CONSTRUCTION INFRASTRUCTURE DRAWINGS

BROADMOOR

CID-YR-XX

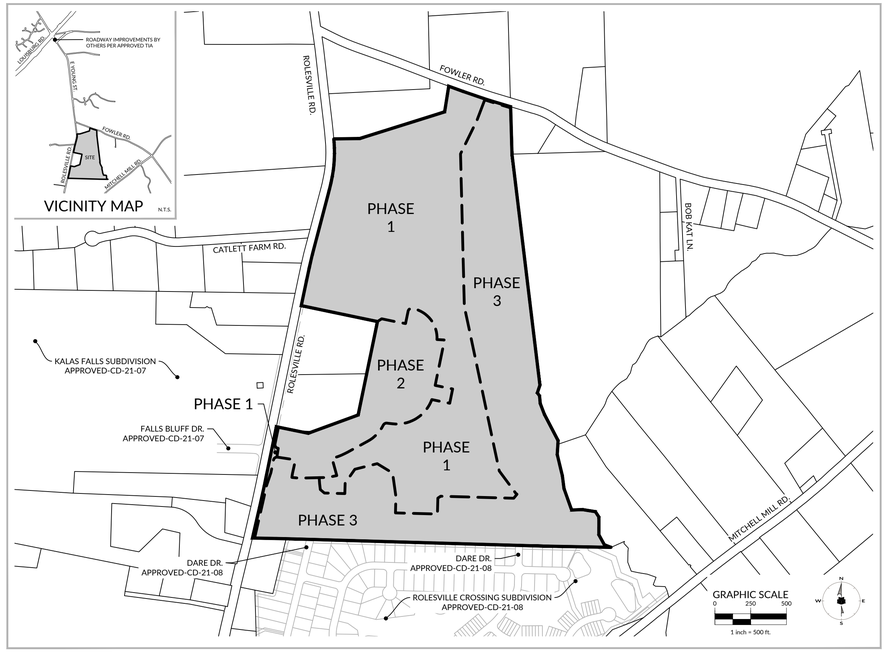
ROLESVILLE ROAD | ROLESVILLE, NC 27587 | WAKE COUNTY

PARCEL DATA

PIN:	1768511519 (25.61 AC. PORTION)	PIN:	1768500618
OWNER:	CARLYLE D & ALMA D WOODLIEF	OWNER:	BILLY CRAIG & ELLEN WOODLIEF
ADDRESS:	1321 ROLESVILLE RD, WAKE FOREST, NC 27587-6959	ADDRESS:	5101 OLD MILBURNIE RD, WENDELL, NC 27591-7817
ZONING:	RH-CZ	ZONING:	RH-CZ & RM-CZ
PIN:	1768409261 (11.96 AC. PORTION)	PIN:	1767590716 (13.84 AC. PORTION)
OWNER:	JANICE GAYLE W & HARRELL STALLINGS	OWNER:	DONNIE L & PATSY WOODLIEF
ADDRESS:	1512 ROLESVILLE RD, WAKE FOREST, NC 27587-6961	ADDRESS:	6609 FOWLER RD, ZEBULON, NC 27597-8303
ZONING:	RH-CZ & RM-CZ	ZONING:	RH-CZ & RM-CZ
PIN:	1767590335 (18.42 AC. PORTION)	PIN:	1767580938
OWNER:	BETTY JOYCE WOODLIEF	OWNER:	DWIGHT THOMAS WOODLIEF
ADDRESS:	1501 ROLESVILLE RD, WAKE FOREST, NC 27587-6962	ADDRESS:	6608 FOWLER RD, ZEBULON, NC 27597-8302
ZONING:	RH-CZ & RM-CZ	ZONING:	RM-CZ

SITE DATA TABLE

TOWN OF ROLESVILLE PROJECT NO.	PSP-24-02
ZONING APPROVAL	REZ-23-02
JURISDICTION	ROLESVILLE TOWN LIMITS (ANX-23-01)
TOTAL PROJECT AREA [AC.]	OVERALL SITE - 105.56 RH-CZ ZONING - 41.54 RM-CZ ZONING - 64.02
WATERSHED	BUFFALO CREEK
RIVER BASIN	NEUSE RIVER
FEMA FLOODPLAIN	FIRM 3720176800K, EFFECTIVE DATE 07/19/2022 FIRM 3720176600K, EFFECTIVE DATE 07/19/2022
EXISTING ZONING PER REZ-23-02	RH-CZ (RESIDENTIAL HIGH DENSITY), RM-CZ (RESIDENTIAL MEDIUM DENSITY)
EXISTING LAND USE	VACANT
PROPOSED NUMBER OF DWELLING UNITS	253
PROPOSED NUMBER OF SINGLE-FAMILY ATTACHED DWELLING UNIT (TOWNHOMES) LOTS	96
PROPOSED NUMBER OF SINGLE-FAMILY DETACHED DWELLING UNIT LOTS	157
REQUIRED OPEN SPACE [AC.]	RH-CZ ZONING - 6.23 (15%) RM-CZ ZONING - 25.61 (40%)
PROPOSED OPEN SPACE [AC.]	RH-CZ ZONING - 32.26 (78%) RM-CZ ZONING - 33.11 (52%)
EXISTING TREE COVERAGE [AC.]	26.16 (25% OF TOTAL PROJECT AREA)



1ST SUBMITTAL: NOVEMBER 1, 2024

SURVEY BENCHMARK

BENCHMARK IS LOCAL TO SITE.
SEE SHEET C1.03 FOR BENCHMARK INFORMATION.
VERTICAL DATUM BASED ON NAVD 88-GEOID 18.

INFRASTRUCTURE DATA TABLE

	PHASE 1	PHASE 2	PHASE 3	TOTALS
UNITS - SINGLE FAMILY DETACHED	29	61	67	**157**
UNITS - SINGLE FAMILY ATTACHED	96	-	-	**96**
STREETS [LF.]	3,775	2,624	2,281	**8,680**
8" WATER MAIN [LF.]	3,968	2,470	2,308	**8,746**
8" SEWER MAIN [LF.]	8,295	2,424	2,381	**13,100**
STORM DRAINAGE [LF.]	6,914	3,867	3,921	**14,702**
SCMs	4	-	-	**4**
EXISTING IMPERVIOUS SURFACE [SF.]	-	-	-	**3,060**
PROPOSED IMPERVIOUS SURFACE [SF.]	480,651	282,891	317,145	**1,080,687**
SIDEWALK [LF.]	7,549	4,948	4,646	**17,143**
PUBLIC GREENWAY [LF.]	3,699	-	162	**3,861**

ZONING DATA TABLE

	RH-CZ	RM-CZ
PROPOSED DENSITY	2.31 UNITS/AC	2.45 UNITS/AC
MINIMUM LOT AREA REQUIRED	2,000 SF (ATTACHED)	5,000 SF*
MINIMUM LOT AREA PROPOSED	2,134 SF (ATTACHED)	5,022 SF*
MINIMUM LOT WIDTH REQUIRED	20' (ATTACHED)	40'*
MINIMUM LOT WIDTH PROPOSED	22'	41'*
MINIMUM BUILDING SETBACK (FRONT)	20'	20'*
MINIMUM BUILDING SETBACK (REAR)	15'	20'*
MINIMUM BUILDING SETBACK (SIDE)	0' INTERNAL (ATTACHED)	5'*
	10' END UNIT (ATTACHED)	N/A
REQUIRED MINIMUM BUILDING SETBACK (CORNER)	15'	10'*
MAXIMUM BUILDING HEIGHT	35'	35'
MINIMUM PARKING SPACES REQUIRED (TOWNHOME USE ONLY)	216	N/A
PROPOSED PARKING SPACES (TOWNHOME USE ONLY)	216	N/A

*PROJECT REZONING WAS SUBMITTED MARCH 2ND, 2023. THE AREA ZONED RM-CZ IS THEREFORE SUBJECT TO LDO SECTION 3.1.B CLUSTER REQUIREMENTS FOR MINIMUM LOT SIZE, WIDTH, & BUILDING SETBACKS IN PLACE PRIOR TO THE APRIL 4TH, 2023 LDO TEXT AMENDMENT TA-23-02.

NOTES

1. PURSUANT TO N.C.G.S 160D-108, PRELIMINARY SUBDIVISION PLAT AS PROPOSED IS REQUESTED TO BE REVIEWED UNDER THE LAND DEVELOPMENT ORDINANCE (LDO) EFFECTIVE JUNE 1, 2021, AND AMENDED IN DECEMBER, 2021 AND OCTOBER 4, 2022.
2. REFERENCE SHEET C2.02 FOR REZ-23-02 CONDITIONS OF APPROVAL

TOWN OF ROLESVILLE APPROVAL:

CONTACT LIST:

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811 Know what's below. Call before you dig.

NORTH CAROLINA PRELIMINARY NOT APPROVED FOR CONSTRUCTION LAWRENCE COOK

PREPARED BY:

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CARY, NC 27518
PHONE #: 919-606-0878
ATTENTION: KELLY RACE

PULTEGROUP

CONSTRUCTION
INFRASTRUCTURE DRAWINGS
BROADMOOR
CID-YR-XX
WR PROJECT NO. 23-0045
TOWN OF ROLESVILLE:
REVISIONS: XX/XX/XXXX
PER TOWN COMMENTS
INITIAL PLAN DATE: 11/01/2024

INDEX OF SHEETS

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C0.01	INDEX OF SHEETS
C0.02	GENERAL NOTES & LEGENDS
C0.03	GENERAL NOTES & LEGENDS
C1.00	OVERALL EXISTING CONDITIONS & DEMOLITION PLAN
C1.01	EXISTING CONDITIONS & DEMOLITION PLAN
C1.02	EXISTING CONDITIONS & DEMOLITION PLAN
C1.03	EXISTING CONDITIONS & DEMOLITION PLAN
C1.04	EXISTING CONDITIONS & DEMOLITION PLAN
C1.05	EXISTING CONDITIONS & DEMOLITION PLAN
C1.06	EXISTING CONDITIONS & DEMOLITION PLAN
C1.07	EXISTING CONDITIONS & DEMOLITION PLAN
C2.00	PHASING PLAN
C2.01	OPEN SPACE PLAN
C2.02	APPROVED CONCEPTUAL PLAN (REZ-23-02)
C3.00	OVERALL SITE PLAN
C3.01	SITE PLAN
C3.02	SITE PLAN
C3.03	SITE PLAN
C3.04	SITE PLAN
C3.05	SITE PLAN
C3.06	SITE PLAN
C3.07	SITE PLAN
C3.08	TYPICAL LOTS & ROADWAY SECTIONS
C4.00	OVERALL UTILITY PLAN
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C4.03	UTILITY PLAN
C4.04	UTILITY PLAN
C4.05	UTILITY PLAN
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C4.07	UTILITY PLAN
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C5.02	STORM DRAINAGE PLAN
C5.03	STORM DRAINAGE PLAN
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C6.02	GRADING PLAN
C6.03	GRADING PLAN
C6.04	GRADING PLAN
C6.05	GRADING PLAN
C6.06	GRADING PLAN
C6.07	GRADING PLAN
C7.00	OVERALL EROSION CONTROL PLAN (STAGE 1)
C7.01	EROSION CONTROL PLAN (STAGE 1)
C7.02	EROSION CONTROL PLAN (STAGE 1)
C7.03	EROSION CONTROL PLAN (STAGE 1)
C7.04	EROSION CONTROL PLAN (STAGE 1)
C7.05	EROSION CONTROL PLAN (STAGE 1)
C7.06	EROSION CONTROL PLAN (STAGE 1)
C7.07	EROSION CONTROL PLAN (STAGE 1)
C7.08	OVERALL EROSION CONTROL PLAN (STAGE 2)
C7.09	EROSION CONTROL PLAN (STAGE 2)
C7.10	EROSION CONTROL PLAN (STAGE 2)
C7.11	EROSION CONTROL PLAN (STAGE 2)
C7.12	EROSION CONTROL PLAN (STAGE 2)
C7.13	EROSION CONTROL PLAN (STAGE 2)
C7.14	EROSION CONTROL PLAN (STAGE 2)
C7.15	EROSION CONTROL PLAN (STAGE 2)
C7.16	EROSION CONTROL NOTES & CALCULATIONS
C8.01	PICASSO DRIVE & SEURAT PLACE PLAN & PROFILE
C8.02	RODIN WAY PLAN & PROFILE
C8.03	BEARDEN STREET PLAN & PROFILE
C8.04	SISLEY PLACE PLAN & PROFILE
C8.05	TITIAN AVENUE PLAN & PROFILE (9+50 - 19+00)
C8.06	TITIAN AVENUE PLAN & PROFILE (18+50 - 27+50)
C8.07	DELACROIX DRIVE PLAN & PROFILE (9+50 - 18+50)
C8.08	DELACROIX DRIVE PLAN & PROFILE (18+50 - 27+50)
C8.09	MUNCH DRIVE PLAN & PROFILE (9+50 - 14+50)
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C8.12	GREENWAY 1 PLAN & PROFILE (10+00 - 25+00)
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C8.13	GREENWAY 1 PLAN & PROFILE (39+50 - 48+00)
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C8.18	SEWER OUTFALL A (39+50 - 52+00) PLAN & PROFILE
C8.19	SEWER OUTFALLS B & C PLAN & PROFILE
C8.20	SEWER OUTFALLS D & E PLAN & PROFILE
C9.01	SCM 1 PLAN & PROFILE
C9.02	SCM 2 PLAN & PROFILE
C9.03	SCM 3 PLAN & PROFILE
C9.04	SCM 4 PLAN & PROFILE
C9.05	SCM DETAILS
C10.00	SITE DETAILS
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C10.06	NCDOT DETAILS
C10.07	NCDOT DETAILS
C10.08	EROSION CONTROL DETAILS
C10.09	EROSION CONTROL DETAILS
C11.01	SIGNAGE & PAVEMENT MARKINGS PLAN
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C11.03	SIGNAGE & PAVEMENT MARKINGS PLAN
C11.04	SIGNAGE & PAVEMENT MARKINGS PLAN
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C11.07	SIGNAGE & PAVEMENT MARKINGS PLAN
L1.00	OVERALL LANDSCAPE PLAN
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L1.07	LANDSCAPE PLAN
L1.08	LANDSCAPE DETAILS
SL1.00	LIGHTING EXHIBIT

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CONSTRUCTION INFRASTRUCTURE DRAWINGS
BROADMOOR
CID-YR-XX
ROLESVILLE ROAD | ROLESVILLE, NC 27587 | WAKE COUNTY

NORTH CAROLINA PROFESSIONAL ENGINEER TERRENCE COOK
PRELIMINARY
NOT APPROVED FOR CONSTRUCTION

INITIAL PLAN DATE: 11/01/2024
REVISIONS:

WR JOB NUMBER 23-0045
DRN: WR DGN: WR CKD: WR

INDEX OF SHEETS

C0.01

SURVEY NOTES:

1. THE FOLLOWING INFORMATION WAS USED FOR THE EXISTING SURVEY:
    a. COORDINATE SYSTEM: NORTH CAROLINA STATE PLANE FOOT
    b. PROJECT HORIZONTAL DATUM: NAD 83/2011
    c. VERTICAL DATUM: NAVD 88
    d. COORDINATE UNITS: US SURVEY FEET
    e. VERTICAL UNITS: US SURVEY FEET
2. PROPERTY BOUNDARY SHOWN AS PROVIDED BY MSS LAND CONSULTANTS, DATED 03/07/2023.
3. TOPOGRAPHIC SURVEY SHOWN AS PROVIDED BY WITHERSRAVENEL, DATED 04/11/2024.
4. WETLANDS, STREAMS, AND RIPARIAN BUFFERS SHOWN AS PROVIDED BY WITHERSRAVENEL ENVIRONMENTAL DEPARTMENT, DATED 01/12/2023, AND APPROVED BY USACE ON 09/28/2023 (SAW-2023-01242) AND NCDWR ON 08/28/2023 (NBRRO #23-170V2).
5. TREE SURVEY SHOWN AS PROVIDED BY WITHERSRAVENEL, DATED 12/23/2023.
6. PROPERTY DOES FALL WITHIN FEMA FLOODPLAIN PER FEMA FIRM 3720176800K, EFFECTIVE DATE 07/19/2022, AND 3720176600K, EFFECTIVE DATE 07/19/2022.
7. NO DETERMINATION HAS BEEN MADE BY THE SURVEYOR AS TO THE FOLLOWING: UNDERGROUND STORAGE FACILITIES, UNDERGROUND UTILITIES, GRAVES, CEMETERIES, BURIAL GROUNDS, HAZARDOUS WASTE DEPOSITS OR MATERIALS.
8. THE UNDERGROUND UTILITIES SHOWN HEREON WERE MARKED BY WITHERSRAVENEL ON 03/05/2024 AND THOSE MARKS WERE FIELD LOCATED BY WITHERSRAVENEL ON 03/05/2024. THE ACCURACY OF THE FIELD MARKED UNDERGROUND UTILITIES IS ± 24" INCHES, UNLESS OTHERWISE INDICATED. THE DEPTH OF THESE UTILITIES IS UNKNOWN, UNLESS OTHERWISE INDICATED.
9. SURVEY CONTROL POINTS PROVIDED IN NC STATE PLANE COORDINATES. ALL PROPOSED COORDINATES ARE GROUND COORDINATES. THE CONTRACTOR'S SURVEYOR IS RESPONSIBLE FOR ANY CONVERSIONS NEEDED FOR THE STAKEOUT OF THE PROPOSED GROUND COORDINATES SHOWN.
10. CONTRACTOR SHALL BE RESPONSIBLE FOR ESTABLISHING ADDITIONAL CONTROLS THAT MAY BE NEEDED THROUGHOUT THE PROJECT.

GENERAL NOTES:

1. WORK ON THIS PROJECT SHALL CONFORM TO THE LATEST NORTH CAROLINA DEPARTMENT OF TRANSPORTATION (NCDOT) STANDARD SPECIFICATIONS FOR ROADS AND STRUCTURES, THE NORTH CAROLINA EROSION AND SEDIMENT CONTROL PLANNING AND DESIGN MANUAL, TOWN OF ROLESVILLE STANDARDS AND SPECIFICATIONS, GEOTECHNICAL REPORTS, AND ANY OTHER APPLICABLE DESIGN STANDARDS AT THE TIME OF PLAN APPROVAL. IN THE EVENT OF CONFLICT BETWEEN ANY OF THESE STANDARDS, SPECIFICATIONS OR PLANS, THE MOST STRINGENT SHALL GOVERN, UNLESS OTHERWISE NOTED IN THESE PLANS.
2. THE CONTRACTOR SHALL BE HELD RESPONSIBLE FOR HAVING VISITED THE SITE AND HAVING FAMILIARIZED THEMSELVES WITH THE EXISTING CONDITIONS PRIOR TO COMMENCING WORK.
3. ANY DISCREPANCIES, INCONSISTENCIES OR AMBIGUITIES FOUND BETWEEN THE DRAWINGS, SPECIFICATIONS, AND SITE CONDITIONS SHALL BE IMMEDIATELY REPORTED TO THE ENGINEER IN WRITING. WORK DONE BY THE CONTRACTOR AFTER THE DISCOVERY OF SUCH DISCREPANCIES, INCONSISTENCIES, OR AMBIGUITIES WITHOUT WRITTEN CLARIFICATION FROM THE ENGINEER AND APPROVAL BY OWNER SHALL BE DONE AT THE CONTRACTOR'S RISK AND EXPENSE.
4. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR ALL JOBSITE SAFETY DURING ALL PHASES OF CONSTRUCTION. ALL WORK SHALL COMPLY WITH MUNICIPAL, COUNTY AND STATE REGULATIONS, AND OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA) STANDARDS. CONTRACTOR SHALL COMPLY WITH THE LATEST REVISIONS AND INTERPRETATIONS OF THE DEPARTMENT OF LABOR SAFETY AND HEALTH REGULATIONS FOR CONSTRUCTION PROMULGATED UNDER THE OSHA ACT.
5. THE CONTRACTOR SHALL CALL “811” FOR PROPER IDENTIFICATION OF EXISTING UTILITIES AT LEAST 72 HOURS PRIOR TO ANY DEMOLITION, GRADING, OR CONSTRUCTION ACTIVITY.
6. THE CONTRACTOR IS RESPONSIBLE FOR HORIZONTALLY AND VERTICALLY LOCATING, AND SUBSEQUENTLY PROTECTING, ALL PUBLIC AND PRIVATE UTILITIES (SHOWN OR NOT SHOWN) THAT LIE IN OR ADJACENT TO THE PROJECT SITE. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK AND AGREES TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE OCCASIONED BY THE UNDERGROUND UTILITIES. ALL UTILITIES AND FACILITIES ARE NOT NECESSARILY SHOWN. HAND DIGGING TO PROTECT UTILITIES FROM DAMAGE MAY BE REQUIRED.
7. ANY UTILITIES AND EXISTING SITE ELEMENTS (I.E. SIGNS, ROADWAYS, PATHS, STRUCTURES, NATURAL VEGETATION, OTHER EXISTING PROPERTY ITEMS, ETC.) DAMAGED DURING THE PROJECT BY THE CONTRACTOR'S WORKERS OR EQUIPMENT SHALL BE PROMPTLY REPAIRED AT THE CONTRACTOR'S EXPENSE TO THE SATISFACTION OF THE OWNER, UTILITY OWNER, REGULATORY AGENCY, AND ENGINEER.
8. CONTRACTOR SHALL MAKE EVERY EFFORT TO PRESERVE PROPERTY IRONS, MONUMENTS, OTHER PERMANENT POINTS AND LINES OF REFERENCE AND CONSTRUCTION STAKES. A NORTH CAROLINA LICENSED LAND SURVEYOR SHALL REPLACE, AT THE CONTRACTOR'S EXPENSE, PROPERTY IRONS, MONUMENTS, OTHER PERMANENT POINTS AND LINES OF REFERENCE AND CONSTRUCTION STAKES DESTROYED BY THE CONTRACTOR.
9. CONTRACTOR SHALL PLAN AND CONSTRUCT WORK IN ORDER TO CAUSE MINIMUM DISTURBANCE TO THE OWNER, ADJACENT PROPERTIES AND THE PUBLIC. CONTRACTOR SHALL COORDINATE WITH AND OBTAIN APPROVAL FROM STATE AND LOCAL REGULATORY AGENCIES ON TRAFFIC CONTROL PLANS.
10. ADJACENT STREETS AND SIDEWALKS SHALL BE MAINTAINED IN AN UNOBSTRUCTED, CLEAN CONDITION, MUD AND DUST-FREE.
11. THE CONTRACTOR SHALL HAVE A COMPLETE SET OF CONTRACT DOCUMENTS AS WELL AS ALL PERMIT APPROVALS AND EXECUTED EASEMENTS ON THE JOB SITE AT ALL TIMES.
12. CONSTRUCTION STAKEOUT FOR THIS PROJECT MAY BE PERFORMED BY THE CONTRACTOR, USING A DIGITAL (CADD) FILE PROVIDED BY THE ENGINEER. THE CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY OF ANY DISCREPANCIES FOUND BETWEEN THE DIGITAL FILE AND THE CRITICAL STAKING DIMENSIONS SHOWN ON THIS PLAN (I.E. PAVEMENT WIDTHS, CURB RADII, BUILDING SETBACKS, BUILDING FOOTPRINTS, ETC.). ANY MODIFICATIONS MADE BY OTHERS TO THE DIGITAL FILE PROVIDED BY THE ENGINEER SHALL RENDER IT VOID.
13. WETLANDS SHOWN WILL HAVE DEED RESTRICTION AND SHALL NOT BE CLEARED, DRAINED, OR OTHERWISE DISTURBED UNLESS SPECIFICALLY PERMITTED BY THE UNITED STATES ARMY CORPS OF ENGINEERS (USACE) OR NC DIVISION OF COASTAL MANAGEMENT (DCM) OR NC DIVISION OF WATER RESOURCES (DWR), AS APPLICABLE.
14. ANY WETLANDS THAT ARE TEMPORARILY IMPACTED DUE TO CONSTRUCTION ACTIVITIES SHALL BE RETURNED TO PRE-CONSTRUCTION GRADE AND SEEDED WITH A WETLAND SEED MIX IN ACCORDANCE WITH THE SEDIMENT & EROSION CONTROL PLAN.
15. CONTRACTOR SHALL FURNISH AND INSTALL ALL PAVEMENT MARKINGS FOR FIRE LANES, PARKING STALLS, ACCESSIBLE PARKING SYMBOLS, AND MISCELLANEOUS STRIPING WITHIN PARKING LOT AND AROUND BUILDINGS AS SHOWN ON THE PLANS. ALL PAVEMENT MARKING MATERIALS SHALL ADHERE TO NCDOT STANDARDS, UNLESS NOTED OTHERWISE.
16. ACCESSIBLE ROUTES AND PARKING AREAS MUST BE PROVIDED IN ACCORDANCE WITH THE CURRENT NORTH CAROLINA BUILDING CODE AND ADA STANDARDS FOR ACCESSIBLE DESIGN.
17. WHERE PROPOSED CURB AND GUTTER TIES TO EXISTING CURB OR CURB AND GUTTER, A TRANSITION OF 10' SHALL BE MADE TO CONFORM TO THE EXISTING HEIGHTS AND SHAPES, UNLESS OTHERWISE SHOWN ON THE PLANS.
18. ALL EXPANSION CURB JOINTS SHALL EXTEND THROUGH THE CURB. MINIMUM LENGTH OF OFFSET JOINTS AT RADIUS POINTS IS 1.5', UNLESS OTHERWISE SHOWN ON PLANS. ALL JOINTS SHALL BE SEALED WITH JOINT SEALANT.
19. TESTING OF MATERIAL REQUIRED FOR THE CONSTRUCTION OF THE IMPROVEMENTS SHALL BE PERFORMED BY AN APPROVED AGENCY FOR TESTING MATERIALS. THE NOMINATION OF THE TESTING LAB AND THE PAYMENT OF EACH TESTING SERVICES SHALL BE MADE BY THE OWNER. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO SHOW BY STANDARD TESTING PROCEDURES THAT THE WORK CONSTRUCTED MEETS THE REQUIREMENT OF THE NCDOT AND MUNICIPAL SPECIFICATIONS.

DEMOLITION NOTES:

1. CONTRACTOR SHALL COORDINATE WITH THE OWNER AND UTILITY OWNER TO PROPERLY MAINTAIN, REMOVE OR RELOCATE EXISTING SERVICE CONNECTIONS WHEN NECESSARY.
2. CONTRACTOR SHALL BE RESPONSIBLE FOR NOTIFYING SURROUNDING NEIGHBORS ABOUT ANY POTENTIAL INTERRUPTION TO SERVICE OF ANY KIND.
3. EXISTING UTILITIES NOT INTENDED FOR DEMOLITION SHALL BE MAINTAINED, PROTECTED AND UNDISTURBED DURING CONSTRUCTION ACTIVITIES.
4. THE CONTRACTOR SHALL PROTECT ALL ADJACENT PROPERTY, STRUCTURES AND UTILITIES. DAMAGE TO PROPERTIES OF OTHERS DUE TO THE CONTRACTOR'S ACTIVITIES SHALL BE AT THE CONTRACTOR'S EXPENSE AND SHALL BE REPLACED BY THE CONTRACTOR TO THE SATISFACTION OF THE OWNER.
5. ALL MATERIAL CLEARED OR DEMOLISHED BY THE CONTRACTOR IN ORDER TO CONSTRUCT THE WORK SHALL BECOME THE PROPERTY OF THE CONTRACTOR, UNLESS OTHERWISE NOTED AND SHALL BE PROPERLY DISPOSED OF OFF-SITE.
6. SAW CUTS OF EXISTING PAVEMENTS, CURBS, GUTTERS AND SIDEWALKS SHALL PRODUCE A NEAT VERTICAL EDGE.
7. ALL DEMOLITION WORK SHALL BE DONE IN STRICT ACCORDANCE WITH AUTHORITIES HAVING JURISDICTION.
8. ALL PERMITS REQUIRED FOR THE DEMOLITION WORK SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO OBTAIN PRIOR TO THE START OF DEMOLITION ACTIVITIES.

STORM DRAINAGE NOTES:

1. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH CURRENT TOWN OF ROLESVILLE STANDARDS AND NCDOT STANDARD SPECIFICATIONS AND DETAILS.
2. ALL PUBLIC STORM DRAINAGE FRAMES, GRATES, AND HOODS SHALL BE STAMPED WITH “DRAINS TO RIVER” IN ACCORDANCE WITH TOWN OF ROLESVILLE AND NCDOT STANDARDS.
3. RIM ELEVATION GIVEN FOR CATCH BASIN (CB) IS TOP OF CURB, YARD INLET (YI) IS OPENING INVERT FOR SLAB TOP, DROP INLET (DI) IS TOP OF GRATE AND JUNCTION BOX (JB) IS TOP OF RIM.
4. CONTRACTOR SHALL VERIFY AND COORDINATE ALL DIMENSIONS SHOWN, INCLUDING, BUT NOT LIMITED TO THE HORIZONTAL AND VERTICAL LOCATION OF STRUCTURES AND UTILITIES CROSSING THE STORM SEWER PIPE.
5. CONTRACTOR SHALL PROVIDE ALL MATERIALS AND APPURTENANCES NECESSARY FOR COMPLETE INSTALLATION OF THE STORM SEWER DRAINAGE SYSTEM.
6. ALL STORM SEWER PIPE SHALL BE MINIMUM CLASS III REINFORCED CONCRETE PIPE (RCP), UNLESS OTHERWISE NOTED.
7. IF THERE ARE DISCREPANCIES BETWEEN THE PLAN AND FIELD CONDITIONS RELATED TO WHERE THE PROPOSED STORM SEWER PIPING TIES TO EXISTING STRUCTURES, PIPES, SWALES, ETC., THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ENGINEER AND OWNER. AFTER NOTIFICATION TO ENGINEER AND OWNER, THE CONTRACTOR SHALL PERFORM THE AGREED UPON FIELD ADJUSTMENTS TO MATCH THE LOCATIONS OF THESE EXISTING FEATURES.
8. ALL STORM SEWER PIPE SHALL HAVE A MINIMUM COVER OF 2 FEET FROM FINISHED SUBGRADE TO THE PIPE CROWN IN TRAFFIC BEARING AREAS, UNLESS APPROVED BY AUTHORITIES HAVING JURISDICTION.
9. ALL STORM SEWER PIPE SHALL HAVE A MINIMUM COVER OF 1 FOOT TO THE PIPE CROWN IN NON-TRAFFIC BEARING AREAS.
10. THE STORM PIPE LENGTHS AS SHOWN ON THE DRAWINGS REPRESENTS THE DISTANCE FROM CENTER TO CENTER OF THE RESPECTIVE STRUCTURES.
11. STORM SEWER UTILITY STRUCTURE TABLES ARE AVAILABLE UPON REQUEST.

GRADING NOTES:

1. ALL AREAS SHALL BE GRADED FOR POSITIVE DRAINAGE, AND AS SHOWN ON THESE PLANS. THE CONTRACTOR SHALL MAINTAIN ADEQUATE SITE DRAINAGE DURING ALL PHASES OF CONSTRUCTION. IN ADDITION TO THE MEASURES SHOWN IN THESE PLANS, THE CONTRACTOR SHALL USE INTERIM DIVERSION DITCHES, BERMS, OR OTHER METHODS AS REQUIRED TO DIRECT DRAINAGE AS SHOWN ON THESE PLANS AND TO PREVENT SILT AND CONSTRUCTION DEBRIS FROM FLOWING ONTO ADJACENT PROPERTIES, ROADWAYS, AND ENVIRONMENTALLY SENSITIVE AREAS SUCH AS BUFFERS AND WETLANDS. THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ENGINEER AND OWNER IN WRITING OF ANY DISCREPANCIES OR CONCERNS.
2. ALL SOILS USED FOR BACKFILL SHALL BE FREE OF UNSATISFACTORY MATERIALS INCLUDING ROCK OR GRAVEL LARGER THAN 3 INCHES IN ANY DIMENSION, DEBRIS, WASTE, FROZEN MATERIALS, VEGETATION AND OTHER DELETERIOUS MATTER. ROCK OR GRAVEL LARGER THAN 2 INCHES IN ANY DIMENSION SHALL NOT BE PLACED IN THE IN THE FINAL LIFT (MINIMUM OF 6 INCHES). UNSATISFACTORY MATERIALS ALSO INCLUDE MAN-MADE FILLS AND REFUSE DEBRIS DERIVED FROM ANY SOURCE. REFER TO FINAL GEOTECHNICAL REPORT FOR ANY SPECIAL FILL MATERIAL REQUIRED FOR THIS PROJECT, IF ANY. THE CONTRACTOR SHALL CONSULT WITH THE SITE GEOTECHNICAL ENGINEER PRIOR TO BACKFILL PLACEMENT TO VERIFY BACKFILL MEETS PROJECT REQUIREMENTS.
3. THE CONTRACTOR IS RESPONSIBLE FOR ENSURING ALL SOIL TESTING IS PERFORMED AND THE RESULTS FORWARDED TO THE ENGINEER AND OWNER.
4. MATERIALS USED TO CONSTRUCT EMBANKMENTS FOR ANY PURPOSE, BACKFILL AROUND DRAINAGE STRUCTURES, OR IN UTILITY TRENCHES FOR ANY OTHER DEPRESSION REQUIRING FILL OR BACKFILL SHALL MEET THE REQUIREMENTS OF THE PROJECT GEOTECHNICAL ENGINEER RECOMMENDATIONS.
5. THE CONTRACTOR SHALL, PRIOR TO ANY OPERATIONS INVOLVING FILLING OR BACKFILLING, SUBMIT TO THE OWNER AND PROJECT GEOTECHNICAL ENGINEER THE RESULTS OF THE PROCTOR TEST TOGETHER WITH A CERTIFICATION THAT THE SOIL TESTED IS REPRESENTATIVE OF THE MATERIALS TO BE USED ON THE PROJECT. TESTS SHALL BE CONDUCTED BY A NORTH CAROLINA CERTIFIED MATERIALS TESTING LABORATORY AND CERTIFICATIONS MADE BY A LICENSED PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF NORTH CAROLINA REPRESENTING THE LABORATORY.
6. ALL PAVEMENT SUBGRADES SHALL BE SCARIFIED TO A DEPTH OF 8 INCHES AND COMPACTED TO A MINIMUM DENSITY OF 100 PERCENT OF ASTM D1557 DENSITY AT OPTIMUM MOISTURE CONTENT UNLESS OTHERWISE SHOWN ON THE CONSTRUCTION PLANS OR AS DIRECTED BY THE GEOTECHNICAL ENGINEER.
7. RETAINING SYSTEMS PROVIDING A CUMULATIVE VERTICAL RELIEF GREATER THAN FOUR FEET (4') IN HEIGHT WITHIN A HORIZONTAL SEPARATION DISTANCE OF 50 FEET OR LESS, INCLUDING RETAINING WALLS OR MECHANICALLY STABILIZED EARTH WALLS, SHALL BE DESIGNED UNDER THE RESPONSIBLE CHARGE OF A REGISTERED DESIGN PROFESSIONAL. RETAINING WALL SYSTEMS SHALL MEET THE REQUIREMENTS OF THE NC BUILDING CODE AND LOCAL JURISDICTION.
8. CONTOURS AND GUTTER GRADIENTS ARE APPROXIMATE. SPOT ELEVATIONS ARE TO BE USED IN CASE OF DISCREPANCY.
9. CONTRACTOR SHALL OBTAIN ALL PERMITS AS REQUIRED FOR BLASTING ROCK IF BLASTING ROCK IS REQUIRED. CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR COMPLYING WITH ALL REQUIREMENTS OF AUTHORITIES HAVING JURISDICTION RELATED TO BLASTING AND SAFETY.
10. CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DEWATERING NECESSARY TO CONSTRUCT THE PROJECT AS SHOWN ON THE PLANS. DEWATERING SHALL BE INCIDENTAL TO GRADING OPERATIONS.
11. MASS GRADING OPERATIONS SHALL BE PHASED TO LIMIT EXPOSED AREAS. PRIOR TO PROCEEDING TO ANOTHER PHASE, THE PRESENT PHASE SHALL BE STABILIZED WITH ADEQUATE GROUND COVER SUFFICIENT TO RESTRAIN EROSION AND HAVE ALL INFRASTRUCTURE INSTALLED. SEE GROUND COVER REQUIREMENTS WITHIN THESE PLANS OR CONSULT THE MUNICIPAL EROSION CONTROL SPECIALIST.
12. THE FRAMES AND COVERS OF ALL EXISTING AND PROPOSED DRAINAGE, SANITARY SEWER, WATER MAIN, GAS AND ELECTRIC UTILITY STRUCTURES SHALL BE ADJUSTED TO MATCH PROPOSED FINISHED ELEVATIONS AND SLOPES UNLESS OTHERWISE SHOWN ON THE PLANS.
13. BEFORE ANY EARTHWORK COMMENCES, THE CONTRACTOR SHALL STAKE OUT AND MARK THE LIMITS OF CONSTRUCTION AND OTHER ITEMS ESTABLISHED IN THE PLANS. THE CONTRACTOR SHALL PROVIDE ALL NECESSARY SURVEYING FOR LINE AND GRADE CONTROL POINTS RELATED TO EARTHWORK.
14. ZONE 1 NEUSE RIPARIAN BUFFER SHALL NOT BE DISTURBED DURING CONSTRUCTION, UNLESS OTHERWISE NOTED. ZONE 1 NEUSE RIPARIAN BUFFER SHALL EXTEND 30' FROM TOP OF BANK AS SHOWN ON THE PLANS. ZONE 2 NEUSE RIPARIAN BUFFER SHALL BE CLEARED AND GRUBBED IN THE AREAS SHOWN ON THE PLANS. ZONE 2 NEUSE RIPARIAN BUFFER SHALL EXTEND 20' INLAND FROM THE ZONE 1 NEUSE RIPARIAN PERIMETER (50' FROM TOP OF BANK). CONSTRUCTION ACTIVITY SHALL BE KEPT AT A MINIMUM IN THIS AREA. ALL TREES WITHIN ZONE 2 NEUSE RIPARIAN BUFFER SHALL BE FELLED AWAY FROM ZONE 1 NEUSE RIPARIAN BUFFER.
15. THE PLACEMENT OF ANY FILL MATERIAL MUST BE CONDUCTED UNDER THE OBSERVATION OF A QUALIFIED LICENSED GEOTECHNICAL ENGINEER AND UPON COMPLETION OF THE EARTHWORK ACTIVITIES THE OWNER AND JURISDICTION MUST BE PROVIDED WITH A FINAL GRADING REPORT THAT INCLUDES THE CORRESPONDING COMPACTION TEST RESULTS AND CERTIFIES THE TYPE OF FILL MATERIAL AND ITS PROPER PLACEMENT.
16. REFERENCE STRUCTURAL DRAWINGS, SPECIFICATIONS, GEOTECHNICAL REPORT, AND/OR DIRECTIVES PROVIDED BY THE PROJECT GEOTECHNICAL ENGINEER FOR BUILDING PAD AND PAVING SUBGRADE INFORMATION.
17. ALL PROPOSED SLOPES SHALL BE GRADED TO 3:1 OR FLATTER UNLESS OTHERWISE NOTED.

GENERAL LANDSCAPE NOTES:

1. THE CONTRACTOR SHALL TAKE PROPER PRECAUTIONS NOT TO DAMAGE EXISTING PLANTS, FACILITIES AND STRUCTURES THAT ARE TO REMAIN. THE CONTRACTOR SHALL RESTORE DISTURBED AREAS TO THEIR ORIGINAL CONDITION TO THE SATISFACTION OF THE LANDSCAPE ARCHITECT AND OWNER.
2. UTILITIES SHOWN ON THE LANDSCAPE DRAWINGS ARE FOR REFERENCE ONLY. SEE UTILITY DRAWINGS FOR EXISTING AND PROPOSED UTILITY LOCATIONS. SEE UTILITY NOTES FOR ADDITIONAL INFORMATION.
3. NO CHANGES TO ANY ASPECT OF APPROVED PLAN, INCLUDING BUT NOT LIMITED TO LANDSCAPING, GRADING, BUILDING ELEVATIONS, LIGHTING, OR UTILITIES SHALL BE MADE WITHOUT THE APPROVAL OF THE GOVERNING MUNICIPALITY, ENGINEER, LANDSCAPE ARCHITECT AND OWNER.
4. ALL PLANTS PROVIDED BY THE CONTRACTOR SHALL MEET OR SURPASS THE SPECIFICATIONS GIVEN IN THE PLANT TABLE AND CONFORM TO THE AMERICAN STANDARD OF NURSERY STOCK, ANSI Z601-1973 IN REGARD TO SIZING, GROWING AND BALLED AND BURLAPPED (B&B) SPECIFICATIONS. PLANTS SHALL BE FULL AND HEAVY, AND IN HEALTHY CONDITION AT THE TIME OF PLANTING. LANDSCAPE ARCHITECT SHALL REJECT ANY PLANT NOT MEETING THESE GUIDELINES AND REQUIRE REPLACEMENT.
5. ALL PLANTS ARE TO BE FULLY WARRANTED (INCLUDING LABOR AND MATERIALS) FOR A PERIOD OF NOT LESS THAN ONE (1) YEAR FROM FINAL ACCEPTANCE.
6. PLANTING SHALL BE INSTALLED DURING THE IDEAL SEASON BASED ON THE TYPE OF PLANT.
7. ALL PLANTS THAT ARE UNABLE TO BE IMMEDIATELY PLANTED SHALL BE STORED IN A PROTECTED AREA OUT OF DIRECT SUN AND WIND. PLANTS SHALL BE EVENLY AND CONSISTENTLY WATERED, AS NEEDED, TO PREVENT DRYING OF ROOTS. ROOT BALLS OF B&B STOCK SHALL BE COVERED WITH AT LEAST 4 INCHES OF HARDWOOD MULCH TO MAINTAIN MOISTURE IN ROOTS.
8. THE CONTRACTOR SHALL VERIFY ALL PLANT QUANTITIES SHOWN ON PLANS AND CLARIFY ANY DISCREPANCIES WITH LANDSCAPE ARCHITECT PRIOR TO PURCHASING PLANTS. CONTRACTOR SHALL TAG ALL TREES (AS DESIGNATED IN THE MASTER PLANT LIST) AT THE NURSERY FOR APPROVAL BY THE LANDSCAPE ARCHITECT PRIOR TO PURCHASING PLANTS.
9. LANDSCAPE ARCHITECT SHALL BE NOTIFIED IN WRITING OF ANY PROPOSED PLANT SUBSTITUTIONS BY THE CONTRACTOR. NO SUBSTITUTIONS SHALL BE MADE UNDER ANY CIRCUMSTANCES WITHOUT PRIOR APPROVAL BY THE LANDSCAPE ARCHITECT OR OWNER'S REPRESENTATIVE.
10. ALL PLANTS AND PLANTING BEDS ARE TO BE LOCATED BY SCALED DIMENSIONS FROM BUILDINGS, CURBS, PAVEMENTS, ETC. SPECIFIC ATTENTION SHALL BE GIVEN TO ENSURE THAT PLANTS INDIVIDUALLY SHOWN ON THE PLAN ARE ACCURATELY LOCATED. LOCATION OF ALL PLANTS SHALL BE REVIEWED IN THE FIELD BY THE LANDSCAPE ARCHITECT PRIOR TO INSTALLATION. CONTRACTOR SHALL PROVIDE 48 HOURS NOTICE FOR REVIEW.
11. NO PLANTINGS SHALL BE REQUIRED WHEN A PRESERVED WETLAND OR REQUIRED RIPARIAN BUFFER EXISTS WITHIN A REQUIRED BUFFER YARD.
12. EXISTING SIGNIFICANT VEGETATION THAT IS PRESERVED WITHIN ANY REQUIRED BUFFER YARD SHALL BE CREDITED TOWARD STANDARDS FOR THE TYPE OF BUFFER REQUIRED AT THE TIME OF MUNICIPAL APPROVALS. IF EXISTING VEGETATION DOES NOT FULLY MEET THE STANDARDS FOR THE TYPE OF BUFFER REQUIRED, SUPPLEMENTAL VEGETATION AND/OR SITE FEATURES (INCLUDING FENCES) SHALL BE PLANTED OR INSTALLED WITHIN THE REQUIRED BUFFER AREA TO MEET MINIMUM STANDARDS.
13. A PRE-EMERGENT HERBICIDE SHALL BE APPLIED TO ALL NEW PLANTING BEDS IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS AND ALLOWED TO DISSIPATE PRIOR TO INSTALLATION OF ANY PLANT MATERIAL.
14. ALL LANDSCAPE AREAS ARE TO BE GRADED FOR POSITIVE DRAINAGE AND TO ENSURE NO STANDING WATER. SEE GRADING PLAN FOR SPECIFIC GRADING INFORMATION. CONTRACTOR SHALL NOTIFY LANDSCAPE ARCHITECT AND/OR ENGINEER OF ANY GRADING DISCREPANCIES OR CONCERNS.
15. ESTABLISH AND MAINTAIN TOP OF GRADE BELOW ADJACENT CURBS, WALKWAYS AND OTHER HARDSCAPE AREAS TO ALLOW FOR INSTALLATION OF MULCH.
16. ALL PLANTING BEDS ARE TO BE COVERED WITH MULCH TO A MINIMUM DEPTH OF 2-3 INCHES, UNLESS INDICATED OTHERWISE. MULCH SHALL BE AS SELECTED BY THE LANDSCAPE ARCHITECT. CONTRACTOR SHALL SUBMIT A SAMPLE FOR APPROVAL BY LANDSCAPE ARCHITECT PRIOR TO PURCHASE AND DELIVERY TO PROJECT SITE.
17. FINISH OFF 2-4 FOOT CLEAR ZONE AROUND TREES WITH A 2-3-INCH LAYER OF MULCH, BUT DO NOT PLACE UP AGAINST OR MOUND AROUND THE ROOT FLARE.
18. MIXED GROUNDCOVER AND PLANTS SPECIFIED FOR MASS PLANTINGS SHALL BE PLANTED IN ODD GROUPINGS AND LOCATED AS REQUIRED TO PROVIDE A GENERAL MIXING OF SPECIES. DO NOT PLANT IN ROWS OR REPETITIVE PATTERNS UNLESS OTHERWISE DIRECTED.
19. ALL TREES ADJACENT TO PEDESTRIAN WALKWAYS AND IN SIGHT TRIANGLES SHALL BE UNDER-TRIMMED SUFFICIENTLY TO ALLOW CLEAR SIGHT AND PEDESTRIAN ACCESS UP TO 6 FEET ABOVE SIDEWALK ELEVATION. ALL PRUNING SHALL BE PERFORMED BY A CERTIFIED ARBORIST AND ADHERE TO THE ANSI A300 PRUNING STANDARD. PRUNING CUTS ARE TO BE DELIBERATE AND TARGETED ONLY TO THE NECESSARY BRANCHES IN ORDER TO SATISFY SIGHT AND CLEARANCE REQUIREMENTS WHILE MAINTAINING THE INTEGRITY OF THE TREES.
20. THE SITE SHALL BE STABILIZED PRIOR TO THE ISSUANCE OF A CERTIFICATE OF OCCUPANCY (CO).
21. CONTRACTOR IS RESPONSIBLE FOR FULLY MAINTAINING ALL PLANTING (INCLUDING, BUT NOT LIMITED TO WATERING, MULCHING, SPRAYING, FERTILIZING, ETC.) OF THE PLANTING AREAS UNTIL FINAL ACCEPTANCE.
22. ANY PLANT WHICH DIES, TURNS BROWN OR DEFOLIATES PRIOR TO FINAL ACCEPTANCE OF THE WORK SHALL BE PROMPTLY REMOVED FROM THE SITE AND REPLACED WITH MATERIAL OF THE SAME SPECIES, IN ACCORDANCE WITH THE APPROPRIATE PLANTING SEASON; QUANTITY AND SIZE TO MEET PLAN SPECIFICATIONS.

TREE PROTECTION NOTES:

1. ALL TREES THAT ARE TO REMAIN, WITHIN OR DIRECTLY ADJACENT TO THE LIMITS OF WORK, MUST BE PROTECTED WITH TREE PROTECTION FENCE AS INDICATED ON THE PLANS TO THE EXTENT OF THE TREE BOX OR THE DRIP LINE IN A PLANTING STRIP. THE DRIP LINE IS DEFINED AS THE GROUND AREA UNDER THE CANOPY OF THE TREE. FENCING IS TO BE INSTALLED PRIOR TO CONSTRUCTION, MAINTAINED THROUGHOUT, AND REMOVED ONLY AT THE END OF THE PROJECT.
2. NONE OF THE FOLLOWING SHALL OCCUR WITHIN THE ROOT ZONE OF A TREE WITHOUT PERMISSION OF LANDSCAPE ARCHITECT OR PROJECT ARBORIST: ALTERATION OR DISTURBANCE TO EXISTING GRADE; STAGING OR STORAGE OF CONSTRUCTION MATERIALS, EQUIPMENT USE, SOIL OR DEBRIS REMOVAL OR STOCKPILING; TRENCHING; OR DISPOSAL OF ANY LIQUIDS.
3. APPROVED EXCAVATIONS WITHIN THE DRIP LINE SHALL PROCEED WITH CARE BY USE OF HAND TOOLS OR EQUIPMENT THAT WILL NOT CAUSE INJURY TO TREE TRUNKS, BRANCHES AND ROOTS.
4. NO ROOTS GREATER THAN 2 INCHES IN DIAMETER SHALL BE CUT WITHOUT PERMISSION OF LANDSCAPE ARCHITECT OR PROJECT ARBORIST. EXPOSED ROOTS 2 INCHES AND LARGER IN DIAMETER SHALL BE WRAPPED IN BURLAP OR OTHER APPROVED MATERIAL AND KEPT MOIST AT ALL TIMES.
5. IF THERE ARE ANY TREE CONFLICTS ON THIS JOB SITE, PERMIT HOLDER MUST SUSPEND ALL WORK THAT CONTRIBUTES TO THE CONFLICT AND IMMEDIATELY CONTACT LANDSCAPE ARCHITECT OR PROJECT ARBORIST FOR DIRECTION AND CLEARANCE TO CONTINUE THE CONFLICTING WORK.
6. TREES THAT ARE PROTECTED SHALL BE THOROUGHLY WATERED AS REQUIRED TO KEEP ROOT BALLS FROM DRYING OUT, ESPECIALLY BETWEEN APRIL THROUGH SEPTEMBER.

UTILITIES NOTES:

1. GENERALLY, FILL MATERIAL SHALL BE IN PLACE AND COMPACTED BEFORE INSTALLATION OF PROPOSED UTILITIES.
2. ALL NECESSARY INSPECTIONS, CERTIFICATIONS, AND TESTING REQUIRED BY CODES AND UTILITY SERVICE COMPANIES SHALL BE PERFORMED PRIOR TO MUNICIPAL APPROVAL FOR THE FINAL CONNECTION OF SERVICE. CONTRACTOR SHALL BE RESPONSIBLE FOR PAYMENT OF TESTING SERVICES AND COORDINATION WITH UTILITY OWNER.
3. CONTRACTOR SHALL PROVIDE ALL MATERIALS AND APPURTENANCES NECESSARY FOR COMPLETE INSTALLATION OF THE IMPROVEMENTS SHOWN.
4. THE CONTRACTOR SHALL REPORT, IN WRITING ANY UTILITY CONFLICTS TO THE ENGINEER IMMEDIATELY UPON DISCOVERING CONFLICTS.
5. THE SANITARY SEWER PIPE LENGTHS AS SHOWN ON THE DRAWINGS REPRESENTS THE DISTANCE FROM CENTER TO CENTER OF THE RESPECTIVE STRUCTURES.
6. PRIOR TO UTILITY RELOCATION, REMOVAL OR ABANDONMENT, THE CONTRACTOR SHALL COORDINATE WITH THE LOCAL UTILITY PROVIDERS, LOCAL MUNICIPALITY, AND NCDOT.
7. THE CONTRACTOR SHALL MAINTAIN A MINIMUM COVER OF 5 FEET MEASURED FROM FINISHED GRADE IN TRAFFIC AREAS TO THE PIPE CROWN UNLESS DUCTILE IRON PIPE IS PROVIDED IN CLASS I BEDDING WHERE MINIMUM COVER SHALL BE THREE FEET.
8. THE CONTRACTOR SHALL COORDINATE WITH UTILITY COMPANIES FOR INSTALLATION OF ALL PROPOSED POWER AND COMMUNICATION LINES AND ASSOCIATED APPURTENANCES.

WELL ABANDONMENT:

1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL REQUIRED PERMITS AND PAYING APPLICABLE FEES FOR THE ABANDONMENT OF WELLS.
2. ALL WORK SHALL BE COMPLETED IN ACCORDANCE WITH THE NORTH CAROLINA DEPARTMENT OF ENVIRONMENTAL QUALITY (NCDEQ) WELL STANDARDS (15A NCAC 02C .0113). AN ABANDONMENT PERMIT SHALL BE OBTAINED BY A CERTIFIED NC WELL CONTRACTOR FROM THE COUNTY ENVIRONMENTAL HEALTH DIVISION PRIOR TO COMMENCING ABANDONMENT WORK. USE FORM GW-20 PROVIDED BY NCDEQ.

SEPTIC SYSTEM ABANDONMENT:

1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL REQUIRED PERMITS AND PAYING APPLICABLE FEES FOR THE ABANDONMENT OF SEPTIC TANKS AND SEPTAGE. ALL WORK SHALL BE DONE IN ACCORDANCE WITH AUTHORITIES HAVING JURISDICTION.
2. THE CONTRACTOR SHALL PROVIDE TEMPORARY CONTAINMENT AND PROPER DISPOSAL OF THE WASTEWATER COMING FROM THE RESIDENCE PRIOR TO DISCONNECTING THE SEPTIC SYSTEM TO BE ABANDONED.
3. FOR SEPTIC SYSTEMS CONTAINING A SEPTIC PUMP, THE CONTRACTOR SHALL DISCONNECT THE SEPTIC PUMP PRIOR TO ABANDONING THE SEPTIC SYSTEM. ALL ELECTRICAL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE CURRENT NC ELECTRICAL CODE BY A LICENSED ELECTRICAL CONTRACTOR IN THE STATE OF NORTH CAROLINA.
4. ALL DEBRIS AND MATERIALS FROM THE ABANDONED SEPTIC SYSTEM ARE TO BE DISPOSED OF PROPERLY IN AN APPROVED OFF-SITE FACILITY AND THE CONSTRUCTION AREA RESTORED TO PRE-CONSTRUCTION CONDITIONS OR BETTER.
5. NO SEPTAGE SHALL BE DISCHARGED TO THE EXISTING SEWER SYSTEM.

RETAINING WALL NOTES:

1. THE CONTRACTOR SHALL ADHERE TO THE HORIZONTAL AND VERTICAL LOCATION OF THE WALLS SHOWN ON THE PLANS. THE STRUCTURAL WALL DESIGN SHALL BE COMPLETED BY OTHERS, UNLESS OTHERWISE NOTED.
2. TFW REFERS TO TOP FACE OF WALL ELEVATION. BFW REFERS TO THE BOTTOM FACE OF WALL ELEVATION AT FINISHED GRADE, NOT FOOTING GRADE.
3. IF STAKED BY WITHERSRAVENEL, INC., BOTTOM OF WALL GRADE AT FINISHED GRADE WILL BE STAKED. ANY DIFFERENCES BETWEEN FOUNDATION OF WALL AS COMPARED TO FINISHED GRADE BOTTOM IS TO BE STATED SO ON RETAINING WALL PLANS BY OTHERS.
4. IF WALL CONTRACTOR REQUIRES ADDITIONAL STAKING BEYOND WALL AT FINISHED GRADE, THE ENGINEER MAY PROVIDE A CAD FILE NOTING LOCATION OF THE ITEMS TO BE STAKED. LOCATIONS WHERE WALL BREAKS OR CHANGES IN WALL ANGLES ARE TO BE NOTED ON THE CAD FILE.
5. WALL BATTER ASSUMPTIONS
    a. ¼” PER 8” VERTICAL RISE.
    b. THE WALL CONTRACTOR OR ENGINEER OF RECORD FOR THE PROPOSED WALL SHALL NOTIFY WITHERSRAVENEL, INC. IF THE RETAINING WALL BATTER MUST DEVIATE FROM THE ABOVE WALL ASSUMPTIONS AT THE TIME OF DESIGN FOR VERIFICATION TO MEET SITE DESIGN CRITERIA.
6. PRIOR TO WALL STAKING, A MEETING SHALL BE HELD BY THE SURVEYOR AND WALL CONTRACTOR TO DETERMINE STAKING CRITERIA.
7. CONTRACTOR TO INSTALL TEMPORARY FENCING/BARRICADES DURING CONSTRUCTION UNTIL PERMANENT FENCING IS INSTALLED.
8. CONTRACTOR IS RESPONSIBLE FOR ALL DAMAGES TO PERMANENT FENCING DURING CONSTRUCTION. REPAIR OF DAMAGES SHALL BE DONE AT NO ADDITIONAL COST TO THE OWNER AND SHALL BE DONE TO THE SATISFACTION OF THE ENGINEER AND OWNER.

