STRUCTURE TABLE

STRUCTURE NAME:	STRUCTURE TYPE	DETAILS:	PIPES IN:	PIPES OUT
DI-1 RIM=964.20' H= 3.5	VDOT ST'D DI-1	RIM = 964.20' SUMP = 960.7' INV OUT = 960.70'		1 to 4, 15" INV OUT =960.70'
DI-2 RIM=966.30' H= 3.3	24" NYLOPLAST YARD INLET	RIM = 966.30' SUMP = 962.8' INV OUT = 962.80'		2 to 3, 15" INV OUT =962.80'
DI-3 RIM=966.30' H= 4.0	24" NYLOPLAST YARD INLET	RIM = 966.30' SUMP = 962.3' INV IN = 962.40' INV OUT = 962.30'	2 to 3, 15" INV IN =962.40'	3 to 4, 15" INV OUT =962.30'
DI-4 RIM=962.50' H= 3.6	VDOT ST'D DI-1	RIM = 962.50' SUMP = 958.9' INV IN = 958.99' INV IN = 959.09' INV OUT = 958.90'	1 to 4, 15" INV IN =959.00' EX to 4, 15" INV IN =959.90'	4 to EX 5, 15" INV OUT =958.90'
MH-5 (DD) RIM=964.49' H= 10.8	EX MANHOLE	RIM = 964.49' SUMP = 953.7' INV IN = 954.58' INV IN = 954.68' INV IN = 953.68' INV OUT = 953.74'	4 to EX 5, 15" INV IN =958.50' EX: 18", 18" INV IN =954.99' EX: 42", 42" INV IN =953.93'	EXIST. 42", 42" INV OUT =953.74'

PIPE TABLE

NAME	SIZE	LENGTH	INVERT IN	INVERT OUT	SLOPE	MATERIAL
1 to 4	15"	108'	960.70'	959.00'	1.6%	Corrugated HDPE Pipe
2 to 3	15"	41'	962.80'	962.40'	1.0%	Corrugated HDPE Pipe
3 to 4	15"	75'	962.30'	959.00'	4.4%	Corrugated HDPE Pipe
4 to EX 5	15"	13'	958.90'	958.50'	3.2%	Reinforced Concrete Pipe
EX. 18"	18"	13'	957.78'	954.99'	21.2%	Reinforced Concrete Pipe
EX. 42"	42"	110'	953.74'	953.93'	7.2%	Reinforced Concrete Pipe
EXIST. 42"	42"	28'	953.74'	953.00'	2.6%	Reinforced Concrete Pipe

DRAINAGE DESCRIPTIONS:

2 NYLOPLAST 24" H-10 YARD DRAIN WITH A 24" PEDESTRIAN GRATE

3 NYLOPLAST 24" H-10 YARD DRAIN WITH A 24" PEDESTRIAN GRATE

6 EARTHEN DRAINAGE DITCH, 2:1 SIDE SLOPES, DEPTH = 1.0'

7 EARTHEN DRAINAGE DITCH, 2:1 SIDE SLOPES, DEPTH = 1.0'

RAINLEADER DESCRIPTIONS:

170± LF - 4" AND 6± LF - 6" PVC /SDR-35 UNDERGROUND RAINLEADERS. INSTALL ALL RAINLEADERS WITH 2.0" MINIMUM COVER WITH A 2.0% MINIMUM SLOPE. CORE / CAST OPENINGS IN STRUCTURE #2 AND STRUCTURE #3 AT INVERT 693.3± . RAINLEADERS SHALL BE PVC SCHEDULE 40 WITH SOLVENT WELDED FITTINGS OR OR PVC SDR-35 WITH PUSH ON FITTINGS. CONNECT THE 6" RAINLEADER TO THE 15" HDPE PIPE WITH AN ADS "INSERTA-TEE" ON THE CROWN OF THE TRUNK LINE.

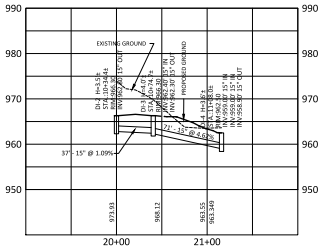
DRAINAGE NOTES:

1. ALL PIPES SHALL BE INSTALLED PER THE VDOT PIPE BEDDING DETAIL PB-1, SEE DETAIL ON SHEET C-9 HDPE PIPE SHALL BE ADS N-12 ST OR ARCHITECT APPROVED EQUAL, REINFORCED CONCRETE PIPE, VDOT CLASS III IS AN APPROVED EQUAL.
2. INCREASE THE INLET AND THE MANHOLE DIAMETERS AS NEEDED TO ACCOMMODATE THE PROPOSED PIPES WHILE MAINTAINING H20 LOADING REQUIREMENTS.
3. PIPE LENGTHS ARE FROM STRUCTURE TO STRUCTURE AND BASED ON PLAN VIEW AND 4.0' DIAMETER STRUCTURES. ADJUST LENGTHS AND STRUCTURE DIAMETERS ACCORDINGLY.
4. VERIFY ALL ELEVATIONS PRIOR TO ORDERING MATERIALS AND ADJUST ELEVATIONS TO MATCH FIELD CONDITIONS, ALL STRUCTURE HEIGHTS AND PIPE LENGTHS ARE FOR CONTRACTOR'S CONVENIENCE, VERIFY
5. CONTACT THE ARCHITECT/ENGINEER IF ROCK IS ENCOUNTERED
6. ALL ELEVATIONS ARE TOP OF RIM AS SHOWN ON THE PLANS
7. ALL INLETS SHALL HAVE INLET SHAPING CONFORMING TO THE VDOT ROAD AND BRIDGE STANDARD 106.08, IS-1, SEE DETAIL ON SHEET C-8
8. WHERE DRAIN PIPES CROSS SANITARY SEWER LINES A VDOT UB-1 CONCRETE CAP IS REQUIRED.
9. NO PIPE JOINTS ARE PERMITTED WITHIN 8.0' OF ALL PIPE AND UTILITY LINE CROSSINGS

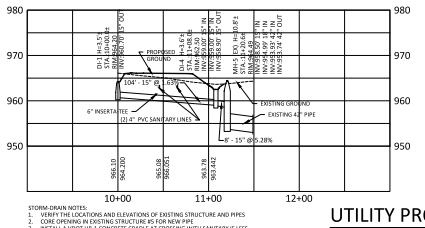
RAIN LEADER NOTES:

10. REFER TO THE ARCHITECTURAL DRAWING FOR DOWNSPOUT LOCATIONS
11. ALL RAINLEADERS SHALL HAVE A CLEANOUT ADJACENT TO AND WITHIN 5.0' OF THE DOWNSPOUT CONNECTION. CLEANOUT SHALL BE 6" MINIMUM
12. VERIFY ALL ELEVATIONS PRIOR TO ORDERING MATERIALS
13. ALL RAIN LEADERS SHALL HAVE A MINIMUM SLOPE OF 1.5% AND HAVE 2.0' OF COVER UNLESS SHOWN OTHERWISE
14. RAINLEADER SHALL BE PVC SCH. 40 WITH SOLVENT WELDED FITTINGS , OR SDR-35 WITH PUSH-ON FITTINGS, OR ADS N12 HDPE
15. RAINLEADER DESCRIPTIONS DO NOT INCLUDE ALL OF THE REQUIRED PIPES, FITTINGS- REFER TO PLAN SHEETS FOR LAYOUTS

Storm Drain System - Rear



Storm Drain System - Front

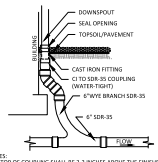


STORM-DRAIN NOTES:

1. VERIFY THE LOCATIONS AND ELEVATIONS OF EXISTING STRUCTURE AND PIPES
2. CORE OPENING IN EXISTING STRUCTURE #5 FOR NEW PIPE
3. INSTALL A VDOT UB-1 CONCRETE CRADLE AT CROSSING WITH SANITARY IF LESS THAN 15" O.D TO O.D. SEE DETAIL SHEET C-9
4. CORE / CAST OPENINGS FOR 4" RAINLEADERS IS STRUCTURES #2 AND #3 AT INVERT 963.30'±

UTILITY PROFILES

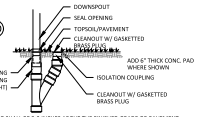
Scales 1" = 5' VERTICAL
1"=50 HORIZONTAL



NOTES:
1. TOP OF COUPLING SHALL BE 2-3 INCHES ABOVE THE FINISHED GRADE OR PAVEMENT.
2. CAST IRON FITTING-NEENAH R-4917A OR APPROVED EQUAL, PRIMED AND PAINTED TO MATCH DOWNSPOUT

DOWNSPOUT CONNECTION

NO SCALE



NOTES:
1. TOP OF COUPLING SHALL BE 2-3 INCHES ABOVE THE FINISHED GRADE OR PAVEMENT.
2. CAST IRON FITTING-NEENAH R-4917A OR APPROVED EQUAL, PRIMED AND PAINTED TO MATCH DOWNSPOUT
3. AN ISOLATION COUPLING IS REQUIRED ON ALL CLEANOUTS.
4. SEE DOWNSPOUT CONNECTION AND SEWER 5 RAINLEADER CLEANOUT DETAILS FOR ADDITIONAL REQUIREMENTS

