

# LOCATION MAP

Contract Drawings For

# METROPOLITAN SEWERAGE DISTRICT OF BUNCOMBE COUNTY

# French Broad Interceptor Emergency Repair MSD Project No. 2021036

**Issued For Bids** 

Lyman Street Asheville, NC 28806

Date: June 2022



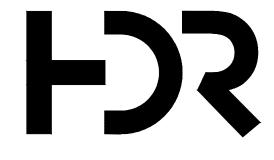
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GENERAL 00G-00 00G-01

CIVIL 01C-01 02C-01 02C-02 02C-03 02C-04 02C-05 03C-01 03C-02 03C-03 03C-04

04C-01

04C-02



HDR Engineering, Inc. of the Carolinas

440 S. Church Street, Suite 1000 Charlotte NC 28202 704.338.6700

N.C.B.E.L.S. License Number F-0116

## X OF DRAWINGS

COVER SHEET AND INDEX BYPASS PUMPING PLAN AND GREENWAY DETOUR PLAN

EXISTING CONDITIONS GRAVITY SEWER PLAN AND PROFILE STA 0+00 TO STA 4+00 GRAVITY SEWER PLAN AND PROFILE STA 4+00 TO STA 8+00 GRAVITY SEWER PLAN AND PROFILE STA 8+00 TO STA 10+39 GRAVITY SEWER PLANS AND PROFILES STORM PLAN AND PROFILE CIVIL DETAILS 1 CIVIL DETAILS 2 EROSION CONTROL NOTES EROSION CONTROL DETAILS 1 GREENWAY RESTORATION DETAILS 1 GREENWAY RESTORATION DETAILS 2

1	2		3
KEYED NOTES		GENERAL NO	TES
AVERAGE DAY FLOW IN THE SWANNANOA INT 8-MGD, PEAK FLOW IS APPROXIMATELY 20-MG		1. COMPLY WITH PUMPING.	I SPECIFICATION SECTION 33 01 33-TEMPOR
2 AVERAGE DAY FLOW IN THE SOUTH FRENCH E APPROXIMATELY 8-MGD, PEAK FLOW IS APPR		BIKE PATH AN	) IMAGE SHOWN DOES NOT INCLUDE THE RO D GREENWAY PATH IMPROVEMENTS ALONG REQUIRED TO UNDERSTAND THE WORK AND
3 BYPASS PIPE(S) SHALL BE INSTALLED ON THE TO KEEP IT OFF THE TRAVEL LANES. COMPLY INSTALL REFLECTIVE TAPE ON SIDE OF PIPE F AT NIGHT. HAVE SPARE FUSED PIPE AND FITT	WITH ALL NCDOT REQUIREMENTS. ACING TRAFFIC TO MAKE VISIBLE	INSTALLATION	D COSTS REQUIRED FOR THE PLANNING, DE I, OPERATION, MAINTENANCE AND REMOVAI IPONENTS IS THE SOLE RESPONSIBILITY OF
4 EXISTING MANHOLE INCLUDES A 48" INCOMING SEWER. MANHOLE RIM ELEVATION IS APPROX ELEVATION IS APPROXIMATELY 1977± AND INV APPROXIMATELY 1966.6	(IMATELY 1983.1, GROUND	LAYOUT OF TH	SHOWN ON THE DRAWING IS ONLY TO PROV HE BYPASS PUMPING SYSTEM FOR GENERAL SERVE AS THE DETAILED DESIGN THAT THE (
5 EXISTING MANHOLE INCLUDES A 48" INCOMING SEWER. MANHOLE RIM ELEVATION IS APPROX ELEVATION IS APPROXIMATELY 1980±, AND IN APPROXIMATELY 1967±. MANHOLE SERVES AS REMOVE METER PRIOR TO CONSTRUCTION AN CONSTRUCTION.	(IMATELY 1980±, GROUND VERT ELEVATION OF S A METERING SITE, MSD WILL		
6 EXISTING MANHOLE INCLUDES A 48" INCOMING SEWER. MANHOLE RIM ELEVATION IS APPROX ELEVATION IS APPROXIMATELY 1984±, AND IN APPROXIMATELY 1966.3.	(IMATELY 1992.2, GROUND	55 55 (0)	
7INSTALL A PLUG INSIDE THE CARRIER BRIDGE TO BYPASS PUMPS LOCATED SOUTH OF AMBO		<u>θ</u> 2	
8 EXISTING MANHOLE INCLUDES A 48" INCOMING SEWER. MANHOLE RIM ELEVATION IS APPROX ELEVATION IS APPROXIMATELY 1974±, AND TH APPROXIMATELY 1960.4.	(IMATELY1976.3, GROUND		
9 EXISTING MANHOLE INCLUDES A 48" INCOMING SEWER. MANHOLE RIM ELEVATION IS APPROX ELEVATION IS APPROXIMATELY 1975± AND THE APPROXIMATELY 1961.0.	(IMATELY 1976.3, GROUND		
(10) TO BYPASS THE EXISTING 10" GRAVITY SEWER MANHOLE OR STANDPIPE BETWEEN THE CON SEWER AND LYMAN STREET TO PROVIDE A BY	NECTION INTO THE EXISTING 54"		
		BYPASS PUMP D	
And a local distance of the local distance o			(PRIMARY)
			55 55 F
			LYNAAN STREET 9155
		55	
		55	── BYPASS PIPE(S)
BYPASS PUMP DIS (SECONDARY IF I		55	
E State	55		
	55 (9)	GRAVITT	Sewer
	3		
	1 3	RIVER	
	3	OH BROAD RIVER	
(0) 5 <sup>5</sup>	FREN	0.	
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55 55			
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60			
6. 5			
GREENWAY DETOUR. 10-FEET EXISTING CROSSWALK, INSTA	ALL SIX NCDOT		
DRUMS ACROSS THE BIKE PA MULTI-USE PATH AND A SIGN CENTER OF EACH PATH THAT	IN THE STATES "PATH		
CLOSED. DETOUR ACROSS TH	HE STREET".		

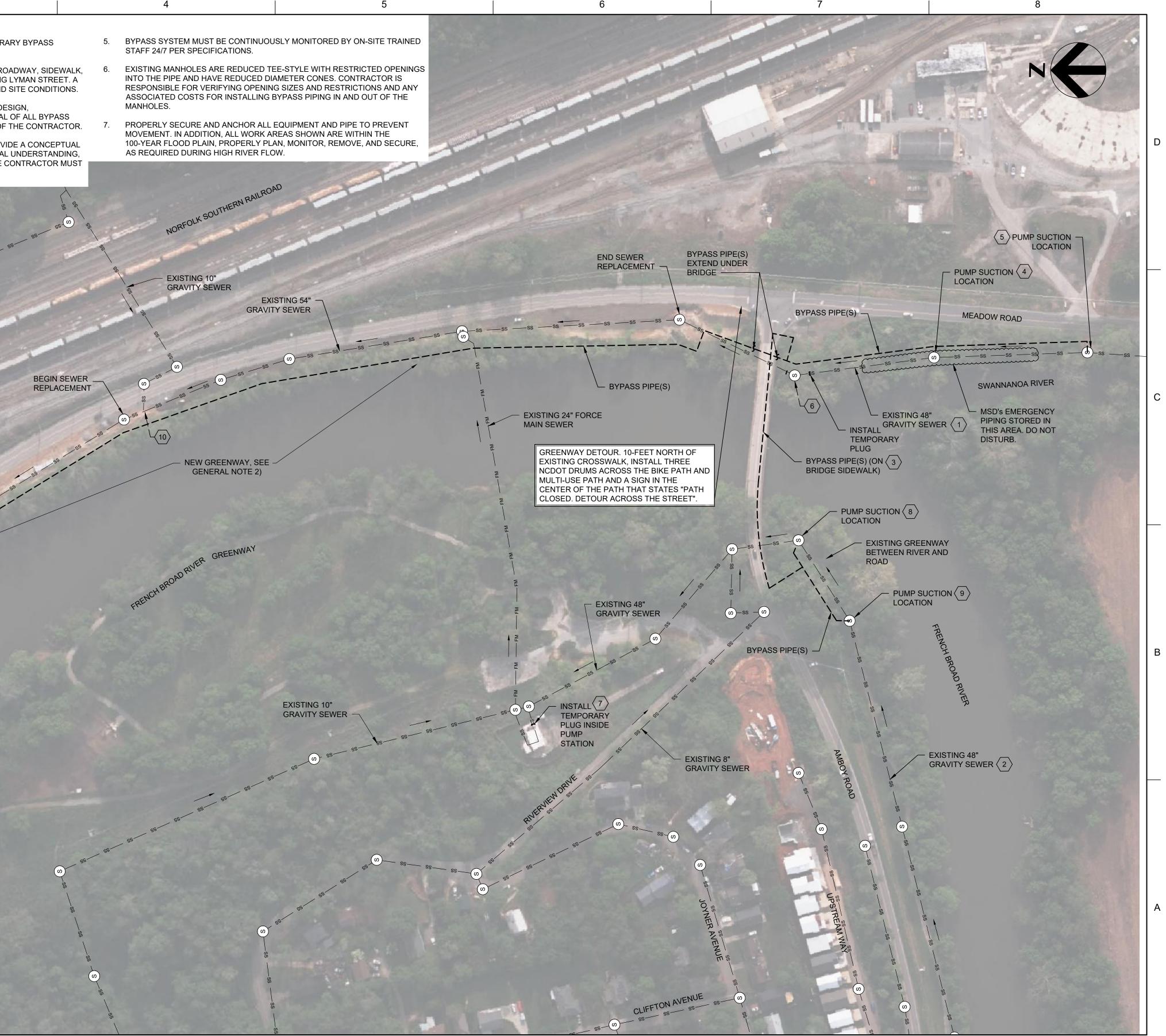
HDR Engineering Inc. of the Carolinas

440 S. Church Street, Suite 1000 Charlotte, NC 28202 704.338.6700

N.C.B.E.L.S. License Number: F-0116

A 6/2022
ISSUE DATE

ISSUED FOR BIDS
DESCRIPTION



MATTHEW A. SHULTZ
M. SHULTZ, PE
S. BEROSET, PE
J. KROOSWYK
10194380





## FRENCH BROAD INTERCEPTOR REPLACEMENT

METROPOLITAN SEWERAGE DISTRICT OF BUNCOMBE COUNTY

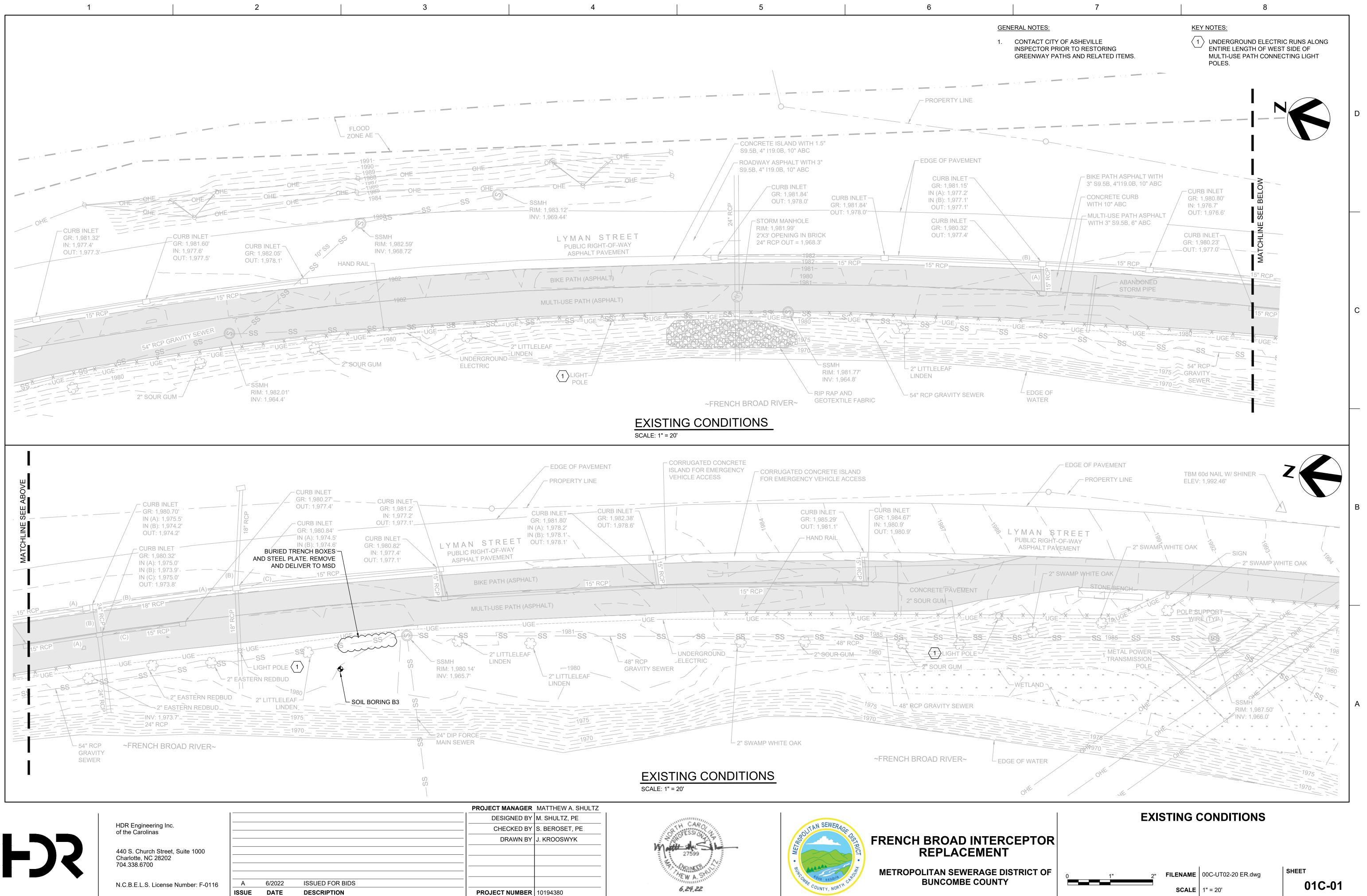
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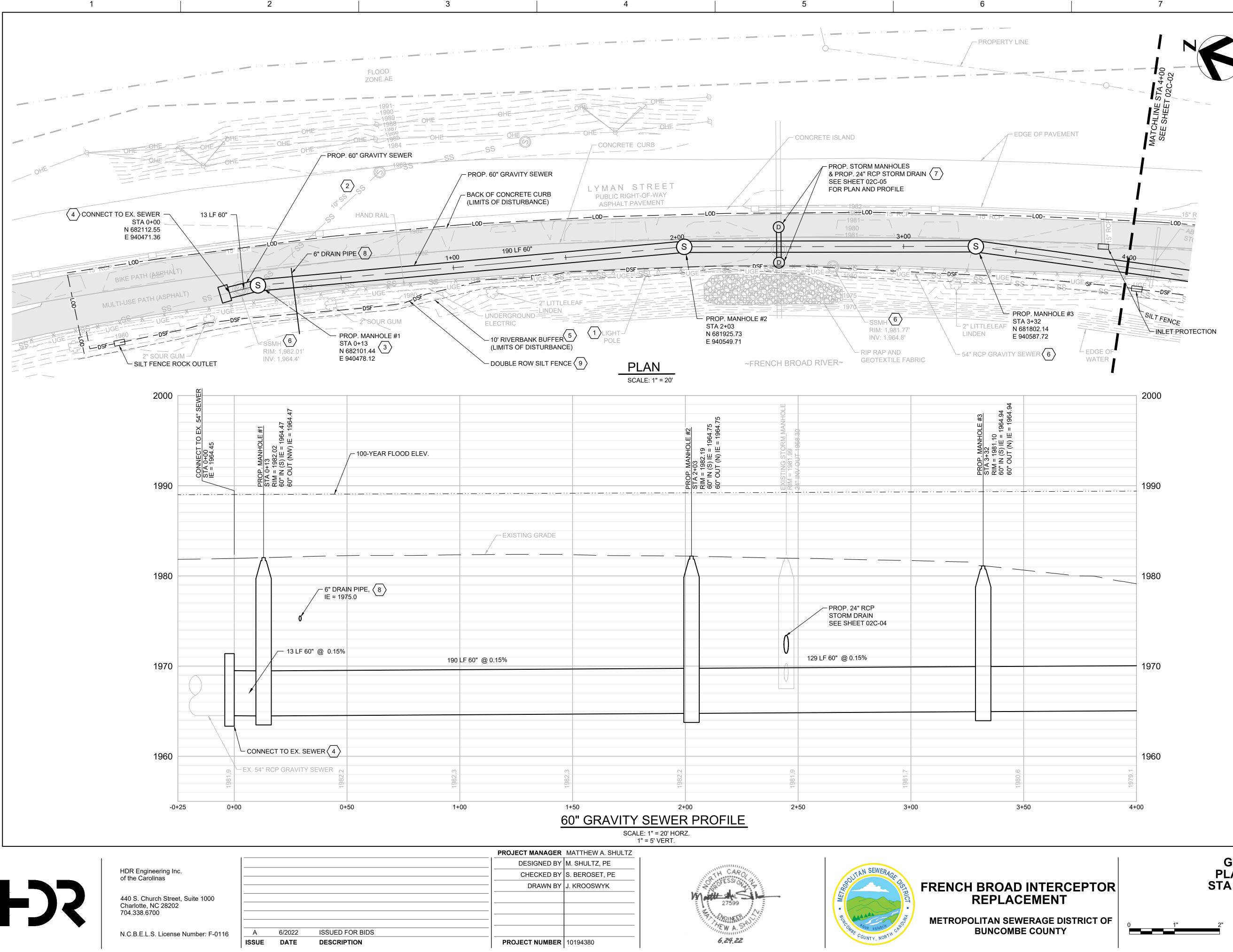
## BYPASS PUMPING PLAN GREENWAY DETOUR PLAN

