

MATCH LINE SEE SHEET 5



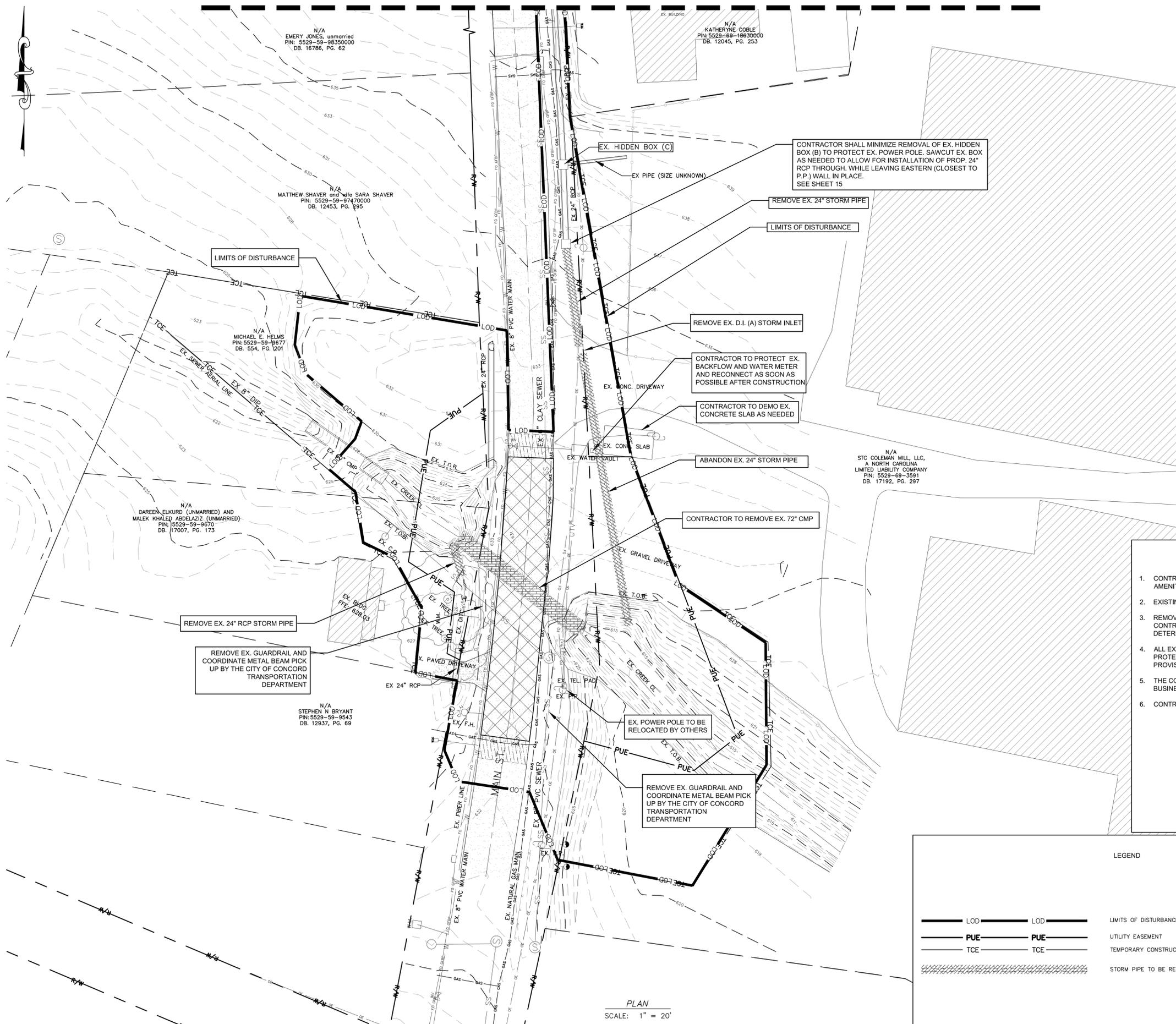
PREPARED BY
ENGINEERING DEPARTMENT
CITY OF CONCORD
P.O. BOX 308
CONCORD N.C. 28026
(704) 920-5425



2/28/2025
Engineer's Seal

Surveyor's Seal

**MAIN ST. CULVERT
REPLACEMENT
DEMOLITION PLAN
PROJECT # : 2032-024**



CONTRACTOR SHALL MINIMIZE REMOVAL OF EX. HIDDEN BOX (B) TO PROTECT EX. POWER POLE. SAWCUT EX. BOX AS NEEDED TO ALLOW FOR INSTALLATION OF PROP. 24\"/>

REMOVE EX. 24\"/>

LIMITS OF DISTURBANCE

REMOVE EX. D.I. (A) STORM INLET

CONTRACTOR TO PROTECT EX. BACKFLOW AND WATER METER AND RECONNECT AS SOON AS POSSIBLE AFTER CONSTRUCTION

CONTRACTOR TO DEMO EX. CONCRETE SLAB AS NEEDED

ABANDON EX. 24\"/>

CONTRACTOR TO REMOVE EX. 72\"/>

LIMITS OF DISTURBANCE

REMOVE EX. 24\"/>

REMOVE EX. GUARDRAIL AND COORDINATE METAL BEAM PICK UP BY THE CITY OF CONCORD TRANSPORTATION DEPARTMENT

EX. POWER POLE TO BE RELOCATED BY OTHERS

REMOVE EX. GUARDRAIL AND COORDINATE METAL BEAM PICK UP BY THE CITY OF CONCORD TRANSPORTATION DEPARTMENT

- NOTES
- CONTRACTOR SHALL REMOVE, PROTECT, AND RESET MAIL BOXES AND SITE AMENITIES.
 - EXISTING PRIVATE SIDEWALKS IMPACTED BY EXCAVATION SHALL BE REPLACED.
 - REMOVAL OF TREES AND SHRUBS ARE TO BE MINIMIZED AS MUCH AS POSSIBLE. CONTRACTOR TO AVOID AND MINIMIZE DAMAGE TO THOSE TREES AND SHRUBS DETERMINED TO REMAIN.
 - ALL EXISTING SERVICE CONNECTIONS TO REMAIN IN SERVICE AND TO BE PROTECTED DURING CONSTRUCTION. CONTRACTOR SHALL LOCATE AND MAKE PROVISIONS IN ACCORDANCE WITH THE CITY OF CONCORD FOR PROTECTION.
 - THE CONTRACTOR WILL BE REQUIRED TO MAINTAIN INGRESS AND EGRESS TO ALL BUSINESSES AND DWELLINGS, AND EASY ACCESS TO FIRE HYDRANTS.
 - CONTRACTOR SHALL REMOVE, PROTECT AND RESET ALL EX. ROAD SIGNS
- AREA TO BE DISTURBED - 0.90 ACRES

LEGEND

	LOD		LOD	LIMITS OF DISTURBANCE		ASPHALT PAVEMENT TO BE REMOVED
	PUE		PUE	UTILITY EASEMENT		MILLING/PATCHING
	TCE		TCE	TEMPORARY CONSTRUCTION EASEMENT		
				STORM PIPE TO BE REMOVED		

PLAN
SCALE: 1" = 20'



REV. #	DATE	DESCRIPTION
0	12/06/24	FINAL, FOR CONSTRUCTION
1	01/22/25	ADDRESSED AECOLA COMMENTS & ADJUSTED FOR DEVELOPER SITE

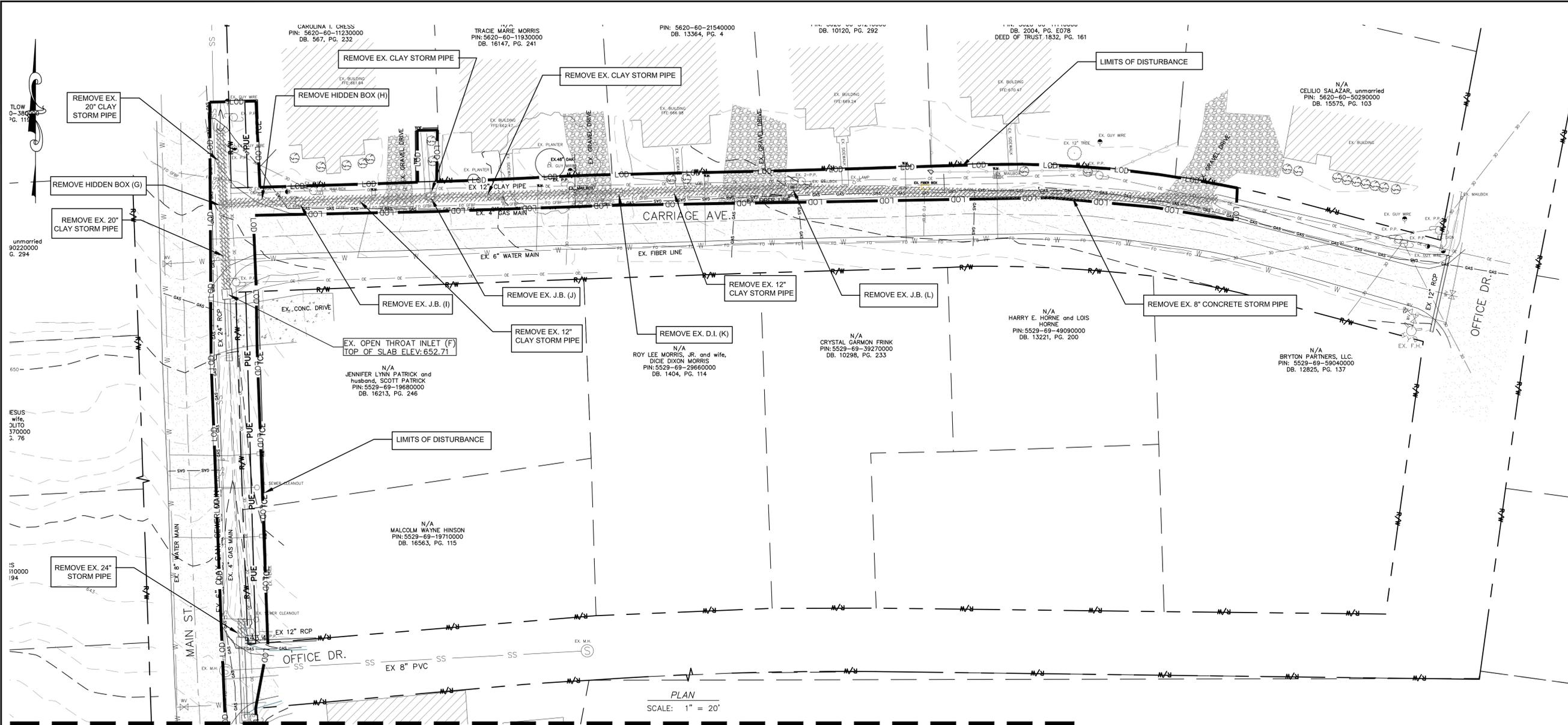
DESIGNED BY: CGZ
DRAWN BY: BCC
CHECKED BY: EAB
SCALE: AS SHOWN
DATE: 08/08/24
PROJECT NUMBER: 2023-024
SHEET: 4 OF: 27



Engineer's Seal

Surveyor's Seal

**MAIN ST. CULVERT
REPLACEMENT
DEMOLITION PLAN
PROJECT # : 2032-024**



PLAN
SCALE: 1" = 20'

MATCH LINE SEE SHEET 4



NOTES

- CONTRACTOR SHALL REMOVE, PROTECT, AND RESET MAIL BOXES AND SITE AMENITIES.
- EXISTING PRIVATE SIDEWALKS IMPACTED BY EXCAVATION SHALL BE REPLACED.
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- CONTRACTOR SHALL REMOVE, PROTECT AND RESET ALL EX. ROAD SIGNS

AREA TO BE DISTURBED - 0.90 ACRES

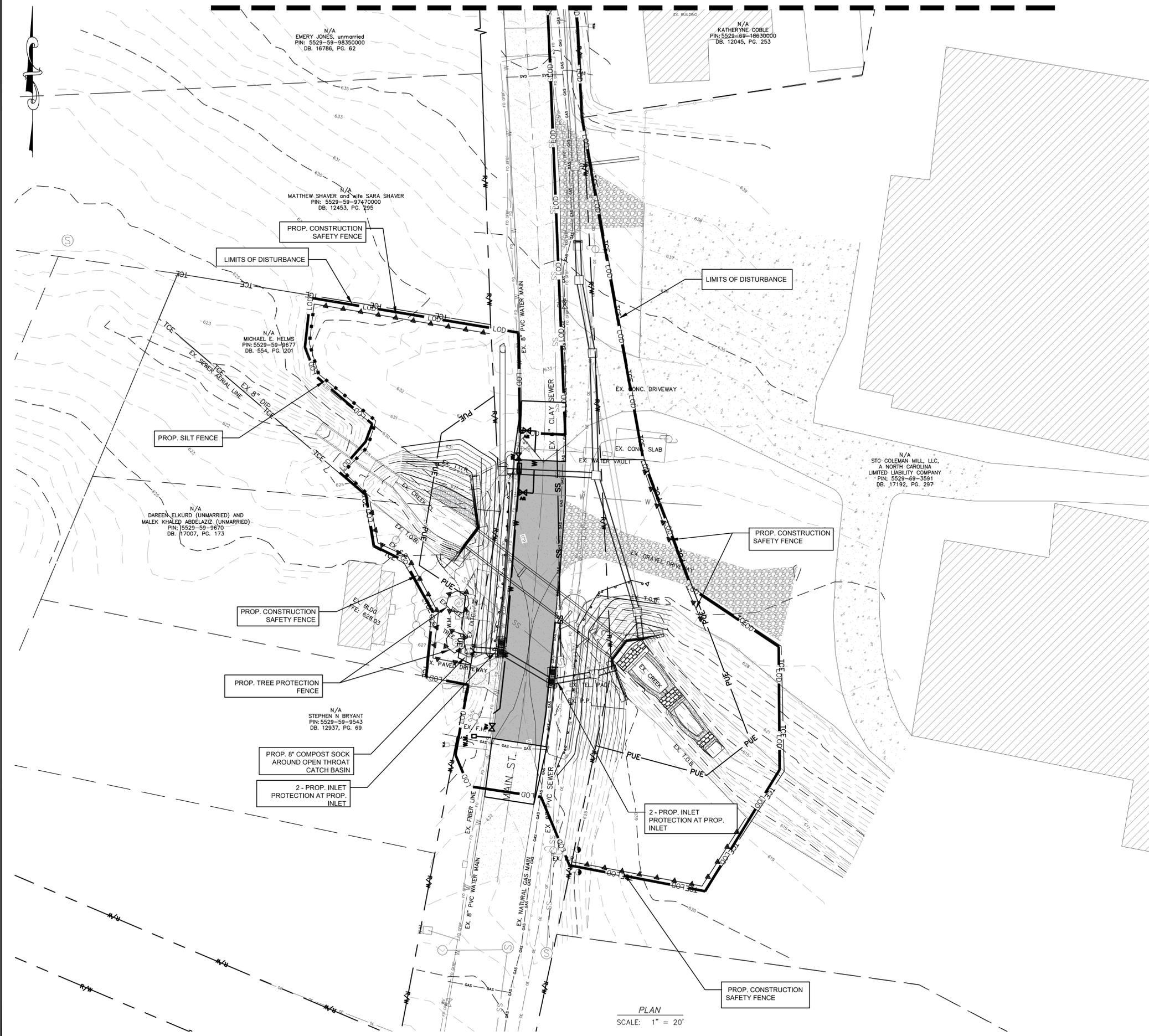
LEGEND

	LOD	LOD	LIMITS OF DISTURBANCE		ASPHALT PAVEMENT TO BE REMOVED
	PUE	PUE	UTILITY EASEMENT		MILLING/PATCHING
	TCE	TCE	TEMPORARY CONSTRUCTION EASEMENT		
			STORM PIPE TO BE REMOVED		

REV. #	DATE	DESCRIPTION
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DESIGNED BY: CGZ
DRAWN BY: BCC
CHECKED BY: EAB
SCALE: AS SHOWN
DATE: 08/08/24
PROJECT NUMBER: 2023-024
SHEET: 5 OF: 27

MATCH LINE SEE SHEET 5



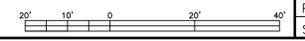
SEDIMENTATION AND EROSION CONTROL LEGEND

- TEMPORARY GRAVEL CONSTRUCTION ENTRANCE/EXIT PER NCDOT STD. 1607.01
- SEDIMENT FENCE (SILT FENCE)
- STONE OUTLETS/SSCS BREAK
- CONSTRUCTION SAFETY FENCE/TREE PROTECTION FENCE
- TEMPORARY DIVERSION
- DROP INLET PROTECTION, FABRIC
- TO BE PROTECTED
- CHECK DAM
- LOD LIMITS OF DISTURBANCE
- PUE UTILITY EASEMENT
- TCE TEMPORARY CONSTRUCTION EASEMENT
- MAJOR CONTOUR LINE
- MINOR CONTOUR LINE

- NOTES**
- STREAM AREAS IMPACTED DUE TO SITE DEWATERING ACTIVITIES SHALL BE RE-GRADED TO ITS PRE-CONSTRUCTION CONTOURS AND RE-VEGETATED WITH APPROPRIATE STREAM NATIVE SPECIES, SUCH AS "ELDERBERRY" (SAMBUCUS CANADENSIS), "SILKY DOGWOOD" (CORNUS AMOMUM), "SILKY WILLOW" (SALIX SERICEA), "BLUE FLAG IRIS", "SOFT RUSH", AND "LIZARD'S TAIL"
 - COIR FIBER MATTING SHALL BE INSTALLED ON ALL 2:1 SLOPES.
 - UNLESS OTHERWISE STATED IN PLANS, ALL SLOPES 4:1 AND STEEPER SHALL BE STABILIZED WITH BIODEGRADABLE SINGLE-NET STRAW BLANKET STABILIZATION MATTING.
 - REMOVAL OF TREES AND SHRUBS ARE TO BE MINIMIZED AS MUCH AS POSSIBLE. CONTRACTOR TO AVOID AND MINIMIZE DAMAGE TO THOSE TREES AND SHRUBS DETERMINED TO REMAIN.

AREA TO BE DISTURBED - 0.99 ACRES

PLAN
SCALE: 1" = 20'



PREPARED BY
ENGINEERING DEPARTMENT
CITY OF CONCORD
P.O. BOX 308
CONCORD N.C. 28026
(704) 920-5425



2/28/2025
Engineer's Seal

Surveyor's Seal

**MAIN ST. CULVERT
REPLACEMENT
EROSION CONTROL PLAN
PROJECT # : 2032-024**

REV. #	DATE	DESCRIPTION
0	12/06/24	FINAL, FOR CONSTRUCTION
1	01/22/25	ADDRESSED AECOLA COMMENTS & ADJUSTED FOR DEVELOPER SITE

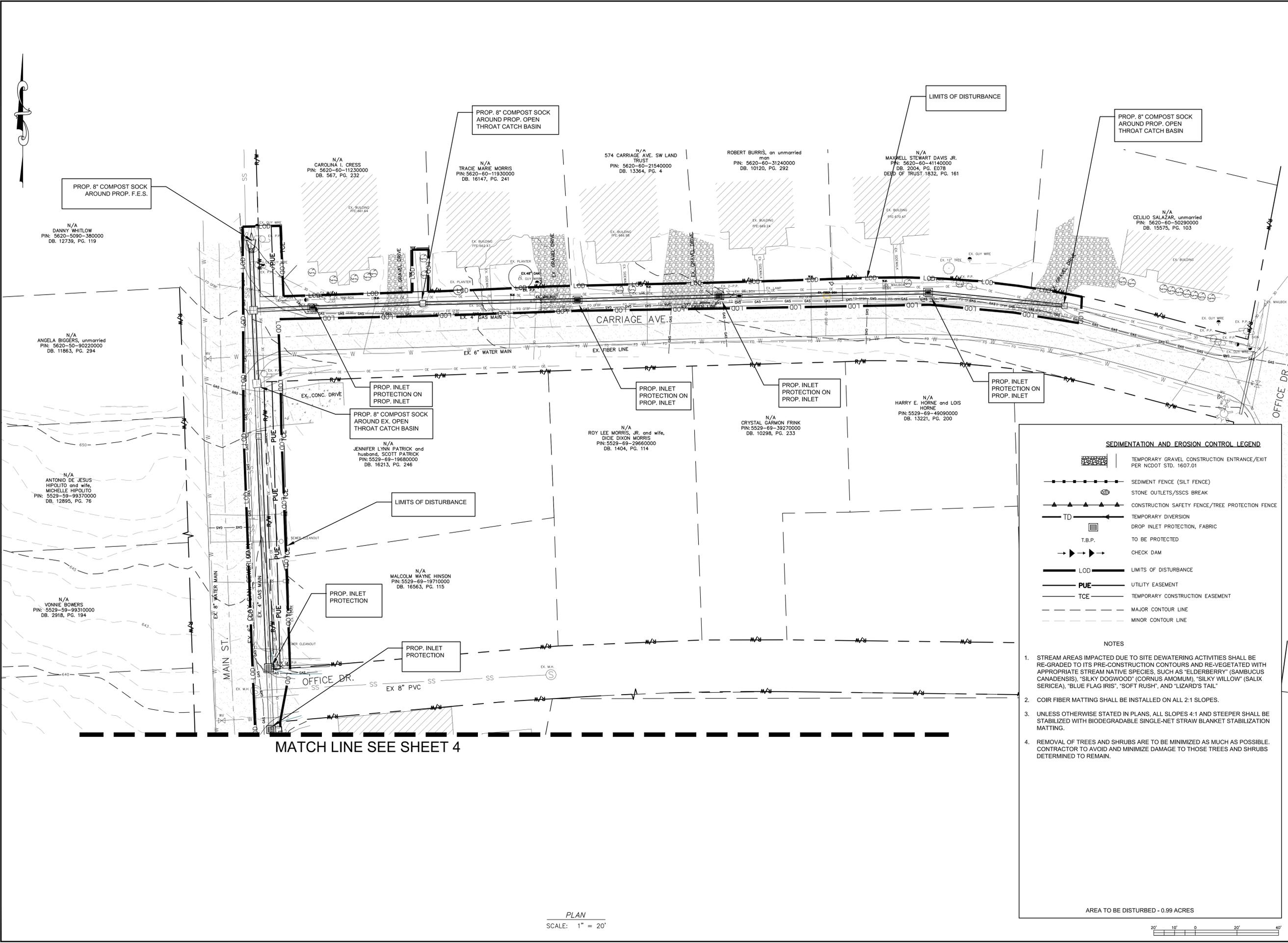
DESIGNED BY: CGZ
DRAWN BY: BCC
CHECKED BY: EAB
SCALE: AS SHOWN
DATE: 08/08/24
PROJECT NUMBER: 2023-024
SHEET: 6 OF: 27



