CITY OF CHARLOTTESVILLE
NEIGHBORHOOD DEVELOPMENT SERVICES

ROSE HILL DRIVE AND RUGBY AVENUE INTERSECTION IMPROVEMENTS

VDOT REVENUE SHARING PROJECT (UPC 106259)

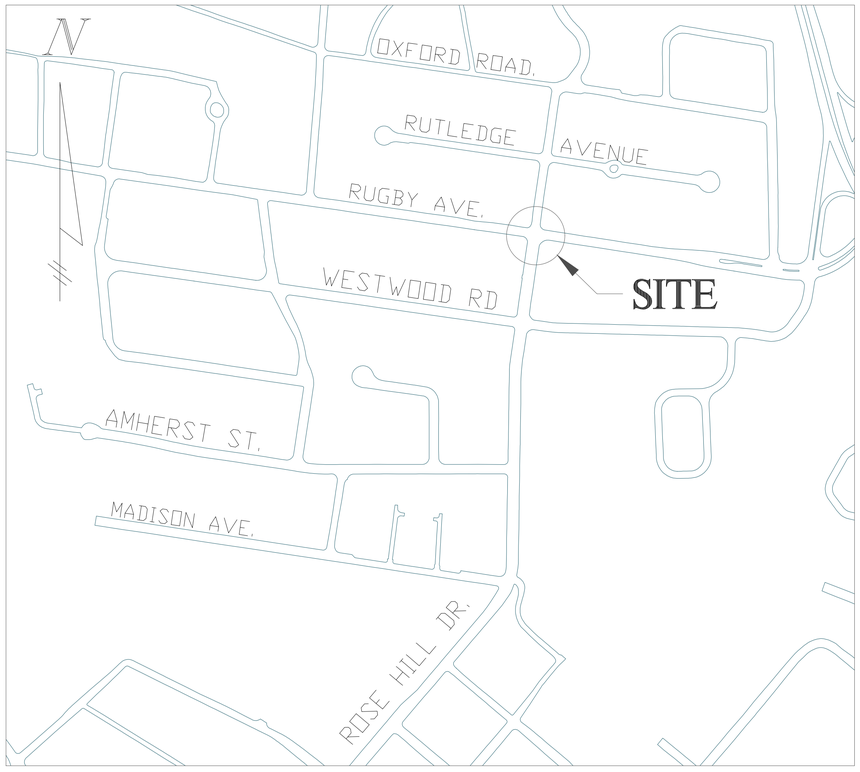
100% PLANS MARCH 22, 2022

THIS PROJECT IS TO BE CONSTRUCTED IN ACCORDANCE WITH THE 2020 VIRGINIA DEPARTMENT OF TRANSPORTATION ROAD AND BRIDGE SPECIFICATIONS, STANDARDS AND SPECIFICATIONS PRESCRIBED BY THE CITY OF CHARLOTTESVILLE STANDARDS AND DESIGN MANUAL, 2016 ROAD AND BRIDGE STANDARDS, 2009 MUTCD, 2011 VIRGINIA SUPPLEMENT TO THE MUTCD, 2011 WORK AREA PROTECTION MANUAL AND AS AMENDED BY CONTRACT PROVISIONS AND THE COMPLETE ELECTRONIC PDF VERSION OF THE PLAN ASSEMBLY.

APPROVED FOR CONSTRUCTION	
DATE	LOCAL PROGRAM ADMINISTRATOR

APPROVED FOR CONSTRUCTION	
	Jack Dawson, PE
DATE	CITY ENGINEER DEPT. OF PUBLIC WORKS

Digitally signed by Jack Dawson, PE
Date: 2022.04.14 17:01:33 -04'00'



VICINITY MAP
SCALE: 1" = 300'

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PLAN REVISIONS -

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SCALE N.T.S.

ROSE HILL DRIVE AND RUGBY AVENUE INTERSECTION IMPROVEMENTS
CHARLOTTESVILLE, VIRGINIA

COVER SHEET

DATE: 03/22/2022
ENGINEER: BNG
CHECKED: JSK
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RUMMEL, KLEPPER & KAHL, LLP

GENERAL NOTES

1. AFFECTED PROPERTY OWNERS MEETINGS

THE CONTRACTOR SHALL MEET TO DISCUSS ACTIVITIES WITH ALL AFFECTED OWNERS BEFORE START OF ANY WORK ON THE PROJECT. THE MEETINGS SHALL INCLUDE THE CITY INSPECTOR.

2. EXISTING UTILITIES

THE LOCATION OF EXISTING SEWER, WATER, POWER, GAS, TELEPHONE, AND OTHER UTILITIES AND STRUCTURES WHICH ARE LOCATED ACROSS, UNDERNEATH, ALONG AND WITHIN THE LIMITS OF THE PROPOSED WORK ARE NOT NECESSARILY SHOWN ON THE PLANS, AND WHERE SHOWN ARE ONLY APPROXIMATELY CORRECT. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL NOTIFY THE UNDERGROUND PROTECTION CENTER ("MISS UTILITY") AT 1–800–552–7001 AND, AT HIS OWN COST, VERIFY THE LOCATIONS AND ELEVATIONS OF ALL EXISTING UTILITIES WITHIN THE LIMITS OF CONSTRUCTION. HE SHALL NOTIFY THE ENGINEER IMMEDIATELY IF THERE APPEARS TO BE A CONSTRUCTION CONFLICT OR UPON DISCOVERY OF ANY UTILITY NOT SHOWN ON THE PLAN. THE CONTRACTOR SHALL BE LIABLE FOR ALL DAMAGE DONE TO ANY STRUCTURES OR PROPERTY THROUGH HIS CARELESSNESS OR NEGLIGENCE. ANY GRADE STAKES, HUBS, ETC. DESTROYED WILL BE REPLACED AT THE CONTRACTORS EXPENSE

THE CONTRACTOR SHALL NOTIFY THE APPLICABLE GOVERNMENTAL PUBLIC WORKS AND PUBLIC UTILITY DEPARTMENT AT LEAST 24 HOURS PRIOR TO START OF WORK ON THE PROJECT.

3. MATERIALS AND WORKMANSHIP

ALL MATERIALS AND WORKMANSHIP SHALL BE DONE IN ACCORDANCE WITH THE LATEST EDITIONS OF:

(A) VIRGINIA DEPARTMENT OF TRANSPORTATION "ROAD DESIGN MANUAL" AND "ROAD AND BRIDGE SPECIFICATIONS".
(B) APPLICABLE CITY OF CHARLOTTESVILLE ORDINANCES AND REGULATIONS
(C) THE LATEST RULES AND REGULATIONS GOVERNING CONSTRUCTION DEMOLITION AND EXCAVATION AS ADOPTED BY THE SAFETY CODES COMMISSION OF THE COMMONWEALTH OF VIRGINIA AND OSHA.

4. DEVIATION FROM PLANS

NO DEVIATION FROM THESE PLANS WILL BE ALLOWED WITHOUT PRIOR WRITTEN APPROVAL OF THE OWNER, ENGINEER AND AFFECTED GOVERNMENTAL AGENCIES.

5. CLEARING AND GRUBBING

A. ALL GROWTH OF TREES, OTHER VEGETATION AND OBJECTIONABLE DEBRIS SHALL BE CLEARED AND GRUBBED FROM THE PROPOSED PAVED AND BUILDING AREAS AS WELL AS AREAS INDICATED TO BE GRADED ON THE PLANS.

B. ALL CLEARING AND GRUBBING WITHIN THE UTILITY EASEMENTS AND SPECIAL FILL AREAS SHALL BE TO THE LENGTH AND WIDTH NECESSARY TO CONSTRUCT IMPROVEMENTS SHOWN ON THE PLANS.

C. ALL TREES, BRANCHES, VEGETATION AND DEBRIS SHALL BE DISPOSED OF IN A LEGAL MANNER ACCEPTABLE TO THE OWNER AND ENGINEER. BURNING PERMITS WILL BE OBTAINED BY THE CONTRACTOR AT HIS EXPENSE.

D. ALL TREES AND VEGETATION WHICH OBSTRUCT SIGHT DISTANCES AT ROAD INTERSECTIONS SHALL BE REMOVED SO AS TO OBTAIN THE MAXIMUM SIGHT DISTANCE AT EACH INTERSECTION

6. TOPSOIL STRIPPING

CONTRACTOR SHALL REMOVE TOPSOIL TO ITS ENTIRE DEPTH FROM ALL AREAS TO BE GRADED AND OR FILLED. HE SHALL STOCKPILE OR REMOVE THE TOPSOIL FROM THE SITE AT OWNERS DIRECTION.

7. GRADING

A. ROADWAYS, EASEMENTS, AND SPECIAL FILL AREAS TO BE GRADED AND COMPACTED TO THE FINISHED SUBGRADE OR GRADES AS SHOWN ON THE PLANS. CONTRACTOR OR OWNER SHALL HAVE REPRESENTATIVE SUBGRADE CBR TEST RUN AND SHALL REPORT TO THE OWNER, ENGINEER, AND ANY AFFECTED GOVERNMENTAL AGENCIES ANY TEST WHICH SHOW A CBR OF LESS THAN 10. IN SUCH CASE ROAD PAVEMENT DESIGN MAY HAVE TO BE RE–DESIGNED TO MEET WITH THE ACTUAL SOIL CONDITIONS ENCOUNTERED
B. IF UNSUITABLE MATERIAL IS ENCOUNTERED WITHIN THE ROADWAY, PARKING AREA OR ANY SPECIAL FILL AREA, IT SHALL BE REMOVED FROM THE ENTIRE PROPOSED PAVED AREA OR FILL AREA AND REPLACED WITH SELECT BACKFILL WHICH IS SUITABLE FOR ROADWAY (OR BUILDING SITE) CONSTRUCTION AS PER 'VDOT' REQUIREMENTS AND ANY SPECIAL REQUIREMENTS OF THE CITY OWNER, ENGINEER, AND ANY AFFECTED GOVERNMENTAL AGENCIES.
C. FILL AND BACKFILL MATERIAL SHALL BE COMPACTED TO 95% STD. PROCTOR DENSITY AT OPTIMUM MOISTURE +–2% UNLESS SPECIFIED OTHERWISE ON THE PLAN.
D. ALL GRADING OPERATIONS SHALL BE DONE IN SUCH A MANNER SO AS TO PROVIDE POSITIVE DRAINAGE AT ALL TIMES.
E. AT ALL ROAD INTERSECTIONS IN A CUT SECTION, THE BACK SLOPES AND VEGETATION SHALL BE CUT BACK WITH AT LEAST 3:1 BACK SLOPES SO AS TO PROVIDE THE BEST POSSIBLE SIGHT DISTANCE
F. STANDARD SPRING BOXES (SB–1) AND UNDERDRAIN SYSTEM (UD–1 UD–2) WILL BE INSTALLED AT LOCATIONS SHOWN ON THE PLANS AND WHEREVER FIELD CONDITIONS WARRANT.

8. DRAINAGE STRUCTURES AND MINOR EXCAVATION

A. ALL PIPE CULVERTS AND STORM SEWER SYSTEMS SHALL HAVE A MINIMUM COVER OF 1 FOOT AND BE MADE OF THE MATERIAL SPECIFIED ON THE PLANS. IF THIS PROJECT IS LOCATED IN CITY OF CHARLOTTESVILLE, ALL STORM SEWER SHALL HAVE A MINIMUM OF 4" INCHES AGGREGATE BEDDING MATERIAL.
B. BACKFILL FOR ALL UTILITIES WITHIN PROPOSED STREETS SHALL BE PLACED GENERALLY IN ACCORDANCE WITH CITY OF CHARLOTTESVILLE UTILITY SPECIFICATIONS AND THE FOLLOWING CRITERIA:
1) NO TRENCH SHALL BE BACKFILLED UNTIL AUTHORIZED BY THE INSPECTOR OR OWNER OR HIS AUTHORIZED REPRESENTATIVE. MATERIALS USED FOR BACKFILL FROM THE TRENCH BOTTOM TO 12 INCHES ABOVE THE PIPE SHALL BE SELECT MATERIAL, FREE FROM FROST, LARGE CLODS, STONES, AND DEBRIS. IT SHALL BE THOROUGHLY AND CAREFULLY COMPACTED TO INSURE A SOUND BACKFILL AROUND AND OVER THE PIPE.
2) BACKFILL SHALL BE COMPACTED BY MECHANICAL TAMPING THROUGHOUT THE DEPTH OF THE TRENCH TO OBTAIN 95% DENSITY AT OPTIMUM MOISTURE+–2%. THIS IS TO INSURE A SUITABLE SUBBASE ACCEPTABLE FOR PROPOSED STREETS AND PARKING AREAS.
3) IF IN THE OPINION OF THE OWNER, THE ENGINEER OR ANY AFFECTED GOVERNMENTAL AGENCY THE MATERIAL TAKEN FROM THE DITCH IS NOT SUITABLE FOR BACKFILL, IT SHALL BE REMOVED AND ACCEPTABLE MATERIAL USED FOR BACKFILLING SHALL BE OBTAINED.

C. TRENCHES SHALL BE EXCAVATED TO A MINIMUM OF 4 INCHES BELOW THE BOTTOM OF THE BARREL OF THE PIPE AND A BEDDING SHALL BE PROVIDED AND INSTALLED OF SELECT MATERIAL SUITABLE TO MEET VDOT PB–1 PIPE INSTALLATION REQUIREMENTS. TRENCHES SHALL NOT BE CUT OVER 16 INCHES WIDER THAN THE OUTSIDE DIAMETER OF THE PIPE UNLESS AN UNSUITABLE FOUNDATION MATERIAL IS ENCOUNTERED

9. BASE AND PAVEMENT ITEMS

A. SUBGRADE MUST BE CHECKED BY AFFECTED GOVERNMENTAL OFFICIALS, AND OWNER FOR GRADE, TEMPLATE AND COMPACTION BEFORE BASE IS APPLIED.
B. BASE AND PAVEMENT MATERIALS SHALL MEET ALL 'VDOT' SPECIFICATIONS AND SHALL BE APPLIED IN ACCORDANCE WITH THE CURRENT 'VDOT' SPECIFICATIONS. ALL MATERIALS MUST BE TESTED AND APPROVED BY 'VDOT' OR APPLICABLE GOVERNMENTAL AGENCY OFFICIALS PRIOR TO EMPLACEMENT.
C. PAVING OPERATIONS SHALL NOT BE STARTED BETWEEN NOVEMBER 15 AND APRIL 1 WITHOUT WRITTEN AUTHORIZATION OF CITY OF CHARLOTTESVILLE OFFICIALS AND THE OWNER.
D. WHEN USING PUG MILLED AGGREGATE BASE MATERIAL WHICH IS TESTED BY 'VDOT' OFFICIALS AT THE PLANT, THE TEST WILL BE GOOD FOR 90 DAYS ONLY. ADDITIONAL "IN PLACE" TEST SHALL BE MADE AFTER 90 DAYS.
E. WHEN LOCAL BASE MATERIAL (TYPE II) IS PROPOSED FOR ROAD BASE, IT SHALL BE TESTED AND APPROVED BY 'VDOT' OFFICIALS PRIOR TO BEING USED. OWNER AND ANY AFFECTED GOVERNMENTAL OFFICIALS SHALL ALSO CHECK AND APPROVED LOCAL BASE MATERIALS FOR DEPTH, COMPACTION, AND CONSISTENCY ONCE IT HAS BEEN PLACED IN ROADWAYS.

10. ALL ENTRANCE PERMITS TO PUBLIC ROADS MUST BE OBTAINED BY THE CONTRACTOR AT HIS EXPENSE PRIOR TO CONSTRUCTION. ALL OTHER PERMITS NECESSARY TO UNDERTAKE THIS PROJECT MUST BE OBTAINED BY THE CONTRACTOR PRIOR TO CONSTRUCTION (AT THE CONTRACTORS EXPENSE).