CITY OF RALEIGH STANDARD UTILITY NOTES:

1. ALL MATERIALS & CONSTRUCTION METHODS SHALL BE IN ACCORDANCE WITH CITY OF RALEIGH DESIGN STANDARDS, DETAILS & SPECIFICATIONS (REFERENCE: CORPUD HANDBOOK, CURRENT EDITION)
2. UTILITY SEPARATION REQUIREMENTS:
    a. 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 OR 50' FROM A PUBLIC WELL.
    b. WHEN INSTALLING WATER &/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.
    c. WHERE IT IS IMPOSSIBLE TO OBTAIN PROPER SEPARATION, OR ANYTIME A SANITARY SEWER PASSES OVER A WATERMAIN, DIP MATERIALS OR STEEL ENCASEMENT EXTENDED 10' ON EACH SIDE OF CROSSING MUST BE SPECIFIED & INSTALLED TO WATERLINE SPECIFICATIONS.
    d. 5.0' MINIMUM HORIZONTAL SEPARATION IS REQUIRED BETWEEN ALL SANITARY SEWER & STORM SEWER FACILITIES, UNLESS DIP MATERIAL IS SPECIFIED FOR SANITARY SEWER
    e. MAINTAIN 18” MIN. VERTICAL SEPARATION AT ALL WATERMAIN & RCP STORM DRAIN CROSSINGS; MAINTAIN 18” 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).
    f. ALL OTHER UNDERGROUND UTILITIES SHALL CROSS WATER & SEWER FACILITIES WITH 18” MIN. VERTICAL SEPARATION REQUIRED.
3. ANY NECESSARY FIELD REVISIONS ARE SUBJECT TO REVIEW & APPROVAL OF AN AMENDED PLAN &/OR PROFILE BY THE CITY OF RALEIGH PUBLIC UTILITIES DEPARTMENT PRIOR TO CONSTRUCTION.
4. DEVELOPER SHALL PROVIDE 30 DAYS ADVANCE WRITTEN NOTICE TO OWNER FOR ANY WORK REQUIRED WITHIN AN EXISTING CITY OF RALEIGH UTILITY EASEMENT TRAVERSING PRIVATE PROPERTY.
5. 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.
6. SEWER BYPASS PUMPING - A BYPASS PLAN SEALED BY AN NC PROFESSIONAL ENGINEER SHALL BE PROVIDED TO RALEIGH WATER PRIOR TO PUMPING OPERATIONS FOR APPROVAL. THE OPERATIONS AND EQUIPMENT SHALL COMPLY WITH THE PUBLIC UTILITIES HANDBOOK.
7. 3.0' MINIMUM COVER IS REQUIRED ON ALL WATER MAINS & SEWER FORCE MAINS. 4.0' MINIMUM COVER IS REQUIRED ON ALL REUSE MAINS.
8. 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.
9. INSTALL ¾” COPPER* WATER SERVICES WITH METERS LOCATED AT ROW OR WITHIN A 2'X2' WATERLINE EASEMENT IMMEDIATELY ADJACENT. NOTE: IT IS THE APPLICANT'S RESPONSIBILITY TO PROPERLY SIZE THE WATER SERVICE FOR EACH CONNECTION TO PROVIDE ADEQUATE FLOW & PRESSURE
10. INSTALL 4” PVC* SEWER SERVICES @ 1.0% MINIMUM GRADE WITH CLEANOUTS LOCATED AT ROW OR EASEMENT LINE & SPACED EVERY 75 LINEAR FEET MAXIMUM.
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 MANHOLE.
12. ALL ENVIRONMENTAL PERMITS APPLICABLE TO THE PROJECT MUST BE OBTAINED FROM NCDWQ, USACE &/OR FEMA FOR ANY RIPARIAN BUFFER, WETLAND &/OR FLOODPLAIN IMPACTS (RESPECTIVELY) PRIOR TO CONSTRUCTION.
13. NCDOT / RAILROAD ENCROACHMENT AGREEMENTS ARE REQUIRED FOR ANY UTILITY WORK (INCLUDING MAIN EXTENSIONS & SERVICE TAPS) WITHIN STATE OR RAILROAD ROW PRIOR TO CONSTRUCTION.
14. GREASE INTERCEPTOR / OIL WATER SEPARATOR SIZING CALCULATIONS & INSTALLATION SPECIFICATIONS SHALL BE APPROVED BY THE RW FOG PROGRAM COORDINATOR PRIOR TO ISSUANCE OF A UC AND/OR BUILDING PERMIT. CONTACT (919) 996-4516 OR FOG@RALEIGHNC.GOV FOR MORE INFORMATION.
15. CROSS-CONNECTION CONTROL PROTECTION DEVICES ARE REQUIRED BASED ON THE DEGREE OF HEALTH HAZARD INVOLVED AS LISTED IN APPENDIX B OF THE RULES GOVERNING PUBLIC WATER SYSTEMS IN NORTH CAROLINA.
16. THE DEVICES SHALL MEET THE AMERICAN SOCIETY OF SANITARY ENGINEERING (SAAE) STANDARDS AND BE ON THE UNIVERSITY OF SOUTHERN CALIFORNIA APPROVAL LIST.
17. THE DEVICE AND INSTALLATION SHALL MEE THE GUIDELINES OF APPENDIX A - GUIDELINES AND REQUIREMENTS FOR THE CROSS CONNECTION PROGRAM IN RALEIGH'S SERVICE AREA.
18. 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 CROSS.CONNECTION@RALEIGHNC.GOV FOR MORE INFORMATION.
19. NOTICE FOR PROJECTS THAT INVOLVE AN OVERSIZED MAIN OR URBAN MAIN REPLACEMENT. ANY CITY REIMBURSEMENT GREATER THAN $250,000.00 MUST UNDERGO THE PUBLIC BIDDING PROCESS.

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CARY, NC 27518

CONSTRUCTION INFRASTRUCTURE DRAWINGS
BROADMOOR
CID-YR-XX
ROLESVILLE ROAD | ROLESVILLE, NC 27587 | WAKE COUNTY

PRELIMINARY
NOT APPROVED FOR
CONSTRUCTION
TERRENCE COOK

INITIAL PLAN DATE: 11/01/2024
REVISIONS:

WR JOB NUMBER 23-0045
DRN: WR DGN: WR CKD: WR

GENERAL NOTES & LEGENDS

C0.02

EST. 1983

REZ-23-02: WOODLIEF REZONING CONDITIONS
FEBRUARY 26, 2024

1. THE DEVELOPMENT OF THE PROPERTY SHALL BE IN SUBSTANTIAL CONFORMANCE WITH THE ACCOMPANYING EXHIBIT, CONCEPT PLAN DATED 12/13/2023. LOCATIONS SHOWN FOR COMMITTED ELEMENTS INCLUDING, BUT NOT LIMITED TO GREENWAYS, STREETS, AND OPEN AREAS SHOWN ON THE CONCEPT PLAN, MAY BE ADJUSTED TO CONFORM TO LDO REQUIREMENTS OR AS PERMITTED AS A MINOR ADJUSTMENT BY THE LAND DEVELOPMENT ADMINISTRATOR.
2. THE FOLLOWING USES SHALL BE PROHIBITED ON THE PORTION OF THE PROPERTY ZONED TO THE RESIDENTIAL HIGH DENSITY DISTRICT (THE "RH DISTRICT"):
   A. LIVE-WORK UNIT;
   B. RESIDENTIAL CARE (ALF, ILF, CCF);
   C. TELECOMMUNICATIONS TOWER.
3. THE FOLLOWING USES SHALL BE PROHIBITED ON THE PORTION OF THE PROPERTY ZONED TO THE RESIDENTIAL MEDIUM DENSITY DISTRICT (THE "RM DISTRICT"):
   A. TELECOMMUNICATIONS TOWER.
4. THE RH-CZ DISTRICT MAY BE DEVELOPED TO A MAXIMUM OF 98 DWELLING, SINGLE-FAMILY ATTACHED (TOWNHOUSE) LOTS.
5. THE RM-CZ DISTRICT MAY BE DEVELOPED TO A MAXIMUM OF 157 DWELLING SINGLE-FAMILY DETACHED LOTS.
6. ALL DWELLING, SINGLE-FAMILY DETACHED DWELLINGS SHALL ADHERE TO THE FOLLOWING CONDITIONS:
   A. SIDING MATERIAL:
      - IF MASONRY (SUCH AS BRICK VENEER OR FAUX STONE PRODUCT) IS NOT THE PREDOMINANT FIRST FLOOR FINISH (GREATER THAN 50%), THEN THE FRONT ELEVATION SHALL HAVE AT LEAST TWO (2) STYLES OF FIBER CEMENT SIDING (I.E. LAP, SHAKE, OR BOARD AND BATTEN, ETC.);
      - VINYL MATERIAL IS PROHIBITED EXCEPT FOR SOFFITS, FACIA, AND CORNER BOARDS;
      - NO DWELLING UNIT SHALL BE CONSTRUCTED WITH AN EXTERIOR ELEVATION OR COLOR PALETTE THAT IS IDENTICAL TO THE DWELLING UNIT ON EITHER SIDE OR DIRECTLY ACROSS THE STREET.
   B. GARAGES:
      - A MINIMUM 2-CAR SIDE-BY-SIDE (NOT TANDEM) GARAGE SHALL BE PROVIDED;
      - ALL GARAGE DOORS SHALL HAVE WINDOWS.
   C. ROOFS: ROOF MATERIALS SHALL BE ASPHALT SHINGLES, METAL, COPPER, WOOD, OR A COMBINATION OF THESE MATERIALS.
   D. BUILDING FOUNDATIONS: BUILDING FOUNDATIONS ALONG THE FRONT FAÇADE SHALL HAVE AN EXPOSED HEIGHT ABOVE FINISHED GRADE OF AT LEAST 18" AND MUST BE FINISHED WITH MASONRY PRODUCT SUCH AS BRICK VENEER OR FAUX STONE PRODUCT.
   E. COVERED ENTRY: A COVERED FRONT PORCH OR COVERED STOOP OF AT LEAST 20 SQUARE FEET WITH A MINIMUM DEPTH OF 5 FEET.
   F. WINDOWS:
      - ALL WINDOWS ALONG THE FRONT FAÇADE SHALL HAVE SHUTTERS AND/OR TRIM;
      - EACH SIDE ELEVATION SHALL HAVE AT LEAST TWO WINDOWS.
   G. REAR YARD AMENITY: AN UNENCLOSED PATIO, DECK, OR SCREENED-IN PORCH OF AT LEAST 64 SQUARE FEET.
7. ALL DWELLING, SINGLE-FAMILY ATTACHED (TOWNHOME) BUILDINGS SHALL ADHERE TO THE FOLLOWING CONDITIONS:
   A. SIDING MATERIAL:
      - IF MASONRY (SUCH AS BRICK VENEER OR FAUX STONE PRODUCT) IS NOT THE PREDOMINANT FIRST FLOOR FINISH (GREATER THAN 50%), THEN THE FRONT ELEVATION SHALL HAVE AT LEAST TWO (2) STYLES OF FIBER CEMENT SIDING (I.E. LAP, SHAKE, OR BOARD AND BATTEN, ETC.);
      - VINYL MATERIAL IS PROHIBITED EXCEPT FOR SOFFITS, FACIA, AND CORNER BOARDS;
      - NO DWELLING UNIT SHALL BE CONSTRUCTED WITH AN EXTERIOR ELEVATION OR COLOR PALETTE THAT IS IDENTICAL TO THE DWELLING UNIT ON EITHER SIDE, DIRECTLY ACROSS THE STREET.
   B. GARAGES:
      - A MINIMUM 1-CAR GARAGE SHALL BE PROVIDED;
      - ALL GARAGE DOORS SHALL HAVE WINDOWS.
   C. ROOFS: ROOF MATERIALS SHALL BE ASPHALT SHINGLES, METAL, COPPER, WOOD, OR A COMBINATION OF THESE MATERIALS.
   D. COVERED ENTRY: A COVERED FRONT PORCH OR COVERED STOOP OF AT LEAST 20 SQUARE FEET WITH A MINIMUM DEPTH OF 4 FEET.
   E. WINDOWS:
      - ALL WINDOWS ALONG THE FRONT FAÇADE SHALL HAVE SHUTTERS AND/OR TRIM;
      - EACH SIDE ELEVATION SHALL HAVE AT LEAST ONE WINDOW (EXCLUDING INTERIOR UNITS).
   F. REAR YARD AMENITY: AN UNENCLOSED PATIO, DECK, OR SCREENED-IN PORCH OF AT LEAST 64 SQUARE FEET.
8. AMENITY CENTER: THE MAIN AMENITY AREA SHALL INCLUDE A MINIMUM 1,500 SQUARE FOOT CABANA WITH AN UNENCLOSED COVERED SEATING AREA, BATHROOMS, AND A MINIMUM 2,000 SQUARE FOOT POOL. THE MAIN AMENITY AREA SHALL BE CONSTRUCTED PRIOR TO THE ISSUANCE OF THE 200TH RESIDENTIAL BUILDING PERMIT.
9. POLLINATOR GARDEN: THE DEVELOPMENT SHALL INCLUDE AT LEAST ONE POLLINATOR GARDEN. THE POLLINATOR GARDEN SHALL BE A LANDSCAPED GARDEN IN WHICH AT LEAST SEVENTY FIVE PERCENT (75%) OF ALL PLANTS, EXCLUDING GRASSES, ARE NATIVE MILKWEEDS AND OTHER NECTAR-RICH FLOWERS. THE POLLINATOR GARDEN SHALL BE A HALF-ACRE (21,780 SQUARE FEET) IN AREA AT A MINIMUM, WHICH MAY BE DISTRIBUTED IN SEVERAL DIFFERENT LOCATIONS. THE FINAL LOCATION(S) OF POLLINATOR GARDEN SHALL BE DETERMINED AT SUBSEQUENT STAGES OF APPROVAL AND WILL BE IDENTIFIED ON THE LANDSCAPE PLAN SUBMITTED WITH THE CONSTRUCTION DRAWINGS. THE POLLINATOR GARDEN SHALL BE CONSTRUCTED PRIOR TO THE ISSUANCE OF THE 150TH RESIDENTIAL BUILDING PERMIT.
10. COMMUNITY AMENITIES: THE DEVELOPMENT SHALL INCLUDE ONE TOT-LOT AND ONE DOG PARK. LOCATIONS WILL BE DETERMINED AT SUBSEQUENT STAGES OF APPROVAL AND WILL BE IDENTIFIED ON THE CONSTRUCTION DRAWINGS. THE TOT-LOT AND DOG PARK SHALL BE CONSTRUCTED PRIOR TO THE ISSUANCE OF THE 150TH RESIDENTIAL BUILDING PERMIT.
11. THE DEVELOPMENT SHALL INCLUDE A MINIMUM OF FIVE (5) AFFORDABLE HOUSING ATTACHED TOWNHOME OWNERSHIP UNITS (THE "AFFORDABLE UNITS"). BUYERS OF THE AFFORDABLE UNITS SHALL BE VETTED TO ENSURE THAT THE SALE PRICE, IN THE FIRST SALE OF THE AFFORDABLE UNITS, IS AFFORDABLE TO LOW OR MODERATE INCOME HOUSEHOLDS EARNING NO MORE THAN EIGHTY PERCENT (80%) OF THE RALEIGH NC METROPOLITAN STATISTICAL AREA (MSA), AREA MEDIAN INCOME (AMI), ADJUSTED FOR FAMILY SIZE AS MOST RECENTLY PUBLISHED BY HUD. PRIOR TO SUBDIVISION CLOSEOUT, DOCUMENTATION OF COMPLIANCE WITH THIS ZONING CONDITION SHALL BE SUBMITTED TO THE TOWN. FOLLOWING THE FIRST SALE OF EACH OF THE AFFORDABLE UNITS, THE DEVELOPER SHALL HAVE NO FURTHER OBLIGATIONS UNDER THIS CONDITION.
12. THE PROJECT SHALL BE RESPONSIBLE FOR THE WIDENING OF ROLESVILLE ROAD ALONG THE SITE'S FULL FRONTAGE OF ROLESVILLE ROAD, INCLUDING THE PARTIALLY RETAINED PARCELS, CURRENTLY IDENTIFIED BY WAKE COUNTY PIN(S) 1767590716, 1768409261, AND 1767590335. THIS SHALL INCLUDE THE DESIGN AND CONSTRUCTION OF HALF OF THE ULTIMATE CROSS SECTION FOR ROLESVILLE ROAD CONSISTENT WITH THE TOWN OF ROLESVILLE'S COMMUNITY TRANSPORTATION PLAN. THESE IMPROVEMENTS SHALL BE COMPLETED PRIOR TO THE ISSUANCE OF THE 100TH RESIDENTIAL BUILDING PERMIT.

EASEMENT ABBREVIATION LEGEND

UE	PUBLIC UTILITY EASEMENT
DE	PUBLIC DRAINAGE EASEMENT
VWDE	PUBLIC VARIABLE WIDTH DRAINAGE EASEMENT
GE	PUBLIC GREENWAY EASEMENT
CORSSE	CITY OF RALEIGH SANITARY SEWER EASEMENT
PSCSAE	PRIVATE STORMWATER CONTROL STRUCTURE AND ACCESS EASEMENT
PDE	PRIVATE DRAINAGE EASEMENT
PWMAE	PRIVATE WALL MAINTENANCE ACCESS EASEMENT

GENERAL LEGEND

(UNLESS OTHERWISE DENOTED)

DESCRIPTION	EXISTING	PROPOSED
1' CONTOUR INTERVAL		
5' CONTOUR INTERVAL		
PROPERTY LINE		
ROADWAY CENTERLINE		
RIGHT OF WAY LIMITS		
EASEMENT LINE		
CURB & GUTTER		
EDGE OF PAVEMENT		
WATER MAIN	W	W
FIRE HYDRANT ASSEMBLY		
BLOWOFF ASSEMBLY	N/A	
WATER VALVE		
WATER METER		
AIR RELEASE VALVE	N/A	
WATER MANHOLE		
SANITARY SEWER MAIN	SS	SS
SANITARY SEWER MANHOLE		
SANITARY SEWER SERVICE	N/A	
FORCE MAIN	FM	FM
STORM DRAINAGE PIPE		
CATCH BASIN		
YARD INLET		
JUNCTION BOX		
FLARED END SECTION		
ELECTRIC	E	N/A

DESCRIPTION	EXISTING	PROPOSED
OVERHEAD ELECTRIC	OHE	N/A
POWER POLE		N/A
GUY ANCHOR		N/A
LIGHT POLE		N/A
ELECTRICAL PEDESTAL		N/A
GAS MAIN	GAS	N/A
ABANDONED GAS MAIN	G	N/A
GAS VALVE		N/A
TELEPHONE	T	N/A
TELEPHONE STRUCTURE		N/A
TELEPHONE PEDESTAL		N/A
TELEVISION PEDESTAL		N/A
FIBER OPTIC MARKER		N/A
UTILITY MANHOLE		N/A
STRUCTURES		
FENCING STRUCTURE		
TREE LINE		N/A
WATERWAYS		N/A
SIGN		N/A
MAIL BOX		N/A
PROPERTY IRON		N/A
CONCRETE MONUMENT		N/A
SPOT ELEVATION	(340.17) CL	339.92 EP

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CONSTRUCTION INFRASTRUCTURE DRAWINGS
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ROLESVILLE ROAD | ROLESVILLE, NC 27587 | WAKE COUNTY

NORTH CAROLINA PROFESSIONAL ENGINEER
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NOT APPROVED FOR CONSTRUCTION
TERRENCE COOK

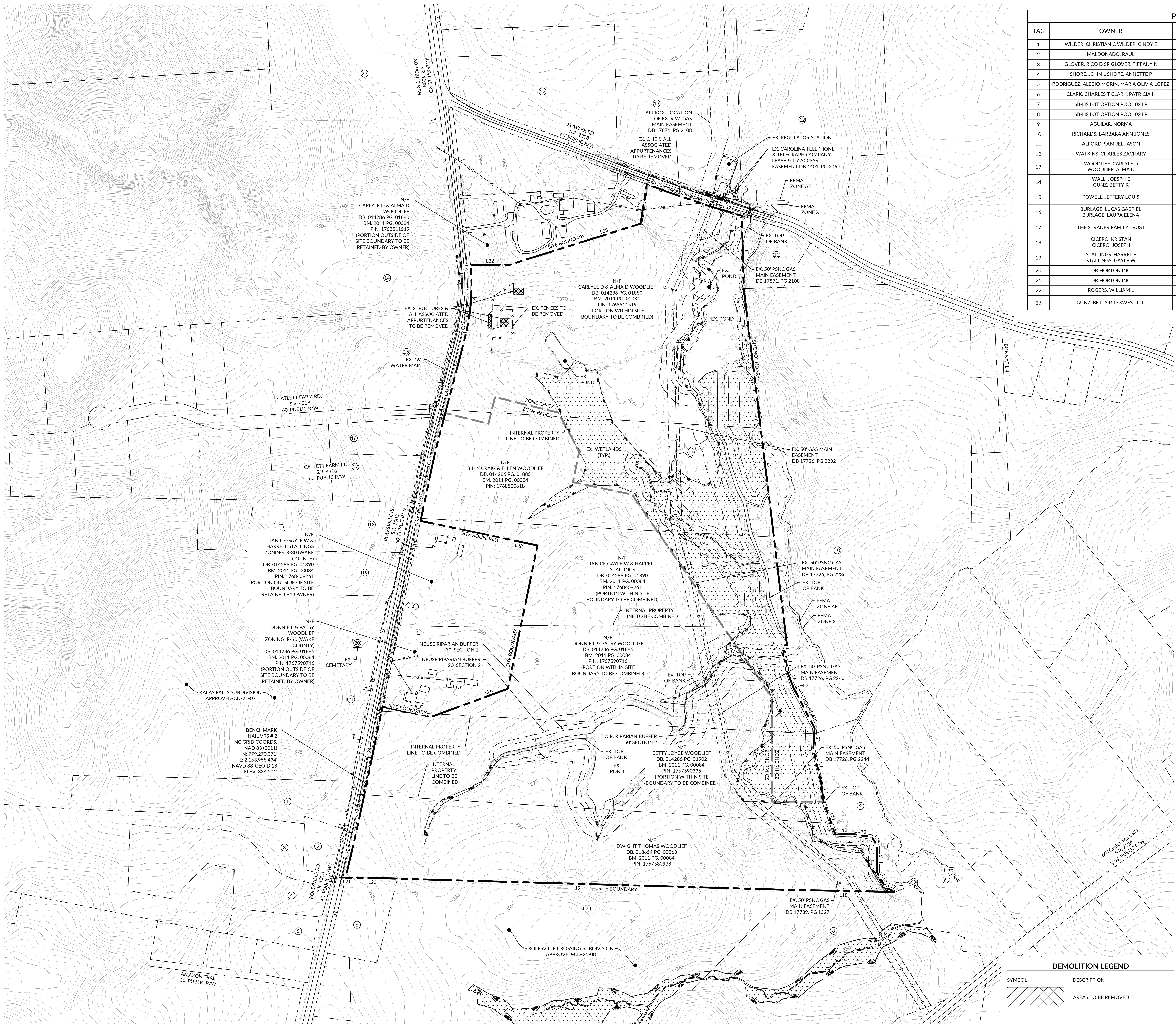
INITIAL PLAN DATE: 11/01/2024
REVISIONS:

WR JOB NUMBER		23-0045
DRN: WR	DGN: WR	CKD: WR

GENERAL NOTES & LEGENDS

C0.03

EST. 1983



PROPERTY OWNER DATA						
TAG	OWNER	DEED BOOK	PAGE NO.	PIN.	ZONING	DESCRIPTION
1	WILDER, CHRISTIAN C WILDER, CINDY E	10927	1494	1767-39-2260	R-30 (WAKE COUNTY)	RESIDENTIAL-30
2	MALDONADO, RAUL	17784	1955	1767-38-7947	R-30 (WAKE COUNTY)	RESIDENTIAL-30
3	GLOVER, RICO D SR GLOVER, TIFFANY N	17360	1716	1767-38-5949	R-30 (WAKE COUNTY)	RESIDENTIAL-30
4	SHORE, JOHN L SHORE, ANNETTE P	13782	1145	1767-38-0992	R-30 (WAKE COUNTY)	RESIDENTIAL-30
5	RODRIGUEZ, ALECIO MORIN, MARIA OLIVIA LOPEZ	19067	2293	1767-38-5643	R-30 (WAKE COUNTY)	RESIDENTIAL-30
6	CLARK, CHARLES T CLARK, PATRICIA H	4572	246	1767-38-9615	R-30 (WAKE COUNTY)	RESIDENTIAL-30
7	SB-HS LOT OPTION POOL 02 LP	19676	2496	1767-48-3143	R3-CZ (ROLESVILLE)	-
8	SB-HS LOT OPTION POOL 02 LP	19676	2496	1767-58-6083	R3-CZ (ROLESVILLE)	-
9	AGUILAR, NORMA	12647	1286	1767-68-5863	R-30 (WAKE COUNTY)	RESIDENTIAL-30
10	RICHARDS, BARBARA ANN JONES	1730	526	1768-60-2816	R-30 (WAKE COUNTY)	RESIDENTIAL-30
11	ALFORD, SAMUEL JASON	19530	2760	1768-51-8609	R-30 (WAKE COUNTY)	RESIDENTIAL-30
12	WATKINS, CHARLES ZACHARY	17332	2109	1768-52-9682	R-30 (WAKE COUNTY)	RESIDENTIAL-30
13	WOODLIEF, CARLYLE D WOODLIEF, ALMA D	14286	1880	1768-51-1519	R-30 (WAKE COUNTY)	RESIDENTIAL-30
14	WALL, JOESPH E GUNZ, BETTY R	5178	858	1768-21-6907	RL (ROLESVILLE)	RESIDENTIAL LOW DENSITY
15	POWELL, JEFFERY LOUIS	12-E	3279	1768-31-7240	RL (ROLESVILLE)	RESIDENTIAL LOW DENSITY
16	BURLAGE, LUCAS GABRIEL BURLAGE, LAURA ELENA	15424	810	1768-30-9874	RL (ROLESVILLE)	RESIDENTIAL LOW DENSITY
17	THE STRADER FAMILY TRUST	15137	2468	1768-30-9667	RL (ROLESVILLE)	RESIDENTIAL LOW DENSITY
18	CICERO, KRISTAN CICERO, JOSEPH	19017	1461	1768-30-8414	R-30 (WAKE COUNTY)	RESIDENTIAL-30
19	STALLINGS, HARREL F STALLINGS, GAYLE W	12830	114	1768-30-6321	R-30 (WAKE COUNTY)	RESIDENTIAL-30
20	DR HORTON INC	19008	1446	1767-39-9921	R&PUD-CZ (ROLESVILLE)	-
21	DR HORTON INC	19008	1446	1767-29-3887	R&PUD-CZ (ROLESVILLE)	-
22	ROGERS, WILLIAM L	3626	569	1768-42-7499	R-30 (WAKE COUNTY)	RESIDENTIAL-30
23	GUNZ, BETTY R TEXWEST LLC	10194	2092	1768-32-8863	RL (ROLESVILLE)	RESIDENTIAL LOW DENSITY

CURVE TABLE

CURVE #	LENGTH	RADIUS	DELTA
C1	180.79	6679.90	1.55°
C2	137.69	1382.59	5.71°
C3	195.33	958.28	11.68°
C4	24.35	3453.77	0.40°
C5	50.77	1298.50	2.24°

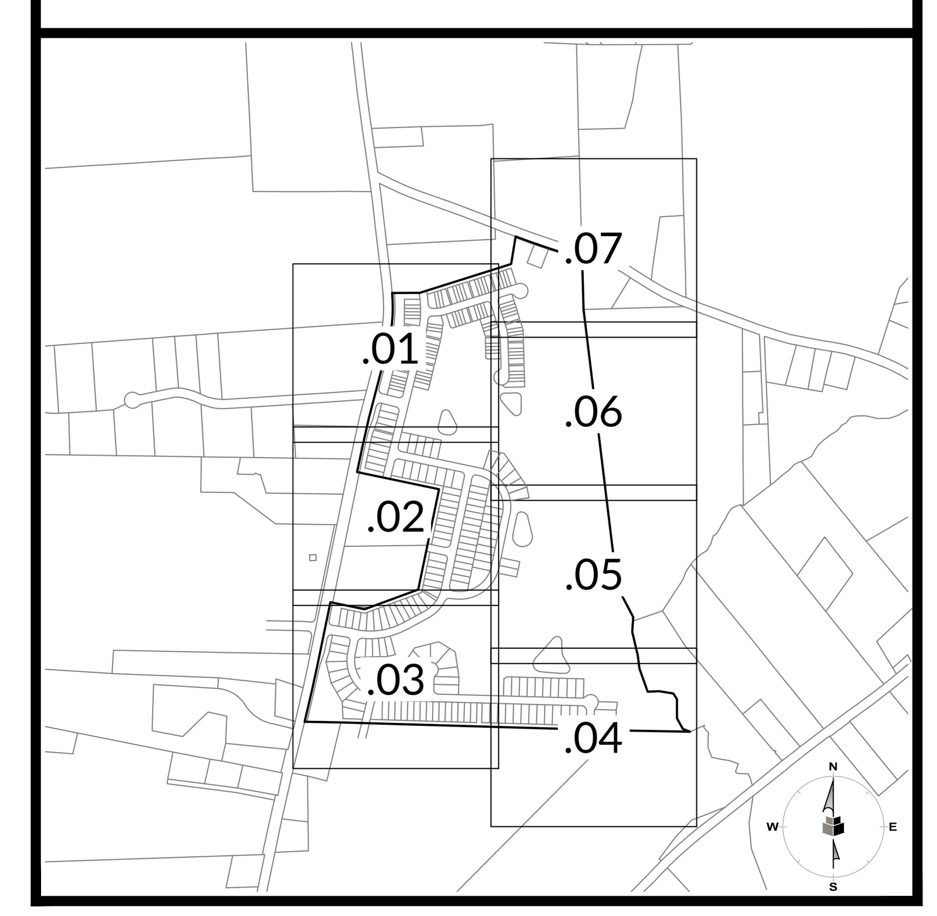
LINE TABLE

LINE #	BEARING	DISTANCE
L1	S01°36'33"E	331.36
L2	S06°53'59"E	1627.11
L3	S18°52'37"W	56.68
L4	S38°15'12"E	25.09
L5	S05°12'56"E	54.55
L6	S21°01'52"E	80.42
L7	S27°30'18"E	207.75
L8	S03°37'01"W	97.01
L9	S13°29'28"E	153.88
L10	S07°17'46"E	89.26
L11	S19°33'48"E	159.31
L12	N87°33'10"E	75.19
L13	S80°55'53"E	92.15
L14	S32°50'43"E	45.25
L15	S00°05'28"E	124.26
L16	S28°43'30"E	78.63
L17	S68°30'30"E	50.46
L18	N88°56'43"W	474.91
L19	N88°20'38"W	1796.39
L20	N88°52'07"W	224.55
L21	N88°52'07"W	10.87
L22	N13°00'14"E	225.00
L23	N12°19'14"E	148.01
L24	N11°36'25"E	422.60
L25	S78°23'35"E	226.99
L26	N69°53'25"E	371.57
L27	N11°41'17"E	666.87
L28	N78°11'05"W	544.02
L29	N11°36'25"E	4.65
L30	N11°51'14"E	175.52
L31	N14°43'08"E	474.13
L32	N89°21'38"E	179.92
L33	N72°34'34"E	623.13
L34	N09°01'09"E	181.91
L35	S69°53'15"E	102.86
L36	S71°01'28"E	153.25
L37	S73°15'53"E	149.14

DEMOLITION LEGEND

SYMBOL	DESCRIPTION
(crosshatch)	AREAS TO BE REMOVED

KEY MAP
NOT TO SCALE



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PRELIMINARY
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SCALE: 1 inch = 200 ft.

INITIAL PLAN DATE: 11/01/2024
REVISIONS:

WR JOB NUMBER 23-0045
DRN: WR DGN: WR CKD: WR

OVERALL EXISTING CONDITIONS & DEMOLITION PLAN

C1.00

EST. 1983

CURVE TABLE

CURVE #	LENGTH	RADIUS	DELTA
C1	180.79	6679.90	1.55°
C2	137.69	1382.59	5.71°
C3	195.33	958.28	11.68°
C4	24.35	3453.77	0.40°
C5	50.77	1298.50	2.24°

LINE TABLE

LINE #	BEARING	DISTANCE
L1	S01°36'33"E	331.36
L2	S06°53'59"E	1627.11
L3	S18°52'37"W	56.68
L4	S38°15'12"E	25.09
L5	S05°12'56"E	54.55
L6	S21°01'52"E	80.42
L7	S27°30'18"E	207.75
L8	S03°37'01"W	97.01
L9	S13°29'28"E	153.88
L10	S07°17'46"E	89.26
L11	S19°33'48"E	159.31
L12	N87°33'10"E	75.19
L13	S80°55'53"E	92.15
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DEMOLITION LEGEND

SYMBOL	DESCRIPTION
(crosshatch)	AREAS TO BE REMOVED

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NORTH CAROLINA PROFESSIONAL ENGINEER TERRENCE COOK
PRELIMINARY
NOT APPROVED FOR CONSTRUCTION

0 25 50
SCALE: 1 inch = 50 ft.

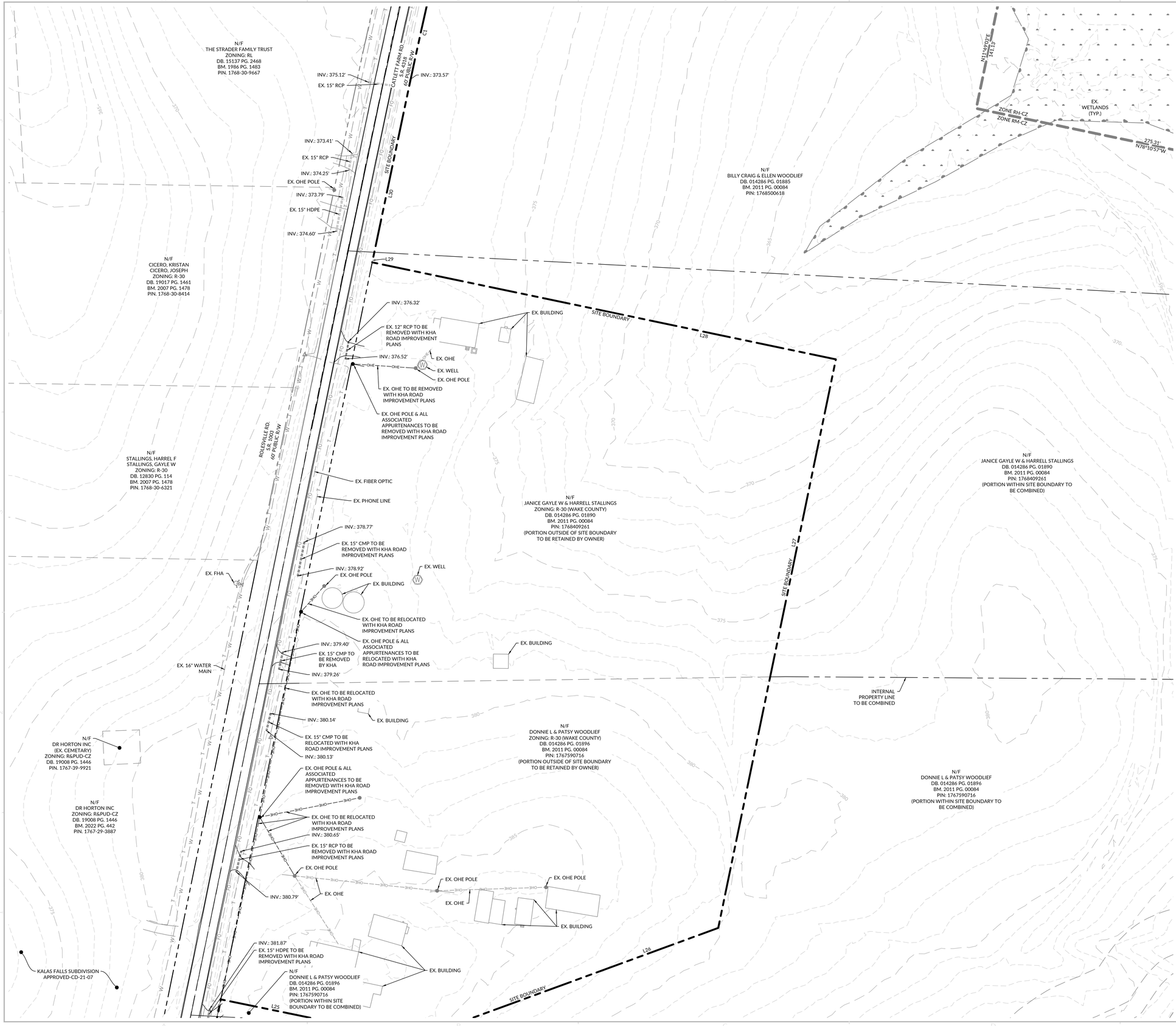
INITIAL PLAN DATE: 11/01/2024
REVISIONS:

WR JOB NUMBER 23-0045
DRN: WR DGN: WR CKD: WR

EXISTING CONDITIONS & DEMOLITION PLAN

C1.01

EST. 1983



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	AREAS TO BE REMOVED

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0 25 50
SCALE 1 inch = 50 ft.

INITIAL PLAN DATE: 11/01/2024
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WR JOB NUMBER 23-0045
DRN: WR DGN: WR CKD: WR

EXISTING CONDITIONS & DEMOLITION PLAN

C1.02

J:\23\0045-Pulte_Woodlief Assemblage\CAD\Drawing Sets\Construction\C1.01-1.07 EXISTING CONDITIONS & DEMOLITION PLAN.dwg, Thursday, October 31, 2024 11:24:58 AM, RSANTOS

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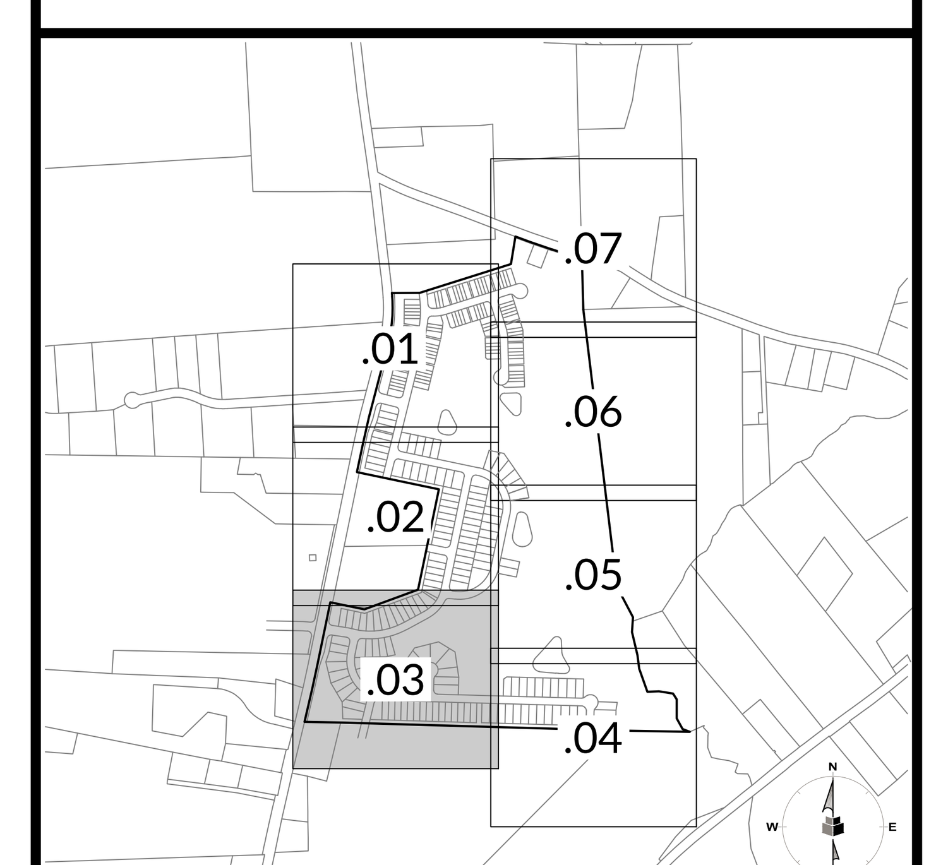
L4	S38°15'12"E	25.09
L5	S05°12'56"E	54.55
L6	S21°01'52"E	80.42
L7	S27°30'18"E	207.75
L8	S03°37'01"W	97.01
L9	S13°29'28"E	153.88
L10	S07°17'46"E	89.26
L11	S19°33'48"E	159.31
L12	N87°33'10"E	75.19
L13	S80°55'53"E	92.15
L14	S32°50'43"E	45.25
L15	S00°05'28"E	124.26
L16	S28°43'30"E	78.63
L17	S68°30'30"E	50.46
L18	N88°56'43"W	474.91
L19	N88°20'38"W	1796.39
L20	N88°52'07"W	224.55
L21	N88°52'07"W	10.87
L22	N13°00'14"E	225.00
L23	N12°19'14"E	148.01
L24	N11°36'25"E	422.60
L25	S78°23'35"E	226.99
L26	N69°53'25"E	371.57
L27	N11°41'17"E	666.87
L28	N78°11'05"W	544.02
L29	N11°36'25"E	4.65
L30	N11°51'14"E	175.52
L31	N14°43'08"E	474.13
L32	N89°21'38"E	179.92
L33	N72°34'34"E	623.13
L34	N09°01'09"E	181.91
L35	S69°53'15"E	102.86
L36	S71°01'28"E	153.25
L37	S73°15'53"E	149.14

DEMOLITION LEGEND

SYMBOL	DESCRIPTION
(crosshatch)	AREAS TO BE REMOVED

KEY MAP
NOT TO SCALE



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PULTEGROUP
1225 CRESCENT GREEN DRIVE, SUITE 250
CARY, NC 27518

CONSTRUCTION INFRASTRUCTURE DRAWINGS
BROADMOOR
CID-YR-XX
ROLESVILLE ROAD | ROLESVILLE, NC 27587 | WAKE COUNTY

PRELIMINARY
NOT APPROVED FOR CONSTRUCTION
NORTH CAROLINA PROFESSIONAL ENGINEER TERRENCE COOK

SCALE: 1 inch = 50 ft.

INITIAL PLAN DATE: 11/01/2024
REVISIONS:

WR JOB NUMBER 23-0045
DRN: WR DGN: WR CKD: WR

EXISTING CONDITIONS & DEMOLITION PLAN

C1.03

CURVE TABLE

CURVE #	LENGTH	RADIUS	DELTA
C1	180.79	6679.90	1.55°
C2	137.69	1382.59	5.71°
C3	195.33	958.28	11.68°
C4	24.35	3453.77	0.40°
C5	50.77	1298.50	2.24°

LINE TABLE

LINE #	BEARING	DISTANCE
L1	S01°36'33"E	331.36
L2	S06°53'59"E	1627.11
L3	S18°52'37"W	56.68
L4	S38°15'12"E	25.09
L5	S05°12'56"E	54.55
L6	S21°01'52"E	80.42
L7	S27°30'18"E	207.75
L8	S03°37'01"W	97.01
L9	S13°29'28"E	153.88
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L11	S19°33'48"E	159.31
L12	N87°33'10"E	75.19
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L14	S32°50'43"E	45.25
L15	S00°05'28"E	124.26
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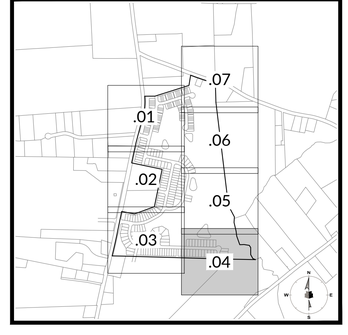
L36	S71°01'28"E	153.25
L37	S73°15'53"E	149.14

DEMOLITION LEGEND

SYMBOL	DESCRIPTION
	AREAS TO BE REMOVED

KEY MAP
NOT TO SCALE



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CONSTRUCTION INFRASTRUCTURE DRAWINGS
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NORTH CAROLINA PROFESSIONAL ENGINEER
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LAWRENCE COOK

0 25 50
SCALE: 1 inch = 50 ft.

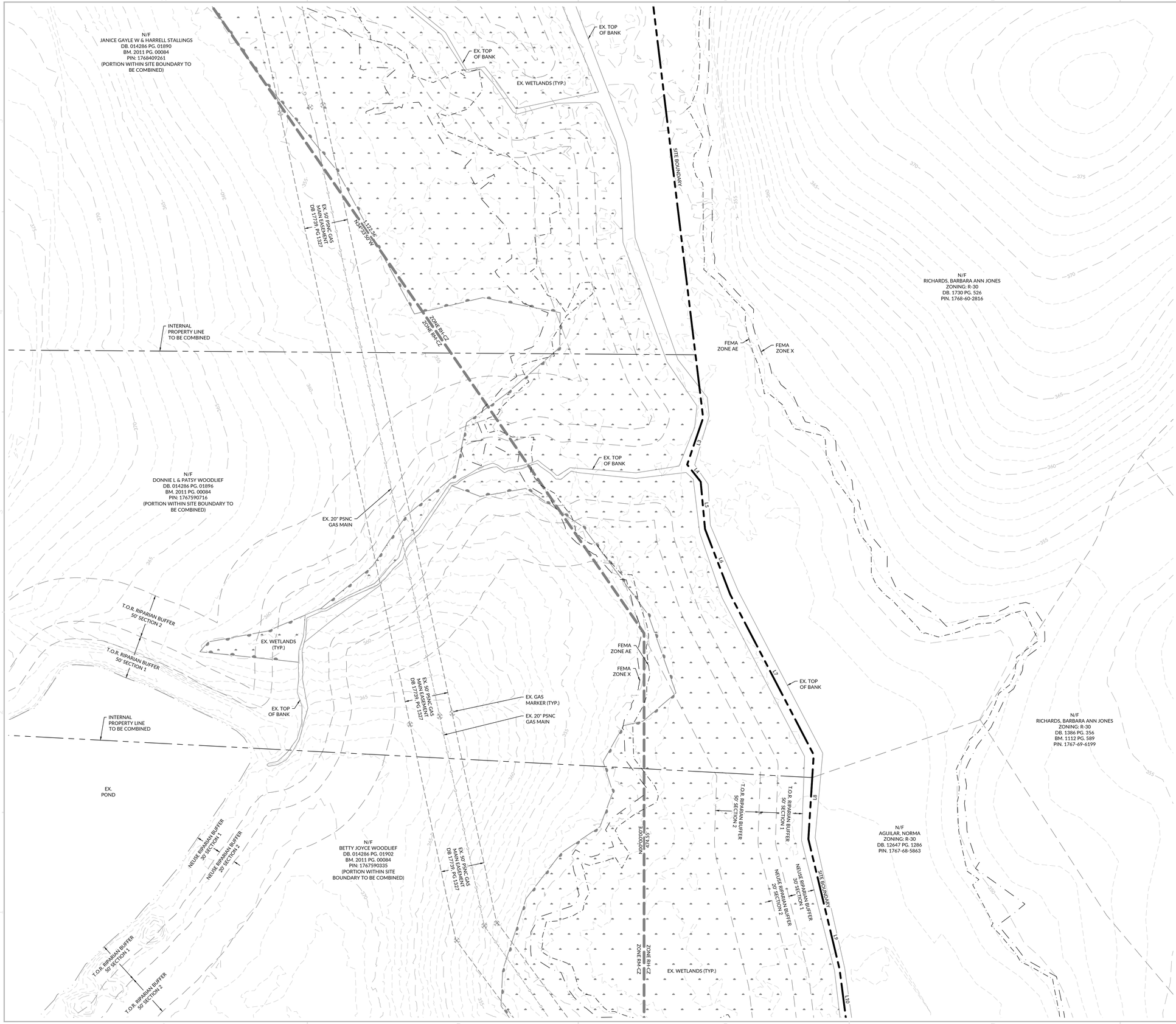
INITIAL PLAN DATE: 11/01/2024
REVISIONS:

WR JOB NUMBER 23-0045
DRN: WR DGN: WR CKD: WR

EXISTING CONDITIONS & DEMOLITION PLAN

C1.04

J:\23\0045-Pulte_Woodlief Assemblage\CAD\Drawing Sets\Construction\C1.01-1.07 EXISTING CONDITIONS & DEMOLITION PLAN.dwg, Thursday, October 31, 2024 11:24:53 AM, RSANTOS



CURVE TABLE

CURVE #	LENGTH	RADIUS	DELTA
C1	180.79	6679.90	1.55°
C2	137.69	1382.59	5.71°
C3	195.33	958.28	11.68°
C4	24.35	3453.77	0.40°
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LINE TABLE

LINE #	BEARING	DISTANCE
L1	S01°36'33"E	331.36
L2	S06°53'59"E	1627.11
L3	S18°52'37"W	56.68
L4	S38°15'12"E	25.09
L5	S05°12'56"E	54.55
L6	S21°01'52"E	80.42
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L35	S69°53'15"E	102.86
L36	S71°01'28"E	153.25
L37	S73°15'53"E	149.14

DEMOLITION LEGEND

SYMBOL	DESCRIPTION
	AREAS TO BE REMOVED

KEY MAP
NOT TO SCALE

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CONSTRUCTION INFRASTRUCTURE DRAWINGS

BROADMOOR
CID-YR-XX

ROLESVILLE ROAD | ROLESVILLE, NC 27587 | WAKE COUNTY

NORTH CAROLINA
PROFESSIONAL
PRELIMINARY
NOT APPROVED FOR
CONSTRUCTION
PURPOSES
TERRENCE COOK

0 25 50
SCALE: 1 inch = 50 ft.

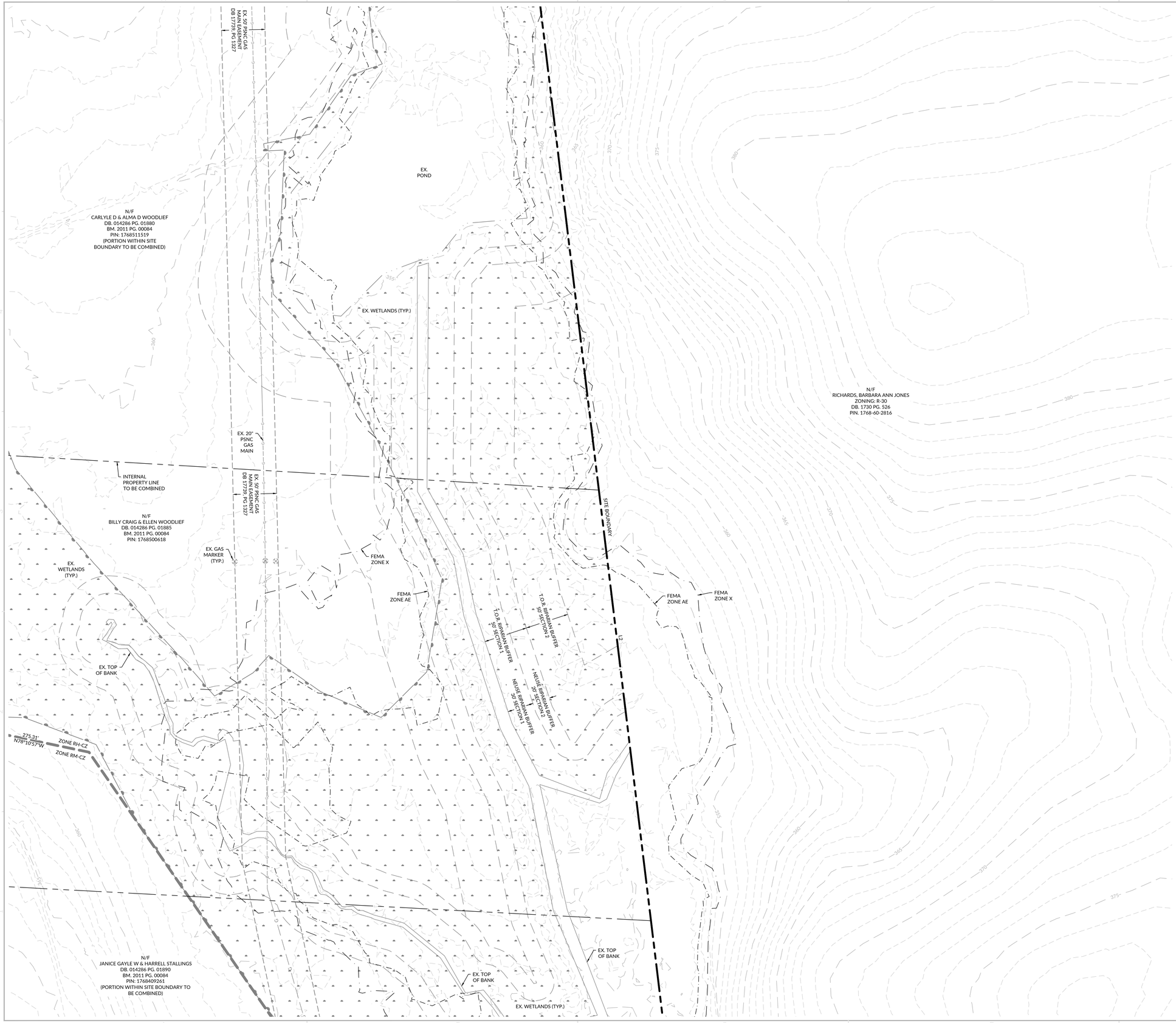
INITIAL PLAN DATE: 11/01/2024
REVISIONS:

WR JOB NUMBER 23-0045
DRN: WR DGN: WR CKD: WR

EXISTING CONDITIONS & DEMOLITION PLAN

C1.05

J:\23\0045-Pulte_Woodlief Assemblage\CAD\Drawing Set\Construction\C1.01-1.07 EXISTING CONDITIONS & DEMOLITION PLAN.dwg, Thursday, October 31, 2024 11:24:58 AM, ESANTOS



CURVE TABLE

CURVE #	LENGTH	RADIUS	DELTA
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L4	S38°15'12"E	25.09
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L35	S69°53'15"E	102.86
L36	S71°01'28"E	153.25
L37	S73°15'53"E	149.14

DEMOLITION LEGEND

SYMBOL	DESCRIPTION
	AREAS TO BE REMOVED

KEY MAP
NOT TO SCALE

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NORTH CAROLINA PROFESSIONAL ENGINEER
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LAWRENCE COOK

0 25 50
SCALE: 1 Inch = 50 ft.

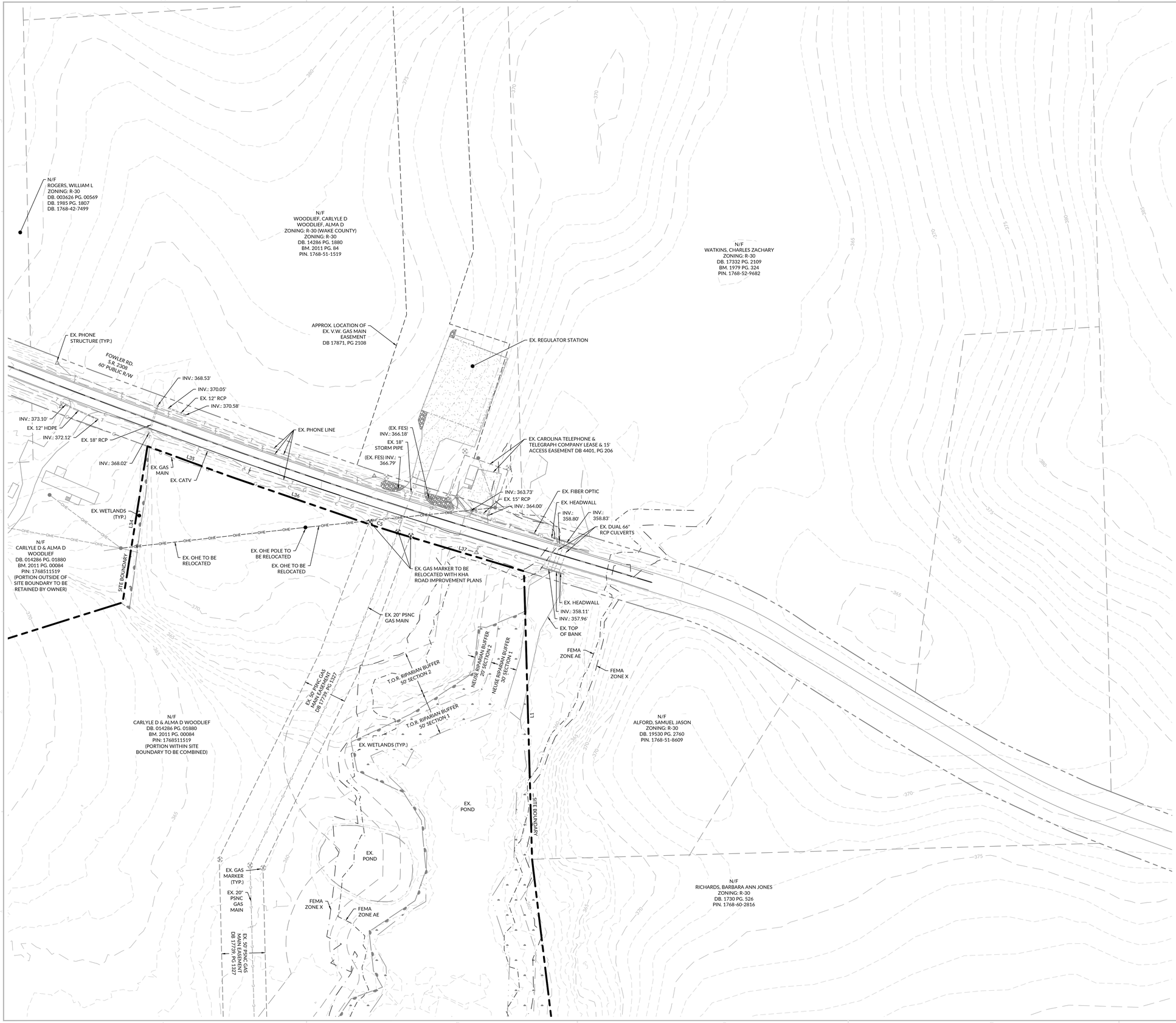
INITIAL PLAN DATE: 11/01/2024
REVISIONS:

WR JOB NUMBER 23-0045
DRN: WR DGN: WR CKD: WR

EXISTING CONDITIONS & DEMOLITION PLAN

C1.06

J:\23\0045-Pulte_Woodlief Assemblage\CAD\Drawing Sets\Construction\C1.01-1.07 EXISTING CONDITIONS & DEMOLITION PLAN.dwg, Thursday, October 31, 2024 11:24:37 AM, RSANTOS



CURVE TABLE			
CURVE #	LENGTH	RADIUS	DELTA
C1	180.79	6679.90	1.55°
C2	137.69	1382.59	5.71°
C3	195.33	958.28	11.68°
C4	24.35	3453.77	0.40°
C5	50.77	1298.50	2.24°

LINE TABLE		
LINE #	BEARING	DISTANCE
L1	S01°36'33"E	331.36
L2	S06°53'59"E	1627.11
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L5	S05°12'56"E	54.55
L6	S21°01'52"E	80.42
L7	S27°30'18"E	207.75
L8	S03°37'01"W	97.01
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L11	S19°33'48"E	159.31
L12	N87°33'10"E	75.19
L13	S80°55'53"E	92.15
L14	S32°50'43"E	45.25
L15	S00°05'28"E	124.26
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L17	S68°30'30"E	50.46
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L36	S71°01'28"E	153.25
L37	S73°15'53"E	149.14

DEMOLITION LEGEND

SYMBOL	DESCRIPTION
	AREAS TO BE REMOVED

KEY MAP
NOT TO SCALE

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ROLESVILLE ROAD | ROLESVILLE, NC 27587 | WAKE COUNTY

NORTH CAROLINA PROFESSIONAL ENGINEER TERRENCE COOK

PRELIMINARY
NOT APPROVED FOR CONSTRUCTION

SCALE: 1 inch = 50 ft.

