed or existing facility as designed or permitted.

   b. Enter the average and peak sewage flows for the most restrictive sections of the existing sewage facilities.

   c. Enter the average and peak sewage flows, projected for 5 years (2 years for pump stations) through the most restrictive sections of the existing sewage facilities. Include existing, proposed (this project) and future project (other approved projects) flows.

   To complete the table, refer to the instructions, Section J.

	a. Design and/or Permitted Capacity (gpd)		b. Present Flows (gpd)		c. Projected Flows in 5 years (gpd) (2 years for P.S.)	
	Average	Peak	Average	Peak	Average	Peak
Collection	98433919	344518718	781000	6346000	1905149	6668020
Conveyance		20,600,000	3,000,000	3,260,000	3,030,000	3,290,000
Treatment	209,300,000	250,000,000	190,200,000	250,000,000	219,001,000	295,000,000

3. Collection and Conveyance Facilities

   The questions below are to be answered by the sewer authority, municipality, or agency responsible for completing the Chapter 94 report for the collection and conveyance facilities. These questions should be answered in coordination with the latest Chapter 94 annual report and the above table. The individual(s) signing below must be legally authorized to make representation for the organization.

	YES	NO	
a.	☐	☒	This project proposes sewer extensions or tap-ins. Will these actions create a hydraulic overload within five years on any existing collection or conveyance facilities that are part of the system?

   If yes, this sewage facilities planning module will not be accepted for review by the municipality, delegated local agency and/or DEP until all inconsistencies with Chapter 94 are resolved or unless there is an approved Corrective Action Plan (CAP) granting an allocation for this project. A letter granting allocations to this project under the CAP must be attached to the module package.

   If no, a representative of the sewer authority, municipality, or agency responsible for completing the Chapter 94 report for the collection and conveyance facilities must sign below to indicate that the collection and conveyance facilities have adequate capacity and are able to provide service to the proposed development in accordance with both §71.53(d)(3) and Chapter 94 requirements and that this proposal will not affect that status.

   b. Collection System

   Name of Agency, Authority, Municipality PWSA

   Name of Responsible Agent Barry King, PE, PMP

   Agent Signature BK Date 8/16/2021

☒ J. CHAPTER 94 CONSISTENCY DETERMINATION (See Section J of instructions)

c. Conveyance System

Name of Agency, Authority, Municipality ALCOSAN

Name of Responsible Agent Joseph A. Sparbanie, P.E.

Agent Signature JAS

Date 9/30/21

4. Treatment Facility

The questions below are to be answered by a representative of the facility permittee in coordination with the information in the table and the latest Chapter 94 report. The individual signing below must be legally authorized to make representation for the organization.

	YES	NO	
a.	☐	☒	This project proposes the use of an existing wastewater treatment plant for the disposal of sewage. Will this action create a hydraulic or organic overload within 5 years at that facility?

If yes, this planning module for sewage facilities will not be reviewed by the municipality, delegated local agency and/or DEP until this inconsistency with Chapter 94 is resolved or unless there is an approved CAP granting an allocation for this project. A letter granting allocations to this project under the CAP must be attached to the planning module.

If no, the treatment facility permittee must sign below to indicate that this facility has adequate treatment capacity and is able to provide wastewater treatment services for the proposed development in accordance with both §71.53(d)(3) and Chapter 94 requirements and that this proposal will not impact that status.

b. Name of Agency, Authority, Municipality ALCOSAN

Name of Responsible Agent Joseph A. Sparbanie, P.E.

Agent Signature JAS

Date 9/30/21

☐ K. TREATMENT AND DISPOSAL OPTIONS (See Section K of instructions)

This section is for land development projects that propose construction of wastewater treatment facilities. Please note that, since these projects require permits issued by DEP, these projects may **NOT** receive final planning approval from a delegated local agency. Delegated local agencies must send these projects to DEP for final planning approval.

Check the appropriate box indicating the selected treatment and disposal option.

☐ 1. Spray irrigation (other than individual residential spray systems (IRSIS)) or other land application is proposed, and the information requested in Section K.1. of the planning module instructions are attached.

☐ 2. Recycle and reuse is proposed and the information requested in Section K-2 of the planning module instructions is attached.

☐ 3. A discharge to a dry stream channel is proposed, and the information requested in Section K.3. of the planning module instructions are attached.

☐ 4 A discharge to a perennial surface water body is proposed, and the information requested in Section K.4. of the planning module instructions are attached.

☐ L. PERMEABILITY TESTING (See Section L of instructions)

☐ The information required in Section L of the instructions is attached.

☐ M. PRELIMINARY HYDROGEOLOGIC STUDY (See Section M of instructions)

☐ The information required in Section M of the instructions is attached.

☐ N. DETAILED HYDROGEOLOGIC STUDY (See Section N of instructions)

☐ The detailed hydrogeologic information required in Section N. of the instructions is attached.

O. SEWAGE MANAGEMENT (See Section O of instructions)

(1-3 for completion by the developer(project sponser), 4-5 for completion by the non-municipal facility agent and 6 for completion by the municipality)

	Yes	No	
1.	☐	☒	Is connection to, or construction of, a DEP permitted, non-municipal sewage facility or a local agency permitted, community onlot sewage facility proposed.

If Yes, respond to the following questions, attach the supporting analysis, and an evaluation of the options available to assure long-term proper operation and maintenance of the proposed non-municipal facilities. If No, skip the remainder of Section O.

2. Project Flows _____ gpd

	Yes	No	
3.	☐	☒	Is the use of nutrient credits or offsets a part of this project?

If yes, attach a letter of intent to puchase the necessary credits and describe the assurance that these credits and offsets will be available for the remaining design life of the non-municipal sewage facility;

(For completion by non-municipal facility agent)

4. Collection and Conveyance Facilities

The questions below are to be answered by the organization/individual responsible for the non-municipal collection and conveyance facilities. The individual(s) signing below must be legally authorized to make representation for the organization.

	Yes	No	
a.	☐	☐	If this project proposes sewer extensions or tap-ins, will these actions create a hydraulic overload on any existing collection or conveyance facilities that are part of the system?

If yes, this sewage facilities planning module will not be accepted for review by the municipality, delegated local agency and/or DEP until this issue is resolved.

If no, a representative of the organization responsible for the collection and conveyance facilities must sign below to indicate that the collection and conveyance facilities have adequate capacity and are able to provide service to the proposed development in accordance with Chapter 71 §71.53(d)(3) and that this proposal will not affect that status.

b. Collection System
Name of Responsible Organization _____
Name of Responsible Agent _____
Agent Signature _____
Date _____

c. Conveyance System
Name of Responsible Organization _____
Name of Responsible Agent _____
Agent Signature _____
Date _____

5. Treatment Facility

The questions below are to be answered by a representative of the facility permittee. The individual signing below must be legally authorized to make representation for the organization.

	Yes	No	
a.	☐	☐	If this project proposes the use of an existing non-municipal wastewater treatment plant for the disposal of sewage, will this action create a hydraulic or organic overload at that facility?

If yes, this planning module for sewage facilities will not be reviewed by the municipality, delegated local agency and/or DEP until this issue is resolved.

If no, the treatment facility permittee must sign below to indicate that this facility has adequate treatment capacity and is able to provide wastewater treatment services for the proposed development in accordance with §71.53(d)(3) and that this proposal will not impact that status.

b. Name of Facility _____

Name of Responsible Agent _____

Agent Signature _____

Date _____

(For completion by the municipality)

6. ☐ The **SELECTED OPTION** necessary to assure long-term proper operation and maintenance of the proposed non-municipal facilities is clearly identified with documentation attached in the planning module package.

P. PUBLIC NOTIFICATION REQUIREMENT (See Section P of instructions)

This section must be completed to determine if the applicant will be required to publish facts about the project in a newspaper of general circulation to provide a chance for the general public to comment on proposed new land development projects. This notice may be provided by the applicant or the applicant's agent, the municipality or the local agency by publication in a newspaper of general circulation within the municipality affected. Where an applicant or an applicant's agent provides the required notice for publication, the applicant or applicant's agent shall notify the municipality or local agency and the municipality and local agency will be relieved of the obligation to publish. The required content of the publication notice is found in Section P of the instructions.

To complete this section, each of the following questions must be answered with a "yes" or "no". Newspaper publication is required if any of the following are answered "yes".

	Yes	**No**	
1.	☐	☒	Does the project propose the construction of a sewage treatment facility ?
2.	☐	☒	Will the project change the flow at an existing sewage treatment facility by more than 50,000 gallons per day?
3.	☐	☒	Will the project result in a public expenditure for the sewage facilities portion of the project in excess of $100,000?
4.	☐	☒	Will the project lead to a major modification of the existing municipal administrative organizations within the municipal government?
5.	☐	☒	Will the project require the establishment of *new* municipal administrative organizations within the municipal government?
6.	☐	☒	Will the project result in a subdivision of 50 lots or more? (onlot sewage disposal only)
7.	☐	☒	Does the project involve a major change in established growth projections?
8.	☐	☒	Does the project involve a different land use pattern than that established in the municipality's Official Sewage Plan?

P. PUBLIC NOTIFICATION REQUIREMENT cont'd. (See Section P of instructions)

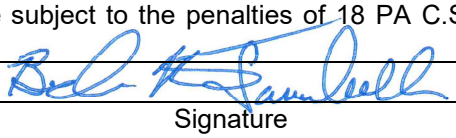
9. ☐ ☒ Does the project involve the use of large volume onlot sewage disposal systems (Flow > 10,000 gpd)?
10. ☐ ☒ Does the project require resolution of a conflict between the proposed alternative and consistency requirements contained in §71.21(a)(5)(i), (ii), (iii)?
11. ☐ ☒ Will sewage facilities discharge into high quality or exceptional value waters?

☐ Attached is a copy of:
- ☐ the public notice,
- ☐ all comments received as a result of the notice,
- ☐ the municipal response to these comments.

☐ No comments were received. A copy of the public notice is attached.

Q. FALSE SWEARING STATEMENT (See Section Q of instructions)

I verify that the statements made in this component are true and correct to the best of my knowledge, information and belief. I understand that false statements in this component are made subject to the penalties of 18 PA C.S.A. §4904 relating to unsworn falsification to authorities.

Brandon Fombelle	
Name (Print)	Signature
Project Manager	08/30/2021
Title	Date
100 Airside Drive, Moon Township, PA 15108	412-375-3081
Address	Telephone Number

R. REVIEW FEE (See Section R of instructions)

The Sewage Facilities Act establishes a fee for the DEP planning module review. DEP will calculate the review fee for the project and invoice the project sponsor **OR** the project sponsor may attach a self-calculated fee payment to the planning module prior to submission of the planning package to DEP. (Since the fee and fee collection procedures may vary if a "delegated local agency" is conducting the review, the project sponsor should contact the "delegated local agency" to determine these details.) Check the appropriate box.

☐ I request DEP calculate the review fee for my project and send me an invoice for the correct amount. I understand DEP's review of my project will not begin until DEP receives the correct review fee from me for the project.

☒ I have calculated the review fee for my project using the formula found below and the review fee guidance in the instructions. I have attached a check or money order in the amount of $300 payable to "Commonwealth of PA, DEP". Include DEP code number on check. I understand DEP will not begin review of my project unless it receives the fee and determines the fee is correct. If the fee is incorrect, DEP will return my check or money order, send me an invoice for the correct amount. I understand DEP review will NOT begin until I have submitted the correct fee.

☐ I request to be exempt from the DEP planning module review fee because this planning module creates **only** one new lot and is the **only** lot subdivided from a parcel of land as that land existed on December 14, 1995. I realize that subdivision of a second lot from this parcel of land shall disqualify me from this review fee exemption. I am furnishing the following deed reference information in support of my fee exemption.

County Recorder of Deeds for _____ County, Pennsylvania

Deed Volume _____ Book Number _____

Page Number _____ Date Recorded _____

R. REVIEW FEE (continued)

Formula:

1. For a new collection system (with or without a Clean Streams Law Permit), a collection system extension, or individual tap-ins to an existing collection system use this formula.

   #6 Lots (or EDUs) X $50.00 = $ 300

   The fee is based upon:

   - The number of lots created or number of EDUs whichever is higher.
   - For community sewer system projects, one EDU is equal to a sewage flow of 400 gallons per day.

2. For a surface or subsurface discharge system, use the appropriate one of these formulae.

   A. A new surface discharge greater than 2000 gpd will use a flat fee:

   $ 1,500 per submittal (non-municipal)
   $ 500 per submittal (municipal)

   B. An increase in an existing surface discharge will use:

   #_____ Lots (or EDUs) X $35.00 = $ _____

   to a maximum of $ 1,500 per submittal (non-municipal) or $ 500 per submittal (municipal)

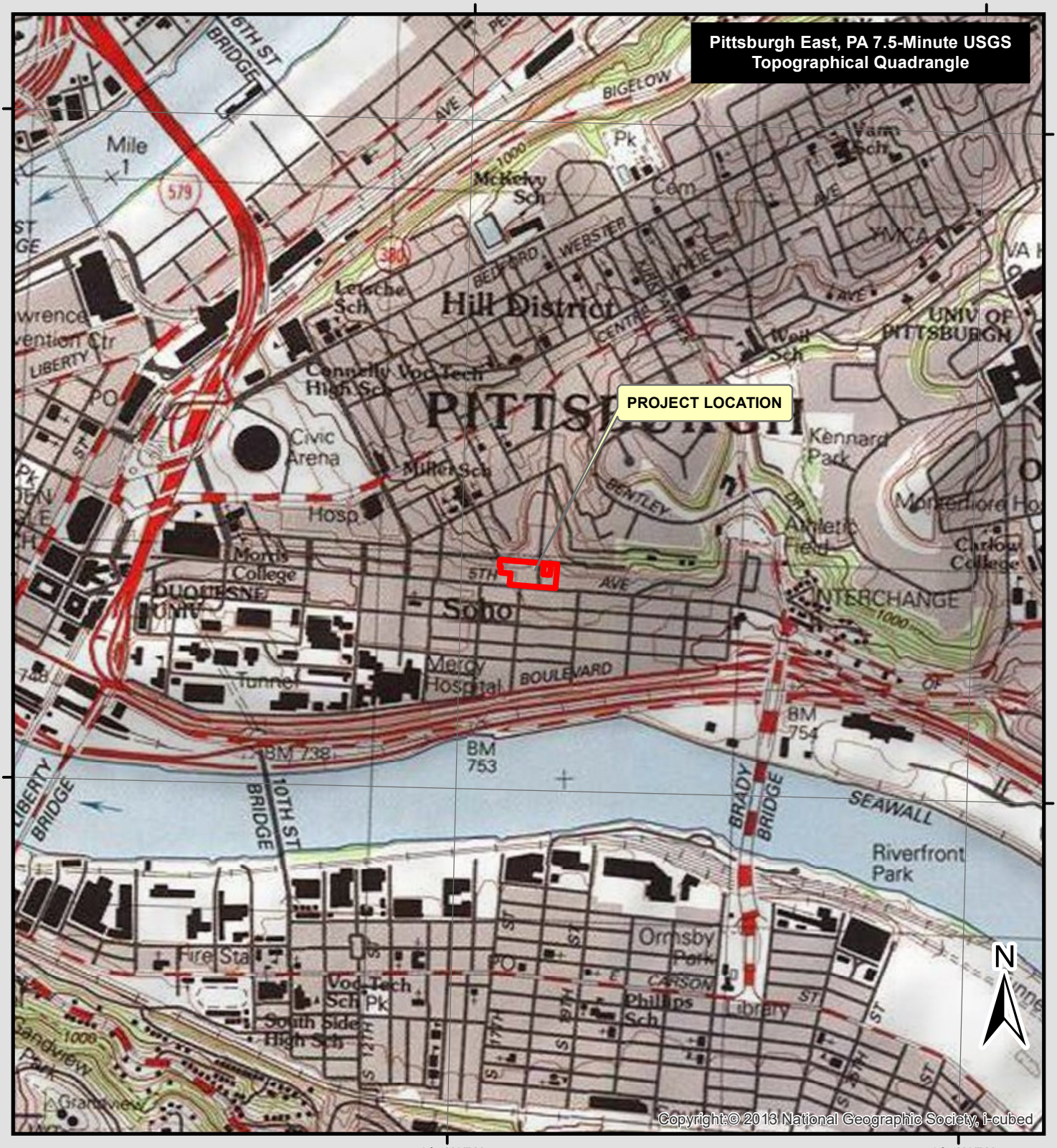
   The fee is based upon:

   - The number of lots created or number of EDUs whichever is higher.
   - For community sewage system projects one EDU is equal to a sewage flow of 400 gallons per day.
   - For non-single family residential projects, EDUs are calculated using projected population figures

   C. A sub-surface discharge system that requires a permit under The Clean Streams Law will use a flat fee:

   $ 1,500 per submittal (non-municipal)
   $ 500 per submittal (municipal)

SITE LOCATION MAP



PROJECT LOCATION MAP

Fifth and Dinwiddie Development

Pittsburgh
Allegheny County, PA
Latitude: 40.438775
Longitude: -79.981117

Legend

LOD

0 500 1,000 2,000 Feet

prepared by

Michael Baker INTERNATIONAL

PNDI

1. PROJECT INFORMATION

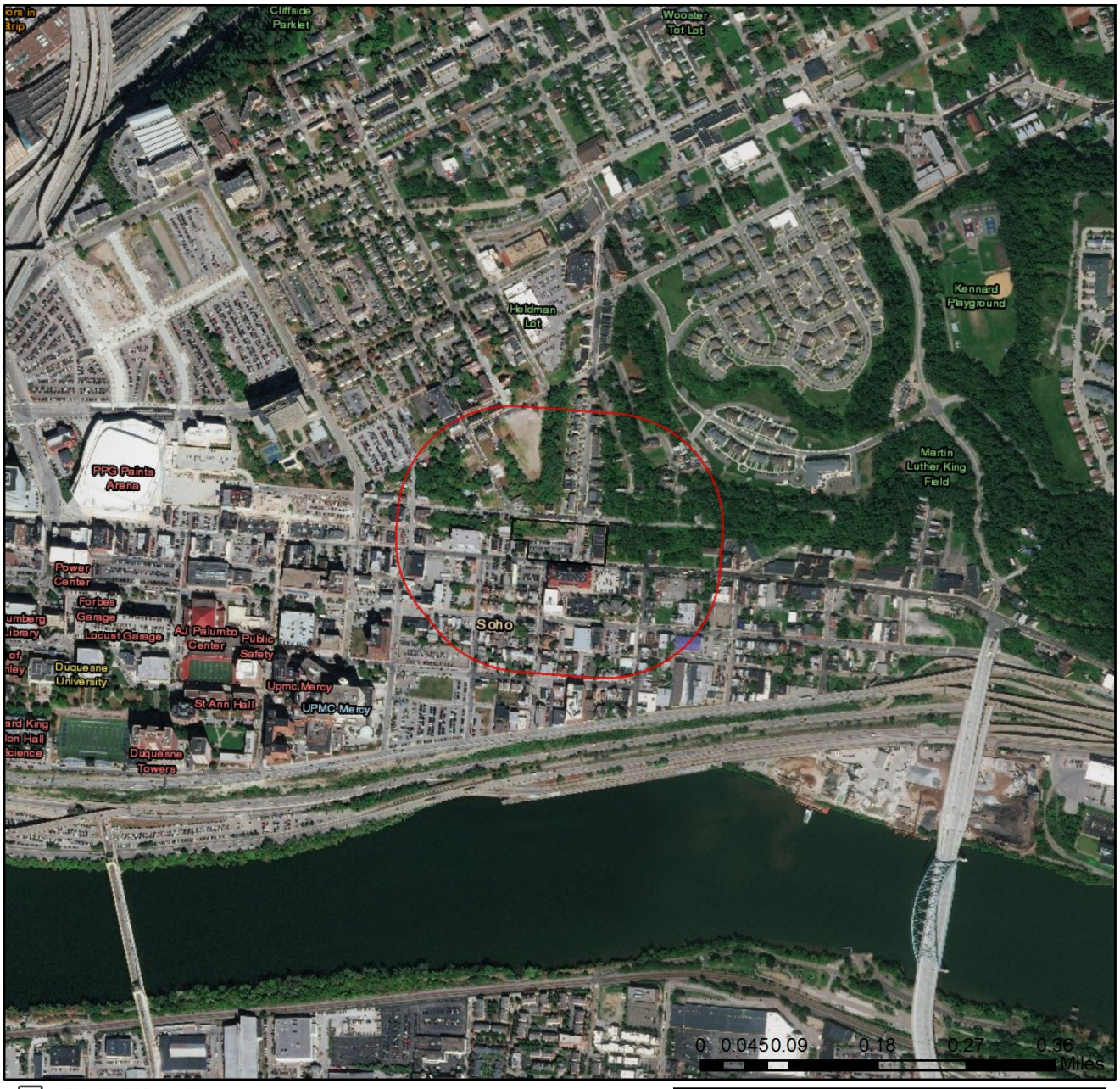
Project Name: **Fifth and Dinwiddie**
Date of Review: **3/11/2020 12:06:42 PM**
Project Category: **Development, Other**
Project Area: **2.32 acres**
County(s): **Allegheny**
Township/Municipality(s): **PITTSBURGH**
ZIP Code: **15219**
Quadrangle Name(s): **PITTSBURGH EAST**
Watersheds HUC 8: **Lower Monongahela**
Watersheds HUC 12: **Streets Run-Monongahela River**
Decimal Degrees: **40.438739, -79.981074**
Degrees Minutes Seconds: **40° 26' 19.4607" N, 79° 58' 51.8674" W**

2. SEARCH RESULTS

Agency	Results	Response
PA Game Commission	No Known Impact	No Further Review Required
PA Department of Conservation and Natural Resources	No Known Impact	No Further Review Required
PA Fish and Boat Commission	No Known Impact	No Further Review Required
U.S. Fish and Wildlife Service	No Known Impact	No Further Review Required

As summarized above, Pennsylvania Natural Diversity Inventory (PNDI) records indicate no known impacts to threatened and endangered species and/or special concern species and resources within the project area. Therefore, based on the information you provided, no further coordination is required with the jurisdictional agencies. This response does not reflect potential agency concerns regarding impacts to other ecological resources, such as wetlands.

Fifth and Dinwiddie

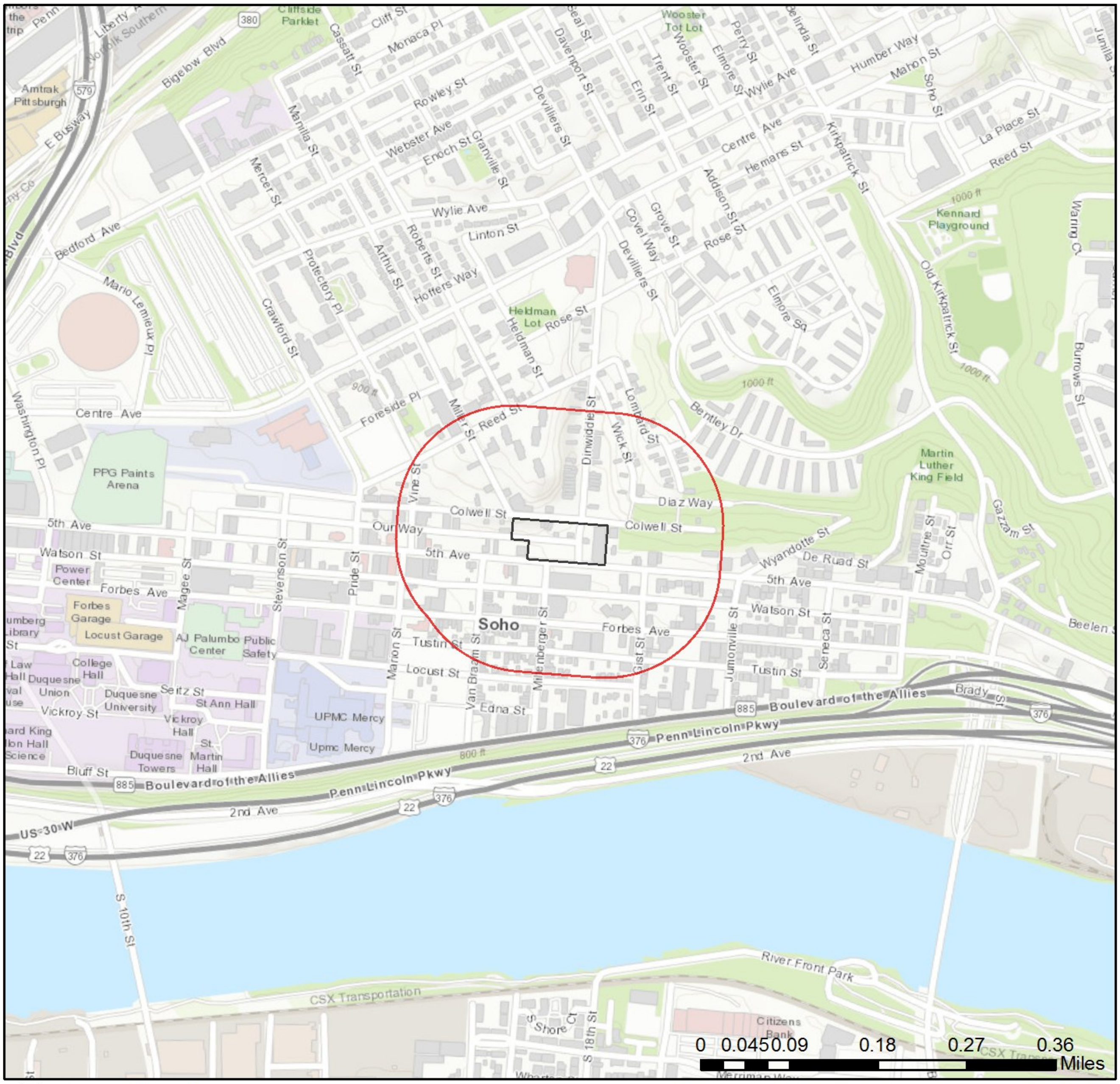


Project Boundary

Buffered Project Boundary

Service Layer Credits: Sources: Esri, HERE, DeLorme, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), swisstopo, MapmyIndia, © OpenStreetMap contributors, and the GIS User Community
Esri, HERE, Garmin, (c) OpenStreetMap contributors, and the GIS user community

Fifth and Dinwiddie



Project Boundary

Buffered Project Boundary

Service Layer Credits: Sources: Esri, HERE, DeLorme, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), swisstopo, MapmyIndia, © OpenStreetMap contributors, and the GIS User Community
Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS,

RESPONSE TO QUESTION(S) ASKED

Q1: The proposed project is in the range of the Indiana bat. Describe how the project will affect bat habitat (forests, woodlots and trees) and indicate what measures will be taken in consideration of this. Round acreages up to the nearest acre (e.g., 0.2 acres = 1 acre).
Your answer is: No forests, woodlots or trees will be affected by the project.

Q2: Is tree removal, tree cutting or forest clearing of 40 acres or more necessary to implement all aspects of this project?
Your answer is: No

3. AGENCY COMMENTS

Regardless of whether a DEP permit is necessary for this proposed project, any potential impacts to threatened and endangered species and/or special concern species and resources must be resolved with the appropriate jurisdictional agency. In some cases, a permit or authorization from the jurisdictional agency may be needed if adverse impacts to these species and habitats cannot be avoided.

These agency determinations and responses are **valid for two years** (from the date of the review), and are based on the project information that was provided, including the exact project location; the project type, description, and features; and any responses to questions that were generated during this search. If any of the following change: 1) project location, 2) project size or configuration, 3) project type, or 4) responses to the questions that were asked during the online review, the results of this review are not valid, and the review must be searched again via the PNDI Environmental Review Tool and resubmitted to the jurisdictional agencies. The PNDI tool is a primary screening tool, and a desktop review may reveal more or fewer impacts than what is listed on this PNDI receipt. The jurisdictional agencies **strongly advise against** conducting surveys for the species listed on the receipt prior to consultation with the agencies.

PA Game Commission
RESPONSE:
No Impact is anticipated to threatened and endangered species and/or special concern species and resources.

PA Department of Conservation and Natural Resources
RESPONSE:
No Impact is anticipated to threatened and endangered species and/or special concern species and resources.

PA Fish and Boat Commission
RESPONSE:
No Impact is anticipated to threatened and endangered species and/or special concern species and resources.

U.S. Fish and Wildlife Service
RESPONSE:
No impacts to **federally** listed or proposed species are anticipated. Therefore, no further consultation/coordination under the Endangered Species Act (87 Stat. 884, as amended; 16 U.S.C. 1531 et seq. is required. Because no take of federally listed species is anticipated, none is authorized. This response does not reflect potential Fish and Wildlife Service concerns under the Fish and Wildlife Coordination Act or other authorities.

4. DEP INFORMATION

The Pa Department of Environmental Protection (DEP) requires that a signed copy of this receipt, along with any required documentation from jurisdictional agencies concerning resolution of potential impacts, be submitted with applications for permits requiring PNDI review. Two review options are available to permit applicants for handling PNDI coordination in conjunction with DEP's permit review process involving either T&E Species or species of special concern. Under sequential review, the permit applicant performs a PNDI screening and completes all coordination with the appropriate jurisdictional agencies prior to submitting the permit application. The applicant will include with its application, both a PNDI receipt and/or a clearance letter from the jurisdictional agency if the PNDI Receipt shows a Potential Impact to a species or the applicant chooses to obtain letters directly from the jurisdictional agencies. Under concurrent review, DEP, where feasible, will allow technical review of the permit to occur concurrently with the T&E species consultation with the jurisdictional agency. The applicant must still supply a copy of the PNDI Receipt with its permit application. The PNDI Receipt should also be submitted to the appropriate agency according to directions on the PNDI Receipt. The applicant and the jurisdictional agency will work together to resolve the potential impact(s). See the DEP PNDI policy at https://conservationexplorer.dcnr.pa.gov/content/resources.

5. ADDITIONAL INFORMATION

The PNDI environmental review website is a preliminary screening tool. There are often delays in updating species status classifications. Because the proposed status represents the best available information regarding the conservation status of the species, state jurisdictional agency staff give the proposed statuses at least the same consideration as the current legal status. If surveys or further information reveal that a threatened and endangered and/or special concern species and resources exist in your project area, contact the appropriate jurisdictional agency/agencies immediately to identify and resolve any impacts.

For a list of species known to occur in the county where your project is located, please see the species lists by county found on the PA Natural Heritage Program (PNHP) home page (www.naturalheritage.state.pa.us). Also note that the PNDI Environmental Review Tool only contains information about species occurrences that have actually been reported to the PNHP.

6. AGENCY CONTACT INFORMATION

PA Department of Conservation and Natural Resources
Bureau of Forestry, Ecological Services Section
400 Market Street, PO Box 8552
Harrisburg, PA 17105-8552
Email: RA-HeritageReview@pa.gov

U.S. Fish and Wildlife Service
Pennsylvania Field Office
Endangered Species Section
110 Radnor Rd; Suite 101
State College, PA 16801
NO Faxes Please

PA Fish and Boat Commission
Division of Environmental Services
595 E. Rolling Ridge Dr., Bellefonte, PA 16823
Email: RA-FBPACENOTIFY@pa.gov

PA Game Commission
Bureau of Wildlife Habitat Management
Division of Environmental Planning and Habitat Protection
2001 Elmerton Avenue, Harrisburg, PA 17110-9797
Email: RA-PGC_PNDI@pa.gov
NO Faxes Please

7. PROJECT CONTACT INFORMATION

Name: Catalina Escobar
Company/Business Name: Michael Baker International
Address: 100 Airside Drive
City, State, Zip: Moon Township, PA, 15108
Phone: (412) 269 6300 Fax: ( )
Email: catalina.escobar@mbakerintl.com

8. CERTIFICATION

I certify that ALL of the project information contained in this receipt (including project location, project size/configuration, project type, answers to questions) is true, accurate and complete. In addition, if the project type, location, size or configuration changes, or if the answers to any questions that were asked during this online review change, I agree to re-do the online environmental review.

Catalina Escobar
applicant/project proponent signature

11 March 2020
date

TABLE OF PARCELS & LOTS

S.O. No.: 176433
Project: 5th Avenue & Dinwiddie Development

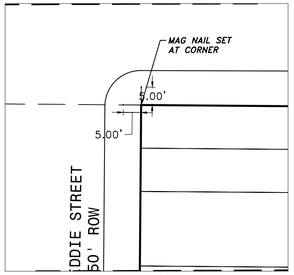
Michael Baker INTERNATIONAL

Subject: Table of Parcels and Lots

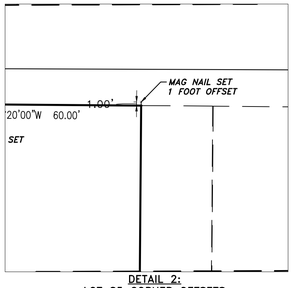
Date: 3/19/2020 **Sheet No.:** 1 **of** 1

FIFTH AND DINWIDDIE PARCELS AND LOTS				
LOT No.	OWNER	PARCEL No.	DEED BOOK	DEED PAGE
19	URBAN REDEVELOPMENT AUTHORITY OF PITTSBURGH	11-E-19	14542	565
20		11-E-20		
22		11-E-22		
23		11-E-23		
24		11-E-24		
25		11-E-25		
26		11-E-26		
27		11-E-27		
28		11-E-28		
29		11-E-29		
30		11-E-30		
31		11-E-31		
56		11-E-56	15047	63
57		11-E-57		
58		11-E-58		
59		11-E-59		
60		11-E-60	15465	552
60A		11-E-60A	14533	313
61		11-E-61	15465	552
62		11-E-62	14533	313
63		11-E-63		
64		11-E-64		
65		11-E-65	14533	295
65A		11-E-65A		
66		11-E-66		
67		11-E-67	14449	280
68		11-E-68	14533	286
69		11-E-69		
70		11-E-70		
71		11-E-71	13936	206
72		11-E-72	14533	286
73		11-E-73		
81	CITY OF PITTSBURGH	11-E-81	8400	439
82		11-E-82	N/A	N/A
85		11-E-85	N/A	N/A

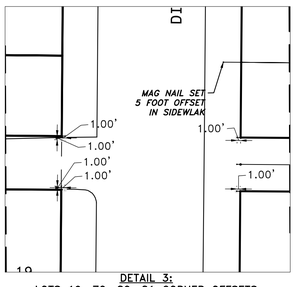
PLOT DATE: 11/12/2020 12:43 PM



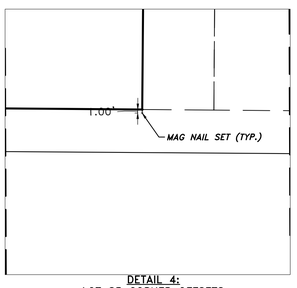
DETAIL 1:
LOT 75 CORNER OFFSETS
1" = 20'



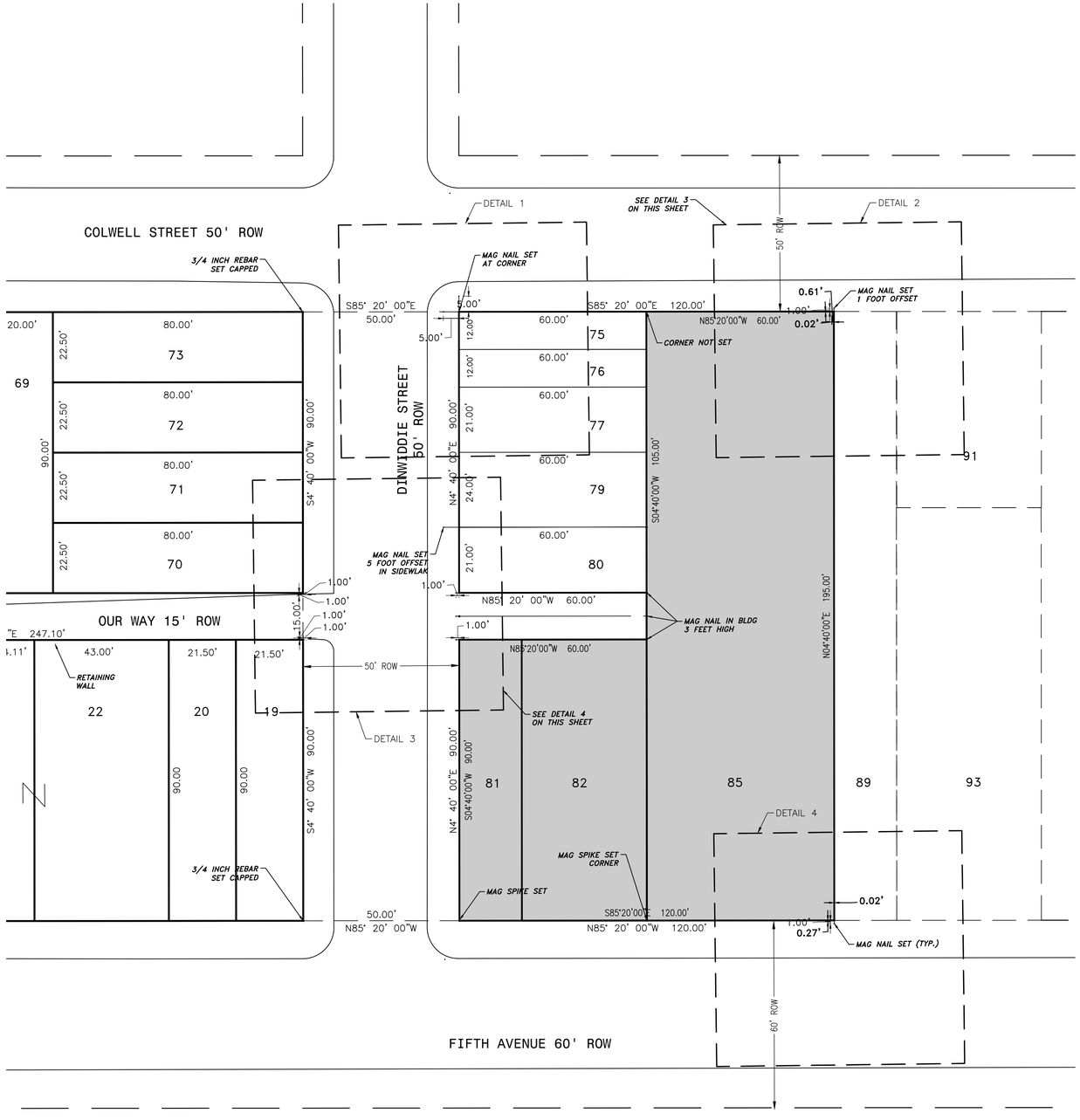
DETAIL 2:
LOT 85 CORNER OFFSETS
1" = 20'



DETAIL 3:
LOTS 19, 70, 80, 81 CORNER OFFSETS
1" = 20'



DETAIL 4:
LOT 85 CORNER OFFSETS
1" = 20'



PARCEL OWNERS				
LOT No.	OWNER	PARCEL No.	DEED BOOK	DEED PAGE
75	SAL WILLIAMS	11-E-75	13746	557
76		11-E-76		
77		11-E-77		
79		11-E-79		
80	WHATS HAPPENING LLC	11-E-80	15180	158
81	CITY OF PITTSBURGH	11-E-81	8400	439
82		11-E-82	N/A	N/A
85		11-E-85	N/A	N/A

EXISTING PARCELS TO BE CONSOLIDATED		
LOT No.	AREA (SF)	AREA (AC)
81	1800	0.0413
82	3600	0.0826
85	11700	0.2686
TOTAL	17100	0.3926

PROPOSED PARCELS TO BE CONSOLIDATED		
LOT No.	AREA (SF)	AREA (AC)
81	1800	0.0413
82	3600	0.0826
85	11700	0.2686
TOTAL	17100	0.3926

LOTS TO BE CONSOLIDATED

N

20' 10' 0 20'

SCALE: 1"= 20'

CITY OF PITTSBURGH
DEPARTMENT OF CITY PLANNING

APPROVED: _____
CITY PLANNING COMMISSION

_____
CHAIRMAN

ATTEST: _____
SECRETARY

KNOW ALL MEN BY THESE PRESENTS: THAT FIFTH AND DINWIDDIE DEVELOPMENT, LLC FORMED IN THE STATE OF PENNSYLVANIA, DOES HEREBY ADOPT THIS PLAN AS ITS PLAN OF LOTS OF ITS PROPERTY, SITUATED IN THE 3RD WARD, CITY OF PITTSBURGH, ALLEGHENY COUNTY, PENNSYLVANIA.

IN WITNESS WHERE OF THE SAID LIMITED LIABILITY COMPANY HAS CAUSED ITS SEAL TO BE AFFIXED BY OUR HAND, THIS _____ DAY OF _____ 20___.

ATTEST:

_____
NOTARY PUBLIC

_____
FIFTH AND DINWIDDIE DEVELOPMENT, LLC: SIGNATURE AUTHORITY

COMMONWEALTH OF PENNSYLVANIA)
COUNTY OF ALLEGHENY) SS:

_____, MORTGAGEE OF THE PROPERTY EMBRACED IN THIS PLAN OF SUBDIVISION: FIFTH AND DINWIDDIE DEVELOPMENT, LLC LOT CONSOLIDATION EXHIBIT (EAST SITE), DO HEREBY CONSENT TO THE RECORDING OF SAID PLAN IN THE RECORDERS OFFICE OF ALLEGHENY COUNTY, PENNSYLVANIA, AND TO THE DEDICATIONS AND COVENANTS APPEARING THEREON.

_____
WITNESS

_____
MORTGAGEE

I, RALPH W. GROMLEY, A PROFESSIONAL LAND SURVEYOR OF THE COMMONWEALTH OF PENNSYLVANIA, DO HEREBY CERTIFY TO THE BEST OF MY KNOWLEDGE, INFORMATION, AND BELIEF THAT THIS PLAN CORRECTLY REPRESENTS THE LOTS, LANDS, STREETS AND HIGHWAYS AS SURVEYED AND PLOTTED BY ME FOR THE OWNERS OR AGENTS.

_____ _____
SIGNATURE DATE
REG. NO.

RECORDED IN THE OFFICE OF THE DEPARTMENT OF REAL ESTATE OF THE COUNTY OF ALLEGHENY, COMMONWEALTH OF PENNSYLVANIA, IN PLAN BOOK VOLUME____, PAGE(S)_____.

GIVEN UNDER MY HAND AND SEAL THIS ___ DAY OF _____, 20___.

REVISIONS

PRELIMINARY DESIGN — NOT FOR CONSTRUCTION USE

PREPARED BY:
MICHAEL BAKER INTERNATIONAL
Consulting Engineers
100 AIRSIDE DRIVE
MOON TOWNSHIP, PA 115108
(412) 269-6300
(412) 375-3977 (FAX)

FIFTH AND DINWIDDIE DEVELOPMENT, LLC

FIFTH AND DINWIDDIE DEVELOPMENT

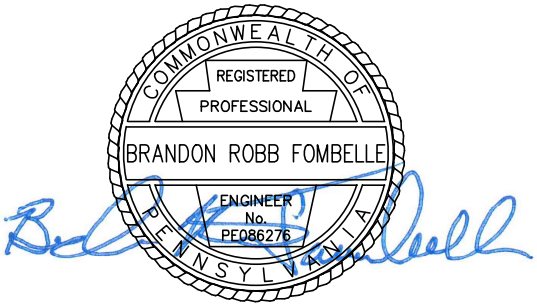
CITY OF PITTSBURGH DEPARTMENT OF MOBILITY AND INFASTRUCTURE

LOT CONSOLIDATION EXHIBIT (EAST SITE)

DATE: 09/10/2020 SHEET NO. 1 OF 1 ACCESSION NO. _____
REV: _____ CASE NO. _____

F:\5th and Din Development - 499325\176433 - Fifth and Dinwiddie\06 Drawings\Civil\Sheet Files\00_Exhibits\176433_C_Consolidation Exhibit - East Site.dwg

WATER & SANITARY CALCULATIONS



S.O. No.:	176433
Project:	5th Avenue & Dinwiddie Development - East Site
Subject:	Water Consumption and Sanitary Flow Calculations
	Existing Site Water Consumption Building 3 Lot
Date:	11/30/2020

Michael Baker INTERNATIONAL

BUILDING 3 LOT: FIFTH AND DINWIDDIE PARCELS, LOTS, & EDU				
LOT No.	OWNER	PARCEL No.	EDUs	
81	CITY OF PITTSBURGH	11-E-81	0	
82		11-E-82	0	
85		11-E-85	7	*
		Existing EDU =	**7**	

*calculations for Lot 85 shown below:

TENANT WATER CONSUMPTION: Lot 85 (WTEN)

Floor 1:	Area	3888	sf
Floor 2:	Area	5833	sf
Floor 3:	Area	11665	sf

1 Occupant / 10 gal/occupant — 100 SF

Floor 1		
Area =	3888	sf
Occupants =	39	
Flow =	388.8	gal/day

Floor 2		
Area =	5833	sf
Occupants =	58	
Flow =	583.3	gal/day

Floor 3		
Area =	11665	sf
Occupants =	117	
Flow =	1166.5	gal/day

Therefore, Total Tenant Water Consumption (WTEN) = 2139 gal/day

TOTAL ESTIMATED BUILDING Lot 85 WATER CONSUMPTION (TEW):

300 gal/day = 1 EDU

TEW = tenant water consumption = **2,139 gal/day**

TEW = (2139 gal/day) / (300 gal/day/EDU) ≈ **7 EDU**

S.O. No.:	176433
Project:	5th Avenue & Dinwiddie Development
Subject:	Water Consumption and Sanitary Flow Calculations
	Building 3 Water Consumption **Sheet No.:** 1 of 1
Date:	11/30/2020

Michael Baker INTERNATIONAL

I. WATER CONSUMPTION

A. BUILDING 3

1. *RETAIL UNIT WATER CONSUMPTION (3WRET):*

2 = Number of toilets @ 400 gal/day/toilet
2 = Number of sinks @ 200 gal/day/sink

3WRET = [[(Number of Toilets) x (Assumed Daily Water Demand)] + [(Number of Sinks) x (Assumed Daily Water Demand)]]
3WRET = [(2 toilet)x (400 gal/day/toilet)] + [(2 sink)x (200 gal/day/sink)]

3WRET = 1,200 gal/day

Therefore, Total 3WRET = 1,200 gal/day

2. *OFFICE WATER CONSUMPTION (3WOFF):*

1 Occupant / 100 SF
10 gal/occupant

Floor 1	Area	=	7450 sf	Floor 3	Area	=	11197 sf
	Occupants	=	75		Occupants	=	112
	Flow	=	750 gal/day		Flow	=	1120 gal/day
Floor 2	Area	=	2394 sf	Floor 4	Area	=	11783 sf
	Occupants	=	24		Occupants	=	118
	Flow	=	240 gal/day		Flow	=	1180 gal/day

Therefore, Total Office Water Consumption (3WOFF) = 3290 gal/day

3. *IRRIGATION SYSTEM WATER CONSUMPTION (3WIS):*

32 gal/min = Tap #1 Demand
32 gal/min = Tap #2 Demand
20 min/day = Daily Operation Time

3WIS = [(Tap #1 Demand) + (Tap #2 Demand)] x (Operation Time)

3WIS = [(32 gal/min) + (32 gal/min)] x (20 min/day)

Therefore, Total 3WIS from 0 irrigation taps = - gal/day

4. *TOTAL ESTIMATED BUILDING 3 WATER CONSUMPTION (TE3W):*

300 gal/day = 1 EDU

TE3W = 3WCOM + 3WIS + tenant water consumption

TE3W = (1200 gal/day) + (0 gal/day) + (3290 gal/day)

TE3W = **4,490 gal/day**

TE3W = (4490 gal/day) / (300 gal/day/EDU) ≈ **15 EDU**

S.O. No.:	176433
Project:	5th Avenue & Dinwiddie Development
Subject:	Water Consumption and Sanitary Flow Calculations
	Building 3 Sanitary Flow **Sheet No.:** 1 of 1
Date:	7/20/2021

Michael Baker INTERNATIONAL

II. SANITARY / CONDENSER FLOW

A. BUILDING 3

1. *SANITARY FLOW*

a. *RETAIL SANITARY FLOW (3SRET):*

3SRET = 3WRET = 1,200 gal/day

Therefore, Total 3SRET = 1,200 gal/day

b. *OFFICE SANITARY FLOW (3SOFF):*

3SOFF = 3WOFF = 3,290 gal/day

Therefore, Total 3SOFF = 3,290 gal/day

b. *TOTAL ESTIMATED BUILDING 3 SANITARY FLOW (TE3S):*

TE3S = 3WRET + 3WOFF
TE3S = (1200 gal/day) + (3290 gal/day)

TE3S = **4,490 gal/day**

2. *CONDENSER FLOW*

a. *COMMERCIAL UNIT CONDENSER FLOW (3CCOM):*

1 = Number of Commercial Units
5 gal/unit/day = Estimated Unit Condenser Flow

3CCOM = (Number of Units) x (Estimated Condenser Flow)
3CCOM = (1 units) x (5 gal/unit/day)

Therefore, Total 3CCOM from 1 units = 5 gal/day

b. *TOTAL ESTIMATED BUILDING 3 CONDENSER FLOW (TE1C):*

TE3C = 3CCOM
TE3C = ((5 gal/day)

TE3C = **5 gal/day**

3. *TOTAL COMBINED BUILDING 3 SANITARY FLOW*

TC3S = TE3S + TE3C
TC3S = (4490 gal/day) + (5 gal/day) = **4,495 gal/day**

4. *SUMMARY*

$Q_{d,avg}$ =	98,433,919	gal/day	(Capacity Per FlowMaster Model / 3.5 peaking factor)
$Q_{d,peak}$ =	344,518,718	gal/day	(Capacity Per FlowMaster Model)
$Q_{ex,avg}$ =	781,000	gal/day	(Average flow from metering)
$Q_{ex,peak}$ =	6,346,000	gal/day	(Peak flow from metering)
$Q_{proj,avg}$ =	1,905,149	gal/day	(Proposed Peak / 3.5 peaking factor)
$Q_{proj,peak}$ =	6,668,020	gal/day	(Existing Peak + Proposed Flow) x 1.05

Design Capacity, Average

Project Description	
Friction Method	Manning Formula
Solve For	Normal Depth

Input Data		
Roughness Coefficient	0.016	
Channel Slope	0.024	ft/ft
Diameter	6.0	ft
Discharge	98,433,919.00	gal/day

Results		
Normal Depth	2.2	ft
Flow Area	9.4	ft²
Wetted Perimeter	7.8	ft
Hydraulic Radius	1.2	ft
Top Width	5.78	ft
Critical Depth	3.4	ft
Percent Full	36.6	%
Critical Slope	0.005	ft/ft
Velocity	16.26	ft/s
Velocity Head	4.11	ft
Specific Energy	6.30	ft
Froude Number	2.252	
Maximum Discharge	370,600,806.23	gal/day
Discharge Full	344,518,717.93	gal/day
Slope Full	0.002	ft/ft
Flow Type	Supercritical	

