Application for

Planning Commission Action

Community Development Department
Planning Division

22 Lincoln Street, 5th Floor | Hampton, Virginia 23669
Phone 757-727-6140 | Fax 757-728-2449 | www.hampton.gov/planning

Application for

Planning Commission Action

OFFICE USE ONLY Date Received:
Case Number: PCA ____ ____ ____ ____-____ ____ ____ ____

Complete this application in its entirety along with any required Supplements to the address below:

City of Hampton
Community Development Department, Planning Division
22 Lincoln Street, 5th Floor
Hampton, Virginia 23669

1. PROPERTY INFORMATION

Address or Location Parcel C Pump Station

LRSN 2000401 Zoning District DT1

Current Land Use Vacant

Proposed Land Use New Pump Station 107

2. SITE INFORMATION

Total Number of Structures Proposed 1 Freestanding 1 Enclosed 1

Maximum Height of all Structures 18 Net Square Footage of all Structures 1000

Site Acreage .34 ac Proposed Number of On-site Parking Spaces 0

3. PROPERTY OWNER INFORMATION (an individual or a legal entity may be listed as owner)

Owner's Name HRHA

Address 1 Franklin Street Ste 603 City Hampton State VA Zip 23669

Phone 7578793566 Email amaat@hamptonrha.com

4. APPLICANT INFORMATION (if different from owner)

Applicant's Name Trilogy Developers, LLC

Address 1439 N. Great Neck Road City Virginia Beach State VA Zip 23454

Phone 7574070069 Email rvierra@vierragroupinc.com

5. APPLICANT AGENT INFORMATION (if different from applicant)

Agent's Name _____

Address _____ City _____ State _____ Zip _____

Phone _____ Email _____

6. CERTIFICATION FOR LEGAL ENTITY PROPERTY OWNERS

*Complete this section only if the property owner is **not** an individual but rather a legal entity such as a corporation, trust, LLC, partnership, diocese, etc. as specified in Step 2 above.*

"I hereby submit that I am legally authorized to execute this application on behalf of the fee-simple owner of this property. I have read this application and it is submitted with my full knowledge and consent. I authorize city staff and representatives to have access to this property for inspection. The information contained in this application is accurate and correct to the best of my knowledge."

Name(s), title(s), signature(s), and date(s) of authorized representative(s) of the legal entity (attach additional page if necessary):

Name of Legal Entity HRHA

Signed by:

Name (printed) Aaru Ma`at, Its (title) Executive Director

Signature _____ Date 9/18/2024

Name (printed) _____, Its (title) _____

Signature _____ Date _____

Name (printed) _____, Its (title) _____

Signature _____ Date _____

7. CERTIFICATION FOR INDIVIDUAL PROPERTY OWNERS

Complete this section only if the property owner is an individual or individuals.

"I hereby submit that I am the fee-simple owner of this property. I have read this application and it is submitted with my full knowledge and consent. I authorize city staff and representatives to have access to this property for inspection. The information contained in this application is accurate and correct to the best of my knowledge."

Name(s), signature(s), and date(s) of owner(s) (attach additional page if necessary):

Name (printed) _____

Signature _____ Date _____

Name (printed) _____

Signature _____ Date _____

OFFICE USE ONLY

☐ Application Form	☐ Narrative Statement	☐ Supplemental Form (if required)
☐ Application Fee	☐ Survey Plat	☐ Additional materials (if required)

Design Narrative

for

City of Hampton Pump Station #107 Replacement

Hampton, Virginia
September 13, 2024

Prepared for:

Trilogy Developers, LLC.
1439 N Great Neck Road
Virginia Beach, VA 23454

TIMMONS GROUP
YOUR VISION ACHIEVED THROUGH OURS.

2901 S. Lynnhaven Road, Suite 200
Virginia Beach, Virginia 23452
P: 757-213-6679
F: 757-340-1415

Table of Contents

Project Description

This project is located along Michigan Drive in Hampton, Virginia. This project proposes the demolition and replacement of an existing pump station with a new pump station. The total land disturbance is 0.25 acres, with 0.16 acres occurring in the right-of-way, 0.06 acres occurring on the new proposed site, and 0.03 acres occurring on the site of the existing pump station that will be demolished and replaced. The site also proposes a drive aisle, a generator pad, and a transformer pad. Immediately adjacent to the project site is a Virginia electric and power easement.

Existing Conditions

There are two sites for this project, an existing pump station site and a proposed pump station site.

The existing site is mostly pervious cover with one brick pump station building. The site has managed turf land cover and includes underground sanitary sewer pipes that serve the existing pump station.

The proposed site is all pervious cover, containing of all managed turf with some trees located around the property line.

Adjacent areas

The site is bounded by Michigan Drive to the south, The Grand Hampton at Langley to the north/northeast, and a Virginia power and electric easement to the west. The project is in close proximity to the Hampton Roads Beltway.

Soil properties

According to the "Web Soil Survey" provided by United States Department of Agriculture (USDA) (http://websoilsurvey.nrcs.usda.gov/app/HomePage.htm) the existing site has the following soil characteristics:

Map Unit Legend

Tidewater Cities Area, Virginia (VA715)

Tidewater Cities Area, Virginia (VA715)

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
24	Tomotley-Urban land complex, 0 to 2 percent slopes	0.4	100.0%
Totals for Area of Interest		**0.4**	**100.0%**

The USDA NRCS Web Soil Survey Maps can be found in Appendix A.

Critical Areas

There are no critical areas within the limits of disturbance. This project is outside of any CBPA or other wetland buffers.

Demolition

Demolition for this project will consist of the destruction of the existing pump station and all infrastructure that serves this pump station (gravity and force main sanitary sewer lines and valves). See the "Sequencing" section for the sequence of demolition and construction for this project.

Sequencing

1. Acquire permits and attend presubmittal meeting
2. Construct erosion and sediment control measures
3. Construct new pump station
4. Connect the new pump station to the force main and gravity sewer lines with An open cut of the force main to install a wye and gate valve in accordance with the plan on Sheet C5.0
5. Test new pump station and perform startup for city acceptance
6. Activate new pump station
7. Install new, revised sanitary sewer connections in Michigan Dr to reroute flow from the existing pump station to the new one, as shown in the plans. Contractor to maintain sewer flows to existing pump station until redirection to the new operational pump station is available. Stage construction to minimize bypass pumping. The water line will connect to the existing 8" line with a 1" corporation stop and flow across Michigan Dr perpendicular to the new pump station, and a 5/8" water meter will be installed at the property line.
8. Once sanitary flows are diverted to the new pump station, close new gate valve at the wye connection taking the old pump station force main out of service. The existing lines that are no longer in use and the existing pump station will be demolished or abandoned in place.

Site Layout and Access

Access to the site will be provided by one 36' X 20' concrete drive aisle which connects to Michigan Drive.

The site is zoned DT-1, which has zero building setbacks.

Utilities

Domestic Water

The domestic water line for the proposed pump station will come from the existing 8" waterline that is located on the other side of Michigan Dr along the right-of-way line. The proposed waterline will connect to the existing line with a 1" corporation stop. The

proposed line will be a 1" ductile iron pipe that comes straight across Michigan Dr perpendicular to the pump station building. The line will include a 5/8" water meter on the property line and the waterline will connect to the pump station 2 ft from the corner of the building closest to the drive aisle. After the water meter, there will be a tee off for a freeze proof yard hydrant.

Water meter calculations have been provided in Appendix B.

Sanitary Sewer

Sanitary sewer will connect the existing manholes that serve the existing pump station with a new gravity sewer line. This line will run northeast down the middle of Michigan Dr over to the right side of the proposed drive aisle, which it will run northwest and then southwest over to the influent pipe in the proposed pump station. This gravity sewer will be 12" C900 PVC pipe that runs at a 0.3% slope.

A force main line will then leave the proposed pump station to the northeast under the proposed drive aisle. After the pipe crosses the drive aisle, there will be an air release valve, gate valve, then a tee to an emergency pump connection with a gate valve, then the flow meter vault. The force main will have two 45° bends to turn towards Michigan Dr to connect to the existing force main line. There will be a gate valve, then a 45° bend into a wye with another gate valve. This force main line will 8" ductile iron pipe.

Sanitary sewer calculations can be found in Appendix C. We are currently working in cooperation with David Powell, with Hampton Public Works, for pump station operations and detailed design.

Stormwater Considerations

Existing Drainage Patterns

The existing site's drainage flows into the existing access road and parking lot for The Grand Hampton at Langley. This directs water into the inlets within the parking lot and within Michigan Dr. these inlets then convey stormwater into a creek on the other side of the Grand Hampton access road. This creek then moves the water north until it reaches the Southwest Branch Back River.

The USDA "Web Soil Survey" for the project site classifies the soils as Hydrologic Soil Group (HSG) D and urban land. See Appendix A for the soil map.

Stormwater Overview

Most of the land disturbance that will take place for this project will occur in the right-of-way. This will include excavation to demolish and install force and gravity sanitary sewer as well as domestic water. This land disturbance will not impact the existing condition of the right-of-way, the work will excavate the area and then reinstall the same as existing; therefore, drainage patterns and impervious surfaces will not change. Additionally, only 2,490 SF of land disturbance will take place on the new proposed pump station site and only 1,091 SF of land disturbance will take place on the existing pump station site. Both

land disturbance activities remain under the 2,500 SF, which is the maximum allowable land disturbance before stormwater quantity and quality must be taken into consideration. For this reason, no BMP or additional stormwater infrastructure will be needed for this project, as the existing drainage patterns can still accommodate the site. There will not be a dramatic increase in impervious surfaces and the proposed work will continue to have the same drainage patterns as the existing conditions.

Erosion and Sediment Control

Erosion and Sediment Control Measures

Unless otherwise indicated, all vegetative and structural erosion and sediment control practices shall be constructed and maintained in accordance with the minimum standards and specifications of the Virginia Stormwater Management Handbook (VSMH). The minimum standards of the VSMH Regulations shall be adhered to unless otherwise waived or approved by a variance.

The following measures shall be installed and maintained as shown on the erosion & sediment control plans:

Temporary Construction Entrance - std. & spec. C-SCM-03
A temporary stone construction entrance shall be installed according to the minimum standards and specifications set forth in the VSMH.

Silt Fence - std. & spec. C-PCM-04
Temporary silt fence sediment barriers will be installed around the perimeter of the limits of disturbance to prevent sediment-laden runoff from leaving the site. In areas currently occupied by asphalt pavement, silt fence shall be installed immediately after the pavement has been removed.

Topsoiling (Soil Stockpile) - std. & spec. C-SSM-02
Topsoil will be stripped from areas to be graded and stockpiled in such a manner that natural drainage is not obstructed, and no off-site sediment damage shall result. Stabilize or protect stockpiles in accordance with MS-2 of the VSMH. Side slopes of the stockpile shall not exceed 2H:1V. Perimeter controls must be placed around the stockpile immediately. Stockpiles shall be seeded within seven (7) days of the formation of the stockpile, if it is to remain dormant for longer than 14 days.

Temporary Seeding - std. & spec. C-SSM-09
All denuded areas that will remain dormant for a period of time greater than 14 days shall be seeded with fast germinating temporary vegetation immediately following grading. Selection of vegetation will be dependent on the time of year it is applied.

Permanent Seeding - std. & spec. C-SSM-10
Permanent seeding will be established on all non-paved disturbed areas.

Mulching - std. & spec. C-SSM-11
Mulch will be applied to all seeded areas to prevent erosion and foster the growth of vegetation.

Soil Stabilization Blankets and Matting - std. & spec. C-SSM-05
Soil Stabilization Blankets and Matting are proposed to aid in controlling erosion by providing a microclimate that protects young vegetation and promotes its establishment.

Dust Control - std. & spec. C-SCM-01
Areas subject to surface and air movement of dust shall be stabilized during construction to minimize dust release. Methods include but are not limited to vegetative cover, mulch, or irrigation.

Specifications For ESC Measures

Specifications for all E&S measures used on this project can be found in the" Virginia Stormwater Management" (VSMH), as well as on the plan sheets. The contractor is responsible for following all construction specifications, installation procedures, and maintenance procedures as listed in VSMH.

E&S Management Strategies

The following sequence of events and erosion control measures shall be incorporated into the construction schedule for this project and shall apply to all construction activities within the project limits.

1. Soil Stabilization:
   a. Permanent or temporary soil stabilization shall be applied to denuded areas within seven days after final grade is reached on any portion of the site.
   b. Temporary soil stabilization shall be applied within seven days to denuded areas that may not be at final grade but will remain dormant for longer than 30 days, but less than one year.
   c. Permanent stabilization shall be applied to areas that are to be left dormant for more than one year.
2. Soil Stockpile Stabilization: During construction, soil stockpiles and borrow areas shall be stabilized or protected with sediment trapping measures. Temporary protection and permanent stabilization shall be applied to all soil stockpiles on site and borrow areas or soil intentionally transferred off site.
3. Permanent Stabilization: Permanent vegetative cover shall be established on denuded areas not otherwise permanently stabilized. Permanent vegetation shall not be considered established until a ground cover is achieved that is:
   - Uniform
   - Mature enough to survive
   - Will inhibit erosion
4. Sediment Traps: Sediment traps intended to trap sediment shall be constructed as a first step in any land-disturbing activity and shall be made functional before upslope land disturbance takes place.
5. Cut and Fill Slopes Design & Construction: Cut and fill slopes shall be designed and constructed in a manner that will minimize erosion. Slopes found to be eroding excessively within one year of permanent stabilization shall be provided with additional slope stabilizing measures until the problem is corrected.

6. Concentrated Runoff Down Slopes: Concentrated runoff shall not flow down cut or fill slopes unless contained within an adequate temporary or permanent channel, flume, or slope drain structure.
7. Slope Maintenance: Whenever water seeps from a slope face, adequate drainage or other protection shall be provided.
8. Storm Sewer Inlet Protection: All storm sewer inlets made operable during construction shall be protected so that sediment-laden water cannot enter the stormwater conveyance system without first being filtered/treated to remove sediment.
9. Stormwater Conveyance Protection: Before newly constructed stormwater conveyance channels or pipes are made operational, adequate outlet protection and any required temporary or permanent channel lining shall be installed in both the conveyance channel and the receiving channel.
10. Underground Utility Line Installation: Underground utility lines shall be installed in accordance with the following standards in addition to other applicable criteria:
    a. No more than 500 linear feet of trench may be opened at one time
    b. Excavated material shall be placed on the uphill side of trenches
    c. Effluent from dewatering operations shall be filtered or passed through an approved sediment trapping device, or both, and discharged in a manner that does not adversely affect flowing streams or off-site property
    d. Material used for backfilling trenches shall be properly compacted in order to minimize erosion and promote stabilization
    e. Restabilization shall be accomplished in accordance with these regulations
    f. Comply with applicable safety regulations
11. Vehicular Sediment Tracking: Where construction vehicle access routes intersect paved or public roads:
    a. Provisions shall be made to minimize the transport of sediment by vehicular tracking onto the paved surface
    b. Where sediment is transported onto a paved or public road surface, the road surface shall be cleaned thoroughly at the end of each day
    c. Sediment shall be removed from the roads by shoveling or sweeping and transported to a sediment control disposal area. Street washing shall be allowed only after sediment is removed in this manner
    12. Removal of Temporary Measures: All temporary erosion and sediment control measures shall be removed within 30 days after final site stabilization or after the temporary measures are no longer needed, unless otherwise authorized by the program authority. Trapped sediment and the disturbed soil areas resulting from the disposition of temporary measures shall be permanently stabilized to prevent further erosion and sedimentation.

E&S Maintenance

In general, all erosion and sediment control measures shall be checked after each rainfall or weekly, whichever is most frequent, and should be cleaned and repaired according to the following schedule.

1. Construction entrance shall be maintained in a condition which will prevent tracking or flow of mud onto paved surfaces and public rights-of-way.

Maintain construction entrances in accordance with Std. & Spec. C-SCM-03 of the VSMH.

2. Silt fences shall be inspected after each rainfall and repaired immediately, as required. Maintain silt fence in accordance with Std. & Spec. C-PCM-04 of the VSMH.
3. Erosion and sediment control measures shall be checked regularly for undermining or deterioration and buildup or clogging with sediment. Corrective action shall be taken immediately.
4. All seeded areas will be checked regularly to see that a good stand is maintained. Areas should be fertilized and re-seeded as needed.
5. All temporary erosion and sediment measures shall be disposed of within thirty (30) days after final site stabilization is achieved and vegetation is established. Final site stabilization shall be approved by the City Inspector.

Permanent Stabilization

After final grade is achieved the site shall be permanently stabilized. Seed shall be applied to all grass areas per standard and specification provided on the plan sheets. Other areas will be characterized by impervious pavement or sidewalks, as shown on the layout plan, or enhanced with trees, shrubs, mulch, etc. As shown on the landscape plan.

Appendix A – USDA Soil Map / Geotechnical Report

Map Scale: 1:540 if printed on A landscape (11" x 8.5") sheet.

N

Meters
0 5 10 20 30

Feet
0 25 50 100 150

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 18N WGS84

MAP LEGEND

Area of Interest (AOI)

- Area of Interest (AOI)

Soils

- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features

- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features

- Streams and Canals

Transportation

- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background

- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:12,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Tidewater Cities Area, Virginia
Survey Area Data: Version 21, Sep 5, 2023

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: May 9, 2022—Aug 15, 2022

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
24	Tomotley-Urban land complex, 0 to 2 percent slopes	0.3	100.0%
Totals for Area of Interest		**0.3**	**100.0%**

Appendix B – Water Calculations

WATER METER SIZING CALCULATIONS

CLUB HOUSE

PER AWWA-M22 METER DESIGN WORKSHEET

TIMMONS GROUP
YOUR VISION ACHIEVED THROUGH OURS

Project Name: Hamtpon Pump Station #107 Replacement
Timmons Group Project No. 48544
Date: 09/13/2024
Calculated By: Alec Rediger

Table 4-2 (M22, 2nd edition - 2004): Suggested Fixture Values Based on 60 PSI			
Fixture	**Fixture Value (FU)**	**No. Fixtures**	**Total FU**
Toilet (tank)	4.0		
Toilet (flush valve)	35.0		
Urinal (wall or stall)	16.0		
Urinal (flush valve)	35.0		
Bidet	2.0		
Shower (single head)	2.5		
Faucet (lavatory)	1.5		
Faucet (kitchen sink)	2.2		
Faucet (utility sink)	4.0		
Dishwasher	2.0		
Bathtub	8.0		
Clothes Washer	6.0		
Hose Connections (with 50' of hose)			
1/2 inch	5.0	1	5.0
5/8 inch	9.0		
3/4 inch	12.0		
Drinking Fountain	2.0		

Data Input		Notes and Descriptions
TOTAL FIXTURE COUNT	5 FU	Total of above Fixture Units
PROPOSED USE	Municipal	
PEAK DEMAND	10 GPM	From Figure 4-1 or 4-2 (M22, 2nd edition - 2004)

Table 4-1 (M22, 2nd Edition - 2004): Pressure Adjustment Values	
Pressure (PSI)	**Adjustment Factor**
40	0.80
50	0.90
60	1.00
70	1.09
80	1.17
90	1.25
100	1.34
Working Pressure	60 PSI
Adjustment Factor	1.00
Adjusted Peak Demand	10 GPM
Design Peak Demand	**10 GPM**

From Table 6-1 (AWWA Meter Standards)	
Meter Size	**Max. Safe Flow**
5/8"	**20 GPM**

WATER METER SIZING CALCULATIONS

CLUB HOUSE

PER AWWA-M22 METER DESIGN WORKSHEET

TIMMONS GROUP
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Project Name: Hampton Pump Station #107 Replacement
Timmons Group Project No. 48544
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FIXTURE UNIT CONVERSION CURVES

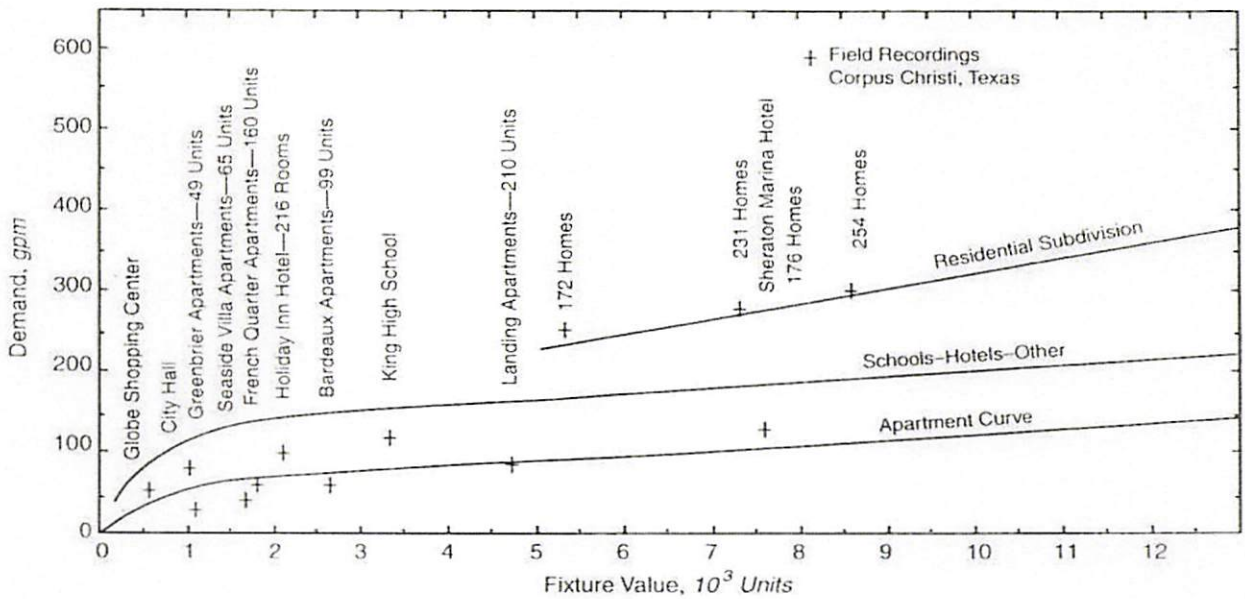

Figure 4-1 Peak flow demand of typical customer categories

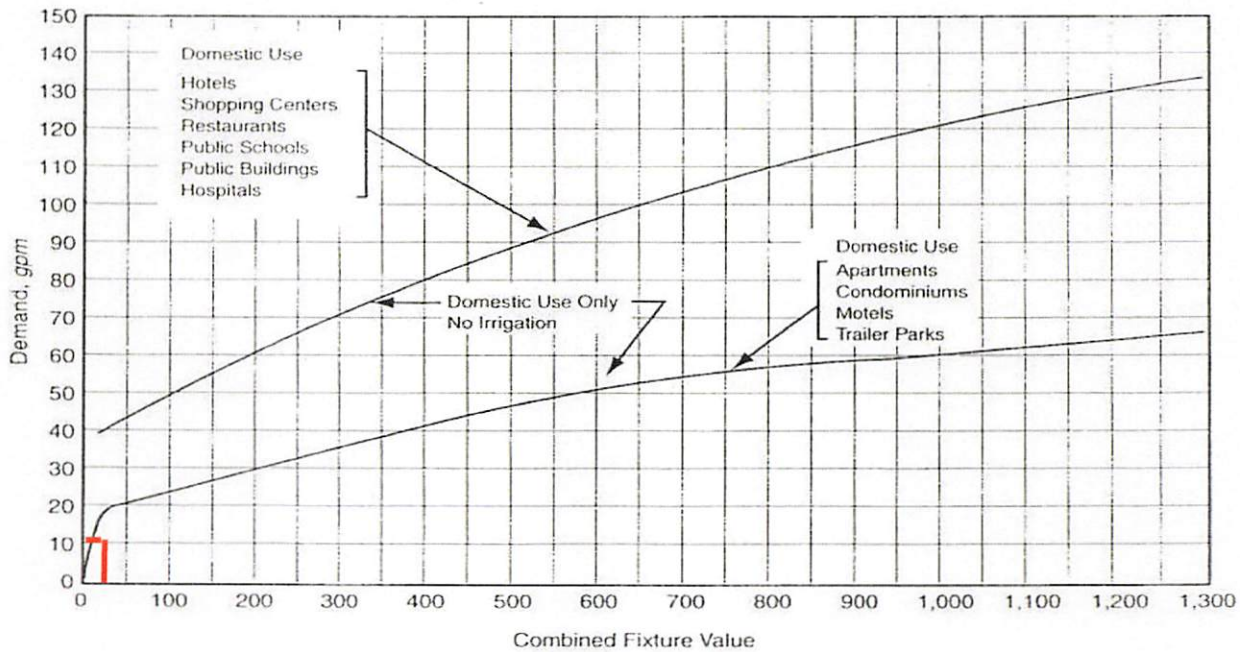

Figure 4-2 Water flow demand per fixture value—low range

WATER METER SIZING CALCULATIONS

CLUB HOUSE

PER AWWA-M22 METER DESIGN WORKSHEET

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AWWA WATER METER STANDARDS (TABLE 6-1)