INITIAL PLAN DATE: 11/01/2024
REVISIONS:

WR JOB NUMBER 23-0045
DRN: WR DGN: WR CKD: WR

EXISTING CONDITIONS & DEMOLITION PLAN

C1.07

J:\23\0045-Pole_Woodlief Assemblage\CAD\Drawing Sets\Construction\C1.01-07 EXISTING CONDITIONS & DEMOLITION PLAN.dwg, Thursday, October 31, 2024 11:24:40 AM, RSANTOS

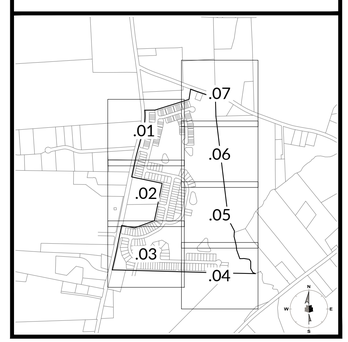
PHASE AREA SUMMARY										
	PHASE 1				PHASE 2		PHASE 3			
	ZONE RH-CZ		ZONE RM-CZ		ZONE RM-CZ		ZONE RH-CZ		ZONE RM-CZ	
	(SF)	(AC)	(SF)	(AC)	(SF)	(AC)	(SF)	(AC)	(SF)	(AC)
TOTAL AREA	934,362	21.45	1,166,532	26.77	536,659	12.32	875,120	20.09	1,085,951	24.93
LOT AREA	276,913	6.36	196,215	4.50	326,750	7.50	0	0.00	473,539	10.87
ROW AREA	118,889	2.73	93,240	2.14	130,801	3.00	0	0.00	120,362	2.76
OPEN SPACE AREA	531,432	12.20	892,109	20.48	65,883	1.51	873,814	20.06	484,387	11.12

LOT SUMMARY			
	TOWNHOMES	SINGLE FAMILY (FRONT LOAD)	TOTAL
PHASE 1	96	31	127
PHASE 2	-	59	59
PHASE 3	-	67	67
TOTAL	96	157	253

PHASING NOTES

1. IMPROVEMENTS TO ROLESVILLE ROAD, FOWLER ROAD, EAST YOUNG STREET, AND LOUISBURG ROAD SHALL BE CONSTRUCTED PRIOR TO THE 100TH RESIDENTIAL BUILDING PERMIT.
2. THE POLLINATION GARDEN SHALL BE CONSTRUCTED PRIOR TO ISSUANCE OF THE 150TH RESIDENTIAL BUILDING PERMIT.
3. ONE TOT-LOT AND ONE DOG PARK SHALL BE CONSTRUCTED PRIOR TO ISSUANCE OF THE 150TH RESIDENTIAL BUILDING PERMIT.
4. THE AMENITY CENTER SHALL BE CONSTRUCTED PRIOR TO ISSUANCE OF THE 200TH RESIDENTIAL BUILDING PERMIT.
5. PHASING IS FOR PLATTING AND CONSTRUCTION ORDERS ONLY. CLEARING AND GRADING OF THE SITE WILL OCCUR ACCORDING TO THE CONSTRUCTION SEQUENCE.

KEY MAP
NOT TO SCALE



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1225 CRESCENT GREEN DRIVE, SUITE 250
CARY, NC 27518

CONSTRUCTION INFRASTRUCTURE DRAWINGS

BROADMOOR
CID-YR-XX

ROLESVILLE ROAD | ROLESVILLE, NC 27587 | WAKE COUNTY

NORTH CAROLINA PROFESSIONAL ENGINEER
PRELIMINARY
NOT APPROVED FOR CONSTRUCTION
TERRENCE COOK

0 100 200
SCALE: 1 inch = 200 ft.

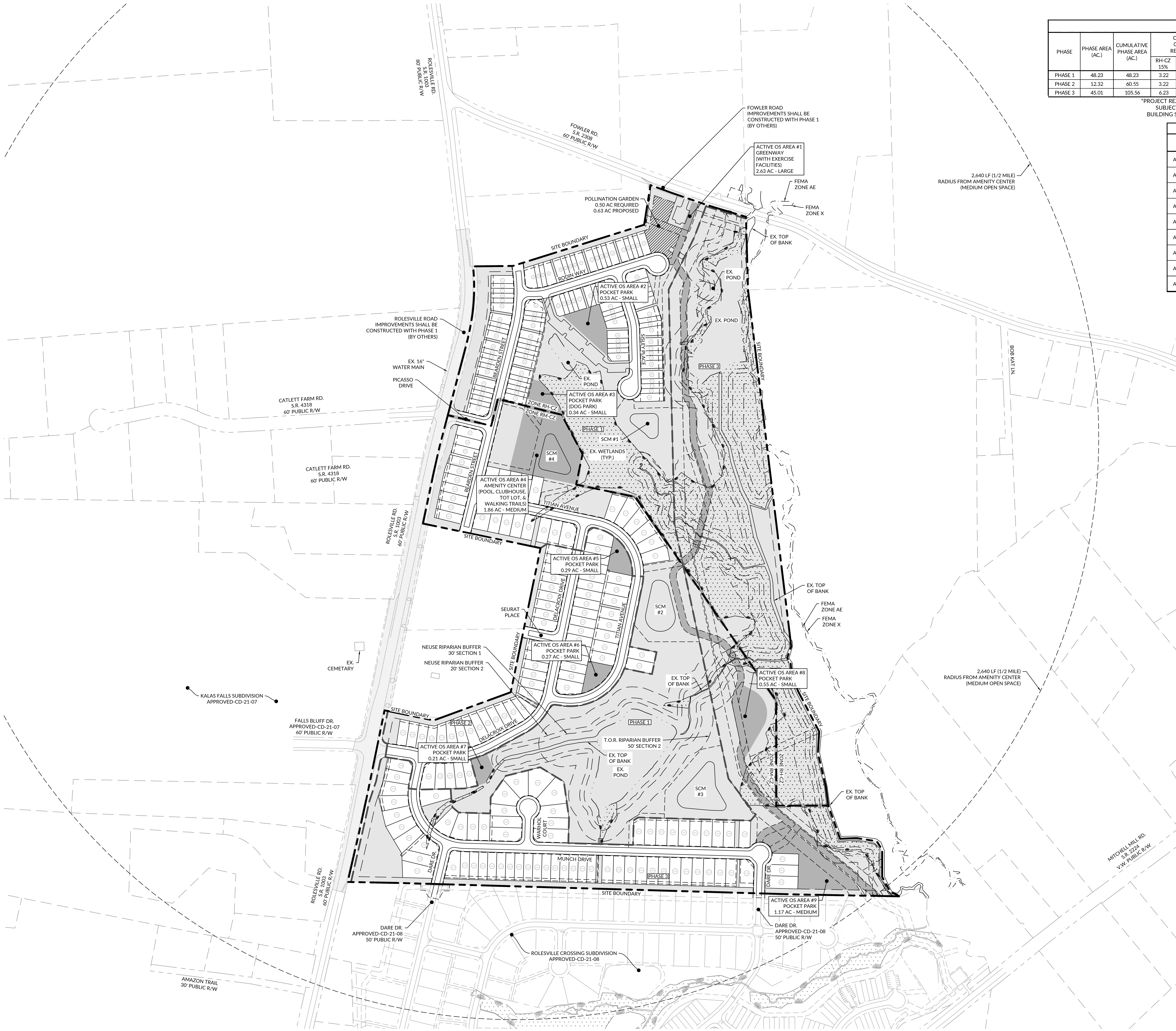
INITIAL PLAN DATE: 11/01/2024
REVISIONS:

WR JOB NUMBER 23-0045
DRN: WR DGN: WR CKD: WR

PHASING PLAN

C2.00

J:\23\0045-Pulte - Wyndfall Assemblage\CAD\Drawing Set\Construction\C2.00 PHASING PLAN.dwg, Thursday, October 31, 2024 11:17:20 AM, RSANTOS


ROLESVILLE RD.
S.R. 1003
80' PUBLIC R/W
FOWLER RD.
S.R. 2308
60' PUBLIC R/W
FOWLER ROAD IMPROVEMENTS SHALL BE CONSTRUCTED WITH PHASE 1 (BY OTHERS)
ACTIVE OS AREA #1
GREENWAY
(WITH EXERCISE FACILITIES)
2.63 AC - LARGE
FEMA ZONE AE
FEMA ZONE X
POLLINATION GARDEN
0.50 AC REQUIRED
0.63 AC PROPOSED
EX. TOP OF BANK
2,640 LF (1/2 MILE) RADIUS FROM AMENITY CENTER (MEDIUM OPEN SPACE)
SITE BOUNDARY
ROBIN WAY
ACTIVE OS AREA #2
POCKET PARK
0.53 AC - SMALL
EX. POND
ROLESVILLE ROAD IMPROVEMENTS SHALL BE CONSTRUCTED WITH PHASE 1 (BY OTHERS)
EX. 16" WATER MAIN
PICASSO DRIVE
BEARDEN STREET
SISLEY PLACE
PHASE 3
BOB KAT LN.
CATLETT FARM RD.
S.R. 4318
60' PUBLIC R/W
ACTIVE OS AREA #3
POCKET PARK
(DOG PARK)
0.34 AC - SMALL
ZONE RH-CZ
ZONE RM-CZ
PHASE 1
SCM #1
SCM #4
EX. WETLANDS (TYP.)
ACTIVE OS AREA #4
AMENITY CENTER
(POOL, CLUBHOUSE, TOT LOT, & WALKING TRAILS)
1.86 AC - MEDIUM
TITIAN AVENUE
ACTIVE OS AREA #5
POCKET PARK
0.29 AC - SMALL
DELACROIX DRIVE
SEURAT PLACE
SCM #2
NEUSE RIPARIAN BUFFER
30' SECTION 1
NEUSE RIPARIAN BUFFER
20' SECTION 2
ACTIVE OS AREA #6
POCKET PARK
0.27 AC - SMALL
EX. CEMETARY
KALAS FALLS SUBDIVISION
APPROVED-CD-21-07
FALLS BLUFF DR.
APPROVED-CD-21-07
60' PUBLIC R/W
ACTIVE OS AREA #8
POCKET PARK
0.55 AC - SMALL
PHASE 2
ACTIVE OS AREA #7
POCKET PARK
0.21 AC - SMALL
T.O.R. RIPARIAN BUFFER
50' SECTION 2
SCM #3
WARHOL COURT
MUNCH DRIVE
DARE DR.
MITCHELL MILL RD.
S.R. 2224
V.W. PUBLIC R/W
ACTIVE OS AREA #9
POCKET PARK
1.17 AC - MEDIUM
DARE DR.
APPROVED-CD-21-08
50' PUBLIC R/W
ROLESVILLE CROSSING SUBDIVISION
APPROVED-CD-21-08
AMAZON TRAIL
30' PUBLIC R/W

OPEN SPACE SUMMARY										
PHASE	PHASE AREA (AC.)	CUMULATIVE PHASE AREA (AC.)	CUMULATIVE OPEN SPACE REQUIRED (AC.)			CUMULATIVE OPEN SPACE PROPOSED (AC.)	CUMULATIVE ACTIVE OPEN SPACE REQUIRED (AC.)			CUMULATIVE ACTIVE OPEN SPACE PROPOSED (AC.)
			RH-CZ 15%	RM-CZ* 40%	TOTAL		RH-CZ 7.5%	RM-CZ 6%	TOTAL	
PHASE 1	48.23	48.23	3.22	10.71	13.93	32.68	1.61	1.61	3.22	3.41
PHASE 2	12.32	60.55	3.22	15.64	18.85	34.19	1.61	2.35	3.95	3.97
PHASE 3	45.01	105.56	6.23	25.61	31.84	65.37	3.12	3.84	6.96	7.85

*PROJECT REZONING WAS SUBMITTED MARCH 2ND, 2023. THE AREA ZONED RM-CZ IS THEREFORE SUBJECT TO LDO SECTION 3.1.B CLUSTER REQUIREMENTS FOR MINIMUM LOT SIZE, WIDTH, & BUILDING SETBACKS IN PLACE PRIOR TO THE APRIL 4TH, 2023 LDO TEXT AMENDMENT TA-23-02.

ACTIVE OPEN SPACE SUMMARY			
NAME	TYPE PER LDO SECTION 6.2.1	SIZE CLASSIFICATION PER LDO SECTION 6.2.1	AREA (AC.)
ACTIVE OPEN SPACE #1	GREENWAY WITH EXERCISE FACILITIES	LARGE	2.63
ACTIVE OPEN SPACE #2	POCKET PARK	SMALL	0.53
ACTIVE OPEN SPACE #3	POCKET PARK (DOG PARK)	SMALL	0.34
ACTIVE OPEN SPACE #4	AMENITY CENTER	MEDIUM	1.86
ACTIVE OPEN SPACE #5	POCKET PARK	SMALL	0.29
ACTIVE OPEN SPACE #6	POCKET PARK	SMALL	0.27
ACTIVE OPEN SPACE #7	POCKET PARK	SMALL	0.21
ACTIVE OPEN SPACE #8	POCKET PARK	SMALL	0.55
ACTIVE OPEN SPACE #9	POCKET PARK	MEDIUM	1.17

OPEN SPACE HATCH LEGEND
- ACTIVE OPEN SPACE
- PASSIVE OPEN SPACE

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CARY, NC 27518

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BROADMOOR
CID-YR-XX
ROLESVILLE ROAD | ROLESVILLE, NC 27587 | WAKE COUNTY

PRELIMINARY
NOT APPROVED FOR CONSTRUCTION

SCALE: 1 inch = 200 ft.

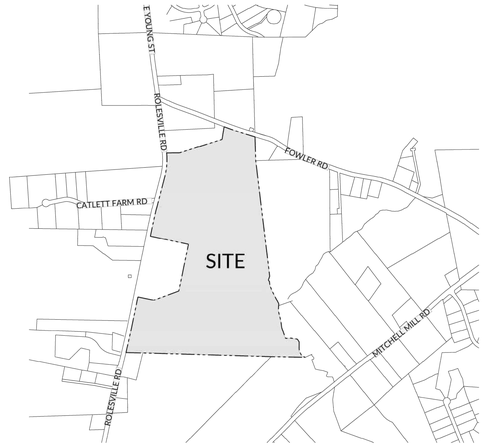
INITIAL PLAN DATE: 11/01/2024
REVISIONS:

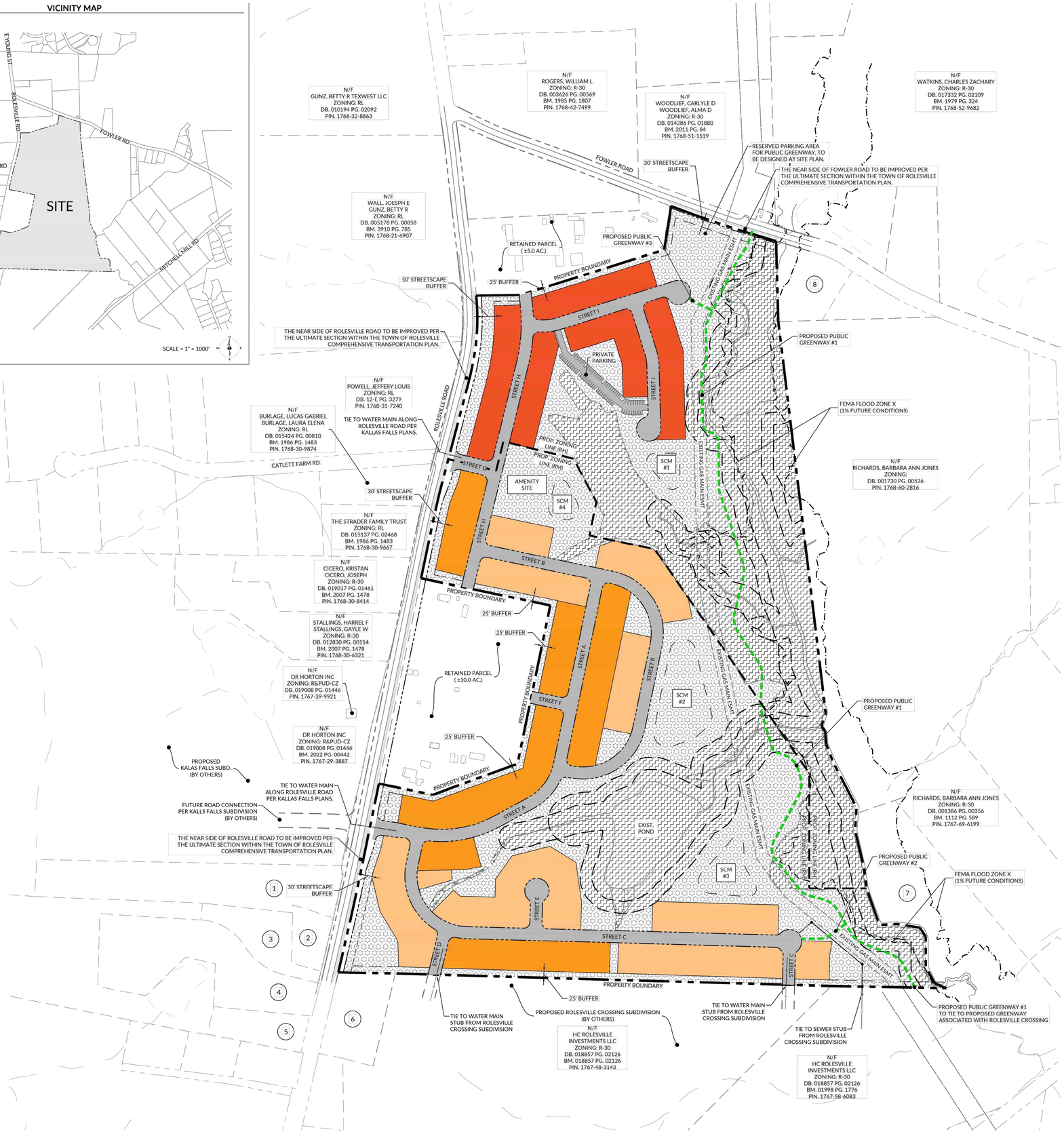
WR JOB NUMBER 23-0045
DRN: WR DGN: WR CKD: WR

OPEN SPACE PLAN

C2.01

VICINITY MAP





ADJACENT PARCEL DATA

PARCEL NUM	OWNER [N/F]	ZONING	DB.	PG.	BM.	PG.	PIN.
1	WILDER, CHRISTIAN C WILDER, CINDY E	R-30	010927	01494	2019	01188	1767-39-2260
2	MALDONADO, RAUL	R-30	017784	01955	2022	01097	1767-38-7947
3	GLOVER, RICO D SR GLOVER, TIFFANY N	R-30	017360	01716	2018	02222	1767-38-5959
4	SHORE, JOHN L SHORE, ANNETTE P	R-30	013782	01145	2004	01971	1767-38-1953
5	RODRIGUEZ, ALECIO MORIN MARIA OLIVIA LOPEZ	R-30	019067	02293	2018	02222	1767-38-5643
6	CLARK, CHALES T CLARK, PATRICA H	R-30	004572	00246	4572	0246	1767-38-9615
7	AGUILAR, NORMA	R-30	012647	01286	-	-	1767-68-5863
8	ALFORD, LARRY W SR ALFORD, BETTY D	R-30	007081	00072	1985	2003	1768-51-8609

PROJECT SITE PARCEL DATA

PARCEL NUM	OWNER [N/F]	ZONING	DB.	PG.	BM.	PG.	PIN.
1	WOODLIEF, CARLYE D WOODLIEF, ALMA D	R-30	014289	01880	2011	00084	1768-51-1519
2	WOODLIEF, BILLY CRAIG HOLDING, ELLEN WOODLIEF	R-30	014286	01885	2011	00084	1768-50-0618
3	STALLINGS, JANICE GAYLE W STALLINGS, HARRELL	R-30	014286	01890	2011	00084	1768-40-9261
4	WOODLIEF, DONNIE L WOODLIEF, PATSY	R-30	014286	01896	2011	00084	1767-59-0716
5	WOODLIEF, BETTY JOYCE	R-30	014286	01902	2011	00084	1767-59-0335
6	WOODLIEF, DWIGHT THOMAS	R-30	018654	00863	2011	00084	1767-58-0938

PRELIMINARY SITE DATA

PROJECT SIZE: ±105.5 AC.

EXISTING ZONING: R30 (WAKE COUNTY)

PROPOSED ZONING: RH & RM

ESTIMATED YIELD: ±255 DWELLING UNITS:

± 77 SINGLE-FAMILY LOTS @ 41'X120' TYP.
± 80 SINGLE-FAMILY LOTS @ 51'X120' TYP.
± 98 TOWNHOMES (26' ENDS, 22' INTERIORS, 60' DEEP)

PROPOSED DENSITY: ±2.42 D.U./AC.

REQUIRED OPEN SPACE:
RH ZONING (±41.5 AC.): 15% MIN. (±6.2 AC.)
MIN.80% OF REQUIRED O.S. MUST BE ON BUILDABLE LAND
6.2 AC. X 0.8 = MIN. 5.0 AC. OF O.S. MUST BE ON BUILDABLE LAND
RM ZONING (±64.0 AC.): 40% MIN. (±25.6 AC.)
MIN. 80% OF REQUIRED O.S. MUST BE ON BUILDABLE LAND
25.6 AC. X 0.8 = MIN. 20.5 AC. OF O.S. MUST BE ON BUILDABLE LAND

PROPOSED OPEN SPACE:
RH ZONING
BUILDABLE OPEN SPACE (OUTSIDE OF "ENVIRONMENTAL AREAS"): ±9.3 AC.
NON-BUILDABLE OPEN SPACE (WETLANDS, STREAM BUFFERS, FLOODPLAIN): ±22.7 AC.
TOTAL OPEN SPACE PROPOSED: ±32.0 AC. (±77.1%)
RM ZONING
BUILDABLE OPEN SPACE (OUTSIDE OF "ENVIRONMENTAL AREAS"): ±21.0 AC.
NON-BUILDABLE OPEN SPACE (WETLANDS, STREAM BUFFERS, FLOODPLAIN): ±12.1 AC.
TOTAL OPEN SPACE PROPOSED: ±33.1 AC. (±51.7%)

TOWNHOME SITE PARKING TABULATION:

OFF-STREET PARKING REQUIRED (NOT INCLUDING GARAGES):
98 UNITS x 2.25 SP/UNIT = 221 SPACES REQUIRED

OFF-STREET PARKING PROVIDED (NOT INCLUDING GARAGES):
40 UNITS @ 2-CAR DRIVEWAY = 80 SPACES
58 UNITS @ 1-CAR DRIVEWAY = 58 SPACES
PARKING LOT IN TOWNHOME AREA = 76 SPACES
SURPLUS PARKING AT AMENITY SITE = 7 SPACES

TOTAL OFF-STREET PARKING = 221 SPACES

NOTES:

1. THIS PLAN HAS BEEN COMPILED FROM A VARIETY OF SOURCES INCLUDING GIS DATA AND IS NOT AN OFFICIAL DESIGN OR SURVEY DOCUMENT.
2. THE LAYOUT SHOWN ON THIS PLAN IS PURELY THEORETICAL IN NATURE AND MAY BE SUBJECT TO SIGNIFICANT REVISION UPON FURTHER DUE-DILIGENCE REVIEW AND EVALUATION. THIS PLAN HAS NOT BEEN REVIEWED BY ANY MUNICIPALITY OR OTHER REVIEW AGENCY, AND IS PROVIDED SOLELY FOR ILLUSTRATION AND CONCEPTUAL PLANNING CONSIDERATIONS.
3. LIMITS OF THE RIPARIAN BUFFERS, WETLANDS AND STREAMS SHOWN ON THIS PLAN ARE BASED ON PRELIMINARY WETLAND/ BUFFER DELINEATION FIELD EVALUATION AND EXHIBIT PREPARED BY WITHERSRAVENEL, INC DATED 01/17/23.
4. ALL STREETS SHOWN AND LABELED ON THIS PLAN SHALL BE 50' PUBLIC RIGHT-OF-WAY
5. PURSUANT TO N.C.G.S 160D-108, THIS CONCEPT PLAN AS PROPOSED IS REQUESTED TO BE REVIEWED UNDER THE LAND DEVELOPMENT ORDINANCE (LDO) EFFECTIVE JUNE 1, 2021, AND AMENDED IN DECEMBER, 2021 AND OCTOBER 4, 2022.

OPEN SPACE HATCHING LEGEND

"ENVIRONMENTAL" OPEN SPACE AREAS (WETLANDS, STREAM BUFFERS, FLOODPLAIN). THESE AREAS ARE ONLY ELIGIBLE TO ACCOUNT FOR A MAXIMUM OF 20% OF THE MINIMUM REQUIRED OPEN SPACE.

"BUILDABLE" OPEN SPACE AREAS (OUTSIDE OF WETLANDS, STREAM BUFFERS, FLOODPLAIN). THESE AREAS MUST ACCOUNT FOR AT LEAST 80% OF THE MINIMUM REQUIRED OPEN SPACE.

LOT SHADING SUMMARY

SINGLE-FAMILY LOTS (TYP. 41' X 120')
SINGLE-FAMILY LOTS (TYP. 51' X 120') — AVERAGE SINGLE-FAMILY LOT SIZE = 6,268 SF
TOWNHOMES (26' ENDS, 22' INTERIORS, 60' DEEP)

CONTACT INFORMATION

PULTEGROUP, INC.

CONTACT: CHRIS RAUGHLEY
ADDRESS: 1225 CRESCENT GREEN DR.
SUITE 250
CARY NC, 27518
PHONE: 919-816-1100
EMAIL: Chris.Raughley@pultegroup.com

WITHERSRAVENEL

CONTACT: BRYANT INGE, PE
PHONE: 919-469-3340
EMAIL: binge@withersravenel.com

TOWN OF ROLESVILLE
PROJECT NUMBER:
REZ-23-02

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MASTER PLAN

WOODLIEF ASSEMBLAGE

1321 ROLESVILLE RD | ROLESVILLE, NC 27587 | WAKE COUNTY

NORTH CAROLINA
PRELIMINARY
NOT APPROVED
FOR CONSTRUCTION
TERRENCE COOPER

0 100 200
SCALE: 1 inch = 200 ft.

INITIAL PLAN DATE: 03/01/2023
REVISIONS:
1 08/01/2023 WR
PER TOWN COMMENTS
2 08/22/2023 WR
REVISED PRODUCT MIX
3 10/02/2023 WR
PER TOWN COMMENTS
4 11/20/2023 WR
PER TOWN COMMENTS
5 12/13/2023 WR
PER TOWN COMMENTS

WR JOB NUMBER 23-0045
DRN: WR DGN: WR CKD: WR

APPROVED CONCEPTUAL PLAN (REZ-23-02)

C2.02

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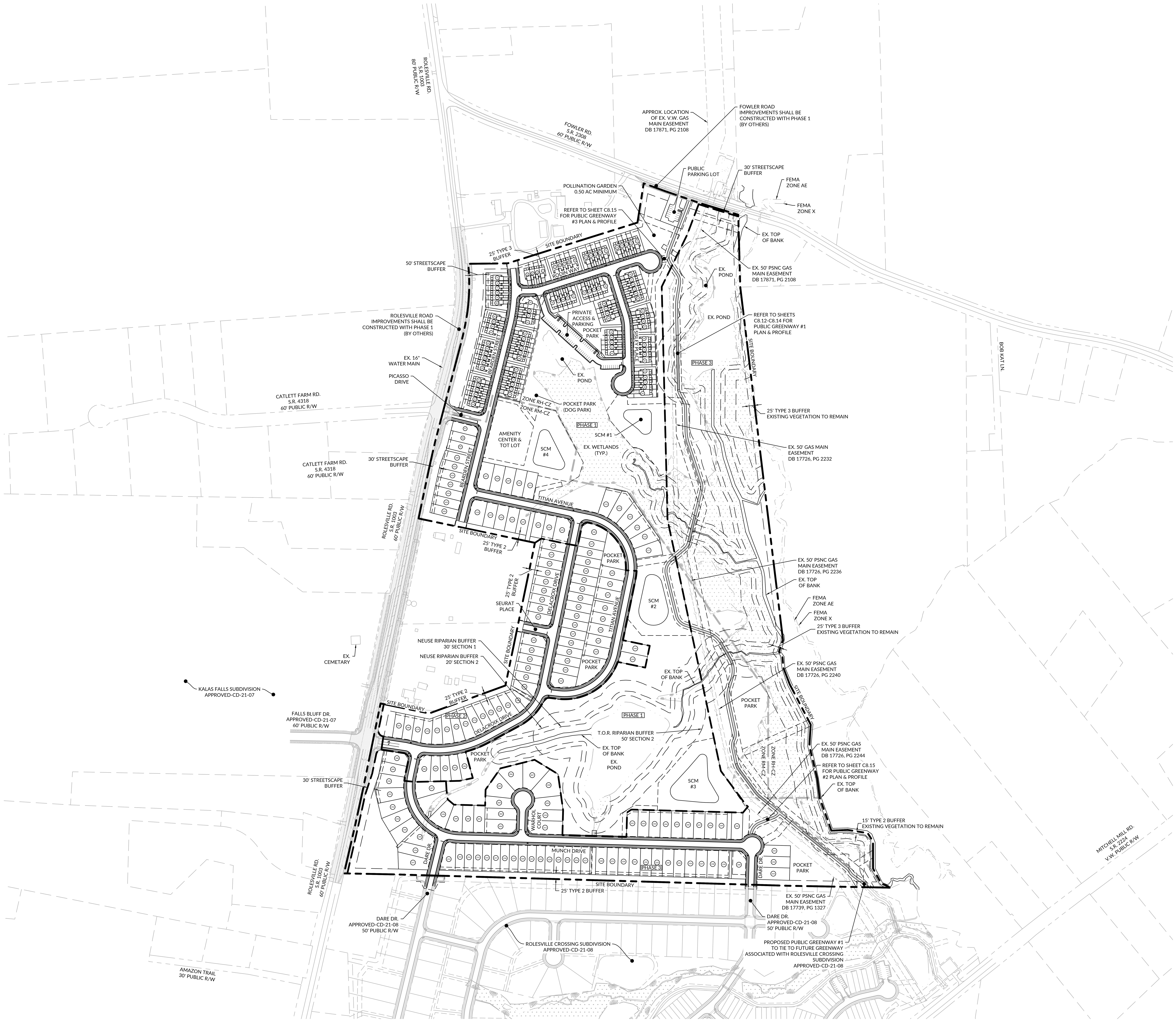


LOT TYPE SUMMARY			
LOT NUMBERS	PHASE	ZONING	LOT TYPE (REFER TO SHEET C3.09)
1-96	PHASE 1	RH-CZ	22' & 26' SINGLE-FAMILY ATTACHED (TOWNHOMES)
97-106	PHASE 1	RM-CZ	41' SINGLE-FAMILY DETACHED
107-125	PHASE 1	RM-CZ	51' SINGLE-FAMILY DETACHED
126-142	PHASE 2	RM-CZ	41' SINGLE-FAMILY DETACHED
143-152	PHASE 2	RM-CZ	51' SINGLE-FAMILY DETACHED
153-186	PHASE 2	RM-CZ	41' SINGLE-FAMILY DETACHED
187-211	PHASE 3	RM-CZ	51' SINGLE-FAMILY DETACHED
212-227	PHASE 3	RM-CZ	41' SINGLE-FAMILY DETACHED
228-253	PHASE 3	RM-CZ	51' SINGLE-FAMILY DETACHED

TOWNHOME SITE PARKING TABULATION

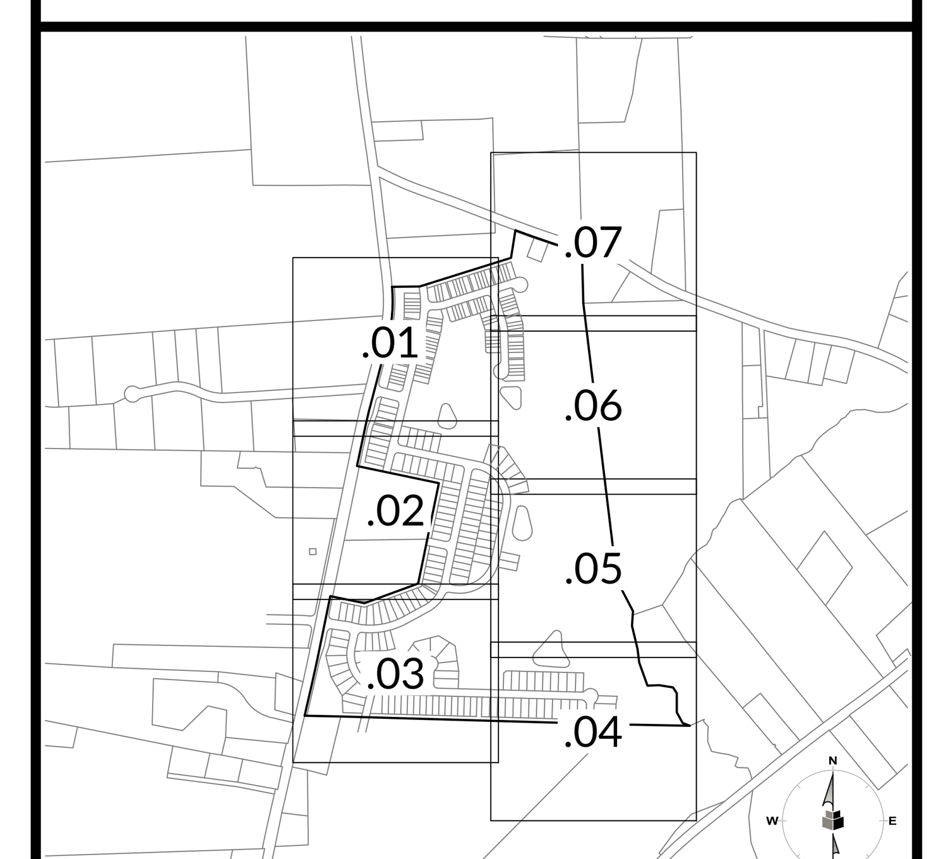
OFF-STREET PARKING REQUIRED (NOT INCLUDING GARAGES):
96 UNITS x 2.25 SP/UNIT = 216 SPACES REQUIRED

OFF-STREET PARKING PROVIDED (NOT INCLUDING GARAGES):
38 UNITS @ 2-CAR DRIVEWAY = 76 SPACES
58 UNITS @ 1-CAR DRIVEWAY = 58 SPACES
PARKING LOT IN TOWNHOME AREA = 62 SPACES (4 ACCESSIBLE SPACES)
SURPLUS PARKING IN AMENITY AREA = 20 SPACES

TOTAL OFF-STREET PARKING = 216 SPACES

KEY MAP

NOT TO SCALE



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CONSTRUCTION INFRASTRUCTURE DRAWINGS

BROADMOOR
CID-YR-XX

ROLESVILLE ROAD | ROLESVILLE, NC 27587 | WAKE COUNTY

PRELIMINARY
NOT APPROVED FOR CONSTRUCTION
NORTH CAROLINA PROFESSIONAL ENGINEER TERRENCE COOK

0 100 200
SCALE: 1 inch = 200 ft.

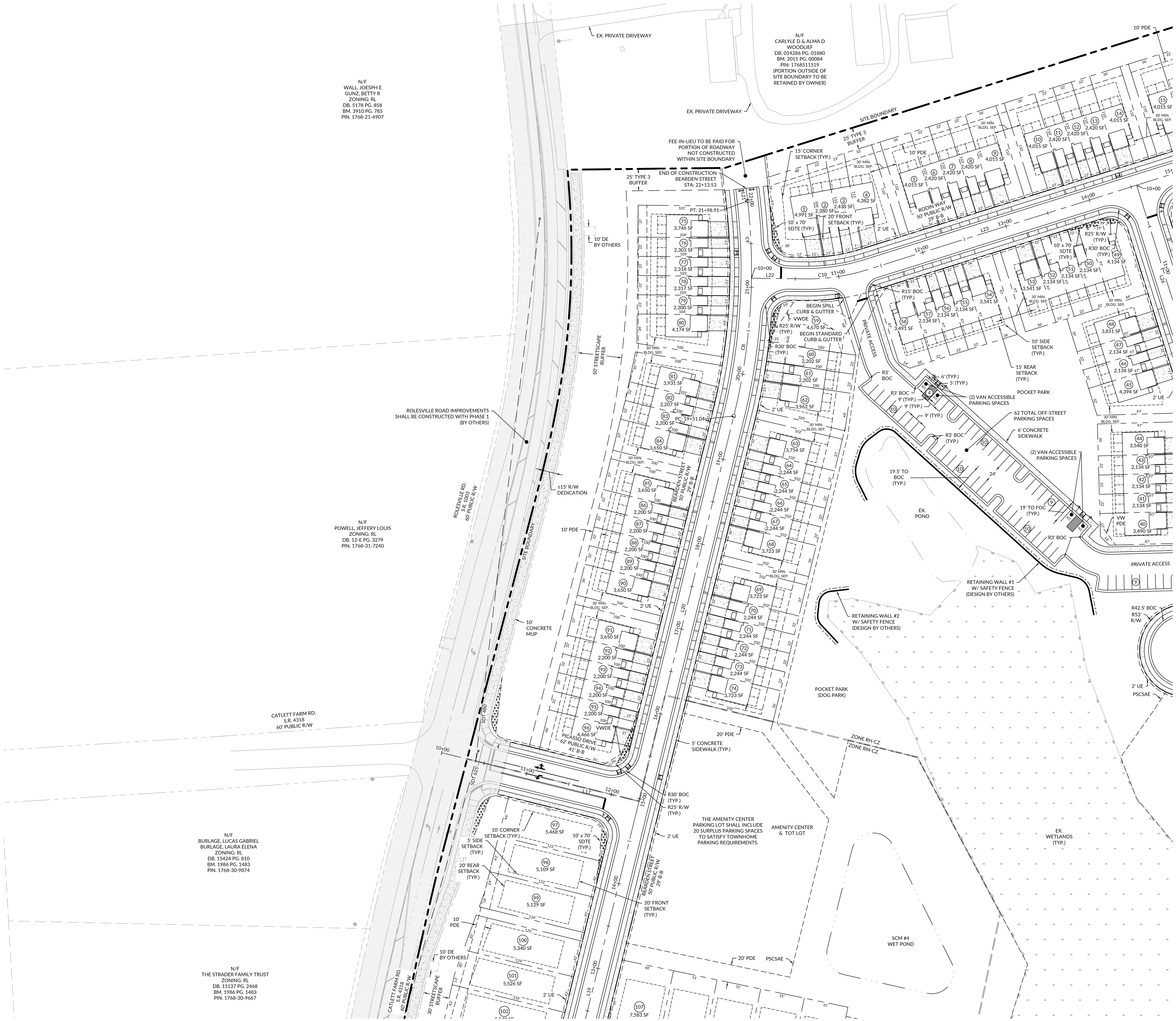
INITIAL PLAN DATE: 11/01/2024
REVISIONS:

WR JOB NUMBER 23-0045
DRN: WR DGN: WR CKD: WR

OVERALL SITE PLAN

C3.00

EST. 1983



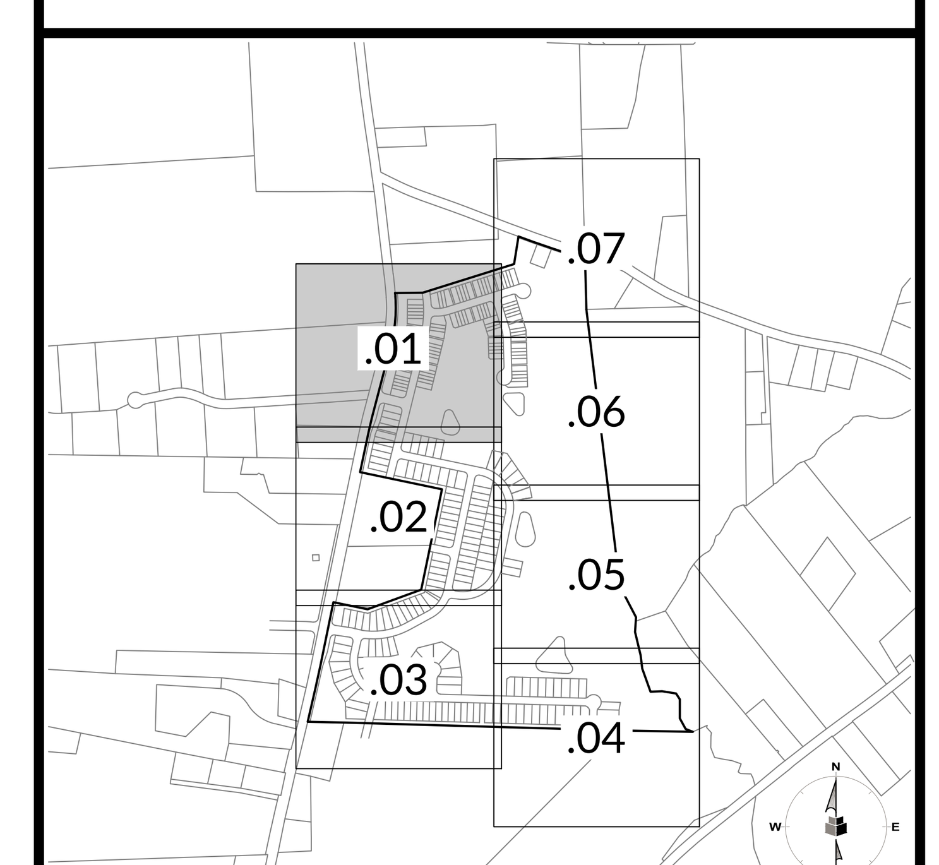
LINE TABLE

LINE #	LENGTH	DIRECTION
L1	232.52	S81°27'20"E
L2	24.00	S81°27'20"E
L3	160.49	N61°26'43"E
L4	247.11	N11°41'17"E
L5	551.68	N11°41'17"E
L6	77.21	S83°18'43"E
L7	348.78	N11°41'17"E
L8	55.52	N78°11'05"W
L9	513.28	N78°11'05"W
L10	127.80	S12°07'16"W
L11	284.94	S88°25'06"E
L12	1047.12	S88°25'06"E
L13	178.55	S01°39'27"W
L14	153.85	N13°35'03"E
L15	181.37	N01°45'22"E
L16	145.00	N78°18'43"W
L17	232.80	N76°10'41"W
L18	139.24	N13°49'19"E
L19	331.95	N13°49'19"E
L20	453.98	N13°49'19"E
L21	14.62	N06°28'00"W
L22	60.73	S89°13'19"E
L23	322.81	N72°34'34"E
L24	183.05	N72°34'34"E
L25	28.00	S17°25'26"E
L26	223.00	N17°25'26"W
L27	256.28	N01°34'10"W
L28	28.00	N88°25'50"E

CURVE TABLE

CURVE #	RADIUS	LENGTH	CHORD LENGTH	CHORD DIRECTION
C1	475.00	307.56	302.220	N79° 59' 41.50"E
C2	235.00	178.14	173.909	N39° 43' 42.28"E
C3	235.00	25.94	25.923	N14° 50' 59.22"E
C4	235.00	348.63	317.527	N54° 11' 16.68"E
C5	235.00	368.61	331.971	N33° 14' 54.11"W
C6	235.00	323.50	298.555	S27° 18' 55.55"E
C7	235.00	88.87	88.337	S77° 35' 06.63"E
C8	700.00	159.36	159.018	N07° 18' 00.21"E
C9	700.00	88.51	88.454	N02° 50' 39.70"W
C10	230.00	73.07	72.761	N81° 40' 37.38"E
C11	230.00	63.64	63.442	N09° 29' 47.98"W

KEY MAP
NOT TO SCALE



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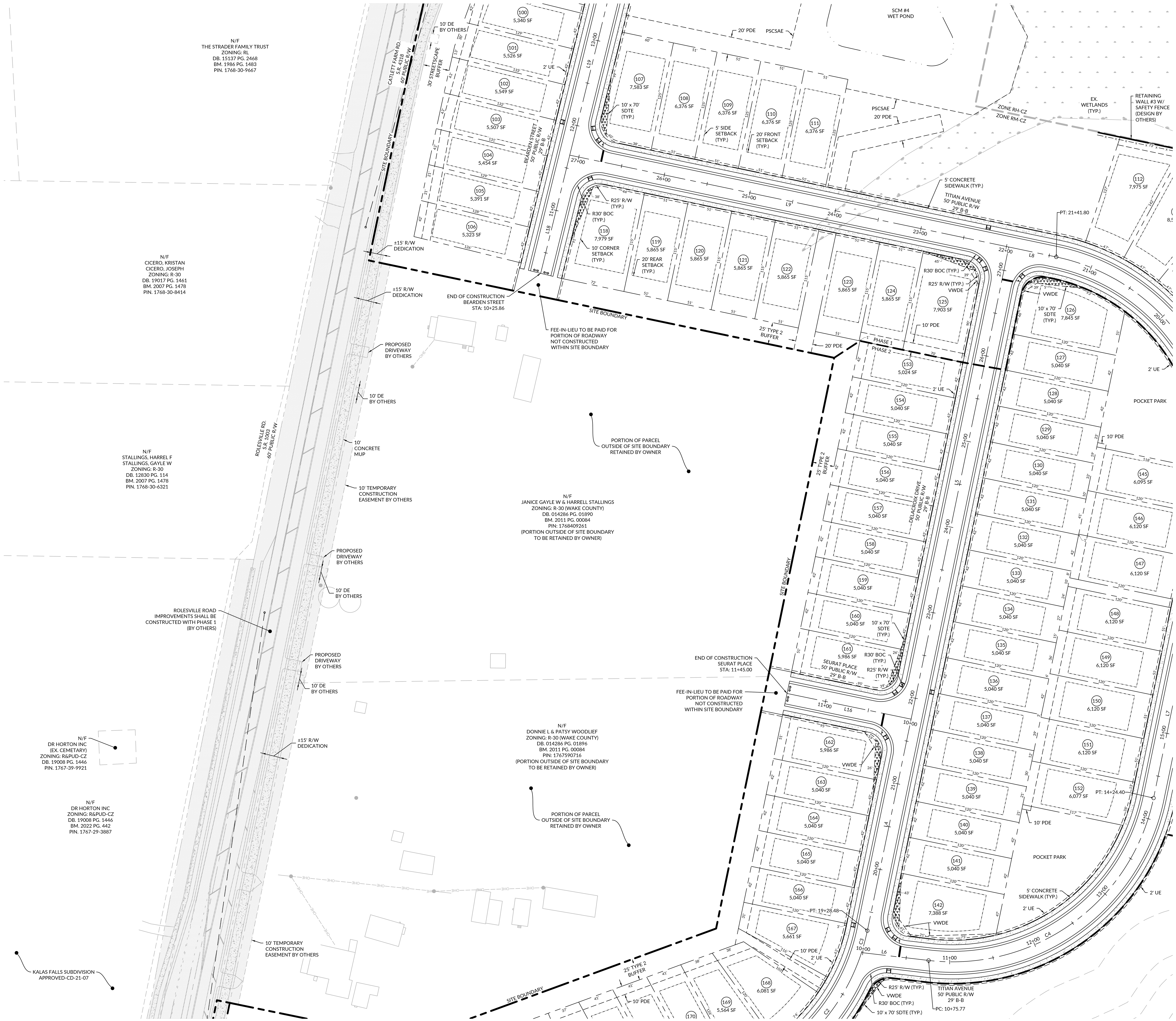
SCALE: 1 inch = 50 ft.

INITIAL PLAN DATE: 11/01/2024
REVISIONS:

WR JOB NUMBER 23-0045
DRN: WR DGN: WR CKD: WR

SITE PLAN

C3.01



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C5	235.00	368.61	331.971	N33° 14' 54.11"W
C6	235.00	323.50	298.555	S27° 18' 55.55"E
C7	235.00	88.87	88.337	S77° 35' 06.63"E
C8	700.00	159.36	159.018	N07° 18' 00.21"E
C9	700.00	88.51	88.454	N02° 50' 39.70"W
C10	230.00	73.07	72.761	N81° 40' 37.38"E
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KEY MAP
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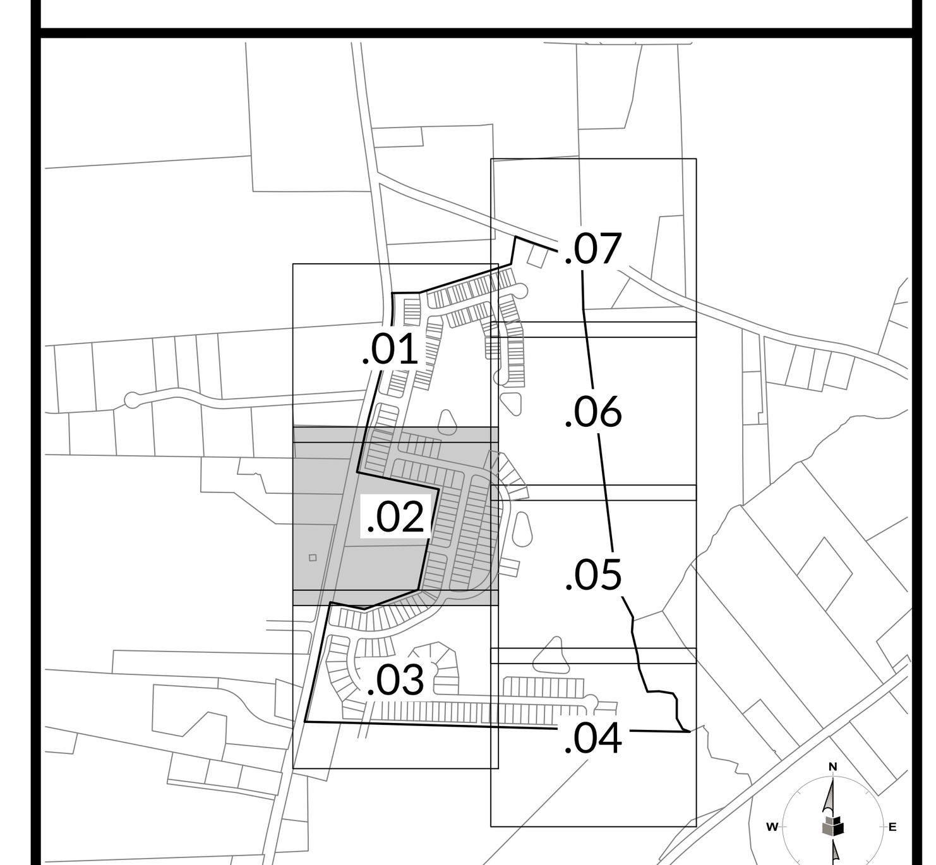

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NORTH CAROLINA PROFESSIONAL ENGINEER TERRENCE COOK
PRELIMINARY
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0 25 50
SCALE: 1 inch = 50 ft.

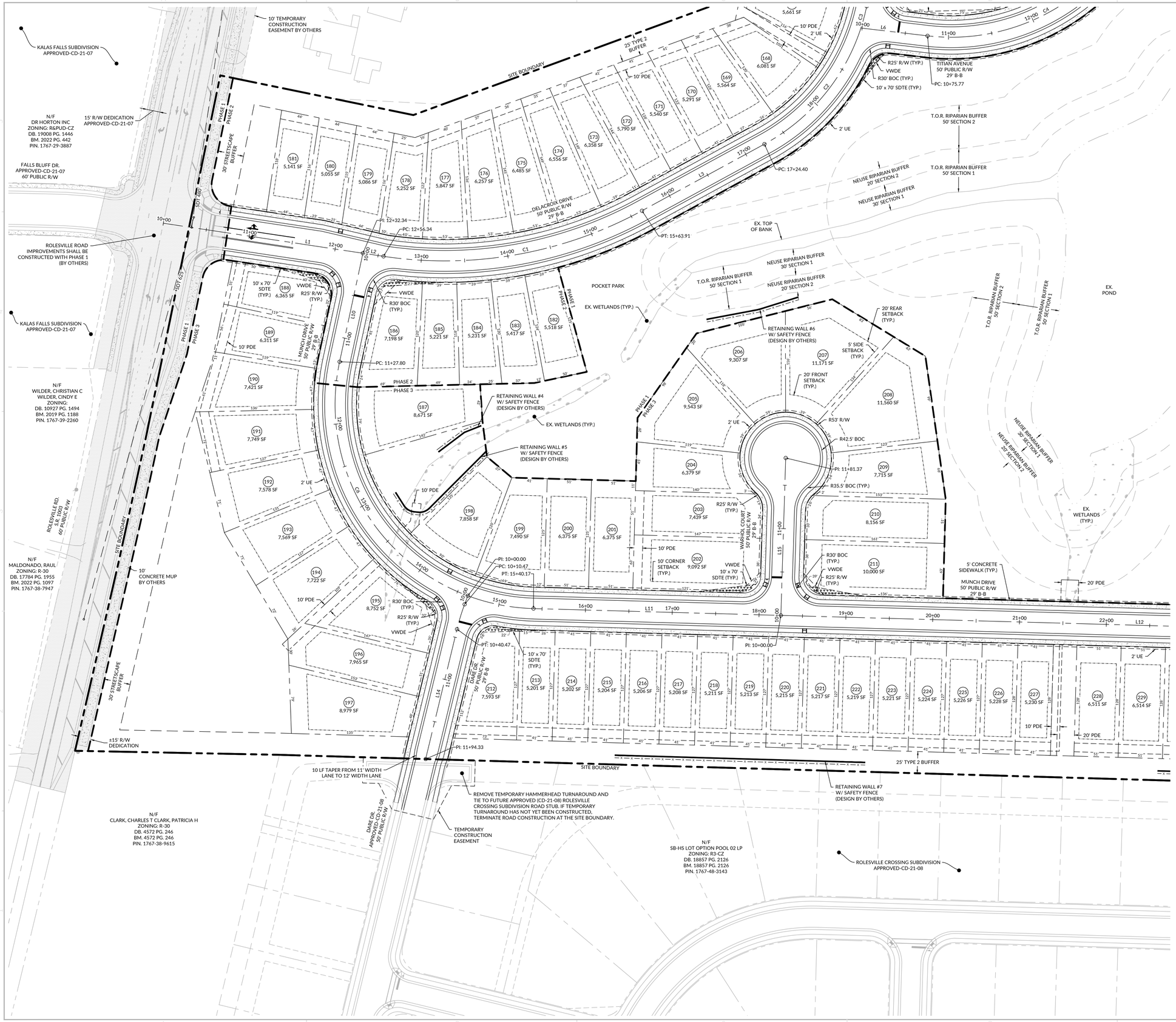
INITIAL PLAN DATE: 11/01/2024
REVISIONS:

WR JOB NUMBER 23-0045
DRN: WR DGN: WR CKD: WR

SITE PLAN

C3.02

EST. 1983



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L12	1047.12	S88°25'06"E
L13	178.55	S01°39'27"W
L14	153.85	N13°35'03"E
L15	181.37	N01°45'22"E
L16	145.00	N78°18'43"W
L17	232.80	N76°10'41"W
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L19	331.95	N13°49'19"E
L20	453.98	N13°49'19"E
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C5	235.00	368.61	331.971	N33° 14' 54.11"W
C6	235.00	323.50	298.555	S27° 18' 55.55"E
C7	235.00	88.87	88.337	S77° 35' 06.63"E
C8	700.00	159.36	159.018	N07° 18' 00.21"E
C9	700.00	88.51	88.454	N02° 50' 39.70"W
C10	230.00	73.07	72.761	N81° 40' 37.38"E
C11	230.00	63.64	63.442	N09° 29' 47.98"W

KEY MAP
NOT TO SCALE

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NORTH CAROLINA PROFESSIONAL ENGINEER
PRELIMINARY
NOT APPROVED FOR CONSTRUCTION
TERRENCE COOK

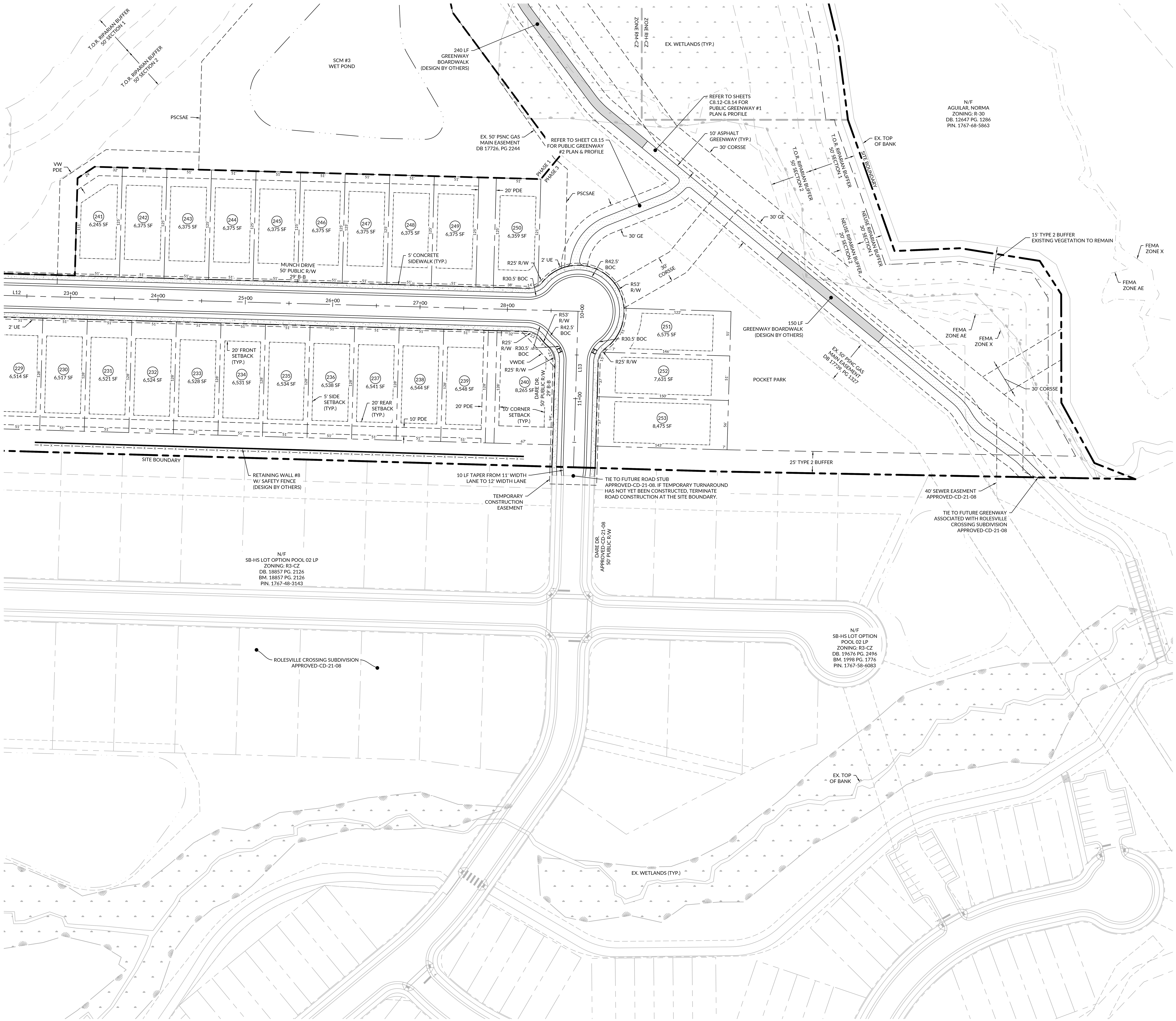
SCALE: 1 inch = 50 ft.