 FILENAME
 00G-01.dwg

 SCALE
 1" = 100'

sheet 00G-01





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ISSUE	DATE	DESCRIPTION	



GENERAL NOTES:

- 2. ONLY THE NEWLY PLANTED LANDSCAPE TREES ARE SHOWN AND LABELED. ALL TREES LABELED NEED TO BE REPLACED **10-FEET FROM SEWER, ADDITIONAL** TREES AND VEGETATION EXIST BETWEEN ASPHALT PATH AND RIVER THAT WILL NEED TO BE CLEARED AND REMOVED WITHIN THE LIMITS OF DISTURBANCE.
- WITH THE EXCEPTION OF MANHOLE #1 (SEE KEY NOTE), FOR ALL OTHER MANHOLES CONTRACTOR MAY USE CIRCULAR PRECAS CONCRETE, T-SERIES PRECAST CONCRETE OR FIBERGLASS TEE, IN LOCATIONS THAT ALLOW FOR EACH OPTION.
- 4. ALL PROPOSED SANITARY SEWER MANHOLES SHALL HAVE SEALED WATERTIGHT FRAME AND LID.
- 5. ALL CONCRETE MANHOLES SHALL INCLUDE CONCRETE PROTECTIVE LINER.
- 6. FOR ANY TEMPORARY LANE CLOSURE OF NORTHBOUND LANE, INSTALL ALL TRAFFIC CONTROL DEVICES AND PERFORM FLAGGING PER NCDOT REQUIREMENTS.

## KEY NOTES:

- $\langle 1 \rangle$  UNDERGROUND ELECTRIC RUNS ALONG ENTIRE LENGTH OF WEST SIDE OF MULTI-USE PATH CONNECTING LIGHT POLES. REMOVE AND REPLACE AS REQUIRED AS PART OF PIPE INSTALLATION.
- $\langle 2 \rangle$  VERIFY EXISTING GRAVITY SEWER SIZE, LOCATION AND MATERIAL TYPE. CONNECT INTO PROPOSED MANHOLE #1.
- $\langle 3 \rangle$  MANHOLE #1 SHALL HAVE A MINIMUM INSIDE DIAMETER OF 120", INCREASE IF NEEDED TO ACCEPT 10" SEWER, AND 60" RISER UP TO THE CONE SECTION. PRIOR TO CONSTRUCTION, VERIFY LOCATION OF 10" SEWER AND ADJUST PROPOSED MANHOLE LOCATION AS REQUIRED.
- $\langle 4 \rangle$  CONNECT EXISTING 54" PIPE TO PROPOSED 60" PIPE USING BURIED PRECAST JUNCTION STRUCTURE WITH FLEXIBLE BOOT CONNECTION. MEET ALL REQUIREMENTS OF PRECAST MANHOLES AND PROVIDE PROTECTIVE LINING ON WALLS AND SOLID TOP. PER MANUFACTURE'S SPECIFICATIONS. PRECAST CONCRETE STRUCTURE CAN BE ROUND, RECTANGULAR OR T-STYLE MANHOLE BASE.
- $\langle 5 \rangle$  10' BUFFER FROM TOP OF RIVER BANK. NO TREE CLEARING OR EXCAVATIONS ALLOWED WITHIN BUFFER. TEMPORARY BYPASS PIPING CAN BE INSTALLED WITHIN BUFFER.
- $\langle 6 \rangle$  ALL EXISTING MANHOLES AND GRAVITY SEWER PIPE SHALL BE REMOVED OR ABANDONED. ANY PIPE SECTIONS NOT REMOVED SHALL HAVE ALL OPEN ENDS PLUGGED WITH CONCRETE. ANY MANHOLES NOT REMOVED SHALL HAVE TOP 3-FEET REMOVED, ALL PIPE PLUGGED WITH CONCRETE AND REMAINING PORTION FILLED WITH COMPACTED SOIL.
- 7 REMOVE EXISTING STORM MANHOLE AND PIPE AS REQUIRED TO INSTALL NEW GRAVITY SEWER AND NEW STORM SYSTEM.
- 8 INSTALL PERFORATED 6" PLASTIC PIPE WITH SOCK TO SERVE AS A FRENCH DRAIN. DAYLIGHT IN RIVER BANK.
- $\langle 9 \rangle$  REDUCE TO SINGLE ROW WHERE ASPHALT PATH DOES NOT ALLOW INSTALLATION OF SECOND ROW.

## **GRAVITY SEWER** PLAN AND PROFILE STA 0+00 TO STA 4+00

FILENAME 00C-UT02-20 ER.dwg

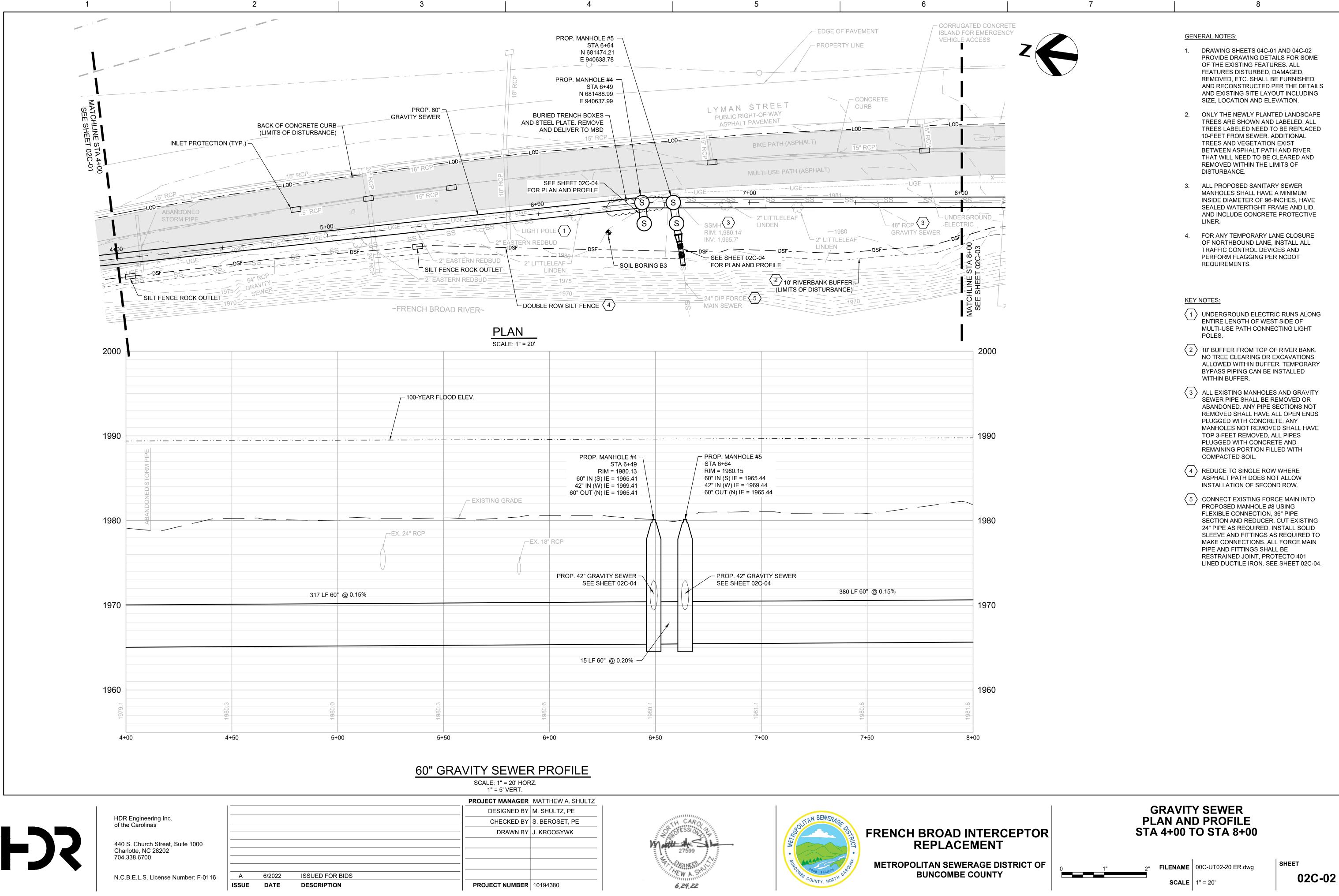
SHEET 02C-01

**SCALE** 1" = 20'

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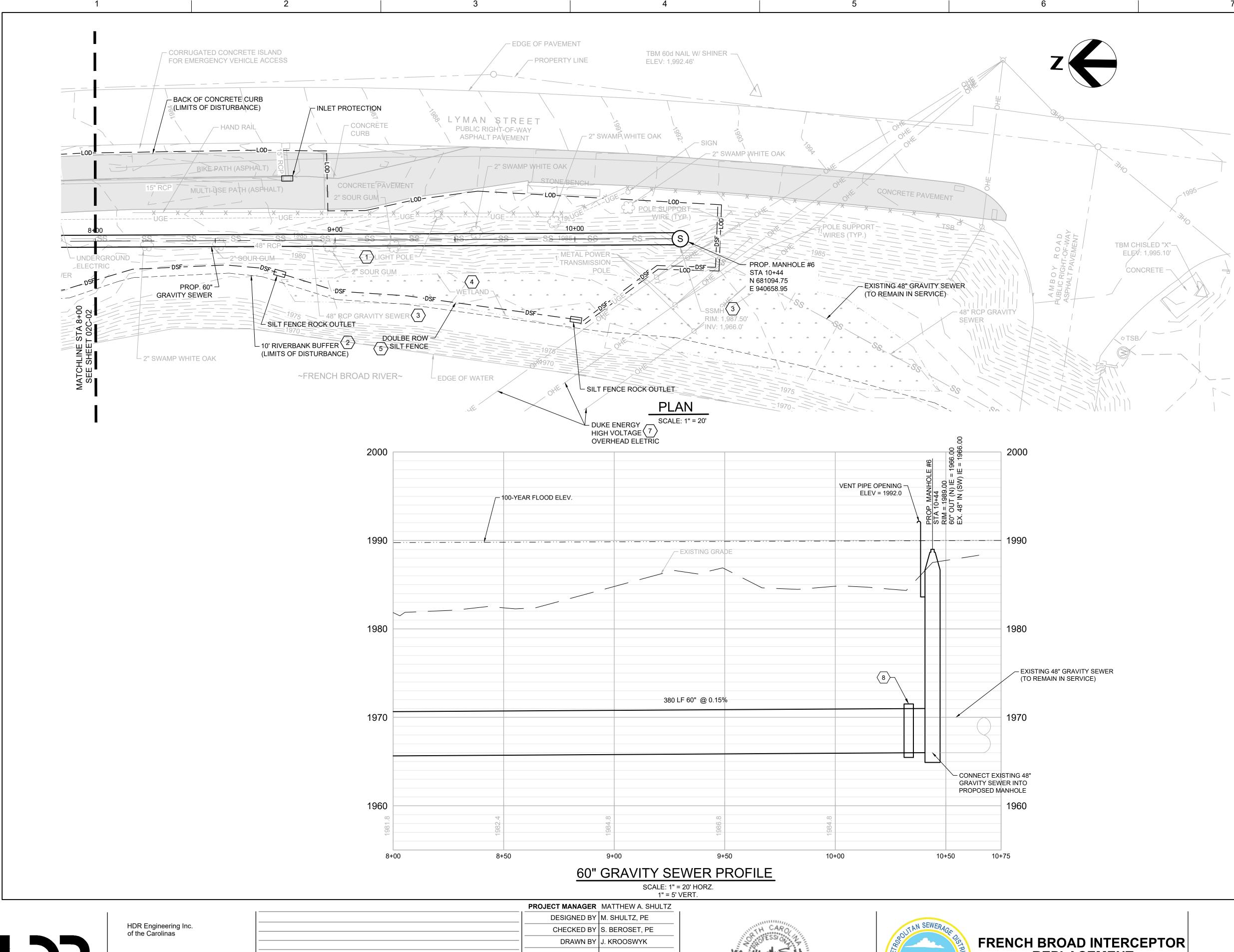