Meter	Minimum Flow Rate (*gpm*)	Low Normal Flow Rate (*gpm*)	Change-over Range (Compound Meters)	High Normal Flow Rate (*gpm*)	Maximum Flow Rate (*gpm*)	Head Loss at Maximum Flow (*psi*)
Positive Displacement						
1/2 in.	0.25	1	N/A	7.5	15	15
5/8 in.	0.25	1		10	20	15
3/4 in.	0.5	2		15	30	15
1 in.	0.75	3		25	50	15
1 1/2 in.	1.5	5	N/A	50	100	15
2 in.	2	8		80	160	15
Multijet						
5/8 in.	0.25	1	N/A	10	20	15
3/4 in.	0.5	2		15	30	15
1 in.	0.75	3		25	50	15
1 1/2 in.	1.5	5		50	100	15
2 in.	2.0	8		80	160	15
Turbine class 1						
3/4 in.	1.5	N/A	N/A	20	30	15
1 in.	2			35	50	15
1 1/2 in.	3			65	100	15
2 in.	4			100	160	15
3 in.	6			220	350	15
4 in.	8			420	630	15
6 in.	15			865	1,300	15
Turbine class 2						
1 1/2 in.	4	N/A	N/A	80	120	7
2 in.	4			100	160	7
3 in.	8			240	350	7
4 in.	15			420	630	7
6 in.	30			920	1,400	7
8 in.	50			1,600	2,400	7
10 in.	75			2,500	3,800	7
12 in.	120			3,300	5,000	7
14 in.	150			5,200	7,500	7
16 in.	200			6,500	10,000	7
18 in.	250			8,500	12,500	7
20 in.	300			10,000	15,000	7
Compound						
2 in.	0.25	2	20	80	160	20
3 in.	0.5	4	23	160	320	20
4 in.	0.75	6	28	250	500	20
6 in.	1.5	10	32	500	1,000	20
8 in.	2	16	50	800	1,600	20
Singlejet						
1 1/2 in.	0.5	1.5	N/A	50	100	15
2 in.	0.5	2.0		80	160	15
3 in.	0.5	2.5		160	320	15
4 in.	0.75	3.0		250	500	15
6 in.	1.5	4.0		500	1000	15

Source: Data are drawn from AWWA Standards C700, C701, C702, C708, C710, and C712, of latest revision as of December 2002.
N/A = not applicable

LIFT STATION SUMMARY SPREADSHEET

TIMMONS GROUP
YOUR VISION ACHIEVED THROUGH OURS

Project Name: Hampton PS 107 Replacement
Timmons Group Project No. 48544
Date: 08/22/2024
Calculated By: Dan Ruby

WASTEWATER FLOW GENERATION		
Data Input		**Notes and Descriptions**
Facility Type Gross Square Footage	Various	Refer to Site Plans
Flow (GPD) per Unit Flow Duration Peak Factor	varies GPD/GSF varies HR varies	Refer to 2008 Hampton Roads Regional Technical Standards - Sewage Flow Projection Data
Average Flow	283 GPM	Unit Flow * Square Footage (converted from GPD to GPM)
Peak Flow	763 GPM	Average Flow * Peak Factor

WET WELL PARAMETERS		
Wet Well Geometry		**Notes and Descriptions**
Wet Well Dimensions	14'x12'	Refer to Utility Plans & Lift Station Details
Wet Well Interior Surface Area	168.00 SF	
Wet Well Elevations		
Top of Top Slab	8.50 FT	Refer to pump station plan
Adjacent Ground	8.00 FT	Refer to grading plan
Influent Pipe	-6.80 FT	Equal to invert of gravity influent pipe
High Water Alarm	-7.80 FT	
Separation 0.50 FT		
Lag Pump On	-8.30 FT	
Separation 0.5 FT		
Lead Pump On	-8.80 FT	
Separation 2.3 FT		
Pump Off	-11.10 FT	
Separation 0.5 FT		
Low Water Alarm	-11.60 FT	
Separation 4 FT		
Top of Bottom Slab	-15.60 FT	
Total Wet Well Depth	24.10 FT	
Depth from Adjacent Grade	23.60 FT	

STATIC HEAD		
Base Static Head		**Notes and Descriptions**
Pump Off Elevation	-11.10 FT	
Force Main High Point	5.00 FT	
Base Static Head	16.10 FT	Difference between high point in FM and pump off elevation
HRSD Force Main Pressures		
HRSD Pressure Head (Wet)	3.00 FT	Refer to attached HRSD Pressure Analysis Letter
HRSD Pressure Head (Dry)	1.00 FT	Refer to attached HRSD Pressure Analysis Letter
Total Static Head		
Total Static Head (Wet), H_{SW}	**19.10 FT**	Base Static Head + HRSD Wet Pressure Head
Total Static Head (Dry), H_{SD}	**17.10 FT**	Base Static Head + HRSD Dry Pressure Head

LIFT STATION SUMMARY SPREADSHEET

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Project Name: Hampton PS 107 Replacement
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Date: 08/22/2024
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FORCE MAIN CHARACTERISTICS			
8" Force Main D = 8 in	**Quantity**	**Equivalent Length**	**Total Length**
8" Straight Pipe (Vertical in Dry Well)	16 LF	1 FT	16 FT
8" Straight Pipe (Through Valve Vault)	6 LF	1 FT	6 FT
8" 90° Elbow	2 EA	8 FT	16 FT
8" 45° Bend	0 EA	3 FT	0 FT
8" 22.5° Bend	0 EA	3 FT	0 FT
8" 11.25° Bend	0 EA	2 FT	0 FT
8" Gate Valve	1 EA	3 FT	3 FT
8" Check Valve	1 EA	32 FT	32 FT
8"x8" Tee (Branch)	1 EA	19 FT	19 FT
8"x8" Tee (Through)	0 EA	5 FT	0 FT
8"x6" Reducer	1 EA	10 FT	10 FT
		Total Equivalent Length, **L**	102 FT
		Hazen Williams C-Factor, **C**	120
8" Force Main D = 8 in (to HRSD Connection)	**Quantity**	**Equivalent Length**	**Total Length**
8" Straight Pipe	846 LF	1 FT	846 FT
8" 45° Bend	6 EA	3 FT	18 FT
8"x8" Tee (Branch)	1 EA	24 FT	24 FT
8" Gate Valve	2 EA	6 FT	12 FT
		Total Equivalent Length, **L**	900 FT
		Hazen Williams C-Factor, **C**	120

SYSTEM CURVE - WET WEATHER					
Pump Flow, Q (GPM)	**Static Head, H_{sw}** (FT)	**Friction Head, H_f (6" FM)** (FT)	**Friction Head, H_f (8" FM)** (FT)	**Total Dynamic Head, TDH** (FT)	
0	19.10	0.00	0.00	19.10	
100	19.10	0.03	0.27	19.40	
200	19.10	0.11	0.98	20.19	
300	19.10	0.23	2.07	21.40	
400	19.10	0.40	3.52	23.02	
500	19.10	0.60	5.32	25.02	
600	19.10	0.84	7.45	27.39	
700	19.10	1.12	9.91	30.13	
770	19.10	1.34	11.82	**32.26**	Operation Point per Pump Curve
800	19.10	1.44	12.68	33.22	
900	19.10	1.79	15.77	36.66	
1000	19.10	2.17	19.16	40.44	
1100	19.10	2.59	22.86	44.55	
1200	19.10	3.04	26.85	48.99	
1300	19.10	3.53	31.14	53.77	
1400	19.10	4.05	35.71	58.86	
1500	19.10	4.60	40.57	64.27	

Friction Head, H_f Computed using the Hazen-Williams Formula: $H_f = 10.44 \frac{Q^{1.85}}{C^{1.85} D^{4.8655}} * L$

LIFT STATION SUMMARY SPREADSHEET

TIMMONS GROUP
YOUR VISION ACHIEVED THROUGH OURS

Project Name: Hampton PS 107 Replacement
Timmons Group Project No. 48544
Date: 08/22/2024
Calculated By: Dan Ruby

SYSTEM CURVE - DRY WEATHER					
Pump Flow, Q (GPM)	**Static Head, H_{SD}** (FT)	**Friction Head, H_f (8" FM)** (FT)	**Friction Head, H_f (8" FM)** (FT)	**Total Dynamic Head, TDH** (FT)	
0	17.10	0.00	0.00	17.10	
50	17.10	0.01	0.08	17.18	
100	17.10	0.03	0.27	17.40	
150	17.10	0.06	0.57	17.74	
200	17.10	0.11	0.98	18.19	
250	17.10	0.17	1.47	18.74	
300	17.10	0.23	2.07	19.40	
350	17.10	0.31	2.75	20.16	
400	17.10	0.40	3.52	21.02	
450	17.10	0.50	4.37	21.97	
500	17.10	0.60	5.32	23.02	
550	17.10	0.72	6.34	24.16	
600	17.10	0.84	7.45	25.39	
650	17.10	0.98	8.64	26.72	
700	17.10	1.12	9.91	28.13	
750	17.10	1.28	11.25	29.63	Operation Point per Pump Curve
800	17.10	1.44	12.68	31.22	
850	17.10	1.61	14.19	32.90	
900	17.10	1.79	15.77	34.66	
950	17.10	1.98	17.43	36.50	
1000	17.10	2.17	19.16	38.44	
1050	17.10	2.38	20.97	40.45	
1100	17.10	2.59	22.86	42.55	
1150	17.10	2.81	24.82	44.73	
1200	17.10	3.04	26.85	46.99	
1250	17.10	3.28	28.96	49.34	
1300	17.10	3.53	31.14	51.77	
1350	17.10	3.78	33.39	54.27	
1400	17.10	4.05	35.71	56.86	
1450	17.10	4.32	38.11	59.53	
1500	17.10	4.60	40.57	62.27	
1550	17.10	4.89	43.11	65.10	

Friction Head, **H_f** Computed using the Hazen-Williams Formula: $H_f = 10.44 \frac{Q^{1.85}}{C^{1.85} D^{4.8655}} * L$

LIFT STATION SUMMARY SPREADSHEET

TIMMONS GROUP
YOUR VISION ACHIEVED THROUGH OURS

Project Name: Hampton PS 107 Replacement
Timmons Group Project No. 48544
Date: 08/22/2024
Calculated By: Dan Ruby

PUMP SELECTION	
Pump Manufacturer	Fairbanks Morse
Model Number	5" 5433 WD
Motor Power	10 HP
Speed	1185 RPM
Voltage	208 V
Phase	3-Phase
Frequency	60 Hz
Discharge Size	6-inch
Impeller Diameter	10.16"

CYCLE TIMES

Lead Pump On Elev.	-8.80 FT	Force Main Diameter	6 IN
Pump Off Elev.	-11.10 FT	Cross-Sectional Area	0.20 SF
Operating Height	2.30 FT		
Operating Volume	386.40 CF		
	2890.27 GAL		

Wet Weather - High Head

Flow Condition	Inflow Rate (GPM)	Pump Rate per Curve (GPM)	Fill Time (MIN)	Pump Run Time (MIN)	Cycle Time (MIN)	Velocity in Force Main (FPS)
Average Flow	283	750	10.2	6.2	16.4	8.51
Minimum Flow (Avg/2)	142	750	20.4	4.7	25.2	8.51
1/2 Pump Rate	375	750	7.7	7.7	15.4	8.51
Peak Flow	763	750	3.8	-222.3	-218.5	8.51

Dry Weather - Low Head (Runout Condition)

Flow Condition	Inflow Rate (GPM)	Pump Rate per Curve (GPM)	Fill Time (MIN)	Pump Run Time (MIN)	Cycle Time (MIN)	Velocity in Force Main (FPS)
Average Flow	283	800	10.2	5.6	15.8	9.08
Minimum Flow (Avg/2)	142	800	20.4	4.4	24.8	9.08
1/2 Pump Rate*	763	800	3.8	78.1	81.9	9.08
Peak Flow	763	800	3.8	78.1	81.9	9.08

* In this scenario, half of the pump rate would exceed the incoming peak flow. The peak flow is substituted instead.

$$\text{Fill Time} = \frac{\text{Operating Volume}}{\text{Inflow Rate}}$$

$$\text{Pump Run Time} = \frac{\text{Operating Volume}}{\text{Pump Rate} - \text{Inflow Rate}}$$

$$\text{Cycle Time} = \text{Fill Time} + \text{Pump Run Time}$$

$$\text{Force Main Velocity} = \frac{\text{Flow}}{\text{Area}} * \left[\frac{1\ \text{CF}}{7.48\ \text{gal}}\right]\left[\frac{1\ \text{min}}{60\ \text{sec}}\right]$$

LIFT STATION SUMMARY SPREADSHEET

TIMMONS GROUP
YOUR VISION ACHIEVED THROUGH OURS

Project Name: Hampton PS 107 Replacement
Timmons Group Project No. 48544
Date: 08/22/2024
Calculated By: Dan Ruby

RESPONSE TIME		
Total Available Storage	12074	GAL
Peak Flow	763	GPM
Response Time	**16**	**MIN**
	0.3	**HOUR**

$$\text{Response Time} = \frac{\text{Total Available Storage}}{\text{Peak Flow}}$$

WET WELL STORAGE		
Wet Well Diameter	14'x12'	FT
Horizontal Area	168.00	SF
High Water Alarm Elev.	-7.80	FT
Wet Well Rim Elev.	8.50	FT
Height Above Alarm	16.30	FT
Storage Above Alarm	2738.40	CF
	20483	**GAL**

Wet Well Storage = Height Above Alarm * Horiz. Area

MANHOLE SS2 STORAGE		
Manhole Diameter	5.00	FT
Horizontal Area	19.63	SF
Invert Out Elev.	45.26	FT
Manhole Rim Elev.	57.16	FT
Wet Well Rim Elev.	8.50	FT
Height to Lowest Rim	-36.76	FT
Available Storage	-721.78	CF
	-5399	**GAL**

Manhole Storage = Available Height * Horiz. Area

MANHOLE SS3 STORAGE		
Manhole Diameter	4.00	FT
Horizontal Area	12.57	SF
Invert Out Elev.	44.66	FT
Manhole Rim Elev.	55.58	FT
Wet Well Rim Elev.	8.50	FT
Height to Lowest Rim	-36.16	FT
Available Storage	-454.40	CF
	-3399	**GAL**

Manhole Storage = Available Height * Horiz. Area

SEWER PIPE STORAGE		
Pipe Diameter	8.00	IN
Cross-Sectional Area	0.35	SF
Total Length	149	LF
Available Volume	52.01	CF
	389	**GAL**

Pipe Storage = Length * Cross Sectional Area

LIFT STATION SUMMARY SPREADSHEET

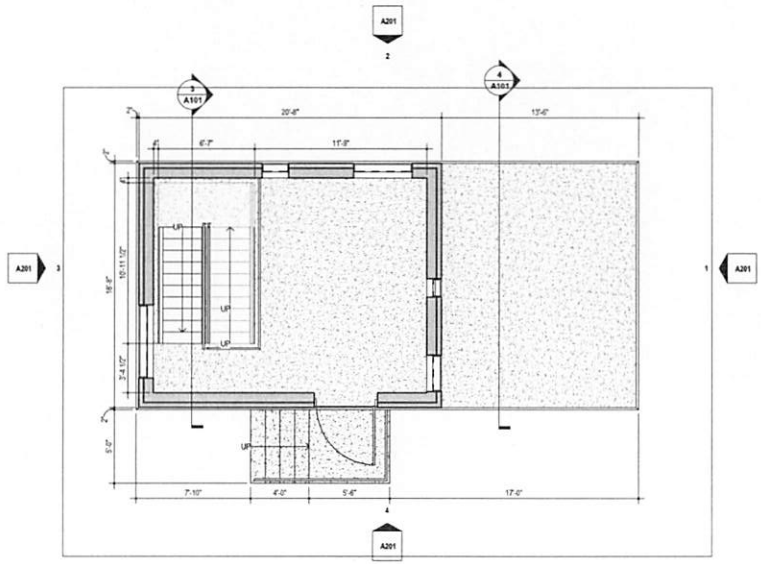
TIMMONS GROUP
YOUR VISION ACHIEVED THROUGH OURS

Project Name: Hampton PS 107 Replacement
Timmons Group Project No. 48544
Date: 08/22/2024
Calculated By: Dan Ruby

SUBMERGENCE		
Vortex:		
Max Flow (Q)	800.00	gpm
Bell Diameter	11.00	inches
Submergence Required	38.83	inches
	3.24	ft
Suction above slab	3.3	inches
Submergence Provided	4.22	ft
(Pump off to pump intake)	PASS	

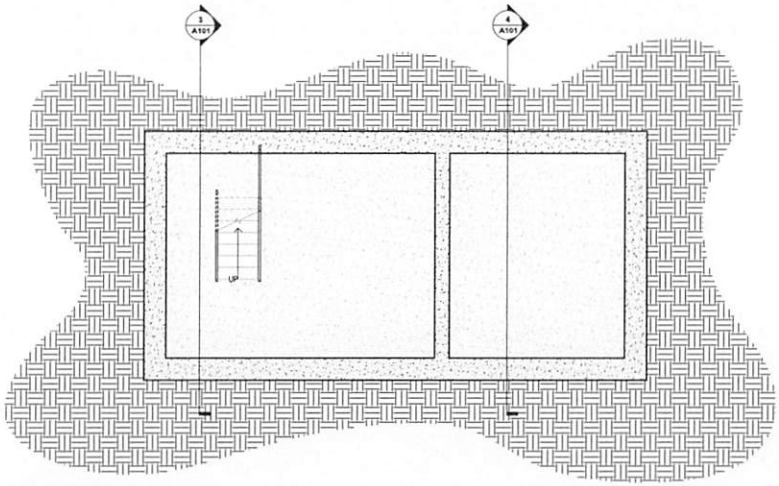
S = D + (0.574Q/D1.5)
S = Req's min. Submergence in inches
D = bell diameter in inches
Q = Flow in gpm

Appendix C – Sewer Calculations



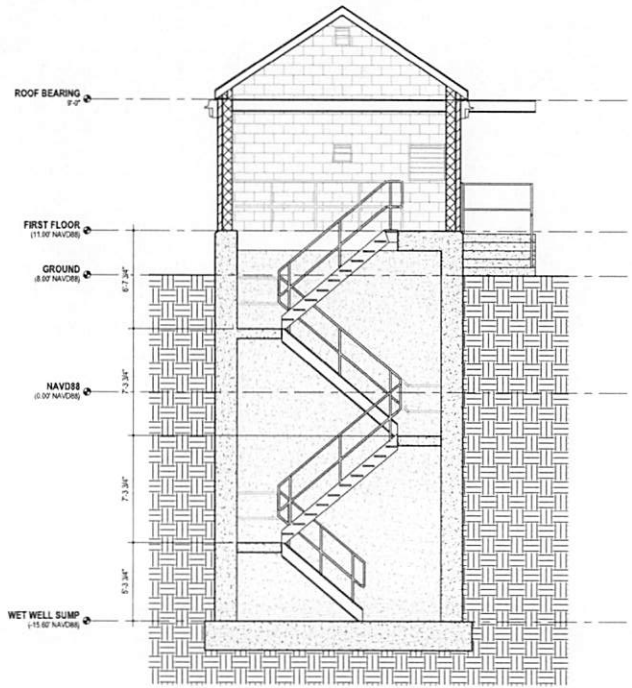
1 **FLOOR PLAN**

1/4" = 1'-0"



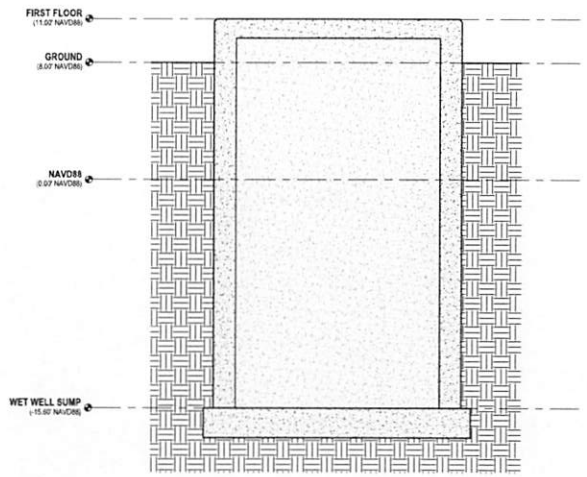
2 **WET WELL SUMP**

1/4" = 1'-0"



3 **BUILDING SECTION**

1/4" = 1'-0"



