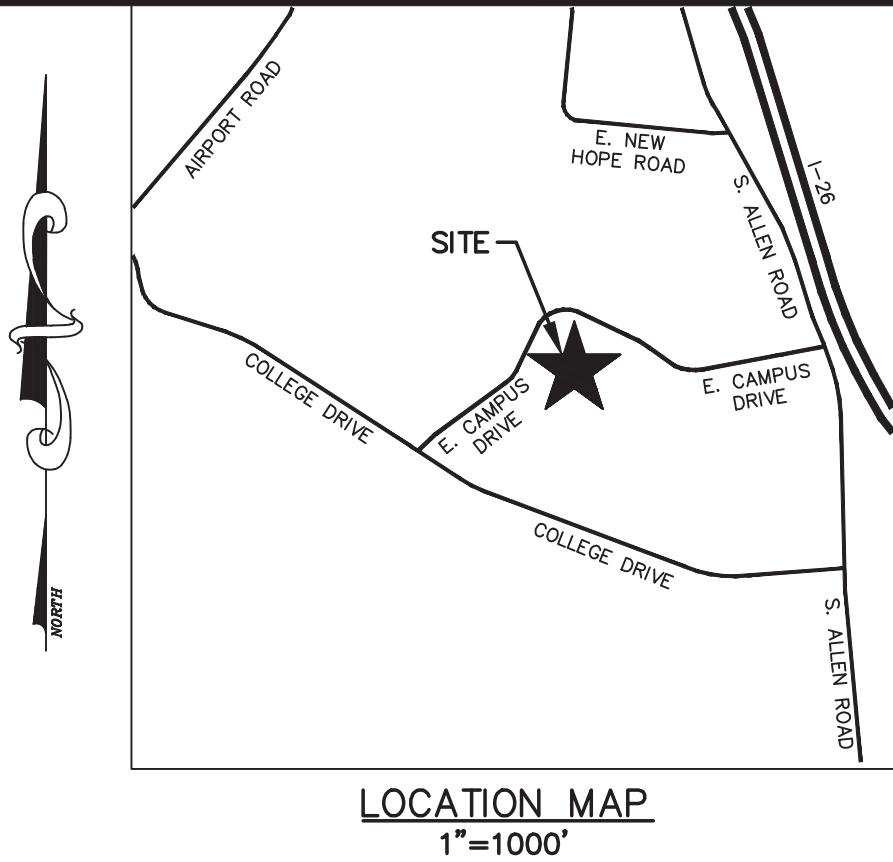


WATER AND SEWER SYSTEM
IMPROVEMENTS

for

Blue Ridge Community College

Henderson County
North Carolina

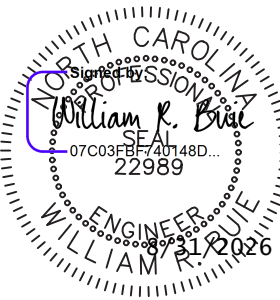


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Blue Ridge
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Henderson County
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REVISIONS	
DATE	DESCRIPTION



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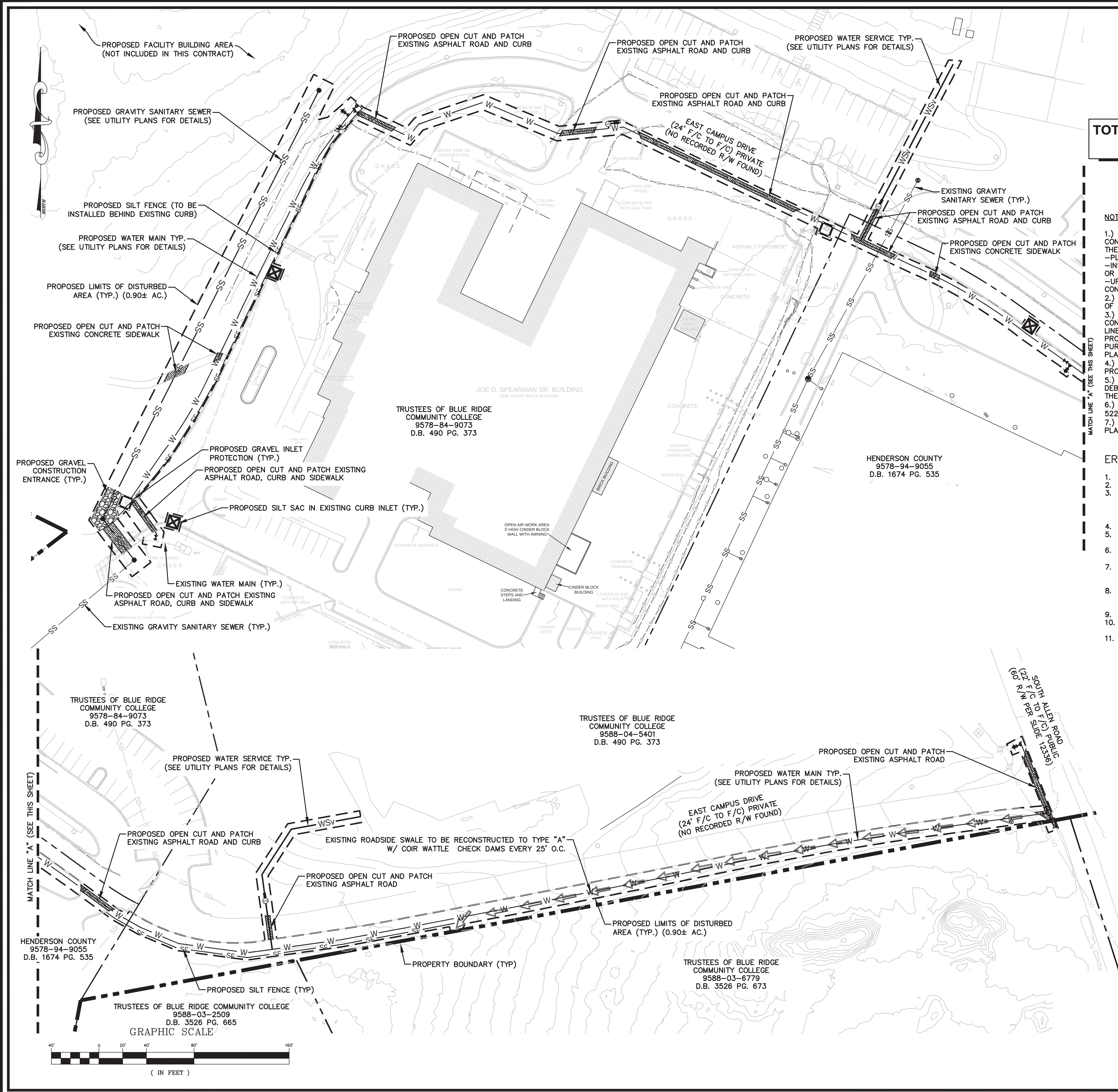
PROJECT NUMBER: 25188
DATE: 8/26

Cover Sheet

C-000

SCALE: NOT TO SCALE

SITE PLANS	
SHEET NO.	DESCRIPTION
C-300	EROSION CONTROL PLAN
C-301	EROSION CONTROL DETAIL SHEET
C-302	EROSION CONTROL DETAIL SHEET
C-303	EROSION CONTROL DETAIL SHEET
C-304	EROSION CONTROL DETAIL SHEET
C-500	UTILITY ROUTING OVERALL PLAN
C-501	WATER MAIN "A" 10+00 TO 21+50
C-502	WATER MAIN "A" 21+50 TO 20+89
C-503	WATER MAIN "B" 10+00 TO 10+77
C-504	WATER SYSTEM DETAILS
C-505	WATER SYSTEM DETAILS
C-600	UTILITY ROUTING OVERALL PLAN
C-601	SEWER MAIN "A" PLAN & PROFILE SHEET
C-602	SEWER SYSTEM DETAILS



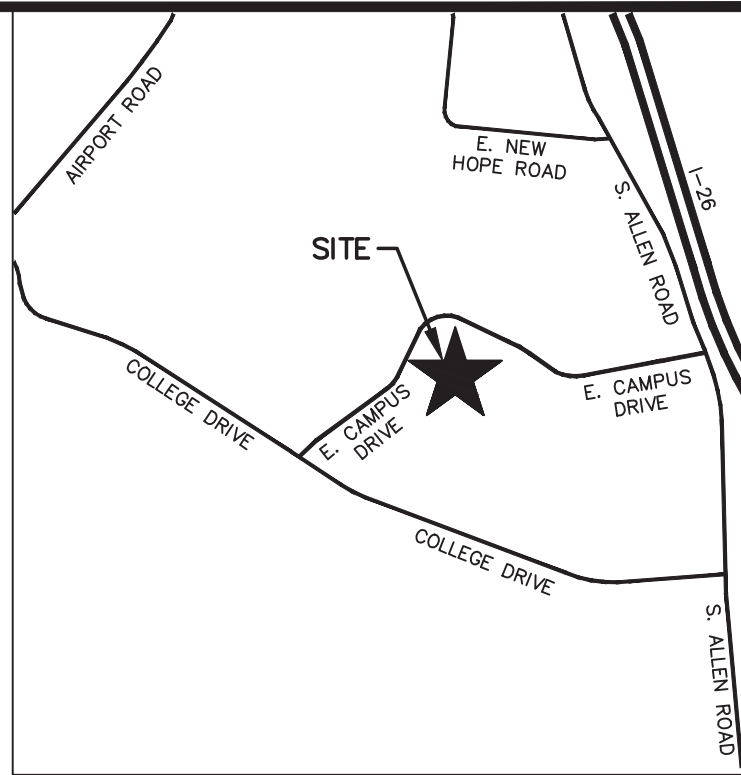
TOTAL DISTURBED AREA
1.10± ACRES

- NOTES:
- 1.) CONTRACTOR SHALL OBTAIN A COPY OF THE APPROVED SEDIMENTATION AND EROSION CONTROL PERMIT AND FOLLOW ALL DIRECTIVES. CONTRACTOR SHALL READ AND UNDERSTAND THE NPDES REQUIREMENTS OF THE PERMIT INCLUDING BUT NOT LIMITED TO:
-PLACEMENT OF RAIN GAUGE ON THE SITE
-INSPECTION OF ALL EROSION CONTROL MEASURES FOLLOWING SPECIFIED RAINFALL EVENTS OR WEEKLY.
-UPKEEP OF INSPECTION LOG FOR REVIEW UPON REQUEST BY NCDEQ, LOCAL EROSION CONTROL AUTHORITY, OWNER AND ENGINEER.
 - 2.) CONTRACTOR SHALL MAINTAIN ALL EROSION CONTROL MEASURES THROUGHOUT THE LIFE OF THE PROJECT.
 - 3.) THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL FIELD STAKING NECESSARY FOR THE CONSTRUCTION OF THE PROJECT. THE CONTRACTOR SHALL HAVE THE EXISTING PROPERTY LINES STAKED IN THE FIELD PRIOR TO AND DURING CONSTRUCTION. THE ENGINEER WILL PROVIDE THE CONTRACTOR WITH AN ELECTRONIC COPY OF THE DESIGN FOR STAKING PURPOSES. HOWEVER ALL ELECTRONIC INFORMATION SHOULD BE COORDINATED WITH THE PLANS.
 - 4.) CONTRACTOR SHALL REMOVE ALL EROSION CONTROL MEASURES AT COMPLETION OF PROJECT, AFTER SITE HAS STABILIZED AND RESTORE TO FINAL GRADE.
 - 5.) CONTRACTOR SHALL ENSURE NO SILT ENTERS INTO THE EXISTING STREETS. IF SILT OR DEBRIS ENTERS THE EXISTING STREETS, THEN THE CONTRACTOR MUST IMMEDIATELY REMOVE THE SILT OR DEBRIS AT THE CONTRACTORS EXPENSE.
 - 6.) SURVEY INFORMATION PROVIDED BY: OWNBEY LAND SURVEYING, PLLC
522 FLEMING STREET, HENDERSONVILLE, NC 28739, (828) 595-9668
 - 7.) CONTRACTOR SHALL COORDINATE THE EROSION CONTROL PLANS WITH THE UTILITY PLANS.

- EROSION CONTROL SEQUENCE
1. OBTAIN PLAN APPROVAL AND APPLICABLE PERMITS
 2. NOTIFY LQS INSPECTOR AND ENGINEER 48 HOURS BEFORE PROJECT STARTS.
 3. NO MAJOR GRADING ACTIVITIES OR BASIN CONSTRUCTION ARE TO TAKE PLACE DURING WET WEATHER OR PERIODS OF PREDICTED WET WEATHER I.E. HURRICANES. SITE MUST BE "STORM READY" BEFORE ANY EXTENDED BREAKS IN CONSTRUCTION ACTIVITIES INCLUDING WEEKENDS.
 4. INSTALL STABILIZED CONSTRUCTION ENTRY/EXIT
 5. CLEAR ONLY THE AREAS NECESSARY FOR THE INSTALLATION OF EROSION CONTROL MEASURES.
 6. INSTALL PERIMETER MEASURES INCLUDING SILT FENCE, SILT SAC AND GRAVEL INLET PROTECTION.
 7. REFER TO NCG01 'REQUIRED GROUND STABILIZATION TIMEFRAMES' FOR ESTABLISHMENT OF TEMPORARY AND PERMANENT GROUND COVER REQUIREMENTS THROUGHOUT CONSTRUCTION.
 8. INSPECTIONS SHALL BE PERFORMED BY THE CONTRACTOR INCLUDING RECORD KEEPING IN ACCORDANCE WITH NCG01 REQUIREMENTS THROUGHOUT THE PROJECT. NEEDED REPAIRS SHALL BE MADE IMMEDIATELY.
 9. CONSTRUCT UTILITY SYSTEMS.
 10. AFTER UTILITY INSTALLATION, PERMANENT VEGETATION SHALL BE INSTALLED IN ACCORDANCE WITH NCG01 REQUIREMENTS.
 11. NOTIFY NCDEQ LQS INSPECTOR WHEN PROJECT IS READY FOR A CLOSE OUT INSPECTION. FILE FOR NCG01 E-NOTICE OF TERMINATION WHEN FINAL CLOSE OUT INSPECTION REPORT IS RECEIVED FROM NCDEQ LQS.

PROJECT SUMMARY	
PROJECT NAME:	BRCC UTILITY EXTENSIONS BLUE RIDGE COMMUNITY COLLEGE EAST CAMPUS DRIVE FLAT ROCK, NC 28731
PIN #	9578-84-9073, 9578-94-9055, 9588-04-5401
DB/PG:	490/373, 1674/535
ZONING	O&I (HENDERSON COUNTY)
FIRE DISTRICT	BLUE RIDGE
OWNER	BLUE RIDGE TECHNICAL INSTITUTE 180 W CAMPUS DRIVE FLAT ROCK, NC 28731 HENDERSON COUNTY 1 HISTORIC COURTHOUSE SQUARE, SUITE 1 HENDERSONVILLE, NC 28792
CONTACT:	DR. CHAD MERRILL, VICE PRESIDENT BLUE RIDGE TECHNICAL INSTITUTE 828-694-1700
ENGINEER	WILLIAM R. BUIE, P.E. WGLA ENGINEERING, PLLC 724 5TH AVENUE WEST HENDERSONVILLE, NC 28739 828-687-7177 EXT. 302

- LEGEND
- - - - - EXISTING 2' CONTOUR
 - - - - - PROPOSED LIMIT OF DISTURBED AREA
 - - - - - PROPOSED SILT FENCE
 - PROPOSED GRAVEL INLET PROTECTION
 - ⊗ PROPOSED SILT SAC
 - ▨ PROPOSED OPEN CUT AND PATCH
 - ▨ EXISTING ROADSIDE SWALE TO BE RECONSTRUCTED
 - ▨ PROPOSED GRAVEL CONSTRUCTION ENTRANCE



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Blue Ridge Community College Utility Extensions

Henderson County North Carolina

WILLIAM R. BUIE
ENGINEER
22989

REVISIONS	
DATE	DESCRIPTION

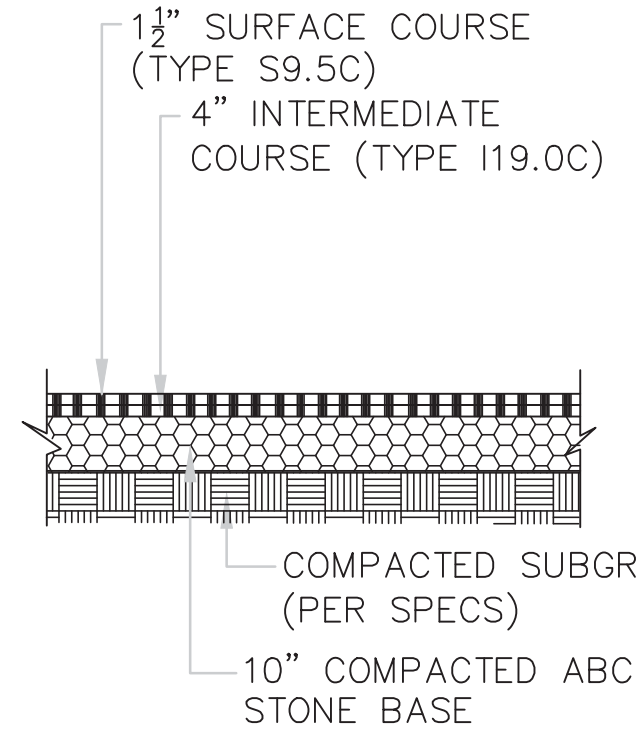
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PROJECT NUMBER: 25188
DATE: 8/26

Erosion Control Plan

C-300

SCALE: 1"= 40'

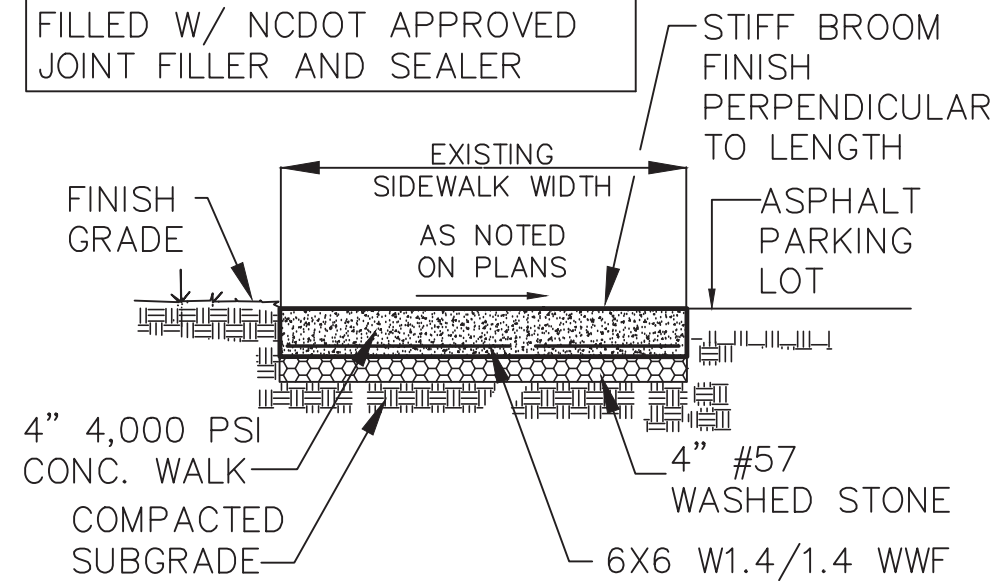


ASPHALT PATCH
PERMANENT
NOT TO SCALE

12-20-2022

JOINTS:

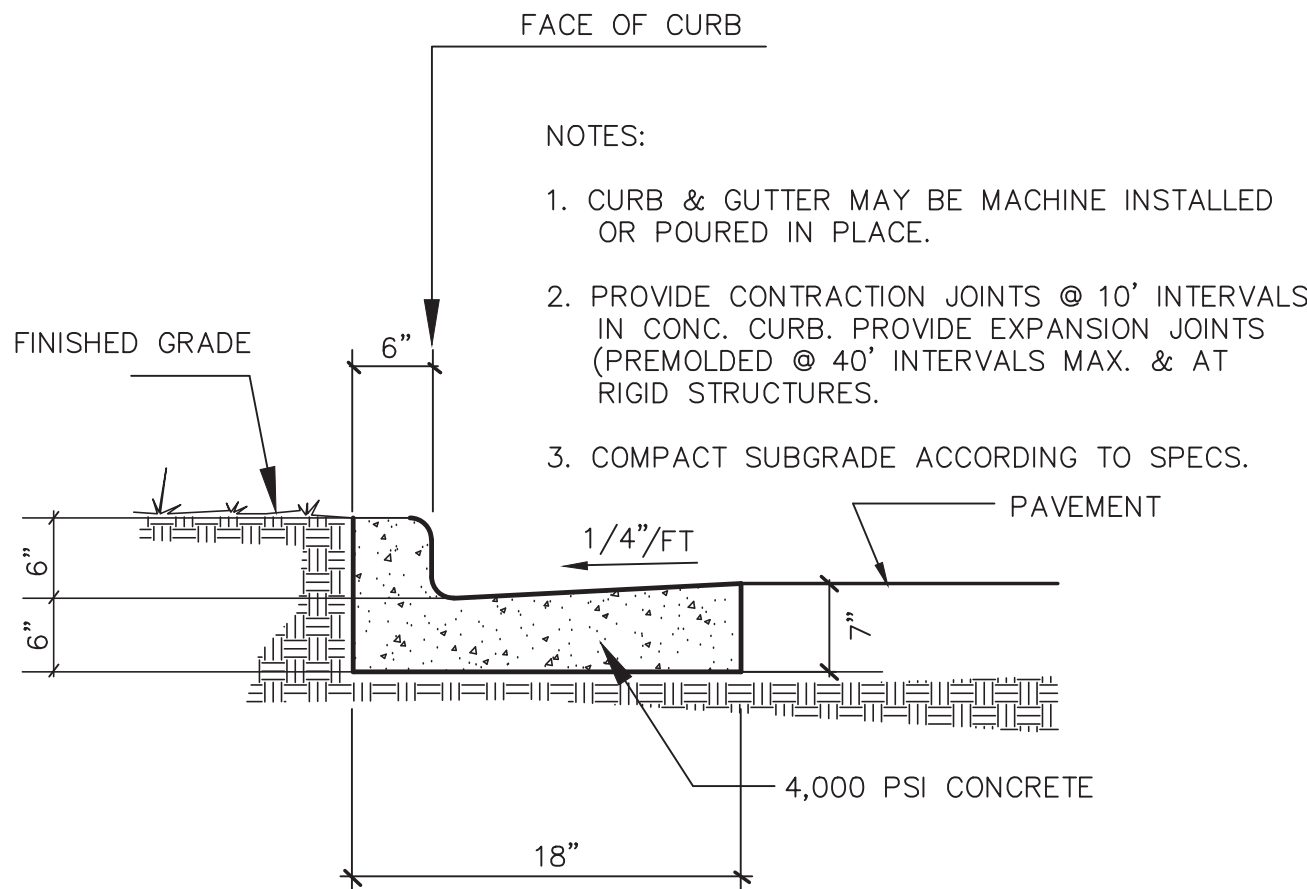
CONTROL JOINTS - 5' O.C.
1/2" EXP. JOINTS - 50' O.C.
& ADJACENT TO RIGID OBJECTS
FILLED W/ NCDOT APPROVED
JOINT FILLER AND SEALER



CONCRETE SIDEWALK
N.T.S.

SIDEWALK PATCH
PERMANENT
NOT TO SCALE

12-20-2022



CONCRETE CURB & GUTTER
NOT TO SCALE

CURB
PERMANENT
NOT TO SCALE

12-20-2022

GENERAL CONSTRUCTION NOTES

1. ALL WORK AND CONSTRUCTION ACTIVITIES ON THE PROJECT SITE SHALL COMPLY WITH ALL APPLICABLE OSHA REGULATIONS AND REQUIREMENTS. IT IS THE CONTRACTOR'S RESPONSIBILITY TO MAINTAIN A SAFE WORK SITE.
2. THE ENGINEER AND OWNER RESERVE THE RIGHT TO MODIFY PROJECT WORK ITEMS (INCLUDING GRADING) AS DEEMED NECESSARY FOR THE SUCCESSFUL COMPLETION OF THE PROJECT. THE CONTRACTOR MAY SUGGEST ADJUSTMENTS TO GRADING OR OTHER WORK ITEMS TO BE APPROVED BY THE ENGINEER OR OWNER.
3. THE CONTRACTOR SHALL COMPLY WITH THE GEOTECHNICAL REPORT FOR THE PLACEMENT OF FILL AND COMPACTION REQUIREMENTS. IF NO REPORT IS AVAILABLE, THE FOLLOWING MINIMUM STANDARDS SHALL APPLY:

PLACEMENT OF FILL:

- A. PLACE THE MATERIAL IN SUCCESSIVE HORIZONTAL LAYERS NOT EXCEEDING 8" FOR THE FULL WIDTH OF THE CROSS SECTION.
- B. FILL SHALL BE PLACED ONLY WHEN IT IS WITHIN 3% OF ITS OPTIMUM MOISTURE CONTENT AS DETERMINED BY A STANDARD PROCTOR ASTM D 698.
- C. EACH LAYER OF FILL SHALL BE SPREAD EVENLY AND SHALL BE COMPACTED TO ITS SPECIFIED DENSITY AS DETERMINED BY STANDARD PROCTOR ASTM D 698 BEFORE NEW LAYERS ARE PLACED AND COMPACTED.
- D. SLOPED GROUND SURFACES STEEPER THAN ONE VERTICAL TO FOUR HORIZONTAL, ON WHICH FILL IS TO BE PLACED, SHALL BE STEPPED OR BENCHED SUCH THAT FILL MATERIAL WILL BOND TO THE EXISTING SURFACES.
- E. EMBANKMENT SLOPES SHALL BE CONSTRUCTED BY FILLING ONE (1) FOOT BEYOND THE PROPOSED FINISHED SLOPE SURFACE FOR EACH LIFT. COMPACTION EQUIPMENT SHALL WORK TO THE EDGE OF EACH LIFT. AFTER THE ENTIRE FILL IS PLACED AND COMPACTED, THE OUTSIDE FOOT OF THE SLOPE SHALL BE TRIMMED TO THE DESIGN SLOPE WITH A DOZER. UNLESS INDICATED ON THE DRAWINGS, NO FILL SLOPES SHALL BE STEEPER THAN 2 HORIZONTAL TO 1 VERTICAL.

COMPACTION:

- A. STRUCTURAL FILL UNDER BUILDINGS AND WITHIN 10' OF BUILDING PERIMETER, 100% OF STANDARD PROCTOR THE ENTIRE DEPTH OF FILL.
- B. UNDER WALKS, DRIVES, PADS, AND PAVED AREAS: 95% OF STANDARD PROCTOR EXCEPT 100% OF STANDARD PROCTOR IN THE UPPER 2'.
- C. UNDER LAWNS AND PLANTING AREAS BEYOND 10' FROM BUILDING: 95% OF STANDARD PROCTOR.
- D. BACKFILL IN TRENCHES: COMPLY WITH COMPACTION REQUIREMENTS FOR THE AREA THROUGH WHICH THE TRENCH RUNS.
4. ALL EROSION CONTROL DEVICES SUCH AS SILT FENCES, DIVERSIONS, SEDIMENT TRAPS, ETC. SHALL BE MAINTAINED IN WORKABLE CONDITIONS FOR THE LIFE OF THE PROJECT AND SHALL BE REMOVED AT THE COMPLETION OF THE PROJECT ONLY WITH THE ENGINEER'S APPROVAL. SEE THE NPDES REQUIREMENTS ON THIS PLAN SHEET FOR MORE DETAIL. IF DURING THE LIFE OF THE PROJECT A STORM CAUSES SOIL EROSION WHICH CHANGES THE FINISHED GRADES OR CREATES "GULLIES" AND "WASHED AREAS", THESE SHALL BE REPAIRED BY THE CONTRACTOR AT NO EXTRA COST. THE CONTRACTOR SHALL ADHERE TO THE APPROVED EROSION CONTROL PLAN AND TAKE ANY ADDITIONAL MEASURES NECESSARY TO PREVENT SEDIMENT FROM LEAVING THE SITE.

- A. DISPOSABLE MATERIALS:
 - A. CLEARING AND GRUBBING WASTES SHALL BE REMOVED FROM THE SITE AND PROPERLY DISPOSED OF BY THE CONTRACTOR AT THEIR EXPENSE, UNLESS OTHERWISE SPECIFIED.
 - B. SOLID WASTES TO BE REMOVED SUCH AS SIDEWALKS, CURBS, PAVEMENT, ETC. MAY BE PLACED IN SPECIFIED DISPOSAL AREAS IF PERMITTED BY THE APPROPRIATE AGENCIES AND APPROVED BY THE OWNER. THIS MATERIAL SHALL BE SPREAD AND MIXED WITH DIRT ELIMINATING ALL VOIDS. THIS MATERIAL SHALL HAVE A MINIMUM COVER OF 2'. THE CONTRACTOR SHALL MAINTAIN SPECIFIED COMPACTION REQUIREMENTS IN THESE AREAS. WHEN DISPOSAL SITES ARE NOT PROVIDED, THE CONTRACTOR SHALL REMOVE THIS WASTE FROM THE SITE AND PROPERLY DISPOSE OF IT AT THEIR EXPENSE.
 - C. ABANDONED UTILITIES SUCH AS CULVERTS, WATER PIPE, HYDRANTS, CASTING, PIPE APPURTENANCES, UTILITY POLES, ETC. SHALL BE THE PROPERTY OF THE SPECIFIED UTILITY AGENCY OR COMPANY HAVING JURISDICTION. BEFORE THE CONTRACTOR CAN REMOVE, DESTROY, SALVAGE, RE-USE, SELL OR STORE FOR THEIR OWN USE ANY ABANDONED UTILITY, THEY MUST PRESENT TO THE OWNER WRITTEN PERMISSION FROM THE UTILITY INVOLVED.
 - D. UNLESS OTHERWISE NOTED ON THE PLANS, BURNING WILL NOT BE ALLOWED ON THIS PROJECT. SHOULD BURNING BE ALLOWED BY THE OWNER, IT IS THE CONTRACTOR'S RESPONSIBILITY TO OBTAIN ALL NECESSARY PERMITS (AT THEIR EXPENSE) AND FOLLOW ALL APPLICABLE RULES AND REGULATIONS.

6. UNLESS OTHERWISE SPECIFIED, ALL BASE, PAVING, CURBING AND OTHER CONCRETE WORK SHALL CONFORM TO THE LOCAL MUNICIPALITY OR NCDOT SPECIFICATIONS FOR CONSTRUCTION. ALL WATER AND SEWER CONSTRUCTION SHALL CONFORM TO THE LOCAL UTILITY REQUIREMENTS AND/OR THE NCDENR MINIMUM STANDARDS.

7. IN THE EVENT EXCESSIVE GROUND WATER OR SPRINGS ARE ENCOUNTERED WITHIN THE LIMITS OF CONSTRUCTION, THE CONTRACTOR SHALL INSTALL NECESSARY UNDERDRAINS AND STONE AS DIRECTED BY THE ENGINEER. ALL WORK SHALL BE PAID BASED UPON THE UNIT PRICES UNLESS OTHERWISE SPECIFIED.

8. THE CONTRACTOR IS RESPONSIBLE FOR THE COORDINATION OF ADJUSTMENT OF ALL UTILITY SURFACE ACCESSSES (INCLUDING MANHOLE COVERS, VALVE BOXES, ETC.) WHETHER HE PERFORMS THE WORK OR THE UTILITY COMPANY PERFORMS THE WORK.

9. THE CONTRACTOR SHALL CONTROL ALL "DUST" BY PERIODIC WATERING AND SHALL PROVIDE ACCESS AT ALL TIMES FOR PROPERTY OWNERS WITHIN THE PROJECT AND FOR EMERGENCY VEHICLES. ALL OPEN DITCHES AND HAZARDOUS AREAS SHALL BE CLEARLY MARKED IN ACCORDANCE WITH OSHA REGULATIONS.

10. ALL AREAS OF EXPOSED SOIL SHALL BE SEEDED, FERTILIZED AND MULCHED ACCORDING TO THE SPECIFICATIONS. THE FINISHED SURFACE SHALL BE TO GRADE AND SMOOTH, FREE OF ALL ROCKS LARGER THAN 3", EQUIPMENT TRACKS, DIRT CLOUDS, BUMPS, RIDGES, AND GOUGES PRIOR TO SEEDING. THE SURFACE SHALL BE LOOSENEED TO A DEPTH OF 1" +/- TO ACCEPT SEED. THE CONTRACTOR SHALL NOT PROCEED WITH SEEDING OPERATIONS WITHOUT FIRST OBTAINING THE ENGINEER'S APPROVAL OF THE GRADED SURFACE. ALL SEEDING SHALL BE PERFORMED BY A MECHANICAL "HYDRO-SEEDER". THE ENGINEER PRIOR TO SEEDING MUST APPROVE HAND SEEDING ON ANY AREA.

11. GRADED SLOPES AND FILLS SHALL BE PROTECTED WITH ROLLED EROSION CONTROL PRODUCT IF COMPLETED OUTSIDE OF OPTIMUM GERMINATION SEASON WHEN UNFAVORABLE WEATHER CONDITIONS PREVENT ESTABLISHMENT OF VEGETATIVE GROUND COVER.

GENERAL CONSTRUCTION NOTES

12-20-2022

NOT TO SCALE

3.28

SEEDING SPECIFICATIONS

I. TEMPORARY COVER

A. LIME & FERTILIZER

CONTRACTOR SHALL FURNISH AND APPLY LIME AND FERTILIZER TO THE SOIL AS REQUIRED TO PROVIDE SATISFACTORY CONDITIONS FOR SEED GERMINATION.

A NORTH CAROLINA DEPARTMENT OF AGRICULTURE SOILS TEST OR EQUAL SHALL BE OBTAINED FOR ALL AREAS TO BE SEEDED. RECOMMENDED FERTILIZER AND pH ADJUSTING PRODUCTS SHALL BE INCORPORATED INTO APPLICABLE AREAS BASED ON THE TEST RESULTS.

THESE MATERIALS SHALL BE SPREAD UNIFORMLY OVER THE AREA TO BE PLANTED. THE SOIL SHALL BE TILLED TO A DEPTH OF 3 - 4 INCHES WITH EQUIPMENT APPROVED BY THE ENGINEER.

B. TEMPORARY COVER

SEEDING - CONTRACTOR SHALL SELECT A QUICK GROWING GRASS WITH HIGH SEEDING VIGOR THAT IS SUITED TO THE AREA, THE TIME OF PLANTING, AND THAT WILL NOT INTERFERE WITH PLANT TO BE SOWN LATER FOR PERMANENT COVER.

MAY THROUGH AUGUST

SUNDANGRASS 50 LB / AC
OR GERMAN MILLET 40 LB / AC

SEPT. THROUGH APRIL

RYEGRASS 120 LB / AC

ALL SEEDS SHALL HAVE BEEN TESTED NOT MORE THAN 6 MONTHS PRIOR TO THE DATE OF SEEDING.

CONTRACTOR SHALL APPLY SEED UNIFORMLY BY HAND, CYCLONE SEEDER, DRILL, CULTIPACKER SEEDER, OR HYDRAULICALLY.

A SLURRY MIXTURE OF WATER, FERTILIZER, SEED AND CELLULOSE FIBER MULCH IS ACCEPTABLE ON THIS PROJECT.

C. MULCHING

IN ORDER TO REDUCE DAMAGE FROM WATER RUN-OFF AND IMPROVE MOISTURE CONDITIONS FOR SEEDLINGS, A MULCH MATERIAL SHALL BE FURNISHED WHEN TEMPORARY SEEDING IS TO BE DONE. ACCEPTABLE MATERIALS ARE:

- DRY UNCHOPPED, UNWEATHERED SMALL GRAIN STRAW OR HAY FREE OF SEEDS OF COMPETING PLANTS - 1-2 TONS / ACRE
- WOOD FIBER (EXCELSIOR)
- WOOD CELLULOSE FIBER - 500 LBS / ACRE WITHOUT STRAW
- JUTE MATTING

II. PERMANENT COVER

A. CONTRACTOR SHALL FURNISH AND APPLY

1- A NORTH CAROLINA DEPARTMENT OF AGRICULTURE SOILS TEST OR EQUAL SHALL BE OBTAINED FOR ALL AREAS TO BE SEEDED. RECOMMENDED FERTILIZER AND pH ADJUSTING PRODUCTS SHALL BE INCORPORATED INTO APPLICABLE AREAS BASED ON THE TEST RESULTS.

2- 2.3 LBS / 1000 SF OF KENTUCKY 31 TALL FESCUE (100 LBS / ACRE)

IN THE MANNER DESCRIBED ABOVE IN PARTS 1, 2 AND 3.

APPLY NURSE CROP AS FOLLOWS:

MAY 1 - AUG 15 - 10 LBS / AC GERMAN MILLET OR
- 15 LBS / AC SUNDANGRASS
AUG 15 - MAY 1 - 40 LBS / AC RYE (GRAIN)

B. SEEDING DATES: KY.31 TALL FESCUE

(BELOW 2500' ELEV)

AUG 20 - SEPT 15
MARCH 1 - MAY 1

(ABOVE 2500' ELEV)

JULY 15 - AUG 30
MARCH 5 - MAY 15

C. MULCHING

APPLY 4000 LB / AC OF GRAIN STRAW SUITABLY TACKED DOWN. ADD NETTING TO STEEP SLOPES AND STAPLE PER MANUFACTURERS RECOMMENDATIONS

III. SOIL PREPARATION

A. GENERAL REQUIREMENTS

1- PREPARATION FOR PRIMARY/PERMANENT STABILIZATION SHALL NOT BEGIN UNTIL ALL CONSTRUCTION AND UTILITY WORK WITHIN THE PREPARATION AREA IS COMPLETE. HOWEVER, IT MAY BE NECESSARY TO PREPARE FOR NURSE CROPS PRIOR TO COMPLETION OF CONSTRUCTION AND INSTALLATION OF UTILITIES.

2- A NORTH CAROLINA DEPARTMENT OF AGRICULTURE SOILS TEST (OR EQUAL) SHALL BE OBTAINED FOR ALL AREAS TO BE SEEDED, SPRIGGED, SODDED OR PLANTED. RECOMMENDED FERTILIZER AND pH ADJUSTING PRODUCTS SHALL BE INCORPORATED INTO THE PREPARED AREAS AND BACKFILL MATERIAL PER THE TEST.

3- ALL AREAS TO BE SEEDED OR PLATED SHALL BE TILLED OR RIPPED TO A DEPTH OF 4". RIPPING CONSISTS OF CREATING FISSURES IN A CRISS-CROSS PATTERN OVER THE ENTIRE SURFACE AREA USING AN IMPLEMENT THAT WILL NOT GLAZE THE SIDE WALLS OF THE FISSURES. SITE PREPARATION THAT DOES NOT COMPLY WITH THESE DOCUMENTS SHALL NOT BE ACCEPTABLE. THE DEPTH OF SOIL PREPARATION MAY BE ESTABLISHED AS A RANGE BASED ON THE APPROVAL OF THE REVIEW AGENCY. ONCE TILLED OR RIPPED ACCORDING TO THE APPROVED PLAN, ALL AREAS ARE TO BE RETURNED TO FINAL GRADE. pH MODIFIERS AND/OR OTHER SOIL AMENDMENTS SPECIFIED IN THE SOIL TESTS CAN BE ADDED DURING THE SOIL PREPARATION PROCEDURE OR AS DESCRIBED BELOW.

4- ALL STONES LARGER THAN 3" ON ANY SIDE, STICKS, ROOTS, AND OTHER EXTRANEEOUS MATERIALS THAT SURFACE DURING THE BED PREPARATION SHALL BE REMOVED.

B. AREAS TO BE SEEDED

1- TILL OR DISC THE PREPARED AREAS TO BE SEEDED TO A MINIMUM DEPTH OF 4". REMOVE STONES LARGER THAN 3" ON ANY SIDE, STICKS, ROOTS, AND OTHER EXTRANEEOUS MATERIALS THAT SURFACE. IF NOT INCORPORATED IN THE RIPPING PROCESS, ADD pH MODIFIERS AND FERTILIZERS AT THE RATE SPECIFIED.