PROJECT MANAGER	MATTHEW A. SHULTZ
DESIGNED BY	M. SHULTZ, PE
CHECKED BY	S. BEROSET, PE
DRAWN BY	J. KROOSYWK
PROJECT NUMBER	10194380
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NCRETE RGENCY	GENERAL NOTES:
	1. DRAWING SHEETS 04C-01 AND 04C-02 PROVIDE DRAWING DETAILS FOR SOME OF THE EXISTING FEATURES. ALL FEATURES DISTURBED, DAMAGED, REMOVED, ETC. SHALL BE FURNISHED AND RECONSTRUCTED PER THE DETAILS AND EXISTING SITE LAYOUT INCLUDING SIZE, LOCATION AND ELEVATION.
	2. ONLY THE NEWLY PLANTED LANDSCAPE TREES ARE SHOWN AND LABELED. ALL TREES LABELED NEED TO BE REPLACED 10-FEET FROM SEWER. ADDITIONAL TREES AND VEGETATION EXIST BETWEEN ASPHALT PATH AND RIVER THAT WILL NEED TO BE CLEARED AND REMOVED WITHIN THE LIMITS OF DISTURBANCE.
	3. ALL PROPOSED SANITARY SEWER MANHOLES SHALL HAVE A MINIMUM INSIDE DIAMETER OF 96-INCHES, HAVE SEALED WATERTIGHT FRAME AND LID, AND INCLUDE CONCRETE PROTECTIVE LINER.
	4. FOR ANY TEMPORARY LANE CLOSURE OF NORTHBOUND LANE, INSTALL ALL TRAFFIC CONTROL DEVICES AND PERFORM FLAGGING PER NCDOT REQUIREMENTS.
	KEY NOTES:
L 2	UNDERGROUND ELECTRIC RUNS ALONG ENTIRE LENGTH OF WEST SIDE OF MULTI-USE PATH CONNECTING LIGHT POLES.
00	2 10' BUFFER FROM TOP OF RIVER BANK. NO TREE CLEARING OR EXCAVATIONS ALLOWED WITHIN BUFFER. TEMPORARY BYPASS PIPING CAN BE INSTALLED WITHIN BUFFER.
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	4 REDUCE TO SINGLE ROW WHERE ASPHALT PATH DOES NOT ALLOW INSTALLATION OF SECOND ROW.
30	5 CONNECT EXISTING FORCE MAIN INTO PROPOSED MANHOLE #8 USING FLEXIBLE CONNECTION, 36" PIPE SECTION AND REDUCER. CUT EXISTING 24" PIPE AS REQUIRED, INSTALL SOLID SLEEVE AND FITTINGS AS REQUIRED TO MAKE CONNECTIONS. ALL FORCE MAIN PIPE AND FITTINGS SHALL BE RESTRAINED JOINT, PROTECTO 401 LINED DUCTILE IRON. SEE SHEET 02C-04.
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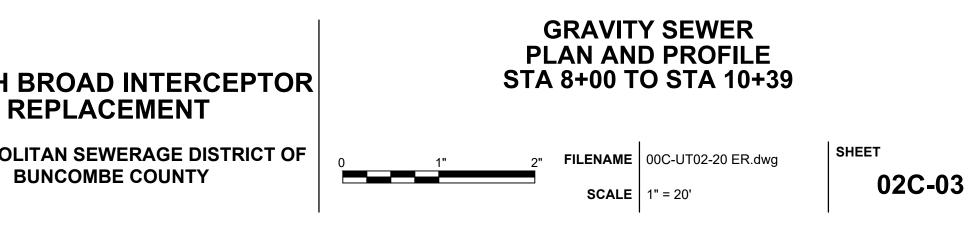
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METROPOLITAN SEWERAGE DISTRICT OF **BUNCOMBE COUNTY** 

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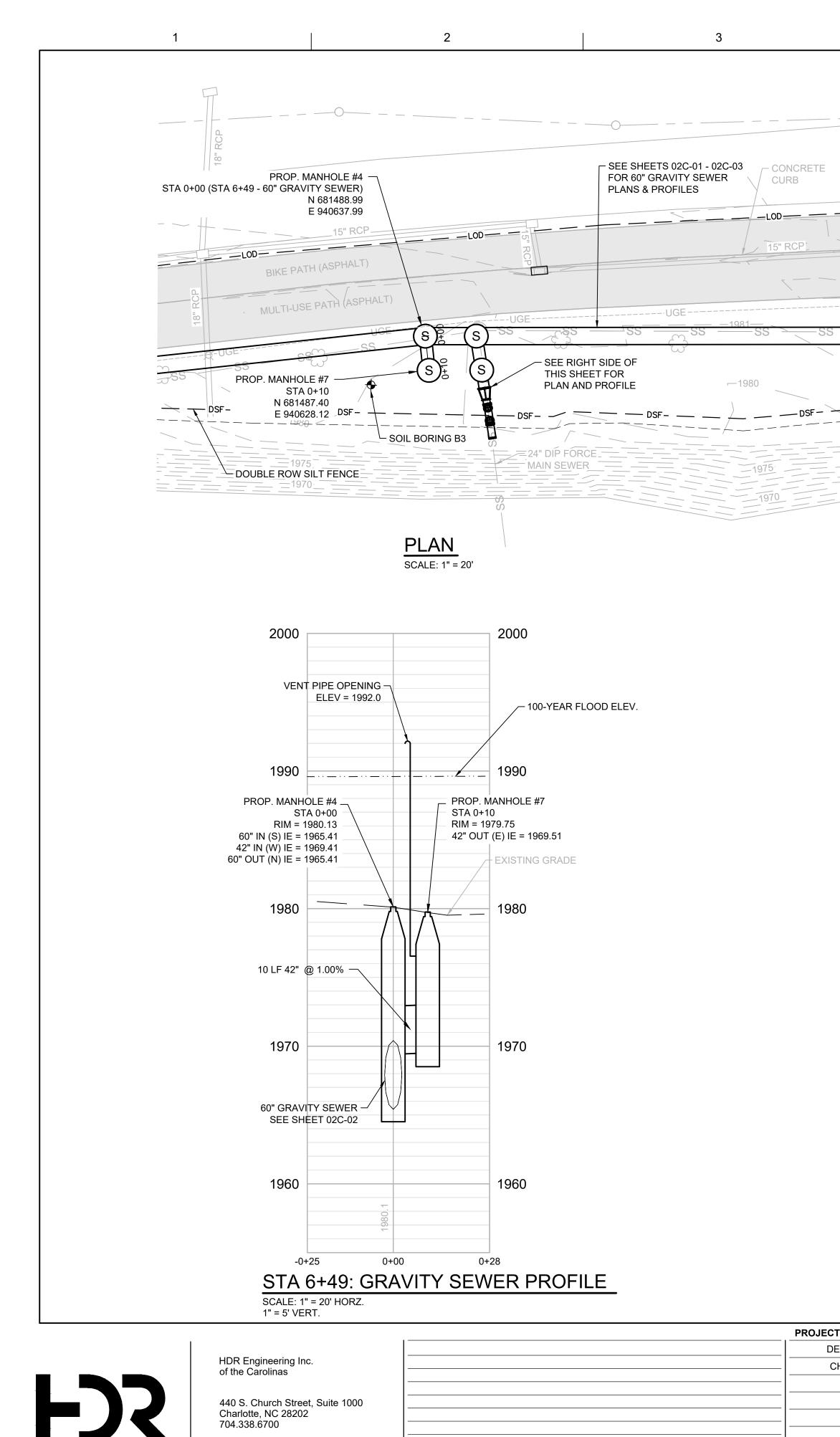
## KEY NOTES:

- (1) UNDERGROUND ELECTRIC RUNS ALONG ENTIRE LENGTH OF WEST SIDE OF MULTI-USE PATH CONNECTING LIGHT POLES.
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- $\langle 4 \rangle$  LIMIT DISTURBANCE TO WETLAND AREA TO THE EXTENT POSSIBLE. INSTALL TEMPORARY GEOTEXTILE FABRIC BEFORE PLACING ANY TEMPORARY FILL FOLLOWING CONSTRUCTION RESTORE TO PRE-CONSTRUCTION ELEVATIONS AND PLAN SPECIAL WETLAND SEED MIX.
- $\left< \frac{5}{5} \right>$  REDUCE TO SINGLE ROW WHERE ASPHALT PATH DOES NOT ALLOW INSTALLATION OF SECOND ROW.
- 6 RESTORE ALL SLOPE DISTURBED BETWEEN STA 8+50 AND MANHOLE #5 WITH EROSION CONTROL MATTING, SEE DETAIL 7/03C-04.
- 7COMPLY WITH ALL OSHA, DUKE ENERGY<br/>AND OTHER APPLICABLE GUIDELINES AND SAFETY STANDARDS FOR WORKING NEAR AND UNDER HIGH VOLTAGE ELECTRICAL LINES. CONTRACTOR IS RESPONSIBLE FOR COORDINATING ALL WORK WITH DUKE ENERGY.
- $\langle 8 \rangle$  FURNISH AND INSTALL HOBAS CLOSURE COUPLING OR APPROVED STAINLESS STEEL REPAIR SLEEVE TO JOIN PIPE ENDS. INCLUDE COST AS PART OF THE 60" PIPE INSTALLATION.



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N.C.B.E.L.S. License Number: F-0116

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DATE

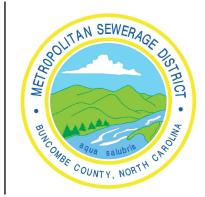
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ISSUE

PROJECT MANAGER	MATTHEW A. SHULTZ	
DESIGNED BY	M. SHULTZ, PE	- 1
CHECKED BY	S. BEROSET, PE	IN TH
DRAWN BY	J. KROOSWYK	
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PROJECT NUMBER	10194380	6.

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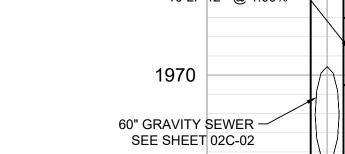
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## **FRENCH BROAD INTERCEPTOR** REPLACEMENT

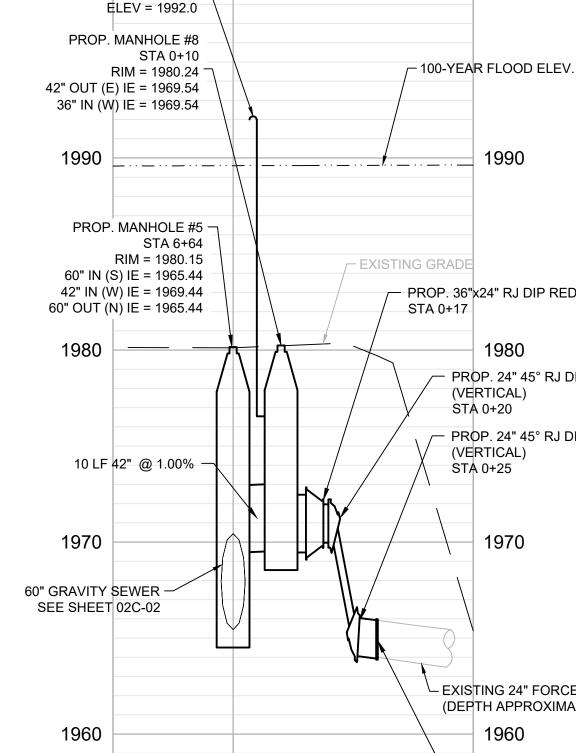
**METROPOLITAN SEWERAGE DISTRICT OF BUNCOMBE COUNTY** 

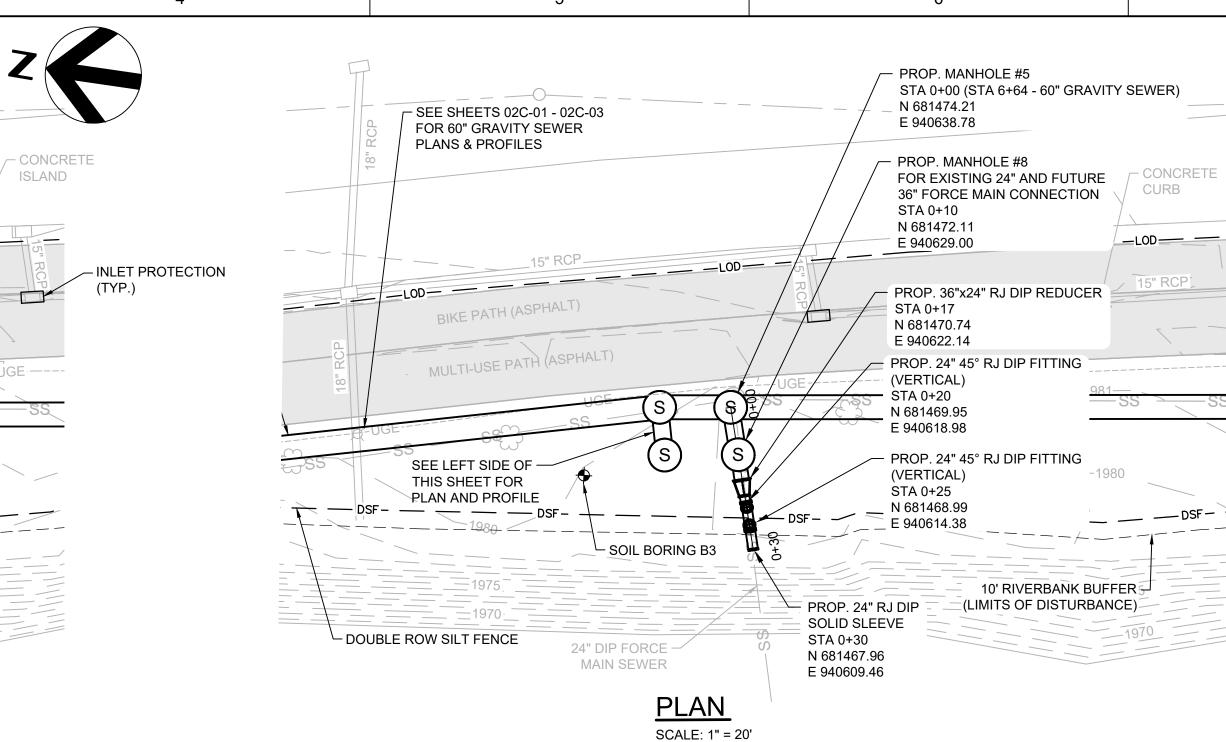
# 0+00 STA 6+64 42" GRAVITY SEWER & 24" FORCE MAIN PROFILE SCALE: 1" = 20' HORZ. 1" = 5' VERT.

