

STAGE I WAKE COUNTY EROSION CONTROL SEQUENCE 1. SCHEDULE A PRECONSTRUCTION CONFERENCE WITH THE ENVIRONMENTAL CONSULTANT

- KARYN PAGEAU, 919-796-8769. OBTAIN A LAND DISTURBING PERMIT.
- CONTRACTOR SHALL OBTAIN AND READ ALL PERMITS NECESSARY TO COMPLETE THE PROJECT, INCLUDING BUT NOT LIMITED TO LAND DISTURBANCE PERMIT
- INSTALL GRAVEL CONSTRUCTION PAD, SILT FENCE, ETC. AS SHOWN ON THESE PLANS. CLEAR ONLY AS NECESSARY TO INSTALL THESE DEVICES. SEED TEMPORARY DIVERSIONS, BERMS AND BASINS IMMEDIATELY AFTER CONSTRUCTION.
- INSTALL SEDIMENT SKIMMER BASINS. IN BASINS 1, 2, 4, AND 5 INSTALL PERMANENT RISER AND OUTFALL WITH TEMPORARY SKIMMER BASIN. PROMPTLY SEED/STABILIZE ALL SLOPES. SEE DETAILS. INSTALL RISER AND CONNECT SKIMMER TO RISER. EMBANKMENTS TO BE CONSTRUCTED AND TESTED AS PERMANENT STRUCTURES PER THE STORMWATER DETAILS
- PROMPTLY STABILIZE ALL 3:1 SLOPES OR GREATER AROUND BASINS AND DOWN-SLOPE OF DISTURBANCE ACTIVITY. SEED/USE EROSION CONTROL BLANKETS SUCH AS NORTH
- AMERICAN GREEN S150, OR SIMILAR PRODUCT RATED FOR STEEP SLOPES. i. INSTALL TEMPORARY DIVERSION BERM/DITCHES WITH SEED & LINER. INSTALL ALL REMAINING EROSION CONTROL MEASURES PER THIS PLAN.
- CALL 919.796.8769 FOR AN ONSITE INSPECTION BY THE WAKE COUNTY WATERSHED MANAGER & OBTAIN CERTIFICATE OF COMPLIANCE. 8. BEGIN CLEARING AND GRUBBING AND ROUGH SITE GRADING. MAINTAIN DEVICES AS NEEDED.
- 9. IT IS THE CONTRACTOR'S RESPONSIBILITY TO MAINTAIN ALL EROSION CONTROL MEASURES THROUGHOUT CONSTRUCTION. ALL EROSION CONTROL DEVICES SHOULD BE INSPECTED AFTER EACH RAINFALL EVENT, AND ON A WEEKLY BASIS, AND REFURBISHED IMMEDIATELY, DO NOT REMOVE SKIMMER BASINS NOR OTHER MEASURES UNTIL INSTRUCTED TO DO SO.
- SKIMMER BASINS TO REMAIN THROUGHOUT CONSTRUCTION. 10. PROCEED TO STAGE 2 EROSION CONTROL PLANS / SEQUENCE FOR CONTINUATION.

GENERAL NOTES

- 1. THE GRADING CONTRACTOR SHALL COMPLY WITH ALL STATE AND LOCAL CODES IN OBSERVING EROSION CONTROL MEASURES BOTH ON AND OFF-SITE.
- 2. THE GRADING CONTRACTOR SHALL MAINTAIN ALL EROSION CONTROL DEVICES AFTER EACH
- RAINFALL EVENT OR AS DIRECTED BY LOCAL AUTHORITIES OR THE ARCHITECT. 3. THE GRADING CONTRACTOR SHALL BE RESPONSIBLE FOR OFF-SITE DISPOSAL OF ALL CLEARING AND GRADING WASTE MATERIALS GENERATED DURING THIS PHASE OF WORK AND FOR OBTAINING ALL APPLICABLE PERMITS FOR OFF-SITE STOCKPILES AND/OR WASTE AREAS.
- ADJACENT ROADWAYS THAT ARE IMPACTED BY CONSTRUCTION TRAFFIC. THE OWNER RESERVES THE RIGHT TO REQUIRE THAT A WASH STATION BE INSTALLED AT NO ADDITIONAL COST IF PAVEMENT AREAS ARE NOT KEPT CLEAN. 5. CONTRACTOR SHALL ABIDE BY ALL CONDITIONS OF THE GENERAL PERMIT TO DISCHARGE

4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CLEANING ANY TRACKED SOIL FROM ALL

- STORMWATER UNDER THE NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) 6. A PRECONSTRUCTION MEETING MUST BE SCHEDULED PRIOR TO WORK, GRADING PERMIT AND
- INSTALLATION OF EROSION CONTROL. 7. UTILITY LOCATIONS ARE TO BE FOUND BY CALLING NC ONE CALL.
- 8. ALL TEMPORARY MEASURES SHALL BE REMOVED AT THE END OF THE CONSTRUCTION OF THE PROJECT.
- 9. CUT AND FILL SLOPES SHALL BE STABILIZED AS REQUIRED BY THE GENERAL PERMIT STABILIZATION REQUIREMENTS FOUND ON THIS SHEET. 10. SILT FENCING SHALL BE INSTALLED AROUND THE PERIMETER SEPARATING EXISTING PEDESTRIAN TRAFFIC AREAS.

13. STOCKPILE HEIGHT SHALL NOT EXCEED 35'.

11. ALL CUT AND FILL SLOPES ARE TO BE AT A 3:1 MAXIMUM UNLESS OTHERWISE NOTED. 12. THERE SHALL BE NO SOIL DISTURBANCE OR RECOMPACTION WITHIN AREAS DESIGNATED FOR THE TREE PRESERVATION AND PROTECTION FENCING. INCLUDING NO STOCKPILING OF CONSTRUCTION OR OTHER MATERIAL, TRAFFIC, OR BORING SAMPLE.

TEMPORARY STOCKPILE NOTES

- 1. STOCKPILE FOOTPRINTS SHALL BE SETBACK A MINIMUM OF 25' FROM ADJACENT PROPERTY LINES, WITH A MAXIMUM HEIGHT OF 35 FT WITH 2:1 OR FLATTER SLOPES.
- 2. SEEDING OR COVERING STOCKPILES WITH TARPS OR MULCH IS REQUIRED AND WILL REDUCE EROSION PROBLEMS. TARPS SHOULD BE KEYED IN AT THE TOP OF THE SLOPE TO KEEP WATER FROM RUNNING UNDERNEATH THE PLASTIC.
- 3. IF A STOCKPILE IS TO REMAIN FOR FUTURE USE AFTER THE PROJECT IS COMPLETE (BUILDERS, ETC.), THE FINANCIAL RESPONSIBLE PARTY MUST NOTIFY WAKE COUNTY OF A NEW RESPONSIBLE PARTY FOR THAT
- 4. THE APPROVED PLAN SHALL PROVIDE FOR THE USE OF STAGED SEEDING AND MULCHING ON A CONTINUAL BASIS WHILE THE STOCKPILE IS IN USE.
- 5. ESTABLISH AND MAINTAIN A VEGETATIVE BUFFER AT THE TOE OF THE SLOPE (WHERE PRACTICAL).

ATTENTION CONTRACTORS The Construction Contractor responsible for the

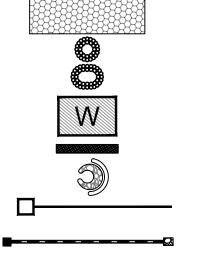
extension of water, sewer, and/or reuse, as approved in these plans, is responsible for contacting the Public Utilities Department at (919) 996-4540 at least twenty four hours prior to beginning any of their

Failure to notify both City Departments in advance of beginning construction, will result in the issuance of monetary fines, and require reinstallation of any water or sewer facilities not inspected as a result of this notification failure.

Failure to call for Inspection, Install a Downstream **Plug**, have **Permitted Plans** on the **Jobsite**, or any other Violation of City of Raleigh Standards will result in a *Fine and Possible Exclusion* from future work in the City of Raleigh.

EROSION CONTROL LEGEND

TPF TPF	TREE PROTECTION FENCE
LOD	LIMITS OF DISTURBANCE
	STOCKPILE AREA
SFSF SF/TPFSF/TPF	SILT/TREE PROTECTION COMBINATION FENCE
···	TEMPORARY DIVERSION DITCH
	SILT BAG AND PAD
	SILT FENCE STONE OUTLET SILT FENCE STONE OUTLET W/J HOOM
	EMERGENCY SPILLWAY / RIP RAP APRON CHECK DAM WITH A WEIR CHECK DAM
	CONSTRUCTION ENTRANCE



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TEMPORARY INLET PROTECTION TEMPORARY DOUBLE INLET PROTECTION

CONCRETE WASHOUT

WATTLE

HORSESHOE INLET PROTECTION SKIMMER

TEMPORARY SLOPE DRAIN (TSD)

TEMPORARY DIVERSION BERM TEMPORARY TIMBER MAT

ROLLED EROSION CONTROL FABRIC

NUMBER	DESCRIPTION
EC101	LIMITS OF DISTURBANCE
EC102	SILT FENCE; REFER TO DETAIL (TYP).
EC103	SILT FENCE OUTLET; REFERT TO DETAIL (TYP).
EC104	TEMPORARY 25' x 100' CONSTRUCTION ENTRANCE; REFER TO DETAIL
EC105	SILT-TREE COMBINATION FENCE. REFER TO DETAIL (TYP.)
EC106	TREE FENCE. REFER TO DETAIL (TYP.) PERMANENT RISER WITH TEMPORARY SKIMMER BASIN #1
	EMBANKMENT, RISER AND OUTFALL TO BE CONSTRUCTED AS
EC107	PERMANENT PER SCM DETAILS ON SHEET C8.0 (REFER TO BASIN
	SUMMARY ON SHEET C4.1)
	PERMANENT RISER WITH TEMPORARY SKIMMER BASIN #2
EC108	EMBANKMENT, RISER AND OUTFALL TO BE CONSTRUCTED AS PERMANENT PER SCM DETAILS ON SHEET C8.1 (REFER TO BASIN
	SUMMARY ON SHEET C4.1)
EC109	TEMPORARY SKIMMER BASIN #3 (REFER TO BASIN SUMMARY ON SHEET
EC 109	C4.1)
	PERMANENT RISER WITH TEMPORARY SKIMMER BASIN #4 EMBANKMENT, RISER AND OUTFALL TO BE CONSTRUCTED AS
EC110	PERMANENT PER SCM DETAILS ON SHEET C8.3 (REFER TO BASIN
	SUMMARY ON SHEET C4.1)
	PERMANENT RISER WITH TEMPORARY SKIMMER BASIN #5
EC111	EMBANKMENT, RISER AND OUTFALL TO BE CONSTRUCTED AS
-	PERMANENT PER SCM DETAILS ON SHEET C8.4 (REFER TO BASIN SUMMARY ON SHEET C4.1)
	TEMPORARY SKIMMER BASIN #6 (REFER TO BASIN SUMMARY ON SHEET
EC112	C4.1)
EC113	TEMPORARY SKIMMER BASIN #7 (REFER TO BASIN SUMMARY ON SHEET
	C4.1) TEMPORARY SKIMMER BASIN #8 (REFER TO BASIN SUMMARY ON SHEET
EC114	C4.1)
EC115	TEMPORARY SKIMMER BASIN #9 (REFER TO BASIN SUMMARY ON SHEET
	C4.1)
EC116	SPILLWAY-REFER TO BASIN SUMMARY ON SHEET C4.1 (TYP.)
EC117	TEMP. DIVERSION DITCH #1A (REFER TO C4.1)
EC118	TEMP. DIVERSION DITCH #1B (REFER TO C4.1)
EC119	TEMP. DIVERSION DITCH #2A (REFER TO C4.1)
EC120	TEMP. DIVERSION DITCH #2B (REFER TO C4.1) TEMP. DIVERSION DITCH #3A (REFER TO C4.1)
EC121	TEMP. DIVERSION DITCH #3A (REFER TO C4.1)
EC122 EC123	TEMP. DIVERSION DITCH #36 (REFER TO C4.1)
EC123 EC124	TEMP. DIVERSION DITCH #48 (REFER TO C4.1)
EC125	TEMP. DIVERSION DITCH #5A (REFER TO C4.1)
EC126	TEMP. DIVERSION DITCH #5B (REFER TO C4.1)
EC127	TEMP. DIVERSION DITCH #6A (REFER TO C4.1)
EC128	TEMP. DIVERSION DITCH #6B (REFER TO C4.1)
EC129	TEMP. DIVERSION DITCH #7A (REFER TO C4.1)
EC130	TEMP. DIVERSION DITCH #7B (REFER TO C4.1)
EC131	TEMP. DIVERSION DITCH #8A (REFER TO C4.1)
EC132	TEMP. DIVERSION DITCH #8B (REFER TO C4.1)
EC133	TEMP. DIVERSION DITCH #9A (REFER TO C4.1)
EC134	TEMP. DIVERSION DITCH #9B (REFER TO C4.1)
EC135	ROCK CHECK DAM REFER TO DETAIL (TYP.)
EC136	POROUS BAFFLES (TYP.)
EC137	SILT BAG AND SILT BAG PAD
EC138	IMPERMEABLE MEMBRANE APRON
EC139	3:1 SIDE SLOPE
EC140	STOCKPILE AREA
EC141	CONCRETE WASHOUT
EC142	TEMPORARY CLASS III 18" RCP PIPE FOR DITCH CROSSING
EC143	TEMPORARY HORSESHOE INLET PROTECTION
	PIPE OUTFALL PROTECTION. (REFER TO C4.1)
	DIVERSION DITCH OUTLET PROTECTION (REFER TO C4.1 AND STORM
	PLAN FOR DETAILS)
EC146	TEMPORARY PIPE FOR OUTFALL CROSSING
EC147	ROCK CHECK DAM WITH WEIR (REFER TO STREAM CROSSING PLAN)

EROSION CONTROL PLAN-STAGE 1 KEYNOTES

Required Wake County Basin Removal Sequence

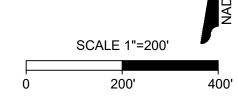
- 1. Schedule a site meeting with the Environmental Consultant to determine if a basin can be removed. Install silt fencing or other temporary erosion control measures as needed prior to removal of the basin.
- 2. Remove Basin(s) and associated temporary diversion ditches. If culvert pipes need to be
- extended, perform this operation at this time. Fine grade area in preparation for seeding.
- 4. Install velocity dissipators and/or level spreaders as required on the Erosion Control Plan.

3. Perform seedbed preparation, seed, mulch and asphalt tack any resulting bare areas

5. When site is fully stabilized, call Environmental Consultant for approval of removing remaining temporary erosion control measures and advice on when site can be issued a Certificate of Completion. Note: A meeting should also be scheduled with the Environmental Consultant to determine when a basin may be converted for stormwater use. Some municipalities may also require this.

MAINTENANCE PLAN:

- 1. ALL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE CHECKED FOR STABILITY AND OPERATION FOLLOWING EVERY RUNOFF-PRODUCING RAINFALL BUT IN NO CASE LESS THAN ONCE EVERY WEEK. ANY NEEDED REPAIRS SHALL BE MADE IMMEDIATELY TO MAINTAIN ALL MEASURES AS
- 2. REMOVE SEDIMENT FROM BEHIND SILT FENCE WHEN DEPTH REACHES 6 INCHES AT THE FENCE. REPAIR SILT FENCE AS NECESSARY TO MAINTAIN A
- 3. ALL SEEDED AREAS SHALL BE FERTILIZED, RE--SEEDED AS NECESSARY, AND MULCHED ACCORDING TO PROJECT SPECS TO MAINTAIN A VIGOROUS,
- DENSE VEGETATIVE GROWTH. 4. TOP DRESS CONSTRUCTION ENTRANCES WITH CLEAN STONE AS
- NECESSARY TO MAINTAIN PROPER FUNCTIONING. 5. REFER TO SPECIFIC DEVICE DETAILS FOR ADDITIONAL MAINTENANCE
- REQUIREMENTS.



ALL CONSTRUCTION TO BE IN ACCORDANCE WITH ALL TOWN OF ROLESVILLE, CITY OF RALEIGH, NCDEQ AND NCDOT STANDARDS, SPECIFICATIONS, AND DETAILS



09/17/2021 DRAWN BY A. BROWN

P. BARBEAU

. BARBEAU

AS SHOWN

JOB NO. 43398 SHEET NO. C4.0

BASIN SUMMARY SCHEDULE

BASIN NAME	BASIN 1	BASIN NAME	BASIN 2	BASIN NAME	BASIN 3	BASIN NAME	BASIN 4	BASIN NAME	BASIN 5	BASIN NAME	BASIN 6	
BASIN TYPE	RISER	BASIN TYPE	RISER	BASIN TYPE	RISER	BASIN TYPE	RISER	BASIN TYPE	RISER	BASIN TYPE	SKIMMER	-
TOTAL DRAINAGE AREA	21.62 acres	TOTAL DRAINAGE AREA	8.07 acres	TOTAL DRAINAGE AREA	1.12 acres	TOTAL DRAINAGE AREA	7.49 acres	TOTAL DRAINAGE AREA	3.44 acres	TOTAL DRAINAGE AREA	3.70 acres	
Tc (TIME OF CONCENTRATION)	5 min	Tc (TIME OF CONCENTRATION)	5 min	Tc (TIME OF CONCENTRATION)	5 min	Tc (TIME OF CONCENTRATION)	10 min	Tc (TIME OF CONCENTRATION)	10 min	Tc (TIME OF CONCENTRATION)	5 min	
C VALUE	0.50	C VALUE	0.50	C VALUE	0.50	C VALUE	0.50	C VALUE	0.50	C VALUE	0.50	
I (10 YEAR STORM)	7.20 in/hr	I (10 YEAR STORM)	7.20 in/hr	I (10 YEAR STORM)	7.20 in/hr	I (10 YEAR STORM)	5.76 in/hr	I (10 YEAR STORM)	5.76 in/hr	I (10 YEAR STORM)	7.20 in/hr	_
SURFACE AREA CALCULATION:		SURFACE AREA CALCULATION:		SURFACE AREA CALCULATION:		SURFACE AREA CALCULATION:		SURFACE AREA CALCULATION:		SURFACE AREA CALCULATION:		_
Q10 = CIA	78 cfs	Q10 = CIA	29 cfs	Q10 = CIA	4 cfs	Q10 = CIA	22 cfs	Q10 = CIA	10 cfs	Q10 = CIA	13 cfs	
SURFACE AREA (AC) = 435 SF * Q10 (CFS)		SURFACE AREA (AC) = 435 SF * Q10 (CFS)		SURFACE AREA (AC) = 435 SF * Q10 (CFS)		SURFACE AREA (AC) = 435 SF * Q10 (CFS)	22 010	SURFACE AREA (AC) = 435 SF * Q10 (CFS)	10 010	SURFACE AREA (AC) = 435 SF * Q10 (CFS)		
SURFACE AREA REQUIRED	33,857 ft ²	SURFACE AREA REQUIRED	12,638 ft ²	SURFACE AREA REQUIRED	1,754 ft ²	SURFACE AREA REQUIRED	9,383 ft ²	SURFACE AREA REQUIRED	4,310 ft ²	SURFACE AREA REQUIRED	5,794 ft ²	
RECTANGLE BASIN PROVIDED	99.5' X 349.4'	RECTANGLE BASIN PROVIDED	50' X 279'	RECTANGLE BASIN PROVIDED	70' X 140'	RECTANGLE BASIN PROVIDED	99.5' X 349.4'	RECTANGLE BASIN PROVIDED	60' X 120'	RECTANGLE BASIN PROVIDED	60' X 120'	-
SURFACE AREA PROVIDED	40,474 ft ²	SURFACE AREA PROVIDED	22,949 ft ²	SURFACE AREA PROVIDED	10,740 ft ²							-
BASIN VOLUME CALCULATION:	40,474 11	BASIN VOLUME CALCULATION:	22,040 10	BASIN VOLUME CALCULATION:	10,740 11	SURFACE AREA PROVIDED BASIN VOLUME CALCULATION:	17,593 ft ²	SURFACE AREA PROVIDED BASIN VOLUME CALCULATION:	8,258 ft ²	SURFACE AREA PROVIDED BASIN VOLUME CALCULATION:	5,881 ft ²	_
BASIN VOLUME DESIGN = 1,800 ft ³ /acre		BASIN VOLUME DESIGN = 1,800 ft ³ /acre		BASIN VOLUME DESIGN = 1,800 ft ³ /acre		2		2				-
	2		2		3	BASIN VOLUME DESIGN = 1,800 ft ³ /acre		BASIN VOLUME DESIGN = 1,800 ft ³ /acre		BASIN VOLUME DESIGN = 1,800 ft ³ /acre		_
BASIN VOLUME REQUIRED	38,916 ft ³	BASIN VOLUME REQUIRED	14,526 ft ³	BASIN VOLUME REQUIRED	2,016 ft ³	BASIN VOLUME REQUIRED	13,482 ft ³	BASIN VOLUME REQUIRED	6,192 ft ³	BASIN VOLUME REQUIRED	6,660 ft ³	_
BASIN VOLUME PROVIDED	0 ft ³	BASIN VOLUME PROVIDED	41,376 ft ³	BASIN VOLUME PROVIDED	42,446 ft ³	BASIN VOLUME PROVIDED	68,733 ft ³	BASIN VOLUME PROVIDED	32,943 ft ³	BASIN VOLUME PROVIDED	13,723 ft ³	
TOP OF EMBANKMENT ELEVATION	376	TOP OF EMBANKMENT ELEVATION	386	TOP OF EMBANKMENT ELEVATION	351	TOP OF EMBANKMENT ELEVATION	374	TOP OF EMBANKMENT ELEVATION	357	TOP OF EMBANKMENT ELEVATION	360	-
EMBANKMENT WIDTH	10 ft	EMBANKMENT WIDTH	10 ft	EMBANKMENT WIDTH	10 ft	EMBANKMENT WIDTH	10 ft	EMBANKMENT WIDTH	10 ft	EMBANKMENT WIDTH	10 ft	
BOTTOM ELEVATION	370.00	BOTTOM ELEVATION	383.00	BOTTOM ELEVATION	345.00	BOTTOM ELEVATION	368.00	BOTTOM ELEVATION	350.00	BOTTOM ELEVATION	356.00	
EMERGENCY SPILLWAY ELEVATION	375.00	EMERGENCY SPILLWAY ELEVATION	385.00	EMERGENCY SPILLWAY ELEVATION	350.00	EMERGENCY SPILLWAY ELEVATION	373.00	EMERGENCY SPILLWAY ELEVATION	356.00	EMERGENCY SPILLWAY ELEVATION	359.00	1
BASIN DEPTH	5 ft	BASIN DEPTH	2 ft	BASIN DEPTH	5 ft	BASIN DEPTH	5 ft	BASIN DEPTH	6 ft	BASIN DEPTH	3 ft	
EMERGENCY SPILLWAY WIDTH	48.5 ft	EMERGENCY SPILLWAY WIDTH	30 ft	EMERGENCY SPILLWAY WIDTH	10 ft	EMERGENCY SPILLWAY WIDTH	45 ft	EMERGENCY SPILLWAY WIDTH	20 ft	EMERGENCY SPILLWAY WIDTH	15 ft	
SEDIMENT STORAGE VOLUME	28,332 ft ³	SEDIMENT STORAGE VOLUME	12,024 ft ³	SEDIMENT STORAGE VOLUME	6,950 ft ³	SEDIMENT STORAGE VOLUME	28,332 ft ³	SEDIMENT STORAGE VOLUME	4,392 ft ³	SEDIMENT STORAGE VOLUME	5,688 ft ³	f
TOD OF BIOER ELEVATION	@ 376'	Top of Bioto 51 51/4 7/01/	@ 386'		@ 351'		@ 374'		@ 357'		@ 359'	
TOP OF RISER ELEVATION	373.00	TOP OF RISER ELEVATION	384.00 ft	TOP OF RISER ELEVATION	348.50	TOP OF RISER ELEVATION	371.00	TOP OF RISER ELEVATION	353.00			
PROVIDE 3 BAFFLES	F :1	PROVIDE 3 BAFFLES	0 :1	PROVIDE 3 BAFFLES		_						
SKIMMER SIZE	5 inch	SKIMMER SIZE	3 inch	SKIMMER SIZE	2.5 inch	SKIMMER SIZE	3 inch	SKIMMER SIZE	3 inch	SKIMMER SIZE	3 inch	_
ORIFICE DIAMETER	3 inch	ORIFICE DIAMETER	2 inch	ORIFICE DIAMETER	0.75 inch	ORIFICE DIAMETER	1.75 inch	ORIFICE DIAMETER	1.25 inch	ORIFICE DIAMETER	1.25 inch	_(
DEWATERING TIME	3.24 days	DEWATERING TIME	3.14 days	DEWATERING TIME	3.40 days	DEWATERING TIME	3.81 days	DEWATERING TIME	3.43 days	DEWATERING TIME	3.69 days	لـ
BASIN NAME	BASIN 8	BASIN TYPE	BASIN 9 SKIMMER	-								
BASIN TYPE	SKIMMER 8.13 acres	TOTAL DRAINAGE AREA	3.61 acres									
TOTAL DRAINAGE AREA To (TIME OF CONCENTRATION)	5 min	To (TIME OF CONCENTRATION)	5 min									
C VALUE	0.50	C VALUE	0.50									
I (10 YEAR STORM)	7.20 in/hr	I (10 YEAR STORM)	7.20 in/hr									
		SURFACE AREA CALCULATION:										
SURFACE AREA CALCULATION:	20 -6-	Q10 = CIA	13 cfs									
Q10 = CIA	29 cfs	SURFACE AREA (AC) = 435 SF * Q10 (CFS)										
SURFACE AREA (AC) = 435 SF * Q10 (CFS)												
SURFACE AREA REQUIRED	12,732 ft ²	SURFACE AREA REQUIRED	5,653 ft ²									
RECTANGLE BASIN PROVIDED	80' X 165'	RECTANGLE BASIN PROVIDED	56' X 112'									
SURFACE AREA PROVIDED	14,561 ft ²	SURFACE AREA PROVIDED	7,261 ft ²									
BASIN VOLUME CALCULATION:		BASIN VOLUME CALCULATION:										
BASIN VOLUME DESIGN = 1,800 ft ³ /acre		BASIN VOLUME DESIGN = 1,800 ft ³ /acre										
	14,634 ft ³	BASIN VOLUME DESIGN = 1,800 ft ³ /acre BASIN VOLUME REQUIRED	6,498 ft ³									
BASIN VOLUME DESIGN = 1,800 ft ³ /acre	14,634 ft ³ 37,314 ft ³		6,498 ft ³ 17,377 ft ³									

DIVERSION DITCH SUMMARY SCHEDUL	E
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357

353.00

356.00

11,103 ft³

10 ft

30 ft

@ 356'

4 inch

1.75 inch

TOP OF EMBANKMENT ELEVATION

EMERGENCY SPILLWAY ELEVATION

EMERGENCY SPILLWAY WIDTH

SEDIMENT STORAGE VOLUME

EMBANKMENT WIDTH

BOTTOM ELEVATION

PROVIDE 3 BAFFLES

ORIFICE DIAMETER

DEWATERING TIME

SKIMMER SIZE

BASIN DEPTH

TOP OF EMBANKMENT ELEVATION

EMERGENCY SPILLWAY ELEVATION

EMERGENCY SPILLWAY WIDTH

SEDIMENT STORAGE VOLUME

EMBANKMENT WIDTH

BOTTOM ELEVATION

PROVIDE 3 BAFFLES

ORIFICE DIAMETER
DEWATERING TIME

BASIN DEPTH

SKIMMER SIZE

390

386.00

389.00

10 ft

3 ft

20 ft

 $4,868 \text{ ft}^3$

@ 389'

3 inch

1.25 inch

3.60 days

DITCH NAME	TOP WIDTH "A"	MIN. DITCH DEPTH (FT) "B"	BOTTOM WIDTH (FT) "C"	SIDE SLOPE "D"	LINER TYPE & THICKNESS
TDD 1A	15 FT	2 FT	3	3:1	North American Green, S75
TDD 1B	10 FT	1.5 FT	1	3:1	North American Green, S75
TDD 2A	8.8 FT	1.3 FT	1	3:1	North American Green, S75
TDD 2B	8.2 FT	1.2 FT	1	3:1	North American Green, S75
TDD 3A	7 FT	1FT	1	3:1	North American Green, S75
TDD 3B	7 FT	1FT	1	3:1	North American Green, S75
TDD 4A	10.5 FT	1.5 FT	1.5	3:1	North American Green, S75
TDD 4B	7 FT	1FT	1	3:1	North American Green, S75
TDD 5A	7.6 FT	1.1 FT	1	3:1	North American Green, S75
TDD 5B	8.2 FT	1.2 FT	1	3:1	North American Green, S75
TDD 6A	8.2 FT	1.2 FT	1	3:1	North American Green, S75
TDD 6B	7 FT	1FT	1	3:1	North American Green, S75
TDD 7A	12 FT	1.75 FT	1.5	3:1	North American Green, S75
TDD 7B	6 FT	1FT	0	3:1	North American Green, S75
TDD 8A	11 FT	1.5 FT	2	3:1	North American Green, S75
TDD 8B	5.5 FT	0.75 FT	1	3:1	North American Green, S75
TDD 9A	8.2 FT	1.2 FT	1	3:1	North American Green, S75
TDD 9B	7 FT	1FT	1	3:1	North American Green, S75

	DITCH OUTLET PROTECTION (NYDOT METHOD)							
DITCH NAME	APRON WIDTH (ft)	RIP RAP CLASS	APRON THICKNESS (in)	APRON LENGTH (ft)				
TDD1A	15.0	В	18.0	24.0				
TDD1B	10.0	Α	12.0	10.0				
TDD2A	8.8	Α	12.0	8.0				
TDD2B	8.2	Α	12.0	8.0				
TDD3A	7.0	Α	12.0	6.0				
TDD3B	7.0	Α	12.0	6.0				
TDD4A	10.5	Α	12.0	10.0				
TDD4B	7.0	Α	12.0	6.0				
TDD5A	8.2	Α	12.0	6.0				
TDD5B	8.2	Α	12.0	6.0				
TDD6A	8.2	Α	12.0	8.0				
TDD6B	7.0	Α	12.0	6.0				
TDD7A	12.0	В	18.0	18.0				
TDD7B	6.0	Α	12.0	6.0				
TDD8A	11.0	В	18.0	18.0				
TDD8B	5.5	Α	12.0	4.0				
TDD9A	8.2	Α	12.0	8.0				
TDD9B	7.0	Α	12.0	6.0				
			A. RIP RAP APRON SHOUL	D CONTINUE TO THE				
TOE OF THE SI	LOPE FROM POINT (OF OUTFALL						

STRUCTURE NAME	PIPE DIAMETER (in)	RIP RAP CLASS	APRON THICKNESS (in)	APRON LENGTH (ft)	APRON WIDTH (ft)
CULVERT 1	72 (2 PIPES)	1	36	40	22.5
CULVERT 2	44 (2 PIPES)	1	24	20	15.0
EW100	48	В	18	24	12.0
EW148	48	1	24	32	12.0
FE201	30	В	18	15	7.5
FE212	30	В	18	15	7.5
EW220	24	Α	12	8	6.0
EW300	36	1	24	24	9.0
EW400	48	1	24	32	12.0
EW500	30	1	24	20	7.5
EW601	30 (3 PIPES)	В	18	15	22.5
EW602	30 (2 PIPES)	В	18	15	14.0
EW603	48	В	18	24	12.0
EW604	48	В	18	24	12.0
EW605	42	В	18	21	10.5
FE651	24	В	18	12	6.0