4 **BUILDING SECTION1**

1/4" = 1'-0"

archsmith studio

PROGRESS PRINT
09.17.24
WORKING DRAWINGS
NOT FOR CONSTRUCTION

REVISIONS:

Hampton Pump Station 107

500 MICHIGAN DRIVE, HAMPTON VA 23669

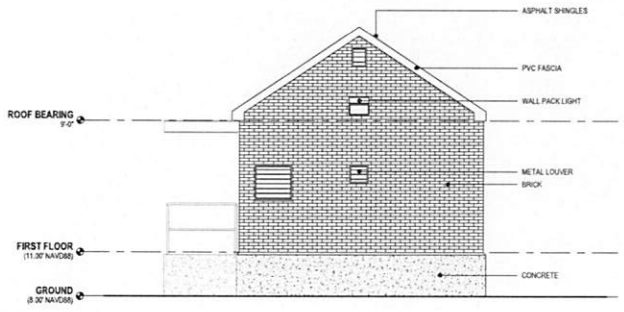
Project Status

JOB NUMBER 2411

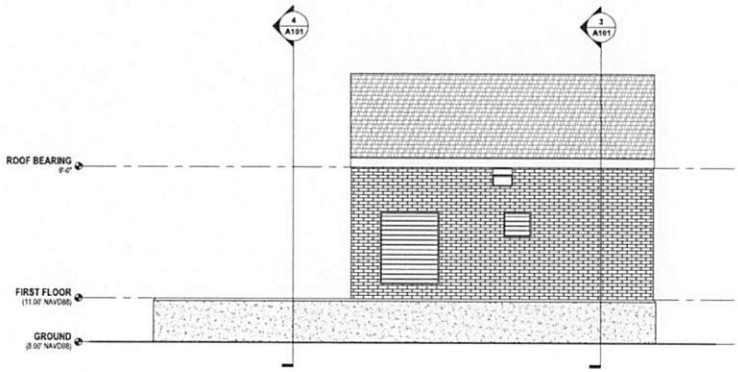
ISSUE DATE 09.17.24

A101

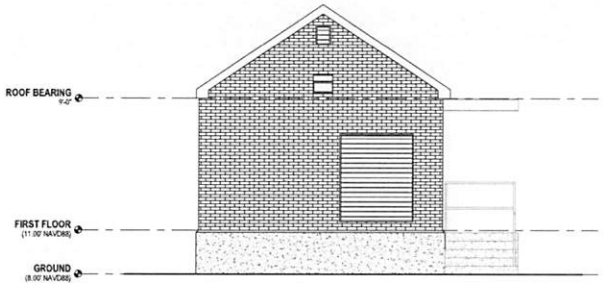
FLOOR PLAN



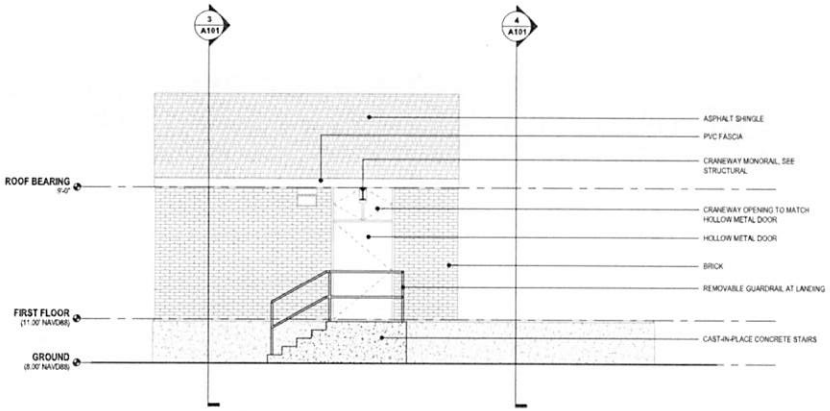
1 **BUILDING ELEVATION - REAR**
1/4" = 1'-0"



2 **BUILDING ELEVATION - SIDE**
1/4" = 1'-0"



3 **BUILDING ELEVATION - FRONT**
1/4" = 1'-0"



4 **BUILDING ELEVATION - SIDE**
1/4" = 1'-0"

archsmith studio

PROGRESS PRINT
09.17.24
WORKING DRAWINGS
NOT FOR CONSTRUCTION

REVISIONS:

Hampton Pump Station 107
500 MICHIGAN DRIVE, HAMPTON VA 23669

Project Status

JOB NUMBER 2411
ISSUE DATE 09.17.24

A201
BUILDING ELEVATIONS

CITY OF HAMPTON PUMP STATION #107 REPLACEMENT

CITY OF HAMPTON, VIRGINIA

CIVIL SITE PLANS

SITE PLAN NO. SP2023-0013

SEPTEMBER 13, 2024

PROJECT INFORMATION:

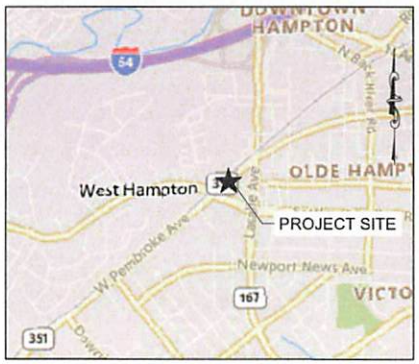
OWNER:	HAMPTON REDEVELOPMENT AND HOUSING AUTHORITY
SITE ADDRESS:	LASALLE AVE. HAMPTON, VA 23669
PARCEL INFORMATION:	LASALLE AVE
LRSN:	2930491
BUILDING FLOOR SPACE:	532 SF (PUMP STATION)
STORMWATER DESIGN CRITERIA	IIB
HUC CODE	02080108
WATERSHED	LYNNHAVEN-POQUOSON
JPA/WETLANDS PERMIT REQUIRED	NO
ONSITE RESOURCE PROTECTION AREA	NO
TOTAL PARCEL AREA:	14,579 SF (0.34 AC)
DISTURBED AREA PROPOSED PS SITE:	2,490 SF (0.06 AC)
DISTURBED AREA EXIST. PS SITE:	1,091 SF (0.03 AC)
DISTURBED AREA IN ROW:	6,875 SF (0.16 AC)
EXISTING DEVELOPMENT IMPERVIOUS AREA (WITHIN LIMITS OF DISTURBANCE):	4,994 SF (0.11 AC)
PROPOSED DEVELOPMENT IMP. AREA (WITHIN LIMITS OF DISTURBANCE):	6,414 SF (0.15 AC)
VERTICAL DATUM:	NAVD88
HORIZONTAL DATUM:	VIRGINIA STATE PLANE SOUTH ZONE, NORTH AMERICAN DATUM 1983/2011 (US SURVEY FEET)
EXISTING USE:	VACANT
PROPOSED LAND USE:	PUMP STATION
METHOD OF REFUSE:	PRIVATE
SOIL TYPE(S):	24 | TOMOTLEY-URBAN LAND COMPLEX | HSG B/D | SLOPES 0 TO 2 PERCENT

REGULATORY DATA

HAMPTON OVERLAY DISTRICT:	NONE
HAMPTON SPECIAL INTEREST DISTRICT:	NONE
FLOOD ZONE:	AE

Sheet List Table

Sheet Number	Sheet Title
C0.0	COVER SHEET
C0.1	GENERAL NOTES
C1.0	EXISTING CONDITIONS
C2.0	DEMOLITION AND EROSION & SEDIMENT CONTROL
C3.0	SITE LAYOUT PLAN
C4.0	GRADING PLAN
C5.0	UTILITY PLAN
C5.1	UTILITY PROFILES
C5.2	UTILITY PROFILES
C5.3	UTILITY PROFILES
C6.0	SITE DETAILS
C7.0	UTILITY DETAILS
C7.1	UTILITY DETAILS
C7.2	UTILITY DETAILS



VICINITY MAP

SCALE: 1" = 1000'

MISS UTILITY OF VIRGINIA

THE CONTRACTOR SHALL CALL "MISS UTILITY" 48 HOURS PRIOR TO THE START OF EXCAVATION. CONTRACTOR SHALL VERIFY LOCATION AND ELEVATION OF ALL UNDERGROUND UTILITIES SHOWN ON PLANS IN AREAS OF CONSTRUCTION PRIOR TO STARTING WORK. CONTACT THE ENGINEER IMMEDIATELY IF THE LOCATION OR ELEVATION IS DIFFERENT FROM THAT SHOWN ON THE PLAN. IF THERE APPEARS TO BE A CONFLICT, AND/OR UPON DISCOVERY OF ANY UTILITY NOT SHOWN ON PLAN, THE DEVELOPER SHALL BE RESPONSIBLE FOR THE RELOCATION OF ANY UTILITY WITHIN THE EXISTING AND/OR RIGHT-OF-WAY REQUIRED BY THE DEVELOPMENT. CONTACT MISS UTILITY OF VIRGINIA: 1-800-552-7001 (TOLL FREE) OR DIAL 811.

APPROVALS

TIMMONS GROUP IS NOT RESPONSIBLE OR LIABLE FOR ANY CONSTRUCTION OR DAMAGES TO THIS PROJECT PRIOR TO ALL FINAL PLAN APPROVALS.

CGP NOTE

A CONSTRUCTION GENERAL PERMIT (CGP) IS REQUIRED PRIOR TO OBTAINING A LAND DISTURBANCE PERMIT FROM THE CITY OF HAMPTON.

NOTE:

All property lines labeled as To Be Established shall be duly recorded at the Circuit Court of Hampton prior to City of Hampton issuance of a building permit. Contact the City of Hampton Development Services Center [757- 727-2444] for information pertaining to the subdivision / property line vacation / boundary line adjustment plat requirements and the City of Hampton's property plat approval process.

RESPONSIBLE LAND DISTURBER NOTE

THE PROFESSIONAL WHOSE SEAL IS AFFIXED HEREON SHALL ACT AS THE "RESPONSIBLE LAND DISTURBER" FOR THE PURPOSES OF PLAN APPROVAL ONLY. PRIOR TO THE ISSUANCE OF THE LAND DISTURBING PERMIT, THE OWNER OR DEVELOPER SHALL PROVIDE THE NAME OF A "RESPONSIBLE LAND DISTURBER" WHO SHALL ASSUME RESPONSIBILITY AS THE "RESPONSIBLE LAND DISTURBER" FOR THE CONSTRUCTION PHASE OF THE PROJECT. THE OWNER OR DEVELOPER SHALL PROVIDE WRITTEN NOTIFICATION SHOULD THE "RESPONSIBLE LAND DISTURBER" CHANGE DURING CONSTRUCTION.

OWNER:
TRILOGY DEVELOPERS, LLC
ROSS VIERRA
1439 N GREAT NECK RD
VIRGINIA BEACH, VA 23454
PHONE: (757) 470-2068
EMAIL: RVIERRA@AXISGE.COM

SURVEYOR:
TIMMONS GROUP
11832 ROCK LANDING DRIVE, SUITE 306
NEWPORT NEWS, VIRGINIA 23606
PHONE: (757) 782-3041
FAX: (757) 782-3004
CONTACT: ROB MANN, LS
EMAIL: ROB.MANN@TIMMONS.COM

ENGINEER:
TIMMONS GROUP
2901 S. LYNNHAVEN ROAD, SUITE 200
VIRGINIA BEACH, VIRGINIA 23452
PHONE: (757) 213-6661
FAX: (757) 340-1415
CONTACT: DAN RUBY, P.E.
EMAIL: DAN.RUBY@TIMMONS.COM

NEWPORT NEWS WATER WORKS
700 TOWN CENTER DRIVE
SUITE 400
NEWPORT NEWS, VIRGINIA 23606
P: (757) 926-1071
F: (757) 926-1167

HAMPTON ROADS SANITATION DISTRICT
2401 G AVENUE
NEWPORT NEWS, VIRGINIA 23602
P: (757) 833-1729

DEVELOPER:
TRILOGY DEVELOPERS, LLC
ROSS VIERRA
1439 N GREAT NECK RD
VIRGINIA BEACH, VA 23454
PHONE: (757) 470-2068
EMAIL: RVIERRA@AXISGE.COM

ARCHITECT:
COX, KLIEWER & COMPANY, P.C.
2533 VIRGINIA BEACH BLVD
VIRGINIA BEACH, VIRGINIA 23452
PHONE: (757) 431-9033
FAX: (757) 463-9380
CONTACT: GREY MASON
EMAIL: GREYM@COXKLIEWER.COM

PUBLIC WORKS CITY OF HAMPTON ENGINEERING SERVICES
22 LINCOLN STREET
HAMPTON, VIRGINIA 23669
P: (757) 727-6348
F: (757) 727-6123

PUBLIC WORKS CITY OF HAMPTON WASTEWATER OPERATIONS
550 NORTH BACK RIVER ROAD
HAMPTON, VIRGINIA 23669
P: (757) 727-6311
RODNEY KIEFERT: (757) 726-2986

WATER SERVICE DATA

PER AWWA-M22 METER DESIGN WORKSHEET

PUMP STATION:

PEAK DOMESTIC DEMAND:	10 GPM
DOMESTIC METER SIZE:	0.625"
DOMESTIC SERVICE LINE SIZE:	1"

NOTE: ALL ON-SITE UNDERGROUND UTILITIES MUST BE IN ACCORDANCE WITH THE LATEST EDITION OF THE CITY OF HAMPTON PUBLIC WORKS DESIGN AND CONSTRUCTION STANDARDS AND CHAPTER 9 OF THE CITY CODE [REF. CITY CODE SECTION 35.1-43]

RESPONSIBLE LAND DISTURBER DESIGNATION

THE PERSON IDENTIFIED BELOW IS DESIGNATED AS THE RESPONSIBLE LAND DISTURBER WHO WILL BE IN CHARGE OF AND RESPONSIBLE FOR CARRYING OUT THE LAND DISTURBING ACTIVITY ASSOCIATED WITH THIS PROJECT. THE PERSON MEETS THE APPLICABLE REQUIREMENTS OF VIRGINIA CODE SECTION 10.1-563 AND 10.1-566 BY VIRTUE OF THE FOLLOWING:

___ RESPONSIBLE LAND DISTURBER CERTIFICATE
___ DCR CERTIFICATION FOR COMBINED ADMINISTRATOR, ADMINISTRATOR, PLAN REVIEWER, INSPECTOR, OR CONTRACTOR
___ VIRGINIA PROFESSIONAL ENGINEER, LAND SURVEYOR, LANDSCAPE ARCHITECT, OR ARCHITECT

RESPONSIBLE LAND DISTURBER CONTACT INFORMATION:

NAME (SIGNATURE) _____
NAME (PRINT) _____
CERTIFICATION/REGISTRATION NUMBER: _____
COMPANY: _____
MAILING ADDRESS: _____
TELEPHONE: _____
EMAIL: _____

THIS DESIGNATION MAY ONLY BE CHANGED BY A PLAN COVER SHEET REVISION THAT MUST BE SUBMITTED TO THE CITY FOR VERIFICATION AND APPROVAL.

Approved by the City of Hampton — Date

_____ _____
DIRECTOR OF PUBLIC WORKS

_____ _____
COMMUNITY DEVELOPMENT DEPARTMENT, CITY AGENT

COMMONWEALTH OF VIRGINIA
DANIEL T. RUBY
Lic. No. 043841
09/13/2024
PROFESSIONAL ENGINEER

THIS DRAWING PREPARED AT THE VIRGINIA BEACH OFFICE
2901 South Lynnhaven Road, Suite 200 Virginia Beach, VA 23452
TEL 757.213.6679 FAX 757.340.1415 www.timmons.com

YOUR VISION ACHIEVED THROUGH OURS.

REVISION DESCRIPTION | DATE

DATE: 09/13/2024
DRAWN BY: A. REDIGER
DESIGNED BY: A. REDIGER
CHECKED BY: D. RUBY
SCALE: --

TIMMONS GROUP

HAMPTON PUMP STATION 107 REPLACEMENT
CITY OF HAMPTON, VIRGINIA
COVER SHEET

JOB NO. 48544
SHEET NO. C0.0

SP2024-XXXX

PERMITTING NOTES:

1. THE CONTRACTOR IS RESPONSIBLE FOR SECURING ALL NECESSARY PERMITS FOR THIS PROJECT PRIOR TO COMMENCING CONSTRUCTION.
2. A STATE CONSTRUCTION GENERAL PERMIT AND A LAND DISTURBANCE PERMIT ARE REQUIRED FOR THIS PROJECT. CONTACT THE COMMUNITY DEVELOPMENT DEPARTMENT - DEVELOPMENT SERVICES CENTER TO OBTAIN THIS PERMIT PRIOR TO ANY LAND DISTURBING ACTIVITY. ALL EROSION AND SEDIMENT CONTROLS IDENTIFIED FOR THE PROJECT MUST BE IN PLACE, INSPECTED, AND APPROVED. COORDINATE INSPECTIONS WITH THE DEPARTMENT OF PUBLIC WORKS. FOR INFORMATION OR TO SCHEDULE AN INSPECTION, CALL (757) 727-8311.
3. AFTER OBTAINING THE LAND DISTURBING PERMIT AND AT LEAST 48 HOURS PRIOR TO ANY LAND DISTURBING ACTIVITY, THE CONTRACTOR SHALL CONTACT THE CONSTRUCTION INSPECTOR AT THE COMMUNITY DEVELOPMENT DEPARTMENT. CALL (757) 728-2444.

ADVISORY NOTES:

1. THE CONTRACTOR SHALL PROVIDE WRITTEN NOTIFICATION TO ALL OWNERS AND RESIDENTS OF THE PROPERTIES ADJACENT TO THE PROJECT SITE 30 DAYS PRIOR TO THE COMMENCEMENT OF WORK UNLESS OTHERWISE DIRECTED BY THE CITY.
2. ALL EXCAVATED MATERIAL SHALL BE DISPOSED OF IN A LAWFUL MANNER. THE CONTRACTOR SHALL COORDINATE THE HAUL ROUTE, MATERIAL QUANTITIES, TRUCK CAPACITIES AND NUMBER OF TRIPS WITH THE CITY CONSTRUCTION INSPECTOR.
3. ANY AND ALL MATERIALS OR DEBRIS TRACKED ONTO A PUBLIC OR PRIVATE ROAD SURFACE WILL BE REMOVED AT THE END OF EACH DAY. SEDIMENT WILL BE REMOVED FROM THE ROADS BY SHOVELING OR SWEEPING AND WILL BE TRANSPORTED TO A SEDIMENT CONTROLLED DISPOSAL AREA.
4. THE CONTRACTOR SHALL FIELD-VERIFY THE LOCATION, DEPTH, AND SIZE OF EXISTING UNDERGROUND UTILITIES. THE LOCATIONS SHOWN ARE APPROXIMATE AND NOT GUARANTEED BY TIMMONS GROUP. THE CONTRACTOR SHALL ALERT THE CIVIL ENGINEER OF ANY DISCREPANCIES.
5. CITY REFUSE COLLECTION WILL BE PROVIDED TO THIS SITE.
6. ANY MILLING AND OVERLAYING REQUIRED IN AREAS OF OPEN CUTTING IN CITY RIGHTS-OF-WAY SHALL BE AT THE DIRECTION AND DISCRETION OF THE CITY CIVIL INSPECTOR.
7. HORIZONTAL DATUM. THIS PLAN IS BASED ON THE VIRGINIA STATE PLANE COORDINATE SYSTEM, SOUTH ZONE, NORTH AMERICAN DATUM OF 1983 (NAD83)(86). THE HORIZONTAL COORDINATE INFORMATION IS BASED ON CITY OF HAMPTON GEODETIC CONTROL MONUMENTS 521 AND 522, SET BY GPS SURVEY. COORDINATE VALUES SHOWN ARE EXPRESSED IN U.S. SURVEY FEET.
8. VERTICAL CONTROL: THIS PLAN IS BASED ON THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88). ELEVATIONS SHOWN ARE BASED ON CITY OF HAMPTON MONUMENT 522.