GVF Input Data		
Downstream Depth	0.0	ft
Length	0.0	ft
Number Of Steps	0	

GVF Output Data		
Upstream Depth	0.0	ft
Profile Description	N/A	
Profile Headloss	0.00	ft
Average End Depth Over Rise	0.0	%
Normal Depth Over Rise	36.6	%
Downstream Velocity	Infinity	ft/s
Upstream Velocity	Infinity	ft/s
Normal Depth	2.2	ft
Critical Depth	3.4	ft
Channel Slope	0.024	ft/ft
Critical Slope	0.005	ft/ft

Design Capacity, Peak

Project Description	
Friction Method	Manning Formula
Solve For	Full Flow Capacity

Input Data		
Roughness Coefficient	0.016	
Channel Slope	0.024	ft/ft
Normal Depth	6.0	ft
Diameter	6.0	ft
Discharge	344,518,717.93	gal/day

Results		
Discharge	344,518,717.93	gal/day
Normal Depth	6.0	ft
Flow Area	28.3	ft²
Wetted Perimeter	18.8	ft
Hydraulic Radius	1.5	ft
Top Width	0.00	ft
Critical Depth	5.7	ft
Percent Full	100.0	%
Critical Slope	0.021	ft/ft
Velocity	18.85	ft/s
Velocity Head	5.52	ft
Specific Energy	11.52	ft
Froude Number	(N/A)	
Maximum Discharge	370,600,806.23	gal/day
Discharge Full	344,518,717.93	gal/day
Slope Full	0.024	ft/ft
Flow Type	Supercritical	

GVF Input Data		
Downstream Depth	0.0	ft
Length	0.0	ft
Number Of Steps	0	

GVF Output Data		
Upstream Depth	0.0	ft
Profile Description	N/A	
Profile Headloss	0.00	ft
Average End Depth Over Rise	0.0	%
Normal Depth Over Rise	100.0	%
Downstream Velocity	Infinity	ft/s
Upstream Velocity	Infinity	ft/s
Normal Depth	6.0	ft

GVF Output Data	
Critical Depth	5.7 ft
Channel Slope	0.024 ft/ft
Critical Slope	0.021 ft/ft

Existing Flows, Average

Project Description	
Friction Method	Manning Formula
Solve For	Normal Depth

Input Data		
Roughness Coefficient	0.016	
Channel Slope	0.024	ft/ft
Diameter	6.0	ft
Discharge	781,000.00	gal/day

Results		
Normal Depth	0.2	ft
Flow Area	0.3	ft²
Wetted Perimeter	2.3	ft
Hydraulic Radius	0.1	ft
Top Width	2.21	ft
Critical Depth	0.3	ft
Percent Full	3.5	%
Critical Slope	0.007	ft/ft
Velocity	3.85	ft/s
Velocity Head	0.23	ft
Specific Energy	0.44	ft
Froude Number	1.803	
Maximum Discharge	370,600,806.23	gal/day
Discharge Full	344,518,717.93	gal/day
Slope Full	0.000	ft/ft
Flow Type	Supercritical	

GVF Input Data		
Downstream Depth	0.0	ft
Length	0.0	ft
Number Of Steps	0	

GVF Output Data		
Upstream Depth	0.0	ft
Profile Description	N/A	
Profile Headloss	0.00	ft
Average End Depth Over Rise	0.0	%
Normal Depth Over Rise	3.5	%
Downstream Velocity	Infinity	ft/s
Upstream Velocity	Infinity	ft/s
Normal Depth	0.2	ft
Critical Depth	0.3	ft
Channel Slope	0.024	ft/ft
Critical Slope	0.007	ft/ft

Existing Flows, Peak

Project Description	
Friction Method	Manning Formula
Solve For	Normal Depth

Input Data		
Roughness Coefficient	0.016	
Channel Slope	0.024	ft/ft
Diameter	6.0	ft
Discharge	6,346,000.00	gal/day

Results		
Normal Depth	0.6	ft
Flow Area	1.3	ft²
Wetted Perimeter	3.7	ft
Hydraulic Radius	0.4	ft
Top Width	3.51	ft
Critical Depth	0.8	ft
Percent Full	9.4	%
Critical Slope	0.005	ft/ft
Velocity	7.28	ft/s
Velocity Head	0.82	ft
Specific Energy	1.39	ft
Froude Number	2.070	
Maximum Discharge	370,600,806.23	gal/day
Discharge Full	344,518,717.93	gal/day
Slope Full	0.000	ft/ft
Flow Type	Supercritical	

GVF Input Data		
Downstream Depth	0.0	ft
Length	0.0	ft
Number Of Steps	0	

GVF Output Data		
Upstream Depth	0.0	ft
Profile Description	N/A	
Profile Headloss	0.00	ft
Average End Depth Over Rise	0.0	%
Normal Depth Over Rise	9.4	%
Downstream Velocity	Infinity	ft/s
Upstream Velocity	Infinity	ft/s
Normal Depth	0.6	ft
Critical Depth	0.8	ft
Channel Slope	0.024	ft/ft
Critical Slope	0.005	ft/ft

Projected Flows in 5 Years, Average

Project Description	
Friction Method	Manning Formula
Solve For	Normal Depth

Input Data		
Roughness Coefficient	0.016	
Channel Slope	0.024	ft/ft
Diameter	6.0	ft
Discharge	1,905,149.00	gal/day

Results		
Normal Depth	0.3	ft
Flow Area	0.6	ft^2
Wetted Perimeter	2.8	ft
Hydraulic Radius	0.2	ft
Top Width	2.70	ft
Critical Depth	0.4	ft
Percent Full	5.3	%
Critical Slope	0.006	ft/ft
Velocity	5.06	ft/s
Velocity Head	0.40	ft
Specific Energy	0.72	ft
Froude Number	1.918	
Maximum Discharge	370,600,806.23	gal/day
Discharge Full	344,518,717.93	gal/day
Slope Full	0.000	ft/ft
Flow Type	Supercritical	

GVF Input Data		
Downstream Depth	0.0	ft
Length	0.0	ft
Number Of Steps	0	

GVF Output Data		
Upstream Depth	0.0	ft
Profile Description	N/A	
Profile Headloss	0.00	ft
Average End Depth Over Rise	0.0	%
Normal Depth Over Rise	5.3	%
Downstream Velocity	Infinity	ft/s
Upstream Velocity	Infinity	ft/s
Normal Depth	0.3	ft
Critical Depth	0.4	ft
Channel Slope	0.024	ft/ft
Critical Slope	0.006	ft/ft

Projected Flows in 5 Years, Peak

Project Description	
Friction Method	Manning Formula
Solve For	Normal Depth

Input Data		
Roughness Coefficient	0.016	
Channel Slope	0.024	ft/ft
Diameter	6.0	ft
Discharge	6,668,020.00	gal/day

Results		
Normal Depth	0.6	ft
Flow Area	1.4	ft^2
Wetted Perimeter	3.8	ft
Hydraulic Radius	0.4	ft
Top Width	3.54	ft
Critical Depth	0.8	ft
Percent Full	9.6	%
Critical Slope	0.005	ft/ft
Velocity	7.39	ft/s
Velocity Head	0.85	ft
Specific Energy	1.43	ft
Froude Number	2.076	
Maximum Discharge	370,600,806.23	gal/day
Discharge Full	344,518,717.93	gal/day
Slope Full	0.000	ft/ft
Flow Type	Supercritical	

GVF Input Data		
Downstream Depth	0.0	ft
Length	0.0	ft
Number Of Steps	0	

GVF Output Data		
Upstream Depth	0.0	ft
Profile Description	N/A	
Profile Headloss	0.00	ft
Average End Depth Over Rise	0.0	%
Normal Depth Over Rise	9.6	%
Downstream Velocity	Infinity	ft/s
Upstream Velocity	Infinity	ft/s
Normal Depth	0.6	ft
Critical Depth	0.8	ft
Channel Slope	0.024	ft/ft
Critical Slope	0.005	ft/ft

SEWER FLOW METERING DATA

MH 002H102 April 17, 2021 through May 16, 2021

Line Size: 72 " Manhole Depth: 0 "

Date	Average Daily Flow (MGD)	Minimum Hourly Flow (Time)	Minimum Hourly Flow (MGD)	Maximum Hourly Flow (Time)	Maximum Hourly Flow (MGD)	Total 24 hr. Precip. (inches)
04/17/2021	0.575	3:00 AM	0.526	1:00 PM	0.617	0.00
04/18/2021	0.597	5:00 AM	0.557	1:00 PM	0.640	0.01
04/19/2021	0.620	4:00 AM	0.544	12:00 AM	1.033	0.05
04/20/2021	0.581	3:00 AM	0.536	10:00 PM	0.613	0.00
04/21/2021	0.657	4:00 AM	0.550	8:00 AM	0.805	0.09
04/22/2021	0.625	4:00 AM	0.569	6:00 PM	0.658	0.00
04/23/2021	0.657	3:00 AM	0.599	10:00 AM	0.689	0.00
04/24/2021	0.743	4:00 AM	0.624	11:00 PM	1.126	0.19
04/25/2021	0.743	11:00 PM	0.661	2:00 AM	1.111	0.12
04/26/2021	0.649	3:00 AM	0.608	11:00 AM	0.687	0.00
04/27/2021	0.649	3:00 AM	0.582	10:00 PM	0.693	0.00
04/28/2021	0.701	4:00 AM	0.635	9:00 AM	0.788	0.00
04/29/2021	1.213	3:00 AM	0.631	6:00 PM	6.346	0.77
04/30/2021	0.726	4:00 AM	0.612	3:00 PM	2.276	0.13
05/01/2021	0.605	5:00 AM	0.570	11:00 AM	0.637	0.00
05/02/2021	0.605	5:00 AM	0.545	12:00 PM	0.653	0.00
05/03/2021	1.068	3:00 AM	0.548	8:00 PM	2.510	0.69
05/04/2021	0.902	5:00 AM	0.693	1:00 PM	2.225	0.17
05/05/2021	1.118	4:00 AM	0.693	6:00 AM	3.185	0.39
05/06/2021	0.717	5:00 AM	0.687	9:00 AM	0.756	0.00
05/07/2021	0.751	4:00 AM	0.635	10:00 AM	1.142	0.11
05/08/2021	0.672	5:00 AM	0.618	12:00 PM	0.728	0.01
05/09/2021	1.800	5:00 AM	0.630	7:00 PM	3.345	1.09
05/10/2021	0.981	11:00 PM	0.846	12:00 AM	1.280	0.01
05/11/2021	0.778	11:00 PM	0.729	12:00 AM	0.828	0.00
05/12/2021	0.722	3:00 AM	0.662	8:00 AM	0.787	0.00
05/13/2021	0.754	4:00 AM	0.690	9:00 AM	0.799	0.00
05/14/2021	0.757	3:00 AM	0.694	10:00 AM	0.803	0.00
05/15/2021	0.743	3:00 AM	0.678	11:00 AM	0.803	0.00
05/16/2021	0.730	4:00 AM	0.662	1:00 PM	0.791	0.00

Average	0.781	0.627	1.312
Minimum	0.575	0.526	0.613
Maximum	1.800	0.846	6.346

3.83 Total

Total Flow 23.438 MG

MH 002H102 April 17, 2021 through May 16, 2021

	Time	Head inches	Velocity fps	Flow MGD		Precip. inches
04/17/2021	12:00 AM	1.97	4.00	0.559		0.00
	1:00 AM	1.96	3.92	0.540		0.00
	2:00 AM	1.95	3.89	0.534		0.00
	3:00 AM	1.94	3.87	0.526		0.00
	4:00 AM	1.95	3.87	0.529		0.00
	5:00 AM	1.95	3.84	0.529		0.00
	6:00 AM	1.97	3.86	0.537		0.00
	7:00 AM	1.99	3.88	0.547		0.00
	8:00 AM	2.03	3.91	0.570		0.00
	9:00 AM	2.07	3.95	0.594		0.00
	10:00 AM	2.09	3.98	0.605		0.00
	11:00 AM	2.10	3.98	0.611		0.00
	12:00 PM	2.10	4.00	0.613		0.00
	1:00 PM	2.12	3.97	0.617		0.00
	2:00 PM	2.10	3.96	0.608		0.00
	3:00 PM	2.08	3.93	0.592		0.00
	4:00 PM	2.08	3.92	0.590		0.00
	5:00 PM	2.08	3.94	0.595		0.00
	6:00 PM	2.06	3.93	0.584		0.00
	7:00 PM	2.05	3.92	0.581		0.00
	8:00 PM	2.06	3.92	0.584		0.00
	9:00 PM	2.07	3.91	0.586		0.00
	10:00 PM	2.08	3.91	0.590		0.00
	11:00 PM	2.08	3.88	0.586		0.00
	MIN	1.94	3.84	0.526	MIN	0.00
	MAX	2.12	4.00	0.617	MAX	0.00
	AVE	2.04	3.92	0.575	TOTAL	0.00
04/18/2021	12:00 AM	2.07	3.84	0.576		0.00
	1:00 AM	2.05	3.80	0.563		0.00
	2:00 AM	2.06	3.78	0.563		0.00
	3:00 AM	2.06	3.76	0.558		0.00
	4:00 AM	2.07	3.76	0.564		0.00
	5:00 AM	2.07	3.72	0.557		0.00
	6:00 AM	2.10	3.70	0.566		0.00
	7:00 AM	2.11	3.73	0.576		0.00
	8:00 AM	2.12	3.76	0.586		0.00
	9:00 AM	2.19	3.83	0.622		0.00
	10:00 AM	2.22	3.84	0.638		0.00
	11:00 AM	2.20	3.83	0.628		0.00
	12:00 PM	2.21	3.85	0.636		0.00
	1:00 PM	2.22	3.84	0.640		0.00
	2:00 PM	2.18	3.82	0.620		0.00
	3:00 PM	2.19	3.84	0.626		0.00
	4:00 PM	2.17	3.78	0.610		0.00
	5:00 PM	2.16	3.80	0.608		0.00
	6:00 PM	2.16	3.74	0.596		0.00
	7:00 PM	2.18	3.77	0.611		0.00
	8:00 PM	2.17	3.80	0.611		0.00
	9:00 PM	2.19	3.76	0.614		0.00
	10:00 PM	2.15	3.75	0.596		0.00
	11:00 PM	2.12	3.70	0.576		0.01
	MIN	2.05	3.70	0.557	MIN	0.00
	MAX	2.22	3.85	0.640	MAX	0.01
	AVE	2.14	3.78	0.597	TOTAL	0.01

	Time	Head inches	Velocity fps	Flow MGD		Precip. inches
04/19/2021	12:00 AM	2.70	4.52	1.033		0.04
	1:00 AM	2.45	4.13	0.801		0.01
	2:00 AM	2.17	3.70	0.594		0.00
	3:00 AM	2.11	3.62	0.556		0.00
	4:00 AM	2.09	3.58	0.544		0.00
	5:00 AM	2.11	3.60	0.556		0.00
	6:00 AM	2.13	3.61	0.567		0.00
	7:00 AM	2.18	3.68	0.595		0.00
	8:00 AM	2.20	3.69	0.606		0.00
	9:00 AM	2.21	3.69	0.610		0.00
	10:00 AM	2.23	3.71	0.620		0.00
	11:00 AM	2.21	3.70	0.613		0.00
	12:00 PM	2.21	3.72	0.614		0.00
	1:00 PM	2.20	3.69	0.608		0.00
	2:00 PM	2.19	3.66	0.598		0.00
	3:00 PM	2.18	3.67	0.595		0.00
	4:00 PM	2.18	3.67	0.594		0.00
	5:00 PM	2.17	3.65	0.586		0.00
	6:00 PM	2.18	3.69	0.599		0.00
	7:00 PM	2.19	3.70	0.602		0.00
	8:00 PM	2.20	3.70	0.605		0.00
	9:00 PM	2.19	3.70	0.605		0.00
	10:00 PM	2.18	3.69	0.598		0.00
	11:00 PM	2.16	3.68	0.588		0.00
	MIN	2.09	3.58	0.544	MIN	0.00
	MAX	2.70	4.52	1.033	MAX	0.04
	AVE	2.21	3.73	0.620	TOTAL	0.05
04/20/2021	12:00 AM	2.13	3.64	0.570		0.00
	1:00 AM	2.10	3.61	0.551		0.00
	2:00 AM	2.09	3.57	0.545		0.00
	3:00 AM	2.08	3.54	0.536		0.00
	4:00 AM	2.08	3.54	0.536		0.00
	5:00 AM	2.08	3.54	0.536		0.00
	6:00 AM	2.10	3.57	0.548		0.00
	7:00 AM	2.15	3.63	0.576		0.00
	8:00 AM	2.17	3.63	0.586		0.00
	9:00 AM	2.18	3.65	0.592		0.00
	10:00 AM	2.20	3.67	0.601		0.00
	11:00 AM	2.21	3.70	0.609		0.00
	12:00 PM	2.17	3.66	0.588		0.00
	1:00 PM	2.18	3.67	0.593		0.00
	2:00 PM	2.18	3.65	0.591		0.00
	3:00 PM	2.19	3.66	0.599		0.00
	4:00 PM	2.19	3.64	0.592		0.00
	5:00 PM	2.19	3.65	0.594		0.00
	6:00 PM	2.19	3.67	0.598		0.00
	7:00 PM	2.19	3.68	0.599		0.00
	8:00 PM	2.19	3.66	0.596		0.00
	9:00 PM	2.19	3.68	0.601		0.00
	10:00 PM	2.21	3.71	0.613		0.00
	11:00 PM	2.18	3.67	0.594		0.00
	MIN	2.08	3.54	0.536	MIN	0.00
	MAX	2.21	3.71	0.613	MAX	0.00
	AVE	2.16	3.64	0.581	TOTAL	0.00

	Time	Head inches	Velocity fps	Flow MGD		Precip. inches
04/21/2021	12:00 AM	2.15	3.63	0.577		0.00
	1:00 AM	2.13	3.57	0.560		0.00
	2:00 AM	2.12	3.55	0.551		0.00
	3:00 AM	2.12	3.57	0.553		0.00
	4:00 AM	2.13	3.52	0.550		0.00
	5:00 AM	2.14	3.53	0.555		0.00
	6:00 AM	2.16	3.59	0.575		0.00
	7:00 AM	2.27	3.74	0.646		0.05
	8:00 AM	2.51	4.03	0.805		0.04
	9:00 AM	2.44	3.90	0.746		0.00
	10:00 AM	2.44	3.89	0.748		0.00
	11:00 AM	2.43	3.90	0.743		0.00
	12:00 PM	2.36	3.81	0.695		0.00
	1:00 PM	2.27	3.73	0.643		0.00
	2:00 PM	2.27	3.72	0.638		0.00
	3:00 PM	2.28	3.74	0.647		0.00
	4:00 PM	2.35	3.81	0.692		0.00
	5:00 PM	2.41	3.87	0.728		0.00
	6:00 PM	2.43	3.87	0.738		0.00
	7:00 PM	2.43	3.88	0.739		0.00
	8:00 PM	2.43	3.88	0.739		0.00
	9:00 PM	2.30	3.74	0.656		0.00
	10:00 PM	2.26	3.70	0.634		0.00
	11:00 PM	2.23	3.66	0.614		0.00
	MIN	2.12	3.52	0.550	MIN	0.00
	MAX	2.51	4.03	0.805	MAX	0.05
	AVE	2.29	3.74	0.657	TOTAL	0.09
04/22/2021	12:00 AM	2.22	3.65	0.606		0.00
	1:00 AM	2.17	3.61	0.580		0.00
	2:00 AM	2.15	3.61	0.574		0.00
	3:00 AM	2.15	3.59	0.569		0.00
	4:00 AM	2.15	3.58	0.569		0.00
	5:00 AM	2.15	3.61	0.572		0.00
	6:00 AM	2.17	3.62	0.583		0.00
	7:00 AM	2.22	3.69	0.614		0.00
	8:00 AM	2.27	3.74	0.644		0.00
	9:00 AM	2.26	3.76	0.643		0.00
	10:00 AM	2.28	3.78	0.654		0.00
	11:00 AM	2.25	3.77	0.642		0.00
	12:00 PM	2.26	3.76	0.641		0.00
	1:00 PM	2.25	3.77	0.642		0.00
	2:00 PM	2.25	3.75	0.638		0.00
	3:00 PM	2.25	3.76	0.638		0.00
	4:00 PM	2.25	3.76	0.639		0.00
	5:00 PM	2.26	3.78	0.645		0.00
	6:00 PM	2.28	3.79	0.658		0.00
	7:00 PM	2.27	3.78	0.650		0.00
	8:00 PM	2.26	3.78	0.647		0.00
	9:00 PM	2.28	3.79	0.655		0.00
	10:00 PM	2.28	3.76	0.652		0.00
	11:00 PM	2.27	3.73	0.644		0.00
	MIN	2.15	3.58	0.569	MIN	0.00
	MAX	2.28	3.79	0.658	MAX	0.00
	AVE	2.23	3.72	0.625	TOTAL	0.00

	Time	Head inches	Velocity fps	Flow MGD		Precip. inches
04/23/2021	12:00 AM	2.24	3.69	0.621		0.00
	1:00 AM	2.24	3.68	0.620		0.00
	2:00 AM	2.22	3.66	0.608		0.00
	3:00 AM	2.21	3.61	0.599		0.00
	4:00 AM	2.22	3.62	0.602		0.00
	5:00 AM	2.23	3.63	0.609		0.00
	6:00 AM	2.26	3.64	0.621		0.00
	7:00 AM	2.31	3.72	0.658		0.00
	8:00 AM	2.33	3.71	0.663		0.00
	9:00 AM	2.36	3.76	0.685		0.00
	10:00 AM	2.37	3.75	0.689		0.00
	11:00 AM	2.37	3.74	0.689		0.00
	12:00 PM	2.36	3.76	0.685		0.00
	1:00 PM	2.36	3.76	0.683		0.00
	2:00 PM	2.31	3.71	0.656		0.00
	3:00 PM	2.33	3.71	0.664		0.00
	4:00 PM	2.35	3.71	0.671		0.00
	5:00 PM	2.34	3.72	0.669		0.00
	6:00 PM	2.35	3.72	0.676		0.00
	7:00 PM	2.37	3.71	0.680		0.00
	8:00 PM	2.36	3.70	0.675		0.00
	9:00 PM	2.38	3.72	0.688		0.00
	10:00 PM	2.37	3.67	0.674		0.00
	11:00 PM	2.37	3.68	0.675		0.00
	MIN	2.21	3.61	0.599	MIN	0.00
	MAX	2.38	3.76	0.689	MAX	0.00
	AVE	2.32	3.70	0.657	TOTAL	0.00
04/24/2021	12:00 AM	2.35	3.65	0.662		0.00
	1:00 AM	2.32	3.60	0.641		0.00
	2:00 AM	2.31	3.55	0.626		0.00
	3:00 AM	2.33	3.56	0.636		0.00
	4:00 AM	2.32	3.52	0.624		0.00
	5:00 AM	2.33	3.50	0.627		0.00
	6:00 AM	2.36	3.53	0.643		0.00
	7:00 AM	2.41	3.55	0.666		0.00
	8:00 AM	2.45	3.60	0.692		0.00
	9:00 AM	2.48	3.65	0.716		0.00
	10:00 AM	2.53	3.71	0.751		0.00
	11:00 AM	2.51	3.71	0.743		0.00
	12:00 PM	2.51	3.69	0.739		0.00
	1:00 PM	2.49	3.67	0.723		0.00
	2:00 PM	2.49	3.65	0.719		0.00
	3:00 PM	2.47	3.66	0.714		0.00
	4:00 PM	2.47	3.66	0.714		0.00
	5:00 PM	2.47	3.64	0.709		0.00
	6:00 PM	2.50	3.67	0.731		0.02
	7:00 PM	2.66	3.81	0.829		0.01
	8:00 PM	2.67	3.82	0.840		0.02
	9:00 PM	2.79	3.91	0.916		0.05
	10:00 PM	3.00	4.03	1.052		0.04
	11:00 PM	3.07	4.17	1.126		0.05
	MIN	2.31	3.50	0.624	MIN	0.00
	MAX	3.07	4.17	1.126	MAX	0.05
	AVE	2.51	3.69	0.743	TOTAL	0.19

	Time	Head inches	Velocity fps	Flow MGD		Precip. inches
04/25/2021	12:00 AM	2.96	3.97	1.013		0.04
	1:00 AM	2.96	4.01	1.025		0.03
	2:00 AM	3.03	4.17	1.111		0.03
	3:00 AM	2.78	3.76	0.877		0.01
	4:00 AM	2.64	3.58	0.772		0.01
	5:00 AM	2.50	3.45	0.686		0.00
	6:00 AM	2.47	3.43	0.668		0.00
	7:00 AM	2.47	3.43	0.669		0.00
	8:00 AM	2.50	3.47	0.690		0.00
	9:00 AM	2.52	3.50	0.705		0.00
	10:00 AM	2.52	3.52	0.706		0.00
	11:00 AM	2.51	3.53	0.703		0.00
	12:00 PM	2.49	3.55	0.701		0.00
	1:00 PM	2.47	3.57	0.697		0.00
	2:00 PM	2.49	3.56	0.702		0.00
	3:00 PM	2.46	3.55	0.689		0.00
	4:00 PM	2.44	3.54	0.679		0.00
	5:00 PM	2.44	3.56	0.684		0.00
	6:00 PM	2.44	3.57	0.683		0.00
	7:00 PM	2.43	3.59	0.686		0.00
	8:00 PM	2.41	3.57	0.670		0.00
	9:00 PM	2.43	3.61	0.688		0.00
	10:00 PM	2.40	3.60	0.672		0.00
	11:00 PM	2.39	3.57	0.661		0.00
	MIN	2.39	3.43	0.661	MIN	0.00
	MAX	3.03	4.17	1.111	MAX	0.04
	AVE	2.55	3.61	0.743	TOTAL	0.12
04/26/2021	12:00 AM	2.35	3.54	0.640		0.00
	1:00 AM	2.34	3.50	0.632		0.00
	2:00 AM	2.32	3.47	0.618		0.00
	3:00 AM	2.31	3.44	0.608		0.00
	4:00 AM	2.32	3.45	0.614		0.00
	5:00 AM	2.32	3.47	0.617		0.00
	6:00 AM	2.33	3.49	0.626		0.00
	7:00 AM	2.39	3.54	0.657		0.00
	8:00 AM	2.41	3.57	0.671		0.00
	9:00 AM	2.40	3.58	0.670		0.00
	10:00 AM	2.42	3.59	0.679		0.00
	11:00 AM	2.43	3.61	0.687		0.00
	12:00 PM	2.38	3.60	0.665		0.00
	1:00 PM	2.40	3.62	0.674		0.00
	2:00 PM	2.37	3.60	0.659		0.00
	3:00 PM	2.37	3.62	0.663		0.00
	4:00 PM	2.33	3.61	0.645		0.00
	5:00 PM	2.33	3.63	0.651		0.00
	6:00 PM	2.35	3.61	0.654		0.00
	7:00 PM	2.34	3.61	0.652		0.00
	8:00 PM	2.34	3.61	0.649		0.00
	9:00 PM	2.35	3.63	0.657		0.00
	10:00 PM	2.33	3.63	0.652		0.00
	11:00 PM	2.30	3.61	0.635		0.00
	MIN	2.30	3.44	0.608	MIN	0.00
	MAX	2.43	3.63	0.687	MAX	0.00
	AVE	2.36	3.57	0.649	TOTAL	0.00

	Time	Head inches	Velocity fps	Flow MGD		Precip. inches
04/27/2021	12:00 AM	2.27	3.58	0.617		0.00
	1:00 AM	2.27	3.55	0.610		0.00
	2:00 AM	2.24	3.51	0.592		0.00
	3:00 AM	2.22	3.50	0.582		0.00
	4:00 AM	2.23	3.49	0.584		0.00
	5:00 AM	2.24	3.50	0.590		0.00
	6:00 AM	2.26	3.51	0.599		0.00
	7:00 AM	2.32	3.57	0.636		0.00
	8:00 AM	2.35	3.63	0.659		0.00
	9:00 AM	2.34	3.60	0.648		0.00
	10:00 AM	2.36	3.62	0.662		0.00
	11:00 AM	2.36	3.63	0.662		0.00
	12:00 PM	2.37	3.63	0.665		0.00
	1:00 PM	2.40	3.67	0.685		0.00
	2:00 PM	2.39	3.63	0.672		0.00
	3:00 PM	2.39	3.59	0.667		0.00
	4:00 PM	2.38	3.60	0.665		0.00
	5:00 PM	2.41	3.61	0.681		0.00
	6:00 PM	2.40	3.60	0.674		0.00
	7:00 PM	2.42	3.57	0.673		0.00
	8:00 PM	2.41	3.57	0.672		0.00
	9:00 PM	2.44	3.59	0.686		0.00
	10:00 PM	2.46	3.58	0.693		0.00
	11:00 PM	2.46	3.56	0.692		0.00
	MIN	2.22	3.49	0.582	MIN	0.00
	MAX	2.46	3.67	0.693	MAX	0.00
	AVE	2.35	3.58	0.649	TOTAL	0.00
04/28/2021	12:00 AM	2.44	3.52	0.672		0.00
	1:00 AM	2.40	3.48	0.651		0.00
	2:00 AM	2.39	3.48	0.644		0.00
	3:00 AM	2.38	3.47	0.642		0.00
	4:00 AM	2.38	3.44	0.635		0.00
	5:00 AM	2.41	3.46	0.650		0.00
	6:00 AM	2.43	3.47	0.662		0.00
	7:00 AM	2.47	3.52	0.686		0.00
	8:00 AM	2.59	3.67	0.772		0.00
	9:00 AM	2.63	3.66	0.788		0.00
	10:00 AM	2.58	3.59	0.750		0.00
	11:00 AM	2.56	3.58	0.736		0.00
	12:00 PM	2.56	3.57	0.735		0.00
	1:00 PM	2.53	3.56	0.719		0.00
	2:00 PM	2.53	3.55	0.719		0.00
	3:00 PM	2.51	3.54	0.706		0.00
	4:00 PM	2.51	3.54	0.708		0.00
	5:00 PM	2.49	3.54	0.700		0.00
	6:00 PM	2.49	3.55	0.702		0.00
	7:00 PM	2.51	3.56	0.712		0.00
	8:00 PM	2.51	3.57	0.715		0.00
	9:00 PM	2.52	3.59	0.720		0.00
	10:00 PM	2.50	3.56	0.709		0.00
	11:00 PM	2.46	3.55	0.689		0.00
	MIN	2.38	3.44	0.635	MIN	0.00
	MAX	2.63	3.67	0.788	MAX	0.00
	AVE	2.49	3.54	0.701	TOTAL	0.00

	Time	Head inches	Velocity fps	Flow MGD		Precip. inches
04/29/2021	12:00 AM	2.44	3.52	0.673		0.00
	1:00 AM	2.41	3.48	0.655		0.00
	2:00 AM	2.40	3.47	0.647		0.00
	3:00 AM	2.37	3.43	0.631		0.00
	4:00 AM	2.39	3.44	0.641		0.00
	5:00 AM	2.40	3.45	0.643		0.00
	6:00 AM	2.41	3.49	0.658		0.00
	7:00 AM	2.47	3.53	0.687		0.01
	8:00 AM	2.66	3.78	0.824		0.02
	9:00 AM	2.83	3.99	0.963		0.06
	10:00 AM	3.29	4.62	1.425		0.12
	11:00 AM	3.00	4.80	1.260		0.05
	12:00 PM	2.67	4.37	0.955		0.05
	1:00 PM	2.47	4.11	0.803		0.00
	2:00 PM	2.30	3.88	0.683		0.00
	3:00 PM	2.26	3.82	0.653		0.00
	4:00 PM	2.24	3.84	0.647		0.00
	5:00 PM	2.66	4.24	1.252		0.11
	6:00 PM	5.78	8.70	6.346		0.26
	7:00 PM	4.97	7.58	4.193		0.09
	8:00 PM	2.93	5.35	1.371		0.00
	9:00 PM	2.43	4.85	0.922		0.00
	10:00 PM	2.31	4.65	0.821		0.00
	11:00 PM	2.24	4.50	0.758		0.00
	MIN	2.24	3.43	0.631	MIN	0.00
	MAX	5.78	8.70	6.346	MAX	0.26
	AVE	2.76	4.37	1.213	TOTAL	0.77
04/30/2021	12:00 AM	2.18	4.42	0.715		0.00
	1:00 AM	2.13	4.37	0.684		0.00
	2:00 AM	2.08	4.31	0.653		0.00
	3:00 AM	2.06	4.24	0.629		0.00
	4:00 AM	2.03	4.21	0.612		0.00
	5:00 AM	2.03	4.22	0.615		0.00
	6:00 AM	2.05	4.26	0.627		0.00
	7:00 AM	2.07	4.32	0.647		0.00
	8:00 AM	2.09	4.36	0.665		0.00
	9:00 AM	2.08	4.37	0.660		0.00
	10:00 AM	2.06	4.33	0.644		0.00
	11:00 AM	2.05	4.35	0.643		0.00
	12:00 PM	2.05	4.39	0.650		0.00
	1:00 PM	2.04	4.34	0.635		0.00
	2:00 PM	2.04	4.38	0.644		0.05
	3:00 PM	3.62	6.23	2.276		0.08
	4:00 PM	2.41	4.96	0.950		0.00
	5:00 PM	2.08	4.51	0.682		0.00
	6:00 PM	2.04	4.45	0.652		0.00
	7:00 PM	2.02	4.41	0.640		0.00
	8:00 PM	2.02	4.42	0.638		0.00
	9:00 PM	2.01	4.42	0.633		0.00
	10:00 PM	2.00	4.39	0.624		0.00
	11:00 PM	1.99	4.37	0.616		0.00
	MIN	1.99	4.21	0.612	MIN	0.00
	MAX	3.62	6.23	2.276	MAX	0.08
	AVE	2.13	4.46	0.726	TOTAL	0.13

	Time	Head inches	Velocity fps	Flow MGD		Precip. inches
05/01/2021	12:00 AM	1.98	4.32	0.607		0.00
	1:00 AM	1.97	4.28	0.596		0.00
	2:00 AM	1.96	4.25	0.589		0.00
	3:00 AM	1.95	4.20	0.575		0.00
	4:00 AM	1.95	4.19	0.573		0.00
	5:00 AM	1.94	4.17	0.570		0.00
	6:00 AM	1.94	4.19	0.572		0.00
	7:00 AM	1.98	4.28	0.600		0.00
	8:00 AM	2.00	4.36	0.620		0.00
	9:00 AM	2.00	4.39	0.628		0.00
	10:00 AM	2.00	4.44	0.633		0.00
	11:00 AM	2.01	4.44	0.637		0.00
	12:00 PM	2.00	4.44	0.631		0.00
	1:00 PM	1.99	4.40	0.625		0.00
	2:00 PM	1.96	4.39	0.608		0.00
	3:00 PM	1.96	4.40	0.606		0.00
	4:00 PM	1.95	4.40	0.605		0.00
	5:00 PM	1.96	4.41	0.608		0.00
	6:00 PM	1.95	4.37	0.601		0.00
	7:00 PM	1.96	4.37	0.604		0.00
	8:00 PM	1.95	4.37	0.599		0.00
	9:00 PM	1.97	4.41	0.616		0.00
	10:00 PM	1.97	4.40	0.613		0.00
	11:00 PM	1.97	4.35	0.603		0.00
	MIN	1.94	4.17	0.570	MIN	0.00
	MAX	2.01	4.44	0.637	MAX	0.00
	AVE	1.97	4.34	0.605	TOTAL	0.00
05/02/2021	12:00 AM	1.96	4.30	0.592		0.00
	1:00 AM	1.93	4.25	0.576		0.00
	2:00 AM	1.93	4.23	0.571		0.00
	3:00 AM	1.92	4.19	0.563		0.00
	4:00 AM	1.90	4.17	0.552		0.00
	5:00 AM	1.91	4.11	0.545		0.00
	6:00 AM	1.92	4.15	0.559		0.00
	7:00 AM	1.95	4.18	0.573		0.00
	8:00 AM	1.97	4.24	0.590		0.00
	9:00 AM	2.01	4.32	0.618		0.00
	10:00 AM	2.03	4.37	0.633		0.00
	11:00 AM	2.03	4.37	0.638		0.00
	12:00 PM	2.06	4.40	0.653		0.00
	1:00 PM	2.05	4.37	0.646		0.00
	2:00 PM	2.05	4.36	0.642		0.00
	3:00 PM	2.04	4.31	0.632		0.00
	4:00 PM	2.03	4.28	0.621		0.00
	5:00 PM	2.02	4.25	0.612		0.00
	6:00 PM	2.02	4.25	0.615		0.00
	7:00 PM	2.02	4.25	0.615		0.00
	8:00 PM	2.04	4.27	0.624		0.00
	9:00 PM	2.03	4.25	0.618		0.00
	10:00 PM	2.04	4.26	0.624		0.00
	11:00 PM	2.00	4.20	0.599		0.00
	MIN	1.90	4.11	0.545	MIN	0.00
	MAX	2.06	4.40	0.653	MAX	0.00
	AVE	1.99	4.26	0.605	TOTAL	0.00

	Time	Head inches	Velocity fps	Flow MGD		Precip. inches
05/03/2021	12:00 AM	1.98	4.13	0.580		0.00
	1:00 AM	1.97	4.09	0.568		0.00
	2:00 AM	1.96	4.05	0.559		0.00
	3:00 AM	1.95	3.99	0.548		0.00
	4:00 AM	2.03	4.12	0.601		0.02
	5:00 AM	2.16	4.32	0.693		0.02
	6:00 AM	2.25	4.44	0.756		0.02
	7:00 AM	2.18	4.31	0.699		0.02
	8:00 AM	2.35	4.50	0.816		0.02
	9:00 AM	2.47	4.64	0.910		0.07
	10:00 AM	2.85	5.10	1.233		0.10
	11:00 AM	3.73	5.83	2.152		0.03
	12:00 PM	3.44	5.56	1.802		0.02
	1:00 PM	2.92	5.02	1.292		0.00
	2:00 PM	2.68	4.76	1.069		0.00
	3:00 PM	2.33	4.34	0.774		0.04
	4:00 PM	3.35	5.42	1.780		0.02
	5:00 PM	2.75	4.86	1.138		0.00
	6:00 PM	2.38	4.46	0.821		0.00
	7:00 PM	2.31	4.42	0.782		0.02
	8:00 PM	3.47	5.88	2.510		0.04
	9:00 PM	2.80	5.42	1.314		0.24
	10:00 PM	2.84	5.45	1.349		0.01
	11:00 PM	2.34	4.88	0.879		0.00
	MIN	1.95	3.99	0.548	MIN	0.00
	MAX	3.73	5.88	2.510	MAX	0.24
	AVE	2.56	4.75	1.068	TOTAL	0.69
05/04/2021	12:00 AM	2.26	4.73	0.808		0.00
	1:00 AM	2.20	4.63	0.762		0.00
	2:00 AM	2.17	4.56	0.731		0.00
	3:00 AM	2.15	4.51	0.713		0.00
	4:00 AM	2.13	4.50	0.701		0.00
	5:00 AM	2.11	4.48	0.693		0.00
	6:00 AM	2.12	4.48	0.694		0.00
	7:00 AM	2.14	4.53	0.715		0.00
	8:00 AM	2.16	4.58	0.731		0.00
	9:00 AM	2.15	4.59	0.726		0.00
	10:00 AM	2.15	4.59	0.727		0.00
	11:00 AM	2.14	4.59	0.724		0.00
	12:00 PM	2.14	4.60	0.726		0.00
	1:00 PM	3.34	5.61	2.225		0.01
	2:00 PM	2.63	5.34	1.173		0.04
	3:00 PM	2.31	4.92	0.869		0.00
	4:00 PM	2.33	4.96	0.885		0.00
	5:00 PM	2.27	4.86	0.836		0.07
	6:00 PM	2.34	4.99	0.902		0.00
	7:00 PM	2.22	4.81	0.803		0.02
	8:00 PM	3.32	6.02	1.978		0.01
	9:00 PM	2.32	4.98	0.887		0.00
	10:00 PM	2.24	4.85	0.817		0.02
	11:00 PM	2.23	4.86	0.816		0.00
	MIN	2.11	4.48	0.693	MIN	0.00
	MAX	3.34	6.02	2.225	MAX	0.07
	AVE	2.32	4.82	0.902	TOTAL	0.17

	Time	Head inches	Velocity fps	Flow MGD		Precip. inches
05/05/2021	12:00 AM	2.17	4.75	0.764		0.00
	1:00 AM	2.13	4.65	0.726		0.00
	2:00 AM	2.12	4.63	0.717		0.01
	3:00 AM	2.09	4.59	0.697		0.00
	4:00 AM	2.08	4.59	0.693		0.02
	5:00 AM	2.43	5.10	0.986		0.13
	6:00 AM	4.25	7.24	3.185		0.11
	7:00 AM	3.74	6.55	2.377		0.04
	8:00 AM	2.88	5.64	1.380		0.04
	9:00 AM	3.78	6.51	2.419		0.03
	10:00 AM	2.92	5.68	1.422		0.01
	11:00 AM	2.54	5.29	1.077		0.00
	12:00 PM	2.46	5.17	1.002		0.00
	1:00 PM	2.40	5.12	0.960		0.00
	2:00 PM	2.40	5.07	0.946		0.00
	3:00 PM	2.31	5.03	0.886		0.00
	4:00 PM	2.28	4.98	0.864		0.00
	5:00 PM	2.26	4.97	0.851		0.00
	6:00 PM	2.27	4.94	0.852		0.00
	7:00 PM	2.25	4.89	0.828		0.00
	8:00 PM	2.24	4.87	0.819		0.00
	9:00 PM	2.24	4.88	0.820		0.00
	10:00 PM	2.21	4.84	0.801		0.00
	11:00 PM	2.17	4.77	0.767		0.00
	MIN	2.08	4.59	0.693	MIN	0.00
	MAX	4.25	7.24	3.185	MAX	0.13
	AVE	2.52	5.20	1.118	TOTAL	0.39
05/06/2021	12:00 AM	2.13	4.71	0.735		0.00
	1:00 AM	2.11	4.65	0.716		0.00
	2:00 AM	2.10	4.61	0.708		0.00
	3:00 AM	2.08	4.59	0.694		0.00
	4:00 AM	2.07	4.58	0.688		0.00
	5:00 AM	2.08	4.56	0.687		0.00
	6:00 AM	2.09	4.59	0.697		0.00
	7:00 AM	2.12	4.64	0.719		0.00
	8:00 AM	2.16	4.68	0.749		0.00
	9:00 AM	2.17	4.70	0.756		0.00
	10:00 AM	2.16	4.72	0.754		0.00
	11:00 AM	2.17	4.69	0.756		0.00
	12:00 PM	2.15	4.69	0.743		0.00
	1:00 PM	2.11	4.65	0.717		0.00
	2:00 PM	2.10	4.64	0.709		0.00
	3:00 PM	2.08	4.61	0.694		0.00
	4:00 PM	2.08	4.62	0.695		0.00
	5:00 PM	2.09	4.63	0.706		0.00
	6:00 PM	2.11	4.66	0.721		0.00
	7:00 PM	2.10	4.64	0.711		0.00
	8:00 PM	2.11	4.67	0.719		0.00
	9:00 PM	2.11	4.64	0.713		0.00
	10:00 PM	2.11	4.66	0.716		0.00
	11:00 PM	2.08	4.60	0.696		0.00
	MIN	2.07	4.56	0.687	MIN	0.00
	MAX	2.17	4.72	0.756	MAX	0.00
	AVE	2.11	4.64	0.717	TOTAL	0.00

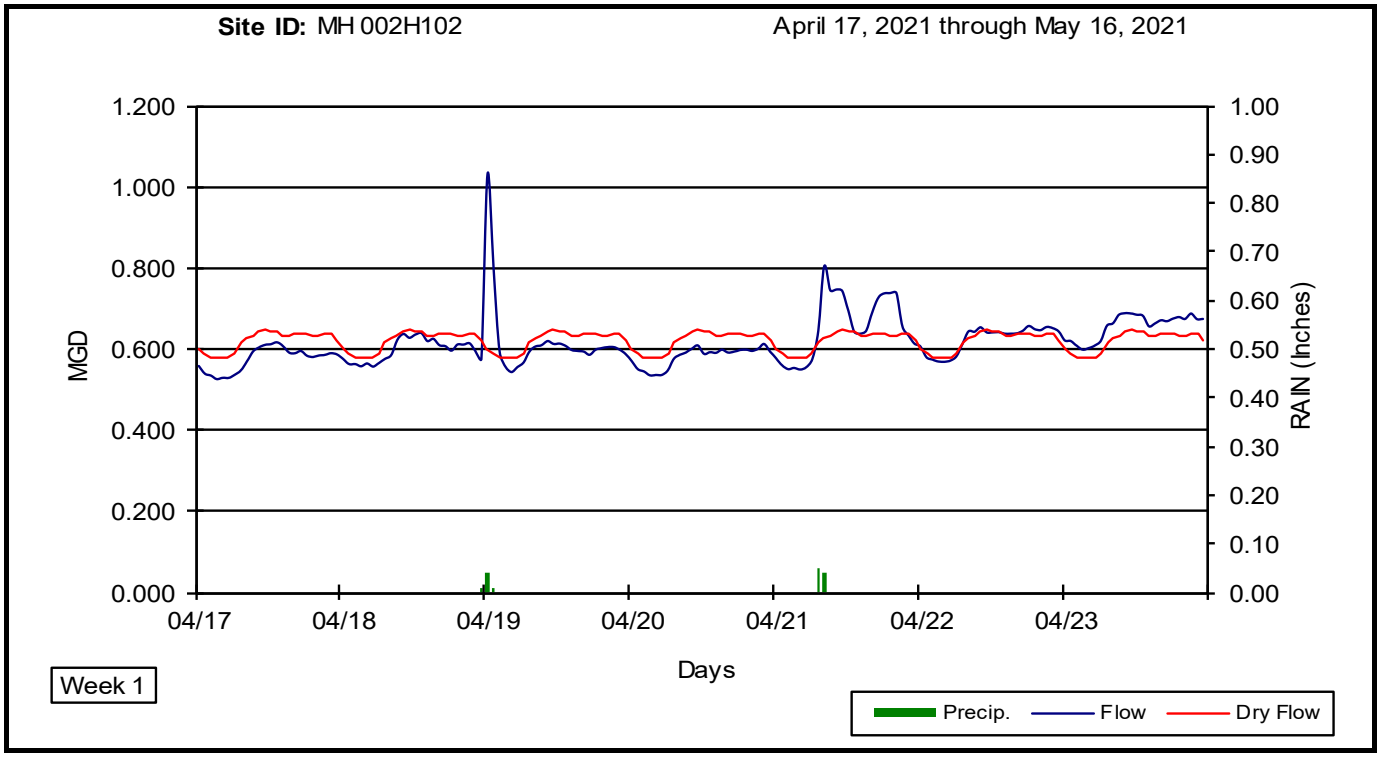
	Time	Head inches	Velocity fps	Flow MGD		Precip. inches
05/07/2021	12:00 AM	2.07	4.54	0.678		0.00
	1:00 AM	2.06	4.47	0.667		0.00
	2:00 AM	2.04	4.46	0.653		0.00
	3:00 AM	2.03	4.41	0.641		0.00
	4:00 AM	2.03	4.38	0.635		0.00
	5:00 AM	2.04	4.38	0.641		0.00
	6:00 AM	2.06	4.41	0.659		0.00
	7:00 AM	2.09	4.46	0.680		0.00
	8:00 AM	2.11	4.49	0.694		0.00
	9:00 AM	2.29	4.76	0.833		0.03
	10:00 AM	2.65	5.27	1.142		0.04
	11:00 AM	2.45	5.01	0.970		0.04
	12:00 PM	2.52	5.13	1.033		0.00
	1:00 PM	2.26	4.71	0.807		0.00
	2:00 PM	2.22	4.63	0.772		0.00
	3:00 PM	2.18	4.56	0.740		0.00
	4:00 PM	2.16	4.57	0.731		0.00
	5:00 PM	2.17	4.57	0.736		0.00
	6:00 PM	2.18	4.58	0.743		0.00
	7:00 PM	2.17	4.55	0.731		0.00
	8:00 PM	2.13	4.52	0.708		0.00
	9:00 PM	2.15	4.49	0.714		0.00
	10:00 PM	2.17	4.49	0.721		0.00
	11:00 PM	2.14	4.44	0.700		0.00
	MIN	2.03	4.38	0.635	MIN	0.00
	MAX	2.65	5.27	1.142	MAX	0.04
	AVE	2.18	4.59	0.751	TOTAL	0.11
05/08/2021	12:00 AM	2.14	4.40	0.692		0.00
	1:00 AM	2.09	4.31	0.657		0.00
	2:00 AM	2.07	4.27	0.639		0.00
	3:00 AM	2.06	4.23	0.631		0.00
	4:00 AM	2.06	4.20	0.623		0.00
	5:00 AM	2.05	4.18	0.618		0.00
	6:00 AM	2.07	4.16	0.623		0.00
	7:00 AM	2.10	4.19	0.642		0.00
	8:00 AM	2.14	4.24	0.668		0.00
	9:00 AM	2.18	4.30	0.697		0.00
	10:00 AM	2.19	4.28	0.695		0.00
	11:00 AM	2.23	4.34	0.726		0.01
	12:00 PM	2.23	4.36	0.728		0.00
	1:00 PM	2.20	4.30	0.706		0.00
	2:00 PM	2.20	4.28	0.701		0.00
	3:00 PM	2.17	4.27	0.689		0.00
	4:00 PM	2.17	4.26	0.687		0.00
	5:00 PM	2.15	4.22	0.671		0.00
	6:00 PM	2.16	4.24	0.679		0.00
	7:00 PM	2.16	4.22	0.676		0.00
	8:00 PM	2.17	4.20	0.677		0.00
	9:00 PM	2.15	4.18	0.666		0.00
	10:00 PM	2.16	4.17	0.667		0.00
	11:00 PM	2.17	4.17	0.670		0.00
	MIN	2.05	4.16	0.618	MIN	0.00
	MAX	2.23	4.40	0.728	MAX	0.01
	AVE	2.15	4.25	0.672	TOTAL	0.01