DATE 09/17/2021

A. BROWN DESIGNED BY P. BARBEAU

DRAWN BY

CHECKED BY P. BARBEAU SCALE

AS SHOWN

43398 SHEET NO. C4.1

ALL CONSTRUCTION TO BE IN ACCORDANCE WITH ALL TOWN OF ROLESVILLE, CITY OF RALEIGH, NCDEQ AND NCDOT STANDARDS, SPECIFICATIONS, AND DETAILS

SCALE 1"=150'

BASIN TYPE

3.70 acres TOTAL DRAINAGE AREA

VALUE

Q10 = CIA

I (10 YEAR STORM)

BASIN NAME

SURFACE AREA (AC) = 435 SF * Q10 (CFS)

BASIN VOLUME DESIGN = 1,800 ft³/acre

TOP OF EMBANKMENT ELEVATION

EMERGENCY SPILLWAY ELEVATION

EMERGENCY SPILLWAY WIDTH

SEDIMENT STORAGE VOLUME

Tc (TIME OF CONCENTRATION)

SURFACE AREA CALCULATION:

SURFACE AREA REQUIRED

SURFACE AREA PROVIDED

BASIN VOLUME REQUIRED

BASIN VOLUME PROVIDED

EMBANKMENT WIDTH

BOTTOM ELEVATION

PROVIDE 3 BAFFLES

ORIFICE DIAMETER

DEWATERING TIME

BASIN DEPTH

SKIMMER SIZE

BASIN VOLUME CALCULATION:

RECTANGLE BASIN PROVIDED

BASIN 7

SKIMMER

13.63 acres

10 min

7.20 in/hr

49 cfs

0.50

21,345 ft²

23,812 ft²

24,534 ft³

63,172 ft³

371

367.00

370.00

10 ft

48 ft

@ 370'

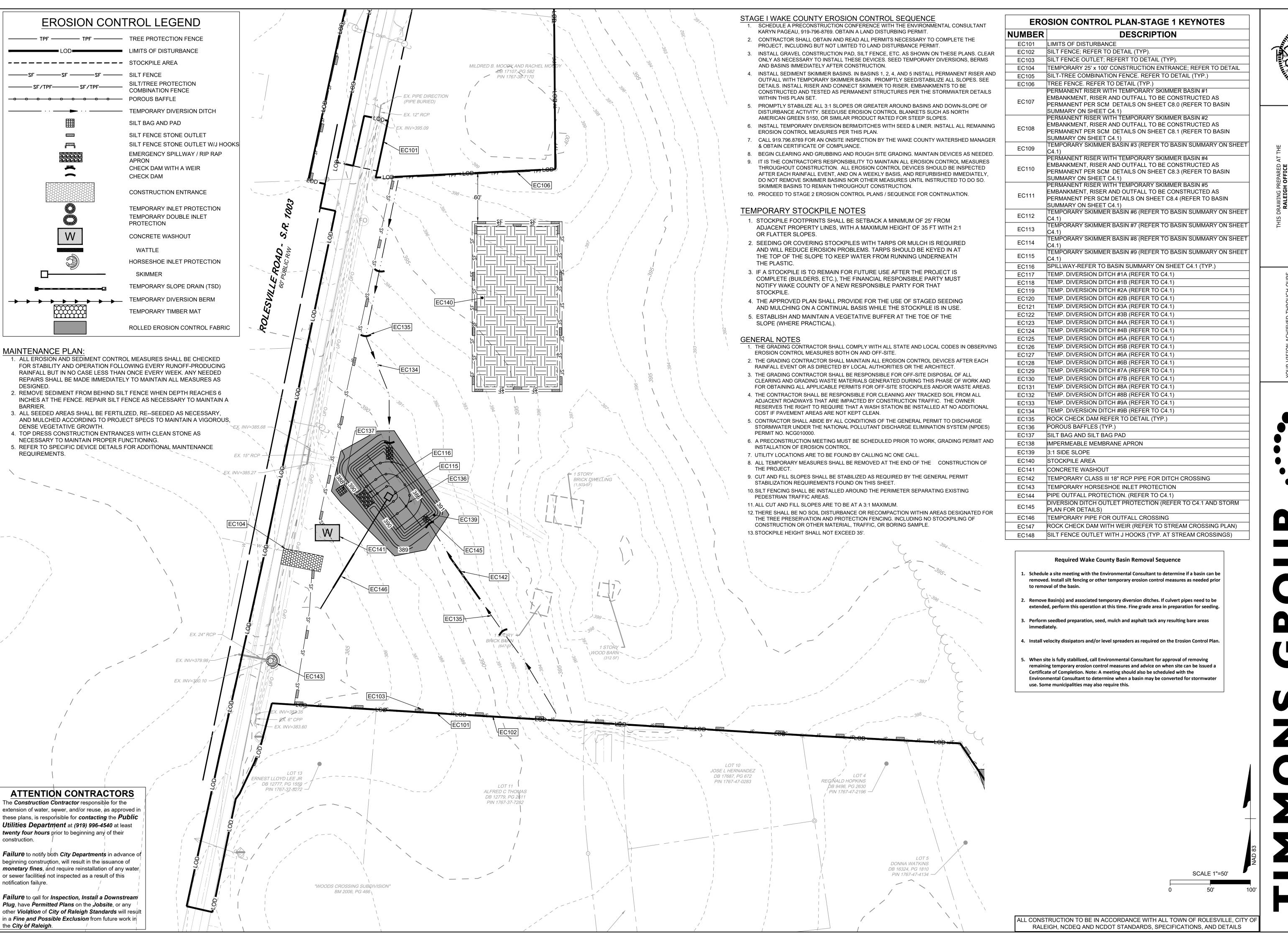
4 inch

2.25 inch

3.64 days

19,312 ft³

104' X 212'



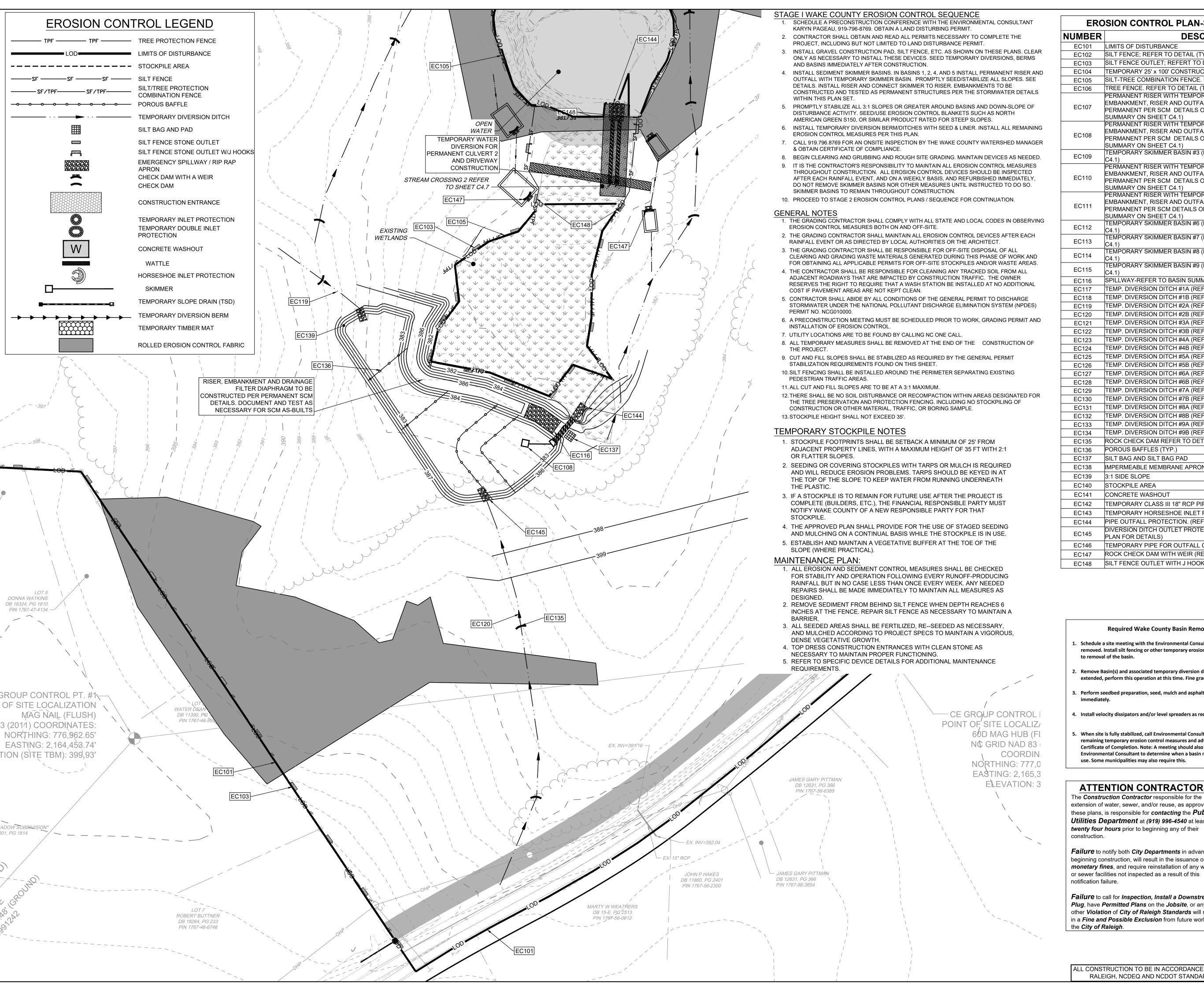
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CHECKED BY . BARBEAU

AS SHOWN

SHEET NO. C4.2



ERU	SION CONTROL PLAN-STAGE 1 KEYNOTES
NUMBER	DESCRIPTION
EC101	LIMITS OF DISTURBANCE
EC102	SILT FENCE; REFER TO DETAIL (TYP).
EC103	SILT FENCE OUTLET; REFERT TO DETAIL (TYP).
EC104	TEMPORARY 25' x 100' CONSTRUCTION ENTRANCE; REFER TO DETAIL
EC105	SILT-TREE COMBINATION FENCE. REFER TO DETAIL (TYP.)
EC106	TREE FENCE. REFER TO DETAIL (TYP.)
	PERMANENT RISER WITH TEMPORARY SKIMMER BASIN #1
	EMBANKMENT, RISER AND OUTFALL TO BE CONSTRUCTED AS
	PERMANENT PER SCM DETAILS ON SHEET C8.0 (REFER TO BASIN
	SUMMARY ON SHEET C4.1) PERMANENT RISER WITH TEMPORARY SKIMMER BASIN #2
	EMBANKMENT, RISER AND OUTFALL TO BE CONSTRUCTED AS
	PERMANENT PER SCM DETAILS ON SHEET C8.1 (REFER TO BASIN
	SUMMARY ON SHEET C4.1)
EC109	TEMPORARY SKIMMER BASIN #3 (REFER TO BASIN SUMMARY ON SHI
	C4.1) PERMANENT RISER WITH TEMPORARY SKIMMER BASIN #4
	EMBANKMENT, RISER AND OUTFALL TO BE CONSTRUCTED AS
	PERMANENT PER SCM DETAILS ON SHEET C8.3 (REFER TO BASIN
	SUMMARY ON SHEET C4.1)
	PERMANENT RISER WITH TEMPORARY SKIMMER BASIN #5
∟/'111	EMBANKMENT, RISER AND OUTFALL TO BE CONSTRUCTED AS
	PERMANENT PER SCM DETAILS ON SHEET C8.4 (REFER TO BASIN SUMMARY ON SHEET C4.1)
	TEMPORARY SKIMMER BASIN #6 (REFER TO BASIN SUMMARY ON SHI
EC112	C4.1)
EC113	TEMPORARY SKIMMER BASIN #7 (REFER TO BASIN SUMMARY ON SHI
ECTIS	C4.1)
EC114	TEMPORARY SKIMMER BASIN #8 (REFER TO BASIN SUMMARY ON SHI C4.1)
	TEMPORARY SKIMMER BASIN #9 (REFER TO BASIN SUMMARY ON SHI
EC115	C4.1)
EC116	SPILLWAY-REFER TO BASIN SUMMARY ON SHEET C4.1 (TYP.)
EC117	TEMP. DIVERSION DITCH #1A (REFER TO C4.1)
EC118	TEMP. DIVERSION DITCH #1B (REFER TO C4.1)
EC119	TEMP. DIVERSION DITCH #2A (REFER TO C4.1)
EC120	TEMP. DIVERSION DITCH #2B (REFER TO C4.1)
EC121	TEMP. DIVERSION DITCH #3A (REFER TO C4.1)
EC122	TEMP. DIVERSION DITCH #3B (REFER TO C4.1)
EC123	TEMP. DIVERSION DITCH #4A (REFER TO C4.1)
EC124	TEMP. DIVERSION DITCH #4B (REFER TO C4.1)
EC125	TEMP. DIVERSION DITCH #5A (REFER TO C4.1)
EC126	TEMP. DIVERSION DITCH #5B (REFER TO C4.1)
EC127	TEMP. DIVERSION DITCH #6A (REFER TO C4.1)
EC128	TEMP. DIVERSION DITCH #6B (REFER TO C4.1)
EC129	TEMP. DIVERSION DITCH #7A (REFER TO C4.1)
EC130	TEMP. DIVERSION DITCH #7B (REFER TO C4.1)
EC131	TEMP. DIVERSION DITCH #8A (REFER TO C4.1)
EC132	TEMP. DIVERSION DITCH #8B (REFER TO C4.1)
EC132	TEMP. DIVERSION DITCH #9A (REFER TO C4.1)
EC134	TEMP. DIVERSION DITCH #9B (REFER TO C4.1)
	ROCK CHECK DAM REFER TO DETAIL (TYP.)
EC136	POROUS BAFFLES (TYP.)
EC130	SILT BAG AND SILT BAG PAD
	IMPERMEABLE MEMBRANE APRON
EC139	3:1 SIDE SLOPE
EC140	STOCKPILE AREA
	CONCRETE WASHOUT
EC142	TEMPORARY CLASS III 18" RCP PIPE FOR DITCH CROSSING
EC143	TEMPORARY HORSESHOE INLET PROTECTION
EC144	PIPE OUTFALL PROTECTION. (REFER TO C4.1)
EC145	DIVERSION DITCH OUTLET PROTECTION (REFER TO C4.1 AND STORM
	PLAN FOR DETAILS)
EC146	TEMPORARY PIPE FOR OUTFALL CROSSING
EC147	ROCK CHECK DAM WITH WEIR (REFER TO STREAM CROSSING PLAN)
EC148	SILT FENCE OUTLET WITH J HOOKS (TYP. AT STREAM CROSSINGS)

Required Wake County Basin Removal Sequence

- L. Schedule a site meeting with the Environmental Consultant to determine if a basin can be removed. Install silt fencing or other temporary erosion control measures as needed prior to removal of the basin.
- . Remove Basin(s) and associated temporary diversion ditches. If culvert pipes need to be extended, perform this operation at this time. Fine grade area in preparation for seeding.
- . Perform seedbed preparation, seed, mulch and asphalt tack any resulting bare areas
- 4. Install velocity dissipators and/or level spreaders as required on the Erosion Control Plan.
- 5. When site is fully stabilized, call Environmental Consultant for approval of removing remaining temporary erosion control measures and advice on when site can be issued a Certificate of Completion. Note: A meeting should also be scheduled with the Environmental Consultant to determine when a basin may be converted for stormwater use. Some municipalities may also require this.

ATTENTION CONTRACTORS

extension of water, sewer, and/or reuse, as approved in these plans, is responsible for *contacting* the *Public* Utilities Department at (919) 996-4540 at least twenty four hours prior to beginning any of their

Failure to notify both City Departments in advance of beginning construction, will result in the issuance of monetary fines, and require reinstallation of any water or sewer facilities not inspected as a result of this notification failure.

Failure to call for Inspection, Install a Downstream *Plug*, have *Permitted Plans* on the *Jobsite*, or any other Violation of City of Raleigh Standards will result in a Fine and Possible Exclusion from future work in the City of Raleigh.

SCALE 1"=50'

ALL CONSTRUCTION TO BE IN ACCORDANCE WITH ALL TOWN OF ROLESVILLE, CITY OF RALEIGH, NCDEQ AND NCDOT STANDARDS, SPECIFICATIONS, AND DETAILS



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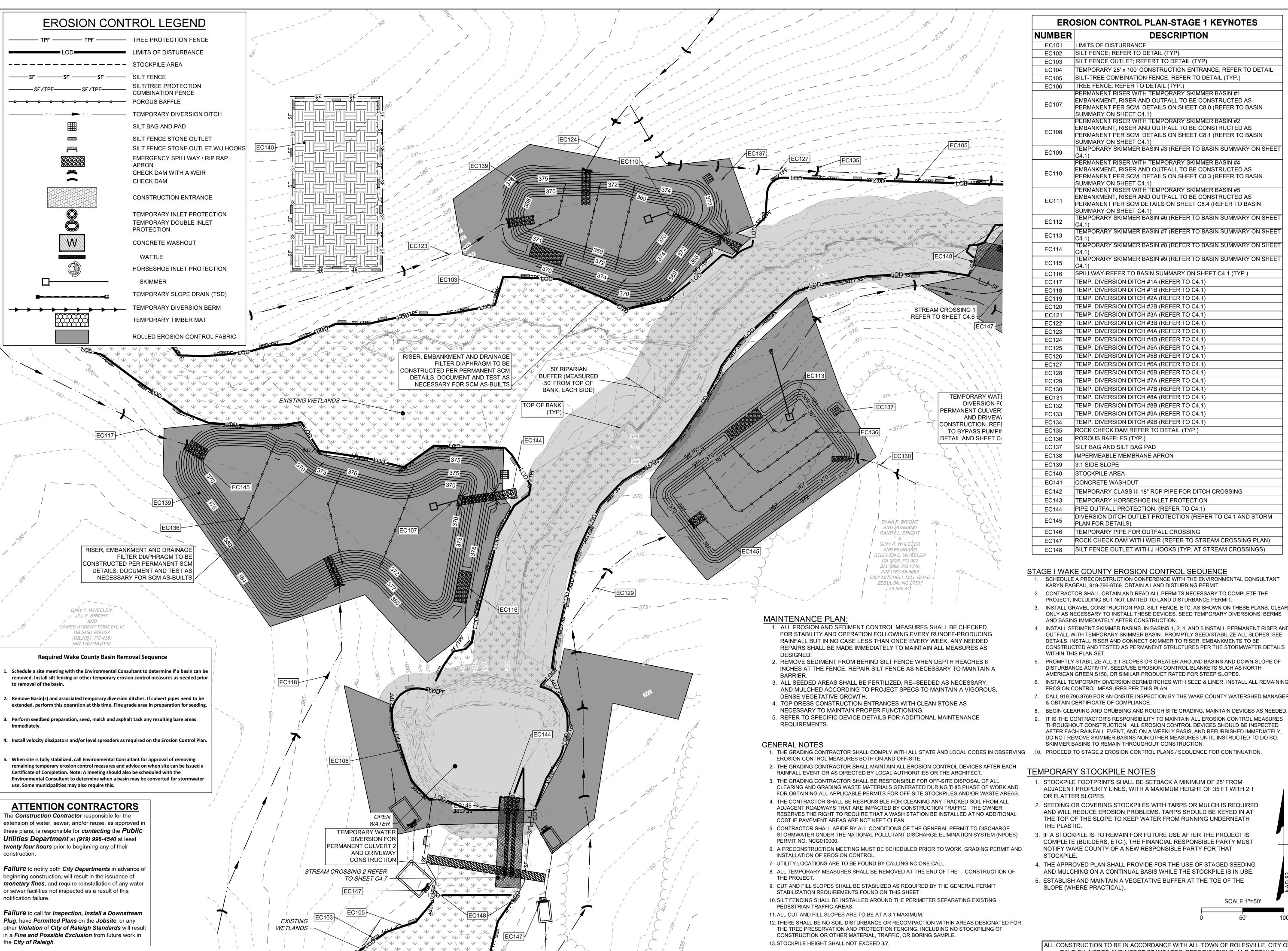
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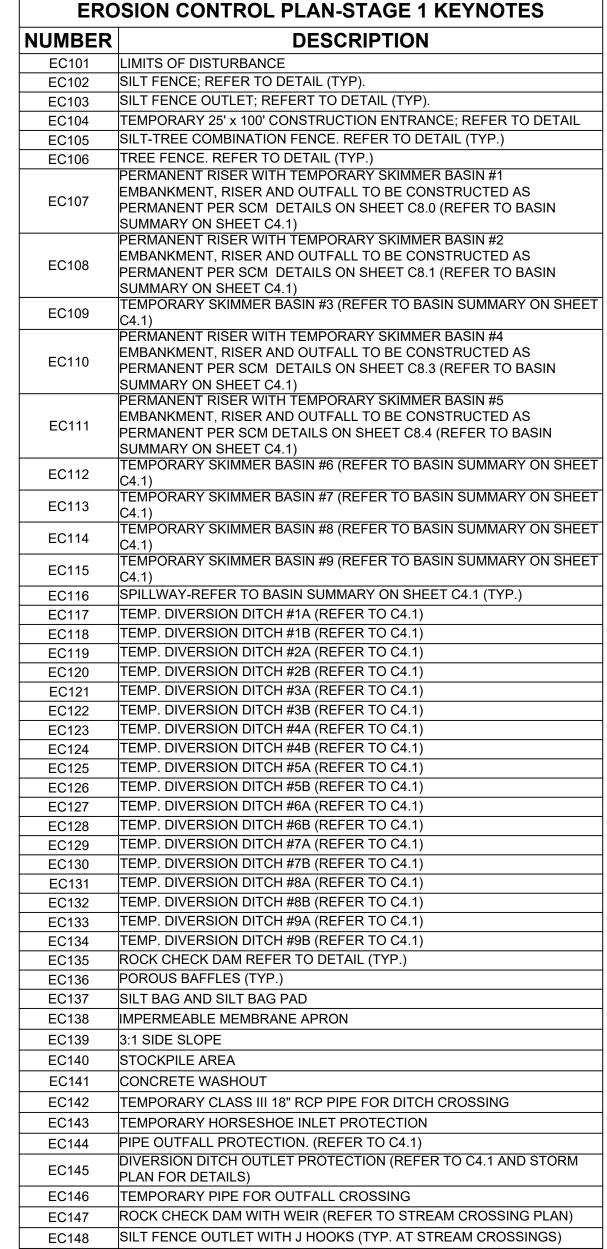
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JOB NO.

SHEET NO. C4.3





STAGE I WAKE COUNTY EROSION CONTROL SEQUENCE

- 1. SCHEDULE A PRECONSTRUCTION CONFERENCE WITH THE ENVIRONMENTAL CONSULTANT
- 2. CONTRACTOR SHALL OBTAIN AND READ ALL PERMITS NECESSARY TO COMPLETE THE
- PROJECT, INCLUDING BUT NOT LIMITED TO LAND DISTURBANCE PERMIT.
- ONLY AS NECESSARY TO INSTALL THESE DEVICES. SEED TEMPORARY DIVERSIONS, BERMS AND BASINS IMMEDIATELY AFTER CONSTRUCTION. 4. INSTALL SEDIMENT SKIMMER BASINS. IN BASINS 1, 2, 4, AND 5 INSTALL PERMANENT RISER AND
- OUTFALL WITH TEMPORARY SKIMMER BASIN. PROMPTLY SEED/STABILIZE ALL SLOPES. SEE DETAILS. INSTALL RISER AND CONNECT SKIMMER TO RISER. EMBANKMENTS TO BE CONSTRUCTED AND TESTED AS PERMANENT STRUCTURES PER THE STORMWATER DETAILS
- 5. PROMPTLY STABILIZE ALL 3:1 SLOPES OR GREATER AROUND BASINS AND DOWN-SLOPE OF DISTURBANCE ACTIVITY. SEED/USE EROSION CONTROL BLANKETS SUCH AS NORTH AMERICAN GREEN S150, OR SIMILAR PRODUCT RATED FOR STEEP SLOPES.
- 6. INSTALL TEMPORARY DIVERSION BERM/DITCHES WITH SEED & LINER. INSTALL ALL REMAINING EROSION CONTROL MEASURES PER THIS PLAN.
- 7. CALL 919.796.8769 FOR AN ONSITE INSPECTION BY THE WAKE COUNTY WATERSHED MANAGER & OBTAIN CERTIFICATE OF COMPLIANCE.
- 8. BEGIN CLEARING AND GRUBBING AND ROUGH SITE GRADING. MAINTAIN DEVICES AS NEEDED.
- 9. IT IS THE CONTRACTOR'S RESPONSIBILITY TO MAINTAIN ALL EROSION CONTROL MEASURES THROUGHOUT CONSTRUCTION. ALL EROSION CONTROL DEVICES SHOULD BE INSPECTED AFTER EACH RAINFALL EVENT, AND ON A WEEKLY BASIS, AND REFURBISHED IMMEDIATELY,

TEMPORARY STOCKPILE NOTES

- 1. STOCKPILE FOOTPRINTS SHALL BE SETBACK A MINIMUM OF 25' FROM ADJACENT PROPERTY LINES, WITH A MAXIMUM HEIGHT OF 35 FT WITH 2:1
- 2. SEEDING OR COVERING STOCKPILES WITH TARPS OR MULCH IS REQUIRED AND WILL REDUCE EROSION PROBLEMS. TARPS SHOULD BE KEYED IN AT THE TOP OF THE SLOPE TO KEEP WATER FROM RUNNING UNDERNEATH
- 3. IF A STOCKPILE IS TO REMAIN FOR FUTURE USE AFTER THE PROJECT IS COMPLETE (BUILDERS, ETC.), THE FINANCIAL RESPONSIBLE PARTY MUST NOTIFY WAKE COUNTY OF A NEW RESPONSIBLE PARTY FOR THAT
- 4. THE APPROVED PLAN SHALL PROVIDE FOR THE USE OF STAGED SEEDING
- AND MULCHING ON A CONTINUAL BASIS WHILE THE STOCKPILE IS IN USE.

5. ESTABLISH AND MAINTAIN A VEGETATIVE BUFFER AT THE TOE OF THE SLOPE (WHERE PRACTICAL).

SCALE 1"=50'

ALL CONSTRUCTION TO BE IN ACCORDANCE WITH ALL TOWN OF ROLESVILLE, CITY OF RALEIGH, NCDEQ AND NCDOT STANDARDS, SPECIFICATIONS, AND DETAILS

09/17/2021 DRAWN BY A. BROWN

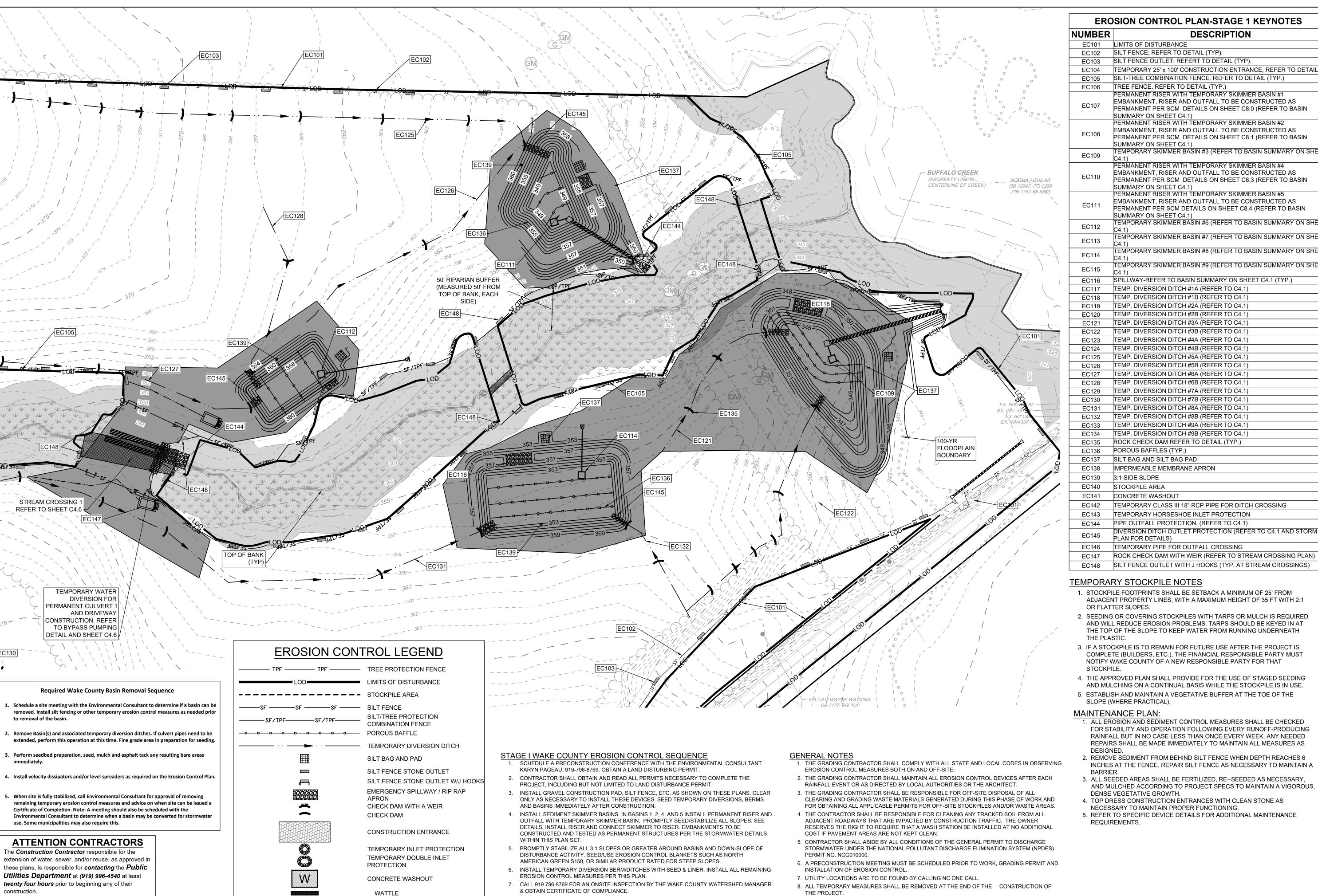
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P. BARBEAU

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SHEET NO. C4.4



8. BEGIN CLEARING AND GRUBBING AND ROUGH SITE GRADING. MAINTAIN DEVICES AS NEEDED.

THROUGHOUT CONSTRUCTION. ALL EROSION CONTROL DEVICES SHOULD BE INSPECTED

AFTER EACH RAINFALL EVENT, AND ON A WEEKLY BASIS, AND REFURBISHED IMMEDIATELY,

DO NOT REMOVE SKIMMER BASINS NOR OTHER MEASURES UNTIL INSTRUCTED TO DO SO.

9. IT IS THE CONTRACTOR'S RESPONSIBILITY TO MAINTAIN ALL EROSION CONTROL MEASURES

10. PROCEED TO STAGE 2 EROSION CONTROL PLANS / SEQUENCE FOR CONTINUATION.

SKIMMER BASINS TO REMAIN THROUGHOUT CONSTRUCTION.

HORSESHOE INLET PROTECTION

TEMPORARY SLOPE DRAIN (TSD)

ROLLED EROSION CONTROL FABRIC

TEMPORARY DIVERSION BERM

TEMPORARY TIMBER MAT

SKIMMER

Failure to notify both **City Departments** in advance of

monetary fines, and require reinstallation of any water

Failure to call for Inspection, Install a Downstream

other Violation of City of Raleigh Standards will result

in a *Fine and Possible Exclusion* from future work in

Plug, have **Permitted Plans** on the **Jobsite**, or any

beginning construction, will result in the issuance of

or sewer facilities not inspected as a result of this

notification failure.

the City of Raleigh.