CITY OF HAMPTON SITE PLAN STANDARD NOTES:

EFFECTIVE: JANUARY 2014

1. ALL WORK ON CITY RIGHT-OF-WAY WILL REQUIRE A SEPARATE PERMIT FROM THE COMMUNITY DEVELOPMENT DEPARTMENT - DEVELOPMENT SERVICES CENTER. ALL CONSTRUCTION WITHIN PUBLIC RIGHTS-OF-WAY AND IMPROVEMENTS THAT ARE TO BE PUBLIC OR PRIVATE INFRASTRUCTURE SHALL CONFORM TO CITY OF HAMPTON SPECIFICATIONS AS SET FORTH IN THE PUBLIC WORKS DESIGN & CONSTRUCTION STANDARDS AND THE DEPARTMENT OF PUBLIC WORKS UTILITY POLICY IN EFFECT AT THE TIME OF PLAN APPROVAL.
2. PER THE CITY OF HAMPTON UTILITY POLICY WORK WILL BE PERFORMED ON RESTRICTED STREETS BETWEEN THE HOURS OF 8:30AM - 4:00PM AND 6:00PM - 6:00AM. LANE CLOSURES WILL BE RESTRICTED TO ONE LANE AND TWO-WAY TRAFFIC WILL BE MAINTAINED AT ALL TIMES. SEE THE CITY OF HAMPTON UTILITY POLICY FOR THE LIST OF RESTRICTED STREETS.
3. PRIVATE SIGN STRUCTURES DEPICTED ON THIS PLAN ARE NOT APPROVED AS TO DESIGN OR LOCATION. ALL PROPOSED PRIVATE SIGNS AND THEIR LOCATIONS ARE SUBJECT TO A PERMITTING AND INSPECTIONS PROCESS ADMINISTERED BY THE CITY OF HAMPTON COMMUNITY DEVELOPMENT DEPARTMENT. FOR MORE INFORMATION CALL (757)728-2444.
4. A LAND DISTURBING PERMIT MUST BE ISSUED BEFORE CONSTRUCTION MAY BEGIN. CONTACT THE COMMUNITY DEVELOPMENT DEPARTMENT - DEVELOPMENT SERVICES CENTER TO OBTAIN THIS PERMIT. EROSION AND SEDIMENTATION CONTROL MEASURES SHALL BE INSTALLED, INSPECTED AND APPROVED PRIOR TO THE ISSUANCE OF THE BUILDING PERMIT. INSPECTIONS SHALL BE COORDINATED THROUGH THE CITY OF HAMPTON DEPARTMENT OF PUBLIC WORKS. FOR INFORMATION OR TO SCHEDULE AN INSPECTION CALL (757)727-8311.
5. A RESPONSIBLE LAND DISTURBER IS REQUIRED TO OBTAIN LAND DISTURBING PERMITS.
6. A VSMP PERMIT SHALL BE OBTAINED WHEN LAND DISTURBED IS GREATER THAN 2500 SQUARE FEET IF THE PROJECT IS LOCATED IN THE CHESAPEAKE BAY PRESERVATION DISTRICT (CBPD) OR 1 ACRE OUTSIDE OF CBPD.
7. PRIOR TO THE FINAL EROSION AND SEDIMENT CONTROL INSPECTION, THE DEVELOPER SHALL PROVIDE A CERTIFIED AS-BUILT FOR THE PROPOSED BMP.
8. ALL UNDERGROUND PIPE SYSTEMS (I.E., STORM, SANITARY, WATER DISTRIBUTION) ON PRIVATE PROPERTY, OUTSIDE OF UTILITY EASEMENTS, SHALL BE INSTALLED IN CONFORMANCE WITH THE INTERNATIONAL PLUMBING CODE, AS AMENDED.
9. ALL PUBLIC SANITARY SEWER FACILITIES SHOWN ON THIS PLAN ARE DESIGNED IN ACCORDANCE WITH THE REGIONAL DESIGN GUIDELINES.
10. SITE LIGHTING SHALL BE A MINIMUM OF ½ FOOT-CANDLE POWER, MEASURED AT GRADE. ANY SITE LIGHTING STRUCTURE IN EXCESS OF FOURTEEN FEET (14') IN HEIGHT SHALL BE BUILT UPON AN ENGINEERED FOUNDATION SYSTEM IN ACCORDANCE WITH A VALID CITY OF HAMPTON BUILDING PERMIT.
11. THIS SITE MAY BE SUBJECT TO THE VIRGINIA OVERHEAD HIGH-VOLTAGE LINE SAFETY ACT. CONTRACTORS MUST CALL THE UTILITY TO MAKE SAFETY ARRANGEMENTS (DOMINION'S NUMBER IS 1-888-667-3000) BEFORE WORKING WITHIN THE 10-FOOT SAFETY ZONE. NO WORK CAN BE STARTED UNTIL APPROPRIATE SAFETY MEASURES ARE COMPLETED.
12. WATER SERVICE AND SEWER LATERALS MUST HAVE A MINIMUM SEPARATION OF TEN FEET (10'). SANITARY SEWER CLEANOUTS MUST BE LOCATED OUTSIDE OF THE DRIVEWAY APRONS AND SIDEWALK. ANY CLEANOUTS FOUND IN SUCH LOCATIONS SHALL BE RELOCATED BY THE DEVELOPER PRIOR TO ACCEPTANCE OF THE IMPROVEMENTS BY THE CITY. METER BOXES CANNOT BE LOCATED IN DRIVEWAYS, APRONS OR SIDEWALKS.
13. GREEN AREAS SHALL CONSIST OF EARTH CAPABLE OF SUSTAINING PLANT MATERIALS AND PROVIDING NATURAL PERCOLATION OF WATER. GREEN AREAS SHALL NOT BE USED TO STORE MATERIALS, PRODUCTS OR EQUIPMENT.
14. ALL REQUIRED LANDSCAPE ELEMENTS (EXISTING TO BE RETAINED AND/OR PROPOSED), AS SPECIFIED ON THE APPROVED LANDSCAPE PLAN, SHALL BE PROVIDED BY THE DEVELOPER AND ACCEPTED BY THE CITY OF HAMPTON'S LANDSCAPE SERVICES COORDINATOR OR BONDED FOR INSTALLATION BY THE DEVELOPER PRIOR TO CITY ISSUANCE OF ANY BUILDING OCCUPANCY CERTIFICATE. FOR MORE INFORMATION CONTACT (757) 728-2444 OR (757)727-6075 TO SCHEDULE A LANDSCAPING INSTALLATION INSPECTION.

GENERAL SITE NOTES:

1. ALL CONSTRUCTION METHODS AND MATERIALS SHALL COMPLY WITH THE LATEST EDITIONS OF THE VIRGINIA DEPARTMENT OF TRANSPORTATION (VDOT) ROAD AND BRIDGE STANDARDS AND SPECIFICATIONS, VIRGINIA EROSION AND SEDIMENT CONTROL REGULATIONS, CITY OF HAMPTON VIRGINIA DESIGN & CONSTRUCTION STANDARDS MANUAL, NEWPORT NEWS WATERWORKS DISTRIBUTION STANDARDS FOR MATERIAL AND CONSTRUCTION, AND ANY OTHER APPLICABLE CITY OF STATE ORDINANCES, CODES, AND LAWS PRIOR TO ANY CONSTRUCTION ACTIVITY.
2. A VSMP PERMIT SHALL BE OBTAINED WHEN LAND DISTURBED IS 1 ACRE OR GREATER. THE CONTRACTOR SHALL BE RESPONSIBLE FOR FILLING OUT THE CONSTRUCTION ACTIVITY OPERATOR INFORMATION AND SIGNING THE CERTIFICATION FOR THE VSMP APPLICATION. THE CONTRACTOR SHALL MAINTAIN THE SWPPP ON-SITE, KEEP THE SWPPP UP-TO-DATE AND MODIFY AS NECESSARY TO SUIT THE PROJECT'S CONDITIONS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR SUBMITTING THE VSMP PERMIT TO DEQ AND PAYING THE VSMP PERMIT FEE.
3. SITE BOUNDARY IS BASED ON RECORD INFORMATION AND DOES NOT REPRESENT A CURRENT BOUNDARY BY TIMMONS GROUP.
4. THE UTILITIES SHOWN ARE SHOWN FOR THE CONTRACTOR'S CONVENIENCE ONLY. OTHER EXISTING UTILITIES MAY BE PRESENT. ALL UTILITY AND SURVEY DATA SHOWN ON THE DRAWINGS HAVE BEEN PROVIDED BY TIMMONS GROUP. INFORMATION HAS BEEN OBTAINED FROM THE BEST AVAILABLE SOURCES AT THE TIME OF THE SURVEY BUT IS NOT REPRESENTED AS BEING COMPLETE AND ACCURATE. THE ENGINEER ASSUMES NO RESPONSIBILITY FOR THE LOCATIONS SHOWN. IT IS THE CONTRACTOR'S RESPONSIBILITY TO LOCATE AND PROTECT EXISTING UTILITIES AND UNDERGROUND STRUCTURES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONTACTING MISS UTILITY (811) FOR EXISTING UTILITY LOCATIONS AT LEAST THREE WORKING DAYS PRIOR TO COMMENCING CONSTRUCTION. DAMAGE TO EXISTING UTILITIES AND UNDERGROUND STRUCTURES SHALL BE REPAIRED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE DEVELOPER.
5. ALL DISTURBED AREAS, INCLUDING BUT NO LIMITED TO PAVEMENT, SHOULDERS, DITCHES, HEADWALLS, ENDWALLS, CULVERT PIPES, CURB AND GUTTER, UTILITIES, DRIVEWAYS, SIGNS, MAILBOXES, ETC., SHALL BE REPAIRED TO A CONDITION EQUAL TO OR BETTER THAN THOSE EXISTING PRIOR TO CONSTRUCTION, OR AS SHOWN ON THE DRAWINGS. SIGNS, MAILBOXES, AND GUARDRAILS THAT ARE DISTURBED SHALL BE RETURNED TO THEIR ORIGINAL LOCATIONS DAILY, AND MAINTAINED THROUGHOUT THE PROJECT.
6. THE CONTRACTOR SHALL REESTABLISH ALL EXISTING PROPERTY PINS AND MONUMENTS DISTURBED DURING CONSTRUCTION AT NO ADDITIONAL COST TO THE DEVELOPER.
7. ON-SITE EXTERIOR CONCRETE IS TO HAVE A MINIMUM COMPRESSIVE STRENGTH OF 3500 PSI WITH 5% TO 7% AIR ENTRAINMENT.
8. ALL WALKS AND SIMILAR PAVED SURFACES SHALL HAVE A MINIMUM 1.0% AND MAXIMUM 2.0% CROSS SLOPE AND SHALL MEET ALL LOCAL AND FEDERAL REQUIREMENTS.
9. ALL PROPOSED PAVING SURFACES SHALL MEET ADJACENT PAVING SURFACES IN A SMOOTH CONTINUOUS MANNER, FLUSH ALONG ENTIRE COMMON EDGE.
10. ALL RADII AND CURBS INDICATED SHALL HAVE CONTINUOUS/SMOOTH TRANSITIONS WITHOUT ABRUPT CHANGES, BENDS, OR FACETED EDGE. ALL RADIAL DIMENSIONS SHOWN ARE TO THE FACE OF CURB UNLESS OTHERWISE NOTED.
11. DIMENSIONS ARE FROM FACE OF BUILDING OR FACE OF CURB UNLESS OTHERWISE NOTED.
12. ALL HANDICAP PARKING, RAMPS, AND SIGNS SHALL BE IN ACCORDANCE WITH UNIFORM FEDERAL ACCESSIBILITY STANDARDS.
13. EXPANSION JOINTS IN CONCRETE SHALL BE PROVIDED AROUND ALL JUNCTIONS, STRUCTURES, OR FIXED OBSTRUCTIONS.
14. ALL UNPAVED AREAS DISTURBED BY THE CONTRACTOR'S OPERATIONS SHALL BE GRADED TO DRAIN, TOPSOILED, SEEDED, MULCHED, AND FERTILIZED.
15. UNLESS OTHERWISE NOTED ON THE PLANS, ALL SIDEWALKS SHALL HAVE TRANSVERSE DUMMY JOINTS AT 5-FOOT INTERVALS; 1/2-INCH TRANSVERSE EXPANSION JOINTS SPACED AT 20-FOOT INTERVALS. DUMMY JOINTS SHALL BE 1-INCH DEEP & 1/4-INCH WIDE, USING A 1/8-INCH RADIUS. EXPANSIONS JOINTS SHALL BE CONSTRUCTED USING EXPANSION JOINT MATERIAL PLACED 1/2-INCH BELOW FINISHED SURFACE. ROUND EDGES OF CONCRETE 1/8-INCH RADIUS.
16. ALL CONCRETE SIDEWALKS, CURBS, AND GUTTERS INDICATED TO BE REMOVED OR REPLACED, SHALL BE DONE SO TO THE NEAREST JOINT.
17. IF A CONSTRUCTION TRAILER CONTAINING TOILET FACILITIES IS PROPOSED DURING CONSTRUCTION, IT SHALL BE CONNECTED TO THE SEWER SYSTEM OR A "PUMP AND HAUL" PERMIT SHALL BE OBTAINED FROM THE HEALTH DEPARTMENT.
18. CONTRACTOR'S LAYDOWN/STORAGE AREA IS LIMITED TO THE AREA WITHIN THE SITE'S CONSTRUCTION LIMITS AND PROPERTY.
19. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PREPARING AS-BUILT DRAWINGS FOR STORMWATER MANAGEMENT FACILITIES, PUBLIC STORM DRAINS, AND PUBLIC SANITARY SEWER FACILITIES INCLUSIVE OF GRAVITY SEWER MAINS AND SEWER FORCE MAINS IN ACCORDANCE WITH THE CITY OF HAMPTON DEPARTMENT OF PUBLIC WORKS DESIGN AND CONSTRUCTION STANDARDS.
20. THE DEVELOPER/CONTRACTOR MUST PROVIDE A PAVEMENT DESIGN CERTIFICATION THAT STATES THE PRIVATELY MAINTAINED PAVEMENT IS CONSTRUCTED PER THE DESIGN. PROVIDE INSPECTION CERTIFICATION BY THIRD-PARTY LICENSED CIVIL ENGINEER. PAVEMENT DESIGN MUST ACCOMMODATE HS 20 LOADING FOR FIRE APPARATUS AND TRASH REMOVAL VEHICLES.
21. THIS PROJECT IS SUBJECT TO THE VIRGINIA OVERHEAD HIGH-VOLTAGE LINE SAFETY ACT.
    - 21.1. THE AMENDED LAW EXPANDS THE SAFE WORK ZONE FROM 6 FEET TO 10 FEET AWAY FROM OVERHEAD POWER LINES.
    - 21.2. CONTRACTORS MUST CALL THE UTILITY TO MAKE SAFETY ARRANGEMENTS BEFORE WORKING WITHIN THE 10-FOOT SAFETY ZONE. NO WORK CAN BE STARTED UNTIL APPROPRIATE SAFETY MEASURES ARE COMPLETED.
22. DURING CONSTRUCTION, THE CONTRACTOR IS RESPONSIBLE FOR MAINTAINING A CLEAN WORK SITE AND REMOVAL OF CONSTRUCTION DEBRIS AND MATERIALS.
23. THE OWNER/DEVELOPER SHALL CONTRACT WITH A PRIVATE COMPANY FOR TRASH REMOVAL UPON BUILDING OCCUPANCY.
24. FIRE HYDRANTS AND ACCESS ROADS SHALL BE PROVIDED PRIOR TO BRINGING COMBUSTIBLES ON SITE.

UTILITY NOTES:

1. IF EXISTING UTILITIES ARE FOUND TO BE IN CONFLICT WITH PROPOSED SITE IMPROVEMENTS, THE CONTRACTOR SHALL NOTIFY THE CITY, DESIGN ENGINEER, OWNER, AND THE UTILITY COMPANY TO EITHER REDESIGN THE PROPOSED IMPROVEMENTS OR RELOCATE THE EXISTING UTILITIES.
2. THE CONTRACTOR SHALL ENSURE ALL SANITARY SEWER AND WATER MAINS MUST HAVE A MINIMUM HORIZONTAL SEPARATION OF TEN FEET (10') UNLESS OTHERWISE NOTED. IN AREAS WHERE SEWER AND WATER LINES CROSS, THE LINES SHALL BE PLACED SO AS TO PROVIDE A VERTICAL SEPARATION OF AT LEAST 18 INCHES IN ACCORDANCE WITH THE VIRGINIA DEPARTMENT OF HEALTH SEWER AND WATERWORKS REGULATIONS, AS WELL AS OTHER PIPES AND STRUCTURES SHOWN ON THE PLANS. OTHER MEASURES MAY BE REQUIRED IN SOME CASES (SEE STATE REGULATIONS).
3. THE CONTRACTOR SHALL INSTALL PIPE, FITTINGS, AND VALVES IN DRY TRENCH CONDITIONS AND IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATION. THE CONTRACTOR SHALL PROVIDE ALL DEWATERING, WELL POINTING, SHEETING, TRENCH BOXES, AND TRENCH STABILIZATION AS REQUIRED AT NO ADDITIONAL COST TO THE OWNER/DEVELOPER.
4. THE CONTRACTOR SHALL PROVIDE SUFFICIENT COVER OVER ALL UTILITY LINES DURING CONSTRUCTION.
5. SANITARY SEWER PIPE AND FITTINGS SHALL BE PVC SDR 26 UNLESS OTHERWISE NOTED ON PLANS. SANITARY SEWER PIPES AND FITTINGS SHALL BE PROTECTO 401 DUCTILE IRON WHERE COVER IS LESS THAN 3 FEET. FOR CERTAIN SHALLOW INSTALLATION APPLICATIONS PVC C900 OR C905 COULD BE USED IN PLACE OF PROTECTO 401 DUCTILE IRON UPON CITY APPROVAL. PVC C900 OR C905 PIPE AND FITTINGS (DR 18) ARE REQUIRED FOR PIPE DEPTHS GREATER THAN 12 FEET.
6. CONTRACTOR SHALL INSTALL MANHOLE INSERTS IN NEWLY CONSTRUCTED PUBLIC AND PRIVATE MANHOLES. ACCEPTABLE INSERTS INCLUDE "MODEL C-WH RAINSTOPPER" MANUFACTURED BY SOUTHWESTERN PACKAGING & SEALS, INC. OR "LOCKDRY" MANUFACTURED BY BARTON SOUTHERN COMPANY, OR APPROVED EQUAL.
7. ALL SANITARY SEWER STUBS SHALL BE CAPPED.
8. ALL PROPOSED SANITARY CLEANOUT TOPS SHALL BE FLUSH WITH FINISH GRADE.
9. THE CONTRACTOR SHALL USE PIPE AND/OR JOINT DEFLECTION OAS SPECIFIED BY THE PIPE MANUFACTURER OR FITTINGS AS NECESSARY TO OBTAIN THE REQUIRED HORIZONTAL AND VERTICAL ALIGNMENT OF THE PROPOSED WATER AND SEWER LINES.
10. THE PLAN SHEETS ARE BASED UPON ALLOWABLE DEFLECTIONS OF JOINTS, BENDS, AND FITTINGS FOR PVC AND DUCTILE IRON PIPE. PROJECT STATIONING IS ALONG THE CENTERLINE OF THE PIPE PROJECTED ONTO THE HORIZONTAL PLANE. A DETAILED LAY SCHEDULE FOR THE PIPE MATERIALS MUST BE SUBMITTED TO THE ENGINEER DEPICTING A CHANGE IN ALIGNMENT AS COMPARED TO THE DRAWINGS.
11. COORDINATE UTILITY WORK WITH ONSITE ELECTRICAL SITE WORK. SEE ELECTRICAL PLANS.
12. FINAL WATERLINE DESIGN FOR AREAS LOCATED WITHIN THE RIGHT-OF-WAY OR WITHIN NEWPORT NEWS WATERWORKS EASEMENTS SHALL BE PER THE PLANS PREPARED BY NEWPORT NEWS WATERWORKS (NNWW) FOR THE NNWW WATERLINE EXTENSION AGREEMENT.
13. ALL WATERLINE MATERIALS AND INSTALLATION SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE NNWW DISTRIBUTION STHADARDS. THE CONTRACTOR TO PERFORM THE WATERLINE INSTALLATION SHALL BE ON THE NNWW APPROVED LIST OF CERTIFIED CONTRACTORS.
14. THE CONTRACTOR SHALL COORDINATE RELOCATIONS FOR EXISTING UTILITIES WITH UTILITY OWNERS.
15. ALL UTILITY WORK LOCATED WITHIN THE RIGHT-OF-WAY SHALL BE IN ACCORDANCE WITH THE CITY OF HAMPTON UTILITY POLICY.
16. A MINIMUM NOTICE OF 7 WORKING DAYS IS REQUIRED FOR COORDINATION WITH PUBLIC WORKS WASTEWATER REPRESENTATIVES DURING ALL FORCE MAIN TIE-IN ACTIVITIES.
17. ALL CONNECTIONS OF NEW SEWER TO EXISTING MANHOLES WILL REQUIRE FULL REHABILITATION, INCLUDING BENCH AND INVERT SHAPING, OF THE EXISTING MANHOLE AFTER THE CONNECTIONS ARE MADE. EPOXY-BASED COATING SYSTEMS ARE PREFERRED, BUT GEOPOLYMER AND CEMENTITIOUS SYSTEMS ARE ALSO ACCEPTABLE IF APPROVED BY CITY OF HAMPTON.
18. ALL SURFACE FEATURES SUCH AS (BUT NOT LIMITED TO) SEWER MANHOLE COVERS, VALVE BOX COVERS, AND SEWER CLEANOUT LIDS WITHIN AREAS BEING REPAVED AND/OR REGRADED SHALL BE RE-ESTABLISHED TO FINISHED GRADES.

DEMOLITION NOTES:

1. SAWCUTTING SHALL BE PERFORMED ON EDGES OF PAVEMENT AND CONCRETE DEMOLITION.
2. SEAL COAT FACE OF EXISTING SAWCUT ASPHALT WITH APPROPRIATE SEALANT PRIOR TO PLACEMENT OF NEW ASPHALT.
3. WATER AND SEWER PIPE DEMOLITION TO BE PERFORMED TO POINTS WHERE NEW CONNECTIONS ARE TO BE MADE.
4. EXISTING UTILITY LINES NO LONGER NECESSARY (I.E. ELECTRIC, GAS, ETC.) SHALL BE REMOVED IN AREAS WHERE DISTURBANCE IS SHOWN.
5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REPLACING WITH MATCHING MATERIALS, ANY PAVEMENT, CONCRETE, CURBS, ETC. THAT MUST BE CUT OR THAT ARE DAMAGED DURING CONSTRUCTION.
6. DEMOLITION AND CONSTRUCTION ACTIVITIES ARE NOT TO DISTURB NOR ENCROACH UPON ADJACENT PROPERTIES AT ANY TIME DURING CONSTRUCTION.
8. ALL EXISTING SIDEWALK AND CURB AND GUTTER REMOVED TO ACCOMMODATE PROPOSED IMPROVEMENTS SHALL BE REPLACED TO THE NEAREST JOINT.
9. SECTION 108.1 ITEM #1 OF THE VCC REQUIRES A BUILDING PERMIT BE SECURED FOR THE DEMOLITION OF ANY BUILDING OR STRUCTURE PRIOR TO THAT DEMOLITION.
10. SECTION 110.3 OF THE VCC REQUIRES THAT A BUILDING PERMIT SHALL NOT BE ISSUED FOR THE RENOVATION OR DEMOLITION OF A BUILDING CONSTRUCTED PRIOR TO JANUARY 1, 1985 WITHOUT AN ASBESTOS CERTIFICATE AND ABATEMENT PERMIT FROM THIS OFFICE TO REMOVE ANY IDENTIFIED ASBESTOS.

SEQUENCE:

1. ACQUIRE PERMITS AND ATTEND PRESUBMITTAL MEETING.
2. CONSTRUCT EROSION & SEDIMENT CONTROL MEASURES.
3. CONSTRUCT NEW PUMP STATION.
4. CONNECT THE NEW PUMP STATION TO THE FORCE MAIN AND GRAVITY SEWER LINES WITH AN OPEN CUT OF THE FORCE MAIN TO INSTALL A WYE AND GATE VALVE IN ACCORDANCE WITH THE PLAN ON SHEET C5.0.
5. TEST NEW PUMP STATION AND PERFORM STARTUP FOR CITY ACCEPTANCE.
6. ACTIVATE NEW PUMP STATION.
7. INSTALL NEW, REVISED SANITARY SEWER CONNECTIONS IN MICHIGAN DRIVE TO REROUTE FLOW FROM THE EXISTING TO PUMP STATION TO THE NEW ONE, AS SHOWN IN THE PLANS. CONTRACTOR TO MAINTAIN SEWER FLOWS TO EXISTING PUMP STATION UNTIL REDIRECTION TO THE NEW OPERATIONAL PUMP STATION IS AVAILABLE. STAGE CONSTRUCTION TO MINIMIZE BYPASS PUMPING. THE WATER LINE WILL CONNECT TO THE EXISTING LINE WITH A 1" CORP. STOP AND FLOW ACROSS MICHIGAN DRIVE PERPENDICULAR TO THE NEW PUMP STATION, AND A ¾" WATER METER WILL BE INSTALLED AT THE PROPERTY LINE.
8. ONCE SANITARY FLOWS ARE DIVERTED TO THE NEW PUMP STATION, CLOSE NEW GATE VALVE AT THE WYE CONNECTION TAKING THE OLD PUMP STATION FORCE MAIN OUT OF SERVICE. THE EXISTING LINES THAT ARE NO LONGER IN USE AND THE EXISTING PUMP STATION WILL BE DEMOLISHED OR ABANDONED IN PLACE.