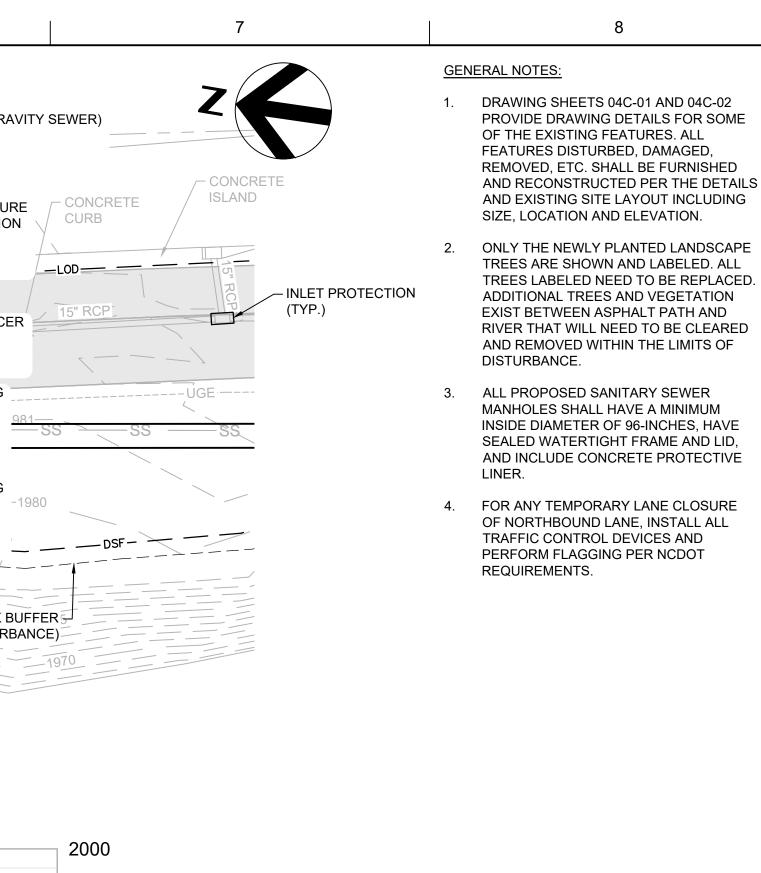


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VENT PIPE OPENING







	EXIST BETWEEN ASPHALT PATH AND RIVER THAT WILL NEED TO BE CLEARED AND REMOVED WITHIN THE LIMITS OF DISTURBANCE.
3.	ALL PROPOSED SANITARY SEWER MANHOLES SHALL HAVE A MINIMUM INSIDE DIAMETER OF 96-INCHES, HAVE SEALED WATERTIGHT FRAME AND LID, AND INCLUDE CONCRETE PROTECTIVE LINER.
4.	FOR ANY TEMPORARY LANE CLOSURE OF NORTHBOUND LANE, INSTALL ALL TRAFFIC CONTROL DEVICES AND PERFORM FLAGGING PER NCDOT REQUIREMENTS.

PROP. 36"x24" RJ DIP REDUCER STA 0+17

\_\_\_\_ 1990

1980 - PROP. 24" 45° RJ DIP FITTING (VERTICAL) STA 0+20

- PROP. 24" 45° RJ DIP FITTING

(VERTICAL) STA 0+25

1970

- EXISTING 24" FORCE MAIN (DEPTH APPROXIMATE)

1960

PROP. 24" RJ DIP

# SOLID SLEEVE

## STA 0+30 0+50

PLANS AND PROFILES

**SCALE** 1" = 20'

**GRAVITY SEWER** 

FILENAME 00C-UT02-20 ER.dwg

SHEET 02C-04

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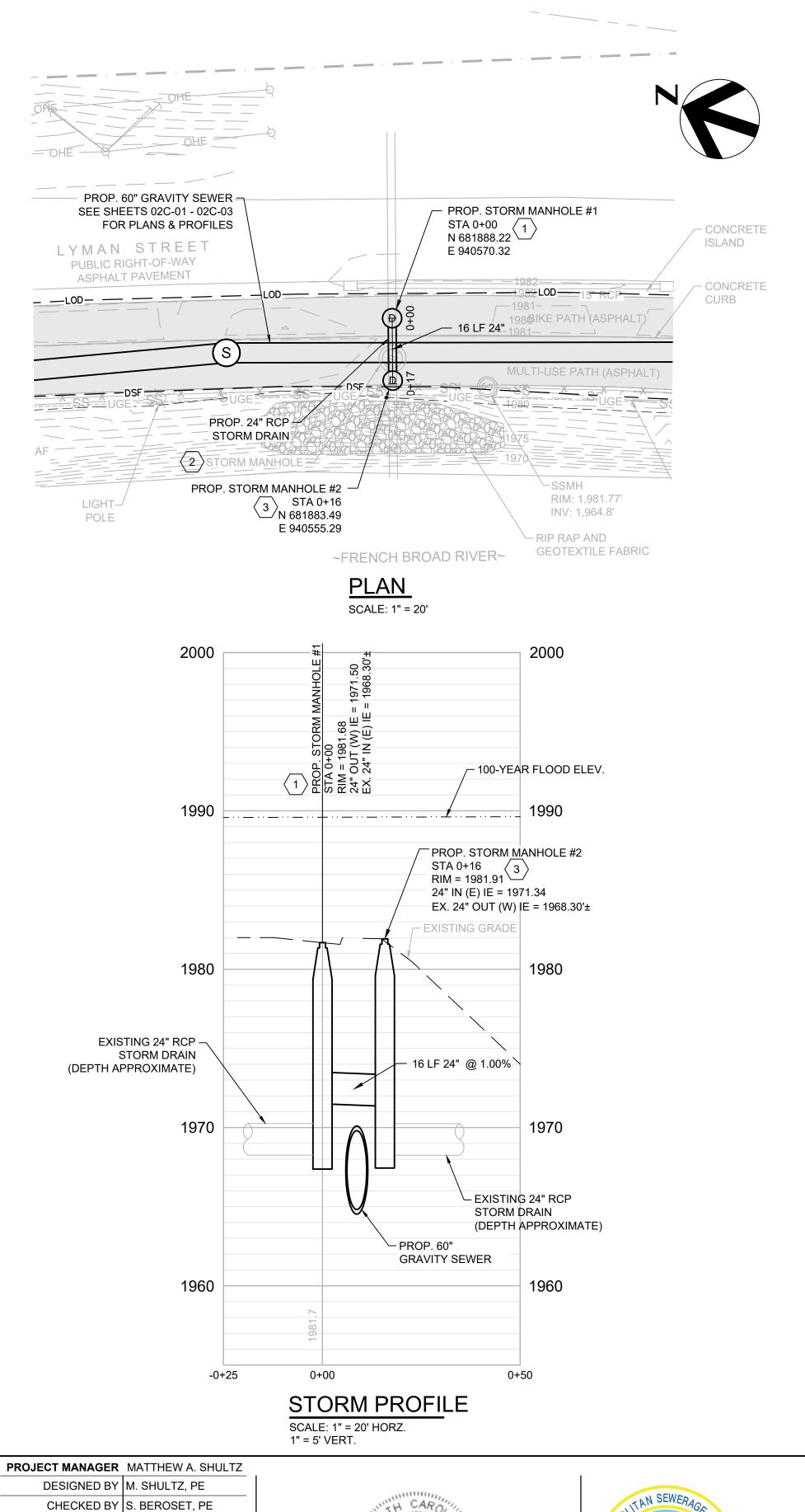
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ISSUED FOR BIDS DESCRIPTION



METROPOLITAN SEWERAGE DISTRICT OF BUNCOMBE COUNTY

6

PROJECT NUMBER 10194380

DRAWN BY J. KROOSWYK



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	KEY NOTES:
	1 ROTATE MANHOLE CONE SO THAT CENTER OF MANHOLE LID IS IN CENTER OF BIKE PATH.
	2 REMOVE EXISTING STORM MANHOLE AND PIPE AS REQUIRED TO INSTALL NEW GRAVITY SEWER AND NEW STORM SYSTEM.
	3 ROTATE MANHOLE CONE SO THAT ENTIRE MANHOLE LID IS WITHIN ASPHALT LIMITS ON MULT-USE PATH AND NOT UNDER HAND RAIL.

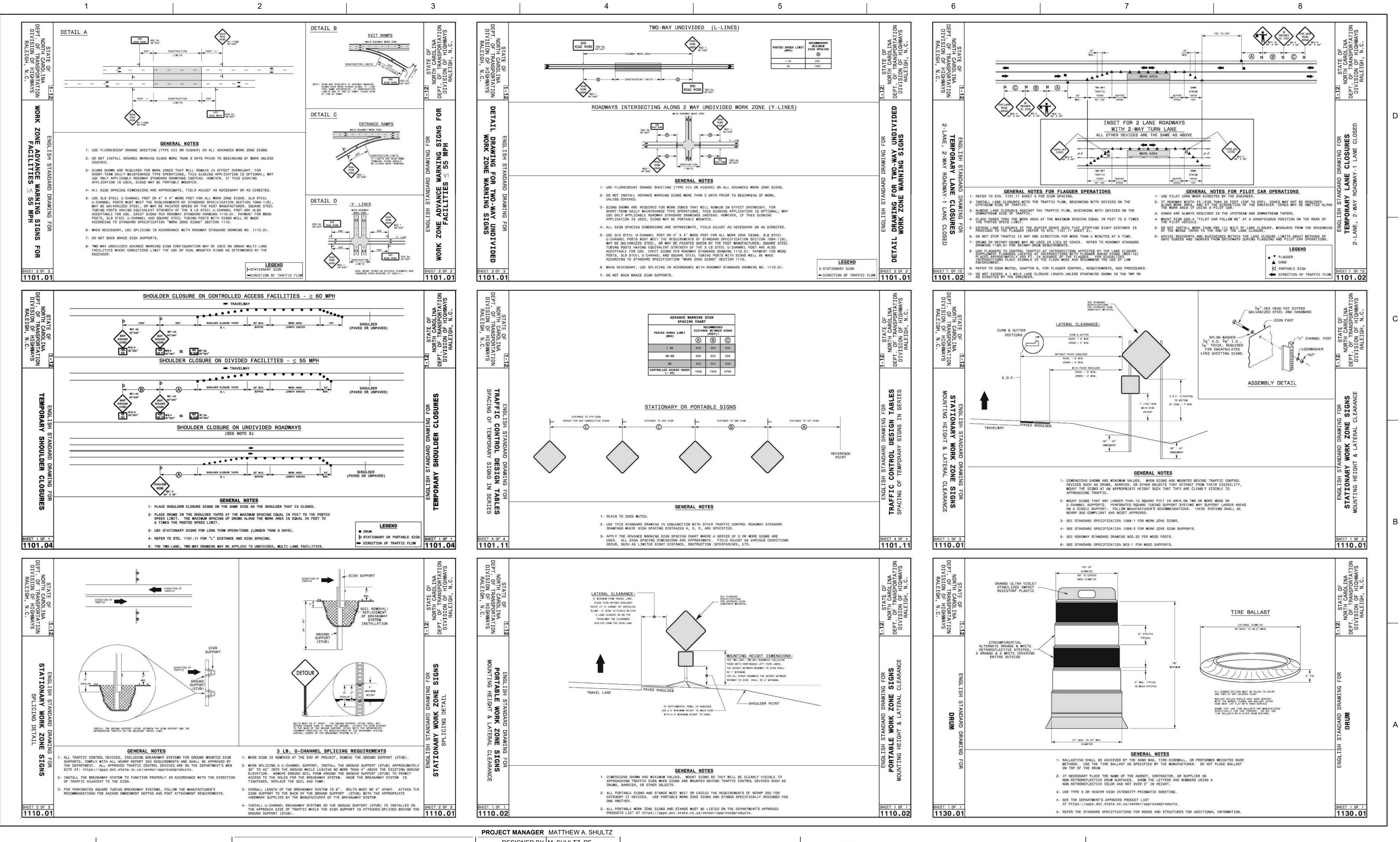


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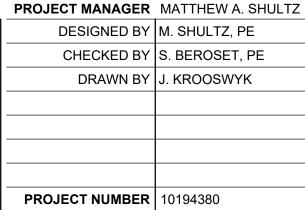
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## CARRIER BRIDGE PUMP STATION