PERMANENT RISER WITH TEMPORARY SKIMMER BASIN #1 MBANKMENT, RISER AND OUTFALL TO BE CONSTRUCTED AS PERMANENT PER SCM DETAILS ON SHEET C8.0 (REFER TO BASIN UMMARY ON SHEET C4.1) PERMANENT RISER WITH TEMPORARY SKIMMER BASIN #2 EMBANKMENT. RISER AND OUTFALL TO BE CONSTRUCTED AS PERMANENT PER SCM DETAILS ON SHEET C8.1 (REFER TO BASIN SUMMARY ON SHEET C4.1) EMPORARY SKIMMER BASIN #3 (REFER TO BASIN SUMMARY ON SHEE EMBANKMENT. RISER AND OUTFALL TO BE CONSTRUCTED AS PERMANENT PER SCM DETAILS ON SHEET C8.3 (REFER TO BASIN SUMMARY ON SHEET C4.1) PERMANENT RISER WITH TEMPORARY SKIMMER BASIN #5 EMBANKMENT, RISER AND OUTFALL TO BE CONSTRUCTED AS PERMANENT PER SCM DETAILS ON SHEET C8.4 (REFER TO BASIN SUMMARY ON SHEET C4.1) EMPORARY SKIMMER BASIN #6 (REFER TO BASIN SUMMARY ON SHEET TEMPORARY SKIMMER BASIN #7 (REFER TO BASIN SUMMARY ON SHEET SPILLWAY-REFER TO BASIN SUMMARY ON SHEET C4.1 (TYP.) TEMP. DIVERSION DITCH #1A (REFER TO C4.1) TEMP. DIVERSION DITCH #1B (REFER TO C4.1) TEMP. DIVERSION DITCH #2A (REFER TO C4.1) EMP. DIVERSION DITCH #2B (REFER TO C4.1) EMP. DIVERSION DITCH #3A (REFER TO C4.1) TEMP. DIVERSION DITCH #3B (REFER TO C4.1) TEMP. DIVERSION DITCH #4A (REFER TO C4.1) EMP. DIVERSION DITCH #4B (REFER TO C4.1) TEMP. DIVERSION DITCH #5A (REFER TO C4.1) EMP. DIVERSION DITCH #5B (REFER TO C4.1) EMP. DIVERSION DITCH #6A (REFER TO C4.1) TEMP. DIVERSION DITCH #6B (REFER TO C4.1) EMP. DIVERSION DITCH #7A (REFER TO C4.1) TEMP. DIVERSION DITCH #7B (REFER TO C4.1 TEMP. DIVERSION DITCH #8A (REFER TO C4.1) TEMP. DIVERSION DITCH #8B (REFER TO C4.1) TEMP. DIVERSION DITCH #9A (REFER TO C4.1) TEMP. DIVERSION DITCH #9B (REFER TO C4.1) ROCK CHECK DAM REFER TO DETAIL (TYP.) POROUS BAFFLES (TYP.) SILT BAG AND SILT BAG PAD IMPERMEABLE MEMBRANE APRON 3:1 SIDE SLOPE STOCKPILE AREA CONCRETE WASHOUT TEMPORARY CLASS III 18" RCP PIPE FOR DITCH CROSSING TEMPORARY HORSESHOE INLET PROTECTION PIPE OUTFALL PROTECTION. (REFER TO C4.1) DIVERSION DITCH OUTLET PROTECTION (REFER TO C4.1 AND STORM PLAN FOR DETAILS) TEMPORARY PIPE FOR OUTFALL CROSSING ROCK CHECK DAM WITH WEIR (REFER TO STREAM CROSSING PLAN) EC148 | SILT FENCE OUTLET WITH J HOOKS (TYP. AT STREAM CROSSINGS) TEMPORARY STOCKPILE NOTES 1. STOCKPILE FOOTPRINTS SHALL BE SETBACK A MINIMUM OF 25' FROM ADJACENT PROPERTY LINES, WITH A MAXIMUM HEIGHT OF 35 FT WITH 2:1

DESCRIPTION

- OR FLATTER SLOPES.
- 2. SEEDING OR COVERING STOCKPILES WITH TARPS OR MULCH IS REQUIRED AND WILL REDUCE EROSION PROBLEMS. TARPS SHOULD BE KEYED IN AT THE TOP OF THE SLOPE TO KEEP WATER FROM RUNNING UNDERNEATH
- 3. IF A STOCKPILE IS TO REMAIN FOR FUTURE USE AFTER THE PROJECT IS COMPLETE (BUILDERS, ETC.), THE FINANCIAL RESPONSIBLE PARTY MUST NOTIFY WAKE COUNTY OF A NEW RESPONSIBLE PARTY FOR THAT
- 4. THE APPROVED PLAN SHALL PROVIDE FOR THE USE OF STAGED SEEDING AND MULCHING ON A CONTINUAL BASIS WHILE THE STOCKPILE IS IN USE. 5. ESTABLISH AND MAINTAIN A VEGETATIVE BUFFER AT THE TOE OF THE
- SLOPE (WHERE PRACTICAL).

MAINTENANCE PLAN:

9. CUT AND FILL SLOPES SHALL BE STABILIZED AS REQUIRED BY THE GENERAL PERMIT

10. SILT FENCING SHALL BE INSTALLED AROUND THE PERIMETER SEPARATING EXISTING

12. THERE SHALL BE NO SOIL DISTURBANCE OR RECOMPACTION WITHIN AREAS DESIGNATED FOR

THE TREE PRESERVATION AND PROTECTION FENCING. INCLUDING NO STOCKPILING OF

STABILIZATION REQUIREMENTS FOUND ON THIS SHEET.

11. ALL CUT AND FILL SLOPES ARE TO BE AT A 3:1 MAXIMUM.

CONSTRUCTION OR OTHER MATERIAL, TRAFFIC, OR BORING SAMPLE.

PEDESTRIAN TRAFFIC AREAS.

13. STOCKPILE HEIGHT SHALL NOT EXCEED 35'.

- 1. ALL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE CHECKED FOR STABILITY AND OPERATION FOLLOWING EVERY RUNOFF-PRODUCING RAINFALL BUT IN NO CASE LESS THAN ONCE EVERY WEEK. ANY NEEDED REPAIRS SHALL BE MADE IMMEDIATELY TO MAINTAIN ALL MEASURES AS DESIGNED.
- 2. REMOVE SEDIMENT FROM BEHIND SILT FENCE WHEN DEPTH REACHES 6 INCHES AT THE FENCE. REPAIR SILT FENCE AS NECESSARY TO MAINTAIN A
- 3. ALL SEEDED AREAS SHALL BE FERTILIZED, RE--SEEDED AS NECESSARY, AND MULCHED ACCORDING TO PROJECT SPECS TO MAINTAIN A VIGOROUS. DENSE VEGETATIVE GROWTH.
- 4. TOP DRESS CONSTRUCTION ENTRANCES WITH CLEAN STONE AS NECESSARY TO MAINTAIN PROPER FUNCTIONING.

5. REFER TO SPECIFIC DEVICE DETAILS FOR ADDITIONAL MAINTENANCE REQUIREMENTS.

SCALE 1"=50'

ALL CONSTRUCTION TO BE IN ACCORDANCE WITH ALL TOWN OF ROLESVILLE, CITY OF

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09/17/2021

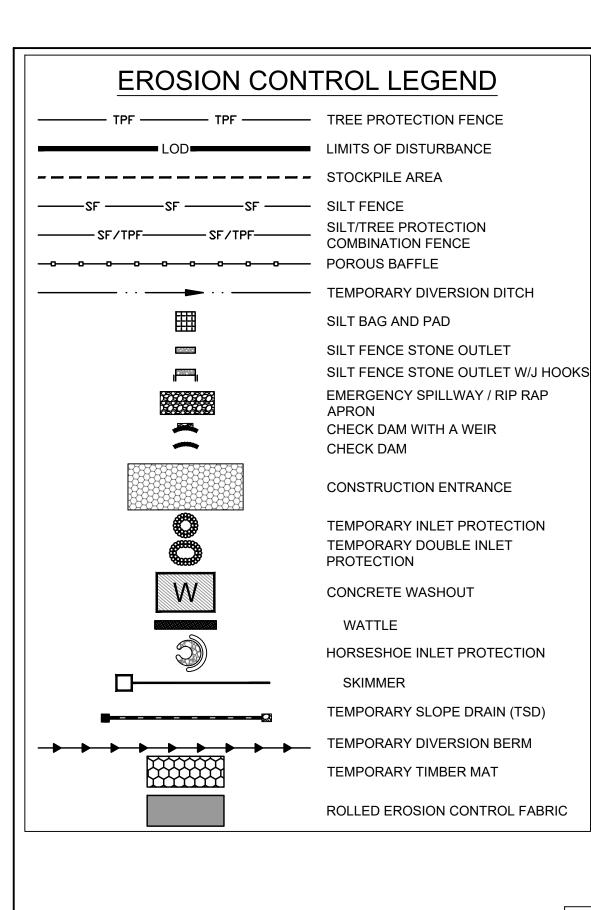
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P. BARBEAU

AS SHOWN

SHEET NO. C4.5

RALEIGH, NCDEQ AND NCDOT STANDARDS, SPECIFICATIONS, AND DETAILS



Required Wake County Basin Removal Sequence

. Schedule a site meeting with the Environmental Consultant to determine if a basin can be

removed. Install silt fencing or other temporary erosion control measures as needed prior

Remove Basin(s) and associated temporary diversion ditches. If culvert pipes need to be

extended, perform this operation at this time. Fine grade area in preparation for seeding.

. Perform seedbed preparation, seed, mulch and asphalt tack any resulting bare areas

4. Install velocity dissipators and/or level spreaders as required on the Erosion Control Plan.

remaining temporary erosion control measures and advice on when site can be issued a

Environmental Consultant to determine when a basin may be converted for stormwater

. When site is fully stabilized, call Environmental Consultant for approval of removing

Certificate of Completion. Note: A meeting should also be scheduled with the

use. Some municipalities may also require this.

ATTENTION CONTRACTORS

extension of water, sewer, and/or reuse, as approved in

these plans, is responsible for $\emph{contacting}$ the \emph{Public}

Failure to notify both **City Departments** in advance of beginning construction, will result in the issuance of monetary fines, and require reinstallation of any water

or sewer facilities not inspected as a result of this

Failure to call for Inspection, Install a Downstream

Plug, have **Permitted Plans** on the **Jobsite**, or any

Utilities Department at (919) 996-4540 at least twenty four hours prior to beginning any of their

he Construction Contractor responsible for the

STAGE I STREAM CROSSING 1 EROSION CONTROL SEQUENCE ONCE PROPER 401/404 BUFFER AUTHORIZATIONS AND ALL OTHER NECESSARY PERMITS ARE OBTAINED BEGIN STREAM CROSSING PROCESS. 2. OPERATION AND CONSTRUCTION FOR STREAM CROSSINGS SHOULD BE PERFORMED IN A DRY WEATHER PATTERN OF AT LEAST 3-5 DAYS AND SHOULD NOT BEGIN UNTIL ALL NECESSARY CONSTRUCTION MATERIALS ARE LOCATED ON THE SITE. 3. SILT FENCE MUST BE INSTALLED ALONG STREAM BANKS AT THE END OF THE WORK DAY TO MINIMIZE IMPACTS. 4. INSTALL CHECK DAM WITH WEIR AT EXISTING GRADES. 5. INSTALL THE IMPERVIOUS DIKES (SAND BAGS, SHEET PILING, OR NO. 57 STONE WITH POLYPROPYLENE FOR WIDTH AND DEPTH OF CHANNEL. SET UP AND BEGIN BYPASS PUMPING OF EXISTING FLOW PER THE DETAIL. 6. IF A TEMPORARY CROSSING IS REQUIRED, UTILIZE TIMBER MAT. 6.1. STONE APPROACHES WILL BE REQUIRED ON BOTH SIDES AND THE BOARDS WILL HAVE NO GAPS. GEOTEXTILE SHALL BE UNDERLAIN OR OVERLAIN AND SIDE BOARDS WILL BE INSTALLED ALONG THE PERIMETER OF THE MAT.

7. INSTALL CULVERT PIPES AND HEADWALLS PER THE STORMWATER AND GRADING SHEETS AND

10. BRING PERMANENT CROSSING TO GRADE AND PROMPTLY STABILIZE ALL 3:1 SLOPES OR

GREATER DOWN-SLOPE OF DISTURBANCE ACTIVITY. SEED/USE EROSION CONTROL

11. ADJUST TEMPORARY DIVERSION DITCHES IN PROXIMITY AS NECESSARY TO MAINTAIN

12. PROCEED TO STREAM CROSSING 2 OR OTHER SITE IMPROVEMENTS PER THE PLANS.

FROM THE PLANS TO AN EXTENT REQUIRING ANY MODIFICATIONS.

POSITIVE DRAINAGE TO SEDIMENT BASINS.

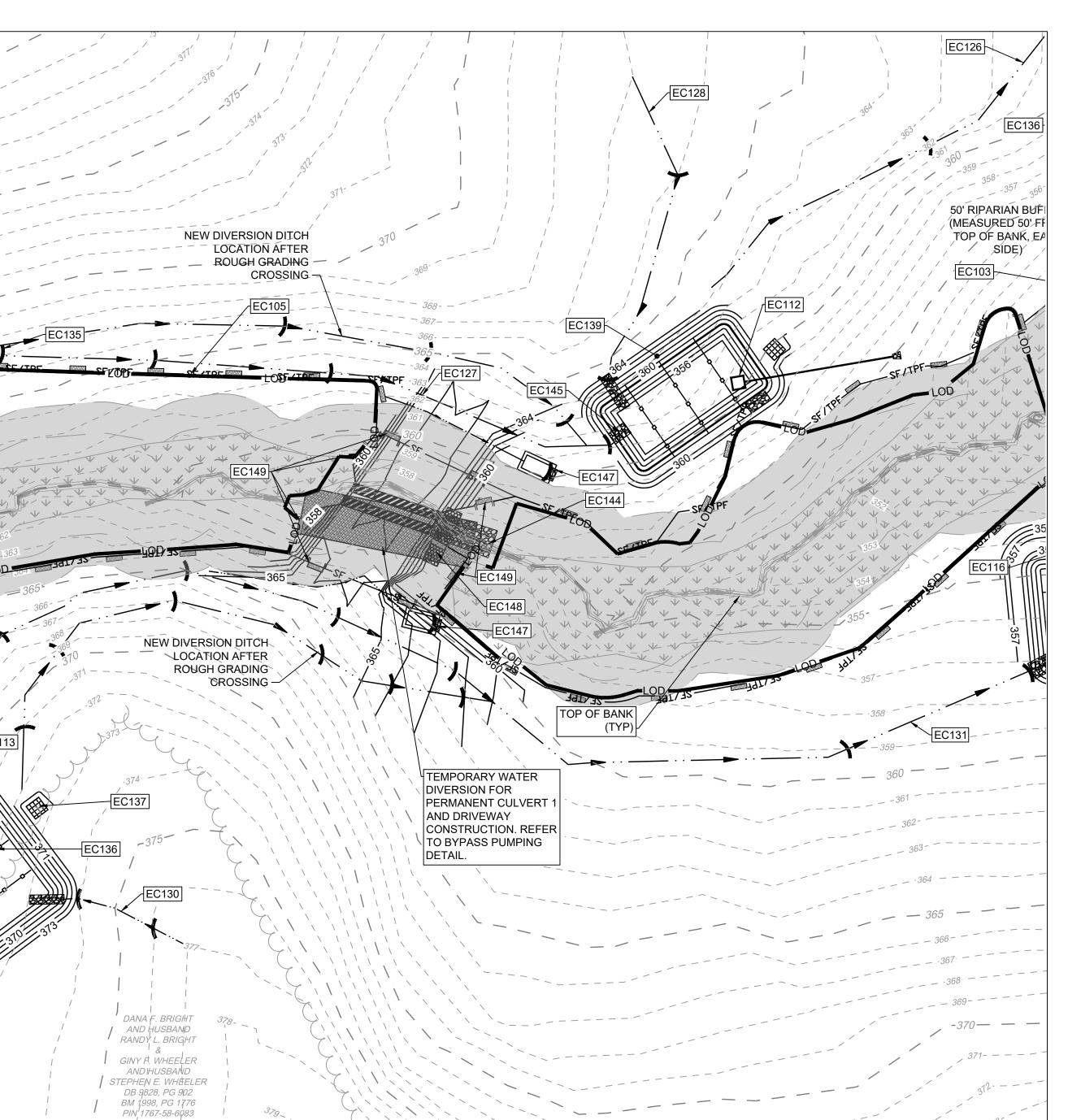
SPECIFICATIONS WITHIN THIS PLAN SET. INFORM THE ENGINEER IF FIELD CONDITIONS DIFFER

BLANKETS SUCH AS NORTH AMERICAN GREEN \$150, OR SIMILAR PRODUCT RATED FOR STEEP

1. CHECK DAMS WITH A WEIR TO SERVE AS SEDI CROSSINGS AS NEEDED. CHECK AND REMOVE

Check Dam with a Weir:	# 1	
С	0.3	
1	7.2 in/hr	
А	0.037 AC	
Q10	0.08 CFS	Q=C*I*A
Storage Required	133.2 CF	Volume = A*3600
Weir Length	0.09 FT	(Q cfs / 0.88)
Check Dam with a Weir:	# 2	
С	0.3	
1	7.2 in/hr	
А	0.060 AC	
Q10	0.13 CFS	Q=C*I*A
Storage Required	216 CF	Volume = A*3600
Weir Length	0.15 FT	(Q cfs / 0.88)

	GENERAL NOTES 1. THE GRADING CONTRACTOR SHALL COMPLY WITH ALL STATE AND LOCAL CODES IN OBSERVING	ERC	OSION CONTROL PLAN-STAGE 1 KEYNOTES
	EROSION CONTROL MEASURES BOTH ON AND OFF-SITE. 2. THE GRADING CONTRACTOR SHALL MAINTAIN ALL EROSION CONTROL DEVICES AFTER EACH	NUMBER	
	RAINFALL EVENT OR AS DIRECTED BY LOCAL AUTHORITIES OR THE ARCHITECT.		LIMITS OF DISTURBANCE
=C*I*A	3. THE GRADING CONTRACTOR SHALL BE RESPONSIBLE FOR OFF-SITE DISPOSAL OF ALL	EC101 EC102	SILT FENCE; REFER TO DETAIL (TYP).
olume = A*3600	CLEARING AND GRADING WASTE MATERIALS GENERATED DURING THIS PHASE OF WORK AND FOR OBTAINING ALL APPLICABLE PERMITS FOR OFF-SITE STOCKPILES AND/OR WASTE AREAS.	EC102	SILT FENCE OUTLET; REFERT TO DETAIL (TYP).
cfs / 0.88)	4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CLEANING ANY TRACKED SOIL FROM ALL	EC104	TEMPORARY 25' x 100' CONSTRUCTION ENTRANCE; REFER TO DETAIL
	ADJACENT ROADWAYS THAT ARE IMPACTED BY CONSTRUCTION TRAFFIC. THE OWNER	EC105	SILT-TREE COMBINATION FENCE. REFER TO DETAIL (TYP.)
	RESERVES THE RIGHT TO REQUIRE THAT A WASH STATION BE INSTALLED AT NO ADDITIONAL	EC106	TREE FENCE. REFER TO DETAIL (TYP.)
	COST IF PAVEMENT AREAS ARE NOT KEPT CLEAN.		PERMANENT RISER WITH TEMPORARY SKIMMER BASIN #1
	CONTRACTOR SHALL ABIDE BY ALL CONDITIONS OF THE GENERAL PERMIT TO DISCHARGE STORMWATER UNDER THE NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)	EC107	EMBANKMENT, RISER AND OUTFALL TO BE CONSTRUCTED AS
C*I*A	PERMIT NO. NCG010000.	20107	PERMANENT PER SCM DETAILS ON SHEET C8.0 (REFER TO BASIN
lume = A*3600	6. A PRECONSTRUCTION MEETING MUST BE SCHEDULED PRIOR TO WORK, GRADING PERMIT AND		SUMMARY ON SHEET C4.01) PERMANENT RISER WITH TEMPORARY SKIMMER BASIN #2
cfs / 0.88)	INSTALLATION OF EROSION CONTROL.	50400	EMBANKMENT, RISER AND OUTFALL TO BE CONSTRUCTED AS
,,	7. UTILITY LOCATIONS ARE TO BE FOUND BY CALLING NC ONE CALL.	EC108	PERMANENT PER SCM DETAILS ON SHEET C8.1 (REFER TO BASIN
	ALL TEMPORARY MEASURES SHALL BE REMOVED AT THE END OF THE CONSTRUCTION OF THE PROJECT.		SUMMARY ON SHEET C4.01)
	9. CUT AND FILL SLOPES SHALL BE STABILIZED AS REQUIRED BY THE GENERAL PERMIT	EC109	TEMPORARY SKIMMER BASIN #3 (REFER TO BASIN SUMMARY ON SHE
ENT STORAGE FOR STREAM	STABILIZATION REQUIREMENTS FOUND ON THIS SHEET.		C4.01) PERMANENT RISER WITH TEMPORARY SKIMMER BASIN #4
EDIMENT AS REQUIRED.	10. SILT FENCING SHALL BE INSTALLED AROUND THE PERIMETER SEPARATING EXISTING		EMBANKMENT, RISER AND OUTFALL TO BE CONSTRUCTED AS
	PEDESTRIAN TRAFFIC AREAS.	EC110	PERMANENT PER SCM DETAILS ON SHEET C8.3 (REFER TO BASIN
	11. ALL CUT AND FILL SLOPES ARE TO BE AT A 3:1 MAXIMUM.		SUMMARY ON SHEET C4.01)
	12. THERE SHALL BE NO SOIL DISTURBANCE OR RECOMPACTION WITHIN AREAS DESIGNATED FOR		PERMANENT RISER WITH TEMPORARY SKIMMER BASIN #5
	THE TREE PRESERVATION AND PROTECTION FENCING. INCLUDING NO STOCKPILING OF CONSTRUCTION OR OTHER MATERIAL, TRAFFIC, OR BORING SAMPLE.	EC111	EMBANKMENT, RISER AND OUTFALL TO BE CONSTRUCTED AS PERMANENT PER SCM DETAILS ON SHEET C8.4 (REFER TO BASIN
	13. STOCKPILE HEIGHT SHALL NOT EXCEED 35'.		SUMMARY ON SHEET C4.01)
	13.310CKFILE HEIGHT SHALL NOT EXCEED 33.	E0440	TEMPORARY SKIMMER BASIN #6 (REFER TO BASIN SUMMARY ON SHE
		EC112	C4.01)
		EC113	TEMPORARY SKIMMER BASIN #7 (REFER TO BASIN SUMMARY ON SHE
			C4.01) TEMPORARY SKIMMER BASIN #8 (REFER TO BASIN SUMMARY ON SHE
		EC114	C4.01)
		50445	TEMPORARY SKIMMER BASIN #9 (REFER TO BASIN SUMMARY ON SHE
		EC115	C4.01)
		EC116	SPILLWAY-REFER TO BASIN SUMMARY ON SHEET C4.01 (TYP.)
		EC117	TEMP. DIVERSION DITCH #1A (REFER TO C4.01)
		EC118	TEMP. DIVERSION DITCH #1B (REFER TO C4.01)
		EC119	TEMP. DIVERSION DITCH #2A (REFER TO C4.01)
		EC120	TEMP. DIVERSION DITCH #2B (REFER TO C4.01)
		EC121	TEMP. DIVERSION DITCH #3A (REFER TO C4.01)



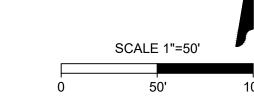
EC122 TEMP. DIVERSION DITCH #3B (REFER TO C4.01) EC123 TEMP. DIVERSION DITCH #4A (REFER TO C4.01) TEMP. DIVERSION DITCH #4B (REFER TO C4.01) TEMP. DIVERSION DITCH #5A (REFER TO C4.01) TEMP. DIVERSION DITCH #5B (REFER TO C4.01) TEMP. DIVERSION DITCH #6A (REFER TO C4.01) TEMP. DIVERSION DITCH #6B (REFER TO C4.01) TEMP. DIVERSION DITCH #7A (REFER TO C4.01) EC129 TEMP. DIVERSION DITCH #7B (REFER TO C4.01) TEMP. DIVERSION DITCH #8A (REFER TO C4.01) TEMP. DIVERSION DITCH #8B (REFER TO C4.01) TEMP. DIVERSION DITCH #9A (REFER TO C4.01) TEMP. DIVERSION DITCH #9B (REFER TO C4.01) ROCK CHECK DAM REFER TO DETAIL (TYP.) EC136 POROUS BAFFLES (TYP.) SILT BAG AND SILT BAG PAD IMPERMEABLE MEMBRANE APRON EC138 EC139 3:1 SIDE SLOPE STOCKPILE AREA EC140 CONCRETE WASHOUT TEMPORARY CLASS 3 18" RCP PIPE FOR DITCH CROSSING TEMPORARY HORSESHOE INLET PROTECTION PIPE OUTFALL PROTECTION. (REFER TO C4.01) DIVERSION DITCH OUTLET PROTECTION (REFER TO C4.01 AND STORM PLAN FOR DETAILS) TEMPORARY PIPE FOR OUTFALL CROSSING EC146 ROCK CHECK DAM WITH WEIR (REFER TO DETAIL) EC148 TIMBER MAT SILT FENCE OUTLET WITH J HOOKS (TYP. AT STREAM CROSSINGS)

TEMPORARY STOCKPILE NOTES

- 1. STOCKPILE FOOTPRINTS SHALL BE SETBACK A MINIMUM OF 25' FROM ADJACENT PROPERTY LINES, WITH A MAXIMUM HEIGHT OF 35 FT WITH 2:1
- OR FLATTER SLOPES. 2. SEEDING OR COVERING STOCKPILES WITH TARPS OR MULCH IS REQUIRED AND WILL REDUCE EROSION PROBLEMS. TARPS SHOULD BE KEYED IN AT THE TOP OF THE SLOPE TO KEEP WATER FROM RUNNING UNDERNEATH
- THE PLASTIC. 3. IF A STOCKPILE IS TO REMAIN FOR FUTURE USE AFTER THE PROJECT IS COMPLETE (BUILDERS, ETC.), THE FINANCIAL RESPONSIBLE PARTY MUST NOTIFY WAKE COUNTY OF A NEW RESPONSIBLE PARTY FOR THAT
- STOCKPILE. 4. THE APPROVED PLAN SHALL PROVIDE FOR THE USE OF STAGED SEEDING AND MULCHING ON A CONTINUAL BASIS WHILE THE STOCKPILE IS IN USE.
- 5. ESTABLISH AND MAINTAIN A VEGETATIVE BUFFER AT THE TOE OF THE SLOPE (WHERE PRACTICAL).

MAINTENANCE PLAN:

- 1. ALL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE CHECKED FOR STABILITY AND OPERATION FOLLOWING EVERY RUNOFF-PRODUCING RAINFALL BUT IN NO CASE LESS THAN ONCE EVERY WEEK. ANY NEEDED REPAIRS SHALL BE MADE IMMEDIATELY TO MAINTAIN ALL MEASURES AS
- 2. REMOVE SEDIMENT FROM BEHIND SILT FENCE WHEN DEPTH REACHES 6 INCHES AT THE FENCE. REPAIR SILT FENCE AS NECESSARY TO MAINTAIN A BARRIER.
- 3. ALL SEEDED AREAS SHALL BE FERTILIZED, RE--SEEDED AS NECESSARY, AND MULCHED ACCORDING TO PROJECT SPECS TO MAINTAIN A VIGOROUS,
- DENSE VEGETATIVE GROWTH. 4. TOP DRESS CONSTRUCTION ENTRANCES WITH CLEAN STONE AS
- NECESSARY TO MAINTAIN PROPER FUNCTIONING.
- 5. REFER TO SPECIFIC DEVICE DETAILS FOR ADDITIONAL MAINTENANCE
- REQUIREMENTS.



ALL CONSTRUCTION TO BE IN ACCORDANCE WITH ALL TOWN OF ROLESVILLE, CITY OF RALEIGH, NCDEQ AND NCDOT STANDARDS, SPECIFICATIONS, AND DETAILS

09/17/2021 DRAWN BY R. WINGATE

DESIGNED BY P. BARBEAU CHECKED BY

P. BARBEAU

AS SHOWN

JOB NO.

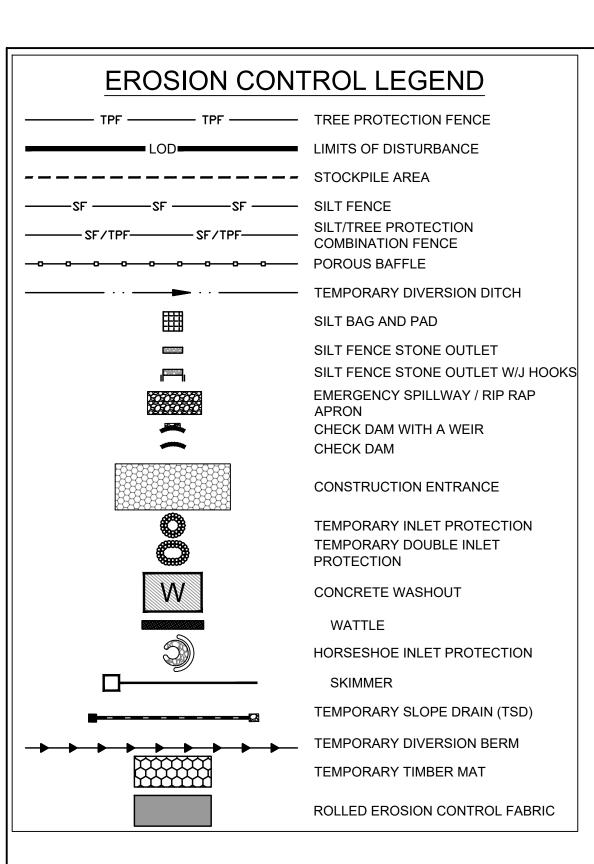
SHEET NO. C4.6

other Violation of City of Raleigh Standards will result in a *Fine and Possible Exclusion* from future work in the City of Raleigh.

construction.

notification failure.

to removal of the basin.



Required Wake County Basin Removal Sequence

to removal of the basin.

immediately.

construction.

notification failure.

the *City of Raleigh*.

1. Schedule a site meeting with the Environmental Consultant to determine if a basin can be

2. Remove Basin(s) and associated temporary diversion ditches. If culvert pipes need to be extended, perform this operation at this time. Fine grade area in preparation for seeding.

Perform seedbed preparation, seed, mulch and asphalt tack any resulting bare areas

4. Install velocity dissipators and/or level spreaders as required on the Erosion Control Plan.

When site is fully stabilized, call Environmental Consultant for approval of removing

Certificate of Completion. Note: A meeting should also be scheduled with the

use. Some municipalities may also require this.