10. ELEVATIONS ON THE PLANS ARE TO DATUM ESTABLISHED BY THE N.G.S. OF THE N.O.A.A.
11. A LONGITUDINAL DROP INLET (ON GRADE) SHALL BE POURED WITH THE THROAT ON THE SAME GRADE AS THE ADJOINING CURB AND GUTTER UNLESS SPECIFICALLY NOTED OTHERWISE ON THE PLANS.
12. ALL CONSTRUCTION STAKING WILL BE AT THE CONTRACTOR'S EXPENSE UTILIZING A VIRGINIA CERTIFIED PROFESSIONAL ENGINEER OR LAND SURVEYOR UNLESS AGREED UPON BY THE OWNER IN WRITING. COPIES OF ALL SITE WORK CUT SHEETS ARE TO BE FURNISHED TO ENGINEER FOR HIS REVIEW PRIOR TO CONSTRUCTION. CONTRACTOR SHALL BE LIABLE FOR ANY ADVERSE CONSEQUENCES IF CUT SHEETS ARE NOT PROVIDED TO ENGINEER FOR HIS REVIEW PRIOR TO CONSTRUCTION. COST OF THIS REVIEW TO BE BORNE BY CONTRACTOR.
13. ALL CONCRETE TO BE CITY OF CHARLOTTESVILLE MIX CLASS A 3500 CONC.
14. ACCESS TO PRIVATE PROPERTY FOR CONSTRUCTION PURPOSES WILL BE SECURED BY THE CITY OF CHARLOTTESVILLE.

STANDARD NOTES

1. ALL CONSTRUCTION MATERIALS SHALL CONFORM WITH THE LATEST STANDARDS AND SPECIFICATIONS OF THE VIRGINIA DEPT. OF HIGHWAYS AND TRANSPORTATION, EXCEPT WHERE CITY OF CHARLOTTESVILLE STANDARDS ARE APPLICABLE.

2. ALL STORM SEWER SHALL BE ASTM, C–76, CLASS III, EXCEPT AS NOTED.

3. THE CONTRACTOR SHALL NOTIFY THE DEPT. OF PUBLIC UTILITIES PRIOR TO MAKING ANY ADJUSTMENTS TO THE WATER OR SEWERAGE SYSTEMS.

4. THE CONTRACTOR SHALL NOTIFY THE CITY ENGINEER AT LEAST 48 HOURS PRIOR TO STARTING WORK ON THE PROJECT.

5. ALL STORM SEWER LOCATED WITHIN AN EASEMENT OR RIGHT OF WAY SHALL HAVE A MINIMUM OF 4" AGGREGATE BEDDING MATERIAL.

6. A PERMIT MUST BE OBTAINED FROM THE OFFICE OF THE CITY ENGINEER PRIOR TO DOING ANY WORK WITHIN EXISTING CITY RIGHT OF WAY.

7. ALL CURB AND GUTTER AND STORM SEWER LOCATED WITHIN EXISTING CITY RIGHT OF WAY SHALL BE STAKED/ COORDINATED BY THE CITY, UPON WRITTEN REQUEST BEING MADE TO THE CITY ENGINEER.

8. ALL CURB AND GUTTER SHALL BE VDOT STANDARD EXCEPT AS NOTED.

9. A D.I. ON GRADE SHALL BE POURED WITH THE THROAT ON THE SAME GRADE AS THE ADJOINING CURB AND GUTTER.

10. THE PAVEMENT DESIGN IN PUBLIC R/W IS SUBJECT TO CHANGE DUE TO SOIL CONDITIONS AT THE TIME OF CONSTRUCTION, AS DETERMINED BY THE CITY.

11. THE APPROVAL OF THIS PLAN DOES NOT ESTABLISH THE CURB AND GUTTER ELEVATIONS ALONG THE PUBLIC RIGHT OF WAY. THE ELEVATIONS/ LAYOUT WILL BE REVIEWED BY CITY INSPECTIONS.

12. ANY NECESSARY PAVEMENT WIDENING BETWEEN THE EXISTING PAVEMENT AND PROPOSED IMPROVEMENTS IS THE RESPONSIBILITY OF THE CONTRACTOR.

13. ALL UTILITY POLES WITHIN THE PUBLIC RIGHT OF WAY WHICH ARE IN CONFLICT WITH PROPOSED IMPROVEMENTS TO THE RIGHT OF WAY, SUCH AS, CURB AND GUTTER, DRAINAGE ITEMS, OR PAVEMENT WIDENING, SHALL BE RELOCATED AT THE OWNER'S EXPENSE PRIOR TO STAKING OF ANY OF THE IMPROVEMENTS.

14. ADEQUATE SIGHT DISTANCE, AS REQUIRED BY THE CITY TRAFFIC ENGINEER, SHALL BE REQUIRED AT ALL INTERSECTIONS AND ON ALL ROADWAYS.

15. ALL CONSTRUCTION WORK AND PROPOSED SIDEWALK SHALL BE WITHIN CITY OF CHARLOTTESVILLE RIGHT–OF–WAY, OR AS DIRECTED BY THE CITY ENGINEER.

SIGNAL NOTES

1. ALL TRAFFIC SIGNAL HEADS, BACK PLATES, AND MAST ARM POLE FOUNDATIONS SHALL CONFORM TO THE VIRGINIA DEPARTMENT OF TRANSPORTATION (VDOT) ROAD AND BRIDGE STANDARDS 2016, AND CITY OF CHARLOTTESVILLE STANDARDS AND SPECIFICATIONS (LATEST EDITION). THE CITY'S STANDARDS AND SPECIFICATIONS SHALL SUPERCEDE THE VDOT SPECIFICATIONS.

2. MAST ARM POLES SHALL CONFORM TO THE CITY OF CHARLOTTESVILLE SPECIFICATIONS.

3. MAST ARM POLE FOUNDATIONS SHALL CONFORM TO VDOT PF–8 AND TO THE CUSTOM DETAIL AS SHOWN ON PLANS.

4. CONDUCTOR CONDUIT CABLE, TRENCH EXCAVATION, AND SIGNAL JUNCTION BOXES SHALL CONFORM TO 2016 VDOT ROAD AND BRIDGE STANDARDS.

5. THE LOCATION OF ALL EXISTING UNDERGROUND UTILITIES SHOULD BE CONSIDERED APPROXIMATE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE DEFINITE LOCATION OF EACH UTILITY INVOLVED WITHIN THE AREA OF HIS EXCAVATION FOR WORK UNDER THIS CONTRACT. THE CONTRACTOR SHALL CALL MISS UTILITY OF VIRGINIA (1–800–552–1007) 48 HOURS BEFORE BEGINNING WORK.

6. SIGNAL HEADS SHALL HAVE LED INDICATIONS. ALL SIGNAL HEADS SHALL BE MOUNTED IN ACCORDANCE WITH THE CITY OF CHARLOTTESVILLE STANDARDS AND ALL SIGNAL HEADS SHALL CONFORM TO THE REQUIREMENTS OF THE ITE STANDARD FOR VEHICLE TRAFFIC CONTROL SIGNAL HEADS AND SECTION 238 OF VDOT'S 2020 ROAD AND BRIDGE SPECIFICATIONS.

7. IT SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR TO FURNISH AND MAINTAIN, UNTIL THE WORK HAS BEEN ACCEPTED BY THE CITY, AND ALL SIGNS, LIGHTS, BARRICADES, FLAGMEN, ETC., NECESSARY FOR THE SAFETY OF THE GENERAL PUBLIC, INCLUDING BOTH VEHICULAR AND PEDESTRIAN TRAFFIC. ALL COSTS FOR THE MAINTENANCE OF TRAFFIC SHALL BE INCLUDED IN LUMP SUM BID ITEM. MAINTENANCE OF TRAFFIC SHALL BE ACCORDING TO THE 2011 EDITION VIRGINIA WORK AREA PROTECTION MANUAL (LATEST EDITION). LANE CLOSURES SHALL NOT BE PERMITTED BETWEEN 7AM TO 9AM AND 4PM TO 6PM. A TEMPORARY STREET CLOSURE PERMIT IS REQUIRED FOR CLOSURE OF SIDEWALKS, PARKING SPACES AND ROADWAY AND IS SUBJECT TO APPROVAL BY THE CITY TRAFFIC ENGINEER. A TEMPORARY STREET CLOSURE PERMIT REQUIRES, AMONG OTHER THINGS, A MAINTENANCE TRAFFIC PLAN FOR EACH PHASE OF THE PROJECT.

8. ALL DAMAGES TO EXISTING STRUCTURES, FACILITIES, PAVEMENT, GRASSED AREAS, ETC. SHALL BE RESTORED TO EXISTING CONDITION AT THE CONTRACTOR'S EXPENSE.

9. THE CONTRACTOR SHALL CONTACT THE CITY OF CHARLOTTESVILLE DEPARTMENT OF PUBLIC WORKS (SIGNAL SUPERINTENDENT) AT LEAST 72 HOURS PRIOR TO BEGINNING WORK.

10. POLE LOCATIONS SHALL BE INSTALLED WITHIN 12" OF THE POINT AS SHOWN ON THE PLAN. CONTRACTOR SHALL STAKE AND FIELD VERIFY WITH "MISS UTILITY OF VIRGINIA" THE POLE LOCATIONS BEFORE ORDERING POLES AND ARMS. THESE STAKED LOCATIONS SHOULD BE APPROVED BY THE CITY TRAFFIC ENGINEER BEFORE CONSTRUCTION.

11. EMERGENCY PREEMPTION EQUIPMENT SHALL BE COMPATIBLE WITH THE CITY'S OPTICOM SYSTEM.

12. SHOP DRAWINGS AND CALCULATIONS FOR ALL POLES AND FOUNDATIONS SHALL BE FURNISHED TO THE CITY FOR APPROVAL BEFORE CONSTRUCTION.

13. THIS PLAN DOES NOT GUARANTEE THE EXISTENCE OR NONEXISTENCE OF UNDERGROUND UTILITIES. PRIOR TO ANY CONSTRUCTION, THE CONTRACTOR SHALL VERIFY THE EXISTENCE AND LOCATION OF, UNDERGROUND OR OVERHEAD UTILITIES. WHERE CONFLICTS OCCUR, THE CONTRACTOR SHALL CONTACT THE ENGINEER PRIOR TO BEGINNING WORK.

14. THE CONTRACTOR SHALL VERIFY THE ELEVATIONS OF ALL UNDERGROUND UTILITIES TO BE CROSSED PRIOR TO DIRECTIONAL BORING OF CONDUITS. THE CONTRACTOR SHALL HAND DIG WHEN CROSSING WATER LINES, GAS LINES, AND SEWER FORCE MAINS.

15. ALL UNDERGROUND CONDUITS SHALL BE INSTALLED IN ACCORDANCE WITH STANDARD ECI–1 OF 2016 VDOT ROAD AND BRIDGE STANDARDS.

16. ALL U–BOLTS, BUTS, AND WASHERS SHALL BE STAINLESS STEEL. ALL PLATE MATERIAL SHALL BE GALVANIZED.

17. CONDUITS ENTERING JUNCTION BOXES SHALL NOT EXTEND OVER 3" MAXIMUM OR 2" MINIMUM AND SHALL BE FITTED WITH BELL ENDS OR BRUSHINGS.

18. THE PROPOSED POLE FOUNDATION SHALL BE PERMANENTLY MARKED TO INDICATE THE LOCATIONS OF ALL CONDUITS CAST IN THE FOUNDATION. THE MARKINGS SHALL CONSIST OF AN ARROW, 4 TO 6 INCHES LONG, AND A LETTER DESIGNATION AS FOLLOWS:
(S) – SPARE CONDUIT;
(T) – CONDUIT WITH SIGNAL CABLES;
(E) – CONDUIT WITH ELECTRICAL SERVICE CONDUCTORS FOR TRAFFIC SIGNAL;
(G) – CONDUIT FOR GROUNDING

SIGNAL NOTES (CONTINUED)

19. SYSTEM BOND WIRE IS REQUIRED ONLY IF THE CONDUIT IS NON–METALLIC. PAYMENT SHALL BE INCIDENTAL TO CONDUIT COST.

20. THE CONTRACTOR SHALL STUB AND CAP ONE EACH 2–INCH PVC CONDUITS FOR FUTURE USE FROM EACH MAST ARM POLE.

21. ALL CONDUITS STUBBED FROM JUNCTION BOXES AND FOUNDATIONS SHALL EXTEND A MINIMUM OF SIX INCHES BEYOND THE BOX OR FOUNDATION AND SHALL BE CAPPED.

22. CONDUIT AND PULL BOXES SHOWN IN THE PLAN MAY BE SHIFTED IN LOCATION TO ACCOMMODATE FIELD CONDITIONS. ALL EQUIPMENT SHALL BE PLACED WITHIN THE CITY OF CHARLOTTESVILLE RIGHT OF WAY.

23. MAST ARMS, POLES AND ATTACHMENT HARDWARE SHALL BE GALVANIZED, PER CITY STANDARDS.

24. TRAFFIC SIGNAL CONTROLLER SHALL BE IN ACCORDANCE WITH THE CONTRACT DOCUMENTS.

25. CABINETS FOR TRAFFIC SIGNAL CONTROLLERS AND MASTER CONTROLLERS SHALL BE 4 DOOR MODEL #333 AND SHALL CONFORM TO CITY OF CHARLOTTESVILLE CABINET SPECIFICATIONS.

26. VIDEO DETECTION SHALL BE IN ACCORDANCE WITH THE CONTRACT DOCUMENTS AND SHALL BE MANUFACTURER'S STANDARD PRODUCTION MODEL.

27. SHOP DRAWINGS SHALL BE SUBMITTED TO THE CITY FOR THE POLES, SIGNAL HEADS, LENSES, VISORS, BACKPLATES, MOUNTING BRACKETS, CONDUCTORS, CONDUITS, JUNCTION BOXES, POWER SERVICE EQUIPMENT, COMMUNICATION EQUIPMENT, CONTROLLER AND THE EQUIPMENT IN THE CABINET, DETECTION SERVICES, EMERGENCY VEHICLE DETECTORS, PEDESTRIAN PUSHBUTTONS, SIGNS, UNINTERRUPTIBLE POWER SUPPLY, ARMS, CONDUCTOR TERMINAL STRIPS, AND JUNCTION BOXES.

MAINTENANCE OF TRAFFIC NOTES

TMP TYPE: TYPE A, CATEGORY II
WORK ZONE LOCATION: INTERSECTION OF ROSE HILL DRIVE AND RUGBY AVENUE

BOTH TRAVEL LANES ALONG ROSE HILL DRIVE AND RUGBY AVENUE WILL BE AFFECTED BY PROJECT WORK.

NOT TO EXCLUDE OTHER VIRGINIA WORK AREA PROTECTION MANUAL STANDARD LAYOUTS OR MODIFICATIONS THEREOF, THE FOLLOWING TYPICAL TRAFFIC CONTROL FIGURES APPLY TO THE DAILY SAFETY FEATURES EMPLOYED BY THE CONTRACTOR:

TTC–28.2 LANE CLOSURE OPERATION IN AN INTERSECTION
TTC–35.1 SIDEWALK CLOSURE AND BYPASS SIDEWALK OPERATION
TTC–53.0 SIGNING FOR PROJECT LIMITS

ACCESS TO ADJACENT RESIDENTIAL AND COMMERCIAL PROPERTIES SHALL BE MAINTAINED AT ALL TIMES, OR AS DIRECTED BY THE ENGINEER.

THE CONTRACTOR SHALL NOTIFY EACH AFFECTED PROPERTY OWNER AT LEAST 48 HOURS IN ADVANCE OF THE START OF ANY WORK THAT WILL REQUIRE THE TEMPORARY CLOSURE OF ACCESS.

TRAFFIC CONTROL DEVICES WHICH CONFLICT WITH PRIVATE ENTRANCES WILL BE PLACED IN A MANNER TO ELIMINATE THAT CONFLICT.