TRAFFIC CONTROL, SIGNAGE AND MARKINGS:

1. TEMPORARY TRAFFIC CONTROL SHALL CONFORM TO THE LATEST EDITION OF THE VIRGINIA WORK AREA PROTECTION MANUAL.
2. ALL TRAFFIC CONTROL SIGNS AND PAVEMENT MARKINGS SHALL CONFORM TO THE LATEST EDITION OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) FOR STREETS AND HIGHWAYS.
3. TRAFFIC ON EXISTING ROADWAYS MUST BE MAINTAINED DURING CONSTRUCTION WHEN ANY WORK IS BEING PERFORMED WITHIN THE EXISTING RIGHT OF WAY. THE MAINTENANCE OF TRAFFIC PLAN FOR THIS WORK MUST BE IN ACCORDANCE WITH THE VIRGINIA WORK AREA PROTECTION MANUAL AND ANY OTHER AVAILABLE PROVISIONS.
4. ROAD CLOSURES WILL NOT BE PERMITTED DURING CONSTRUCTION. IF A ROAD CLOSURE IS NECESSARY FOR WORK WITHIN THE ROADWAY, CONTRACTOR SHALL RECEIVE WRITTEN APPROVAL FROM THE CITY OF HAMPTON AND SUBMIT A TEMPORARY DETOUR PLAN FOR APPROVAL.
5. ANY WORK INCLUDING LANE CLOSURES WITHIN THE RIGHT-OF-WAY MUST BE APPROVED BY THE CITY OF HAMPTON AND ALL TAFFIC CONFORM TO THE 2011 VIRGINIA WORK AREA PROTECTION MANUAL, THE 2009 MUTCD REVISIONS 1, 2 AND 3 AND THE CITY OF HAMPTON RIGHT-OF-WAY MANUAL.

GRADING AND DRAINAGE:

1. ALL FILL MATERIAL SHALL BE VOID OF DEBRIS AND PLACED IN UNIFORM LIFTS AS SPECIFIED IN THE GEOTECHNICAL ENGINEERING REPORT.
2. COMPACTION SHALL BE PERFORMED WITH HEAVY COMPACTION EQUIPMENT.
3. COMPACT TO 95% MAXIMUM DRY DENSITY.
4. ALL OBJECTIONABLE AND DELETERIOUS MATERIAL IS TO BE REMOVED FROM THE SITE AND DISPOSED OF IN A STATE APPROVED FACILITY MEETING THE REQUIREMENTS OF ALL APPLICABLE LOCAL, STATE, AND FEDERAL REGULATIONS.
5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING COMPACTION TEST RESULTS BY A GEOTECHNICAL ENGINEER TO THE OWNER FOR VERIFICATIONS OF PROPER COMPACTION.
6. WHEN MATERIAL UNSUITABLE FOR FOUNDATION, SUBGRADES, OR OTHER PURPOSES OCCURS WITHIN THE LIMITS OF CONSTRUCTION, THE CONTRACTOR SHALL EXCAVATE SUCH MATERIAL AND BACKFILL WITH APPROVED SUITABLE MATERIAL. THE EXTENT OF UNDERCUTTING AND BACKFILLING TO BE DETERMINED BY THE OWNER'S SOILS ENGINEERING CONSULTANT.
7. TOPSOIL SHALL BE STOCKPILED SEPARATELY FROM OTHER EXCAVATION, AND PLACED BACK IN THE TOP 6" OF THE PIPE TRENCH TO PROMOTE NATIVE VEGETATION REGROWTH. WHERE THE PIPE TRENCH CROSSES CULTIVATED AREAS, TOP SOIL SHALL BE REPLACED IN THE TOP 12" OF THE PIPELINE EXCAVATION.
8. ALL AREAS SHALL BE GRADED FOR POSITIVE DRAINAGE AS SHOWN ON PLANS. POSITIVE DRAINAGE IS CRITICAL TO THE PROJECT.
9. STORM STRUCTURES, PIPING, AND BEDDING SHALL CONFORM TO THE VDOT ROAD AND BRIDGE STANDARDS AND VDOT SPECIFICATIONS OR MANUFACTURER'S SPECIFICATIONS AND GUIDELINES, INCLUDING INLET SHAPING (IS-1), STEPS (ST-1), PIPE BEDDING (PB-1) AND PRECAST UNIT ASSEMBLY NOTES (103.01 AND 103.02).
10. ALL STORM SEWER SHALL BE INSTALLED IN ACCORDANCE WITH THE VIRGINIA DEPARTMENT OF TRANSPORTATION (VDOT) STANDARDS AND SPECIFICATIONS, AND CITY OF HAMPTON STANDARDS AND SPECIFICATIONS.
11. ALL STORM PIPES SHALL BE REINFORCED CONCRETE PIPE (RCP) CLASS III UNLESS OTHERWISE SPECIFIED.
12. ALL PIPE JOINTS AND CONNECTIONS MUST BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER, ASTM AND VDOT PROVISIONS, SPECIFICATIONS AND STANDARDS SO AS TO BE SOIL TIGHT AND LEAK RESISTANT (SEE PWS&S SEC. 2.2.2).
13. STORM SEWER PIPES AS SHOWN ON THIS PLAN ARE MEASURED FROM THE CENTERLINE OF MANHOLE, CURB INLETS, YARD INLETS AND INVERTS ARE BASED ON THE CENTERLINE DISTANCE. LENGTH OF PIPES WITH FLARED END SECTIONS ARE MEASURED TO THE END. CONTRACTOR SHALL ADJUST SLOPE OF PIPES WITH FLARED END SECTIONS SUCH THAT THE TOP OF THE END SECTION MATCHES SLOPE OF THE BANK.
14. FINISHED GRADES SHALL SLOPE UNIFORMLY BETWEEN SPOT ELEVATIONS SHOWN.
15. TEMPORARY DRAINAGE DURING CONSTRUCTION SHALL BE PROVIDED BY THE CONTRACTOR TO RELIEVE AREAS THAT MAY CAUSE DAMAGE TO ROADWAYS AND SURROUNDING AREAS.
16. ALL ONSITE STORM DRAIN PIPES WITHIN THE PROJECT LIMITS SHALL BE VACUUMED CLEAN AFTER ESTABLISHMENT OF PERMANENT SEEDING.

COMMONWEALTH OF VIRGINIA
PROFESSIONAL ENGINEER
09/13/2024

THIS DRAWING PREPARED AT THE VIRGINIA BEACH OFFICE
2901 South Lynnhaven Road, Suite 200 | Virginia Beach, VA 23452
TEL 757 213 6679 FAX 757 340 1415 www.timmons.com

YOUR VISION ACHIEVED THROUGH OURS.

DATE	REVISION DESCRIPTION

TIMMONS GROUP

HAMPTON PUMP STATION 107 REPLACEMENT
CITY OF HAMPTON, VIRGINIA
GENERAL NOTES

DATE	09/13/2024
DRAWN BY	A. REDIGER
DESIGNED BY	A. REDIGER
CHECKED BY	D. RUBY
SCALE	--
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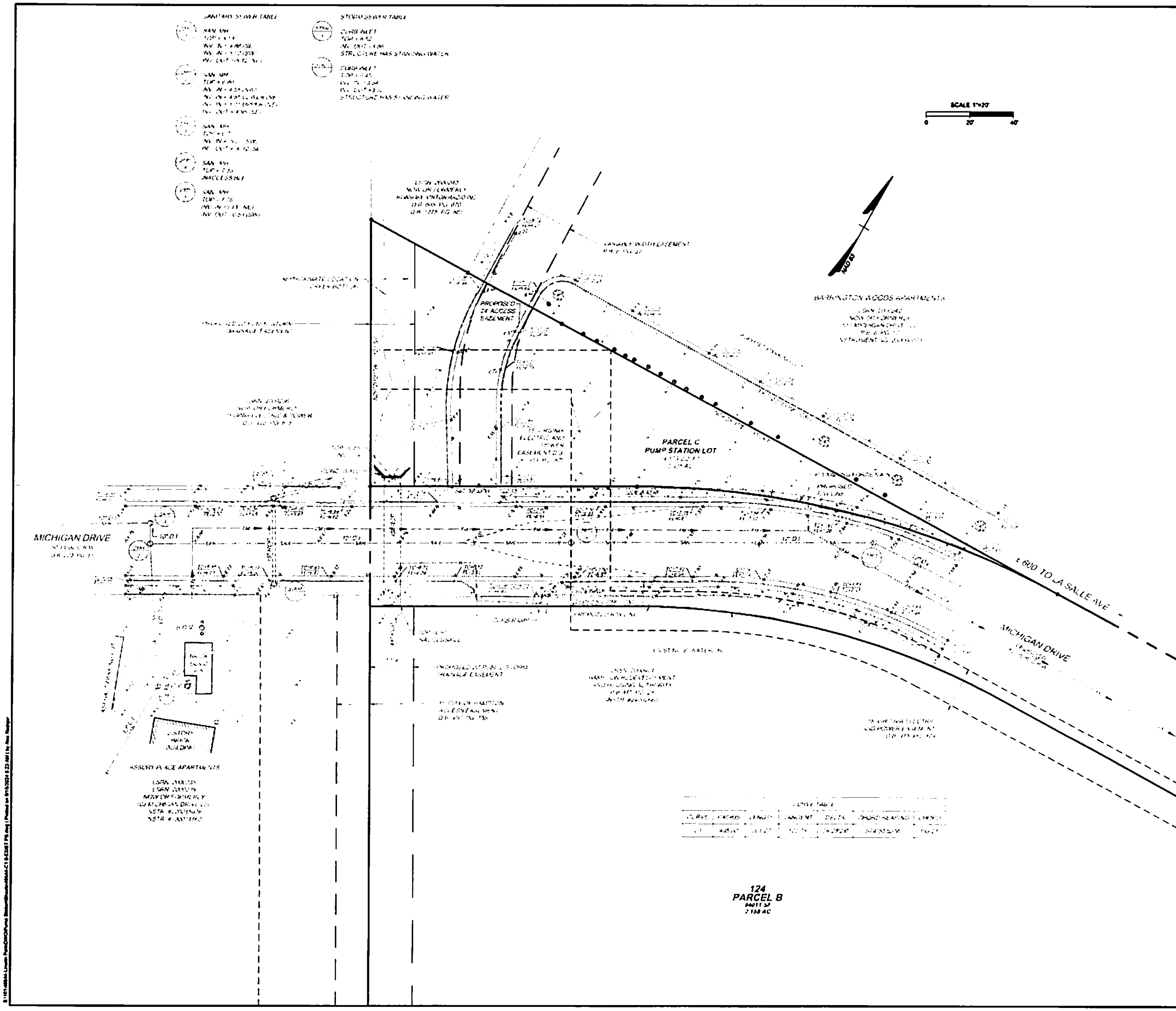

FIELD SURVEY NOTES

APPLICABLE ONLY TO AREAS FIELD-SURVEYED

1. THE MERIDIAN SOURCE OF THIS SURVEY IS BASED ON THE VIRGINIA STATE PLANE COORDINATE SYSTEM, SOUTH ZONE, NORTH AMERICAN DATUM 1983/1993 (HARN). COORDINATE VALUES SHOWN ARE EXPRESSED IN U.S. SURVEY FEET.
2. THE ELEVATIONS SHOWN HEREON ARE IN FEET AND ARE REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88).
3. THE PROPERTY SHOWN HEREON APPEARS TO FALL INSIDE ZONES AE (AREAS DETERMINED TO BE WITHIN THE 1% ANNUAL CHANCE FLOODPLAIN) AS SHOWN ON THE FEDERAL EMERGENCY MANAGEMENT AGENCY (F.E.M.A.) FLOOD INSURANCE RATE MAP (F.I.R.M.) FOR THE CITY OF HAMPTON, VIRGINIA, COMMUNITY PANEL NUMBER 5155270025H, MAP REVISED: MAY 16, 2016. FLOOD ZONE DETERMINATION IS BASED ON F.I.R.M. AND DOES NOT IMPLY THAT THIS PROPERTY WILL OR WILL NOT BE FREE FROM FLOODING OR DAMAGE. CONTACT THE LOCAL COMMUNITY FLOOD OFFICIAL TO CONFIRM THE ABOVE INFORMATION. FLOOD ZONE INFORMATION WAS SCALED FROM F.E.M.A. F.I.R.M. TIMMONS GROUP IS NOT A PARTY IN DETERMINING THE REQUIREMENTS FOR FLOOD INSURANCE ON THE PROPERTY SHOWN HEREON.
4. THIS SURVEY DOES NOT GUARANTEE THE EXISTENCE, SIZE OR HORIZONTAL LOCATION OF ANY UNDERGROUND UTILITIES. THE UNDERGROUND UTILITIES SHOWN ON THIS SURVEY, IF ANY, WERE ESTABLISHED USING ABOVE GROUND STRUCTURES (VALVES, MANHOLES, ETC.). NO GUARANTEE IS MADE THAT THE UNDERGROUND UTILITIES SHOWN COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN SERVICE OR ABANDONED. ACCURACY OF THE UTILITY INFORMATION SHOWN CANNOT BE GUARANTEED, AND ALL UNDERGROUND UTILITY LOCATIONS SHOWN HEREON SHOULD BE CONSIDERED APPROXIMATE. CONTRACTOR MUST VERIFY ALL UTILITIES PRIOR TO CONSTRUCTION. WATERLINES SHOWN ARE DEPICTED PER RECORD DATA.

ABBREVIATIONS

B.O.V.	BLOW OFF VALVE
CONC	CONCRETE
C&G	CURB & GUTTER
D.I.	DUCTILE IRON PIPE
FL	FLOWLINE
FM	FORCE MAIN
INV	INVERT
P.S.	PUMP STATION
R/W	RIGHT OF WAY
RCP	REINFORCED CONCRETE PIPE
SAN	SANITARY PIPE
STRM	STORM INLET
SMH	SANITARY MANHOLE
TC	TOP OF CURB

EXISTING CONDITIONS LEGEND

GRAVITY SANITARY SEWER LINE
FORCE MAIN (SANITARY) LINE
WATER LINE
FENCE LINE
EDGE OF PAVEMENT
STORM DRAIN
SURFACE CONTOUR
BUILDING
CONCRETE
UTILITY VALVE
UTILITY VAULT
LIGHT POLE
ELECTRIC METER
ELECTRIC BOX
STORM MANHOLE
STORM DRAIN
POST INDICATOR VALVE
CLEANOUT

COMMONWEALTH OF VIRGINIA
Lic. No.
09/13/2024
PROFESSIONAL ENGINEER

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DATE	REVISION DESCRIPTION

TIMMONS GROUP

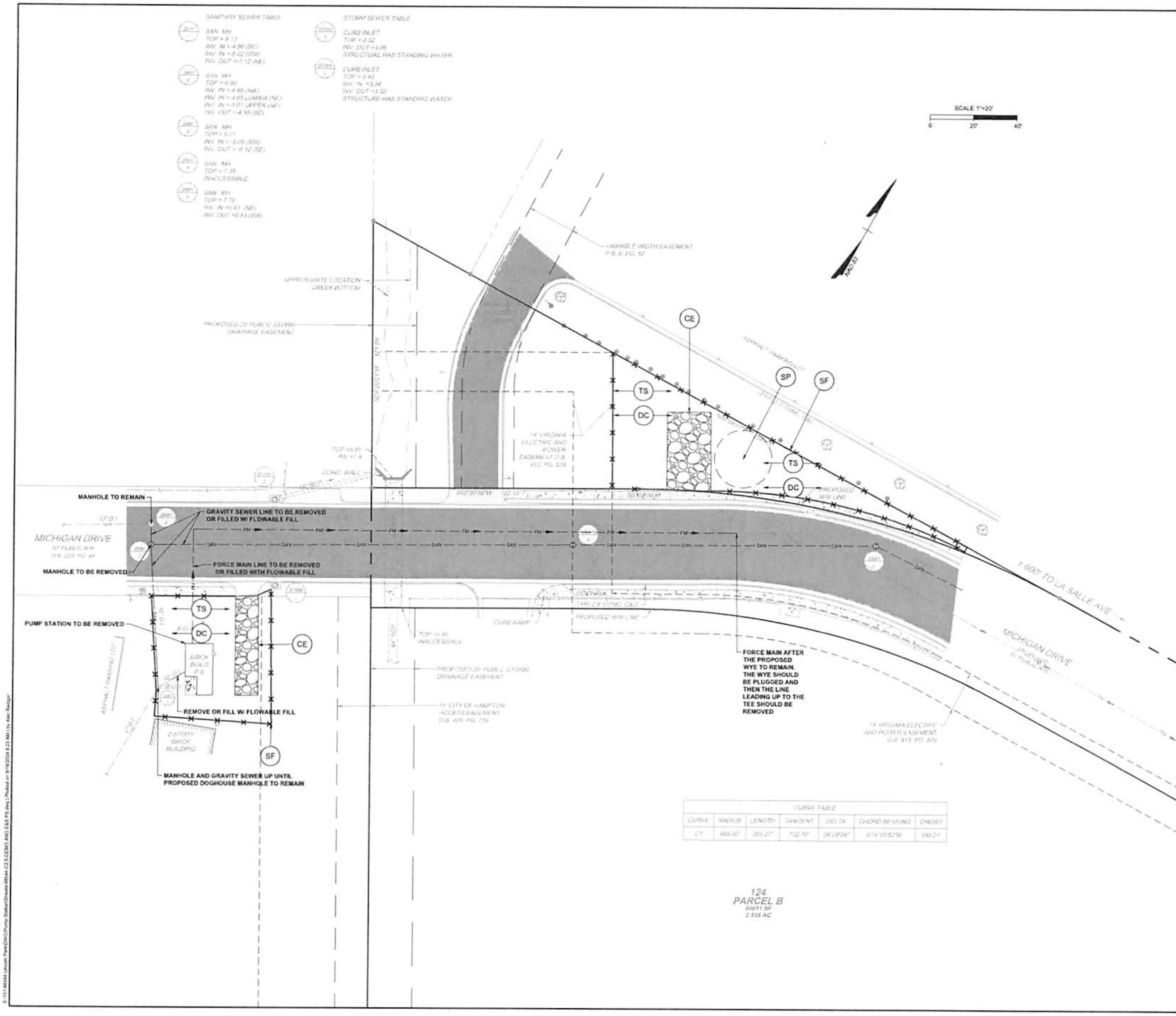
HAMPTON PUMP STATION 107 REPLACEMENT

CITY OF HAMPTON, VIRGINIA

EXISTING CONDITIONS

DATE	09/13/2024
DRAWN BY	A. REDIGER
DESIGNED BY	D. RUBY
CHECKED BY	D. RUBY
SCALE	1" = 20'
JOB NO.	48544
SHEET NO.	C-1.0

SP2024-XXXX



CURVE TABLE						
CURVE	RADIUS	LENGTH	TANGENT	DELTA	CHORD BEARING	CHORD
C1	400.00'	201.27'	102.78'	28°49'28"	S74°33'52"W	199.21'

EROSION & SEDIMENT CONTROL LEGEND

EXISTING CONTOURS	
LIMITS OF DISTURBANCE	
SILT FENCE	SF
CONSTRUCTION ENTRANCE	CE
TEMPORARY SEEDING	TS
DUST CONTROL	DC
SOIL STOCKPILE	SP

EROSION & SEDIMENT CONTROL NOTES

1. PERIMETER EROSION AND SEDIMENT CONTROL MEASURES SHALL BE INSTALLED AND APPROVED BY THE CITY INSPECTOR PRIOR TO COMMENCING MASS CLEARING AND DEMOLITION.
2. MAINTAIN PERIMETER SILT FENCE THROUGHOUT THE DURATION OF CONSTRUCTION.
3. COORDINATE LOCATION OF CONSTRUCTION ENTRANCE WITH EROSION CONTROL INSPECTOR. ONLY ONE CONSTRUCTION ENTRANCE SHALL BE ALLOWED AT A TIME.

DEMOLITION NOTES

1. **SEE GENERAL NOTES, SHEET 0.1, FOR SEQUENCING OF THE DEMOLITION OF EXISTING PUMP STATION AND GRAVITY/FORCE MAIN SANITARY SEWER LINES.**
2. THE CONTRACTOR IS RESPONSIBLE FOR LOCATING ALL UNDERGROUND UTILITIES (PUBLIC OR PRIVATE) THAT MAY EXIST AND CROSS THROUGH THE AREA OF CONSTRUCTION PRIOR TO COMMENCING EXCAVATION. THE CONTRACTOR SHALL CALL "MISS UTILITY" AT LEAST 72 HOURS PRIOR TO EXCAVATING AT "811" OR 1-800-552-7001.
3. THE CONTRACTOR IS RESPONSIBLE FOR REPLACING OR REPAIRING ANY UTILITIES THAT ARE DAMAGED DURING CONSTRUCTION AT HIS OWN EXPENSE.
4. UTILITIES SERVING ADJACENT PROPERTIES SHALL REMAIN OPERATIONAL DURING BUSINESS HOURS THROUGHOUT THE COURSE OF CONSTRUCTION.
5. THE CONTRACTOR MUST NOTIFY PUBLIC UTILITIES CONSTRUCTION REPRESENTATIVE SEVEN (7) CALENDAR DAYS PRIOR TO ANY NIGHT TIME SHUT DOWN OF ANY WATER MAINS.
6. DEMOLITION AND CONSTRUCTION ACTIVITIES SHALL NOT DISTURB NOR ENCROACH UPON ADJACENT PRIVATE PROPERTIES AT ANY TIME DURING CONSTRUCTION.
7. NO DEMOLITION OUTSIDE OF WHAT IS NECESSARY TO INSTALL PERIMETER EROSION AND SEDIMENT CONTROL MEASURES SHALL TAKE PLACE UNTIL ALL MEASURES ARE PROPERLY INSTALLED AND INSPECTED.
8. THE CONTRACTOR IS RESPONSIBLE FOR REPLACING ANY CURB, FENCE, PAVEMENT, CONCRETE, ETC. THAT MUST BE CUT OR THAT IS DAMAGED DURING CONSTRUCTION AT HIS OWN EXPENSE. REPLACEMENT MATERIALS SHALL BE EQUAL OR BETTER THAN EXISTING CONDITIONS.
9. DRIVEWAYS, ENTRANCES, SIDEWALKS, AND CURBS THAT ARE REMOVED TO ACCOMMODATE PROPOSED IMPROVEMENTS SHALL BE SAWCUT AT THE NEAREST JOINT.
10. THE CONTRACTOR SHALL EXERCISE EXTREME CAUTION WHEN WORKING NEAR OVERHEAD POWER LINES.
11. THE CONTRACTOR SHALL EXERCISE EXTREME CAUTION WHEN WORKING NEAR EXISTING NATURAL GAS LINES.
12. FEATURES THAT SHALL BE REMOVED OR DEMOLISHED ARE SHOWN IN BLACK.