ATTENTION CONTRACTORS

extension of water, sewer, and/or reuse, as approved in

these plans, is responsible for *contacting* the *Public* Utilities Department at (919) 996-4540 at least twenty four hours prior to beginning any of their

Failure to notify both City Departments in advance of beginning construction, will result in the issuance of monetary fines, and require reinstallation of any water or sewer facilities not inspected as a result of this

Failure to call for Inspection, Install a Downstream

Plug, have *Permitted Plans* on the *Jobsite*, or any other Violation of City of Raleigh Standards will result in a *Fine and Possible Exclusion* from future work in

The **Construction Contractor** responsible for the

remaining temporary erosion control measures and advice on when site can be issued a

Environmental Consultant to determine when a basin may be converted for stormwater

removed. Install silt fencing or other temporary erosion control measures as needed prior

STAGE I STREAM CROSSING 2 EROSION CONTROL SEQUENCE ONCE PROPER 401/404 BUFFER AUTHORIZATIONS AND ALL OTHER NECESSARY PERMITS ARE OBTAINED BEGIN STREAM CROSSING PROCESS. 2. OPERATION AND CONSTRUCTION FOR STREAM CROSSINGS SHOULD BE PERFORMED IN A DRY WEATHER PATTERN OF AT LEAST 3-5 DAYS AND SHOULD NOT BEGIN UNTIL ALL NECESSARY CONSTRUCTION MATERIALS ARE LOCATED ON THE SITE. 3. SILT FENCE MUST BE INSTALLED ALONG STREAM BANKS AT THE END OF THE WORK DAY TO MINIMIZE IMPACTS. 4. INSTALL CHECK DAM WITH WEIR AT EXISTING GRADES. 5. INSTALL THE IMPERVIOUS DIKES (SAND BAGS, SHEET PILING, OR NO. 57 STONE WITH POLYPROPYLENE FOR WIDTH AND DEPTH OF CHANNEL. SET UP AND BEGIN BYPASS PUMPING OF EXISTING FLOW PER THE DETAIL. 6. IF A TEMPORARY CROSSING IS REQUIRED, UTILIZE TIMBER MAT. 6.1. STONE APPROACHES WILL BE REQUIRED ON BOTH SIDES AND THE BOARDS WILL HAVE NO GAPS. GEOTEXTILE SHALL BE UNDERLAIN OR OVERLAIN AND SIDE BOARDS WILL BE INSTALLED ALONG THE PERIMETER OF THE MAT. 7. INSTALL CULVERT PIPES AND HEADWALLS PER THE STORMWATER AND GRADING SHEETS AND SPECIFICATIONS WITHIN THIS PLAN SET. INFORM THE ENGINEER IF FIELD CONDITIONS DIFFER FROM THE PLANS TO AN EXTENT REQUIRING ANY MODIFICATIONS. 10. BRING PERMANENT CROSSING TO GRADE AND PROMPTLY STABILIZE ALL 3:1 SLOPES OR GREATER DOWN-SLOPE OF DISTURBANCE ACTIVITY. SEED/USE EROSION CONTROL BLANKETS SUCH AS NORTH AMERICAN GREEN S150, OR SIMILAR PRODUCT RATED FOR STEEP 11. ADJUST TEMPORARY DIVERSION DITCHES IN PROXIMITY AS NECESSARY TO MAINTAIN POSITIVE DRAINAGE TO SEDIMENT BASINS. 12. PROCEED WITH OTHER SITE IMPROVEMENTS PER THE PLANS AND PROCEED TO PHASE 2 EROSION CONTROL WHEN POSSIBLE.

GE FOR STREAM REQUIRED.

Check Dam with a Weir:	# 1	
С	0.3	
I	7.2 in/hr	
А	0.200 AC	
Q10	0.43 CFS	Q=C*I*A
Storage Required	720 CF	Volume = A*3600
Weir Length	0.49 FT	(Q cfs / 0.88)
Check Dam with a Weir:	# 2	
С	0.3	
1	7.2 in/hr	
А	0.220 AC	
Q10	0.48 CFS	Q=C*I*A
Storage Required	792 CF	Volume = A*3600
Weir Length	0.54 FT	(Q cfs / 0.88)
Check Dam with a Weir:	# 3	
С	0.3	
1	7.2 in/hr	
А	0.060 AC	
Q10	0.13 CFS	Q=C*I*A
Storage Required	216 CF	Volume = A*3600
Weir Length	0.15 FT	(Q cfs / 0.88)
Check Dam with a Weir:	# 4	
С	0.3	
1	7.2 in/hr	
А	0.090 AC	
Q10	0.19 CFS	Q=C*I*A
Storage Required	324 CF	Volume = A*3600
Weir Length	0.22 FT	(Q cfs / 0.88)

GENERAL NOTES

PERMIT NO. NCG010000.

INSTALLATION OF EROSION CONTROL.

PEDESTRIAN TRAFFIC AREAS.

13. STOCKPILE HEIGHT SHALL NOT EXCEED 35'.

1. THE GRADING CONTRACTOR SHALL COMPLY WITH ALL STATE AND LOCAL CODES IN OBSERVING

CLEARING AND GRADING WASTE MATERIALS GENERATED DURING THIS PHASE OF WORK AND

FOR OBTAINING ALL APPLICABLE PERMITS FOR OFF-SITE STOCKPILES AND/OR WASTE AREAS.

RESERVES THE RIGHT TO REQUIRE THAT A WASH STATION BE INSTALLED AT NO ADDITIONAL

STORMWATER UNDER THE NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)

6. A PRECONSTRUCTION MEETING MUST BE SCHEDULED PRIOR TO WORK, GRADING PERMIT AND

8. ALL TEMPORARY MEASURES SHALL BE REMOVED AT THE END OF THE CONSTRUCTION OF

12. THERE SHALL BE NO SOIL DISTURBANCE OR RECOMPACTION WITHIN AREAS DESIGNATED FOR

THE TREE PRESERVATION AND PROTECTION FENCING. INCLUDING NO STOCKPILING OF

9. CUT AND FILL SLOPES SHALL BE STABILIZED AS REQUIRED BY THE GENERAL PERMIT

10. SILT FENCING SHALL BE INSTALLED AROUND THE PERIMETER SEPARATING EXISTING

4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CLEANING ANY TRACKED SOIL FROM ALL

ADJACENT ROADWAYS THAT ARE IMPACTED BY CONSTRUCTION TRAFFIC. THE OWNER

5. CONTRACTOR SHALL ABIDE BY ALL CONDITIONS OF THE GENERAL PERMIT TO DISCHARGE

2. THE GRADING CONTRACTOR SHALL MAINTAIN ALL EROSION CONTROL DEVICES AFTER EACH

RAINFALL EVENT OR AS DIRECTED BY LOCAL AUTHORITIES OR THE ARCHITECT.

3. THE GRADING CONTRACTOR SHALL BE RESPONSIBLE FOR OFF-SITE DISPOSAL OF ALL

EROSION CONTROL MEASURES BOTH ON AND OFF-SITE.

COST IF PAVEMENT AREAS ARE NOT KEPT CLEAN.

7. UTILITY LOCATIONS ARE TO BE FOUND BY CALLING NC ONE CALL.

CONSTRUCTION OR OTHER MATERIAL, TRAFFIC, OR BORING SAMPLE.

STABILIZATION REQUIREMENTS FOUND ON THIS SHEET.

11. ALL CUT AND FILL SLOPES ARE TO BE AT A 3:1 MAXIMUM.

Check Dam with a Weir:	# 1	
C	0.3	
1	7.2 in/hr	
А	0.200 AC	
Q10	0.43 CFS	Q=C*I*A
Storage Required	720 CF	Volume = A*3600
Weir Length	0.49 FT	(Q cfs / 0.88)
Check Dam with a Weir:	# 2	
С	0.3	
I	7.2 in/hr	
А	0.220 AC	
Q10	0.48 CFS	Q=C*I*A
Storage Required	792 CF	Volume = A*3600
Weir Length	0.54 FT	(Q cfs / 0.88)
Check Dam with a Weir:	# 3	
С	0.3	
1	7.2 in/hr	
Α	0.060 AC	
Q10	0.13 CFS	Q=C*I*A
Storage Required	216 CF	Volume = A*3600
Weir Length	0.15 FT	(Q cfs / 0.88)
Check Dam with a Weir:	# 4	
С	0.3	
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Α	0.090 AC	
Q10	0.19 CFS	Q=C*I*A
Storage Required	324 CF	Volume = A*3600
Weir Length	0.22 FT	(Q cfs / 0.88)
NOTE: 1. CHECK DAMS WITH A CROSSINGS AS NEED!	_	

ERC	SION CONTROL PLAN-STAGE 1 KEYNOTES
NUMBER	DESCRIPTION
EC101	LIMITS OF DISTURBANCE
EC102	SILT FENCE; REFER TO DETAIL (TYP).
EC103	SILT FENCE OUTLET; REFERT TO DETAIL (TYP).
EC104	TEMPORARY 25' x 100' CONSTRUCTION ENTRANCE; REFER TO DETAIL
EC105	SILT-TREE COMBINATION FENCE. REFER TO DETAIL (TYP.)
EC106	TREE FENCE. REFER TO DETAIL (TYP.)
EC107	PERMANENT RISER WITH TEMPORARY SKIMMER BASIN #1 EMBANKMENT, RISER AND OUTFALL TO BE CONSTRUCTED AS PERMANENT PER SCM DETAILS ON SHEET C8.0 (REFER TO BASIN SUMMARY ON SHEET C4.01)
EC108	PERMANENT RISER WITH TEMPORARY SKIMMER BASIN #2 EMBANKMENT, RISER AND OUTFALL TO BE CONSTRUCTED AS PERMANENT PER SCM DETAILS ON SHEET C8.1 (REFER TO BASIN SUMMARY ON SHEET C4.01)
EC109	TEMPORARY SKIMMER BASÍN #3 (REFER TO BASIN SUMMARY ON SHEET C4.01)
EC110	PERMANENT RISER WITH TEMPORARY SKIMMER BASIN #4 EMBANKMENT, RISER AND OUTFALL TO BE CONSTRUCTED AS PERMANENT PER SCM DETAILS ON SHEET C8.3 (REFER TO BASIN SUMMARY ON SHEET C4.01)
EC111	PERMANENT RISER WITH TEMPORARY SKIMMER BASIN #5 EMBANKMENT, RISER AND OUTFALL TO BE CONSTRUCTED AS PERMANENT PER SCM DETAILS ON SHEET C8.4 (REFER TO BASIN SUMMARY ON SHEET C4.01)
EC112	TEMPORARY SKIMMER BASIN #6 (REFER TO BASIN SUMMARY ON SHEET C4.01)
EC113	TEMPORARY SKIMMER BASIN #7 (REFER TO BASIN SUMMARY ON SHEET C4.01)
EC114	TEMPORARY SKIMMER BASIN #8 (REFER TO BASIN SUMMARY ON SHEET C4.01)
EC115	TEMPORARY SKIMMER BASIN #9 (REFER TO BASIN SUMMARY ON SHEET C4.01)
EC116	SPILLWAY-REFER TO BASIN SUMMARY ON SHEET C4.01 (TYP.)
EC117	TEMP. DIVERSION DITCH #1A (REFER TO C4.01)
EC118	TEMP. DIVERSION DITCH #1B (REFER TO C4.01)
EC119	TEMP. DIVERSION DITCH #2A (REFER TO C4.01)
EC120	TEMP. DIVERSION DITCH #2B (REFER TO C4.01)
EC121	TEMP. DIVERSION DITCH #3A (REFER TO C4.01)
EC122	TEMP. DIVERSION DITCH #3B (REFER TO C4.01)
EC123	TEMP. DIVERSION DITCH #4A (REFER TO C4.01)
EC124	TEMP. DIVERSION DITCH #4B (REFER TO C4.01)
EC125	TEMP. DIVERSION DITCH #5A (REFER TO C4.01)
EC126	TEMP. DIVERSION DITCH #5B (REFER TO C4.01)
EC127	TEMP. DIVERSION DITCH #6A (REFER TO C4.01)
EC128	TEMP. DIVERSION DITCH #6B (REFER TO C4.01)
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EC130	TEMP. DIVERSION DITCH #7B (REFER TO C4.01)

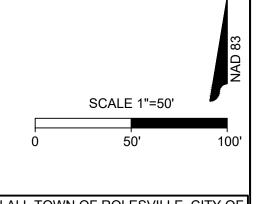
EC131 TEMP. DIVERSION DITCH #8A (REFER TO C4.01) TEMP. DIVERSION DITCH #8B (REFER TO C4.01) EC133 TEMP. DIVERSION DITCH #9A (REFER TO C4.01) TEMP. DIVERSION DITCH #9B (REFER TO C4.01) ROCK CHECK DAM REFER TO DETAIL (TYP.) EC135 EC136 POROUS BAFFLES (TYP.) EC137 SILT BAG AND SILT BAG PAD IMPERMEABLE MEMBRANE APRON EC138 EC139 3:1 SIDE SLOPE EC140 STOCKPILE AREA CONCRETE WASHOUT TEMPORARY CLASS 3 18" RCP PIPE FOR DITCH CROSSING TEMPORARY HORSESHOE INLET PROTECTION PIPE OUTFALL PROTECTION. (REFER TO C4.01) DIVERSION DITCH OUTLET PROTECTION (REFER TO C4.01 AND STORM PLAN FOR DETAILS) TEMPORARY PIPE FOR OUTFALL CROSSING EC146 ROCK CHECK DAM WITH WEIR (REFER TO DETAIL) EC148 TIMBER MAT SILT FENCE OUTLET WITH J HOOKS (TYP. AT STREAM CROSSINGS)

TEMPORARY STOCKPILE NOTES

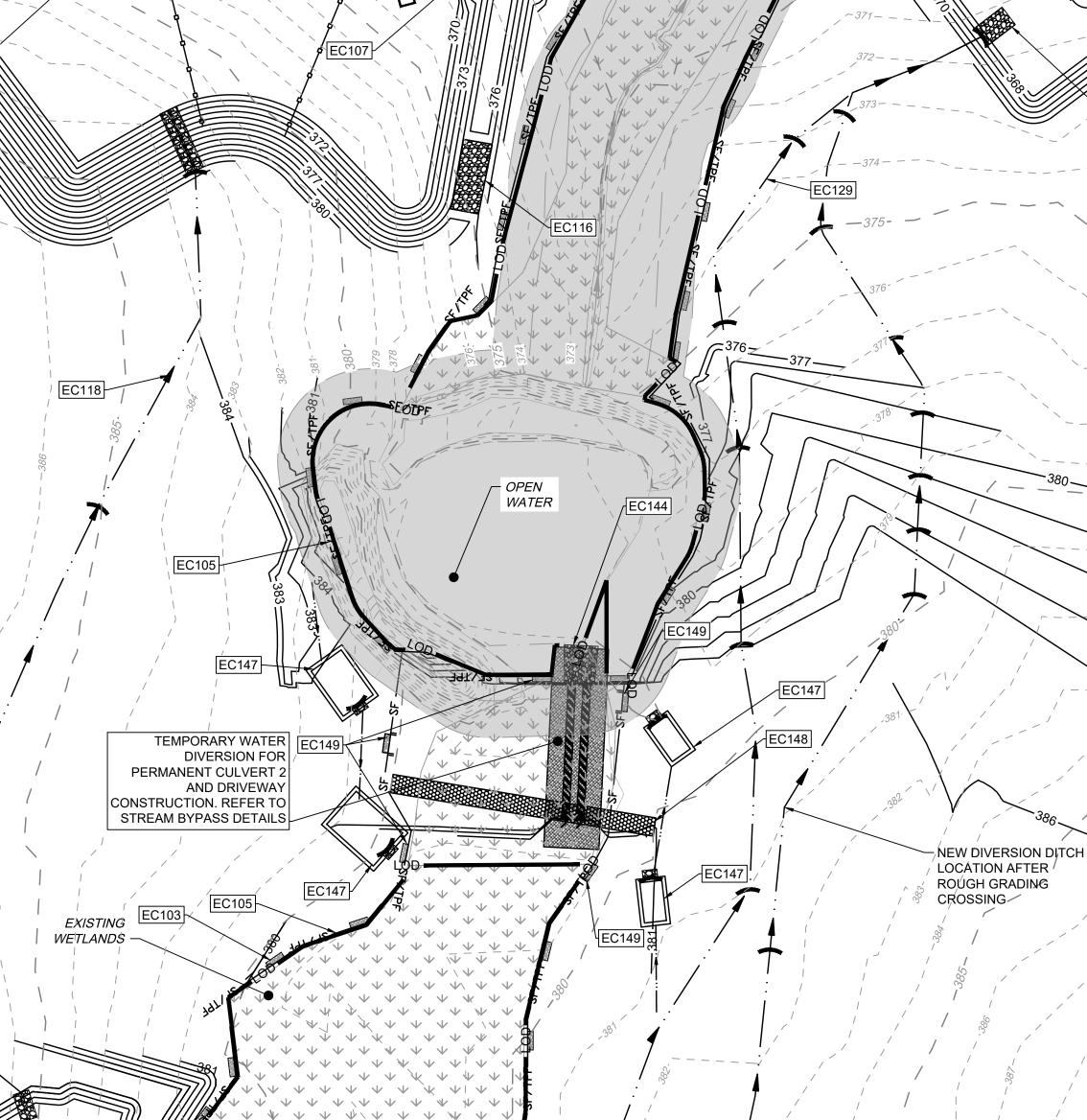
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- 5. ESTABLISH AND MAINTAIN A VEGETATIVE BUFFER AT THE TOE OF THE SLOPE (WHERE PRACTICAL).

MAINTENANCE PLAN:

- 1. ALL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE CHECKED FOR STABILITY AND OPERATION FOLLOWING EVERY RUNOFF-PRODUCING RAINFALL BUT IN NO CASE LESS THAN ONCE EVERY WEEK. ANY NEEDED REPAIRS SHALL BE MADE IMMEDIATELY TO MAINTAIN ALL MEASURES AS DESIGNED.
- 2. REMOVE SEDIMENT FROM BEHIND SILT FENCE WHEN DEPTH REACHES 6 INCHES AT THE FENCE. REPAIR SILT FENCE AS NECESSARY TO MAINTAIN A
- 3. ALL SEEDED AREAS SHALL BE FERTILIZED, RE--SEEDED AS NECESSARY, AND MULCHED ACCORDING TO PROJECT SPECS TO MAINTAIN A VIGOROUS, DENSE VEGETATIVE GROWTH.
- 4. TOP DRESS CONSTRUCTION ENTRANCES WITH CLEAN STONE AS
- NECESSARY TO MAINTAIN PROPER FUNCTIONING.
- 5. REFER TO SPECIFIC DEVICE DETAILS FOR ADDITIONAL MAINTENANCE
- REQUIREMENTS.



ALL CONSTRUCTION TO BE IN ACCORDANCE WITH ALL TOWN OF ROLESVILLE, CITY OF RALEIGH, NCDEQ AND NCDOT STANDARDS, SPECIFICATIONS, AND DETAILS



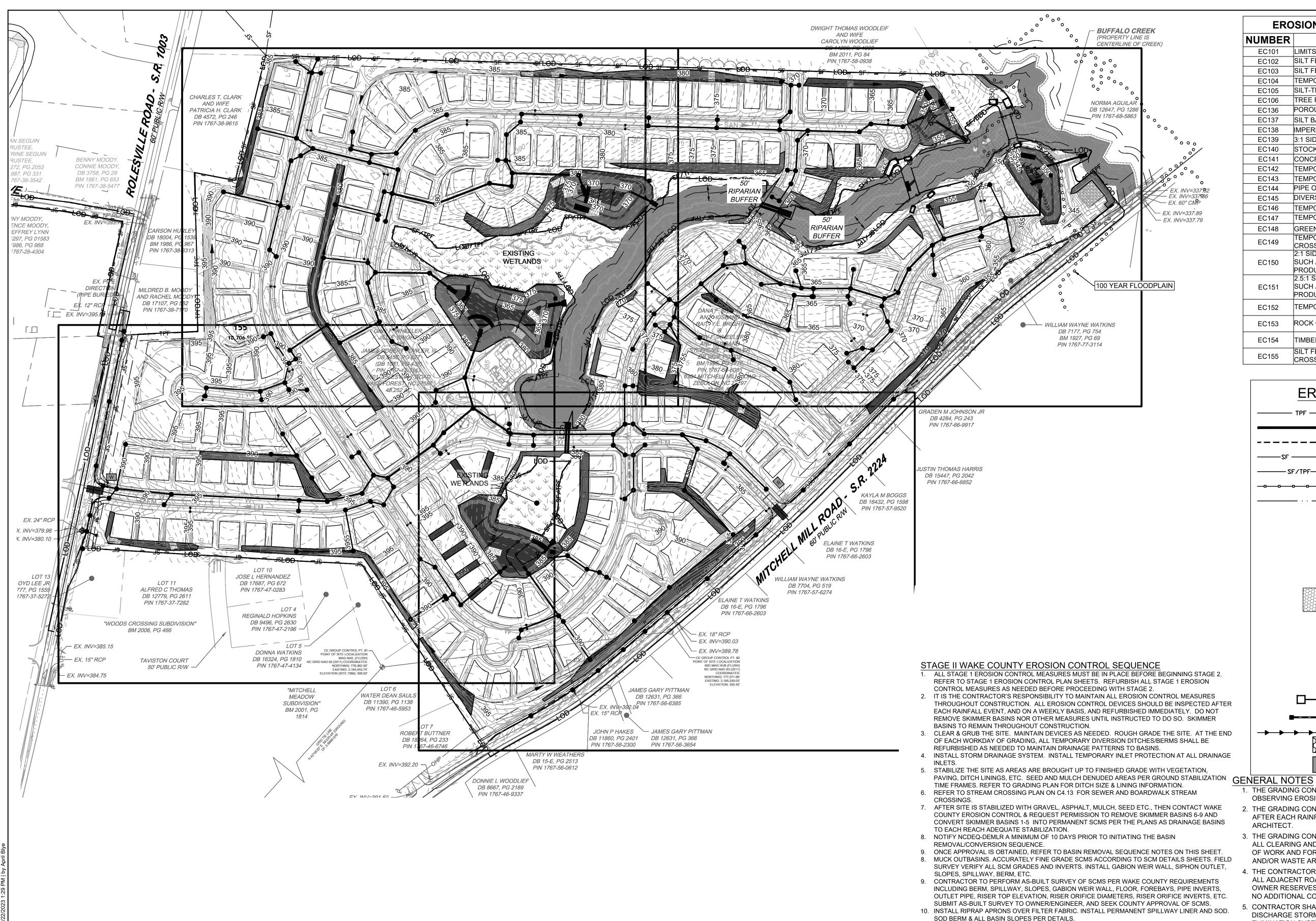
JOB NO. SHEET NO.

09/17/2021 DRAWN BY R. WINGATE

DESIGNED BY P. BARBEAU CHECKED BY

P. BARBEAU

AS SHOWN



ATTENTION CONTRACTORS

The **Construction Contractor** responsible for the extension of water, sewer, and/or reuse, as approved in these plans, is responsible for *contacting* the *Public* Utilities Department at (919) 996-4540 at least twenty four hours prior to beginning any of their construction.

Failure to notify both City Departments in advance of beginning construction, will result in the issuance of *monetary fines*, and require reinstallation of any water or sewer facilities not inspected as a result of this notification failure.

Failure to call for Inspection, Install a Downstream *Plug*, have *Permitted Plans* on the *Jobsite*, or any other Violation of City of Raleigh Standards will result in a *Fine and Possible Exclusion* from future work in the City of Raleigh.

NPDES GROUND STABILIZATION

SOIL STABILIZATION SHALL BE ACHIEVED ON ANY AREA OF A SITE WHERE LAND-DISTURBING ACTIVITIES HAVE TEMPORARILY OR PERMANENTLY CEASED ACCORDING TO THE FOLLOWING SCHEDULE:

- 1. ALL PERIMETER DIKES, SWALES, DITCHES, PERIMETER SLOPES AND SLOPES STEEPER THAN 3:1 SHALL BE PROVIDED TEMPORARY OR PERMANENT STABILIZATION WITH GROUND COVER AS SOON AS PRACTICABLE, BUT WITHIN ANY EVENT WITHIN 7 CALENDAR DAYS FROM THE LAST LAND-DISTURBING ACTIVITY.
- 2. ALL OTHER DISTURBED AREAS SHALL BE PROVIDED TEMPORARY OR PERMANENT STABILIZATION WITH GROUND COVER AS SOON AS PRACTICABLE, BUT IN ANY EVENT WITHIN 14 CALENDAR DAYS FROM THE LAST LAND-DISTURBING ACTIVITY.

Required Wake County Basin Removal Sequence

removed. Install silt fencing or other temporary erosion control measures as needed prior to removal of the basin.

- extended, perform this operation at this time. Fine grade area in preparation for seeding.
- 3. Perform seedbed preparation, seed, mulch and asphalt tack any resulting bare areas
- 4. Install velocity dissipators and/or level spreaders as required on the Erosion Control Plan.
- Environmental Consultant to determine when a basin may be converted for stormwater use. Some municipalities may also require this.

.. Schedule a site meeting with the Environmental Consultant to determine if a basin can be

- 2. Remove Basin(s) and associated temporary diversion ditches. If culvert pipes need to be
- . When site is fully stabilized, call Environmental Consultant for approval of removing remaining temporary erosion control measures and advice on when site can be issued a Certificate of Completion. Note: A meeting should also be scheduled with the

11. REMOVE TEMPORARY SKIMMER. CLOSE RISER DRAIN. UNPLUG ALL RISER ORIFICES 12. CONTACT ENGINEER TO REQUEST FINAL POND INSPECTION & PE CERTIFICATION OF POND. 13. WHEN CONSTRUCTION IS COMPLETE AND ALL AREAS ARE STABILIZED COMPLETELY, CALL 919.796.8769 FOR AN ONSITE INSPECTION WITH THE WAKE COUNTY WATERSHED MANAGER. 14. IF SITE IS APPROVED, THEN REMOVE TEMPORARY EROSION CONTROL MEASURES INCLUDING TEMPORARY DIVERSIONS, SILT FENCE, SKIMMER BASINS, ETC. AND SEED OUT OR STABILIZE ANY RESULTING BARE AREAS. ALL REMAINING PERMANENT EROSION CONTROL DEVICES, SUCH AS RIPRAP APRONS OVER FILTER FABRIC SHOULD NOW BE INSTALLED. 5. WHEN VEGETATION HAS BECOME ESTABLISHED, CALL FOR A FINAL SITE INSPECTION BY THE WAKE COUNTY ENVIRONMENTAL CONSULTANT KARYN PAGEAU, 919-796-8769. OBTAIN A CERTIFICATE OF COMPLETION.

MAINTENANCE PLAN:

REQUIREMENTS.

1. ALL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE CHECKED FOR STABILITY AND OPERATION FOLLOWING EVERY RUNOFF-PRODUCING RAINFALL BUT IN NO CASE LESS THAN ONCE EVERY WEEK. ANY NEEDED REPAIRS SHALL BE MADE IMMEDIATELY TO MAINTAIN ALL MEASURES AS DESIGNED

2. REMOVE SEDIMENT FROM BEHIND SILT FENCE WHEN DEPTH REACHES 6 INCHES AT THE FENCE. REPAIR SILT FENCE AS NECESSARY TO MAINTAIN A BARRIER. 3. ALL SEEDED AREAS SHALL BE FERTILIZED, RE--SEEDED AS NECESSARY, AND

MULCHED ACCORDING TO PROJECT SPECS TO MAINTAIN A VIGOROUS, DENSE VEGETATIVE GROWTH. 4. TOP DRESS CONSTRUCTION ENTRANCES WITH CLEAN STONE AS NECESSARY TO MAINTAIN PROPER FUNCTIONING.

5. REFER TO SPECIFIC DEVICE DETAILS FOR ADDITIONAL MAINTENANCE SCALE 1"=150"

ERO	SION CONTROL PLAN-STAGE 2 KEYNOTES		
/BER	DESCRIPTION	RTH CAR	The state of the s
C101	LIMITS OF DISTURBANCE	SESSIV	
C102	SILT FENCE; REFER TO DETAIL (TYP).		700
C103	SILT FENCE OUTLET; REFERT TO DETAIL (TYP).		()Kå₫
C104	TEMPORARY 25' x 100' CONSTRUCTION ENTRANCE; REFER TO DETAIL		5 8 0 4
2105	SILT-TREE COMBINATION FENCE. REFER TO DETAIL (TYP.)	000000000 I NE	SO RELIE
2106	TREE FENCE. REFER TO DETAIL (TYP.)	11/1/1/1	BARRIE
2136	POROUS BAFFLES (TYP.)		01/02/
C137	SILT BAG AND SILT BAG PAD	_	
C138	IMPERMEABLE MEMBRANE APRON		
2139	3:1 SIDE SLOPE	ا ج	
C140	STOCKPILE AREA	, <u>8</u>	
C141	CONCRETE WASHOUT	27607 Imons.	
C142	TEMPORARY CLASS 3 18" RCP PIPE FOR DITCH CROSSING	AT THE sigh, NC 27607 www.timmons.com	
C143	TEMPORARY HORSESHOE INLET PROTECTION	XED AT THE ICE Raleigh, NC :	ည
C144	PIPE OUTFALL PROTECTION. (REFER TO C4.1)	T T T digh,	
C145	DIVERSION DITCH OUTLET PROTECTION (C3.0 FOR DITCH CHARTS)	- Ψ΄	
C146	TEMPORARY PIPE FOR OUTFALL CROSSING		Y COMMENT SUBMITTAL
C147	TEMPORARY STORM INLET PROTECTION; REFER TO DETAIL (TYP.)	OF 33.8	3 > s S - s
C148	GREENWAY BOARDWALK BRIDGE.	G PF GH 1 GH 1 GH 1 GH 1	길림님
C149	TEMPORARY STREAM BYPASS AND TIMBER MATTING FOR SEWER	WING PREPA ALEIGH OFF Suite 102 X 919,833.8	COUNT

09/17/2021

DRAWN BY

A. BROWN

DESIGNED BY

P. BARBEAU

CHECKED BY

P. BARBEAU

AS SHOWN

EROSION CONTROL LEGEND — TPF — TREE PROTECTION FENCE LIMITS OF DISTURBANCE **----** STOCKPILE AREA ——SF ——SF —— SILT FENCE SILT/TREE PROTECTION COMBINATION FENCE - - - - - - - - - - - - - - - - - P POROUS BAFFLE TEMPORARY DIVERSION DITCH SILT BAG AND PAD SILT FENCE STONE OUTLET SILT FENCE STONE OUTLET W/J HOOKS **EMERGENCY SPILLWAY / RIP RAP** APRON CHECK DAM WITH A WEIR **CHECK DAM CONSTRUCTION ENTRANCE** TEMPORARY INLET PROTECTION TEMPORARY DOUBLE INLET PROTECTION CONCRETE WASHOUT WATTLE HORSESHOE INLET PROTECTION SKIMMER TEMPORARY SLOPE DRAIN (TSD) TEMPORARY DIVERSION BERM TEMPORARY TIMBER MAT ROLLED EROSION CONTROL FABRIC

NUMBER

EC140

EC141

EC154

EC155

EC101 LIMITS OF DISTURBANCE

EC102 SILT FENCE; REFER TO DETAIL (TYP).

PRODUCT FOR STEEP SLOPES).

PRODUCT FOR STEEP SLOPES).

CROSSINGS)

CROSSING; REFER TO DETAIL (TYP.)

SUCH AS NORTH AMERICAN GREEN \$150, OR SIMILARLY RATED

SUCH AS NORTH AMERICAN GREEN S150, OR SIMILARLY RATED

EMPORARY INLET PROTECTION; REFER TO DETAIL (TYP.)

