PROPOSED AGENDA

Meeting of the Town of Biltmore Forest Board of Commissioners

To be held Tuesday, December 13, 2022 at 4:30 p.m.

- A. Pledge of Allegiance
- B. Roll Call

Mayor George F. Goosmann, III Commissioner Fran G. Cogburn Commissioner E. Glenn Kelly Commissioner Doris P. Loomis

- C. The minutes of the November 15, 2022 meeting will be presented for approval.
- D. Reports of Officers
 - 1. Chief of Skyland Fire and Rescue
 - 2. Chief of Police Chris Beddingfield
 - 3. Public Works Director Harry Buckner
 - 4. Town Manager Jonathan Kanipe
- E. Special Introduction Dr. Rob Jackson, Buncombe County Schools Superintendent
- F. New Business
 - Consideration of Resolution 2022-05 A Resolution Designating the Town Manager to Make Recommendations to the NC ABC Commission regarding ABC Permit Applications
 - 2. Cedar Hill Road Stabilization/Stream Restoration Project
 - 3. Town of Biltmore Forest Centennial Celebration
 - 4. Planning Commission Update Chair Paul Zimmerman
- G. Public Comment
- H. Adjourn

For those interested in viewing the Board meeting remotely, please utilize the following information:

Passcode: 966757

MINUTES OF THE MEETING OF THE MAYOR AND THE TOWN COMMISSIONERS OF BILTMORE FOREST HELD NOVEMBER 15, 2022

Be it remembered by those that follow these proceedings that the Governing Board of the Town of Biltmore Forest met and conducted the following business:

Roll call taken by the Clerk:

Mayor George F. Goosmann, III, present Commissioner Doris P. Loomis, present Commissioner E. Glenn Kelly, absent Commissioner Fran Cogburn, present

Mr. Jonathan Kanipe, the Town Manager, and Mr. William Clarke, the Town Attorney, were also present.

The Pledge of Allegiance was conducted.

Mayor Goosmann called the meeting to order at 4:30 pm.

Commissioner Loomis made a motion to approve the minutes from October 11, 2022. The motion was seconded by Commissioner Cogburn and unanimously approved.

Chief Trevor Lance from Skyland Fire Department gave the monthly report. The Halloween event went well. Fire Prevention month was in October. Chief Lance reminded everyone to change clocks and batteries in smoke detectors when the time falls back. There were fifteen calls for service in October which is a low number. There were also five medical assist calls.

Chief Chris Beddingfield gave the report for the Police Department. Chief Beddingfield said there were 640 calls for service. Police Department staff designed an anniversary badge and patch for the 100-year celebration. They went back to the original police badge and patch and

designed it with a new twist. Chief Beddingfield said there was a lot of good feedback and compliments. Chief Beddingfield said the calendar project is going well. They do this every year as a fundraiser. Chief Beddingfield said Halloween went well and there were no issues, and thanked Chief Lance for Skyland Fire Department's help.

There have been many bear calls and it is that time of year to put bird feeders away, clean grills, and put trash cans away to deter them.

The new upgraded body cameras and Tasers are in service and being used. They are working very well.

Mayor Goosmann thanked the Police Department for all their hard work.

Mr. Harry Buckner gave the report for the Public Works Department. October was a fairly busy month and pavement repairs were conducted throughout Town. The streetlight project work has begun. They are working out the final pricing for LED.

Mr. Buckner said the Greenwood Park project is complete. The only outstanding task is the planting of some trees, which will be available in January. Town staff will be filling in the "mud puddle" along the southwest corner of the park.

The Department's primary focus in November will be leaf pickup.

Mr. Buckner said there are still two vacant positions within the department.

Mayor Goosmann thanked Mr. Buckner for all their hard work.

Mr. Jonathan Kanipe gave the report for the Town. The Cedar Hill Drive road stabilization project was discussed. The request for proposal should be out this month.

Mr. Kanipe gave an update on the 65-gallon trash containers, and indicated he had spoken with Schaefer's southeastern representative regarding the delay. Town staff will reach out to those that ordered a 65-gallon container to see if they would like a 95-gallon container instead. The 65-gallon containers should be here by the end of the year.

Mr. Kanipe said the Town's road striping contractor returned on Monday and Tuesday to perform additional striping through Town. There was significant public feedback regarding public safety and vehicular speeds. The striping creates a constant visual cue for drivers and the defined lane is an assistive traffic calming technique.

Mr. Kanipe said the Town Hall and Public Works department will be closed on November 24th and November 25th for the Thanksgiving holiday. These two facilities will also be closed December 22, December 23, and December 26th for the Christmas holiday. Residents will be notified via CodeRed and this information has been posted to the Town's website.

Mr. Kanipe discussed the Consideration of Audio-Visual project for the social room at the Town Hall. Mr. Kanipe contacted TSA Choice, which is an audio-visual company. Mr. Kanipe provided the full proposal for the Board's consideration. The cost is \$50,091.60. The diagram of what would be installed in the social room was shown and explained by Mr. Kanipe. A portion of the Town's American Rescue Plan (ARP) money will be put toward this. These improvements may be installed by the end of December. Commissioner Loomis made a motion to approve the audio-visual project for the social room at the Town Hall. Commissioner Cogburn seconded the motion. The motion was unanimously approved.

The Board then reviewed a potential easement to Duke Energy for the Targeted Underground Project. The easement was for property located at the Town Hall complex. During the October meeting, the Board approved an easement for additional underground infrastructure at Rosebank Park. Mr. Kanipe recommended approval of this easement request. Mr. Billy Clarke has reviewed it and has no issues. This easement will assist Duke's underground project and will help the burying of power lines and utility lines in the future. Commissioner Loomis made a motion

to approve the easement for the targeted underground project. Commissioner Cogburn seconded the motion. The motion was unanimously approved.

Mr. Kanipe then moved to reviewing the proposed FY23 Budget Amendment. This budget amendment includes \$24,500 in grant revenues for the Police Department UTV project. The amendment includes a new line item, "10-3800-0000 Law Enforcement Block Grant" with the line item of \$24,500. The Police Department's capital outlay budget, "10-5100-7400" is increased by the same amount. A motion was made by Commissioner Cogburn to approve the FY23 Budget Amendment. The motion was seconded by Commissioner Loomis and unanimously approved.

Mr. Kanipe then discussed the Greenwood Park Conceptual Plan. Commissioner Loomis thanked Public Works Supervisor Mike Dale for the drawing and said it was very detailed and well designed. Mr. Buckner said they want to add a more modern looking playground area to this park. Benches, concrete pads for picnic areas, and a covered shelter would also be installed. Additionally, the proposed plan makes accessibility for the park a top priority. The three unmarked parking spaces along the southwest edge of the park are removed and new spaces are created with head-in parking off the street. This would improve safety in many areas but most importantly, it removes the vehicles from the bank where they are currently situated. The handicap parking spaces would be placed along the western edge of the park. The proposal also showed a pavilion on the north side of the creek as well as another concrete pad with benches, picnic tables, and trash cans.

Commissioner Cogburn liked Mr. Dale's proposal as well. Commissioner Cogburn would like to see the concrete pad kept natural (pervious). Commissioner Loomis suggested getting feedback from parents in Town. Mr. Kanipe suggested putting this form on the Town website to get feedback from residents. Commissioner Cogburn said this plan is a good start to this project.

Mr. Paul Zimmerman gave an update for the Planning Commission and the Town's Comprehensive Plan. The Planning Commission has focused on developing a reference guide for new residents and revisions of tree preservation ordinance within the Town. Tree Ordinances were researched from four different Towns. The Planning Commission is drafting new ordinances which would include residential and non-residential uses being differentiated. Mr. Zimmerman discussed

the importance of managing the tree canopy within the entire Town. Mr. Zimmerman said Mr. Tony Saponaro and Mr. Ken Hornowski will be speaking about the principles and philosophies at the next Planning Commission meeting. Several Planning Commission members tagged along with Mr. Mike Dale to see how tree ordinances are enforced and followed.

Mr. Zimmerman also suggested having a joint meeting with the Board of Adjustment. The Planning Board would like to hear their perspective on what current ordinances may need to be revisited.

Mr. Zimmerman discussed additional ordinances he believed beneficial for the Town, including ordinances related to junked and abandoned cars and electric vehicle charging stations.

Mayor Goosmann thanked Mr. Zimmerman for doing such great work on the Planning Commission. Commissioner Loomis thanked Mr. Zimmerman as well and appreciates his hard work.

Mr. Kanipe provided an update on the discussion with Biltmore Farms regarding property transfers. The Town has been working with Biltmore Farms on the identification and subsequent conveyance of properties never formally dedicated during the creation of the Town. The areas noted below are all maintained by the Town currently, and in the case of Rosebank Park (and lower Vanderbilt Park) there is a lease in existence between the Town and Biltmore Farms. The Town's priority list included: Rosebank Park and lower Vanderbilt Park, Busbee/Hendersonville Road triangle, East Forest Road/Forest Road triangle, Southwood Road/Brookside Road "park" which is across from the Biltmore Forest Country Club golf course, and the area at the end of Greenwood Place between Westwood/Brookside roads.

The next topic Mr. Kanipe discussed is the Consideration of the 2023 Holiday Schedule which is the schedule the State of North Carolina abides by. Commissioner Cogburn moved to approve the 2023 holiday schedule. Commissioner Loomis seconded the motion and was unanimously approved.

Commissioner Cogburn asked about the gas line break on Stuyvesant Road last night. Chief Beddingfield indicated this was called in to him directly and he referred it to Skyland Fire Department. They, along with the gas company, inspected the scene and repairs were made to ensure the safety of the public.

Public Comment

There was no Public Comment.

Mayor Goosmann adjourned the meeting at 5:41 p.m. The next meeting is scheduled for Tuesday, December 13, 2022 at 4:30 pm.

ATTEST:	
Laura Jacobs	George F. Goosmann, III
Town Clerk	Mayor

Biltmore Forest Police 355 Vanderbilt Road Biltmore Forest, NC 28803 828-274-0822 Chief M. Chris Beddingfield



George F. Goosmann, III, Mayor Doris P Loomis, Mayor-Pro Tem E. Glenn Kelly, Commissioner Fran Cogburn, Commissioner Jonathan Kanipe, Town Manager

Biltmore Forest Police Department December- 13th, 2022 Commission Report

November 2022 Data

Total Calls For Service:

582 (640 last month)

Arrests:

0-Felony Arrests-

1-Misdemeanor Arrest-One for Multiple Court Violations out of a traffic stop.

Citations:

Citations for various traffic violations 22 (25 last month)

Time Consumption Summary:

Approximations:

Business Checks- 4 hours

House Checks- 4 hours

Radar Operation- 1 hour

Vehicle Crash Investigation- 4 hours

Notable Calls and Projects:

One vehicle pursuit-Started as 85MPH in 45 MPH RADAR clock on Hendersonville Rd, officer terminated due to speed/safety

Still dealing with some homeless issues. Usually around MAHEC, TGIFriday and Double Tree. Begging, sleeping on premises, causing customers to be uncomfortable.

One foot pursuit-Suspicious person call, subject was wanted and fled on foot. Subject escaped but was already identified so we secured more charges.

Biltmore Forest 355 Vanderbilt Rd Biltmore Forest, NC 28803

11/01/2022 - 11/30/2022

BILTMORE FOREST POLICE DEPARTMENT	Count	Percent
ALARM	14	2.41%
ANIMAL CONTROL	12	2.06%
ASSIST MOTORIST	5	0.86%
ASSIST NON-RESIDENT	4	0.69%
ASSIST OTHER AGENCY	6	1.03%
ASSIST RESIDENT	14	2.41%
BUSINESS CHECK	206	35.40%
CHASE	2	0.34%
CRIME PREVENTION	8	1.37%
DEBRIS IN ROADWAY	4	0.69%
DEPARTMENT OTHER	4	0.69%
DOMESTIC	1	0.17%
ESCORT	1	0.17%
FIRE	3	0.52%
FOLLOW-UP INVESTIGATION	5	0.86%
HOUSE CHECK	110	18.90%
IMPROPER PARKING	9	1.55%
INTOXICATED PERSON	1	0.17%
MEDICAL EMERGENCY	2	0.34%
NOISE COMPLAINT	1	0.17%
ORDINACE VIOLATION	8	1.37%
POWER OUTAGE	2	0.34%
PROPERTY DAMAGE	1	0.17%
RADAR OPERATION	2	0.34%
ROAD BLOCKED	4	0.69%
SPECIAL CHECK	20	3.44%
SUSPICIOUS ACTIVITY	1	0.17%
SUSPICIOUS PERSON	9	1.55%
SUSPICIOUS VEHICLE	25	4.30%
TALK WITH OFFICER	3	0.52%
TOWN HALL BUSINESS	3	0.52%
TRAFFIC STOP	76	13.06%
TREE DOWN	4	0.69%
VEHICLE ACCIDENT	5	0.86%
WELFARE CHECK	7	1.20%
Total Records For BILTMORE FOREST POLICE DEPARTMENT	582 De Ca	ot Calls/Total 100.00% lls

355 Vanderbilt Rd | Biltmore Forest, NC Po Box 5352 | Biltmore Forest, NC 28803 P (828) 274-0824 | F (828) 274-8131 www.biltmoreforest.org



George F. Goosmann, III, Mayor Doris P. Loomis, Mayor-Pro Tem E. Glenn Kelly, Commissioner Fran G. Cogburn, Commissioner

> Jonathan B. Kanipe, Town Manager

MEMORANDUM

To: Jonathan Kanipe, Town Manager

Mayor and Board of Commissioners

From: Harry B. Buckner, PE, Director of Public Works

Re: Public Works Department November 2022 Monthly Report

Date: December 6, 2022

Recurring Activities:

The Public Works Department has completed the following activities during the month of November:

- Collected 43.85 tons of garbage.
- Diverted 18.70 tons of recycled goods from garbage.
- Picked up 20 loads of brush and leaves (approximately 600 cubic yards) and 50 loads of leaves (approximately 1500cubic yards) over 17 days.
- Responded to 8 total utility locate requests, comprised of 19 new requests and 69 updates. This total includes 1 emergency, 1 short term, and 1 rush request.
- Visited 7 residences for Tree Assessments, approving the removal of 26 trees, and requiring the installation of 27 trees.
- Completed daily chlorine residual tests across town and passed the required two bacteriological tests. Results are reported via the State's on-line reporting system. Completed the required quarterly disinfection byproduct testing and did have one (1) of the four tests exceed the reporting limit, however, the long-term annual moving average is still within the acceptable range. We will increase hydrant flushing in that area of the water system to improve the overall water quality and hopefully move the test results back to an acceptable level.
- Used the Beacon/Badger Meter automated meter reading system to monitor for water leaks daily and informed residents of suspected leaks.
- We continue to perform litter pick-ups as needed, focusing on the entrances.
- Leaf collection began November 1 and will continue daily until January 15, 2023. We are running both the leaf vacuum and the brush truck as staffing allows.

Miscellaneous Activities in November

- We continue to advertise for two (2) open Public Services Worker Positions. Should anyone know of a candidate they would be willing to refer, please reach out to either me or Mike.
- White and yellow line striping was completed on segments of Cedarcliff Road, Vanderbilt Road, Busbee Road, and Southwood Road during the week of November 7.
- We have an executed contract with MB Haynes to retrofit our existing streetlights to LED lighting in order to comply with the new Duke Energy Progress underground service requirements. This contract is on an hourly basis, and each conversion is estimated to be approximately \$900.00
- We are still awaiting the necessary parts to complete repairs to the fallen streetlight at 394 Vanderbilt.
- I have completed a street striping mater plan for Board review and input.
- Public Works staff completed the installation of the wreaths, lights, and garlands at the Town Hall complex and adjoining streetlights and bus station. Special thanks to Daniel Rice, Hunter Graham, and Mike Dale for completing this task.
- We coordinated additional tree removals with the Biltmore Estate along Vanderbilt Road, jointly removing both trees from their property and our right-of-way. We also removed a hazardous tree from the right-of-way along Busbee Road across from the condominiums.
- I worked with our outside vendor to coordinate the installation of the tree wraps lights in the median across from Town Hall and installation of additional lights to the eaves of the Town Hall building.
- Supervisor Dale and I attended an informational meeting regarding the possibility of establishing a Regional Stormwater Partnership group hosted by the City of Hendersonville on November 16th.
- Staff replaced a broken water meter setter and meter box at 128 Stuyvesant Road on November 17th.
- We continue to collect unwanted garbage cans and are recycling them at the Curbside Management facility in Woodfin.
- I met with our consultant on December 2nd to review additional adjustments to private easements for the stormwater master plan project scheduled for this spring.

Larger/Capital Projects Updates

Greenwood Park Stream Restoration

• We have coordinated the delivery of a load of topsoil to remove the failed stormwater control measure at the southwestern end of the park site. We are awaiting better weather to fill in this wet area. Also, the Contractor will return in January to complete the installation of bare root trees and live stakes in the stream bank. This work must be

completed when that plant material is available which is typically no earlier than December 15.

Cedar Hill Road Stream Stabilization Project

- Project bid documents were finalized in November 28th for this project. Manager Kanipe released this project for informal bids on November 30, 2022, and we are holding a mandatory pre-bid conference on December 7, 2022 at 1:30 pm. Bids will be received on December 21, 2022.
- Manager Kanipe has a separate agenda item in his Manager's report with more project details.

Master Plan Project Area 1 & Area 9 – Vanderbilt/Stuyvesant/Lone Pine Stormwater Project

- I met with the consultant on December 2nd to review the latest version of the proposed easement exhibits and discuss some final adjustments to the design. They will be finalizing the easement exhibits for us and the Town Attorney to review and complete the easement packages.
- The next step once packages are finalized will be to make contact with affected property owners to begin easement acquisition.
- We are continuing to be in touch with the Metropolitan Sewerage District to see if there is any need to coordinate work together in this area.
- The tentative schedule is to complete the contract documents this year and bid the project in the late winter for construction next year.

Garbage Can and Cart Tipper Project

- We continue to be told that the 65-gallon can delivery is expected before the end of this calendar year.
- We have completed the majority of container pick-ups but continue to have requests come in. We will continue to collect cans as needed. They are being recycled at the Curbside Management recycling facility in Woodfin.

Upcoming in December

- We are continuing to focus on filling the open Public Services Worker position, including using temporary or seasonal workers.
- We have fully transitioned grounds maintenance to focus on leaf collection. Staff will be performing leaf pick-up continually by following the brush pick-up routes. This insures fair access to all residents. We fully completed one pass through the south route on November 16th and anticipate completing the first pass on the North route (which tends to be quite a bit heavier) by the week of December 19th. Leaf pick-up continues until January 15th, 2023.
- We will be performing some hydrant flushing this month.

- Mowing activities are essentially over for the season. We will be removing leaves from the parks, however, and mowing as needed.
- We have tentatively scheduled more days of dead or damaged tree removals from Town property on December 7th, 8th, and 9th.
- Work will begin on the new services and retrofits of the Town street lights.
- We will be fabricating a replacement streetlight in the shop for the location at 394 Vanderbilt Rd.
- We will continue to solicit contractors to re-paint Town Hall.
- Old garbage container collections will continue as requested.

As always, please do not hesitate to contact me with any questions or feedback.

BOARD OF COMMISSIONERS MEETING STAFF MEMORANDUM

December 13, 2022

Agenda Item D-4

Town Manager's Monthly Report



Duke Energy Underground Project/Streetlight Retrofit Coordination

Duke Energy representatives conducted their pre-construction site visit Wednesday, December 7 to review the boring and trenching work that will be needed to bring the underground power to the Town's streetlights. Duke has contracted this project with Sumter as they were able to perform the work more quickly than other contractors. The Town is utilizing M.B. Haynes to perform the "customer" side of the work, which is retrofitting the streetlights. We have signed a proposal for this work and have a pre-construction virtual call with their project manager and Duke Energy representatives on Wednesday, December 14. An estimated construction and completion date will be provided to the Board as soon as that is available.

Social Room Audio/Visual Upgrades

Last month, the Board approved the Town entering into an agreement with TSA Choice to perform audio/visual upgrades to the Town's Social Room. These funds are being expended through the American Rescue Plan (ARP) funds allocated directly to the Town from the federal government. The initial installation timeline was mid-December; however, due to shipping delays and components for this project not having arrived yet, it appears it will be mid-January before this work occurs. We anticipate work being complete for the Town's centennial celebration that will occur on February 14, 2023.

Biltmore Farms Parcel Transfer

Mayor Goosmann and I met with Jack Cecil and Lee Thomason, from Biltmore Farms, last month to review the Town's desire to transfer multiple parcels to the Town. These larger parcels have been maintained by the Town for nearly 100 years. The property at Rosebank Park and Lower Vanderbilt Park is included in this discussion, though that property was leased to the Town in 1928 on a 99-year term. The other parcels (Busbee/Hendersonville Road intersection; East Forest Road/Forest Road intersection; area adjacent to Southwood Road; area between Westwood Road and Greenwood Place) were simply never formally conveyed to the Town. The meeting was productive, and we are providing some requested information to Biltmore Farms regarding the parcels in question.

Planning and Zoning Position

During the FY23 budget process, the Board discussed the potential for a new position focused on zoning and ordinance matters. The final discussion included moving allocated funds from salary

and benefits line items to the general government miscellaneous line items. The purpose behind this movement in the final budget was to have funds allocated and revisit the position during the year. As the first six months of FY23 conclude and in order to fulfill the Board's request from June, I will provide information at the meeting in January regarding this position. If you have specific requests or information you would like included within this review, please let me know.

Paymentus Implementation Update

In September, the Board approved an agreement with Paymentus to become the Town's new online payment vendor. Since that time, staff has worked with Paymentus's implementation group to move forward with this system. We are meeting weekly with our implementation specialist and providing information for their team and integration with our billing systems. The current goal for going live is late February or early March 2023. We are scheduled to convene with their marketing team in early January 2023 to devise appropriate ways to inform the public about this change.

65-Gallon Trash Container Update

The Town has followed up extensively with Schaefer's southeast representative regarding our delivery date for these smaller containers. As of December 6, the representative indicated these containers are still scheduled for fabrication and delivery to the Town by the end of the year. Once delivered, Town staff will endeavor to get these out to residents as quickly as possible.

				YTD With			
Account		Budget (\$)	Current Period (\$)	Encumbrance (\$)	Encumbrance (\$)	Remaining Balance (\$)	% Used
3010 Ad Valorem Tax							
Revenue							
3010 Ad Valorem Tax							
10-3010-0000 AD VAL	OREM TAXES (PROPERTY)	2,920,559.00	2,957,821.81	2,957,821.81	0.00	-37,262.81	101
10-3010-0100 AD VAL	OREM TAXES (DMV)	109,396.00	10,258.62	10,258.62	0.00	99,137.38	9
10-3010-0200 TAX INT	EREST & PENALTIES	5,000.00	66.52	66.52	0.00	4,933.48	1
	3010 Ad Valorem Tax Subtotal	\$3,034,955.00	\$2,968,146.95	\$2,968,146.95	\$0.00	\$66,808.05	98
	Revenue Subtotal	\$3,034,955.00	\$2,968,146.95	\$2,968,146.95	\$0.00	\$66,808.05	98
After Transfers	Excess Of Revenue Subtotal	\$3,034,955.00	\$2,968,146.95	\$2,968,146.95	\$0.00		98
3020 Unrestricted Intergover	rnm						
Revenue							
3020 Unrestricted Intergov	ernm						
10-3020-0000 FRANCI	HISE & UTILITIES TAX DIST.	211,384.00	48,409.65	48,409.65	0.00	162,974.35	23
10-3020-0100 ALCOH	OL BEVERAGE TAX	6,450.00	0.00	0.00	0.00	6,450.00	0
10-3020-0200 BUNCO	MBE COUNTY 1% TAX	793,429.00	195,984.51	195,984.51	0.00	597,444.49	25
10-3020-0300 1/2 CEN	IT SALES TAX A.40	330,137.00	85,480.82	85,480.82	0.00	244,656.18	26
10-3020-0400 1/2 CEN	IT SALES TAX A.42	419,847.00	104,409.43	104,409.43	0.00	315,437.57	25
10-3020-0600 SALES	TAX REFUND	15,000.00	0.00	0.00	0.00	15,000.00	0
10-3020-0700 GASOLI	NE TAX REFUND	3,500.00	5,923.24	5,923.24	0.00	-2,423.24	169
3020 U	nrestricted Intergovernm Subtotal	\$1,779,747.00	\$440,207.65	\$440,207.65	\$0.00	\$1,339,539.35	25
	Revenue Subtotal	\$1,779,747.00	\$440,207.65	\$440,207.65	\$0.00	\$1,339,539.35	25
After Transfers	Excess Of Revenue Subtotal	\$1,779,747.00	\$440,207.65	\$440,207.65	\$0.00		25
3030 Restricted Intergoverni	men						
Revenue							
3030 Restricted Intergover	nmen						
10-3030-0000 SOLID V	WASTE DISPOSAL TAX	975.00	246.45	246.45	0.00	728.55	25
10-3030-0100 POWEL	L BILL	66,849.00	33,603.71	33,603.71	0.00	33,245.29	50
3030 R	estricted Intergovernmen Subtotal	\$67,824.00	\$33,850.16	\$33,850.16	\$0.00	\$33,973.84	50
	Revenue Subtotal	\$67,824.00	\$33,850.16	\$33,850.16	\$0.00	\$33,973.84	50
After Transfers	Excess Of Revenue Subtotal	\$67,824.00	\$33,850.16	\$33,850.16	\$0.00		50
3040 Permits & Fees							
Revenue							
3040 Permits & Fees							
10-3040-0000 ZONING	PERMITS	45,000.00	17,461.00	17,461.00	0.00	27,539.00	39
10-3040-0100 DOG LIG	CENSE FEE	1,300.00	30.00	30.00	0.00	1,270.00	2
	3040 Permits & Fees Subtotal	\$46,300.00	\$17,491.00	\$17,491.00	\$0.00	\$28,809.00	38
	Revenue Subtotal	\$46,300.00	\$17,491.00	\$17,491.00	\$0.00	\$28,809.00	38
After Transfers	Excess Of Revenue Subtotal	\$46,300.00	\$17,491.00	\$17,491.00	\$0.00		38

