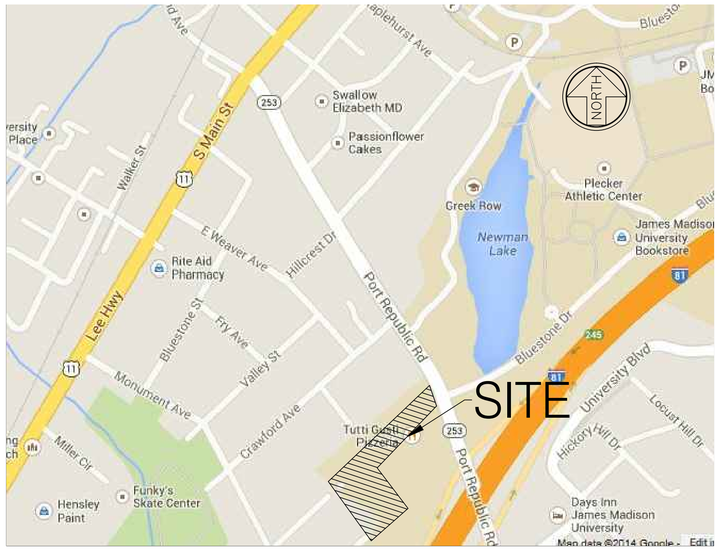
City of Harrisonburg, Virginia

BLUESTONE TRAIL SHARED USE PATH
BUTLER TO PORT REPUBLIC

LEGEND

- BACKFLOW PREVENTER, EXISTING
- BACKFLOW PREVENTER, PROPOSED
- BENCHMARK
- CONTOURS, EXISTING
- CONTOURS, PROPOSED
- CURB AND GUTTER, EXISTING
- CURB AND GUTTER, PROPOSED
- EDGE OF PAVEMENT, EXISTING
- SHOULDER, EXISTING
- DRAINAGE STRUCTURES, EXISTING
- DRAINAGE STRUCTURES, PROPOSED
- GRATE INLET, PROPOSED
- ELECTRICAL TRANSFORMER/BOX, EXISTING
- ELECTRICAL TRANSFORMER/BOX, PROPOSED
- FENCE LINE, EXISTING
- FENCE LINE, PROPOSED
- FIRE HYDRANT, EXISTING
- FIRE HYDRANT, PROPOSED
- GAS LINE, EXISTING
- GAS LINE, PROPOSED
- GUARD RAIL, EXISTING
- GUARD RAIL, PROPOSED
- HANDRAIL, PROPOSED
- IRON PIN
- LIGHT, EXISTING
- LIGHT, PROPOSED
- MAIL BOX, EXISTING
- MAIL BOX, PROPOSED
- MONUMENT
- PROPERTY LINE, EXISTING
- PROPERTY LINE, PROPOSED
- RETAINING WALL, EXISTING
- RETAINING WALL, PROPOSED
- RIGHT-OF-WAY, EXISTING
- RIGHT-OF-WAY, PROPOSED
- SANITARY SEWER LINE, EXISTING
- SANITARY SEWER LINE, PROPOSED
- SANITARY SEWER MANHOLE, EXISTING
- SANITARY SEWER MANHOLE, PROPOSED
- SIGN, EXISTING
- SIGN, PROPOSED
- SIGNAL BOX, EXISTING
- SIGNAL BOX, PROPOSED
- TRAVERSE POINT
- UTILITIES - OVERHEAD, EXISTING
- UTILITIES - OVERHEAD, PROPOSED
- UTILITIES - UNDERGROUND, EXISTING
- UTILITIES - UNDERGROUND, PROPOSED
- UTILITY POLE W/ GUY WIRE, EXISTING
- UTILITY POLE W/ GUY WIRE, PROPOSED
- WATER LINE, EXISTING
- WATER LINE, PROPOSED
- WATER METER, EXISTING
- DOUBLE WATER METER, EXISTING
- WATER METER, PROPOSED
- WATER VALVE, EXISTING
- WATER VALVE, PROPOSED
- SIGNAL POLE, EXISTING
- TEMPORARY CONSTRUCTION EASEMENT

MAYOR ..... TED BYRD
CITY MANAGER ..... KURT HODGEN
CITY ENGINEER ..... DANIEL J. RUBLEE
DIRECTOR OF PUBLIC WORKS ..... JAMES D. BAKER
DIRECTOR OF PUBLIC UTILITIES ... A. MICHAEL COLLINS



VICINITY SKETCH
NTS

SHEET INDEX

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FINAL PLANS
FEBRUARY 18 2014

COMMONWEALTH OF VIRGINIA
THOMAS A. HARTMAN
Lic. No. 047782
02/18/2014
PROFESSIONAL ENGINEER

REV	DATE	DESCRIPTION	BY

SCALE: AS SHOWN

DRAWN BY	DATE
DJD	2/18/14
DESIGNED BY	DATE
DJD/TAH	2/18/14
CHECKED BY	DATE
TAH	2/18/14
TAX MAP	

BLUESTONE TRAIL

PUBLIC WORKS DEPARTMENT
CITY OF HARRISONBURG
320 EAST MOSBY ROAD
HARRISONBURG, VIRGINIA

TITLE SHEET

SHEET
1

STANDARD CITY GENERAL NOTES

ALL NOTES MAY NOT APPLY

1. WORK IN THIS PROJECT SHALL CONFORM TO THE LATEST EDITIONS OF THE VIRGINIA DEPARTMENT OF TRANSPORTATION (VDOT) ROAD AND BRIDGE SPECIFICATIONS, THE VDOT ROAD AND BRIDGE STANDARDS, THE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK, THE VIRGINIA EROSION AND SEDIMENT CONTROL REGULATIONS AND THE CITY OF HARRISONBURG DESIGN AND CONSTRUCTION STANDARDS MANUAL. IN THE EVENT OF CONFLICT BETWEEN ANY OF THESE STANDARDS, SPECIFICATIONS OR PLANS, THE MOST STRINGENT SHALL GOVERN. ALL UTILITIES TO BE DEDICATED TO THE CITY OF HARRISONBURG MUNICIPAL WATER AND/OR SANITARY SEWER SYSTEM SHALL BE CONSTRUCTED AND TESTED TO CONFORM TO COMMONWEALTH OF VIRGINIA/STATE BOARD OF HEALTH WATERWORKS AND/OR SEWERAGE REGULATIONS AND THE CITY OF HARRISONBURG DESIGN AND CONSTRUCTION STANDARDS MANUAL.

2. EROSION AND SEDIMENT CONTROL MEASURES SHALL BE MAINTAINED CONTINUOUSLY, RELOCATED WHEN AND AS NECESSARY AND SHALL BE CHECKED AFTER EVERY RAINFALL. SEEDED AREAS SHALL BE CHECKED REGULARLY AND SHALL BE WATERED, FERTILIZED, RESEEDED AND MULCHED AS NECESSARY TO OBTAIN A DENSE STAND OF GRASS.

3. ALL DRAIN INLETS SHALL BE PROTECTED FROM SILTATION. INEFFECTIVE PROTECTION DEVICES SHALL BE IMMEDIATELY REPLACED AND THE INLET CLEANED. FLUSHING IS NOT AN ACCEPTABLE METHOD OF CLEANING.

4. WHEN THE CRUSHED STONE CONSTRUCTION ENTRANCE HAS BEEN COVERED WITH SOIL OR HAS BEEN PUSHED INTO THE SOIL BY CONSTRUCTION TRAFFIC, IT SHALL BE REPLACED WITH A DEPTH OF STONE EQUAL TO THAT OF ORIGINAL APPLICATION.

5. THE LOCATION OF EXISTING UTILITIES AS SHOWN IS APPROXIMATE ONLY. THE CONTRACTOR IS RESPONSIBLE FOR LOCATING ALL PUBLIC OR PRIVATE UTILITIES WHICH LIE IN OR ADJACENT TO THE CONSTRUCTION SITE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIRING, AT HIS EXPENSE, ALL EXISTING UTILITIES DAMAGED DURING CONSTRUCTION. FORTY-EIGHT (48) HOURS PRIOR TO ANY EXCAVATION CALL MISS UTILITY 1 (800) 552-7001.

6. ALL UNDERGROUND FACILITIES LOCATED WITHIN THE CITY'S RIGHTS-OF-WAY SHALL BE INSTALLED PRIOR TO THE PLACEMENT OF ANY PART OF THE PAVEMENT STRUCTURE.

7. INSTALLATION OF STORM PIPE SHALL COMPLY WITH VDOT STANDARD DRAWING PB-1.

8. ALL MATERIALS USED FOR FILL OR BACK-FILL SHALL BE FREE OF WOOD, ROOTS, ROCKS, BOULDERS OR ANY OTHER NON-COMPACTIBLE SOIL TYPE MATERIAL. UNSATISFACTORY MATERIALS ALSO INCLUDE MAN-MADE FILLS AND REFUSE DEBRIS DERIVED FROM ANY SOURCE.