METROPOLITAN SEWERAGE DISTRICT OF BUNCOMBE COUNTY

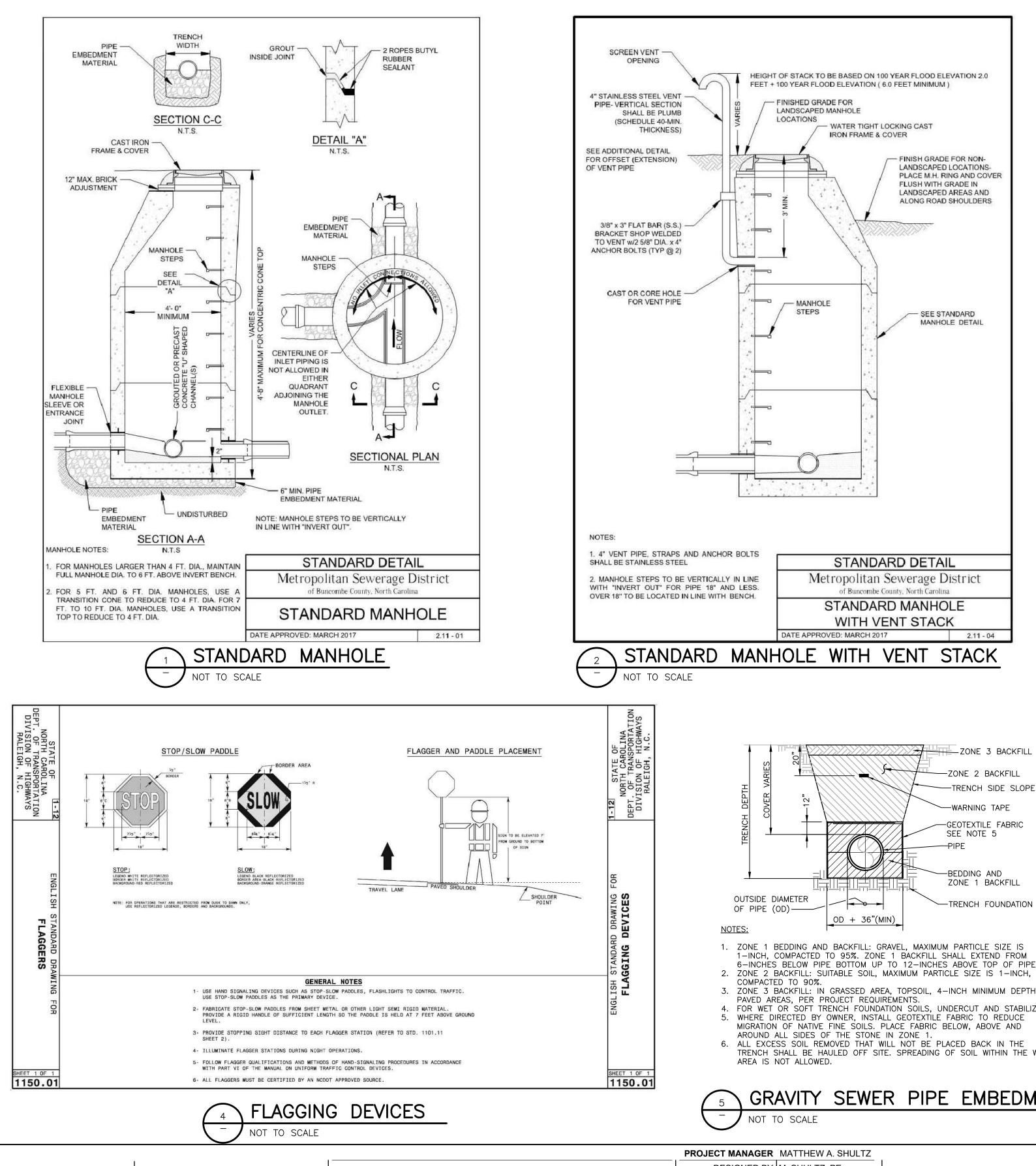


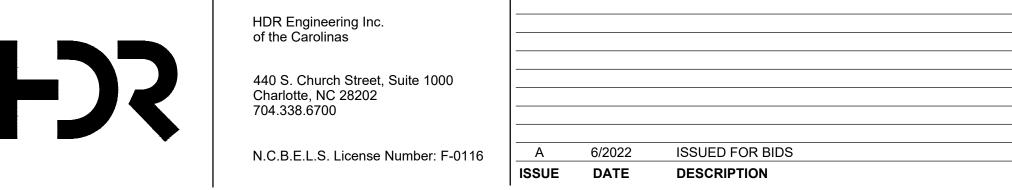
## **CIVIL DETAILS 1**

FILENAME03C-01.dwgSHESCALENOT TO SCALEO

sheet 03С-01







PROJECT MANAGER MATTHEW A. SHULTZ         DESIGNED BY M. SHULTZ, PE         CHECKED BY S. BEROSET, PE         DRAWN BY J. KROOSWYK         Image: Checked by S. BEROSET, PE         Image: Checked by S. BEROSET,	<ul> <li>6-INCHES BELOW PIPE BOTTOM UI</li> <li>2. ZONE 2 BACKFILL: SUITABLE SOIL, COMPACTED TO 90%.</li> <li>3. ZONE 3 BACKFILL: IN GRASSED AF PAVED AREAS, PER PROJECT REQU</li> <li>4. FOR WET OR SOFT TRENCH FOUNE</li> <li>5. WHERE DIRECTED BY OWNER, INST. MIGRATION OF NATIVE FINE SOILS. AROUND ALL SIDES OF THE STONE</li> <li>6. ALL EXCESS SOIL REMOVED THAT</li> </ul>	GRAVEL, MAXIMUM PARTICLE SIZE IS IE 1 BACKFILL SHALL EXTEND FROM P TO 12-INCHES ABOVE TOP OF PIPE. MAXIMUM PARTICLE SIZE IS 1-INCH, REA, TOPSOIL, 4-INCH MINIMUM DEPTH. IN JIREMENTS. DATION SOILS, UNDERCUT AND STABILIZE. ALL GEOTEXTILE FABRIC TO REDUCE PLACE FABRIC BELOW, ABOVE AND E IN ZONE 1.	NOTES: 1. TRENCH STABILIZATION REQUIRED FOR WET OR SOFT AREAS AS DETERMINED BY THE ENGINEER. 2. DEPTH OF STONE SHALL BE 18" MINIMUM, OR AS DETERMINED BY THE ENGINEER.
DESIGNED BY M. SHULTZ, PE CHECKED BY S. BEROSET, PE DRAWN BY J. KROOSWYK HILL DRAWN BY J. KROOSW		R PIPE EMBEDMENT	
PROJECT NUMBER 10194380 6.24.22	DESIGNED BY M. SHULTZ, PE CHECKED BY S. BEROSET, PE DRAWN BY J. KROOSWYK	27599	FRENCH BRO REPL BILLOUIS COUNTY, NORTH CHOINE

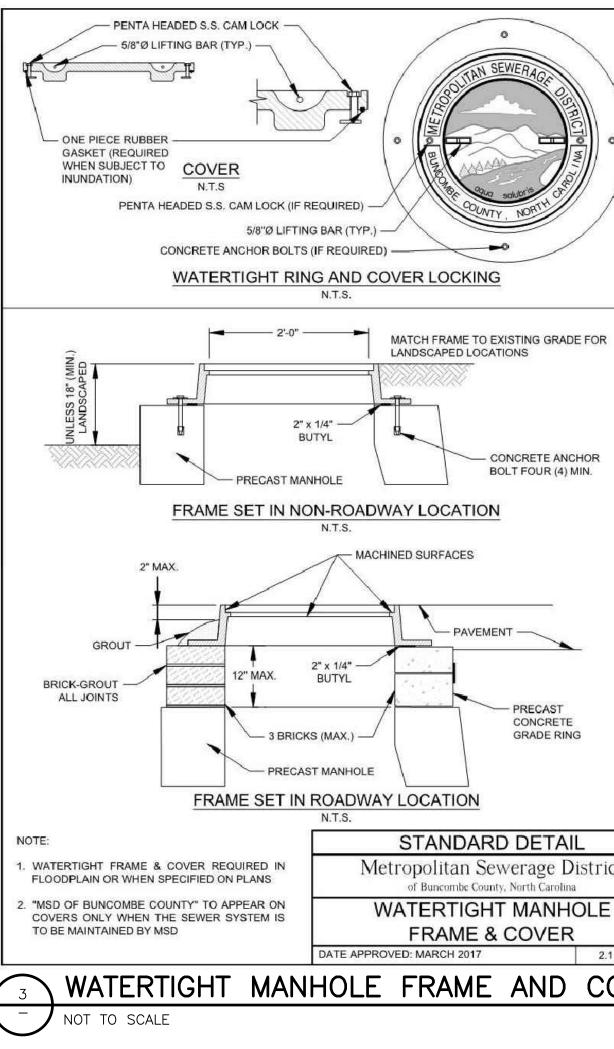
## ICH BROAD INTERCEPTOR REPLACEMENT

- TRENCH STABILIZATION STONE WRAPPED IN

GEOTEXTILE FABRIC

**ROPOLITAN SEWERAGE DISTRICT OF BUNCOMBE COUNTY** 

# ZONE 3 BACKFILL



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AGE			
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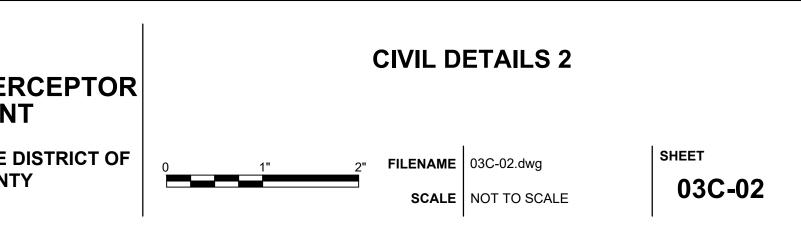
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OSION CONTROL NOTES	a. INSPECT STON

- I. THE CONTRACTOR SHALL INSTALL ALL EROSION AND SEDIMENTATION CONTROL MEASURES AND DEVICES NECESSARY TO COMPLY WITH THE STANDARDS AND SPECIFICATIONS OF THE NORTH CAROLINA DEPARTMENT OF ENVIRONMENTAL QUALITY (NC DEQ) AND APPLICABLE STATE AND LOCAL LAWS AND ORDINANCES, AND PREVENT STANDING WATER WITHIN PROJECT LIMITS, UNLESS OTHERWISE DIRECTED.
- 2. INSTALL CONSTRUCTION ENTRANCES AND ACCESS ROADS IN LOCATIONS SHOWN. IN ACCORDANCE WITH STATE STANDARDS AND WITH MINIMAL DISTURBANCE TO SURROUNDING VEGETATION AND TREES. CONTRACTOR SHALL RECEIVE PRIOR APPROVAL FROM ENGINEER BEFORE TREE REMOVAL FOR ACCESS ROAD CONSTRUCTION. WITHIN 30 DAYS AFTER CONSTRUCTION IS COMPLETED FOR WHICH ACCESS ROAD IS USED, AND UNLESS OTHERWISE APPROVED, CONTRACTOR SHALL REMOVE ALL REMNANTS OF THE ACCESS ROADS AND RETURN AREA TO AS GOOD AS OR BETTER CONDITION ADDITIONAL MEASURES TO CONTROL EROSION AND SEDIMENT MAY BE REQUIRED BASED ON CONTRACTOR'S PRACTICES OR BY THE CONTRACTING OFFICER AND WILL BE EMPLOYED WHERE DETERMINED NECESSARY BY ACTUAL SITE CONDITIONS.
- 3. ALL MATERIALS SPILLED, DROPPED, WASHED, OR TRACKED FROM VEHICLE OR SITE ONTO PUBLIC ROADWAY OR INTO STORM DRAIN MUST BE REMOVED.
- 4. ALL DITCH LINES DISTURBED DURING CONSTRUCTION SHALL BE STABILIZED BY THE CONTRACTOR. ON ALL NEW OR UNDISTURBED, UNPAVED DITCHES INSTALL EROSION CONTROL MATTING (NAG SC150, SC150BN OR APPROVED EQUAL) A TEMPORARY DITCH LINER OF FIBERGLASS ROVING ON THE DITCH BOTTOM AND SIDE SLOPES.
- 5. PROVIDE SILT FENCE ADJACENT TO DITCHES AND AT THE TOE OF FILL SLOPES. ALSO. PROVIDE ADEQUATE MEASURES IN AREAS WHERE NATURAL VEGETATION DOES NOT PROVIDE A SUFFICIENT BUFFER AND AS DIRECTED BY THE ENGINEER. WHERE SILT FENCE AND TREE PROTECTION CONFLICT, STOP SILT FENCE AT TREE PROTECTION.
- 6. INLET PROTECTION MAY BE REQUIRED AT EXISTING INLETS IN THE EVENT SEDIMENT WILL RUN DOWNSTREAM TO AN EXISTING INLET.
- 7. PRIOR TO COMMENCING LAND DISTURBANCE ACTIVITY:

ENERAL ER

- a. THE LIMITS OF LAND DISTURBANCE SHALL BE CLEARLY AND ACCURATELY DEMARCATED WITH STAKES, FENCING, OR OTHER APPROPRIATE MEANS. THE LOCATION AND EXTENT OF ALL AUTHORIZED LAND DISTURBANCE ACTIVITY SHALL BE DEMARCATED FOR THE DURATION OF THE CONSTRUCTION ACTIVITY. NO LAND DISTURBANCE SHALL OCCUR OUTSIDE THE APPROVED LIMITS INDICATED ON THE APPROVED PLANS.
- b. ALL TREE PROTECTION FENCING SHALL BE INSTALLED, INSPECTED AND APPROVED BY THE INSPECTOR. TREES WITHIN THE PROTECTION AREAS MAY ONLY BE REMOVED WITH APPROVAL BY THE INSPECTOR
- 8. COMPLY WITH THE FOLLOWING CONSTRUCTION SEQUENCE FOR EACH CONSTRUCTION PHASE: a. GRUBBING SHALL BE PERFORMED DURING PREDICTED PERIODS OF DRY WEATHER.
- b. EROSION CONTROL DEVICES AND STORMWATER MANAGEMENT DEVICES SHALL BE INSTALLED PRIOR TO ANY OTHER CONSTRUCTION AND WITHIN 24 HOURS OF GRUBBING. THIS MAY REQUIRE GRUBBING IN STAGES TO ENSURE EROSION CONTROL MEASURES ARE PUT IN PLACE PRIOR TO RAIN EVENT. THE LOCATION OF SOME OF THE FROSION CONTROL DEVICES MAY HAVE TO BE ALTERED FROM THAT SHOWN ON THE APPROVED PLANS IF DRAINAGE PATTERNS DURING CONSTRUCTION ARE DIFFERENT FROM THE FINAL PROPOSED DRAINAGE PATTERNS. IT IS THE CONTRACTOR'S RESPONSIBILITY TO ACCOMPLISH EROSION CONTROL FOR ALL DRAINAGE PATTERNS CREATED AT VARIOUS STAGES DURING CONSTRUCTION. ANY DIFFICULTY IN CONTROLLING EROSION DURING ANY PHASE OF CONSTRUCTION SHALL IMMEDIATELY BE REPORTED TO THE ENGINEER.
- c. SILT FENCE SHALL BE INSTALLED WITHIN 24 HOURS OF GRUBBING ALL PERIMETERS. THE CONTRACTOR SHALL REMOVE ACCUMULATED SILT WHEN THE SILT IS WITHIN 12" OF THE TOP OF THE SILT FENCE UTILIZED FOR EROSION CONTROL.
- 9. THE CONSTRUCTION OF THE SITE WILL COMMENCE WITH INSTALLATION OF EROSION CONTROL MEASURES SUFFICIENT TO CONTROL SEDIMENT DEPOSITS AND EROSION. ALL SEDIMENT CONTROL WILL BE MAINTAINED UNTIL ALL UPSTREAM GROUND WITHIN THE CONSTRUCTION AREA HAS BEEN COMPLETELY STABILIZED WITH PERMANENT VEGETATION
- 10. FAILURE TO INSTALL, OPERATE OR MAINTAIN ALL EROSION CONTROL MEASURES WILL RESULT IN ALL CONSTRUCTION BEING STOPPED ON THE JOB SITE UNTIL SUCH MEASURES ARE CORRECTED TO NORTH CAROLINA EROSION AND SEDIMENT CONTROL REGULATIONS.
- 11. A COPY OF THE APPROVED LAND DISTURBANCE PLAN AND PERMIT SHALL BE PRESENT ON THE SITE WHENEVER LAND DISTURBANCE ACTIVITY IS IN PROGRESS.
- 12. ALL EROSION AND SEDIMENT CONTROL MEASURES WILL BE CHECKED DAILY AND ANY DEFICIENCIES NOTED WILL BE CORRECTED BY THE END OF EACH DAY. ADDITIONAL EROSION AND SEDIMENT CONTROL MEASURES WILL BE INSTALLED IF DEEMED NECESSARY BY ON-SITE INSPECTION.
- 13. ON-SITE STOCKPILING OF SOIL IS ALLOWED WITHIN THE LIMITS OF DISTURBANCE SUBJECT TO PLACING APPROPRIATE EROSION CONTROL DEVICES TO PREVENT SOIL LOSS DURING RAIN EVENTS. LOCATIONS SHALL BE PRE-APPROVED BY THE INSPECTOR.
- 14. GROUND STABILIZATION SHALL BE ACHIEVED CONSISTENT WITH NCDEQ GENERAL PERMIT NCG01000 EFFECTIVE AS OF AUGUST 2, 2011. WHERE LAND DISTURBING ACTIVITIES HAVE TEMPORARILY OR PERMANENTLY CEASED, ALL DISTURBED AREAS SHALL BE PROVIDED WITH TEMPORARY OR PERMANENT STABILIZATION WITH GROUND COVER WITHIN 7 CALENDAR DAYS FROM THE LAST LAND DISTURBING ACTIVITY EXCEPT FOR ALL PERIMETER DIKES, SWALES, DITCHES, PERIMETER SLOPES, AND ALL SLOPES STEEPER THAN 3:1 (H:V), WHICH SHALL BE PROVIDED TEMPORARY OR PERMANENT STABILIZATION WITH GROUND COVER WITHIN 7 CALENDAR DAYS FROM THE LAND DISTURBING ACTIVITY. THE CONTRACTOR SHALL REFER TO GENERAL PERMIT NCG01000 FOR SPECIFIC CONDITIONS EXEMPTIONS AND DEFINITIONS FOR MEETING THESE STABILIZATION REQUIREMENTS. SEE TABLE 1.
- 15. PROVIDE NOTIFICATION TO ALL AFFECTED PROPERTY OWNERS PRIOR TO CONSTRUCTION, AS APPLICABLE.
- 16. EFFECTIVE OCTOBER 1, 2010, PERSONS RESPONSIBLE FOR LAND DISTURBING ACTIVITIES MUST INSPECT THE SEDIMENT AND EROSION CONTROL MEASURES ON A PROJECT AFTER EACH PHASE OF THE PROJECT TO MAKE SURE THAT THE APPROVED EROSION AND SEDIMENTATION CONTROL PLAN IS BEING FOLLOWED, SELE-INSPECTION REPORTS ARE REQUIRED A SAMPLE SELE-INSPECTION REPORT AS WELL AS DETAILS OF THE SELF-INSPECTION PROGRAM CAN BE FOUND ON THE LAND QUALITY WEB SITE: http://deq.nc.gov/about/divisions/energy-mineral-lan-resources/erosion-sediment-control/forms.
- 17. ANY OFF-SITE BORROW OR WASTE REQUIRED FOR THIS PROJECT MUST COME FROM AN APPROVED EROSION CONTROL SITE PLAN REGULATED UNDER THE MINING ACT OF 1971 OR A LANDFILL REGULATED BY THE DIVISION OF SOLID WASTE MANAGEMENT. DEBRIS FROM DEMOLITION ACTIVITIES SHOULD BE DISPOSED OF AT AN APPROVED FACILITY.

## EROSION MAINTENANCE REQUIREMENTS

- 1. SEDIMENT FENCE (SILT FENCE):
- a. INSPECT SEDIMENT FENCES AT LEAST ONCE A WEEK AND AFTER EACH RAINFALL. MAKE ANY REQUIRED REPAIRS IMMEDIATELY.
- b. SHOULD THE FABRIC OF A SEDIMENT FENCE COLLAPSE, TEAR, DECOMPOSE, OR BECOME INEFFECTIVE, REPLACE IT PROMPTLY.
- c. REMOVE SEDIMENT DEPOSITS AS NECESSARY TO PROVIDE ADEQUATE STORAGE VOLUME FOR THE NEXT RAIN AND TO REDUCE PRESSURE ON THE FENCE.
- d. TAKE CARE TO AVOID UNDERMINING THE FENCE DURING CLEAN OUT.
- e. REMOVE ALL FENCING MATERIALS AND UNSTABLE SEDIMENT DEPOSITS AND BRING THE AREA TO GRADE. STABILIZE IT AFTER THE CONTRIBUTING DRAINAGE AREA HAS BEEN PROPERLY STABILIZED. 2. SEDIMENT TUBES:
- a. INSPECT CHANNELS FOR DAMAGE AFTER EACH RUNOFF EVENT. b. ANTICIPATE SUBMERGENCE AND DEPOSITION ABOVE THE WATTLE AND EROSION FROM HIGH FLOWS AROUND THE EDGES OF THE WATTLE. CORRECT ALL DAMAGE IMMEDIATELY. IF SIGNIFICANT EROSION OCCURS BETWEEN WATTLES, INSTALL A PROTECTIVE RIPRAP LINER IN THAT PORTION OF THE CHANNEL
- c. REMOVE SEDIMENT ACCUMULATED BEHIND THE WATTLES AS NEEDED TO PREVENT DAMAGE TO CHANNEL VEGETATION, ALLOW THE CHANNEL TO DRAIN THROUGH THE STRAW WATTLE AND PREVENT LARGE FLOWS FROM CARRYING SEDIMENT OVER THE WATTLE.
- 3. TEMPORARY GRAVEL CONSTRUCTION ENTRANCE/EXIT:
- a. INSPECT ON LEAVING THE CONSTRUCTION SITE. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH 2-INCH STONE. AFTER EACH RAINFALL, INSPECT ANY STRUCTURE USED TO TRAP SEDIMENT AND CLEAN IT OUT AS NECESSARY. IMMEDIATELY REMOVE ALL OBJECTIONABLE MATERIALS SPILLED, WASHED, OR TRACKED ONTO PUBLIC ROADWAYS.
- 4. ROCK OUTLET PROTECTION:
- a. INSPECT STONE ARRANGEMENT WEEKLY AND AFTER EVERY RAINFALL EVENT.
- b. MAINTAIN SPECIFIED DIMENSIONS AND REMOVE SEDIMENT BUILDUP WHEN THE SEDIMENT LEVEL IS 1/2 THE HEIGHT OF THE ROCKS.
- 5. INLET PROTECTION:



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- ONE ARRANGEMENT WEEKLY AND AFTER EVERY RAINFALI
- b. REPLACE STONE AS NEEDED TO MAINTAIN SPECIFIED DIMENSIONS c. REMOVE SEDIMENT BUILDUP WHEN THE SEDIMENT LEVEL IS 1/2 THE HE
- ARE NOT TO DAMAGE OR UNDERCUT THE WIRE MESH DURING SEDIME
- 6. TEMPORARY DIVERSIONS:
- a. INSPECT WEEKLY AND, AFTER EVERY RAINFALL, REMOVE SEDIMENT F
- REPAIR THE DIVERSION RIDGES. ALSO CHECK AND MAINTAIN OUTLETS b. WHEN THE PROTECTED AREA IS PERMANENTLY STABILIZED. REMOVE
- CHANNEL TO BLEND WITH THE NATURAL GROUND LEVEL AND APPROF
- 7. CHECK DAM:
- a. INSPECT CHECK DAMS AND CHANNELS FOR DAMAGE AFTER EACH RUN b. ANTICIPATE SUBMERGENCE AND DEPOSITION ABOVE THE CHECK DAM FLOWS AROUND THE EDGES OF THE DAM. CORRECT ALL DAMAGE IMM EROSION OCCURS BETWEEN DAMS, INSTALL A PROTECTIVE RIPRAP LI CHANNEL
- c. REMOVE SEDIMENT ACCUMULATED BEHIND THE DAMS AS NEEDED TO CHANNEL VEGETATION, ALLOW THE CHANNEL TO DRAIN THROUGH TH PREVENT LARGE FLOWS FROM CARRYING SEDIMENT OVER THE DAM. NEEDED TO MAINTAIN DESIGN HEIGHT AND CROSS SECTION.

TEMPORARY NON LAWN SEEDING MEASURES

A. <u>GENERAL:</u>

- 1. AFTER CONSTRUCTION IS COMPLETE IN ANY AREA OR PHASE OF THE PROJECT, THE DISTURBED AREAS SHALL RECEIVE A PERMANENT GROUND COVER. SEEDING AND MULCHING SHALL BE PERFORMED IMMEDIATELY BEHIND CONSTRUCTION. THE CONTRACTOR SHALL PROVIDE PERMANENT SEEDING IN ALL DISTURBED AREAS AS INDICATED IN THE CONTRACT DOCUMENTS. THE CONTRACTOR SHALL ADAPT PERMANENT SEEDING OPERATIONS TO PROTECT AND TO ACCOMMODATE ANY TEMPORARY SEEDING AND SOIL AND EROSION CONTROL MEASURES THAT MAY ALREADY BE IN PLACE DURING THE WORK PERIOD.
- 2. WHEN SEEDING MUST TAKE PLACE OUT OF SEASON FOR PERMANENT GRASS THE APPROPRIATE TEMPORARY SEEDING SHALL BE DONE AND THE CONTRACTOR SHALL BE RESPONSIBLE FOR PERMANENT SEEDING AS SPECIFIED IN SEASON AT NO ADDITIONAL COST TO OWNER.
- 3. CONTRACTOR SHALL BE RESPONSIBLE FOR TURF MAINTENANCE THROUGH SUBSTANTIAL COMPLETION. SLOPES MUST BE AT 90% COVERAGE AT SUBSTANTIAL COMPLETION REVIEW TO BE ACCEPTED. IF NOT AT 90% COVERAGE, SUBSTANTIAL COMPLETION WILL BE DELAYED UNTIL 90% COVERAGE IS ACHIEVED AND/OR UNTIL THE FOLLOWING GROWING SEASON.