ILT FENCE STONE OUTLET WITH J HOOKS (TYP. AT STREAM

ROCK CHECK DAM WITH WEIR (REFER TO DETAIL)

1 SIDE SLOPE (SOD/STABILIZE WITH EROSION CONTROL BLANKETS

2.5:1 SIDE SLOPE (SOD/STABILIZE WITH EROSION CONTROL BLANKETS

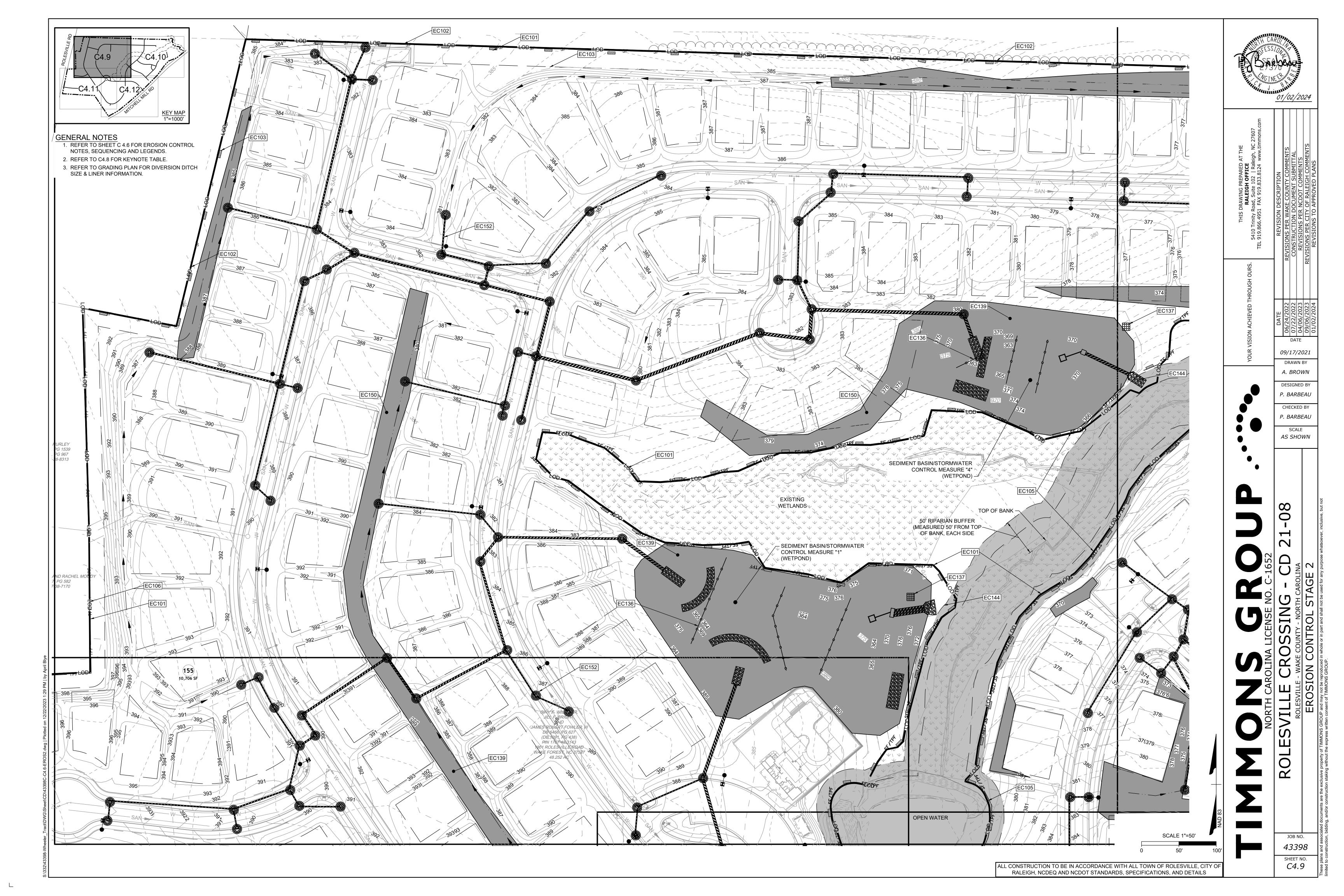
1. THE GRADING CONTRACTOR SHALL COMPLY WITH ALL STATE AND LOCAL CODES IN

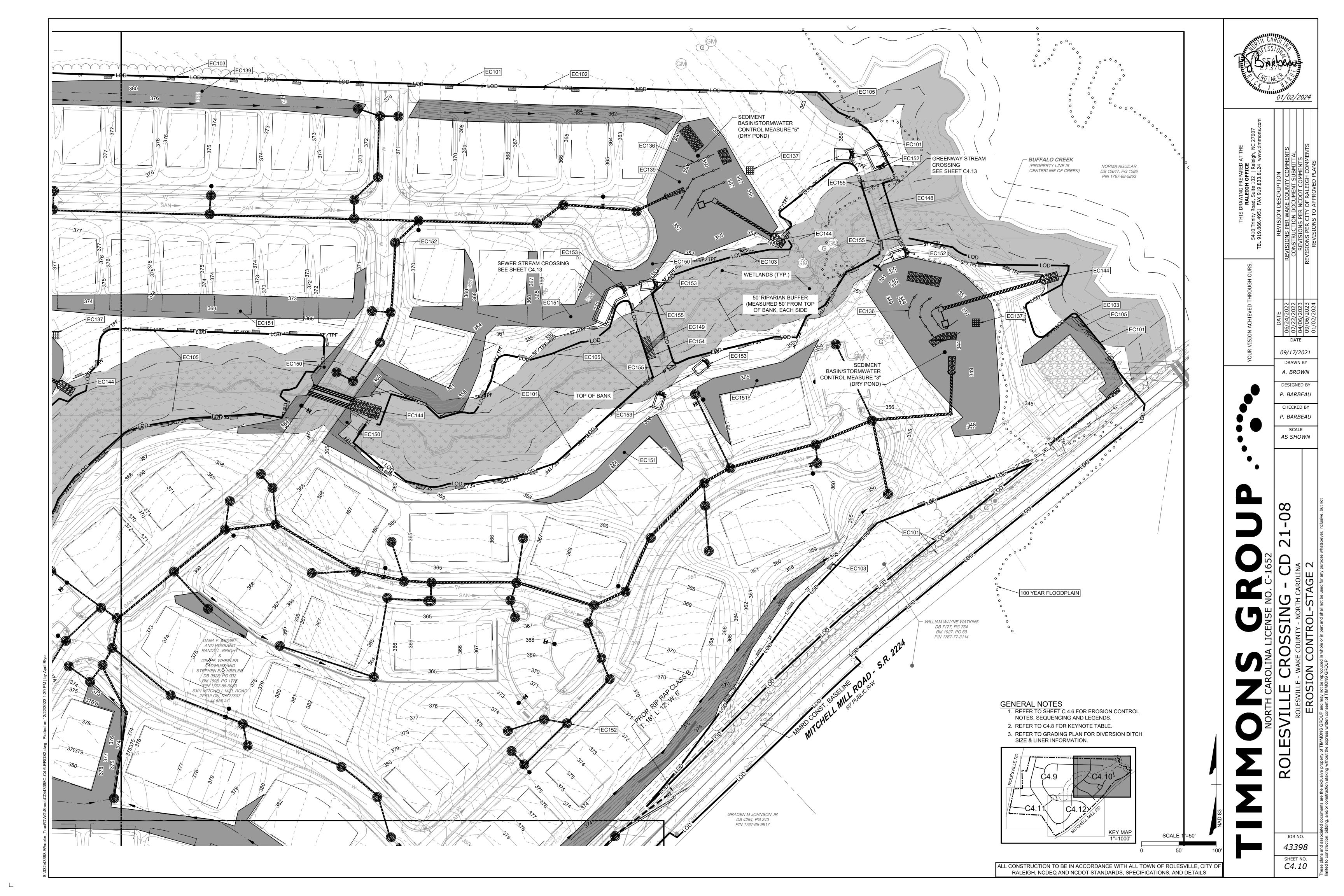
- OBSERVING EROSION CONTROL MEASURES BOTH ON AND OFF-SITE. . THE GRADING CONTRACTOR SHALL MAINTAIN ALL EROSION CONTROL DEVICES AFTER EACH RAINFALL EVENT OR AS DIRECTED BY LOCAL AUTHORITIES OR THE
- 3. THE GRADING CONTRACTOR SHALL BE RESPONSIBLE FOR OFF-SITE DISPOSAL OF ALL CLEARING AND GRADING WASTE MATERIALS GENERATED DURING THIS PHASE OF WORK AND FOR OBTAINING ALL APPLICABLE PERMITS FOR OFF-SITE STOCKPILES
- AND/OR WASTE AREAS. 4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CLEANING ANY TRACKED SOIL FROM ALL ADJACENT ROADWAYS THAT ARE IMPACTED BY CONSTRUCTION TRAFFIC. THE OWNER RESERVES THE RIGHT TO REQUIRE THAT A WASH STATION BE INSTALLED AT
- NO ADDITIONAL COST IF PAVEMENT AREAS ARE NOT KEPT CLEAN. CONTRACTOR SHALL ABIDE BY ALL CONDITIONS OF THE GENERAL PERMIT TO DISCHARGE STORMWATER UNDER THE NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT NO. NCG010000.
- 6. A PRECONSTRUCTION MEETING MUST BE SCHEDULED PRIOR TO WORK, GRADING
- PERMIT AND INSTALLATION OF EROSION CONTROL.
- 7. UTILITY LOCATIONS ARE TO BE FOUND BY CALLING NC ONE CALL.
- 8. ALL TEMPORARY MEASURES SHALL BE REMOVED AT THE END OF THE
- CONSTRUCTION OF THE PROJECT.
- 9. CUT AND FILL SLOPES SHALL BE STABILIZED AS REQUIRED BY THE GENERAL PERMIT STABILIZATION REQUIREMENTS FOUND ON THIS SHEET.
- 10. SILT FENCING SHALL BE INSTALLED AROUND THE PERIMETER SEPARATING EXISTING PEDESTRIAN TRAFFIC AREAS.
- 11. ALL CUT AND FILL SLOPES ARE TO BE AT A 3:1 MAXIMUM UNLESS OTHERWISE NOTED. 12. THERE SHALL BE NO SOIL DISTURBANCE OR RECOMPACTION WITHIN AREAS DESIGNATED FOR THE TREE PRESERVATION AND PROTECTION FENCING. INCLUDING NO STOCKPILING OF CONSTRUCTION OR OTHER MATERIAL, TRAFFIC, OR BORING
- SAMPLE. 13. STOCKPILE HEIGHT SHALL NOT EXCEED 35'.
- 14.FOR UTILITY STREAM CROSSING, DISTURB ONLY THE AREA REQUIRED FOR INSTALLATION. CONSTRUCTION FOR CROSSING TO ONLY BEGIN ONCE ALL NECESSARY MATERIALS ARE ON SITE AND CONDITIONS ARE IN A DRY WEATHER PATTERN OF 3-5 DAYS.

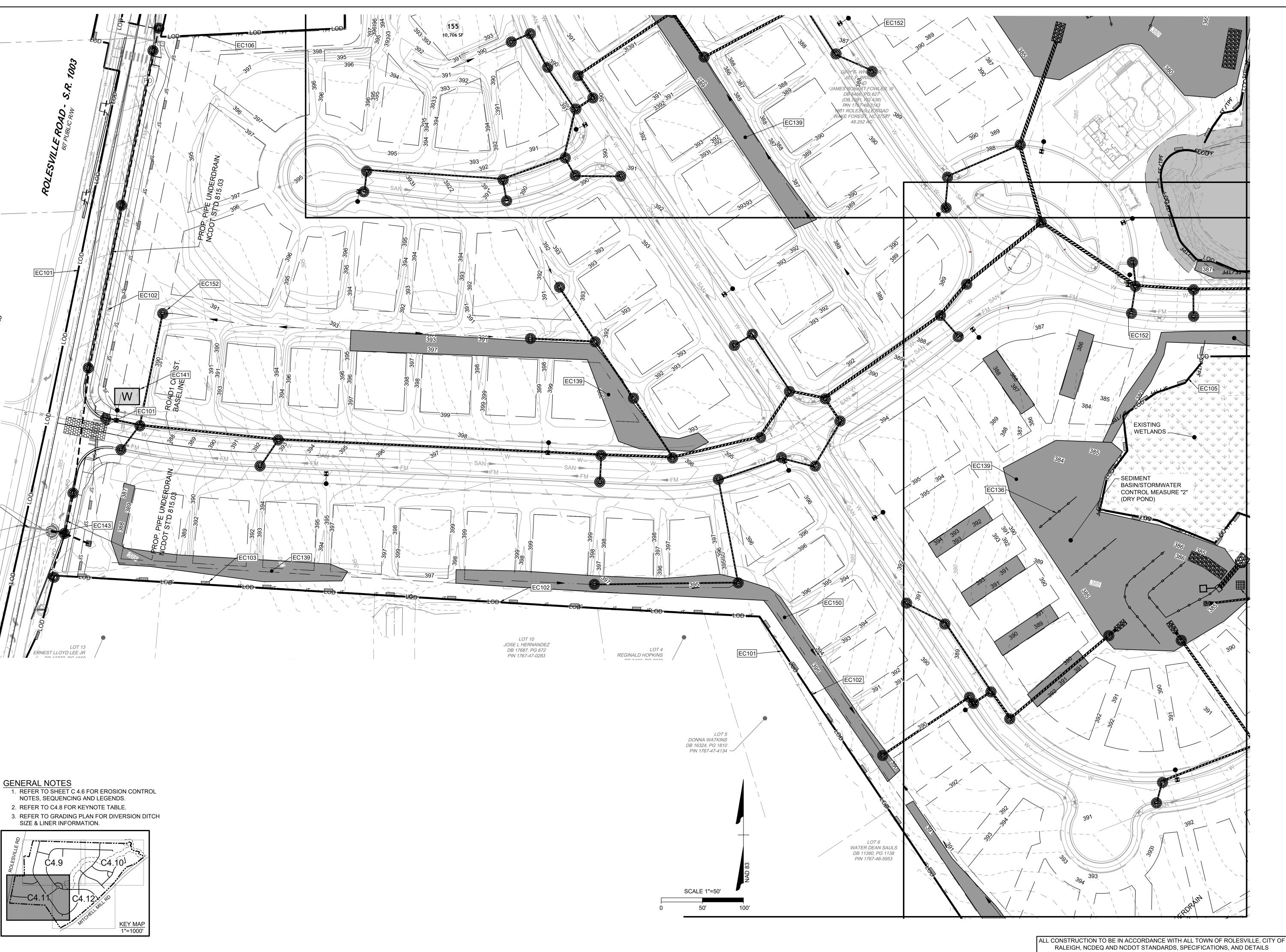
ALL CONSTRUCTION TO BE IN ACCORDANCE WITH ALL TOWN OF ROLESVILLE, CITY OF RALEIGH, NCDEQ AND NCDOT STANDARDS, SPECIFICATIONS, AND DETAILS

JOB NO. 43398 SHEET NO. C4.8

—C4.1







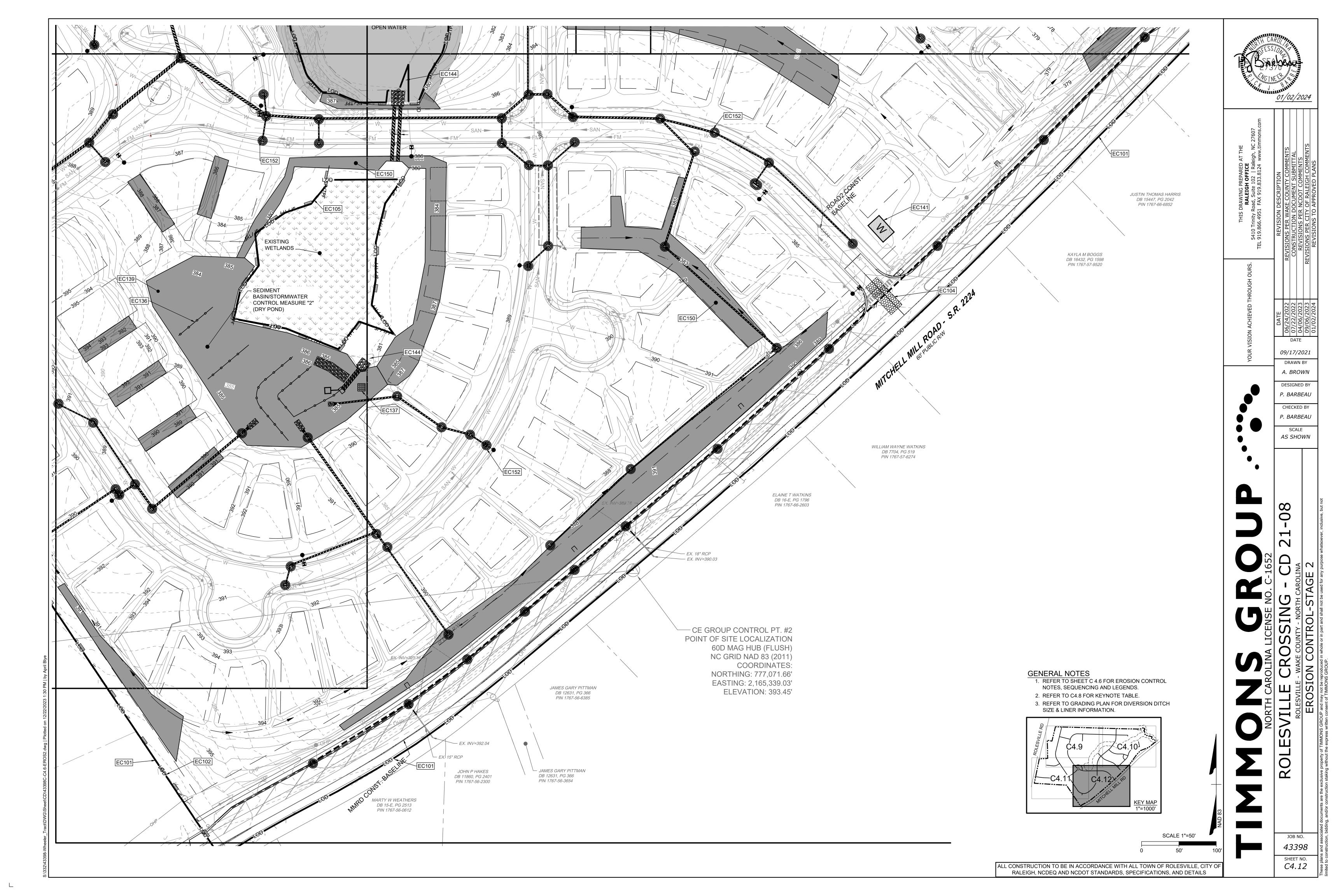
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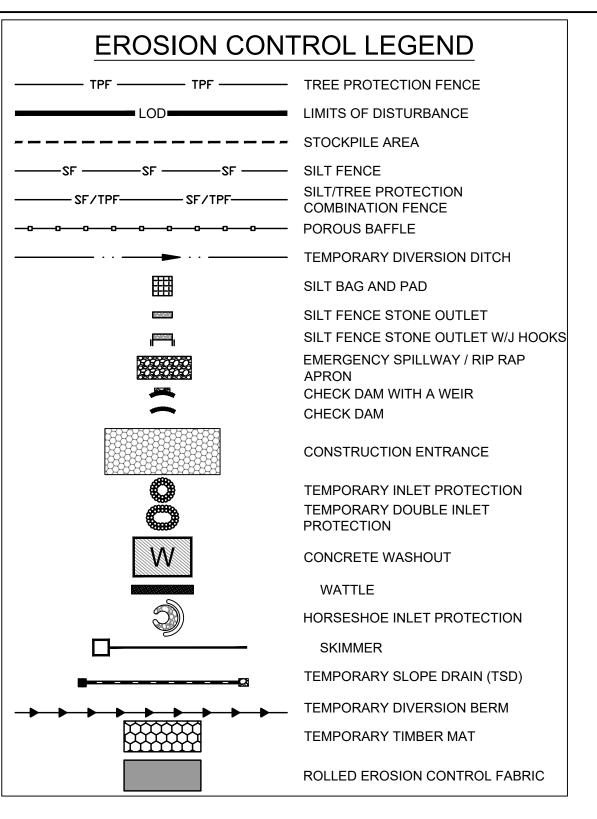
DRAWN BY A. BROWN DESIGNED BY P. BARBEAU

CHECKED BY P. BARBEAU

AS SHOWN

JOB NO. SHEET NO. C4.11

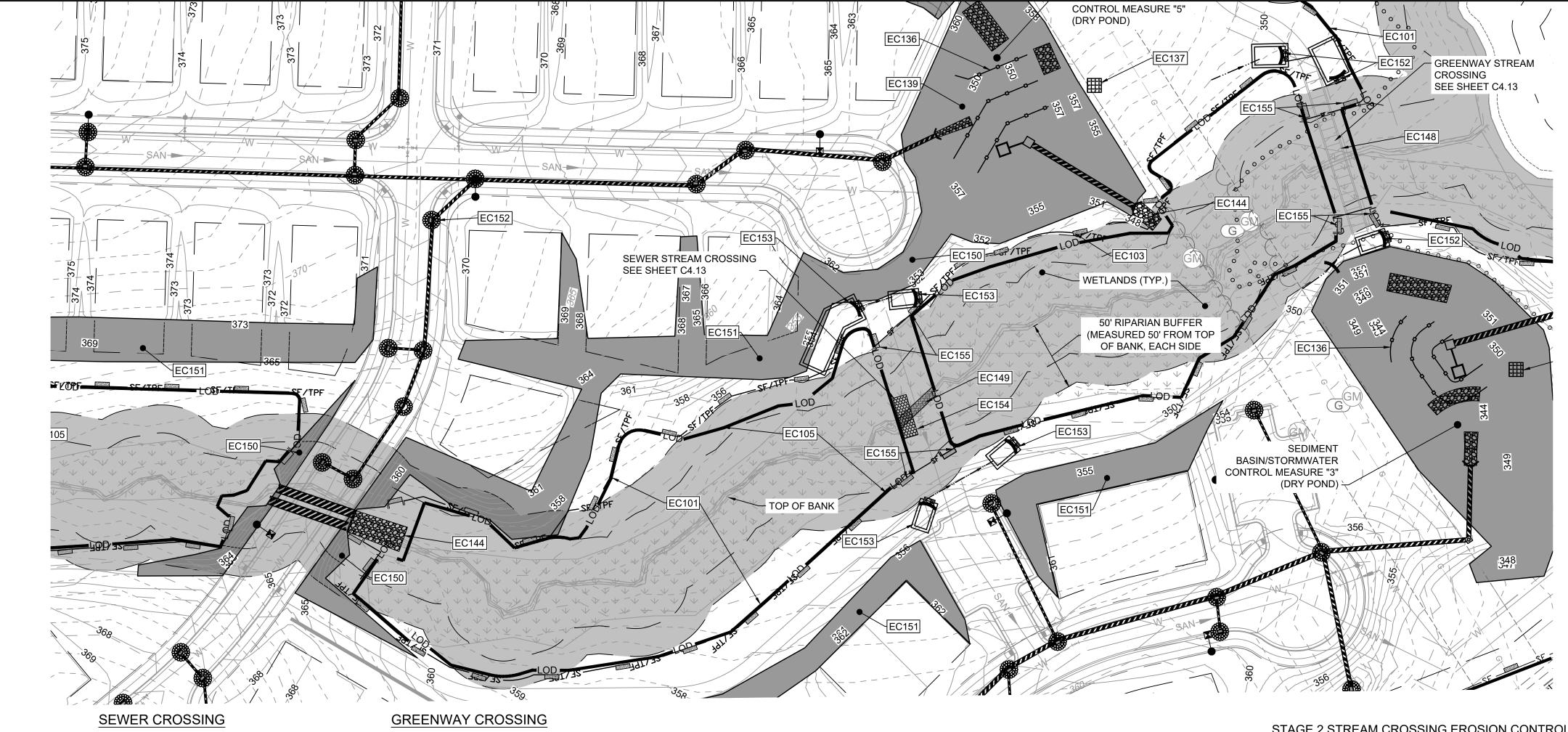




ERC	SION CONTROL PLAN-STAGE 2 KEYNOTES
NUMBER	DESCRIPTION
EC101	LIMITS OF DISTURBANCE
EC102	SILT FENCE; REFER TO DETAIL (TYP).
EC103	SILT FENCE OUTLET; REFERT TO DETAIL (TYP).
EC104	TEMPORARY 25' x 100' CONSTRUCTION ENTRANCE; REFER TO DETAIL
EC105	SILT-TREE COMBINATION FENCE. REFER TO DETAIL (TYP.)
EC106	TREE FENCE. REFER TO DETAIL (TYP.)
EC136	POROUS BAFFLES (TYP.)
EC137	SILT BAG AND SILT BAG PAD
EC138	IMPERMEABLE MEMBRANE APRON
EC139	3:1 SIDE SLOPE
EC140	STOCKPILE AREA
EC141	CONCRETE WASHOUT
EC142	TEMPORARY CLASS 3 18" RCP PIPE FOR DITCH CROSSING
EC143	TEMPORARY HORSESHOE INLET PROTECTION
EC144	PIPE OUTFALL PROTECTION. (REFER TO C4.1)
EC145	DIVERSION DITCH OUTLET PROTECTION (C3.0 FOR DITCH CHARTS)
EC146	TEMPORARY PIPE FOR OUTFALL CROSSING
EC147	TEMPORARY STORM INLET PROTECTION; REFER TO DETAIL (TYP.)
EC148	GREENWAY BOARDWALK BRIDGE.
EC149	TEMPORARY STREAM BYPASS AND TIMBER MATTING FOR SEWER CROSSING; REFER TO DETAIL (TYP.)
EC150	2:1 SIDE SLOPE (SOD/STABILIZE WITH EROSION CONTROL BLANKETS SUCH AS NORTH AMERICAN GREEN S150, OR SIMILARLY RATED PRODUCT FOR STEEP SLOPES).
EC151	2.5:1 SIDE SLOPE (SOD/STABILIZE WITH EROSION CONTROL BLANKETS SUCH AS NORTH AMERICAN GREEN S150, OR SIMILARLY RATED PRODUCT FOR STEEP SLOPES).
EC152	TEMPORARY INLET PROTECTION; REFER TO DETAIL (TYP.)
EC153	ROCK CHECK DAM WITH WEIR (REFER TO DETAIL)
EC154	TIMBER MAT
EC155	SILT FENCE STONE OUTLET WITH J HOOKS (TYP. AT STREAM CROSSINGS)

GENERAL NOTES

- 1. THE GRADING CONTRACTOR SHALL COMPLY WITH ALL STATE AND LOCAL CODES IN OBSERVING EROSION CONTROL MEASURES BOTH ON AND OFF-SITE. 2. THE GRADING CONTRACTOR SHALL MAINTAIN ALL EROSION CONTROL DEVICES
- AFTER EACH RAINFALL EVENT OR AS DIRECTED BY LOCAL AUTHORITIES OR THE ARCHITECT. 3. THE GRADING CONTRACTOR SHALL BE RESPONSIBLE FOR OFF-SITE DISPOSAL OF
- ALL CLEARING AND GRADING WASTE MATERIALS GENERATED DURING THIS PHASE OF WORK AND FOR OBTAINING ALL APPLICABLE PERMITS FOR OFF-SITE STOCKPILES AND/OR WASTE AREAS. 4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CLEANING ANY TRACKED SOIL FROM ALL ADJACENT ROADWAYS THAT ARE IMPACTED BY CONSTRUCTION TRAFFIC. THE
- OWNER RESERVES THE RIGHT TO REQUIRE THAT A WASH STATION BE INSTALLED AT NO ADDITIONAL COST IF PAVEMENT AREAS ARE NOT KEPT CLEAN. 5. CONTRACTOR SHALL ABIDE BY ALL CONDITIONS OF THE GENERAL PERMIT TO DISCHARGE STORMWATER UNDER THE NATIONAL POLLUTANT DISCHARGE
- ELIMINATION SYSTEM (NPDES) PERMIT NO. NCG010000. 6. A PRECONSTRUCTION MEETING MUST BE SCHEDULED PRIOR TO WORK, GRADING
- PERMIT AND INSTALLATION OF EROSION CONTROL.
- 7. UTILITY LOCATIONS ARE TO BE FOUND BY CALLING NC ONE CALL. 8. ALL TEMPORARY MEASURES SHALL BE REMOVED AT THE END OF THE
- CONSTRUCTION OF THE PROJECT. 9. CUT AND FILL SLOPES SHALL BE STABILIZED AS REQUIRED BY THE GENERAL PERMIT
- STABILIZATION REQUIREMENTS FOUND ON THIS SHEET. 10. SILT FENCING SHALL BE INSTALLED AROUND THE PERIMETER SEPARATING EXISTING
- PEDESTRIAN TRAFFIC AREAS.
- 11. ALL CUT AND FILL SLOPES ARE TO BE AT A 3:1 MAXIMUM.
- 12. THERE SHALL BE NO SOIL DISTURBANCE OR RECOMPACTION WITHIN AREAS DESIGNATED FOR THE TREE PRESERVATION AND PROTECTION FENCING. INCLUDING NO STOCKPILING OF CONSTRUCTION OR OTHER MATERIAL, TRAFFIC, OR BORING
- 13. STOCKPILE HEIGHT SHALL NOT EXCEED 35'.



SEWE	R CROSSIN	<u>NG</u>	GREE	NWAY CRO	<u>)SSING</u>
theck Dam with a Weir:	# 1		Check Dam with a Weir:	# 1	-
С	0.3		С	0.3	
1	7.2 in/hr		I	7.2 in/hr	
А	0.030 AC		А	0.147 AC	
Q10	0.06 CFS	Q=C*I*A	Q10	0.32 CFS	Q=C*I*A
Storage Required	108 CF	Volume = A*3600	Storage Required	529.2 CF	Volume = A*3600
Weir Length	0.07 FT	(Q cfs / 0.88)	Weir Length	0.36 FT	(Q cfs / 0.88)
heck Dam with a Weir:	# 2		Check Dam with a Weir:	# 2	
С	0.3		С	0.3	
1	7.2 in/hr		1	7.2 in/hr	
А	0.284 AC		А	0.097 AC	
Q10	0.61 CFS	Q=C*I*A	Q10	0.21 CFS	Q=C*I*A
Storage Required	1022.4 CF	Volume = A*3600	Storage Required	349.2 CF	Volume = A*3600
Weir Length	0.70 FT	(Q cfs / 0.88)	Weir Length	0.24 FT	(Q cfs / 0.88)
heck Dam with a Weir:	# 3		Check Dam with a Weir:	# 3	
С	0.3		С	0.3	
1	7.2 in/hr		1	7.2 in/hr	
А	0.030 AC		А	0.050 AC	
Q10	0.06 CFS	Q=C*I*A	Q10	0.11 CFS	Q=C*I*A
Storage Required	108 CF	Volume = A*3600	Storage Required	180 CF	Volume = A*3600
Weir Length	0.07 FT	(Q cfs / 0.88)	Weir Length	0.12 FT	(Q cfs / 0.88)
heck Dam with a Weir:	# 4		NOTE		
С	0.3		NOTE: 1. CHECK DAMS WITH A	A WEID TO SERV	E AS SEDIMENT STO
	70: //		I. CHECK DAINS WITH	A WEIR IU SERV	E 43 SEDIMENT STO

CROSSINGS AS NEEDED. CHECK AND REMOVE SEDIMENT AS REQUIRED.