Engineer's Seal

Surveyor's Seal

**MAIN ST. CULVERT
REPLACEMENT
EROSION CONTROL PLAN
PROJECT # : 2032-024**



SEDIMENTATION AND EROSION CONTROL LEGEND

- TEMPORARY GRAVEL CONSTRUCTION ENTRANCE/EXIT PER NCDOT STD. 1607.01
- SEDIMENT FENCE (SILT FENCE)
- STONE OUTLETS/SSCS BREAK
- CONSTRUCTION SAFETY FENCE/TREE PROTECTION FENCE
- TEMPORARY DIVERSION
- DROP INLET PROTECTION, FABRIC
- T.B.P. TO BE PROTECTED
- CHECK DAM
- LOD LIMITS OF DISTURBANCE
- PUE UTILITY EASEMENT
- TCE TEMPORARY CONSTRUCTION EASEMENT
- MAJOR CONTOUR LINE
- MINOR CONTOUR LINE

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AREA TO BE DISTURBED - 0.99 ACRES



PLAN
SCALE: 1" = 20'

REV. #	DATE	DESCRIPTION
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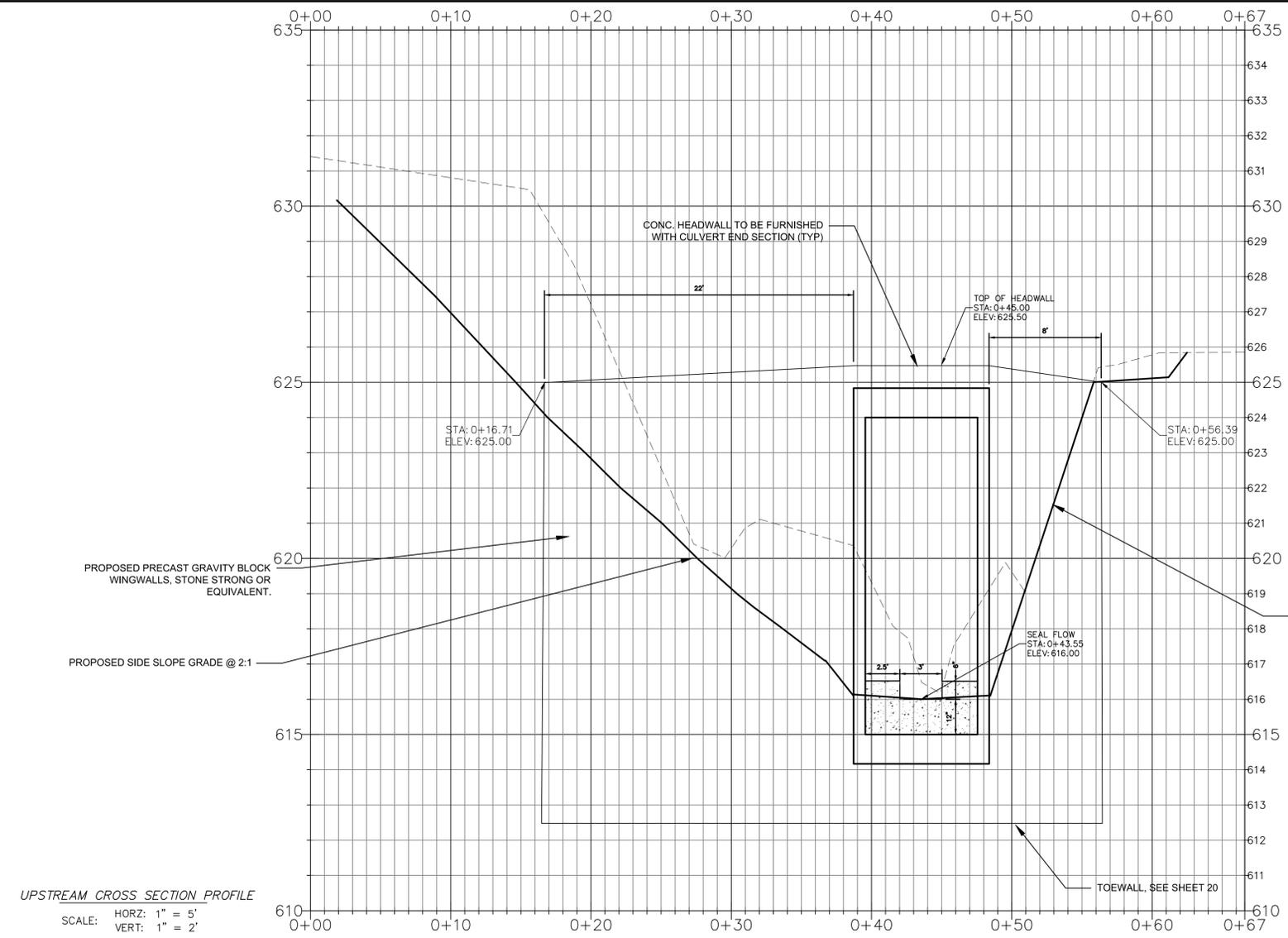
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DRAWN BY:	BCC
CHECKED BY:	EAB
SCALE:	AS SHOWN
DATE:	08/08/24
PROJECT NUMBER:	2023-024
SHEET:	7 OF 27



Engineer's Seal

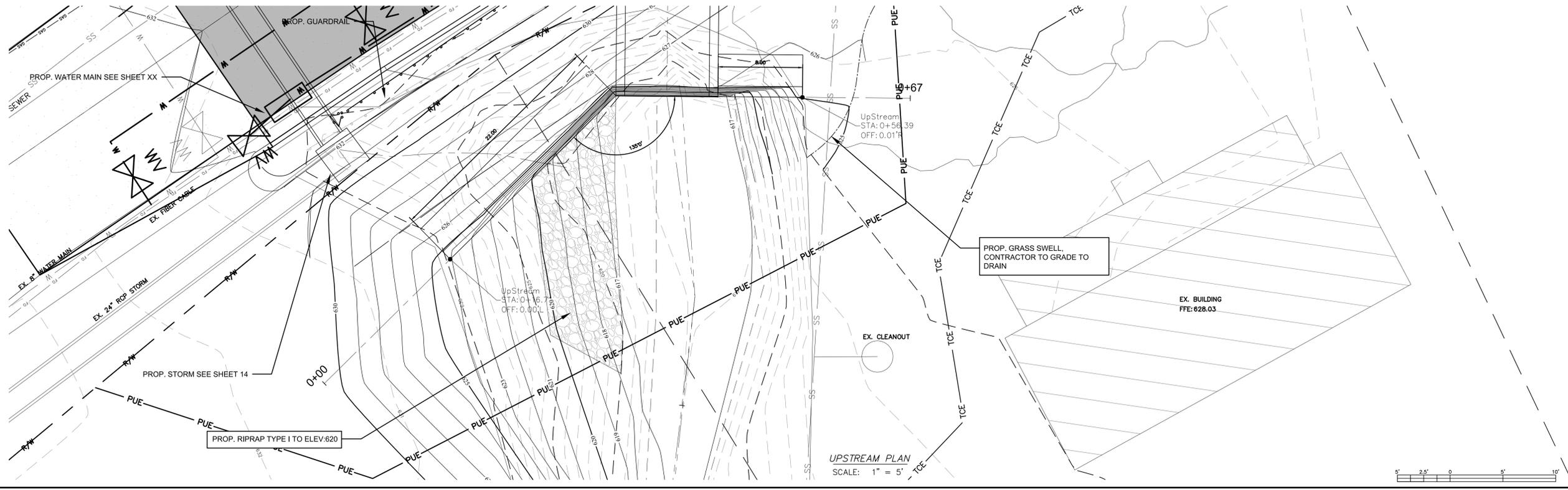
Surveyor's Seal

**MAIN ST. CULVERT
 REPLACEMENT
 UP-STREAM PLAN & PROFILE
 PROJECT # : 2023-024**



UPSTREAM CROSS SECTION PROFILE
 SCALE: HORIZ: 1" = 5'
 VERT: 1" = 2'

- NOTE:
1. THESE PLANS AND DETAILS ARE MEANT TO SHOW THE GENERAL INTENT OF THE WINGWALL DESIGN. CONTRACTOR SHALL HAVE STONE STRONG PRECAST CONCRETE BLOCK GRAVITY WINGWALLS OR EQUIVALENT DESIGNED, DETAILED AND SPECIFIED BY MANUFACTURER OR MANUFACTURER'S REPRESENTATIVE LICENSED IN THE STATE OF NORTH CAROLINA.
 2. CONTRACTOR SHALL SUBMIT FINAL DESIGN AND CALCULATIONS TO THE CITY OF CONCORD FOR APPROVAL.



UPSTREAM PLAN
 SCALE: 1" = 5'



REV. #	DATE	DESCRIPTION	BY
0	12/06/24	FINAL, FOR CONSTRUCTION	BCC
1	01/22/25	ADDRESSED AECQA COMMENTS & ADJUSTED FOR DEVELOPER SITE	BCC

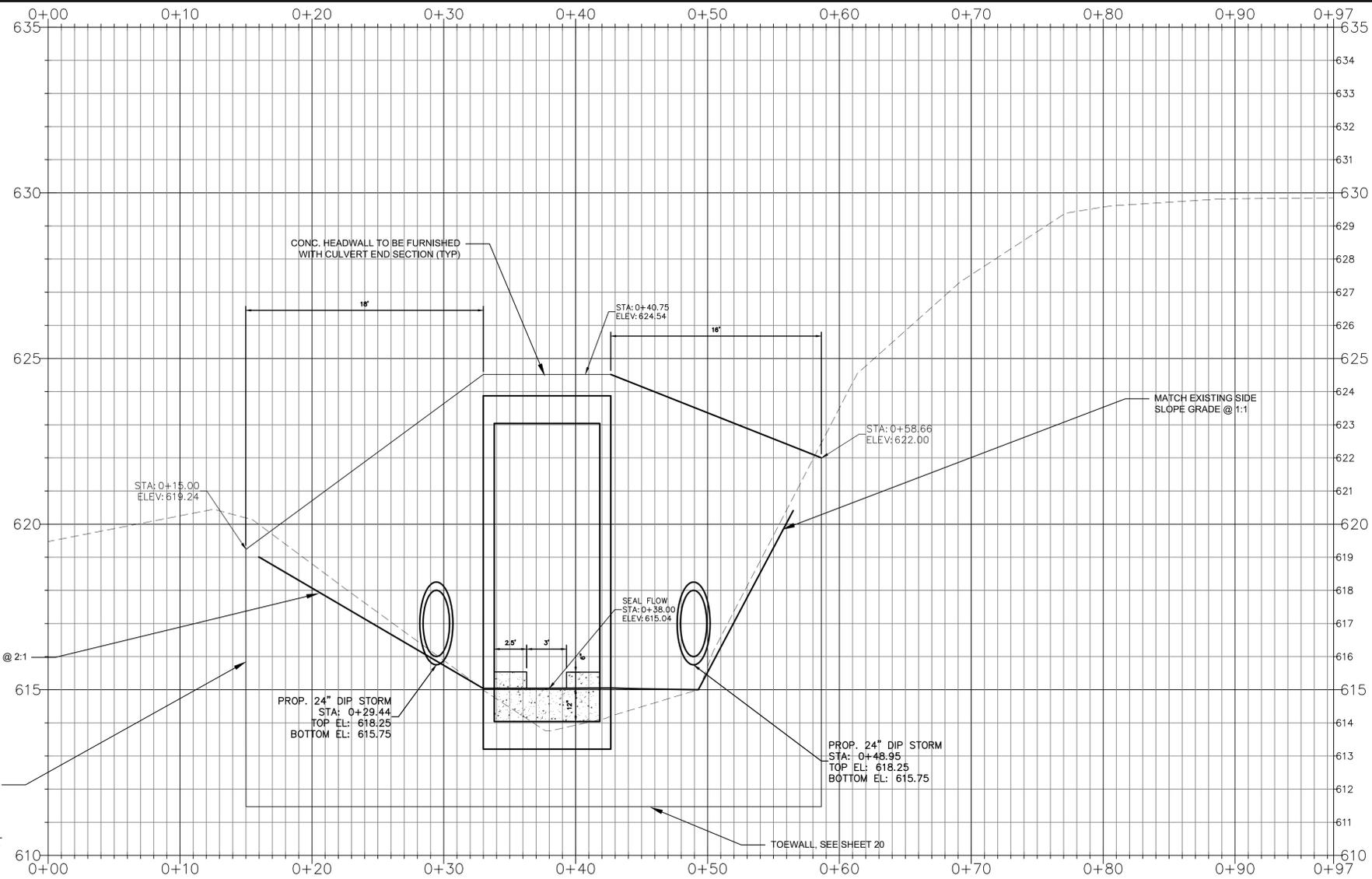
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DRAWN BY:	BCC
CHECKED BY:	EAB
SCALE:	AS SHOWN
DATE:	08/08/24
PROJECT NUMBER:	2023-024
SHEET:	9 OF 27



Engineer's Seal

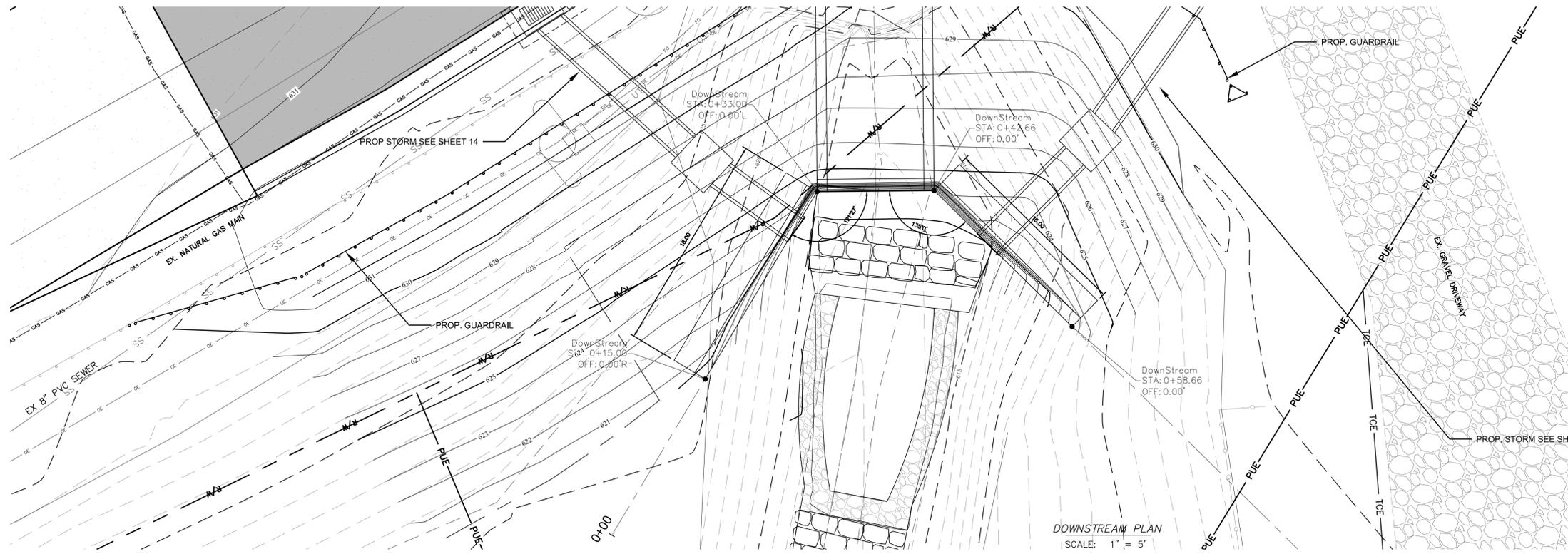
Surveyor's Seal

**MAIN ST. CULVERT
REPLACEMENT
DOWN-STREAM PLAN &
PROFILE
PROJECT # : 2023-024**



DOWNSTREAM CROSS SECTION PROFILE

SCALE: HORIZ: 1" = 5'
VERT: 1" = 2'

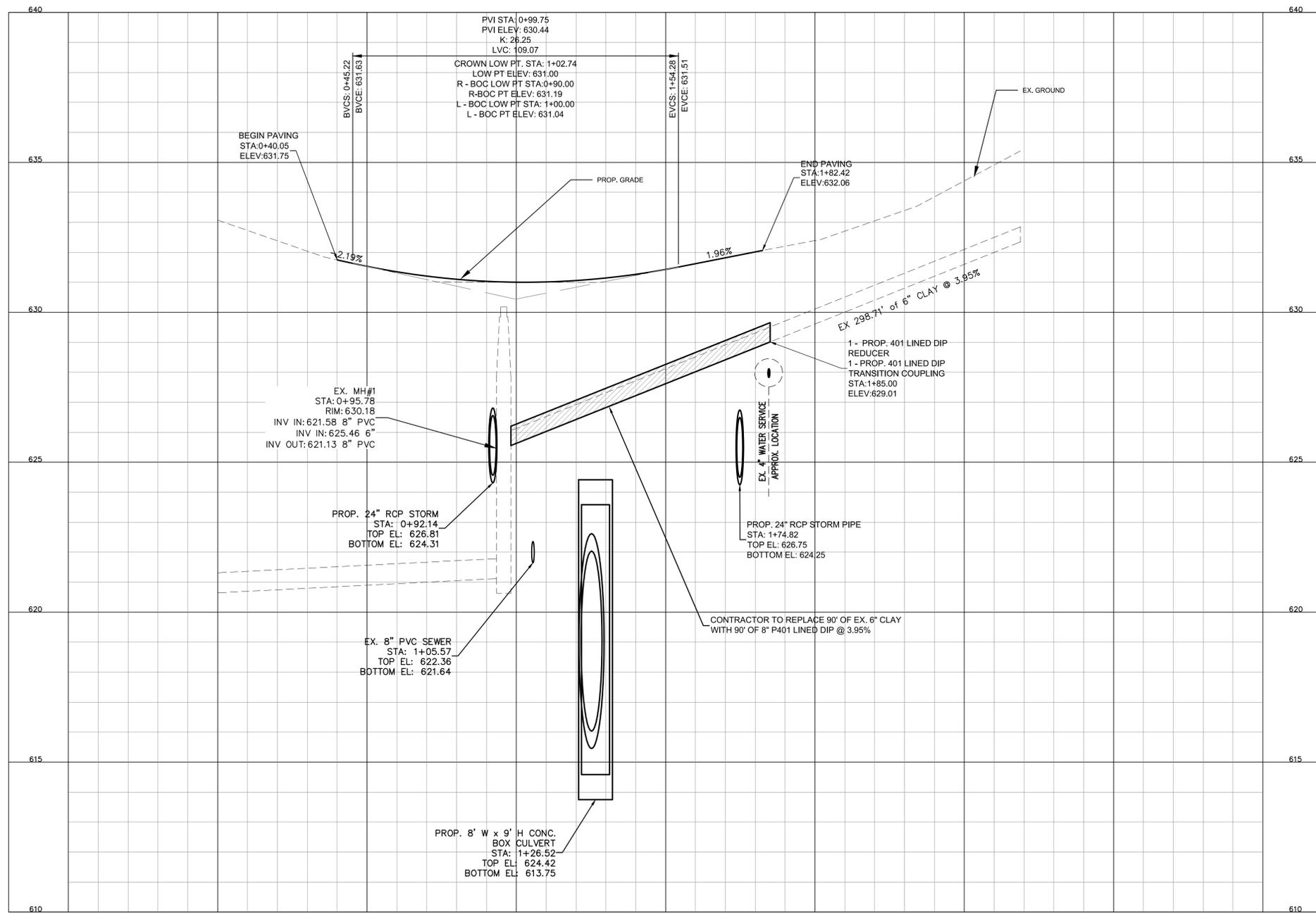


DOWNSTREAM PLAN
SCALE: 1" = 5'

- NOTE:
1. THESE PLANS AND DETAILS ARE MEANT TO SHOW THE GENERAL INTENT OF THE WINGWALL DESIGN. CONTRACTOR SHALL HAVE STONE STRONG PRECAST CONCRETE BLOCK GRAVITY WINGWALLS OR EQUIVALENT DESIGNED, DETAILED AND SPECIFIED BY MANUFACTURER OR MANUFACTURER'S REPRESENTATIVE LICENSED IN THE STATE OF NORTH CAROLINA.
 2. CONTRACTOR SHALL SUBMIT FINAL DESIGN AND CALCULATIONS TO THE CITY OF CONCORD FOR APPROVAL.
 3. PIPE OUTLETS CAN BE ADJUSTED WITH THE ENGINEER'S APPROVAL FOR A BETTER FIT THROUGH THE BLOCK WALLS.

REV. #	DATE	DESCRIPTION	BY
0	12/06/24	FINAL, FOR CONSTRUCTION	BCC
1	01/22/25	ADDRESSED AECQA COMMENTS & ADJUSTED FOR DEVELOPER SITE	BCC

DESIGNED BY: CGZ
DRAWN BY: BCC
CHECKED BY: EAB
SCALE: AS SHOWN
DATE: 08/08/24
PROJECT NUMBER: 2023-024
SHEET: 10 OF: 27



- NOTE:
1. CONTRACTOR TO REPLACE EXISTING ROADWAY ACCORDING TO CITY OF CONCORD AND NCDOT STANDARD. SEE SHEET 26 FOR TYPICAL CROSS SECTION.
 2. CONTRACTOR TO INSURE DRAINAGE ALONG PROPOSED CURB AND GUTTER TO PROPOSED DOUBLE CATCH BASINS EACH SIDE. SEE ROADWAY CROSS SECTIONS SHEET 18 FOR DETAILS AS TO HOW THIS IS ACCOMPLISHED.