9. SATISFACTORY MATERIAL FOR USE AS FILL FOR PUBLIC STREETS INCLUDE MATERIAL CLASSIFIED IN ASTM D-2487 AS GW, GP, GM, GC, SW, SP, SM, SC, ML AND CL GROUPS. THE MOISTURE CONTENT SHALL BE CONTROLLED WITHIN PLUS OR MINUS 2 PERCENTAGE POINTS OF OPTIMUM TO FACILITATE COMPACTION. GENERALLY, UNSATISFACTORY MATERIALS INCLUDE MATERIALS CLASSIFIED IN ASTM D-2487 AS PT, CH, MH, OL, OH, AND ANY SOIL TOO WET TO FACILITATE COMPACTION. CH AND MH SOILS MAY BE USED SUBJECT TO APPROVAL OF THE CITY ENGINEER. SOILS SHALL HAVE A MINIMUM DRY DENSITY OF 92 LB./CU. FT. PER ASTM D-698 AND SHALL HAVE A PLASTICITY INDEX LESS THAN 17.

10. COMPACTION OF FILL MATERIAL UNDER BUILDING SLABS SHALL BE BASED UPON RECOMMENDATIONS OF SOILS ENGINEER AFTER COMPLETION OF STANDARD PROCTOR TEST AND SHALL MEET BEARING REQUIREMENTS OF ARCHITECT OF BUILDINGS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR TESTING.

11. MATERIALS USED TO CONSTRUCT EMBANKMENTS FOR ANY PURPOSE, BACK-FILL AROUND DRAINAGE STRUCTURES OR IN UTILITY TRENCHES OR ANY OTHER DEPRESSION REQUIRING FILL OR BACK-FILL SHALL BE COMPACTED TO 95% OF MAXIMUM DENSITY AS DETERMINED BY THE STANDARD PROCTOR TEST AS SET OUT IN ASTM STANDARD D-698. THE CONTRACTOR SHALL, PRIOR TO ANY OPERATIONS INVOLVING FILLING OR BACK-FILLING SUBMIT THE RESULTS OF THE PROCTOR TEST TOGETHER WITH A CERTIFICATION THAT THE SOIL TESTED IS REPRESENTATIVE OF THE MATERIALS TO BE USED ON THE PROJECT. TESTS SHALL BE CONDUCTED BY A CERTIFIED MATERIALS TESTING LABORATORY AND THE CERTIFICATIONS MADE BY A LICENSED PROFESSIONAL ENGINEER REPRESENTING THE LABORATORY.

12. CERTIFICATIONS FOR MATERIALS INCLUDING, BUT NOT LIMITED TO STONE, CONCRETE, PIPES, PRECAST UNITS, HANDRAILS, STABILIZATION MATS, TRAFFIC SIGNAL ITEMS, MUST BE PROVIDED TO THE CITY'S ON-SITE INSPECTOR AND APPROVED BY THE INSPECTOR PRIOR TO INSTALLATION. SEE INSPECTOR FOR MATERIALS CERTIFICATION CHECKLIST.

13. EMBANKMENT FILL AND TRENCH BACK-FILL SHALL BE PLACED IN LIFTS AT A MAXIMUM UNCOMPACTED DEPTH OF 8-INCHES AND 6-INCHES, RESPECTIVELY. DENSITY TESTS SHALL BE CONDUCTED AT THE FOLLOWING MINIMUM FREQUENCIES:

    (A) EMBANKMENTS FOR ROADS, STREET, DAMS, ETC.;
    ONE TEST PER LIFT PER 10,000 SQUARE FEET OF LIFT.
    (B) BACK-FILL AROUND STRUCTURES AND IN TRENCHES:
    ONE TEST PER LIFT PER 500 LINEAL FEET OF TRENCH.

14. COMPACTION TESTS FOR STREET PAVEMENT STRUCTURE SHALL BE MADE IN CUT AND FILL AREAS AT THE FOLLOWING MINIMUM FREQUENCIES:

    (A) SUB-GRADE: ONE TEST PER LANE PER 500 LINEAL FEET
    (B) STONE BASE: ONE TEST PER LANE PER 6" COMPACTED LIFT PER 500 LINEAL FEET
    (C) HOT ASPHALTIC CONCRETE: ONE TEST PER LANE PER LIFT PER 500 LINEAR FEET

15. ALL EXCAVATIONS, INCLUDING TRENCHES, SHALL BE KEPT DRY TO PROTECT THEIR INTEGRITY.

16. TEST RESULTS SHALL BE SUBMITTED TO THE CITY ENGINEER. FAILURE TO CONDUCT DENSITY TESTS SHALL BE CAUSE FOR NON-ACCEPTANCE OF THE FACILITY. TESTS SHALL BE CONDUCTED AT THE SOLE COST OF THE DEVELOPER OR HIS AGENT.

17. COMBINATION UNDER-DRAINS TYPE CD-1 SHALL BE INSTALLED AT THE LOWER END OF CUT SECTIONS. UNDER-DRAINS TYPE CD-2 SHALL BE INSTALLED AT THE LOW POINT OF ALL VERTICAL CURVES.

18. STANDARD UD-1 AND UD-3 UNDER-DRAINS SHALL BE INSTALLED WHERE INDICATED ON PLANS AND FURTHER WHERE DETERMINED NECESSARY IN THE FIELD BY CITY INSPECTORS.

19. CITY INSPECTORS HAVE FULL AUTHORITY TO REJECT FILL OR BACKFILL MATERIALS, REQUIRE UNDERCUTTING OR SUBGRADE STABILIZATION, REQUIRE PROVISIONS FOR SUB DRAINAGE, OR REQUIRE OTHER MEASURES WHICH AFFECT THE INTEGRITY OF ROAD AND UTILITY CONSTRUCTION FAILURE TO COMPLY WITH INSPECTOR'S DIRECTIVES SHALL BE CAUSE FOR NON-ACCEPTANCE TO THE FACILITY.

20. TRAFFIC CONTROL ON PUBLIC STREETS SHALL BE IN CONFORMANCE WITH THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES AND AS FURTHER DIRECTED BY CITY INSPECTORS. CITY INSPECTORS MUST BE NOTIFIED 24-HOURS IN ADVANCE OF ANY PLANNED WORK OR ACTIVITY IN CITY RIGHT-OF-WAY THAT REQUIRES FLAGGING, LANE CLOSURE OR STREET CLOSURE. ALL SIGNAGE AND OTHER CONTROL DEVICES SHALL BE IN PLACE BEFORE SUCH ACTIVITIES CAN COMMENCE.

21. ANY DISCREPANCIES FOUND BETWEEN THE DRAWINGS AND SPECIFICATIONS AND SITE CONDITIONS OR ANY INCONSISTENCIES OR AMBIGUITIES IN DRAWINGS OR SPECIFICATIONS SHALL BE IMMEDIATELY REPORTED TO THE ENGINEER, IN WRITING, WHO SHALL PROMPTLY ADDRESS SUCH INCONSISTENCIES OR AMBIGUITIES. WORK DONE BY THE CONTRACTOR AFTER HIS DISCOVERY OF SUCH DISCREPANCIES, INCONSISTENCIES, OR AMBIGUITIES SHALL BE DONE AT THE CONTRACTOR'S RISK.

22. A PRE CONSTRUCTION CONFERENCE SHALL BE HELD PRIOR TO THE START OF THE CONSTRUCTION. THE CONTRACTOR SHALL ARRANGE THE MEETING WITH THE CITY ENGINEER. AT THIS TIME, THE CONTRACTOR SHALL PROVIDE A SCHEDULE AND TRAFFIC CONTROL PLAN FOR WORK WITHIN THE CITY RIGHT-OF-WAY.

23. INSTALL CITY STANDARD STREET CENTERLINE MONUMENTS WHERE REQUIRED FOR NEW STREETS.

24. IF TRAFFIC SIGNAL PLANS HAVE BEEN REVISED OR CHANGED SINCE APPROVAL, THE DEVELOPER MUST PROVIDE TO THE DIRECTOR OF PUBLIC WORKS AS-BUILT DRAWINGS REFLECTING CHANGES. PROVISIONS OF AS-BUILT DRAWINGS IS A CONDITION OF BOND RELEASE.

EROSION & 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. (1996 REVISIONS)

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: SEDIMENT BASINS AND TRAPS, PERIMETER DIKES, SEDIMENT BARRIERS AND ANY OTHER MEASURES INTENDED TO TRAP SEDIMENT SHALL BE CONSTRUCTED AS A FIRST STEP IN ANY LAND DISTURBING ACTIVITY AND SHALL BE MADE FUNCTIONAL BEFORE UPSLOPE LAND DISTURBANCES TAKE PLACE.

ES-4: STABILIZATION MEASURES SHALL BE APPLIED TO EARTHEN STRUCTURES SUCH AS DAMS, DIKES AND DIVERSIONS IMMEDIATELY AFTER INSTALLATION.

ES-5: A COPY OF THE APPROVED EROSION AND SEDIMENT CONTROL PLAN INCLUDING THE NARRATIVE SHALL BE MAINTAINED ON THE SITE AT ALL TIMES.

ES-6: 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-7: THE CONTRACTOR IS RESPONSIBLE FOR THE INSTALLATION OF ANY ADDITIONAL EROSION CONTROL MEASURES NECESSARY TO PREVENT EROSION AND SEDIMENTATION AS DETERMINED BY THE PLAN APPROVING AUTHORITY.

ES-8: 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-9: DURING DEWATERING OPERATIONS, WATER WILL BE PUMPED INTO AN APPROVED FILTERING DEVICE.