0.11 FT Weir Length NPDES GROUND STABILIZATION

ACCORDING TO THE FOLLOWING SCHEDULE:

7.2 in/hr

0.10 CFS Q=C*I*A

A 0.046 AC

Storage Required 165.6 CF

SOIL STABILIZATION SHALL BE ACHIEVED ON ANY AREA OF A SITE WHERE LAND-DISTURBING ACTIVITIES HAVE TEMPORARILY OR PERMANENTLY CEASED

Volume = A*3600

- 1. ALL PERIMETER DIKES, SWALES, DITCHES, PERIMETER SLOPES AND SLOPES STEEPER THAN 3:1 SHALL BE PROVIDED TEMPORARY OR PERMANENT STABILIZATION WITH GROUND COVER AS SOON AS PRACTICABLE, BUT WITHIN ANY EVENT WITHIN 7 CALENDAR DAYS FROM THE LAST LAND-DISTURBING ACTIVITY.
- 2. ALL OTHER DISTURBED AREAS SHALL BE PROVIDED TEMPORARY OR PERMANENT STABILIZATION WITH GROUND COVER AS SOON AS PRACTICABLE, BUT IN ANY EVENT WITHIN 14 CALENDAR DAYS FROM THE LAST LAND-DISTURBING ACTIVITY.

TEMPORARY STOCKPILE NOTES

- 1. STOCKPILE FOOTPRINTS SHALL BE SETBACK A MINIMUM OF 25' FROM ADJACENT PROPERTY LINES, WITH A MAXIMUM HEIGHT OF 35 FT WITH 2:1 OR FLATTER SLOPES.
- 2. SEEDING OR COVERING STOCKPILES WITH TARPS OR MULCH IS REQUIRED AND WILL REDUCE EROSION PROBLEMS. TARPS SHOULD BE KEYED IN AT THE TOP OF THE SLOPE TO KEEP WATER FROM RUNNING UNDERNEATH THE PLASTIC.
- 3. IF A STOCKPILE IS TO REMAIN FOR FUTURE USE AFTER THE PROJECT IS COMPLETE (BUILDERS, ETC.), THE FINANCIAL RESPONSIBLE PARTY MUST NOTIFY WAKE COUNTY OF A NEW RESPONSIBLE PARTY FOR THAT
- STOCKPILE. 4. THE APPROVED PLAN SHALL PROVIDE FOR THE USE OF STAGED SEEDING AND MULCHING ON A CONTINUAL BASIS WHILE THE STOCKPILE IS IN USE.
- 5. ESTABLISH AND MAINTAIN A VEGETATIVE BUFFER AT THE TOE OF THE SLOPE (WHERE PRACTICAL).

STAGE 2 STREAM CROSSING EROSION CONTROL SEQUENCE ONCE PROPER 401/404 BUFFER AUTHORIZATIONS AND ALL OTHER NECESSARY PERMITS

- OBTAINED BEGIN STREAM CROSSING PROCESS AS NECESSARY FOR FORCE MAIN CONSTRUCTION. 2. OPERATION AND CONSTRUCTION FOR STREAM CROSSINGS SHOULD BE PERFORMED IN A DRY
- WEATHER PATTERN OF AT LEAST 3-5 DAYS AND SHOULD NOT BEGIN UNTIL ALL NECESSARY CONSTRUCTION MATERIALS ARE LOCATED ON AT THE SITE.
- 3. SILT FENCE MUST BE INSTALLED ALONG STREAM BANKS AT THE END OF THE WORK DAY TO
- INSTALL CHECK DAM WITH WEIR AT EXISTING GRADES PER SIZING ON THIS SHEET FOR SEDIMENT STORAGE.
- 5. INSTALL THE IMPERVIOUS DIKES (SAND BAGS, SHEET PILING, OR NO. 57 STONE WITH POLYPROPYLENE FOR WIDTH AND DEPTH OF CHANNEL. SET UP AND BEGIN BYPASS PUMPING OF EXISTING FLOW PER THE DETAIL.
- 6. IF A TEMPORARY CROSSING IS REQUIRED, UTILIZE TIMBER MAT.
- 6.1. STONE APPROACHES WILL BE REQUIRED ON BOTH SIDES AND THE BOARDS WILL HAVE NO GAPS. GEOTEXTILE SHALL BE UNDERLAIN OR OVERLAIN AND SIDE BOARDS WILL BE INSTALLED ALONG THE PERIMETER OF THE MAT.
- 7. INSTALL SEWER MAIN PIPES PER THE UTILITY DESIGN AND SPECIFICATIONS WITHIN THIS PLAN SET. INFORM THE ENGINEER IF FIELD CONDITIONS DIFFER FROM THE PLANS TO AN EXTENT REQUIRING MODIFICATIONS. OR CONSTRUCT GREENWAY BOARDWALK PER PLANS.
- 10. BACKFILL TRENCHING OR BRING CROSSING TO GRADE, RETURN IMPACTED AREAS TO PRE-EXISTING GRADES AND PROMPTLY STABILIZE AREAS. MAINTENANCE PLAN:
- 1. ALL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE CHECKED FOR STABILITY AND OPERATION FOLLOWING EVERY RUNOFF-PRODUCING RAINFALL BUT IN NO CASE LESS THAN ONCE EVERY WEEK. ANY NEEDED REPAIRS SHALL BE MADE IMMEDIATELY TO MAINTAIN ALL MEASURES AS DESIGNED.
- 2. REMOVE SEDIMENT FROM BEHIND SILT FENCE WHEN DEPTH REACHES 6 INCHES AT THE FENCE. REPAIR SILT FENCE AS NECESSARY TO MAINTAIN A BARRIER.
- 3. ALL SEEDED AREAS SHALL BE FERTILIZED, RE--SEEDED AS NECESSARY, AND MULCHED ACCORDING TO PROJECT SPECS TO MAINTAIN A VIGOROUS, DENSE VEGETATIVE GROWTH.
- 4. TOP DRESS CONSTRUCTION ENTRANCES WITH CLEAN STONE AS NECESSARY TO MAINTAIN PROPER FUNCTIONING.
- 5. REFER TO SPECIFIC DEVICE DETAILS FOR ADDITIONAL MAINTENANCE REQUIREMENTS.

ATTENTION CONTRACTORS The **Construction Contractor** responsible for the extension of water, sewer, and/or reuse, as approved in

these plans, is responsible for *contacting* the *Public* Utilities Department at (919) 996-4540 at least twenty four hours prior to beginning any of their

Failure to notify both City Departments in advance of beginning construction, will result in the issuance of monetary fines, and require reinstallation of any water or sewer facilities not inspected as a result of this notification failure.

Failure to call for Inspection, Install a Downstream *Plug*, have *Permitted Plans* on the *Jobsite*, or any other Violation of City of Raleigh Standards will result in a *Fine and Possible Exclusion* from future work in the City of Raleigh.

SCALE 1"=50'

ALL CONSTRUCTION TO BE IN ACCORDANCE WITH ALL TOWN OF ROLESVILLE, CITY OF RALEIGH, NCDEQ AND NCDOT STANDARDS, SPECIFICATIONS, AND DETAILS



09/17/2021 DRAWN BY R. WINGATE

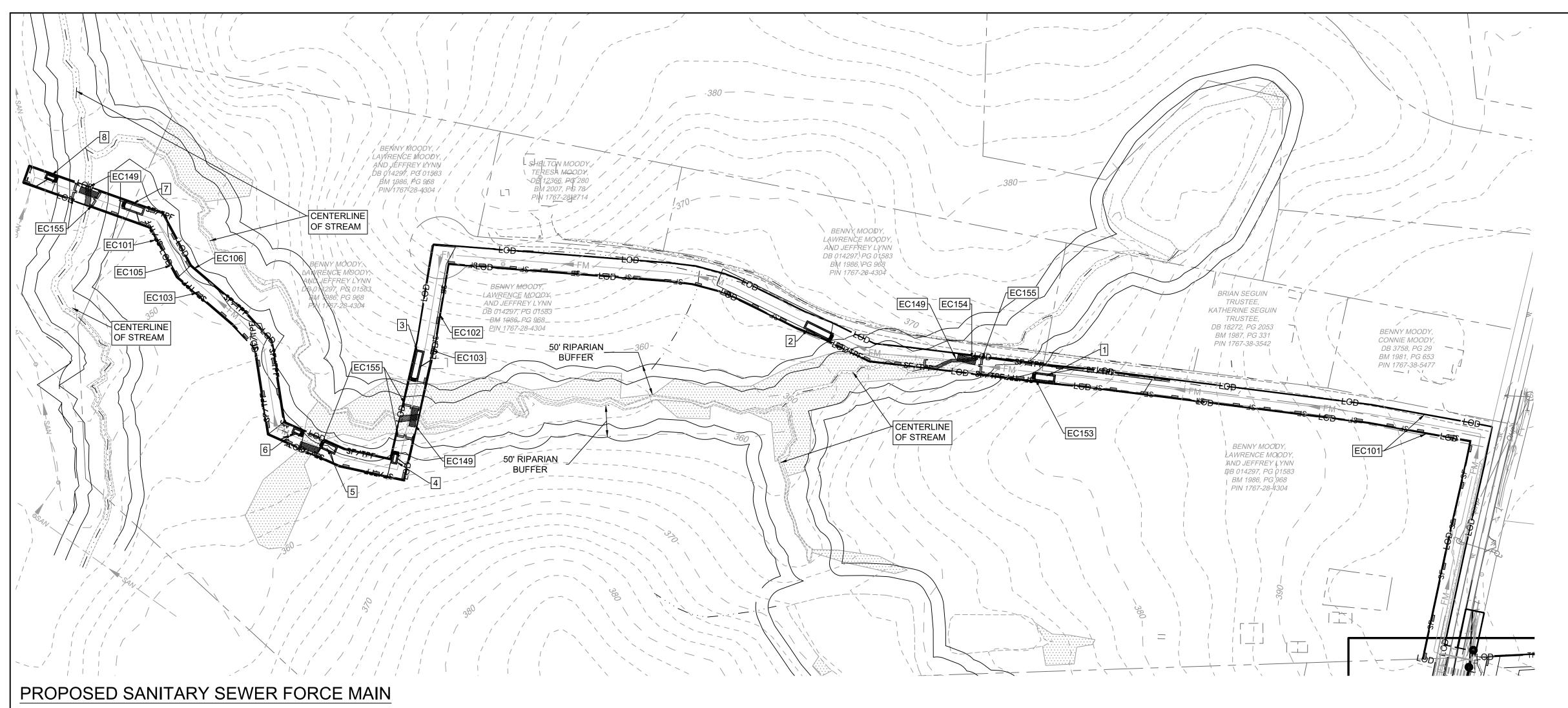
DESIGNED BY P. BARBEAU CHECKED BY

P. BARBEAU

AS SHOWN

JOB NO. SHEET NO.

43398 C4.13



			la			lar i a la l			lar ra		
Check Dam with a Weir:	# 1		Check Dam with a Weir:	# 2		Check Dam with a Weir:	# 3		Check Dam with a Weir:	# 4	
C	0.3		С	0.3		С	0.3		С	0.3	
1	7.2 in/hr		I	7.2 in/hr		I	7.2 in/hr		I	7.2 in/hr	
A	0.100 AC		А	0.130 AC		А	0.140 AC		А	0.024 AC	
Q10	0.22 CFS	Q=C*I*A	Q10	0.28 CFS	Q=C*I*A	Q10	0.30 CFS	Q=C*I*A	Q10	0.05 CFS	Q=C*I*A
Storage Required	360 CF	Volume = A*3600	Storage Required	468 CF	Volume = A*3600	Storage Required	504 CF	Volume = A*3600	Storage Required	86.4 CF	Volume = A*3600
Weir Length	0.25 FT	(Q cfs / 0.88)	Weir Length	0.32 FT	(Q cfs / 0.88)	Weir Length	0.34 FT	(Q cfs / 0.88)	Weir Length	0.06 FT	(Q cfs / 0.88)
Check Dam with a Weir:	# 5		Check Dam with a Weir:	# 6		Check Dam with a Weir:	# 7		Check Dam with a Weir:	# 8	
С	0.3		С	0.3		С	0.3		С	0.3	
1	7.2 in/hr		1	7.2 in/hr		1	7.2 in/hr		I	7.2 in/hr	
A	0.070 AC		А	0.029 AC		А	0.093 AC		А	0.028 AC	
Q10	0.15 CFS	Q=C*I*A	Q10	0.06 CFS	Q=C*I*A	Q10	0.20 CFS	Q=C*I*A	Q10	0.06 CFS	Q=C*I*A
Storage Required	252 CF	Volume = A*3600	Storage Required	104.4 CF	Volume = A*3600	Storage Required	334.8 CF	Volume = A*3600	Storage Required	100.8 CF	Volume = A*3600
Weir Length	0.17 FT	(Q cfs / 0.88)	Weir Length	0.07 FT	(Q cfs / 0.88)	Weir Length	0.23 FT	(Q cfs / 0.88)	Weir Length	0.07 FT	(Q cfs / 0.88)

1. CHECK DAMS WITH A WEIR TO SERVE AS SEDIMENT STORAGE FOR STREAM CROSSINGS AS NEEDED. CHECK AND REMOVE SEDIMENT AS REQUIRED.

GENERAL NOTES

- 1. THE GRADING CONTRACTOR SHALL COMPLY WITH ALL STATE AND LOCAL CODES IN OBSERVING EROSION CONTROL MEASURES BOTH ON AND OFF-SITE. 2. THE GRADING CONTRACTOR SHALL MAINTAIN ALL EROSION CONTROL DEVICES
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- OF WORK AND FOR OBTAINING ALL APPLICABLE PERMITS FOR OFF-SITE STOCKPILES AND/OR WASTE AREAS. 4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CLEANING ANY TRACKED SOIL FROM ALL ADJACENT ROADWAYS THAT ARE IMPACTED BY CONSTRUCTION TRAFFIC. THE
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- 5. CONTRACTOR SHALL ABIDE BY ALL CONDITIONS OF THE GENERAL PERMIT TO DISCHARGE STORMWATER UNDER THE NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT NO. NCG010000.
- 6. A PRECONSTRUCTION MEETING MUST BE SCHEDULED PRIOR TO WORK, GRADING PERMIT AND INSTALLATION OF EROSION CONTROL.
- 7. UTILITY LOCATIONS ARE TO BE FOUND BY CALLING NC ONE CALL.
- 8. ALL TEMPORARY MEASURES SHALL BE REMOVED AT THE END OF THE
- 9. CUT AND FILL SLOPES SHALL BE STABILIZED AS REQUIRED BY THE GENERAL PERMIT STABILIZATION REQUIREMENTS FOUND ON THIS SHEET.
- 10. SILT FENCING SHALL BE INSTALLED AROUND THE PERIMETER SEPARATING EXISTING PEDESTRIAN TRAFFIC AREAS.
- 11. ALL CUT AND FILL SLOPES ARE TO BE AT A 3:1 MAXIMUM.
- 12. THERE SHALL BE NO SOIL DISTURBANCE OR RECOMPACTION WITHIN AREAS DESIGNATED FOR THE TREE PRESERVATION AND PROTECTION FENCING. INCLUDING NO STOCKPILING OF CONSTRUCTION OR OTHER MATERIAL, TRAFFIC, OR BORING SAMPLE.

13. STOCKPILE HEIGHT SHALL NOT EXCEED 35'.

CONSTRUCTION OF THE PROJECT.

MAINTENANCE PLAN:

- 1. ALL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE CHECKED FOR STABILITY AND OPERATION FOLLOWING EVERY RUNOFF-PRODUCING RAINFALL BUT IN NO CASE LESS THAN ONCE EVERY WEEK. ANY NEEDED REPAIRS SHALL BE MADE IMMEDIATELY TO MAINTAIN ALL MEASURES AS DESIGNED.
- 2. REMOVE SEDIMENT FROM BEHIND SILT FENCE WHEN DEPTH REACHES 6 INCHES AT THE FENCE. REPAIR SILT FENCE AS NECESSARY TO MAINTAIN A BARRIER. 3. ALL SEEDED AREAS SHALL BE FERTILIZED, RE--SEEDED AS NECESSARY, AND
- MULCHED ACCORDING TO PROJECT SPECS TO MAINTAIN A VIGOROUS, DENSE VEGETATIVE GROWTH. 4. TOP DRESS CONSTRUCTION ENTRANCES WITH CLEAN STONE AS NECESSARY TO MAINTAIN PROPER FUNCTIONING.
- 5. REFER TO SPECIFIC DEVICE DETAILS FOR ADDITIONAL MAINTENANCE REQUIREMENTS.

STAGE II WAKE COUNTY EROSION CONTROL SEQUENCE- FORCE MAIN . ALL STAGE 1 EROSION CONTROL MEASURES MUST BE IN PLACE BEFORE BEGINNING STAGE 2.

- REFER TO STAGE 1 EROSION CONTROL PLAN SHEETS. REFURBISH ALL STAGE 1 EROSION CONTROL MEASURES AS NEEDED BEFORE PROCEEDING WITH STAGE 2. 2. IT IS THE CONTRACTOR'S RESPONSIBILITY TO MAINTAIN ALL EROSION CONTROL MEASURES
- THROUGHOUT CONSTRUCTION. ALL EROSION CONTROL DEVICES SHOULD BE INSPECTED AFTER EACH RAINFALL EVENT, AND ON A WEEKLY BASIS, AND REFURBISHED IMMEDIATELY. DO NOT REMOVE SKIMMER BASINS NOR OTHER MEASURES UNTIL INSTRUCTED TO DO SO. SKIMMER BASINS TO REMAIN THROUGHOUT CONSTRUCTION.
- CLEAR & GRUB THE SITE. MAINTAIN DEVICES AS NEEDED. ROUGH GRADE THE SITE. AT THE END OF EACH WORKDAY OF GRADING, ALL TEMPORARY DIVERSION DITCHES/BERMS SHALL BE
- REFURBISHED AS NEEDED TO MAINTAIN DRAINAGE PATTERNS TO BASINS. STABILIZE THE SITE AS AREAS ARE BROUGHT UP TO FINISHED GRADE WITH VEGETATION, PAVING, DITCH LININGS, ETC. SEED AND MULCH DENUDED AREAS PER GROUND STABILIZATION
- 5. EARTH EXCAVATED FOR SEWER TRENCHING SHOULD BE WITHIN THE LIMITS OF SILT FENCE. ANY WATER PUMPED FROM EXCAVATED TRENCH SHOULD BE FILTERED THROUGH A SILT BAG PRIOR TO DISCHARGING. PROPERLY DISPOSE OF ANY ACCUMULATED SEDIMENT AS NECESSARY.
- REFER TO STAGE 2 STREAM CROSSING EROSION CONTROL SEQUENCE.
- WHEN CONSTRUCTION IS COMPLETE AND ALL AREAS ARE STABILIZED COMPLETELY, CALL 919.796.8769 FOR AN ONSITE INSPECTION WITH THE WAKE COUNTY WATERSHED MANAGER.
- 8. IF SITE IS APPROVED, THEN REMOVE TEMPORARY EROSION CONTROL MEASURES INCLUDING TEMPORARY DIVERSIONS, SILT FENCE, SKIMMER BASINS, ETC. AND SEED OUT OR STABILIZE ANY RESULTING BARE AREAS. ALL REMAINING PERMANENT EROSION CONTROL DEVICES, SUCH AS RIPRAP APRONS OVER FILTER FABRIC SHOULD NOW BE INSTALLED.
- WHEN VEGETATION HAS BECOME ESTABLISHED, CALL FOR A FINAL SITE INSPECTION BY THE WAKE COUNTY ENVIRONMENTAL CONSULTANT KARYN PAGEAU, 919.796.8769. OBTAIN A CERTIFICATE OF COMPLETION.

ATTENTION CONTRACTORS

The **Construction Contractor** responsible for the extension of water, sewer, and/or reuse, as approved in these plans, is responsible for *contacting* the *Public* Utilities Department at (919) 996-4540 at least twenty four hours prior to beginning any of their

Failure to notify both **City Departments** in advance of beginning construction, will result in the issuance of monetary fines, and require reinstallation of any water or sewer facilities not inspected as a result of this notification failure.

Failure to call for Inspection, Install a Downstream *Plug*, have *Permitted Plans* on the *Jobsite*, or any other Violation of City of Raleigh Standards will result in a *Fine and Possible Exclusion* from future work in the City of Raleigh.

- STAGE 2 STREAM CROSSING EROSION CONTROL SEQUENCE 1. ONCE PROPER 401/404 BUFFER AUTHORIZATIONS AND ALL OTHER NECESSARY PERMITS OBTAINED BEGIN STREAM CROSSING PROCESS AS NECESSARY FOR FORCE MAIN
- CONSTRUCTION. 2. OPERATION AND CONSTRUCTION FOR STREAM CROSSINGS SHOULD BE PERFORMED IN A DRY WEATHER PATTERN OF AT LEAST 3-5 DAYS AND SHOULD NOT BEGIN UNTIL ALL NECESSARY
- CONSTRUCTION MATERIALS ARE LOCATED ON AT THE SITE. 3. SILT FENCE MUST BE INSTALLED ALONG STREAM BANKS AT THE END OF THE WORK DAY TO MINIMIZE IMPACTS.
- 4. INSTALL CHECK DAM WITH WEIR AT EXISTING GRADES PER SIZING ON THIS SHEET FOR SEDIMENT STORAGE.
- 5. INSTALL THE IMPERVIOUS DIKES (SAND BAGS, SHEET PILING, OR NO. 57 STONE WITH POLYPROPYLENE FOR WIDTH AND DEPTH OF CHANNEL. SET UP AND BEGIN BYPASS PUMPING OF EXISTING FLOW PER THE DETAIL.
- 6. IF A TEMPORARY CROSSING IS REQUIRED, UTILIZE TIMBER MAT.
- 6.1. STONE APPROACHES WILL BE REQUIRED ON BOTH SIDES AND THE BOARDS WILL HAVE NO GAPS. GEOTEXTILE SHALL BE UNDERLAIN OR OVERLAIN AND SIDE BOARDS WILL BE INSTALLED ALONG THE PERIMETER OF THE MAT.
- 7. INSTALL FORCE MAIN PIPES PER THE UTILITY DESIGN AND SPECIFICATIONS WITHIN THIS PLAN SET. INFORM THE ENGINEER IF FIELD CONDITIONS DIFFER FROM THE PLANS TO AN EXTENT REQUIRING MODIFICATIONS.
- 10. BACKFILL TRENCHING, RETURN IMPACTED AREAS TO PRE-EXISTING GRADES AND PROMPTLY STABILIZE AREAS.

TEMPORARY STOCKPILE NOTES

- 1. STOCKPILE FOOTPRINTS SHALL BE SETBACK A MINIMUM OF 25' FROM ADJACENT PROPERTY LINES, WITH A MAXIMUM HEIGHT OF 35 FT WITH 2:1
- 2. SEEDING OR COVERING STOCKPILES WITH TARPS OR MULCH IS REQUIRED AND WILL REDUCE EROSION PROBLEMS. TARPS SHOULD BE KEYED IN AT THE TOP OF THE SLOPE TO KEEP WATER FROM RUNNING UNDERNEATH THE PLASTIC.
- 3. IF A STOCKPILE IS TO REMAIN FOR FUTURE USE AFTER THE PROJECT IS COMPLETE (BUILDERS, ETC.), THE FINANCIAL RESPONSIBLE PARTY MUST NOTIFY WAKE COUNTY OF A NEW RESPONSIBLE PARTY FOR THAT STOCKPILE.
- 4. THE APPROVED PLAN SHALL PROVIDE FOR THE USE OF STAGED SEEDING AND MULCHING ON A CONTINUAL BASIS WHILE THE STOCKPILE IS IN USE.
- 5. ESTABLISH AND MAINTAIN A VEGETATIVE BUFFER AT THE TOE OF THE SLOPE (WHERE PRACTICAL).

NPDES GROUND STABILIZATION

SOIL STABILIZATION SHALL BE ACHIEVED ON ANY AREA OF A SITE WHERE LAND-DISTURBING ACTIVITIES HAVE TEMPORARILY OR PERMANENTLY CEASED ACCORDING TO THE FOLLOWING SCHEDULE:

- 1. ALL PERIMETER DIKES, SWALES, DITCHES, PERIMETER SLOPES AND SLOPES STEEPER THAN 3:1 SHALL BE PROVIDED TEMPORARY OR PERMANENT STABILIZATION WITH GROUND COVER AS SOON AS PRACTICABLE, BUT WITHIN ANY EVENT WITHIN 7 CALENDAR DAYS FROM THE LAST LAND-DISTURBING ACTIVITY.
- 2. ALL OTHER DISTURBED AREAS SHALL BE PROVIDED TEMPORARY OR PERMANENT STABILIZATION WITH GROUND COVER AS SOON AS PRACTICABLE, BUT IN ANY EVENT WITHIN 14 CALENDAR DAYS FROM THE LAST LAND-DISTURBING ACTIVITY.



09/17/2021 DRAWN BY

A. BROWN **DESIGNED BY** P. BARBEAU

CHECKED BY . BARBEAU

AS SHOWN

CONSTRUCTION ENTRANCE

TEMPORARY INLET PROTECTION TEMPORARY DOUBLE INLET PROTECTION

COMBINATION FENCE

SILT BAG AND PAD

APRON

CHECK DAM

TEMPORARY DIVERSION DITCH

SILT FENCE STONE OUTLET

CHECK DAM WITH A WEIR

SILT FENCE STONE OUTLET W/J HOOKS

EMERGENCY SPILLWAY / RIP RAP

CONCRETE WASHOUT

WATTLE HORSESHOE INLET PROTECTION

SKIMMER TEMPORARY SLOPE DRAIN (TSD)

EROSION CONTROL PLAN-STAGE 2 KEYNOTES

SILT-TREE COMBINATION FENCE. REFER TO DETAIL (TYP.)

TEMPORARY CLASS 3 18" RCP PIPE FOR DITCH CROSSING

DIVERSION DITCH OUTLET PROTECTION (C3.0 FOR DITCH CHARTS)

TEMPORARY STORM INLET PROTECTION; REFER TO DETAIL (TYP.)

SUCH AS NORTH AMERICAN GREEN S150, OR SIMILARLY RATED

SUCH AS NORTH AMERICAN GREEN \$150. OR SIMILARLY RATED

TEMPORARY INLET PROTECTION; REFER TO DETAIL (TYP.)

SILT FENCE STONE OUTLET WITH J HOOKS (TYP. AT STREAM

EROSION CONTROL LEGEND

ROCK CHECK DAM WITH WEIR (REFER TO DETAIL)

SIDE SLOPE (SOD/STABILIZE WITH EROSION CONTROL BLANKETS

2.5:1 SIDE SLOPE (SOD/STABILIZE WITH EROSION CONTROL BLANKETS

TEMPORARY HORSESHOE INLET PROTECTION PIPE OUTFALL PROTECTION. (REFER TO C4.1)

TEMPORARY PIPE FOR OUTFALL CROSSING

SILT FENCE OUTLET; REFERT TO DETAIL (TYP).

TREE FENCE. REFER TO DETAIL (TYP.)

IMPERMEABLE MEMBRANE APRON

GREENWAY BOARDWALK BRIDGE.

PRODUCT FOR STEEP SLOPES).

PRODUCT FOR STEEP SLOPES).

CROSSING: REFER TO DETAIL (TYP.)

DESCRIPTION

TEMPORARY 25' x 100' CONSTRUCTION ENTRANCE; REFER TO DETAIL

NUMBER

EC141

EC154

EC101 LIMITS OF DISTURBANCE

EC102 SILT FENCE; REFER TO DETAIL (TYP).