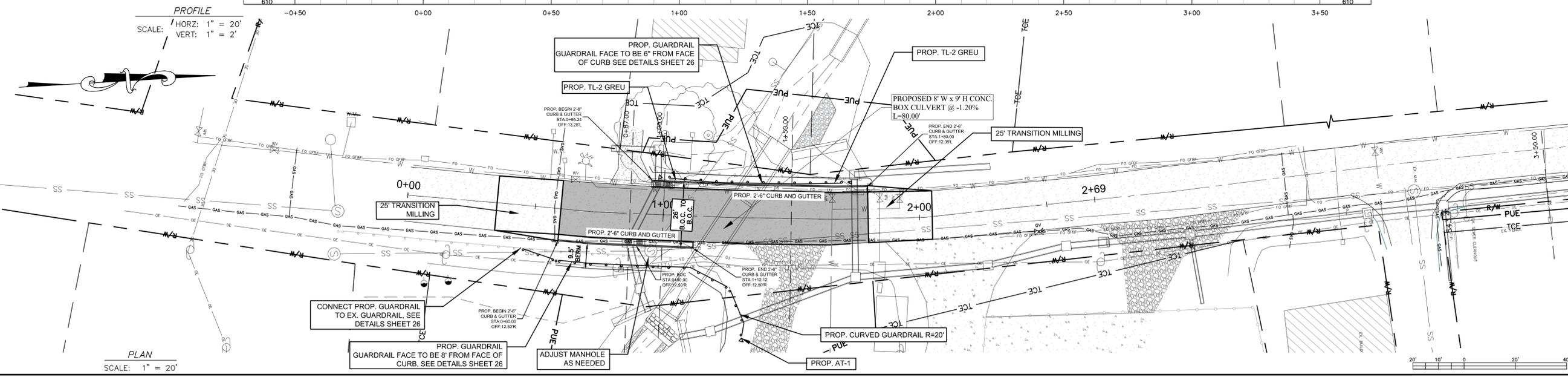
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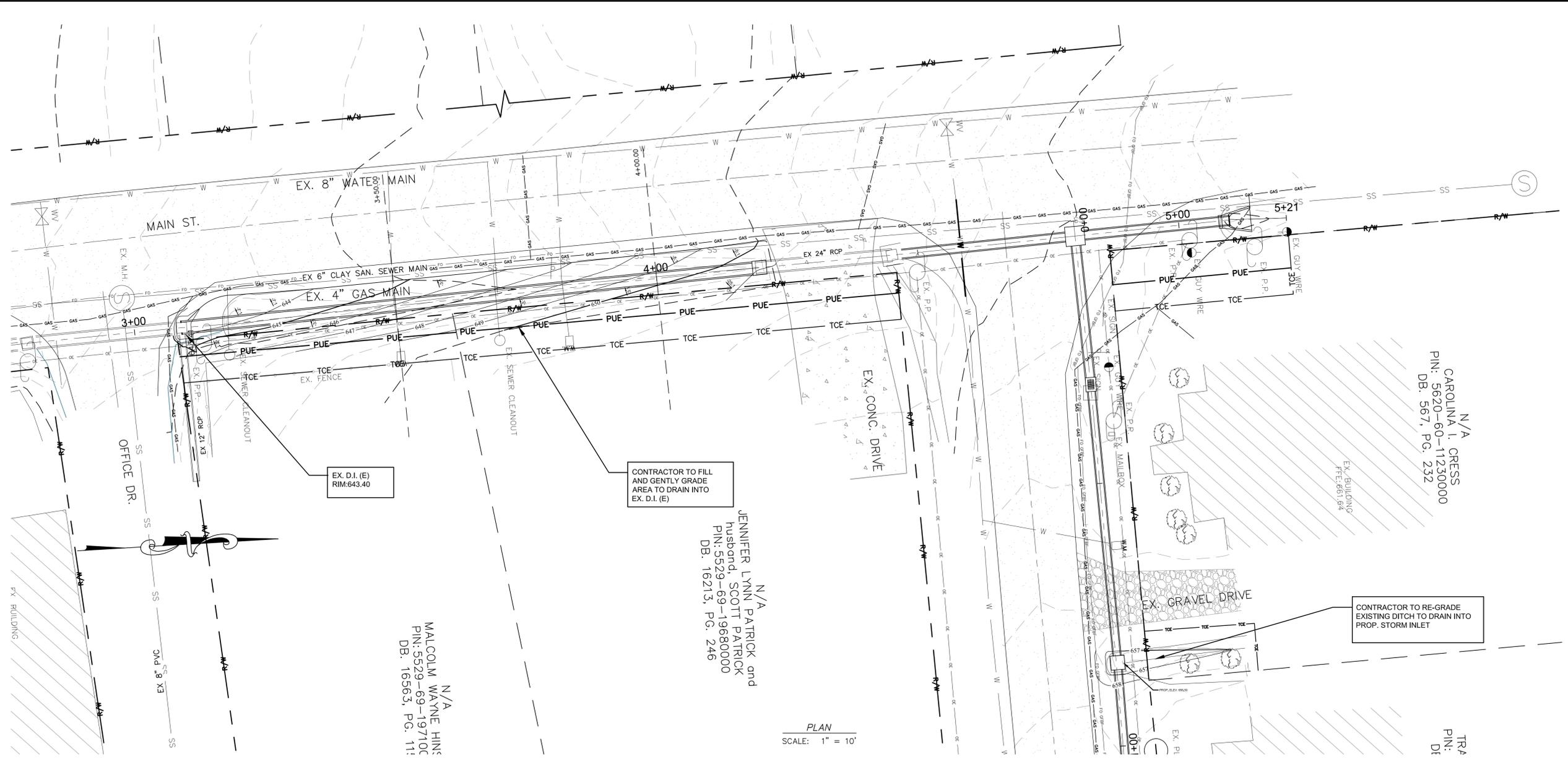
**MAIN ST. CULVERT
REPLACEMENT
MAIN ST. ROADWAY
SITE PLAN
PROJECT # : 2023-024**



REV. #	DATE	DESCRIPTION	BY
0	12/06/24	FINAL, FOR CONSTRUCTION	BCC
1	01/22/25	ADDRESSED AECQA COMMENTS & ADJUSTED FOR DEVELOPER SITE	BCC

DESIGNED BY: CGZ
DRAWN BY: BCC
CHECKED BY: EAB
SCALE: AS SHOWN
DATE: 08/08/24
PROJECT NUMBER: 2023-024
SHEET: 11 OF: 27

**MAIN ST. CULVERT
REPLACEMENT
GRADING PLAN**
PROJECT # : 2023-024

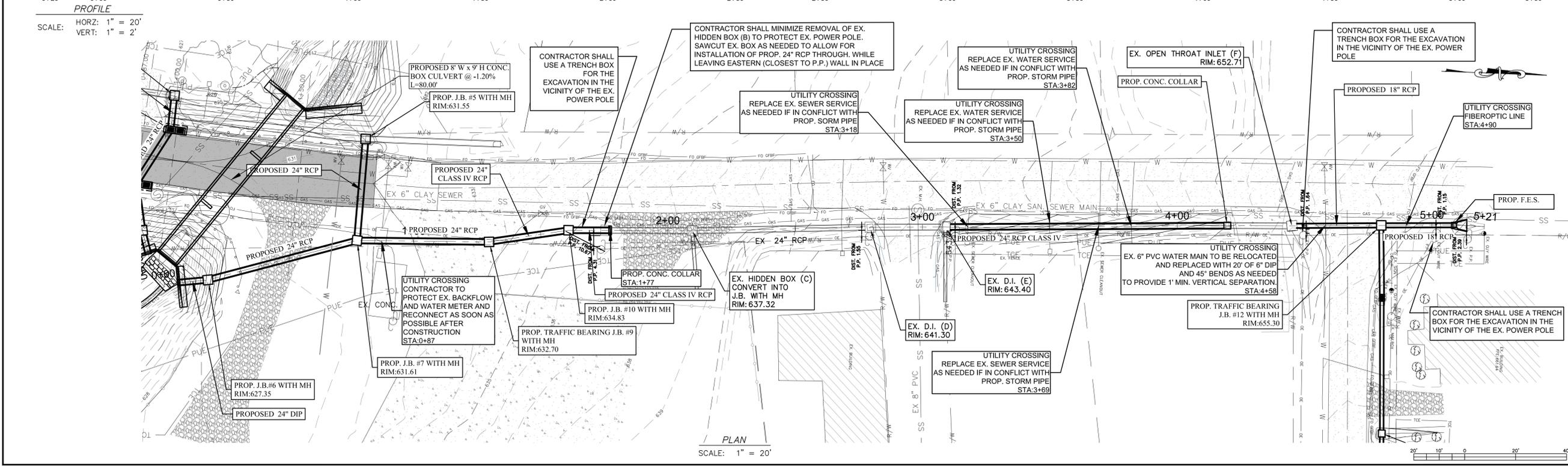
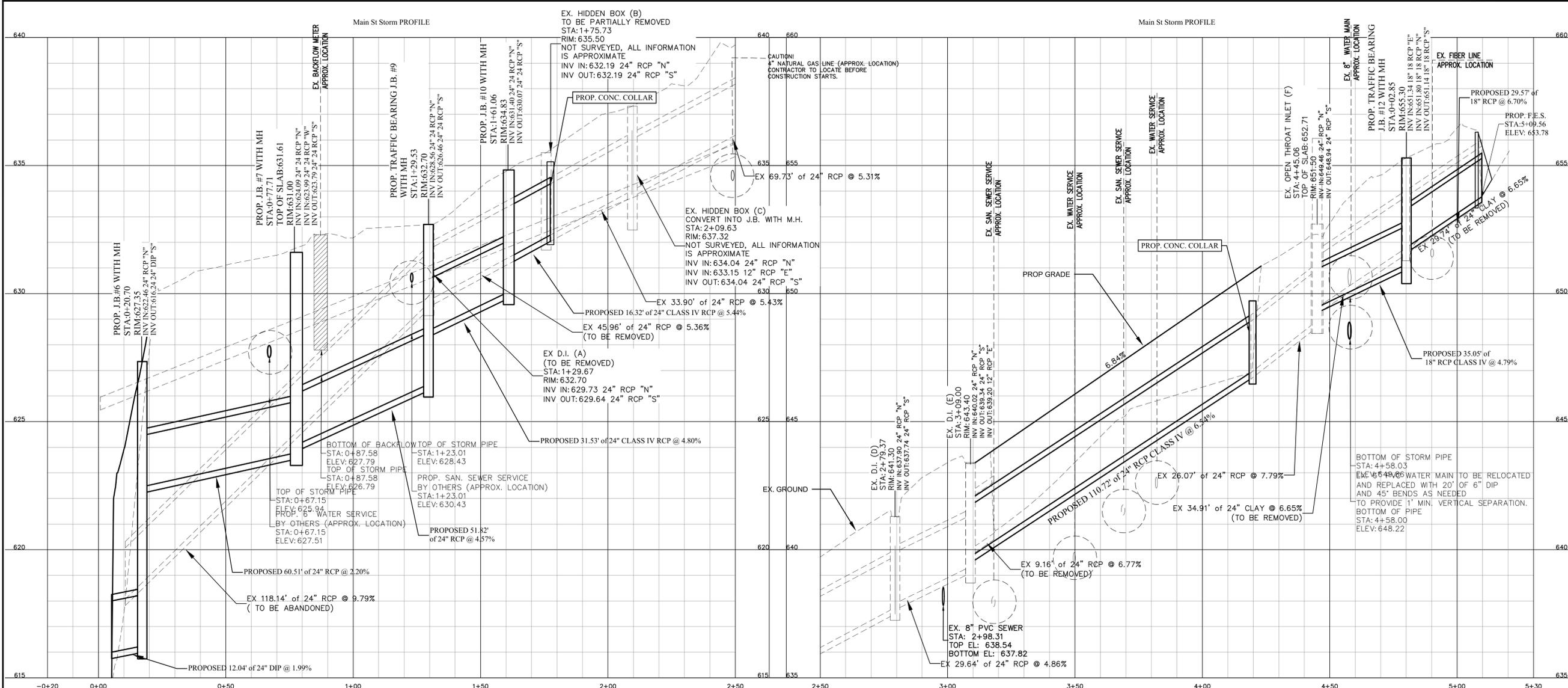




Engineer's Seal

Surveyor's Seal

**MAIN ST. CULVERT
REPLACEMENT
MAIN ST. STORM PIPE
PLAN & PROFILE
PROJECT # : 2023-024**



PROFILE
SCALE: HORZ: 1" = 20'
VERT: 1" = 2'

PLAN
SCALE: 1" = 20'

REV. #	DATE	DESCRIPTION
0	12/06/24	FINAL, FOR CONSTRUCTION
1	01/22/25	ADDRESSED AECOLA COMMENTS & ADJUSTED FOR DEVELOPER SITE

BY	DATE	DESCRIPTION
BCC		
BCC		

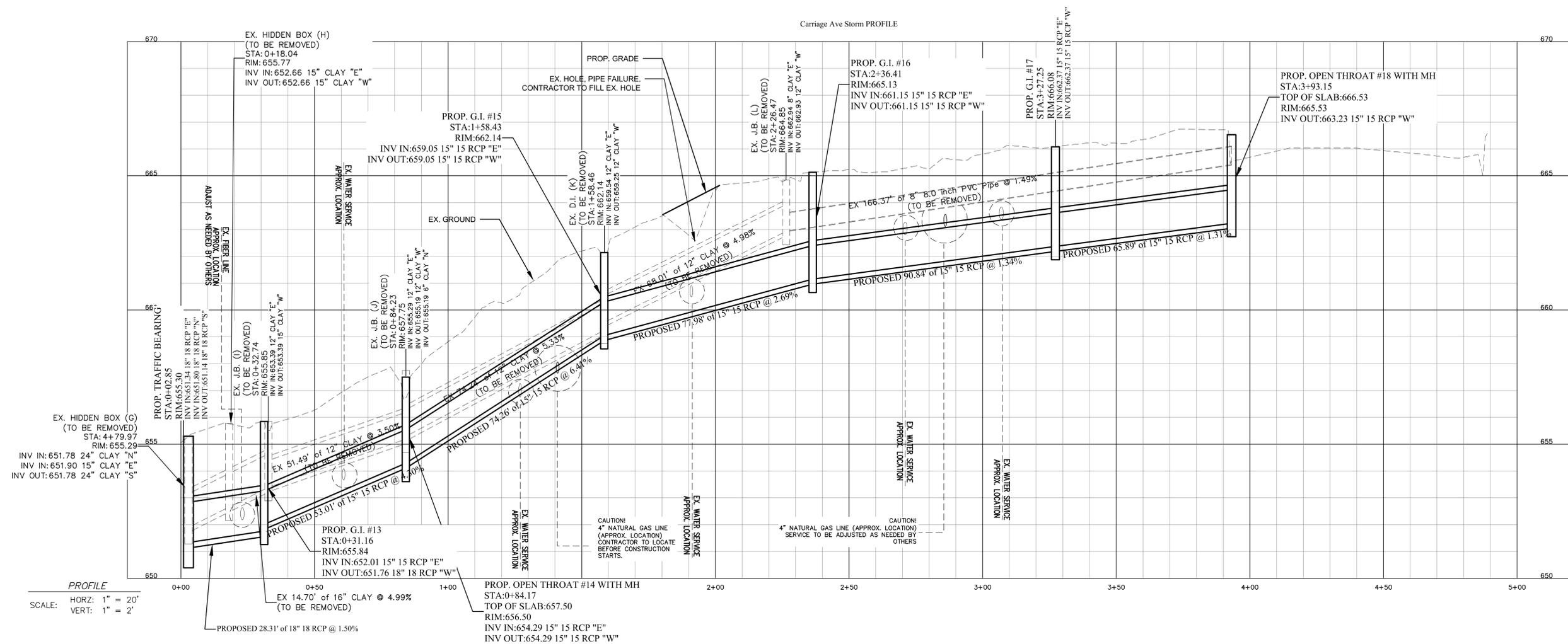
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DRAWN BY:	BCC
CHECKED BY:	EAB
SCALE:	AS SHOWN
DATE:	08/08/24
PROJECT NUMBER:	2023-024
SHEET:	15 OF 27



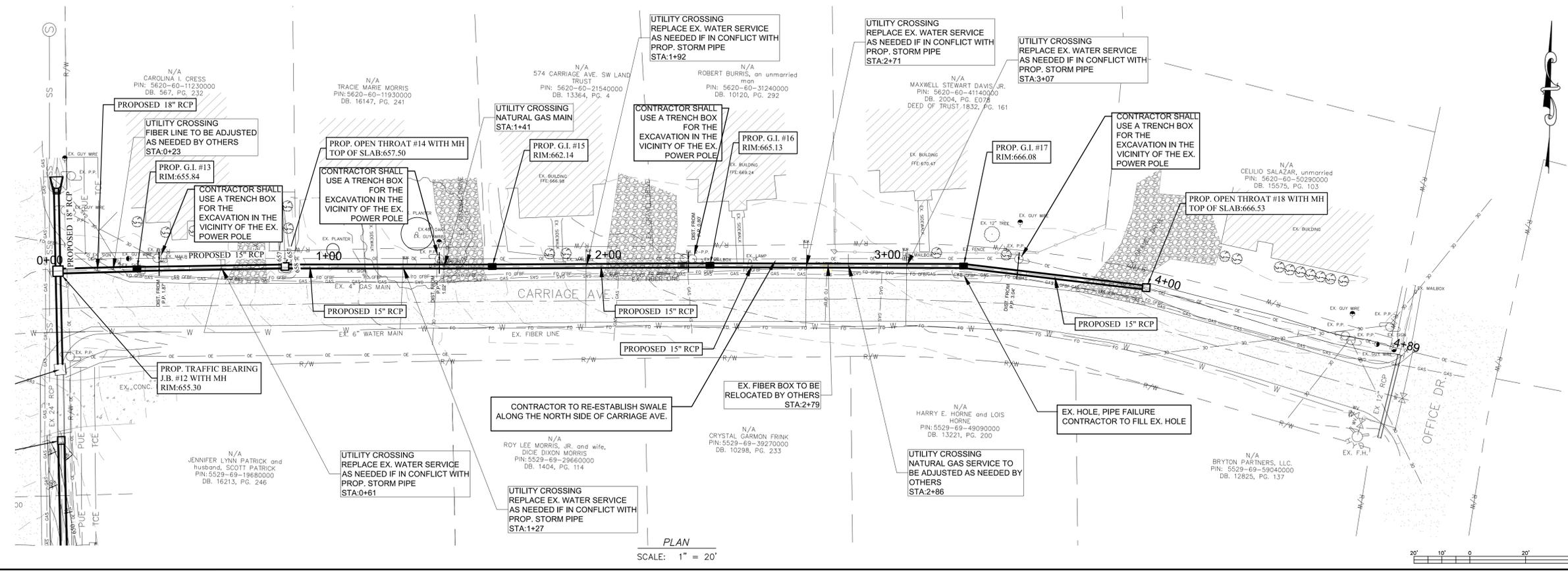
2/28/2025
 Engineer's Seal

Surveyor's Seal

**MAIN ST. CULVERT
 REPLACEMENT
 CARRIAGE AVE STORM PIPE
 PLAN & PROFILE
 PROJECT # : 2023-024**



PROFILE
 SCALE: HORIZ: 1" = 20'
 VERT: 1" = 2'



PLAN
 SCALE: 1" = 20'

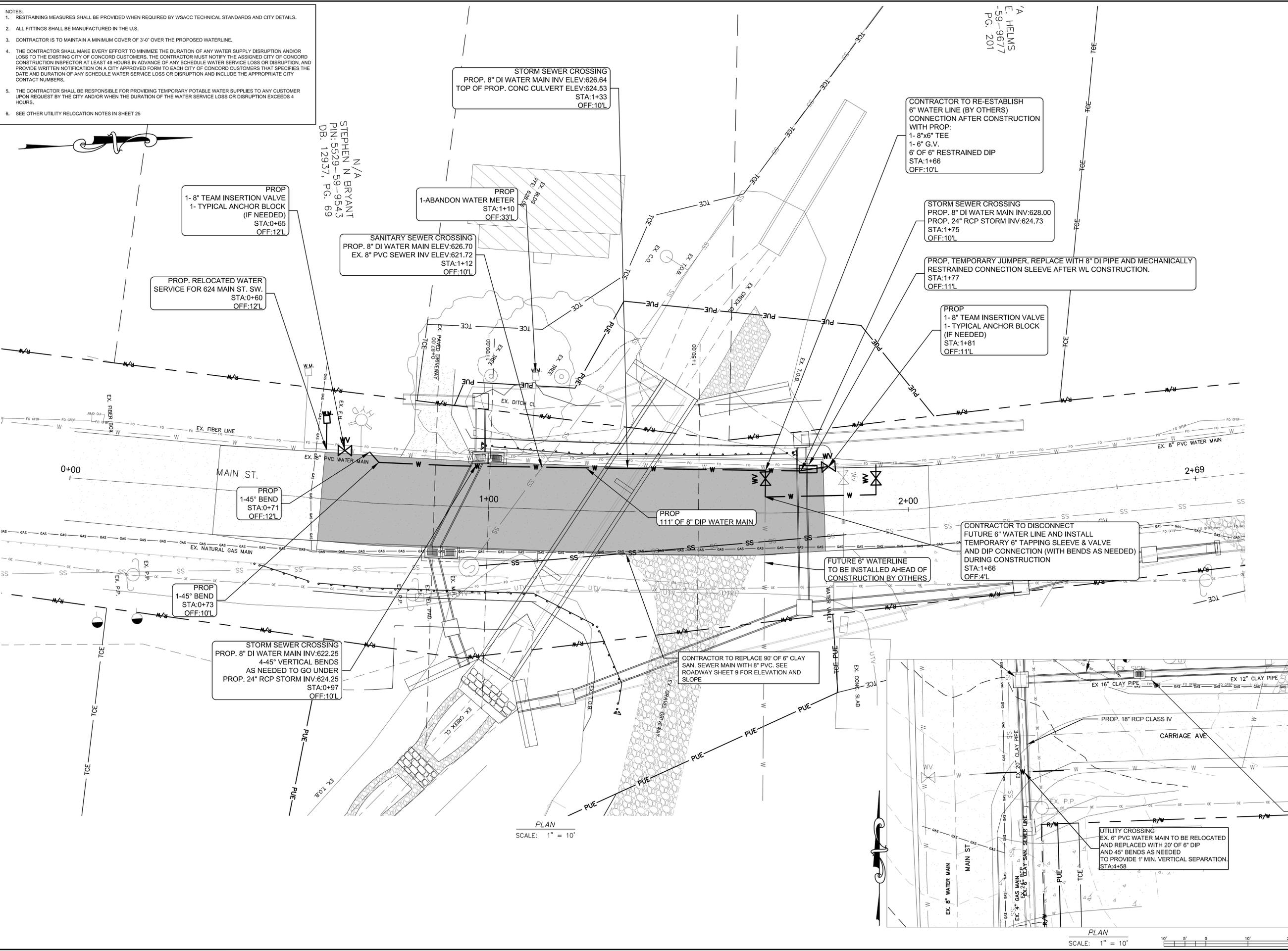
REV. #	DATE	DESCRIPTION	BY
0	12/06/24	FINAL, FOR CONSTRUCTION	BCC
1	01/22/25	ADDRESSED AECMA COMMENTS & ADJUSTED FOR DEVELOPER SITE	BCC