ES-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.

ES-11: PERMANENT OR TEMPORARY SOIL STABILIZATIONS 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 A FINAL GRADE BUT WILL REMAIN DORMANT (UNDISTURBED FOR LONGER THAN 30 DAYS). PERMANENT STABILIZATION SHALL BE APPLIED TO AREAS THAT ARE TO BE LEFT DORMANT FOR MORE THAN ONE YEAR.

ES-12: 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.

ES-13: DURING CONSTRUCTION OF THE PROJECT SOIL STOCK PILES SHALL BE STABILIZED OR PROTECTED WITH SEDIMENT TRAPPING MEASURES.

ES-14: CUT AND FILL SLOPES SHALL BE CONSTRUCTED IN A MANNER THAT WILL MINIMIZE EROSION. SLOPES THAT ARE FOUND TO BE ERODING EXCESSIVELY WITHIN ONE YEAR OR PERMANENT STABILIZATION SHALL BE PROVIDED WITH ADDITIONAL SLOPE STABILIZING MEASURES UNTIL THE PROBLEM IS CORRECTED.

ES-15: ALL STORM SEWER INLETS THAT ARE MADE OPERABLE DURING CONSTRUCTION SHALL BE PROTECTED SO THAT SEDIMENT WATER CANNOT ENTER THE CONVEYANCE SYSTEM WITHOUT FIRST BEING FILTERED OR OTHERWISE TREATED TO REMOVE SEDIMENT.

ES-16: BEFORE NEWLY CONSTRUCTED STORM WATER CONVEYANCE CHANNELS OR PIPES ARE MADE OPERATIONS, ADEQUATE OUTLET PROTECTION AND ANY REQUIRED TEMPORARY OR PERMANENT CHANNEL LINING SHALL BE INSTALLED IN BOTH THE CONVEYANCE CHANNEL AND RECEIVING CHANNEL.

ES-17: WHEN WORK IN A LIVE WATERCOURSE IS PERFORMED, PRECAUTIONS SHALL BE TAKEN TO MINIMIZE ENCROACHMENT, CONTROL SEDIMENT TRANSPORT AND STABILIZE THE WORK AREA TO THE GREATEST EXTENT POSSIBLE DURING CONSTRUCTION NONERODIBLE MATERIAL SHALL BE USED FOR THE CONSTRUCTION OF CAUSEWAYS AND COFFERDAMS. EARTHEN FILL MAY BE USED FOR THESE STRUCTURES IF ARMORED BY NONERODIBLE COVER MATERIALS

ES-18: WHEN A LIVE WATERCOURSE MUST BE CROSSED BY CONSTRUCTION VEHICLES MORE THAN TWICE IN A SIX-MONTH PERIOD, A TEMPORARY VEHICULAR STREAM CROSSING CONSTRUCTED OF NONERODIBLE MATERIAL SHALL BE PROVIDED.

ES-19: THE BED AND BANKS OF A WATERCOURSE SHALL BE STABILIZED IMMEDIATELY AFTER WORK IN THE WATERCOURSE IS COMPLETE.

ES-20: 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 OF 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. APPLICABLE SAFETY REGULATIONS SHALL BE COMPLIED WITH.

ES-21: 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 SHALL BE CLEANED THOROUGHLY AT THE END OF EACH DAY. SEDIMENT SHALL BE REMOVED FROM THE ROAD 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.

ES-22: 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 ADMINISTRATOR. TRAPPED SEDIMENT AND THE DISTURBED SOIL AREAS RESULTING FROM THE DISPOSITION OF TEMPORARY MEASURES SHALL BE PERMANENTLY STABILIZED TO PREVENT FURTHER EROSION AND SEDIMENTATION.

EROSION AND SEDIMENT CONTROL NARRATIVE

PROJECT DESCRIPTION

THE PURPOSE OF THIS PROJECT IS THE CONSTRUCTION OF A SHARED USE PATH FROM PORT REPUBLIC ROAD THROUGH JAMES MADISON UNIVERSITY PROPERTY TO CONNECT INTO BUTLER STREET. 0.85 ACRES ARE DISTURBED WITH THIS PROJECT. AN ADDITIONAL 0.29 AC OF IMPERVIOUS AREA WILL BE ADDED TO THIS PROJECT.

EXISTING SITE CONDITIONS

THE EXISTING SITE JAMES MADISON UNIVERSITY PROPERTY ADJACENT TO PORT REPUBLIC ROAD CONSISTING OF GRASSED AND LANDSCAPED AREAS AS WELL AS PAVED PARKING LOT AREAS. TOTAL EXISITING IMPERVIOS AREA ONSITE IS 5.92 AC. EXISTING SOILS ON SITE CONSIST MOSTLY OF ROCK OUTCROPPING (APPROXIMATELY 68% OF TOTAL AREA), WITH SMALL AREAS OF SILTY LOAM SOIL.

ADJACENT PROPERTY

THE SITE IS BOUNDED BY CITY OF HARRISONBURG RIGHT OF WAY TO THE EAST/SOUTH EAST, INTERSTATE 81 TO THE SOUTH, AND RESIDENTIAL AREAS TO THE NORTH AND WEST..

CRITICAL EROSION AREAS

ALL 3:1 SLOPES AND STEEPER AND DITCHES SHALL BE CONSIDERED CRITICAL EROSION AREAS. THESE AREAS SHALL BE MONITORED DAILY AND AFTER EACH SUFFICIENT RAIN FALL. THE LOCAL GOVERNING AUTHORITY WILL HAVE THE AUTHORITY TO RECOMMEND THE PLACEMENT OF ADDITIONAL EROSION CONTROL MEASURES IN THIS AREA IF IT BECOMES EVIDENT DURING CONSTRUCTION THAT THE ONES IN PLACE ARE NOT FUNCTIONING SUFFICIENTLY.

EROSION AND SEDIMENT CONTROL MEASURES

UNLESS OTHERWISE INDICATED, ALL VEGETATIVE AND STRUCTURAL EROSION AND SEDIMENT CONTROL PRACTICES SHALL BE CONSTRUCTED AND MAINTAINED ACCORDING TO MINIMUM STANDARDS AND SPECIFICATIONS OF THE HANDBOOK. THE MINIMUM STANDARDS OF THE VESCH SHALL BE ADHERED TO UNLESS OTHERWISE WAIVED OR APPROVED BY A VARIANCE.

STRUCTURAL PRACTICES

SILT FENCE (3.05): WILL BE CONSTRUCTED AS SHOWN ON THE PLANS.

INLET PROTECTION (3.07): WILL BE CONSTRUCTED AS SHOWN ON THE PLANS.

TREE PROTECTION (3.38): WILL BE CONSTRUCTED AS SHOWN ON THE PLANS.

PERMANENT SEEDING (3.32): WILL BE CONSTRUCTED AS SHOWN ON THE PLANS.

MULCHING (3.35): WILL BE CONSTRUCTED AS SHOWN ON THE PLANS.

TOPSOILING (3.30): WILL BE CONSTRUCTED AS SHOWN ON THE PLANS.

SOIL STABILIZATION BLANKETS & MATTING (3.36): WILL BE CONSTRUCTED AS SHOWN ON THE PLANS.

VEGETATIVE PRACTICES

TOP SOILING: TOPSOIL WILL BE STRIPPED FROM THE SITE AND STOCKPILED IN AN AREA DETERMINED IN THE FIELD. UPON THE COMPLETION OF THE PROJECT TOPSOIL WILL BE PLACED ON ALL DISTURBED AREAS AT A MINIMUM DEPTH OF 4 INCHES.
TEMPORARY SEEDING: ALL DENUDED AREAS LEFT DORMANT FOR MORE THAN 30 DAYS SHALL BE SEEDED WITH A FAST GERMINATING SEED. TEMPORARY VEGETATION. THE TIME OF YEAR WILL BE THE BASIS FOR THE SEED MIXTURE.
PERMANENT SEEDING: ALL SEEDED AREAS WILL BE RESEEDED, MULCHED AND FERTILIZED AS NEEDED TO OBTAIN AN ADEQUATE STAND OF GRASS.

MANAGEMENT STRATEGIES

CONSTRUCTION WILL BE SEQUENCED SO THAT GRADING OPERATIONS WILL BEGIN AND END AS SOON AS POSSIBLE. THE JOB SUPERINTENDENT SHALL BE RESPONSIBLE FOR THE INSTALLATION AND MAINTENANCE OF ALL EROSION AND SEDIMENT CONTROL MEASURES. AFTER ACHIEVING ADEQUATE STABILIZATION, AND IN THE OPINION OF THE LOCAL E&S ADMINISTRATOR, THE TEMPORARY EROSION AND SEDIMENT CONTROLS SHALL BE REMOVED AND ANY AREAS DISTURBED DURING THIS PROCESS SHALL BE STABILIZED.

PERMANENT STABILIZATION

ALL AREAS LEFT UNCOVERED BY EITHER BUILDINGS OR PAVEMENT SHALL BE STABILIZED WITH PERMANENT SEEDING IMMEDIATELY FOLLOWING FINISH GRADING. SEEDING SHALL BE DONE IN ACCORDANCE WITH THE VESCH. ANY ALTERATIONS FROM THIS DOCUMENT SHALL BE APPROVED BY THE LOCAL EROSION CONTROL ADMINISTRATOR.