INITIAL PLAN DATE: 11/01/2024
REVISIONS:

WR JOB NUMBER 23-0045
DRN: WR DGN: WR CKD: WR

SITE PLAN

C3.03



LINE TABLE

LINE #	LENGTH	DIRECTION
L1	232.52	S81°27'20"E
L2	24.00	S81°27'20"E
L3	160.49	N61°26'43"E
L4	247.11	N11°41'17"E
L5	551.68	N11°41'17"E
L6	77.21	S83°18'43"E
L7	348.78	N11°41'17"E
L8	55.52	N78°11'05"W
L9	513.28	N78°11'05"W
L10	127.80	S12°07'16"W
L11	284.94	S88°25'06"E
L12	1047.12	S88°25'06"E
L13	178.55	S01°39'27"W
L14	153.85	N13°35'03"E
L15	181.37	N01°45'22"E
L16	145.00	N78°18'43"W
L17	232.80	N76°10'41"W
L18	139.24	N13°49'19"E
L19	331.95	N13°49'19"E
L20	453.98	N13°49'19"E
L21	14.62	N06°28'00"W
L22	60.73	S89°13'19"E
L23	322.81	N72°34'34"E
L24	183.05	N72°34'34"E
L25	28.00	S17°25'26"E
L26	223.00	N17°25'26"W
L27	256.28	N01°34'10"W
L28	28.00	N88°25'50"E

CURVE TABLE

CURVE #	RADIUS	LENGTH	CHORD LENGTH	CHORD DIRECTION
C1	475.00	307.56	302.220	N79° 59' 41.50"E
C2	235.00	178.14	173.909	N39° 43' 42.28"E
C3	235.00	25.94	25.923	N14° 50' 59.22"E
C4	235.00	348.63	317.527	N54° 11' 16.68"E
C5	235.00	368.61	331.971	N33° 14' 54.11"W
C6	235.00	323.50	298.555	S27° 18' 55.55"E
C7	235.00	88.87	88.337	S77° 35' 06.63"E
C8	700.00	159.36	159.018	N07° 18' 00.21"E
C9	700.00	88.51	88.454	N02° 50' 39.70"W
C10	230.00	73.07	72.761	N81° 40' 37.38"E
C11	230.00	63.64	63.442	N09° 29' 47.98"W

KEY MAP
NOT TO SCALE

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1225 CRESCENT GREEN DRIVE, SUITE 250 CARY, NC 27518

CONSTRUCTION INFRASTRUCTURE DRAWINGS
BROADMOOR
CID-YR-XX
ROLESVILLE ROAD | ROLESVILLE, NC 27587 | WAKE COUNTY

PRELIMINARY
NOT APPROVED FOR CONSTRUCTION
NORTH CAROLINA PROFESSIONAL ENGINEER TERRENCE COOK

0 25 50
SCALE: 1 inch = 50 ft.

INITIAL PLAN DATE: 11/01/2024
REVISIONS:

WR JOB NUMBER		23-0045
DRN: WR	DGN: WR	CKD: WR

SITE PLAN

C3.04

LINE TABLE

LINE #	LENGTH	DIRECTION
L1	232.52	S81°27'20"E
L2	24.00	S81°27'20"E
L3	160.49	N61°26'43"E
L4	247.11	N11°41'17"E
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L23	322.81	N72°34'34"E
L24	183.05	N72°34'34"E
L25	28.00	S17°25'26"E
L26	223.00	N17°25'26"W
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CURVE TABLE

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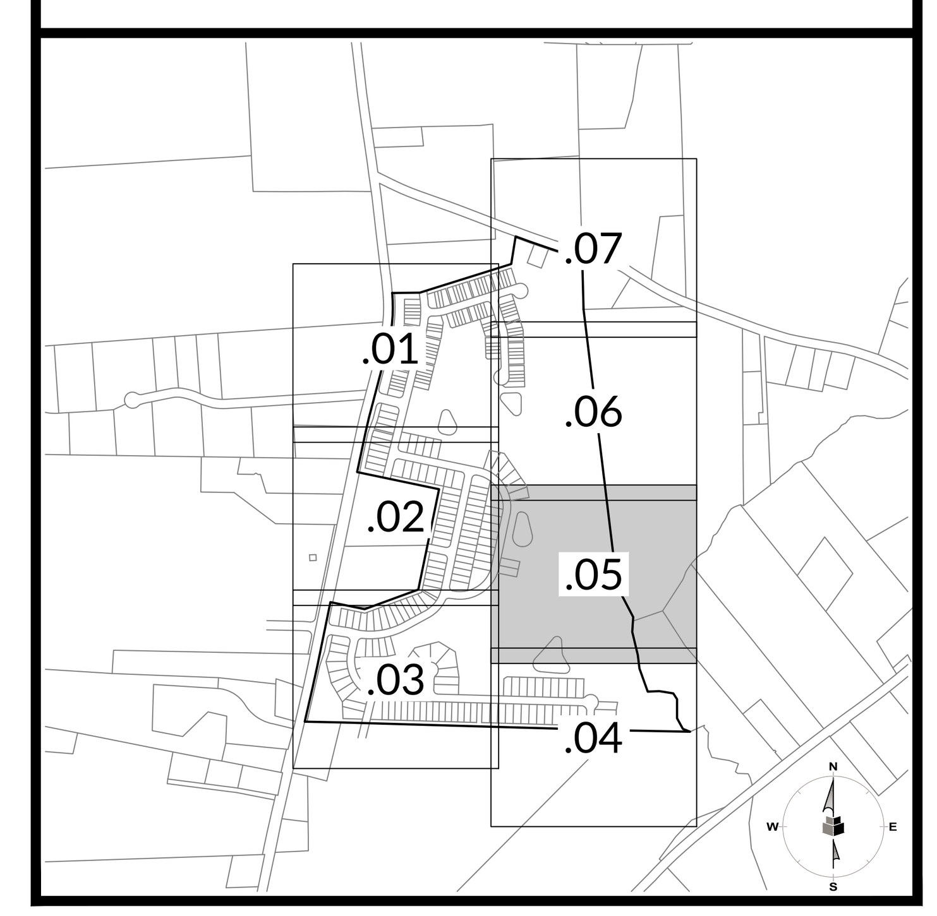
C4	235.00	348.63	317.527	N54° 11' 16.68"E
C5	235.00	368.61	331.971	N33° 14' 54.11"W
C6	235.00	323.50	298.555	S27° 18' 55.55"E
C7	235.00	88.87	88.337	S77° 35' 06.63"E
C8	700.00	159.36	159.018	N07° 18' 00.21"E
C9	700.00	88.51	88.454	N02° 50' 39.70"W
C10	230.00	73.07	72.761	N81° 40' 37.38"E
C11	230.00	63.64	63.442	N09° 29' 47.98"W

KEY MAP
NOT TO SCALE



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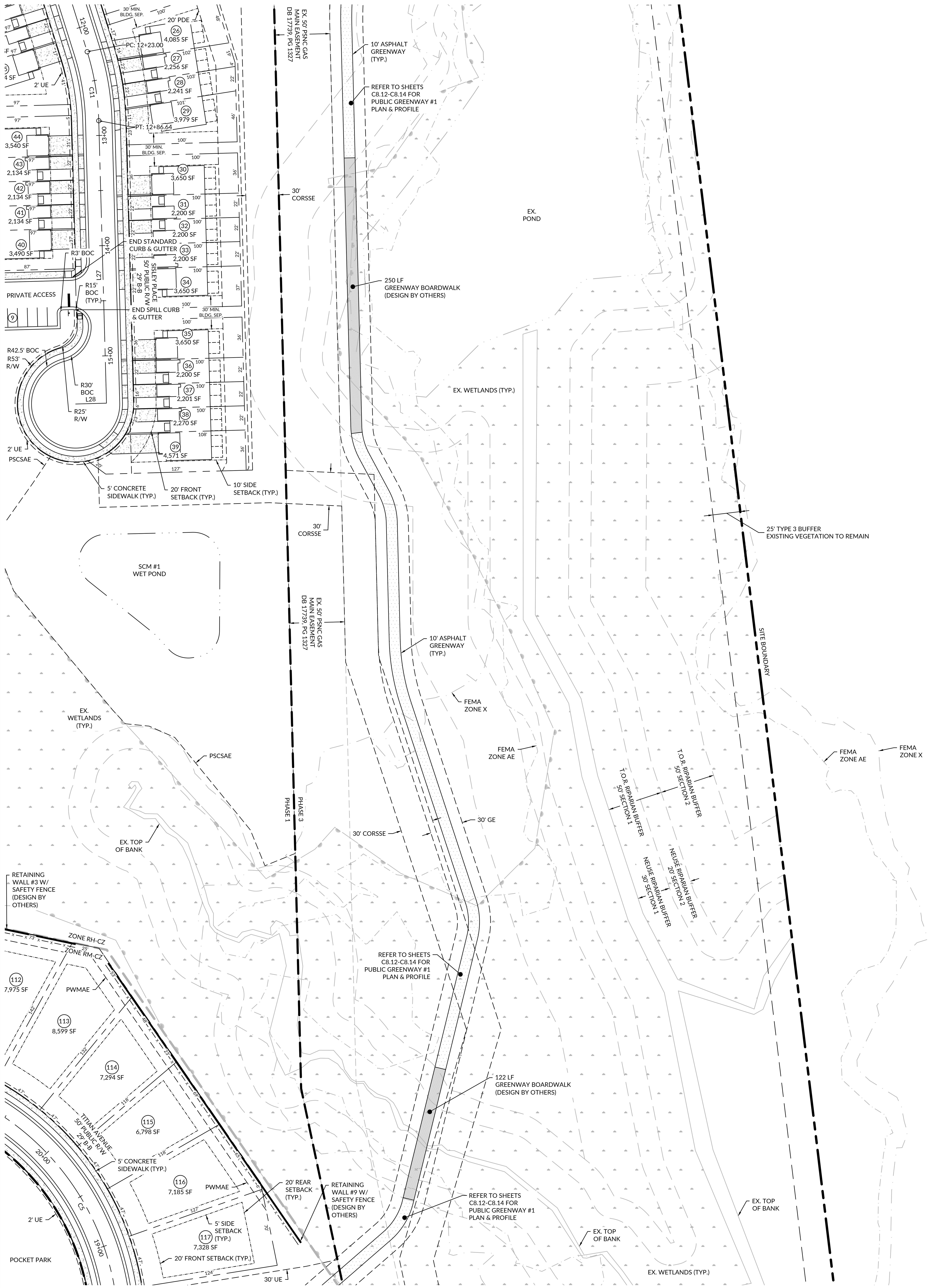
SCALE: 1 inch = 50 ft.

INITIAL PLAN DATE: 11/01/2024
REVISIONS:

WR JOB NUMBER 23-0045
DRN: WR DGN: WR CKD: WR

SITE PLAN

C3.05



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L26	223.00	N17°25'26"W
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KEY MAP
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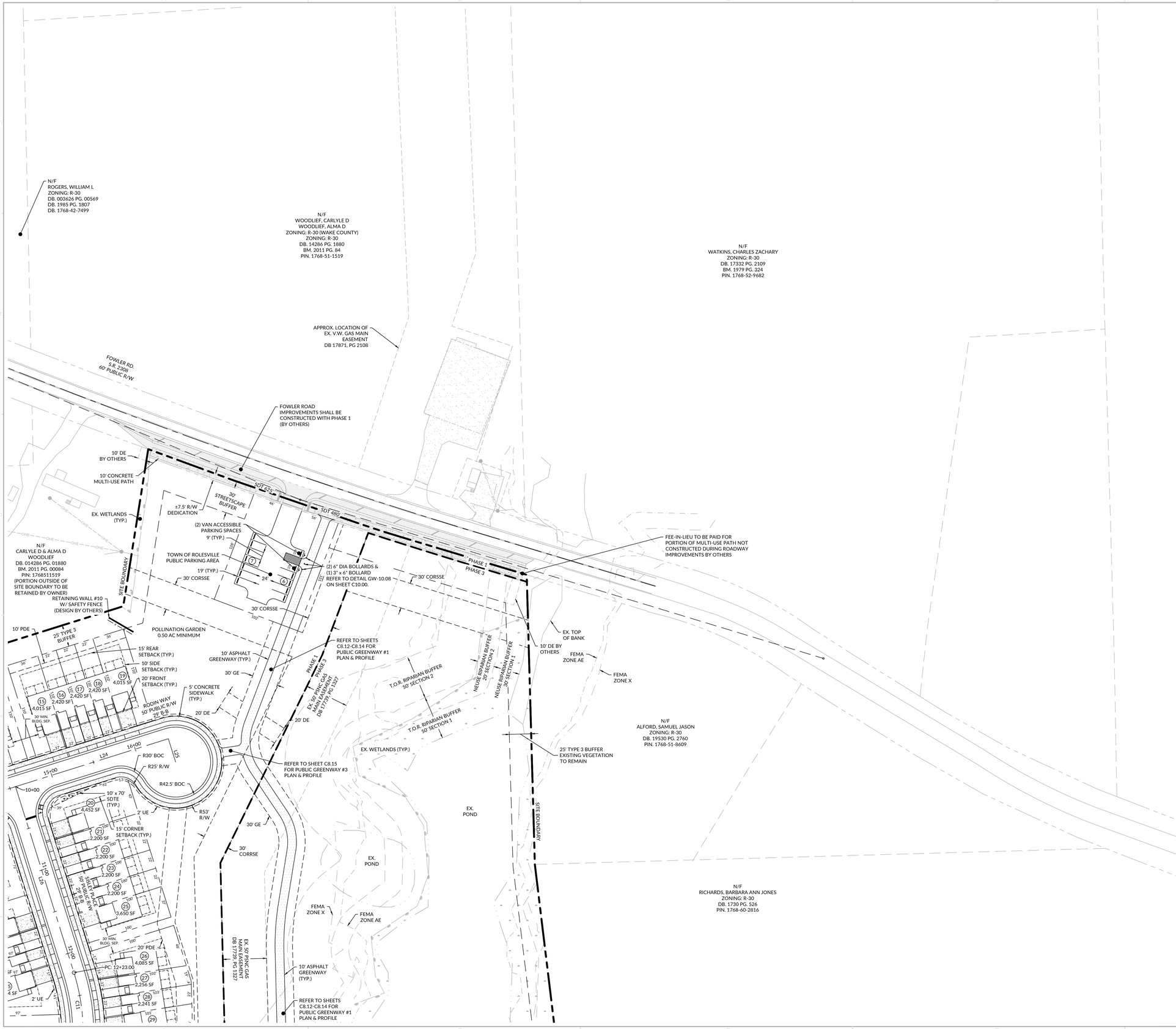
SCALE: 1 inch = 50 ft.

INITIAL PLAN DATE: 11/01/2024
REVISIONS:

WR JOB NUMBER 23-0045
DRN: WR DGN: WR CKD: WR

SITE PLAN

C3.06



J:\23\0045-Pulte_Woodlief Assemblage\CAD\Drawing Sets\Construction\C3.01-3.07 SITE PLAN.dwg- Thursday, October 31, 2024 11:25:20 AM - JKEITH

LINE TABLE

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KEY MAP
NOT TO SCALE

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NORTH CAROLINA
PROFESSIONAL ENGINEER
PRELIMINARY
NOT APPROVED FOR
CONSTRUCTION
TERRENCE COOK

0 25 50
SCALE: 1 inch = 50 ft.
N W E S

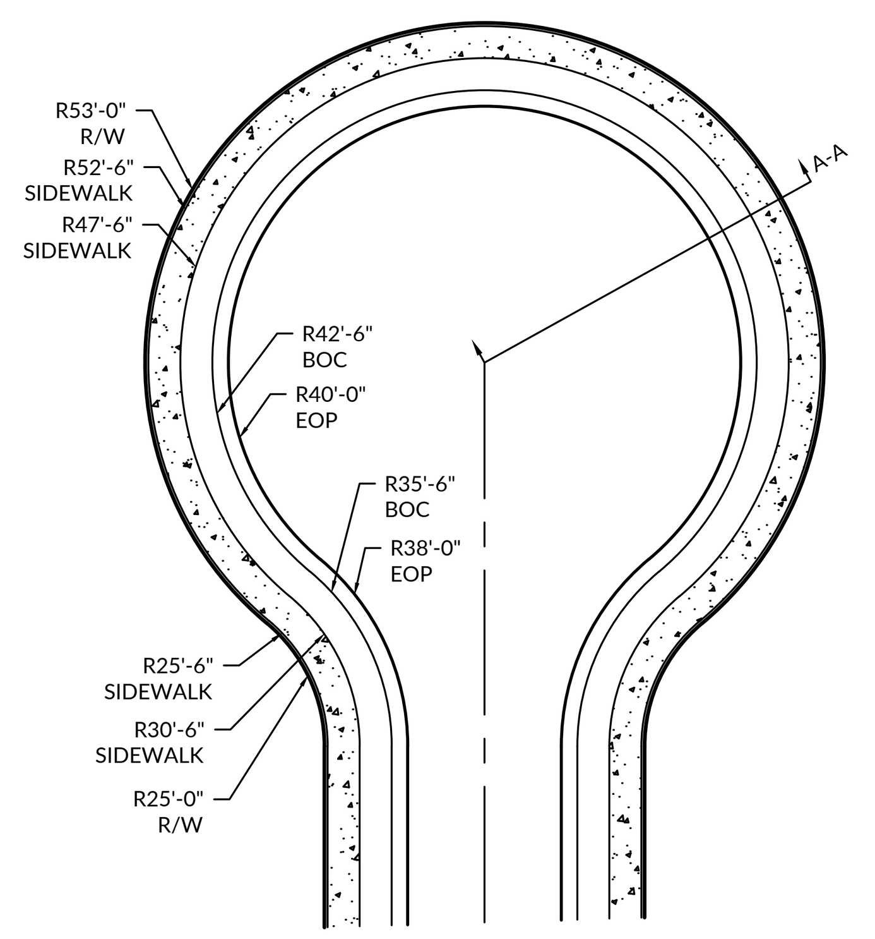
INITIAL PLAN DATE: 11/01/2024
REVISIONS:

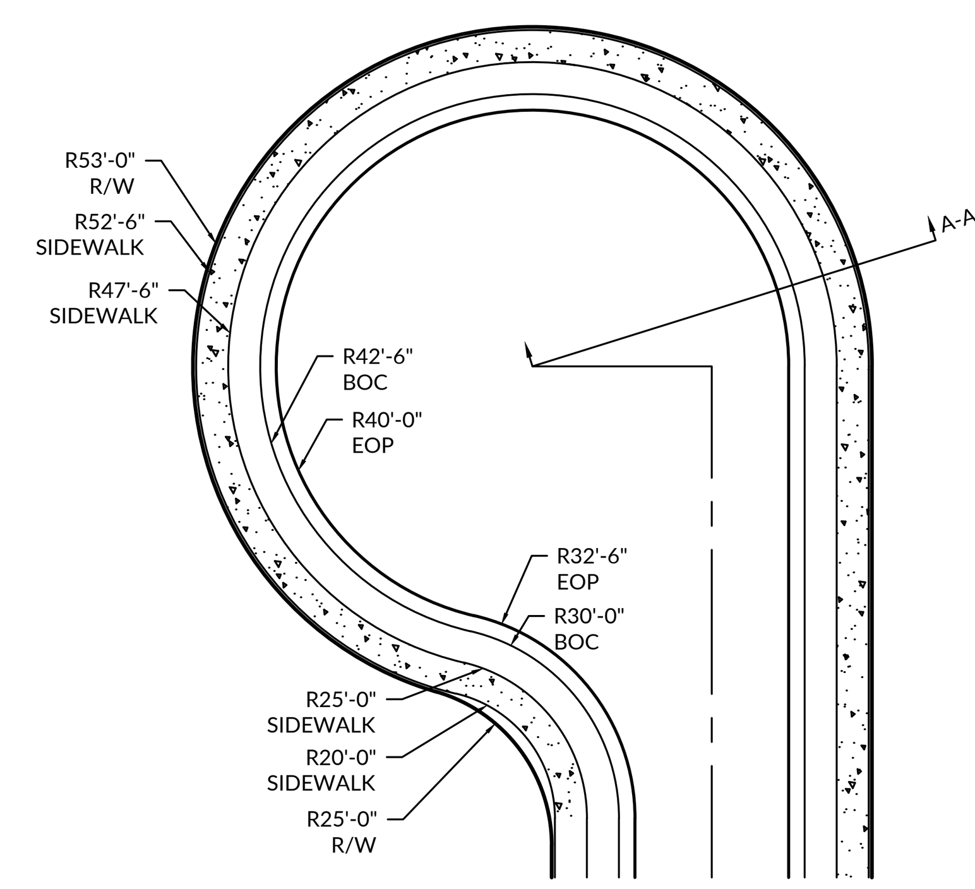
WR JOB NUMBER 23-0045
DRN: WR DGN: WR CKD: WR

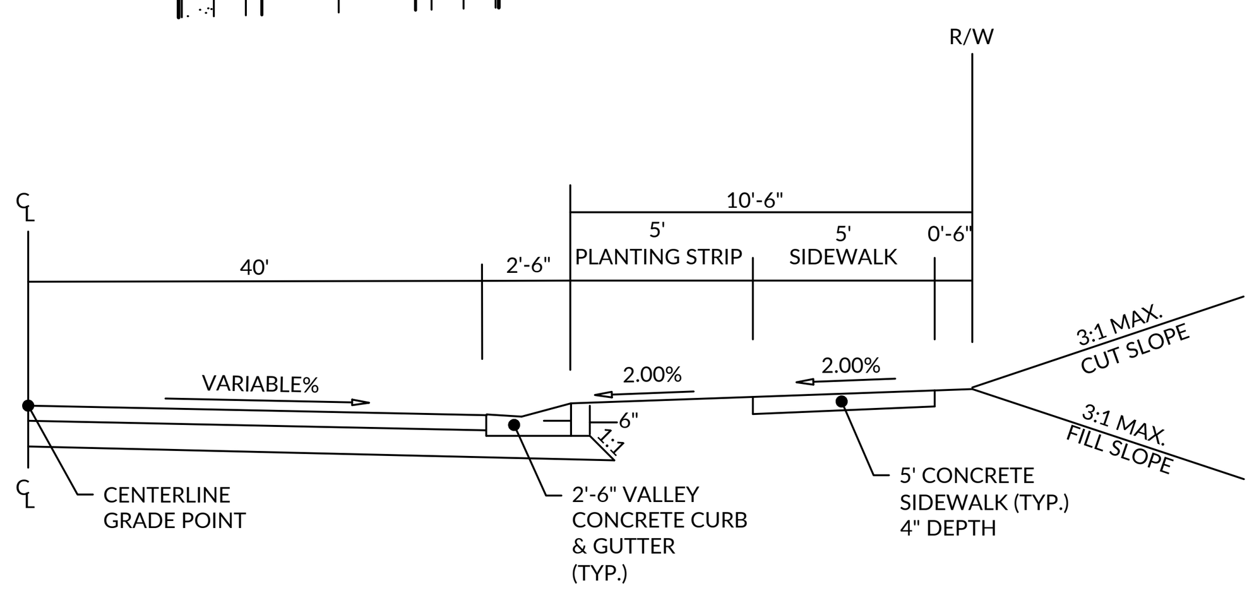
SITE PLAN

C3.07

EST. 1983





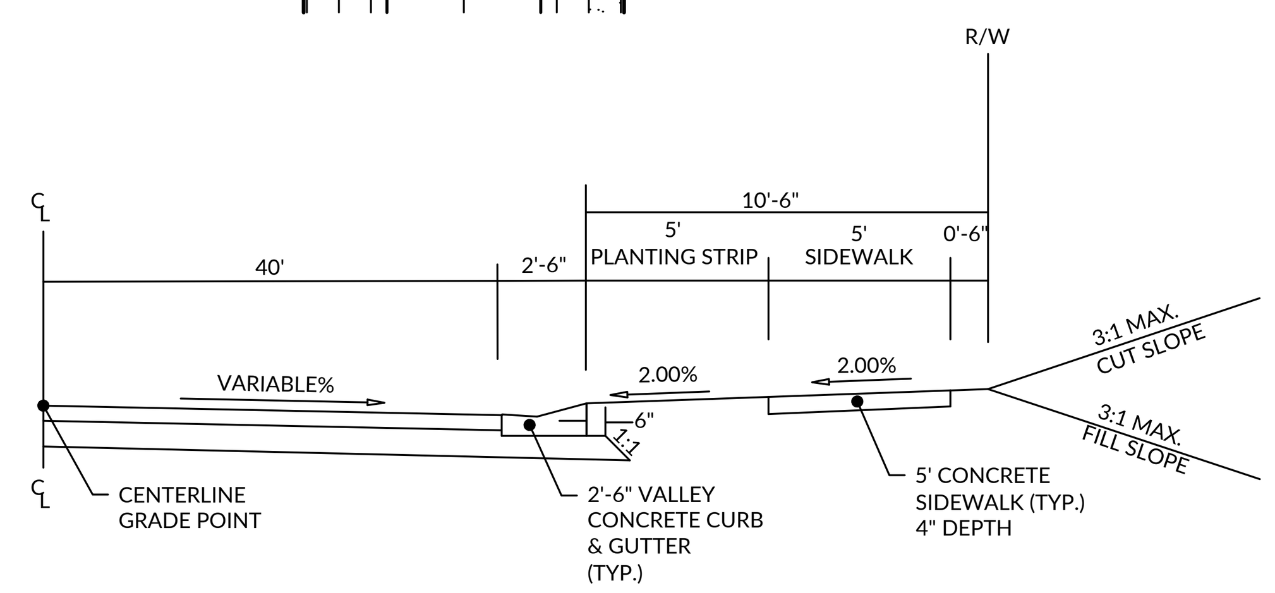


SECTION A-A

TYPICAL CUL-DE-SAC

NTS

PAVEMENT DESIGN
3" S9.5B
8" ABC

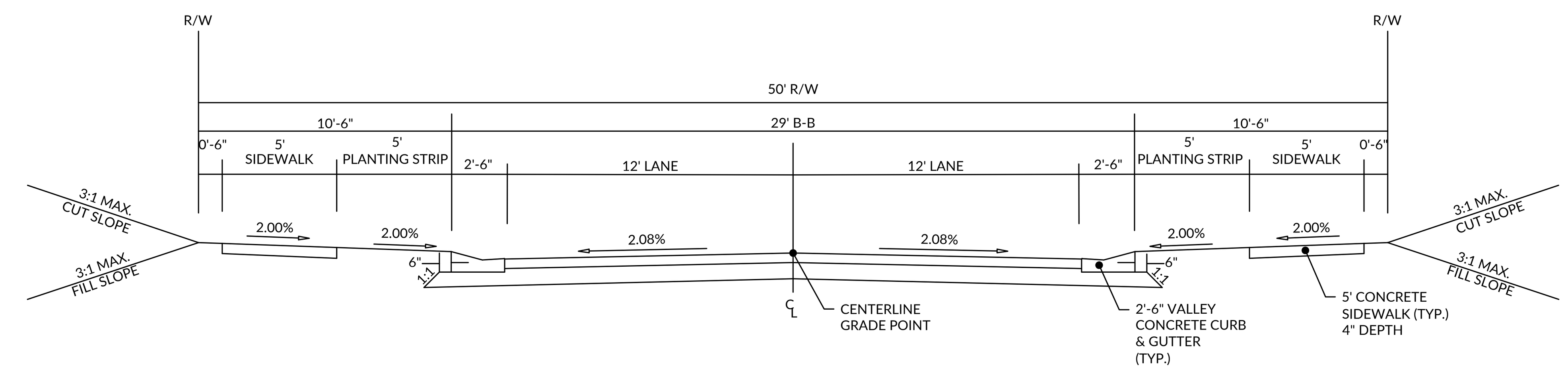


SECTION A-A

TYPICAL OFFSET CUL-DE-SAC

NTS

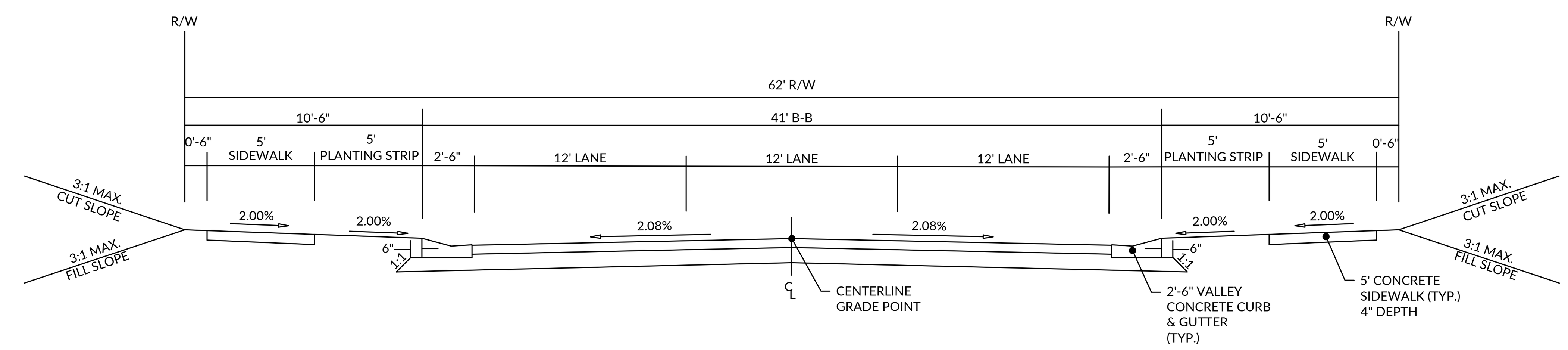
PAVEMENT DESIGN
3" S9.5B
8" ABC



50' PUBLIC R/W, 29' B-B

NTS

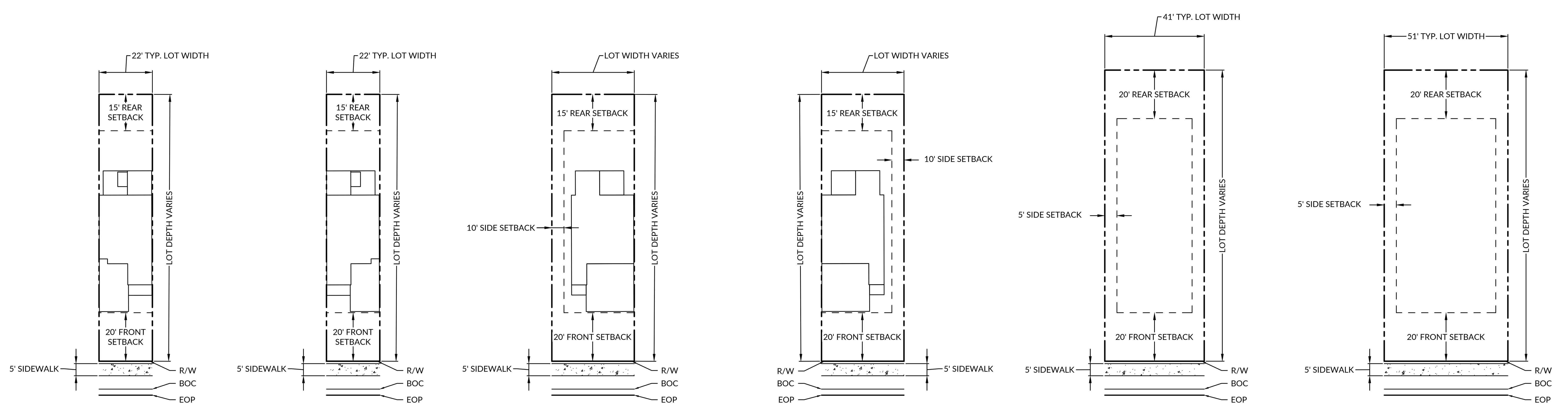
PAVEMENT DESIGN
3" S9.5B
8" ABC



62' PUBLIC R/W, 41' B-B

NTS

PAVEMENT DESIGN
3" S9.5B
8" ABC



22' TOWNHOME
(INTERNAL UNIT, LEFT - FRONT LOAD)
ZONE RH-CZ
MAXIMUM IMPERVIOUS: 1,700 SF

22' TOWNHOME
(INTERNAL UNIT, RIGHT - FRONT LOAD)
ZONE RH-CZ
MAXIMUM IMPERVIOUS: 1,700 SF

26' TOWNHOME
(END UNIT, LEFT - FRONT LOAD)
ZONE RH-CZ
MAXIMUM IMPERVIOUS: 2,600 SF

26' TOWNHOME
(END UNIT, RIGHT - FRONT LOAD)
ZONE RH-CZ
MAXIMUM IMPERVIOUS: 2,600 SF

41' DETACHED (FRONT LOAD)
ZONE RM-CZ
MAXIMUM IMPERVIOUS: 2,600 SF

51' DETACHED (FRONT LOAD)
ZONE RM-CZ
MAXIMUM IMPERVIOUS: 3,500 SF

NOTE:
MINIMUM DISTANCE BETWEEN TOWNHOME BUILDINGS SHALL BE 30 FEET.

NOTE:
PROJECT REZONING WAS SUBMITTED MARCH 2ND, 2023. THE AREA ZONED RM-CZ IS THEREFORE SUBJECT TO LDO SECTION 3.1.B CLUSTER REQUIREMENTS FOR MINIMUM LOT SIZE, WIDTH, & BUILDING SETBACKS IN PLACE PRIOR TO THE APRIL 4TH, 2023 LDO TEXT AMENDMENT TA-23-02.

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CONSTRUCTION INFRASTRUCTURE DRAWINGS
BROADMOOR
CID-YR-XX
ROLESVILLE ROAD | ROLESVILLE, NC 27587 | WAKE COUNTY

PRELIMINARY
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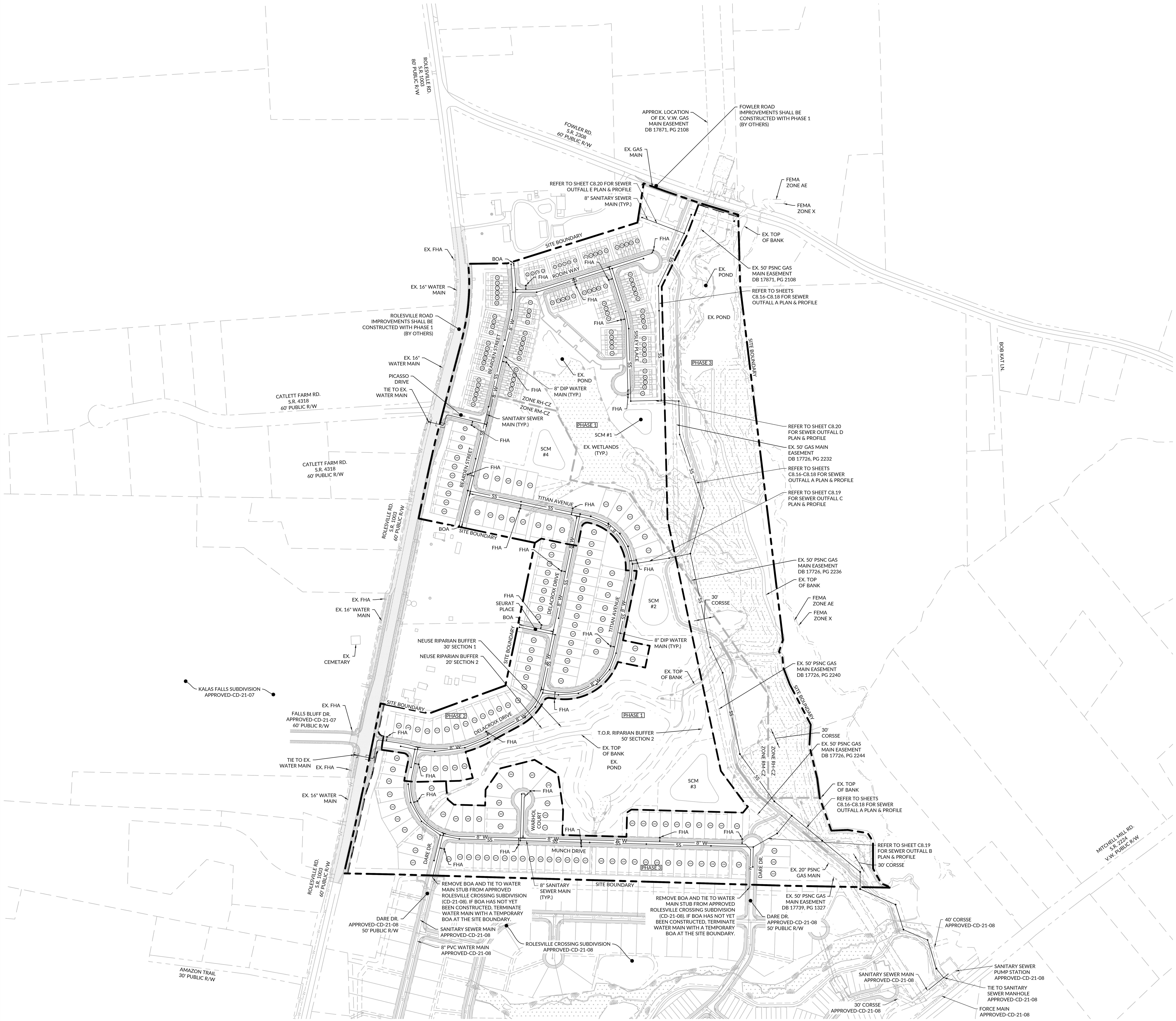
INITIAL PLAN DATE: 11/01/2024
REVISIONS:

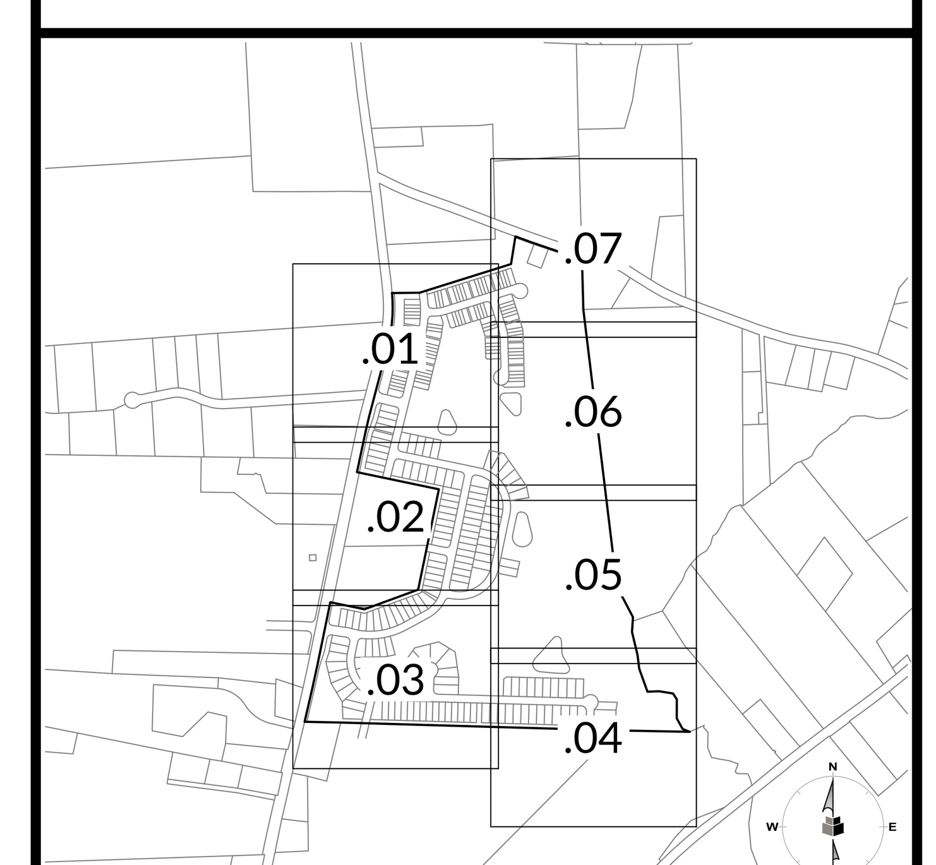
WR JOB NUMBER 23-0045
DRN: WR DGN: WR CKD: WR

TYPICAL LOTS & ROADWAY SECTIONS

C3.08



KEY MAP
NOT TO SCALE



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SCALE: 1 inch = 200 ft.

INITIAL PLAN DATE: 11/01/2024
REVISIONS:

WR JOB NUMBER	23-0045
DRN: WR	DGN: WR	CKD: WR

OVERALL UTILITY PLAN

C4.00

EX. PRIVATE DRIVEWAY
EX. PRIVATE DRIVEWAY
SITE BOUNDARY
25' TYPE 3 BUFFER
10' PDE
EX. FHA
MH 032
BOA
25' TYPE 3 BUFFER
8" DIP WATER MAIN (TYP.)
10' DE BY OTHERS
EX. 16" WATER MAIN
128.05 LF 8" PVC @ 4.40%
8" X 8" TEE (3) 8" GV
108.66 LF 8" PVC @ 0.55%
MH 028
81.01 LF 8" PVC @ 0.55%
INV.: 361.62'
EX. 24" RCP
50' STREETSCAPE BUFFER
¾" WATER SERVICE & ⅝" METER (TYP.)
4" SEWER SERVICE (TYP.)
141.85 LF 8" PVC @ 2.99%
ROLESVILLE ROAD IMPROVEMENTS SHALL BE CONSTRUCTED WITH PHASE 1 (BY OTHERS)
ROLESVILLE RD. S.R. 1003 60' PUBLIC R/W
SITE BOUNDARY
10' PDE
INV.: 369.56'
EX. 15" RCP
INV.: 369.99'
CATLETT FARM RD. S.R. 4318 60' PUBLIC R/W
20'x17' RECEIVING PIT
EX. 18" RCP
20'x17' RECEIVING PIT WITH 2:1 SIDE SLOPES
TIE TO EX. WATER MAIN W/ TAPPING SLEEVE & 8" GV BY BORE & JACK. REFER TO SHEET C10.03 FOR BORE & JACK DETAIL.
EX. WATER VALVE
EX. FHA
(4) 45° BENDS
20'x40' BORE PIT WITH 2:1 SIDE SLOPES
10' DE BY OTHERS
CATLETT FARM RD. S.R. 4318 60' PUBLIC R/W
30' STREETSCAPE BUFFER
INV.: 375.12'
EX. 15" RCP
MH 029
R706'
2' UE
MH 030
MH 044
FHA
2' UE
286.31 LF 8" PVC @ 2.19%
VWDE
MH 043
PICASSO DRIVE 62' PUBLIC R/W 41' B-B
8" DIP WATER MAIN (TYP.)
8" X 8" TEE (3) 8" GV
2' UE
FHA
4" SEWER SERVICE (TYP.)
244.64 LF 8" PVC @ 0.55%
¾" WATER SERVICE & ⅝" METER (TYP.)
8" SANITARY SEWER MAIN (TYP.)
BEARDEN STREET 50' PUBLIC R/W 29' B-B
MH 042
2' UE
150.17 LF 8" DIP @ 0.55%
FHA
20' PDE
PSCSAE
HW - 450
SCM #4 WET POND
FUTURE AMENITY SITE
EX. WETLANDS (TYP.)
ZONE RH-CZ
ZONE RM-CZ
RODIN WAY 50' PUBLIC R/W 29' B-B
2' UE
362.27 LF 8" PVC @ 1.34%
8" X 8" TEE (3) 8" GV
FHA
8" SANITARY SEWER MAIN (TYP.)
MH 027
MH 026
MH 025
2' UE
FHA
VW PDE
2' UE
PSCSAE
EX. POND

KEY MAP
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ROLESVILLE ROAD | ROLESVILLE, NC 27587 | WAKE COUNTY

NORTH CAROLINA PROFESSIONAL ENGINEER
PRELIMINARY
NOT APPROVED FOR CONSTRUCTION
LAWRENCE COOK

0 25 50
SCALE: 1 inch = 50 ft.

INITIAL PLAN DATE: 11/01/2024
REVISIONS:

WR JOB NUMBER 23-0045
DRN: WR DGN: WR CKD: WR

UTILITY PLAN

C4.01

J:\23\0045-Pulte_Woodlief Assemblage\CAD\Drawing Sets\Construction\C4.01 x-07 UTILITY PLAN.dwg - Thursday, October 31, 2024 11:29:48 AM - RSANTOS

KEY MAP

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CONSTRUCTION INFRASTRUCTURE DRAWINGS

BROADMOOR CID-YR-XX

ROLESVILLE ROAD | ROLESVILLE, NC 27587 | WAKE COUNTY

PRELIMINARY NOT APPROVED FOR CONSTRUCTION

NORTH CAROLINA PROFESSIONAL ENGINEER TERRENCE COOK

SCALE: 1 inch = 50 ft.

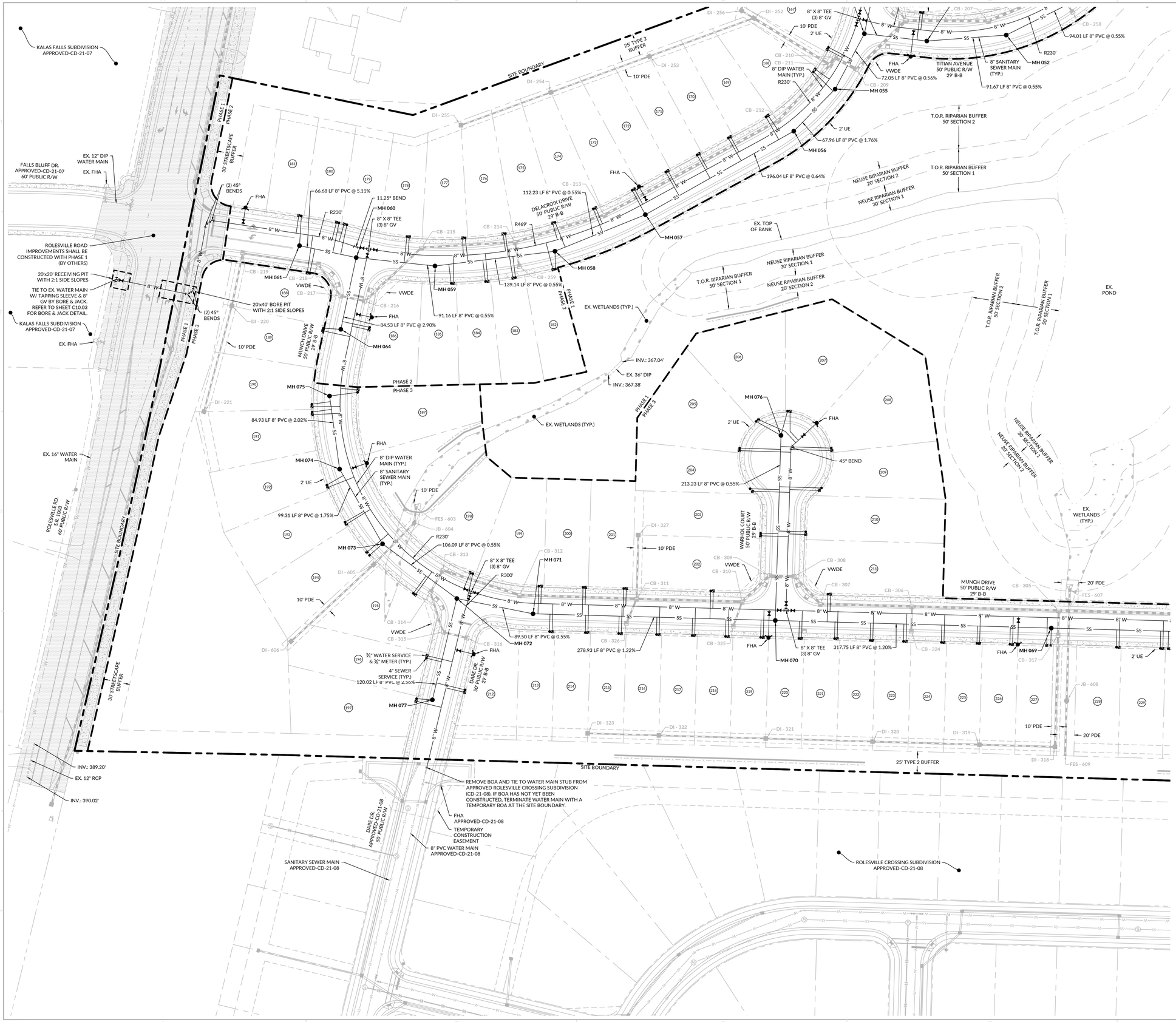
INITIAL PLAN DATE: 11/01/2024

REVISIONS:

WR JOB NUMBER	23-0045
DRN: WR DGN: WR	CKD: WR

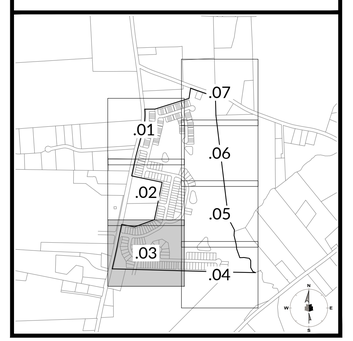
UTILITY PLAN

C4.02



KEY MAP

NOT TO SCALE



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1225 CRESCENT GREEN DRIVE, SUITE 250
CARY, NC 27518

CONSTRUCTION INFRASTRUCTURE DRAWINGS

BROADMOOR
CID-YR-XX

ROLESVILLE ROAD | ROLESVILLE, NC 27587 | WAKE COUNTY

NORTH CAROLINA PROFESSIONAL ENGINEER
PRELIMINARY
NOT APPROVED FOR CONSTRUCTION
JOHN TERRENCE COOK

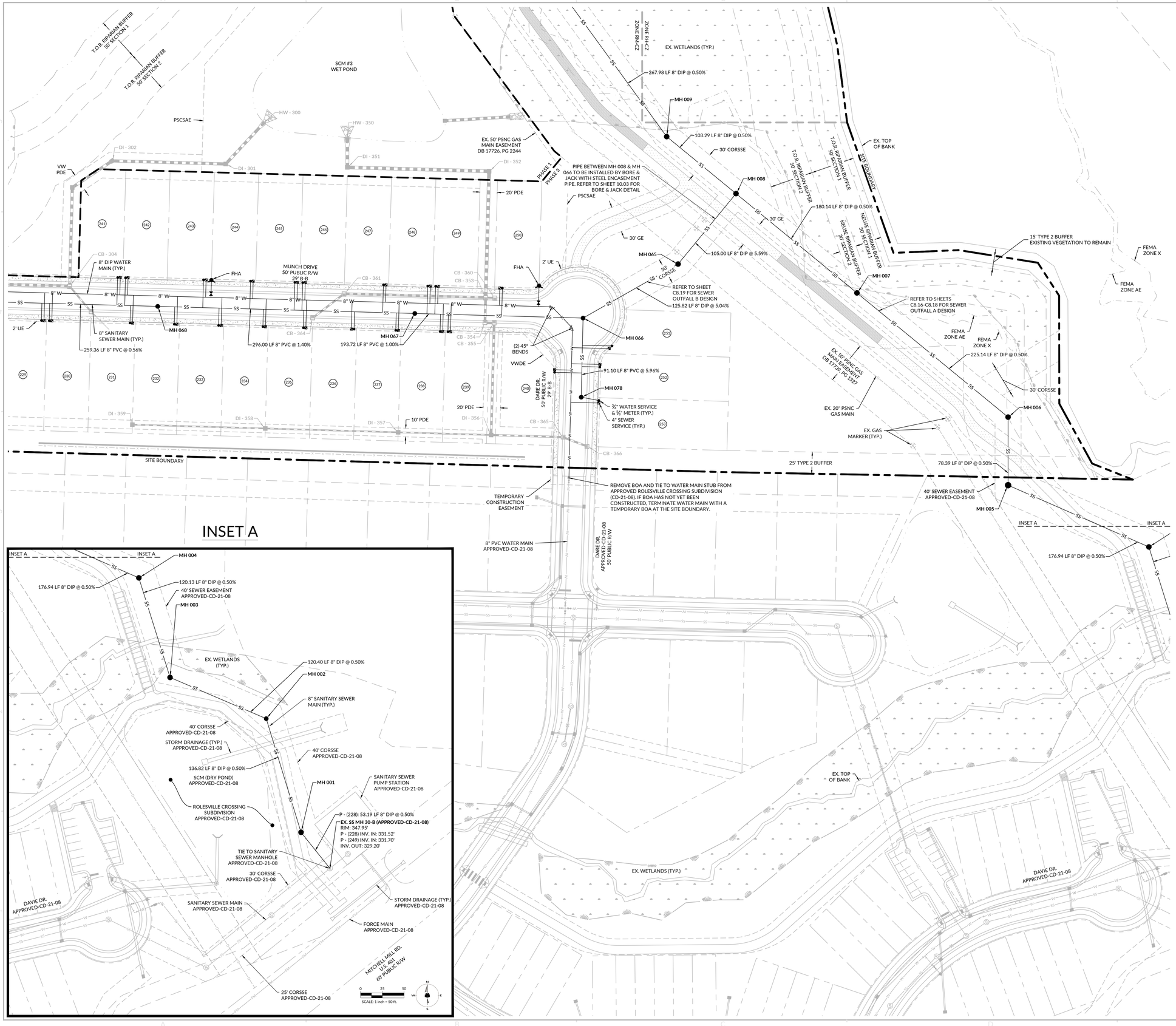
0 25 50
SCALE: 1 inch = 50 ft.

INITIAL PLAN DATE: 11/01/2024
REVISIONS:

WR JOB NUMBER	23-0045
DRN: WR	DGN: WR CKD: WR

UTILITY PLAN

C4.03



INSET A

KEY MAP

NOT TO SCALE

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CONSTRUCTION INFRASTRUCTURE DRAWINGS

BROADMOOR
CID-YR-XX

ROLESVILLE ROAD | ROLESVILLE, NC 27587 | WAKE COUNTY

NORTH CAROLINA PROFESSIONAL ENGINEER
PRELIMINARY
NOT APPROVED FOR CONSTRUCTION
LAWRENCE COOK

0 25 50
SCALE: 1 inch = 50 ft.

INITIAL PLAN DATE: 11/01/2024
REVISIONS:

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DRN: WR DGN: WR CKD: WR

UTILITY PLAN

C4.04

CB - 226
R230'
8" SANITARY SEWER MAIN (TYP.)
2' UE
MH 035
CB - 233
83.16 LF 8" DIP @ 2.65%
4" SEWER SERVICE (TYP.)
¾" WATER SERVICE & ¾" METER (TYP.)
CB - 223
MH 034
FHA
169.96 LF 8" DIP @ 0.55%
REFER TO SHEET C8.19 FOR SEWER OUTFALL C DESIGN
CB - 222
SANITARY SEWER MAIN (TYP.)
75.84 LF 8" DIP @ 0.55%
MH 048
8" DIP WATER MAIN (TYP.)
TITAN AVENUE 58' PUBLIC R/W 29' B-B
CB - 202
CB - 201
CB - 203
SCM #2 WET POND
HW - 200
339.73 LF 8" DIP @ 0.55%
PSCSAE
PHASE 2
PHASE 1
MH 049
80.76 LF 8" PVC @ 2.75%
MH 050
2' UE
8" PVC @ 1.75%
T.O.R. RIPARIAN BUFFER 50' SECTION 2
T.O.R. RIPARIAN BUFFER 50' SECTION 1
EX. WETLANDS (TYP.)
EX. TOP OF BANK
EX.
POND
NEUSE RIPARIAN BUFFER 30' SECTION 1
NEUSE RIPARIAN BUFFER 20' SECTION 2
T.O.R. RIPARIAN BUFFER 50' SECTION 1
T.O.R. RIPARIAN BUFFER 50' SECTION 2
SCM #3 WET POND
PWMAE
99.35 LF 8" PVC @ 2.47%
PIPE BETWEEN MH 013 & MH 033 TO BE INSTALLED BY OPEN CUT. REFER TO SHEET 10.02 FOR CITY OF RALEIGH STANDARD DETAIL S-5.
EX. TOP OF BANK
MH 033
30' UE
MH 013
EX. WETLANDS (TYP.)
438.77 LF 8" DIP @ 0.50%
REFER TO SHEETS C8.16-C8.19 FOR SEWER OUTFALL A DESIGN
EX. 50' PSNC GAS MAIN EASEMENT DB 17739 PG 1327
SITE BOUNDARY
30' CORSSE
ZONE RM-CZ
ZONE RH-CZ
FEMA ZONE AE
FEMA ZONE X
EX. TOP OF BANK
25' TYPE 3 BUFFER EXISTING VEGETATION TO REMAIN
MH 012
EX. 20" PSNC GAS MAIN
PIPE BETWEEN MH 011 & MH 012 TO BE INSTALLED BY OPEN CUT. REFER TO SHEET 10.03 FOR TEMPORARY STREAM CROSSING BYPASS DETAIL.
129.08 LF 8" DIP @ 0.50%
MH 011
30' GE
FEMA ZONE AE
FEMA ZONE X
EX. TOP OF BANK
EX. GAS MARKER (TYP.)
EX. 20" PSNC GAS MAIN
380.24 LF 8" DIP @ 0.50%
MH 010
REFER TO SHEETS C8.16-C8.18 FOR SEWER OUTFALL A DESIGN
267.98 LF 8" DIP @ 0.50%
EX. WETLANDS (TYP.)
T.O.R. RIPARIAN BUFFER 50' SECTION 2
T.O.R. RIPARIAN BUFFER 50' SECTION 1
NEUSE RIPARIAN BUFFER 30' SECTION 1
NEUSE RIPARIAN BUFFER 20' SECTION 2
SITE BOUNDARY

KEY MAP
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CONSTRUCTION INFRASTRUCTURE DRAWINGS FOR
BROADMOOR CID-YR-XX
ROLESVILLE ROAD | ROLESVILLE, NC 27587 | WAKE COUNTY

NORTH CAROLINA PROFESSIONAL ENGINEER
PRELIMINARY
NOT APPROVED FOR CONSTRUCTION
TERRENCE COOK

0 25 50
SCALE: 1 inch = 50 ft.