B. SITE PREPARATION AND INSTALLATION:

- GROUND COVER: ALL DISTURBED AREAS SHALL BE DRESSED TO A DEPTH OF SIX (6) NCHES. THE TOP THREE (3) INCHES SHALL BE PULVERIZED TO PROVIDE A UNIFORM SEEDBED. RAKE OR HARROW THE SITE TO ESTABLISH A SMOOTH AND LEVEL FINAL GRADE. SOIL PARTICLES SHOULD BE NO LARGER THAN MARBLE SIZE, AND PEA GRAVEL SIZE IS EVEN BETTER. AGRICULTURAL LIME SHALL BE APPLIED AT THE RATE OF 1 TONS/ACRE IMMEDIATELY BEFORE PLOWING. GRASS SEED SHALL BE APPLIED AT THE RATES OUTLINED IN MSD's STANDARD SPECIFICATIONS.
- 2. 10-10-10 FERTILIZER SHALL BE APPLIED TO ALL DISTURBED AREAS AT A RATE OF 750 LBS./ACRE. MULCHING SHALL CONSIST OF SMALL GRAIN STRAW APPLIED AT A RATE OF 2 TONS/ACRE. MULCHED AREAS SHALL BE TACKED WITH ASPHALT OR OTHER APPROVED METHOD SUFFICIENT TO HOLD THE STRAW IN PLACE, AT A RATE OF 150 TO 200 GALLONS PER TON OF STRAW.
- 3. SOME AREAS MAY REQUIRE TEMPORARY SEEDING DUE TO AN INTERRUPTION OF WORK OR SEASONAL RESTRICTIONS AS SPECIFIED IN THE PERMANENT SEEDING SCHEDULE, OR A COMBINATION THEREOF. THESE AREAS SHALL BE RE-SEEDED IN ACCORDANCE WITH THE PERMANENT SEEDING SCHEDULE. IF TEMPORARY SEEDING IS REQUIRED DUE TO CONTRACTOR DELAYS. THERE WILL BE NO COMPENSATION FOR THE TEMPORARY SEEDING. TEMPORARY SEEDING SHALL BE PERFORMED ONLY AT THE DIRECTION OF THE ENGINEER OR INSPECTOR.
- C. CLEANUP AND INSPECTION:
- 1. UPON COMPLETION OF WORK, THE CONTRACTOR SHALL REMOVE FROM THE SITE ALL EQUIPMENT AND OTHER ARTICLES USED. ALL EXCESS SOIL, STONE, AND DEBRIS SHALL BE REMOVED AND LEGALLY DISPOSED OF AT NO ADDITIONAL COST TO THE OWNER. ALL WORK AREAS SHALL BE LEFT IN A CLEAN AND NEAT CONDITION. ALL DAMAGE TO EXISTING CONSTRUCTION CAUSED BY LANDSCAPING OPERATIONS SHALL BE REPAIRED TO THE SATISFACTION OF THE TOWN AT THE CONTRACTOR'S EXPENSE.
- 2. SEEDED AREAS SHALL BE PROTECTED AND REPLANTED AS NECESSARY TO ESTABLISH A UNIFORM STAND OF SPECIFIED GRASS. SCATTERED BARE SPOTS, NONE OF WHICH SHALL BE LARGER THAT ONE (1) SQUARE FOOT, WILL BE ALLOWED UP TO A MAXIMUM OF 3% OF THE SEEDED AREA FOR EACH PROPERTY. WHEN SEEDED AREAS ARE READY FOR INSPECTION, THE MAINTAINED TURF AREAS SHALL BE NEATLY MOWED TO THE UNIFORM HEIGHT OF APPROXIMATELY TWO AND ONE-HALF (2.5) INCHES. THE LAWNS SHALL BE CONSIDERED ESTABLISHED ONLY WHEN THE SPECIFIED GRASS IS VIGOROUS AND GROWING WELL IN ADDITION TO MEETING THE OTHER REQUIREMENTS SPECIFIED.
- 3. AN INSPECTION OF THE COMPLETED SEEDING SHALL BE MADE AT THE CONCLUSION OF THE LANDSCAPE WORK UPON WRITTEN NOTICE REQUESTING SUCH INSPECTION SUBMITTED BY THE CONTRACTOR TO THE ENGINEER, AT LEAST TEN (10) DAYS PRIOR TO THE ANTICIPATED DATE OF INSPECTION.
- 4. A FINAL INSPECTION SHALL BE PERFORMED WHEN A SATISFACTORY STAND OF SEEDED TURF GRASS HAS BEEN PRODUCED, UPON WRITTEN NOTICE REQUESTING SUCH INSPECTION SUBMITTED BY THE CONTRACTOR TO THE ENGINEER, AT LEAST TEN (10) DAYS PRIOR TO THE ANTICIPATED DATE OF INSPECTION. IF A SATISFACTORY STAND OF TURF HAS NOT BEEN PRODUCED AT THE TIME OF FINAL INSPECTION, NECESSARY REPAIRS SHALL BE PERFORMED IN CONFORMANCE WITH THE REQUIREMENTS OF THIS SECTION. UPON COMPLETION OF THESE REPAIRS, THE SEEDED GRASS SHALL BE REINSPECTED UPON WRITTEN NOTICE AS ABOVE.

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LL EVENT.		EROSION CONTROL CONSTRUCTION SEQUENCE				
HEIGHT OF THE RO MENT REMOVAL.	OCKS. TAKE			AIN ON SITE THE LAND-DISTURBING PERMIT FROM NCDEQ.		
				ONAL OFFICE TO SCHEDULE A PRE-CONSTRUCTION MEETING AT RIOR TO PROJECT ACTIVATION.		
FROM THE FLOW A TS. THE RIDGES AND OPRIATELY STABILI	THE		ACCURATELY DEM	ICING ANY LAND DISTURBANCE ACTIVITY, CLEARLY AND ARCATE THE LIMITS OF THE LAND DISTURBANCE WITH STAKES, ER APPROPRIATE MEANS.		
UNOFF EVENT. AM AND EROSION F MMEDIATELY. IF SIG			LAND DISTURBANC	D CONSTRUCTION ENTRANCE AND SILT FENCE PRIOR TO ANY E ACTIVITIES (CLEARING, GRADING, GRUBBING, OR EXCAVATION ECESSARY TO INSTALL THE SKIMMER BASIN AS SHOWN ON THE CONTROL PLANS.	۱).	
O PREVENT DAMAGE TO	GE TO		MEASURES. WHEN	PECTOR FOR AN ON-SITE INSPECTION OF THE INSTALLED I APPROVED, INSTALL REMAINING EROSION CONTROL DEVICES RSION DITCHES, STRAW WATTLES, ETC.).		
I. ADD STONES TO	DAMS AS		EVERY RAINFALL E PROPERLY. ANY A DESIGNATED SPOIL PERIODIC INSPECT MAKE ANY REPAIRS	SION CONTROL DEVICES AT WEEKLY INTERVALS AND AFTER VENT EXCEEDING $\frac{1}{2}$ " TO VERIFY THAT THEY ARE FUNCTIONING CCUMULATED SEDIMENT SHALL BE REMOVED AND PLACED IN A L DISPOSAL AREA APPROVED BY THE INSPECTOR. CONDUCT TIONS OF ALL EROSION AND SEDIMENTATION CONTROLS AND S OR MODIFICATIONS NECESSARY TO ASSURE CONTINUED TION OF EACH DEVICE.		
			7. BEGIN REMAINDER	OF CLEARING, GRUBBING, AND GRADING OF SITE.		
R PHASE OF THE	PROJECT, THE		8. STABILIZE SITE PER	R EROSION CONTROL NOTES AND SEEDING SCHEDULE AS AREA	S	

 STABILIZE SITE PER EROSION CONTROL NOTES AND SEEDING SCHEDULE AS AREAS ARE BROUGHT TO FINISHED GRADE WITH VEGETATION, PAVING, DITCH LININGS, ETC. PER GENERAL PERMIT NCG010000 ALL PERIMETER DIKES SWALES DITCHES PERIMETER SLOPES, AND ALL SLOPES STEEPER THAN 3:1 SHALL BE PROVIDED TEMPORARY OR PERMANENT STABILIZATION WITH GROUND COVER AS SOON AS PRACTICABLE BUT IN ANY EVENT WITHIN 7 CALENDAR DAYS FROM THE LAST LAND DISTURBING ACTIVITY. ALL OTHER DISTURBED AREAS SHALL BE PROVIDED TEMPORARY OR PERMANENT STABILIZATION WITH GROUND COVER AS SOON AS PRACTICABLE BUT IN EVENT WITHIN 7 CALENDAR DAYS FROM THE LAST LAND DISTURBING ACTIVITY.

- 9. THE STORM DRAINAGE NETWORK MUST BE CONSTRUCTED TO DISCHARGE INTO THE SKIMMER BASIN AS INDICATED ON THE PHASE II EROSION CONTROL PLANS. ONCE STORM NETWORK IS COMPLETELY CONSTRUCTED, ALL INLETS ARE PROPERLY PROTECTED, AND VEGETATION HAS BEEN ESTABLISHED ON A MAJORITY OF THE SITE, THE SKIMMER BASIN CAN BE CLEANED OF ACCUMULATED SEDIMENT AND SODDED. PIPES INTERCONNECTING THE FORMER SKIMMER BASIN TO THE SAND FILTER CAN BE INSTALLED AS SHOWN ON SHEET CG103 WHEN DEEMED APPROPRIATE BY THE CONTRACTING OFFICER.
- 10. ADDITIONAL CONTROL DEVICES MAY BE REQUIRED DURING CONSTRUCTION IN ORDER TO CONTROL EROSION AND/OR OFFSITE SEDIMENTATION.
- 11. ALL DENUDED AREA NOT PAVED SHALL BE SODDED.
- 12. CONTACT THE INSPECTOR FOR AN INSPECTION WHEN CONSTRUCTION IS COMPLETE AND ALL AREAS ARE FULLY PLANTED/SODDED AND STABILIZED.
- 13. WHEN FINAL SITE STABILIZATION IS APPROVED, REMOVE ALL EROSION CONTROL DEVICES AND STABILIZE THESE AND ANY RESULTING BARE AREAS.
- 14. CONTACT THE INSPECTOR FOR A FINAL SITE INSPECTION WHEN VEGETATION HAS BECOME ESTABLISHED

TABLE 1				
NCDEQ	Stabilization [	<u>Fimeframes</u>		
Site Area Description Stabilization Timeframe Exceptions				
Perimeter Dikes, swales, ditches and slopes	7 days	None		
High Quality Water (HQW) Zones	7 days	None		
		If slopes are 10' or less in length and		
Slopes Steeper than 3:1	7 days	are not steeper than 2:1, 14 days are allowed		
Slopes 3:1 or Flatter	14 days	7 days for slopes greater than 50' in length		
All other areas with slopes flatter than 4:1	14 days	None, except for perimeters and HQW zones		

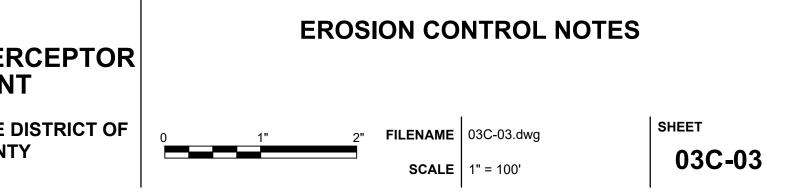
## **PROJECT MANAGER** MATTHEW A. SHULTZ DESIGNED BY M. SHULTZ, PE CHECKED BY S. BEROSET, PE DRAWN BY J. KROOSWYK PROJECT NUMBER | 10194380