DESIGNED BY:	CGZ
DRAWN BY:	BCC
CHECKED BY:	EAB
SCALE:	AS SHOWN
DATE:	08/08/24
PROJECT NUMBER:	2023-024
SHEET:	16 OF 27

- NOTES:
1. RESTRAINING MEASURES SHALL BE PROVIDED WHEN REQUIRED BY WSACC TECHNICAL STANDARDS AND CITY DETAILS.
 2. ALL FITTINGS SHALL BE MANUFACTURED IN THE U.S.
 3. CONTRACTOR IS TO MAINTAIN A MINIMUM COVER OF 3'-0" OVER THE PROPOSED WATERLINE.
 4. THE CONTRACTOR SHALL MAKE EVERY EFFORT TO MINIMIZE THE DURATION OF ANY WATER SUPPLY DISRUPTION AND/OR LOSS TO THE EXISTING CITY OF CONCORD CUSTOMERS. THE CONTRACTOR MUST NOTIFY THE ASSIGNED CITY OF CONCORD CONSTRUCTION INSPECTOR AT LEAST 48 HOURS IN ADVANCE OF ANY SCHEDULED WATER SERVICE LOSS OR DISRUPTION, AND PROVIDE WRITTEN NOTIFICATION ON A CITY APPROVED FORM TO EACH CITY OF CONCORD CUSTOMERS THAT SPECIFIES THE DATE AND DURATION OF ANY SCHEDULED WATER SERVICE LOSS OR DISRUPTION AND INCLUDE THE APPROPRIATE CITY CONTACT NUMBERS.
 5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING TEMPORARY POTABLE WATER SUPPLIES TO ANY CUSTOMER UPON REQUEST BY THE CITY AND/OR WHEN THE DURATION OF THE WATER SERVICE LOSS OR DISRUPTION EXCEEDS 4 HOURS.
 6. SEE OTHER UTILITY RELOCATION NOTES IN SHEET 25

N/A
 STEPHEN N. BRYANT
 PIN: 5529-59-9543
 DB: 12937, PG. 69

E. HELMS
 -59-9677
 PG. 201



STORM SEWER CROSSING
 PROP. 8" DI WATER MAIN INV:626.64
 TOP OF PROP. CONC CULVERT ELEV:624.53
 STA:1+33
 OFF:10'L

PROP. 1-ABANDON WATER METER
 STA:1+10
 OFF:33'L

SANITARY SEWER CROSSING
 PROP. 8" DI WATER MAIN ELEV:626.70
 EX. 8" PVC SEWER INV ELEV:621.72
 STA:1+12
 OFF:10'L

PROP. 1- 8" TEAM INSERTION VALVE
 1- TYPICAL ANCHOR BLOCK
 (IF NEEDED)
 STA:0+65
 OFF:12'L

PROP. RELOCATED WATER
 SERVICE FOR 624 MAIN ST. SW.
 STA:0+60
 OFF:12'L

PROP. 1-45° BEND
 STA:0+71
 OFF:12'L

PROP. 1-45° BEND
 STA:0+73
 OFF:10'L

STORM SEWER CROSSING
 PROP. 8" DI WATER MAIN INV:622.25
 4-45° VERTICAL BENDS
 AS NEEDED TO GO UNDER
 PROP. 24" RCP STORM INV:624.25
 STA:0+97
 OFF:10'L

CONTRACTOR TO REPLACE 90° OF 6" CLAY
 SAN. SEWER MAIN WITH 8" PVC. SEE
 ROADWAY SHEET 9 FOR ELEVATION AND
 SLOPE

CONTRACTOR TO RE-ESTABLISH
 6" WATER LINE (BY OTHERS)
 CONNECTION AFTER CONSTRUCTION
 WITH PROP:
 1- 8"x6" TEE
 1- 6" G.V.
 6" OF 6" RESTRAINED DIP
 STA:1+66
 OFF:10'L

STORM SEWER CROSSING
 PROP. 8" DI WATER MAIN INV:628.00
 PROP. 24" RCP STORM INV:624.73
 STA:1+75
 OFF:10'L

PROP. TEMPORARY JUMPER. REPLACE WITH 8" DI PIPE AND MECHANICALLY
 RESTRAINED CONNECTION SLEEVE AFTER WL CONSTRUCTION.
 STA:1+77
 OFF:11'L

PROP. 1- 8" TEAM INSERTION VALVE
 1- TYPICAL ANCHOR BLOCK
 (IF NEEDED)
 STA:1+81
 OFF:11'L

CONTRACTOR TO DISCONNECT
 FUTURE 6" WATER LINE AND INSTALL
 TEMPORARY 6" TAPPING SLEEVE & VALVE
 AND DIP CONNECTION (WITH BENDS AS NEEDED)
 DURING CONSTRUCTION
 STA:1+66
 OFF:4'L

FUTURE 6" WATERLINE
 TO BE INSTALLED AHEAD OF
 CONSTRUCTION BY OTHERS

UTILITY CROSSING
 EX. 6" PVC WATER MAIN TO BE RELOCATED
 AND REPLACED WITH 20' OF 6" DIP
 AND 45° BENDS AS NEEDED
 TO PROVIDE 1' MIN. VERTICAL SEPARATION.
 STA:4+58

PLAN
 SCALE: 1" = 10'

PLAN
 SCALE: 1" = 10'



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 CONCORD N.C. 28026
 (704) 920-5425



Surveyor's Seal

MAIN ST. CULVERT
 REPLACEMENT
 WATER PLAN
 PROJECT #: 2023-024

REV. #	DATE	DESCRIPTION
0	12/06/24	FINAL, FOR CONSTRUCTION
1	01/22/25	ADDRESSED AECOLA COMMENTS & ADJUSTED FOR DEVELOPER SITE

DESIGNED BY:	CGZ
DRAWN BY:	BCC
CHECKED BY:	EAB
SCALE:	AS SHOWN
DATE:	08/08/24
PROJECT NUMBER:	2023-024
SHEET:	17 OF 27

EROSION CONTROL NOTES

- THE CONTRACTOR SHALL INSTALL AND MAINTAIN THROUGHOUT THE PROJECT CONSTRUCTION ALL EROSION CONTROL MEASURES SHOWN WITHIN THESE PLANS IN ACCORDANCE WITH APPLICABLE NCDCEQ EROSION AND SEDIMENT CONTROL AND NCDOT REGULATIONS.
- ALL EROSION CONTROL MEASURES SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE NORTH CAROLINA EROSION AND SEDIMENT CONTROL REGULATIONS, NCDOT, US. DEPARTMENT OF AGRICULTURE, AND US. SOIL CONSERVATION SERVICE REGULATIONS.
- ALL CONSTRUCTION WORK SHALL BE IN COMPLIANCE WITH REGULATIONS OF THE NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) STORM WATER GENERAL PERMIT.
- THE CONTRACTOR SHALL DILIGENTLY AND CONTINUOUSLY MAINTAIN ALL EROSION CONTROL DEVICES AND STRUCTURES TO MINIMIZE EROSION. THE CONTRACTOR SHALL MAINTAIN CLOSE CONTACT WITH THE NCDCEQ EROSION CONTROL INSPECTOR SO THAT PERIODIC INSPECTIONS CAN BE PERFORMED AT APPROPRIATE STAGES OF CONSTRUCTION.
- APPROVAL OF THIS PLAN IS NOT AN AUTHORIZATION TO GRADE ADJACENT PROPERTIES. WHEN FIELD CONDITIONS WARRANT OFF-SITE GRADING, PERMISSION MUST BE OBTAINED FROM THE AFFECTED PROPERTY OWNERS. CONTACT PROJECT ENGINEER AND PROJECT EROSION CONTROL INSPECTOR TO ENSURE ADDITIONAL EROSION CONTROL MEASURES ARE INSTALLED PRIOR TO OFF-SITE GRADING.
- EROSION AND SEDIMENT CONTROL MEASURES SHALL BE MAINTAINED CONTINUOUSLY, RELOCATED WHEN AND AS NECESSARY AND SHALL BE CHECKED AFTER EVERY RAINFALL. SEEDED AREAS SHALL BE CHECKED REGULARLY AND SHALL BE WATERED, FERTILIZED, RESEEDED AND MULCHED AS NECESSARY TO OBTAIN A DENSE STAND OF GRASS.
- STABILIZATION IS THE BEST FORM OF EROSION CONTROL. ALL DISTURBED AREAS WHICH ARE NOT OTHERWISE STABILIZED SHALL BE TOP SOILED AND SEEDED, TEMPORARILY OR PERMANENTLY IN ACCORDANCE WITH THE NORTH CAROLINA SEDIMENT CONTROL REGULATIONS. PERMANENT SEEDING AND GRASS ESTABLISHMENT IS REQUIRED PRIOR TO PROJECT COMPLETION AND ACCEPTANCE.
- WHERE SEDIMENT IS TRANSPORTED ONTO A PAVED OR PUBLIC ROAD SURFACE, THE ROAD SURFACE SHALL BE CLEANED THOROUGHLY AT THE END OF EACH DAY. SEDIMENT SHALL BE REMOVED FROM THE ROADS BY SHOVELING OR SWEEPING AND TRANSPORTED TO A SEDIMENT CONTROL DISPOSAL AREA. STREET WASHING SHALL BE ALLOWED ONLY AFTER SEDIMENT IS REMOVED IN THIS MANNER.
- WHEN A CRUSHED STONE CONSTRUCTION ENTRANCE HAS BEEN COVERED WITH SOIL OR HAS BEEN PUSHED INTO THE SOIL BY CONSTRUCTION TRAFFIC, IT SHALL BE REPLACED WITH A DEPTH OF STONE EQUAL TO THAT OF THE ORIGINAL APPLICATION.
- ALL DRAINAGE INLETS SHALL BE PROTECTED FROM SILTATION. INEFFECTIVE PROTECTION DEVICES SHALL BE IMMEDIATELY REPLACED AND THE INLET CLEANED. FLUSHING IS NOT AN ACCEPTABLE METHOD OF CLEANING.
- DURING CONSTRUCTION OF THE PROJECT, SOIL STOCKPILES SHALL BE STABILIZED OR PROTECTED WITH SEDIMENT TRAPPING MEASURES. THE APPLICANT IS RESPONSIBLE FOR THE TEMPORARY PROTECTION AND PERMANENT STABILIZATION OF ALL SOIL STOCKPILES ON SITE, AS WELL AS SOIL INTENTIONALLY TRANSPORTED FROM THE PROJECT SITE.
- CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING AN EROSION AND SEDIMENTATION PERMIT FROM THE NORTH CAROLINA DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES FOR ANY NEW OFF-SITE BORROW AREA. ANY OFF-SITE BORROW AND WASTE REQUIRED FOR THIS PROJECT MUST COME FROM AN APPROVED EROSION CONTROL PLAN SITE. 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.

SELF-INSPECTION

PERSONS RESPONSIBLE FOR LAND DISTURBING ACTIVITIES MUST INSPECT THE SEDIMENT AND EROSION CONTROL MEASURES ON THIS PROJECT AFTER EACH PHASE TO MAKE SURE THAT THE APPROVED EROSION AND SEDIMENTATION CONTROL PLAN IS BEING FOLLOWED. SELF-INSPECTION REPORTS ARE REQUIRED. A SAMPLE REPORT AND DETAILS OF THE PROGRAM CAN BE FOUND ON THE LAND QUALITY WEBSITE.

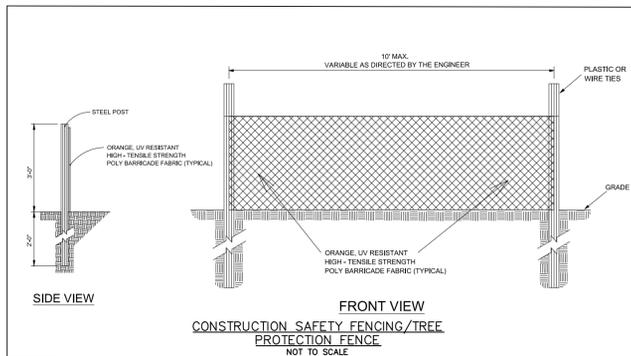
STABILIZATION REQUIREMENTS

Stabilization Requirements:
 (03-11-16)S-3
 Stabilization for this project shall comply with the time frame guidelines as specified by the NCC-010000 general construction permit effective August 3, 2011 issued by the North Carolina Department of Environment and Natural Resources Division of Water Quality. Temporary or permanent ground cover stabilization shall occur within 7 calendar days from the last land-disturbing activity, with the following exceptions in which temporary or permanent ground cover shall be provided in 14 calendar days from the last land-disturbing activity.

- Slopes between 2:1 and 3:1, with a slope length of 10 ft. or less
- Slopes 3:1 or flatter, with a slope length of 50 ft. or less
- Slopes 4:1 or flatter

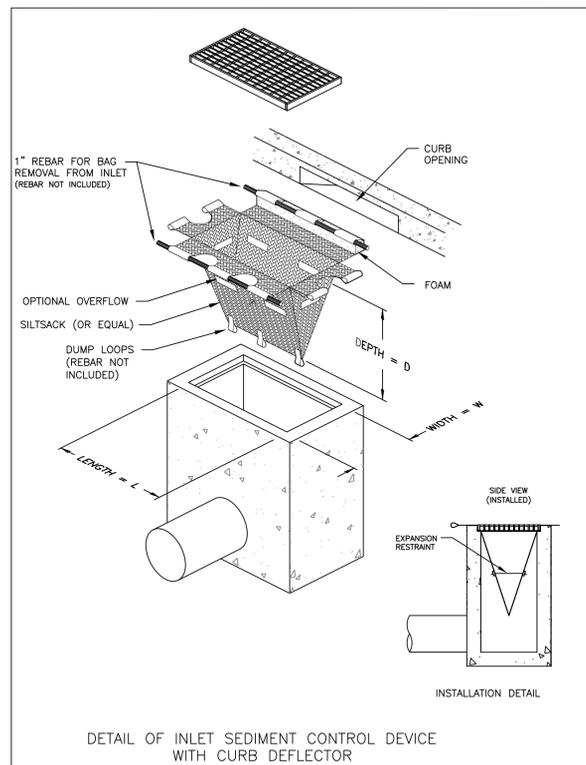
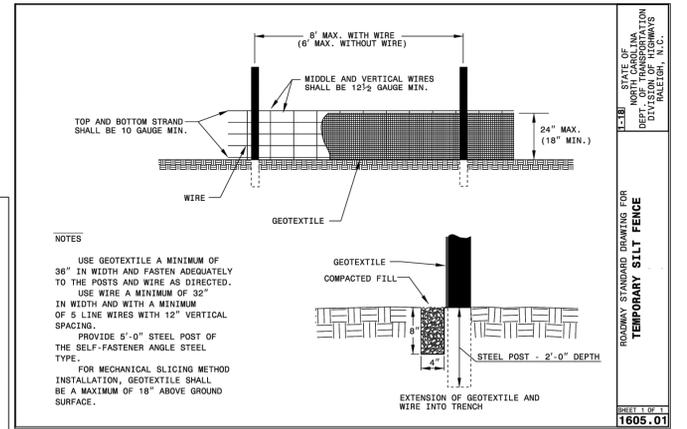
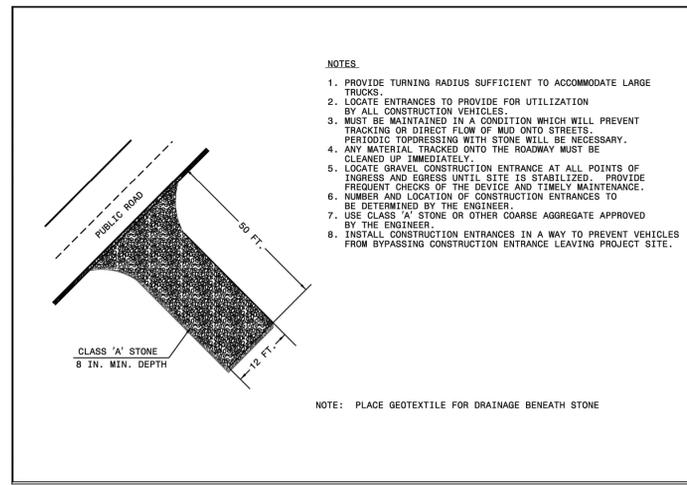
The stabilization timeframe for High Quality Water (HQW) Zones shall be 7 calendar days with no exceptions for slope grades or lengths. High Quality Water Zones (HQW) Zones are defined by North Carolina Administrative Code 15A NCAC 04A.0105 (25). Temporary and permanent ground cover stabilization shall be achieved in accordance with the provisions in this contract and as directed.

Provisions for a permanent ground cover sufficient to restrain erosion must be accomplished within 15 working days or 90 calendar days following completion of construction or development, whichever period is shorter.



MAINTENANCE PLAN

- ALL EROSION AND SEDIMENTATION CONTROL DEVICES WILL BE CHECKED BY THE CONTRACTOR FOR STABILITY AND OPERATION WITHIN 24 HOURS AFTER EVERY RUNOFF PRODUCING RAINFALL INCLUDING ANY STORM EVENT GREATER THAN 0.5" OF PRECIPITATION DURING ANY 24 HOUR PERIOD, BUT IN NO CASE LESS THAN ONCE EVERY WEEK. ANY NEEDED REPAIRS WILL BE MADE IMMEDIATELY TO MAINTAIN ALL PRACTICES AS DESIGNED. DAMAGED OR INEFFECTIVE DEVICES SHALL BE REPAIRED OR REPLACED AS NECESSARY.
- MAINTAIN EROSION CONTROL DEVICES AS FOLLOW:
 - TEMPORARY SILT FENCE - REMOVE SEDIMENT DEPOSITS WHEN IT BECOMES 0.5 FT DEEP AT THE FENCE AND AS NECESSARY TO PROVIDE ADEQUATE STORAGE VOLUME FOR THE NEXT RAIN AND TO REDUCE PRESSURE ON THE FENCE. AVOID UNDERMINING THE FENCE.
 - TEMPORARY CHECK DAM - REMOVE SEDIMENT ACCUMULATION BEHIND THE DAMS AS NEEDED TO PREVENT DAMAGE TO CHANNEL VEGETATION. ADD STORE TO DAMS AS NEEDED TO MAINTAIN DESIGN HEIGHT AND CROSS SECTION.
 - STORM DRAIN INLET PROTECTION - REMOVE SEDIMENT AS NECESSARY TO PROVIDE ADEQUATE STORAGE VOLUME FOR THE NEXT RAINFALL.
 - TEMPORARY DIVERSION DITCH - INSPECT TEMPORARY DIVERSIONS ONCE A WEEK AFTER EVER RAINFALL. IMMEDIATELY REMOVE SEDIMENT FROM THE FLOW AREA AND REPAIR THE DIVERSION RIDGE. CAREFULLY CHECK OUTLETS AND MAKE TIMELY REPAIRS AS NEEDED. WHEN THE AREA PROTECTED IS PERMANENTLY STABILIZED, REMOVE THE RIDGE AND THE CHANNEL TO BLEND WITH THE NATURAL GROUND.
 - SEDIMENT DAMS - REMOVE SEDIMENT AND RESTORE BASIN TO ITS ORIGINAL DIMENSIONS WHEN THE SEDIMENT HAS ACCUMULATED TO ONE HALF THE DESIGN DEPTH OF THE TRAP. CHECK THE STRUCTURE FOR DAMAGE FROM EROSION TO ENSURE IT IS A MINIMUM 1.5 FEET BELOW THE LOW POINT OF THE EMBANKMENT.
 - TEMPORARY SLOPE DAM - INSPECT THE SLOPE DRAIN AND SUPPORTING DIVERSION AFTER EVERY RAINFALL AND PROMPTLY MAKE NECESSARY REPAIRS. WHEN THE PROTECTED AREA HAS BEEN PERMANENTLY STABILIZED, TEMPORARY MEASURES MAY BE REMOVED. MATERIALS DISPOSED OF PROPERLY AND ALL DISTURBED AREAS STABILIZED APPROPRIATELY.
 - SEDIMENT TUBE - CHECK SEDIMENT TUBE AFTER EACH RAINFALL. REMOVE SEDIMENT AND RESTORE ORIGINAL VOLUME WHEN SEDIMENT ACCUMULATES TO ONE-HALF THE DESIGN VOLUME.
- ALL GRADED AREAS WILL BE SEEDED, FERTILIZED AND MULCHED ACCORDING TO SPECIFICATIONS, SPECIAL PROVISIONS AND THE NORTH CAROLINA EROSION AND SEDIMENT CONTROL PLANNING AND DESIGN MANUAL TO MAINTAIN A VIGOROUS, DENSE, VEGETATIVE COVER WITHIN REQUIRED SOIL STABILIZATION TIMEFRAMES. IF WORK ON THE PROJECT CEASES FOR MORE THAN THE AFOREMENTIONED LENGTH OF TIME, ALL DISTURBED AREAS SHALL HAVE TEMPORARY VEGETATIVE GROUND COVER ESTABLISHED AND EROSION CONTROL DEVICES MAINTAINED.
- PROVIDE SILT FENCE AND/OR OTHER CONTROL DEVICES AS MAY BE REQUIRED TO CONTROL SOIL EROSION DURING UTILITY CONSTRUCTION. ALL DISTURBED AREAS SHALL BE CLEANED, GRADED, AND STABILIZED WITH GRASSING IMMEDIATELY AFTER THE UTILITY INSTALLATION.
- ALL EROSION CONTROL DEVICES SHALL BE PROPERLY MAINTAINED DURING ALL PHASES OF CONSTRUCTION UNTIL THE COMPLETION OF ALL CONSTRUCTION ACTIVITIES AND DISTURBED AREAS HAVE BEEN STABILIZED. ADDITIONAL CONTROL DEVICES MAY BE REQUIRED DURING CONSTRUCTION IN ORDER TO CONTROL EROSION AND/OR OFFSITE SEDIMENTATION. ALL TEMPORARY CONTROL DEVICES SHALL BE REMOVED ONCE CONSTRUCTION IS COMPLETE AND THE SITE IS STABILIZED.
- THE CONTRACTOR MUST TAKE NECESSARY ACTION TO MINIMIZE THE TRACKING OF MUD ONTO THE PAVED ROADWAY CONSTRUCTION AREAS. THE CONTRACTOR SHALL DAILY REMOVE MUD/SOIL FROM PAVEMENT AS MAY BE REQUIRED.
- TEMPORARY DIVERSION BERMS AND/OR DITCHES WILL BE PROVIDED AS NEEDED DURING CONSTRUCTION TO PROTECT WORK AREAS FROM UPSLOPE RUNOFF AND/OR DIVERT SEDIMENT. LADEN WATER TO APPROPRIATE TRAPS OR STABLE OUTLETS. TEMPORARY SEDIMENT BASIN MUST BE MAINTAINED PRIOR TO TRANSITIONING TO PERMANENT DRY OR WET BASINS.