THE MAJOR TYPES OF TRAVELERS IMPACTED BY THE CONSTRUCTION AT ROSE HILL DRIVE AND RUGBY AVENUE ARE RESIDENTS AND COMMUTERS.

EXISTING PEDESTRIAN ACCESS SHALL BE MAINTAINED DURING CONSTRUCTION. IF EXISTING CONDITIONS CANNOT BE MAINTAINED, A PEDESTRIAN DIVERSION OR DETOUR SHALL BE INSTALLED MEETING 2010 ADA DESIGN GUIDELINES FOR ACCESSIBLE DESIGN.

WHERE TRANSIT STOPS ARE AFFECTED OR RELOCATED BECAUSE OF WORK ACTIVITY, BOTH PEDESTRIAN AND VEHICULAR ACCESS TO THE AFFECTED OR RELOCATED TRANSIT STOPS SHALL BE PROVIDED.

BICYCLISTS AND PEDESTRIANS SHOULD NOT BE EXPOSED TO UNPROTECTED EXCAVATIONS, OPEN UTILITY ACCESS, OVERHANGING EQUIPMENT, OR OTHER SUCH CONDITIONS.

IT IS NOT THE INTENT OF THIS PLAN TO ENUMERATE EVERY DETAIL WHICH MUST BE CONSIDERED IN THE CONSTRUCTION OF EACH PHASE, BUT ONLY TO SHOW THE GENERAL FEATURES NECESSARY TO PROVIDE THE PROPER HANDLING OF TRAFFIC.

THE CLEAR ZONE (OR LATERAL OFFSET) IS TO BE FREE OF STORED MATERIALS AND PARKED EQUIPMENT.

HORIZONTAL AND VERTICAL SIGHT DISTANCES SHALL NOT BE IMPACTED BY PARKED CONSTRUCTION EQUIPMENT.

ALL AREAS EXCAVATED MORE THAN 2" BELOW PAVEMENT SURFACE WHICH PUBLIC TRAFFIC IS ON AND WITHIN THE CLEAR ZONE (OR LATERAL OFFSET) AND NOT PROTECTED BY A POSITIVE BARRIER AT THE CONCLUSION OF EACH WORKDAY, SHALL BE BACKFILLED TO FORM AN APPROXIMATE 6:1 SAFETY WEDGE DESIRABLE, 4:1 MINIMUM, AGAINST THE PAVEMENT SURFACE FOR THE SAFETY AND PROTECTION OF THE PUBLIC TRAFFIC. ALL COSTS FOR PLACING, MAINTAINING AND REMOVING THE 6:1 DESIRABLE, 4:1 MINIMUM SAFETY WEDGE SHALL BE INCLUDED IN THE PRICE BID FOR OTHER ITEMS IN THE CONTRACT AND NO ADDITIONAL COMPENSATION WILL BE ALLOWED. SEE DETAIL ON THIS SHEET.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING ANY EXISTING SIGNS, UNLESS OTHERWISE ADVISED BY THE ENGINEER TO REMOVE OR RELOCATE.

PUBLIC COMMUNICATIONS PLAN

A). CITY OF CHARLOTTESVILLE

1).POINTS OF CONTACT

POINTS OF CONTACT	CONTACT	PHONE NUMBER	EMAIL
A). CITY DEPUTY PROJECT MANAGER	TIM MOTSCH	434–970–3395	
B). CITY PROJECT MANAGER	TIM MOTSCH	434–970–3395	motscht@charlottesville.org
C). CITY TRAFFIC ENGINEER	BRENNEN DUNCAN	434–970–3720	
D). CITY PUBLIC SERVICE MANAGER		434–970–3895	
E). CITY COMMUNICATIONS COORDINATOR	JOE RICE	434–970–3129	
F). CITY POLICE		434–970–3280	
G). CITY FIRE		434–970–3240	
H). E–911 NON–EMERGENCY COMMUNICATIONS		434–977–9041	
I). UNIVERSITY OF VIRGINIA		434–982–5834	dsundgren@virginia.edu
J). VDOT DISTRICT PUBLIC AFFAIRS		540–717–2890	
K). CITY TRANSPORTATION DIVISION		434–970–3319	
L). CITY PUBLIC WORKS	PAUL OBERDORFER	434–970–3301	
M). CITY PUBLIC INFORMATION		434–970–3707	
N). CITY ENGINEER	MARTY SILMAN	434–970–3991	

MAINTENANCE OF TRAFFIC NOTES (CONTINUED)

CONCURRENT CONSTRUCTION LEFT AND RIGHT OF ANY LANE CARRYING TRAFFIC WILL NOT BE ALLOWED UNLESS OTHERWISE DIRECTED BY THE ENGINEER.

TRAFFIC IS TO BE MAINTAINED THROUGHOUT THE PROJECT WITHIN THE EXISTING TRAVELWAY. ONE–LANE, TWO WAY FLAGGING OPERATIONS ARE ONLY PERMITTED BETWEEN 9:00 A.M. AND 3:00 P.M. MONDAY – FRIDAY. AT ALL OTHER TIMES TWO LANES MUST BE OPEN TO TRAFFIC UNLESS OTHERWISE DIRECTED BY THE ENGINEER.

BICYCLE TRAFFIC IS TO BE MAINTAINED WITHIN THE EXISTING BICYCLE LANES THROUGHOUT THE PROJECT. BICYCLE LANE CLOSURES SHALL BE AT THE DISCRETION OF THE ENGINEER TO AFFORD ADDITIONAL WORK SPACE. IF PERMITTED, THE CONTRACTOR SHALL SUBMIT A BIKE LANE CLOSURE PLAN COMPLIANT WITH VDOT'S WORK ZONE PEDESTRIAN AND BICYCLE GUIDANCE DOCUMENT.

A TEMPORARY STREET CLOSURE PERMIT IS REQUIRED FOR CLOSURE OF SIDEWALKS, PARKING SPACES, AND ROADWAYS AND IS SUBJECT TO APPROVAL BY THE CITY TRAFFIC ENGINEER.

ALL WORK IS TO BE PERFORMED IN ACCORDANCE WITH THE CURRENT MUTCD, THE 2020 VDOT ROAD AND BRIDGE SPECIFICATIONS, THE 2016 VDOT ROAD AND BRIDGE STANDARDS, THE 2011 VIRGINIA WORK AREA PROTECTION MANUAL REV. 2, AND THE 2011 SUPPLEMENT TO THE MUTCD INCLUDING EACH MANUAL'S SUBSEQUENT REVISIONS AND AS DIRECTED BY THE ENGINEER.

THE CONTRACTOR SHALL PROVIDE TEMPORARY DRAINAGE, IF REQUIRED, TO PREVENT PONDING OF WATER ON THE ROADWAY AND ADJACENT PROPERTIES. TEMPORARY DRAINAGE ON THE PROJECT IS THE CONTRACTOR'S RESPONSIBILITY. THE COST OF THE TEMPORARY DRAINAGE, OTHER THAN THE ITEMS THAT HAVE BEEN QUANTIFIED IN THESE PLANS, IS INCLUDED IN THE PRICE BID FOR OTHER DRAINAGE ITEMS AND NO ADDITIONAL COMPENSATION WILL BE ALLOWED.

ALL PROPOSED FULL DEPTH ASPHALT PAVEMENT AND BUILD–UP WILL BE CONSTRUCTED UP TO THE FINAL SURFACE COURSE.

THE FINAL SURFACE COURSE WILL BE APPLIED IN THE FINAL PHASE OR CONSTRUCTION WHEN APPROVED BY THE ENGINEER.

ALL SIGNING FOR THE PROJECT LIMITS SHALL BE DONE IN ACCORDANCE WITH THE 2011 VIRGINIA WORK AREA PROTECTION MANUAL REV. 2. THESE SIGNS SHALL BE INSTALLED ON ALL STATE MAINTAINED ROADWAYS AND REMAIN IN PLACE FOR THE DURATION OF THE PROJECT.

SIGN SPACING SHALL BE ADJUSTED TO FIT FIELD CONDITIONS WITH APPROVAL OF THE ENGINEER.

TRANSPORTATION OPERATIONS PLAN

A). THE CONTRACTOR IS RESPONSIBLE FOR THE FOLLOWING:
1. NOTIFY THE CITY AND REGIONAL TRANSPORTATION OPERATIONS CENTER (TOC) TWO (2) WEEKS IN ADVANCE TO PLACE LANE CLOSURE INFORMATION ON THE 511 SYSTEM AND VA –TRAFFIC.
2. POST A LIST OF LOCAL EMERGENCY RESPONSE AGENCIES INSIDE THE PROJECT'S CONSTRUCTION OFFICE/TRAILER.
3. THE CONTRACTOR IS REQUIRED TO IMMEDIATELY REPORT ANY TRAFFIC INCIDENTS THAT OCCUR IN THE WORK ZONE AND EXPECTED TRAFFIC DELAYS.
4. WITHIN 24 HRS OF ANY INCIDENTS WITHIN THE CONSTRUCTION WORK ZONE A REVIEW OF THE TRAFFIC CONTROLS SHALL BE COMPLETED, AND NECESSARY ADJUSTMENTS MADE TO REDUCE THE FREQUENCY AND SEVERITY OF ANY FUTURE INCIDENTS.

B). A CONTACT LIST OF LOCAL AGENCIES FOR NOTIFICATION OF CONSTRUCTION DELAYS, INCIDENTS OR UNSCHEDULED TRAFFIC DELAYS MAY BE PRESENTED IN NARRATIVE FORMAT AS PART OF THE TEMPORARY TRAFFIC CONTROL (TTC).

C). PERIODIC REVIEWS WITH CITY PROJECT STAFF AND CONTRACTOR STAFF SHALL BE CONDUCTED THROUGHOUT THE LIFE OF THE PROJECT TO IDENTIFY POTENTIAL PROBLEMS.

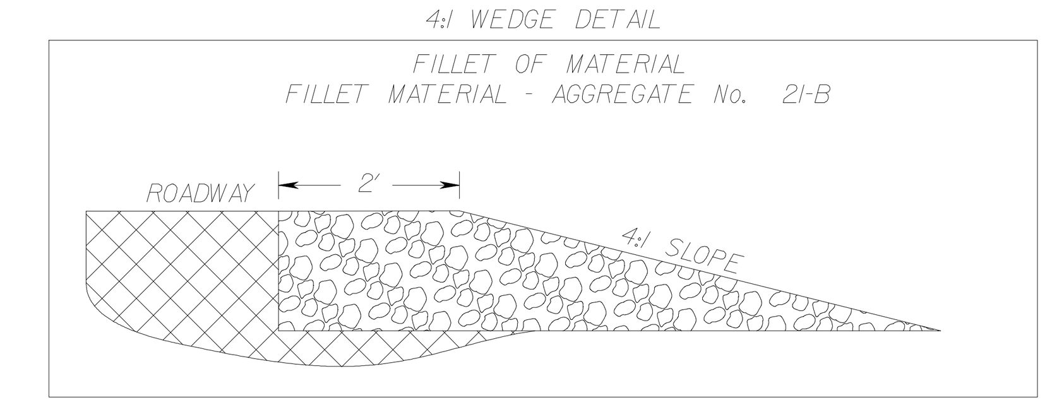
D). EMERGENCY CONTACT FOR THIS PROJECT SHALL BE 911.

SEQUENCE OF CONSTRUCTION

THE CONTRACTOR SHALL SUBMIT A PROPOSED SEQUENCE OF CONSTRUCTION AT THE PRECONSTRUCTION MEETING. THE CONTRACTOR SHALL PLAN AND EXECUTE THE WORK IN ACCORDANCE WITH THEIR SEQUENCE OF CONSTRUCTION PLAN UNLESS A CHANGE IS APPROVED OR DIRECTED BY THE ENGINEER. THE SEQUENCE OF CONSTRUCTION SHALL INCLUDE THE CONTRACTOR'S PLAN FOR:

- MAINTENANCE OF AUTOMOTIVE, BICYCLE, AND PEDESTRIAN TRAFFIC THROUGH THE PROJECT AREA
- CLOSURE AND/OR MAINTENANCE OF ON–STREET PARKING DURING CONSTRUCTION (IF EXPECTED TO BE IMPACTED DURING CONSTRUCTION)
- TEMPORARY RELOCATION OF BUS STOPS IN THE PROJECT LIMITS (IF EXPECTED TO BE IMPACTED DURING CONSTRUCTION)

4:1 WEDGE DETAIL



PLAN REVISIONS -

SHEET 2A OF 7

SCALE N.T.S.

ROSE HILL DRIVE AND RUGBY AVENUE INTERSECTION IMPROVEMENTS
CHARLOTTESVILLE, VIRGINIA

GENERAL NOTES AND DETAILS

DATE: 03/22/2022
ENGINEER: BNG
CHECKED: JSK
CAD: BNG
JOB#: 17018-07

COMMONWEALTH OF VIRGINIA
03/24/2022
JEFFREY SCOTT KUTTESCH
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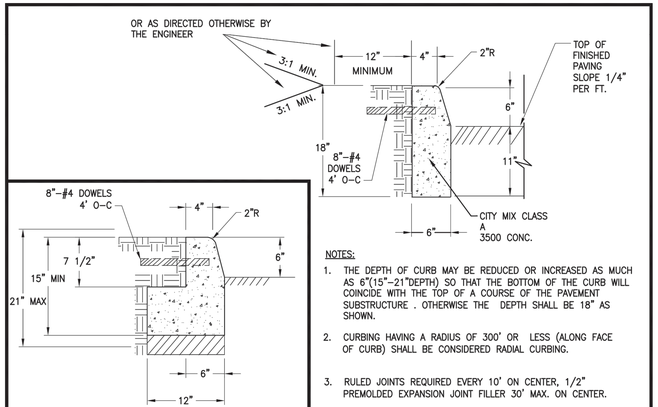
RK&K Engineers | Construction Managers | Planners | Scientists

RUMMEL, KLEPPER & KAHL, LLP



NOTES:

1. THE DEPTH OF CURB MAY BE REDUCED OR INCREASED AS MUCH AS 6"(15"–21"DEPTH) SO THAT THE BOTTOM OF THE CURB WILL COINCIDE WITH THE TOP OF A COURSE OF THE PAVEMENT SUBSTRUCTURE . OTHERWISE THE DEPTH SHALL BE 18" AS SHOWN.
2. CURBING HAVING A RADIUS OF 300' OR LESS (ALONG FACE OF CURB) SHALL BE CONSIDERED RADIAL CURBING.
3. RULED JOINTS REQUIRED EVERY 10' ON CENTER, 1/2" PREMOLDED EXPANSION JOINT FILLER 30' MAX. ON CENTER.
4. CONCRETE TO BE CITY MIX CLASS A 3500.