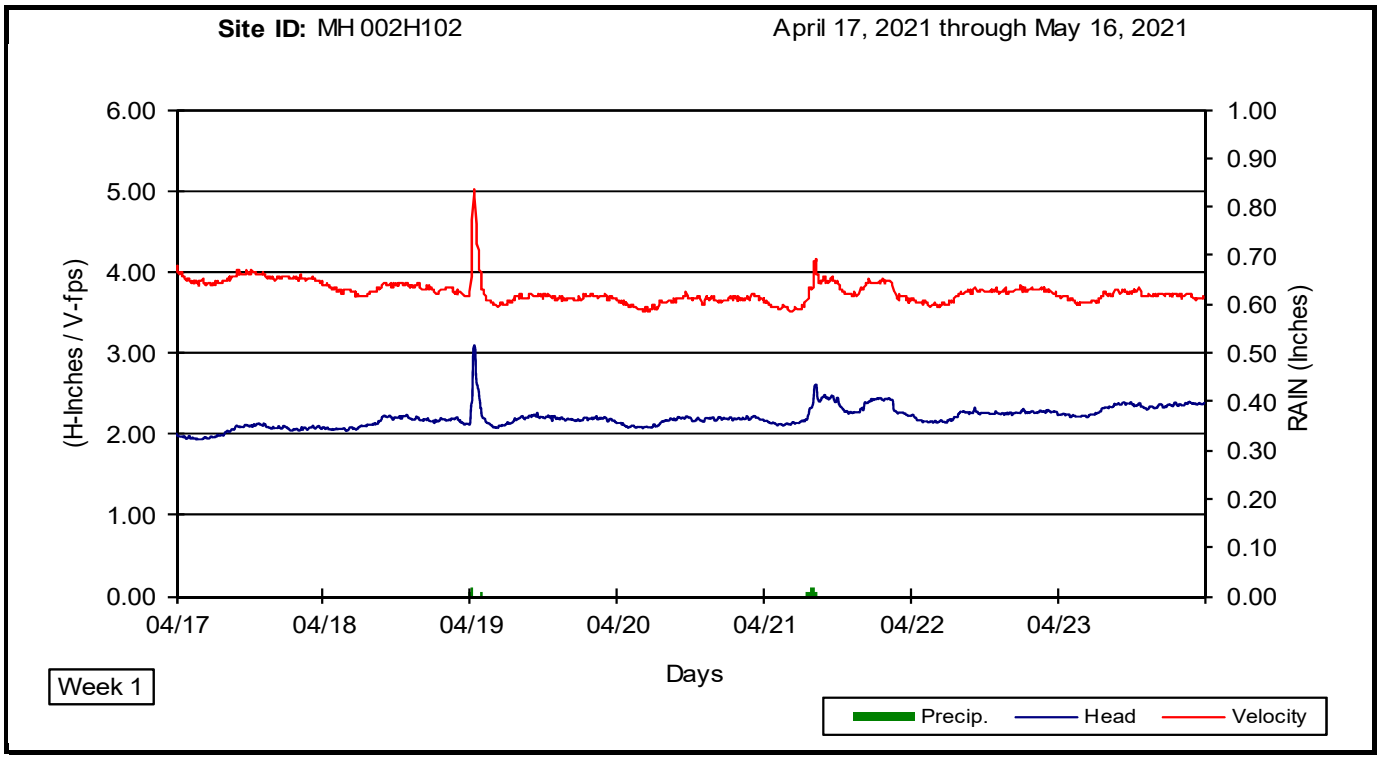
	Time	Head inches	Velocity fps	Flow MGD		Precip. inches
05/09/2021	12:00 AM	2.16	4.15	0.663		0.00
	1:00 AM	2.14	4.07	0.642		0.00
	2:00 AM	2.14	4.05	0.639		0.00
	3:00 AM	2.14	4.03	0.634		0.00
	4:00 AM	2.14	4.02	0.635		0.00
	5:00 AM	2.16	3.95	0.630		0.00
	6:00 AM	2.17	3.98	0.640		0.00
	7:00 AM	2.20	3.98	0.656		0.00
	8:00 AM	2.25	4.03	0.686		0.07
	9:00 AM	3.18	5.05	1.544		0.15
	10:00 AM	4.36	6.21	2.852		0.09
	11:00 AM	3.36	5.39	1.696		0.03
	12:00 PM	3.86	5.77	2.540		0.12
	1:00 PM	4.39	6.42	3.051		0.04
	2:00 PM	3.86	5.87	2.390		0.12
	3:00 PM	4.60	6.63	3.286		0.07
	4:00 PM	4.41	6.47	2.988		0.05
	5:00 PM	3.63	5.81	2.037		0.05
	6:00 PM	3.53	5.73	1.923		0.07
	7:00 PM	4.53	6.70	3.345		0.12
	8:00 PM	4.48	6.63	3.151		0.08
	9:00 PM	4.41	6.57	3.038		0.03
	10:00 PM	3.70	5.87	2.122		0.00
	11:00 PM	3.03	5.32	1.410		0.00
	MIN	2.14	3.95	0.630	MIN	0.00
	MAX	4.60	6.70	3.345	MAX	0.15
	AVE	3.29	5.28	1.800	TOTAL	1.09
05/10/2021	12:00 AM	2.89	5.18	1.280		0.00
	1:00 AM	2.78	5.07	1.179		0.00
	2:00 AM	2.71	5.02	1.125		0.00
	3:00 AM	2.66	4.94	1.077		0.00
	4:00 AM	2.61	4.91	1.042		0.00
	5:00 AM	2.60	4.88	1.028		0.00
	6:00 AM	2.59	4.85	1.017		0.00
	7:00 AM	2.58	4.87	1.012		0.00
	8:00 AM	2.57	4.84	1.000		0.00
	9:00 AM	2.56	4.85	0.996		0.01
	10:00 AM	2.55	4.85	0.994		0.00
	11:00 AM	2.54	4.84	0.981		0.00
	12:00 PM	2.53	4.82	0.975		0.00
	1:00 PM	2.49	4.81	0.951		0.00
	2:00 PM	2.46	4.76	0.921		0.00
	3:00 PM	2.45	4.76	0.921		0.00
	4:00 PM	2.44	4.74	0.908		0.00
	5:00 PM	2.42	4.73	0.896		0.00
	6:00 PM	2.41	4.73	0.892		0.00
	7:00 PM	2.41	4.72	0.888		0.00
	8:00 PM	2.40	4.70	0.878		0.00
	9:00 PM	2.39	4.71	0.871		0.00
	10:00 PM	2.38	4.69	0.866		0.00
	11:00 PM	2.36	4.64	0.846		0.00
	MIN	2.36	4.64	0.846	MIN	0.00
	MAX	2.89	5.18	1.280	MAX	0.01
	AVE	2.53	4.83	0.981	TOTAL	0.01

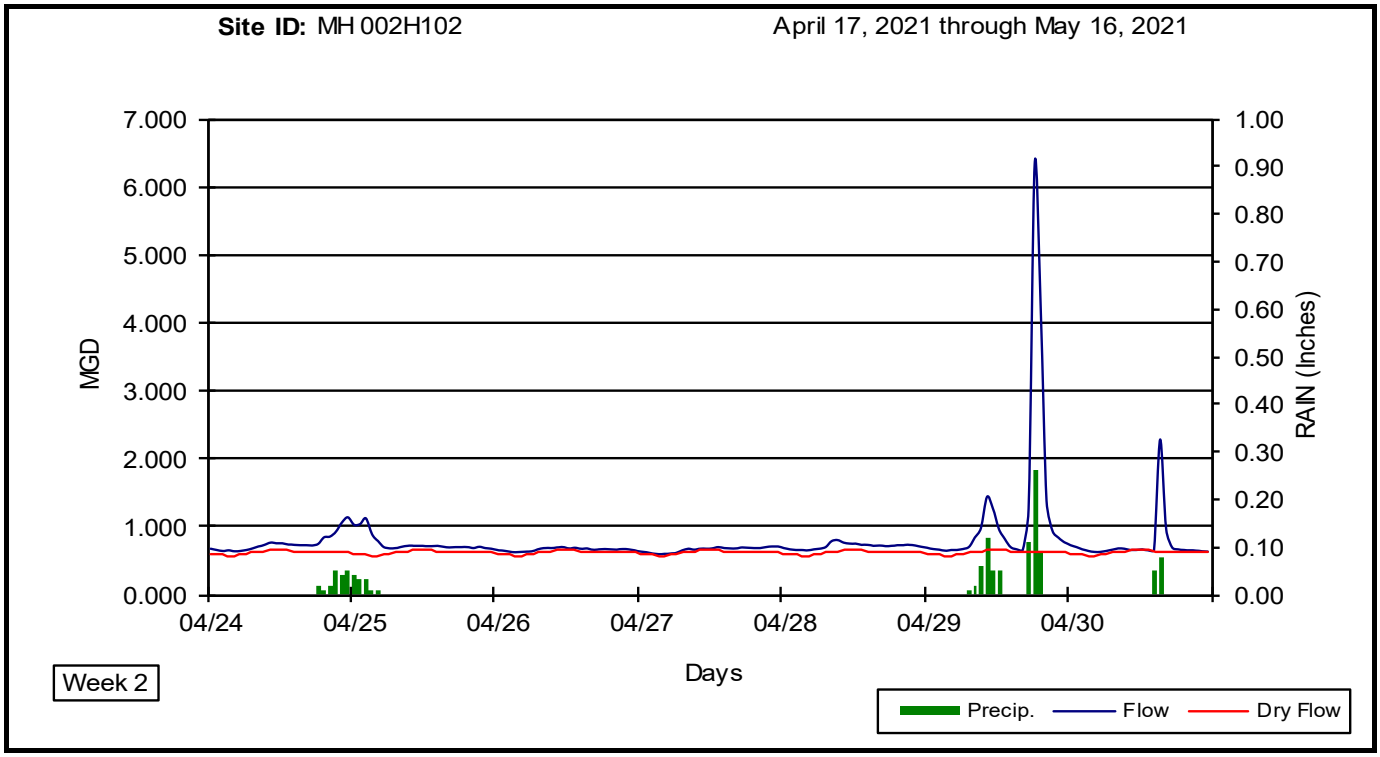
	Time	Head inches	Velocity fps	Flow MGD		Precip. inches
05/11/2021	12:00 AM	2.34	4.60	0.828		0.00
	1:00 AM	2.30	4.54	0.795		0.00
	2:00 AM	2.28	4.50	0.781		0.00
	3:00 AM	2.27	4.46	0.766		0.00
	4:00 AM	2.25	4.44	0.756		0.00
	5:00 AM	2.26	4.42	0.754		0.00
	6:00 AM	2.28	4.46	0.773		0.00
	7:00 AM	2.31	4.50	0.794		0.00
	8:00 AM	2.34	4.53	0.817		0.00
	9:00 AM	2.33	4.53	0.810		0.00
	10:00 AM	2.33	4.52	0.808		0.00
	11:00 AM	2.34	4.51	0.810		0.00
	12:00 PM	2.33	4.49	0.802		0.00
	1:00 PM	2.30	4.47	0.782		0.00
	2:00 PM	2.28	4.44	0.767		0.00
	3:00 PM	2.28	4.43	0.766		0.00
	4:00 PM	2.29	4.42	0.768		0.00
	5:00 PM	2.29	4.42	0.771		0.00
	6:00 PM	2.28	4.40	0.762		0.00
	7:00 PM	2.29	4.40	0.769		0.00
	8:00 PM	2.29	4.37	0.762		0.00
	9:00 PM	2.27	4.34	0.745		0.00
	10:00 PM	2.28	4.35	0.753		0.00
	11:00 PM	2.24	4.31	0.729		0.00
	MIN	2.24	4.31	0.729	MIN	0.00
	MAX	2.34	4.60	0.828	MAX	0.00
	AVE	2.29	4.45	0.778	TOTAL	0.00
05/12/2021	12:00 AM	2.23	4.25	0.712		0.00
	1:00 AM	2.19	4.21	0.686		0.00
	2:00 AM	2.18	4.13	0.669		0.00
	3:00 AM	2.19	4.07	0.662		0.00
	4:00 AM	2.21	4.03	0.666		0.00
	5:00 AM	2.21	4.00	0.662		0.00
	6:00 AM	2.25	4.01	0.683		0.00
	7:00 AM	2.32	4.10	0.727		0.00
	8:00 AM	2.40	4.19	0.787		0.00
	9:00 AM	2.36	4.10	0.749		0.00
	10:00 AM	2.36	4.08	0.743		0.00
	11:00 AM	2.38	4.09	0.755		0.00
	12:00 PM	2.36	4.08	0.742		0.00
	1:00 PM	2.34	4.07	0.734		0.00
	2:00 PM	2.33	4.03	0.721		0.00
	3:00 PM	2.34	4.02	0.724		0.00
	4:00 PM	2.35	4.00	0.725		0.00
	5:00 PM	2.35	4.01	0.726		0.00
	6:00 PM	2.36	4.01	0.734		0.00
	7:00 PM	2.38	4.00	0.738		0.00
	8:00 PM	2.39	4.01	0.745		0.00
	9:00 PM	2.40	4.01	0.750		0.00
	10:00 PM	2.41	3.98	0.748		0.00
	11:00 PM	2.40	3.95	0.737		0.00
	MIN	2.18	3.95	0.662	MIN	0.00
	MAX	2.41	4.25	0.787	MAX	0.00
	AVE	2.32	4.06	0.722	TOTAL	0.00

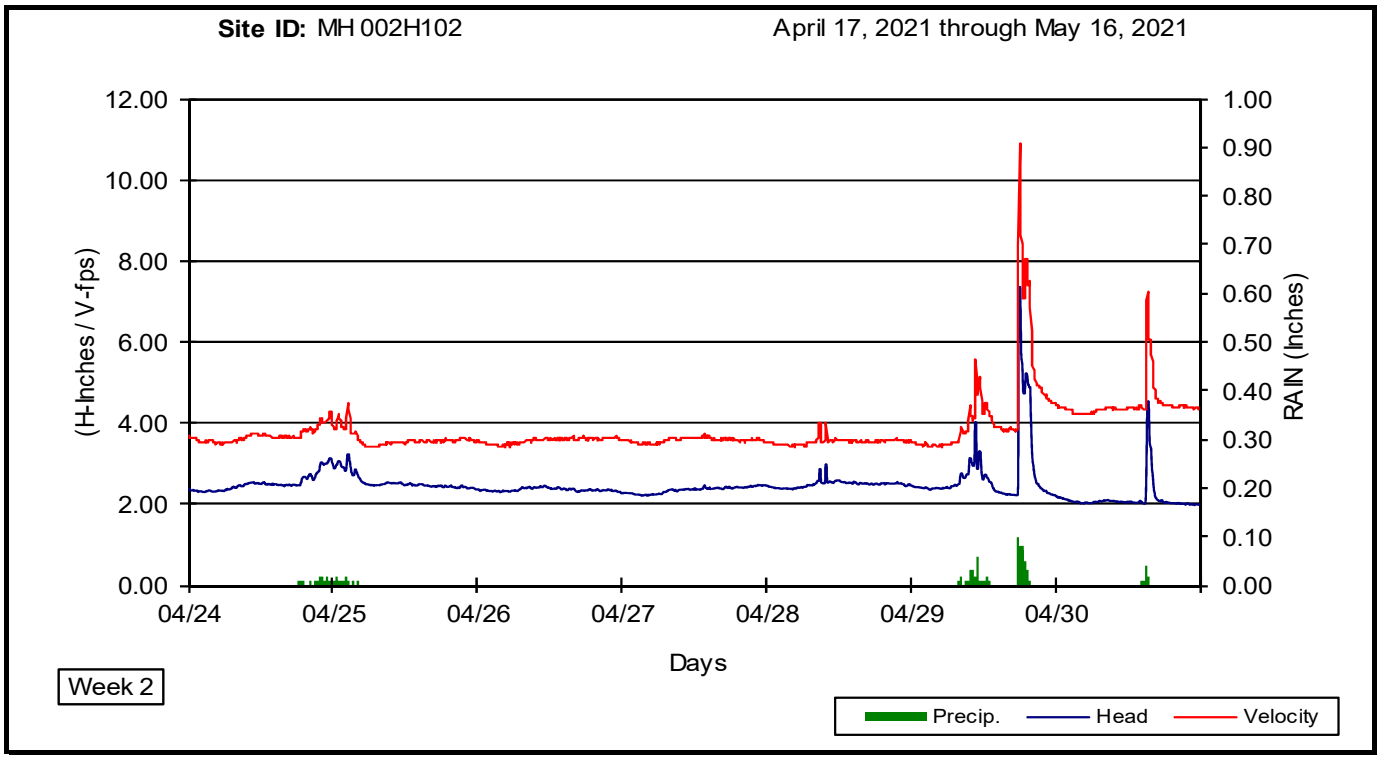
	Time	Head inches	Velocity fps	Flow MGD		Precip. inches
05/13/2021	12:00 AM	2.37	3.91	0.719		0.00
	1:00 AM	2.36	3.86	0.702		0.00
	2:00 AM	2.34	3.85	0.696		0.00
	3:00 AM	2.36	3.82	0.695		0.00
	4:00 AM	2.36	3.78	0.690		0.00
	5:00 AM	2.38	3.78	0.696		0.00
	6:00 AM	2.44	3.80	0.726		0.00
	7:00 AM	2.47	3.83	0.747		0.00
	8:00 AM	2.52	3.87	0.780		0.00
	9:00 AM	2.56	3.89	0.799		0.00
	10:00 AM	2.56	3.88	0.798		0.00
	11:00 AM	2.52	3.85	0.774		0.00
	12:00 PM	2.52	3.86	0.776		0.00
	1:00 PM	2.52	3.86	0.777		0.00
	2:00 PM	2.51	3.84	0.767		0.00
	3:00 PM	2.51	3.84	0.767		0.00
	4:00 PM	2.51	3.83	0.767		0.00
	5:00 PM	2.52	3.85	0.774		0.00
	6:00 PM	2.53	3.84	0.775		0.00
	7:00 PM	2.53	3.85	0.780		0.00
	8:00 PM	2.53	3.87	0.783		0.00
	9:00 PM	2.53	3.84	0.775		0.00
	10:00 PM	2.52	3.85	0.776		0.00
	11:00 PM	2.50	3.82	0.757		0.00
	MIN	2.34	3.78	0.690	MIN	0.00
	MAX	2.56	3.91	0.799	MAX	0.00
	AVE	2.48	3.84	0.754	TOTAL	0.00
05/14/2021	12:00 AM	2.47	3.79	0.742		0.00
	1:00 AM	2.43	3.76	0.717		0.00
	2:00 AM	2.42	3.71	0.701		0.00
	3:00 AM	2.41	3.69	0.694		0.00
	4:00 AM	2.43	3.70	0.704		0.00
	5:00 AM	2.44	3.69	0.709		0.00
	6:00 AM	2.48	3.71	0.727		0.00
	7:00 AM	2.53	3.79	0.765		0.00
	8:00 AM	2.57	3.81	0.790		0.00
	9:00 AM	2.58	3.83	0.797		0.00
	10:00 AM	2.59	3.84	0.803		0.00
	11:00 AM	2.55	3.84	0.785		0.00
	12:00 PM	2.54	3.82	0.778		0.00
	1:00 PM	2.56	3.83	0.786		0.00
	2:00 PM	2.55	3.82	0.780		0.00
	3:00 PM	2.53	3.81	0.772		0.00
	4:00 PM	2.52	3.81	0.765		0.00
	5:00 PM	2.52	3.81	0.767		0.00
	6:00 PM	2.52	3.82	0.766		0.00
	7:00 PM	2.50	3.83	0.762		0.00
	8:00 PM	2.54	3.85	0.781		0.00
	9:00 PM	2.52	3.82	0.768		0.00
	10:00 PM	2.52	3.85	0.773		0.00
	11:00 PM	2.48	3.78	0.743		0.00
	MIN	2.41	3.69	0.694	MIN	0.00
	MAX	2.59	3.85	0.803	MAX	0.00
	AVE	2.51	3.79	0.757	TOTAL	0.00

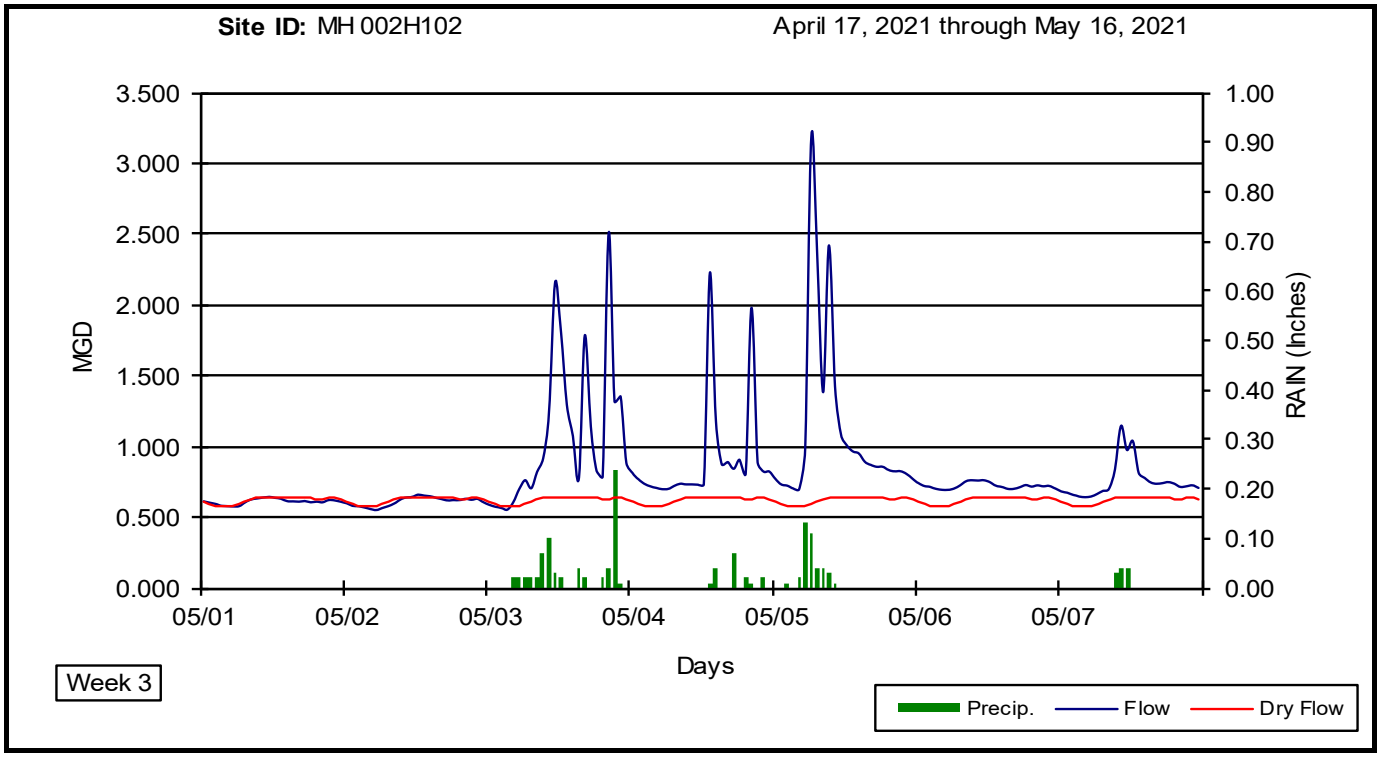
	Time	Head inches	Velocity fps	Flow MGD		Precip. inches
05/15/2021	12:00 AM	2.47	3.75	0.731		0.00
	1:00 AM	2.44	3.74	0.715		0.00
	2:00 AM	2.42	3.70	0.701		0.00
	3:00 AM	2.38	3.67	0.678		0.00
	4:00 AM	2.41	3.66	0.687		0.00
	5:00 AM	2.43	3.66	0.697		0.00
	6:00 AM	2.44	3.66	0.700		0.00
	7:00 AM	2.47	3.70	0.723		0.00
	8:00 AM	2.51	3.76	0.752		0.00
	9:00 AM	2.56	3.81	0.784		0.00
	10:00 AM	2.56	3.82	0.785		0.00
	11:00 AM	2.58	3.86	0.803		0.00
	12:00 PM	2.56	3.83	0.789		0.00
	1:00 PM	2.56	3.83	0.789		0.00
	2:00 PM	2.56	3.82	0.784		0.00
	3:00 PM	2.53	3.81	0.771		0.00
	4:00 PM	2.50	3.77	0.748		0.00
	5:00 PM	2.49	3.78	0.746		0.00
	6:00 PM	2.48	3.76	0.740		0.00
	7:00 PM	2.48	3.78	0.743		0.00
	8:00 PM	2.48	3.80	0.744		0.00
	9:00 PM	2.47	3.80	0.741		0.00
	10:00 PM	2.49	3.83	0.755		0.00
	11:00 PM	2.45	3.78	0.730		0.00
	MIN	2.38	3.66	0.678	MIN	0.00
	MAX	2.58	3.86	0.803	MAX	0.00
	AVE	2.49	3.77	0.743	TOTAL	0.00
05/16/2021	12:00 AM	2.43	3.77	0.719		0.00
	1:00 AM	2.40	3.72	0.698		0.00
	2:00 AM	2.38	3.71	0.684		0.00
	3:00 AM	2.35	3.71	0.673		0.00
	4:00 AM	2.34	3.67	0.662		0.00
	5:00 AM	2.35	3.66	0.664		0.00
	6:00 AM	2.36	3.66	0.666		0.00
	7:00 AM	2.39	3.70	0.688		0.00
	8:00 AM	2.42	3.76	0.710		0.00
	9:00 AM	2.45	3.80	0.731		0.00
	10:00 AM	2.47	3.83	0.750		0.00
	11:00 AM	2.49	3.85	0.761		0.00
	12:00 PM	2.53	3.86	0.779		0.00
	1:00 PM	2.54	3.89	0.791		0.00
	2:00 PM	2.53	3.87	0.783		0.00
	3:00 PM	2.51	3.87	0.770		0.00
	4:00 PM	2.49	3.84	0.758		0.00
	5:00 PM	2.48	3.84	0.752		0.00
	6:00 PM	2.46	3.82	0.742		0.00
	7:00 PM	2.47	3.81	0.743		0.00
	8:00 PM	2.47	3.83	0.745		0.00
	9:00 PM	2.50	3.85	0.765		0.00
	10:00 PM	2.47	3.83	0.748		0.00
	11:00 PM	2.44	3.80	0.728		0.00
	MIN	2.34	3.66	0.662	MIN	0.00
	MAX	2.54	3.89	0.791	MAX	0.00
	AVE	2.45	3.79	0.730	TOTAL	0.00

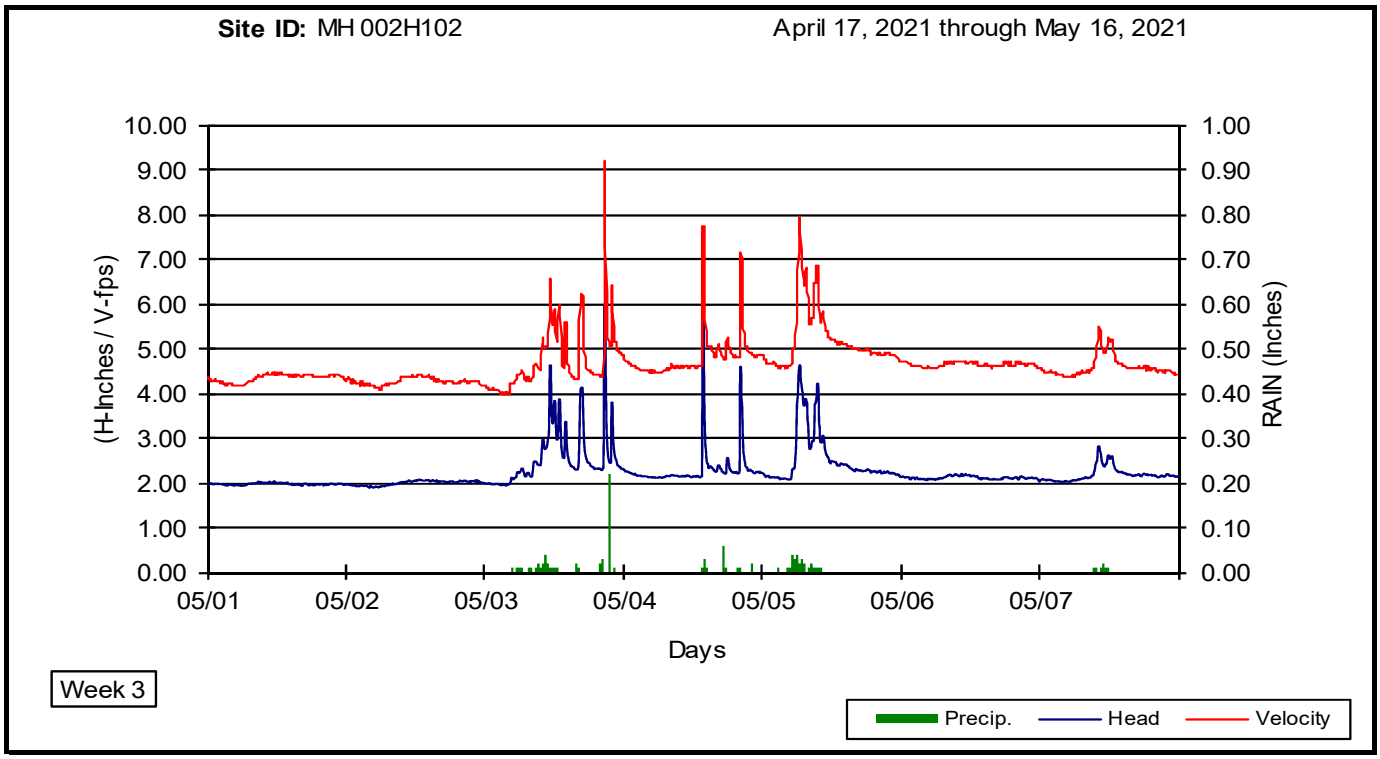

Site ID: MH 002H102
April 17, 2021 through May 16, 2021
MGD
RAIN (Inches)
1.200
1.000
0.800
0.600
0.400
0.200
0.000
1.00
0.90
0.80
0.70
0.60
0.50
0.40
0.30
0.20
0.10
0.00
04/17
04/18
04/19
04/20
04/21
04/22
04/23
Days
Week 1
Precip.
Flow
Dry Flow

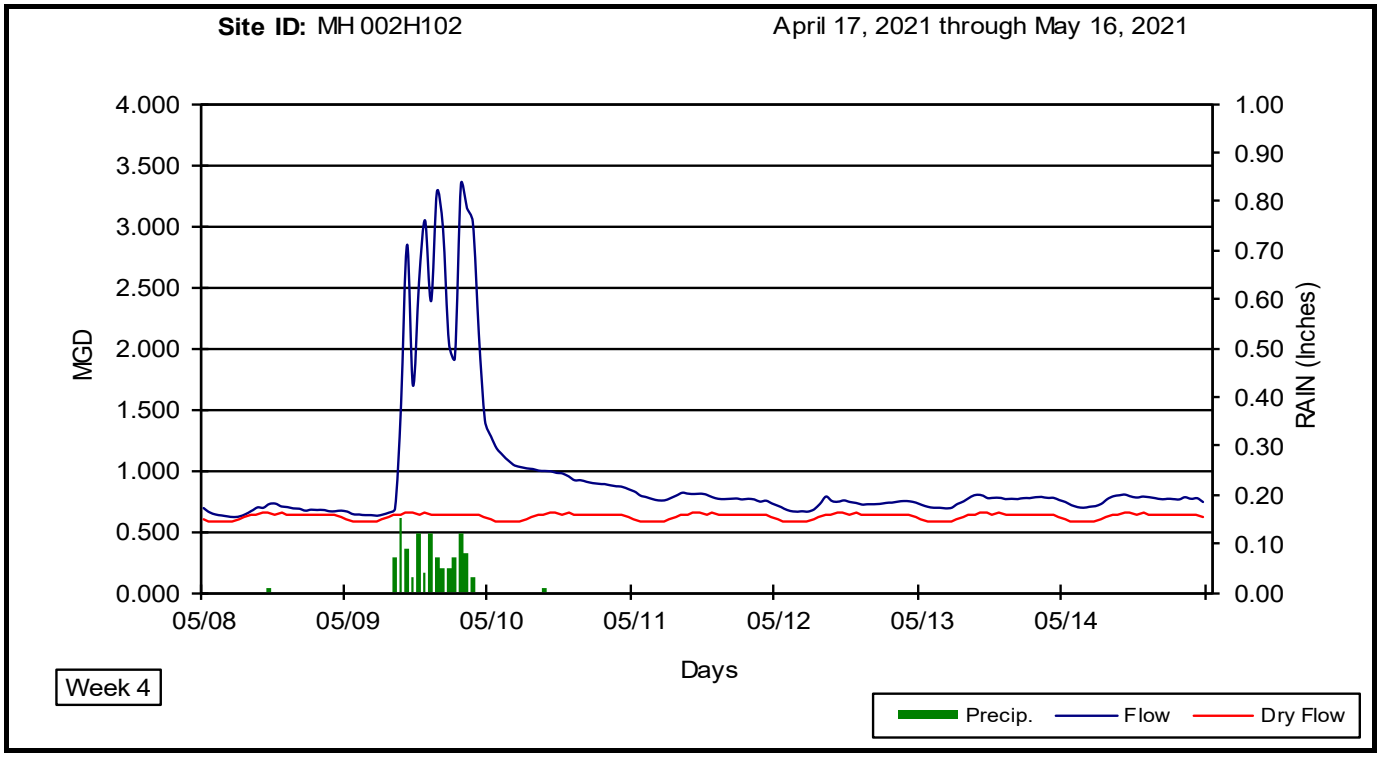

Site ID: MH 002H102
April 17, 2021 through May 16, 2021
(H-Inches / V-fps)
RAIN (Inches)
6.00
5.00
4.00
3.00
2.00
1.00
0.00
1.00
0.90
0.80
0.70
0.60
0.50
0.40
0.30
0.20
0.10
0.00
04/17
04/18
04/19
04/20
04/21
04/22
04/23
Days
Week 1
Precip.
Head
Velocity

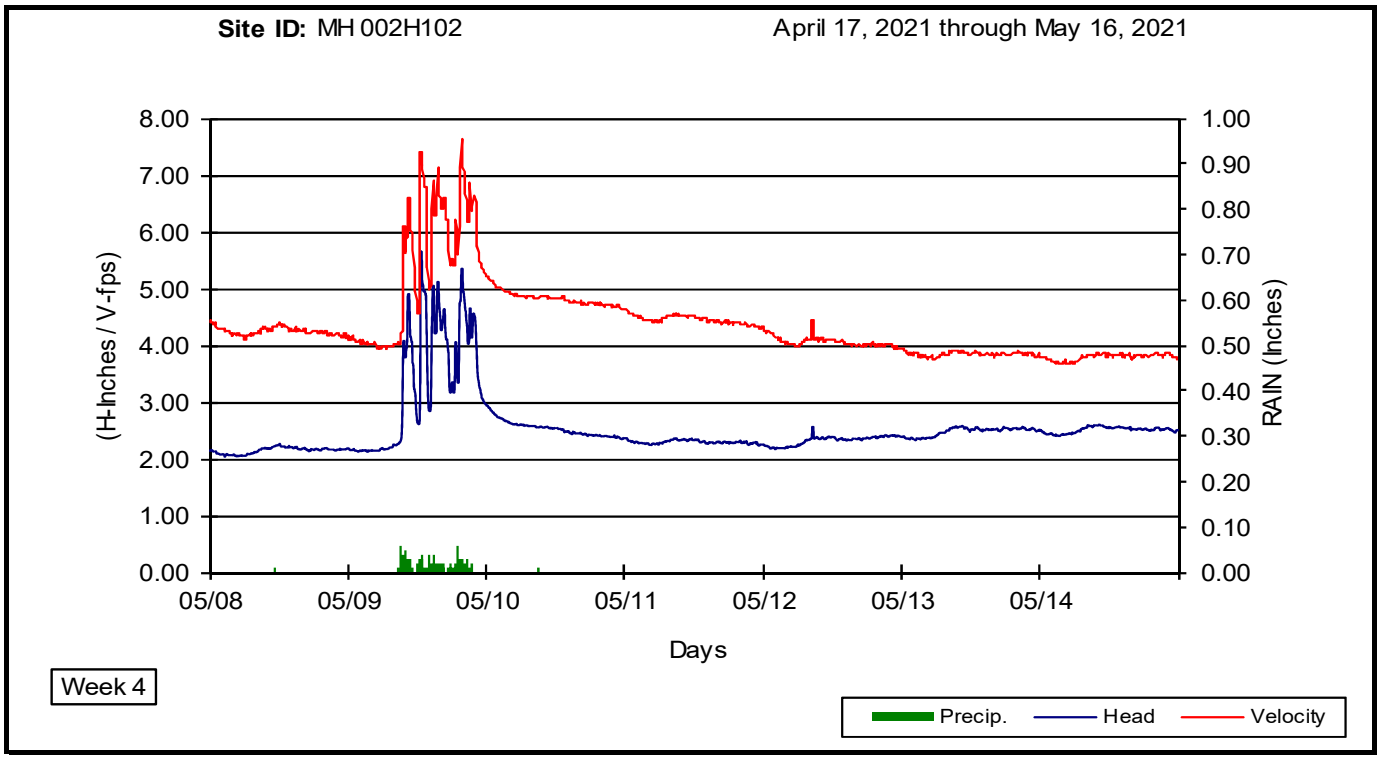

Site ID: MH 002H102
April 17, 2021 through May 16, 2021
MGD
RAIN (Inches)
7.000
6.000
5.000
4.000
3.000
2.000
1.000
0.000
1.00
0.90
0.80
0.70
0.60
0.50
0.40
0.30
0.20
0.10
0.00
04/24
04/25
04/26
04/27
04/28
04/29
04/30
Days
Week 2
Precip.
Flow
Dry Flow

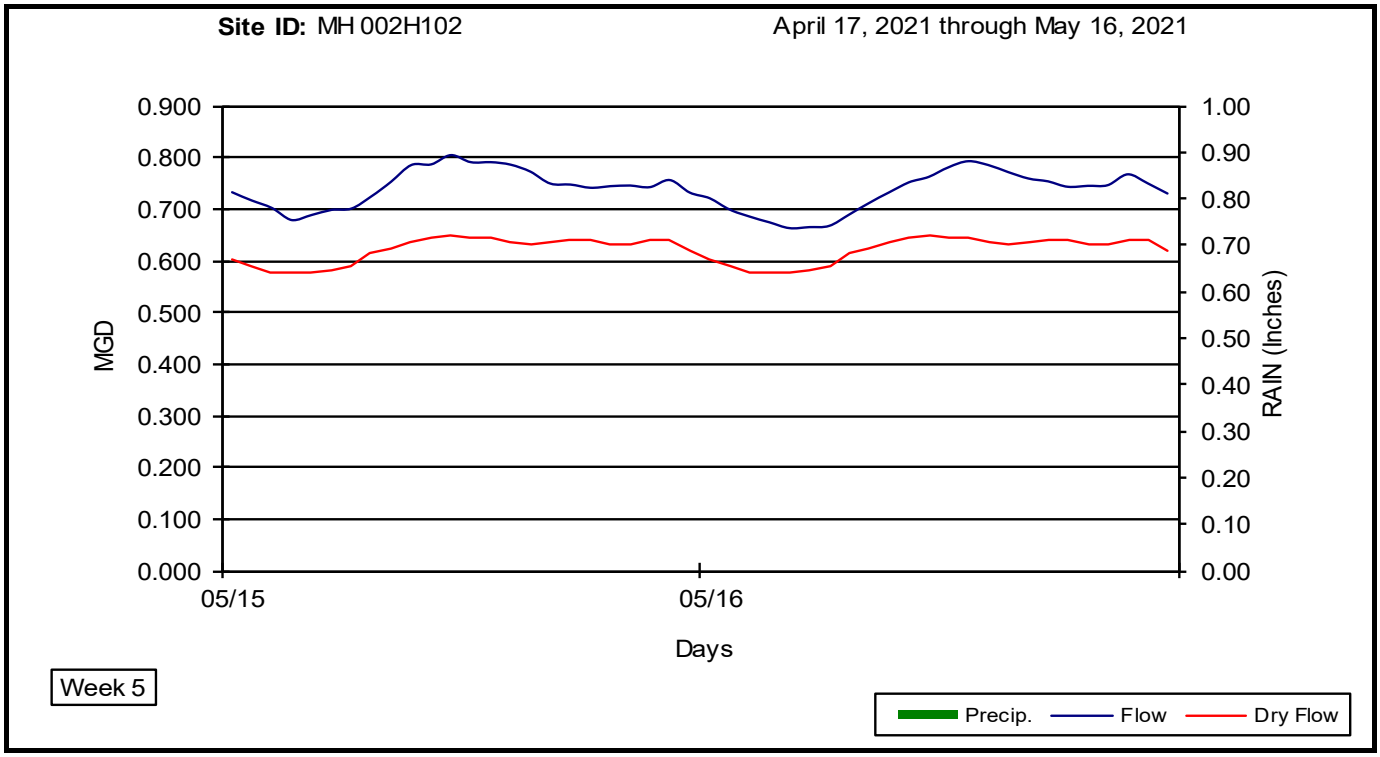

Site ID: MH 002H102
April 17, 2021 through May 16, 2021
(H-Inches / V-fps)
RAIN (Inches)
12.00
10.00
8.00
6.00
4.00
2.00
0.00
1.00
0.90
0.80
0.70
0.60
0.50
0.40
0.30
0.20
0.10
0.00
04/24
04/25
04/26
04/27
04/28
04/29
04/30
Days
Week 2
Precip.
Head
Velocity

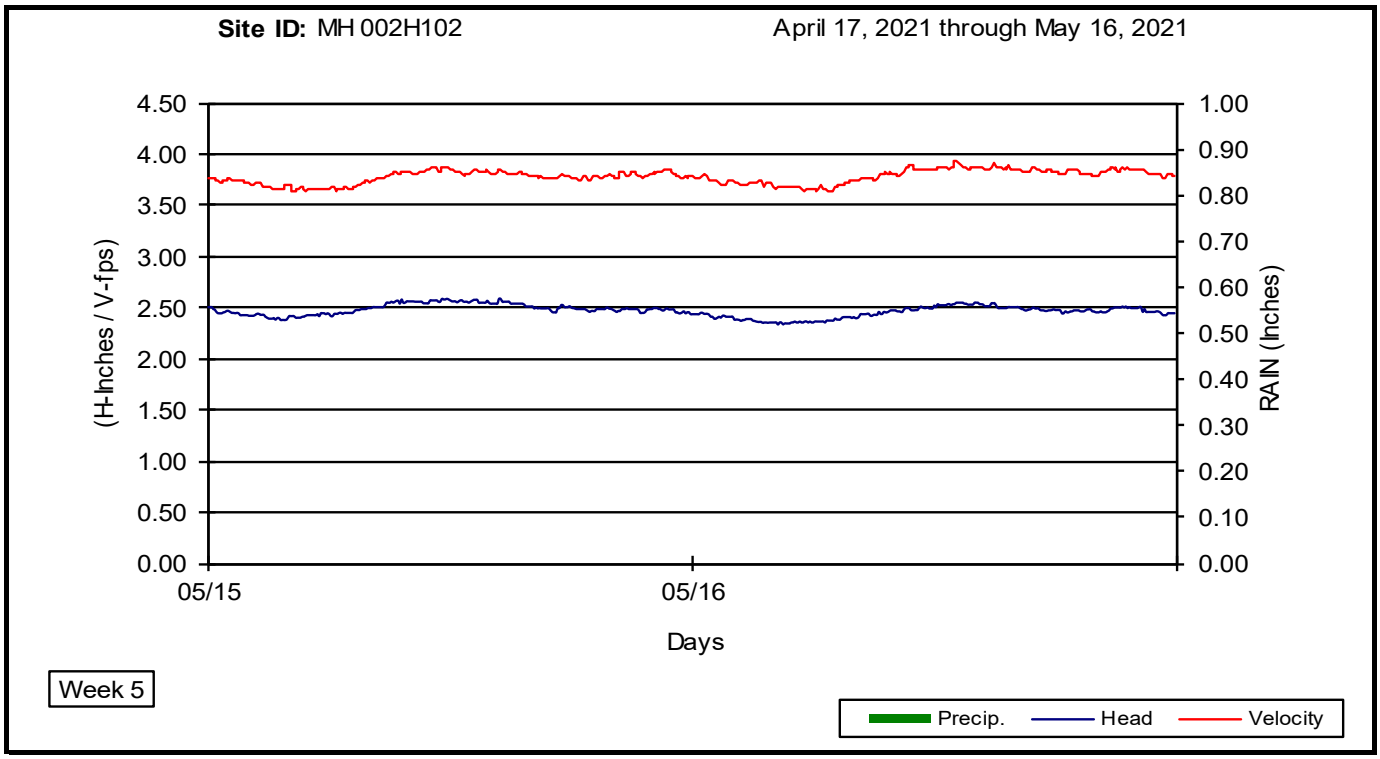

Site ID: MH 002H102
April 17, 2021 through May 16, 2021
MGD
RAIN (Inches)
3.500
3.000
2.500
2.000
1.500
1.000
0.500
0.000
1.00
0.90
0.80
0.70
0.60
0.50
0.40
0.30
0.20
0.10
0.00
05/01
05/02
05/03
05/04
05/05
05/06
05/07
Days
Week 3
Precip.
Flow
Dry Flow


Site ID: MH 002H102
April 17, 2021 through May 16, 2021
(H-Inches / V-fps)
RAIN (Inches)
10.00
9.00
8.00
7.00
6.00
5.00
4.00
3.00
2.00
1.00
0.00
1.00
0.90
0.80
0.70
0.60
0.50
0.40
0.30
0.20
0.10
0.00
05/01
05/02
05/03
05/04
05/05
05/06
05/07
Days
Week 3
Precip.
Head
Velocity


Site ID: MH 002H102
April 17, 2021 through May 16, 2021
MGD
RAIN (Inches)
4.000
3.500
3.000
2.500
2.000
1.500
1.000
0.500
0.000
1.00
0.90
0.80
0.70
0.60
0.50
0.40
0.30
0.20
0.10
0.00
05/08
05/09
05/10
05/11
05/12
05/13
05/14
Days
Week 4
Precip.
Flow
Dry Flow


Site ID: MH 002H102
April 17, 2021 through May 16, 2021
(H-Inches / V-fps)
RAIN (Inches)
8.00
7.00
6.00
5.00
4.00
3.00
2.00
1.00
0.00
1.00
0.90
0.80
0.70
0.60
0.50
0.40
0.30
0.20
0.10
0.00
05/08
05/09
05/10
05/11
05/12
05/13
05/14
Days
Week 4
Precip.
Head
Velocity


Site ID: MH 002H102
April 17, 2021 through May 16, 2021
MGD
RAIN (Inches)
0.900
0.800
0.700
0.600
0.500
0.400
0.300
0.200
0.100
0.000
1.00
0.90
0.80
0.70
0.60
0.50
0.40
0.30
0.20
0.10
0.00
05/15
05/16
Days
Week 5
Precip.
Flow
Dry Flow

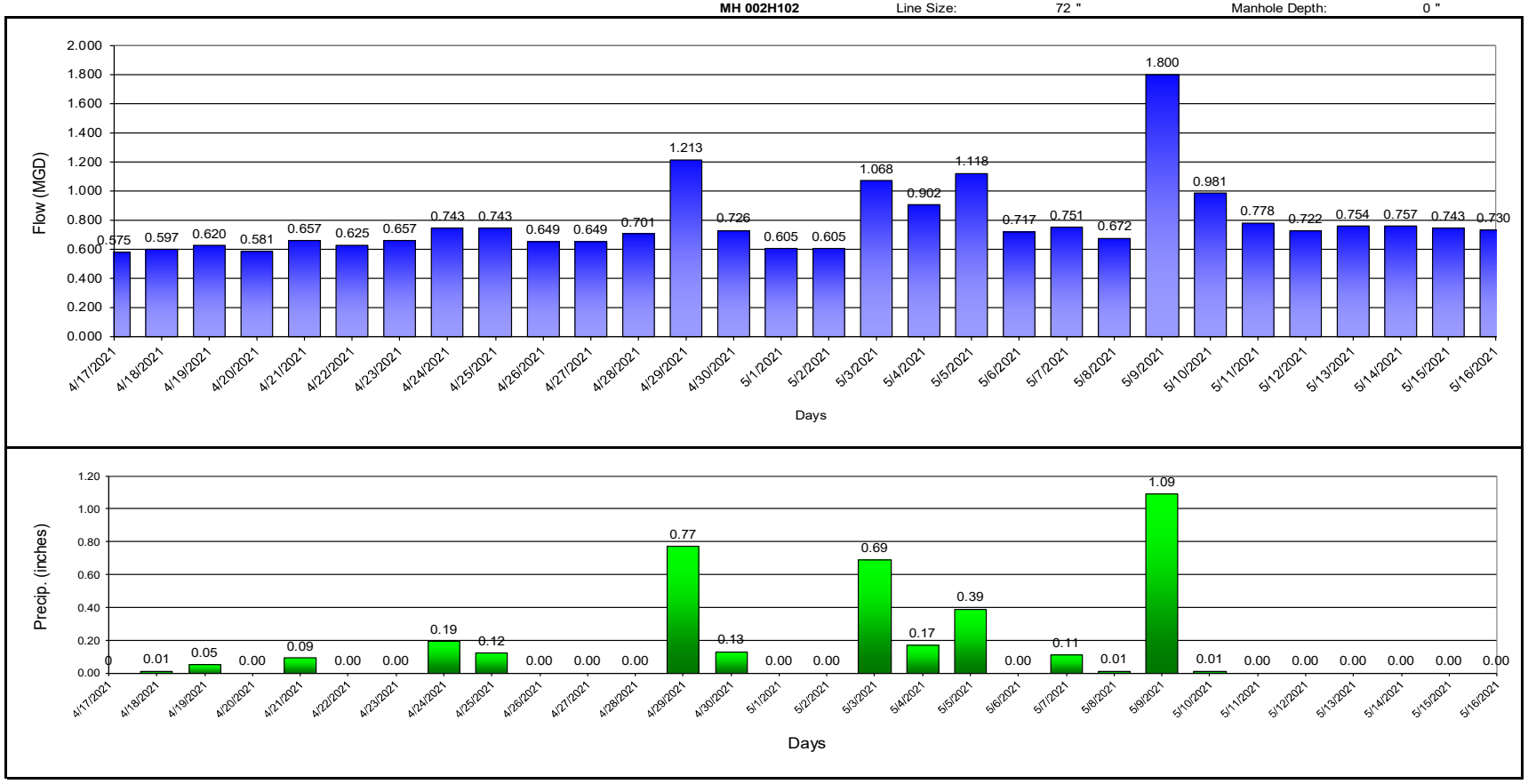

Site ID: MH 002H102
April 17, 2021 through May 16, 2021
(H-Inches / V-fps)
RAIN (Inches)
4.50
4.00
3.50
3.00
2.50
2.00
1.50
1.00
0.50
0.00
1.00
0.90
0.80
0.70
0.60
0.50
0.40
0.30
0.20
0.10
0.00
05/15
05/16
Days
Week 5
Precip.
Head
Velocity