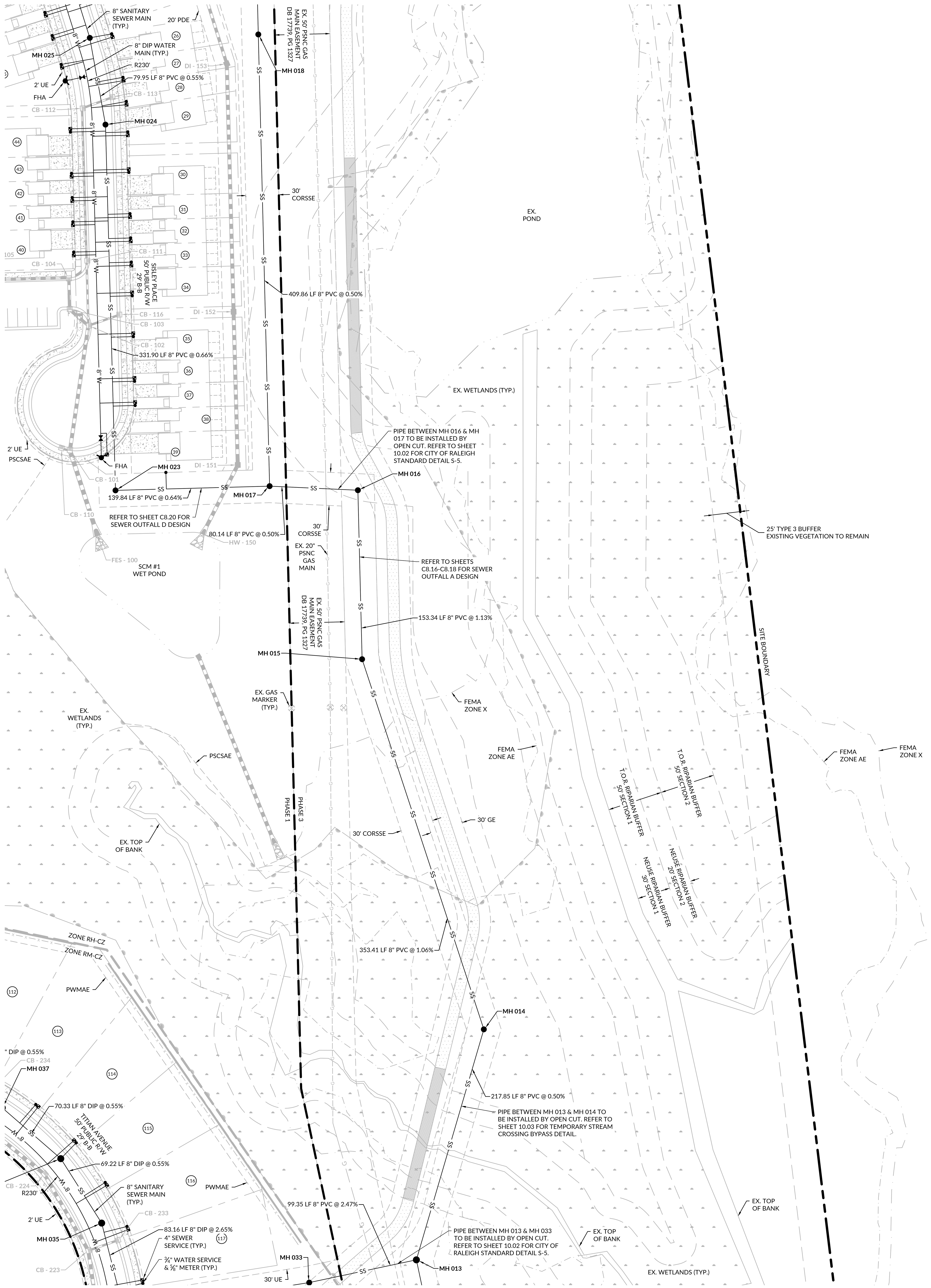
INITIAL PLAN DATE: 11/01/2024
REVISIONS:

WR JOB NUMBER	23-0045
DRN: WR	DGN: WR CKD: WR

UTILITY PLAN

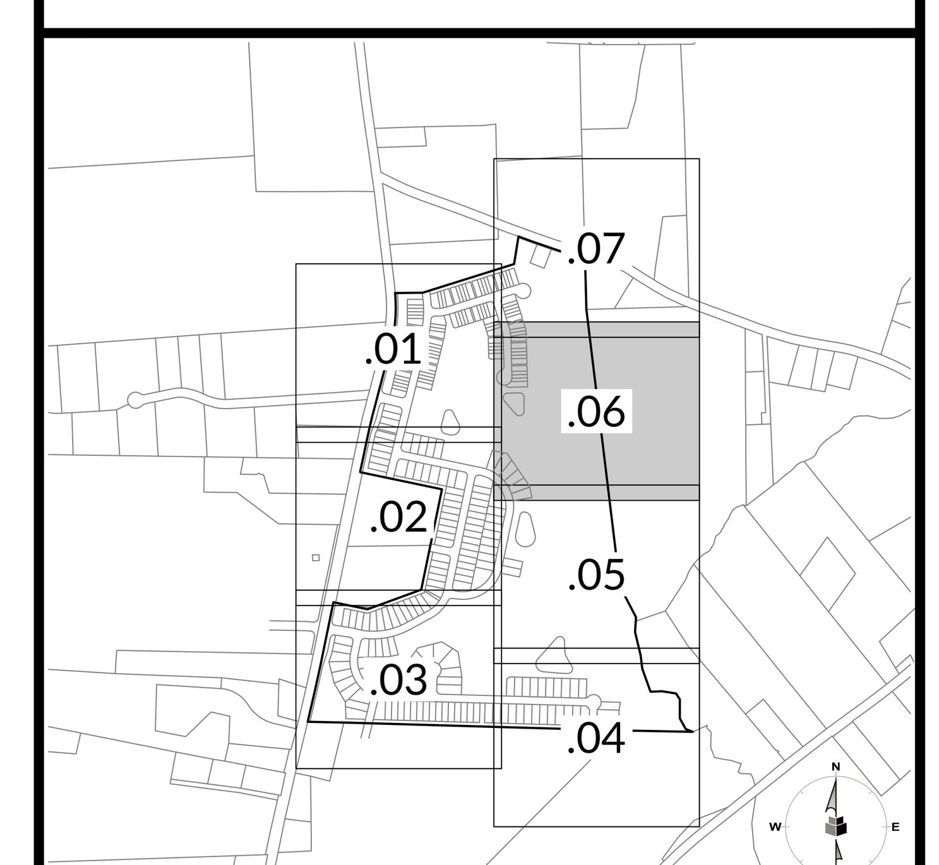
C4.05

J:\23\0045-Pulte_Woodleaf Assemblage\CAD\Drawing Set\Construction\C4.05 UTILITY PLAN.dwg - Thursday, October 31, 2024 11:39:40 AM - RAMTOS



KEY MAP

NOT TO SCALE



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CONSTRUCTION INFRASTRUCTURE DRAWINGS

BROADMOOR CID-YR-XX

ROLESVILLE ROAD | ROLESVILLE, NC 27587 | WAKE COUNTY

NORTH CAROLINA PROFESSIONAL ENGINEER TERRENCE COOK

PRELIMINARY
NOT APPROVED FOR CONSTRUCTION

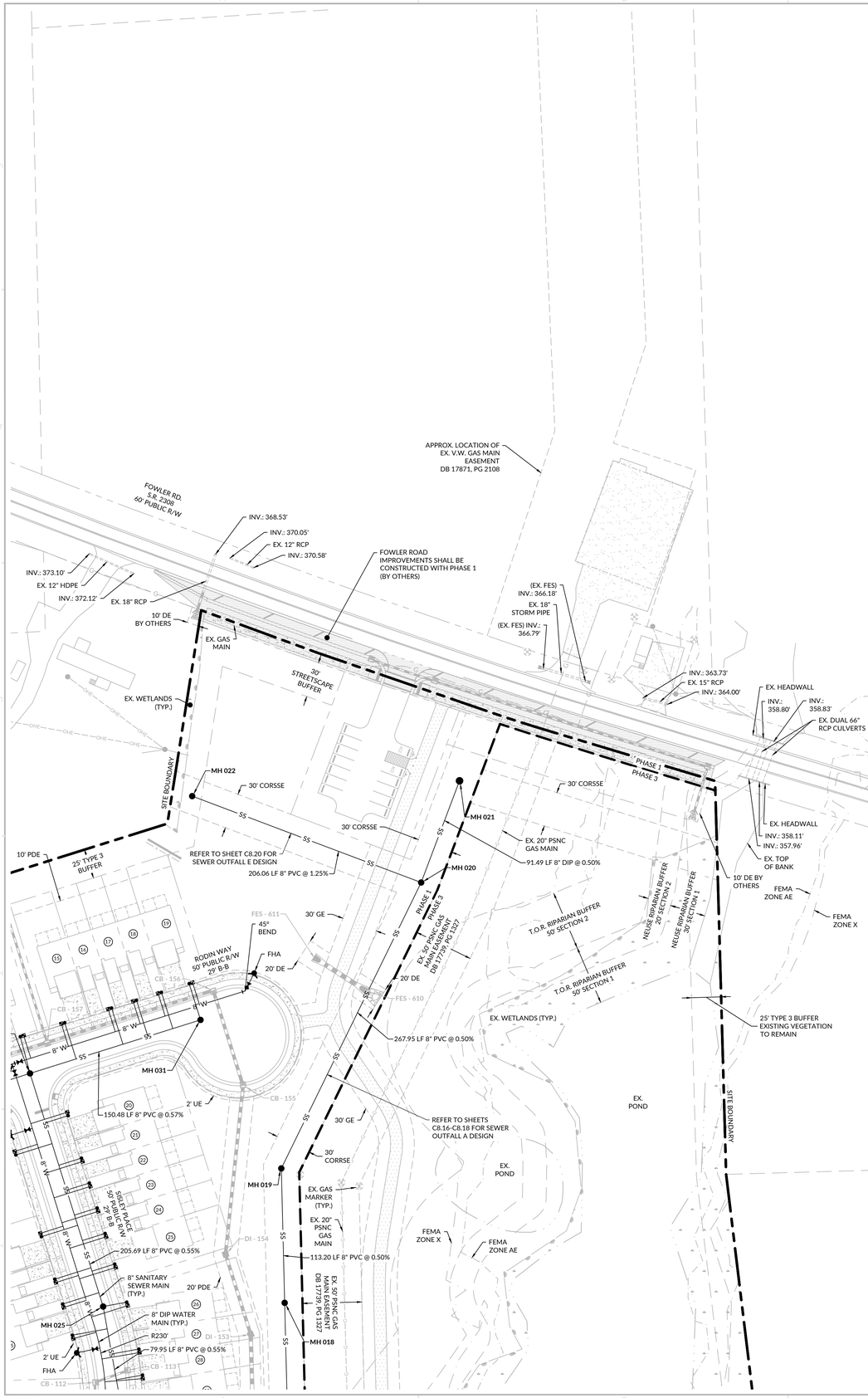
SCALE: 1 inch = 50 ft.

INITIAL PLAN DATE: 11/01/2024
REVISIONS:

WR JOB NUMBER 23-0045
DRN: WR DGN: WR CKD: WR

UTILITY PLAN

C4.06



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CONSTRUCTION INFRASTRUCTURE DRAWINGS

BROADMOOR CID-YR-XX

ROLESVILLE ROAD | ROLESVILLE, NC 27587 | WAKE COUNTY

NORTH CAROLINA PROFESSIONAL ENGINEER JERRENCE COOK

PRELIMINARY
NOT APPROVED FOR CONSTRUCTION

0 25 50
SCALE: 1 inch = 50 ft.

INITIAL PLAN DATE: 11/01/2024
REVISIONS:
-
-
-

WR JOB NUMBER 23-0045
DRN: WR DGN: WR CKD: WR

UTILITY PLAN

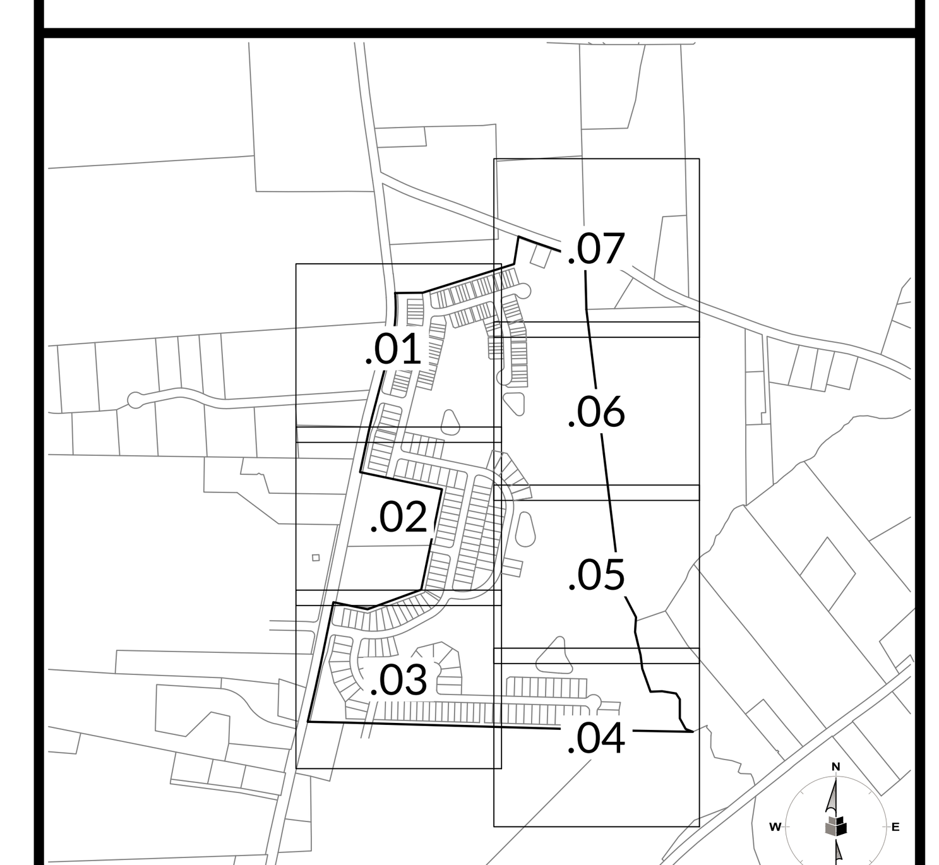
C4.07

KEY MAP
NOT TO SCALE

J:\23\0045-Pulte_Woodleaf Assemblage\CAD\Drawing Set\Construction\C4.04-UTILITY PLAN.dwg, Thursday, October 31, 2024 11:31:09 AM, - BSANTOS

KEY MAP

NOT TO SCALE



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SUITE 250
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CONSTRUCTION INFRASTRUCTURE DRAWINGS

BROADMOOR
CID-YR-XX

ROLESVILLE ROAD | ROLESVILLE, NC 27587 | WAKE COUNTY

PRELIMINARY
NOT APPROVED FOR
CONSTRUCTION

0 100 200
SCALE: 1 inch = 200 ft.

INITIAL PLAN DATE: 11/01/2024
REVISIONS:

WR JOB NUMBER 23-0045
DRN: WR DGN: WR CKD: WR

OVERALL STORM DRAINAGE & GRADING PLAN

C5.00

EX. PRIVATE DRIVEWAY

EX. PRIVATE DRIVEWAY

SITE BOUNDARY

DI - 160
RIM: 368.73'
INV. IN: 366.30' (DI - 161)
INV. OUT: 366.20' (CB - 157)

10' PDE

149.00 LF 15" HDPE @ 1.01%

DI - 161
RIM: 370.62'
INV. OUT: 367.80' (DI - 160)

DI - 407
RIM: 371.71'
INV. OUT: 369.00' (CB - 406)

115.47 LF 15" RCP @ 1.26%

CB - 157
RIM: 370.29'
INV. IN: 364.10' (CB - 158)
INV. IN: 364.75' (DI - 160)
INV. OUT: 364.00' (CB - 156)

73.02 LF 24" RCP @ 1.10%

VALLEY CURB INLET (GRATE ONLY)

CB - 158
RIM: 371.02'
INV. IN: 365.40' (CB - 159)
INV. IN: 365.65' (CB - 162)
INV. OUT: 364.90' (CB - 157)

10' PDE

CB - 159
RIM: 371.78'
INV. OUT: 366.85' (CB - 158)

75.98 LF 18" RCP @ 1.91%

RODIN WAY
50' PUBLIC R/W
29' B-B

CB - 424
RIM: 375.68'
INV. OUT: 371.00' (CB - 419)

66.28 LF 15" RCP @ 2.72%

2' UE

10' DE
BY OTHERS

CB - 419
RIM: 374.68'
INV. IN: 367.85' (CB - 420)
INV. IN: 369.20' (CB - 424)
INV. OUT: 367.75' (CB - 404)

VALLEY CURB INLET (GRATE ONLY)

CB - 421
RIM: 374.86'
INV. IN: 368.90' (CB - 422)
INV. OUT: 368.80' (CB - 420)

CB - 422
RIM: 374.99'
INV. IN: 369.20' (DI - 423)
INV. OUT: 369.10' (CB - 421)

INV.: 361.62'

EX. 24" RCP

DI - 423
RIM: 372.23'
INV. IN: 369.90' (DI - 415)
INV. OUT: 369.80' (CB - 422)

VWDE

CB - 406
RIM: 373.27'
INV. IN: 368.30' (DI - 407)
INV. OUT: 368.20' (CB - 405)

75.32 LF 15" RCP @ 0.66%

29.00 LF 15" RCP @ 1.50%

CB - 162
RIM: 371.02'
INV. OUT: 366.09' (CB - 158)

CB - 405
RIM: 373.06'
INV. IN: 367.70' (CB - 406)
INV. OUT: 367.60' (CB - 404)

43.11 LF 15" RCP @ 0.58%

DI - 109
RIM: 367.82'
INV. OUT: 365.30' (DI - 108)

CB - 404
RIM: 372.28'
INV. IN: 367.10' (CB - 419)
INV. IN: 367.35' (CB - 405)
INV. OUT: 366.60' (DI - 403)

108.30 LF 15" RCP @ 1.48%

PRIVATE STORM DRAINAGE

CB - 115
RIM: 369.23'
INV. OUT: 364.60' (CB - 114)

102.50 LF 15" RCP @ 1.07%

DI - 108
RIM: 366.12'
INV. IN: 363.70' (DI - 109)
INV. OUT: 363.60' (DI - 107)

80.71 LF 15" RCP @ 0.87%

PRIVATE STORM DRAINAGE

CB - 114
RIM: 368.20'
INV. IN: 363.50' (CB - 115)
INV. OUT: 363.40' (CB - 106)

2' UE

ROLESVILLE ROAD IMPROVEMENTS SHALL BE CONSTRUCTED WITH PHASE 1 (BY OTHERS)

ROLESVILLE RD.
S.R. 1308
40' PUBLIC R/W

BEARDEN STREET
50' PUBLIC R/W
29' B-B

85.61 LF 18" RCP @ 0.76%

CB - 420
RIM: 374.86'
INV. IN: 368.50' (CB - 421)
INV. OUT: 368.25' (CB - 419)

103.02 LF 15" RCP @ 0.58%

125.94 LF 15" HDPE @ 1.87%

DI - 415
RIM: 374.75'
INV. OUT: 372.25' (DI - 423)

DI - 403
RIM: 374.27'
INV. IN: 365.95' (CB - 404)
INV. OUT: 365.85' (DI - 402)

2' UE

10' PDE

SITE BOUNDARY

DI - 414
RIM: 373.64'
INV. OUT: 371.05' (DI - 413)

2' UE

168.34 LF 18" HDPE @ 1.46%

INV.: 369.56'

EX. 15" RCP

INV.: 369.99'

CB - 410
RIM: 373.48'
INV. IN: 367.20' (CB - 411)
INV. OUT: 366.70' (CB - 409)

39.01 LF 18" RCP @ 2.18%

CB - 417
RIM: 374.54'
INV. IN: 369.30' (CB - 418)
INV. OUT: 369.05' (CB - 412)

DI - 413
RIM: 371.35'
INV. IN: 368.60' (DI - 414)
INV. OUT: 368.50' (CB - 412)

CATLETT FARM RD.
S.R. 4318
60' PUBLIC R/W

41.00 LF 15" RCP @ 0.73%

17.66 LF 15" RCP @ 1.70%

VWDE

PICASSO DRIVE
62' PUBLIC R/W
41' B-B

20' PDE

107.50 LF 24" RCP @ 1.77%

STORM DRAINAGE (TYP.)

EX. 18" RCP

CB - 408
RIM: 374.16'
INV. IN: 365.90' (CB - 409)
INV. OUT: 365.80' (DI - 401)

DI - 401
RIM: 373.20'
INV. IN: 363.90' (CB - 408)
INV. IN: 363.90' (DI - 402)
INV. OUT: 363.40' (HW - 400)

ZONE RH-CZ

ZONE RM-CZ

68.00 LF 24" RCP @ 0.74%

CB - 409
RIM: 373.48'
INV. IN: 366.50' (CB - 410)
INV. OUT: 366.40' (CB - 408)

29.00 LF 24" RCP @ 0.69%

44.20 LF 18" RCP @ 0.57%

167.20 LF 30" RCP @ 0.54%

CB - 412
RIM: 374.02'
INV. IN: 368.20' (CB - 417)
INV. IN: 368.20' (DI - 413)
INV. OUT: 368.10' (CB - 411)

CB - 411
RIM: 373.03'
INV. IN: 367.55' (CB - 412)
INV. IN: 367.55' (CB - 416)
INV. OUT: 367.45' (CB - 410)

74.50 LF 18" RCP @ 0.74%

41.00 LF 18" RCP @ 0.61%

CB - 418
RIM: 374.54'
INV. OUT: 369.60' (CB - 417)

2' UE

CB - 416
RIM: 373.03'
INV. OUT: 367.80' (CB - 411)

EX. WETLANDS (TYP.)

CB - 454
RIM: 371.48'
INV. IN: 366.05' (CB - 455)
INV. OUT: 365.95' (CB - 453)

127.50 LF 18" RCP @ 0.55%

18.00 LF 18" RCP @ 1.25%

BEARDEN STREET
50' PUBLIC R/W
29' B-B

29.00 LF 18" RCP @ 0.86%

CB - 453
RIM: 371.48'
INV. IN: 365.70' (CB - 454)
INV. OUT: 365.20' (CB - 452)

HW - 400
INV.: 362.50'

10' PDE

DI - 456
RIM: 369.65'
INV. IN: 367.30' (DI - 457)
INV. OUT: 366.95' (CB - 455)

13.39 LF 24" RCP @ 0.75%

38.88 LF 36" RCP @ 0.51%

222.79 LF 36" RCP @ 0.58%

20' PDE

PSCSAE

SCM #4
WET POND

HW - 450
INV.: 362.50'

65.71 LF 30" RCP @ 1.52%

STRUCTURE - (8)
RIM: 362.38'
INV. IN: 359.50' (SCM4 - RISER)

CLASS 1 RIP RAP
DISSIPATER
LENGTH: 20'
WIDTH: 7.5'
THICKNESS: 2.13'

SCM4 - RISER
RIM: 368.00'
INV. OUT: 360.50' (STRUCTURE - (8))

10' DE
BY OTHERS

162.93 LF 15" HDPE @ 1.47%

2' UE

CB - 452
RIM: 371.48'
INV. IN: 365.85' (CB - 458)
INV. IN: 365.10' (CB - 453)
INV. OUT: 364.10' (DI - 451)

CB - 455
RIM: 371.47'
INV. IN: 366.25' (DI - 456)
INV. OUT: 366.15' (CB - 454)

DI - 451
RIM: 369.53'
INV. IN: 362.80' (CB - 452)
INV. OUT: 362.70' (HW - 450)

INV.: 375.12'

EX. 15" RCP

CATLETT FARM RD.
S.R. 4318
60' PUBLIC R/W

EX. POND

171.80 LF 24" RCP @ 0.52%

103.00 LF 15" RCP @ 1.02%

DI - 107
RIM: 367.74'
INV. IN: 362.90' (DI - 108)
INV. OUT: 362.65' (CB - 106)

38.21 LF 18" RCP @ 1.44%

DI - 402
RIM: 374.46'
INV. IN: 364.95' (DI - 403)
INV. OUT: 364.85' (DI - 401)

RETAINING WALL #1
W/ SAFETY FENCE
(DESIGN BY OTHERS)

RETAINING WALL #2
W/ SAFETY FENCE
(DESIGN BY OTHERS)

VW
PDE

CB - 106
RIM: 367.20'
INV. IN: 362.35' (CB - 114)
INV. IN: 362.10' (DI - 107)
INV. OUT: 361.60' (CB - 105)

40.90 LF 24" RCP @ 0.98%

CB - 105
RIM: 366.87'
INV. IN: 361.20' (CB - 106)
INV. OUT: 361.10' (CB - 104)

80.42 LF 24" RCP @ 0.87%

171.00 LF 24" RCP @ 0.56%

2' UE

PSCSAE

KEY MAP
NOT TO SCALE

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1225 CRESCENT GREEN DRIVE.
SUITE 250
CARY, NC 27518

CONSTRUCTION INFRASTRUCTURE DRAWINGS
BROADMOOR
CID-YR-XX
ROLESVILLE ROAD | ROLESVILLE, NC 27587 | WAKE COUNTY

NORTH CAROLINA PROFESSIONAL ENGINEER
PRELIMINARY
NOT APPROVED FOR CONSTRUCTION
LAWRENCE E. COOK

0 25 50
SCALE: 1 inch = 50 ft.

INITIAL PLAN DATE: 11/01/2024
REVISIONS:

WR JOB NUMBER 23-0045
DRN: WR DGN: WR CKD: WR

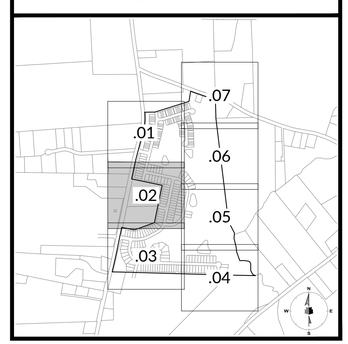
STORM DRAINAGE PLAN

C5.01

J:\23\0045-Pulte_Woodlief Assemblage\CAD\Drawing Sets\Construction\C5.01 1-07 STORM DRAINAGE PLAN.dwg - Thursday, October 31, 2024 11:56:28 AM - JKEITH

KEY MAP

NOT TO SCALE



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1225 CRESCENT GREEN DRIVE, SUITE 250
CARY, NC 27518

CONSTRUCTION INFRASTRUCTURE DRAWINGS FOR

BROADMOOR
CID-YR-XX

ROLESVILLE ROAD | ROLESVILLE, NC 27587 | WAKE COUNTY

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL TERRENCE COOK

PRELIMINARY
NOT APPROVED FOR CONSTRUCTION
TERRENCE COOK

0 25 50
SCALE: 1 inch = 50 ft.

INITIAL PLAN DATE: 11/01/2024
REVISIONS:

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DRN: WR DGN: WR CKD: WR

STORM DRAINAGE PLAN

C5.02

J:\23\0045-Pulte_Woodleaf Assemblage\CAD\Drawing Set\Construction\C5.02-STORM DRAINAGE PLAN.dwg, Thursday, October 31, 2024 11:36:38 AM, JKEITH

KALAS FALLS SUBDIVISION
APPROVED-CD-21-07

FALLS BLUFF DR.
APPROVED-CD-21-07
60' PUBLIC R/W

ROLESVILLE ROAD
IMPROVEMENTS SHALL BE
CONSTRUCTED WITH PHASE 1
(BY OTHERS)

KALAS FALLS SUBDIVISION
APPROVED-CD-21-07

ROLESVILLE RD.
S.R. 1003
60' PUBLIC R/W

SITE BOUNDARY

PHASE 1
PHASE 2
PHASE 3

DI - 253
RIM: 372.51'
INV. IN: 370.20' (DI - 254)
INV. OUT: 370.10' (DI - 252)

128.05 LF 15" HDPE @ 1.44%

120.50 LF 15" HDPE @ 1.00%

DI - 254
RIM: 373.77'
INV. IN: 371.50' (DI - 255)
INV. OUT: 371.40' (DI - 253)

110.18 LF 15" HDPE @ 1.54%

CB - 219
RIM: 383.30'
INV. IN: 375.05' (DI - 220)
INV. OUT: 374.95' (CB - 218)

88.15 LF 15" RCP @ 0.62%

CB - 218
RIM: 380.81'
INV. IN: 374.40' (CB - 219)
INV. OUT: 374.15' (CB - 217)

DI - 255
RIM: 376.01'
INV. OUT: 373.20' (DI - 254)

107.66 LF 18" RCP @ 1.02%

CB - 215
RIM: 378.76'
INV. IN: 372.40' (CB - 216)
INV. OUT: 372.30' (CB - 214)

107.70 LF 24" RCP @ 0.56%

CB - 214
RIM: 377.44'
INV. IN: 371.20' (CB - 215)
INV. IN: 372.11' (CB - 259)
INV. OUT: 370.70' (CB - 213)

227.57 LF 24" RCP @ 0.97%

CB - 213
RIM: 376.12'
INV. IN: 370.10' (CB - 214)
INV. OUT: 370.00' (CB - 212)

DELACROIX DRIVE
50' PUBLIC R/W
29' B-B

CB - 212
RIM: 373.38'
INV. IN: 367.80' (CB - 213)
INV. OUT: 367.70' (CB - 211)

CB - 211
RIM: 372.47'
INV. IN: 366.80' (CB - 212)
INV. IN: 366.80' (DI - 252)
INV. OUT: 366.30' (CB - 210)

79.81 LF 30" RCP @ 0.63%

102.99 LF 24" RCP @ 0.68%

87.71 LF 24" RCP @ 1.03%

10' PDE

2' UE

VWDE

TITIAN AVENUE
50' PUBLIC R/W
29' B-B

CB - 209
RIM: 372.45'
INV. IN: 365.60' (CB - 210)
INV. OUT: 365.50' (CB - 208)

29.00 LF 30" RCP @ 1.03%

CB - 210
RIM: 372.45'
INV. IN: 366.00' (CB - 211)
INV. OUT: 365.90' (CB - 209)

10.00 LF 30" RCP @ 3.00%

CB - 258
RIM: 369.68'
INV. OUT: 364.40' (CB - 206)

29.00 LF 15" RCP @ 1.55%

CB - 207
RIM: 370.80'
INV. IN: 363.80' (CB - 208)
INV. OUT: 363.70' (CB - 206)

95.09 LF 30" RCP @ 1.16%

T.O.R. RIPARIAN BUFFER
50' SECTION 2

T.O.R. RIPARIAN BUFFER
50' SECTION 1

NEUSE RIPARIAN BUFFER
20' SECTION 2

NEUSE RIPARIAN BUFFER
30' SECTION 1

EX. TOP
OF BANK

EX.
POND

EX. WETLANDS (TYP.)

RETAINING WALL #6
W/ SAFETY FENCE
(DESIGN BY OTHERS)

INV.: 367.04'

EX. 36" DIP

INV.: 367.38'

RETAINING WALL #4
W/ SAFETY FENCE
(DESIGN BY OTHERS)

EX. WETLANDS (TYP.)

RETAINING WALL #5
W/ SAFETY FENCE
(DESIGN BY OTHERS)

FES - 603
RIM: 375.97'
INV. IN: 374.30' (JB - 604)

17.72 LF 15" RCP @ 1.13%

JB - 604
RIM: 380.88'
INV. IN: 374.60' (DI - 605)
INV. OUT: 374.50' (FES - 603)

67.16 LF 15" RCP @ 0.74%

CB - 313
RIM: 380.34'
INV. IN: 373.90' (CB - 314)
INV. OUT: 373.40' (CB - 312)

DI - 327
RIM: 374.73'
INV. OUT: 372.39' (CB - 311)

73.50 LF 15" RCP @ 0.67%

43.33 LF 24" RCP @ 0.69%

31.02 LF 15" RCP @ 0.86%

34.78 LF 24" RCP @ 1.15%

92.84 LF 24" RCP @ 0.65%

CB - 312
RIM: 379.34'
INV. IN: 372.80' (CB - 313)
INV. OUT: 372.70' (CB - 311)

121.54 LF 24" RCP @ 0.62%

10' PDE

CB - 311
RIM: 377.98'
INV. IN: 372.80' (CB - 326)
INV. IN: 371.15' (CB - 312)
INV. IN: 371.90' (DI - 327)
INV. OUT: 371.05' (CB - 310)

WHITLOL COURT
50' PUBLIC R/W
29' B-B

VWDE

CB - 309
RIM: 376.49'
INV. IN: 369.90' (CB - 310)
INV. OUT: 369.80' (CB - 308)

29.00 LF 24" RCP @ 0.69%

CB - 308
RIM: 376.49'
INV. IN: 369.60' (CB - 309)
INV. OUT: 369.50' (CB - 307)

VWDE

43.36 LF 24" RCP @ 0.69%

105.61 LF 24" RCP @ 1.80%

CB - 306
RIM: 374.80'
INV. IN: 367.20' (CB - 307)
INV. IN: 369.50' (CB - 324)
INV. OUT: 367.10' (CB - 305)

FES - 607
RIM: 370.29'
INV. IN: 368.50' (JB - 608)

CB - 305
RIM: 373.10'
INV. IN: 364.60' (CB - 317)
INV. IN: 364.10' (CB - 306)
INV. OUT: 363.60' (CB - 304)

29.00 LF 18" RCP @ 2.07%

MUNCH DRIVE
50' PUBLIC R/W
29' B-B

149.35 LF 30" RCP @ 0.54%

20' PDE

DI - 605
RIM: 381.26'
INV. IN: 375.20' (DI - 606)
INV. OUT: 375.10' (JB - 604)

10' PDE

29.02 LF 18" RCP @ 0.86%

CB - 314
RIM: 380.34'
INV. IN: 374.40' (CB - 315)
INV. OUT: 374.15' (CB - 313)

129.71 LF 15" RCP @ 0.62%

VWDE

DI - 606
RIM: 378.32'
INV. OUT: 376.00' (DI - 605)

47.96 LF 15" RCP @ 0.57%

CB - 315
RIM: 380.05'
INV. IN: 374.78' (CB - 316)
INV. OUT: 374.68' (CB - 314)

29.00 LF 15" RCP @ 0.78%

CB - 326
RIM: 378.09'
INV. OUT: 373.07' (CB - 311)

CB - 325
RIM: 376.86'
INV. OUT: 371.80' (CB - 310)

CB - 316
RIM: 380.05'
INV. OUT: 375.00' (CB - 315)

DARE DR.
50' PUBLIC R/W
29' B-B

82.00 LF 15" HDPE @ 1.01%

DI - 323
RIM: 376.59'
INV. OUT: 374.13' (DI - 322)

DI - 322
RIM: 375.81'
INV. IN: 373.30' (DI - 323)
INV. OUT: 373.20' (DI - 321)

123.00 LF 15" HDPE @ 0.98%

CB - 310
RIM: 376.76'
INV. IN: 371.50' (CB - 325)
INV. IN: 370.30' (CB - 311)
INV. OUT: 370.20' (CB - 309)

30.53 LF 15" RCP @ 0.98%

DI - 321
RIM: 374.58'
INV. IN: 372.00' (DI - 322)
INV. OUT: 371.90' (DI - 320)

CB - 307
RIM: 375.86'
INV. IN: 369.20' (CB - 308)
INV. OUT: 369.10' (CB - 306)

29.00 LF 15" RCP @ 0.86%

CB - 324
RIM: 374.80'
INV. OUT: 369.75' (CB - 306)

169.00 LF 24" RCP @ 1.78%

DI - 320
RIM: 373.34'
INV. IN: 370.65' (DI - 321)
INV. OUT: 370.40' (DI - 319)

123.00 LF 15" HDPE @ 1.02%

CB - 317
RIM: 373.10'
INV. IN: 365.30' (DI - 318)
INV. OUT: 365.20' (CB - 305)

128.10 LF 18" RCP @ 2.03%

123.00 LF 18" HDPE @ 0.98%

10' PDE

2' UE

128.25 LF 18" RCP CLASS IV @ 0.51%

JB - 608
RIM: 373.95'
INV. IN: 369.25' (FES - 609)
INV. OUT: 369.15' (FES - 607)

63.47 LF 18" RCP @ 6.23%

20' PDE

DI - 319
RIM: 372.11'
INV. IN: 369.20' (DI - 320)
INV. OUT: 369.10' (DI - 318)

87.00 LF 18" HDPE @ 1.26%

DI - 318
RIM: 371.34'
INV. IN: 368.00' (DI - 319)
INV. OUT: 367.90' (CB - 317)

FES - 609
RIM: 375.00'
INV. OUT: 373.20' (JB - 608)

STORM-DRAINAGE (TYP.)

SITE BOUNDARY

INV.: 389.20'

EX. 12" RCP

INV.: 390.02'

STORM DRAINAGE
APPROVED-CD-21-08

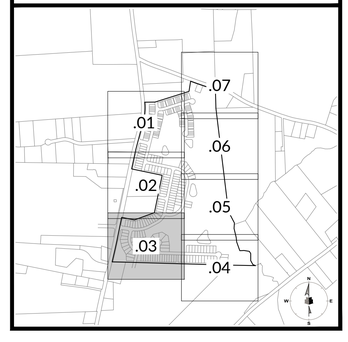
DARE DR.
APPROVED-CD-21-08
50' PUBLIC R/W

TEMPORARY
CONSTRUCTION
EASEMENT

RETAINING WALL #7
W/ SAFETY FENCE
(DESIGN BY OTHERS)

ROLESVILLE CROSSING SUBDIVISION
APPROVED-CD-21-08

KEY MAP
NOT TO SCALE



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1225 CRESCENT GREEN DRIVE,
SUITE 250
CARY, NC 27518

CONSTRUCTION INFRASTRUCTURE DRAWINGS

BROADMOOR
CID-YR-XX

ROLESVILLE ROAD | ROLESVILLE, NC 27587 | WAKE COUNTY

NORTH CAROLINA
PROFESSIONAL
PRELIMINARY
NOT APPROVED FOR
CONSTRUCTION
LAWRENCE COOK

0 25 50
SCALE: 1 inch = 50 ft.

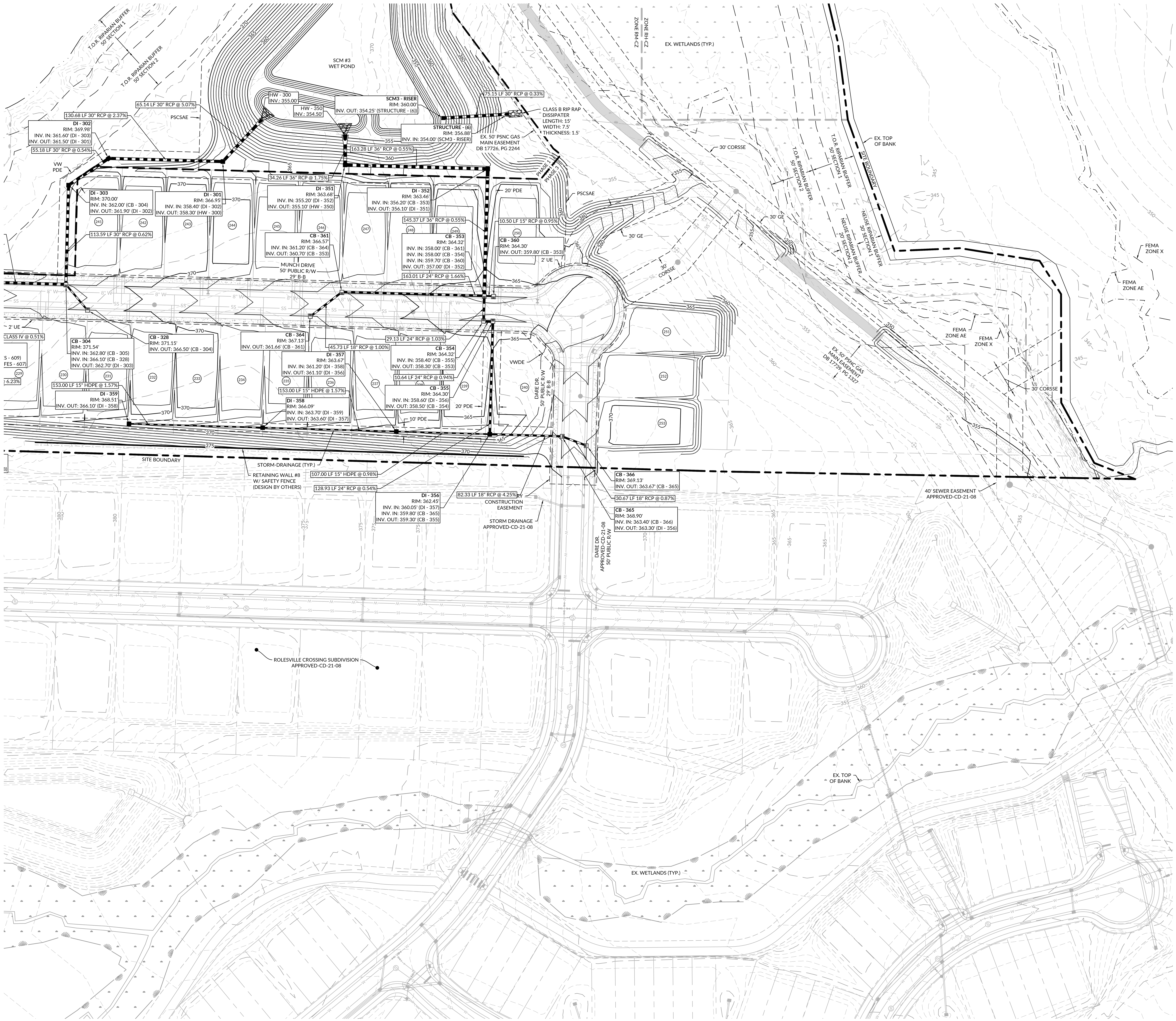
INITIAL PLAN DATE: 11/01/2024
REVISIONS:

WR JOB NUMBER 23-0045
DRN: WR DGN: WR CKD: WR

STORM DRAINAGE PLAN

C5.03

J:\23\0045-Pulte_Woodlief Assemblage\CAD\Drawing Sets\Construction\C5.03 - 1.07 STORM DRAINAGE PLAN.dwg - Thursday, October 31, 2024 11:38:58 AM - JKEITH



KEY MAP
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CONSTRUCTION INFRASTRUCTURE DRAWINGS
BROADMOOR
CID-YR-XX
ROLESVILLE ROAD | ROLESVILLE, NC 27587 | WAKE COUNTY

PRELIMINARY
NOT APPROVED FOR CONSTRUCTION

SCALE: 1 inch = 50 ft.

INITIAL PLAN DATE: 11/01/2024
REVISIONS:

WR JOB NUMBER 23-0045
DRN: WR DGN: WR CKD: WR

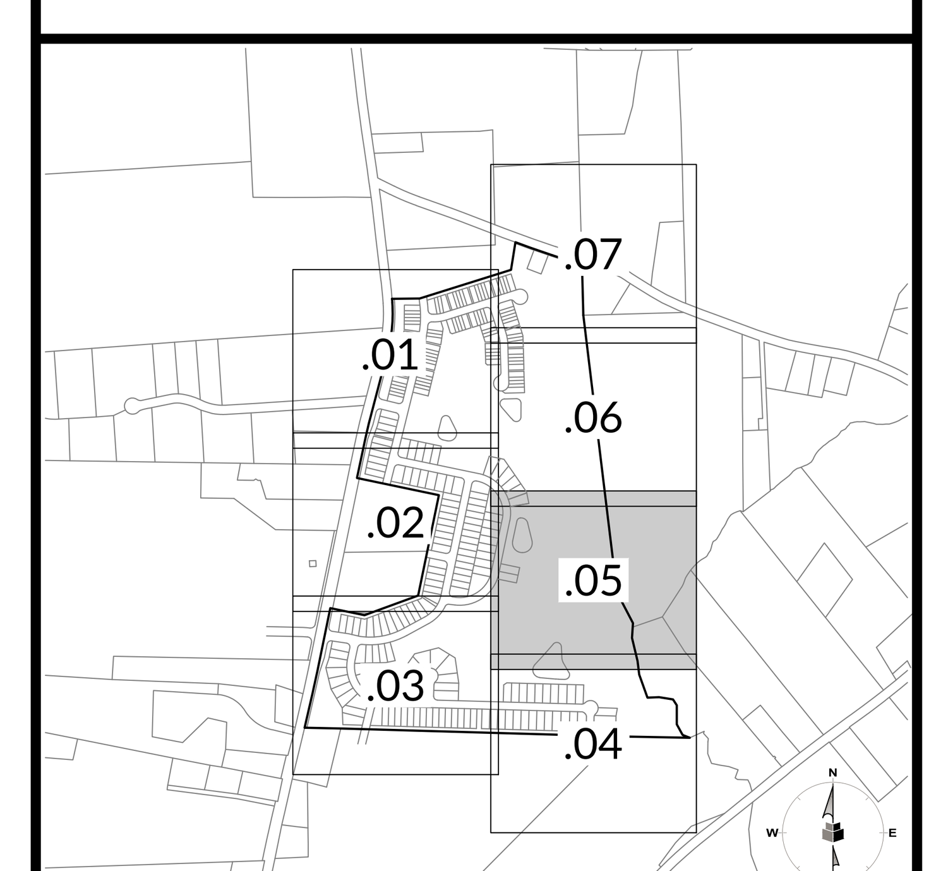
STORM DRAINAGE PLAN

C5.04

STRUCTURE - (4)
RIM: 358.92'
INV. IN: 355.50' (SCM2 - RISER)
CLASS B RIP RAP DISSIPATER
LENGTH: 18'
WIDTH: 9'
THICKNESS: 1.5'
77.32 LF 36" RCP @ 0.97%
SCM2 - RISER
RIM: 360.08'
INV. OUT: 356.25' (STRUCTURE - (4))
CB - 233
RIM: 368.03'
INV. OUT: 363.00' (CB - 223)
29.00 LF 15" RCP @ 1.03%
CB - 223
RIM: 368.03'
INV. IN: 360.90' (CB - 224)
INV. IN: 362.70' (CB - 233)
INV. OUT: 360.80' (CB - 222)
CB - 222
RIM: 366.88'
INV. IN: 360.30' (CB - 223)
INV. OUT: 360.20' (CB - 202)
159.91 LF 30" RCP @ 0.88%
29.00 LF 42" RCP @ 0.69%
52.68 LF 42" RCP @ 0.95%
SCM #2
WET POND
HW - 200
INV.: 357.00'
CB - 201
RIM: 365.11'
INV. IN: 357.60' (CB - 202)
INV. OUT: 357.50' (HW - 200)
CB - 202
RIM: 365.10'
INV. IN: 358.80' (CB - 222)
INV. IN: 358.30' (CB - 203)
INV. IN: 359.80' (DI - 242)
INV. OUT: 357.80' (CB - 201)
8.06 LF 36" RCP @ 1.24%
CB - 203
RIM: 365.12'
INV. IN: 358.50' (CB - 204)
INV. OUT: 358.40' (CB - 202)
CB - 260
RIM: 367.36'
INV. OUT: 362.50' (CB - 204)
29.00 LF 15" RCP @ 1.03%
80.03 LF 30" RCP @ 0.62%
85.81 LF 30" RCP @ 0.58%
PWMAE
STORM-DRAINAGE (TYP.)
RETAINING WALL #9 W/ SAFETY FENCE (DESIGN BY OTHERS)
TITAN AVENUE 50' PUBLIC R/W 29' B-B
EX. TOP OF BANK
EX. WETLANDS (TYP.)
SITE BOUNDARY
EX. 50' PSNC GAS MAIN EASEMENT DB 17739, PG 1327
ZONE RH-CZ
ZONE RM-CZ
30' CORSSE
PSCSAE
PHASE 3
PHASE 1
PHASE 2
FEMA ZONE AE
FEMA ZONE X
30' GE
T.O.R. RIPARIAN BUFFER 50' SECTION 2
T.O.R. RIPARIAN BUFFER 50' SECTION 1
NEUSE RIPARIAN BUFFER 30' SECTION 1
NEUSE RIPARIAN BUFFER 20' SECTION 2
EX. POND
SCM #3
WET POND
2' UE
30' UE

KEY MAP

NOT TO SCALE



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CONSTRUCTION INFRASTRUCTURE DRAWINGS

BROADMOOR

CID-YR-XX

ROLESVILLE ROAD | ROLESVILLE, NC 27587 | WAKE COUNTY

PRELIMINARY
NOT APPROVED FOR CONSTRUCTION
NORTH CAROLINA PROFESSIONAL ENGINEER TERRENCE COOK

0 25 50
SCALE: 1 inch = 50 ft.

INITIAL PLAN DATE: 11/01/2024
REVISIONS:

WR JOB NUMBER		23-0045
DRN: WR	DGN: WR	CKD: WR

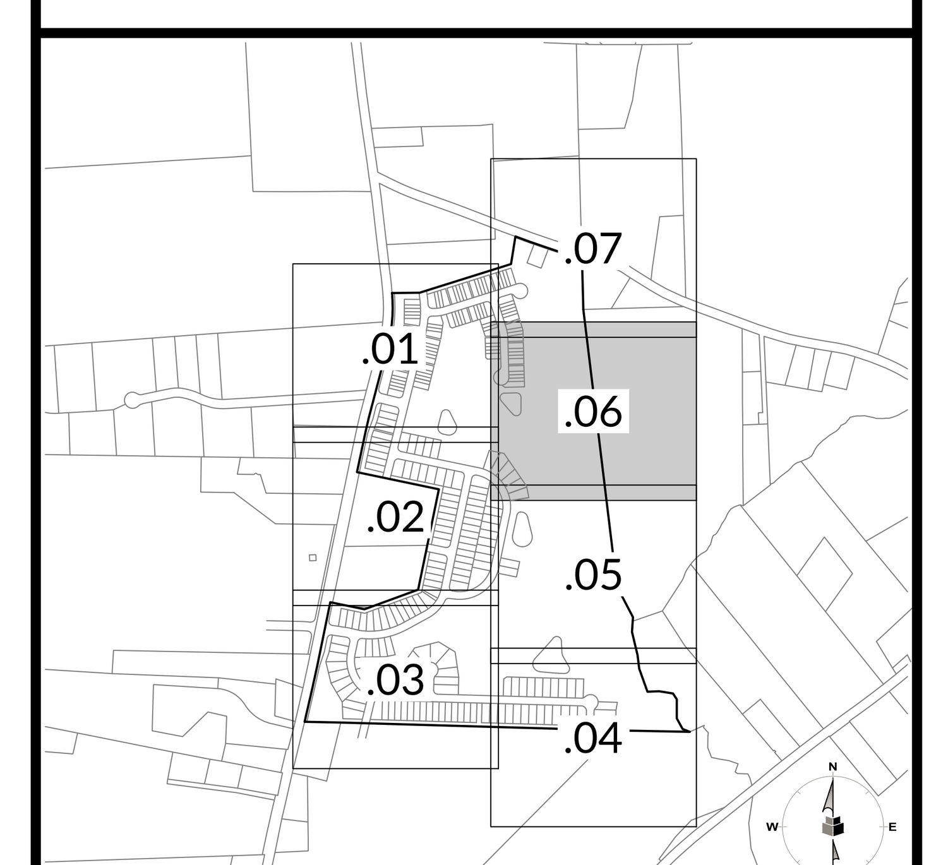
STORM DRAINAGE PLAN

C5.05

EST. 1983

KEY MAP

NOT TO SCALE



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CONSTRUCTION INFRASTRUCTURE DRAWINGS
BROADMOOR CID-YR-XX
ROLESVILLE ROAD | ROLESVILLE, NC 27587 | WAKE COUNTY

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SCALE: 1 inch = 50 ft.

INITIAL PLAN DATE: 11/01/2024
REVISIONS:

WR JOB NUMBER 23-0045
DRN: WR DGN: WR CKD: WR

STORM DRAINAGE PLAN

C5.06

APPROX. LOCATION OF EX. V.W. GAS MAIN EASEMENT DB 17871, PG 2108

FOWLER RD. S.R. 2308 60' PUBLIC R/W

INV.: 368.53'
INV.: 370.05'
EX. 12" RCP
INV.: 370.58'

FOWLER ROAD IMPROVEMENTS SHALL BE CONSTRUCTED WITH PHASE 1 (BY OTHERS)

INV.: 373.10'
EX. 12" HDPE
INV.: 372.12'
EX. 18" RCP

10' DE BY OTHERS

(EX. FES) INV.: 366.18'
EX. 18" STORM PIPE
(EX. FES) INV.: 366.79'

INV.: 363.73'
EX. 15" RCP
INV.: 364.00'

EX. HEADWALL
INV.: 358.80'
INV.: 358.83'
EX. DUAL 66" RCP CULVERTS

EX. WETLANDS (TYP.)

SITE BOUNDARY

PHASE 1
PHASE 3

30' CORSSE

RETAINING WALL #10 W/ SAFETY FENCE (DESIGN BY OTHERS)

10' PDE

EX. HEADWALL
INV.: 358.11'
INV.: 357.96'

EX. TOP OF BANK

10' DE BY OTHERS

FEMA ZONE AE

FEMA ZONE X

52.49 LF 36" RCP @ 0.88%

FES - 611
RIM: 364.86'
INV. OUT: 361.46' (FES - 610)

30' GE

EX. 50' PSNC GAS MAIN EASEMENT DB 17789, PG 1527

T.O.R. RIPARIAN BUFFER 50' SECTION 2

NEUSE RIPARIAN BUFFER 30' SECTION 2

NEUSE RIPARIAN BUFFER 30' SECTION 1

T.O.R. RIPARIAN BUFFER 50' SECTION 1

CB - 156
RIM: 368.83'
INV. IN: 362.60' (CB - 157)
INV. OUT: 362.50' (CB - 155)
146.58 LF 24" RCP @ 0.96%

ROBIN WAY
50' PUBLIC R/W
29' B-B

20' DE

20' DE

EX. WETLANDS (TYP.)

FES - 610
RIM: 363.92'
INV. IN: 361.00' (FES - 611)

84.05 LF 24" RCP @ 0.83%

2' UE

CB - 155
RIM: 367.67'
INV. IN: 361.80' (CB - 156)
INV. OUT: 361.70' (DI - 154)

30' GE

30' CORSSE

142.66 LF 24" RCP @ 0.56%

JESSEY PLACE
50' PUBLIC R/W
29' B-B

EX. POND

EX. POND

SITE BOUNDARY

FEMA ZONE X

FEMA ZONE AE

DI - 154
RIM: 367.25'
INV. IN: 360.90' (CB - 155)
INV. OUT: 360.80' (DI - 153)

20' PDE

70.89 LF 24" RCP @ 0.56%

EX. 50' PSNC GAS MAIN EASEMENT DB 17789, PG 1527

VALLEY CURB INLET (GRATE ONLY)

CB - 113
RIM: 367.78'
INV. OUT: 362.80' (CB - 112)

29.95 LF 15" RCP @ 1.00%

2' UE

DI - 153
RIM: 366.59'
INV. IN: 360.40' (DI - 154)
INV. OUT: 359.90' (DI - 152)

KEY MAP
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CONSTRUCTION INFRASTRUCTURE DRAWINGS FOR
BROADMOOR
CID-YR-XX
ROLESVILLE ROAD | ROLESVILLE, NC 27587 | WAKE COUNTY

NORTH CAROLINA PROFESSIONAL
PRELIMINARY
NOT APPROVED FOR CONSTRUCTION
TERRENCE COOK

0 25 50
SCALE: 1 inch = 50 ft.

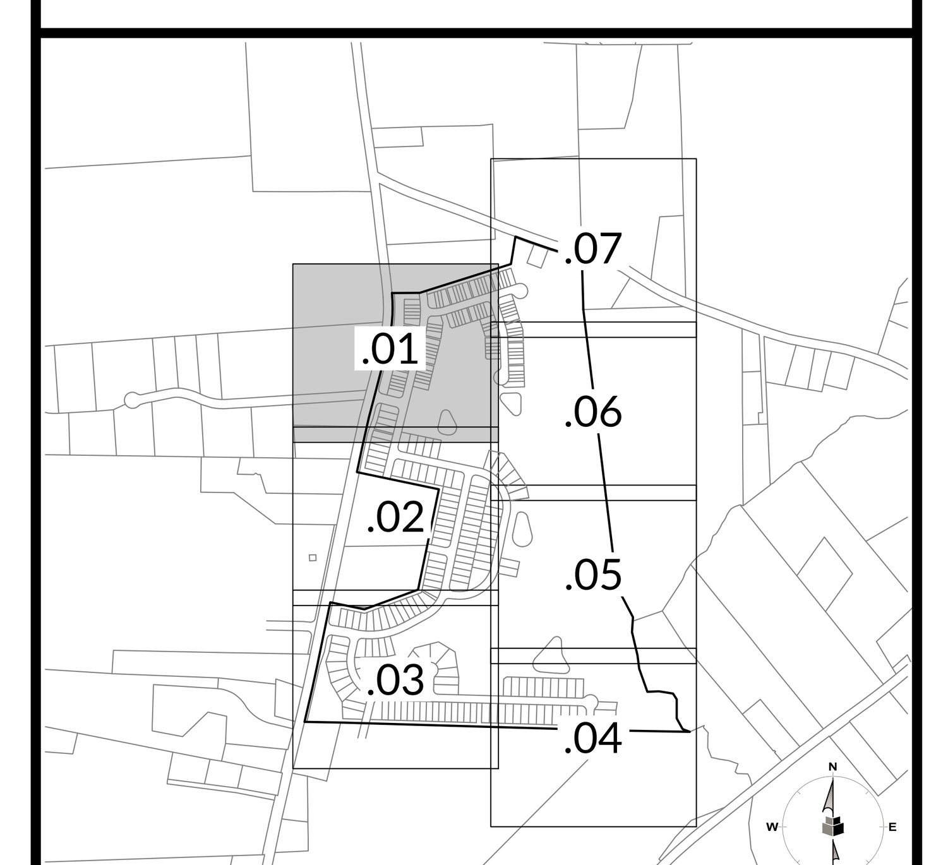
INITIAL PLAN DATE: 11/01/2024
REVISIONS:

WR JOB NUMBER 23-0045
DRN: WR DGN: WR CKD: WR

STORM DRAINAGE PLAN

C5.07

J:\23\0045-Pole_Woodlief Assemblage\CAD\Drawing Set\Construction\C5.01-5.07 STORM DRAINAGE PLAN.dwg Thursday, October 31, 2024 11:57:42 AM - JKEITH



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BROADMOOR
CID-YR-XX
ROLESVILLE ROAD | ROLESVILLE, NC 27587 | WAKE COUNTY

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CONSTRUCTION

SCALE: 1 inch = 50 ft.