			Current	YTD With Encumbrance	Encumbrance	Remaining	
Account		Budget (\$)	Period (\$)	(\$)	(\$)	Balance (\$)	% Used
3050 Investment Earnings							
Revenue							
3050 Investment Earnings							
10-3050-0000 INTERES	T EARNED	2,000.00	18,798.40	18,798.40	0.00	-16,798.40	940
30	50 Investment Earnings Subtotal	\$2,000.00	\$18,798.40	\$18,798.40	\$0.00	-\$16,798.40	940
	Revenue Subtotal	\$2,000.00	\$18,798.40	\$18,798.40	\$0.00	-\$16,798.40	940
After Transfers	Excess Of Revenue Subtotal	\$2,000.00	\$18,798.40	\$18,798.40	\$0.00		940
3060 Miscellaneous							
Revenue							
3060 Miscellaneous							
10-3060-0100 AMERICA	AN TOWER AGREEMENT	45,600.00	2,000.00	2,000.00	0.00	43,600.00	4
10-3060-0200 MISCELL	ANEOUS	20,000.00	221,149.21	221,149.21	0.00	-201,149.21	1,106
	3060 Miscellaneous Subtotal	\$65,600.00	\$223,149.21	\$223,149.21	\$0.00	-\$157,549.21	340
	Revenue Subtotal	\$65,600.00	\$223,149.21	\$223,149.21	\$0.00	-\$157,549.21	340
After Transfers	Excess Of Revenue Subtotal	\$65,600.00	\$223,149.21	\$223,149.21	\$0.00		340
3290							
Revenue							
3290							
30-3290-0000 INTERES	T EARNED	50.00	498.61	498.61	0.00	-448.61	997
	3290 Subtotal	\$50.00	\$498.61	\$498.61	\$0.00	-\$448.61	997
	Revenue Subtotal	\$50.00	\$498.61	\$498.61	\$0.00	-\$448.61	997
After Transfers	Excess Of Revenue Subtotal	\$50.00	\$498.61	\$498.61	\$0.00		997
3350 Commissions, Sw Chg C	Coll						
Revenue							
3350 Commissions, Sw Chg	Coll						
30-3350-0000 COMMIS	SIONS, SEWER CHARGE COLL	8,000.00	1,768.80	1,768.80	0.00	6,231.20	22
3350 Cor	nmissions, Sw Chg Coll Subtotal	\$8,000.00	\$1,768.80	\$1,768.80	\$0.00	\$6,231.20	22
	Revenue Subtotal	\$8,000.00	\$1,768.80	\$1,768.80	\$0.00	\$6,231.20	22
After Transfers	Excess Of Revenue Subtotal	\$8,000.00	\$1,768.80	\$1,768.80	\$0.00		22
3500 Other Financing							
Other Financing Source							
3500 Other Financing							
10-3500-0000 SALE OF	PERSONAL PROPERTY	10,000.00	0.00	0.00	0.00	10,000.00	0
10-3500-0700 INTERGO	OVERNMENTAL LOAN (RESTRIC	292,000.00	0.00	0.00	0.00	292,000.00	0
	3500 Other Financing Subtotal	\$302,000.00	\$0.00	\$0.00	\$0.00	\$302,000.00	0
	Other Financing Source Subtotal	\$302,000.00	\$0.00	\$0.00	\$0.00	\$302,000.00	0
After Transfers	Deficiency Of Revenue Subtotal	\$302,000.00	\$0.00	\$0.00	\$0.00		0
3710 Water Sales							

Account		Budget (\$)	Current Period (\$)	YTD With Encumbrance (\$)	Encumbrance (\$)	Remaining Balance (\$)	% Used
Revenue							
3710 Water Sales							
30-3710-0000 WA	TER CHARGES	369,000.00	179,981.27	179,981.27	0.00	189,018.73	49
30-3710-0100 MS	D CHARGES	248,284.00	143,657.48	143,657.48	0.00	104,626.52	58
30-3710-0200 AM	TRANSMITTER CHARGES	7,700.00	2,748.32	2,748.32	0.00	4,951.68	36
	3710 Water Sales Subtotal	\$624,984.00	\$326,387.07	\$326,387.07	\$0.00	\$298,596.93	52
	Revenue Subtotal	\$624,984.00	\$326,387.07	\$326,387.07	\$0.00	\$298,596.93	52
After Transfers	Excess Of Revenue Subtotal	\$624,984.00	\$326,387.07	\$326,387.07	\$0.00		52
3730 Water Tap & Conn	ect Fees						
Revenue							
3730 Water Tap & Con	nect Fees						
30-3730-0000 WA	TER TAP AND CONNECTION FEES	6,000.00	6,330.00	6,330.00	0.00	-330.00	106
37	30 Water Tap & Connect Fees Subtotal	\$6,000.00	\$6,330.00	\$6,330.00	\$0.00	-\$330.00	106
	Revenue Subtotal	\$6,000.00	\$6,330.00	\$6,330.00	\$0.00	-\$330.00	106
After Transfers	Excess Of Revenue Subtotal	\$6,000.00	\$6,330.00	\$6,330.00	\$0.00		106
4000							
Revenue							
4000							
40-4000-1100 ARI	DISTRIBUTION	451,275.58	0.00	0.00	0.00	451,275.58	0
	4000 Subtotal	\$451,275.58	\$0.00	\$0.00	\$0.00	\$451,275.58	0
	Revenue Subtotal	\$451,275.58	\$0.00	\$0.00	\$0.00	\$451,275.58	0
After Transfers	Deficiency Of Revenue Subtotal	\$451,275.58	\$0.00	\$0.00	\$0.00		0
4200 Administration							
Expenditure							
4200 Administration							
10-4200-0200 SAI	ARIES	226,063.00	106,830.54	106,830.54	0.00	119,232.46	47
10-4200-0300 OV	ERTIME	3,000.00	0.00	0.00	0.00	3,000.00	0
10-4200-0500 FIC	A	17,293.00	7,159.61	7,159.61	0.00	10,133.39	41
10-4200-0600 HE	ALTH INSURANCE (MEDICAL)	24,158.00	10,606.25	10,606.25	0.00	13,551.75	44
10-4200-0650 DEI	NTAL, VISION, LIFE INSURANCE	4,935.00	1,946.10	1,946.10	0.00	2,988.90	39
10-4200-0675 HE	ALTH REIMBUSEMENT ACC	3,750.00	1,562.50	1,562.50	0.00	2,187.50	42
10-4200-0700 LGI	ERS RETIREMENT	41,231.00	18,228.91	18,228.91	0.00	23,002.09	44
10-4200-0800 401	K SUPP RETIREMENT	11,453.00	5,100.89	5,100.89	0.00	6,352.11	45
10-4200-1000 AC	COUNTING & TAXES	51,400.00	15,619.75	17,369.75	1,750.00	34,030.25	34
10-4200-1200 PO	STAGE, PRINTING, STATIONARY	10,140.00	2,826.31	5,286.65	2,460.34	4,853.35	52
10-4200-1400 MIL	EAGE & BOARD SALARY	21,600.00	9,068.68	9,068.68	0.00	12,531.32	42
10-4200-1500 BLI	OC 8 CONIDC MAINTENANCE	20,000.00	3,849.29	6,373.23	2,523.94	13,626.77	32
	JG & GRNDS MAINTENANCE	-,	-,	-,			
10-4200-3300 SUI	PPLIES AND EQUIPMENT	7,722.00	4,992.90	5,645.59	652.69	2,076.41	73

Account	Account		Current Period (\$)	YTD With Encumbrance (\$)	Encumbrance (\$)	Remaining Balance (\$)	% Used
10-4200-5700 MIS	CELLANEOUS	1,000.00	572.06	572.06	0.00	427.94	57
10-4200-6500 STA	FF DEVELOPMENT	16,000.00	5,984.97	8,809.78	2,824.81	7,190.22	55
	4200 Administration Subtotal	\$464,815.00	\$198,112.31	\$208,324.09	\$10,211.78	\$256,490.91	45
	Expenditure Subtotal	\$464,815.00	\$198,112.31	\$208,324.09	\$10,211.78	\$256,490.91	45
Before Transfers	Deficiency Of Revenue Subtotal	-\$464,815.00	-\$198,112.31	-\$198,112.31	-\$10,211.78		43
After Transfers	Deficiency Of Revenue Subtotal	-\$464,815.00	-\$198,112.31	-\$198,112.31	-\$10,211.78		43
5100 Police Department							
Expenditure							
5100 Police Departmen	t						
10-5100-0200 SAL		951,387.00	447,341.12	447,341.12	0.00	504,045.88	47
10-5100-0300 OVE	ERTIME	26,000.00	0.00	0.00	0.00	26,000.00	0
10-5100-0400 SEP	ARATION ALLOWANCE	38,117.00	20,453.49	20,453.49	0.00	17,663.51	54
10-5100-0500 FICA	P	72,781.00	32,004.07	32,004.07	0.00	40,776.93	44
10-5100-0600 HEA	LTH INSURANCE (MEDICAL)	164,272.00	64,884.36	64,884.36	0.00	99,387.64	39
10-5100-0650 DEN	ITAL, VISION, LIFE INSURANCE	35,558.00	7,258.42	7,258.42	0.00	28,299.58	20
10-5100-0675 HRA	A HEALTH REIMB ACCT	25,500.00	10,250.00	10,250.00	0.00	15,250.00	40
10-5100-0700 LGE	RS RETIREMENT	185,598.00	76,820.67	76,820.67	0.00	108,777.33	41
10-5100-0800 4011	K SUPP RETIREMENT	48,996.00	21,765.93	21,765.93	0.00	27,230.07	44
10-5100-1500 MAI	NT/REPAIR - BLDG/GROUNDS	20,000.00	175.00	175.00	0.00	19,825.00	1
10-5100-1600 MAI	NT/REPAIR - EQUIPMENT	1,000.00	1,002.85	1,002.85	0.00	-2.85	100
10-5100-1700 MAI	NT/REPAIR - VEHICLES	10,000.00	6,061.82	6,366.00	304.18	3,634.00	64
10-5100-3100 MO	FOR FUELS	24,600.00	9,596.94	9,596.94	0.00	15,003.06	39
10-5100-3300 SUP	PLIES	20,080.00	7,808.44	9,722.57	1,914.13	10,357.43	48
10-5100-3600 UNII	FORMS	15,000.00	8,426.62	31,849.15	23,422.53	-16,849.15	212
10-5100-3700 SOF	TWARE	18,725.00	15,290.26	15,290.26	0.00	3,434.74	82
10-5100-3800 TEC	HNOLOGY	58,740.00	13,520.38	14,451.96	931.58	44,288.04	25
10-5100-5700 MIS	CELLANEOUS	8,265.00	3,331.34	3,707.89	376.55	4,557.11	45
10-5100-5800 PHY	SICAL EXAMS	2,000.00	795.26	795.26	0.00	1,204.74	40
10-5100-6500 STA	FF DEVELOPMENT	15,000.00	6,736.72	7,111.72	375.00	7,888.28	47
10-5100-7400 CAP	PITAL EQUIPMENT PURCHASES	102,500.00	115,424.29	117,684.73	2,260.44	-15,184.73	115
	5100 Police Department Subtotal	\$1,844,119.00	\$868,947.98	\$898,532.39	\$29,584.41	\$945,586.61	49
	Expenditure Subtotal	\$1,844,119.00	\$868,947.98	\$898,532.39	\$29,584.41	\$945,586.61	49
Before Transfers	Deficiency Of Revenue Subtotal	-\$1,844,119.00	-\$868,947.98	-\$868,947.98	-\$29,584.41		47
After Transfers	Deficiency Of Revenue Subtotal	-\$1,844,119.00	-\$868,947.98	-\$868,947.98	-\$29,584.41		47
5200 Fire Services							
Expenditure							
5200 Fire Services							
10-5200-0000 FIRE	E CONTRACT	425,000.00	0.00	0.00	0.00	425,000.00	0

Account		Budget (\$)	Current Period (\$)	YTD With Encumbrance (\$)	Encumbrance (\$)	Remaining Balance (\$)	% Used
	5200 Fire Services Subtotal	\$425,000.00	\$0.00	\$0.00	\$0.00	\$425,000.00	0
	Expenditure Subtotal	\$425,000.00	\$0.00	\$0.00	\$0.00	\$425,000.00	0
Before Transfers	Deficiency Of Revenue Subtotal	-\$425,000.00	\$0.00	\$0.00	\$0.00		0
After Transfers	Deficiency Of Revenue Subtotal	-\$425,000.00	\$0.00	\$0.00	\$0.00		0
6600 Public Works							
Expenditure							
5600 Public Works							
10-5600-0200 SAL	ARIES	244,822.00	110,247.71	110,247.71	0.00	134,574.29	45
10-5600-0300 OVE	RTIME	5,000.00	0.00	0.00	0.00	5,000.00	0
10-5600-0500 FICA	4	19,111.00	7,439.71	7,439.71	0.00	11,671.29	39
10-5600-0550 UNE	MPLOYMENT INSURANCE	500.00	0.00	0.00	0.00	500.00	0
10-5600-0600 HOS	SPITAL INSURANCE (MEDICAL)	43,484.00	13,127.54	13,127.54	0.00	30,356.46	30
10-5600-0650 DEN	ITAL, VISION, LIFE INSURANCE	8,883.00	1,456.02	1,456.02	0.00	7,426.98	16
10-5600-0675 HRA	HEALTH REIMB ACCT	6,750.00	2,187.50	2,187.50	0.00	4,562.50	32
10-5600-0700 LGE	RS RETIREMENT	44,968.00	18,602.08	18,602.08	0.00	26,365.92	41
10-5600-0800 4011	SUPP RETIREMENT	12,491.00	4,848.67	4,848.67	0.00	7,642.33	39
10-5600-1000 OUT	SIDE SERVICES	10,000.00	275.00	275.00	0.00	9,725.00	3
10-5600-1300 STR	EETLIGHTS ELECTRIC	7,000.00	998.69	998.69	0.00	6,001.31	14
10-5600-1500 MAI	NT/REPAIR - BLDG/GROUNDS	9,600.00	4,361.94	4,361.94	0.00	5,238.06	45
10-5600-1600 MAI	NT/REPAIR- STREETLIGHTS	35,000.00	9.07	9.07	0.00	34,990.93	C
10-5600-1700 MAI	NT/REPAIR - VEHICLES	10,000.00	2,419.54	2,419.54	0.00	7,580.46	24
10-5600-3100 MO	FOR FUELS	20,000.00	7,548.26	7,548.26	0.00	12,451.74	38
10-5600-3300 SUF		10,000.00	3,163.33	3,167.60	4.27	6,832.40	32
	EET SIGNS & NUMBERS	1,000.00	43.89	43.89	0.00	956.11	4
10-5600-3600 UNI	FORMS	8,650.00	1,823.26	3,270.76	1,447.50	5,379.24	38
10-5600-3800 TEC		9,500.00	8,152.04	8,152.04	0.00	1,347.96	86
10-5600-5200 PAR		60,000.00	736.79	3,273.35	2.536.56	56,726.65	5
	EENWOOD PARK STREAM RESTORA	292,000.00	132,075.44	132,075.44	0.00	159,924.56	45
10-5600-5800 PHY		500.00	0.00	0.00	0.00	500.00	C
10-5600-5900 MIS		1,000.00	204.30	204.30	0.00	795.70	20
	FF DEVELOPMENT	8,000.00	2,880.87	3,307.07	426.20	4,692.93	41
	CAPITAL PROJECTS	451,275.58	23,441.16	23,441.16	0.00	427,834.42	5
	5600 Public Works Subtotal	\$1,319,534.58	\$346,042.81	\$350,457.34	\$4,414.53	\$969,077.24	27
	Expenditure Subtotal	\$1,319,534.58	\$346,042.81	\$350,457.34	\$4,414.53	\$969,077.24	27
Before Transfers	Deficiency Of Revenue Subtotal	-\$1,319,534.58	-\$346,042.81	-\$346,042.81	-\$4,414.53	<u> </u>	26
After Transfers	Deficiency Of Revenue Subtotal	-\$1,319,534.58	-\$346,042.81	-\$346,042.81	-\$4,414.53		26
700 Streets & Transpor	tation						
Expenditure							
5700 Streets & Transpo	ortation						

Account		Budget (\$)	Current Period (\$)	YTD With Encumbrance (\$)	Encumbrance (\$)	Remaining Balance (\$)	% Used
10-5700-1700	VEHICLE REPAIRS - STREET DEPT.	10,000.00	470.88	470.88	0.00	9,529.12	5
10-5700-2200	CONTRACTS- PAVING & STRIPING	210,000.00	71,765.00	71,765.00	0.00	138,235.00	34
10-5700-2300	SUPPLIES	10,000.00	6,460.80	11,413.07	4,952.27	-1,413.07	114
10-5700-2400	TRAFFIC SIGNS	500.00	809.48	809.48	0.00	-309.48	162
10-5700-2500	STORM WATER DRAINAGE	275,000.00	1,035.30	1,728.66	693.36	273,271.34	1
10-5700-3800	TECHNOLOGY	5,000.00	0.00	0.00	0.00	5,000.00	0
10-5700-6500	STAFF DEVELOPMENT	1,000.00	0.00	0.00	0.00	1,000.00	0
10-5700-7400	CAPITAL EQUIPMENT PURCHASES	5,000.00	0.00	0.00	0.00	5,000.00	0
10-5700-7500	ENGINEERING	100,000.00	35,830.50	35,830.50	0.00	64,169.50	36
	5700 Streets & Transportation Subtotal	\$616,500.00	\$116,371.96	\$122,017.59	\$5,645.63	\$494,482.41	20
	Expenditure Subtotal	\$616,500.00	\$116,371.96	\$122,017.59	\$5,645.63	\$494,482.41	20
Before Transfers	Deficiency Of Revenue Subtotal	-\$616,500.00	-\$116,371.96	-\$116,371.96	-\$5,645.63		19
After Transfers	Deficiency Of Revenue Subtotal	-\$616,500.00	-\$116,371.96	-\$116,371.96	-\$5,645.63		19
5800 Sanitation & Re	ecycling						
Expenditure							
5800 Sanitation & F	Recycling						
10-5800-0200	SALARIES	125,190.00	60,356.54	60,356.54	0.00	64,833.46	48
10-5800-0300	OVERTIME	5,000.00	0.00	0.00	0.00	5,000.00	0
10-5800-0500	FICA	9,960.00	4,247.64	4,247.64	0.00	5,712.36	43
10-5800-0600	HEALTH INSURANCE (MEDICAL)	28,989.00	9,712.50	9,712.50	0.00	19,276.50	34
10-5800-0650	DENTAL, VISION, LIFE INSURANCE	5,922.00	823.60	823.60	0.00	5,098.40	14
10-5800-0675	HRA HEALTH REIMB ACCT	4,500.00	1,875.00	1,875.00	0.00	2,625.00	42
10-5800-0700	LGERS RETIREMENT	23,435.00	10,481.01	10,481.01	0.00	12,953.99	45
10-5800-0800	401K SUPP RETIREMENT	6,510.00	3,001.21	3,001.21	0.00	3,508.79	46
10-5800-1700	MAINT/REPAIRS - VEHICLES	25,000.00	16,828.11	24,923.58	8,095.47	76.42	100
10-5800-3100	MOTOR FUELS	30,000.00	9,603.04	9,603.04	0.00	20,396.96	32
10-5800-3300	SUPPLIES	1,000.00	340.31	499.43	159.12	500.57	50
10-5800-3600	UNIFORMS	1,000.00	0.00	0.00	0.00	1,000.00	0
10-5800-3800	TECHNOLOGY	600.00	1,486.20	1,486.20	0.00	-886.20	248
10-5800-5800	PHYSICAL EXAMS	500.00	0.00	0.00	0.00	500.00	0
10-5800-5900	MISCELLANEOUS	1,000.00	0.00	0.00	0.00	1,000.00	0
10-5800-6000	CAPITAL OUTLAY	55,000.00	36,794.95	36,794.95	0.00	18,205.05	67
10-5800-8000	TIPPING FEES & BRUSH REMOVAL	30,000.00	17,618.33	17,618.33	0.00	12,381.67	59
10-5800-8100	RECYCLING	6,000.00	2,381.80	2,381.80	0.00	3,618.20	40
10-5800-8200	BRUSH & LEAF DISPOSAL FEES	31,200.00	5,180.00	5,180.00	0.00	26,020.00	17
	5800 Sanitation & Recycling Subtotal	\$390,806.00	\$180,730.24	\$188,984.83	\$8,254.59	\$201,821.17	48
	Expenditure Subtotal	\$390,806.00	\$180,730.24	\$188,984.83	\$8,254.59	\$201,821.17	48

*100 in the % Used column indicates that no budget exists

Account		Budget (\$)	Current Period (\$)	YTD With Encumbrance (\$)	Encumbrance (\$)	Remaining Balance (\$)	% Used
After Transfers	Deficiency Of Revenue Subtotal	-\$390,806.00	-\$180,730.24	-\$180,730.24	-\$8,254.59		46
6600 General Governmen	t						
Expenditure							
6600 General Governme	ent						
10-6600-0401 LEGA	AL SERVICES	35,000.00	10,769.51	10,769.51	0.00	24,230.49	31
10-6600-1100 TECH	HNOLOGY	92,120.00	36,014.12	36,014.12	0.00	56,105.88	39
10-6600-1300 MUN	ICIPAL UTILITIES	25,000.00	7,564.26	7,564.26	0.00	17,435.74	30
10-6600-1500 GE. F	REPS. AND MAINT.	28,200.00	22,961.73	22,961.73	0.00	5,238.27	81
10-6600-2800 ELEC	CTIONS	6,000.00	0.00	0.00	0.00	6,000.00	0
10-6600-5400 INSU	RANCE	105,000.00	105,507.55	105,507.55	0.00	-507.55	100
10-6600-6000 CON	TINGENCY	181,444.00	0.00	0.00	0.00	181,444.00	0
10-6600-6100 MISC	CELLANEOUS	10,000.00	2,223.69	2,223.69	0.00	7,776.31	22
10-6600-6201 COV	ID EXPENDITURES	2,000.00	8,500.00	8,500.00	0.00	-6,500.00	425
10-6600-6300 COM	MUNITY EVENTS	50,000.00	3,199.10	3,199.10	0.00	46,800.90	6
10-6600-6301 4TH	OF JULY	10,000.00	4,340.73	4,340.73	0.00	5,659.27	43
10-6600-6302 NATI	ONAL NIGHT OUT	7,000.00	0.00	0.00	0.00	7,000.00	0
10-6600-6303 HOLI	DAY LIGHTING	21,500.00	0.00	0.00	0.00	21,500.00	0
10-6600-6304 ARB	OR DAY EVENT	2,000.00	0.00	0.00	0.00	2,000.00	0
10-6600-6400 WILE	DLIFE MANAGEMENT	5,000.00	569.90	569.90	0.00	4,430.10	11
10-6600-6500 FOR	EST MANAGEMENT	60,000.00	22,300.00	22,300.00	0.00	37,700.00	37
10-6600-7600 FIRE	PROTECTION	0.00	106,250.00	106,250.00	0.00	-106,250.00	*100
	6600 General Government Subtotal	\$640,264.00	\$330,200.59	\$330,200.59	\$0.00	\$310,063.41	52
	Expenditure Subtotal	\$640,264.00	\$330,200.59	\$330,200.59	\$0.00	\$310,063.41	52
Before Transfers	Deficiency Of Revenue Subtotal	-\$640,264.00	-\$330,200.59	-\$330,200.59	\$0.00		52
After Transfers	Deficiency Of Revenue Subtotal	-\$640,264.00	-\$330,200.59	-\$330,200.59	\$0.00		52
6700 Debt Service							
Expenditure							
6700 Debt Service							
10-6700-0100 Polic	e Dept Renovations-Principal	23,334.00	11,666.66	11,666.66	0.00	11,667.34	50
10-6700-0200 Stree	t Improvements-Principal	6,667.00	3,333.34	3,333.34	0.00	3,333.66	50
10-6700-0500 Publi	c Works Building-Principal	84,211.00	42,105.26	42,105.26	0.00	42,105.74	50
10-6700-0600 2020	POLICE CARS-PRINCIPAL	29,106.00	0.00	0.00	0.00	29,106.00	0
10-6700-1100 Police	e Dept Renovations-Interest	1,445.00	833.44	833.44	0.00	611.56	58
10-6700-1200 Stree	t Improvements-Interest	413.00	238.12	238.12	0.00	174.88	58
10-6700-1500 Publi	c Works Building-Interest	17,685.00	9,195.79	9,195.79	0.00	8,489.21	52
10-6700-1600 2020	POLICE CARS-INTEREST	801.00	0.00	0.00	0.00	801.00	0
	6700 Debt Service Subtotal	\$163,662.00	\$67,372.61	\$67,372.61	\$0.00	\$96,289.39	41
	Expenditure Subtotal	\$163,662.00	\$67,372.61	\$67,372.61	\$0.00	\$96,289.39	41

 ${\it fl-Revenue And Expenditure Portrait}$

Account		Budget (\$)	Current Period (\$)	YTD With Encumbrance (\$)	Encumbrance (\$)	Remaining Balance (\$)	% Used
After Transfers	Deficiency Of Revenue Subtotal	-\$163,662.00	-\$67,372.61	-\$67,372.61	\$0.00		41
8100 Water Dept.							
Expenditure							
8100 Water Dept.							
30-8100-0200 SAI	LARIES	144,572.00	50,424.67	50,424.67	0.00	94,147.33	35
30-8100-0400 PR	OFESSIONAL SERVICES	5,000.00	1,719.60	3,655.04	1,935.44	1,344.96	73
30-8100-0500 FIC	A.	11,060.00	3,471.47	3,471.47	0.00	7,588.53	31
30-8100-0600 HE	ALTH INSURANCE (MEDICAL)	19,326.00	6,933.39	6,933.39	0.00	12,392.61	36
30-8100-0650 DE	NTAL, VISION, LIFE INSURANCE	3,948.00	1,014.60	1,014.60	0.00	2,933.40	26
30-8100-0675 HR	A HEALTH REIMBUSEMENT ACCT	3,000.00	1,125.00	1,125.00	0.00	1,875.00	38
30-8100-0700 LGI	ERS RETIREMENT	26,023.00	8,791.25	8,791.25	0.00	17,231.75	34
30-8100-0800 401	K SUPP RETIREMENT	7,229.00	3,208.50	3,208.50	0.00	4,020.50	44
30-8100-1200 PO	STAGE, PRINTING,& STATIONARY	5,000.00	606.42	606.42	0.00	4,393.58	12
30-8100-1500 GE	NERAL REPAIRS	10,000.00	3,093.21	3,093.21	0.00	6,906.79	31
30-8100-3300 SU	PPLIES & EQUIPMENT	15,000.00	3,794.39	6,382.98	2,588.59	8,617.02	43
30-8100-3800 TEG	CHNOLOGY	5,000.00	0.00	0.00	0.00	5,000.00	0
30-8100-4800 WA	TER PURCHASES	179,580.00	83,847.25	83,847.25	0.00	95,732.75	47
30-8100-4900 SE	WER PURCHASES	185,400.00	137,687.30	137,687.30	0.00	47,712.70	74
30-8100-5000 AM	I TRANSMITTER FEES	7,700.00	1,450.26	1,450.26	0.00	6,249.74	19
30-8100-5700 MIS	SCELLANEOUS	6,196.00	0.00	0.00	0.00	6,196.00	0
30-8100-6500 STA	AFF DEVELOPMENT	5,000.00	581.00	581.00	0.00	4,419.00	12
30-8100-7400 CA	PITAL IMPROVEMENT	29,939.00	0.00	0.00	0.00	29,939.00	0
	8100 Water Dept. Subtotal	\$668,973.00	\$307,748.31	\$312,272.34	\$4,524.03	\$356,700.66	47
	Expenditure Subtotal	\$668,973.00	\$307,748.31	\$312,272.34	\$4,524.03	\$356,700.66	47
Before Transfers	Deficiency Of Revenue Subtotal	-\$668,973.00	-\$307,748.31	-\$307,748.31	-\$4,524.03		46
After Transfers	Deficiency Of Revenue Subtotal	-\$668,973.00	-\$307,748.31	-\$307,748.31	-\$4,524.03		46

BOARD OF COMMISSIONERS MEETING STAFF MEMORANDUM

December 13, 2022



Agenda Item E-1

Special Guest Introduction
Dr. Rob Jackson, Buncombe County Schools Superintendent

Background

Dr. Rob Jackson was selected to serve as the 22nd superintendent of Buncombe County Schools and began his tenure in November 2022. Dr. Jackson reached out and wanted an opportunity to introduce himself to the Board of Commissioners and Biltmore Forest community. A brief biography of Dr. Jackson from the BCS website is provided below.