MAINTENANCE

ALL EROSION AND SEDIMENT CONTROL MEASURES WILL BE CHECKED DAILY AND AFTER EACH SIGNIFICANT RAINFALL. THEY WILL BE INSPECTED FOR UNDERMINING, DETERIORATION, EROSION AND EXCESS DEPOSITED MATERIAL. ALL DEFICIENCIES WILL BE CORRECTED IMMEDIATELY. EXCESS MATERIAL WILL BE SPREAD ON THE SITE IN A MANNER WHERE IT IS NOT LIKELY TO ERODE IN THE FUTURE.

COMMONWEALTH OF VIRGINIA
THOMAS A. HARTMAN
Lic. No. 047782
02/18/2014
PROFESSIONAL ENGINEER

REV	DATE	DESCRIPTION	BY

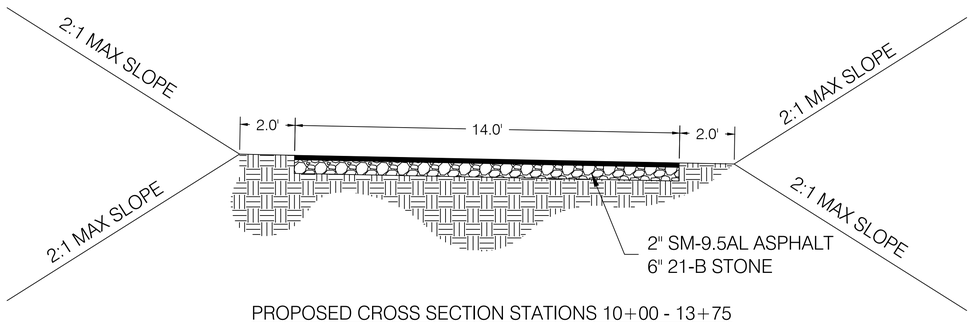
SCALE:	AS SHOWN
DRAWN BY	DATE
DJD	2/18/14
DESIGNED BY	DATE
DJD/TAH	2/18/14
CHECKED BY	DATE
TAH	2/18/14
TAX MAP	

BLUESTONE TRAIL

PUBLIC WORKS DEPARTMENT
CITY OF HARRISONBURG
320 EAST MOSBY ROAD
HARRISONBURG, VIRGINIA

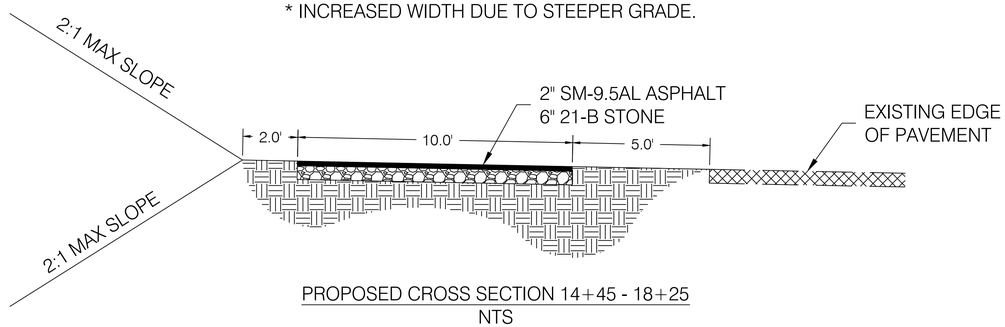
GENERAL NOTES

SHEET
2

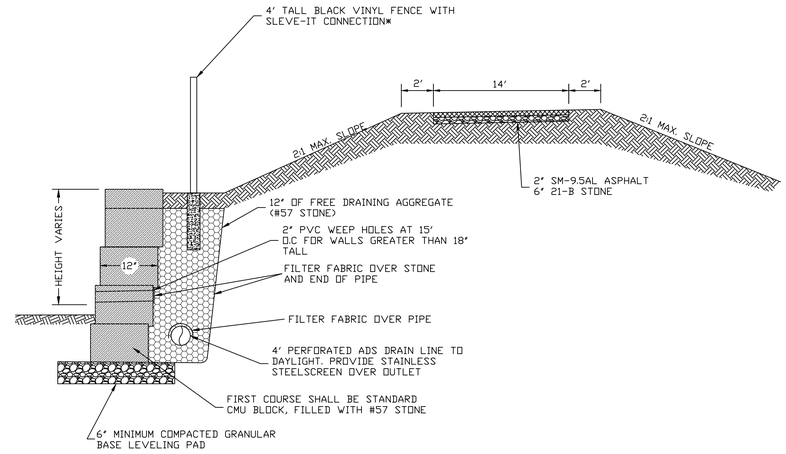


PROPOSED CROSS SECTION STATIONS 10+00 - 13+75
NTS

* INCREASED WIDTH DUE TO STEEPER GRADE.



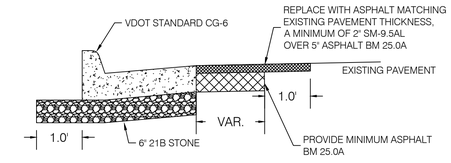
PROPOSED CROSS SECTION 14+45 - 18+25
NTS



PROPOSED CROSS SECTION STATION 12+00-12+50 AND 13+00-13+50
SEGMENTAL RETAINING WALL DETAIL
(NTS)

NOTE:

1. UNIT PRICE IS FOR EXPOSED FACE OF WALL.

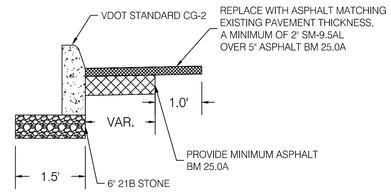


CURB AND GUTTER SECTION
NTS

NOTES:

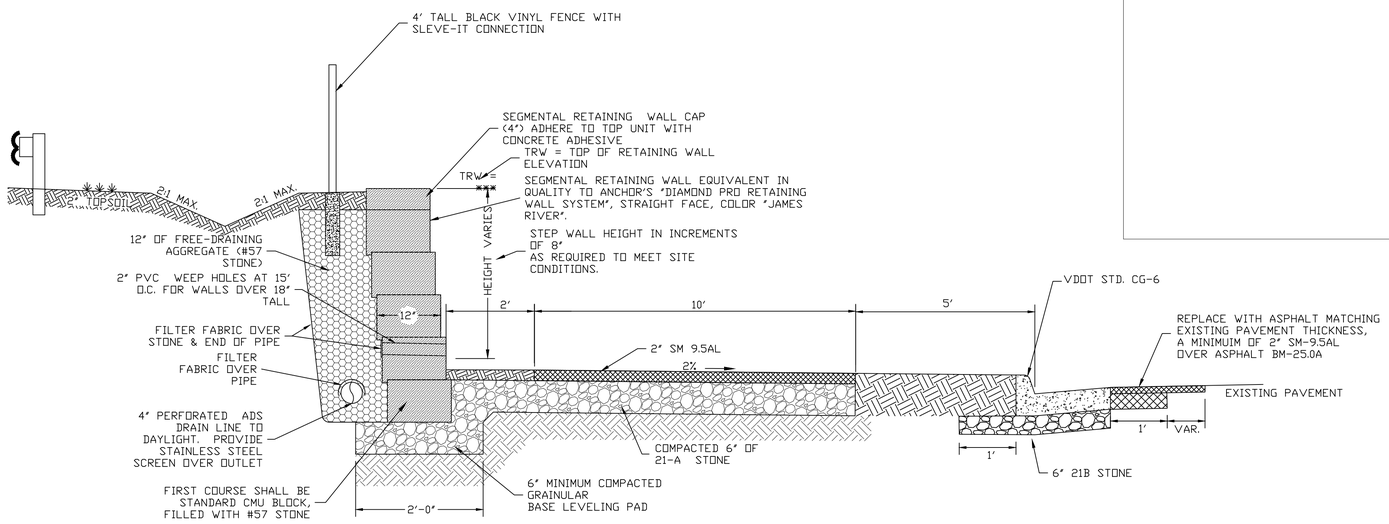
1. BETWEEN STA. 14+40 TO STA. 18+25 FACE OF STANDING CURB TO BE ALLIGNED WITH EXISTING FACE OF PAVED CURB, AND LIP OF GUTTER SHALL BE SET FLUSH WITH PAVEMENT

2. BETWEEN STA. 19+00 TO STA. 21+50 FACE OF CURB TO BE ALLIGNED WITH EXISTING EDGE OF PAVEMENT, SEE DETAIL THIS SHEET



STANDING CURB SECTION
NTS

NOTE: FACE OF STANDING CURB TO BE ALLIGNED WITH EXISTING FACE OF PAVED CURB



PROPOSED CROSS SECTION STATION 19+35 TO STATION 21+00
SEGMENTAL RETAINING WALL DETAIL
(NTS)

NOTE: UNIT PRICE IS FOR EXPOSED FACE OF WALL.