COMBO. DOWNSPOUT / CLEANOUT

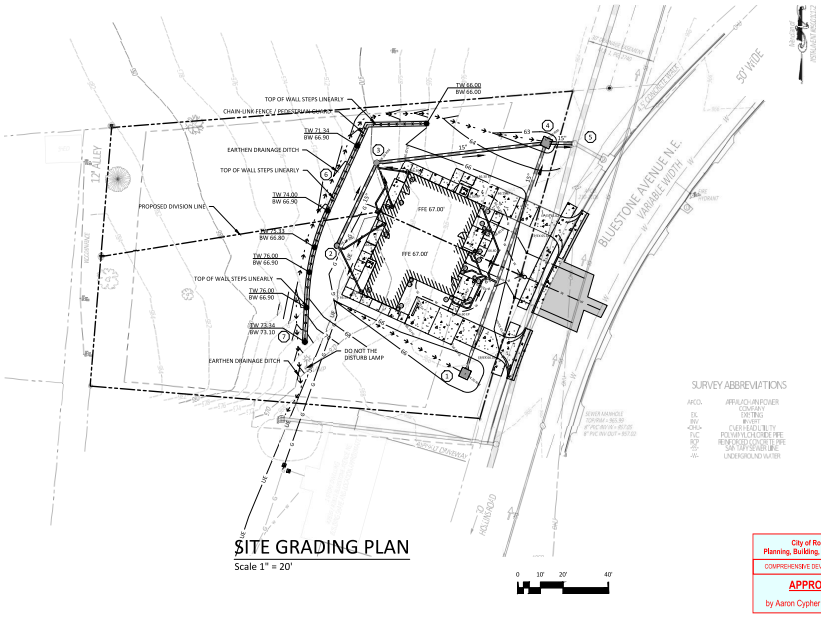
NO SCALE

LEGEND

	ASPHALT
	CONCRETE / HD CONCRETE
	PROPOSED STRUCTURE
	VALVE W/ VALVE BOX
4	STRUCTURE NUMBER
	PROPERTY LINE
	INTERMEDIATE CONTOUR
80	INDEX CONTOUR
	DRAINAGE / STORM DRAIN PIPE
	UNDERGROUND ELECTRICAL
	SANITARY SEWER LINE
W	WATER LINE
	DRAINAGE DITCH
G	NATURAL GAS
	PEDESTRIAN GUARD (FENCE)
	48" HIGH VINYL SCREENING FENCE
C/O	6" CLEANOUTS
CO	DOWNSPOUT W/ TURNOUT
CO	DOWNSPOUT W/ SPLASHBLOCK
CO	DOWNSPOUT WITH RAINLEADER
80.43 TW	TOP OF WALL ELEVATION
74.80 BW	BOTTOM OF WALL ELEVATION
x 77.98 FG	FINISHED GRADE ELEVATION
x 72.49 TS	TOP OF SLAB ELEVATION
x 73.29 EX	EXISTING GRADE ELEVATION
X 68.55 RIM	STRUCTURE RIM ELEVATION

GRADING NOTES AND DRAINAGE NOTES:

1. FILL AND COMPACT ALL AREAS BEHIND THE CURB FLUSH WITH THE TOP OF THE CURB AND GRADE TO DRAIN. NO STANDING WATER IS PERMITTED.
2. THE UNDERGROUND RAIN LEADERS SHALL BE SDR-35 WITH A MINIMUM COVER OF 2.0 FEET AND A MINIMUM SLOPE OF 1.5 PERCENT.
3. INSTALL A #14 COATED COPPER TRACE WIRE AND 6 INCHES WIDE COLOR-CODED PLASTIC WARNING TAPE 7 INCHES BELOW THE SURFACE AND ABOVE ALL NON METALLIC UTILITY AND DRAINAGE PIPES AND NOTED IN THE GENERAL NOTES.
4. ALL DOWNSPOUT CONNECTIONS TO THE RAIN LEADER SYSTEM MUST BE WITH A WATER/SOIL TIGHT DUCTILE IRON DOWNSPOUT CONNECTION, SEE DETAIL D.I. DOWNSPOUT CONNECTION THIS SHEET.
5. ALL DOWNSPOUT TO RAINLEADER CONNECTIONS SHALL HAVE A 6" CLEANOUT AT THE SURFACE ADJACENT TO EACH DOWNSPOUT CONNECTION.
6. REFER TO ARCHITECTURAL PLANS FOR ACTUAL DOWNSPOUT LOCATIONS.
7. ALL AREAS SHALL BE GRADED TO DRAIN. NO STANDING OR PONDING OF WATER PERMITTED
8. A PERMIT FOR THE RETAINING WALL FROM THE CITY OF ROANOKE IS REQUIRED AND IS THE RESPONSIBILITY OF THE CONTRACTOR.



SITE GRADING PLAN

Scale 1" = 20'

0 10' 20' 40'

DATE: Feb 03, 2020

REVISIONS

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NEW CONSTRUCTION OF
ONE PUBLIC HOUSING DUPLEX
BLUESTONE PARK
BLUESTONE AVE NW ROANOKE, VA 24012

DRAWN BY: mjs
CHECKED BY: dlp

SITE GRADING PLAN, NOTES AND DETAILS

PROJECT No. 201001

09/21/2022
MARK JOHN AYLES
Lic. No. 034180
COMMONWEALTH OF VIRGINIA
PROFESSIONAL ENGINEER

City of Roanoke
Planning, Building, & Development
COMPREHENSIVE DEVELOPMENT PLAN
APPROVED
by Aaron Cypher 04/21/2023

COMMISSION No. 19023.007

SHEET C-3

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A CORPORATION, CORPORATION