A native of Buncombe County, Dr. Jackson grew up and attended school in Swannanoa. After serving in the United States Navy, he began his career in education as a student data manager and summer custodian as he worked his way through Asheville-Buncombe Technical Community College and Western Carolina University to earn his degree to become a teacher. Dr. Jackson worked in Buncombe County Schools for nine years, as a classified employee and then an elementary school teacher. Dr. Jackson also has a notable history as a school administrator serving as an assistant principal in Gaston County and as a principal in three schools in Union County. In Union County, Dr. Jackson had the unique honor of serving as the inaugural principal for two different schools, Marvin Elementary School and Cuthbertson High School. In 2014, Dr. Jackson was named Superintendent of Edenton-Chowan Public Schools in eastern North Carolina, a position he held for six years before being named to his current role as Superintendent of Carteret County Public Schools.

Over the past several years, Dr. Jackson has received multiple recognitions for his leadership, including being named the North Carolina High School Athletic Association's Superintendent of the Year, a Dr. Sam Houston Superintendent Leadership Award recipient, and the Dr. Brad Sneeden Superintendent Leadership Award winner from the North Carolina School Superintendent Association. Dr. Jackson was also honored as the 2011 Wells-Fargo North Carolina State Principal of the Year and as the North Carolina High School Principal of the Year by the North Carolina Principals and Assistant Principals Association.

Dr. Jackson earned his Bachelor of Science and Master of School Administration degrees from Western Carolina University and holds an Education Specialist Degree and Doctor of Education from Wingate University.

BOARD OF COMMISSIONERS MEETING STAFF MEMORANDUM

December 13, 2022



Agenda Item F-1

Consideration of Resolution 2022-05
Resolution of the Town of Biltmore Forest regarding the
Designation of an Official to Make Recommendations to the
NC ABC Commission on ABC Permit Applications

Background

As a local government entity within North Carolina that has authorized the sale of alcoholic beverages within its Town limits, the Town is authorized to designate an official to make recommendations to the NC Alcoholic Beverage Control (ABC) Commission on ABC permit applications. The Town's current designee is still shown as Nelson Smith. Mr. Smith retired as the Town Administrator in 2014 and it is prudent to make this change in authorizing official at this point.

Resolution required to Change Designation

The NC ABC Commission requires the attached form (resolution) be approved by the Governing Body to make this change. NCGS 18B-904(f) authorizes local governments to designate an official for this purpose. If approved, staff will send the resolution to the ABC Commission in Raleigh as noted on the form. The Town receives multiple requests each year for this form to be filled out and believes following the protocol to change the designee's name is in the best interest of applicants and the Town.

NORTH CAROLINA ALCOHOLIC BEVERAGE CONTROL COMMISSION

(919) 779-0700

Location: 400 E. Tryon Road Raleigh, NC 27610 Mail: 4307 Mail Service Center Raleigh, NC 27699-4307

RESOLUTION OF THE CITY OF Biltmore Forest, COUNTY OF
Buncombe , REGARDING THE DESIGNATION OF AN OFFICIAL
TO MAKE RECOMMENDATIONS TO THE NORTH CAROLINA ALCOHOLIC
BEVERAGE CONTROL COMMISSION ON ABC PERMIT APPLICATIONS.
WHEREAS G.S.18B-904(f) authorizes a governing body to designate an official, by name or by
position, to make recommendations concerning the suitability of persons or locations for ABC permits;
and
WHEREAS the City of Biltmore Forest , County of
Buncombe wishes to notify the NC ABC Commission of its
designation as required by G.S.18B-904(f);
BE IT THEREFORE RESOLVED that Jonathan Kanipe , Town Manager ,
(Name of Official) (Title or Position)
is hereby designated to notify the North Carolina Alcoholic Beverage Control Commission of the
recommendations of the City of Biltmore Forest , County of
Buncombe , regarding the suitability of persons and locations for ABC
permits within its jurisdiction.
BE IT FURTHER RESOLVED THAT notices to the City of Biltmore Forest , County
of Buncombe , should be mailed or delivered to the official designated above
at the following address:
Mailing address: PO Box 5352
off Maring address.
Office location: 355 Vanderbilt Road
City: Asheville NC
City.
Zip Code: 28803 Phone #: 828/274-0824
4.24h a Docember as 22
This the 13th day of December , 2022.
(Mayor/Chairman)
Sworn to and subscribed before me this the day of, 20

BOARD OF COMMISSIONERS MEETING STAFF MEMORANDUM

December 13, 2022



Agenda Item F-2

Cedar Hill Road Stabilization/Stream Restoration Project Update

Background

In October, the Board received a report from Town staff regarding the plans for the Cedar Hill Road stabilization/stream restoration project. This overview included a brief review of the projected impact to the stream, road, and adjacent property owners, as well as the process by which the Town is undertaking to bid the project. The information below provides information related to where we are in this process.

Request for Proposals (RFP) Issued and Pre-Bid Conference

The Town issued the RFP for this project on Wednesday, November 30. Because the estimated cost is under the formal biding threshold, the Town is able to invite specific bidders to review the proposal and consider the project. This is particularly key for a stream restoration project, as these are highly specialized and intricate projects. The attached information includes the full RFP and final drawings for the project. Responses for the RFP must be returned to the Town no later than Wednesday, December 21st at 2:00 p.m. The RFPs will be opened and reviewed at the Town Hall at that time.

Staff anticipates having a formal recommendation for the Board at the next regular board meeting on Tuesday, January 12, 2023. We are hopeful to have construction finished on this project by the end of June 2023. Staff will be happy to answer any questions you may have regarding the project.



TOWN OF BILTMORE FOREST

Request for Proposal

UT Four Mile Branch Stream Restoration

Date of Issue November 30, 2022

Proposal Submission Deadline: December

21, 2022 at 2:00 PM ET

TABLE OF CONTENTS

1.0	PURP	OSE		RΔ	CKC	RO	חאוו
1.0	FUNE	UJE	AINU	DA	cn	$\mathbf{J} \mathbf{N} \mathbf{U}$	UIIU

- 2.0 GENERAL INFORMATION
- 2.1 REQUEST FOR PROPOSAL DOCUMENT
- 2.2 NOTICE REGARDING RFP TERMS AND CONDITIONS
- 2.3 RFP SCHEDULE
- 2.4 MANDATORY PRE-PROPOSAL CONFERENCE
- 2.5 PROPOSAL QUESTIONS
- 2.6 PROPOSAL SUBMITTAL
- 2.7 PROPOSAL CONTENTS

3.0 METHOD OF AWARD AND EVALUATION

- 3.1 METHOD OF AWARD
- 3.2 EVALUATION CRITERIA

4.0 REQUIREMENTS

- 4.1 CONTRACT TERM
- 4.2 PRICING
- 4.3 VENDOR EXPERIENCE
- 4.4 VENDOR'S REPRESENTATIONS
- 5.0 SCOPE OF WORK
- 6.0 GENERAL TERMS AND CONDITIONS

ATTACHMENT A – BLANK BID TAB
ATTACHMENT B – DESIGN PLANS FOR PROJECT

1.0 PURPOSE AND BACKGROUND

The Town of Biltmore Forest (Town) seeks proposals for a streambank restoration project on an unnamed tributary to Four Mile Branch on private property and Town right-of-way.

Proposals shall be submitted in accordance with the terms and conditions of this RFP and any addenda issued hereto.

2.0 GENERAL INFORMATION

2.1 REQUEST FOR PROPOSAL DOCUMENT

The RFP is comprised of the base RFP document, any attachments, and any addenda released before Contract award. All attachments and addenda released for this RFP in advance of any Contract award are incorporated herein by reference.

2.2 NOTICE REGARDING RFP TERMS AND CONDITIONS

It shall be the Vendor's responsibility to read the Instructions, the Town's terms and conditions, all relevant exhibits and attachments, and any other components made a part of this RFP and comply with all requirements and specifications herein. Vendors also are responsible for obtaining and complying with all addenda and other changes that may be issued in connection with this RFP.

If Vendors have questions, issues, or exceptions regarding any term, condition, or other component within this RFP, those must be submitted as questions in accordance with the instructions in Section 2.5 PROPOSAL QUESTIONS. If the Town determines that any changes will be made as a result of the questions asked, then such decisions will be communicated in the form of an RFP addendum. The Town may also elect to leave open the possibility for later negotiation and amendment of specific provisions of the Contract that have been addressed during the question and answer period. Other than through this process, the Town rejects and will not be required to evaluate or consider any additional or modified terms and conditions submitted with Vendor's proposal. This applies to any language appearingin or attached to the document as part of the Vendor's proposal that purports to vary any terms and conditions or Vendors' instructions herein or to render the proposal non-binding or subject to further negotiation. Vendor's proposal shall constitute a firm offer. By execution and delivery of this RFP Response, the Vendor agrees that any additional or modified terms and conditions, whether submitted purposely or inadvertently, shall have no force or effect, and will be disregarded. Noncompliance with, or any attempt to alter or delete, this paragraph shall constitute sufficient grounds to reject Vendor's proposal as nonresponsive.

2.3 RFP SCHEDULE

The table below shows the *intended* schedule for this RFP. The Town will make every effort to adhere to this schedule.

Event	Responsibility	Date and Time
Issue RFP	Town	11/30/2022
Mandatory Pre-Proposal Conference	Vendor	12/07//2022 1:30 pm
Submit Written Questions	Vendor	12/14/2022 5:00 pm
Provide Response to Questions	Town	12/16/2022
Submit Proposals	Vendor	12/21/2022 2:00pm
Contract Award	Town	TBD
Contract Effective Date	Town	TBD

2.4 PRE-PROPOSAL CONFERENCE

A mandatory pre-proposal conference will be held on December 7, 2022 at 1:30 p.m. The conference will begin in the parking lot of the Town Administration building at 355 Vanderbilt Road, Asheville, NC 28803 and then proceed to the job site location.

2.5 PROPOSAL QUESTIONS

Upon review of the RFP documents, Vendors may have questions to clarify or interpret the RFP in order to submit the best proposal possible. To accommodate the Proposal Questions process, Vendors shall submit any such questions by the above due date.

Written questions shall be emailed to hbuckner@biltmoreforest.org by the date and time specified above. Vendors should enter "RFP UT FOURMILE BRANCH RESTORATION Questions" as the subject for the email. Questions submittals should include a reference to the applicable RFP section.

Questions received prior to the submission deadline date, the Town's response, and any additional terms deemed necessary by the Town will be posted in the form of an addendum. No information, instruction or advice provided orally σ informally by any Town personnel, whether made in response to a question or otherwise in connection with this RFP, shall be considered authoritative or binding.

2.6 PROPOSAL SUBMITTAL

Proposals will be received until 2:00pm, 12/21/2022. All proposals may be submitted electronically via email and properly identified with the title RFP UT FOURMILE BRANCH RESTORATION PROPOSAL.

Proposals may be emailed to: Harry Buckner, Director of Public Works E-mail: hbuckner@biltmoreforest.org

Or hard copies delivered to: Harry Buckner, Director of Public Works 355 Vanderbilt Road, Asheville, NC 28803

The Town's capacity for email attachments is 9mb. It is the bidder's responsibility to ensure the proposal is received prior to the proposal acceptance time. Late proposals will not be accepted. The Town reserves the right to accept σ reject all or any part of any proposal, waive informalities and award the contract to best serve the interest of the Town. It is the responsibility of the applicant that their proposal is received. Receipt of proposals can be verified by calling 828-274-3919.

2.7 PROPOSAL CONTENTS

Vendors shall populate all attachments of this RFP that require the Vendor to provide information and include an authorized signature where requested. Vendor RFP responses shall include the following items and those attachments should be arranged in the following order:

- a) Cover Letter
- b) Title Page: Include the company name, address, phone number and authorized representative along with the Proposal Number.
- c) Describe the background, experience, and capabilities of your firm as it relates to the Scope of Work outlined in the RFP.
 - Bidders must document and provide references for successful completion of at least three (3) natural stream restoration projects on streams with the following project components:
 - 1. Accurate grading of stream channels and floodplains to provide sustainable functional natural stream features including thalweg, riffle, step, pool, run, glide, point bar, inner berm, bankfull bench, and meanders;
 - 2. Accurate installation of in-channel boulder and log structures for streamflow direction, bank stabilization, and grade control, including vanes, j-hook vanes, step-pools, and constructed riffles.
 - 3. Successful compliance with environmental permit requirements imposed by US Army Corps of Engineers,

NC Division of Water Resources, and NC Division of Energy, Mineral and Land Resources. Specific environmental requirements will include erosion and sedimentation control measures, stormwater management, water quality protection, waste management, and ground cover establishment.

- d) Identify all subcontractors you intend to use for the proposed scope of work. For each subcontractor listed, proposers shall indicate 1.) What products and/or services are to be supplied by that subcontractor and; 2.) What percentage of the overall scope of work that subcontractor will perform.
- e) List at least 3 client references public and private of similar size for whom you have provided services in the past three years. Provide telephone numbers and contact names for references.
- f) Provide specific costs for services using the bid tab form provided.
- g) Each Vendor shall submit with its proposal the name, address, and telephone number of the person(s) with authority to bind the firm and answer questions or provide clarification concerning the firm's proposal.

3.0 METHOD OF AWARD AND PROPOSAL EVALUATION PROCESS

3.1 METHOD OF AWARD

All qualified proposals will be evaluated, and awards will be made to the Vendor(s) meeting the RFP requirements and best fits the needs of the Town.

The Town reserves the right to reject any and/or all submittals, and to waive defects, technicalities and/or irregularities in any submittal. The Town reserves the right to finalize a contract with one or more firms based on all factors involved in the written qualification submittal without further discussion or interviews.

Proposals will generally be evaluated according to completeness, content, and experience with similar projects, ability of the Vendor and its staff, and cost.

Vendors are cautioned that this is a request for proposals, not an offer or request to contract, and the Town reserves the unqualified right to reject any and all offers at any time if such rejection is deemed to be in the best interest of the Town.

3.2 EVALUATION CRITERIA

Following the deadline for submittals, a selection committee will review the submitted proposals. The selection committee will review and analyze all submittals based on their response to the information requested.

The contract will be awarded to the lowest cost responsible, responsive, and qualified bidder.

4.0 REQUIREMENTS

4.1 CONTRACT TERM

The Contract term shall be until completion and acceptance of all requirements within the scope of work, beginning on the date of contract award (the "Effective Date").

4.2 PRICING

Proposal price shall constitute the total cost to Buyer for complete performance in accordance with the requirements and specifications herein, including all applicable charges handling, administrative and other similar fees. Vendor shall not invoice for any amounts not specifically allowed for in this RFP. When pricing submitters shall use the Blank Bid Tab included with this RFP.

4.3 VENDOR EXPERIENCE

In its Proposal, Vendor shall demonstrate experience with public and/or private sector clients with similar or greater size and complexity to The Town. Vendor shall provide information as to the qualifications and experience of all executive, managerial, legal, and professional personnel to be assigned to this project, including citing experience with similar projects and the responsibilities to be assigned to each person.

4.4 VENDOR'S REPRESENTATIONS

a) Vendor warrants that qualified personnel shall provide Services under this Contract in a professional manner. "Professional manner" means that the personnel performing the Services will possess the skill and competence

consistent with the prevailing business standards in the industry. Vendor agrees that it will not enter any agreement with a third party that may abridge any rights of the Town under this Contract. Vendor will serve as the prime contractor under this Contract and shall be responsible for the performance and payment of all subcontractor(s) that may be approved by the Town. Names of any third party Vendors or subcontractors of Vendor may appear for purposes of convenience in Contract documents; and shall not limit Vendor's obligations hereunder. Vendor will retain executive representation for functional and technical expertise as needed in order to incorporate any work by third party subcontractor(s).

- b) If any Services, deliverables, functions, or responsibilities not specifically described in this Contract are required for Vendor's proper performance, provision and delivery of the service and deliverables under this Contract, or are an inherent part of or necessary sub-task included within such service, they will be deemed to be implied by and included within the scope of the contract to the same extent and in the same manner as if specifically described in the contract. Unless otherwise expressly provided herein, Vendor will furnish all of its own necessary management, supervision, labor, facilities, furniture, computer and telecommunications equipment, software, supplies and materials necessary for the Vendor to provide and deliver the Services and Deliverables.
- c) Vendor warrants that it has the financial capacity to perform and to continue to perform its obligations under the contract; that Vendor has no constructive or actual knowledge of an actual or potential legal proceeding being brought against Vendor that could materially adversely affect performance of this Contract; and that entering into this Contract is not prohibited by any contract, or order by any court of competent jurisdiction.

5.0 SCOPE OF WORK

The scope of work is contained in Attachment B - Design Plans for Project.

6.0 GENERAL TERMS AND CONDITIONS

- 1. <u>READ, REVIEW AND COMPLY</u>: It shall be the Vendor's responsibility to read this entire document, review all enclosures and attachments, and any addenda thereto, and comply with all requirements specified herein, regardless of whether appearing in these Instructions to Vendors or elsewhere in this RFP document.
- LATE PROPOSALS: Late proposals, regardless of cause, will not be considered, and will automatically be disqualified from further consideration. It shall be the Vendor's sole responsibility to ensure the timely submission of proposals.
- 3. <u>ACCEPTANCE AND REJECTION</u>: The Town reserves the right to reject any and all proposals, to waive any informality in proposals and, unless otherwise specified by the Vendor, to accept any item in the proposal.
- 4. INFORMATION AND DESCRIPTIVE LITERATURE: If required elsewhere in this proposal, each Vendor shall submit with its proposal any sketches, descriptive literature and/or complete specifications covering the products and services offered. Reference to literature submitted with a previous proposal or available elsewhere will not satisfy this provision. Failure to comply with these requirements shall constitute sufficient cause to reject a proposal without further consideration.
- 5. <u>SUSTAINABILITY</u>: To support the sustainability efforts of the State of North Carolina we solicit your cooperation in this effort. Pursuant to Executive Order 156 (1999), it is desirable that all print responses submitted meet the following:
 - All copies of the proposal are printed <u>double sided</u>.
 - All submittals and copies are printed on recycled paper with a minimum post-consumer content of 30%.
 - Unless absolutely necessary, all proposals and copies should minimize or eliminate use of non-recyclable or non-reusable materials such as plastic report covers, plastic dividers, vinyl sleeves, and GBC binding. Threeringed binders, glued materials, paper clips, and staples are acceptable.
 - Materials should be submitted in a format which allows for easy removal, filing and/or recycling of paper and binder materials. Use of oversized paper is strongly discouraged unless necessary for clarity or legibility.
- 6. HISTORICALLY UNDERUTILIZED BUSINESSES: The Town is committed to retaining Vendors from

diverse backgrounds, and it invites and encourages participation in the procurement process by businesses owned by minorities, women, disabled, disabled business enterprises and non-profit work centers for the blind and severely disabled. In particular, the Town encourages participation by Vendors certified by the State Office of Historically Underutilized Businesses, as well as the use of HUB-certified vendors as subcontractors on Town contracts.

- 7. <u>INELIGIBLE VENDORS</u>: As provided in G.S. 147-86.59 and G.S. 147-86.82, the following companies are ineligible to contract with the State of North Carolina or any political subdivision of the State: a) any company identified as engaging in investment activities in Iran, as determined by appearing on the Final Divestment List created by the State Treasurer pursuant to G.S. 147-86.58, and b) any company identified as engaged in a boycott of Israel as determined by appearing on the List of restricted companies created by the State Treasurer pursuant to G.S. 147-86.81. A contract with the Town by any company identified in a) or b) above shall be void *ab initio*.
- 8. CONFIDENTIAL INFORMATION: To the extent permitted by applicable statutes and rules, the Town will maintain confidential trade secrets in its proposal that the Vendor does not wish disclosed. As a condition to confidential treatment, each page containing trade secret information shall be identified in boldface at the top and bottom as "CONFIDENTIAL" by the Vendor, with specific trade secret information enclosed in boxes, marked in a distinctive color or by similar indication. Cost information shall not be deemed confidential under any circumstances. Regardless of what a Vendor may label as a trade secret, the determination whether it is or is not entitled to protection will be determined in accordance with G.S. 132-1.2. Any material labeled as confidential constitutes a representation by the Vendor that it has made a reasonable effort in good faith to determine that such material is, in fact, a trade secret under G.S. 132-1.2. Vendors are urged and cautioned to limit the marking of information as a trade secret oras confidential so far as is possible. If a legal action is brought to require the disclosure of any material so marked as confidential, the Town will notify Vendor of such action and allow Vendor to defend the confidential status of its information.
- 9. <u>MISCELLANEOUS</u>: Any gender-specific pronouns used herein, whether masculine or feminine, shall be read and construed as gender neutral, and the singular of any word or phrase shall be read to include the plural and vice versa.
- 10. <u>INFORMAL COMMENTS</u>: The Town shall not be bound by informal explanations, instructions or information given at any time by anyone on behalf of the Town during the competitive process or after award. The Town is bound only by information provided in writing in this RFP and in formal Addenda issued
- 11. <u>COST FOR PROPOSAL PREPARATION</u>: Any costs incurred by Vendor in preparing or submitting offers are the Vendor's sole responsibility; The Town will not reimburse any Vendor for any costs incurred or associated with the preparation of proposals.
- 12. <u>AVAILABILITY OF FUNDS</u>: Any and all payments to the Vendor shall be dependent upon and subject to the availability of funds to the agency for the purpose set forth in The Contract.
- 13. <u>SITUS AND GOVERNING LAWS</u>: This Contract is made under and shall be governed and construed in accordance with the laws of the State of North Carolina, without regard to its conflict of laws rules, and within which State all matters, whether sounding in Contract or tort or otherwise, relating to its validity, construction, interpretation and enforcement shall be determined.
- 14. <u>PAYMENT TERMS</u>: If a payment schedule is not part of The Contract then payment terms will be Net 30 days after receipt of a correct invoice or acceptance of goods, whichever is later.
- 15. NON-DISCRIMINATION: The Vendor will take necessary action to comply with all Federal and State requirements concerning fair employment and employment of people with disabilities, and concerning the treatment of all employees without regard to discrimination on the basis of any prohibited grounds as defined by Federal and State law.
- **16. ADVERTISING:** Vendor agrees not to use the existence of The Contract or the name of the Town as part of any commercial advertising or marketing of products or services. A Vendor may inquire whether the Town is willing to act as a reference by providing factual information directly to other prospective customers.

17. INSURANCE:

COVERAGE - During the term of the Contract, the Vendor at its sole cost and expense shall provide commercial insurance of such type and with such terms and limits as may be reasonably associated with the Contract. As a minimum, the Vendor shall provide and maintain the following coverage and limits:

Commercial General Liability insurance in an amount not less than \$1,000,000 each occurrence/\$2,000,000 annual aggregate. Coverage shall not contain any endorsement(s) excluding nor limiting Product/Completed Operations or Contractual Liability.

Business Automobile Liability insurance covering all owned, non-owned, and hired vehicles with a minimum combined single limit of \$1,000,000 each occurrence and shall include uninsured/underinsured motorist coverage per NC General Statute 20-279-21.

Workers Compensation coverage at the statutory limits in compliance with applicable State and Federal laws. Supplier shall ensure that any subcontractors also have workers compensation coverage at the statutory limits.

Employer's Liability coverage with minimum limits of \$500,000 each accident and \$500,000 each employee disease.

Vendor shall agree these General Conditions constitute an insured contract and shall name the Town of Mills River as an additional insured under the Commercial General Liability policy. Before commencing work and for any subsequent renewals, Vendor shall furnish the Town with certificates of insurance evidencing the above coverages and amounts on an approved form. Vendor hereby grants the Town a waiver of any right of subrogation which any insurer of said Vendor may acquire against the Town by virtue of payment of any loss under such insurance. Vendor agrees to obtain any endorsement that may be necessary to affect this waiver of subrogation. Each insurancepolicy required above shall state that coverage shall not be canceled, except with written notice to the Town and delivered in accordance with the policy provisions. All insurance shall be procured from reputable insurers authorized and qualified to do business in North Carolina and in a form acceptable to the Town. The limits of coverage undereach insurance policy maintained by the Vendor shall not be interpreted as limiting the Supplier's liability and obligations. Nothing in this section is intended to affect or abrogate the Town's governmental immunity.

