

1 VDOT ST'D DI-1
TOP: 925.95
INV. OUT: 921.2

2 43 LF OF 15" TYPE S
HDPE PIPE AT 2.07%

3 VDOT ST'D MH-1
TOP: 926.40
INV. IN: 922.0 (6" ROOF LEADER)
INV. OUT: 920.3
INV. OUT: 920.2

4 94 LF OF 15" TYPE S
HDPE PIPE AT 1.70%

5 VDOT ST'D DI-3A CURB INLET
TOP: 924.58
INV. IN: 918.6
INV. OUT: 918.5

6 35 LF 15" TYPE S
HDPE PIPE AT 4.26%

7 VDOT ST'D DI-3B CURB INLET
(6" THROAT)
TOP: 922.61
INV. IN: 917.0
INV. OUT: 915.5

8 40 LF 15" TYPE S
HDPE PIPE AT 1.76%

9 VDOT ST'D DI-1
TOP: 919.51
INV. IN: 914.8
INV. OUT: 914.7

10 24 LF 15" CL. III RCP
AT 2.12%

11 37 LF 6" SCH. 40 PVC
PIPE AT MIN. 2.00%
INV. OUT 922.0 (STR. 3)

EX EX. CURB INLET A
EX. TOP: 919.0
EX. NEW INV. IN: 914.2
EX. INV. IN: 914.9 (T.B.R.)
EX. INV. OUT: 913.2

NOTES:

1. VDOT STD IS-1 INLET SHAPING SHALL BE PROVIDED IN ALL PROPOSED STRUCTURES
2. NON-SHRINK GROUT SHALL BE USED FOR ALL STORM SEWER PIPE CONNECTIONS.

BLDG - (A) 5 LF OF 6" SDR-35 PVC AT 4.00%
(INV. AT BLDG. 923.2)

(A) PRIVATE S.S. C.O. W/TRAFFIC BEARING LID
TOP= 926.9
INV.= 923.0

(A) - (B) 18 LF OF 6" SDR-35 PVC AT 3.30%

(B) 1,500 GALLON GREASE TRAP W/TRAFFIC
BEARING LIDS
TOP=926.33
INV.=922.4

(B) - (C) 5 LF OF 6" SDR-35 PVC AT 4.42%

(C) SAMPLING MANHOLE W.V.W.A. ST'D S-1
TOP= 925.84
INV. IN=922.0
INV. OUT=921.9

(C) - (E) 7 LF OF 6" SDR-35 PVC AT 3.08%

BLDG - (D) 5 LF OF 6" SDR-35 PVC AT 4.00%
(INV. AT BLDG. 923.2)

(D) PRIVATE S.S. C.O. W/TRAFFIC BEARING LID
TOP=926.9
INV.=923.0

(D) - (E) 35 LF OF 6" SDR-35 PVC AT 2.82%

(E) PRIVATE S.S. C.O. W/TRAFFIC BEARING LID
TOP=925.66
INV.=922.2

(E) - (F) 10 LF OF 6" SDR-35 PVC AT 1.98%

(F) PRIVATE S.S. C.O. W/TRAFFIC BEARING LID
TOP=25.49
INV.=921.7

(F) - (G) 26 LF OF 6" SDR-35 PVC AT 5.33%

(G) PUBLIC S.S. C.O. W/TRAFFIC BEARING LID
TOP=923.76
INV.=920.3

(G) - (X) 13 LF OF 6" SDR-26 PVC AT 1.56%
INV. OUT= 920.1

NOTES:
1. G.C. TO CONFIRM & COORDINATE ALL BUILDING TIE-IN LOCATIONS WITH M.E.P. AND ARCHITECTURAL DRAWINGS PRIOR TO CONSTRUCTION OF LATERALS.
2. G.C. TO CONFIRM ALL TIE-IN LOCATIONS TO EXISTING LINES PRIOR TO CONSTRUCTION AND NOTIFY THE ENGINEER OF ANY DISCREPANCIES.

REFER TO BUILDING PLANS FOR SUBGRADE AND UTILITY TRENCHES WITHIN 5' OF THE BUILDING ENVELOPE.

REMOVE TREES, SHRUBS, GRASS, AND OTHER VEGETATION, IMPROVEMENTS OR OBSTRUCTIONS AS REQUIRED TO PERMIT INSTALLATION OF NEW CONSTRUCTION. REMOVE TREES AND OTHER VEGETATION, INCLUDING STUMPS AND ROOTS, COMPLETELY IN AREAS REQUIRED FOR SUBSEQUENT SEEDING. CUT OFF TREES AND STUMPS IN AREAS TO RECEIVE FILL MORE THAN THREE FEET IN DEPTH TO WITHIN EIGHT INCHES OF THE ORIGINAL GROUND SURFACE.