COMMONWEALTH OF VIRGINIA
THOMAS A. HARTMAN
Lic. No. 047782
02/18/2014
PROFESSIONAL ENGINEER

REV	DATE	DESCRIPTION	BY

SCALE:	AS SHOWN
DRAWN BY	DATE
DJD	2/18/14
DESIGNED BY	DATE
DJD/TAH	2/18/14
CHECKED BY	DATE
TAH	2/18/14
TAX MAP	

BLUESTONE TRAIL

PUBLIC WORKS DEPARTMENT
CITY OF HARRISONBURG
320 EAST MOSBY ROAD
HARRISONBURG, VIRGINIA

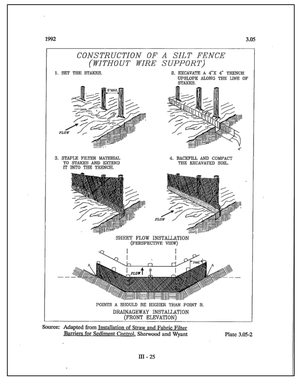
TYPICAL SECTION & DETAILS

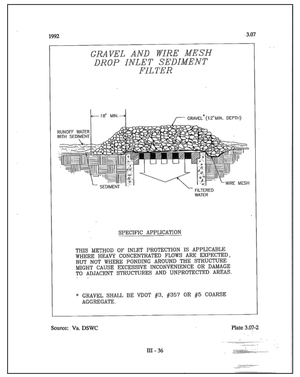
SHEET
2A

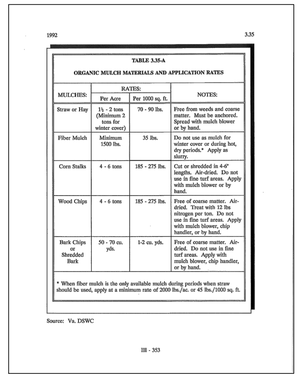
EROSION AND SEDIMENT CONTROL LEGEND

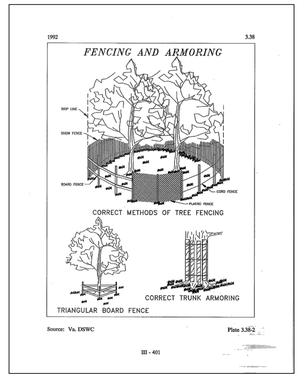
3.05	SILT FENCE	SF
3.07	STORM DRAIN INLET PROTECTION	IP
3.38	TREE PRESERVATION & PROTECTION	TP
3.30	TOPSOILING	TS
3.32	PERMANENT SEEDING	PS
3.35	MULCHING	MU
3.36	SOIL STABILIZATION BLANKETS AND MATTING	BM

ALL STANDARDS PER THE LATEST EDITION OF THE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK





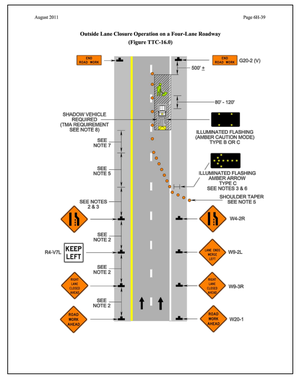


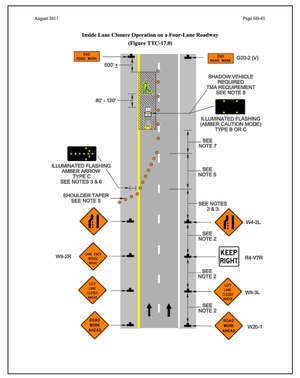


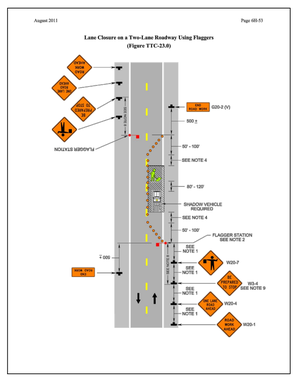
SEEDING SPEC

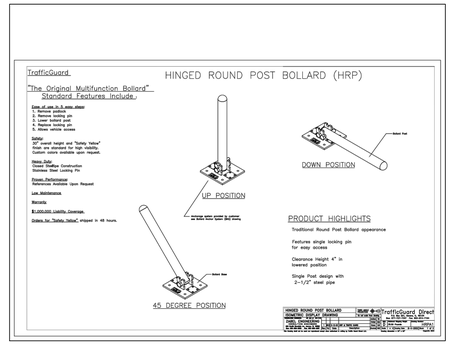
ALL DISTURBED AREAS SHALL BE FERTILIZED AND SEEDED WITH THE APPLICATIONS AS FOLLS UNTIL A SUITABLE STAND OF GRASS IS OBTAINED AND APPROVED BY THE ENGINEER:

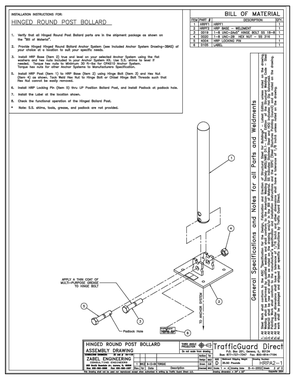
- GRASS SEED (90/10 MIXTURE TALL FESCUEAND KENTUCKY BLUGRASS) TRINITY TURF STURDY SUN AND SHADE @ 60LBS PER 1000 SQFT
- STARTER FERTILIZER SHOULD BE APPLIED AT SEEDING TO ENSURE ACCEPTABLE GERMINATION AND ESTABLISHMENT.
- THE USE OF A "1-2-1" PRODUCT AT 1 POUND OF PHOSPHORUS PER 1000 SQFT IS RECOMMENDED
- MULCH (STRAW OR APPROVED EQUIVALENT) @ 400 LB/ACRE
- LIME MAXIMUM APPLICATION RATE OF 50LBS 1000 PER SQFT



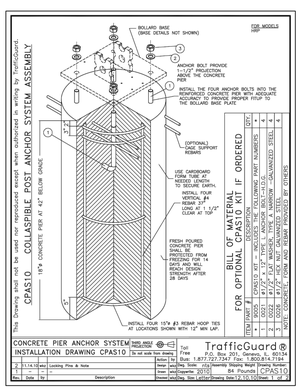


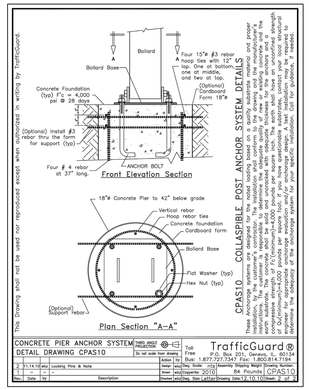


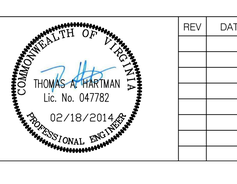




NOTE: BOLLARD'S SHALL BE COVERED WITH RETROFLECTIVE MATERIAL







REV	DATE	DESCRIPTION	BY

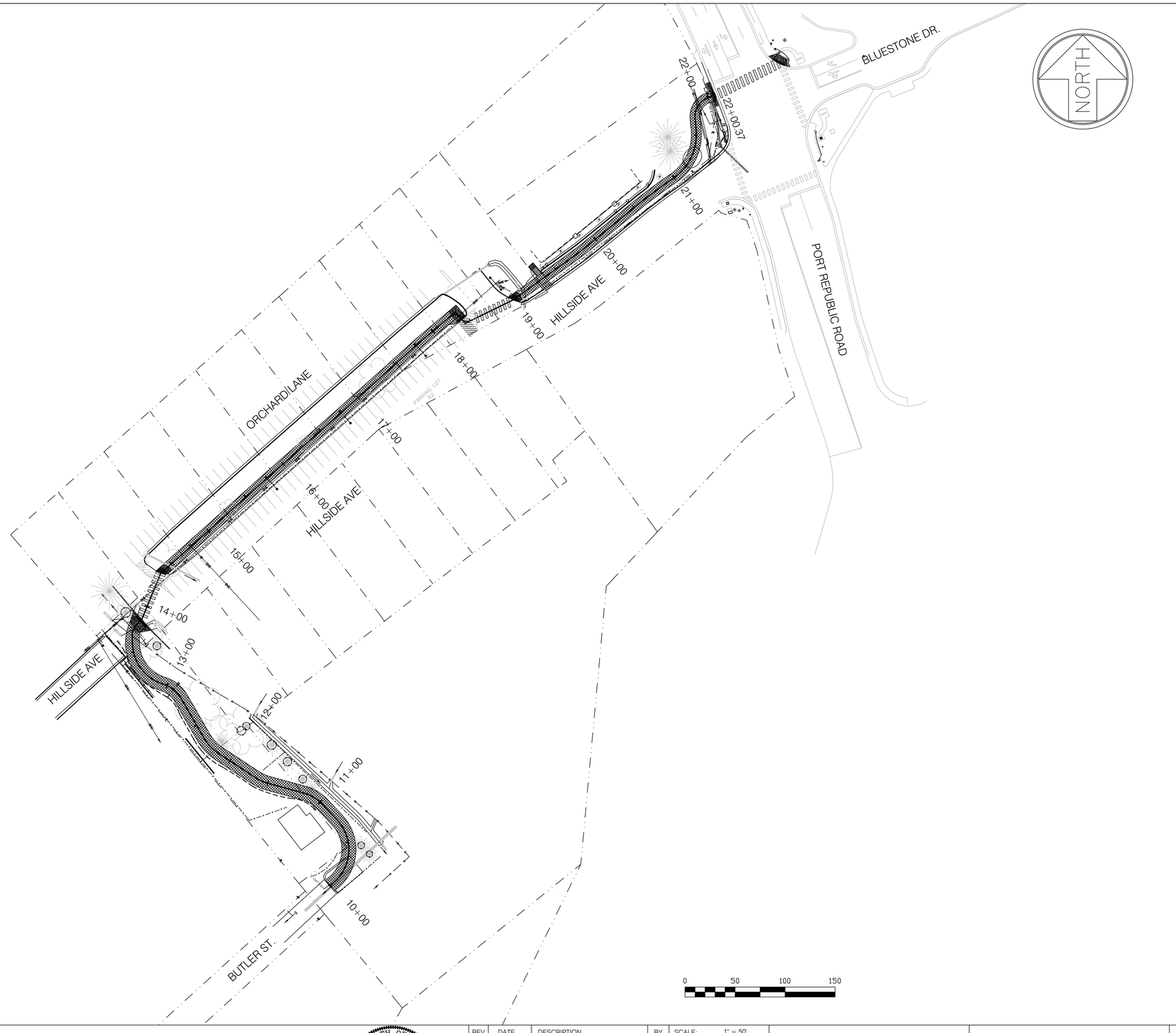
SCALE:	N/A
DRAWN BY	DATE
DJD	2/18/14
DESIGNED BY	DATE
DJD/TAH	2/18/14
CHECKED BY	DATE
TAH	2/18/14
TAX MAP	