- 18. GENERAL INDEMNITY: The Vendor shall hold and save the Town of Mills River, its officers, agents, and employees, harmless from liability of any kind, including all claims and losses accruing or resulting to any other person, firm, or corporation furnishing or supplying work, Services, materials, or supplies in connection with the performance of TheContract, and from any and all claims and losses accruing or resulting to any person, firm, or corporation that may be injured or damaged by the Vendor in the performance of The Contract and that are attributable to the negligenceor intentionally tortious acts of the Vendor provided that the Vendor is notified in writing within 30 days from the date that the Town has knowledge of such claims. The Vendor represents and warrants that it shall make no claim of any kind or nature against the Town's agents who are involved in the delivery or processing of Vendor deliverablesor services to the Town. The representation and warranty in the preceding sentence shall survive the termination or expiration of The Contract.
- 19. <u>CONFIDENTIALITY</u>: Any Town information, data, instruments, documents, studies or reports given to or prepared or assembled by or provided to the Vendor under The Contract shall be kept as confidential, used only for the purpose(s) required to perform The Contract and not divulged or made available to any individual or organization without the prior written approval by the Town.
- 20. <u>COMPLIANCE WITH LAWS</u>: Vendor shall comply with all laws, ordinances, codes, rules, regulations, and licensing requirements that are applicable to the conduct of its business and its performance in accordance with The Contract, including those of federal, state, and local agencies having jurisdiction and/or authority.
- 21. <u>ENTIRE AGREEMENT</u>: This RFP and any documents incorporated specifically by reference represent the entire agreement between the parties and supersede all prior oral or written statements or agreements. This RFP, any addenda hereto, and the Vendor's proposal are incorporated herein by reference as though set forth verbatim.

All promises, requirements, terms, conditions, provisions, representations, guarantees, and warranties contained herein shall survive the contract expiration or termination date unless specifically provided otherwise herein, or unless superseded by applicable Federal or State statutes of limitation.

22. AMENDMENTS: This Contract may be amended only by a written amendment duly executed by the Town and the Vendor.

- 23. <u>NO WAIVER</u>: Notwithstanding any other language or provision in The Contract, nothing herein is intended nor shall be interpreted as a waiver of any right or remedy otherwise available to the Town under applicable law. The waiver by the Town of any right or remedy on any one occasion or instance shall not constitute or be interpreted as a waiver of that or any other right or remedy on any other occasion or instance.
- 24. FORCE MAJEURE: Neither party shall be deemed to be in default of its obligations hereunder if and so long as it is prevented from performing such obligations as a result of events beyond its reasonable control, including without limitation, fire, power failures, any act of war, hostile foreign action, nuclear explosion, riot, strikes or failures or refusals to perform under subcontracts, civil insurrection, earthquake, hurricane, tornado, or other catastrophic natural event or act of God.
- 25. <u>SOVEREIGN IMMUNITY</u>: Notwithstanding any other term or provision in The Contract, nothing herein is intended nor shall be interpreted as waiving any claim or defense based on the principle of sovereign immunity or state or federal constitutional provision or principle that otherwise would be available to the Town under applicable law.
- **26.** <u>E-Verify Requirements:</u> The Town is prohibited from contracting with contractors and subcontractors that are not compliant with the state's E-Verify hiring requirement (G.S. 143-133.3)

DRAWING

REVISIONS:

JE PID: 5701

TOWN OF BILTMORE FOREST
UT FOURMILE BRANCH STREAM RESTORATION

BUNCOMBE COUNTY, NORTH CAROLINA

USACE ACTION ID NO.: 2022-01264

USACE ACTION ID NO 2022-01204	•
NCDWR WQC NO.: 2022-0767	

PROJECT DIRECTORY			
LANDOWNER	JOHN BRACKET, LAURA WERNER		
	2 HEMLOCK DRIVE BILTMORE FOREST, NC 28803		
PROJECT OWNER	TOWN OF BILTMORE FOREST		
Barth garding	HARRY BUCKNER PUBLIC WORKS DIRECTOR HBUCKNER@BILTMOREFOREST.ORG		
ENGINEER	JENNINGS ENVIRONMENTAL PLLC		
Jennings Environmental	GREG JENNINGS, PHD, PE PRESIDENT GREG@JENNINGSENV.COM (919) 600-4790		
SURVEYOR BEN PATTON LAND SURVEYING PLLC			
BPLS Ben Patton Land Surveying	BEN PATTON, PLS PRESIDENT BEN@BPSURVEYING.COM (828) 559-8004		

SITE SITE	
SITE	om the
Billtmore 2 2	Miller Lr.
Buttovia Ro Buttovia	THE PARTY OF THE P
Eastwood Rd	Eogo ^{nia}
And the second s	W.
	Copper
	The C
Therton Therton	
Valley Springs Springs New York Control of the Printer of the Prin	185
time Hidge Park	**
Androise Control of the Control of t	
oge privite crees	*********
0 0.125 0.25 0.5 Miles	
NORTH Sources: Esri, HERE, Garmin, USGS, Intermep, INCREMENT P. NRCan, Esri Japan, METI, Esri Ct (Hong Kong), Esri Korea, Esri (Thailand), NGCC, (c) OpenStreetMap contributors, and the GIS Use Community	priziona c

SHEET INDEX				
COVER SHEET	0.1			
PROJECT NOTES AND SPECIFICATIONS	0.2			
STREAM RESTORATION DESIGN CHANNEL SECTIONS	1.1			
STREAM RESTORATION DESIGN PLAN AND PROFILE	2.1			
STREAM RESTORATION DESIGN GRADING SECTIONS	3.1			
STREAM RESTORATION DESIGN DETAILS	4.1 - 4.2			
SITE PREPARATION PLAN	5.1			
EROSION AND SEDIMENTATION CONTROL PLAN	6.1 - 6.3			
VEGETATION PLAN	7.1 - 7.2			

FINAL DRAWING

NOT RELEASED FOR CONSTRUCTION

OCTOBER 18, 2022

GENERAL PROJECT NOTES AND SPECIFICATIONS

- DEFINITIONS:
- 1.1. CONSTRUCTION DOCUMENTS: THE CONTRACT AND APPLICABLE DRAWINGS, DETAILS, SPECIFICATIONS, PERMIT(S), AND/OR ANY OTHER DOCUMENTS (MEETING MINUTES, PUNCH LISTS, BID TABS, ETC.) FOR COMPLETE INFORMATION ABOUT THE REQUIRED WORK. ANY ONE OF THESE PARTS OF THE MAY NOT CONTAIN ALL OF THE INFORMATION REQUIRED TO COMPLETE THE PROJECT WORK.
- 1.2. PROJECT OWNER: TOWN OF BILTMORE FOREST
- ENGINEER: JENNINGS ENVIRONMENTAL PLLC 2. THE WORK ON THIS PROJECT SHALL ADHERE TO THE FOLLOWING
- SPECIFICATIONS, STANDARDS AND/OR REGULATIONS: 2.1. NC DEMLR'S "EROSION AND SEDIMENT CONTROL PLANNING
- AND DESIGN MANUAL" (2013) 2.2. NC DEMLR'S CONSTRUCTION GENERAL PERMIT NUMBER
- NCG01000 GENERAL, REGIONAL AND SPECIAL CONDITIONS OF USACE'S
- 404 NATIONWIDE PERMIT NUMBER 27 GENERAL AND SPECIAL CONDITIONS OF NCDWR'S 401 WATER
- QUALITY CERTIFICATION 4134 2.5. THE CONSTRUCTION DOCUMENTS
- 3. NOT ALL EXISTING UTILITIES ARE SHOWN. SOME LOCATIONS MAY BE ARE APPROXIMATE. THE CONTRACTOR IS RESPONSIBLE FOR ALL UTILITY LOCATION AND COORDINATION. ANY UTILITIES SHOWN ON THE CONSTRUCTION DOCUMENTS ARE FOR INFORMATIONAL PURPOSES ONLY AND IN NO WAY RELIEVES THE CONTRACTOR FROM COORDINATING, VERIFYING AND PROTECTING EXISTING UTILITIES. ALL UTILITIES SHALL BE PROTECTED AND REMAIN ACTIVE UNLESS OTHERWISE NOTED.
- 4. THE BUILDER IS RESPONSIBLE FOR THE PROJECT AREA UNTIL COMPLETION AND FINAL ACCEPTANCE BY THE PROJECT OWNER. THE BUILDER SHALL TAKE ALL PRECAUTIONS NECESSARY AND SHALL BEAR ALL RISK OF LOSS OR DAMAGE. THE CONTRACTOR WILL FURNISH ALL NECESSARY EQUIPMENT, TOOLS, LABOR, TRANSPORTATION, AND SUPERVISION TO COMPLETE THE WORK ACCORDING TO THESE SPECIFICATIONS AND APPLICABLE FEDERAL, STATE AND LOCAL LAWS AND REGULATIONS. THE BUILDER SHALL CONFINE ALL ACTIVITIES, INCLUDING EQUIPMENT STORAGE, TO THE LIMITS OF DISTURBANCE, STAGING AREAS, AND DESIGNATED CONSTRUCTION ACCESS POINTS.
- THE MANNER IN WHICH THE BUILDER DEALS WITH PEOPLE AND THEIR PROPERTIES WHILE PERFORMING THIS WORK IS EXTREMELY IMPORTANT TO THE TOWN. THEREFORE, THE BUILDER AND THE BUILDER'S REPRESENTATIVES SHALL MANIFEST A SPIRIT OF FRIENDLINESS AND COOPERATION WHEN DEALING WITH PROPERTY OWNERS AND THE GENERAL PUBLIC WHILE PERFORMING WORK UNDER THIS SPECIFICATION.
- 6. EXTREME CARE AND DILIGENCE SHALL BE EXERCISED BY THE CONTRACTOR TO ASSURE THE SAFETY OF PERSONS, ANIMALS, AND PROPERTY. IF AT ANY TIME PROJECT OWNER DETERMINES THAT THE BUILDER'S METHODS OR EQUIPMENT ARE INADEQUATE FOR SECURING THE SAFETY OF THE CONTRACTOR'S EMPLOYEES OR THE PUBLIC, THE DESIGNATED REPRESENTATIVE MAY DIRECT THE CONTRACTOR TO TAKE SPECIFIC ACTIONS TO ENSURE SAFETY. THE CONTRACTOR SHALL IMPROVE METHODS AS DEEMED APPROPRIATE BY THE DESIGNATED REPRESENTATIVE WITHOUT ADDITIONAL COST TO THE PROJECT OWNER, SO AS TO ASSURE COMPLIANCE WITH SAFETY CONCERNS. FAILURE OF THE DESIGNATED REPRESENTATIVE TO MAKE THIS DEMAND SHALL NOT RELIEVE THE BUILDER OF ANY OBLIGATION TO ENSURE THE SAFE CONDUCT OF ITS WORK.
- THE BUILDER SHALL MAINTAIN ALL LIGHTS, GUARDS, SIGNS, TEMPORARY PASSAGES, OR OTHER PRECAUTIONS NECESSARY FOR THE SAFETY OF ALL PERSONS. THE BUILDER SHALL ABIDE BY ALL GOVERNMENTAL AUTHORITIES AND OTHER ENTITIES. INCLUDING RAILROADS, SO THE PUBLIC IS SAFEGUARDED FROM ACCIDENTS AND DELAYS. GUARDS AND FLAGS REQUIRED BY GOVERNMENTAL OR RAILROAD AUTHORITIES SHALL BE PROVIDED AT THE BUILDER'S EXPENSE, UNLESS DIRECTED OTHERWISE BY THE DESIGNATED REPRESENTATIVE. CONTRACTOR SHALL AT NO TIME COMPROMISE EITHER SAFETY OR ENVIRONMENTAL REQUIREMENTS.
- 8. THE BUILDER SHALL ONLY USE ACCESS POINTS, ACCESS PATHS AND STAGING AREAS SHOWN ON THE DRAWINGS. ANY ALTERNATE ACCESS PLANNED BY THE CONTRACTOR SHALL BE APPROVED BY THE ENGINEER AND PROJECT OWNER PRIOR TO USE. ANY NEW ACCESS ROUTES OR STAGING AREAS NEEDED FOR STREAM RESTORATION ACTIVITIES MUST FIRST BE FLAGGED AND MAPPED FOR EVALUATION AND WRITTEN APPROVAL MUST BE OBTAINED PRIOR TO ANY DISTURBANCE ACTIVITIES.

TOPOGRAPHIC NOTES AND SPECIFICATIONS

- 9. A DETAILED TOPOGRAPHIC AND TREE SURVEY OF THE WORK AREA WAS COMPLETED BY BEN PATTON SURVEYING PLLC IN OCTOBER 2021. ADDITIONAL SITE DATA AND BASE DRAWINGS WERE CURATED BY JENNINGS ENVIRONMENTAL PLLC.
- 10. HORIZONTAL DATUM IS NAD83(2011) & VERTICAL DATUM IS NAVD88. ALL COORDINATES ARE BASED ON NAD83(2011) AND ALL ELEVATIONS ARE BASED ON NAVD88.
- 11. THE DESIGN ELEVATIONS AND GRADES SHOWN IN THE DRAWINGS ARE BASED ON THE EXISTING GROUND SURFACE FROM THE OCTOBER 2021 SURVEY FROM WHICH ALL COMPUTATIONS OF CUT AND FILL ARE BASED. SLIGHT DISCREPANCIES BETWEEN THE SURVEYED EXITING GROUND SURFACE AND FIELD CONDITIONS AT THE TIME OF CONSTRUCTION CAN RESULT IN VARIATIONS OF TOTAL EXCAVATED QUANTITIES. THESE VARIATIONS SHALL BE CONSIDERED INCIDENTAL TO CONSTRUCTION.

QUANTITIES AND MATERIALS SPECIFICATIONS

- 12. THE BUILDER SHALL FURNISH ALL MATERIALS NECESSARY TO COMPLETE THE PROPOSED WORK UNLESS OTHER PROVISIONS HAVE BEEN AGREED UPON PRIOR TO CONSTRUCTION. THE BUILDER SHALL DELIVER ALL MATERIALS TO THE DESIGNATED ACCESS POINTS AND STAGING AREAS. MATERIAL QUANTITIES, DIMENSIONS AND SIZES SHALL CONFORM TO THE NOTES AND SPECIFICATIONS PROVIDED IN THE CONSTRUCTION DOCUMENTS. THE ENGINEER MAY INSPECT AND APPROVE ALL MATERIALS PRIOR TO CONSTRUCTION. IF MATERIALS DO NOT MEET THE MINIMUM REQUIREMENTS SPECIFIED IN THE CONSTRUCTION DOCUMENTS, THE ENGINEER SHALL REJECT THE MATERIALS.
- 13. COSTS INCURRED DUE TO PROJECT DELAYS RESULTING FROM FAILURE OF THE BUILDER TO MEET THE REQUIREMENTS OF THE CONSTRUCTION DOCUMENTS SHALL BE THE EXPENSE OF THE BUILDER. QUANTITIES LISTED ARE ESTIMATES ONLY AND SHALL BE CONFIRMED BY THE BUILDER.
- 14. THE EROSION CONTROL MEASURES DEPICTED ON THE DRAWINGS SHALL BE INSTALLED AS NEEDED TO KEEP ALL SEDIMENT ON SITE AND OUT OF STREAMS AND WETLANDS. ADDITIONAL EROSION

- CONTROL MEASURES (ABOVE THOSE SHOWN ON THE DRAWINGS) MAY BE REQUIRED IN ORDER TO KEEP ALL SEDIMENT ON SITE AND OUT OF STREAMS AND WETLANDS.
- 15. ANY ADDITIONAL GRADING OTHER THAN WHAT IS SHOWN ON THE PLANS SHALL REQUIRE PRIOR APPROVAL FROM THE ENGINEER AND
- 16. THE USE OF ANY BRAND NAMES/MANUFACTURERS OR MODELS IS INTENDED SOLELY TO DENOTE THE QUALITY STANDARD OF THE DESIRED PRODUCT. ANY USE OF BRAND NAMES IS NOT INTENDED TO RESTRICT BIDDERS TO A SPECIFIC BRAND, MAKE, MANUFACTURER, OR NAME. THE BRAND NAMES / MANUFACTURERS OF MODELS ARE INTENDED TO CONVEY THE GENERAL STYLE, TYPE, CHARACTER, AND QUALITY OF PRODUCT. EQUIVALENT PRODUCTS WILL BE ACCEPTABLE IF THE PROJECT OWNER OR ENGINEER HAS GIVEN APPROVAL OF THE SPECIFIC PRODUCT IN WRITING.
- 17. THE BUILDER SHALL BE RESPONSIBLE FOR LOCATING AND PROVIDING STORAGE AREAS FOR CONSTRUCTION MATERIALS AND EQUIPMENT. THE MATERIAL AND EQUIPMENT STORAGE SHALL COMPLY WITH THE CONSTRUCTION DOCUMENTS AND ALL LOCAL, STATE AND FEDERAL REGULATIONS THROUGHOUT THE CONSTRUCTION PERIOD. THE BUILDER SHALL RESTORE THE STORAGE AREA TO ITS ORIGINAL (OR BETTER) CONDITION UPON COMPLETION OF THE PROJECT OR UPON SUCH TIME AS DIRECTED
- BY THE ENGINEER AND PROJECT OWNER. 18. THE BUILDER SHALL WARRANTY ALL MATERIALS AND WORKMANSHIP FOR A PERIOD OF ONE (1) YEAR FROM THE DATE OF ACCEPTANCE OF BY THE PROJECT OWNER AND SHALL REPLACE ANY PORTIONS THAT FAIL DUE TO FAULTY MATERIALS OR WORKMANSHIP, AT NO ADDITIONAL COST TO THE PROJECT OWNER. A SIX (6) MONTH AND ELEVEN (11) MONTH INSPECTION WILL BE PERFORMED DURING THE WARRANTY PERIOD. THE BUILDER SHALL IMMEDIATELY REPAIR ALL ITEMS DETERMINED BY THE PROJECT OWNER OR AUTHORIZED REPRESENTATIVE TO BE DEFECTIVE UPON NOTIFICATION. THE BUILDER SHALL IMMEDIATELY REPAIR OR REPLACE FAILED ITEMS UPON NOTIFICATION BY THE PROJECT OWNER. SEASONALLY INSTALLED ITEMS SHALL BE REPAIRED OR REPLACED DURING THE NEXT AVAILABLE INSTALLATION PERIOD. ITEMS REPAIRED OR REPLACED UNDER THIS PROVISION SHALL HAVE AN ADDITIONAL ONE (1) YEAR WARRANTY PERIOD FROM THE NEW DATE OF ACCEPTANCE. AREAS AND/OR OTHER WORK DISTURBED WHILE ACCESSING AND/OR REPAIRING/REPLACING WARRANTY COVERED ITEMS SHALL BE STABILIZED.

STREAM RESTORATION NOTES AND **SPECIFICATIONS**

- 19. FIELD CONDITIONS AND PROJECT VARIABILITY MAY REQUIRE ADAPTATION OF THE DRAWINGS AND/OR DETAILS PROVIDED IN THE CONSTRUCTION DOCUMENTS DEPENDING ON SITE CONDITIONS OR PROJECT NEEDS. MINOR VARIATION(S) OR ADAPTATION(S) OF THE PROPOSED WORK SHOWN ON THE DRAWINGS AND/OR DETAILS ARE CONSIDERED INCIDENTAL TO THE
- 20. THE BUILDER SHALL MARK THE LIMITS OF CLEARING FOR ACCESS STAGING AND GRADING OPERATIONS FOR VERIFICATION OF INTENT BY THE ENGINEER AND THE TOWN. SOME MINOR ADJUSTMENT OF THE ACCESS ROUTES AND STAGING AREAS MAY BE REQUIRED TO PRESERVE TREES OR MINIMIZE IMPACT TO TREES THE ENGINEER AND PROJECT OWNER MUST APPROVE ALL TREE REMOVAL OPERATIONS. WHERE PRACTICABLE, EXISTING TREES AND VEGETATION SHOULD BE LEFT IN PLACE TO FACILITATE NATURAL REGENERATION AND SOIL STABILIZATION.
- 21. THE BUILDER SHALL MINIMIZE, TO THE MAXIMUM EXTENT POSSIBLE, IMPACTS TO THE ADJACENT TREES.
- SAFETY RULES AND CONSTRUCTION CONDITIONS REQUIRED BY 22. CONSTRUCTION EQUIPMENT TRACKS AND ACCESS PATHS SHALL BE GRADED AND RE-CONTOURED AFTER CONSTRUCTION TO PREVENT RILL AND GULLY EROSION.
 - 23. THE BUILDER SHALL USE AN EXCAVATOR WITH A HYDRAULIC THUMB TO INSTALL IN-STREAM STRUCTURES.
 - 24. DESIGN ELEVATIONS AT THE UPSTREAM AND DOWNSTREAM EXTENTS OF THE WORK AND IN THE VICINITY OF TRIBUTARIES AND CONFLUENCES MAY NEED TO BE ADJUSTED TO MEET FIELD CONDITIONS. ADJUSTMENTS SHALL BE MADE IN CONJUNCTION WITH THE ENGINEER AND ARE CONSIDERED INCIDENTAL TO CONSTRUCTION.
 - 25. CHANNEL REALIGNMENT WORK SHALL BE COMPLETED AND STABILIZED PRIOR TO ALLOWING FLOW TO ENTER INTO THE NEWLY CONSTRUCTED STREAM CHANNEL. THE BUILDER SHALL NOT OPEN UP MORE THAN 150 FEET OF CHANNEL WITHOUT EROSION CONTROL MATTING IN PLACE OR BY APPROVAL OF THE ENGINEER. IF THE CHANNEL REALIGNMENT WORK IS NOT COMPLETED PRIOR TO ABANDONING THE OLD CHANNEL, A TEMPORARY SYSTEM SHALL BE USED ACCORDING THE APPROVED E&SC PLAN AND DETAILS. IN-LINE CHANNEL WORK SHALL UTILIZE THE TEMPORARY PUMP AROUND SYSTEM AT ALL TIMES.
 - 26. STREAM RESTORATION WORK SHALL BE IMPLEMENTED BY FIRST GRADING THE FLOODPLAIN ADJACENT TO THE CHANNEL TO THE ELEVATIONS AND GRADES SPECIFIED IN THE DRAWINGS. THE DESIGN CHANNEL SHALL THEN BE EXCAVATED TO THE DESIGN CHANNEL CROSS-SECTION GEOMETRY AND LONGITUDINAL PROFILE SHOWN IN THE DRAWINGS AND DETAILS. ANY TEMPORARY STOCKPILING OR DOUBLE HANDLING OF EXCESS EARTH NECESSARY TO BUILD THE CHANNEL SHALL BE CONSIDERED INCIDENTAL TO CONSTRUCTION.
 - 27. BANKFULL CHANNEL DIMENSION TOLERANCES WILL BE HELD TO THE DIMENSIONS SHOWN ON THE DESIGN CHANNEL SECTIONS. ELEVATIONS SHALL BE CONSTRUCTED WITHIN 0.1' (VERTICAL) WIDTHS AND DEPTHS MUST FALL WITHIN RANGES SHOWN IN THE PLANSHEETS. CHANNEL CROSS-SECTION DIMENSIONS SHALL BE WITHIN 0.2' (HORIZONTAL).
 - 28. IF THE EXISTING GROUND IS LESS THAN 0.2' HIGHER THAN THE PROPOSED BANKFULL ELEVATION, IT IS NOT NECESSARY TO EXCAVATE TO THE PROPOSED ELEVATIONS AND GRADES IN THE CONSTRUCTION DOCUMENTS.
 - 29. IN-STREAM STRUCTURES SHALL BE INSTALLED AS THE CHANNEL IS BEING CONSTRUCTED. INSTREAM STRUCTURES SHALL BE FINISHED TO A SMOOTH SURFACE IN ACCORDANCE WITH THE LINES, GRADES AND ELEVATIONS SHOWN IN THE CONSTRUCTION DOCUMENTS. THE FINISHED STRUCTURE SLOPES AND PROFILE ELEVATIONS SHALL BE WITHIN 0.1' (VERTICAL) OF THE CONSTRUCTION DOCUMENTS.
 - 30. FILTER FABRIC SHALL BE USED FOR IN-STREAM STRUCTURES. ALL FILTER FABRIC SHALL BE 80Z. NONWOVEN GEOTEXTILE UNLESS OTHERWISE SPECIFIED IN STRUCTURE DETAILS OR SPECIFICATIONS. FILTER FABRIC SHALL BE TRIMMED TIGHT TO THE SURFACE OF THE STRUCTURE AND SHOULD NOT BE OBSERVED BY VISUAL INSPECTION.
 - 1. BOULDER STRUCTURES SHALL BE CONSTRUCTED FROM BOULDERS THAT ARE CUBICAL OR RECTANGULAR IN SHAPE AND SIZED ACCORDING TO THE STRUCTURE DETAILS.
 - 32. AFTER THE STRUCTURE IS COMPLETE AND FLOW IS RESTORED TO THE CHANNEL, SOME ADJUSTMENT TO THE STRUCTURE OR

ADDITIONAL STABILIZATION MEASURE MAY BE NECESSARY TO ACHIEVE THE DESIRED FUNCTION.

- 33. THE CONSTRUCTED CHANNEL SHALL BE STABILIZED AS SOON AS POSSIBLE BY TEMPORARY AND PERMANENT SEEDING, ADDING STRAW MULCH TO BARE SOIL AND INSTALLING EROSION CONTROL MATTING FROM THE TOE OF THE BANKFULL CHANNEL TO THE FLOODPLAIN GRADING LIMITS. PRIOR TO INSTALLING THE EROSION CONTROL MATTING, PREPARE THE SOIL SURFACE BY LOOSENING 4" OF SOIL OR APPLYING 4" OF TOPSOIL TO THE PROPOSED ELEVATIONS AND APPLY SEED AND THEN STRAW MULCH. SEED SHALL BE BROADCAST EVENLY OF THE AREA USING A BROADCAST SPREADER PRIOR TO COVERING WITH THE EROSION CONTROL MATTING. INSTALL MATTING IN ACCORDANCE WITH THE DETAIL INCLUDED IN THE CONSTRUCTION DOCUMENTS. MATTING MATERIAL USED FOR STREAMSIDE STABILIZATION MUST BE CERTIFIED WEED-FREE STRAW OR OTHER NATURAL WEED-FREE / NON-PROPAGATING VEGETATIVE MATERIALS. REWORKING OF AREAS THAT DO NOT ESTABLISH VEGETATION OR BECOME UNSTABLE SHALL BE NECESSARY IN THE MATTING SEPARATES FROM THE SOIL.
- 34. ANY AREA DISTURBED BY THE BUILDER SHALL BE PROMPTLY STABILIZED FOR INTERIM AND PERMANENT PURPOSES CONSISTENT WITH STORMWATER BEST MANAGEMENT PRACTICES. STABILIZATION INCLUDES RE-VEGETATION OF ANY EXPOSED SOILS. MULCH SHALL BE SPREAD TO COVER DISTURBED CHANNEL AND FLOODPLAIN AREAS. MULCH SHALL BE KEPT OUT OF THE CROWNS OF SHRUBS AND GROUND COVER.