BARRICADE OPEN EXCAVATIONS OCCURRING AS PART OF THIS WORK AND OPERATE WARNING LIGHTS AS RECOMMENDED BY AUTHORITIES HAVING JURISDICTION.

EXCAVATION FOR STRUCTURES:

- a. CONFORM TO ELEVATIONS AND DIMENSIONS SHOWN WITHIN A TOLERANCE OF 0.1"
- b. PROVIDE TRUE AND STRAIGHT FOOTING EXCAVATIONS WITH UNIFORM AND LEVEL BOTTOMS OF THE WIDTH INDICATED TO ENSURE PROPER PLACEMENT AND COVER OF ALL REINFORCEMENT.
- c. REMOVE ALL LOOSE MATERIALS FROM THE EXCAVATION PRIOR TO PLACEMENT OF CONCRETE.
- d. FOOTINGS WHICH SUPPORT CONCRETE MASONRY UNITS MAY BE STEPPED PROVIDED THE VERTICAL STEP DOES NOT EXCEED ONE HALF OF THE HORIZONTAL DISTANCE BETWEEN STEPS AND HORIZONTAL DISTANCE BETWEEN STEPS IS NOT LESS THAN TWO FEET.
- e. IF ROCK IS ENCOUNTERED IN A FOOTING EXCAVATION, UNDERCUT IT A MINIMUM EXCAVATION WITH CONTROLLED FILL.

CUT SURFACE UNDER PAVEMENTS TO COMPLY WITH CROSS SECTIONS, ELEVATIONS, AND GRADES AS INDICATED.

EXCAVATE TRENCHES TO UNIFORM WIDTH CONFORMING TO VDOT STANDARD PB-1 FOR STORM DRAINAGE PIPING.

PREVENT SURFACE WATER AND SUBSURFACE OR GROUND WATER FROM FLOWING INTO EXCAVATIONS AND FROM FLOODING PROJECT SITE AND SURROUNDING AREA. DO NOT ALLOW WATER TO ACCUMULATE IN EXCAVATIONS. REMOVE WATER TO PREVENT SOFTENING OF FOUNDATION BOTTOMS, UNDERCUTTING FOOTINGS, AND SOIL CHANGES DETRIMENTAL TO STABILITY OF SUBGRADES AND FOUNDATIONS. CONVEY WATER WHEN ATMOSPHERIC TEMPERATURE IS LESS THEN 35°F (1°C).

PROTECT EXCAVATED BOTTOMS OF ALL FOOTINGS AND TRENCHES AGAINST FREEZING WHEN ATMOSPHERIC TEMPERATURE IS LESS THEN 35°F (1°).

BACKFILLING:

- a. COMPACT THE BACKFILL AROUND THE OUTSIDE OF EACH BUILDING TO A MINIMUM OF 85% OF MAXIMUM DRY DENSITY IN ACCORDANCE WITH ASTM D 698 STANDARD PROCTOR. DO NOT ALLOW HEAVY COMPACTION EQUIPMENT SUCH AS ROLLERS, ETC., CLOSER TO ANY FOOTING THAN THE HORIZONTAL DISTANCE SUBTENDED BY A 45° ANGLE WITH THE TOP EDGE OF THE FOOTINGS AND THE SURFACE OF THE GROUND.
- b. BACKFILL BEHIND WALLS AFTER PERMANENT CONSTRUCTION WHICH BRACES THE WALL IS IN PLACE OR TEMPORARY BRACING OF THE WALL IS PROPERLY INSTALLED, AND AFTER ACCEPTANCE OF CONSTRUCTION BELOW FINISH GRADE INCLUDING DAMP-PROOFING, REMOVAL OF CONCRETE FORMWORK, AND REMOVAL OF TRASH AND DEBRIS.

FINISH LAWN AREAS TO WITHIN ONE INCH ABOVE OR BELOW REQUIRED SUBGRADE ELEVATIONS. SHAPE SURFACE UNDER WALKS AND PAVEMENTS TO LINE, GRADE, AND CROSS SECTION, WITH NOT MORE THAN 1/2" ABOVE OR BELOW REQUIRED SUBGRADE ELEVATION.