SILTSACK® SPECIFICATIONS

NOTE: THE SILTSACK WILL BE MANUFACTURED FROM A WOVEN POLYPROPYLENE FABRIC THAT MEETS OR EXCEEDS THE FOLLOWING SPECIFICATIONS.

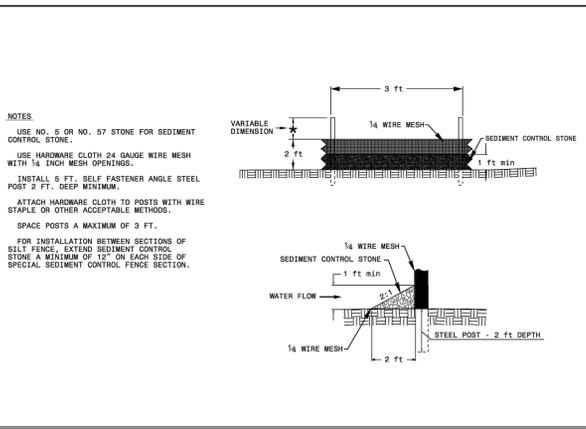
REGULAR FLOW SILTSACK®
 (FOR AREAS OF LOW TO MODERATE PRECIPITATION AND RUN-OFF)

PROPERTIES	TEST METHOD	UNITS
GRAB TENSILE STRENGTH	ASTM D-4632	300 LBS
GRAB TENSILE ELONGATION	ASTM D-4632	20 %
PUNCTURE	ASTM D-4833	120 LBS
MULLEN BURST	ASTM D-3786	800 PSI
TRAPEZOID TEAR	ASTM D-4533	120 LBS
UV RESISTANCE	ASTM D-4355	80 %
APPARENT OPENING SIZE	ASTM D-4751	40 US SIEVE
FLOW RATE	ASTM D-4491	40 GAL/MIN/SQ FT
PERMITTIVITY	ASTM D-4491	0.55 SEC -1

HI-FLOW SILTSACK®
 (FOR AREAS OF MODERATE TO HEAVY PRECIPITATION AND RUN-OFF)

PROPERTIES	TEST METHOD	UNITS
GRAB TENSILE STRENGTH	ASTM D-4632	265 LBS
GRAB TENSILE ELONGATION	ASTM D-4632	20 %
PUNCTURE	ASTM D-4833	135 LBS
MULLEN BURST	ASTM D-3786	420 PSI
TRAPEZOID TEAR	ASTM D-4533	45 LBS
UV RESISTANCE	ASTM D-4355	90 %
APPARENT OPENING SIZE	ASTM D-4751	20 US SIEVE
FLOW RATE	ASTM D-4491	200 GAL/MIN/SQ FT
PERMITTIVITY	ASTM D-4491	1.5 SEC -1

(FOR AREAS WHERE THERE IS A CONCERN FOR OIL RUN-OFF OR SPILLS) DEPENDING ON YOUR PARTICULAR APPLICATION, THE SILTSACK CAN BE MADE FROM EITHER ONE OF THE ABOVE FABRICS WITH AN OIL-ABSORBANT PILLLOW INSERT OR, MADE COMPLETELY FROM AN OIL-ABSORBANT SILTSACK WITH A WOVEN PILLLOW INSERT.



SOIL STABILIZATION TIME FRAMES

SITE DESCRIPTION	STABILIZATION TIME	TIMEFRAME EXCEPTIONS
PERIMETER DIKES, SWALES, DITCHES AND SLOPES	7 DAYS	NONE
HIGH QUALITY WATER (HQW) ZONES	7 DAYS	NONE
SLOPES STEEPER THAN 3:1	7 DAYS	IF SLOPES ARE 10' OR LESS IN LENGTH AND 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.

SEEDING AND MULCHING:
 (West)
 The kinds of seed and fertilizer, and the rates of application of seed, fertilizer, and limestone, shall be as stated below. During periods of overlapping dates, the kind of seed to be used shall be determined. All rates are in pounds per acre.

Shoulder and Median Areas

August 1 - June 1	May 1 - September 1
20# Kentucky Bluegrass	20# Kentucky Bluegrass
75# Hard Fescue	75# Hard Fescue
25# Rye Grain	10# German or Browntop Millet
500# Fertilizer	500# Fertilizer
4000# Limestone	4000# Limestone

Areas Beyond the Mowing Pattern, Waste and Borrow Areas:

August 1 - June 1	May 1 - September 1
100# Tall Fescue	100# Tall Fescue
15# Kentucky Bluegrass	15# Kentucky Bluegrass
30# Hard Fescue	10# Hard Fescue
25# Rye Grain	10# German or Browntop Millet
500# Fertilizer	500# Fertilizer
4000# Limestone	4000# Limestone

Approved Tall Fescue Cultivars

06 Dust	Escalade	Justice	Serengeti
2nd Millennium	Kalahari	Shelby	Shelby
3rd Millennium	Evergreen 2	Kitty Hawk 2000	Sheridan
Apache III	Falcon III	Legitimate	Signia
Avenger	Falcon IV	Lexington	Silver Hawk
Barlexas	Falcon V	LSD	Silverstar
Barlexas II	Faith	Magellan	Shenandoah Elite
Bar Fa	Fat Cat	Matador	Sidewinder
Barrera	Festnova	Millennium	SRP Skyline
Barrington	Fidelity	Monet	Solara
Barrubusto	Finelawn Elite	Mustang 4	Southern Choice II
Barvado	Finelawn Xpress	Ninja 2	Speedway
Biltmore	Finesse II	Ol' Glory	Spyder LS
Bingo	Firebird	Olympic Gold	Sunset Gold
Bizem	Firecracker LS	PadreTaccua	Blackwatch
Fireza	Patagonia	Tanzania	Blade Runner II
Five Point	Pedigree	Trio	Bonsai
Focus	Picasso	Tahoe II	
Braveheart	Forté	Piedmont	Talladege
Bravo	Garrison	Plantation	Tarheel
Bulls-eye	Gazella II	Prospects 5301	Terrano
Cannovar	Gold Medallion	Prospect	Titan IId
Catalyst	Grande 3	Pure Gold	Titanium LS
Cayenne	Greenbrooks	Quest	Tracer
Cessane Rz	Greenkeeper	Raptor II	Traverse SRP
Chipper	Gremlin	Rebel Exeda	Tulsa Time
Cochise IV	Greystone	Rebel Sentry	Turbo
Constitution	Guardian 21	Rebel IV	Turbo RZ
Corgi	Guardian 41	Regiment II	Turbo RZ
Corona	Hemi	Regenerate	Ultimate
Coyote	Honky Tonk	Rendition	Venture
Darlington	Hot Rod	Rhambler 2 SRP	Umbrella
Davinci	Hunter	Rembrandt	
Van Gogh	Desire	Inferno	
Reunion	Watchdog	Dominion	Innovator
Riverside	Wolfpack II	DynamicIntegrity	RNPxtremegreen
DynastyJaguar 3	Rocket	Endeavor	Jamboree

Approved Kentucky Bluegrass Cultivars:

4-Season	Blue Velvet	Gladstone	Quantum
Leap	Alexa II	Blueberry	Granite
Rambo	America	Boomerang	Hampton
Rhapsody	Apollo	Brilliant	Harmonie
Rhythm	Arcadia	Cabernet	Impact
Rita	Aries	Champagne	Jefferson
Royce	Armada	Champion	Juliet
Rubicun	Arrow	Chicago II	Jump Start
Rugby II	Arrowhead	Corsair	Keeneland
Shiraz	Aura	Courtyard	Langara
Avid	Delight	Liberator	Skye Award
Diva	Madison	Solar Eclipse	Awsome
Dynamo	Mercury	Sonoma	Bandera
Eagleton	Midnight	Sorbonne	Barduke
Emblem	Midnight II	Starburst	Barrique
Empire	Moon Shadow	Sudden Impact	Baroness
Envicta	Moonlight SLT	Total Eclipse	Barsteezor
Everest	Mystere	Touche	Barvette HGT
Everglade	Nu Destiny	Tsunami	Bedazzled
Excursion	Nu	Chicago	Unique
Belissimo	Freedom II	Nu Glade	Valor
Bewitched	Freedom III	Odyssey	Voyager II
Beyond	Front Page	Perfection	Washington
Blacksburg II	Futurity	Pinot	Zinfandel
Blackstone	Gaelic	Princeton 105	Blue Note Ginney II
Prosperity			

Approved Hard Fescue Cultivars:

Aurora Gold	Eureka II	Oxford	Scalds II
Berkshire	Firefly	Reliant II	Spartan II
Bighorn GT	Granite	Reliant IV	Stonehenge
Rescue 911	Chariot	Heron	Nordic

On cut and fill slopes 2:1 or steeper add 20# Sericea Lespedeza January 1 - December 31.

Fertilizer shall be 10-20-20 analysis. A different analysis of fertilizer may be used provided the 1-2-2 ratio is maintained and the rate of application adjusted to provide the same amount of plant food as a 10-20-20 analysis and as directed.

Concord
 NORTH CAROLINA
 High Performance Living

PREPARED BY
 ENGINEERING DEPARTMENT
 CITY OF CONCORD
 P.O. BOX 308
 CONCORD N.C. 28026
 (704) 920-5425

Carolina Professional Engineers Seal
 SEAL
 044150
 2/28/2025
 Engineer's Seal

Surveyor's Seal

MAIN ST. CULVERT REPLACEMENT EROSION CONTROL DETAILS
 PROJECT #: 2023-024

REV #	DATE	DESCRIPTION	BY	BCC	BCC
0	12/06/24	FINAL, FOR CONSTRUCTION			
1	01/22/25	ADDRESSED AECOLA COMMENTS & ADJUSTED FOR DEVELOPER SITE			

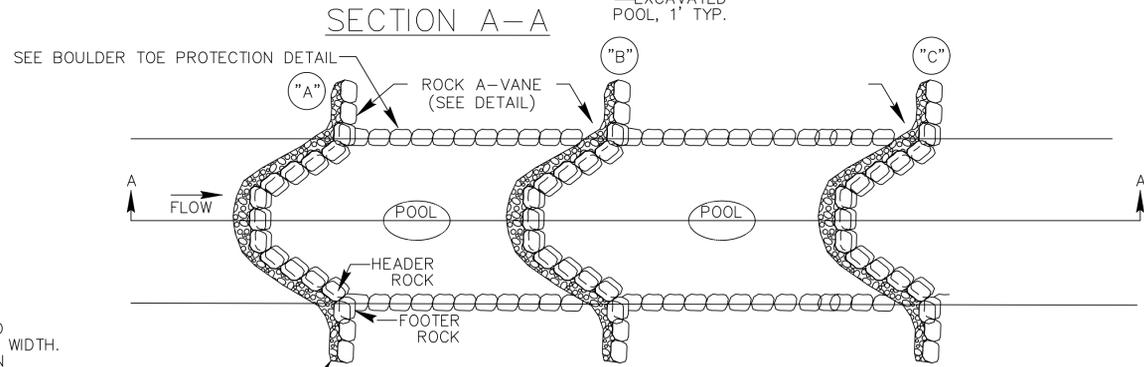
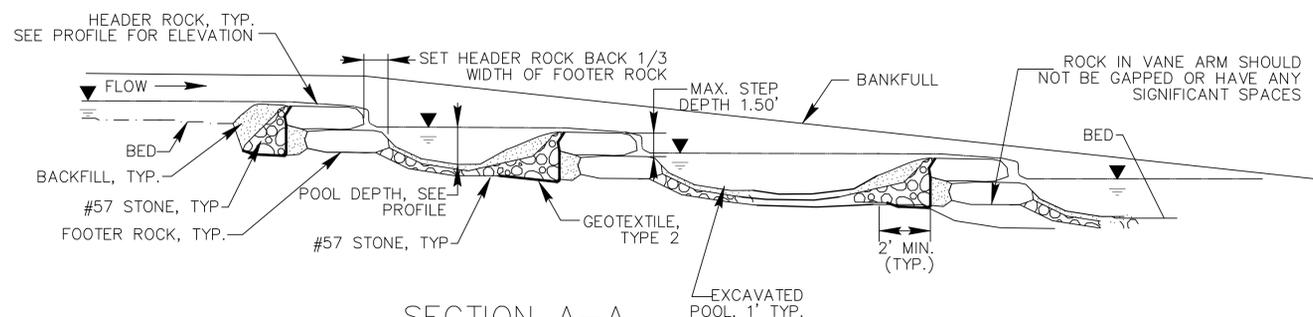
DESIGNED BY: CGZ
 DRAWN BY: BCC
 CHECKED BY: EAB
 SCALE: AS SHOWN
 DATE: 08/26/24
 PROJECT NUMBER: 2023-024
 SHEET: 19 OF: 27



Engineer's Seal

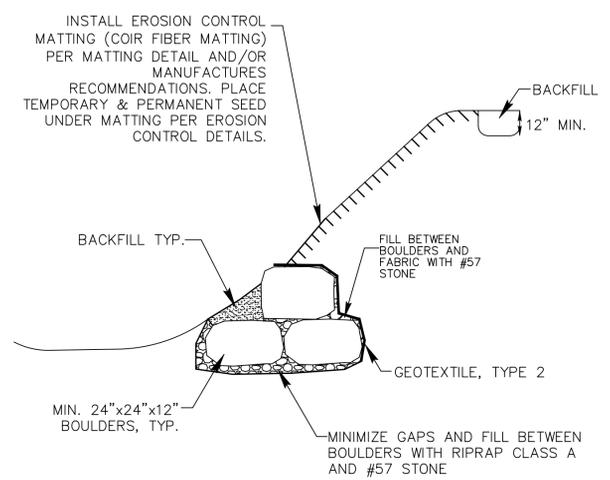
Surveyor's Seal

MAIN ST.
CULVERT REPLACEMENT
STEP POOL
STANDARD DETAILS
PROJECT #: 2023-024

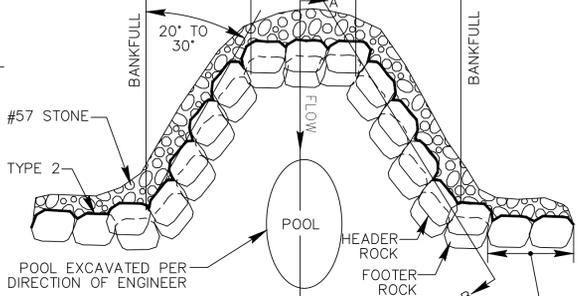
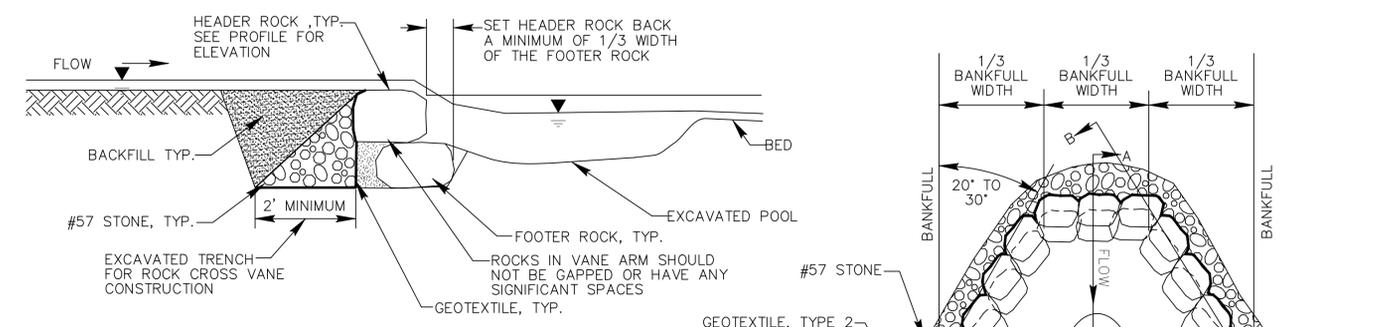


STEP POOL DETAIL
NOT TO SCALE

- NOTES:
1. STEPS TO BE SHORT, FREQUENT, AND CLOSELY SPACED.
 2. POOL SPACING SHALL BE INVERSELY PROPORTIONAL TO STREAM SLOPE, AND DIRECTLY PROPORTIONAL TO BANKFULL WIDTH.
 3. POOL DEPTHS AT BANKFULL ELEVATION SHALL BE TYPICALLY 2 TO 3 TIMES DEEPER THAN STEP DEPTHS AT BANKFULL ELEVATION.
 4. ADEQUATE NUMBER OF FOOTER BOULDERS TO BE USED IN ORDER TO HOLD UP THE BOULDERS AT HEAD OF STEPS DURING HIGH ENERGY/HIGH FLOW EVENTS.
 5. STEP POOL DEPTH SHOULD BE 2 TO 3 TIMES BANKFULL DEPTH.

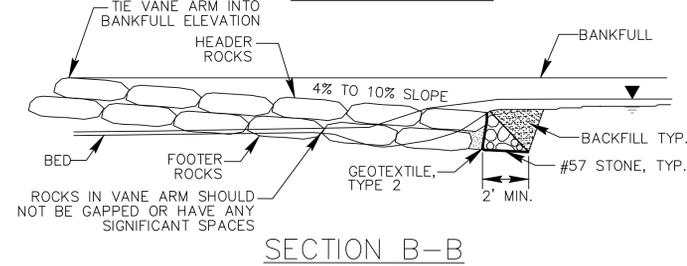


BOULDER TOE PROTECTION W/ EROSION CONTROL MATTING
NOT TO SCALE



SECTION A-A

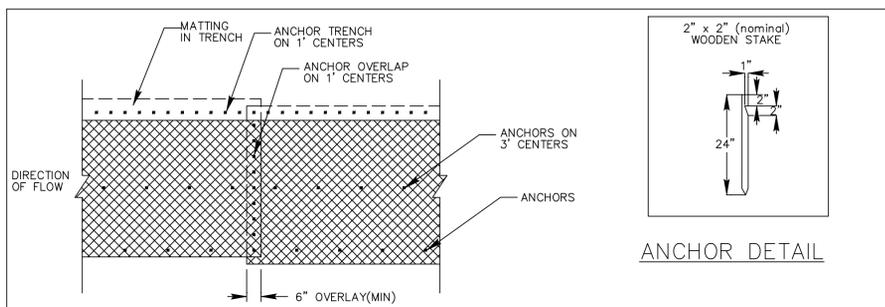
PLAN VIEW



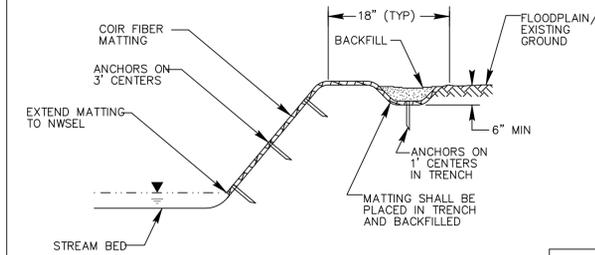
SECTION B-B

- NOTES:
1. DEEPEST PART OF POOL TO BE IN LINE WITH WHERE VANE ARM TIES INTO BANKFULL.
 2. DO NOT EXCAVATE POOL TOO CLOSE TO FOOTER BOULDERS.
 3. CLASS "A" STONE CAN BE USED TO REDUCE VOIDS BETWEEN HEADERS AND FOOTERS.
 4. COMPACT BACKFILL TO EXTENT POSSIBLE OR AT THE DIRECTION OF THE ENGINEER.
 5. POOL DEPTH SHOULD BE 2 TO 3 TIMES BANKFULL DEPTH.

ROCK CROSS VANE DETAIL FOR STEP POOLS
NOT TO SCALE



ANCHOR DETAIL



TYPICAL CROSS SECTION

COIR FIBER MATTING DETAIL

- NOTES:
1. IN AREAS TO BE MATTED, ALL SEEDING, SOIL AMENDMENTS, AND SOIL PREPARATION MUST BE COMPLETED IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS PRIOR TO PLACEMENT OF COIR FIBER MATTING.