2- RECOMPACT THE AREA UTILIZING A CULTIPACKER ROLLER. THE FINISHED GRADE SHALL BE SMOOTH EVEN SOIL SURFACE WITH LOOSE, UNIFORMLY FINE TEXTURE. ALL RIDGES AND DEPRESSIONS SHALL BE REMOVED AND FILLED TO PROVIDE THE APPROVED SURFACE DRAINAGE. SEEDING THE GRADED AREAS IS TO BE DONE IMMEDIATELY AFTER FINISHED GRADES ARE OBTAINED AND SEEDBED PREPARATION IS COMPLETE.

C. AREAS TO BE SPRIGGED, SODDED, AND/OR PLANTED

1- AT THE TIME OF PLANTING, TILL OR DISC THE PREPARED AREA TO A DEPTH OF 4"-6" BELOW THE APPROVED FINISHED GRADE. REMOVE ALL STONES LARGER THAN 3" ON ANY SIDE, STICKS, ROOTS AND OTHER EXTRANEEOUS MATERIALS THAT SURFACE. IF NOT INCORPORATED DURING THE RIPPING PROCESS, ADD pH MODIFIERS, FERTILIZER AND OTHER RECOMMENDED SOIL AMENDMENTS.

2- RECOMPACT THE AREA UTILIZING A CULTIPACKER ROLLER AND PREPARE FINAL GRADES AND DESCRIBED ABOVE. INSTALL SPRIGS, SOD AND PLANTS AS DIRECTED IMMEDIATELY AFTER FINE GRADING IS COMPLETE. MULCH, MAT AND/OR TACK AS SPECIFIED.

IV. CLOSEOUT

1- REFER TO NCG01 REQUIREMENTS AND CONSTRUCTION SEQUENCE FOR GROUND STABILIZATION TIMEFRAMES.

2- CONTRACTOR RESPONSIBLE FOR ESTABLISHING GROUND COVER PRIOR TO CLOSE OUT OF EROSION CONTROL. PERMIT OR ACCEPTANCE BY OWNER. GROUND COVER WILL BE CONSIDERED ESTABLISHED WHEN ALL EXPOSED SOILS HAVE BEEN STABILIZED WITH A PERMANENT PERENNIAL VEGETATIVE COVER WITH A DENSITY OF 80% WITH NO CONTIGUOUS BARE AREAS GREATER THAN ONE SQUARE YARD. VEGETATION DENSITY SHALL BE DETERMINED BY THE ENGINEER OR EROSION CONTROL INSPECTOR.

3- MULTIPLE SEEDING EFFORTS BY THE CONTRACTOR MAY BE REQUIRED FOR PORTIONS OF OR THE ENTIRE SITE TO ESTABLISH SUITABLE GROUND COVER.

SEEDING SPECIFICATIONS

11-15-23

NOT TO SCALE

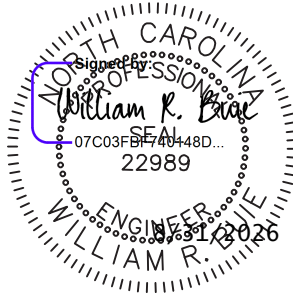
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REVISIONS	
DATE	DESCRIPTION



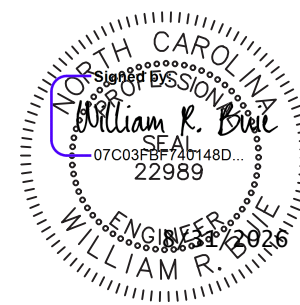
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PROJECT NUMBER: 25188
DATE: 8/26

Erosion Control
Detail Sheet

C-302

SCALE: NOT TO SCALE



REVISIONS	
DATE	DESCRIPTION



PROJECT NUMBER: 25188
DATE: 8/26

Erosion Control
Detail Sheet

C-303

SCALE: NOT TO SCALE

GROUND STABILIZATION AND MATERIALS HANDLING PRACTICES FOR COMPLIANCE WITH THE NCG01 CONSTRUCTION GENERAL PERMIT

Implementing the details and specifications on this plan sheet will result in the construction activity being considered compliant with the Ground Stabilization and Materials Handling sections of the NCG01 Construction General Permit (Sections E and F, respectively). The permittee shall comply with the Erosion and Sediment Control plan approved by the delegated authority having jurisdiction. All details and specifications shown on this sheet may not apply depending on site conditions and the delegated authority having jurisdiction.

SECTION E: GROUND STABILIZATION

Required Ground Stabilization Timeframes		
Site Area Description	Stabilize within this many calendar days after ceasing land disturbance	Timeframe variations
(a) Perimeter dikes, swales, ditches, and perimeter slopes	7	None
(b) High Quality Water (HQW) Zones	7	None
(c) Slopes steeper than 3:1	7	If slopes are 10 feet or less in length and are not steeper than 2:1, 14 days are allowed
(d) Slopes 3:1 to 4:1	14	-7 days for slopes greater than 50' in length and with slopes steeper than 4:1 -7 days for perimeter dikes, swales, ditches, perimeter slopes and HQW Zones -10 days for Falls Lake Watershed
(e) Areas with slopes flatter than 4:1	14	-7 days for perimeter dikes, swales, ditches, perimeter slopes and HQW Zones -10 days for Falls Lake Watershed unless there is zero slope

Note: After the permanent cessation of construction activities, any areas with temporary ground stabilization shall be converted to permanent ground stabilization as soon as practicable but in no case longer than 90 calendar days after the last land disturbing activity. Temporary ground stabilization shall be maintained in a manner to render the surface stable against accelerated erosion until permanent ground stabilization is achieved.

GROUND STABILIZATION SPECIFICATION

Stabilize the ground sufficiently so that rain will not dislodge the soil. Use one of the techniques in the table below:

Temporary Stabilization	Permanent Stabilization
- Temporary grass seed covered with straw or other mulches and tackifiers. - Hydroseeding - Rolled erosion control products with or without temporary grass seed - Appropriately applied straw or other mulch - Plastic sheeting	- Permanent grass seed covered with straw or other mulches and tackifiers - Geotextile fabrics such as permanent soil reinforcement matting (PRSM) - Hydroseeding - Shrubs or other permanent plantings covered with mulch - Uniform and evenly distributed ground cover sufficient to restrain erosion - Structural methods such as concrete, asphalt or retaining walls - Rolled erosion control products with grass seed

Note: The use of techniques listed above which promote and assist in establishment of vegetation does not constitute permanet stabilization prior to the establishment of permanent vegetation.

POLYACRYLAMIDES (PAMS) AND FLOCCULANTS

- Select flocculants that are appropriate for the soils being exposed during construction, selecting from the NC DWR List of Approved PAMS/Flocculants
- Apply flocculants at or before the inlets to Erosion and Sediment Control Measures.
- Apply flocculants at the concentrations specified in the NC DWR List of Approved PAMS/Flocculants and in accordance with the manufacturer's instructions.
- Provide ponding area for containment of treated Stormwater before discharging offsite.
- Store flocculants in leak-proof containers that are kept under storm-resistant cover or surrounded by secondary containment structures.

EQUIPMENT AND VEHICLE MAINTENANCE

- Maintain vehicles and equipment to prevent discharge of fluids.
- Provide drip pans under any stored equipment.
- Identify leaks and repair as soon as feasible, or remove leaking equipment from the project.
- Collect all spent fluids, store in separate containers and properly dispose as hazardous waste (recycle when possible).
- Remove leaking vehicles and construction equipment from service until the problem has been corrected.
- Bring used fuels, lubricants, coolants, hydraulic fluids and other petroleum products to a recycling or disposal center that handles these materials.

LITTER, BUILDING MATERIAL AND LAND CLEARING WASTE

- Never bury or burn waste. Place litter and debris in approved waste containers.
- Provide a sufficient number and size of waste containers (e.g dumpster, trash receptacle) on site to contain construction and domestic wastes.
- Locate waste containers at least 50 feet away from storm drain inlets and surface waters unless no other alternatives are reasonably available.
- Locate waste containers on areas that do not receive substantial amounts of runoff from upland areas and does not drain directly to a storm drain, stream or wetland.
- Cover waste containers at the end of each workday and before storm events or provide secondary containment. Repair or replace damaged waste containers.
- Anchor all lightweight items in waste containers during times of high winds.
- Empty waste containers as needed to prevent overflow. Clean up immediately if containers overflow.
- Dispose waste off-site at an approved disposal facility.
- On business days, clean up and dispose of waste in designated waste containers.

PAINT AND OTHER LIQUID WASTE

- Do not dump paint and other liquid waste into storm drains, streams or wetlands.
- Locate paint washouts at least 50 feet away from storm drain inlets and surface waters unless no other alternatives are reasonably available.
- Contain liquid wastes in a controlled area.
- Containment must be labeled, sized and placed appropriately for the needs of site.
- Prevent the discharge of soaps, solvents, detergents and other liquid wastes from construction sites.

PORTABLE TOILETS

- Install portable toilets on level ground, at least 50 feet away from storm drains, streams or wetlands unless there is no alternative reasonably available. If 50 foot offset is not attainable, provide relocation of portable toilet behind silt fence or place on a gravel pad and surround with sand bags.
- Provide staking or anchoring of portable toilets during periods of high winds or in high foot traffic areas.
- Monitor portable toilets for leaking and properly dispose of any leaked material. Utilize a licensed sanitary waste hauler to remove leaking portable toilets and replace with properly operating unit.

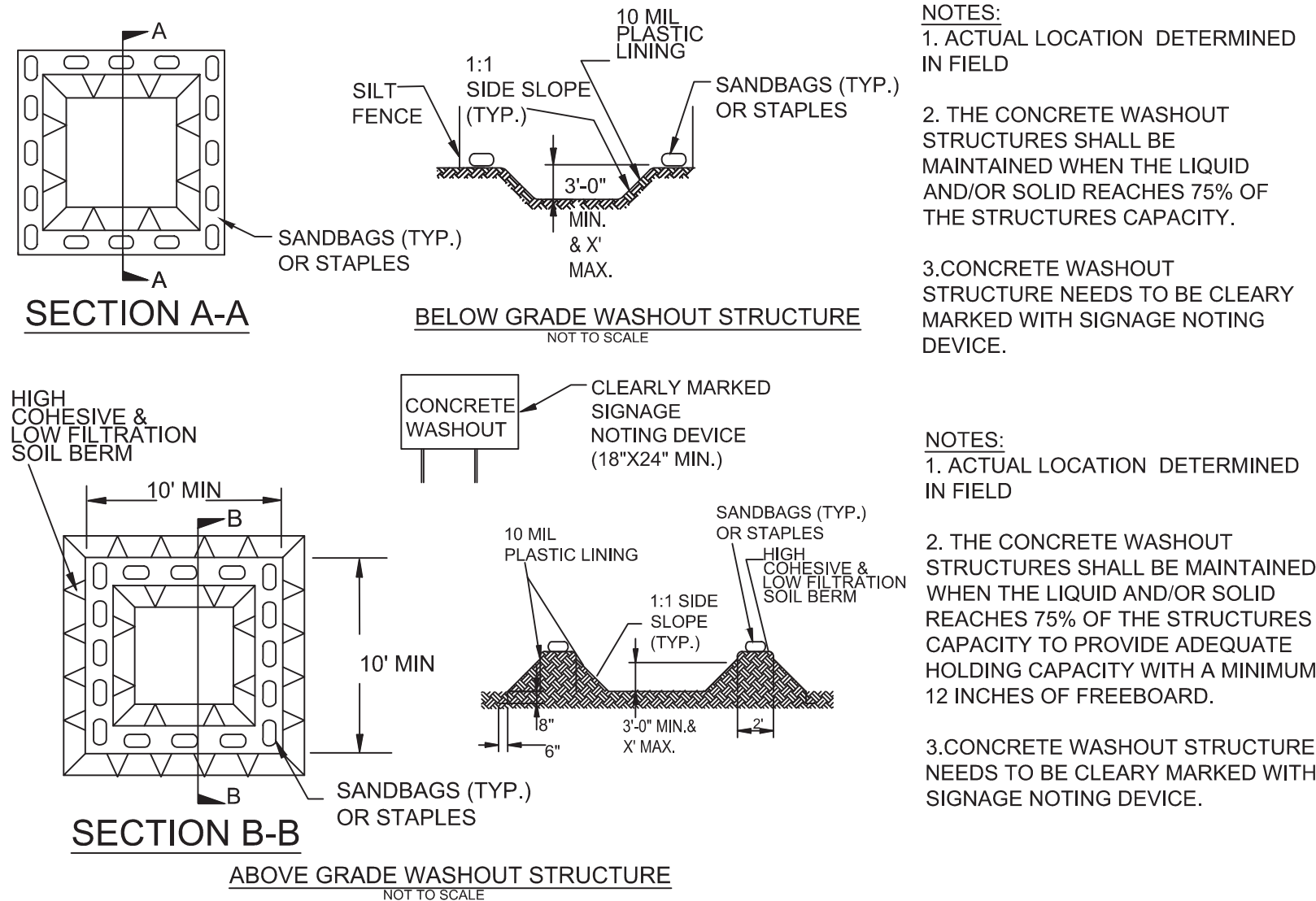
EARTHEN STOCKPILE MANAGEMENT

- Show stockpile locations on plans. Locate earthen-material stockpile areas at least 50 feet away from storm drain inlets and surface waters unless it can be shown no other alternatives are reasonably available. It is recommended to locate stockpile areas at least 50 feet away from skimmer basins and anywhere stormwater flow is concentrated.
- Protect stockpile with silt fence installed along toe of slope with a minimum offset of five feet from the toe of stockpile.
- Provide stable stone access point when feasible.
- Stabilize stockpile within the timeframes provided on this sheet and in accordance with the approved plan and any additional requirements. Soil stabilization is defined as vegetative, physical or chemical coverage techniques that will restrain accelerated erosion on disturbed soils for temporary or permanent control needs.

HAZARDOUS AND TOXIC WASTE

- Create designated hazardous waste collection areas on-site.
- Place hazardous waste containers under cover or in secondary containment.
- Do not store hazardous chemicals, drums or bagged materials directly on the ground.

ONSITE CONCRETE WASHOUT STRUCTURE WITH LINER



CONCRETE WASHOUTS

- Do not discharge concrete or cement slurry from the site.
- Dispose of, or recycle settled, hardened concrete residue in accordance with local and state solid waste regulations and at an approved facility.
- Manage washout from mortar mixers in accordance with the above item and in addition place the mixer and associated materials on impervious barrier and within lot perimeter silt fence.
- Install temporary concrete washouts per local requirements, where applicable. If an alternate method or product is to be used, contact your approval authority for review and approval. If local standard details are not available, use one of the two types of temporary concrete washouts provided on this detail.
- Do not use concrete washouts for dewatering or storing defective curb or sidewalk sections. Stormwater accumulated within the washout may not be pumped into or discharged to the storm drain system or receiving surface waters. Liquid waste must be pumped out and removed from project.
- Locate washouts at least 50 feet from storm drain inlets and surface waters unless it can be shown that no other alternatives are reasonably available. At a minimum, install protection of storm drain inlet(s) closest to the washout which could receive spills or overflow.
- Locate washouts in an easily accessible area, on level ground and install a stone entrance pad in front of the washout. Additional controls may be required by the approving authority.
- Install at least one sign directing concrete trucks to the washout within the project limits. Post signage on the washout itself to identify this location.
- Remove leavings from the washout when at approximately 75% capacity to limit overflow events. Replace the tarp, sand bags or other temporary structural components when no longer functional. When utilizing alternative or proprietary products, follow manufacturer's instructions.
- At the completion of the concrete work, remove remaining leavings and dispose of in an approved disposal facility. Fill pit, if applicable, and stabilize any disturbance caused by removal of washout.

HERBICIDES, PESTICIDES AND RODENTICIDES

- Store and apply herbicides, pesticides and rodenticides in accordance with label restrictions.
- Store herbicides, pesticides and rodenticides in their original containers with the label, which lists directions for use, ingredients and first aid steps in case of accidental poisoning.
- Do not store herbicides, pesticides and rodenticides in areas where flooding is possible or where they may spill or leak into wells, stormwater drains, ground water or surface water. If a spill occurs, clean area immediately.
- Do not stockpile these materials onsite.



GROUND COVER & MATERIALS HANDLING

Effective:
April 1, 2024

Blue Ridge
Community College
Utility Extensions

Henderson County
North Carolina



REVISIONS	
DATE	DESCRIPTION



PROJECT NUMBER: 25188
DATE: 8/26

Erosion Control
Detail Sheet

C-304

SCALE: NOT TO SCALE

PART III

SELF-INSPECTION, RECORDKEEPING AND REPORTING

SECTION A: SELF-INSPECTION

Self-inspections are required during normal business hours in accordance with the table below. When adverse weather or site conditions would cause the safety of the inspection personnel to be in jeopardy, the inspection may be delayed until the next business day on which it is safe to perform the inspection. In addition, when a storm event of equal to or greater than 1.0 inch occurs outside of normal business hours, the self-inspection shall be performed upon the commencement of the next business day. Any time when inspections were delayed shall be noted in the Inspection Record.

Inspect	Frequency (during normal business hours)	Inspection records must include:
(1) Rain gauge maintained in good working order	Daily	Daily rainfall amounts. If no daily rain gauge observations are made during weekend on holiday periods, and no individual-day rainfall information is available, record the cumulative rain measurement for those unattended days (this will determine if a site inspection is needed). Days on which no rainfall occurred shall be recorded as "Zero." The permittee may use another rain-monitoring device approved by the Division.
(2) E&SC Measures	At least once per 7 calendar days and within 24 hours of a rain event $\geq$ 1.0 inch in 24 hours.	1. Identification of the measures inspected 2. Date and Time of the inspection 3. Name of the person performing the inspection 4. Indication of whether the measures were operating properly 5. Description of maintenance needs for the measure 6. Description, Evidence, and date of corrective actions taken
(3) Stormwater discharge outfalls(SDOs)	At least once per 7 calendar days and within 24 hours of a rain event $\geq$ 1.0 inch in 24 hours.	1. Identification of the discharge outfalls inspected 2. Date and Time of the inspection 3. Name of the person performing the inspection 4. Evidence of indicators of stormwater pollution such as oil sheen, floating or suspended solids or discoloration 5. Indication of visible sediment leaving the site 6. Description, Evidence, and date corrective actions taken
(4) Perimeter of Site	At least once per 7 calendar days and within 24 hours of a rain event $\geq$ 1.0 inch in 24 hours.	If visible Sedimentation is found outside site limits, then record of the following shall be made: 1) Actions taken to clean up or stabilize sediment that has left the site limits 2) Description, Evidence and date of corrective actions taken 3) An explanation as to the actions taken to control future releases
(5) Streams or wetlands onsite or offsite (where accessible)	At least once per 7 calendar days and within 24 hours of a rain event $\geq$ 1.0 inch in 24 hours.	If the stream or wetland has increased visible sedimentation or has visible increased turbidity from the construction activity, then a record of the following shall be made: 1) Description, Evidence and date of corrective actions taken 2)Records of required reports to the appropriate Division Regional Office per Part III, Section C, Item(2)(a) of this permit
(6) Ground Stabilization Measures	After each phase of grading.	1. The phase of grading (installation of perimeter E&SC measures, clearing and grubbing, installation of storm drainage facilities, completion of all land-disturbing activity, construction or redevelopment, permanent ground cover). 2. Documentation that the required ground stabilization measures have been provided within the required timeframe or assurance that they will be provided as soon as possible.

NOTE: The rain inspection resets the required 7 calendar day inspection requirement.

PART III

SELF-INSPECTION, RECORDKEEPING AND REPORTING

SECTION B: RECORDKEEPING

1. E&SC Plan Documentation

The approved E&SC plan as well as any approved deviation shall be kept on the site. The approved E&SC plan must be kept up-to-date throughout the coverage under this permit. The following items pertaining to the E&SC plan shall be kept on site and available for inspection at all times during normal business hours.