CITY OF CHARLOTTESVILLE

REVISION	DATE

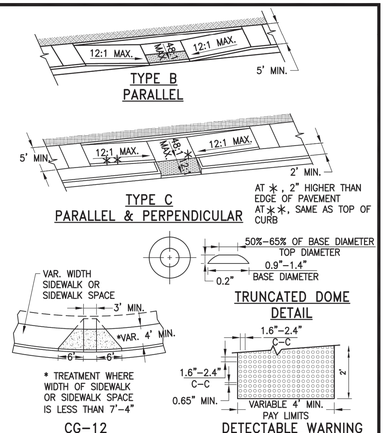
CITY STANDARDS

STANDARD CURBING

SCALE: N.T.S. STANDARD NUMBER: CG–2

GENERAL NOTES:

1. DETECTABLE WARNING TO BE PRE–FORMED PLASTIC INSERT WITH SLIP RESISTANT SURFACE COVERING THE FULL WIDTH OF THE RAMP FLOOR BY 2 FOOT IN LENGTH IN THE DIRECTION OF TRAVEL.
2. THE DETECTABLE WARNING SHALL BE PROVIDED BY TRUNCATED DOMES. TRUNCATED DOMES TO BE STAMPED IN TOP SURFACE. THE COLOR OF THE DETECTABLE WARNING SECTION SHALL BE YELLOW.
3. SLOPING SIDES OF CURB RAMP MAY BE POURED MONOLITHICALLY WITH RAMP FLOOR OR BY USING PERMISSIBLE CONSTRUCTION JOINT WITH REQUIRED BARS.
4. IF RAMP FLOOR IS PRECAST, HOLES MUST BE PROVIDED FOR DOWEL BARS SO THAT ADJOINING FLARED SIDES CAN BE CAST IN PLACE AFTER PLACEMENT OF PRECAST RAMP FLOOR. PRECAST CONCRETE SHALL BE CLASS A–4.
5. REQUIRED BARS ARE TO BE NO. 5 X 8" PLACED 1' CENTER TO CENTER ALONG BOTH SIDES OF THE RAMP FLOOR, MID–DEPTH OF RAMP FLOOR. MINIMUM CONCRETE COVER 1 1/2".
6. RAMPS MAY BE PLACED ON RADIAL OR TANGENTIAL SECTIONS PROVIDED THAT THE CURB OPENING IS PLACED WITHIN THE LIMITS OF THE CROSSWALK AND THAT THE SLOPE AT THE CONNECTION OF THE CURB OPENING IS PERPENDICULAR TO THE CURB.
7. TYPICAL CONCRETE SIDEWALK IS 4" THICK. WHEN THE RAMP IS PLACED IN THE CURB RETURN RADIUS IT SHALL BE 7" THICK.
8. WHEN CURB RAMPS ARE USED IN CONJUNCTION WITH A SHARED USE PATH, THE MINIMUM WIDTH SHALL BE THE WIDTH OF THE SHARED USE PATH.



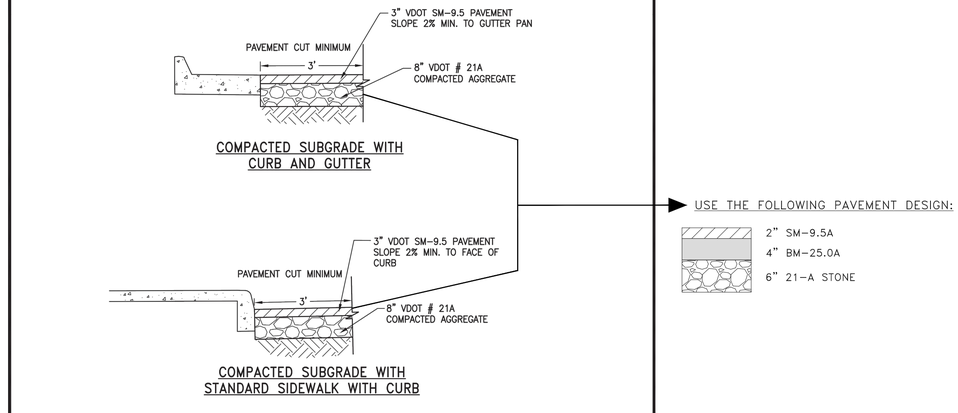
CITY OF CHARLOTTESVILLE

REVISION	DATE

CITY STANDARDS

CG–12 DETECTABLE WARNING SURFACE GENERAL NOTES (SHEET 1 OF 3)

SCALE: N.T.S. STANDARD NUMBER: CG–12



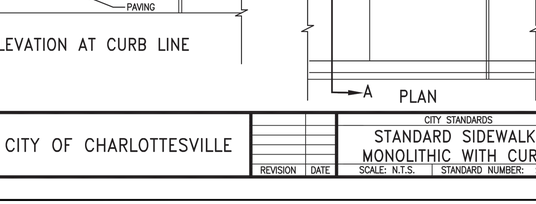
CITY OF CHARLOTTESVILLE

REVISION	DATE

CITY STANDARDS

MINIMUM PAVEMENT PATCH

SCALE: N.T.S. STANDARD NUMBER: PP–1



NOTES:

1. THE BOTTOM OF THE CURB AND GUTTER MAY BE CONSTRUCTED PARALLEL TO THE SLOPE OF SUB–SURFACE COURSES PROVIDED A MINIMUM DEPTH OF 7" IS MAINTAINED.
2. COMBINATION CURB & GUTTER HAVING A RADIUS OF 300' OR LESS (ALONG FACE OF CURB) SHALL BE CONSIDERED RADIAL COMBINATION CURB & GUTTER.
3. RULED JOINTS SHALL BE PLACED AT 10' O.C.
4. PLACE 1/2" PREMOLDED EXPANSION JOINT FILLER AT 30' MAX. O.C.

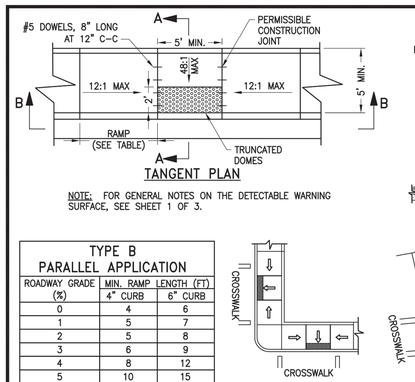
CITY OF CHARLOTTESVILLE

REVISION	DATE

CITY STANDARDS

COMBINATION CURB & GUTTER

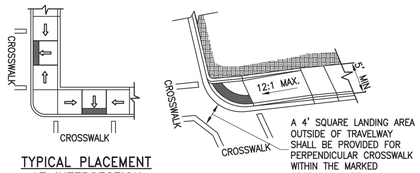
SCALE: N.T.S. STANDARD NUMBER: CG–6



TYPE B PARALLEL APPLICATION

ROADWAY GRADE (%)	MIN. RAMP LENGTH (FT) 4" CURB	6" CURB
0	4	6
1	5	7
2	5	8
3	6	9
4	8	12
5	10	15
6	14	15

NOTE: THE REQUIRED LENGTH OF A PARALLEL RAMP IS LIMITED TO 15 FEET, REGARDLESS OF THE SLOPE.



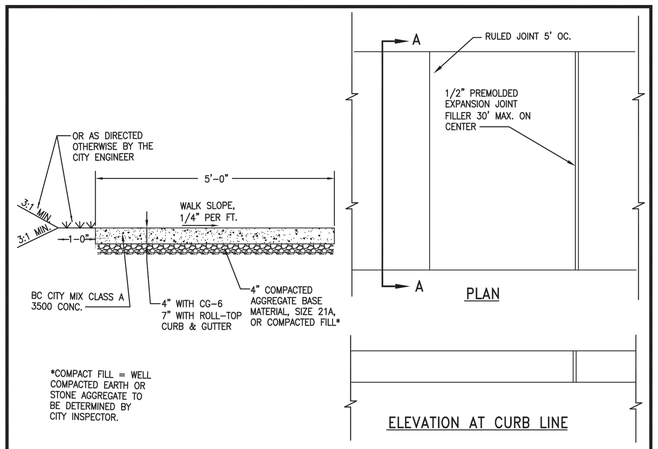
CITY OF CHARLOTTESVILLE

REVISION	DATE

CITY STANDARDS

CG–12 DETECTABLE WARNING SURFACE TYPE B (SHEET 2 OF 3)

SCALE: N.T.S. STANDARD NUMBER: CG–12



CITY OF CHARLOTTESVILLE

REVISION	DATE

CITY STANDARDS

STANDARD SIDEWALK WITHOUT CURB

SCALE: N.T.S. STANDARD NUMBER: SW–1

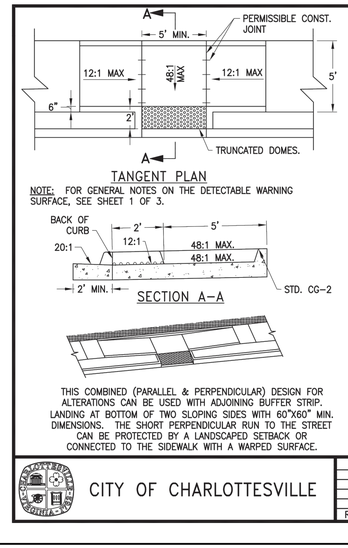
CITY OF CHARLOTTESVILLE

REVISION	DATE

CITY STANDARDS

STANDARD SIDEWALK MONOLITHIC WITH CURB

SCALE: N.T.S. STANDARD NUMBER: SW–2



TYPE C PARALLEL & PERPENDICULAR APPLICATION

ROADWAY GRADE (%)	MIN. RAMP LENGTH (FT) 4" CURB	6" CURB
0	2	4
1	2	5
2	3	5
3	3	6
4	4	8
5	5	10
6	7	14
7	13	15
8	15	15

NOTE: THE REQUIRED LENGTH OF A PARALLEL RAMP IS LIMITED TO 15 FEET, REGARDLESS OF THE SLOPE.

CITY OF CHARLOTTESVILLE

REVISION	DATE

CITY STANDARDS

CG–12 DETECTABLE WARNING SURFACE TYPE C (SHEET 3 OF 3)

SCALE: N.T.S. STANDARD NUMBER: CG–12

PLAN REVISIONS -

SHEET 2B OF 7

SCALE N.T.S.

ROSE HILL DRIVE AND RUGBY AVENUE INTERSECTION IMPROVEMENTS
CHARLOTTESVILLE, VIRGINIA

GENERAL NOTES AND DETAILS

DATE: 03/22/2022
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RUMMEL, KLEPPER & KAHL, LLP

GENERAL EROSION AND SEDIMENT CONTROL NOTES

ES-1: UNLESS OTHERWISE INDICATED, ALL VEGETATIVE AND STRUCTURAL EROSION AND SEDIMENT CONTROL PRACTICES WILL BE CONSTRUCTED AND MAINTAINED ACCORDING TO MINIMUM STANDARDS AND SPECIFICATIONS OF THE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK AND VIRGINIA REGULATIONS VR 625-02-00 EROSION AND SEDIMENT CONTROL REGULATIONS.

ES-2: THE PLAN APPROVING AUTHORITY MUST BE NOTIFIED ONE WEEK PRIOR TO THE PRE-CONSTRUCTION CONFERENCE, ONE WEEK PRIOR TO THE COMMENCEMENT OF LAND DISTURBING ACTIVITY, AND ONE WEEK PRIOR TO THE FINAL INSPECTION.

ES-3: ALL EROSION AND SEDIMENT CONTROL MEASURES ARE TO BE PLACED PRIOR TO OR AS THE FIRST STEP IN CLEARING.

ES-4: A COPY OF THE APPROVED EROSION AND SEDIMENT CONTROL PLAN SHALL BE MAINTAINED ON THE SITE AT ALL TIMES.

ES-5: PRIOR TO COMMENCING LAND DISTURBING ACTIVITIES IN AREAS OTHER THAN INDICATED ON THESE PLANS (INCLUDING, BUT NOT LIMITED TO, OFF-SITE BORROW OR WASTE AREAS), THE CONTRACTOR SHALL SUBMIT A SUPPLEMENTARY EROSION CONTROL PLAN TO THE OWNER FOR REVIEW AND APPROVAL BY THE PLAN APPROVING AUTHORITY.

ES-6: THE CONTRACTOR IS RESPONSIBLE FOR INSTALLATION OF ANY ADDITIONAL EROSION CONTROL MEASURES NECESSARY TO PREVENT EROSION AND SEDIMENTATION AS DETERMINED BY THE PLAN APPROVING AUTHORITY.

ES-7: ALL DISTURBED AREAS ARE TO DRAIN TO APPROVED SEDIMENT CONTROL MEASURES AT ALL TIMES DURING LAND DISTURBING ACTIVITIES AND DURING SITE DEVELOPMENT UNTIL FINAL STABILIZATION IS ACHIEVED.

ES-8: DURING DEWATERING OPERATIONS, WATER WILL BE PUMPED INTO AN APPROVED FILTERING DEVICE.

ES-9: THE CONTRACTOR SHALL INSPECT ALL EROSION CONTROL MEASURES PERIODICALLY AND AFTER EACH RUNOFF-PRODUCING RAINFALL EVENT. ANY NECESSARY REPAIRS OR CLEANUP TO MAINTAIN THE EFFECTIVENESS OF THE EROSION CONTROL DEVICES SHALL BE MADE IMMEDIATELY.

EROSION CONTROL NOTES

1. UNLESS OTHERWISE INDICATED, ALL VEGETATIVE AND STRUCTURAL EROSION AND SEDIMENT CONTROL PRACTICES WILL BE CONSTRUCTED AND MAINTAINED ACCORDING TO MINIMUM STANDARDS AND SPECIFICATIONS OF THE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK AND VIRGINIA REGULATIONS VR 625-02-00 EROSION AND SEDIMENT CONTROL REGULATIONS.
2. ALL EROSION AND SEDIMENT CONTROL MEASURES ARE TO BE PLACED PRIOR TO OR AS THE FIRST STEP IN CLEARING. IF DURING CONSTRUCTION, ADDITIONAL EROSION CONTROL DEVICES ARE FOUND NECESSARY, THEY SHALL BE INSTALLED AS DIRECTED BY THE DEPARTMENT OF COMMUNITY DEVELOPMENT.
3. A COPY OF THE APPROVED EROSION AND SEDIMENT CONTROL PLAN SHALL BE MAINTAINED ON THE SITE AT ALL TIMES.
4. NO DISTURBED AREA WILL BE DENUDED FOR MORE THAN 30 CALENDAR DAYS
5. ALL STORM AND SANITARY SEWER LINES NOT IN STREETS ARE TO BE MULCHED AND SEEDED IMMEDIATELY AFTER BACKFILL. NO MORE THAN FIVE HUNDRED (500) FEET ARE TO BE OPEN AT ONE TIME.
6. ELECTRIC POWER, TELEPHONE, AND GAS SUPPLY TRENCHES ARE TO BE COMPACTED, SEEDED AND MULCHED IMMEDIATELY AFTER BACKFILL
7. ALL TEMPORARY EARTH BERMS, DIVERSIONS, AND SILT DAMS ARE TO BE MULCHED AND SEEDED FOR VEGETATIVE COVER IMMEDIATELY AFTER GRADING. STRAW OR HAY MULCH IS REQUIRED. THE SAME APPLIES TO ALL SOIL STOCKPILES.
8. DURING CONSTRUCTION, ALL STORM SEWER INLETS WILL BE PROTECTED BY SILT TRAPS, MAINTAINED AND MODIFIED AS REQUIRED BY CONSTRUCTION PROGRESS.
9. ANY DISTURBED AREA NOT PAVED, SODDED, OR BUILT UPON BY NOVEMBER 1ST, IS TO BE SEEDED ON THAT DATE WITH OATS, ABRUZZI, RYE OR EQUIVALENT AND MULCHED WITH HAY OR STRAW MULCH. MODIFY AS APPLICABLE DEPENDING ON PROPOSED TIME OF CONSTRUCTION.
10. THE CONTRACTOR SHALL INSPECT ALL EROSION CONTROL MEASURES PERIODICALLY AND AFTER EACH RUNOFF-PRODUCING RAINFALL EVENT ANY NECESSARY REPAIRS OR CLEANUP TO MAINTAIN THE EFFECTIVENESS OF THE EROSION CONTROL DEVICES SHALL BE MADE IMMEDIATELY.
11. DURING DEWATERING OPERATIONS, WATER WILL BE PUMPED INTO AN APPROVED FILTERING DEVICE.
12. PRIOR TO COMMENCING LAND DISTURBING ACTIVITIES IN AREAS OTHER THAN INDICATED ON THESE PLANS (INCLUDING, BUT NOT LIMITED TO, OFF-SITE BORROW OR WASTE AREAS), THE CONTRACTOR SHALL SUBMIT A SUPPLEMENTARY EROSION CONTROL PLAN TO THE OWNER FOR REVIEW AND APPROVAL BY THE DEPARTMENT OF COMMUNITY DEVELOPMENT.

APPLICABLE MINIMUM STANDARDS (EROSION AND SEDIMENT CONTROL LAW AND REGULATIONS)

MS-1: 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. 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. PERMANENT STABILIZATION SHALL BE APPLIED TO AREAS THAT ARE TO BE LEFT DORMANT FOR MORE THAN ONE YEAR.