INITIAL PLAN DATE: 11/01/2024
REVISIONS:

WR JOB NUMBER		23-0045
DRN: WR	DGN: WR	CKD: WR

GRADING PLAN

C6.01

KEY MAP
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CONSTRUCTION INFRASTRUCTURE DRAWINGS FOR

BROADMOOR
CID-YR-XX

ROLESVILLE ROAD | ROLESVILLE, NC 27587 | WAKE COUNTY

NORTH CAROLINA PROFESSIONAL ENGINEER TERRENCE COOK

PRELIMINARY
NOT APPROVED FOR CONSTRUCTION

0 25 50
SCALE: 1 inch = 50 ft.

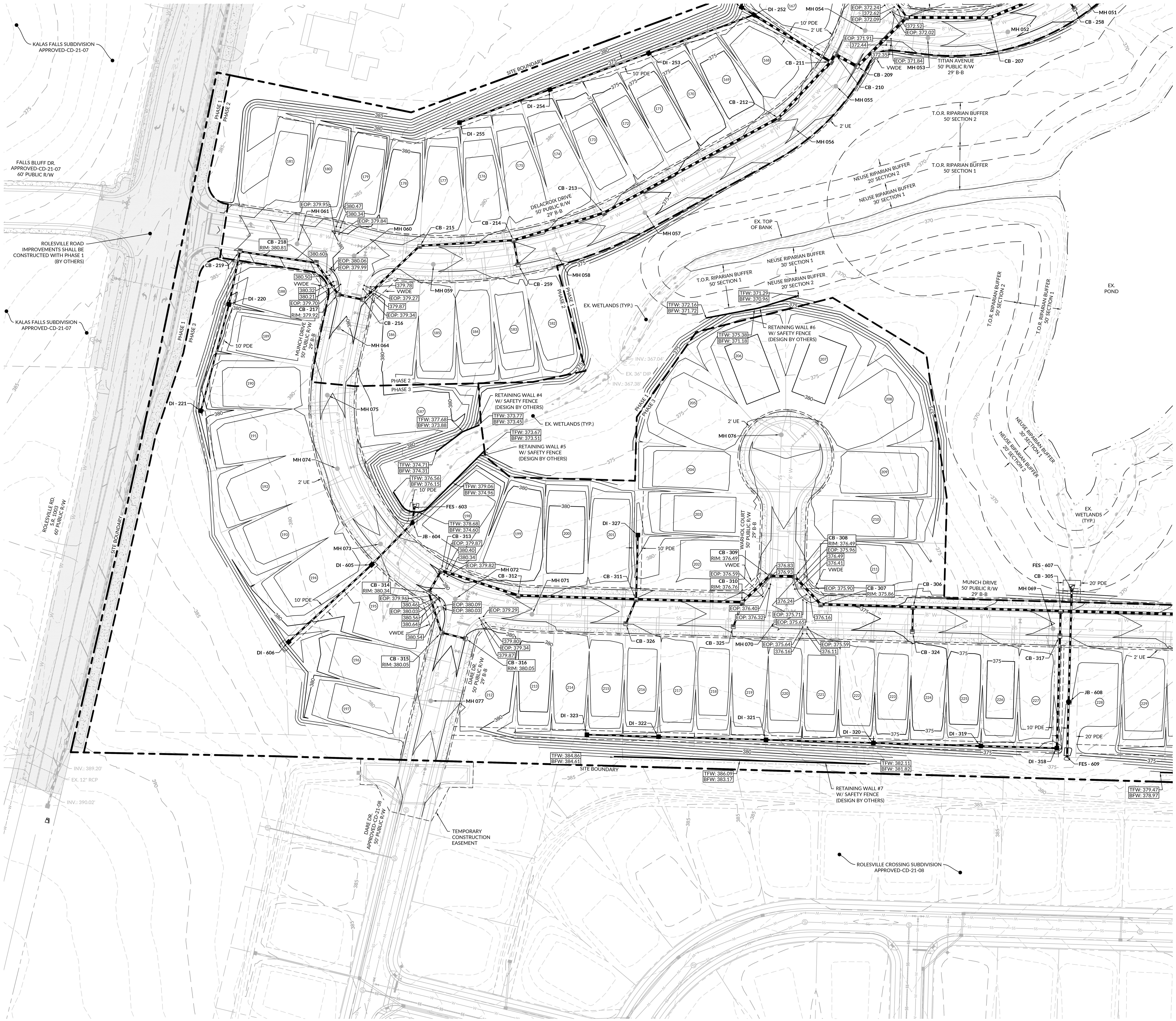
INITIAL PLAN DATE: 11/01/2024
REVISIONS:

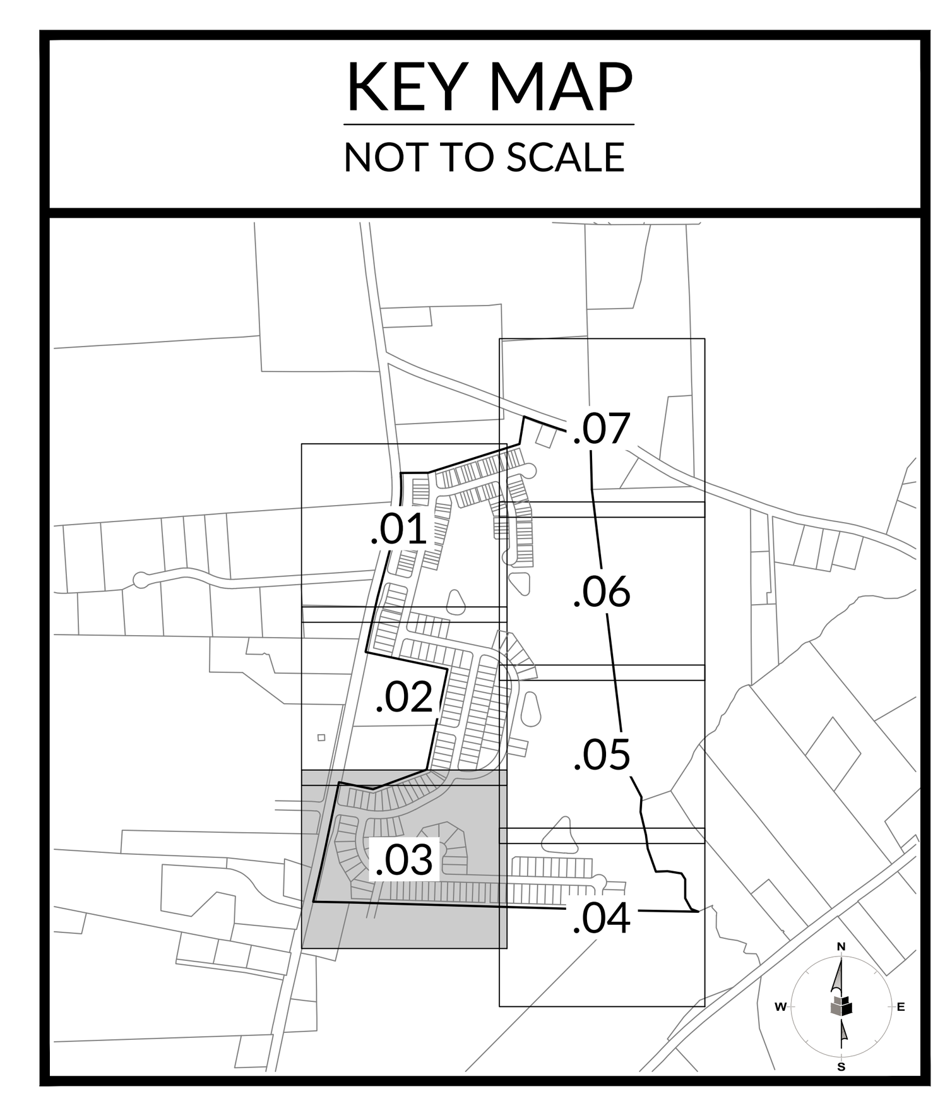
WR JOB NUMBER	23-0045
DRN: WR	DGN: WR CKD: WR

GRADING PLAN

C6.02

J:\23\0045-Pole_Woodlief Assemblage\CAD\Drawing Set\Construction\C6.01-6.07 GRADING PLAN.dwg - Thursday, October 31, 2024 11:16:47 AM - JKEITH





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1225 CRESCENT GREEN DRIVE, SUITE 250 CARY, NC 27518

CONSTRUCTION INFRASTRUCTURE DRAWINGS
BROADMOOR
CID-YR-XX
ROLESVILLE ROAD | ROLESVILLE, NC 27587 | WAKE COUNTY

PRELIMINARY
NOT APPROVED FOR CONSTRUCTION

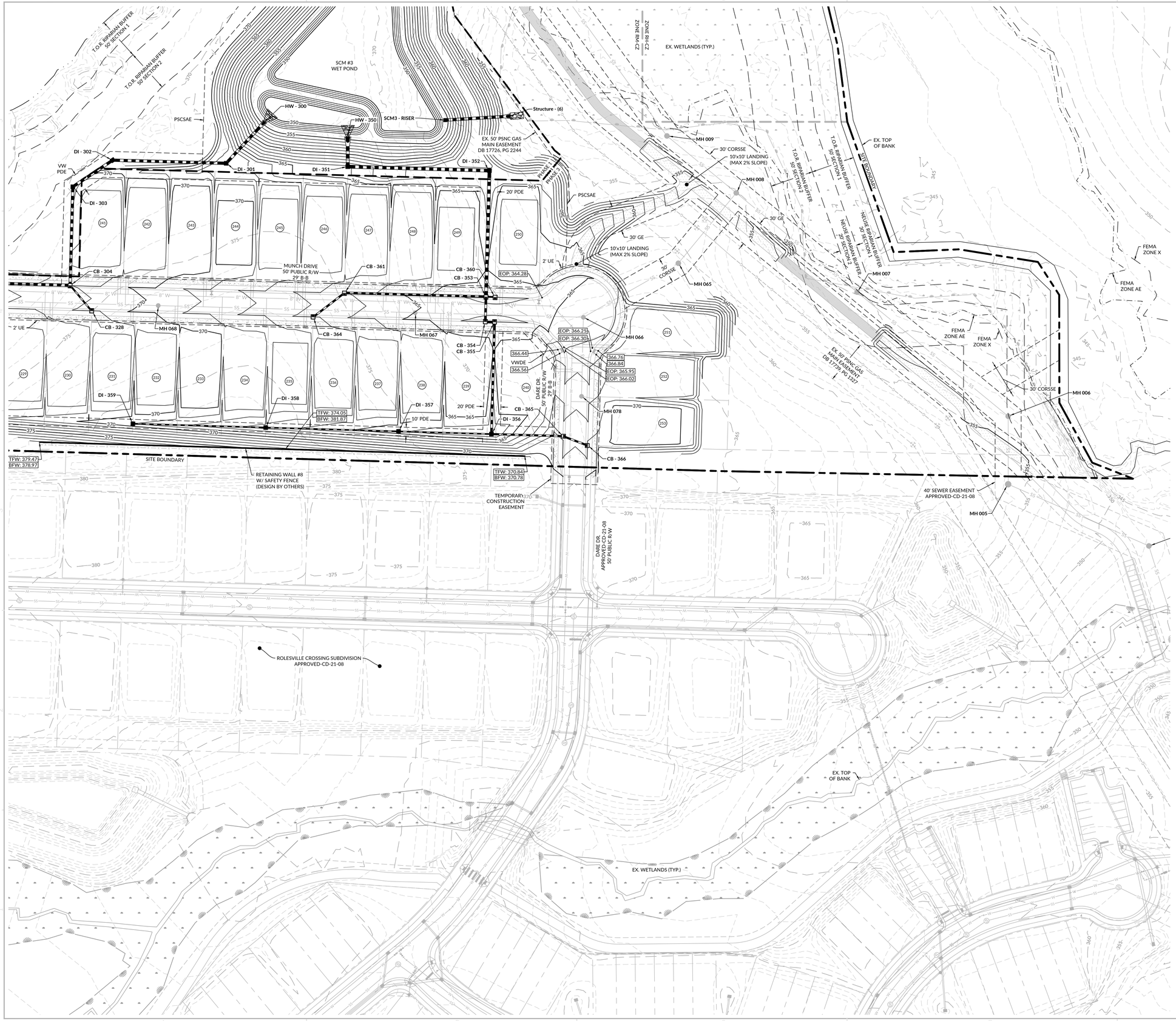
SCALE: 1 inch = 50 ft.

INITIAL PLAN DATE: 11/01/2024
REVISIONS:

WR JOB NUMBER	23-0045
DRN: WR	DGN: WR	CKD: WR

GRADING PLAN

C6.03



KEY MAP
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CONSTRUCTION INFRASTRUCTURE DRAWINGS
BROADMOOR
CID-YR-XX
ROLESVILLE ROAD | ROLESVILLE, NC 27587 | WAKE COUNTY

NORTH CAROLINA PROFESSIONAL ENGINEER
PRELIMINARY
NOT APPROVED FOR
CONSTRUCTION
LAWRENCE COOK

0 25 50
SCALE: 1 inch = 50 ft.

INITIAL PLAN DATE: 11/01/2024
REVISIONS:

WR JOB NUMBER 23-0045
DRN: WR DGN: WR CKD: WR

GRADING PLAN

C6.04

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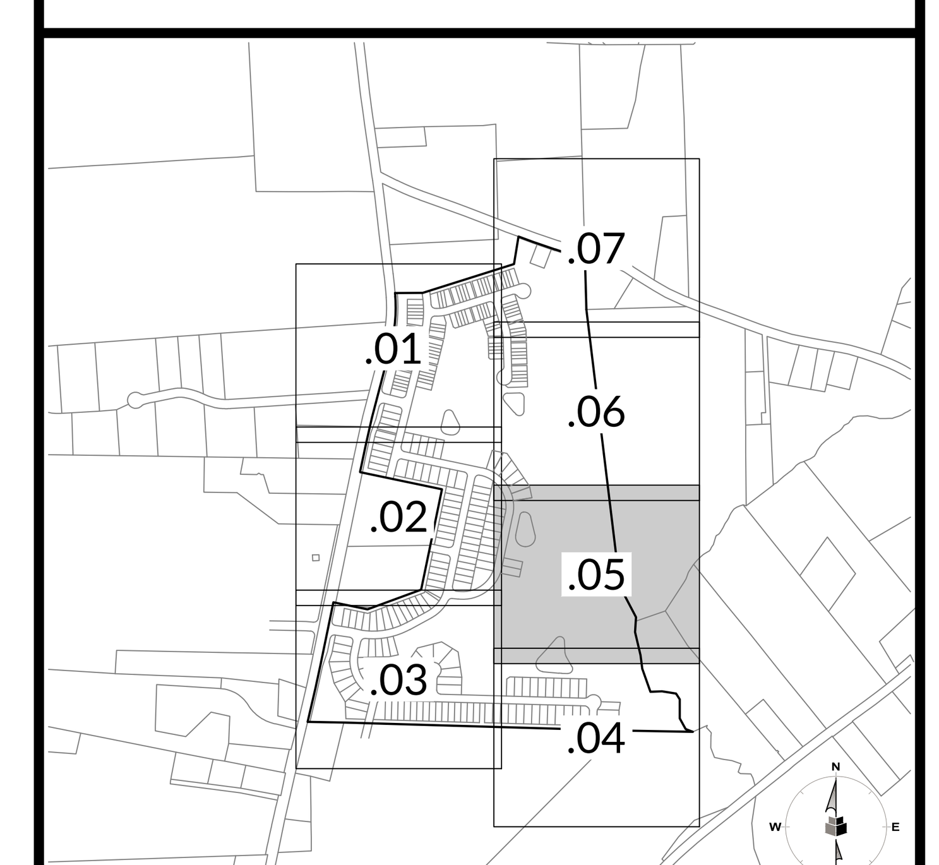
KEY MAP

NOT TO SCALE



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PULTEGROUP
1225 CRESCENT GREEN DRIVE, SUITE 250
CARY, NC 27518

CONSTRUCTION INFRASTRUCTURE DRAWINGS

BROADMOOR CID-YR-XX

ROLESVILLE ROAD | ROLESVILLE, NC 27587 | WAKE COUNTY

PRELIMINARY
NOT APPROVED FOR CONSTRUCTION

SCALE: 1 inch = 50 ft.

INITIAL PLAN DATE: 11/01/2024
REVISIONS:

WR JOB NUMBER 23-0045
DRN: WR DGN: WR CKD: WR

GRADING PLAN

C6.05

KEY MAP

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CARY, NC 27518

CONSTRUCTION INFRASTRUCTURE DRAWINGS

BROADMOOR CID-YR-XX

ROLESVILLE ROAD | ROLESVILLE, NC 27587 | WAKE COUNTY

PRELIMINARY
NOT APPROVED FOR CONSTRUCTION

SCALE: 1 inch = 50 ft.

INITIAL PLAN DATE: 11/01/2024
REVISIONS:

WR JOB NUMBER 23-0045
DRN: WR DGN: WR CKD: WR

GRADING PLAN

C6.06

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CONSTRUCTION INFRASTRUCTURE DRAWINGS
BROADMOOR
CID-YR-XX
ROLESVILLE ROAD | ROLESVILLE, NC 27587 | WAKE COUNTY

PRELIMINARY
NOT APPROVED FOR CONSTRUCTION

SCALE: 1 inch = 50 ft.

INITIAL PLAN DATE: 11/01/2024
REVISIONS:

WR JOB NUMBER 23-0045
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GRADING PLAN

C6.07

HATCH LEGEND

LOD — LIMITS OF DISTURBANCE

KEY MAP

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CONSTRUCTION INFRASTRUCTURE DRAWINGS
BROADMOOR
CID-YR-XX
ROLESVILLE ROAD | ROLESVILLE, NC 27587 | WAKE COUNTY

NORTH CAROLINA PROFESSIONAL ENGINEER
PRELIMINARY
NOT APPROVED FOR CONSTRUCTION
KYLE VAUGHAN

0 100 200
SCALE: 1 inch = 200 ft.

INITIAL PLAN DATE: 11/01/2024
REVISIONS:

WR JOB NUMBER 23-0045
DRN: WR DGN: WR CKD: WR

OVERALL EROSION CONTROL PLAN (STAGE 1)

C7.00

J:\23\0045-pulte_woodlief_assemblage\CAD\drawing sets\construction\C7.00 OVERALL EROSION CONTROL PLAN (STAGE 1).dwg - Thursday, October 31, 2024 11:18:06 AM - JEMASTER

N/F
WALL, JOESPH E
GUNZ, BETTY R
ZONING: RL
DB. 5178 PG. 858
BM. 3910 PG. 785
PIN. 1768-21-6907

EX. PRIVATE DRIVEWAY

EX. OHE POLE

EX. WELL

N/F
CARLYLE D & ALMA D
WOODLIEF
DB. 014286 PG. 01880
BM. 2011 PG. 00084
PIN: 1768511519
(PORTION OUTSIDE OF
SITE BOUNDARY TO BE
RETAINED BY OWNER)

EX. PRIVATE DRIVEWAY

SITE BOUNDARY

LIMITS OF DISTURBANCE
TYP

SILT FENCE
TYP

EX. FHA

SILT FENCE
OUTLET TYP

EX. 16" WATER
MAIN

INV.: 361.62'

EX. 24" RCP

TEMPORARY
DIVERSION CHANNEL
TD 7-2

ROLESVILLE ROAD
IMPROVEMENTS SHALL BE
CONSTRUCTED WITH PHASE 1
(DESIGNED BY OTHERS)

ROLESVILLE RD.
S.R. 1005
60' PUBLIC R/W

N/F
POWELL, JEFFERY LOUIS
ZONING: RL
DB. 12-E PG. 3279
PIN. 1768-31-7240

SITE BOUNDARY

TEMPORARY DIVERSION CHANNEL
TD 6-2

24" SLOPE DRAIN W/
HORSESHOE INLET
PROTECTION

CLASS A RIP RAP
DISSIPATER PAD
LENGTH: 6'
WIDTH: 8'
THICKNESS: 12"

TEMPORARY DIVERSION CHANNEL
TD 1-2

CLASS A RIP RAP
DISSIPATER PAD
LENGTH: 4.5'
WIDTH: 6'
THICKNESS: 12"

EX.
POND

SKIMMER

CLASS A RIP RAP
DISSIPATER PAD
LENGTH:
WIDTH:
THICKNESS: 12"

TEMPORARY DIVERSION CHANNEL
TD 6-1

18" SLOPE DRAIN W/
HORSESHOE INLET
PROTECTION

SSB #6
BOTTOM: 359'
TOP OF BERM: 362'
BERM WIDTH: 10'

SPILLWAY
ELEVATION: 360.5'
LINED WITH NAG
C350 OR
EQUIVALENT

INV.: 369.56'

EX. 15" RCP

INV.: 369.99'

TEMPORARY DIVERSION CHANNEL
TD 4-2

CATLETT FARM RD.
S.R. 4318
60' PUBLIC R/W

297.25'
N76°10'41"W

125.00'
S13°49'12"W

ZONE RH-CZ
ZONE RM-CZ

EX. 18" RCP

202.61'
N76°10'41"W

CHECK DAM
TYP

EX. OHE
POLE

CONSTRUCTION ENTRANCE

CONCRETE WASHOUT

24" SLOPE DRAIN W/
HORSESHOE INLET
PROTECTION

SPILLWAY
ELEVATION: 369.5'
LINED WITH NAG
C350 OR
EQUIVALENT

EX.
WETLANDS
(TYP.)

EX. WATER
VALVE

EX. FHA

N/F
BURLAGE, LUCAS GABRIEL
BURLAGE, LAURA ELENA
ZONING: RL
DB. 15424 PG. 810
BM. 1986 PG. 1483
PIN. 1768-30-9874

CLASS A RIP RAP
DISSIPATER PAD
LENGTH: 6'
WIDTH: 8'
THICKNESS: 12"

EX. PHONE LINE

EX. FIBER OPTIC

RSB #4
BOTTOM: 357'
TOP OF BERM: 370'
BERM WIDTH: 10'

EX. OHE
POLE

BAFFLES
TYP

SCM4 - RISER

Structure - (8)

CLASS A RIP RAP
DISSIPATER PAD
LENGTH: 6'
WIDTH: 8'
THICKNESS: 12"

24" SLOPE DRAIN W/
HORSESHOE INLET
PROTECTION

N/F
THE STRADER FAMILY TRUST
ZONING: RL
DB. 15137 PG. 2468
BM. 1986 PG. 1483
PIN. 1768-30-9667

INV.: 375.12'

EX. 15" RCP

CATLETT FARM RD.
S.R. 4318
60' PUBLIC R/W

KEY MAP
NOT TO SCALE

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CONSTRUCTION INFRASTRUCTURE DRAWINGS FOR
BROADMOOR
CID-YR-XX
ROLESVILLE ROAD | ROLESVILLE, NC 27587 | WAKE COUNTY

NORTH CAROLINA PROFESSIONAL ENGINEER
PRELIMINARY
NOT APPROVED FOR CONSTRUCTION
KYLE VAUGHAN

0 25 50
SCALE: 1 inch = 50 ft.

INITIAL PLAN DATE: 11/01/2024
REVISIONS:

WR JOB NUMBER	23-0045
DRN: WR	DGN: WR CKD: WR

EROSION CONTROL PLAN (STAGE 1)

C7.01

N/F
THE STRADER FAMILY TRUST
ZONING: RL
DB. 15137 PG. 2468
BM. 1986 PG. 1483
PIN. 1768-30-9667
INV.: 375.12'
EX. 15" RCP
INV.: 373.41'
EX. 15" RCP
INV.: 374.25'
EX. OHE POLE
INV.: 373.79'
EX. 15" HDPE
INV.: 374.60'
N/F
CICERO, KRISTAN
CICERO, JOSEPH
ZONING: R-30
DB. 19017 PG. 1461
BM. 2007 PG. 1478
PIN. 1768-30-8414
ROLESVILLE ROAD IMPROVEMENTS SHALL BE CONSTRUCTED WITH PHASE 1 (DESIGNED BY OTHERS)
EX. BUILDING
EX. OHE
EX. WELL
EX. OHE POLE
SITE BOUNDARY
N/F
STALLINGS, HARREL F
STALLINGS, GAYLE W
ZONING: R-30
DB. 12830 PG. 114
BM. 2007 PG. 1478
PIN. 1768-30-6321
EX. FIBER OPTIC
EX. PHONE LINE
N/F
JANICE GAYLE W & HARRELL STALLINGS
ZONING: R-30 (WAKE COUNTY)
DB. 014286 PG. 01890
BM. 2011 PG. 00084
PIN: 1768409261
(PORTION OUTSIDE OF SITE BOUNDARY TO BE RETAINED BY OWNER)
EX. FHA
EX. WELL
EX. OHE POLE
EX. BUILDING
EX. 16" WATER MAIN
N/F
DR HORTON INC
(EX. CEMETARY)
ZONING: R&PUD-CZ
DB. 19008 PG. 1446
PIN. 1767-39-9921
N/F
DONNIE L & PATSY WOODLIEF
ZONING: R-30 (WAKE COUNTY)
DB. 014286 PG. 01896
BM. 2011 PG. 00084
PIN: 1767590716
(PORTION OUTSIDE OF SITE BOUNDARY TO BE RETAINED BY OWNER)
N/F
DR HORTON INC
ZONING: R&PUD-CZ
DB. 19008 PG. 1446
BM. 2022 PG. 442
PIN. 1767-29-3887
EX. OHE POLE
EX. OHE
KALAS FALLS SUBDIVISION APPROVED-CD-21-07
BAFFLES TYP
CLASS A RIP RAP DISSIPATER PAD LENGTH: 6' WIDTH: 8' THICKNESS: 12"
24" SLOPE DRAIN W/ HORSESHOE INLET PROTECTION
SCM4 - RISER
Structure - (8)
SKIMMER
TEMPORARY DIVERSION CHANNEL TD 4-1
ZONE RH-CZ
ZONE RM-CZ
EX. WETLANDS (TYP.)
SPILLWAY ELEVATION: 359.5' LINED WITH NAG C350 OR EQUIVALENT
TEMPORARY DIVERSION CHANNEL TD 12-1
SSB #12
BOTTOM: 357'
TOP OF BERM: 360'
BERM WIDTH: 10'
CHECK DAM TYP
TEMPORARY DIVERSION CHANNEL TD 2-1
SILT FENCE OUTLET TYP
SILT FENCE TYP
LIMITS OF DISTURBANCE TYP
CHECK DAM TYP
TEMPORARY DIVERSION CHANNEL TD 2-2
SSB #8
BOTTOM: 372'
TOP OF BERM: 375'
BERM WIDTH: 10'
TEMPORARY DIVERSION CHANNEL TD 8-1

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CONSTRUCTION INFRASTRUCTURE DRAWINGS
BROADMOOR
CID-YR-XX
ROLESVILLE ROAD | ROLESVILLE, NC 27587 | WAKE COUNTY

PRELIMINARY
NOT APPROVED FOR CONSTRUCTION
NORTH CAROLINA PROFESSIONAL ENGINEER
KYLE VAUGHAN

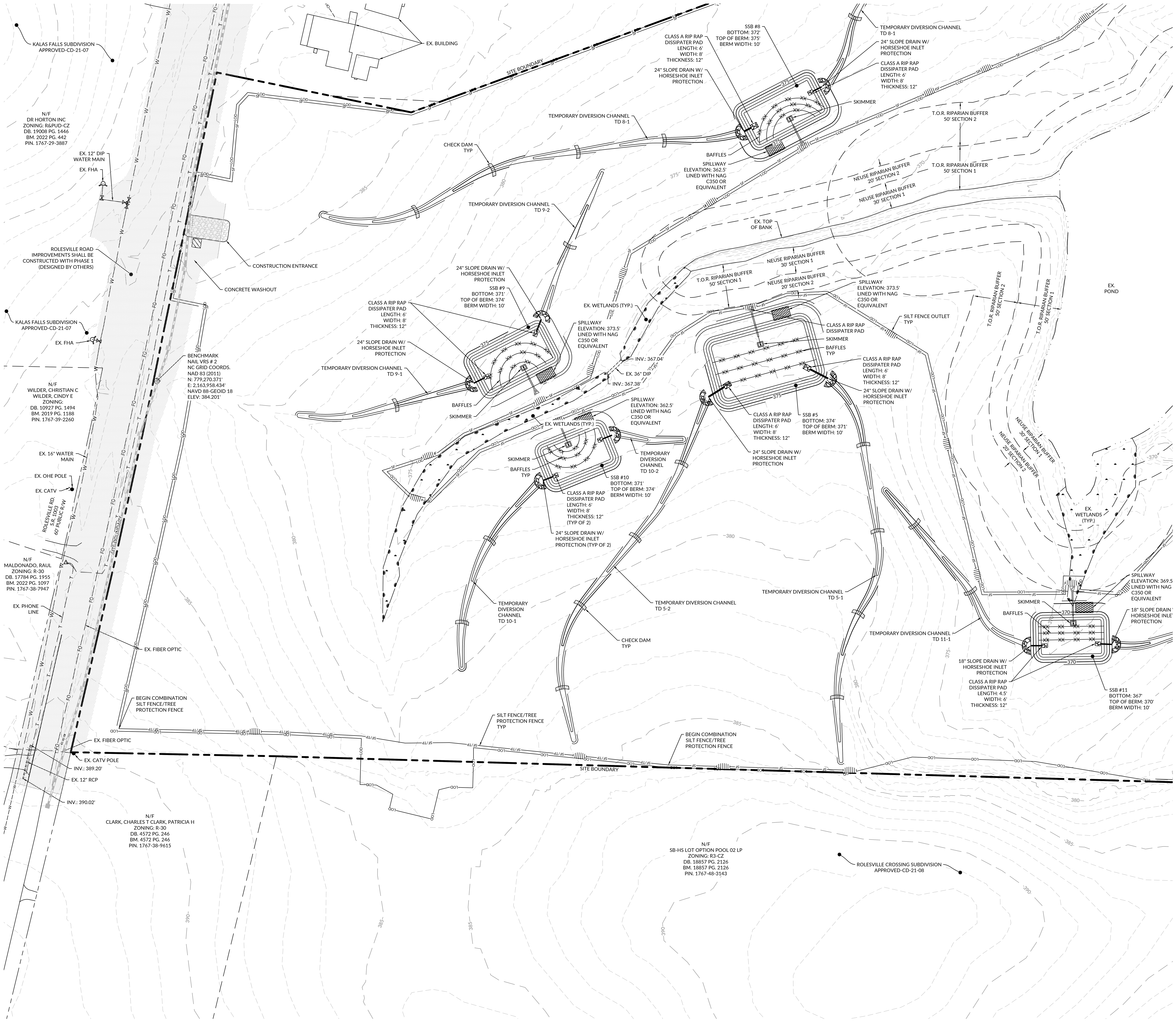
SCALE: 1 inch = 50 ft.

INITIAL PLAN DATE: 11/01/2024
REVISIONS:

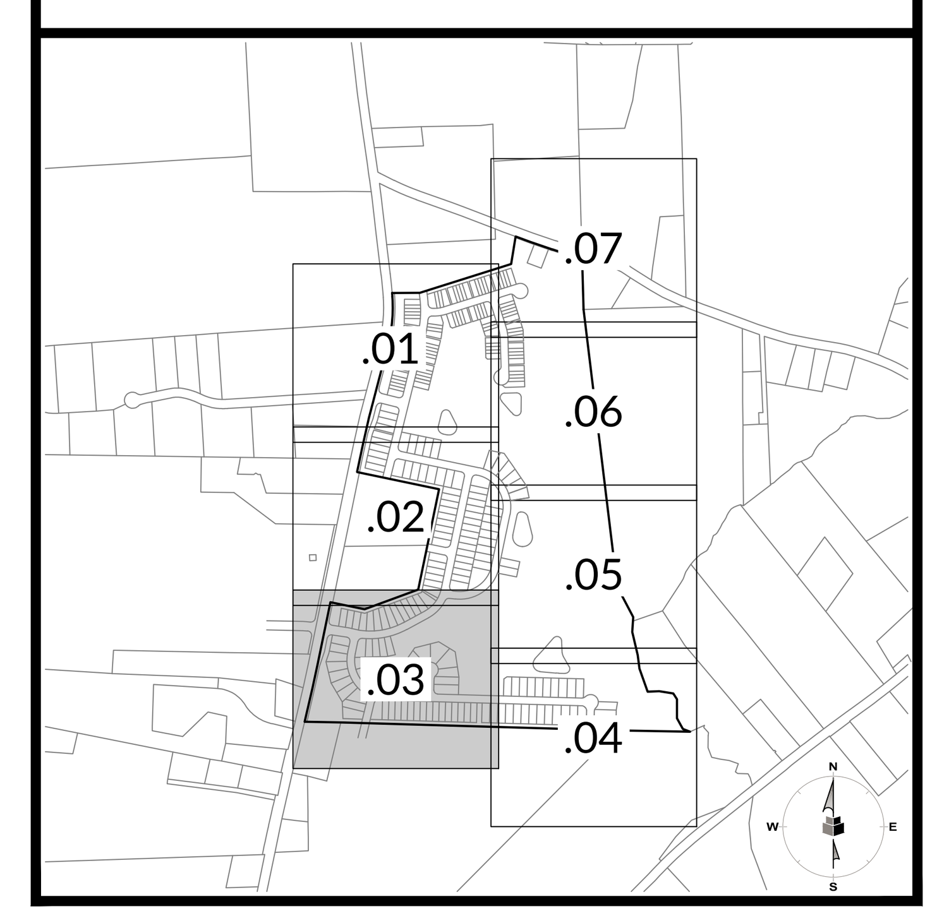
WR JOB NUMBER	23-0045
DRN: WR	DGN: WR	CKD: WR

EROSION CONTROL PLAN (STAGE 1)

C7.02



KEY MAP
NOT TO SCALE



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CARY, NC 27518

CONSTRUCTION INFRASTRUCTURE DRAWINGS
BROADMOOR
CID-YR-XX
ROLESVILLE ROAD | ROLESVILLE, NC 27587 | WAKE COUNTY

PRELIMINARY
NOT APPROVED FOR CONSTRUCTION

SCALE: 1 inch = 50 ft.

INITIAL PLAN DATE: 11/01/2024
REVISIONS:

WR JOB NUMBER	23-0045
DRN: WR	DGN: WR CKD: WR

EROSION CONTROL PLAN (STAGE 1)

C7.03

T.O.R. RIPARIAN BUFFER 50' SECTION 1
T.O.R. RIPARIAN BUFFER 50' SECTION 2
BAFFLES TYP
SKIMMER
SPILLWAY ELEVATION: 361.5' LINED WITH NAG C350 OR EQUIVALENT
ZONE RM-CZ
ZONE R3-CZ
EX. WETLANDS (TYP.)
Structure - (6)
SCM3 - RISER
EX. 50' PSNC GAS MAIN EASEMENT DB 17726, PG 2244
235.90'
N90°00'00"W
N/F
AGUILAR, NORMA
ZONING: R-30
DB. 12647 PG. 1286
PIN. 1767-68-5863
EX. TOP OF BANK
SITE BOUNDARY
T.O.R. RIPARIAN BUFFER 50' SECTION 1
T.O.R. RIPARIAN BUFFER 50' SECTION 2
NEUSE RIPARIAN BUFFER 50' SECTION 1
NEUSE RIPARIAN BUFFER 20' SECTION 2
RSB #3
BOTTOM: 349'
TOP OF BERM: 363'
BERM WIDTH: 10'
CLASS A RIP RAP DISSIPATER PAD LENGTH: 6' WIDTH: 8' THICKNESS: 12"
CLASS A RIP RAP DISSIPATER PAD LENGTH: 6' WIDTH: 8' THICKNESS: 12"
24" SLOPE DRAIN W/ HORSESHOE INLET PROTECTION
24" SLOPE DRAIN W/ HORSESHOE INLET PROTECTION
SPILLWAY ELEVATION: 369.5' LINED WITH NAG C350 OR EQUIVALENT
TEMPORARY DIVERSION CHANNEL TD 11-2
18" SLOPE DRAIN W/ HORSESHOE INLET PROTECTION
TEMPORARY DIVERSION CHANNEL TD 3-1
CHECK DAM TYP
TEMPORARY DIVERSION CHANNEL TD 3-2
1: 367'
BERM: 370'
IDTH: 10'
FEMA ZONE X
FEMA ZONE AE
FEMA ZONE AE
FEMA ZONE X
EX. 50' PSNC GAS MAIN EASEMENT DB 17739, PG 1427
EX. 20" PSNC GAS MAIN
EX. GAS MARKER (TYP.)
SILT FENCE OUTLET TYP
SITE BOUNDARY
N/F
SB-HS LOT OPTION POOL 02 LP
ZONING: R3-CZ
DB. 18857 PG. 2126
BM. 18857 PG. 2126
PIN. 1767-48-3143
ROLESVILLE CROSSING SUBDIVISION APPROVED-CD-21-08
N/F
SB-HS LOT OPTION POOL 02 LP
ZONING: R3-CZ
DB. 19676 PG. 2496
BM. 1998 PG. 1776
PIN. 1767-58-6083
EX. TOP OF BANK
EX. WETLANDS (TYP.)

KEY MAP
NOT TO SCALE

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CARY, NC 27518

CONSTRUCTION INFRASTRUCTURE DRAWINGS
BROADMOOR
CID-YR-XX
ROLESVILLE ROAD | ROLESVILLE, NC 27587 | WAKE COUNTY

PRELIMINARY
NOT APPROVED FOR CONSTRUCTION
NORTH CAROLINA PROFESSIONAL ENGINEER KYLE VAUGHAN

0 25 50
SCALE: 1 inch = 50 ft.

INITIAL PLAN DATE: 11/01/2024
REVISIONS:

WR JOB NUMBER		23-0045
DRN: WR	DGN: WR	CKD: WR

EROSION CONTROL PLAN (STAGE 1)

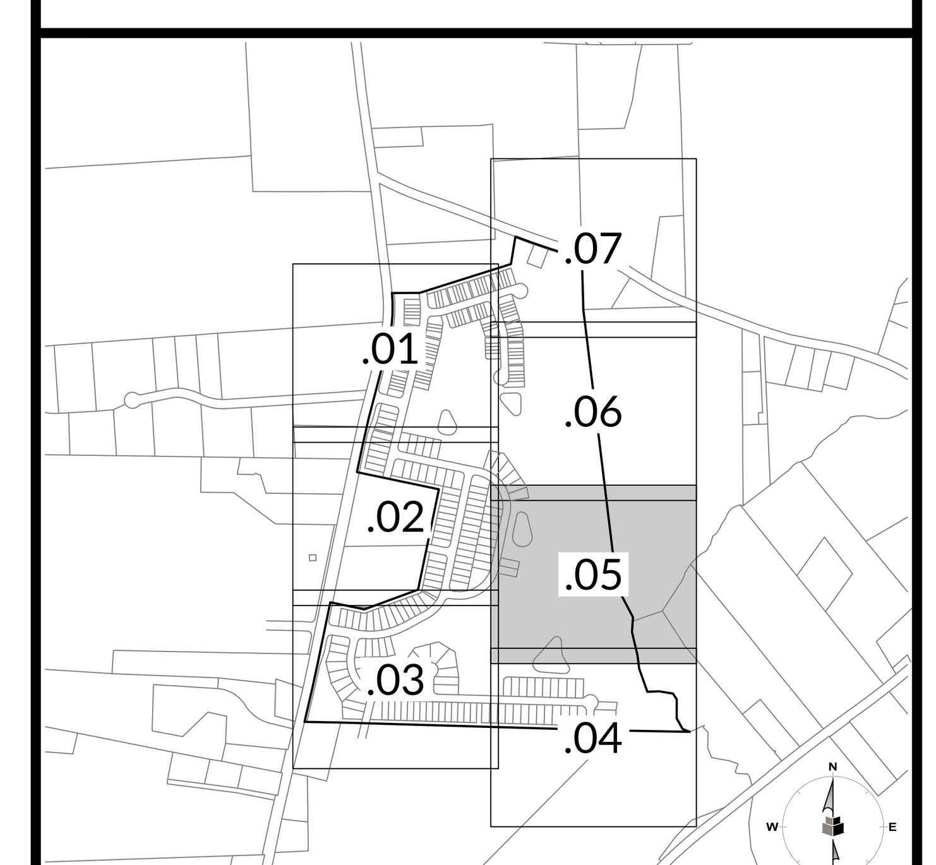
C7.04

J:\23\0045-public_woodlief assemblage\CAD\drawing set\construction\C7.01-7.08 EROSION CONTROL PLAN (STAGE 1).dwg - Thursday, October 31, 2024 11:19:01 AM - AEMASTER

EST. 1983


TEMPORARY DIVERSION CHANNEL TD 12-2
TEMPORARY DIVERSION CHANNEL TD 2-1
24" SLOPE DRAIN W/ HORSESHOE INLET PROTECTION
SCM2 - RISER
Structure - (4)
CLASS A RIP RAP DISSIPATER PAD LENGTH: 6' WIDTH: 8' THICKNESS: 12"
SPILLWAY ELEVATION: 362.5' LINED WITH NAG C350 OR EQUIVALENT
RSB #2 BOTTOM: 352' TOP OF BERM: 363.5' BERM WIDTH: 10'
SKIMMER
BAFFLES TYP
SILT FENCE OUTLET TYP
EX. TOP OF BANK
EX. WETLANDS (TYP.)
SITE BOUNDARY
ZONE RH-CZ
ZONE RM-CZ
N/F RICHARDS, BARBARA ANN JONES ZONING: R-30 DB. 1730 PG. 526 PIN. 1768-60-2816
FEMA ZONE AE
FEMA ZONE X
TEMPORARY DIVERSION CHANNEL TD 2-2
EX. 20" PSNC GAS MAIN
T.O.R. RIPARIAN BUFFER 50' SECTION 2
T.O.R. RIPARIAN BUFFER 50' SECTION 1
EX. GAS MARKER (TYP.)
EX. POND
N/F RICHARDS, BARBARA ANN JONES ZONING: R-30 DB. 1386 PG. 356 BM. 1112 PG. 589 PIN. 1767-69-6199
N/F AGUILAR, NORMA ZONING: R-30 DB. 12647 PG. 1286 PIN. 1767-68-5863
NEUSE RIPARIAN BUFFER 30' SECTION 1
NEUSE RIPARIAN BUFFER 20' SECTION 2
RSB #3 BOTTOM: 351' TOP OF BERM: 364' BERM WIDTH: 10'
SPILLWAY ELEVATION: 361.5' LINED WITH NAG C350 OR EQUIVALENT
BAFFLES
EX. 50' PSNC GAS MAIN EASEMENT DB 17739, PG 1327

KEY MAP
NOT TO SCALE



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1225 CRESCENT GREEN DRIVE, SUITE 250 CARY, NC 27518

CONSTRUCTION INFRASTRUCTURE DRAWINGS
BROADMOOR
CID-YR-XX
ROLESVILLE ROAD | ROLESVILLE, NC 27587 | WAKE COUNTY

NORTH CAROLINA PROFESSIONAL ENGINEER KYLE VAUGHAN
PRELIMINARY
NOT APPROVED FOR CONSTRUCTION

0 25 50
SCALE: 1 inch = 50 ft.

INITIAL PLAN DATE: 11/01/2024
REVISIONS:

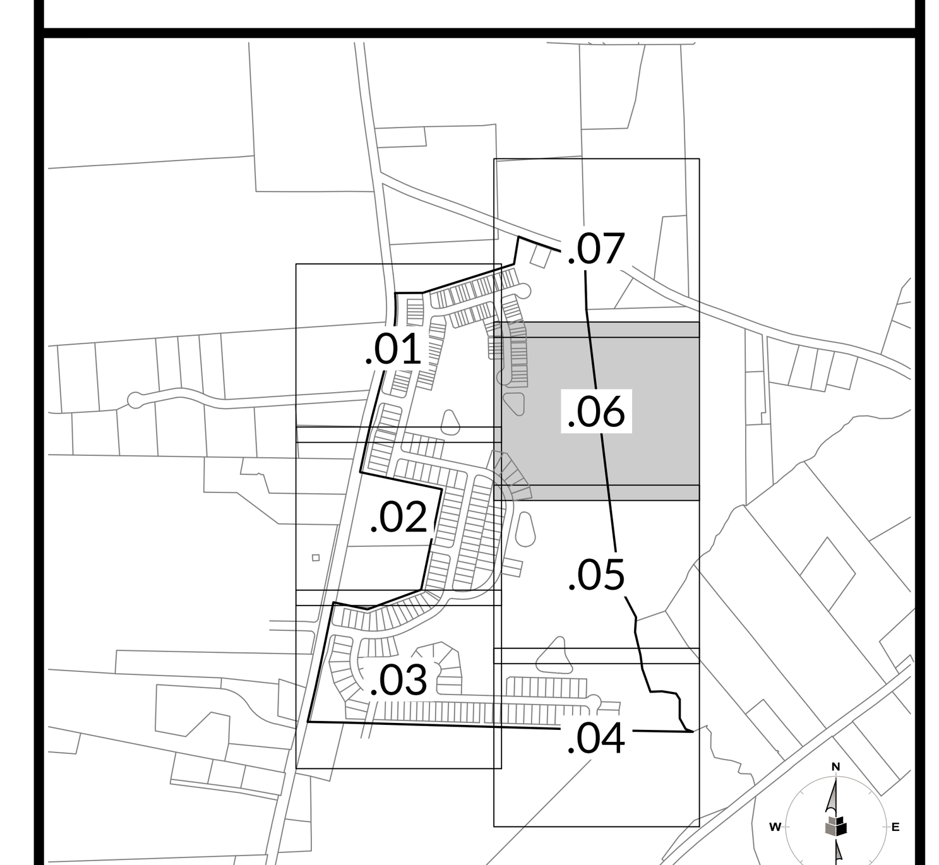
WR JOB NUMBER	23-0045
DRN: WR	DGN: WR CKD: WR

EROSION CONTROL PLAN (STAGE 1)

C7.05

TEMPORARY DIVERSION CHANNEL
TD 1-1
TEMPORARY DIVERSION CHANNEL
TD 1-2
EX. 50' PSNC GAS MAIN EASEMENT DB 17739, PG 1327
EX. POND
EX. WETLANDS (TYP.)
24" SLOPE DRAIN W/ HORSESHOE INLET PROTECTION
CLASS A RIP RAP DISSIPATER PAD LENGTH: 6' WIDTH: 8' THICKNESS: 12"
RSB #1 BOTTOM: 352' TOP OF BERM: 363' BERM WIDTH: 10'
BAFFLES TYP
RSB #1
EX. 20" PSNC GAS MAIN
SPILLWAY ELEVATION: 362.5' LINED WITH NAG C350 OR EQUIVALENT
SKIMMER
SCM1-RISER
EX. WETLANDS (TYP.)
EX. GAS MARKER (TYP.)
FEMA ZONE X
FEMA ZONE AE
SITE BOUNDARY
N/F RICHARDS, BARBARA ANN JONES ZONING: R-30 DB. 1730 PG. 526 PIN. 1768-60-2816
FEMA ZONE AE
FEMA ZONE X
T.O.B. RIPARIAN BUFFER 50' SECTION 2
T.O.B. RIPARIAN BUFFER 50' SECTION 1
NEUSE RIPARIAN BUFFER 20' SECTION 2
NEUSE RIPARIAN BUFFER 30' SECTION 1
SILT FENCE OUTLET TYP
SCM1-FES
EX. TOP OF BANK
SPILLWAY ELEVATION: 359.5' LINED WITH NAG C350 OR EQUIVALENT
ZONE RH-CZ
ZONE RM-CZ
CLASS A RIP RAP DISSIPATER PAD LENGTH: 3' WIDTH: 4' THICKNESS: 12"
12" SLOPE DRAIN W/ HORSESHOE INLET PROTECTION
RSB #12
TEMPORARY DIVERSION CHANNEL TD 12-2
TEMPORARY DIVERSION CHANNEL TD 12-2
TEMPORARY DIVERSION CHANNEL TD 2-1
EX. TOP OF BANK
EX. TOP OF BANK
EX. WETLANDS (TYP.)

KEY MAP
NOT TO SCALE



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1225 CRESCENT GREEN DRIVE, SUITE 250 CARY, NC 27518

CONSTRUCTION INFRASTRUCTURE DRAWINGS

BROADMOOR CID-YR-XX

ROLESVILLE ROAD | ROLESVILLE, NC 27587 | WAKE COUNTY

NORTH CAROLINA PROFESSIONAL ENGINEER
PRELIMINARY
NOT APPROVED FOR CONSTRUCTION
KYLE VAUGHAN

0 25 50
SCALE: 1 inch = 50 ft.

INITIAL PLAN DATE: 11/01/2024
REVISIONS:

WR JOB NUMBER 23-0045
DRN: WR DGN: WR CKD: WR

EROSION CONTROL PLAN (STAGE 1)

C7.06

N/F
ROGERS, WILLIAM L
ZONING: R-30
DB. 003626 PG. 00569
DB. 1985 PG. 1807
DB. 1768-42-7499

N/F
WOODLIEF, CARLYLE D
WOODLIEF, ALMA D
ZONING: R-30 (WAKE COUNTY)
ZONING: R-30
DB. 14286 PG. 1880
BM. 2011 PG. 84
PIN. 1768-51-1519

N/F
WATKINS, CHARLES ZACHARY
ZONING: R-30
DB. 17332 PG. 2109
BM. 1979 PG. 324
PIN. 1768-52-9682

APPROX. LOCATION OF EX. V.W. GAS MAIN EASEMENT DB 17871, PG 2108

EX. REGULATOR STATION

EX. PHONE STRUCTURE (TYP.)

FOWLER RD.
S.R. 2308
60' PUBLIC R/W

INV.: 368.53'
INV.: 370.05'
EX. 12" RCP
INV.: 370.58'
INV.: 373.10'
EX. 12" HDPE
INV.: 372.12'
EX. 18" RCP

EX. PHONE LINE

(EX. FES)
INV.: 366.18'
EX. 18"
STORM PIPE
(EX. FES) INV.:
366.79'

EX. CAROLINA TELEPHONE & TELEGRAPH COMPANY LEASE & 15' ACCESS EASEMENT DB 4401, PG 206

EX. GAS MAIN
EX. CATV

INV.: 363.73'
EX. 15" RCP
INV.: 364.00'
EX. FIBER OPTIC
EX. HEADWALL
INV.: 358.80'
INV.: 358.83'
EX. DUAL 66"
RCP CULVERTS

EX. WETLANDS (TYP.)

N/F
CARLYLE D & ALMA D WOODLIEF
DB. 014286 PG. 01880
BM. 2011 PG. 00084
PIN: 1768511519
(PORTION OUTSIDE OF SITE BOUNDARY TO BE RETAINED BY OWNER)

SITE BOUNDARY

CONCRETE WASHOUT
CONSTRUCTION ENTRANCE

EX. 20" PSNC GAS MAIN

EX. HEADWALL
INV.: 358.11'
INV.: 357.96'
EX. TOP OF BANK

SILT FENCE OUTLET TYP

EX. 20" PSNC GAS MAIN EASEMENT DB 17727, PG 1325

T.O.R. RIPARIAN BUFFER 50' SECTION 2

NEUSE RIPARIAN BUFFER 20' SECTION 2

NEUSE RIPARIAN BUFFER 30' SECTION 1

T.O.R. RIPARIAN BUFFER 50' SECTION 1

FEMA ZONE AE

FEMA ZONE X

TEMPORARY DIVERSION CHANNEL TD 7-1

18" SLOPE DRAIN W/ HORSESHOE INLET PROTECTION

CLASS A RIP RAP DISSIPATER PAD
LENGTH: 4.5'
WIDTH: 6'
THICKNESS: 12"

SKIMMER

SSB #7
BOTTOM: 361'
TOP OF BERM: 364'
BERM WIDTH: 10'

SPILLWAY ELEVATION: 363.5' LINED WITH NAG C350 OR EQUIVALENT

EX. WETLANDS (TYP.)

EX. POND

N/F
ALFORD, SAMUEL JASON
ZONING: R-30
DB. 19530 PG. 2760
PIN. 1768-51-8609

EX. GAS MARKER (TYP.)

EX. 20" PSNC GAS MAIN

EX. 50' PSNC GAS MAIN EASEMENT DB 17727, PG 1327

TEMPORARY DIVERSION CHANNEL TD 7-2

N/F
RICHARDS, BARBARA ANN JONES
ZONING: R-30
DB. 1730 PG. 526
PIN. 1768-60-2816

KEY MAP
NOT TO SCALE

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SUITE 250
CARY, NC 27518

CONSTRUCTION INFRASTRUCTURE DRAWINGS
BROADMOOR
CID-YR-XX
ROLESVILLE ROAD | ROLESVILLE, NC 27587 | WAKE COUNTY

NORTH CAROLINA
PROFESSIONAL
PRELIMINARY
NOT APPROVED FOR
CONSTRUCTION
ENGINEERING
KYLE VAUGHAN

0 25 50
SCALE: 1 inch = 50 ft.

INITIAL PLAN DATE: 11/01/2024
REVISIONS:

WR JOB NUMBER 23-0045
DRN: WR DGN: WR CKD: WR

EROSION CONTROL PLAN (STAGE 1)

C7.07

J:\23\0045-pulte_woodlief_assemblage\CAD\drawing set\construction\C7.07-7.08 EROSION CONTROL PLAN STAGE 1).dwg - Thursday, October 31, 2024 11:19:19 AM - JERMASTER

KEY MAP

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NORTH CAROLINA PROFESSIONAL ENGINEER KYLE VAUGHAN

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0 100 200
SCALE: 1 inch = 200 ft.

INITIAL PLAN DATE: 11/01/2024
REVISIONS:

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DRN: WR DGN: WR CKD: WR

OVERALL EROSION CONTROL PLAN (STAGE 2)

C7.08

KEY MAP

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NORTH CAROLINA PROFESSIONAL ENGINEER SEAL KYLE VAUGHAN

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SCALE: 1 inch = 50 ft.

INITIAL PLAN DATE: 11/01/2024
REVISIONS:

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EROSION CONTROL PLAN (STAGE 2)

C7.09

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NORTH CAROLINA PROFESSIONAL ENGINEER KYLE VAUGHAN

SCALE: 1 inch = 50 ft.

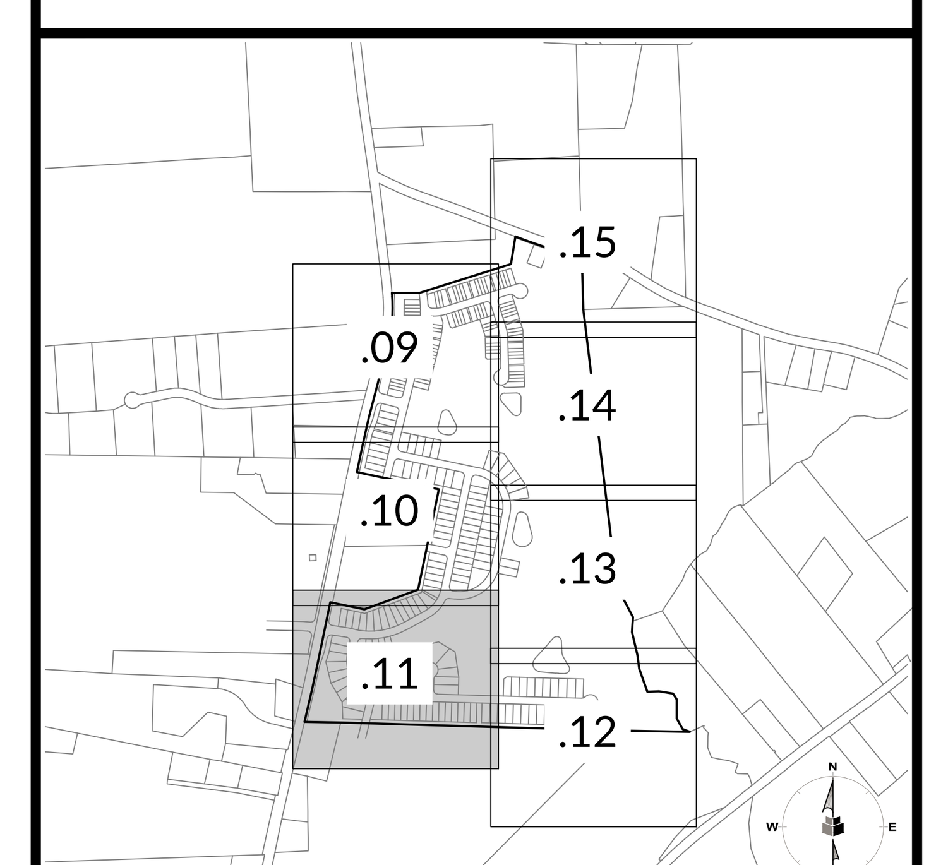
INITIAL PLAN DATE: 11/01/2024
REVISIONS:

WR JOB NUMBER	23-0045
DRN: WR	DGN: WR	CKD: WR

EROSION CONTROL PLAN (STAGE 2)

C7.10

KEY MAP
NOT TO SCALE



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ROLESVILLE ROAD | ROLESVILLE, NC 27587 | WAKE COUNTY

NORTH CAROLINA PROFESSIONAL ENGINEER KYLE VAUGHAN
PRELIMINARY
NOT APPROVED FOR CONSTRUCTION

0 25 50
SCALE: 1 inch = 50 ft.