PUMP STATION DEMOLITION NOTES

1. REMOVE EQUIPMENT AND PROVIDE TO THE THE CITY OF HAMPTON. IF UNDESIRED BY THE CITY OF HAMPTON, THEN DISPOSE OF THE EQUIPMENT LEGALLY.
2. DEMOLISH BUILDING AND UNDERGROUND WALLS TO A DEPTH OF 3' BELOW GROUND.
3. FILL ABANDONED GRAVITY SEWER WITH FLOWABLE FILL.
4. BREAK UP BOTTOM SLAB CONCRETE TO ALLOW UNRESTRICTED GROUNDWATER MOVEMENT.
5. FILL WET WELL AND DRY WELL WITH CLEAN FILL. PROVIDE MINIMUM 4" TOPSOIL AND SEEDING.

COMMONWEALTH OF VIRGINIA — DANIEL E. RUBY — Lic. No. 043849 — 09/13/2024 — PROFESSIONAL ENGINEER

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DATE	REVISION DESCRIPTION

TIMMONS GROUP

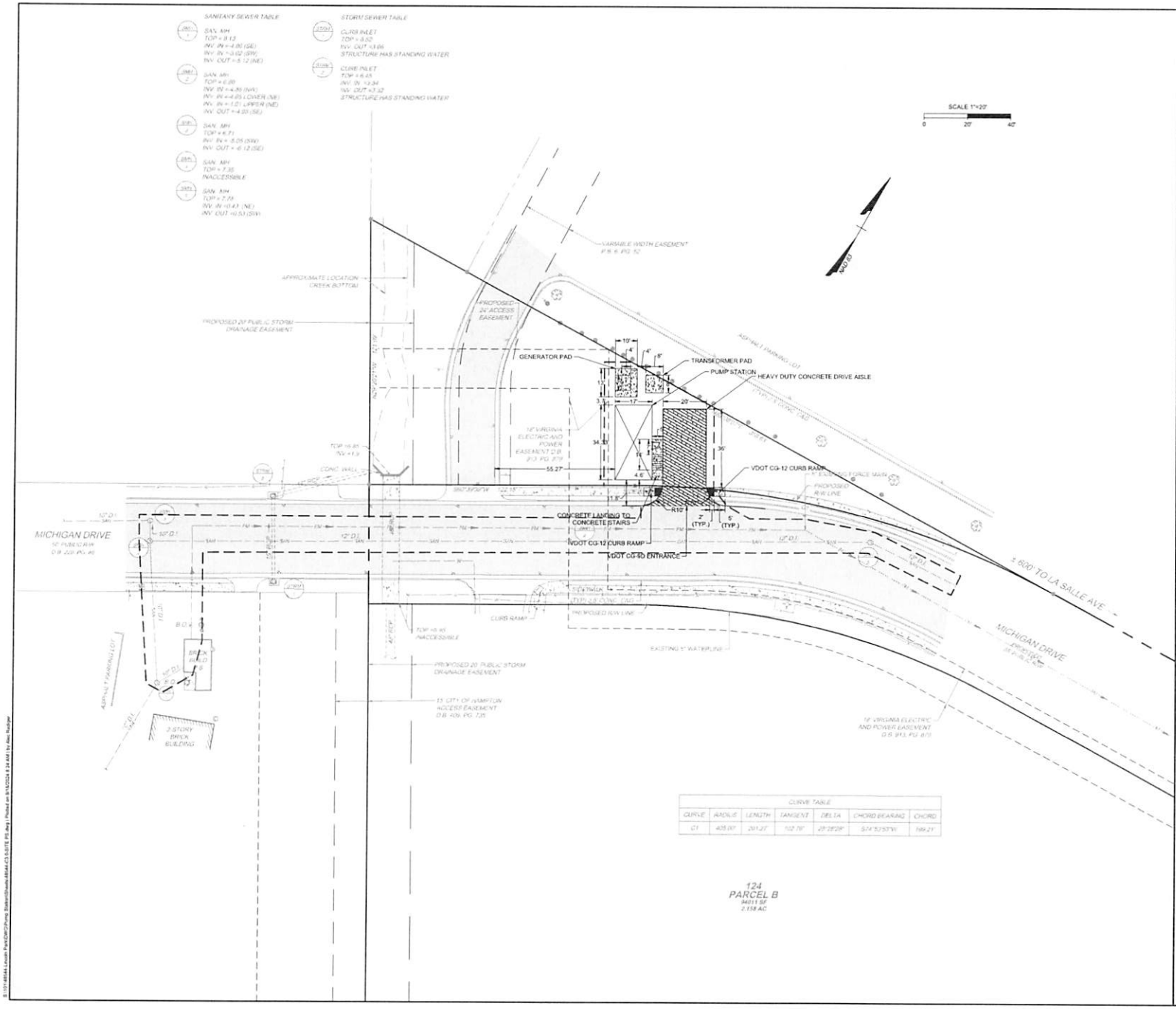
HAMPTON PUMP STATION 107 REPLACEMENT

CITY OF HAMPTON, VIRGINIA

DEMOLITION AND EROSION & SEDIMENT CONTROL PLAN

DATE	09/13/2024
DRAWN BY	A. REDIGER
DESIGNED BY	D. RUBY
CHECKED BY	D. RUBY
SCALE	1" = 20'
JOB NO.	48544
SHEET NO.	C-2.0

SP2024-XXXX



SITE LAYOUT LEGEND

REINFORCE CONCRETE DRIVE AISLE

CONCRETE STAIRS/PAD

LIMITS OF DISTURBANCE

TRUNCATED DOMES

SITE PLAN NOTES

1. DIMENSIONS ARE MEASURED TO FACE OF CURB OR OUTSIDE FACE OF WALL UNLESS OTHERWISE INDICATED.
2. THIS SITE IS LOCATED IN THE FOLLOWING FLOOD ZONES PER FEMA FLOOD INSURANCE RATE MAP (FIRM) 51552700251, EFFECTIVE 05/16/2016:
   - ZONE AE WITHIN THE 1 ANNUAL CHANCE FLOODPLAIN
3. ALL PROPOSED PAVING SURFACES SHALL MEET ADJACENT PAVING SURFACES IN A SMOOTH CONTINUOUS MANNER, FLUSH ALONG ENTIRE COMMON EDGE.
4. ALL RADII AND CURBS INDICATED SHALL HAVE CONTINUOUS AND SMOOTH TRANSITIONS WITHOUT ABRUPT CHANGES, BENDS, OR FACETED EDGES. ALL RADIAL DIMENSIONS SHOWN ARE TO THE FACE OF CURB UNLESS OTHERWISE INDICATED.
5. EXPANSION AND CONTRACTION JOINTS SHALL BE INSTALLED IN ALL CONCRETE SURFACES. REFER TO DETAILS ON SHEET C-6.0.
6. EXPANSION JOINTS IN CONCRETE SHALL BE PROVIDED AROUND ALL JUNCTIONS, STRUCTURES, OR FIXED OBSTRUCTIONS.
7. EXPANSION JOINTS SHALL BE FINISHED WITH POLYURETHANE JOINT SEALANT IN ACCORDANCE WITH THE DETAILS ON SHEET C-6.0.
8. ALL CONCRETE SIDEWALKS, CURBS, ENTRANCES, AND GUTTERS INDICATED TO BE REMOVED OR REPLACED SHALL BE DEMOLISHED TO THE NEAREST JOINT.
9. THE CONTRACTOR SHALL USE CAUTION WHEN EXCAVATING NEAR UNDERGROUND POWER LINES AND WHEN PERFORMING WORK NEAR OVERHEAD POWER LINES.

COMMONWEALTH OF VIRGINIA
DAVID E. RUBY
Lic. No. 043911
PROFESSIONAL ENGINEER
09/13/2024

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DESIGNED BY: D. RUBY
CHECKED BY: D. RUBY
SCALE: 1" = 20'

TIMMONS GROUP

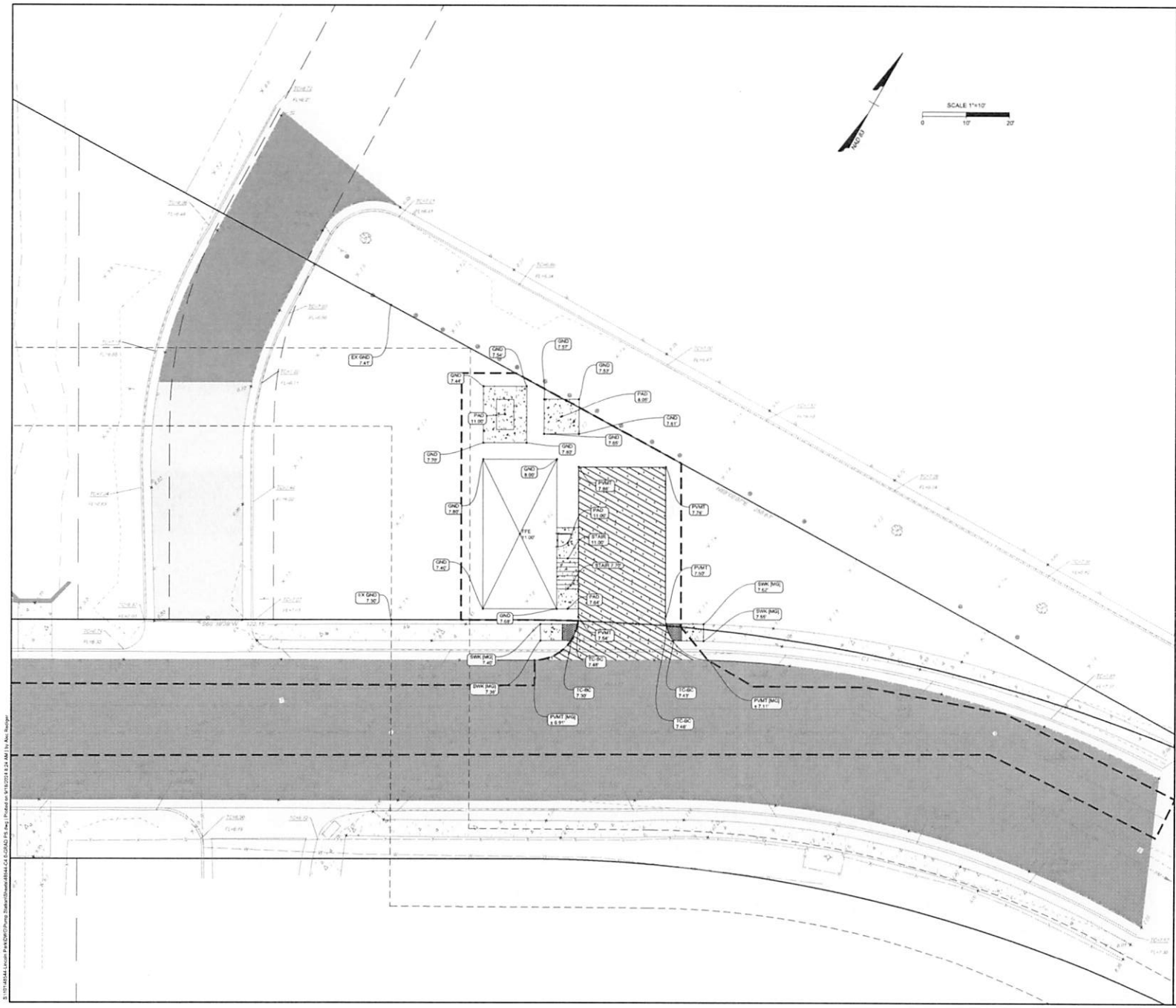
HAMPTON PUMP STATION 107 REPLACEMENT

CITY OF HAMPTON, VIRGINIA

SITE LAYOUT PLAN

JOB NO. 48544
SHEET NO. C-3.0

SP2024-XXXX



GRADING PLAN ABBREVIATIONS

FFE	FINISHED FLOOR ELEVATION
PAD	CONCRETE PAD
EX	EXISTING
GND	GROUND
MG	MATCH EXISTING GRADE
PVMT	ASPHALT PAVEMENT
STAIR	CONCRETE STAIRS
TC-BC	TOP OF CURB-BACK OF CURB
SWK	SIDEWALK

SITE LAYOUT LEGEND

- CONCRETE DRIVE AISLE
- CONCRETE STAIRS/PAD
- LIMITS OF DISTURBANCE
- TRUNCATED DOMES

GRADING PLAN NOTES

1. ALL AREAS SHALL BE GRADED FOR POSITIVE DRAINAGE AS SHOWN ON THE PLANS. POSITIVE DRAINAGE IS CRITICAL TO THE PROJECT.
2. TIE-IN SLOPES SHALL NOT EXCEED 5% IN ANY DIRECTION WHEN TYING-IN PROPOSED ELEVATIONS TO EXISTING ELEVATIONS.
3. FINISHED GRADES SHALL SLOPE UNIFORMLY BETWEEN SPOT ELEVATIONS SHOWN.
4. CONTRACTOR SHALL PHASE CONSTRUCTION SUCH THAT GRADING CAN COMMENCE AND END IN THE SHORTEST TIME POSSIBLE.
5. ALL UNPAVED AREAS DISTURBED BY THE CONTRACTOR'S OPERATIONS SHALL BE GRADED TO DRAIN, TOPSOILED, SEEDED, MULCHED, AND FERTILIZED.

COMMONWEALTH OF VIRGINIA
DANIEL E. RUBY
Lic. No. 043841
09/13/2024
PROFESSIONAL ENGINEER

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REVISION DESCRIPTION	DATE

DATE: 09/13/2024
DRAWN BY: A. REDIGER
DESIGNED BY: D. RUBY
CHECKED BY: D. RUBY
SCALE: 1" = 10'

TIMMONS GROUP

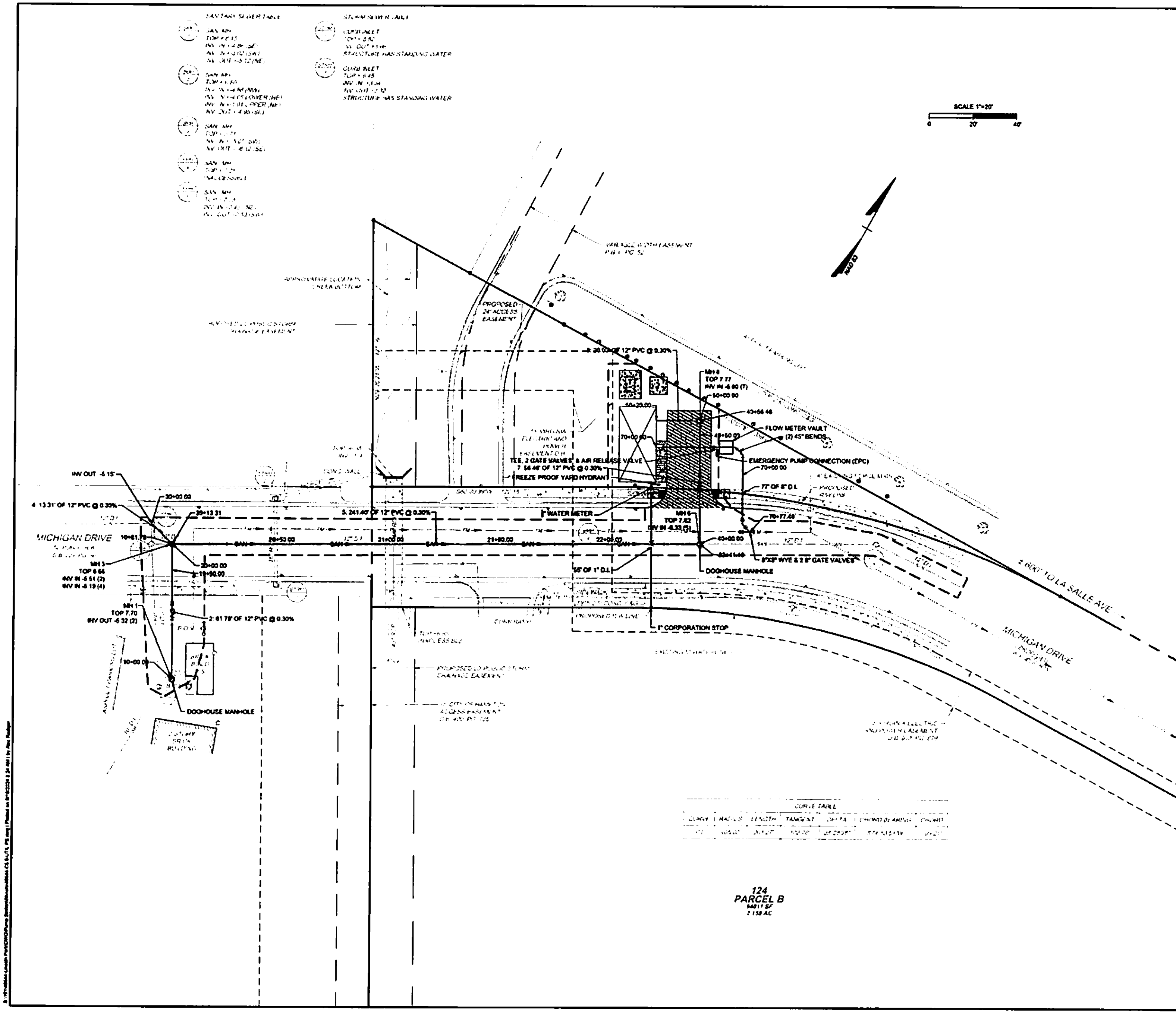
HAMPTON PUMP STATION 107 REPLACEMENT

CITY OF HAMPTON, VIRGINIA

GRADING PLAN

JOB NO. 48544
SHEET NO. C-4.0

SP2024-XXXX



UTILITY PLAN LEGEND

LIMITS OF DISTURBANCE	— — — — —
GRAVITY SEWER PIPE	——SAN——
SEWER FORCE MAIN	——FM——
DOMESTIC WATER PIPE	——W——
FIRE SPRINKLER PIPE	——F——
TEES & WYES	
HORIZONTAL ELBOWS	
SEWER VALVES	
SEWER CLEANOUT	
WATER VALVES	
WATER METER	

UTILITY PLAN NOTES

1. THE CONTRACTOR SHALL FIELD-VERIFY THE LOCATION, SIZE, MATERIAL, AND DEPTH OF EXISTING WATER, SANITARY SEWER, NATURAL GAS, ELECTRIC, AND TELECOM SERVICES. THE LOCATIONS SHOWN ARE APPROXIMATE AND NOT GUARANTEED BY TIMMONS GROUP.
2. THE CONTRACTOR SHALL COORDINATE WITH DOMINION ENERGY TO EXTEND NEW ELECTRIC SERVICE TO THE PROPOSED BUILDING.
3. THE CONTRACTOR SHALL SCHEDULE AND SEQUENCE UTILITY INSTALLATION TO MINIMIZE DISRUPTIONS TO EXISTING WATER, SEWER, ELECTRIC, GAS, AND TELECOM SERVICES.
4. PROPOSED UTILITY PIPING SHALL BE INSTALLED IN ACCORDANCE WITH MINIMUM STANDARD #16 OF THE VIRGINIA EROSION AND SEDIMENT CONTROL PROGRAM.
5. THE CONTRACTOR SHALL VERIFY UTILITY TIE-IN LOCATIONS AT THE PROPOSED BUILDING. REFER TO PLUMBING PLANS.
6. THE CONTRACTOR SHALL PROVIDE AT LEAST 3-FEET OF COVER OVER ALL WATER AND SEWER PIPES.
7. ALL WATER PIPES 4-INCHES AND LARGER SHALL BE FULLY RESTRAINED AT ALL JOINTS AND FITTINGS WITH MEGALUG38 OR EQUIVALENT.
8. TRACER WIRE SHALL BE INSTALLED OVER ALL PLASTIC WATER AND SEWER PIPES AND FORCE MAINS.
9. THE CONTRACTOR SHALL PROVIDE AT LEAST 6-INCHES OF VERTICAL SEPARATION WHERE PROPOSED PIPES CROSS OVER OTHER UTILITIES AND 18-INCHES OF VERTICAL SEPARATION WHERE PROPOSED PIPES CROSS UNDERNEATH.
10. FIRE SERVICE MAINS AND THEIR APPURTENANCES SHALL BE INSTALLED PER THE VIRGINIA STATEWIDE FIRE PREVENTION CODE AND NFPA 24.

COMMONWEALTH OF VIRGINIA — PROFESSIONAL ENGINEER — 09/13/2024

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YOUR VISION ACHIEVED THROUGH OURS.