POROUS BAFFLES (TYP.) SILT BAG AND SILT BAG PAD

3:1 SIDE SLOPE STOCKPILE AREA

CONCRETE WASHOUT

TEMPORARY DIVERSION BERM

TEMPORARY TIMBER MAT

ROLLED EROSION CONTROL FABRIC

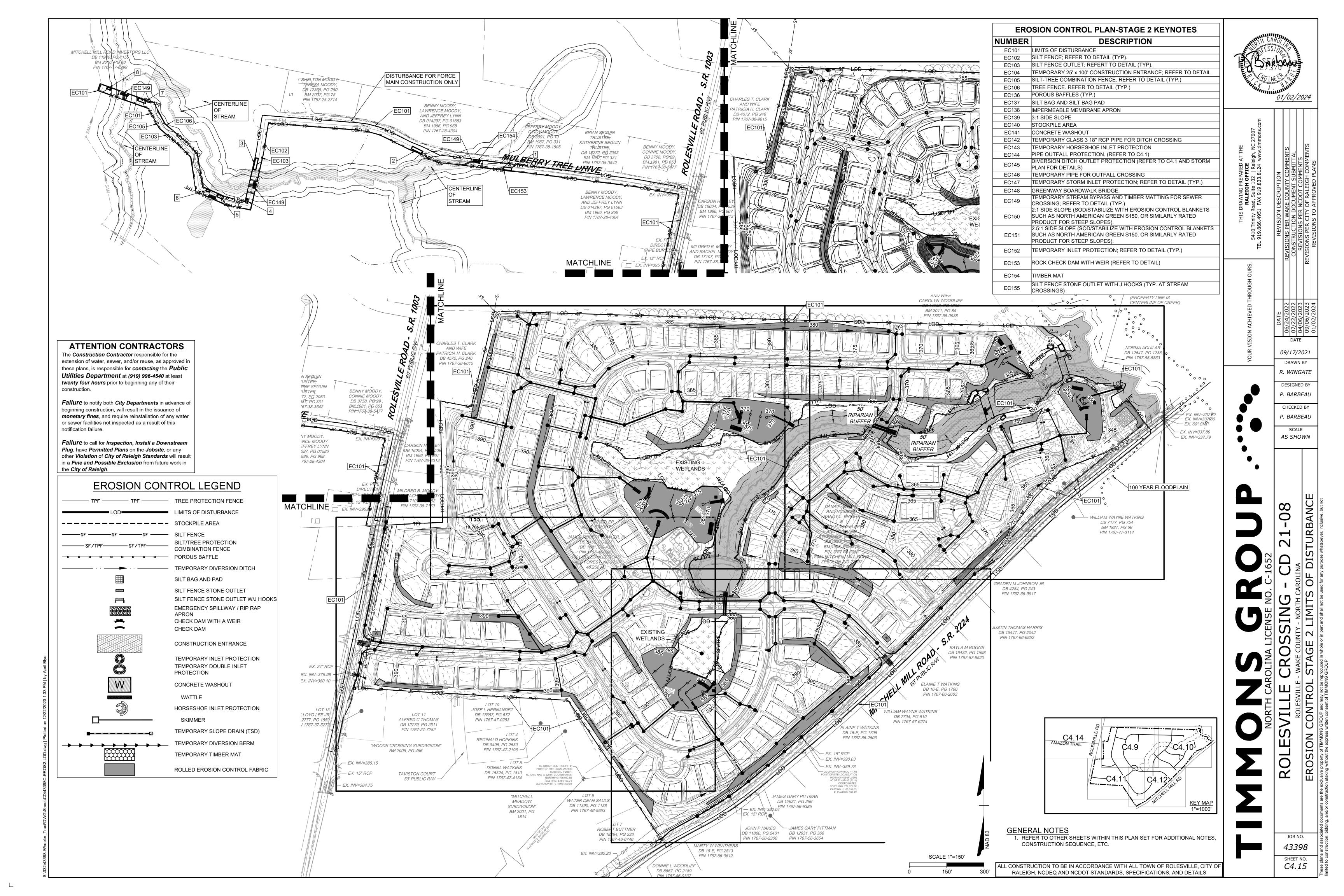
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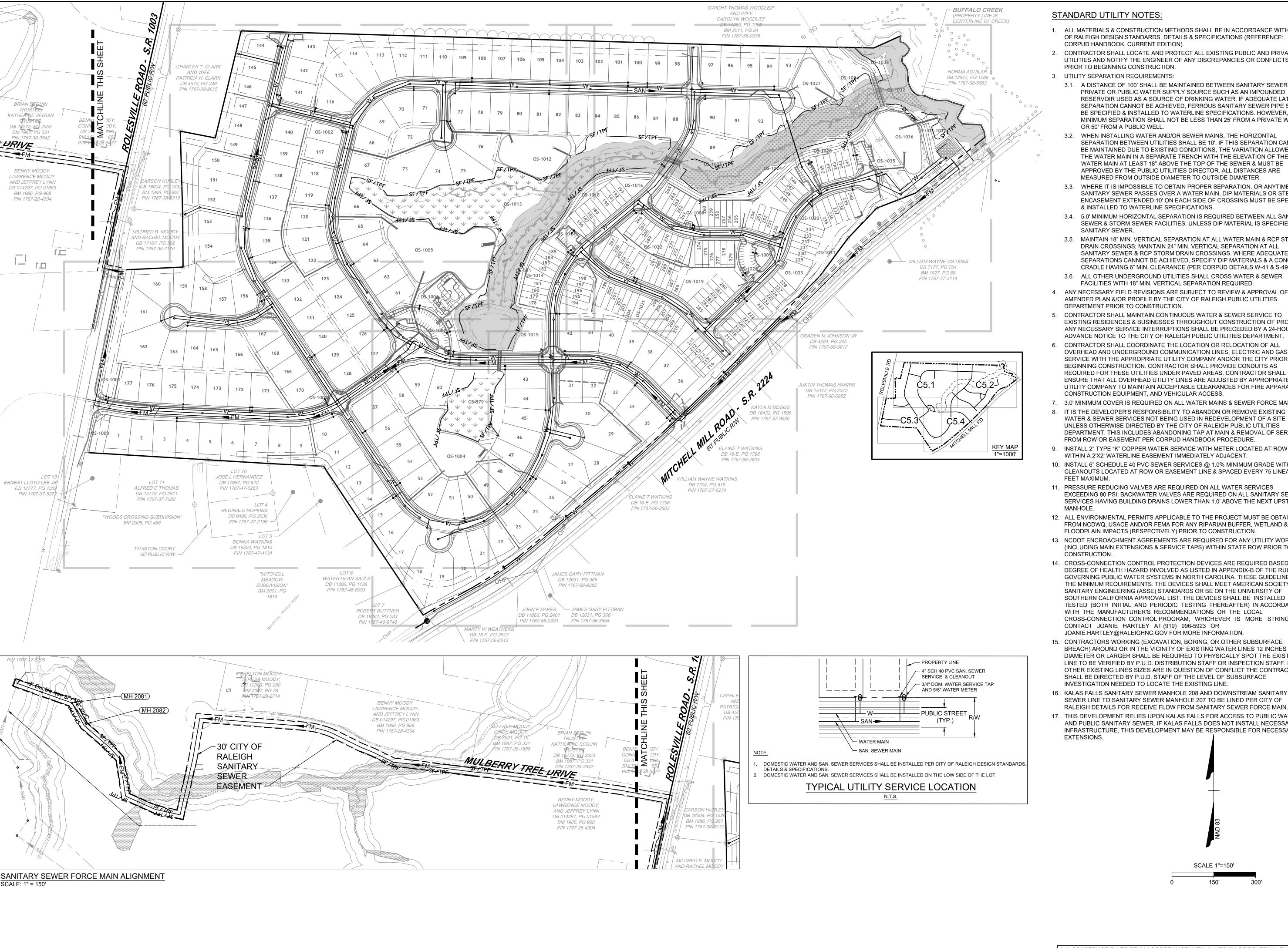
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C4.14

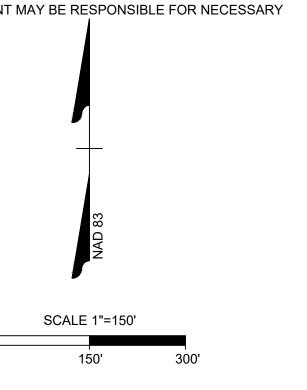
ALL CONSTRUCTION TO BE IN ACCORDANCE WITH ALL TOWN OF ROLESVILLE, CITY OF RALEIGH, NCDEQ AND NCDOT STANDARDS, SPECIFICATIONS, AND DETAILS

SCALE 1"=100'





- 1. ALL MATERIALS & CONSTRUCTION METHODS SHALL BE IN ACCORDANCE WITH CITY OF RALEIGH DESIGN STANDARDS, DETAILS & SPECIFICATIONS (REFERENCE:
- 2. CONTRACTOR SHALL LOCATE AND PROTECT ALL EXISTING PUBLIC AND PRIVATE UTILITIES AND NOTIFY THE ENGINEER OF ANY DISCREPANCIES OR CONFLICTS
- 3.1. A DISTANCE OF 100' SHALL BE MAINTAINED BETWEEN SANITARY SEWER & ANY PRIVATE OR PUBLIC WATER SUPPLY SOURCE SUCH AS AN IMPOUNDED RESERVOIR USED AS A SOURCE OF DRINKING WATER. IF ADEQUATE LATERAL SEPARATION CANNOT BE ACHIEVED, FERROUS SANITARY SEWER PIPE SHALL BE SPECIFIED & INSTALLED TO WATERLINE SPECIFICATIONS. HOWEVER, THE MINIMUM SEPARATION SHALL NOT BE LESS THAN 25' FROM A PRIVATE WELL
- 3.2. WHEN INSTALLING WATER AND/OR SEWER MAINS, THE HORIZONTAL SEPARATION BETWEEN UTILITIES SHALL BE 10'. IF THIS SEPARATION CANNOT BE MAINTAINED DUE TO EXISTING CONDITIONS, THE VARIATION ALLOWED IS THE WATER MAIN IN A SEPARATE TRENCH WITH THE ELEVATION OF THE WATER MAIN AT LEAST 18" ABOVE THE TOP OF THE SEWER & MUST BE APPROVED BY THE PUBLIC UTILITIES DIRECTOR. ALL DISTANCES ARE MEASURED FROM OUTSIDE DIAMETER TO OUTSIDE DIAMETER.
- 3.3. WHERE IT IS IMPOSSIBLE TO OBTAIN PROPER SEPARATION, OR ANYTIME A SANITARY SEWER PASSES OVER A WATER MAIN, DIP MATERIALS OR STEEL ENCASEMENT EXTENDED 10' ON EACH SIDE OF CROSSING MUST BE SPECIFIED
- 3.4. 5.0' MINIMUM HORIZONTAL SEPARATION IS REQUIRED BETWEEN ALL SANITARY SEWER & STORM SEWER FACILITIES, UNLESS DIP MATERIAL IS SPECIFIED FOR
- 3.5. MAINTAIN 18" MIN. VERTICAL SEPARATION AT ALL WATER MAIN & RCP STORM DRAIN CROSSINGS; MAINTAIN 24" MIN. VERTICAL SEPARATION AT ALL SANITARY SEWER & RCP STORM DRAIN CROSSINGS. WHERE ADEQUATE SEPARATIONS CANNOT BE ACHIEVED, SPECIFY DIP MATERIALS & A CONCRETE CRADLE HAVING 6" MIN. CLEARANCE (PER CORPUD DETAILS W-41 & S-49).
- 3.6. ALL OTHER UNDERGROUND UTILITIES SHALL CROSS WATER & SEWER FACILITIES WITH 18" MIN. VERTICAL SEPARATION REQUIRED.
- 4. ANY NECESSARY FIELD REVISIONS ARE SUBJECT TO REVIEW & APPROVAL OF AN AMENDED PLAN &/OR PROFILE BY THE CITY OF RALEIGH PUBLIC UTILITIES
- CONTRACTOR SHALL MAINTAIN CONTINUOUS WATER & SEWER SERVICE TO EXISTING RESIDENCES & BUSINESSES THROUGHOUT CONSTRUCTION OF PROJECT. ANY NECESSARY SERVICE INTERRUPTIONS SHALL BE PRECEDED BY A 24-HOUR ADVANCE NOTICE TO THE CITY OF RALEIGH PUBLIC UTILITIES DEPARTMENT
- CONTRACTOR SHALL COORDINATE THE LOCATION OR RELOCATION OF ALL OVERHEAD AND UNDERGROUND COMMUNICATION LINES, ELECTRIC AND GAS SERVICE WITH THE APPROPRIATE UTILITY COMPANY AND/OR THE CITY PRIOR TO BEGINNING CONSTRUCTION. CONTRACTOR SHALL PROVIDE CONDUITS AS REQUIRED FOR THESE UTILITIES UNDER PAVED AREAS. CONTRACTOR SHALL ENSURE THAT ALL OVERHEAD UTILITY LINES ARE ADJUSTED BY APPROPRIATE UTILITY COMPANY TO MAINTAIN ACCEPTABLE CLEARANCES FOR FIRE APPARATUS, CONSTRUCTION EQUIPMENT, AND VEHICULAR ACCESS.
- 3.0' MINIMUM COVER IS REQUIRED ON ALL WATER MAINS & SEWER FORCE MAINS.
- IT IS THE DEVELOPER'S RESPONSIBILITY TO ABANDON OR REMOVE EXISTING WATER & SEWER SERVICES NOT BEING USED IN REDEVELOPMENT OF A SITE UNLESS OTHERWISE DIRECTED BY THE CITY OF RALEIGH PUBLIC UTILITIES DEPARTMENT. THIS INCLUDES ABANDONING TAP AT MAIN & REMOVAL OF SERVICE FROM ROW OR EASEMENT PER CORPUD HANDBOOK PROCEDURE
- INSTALL 2" TYPE "K" COPPER WATER SERVICE WITH METER LOCATED AT ROW OR WITHIN A 2'X2' WATERLINE EASEMENT IMMEDIATELY ADJACENT.
- 10. INSTALL 6" SCHEDULE 40 PVC SEWER SERVICES @ 1.0% MINIMUM GRADE WITH CLEANOUTS LOCATED AT ROW OR EASEMENT LINE & SPACED EVERY 75 LINEAR
- 11. PRESSURE REDUCING VALVES ARE REQUIRED ON ALL WATER SERVICES EXCEEDING 80 PSI; BACKWATER VALVES ARE REQUIRED ON ALL SANITARY SEWER SERVICES HAVING BUILDING DRAINS LOWER THAN 1.0' ABOVE THE NEXT UPSTREAM
- 12. ALL ENVIRONMENTAL PERMITS APPLICABLE TO THE PROJECT MUST BE OBTAINED FROM NCDWQ, USACE AND/OR FEMA FOR ANY RIPARIAN BUFFER, WETLAND &/OR
- 13. NCDOT ENCROACHMENT AGREEMENTS ARE REQUIRED FOR ANY UTILITY WORK (INCLUDING MAIN EXTENSIONS & SERVICE TAPS) WITHIN STATE ROW PRIOR TO
- 14. CROSS-CONNECTION CONTROL PROTECTION DEVICES ARE REQUIRED BASED ON DEGREE OF HEALTH HAZARD INVOLVED AS LISTED IN APPENDIX-B OF THE RULES GOVERNING PUBLIC WATER SYSTEMS IN NORTH CAROLINA. THESE GUIDELINES ARE THE MINIMUM REQUIREMENTS. THE DEVICES SHALL MEET AMERICAN SOCIETY OF SANITARY ENGINEERING (ASSE) STANDARDS OR BE ON THE UNIVERSITY OF SOUTHERN CALIFORNIA APPROVAL LIST. THE DEVICES SHALL BE INSTALLED AND TESTED (BOTH INITIAL AND PERIODIC TESTING THEREAFTER) IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS OR THE LOCAL CROSS-CONNECTION CONTROL PROGRAM, WHICHEVER IS MORE STRINGENT. CONTACT JOANIE HARTLEY AT (919) 996-5923 OR
- 15. CONTRACTORS WORKING (EXCAVATION, BORING, OR OTHER SUBSURFACE BREACH) AROUND OR IN THE VICINITY OF EXISTING WATER LINES 12 INCHES IN DIAMETER OR LARGER SHALL BE REQUIRED TO PHYSICALLY SPOT THE EXISTING LINE TO BE VERIFIED BY P.U.D. DISTRIBUTION STAFF OR INSPECTION STAFF. IF OTHER EXISTING LINES SIZES ARE IN QUESTION OF CONFLICT THE CONTRACTOR SHALL BE DIRECTED BY P.U.D. STAFF OF THE LEVEL OF SUBSURFACE INVESTIGATION NEEDED TO LOCATE THE EXISTING LINE.
- SEWER LINE TO SANITARY SEWER MANHOLE 207 TO BE LINED PER CITY OF RALEIGH DETAILS FOR RECEIVE FLOW FROM SANITARY SEWER FORCE MAIN.
- 17. THIS DEVELOPMENT RELIES UPON KALAS FALLS FOR ACCESS TO PUBLIC WATER AND PUBLIC SANITARY SEWER. IF KALAS FALLS DOES NOT INSTALL NECESSARY INFRASTRUCTURE, THIS DEVELOPMENT MAY BE RESPONSIBLE FOR NECESSARY



09/17/2021

DRAWN BY R. WINGATE **DESIGNED BY**

P. BARBEAU CHECKED BY . BARBEAU

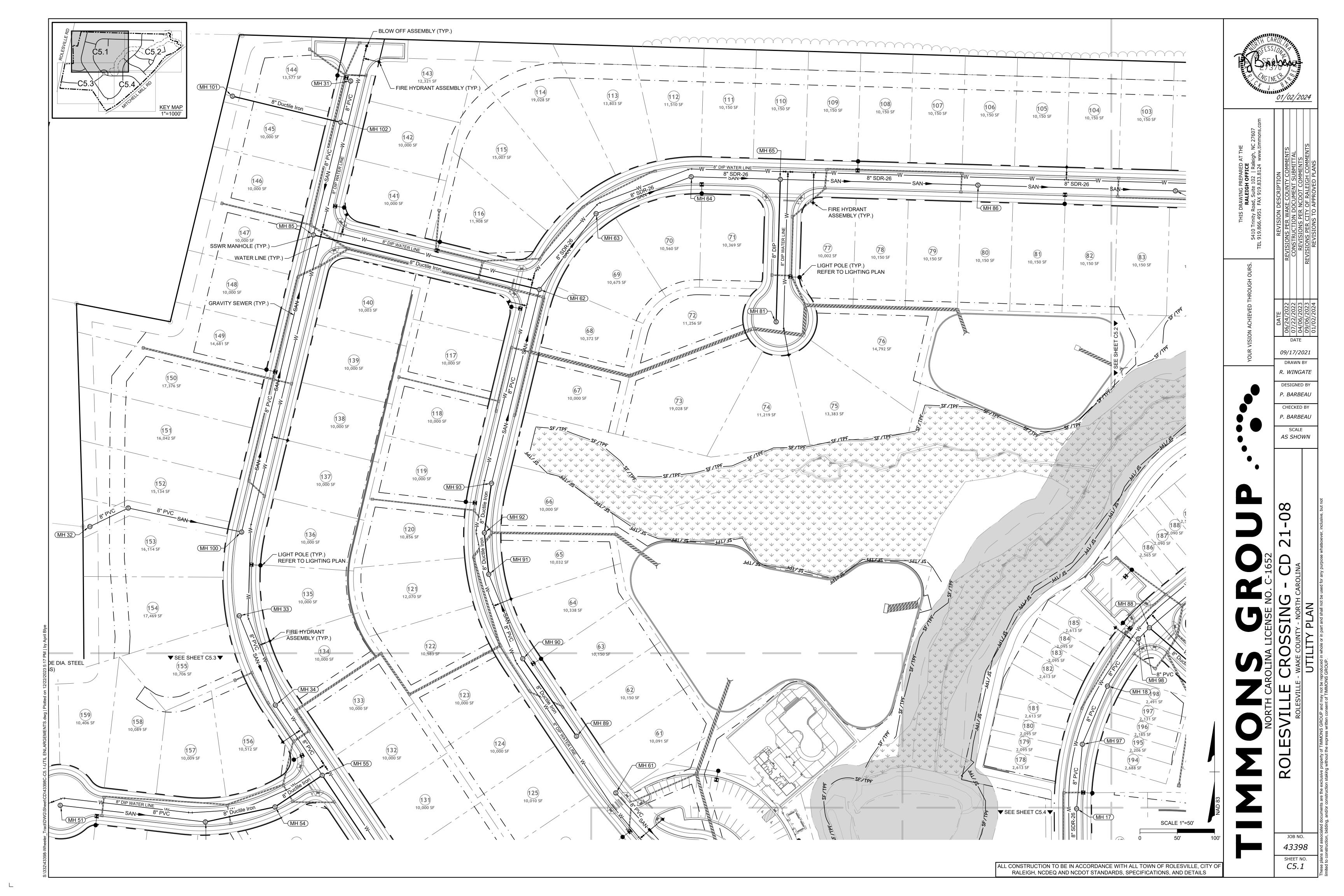
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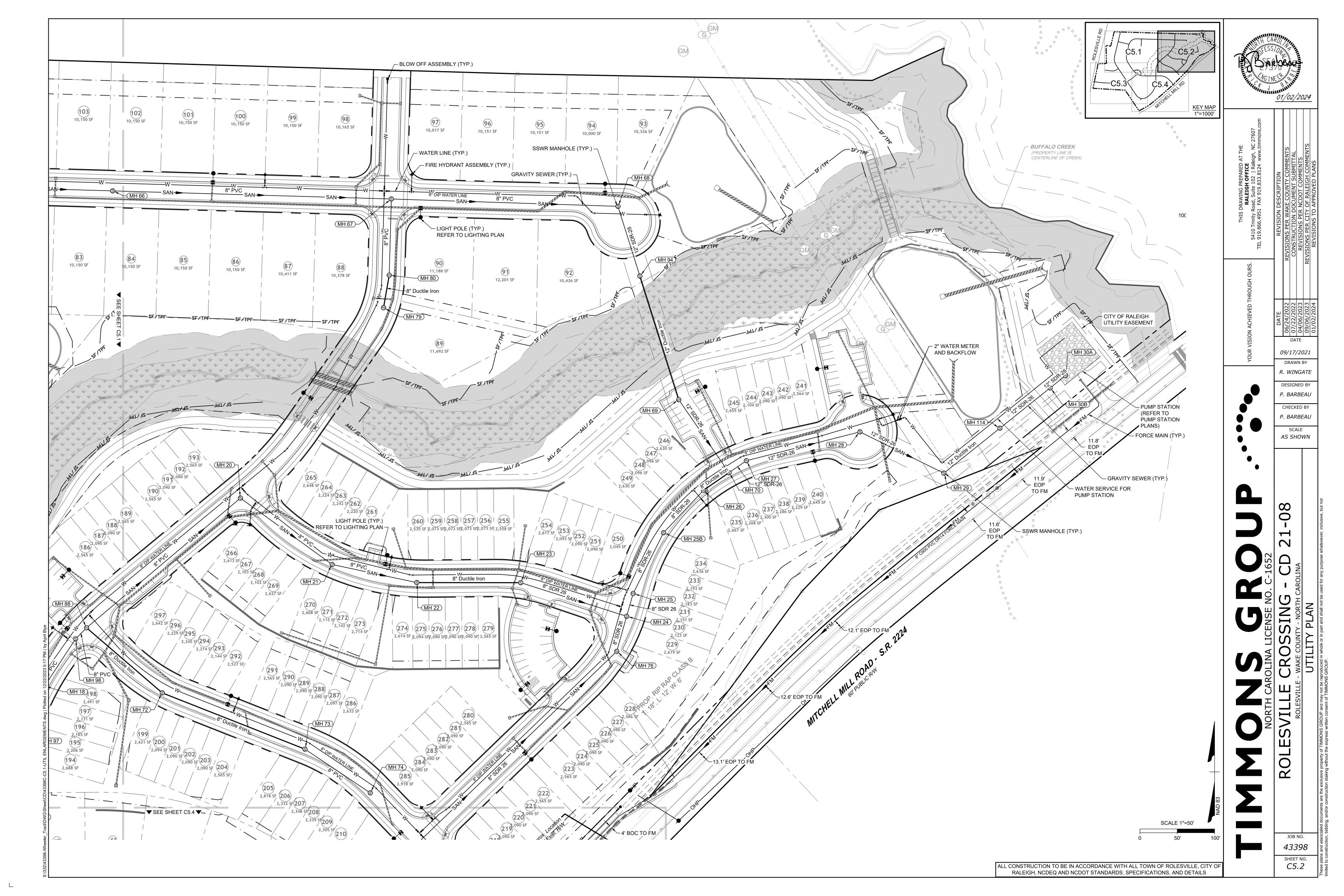
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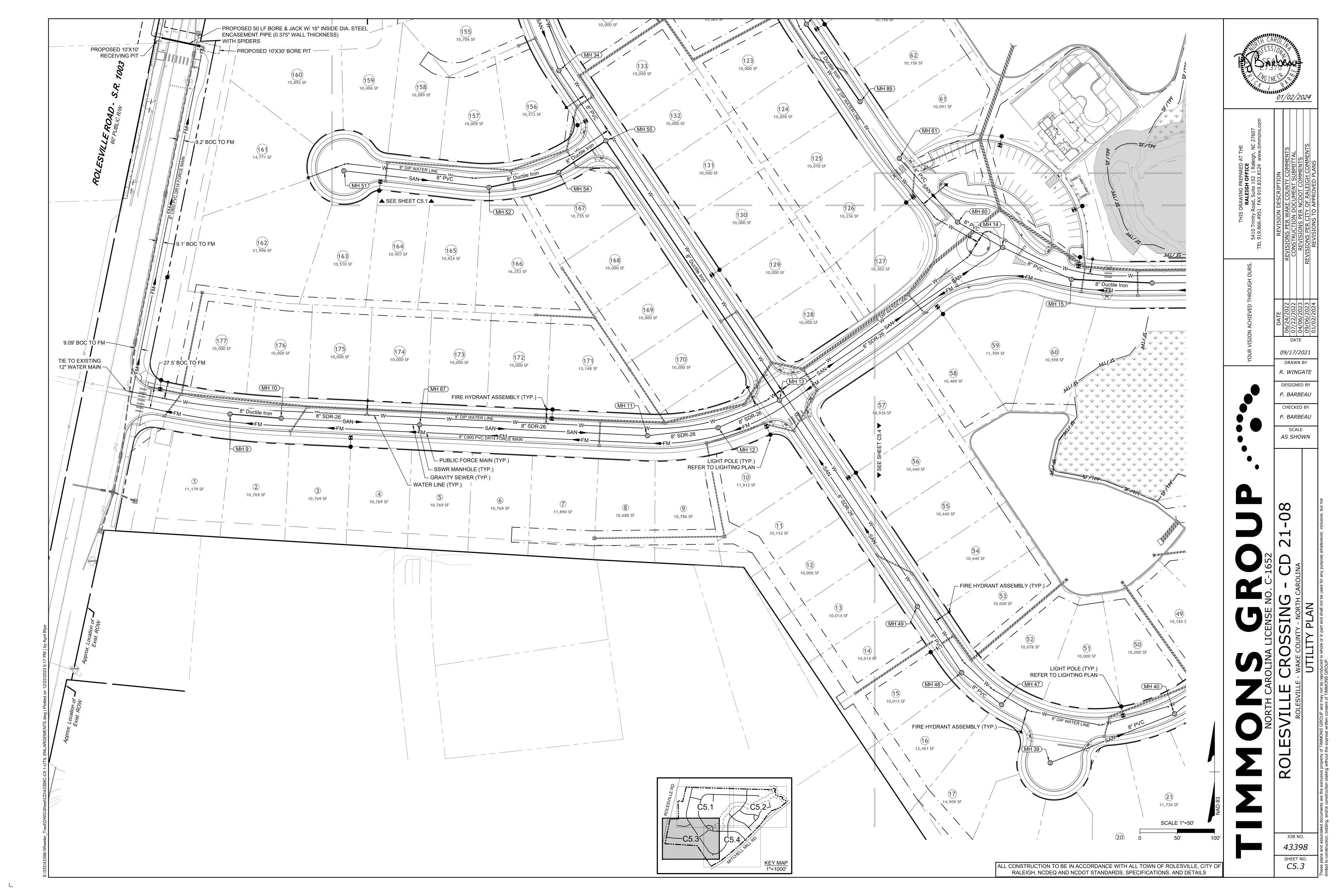
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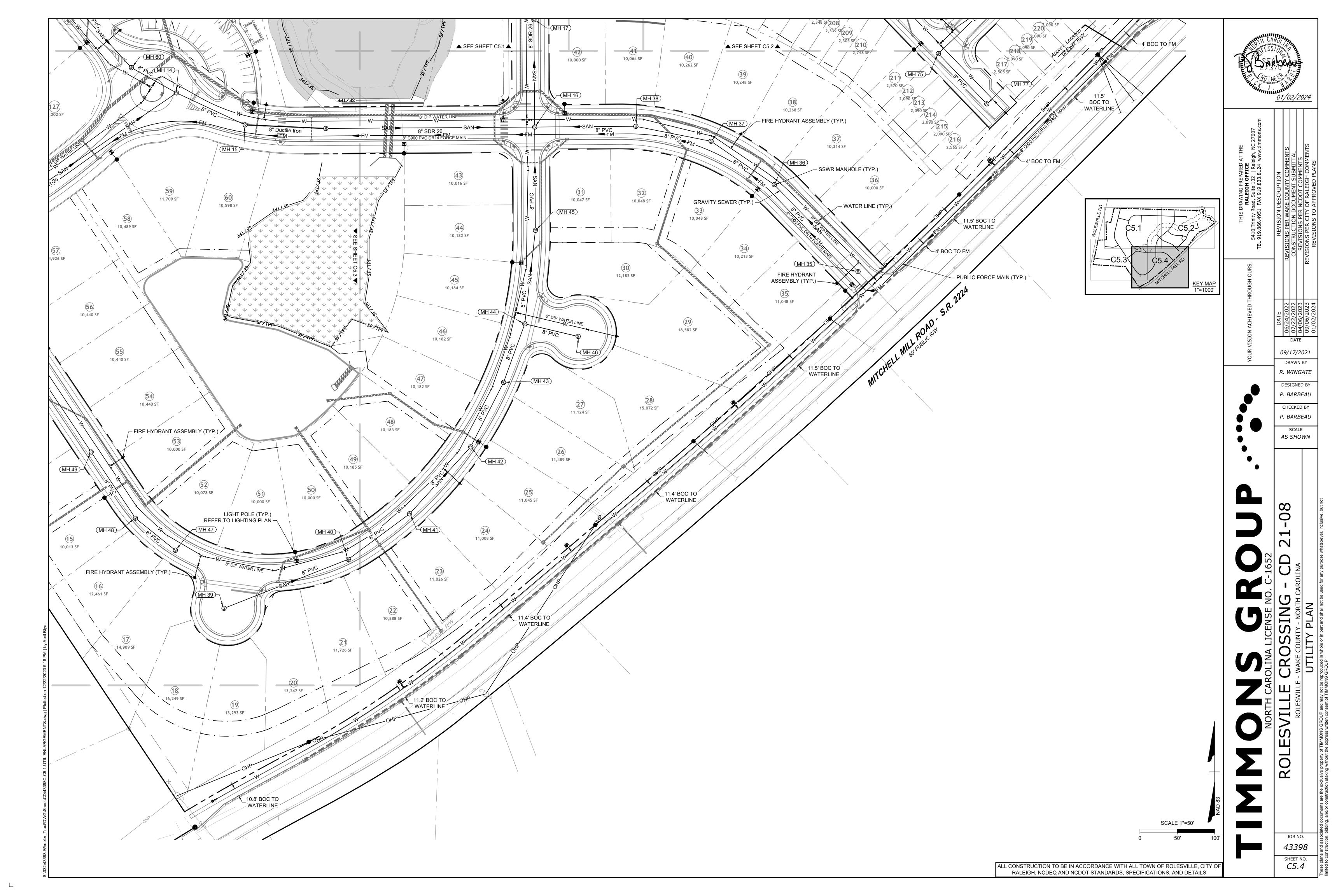
C5.0

ALL CONSTRUCTION TO BE IN ACCORDANCE WITH ALL TOWN OF ROLESVILLE, CITY OF RALEIGH, NCDEQ AND NCDOT STANDARDS, SPECIFICATIONS, AND DETAILS









STR.#	ТОР	INV. IN	INV. OUT	DESCRIPTION
MH 9	389.23'		383.68' (8" Ductile Iron TO MH 10)	48" Manhole
MH 10	391.86'	383.34' (8" Ductile Iron FROM MH 9)	383.14' (8" SDR-26 TO MH 87)	60" Manhole
MH 11	396.93'	380.48' (8" SDR-26 FROM MH 87)	380.28' (8" SDR-26 TO MH 12)	60" Manhole
MH 12	395.18'	379.81' (8" SDR-26 FROM MH 11)	379.61' (8" SDR-26 TO MH 13)	60" Manhole
MH 13	393.39'	379.16' (8" SDR-26 FROM MH 12) 381.12' (8" Ductile Iron FROM MH 55) 379.16' (8" SDR-26 FROM MH 49)	378.96' (8" SDR-26 TO MH 14)	60" Manhole
MH 14	385.10'	377.16' (8" SDR-26 FROM MH 13) 378.90' (8" PVC FROM MH 60)	376.96' (8" PVC TO MH 15)	48" Manhole
MH 15	384.13'	376.45' (8" PVC FROM MH 14)	376.07' (8" Ductile Iron TO MH 15A)	48" Manhole
MH 15A	384.82'	375.53' (8" Ductile Iron FROM MH 15)	375.33' (8" SDR 26 TO MH 16)	48" Manhole
MH 16	385.95'	373.93' (8" SDR 26 FROM MH 15A) 373.77' (8" PVC FROM MH 38) 374.90' (8" PVC FROM MH 45)	373.09' (8" SDR-26 TO MH 17)	60" Manhole
MH 17	382.86'	372.38' (8" SDR-26 FROM MH 16)	372.08' (8" PVC TO MH 97)	48" Manhole
MH 18	375.35'	369.29' (8" PVC FROM MH 97)	368.89' (8" PVC TO MH 98)	48" Manhole
MH 20	368.47'	361.50' (8" PVC FROM MH 88)	359.94' (8" PVC TO MH 21)	48" Manhole
MH 21	365.71'	359.18' (8" PVC FROM MH 20)	358.98' (8" PVC TO MH 22)	48" Manhole
MH 22	364.11'	358.40' (8" PVC FROM MH 21)	357.07' (8" Ductile Iron TO MH 23)	48" Manhole
MH 23	365.65'	356.37' (8" Ductile Iron FROM MH 22)	356.07' (8" SDR 26 TO MH 24)	48" Manhole
MH 24	369.02'	355.33' (8" SDR 26 FROM MH 23) 356.00' (8" SDR 26 FROM MH 76)	355.10' (8" SDR 26 TO MH 25)	72" Drop Manhole
MH 25	368.13'	354.94' (8" SDR 26 FROM MH 24)	354.74' (8" SDR-26 TO MH 25B)	60" Manhole
MH 25B	364.54'	354.28' (8" SDR-26 FROM MH 25)	354.08' (8" SDR-26 TO MH 26)	48" Manhole
MH 26	361.70'	353.68' (8" SDR-26 FROM MH 25B)	353.48' (8" Ductile Iron TO MH 70)	48" Manhole
MH 27	360.59'	343.04' (12" SDR-26 FROM MH 70)	342.84' (12" SDR-26 TO MH 28)	60" Manhole
MH 28	359.04'	342.06' (12" SDR-26 FROM MH 27)	341.86' (12" SDR-26 TO MH 29)	60" Manhole
MH 29	348.04'	341.24' (12" SDR-26 FROM MH 28)	341.04' (12" Ductile Iron TO MH 114)	48" Manhole
MH 30A	349.00'	329.00' (12" SDR-26 FROM MH 30B)	REFER TO PUMP STATION PLANS	72" Manhole
MH 30B	348.00'	331.70' (12" SDR-26 FROM MH 114)	329.20' (12" SDR-26 TO MH 30A)	60" Manhole
MH 31	381.82'		376.08' (8" PVC TO MH 102)	48" Manhole
MH 32	397.52'		383.80' (8" PVC TO MH 107)	60" Manhole
MH 33	391.06'		385.38' (8" PVC TO MH 34)	48" Manhole
MH 34	389.88'	384.18' (8" PVC FROM MH 33)	383.98' (8" PVC TO MH 55)	48" Manhole
MH 35	386.01'		378.50' (8" PVC TO MH 36)	48" Manhole
MH 36	383.28'	377.30' (8" PVC FROM MH 35)	377.00' (8" PVC TO MH 37)	48" Manhole
MH 37	383.47'	375.40' (8" PVC FROM MH 36)	375.20' (8" PVC TO MH 38)	48" Manhole
MH 38	384.57'	374.69' (8" PVC FROM MH 37)	374.45' (8" PVC TO MH 16)	48" Manhole
MH 39	391.37'		382.51' (8" PVC TO MH 40)	48" Manhole
MH 40	389.29'	381.35' (8" PVC FROM MH 39)	381.15' (8" PVC TO MH 41)	48" Manhole
MH 41	388.32'	380.64' (8" PVC FROM MH 40)	380.44' (8" PVC TO MH 42)	48" Manhole
MH 42	387.47'	379.83' (8" PVC FROM MH 41)	379.63' (8" PVC TO MH 43)	48" Manhole
MH 43	387.89'	379.14' (8" PVC FROM MH 42)	378.94' (8" PVC TO MH 44)	60" Manhole
MH 44	388.50'	378.53' (8" PVC FROM MH 43) 380.70' (8" PVC FROM MH 46)	378.33' (8" PVC TO MH 45)	72" DROP Manhole
MH 45	387.32'	377.70' (8" PVC FROM MH 44)	377.50' (8" PVC TO MH 16)	60" Manhole
MH 46	389.57'		383.73' (8" PVC TO MH 44)	48" Manhole
MH 47	390.03'		384.40' (8" PVC TO MH 48)	48" Manhole
MH 48	388.67'	382.81' (8" PVC FROM MH 47)	382.09' (8" PVC TO MH 49)	48" Manhole
MH 49	388.94'	381.02' (8" PVC FROM MH 48)	380.82' (8" SDR-26 TO MH 13)	48" Manhole
MH 51	394.83'		388.70' (8" PVC TO MH 52)	48" Manhole
MH 52	391.16'	384.90' (8" PVC FROM MH 51)	384.70' (8" Ductile Iron TO MH 54)	48" Manhole
MH 54	389.34'	384.10' (8" Ductile Iron FROM MH 52)	383.79' (8" Ductile Iron TO MH 55)	48" Manhole
MH 55	390.08'	383.41' (8" PVC FROM MH 34) 383.41' (8" Ductile Iron FROM MH 54)	383.21' (8" Ductile Iron TO MH 13)	48" Manhole
	386.68'	380.50' (8" PVC FROM MH 61)	380.30' (8" PVC TO MH 14)	48" Manhole
MH 60			!	
MH 60 MH 61	389.04'	371.06' (8" Ductile Iron FROM MH 85)	382.36' (8" PVC TO MH 60)	48" Manhole