BLUESTONE TRAIL

PUBLIC WORKS DEPARTMENT
CITY OF HARRISONBURG
320 EAST MOSBY ROAD
HARRISONBURG, VIRGINIA

DETAILS

SHEET
2B



COMMONWEALTH OF VIRGINIA
THOMAS A. HARTMAN
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02/18/2014
PROFESSIONAL ENGINEER

REV	DATE	DESCRIPTION	BY

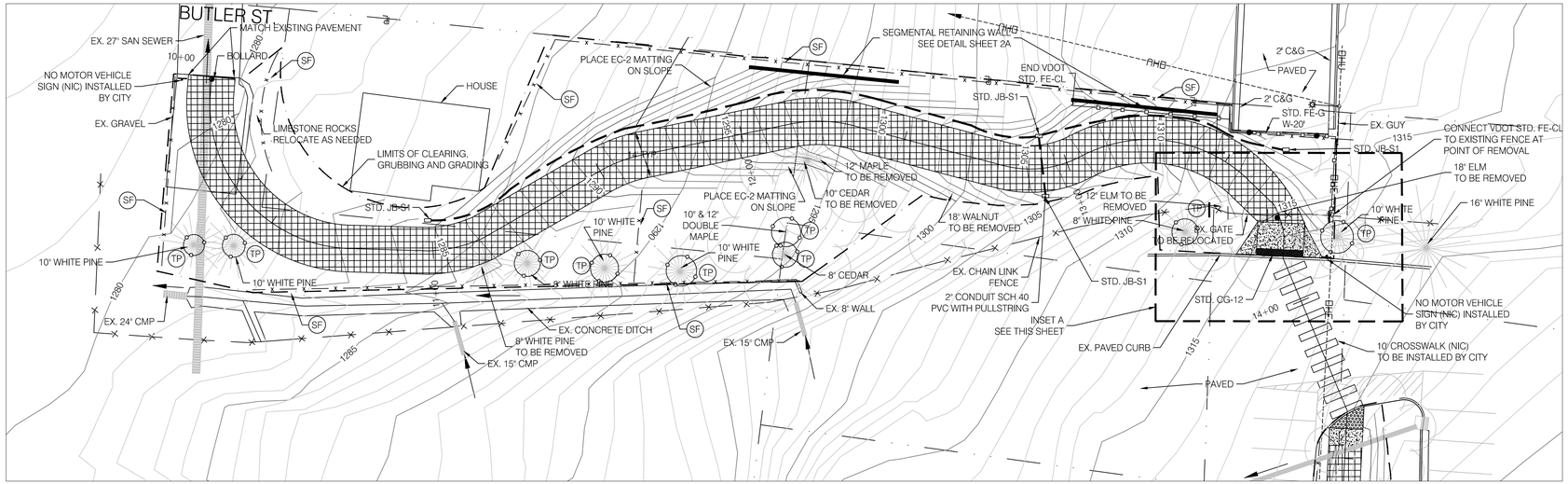
SCALE:	1" = 50'
DRAWN BY	DATE
DJD	2/18/14
DESIGNED BY	DATE
DJD/TAH	2/18/14
CHECKED BY	DATE
TAH	2/18/14
TAX MAP	

BLUESTONE TRAIL

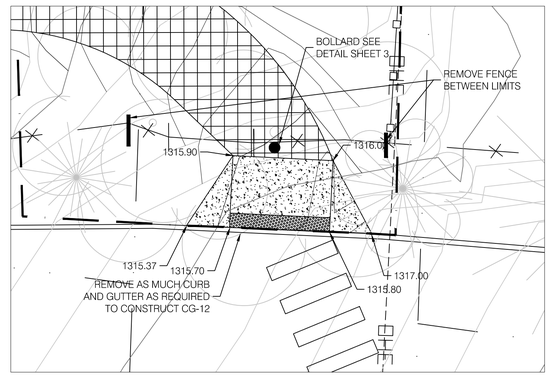
PUBLIC WORKS DEPARTMENT
CITY OF HARRISONBURG
320 EAST MOSBY ROAD
HARRISONBURG, VIRGINIA

SITE LAYOUT

SHEET
3

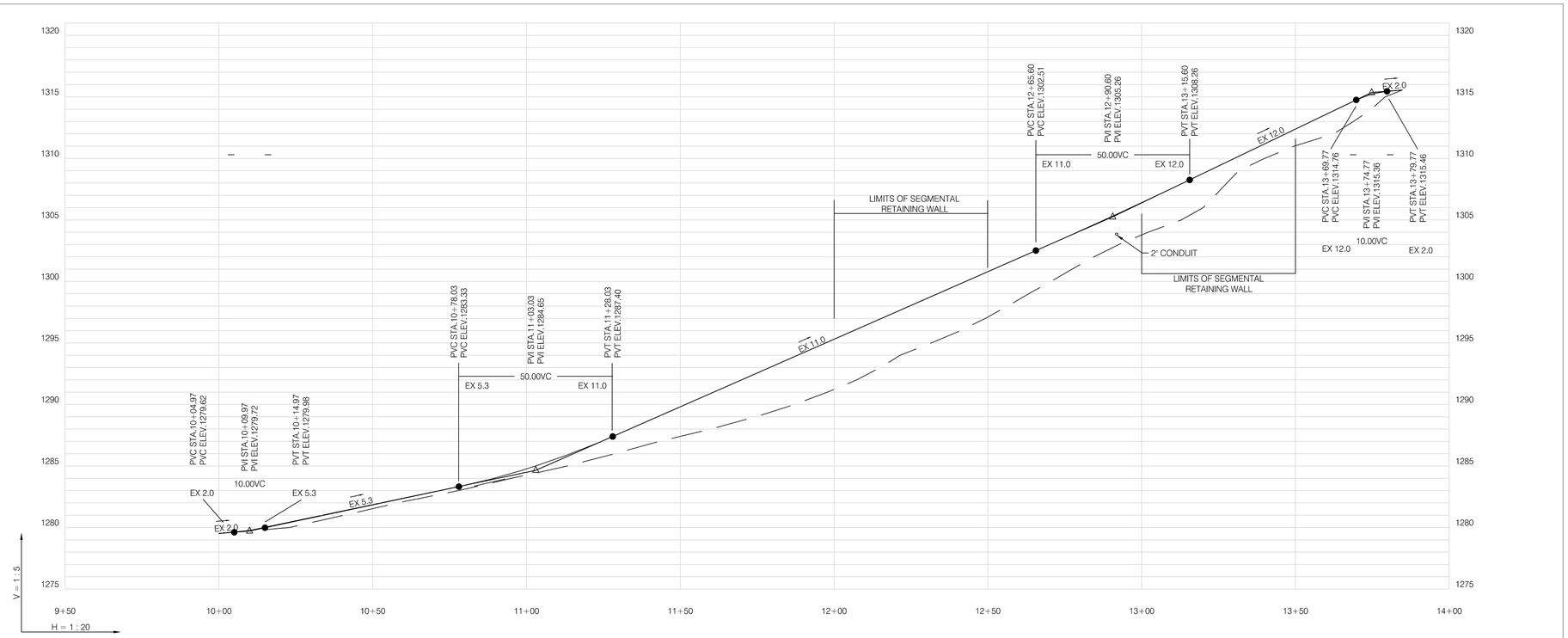


SEE SHEET 5



INSET A
SCALE: 1"=10'

0 10 20 30



GENERAL NOTES NOTES:

1. ALL EROSION AND SEDIMENT CONTROL MEASURES TO BE INSTALLED PRIOR ANY GROUND DISTURBING ACTIVITIES.
2. UNIT PRICE FOR SEGMENTAL RETAINING WALL SHALL INCLUDE ALL COSTS ASSOCIATIED WITH DESIGN, INSTALLATION, SHORING, AND BACKFILL OF WALL.
3. UNIT PRICE FOR 4' BLACK VINYL FENCE SHALL INCLUDE COST FOR LINEBRACING AND CORNER BRACING AS NEEDED PER VDOT STANDARD FE-CL.