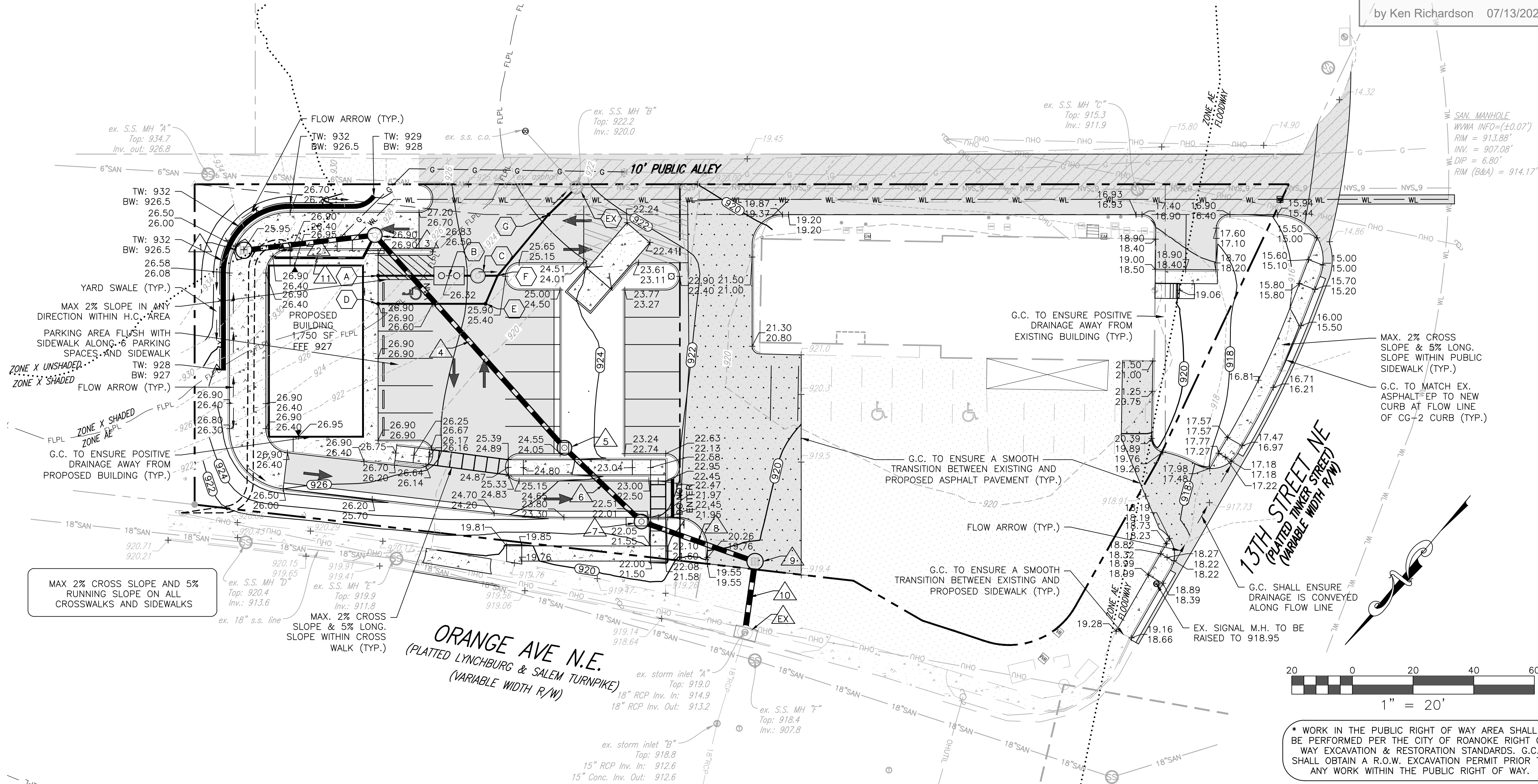
GRADE SURFACE UNDER BUILDING SLABS SMOOTH AND EVEN, FREE OF VOIDS. PROVIDE FINAL GRADES WITHIN 1/2" OF THOSE INDICATED WHEN TESTED WITH A 10' STRAIGHT EDGE.

PROTECT GRADED AREAS FROM TRAFFIC AND EROSION. REPAIR AREAS WHICH HAVE SETTLED, ERODED, OR BECOME DAMAGED DUE TO CONSTRUCTION ACTIVITIES AT NO ADDITIONAL COST TO OWNER.