EXISTING SITE FEATURES

STREAM RESTORATION PLAN FEATURES

	PARCEL BOUNDARY	\otimes	UTILITY	— LOD —	LIMITS OF DISTURBANCE (LOD)		DESIGN CHANNEL PLUG
R/W	RIGHT OF WAY		NAIL WITH BLUE FLAGGING		DESIGN MAJOR CONTOUR		DESIGN CONSTRUCTED RIFFLE
——·2085 — —	EXISTING MAJOR CONTOUR		FIRE HYDRANT		DESIGN MINOR CONTOUR		DESIGN BOULDER RIFFLE
	EXISTING MINOR CONTOUR		SEWER MANHOLE		DESIGN STREAM BANKFULL		DESIGN BOULDER STEP
==:==:=	EXISTING CULVERT	D	STORMWATER MANHOLE		DESIGN STREAM CENTERLINE	**********	DESIGN TOE PROTECTION
	EXISTING STREAM	\$	DECIDUOUS TREE		DESIGN GRADING LIMITS		DESIGN BOULDER WALL
			CONIFEROUS TREE	— FPT —	DESIGN FLOODPLAIN TOE		



1 0 0 B S ш Ш S C 1 0 ~ $\mathbf{\Omega}$ ш

 \mathcal{B}

0

 \Box

0

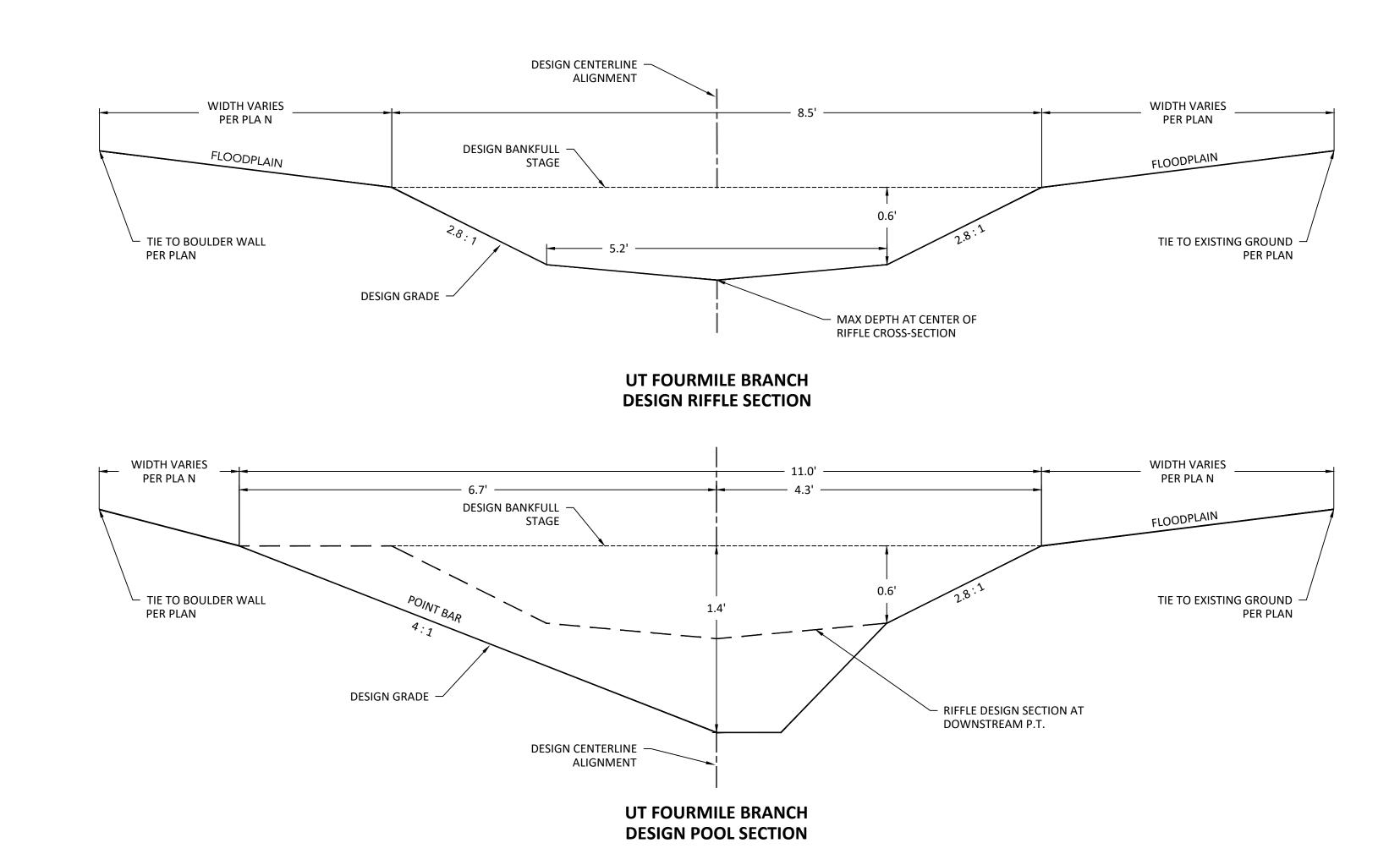
FINAL **DRAWING**

REVISIONS:

DATE: 10/18/2022 PLOT SIZE: 24" x 36" H.D.: NAD83 (NCSP) V.D.: NAVD88

DESIGN CHANNEL SECTION SPECIFICATIONS

- CONSTRUCT THE DESIGN CHANNEL SECTION TO THE LINES, ELEVATIONS AND GRADES SHOWN ON THE DRAWINGS AND DETAILS.
- 2. CHANNEL CONSTRUCTION WORK SHALL BE IMPLEMENTED BY FIRST GRADING THE FLOODPLAIN ADJACENT TO THE CHANNEL TO THE DESIGN ELEVATIONS AND GRADES SPECIFIED IN THE DRAWINGS AND DETAILS. THE DESIGN CHANNEL SHALL THEN BE EXCAVATED TO THE DESIGN CHANNEL GEOMETRY AND PROFILE. THIS CHANNEL WORK SHALL BE DONE WITH LOW GROUND PRESSURE TRACK EQUIPMENT. DRAWINGS PROVIDE DIMENSIONS, ELEVATIONS AND SLOPES TO AID IN CONSTRUCTION OF THE CHANNEL. THE THALWEG (CENTERLINE) CAN FIRST BE EXCAVATED TO THE ELEVATION SPECIFIED IN THE PROFILE. EXCAVATION OF THE SIDE SLOPES AND FINE GRADING OF THE CHANNEL SHALL THEN BE PREFORMED. ANY TEMPORARY STOCKPILING OR DOUBLE HANDLING OF EXCESS EARTH NECESSARY TO BUILD THE CHANNEL SHALL BE CONSIDERED INCIDENTAL TO CONSTRUCTION.
- 3. BANKFULL CHANNEL DIMENSIONS WILL BE HELD TO THE DIMENSIONS SHOWN IN THE DESIGN CHANNEL SECTION DETAIL ON THIS SHEET. ELEVATIONS AND DEPTHS SHALL BE CONSTRUCTED TO WITHIN 0.1' (VERTICAL). CHANNEL WIDTHS AND OTHER HORIZONTAL (X,Y) DIMENSIONS SHALL BE WITHIN 0.2'.
- 4. IN-STREAM STRUCTURES SHALL BE INSTALLED AS THE CHANNEL IS BEING CONSTRUCTED. INSTREAM STRUCTURES SHALL BE FINISHED TO A SMOOTH SURFACE IN ACCORDANCE WITH THE LINES, GRADES AND ELEVATIONS SHOWN IN THE DRAWINGS AND DETAILS. THE FINISHED STRUCTURE SLOPES AND ELEVATIONS SHALL BE WITHIN 0.1' (VERTICAL) OF THE DRAWINGS AND DETAILS.
- 5. INSTALL EROSION CONTROL MATTING ON THE ENTIRE FLOODPLAIN.



SECTIONS

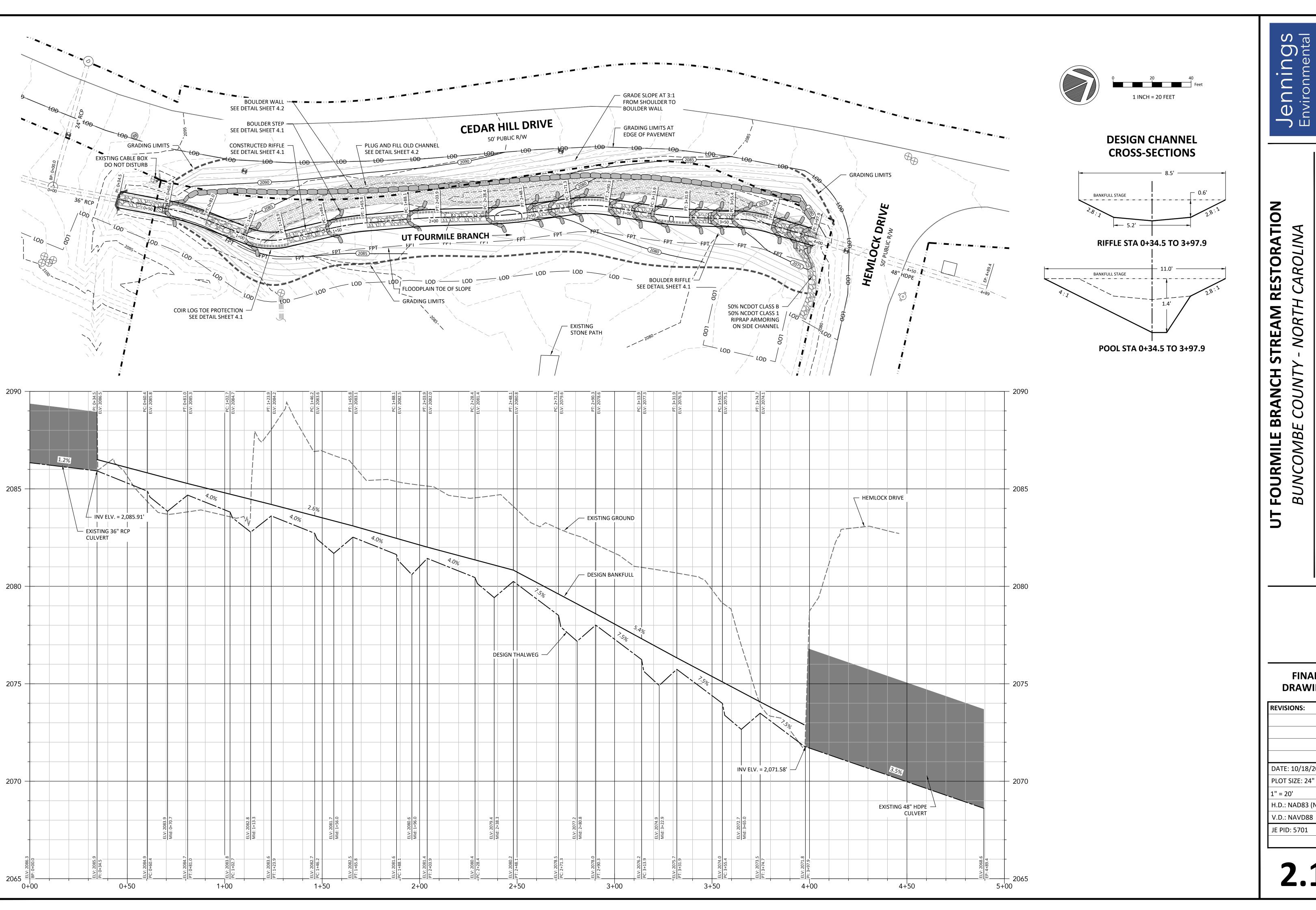
RESTORATION

REAM

H.D.: NAD83 (NCSP)
V.D.: NAVD88

JE PID: 5701

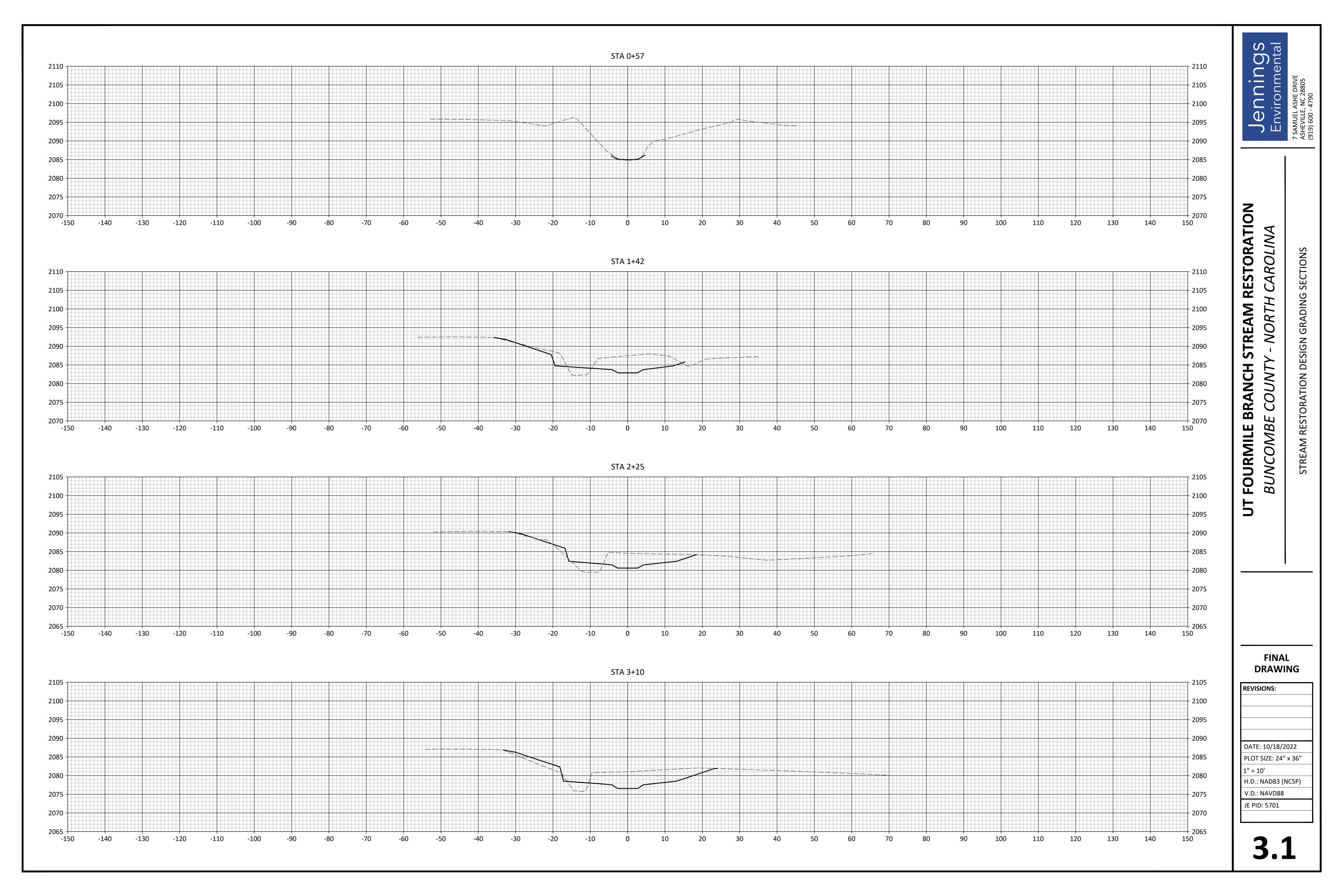
1.1



BUN

FINAL DRAWING

DATE: 10/18/2022 PLOT SIZE: 24" x 36" H.D.: NAD83 (NCSP)



SET BOULDER INVERTS AT ELEVATION SHOWN ON THE PLAN AND PROFILE SHEETS. NO ELEVATIONS OF THE BOULDERS

MAY VARY FROM THE PLAN SHEETS WITHOUT DIRECTION FROM THE ENGINEER. THE BOULDER ARMS SHALL EXTEND UP

TO THE STREAMBANK AT A 1% - 2% SLOPE AND INTO THE STREAMBANK A MINIMUM OF 10.0' OR TWO FULL BOULDER

LENGTH OF THE STRUCTURE. FILTER FABRIC SHALL EXTEND FROM THE BOTTOM OF THE FOOTER BOULDER TO THE

FINISHED GRADE ELEVATION AND SHALL BE PLACED THE ENTIRE LENGTH OF THE STRUCTURE. RIFFLE MATERIAL SHALL BE USED AS BACKFILL MATERIAL AROUND THE OFFSET BOULDER STEPS AND MICROPOOLS SHALL BE ESTABLISHED

BOULDER RIFFLES SHALL BE BACKFILLED WITH NATIVE GRAVEL AND COBBLE MATERIAL AVAILABLE ONSITE. THE ENGINEER MUST APPROVE THE USE OF ALL ONSITE NATIVE MATERIAL. WHEN NATIVE SUBSTRATE IS NOT SUFFICIENT FOR COMPLETION OF THE STRUCTURE, QUARRIED STONE SHALL BE USED TO SUPPLEMENT THE RIFFLE MATERIAL

ACCORDING TO THE RIFFLE SUBSTRATE SPECIFICATIONS IN THE CONSTRUCTED RIFFLE DETEAIL. RIFFLE MATERIAL

SHALL BE PLACED AT A UNIFORM THICKNESS SUCH THAT, IN CROSS-SECTION, ITS LOWEST ELEVATION OCCURS IN THE CENTER OF THE CHANNEL. RIFFLE MATERIAL SHALL BE COMPACTED USING AN EXCAVATOR BUCKET SUCH THAT FUTURE

6. RIFFLE MATERIAL SHALL EXTEND A MINIMUM OF $\frac{1}{3}$ W_{BKF} U/S OF THE P.T. INTO THE GLIDE AND A MINIMUM OF $\frac{1}{3}$ W_{BKF}

8. THE SURFACE OF THIS STRUCTURE SHALL BE FINISHED TO A SMOOTH AND COMPACT SURFACE IN ACCORDANCE WITH THE LINES, GRADES, AND CROSS-SECTIONS OR ELEVATIONS SHOWN ON THE DRAWINGS. THE DEGREE OF FINISH FOR

ELEVATIONS SHALL BE WITHIN 0.1 FT OF THE GRADES AND ELEVATIONS INDICATED OR APPROVED BY THE ENGINEER. 9. RE-DRESSING OF CHANNEL AND BANKFULL BENCH/FLOODPLAIN WILL LIKELY BE REQUIRED FOLLOWING INSTALLATION

BOULDER SILL

EXTEND INTO STREAMBANK MIN 8.0' OR

DETAILED SECTION B - B'

NOT TO SCALE

COIR LOG TOE SPECIFICATIONS

1. COIR LOGS USED IN THE VEGETATED SOIL LIFT SHALL BE 24" IN DIAMETER AND SECURED IN PLACE USING 2" X 2" X 36"

3. LIVE TRANSPLANTS AVAILABLE ON THE SITE MAY REPLACE EROSION CONTROL MATTING AS DIRECTED BY THE

4. THE SURFACE OF THIS STRUCTURE SHALL BE FINISHED TO A SMOOTH AND COMPACT SURFACE IN ACCORDANCE WITH

5. RE-DRESSING OF CHANNEL AND BANKFULL BENCH/FLOODPLAIN WILL LIKELY BE REQUIRED FOLLOWING INSTALLATION

OF IN-STREAM STRUCTURES AND SHALL BE CONSIDERED INCIDENTAL TO CONSTRUCTION.

THE LINES, GRADES, AND CROSS-SECTIONS OR ELEVATIONS SHOWN ON THE DRAWINGS. THE DEGREE OF FINISH FOR ELEVATIONS SHALL BE WITHIN 0.1 FT OF THE GRADES AND ELEVATIONS INDICATED OR APPROVED BY THE ENGINEER.

TWO FULL BOULDER LENGTHS

OF IN-STREAM STRUCTURES AND SHALL BE CONSIDERED INCIDENTAL TO CONSTRUCTION.

RIFFLES SHALL BE CONSTRUCTED OF 50% NCDOT CLASS B AND 50% NCDOT CLASS 1 RIPRAP. THE ENGINEER MUST

APPROVE THE USE OF ALL ONSITE NATIVE MATERIAL. ALL STONE USED FOR RIFFLE CONSTRUCTION SHALL BE MIXED

WITH EARTH AVAILABLE ONSITE SUCH THAT THE RIFFLE MATERIAL IS WELL-GRADED WHEN PLACED IN THE RIFFLE

4. ON THE UPSTREAM SIDE OF THE BOULDERS, NON-WOVEN GEOTEXTILE FABRIC SHALL BE PLACED ON THE ENTIRE

LENGTHS. MAXIMUM ELEVATION DROP OVER EACH BOULDER IS STEP IS 0.3' - 0.5'.

SETTLEMENT OF THE MATERIAL IS KEPT TO A MINIMUM.

0 ATI 0 0 ш RE S 4 $\mathbf{\Omega}$ 0 $\boldsymbol{\mathcal{B}}$

DESIGN

 \propto

DRAWING

REVISIONS:

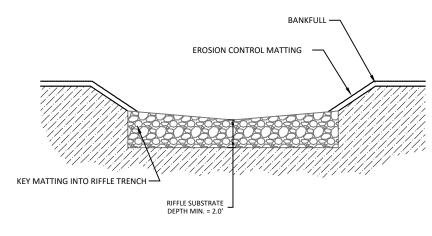
DATE: 10/18/2022 PLOT SIZE: 24" x 36"

H.D.: NAD83 (NCSP) V.D.: NAVD88

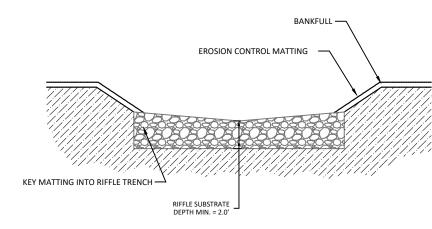
JE PID: 5701

CONSTRUCTED RIFFLE SPECIFICATIONS

- 1. FOR INSTALLATION, THE CONTRACTOR SHALL OVER EXCAVATE THE LENGTH OF THE RIFFLE AND BACKFILL THE TRENCH WITH THE SPECIFIED RIFFLE SUBSTRATE MATERIAL TO THE ELEVATIONS SHOWN ON THE PROPOSED PROFILE.
- 2. RIFFLE MATERIAL SHALL EXTEND A MINIMUM OF $\frac{1}{3}$ W_{BKF} U/S OF THE P.T. INTO THE GLIDE AND A MINIMUM OF $\frac{1}{3}$ W_{BKF}
- 3. THE RIFFLE MATERIAL SHALL BE PLACED AT A UNIFORM THICKNESS SUCH THAT, IN CROSS-SECTION, ITS LOWEST **ELEVATION OCCURS IN THE CENTER OF THE CHANNEL**
- 4. RIFFLE MATERIAL SHALL BE COMPACTED USING AN EXCAVATOR BUCKET SUCH THE DEEPEST POINT OF THE CHANNEL IS ALONG THE CENTERLINE AND THAT FUTURE SETTLEMENT OF THE MATERIAL IS KEPT TO A MINIMUM.
- THE LINES, GRADES, AND CROSS-SECTIONS OR ELEVATIONS SHOWN ON THE DRAWINGS. THE DEGREE OF FINISH FOR
- 7. RE-DRESSING OF CHANNEL AND BANKFULL BENCH/FLOODPLAIN WILL LIKELY BE REQUIRED FOLLOWING INSTALLATION



TO FINAL DRAWING



DETAILED SECTION B - B'

CONSTRUCTED RIFFLE DETAIL

BOULDER STEP SPECIFICATIONS

- 1. ALL BOULDERS USED FOR THE PROPOSED STRUCTURE SHALL BE STRUCTURAL STONE, CUBICAL OR RECTANGULAR IN SHAPE. THE ENGINEER MUST APPROVE THE USE OF BOULDERS THAT MAY BE AVAILABLE ONSITE. BOULDERS IS 1.5'. BOULDERS LONGER (L) THAN 5.5' WILL BE ACCEPTED.
- 3. GAPS BETWEEN BOULDERS SHALL BE MINIMIZED BY FITTING BOULDERS TOGETHER AND PLUGGING WITH NC DOT
- 2. HEADER BOULDERS SHALL BE UNDERLAIN BY FOOTER BOULDERS TO PROVIDE A FOUNDATION UNLESS OTHERWISE
- SET BOULDER INVERTS AT ELEVATION SHOWN ON THE PLAN AND PROFILE SHEETS. NO ELEVATIONS OF THE
- 4. NON-WOVEN GEOTEXTILE SHALL BE PLACED ON THE UPSTREAM SIDE OF THE STRUCTURE TO PREVENT WASHOUT OF SEDIMENT THROUGH BOULDER GAPS. FILTER FABRIC SHALL EXTEND FROM THE BOTTOM OF THE FOOTER BOULDER FILL MATERIAL SHALL BE PLACED UPSTREAM OF THE GEOTEXTILE MATERIAL.
- 5. GRAVEL MATERIAL CONSISTING OF A WELL-GRADED BLEND OF NCDOT CLASS A RIP-RAP AND ASTM #57 ROCK MIXED WITH EARTH SHALL BE USED TO BACKFILL THE STRUCTURE. BACKFILL MATERIAL SHALL BE COMPACTED SUCH THAT
- 6. THE SURFACE OF THIS STRUCTURE SHALL BE FINISHED TO A SMOOTH AND COMPACT SURFACE IN ACCORDANCE WITH THE LINES, GRADES, AND CROSS-SECTIONS OR ELEVATIONS SHOWN ON THE DRAWINGS. THE DEGREE OF FINISH FOR INVERT ELEVATIONS SHALL BE WITHIN 0.1 FT OF THE GRADES AND ELEVATIONS INDICATED.
- INSTALLATION OF IN-STREAM STRUCTURES AND SHALL BE CONSIDERED INCIDENTAL TO CONSTRUCTION.

LIVE STAKES AND BARE ROOT PLANTINGS **DETAILED PLAN** NOT TO SCALE

RIFFLE SUBSTRATE -

50% NCDOT CLASS B 50% NCDOT CLASS 1

EXTEND BOULDER SILL INTO STREAMBANK ·

MIN 8.0' OR TWO FULL BOULDER LENGTHS

MOST DOWN STREAM STRUCTURE AT -

BOULDERS 1.0' U/S

BOULDER RIFFLE DETAIL

COIR LOG TOE DETAIL

WOOD STAKES 4' O.C.