Item to Document	Document Requirements
(a) Each E&SC measure has been installed and does not significantly deviate from the locations, dimensions and relative elevations shown on the approved E&SC plan.	Initial and date each E&SC measure on a copy of the approved E&SC plan or complete, date and sign an inspection report that lists each E&SC measure shown on the approved E&SC plan. This documentation is required upon the initial installation of the E&SC measures or if the E&SC measures are modified after initial installation.
(b) A phase of grading has been completed.	Initial and date a copy of the approved E&SC plan or complete, date and sign an inspection report to indicate completion of the construction phase.
(c) Ground cover is located and installed in accordance with the approved E&SC plan.	Initial and date a copy of the approved E&SC plan or complete, date and sign an inspection report to indicate compliance with approved ground cover specifications.
(d) The maintenance and repair requirements for all E&SC measures have been performed.	Complete, date and sign an inspection report.
(e) Corrective actions have been taken to E&SC measures.	Initial and date a copy of the approved E&SC plan or complete, date and sign an inspection report to indicate the completion of the corrective action.

2. Additional Documentation to be Kept on Site

In addition to the E&SC plan documents above, the following items shall be kept on the site and available for inspectors at all times during normal business hours, unless the Division provides a site-specific exemption based on unique site conditions that make this requirement not practical:

(a) This General Permit as well as the Certificate of Coverage, after it is received.

(b) Records of inspections made during the previous twelve months. The permittee shall record the required observations on the Inspection Record Form provided by the Division or a similar inspection form that includes all the required elements. Use of electronically-available records in lieu of the required paper copies will be allowed if shown to provide equal access and utility as the hard-copy records.

3. Documentation to be Retained for Three Years*

*All data used to complete the e-NOI and all inspection records shall be maintained for a period of three years after project completion and made available upon request. [40 CFR 122.41]

PART III

SELF-INSPECTION, RECORDKEEPING AND REPORTING

SECTION C: REPORTING

1. Occurrences that Must be Reported

Permittees shall report the following occurrences:

- (a) Visible sediment deposition in a stream or wetland.
- (b) Oil spills if:
- They are 25 gallons or more,
 - They are less than 25 gallons but cannot be cleaned up within 24 hours,
 - They cause sheen on surface waters (regardless of volume), or
 - They are within 100 feet of surface waters (regardless of volume).
- (c) Releases of hazardous substances in excess of reportable quantities under Section 311 of the Clean Water Act (Ref: 40 CFR 110.3 and 40 CFR 117.3) or Section 102 of CERCLA (Ref: 40 CFR 302.4) or G.S. 143-215.85.
- (d) Anticipated bypasses and unanticipated bypasses.
- (e) Noncompliance with the conditions of this permit that may endanger health or the environment.

2. Reporting Timeframes and Other Requirements

After a permittee becomes aware of an occurrence that must be reported, he shall contact the appropriate Division regional office within the timeframes and in accordance with the other requirements listed below. Occurrences outside normal business hours may also be reported to the Department's Environmental Emergency Center personnel at (800) 858-0368.

Occurrence	Reporting Timeframe (After Discovery) and Other Requirements
(a) Visible sediment deposition in a stream or wetland	- Within 24 hours, an oral or electronic notification. - Within 7 Calendar Days, a report that contains a description of the sediment and actions taken to address the cause of the deposition. Division staff may waive the requirement for a written report on a case-by-case basis. - If the stream is named on the NC 303(d) list as impaired for sediment-related caused, the permittee may be required to perform additional monitoring, inspections or apply more stringent practices if staff determine that additional requirements are needed to assure compliance with the federal or state impaired-waters conditions.
(b) Oil spills and release of hazardous substances per item 1(b)-(c) above	Within 24 Hours, an oral or electronic notification. The notification shall include information about the date, time, nature, volume and location of the spill or release.
(c) Anticipated bypasses [40 CFR 122.41(m)(3)]	A report at least ten days before the date of the bypass, if possible. The report shall include an evaluation of the anticipated quality and effect of the bypass.
(d) Unanticipated bypasses [40 CFR 122.41(m)(3)]	- Within 24 Hours, an oral or electronic notification - Within 7 calendar days, a report that includes an evaluation of the quality and effect of the bypass.
(e) Noncompliance with the conditions of this permit that may endanger health or the environment [40 CFR 122.41(l)(7)]	- Within 24 Hours, an oral or electronic notification - Within 7 calendar days, a report that contains a description of the noncompliance, and its causes; the period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected, the anticipated time noncompliance is expected to continue; and steps taken or planned to reduce, eliminate and prevent reoccurrence of the noncompliance. [40 CFR 122.41(l)(6). - Division staff may waive the requirement for a written report on a case-by-case basis.

PART II, SECTION G, ITEM (4)

DRAW DOWN OF SEDIMENT BASINS FOR MAINTENANCE OR CLOSE OUT

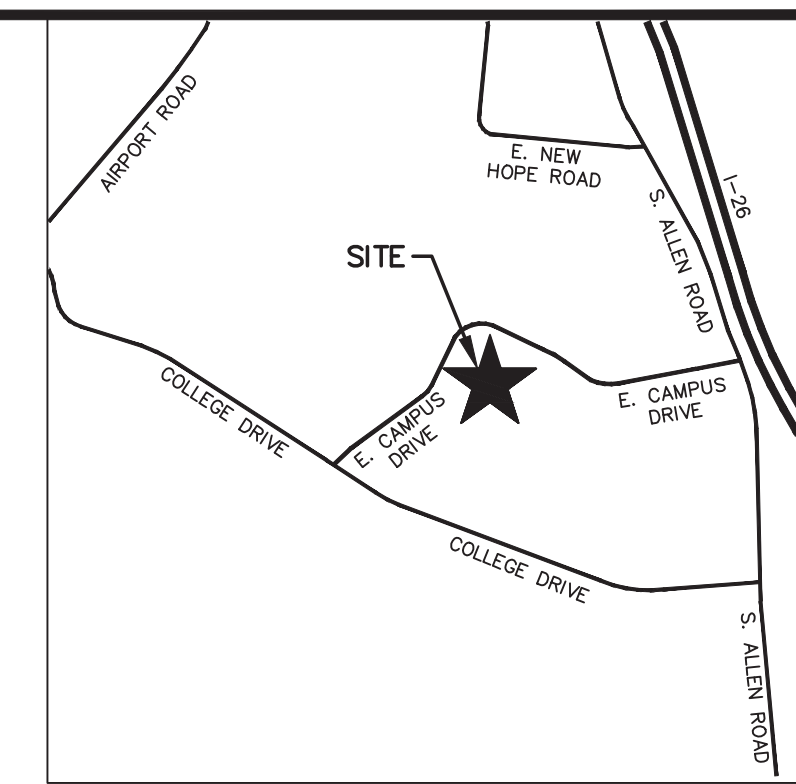
Sediment basins and traps that receive runoff from drainage areas of one acre or more shall use outlet structures that withdraw water from the surface when these devices need to be drawn down for maintenance or close out unless this is infeasible. The circumstances in which it is not feasible to withdraw water from the surface shall be rare (for example, times with extended cold weather). Non-surface withdrawals from sediment basins shall be allowed only when all of the following criteria have been met:

- (a) The E&SC plan authority has been provided with documentation of the non-surface withdrawal and the specific time periods or conditions in which it will occur. The non-surface withdrawal shall not commence until the E&SC plan authority has approved these items,
- (b) The non-surface withdrawal has been reported as an anticipated bypass in accordance with Part III, Section C, Item (2)(c) and (d) of this permit,
- (c) Dewatering discharges are treated with controls to minimize discharges of pollutants from stormwater that is removed from the sediment basin. Examples of appropriate controls include properly sited, designed and maintained dewatering tanks, weir tanks, and filtration systems,
- (d) Vegetated, upland areas of the sites or a properly designed stone pad is used to the extent feasible at the outlet of the dewatering treatment devices described in Item (c) above,
- (e) Velocity dissipation devices such as check dams, sediment traps, and riprap are provided at the discharge points of all dewatering devices, and
- (f) Sediment removed from the dewatering treatment devices described in Item (c) above is disposed of in a manner that does not cause deposition of sediment into waters of the United States.



INSPECTION, RECORD KEEPING AND REPORTING

Effective:
April 1, 2024



WGLA
Engineering

WGLA ENGINEERING, PLLC
724 5th AVENUE WEST
HENDERSONVILLE, NC 28739
(828) 687-7177
WGLA.COM
NC LICENSE P-1342

Blue Ridge
Community College
Utility Extensions

Henderson County
North Carolina

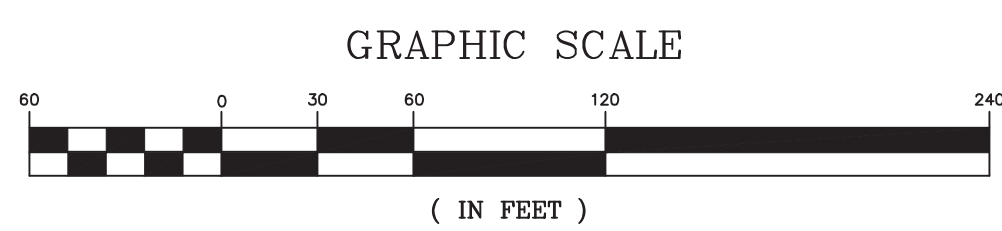
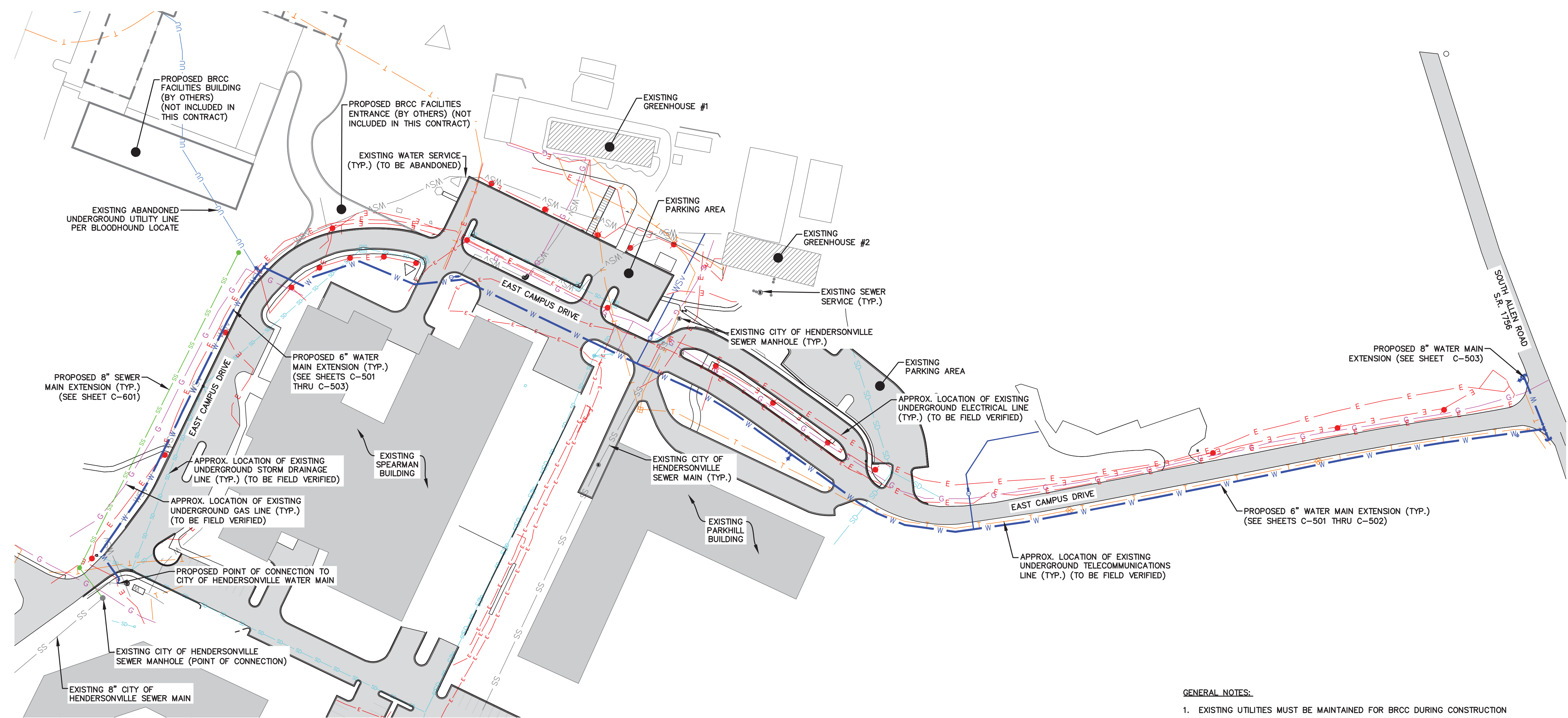
REVISIONS	
DATE	DESCRIPTION

PROJECT NUMBER: 25188
DATE: 8/26

Utility Routing
Overall Plan

C-500

SCALE: 1" = 60'



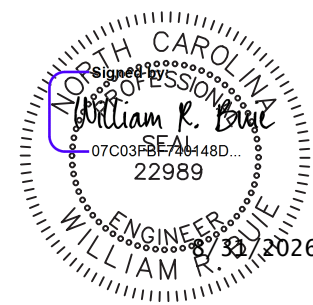
LEGEND:

— W —	EXISTING WATER MAIN
— WSv —	EXISTING WATER SERVICE
— SS —	EXISTING SEWER MAIN
— E —	EXISTING ELECTRICAL LINE
— G —	EXISTING GAS MAIN
— SD —	EXISTING STORM DRAINAGE
— T —	EXISTING TELECOMMUNICATIONS LINE
— W —	PROPOSED WATER MAIN
— WSv —	PROPOSED WATER SERVICE
— SS —	PROPOSED SEWER MAIN

- GENERAL NOTES:**
- EXISTING UTILITIES MUST BE MAINTAINED FOR BRCC DURING CONSTRUCTION
 - FOLLOWING COMPLETION OF PROPOSED WATER MAIN INSTALLATION, CONTRACTOR SHALL COORDINATE WITH HENDERSON COUNTY, BRCC, AND THE CITY OF HENDERSONVILLE TO PROVIDE NEW WATER SERVICES FOR THE EXISTING GREENHOUSES AND BASEBALL FIELD RESTROOMS.
 - THE CONTRACTOR SHALL PROVIDE A MINIMUM OF ONE WEEK NOTICE BEFORE TEMPORARY SERVICE LOSS OR CHANGING SERVICES

**Blue Ridge
Community College
Utility Extensions**

Henderson County
North Carolina



REVISIONS	
DATE	DESCRIPTION

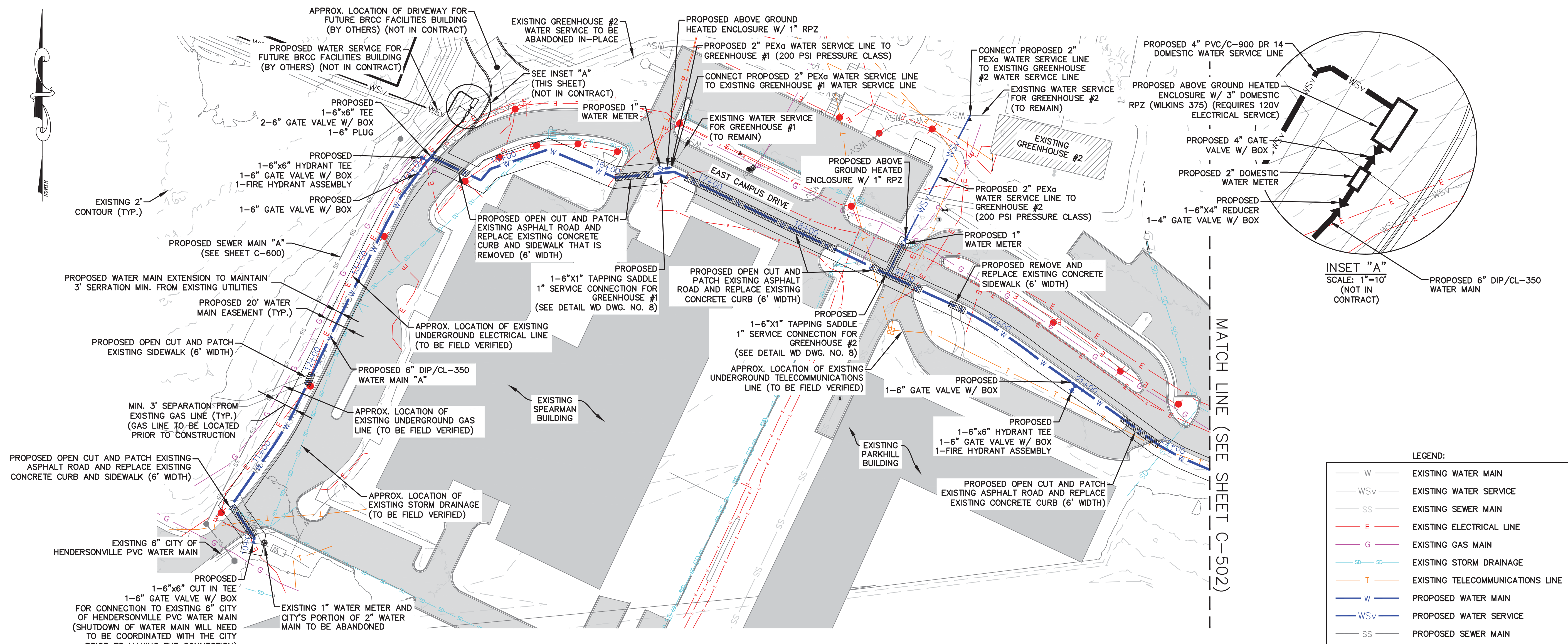


PROJECT NUMBER: 25188
DATE: 8/26

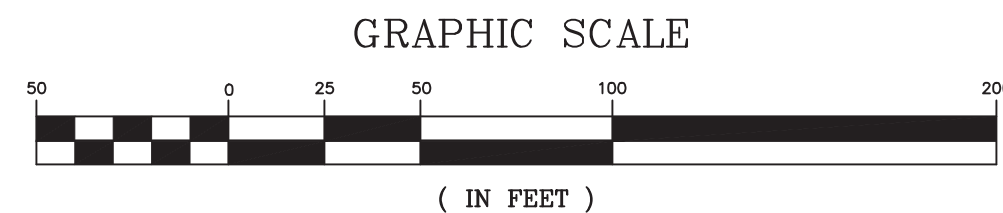
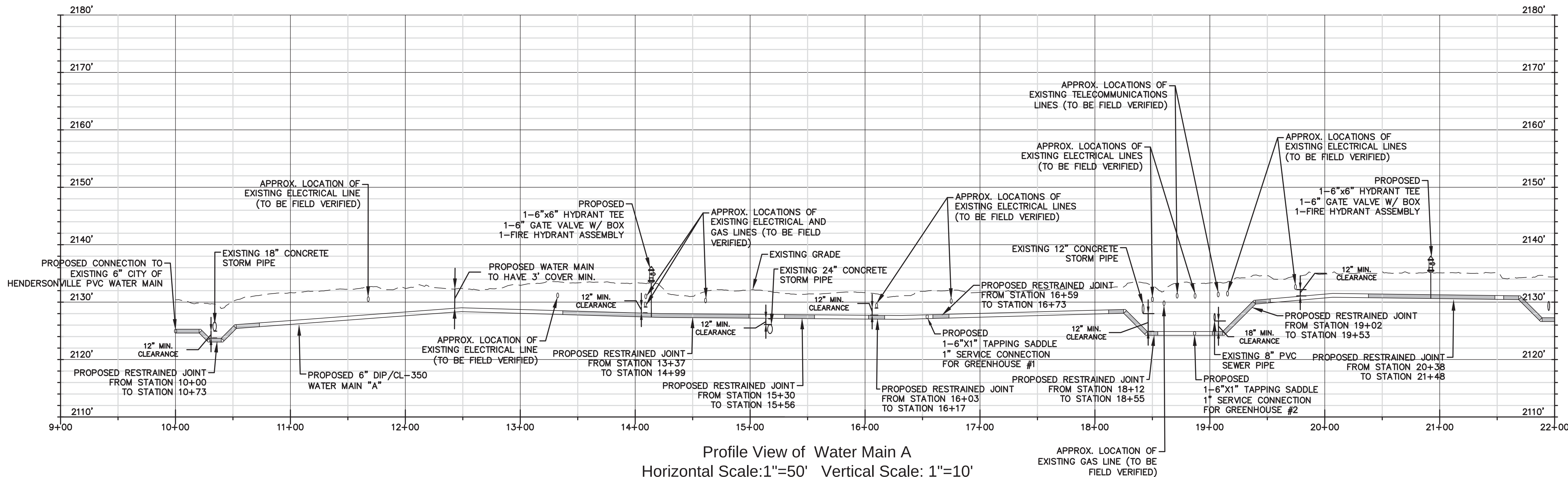
Water Main "A"
10+00 to 21+50