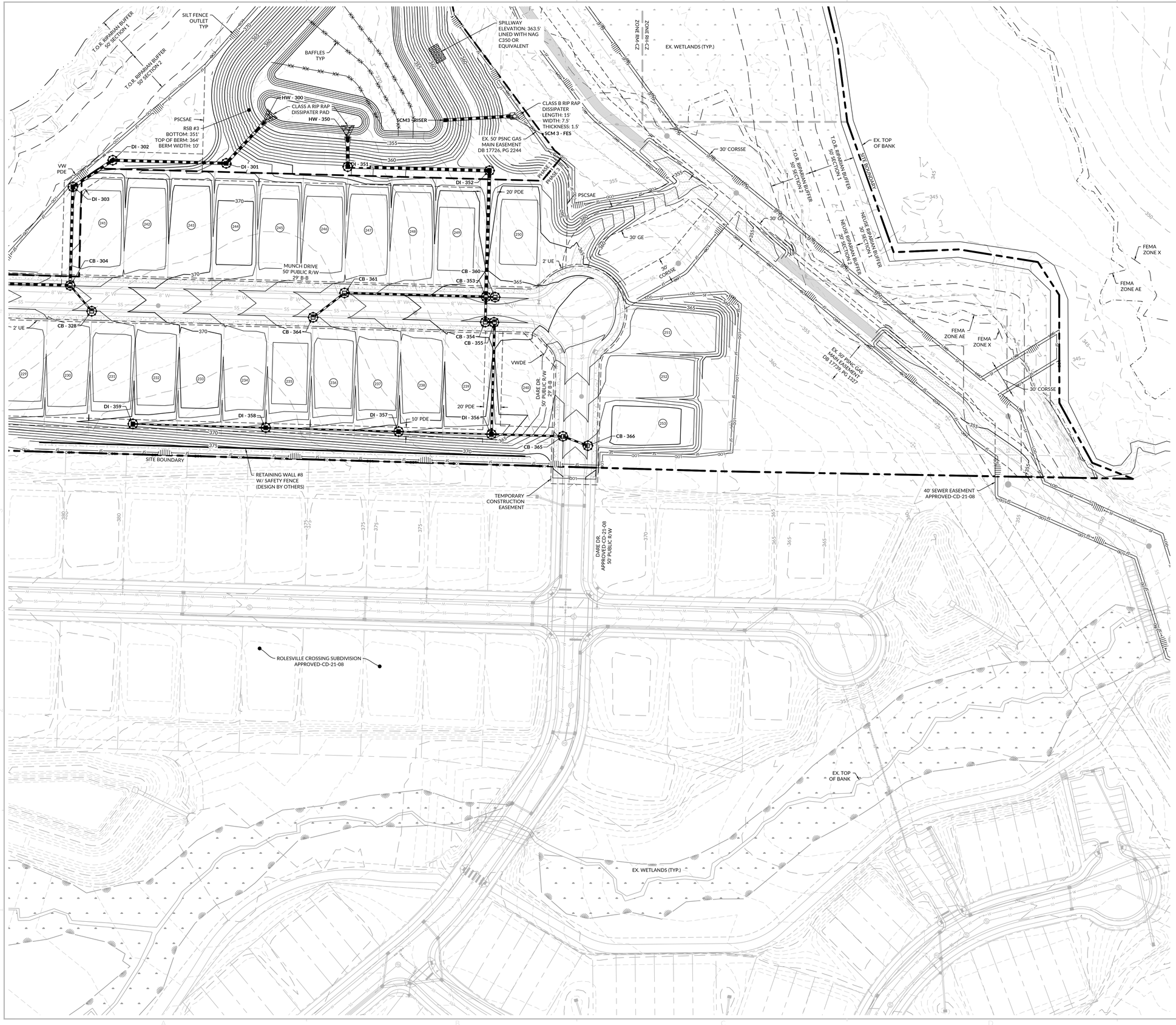
INITIAL PLAN DATE: 11/01/2024
REVISIONS:

WR JOB NUMBER		23-0045
DRN: WR	DGN: WR	CKD: WR

EROSION CONTROL PLAN (STAGE 2)

C7.11

EST. 1983



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0 25 50
SCALE 1 inch = 50 ft.

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DRN: WR DGN: WR CKD: WR

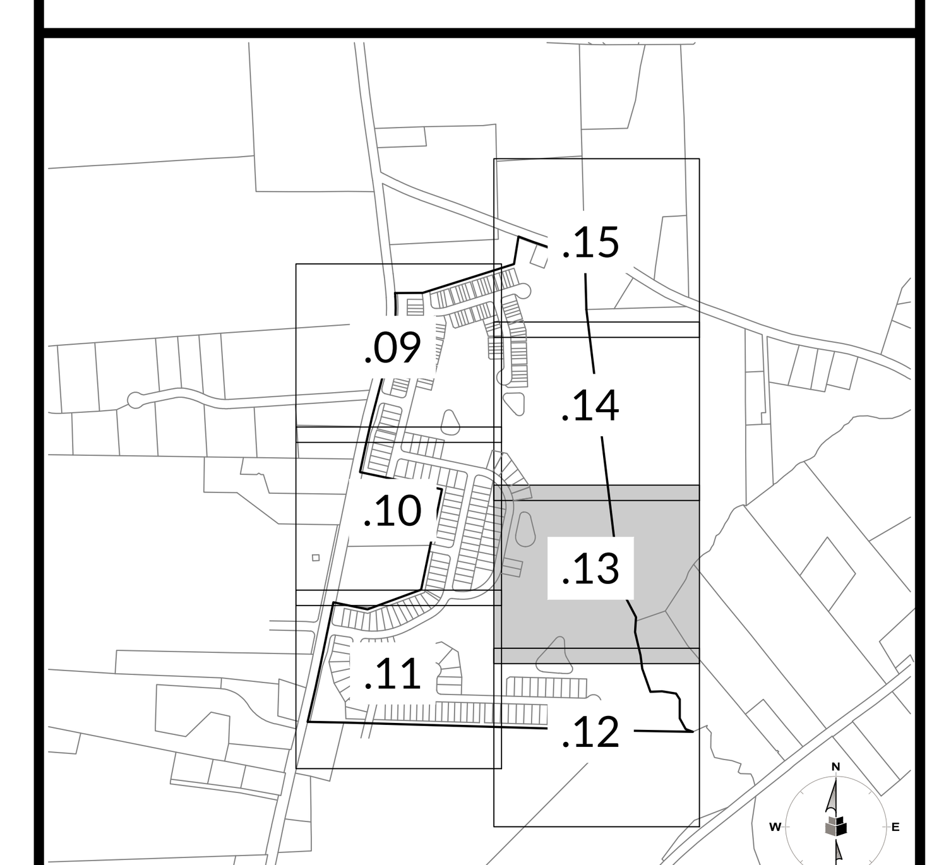
EROSION CONTROL PLAN (STAGE 2)

C7.12


CB - 224
PWMAE
RETAINING WALL #9 W/ SAFETY FENCE (DESIGN BY OTHERS)
2' UE
CB - 233
CB - 223
30' UE
CLASS B RIP RAP DISSIPATER LENGTH: 18' WIDTH: 9.0' THICKNESS: 1.5'
SCM2 - RISER
SCM2 - FES
CB - 222
SPILLWAY ELEVATION: 363.5' LINED WITH NAG C350 OR EQUIVALENT
BAFFLES TYP
TITAN AVENUE 50' PUBLIC R/W 29' B-B
CB - 202
CB - 201
HW - 200
CB - 203
EX. 50' PSNC GAS MAIN EASEMENT DB 17739, PG 1327
EX. TOP OF BANK
EX. WETLANDS (TYP.)
SITE BOUNDARY
30' CORSSE
ZONE RH-CZ
ZONE RM-CZ
FEMA ZONE AE
FEMA ZONE X
CLASS A RIP RAP DISSIPATER PAD
PSCSAE
RSB #2 BOTTOM: 352' TOP OF BERM: 363.5' BERM WIDTH: 10'
PHASE 2
PHASE 1
PHASE 3
CB - 260
SILT FENCE OUTLET TYP
30' GE
T.O.R. RIPARIAN BUFFER 50' SECTION 2
T.O.R. RIPARIAN BUFFER 50' SECTION 1
EX. POND
NEUSE RIPARIAN BUFFER 30' SECTION 1
NEUSE RIPARIAN BUFFER 20' SECTION 2
RSB #3 BOTTOM: 351' TOP OF BERM: 364' BERM WIDTH: 10'
SPILLWAY ELEVATION: 363.5' LINED WITH NAG C350 OR EQUIVALENT
EX. WETLANDS (TYP.)

KEY MAP

NOT TO SCALE



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NORTH CAROLINA PROFESSIONAL ENGINEER KYLE VAUGHAN

SCALE: 1 inch = 50 ft.

INITIAL PLAN DATE: 11/01/2024
REVISIONS:

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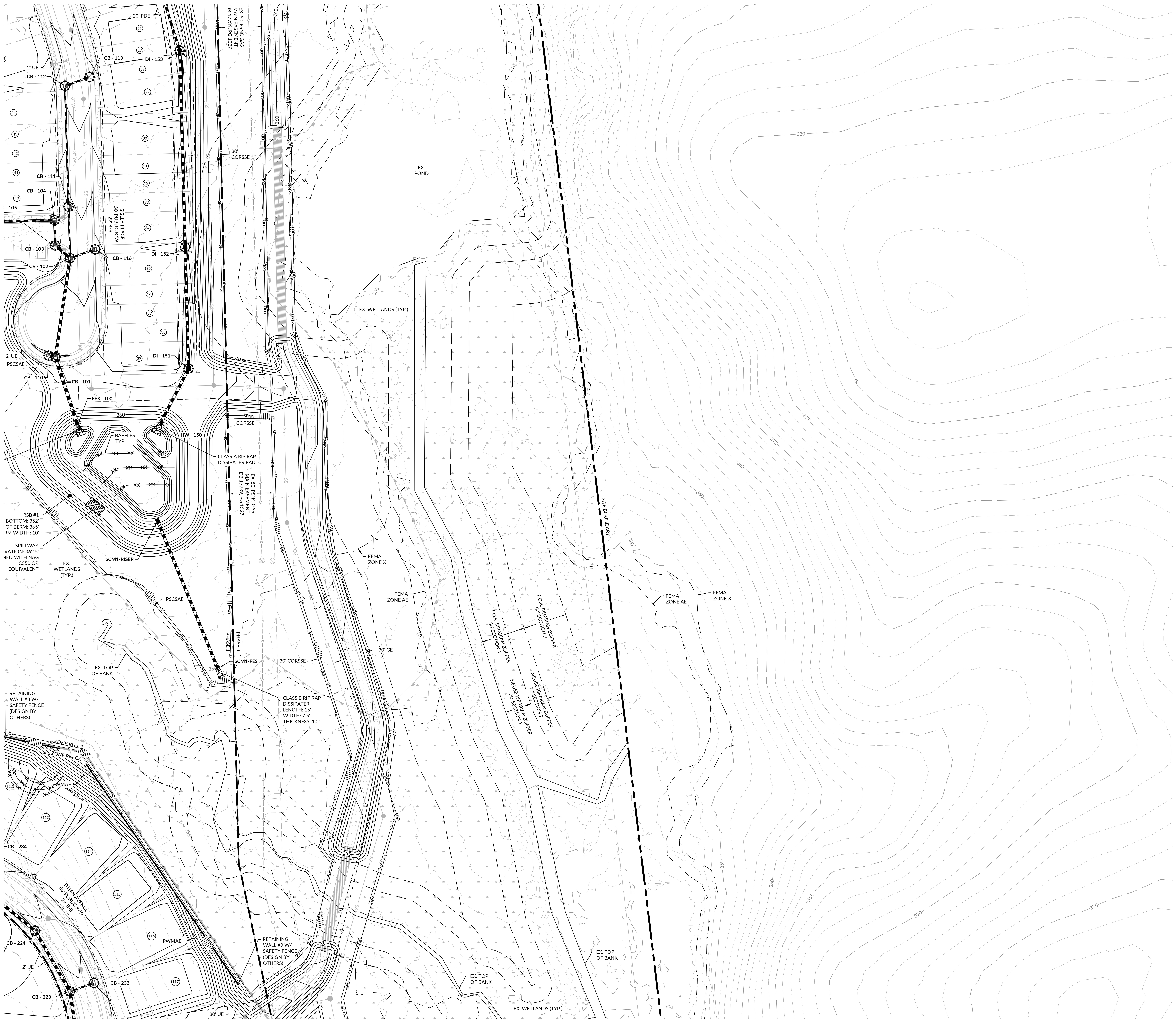
EROSION CONTROL PLAN (STAGE 2)

C7.13



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NORTH CAROLINA PROFESSIONAL ENGINEER KYLE VAUGHAN

SCALE: 1 inch = 50 ft.

INITIAL PLAN DATE: 11/01/2024
REVISIONS:

WR JOB NUMBER	23-0045
DRN: WR DGN: WR	CKD: WR

EROSION CONTROL PLAN (STAGE 2)

C7.14

KEY MAP

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PRELIMINARY
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SCALE: 1 inch = 50 ft.

INITIAL PLAN DATE: 11/01/2024
REVISIONS:

WR JOB NUMBER	23-0045
DRN: WR	DGN: WR	CKD: WR

EROSION CONTROL PLAN (STAGE 2)

C7.15

EROSION CONTROL NOTES:

1. RECEIVING WATERSHED: BUFFALO CREEK
2. TOTAL LIMITS OF CONSTRUCTION/LIMITS OF DISTURBANCE = 66 ACRES.
3. ALL LAND DISTURBING ACTIVITIES SHALL BE CONDUCTED IN ACCORDANCE WITH SEDIMENTATION AND EROSION CONTROL STANDARDS AND PRACTICES PRESCRIBED BY THE STATE OF NORTH CAROLINA AND WAKE COUNTY. WHERE STANDARDS AND PRACTICES CONFLICT, THE MORE STRINGENT SHALL APPLY.
4. ALL ENVIRONMENTAL PERMITS APPLICABLE TO THE PROJECT MUST BE OBTAINED FROM THE TOWN OF ROLESVILLE, NCDWR, USACE, AND/OR FEMA FOR ANY RIPARIAN BUFFER, WETLANDS, AND/ OR FLOODPLAIN IMPACTS (RESPECTIVELY) PRIOR TO CONSTRUCTION.
5. NCDOT ENCROACHMENT AGREEMENTS ARE REQUIRED FOR ANY UTILITY WORK OR GRADING (INCLUDING EXTENSIONS) WITHIN STATE RIGHT-OF-WAY PRIOR TO CONSTRUCTION.
6. THIS PROJECT SHALL BE SUBJECT TO MONITORING REQUIREMENTS IN ACCORDANCE WITH SECTION II.B(3) OF THE MOST RECENT NCDENR-DEMLR GENERAL PERMIT NCG 01000.
7. THE CONTRACTOR SHALL FAITHFULLY MAINTAIN ALL EROSION AND SEDIMENTATION CONTROL MEASURES AND TAKE ALL PRECAUTIONARY MEASURES NECESSARY TO ENSURE THAT NO SILT LEAVES THE PROJECT SITE AND ENTERS ANY NATURAL STREAM OR WATERWAY AND MAINTAIN EROSION AND SEDIMENTATION CONTROL MEASURES UNTIL PERMANENT GROUND COVER IS ESTABLISHED.
8. THE CONTRACTOR IS TO CONDUCT A WEEKLY SITE INSPECTION, AFTER EACH RAINFALL EVENT IN EXCESS OF 1-INCH AND PERFORM ANY NECESSARY MAINTENANCE.
9. ANY AREA DISTURBANCES BY THE CONTRACTOR NOT SHOWN ON THE CONSTRUCTION DRAWINGS ARE TO BE PERMITTED THROUGH THE APPROPRIATE PERMITTING AGENCY.
10. PURSUANT TO G.S. 113A-57(2), THE ANGLE FOR GRADED SLOPES AND FILLS SHALL BE NO GREATER THAN THE ANGLE THAT CAN BE RETAINED BY VEGETATIVE COVER OR OTHER ADEQUATE EROSION CONTROL DEVICE OR STRUCTURE.
11. ALL SLOPES 3:1 OR GREATER SHALL BE LINED WITH EROSION CONTROL MATTING.
12. NPDES GROUND COVER REQUIREMENTS SHALL BE FOLLOWED IN ADDITION TO STANDARD NCDENR EROSION CONTROL REQUIREMENTS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ESTABLISHING A PERMANENT STAND OF VEGETATION ON ALL DISTURBED AREAS AND MEETING ALL NPDES FINAL STABILIZATION REQUIREMENTS.
13. PROVIDE A ROLLED EROSION CONTROL PRODUCT (RECP) TO STABILIZE DISTURBED DITCHES IF ANY SIGNS OF SCOURING OR EVIDENT, EVEN IF NO RECP HAS BEEN SHOWN ON THE CONSTRUCTION DRAWINGS.
14. NO STOCK OR WASTE PILES ARE ALLOWED WITHIN 50' OF STREAMS OR DRAINAGE STRUCTURES.
15. WHERE DEWATERING OF TRENCHES, PITS, AND OTHER EXCAVATIONS BECOMES NECESSARY THE DISCHARGE MUST BE DIVERTED TO A SEDIMENT FILTER BAG BEFORE BEING DISCHARGED TO THE GROUND.
16. ADEQUATE EROSION CONTROL MEASURES MUST BE INSTALLED, MAINTAINED, AND ADJUSTED AS NEEDED DURING THE DEMOLITION OR CLEARING AND GRUBBING PHASES AS WELL AS THROUGHOUT THE LIFE OF THE PROJECT AND UNTIL PERMANENT VEGETATION IS ESTABLISHED.
17. IN INSTANCES WHERE THE DIFFERENCE IN HEIGHT OF EMERGENCY SPILLWAY AND BOTTOM ELEVATION OF A POND IS GREATER THAN 5 FEET, DOUBLE-HEIGHT BAFFLES ARE REQUIRED.
18. CONCRETE WASHOUTS SHOWN FOR CURB & GUTTER AND SIDEWALK USE ONLY.
19. EXISTING TEMPORARY SEDIMENT BASIN SHALL BE REPAIRED/MAINTAINED AS NECESSARY TO MEET REQUIREMENTS OF THIS PROJECT.
20. SCM FOREBAYS SHALL NOT BE REQUIRED WHILE SCM IS ACTING AS AN EROSION CONTROL DEVICE.
21. VELOCITY DISSIPATORS SHALL BE INSTALLED AT THE END OF EACH FES AND SHALL HAVE A FILTER FABRIC UNDERLINER.
22. THE CONTRACTOR SHALL INSTALL TEMPORARY DIVERSION BERMS ROUTING CONSTRUCTION RUNOFF TO APPROPRIATELY SIZED SLOPE DRAINS WITH INLET/OUTLET PROTECTION WHEREVER NECESSARY OR AS REQUIRED BY WAKE COUNTY AT TOP OF SLOPES DURING/AFTER SLOPE FORMATION TO PREVENT SLOPE EROSION.

CONSTRUCTION SEQUENCE:

1. SCHEDULE A PRECONSTRUCTION CONFERENCE WITH THE ENVIRONMENTAL CONSULTANT. OBTAIN A LAND DISTURBING PERMIT.
2. INSTALL GRAVEL CONSTRUCTION PAD, TEMPORARY DIVERSIONS, SILT FENCE, SEDIMENT BASINS OR OTHER MEASURES AS SHOWN ON THE APPROVED PLAN. CLEAR ONLY AS NECESSARY TO INSTALL THESE DEVICES. SEED TEMPORARY DIVERSIONS, BERMS AND BASINS IMMEDIATELY AFTER CONSTRUCTION.
3. CALL ENVIRONMENTAL CONSULTANT FOR AN ONSITE INSPECTION BY THE ENVIRONMENTAL CONSULTANT TO OBTAIN A CERTIFICATE OF COMPLIANCE.
4. BEGIN CLEARING AND GRUBBING. MAINTAIN DEVICES AS NEEDED. ROUGH GRADE SITE.
5. INSTALL STORM SEWER, IF SHOWN, AND PROTECT INLETS WITH BLOCK AND GRAVEL INLET CONTROLS, SEDIMENT TRAPS OR OTHER APPROVED MEASURES AS SHOWN ON THE PLAN. BEGIN CONSTRUCTION, BUILDING, ETC.
6. STABILIZE SITE AS AREAS ARE BROUGHT UP TO FINISH GRADE WITH VEGETATION, PAVING, DITCH LININGS, ETC. SEED AND MULCH DENUDED AREAS PER GROUND STABILIZATION TIME FRAMES.
7. WHEN CONSTRUCTION IS COMPLETE AND ALL AREAS ARE STABILIZED COMPLETELY, CALL ENVIRONMENTAL CONSULTANT FOR AN INSPECTION.
8. IF SITE IS APPROVED, REMOVE TEMPORARY DIVERSIONS, SILT FENCE, SEDIMENT BASINS, ETC., AND SEED OUT OR STABILIZE ANY RESULTING BARE AREAS. ALL REMAINING PERMANENT EROSION CONTROL DEVICES, SUCH AS VELOCITY DISSIPATORS, SHOULD NOW BE INSTALLED.
9. WHEN VEGETATION HAS BECOME ESTABLISHED, CALL FOR A FINAL SITE INSPECTION BY THE ENVIRONMENTAL CONSULTANT. OBTAIN A CERTIFICATE OF COMPLETION.

SEED BED PREPARATION:

1. CHISEL COMPACTED AREAS AND SPREAD TOPSOIL 3 INCHES DEEP OVER ADVERSE SOIL CONDITIONS, WITH STOCKPILED TOPSOIL. CONTRACTOR SHALL RESERVE SUFFICIENT TOPSOIL FOR SEEDBED PREPARATION.
2. RIP THE ENTIRE AREA TO 6 INCH DEPTH.
3. REMOVE ALL LOOSE ROCK, ROOTS, AND OTHER OBSTRUCTIONS LEAVING SURFACE REASONABLY SMOOTH AND UNIFORM.
4. APPLY AGRICULTURAL LIME, FERTILIZER, AND SUPER-PHOSPHATE UNIFORMLY AND MIX WITH SOIL (SEE BELOW*).
5. CONTINUE TILLAGE UNTIL A WELL-PULVERIZED, FIRM, REASONABLY UNIFORM SEEDBED IS PREPARED 4 TO 6 INCHES DEEP.
6. SEED ON A FRESHLY PREPARED SEEDBED AND COVER SEED LIGHTLY WITH SEEDING EQUIPMENT OR CULTIPACK AFTER SEEDING.
7. MULCH IMMEDIATELY AFTER SEEDING AND ANCHOR MULCH.
8. INSPECT ALL SEEDED AREAS AND MAKE NECESSARY REPAIRS OR RESEEDINGS WITHIN THE PLANTING SEASON, IF POSSIBLE. IF STAND IS LESS THAN 60% ESTABLISHED, THE ENTIRE AREA SHALL BE RESEEDED ACCORDING TO SPECIFICATIONS USING THE ORIGINAL LIME, FERTILIZER AND SEEDING RATES.
9. CONSULT A CONSERVATION INSPECTOR ON MAINTENANCE TREATMENT AND FERTILIZATION AFTER PERMANENT COVER IS ESTABLISHED.

*APPLY:

AGRICULTURAL LIMESTONE	2 TONS/ACRE (3 TONS/ACRE IN CLAY SOILS)
FERTILIZER	1,000 LB/ACRE - 10-10-10
SUPER-PHOSPHATE	500 LB/ACRE - 20% ANALYSIS
MULCH	2 TONS/ACRE - SMALL GRAIN STRAW
ANCHOR	ASPHALT EMULSION @ 300 GALS/ACRE

SEEDING AND MULCHING:

SEEDING AND MULCHING SHALL BE CARRIED OUT IMMEDIATELY BEHIND CONSTRUCTION IN ACCORDANCE WITH THE FOLLOWING SPECIFICATIONS:

SHOULDERS, SIDE DITCHES, SLOPES (3:1 MAX.)

DATE	TYPE	PLANTING/ACRE
AUG 15 - NOV 1	TALL FESCUE	300 LBS.
NOV 1 - MAR 1	TALL FESCUE & ABRUZZI RYE	300 LBS.
MAR 1 - APR 15	TALL FESCUE	300 LBS.
APR 15 - JUNE 30	HULLED COMMON BERMUDA GRASS	25 LBS.
JULY 15 - AUG 15	TALL FESCUE AND	35 LBS.
	*** BROWN TOP MILLET OR	
	*** SORGHUM-SUDAN HYBRIDS	

SLOPES (3:1 TO 2:1)

DATE	TYPE	PLANTING/ACRE
MAR 1 - APRIL 15	ADD TALL FESCUE AND	120 LBS.
MAR 1 - JUNE 30	ADD WEEPING LOVE GRASS OR	10 LBS.
MAR 1 - JUNE 30	ADD HULLED COMMON BERMUDA GRASS	25 LBS.
JUNE 1 - SEP 1	*** TALL FESCUE AND	120 LBS.
	*** BROWN TOP MILLET OR	35 LBS.
	*** SORGHUM-SUDAN HYBRIDS	30 LBS.
SEP 1 - MAR 1	TALL FESCUE	120 LBS.
NOV 1 - MAR 1	ADD ABRUZZI RYE	25 LBS.

***TEMPORARY - RESEED ACCORDING TO OPTIMUM SEASON FOR DESIRED PERMANENT VEGETATION. DO NOT ALLOW TEMPORARY COVER TO GROW OVER 12 INCHES IN HEIGHT BEFORE MOWING, OTHERWISE FESCUE MAY BE SHADED OUT.

A CONSERVATION ENGINEER OR SOIL CONSERVATION SERVICE SHALL BE CONSULTED FOR ADDITIONAL INFORMATION CONCERNING OTHER ALTERNATIVES FOR VEGETATION OF DENUDED AREAS. THE ABOVE VEGETATION RATES ARE THOSE WHICH DO WELL UNDER LOCAL CONDITIONS; OTHER SEEDING RATE COMBINATIONS ARE POSSIBLE. ANY VARIATION FROM THIS LIST SHALL BE PRE-APPROVED BY THE TOWN.

GROUND STABILIZATION CHART

SITE AREA DESCRIPTION	STABILIZATION	TIMEFRAME EXCEPTIONS
DIKES, SWALES, DITCHES, AND SLOPES	7 DAYS	NONE
HIGH QUALITY WATER (HQW) ZONES	7 DAYS	NONE
SLOPES STEEPER THAN 3:1	7 DAYS	IF SLOPES ARE 10' OR LESS IN LENGTH AND ARE NOT STEEPER THAN 2:1, 14 DAYS ARE ALLOWED.
SLOPES 3:1 OR FLATTER	14 DAYS	7 DAYS FOR SLOPES GREATER THAN 50' IN LENGTH.
ALL OTHER AREAS WITH SLOPES FLATTER THAN 4:1	14 DAYS	NONE, EXCEPT FOR PERIMETERS AND HQW ZONES.

MAINTENANCE PLAN:

1. ALL EROSION AND SEDIMENTATION CONTROL PRACTICES WILL BE CHECKED FOR STABILITY AND OPERATION FOLLOWING EVERY RUNOFF-PRODUCING RAINFALL BUT IN NO CASE LESS THAN ONCE EVERY WEEK. ANY NEEDED REPAIRS WILL BE MADE IMMEDIATELY TO MAINTAIN ALL PRACTICES AS DESIGNED.
2. SEDIMENT WILL BE REMOVED FROM SEDIMENT TRAP DEVICES WHEN STORAGE CAPACITY HAS BEEN APPROXIMATELY 50% FILLED. GRAVEL WILL BE CLEANED OR REPLACED WHEN THE SEDIMENT POOL NO LONGER DRAINS PROPERLY.
3. SEDIMENT WILL BE REMOVED FROM BEHIND THE SILT FENCE WHEN IT BECOMES APPROXIMATELY 6-INCHES DEEP AT THE FENCE. THE SILT FENCE WILL BE REPAIRED AS NECESSARY TO MAINTAIN A BARRIER.
4. INLET PROTECTION DEVICES SHALL BE INSPECTED AFTER EVERY RAINFALL EVENT. DAMAGED SILT FENCE SHALL BE REPLACED AND GRAVEL SHALL BE CLEANED OR REPLACED WHEN INLET NO LONGER DRAINS PROPERLY.
5. ALL SEEDED AREAS WILL BE FERTILIZED, RE-SEEDED AS NECESSARY, AND MULCHED ACCORDING TO THE SPECIFICATIONS IN THE VEGETATIVE PLAN TO MAINTAIN A VIGOROUS, DENSE VEGETATIVE COVER.

SEEDING NON-WETLAND AREAS

A. TEMPORARY NON-WETLAND SEEDING

1. SEEDING SCHEDULE

TEMPORARY SEEDING OF NON-WETLAND AREAS		
DATES	SEED MIXTURE SPECIES	APPLICATION RATE (LB/ACRE)
JAN 1 - MAY 1	RYE GRAIN	120
MAY 1 - AUG 15	GERMAN MILLET	40
AUG 15 - DEC 30	RYE GRAIN	120

2. SOIL AMENDMENTS
   a. FOLLOW RECOMMENDATIONS OF SOIL TESTS OR APPLY 2,000 LB/ACRE GROUND AGRICULTURAL LIMESTONE AND 750 LB/ACRE 10-10-10 FERTILIZER.
3. MULCH
   a. APPLY 4,000 LB/ACRE STRAW. ANCHOR STRAW BY TACKING WITH ASPHALT, NETTING, OR A MULCH ANCHORING TOOL. A DISK WITH BLADES SET NEARLY STRAIGHT CAN BE USED AS A MULCH ANCHORING TOOL.
4. MAINTENANCE
   a. WINTER, EARLY SPRING, AND SUMMER
      1) REFERTILIZE IF GROWTH IS NOT FULLY ADEQUATE. RESEED, REFERTILIZE, AND MULCH IMMEDIATELY FOLLOWING EROSION OR OTHER DAMAGE.
   b. FALL
1. REPAIR AND REFERTILIZE DAMAGED AREAS IMMEDIATELY. TOPDRESS WITH 50 LB/ACRE OF NITROGEN IN MARCH. TEMPORARY SEEDING MUST BE FOLLOWED UP WITH PERMANENT SEEDING AS SOON A PRACTICAL.

B. PERMANENT NON-WETLAND SEEDING

1. SEED ALL DISTURBED AREAS OF CONSTRUCTION.
2. NO SEEDING SHOULD BE UNDERTAKEN IN WINDY OR UNFAVORABLE WEATHER, WHEN THE GROUND IS TOO WET TO RAKE EASILY, WHEN IT IS IN A FROZEN CONDITION, OR TOO DRY.
3. THE SUBGRADE OF ALL AREAS TO BE SEEDED SHALL BE RAKED AND ALL RUBBISH, STICKS, ROOTS, AND STONES LARGER THAN 2 INCHES SHALL BE REMOVED.
4. THE SUBGRADE SHALL BE SCARIFIED OR OTHERWISE LOOSENED TO A MINIMUM DEPTH OF 4 INCHES.
5. APPLY GROUND AGRICULTURAL LIMESTONE AT A RATE OF 3,000 - 4,000 LB/ACRE.
6. APPLY 10-10-10 FERTILIZER AT A RATE OF 1,000 LB/ACRE. FERTILIZER SHALL BE UNIFORMLY SPREAD AND DISKED OR ROTO_TILLED TO A DEPTH OF AT LEAST 4 INCHES.
7. PERMANENT SEEDING
   a. IMMEDIATELY FOLLOWING THIS PREPARATION, PERMANENT SEED SHALL BE UNIFORMLY APPLIED AND LIGHTLY RAKED INTO THE SURFACE. LIGHTLY ROLL THE SURFACE AND WATER WITH FINE SPRAY. PERMANENT SEED SHALL BE APPLIED AT THE FOLLOWING RATES:

PERMANENT SEEDING OF NON-WETLAND AREAS		
DATES	SEED MIXTURE SPECIES	APPLICATION RATE (LB/ACRE)
APR 15 - JUN 30	BERMUDA GRASS	25
SEP 1 - APR 1	TALL FESCUE	120

   b. THE BEST SEEDING DATES ARE BETWEEN SEPTEMBER 1 THROUGH SEPTEMBER 30 AND FEBRUARY 15 THROUGH MARCH 20.
   c. POSSIBLE SEEDING DATES ARE BETWEEN SEPTEMBER 1 THROUGH OCTOBER 31 AND FEBRUARY 15 THROUGH APRIL 30.
   d. BETWEEN APRIL 15 AND AUGUST 15, ADD 10 LB/ACRE GERMAN MILLET OR 15 LB/ACRE OF SUDANGRASS.
   e. PRIOR TO MAY 1 OR AFTER AUGUST 15 ADD 25 LB/ACRE RYE (GRAIN).
8. APPLY MULCH AT A RATE OF 4,000 LB/ACRE.
9. APPLY TACKIFIER AT A RATE OF 10 GAL/1,000FT2.
10. THE CONTRACTOR SHALL KEEP ALL SEEDED AREAS WATERED AND IN GOOD CONDITION. RESEEDING SHALL BE DONE IF AND WHEN NECESSARY UNTIL A GOOD, HEALTHY, UNIFORM GROWTH IS ESTABLISHED OVER THE ENTIRE AREA SEEDED.
11. ON SLOPES, THE CONTRACTOR SHALL PROVIDE AGAINST WASHOUTS BY AN APPROVED METHOD. ANY WASHOUT THAT OCCURS SHALL BE REGRADED AND RESEEDED AT THE CONTRACTOR'S EXPENSE UNTIL GOOD SOD IS ESTABLISHED.

SEEDING RIPARIAN BUFFER AREAS:

AREAS WITHIN THE 50' RIPARIAN BUFFER SHALL BE STABILIZED WITH NATIVE SEED MIX, 'MMF RIPARIAN BUFFER MIX' FROM MELLOW MARSH FARM, INC. OR APPROVED EQUAL.

RECOMMENDED APPLICATION RATE: 20 TO 25 LBS. PER ACRE (1LB./2,000 SQ. FT.) - $21.44 PER POUND		
SPECIES	COMMON NAME	PERCENT
AGROSTIS HYEMALIS	WINTER BENTGRASS	0.50%
AGROSTIS PERENNANS	UPLAND BENTGRASS	0.50%
ANDROPOGON GERARDII	BIG BLUESTEM	15.00%
ANDROPOGON VIRGINICUS	BROOMSEDGE	0.50%
COLEATAENIA ANCEPS	BEAKED PANICGRASS	1.00%
COREOPSIS LANCEOLATA	LANCELEAF COREOPSIS	1.00%
DICHANTHELIUM DICHOTOMIFLORUM	FALL PANICGRASS	0.50%
ELYMUS VIRGINICUS	VIRGINIA WILDRYE	34.00%
JUNCUS EFFUSUS	SOFT RUSH	0.50%
PANICUM VIRGATUM	SWITCHGRASS	13.00%
PYCNANTHEMUM TENUIFOLIUM	NARROWLEAF MOUNTAINMINT	0.50%
RUDBECKIA HIRTA	BLACKEYED SUSAN	0.50%
SCHIZACHYRIUM SCOPARIUM	LITTLE BLUESTEM	10.00%
SOLIDAGO SPECIOSA	SHOWY GOLDENROD	0.50%
SORGHASTRUM NUTANS	INDIAN GRASS	7.00%
TRADESCANTIA SUBASPERA	ZIGZAG SPIDERWORT	1.00%
TRIPSACUM DACTYLOIDES	EASTERN GAMAGRASS	12.00%
ZIZIA AUREA	GOLDEN ZIZIA	2.00%
		100.00%

MAINTENANCE REQUIREMENTS:

1. MANY OF THE RECOMMENDED PERMANENT GRASS SPECIES MAY REQUIRE TWO YEARS OF ESTABLISHMENT, DEPENDING ON SITE CONDITIONS. INSPECT SEEDED AREAS FOR FAILURE AND MAKE NECESSARY REPAIRS, SOIL AMENDMENTS, AND RESEEDINGS. IF WEEDY EXOTIC SPECIES HAVE OVERTAKEN THE AREA AFTER THE FIRST GROWING SEASON, THE INVADING SPECIES MUST BE ERADICATED TO ALLOW NATIVE SPECIES TO GROW. NATIVE VEGETATIONS ARE DIFFICULT TO MANAGE AND TAKE LONGER TO ESTABLISH. MONITOR THE SITE UNTIL LONG TERM STABILITY HAS BEEN ESTABLISHED.

TOPSOIL WASTE NOTE:

1. EXCESS TOPSOIL/MATERIAL SHALL BE HAULED OFFSITE UNLESS OTHERWISE DIRECTED BY THE OWNER'S REPRESENTATIVE. IF OWNER DECIDES TO KEEP EXCESS TOPSOIL/MATERIAL ON SITE, COORDINATION WITH OWNER'S REPRESENTATIVE AND TOWN OF WAKE COUNTY EROSION CONTROL STAFF WILL TAKE PLACE BEFORE EXCESS TOPSOIL/MATERIAL IS PLACED.

CHANNEL DESIGN INFORMATION

CHANNEL I.D.	DRAINAGE AREA (AC)	WEIGHTED 'C' COEFFICIENT	CHANNEL FLOW (CFS)	CHANNEL SLOPE (%)	CHANNEL FLOW DEPTH (FT)	CHANNEL MINIMUM DEPTH (FT)	CHANNEL BOTTOM WIDTH (FT)	CHANNEL SIDE SLOPES	CHANNEL VELOCITY (FPS)	ALLOWABLE VELOCITY (FPS)	CHANNEL SHEAR STRESS (PSF)	ALLOWABLE SHEAR STRESS (PSF)	DITCH LINING
1-1	1.22	0.50	4.39	1.58	0.67	1.50	2.00	2 :1	1.98	5.00	0.65	1.60	NAG S75BN OR EQUAL
1-2	1.11	0.50	4.00	1.15	0.69	1.50	2.00	2 :1	1.72	5.00	0.49	1.60	NAG S75BN OR EQUAL
2-1	2.14	0.50	7.70	2.00	0.83	1.50	2.00	2 :1	2.51	5.00	1.04	1.60	NAG S75BN OR EQUAL
2-2	2.17	0.50	7.81	2.00	0.84	1.50	2.00	2 :1	2.52	5.00	1.04	1.60	NAG S75BN OR EQUAL
3-1	2.04	0.50	7.34	2.00	0.81	1.50	2.00	2 :1	2.48	5.00	1.01	1.60	NAG S75BN OR EQUAL
3-2	1.11	0.50	4.00	2.00	0.60	1.50	2.00	2 :1	2.10	5.00	0.74	1.60	NAG S75BN OR EQUAL
4-1	2.28	0.50	8.21	2.00	0.86	1.50	2.00	2 :1	2.55	5.00	1.07	1.60	NAG S75BN OR EQUAL
4-2	1.82	0.50	6.55	2.00	0.77	1.50	2.00	2 :1	2.40	5.00	0.95	1.60	NAG S75BN OR EQUAL
5-1	1.21	0.50	4.36	2.00	0.62	1.50	2.00	2 :1	2.15	5.00	0.77	1.60	NAG S75BN OR EQUAL
5-2	1.41	0.50	5.08	2.00	0.67	1.50	2.00	2 :1	2.24	5.00	0.84	1.60	NAG S75BN OR EQUAL
6-1	0.59	0.50	2.12	2.58	0.40	1.50	2.00	2 :1	1.91	5.00	0.63	1.60	NAG S75BN OR EQUAL
6-2	1.82	0.50	6.55	2.10	0.76	1.50	2.00	2 :1	2.45	5.00	0.99	1.60	NAG S75BN OR EQUAL
7-1	1.00	0.50	3.60	2.00	0.56	1.50	2.00	2 :1	2.04	5.00	0.70	1.60	NAG S75BN OR EQUAL
7-2	0.89	0.50	3.20	2.00	0.53	1.50	2.00	2 :1	1.97	5.00	0.66	1.60	NAG S75BN OR EQUAL
8-1	2.30	0.50	8.28	2.00	0.87	1.50	2.00	2 :1	2.56	5.00	1.07	1.60	NAG S75BN OR EQUAL
8-2	0.57	0.50	2.05	2.00	0.42	1.50	2.00	2 :1	1.73	5.00	0.52	1.60	NAG S75BN OR EQUAL
9-1	1.09	0.50	3.92	2.00	0.59	1.50	2.00	2 :1	2.09	5.00	0.73	1.60	NAG S75BN OR EQUAL
9-2	0.57	0.50	2.05	2.00	0.42	1.50	2.00	2 :1	1.73	5.00	0.52	1.60	NAG S75BN OR EQUAL
10-1	0.69	0.50	2.48	2.00	0.46	1.50	2.00	2 :1	1.83	5.00	0.57	1.60	NAG S75BN OR EQUAL
10-2	0.13	0.50	0.47	2.00	0.18	1.50	2.00	2 :1	1.09	5.00	0.22	1.60	NAG S75BN OR EQUAL
11-1	0.52	0.50	1.87	2.00	0.40	1.50	2.00	2 :1	1.68	5.00	0.49	1.60	NAG S75BN OR EQUAL
11-2	0.28	0.50	1.01	2.00	0.28	1.50	2.00	2 :1	1.39	5.00	0.35	1.60	NAG S75BN OR EQUAL
12-1	1.68	0.50	6.05	2.00	0.74	1.50	2.00	2 :1	2.35	5.00	0.92	1.60	NAG S75BN OR EQUAL
12-2	0.50	0.50	1.80	2.00	0.39	1.50	2.00	2 :1	1.66	5.00	0.48	1.60	NAG S75BN OR EQUAL

Slope Drain Summary

Slope Drain ID	Drainage Area (ac)	Pipe Diameter (in)
1-1	1.22	24
1-2	1.11	24
2-1	2.14	24
2-2	2.17	24
3-1	2.04	24
3-2	1.11	18
4-1	2.28	24
4-2	1.82	24
5-1	1.21	24
5-2	1.41	24
6-1	0.59	18
6-2	1.82	24
7-1	1.00	18
7-2	0.89	18
8-1	2.03	24
8-2	0.57	15
9-1	1.09	18
9-2	0.57	15
10-1	0.69	15
10-2	0.13	12
11-1	0.52	15
11-2	0.28	12
12-1	1.68	24
12-2	0.50	12

TEMPORARY SKIMMER BASIN AND ORIFICE DESIGN SUMMARY

BASIN	TYPE	DRAINAGE AREA	DISTURBED AREA	C VALUE	PEAK FLOW	DEPTH	LENGTH	WIDTH	WEIR LENGTH	VOLUME REQUIRED	VOLUME PROVIDED	SURFACE AREA REQUIRED	SURFACE AREA PROVIDED	SKIMMER SIZE	ORIFICE SIZE	Dewatering Time
		(AC)	(AC)		(CFS)	(FT)	(FT)	(FT)	(FT)	(CF)	(CF)	(SF)	(SF)	(IN)	(IN)	(DAYS)
SSB #5	SKIMMER	2.62	2.62	0.50	9.43	4.0	SEE EC PLANS		9	4,716	16,080	3,065	9,126	2.5	3	1.69
SSB #6	SKIMMER	2.41	2.41	0.50	8.68	4.5	SEE EC PLANS		8	4,338	5,675	2,820	5,250	2.0	1.5	2.67
SSB #7	SKIMMER	1.89	1.89	0.50	6.80	4.0	SEE EC PLANS		7	3,402	7,731	2,211	4,649	2.0	1.5	3.64
SSB #8	SKIMMER	2.60	2.60	0.50	9.36	4.0	SEE EC PLANS		9	4,680	7,231	3,042	4,649	2.0	1.5	3.41
SSB #9	SKIMMER	1.66	1.66	0.50	5.98	4.0	SEE EC PLANS		6	2,988	7,231	1,942	4,649	2.0	1.5	3.41
SSB #10	SKIMMER	1.00	1.00	0.50	3.60	4.0	SEE EC PLANS		4	1,800	7,231	1,170	4,649	2.0	1.5	3.41
SSB #11	SKIMMER	1.00	1.00	0.50	3.60	4.0	SEE EC PLANS		4	1,800	6,731	1,170	4,073	2.0	3	0.79
SSB #12	SKIMMER	2.18	2.18	0.50	7.85	4.0	SEE EC PLANS		8	3,924	6,731	2,551	4,073	2.0	1.5	3.17
RSB #1	RISER	3.14	3.14	0.50	11.30	11.0	SEE EC PLANS		N/A	5,652	15,010	4,917	7,156	2.5	2.3	2.81
RSB #2	RISER	6.33	6.33	0.50	22.79	11.5	SEE EC PLANS		N/A	11,394	37,686	9,913	18,298	4.0	3.5	2.31
RSB #3	RISER	4.67	4.67	0.50	16.81	13.0	SEE EC PLANS		N/A	8,406	46,969	7,313	22,823	4.0	3.5	2.87
RSB #4	RISER	6.94	6.94	0.50	24.98	13.0	SEE EC PLANS		N/A	12,492	25,648	10,868	12,354	3.0	2.3	4.39

ABBREVIATIONS LEGEND:
CTD - CLEAN-WATER TEMPORARY DITCH
RTD - RISER BASIN TEMPORARY DITCH
STD - SKIMMER BASIN TEMPORARY DITCH
TD - TEMPORARY DITCH

NOTES: 12" FREEBOARD PROVIDED
RAINFALL INTENSITY (10-YEAR): 7.20 IN/HR

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NORTH CAROLINA PROFESSIONAL ENGINEER KYLE VAUGHAN
PRELIMINARY
NOT APPROVED FOR CONSTRUCTION

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REVISIONS:

WR JOB NUMBER 23-0045
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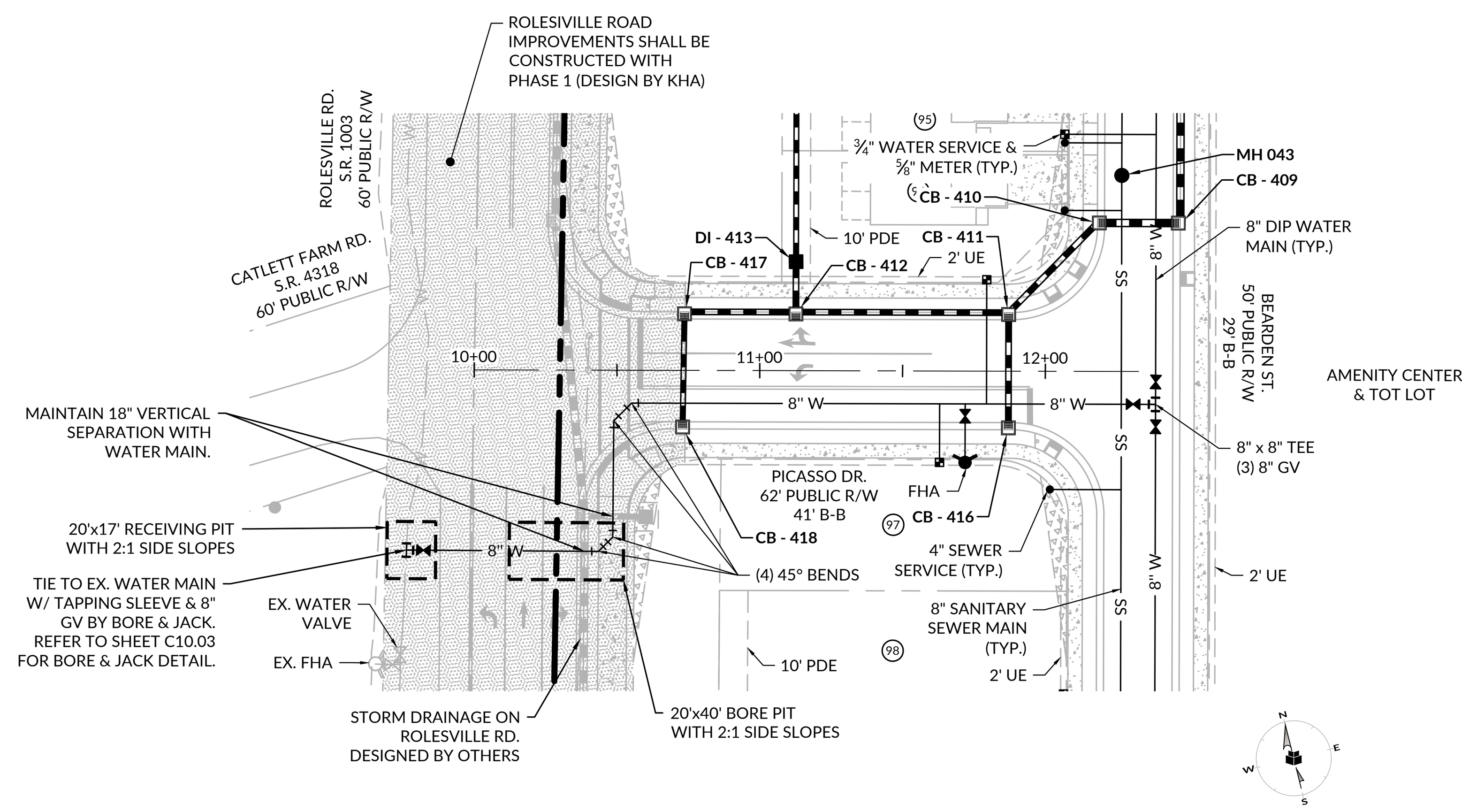
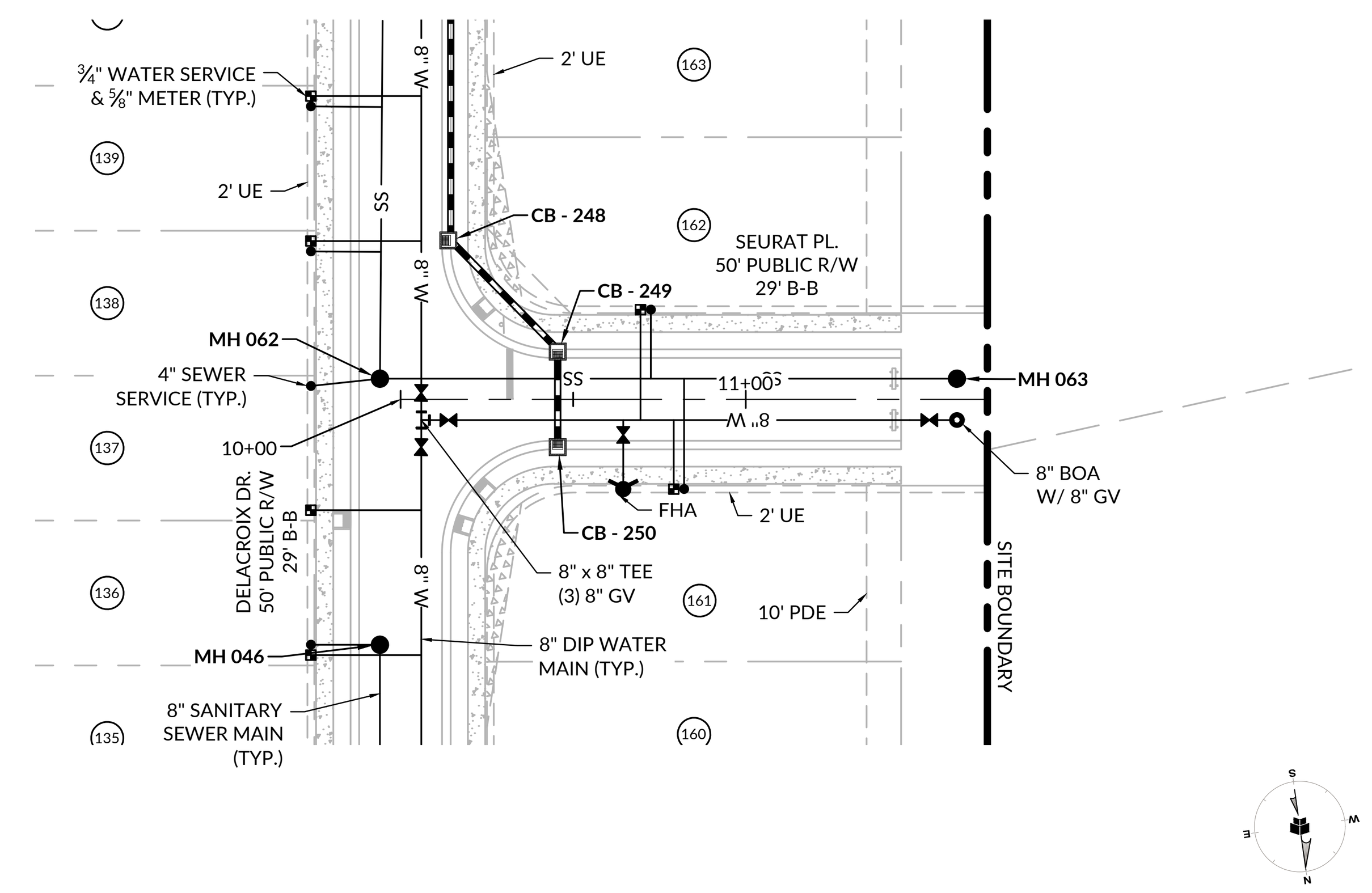
EROSION CONTROL NOTES & CALCULATIONS

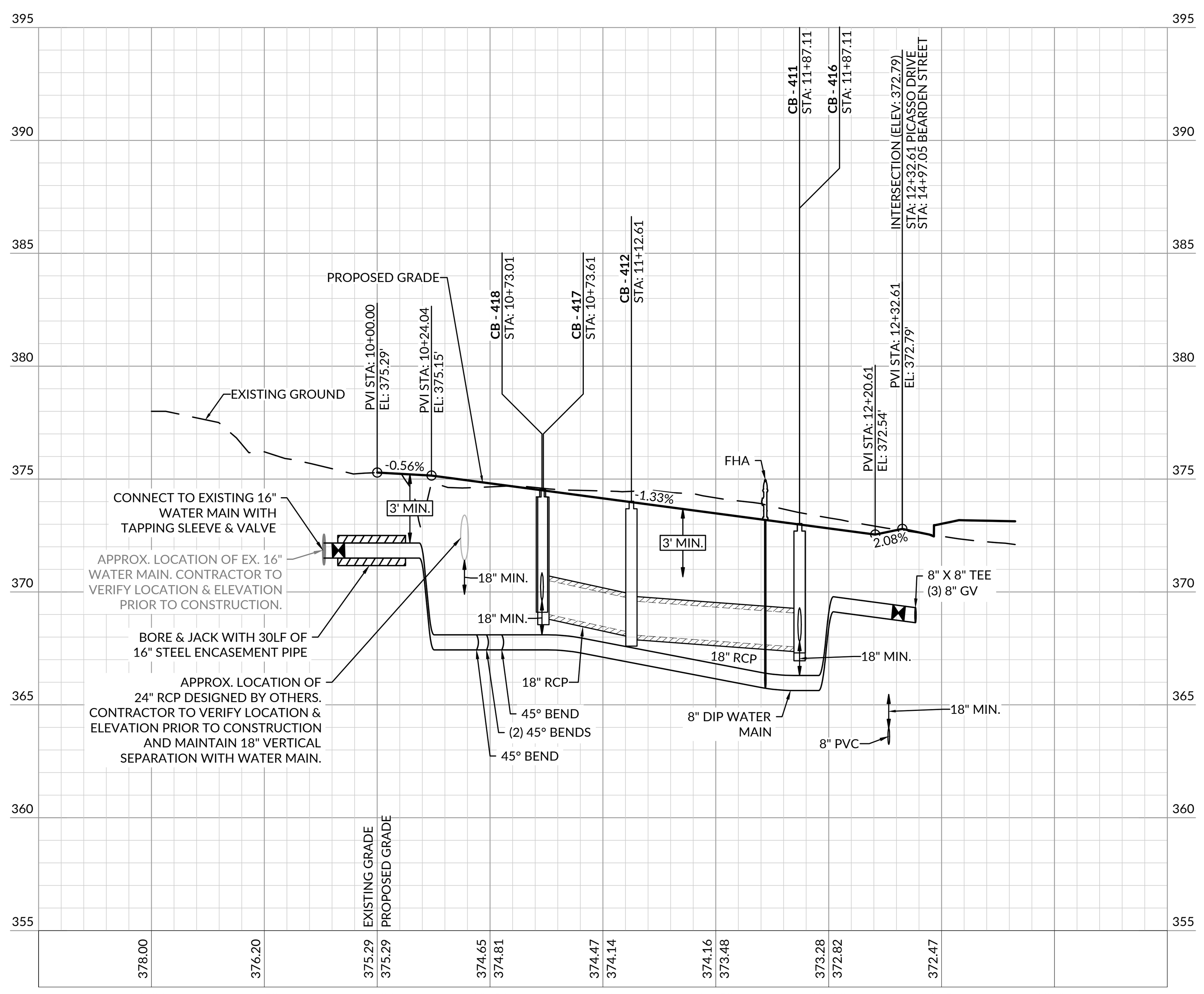
C7.16

EST. 1983

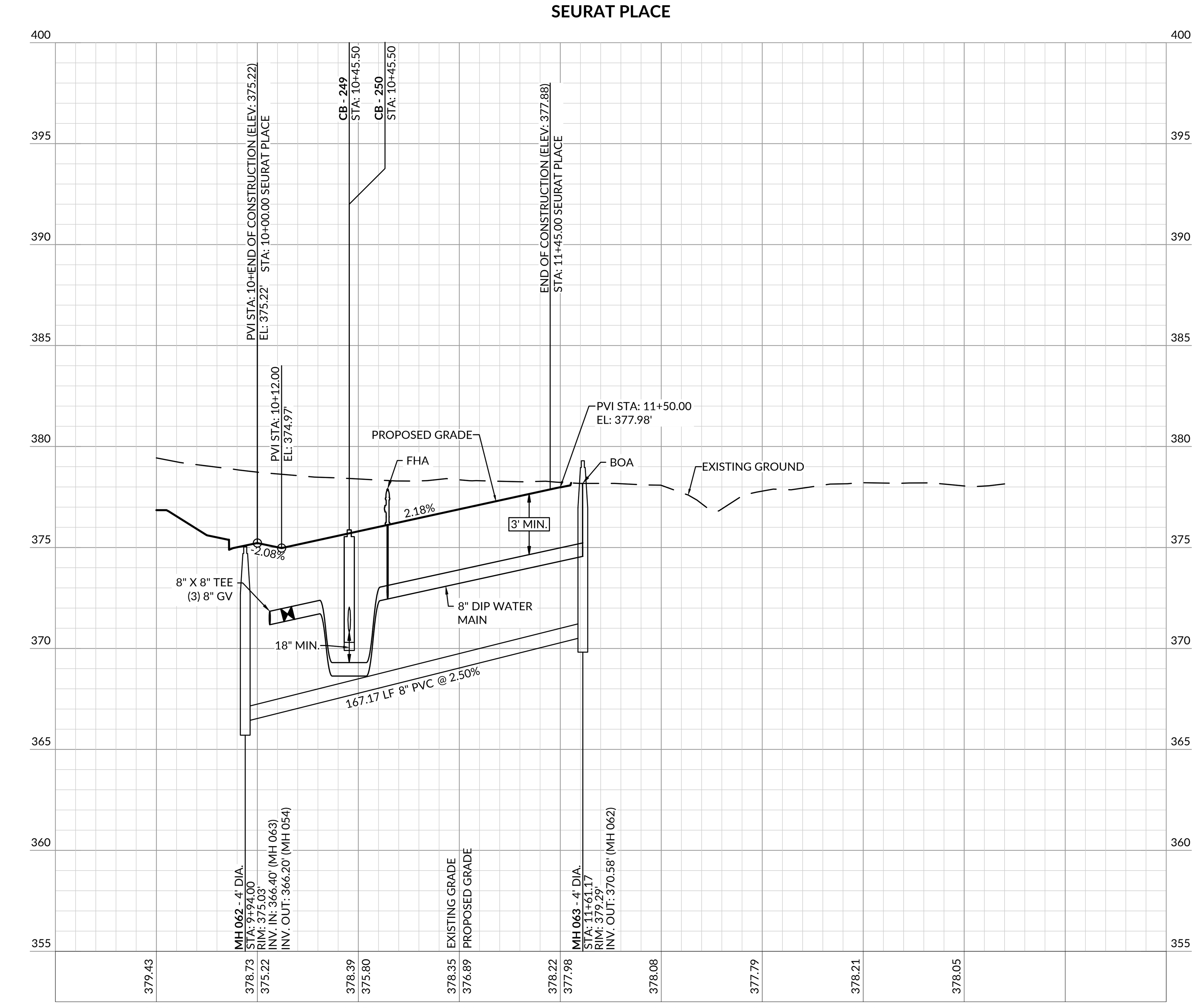




PICASSO DRIVE



SEURAT PLACE



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NORTH CAROLINA PROFESSIONAL ENGINEER TERRENCE COOK
PRELIMINARY
NOT APPROVED FOR CONSTRUCTION