COMMONWEALTH OF VIRGINIA
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REV	DATE	DESCRIPTION	BY

SCALE:	AS NOTED
DRAWN BY	DATE
DJD	2/14/18
DESIGNED BY	DATE
DJD/TAH	2/14/18
CHECKED BY	DATE
TAH	2/14/18
TAX MAP	

BLUESTONE TRAIL

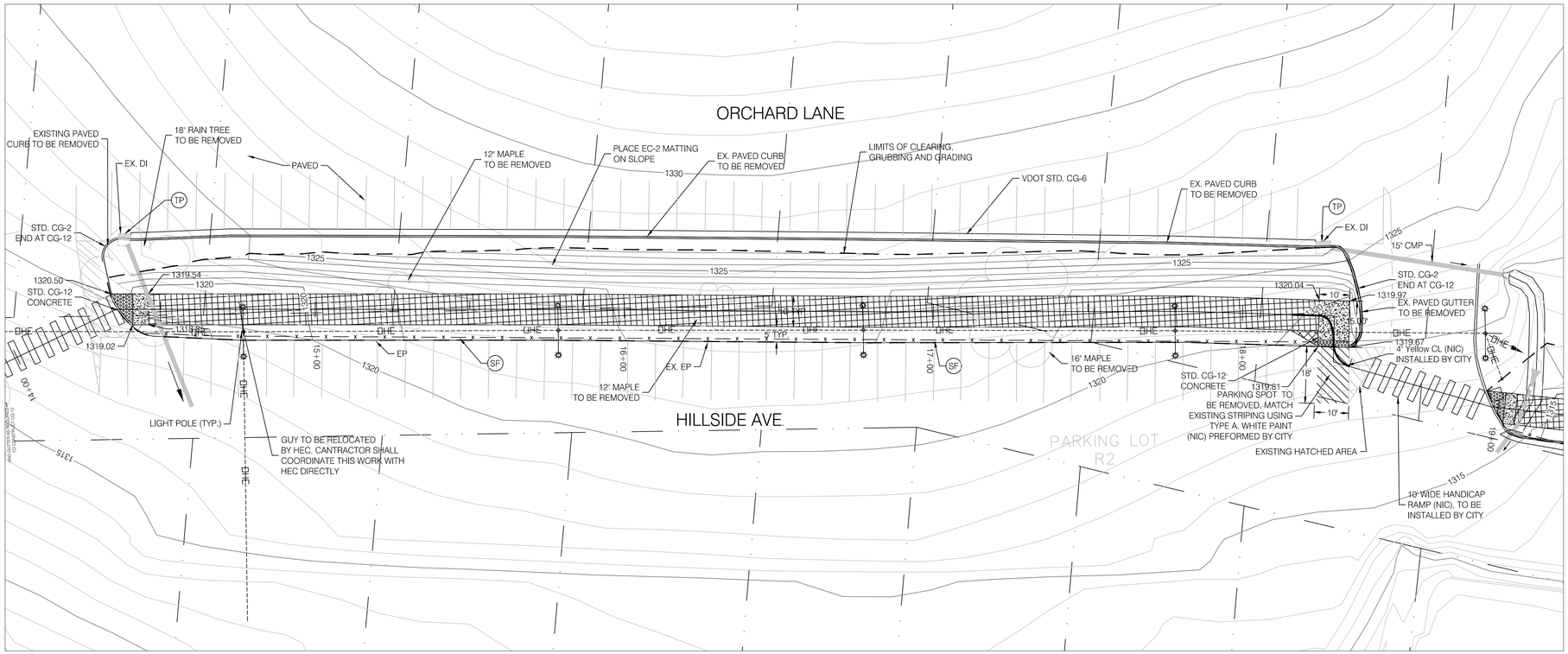
PUBLIC WORKS DEPARTMENT
CITY OF HARRISONBURG
320 EAST MOSBY ROAD
HARRISONBURG, VIRGINIA

PLAN SHEET
STA. 10+00 TO STA. 14+00

SHEET
4

GENERAL NOTES NOTES:

1. ALL EROSION AND SEDIMENT CONTROL MEASURES TO BE INSTALLED PRIOR ANY GROUND DISTURBING ACTIVITIES.
2. 5 FOOT AREA BETWEEN EDGE OF PAVEMENT AND SHARED USED PATH WILL NOT BE SEEDED AND MULCHED. AFTER CONSTRUCTION JMU WILL PLACE LANDSCAPING STONE IN THIS AREA.



SEE SHEET 4

SEE SHEET 6

0 20 40 60

COMMONWEALTH OF VIRGINIA
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PROFESSIONAL ENGINEER

REV	DATE	DESCRIPTION	BY

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CHECKED BY	DATE
TAH	2/18/14
TAX MAP	

BLUESTONE TRAIL

PUBLIC WORKS DEPARTMENT
CITY OF HARRISONBURG
320 EAST MOSBY ROAD
HARRISONBURG, VIRGINIA

PLAN SHEET
STA. 14+00 TO STA. 19+00

SHEET
5

GENERAL NOTES NOTES:

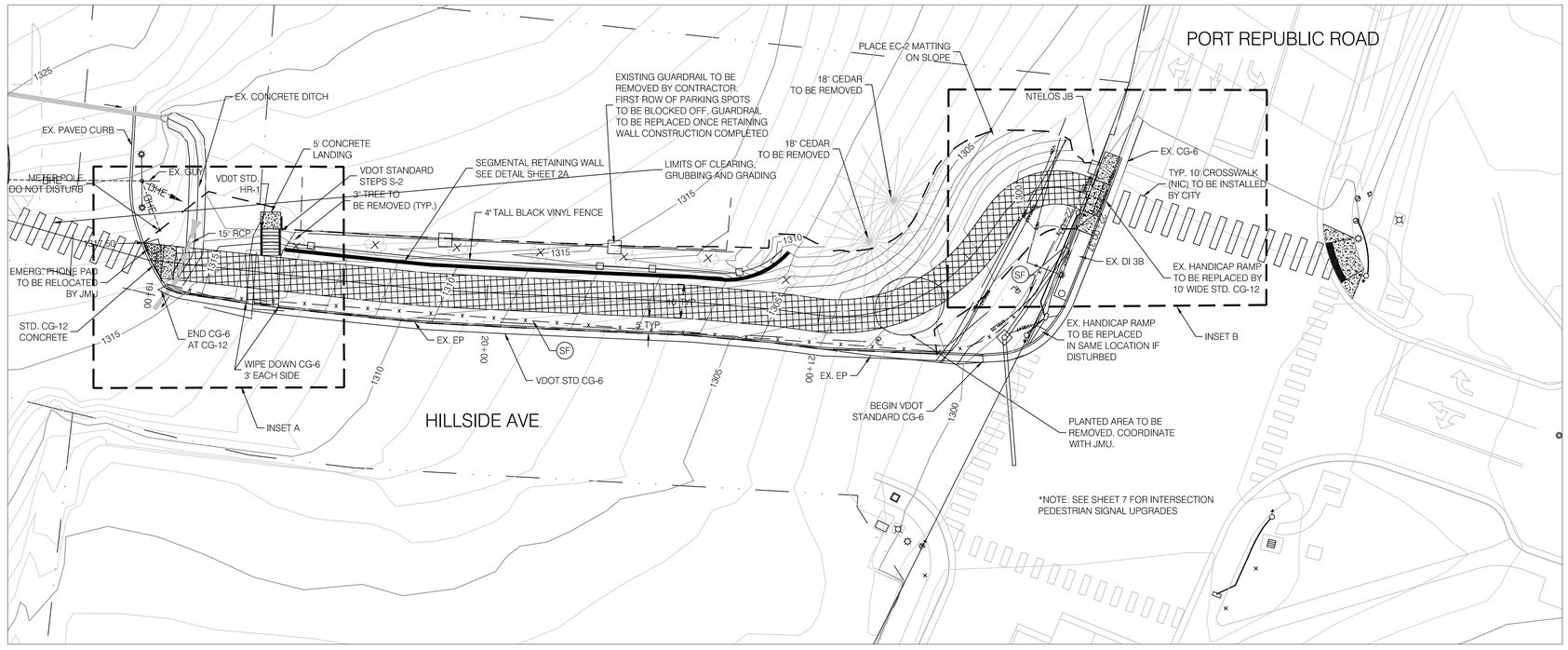
1. ALL EROSION AND SEDIMENT CONTROL MEASURES TO BE INSTALLED PRIOR ANY GROUND DISTURBING ACTIVITIES.
2. SEGMENTAL RETAINING WALL EQUIVALENT IN QUALITY TO ANCHOR'S "DIAMOND PRO RETAINING WALL SYSTEM", STRAIGHT FACE, COLOR "JAMES RICER".
3. REMOVE GUARDRAIL IN PARKING LOT PRIOR TO WALL CONSTRUCTION. REPLACE GUARDRAIL WHEN WALL CONSTRUCTION IS COMPLETED.
4. COORDINATE WITH CITY INSPECTOR FOR THE REMOVAL AND REPLACEMENT OF HARRISONBURG ELECTRIC COOPERATIVE LIGHT POLE ADJACENT TO UPPER PARKING LOT.
5. JAMES MADISON UNIVERSITY TO REMOVE OR RELOCATE EMERGENCY CALL BOX AND PLANTED AREA PRIOR TO CONSTRUCTION.
6. CONTRACTOR SHALL CONNECT EXISTING GRAVEL PATH FROM UPPER PARKING AREA TO SHARED USED PATH ONCE CONSTRUCTION IS COMPLETED.
7. UNIT PRICE FOR SEGMENTAL RETAINING WALL SHALL INCLUDE ALL COSTS ASSOCIATIE WITH DESIGN, INSTALLATION, SHORING, AND BACKFILL OF WALL.
8. LUMP SUM PRICE FOR VDOT STANDARD SE-2 SHALL INCLUDE COST FOR FORMING, CONCRETE, AND REINFORCING STEEL.