SANITARY SEWER STRUCTURE TABLE

STR.#	ТОР	INV. IN	INV. OUT	DESCRIPTION
MH 63	383.00'	368.37' (8" SDR-26 FROM MH 62)	368.17' (8" SDR-26 TO MH 64)	60" Manhole
MH 64	384.48'	367.53' (8" SDR-26 FROM MH 63)	367.33' (8" SDR-26 TO MH 65)	60" Manhole
MH 65	384.85'	366.69' (8" SDR-26 FROM MH 64) 375.87' (8" DIP FROM MH 81)	366.49' (8" SDR-26 TO MH 86)	72" Drop Manhole
MH 66	374.81'	363.65' (8" SDR-26 FROM MH 86)	363.45' (8" PVC TO MH 67)	48" Manhole
MH 67	369.89'	360.74' (8" PVC FROM MH 66) 358.23' (8" PVC FROM MH 80)	358.03' (8" PVC TO MH 68)	72" DROP Manhole
MH 68	361.32'	352.05' (8" PVC FROM MH 67)	351.00' (12" SDR-26 TO MH 94)	48" Manhole
MH 69	356.03'	344.23' (12" Ductile Iron FROM MH 94)	344.03' (12" SDR-26 TO MH 70)	48" Manhole
MH 70	360.83'	353.08' (8" Ductile Iron FROM MH 26) 343.43' (12" SDR-26 FROM MH 69)	343.23' (12" SDR-26 TO MH 27)	72" DROP Manhole
MH 72	373.94'	368.12' (8" Ductile Iron FROM MH 73)	367.92' (8" Ductile Iron TO MH 88)	48" Manhole
MH 73	380.95'	375.35' (8" PVC FROM MH 74)	373.80' (8" Ductile Iron TO MH 72)	48" Manhole
MH 74	381.68'		375.88' (8" PVC TO MH 73)	48" Manhole
MH 75	381.04'	373.87' (8" PVC FROM MH 77)	373.63' (8" SDR 26 TO MH 76)	48" Manhole
MH 76	369.68'	359.21' (8" SDR 26 FROM MH 75)	358.00' (8" SDR 26 TO MH 24)	48" Manhole
MH 77	381.78'		376.10' (8" PVC TO MH 75)	48" Manhole
MH 79	364.91'		359.15' (8" Ductile Iron TO MH 80)	48" Manhole
MH 80	366.39'	358.93' (8" Ductile Iron FROM MH 79)	358.73' (8" PVC TO MH 67)	48" Manhole
MH 81	382.86'		377.76' (8" DIP TO MH 65)	48" Manhole
MH 85	384.69'	372.82' (8" PVC FROM MH 102) 375.00' (8" PVC FROM MH 100)	372.62' (8" Ductile Iron TO MH 62)	60" Manhole
MH 86	379.95'	365.17' (8" SDR-26 FROM MH 65)	364.97' (8" SDR-26 TO MH 66)	60" Manhole
MH 87	396.61'	382.21' (8" SDR-26 FROM MH 10)	382.01' (8" SDR-26 TO MH 11)	60" Manhole
MH 88	371.95'	366.20' (8" PVC FROM MH 98) 365.36' (8" Ductile Iron FROM MH 72)	365.16' (8" PVC TO MH 20)	48" Manhole
MH 89	388.83'		382.08' (8" Ductile Iron TO MH 90)	48" Manhole
MH 90	386.32'	380.48' (8" Ductile Iron FROM MH 89)	380.28' (8" PVC TO MH 91)	48" Manhole
MH 91	383.74'	378.09' (8" PVC FROM MH 90)	377.89' (8" Ductile Iron TO MH 92)	48" Manhole
MH 92	382.60'	377.62' (8" Ductile Iron FROM MH 91)	375.30' (8" Ductile Iron TO MH 93)	48" Manhole
MH 93	381.17'	374.63' (8" Ductile Iron FROM MH 92)	374.43' (8" PVC TO MH 62)	48" Manhole
MH 94	353.05'	347.19' (12" SDR-26 FROM MH 68)	345.10' (12" Ductile Iron TO MH 69)	48" Manhole
MH 97	379.13'	371.65' (8" PVC FROM MH 17)	371.45' (8" PVC TO MH 18)	48" Manhole
MH 98	372.46'	366.50' (8" PVC FROM MH 18)	366.30' (8" PVC TO MH 88)	48" Manhole
MH 100	390.31'	382.00' (8" PVC FROM MH 107)	381.60' (8" PVC TO MH 85)	48" Manhole
MH 101	387.77'		377.00' (8" Ductile Iron TO MH 102)	48" Manhole
MH 102	382.55'	375.20' (8" PVC FROM MH 31) 375.20' (8" Ductile Iron FROM MH 101)	375.00' (8" PVC TO MH 85)	48" Manhole
MH 107	390.03'	383.20' (8" PVC FROM MH 32)	383.00' (8" PVC TO MH 100)	48" Manhole
MH 114	348.00'	340.55' (12" Ductile Iron FROM MH 29)	339.89' (12" SDR-26 TO MH 30B)	48" Manhole
MH 2081	346.57'	335.99' (8" PVC FROM MH 2082)	335.79' (8" Ductile Iron TO)	48" Manhole
MH 2082	347.52'		338.04' (8" PVC TO MH 2081)	48" Manhole

	SAN	ITARY SEWER	PIPE TAI	BLE									
FROM - TO	UPSTREAM INVERT	DOWNSTREAM INVERT	SLOPE	LENGTH	DIA.	MATERIAL	FROM - TO	UPSTREAM INVERT	DOWNSTREAM INVERT	SLOPE	LENGTH	DIA.	MATERIAL
MH 9 - MH 10	383.68'	383.34'	0.50%	68.92 LF	8"	Ductile Iron	MH 64 - MH 65	367.33'	366.69'	0.53%	119.36 LF	8"	SDR-26
MH 10 - MH 87	383.14'	382.21'	0.50%	185.38 LF	8"	SDR-26	MH 65 - MH 86	366.49'	365.17'	0.50%	264.72 LF	8"	SDR-26
MH 11 - MH 12	380.28'	379.81'	0.50%	95.17 LF	8"	SDR-26	MH 66 - MH 67	363.45'	360.74'	0.73%	373.47 LF	8"	PVC
MH 12 - MH 13	379.61'	379.16'	0.50%	90.04 LF	8"	SDR-26	MH 67 - MH 68	358.03'	352.05'	1.97%	303.63 LF	8"	PVC
MH 13 - MH 14	378.96'	377.16'	0.50%	362.44 LF	8"	SDR-26	MH 68 - MH 94	351.00'	347.19'	3.89%	97.89 LF	12"	SDR-26
MH 14 - MH 15	376.96'	376.45'	0.50%	101.40 LF	8"	PVC	MH 69 - MH 70	344.03'	343.43'	0.51%	118.62 LF	12"	SDR-26
MH 15 - MH 15A	376.07'	375.53'	0.50%	108.17 LF	8"	Ductile Iron	MH 70 - MH 27	343.23'	343.04'	0.66%	28.17 LF	12"	SDR-26
MH 15A - MH 16	375.33'	373.93'	0.50%	279.70 LF	8"	SDR 26	MH 72 - MH 88	367.92'	365.36'	1.92%	133.67 LF	8"	Ductile Iron
MH 16 - MH 17	373.09'	372.38'	0.50%	143.75 LF	8"	SDR-26	MH 73 - MH 72	373.80'	368.12'	2.76%	205.45 LF	8"	Ductile Iron
MH 17 - MH 97	372.08'	371.65'	0.50%	86.61 LF	8"	PVC	MH 74 - MH 73	375.88'	375.35'	0.50%	105.25 LF	8"	PVC
MH 18 - MH 98	368.89'	366.50'	3.17%	75.57 LF	8"	PVC	MH 75 - MH 76	373.63'	359.21'	3.91%	369.16 LF	8"	SDR 26
MH 20 - MH 21	359.94'	359.18'	0.50%	151.59 LF	8"	PVC	MH 76 - MH 24	358.00'	356.00'	4.10%	48.82 LF	8"	SDR 26
MH 21 - MH 22	358.98'	358.40'	0.50%	115.99 LF	8"	PVC	MH 77 - MH 75	376.10'	373.87'	2.38%	93.47 LF	8"	PVC
MH 22 - MH 23	357.07'	356.37'	0.50%	139.17 LF	8"	Ductile Iron	MH 79 - MH 80	359.15'	358.93'	0.50%	44.15 LF	8"	Ductile Iron
MH 23 - MH 24	356.07'	355.33'	0.50%	148.81 LF	8"	SDR 26	MH 80 - MH 67	358.73'	358.23'	0.49%	102.17 LF	8"	PVC
MH 24 - MH 25	355.10'	354.94'	0.50%	31.70 LF	8"	SDR 26	MH 81 - MH 65	377.76'	375.87'	0.99%	190.90 LF	8"	DIP
MH 25 - MH 25B	354.74'	354.28'	0.51%	91.07 LF	8"	SDR-26	MH 85 - MH 62	372.62'	371.06'	0.50%	311.47 LF	8"	Ductile Iron
MH 25B - MH 26	354.08'	353.68'	0.51%	78.22 LF	8"	SDR-26	MH 86 - MH 66	364.97'	363.65'	0.50%	264.72 LF	8"	SDR-26
MH 26 - MH 70	353.48'	353.08'	0.96%	41.39 LF	8"	Ductile Iron	MH 87 - MH 11	382.01'	380.48'	0.50%	305.65 LF	8"	SDR-26
MH 27 - MH 28	342.84'	342.06'	0.50%	156.90 LF	12"	SDR-26	MH 88 - MH 20	365.16'	361.50'	1.36%	269.48 LF	8"	PVC
MH 28 - MH 29	341.86'	341.24'	0.50%	125.28 LF	12"	SDR-26	MH 89 - MH 90	382.08'	380.48'	1.26%	126.31 LF	8"	Ductile Iron
MH 29 - MH 114	341.04'	340.55'	0.50%	96.22 LF	12"	Ductile Iron	MH 90 - MH 91	380.28'	378.09'	1.79%	121.88 LF	8"	PVC
MH 30B - MH 30A	329.20'	329.00'	0.75%	26.50 LF	12"	SDR-26	MH 91 - MH 92	377.89'	377.62'	0.50%	55.91 LF	8"	Ductile Iron
MH 31 - MH 102	376.08'	375.20'	1.55%	56.92 LF	8"	PVC	MH 92 - MH 93	375.30'	374.63'	1.00%	66.91 LF	8"	Ductile Iron
MH 32 - MH 107	383.80'	383.20'	1.05%	57.07 LF	8"	PVC	MH 93 - MH 62	374.43'	369.20'	1.96%	267.33 LF	8"	PVC
MH 33 - MH 34	385.38'	384.18'	0.93%	129.01 LF	8"	PVC	MH 94 - MH 69	345.10'	344.23'	0.50%	173.63 LF	12"	Ductile Iron
MH 34 - MH 55	383.98'	383.41'	0.50%	113.10 LF	8"	PVC	MH 97 - MH 18	371.45'	369.29'	2.54%	84.91 LF	8"	PVC
MH 35 - MH 36	378.50'	377.30'	0.74%	161.68 LF	8"	PVC	MH 98 - MH 88	366.30'	366.20'	0.50%	20.95 LF	8"	PVC
MH 36 - MH 37	377.00'	375.40'	1.56%	102.70 LF	8"	PVC	MH 100 - MH 85	381.60'	375.00'	1.61%	409.31 LF	8"	PVC
MH 37 - MH 38	375.20'	374.69'	0.50%	102.70 LF	8"	PVC	MH 101 - MH 102	377.00'	375.20'	1.21%	149.00 LF	8"	Ductile Iron
MH 38 - MH 16	374.45'	373.77'	0.50%	135.48 LF	8"	PVC	MH 102 - MH 85	375.00'	372.82'	1.41%	155.15 LF	8"	PVC
MH 39 - MH 40	382.51'	381.35'	0.65%	178.89 LF	8"	PVC	MH 107 - MH 100	383.00'	382.00'	0.64%	155.19 LF	8"	PVC
MH 40 - MH 41	381.15'	380.64'	0.50%	102.28 LF	8"	PVC	MH 114 - MH 30B	339.89'	331.70'	9.50%	86.20 LF	12"	SDR-26
MH 41 - MH 42	380.44'	379.83'	0.50%	121.36 LF	8"	PVC	MH 2081 -	335.79'	334.53'	0.60%	208.71 LF	8"	Ductile Iron
MH 42 - MH 43	379.63'	379.14'	0.50%	97.03 LF	8"	PVC	MH 2082 - MH 2081	338.04'	335.99'	2.24%	91.39 LF	8"	PVC
MH 43 - MH 44	378.94'	378.53'	0.50%	83.37 LF	8"	PVC						•	1
MH 44 - MH 45	378.33'	377.70'	0.50%	126.18 LF	8"	PVC							
MH 45 - MH 16	377.50'	374.90'	1.88%	138.21 LF	8"	PVC							
MH 46 - MH 44	383.73'	380.70'	4.13%	73.40 LF	8"	PVC							
MH 47 - MH 48	384.40'	382.81'	2.31%	68.63 LF	8"	PVC							
MH 48 - MH 49	382.09'	381.02'	1.00%	106.63 LF	8"	PVC							
MH 49 - MH 13	380.82'	379.16'	0.50%	332.23 LF	8"	SDR-26							
MH 51 - MH 52	388.70'	384.90'	1.94%	195.71 LF	8"	PVC							
MH 52 - MH 54	384.70'	384.10'	0.63%	95.33 LF	8"	Ductile Iron							
		 				 							

PIPE MATERIAL DEPTH					
MATERIAL	DEPTH				
DIP (CLASS 1 BEDDING)	MIN. 3'-5' w/IN TRAFFIC AREA				
PVC - SDR 26	>5' w/IN TRAFFIC AREA				
PVC - SDR 35	36" - 54"				
PVC - SDR 26	12' - 20' NON-TRAFFIC AREA				
DIP	>20' w/DIRECTOR APPROVAL				

0.50% | 76.17 LF | 8" | Ductile Iron

0.50% | 418.16 LF | 8" | Ductile Iron

PVC

SDR-26

SDR-26

2.02% | 69.24 LF | 8"

0.50% | 126.81 LF | 8" |

0.47% | 136.67 LF | 8" |

1.61% | 115.71 LF |

383.79'

383.21'

380.30'

382.36'

369.00'

368.17'

378.90'

368.37'

367.53'

MH 54 - MH 55

MH 55 - MH 13

MH 60 - MH 14

MH 62 - MH 63

DIP AND APPROPRIATE PVC PIPE CAN BE INTERCHANGEABLE AS LONG AS CRITERIA LISTED ABOVE ARE MET.

N	IANHOLE SIZE REQUIREMENT	T
NHOLE DIAMETER	SEWER MAIN SIZE	DEPTH OF INSTALLATION
4'	8"- 12"	0' - 12'
5'	15"- 30"	12' - 20'
6'	36" - 54"	>20'

ALL CONSTRUCTION TO BE IN ACCORDANCE WITH ALL TOWN OF ROLESVILLE, CITY OF RALEIGH, NCDEQ AND NCDOT STANDARDS, SPECIFICATIONS, AND DETAILS

01/02/2024

DATE

09/17/2021

DRAWN BY R. WINGATE

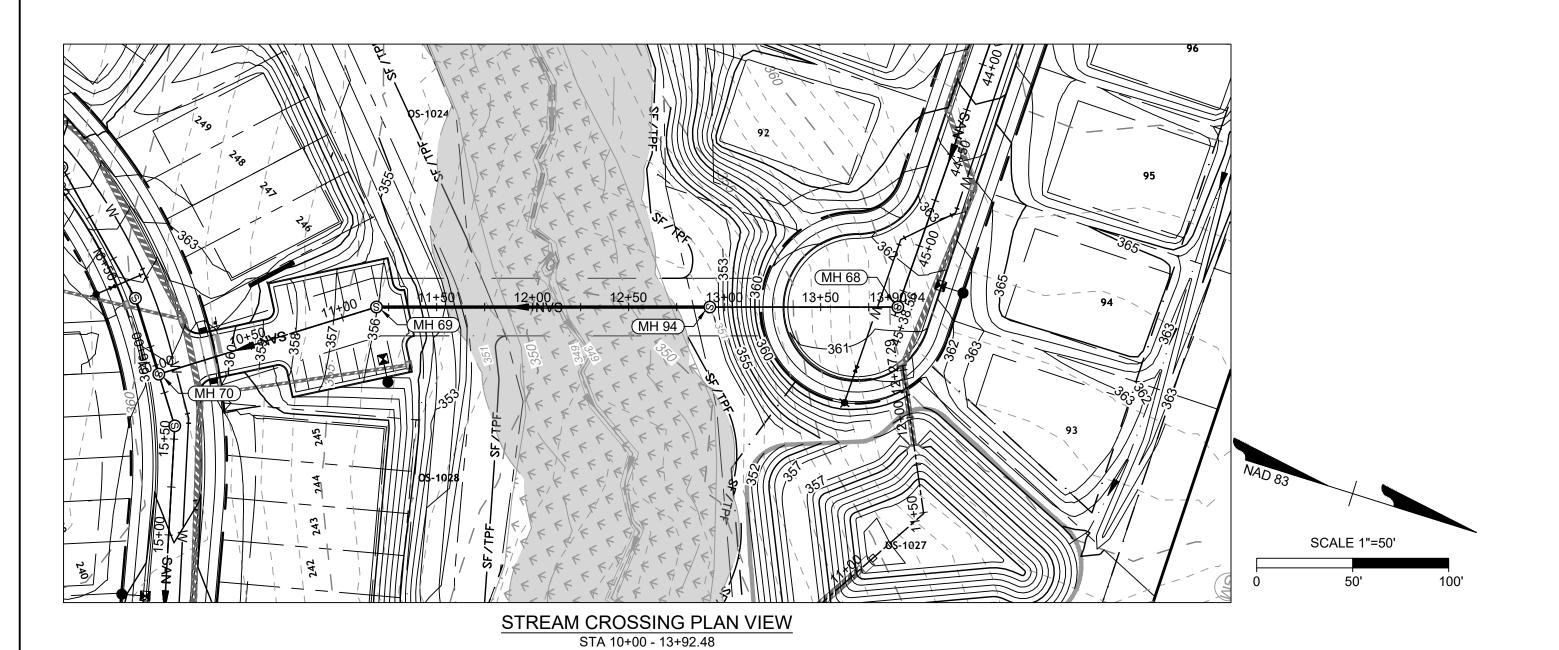
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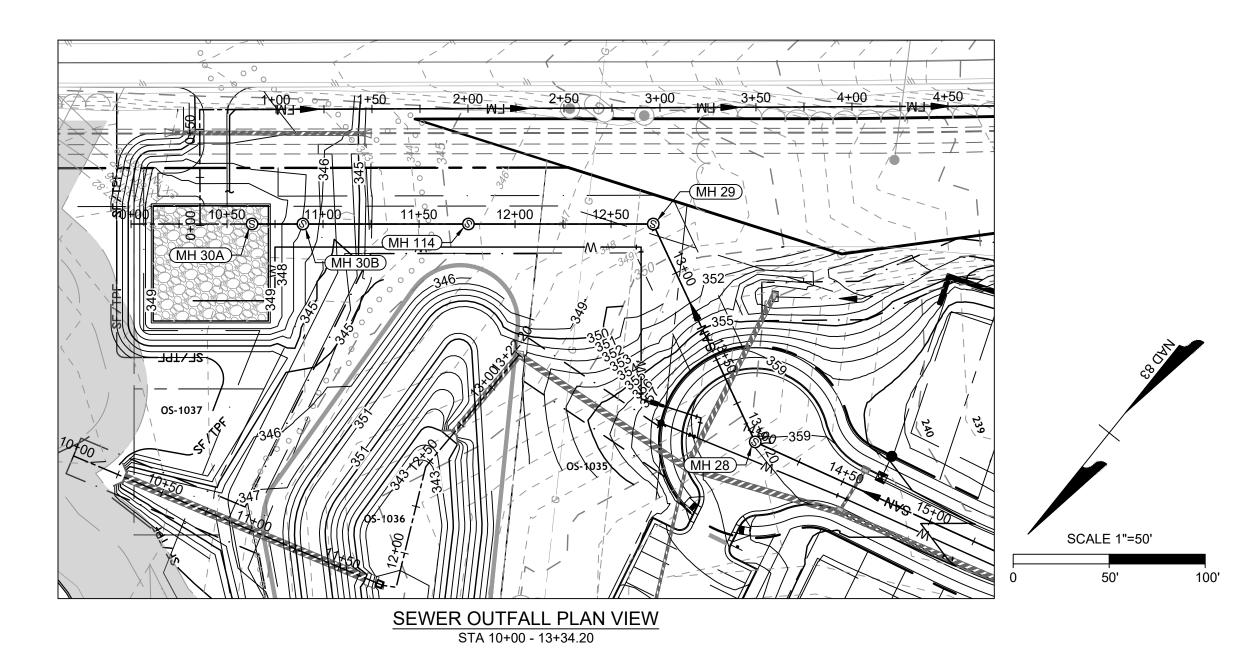
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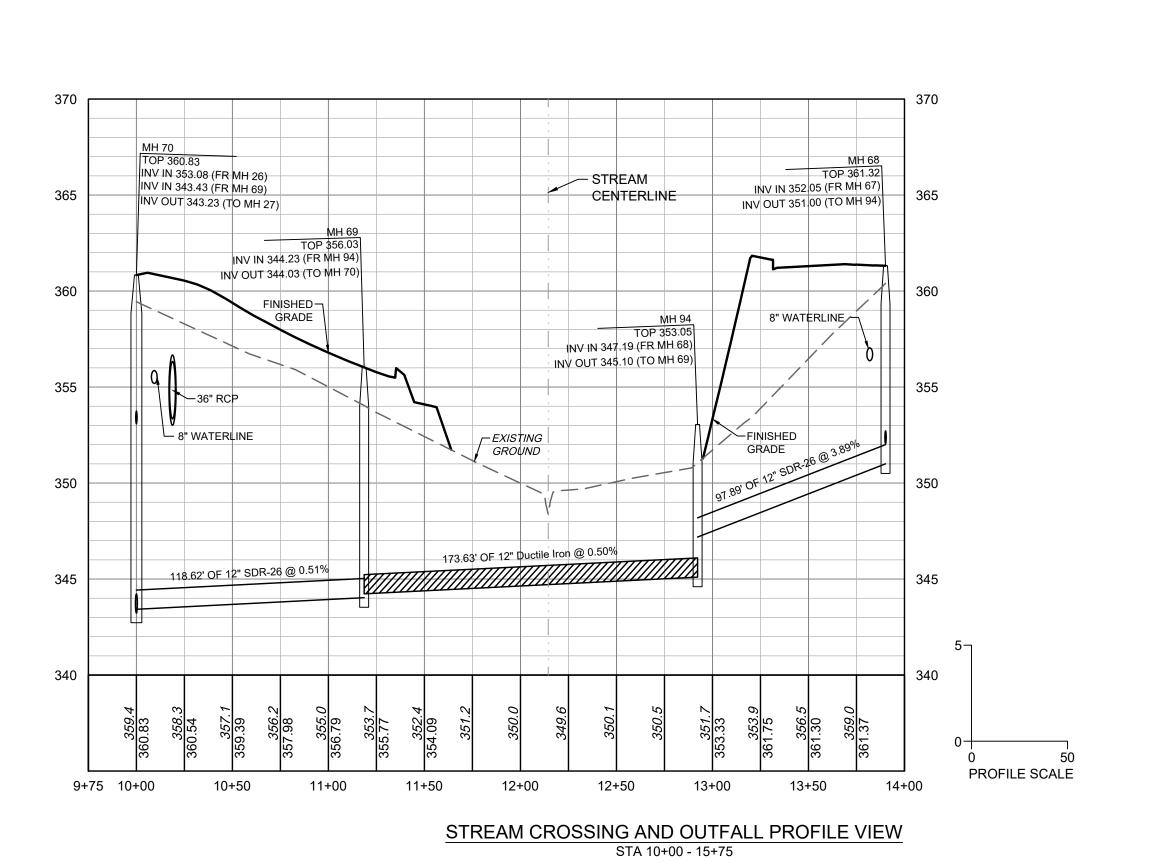
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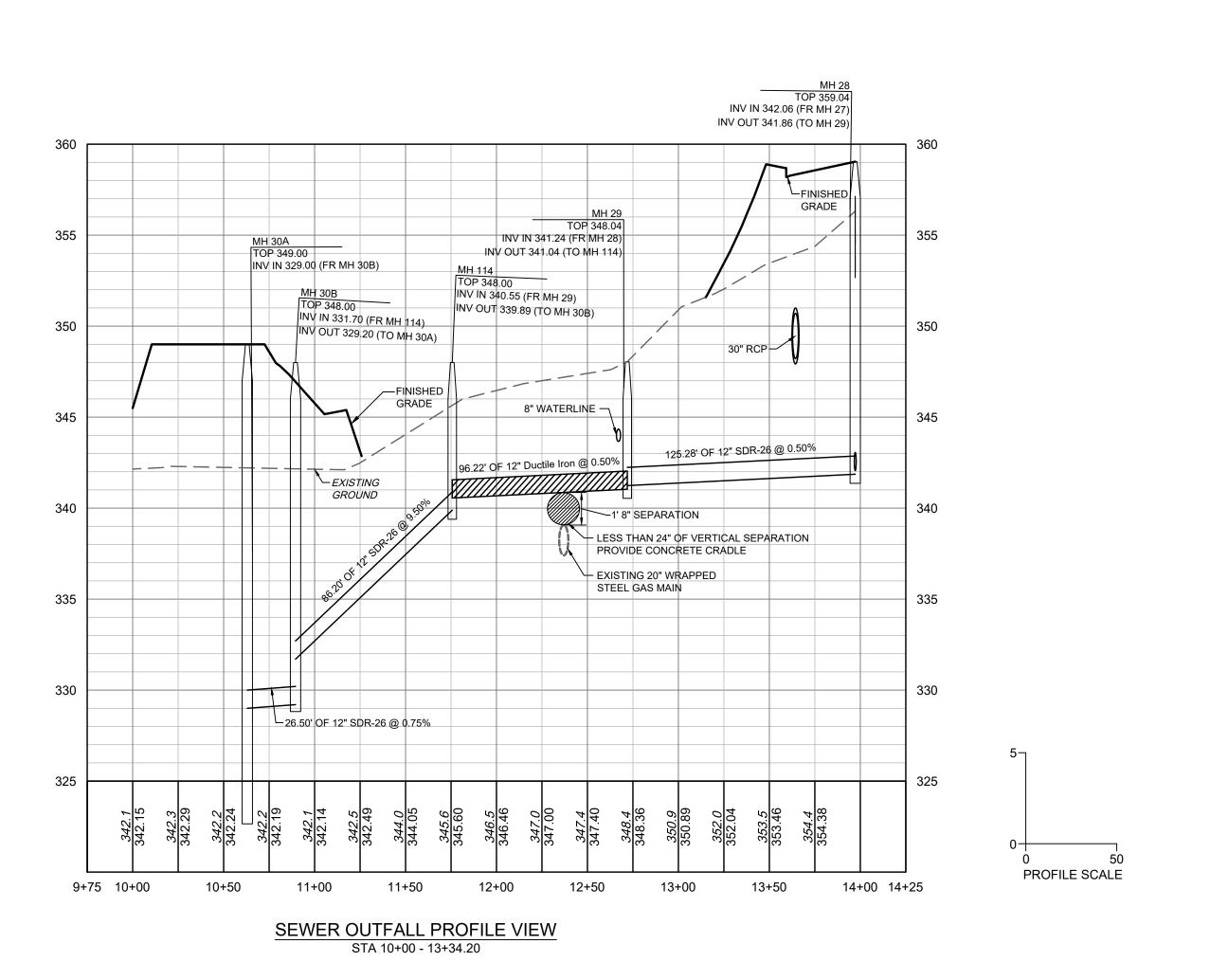
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ALL CONSTRUCTION TO BE IN ACCORDANCE WITH ALL TOWN OF ROLESVILLE, CITY OF RALEIGH, NCDEQ AND NCDOT STANDARDS, SPECIFICATIONS, AND DETAILS

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