DRNACH ENVIRONMENTAL, INC. **MH 002H102** April 17, 2021 through May 16, 2021

Date:	04/17/2021	04/18/2021	04/19/2021	04/20/2021	04/21/2021	04/22/2021	04/23/2021	04/24/2021	04/25/2021	04/26/2021	04/27/2021	04/28/2021	04/29/2021	04/30/2021	05/01/2021	05/02/2021
Flow:	0.575	0.597	0.620	0.581	0.657	0.625	0.657	0.743	0.743	0.649	0.649	0.701	1.213	0.726	0.605	0.605
Precip.:	0.00	0.01	0.05	0.00	0.09	0.00	0.00	0.19	0.12	0.00	0.00	0.00	0.77	0.13	0.00	0.00

Date:	05/03/2021	05/04/2021	05/05/2021	05/06/2021	05/07/2021	05/08/2021	05/09/2021	05/10/2021	05/11/2021	05/12/2021	05/13/2021	05/14/2021	05/15/2021	05/16/2021
Flow:	1.068	0.902	1.118	0.717	0.751	0.672	1.800	0.981	0.778	0.722	0.754	0.757	0.743	0.730
Precip.:	0.69	0.17	0.39	0.00	0.11	0.01	1.09	0.01	0.00	0.00	0.00	0.00	0.00	0.00

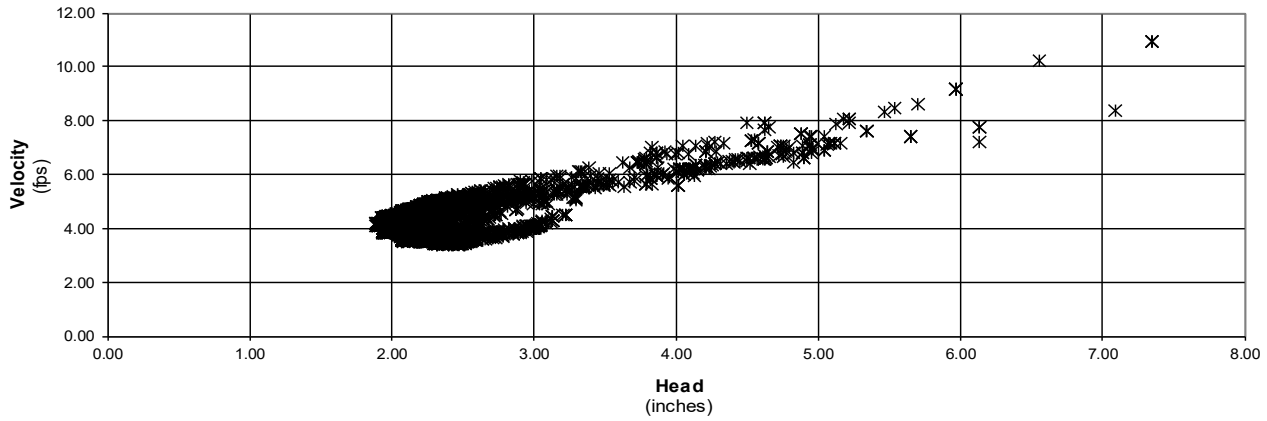
MH 002H102 Line Size: 72 " Manhole Depth: 0 "



Line Size: 72 " Manhole Depth: 0 "

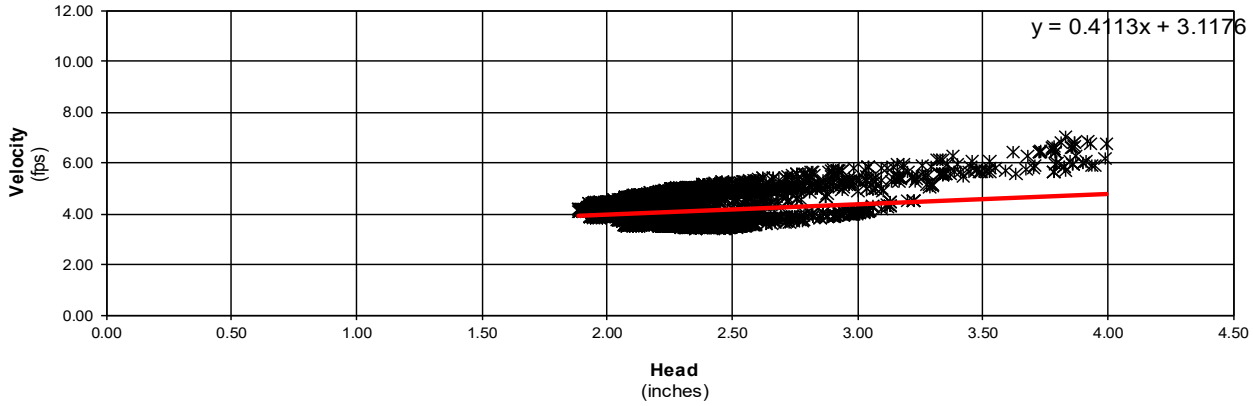
MH 002H102 April 17, 2021 through May 16, 2021

Scatter Plot (Head Vs Velocity)



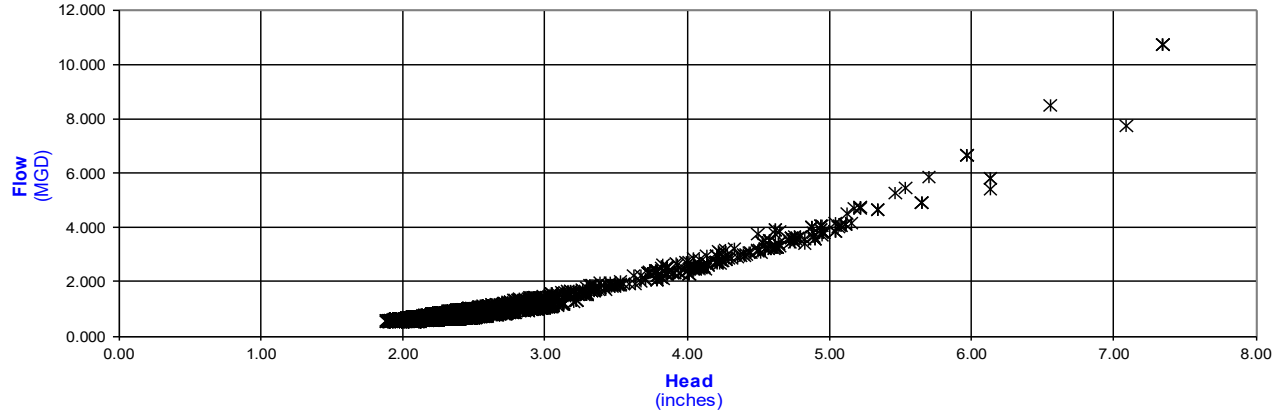
MH 002H102 April 17, 2021 through May 16, 2021

Scatter Plot (Free Flow)



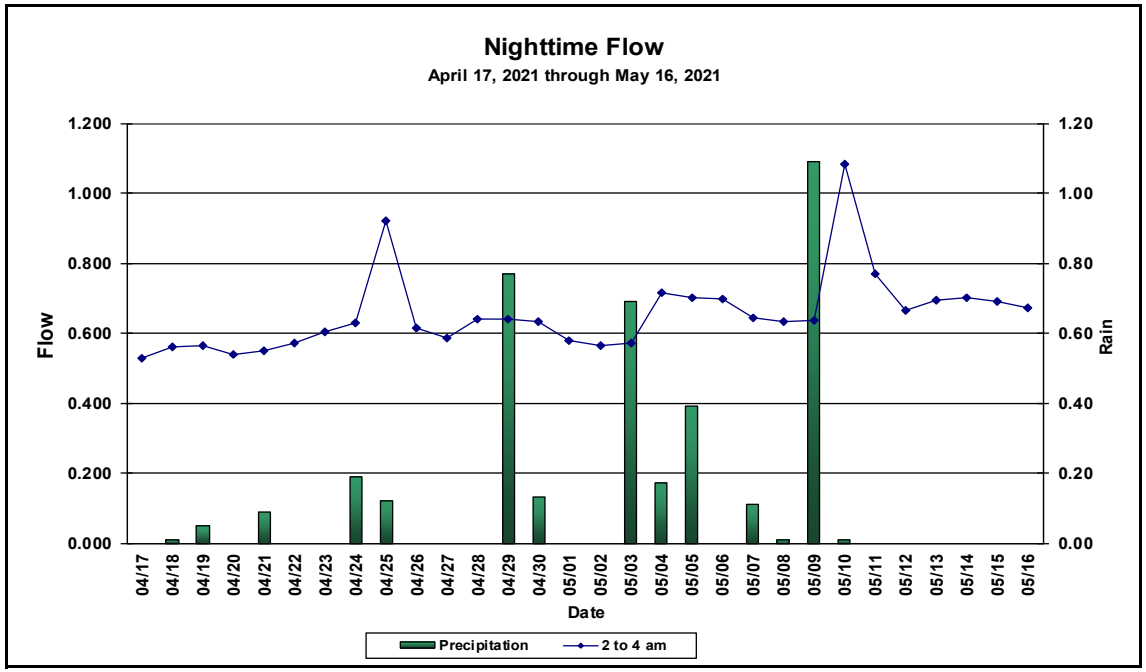
MH 002H102 April 17, 2021 through May 16, 2021

Scatter Plot (Head Vs Flow)



MH 002H102
Nighttime Flow

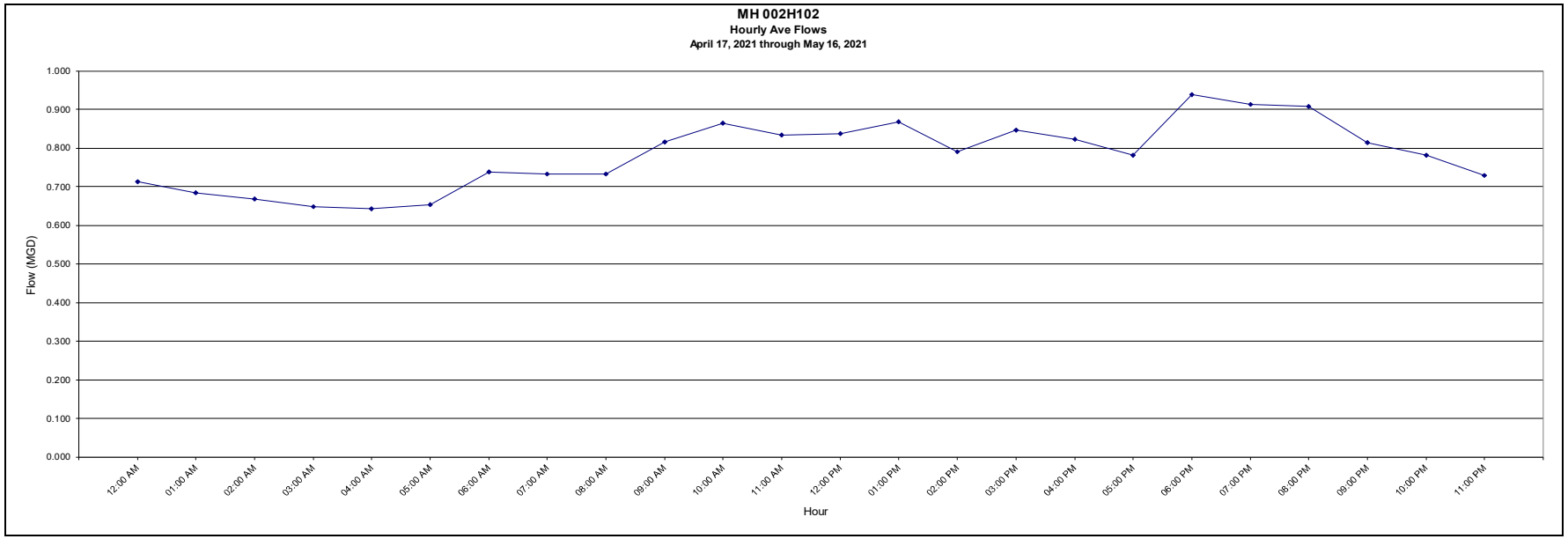
Date	Total 24 hr Precipitation	Ave flow 2 to 4 am
04/17	0.00	0.530
04/18	0.01	0.562
04/19	0.05	0.565
04/20	0.00	0.539
04/21	0.09	0.551
04/22	0.00	0.571
04/23	0.00	0.603
04/24	0.19	0.628
04/25	0.12	0.920
04/26	0.00	0.613
04/27	0.00	0.586
04/28	0.00	0.640
04/29	0.77	0.640
04/30	0.13	0.632
05/01	0.00	0.579
05/02	0.00	0.562
05/03	0.69	0.569
05/04	0.17	0.715
05/05	0.39	0.702
05/06	0.00	0.697
05/07	0.11	0.643
05/08	0.01	0.631
05/09	1.09	0.636
05/10	0.01	1.081
05/11	0.00	0.768
05/12	0.00	0.666
05/13	0.00	0.694
05/14	0.00	0.699
05/15	0.00	0.689
05/16	0.00	0.673
AVG	0.13	0.653
MIN	0.00	0.530
MAX	1.09	1.081



Nighttime Flows During Dry Weather Flow is Commonly Estimated to be 90% Ground Water Infiltration According to EPA SSOAP Toolbox

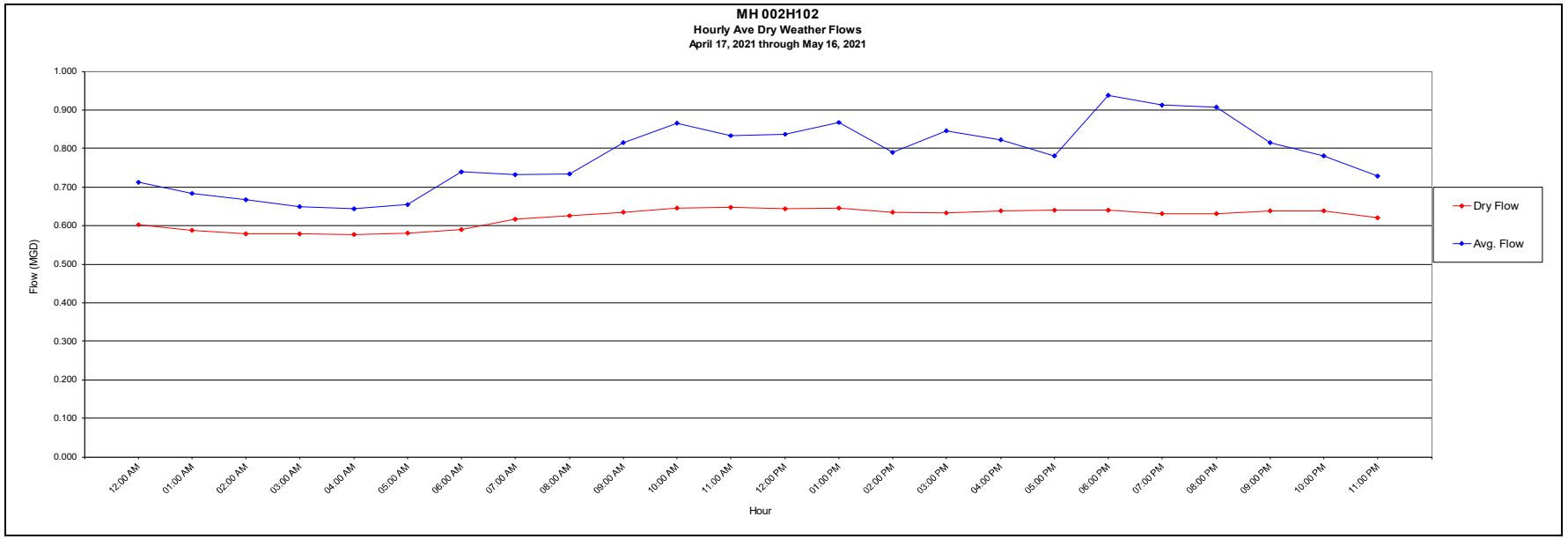
Average Hourly Flow April 17, 2021 through May 16, 2021

2021	04/17	04/18	04/19	04/20	04/21	04/22	04/23	04/24	04/25	04/26	04/27	04/28	04/29	04/30	05/01	05/02	05/03	05/04	05/05	05/06	05/07	05/08	05/09	05/10	05/11	05/12	05/13	05/14	05/15	05/16	Average
12:00 AM	0.559	0.576	1.033	0.570	0.577	0.606	0.621	0.662	1.013	0.640	0.617	0.672	0.673	0.715	0.607	0.592	0.580	0.808	0.764	0.735	0.678	0.692	0.663	1.280	0.828	0.712	0.719	0.742	0.731	0.719	0.713
01:00 AM	0.540	0.563	0.801	0.551	0.560	0.580	0.620	0.641	1.025	0.632	0.610	0.651	0.655	0.684	0.596	0.576	0.568	0.762	0.726	0.716	0.667	0.657	0.642	1.179	0.795	0.686	0.702	0.717	0.715	0.698	0.684
02:00 AM	0.534	0.563	0.594	0.545	0.551	0.574	0.608	0.626	1.111	0.618	0.592	0.644	0.647	0.653	0.589	0.571	0.559	0.731	0.717	0.708	0.653	0.639	0.639	1.125	0.781	0.669	0.696	0.701	0.701	0.684	0.667
03:00 AM	0.526	0.558	0.556	0.536	0.553	0.569	0.599	0.636	0.877	0.608	0.582	0.642	0.631	0.629	0.575	0.563	0.548	0.713	0.697	0.694	0.641	0.631	0.634	1.077	0.766	0.662	0.695	0.694	0.678	0.673	0.648
04:00 AM	0.529	0.564	0.544	0.536	0.550	0.569	0.602	0.624	0.772	0.614	0.584	0.635	0.641	0.612	0.573	0.552	0.601	0.701	0.693	0.688	0.635	0.623	0.635	1.042	0.756	0.666	0.690	0.704	0.687	0.662	0.643
05:00 AM	0.529	0.557	0.556	0.536	0.555	0.572	0.609	0.627	0.686	0.617	0.590	0.650	0.643	0.615	0.570	0.545	0.693	0.693	0.986	0.687	0.641	0.618	0.630	1.028	0.754	0.662	0.696	0.709	0.697	0.664	0.654
06:00 AM	0.537	0.566	0.567	0.548	0.575	0.583	0.621	0.643	0.668	0.626	0.599	0.662	0.658	0.627	0.572	0.559	0.756	0.694	3.185	0.697	0.659	0.623	0.640	1.017	0.773	0.683	0.726	0.727	0.700	0.666	0.738
07:00 AM	0.547	0.576	0.595	0.576	0.646	0.614	0.658	0.666	0.669	0.657	0.636	0.686	0.687	0.647	0.600	0.573	0.699	0.715	2.377	0.719	0.680	0.642	0.656	1.012	0.794	0.727	0.747	0.765	0.723	0.688	0.733
08:00 AM	0.570	0.586	0.606	0.586	0.805	0.644	0.663	0.692	0.690	0.671	0.659	0.772	0.824	0.665	0.620	0.590	0.816	0.731	1.380	0.749	0.694	0.668	0.686	1.000	0.817	0.787	0.780	0.790	0.752	0.710	0.733
09:00 AM	0.594	0.622	0.610	0.592	0.746	0.643	0.685	0.716	0.705	0.670	0.648	0.788	0.963	0.660	0.628	0.618	0.910	0.726	2.419	0.756	0.833	0.697	1.544	0.996	0.810	0.749	0.799	0.797	0.784	0.731	0.815
10:00 AM	0.605	0.638	0.620	0.601	0.748	0.654	0.689	0.751	0.706	0.679	0.662	0.750	1.425	0.644	0.633	0.633	1.233	0.727	1.422	0.754	1.142	0.695	2.852	0.994	0.808	0.743	0.798	0.803	0.785	0.750	0.865
11:00 AM	0.611	0.628	0.613	0.609	0.743	0.642	0.689	0.743	0.703	0.687	0.662	0.736	1.260	0.643	0.637	0.638	2.152	0.724	1.077	0.756	0.970	0.726	1.696	0.981	0.810	0.755	0.774	0.785	0.803	0.761	0.834
12:00 PM	0.613	0.636	0.614	0.588	0.695	0.641	0.685	0.739	0.701	0.665	0.665	0.735	0.955	0.650	0.631	0.653	1.802	0.726	1.002	0.743	1.033	0.728	2.540	0.975	0.802	0.742	0.776	0.778	0.789	0.779	0.836
01:00 PM	0.617	0.640	0.608	0.593	0.643	0.642	0.683	0.723	0.697	0.674	0.685	0.719	0.803	0.635	0.625	0.646	1.292	2.225	0.960	0.717	0.807	0.706	3.051	0.951	0.782	0.734	0.777	0.786	0.789	0.791	0.867
02:00 PM	0.608	0.620	0.598	0.591	0.638	0.638	0.656	0.719	0.702	0.659	0.672	0.719	0.683	0.644	0.608	0.642	1.069	1.173	0.946	0.709	0.772	0.701	2.390	0.921	0.767	0.721	0.767	0.780	0.784	0.783	0.789
03:00 PM	0.592	0.626	0.595	0.599	0.647	0.638	0.664	0.714	0.689	0.663	0.667	0.706	0.653	2.276	0.606	0.632	0.774	0.869	0.886	0.694	0.740	0.689	3.286	0.921	0.766	0.724	0.767	0.772	0.771	0.770	0.847
04:00 PM	0.590	0.610	0.594	0.592	0.692	0.639	0.671	0.714	0.679	0.645	0.665	0.708	0.647	0.950	0.605	0.621	1.780	0.885	0.864	0.695	0.731	0.687	2.988	0.908	0.768	0.725	0.767	0.765	0.748	0.758	0.823
05:00 PM	0.595	0.608	0.586	0.594	0.728	0.645	0.669	0.709	0.684	0.651	0.681	0.700	1.252	0.682	0.608	0.612	1.138	0.836	0.851	0.706	0.736	0.671	2.037	0.896	0.771	0.726	0.774	0.767	0.746	0.752	0.780
06:00 PM	0.584	0.596	0.599	0.598	0.738	0.658	0.676	0.731	0.683	0.654	0.674	0.702	6.346	0.652	0.601	0.615	0.821	0.902	0.852	0.721	0.743	0.679	1.923	0.892	0.762	0.734	0.775	0.766	0.740	0.742	0.939
07:00 PM	0.581	0.611	0.602	0.599	0.739	0.650	0.680	0.829	0.686	0.652	0.673	0.712	4.193	0.640	0.604	0.615	0.782	0.803	0.828	0.711	0.731	0.676	3.345	0.888	0.769	0.738	0.780	0.762	0.743	0.743	0.912
08:00 PM	0.584	0.611	0.605	0.596	0.739	0.647	0.675	0.840	0.670	0.649	0.672	0.715	1.371	0.638	0.599	0.624	2.510	1.978	0.819	0.719	0.708	0.677	3.151	0.878	0.762	0.745	0.783	0.781	0.744	0.745	0.908
09:00 PM	0.586	0.614	0.605	0.601	0.656	0.655	0.688	0.916	0.688	0.657	0.686	0.720	0.922	0.633	0.616	0.618	1.314	0.887	0.820	0.713	0.714	0.666	3.038	0.871	0.745	0.750	0.775	0.768	0.741	0.765	0.814
10:00 PM	0.590	0.596	0.598	0.613	0.634	0.652	0.674	1.052	0.672	0.652	0.693	0.709	0.821	0.624	0.613	0.624	1.349	0.817	0.801	0.716	0.721	0.667	2.122	0.866	0.753	0.748	0.776	0.773	0.755	0.748	0.781
11:00 PM	0.586	0.576	0.588	0.594	0.614	0.644	0.675	1.126	0.661	0.635	0.692	0.689	0.758	0.616	0.603	0.599	0.879	0.816	0.767	0.696	0.700	0.670	1.410	0.846	0.729	0.737	0.757	0.743	0.730	0.728	0.729
AVG.	0.575	0.597	0.620	0.581	0.657	0.625	0.657	0.743	0.743	0.649	0.649	0.701	1.213	0.726	0.605	0.605	1.068	0.902	1.118	0.717	0.751	0.672	1.800	0.981	0.778	0.722	0.754	0.757	0.743	0.730	**0.781**
Precip. :	0.00	0.01	0.05	0.00	0.09	0.00	0.00	0.19	0.12	0.00	0.00	0.00	0.77	0.13	0.00	0.00	0.69	0.17	0.39	0.00	0.11	0.01	1.09	0.01	0.00	0.00	0.00	0.00	0.00	0.00	

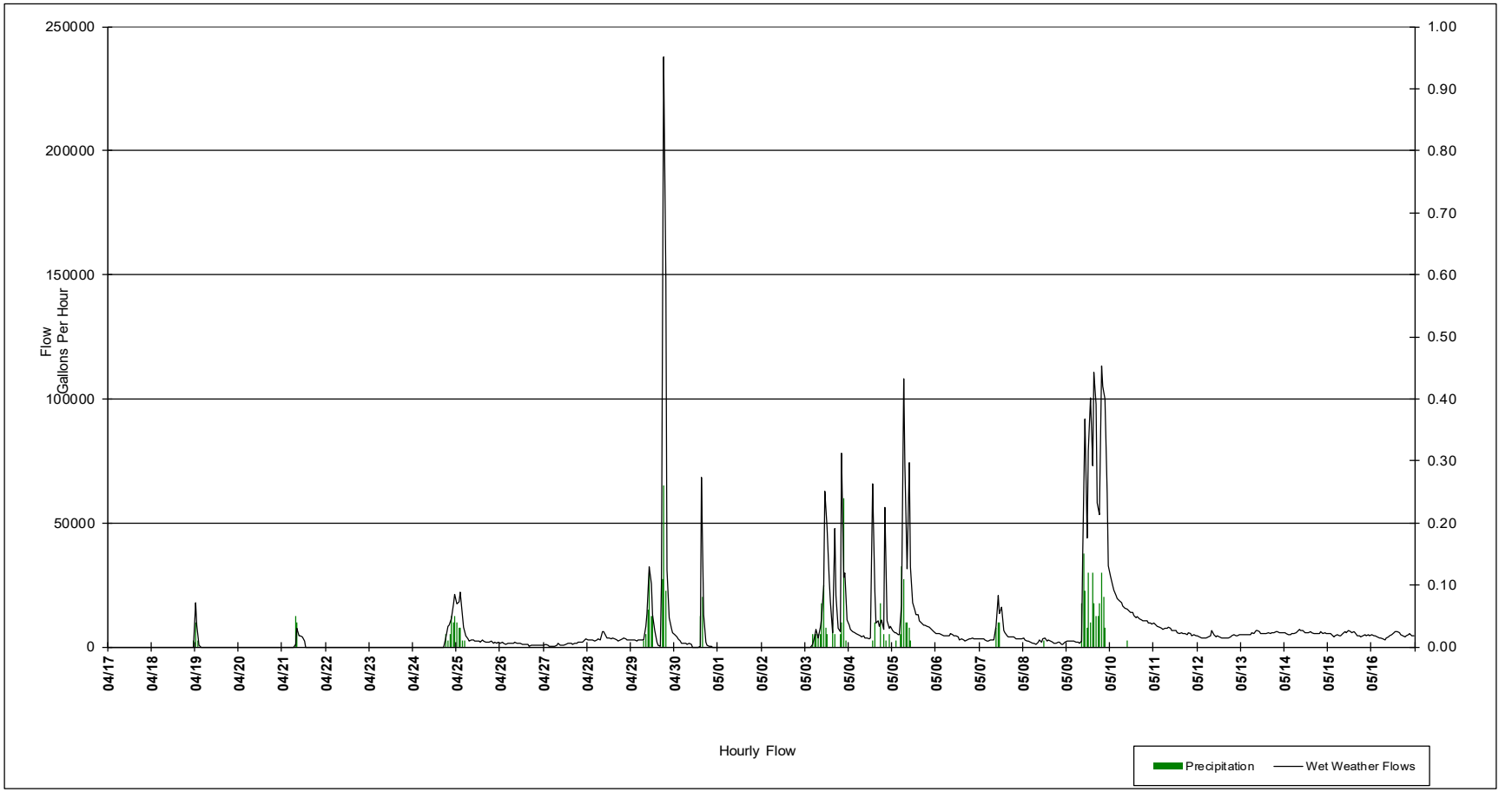


Average Hourly Dry Flow April 17, 2021 through May 16, 2021

2021	04/17	04/18	04/19	04/20	04/21	04/22	04/23	04/24	04/25	04/26	04/27	04/28	04/29	04/30	05/01	05/02	05/03	05/04	05/05	05/06	05/07	05/08	05/09	05/10	05/11	05/12	05/13	05/14	05/15	05/16	Average
12:00 AM	0.559			0.570		0.606	0.621			0.640	0.617				0.607	0.592															0.602
01:00 AM	0.540			0.551		0.580	0.620			0.632	0.610				0.596	0.576															0.588
02:00 AM	0.534			0.545		0.574	0.608			0.618	0.592				0.589	0.571															0.579
03:00 AM	0.526			0.536		0.569	0.599			0.608	0.582	0.642			0.575	0.563															0.578
04:00 AM	0.529			0.536		0.569	0.602			0.614	0.584	0.635			0.573	0.552															0.577
05:00 AM	0.529			0.536		0.572	0.609			0.617	0.590	0.650			0.570	0.545															0.580
06:00 AM	0.537			0.548		0.583	0.621			0.626	0.599	0.662			0.572	0.559															0.590
07:00 AM	0.547			0.576		0.614	0.658			0.657	0.636	0.686			0.600	0.573															0.616
08:00 AM	0.570			0.586		0.644	0.663			0.671	0.659				0.620	0.590															0.625
09:00 AM	0.594			0.592		0.643	0.685			0.670	0.648				0.628	0.618															0.635
10:00 AM	0.605			0.601		0.654	0.689			0.679	0.662				0.633	0.633															0.644
11:00 AM	0.611			0.609		0.642	0.689			0.687	0.662				0.637	0.638															0.647
12:00 PM	0.613			0.588		0.641	0.685			0.665	0.665				0.631	0.653															0.643
01:00 PM	0.617			0.593		0.642	0.683			0.674	0.685				0.625	0.646															0.646
02:00 PM	0.608			0.591		0.638	0.656			0.659	0.672				0.608	0.642															0.634
03:00 PM	0.592			0.599		0.638	0.664			0.663	0.667				0.606	0.632															0.633
04:00 PM	0.590			0.592		0.639	0.671			0.645	0.665	0.708			0.605	0.621															0.637
05:00 PM	0.595			0.594		0.645	0.669			0.651	0.681	0.700			0.608	0.612															0.639
06:00 PM	0.584			0.598		0.658	0.676			0.654	0.674	0.702			0.601	0.615															0.640
07:00 PM	0.581			0.599		0.650	0.680			0.652	0.673				0.604	0.615															0.631
08:00 PM	0.584			0.596		0.647	0.675			0.649	0.672				0.599	0.624															0.631
09:00 PM	0.586			0.601		0.655	0.688			0.657	0.686				0.616	0.618															0.638
10:00 PM	0.590			0.613		0.652	0.674			0.652	0.693				0.613	0.624															0.639
11:00 PM	0.586			0.594		0.644	0.675			0.635					0.603	0.599															0.620
AVG.	0.575			0.581		0.625	0.657			0.649	0.647	0.673			0.605	0.605															**0.620**
Precip. :	0.00	0.01	0.05	0.00	0.09	0.00	0.00	0.19	0.12	0.00	0.00	0.00	0.77	0.13	0.00	0.00	0.69	0.17	0.39	0.00	0.11	0.01	1.09	0.01	0.00	0.00	0.00	0.00	0.00	0.00	



Wet Weather Flow Volumes **MH 002H102**



Date:	4/17/2021	4/18/2021	4/19/2021	4/20/2021	4/21/2021	4/22/2021	4/23/2021	4/24/2021	4/25/2021	4/26/2021	4/27/2021	4/28/2021	4/29/2021	4/30/2021	5/1/2021	5/2/2021
Flow (GPD):	0	0	27,501	0	23,840	0	0	70,629	122,718	28,512	28,056	80,502	592,567	107,227	0	0
Precip. (In.):	0.00	0.01	0.05	0.00	0.09	0.00	0.00	0.19	0.12	0.00	0.00	0.00	0.77	0.13	0.00	0.00

Date:	5/3/2021	5/4/2021	5/5/2021	5/6/2021	5/7/2021	5/8/2021	5/9/2021	5/10/2021	5/11/2021	5/12/2021	5/13/2021	5/14/2021	5/15/2021	5/16/2021
Flow (GPD):	450,979	281,379	497,824	96,196	130,642	51,559	1,179,407	360,537	157,428	101,387	133,529	136,799	122,656	109,238
Precip. (In.):	0.69	0.17	0.39	0.00	0.11	0.01	1.09	0.01	0.00	0.00	0.00	0.00	0.00	0.00

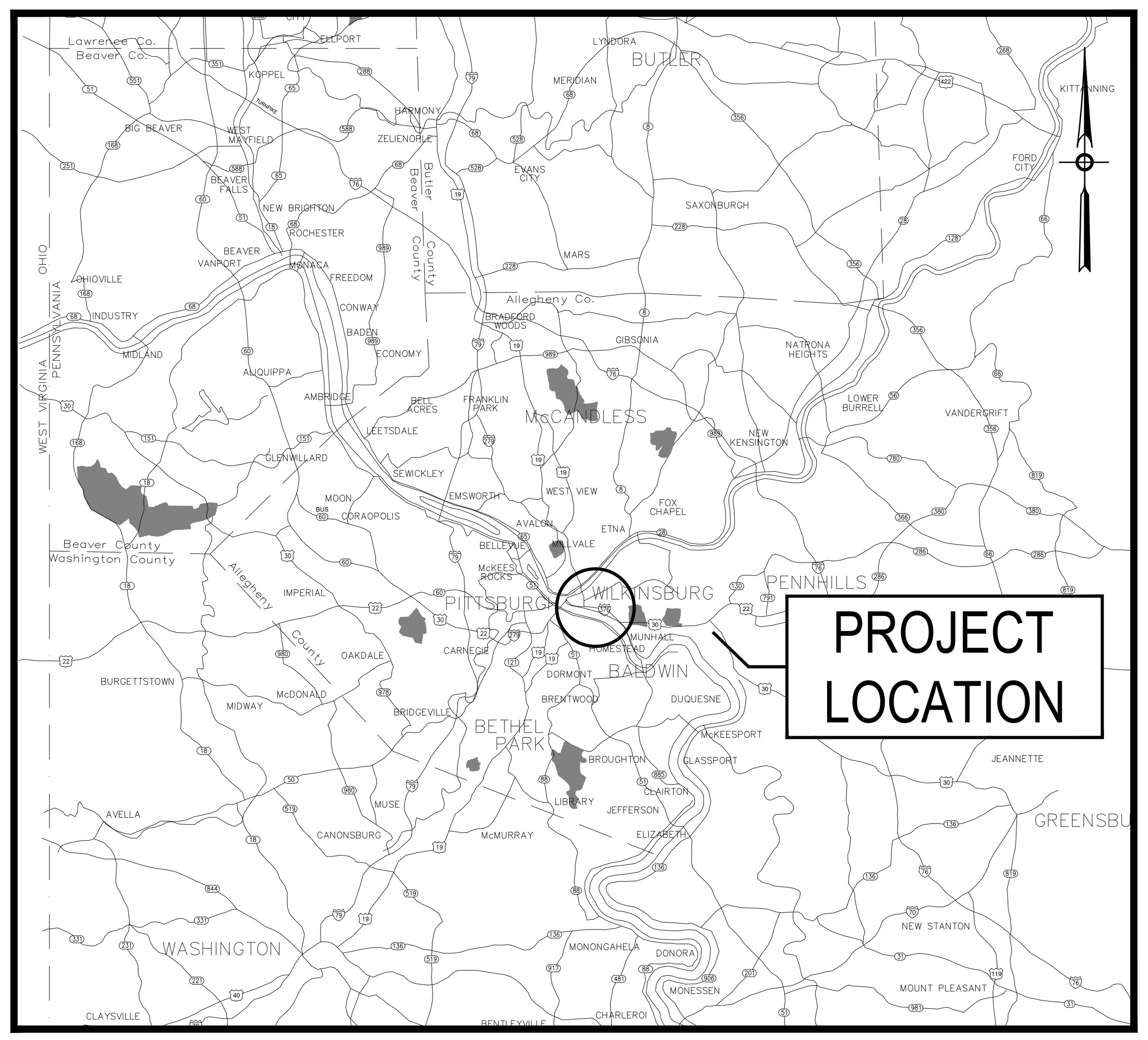
DRAWINGS

FIFTH AND DINWIDDIE DEVELOPMENT - EAST SITE

WATER AND SEWER TAP AND TERMINATION PLAN

PITTSBURGH WATER AND SEWER AUTHORITY

95% DESIGN DRAWINGS



VICINITY MAP
NTS

LOCATION MAP
NTS

JUNE 16, 2021

INDEX OF WATER AND SEWER TAP PLAN DRAWINGS

PEAK DAILY FLOW DEMANDS

To be completed by the Applicant:

TYPE OF FLOW	SANITARY, GPD	WATER, GPD	STORM, CFS
PROJECT FLOW	4,495	4,490	1.62
EXISTING FLOW	2,139	2,139	1.87
NET FLOW	2,356	2,351	NOT REQUIRED
PWSA W&S USE APPROVAL DATE (If required)			
DEP SFPM APPROVAL DATE (If required)			

PEAK OPERATING WATER DEMANDS

To be completed by the Applicant:

METER INFORMATION					DOMESTIC SYSTEM		FIRE SYSTEM	
I.D.	QUANTITY	SIZE	TYPE	USE	FLOW, GPM	PRESSURE, PSI	FLOW, GPM	PRESSURE, PSI
A	1	XX	XX	COMBINATION	30	XX	360	XX
B								
C								
D								
E								

METER SIZE: ⅝", ⅝"x¾", ¾", 1", 2", 3", 4", 6", 8", 10", 12", 16"
METER TYPE: POSITIVE DISPLACEMENT, COMPOUND, ELECTROMAGNETIC, ULTRASONIC, TURBINE
METER USE: DOMESTIC, FIRE, COMBINATION

HYDRANT FLOW TEST RESULTS

To be completed by the Applicant:

DATE OF TEST 09/09/2020
HYDRANT PERMIT NUMBER
PERFORMED BY MICHAEL BAKER INTL.

FLOW HYDRANT

HYDRANT NUMBER A681
LOCATION NE CORNER OF MILTENBERGER AND 5TH AVE
FLOW OBSERVED, GPM 1,454

PRESSURE HYDRANT

HYDRANT NUMBER A676
LOCATION ACROSS 5TH AVE FROM 1807 5TH AVE
STATIC PRESSURE, PSI 82
RESIDUAL PRESSURE, PSI 80

CALCULATIONS

PROJECTED FLOW AT 20 PSI, GPM

SPRINKLER SYSTEM DESIGN INFORMATION

To be completed by the Applicant:

LOCATION(S):

TYPE OF SYSTEM (Check one)

___ 13D
___ 13R
___ 13
___ OTHER:

SYSTEM CONFIGURATION (Check one)

___ STAND-ALONE SPRINKLER SYSTEM
___ MULTI-PURPOSE SPRINKLER SYSTEM

HOSE DEMANDS (N/A for 13D systems)

INSIDE HOSE DEMAND, GPM
OUTSIDE HOSE DEMAND, GPM

Michael Baker
INTERNATIONAL
100 Airside Drive
Moon Township, PA 15108
Phone: 412-269-6300
Fax: 412-375-3977

OWNER: Fifth and Dinwiddie Development, LLC
CIVIL ENGINEER: Michael Baker International
ARCHITECT: GBBN Architects
MASTER PLANNERS / LANDSCAPE ARCHITECT: evolveEA

Seal:

PRELIMINARY DESIGN
NOT FOR CONSTRUCTION USE

No.	Description	Date

Project Number: 176433
Drawn By: BRF

THE PITTSBURGH WATER & SEWER AUTHORITY APPROVAL BLOCK

To be completed by the Applicant:

(Check all that apply)

X NEW WATER CONNECTION(S)
X NEW SEWER CONNECTION(S)
___ REUSE EXISTING WATER CONNECTION(S)
___ REUSE EXISTING SEWER CONNECTION(S)
X TERMINATE EXISTING WATER CONNECTION(S)
___ TERMINATE EXISTING SEWER CONNECTION(S)
___ PRIVATE CONSTRUCTION OF PUBLIC FACILITIES

To be completed by the PWSA:

(Required for ALL approvals)

REVIEWER

CHIEF OF OPERATIONS

(Required for "Private Construction of Public Facilities" ONLY)

DIRECTOR OF ENGINEERING AND CONSTRUCTION

PWSA PROJECT NUMBER ___

TAP C RECORD NUMBER ___

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FIFTH AND DINWIDDIE DEVELOPMENT, LLC

FIFTH AND DINWIDDIE DEVELOPMENT - EAST SITE
WATER AND SEWER TAP PLAN

COVER SHEET

SCALE: AS SHOWN SHEET ACCESSION No. ___

DATE: 06/16/2021 1 OF 10 CASE No. ___

PLOT DATE: 7/20/2021 12:55 PM

\\mcorpstc1.bkr.mbakercorp.com\CE&E\5th and din development - 499325\176433_fifth and dinwiddie\06 drawings\Civil Sheet Files\PWSA Termination Plan - East Site\176433_TERM_UD101.dwg

PWSA SAN MANHOLE MH011E012 TOP 884.72 xx" FL xxxx.xx IN xx" FL xxxx.xx OUT

#1715,1717,1719,1721 COLWELL STREET

#205 DINWIDDIE STREET

#202 DINWIDDIE STREET

PWSA STORM INLET TOP 859.87

PWSA STORM INLET TOP 858.93 15" FL 855.43 OUT

PWSA SAN MANHOLE (#5) MH011E016 TOP 858.96 42" FL 846.17 OUT

COLWELL STREET 50' ROW

PWSA 12" WATER (FROM RECORD)

#1652 COLWELL STREET

PWSA STORM INLET TOP 859.00

DINWIDDIE STREET 50' ROW

11-E-53 #1711 OUR WAY 11-E-55 11-E-56 11-E-57 11-E-58 11-E-59 11-E-60 11-E-60-A 11-E-61 11-E-62 11-E-63 11-E-64 11-E-65 11-E-65-A 11-E-66 11-E-67 11-E-68 11-E-69 11-E-70 11-E-71 11-E-72 11-E-73

#115 DINWIDDIE STREET

#113 DINWIDDIE STREET

11-E-75 11-E-76 11-E-77

PWSA SAN MANHOLE (#4) MH011E019 TOP 851.36 24" FL 840.11 IN 42" FL 839.21 OUT

11-E-79

11-E-80

TERMINATE EX. WATER SERVICE METER #44798935 WS-STS (TYP.) DINWIDDIE STREET STA 1+32 (RT)

#1807 FIFTH AVE.

11-E-85

OUR WAY 15' ROW

PWSA 15" SAN SEWER

PWSA SAN MANHOLE (#7) TOP 844.77 15" FL 829.49 IN

PWSA SAN MANHOLE (#6) TOP 848.82 15" FL 838.20 IN 15" FL 836.77 OUT

RETAINING WALL

FENCE

11-E-35 11-E-34 11-E-33 #1719 FIFTH AVE. 11-E-32 #1721 FIFTH AVE. 11-E-31 11-E-30 11-E-29 11-E-28 11-E-27 11-E-26 11-E-25 11-E-24 11-E-23 11-E-22 11-E-21 11-E-20 11-E-19

PWSA 12" DIP WATER LINE

PWSA 42" RCP COMBINED SEWER

11-E-81 11-E-82

PWSA STORM INLET TOP 843.43

PWSA SAN MANHOLE (#3) MH011E020 TOP 843.60 FL 42" 831.88 IN FL XX" XXX.XX OUT

TERMINATE EX. WATER SERVICE METER #44798935 WS-STS (TYP.) FIFTH AVENUE, STA 10+99 (RT)

PWSA STORM INLET TOP 843.30

PWSA 15" DIP WATER

PWSA 72" SAN SEWER

PWSA SAN MANHOLE (#1) TOP 843.14 FL 836.14 IN FL 831.99 OUT

FIFTH AVENUE 60'

PWSA 16" WATER (FROM RECORD)

#1712,1714,1716 FIFTH AVE.

PWSA STORM INLET TOP 836.32

PWSA STORM INLET TOP 839.37

PWSA SAN MANHOLE (#2) MH011E002 TOP 839.02 FL xx" xxx.xx IN FL xx" XXX.XX OUT

#1800 FIFTH AVE.

WATER & SANITARY SEWER TERMINATION NOTES

1. ALL WATER AND SANITARY SEWER TERMINATIONS TO BE COMPLETED IN ACCORDANCE WITH PWSA STANDARDS PER THEIR PROCEDURE MANUAL FOR DEVELOPER'S LATEST EDITION.
2. ASSUMED LOCAL STATIONING FOR PROJECT REFERENCE ONLY AND IS BASED ON ROADWAY CENTERLINE.
3. SEQUENCE OF CONSTRUCTION FOR EXISTING WATER SERVICE LINE RECONNECTION: INSTALL NEW PWSA X" WATER MAIN FIRST; RECONNECT EXISTING X" WATER SERVICE LINE; AND THEN REMOVE EXISTING PWSA X" WATER MAIN.