MS-2: 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.

MS-3: A 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 AND WILL INHIBIT EROSION.

MS-7: CUT AND FILL SLOPES SHALL BE DESIGNED AND CONSTRUCTED IN A MANNER THAT WILL MINIMIZE EROSION. SLOPES THAT ARE FOUND TO BE ERODING EXCESSIVELY WITHIN ONE YEAR OF PERMANENT STABILIZATION SHALL BE PROVIDED WITH ADDITIONAL SLOPE STABILIZING MEASURES UNTIL THE PROBLEM IS CORRECTED.

MS-10: ALL STORM SEWER INLETS THAT ARE MADE OPERABLE DURING CONSTRUCTION SHALL BE PROTECTED SO THAT SEDIMENT-LADEN WATER CANNOT ENTER THE CONVEYANCE SYSTEM WITHOUT FIRST BEING FILTERED OR OTHERWISE TREATED TO REMOVE SEDIMENT.

MS-11: 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 RECEIVING CHANNEL.

MS-16: UNDERGROUND UTILITY LINES SHALL BE INSTALLED IN ACCORDANCE WITH THE MINIMUM STANDARDS AND SPECIFICATIONS OF THE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK AND VIRGINIA REGULATIONS VR625-02-00 EROSION AND SEDIMENT CONTROL REGULATIONS IN ADDITION TO OTHER APPLICABLE CRITERIA.

MS-17: WHERE CONSTRUCTION VEHICLE ACCESS ROUTES INTERSECT PAVED OR PUBLIC ROADS, PROVISIONS SHALL BE MADE TO MINIMIZE THE TRANSPORT OF SEDIMENT BY VEHICULAR TRACKING ONTO THE PAVED SURFACE. WHERE SEDIMENT IS TRANSPORTED ONTO A PAVED OR PUBLIC ROAD SURFACE, THE ROAD SURFACE SHALL BE CLEANED THOROUGHLY AT THE END OF EACH DAY. 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.

MS-18: 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 LOCAL 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.

MS-19: PROPERTIES AND WATERWAYS DOWNSTREAM FROM DEVELOPMENT SITES SHALL BE PROTECTED FROM SEDIMENT DEPOSITION, EROSION AND DAMAGE DUE TO INCREASES IN VOLUME, VELOCITY AND PEAK FLOW RATE OF STORMWATER RUN-OFF FOR THE STATED FREQUENCY STORM OF 24-HOUR DURATION IN ACCORDANCE WITH THE FOLLOWING STANDARDS AND CRITERIA. (REFER TO SITE PLAN FOR FULL STORMWATER MANAGEMENT PLAN AS IT APPLIES TO MS-19.)

MS-4, 5, AND 6:
NO SILT TRAPS OR BASINS ARE REQUIRED FOR THIS LIMITED LAND DISTURBANCE ACTIVITY.

MS-8, 9, 12, 13, 14, AND 15:
STEEP SLOPED CUT/FILL AREAS ARE NOT PREVALENT WITH IN THE PROJECT, NO SEEPS APPEAR TO BE ON THE PROJECT AND NO "LIVE" STREAMS OR "WATERCOURSES" EXIST ON THE SITE; THEREFORE NONE WILL BE IMPACTED.

LIME AND FERTILIZER

LIME AND FERTILIZER NEED SHOULD BE DETERMINED BY SOIL TEST. SOIL TESTS MAY BE PERFORMED BY COOPERATIVE EXTENSION SERVICE SOIL TESTING LABORATORY AT VPI&SU, OR BY A REPUTABLE COMMERCIAL LABORATORY. INFORMATION CONCERNING THE STATE SOIL TESTING LABORTORY IS AVAILABLE FROM COUNTY EXTENSION AGENTS. REFERENCE APPENDIX 3.32-D FOR LIMING APPLICATIONS (IN LBS.) NEEDED TO CORRECT UNDESIRABLE PH FOR VARIOUS SOIL TYPES.

UNDER UNUSAL CONDITIONS WHERE IT IS NOT POSSIBLE TO OBTAIN A SOIL TEST, THE FOLLOWING SOIL AMENDMENTS WILL BE APPLIED:

LIME:
COASTAL PLAIN:
2 TONS/ACRE PULVERIZED AGRICULTURAL GRADE LIMESTONE (90 LBS./1000SQ.FT.)

PIEDMONT AND APPALACHIAN REGION:
2 TONS/ACRE PULVERIZED AGRICULTURAL GRADE LIMESTONE (90 LBS./1000 SQ.FT.)

NOTE: AN AGRICULTURAL GRADE OF LIMESTONE SHOULD ALWAYS BE USED.

FERTILIZER:
MIXED GRASSES AND LEGUMES:
1000 LBS/ACRE 5-20-10 (23 LBS./1000 SQ. FT.) IS PREFERRED; HOWEVER, 1000 LBS./ACRE OF 10-20-10 OR EQUIVALENT MAY BE USED.

GRASS STANDS ONLY:
1000 LBS/ACRE 10-20-10 OR EQUIVALENT NUTRIENTS, (23 LBS./1000 SQ.FT.)

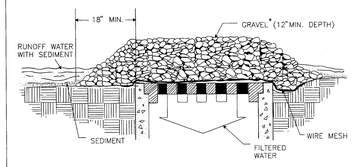
OTHER FERTILIZER FORMULATIONS, INCLUDING SLOW-RELEASE SOURCES OF NITROGEN (PREFERRED FROM A WAER QUALITY STANDPOINT), MAY BE USED PROVIDED THEY CAN SUPPLY THE SAME AMOUNTS AND PROPORTIONS OF PLANT NUTRIENTS.

INCORPORATION: LIME AND FERTILIZER SHALL BE INCORPORATED INTO THE TOP 4-6 INCHES OF THE SOIL BY DISCING OR OTHERS MEANS WHENEVER POSSIBLE. FOR EROSION CONTROL, WHEN APPLYING LIME AND FERTILIZER WITH A HYDROSEEDER, APPLY TO A ROUGH, LOOSE SURFACE.

NOTE:
SEEDING, MULCHING, LIMING, AND FERTILIZER PER VIRGINIA EROSION AND SEDIMENT MANUAL. FINAL DETAILS FOR FINISHED LANDSCAPING SPECIFICATIONS TO APPLY IF EQUAL OR GREATER.

1992 3.07

GRAVEL AND WIRE MESH DROP INLET SEDIMENT FILTER



SPECIFIC APPLICATION

THIS METHOD OF INLET PROTECTION IS APPLICABLE WHERE HEAVY CONCENTRATED FLOWS ARE EXPECTED, BUT NOT WHERE PONDING AROUND THE STRUCTURE MIGHT CAUSE EXCESSIVE INCONVENIENCE OR DAMAGE TO ADJACENT STRUCTURES AND UNPROTECTED AREAS.

* GRAVEL SHALL BE VDOT #3, #357 OR #5 COARSE AGGREGATE.

Source: Va. DSWC Plate 3.07-2

III - 36

TEMPORARY SEEDING PLANT MATERIALS, SEEDING RATES, AND DATES

SPECIES	SEEDING RATE		NORTH[a] 3/1 to 4/30	NORTH[a] 5/1 to 8/15	NORTH[a] 8/15 to 11/1	SOUTH[b] 2/15 to 4/30	SOUTH[b] 5/1 to 9/1	SOUTH[b] 9/1 to 11/15	PLANT CHARACTERISTICS
OATS (Avena sativa)	3 bu. (up to 100 lbs. not less than 50 lbs.)	2 lbs.	X	–	–	X	–	–	Use spring varieties (e.g., Noble).
RYE[d] (Secale cereale)	2 bu. (up to 110 lbs. not less than 50 lbs.)	2.5 lbs	X	–	X	X	–	X	Use for late fall seedings, winter cover. Tolerates cold and low moisture.
GERMAN MILLET (Setaria italica)	50 lbs.	approx. 1 lb.	–	X	–	–	X	–	May be added in mixes. Will mow out of most stands.
ANNUAL RYEGRASS[c] (Lolium multi-florum)	60 lbs.	*1 ½ lbs.*	X	–	X	X	–	X	ANNUAL RYEGRASS[c] (Lolium multi-florum)
WEEPING LOVEGRASS (Eragrostis curvula)	15 lbs.	*5 ½ ozs.*	–	X	–	–	X	–	Warm-season perennial. May bunch. Tolerates hot, dry slopes and acid, infertile soils. May be added to mixes.
KOREAN LESPEDEZA[c] (Lespedeza stipulacea)	25 lbs.	*approx. 1 ½ lbs.*	X	X	–	X	X	–	Warm season annual legume. Tolerates acid soils. May be added to mixes.

a Northern Piedmont and Mountain region. See Plates 3.22-1 and 3.22-2.
b Southern Piemond and Coastal Plain.
c May be used as a cover crop with spring seeding.
d May be Used as a cover crop with fall seeding.
X May be planted between these dates.
– May not be planeted between these dates.

SEEDING MIXTURES, RATES AND DATES; SOUTHERN PIEDMONT AND COASTAL PLAIN

SITE CONDITIONS	SEEDING MIXTURES	RATES PER ACRE	RATES PER 1000 ft|s2	DATES 3/1 to 4/15	DATES 4/15 to 8/1	DATES 8/1 to 10/15
High Maintaince Lawns	1. Tall fescue–90% Kentucky bluegrass–10%	250 lbs.	6 lbs.	X	no	X
Low Maintaince General Use	2. Tall fescue–50% Ladino clover–10% Red clover–10% Korean lespedeza–15% Annual ryegrass–15%	80 lbs.	2 lbs.	X	(a,b) X	X
	3. Tall fescue–50% Sericea lespedeza–30% Annual ryegrass–20%	70 lbs.	*1 ½ lbs.*	X	(a) X	X
Droughty Area, Sandy Soils	4. Tall fescue–50% Sericea lespedeza–20% Korean lespedeza–15% Annual ryegrass–15%	80 lbs.	2 lbs.	X	(a,b) X	X
Poorly Drained Areas	5. Tall fescue–60% Korean lespedeza–20% Annual ryegrass–10% Redtop–5%	80 lbs.	2 lbs.	X	(a,b) X	X

a After May1, use 10 lb/A german millet or 2 lb/A weeping lovegrass in place of annual ryegrass.
b After May 1, Kprean lespedeza will not reseed itself. You may increase the amount of other legumes accordingly.
Source: VA SWCC

ACCEPTABLE TEMPORARY SEEDING PLANT MATERIALS "QUICK REFERENCE FOR ALL REGIONS"

Planting Dates	Species	Rate (lbs./acre)
Sept. 1 – Feb. 15	50/50 Mix of Annual Ryegrass (Lolium multi- florum) & Cereal (Winter) Rye (Secale cereale)	50 – 100
Feb. 16 – Apr. 30	Annual Ryegrass (Lolium multi- florum)	60 – 100
May 1 – Aug. 31	German Millet (Setaria italica)	50

ORGANIC MULCH MATERIALS AND APPLICATION RATES

MULCHES	RATES Per Acre	RATES Per 1000 sq.ft.	NOTES
Straw or Hay	*1 ½ – 2 tons* (Minimum 2 tons for over winter cover)	70–90 lbs.	Free from weeds and coarse matter. Must be anchored. Spread with mulch blower or by hand.
Fiber Mulch	Minimum 1500 lbs	35 lbs.	Do not use as mulch for winter cover or during hot, dry periods. * Apply as slurry
Corn Stalks	4–6 tons	185–275 lbs.	Cut or shedded in 4–6" lengths. Air-dried. Do not use in fine turf areas. Apply with mulch blower or by hand.
Wood Chips	4–6 tons	185–275 lbs.	Free of coarse matter. Air-dried. Treat with 12 lbs nitrogen per ton. Do not use in fine turf areas. Apply with mulch blower, chip handler, or by hand.
Bark Chips Or Shredded Bark	50–70 cu. Yds.	1–2 cu. Yds.	Free of coarse matter. Air-dried. Do not use in fine turf areas. Apply with mulch blower, chip handler, or by hand.

* When fiber mulch is the only available mulch during periods when straw should be used, apply at a minimum rate of 2000 lbs./ac. Or 45 lbs./1000 sq. ft.

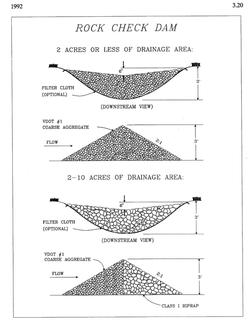
LIMING REQUIREMENTS FOR TEMPORARY SITES

Agricultural Limestone	Recommended Application of Agricultural Limestone
Below 4.2	3 tons per acre
4.2 to 5.2	2 tons per acre
5.2 to 6	1 ton per acre

Source: VA SWCC

1992 3.20

ROCK CHECK DAM

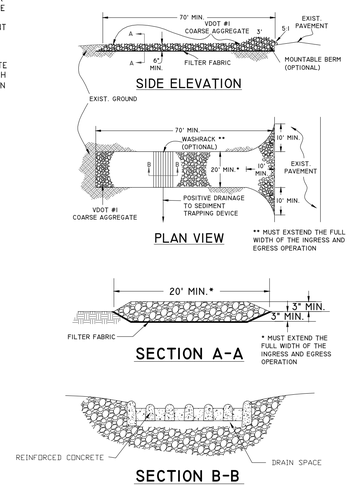


Source: Va. DSWC Plate 3.20-1

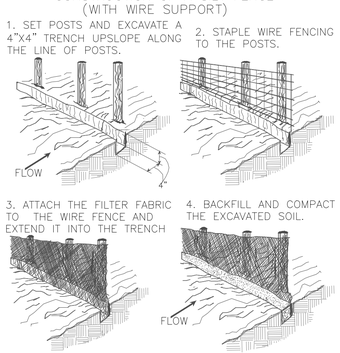
III - 187

STONE CONSTRUCTION ENTRANCE

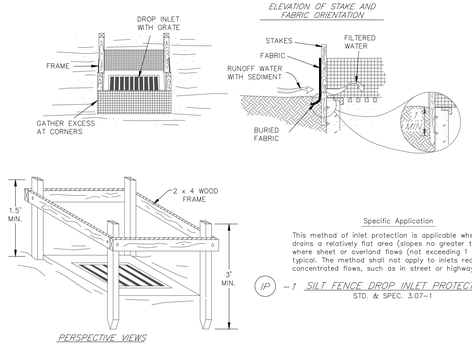
STD. & SPEC. 3.02 - VA. EROSION AND SEDIMENT CONTROL HANDBOOK (1992)



CONSTRUCTION OF A SILT FENCE (WITH WIRE SUPPORT)



SF REINFORCED SILT FENCE
STD. & SPEC. 3.05-2



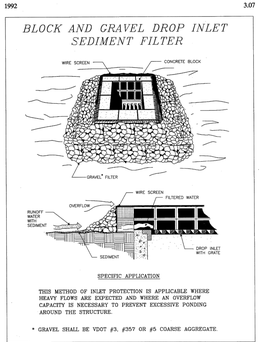
Specific Application

This method of inlet protection is applicable where the inlet drains a relatively flat area (slopes no greater than 5%) where sheet or overland flows (not exceeding 1 cfs) are typical. The method shall not apply to inlets receiving concentrated flows, such as in street or highway medians.

IP – 1 SILT FENCE DROP INLET PROTECTION
STD. & SPEC. 3.07-1

1992 3.07

BLOCK AND GRAVEL DROP INLET SEDIMENT FILTER



SPECIFIC APPLICATION

THIS METHOD OF INLET PROTECTION IS APPLICABLE WHERE HEAVY FLOWS ARE EXPECTED AND WHERE AN OVERFLOW CAPACITY IS NECESSARY TO PREVENT EXCESSIVE PONDING AROUND THE STRUCTURE.

* GRAVEL SHALL BE VDOT #3, #357 OR #5 COARSE AGGREGATE.