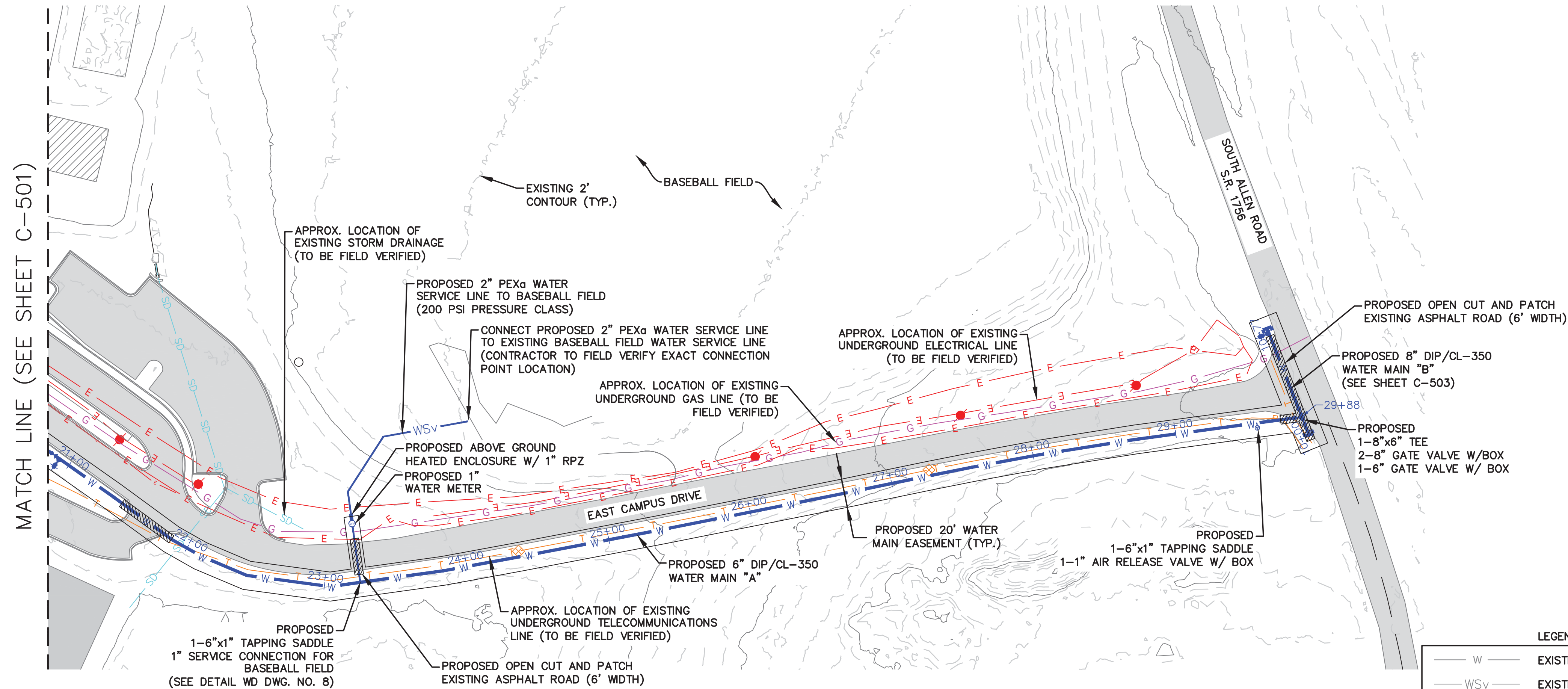
C-501

SCALE: 1" = 50'



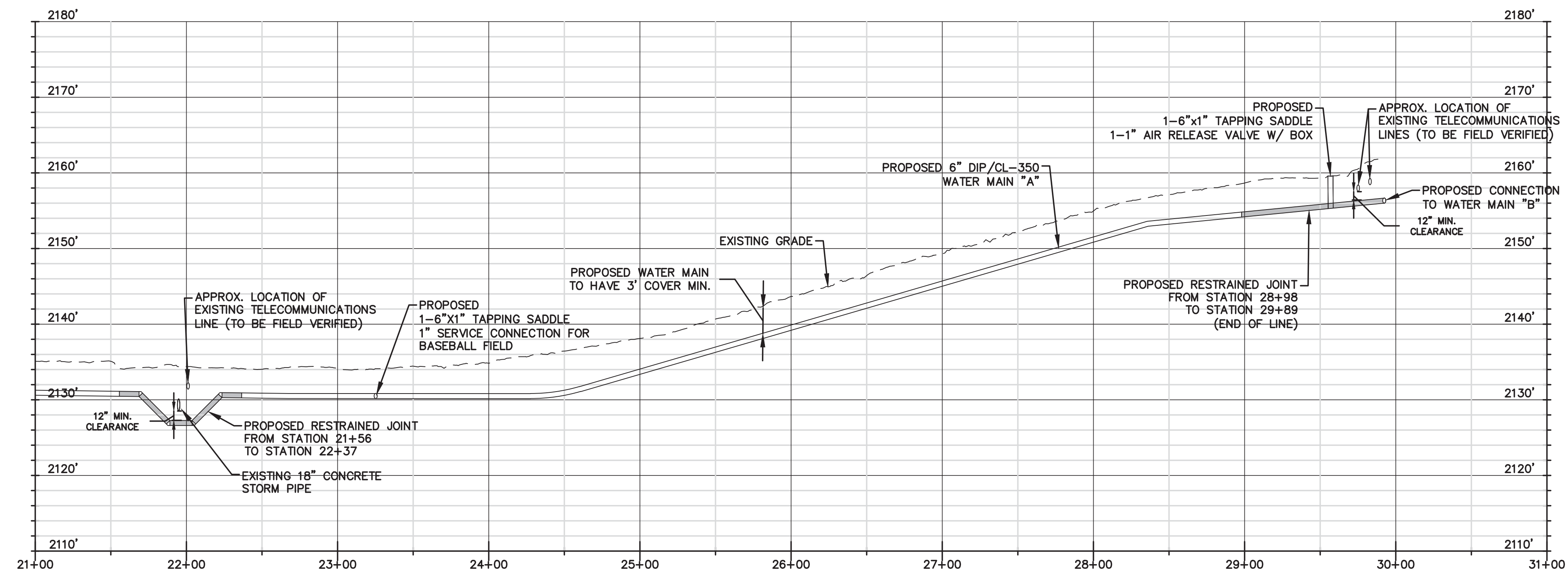
PLAN VIEW
SCALE: 1"=50'



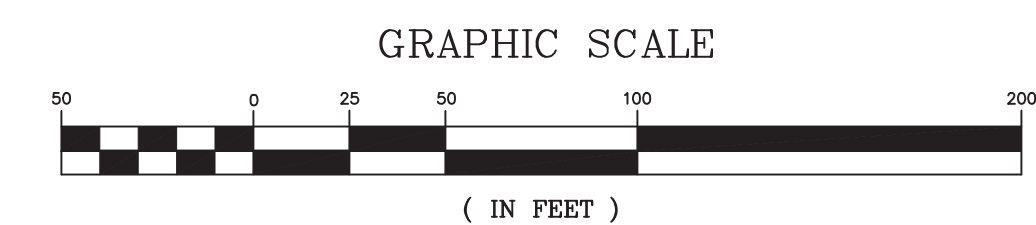


PLAN VIEW
SCALE: 1"=50'

LEGEND:	
W	EXISTING WATER MAIN
WSv	EXISTING WATER SERVICE
SS	EXISTING SEWER MAIN
E	EXISTING ELECTRICAL LINE
G	EXISTING GAS MAIN
SD	EXISTING STORM DRAINAGE
T	EXISTING TELECOMMUNICATIONS LINE
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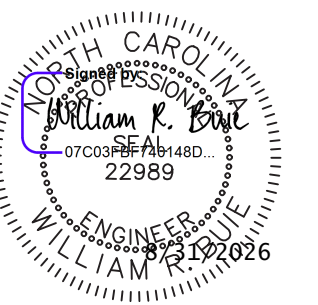


Profile View of Water Main A
Horizontal Scale: 1"=50' Vertical Scale: 1"=10'



Blue Ridge
Community College
Utility Extensions

Henderson County
North Carolina



REVISIONS	
DATE	DESCRIPTION

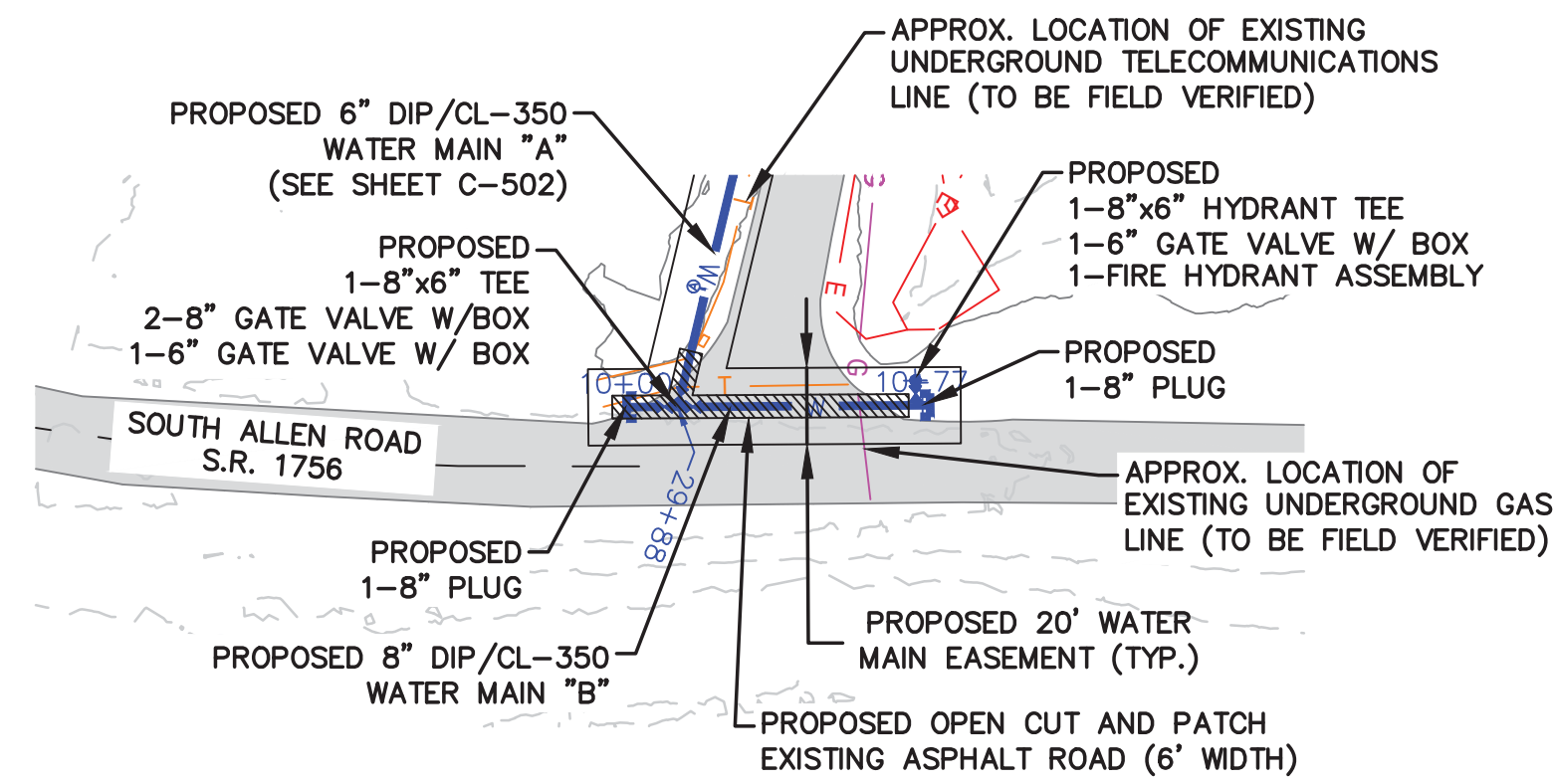
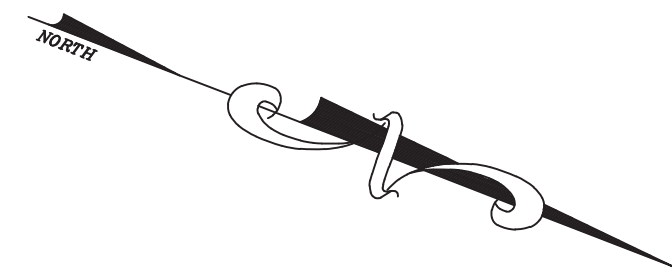


PROJECT NUMBER: 25188
DATE: 8/26

Water Main "A"
21+50 to 29+89

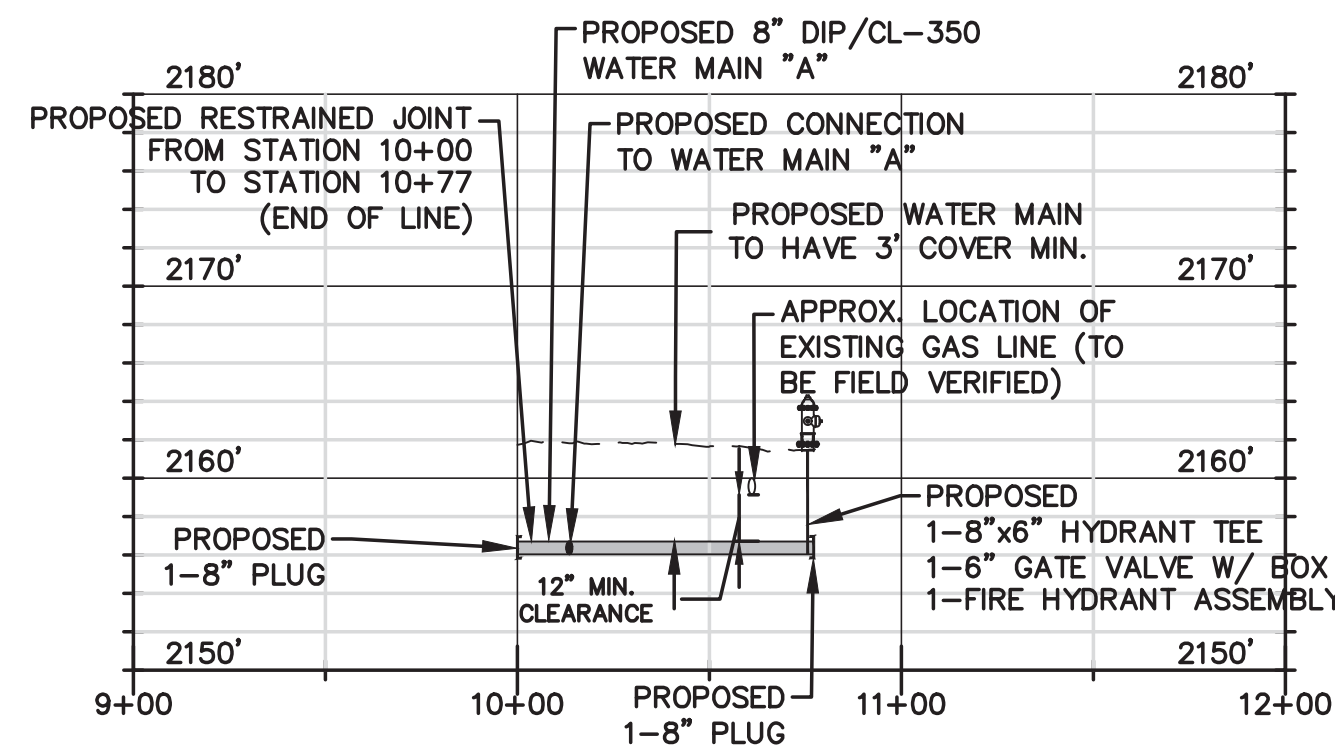
C-502

SCALE: 1" = 50'

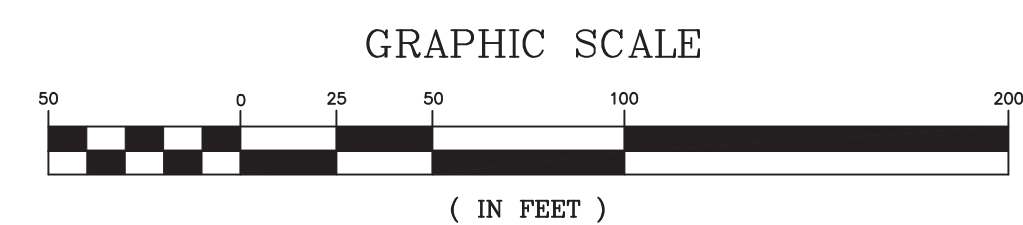


PLAN VIEW
SCALE: 1"=50'

LEGEND:	
— W —	EXISTING WATER MAIN
— WSv —	EXISTING WATER SERVICE
— SS —	EXISTING SEWER MAIN
— E —	EXISTING ELECTRICAL LINE
— G —	EXISTING GAS MAIN
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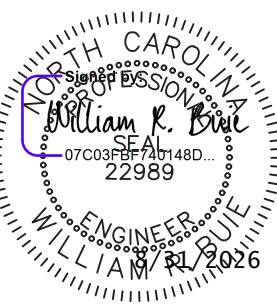


Profile View of Water Main B
Horizontal Scale: 1"=50' Vertical Scale: 1"=10'



Blue Ridge
Community College
Utility Extensions

Henderson County
North Carolina



REVISIONS	
DATE	DESCRIPTION



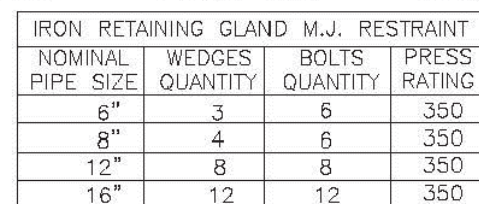
PROJECT NUMBER: 25188
DATE: 8/26

Water Main "B"
10+00 to 10+77

C-503

SCALE: 1" = 50'

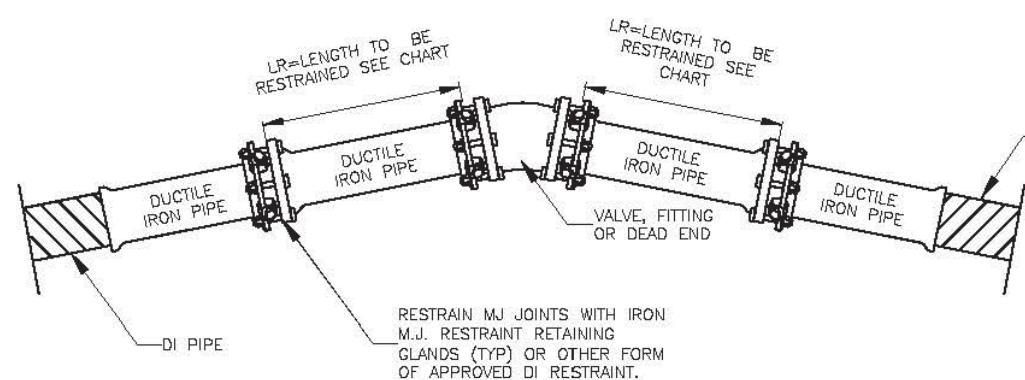
Henderson County
North Carolina



IRON RETAINING GLAND M.J. RESTRAINT			
NOMINAL PIPE SIZE	WEDGES QUANTITY	BOLTS QUANTITY	PRESS RATING
6"	3	6	350
8"	4	6	350
12"	8	8	350
16"	12	12	350

8" SIZE SHOWN 6" & 12" SIMILAR IF
GLAND M.J. RESTRAINT.