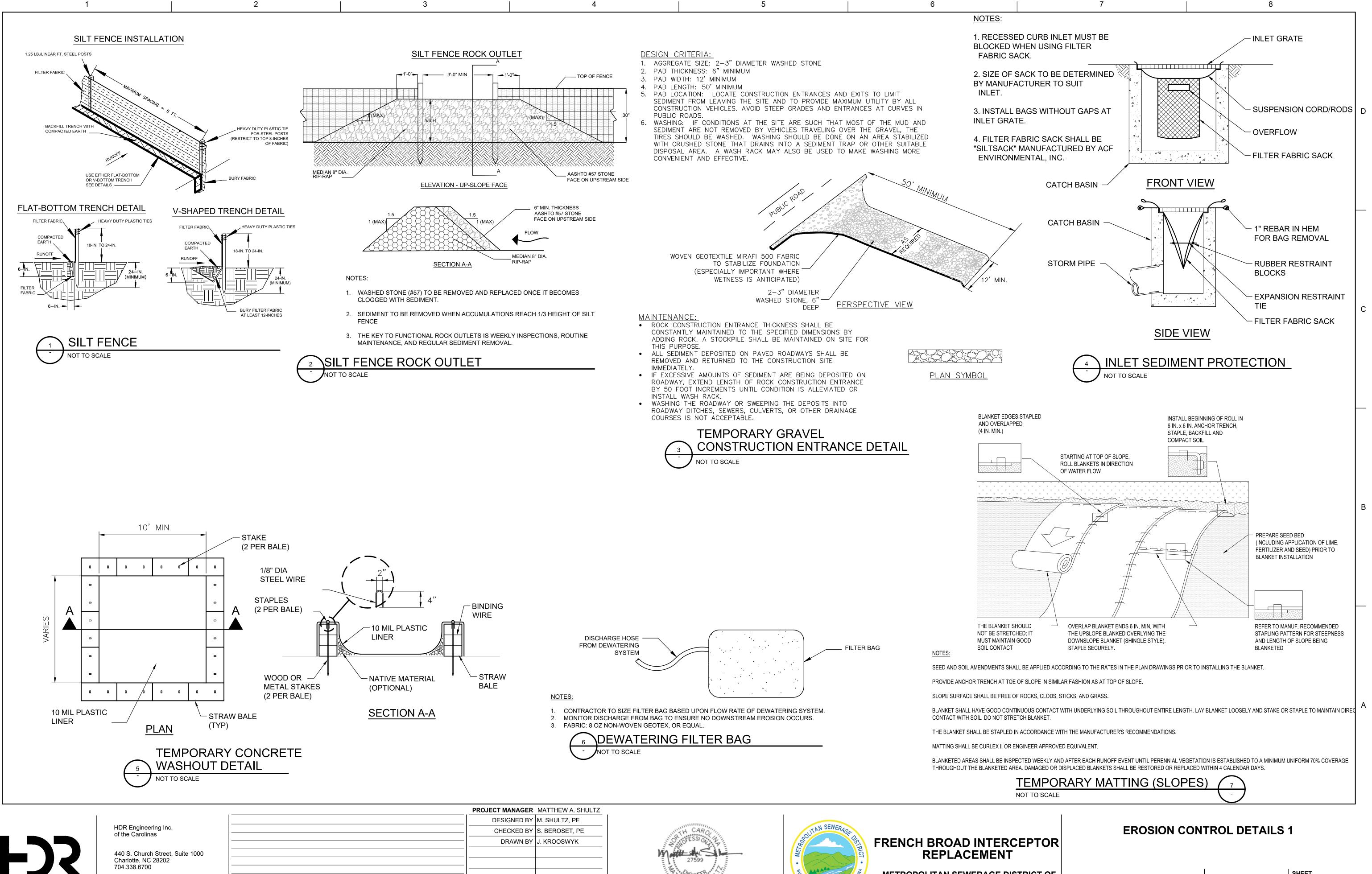
## FRENCH BROAD INTERCEPTOR REPLACEMENT

METROPOLITAN SEWERAGE DISTRICT OF BUNCOMBE COUNTY



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DESCRIPTION

6/2022

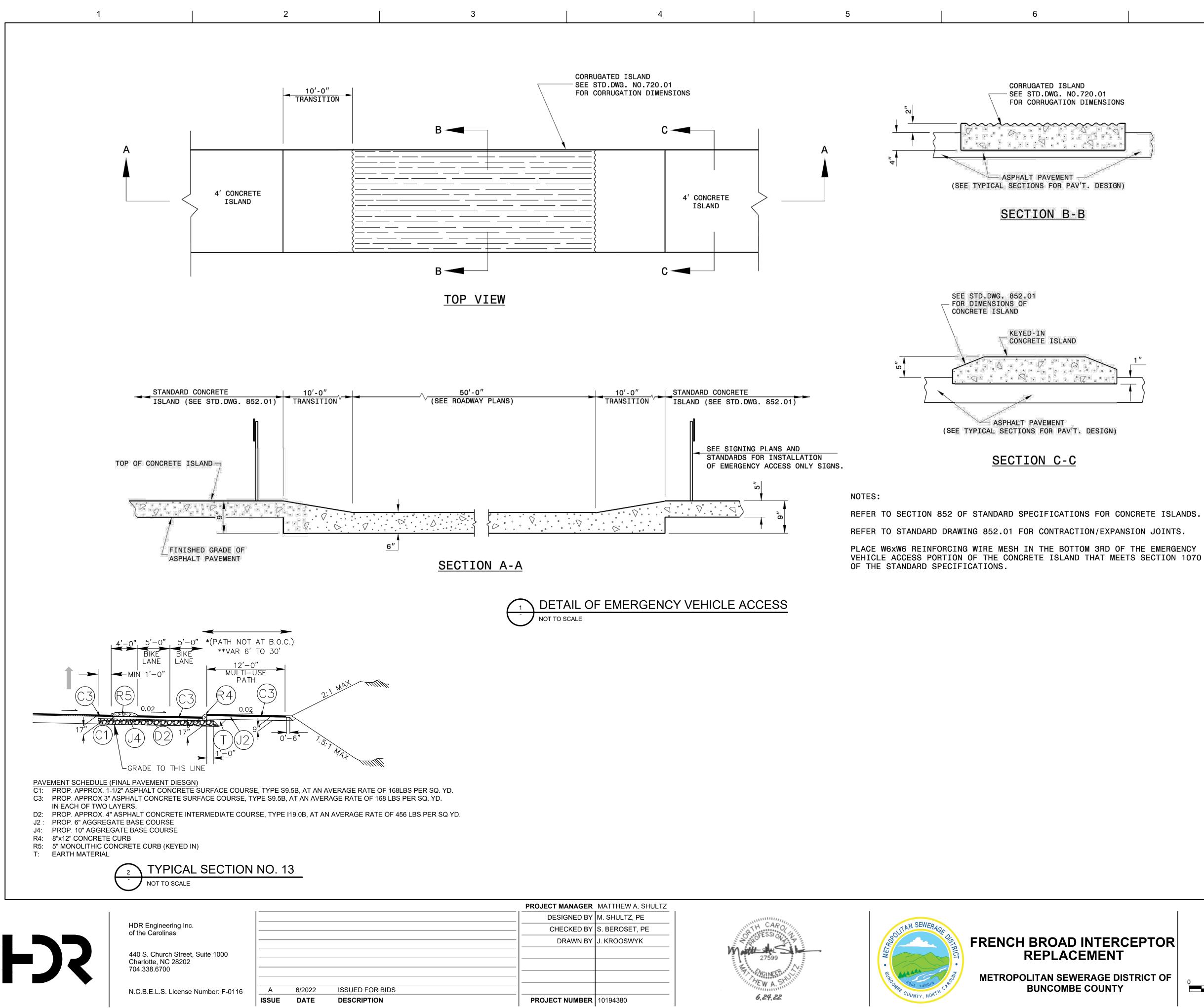
DATE

ISSUE

**METROPOLITAN SEWERAGE DISTRICT OF BUNCOMBE COUNTY** 

6.24.22

PROJECT NUMBER 10194380

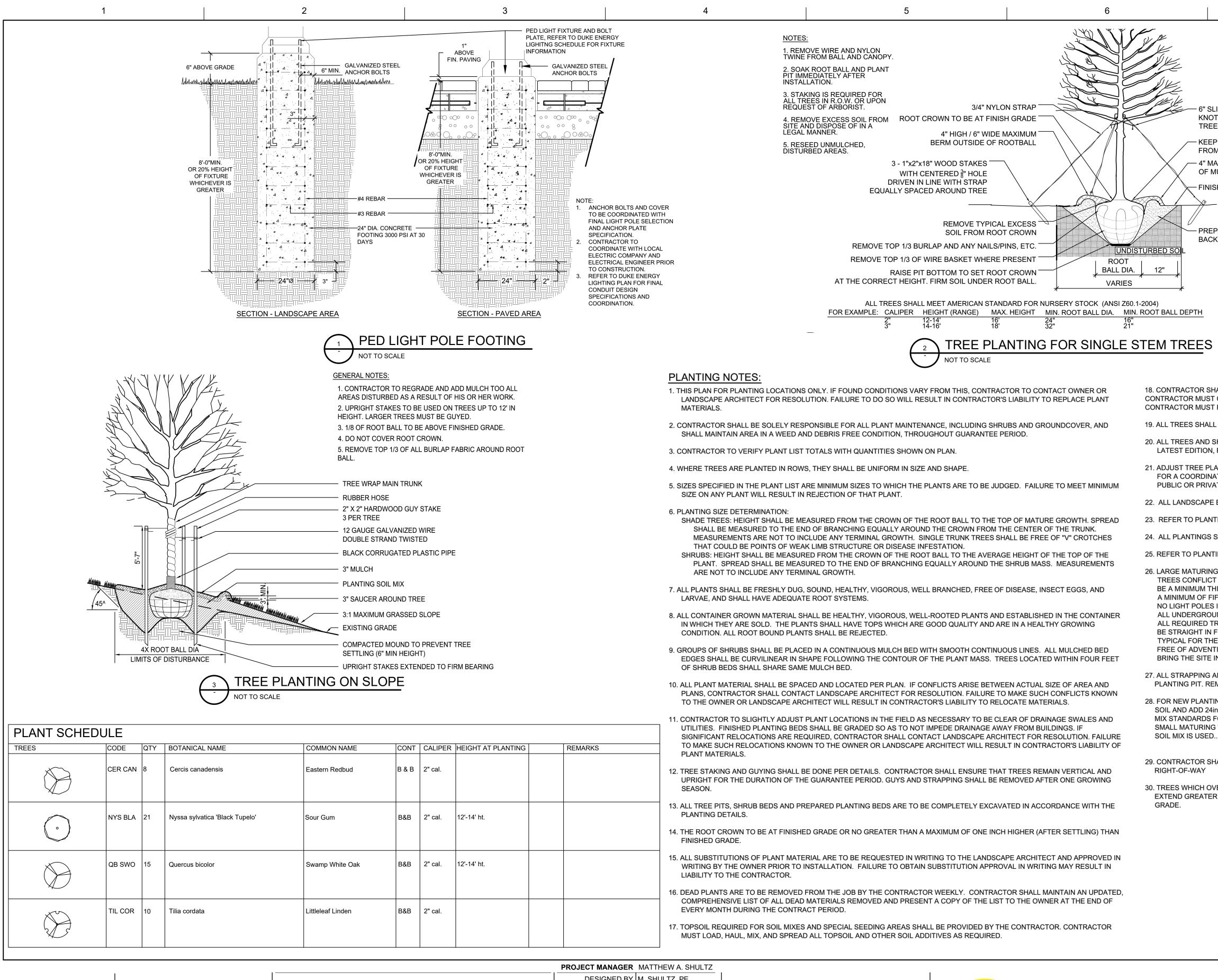


## **GREENWAY RESTORATION DETAILS 2** FRENCH BROAD INTERCEPTOR **METROPOLITAN SEWERAGE DISTRICT OF** SHEET **FILENAME** 04C-01 - 04C-02.DWG 04C-02 SCALE NOT TO SCALE

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	NOTE	<u>S:</u>	
		SHOWN DETAILS ARE FROM THE FOLLOWING REFERENCES:	
		PLANS BY CDM SMITH, TITLED: CITY OF ASHEVILLE - BUNCOME COUNTY - RIVER ARTS DISTRICT - IMPROVEMENT PROJECT (RADTIP).	
SIONS		PLANS BY LAND DESIGN, TITLED: RIVER ARTS DISTRICT - TRANSPORTATION IMPROVEMENT PROJECT - STREETSCAPE & BMP.	
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6/2022 ISSUED FOR BIDS DATE DESCRIPTION

ISSUE

PROJECT MANAGER	MATTHEW A. SHULTZ
DESIGNED BY	M. SHULTZ, PE
CHECKED BY	S. BEROSET, PE
DRAWN BY	J. KROOSWYK
PROJECT NUMBER	10194380





## FRENCH BROAD INTERCEPTOR REPLACEMENT

METROPOLITAN SEWERAGE DISTRICT OF BUNCOMBE COUNTY

		7		8	_
			NOTE	<u>=S:</u>	
			1.	SHOWN DETAILS ARE FROM THE FOLLOWING REFERENCES:	
			A)	PLANS BY CDM SMITH, TITLED: CITY OF ASHEVILLE - BUNCOME COUNTY - RIVER ARTS DISTRICT - IMPROVEMENT PROJECT (RADTIP).	
<ul> <li>6" SLIP KNOT KNOT. 6" LAR TREE DIAMET</li> </ul>	GER THAN		B)	PLANS BY LAND DESIGN, TITLED: RIVER ARTS DISTRICT - TRANSPORTATION IMPROVEMENT PROJECT - STREETSCAPE & BMP.	
					D
/ 4" MAXIMUM L OF MULCH	AYER				
FINISH GRADE					
-					
EPTH					

18. CONTRACTOR SHALL GUARANTEE ALL LANDSCAPE IMPROVEMENTS, INCLUDING SEEDING, AS REQUIRED BY THE SPECIFICATIONS. CONTRACTOR MUST CONTACT THE OWNER AT LEAST 10 WORKING DAYS IN ADVANCE TO SCHEDULE ACCEPTANCE INSPECTION(S). CONTRACTOR MUST REPLACE ALL DEAD OR UNACCEPTABLE PLANTS DURING THE FOLLOWING RECOMMENDED PLANTING SEASON.

19. ALL TREES SHALL BE LIMBED TO PROVIDE 6' CLEARANCE AT WALKWAYS PER A.D.A REQUIREMENTS.

20. ALL TREES AND SHRUBS SHALL MEET THE NORMAL REQUIREMENTS FOR THE AMERICAN STANDARD FOR NURSERY STOCK, LATEST EDITION, PUBLISHED BY THE AMERICAN ASSOCIATION OF NURSERYMAN (AAN).

21. ADJUST TREE PLANTING LOCATIONS TO AVOID UNDERGROUND UTILITIES WHERE POSSIBLE. CONTACT LANDSCAPE ARCHITECT FOR A COORDINATED SOLUTION FOR ANY UTILITY CONFLICTS. CONTRACTOR SHALL BE LIABLE FOR DAMAGE TO ANY AND ALL PUBLIC OR PRIVATE UTILITIES.

22. ALL LANDSCAPE BEDS TO BE MULCHED TO 3IN DEPTH WITH HARDWOOD MULCH.

23. REFER TO PLANTING DETAILS FOR ADDITIONAL PLANTING INFORMATION.

24. ALL PLANTINGS SHALL COMPLY WITH CURRENT LOCAL ORDINANCES AND GUIDELINES

25. REFER TO PLANTING DETAILS FOR SOIL MIX SPECIFICATIONS.

26. LARGE MATURING TREES MUST BE A MINIMUM 25 TO 30 FEET FROM THE OVERHEAD DISTRIBUTION OR TRANSMISSION LINES. IF TREES CONFLICT WITH POWER LINES OR SIGNS, CALL URBAN FORESTER TO RESOLVE BEFORE PLANTING. SITE LIGHTING MUST BE A MINIMUM THIRTY (30) FEET AWAY FROM A TREE. IF PEDESTRIAN SCALE LIGHTING IS BEING USED. THEN LIGHTING MUST BE A MINIMUM OF FIFTEEN (15) FEET AWAY FROM A TREE, UNLESS APPROVED OTHERWISE BY THE CITY. SHOW SITE LIGHTING PLAN NO LIGHT POLES IN TREE ISLANDS. ADJUST TREE PLANTING LOCATIONS TO AVOID UNDERGROUND UTILITIES. PLANT 15' FROM ALL UNDERGROUND UTILITIES (GAS, WATER, PHONE, AND ELECTRICAL LINES.) UNLESS APPROVED BY URBAN FORESTRY STAFF ALL REQUIRED TREES MUST HAVE SINGLE STEM TRUNKS WITH NO CO-DOMINANT TRUNKS OR BRANCHES. TREE TRUNKS SHALL BE STRAIGHT IN FORM AND FREE OF DAMAGE OR CRACKS. PRUNING SHALL BE CALLUSED OVER. BRANCH LENGTH SHALL BE TYPICAL FOR THE TREES AGE AND NOT BE BROKEN, DISEASED, OR INJURED. ROOT FLARE SHALL BE LOCATED AT GRADE AND BE FREE OF ADVENTITIOUS ROOT GROWTH. ANY REQUIRED TREES ON SITE THAT HAVE EXPIRED WILL NEED TO BE REPLACED TO BRING THE SITE INTO COMPLIANCE WITH THE TREE ORDINANCE

27. ALL STRAPPING AND TOP 2/3 OF WIRE BASKET MUST BE CUT AWAY AND REMOVED FROM ROOT BALL PRIOR TO BACKFILLING PLANTING PIT. REMOVE TOP 1/3 OF THE BURLAP FROM THE ROOT BALL.

28. FOR NEW PLANTING AREAS, REMOVE ALL PAVEMENT, GRAVEL SUB-BASE AND CONSTRUCTION DEBRIS; REMOVE COMPACTED SOIL AND ADD 24in NEW TOPSOIL -OR- UNCOMPACTED AND AMEND THE TOP 24in OF EXISTING SOIL TO MEET TOPSOIL/PLANTING MIX STANDARDS FOR TREES (WITHIN ENTIRE MINIMUM AREA OF 274sf PER TREE FOR LARGE MATURING TREES; OR 200sf FOR SMALL MATURING TREES). IN URBAN ZONES, LARGE MATURING TREES CAN ALSO BE PLANTED IN 200sf PLANTERS IF A SPECIFIC

29. CONTRACTOR SHALL CONTACT THE LANDSCAPE MAINTENANCE DIVISION PRIOR TO THE PLANTING OF STREET TREES WITHIN THE

30. TREES WHICH OVERHANG THE PEDESTRIAN CIRCULATION ROUTES AT THE STREETS OR WITHIN OPEN SPACE AREAS SHALL NOT EXTEND GREATER THAN FOUR INCHES INTO THE CIRCULATION ROUTE AT A HEIGHT LESS THAN 80 INCHES ABOVE THE ADJACENT