DATE	REVISION DESCRIPTION

DATE	09/13/2024
DRAWN BY	A. REDIGER
DESIGNED BY	D. RUBY
CHECKED BY	D. RUBY
SCALE	1" = 20'
JOB NO.	48544
SHEET NO.	C-5.0

TIMMONS GROUP

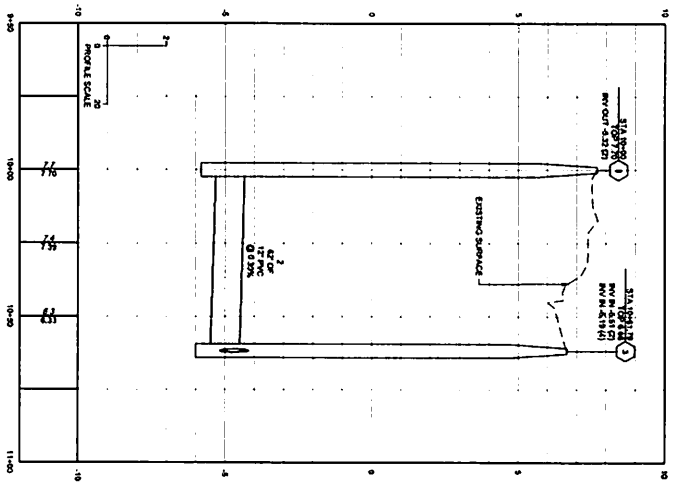
HAMPTON PUMP STATION 107 REPLACEMENT

CITY OF HAMPTON, VIRGINIA

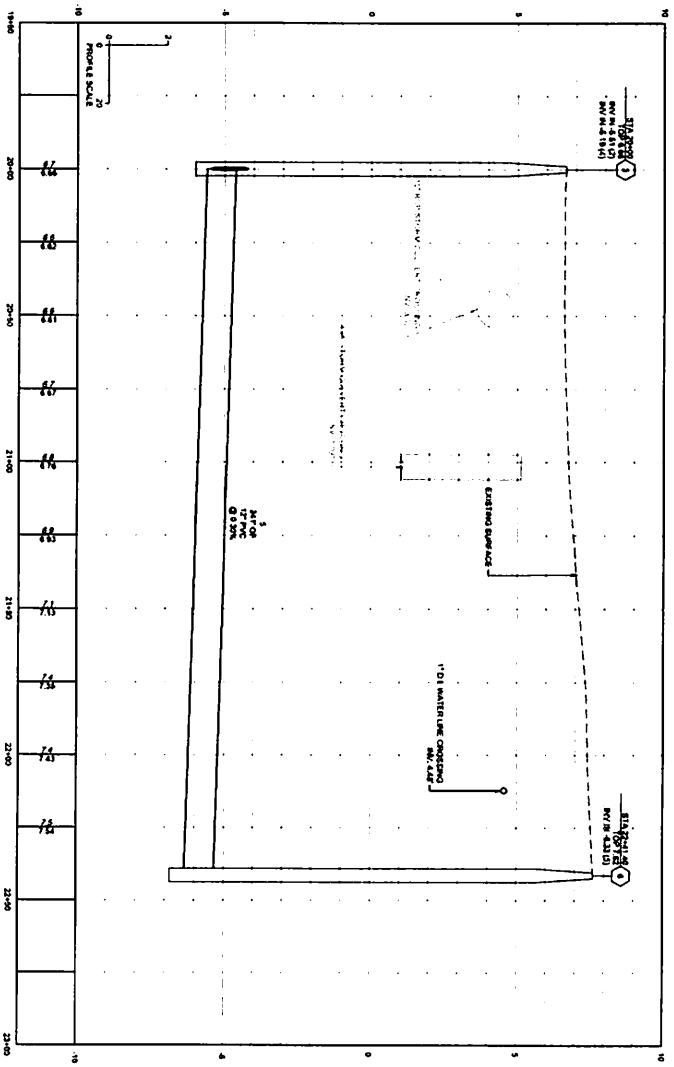
UTILITY PLAN

SP2024-XXXX

SANITARY SEWER LINE: MH 1 TO 3
STA 10+00 TO 10+61.79



SANITARY SEWER LINE: MH 3 TO 6
STA 20+00 TO 22+41.40



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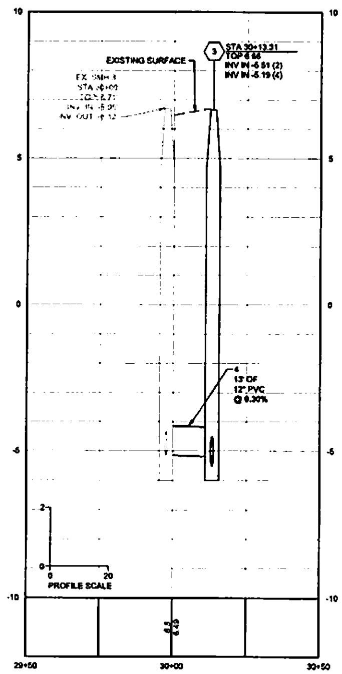
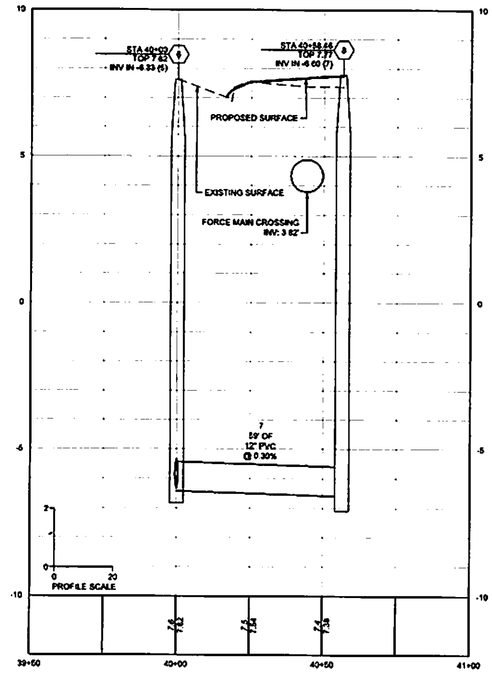
HAMPTON PUMP STATION 107 REPLACEMENT
CITY OF HAMPTON, VIRGINIA
UTILITY PROFILES

SHEET NO.	C-5.1
JOB NO.	48544
SCALE	AS SHOWN
DESIGNED BY	D. RUBY
CHECKED BY	D. RUBY
DRAWN BY	A. REDIKER
DATE	09/13/2024

DATE	REVISION DESCRIPTION



SANITARY SEWER LINE: EX SMH 3 TO MH 3
STA 30+00 TO 30+13.31



SANITARY SEWER LINE: MH 6 TO 8
STA 40+00 TO 40+58.46

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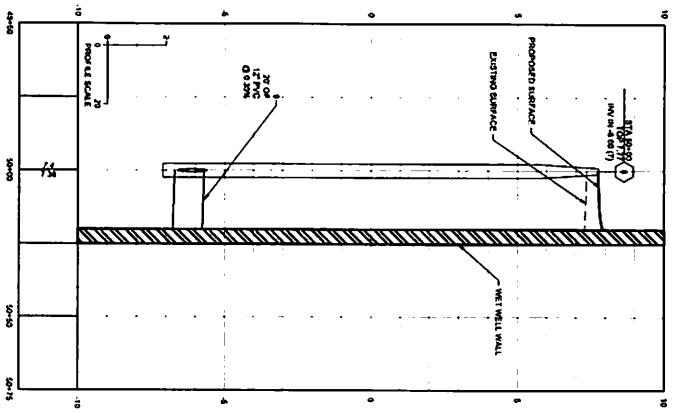
DATE	REVISION DESCRIPTION

DATE	DRAWN BY	DESIGNED BY	CHECKED BY	SCALE
09/13/2024	A. REDIGER	D. RUBY	D. RUBY	AS SHOWN

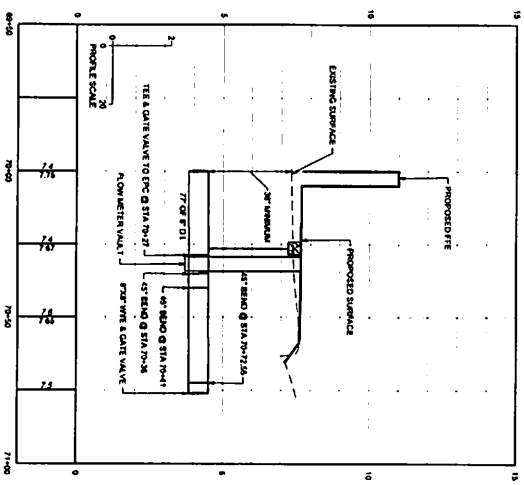
HAMPTON PUMP STATION 107 REPLACEMENT
CITY OF HAMPTON, VIRGINIA
UTILITY PROFILES

JOB NO. 48544
SHEET NO. C-5.2

SP2024-XXXX



SANITARY SEWER LINE: MH 8 TO PS
STA 50+00 TO 50+20.00



SANITARY SEWER FORCE MAIN:
STA 70+00 TO 70+76.04

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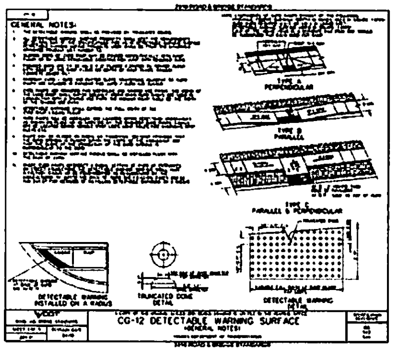
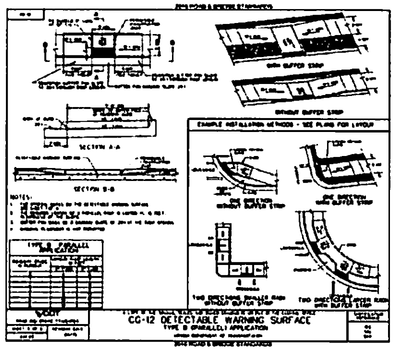
COMMONWEALTH OF VIRGINIA
LICENSED PROFESSIONAL ENGINEER
M. B. ROSE
08/13/2024

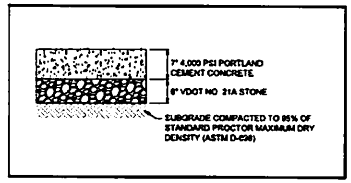
HAMPTON PUMP STATION 107 REPLACEMENT
CITY OF HAMPTON, VIRGINIA
UTILITY PROFILES

SHEET NO.	C-5.3
JOB NO.	48544
SCALE	AS SHOWN
CHECKED BY	D. RUBY
DESIGNED BY	D. RUBY
DRAWN BY	A. REDIGER
DATE	08/12/2024

DATE	REVISION DESCRIPTION

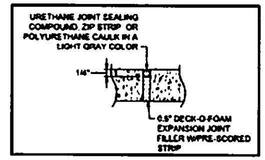






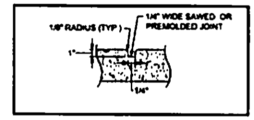
CONCRETE PAVEMENT SECTION

NO SCALE



EXPANSION JOINT DETAIL

NO SCALE



CONCRETE CONTROL JOINT DETAIL

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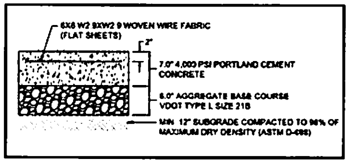
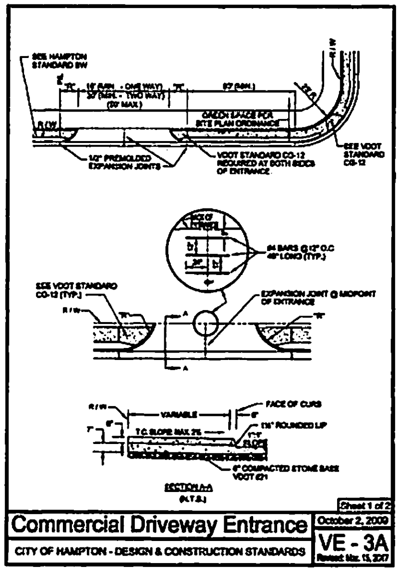
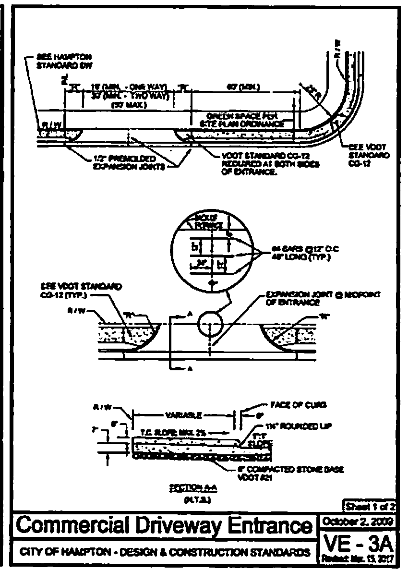
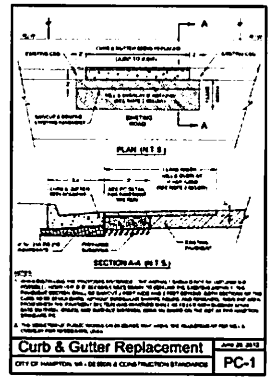


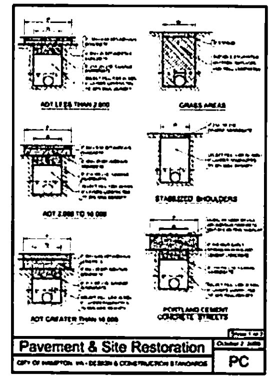
HEAVY-DUTY CONCRETE PAVEMENT

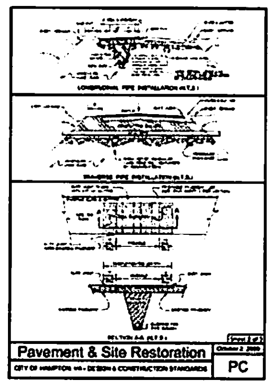
NO SCALE

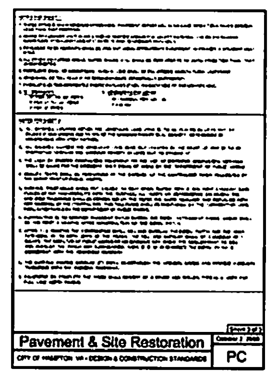












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PROFESSIONAL ENGINEER
09/13/2024

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YOUR VISION ACHIEVED THROUGH OURS.

DATE	REVISION DESCRIPTION

DATE	09/13/2024
DRAWN BY	A. REDIGER
DESIGNED BY	A. REDIGER
CHECKED BY	D. RUBY
SCALE	---

TIMMONS GROUP

HAMPTON PUMP STATION 107 REPLACEMENT

CITY OF HAMPTON, VIRGINIA

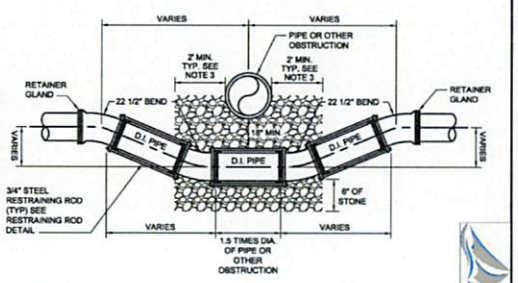
SITE DETAILS

JOB NO.	48544
SHEET NO.	C-6.0

SP2024-XXXX

OBSTRUCTION BY-PASS UNIFORM OFFSET

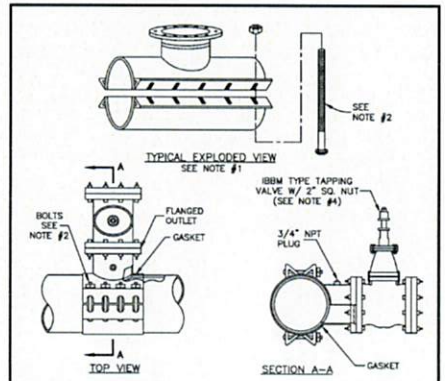
NOT TO SCALE



NOTES:

1. SEE PLANS FOR OFFSET DIMENSIONS. NON-UNIFORM OFFSET REQUIRES SPECIAL DESIGN.
2. SEE SPECIFICATION SECTION 200 FOR OTHER ALLOWABLE METHODS OF RESTRAINT.
3. BEDDING MATERIAL SHALL BE PLACED A MINIMUM OF 2 FEET BEYOND EACH PIPE AND PROJECT OUTWARD FROM THE CROSSING ALONG BOTH PIPES.

REFERENCE	CATEGORY	DATE	SHEET No.	DETAIL No.
200,801,803	WATER & SANITARY	6/16	1 OF 1	WS_06

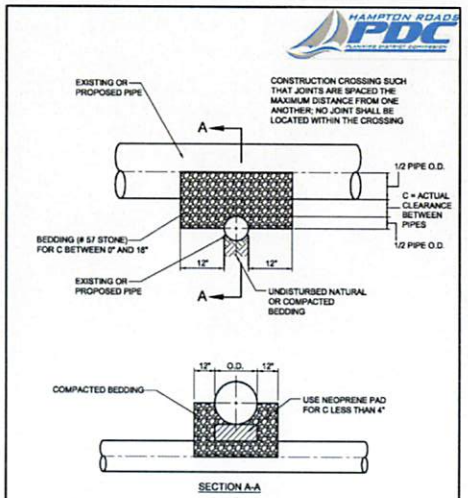


NOTES:

1. FULL BACK SADDLES ONLY, EXCEPT IN ACCORDANCE WITH PIPE MANUFACTURER'S RECOMMENDATIONS FOR SP-5 AND SP-12 (SEE H.R.S.D. STANDARD DESIGN DETAIL #377 – TAPPING SADDLE FOR CONC. CYLINDER PIPE).
2. THE NUMBER, SPACING, SIZE AND INSTALLATION OF BOLTS SHALL BE IN ACCORDANCE WITH SADDLE MANUFACTURER'S RECOMMENDATIONS.
3. CONTRACTOR SHALL SUPPLY TO HAMPTON ROADS SANITATION DISTRICT SYSTEMS ENGINEER THREE (3) CLEAR COPIES OF TAPPING SADDLE MANUFACTURER'S CATALOG CUT AND INSTALLATION INSTRUCTIONS 14 DAYS PRIOR TO INSTALLATION OF SADDLE.
4. TAPPING VALVE TO MEET ANSI/AWWA STANDARDS C500, C509 OR C515.
5. ALL BOLTS, NUTS AND WASHERS SHALL BE STAINLESS STEEL.
6. SADDLE COATING SHALL BE FUSION BONDED EPOXY.
7. TAPPING SADDLE MANUFACTURER SHALL BE SMITH-BLAIR STYLE 622 OR HRSD APPROVED EQUAL.

NOT TO SCALE

HRSD	STANDARD DESIGN DETAIL	DRAWING NO. 376
	TAPPING SADDLE FOR CAST IRON PIPE, DUCTILE IRON, RC, & PVC PIPE	SHEET 1 OF 1
		DATE 1/2021



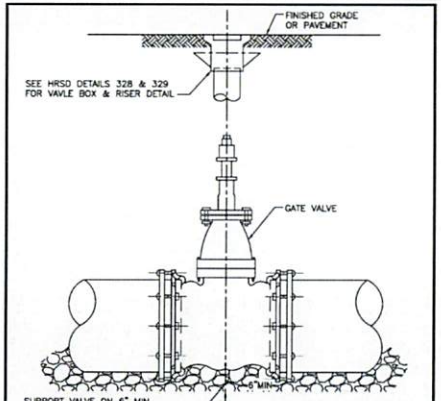
NOTE:

1. USE OF THIS DETAIL MUST BE APPROVED BY THE LOCALITY.

PIPE CROSSING

NOT TO SCALE

REFERENCE	CATEGORY	DATE	SHEET No.	DETAIL No.
200, 801, 802, 803	WATER & SANITARY	6/16	1 OF 1	WS_09

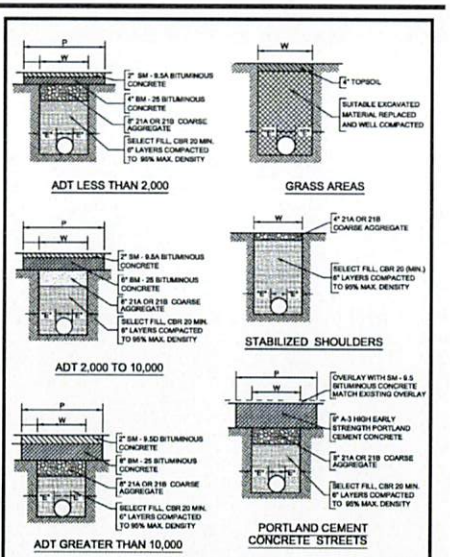


NOTE:

1. SEE SPECIFICATIONS FOR HORIZONTAL OR VERTICAL POSITION AND BYPASS REQUIREMENT.
2. EXTENSION SYSTEMS ARE NOT ACCEPTABLE.
3. INSTALL CRIBBING AS NECESSARY.
4. THIS DETAIL ONLY APPLICABLE FOR VALVES 14" AND SMALLER.
5. MINIMUM VALVE SIZE SHALL BE 8".

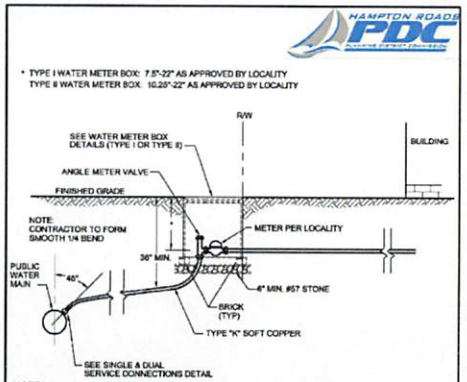
NOT TO SCALE

HRSD	STANDARD DESIGN DETAIL	DRAWING NO. 327
	VERTICAL GATE VALVE	SHEET 1 OF 1
		DATE 1/2021



Sheet 1 of 3

Pavement & Site Restoration	October 2, 2009
CITY OF HAMPTON, VA - DESIGN & CONSTRUCTION STANDARDS	PC



NOTES:

1. ALL DUCTILE IRON MAINS, SIX INCHES IN DIAMETER AND LARGER, MAY BE TAPPED WITHOUT SADDLES. WHERE PVC MAINS ARE PERMITTED BY LOCALITIES, THE CONNECTION TO A PVC MAIN MUST BE MADE WITH A TAPPING SADDLE. TAPPING SADDLES TO BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURERS SPECIFICATIONS. ALL TAPPING SADDLES TO BE STAINLESS STEEL OR EPOXY COATED.
2. METER SHALL BE 5/8" MINIMUM THRU 1" MAXIMUM.
3. INSTALL METER BOX BETWEEN THE CURB & GUTTER AND THE SIDEWALK. METER BOXES SHALL NOT BE INSTALLED IN DRIVEWAYS OR SIDEWALKS.
4. ALL BENDS IN TYPE K COPPER SHALL BE MADE USING AN APPROPRIATE PIPE BENDING TOOL. THERE SHALL BE NO CRIMPS IN THE PIPE LINE.

WATER SERVICE INSTALLATION DETAIL

NOT TO SCALE

REFERENCE	CATEGORY	DATE	SHEET No.	DETAIL No.
200,801	WATER DISTRIBUTION	6/16	1 OF 1	WD_02

COMMONWEALTH OF VIRGINIA
DANIEL S. BURI
Lic. No. 043811
09/13/2024
PROFESSIONAL ENGINEER

THIS DRAWING PREPARED AT THE VIRGINIA BEACH OFFICE
2901 South Lynnhaven Road, Suite 200 | Virginia Beach, VA 23452
TEL: 757.213.6679 FAX: 757.340.1415 www.timmons.com

YOUR VISION ACHIEVED THROUGH OURS.