LR (IN. MIN. LENGTH OF RESTRAINT EACH DIRECTION OF THRUST IN LINEAR FEET) Based on 200 psig pressure, Safety Factor of 2.0:1, BARE DI PIPE AND ML Soil, 3.5" cover Chart does not apply to pipes wrapped in polyethylene wrap					
PIPE SIZE	VALVES DEAD ENDS TEES	90° ELBOWS	45° ELBOW & CROSSES	22-1/2° ELBOWS	REDUCER
6"	55'	31'	13'	7'	6"x2" 67'
8"	72'	40'	17'	8'	8"x6" 30'
12"	102'	57'	24'	12'	12"x8" 54'
16"	130'	72'	30'	15'	12"x8" 54'
					16"x8" 95'



- NOTES:
1. COMPACTION OF BACKFILL SHALL BE ACHIEVED THROUGH THE USE OF AN APPROVED VIBRATORY PLATE TAMPER OR ROLLER. THE CONTRACTOR IS RESPONSIBLE FOR MEETING ALL COMPACTION REQUIREMENTS.
 2. COMPACTION TESTING OF THE BACKFILL SHALL BE COORDINATED BY THE OWNER, WITH TESTING INTERVALS AT THE OWNER'S DISCRETION AND SUBJECT TO CHANGE. IF A TEST FAILS, THE CONTRACTOR MUST REMOVE THE DEFECTIVE BACKFILL, RE-DO THE WORK, AND PASS THE SAME AREA. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING ALL MATERIALS AND EQUIPMENT TO PROVIDE PROPER WATER CONTENT IN THE BACKFILL MATERIAL. IF THE WATER CONTENT IS DEEMED INSUFFICIENT FOR PROPER COMPACTION, THE CONTRACTOR SHALL PROVIDE PROPER WATER TO THE BACKFILL MATERIAL.
 3. TRACER WIRE AND CONNECTORS SHALL BE TRACE-SAFE WATER BLOKING TRACER WIRE OR EQUIVALENT AS SHOWN IN THE APPROVED PARTS LIST AND APPROVED BY THE ENGINEER. EQUIVALENT TRACER WIRE WILL BE A 19 GAUGE IN COATED COPPER CONDUCTOR WITH 19 GAUGE COPPER WIRE INSULATED WITH POLYESTER FIBER CLOTHED AND MOISTURE RESISTANT. THE WIRE SHALL BE POLYURETHANE ABRASION RESISTANT 30 MIL BLUE HOPE OUTER JACKET.
 4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ENSURING A SAFE WORK ENVIRONMENT WHEN WORKING IN TRENCHES INCLUDING THE PROPER USE OF SHIELDING, PROTECTIVE EQUIPMENT, AND MAINTAINING A SAFE DISTANCE FROM EXCAVATION. THE CONTRACTOR'S TRENCHING OPERATIONS MUST COMPLY WITH THE LATEST OSHA STANDARDS FOR EXCAVATION SAFETY, INCLUDING BUT NOT LIMITED TO THE FOLLOWING:

GENERAL NOTES:

1. WATER CONSTRUCTION IS AUTHORIZED BY THE NORTH CAROLINA DEPARTMENT OF TRANSPORTATION, QUALITY (QSDOT) AND THE CITY OF HENDERSONVILLE. THE WATER IS SUBJECT TO INSPECTIONS AT ALL TIMES BY REPRESENTATIVES OF QSDOT, THE CITY OF HENDERSONVILLE, AND THE STATE OF NORTH CAROLINA. THE CITY OF HENDERSONVILLE WILL BE RESPONSIBLE FOR THE CERTIFICATION OF COMPLETION OF THE WATER SYSTEMS BY THE ENGINEER AND THE CITY OF HENDERSONVILLE WILL BE RESPONSIBLE FOR THE FINAL CHECK AND DETAIL APPROVALS.

2. MATERIALS AND INSTALLATION FOR WATER CONSTRUCTION SHALL CONFORM TO THE CITY OF HENDERSONVILLE SPECIFICATIONS, QSDOT SPECIFICATIONS, AND APPROVED MATERIALS LIST, AND ASIAN STANDARDS AND REQUIREMENTS.

3. THE CONTRACTOR SHALL NOTIFY NORTH CAROLINA'S APPROPRIATE UTILITIES AGENCIES PRIOR TO ANY WORK BEING PERFORMED.

4. DURING WORKING HOURS SHALL BE FROM 7:00 AM TO 5:00 PM, MONDAY THROUGH FRIDAY, EXCEPT FOR EMERGENCY REPAIRS. ANY WORK BEING PERFORMED OUTSIDE OF THE CITY OF HENDERSONVILLE REPRESENTATIVES, THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF THE PUBLIC AND MAY BE REQUIRED TO CLOSE DURING NON-WORKING HOURS. AT TIMES, THE ENGINEER MAY DETERMINE THAT THE WORK SHALL BE STOPPED FOR THE SAFETY OF THE PUBLIC.

5. THE CONTRACTOR SHALL BE COURTEOUS AND RESPECTFUL TO THE PUBLIC. CURBING OUR OWN LANGUAGE IS NOT PERMITTED AND WILL NOT BE TOLERATED.

6. THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING PROTECTION TO THE CITY OF HENDERSONVILLE, QSDOT, AND ANY OTHER NECESSARY AUTHORITIES PRIOR TO ANY STREET CLOSURE OR TRAFFIC CHANGING.

7. THE CONTRACTOR, AT THEIR OWN EXPENSE, SHALL KEEP THE CONSTRUCTION SITE ACCESSIBLE TO THE PUBLIC AND SHALL MAINTAIN THE TRAFFIC FLOW. THE CONTRACTOR IS ALSO RESPONSIBLE FOR CONTROLLING, SUPPRESSING, AND REMOVING ANY POLLUTION OR SPILLAGE THAT MAY OCCUR.

8. THE CONTRACTOR IS RESPONSIBLE FOR ALL CONSTRUCTION IN ACCORDANCE WITH THE CITY OF HENDERSONVILLE SPECIFICATIONS, QSDOT SPECIFICATIONS, AND APPROVED MATERIALS LIST, AND ASIAN STANDARDS AND REQUIREMENTS.

9. THE CONTRACTOR SHALL VERIFY THAT ALL ELEVATIONS FOR ALL UTILITIES IN THEIR FIELD, DRAINAGE, AND OTHER DISCHARGE FACILITIES BOTH EXISTING AND PROPOSED, ARE CORRECT AND THE ENGINEER OF ANY DISCREPANCIES OR CONFLICTS PRIOR TO CONSTRUCTION.

10. THE CONTRACTOR SHALL PROTECT EXISTING UTILITIES DURING CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF ALL UTILITIES WITH APPLICABLE STANDARDS OF APPROPRIATE AGENCIES AND THE CONTRACTOR'S OWN STANDARDS.

11. THE CONTRACTOR SHALL MAINTAIN THE OPERATION OF EXISTING UTILITIES AND SHALL BE RESPONSIBLE FOR THE PROTECTION OF ALL UTILITIES. ANY INTERRUPTIONS SHALL BE MADE IN COORDINATION WITH THE CITY OF HENDERSONVILLE, QSDOT, AND ANY OTHER NECESSARY AUTHORITIES. ANY CONSIDERATIONS SHALL EXCEED ALL OTHERS. THE CONTRACTOR'S SCHEDULE, INCLUDING THE CONSTRUCTION OF THE TEMPORARY STRUCTURES, SHALL BE NECESSARY FOR THESE CONSIDERATIONS.

12. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE TEMPORARY PERMANENT REDUCTION OF STRUCTURES AND UTILITIES INCLUDING BUT NOT LIMITED TO POLES, LIGHTS, HORNS, AND OTHERS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR NOT INTERFERE WITH THE POSITIONING OF THE WORK AS SHOWN ON THE DRAWINGS.

13. THE CONTRACTOR SHALL BE REQUIRED TO COMPLY AND COMPLY WITH ALL CITY OF HENDERSONVILLE, QSDOT, AND ANY OTHER NECESSARY AUTHORITIES STANDARDS AND REQUIREMENTS.

14. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF ALL UTILITIES WITH APPLICABLE STANDARDS OF APPROPRIATE AGENCIES AND THE CONTRACTOR'S OWN STANDARDS.

15. ALL DISTURBED AREAS, INCLUDING BUT NOT LIMITED TO ASPHALT, CONCRETE, GRASS, AND OTHERS, SHALL BE RESTORED TO ORIGINAL CONDITION. EQUAL OR BETTER AREA, ORIGINAL SITE, DRAINAGE AND LANDSCAPED AREAS SHALL BE RESTORED TO ORIGINAL CONDITION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF ALL UTILITIES WITH APPLICABLE STANDARDS OF APPROPRIATE AGENCIES AND THE CONTRACTOR'S OWN STANDARDS. THE RESTORATION MAY BE REQUIRED WITHIN THE WARRANTY PERIOD AT THE CITY OF HENDERSONVILLE'S DISCRETION.

16. THE CONTRACTOR SHALL PROVIDE EROSION CONTROL DEVICES TO CONTROL RUNOFF AS REQUIRED. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY FINES THAT MAY BE DISCHARGED TO THE DRAINAGE SYSTEM.

17. IT IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR TO FOLLOW ALL CITY OF HENDERSONVILLE, QSDOT, AND ANY OTHER NECESSARY AUTHORITIES PERTAINING TO CONSTRUCTION OPERATIONS.

18. ALL WATER MAINS SHALL HAVE A 3' MINIMUM COVER.

19. ALL WATER MAINS SHALL BE INSTALLED AT A MINIMUM 18" DEPTH.

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SCALE: NOT TO SCALE	
City of Hendersonville Engineering Department 305 Williams Street Hendersonville, NC 28792 (828) 697-3000 (office) www.cityofhendersonville.org	
WATER DETAILS GENERAL NOTES 	

7. PRIVATELY OWNED FIRE SYSTEMS SHALL BE APPROVED BY THE APPROPRIATE LOCAL JURISDICTION. THE CITY ENGINEERING OR WATER AND SEWER DEPARTMENTS ARE NOT RESPONSIBLE FOR ENSURING COMPLIANCE WITH APPROPRIATE FIRE PROTECTION REGULATIONS. THE CITY DOES NOT PROVIDE ANY GUARANTEE OF ITS WATER SYSTEM'S CAPABILITY TO DELIVER WATER FLOW AND RESIDUAL PRESSURE THE FIRE FIGHTING AUTHORITY MAY REQUIRE.
8. ALL PERMANENT BACKFLOW PREVENTION ASSEMBLIES SHALL BE USED APPROVED AND REVIEWED BY THE CITY'S ENVIRONMENTAL COMPLIANCE COORDINATOR. PROTECTION OF THE PUBLIC WATER DISTRIBUTION SYSTEM SHALL BE ASSURED BY INSPECTION OF THE INSTALLATION AND TESTING OF BACKFLOW PREVENTION DEVICES IN ACCORDANCE WITH APPROPRIATE LOCAL, STATE, AND FEDERAL REGULATIONS.
9. CONSTRUCTION WATER SOURCING MUST BE APPROVED IN WRITING BY THE CITY. CONSTRUCTION WATER CONNECTIONS SHALL BE PAIRED WITH AN IRRIGATION METER AND APPROVED BACKFLOW PREVENTION ASSEMBLY. THIS ASSEMBLY INSTALLATION MUST BE TESTED BY A LICENSED PLUMBER AND TEST RESULTS SUBMITTED TO THE CITY BEFORE USE OF CONSTRUCTION WATER.
10. SECURE WRITTEN ACCEPTANCE FROM THE CITY OF HENDERSONVILLE PRIOR TO ACTIVATION OF THE SYSTEM. WATER SERVICE WILL NOT BE PROVIDED UNTIL WRITTEN ACCEPTANCE OF THE SYSTEM IS ISSUED BY THE CITY.
11. THE ENGINEER SHALL SUPPLY THE CITY WITH FINAL AS-BUILT DRAININGS AND COMPLETE ALL PROJECT CLOSE OUT REQUIREMENTS.

DISCLAIMER:

STANDARD WATER DETAILS ARE FOR THE SOLE USE OF PROJECTS THAT ARE OWNED BY, OR WILL BE TRANSFERRED TO THE CITY OF HENDERSONVILLE. STANDARD WATER DETAILS ARE INTENDED TO SHOW THE CITY OF HENDERSONVILLE'S EXPECTATIONS FOR THE GENERAL LAYOUT AND ARRANGEMENT FOR WATER DISTRIBUTION SYSTEM IDEAS AND THEIR RELATED APPURTENANCES. IT REMAINS THE SOLE RESPONSIBILITY OF THE DESIGNER IN RESPONSIBLE CHARGE (EJC) OF EACH APPLICATION TO DETERMINE, DESIGN TO, AND IDENTIFY TO THE DESIGN PARAMETERS FOR EACH INSTALLATION. THE DCJ MUST ALSO ENSURE THE DESIGN COMPLIES WITH THE MINIMUM DESIGN CRITERIA OF NO DESIGN OF ENVIRONMENTAL QUALITY AND ALL LOCAL, AND STATE LAW AND REGULATIONS.

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SEE DETAILS FOR TYPICAL
PAVEMENT REPLACEMENT SECTIONS

FINISHED GRADE

UNDISTURBED EARTH

1" MIN. COVER

5" MIN. COVER

ABC STONE COMPACTED IN 6" LIFTS TO 95% STANDARD PROCTOR DENSITY

CONTINUOUS TRACER WIRE AS SPECIFIED BELOW

DUCTILE IRON WATER MAIN

4" ABC STONE WHEN ROCK OR WATER IS ENCOUNTERED

6" MIN. CLEARANCE

6" MIN. CLEARANCE

BACKFILL SHALL BE COMPACTED IN 6" LIFTS TO 95% STANDARD PROCTOR DENSITY

TWO CARE TO FULLY COMPACT HAUNCH ZONE OF PIPE BACKFILL

NOTES:

1. COMPACTION OF BACKFILL SHALL BE ACHIEVED THROUGH THE USE OF AN APPROVED VIBRATORY PLATE TAMPER OR ROLLER. THE CONTRACTOR IS RESPONSIBLE FOR MEETING ALL COMPACTION REQUIREMENTS.
2. COMPACTION TESTING OF THE BACKFILL SHALL BE COORDINATED BY THE OWNER, WITH TESTING INTERVALS AT THE OWNER'S DISCRETION AND SUBJECT TO CHANGE. IF A TEST FAILS, THE CONTRACTOR MUST REMOVE THE DEFECTIVE BACKFILL, REDO THE WORK AND RETEST THE AREA. THE CONTRACTOR IS RESPONSIBLE FOR MEETING THE REQUIRED LEVEL OF COMPACTION AND ENSURING THE PROPER WATER CONTENT IN THE BACKFILL MATERIAL. IF THE WATER CONTENT IS DEEMED INSUFFICIENT FOR PROPER COMPACTION, THE CONTRACTOR SHALL REMOVE THE DEFECTIVE MATERIAL AND PERFORM CORRECTIVE WORK AS DIRECTED BY THE OWNER OR ENGINEER.
3. TRACER WIRE AND CONNECTORS SHALL BE TRACE-SAFE WATER BLOCKING TRACER WIRE OR EQUIVALENT AS SHOWN IN THE APPROVED PARTS LIST AND APPROVED BY THE ENGINEER. EQUIVALENT TRACER WIRE SHALL BE A 19 GAUGE 1/8" THICK COATED COPPER CONDUCTOR WITH POLYETHYLENE INSULATION, A HIGH-TENSILE KOVEX POLYESTER STRENGTH ELEMENT INCLUDING WATER BLOCKING TARN, AND AN AMBIOSION RESISTANT 90 MIL BLUE HOT-OUT JOCKET.
4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ENSURING A SAFE WORK ENVIRONMENT WHEN WORKING IN TRENCHES INCLUDING THE USE OF TRENCH BOXES, SHIELDING, OR BENCHING AS REQUIRED TO PREVENT COLLAPSE AND MAINTAIN STABILITY OF EXCAVATION. ALL TRENCHING OPERATIONS MUST COMPLY WITH THE LATEST OSHA STANDARDS FOR EXCAVATION SAFETY, INCLUDING BUT NOT LIMITED TO THE USE OF PROTECTIVE SYSTEMS IN ACCORDANCE WITH 29 CFR 1926 SUBPART P.

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SECTION "B-B"

SECTION "A-A"

NOMINAL PIPE SIZE	WEDGES QUANTITY	BOLTS QUANTITY	PRESS RATING
6"	3	6	350
8"	4	6	350
12"	8	8	350
16"	12	12	350

8" SIZE SHOWN 6" & 12" SIMILAR IRON RETAINING GLAND M.J. RESTRAINT

LR (MIN. LENGTH OF RESTRAINT EACH DIRECTION OF THRUST IN LINEAR FEET) Based on 200 psig pressure, Safety Factor of 2.0:1, BARE DI PIPE AND ML Soil, 3.5" cover Chart does not apply to pipes wrapped in polyethylene wrap					
PIPE SIZE	VALVES DEAD ENDS TEES	90° ELBOWS	45° ELBOW & CROSSES	22-1/2° ELBOWS	REDUCER
6"	55'	31'	13'	7'	6"x2" 67'
8"	72'	40'	17'	8'	8"x6" 30'
12"	102'	57'	24'	12'	12"x8" 54'
16"	130'	72'	30'	15'	12"x8" 54' 16"x8" 95'