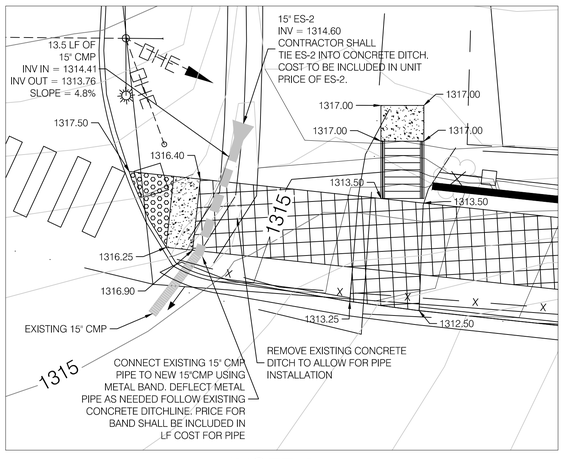
TRAFFIC CONTROL NOTES:

1. ALL SIGNS, SIGN LAYOUTS, WORK ZONES AND ALL OTHER TRAFFIC CONTROL DEVICES SHALL CONFORM TO THE LATEST EDITIONS OF THE VIRGINIA WORK AREA PROTECTION MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, THE VIRGINIA SUPPLEMENT TO THE MUTCD, VDOT ROAD AND BRIDGE STANDARDS AND VDOT ROAD AND BRIDGE SPECIFICATIONS.
2. ALL CONSTRUCTION SIGNS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR, INCLUDING FURNISHING, INSTALLING, ADJUSTING, MAINTAINING, AND REMOVING THE SIGNS AND POSTS PER THE SPECIFICATIONS AND STANDARD DETAILS, AND SHALL BE INCLUDED IN THE PRICE BID FOR CONSTRUCTION SIGNS .
3. LANE CLOSURES SHALL BE INSTALL PER TTC-17, AS FOUND IN THE VIRGINIA WORK AREA PROTECTION MANUAL.

NORTH

SEE SHEET 5





INSET A
SCALE: 1"=10'
0 10 20 30

INSET B
SCALE: 1"=10'
0 10 20 30

COMMONWEALTH OF VIRGINIA
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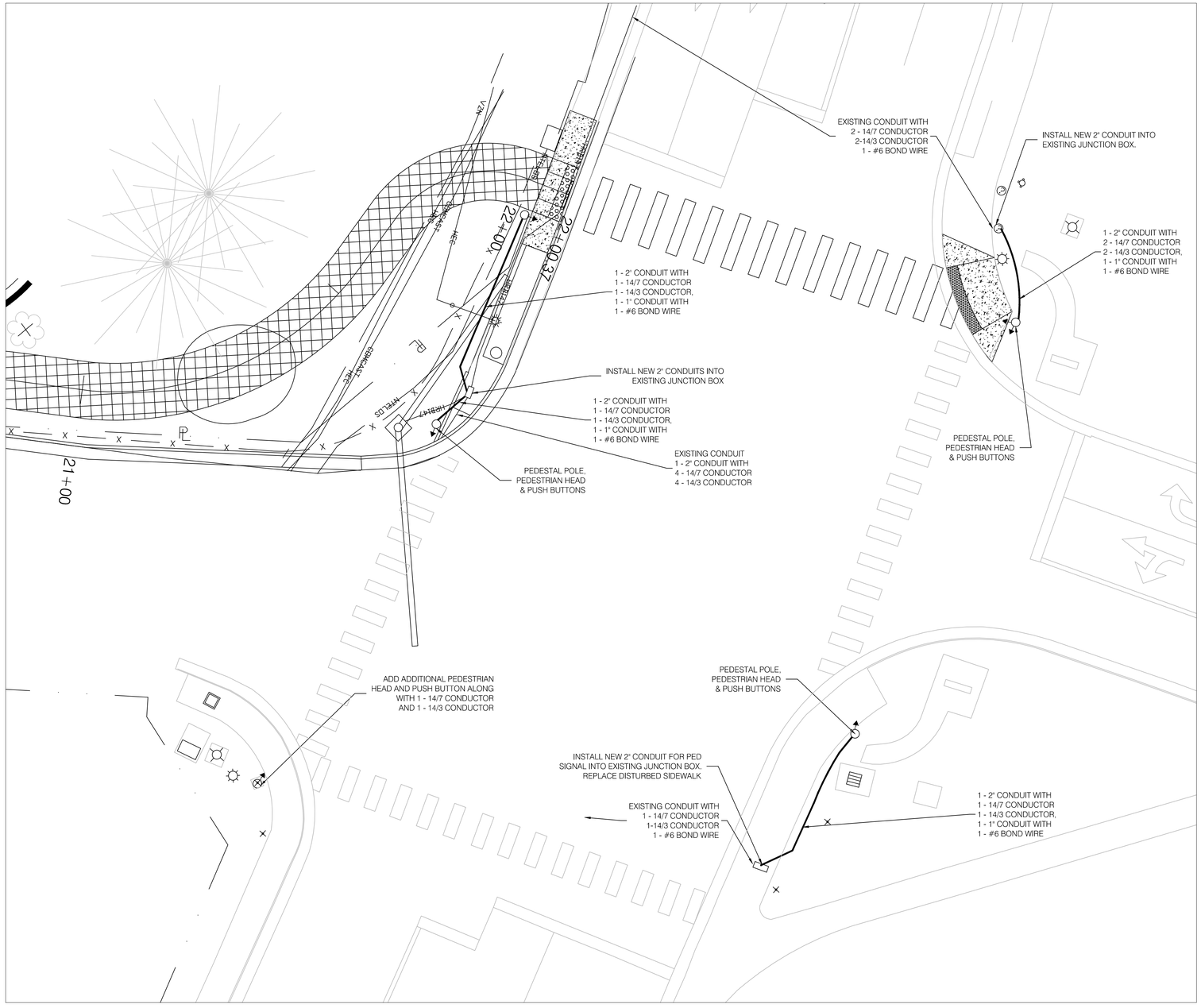
TAX MAP	

BLUESTONE TRAIL

PUBLIC WORKS DEPARTMENT
CITY OF HARRISONBURG
320 EAST MOSBY ROAD
HARRISONBURG, VIRGINIA

PLAN SHEET
STA. 19+00 TO STA. 22+00

SHEET
6



PORT REPUBLIC ROAD PEDESTRIAN SIGNAL UPGRADES

SCALE: 1"=10'

0 10 20 30

PEDESTRIAN SIGNALS AT PORT REPUBLIC ROAD - DESCRIPTION OF WORK

Provide conduits where shown on plans with 18" minimum cover and 8" minimum separation at cross pipe barrels and 18" minimum separation within two feet of cross pipe joints. Existing conduits and conductors not required for signal or lighting operations shall be removed as directed by City. Conduits shall run under and elbow up into new juction boxes from below. Conduits placed in existing junction boxes shall be placed as directed by City. Open cut is required for conduit installations. Contractor shall contact "MISS UTILITY" at least 48 hours before starting directional boring. Coordinate work with City Traffic Engineering.

Provide 4 each: pedestal poles, bases and concrete foundations at locations shown

Provide 6 each: pedestal heads at locations shown. Pedestal lights in median next to west bound traffic go on existing traffic pole

Provide 6 each: pedestal push buttons

Provide 14/7 C cable and terminations from controller cabinets to each pedestal head as shown

Provide 14/3 C cable and terminations from controller cabinets to each actuation device as shown

City Traffic Engineering will provide programming of the controllers.

MATERIAL SPECIFICATIONS (Provide specified products or equivalent as approved by Engineer)

Pedestal Heads: Standard SP-8, Leotek Model TP-16H-CIL-9

Polara Accessible Pedestrain Signals (APS) EZ Communicator Navigator, 2 wire system

Central Control Unit: CCU2EN w/panel & harness

Push Buttons Stations: EN25DB1B

Conduits: Schedule 40 PVC

Wire: 14 AWG STRANDED IMSA approved

Pole & base: VDOT PF-2 H=8'

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SCALE:	1" = 10'
DRAWN BY	DATE
DJD	2/18/14
DESIGNED BY	DATE
DJD/TAH	2/18/14
CHECKED BY	DATE
TAH	2/1814
TAX MAP	

BLUESTONE TRAIL

PUBLIC WORKS DEPARTMENT
CITY OF HARRISONBURG
320 EAST MOSBY ROAD
HARRISONBURG, VIRGINIA

PEDESTRIAN SIGNAL
PORT ROAD

SHEET
7