WATER & SEWER TERMINATION LEGEND

- PROPERTY BOUNDARY
- ROADWAY CENTER LINE
- EXIST. WATER LINE
- EXIST. WATER LINE TO BE REMOVED
- EXIST. FIRE HYDRANT
- EXIST. COMB./SANITARY SEWER
- EXIST. COMB./SANITARY SEWER TO BE REMOVED
- EXIST. ACTIVE FACTORY WYE SEWER LATERAL
- EXIST. ACTIVE BREAK-IN SEWER LATERAL
- EXIST. CAPPED FACTORY WYE SEWER LATERAL
- EXIST. CAPPED BREAK-IN SEWER LATERAL
- EXIST. FACTORY WYE SEWER LATERAL TO BE CAPPED
- EXIST. BREAK-IN SEWER LATERAL TO BE CAPPED
- SANITARY/STORM MANHOLE
- SANITARY/STORM MANHOLE TO BE REMOVED
- STORM INLET/CATCH BASIN
- STORM INLET/CATCH BASIN TO BE REMOVED

N

20' 10' 0 20'

SCALE: 1"= 20'

Michael Baker
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Phone: 412-269-6300
Fax: 412-375-3977

OWNER:
Fifth and Dinwiddie Development, LLC
CIVIL ENGINEER:
Michael Baker International
ARCHITECT:
GBBN Architects
MASTER PLANNERS / LANDSCAPE ARCHITECT:
evolveEA

Seal: PRELIMINARY DESIGN — NOT FOR CONSTRUCTION USE

No.	Description	Date

Project Number: 176433
Drawn By: BRF

THE PITTSBURGH WATER & SEWER AUTHORITY APPROVAL BLOCK

To be completed by the Applicant:
(Check all that apply)

- X NEW WATER CONNECTION(S)
- X NEW SEWER CONNECTION(S)
- ____ REUSE EXISTING WATER CONNECTION(S)
- ____ REUSE EXISTING SEWER CONNECTION(S)
- X TERMINATE EXISTING WATER CONNECTION(S)
- ____ TERMINATE EXISTING SEWER CONNECTION(S)
- ____ PRIVATE CONSTRUCTION OF PUBLIC FACILITIES

To be completed by the PWSA:
(Required for ALL approvals)

REVIEWER

CHIEF OF OPERATIONS

(Required for "Private Construction of Public Facilities" ONLY)

DIRECTOR OF ENGINEERING AND CONSTRUCTION

PWSA PROJECT NUMBER _____

TAP C RECORD NUMBER _____

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FIFTH AND DINWIDDIE DEVELOPMENT, LLC

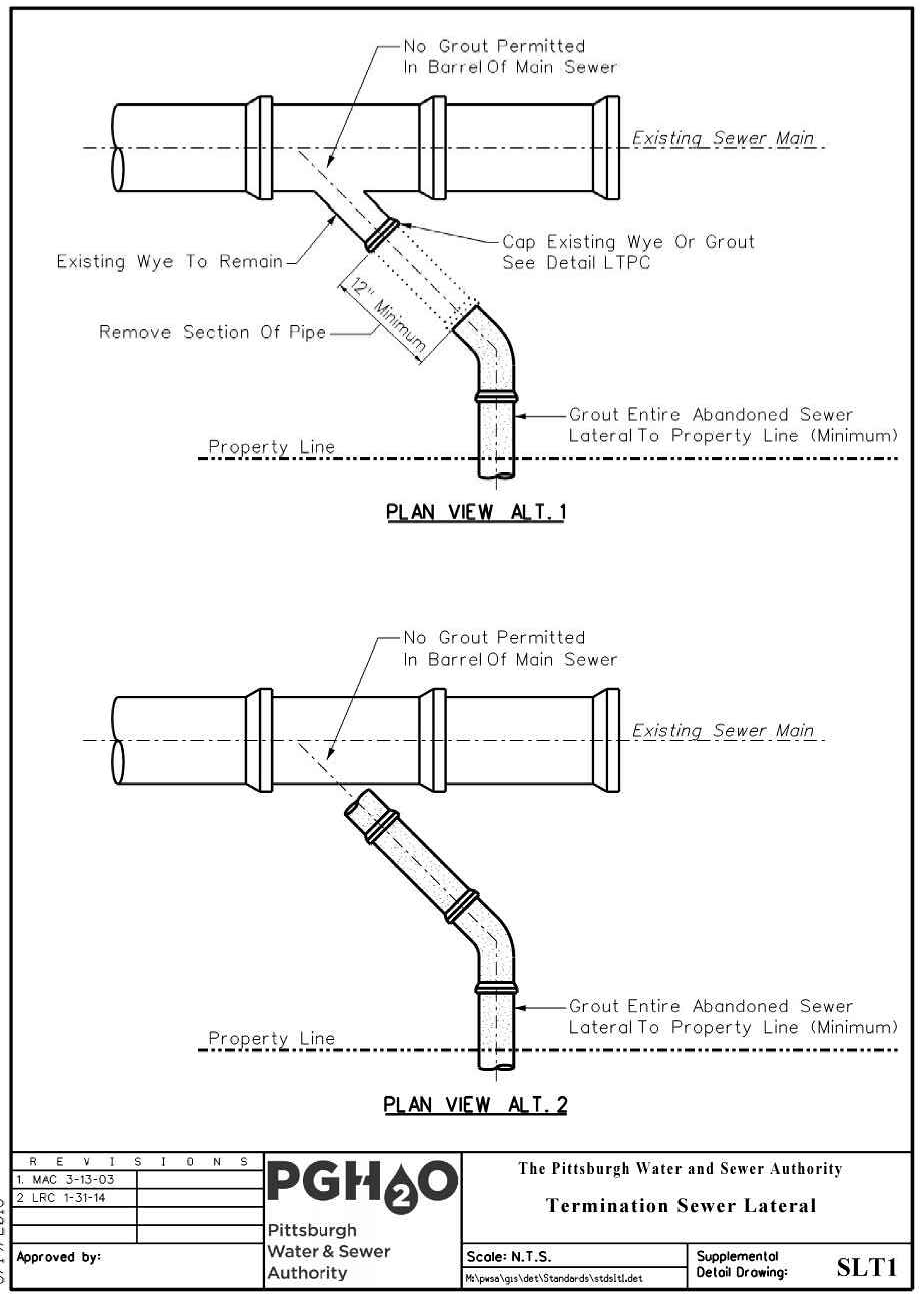
FIFTH AND DINWIDDIE DEVELOPMENT - EAST SITE
WATER AND SEWER TERMINATION PLAN

WATER & SANITARY SEWER

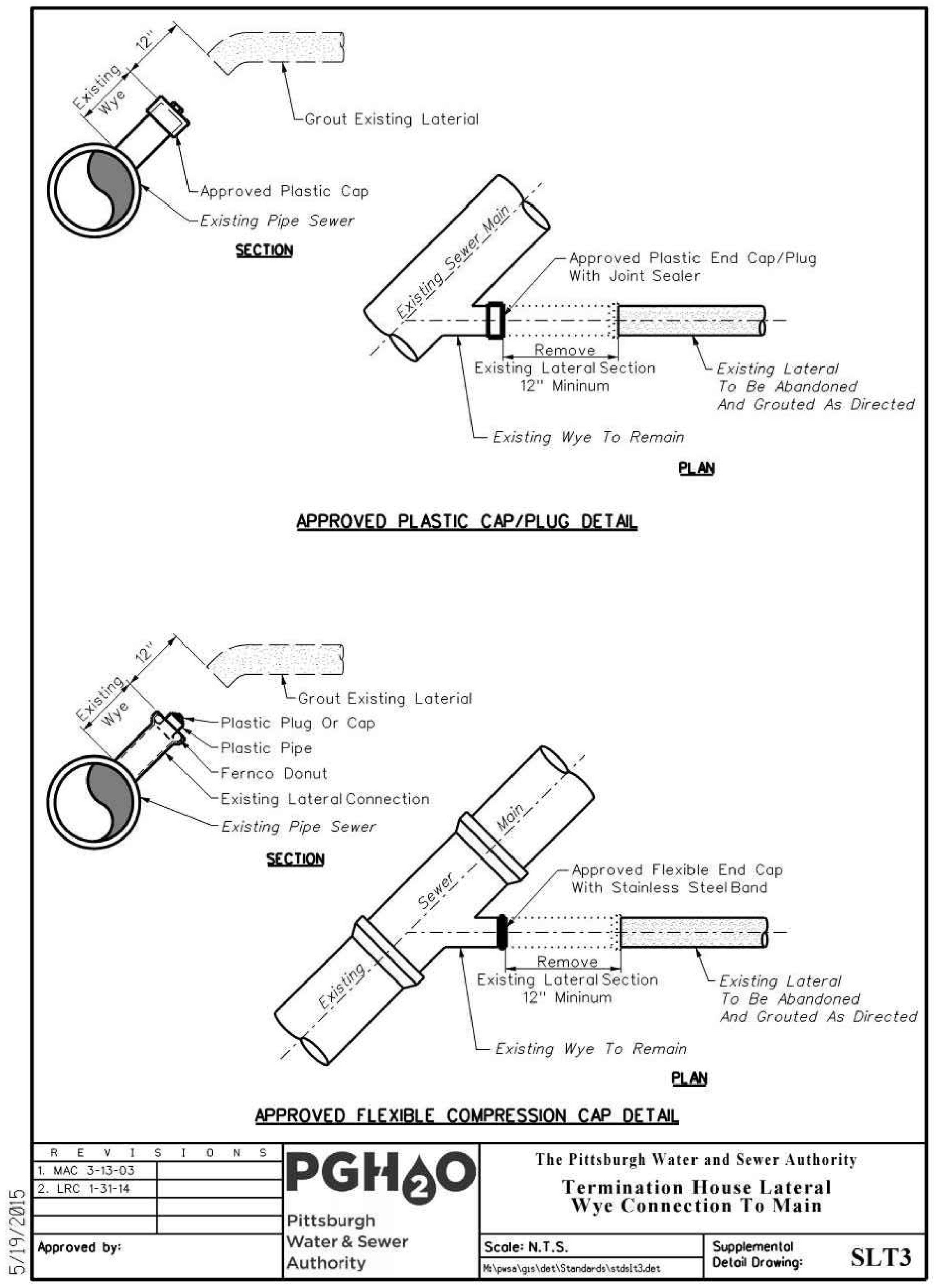
1723 5th AVE., 115 DINWIDDIE ST., 1807 5th AVE
PITTSBURGH, PA 15219

SCALE: AS SHOWN SHEET ACCESSION No. _____

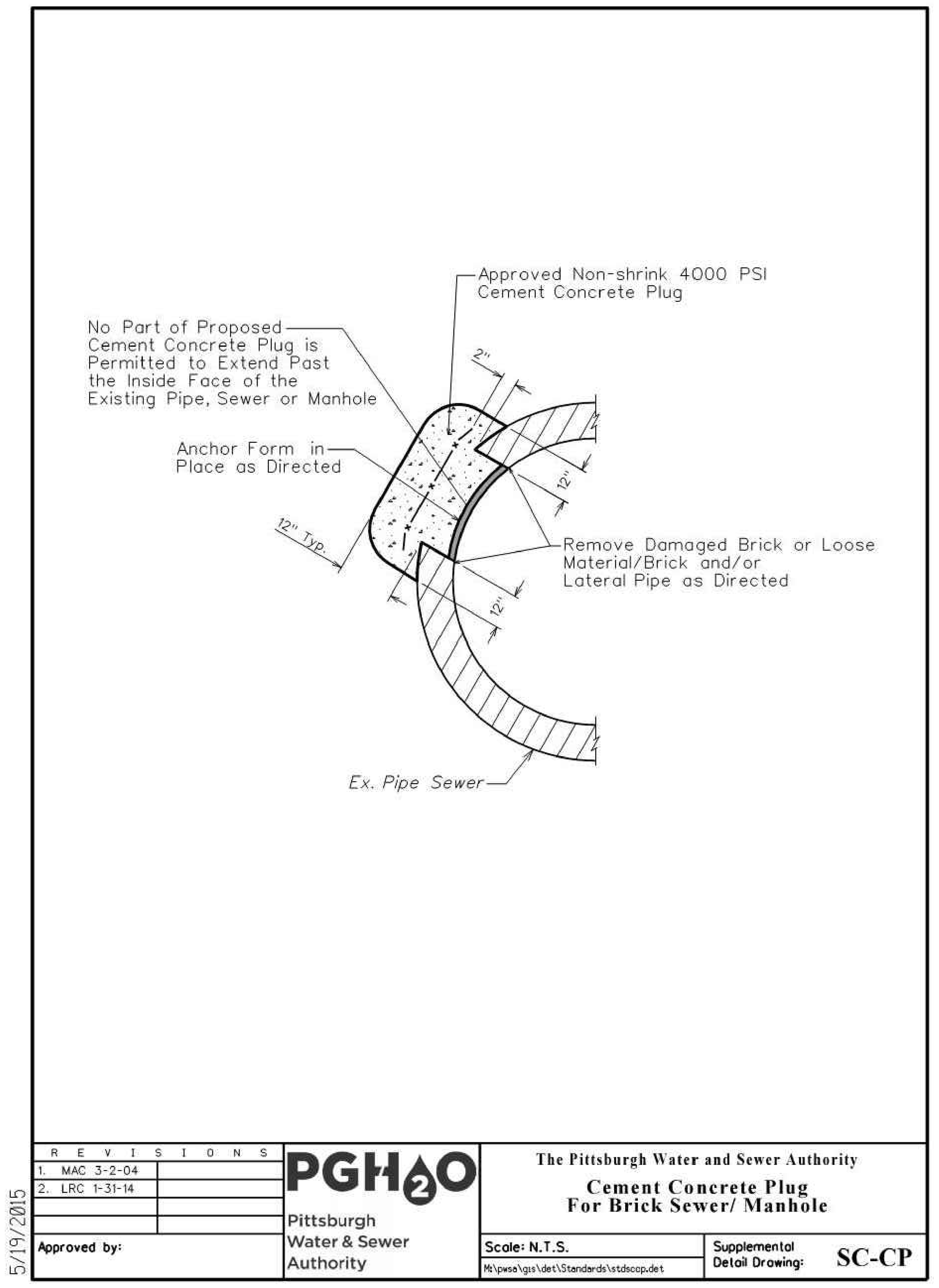
DATE: 06/16/2021 T-2 OF 10 CASE No. _____



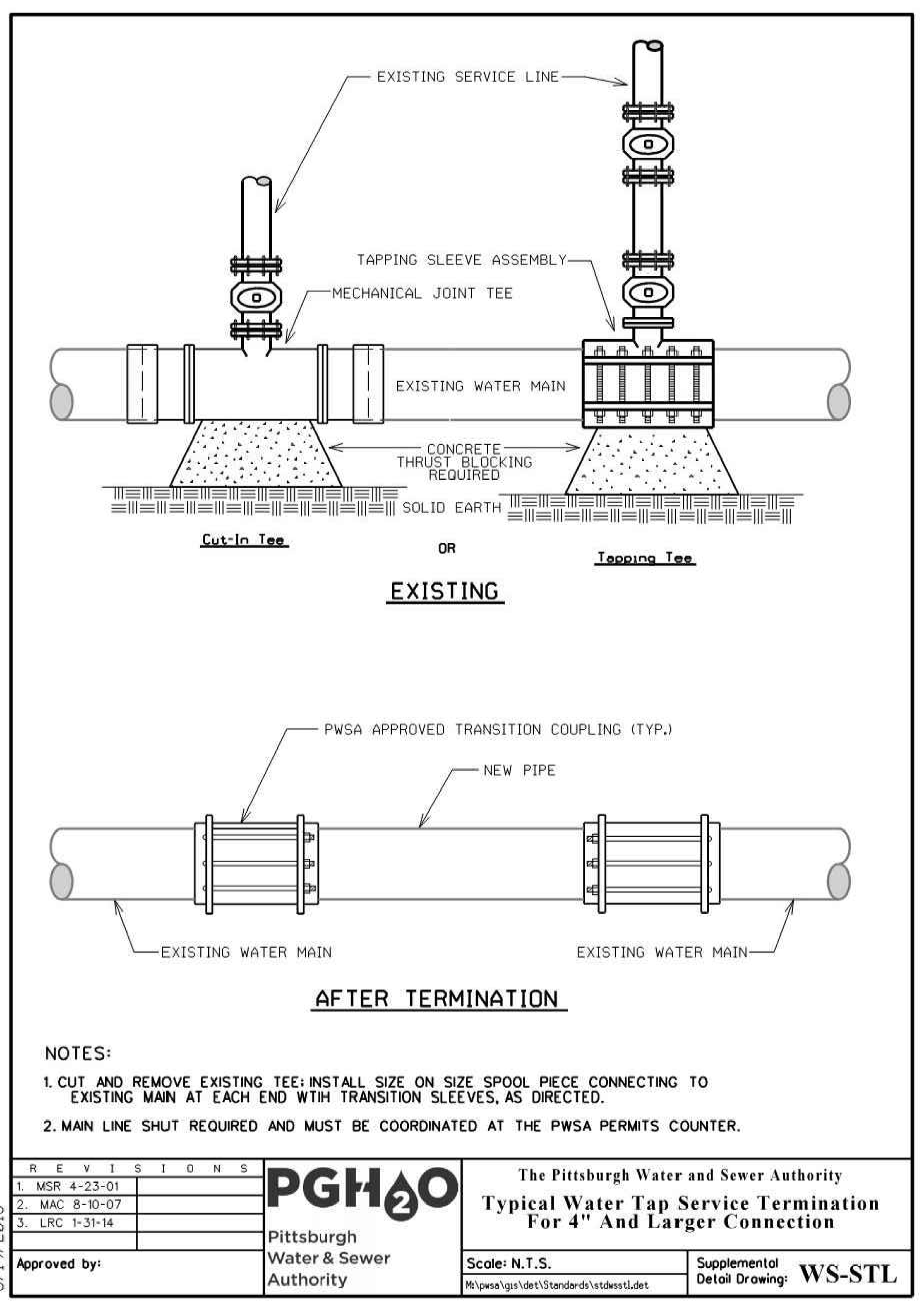
No Grout Permitted In Barrel Of Main Sewer
Existing Sewer Main
Existing Wye To Remain
Cap Existing Wye Or Grout See Detail LTPC
12" Minimum
Remove Section Of Pipe
Grout Entire Abandoned Sewer Lateral To Property Line (Minimum)
Property Line
PLAN VIEW ALT. 1
No Grout Permitted In Barrel Of Main Sewer
Existing Sewer Main
Grout Entire Abandoned Sewer Lateral To Property Line (Minimum)
Property Line
PLAN VIEW ALT. 2
REVISIONS
1. MAC 3-13-03
2. LRC 1-31-14
Approved by:
5/19/2015
PGH2O Pittsburgh Water & Sewer Authority
The Pittsburgh Water and Sewer Authority
Termination Sewer Lateral
Scale: N.T.S.
Supplemental Detail Drawing:
SLT1



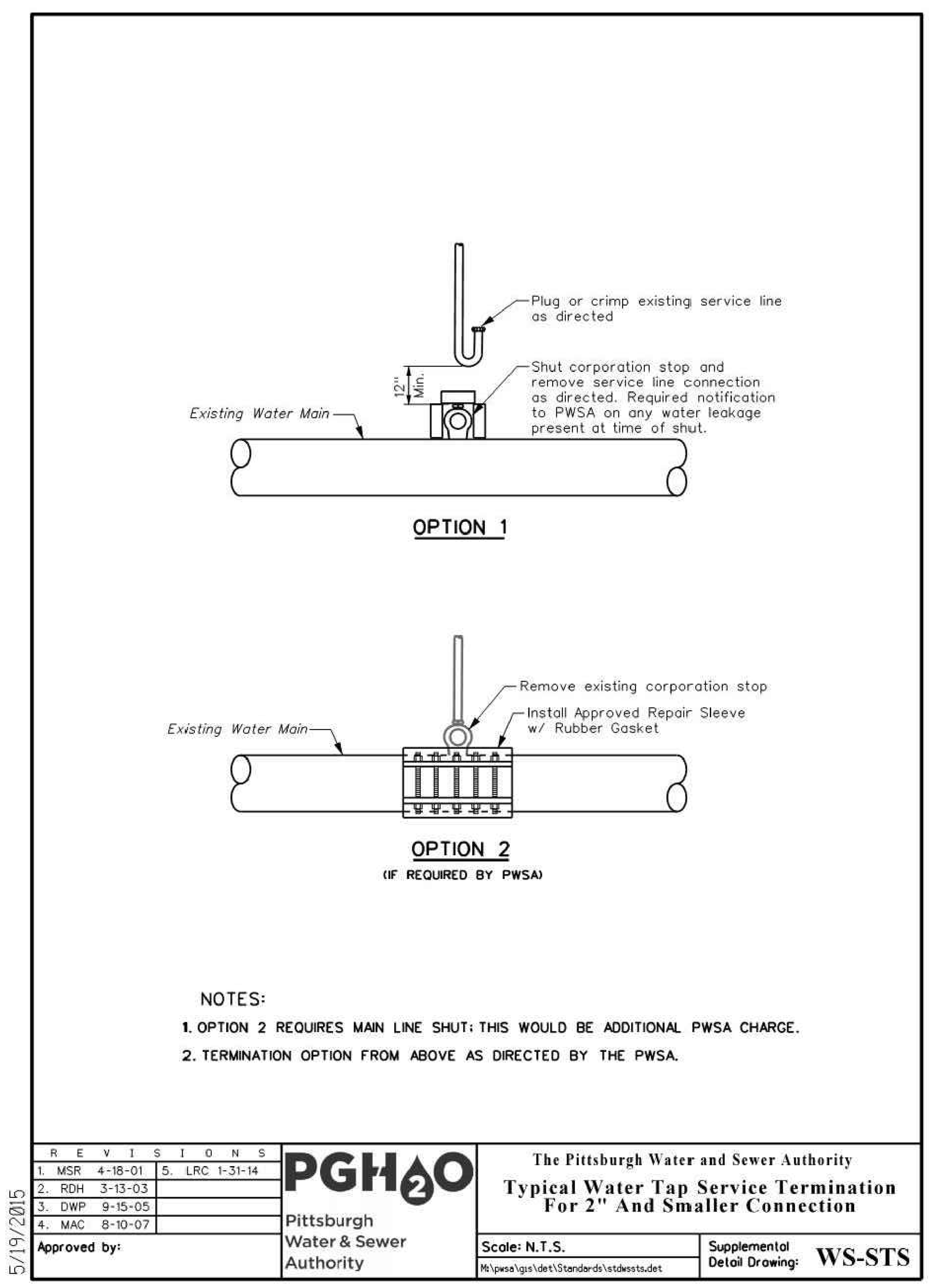
Existing Wye
12"
Grout Existing Lateral
Approved Plastic Cap
Existing Pipe Sewer
SECTION
Existing Sewer Main
Approved Plastic End Cap/Plug With Joint Sealer
Remove Existing Lateral Section 12" Minimum
Existing Lateral To Be Abandoned And Grouted As Directed
Existing Wye To Remain
PLAN
APPROVED PLASTIC CAP/PLUG DETAIL
Existing Wye
12"
Grout Existing Lateral
Plastic Plug Or Cap
Plastic Pipe
Fernco Donut
Existing Lateral Connection
Existing Pipe Sewer
SECTION
Existing Sewer Main
Approved Flexible End Cap With Stainless Steel Band
Remove Existing Lateral Section 12" Minimum
Existing Lateral To Be Abandoned And Grouted As Directed
Existing Wye To Remain
PLAN
APPROVED FLEXIBLE COMPRESSION CAP DETAIL
REVISIONS
1. MAC 3-13-03
2. LRC 1-31-14
Approved by:
5/19/2015
PGH2O Pittsburgh Water & Sewer Authority
The Pittsburgh Water and Sewer Authority
Termination House Lateral Wye Connection To Main
Scale: N.T.S.
Supplemental Detail Drawing:
SLT3



No Part of Proposed Cement Concrete Plug is Permitted to Extend Past the Inside Face of the Existing Pipe, Sewer or Manhole
Approved Non-shrink 4000 PSI Cement Concrete Plug
Anchor Form in Place as Directed
12" Typ.
Remove Damaged Brick or Loose Material/Brick and/or Lateral Pipe as Directed
Ex. Pipe Sewer
REVISIONS
1. MAC 3-2-04
2. LRC 1-31-14
Approved by:
5/19/2015
PGH2O Pittsburgh Water & Sewer Authority
The Pittsburgh Water and Sewer Authority
Cement Concrete Plug For Brick Sewer/ Manhole
Scale: N.T.S.
Supplemental Detail Drawing:
SC-CP



EXISTING SERVICE LINE
TAPPING SLEEVE ASSEMBLY
MECHANICAL JOINT TEE
EXISTING WATER MAIN
CONCRETE THRUST BLOCKING REQUIRED
SOLID EARTH
Cut-In Tee
OR
Tapping Tee
EXISTING
PWSA APPROVED TRANSITION COUPLING (TYP.)
NEW PIPE
EXISTING WATER MAIN
EXISTING WATER MAIN
AFTER TERMINATION
NOTES:
1. CUT AND REMOVE EXISTING TEE; INSTALL SIZE ON SIZE SPOOL PIECE CONNECTING TO EXISTING MAIN AT EACH END WITH TRANSITION SLEEVES, AS DIRECTED.
2. MAIN LINE SHUT REQUIRED AND MUST BE COORDINATED AT THE PWSA PERMITS COUNTER.
REVISIONS
1. MSR 4-23-01
2. MAC 8-10-07
3. LRC 1-31-14
Approved by:
5/19/2015
PGH2O Pittsburgh Water & Sewer Authority
The Pittsburgh Water and Sewer Authority
Typical Water Tap Service Termination For 4" And Larger Connection
Scale: N.T.S.
Supplemental Detail Drawing:
WS-STL



Plug or crimp existing service line as directed
Shut corporation stop and remove service line connection as directed. Required notification to PWSA on any water leakage present at time of shut.
12" Min.
Existing Water Main
OPTION 1
Remove existing corporation stop
Install Approved Repair Sleeve w/ Rubber Gasket
Existing Water Main
OPTION 2
(IF REQUIRED BY PWSA)
NOTES:
1. OPTION 2 REQUIRES MAIN LINE SHUT: THIS WOULD BE ADDITIONAL PWSA CHARGE.
2. TERMINATION OPTION FROM ABOVE AS DIRECTED BY THE PWSA.
REVISIONS
1. MSR 4-18-01
2. RDH 3-13-03
3. DWP 9-15-05
4. MAC 8-10-07
5. LRC 1-31-14
Approved by:
5/19/2015
PGH2O Pittsburgh Water & Sewer Authority
The Pittsburgh Water and Sewer Authority
Typical Water Tap Service Termination For 2" And Smaller Connection
Scale: N.T.S.
Supplemental Detail Drawing:
WS-STS

Michael Baker
INTERNATIONAL
100 Airside Drive
Moon Township, PA 15108
Phone: 412-269-6300
Fax: 412-375-3977

OWNER: Fifth and Dinwiddie Development, LLC
CIVIL ENGINEER: Michael Baker International
ARCHITECT: GBBN Architects
MASTER PLANNERS / LANDSCAPE ARCHITECT: evolveEA

Seal:

PRELIMINARY DESIGN — NOT FOR CONSTRUCTION USE

No.	Description	Date

Project Number: 176433
Drawn By: BRF

THE PITTSBURGH WATER & SEWER AUTHORITY APPROVAL BLOCK

To be completed by the Applicant:
(Check all that apply)

- X NEW WATER CONNECTION(S)
- X NEW SEWER CONNECTION(S)
- ___ REUSE EXISTING WATER CONNECTION(S)
- ___ REUSE EXISTING SEWER CONNECTION(S)
- X TERMINATE EXISTING WATER CONNECTION(S)
- ___ TERMINATE EXISTING SEWER CONNECTION(S)
- ___ PRIVATE CONSTRUCTION OF PUBLIC FACILITIES

To be completed by the PWSA:
(Required for ALL approvals)

REVIEWER

CHIEF OF OPERATIONS

(Required for "Private Construction of Public Facilities" ONLY)

DIRECTOR OF ENGINEERING AND CONSTRUCTION

PWSA PROJECT NUMBER ______

TAP C RECORD NUMBER ______

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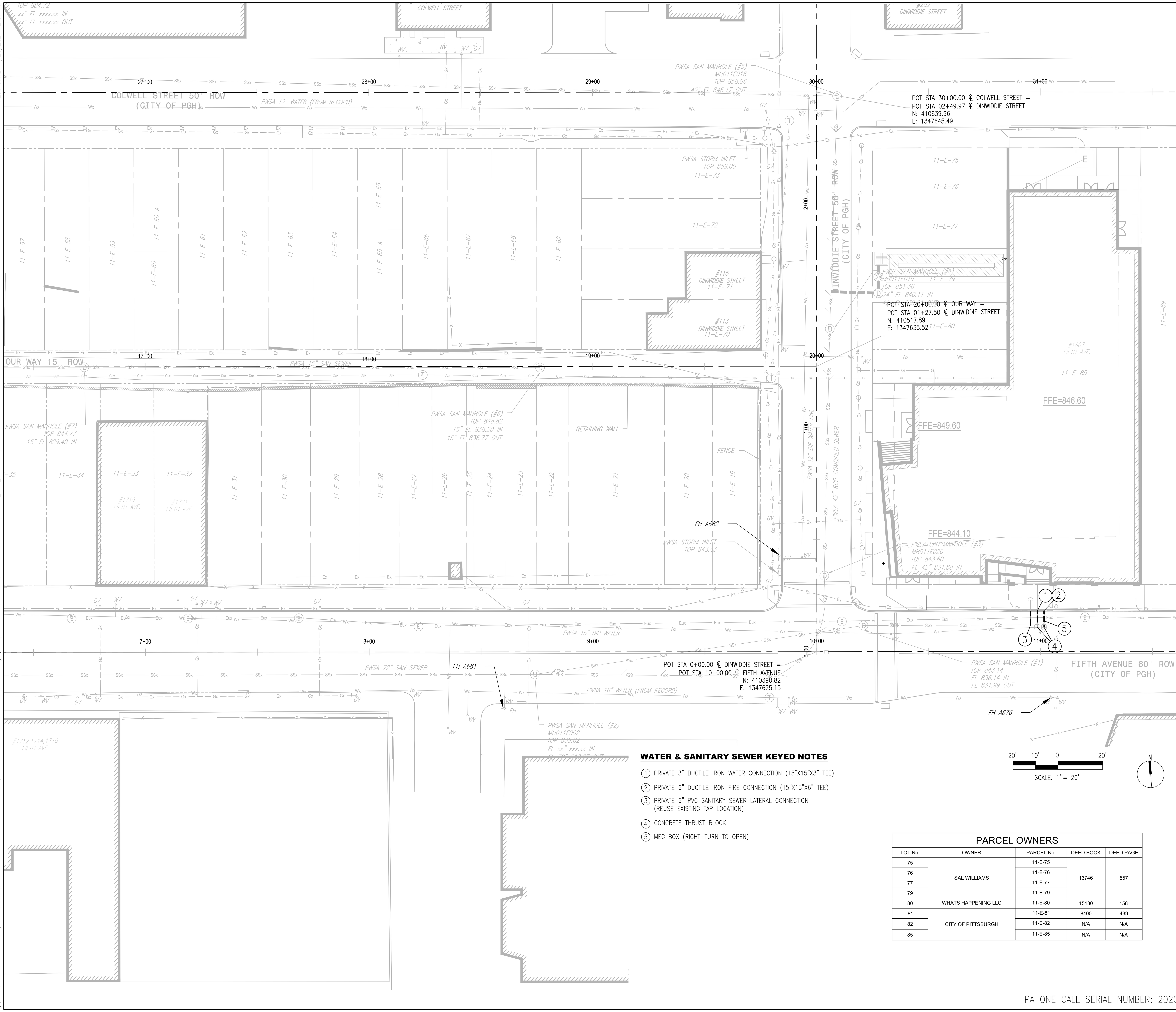
FIFTH AND DINWIDDIE DEVELOPMENT, LLC

FIFTH AND DINWIDDIE DEVELOPMENT - EAST SITE
WATER AND SEWER TERMINATION PLAN
WATER & SANITARY SEWER

SITE UTILITY DETAILS

SCALE: AS SHOWN   SHEET   ACCESSION No. ______

DATE: 06/16/2021   T-3 OF 10   CASE No. ______



WATER & SANITARY SEWER LEGEND

- PROPERTY BOUNDARY
- ROADWAY CENTER LINE
- EXIST. WATER LINE
- WATER LINE
- WATER SERVICE METER PIT
- CURB BOX
- WATER LINE (PVT)
- WATER METER VAULT
- THRUST BLOCK
- EXIST. FIRE HYDRANT
- EXIST. COMB./SANITARY SEWER
- SANITARY SEWER
- SANITARY SEWER (PVT)
- STORM SEWER
- STORM SEWER (PVT)
- SANITARY/STORM MANHOLE
- STORM MANHOLE (PVT)
- STORM TRAP MANHOLE (PVT)
- STORMCEPTER (PVT)
- STORM INLET/CATCH BASIN
- STORM INLET/CATCH BASIN (PVT)
- STORM TRAP, VENT, CLEANOUT (PVT)
- SANITARY CLEANOUT (PVT)

WATER & SANITARY SEWER KEYED NOTES

1. PRIVATE 3" DUCTILE IRON WATER CONNECTION (15"X15"X3" TEE)
2. PRIVATE 6" DUCTILE IRON FIRE CONNECTION (15"X15"X6" TEE)
3. PRIVATE 6" PVC SANITARY SEWER LATERAL CONNECTION (REUSE EXISTING TAP LOCATION)
4. CONCRETE THRUST BLOCK
5. MEG BOX (RIGHT-TURN TO OPEN)

PARCEL OWNERS

LOT No.	OWNER	PARCEL No.	DEED BOOK	DEED PAGE
75	SAL WILLIAMS	11-E-75	13746	557
76		11-E-76		
77		11-E-77		
79		11-E-79		
80	WHATS HAPPENING LLC	11-E-80	15180	158
81	CITY OF PITTSBURGH	11-E-81	8400	439
82		11-E-82	N/A	N/A
85		11-E-85	N/A	N/A

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- X NEW SEWER CONNECTION(S)
- ___ REUSE EXISTING WATER CONNECTION(S)
- ___ REUSE EXISTING SEWER CONNECTION(S)
- X TERMINATE EXISTING WATER CONNECTION(S)
- ___ TERMINATE EXISTING SEWER CONNECTION(S)
- ___ PRIVATE CONSTRUCTION OF PUBLIC FACILITIES

To be completed by the PWSA:

(Required for ALL approvals)

REVIEWER

CHIEF OF OPERATIONS

(Required for "Private Construction of Public Facilities" ONLY)

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FIFTH AND DINWIDDIE DEVELOPMENT, LLC

FIFTH AND DINWIDDIE DEVELOPMENT - EAST SITE
WATER AND SEWER TAP PLAN

WATER & SANITARY SEWER

FIFTH AVENUE; DINWIDDIE STREET
PITTSBURGH, PA 15219

SCALE: AS SHOWN SHEET ACCESSION No. ____________

DATE: 06/16/2021 2 OF 10 CASE No. ____________

SUMMARY OF BUILDING SERVICE ADDRESSES AND WATER / SANITARY SEWER TAPS

SHEET NO.	BUILDING NO.	STREET ADDRESS	FINISH FLOOR ELEVATION	NO. OF UNITS	DOMESTIC / FIRE WATER SERVICE								SANITARY SEWER SERVICE			
					SERVICE LINE SIZE	METER SIZE & TYPE	PEAK DEMAND	FIRE SPRINKLER DEMAND	BACKFLOW SIZE	TIE–IN LOCATION	BASELINE	BASELINE STATION	SERVICE LINE SIZE	TIE–IN LOCATION	BASELINE	BASELINE STATION

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Michael Baker International
ARCHITECT:
GBBN Architects

MASTER PLANNERS / LANDSCAPE ARCHITECT:
evolveEA

Seal:

PRELIMINARY DESIGN
NOT FOR CONSTRUCTION USE

No.	Description	Date

Project Number: 176433

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THE PITTSBURGH WATER & SEWER AUTHORITY APPROVAL BLOCK

To be completed by the Applicant:
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- X NEW WATER CONNECTION(S)
- X NEW SEWER CONNECTION(S)
- ____ REUSE EXISTING WATER CONNECTION(S)
- ____ REUSE EXISTING SEWER CONNECTION(S)
- X TERMINATE EXISTING WATER CONNECTION(S)
- ____ TERMINATE EXISTING SEWER CONNECTION(S)
- ____ PRIVATE CONSTRUCTION OF PUBLIC FACILITIES

To be completed by the PWSA:
(Required for ALL approvals)

REVIEWER

CHIEF OF OPERATIONS

(Required for "Private Construction of Public Facilities" ONLY)

DIRECTOR OF ENGINEERING AND CONSTRUCTION

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FIFTH AND DINWIDDIE DEVELOPMENT, LLC

FIFTH AND DINWIDDIE DEVELOPMENT - EAST SITE
WATER AND SEWER TAP PLAN

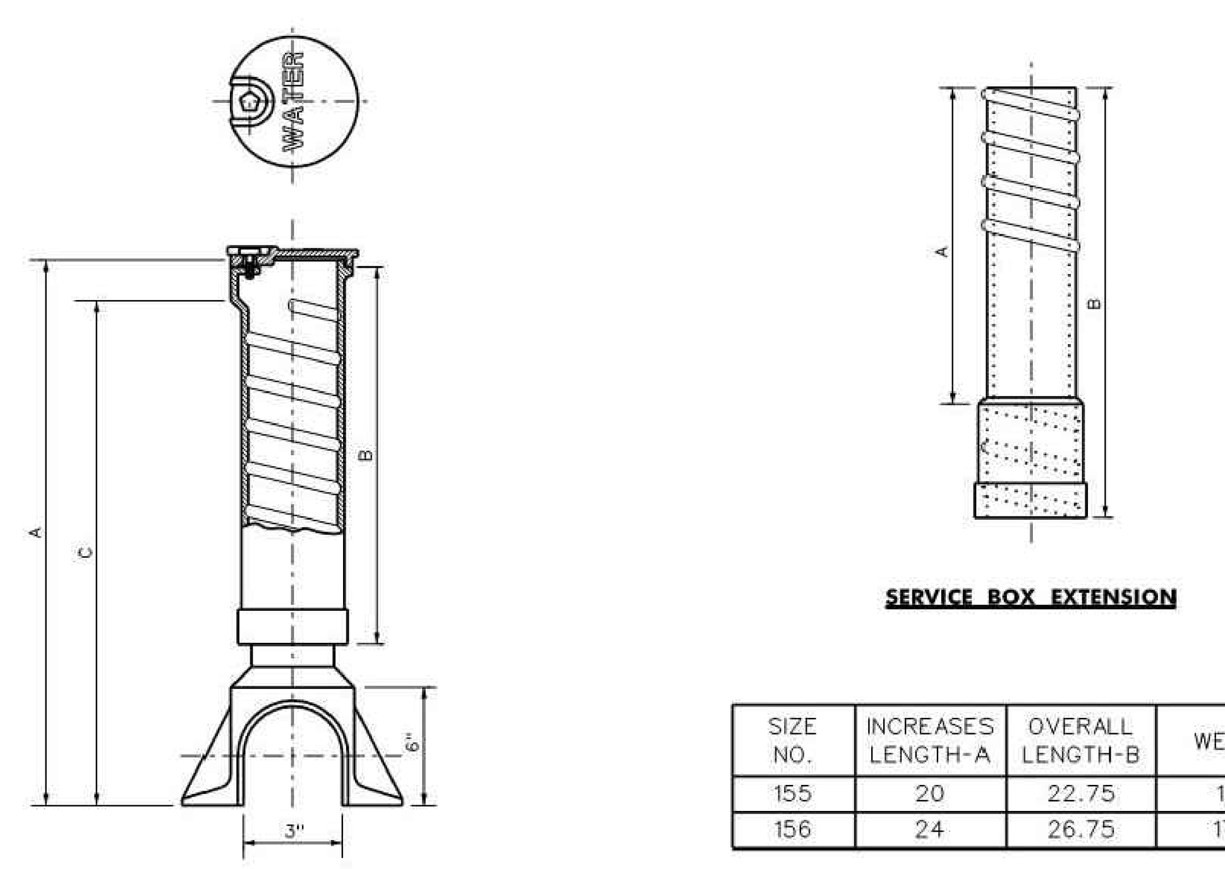
WATER & SANITARY SEWER

TAP-IN SCHEDULE

SCALE: AS SHOWN SHEET ACCESSION No. _____

DATE: 06/16/2021 3 OF 10 CASE No. _____

WCB-1 — 3" Curb Service Box



TOP SECTION, BOTTOM SECTION AND COVER

SERVICE BOX EXTENSION

SIZE NO.	INCREASES LENGTH-A	OVERALL LENGTH-B	WEIGHT
155	20	22.75	13.1
156	24	26.75	17.7

SIZE NO.	EXTENSION RANGE - A	TOP SECTION & COVER			BOTTOM SECTION			TOTAL WEIGHT
		NO.	WEIGHT	DIM. B	NO.	WEIGHT	DIM. C	
2	24" - 39"	9	19.6	18	2	14.1	23.0	32.7

NOTES:

1. SERVICE BOX SHALL BE BINGHAM & TAYLOR BUFFALO STYLE (3" OLD STYLE), No. 4930 OR APPROVED EQUAL.
2. DIMENSIONS IN INCHES; WEIGHT IN POUNDS.
3. LABELED "WATER" ON THE COVER.

REVISIONS	
1.	MAC 3-12-04
2.	MAC 8-15-07
3.	MAC 12-28-07
4.	LRC 1-31-14

Approved by:

PGH2O Pittsburgh Water & Sewer Authority

The Pittsburgh Water and Sewer Authority

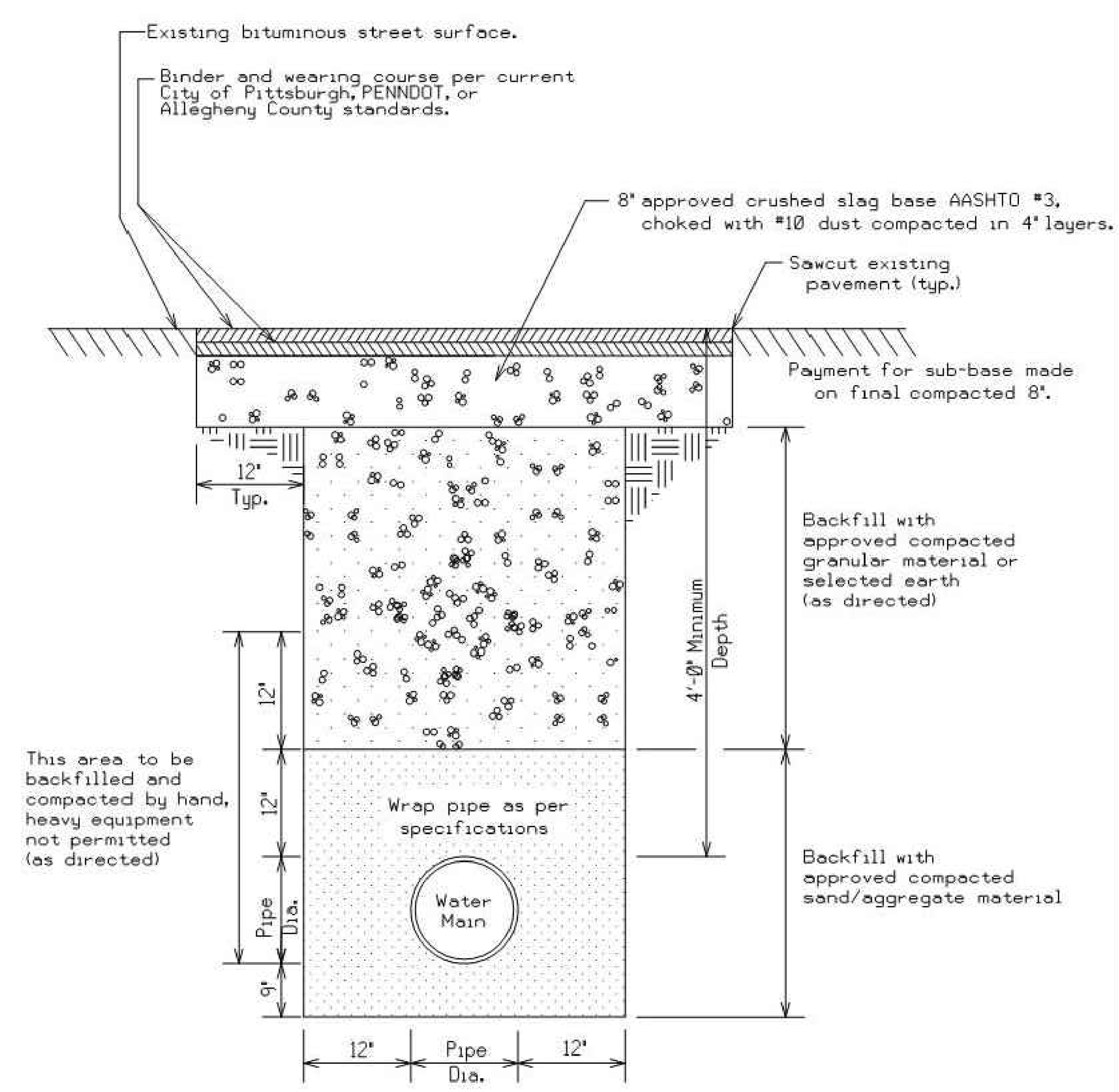
3" Curb Service Box

Scale: N.T.S. Supplemental Detail Drawing: WCB-1

M:\pwsa\gis\det\Standards\stdwcb1.det

5/19/2015

WS-2 — Water Line Trench And Bituminous Repaving



NOTES

1. All trench backfill material to be placed and mechanically compacted in 6" compacted layers.
2. Trench bedding may need to be modified in poor compaction areas.
3. Certain pipe materials and/or related trench materials may need to be substituted if contaminated soils are encountered.

REVISIONS	
1.	MSR 4-23-01
2.	MAC 8-13-07
3.	LRC 1-31-14

Approved by:

PGH2O Pittsburgh Water & Sewer Authority

The Pittsburgh Water and Sewer Authority

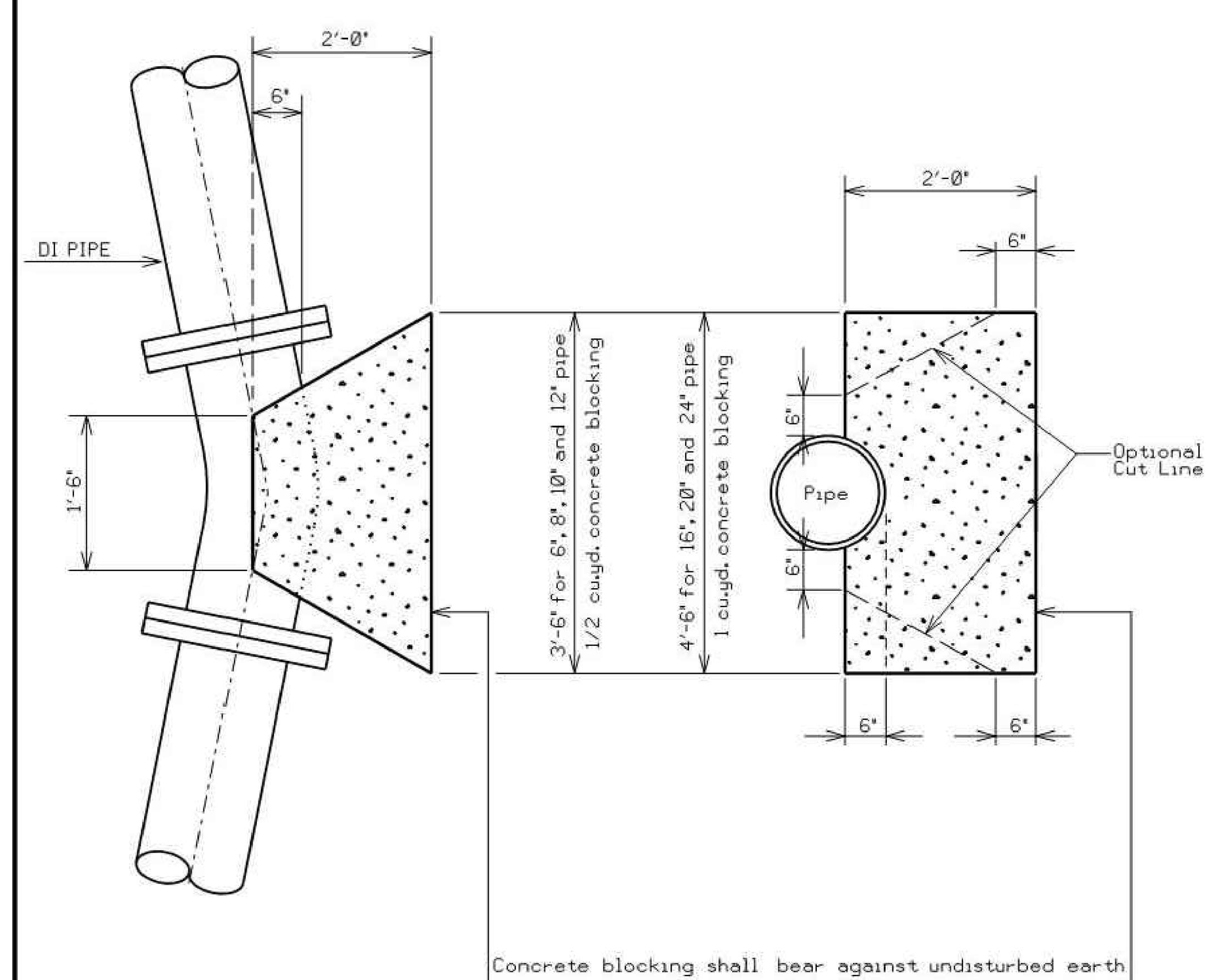
Water Line Trench And Bituminous Repaving

Scale: N.T.S. Supplemental Detail Drawing: WS-2

M:\pwsa\gis\det\Standards\stdws2.det

5/19/2015

WS-3 — Concrete Blocking For Pressure Pipe



NOTES:

1. Concrete thrust blocking shall be provided at all tees, bends, caps, and plugs. In addition, all pipe bends shall be harnessed with mechanical joint retainer glands, using either set screw or lug type retaining system, as directed.
2. Concrete thrust blocks shall be minimum 4000 PSI cement concrete.
3. See detail WS-VB and WS-VBL for vertical bends requirements.

REVISIONS	
1.	MSR 4-23-01
2.	MAC 8-13-07
3.	LRC 1-31-14

Approved by:

PGH2O Pittsburgh Water & Sewer Authority

The Pittsburgh Water and Sewer Authority

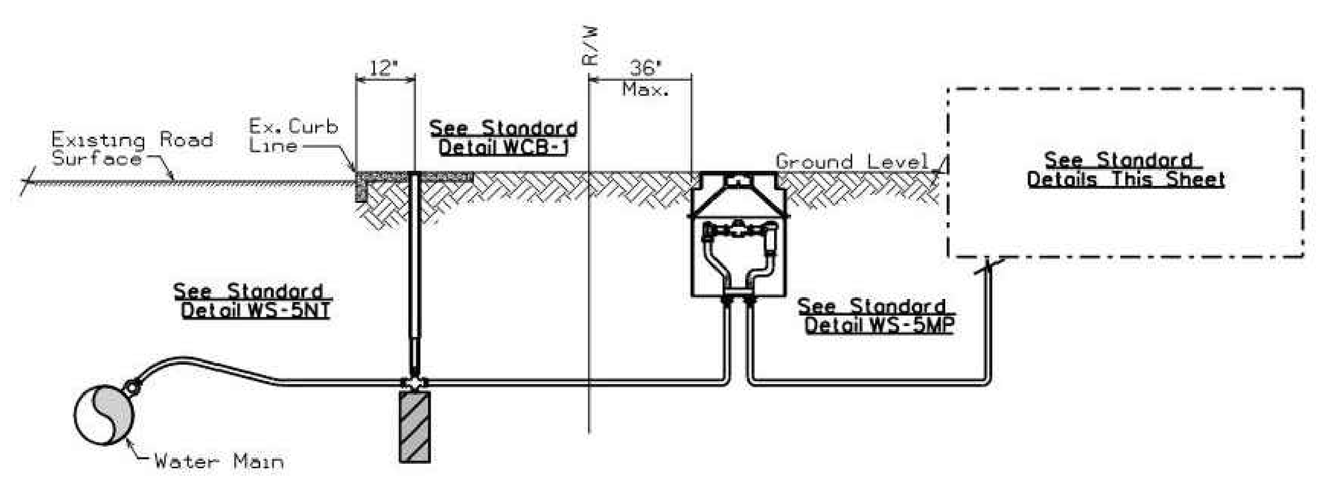
Concrete Blocking For Pressure Pipe

Scale: N.T.S. Supplemental Detail Drawing: WS-3

M:\pwsa\gis\det\Standards\stdws3.det

5/19/2015

WS-5SVB — Sprinkler Backflow Prevention

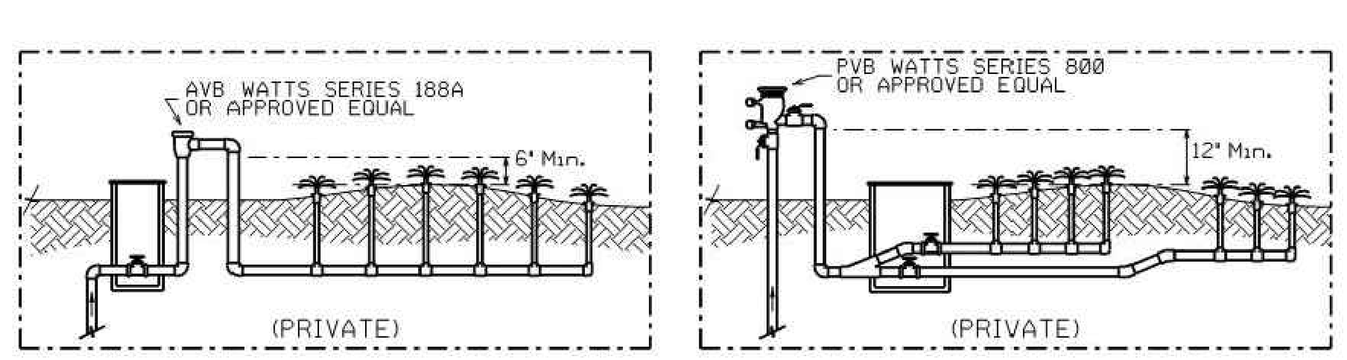


ATMOSPHERIC VACUUM BREAKER (AVB):

1. **ONE AVB REQUIRED FOR EACH IRRIGATION ZONE; NO (ON/OFF VALVES) ALLOWED DOWNSTREAM OF THE AVB.**
2. EACH AVB MUST BE INSTALLED A MINIMUM OF SIX INCHES (6") ABOVE THE HIGHEST POINT OF WATER IN THE ZONE IT PROTECTS.
3. NO CHEMICAL OR FERTILIZER CAN BE INTRODUCED INTO AN IRRIGATION SYSTEM PROTECTED WITH AVB'S.
4. NO PUMPS OR SOURCES FOR BACK PRESSURE ON DOWNSTREAM SIDE OF AN AVB.
5. ANTI-SIPHON, SINGLE ZONE.
6. **CAN ONLY BE PRESSURIZED A MAXIMUM OF A 12 HOUR PERIOD OUT OF 24 HOURS.**

PRESSURE VACUUM BREAKER (PVB):

1. **ONLY ONE PVB REQUIRED TO PROTECT THE WHOLE SYSTEM; (ON/OFF VALVES) CAN BE LOCATED DOWNSTREAM OF THE PVB.**
2. PVB'S MUST BE INSTALLED A MINIMUM OF (12") ABOVE THE HIGHEST POINT OF WATER IN THE SPRINKLER SYSTEM.
3. PVB'S MUST BE TESTED BY A STATE-CERTIFIED BACKFLOW ASSEMBLY TESTER WHEN INSTALLED, ANNUALLY, OR WHEN MOVED/REPAIRED.
4. NO CHEMICAL OR FERTILIZER CAN BE INTRODUCED INTO AN IRRIGATION SYSTEM PROTECTED WITH PVB'S.
5. NO PUMPS OR SOURCES OF BACK PRESSURE ON DOWNSTREAM SIDE OF (AFTER) A PVB.
6. **CAN BE PRESSURIZED A FULL 24 HOURS.**



REVISIONS	
1.	RJM 8-5-10
2.	LRC 1-31-14

Approved by:

PGH2O Pittsburgh Water & Sewer Authority

The Pittsburgh Water and Sewer Authority

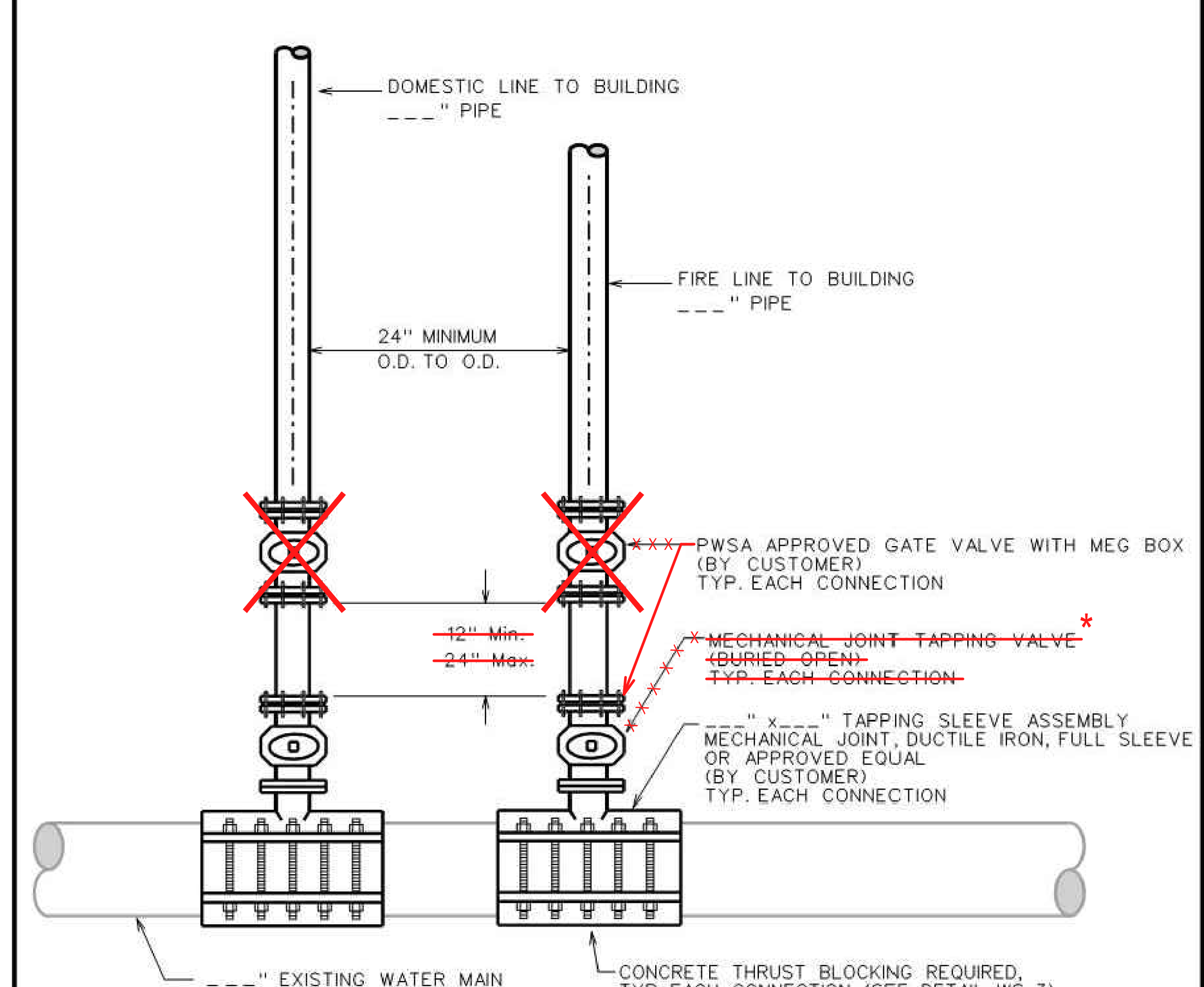
SPRINKLER BACKFLOW PREVENTION

Scale: N.T.S. Supplemental Detail Drawing: WS-5SVB

M:\pwsa\gis\det\Standards\stdws5svb.det

5/19/2015

WS-C2 — Separate Domestic And Fire Service Connection (4" And Larger)



* PER PWSA DIRECTION, THE BURIED OPEN VALVE IS NO LONGER REQUIRED.