Source: Va. DSWC Plate 3.07-3

III - 38

PLAN REVISIONS -

SHEET 2C OF 7

SCALE N.T.S.

ROSE HILL DRIVE AND RUGBY AVENUE INTERSECTION IMPROVEMENTS
CHARLOTTESVILLE, VIRGINIA

GENERAL NOTES AND DETAILS

DATE: 03/22/2022
ENGINEER: BNG
CHECKED: JSK
CAD: BNG
JOB#: 17018-07

COMMONWEALTH OF VIRGINIA
03/24/2022
JEFFREY SCOTT KUTTESCH
Lic. No. 047612
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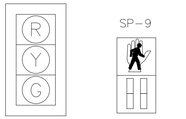
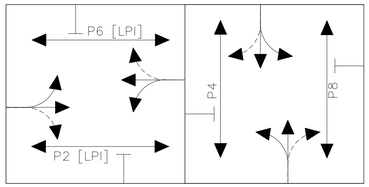
SIGNALS



(2)(4)(6)(8) (P2)(P4)(P6)(P8)

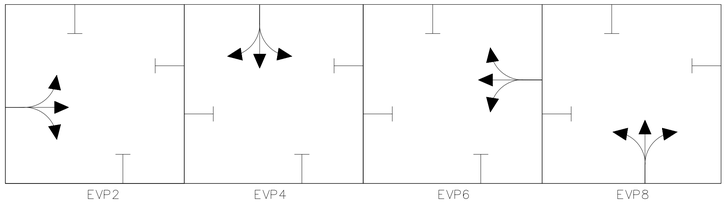
- ALL SIGNAL FACES SHALL BE 12" LED
- ALL SIGNAL HEADS SHALL HAVE RETROREFLECTIVE BACK PLATES AND FULL TUNNEL VISORS

PHASING DIAGRAM



[LPI] INDICATES LEADING PEDESTRIAN INTERVAL

PREEMPTION DIAGRAM



MAST ARM POLE LEGEND

(1) ONE 20' ST'D MP-3 TYPE B2 MAST ARM POLE & 65' MAST ARM (VIDEO DETECTION CAMERA HEIGHT 24' MIN.)

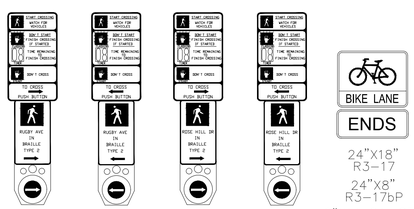
(2)(3)(4)(5)(6)(7)(8)(9) ONE 10' ST'D PF-2 PEDESTAL POLE

COLOR SEQUENCE CHART

Signal	Phases				Combinations		Flash
	2	4	6	8	ø2 & ø6	ø4 & ø8	
2	G				G		Y
4		G				G	R
6			G		G		Y
8				G		G	R
P2	W-LPI	DW	DW	DW	W	DW	BLANK
P4	DW	W	DW	DW	DW	W	BLANK
P6	DW	DW	W-LPI	DW	W	DW	BLANK
P8	DW	DW	DW	W	DW	W	BLANK

- EMPTY BOXES DENOTE RED INDICATIONS.
- "WALK" INDICATION DISPLAYED AFTER PEDESTRIAN CALL HAS BEEN SERVICED. OTHERWISE "DON'T WALK" WILL BE DISPLAYED.
- PEDESTRIAN SIGNALS SHALL BE DW DURING PREEMPTION.
- W-LPI INDICATES LEADING PEDESTRIAN INTERVAL.

SIGN LEGEND



9"X15" R10-3E(R)	9"X15" R10-3E(L)	9"X15" R10-3E(R)	9"X15" R10-3E(L)	24"X18" R3-17 / 24"X8" R3-17bP / 2"X14 GA. STP TY. A FOUND.
1	2	3	4	5

INSTALL ACCESSIBLE PEDESTRIAN SIGNALS (APS) AND PUSHBUTTONS AT ALL CROSSWALKS.
- SPEECH MESSAGE FOR SIGNS 1 AND 2: "RUGBY, WALK SIGN IS ON TO CROSS RUGBY."
- SPEECH MESSAGE FOR SIGNS 3 AND 4: "ROSE HILL. WALK SIGN IS ON TO CROSS ROSE HILL."

CONDUIT LEGEND

(A) 2" CONDUIT
1-14/4c (PED HD)
1-14/2c (PB)
1-#8 EGC

(B) 3" CONDUIT BORED
3" CONDUIT BORED SPARE
2-14/4c (PED HD)
2-14/2c (PB)
2-#8 EGC

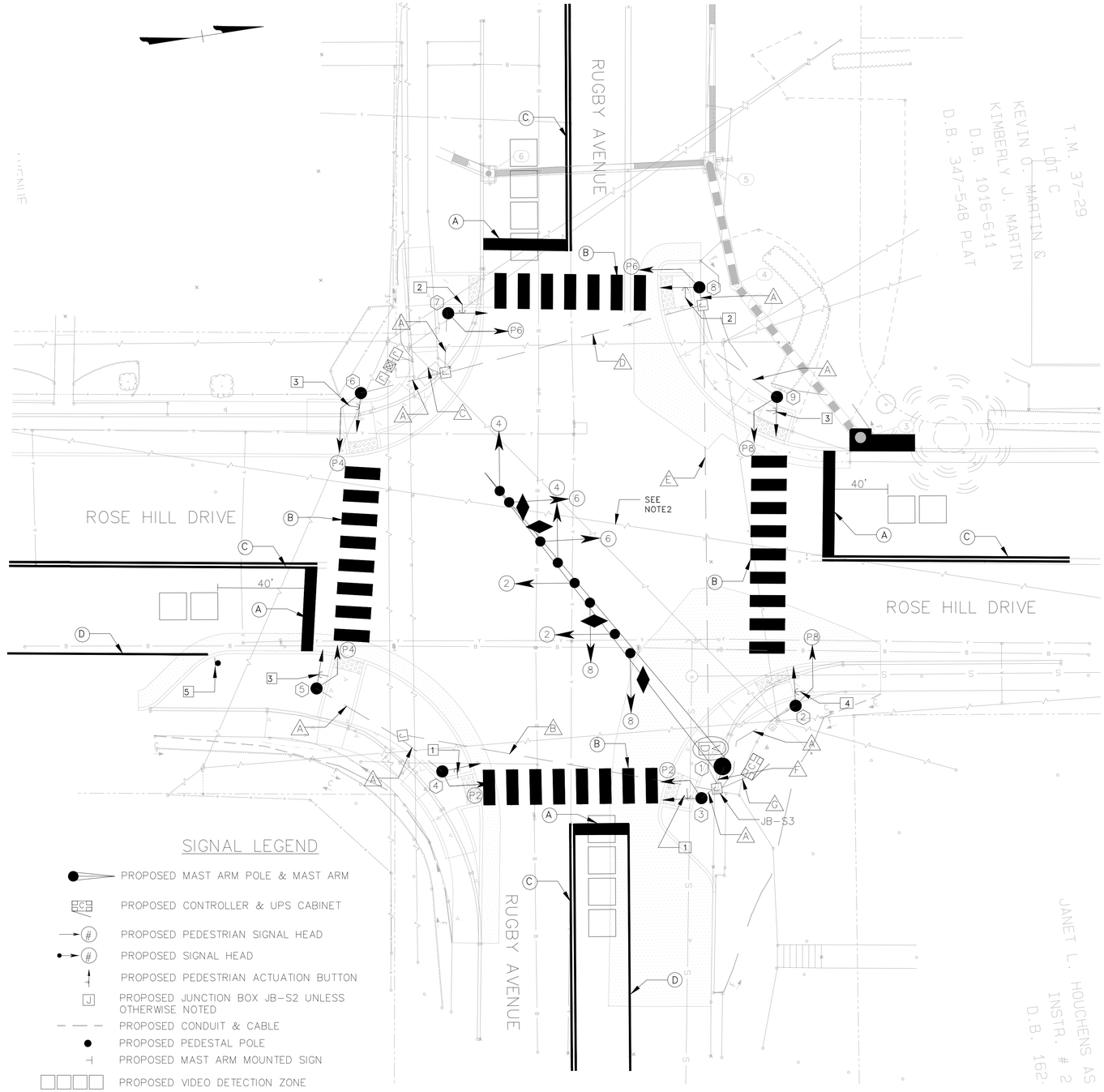
(C) 2" CONDUIT
3-#6/1 (ELEC. SERV.)

(D) 3" CONDUIT BORED
3" CONDUIT BORED SPARE
2-14/4c (PED HD)
2-14/2c (PB)
3-#6/1 (ELEC. SERV.)
2-#8 EGC

(E) 3" CONDUIT BORED
3" CONDUIT BORED SPARE
4-14/4c (PED HD)
4-14/2c (PB)
3-#6/1 (ELEC. SERV.)
2-#8 EGC

(F) 3" CONDUIT
4-14/4c (SIG HD)
4-EVP
1-VDC
1-#8 EGC

(G) 4" CONDUIT
3" CONDUIT
8-14/4c (PED HD, SIG HD)
8-14/2c (PB)
4-EVP
1-VDC
3-#6/1 (ELEC. SERV.)
2-#8 EGC



SIGNAL LEGEND

- PROPOSED MAST ARM POLE & MAST ARM
- PROPOSED CONTROLLER & UPS CABINET
- PROPOSED PEDESTRIAN SIGNAL HEAD
- PROPOSED SIGNAL HEAD
- PROPOSED PEDESTRIAN ACTUATION BUTTON
- PROPOSED JUNCTION BOX JB-S2 UNLESS OTHERWISE NOTED
- PROPOSED CONDUIT & CABLE
- PROPOSED PEDESTAL POLE
- PROPOSED MAST ARM MOUNTED SIGN
- PROPOSED VIDEO DETECTION ZONE
- PROPOSED 360° VIDEO DETECTION CAMERA
- PROPOSED EMERGENCY PREEMPTION GPS SYSTEM DETECTOR
- PROPOSED ELECTRICAL SERVICE SE-5

PAVEMENT MARKING LEGEND

(A) TY. B, CL. II – WHITE, 24" PAVEMENT MARKING

(B) TY. B, CL. II – WHITE, 24" PAVEMENT MARKING, 6' LONG, 2' SPACING

(C) TY. B, CL. II – YELLOW, 4" PAVEMENT MARKING, 4" WIDE, 4" SPACING

(D) TY. B, CL. II – WHITE, 4" PAVEMENT MARKING

NOTE: ERADICATE ANY EXISTING PAVEMENT MARKINGS THAT CONFLICT WITH PROPOSED PAVEMENT MARKINGS TO INCLUDE, BUT NOT LIMITED TO, STOP BARS, CROSSWALKS, LANE LINES, CENTER LINES, AND LANE USE ARROWS.

10 0 10 20
SCALE IN FEET

PLAN REVISIONS -

SHEET 3 OF 7

SCALE 1" = 10'

ROSE HILL DRIVE AND RUGBY AVENUE INTERSECTION IMPROVEMENTS
CHARLOTTESVILLE, VIRGINIA

LAYOUT PLAN

DATE: 03/22/2022
ENGINEER: BNG
CHECKED: JSK
CAD: BNG
JOB#: 17018-07

COMMONWEALTH OF VIRGINIA
03/24/2022
JEFFREY SCOTT KUTTESCH
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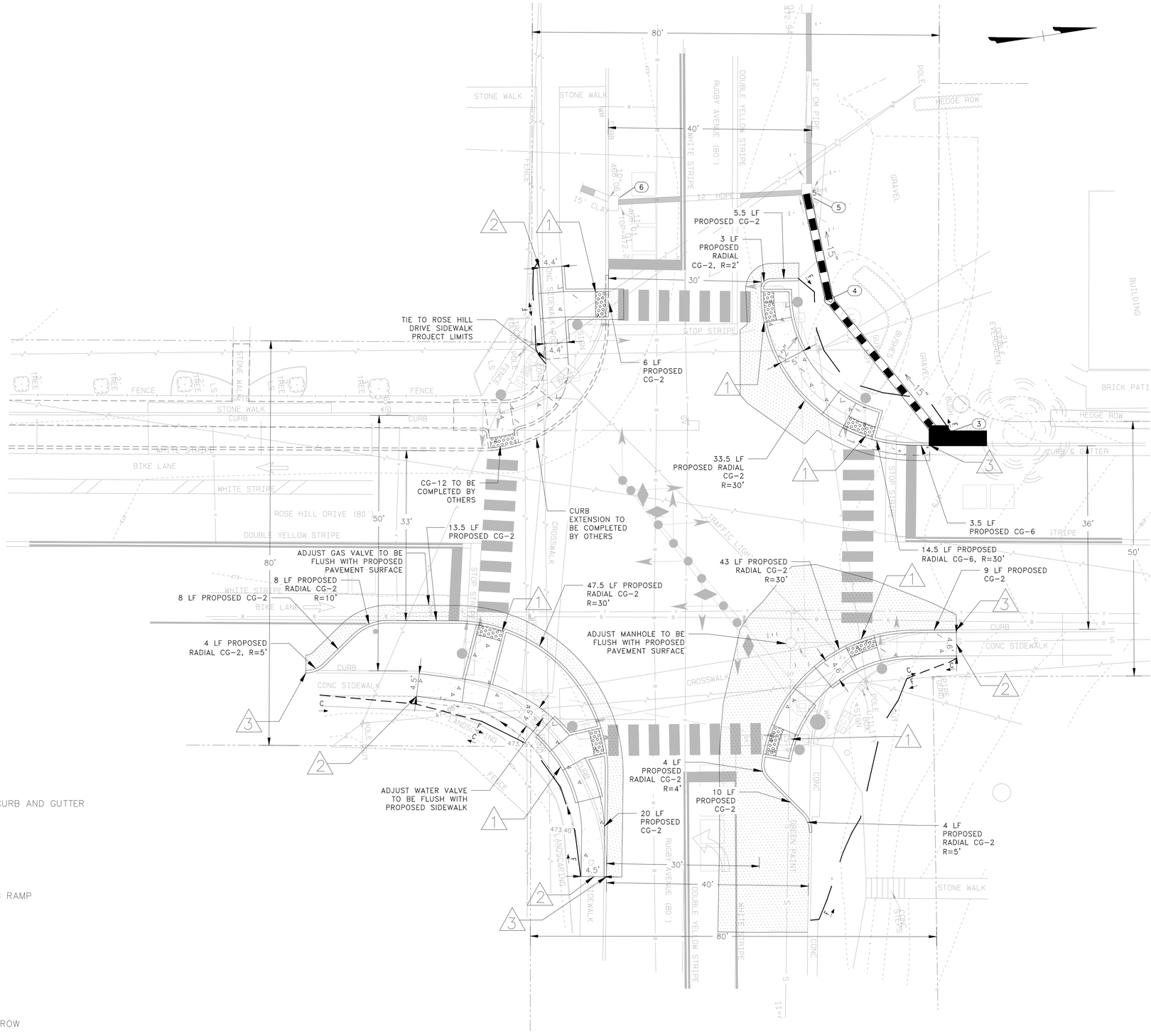

LEGEND

- PROPOSED CG-12
- TIE TO EXISTING SIDEWALK
- TIE TO EXISTING CURB / CURB AND GUTTER

- PROPOSED SIDEWALK/CURB RAMP
- PROPOSED RAISED DOMES
- ASPHALT PAVEMENT

- EXISTING ROW
- FILL LIMITS
- CUT LIMITS
- SWALE

DRAINAGE DESCRIPTIONS

(3) VDOT DI-3B, L=10' (H=4.00')
TOP 474.82

(3) – (4) 34 L.F. OF 15" CLIII RCP @ 0.96%
INV 470.82(IN), INV 470.49(OUT)

(4) VDOT MH-1 (H=2.49')
TOP 472.87

(4) – (5) 21 L.F. OF 15" CLIII RCP @ 0.50%
INV 470.39(IN), INV 470.28(OUT)