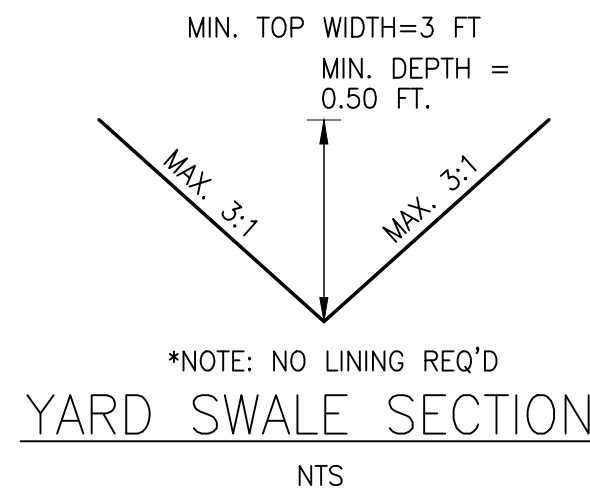
- PLACE ALL FILL AND BACKFILL AS CONTROLLED FILL AS FOLLOWS:
- ESTABLISH SUITABLE SUBGRADE CONDITIONS PRIOR TO PLACING FILL BY PROOFROLLING, UNDERCUTTING AND COMPACTING AS NECESSARY.
 - PLACE FILL MATERIALS IN LAYERS NOT MORE THAN 8" IN LOOSE DEPTH FOR HEAVY COMPACTION EQUIPMENT, AND NOT MORE THAN 4" FOR HAND TAMPERS.
 - PRIOR TO COMPACTION, PROVIDE MOISTURE CONTENT TO WITHIN 3% OF OPTIMUM BY MOISTENING OR AERATING EACH LAYER. DO NOT PLACE FILL MATERIAL ON SURFACES WHICH ARE MUDDY, FROZEN OR CONTAIN FROST OR ICE.
 - COMPACT SOIL TO NOT LESS THAN 95% OF MAXIMUM DRY DENSITY IN ACCORDANCE WITH ASTM D 698 (STANDARD PROCTOR).

SPREAD TOPSOIL TO A DEPTH OF 4" OVER ALL DISTURBED AREAS NOT RECEIVING WALKS, PAVEMENT, WALLS OR BUILDING, INCLUDING TRENCHES. IMMEDIATELY FOLLOWING PLACEMENT OF TOPSOIL, DISK THE ENTIRE TOPSOILED AREA AND RAKE FREE OF STONES AND DEBRIS OVER 1/2" IN ANY DIMENSION. PROVIDE A FINISHED SURFACE FREE OF DEPRESSIONS OR HIGH SPOTS. SEED IMMEDIATELY.

OWNER (CONTRACTOR) SHALL EMPLOY QUALIFIED SOILS TESTING LABORATORY TO INSPECT EARTHWORK OPERATIONS. NOTIFY LABORATORY PRIOR TO PERFORMING EARTHWORK OPERATIONS.



1. NO CONSTRUCTION/FIELD CHANGES WITHOUT THE APPROVAL OF THE OWNER/DEVELOPER, CONSULTING ENGINEER AND CITY OF ROANOKE PLANNING, BUILDING, AND DEVELOPMENT DEPARTMENT.
2. CONTRACTOR TO ENSURE POSITIVE DRAINAGE AWAY FROM ALL BUILDINGS.
3. THE CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY IF ANY DISCREPANCIES WITH EXISTING UTILITIES ARE LOCATED DURING THE GRADING PROCESS FOR THE SITE PRIOR TO PROCEEDING WITH ANY FURTHER WORK.
4. PROPOSED CONCRETE SIDEWALKS SHALL HAVE A MAX. 2% CROSS SLOPE TOWARDS THE PUBLIC ROADWAYS AND AWAY FROM THE PROPOSED BUILDINGS.
5. G.C. SHALL BE RESPONSIBLE FOR CONFIRMING THE PAVEMENT TIE IN LOCATIONS & ELEVATIONS PRIOR TO ANY CONSTRUCTION TO CONFIRM EXISTING CONDITIONS. G.C. SHALL NOTIFY THE ENGINEER IMMEDIATELY OF ANY QUESTIONS/CONCERNS OR DISCREPANCIES FOUND ON-SITE.
6. PROPERTY IS LOCATED WITHIN THE AE FLOODZONE AS SHOWN ON FEMA MAP 51161C01666 WITH MAP REVISION DATE OF SEPTEMBER 28, 2007. EXISTING FLOOD PLAIN ELEVATION 925'.

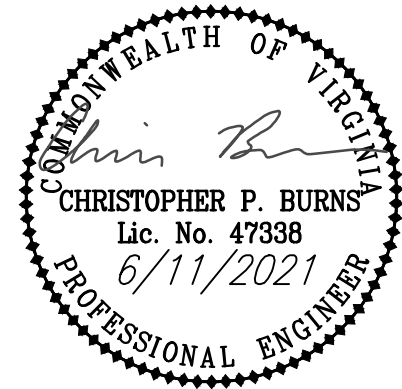


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LITTLE CAESARS ORANGE AVENUE

GRADING PLAN

1321 ORANGE AVENUE NE
CITY OF ROANOKE, VA

DRAWN BY	KAM
DESIGNED BY	BTC
CHECKED BY	BTC
DATE	6/11/2021
SCALE	1"=20'
REVISIONS	

C5
PROJECT NO. 04180041.00