2. COIR LOG SPECIFICATIONS:

2.1. DIAMETER: 20"

2.4. LENGTH: 10 FT

2.2. WEIGHT: 15 LBS / FT

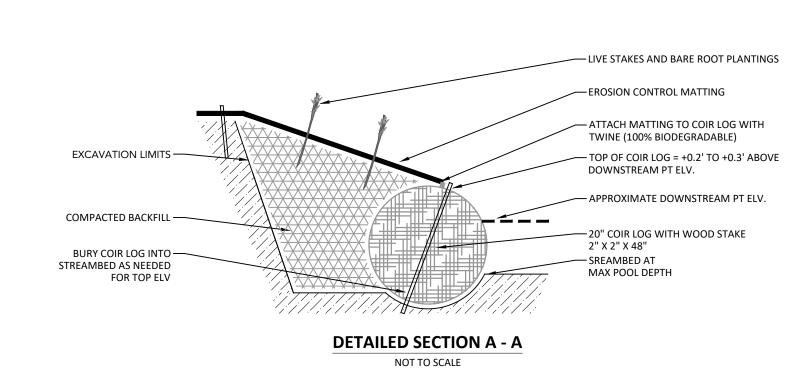
2.3. DENSITY: 9 LBS / FT³

PC MAY BE A BOULDER STEP PER PLAN AND DETAILS

DETAILED PLAN

NOT TO SCALE

DETAILED SECTION A - A'



DETAILED SECTION B - B'

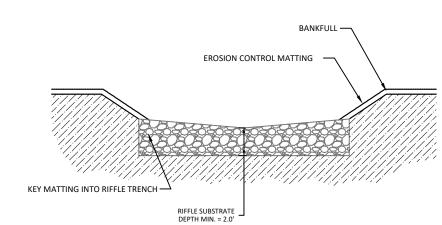
—KEY BOULDERS INTO STREAMBANK @ ½ TO 3 BKF STAGE KEY BOULDERS INTO -—FIT BOULDERS TIGHTLY TOGETHER STREAMBANK MIN. 8.0' PLACE BOULDERS INTO STREAMBED A MINIMUM OF THE BOULDER DIAMETER

NOT TO SCALE

- D/S OF THE P.C. INTO THE RUN.

- 5. RIFFLES SHALL BE CONSTRUCTED OF 50% NCDOT CLASS B AND 50% NCDOT CLASS 1 RIPRAP. THE ENGINEER MUST APPROVE THE USE OF ALL ONSITE NATIVE MATERIAL. ALL STONE USED FOR RIFFLE CONSTRUCTION SHALL BE MIXED WITH EARTH AVAILABLE ONSITE SUCH THAT THE RIFFLE MATERIAL IS WELL-GRADED WHEN PLACED IN THE RIFFLE
- 6. THE SURFACE OF THIS STRUCTURE SHALL BE FINISHED TO A SMOOTH AND COMPACT SURFACE IN ACCORDANCE WITH ELEVATIONS SHALL BE WITHIN 0.1 FT OF THE GRADES AND ELEVATIONS INDICATED OR APPROVED BY THE ENGINEER.
- OF IN-STREAM STRUCTURES AND SHALL BE CONSIDERED INCIDENTAL TO CONSTRUCTION.

SUBSTRATE SPECIFICATIONS TO BE ADDED



NOT TO SCALE

- DIMENSIONS SHALL BE 3.0' X 5.0' X 2.0' (W X L X H) +/- 0.5 FT. THE MINIMUM ACCEPTABLE BOULDER THICKNESS (H)
- 2. DIMENSIONS AND SLOPES OF STRUCTURES DESCRIBED IN THE DETAIL MAY BE ADJUSTED BY DESIGN ENGINEER TO FIT CONDITIONS ONSITE. CONTRACTOR WILL BE REQUIRED TO FIT BOULDERS TOGETHER TIGHTLY.
- CLASS A ROCK OR CHINKING STONE APPROVED BY ENGINEER.
- DIRECTED BY THE ENGINEER. HEADER BOULDERS SHALL BE OFFSET 1.0 FT UPSTREAM OF THE FOOTER.
- BOULDERS MAY VARY FROM THE PLAN SHEETS WITHOUT DIRECTION FROM THE ENGINEER.
- TO THE FINISHED GRADE ELEVATION AND SHALL BE PLACED THE ENTIRE LENGTH OF THE STRUCTURE. SELECT BACK
- FUTURE SETTLEMENT OF THE MATERIAL IS KEPT TO A MINIMUM.
- 7. RE-DRESSING OF CHANNEL AND BANKFULL BENCH/FLOODPLAIN WILL LIKELY BE REQUIRED FOLLOWING

BOULDER — SCOUR POOL GRAVEL BACKFILL **BELOW STRUCTURE** MATERIAL NON-WOVEN -FILTER FABRIC **DETAILED SECTION A - A'**

NOT TO SCALE

DETAILED PLAN NOT TO SCALE

── BANKFULL STAGE

DETAILED PLAN

NOT TO SCALE

RIFFLE SUBSTRATE -

DETAILED SECTION A - A'

NOT TO SCALE

50% NCDOT CLASS 1

P.T. ELEVATION PER -

GRAVEL BACKFILL

UPSTREAM OF STRUCTURE

NON-WOVEN FILTER FABRIC

HIGH DENSITY PLANTINGS -

- STREAMBANK TOE OF SLOPE

OR TWO FULL BOULDER LENGTHS

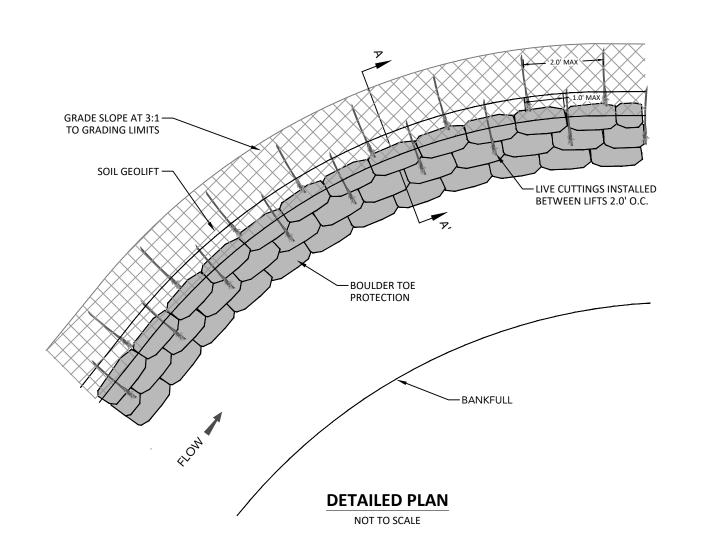
BOULDER STEP DETAIL

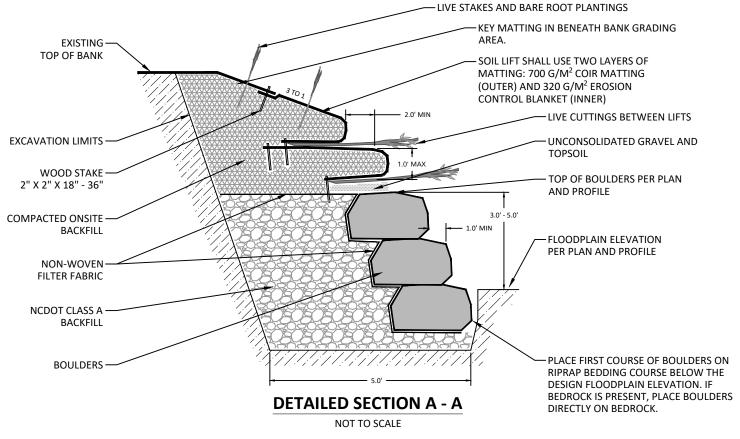
— EXTEND VANE ARM

INTO STREAMBANK

MIN. 8.0' OR TWO

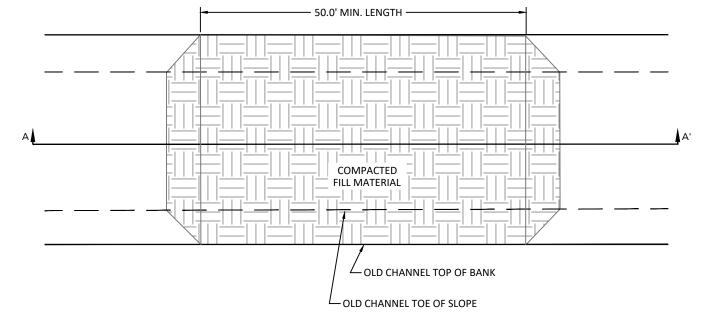
FULL BOULDER LENGTHS





BOULDER WALL NOTES AND SPECIFICATIONS

- 1. ALL BOULDERS SHALL BE STRUCTURAL QUARRIED STONE, CUBICAL OR RECTANGULAR IN SHAPE. BOULDERS SHALL BE 3.0' X 5.0' X 2.5' (W X L X H) +/- 0.5'. THE MINIMUM ACCEPTABLE BOULDER THICKNESS (H) IS 2.0'. BOULDERS LONGER (L) THAN 5.5' WILL BE ACCEPTED. ALL BOULDERS SHALL BE APPROVED BY THE ENGINEER.
- 2. A BEDDING COURSE CONSISTING OF NCDOT CLASS A RIPRAP SHALL BE INSTALLED BELOW THE FIRST ROW OF BOULDERS. IF BEDROCK IS ENCOUNTERED ONSITE, THE FIRST LIFT OF BOULDERS SHALL BE PLACED DIRECTLY ON THE BEDROCK. ALL BOULDERS SHALL FIT TIGHTLY TOGETHER. INSTALL EACH LIFT OF BOULDERS WITH A 1.0' SETBACK FROM THE FRONT EDGE OF THE PREVIOUS LIFT OF BOULDERS. STACK BOULDERS TO THE LINES ELEVATIONS AND GRADES SHOWN IN THE DRAWINGS AND DETAILS. BACKFILL STACKED BOULDERS WITH NCDOT CLASS A.
- 3. UNCONSOLIDATED GRAVEL AND TOPSOIL SHALL BE INSTALLED AS A LEVELING COURSE THE ABOVE BOULDERS BEFORE THE LIVE CUTTINGS AND SOIL LIFTS ARE INSTALLED.
- 4. PLACE LAYER OF LIVE CUTTINGS (MIN. 4' LENGTH) A 2.0' O.C. ON THE GRAVEL AND TOPSOIL LEVELING COURSE SUCH THAT APPROXIMATELY 6 INCHES TO 1 FOOT OF EACH LIVE BRANCH WILL BE EXPOSED AND THE REMAINDER (2' TO 4') OF EACH LIVE BRANCH WILL BE COVERED BY THE SOIL LIFT. LIVE BRANCHES SHALL BE AN EQUAL FRACTION OF SILKY WILLOW (SALIX SERICEA) AND SILKY DOGWOOD (CORNUS AMOMUM). LIVE CUTTINGS SHALL ONLY BE INSTALLED IF CONSTRUCTION OCCURS BETWEEN OCTOBER AND APRIL. IF LIVE CUTTINGS ARE NOT INSTALLED, HIGH DENSITY LIVE STAKING SHALL BE COMPLETED WHEN SEASONALLY APPROPRIATE.
- 5. INSTALL TWO (2) SOIL LIFTS ON TOP OF THE BOULDER WALL. THE SOIL LIFT SHALL NOT EXCEED 1.0' THICKNESS. LIFTS SHALL INCLUDE ALL SOIL PREPARATION, TEMPORARY AND PERMANENT SEEDING AND MULCH. SOIL LIFTS SHALL USE TWO LAYERS OF BIODEGRADABLE MATTING: 700 G/M² COIR MATTING (OUTER) AND 320 G/M² EROSION CONTROL BLANKET (INNER). EROSION CONTROL PRODUCTS USED FOR SOIL LIFTS SHALL BE MADE OF 100% NATURAL FIBERS AND MATERIALS AND BE BIODEGRADABLE UNDER NORMAL CLIMATE CONDITIONS. EROSION CONTROL MATTING CONTAINING PLASTICS OR PLASTIC BASED MATERIALS SHALL NOT BE USED.
- 6. GRADE THE SLOPE AT 3:1 TO THE EXISTING GROUND.
- 7. KEY EROSION CONTROL MATTING IN BENEATH BANK GRADING AREA AND INSTALL MATTING ON ALL DISTURBED SLOPES AND STREAMBANKS.
- 8. PLACE SOIL BACKFILL UP TO THE LIFT HEIGHT SPECIFIED OF NO GREATER THAN 1.0 FT BEING CAREFUL NOT TO PUSH/PULL OR TEAR THE FABRIC PREVIOUSLY PLACED.
- 9. THE SURFACE OF THIS STRUCTURE SHALL BE FINISHED TO A SMOOTH AND COMPACT SURFACE IN ACCORDANCE WITH THE LINES, GRADES, AND CROSS-SECTIONS OR ELEVATIONS SHOWN ON THE DRAWINGS. THE DEGREE OF FINISH FOR ELEVATIONS SHALL BE WITHIN 0.1 FT OF THE GRADES AND ELEVATIONS INDICATED OR APPROVED BY THE ENGINEER.
- 10. RE-DRESSING OF CHANNEL AND BANKFULL BENCH/FLOODPLAIN WILL LIKELY BE REQUIRED FOLLOWING INSTALLATION OF IN-STREAM STRUCTURES AND SHALL BE CONSIDERED INCIDENTAL TO CONSTRUCTION.



DETAILED PLAN NOT TO SCALE

DETAILED SECTION A - A' NOT TO SCALE

CHANNEL AND LATERAL DITCH PLUG NOTES

- 1. ALL CHANNEL WORK SHALL TAKE PLACE DURING DRY WORKING CONDITIONS. THE CONTRACTOR SHALL MINIMIZE THE EXPORT OF SEDIMENT TO ADJACENT SURFACE WATERS TO THE MAXIMUM EXTENT PRACTICABLE BY USING E&SC
- 2. FOR INSTALLATION, THE CONTRACTOR SHALL PLACE SUITABLE CLAY FILL MATERIAL IN THE EXISTING CHANNEL UP TO THE TOP OF BANK. FILL MATERIAL SHOULD BE LOCATED WITHIN THE SITE AND APPROVED FOR USE BY THE ENGINEER. THE CHANNEL PLUG SHALL BE COMPACTED AS DIRECTED AND UNTIL APPROVED BY THE ENGINEER ON
- 3. TOP SOIL SUITABLE FOR ESTABLISHING NATIVE VEGETATION SHALL BE INSTALLED ON TOP OF THE COMPACTED FILL MATERIAL TO A MINIMUM DEPTH OF 0.5' ABOVE THE COMPACTED FILL MATERIAL.
- 4. THE SURFACE OF THIS STRUCTURE SHALL BE FINISHED TO A SMOOTH AND COMPACT SURFACE IN ACCORDANCE WITH THE LINES, GRADES, AND CROSS-SECTIONS OR ELEVATIONS SHOWN ON THE DRAWINGS.
- 5. RE-DRESSING AND STABILIZATION OF THE SURROUNDING WORK AREA WITH TEMPORARY AND PERMANENT SEEDING AND MULCHING WILL LIKELY BE REQUIRED FOLLOWING INSTALLATION OF THE DITCH PLUG AND SHALL BE

S Ш RE, S ANCH $\mathbf{\Omega}$ RMIL FOU

0 TORATIC ROLINA

DESIGN

RES⁻

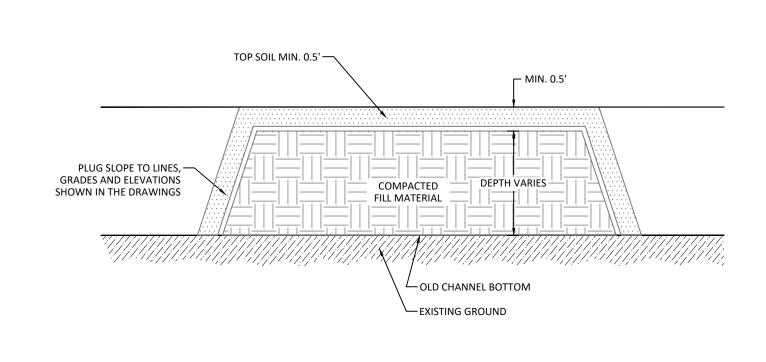
BUN

FINAL DRAWING

REVISIONS:

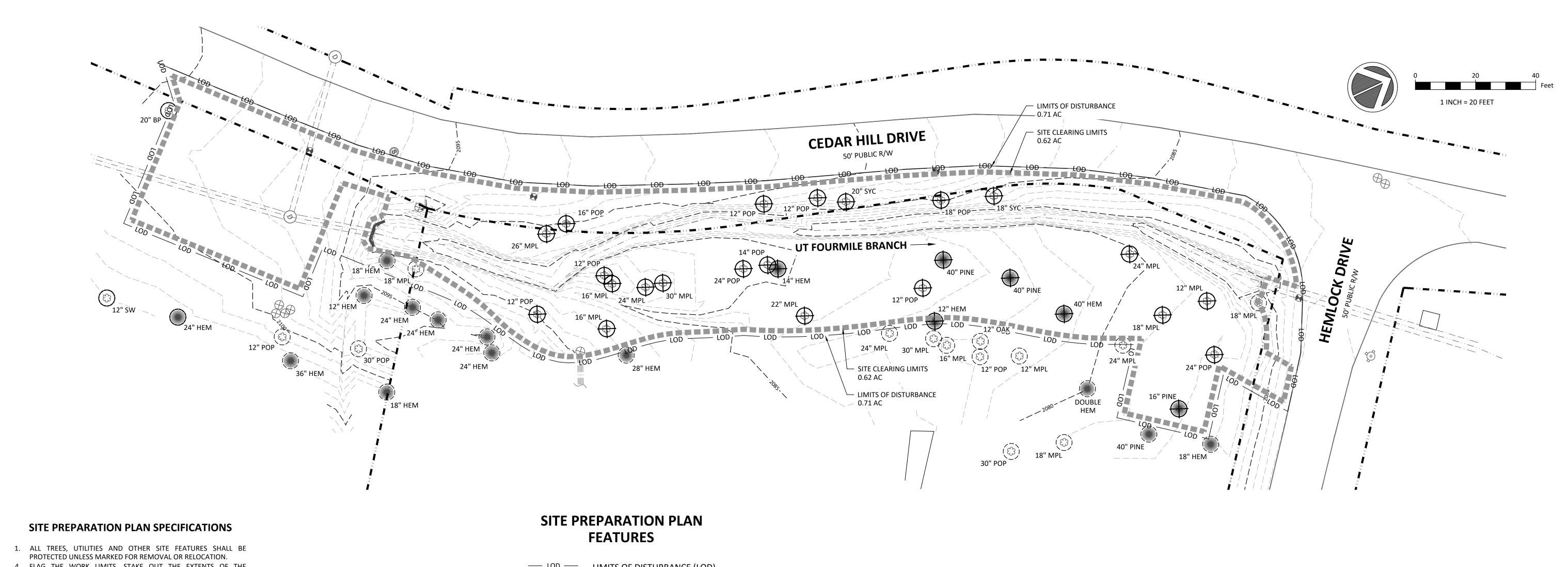
DATE: 10/18/2022 PLOT SIZE: 24" x 36"

H.D.: NAD83 (NCSP) V.D.: NAVD88 JE PID: 5701



BOULDER WALL DETAIL

CHANNEL AND LATERAL DITCH PLUG DETAIL



LIMITS OF DISTURBANCE (LOD)

CLEARING LIMITS

DECIDUOUS TREE

CONIFEROUS TREE

TREE TO REMAIN

TREE REMOVAL

5. THE ENGINEER AND PROJECT OWNER MUST APPROVE ALL TREES

6. ALL LOGS AND WOODY DEBRIS GENERATED DURING SITE CLEARING AND TREE REMOVAL OPERATIONS MUST BE REMOVED FROM THE

MARKED FOR REMOVAL.

FOURMILE BRANCH STREAM RESTORATION
BUNCOMBE COUNTY - NORTH CAROLINA

FINAL DRAWING

REVISIONS:

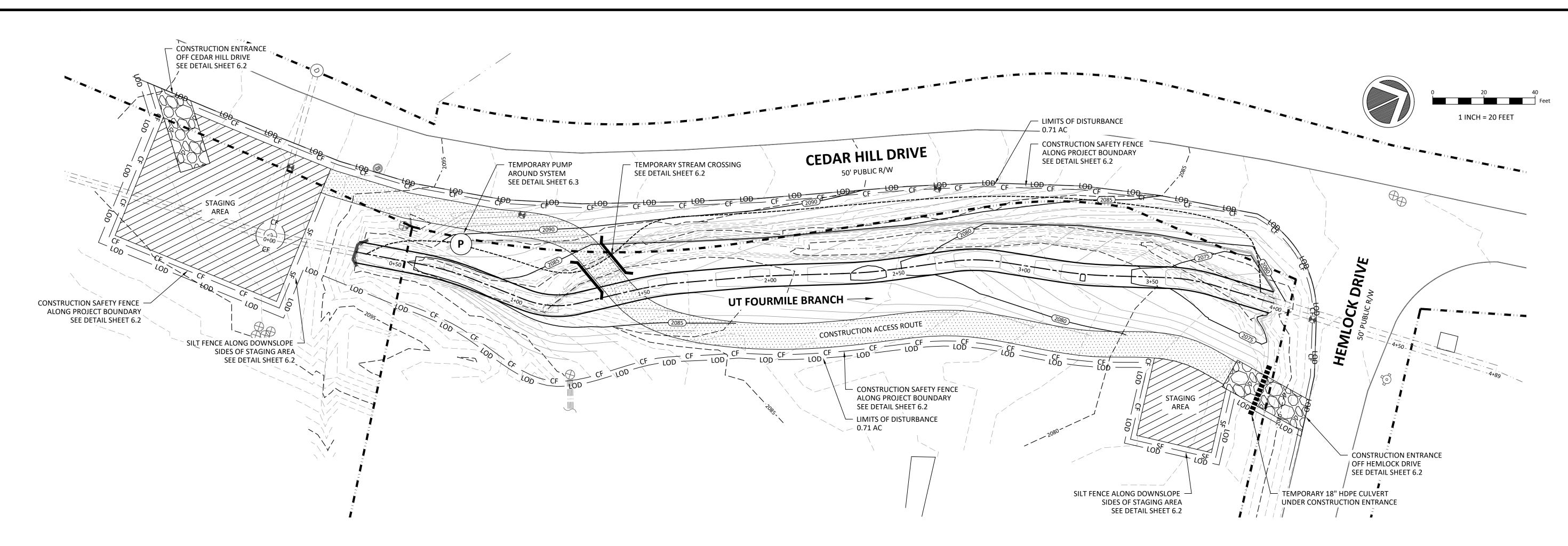
DATE: 10/18/2022 PLOT SIZE: 24" x 36"

H.D.: NAD83 (NCSP) V.D.: NAVD88

JE PID: 5701

1" = 20'

5.1



EROSION AND SEDIMENTATION CONTROL PLAN SPECIFICATIONS

- ALL CONSTRUCTION ACTIVITIES SHALL ADHERE TO THE CONDITIONS AND REQUIREMENTS OF NCDEML'S NG01 CONSTRUCTION
- PROTECTED UNLESS MARKED FOR REMOVAL OR RELOCATION.
- 3. ALL WETLANDS AND STREAMS LOCATED WITHIN 50 FEET OF THE CONSTRUCTION AREA ON THE PROJECT SITE SHALL BE CLEARLY MARKED (EXAMPLE: ORANGE FABRIC FENCING AND FLAGGING) MAINTAINED ON THE PROPERTY UNTIL THE PROJECT PHASE IS COMPLETED. [15A NCAC 02H .0506 (B)(2)]
- TURBIDITY UNITS) SHALL NOT BE EXCEEDED AS DESCRIBED IN 15A PRACTICES MUST BE USED TO MEET THIS STANDARD. [15A NCAC 02B .0211 (21)]
- EQUIPMENT SHALL BE WELL-MAINTAINED, CLEANED PRIOR TO MOBILIZATION, AND CHECKED DAILY FOR LEAKS OF PETROLEUM PRODUCTS. FUELING, LUBRICATION AND GENERAL EQUIPMENT MAINTENANCE SHOULD NOT TAKE PLACE WITHIN 50 FEET OF A WATERBODY OR WETLANDS TO PREVENT CONTAMINATION BY FUEL AND OILS. [15A NCAC 02H .0506 (B)(3) AND 15A NCAC 02B
- 6. CONSTRUCTION SHALL BE TIMED TO OCCUR DURING TIMES OF LOW FLOW.
- 7. A TEMPORARY PUMP AROUND SYSTEM SHALL BE USED TO MAINTAIN DRY WORKING CONDITIONS IN THE EXISTING STREAM CHANNEL.
- 8. THE STREAMBANKS, IN-STREAM STRUCTURES AND WORK AREA MUST BE STABILIZED AT THE END OF EACH DAY BEFORE THE TEMPORARY IN-STREAM DIVERSIONS ARE REMOVED AND FLOW IS RETURNED THE FULL CHANNEL.
- 9. EROSION CONTROL MATTING THAT INCORPORATES PLASTIC MESH AND/OR PLASTIC TWINE SHALL NOT BE USED ALONG STREAMBANKS OR WITHIN WETLANDS. DISTURBED AREAS SHOULD BE SEEDED, MULCHED, AND/OR MATTED AS SOON AS POSSIBLE, PREFERABLY AT THE END OF EACH WORKDAY. [15A NCAC 02B
- 10. IF BORROW OR WASTE MATERIAL IS REQUIRED OR GENERATED DURING GRADING OPERATIONS, AN APPROVED EROSION AND SEDIMENT CONTROL PERMIT MUST BE SECURED FOR THE BORROW DISTURBING ACTIVITY. {15A NCAC 04B .0110}.