REV #	DATE	DESCRIPTION	BY
0	12/06/24	FINAL, FOR CONSTRUCTION	BCC
1	01/22/25	ADDRESSED ACELA COMMENTS & ADJUSTED FOR DEVELOPER SITE	BCC

DESIGNED BY: CGZ
DRAWN BY: BCC
CHECKED BY: EAB
SCALE: AS SHOWN
DATE: 08/19/24
PROJECT NUMBER: 2023-024
SHEET: 21 OF: 27

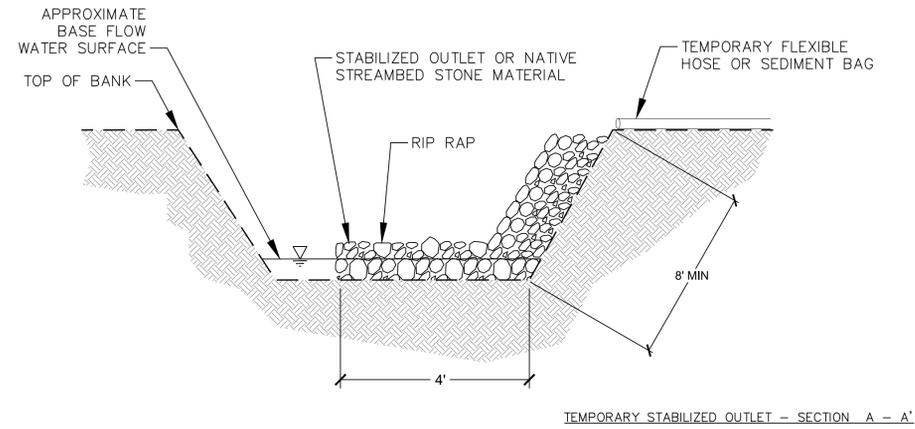
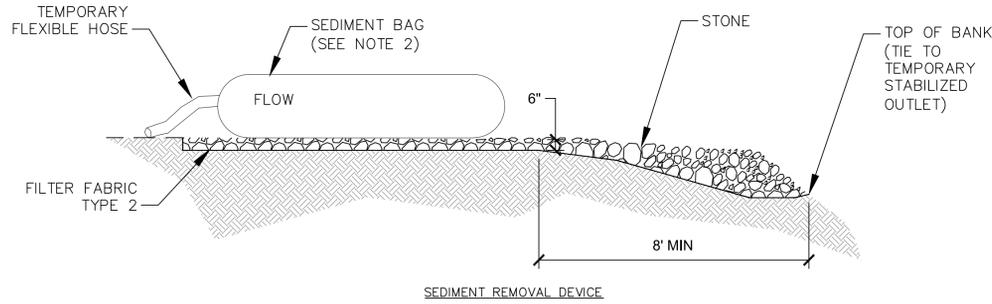
NOTES:

1. SEDIMENT FILTER BAG FABRIC SHALL BE GEOTEXTILE MANUFACTURED FROM WOVEN POLYPROPYLENE OR POLYMER MATERIAL. SEDIMENT FILTER BAG FABRIC MAY BE MADE FROM RECYCLED POLYMER MATERIALS. POLYMER MATERIALS SHALL NOT CONTAIN BIODEGRADABLE FILLER MATERIALS AND SHALL CONFORM TO THE REQUIREMENTS IN ASTM DESIGNATION: E 204
2. SEDIMENT FILTER BAG SHALL CONFORM TO THE FOLLOWING REQUIREMENTS:

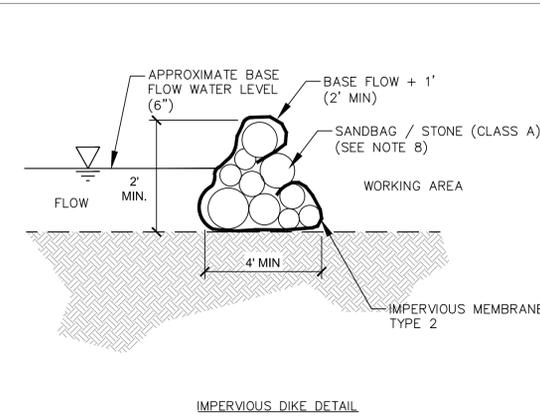
SPECIFICATION	REQUIREMENTS
GRAB TENSILE STRENGTH (ONE INCH GRIP), POUNDS, MINIMUM IN EACH DIRECTION ASTM DESIGNATION: D 4632 OR APPROPRIATE TEST METHOD FOR SPECIFIC POLYMER	255
ELONGATION, PERCENT, MINIMUM IN EACH DIRECTION ASTM DESIGNATION: D 4632 OR APPROPRIATE TEST METHOD FOR SPECIFIC POLYMER	15
PERMITTIVITY, 1/SEC., MINIMUM ASTM DESIGNATION: D 4491	1.5
FLOW RATE, GALLONS PER MINUTE PER SQUARE FOOT MINIMUM ASTM DESIGNATION: D 4491	200
ULTRAVIOLET STABILITY, PERCENT TENSILE STRENGTH RETAINED AFTER 500 HOURS, MINIMUM ASTM DESIGNATION: D 4355 (XENON-ARC LAMP AND WATER SPRAY WEATHERING METHOD)	80

NOTES:

3. THE SEDIMENT FILTER BAG SHALL BE 10'X12'X1.5' (MIN) AND SHALL BE COMPLETE WITH LIFTING LOOPS AND DUMP STRAPS ATTACHED AT THE BOTTOM TO FACILITATE EMPTYING OF SEDIMENT FILTER BAG.
4. LIFTING STRAPS, SHOULD BE PLACED UNDER THE DEWATERING SEDIMENT FILTER BAG TO FACILITATE REMOVAL AFTER USE.
5. PLACE THE DEWATERING SEDIMENT FILTER BAG ON A LEVEL STABILIZED AREA OVER DENSE VEGETATION/STRAW, OR GRAVEL (IF INCREASED DRAINAGE SURFACE AREA IS NEEDED).
6. INSERT DISCHARGE HOSE FROM PUMP INTO THE DEWATERING SEDIMENT FILTER BAG A MINIMUM OF SIX INCHES (6") AND TIGHTLY SECURE WITH ATTACHED STRAP TO PREVENT WATER FROM FLOWING OUT OF THE UNIT WITHOUT BEING FILTERED.
7. REPLACE THE UNIT WHEN ONE HALF (1/2) FULL OF SEDIMENT OR WHEN SEDIMENT HAS REDUCED THE FLOW RATE OF THE PUMP DISCHARGE TO AN IMPRACTICAL RATE.
8. REMOVE THE UNIT AND SEDIMENT FROM ENVIRONMENTALLY SENSITIVE AREA AND WATERWAYS AT THE APPROVED DISPOSAL, SITE OPEN OR SLIT THE UNIT, REMOVE SEDIMENT AND GRADE SMOOTHLY INTO EXISTING TOPOGRAPHY, DISPOSE OF THE DEWATERING SEDIMENT FILTER BAG, AT AN APPROPRIATE RECYCLING OR SOLID WASTE FACILITY.

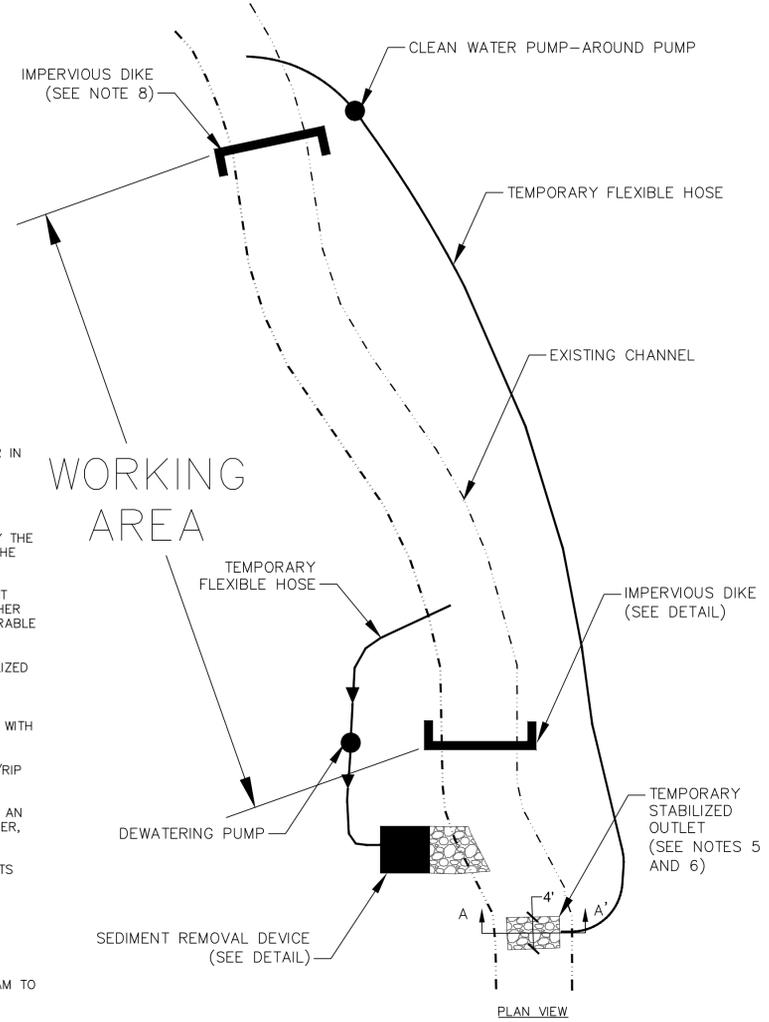


DEWATERING SEDIMENT FILTER BAG NTS

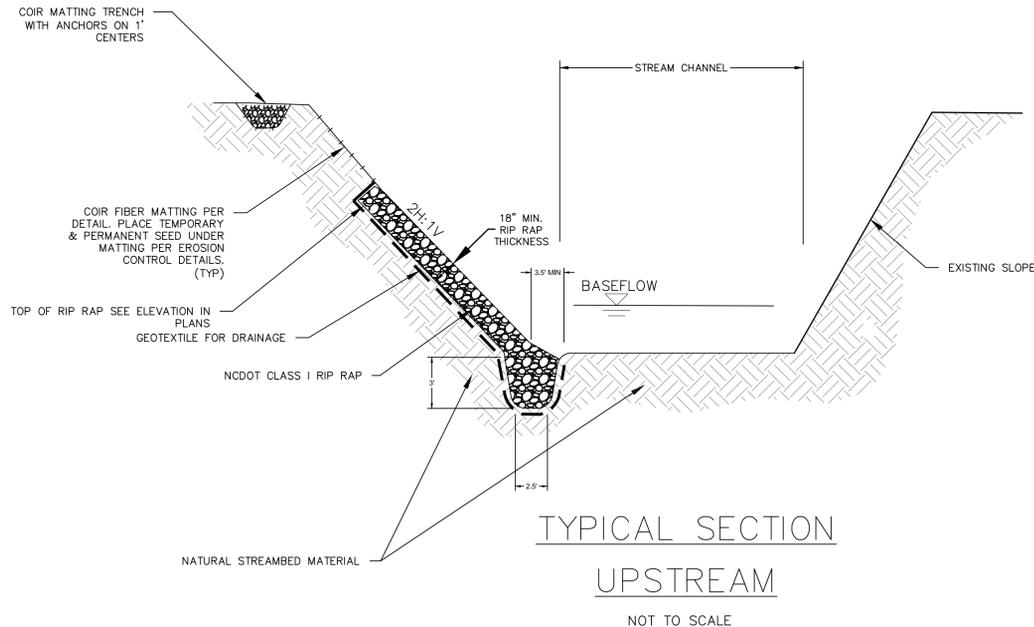


NOTES:

1. ALL CHANNEL WORK INVOLVING EXCAVATION SHALL BE PERFORMED IN DRY CONDITIONS OR IN CHANNEL SECTIONS ISOLATED BY IMPERVIOUS DIKES AND KEPT DE-WATERED.
2. THE CONTRACTOR SHALL NOT DISTURB MORE AREA THAN CAN BE STABILIZED THE SAME WORKING DAY.
3. PUMP-AROUND PUMP AND HOSE SHALL ADEQUATELY CONVEY BASEFLOW AS SPECIFIED BY THE DESIGNER. DE-WATERING PUMP SHALL ADEQUATELY DE-WATER THE WORKING AREA AT THE DOWNSTREAM IMPERVIOUS DIKE.
4. GRAVITY-BASED GEOTEXTILE BAG FILTERS SHALL BE USED TO COLLECT SILT AND SEDIMENT FROM WORK AREA DEWATERING. THE DESIGNER MAY SPECIFY A SEDIMENT BASIN OR OTHER SEDIMENT CONTROL MEASURE IN LIEU OF A SEDIMENT BAG IF SITE CONDITIONS ARE FAVORABLE (I.E. - TREES WILL NOT BE IMPACTED FOR BASIN EXCAVATION, ETC.).
5. EFFLUENT FROM CLEAN WATER PUMP AROUND MAY BE DISCHARGED DIRECTLY INTO STABILIZED OUTLET (NO SEDIMENT REMOVAL DEVICE REQUIRED).
6. A STABILIZED OUTLET SHALL BE USED TO CONTROL THE EFFLUENT FROM ALL PUMPING OPERATIONS. THE DESIGNER SHALL SPECIFY ALL MATERIALS AND DIMENSIONS ASSOCIATED WITH STABILIZED OUTLETS.
7. FILTER FABRIC AS SPECIFIED BY THE DESIGNER SHALL BE USED UNDERNEATH ALL STONE/RIP RAP PLACED FOR SEDIMENT BAGS, STABILIZED OUTLETS, SPLASH PADS.
8. IMPERVIOUS DIKES SHALL BE CONSTRUCTED TO ISOLATE THE IN-STREAM WORKING AREA. AN IMPERVIOUS FABRIC MEMBRANE AND SAND BAGS OR STONE, AS SPECIFIED BY THE DESIGNER, SHALL BE USED TO CREATE THE DIKES.
9. STREAM AREAS IMPACTED DUE TO SITE DEWATERING ACTIVITIES SHALL BE REGRADED TO ITS PRECONSTRUCTION CONTOURS AND REVEGETATED WITH APPROPRIATE NATIVE SPECIES.
10. THE WORK SEQUENCE IN PUMP-AROUND OPERATIONS PROCEEDS TYPICALLY AS FOLLOWS:
 - A. INSTALL SEDIMENT REMOVAL DEVICE AND TEMPORARY STABILIZED OUTLETS AT THE DOWNSTREAM END OF WORKING AREA.
 - B. INSTALL PUMP-AROUND PUMP AND FLEXIBLE HOSE.
 - C. INSTALL UPSTREAM IMPERVIOUS DIKE AND BEGIN PUMPING (CLEAN WATER) DOWNSTREAM TO STABILIZED OUTLET.
 - D. INSTALL DOWNSTREAM IMPERVIOUS DIKE AND DE-WATERING PUMP.
 - E. PERFORM CHANNEL WORK IN ACCORDANCE WITH THE PLANS IN THE WORKING AREA.
 - F. DE-WATER THE WORKING AREA (AS NEEDED) INTO THE SEDIMENT REMOVAL DEVICE AND TEMPORARY STABILIZED OUTLET.
 - G. UPON COMPLETION OF WORK, REMOVE ANY SEDIMENT ACCUMULATION BEHIND IMPERVIOUS DIKES.
 - H. REMOVE DOWNSTREAM AND THEN UPSTREAM DIKES AND ALL PUMPS AND HOSE.
 - I. SEED AND MULCH ALL DISTURBED AREAS PER THE PLANTING PLAN.



PUMP AROUND DETAIL NTS



TYPICAL SECTION UPSTREAM

NOT TO SCALE



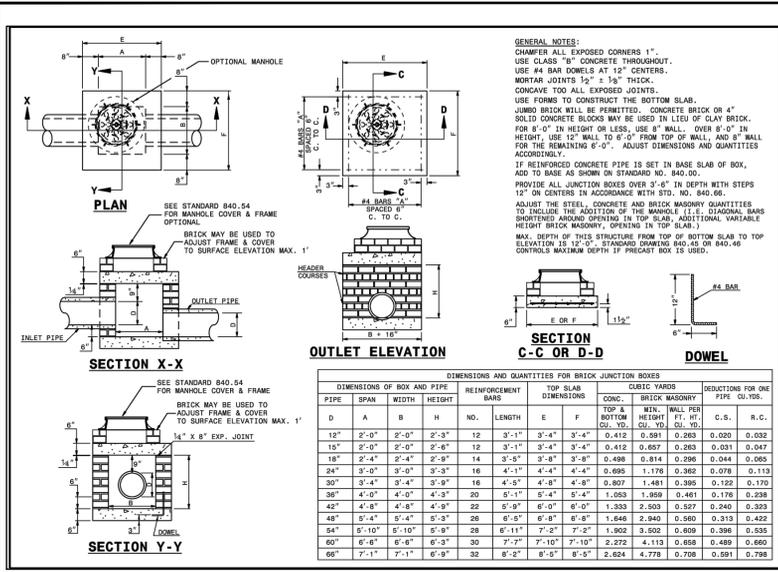
Engineer's Seal

Surveyor's Seal

MAIN ST.
CULVERT REPLACEMENT
STREAM STANDARD
DETAILS
PROJECT # : 2023-024

REV #	DATE	DESCRIPTION
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1	01/22/25	ADJUSTED FOR DEVELOPER SITE COMMENTS

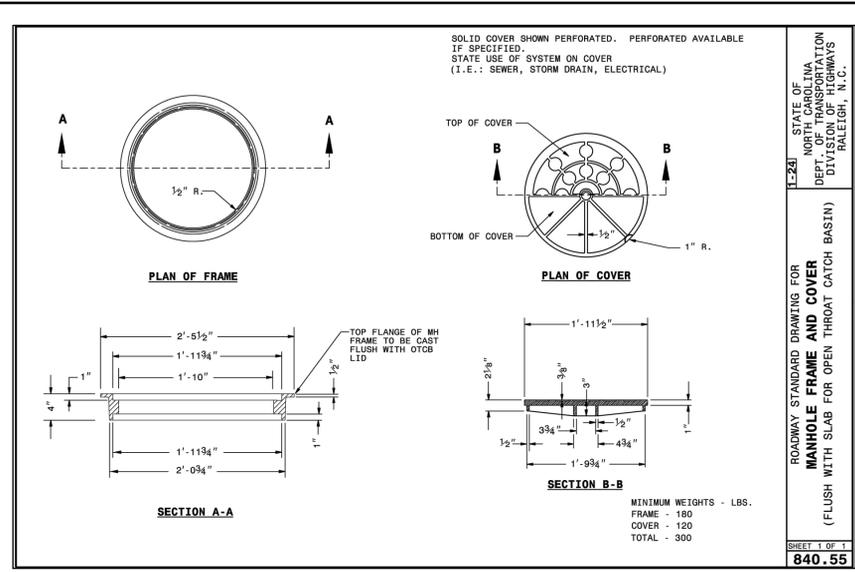
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DRAWN BY: BCC
CHECKED BY: EAB
SCALE: AS SHOWN
DATE: 08/19/24
PROJECT NUMBER: 2023-024
SHEET: 22 OF: 27



STATE OF NORTH CAROLINA
 DEPT. OF TRANSPORTATION
 DIVISION OF HIGHWAYS
 RALEIGH, N.C.

ROADWAY STANDARD DRAWING FOR
BRICK JUNCTION BOX
 12" THRU 66" PIPE

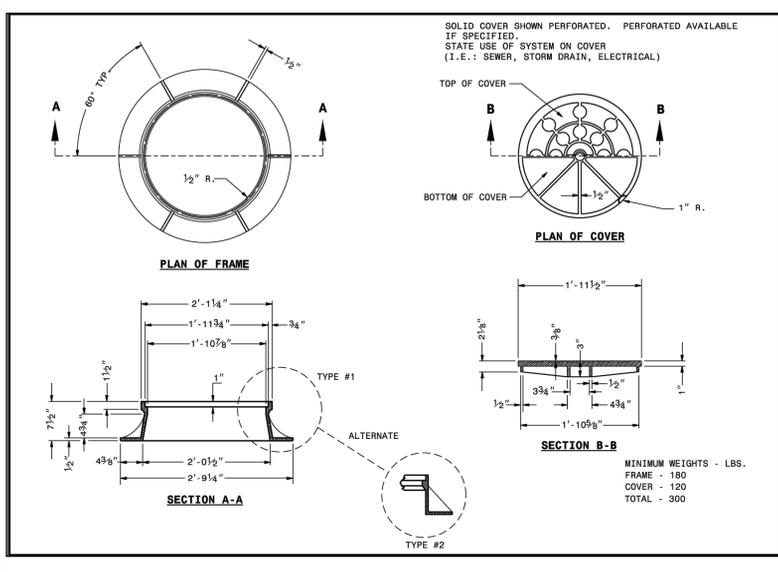
SHEET 1 OF 1
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STATE OF NORTH CAROLINA
 DEPT. OF TRANSPORTATION
 DIVISION OF HIGHWAYS
 RALEIGH, N.C.

ROADWAY STANDARD DRAWING FOR
MANHOLE FRAME AND COVER
 (FLUSH WITH SLAB FOR OPEN THROAT CATCH BASIN)

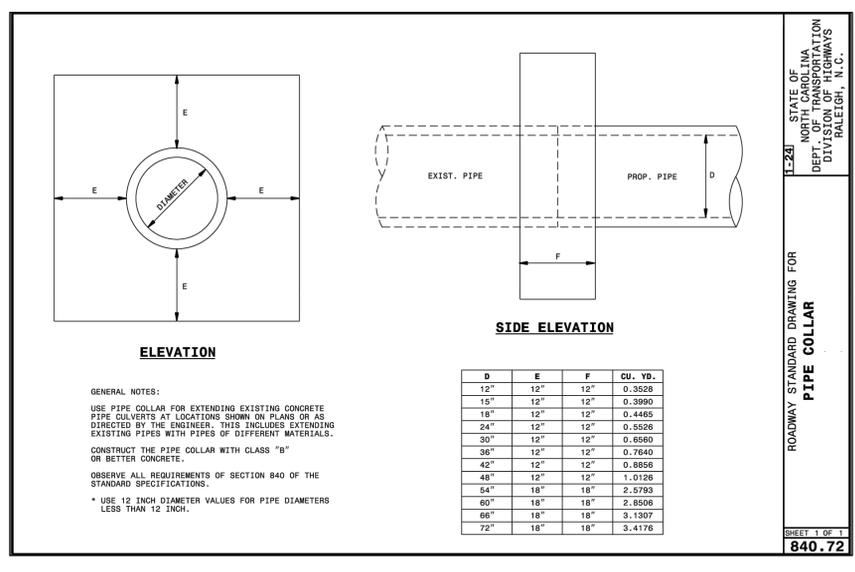
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STATE OF NORTH CAROLINA
 DEPT. OF TRANSPORTATION
 DIVISION OF HIGHWAYS
 RALEIGH, N.C.