NOTES:

1. PWSA PERFORMS ACTUAL TAP TO MAIN ONLY AND MAINTAINS METER; ALL OTHER WORK BY CUSTOMER.
2. TAPPING TEE SHALL BE FULL SLEEVE; SADDLE STYLE NOT PERMITTED.
3. CUSTOMER IS REQUIRED TO ENTER VALUES FOR ALL DIMENSION FIELDS ABOVE.
4. CUT-IN TEE CONNECTION ALSO ACCEPTABLE AND IS REQUIRED FOR SIZE ON SIZE (e.g. 8" TAP ON 8" MAIN).
5. CENTERING OF TAPPING TEE CONNECTION SHALL BE 18" MINIMUM FROM EXISTING WATER MAIN BELL/HUB OR OTHER EXISTING SERVICE CONNECTIONS.
6. CUSTOMER IS RESPONSIBLE FOR, MAINTAINS, AND OWNS, INCLUDING THE TAPPING TEE ASSEMBLY, FROM THE MAIN TO THE BUILDING.
7. ALL VALVES MUST BE "RIGHT TURN TO OPEN".
8. PRIVATE SERVICE LINE MATERIAL AND EQUIPMENT SHALL CONFORM TO ALLEGHENY COUNTY PLUMBING CODE, ARTICLE XV.

REVISIONS			
1.	MSR 4-23-01	5.	LRC 1-31-14
2.	MAC 7-26-04		
3.	MAC 9-9-05		
4.	DWP 9-15-05		

Approved by:

PGH2O Pittsburgh Water & Sewer Authority

The Pittsburgh Water and Sewer Authority

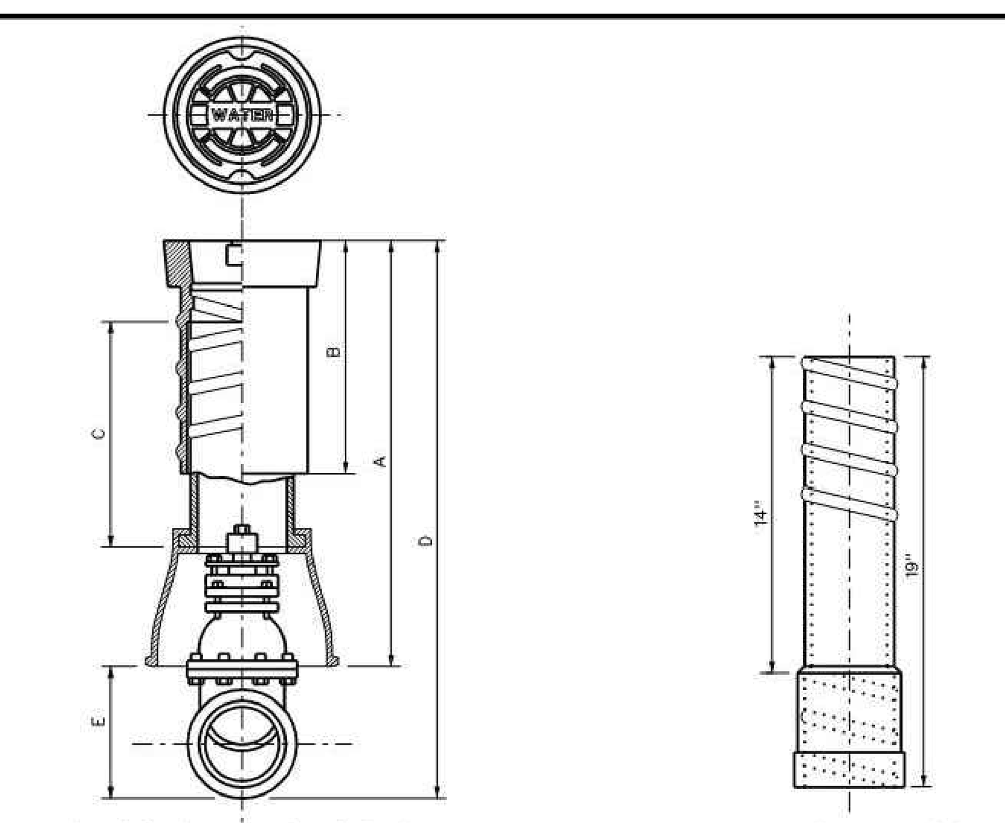
Separate Domestic And Fire Service Connection (4" And Larger)

Scale: N.T.S. Supplemental Detail Drawing: WS-C2

M:\pwsa\gis\det\Standards\stdwsc2.det

5/19/2015

WVB — Valve Box (Medium Extension Gate Box)



TOP SECTION, BOTTOM SECTION AND COVER

VALVE BOX EXTENSION

SIZE NO.	EXTENSION RANGE - A	TOP SECTION & COVER			BOTTOM SECTION			No. 6 BASE WT	TOTAL WEIGHT
		NO.	DIM. B	WEIGHT	NO.	DIM. C	WEIGHT		
II	21" - 27"	74	9.00	58.5	80	8.00	14.0	45.0	117.50
I	27" - 39"	75	15.25	81.5	81	14.00	24.5	45.0	151.00
J	33" - 45"	75	15.25	81.5	82	20.00	30.0	45.0	156.50
K	39" - 51"	75	15.25	81.5	83	26.25	41.0	45.0	167.50
L	39" - 60"	76	26.00	111.0	83	26.25	41.0	45.0	197.00

TABLE FOR DETERMINING LENGTH OF BOX NEEDED

SIZE OF VALVE	BOTTOM BASE TO BOTTOM TRENCH (DIM. E)	No. BASE USED	DEPTH OF TRENCH (DIM. D)								
			36"	42"	48"	54"	60"	66"	72"	78"	84"
3	8"	4	II	I	J	K	L	L	L*	L*	O*
4	13-1/2"	4	II	I	J	J	K	L	L	L*	L*
6	15"	6	II	II	J	J	J	K	L	L*	L*
8	19"	6		II	I	J	J	K	L	L	L*
10	24"	6			II	I	I	K	K	L	L
12	31"	160				II	I	J	K	K	L
14	36-1/2"	160					II	I	J	J	K
16	41-1/4"	160						II	I	I	J

* LONGER BOXES MADE BY ADDING EXTENSIONS TO SIZE L. FOR VALVE CLOSER TO SURFACE, USE NO. 140 ROUND BASE AND REDUCE LENGTH SHOWN ABOVE BY 6 INCHES.

NOTES:

1. MEDIUM EXTENSION GATE VALVE BOX SHALL BE BINGHAM & TAYLOR No. 5001, OR APPROVED EQUAL.
2. MADE OF CAST IRON, SCREW TYPE, 3-PIECE BOX w/ LID AND #6 BASE, 7" DIAMETER SHAFT.
3. LABELED "WATER" ON THE COVER.

REVISIONS	
1.	LRC 1-31-14

Approved by:

PGH2O Pittsburgh Water & Sewer Authority

The Pittsburgh Water and Sewer Authority

Valve Box (Medium Extension Gate Box)

Scale: N.T.S. Supplemental Detail Drawing: WVB

M:\pwsa\gis\det\Standards\stdwvb.det

5/19/2015

Michael Baker INTERNATIONAL
100 Airside Drive
Moon Township, PA 15108
Phone: 412-269-6300
Fax: 412-375-3977

OWNER: Fifth and Dinwiddie Development, LLC
CIVIL ENGINEER: Michael Baker International
ARCHITECT: GBBN Architects
MASTER PLANNERS / LANDSCAPE ARCHITECT: evolveEA

Seal: PRELIMINARY DESIGN — NOT FOR CONSTRUCTION USE

No.	Description	Date

Project Number: 176433
Drawn By: BRF

THE PITTSBURGH WATER & SEWER AUTHORITY APPROVAL BLOCK

To be completed by the Applicant:

(Check all that apply)

- X NEW WATER CONNECTION(S)
- X NEW SEWER CONNECTION(S)
- ___ REUSE EXISTING WATER CONNECTION(S)
- ___ REUSE EXISTING SEWER CONNECTION(S)
- X TERMINATE EXISTING WATER CONNECTION(S)
- ___ TERMINATE EXISTING SEWER CONNECTION(S)
- ___ PRIVATE CONSTRUCTION OF PUBLIC FACILITIES

To be completed by the PWSA:

(Required for ALL approvals)

REVIEWER

CHIEF OF OPERATIONS

(Required for "Private Construction of Public Facilities" ONLY)

DIRECTOR OF ENGINEERING AND CONSTRUCTION

PWSA PROJECT NUMBER ____________

TAP C RECORD NUMBER ____________

Signatures / Approval by PWSA are for the physical connection(s) to the water and/or sewer system only. Responsibility for the design and work depicted by the drawings, including the flow design for the facilities, is by the Professional Engineer shown by the seal and signature affixed to the drawing. The PWSA does not represent or warrant that the water supply to the facilities is sufficient to support the design.

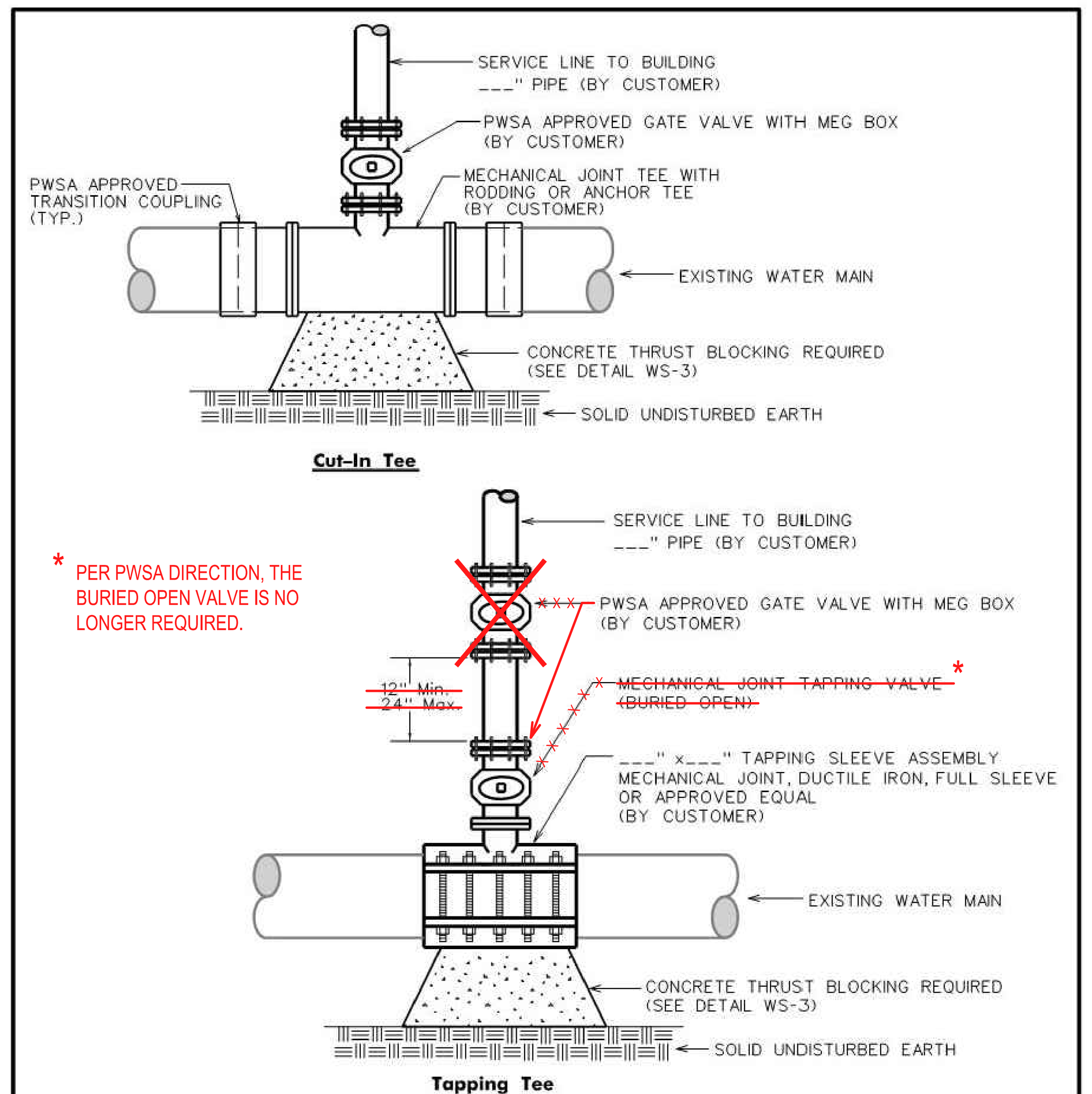
FIFTH AND DINWIDDIE DEVELOPMENT, LLC

FIFTH AND DINWIDDIE DEVELOPMENT - EAST SITE
WATER AND SEWER TAP PLAN
WATER & SANITARY SEWER

SITE UTILITY DETAILS

SCALE: AS SHOWN SHEET ACCESSION No. ________

DATE: 06/16/2021 4 OF 10 CASE No. ________



NOTES:

1. PWSA PERFORMS ACTUAL TAP TO MAIN ONLY AND MAINTAINS METER; ALL OTHER WORK BY CUSTOMER.
2. TAPPING TEE SHALL BE FULL SLEEVE; SADDLE STYLE NOT PERMITTED.
3. CUT-IN TEE CONNECTION ALSO ACCEPTABLE AND IS REQUIRED FOR SIZE ON SIZE (e.g. 8" TAP ON 8" MAIN).
4. CENTERING OF TAPPING TEE CONNECTION SHALL BE 18" MINIMUM FROM EXISTING WATER MAIN BELL/HUB OR OTHER EXISTING SERVICE CONNECTIONS.
5. ALL VALVES MUST BE "RIGHT TURN TO OPEN".
6. PRIVATE SERVICE LINE MATERIAL AND EQUIPMENT SHALL CONFORM TO ALLEGHENY COUNTY PLUMBING CODE, ARTICLE XV.
7. MJxMJ TAPPING SLEEVE MAY BE SUBMITTED TO PWSA FOR AN APPROVED OPTION.

REVISIONS	
1. MSR 4-23-01	5. LRC 1-31-14
2. MAC 7-26-04	
3. DWP 9-15-05	
4. MAC 11-1-07	

Approved by:

PGH2O Pittsburgh Water & Sewer Authority

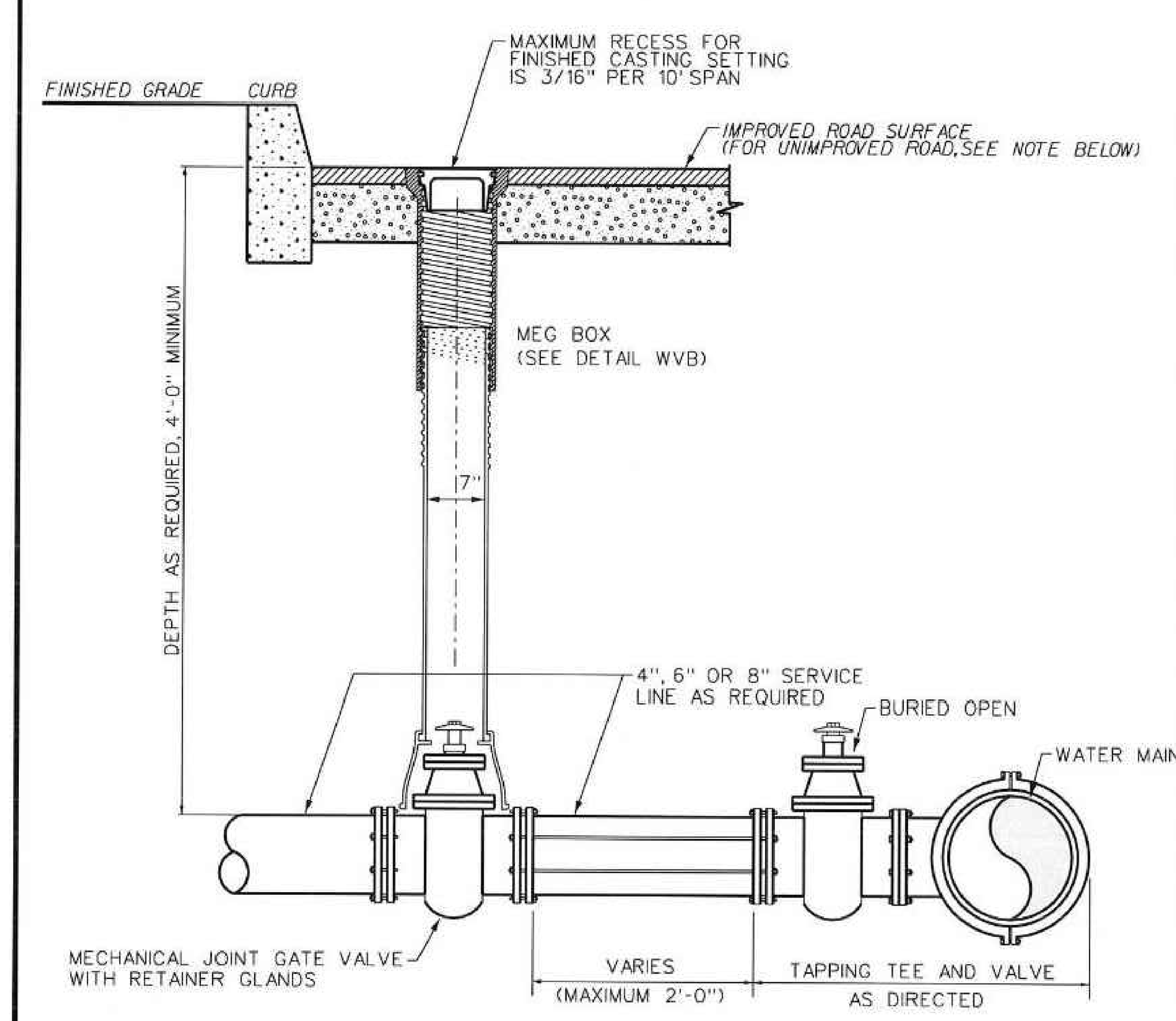
The Pittsburgh Water and Sewer Authority

Cut-In Tee And Tapping Tee

Scale: N.T.S. M:\pwsa\gis\det\Standards\stdwsctt.det

Supplemental Detail Drawing: **WS-CTT**

12/14/2016



NOTES:

1. ALL PIPING TO BE RESTRAINED WITH RODDING AND/OR RETAINER GLANDS.
2. ALL FITTINGS SHALL HAVE THRUST BLOCKS (SEE DETAIL WS-3).
3. STANDARD GATE BOX LID: TWO NOTCH OPENINGS REQUIRED. DIAMETER TO MATCH BOX.
4. GATE BOX EXTENSION: GATE BOX EXTENSION RINGS ARE NOT TO BE USED IN NEW WORK.
5. A MAXIMUM OF 3 EXTENSION RINGS CAN BE USED PER EXISTING GATE BOX.
6. MEG BOX MATERIAL SHALL BE CAST IRON.
7. IF MEG BOX IS LOCATED IN AN UNIMPROVED AREA, THEN A 30"x30"x 8"D CONCRETE PAD APRON CENTERED AROUND THE MEG BOX IS REQUIRED.
8. ALL VALVES MUST BE "RIGHT TURN TO OPEN".
9. PRIVATE SERVICE LINE MATERIAL AND EQUIPMENT SHALL CONFORM TO ALLEGHENY COUNTY PLUMBING CODE, ARTICLE XV.

REVISIONS	
1. MSR 4-23-01	
2. MAC 11-2-07	
3. LRC 1-31-14	

Approved by:

PWSA THE PITTSBURGH WATER & SEWER AUTHORITY Quality Water Quality Service Engineering & Construction Division

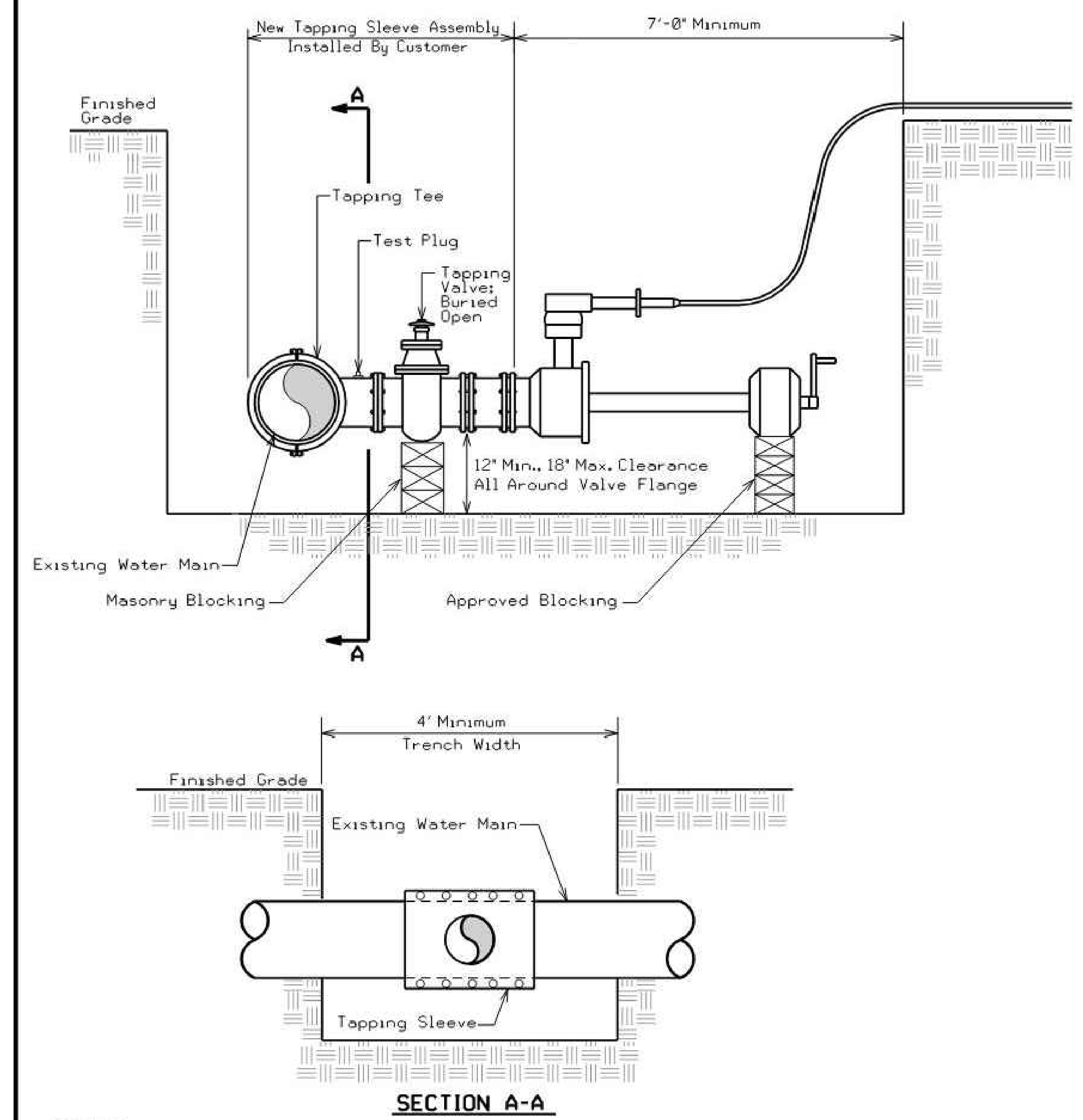
Pittsburgh Water and Sewer Authority

Service Connection 4" Through 8"

Scale: N.T.S. M:\pwsa\gis\det\Standards\stdwsa.det

Supplemental Detail Drawing: **WS-A**

2/24/2014



NOTES:

1. Tapping sleeve and tapping gate to be installed on water main by the contractor. PWSA will make the actual tap.
2. Tapping machine to be mounted and operated by PWSA.
3. Excavation and shoring required as per current OSHA standards.
4. Contractor must supply equipment to lower tapping machine in to trench.
5. All valves must be 'right turn to open'.

REVISIONS	
1. MSR 4-23-01	
2. MAC 8-15-01	
3. MAC 8-13-07	
4. LRC 1-31-14	

Approved by:

PGH2O Pittsburgh Water & Sewer Authority

The Pittsburgh Water and Sewer Authority

Trench Requirements For 4" Through 12" Live Water Tap

Scale: N.T.S. M:\pwsa\gis\det\Standards\stdwsb.det

Supplemental Detail Drawing: **WS-B**

5/19/2015

Michael Baker
INTERNATIONAL
100 Airside Drive
Moon Township, PA 15108
Phone: 412-269-6300
Fax: 412-375-3977

OWNER: Fifth and Dinwiddie Development, LLC

CIVIL ENGINEER: Michael Baker International

ARCHITECT: GBBN Architects

MASTER PLANNERS / LANDSCAPE ARCHITECT: evolveEA

Seal: PRELIMINARY DESIGN — NOT FOR CONSTRUCTION USE

No.	Description	Date

Project Number: 176433

Drawn By: BRF

THE PITTSBURGH WATER & SEWER AUTHORITY APPROVAL BLOCK

To be completed by the Applicant:

(Check all that apply)

- X NEW WATER CONNECTION(S)
- X NEW SEWER CONNECTION(S)
- ___ REUSE EXISTING WATER CONNECTION(S)
- ___ REUSE EXISTING SEWER CONNECTION(S)
- X TERMINATE EXISTING WATER CONNECTION(S)
- ___ TERMINATE EXISTING SEWER CONNECTION(S)
- ___ PRIVATE CONSTRUCTION OF PUBLIC FACILITIES

To be completed by the PWSA:

(Required for ALL approvals)

REVIEWER

CHIEF OF OPERATIONS

(Required for "Private Construction of Public Facilities" ONLY)

DIRECTOR OF ENGINEERING AND CONSTRUCTION

PWSA PROJECT NUMBER ____________

TAP C RECORD NUMBER ____________

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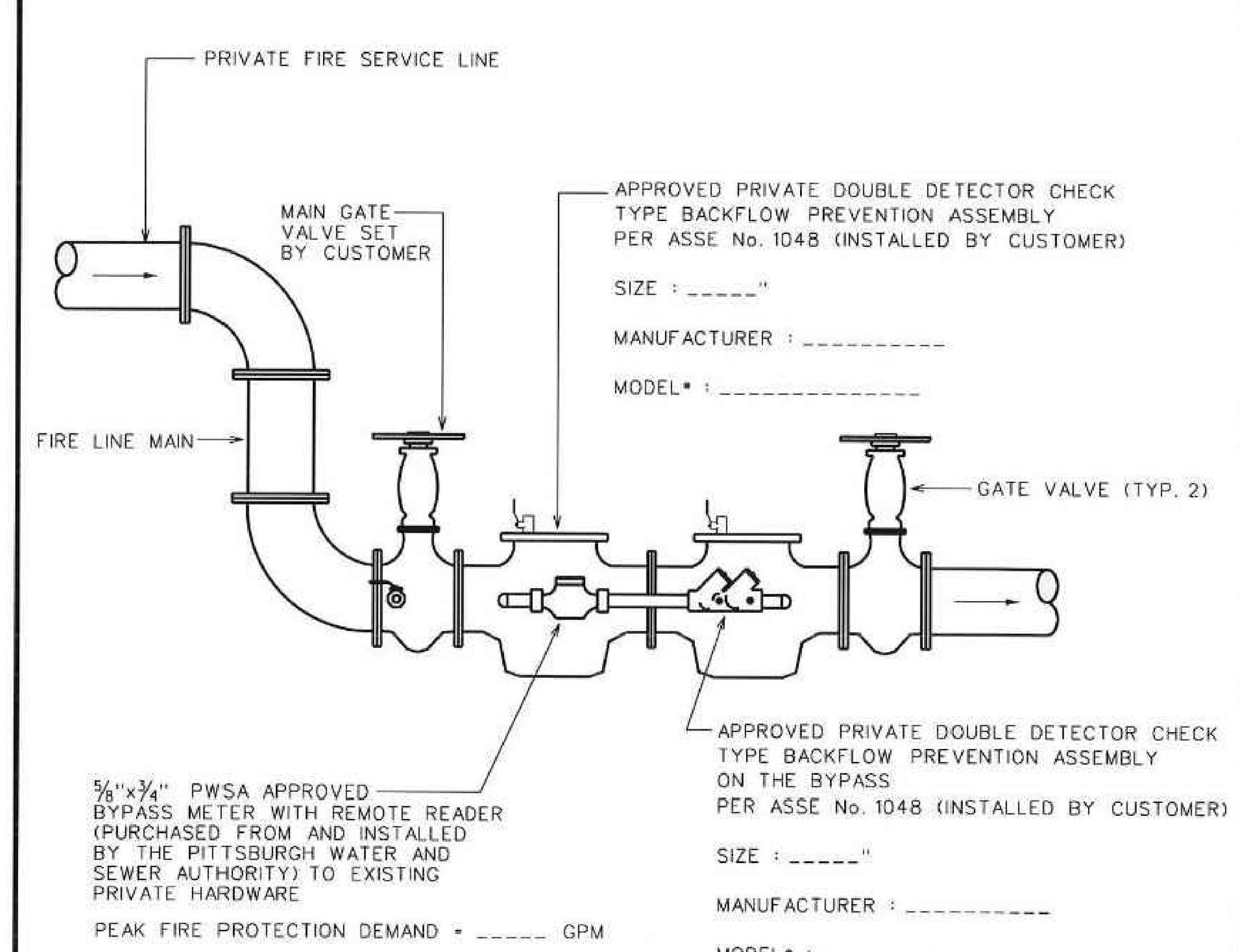


NOTES:

1. ALL ITEMS SHOWN EXCEPT THE BYPASS METER AND MIU SHALL BE FURNISHED AND INSTALLED BY THE CUSTOMER.
2. CUSTOMER TO PROVIDE DATA FOR CORRECT SIZE, MODEL, MANUFACTURER, AND PEAK FIRE DEMAND.
3. INSTALLATION OF ASSEMBLY IS PERMITTED IN VAULT, AS DIRECTED.
4. MANDATORY TEST REQUIRED AT TIME OF INSTALLATION PER IPC 312.9.2. FIELD TESTING REQUIREMENTS AND REPORTING SHALL BE PER ASSE No. 5013 2.0 AND 3.0.

REVISIONS	
1. MSR 4-23-01	
2. DWP 9-15-05	
3. MAC 8-13-07	
4. LRC 1-31-14	

Approved by:

PWSA THE PITTSBURGH WATER & SEWER AUTHORITY Quality Water Quality Service Engineering & Construction Division

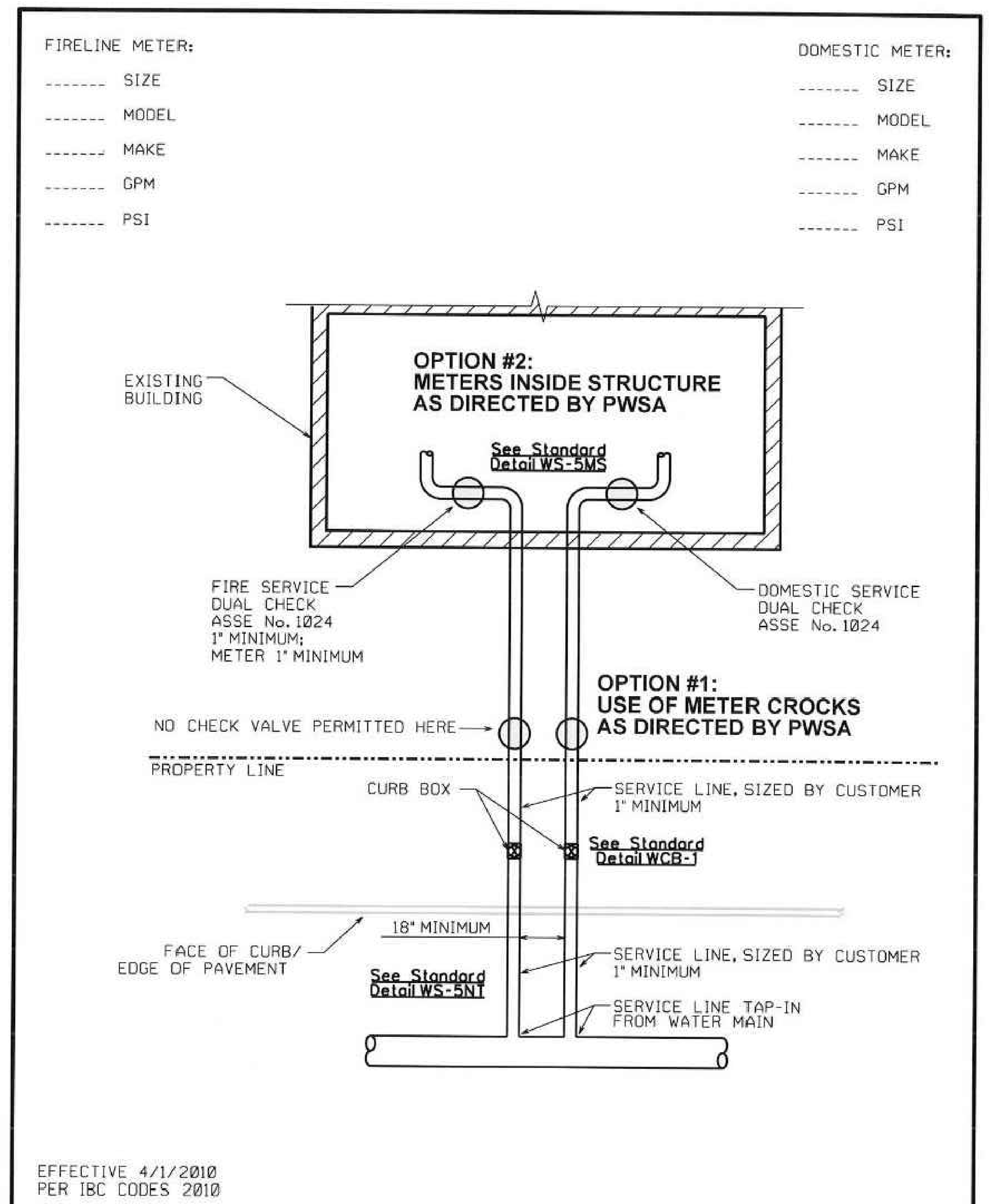
Pittsburgh Water and Sewer Authority

Typical Plumbing Schematic Low Hazard Fire Protection Service

Scale: N.T.S. M:\pwsa\gis\det\Standards\stdws5fplh.det

Supplemental Detail Drawing: **WS-5FPLH**

2/25/2014



REVISIONS
1. LRC 1-31-14

Approved by:

PWSA THE PITTSBURGH WATER & SEWER AUTHORITY Quality Water Quality Service Engineering & Construction Division

Pittsburgh Water and Sewer Authority

RESIDENTIAL DOMESTIC AND FIRE SERVICE CONNECTION STAND-ALONE SYSTEM

Scale: N.T.S. M:\pwsa\gis\det\Standards\stdwsrdf2.det

Supplemental Detail Drawing: **WS-RDF2**

2/24/2014

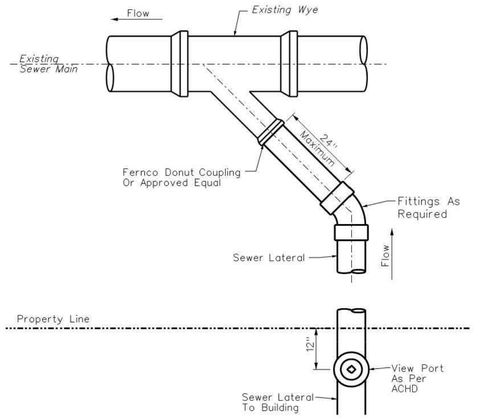
FIFTH AND DINWIDDIE DEVELOPMENT, LLC

FIFTH AND DINWIDDIE DEVELOPMENT - EAST SITE
WATER AND SEWER TAP PLAN
WATER & SANITARY SEWER

SITE UTILITY DETAILS

SCALE: AS SHOWN | SHEET 5 OF 10 | ACCESSION No. ________

DATE: 06/16/2021 | CASE No. ________



PLAN VIEW

REVISIONS		
1. MSR 4-18-01		
2. LRC 1-31-14		
Approved by:		

5/19/2015

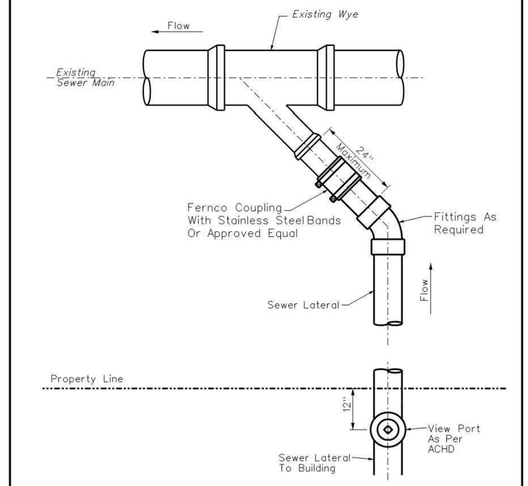
PGH2O Pittsburgh Water & Sewer Authority

The Pittsburgh Water and Sewer Authority

Sewer Tap To Existing Sewer Wye

Scale: N.T.S. — N:\pwsa\gis\det\Standards\stds\st1.dgn

Supplemental Detail Drawing: **ST-1**



PLAN VIEW

REVISIONS		
1. MSR 4-18-01		
2. LRC 1-31-14		
Approved by:		

5/19/2015

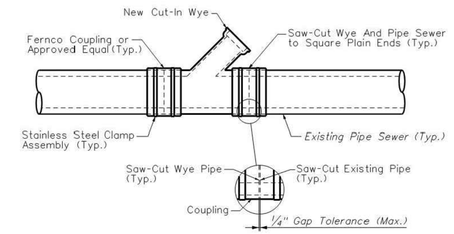
PGH2O Pittsburgh Water & Sewer Authority

The Pittsburgh Water and Sewer Authority

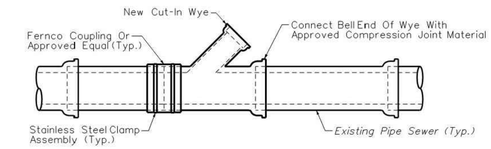
Sewer Tap To Existing Sewer Wye

Scale: N.T.S. — N:\pwsa\gis\det\Standards\stds\st2.dgn

Supplemental Detail Drawing: **ST-2**



ALT. No.1



ALT. No.2

NOTES:

1. SAW-CUT EXISTING PIPE SEWER, NO BREAK-IN OR HAMMER CONNECTIONS PERMITTED. JOINTS MUST BE INSPECTED BY PWSA BEFORE AND AFTER FLEXIBLE COUPLINGS ARE INSTALLED.
2. WYE MATERIAL WILL MATCH SEWER MAIN MATERIAL.
3. PIPE MAIN I.D. OF NEW WYE SECTION WILL MATCH I.D. OF EXISTING PIPE SEWER MAIN.
4. WYE LOCATION WILL BE LOCATED AT 2 O'CLOCK OR 10 O'CLOCK ON BARREL OF PIPE SEWER.

REVISIONS		
1. JLK 8-14-02		
2. MAC 1-5-04		
3. LRC 1-31-14		
Approved by:		

5/19/2015

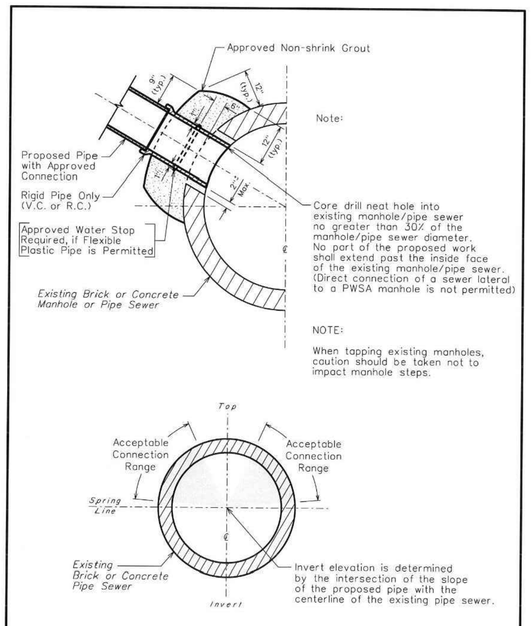
PGH2O Pittsburgh Water & Sewer Authority

The Pittsburgh Water and Sewer Authority

Cut-In Wye Pipe Transition

Scale: N.T.S. — N:\pwsa\gis\det\Standards\stds\st7.dgn

Supplemental Detail Drawing: **ST-7**



REVISIONS		
1. MSR 4-18-01		
2. DWP 9-15-05		
3. MAC 11-3-08		
4. LRC 1-31-14		
Approved by:		

2/24/2014

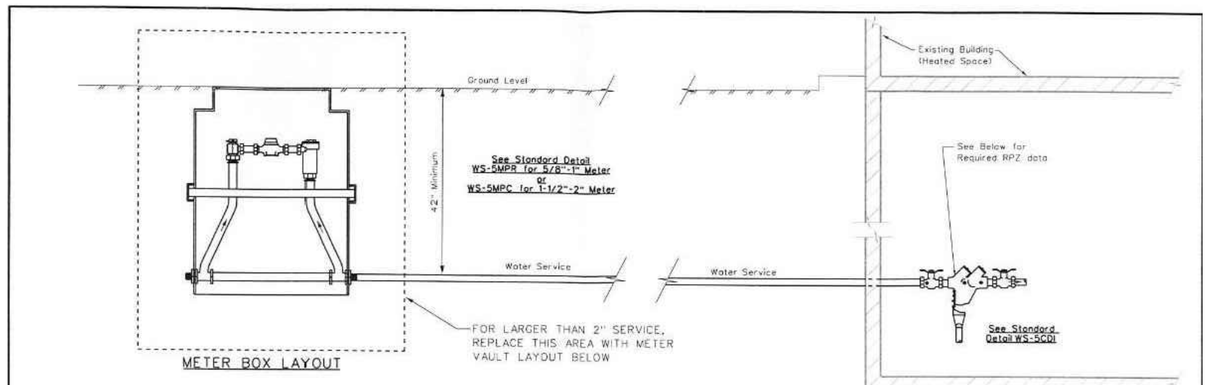
PWSA — Pittsburgh Water and Sewer Authority — Quality Water & Quality Service — Engineering & Construction Division

Pittsburgh Water and Sewer Authority

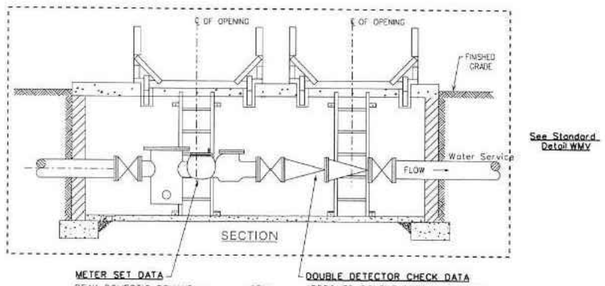
Manhole / Pipe Sewer Cored Wye Connection

Scale: N.T.S. — N:\pwsa\gis\det\Standards\stds\ssc1.dgn

Supplemental Detail Drawing: **SSC-1**



METER BOX LAYOUT



See Standard Detail WMV

METER SET DATA
PEAK DOMESTIC DEMAND = _____ GPM
METER SIZE : _____

DOUBLE DETECTOR CHECK DATA
APPROVED DOUBLE DETECTOR CHECK TYPE BACKFLOW PREVENTION ASSEMBLY PER ASSE No. 1048 (INSTALLED BY OWNER)
SIZE : _____"
MANUFACTURER : _____
MODEL* : _____

RPZ DATA
APPROVED REDUCED PRESSURE ZONE (RPZ) TYPE BACKFLOW PREVENTION ASSEMBLY PER ASSE No. 1013 (INSTALLED BY OWNER)
SIZE : _____"
MANUFACTURER : _____
MODEL* : _____

NOTES:

1. Meter Box Setting for use on water service meters 2" and under.
2. Meter Vault required on meters larger than 2".
3. Mandatory test required at time of installation per IPC 312.9.2

METER VAULT LAYOUT

REVISIONS		
1. RDH 8-8-07		
2. MJM 3-30-10		
3. LRC 1-31-14		
Approved by:		

PWSA — Pittsburgh Water and Sewer Authority — Quality Water & Quality Service — Engineering & Construction Division

Pittsburgh Water and Sewer Authority

Domestic Service External Meter Setting Commercial And Multi-Family

Scale: N.T.S. — N:\pwsa\gis\det\Standards\stds\ws5mprpzdet.dgn

Supplemental Detail Drawing: **WS-5MPRPZ**

Michael Baker
INTERNATIONAL
100 Airside Drive
Moon Township, PA 15108
Phone: 412-269-6300
Fax: 412-375-3977

OWNER:
Fifth and Dinwiddie Development, LLC
CIVIL ENGINEER:
Michael Baker International
ARCHITECT:
GBBN Architects

MASTER PLANNERS / LANDSCAPE ARCHITECT:
evolveEA

Seal:

PRELIMINARY DESIGN — NOT FOR CONSTRUCTION USE

No.	Description	Date

Project Number: 176433

Drawn By: BRF

THE PITTSBURGH WATER & SEWER AUTHORITY APPROVAL BLOCK

To be completed by the Applicant:

(Check all that apply)

X NEW WATER CONNECTION(S)
X NEW SEWER CONNECTION(S)
___ REUSE EXISTING WATER CONNECTION(S)
___ REUSE EXISTING SEWER CONNECTION(S)
X TERMINATE EXISTING WATER CONNECTION(S)
___ TERMINATE EXISTING SEWER CONNECTION(S)
___ PRIVATE CONSTRUCTION OF PUBLIC FACILITIES

To be completed by the PWSA:

(Required for ALL approvals)

REVIEWER

CHIEF OF OPERATIONS

(Required for "Private Construction of Public Facilities" ONLY)

DIRECTOR OF ENGINEERING AND CONSTRUCTION

PWSA PROJECT NUMBER _____

TAP C RECORD NUMBER _____

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FIFTH AND DINWIDDIE DEVELOPMENT, LLC

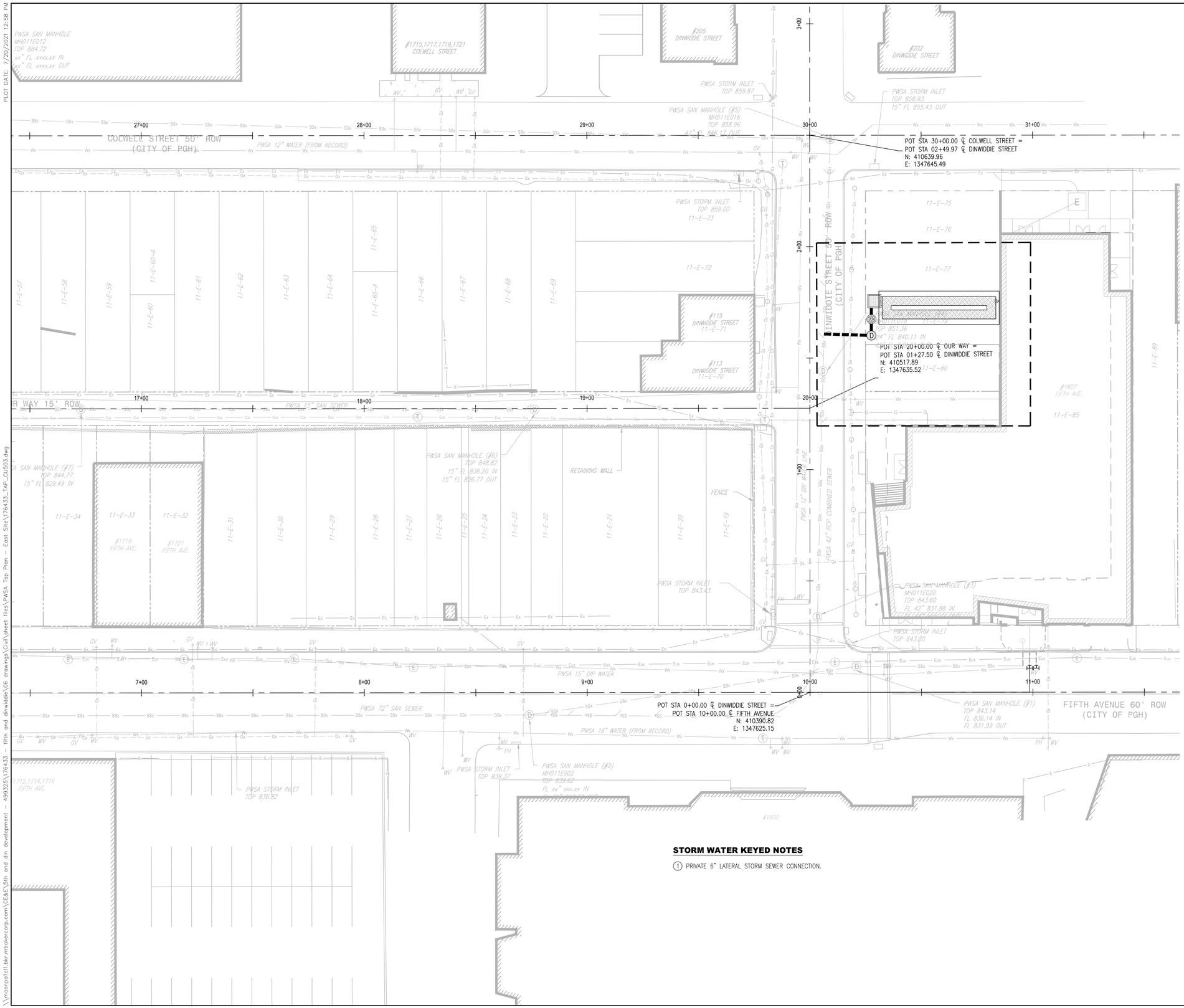
FIFTH AND DINWIDDIE DEVELOPMENT - EAST SITE
WATER AND SEWER TAP PLAN

STORM SEWER

SITE UTILITY DETAILS

SCALE: AS SHOWN SHEET ACCESSION No. _____

DATE: 06/16/2021 6 OF 10 CASE No. _____



WATER & SANITARY SEWER LEGEND

- PROPERTY BOUNDARY
- ROADWAY CENTER LINE
- EXIST. WATER LINE
- WATER LINE
- WATER SERVICE METER PIT
- CURB BOX
- WATER LINE (PVT)
- WATER METER VAULT
- THRUST BLOCK
- EXIST. FIRE HYDRANT
- EXIST. COMB./SANITARY SEWER
- SANITARY SEWER
- SANITARY SEWER (PVT)
- STORM SEWER
- STORM SEWER (PVT)
- SANITARY/STORM MANHOLE
- STORM MANHOLE (PVT)
- STORM TRAP MANHOLE (PVT)
- STORMCEPTER (PVT)
- STORM INLET/CATCH BASIN
- STORM INLET/CATCH BASIN (PVT)
- STORM TRAP, VENT, CLEANOUT (PVT)
- SANITARY CLEANOUT (PVT)

20' 10' 0 20'
SCALE: 1"= 20'
N

STORM WATER KEYED NOTES

(1) PRIVATE 6" LATERAL STORM SEWER CONNECTION.