(5) EX. GRATE INLET
H=2.38'
TOP 472.56
INV.(15")(4) 470.28
INV.(12")(7) 470.34
INV.(12")(OUT) 470.18

10 0 10 20
SCALE IN FEET

PLAN REVISIONS -

SHEET 4 OF 7

SCALE 1" = 10'

ROSE HILL DRIVE AND RUGBY AVENUE INTERSECTION IMPROVEMENTS
CHARLOTTESVILLE, VIRGINIA

CURB AND SIDEWALK PLAN

DATE: 03/22/2022
ENGINEER: BNG
CHECKED: JSK
CAD: BNG
JOB#: 17018-07

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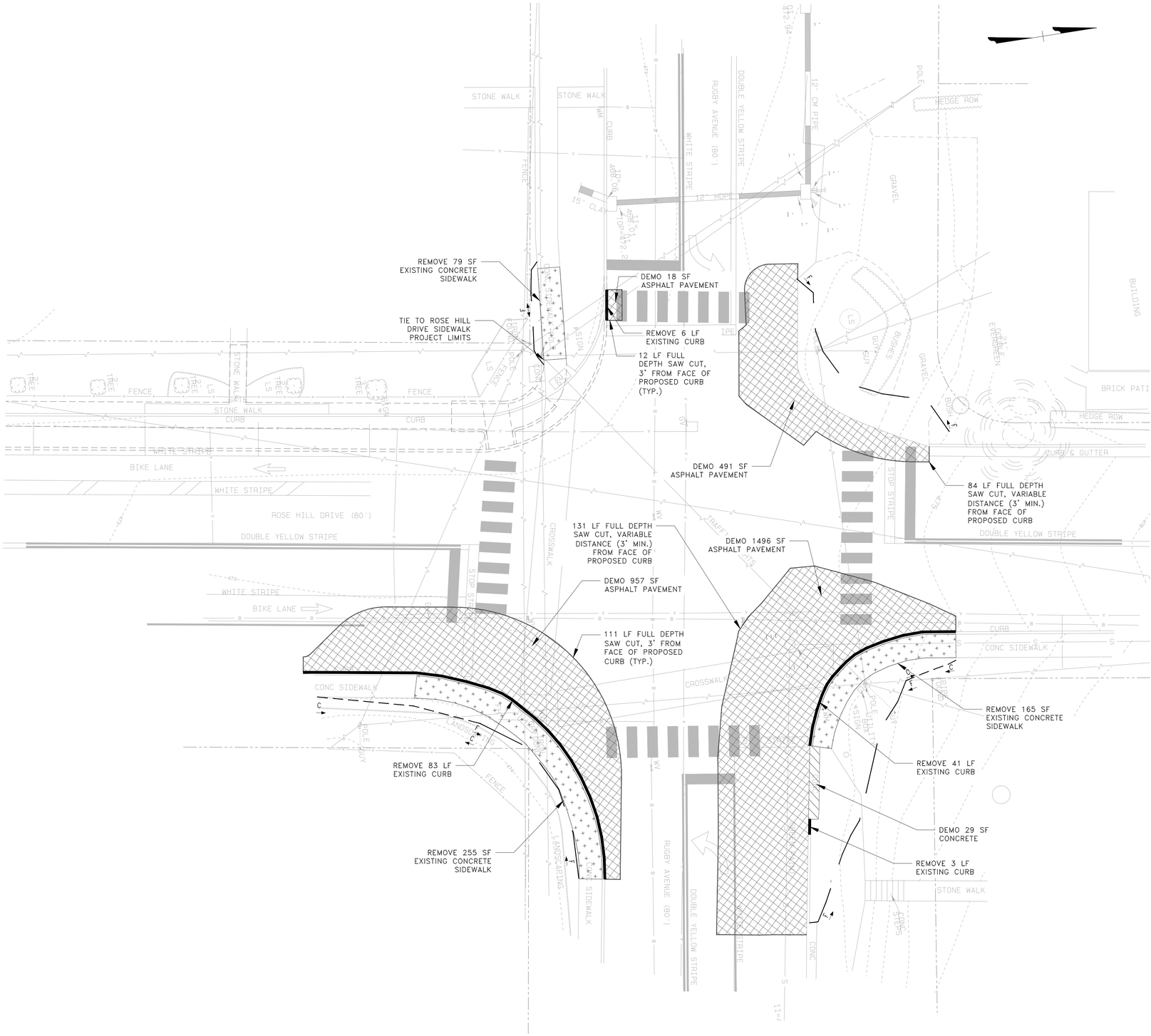

LEGEND

- DEMO SIDEWALK
- DEMO PAVEMENT
- DEMO CONCRETE
- EXISTING ROW
- FILL LIMITS
- CUT LIMITS

10 0 10 20
SCALE IN FEET

PLAN REVISIONS -

SHEET 4A OF 7

SCALE 1" = 10'

ROSE HILL DRIVE AND RUGBY AVENUE INTERSECTION IMPROVEMENTS
CHARLOTTESVILLE, VIRGINIA

DEMOLITION PLAN

DATE: 03/22/2022
ENGINEER: BNG
CHECKED: JSK
CAD: BNG
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03/24/2022
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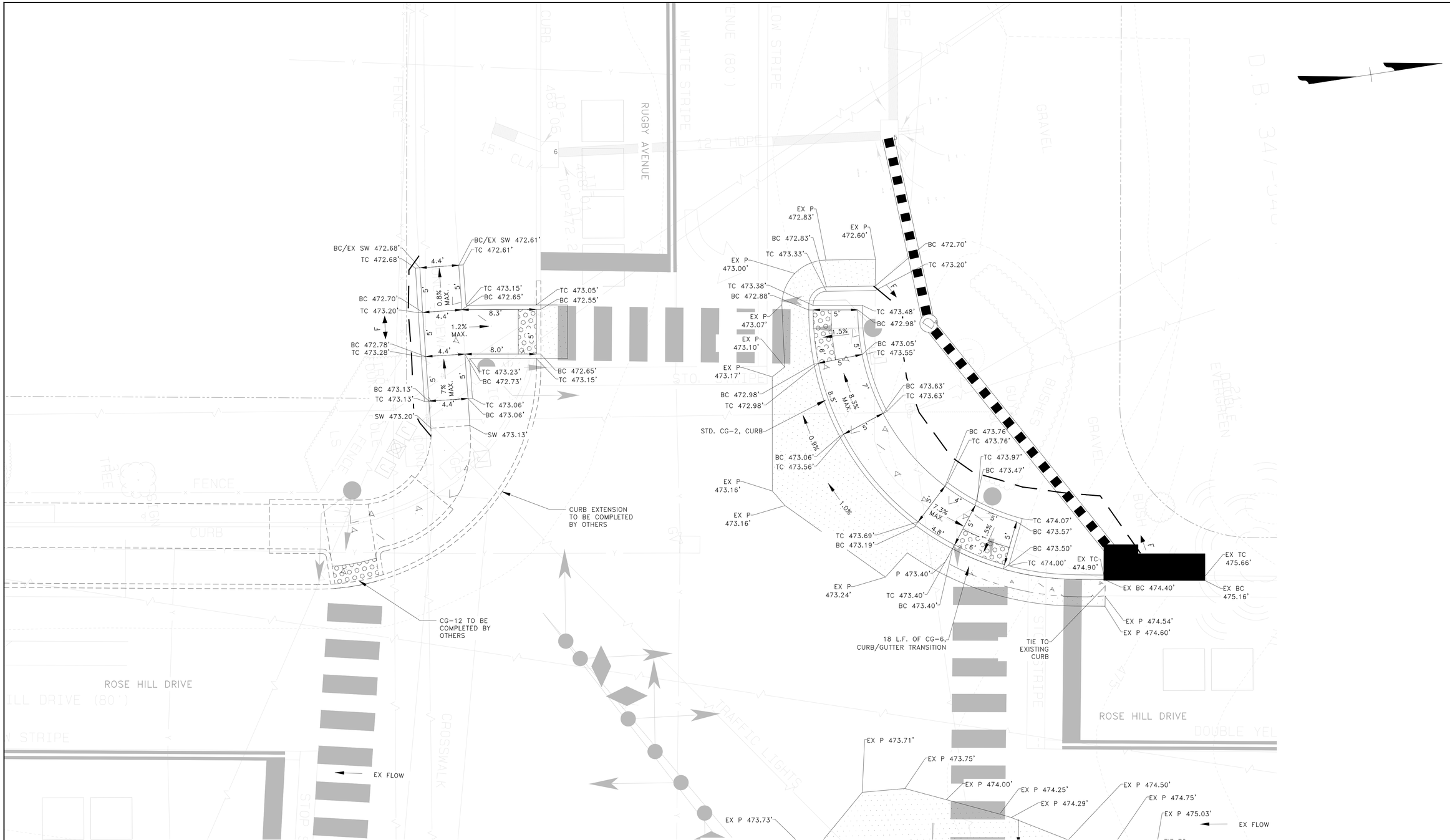

LEGEND

- PROPOSED SIDEWALK/CURB RAMP
- PROPOSED RAISED DOMES
- ASPHALT PAVEMENT
- EXISTING ROW
- FILL LIMITS
- CUT LIMITS
- SWALE

5 0 5 10
SCALE IN FEET

PLAN REVISIONS -

SHEET 5A OF 7

SCALE 1" = 5'

ROSE HILL DRIVE AND RUGBY AVENUE INTERSECTION IMPROVEMENTS
CHARLOTTESVILLE, VIRGINIA

CURB RAMP DETAILS

DATE: 03/22/2022
ENGINEER: BNG
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LEGEND

- PROPOSED SIDEWALK/CURB RAMP
- PROPOSED RAISED DOMES
- ASPHALT PAVEMENT
- EXISTING ROW
- FILL LIMITS
- CUT LIMITS
- SWALE

5 0 5 10
SCALE IN FEET

PLAN REVISIONS -

SHEET 5B OF 7

SCALE 1" = 5'

ROSE HILL DRIVE AND RUGBY AVENUE INTERSECTION IMPROVEMENTS

CHARLOTTESVILLE, VIRGINIA

CURB RAMP DETAILS

DATE: 03/22/2022
ENGINEER: BNG
CHECKED: JSK
CAD: BNG
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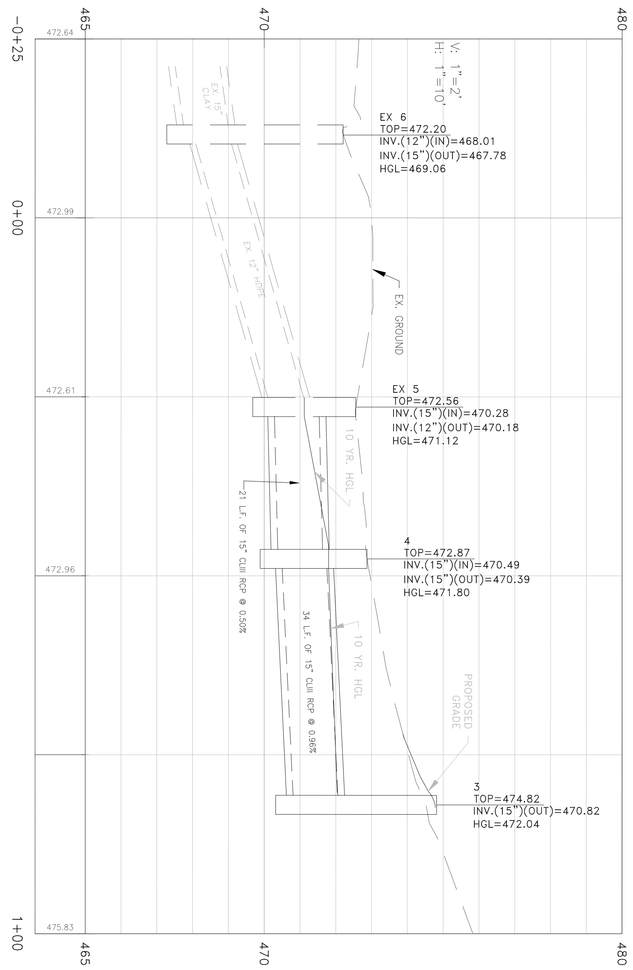

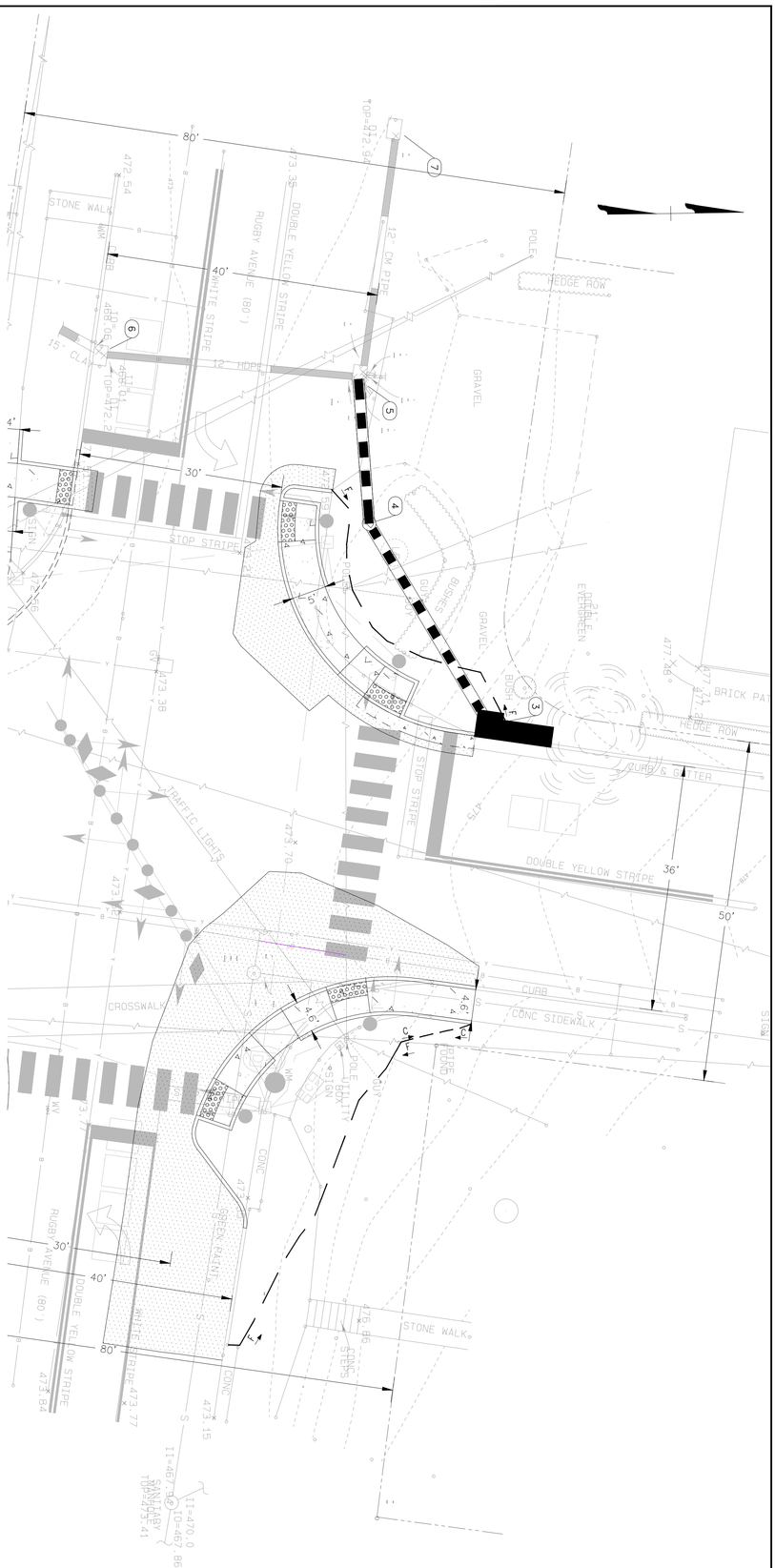

STORM DRAINAGE SYSTEM

(3) VDOT DI-3B, L=10' (H=4.00')
TOP 474.82

(3) – (4) 34 L.F. OF 15" CLIII RCP @ 0.96%
INV 470.82(IN), INV 470.49(OUT)