NO.	REVISION DESCRIPTION	DATE

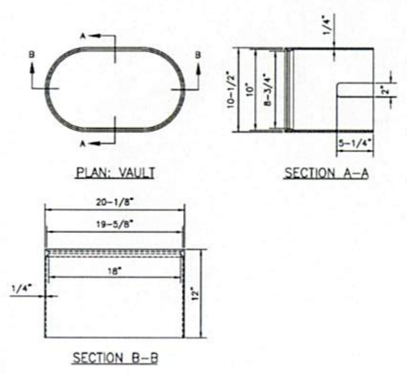
DATE 09/13/2024
DRAWN BY A. REDIGER
DESIGNED BY A. REDIGER
CHECKED BY D. RUBY
SCALE ---

TIMMONS GROUP

HAMPTON PUMP STATION 107 REPLACEMENT
CITY OF HAMPTON, VIRGINIA
UTILITY DETAILS

JOB NO. 48544
SHEET NO. C-7.0

SP2024-XXXX



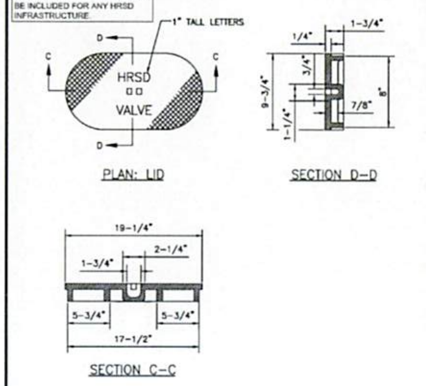
NOTES:

1. VALVE VAULT TO BE SUPPLIED BY CAPITAL FOUNDRY OF VIRGINIA, INC. (MODEL #MBX-1) OR APPROVED EQUAL.
2. ALL GRAY IRON CASTINGS SHALL CONFORM TO LATEST EDITION OF ASTM A-48, CLASS 30 AND SHALL BE OF UNIFORM QUALITY.
3. ALL CASTING DIMENSIONS SHALL HAVE A TOLERANCE OF 1/8"±.
4. ALL CASTINGS SHALL BE CLEANED BY SHOT BLASTING AND HAND CHIPPING UTILIZING STANDARD INDUSTRY PRACTICES PRIOR TO SHOP APPLICATION OF ASPHALTIC COATING, BY DIPPING.

NOT TO SCALE

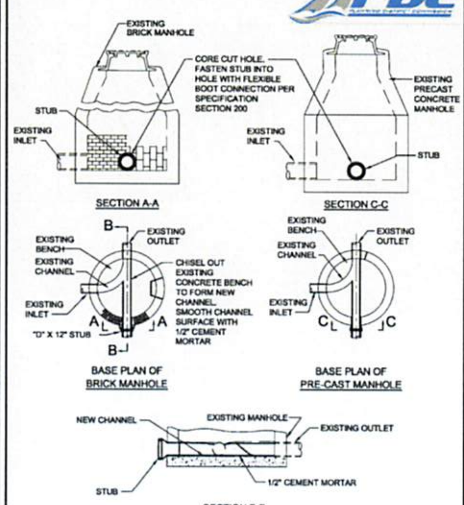
HRSD — STANDARD DESIGN DETAIL — VALVE VAULT FOR 2" HRSD VALVE — DRAWING NO. 306B — SHEET 2 OF 3 — DATE 1/2021

NOTE: A CIRCULAR STAMPED "S" SHALL BE INCLUDED FOR ANY HRSD INFRASTRUCTURE.



NOT TO SCALE

HRSD — STANDARD DESIGN DETAIL — VAULT LID FOR 2" HRSD VALVE — DRAWING NO. 306C — SHEET 3 OF 3 — DATE 1/2021

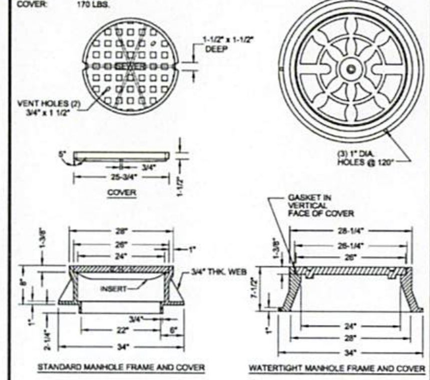


CONNECTION INTO EXISTING MANHOLES

NOT TO SCALE

REFERENCE	CATEGORY	DATE	SHEET No.	DETAIL No.
200,802	SANITARY SYSTEMS	6/16	1 OF 1	SS 08

AVG. WEIGHT: 405 LBS.
RING: 235 LBS.
COVER: 170 LBS.

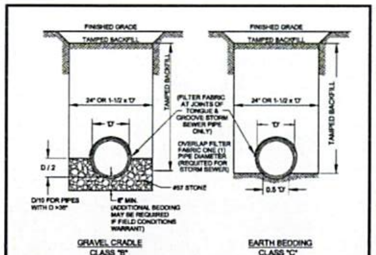


NOTES:

1. CAPITOL FOUNDRY DESIGN NO. MH-C-21-CH, OR EQUAL.
2. CASTINGS SHALL BE COATED WITH ASPHALTIC VARNISH.
3. INSERT REQUIRED FOR SANITARY SEWER MANHOLES ONLY. USE "PARSON ENVIRONMENTAL OR "RAINSTOPPER" BRAND.
5. WHEN WATERTIGHT MANHOLES ARE SPECIFIED, USE CAPITOL FOUNDRY MH-3000-WT, OR EQUAL.
6. CASTINGS ARE TO BE SHOT BLASTED.
7. CASTINGS ARE TO BE ASTM A-48 CLASS 30.
8. MACHINE SEATING SURFACE ON BOTH FRAME AND COVER.
9. TOLERANCE IS TO BE +/- 1/8"
10. USE OF A 4" FRAME AND COVER REQUIRES PRIOR APPROVAL FROM THE DIRECTOR OF PUBLIC WORKS OR DESIGNEE.

Manhole Frame & Cover

CITY OF HAMPTON, VA - DESIGN & CONSTRUCTION STANDARDS — October 2, 2009 — MH — Revised: June 29, 2012



NOTES:

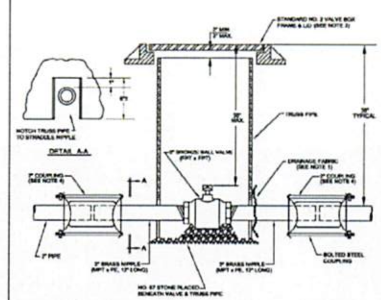
STORM SEWER:
1. PIPE IS TO BE CONCRETE ASTM C-76 CLASS III, WHERE SUBJECT TO TRAFFIC. CLASS II MAY BE USED OTHERWISE.
2. JOINTS ARE TO BE TONGUE AND GROOVE WITH RUBBER COMPRESSION JOINTS OR BUTYL - RUBBER SIMILAR TO BUTYL-TITE OR OTHER APPROVED EQUAL COMPLYING TO FEDERAL SS-S-210-A. OR BELL - SPIGOT W/RUBBER GASKET JOINT COMPLYING WITH ASTM C-443.
3. PIPE WITH LIFT HOLES IS NOT ACCEPTABLE.
4. HP STORM PIPE, AS MANUFACTURED BY ADS, MAY BE USED WITHIN CITY RIGHT OF WAY / EASEMENTS WITH THE DIRECTORS APPROVAL. PIPE MUST BE INSTALLED PER MANUFACTURERS RECOMMENDATIONS.

SANITARY SEWER:
1. PIPE IS TO BE SDR 26 PIPE OR DUCTILE IRON WITH MECHANICAL OR PUSH ON JOINTS. LATERALS ARE TO BE SDR 26 OR DUCTILE IRON.
2. JOINTS WILL BE MADE IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS.

GENERAL:
1. CLASS "B" BEDDING IS REQUIRED UNDER ALL PIPES UNLESS OTHERWISE DIRECTED BY THE DIRECTOR OF PUBLIC WORKS OR DESIGNEE.
2. BACKFILL IS TO BE IN ACCORDANCE WITH HAMPTON STANDARD PC.
3. TRENCH IS TO BE FREE OF WATER PRIOR TO THE INSTALLATION OF ANY PIPE.

Pipe Bedding

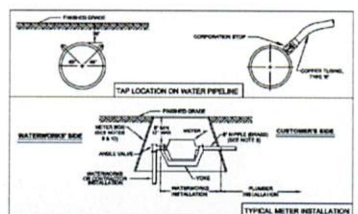
CITY OF HAMPTON, VA - DESIGN & CONSTRUCTION STANDARDS — October 2, 2009 — PB — Revised: Apr. 28, 2022



CITY OF NEWPORT NEWS — DEPARTMENT OF PUBLIC UTILITIES

TYPICAL BALL VALVE SETTING

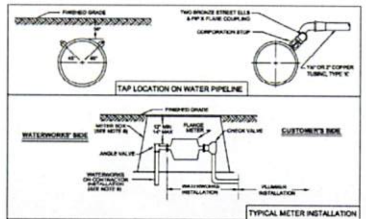
FIGURE NO. 13



CITY OF NEWPORT NEWS — DEPARTMENT OF PUBLIC UTILITIES

TYPICAL WATER METER INSTALLATION OF 5/8" THRU 1"

FIGURE NO. 47



CITY OF NEWPORT NEWS — DEPARTMENT OF PUBLIC UTILITIES

TYPICAL WATER METER INSTALLATION OF 1-1/2" & 2"

FIGURE NO. 48

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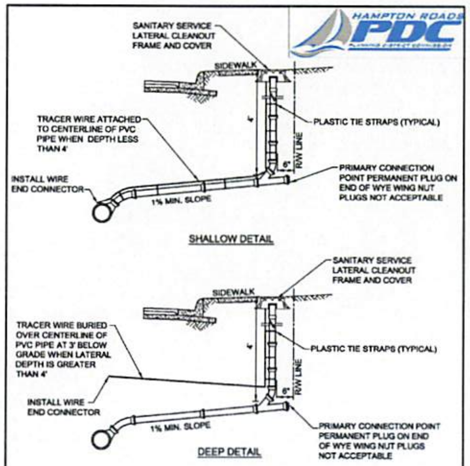
HAMPTON PUMP STATION 107 REPLACEMENT

CITY OF HAMPTON, VIRGINIA

UTILITY DETAILS

DATE	DRAWN BY	DESIGNED BY	CHECKED BY	SCALE	JOB NO.	SHEET NO.
09/13/2024	A. REDIGER	A. REDIGER	D. RUBY	---	48544	C-7.1

SP2024-XXXX



NOTE:
INSTALL DETECTABLE WARNING TAPE CONTINUOUSLY FROM THE MAIN TO THE RIGHT OF WAY LINE DIRECTLY ON TOP OF PVC LATERAL, ATTACHED EVERY 10 FEET.

SANITARY SEWER SERVICE CONNECTION-ALTERNATE

NOT TO SCALE

REFERENCE	CATEGORY	DATE	SHEET No.	DETAIL No.
200.802	SANITARY SYSTEMS	6/16	1 OF 2	SS_20

NOTES:

1. TYPICAL LATERAL LAYOUT - (UTILITY CONTRACTOR) SHALL ONLY UTILIZE THE PRIMARY CONNECTION POINT WHEN TYING TO AN EXISTING LATERAL. THE CONNECTION POINT TO THE PRIVATE LATERAL AND TO THE HOUSE LATERAL CLEANOUT SHALL BE MADE WITH SOLID SLEEVES. FERNCO COUPLINGS OR EQUIVALENTS ARE NOT PERMITTED ON THE HOUSE LATERAL CONNECTION OR AT THE CONNECTION POINT TO THE PRIVATE LATERAL, UNLESS THE PRIVATE LATERAL IS VCP (VITRIFIED CLAY PIPE), OR ORANGEBURG PIPE (BITUMINIZED FIBER SEWER PIPE). CLEANOUT RISER ASSEMBLY AND FITTING SHALL BE SAME MATERIAL AS THE SEWER LATERAL (P.V.C. ASTM D-3034 SCHEDULE 26, OR AWWA C900-CLASS 150 (DR-18). D.I.-ANSI/AWWA C150/A21.50-91 CLASS 52).
2. TYPICAL LATERAL LAYOUT - (PLUMBING CONTRACTOR) THE PLUMBER MAY UTILIZE THE PRIMARY CONNECTION POINT, OR INSTALL AND UTILIZE THE SECONDARY CONNECTION POINT. WHEN INSTALLING THE SECONDARY CONNECTION POINT, THE LATERAL RISER ASSEMBLY, HOUSE LATERAL CLEANOUT AND TRACER WIRE SHALL BE REINSTALLED BY PLUMBING CONTRACTOR PRIOR TO OCCUPANCY. CLEANOUT RISER ASSEMBLY, AND FITTING SHALL BE SAME MATERIAL AS THE SEWER LATERAL (P.V.C. ASTM D-3034 SCHEDULE 26, OR AWWA C900-CLASS150 (DR-18). D.I.-ANSI/AWWA C150/A21.50-91 CLASS 52. ALL CLEANOUT RISER ASSEMBLY FITTING CONNECTIONS AND THE CONNECTION POINT TO THE PRIVATE LATERAL SHALL BE MADE WITH SOLID SLEEVES. FERNCO COUPLING OR EQUIVALENTS ARE NOT PERMITTED ON THE CLEANOUT RISER ASSEMBLY, THE RISER FITTINGS, AND AT THE CONNECTION POINT TO THE PRIVATE LATERAL (RIGHT-OF-WAY LINE OR EASEMENT LIMITS).
3. TYPICAL LATERAL LAYOUT CLEANOUT RISER ASSEMBLY, HOUSE LATERAL CLEANOUT AND TRACER WIRE SHALL BE INSTALLED PRIOR TO FINAL INSPECTION/ACCEPTANCE. LOCATION OF WYE AND CLEANOUT MAY BE VARIED BY INSPECTOR IF NECESSARY DUE TO UNUSUAL DEPTH OR CONDITIONS. MINIMUM COVER OF 4.0 FEET REQUIRED UNLESS MORE DEPTH IS REQUIRED FOR SERVICE. PERMANENT PLUG SHALL BE INSTALLED IN THE END OF THE CLEANOUT WYE (WING NUT PLUGS ARE NOT ACCEPTABLE).
4. LATERAL SHALL BE SAME MATERIAL AS SEWER MAIN DUCTILE IRON (D.I.), OR POLYVINYLCHLORIDE (P.V.C.). D.I. SHALL BE ANSI/AWWA C150/A21.50-91 CLASS 52. P.V.C. SHALL BE ASTM D-3034 SCHEDULE 26, OR AWWA C900-CLASS 150 (DR-18).
5. TRACER WIRE SHALL BE AWG 10 SOLID COPPER WIRE W/POLYETHYLENE INSULATION. THE TRACER WIRE SHALL BE ATTACHED TO THE LATERAL PIPE WHEN THE DEPTH IS NO GREATER THAN 4.0 FEET (PVC ONLY). THE WIRE SHALL BE BURIED OVER THE CENTERLINE OF THE LATERAL PIPE AT 3.0 FEET BELOW GRADE WHEN THE LATERAL DEPTH IS GREATER THAN 4.0 FEET (PVC ONLY).

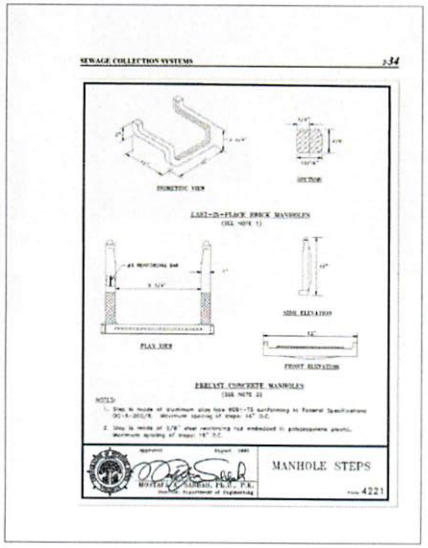
WHEN THE TRACER WIRE IS ATTACHED TO THE LATERAL AND RISER ASSEMBLY, IT WILL BE FASTENED WITH TIE STRAPS OR APPROVED EQUAL.

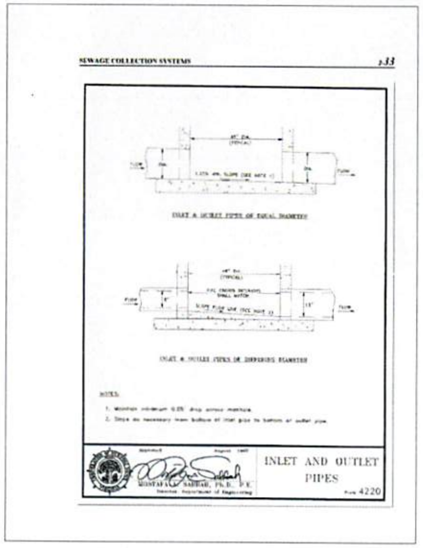
INSTALL DETECTABLE WARNING TAPE CONTINUOUSLY FROM THE MAIN TO THE RIGHT OF WAY LINE DIRECTLY ON TOP OF PVC LATERAL, ATTACHED EVERY 10 FEET.

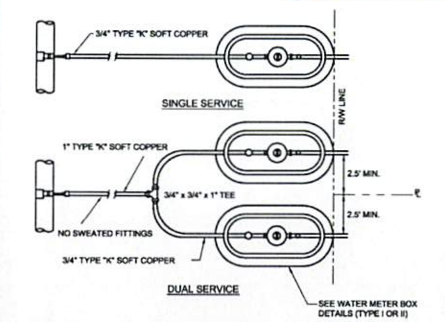
SANITARY SEWER SERVICE CONNECTION-ALTERNATE

NOT TO SCALE

REFERENCE	CATEGORY	DATE	SHEET No.	DETAIL No.
200.802	SANITARY SYSTEMS	6/16	2 OF 2	SS_20







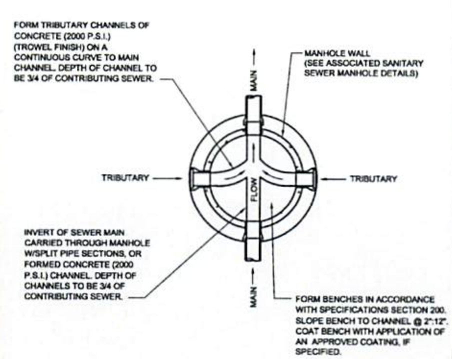
NOTES:

1. DUAL SERVICE REQUIRES PRIOR LOCALITY APPROVAL.
2. CONTRACTOR SHALL USE APPROVED BENDING TOOLS WHEN INSTALLING COPPER PIPE.
3. ALL DUCTILE IRON MAINS, SIX INCHES IN DIAMETER AND LARGER, MAY BE TAPPED WITHOUT SADDLES. WHERE PVC MAINS ARE PERMITTED BY LOCALITIES, THE CONNECTION TO A PVC MAIN MUST BE MADE WITH A TAPPING SADDLE. TAPPING SADDLES SHALL BE AS SPECIFIED IN SECTION 200 AND SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURERS SPECIFICATIONS. ALL SADDLES TO BE STAINLESS STEEL OR EPOXY COATED.
4. INSTALL METER BOX BETWEEN THE CURB AND GUTTER AND THE SIDEWALK. METER BOXES SHALL NOT BE INSTALLED IN DRIVEWAY.

SINGLE & DUAL SERVICE CONNECTIONS

NOT TO SCALE

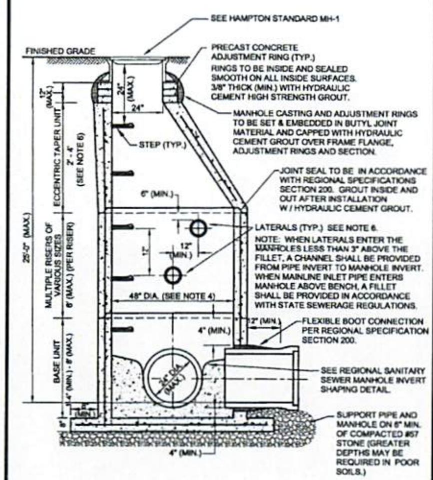
REFERENCE	CATEGORY	DATE	SHEET No.	DETAIL No.
200.801	WATER DISTRIBUTION	6/16	1 OF 1	WD_01



SANITARY SEWER MANHOLE INVERT SHAPING

NOT TO SCALE

REFERENCE	CATEGORY	DATE	SHEET No.	DETAIL No.
200.802	SANITARY SYSTEMS	6/16	1 OF 1	SS_07



Precast Concrete Sanitary Manhole	Sheet 1 of 2 October 2, 2009
CITY OF HAMPTON, VA - DESIGN & CONSTRUCTION STANDARDS	PMH

NOTES:

1. PRECAST CONCRETE MANHOLE TO BE IN COMPLIANCE WITH ASTM C-478.
2. WALL THICKNESS TO BE 5" MINIMUM FOR 48" INSIDE DIAMETER MANHOLES AND 6" MINIMUM FOR 60" INSIDE DIAMETER MANHOLES.
3. PROVIDE A MAXIMUM OF TWO (2) LIFT HOLES PER SECTION. PLUG LIFT HOLES WATERTIGHT WITH RUBBER PLUGS AND GROUT AFTER INSTALLATION.
4. INSIDE DIAMETER OF MANHOLE MUST INCREASE TO 60" WHEN MANHOLE DEPTH IS GREATER THAN 12 FEET. 60" DIAMETER TO BE CONTINUOUS UP TO CONE SECTION.
5. MAXIMUM OF FOUR (4) LATERALS PER MANHOLE.
6. IF LATERALS ARE TO ENTER INTO THE ECCENTRIC TAPER UNIT, THEY MUST ENTER ON THE NON -TAPERED SIDE.
7. THE ANTIMICROBIAL ADDITIVE, CON^{TM}SHIELD$^{®}$ SHALL BE ADDED TO THE CONCRETE MIX WATER BY THE PRECASTER TO RENDER THE CONCRETE UNINHABITABLE FOR BACTERIA GROWTH.
8. CON^{TM}SHIELD$^{®}$ AMOUNTS SHALL BE AS RECOMMENDED BY THE MANUFACTURER. THIS AMOUNT SHALL BE INCLUDED IN THE TOTAL WATER CONTENT OF THE CONCRETE MIX DESIGN.
10. CON^{TM}SHIELD$^{®}$ COLOR IDENTIFIER-INDICATOR (CON ^{TM}SHIELD $^{®}$D) SHALL BE APPLIED TO THE INTERIOR OF EACH PIECE.

NOTE: FOR SAFETY REASONS, THE CITY OF HAMPTON IS NO LONGER REQUIRING STEPS WITHIN SANITARY MANHOLES.

Precast Concrete Sanitary Manhole	Sheet 2 of 2 October 2, 2009
CITY OF HAMPTON, VA - DESIGN & CONSTRUCTION STANDARDS	PMH

COMMONWEALTH OF VIRGINIA
DANIEL I. RUBY
Lic. No. 043840
09/13/2024
PROFESSIONAL ENGINEER

THIS DRAWING PREPARED AT THE
VIRGINIA BEACH OFFICE
2901 South Lynnhaven Road, Suite 200 | Virginia Beach, VA 23452
TEL 757.213.6679 FAX 757.340.1415 www.timmons.com

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DESIGNED BY: A. REDIGER
CHECKED BY: D. RUBY
SCALE: ---

TIMMONS GROUP

HAMPTON PUMP STATION 107 REPLACEMENT

CITY OF HAMPTON, VIRGINIA

UTILITY DETAILS

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SHEET NO. C-7.2

SP2024-XXXX