Michael Baker
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100 Airside Drive
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Phone: 412-269-6300
Fax: 412-375-3977

OWNER:
Fifth and Dinwiddie Development, LLC
CIVIL ENGINEER:
Michael Baker International
ARCHITECT:
GBBN Architects

MASTER PLANNERS / LANDSCAPE ARCHITECT:
evolveEA

Seal:
PRELIMINARY DESIGN — NOT FOR CONSTRUCTION USE

No.	Description	Date

Project Number: 176433
Drawn By: BRF

THE PITTSBURGH WATER & SEWER AUTHORITY APPROVAL BLOCK

To be completed by the Applicant:
(Check all that apply)

- X NEW WATER CONNECTION(S)
- X NEW SEWER CONNECTION(S)
- ____ REUSE EXISTING WATER CONNECTION(S)
- ____ REUSE EXISTING SEWER CONNECTION(S)
- X TERMINATE EXISTING WATER CONNECTION(S)
- ____ TERMINATE EXISTING SEWER CONNECTION(S)
- ____ PRIVATE CONSTRUCTION OF PUBLIC FACILITIES

To be completed by the PWSA:
(Required for ALL approvals)

REVIEWER

CHIEF OF OPERATIONS

(Required for "Private Construction of Public Facilities" ONLY)

DIRECTOR OF ENGINEERING AND CONSTRUCTION

PWSA PROJECT NUMBER ____

TAP C RECORD NUMBER ____

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FIFTH AND DINWIDDIE DEVELOPMENT, LLC

FIFTH AND DINWIDDIE DEVELOPMENT - EAST SITE
WATER AND SEWER TAP PLAN
STORM SEWER

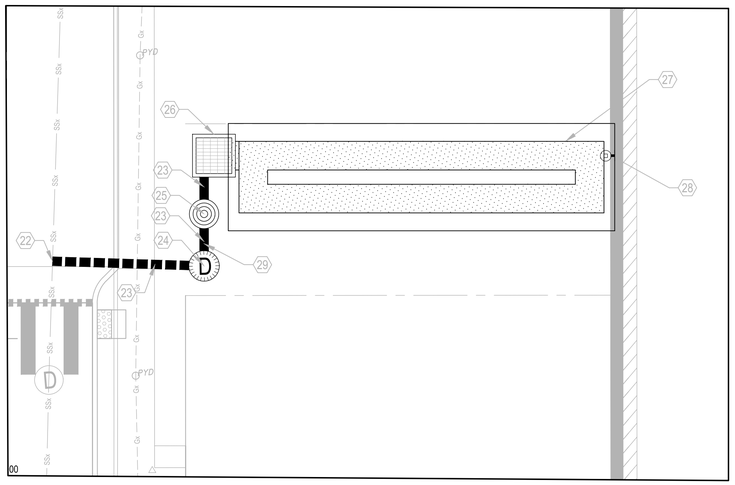
FIFTH AVENUE; DINWIDDIE STREET
PITTSBURGH, PA 15206

SCALE: AS SHOWN SHEET ACCESSION No. ____

DATE: 06/16/2021 7 OF 10 CASE No. ____

PRIVATE STORM WATER STRUCTURE TABLES

STRUCTURE NAME / TYPE	STRUCTURE DETAILS
MH C-4 Null Structure (PVT.)	15" INV IN (E) = 842.53 48" INV IN (N) = 840.28 48" INV OUT (S) = 840.28
OCS C-3 5'X5' OUTLET STRUCTURE (PVT.)	RIM = 853.95 SUMP = 845.97 48" INV IN (E) = 846.00
STORMCEPTOR C-2 Concentric Cylindrical Structure (PVT.)	RIM = 853.28 SUMP = 845.85 15" INV IN (N) = 845.95 15" INV OUT (S) = 845.85
TRAP MH C-1 Concentric Cylindrical Structure (PVT.)	RIM = 852.80 SUMP = 844.20 15" INV IN (N) = 845.78 15" INV OUT (W) = 844.20



N

1 ENLARGED STORM SEWER PLAN A
SCALE: 1" = 10'

10' 5' 0 10'
SCALE: 1"= 10'

22 EXISTING STORMWATER INFRASTRUCTURE POINT OF CONNECTION (SEE PWSA DETAIL SSC-1)

23 15" HDPE STORMWATER PIPING (SLCPP)

24 TRAP MANHOLE

25 STC 450i STORMCEPTOR

26 OUTLET CONTROL STRUCTURE

27 STORMWATER DETENTION AREA
2 ROWS 43.00 LF OF 48" Ø CMP PERFORATED
2-48" Ø HEADERS CMP PERFORATED
OUTSIDE STONE BED DIMENSIONS 54' x 15'

28 STORMWATER ROOF LEADER CONNECTION TO DETENTION (SEE MEP PLAN)

29 TRENCH PLUG

WATER & SANITARY SEWER LEGEND

- PROPERTY BOUNDARY
- ROADWAY CENTER LINE
- EXIST. WATER LINE
- WATER LINE
- WATER SERVICE METER PIT
- CURB BOX
- WATER LINE (PVT)
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- STORM TRAP, VENT, CLEANOUT (PVT)
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REVIEWER

CHIEF OF OPERATIONS

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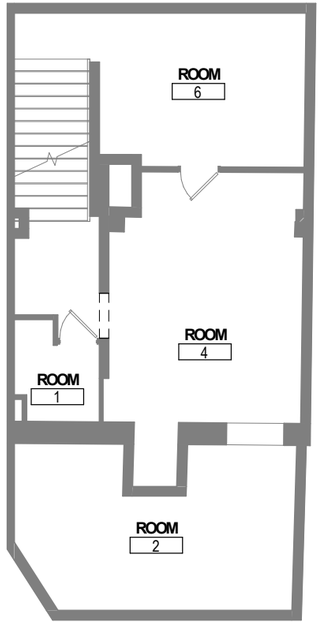
FIFTH AND DINWIDDIE DEVELOPMENT, LLC

FIFTH AND DINWIDDIE DEVELOPMENT - EAST SITE
WATER AND SEWER TAP PLAN
STORM SEWER

PRIVATE STORM STRUCTURE DATA TABLES & ENLARGED STORM SEWER PLAN

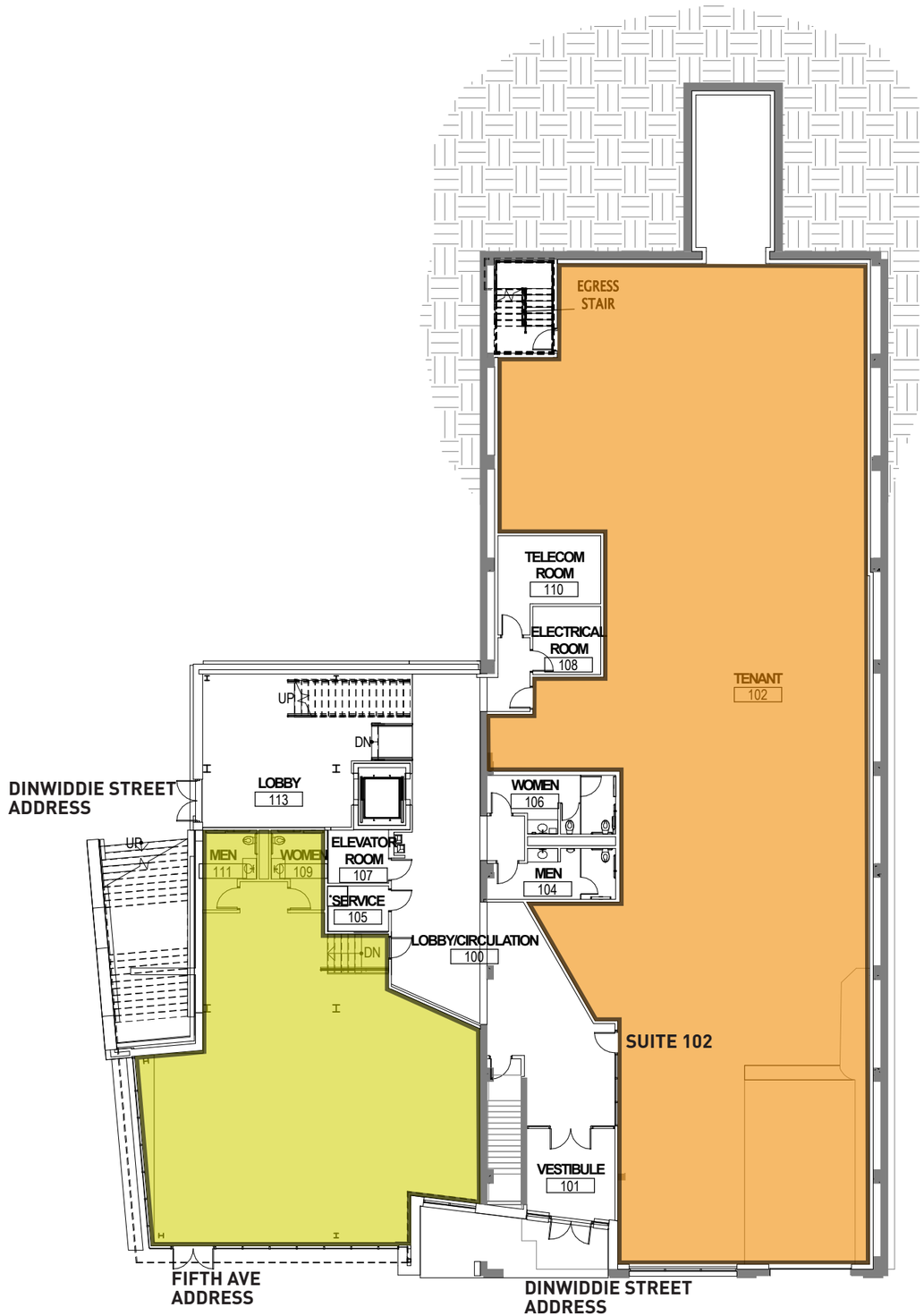
SCALE: AS SHOWN SHEET ACCESSION No. ___

DATE: 06/16/2021 8 OF 10 CASE No. ___



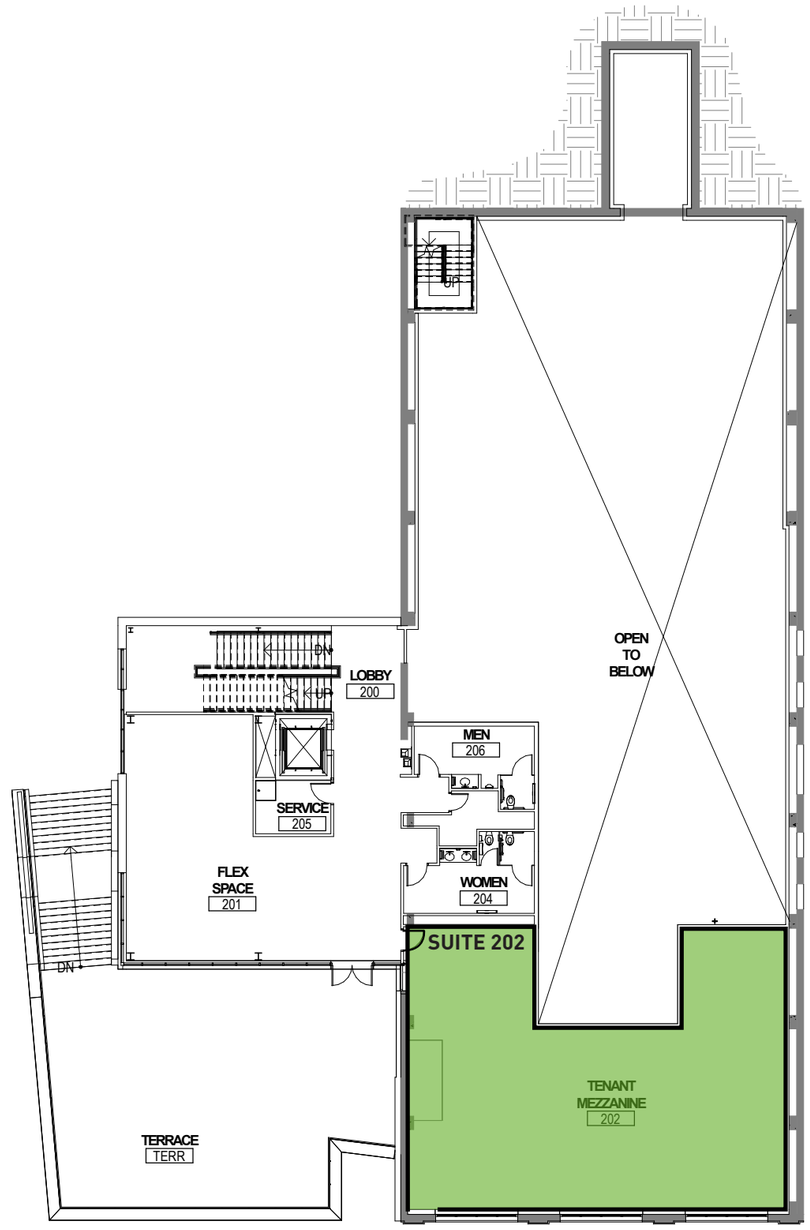
BASEMENT PLAN

09.22.2020
Fifth and Dinwiddie - East Site



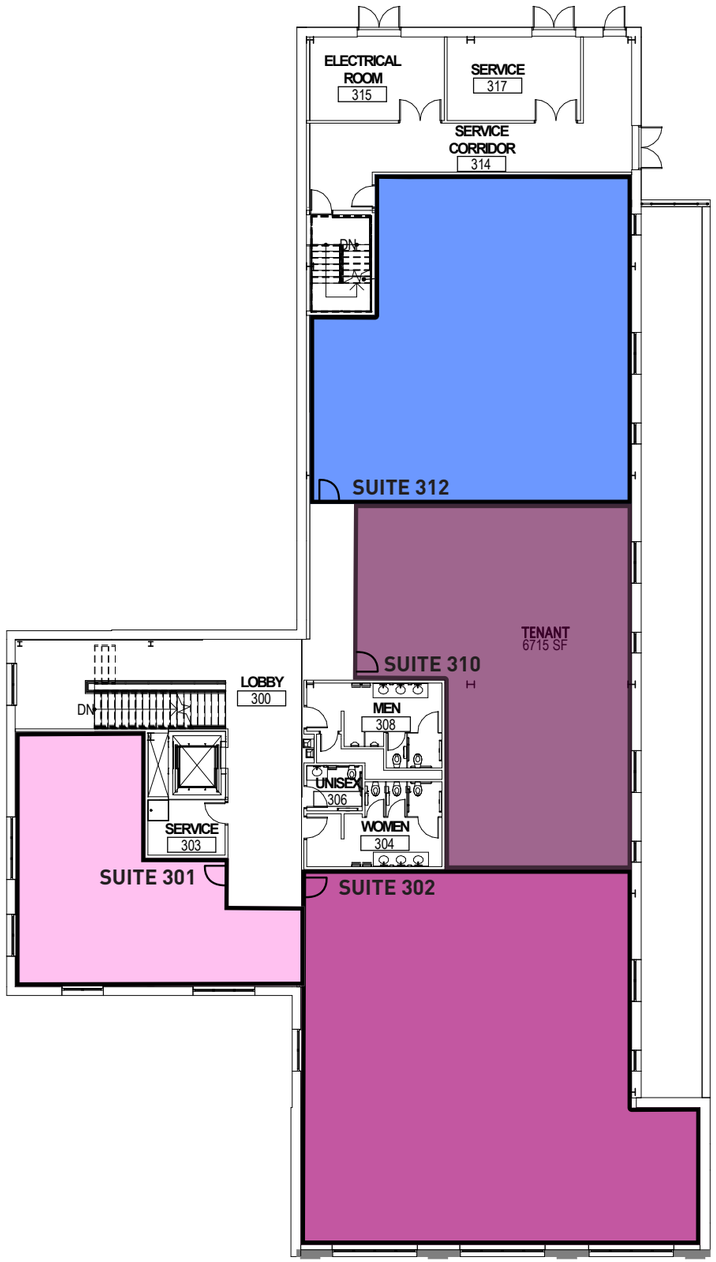
LEVEL 1 PLAN

09.22.2020
Fifth and Dinwiddie - East Site



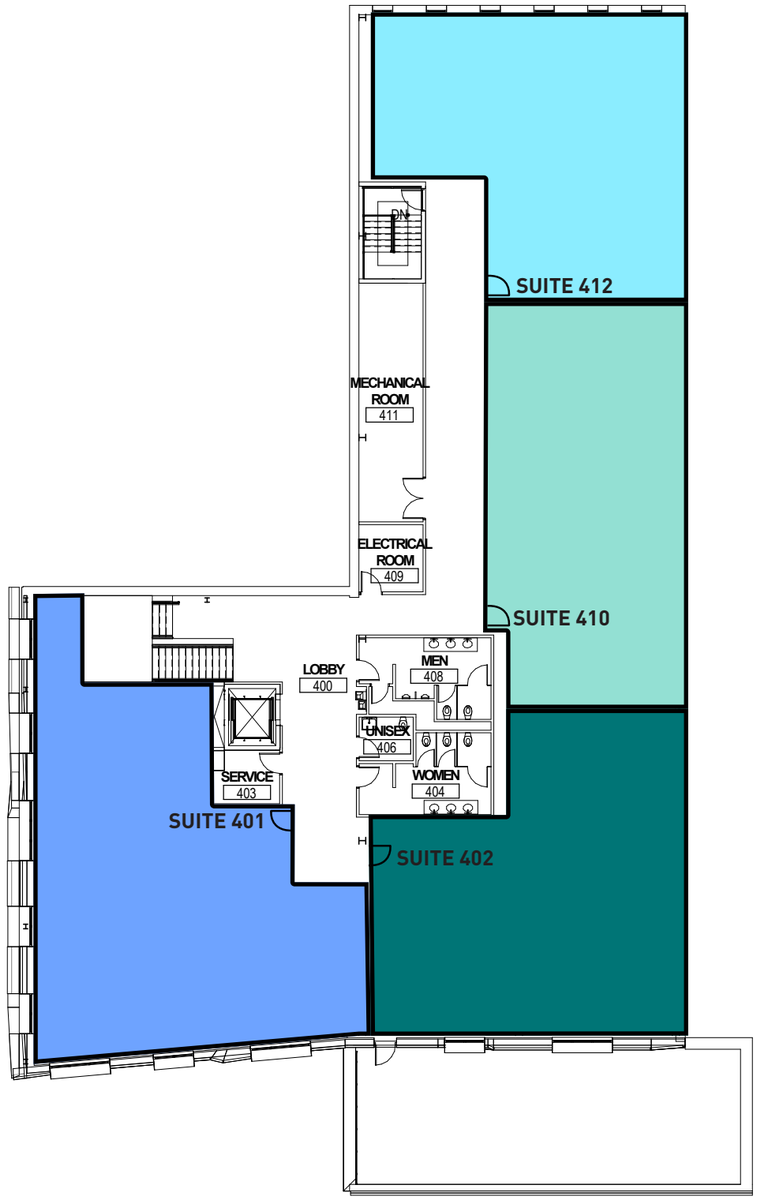
09.22.2020
Fifth and Dinwiddie - East Site

LEVEL 2 PLAN



09.22.2020
Fifth and Dinwiddie - East Site

LEVEL 3 PLAN



LEVEL 4 PLAN

09.22.2020
Fifth and Dinwiddie - East Site

PLUMBING SYMBOLS LEGEND

SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
	ACCESS PANEL		COMPRESSED AIR OUTLET	FS-# OR FS-#	FLOOR SINK W/ P-TRAP		PRESSURE GAUGE WITH GAUGE COCK		STRAINER WITH VALVED AND CAPPED BLOW DOWN
ELEV PLAN	ANGLE GATE VALVE		DIRECTION OF WATER FLOW	FS	PIPING - FLOW SWITCH		PRESSURE REDUCING VALVE		TEE DOWN
	ANGLE GLOBE VALVE		DRAIN VALVE		GATE VALVE		PRESSURE REGULATOR		TEE UP
	BACKFLOW PREVENTER		ELBOW 90° DOWN		GLOBE VALVE	T&P	PRESSURE RELIEF VALVE (TEMPERATURE & PRESSURE)	T	TEMPERATURE SENSOR
	BALL VALVE		ELBOW 90° UP		GAS REGULATOR	T	PRESSURE RELIEF VALVE (TEMPERATURE)		THERMOMETER
	BUTTERFLY VALVE		ELBOW 90°		HOSE BIBB	P	PRESSURE RELIEF VALVE (PRESSURE)	T	THERMOSTAT (DASHED LINE RUNS TO CONTROLLED DEVICE)
	CALIBRATED BALANCE VALVE		ELBOW 45°		HOSE & QUICK COUPLERS		PT (PRESSURE & TEMPERATURE) TEST PORT		TRAP - ELEVATION
	CAP	EJ	EXPANSION JOINT	#	KEYNOTE	P-#	PUMP (ARROW IS DIRECTION OF FLOW)		TRAP - PLAN
	CHECK VALVE (SWING GATE)	FCO	FLOOR CLEAN-OUT		LUBRICATOR		QUICK DISCONNECT		UNION
	CONTROL VALVE (3-WAY)		FILTER	M	METER		REDUCER		VALVE IN RISE
	CONNECT TO EXISTING	F/R	FILTER/REGULATOR		MIXING VALVE	RD-#	ROOF DRAIN		VENT THROUGH ROOF
CO	CLEAN-OUT	F/R/L	FILTER/REGULATOR/LUBRICATOR		PIPE ANCHOR		REMOVE EXISTING TO	WH-#	WALL HYDRANT
CO	CLEAN-OUT IN HORIZONTAL		FLEXIBLE CONNECTION		PIPE GUIDE	S	SOLENOID VALVE	WHA-X	WATER HAMMER ARRESTOR
CO	CLEAN-OUT IN VERTICAL	FD-# OR FD-#	FLOOR DRAIN W/ P-TRAP		PLUG VALVE		STRAINER		

NOTE:
LEGENDS ON THIS SHEET ARE ALL-INCLUSIVE.
ALL SYMBOLS, ABBREVIATIONS, OR PIPE SYSTEMS MAY NOT BE PART OF THIS PROJECT.

PLUMBING ABBREVIATIONS

ABB	DESCRIPTION	ABB	DESCRIPTION	ABB	DESCRIPTION	ABB	DESCRIPTION
ABV	ABOVE	CU FT	CUBIC FEET	FT	FOOT, FEET	POL	PETROLEUM / OIL / LUBRICANT
AC	AIR COMPRESSOR	CUH	CABINET UNIT HEATER	FTG	FOOTING	PSI	POUNDS PER SQUARE INCH
AD	ACCESS DOOR, AIR DRYER	CWBT	CHILLED WATER BUFFER TANK	GA	GAUGE	QTY	QUANTITY
AFF	ABOVE FINISHED FLOOR	CWR	CHILLED WATER RETURN	GBD	GARBAGE DISPOSAL	REQ'D	REQUIRED
AFG	ABOVE FINISHED GRADE	CWS	CHILLED WATER SUPPLY	GC	GENERAL CONTRACTOR	RPM	REVOLUTIONS PER MINUTE
AFR	ABOVE FINISHED ROOF	DEG	DEGREE(S)	GPM	GALLONS PER MINUTE	RWC	RAIN WATER CONDUCTOR
AHU	AIR HANDLING UNIT	DF	DRINKING FOUNTAIN	GWH	GAS WATER HEATER	RWL	RAIN WATER LEADER
AP	ACCESS PANEL	DFU	DRAINAGE FIXTURE UNIT	HP	HORSE POWER	S	SINK
APPROX	APPROXIMATE(LY)	DIA	DIAMETER	HTG	HEATING	SF	SQUARE FEET
ARCH	ARCHITECT OR ARCHITECTURAL	DN	DOWN	HV	HEATING AND VENTILATION	SFU	SUPPLY FIXTURE UNIT(S)
AST	ABOVE GROUND STORAGE TANK	DU	DISTRIBUTION UNIT	HVAC	HEATING VENTILATION / AIR CONDITIONING	SH	SHOWER
C	CELSIUS	DWG	DRAWING	IE	INVERT ELEVATION	SRC	SECONDARY RAIN CONDUCTOR
Kg	KILOGRAM(S)	EC	ELECTRICAL CONTRACTOR	IN	INCH(ES)	SS	SERVICE SINK
L/s	LITERS PER SECOND	EL	EXPANSION LOOP	IRH	INFRARED RADIANT HEATER	STRUC	STRUCTURAL
m	METERS	ELEC	ELECTRIC(AL)	KS	KITCHEN SINK	SWC	SAFE WASTE CONNECTION
m³	CUBIC METERS	ELEV	ELEVATION	KW	KILOWATTS	TD	TRENCH DRAIN
m²	SQUARE METERS	ESEW	EMERGENCY SHOWER & EYE WASH	L	LAVATORY	TE	TOP ELEVATION
m/s	METERS PER SECOND	ET	EXPANSION TANK	LB(S)	POUND(S)	TEMP	TEMPERATURE
mm	MILIMETERS	ETR	EXISTING TO REMAIN	MAX	MAXIMUM	TOF	TOP OF FOOTING
Pa	PASCALS	EW, EEW	EMERGENCY EYE WASH	MC	MECHANICAL CONTRACTOR	TOP	TOP OF PIPE
W	WATT(S)	EWC	ELECTRIC WATER COOLER	MECH	MECHANICAL	TP	TRAP PRIMER VALVE
BLDG	BUILDING	EWH	ELECTRIC WATER HEATER	MFR, MFGR	MANUFACTURER	TYP	TYPICAL
BLW	BELOW	EX, EXIST	EXISTING	MIN	MINIMUM	U	URINAL
BOF	BOTTOM OF FOOTING	(F)	FUTURE	MISC	MISCELLANEOUS	UNO	UNLESS NOTED OTHERWISE
BOT	BOTTOM	F	FAHRENHEIT	MR	MOP RECEPTOR	VOL	VOLUME
C	CELSIUS	FCO	FLOOR CLEANOUT	NC	NORMALLY CLOSED	W	WASTE
CB	CATCH BASIN	FFE	FINISHED FLOOR ELEVATION	NIC	NOT IN CONTRACT	W/	WITH
CFH	CUBIC FEET PER HOUR	FIN	FINISHED	NO	NORMALLY OPEN	W/O	WITHOUT
CLG	CEILING	FLEX	FLEXIBLE	NTS	NOT TO SCALE	WB	WASHER BOX
CONC	CONCRETE	FLR	FLOOR	OB	OUTLET BOX	WC	WATER CLOSET, WATER COLUMN
COND	CONDENSATION	FPM	FEET PER MINUTE	P&T	PRESSURE & TEMPERATURE	WF	WASH FOUNTAIN
CONN	CONNECTION	FRP	FIBERGLASS REINFORCED PLASTIC PIPING	PC	PLUMBING CONTRACTOR	WH	WATER HEATER
CONT	CONTINUOUS, CONTINUATION			PDI	PLUMBING & DRAINAGE INSTITUTE		
CONTR	CONTRACTOR						

PLUMBING PIPE LEGEND

SYMBOL	ABBREV	DESCRIPTION
ATF	ATF	AUTOMATIC TRANSMISSION FLUID
AW	AW	ACID RESISTANT WASTE
AV	AV	ACID RESISTANT VENT
CA	CA	COMPRESSED AIR
CG	CG	CHASSIS GREASE
CW	CW	DOMESTIC COLD WATER
HW	HW	DOMESTIC HOT WATER
HW-R	HW-R	DOMESTIC HOT WATER RETURN
(140°)	HW140	DOMESTIC HOT WATER (60°C)
(140°)	HWR140	DOMESTIC HOT WATER RETURN (60°C)
EC	EC	ENGINE COOLANT
EO	EO	ENGINE OIL
FP	FP	FIRE PROTECTION
G	G	NATURAL GAS
GO	GO	GEAR OIL
GW	GW	GREASE-LADEN WASTE
OW	OW	OIL-LADEN WASTE
PD	PD	PUMP DISCHARGE
SS	SS	SANITARY SEWER
ST	ST	STORM SEWER
TP	TP	TRAP PRIMER PIPING
TW	TW	TEMPERED WATER
-V-	V	SANITARY VENT
WEC	WEC	WASTE ENGINE COOLANT
WEO	WEO	WASTE ENGINE OIL

PLUMBING GENERAL NOTES

1. PROVIDE ALL MATERIALS AND EQUIPMENT AND PERFORM ALL LABOR REQUIRED, TO INSTALL COMPLETE FOR AN OPERABLE PLUMBING SYSTEM AS INDICATED ON THE DRAWINGS, AS SPECIFIED, AND AS REQUIRED BY CODE. ALL MATERIAL SHALL BE NEW AND OF GOOD QUALITY. ALL WORK SHALL BE INSTALLED IN A NEAT AND WORKMAN LIKE MANNER.
2. CONTRACT DOCUMENT DRAWINGS FOR PLUMBING WORK ARE DIAGRAMMATIC AND ARE INTENDED TO CONVEY SCOPE AND GENERAL ARRANGEMENT ONLY. THE LOCATIONS OF ALL ITEMS SHOWN ON THE DRAWINGS OR CALLED FOR IN THE SPECIFICATIONS THAT ARE NOT DEFINITIVELY FIXED BY DRAWING DIMENSIONS ARE APPROXIMATE ONLY. THE EXACT LOCATION NECESSARY TO ACHIEVE THE BEST CONDITIONS AND RESULTS MUST BE DETERMINED BY THE PROJECT SITE CONDITIONS. DO NOT SCALE DRAWINGS. CERTAIN ITEMS SUCH AS RISES AND DROPS IN PIPING, ACCESS DOORS, ETC., ARE INDICATED ON THE CONTRACT DOCUMENT DRAWINGS FOR CLARITY NOT FOR A SPECIFIC LOCATION REQUIREMENT AND SHALL NOT BE INTERPRETED AS THE EXTENT OF THE REQUIREMENTS FOR THESE TYPES OF ITEMS.
3. INSTALL ALL PLUMBING EQUIPMENT AND APPURTENANCES IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS, CONTRACT DOCUMENTS, AND APPLICABLE CODES AND REGULATIONS. COORDINATE ALL EQUIPMENT CONNECTIONS WITH MANUFACTURERS' CERTIFIED DRAWINGS. COORDINATE AND PROVIDE ALL TRANSITIONS REQUIRED FOR FINAL EQUIPMENT CONNECTIONS TO FURNISHED EQUIPMENT. FIELD VERIFY AND COORDINATE ALL PIPING DIMENSIONS BEFORE FABRICATION. LOCATE ALL PLUMBING EQUIPMENT FOR UNOBSTRUCTED ACCESS TO UNIT ACCESS PANELS, CONTROLS, VALVING, ETC.
4. COORDINATE CONSTRUCTION OF ALL PLUMBING WORK WITH ARCHITECTURAL, STRUCTURAL, CIVIL, SOILS, MECHANICAL, ELECTRICAL, COMMUNICATIONS WORK, ETC., AS SHOWN IN OTHER CONTRACT DOCUMENTS. PROPERLY CONSTRUCTED OFFSETS IN PIPING AROUND OBSTRUCTIONS SHALL BE PROVIDED AT NO ADDITIONAL COST. LOCATIONS AND SIZES OF ALL FLOOR, WALL AND ROOF OPENINGS SHALL BE COORDINATED WITH ALL OTHER TRADES INVOLVED.
5. MAINTAIN A MINIMUM OF 6'-8" CLEARANCE TO UNDERSIDE OF PIPES, CONDUITS, SUSPENDED EQUIPMENT, ETC., THROUGHOUT ACCESS ROUTES IN MECHANICAL ROOMS.
6. ALL TESTS SHALL BE COMPLETED BEFORE ANY EQUIPMENT OR PIPING INSULATION IS APPLIED, OR CONCEALED.
7. LOCATE ALL TEMPERATURE, PRESSURE AND FLOW MEASURING DEVICES IN ACCESSIBLE LOCATIONS WITH A STRAIGHT SECTION OF PIPE UPSTREAM AND DOWNSTREAM, AS RECOMMENDED BY THE DEVICE MANUFACTURER FOR ACCURACY. INSTALL THERMOMETER IN A VERTICAL AND TILTED POSITION TO ALLOW READING BY OBSERVER STANDING ON FLOOR.
8. WHERE TWO OR MORE PRODUCTS OF THE SAME TYPE OF EQUIPMENT ARE REQUIRED, THE PRODUCTS OF A SINGLE MANUFACTURER SHALL BE USED.
9. PROVIDE ACCESS PANELS FOR INSTALLATION IN WALLS AND CEILINGS, WHERE REQUIRED, TO SERVICE VALVES AND OTHER CONCEALED PLUMBING EQUIPMENT, DEVICES, ETC. ACCESS PANELS SHALL BE TURNED OVER TO THE GENERAL CONTRACTOR FOR INSTALLATION.
10. ALL OPENINGS IN FIRE RESISTANCE RATED WALLS DUE TO DUCTWORK, PIPING, CONDUIT, ETC., SHALL BE FIRE STOPPED IN ACCORDANCE WITH THE REQUIREMENTS OF ASTM E 814 & UL 1479. SIMILARLY, SEAL/FIRESTOP AS REQUIRED AT SMOKE RATED SURFACES AS WELL.
11. INSTALL PIPING SO THAT ALL VALVES, STRAINERS, UNIONS, TRAPS, FLANGES AND OTHER APPURTENANCES REQUIRING ACCESS ARE EASILY ACCESSIBLE. ALL VALVES SHALL BE INSTALLED SO THAT THE VALVE REMAINS IN SERVICE WHEN EQUIPMENT OR PIPING ON EQUIPMENT SIDE OF VALVE IS REMOVED. ALL BALANCING VALVES AND BUTTERFLY VALVES SHALL BE PROVIDED WITH POSITION INDICATORS AND MAXIMUM ADJUSTABLE STOPS (AKA MEMORY STOPS). ALL VALVES (EXCEPT CONTROL VALVES) AND STRAINERS SHALL BE FULL SIZE OF PIPE BEFORE REDUCING SIZE TO MAKE CONNECTIONS TO EQUIPMENT AND CONTROLS.
12. UNIONS AND/OR FLANGES SHALL BE INSTALLED AT EACH PIECE OF EQUIPMENT AND IN BYPASSES TO PERMIT DISASSEMBLY FOR ALTERATION AND REPAIRS. INSTALL ALL PIPING WITHOUT FORCING OR SPRINGING.
13. DRAIN PIPING IN MECHANICAL ROOMS SHALL BE ROUTED SO AS NOT TO CREATE TRIPPING HAZARDS.
14. LOCATIONS WHERE SANITARY, WASTE, AND VENT PIPING PENETRATES THE SLAB, THE TRANSITION FROM PVC PIPE TO CAST IRON PIPE SHALL OCCUR BELOW THE SLAB.
15. PROVIDE HIGH POINT VENTS AND LOW POINT DRAINS. PROVIDE DIELECTRIC CONNECTIONS BETWEEN DISSIMILAR MATERIALS.
16. VENT FROM NATURAL GAS EQUIPMENT PRV'S TO BUILDING EXTERIOR. PIPE SHALL BE SAME SIZE AS VENT OPENING ON PRV'S. PROVIDE GOOSENECK WITH INSECT SCREEN AT EXTERIOR VENT TERMINATION.
17. REFER TO ARCHITECTURAL DRAWINGS FOR PENETRATIONS.
18. PROPERLY SEAL ALL PLUMBING SYSTEMS PIPING AND COMPONENT'S PENETRATIONS OF BUILDING AIR BARRIER.
19. SHUT-OFF VALVES SHALL BE INTEGRATED INTO THE PLUMBING DISTRIBUTION SYSTEMS TO PERMIT THE ISOLATION OF A FIXTURE OR EQUIPMENT TO PERMIT REPAIR OR MAINTENANCE, WITHOUT DISRUPTION OF OTHER FIXTURES OR EQUIPMENT.
20. WATER HAMMER ARRESTORS SHALL BE INSTALLED AT FLUSH VALVE-OPERATED FIXTURES, SOLENOID VALVES, AND ANY OTHER QUICK CLOSING VALVES TO MINIMIZE NOISE IN ACCORDANCE WITH THE INTERNATIONAL PLUMBING CODE AND PDI STANDARD WH201. ARRESTORS SHALL BE INSTALLED WITH PROPER ACCESS PANELS. AIR CHAMBERS SHALL NOT BE PERMITTED.
21. ALL FLOOR DRAINS AND FLOOR SINKS SHALL BE PROVIDED WITH A TRAP PRIMER CONNECTION SUPPLIED FROM A TRAP PRIMER VALVE, CONFORMING TO ASSE 1018 OR ASSE 1044, WITH APPROPRIATE DISTRIBUTION UNIT OR TRAP INSERT SIMILAR TO PROSET TRAP GUARD, TO REDUCE TRAP SEAL EVAPORATION.

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Newcomb & Boyd
CONSULTANTS AND ENGINEERS

DRAWING ISSUE

ISSUED FOR PERMIT

NO	DATE	DESCRIPTION

DRAWING TITLE

PLUMBING GENERAL NOTES, ABBREVIATIONS & SYMBOLS

SEAL

JOB NUMBER

176425

P001

14 JAN 2021

FIFTH & DINWIDDIE - EAST SITE 1807 FIFTH AVENUE, PITTSBURGH, PA 15219

1 PLUMBING - LEVEL 1 PLAN
SCALE: 1/8" = 1'-0"

GENERAL NOTES

1. SEE P-001 FOR GENERAL NOTES, ABBREVIATIONS & SYMBOLS.
2. REFER TO STRUCTURAL DRAWINGS FOR THE EXACT SIZE, LOCATION, AND ELEVATION OF FOUNDATIONS, FOOTERS AND GRADE BEAMS.
3. REFER TO STRUCTURAL DRAWINGS FOR DETAILS OF PIPE CROSSINGS UNDER OR THROUGH THE STRUCTURAL FOUNDATIONS, FOOTERS AND GRADE BEAMS.
4. ALL UNDERFLOOR SANITARY SEWERS SHALL BE INSTALLED AT A MINIMUM SLOPE OF [1%][1/8"/1'-0"], UNLESS NOTED OTHERWISE.
5. UNDERFLOOR VENTS SHALL CONNECT ABOVE CENTERLINE OF WASTE / SANITARY PIPE & SHALL RISE CONTINUOUSLY THROUGH FLOOR A MINIMUM 6" ABOVE FLOOD LEVEL OF FIXTURE. PROVIDE 45° CONNECTION TO WASTE / SANITARY LINE.
6. UNDERFLOOR SANITARY SEWER PIPING SHALL BE A MINIMUM OF 4" UNLESS NOTED OTHERWISE.
7. REFER TO P-700 SERIES FOR RISER DIAGRAMS.

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DRAWING ISSUE

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NO	DATE	DESCRIPTION

DRAWING TITLE

PLUMBING - 1ST FLOOR PLAN

SEAL

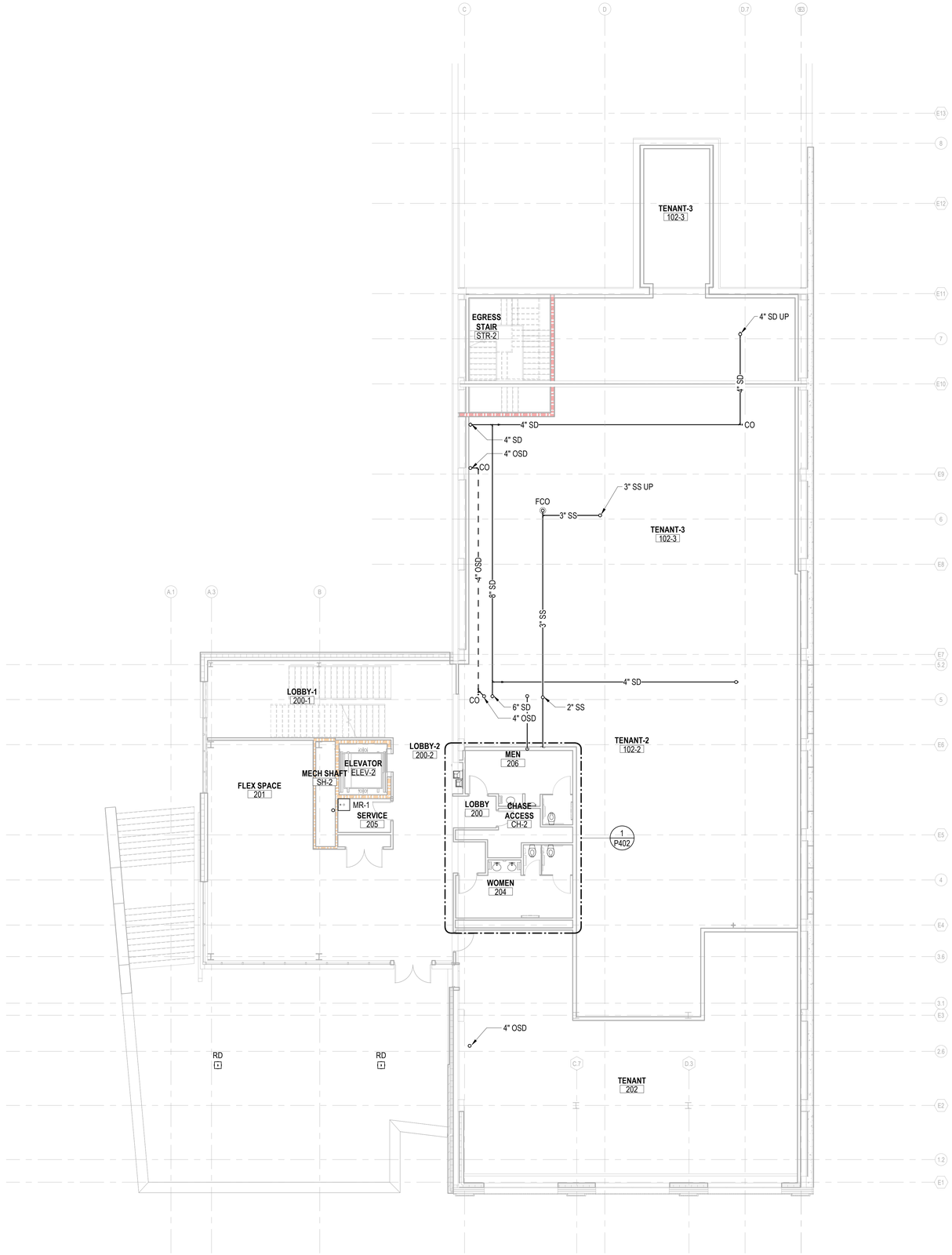
JOB NUMBER

176425

P111

14 JAN 2021

FIFTH & DINWIDDIE - EAST SITE 1807 FIFTH AVENUE, PITTSBURGH, PA 15219



1 PLUMBING - LEVEL 2 PLAN
SCALE: 1/8" = 1'-0"

GENERAL NOTES

1. SEE P-001 FOR GENERAL NOTES, ABBREVIATIONS & SYMBOLS.
2. REFER TO STRUCTURAL DRAWINGS FOR THE EXACT SIZE, LOCATION, AND ELEVATION OF FOUNDATIONS, FOOTERS AND GRADE BEAMS.
3. REFER TO STRUCTURAL DRAWINGS FOR DETAILS OF PIPE CROSSINGS UNDER OR THROUGH THE STRUCTURAL FOUNDATIONS, FOOTERS AND GRADE BEAMS.
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7. REFER TO P-700 SERIES FOR RISER DIAGRAMS.

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PLUMBING - 2ND FLOOR PLAN

SEAL

JOB NUMBER

176425

P121

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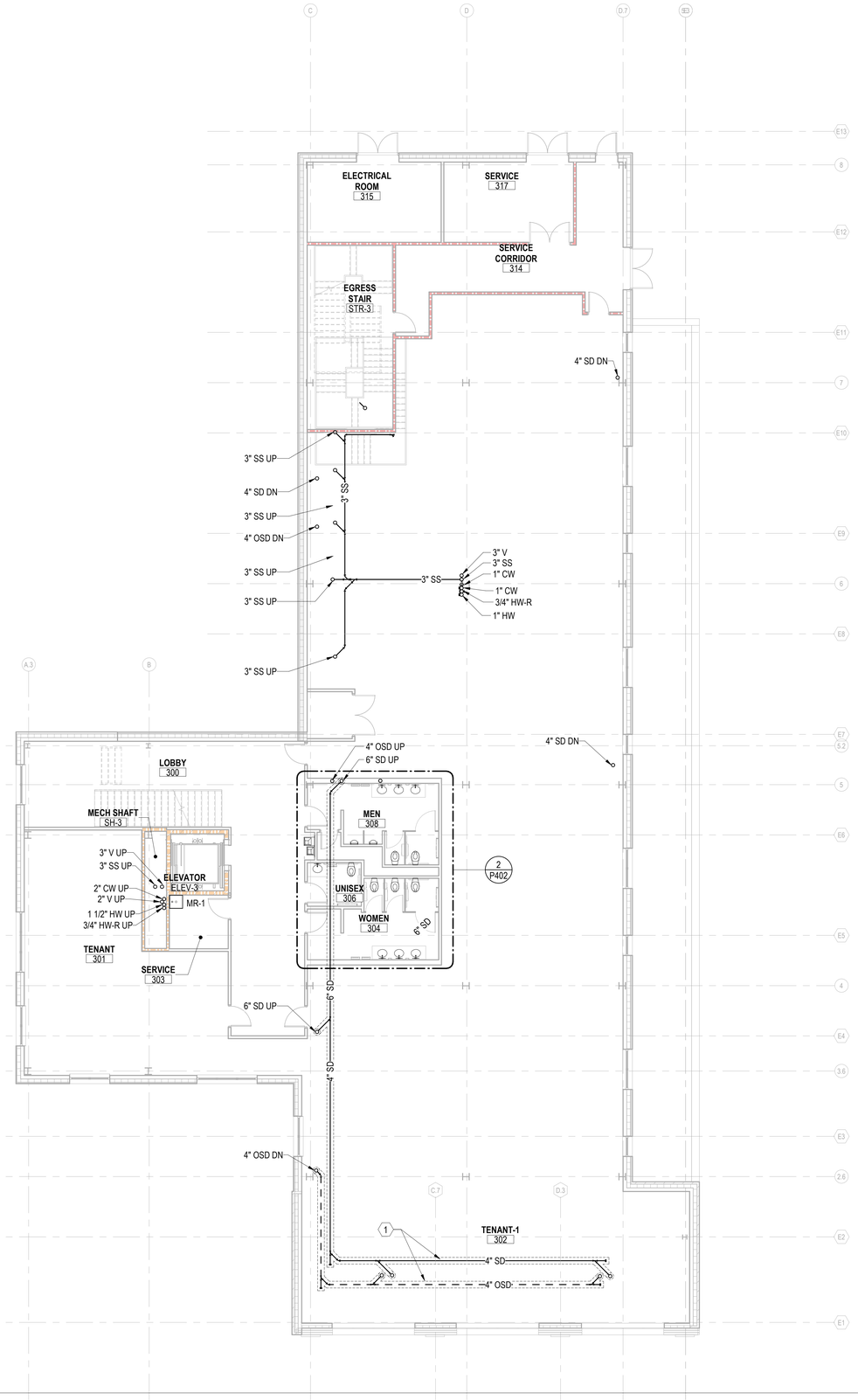

1 PLUMBING - LEVEL 3 PLAN
SCALE: 1/8" = 1'-0"

GENERAL NOTES

1. SEE P-001 FOR GENERAL NOTES, ABBREVIATIONS & SYMBOLS.
2. REFER TO STRUCTURAL DRAWINGS FOR THE EXACT SIZE, LOCATION, AND ELEVATION OF FOUNDATIONS, FOOTERS AND GRADE BEAMS.
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6. UNDERFLOOR SANITARY SEWER PIPING SHALL BE A MINIMUM OF 4" UNLESS NOTED OTHERWISE.
7. REFER TO P-700 SERIES FOR RISER DIAGRAMS.