CONSTRUCTION SEQUENCE

- 1. OBTAIN AND REVIEW THE UT FOURMILE STREAM RESTORATION PROJECT EROSION AND SEDIMENTATION CONTROL PLAN AND ALL OTHER APPLICABLE PERMITS.
- 2. FLAG THE WORK LIMITS AND STAKE OUT THE LIMITS OF DISTURBANCE (LOD) OF THE PROJECT. THE TOTAL PROJECT LOD IS 0.71 AC.
- 3. LOCATE ALL UNDERGROUND UTILITIES WITHIN THE WORK AREA.
- 4. FLAG THE WORK LIMITS. STAKE OUT THE EXTENTS OF THE PROPOSED WORK AND MARK ALL TREES AND VEGETATION THAT MUST BE REMOVED TO COMPLETE THE WORK.
- 5. HOLD ONSITE PRE-CONSTRUCTION MEETING WITH BUILDER, PERMITTEE (PROJECT OWNER), LANDOWNER AND ENGINEER.
- 6. POST CERTIFICATE OF APPROVAL FOR LAND DISTURBANCE AT SITE.
- 7. INSTALL RAIN GAUGE AND PREPARE INSPECTION FORMS. 8. INSTALL CONSTRUCTION ENTRANCES OFF CEDAR HILL DRIVE AND

HEMLOCK DRIVE AS SHOWN IN THE DRAWINGS AND DETAILS.

- ESTABLISH THE STAGING AREA, CONSTRUCTION ACCESS ROUTE AND TEMPORARY STREAM CROSSING AS SHOWN IN THE DRAWINGS AND DETAILS.
- 10. INSTALL CONSTRUCTION SAFETY FENCE ALONG THE PROJECT BOUNDARY AND INSTALL SILT FENCE ON THE DOWNSLOPE SIDES OF THE STAGING AREAS AS SHOWN IN THE DRAWINGS AND DETAILS.
- ALL TREES, UTILITIES AND OTHER SITE FEATURES SHALL BE 11. INSPECT EROSION PREVENTION AND SEDIMENT CONTROL BMPS DAILY AND AFTER SIGNIFICANT RAINFALL EVENTS. MAKE NEEDED REPAIRS IMMEDIATELY. KEEP ALL LOGS AND RECORDS UP-TO-DATE. THE SITE SHALL BE "STORM READY" AT THE END OF EACH WORK DAY AND WORK WEEK.
- PRIOR TO ANY LAND DISTURBING ACTIVITIES AND MUST BE 12. CLEAR EXISTING VEGETATION AND SIGNIFICANT TREES MARKED FOR REMOVAL TAKING CARE NOT TO DISTURB DESIRABLE VEGETATION TO REMAIN INTACT.
- 4. THE TURBIDITY STANDARD OF 50 NTUS (NEPHELOMETRIC 10. PREPARE AND TEST THE TEMPORARY PUMP AROUND SYSTEM FOR WORK IN THE EXISTING CHANNEL.
- NCAC 02B .0200. APPROPRIATE SEDIMENT AND EROSION CONTROL 11. ACQUIRE AND STORE MATERIALS (E.G. ROCK, BOULDERS, EROSION CONTROL MATTING AND FILTER FABRICS) FOR WORK AT THE SITE IN THE STAGING AREA.
 - 12. DURING STREAM RESTORATION WORK, TO THE EXTENT PRACTICABLE, WORK ITERATIVELY FROM UPSTREAM TO DOWNSTREAM. THE BUILDER SHALL LIMIT STREAM CHANNEL DISTURBANCE TO AREAS THAT CAN BE COMPLETED AND STABILIZED DURING ONE DAY OF WORK. DURING EACH ZONE OF DISTURBANCE, FOLLOW THE FOLLOWING STEPS:
 - 12.1. IF WORKING IN THE EXISTING CHANNEL, THE TEMPORARY PUMP AROUND SYSTEM SHALL BE USED TO MAINTAIN DRY WORKING CONDITIONS AND MINIMIZE THE EXPORT OF
 - 12.2. AS SHOWN ON THE DRAWINGS, GRADE THE FLOODPLAIN AND REALIGN THE CHANNEL. ENSURE CONSTRUCTED SLOPES ARE STABILIZED. EXCAVATED EARTH SHALL BE STORED IN THE STAGING AREA OR USED TO BACKFILL THE EXISTING CHANNEL.
 - 12.3. INSTALL IN-STREAM STRUCTURES, BEDFORM FEATURES, AND STREAMBANK PROTECTION AS SHOWN IN THE DRAWINGS AND DETAILS. WHEN POSSIBLE, PERFORM WORK FROM STREAMBANKS IN ORDER TO MINIMIZE TIME SPENT WORKING IN THE CHANNEL.
 - 12.4. INSTALL TEMPORARY SEEDING, PERMANENT SEEDING AND EROSION CONTROL MATTING ON THE STREAMBANK TO 6.0' (MIN) BEYOND THE BANKFULL STAGE.
 - 12.5. PLUG AND FILL THE OLD CHANNEL AFTER STREAM FLOW HAS BEEN TURNED INTO THE NEW CHANNEL.
- OR WASTE MATERIAL SITE PRIOR TO INITIATION OF ANY LAND 13. INSTALL TEMPORARY, PERMANENT SEEDING AND MULCH ON ALL AREAS DISTURBED FOR FLOODPLAIN GRADING AND
 - CONSTRUCTION ACCESS AS SHOWN ON SHEETS 6.1 AND 6.2. 14. ONCE THE WORK AREA IS STABILIZED AND CONSTRUCTION ACTIVITIES ARE COMPLETED, REMOVE AND DISPOSE OF ALL NON-BIODEGRADABLE EROSION AND SEDIMENTATION CONTROL
 - 15. NOTIFY PERMITEE (PROJECT OWNER) AND THE ENGINEER FOR A FINAL INSPECTION AND WALK THROUGH TO VERIFY FINAL STABILIZATION OF THE SITE.
 - 16. WHEN SEASONALLY APPROPRIATE, INSTALL WOODY AND HERBACEOUS PLANTINGS ON STEAMBANKS AND WITHIN THE RIPARIAN ZONE AS SHOWN ON SHEETS 6.1 AND 6.2.

E&SC PLAN FEATURES

— LOD — LIMITS OF DISTURBANCE (LOD) — CF — CONSTRUCTION SAFETY FENCE

— SF — SILT FENCE

TEMPORARY CULVERT

CONSTRUCTION ENTRANCE

STAGING AREA

CONSTRUCTION ACCESS ROUTE

TEMPORARY STREAM CROSSING

EROSION CONTROL MATTING

TORATION ROLINA S Ш AM TRE, S ANCH ~ $\mathbf{\Omega}$ S 0

 \mathcal{B}

FINAL DRAWING

REVISIONS:

DATE: 10/18/2022 PLOT SIZE: 24" x 36" 1" = 20' H.D.: NAD83 (NCSP)

V.D.: NAVD88 JE PID: 5701

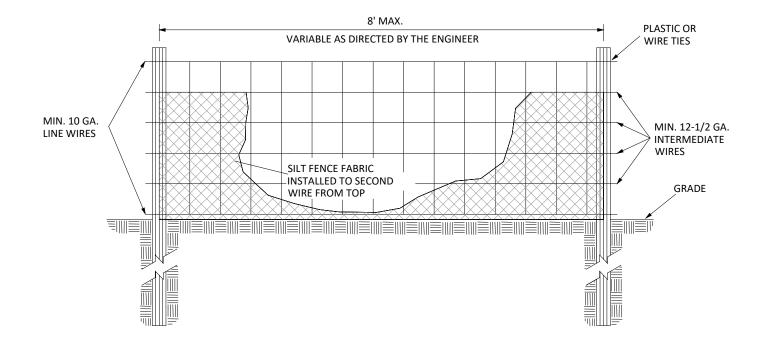
EXISTING ROADWAY -

STANDARD CONSTRUCTION ENTRANCE SPECIFICATIONS

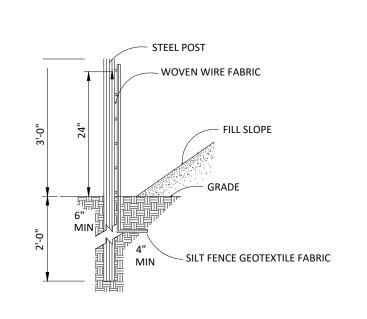
- 1. CLEAR THE ENTRANCE AND EXIT AREA OF ALL VEGETATION ROOTS, AND OTHER OBJECTIOABLE MATERIAL AND
- 2. PLACE THE 2"-3" STONE TO THE SPECIFIC GRADE AND DIMENSIONS SHOWN ON THE PLAND AND SMOOTH IT.
- 3. USE GEOTEXTILE FABRICS TO IMPROVE STABILITY OF THE FOUNDATION IN LOCATIONS SUBJECT TO SEEPAGE OR A HIGH
- 4. INSTALL SILT FENCE OR TREE PROTECTION FENCE UP TO ENSURE CONSTRUCTION ENTRANCE IS USED.
- 5. IF CONSTRUCTION ON THE SITES ARE SUCH THAT THE MUD IS NOT REMOVED BY THE VEHICLE TRAVELING OVER THE STONE, THEN THE LENGTH OF THE CONSTRUCTION ENTRANCE SHALL BE INCREASED.

INFORMATION, NOTES AND SPECIFICATIONS.

6. SEE SECTION 6.06.1 OF NC DEMLR'S EROSION AND SEDIMENT CONTROL DESIGN MANUAL (2013) FOR ADDITIONAL



DETAILED FRONT NOT TO SCALE



DETAILED SIDE NOT TO SCALE

TEMPORARY SILT FENCE NOTES

- 1. CONSTRUCT THE SILT FENCE WITH STANDARD STRENGTH OR EXTRA STRENGTH SYNTHETIC FILTER FABRICS.
- SUPPORT THE STANDARD STRENGTH FILTER FABRIC BY WIRE MESH FASTENED SECURELY TO THE UPSLOPE SIDE OF THE POSTS. EXTEND THE WIRE MESH SUPPORT TO THE BOTTOM THE TRENCH. FASTEN THE WIRE REINFORCEMENT, THEN FABRIC ON THE UPSLOPE SIDE OF THE FENCE POST. WIRE OR PLASTIC ZIP TIES SHOULD HAVE A MINIMUM 50 POUND TENSILE STRENGTH
- 3. WHEN A WIRE MESH SUPPORT FENCE IS USED, SPACE POSTS A MAXIMUM OF 8 FT APART. SUPPORT POSTS SHOULD BE DRIVEN SECURELY INTO THE GROUND A MINIMUM OF 2 FT.
- 4. EXTRA STRENGTH FILTER FABRIC WITH 6 FT POST SPACINGS DOES NOT REQUIRE WIRE MESH SUPPORT FENCE.
- EXCAVATE A TRENCH APPROXIMATELY 4 INCHES WIDE AND 8 INCHES DEEP ALONG THE PROPOSE LINE OF POSTS AND UPSLOPE OF THE BARRIER.
- 6. PLACE 12 INCHES OF FABRIC ALONG THE BOTTOM AND SIDE OF THE TRENCH.
- 7. BACKFILL THE TRENCH WITH SOIL PLACED OVER THE FILTER FABRIC AND COMPACT. THOROUGH COMPACTION OF THE BACKFILL IS CRITICAL TO SILT FENCE PERFORMANCE.
- 8. DO NOT ATTACH FILTER FABRIC TO EXISTING TREES.
- 9. CONSTRUCTION SITE RUNOFF SHALL NOT RUN PARALLEL WITH THE FENCE.
- 10. END OF SILT FENCE NEEDS TO BE TURNED UPHILL.
- 11. SEE SECTION 6.62.1 OF NC DEMLR'S EROSION AND SEDIMENT CONTROL DESIGN MANUAL (2013) FOR ADDITIONAL INFORMATION, NOTES AND SPECIFICATIONS.

TEMPORARY SILT FENCE DETAIL

PLASTIC OR ✓ WIRE TIES WARNING ≤ SIGN **CONSTRUCTION AREA** DO NOT ENTER ORANGE. UV RESISTANT HIGH - TENSILE STRENGTH POLY BARRICADE FABRIC (TYPICAL)

DETAILED FRONT NOT TO SCALE

ORANGE, UV RESISTANT HIGH - TENSILE STRENGTH POLY BARRICADE FABRIC (TYPICAL) - WARNING SIGN CONSTRUCTION AREA DO NOT ENTER WARNING SIGN DETAIL NOT TO SCALE **DETAILED SIDE**

NOT TO SCALE

CONSTRUCTION SAFETY FENCE DETAIL

50' MINIMUM

FILTER FABRIC UNDER STONE

DETAILED CROSS-SECTION A - A'

NOT TO SCALE

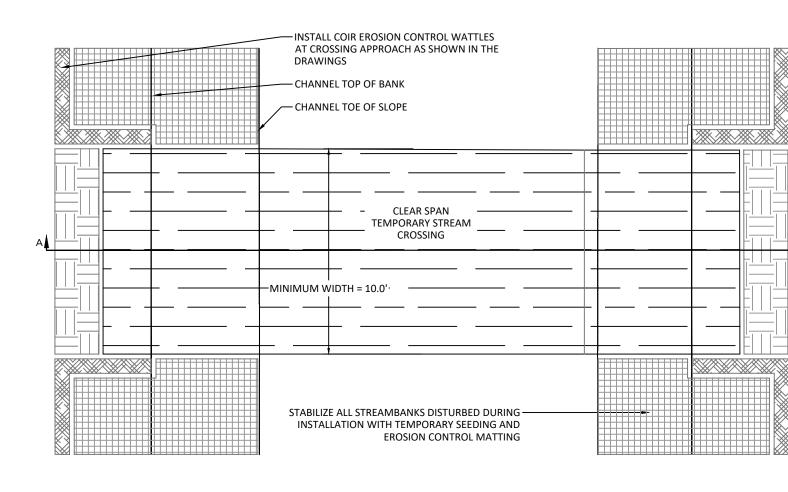
STANDARD CONSTRUCTION ENTRANCE DETAIL

CONSTRUCTION SAFETY FENCE NOTES AND SPECIFICATIONS

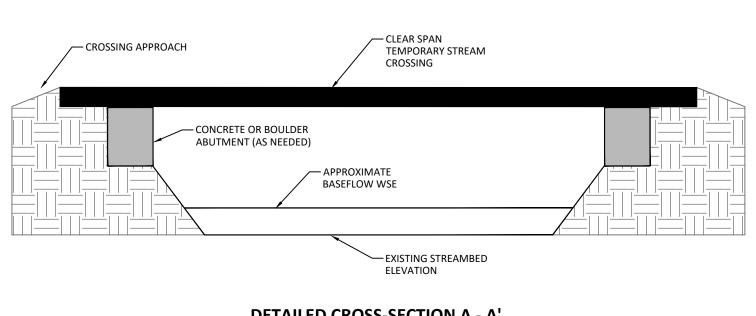
- 1. INSTALL THE CONSTRUCTION SAFETY FENCE WITH ORANGE, UV RESISTANT HIGH TENSILE STRENGTH POLY BARRICADE
- 2. WIRE OR PLASTIC ZIP TIES SHOULD HAVE A MINIMUM 50 POUND TENSILE STRENGTH.

NEW CONSTRUCTION -

- 3. SPACE POSTS A MAXIMUM OF 8 FT APART. SUPPORT POSTS SHOULD BE DRIVEN SECURELY INTO THE GROUND A
- 4. WARNING SIGNS TO BE MADE OF DURABLE, WEATHERPROOF MATERIAL. LETTERS TO BE 3" HIGH MINIMUM, CLEARLY LEGIBLE AND SPACED AS DETAILED. PLACE A SIGN AT EACH END OF LINEAR SAFETY FENCING AND 50' ON CENTER THEREAFTER. FOR CONSTRUCTION AREAS LESS THAN 200' IN PERIMETER, PROVIDE NO LESS THAN ONE SIGN PER PROTECTION AREA. ATTACH SIGNS SECURELY TO FENCE POSTS AND FABRIC.
- 5. MAINTAIN SAFETY FENCE THROUGHOUT DURATION OF PROJECT.



DETAILED PLAN NOT TO SCALE



DETAILED CROSS-SECTION A - A' NOT TO SCALE

TEMPORARY STREAM CROSSING DETAIL

TEMPORARY STREAM CROSSING SPECIFICATIONS

- 1. ALL TEMPORARY STREAM CROSSING WORK SHALL TAKE PLACE DURING DRY WORKING CONDITIONS. THE CONTRACTOR SHALL MINIMIZE THE EXPORT OF SEDIMENT TO ADJACENT SURFACE WATERS TO THE MAXIMUM EXTENT
- 3. THE CONTRACTOR SHALL SELECT A STRUCTURE AND MATERIAL FOR THE CROSSING THAT IS SUFFICIENT TO SUPPORT
- 4. KEEP CLEARING AND EXCAVATION OF THE STREAMBANKS AND BED AND APPROACH SECTIONS TO A MINIMUM.
- 5. THE CROSSING SHALL PROVIDE A CLEAR SPAN OF THE CHANNEL WITH SOOTH TRANSITIONS ON INGRESS AND EGRESS
- 6. KEEP STREAM CROSSING AT RIGHT ANGLES TO THE STREAM FLOW.
- ALIGN ROAD APPROACHES WITH THE CENTERLINE OF THE CROSSING FOR A MINIMUM DISTANCE OF 30 FT. RAISE ABUTMENTS AND CULVERT FILLS A MINIMUM OF 1 FT ABOVE THE ADJOINING APPROACH SECTION TO PREVENT EROSION FROM SURFACE RUNOFF AND TO ALLOW FLOOD FLOWS AROUND THE STRUCTURE.
- ALL STREAMBANKS AND BED MATERIAL DISTURBED DURING INSTALLATION OF THE CROSSING SHALL BE STABILIZED WITH TEMPORARY SEEDING AND EROSION CONTROL MATTING OR RIPRAP. COIR EROSION CONTROL WATTLES SHALL BE INSTALLED AT ALL INGRESS AND EGRESS POINTS AS SHOWN IN THE DRAWINGS.
- 9. REMOVE TEMPORARY STREAM CROSSINGS IMMEDIATELY WHEN THEY ARE NO LONGER NEEDED. RESTORE THE STREAM CHANNEL TO ITS ORIGINAL CROSS-SECTION, AND SMOOTH AND APPROPRIATELY STABILIZE ALL DISTURBED
- 10. RE-DRESSING OF CHANNEL AND BANKFULL BENCH/FLOODPLAIN WILL LIKELY BE REQUIRED FOLLOWING REMOVAL OF THE CROSSING AND SHALL BE CONSIDERED INCIDENTAL TO CONSTRUCTION.
- 11. SEE SECTION 6.70.1 OF NC DEMLR'S EROSION AND SEDIMENT CONTROL DESIGN MANUAL (2013) FOR ADDITIONAL INFORMATION, NOTES AND SPECIFICATIONS.

FINAL DRAWING

REVISIONS:

0

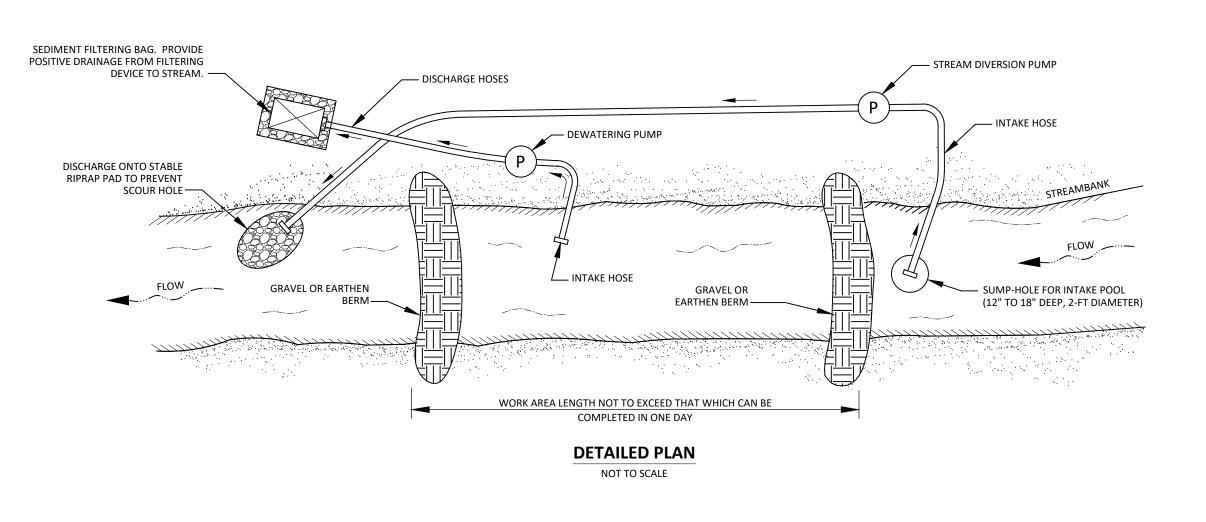
TORATI

S

ANCH

B

DATE: 10/18/2022 PLOT SIZE: 24" x 36" H.D.: NAD83 (NCSP) V.D.: NAVD88 JE PID: 5701

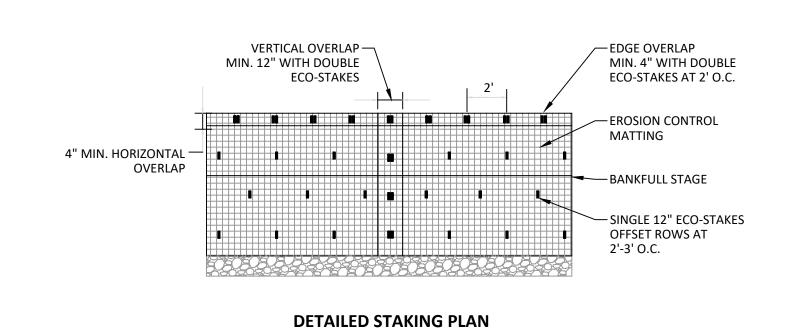


TEMPORARY PUMP AROUND SYSTEM NOTES

- 1. BERMS SHALL BE SITUATED AT THE UPSTREAM AND DOWNSTREAM ENDS OF THE WORK AREA, AND STREAM FLOW SHALL BE PUMPED AROUND THE WORK AREA. THE DIVERSION PUMP SHOULD DISCHARGE ONTO A STABLE VELOCITY DISSIPATER CONSTRUCTED OF RIPRAP. DIVERSION PUMP DISCHARGE SHALL NOT GENERATE SCOUR, EROSION OR THE EXPORT OF EXCESS SEDIMENT TO SURFACE WATERS.
- 2. WATER FROM THE WORK AREA SHALL BE PUMPED TO A SEDIMENT FILTERING BAG. THE MEASURE SHALL BE LOCATED ON A RIPRAP OR GRAVEL PAD SUCH THAT THE WATER DRAINS BACK INTO THE CHANNEL BELOW THE DOWNSTREAM BERM WITHOUT CAUSING FURTHER EROSION.
- 3. THE CONTRACTOR SHALL SIZE THE PUMP AROUND SYSTEM SUFFICIENTLY FOR A RANGE OF POSSIBLE BASEFLOW DISCHARGES AND THE SYSTEM SHALL RUN CONTINUOUSLY WHILE WORKING IN THE STREAM.
- 4. THE STREAMBANKS AND WORK AREA MUST BE STABILIZED AT THE END OF EACH DAY BEFORE THE PUMP AROUND SYSTEM IS SHUT DOWN AND BEFORE FLOW IS RETURNED THE CHANNEL.

EROSION CONTROL MATTING SPECIFICATIONS

- 1. EROSION CONTROL MATTING IS USED TO PROTECT RECENTLY CONSTRUCTED STREAM BANKS FROM EROSION. THE MATTING WILL REMAIN INTACT WHILE THE BANK AND RIPARIAN VEGETATION MATURES, PROVIDING CRITICAL BANK
- . STREAM BANK EROSION CONTROL MATTING MATERIAL SPECIFICATIONS:
- 2.1. MACHINE DIRECTION TENSILE STRENGTH: 77 LB/IN
- CROSS MATCH DIRECTION TENSILE STRENGTH: 86 LB/IN 2.3. APPARENT OPENING SIZE: 0.59" x 0.67"2.4. PERCENT OPENING: 49%
- 2.5. MASS: 700 G/M²
- 3. BEFORE INSTALLING EROSION CONTROL MATTING, RAKE SOIL LEVEL, ADD TEMPORARY AND PERMANENT SEED, SOIL PREPARATION AND MULCH.
- 4. EROSION CONTROL MATTING SHALL BE PLACED ALONG THE LENGTH OF THE NEW CHANNEL FROM THE CHANNEL TOE OF SLOPE OUT TO FLOODPLAIN TOE OF SLOPE.
- 5. SECURE MATTING IN PLACE BY STAKING AND OVERLAPPING AT THE SEEMS WITH A SHINGLE-TYPE METHOD SUCH THAT THE OVERLAPPING PIECE IS IN THE SAME DIRECTION AND AS THE STREAM FLOW AS SHOWN IN THE DETAIL. ADDITIONAL STAKING SHALL BE APPLIED BY THE CONTRACTOR AT NO ADDITIONAL COST IF THE MATTING SEPARATES FROM THE SOIL MORE THAN ONE INCH UNDER A REASONABLE PULL.
- 6. EROSION CONTROL MATTING SHALL USED ON ALL STREAM BANKS SHALL HAVE A DENSITY OF MADE OF 100% NATURAL FIBERS AND MATERIALS AND BE BIODEGRADABLE UNDER NORMAL CLIMATE CONDITIONS. EROSION CONTROL MATTING CONTAINING PLASTICS OR PLASTIC BASED MATERIALS SHALL NOT BE USED.



NOT TO SCALE

BANKFULL-

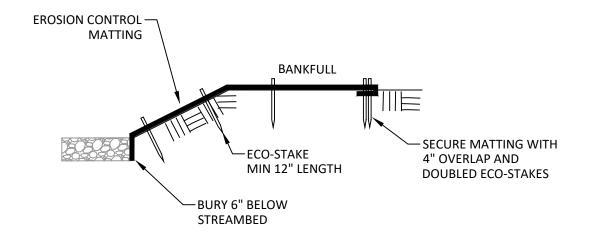
FLOODPLAIN TOE OF SLOPE

DETAILED PLAN

NOT TO SCALE

EROSION CONTROL MATTING FROM TOE OF CHANNEL TO

TOE OF SLOPE



DETAILED SECTION A - A' NOT TO SCALE

TEMPORARY PUMP AROUND SYSTEM DETAIL

EROSION CONTROL MATTING DETAIL

TORATIO ROLINA RE S ANCH $\mathbf{\Omega}$ RMIL

:DIMENT,

SION

BUN

FOU

FINAL DRAWING

REVISIONS:

DATE: 10/18/2022 PLOT SIZE: 24" x 36" H.D.: NAD83 (NCSP)

V.D.: NAVD88 JE PID: 5701

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

mplementing 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.