UP-LENGTH TO BE RESTRAINED SEE CHART

UP-LENGTH TO BE RESTRAINED SEE CHART

DUCTILE IRON PIPE

DUCTILE IRON PIPE

DUCTILE IRON PIPE

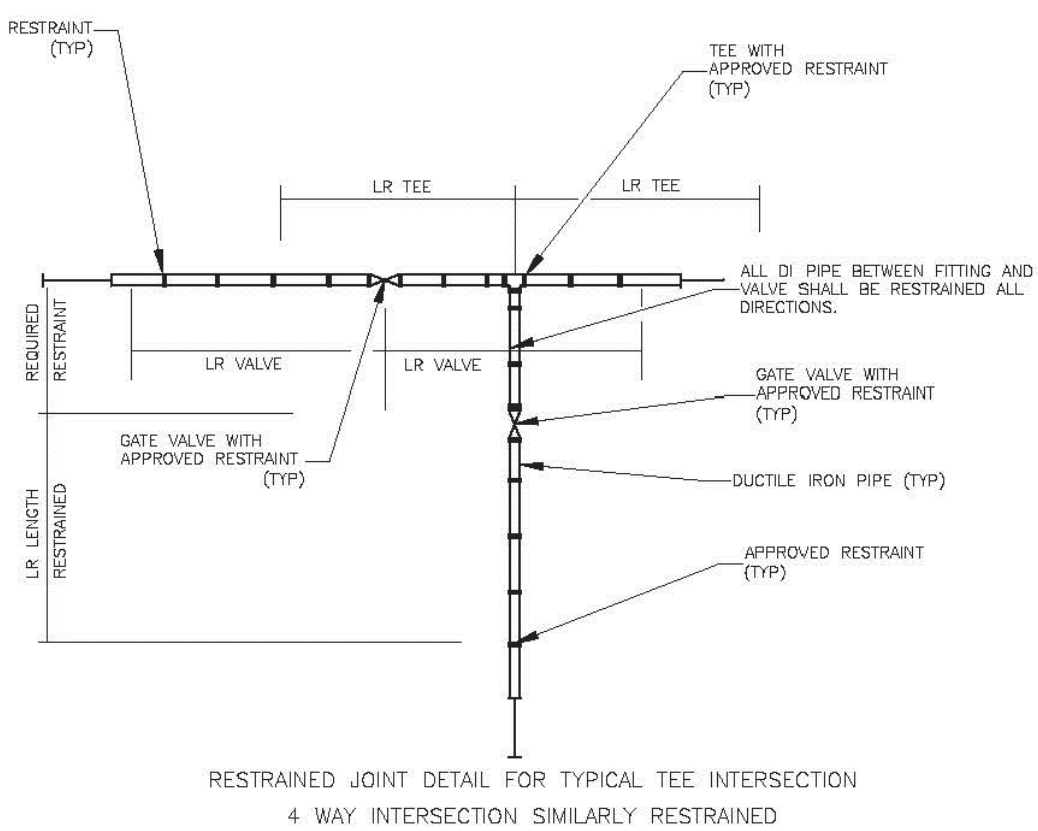
DUCTILE IRON PIPE

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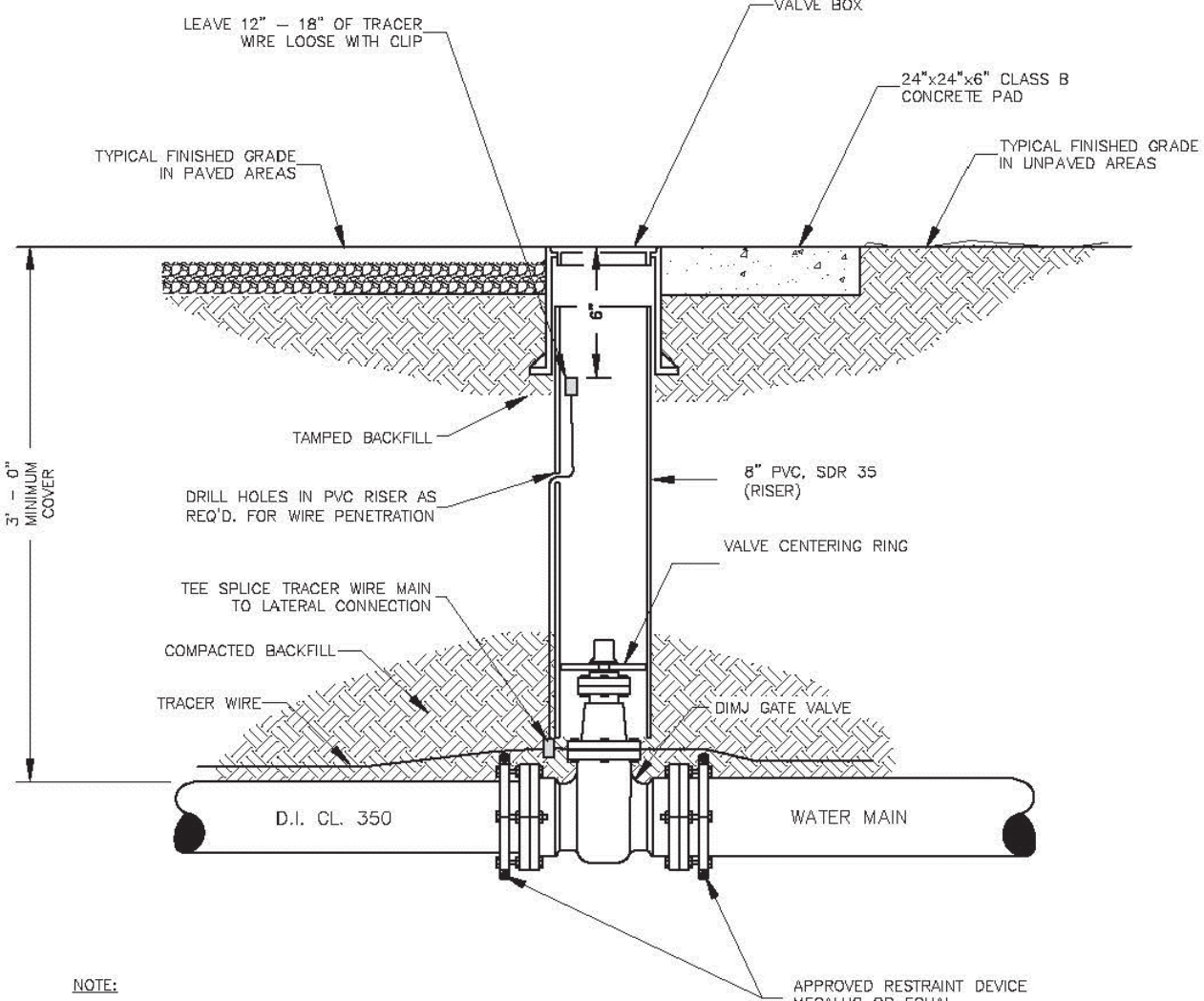
RESTRAIN M.J. JOINTS WITH IRON M.J. RESTRAINT RETAINING GLANDS (TYP) OR OTHER FORM OF APPROVED DI RESTRAINT.

DATE: 07/14/2025	WD DWG. NO. 03-1	DUCTILE IRON PIPE RESTRAINT <u>SHEET 1 OF 2</u>	
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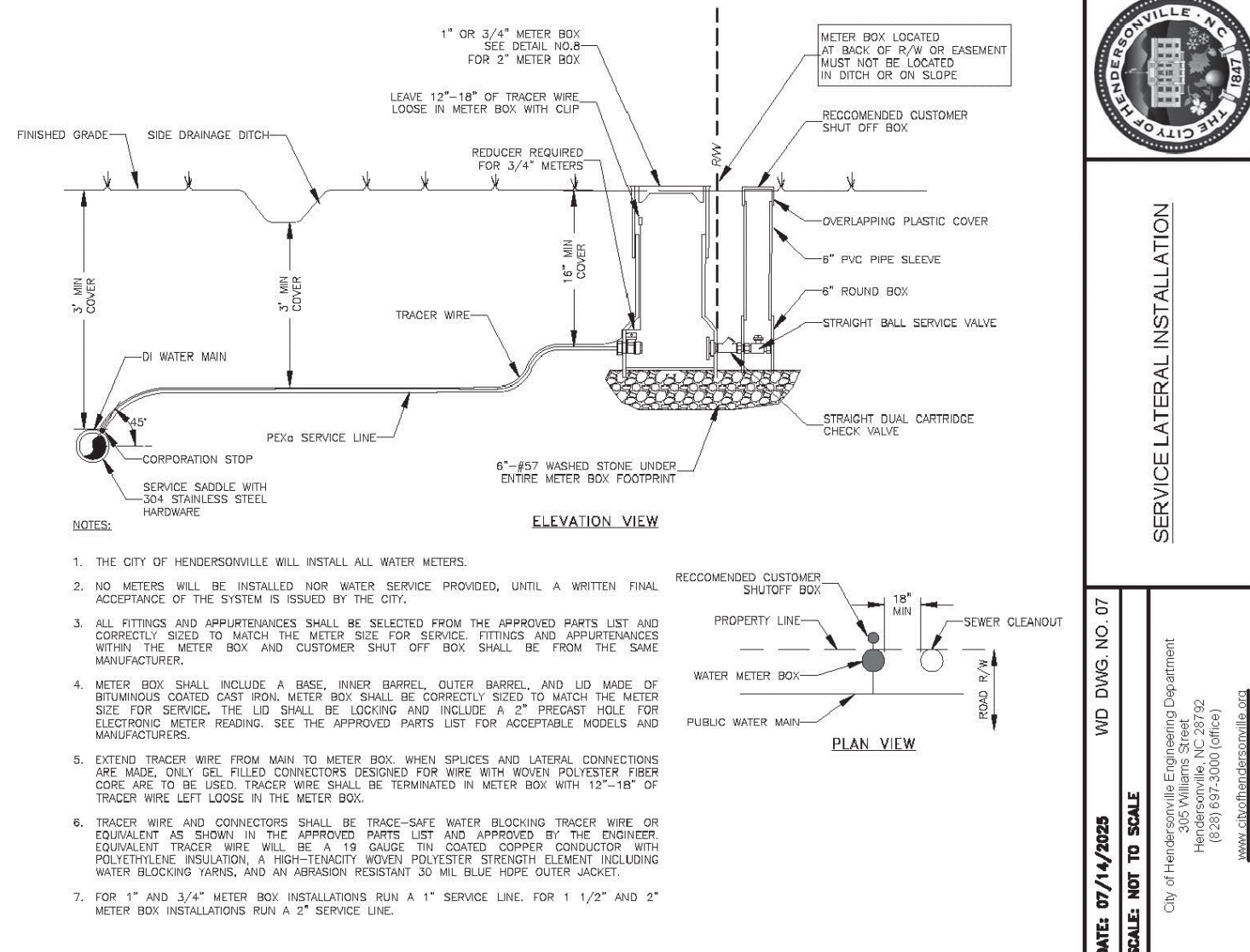
- NOTES:
- | | |
|---|---|
| 1. THE MINIMUM LENGTH OF RESTRAIN INDICATED SHALL REQUIRE ALL JOINTS WITHIN THE LR DISTANCE TO BE RESTRAINED. | 6. RESTRAINT SYSTEMS MAY VARY BASED UPON THE ENGINEER'S DESIGN AS SHOWN ON THE PLAN AND PROFILE SHEETS. |
| 2. THRUST RESTRAINT SHALL BE INSTALLED ON DUCTILE IRON DISTRIBUTION LINES 6" THRU 14" DIAMETER IN THE MANNER SHOWN. | 7. GRIPPER RING AND FIELD LOCK GASKETS ARE AN ACCEPTABLE METHOD OF RESTRAINT ON DUCTILE IRON PIPE ONLY. GASKET MANUFACTURER MUST MATCH PIPE MANUFACTURER. |
| 3. PIPE GREATER THAN 14" DIAMETER SHALL REQUIRE RESTRAINED JOINT PIPE FOR THE PROPER LENGTH. | |
| 4. COMPACT FITTINGS ARE ACCEPTABLE FOR USE WITH IRON RETAINING GLAND. M.J. RESTRAINT AND OTHER FORMS OF DI RESTRAINT. | |
| 5. RESTRAINT SYSTEM SHALL BE INSPECTED AND APPROVED PRIOR TO BACKFILLING. | |

DATE: 07/14/2025	WD DWG NO. 03-2	
SCALE: NOT TO SCALE		
City of Hendersonville Engineering Department 305 Williams Street Hendersonville, NC 28792 (828) 697-3000 (office)		<u>DUCTILE IRON PIPE</u> <u>RESTRAINT</u> <u>SHEET 2 OF 2</u>
www.cityofhendersonville.org		



1. TOP OF COVER SHALL BE STAMPED "WATER".
2. VALVE PAD REQUIREMENTS SHALL NOT BE APPLICABLE FOR PAVED SURFACES.
3. PAVEMENT REPAIR SHALL MATCH THE EXISTING ROAD PAVING SECTION. SEE NOTES TO ASPHALT REPAIR DETAIL #540.10.
4. A MINIMUM OF 24" OF WATER MAIN SHALL BE CONSTRUCTED BETWEEN VALVES AND OPENINGS.
5. WHEN SURFACING NOT DEPTH EXCEEDS 6" BELOW FINISHED GRADE, PROVIDE A WATER PIPE EXTENSION KIT STEM FROM THE WATER MANUFACTURER.
6. TRASSER WIRE AND CONNECTORS SHALL BE THE APPROVED SAFE WATER-BLOCKING TRASSER WIRE, OR AN EQUIVALENT, AS SHOWN IN THE TRACE-SAFE LIST AND APPROVED BY THE ENGINEER. EQUIVALENT TRASSER WIRE SHALL BE A 19-GAUGE TO-COATED COPPER WIRE WITH POSITIVE INSULATION, A HIGH-TENSILE NYLON POLYESTER STRENGTH LEVEL INCLUDING WATER-BLOCKING YARNS, AND AN ABRASION-RESISTANT POLYURETHANE COATING.

DATE: 07/14/2025	WD DWG. NO. 04	
SCALE: NOT TO SCALE		City of Hendersonville Engineering Department 305 Williams Street Hendersonville, NC 28792 (828) 697-3000 (office) www.cityofhendersonville.org VALVE INSTALLATION 



- [illegible]

DATE: 07/14/2025	WID DWG. NO. 07
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SERVICE LATERAL INSTALLATION	

- NOTES:
- 1.) THE SPECIFICATIONS AND REQUIREMENTS OF THE HENDERSONVILLE WATER AND SEWER DEPARTMENT SUPERSEDE ALL OTHERS IN THE INSTALLATION OF THE PROPOSED EXTENSION(S).
- 2.) HENDERSONVILLE WATER AND SEWER DEPARTMENT MAINTENANCE OF WATER SYSTEM ENDS AT THE METER FOR THE SERVICES.
(ALL FIRE HYDRANTS SHALL BE MAINTAINED / OWNED BY THE HENDERSONVILLE WATER AND SEWER DEPARTMENT).
- 3.) THE CONTRACTOR SHOULD BE AWARE OF THE EXISTING UTILITIES ON THE SITE INCLUDING BUT NOT LIMITED TO WATER MAINS, ELECTRICAL LINES, GAS, PHONE LINES, ETC. THE CONTRACTOR SHALL COORDINATE WITH THE APPROPRIATE AGENCIES TO LOCATE THE UTILITIES PRIOR TO CONSTRUCTION.
- 4.) THE CONSTRUCTION SITE MUST BE PROPERLY SIGNED AND SECURED TO LIMIT ACCESS FOR NON-CONSTRUCTION PERSONNEL.
- 5.) DURING NON-WORKING HOURS, THE SITE SHOULD BE SECURED SO THAT NO OPEN TRENCHES OR OTHER HAZARDS ARE ACCESSIBLE.
- 6.) THE CONTRACTOR SHALL COORDINATE THE CONNECTIONS TO THE EXISTING WATER MAINS WITH THE HENDERSONVILLE WATER AND SEWER DEPARTMENT.
- 7.) ANYWHERE "RESTRAINED JOINT" PIPING IS SHOWN OR REQUIRED BY THE CITY, THE CONTRACTOR HAS THE OPTION TO USE MEGA-LUGS, LOCK GASKETS OR ACTUAL RESTRAINED JOINT PIPE.
- 8.) ALL WATER LINES SHALL HAVE A MINIMUM COVER OF 36" TO THE TOP OF THE PROPOSED WATER LINE. 12" OF SEPARATION SHALL BE MAINTAINED BETWEEN ALL POTABLE WATER LINES AND STORMWATER PIPES.
- 9.) A PRECONSTRUCTION MEETING SHALL BE SCHEDULED WITH THE CITY OF HENDERSONVILLE & ENGINEER PRIOR TO BEGINNING WORK.
- 10.) THE ENTIRE PROPOSED WATER SERVICE IS LOCATED ON THE PROPERTY OWNED BY THE DEVELOPER.
- 11.) CONTRACTOR SHALL COORDINATE THE TAP, CONNECTION AND METER REQUESTS WITH THE HENDERSONVILLE WATER DEPARTMENT.
- 12.) CONTRACTOR SHALL VERIFY THE SIZE AND MATERIAL OF THE EXISTING CITY OF HENDERSONVILLE WATER MAIN AT THE CONNECTION POINT.
- 13.) BACKFLOW PREVENTION DEVICE (RP2) MAKE/MODEL SHALL BE USC APPROVED, LEAD FREE AND APPROVED BY CITY UTILITIES COMPLIANCE COORDINATOR EERWIN@HVLNC.GOV.

[illegible]

Know what's below.
Call before you dig.

PROJECT NUMBER:	25188
DATE:	8/26

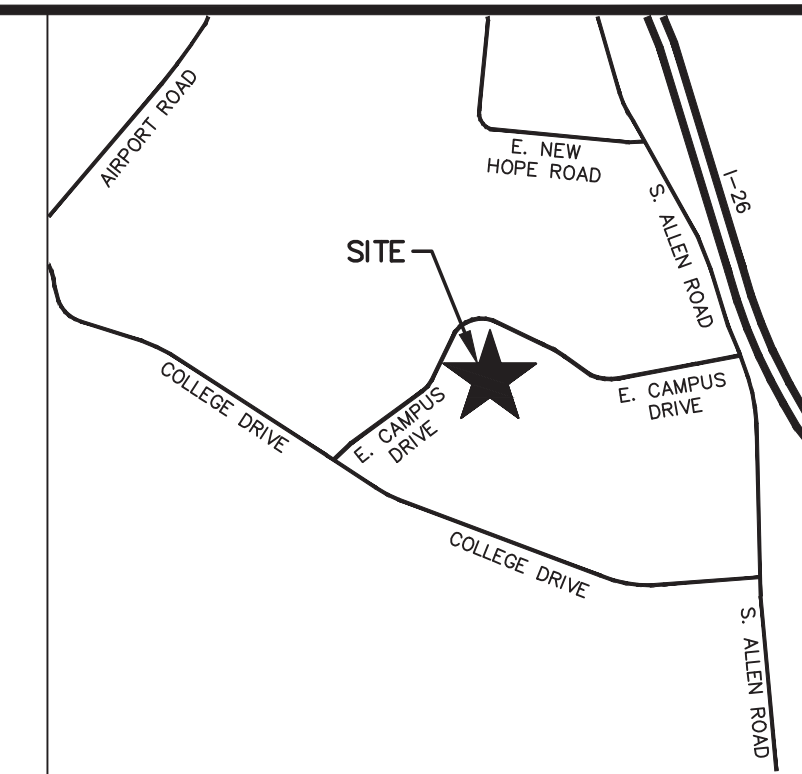
Water System Details

C-504

SCALE: AS-NOTED

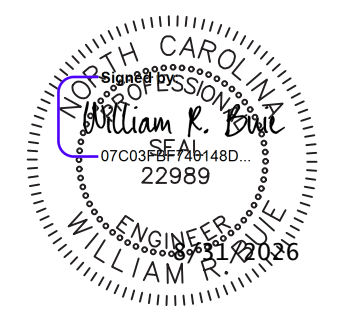
C-505

SCALE: AS-NOTED



Blue Ridge
Community College
Utility Extensions

Henderson County
North Carolina



REVISIONS	
DATE	DESCRIPTION

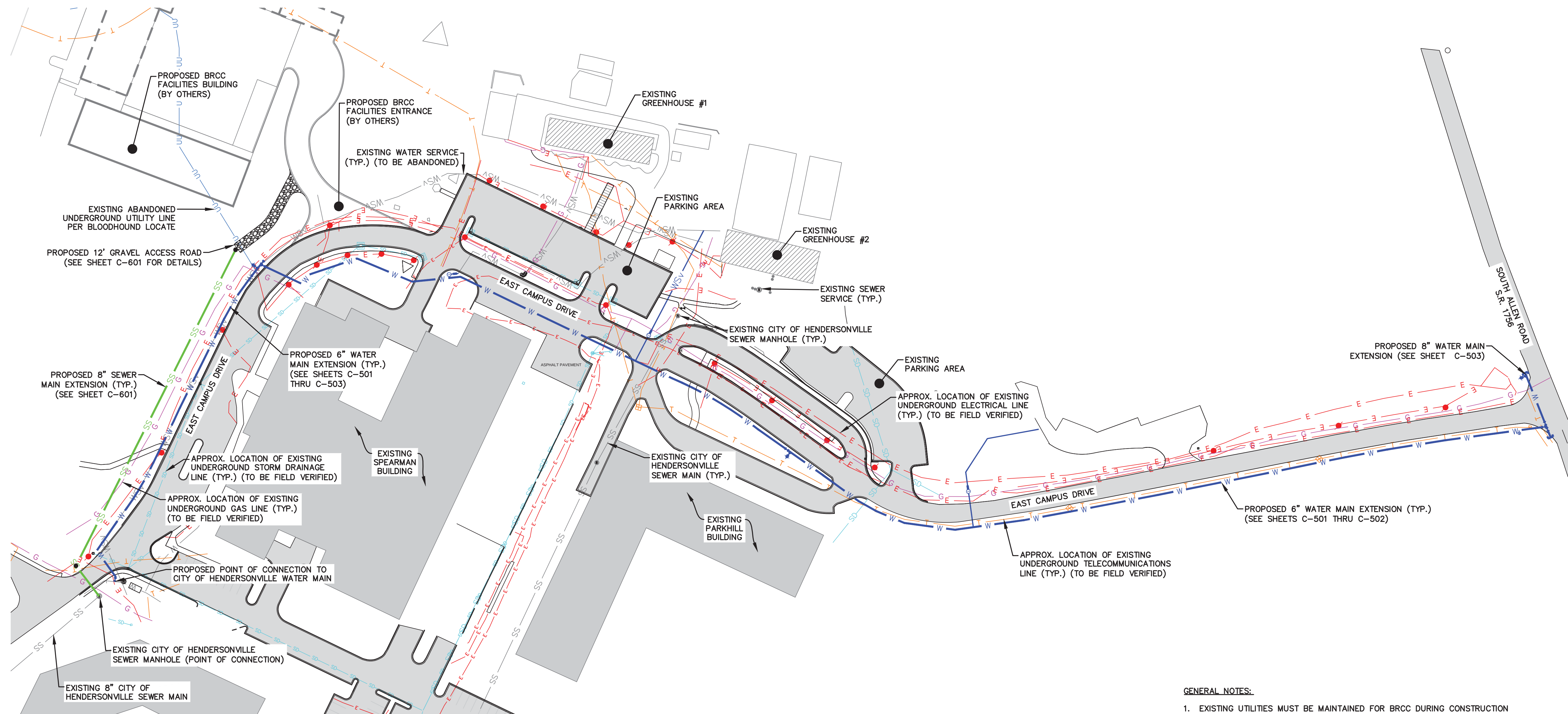


PROJECT NUMBER: 25188
DATE: 8/26

Utility Routing
Overall Plan

C-600

SCALE: 1" = 60'