KEYNOTES

1. INSULATE ROOF DRAIN BODIES AND HORIZONTAL PORTIONS OF STORM (ROOF) DRAINS / OVERFLOW STORM DRAINS.

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PLUMBING - 3RD FLOOR PLAN

SEAL

JOB NUMBER

176425

P131

14 JAN 2021

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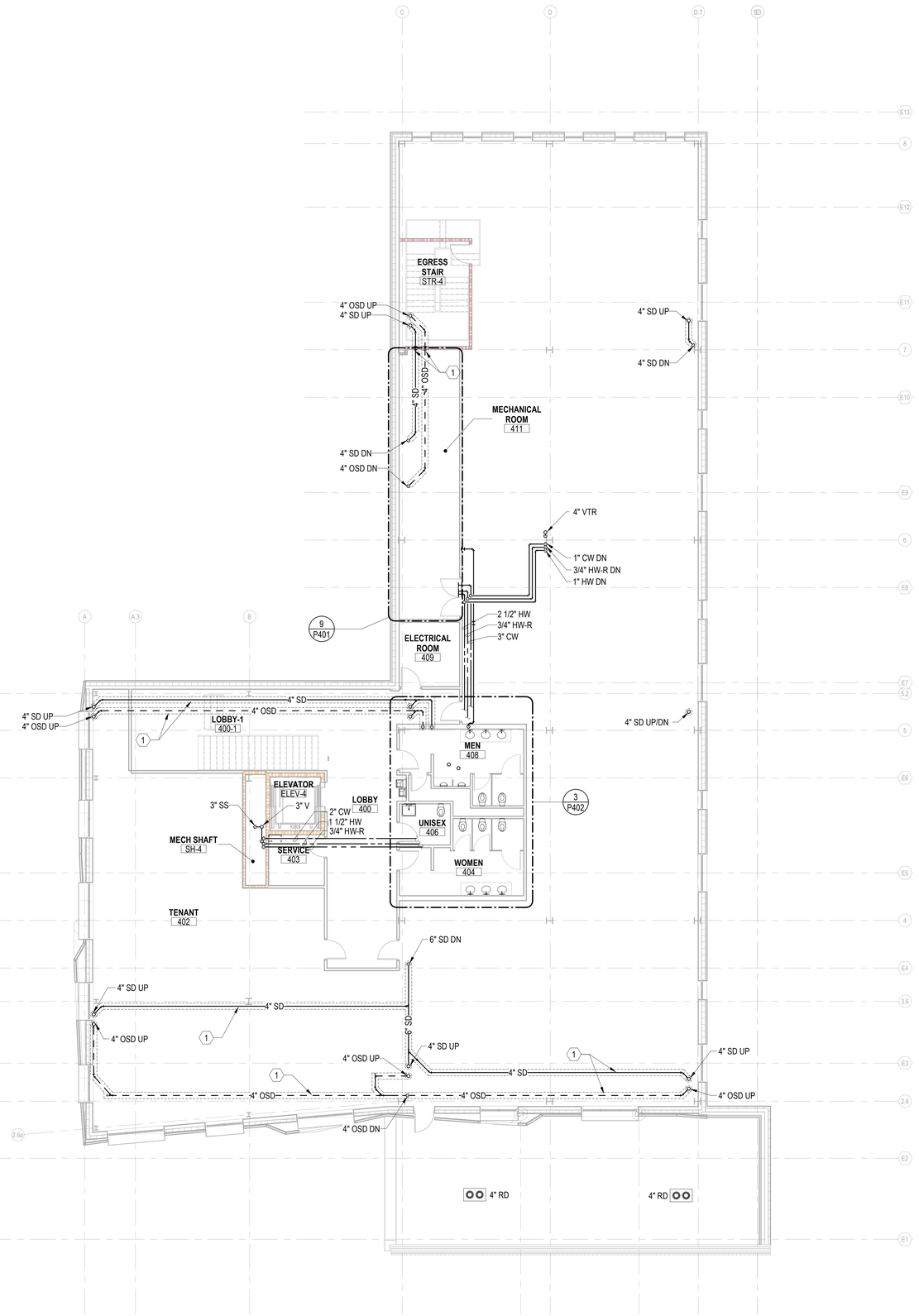

1 PLUMBING - LEVEL 4 PLAN
SCALE: 1/8" = 1'-0"

GENERAL NOTES

1. SEE P-001 FOR GENERAL NOTES, ABBREVIATIONS & SYMBOLS.
2. REFER TO STRUCTURAL DRAWINGS FOR THE EXACT SIZE, LOCATION, AND ELEVATION OF FOUNDATIONS, FOOTERS AND GRADE BEAMS.
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KEYNOTES

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PLUMBING - 4TH FLOOR PLAN

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176425

P141

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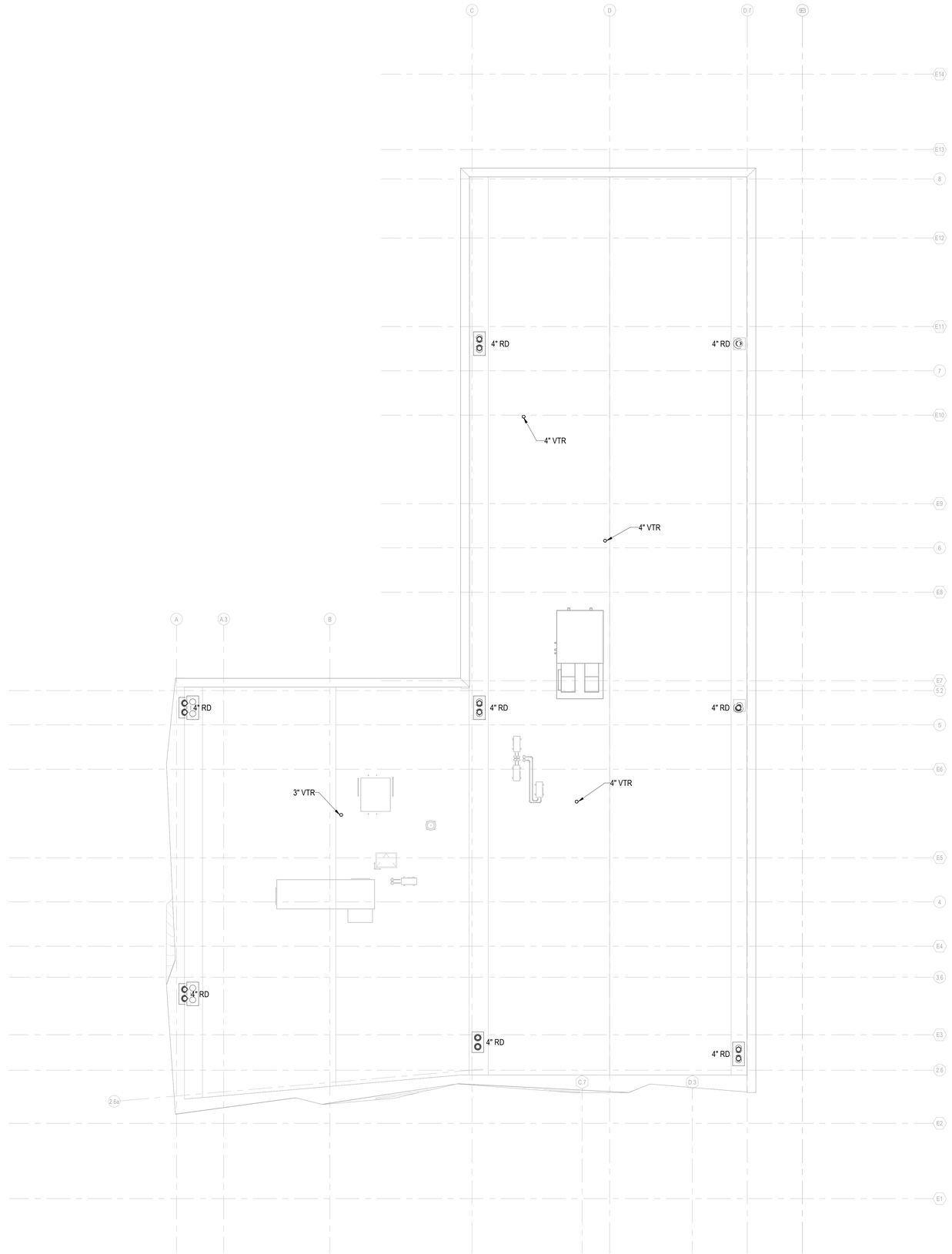

1 PLUMBING - ROOF PLAN
SCALE: 1/8" = 1'-0"

GENERAL NOTES

1	SEE P-001 FOR GENERAL NOTES, ABBREVIATIONS & SYMBOLS.
2	REFER TO STRUCTURAL DRAWINGS FOR THE EXACT SIZE, LOCATION, AND ELEVATION OF FOUNDATIONS, FOOTERS AND GRADE BEAMS.
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PLUMBING - ROOF PLAN

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P151

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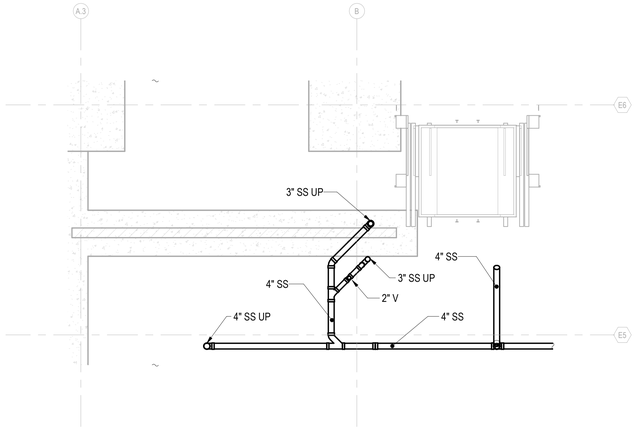
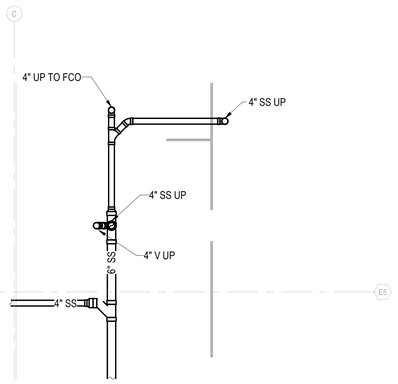
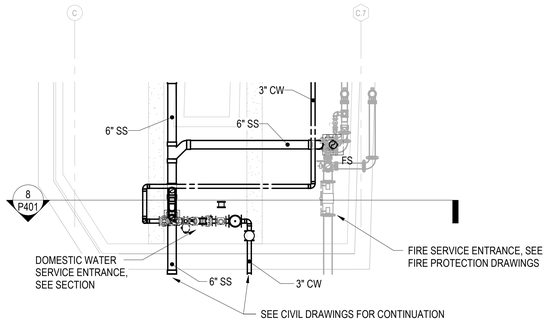


1 ENLARGED TOILET 109/111 - UNDERGROUND
SCALE: 1/4" = 1'-0"



6 ENLARGED TOILET 104/106 - UNDERGROUND
SCALE: 1/4" = 1'-0"



7 ENLARGED DOMESTIC WATER SERVICE ENTRANCE PLAN
SCALE: 1/4" = 1'-0"

GENERAL NOTES

1	SEE GENERAL NOTES DRAFTING VIEW
2	REFER TO STRUCTURAL DRAWINGS FOR THE EXACT SIZE, LOCATION, AND ELEVATION OF FOUNDATIONS, FOOTERS AND GRADE BEAMS.
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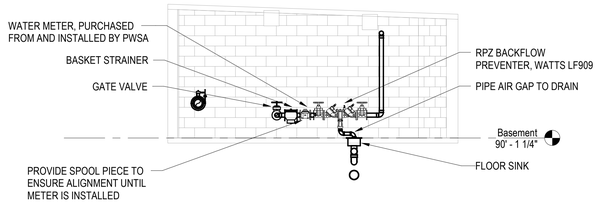
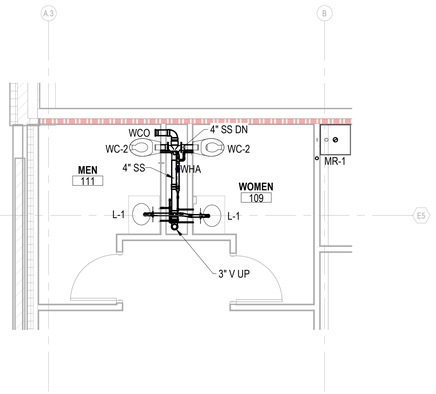
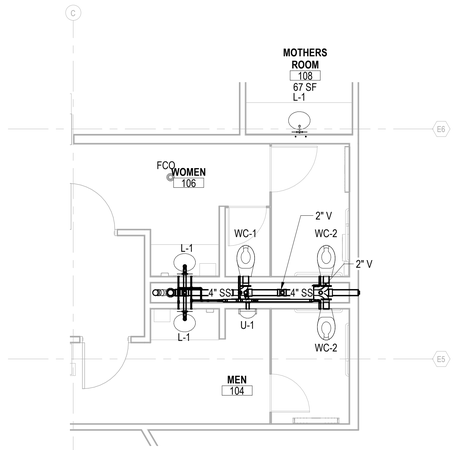


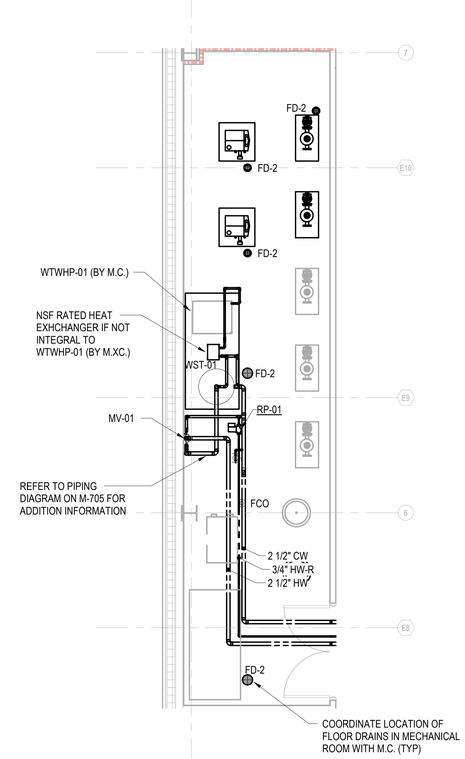
8 WATER SERVICE ENTRANCE SECTION
SCALE: 1/4" = 1'-0"



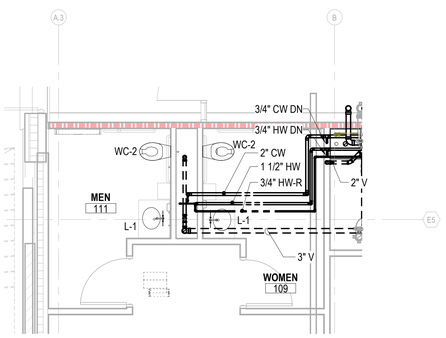
2 ENLARGED TOILET 109/111
SCALE: 1/4" = 1'-0"



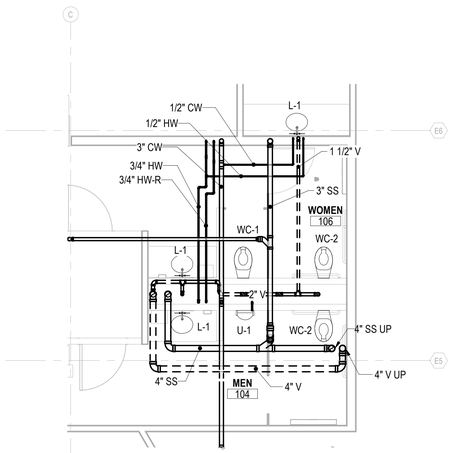
4 ENLARGED TOILET 104/106
SCALE: 1/4" = 1'-0"



9 Plumbing Plan-04 - SD and OSD Enlarged
SCALE: 1/4" = 1'-0"



3 ENLARGED TOILET 109/111 - ABOVE CEILING
SCALE: 1/4" = 1'-0"



5 ENLARGED TOILET 104/106 - ABOVE CEILING
SCALE: 1/4" = 1'-0"

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PLUMBING - ENLARGED PLANS

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JOB NUMBER

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P401

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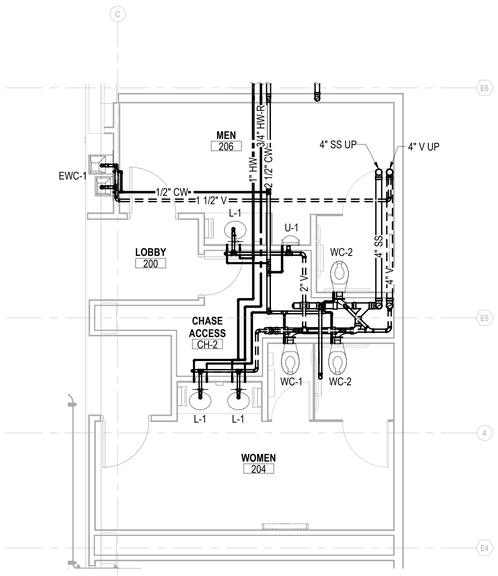
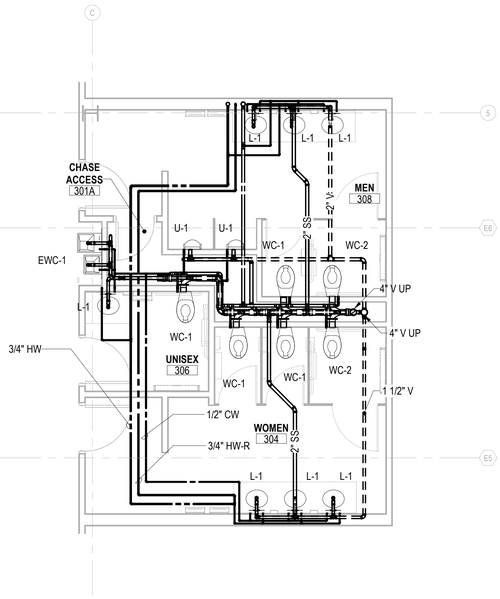
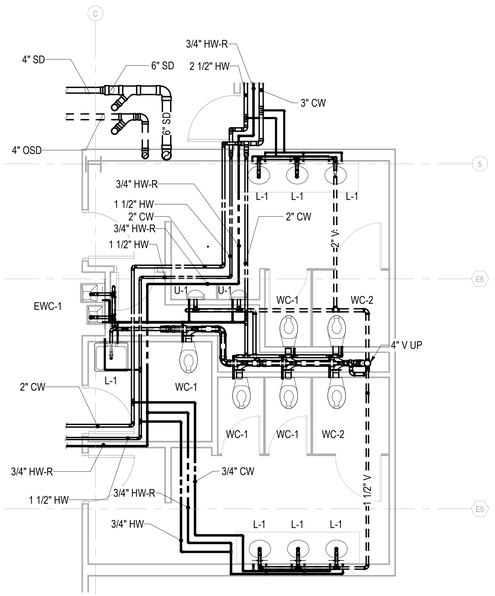


1 ENLARGED TOILET 204/206
SCALE: 1/4" = 1'-0"



2 ENLARGED TOILET 304/306/308
SCALE: 1/4" = 1'-0"



3 ENLARGED TOILET 404/406/408
SCALE: 1/4" = 1'-0"

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PLUMBING - ENLARGED PLANS

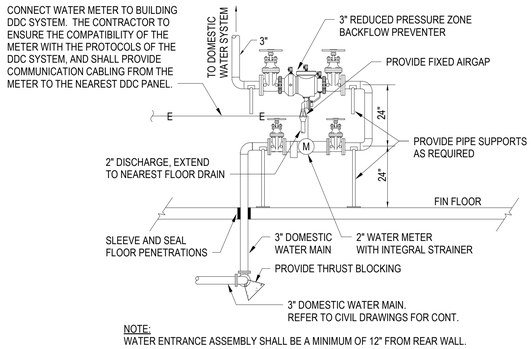
SEAL

JOB NUMBER

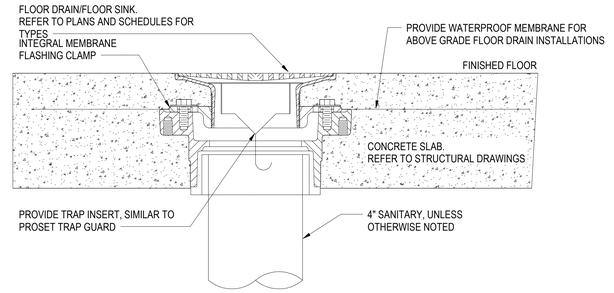
176425

P402

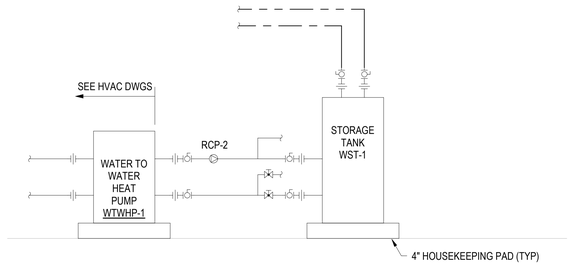
14 JAN 2021



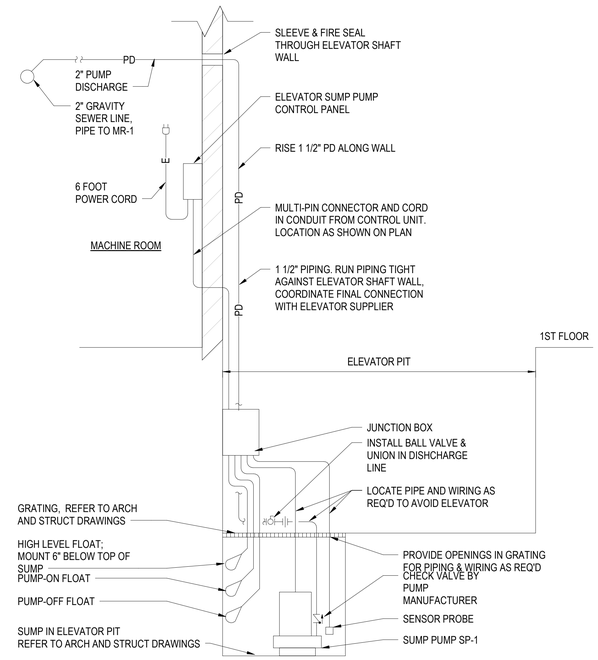
1 WATER SERVICE ENTRANCE DETAIL
SCALE:NTS



2 FLOOR DRAIN WITH TRAP INSERT DETAIL
SCALE:NTS



3 WATER HEATER SCHEMATIC
SCALE: 12" = 1'-0"



4 ELEVATOR SUMP PUMP DETAIL
SCALE:NTS

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PLUMBING - DETAILS

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176425

P501

14 JAN 2021

FIFTH & DINWIDDIE - EAST SITE 1807 FIFTH AVENUE, PITTSBURGH, PA 15219

PLUMBING FIXTURE SCHEDULE

2015 INTERNATIONAL PLUMBING CODE

TAG	FIXTURE	BASIS OF DESIGN	DESCRIPTION	FLOW (GPM / GPF)	CONNECTION SIZE (in)				DFU	SFU			NOTES
					SS	VENT	CW	HW		HW	CW	TOTAL	
EWC-1		FIXTURE: ELKAY:		0.1 GPM	2"	1-1/2"	1/2"		0.5		0.25		
EWC-2	WATER COOLER - ADA	FIXTURE: ELKAY: EZS8WSSK	SINGLE LEVEL WALL HUNG WATER COOLER WITH BOTTLE FILLING STATION. THE UNIT SHALL BE COMPLETE WITH CABINET, MOUNTING FRAME, SELF CLOSING EASY TOUCH SIDE AND FRONT PUSHBAR CONTROLS, FLEXIGUARD SAFETY BUBBLER, REFRIGERATING SYSTEM, AIR COOLED, 120 VOLT, 60 CYCLE, SINGLE PHASE POWER CONNECTION, FULLY AUTOMATIC, COMPLETE AND READY TO OPERATE. MOUNT UNIT AT ADA COMPLIANT HEIGHT.	0.1 GPM	2"	1-1/2"	1/2"		0.5		0.25		
L-1	LAVATORY	FIXTURE: AMERICAN STANDARD:		0.5 GPM	1-1/2"	1-1/2"	1/2"	1/2"	1	1.5	1.5	0	1,2,3,4
MR-1													1,2,3,4
U-1	URINAL	FIXTURE: AMERICAN STANDARD: 6590.503 VALVE: SLOAN: 8186-0.125 CARRIER: ZURN:Z1222	WALL HUNG, VITREOUS CHINA, BATTERY-POWERED INFRARED FLUSH VALVE, WALL URINAL SUPPORT SYSTEM	0.1 GPF	2"	1-1/2"	3/4"	---	2	---	5	10	1,2,3,4
WC-1	WATER CLOSET	FIXTURE: AMERICAN STANDARD: 2859.128 VALVE: SLOAN CARRIER: ZURN:		1.3 GPF	4"	2"	1"	---	4	---	10	10	1,2,3,4
WC-2	WATER CLOSET - WALL HUNG - ADA	FIXTURE: AMERICAN STANDARD: AFWALL SLOAN: 8111-1.28	ELONGATED WALL HUNG WATER CLOSET, 1-1/2" TOP SPUD, WITH CHURCH 295CT ELONGATED OPEN FRONT SEAT. SOLAR POWERED SENSOR ACTIVATED FLUSHOMETER. INSTALL AT ADA COMPLIANT HEIGHT.	1.3 GPF	4"	2"	1"	---	4	---	10	10	
WC-3A	WATER CLOSET	FIXTURE: AMERICAN STANDARD: 2857.128 VALVE: SLOAN: 111-1.28 CARRIER: ZURN:	FLOOR MOUNTED, VITREOUS CHINA, MANUAL FLUSH VALVE, ADA COMPLIANT	1.3 GPF	4"	2"	1"	---	4	---	10	10	1,2,3,4
TP-1	TRAP PRIMER	FIXTURE: PPP: P1-500	AUTOMATIC, PRESSURE-ACTIVATED, 4-WAY DISTRIBUTION UNIT (DU-4), FOR 1-4 DRAINS.	0.0 GPF	---	---	1/2"		0		0	0	1, 9

WATER HAMMER ARRESTOR SCHEDULE

P.D.I. SIZE	CONN SIZE (mm)	TYPE	FIXTURE UNIT CAPACITY	BASIS OF DESIGN		NOTES
				MANUF	MODEL	
A	20	NESTING TYPE BELLOWS	1 TO 11 SFU	ZURN	100	1, 2, 3
B	20	NESTING TYPE BELLOWS	12 TO 32 SFU	ZURN	200	1, 2, 3
C	25	NESTING TYPE BELLOWS	33 TO 60 SFU	ZURN	300	1, 2, 3
D	25	NESTING TYPE BELLOWS	61 TO 113 SFU	ZURN	400	1, 2, 3
E	25	NESTING TYPE BELLOWS	114 TO 154 SFU	ZURN	500	1, 2, 3
F	25	NESTING TYPE BELLOWS	155 TO 330 SFU	ZURN	600	1, 2, 3

NOTES:
1. INSTALL IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.
2. PROVIDE WATER HAMMER ARRESTORS AT FLUSH VALVE-OPERATED FIXTURES, SOLENOID VALVES, AND ANY OTHER QUICK CLOSING VALVES.
3. FURNISH ACCESS PANELS, WHERE REQUIRED, FOR INSTALLATION BY GENERAL CONTRACTOR.

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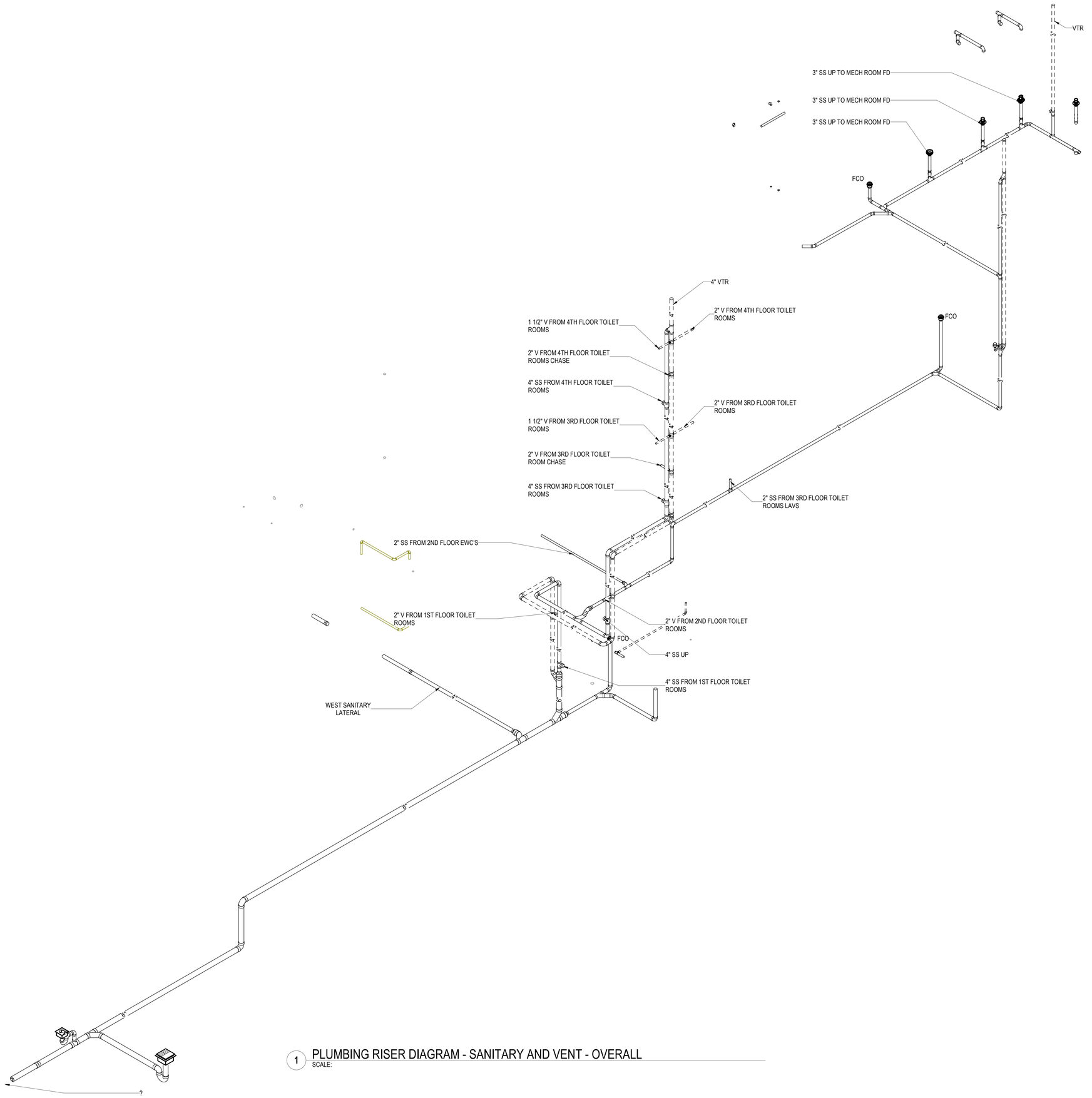

1 PLUMBING RISER DIAGRAM - SANITARY AND VENT - OVERALL
SCALE:

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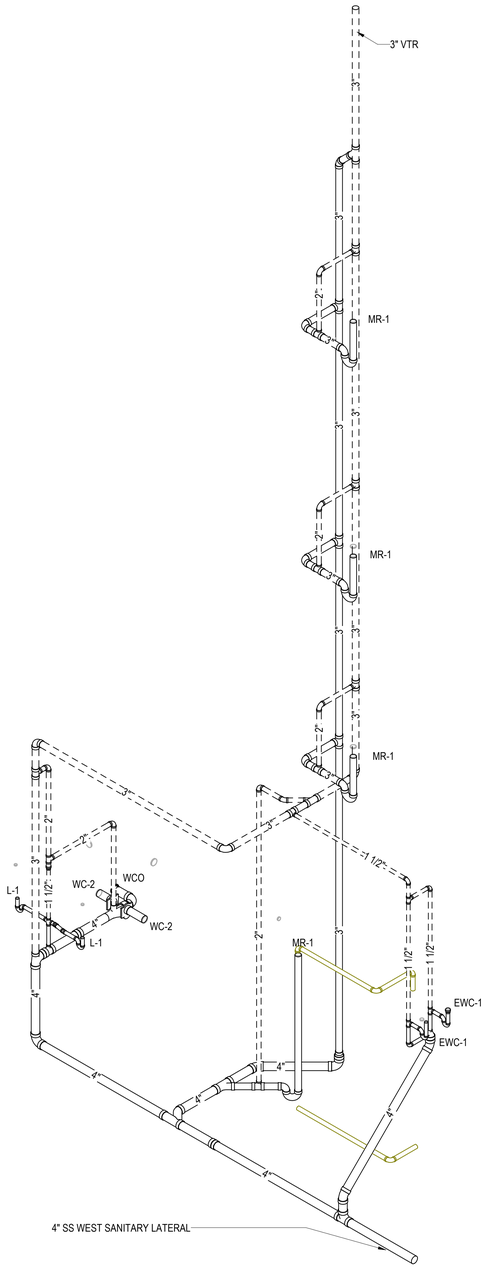
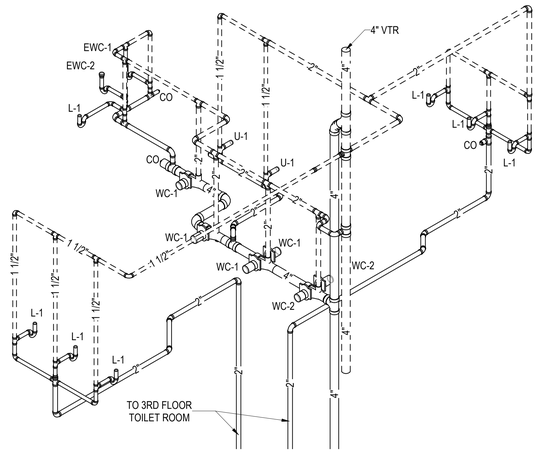
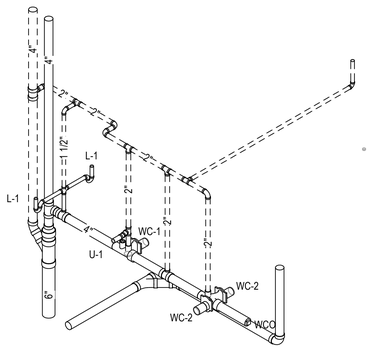


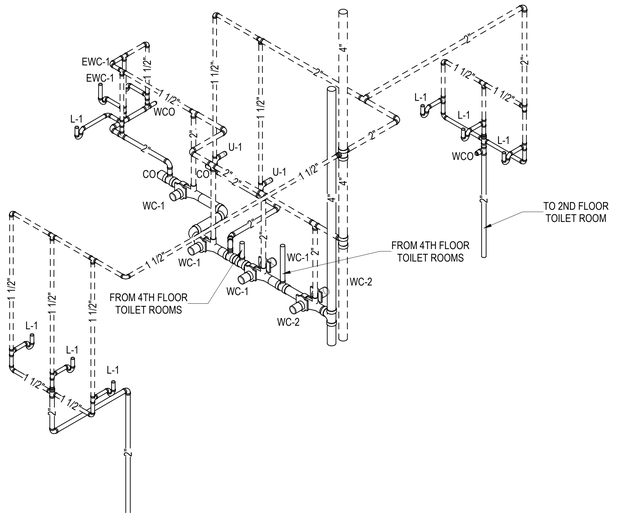
1 PLUMBING RISER DIAGRAM - SANITARY AND VENT - WEST
SCALE:



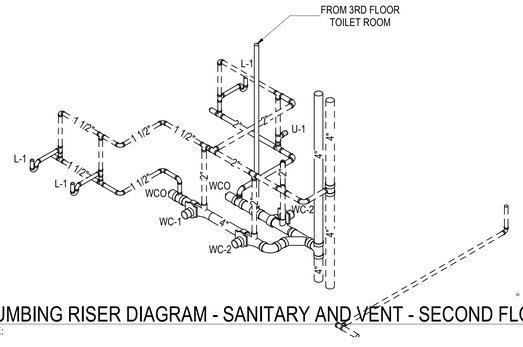
5 PLUMBING RISER DIAGRAM - SANITARY AND VENT - FOURTH FLOOR TOILET ROOM
SCALE:



2 PLUMBING RISER DIAGRAM - SANITARY AND VENT - FIRST FLOOR TOILET ROOM
SCALE:



4 PLUMBING RISER DIAGRAM - SANITARY AND VENT - THIRD FLOOR TOILET ROOM
SCALE:



3 PLUMBING RISER DIAGRAM - SANITARY AND VENT - SECOND FLOOR TOILET ROOM
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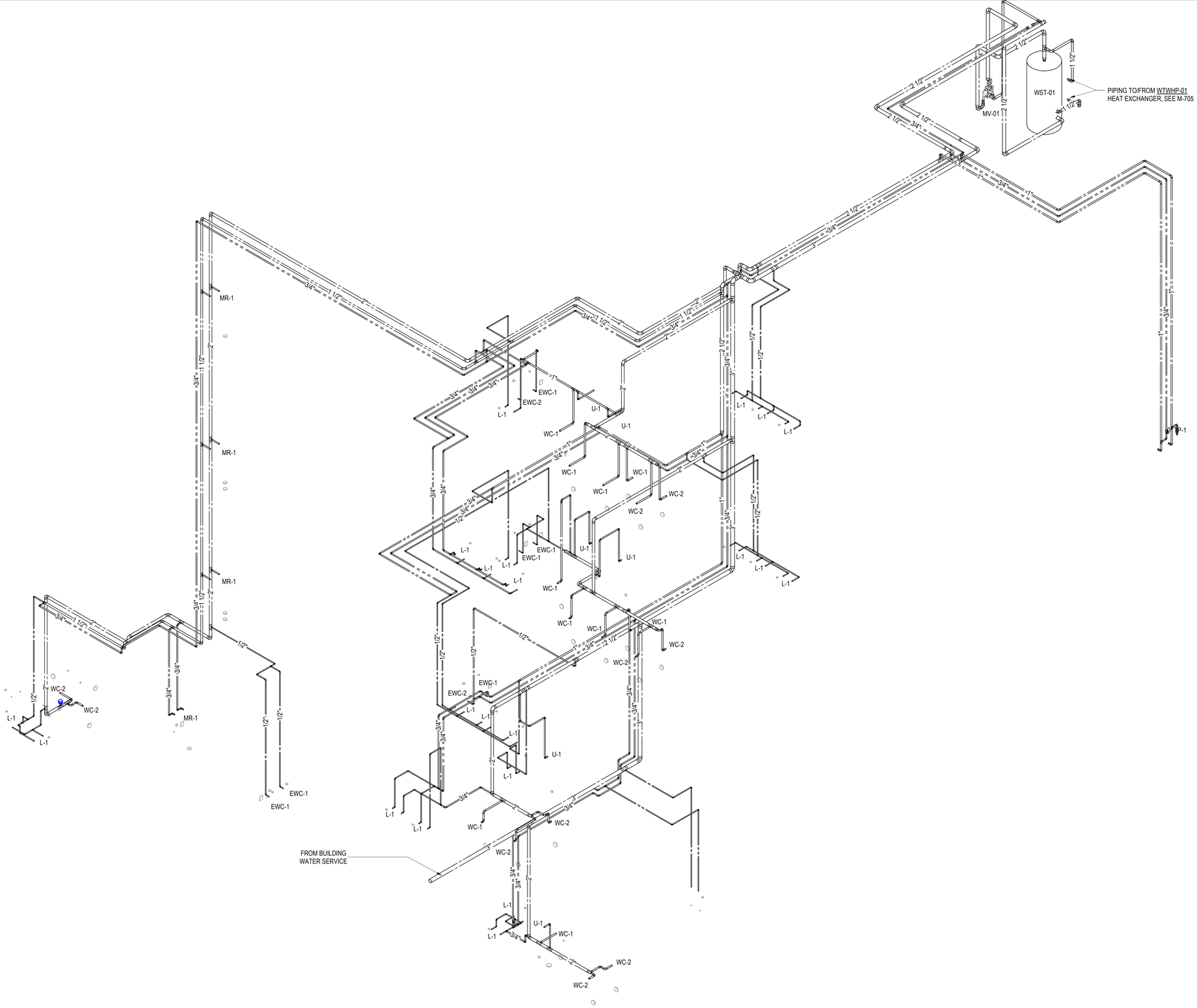

1 DOMESTIC WATER RISER DIAGRAM
SCALE:

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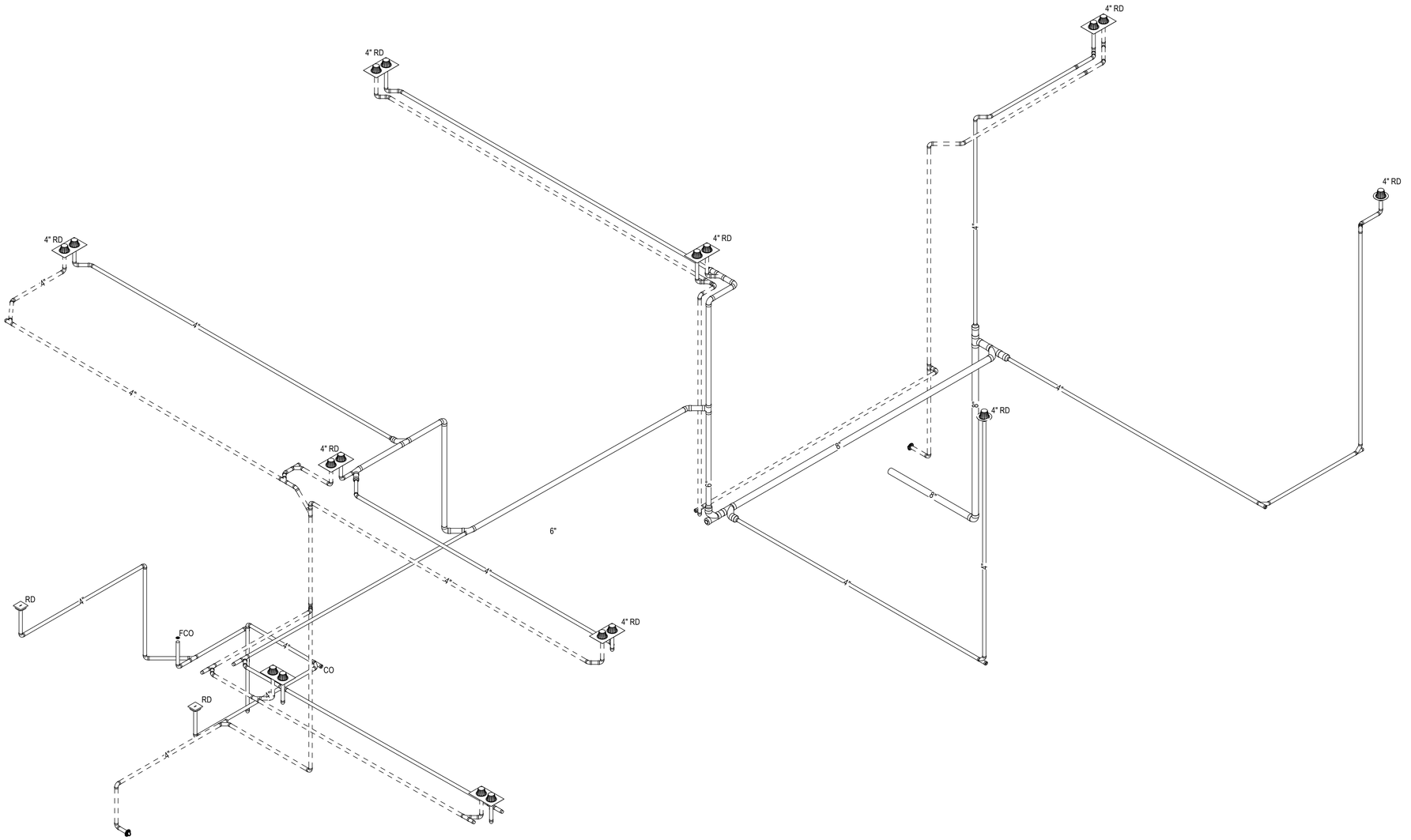

1 STORM RISER DIAGRAM
SCALE:

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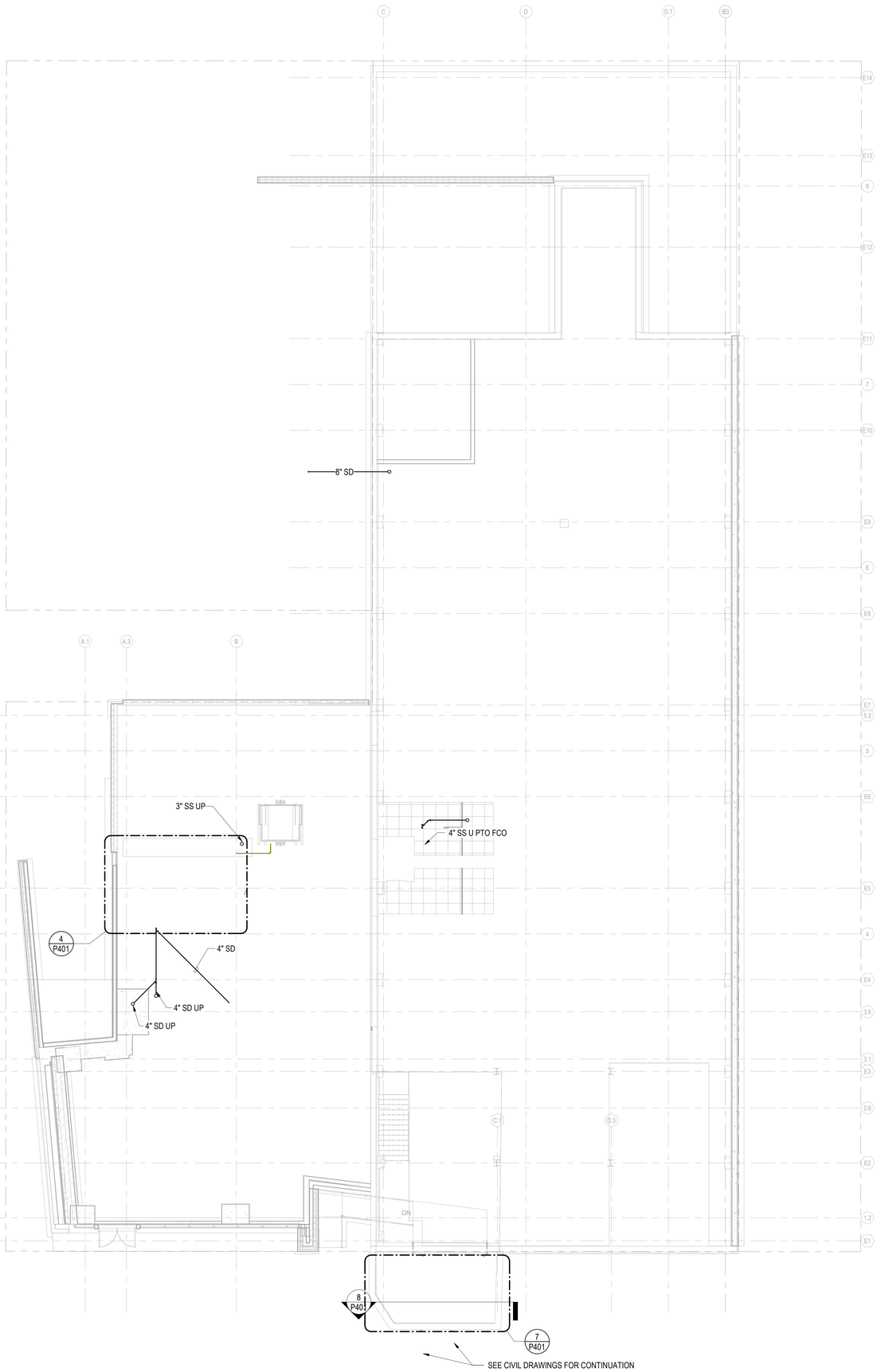

1 PLUMBING - UNDERGROUND PLAN
SCALE: 1/8" = 1'-0"

GENERAL NOTES

1. SEE P-001 FOR GENERAL NOTES, ABBREVIATIONS & SYMBOLS.
2. REFER TO STRUCTURAL DRAWINGS FOR THE EXACT SIZE, LOCATION, AND ELEVATION OF FOUNDATIONS, FOOTERS AND GRADE BEAMS.
3. REFER TO STRUCTURAL DRAWINGS FOR DETAILS OF PIPE CROSSINGS UNDER OR THROUGH THE STRUCTURAL FOUNDATIONS, FOOTERS AND GRADE BEAMS.
4. ALL UNDERFLOOR SANITARY SEWERS SHALL BE INSTALLED AT A MINIMUM SLOPE OF [1%][1/8"/1'-0"], UNLESS NOTED OTHERWISE.
5. UNDERFLOOR VENTS SHALL CONNECT ABOVE CENTERLINE OF WASTE / SANITARY PIPE & SHALL RISE CONTINUOUSLY THROUGH FLOOR A MINIMUM 6" ABOVE FLOOD LEVEL OF FIXTURE. PROVIDE 45° CONNECTION TO WASTE / SANITARY LINE.
6. UNDERFLOOR SANITARY SEWER PIPING SHALL BE A MINIMUM OF 4" UNLESS NOTED OTHERWISE.
7. REFER TO P-700 SERIES FOR RISER DIAGRAMS.

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