Required Ground Stabilization Timeframes				
Site Area Description		Stabilize within this many calendar days after ceasing land disturbance	S 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' 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 Zon -10 days for Falls Lake Watershed unless there is zero slope	

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
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 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

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
- Store flocculants in leak-proof containers that are kept under storm-resistant cover or surrounded by secondary containment structures.

EQUIPMENT AND VEHICLE MAINTENANCE

has been corrected.

- 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
- 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
- . 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. 9. 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.
- 6. Contain liquid wastes in a controlled area. 4. Containment must be labeled, sized and placed appropriately for the needs of site.
- 5. 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, sediment basins, perimeter sediment controls and surface waters unless it can be shown no other alternatives are reasonably
- 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.

ONSITE CONCRETE WASHOUT STRUCTURE WITH LINER 3.CONCRETE WASHOUT STRUCTURE NEEDS T BE CLEARY MARKED WITH SIGNAGE NOTING

CONCRETE WASHOUTS

BELOW GRADE WASHOUT STRUCTURE
NOT TO SCALE

- L. Do not discharge concrete or cement slurry from the site.
- 2. Dispose of, or recycle settled, hardened concrete residue in accordance with local and state solid waste regulations and at an approved facility.

ABOVE GRADE WASHOUT STRUCTURE

- 3. 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
- 4. 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.
- 5. 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.
- 8. 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. 9. 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. 10. 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

- 1. Store and apply herbicides, pesticides and rodenticides in accordance with label
- 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. 4. Do not stockpile these materials onsite.

HAZARDOUS AND TOXIC WASTE

- . Create designated hazardous waste collection areas on-site.
- . Place hazardous waste containers under cover or in secondary containment. 3. Do not store hazardous chemicals, drums or bagged materials directly on the ground.

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 of holiday periods, and no individual-day rainfall information available, record the cumulative rain measurement for those unattended days (and this will determine if a site inspection needed). Days on which no rainfall occurred shall be recorded agreed." 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 ≥ 1.0 inch in 24 hours	Identification of the measures inspected, Date and time of the inspection, Name of the person performing the inspection, Indication of whether the measures were operating properly, Description of maintenance needs for the measure, 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 ≥ 1.0 inch in 24 hours	Identification of the discharge outfalls inspected, Date and time of the inspection, Name of the person performing the inspection, Evidence of indicators of stormwater pollution such as oil sheen, floating or suspended solids or discoloration, Indication of visible sediment leaving the site, Description, evidence, and date of corrective actions taken.
(4) Perimeter of site	At least once per 7 calendar days and within 24 hours of a rain event ≥ 1.0 inch in 24 hours	If visible sedimentation is found outside site limits, then a record of the following shall be made: 1. Actions taken to clean up or stabilize the sediment that has lef the site limits, 2. Description, evidence, and date of corrective actions taken, an 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 ≥ 1.0 inch in 24 hours	If the stream or wetland has increased visible sedimentation or a stream has visible increased turbidity from the construction activity, then a record of the following shall be made: Description, evidence and date of corrective actions taken, and Regional Office per Part III, Section C, Item (2)(a) of this permit 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 an 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 documented in the manner described:

Item to Document	Documentation 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

In addition to the E&SC Plan documents above, the following items shall be kept on the

and available for agency 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 30 days. 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.
- All data used to complete the Notice of Intent and older 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).
- (a) 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.
- (b) Anticipated bypasses and unanticipated bypasses.
- (c) Noncompliance with the conditions of this permit that may endanger health or the

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 Division's Emergency Response personnel at (800) 662-7956, (800) 858-0368 or (919) 733-3300.

Occurrence	Reporting Timeframes (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 causes, 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 complia 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(I)(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(I)(6). Division staff may waive the requirement for a written report on a case-by-case basis.

0 RATIO 0 ш RE S NCH $\mathbf{\Omega}$ BUN FOU

> **FINAL DRAWING**

REVISIONS:

DATE: 10/18/2022 PLOT SIZE: 24" x 36" H.D.: NAD83 (NCSP)

V.D.: NAVD88

GENERAL RE-VEGETATION AND PLANTING NOTES

- PROCUREMENT OF PLANT/SEED STOCK.
- LARGER NATIVE TREE SPECIES TO BE PRESERVED WILL BE IDENTIFIED PRIOR TO CONSTRUCTION ACTIVITIES.
- 3. ALL DISTURBED AREAS WILL BE STABILIZED USING TEMPORARY AND PERMANENT SEEDING AS DEFINED IN THE SEEDING SCHEDULE AND THE APPROVED E&SC PLANS.
- 4. SUPPLEMENTAL PLANTING ACTIVITIES MAY BE REQUIRED WITHIN THE PROJECT BOUNDARY.

TEMPORARY SEEDING AND MULCHING NOTES

- 5. TEMPORARY SEEDING AND MULCHING SHALL BE APPLIED TO ALL AREAS AND ACCESS ROUTES DISTURBED DURING CONSTRUCTION. 6. ALL SEED AND SEED VARIETIES MUST BE FREE OF STATE AND
- FEDERALLY LISTED NOXIOUS WEED SEED AND INVASIVE SPECIES. 7. ALL DISTURBED AREAS WILL BE SEEDED WITH TEMPORARY SEED AND MULCHED WITH WHEAT STRAW. SEEDING WILL BE PERFORMED USING A BROADCAST SPREADER. OTHER METHODS MAY BE USED BUT MUST BE APPROVED BY ENGINEER IN ADVANCE OF INSTALLATION.
- 8. MAINTENANCE OF SEEDED AREAS SHALL CONSIST OF WATERING, WEED AND PEST CONTROL, FERTILIZATION, EROSION REPAIR, 15. PERMANENT AND TEMPORARY SEEDING AND MULCHING SHALL BE RE-SEEDING, AND INCIDENTAL OPERATIONS AS NECESSARY TO ESTABLISH A HEALTHY, VIGOROUS, WEED FREE AND DISEASE FEE UNIFORM STAND OF GRASS. ALL AREAS WHICH FAIL TO SHOW A UNIFORM STAND OF GRASS FOR ANY REASON SHALL BE TREATED REPEATEDLY UNTIL A UNIFORM STAND OF AT LEAST 90% COVERAGE IS ATTAINED WITH NO BARE AREA GREATER THAN FIVE SQUARE FEET.

PERMANENT SEEDING NOTES

- 9. PERMANENT SEEDING SHALL OCCUR IN CONJUNCTION WITH TEMPORARY SEEDING WHERE APPLICABLE. IDEALLY, PERMANENT SEEDING SHALL OCCUR DURING THE PLANTING SEASON FOR EACH SEED TYPE. AREAS FERTILIZED FOR TEMPORARY SEEDING SHALL BE SUFFICIENTLY FERTILIZED FOR PERMANENT SEEDING; ADDITIONAL FERTILIZER IS NOT REQUIRED FOR PERMANENT SEEDING.
- 10. ALL SEED AND SEED VARIETIES MUST BE FREE OF STATE AND FEDERALLY LISTED NOXIOUS WEED SEED AND INVASIVE SPECIES.
- 11. THE CONTRACTOR SHALL LOOSEN THE SOIL TO A MINIMUM DEPTH OF 4-INCHES AND GRADE TO A SMOOTH, EVEN SURFACE WITH A LOOSE, UNIFORMLY FINE TEXTURE. THE AREAS TO BE SEEDED ARE THEN TO BE ROLLED AND RAKED TO REMOVE RIDGES AND FILL DEPRESSIONS TO MEET FINISH GRADES. THE CONTRACTOR IS TO LIMIT SUB GRADE AND FINISH GRADE PREPARATION TO AREAS THAT WILL BE PLANTED IMMEDIATELY. PREPARED AREAS ARE TO BE RESTORED IF ERODED OR OTHERWISE DISTURBED AFTER FINE GRADING AND BEFORE PLANTING.
- 12. SEED SHALL BE SOWN WITH A SPREADER OR A SEEDING MACHINE. SEED IS NOT TO BE BROADCAST OR DROPPED WHEN WIND VELOCITY EXCEEDS 5 MPH. SEED SHALL BE EVENLY DISTRIBUTED BY SOWING IN TWO DIRECTIONS AT RIGHT ANGLES TO EACH OTHER. WET SEED OR SEED THAT IS MOLDY OR OTHERWISE DAMAGED IN TRANSIT OR STORAGE IS NOT TO BE USED. AFTER BEGIN SOWN, THE SEED SHALL BE RAKED INTO THE TOP 1/4 INCH OF THE TOPSOIL, LIGHTLY ROLLED, AND WATERED WITH FINE SPRAY.

SEEDED AREAS ON STREAMBANKS SHALL BE PROTECTED WITH COIF

ZONE 1: STREAMBANK

PLANTINGS SCHEDULE SHALL BE PLANTED IN OFFSET ROWS AT A DENSITY OF 4,840 STEMS PER ACRE (3.0' O.C.) FROM TOE OF THE RESTORED CHANNEL TO 3.0' OUTSIDE THE BANKFULL STAGE. HERBACEOUS PLUGS SHALL BE PLANTED ALONG THE TOE OF THE CHANNEL IN THE OUTSIDE OF THE POOL MEANDER BENDS. PERMANENT AND TEMPORARY SEEDING AND MULCHING SHALL BE APPLIED TO ALL GRADED STREAMBANKS.

ZONE 2: RIPARIAN BUFFER

14. WOODY SPECIES LISTED IN THE PLANTING SCHEDULE SHALL BE PLANTED IN OFFSET ROWS AT A DENSITY OF 440 STEMS PER ACRE (10.0' O.C.) FROM 3.0' OUTSIDE THE BANKFULL STAGE TO THE GRADING LIMITS. EXACT PLACEMENT OF THE SPECIES SHALL BE DETERMINED BY THE BUILDERS'S VEGETATION SPECIALIST PRIOR TO SITE PLANTING AND BASED ON THE WETNESS CONDITIONS OF PLANTING LOCATIONS. PERMANENT AND TEMPORARY SEEDING AND MULCHING SHALL BE APPLIED TO ALL DISTURBED AREAS.

ZONE 3: UPLAND SEEDING

APPLIED TO ALL DISTURBED UPLAND AREAS.

VEGETATION PLAN FEATURES

ZONE 1: STREAMBANK

ZONE 2: RIPARIAN BUFFER

ZONE 3: UPLAND

HERBACEOUS 10.0' O.C. BARE ROOT PLANTINGS 3.0' FROM BANKFULL

BUFFER WIDTH

ROOT GROWTH.

VARIES

BARE ROOT SEEDLING

REMOVE THE DIBBLE AND THE SOIL TO THE FULL ROOTS DEEP INTO THE DEPTH OF THE BLADE PLANTING HOLE. PULL AND PULL BACK ON THE THE SEEDLING BACK UP HANDLE TO OPENT THE TO THE CORRECT PLANTING HOLE, DO NOT PLANTING DEPTH, THE ROCK THE SHOVEL BACK ROOT COLLAR SHOULD BE AND FORTH AS THIS 1" - 3" BELOW THE SOIL CAUSES THE SOIL IN THE SURFACE, GENTLY SHAKE PLANTING HOLE TO BE THE SEEDLING TO ALLOW COMPACTED, INHIBITING THE ROOTS TO STRAIGHTEN OUT. DO NOT TWIST OR SPIN THE SEEDLING OR LEAVE THE ROOTS J-ROOTED.

STRAIGHT DOWN INTO PUSH THE SEEDLING SEVERAL INCHES IN TO THE FULL DEPTH OF FRONT OF THE SEEDLING AND PUSH THE BLADE HALFWAY INTO THE SOIL. TWIST AND PUSH THE HANDLE FORWARD TO CLOSE THE TOP OF THE PLANTING HOLE TO HOLD THE SEEDLING IN PLACE.

SEEDLINGS 10.0' O.C. IN ALL ROOTS SHALL BE PRUNED OFFSET ROWS FROM 3.0' TO AN APPROPRIATE LENGTH FOR PLANTING TO PREVENT STAGE TO THE GRADING J-ROOTIING.

PLANTING BAR SHALL HAVE A

BLADE WITH A TRIANGULAR

CROSS-SECTION, AND SHALL BE

THINK AT THE CENTER.

ROOT PRUNING

PUSH THE DIBBLE DOWN

THE BLADE.

2" LONG, 4" WIDE AND 1"

PULLBACK ON THE HANDLE TO CLOSE THE CLOSE AND FIRM UP THE BOTTOM OF THE OPENING WITH YOUR PLANTING HOLE. THEN HEEL. BE CAREFUL TO PUSH FORWARD TO AVOID DAMAGING THE CLOSE THE TOP SEEDING. ELIMINATING

POCKETS AROUND THE

1. ALL SOILS WITHIN THE

PRIOR TO PLANTING.

BUFFER PLANTING AREA

SHALL BE FINE GRADED AND

/ OR DISKED, AS REQUIRED,

BAREROOT

1.5x CONTAINER

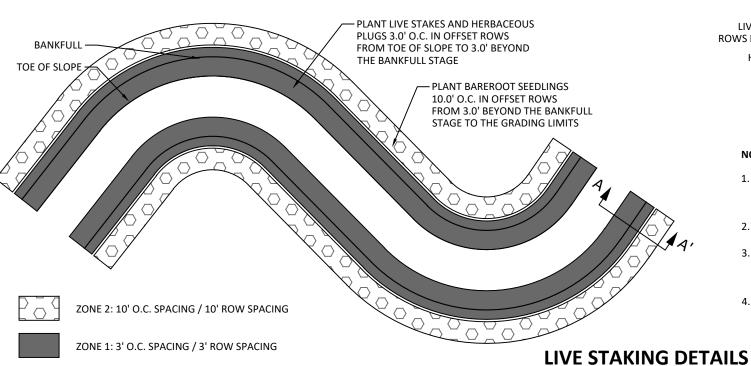
1. PLANTS SHALL HAVE BEEN GROWN IN A CONTAINER LONG ENOUGH FOR THE ROOT SYSTEM TO HAVE DEVELOPED SUFFICIENTLY TO HOLD ITS SOIL TOGETHER ONCE REMOVED FROM THE CONTAINER.

CONTAINER WIDTH

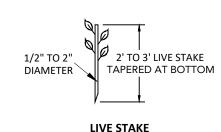
- 2. PLANTS WILL NEED TO BE WATERED REGULARLY AND PLACED IN SHADY CONDITIONS UNTIL PLANTING OCCURS.
- 3. THE DIAMETER OF THE PLANTING PITS FOR EACH PLANT SHOULD BE AT LEAST TWO TIMES THE DIAMETER OF THE ROOT MASS. SCARIFY THE PLANTING PIT PRIOR TO EACH PLANT INSTALLATION.
- 4. SET PLANTS UPRIGHT IN THE CENTER OF THE PIT. THE BOTTOM OF THE ROOT MASS SHOULD BE RESTING ON UNDISTURBED SOIL.
- 5. PLACE BACKFILL AROUND BASE AND SIDES OF ROOT MASS, AND WORK EACH LAYER TO SETTLE BACKFILL AND TO ELIMINATE VOIDS AND AIR POCKETS. WHEN PIT IS APPROXIMATELY 3 FULL. WATER THOROUGHLY BEFORE PLACING REMAINDER OF THE BACKFILL. WATER AGAIN AFTER PLACING FINAL LAYER OF BACKFILL.

CONTAINER PLANT DETAILS

BARE ROOT DETAILS



LIVE STAKES IN OFFSET -**ROWS PER PLANTING PLAN** HERBACEOUS PLUGS -SECTION A - A'



LIVE STAKE

- 1. LIVE STAKES MUST BE DORMANT WHEN CUT. KEEP LIVE STAKES MOIST UNTIL PLANTING. THE STAKE SHOULD BE PREPARED WITH THE BUDS POINTED UP, AND THE BOTTOM SHOULD BE CUT AT AN ANGLE FOR INSERTION INTO THE GROUND. AN IRON BAR CAN BE USED TO MAKE A PILOT HOLE TO PREVENT BARK FROM BEING DAMAGED DURING INSTALLATION.
- 2. LIVE STAKES SHALL BE 0.5" 2" IN DIAMETER AND 2' 3' IN LENGTH.
- 3. LIVE STAKES SHOULD BE PLACED WITH $\frac{2}{3}$ TO $\frac{3}{4}$ OF THE LENGTH OF THE STAKE BELOW GROUND AND ANGLED DOWNSTREAM. ENSURE THE BASE OF THE LIVE STAKE WILL REACH THE WATER TABLE. AFTER INSTALLATION THE TOP OF THE LIVE STAKE SHALL BE PRUNED WITH A SQUARE CUT LEAVING NO LESS THAN 3" AND NO LESS THAN 6" ABOVE THE GROUND.
- 4. PLANT LIVE STAKES AND HERBACEOUS PLUGS IN OFFSET ROWS AND SPACINGS PER PLANTING PLAN.

RESTORATION AROLINA AM TRE/ S **BRANCH** RMILE S 0 B

> **FINAL DRAWING**

REVISIONS: DATE: 10/18/2022 PLOT SIZE: 24" x 36" 1" = 20' H.D.: NAD83 (NCSP)

V.D.: NAVD88

TEMPORARY SEEDING SCHEDULE

ALL DISTURBED AREAS - TEMPORARY SEEDING				
DATE	APP. RATE (LBS/AC)			
	RYE GRAIN (Secale cereale)	120		
	COMMON OATS (Avena sativ)	100		
JAN 1 - MAY 1	GROUND AG. LIMESTONE	2,000		
	10-10-10 FERTILIZER	750		
	STRAW MULCH	4,000		
	GERMAN MILLET (Setaria italica)	50		
	COMMON OATS (Avena sati)	100		
MAY 1 - AUGUST 1	GROUND AG. LIMESTONE	2,000		
	10-10-10 FERTILIZER	750		
	STRAW MULCH	4,000		
	RYE GRAIN (Secale cereale)	120		
	WINTER WHEAT (Triticum aestivum)	100		
AUGUST 1 - DECEMBER 31	GROUND AG. LIMESTONE	2,000		
	10-10-10 FERTILIZER	750		
	STRAW MULCH	4,000		

TOTAL TEMPORARY SEEDING AREA =

PERMANENT SEEDING SCHEDULE

ZONE 1 AND 2 - RIPARIAN SEEDING (25 LBS/AC)					
SPECIES	SPECIES COMMON NAME				
Agrostis hyemalis	WINTER BENTGRASS	0.5%			
Agrostis perennans	UPLAND BENTGRASS	0.5%			
Andropogon gerardii	BIG BLUESTEM	15.0%			
Andropogon virginicus	BROOMSEDGE	0.5%			
Coleataenia anceps	BEAKED PANICGRASS	1.0%			
Coreopsis lanceolata	LANCELEAF COREOPSIS	1.0%			
Dichanthelium dichotomiflorum	FALL PANICGRASS	0.5%			
Elymus virginicus	VIRGINIA WILDRYE	34.0%			
Juncus effusus	SOFT RUSH	0.5%			
Panicum virgatum	SWITCHGRASS	13.0%			
Pycnanthemum tenuifolium	NARROWLEAF MOUNTAINMINT	0.5%			
Rudbeckia hirta	BLACKEYED SUSAN	0.5%			
Schizachyrium scoparium	LITTLE BLUESTEM	10.0%			
Solidago speciosa	SHOWY GOLDENROD	0.5%			
Sorghastrum nutans	INDIAN GRASS	7.0%			
Tradescantia subaspera	ZIGZAG SPIDERWORT	1.0%			
Tripsacum dactyloides	EASTERN GAMAGRASS	12.0%			
Zizia aurea	GOLDEN ZIZIA	2.0%			
	TOTAL	100%			

TOTAL ZONE 1 AND 2 SEEDING AREA =

Z	ZONE 3 - UPLAND (25 LBS/AC)		
PECIES	COMMON NAME	PERCENT	
estuca ovina	HARD FESCUE	50.0%	
estuca arundinacea	TALL FESCUE	25.0%	
oa pratensis	KENTUCKY BLUEGRASS	25.0%	
	TOTAL	100%	

TOTAL ZONE 3 SEEDING AREA =

WOODY PLANTINGS

ZONE	ZONE 1 - STREAMBANK - 3' O.C. (4,840 STEMS/AC)		
SPECIES	COMMON NAME	% OF STEMS	
	LIVE STAKES		
Cornus amomum	SILKY DOGWOOD	30%	
Salix sericea	SILKY WILLOW	30%	
Salix nigra	BLACK WILLOW	15% 16%	
Salix caroliniana	CAROLINA WILLOW	10%	
Sambucus canadensis	CLBERBERRY	10%	
Physocarpus opulifolius	NINEBARK	15% 1999	
	TOTAL	100%	

TOTAL ZONE 1 PLANTING AREA =

PECIES	COMMON NAME	% OF STEMS
PECIES	COMMON NAME	% OF STEIVIS
	OVERSTORY	
Betula lenta	SWEET BIRCH	10%
Betula alleghaniensis	YELLOW BIRCH	10%
Betula nigra	RIVER BIRCH	10%
Carya cordiformis	BITTERNUT HICKORY	10%
Quercus marilandica	BLACKJACK OAK	10%
Ceanothus americanus	NEW JERSEY TEA	5%
lyssa sylvatica	BLACK GUM	5%
	UNDERSTORY	
Cephalanthus occidentalis	BUTTON BUSH	5%
Nnus serrulata	HAZEL ALDER	5%
lamamelis virginiana	WITCH HAZEL	5%
accinium macrocarpon	AMERICAN CRANBERRY	5%
accinium altomontanum	BLUE RIDGE BLUEBERRY	5%
/iburnum carolinianum	CAROLINA ARROWWOOD	5%
iburnum lantanoides	HOBBLEBUSH	5%
iburnum acerifolium	MAPLE-LEAF ARROWWOOD	5%
	TOTAL	100%

TOTAL ZONE 2 PLANTING AREA =

FINAL DRAWING

REVISIONS:

STREAM RESTORATION

BRANCH

FOU

VEGETATION I

DATE: 10/18/2022 PLOT SIZE: 24" x 36" H.D.: NAD83 (NCSP) V.D.: NAVD88

BOARD OF COMMISSIONERS MEETING STAFF MEMORANDUM

December 13, 2022

Agenda Item F-3

Town of Biltmore Forest Centennial Celebration



Background

The Town was officially chartered by the North Carolina Legislature on February 14, 1923. The coming year will mark the Town's 100th anniversary. The Friends of Biltmore Forest (FOBF) Committee has spearheaded the planning efforts for centennial events through the leadership of Cindy Holman, who has chaired the 100th Anniversary sub-committee. Ms. Holman and her committee members have volunteered significant time to planning a wide range of events for the coming year and they, along with the standing members of the FOBF committee, should be applicated for their efforts.

The events planned for the first part of the Town's Centennial are laid out below.

January 1, 2023 – Centennial 5k Run/Walk

The race begins at 2pm on Sunday, January 1, 2023 and finish at Rosebank Park. The race is suitable for those running, walking, or strolling. By registering for this free 5k, you'll be helping the Town kick off our centennial with a healthy and fun outing. Food trucks, beverages, and activities will be available after the race in Rosebank Park to help continue the celebration. All those attending - whether running or not - are encouraged to bring a pair of new or lightly used shoes, boots, or socks for donation to a local charity shoe closet. All items collected will be donated to those in need within our community.

For those interested in registering for the event and viewing this agenda packet electronically, please use the following link to sign up:

https://www.cognitoforms.com/TownOfBiltmoreForest1/Centennial5kRegistration

January 8, 2023 – Lecture on the Formation of the Town of Biltmore Forest

On Sunday, January 8, 2023, Diane Zimmerman will be providing a free lecture titled "The History of Biltmore Forest". The lecture will be given twice – at 2pm and 4pm – and will take place at the Biltmore Forest Town Hall. Diane's impeccably researched articles have been featured for several years in The Forest Companion (now Stroll). Refreshments will be provided!

February 14, 2023 – Founders' Day Commemoration and Art Show Opening

As noted above, the Town's official 100th anniversary will occur on Tuesday, February 14, 2023. Ironically, this also is the same date the Board of Commissioners regularly meet and will serve as the backdrop to the Town's commemoration called Founders' Day. The day will commence with a special proclamation from the Mayor regarding the Town's 100th anniversary and refreshments for children. Upon the conclusion of the Board's regular meeting, the art show opening and toast to the Town will occur at 6pm. The art show will be set up in the Town's Social Room and will be available for visiting for several days after the 14th.

The Town is inviting artists to display their creations, and is looking for 2-dimensional arts, such as painting, drawing, photographs; 3-dimensional arts, like pottery and sculpture; and small-scale live music such as single-instrument or chamber group players for the February 14 opener. Contact Sara Lavelle directly or via email to bfanniversary@biltmoreforest.org specifying "Art Show" in the subject line, to contribute art.

March 19, 2023 - Biltmore Forest Centennial Trolley Tour

This tour is geared toward Biltmore Forest residents interested in tidbits about past notable places, people, and events around town. The trolley tour will be a 45- to 60-minute nonstop tour of a route through Biltmore Forest on a Grayline Trolley, with members of the 100th Anniversary History Committee giving brief descriptions of points of interest relating to people and events in our Town's history. The History Committee is cataloging anecdotes on this tour, that will be fun blasts from the past, as well as surprises and informative tidbits.

The 100th anniversary committee is soliciting fun and informative stories from Biltmore Forest residents to help enliven the tours. For those interested in sharing stories, please reach out directly to <u>bfanniversary@biltmoreforest.org</u> and include as much "who, what, when, where, why and how" to help convey the uniqueness of your anecdote. Good-quality digital photos of the site and any special architectural detail(s) would be great to submit as well, if you are willing to share. If submitting, please use the subject line "trolley" in the email.

For those interested in attending, you may register for either time listed below, by emailing bfanniversary@biltmoreforest.org with "tour" in subject line and names of Biltmore Forest residents who will be attending.

When: Sunday, March 19, 2023—2 and 3pm

Where: The trolley will depart and leave from the Town Hall

BOARD OF COMMISSIONERS MEETING STAFF MEMORANDUM

December 13, 2022

Agenda Item F-4

Planning Commission Update - Chair Paul Zimmerman



Background

Mr. Paul Zimmerman, chair of the Planning Commission, will be present to discuss the Planning Commission's scope of work over the past month. As noted at the last meeting and also at the Board meeting in August, the Commission is working specifically on the items called out within the Town's Comprehensive Plan for improvement or review. The Comprehensive Plan was adopted by the Board of Commissioners at the regular May meeting as the new overall land use guide for the Town.