(4) VDOT MH-1 (H=2.49')
TOP 472.87

(4) – (5) 21 L.F. OF 15" CLIII RCP @ 0.50%
INV 470.39(IN), INV 470.28(OUT)

(5) EX. GRATE INLET
H=2.38'
TOP 472.56
INV.(15")(4) 470.28
INV.(12")(7) 470.34
INV.(12")(OUT) 470.18

SCALE IN FEET 10 0 10 20

SCALE IN FEET 2 0 2 4

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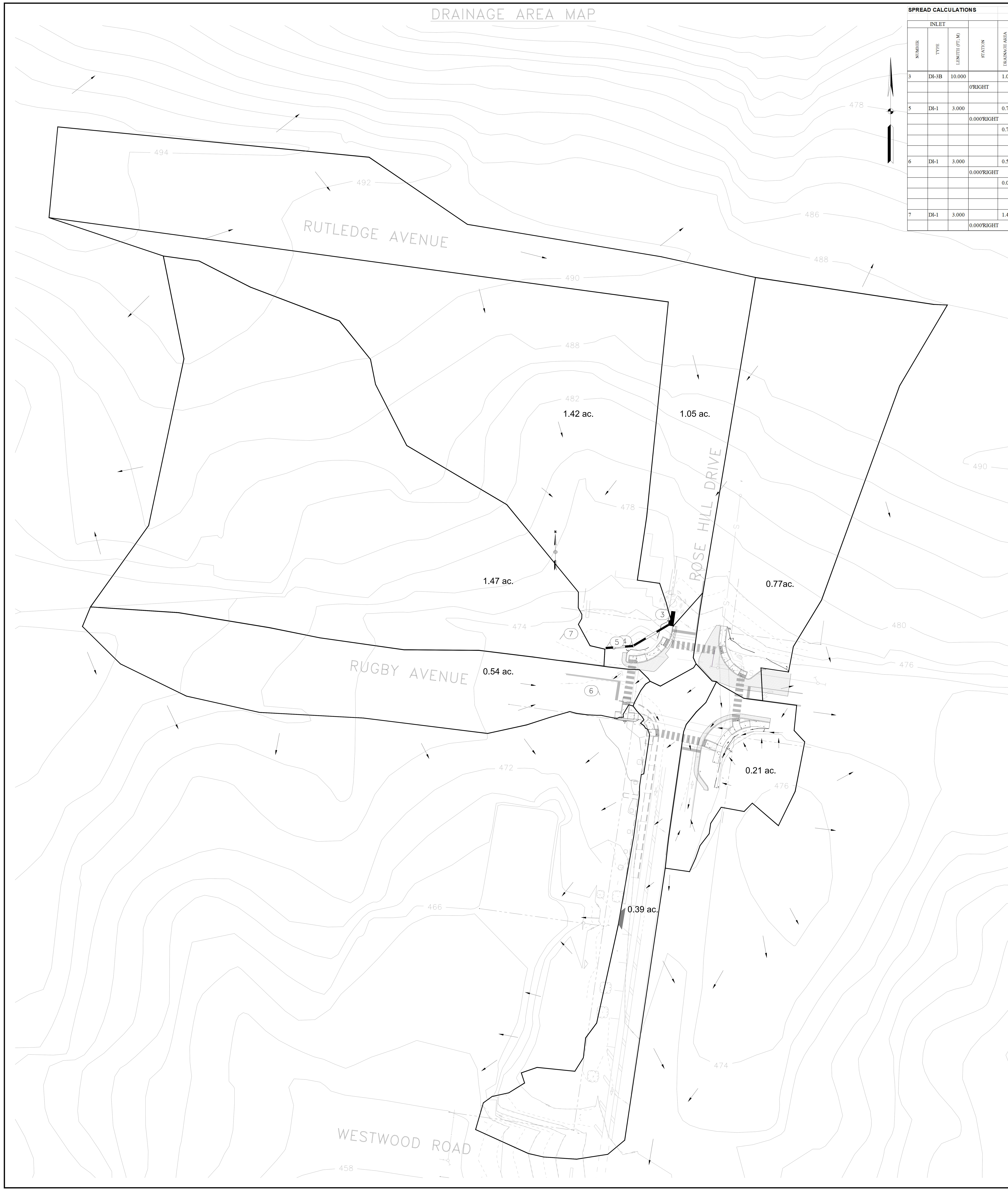
03/24/2022

DATE: 03/22/2022	ROSE HILL DRIVE AND RUGBY AVENUE INTERSECTION IMPROVEMENTS
ENGINEER: BNG	CHARLOTTESVILLE, VIRGINIA
CHECKED: JSK	STORM DRAIN PLAN AND PROFILE
CAD: BNG	
JOB#: 17018-07	

SHEET 6 OF 7

SCALE AS SHOWN

PLAN REVISIONS -



SCALE IN FEET: 40, 0, 40, 80

SPREAD CALCULATIONS — PROJECT: Rugby and Rose Hill — DESIGNER: NR — CHECKED: — DATE: 1/27/2021 — UNITS:ENGLISH

INLET NUMBER	INLET TYPE	INLET LENGTH (FT; M)	STATION	DRAINAGE AREA (AC; HA)	C	CA	ΣCA	I (IN/HR; mm/HR)	Q INCR. (CFS; CMS)	Qc CARRYOVER (CFS; CMS)	QT GUTTER FLOW (CFS; CMS)	S GUTTER SLOPE (FT/FT; M/M)	Sx CROSS SLOPE (FT/FT; M/M)	T (SPREAD) (FT; M)	W (GUTTER WIDTH) (FT; M)	W/T	Sw (GUTTER SLOPE) (FT/FT; M/M)	Sw/Sx	Eo (App. 9C-8)	a	S'w	Se	COMPUTED LENGTH LT (FT; M)	L, SPECIFIED LENGTH (FT; M)	L/LT	E (App. 9C-18)	Q INTERCEPTED (CFS; CMS) or d/h	Qb CARRYOVER (CFS; CMS)	Depth at Curb (IN; MM)	Sag Inlets Only: Allowable Ponding Depth d (FT; M)	Sag Inlets Only: Height of Curb Opening h (FT; M)	Sag Inlets Only: d/h	Sag Inlets Only: Depth at Inlet (IN; MM)	Sag Inlets Only: T SPREAD @ SAG (FT; M)	REMARKS
3	DI-3B	10.000		1.050	0.50	0.525																													
			0'RIGHT				0.525	6.542	3.435	0	3.435	0.0640	0.0315	4.961	2.000	0.4031	0.0833	2.6444	0.845	3.24	0.1351	0.1457	17.433	10.000	0.574	0.784	2.694	0.741	3.118						
5	DI-1	3.000		0.710	0.50	0.355																													Back/Lt.
			0.000'RIGHT				0.355	6.542	2.322	1.001		0.001	0.0350	11.602	2.000	0.1724	0.0833	2.38		3.16															Back/Lt.
				0.710	0.50	0.355																													Ahead/Rt.
							0.355	6.542	2.322	0.382																									Ahead/Rt.
											6.028	0.001			2.000									3			6.028		6.535	0.280			10.534	15.559	T > 8.0 ft
6	DI-1	3.000		0.500	0.50	0.25																													Back/Lt.
			0.000'RIGHT				0.25	6.542	1.636	0		0.0050	0.0350	6.805	2.000	0.2939	.035	1		2.00															Back/Lt.
				0.040	0.90	0.036																													Ahead/Rt.
							0.036	6.542	0.236	0																									Ahead/Rt.
											1.871	0.0050			2.000									3			1.871		2.996	0.280			4.996	7.132	Weir Flow
7	DI-1	3.000		1.470	0.50	0.735																													
			0.000'RIGHT				0.735	6.542	4.808	0	4.808	0.0105	0.0350	8.333	2.000	0.24	0.0833	2.38	0.593	3.16	0.1316	0.1130	13.593	3.000	0.221	0.682	3.281	1.527	4.659						T > 8.0 ft

LD-229
STORM SEWER DESIGN COMPUTATIONS

STORM FREQUENCY: 2

PROJECT: Rugby and Rose Hill
LOCATION:
COUNTY: Charlottesville
NOAA STATION:

Designed by: NR
Checked by:
UNITS: ENGLISH

PIPE NO.	FROM POINT REFERENCE (1)	FROM POINT STA.	TO POINT REFERENCE (2)	TO POINT STA.	DRAIN. AREA "A" Acre (3)	RUNOFF COEFF. "C" (4)	CA INCRE-MENT (5)	CA ACCUM-ULATED (6)	TOTAL INLET TIME Minutes (7)	RAIN FALL In/Hr (8)	RUNOFF Lateral CFS	RUNOFF Total Q CFS (9)	INVERT ELEVATIONS UPPER END (10)	INVERT ELEVATIONS LOWER END (11)	LENGTH of Pipe Ft. (12)	SLOPE Ft./Ft. (13)	SIZE (Dia. Or Span/Rise) In. (14)	SHAPE	Number of Pipes	Capacity CFS (15)	Friction Slope Ft./Ft.	NORMAL FLOW Depth of Flow, dn Ft.	NORMAL FLOW Area of Flow, An SqFt	NORMAL FLOW Hrn Ft.	NORMAL FLOW Vn Ft/Sec (16)	NORMAL FLOW En Ft.	FLOW TIME Sec. (17)	REMARKS (18)
3-4	3		4		1.05	0.50	0.53	0.53	5.00	5.04	0.00	2.65	470.82	470.49	34.36	0.00960	15	Circular	1	6.33	0.00180	0.56	0.54	0.29	4.93	0.94	6.97	
4-5	4		5		0.00		0.00	0.53	5.11	0.00	0.00	3.44	470.39	470.28	21.20	0.00519	15	Circular	1	4.65	0.00300	0.80	0.83	0.36	4.15	1.07	5.11	
5-6	5		6		1.42	0.50	0.71	1.97	5.19	0.00	0.00	10.65	470.18	467.78	38.00	0.06316	15	Circular	1	17.59	0.02420	0.70	0.71	0.34	15.01	4.20	2.53	
7-5	7		5		1.47	0.50	0.74	0.74	5.00	0.00	0.00	3.71	470.82	470.34	33.50	0.01433	12	Circular	1	2.05	0.04880	1.00	0.79	0.25	4.72	1.35	7.10	Pressure Flow

LD-229
STORM SEWER DESIGN COMPUTATIONS

STORM FREQUENCY: 10

PROJECT: Rugby and Rose Hill
LOCATION:
COUNTY: Charlottesville
NOAA STATION:

Designed by: NR
Checked by:
UNITS: ENGLISH

PIPE NO.	FROM POINT REFERENCE (1)	FROM POINT STA.	TO POINT REFERENCE (2)	TO POINT STA.	DRAIN. AREA "A" Acre (3)	RUNOFF COEFF. "C" (4)	CA INCRE-MENT (5)	CA ACCUM-ULATED (6)	TOTAL INLET TIME Minutes (7)	RAIN FALL In/Hr (8)	RUNOFF Lateral CFS	RUNOFF Total Q CFS (9)	INVERT ELEVATIONS UPPER END (10)	INVERT ELEVATIONS LOWER END (11)	LENGTH of Pipe Ft. (12)	SLOPE Ft./Ft. (13)	SIZE (Dia. Or Span/Rise) In. (14)	SHAPE	Number of Pipes	Capacity CFS (15)	Friction Slope Ft./Ft.	NORMAL FLOW Depth of Flow, dn Ft.	NORMAL FLOW Area of Flow, An SqFt	NORMAL FLOW Hrn Ft.	NORMAL FLOW Vn Ft/Sec (16)	NORMAL FLOW En Ft.	FLOW TIME Sec. (17)	REMARKS (18)
3-4	3		4		1.05	0.50	0.53	0.53	5.00	6.54	0.00	3.44	470.82	470.49	34.36	0.00960	15	Circular	1	6.33	0.00300	0.66	0.65	0.32	5.26	1.09	6.53	
4-5	4		5		0.00		0.00	0.53	5.11	0.00	0.00	3.44	470.39	470.28	21.20	0.00519	15	Circular	1	4.65	0.00300	0.80	0.83	0.36	4.15	1.07	5.11	
5-6	5		6		1.42	0.50	0.71	1.97	5.19	0.00	0.00	10.65	470.18	467.78	38.00	0.06316	15	Circular	1	17.59	0.02420	0.70	0.71	0.34	15.01	4.20	2.53	
7-5	7		5		1.47	0.50	0.74	0.74	5.00	0.00	0.00	3.71	470.82	470.34	33.50	0.01433	12	Circular	1	2.05	0.04880	1.00	0.79	0.25	4.72	1.35	7.10	Pressure Flow

LD-347
HYDRAULIC GRADE LINE ANALYSIS

PROJECT: Rugby and Rose Hill

DESIGNED BY: NR
Checked:

INCIDENCE PROBABILITY: 10 Year

INLET OR JUNCTION (1)	STA (2)	INVERT EL. OUTFLOW PIPE	DEPTH OF FLOW OUTFLOW PIPE	OUTLET WATER SURFACE ELEV. (3)	DIA. PIPE Do (In/mm) (4)	DESIGN DISCH. Qo (CFS/CMS) (5)	LENGTH PIPE Lo (Ft/M) (6)	FRICTION SLOPE, Sfo (FT/FT) (M/M) (7)	FRICTION LOSS Hf (Ft/M) (8)	JUNCTION LOSS: Vo (9)	JUNCTION LOSS: Contr. Ho (Ft/M) (10)	JUNCTION LOSS: Vi (11)	JUNCTION LOSS: Vi*2/2g	JUNCTION LOSS: Hi (Expn) 0.35*MAX. (Vi2/2g) (12)	JUNCTION LOSS: SKEW Angle (13)	JUNCTION LOSS: K	JUNCTION LOSS: Bend H (Ft/M) (14)	JUNCTION LOSS: Sum HL (Ft/M) (15)	SURFACE FLOW	Adj. Ht 1.3 Ht (Ft/M) (16)	Inlet Shaping? Y/N	0.5 Ht (Ft/M) (16)	FINAL H (Ft/M) (17)	Inlet Water Surface Elevation (18)	Top of MH Top of Inlet Elev. APPROX. (19)	Adjustment?
6																								469.060		
5		467.780	1.25	469.060	15	10.650	38.00	0.02421	0.920	15.011	0.875	4.719	0.346	0.121	153.0	0.55	0.146	1.142	0.000	1.142	NO	1.142	2.062	471.122	472.560	O.K.
4		470.280	1.25	471.280	15	3.435	21.20	0.00296	0.063	4.149	0.067	5.264	0.430	0.151	153.0	0.55	0.235	0.453	0.000	0.453	NO	0.453	0.515	471.795	472.870	O.K.
3		470.490	1.25	471.795	15	3.435	34.36	0.00296	0.102	5.264	0.108	0.000	0.000	0.000	0.0	0.00	0.000	0.108	3.435	0.140	NO	0.140	0.241	472.037	474.820	O.K.
7		470.340	1.00	471.340	12	3.706	33.50	0.04879	1.635	4.719	0.086	0.000	0.000	0.000	0.0	0.00	0.000	0.086	0.000	0.086	NO	0.086	1.721	473.061	472.940	ADJUST

PLAN REVISIONS -

SHEET 7 OF 7

SCALE AS SHOWN

ROSE HILL DRIVE AND RUGBY AVENUE INTERSECTION IMPROVEMENTS
CHARLOTTESVILLE, VIRGINIA

STORM DRAIN CALCULATIONS

DATE: 03/22/2022
ENGINEER: BNG
CHECKED: JSK
CAD: BNG
JOB#: 17018-07

COMMONWEALTH OF VIRGINIA
03/24/2022
JEFFREY SCOTT KUTTESCH
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PROFESSIONAL ENGINEER

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