ROADWAY STANDARD DRAWING FOR
MANHOLE FRAME AND COVER

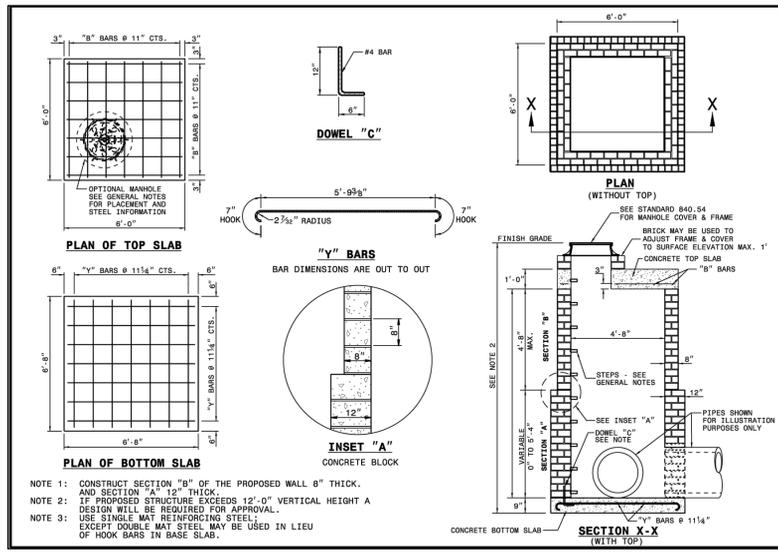
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STATE OF NORTH CAROLINA
 DEPT. OF TRANSPORTATION
 DIVISION OF HIGHWAYS
 RALEIGH, N.C.

ROADWAY STANDARD DRAWING FOR
PIPE COLLAR

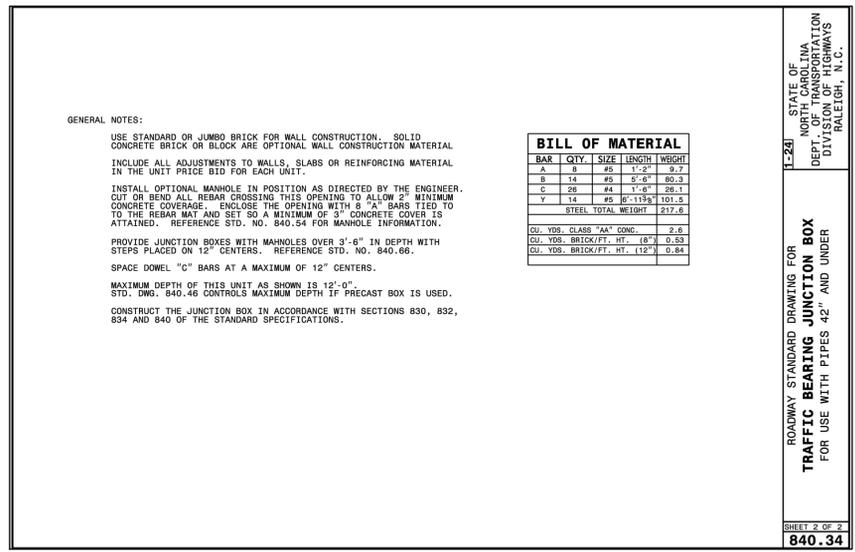
SHEET 1 OF 1
840.72



STATE OF NORTH CAROLINA
 DEPT. OF TRANSPORTATION
 DIVISION OF HIGHWAYS
 RALEIGH, N.C.

ROADWAY STANDARD DRAWING FOR
TRAFFIC BEARING JUNCTION BOX
 FOR USE WITH PIPES 42" AND UNDER

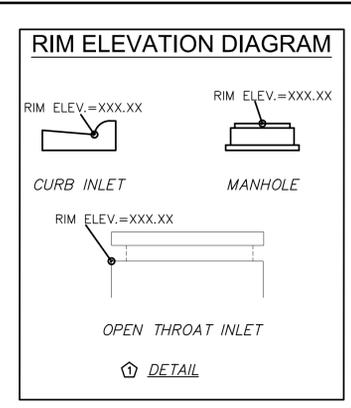
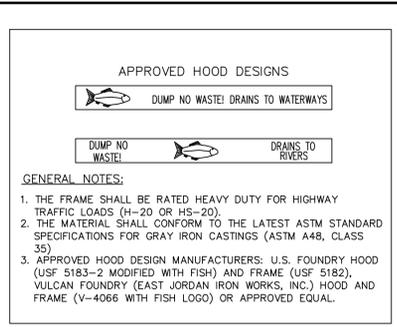
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STATE OF NORTH CAROLINA
 DEPT. OF TRANSPORTATION
 DIVISION OF HIGHWAYS
 RALEIGH, N.C.

ROADWAY STANDARD DRAWING FOR
TRAFFIC BEARING JUNCTION BOX
 FOR USE WITH PIPES 42" AND UNDER

SHEET 2 OF 2
840.34



Concord
 NORTH CAROLINA
 High Performance Living

PREPARED BY
 ENGINEERING DEPARTMENT
 CITY OF CONCORD
 P.O. BOX 308
 CONCORD N.C. 28026
 (704) 920-5425

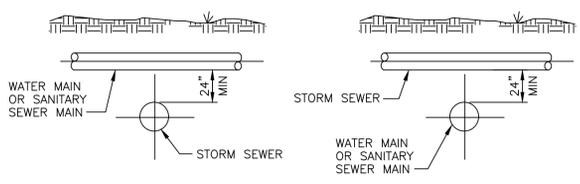
Carolina Statewide Registration
 SEAL
 044150
 ENGINEER
 LINA GARCIA ZARZA
 2/28/2025
 Engineer's Seal

Surveyor's Seal

**MAIN ST.
 CULVERT REPLACEMENT
 STORM DRAINAGE
 STANDARD DETAILS
 PROJECT # : 2023-024**

REV #	DATE	DESCRIPTION	BY
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1	01/22/25	ADDRESSED ACELA COMMENTS & ADJUSTED FOR DEVELOPER SITE	BCC

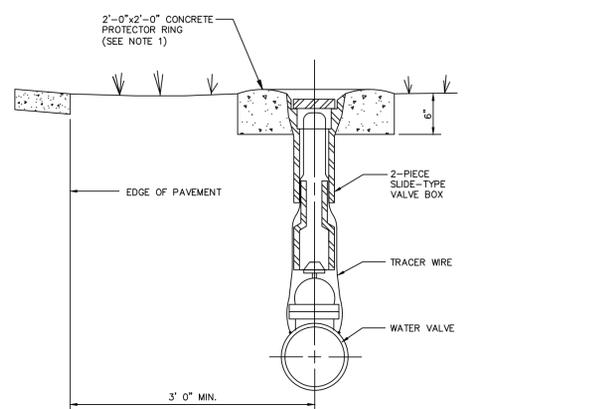
DESIGNED BY: CGZ
 DRAWN BY: BCC
 CHECKED BY: EAB
 SCALE: AS SHOWN
 DATE: 08/19/24
 PROJECT NUMBER: 2023-024
 SHEET: 24 OF 27



NOTE:
WHEN A WATER MAIN OR SANITARY SEWER MAIN CROSSES OVER OR UNDER A STORM SEWER AND CONDITIONS PREVENT THE REQUIRED 24" MIN VERTICAL SEPARATION, THE WATER MAIN OR SANITARY SEWER MAIN SHALL BE CONSTRUCTED OF DUCTILE IRON PIPE WITH JOINTS EQUIVALENT TO WATER MAIN STANDARDS FOR A MINIMUM DISTANCE OF 10 FEET ON EACH SIDE OF THE POINT OF CROSSING.

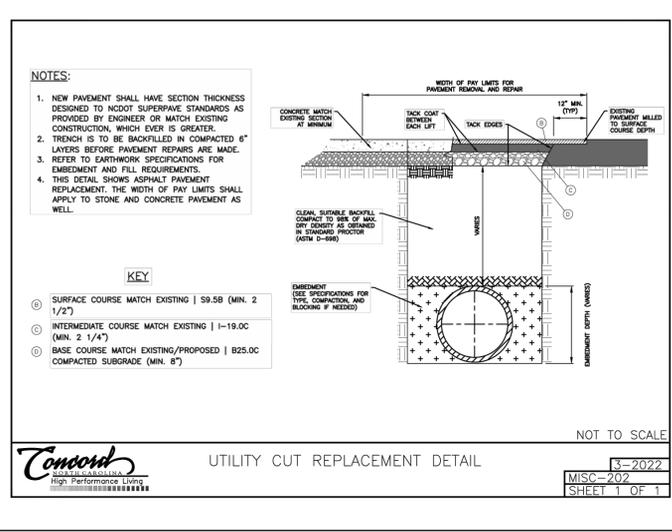
FOR ALL WATER MAINS AT THE PIPE MATERIAL TRANSITIONS FROM C-900 PVC TO DUCTILE IRON (DI) PIPE, RESTRAINED MECHANICAL JOINT SLEEVES SHALL BE UTILIZED TO JOIN THE PIPES.

Concord		CITY OF CONCORD STANDARD DETAIL	
RELATION OF WATER MAINS AND SEWER MAINS TO DETAIL			
No.	Date	By	REVISION
1.	3/7/16	MSH	WATER PIPE TRANSITION BY M.S. SLEEVES BY MSH
Drawn By:	Checked By:	Approved By:	Date
SVM	MSH		11/09



- NOTES:**
- EACH BURIED VALVE TO A DEPTH OF 4 FEET OR LESS SHALL BE PROVIDED WITH A CHARLOTTE FOUNDRY VALVE BOX, OR EQUAL. VALVE BOXES SHALL BE CAST IRON, EXTENSION SLEEVE TYPE, FOR THE DEPTH OF COVER REQUIRED BY THE DRAWINGS. NOT MORE THAN ONE EXTENSION WILL BE ALLOWED WITH EACH SLIDE TYPE VALVE BOX. VALVE BOXES SHALL BE NOT LESS THAN 5 INCHES IN INSIDE DIAMETER, SHALL HAVE A MINIMUM THICKNESS AT ANY POINT OF 3/16 INCH, AND SHALL BE PROVIDED WITH SUITABLE CAST IRON BASES AND COVERS.
 - EACH VALVE BURIED TO A DEPTH GREATER THAN 4 FEET SHALL BE PROVIDED WITH A VALVE BOX CONSISTING OF A CAST IRON COVER AND A 6 INCH DUCTILE IRON PIPE SECTION. THE COVER SHALL BE CLAY & BAILEY "NO. 2193" OR TYLER "SERIES 6890-A". THE PIPE SHAFT SHALL BE SIZED TO EXTEND FROM THE VALVE TO 5 INCHES INSIDE THE VALVE BOX COVER.
 - ALL PARTS OF VALVE BOXES, BASES, AND COVERS SHALL BE SHOP COATED BY DIPPING IN ASPHALT VARNISH.
 - VALVES AND VALVE BOXES SHALL BE SET PLUMB. EACH VALVE BOX SHALL BE PLACED DIRECTLY OVER THE VALVE IT SERVES, WITH THE TOP OF THE BOX BROUGHT FLUSH WITH THE FINISHED GRADE. AFTER BEING PLACED IN PROPER POSITION, EARTHFILL SHALL BE PLACED AROUND EACH VALVE BOX AND THOROUGHLY TAMPED ON EACH SIDE OF THE BOX. THE TOP OF THE BOX SHALL BE SET IN A CONCRETE PROTECTOR RING.
 - NO MORE THAN 6" OF GRADE RINGS SHALL BE USED FOR GRADE ADJUSTMENTS.

Concord		CITY OF CONCORD STANDARD DETAIL	
TYPICAL VALVE BOX			
No.	Date	By	REVISION
1.	07/21	MSH	PK
Drawn By:	Checked By:	Approved By:	Date
SVM/BCC	PK	MSH	07/21



- NOTES:**
- NEW PAVEMENT SHALL HAVE SECTION THICKNESS DESIGNED TO NCDOT SUPERPAVE STANDARDS AS PROVIDED BY ENGINEER OR MATCH EXISTING CONSTRUCTION, WHICH EVER IS GREATER.
 - TRENCH IS TO BE BACKFILLED IN COMPACTED 6" LAYERS BEFORE PAVEMENT REPAIRS ARE MADE. REFER TO EARTHWORK SPECIFICATIONS FOR EMBEDEDMENT AND FILL REQUIREMENTS.
 - THIS DETAIL SHOWS ASPHALT PAVEMENT REPLACEMENT. THE WIDTH OF PAY LIMITS SHALL APPLY TO STONE AND CONCRETE PAVEMENT AS WELL.

Concord		CITY OF CONCORD STANDARD DETAIL	
UTILITY CUT REPLACEMENT DETAIL			
No.	Date	By	REVISION
1.	03-2022	MSH	PK
Drawn By:	Checked By:	Approved By:	Date
SVM	PK	MSH	03/22

- UTILITY RELOCATION SPECIAL PROVISIONS:**
- Prior to utility installation, the contractor must attend a pre-construction meeting with the City of Concord Engineering Staff, and City of Concord Construction Inspection staff.
 - The contractor must attend an on-site meeting with City of Concord personnel to coordinate and review the bypass pumping plan and equipment. The contractor will be required to provide the City of Concord personnel with a detailed bypass pumping plan for the purposes of relocating the existing 8-inch sewer main. This detailed bypass pumping plan will include, but not be limited to, the following items:
 - Type/size/design parameters of pumps that will be utilized, including the supplier's name and contact information (note: redundant pumps are required); Projected initial flow and peak sewer flow (see attached bypass pump operation contingency action plan for additional information).
 - General work plan highlighting the different steps required to complete the bypass pumping operation task (i.e. suction/discharge manhole locations, a list of materials/equipment to be used, estimated number of workers and their corresponding job classifications, projected time frame of operation, summary of typical routine inspections regarding bypass pump system, emergency plan if needed, etc.).
 - The contractor should provide the City of Concord personnel with a sequence of construction operations and projected timelines for proposed utility work required on the project (electric, water, sewer). This sequence of operations should include a summary of how existing utilities will be protected during construction operations.
 - Contractor shall submit the shop drawings/catalog cuts that relate to proposed sewer facilities that will be operate and maintain by the City (i.e. piping, manholes, couplings, end connections, etc.) to City of Concord Construction Manager for review and approval prior to construction.
 - Contractor shall be responsible for any and/or all associated costs, fines, fees or levies, including but not limited to: City's labor, equipment, administrative costs, and/or legal fees; fines imposed by any regulatory agencies; and/or any third party claims which might be resultant of sanitary sewer overflows and/or subsequent environmental impacts caused by the Contractor during the performance of the construction activities within this contract.
 - Pavement repair specifications shall be to NCDOT minimum standards or shall match the existing conditions, however, the most restrictive requirement shall apply.
 - No excavation subject to vehicular and pedestrian traffic shall remain open overnight or unsupervised for any reason, the site and materials must be secure at the end of each day.

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High Performance Living

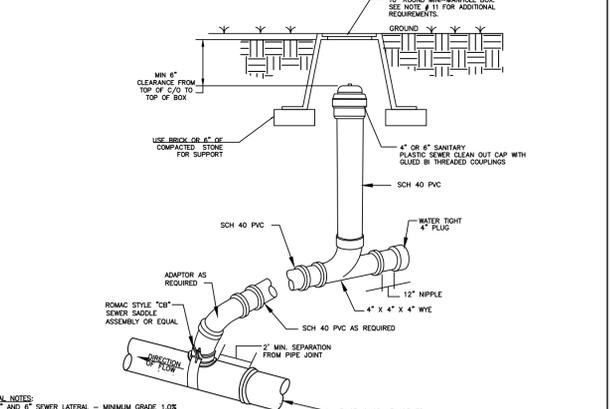
PREPARED BY
ENGINEERING DEPARTMENT
CITY OF CONCORD
P.O. BOX 308
CONCORD N.C. 28026
(704) 920-5425

Carolina State Seal
SEAL
044150
ENGINEER
T. GARCIA
2/28/2025

Engineer's Seal

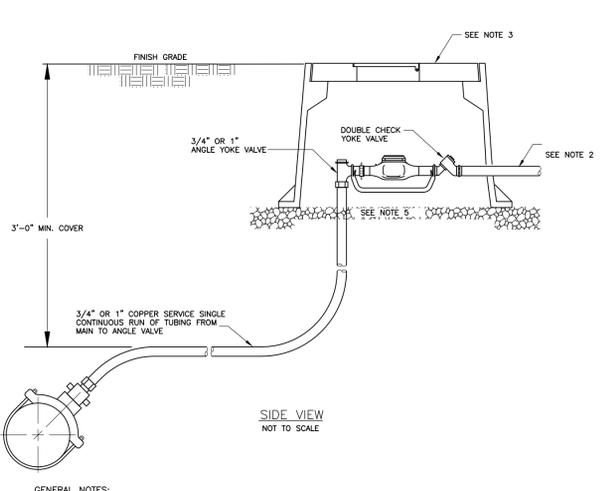
Surveyor's Seal

**MAIN ST.
CULVERT REPLACEMENT
WATER & SAN. SEWER
STANDARD DETAILS
PROJECT # : 2023-024**



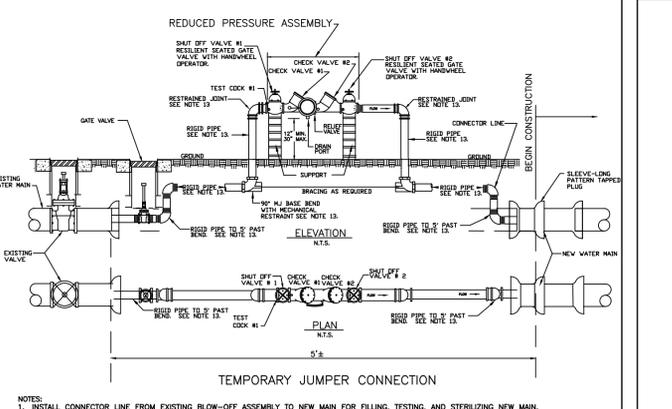
- GENERAL NOTES:**
- 4" AND 6" SEWER LATERAL - MINIMUM GRADE 1.0%
 - THE LATERAL SHALL BE A MINIMUM OF 5' BELOW THE EDGE OF PAVEMENT, EXCEPT WHERE DEPTH OF SEWER MAIN WILL NOT PERMIT.
 - DUCTILE IRON PIPE (DIP) MATERIAL SHALL BE USED WHERE LESS THAN 3' BUT NOT LESS THAN 18" OF COVER IS MAINTAINED OVER THE SEWER LATERAL OR WHERE THE LATERAL HAS 10" OR MORE GROUND COVER OVER THE LATERAL.
 - ALL SCHEDULE 40 PVC LATERALS SHALL BE INSTALLED USING CLASS B BEDDING. DIP SERVICE LATERAL SHALL USE CLASS C BEDDING.
 - A ROMAC STYLE "CR" SEWER SADDLE OR EQUAL WITH STAINLESS STEEL STRAP, BOLTS, NUTS, AND WASHERS SHALL BE INSTALLED ACCORDING TO MANUFACTURER'S RECOMMENDATION ON EXISTING SEWER MAINS. IMPORTANT: THE STRAP IS TO BE TIGHTENED TO ENSURE THE SADDLE REMAINS ON CENTER WITH THE SEWER SERVICE HOLE OUT OUT.
 - THE SEWER SADDLE TWP SHALL BE LOCATED ABOVE THE FLOW LINE OF THE SEWER MAIN SUCH THAT THE BRANCH PIPE AXES FORMS AN ANGLE OF 30-DEGREES WITH THE HORIZONTAL.
 - WHERE THE DEPTH OF THE WYE BRANCH IS MORE THAN 10', A STANDPIPE SHALL BE INSTALLED TO PROVIDE THE MINIMUM SLOPE IN THE SERVICE.
 - SEWER LATERAL CLEANOUTS SHALL BE LOCATED AT THE EDGE OF THE RIGHT-OF-WAY OR PUBLIC UTILITY EASEMENT. SEWER LATERALS THAT EXTEND FROM SEWER MAINS LOCATED WITHIN THE ROAD RIGHTS-OF-WAY SHALL BE LOCATED AT THE CENTER OF THE LOT OR AS INDICATED ON THE APPROVED DESIGN DRAWINGS.
 - SEWER LATERAL CLEANOUTS SHALL NOT BE LOCATED WITHIN SIDEWALKS, DRIVEWAYS OR ANY FEATURE CONNECTING OR JOINING STORMWATER.
 - SEWER LATERALS SHOULD TIE TO THE SEWER MAIN BUT WHEN INDICATED ON THE DRAWINGS, THE SEWER LATERAL CAN BE INSTALLED INTO A MANHOLE. A MAXIMUM OF 3 LATERALS TO A SECOND MANHOLE AND A MAXIMUM OF 2 LATERALS TO AN IN-LINE MANHOLE.
 - THE SEWER LATERAL MUST NOT EXTEND MORE THAN 6' BEYOND THE MANHOLE WALL AND THE LATERAL INVERT SHALL BE LEVEL WITH THE MANHOLE SLEEF AND A CHANNEL SHALL BE BUILT TO PROVIDE SMOOTH FLOW FROM THE LATERAL TO THE MAIN LINE INVERT.
 - THE CLEANOUT SHALL BE HOUSED IN A STANDARD 10" ROUND MINI-MANHOLE FOR SEWER LATERAL CLEANOUTS LOCATED OUTSIDE OF AREAS SUBJECT TO PEDESTRIAN AND VEHICULAR TRAFFIC. THE MINI-MANHOLE SHALL BE PLASTIC MANUFACTURED BY DOW PLASTICS, INC. OR EQUAL. FOR ALL OTHER LOCATIONS AND/OR AREAS WHERE THE SEWER LATERAL CLEANOUTS WILL BE SUBJECT TO ANY PEDESTRIAN AND VEHICULAR TRAFFIC, THE MINI-MANHOLE SHALL BE 1/2-20 LOAD TRAFFIC RATED ASPHALTIC COATED CAST IRON MANUFACTURED BY EAST JOHNSON WORKS, INC. OR EQUAL.
 - A "W" SHALL BE SCRIBED IN THE FACE OF THE CURB ABOVE THE LOCATION OF INSTALLED SEWER LATERAL.