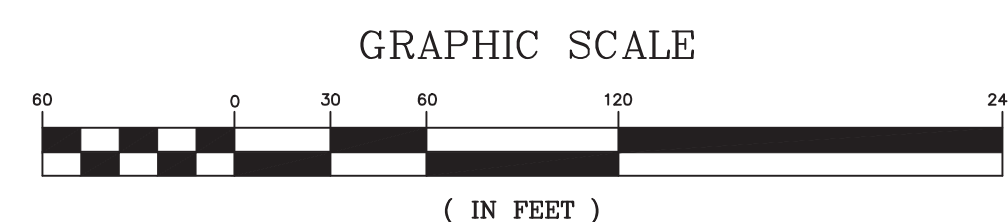


LEGEND:

— W —	EXISTING WATER MAIN
— WSv —	EXISTING WATER SERVICE
— SS —	EXISTING SEWER MAIN
— E —	EXISTING ELECTRICAL LINE
— G —	EXISTING GAS MAIN
— SD —	EXISTING STORM DRAINAGE
— T —	EXISTING TELECOMMUNICATIONS LINE
— W —	PROPOSED WATER MAIN
— WSv —	PROPOSED WATER SERVICE
— SS —	PROPOSED SEWER MAIN

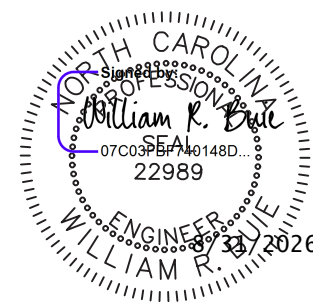
GENERAL NOTES:

- EXISTING UTILITIES MUST BE MAINTAINED FOR BRCC DURING CONSTRUCTION
- FOLLOWING COMPLETION OF PROPOSED WATER MAIN INSTALLATION, CONTRACTOR SHALL COORDINATE WITH HENDERSON COUNTY, BRCC, AND THE CITY OF HENDERSONVILLE TO PROVIDE NEW WATER SERVICES FOR THE EXISTING GREENHOUSES AND BASEBALL FIELD RESTROOMS.
- THE CONTRACTOR SHALL PROVIDE A MINIMUM OF ONE WEEK NOTICE BEFORE TEMPORARY SERVICE LOSS OR CHANGING SERVICES



Blue Ridge
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REVISIONS

DATE	DESCRIPTION

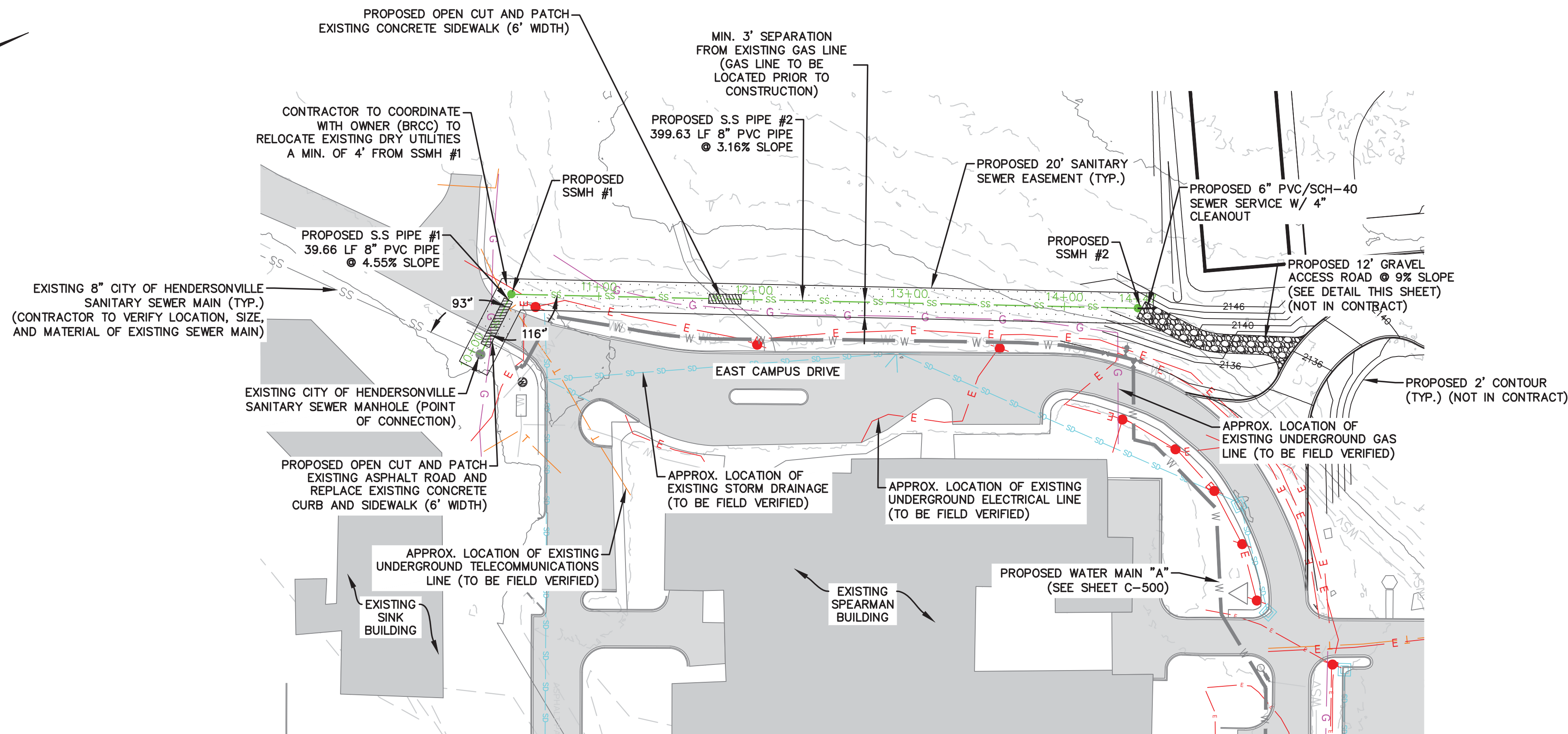


PROJECT NUMBER: 25188
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Sewer Main "A"
10+00 to 14+47

C-601

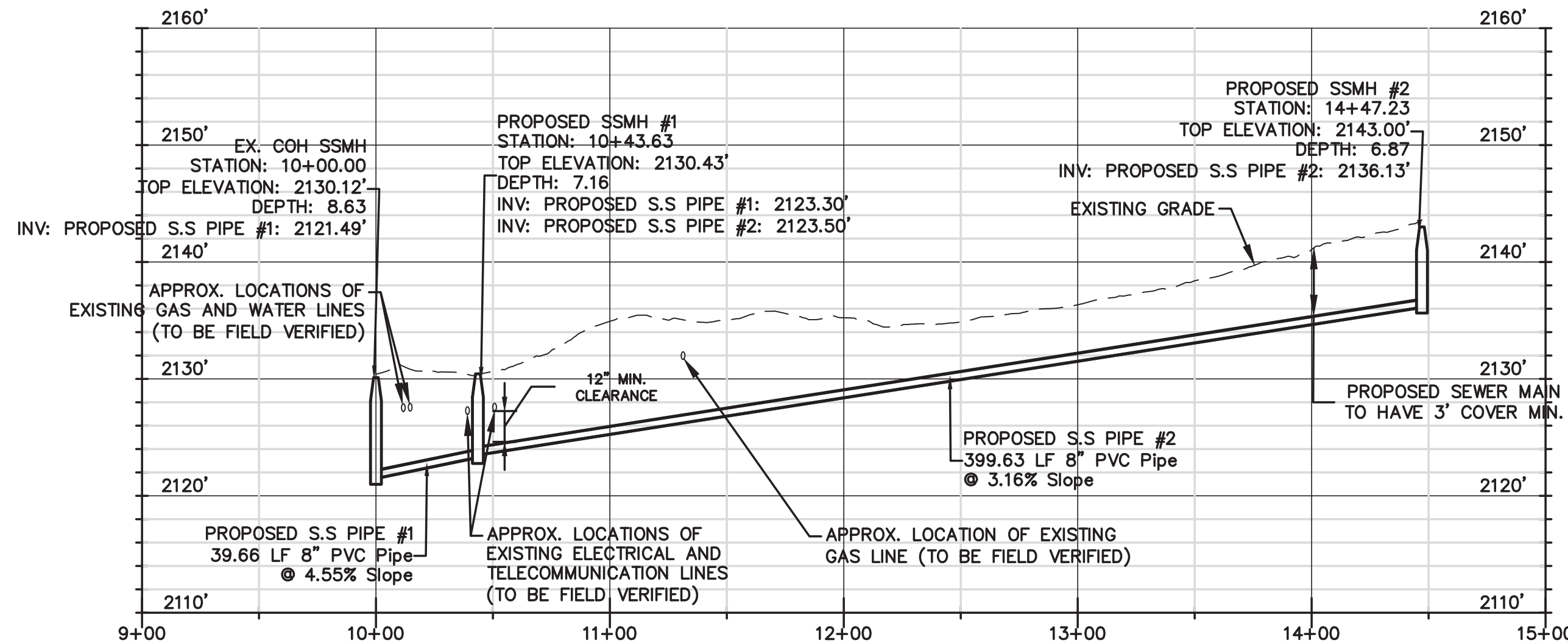
SCALE: 1" = 50'



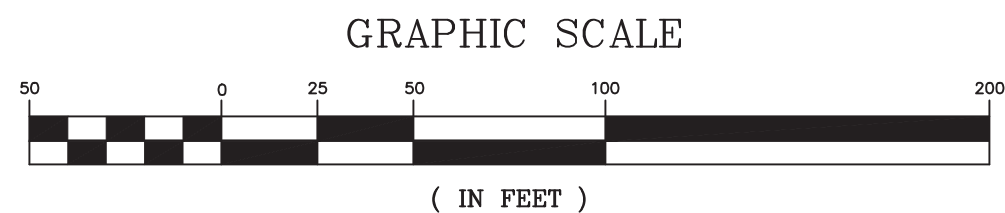
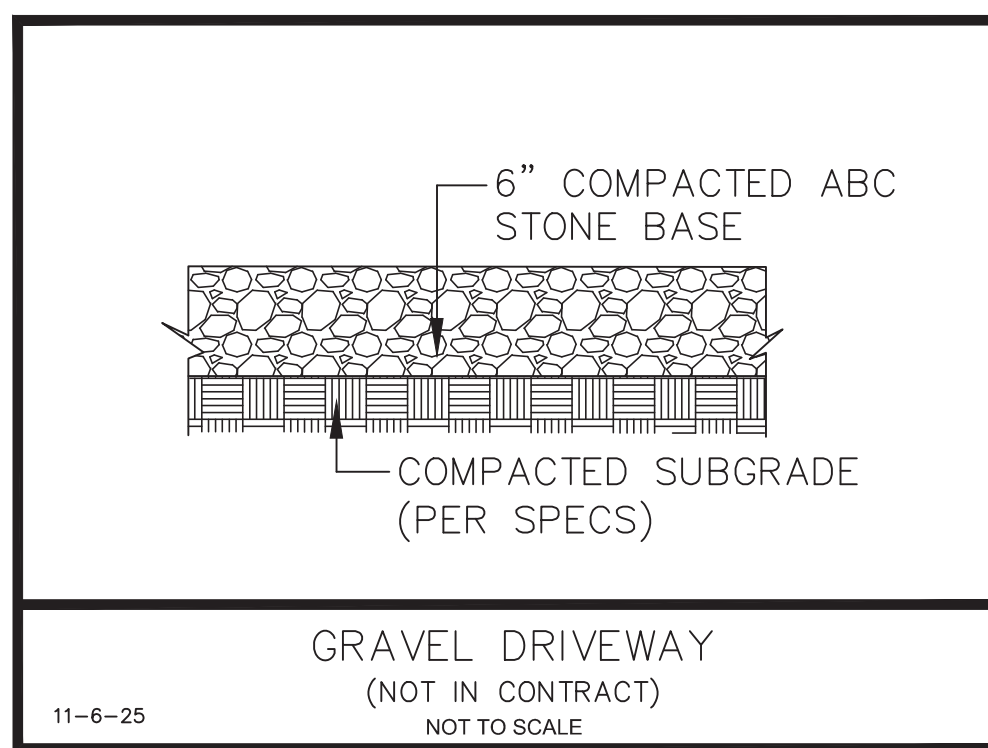
PLAN VIEW
SCALE: 1"=50'

LEGEND:

— W —	EXISTING WATER MAIN
— WSv —	EXISTING WATER SERVICE
— SS —	EXISTING SEWER MAIN
— E —	EXISTING ELECTRICAL LINE
— G —	EXISTING GAS MAIN
— SD — SD —	EXISTING STORM DRAINAGE
— T —	EXISTING TELECOMMUNICATIONS LINE
— W —	PROPOSED WATER MAIN
— WSv —	PROPOSED WATER SERVICE
— SS —	PROPOSED SEWER MAIN

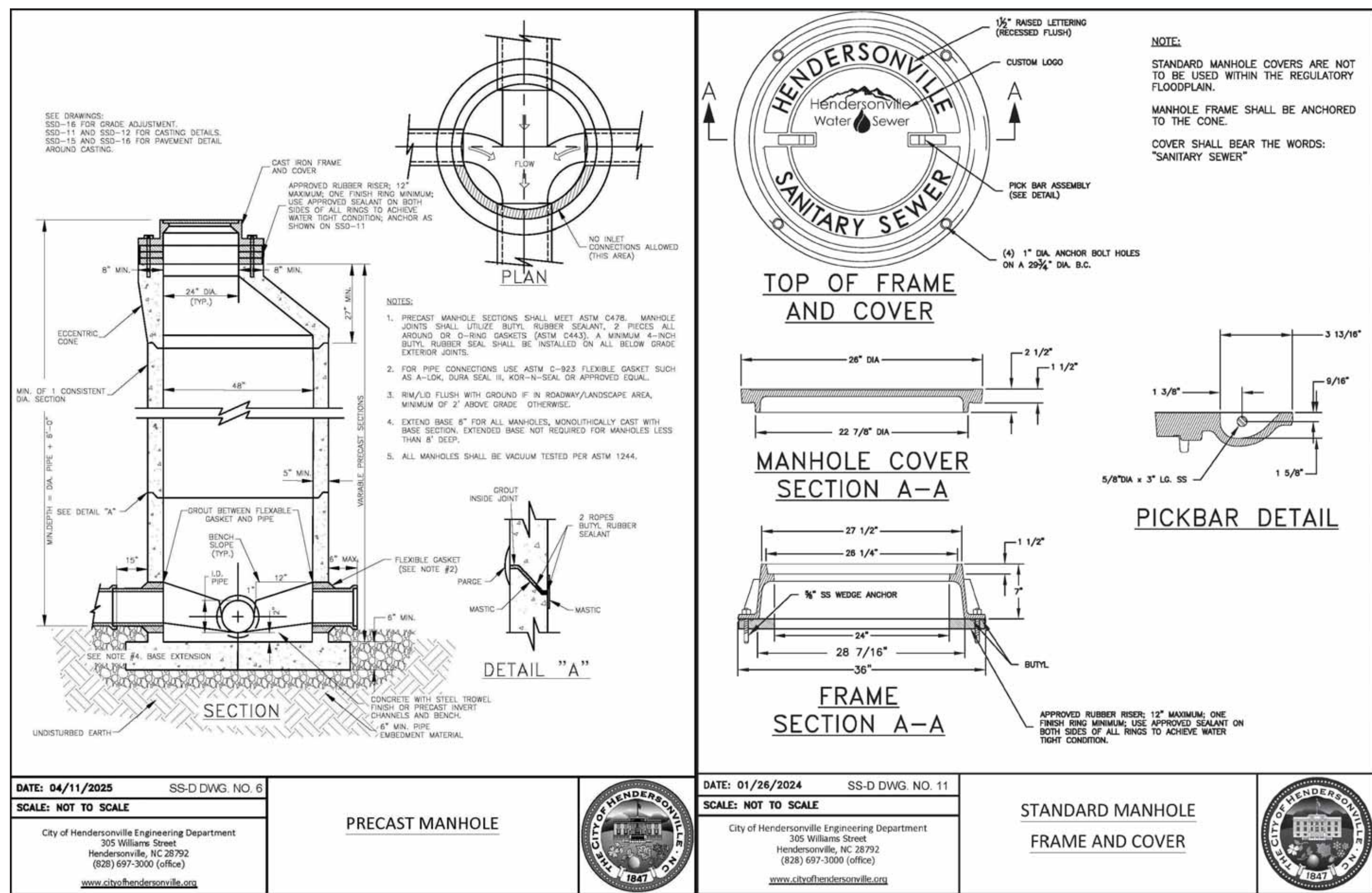
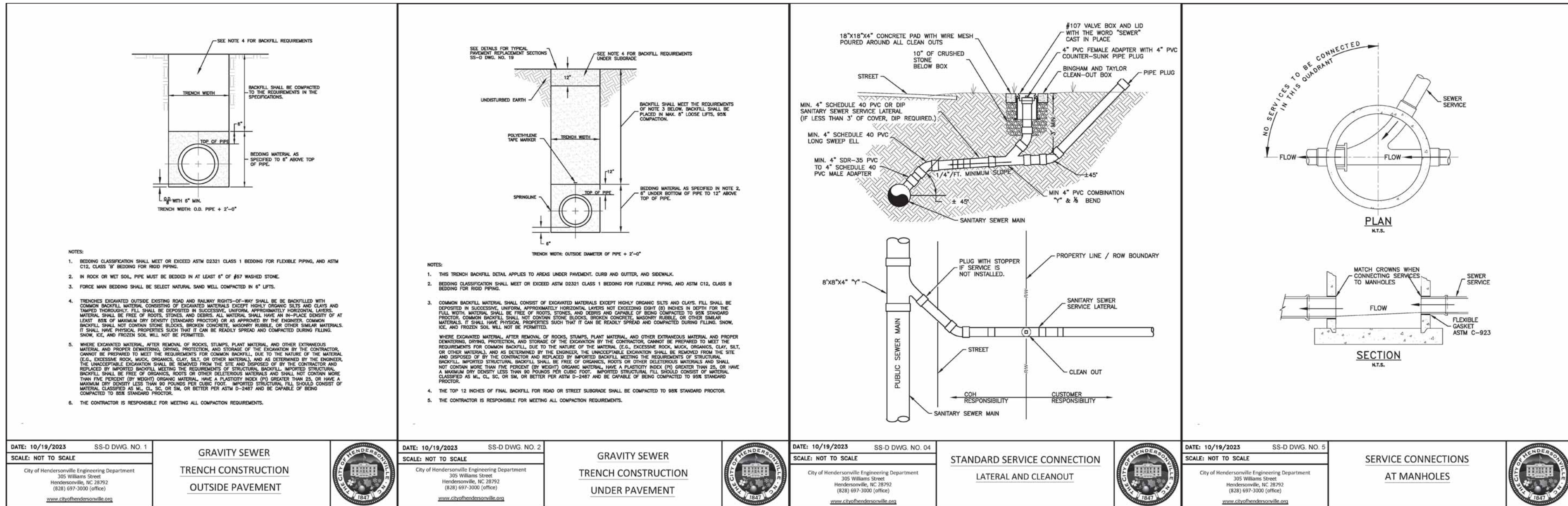


Profile View of Sewer Main A
Horizontal Scale: 1"=50' Vertical Scale: 1"=10'



Blue Ridge Community College Utility Extensions

Henderson County
North Carolina



REVISIONS	
DATE	DESCRIPTION



PROJECT NUMBER: 25188
DATE: 8/26

Sewer System
Details

C-602

SCALE: AS-NOTED