Concord		CITY OF CONCORD STANDARD DETAIL	
SANITARY SEWER LATERAL INSTALLATION ON EXISTING SEWER MAIN			
No.	Date	By	REVISION
1.	07/21	MSH	PK
Drawn By:	Checked By:	Approved By:	Date
BCC	SVM	MSH	07/21



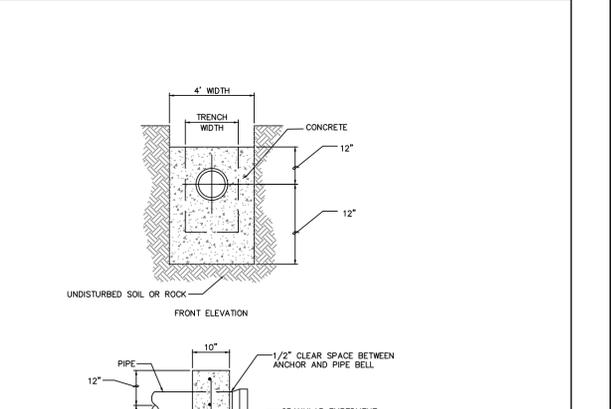
- GENERAL NOTES:**
- REFER TO THE CITY OF CONCORD SPECIFICATIONS FOR ACCEPTABLE MANUFACTURES OF MATERIALS.
 - PROVIDE 12" BRASS NIPPLE PAST BOX
 - THE METER HOUSING SHALL BE MID STATE PLASTICS OR EQUAL; 3/4-INCH BOX MSBCF - 1118-12XL AND LID MSCBC-1118- RTR; AND 1-INCH BOX MSBCF - 1324-12XL AND LID MSCBC-1324- RTR. METER BOX RIM SHALL BE SET FLUSH WITH FINAL GRADE. THE WATER METER BOX ASSEMBLY SHALL NOT BE LOCATED WITHIN A ROAD, STREET, DRIVEWAY, SIDEWALK OR DRAINAGE FEATURE. ALL APPURTENANCES FOR THE INSTALLATION OF THE WATER METER, THE METER, BRASS GROUND LOCKABLE METER CUTOFF, GASKETS, AND EXPANSION CONNECTION; SHALL BE INSTALLED BY THE CITY OF CONCORD, IF CONNECTION IS TO AN EXISTING MAIN. THE BASE OF THE METER BOX MUST HAVE AT LEAST 6-INCHES TO 8-INCHES OF #57 WASHED STONE.
 - A "W" SHALL BE SCRIBED IN THE FACE OF THE CURB ABOVE THE LOCATION OF THE INSTALLED WATER SERVICE.

Concord		CITY OF CONCORD STANDARD DETAIL	
WATER METER STANDARD DETAIL			
No.	Date	By	REVISION
1.	02/05	MSH	PK
Drawn By:	Checked By:	Approved By:	Date
SVM	PK	MSH	02/05



- NOTES:**
- INSTALL CONNECTOR LINE FROM EXISTING BLOW-OFF ASSEMBLY TO NEW MAIN FOR FILLING, TESTING, AND STERILIZING NEW MAIN.
 - CONNECTOR LINE TO BE ASSEMBLED WITH CHECK VALVE AND TO BE OPERATED INDEPENDENT OF EXISTING MAIN.
 - BLOCKING ON EXISTING LINE NOT TO BE DISTURBED.
 - FINAL CONNECTION TO EXISTING MAIN TO BE MADE ONLY AFTER TOTAL PROJECT HAS BEEN ACCEPTED BY THE CITY OF CONCORD INSPECTIONS DEPARTMENT.
 - VALVES ON EXISTING SYSTEM TO BE OPERATED BY THE CITY OF CONCORD'S WATER RESOURCES DEPARTMENT STAFF ONLY.
 - ONLY ONE CONNECTION WILL BE ALLOWED BETWEEN THE EXISTING SYSTEM AND THE NEW CONSTRUCTION UNTIL TESTING AND DISINFECTION IS COMPLETE.
 - WATER IN REASONABLE AMOUNTS REQUIRED FOR AN IN CONNECTION WITH THE WORK TO BE PERFORMED WILL BE FURNISHED AT LOCATIONS AS APPROVED BY OWNER AT RATES SPECIFIED BY OWNER AND IN ACCORDANCE WITH THE FEDERAL, STATE AND LOCAL REGULATIONS, ORDINANCES AND PRICEDICES.
 - CONTRACTOR SHALL FURNISH NECESSARY PIPE, HOSE, REDUCED PRESSURE ZONE BACK FLOW DEVICE, AS APPROVED BY THE OWNER AND METER APPROVED BY OWNER, NOZZLES, AND TOOLS AND SHALL PERFORM ALL NECESSARY LABOR.
 - CONTRACTOR SHALL ENSURE THAT THE EQUIPMENT HAS BEEN INSPECTED BY AND APPROVED BY THE OWNER AND HAS OBTAINED THE APPLICABLE PERMITS AND CERTIFICATIONS PRIOR TO WATER SYSTEM CONNECTION.
 - CONTRACTOR SHALL MAKE ARRANGEMENTS WITH THE OWNER (WHO WILL FIX THE LOCATION, TIME, RATE, AND DURATION OF EACH WITHDRAWAL FROM THE DISTRIBUTION SYSTEM) AS TO THE AMOUNT OF WATER REQUIRED AND THE TIME WHEN THE WATER WILL BE NEEDED. UNNECESSARY WASTE OF WATER WILL NOT BE TOLERATED. IF CONTRACTOR WASTES WATER AS DETERMINED BY OWNER, CONTRACTOR SHALL BE REQUIRED TO OBTAIN ALL REMAINING WATER NECESSARY FOR COMPLETION OF THE WORK MEASURED THROUGH A METER AND AT THE CONTRACTOR'S EXPENSE.
 - SPECIAL HYDRANT WRENCHES SHALL BE USED FOR OPENING AND CLOSING FIRE HYDRANTS. IN NO CASE SHALL PIPE WRENCHES BE USED FOR THIS PURPOSE.
 - 6" TO 10" RP SHALL BE SUPPORTED WITH ADEQUATE SUPPORT PEDESTAL(S). SUPPORT PEDESTALS SHALL NOT BLOCK RELIEF VALVE OR DRAIN PORT.
 - 2" TO 3" K-COPPER PIPE, 4" TO 10" DIP, RESTRAINED JOINTS SHALL BE MEGA LUG RESTRAINTS OR APPROVED EQUAL.
 - TEST COCK SHALL BE UPSTREAM OF SHUT-OFF VALVE #1 AND IS PART OF THE APPROVED ASSEMBLY.

Concord		CITY OF CONCORD STANDARD DETAIL	
TEMPORARY JUMPER CONNECTION			
No.	Date	By	REVISION
1.	05/11	MSH	PK
Drawn By:	Checked By:	Approved By:	Date
SVM	PK	MSH	05/11

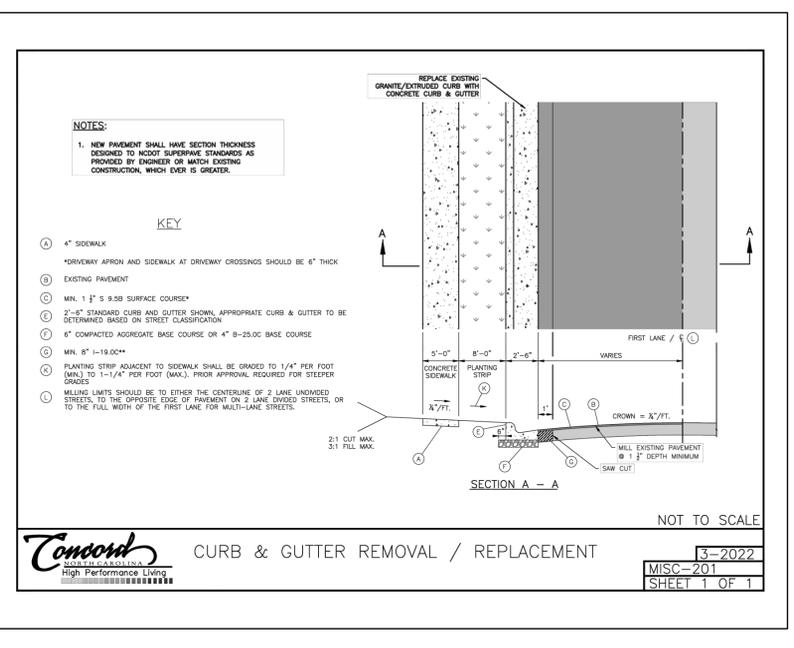
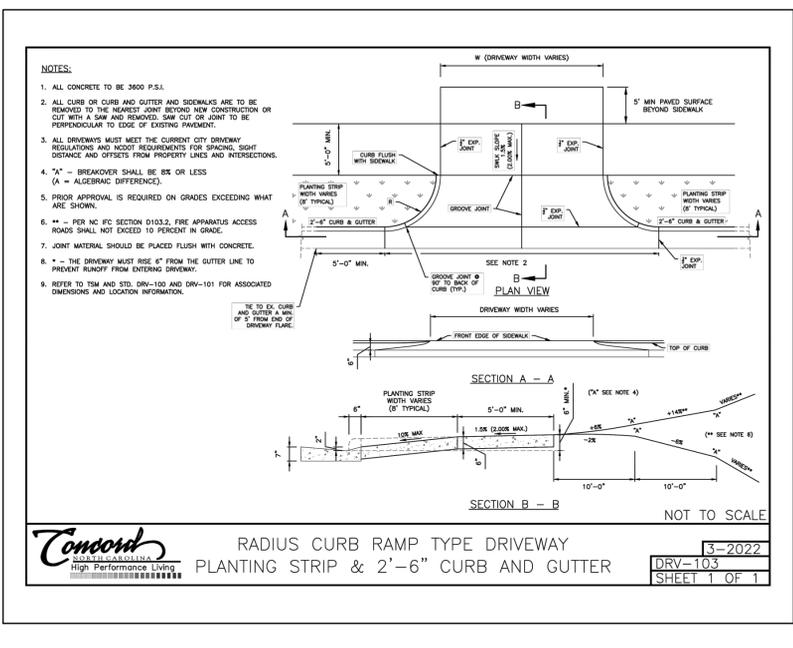
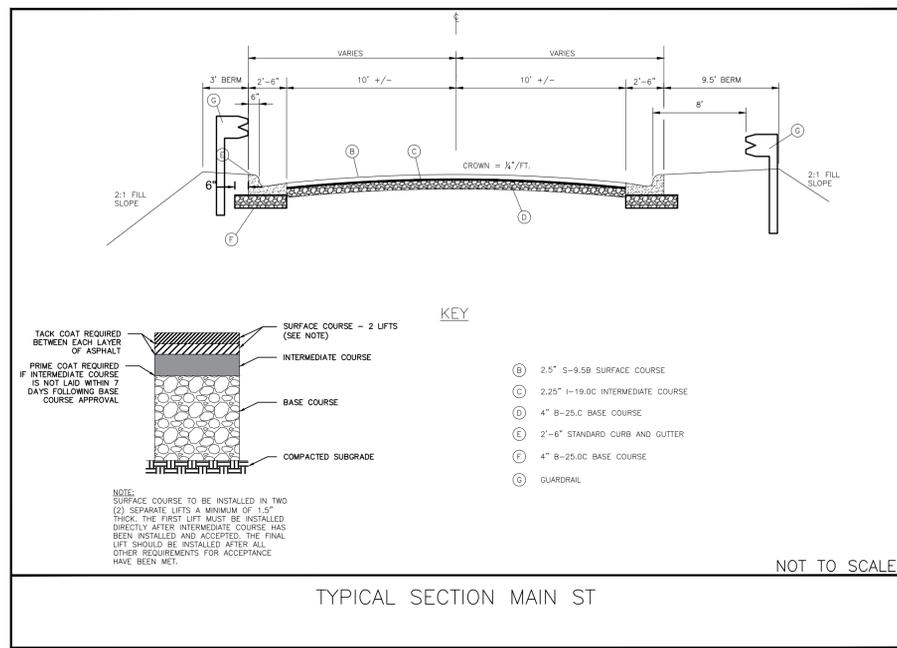


- NOTES:**
- CONCRETE AND REINFORCING STEEL BARS FOR BURIED BLOCKING AND ENCASUREMENT OF PIPE SHALL CONFORM TO THE LIMITING REQUIREMENTS SPECIFIED IN WSAC TECHNICAL SPECIFICATION SECTION 03301, EXCEPT THAT THE CEMENT FACTOR AND TOTAL WATER CONTENT MAY BE ADJUSTED TO PROVIDE A MINIMUM COMPRESSIVE STRENGTH OF 3,000 PSI AT 28 DAYS. CONCRETE SHALL HAVE A SLUMP OF NOT LESS THAN 3 INCHES NOR MORE THAN 5 INCHES WHEN PLACED.
 - KEEP ALL PIPING JOINTS CLEAR OF CONCRETE ANCHOR BLOCKS

Concord		CITY OF CONCORD STANDARD DETAIL	
TYPICAL ANCHOR BLOCK			
No.	Date	By	REVISION
1.	10/11	MSH	PK
Drawn By:	Checked By:	Approved By:	Date
SVM	EAB	MSH	10/11

REV #	DATE	DESCRIPTION	BY
0	12/06/24	FINAL, FOR CONSTRUCTION	BCC
1	01/22/25	ADDRESSED ACELA COMMENTS & ADJUSTED FOR DEVELOPER SIE	BCC

DESIGNED BY: CGZ
DRAWN BY: BCC
CHECKED BY: EAB
SCALE: AS SHOWN
DATE: 08/19/24
PROJECT NUMBER: 2023-024
SHEET: 25 OF: 27

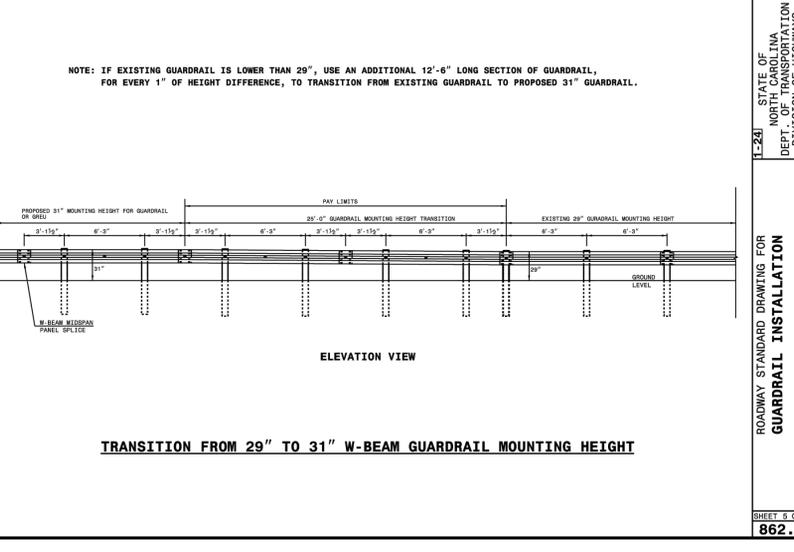
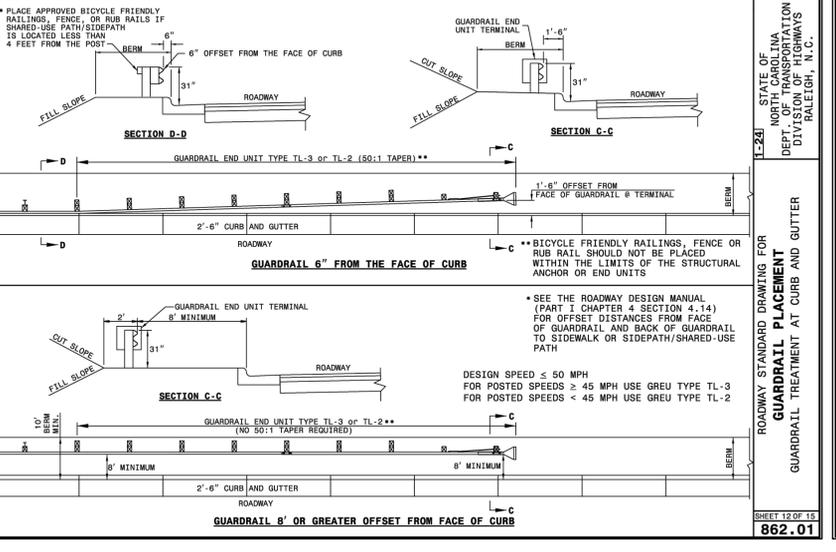
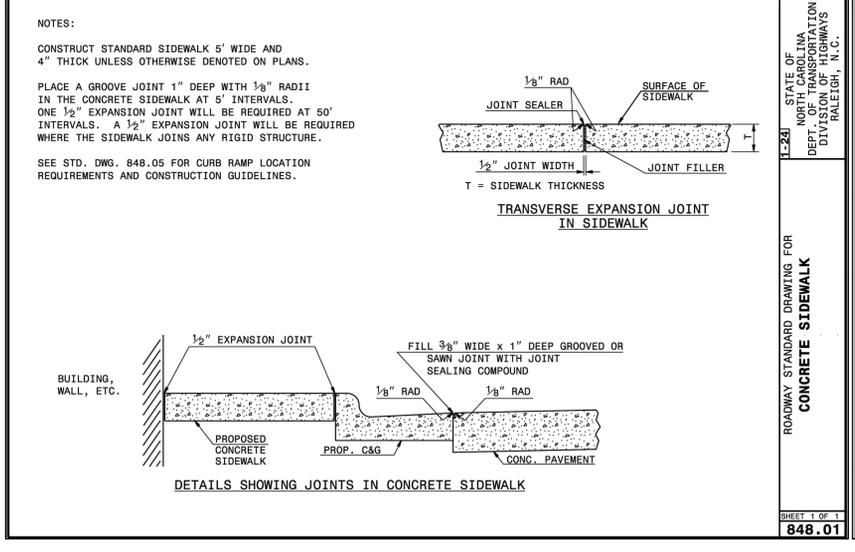
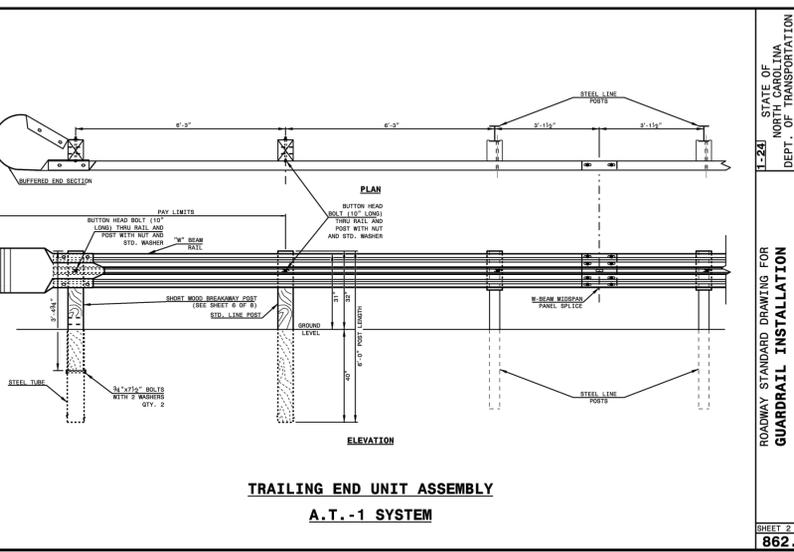
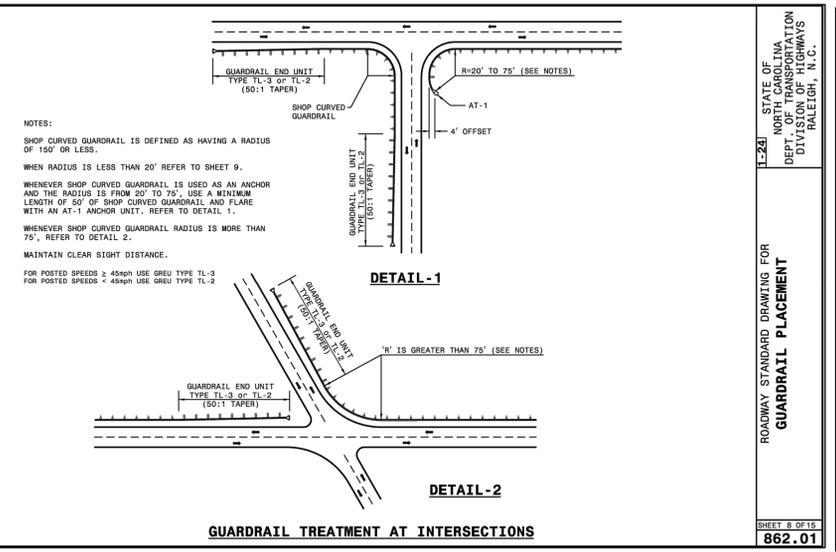
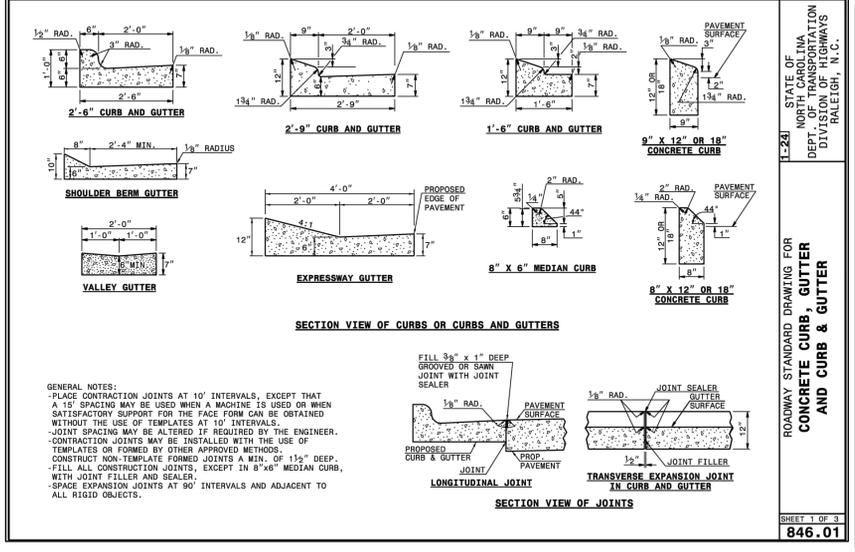


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2/28/2025
Engineer's Seal

Surveyor's Seal



MAIN ST. CULVERT REPLACEMENT ROADWAY STANDARD DETAILS
PROJECT # : 2023-024

REV. #	DATE	DESCRIPTION	BY
0	12/06/24	FINAL, FOR CONSTRUCTION	BCC
1	01/22/25	ADDRESSED ACELA COMMENTS & ADJUSTED FOR DEVELOPER SITE	BCC

DESIGNED BY: CGZ
DRAWN BY: BCC
CHECKED BY: EAB
SCALE: AS SHOWN
DATE: 08/19/24
PROJECT NUMBER: 2023-024
SHEET: 26 OF 27