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1 inch = 5 ft. V

INITIAL PLAN DATE: 11/01/2024
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WR JOB NUMBER	23-0045
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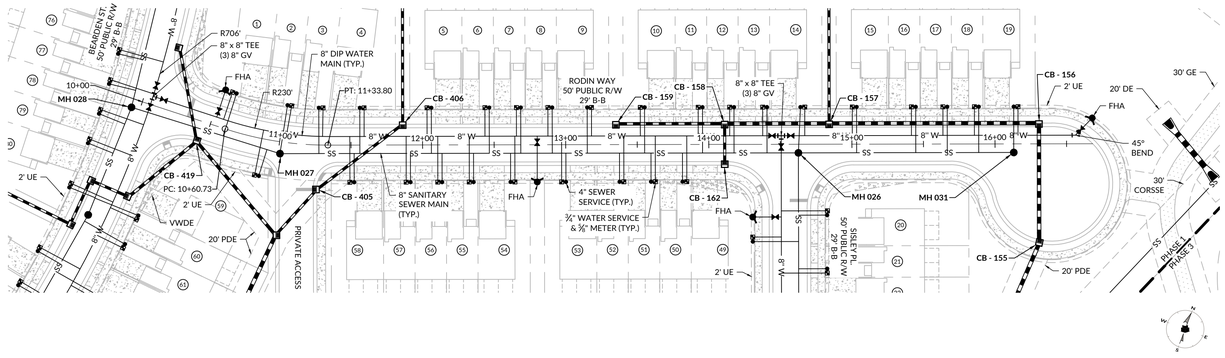
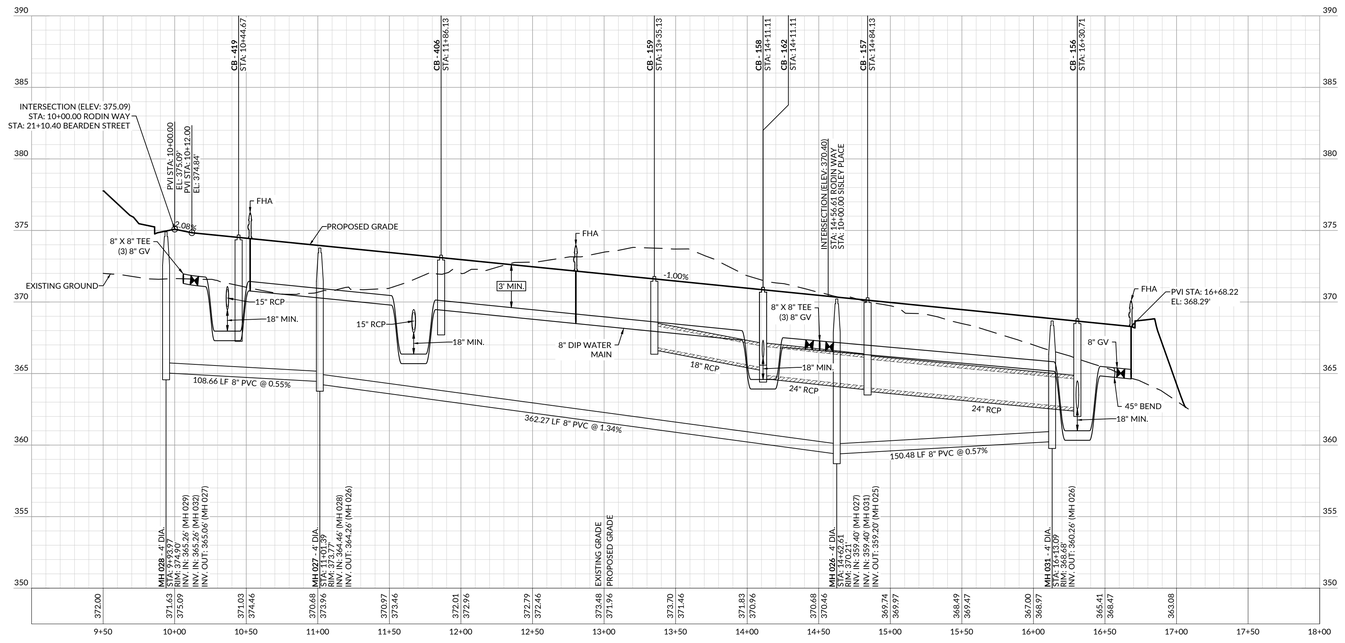
PICASSO DRIVE & SEURAT PLACE PLAN & PROFILE

C8.01



RODIN WAY



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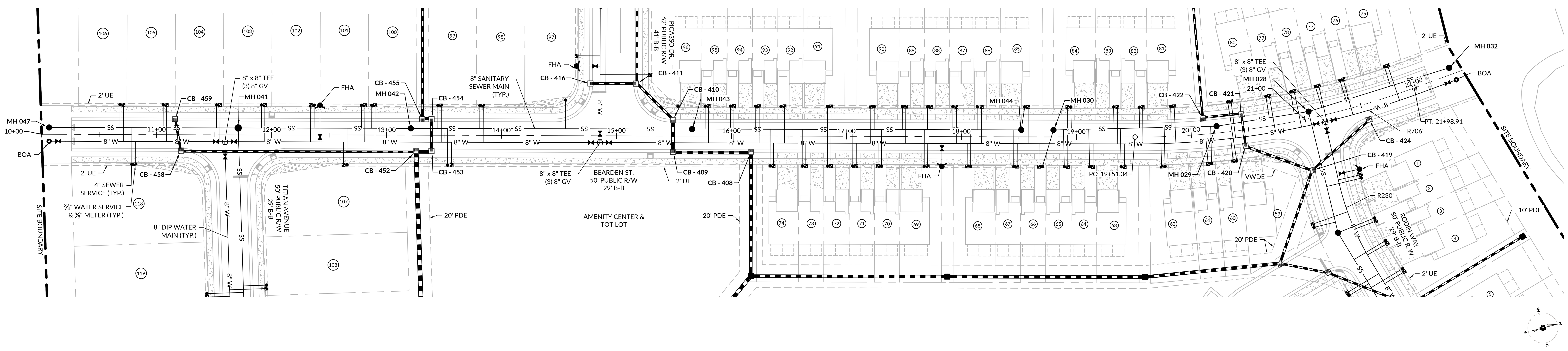
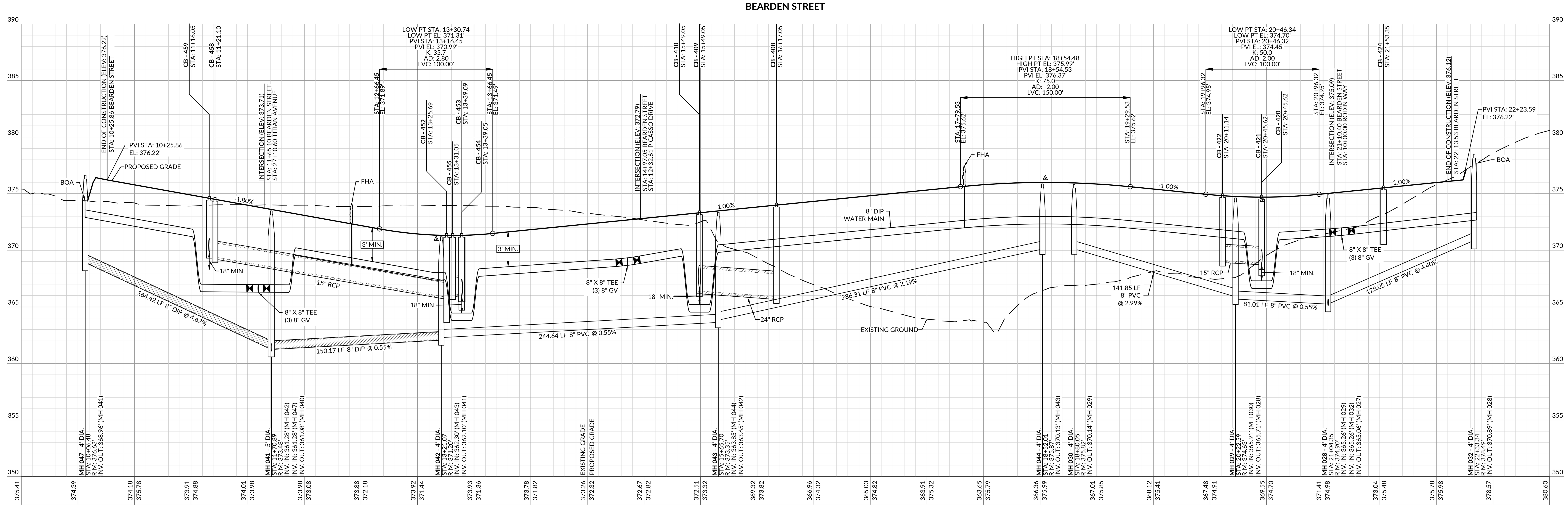
RODIN WAY
PLAN & PROFILE

C8.02



BEARDEN STREET



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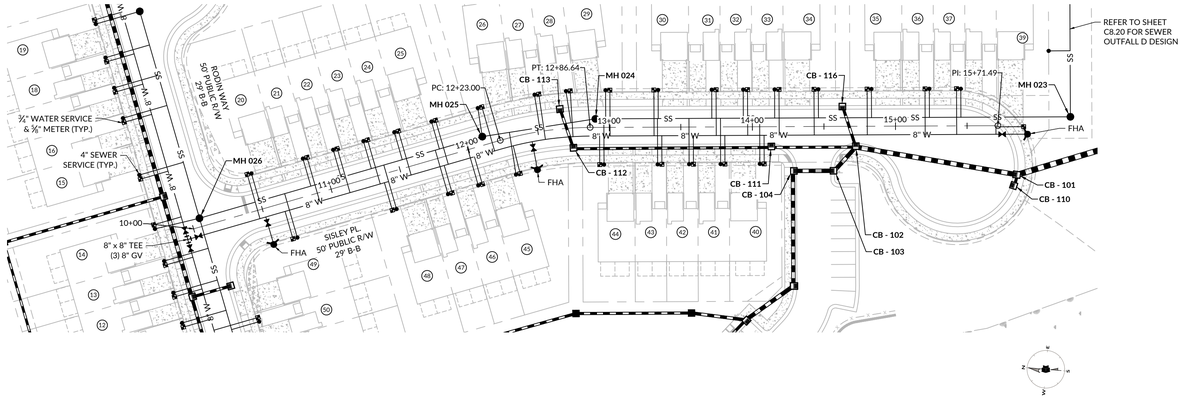
BEARDEN STREET PLAN & PROFILE

C8.03



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SISLEY PLACE PLAN & PROFILE

C8.04

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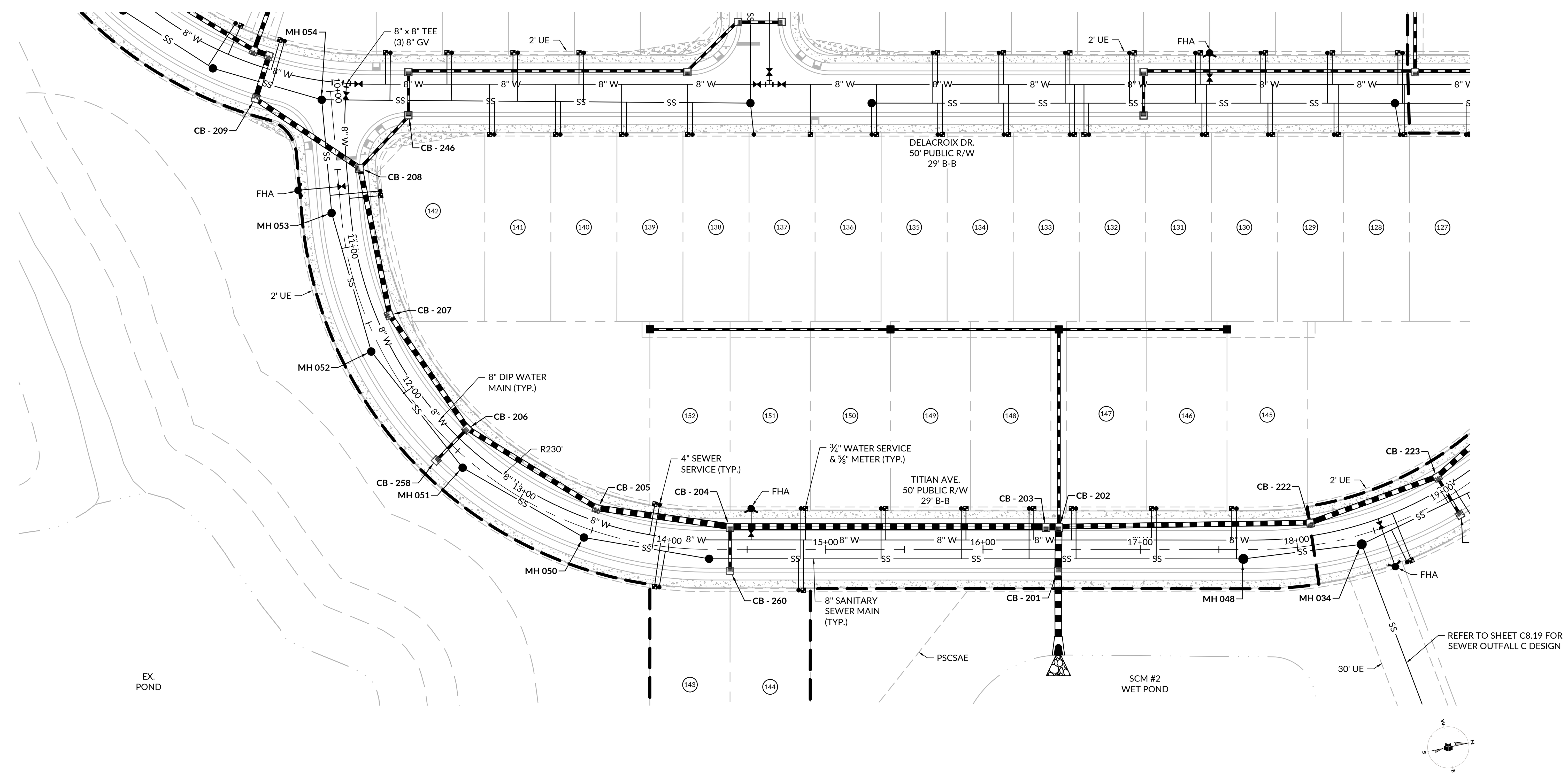
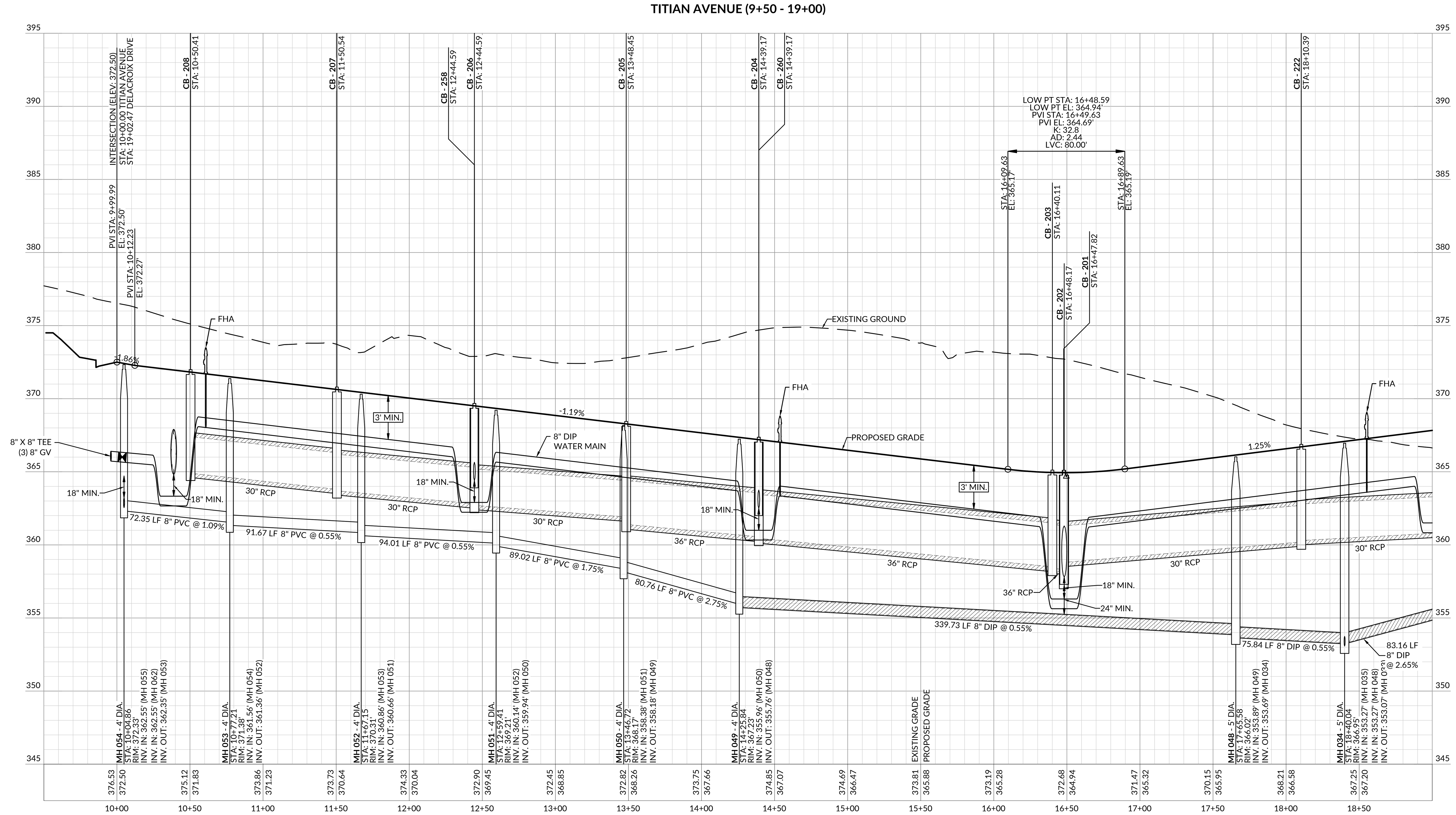


TITIAN AVENUE (9+50 - 19+00)



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TITIAN AVENUE PLAN & PROFILE (9+50 - 19+00)

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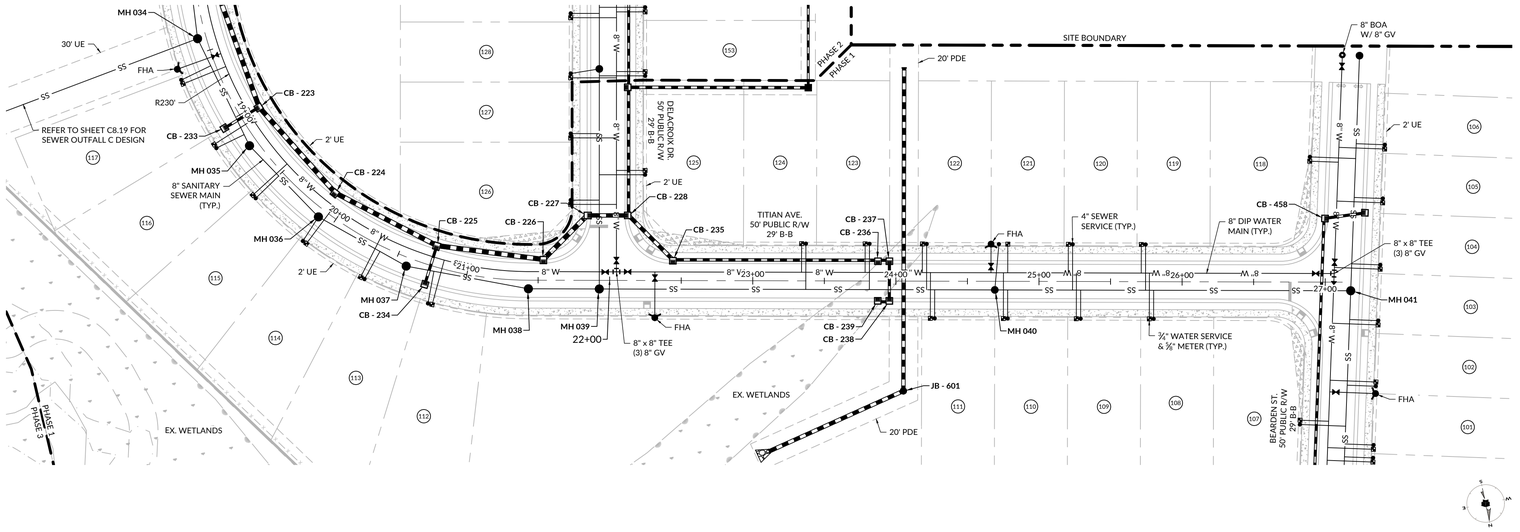

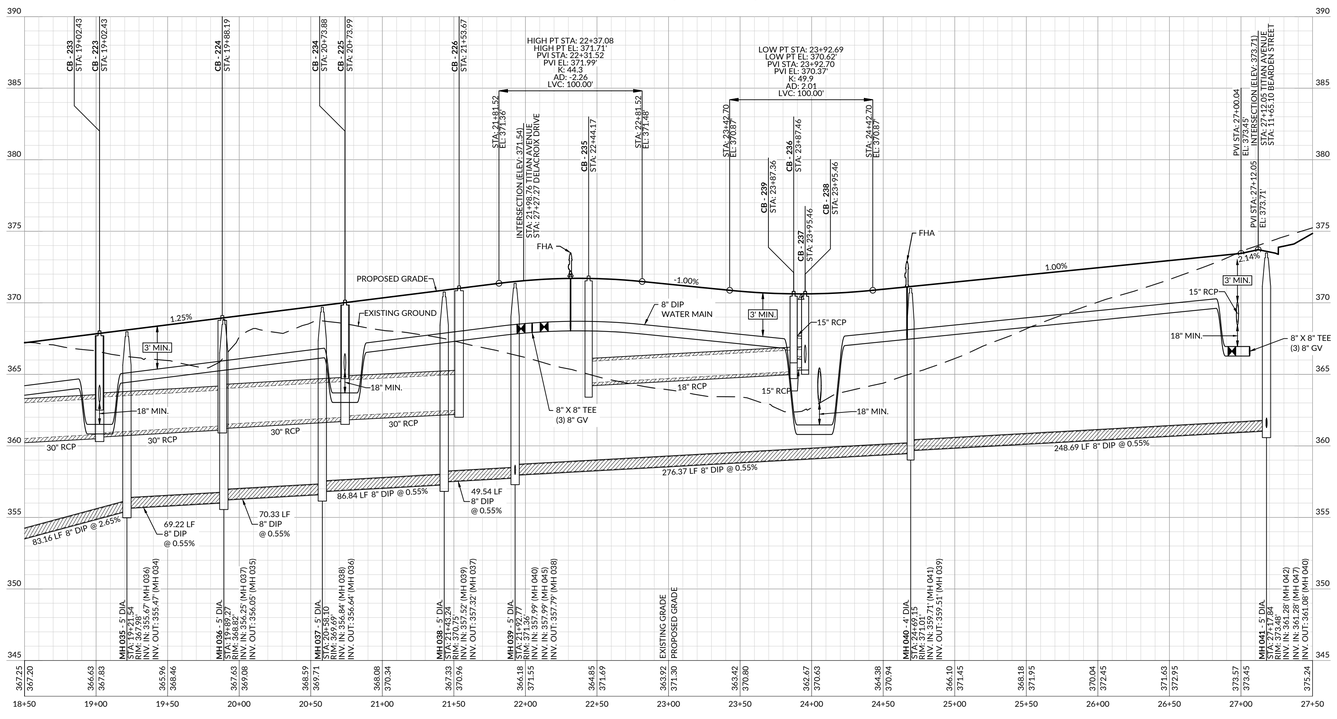

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LAWRENCE COOK

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1 inch = 5 ft. V

INITIAL PLAN DATE: 11/01/2024
REVISIONS:

WR JOB NUMBER 23-0045
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TITIAN AVENUE PLAN & PROFILE (18+50 - 27+50)

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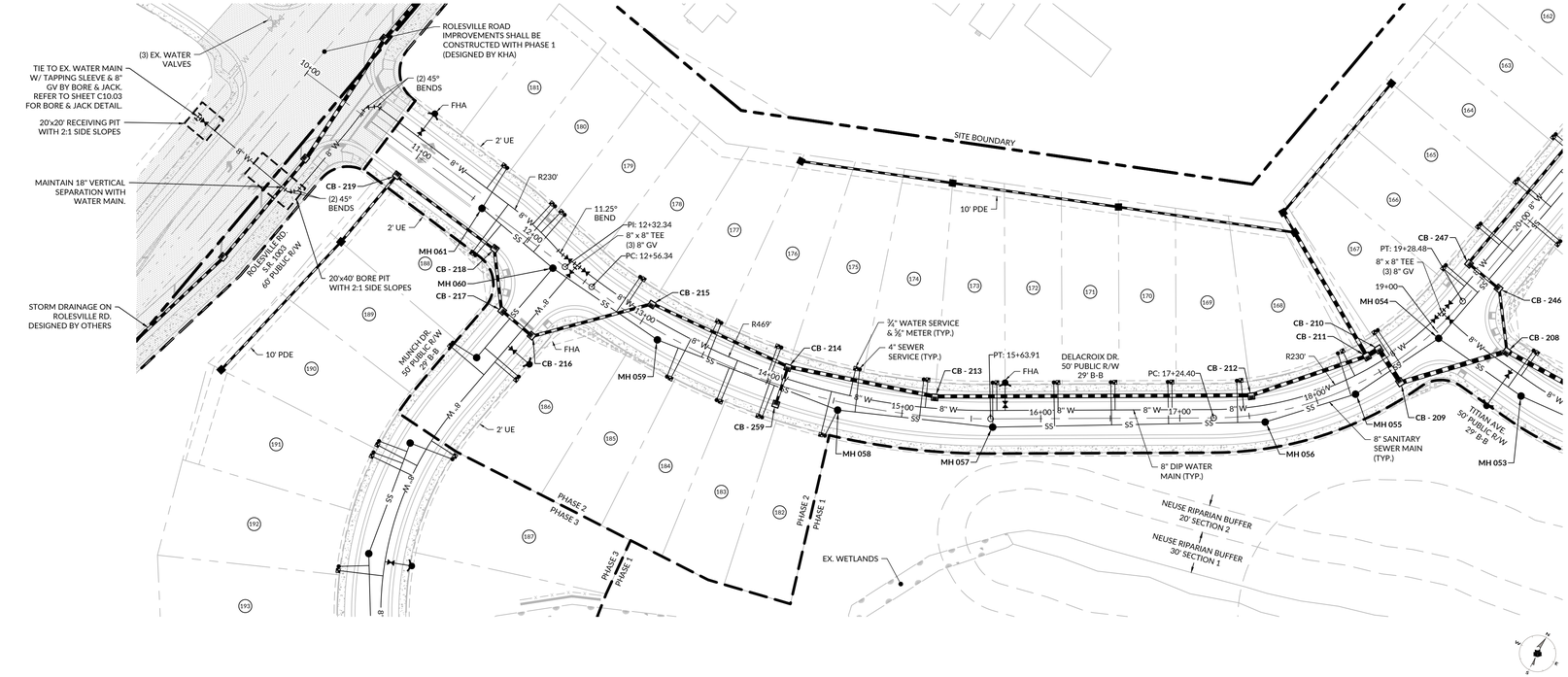
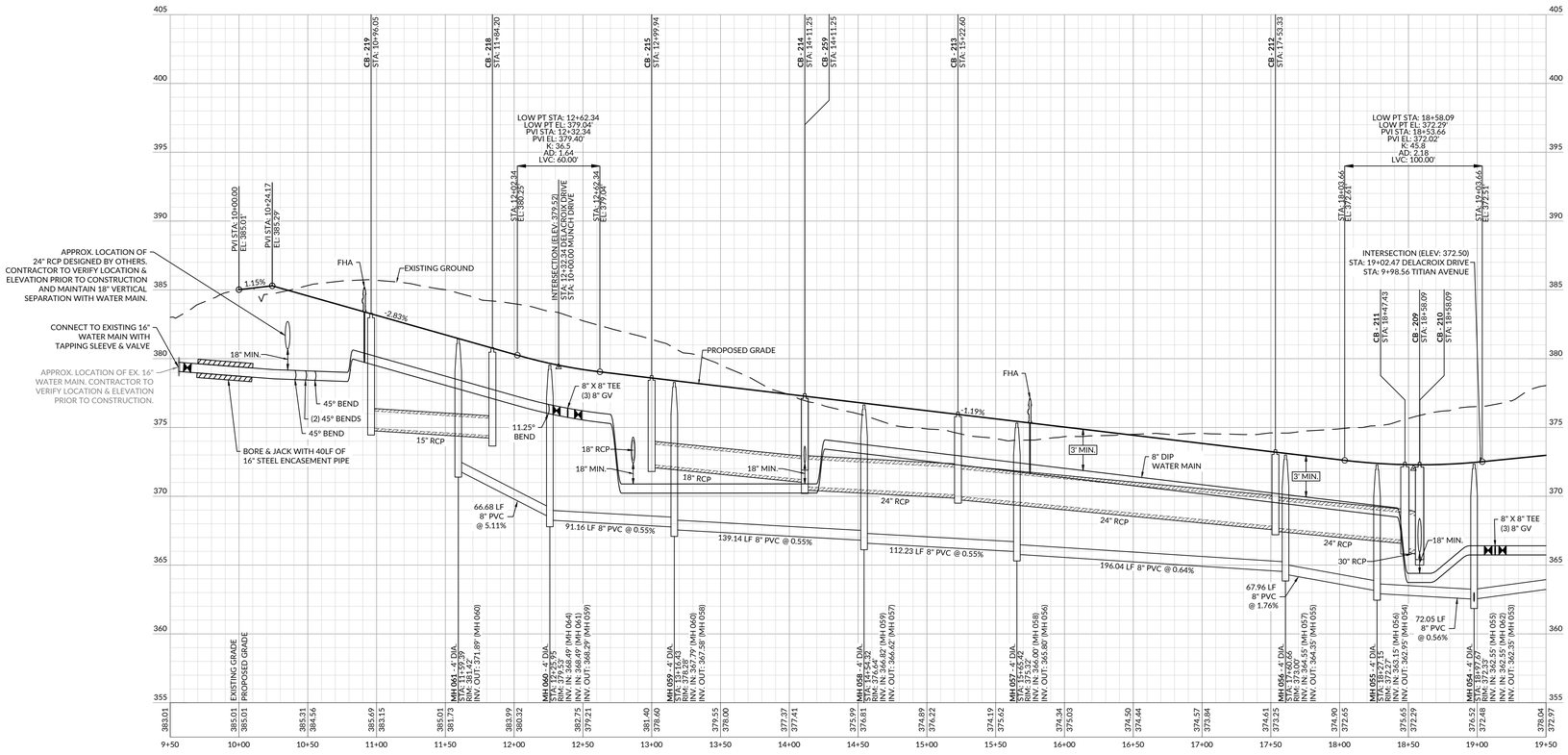


DELACROIX DRIVE (9+50 - 18+50)



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ROLESVILLE ROAD | ROLESVILLE, NC 27587 | WAKE COUNTY

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL TERRENCE COOK
PRELIMINARY
NOT APPROVED FOR CONSTRUCTION
TERRENCE COOK

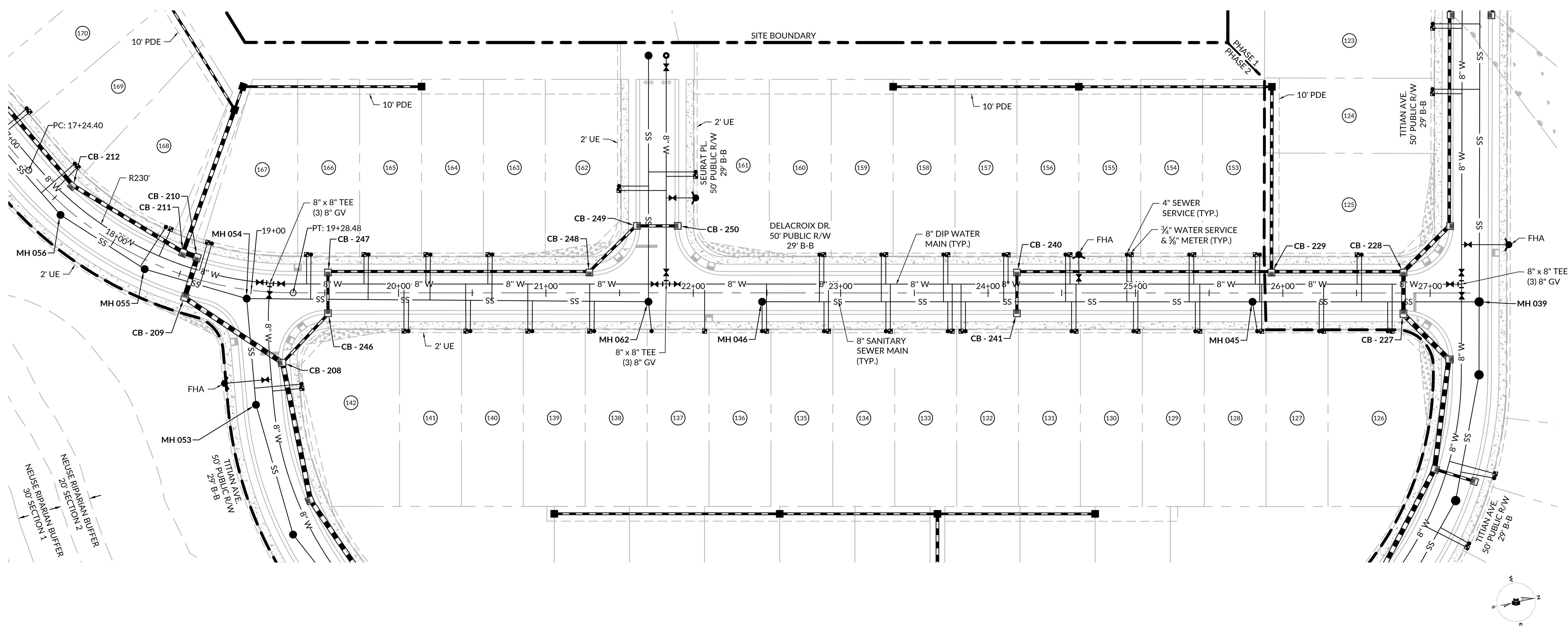
0 25 50
SCALE: 1 inch = 50 ft. H
1 inch = 5 ft. V

INITIAL PLAN DATE: 11/01/2024
REVISIONS:

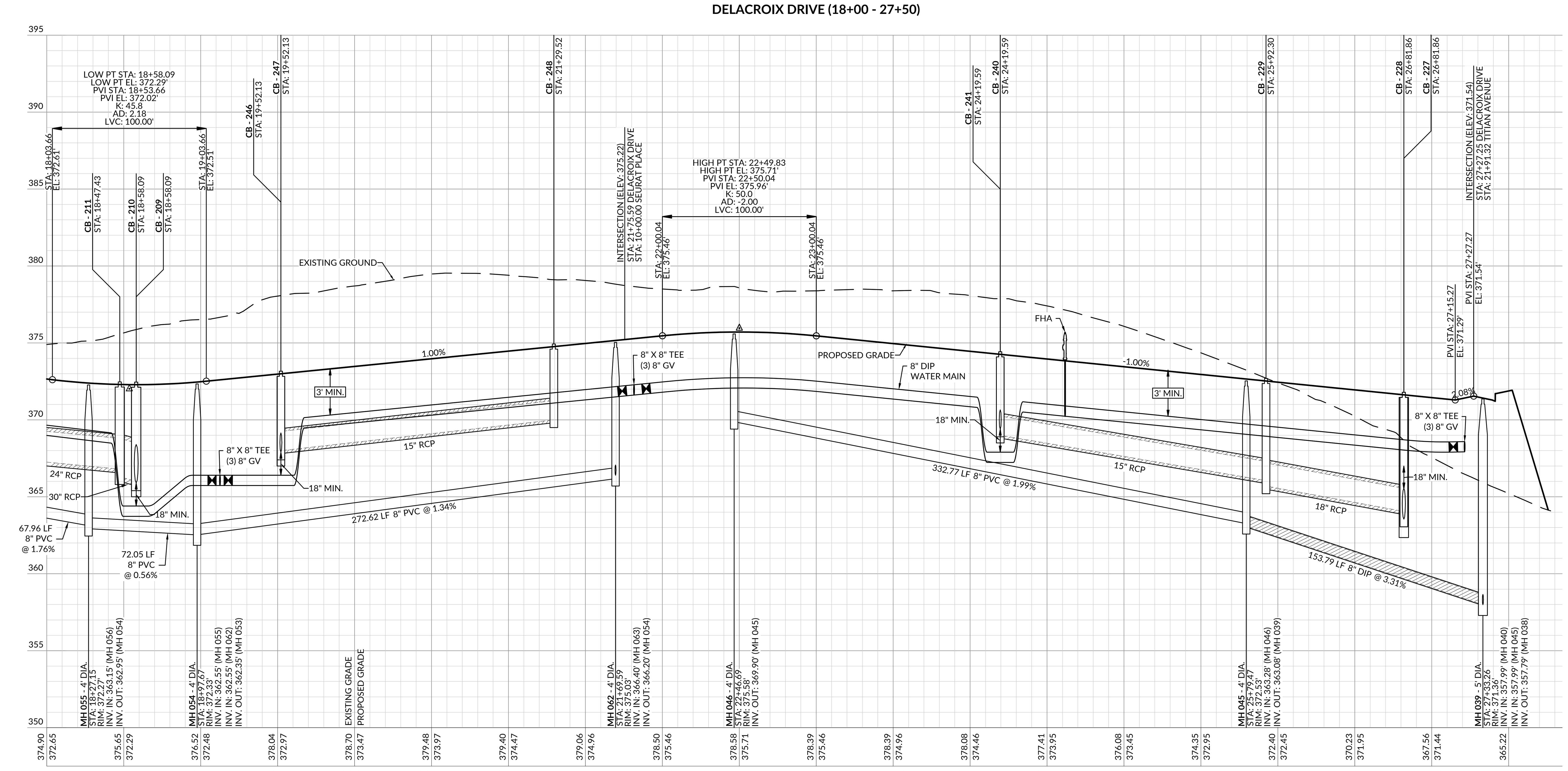
WR JOB NUMBER		23-0045
DRN: WR	DGN: WR	CKD: WR

DELACROIX DRIVE PLAN & PROFILE (9+50 - 18+50)

C8.07



DELACROIX DRIVE (18+00 - 27+50)



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CONSTRUCTION INFRASTRUCTURE DRAWINGS
BROADMOOR
CID-YR-XX
ROLESVILLE ROAD | ROLESVILLE, NC 27587 | WAKE COUNTY

PRELIMINARY
NOT APPROVED FOR CONSTRUCTION

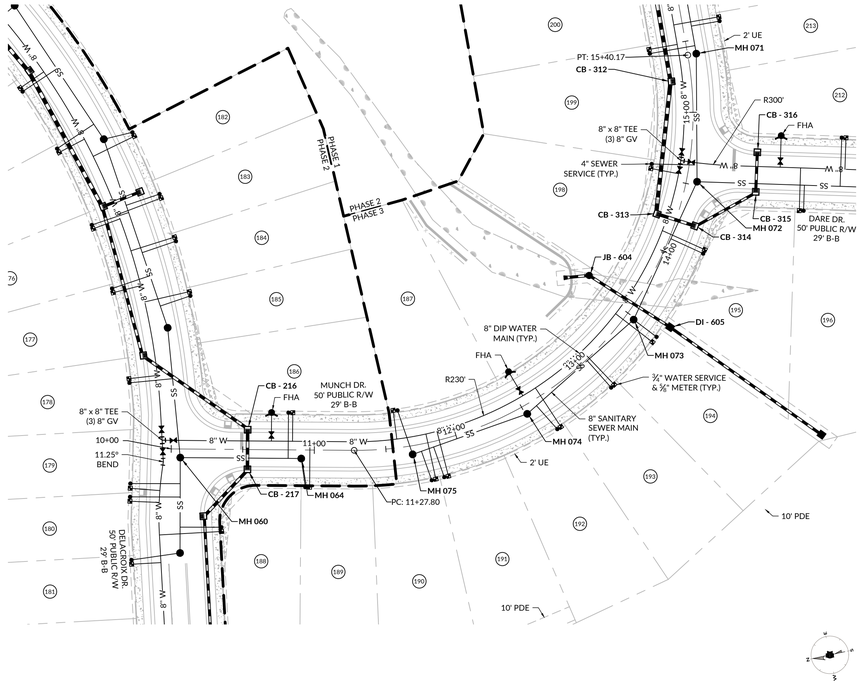
SCALE: 1 inch = 50 ft. H
1 inch = 5 ft. V

INITIAL PLAN DATE: 11/01/2024
REVISIONS:

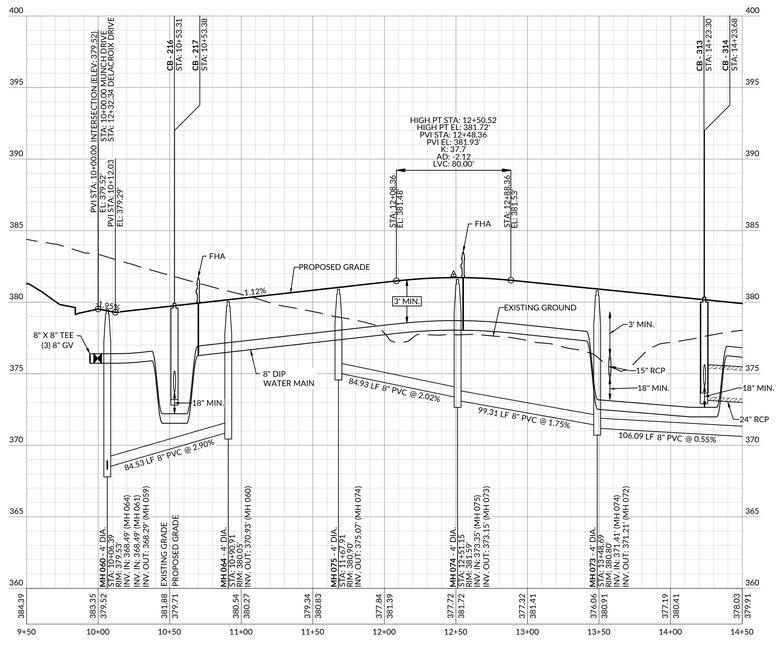
WR JOB NUMBER 23-0045
DRN: WR DGN: WR CKD: WR

DELACROIX DRIVE PLAN & PROFILE (18+50 - 27+50)

C8.08



MUNCH DRIVE (9+50 - 14+50)



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CONSTRUCTION INFRASTRUCTURE DRAWINGS
BROADMOOR
CID-YR-XX
ROLESVILLE ROAD | ROLESVILLE, NC 27587 | WAKE COUNTY

NORTH CAROLINA
PROFESSIONAL
PRELIMINARY
NOT APPROVED FOR
CONSTRUCTION
PURPOSES
LAWRENCE COOK

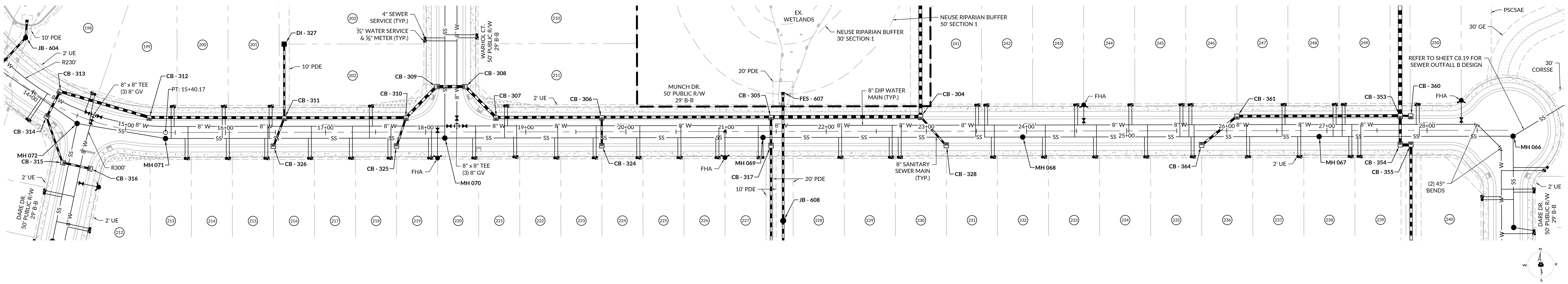
0 25 50
SCALE: 1 inch = 50 ft. H
1 inch = 5 ft. V

INITIAL PLAN DATE: 11/01/2024
REVISIONS:

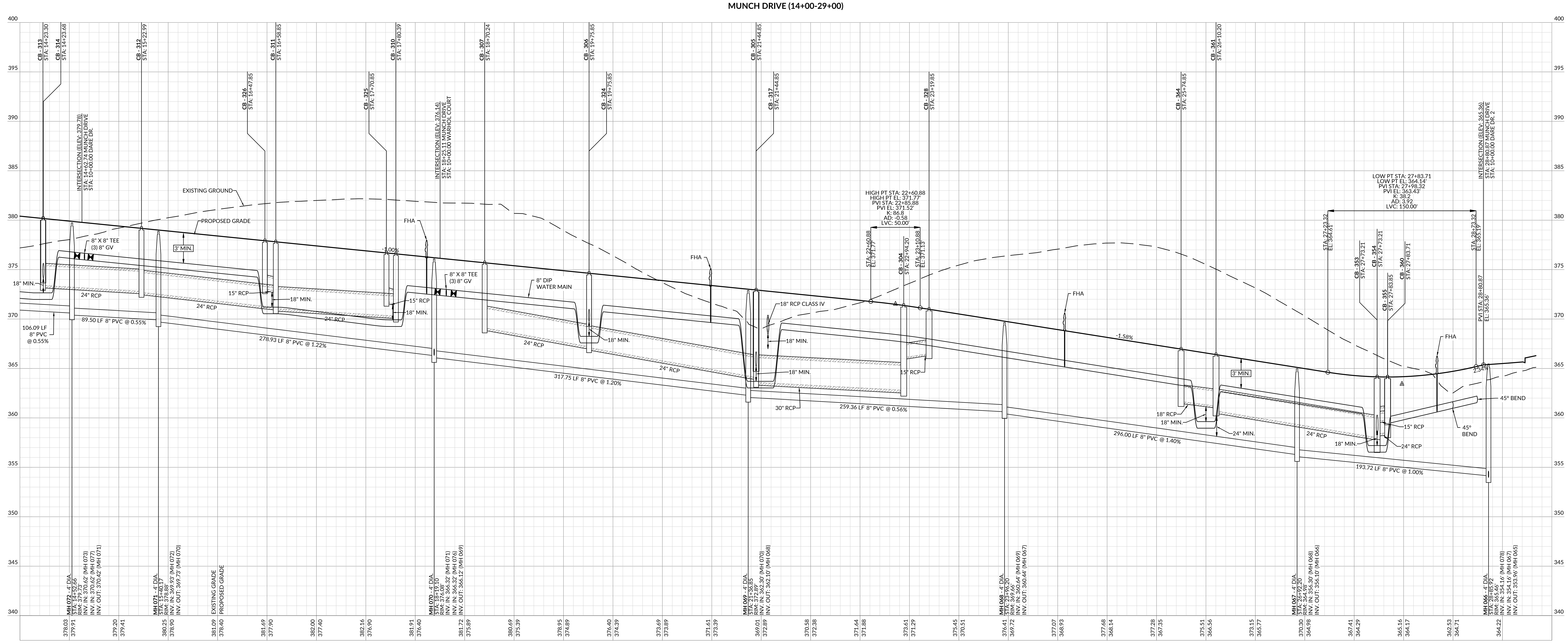
WR JOB NUMBER 23-0045
DRN: WR DGN: WR CKD: WR

MUNCH DRIVE
PLAN & PROFILE
(9+50 - 14+50)

C8.09



MUNCH DRIVE (14+00-29+00)



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CONSTRUCTION INFRASTRUCTURE DRAWINGS
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ROLESVILLE ROAD | ROLESVILLE, NC 27587 | WAKE COUNTY

NORTH CAROLINA PROFESSIONAL ENGINEER TERRENCE COOK
PRELIMINARY
NOT APPROVED FOR CONSTRUCTION

SCALE: 1 inch = 50 ft. H
1 inch = 5 ft. V

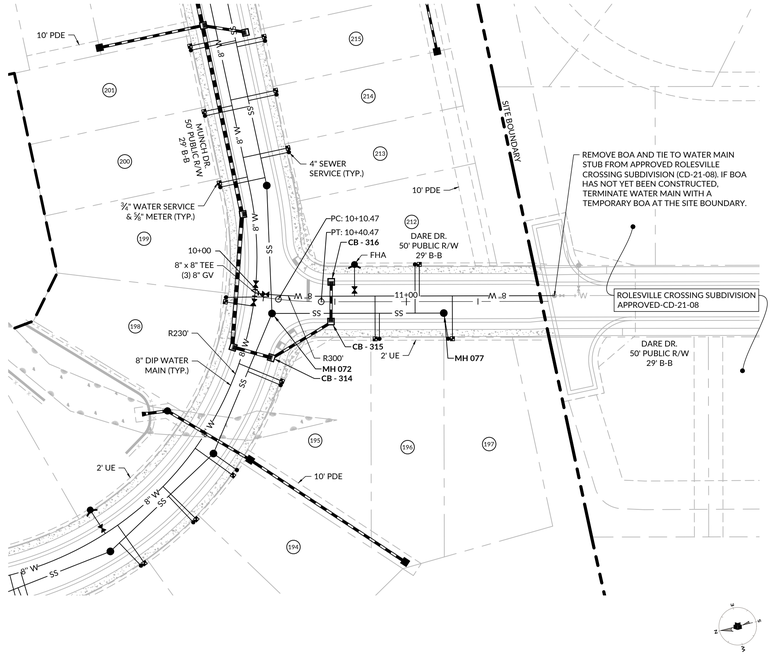
INITIAL PLAN DATE: 11/01/2024
REVISIONS:

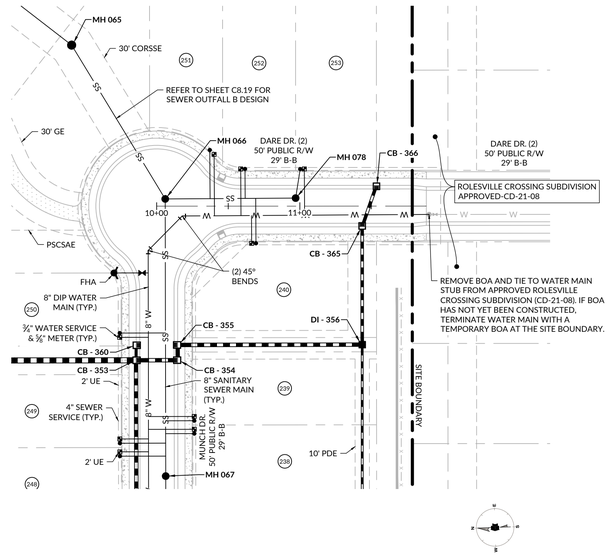
WR JOB NUMBER 23-0045
DRN: WR DGN: WR CKD: WR

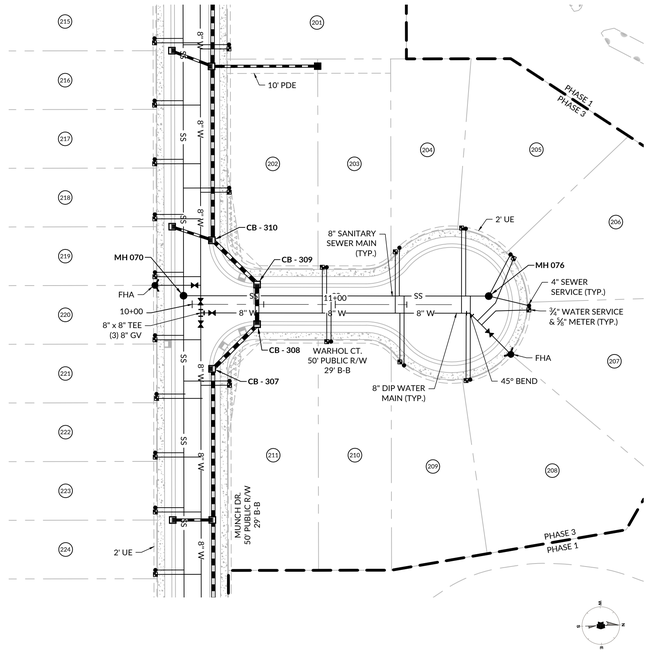
MUNCH DRIVE PLAN & PROFILE (14+50 - 29+50)

C8.10

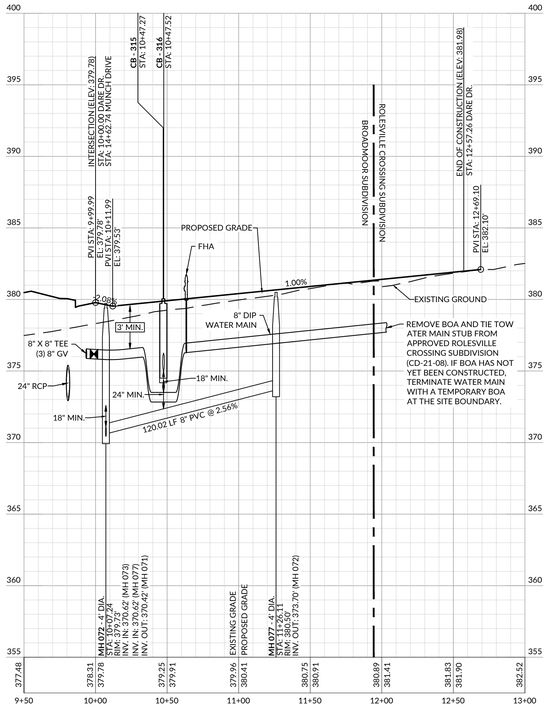
EST. 1983



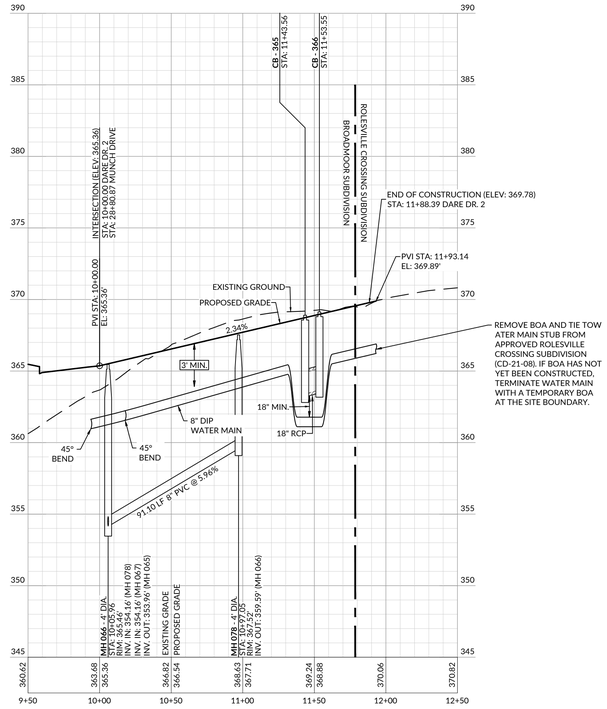




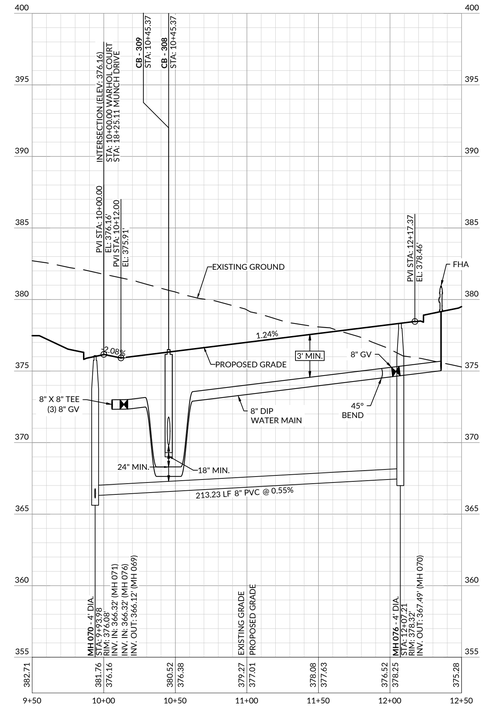
DARE DR.



DARE DR. (2)



WARHOL COURT



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CONSTRUCTION INFRASTRUCTURE DRAWINGS

BROADMOOR
CID-YR-XX

ROLESVILLE ROAD | ROLESVILLE, NC 27587 | WAKE COUNTY

NORTH CAROLINA PROFESSIONAL ENGINEER
PRELIMINARY
NOT APPROVED FOR CONSTRUCTION
LAWRENCE COOK

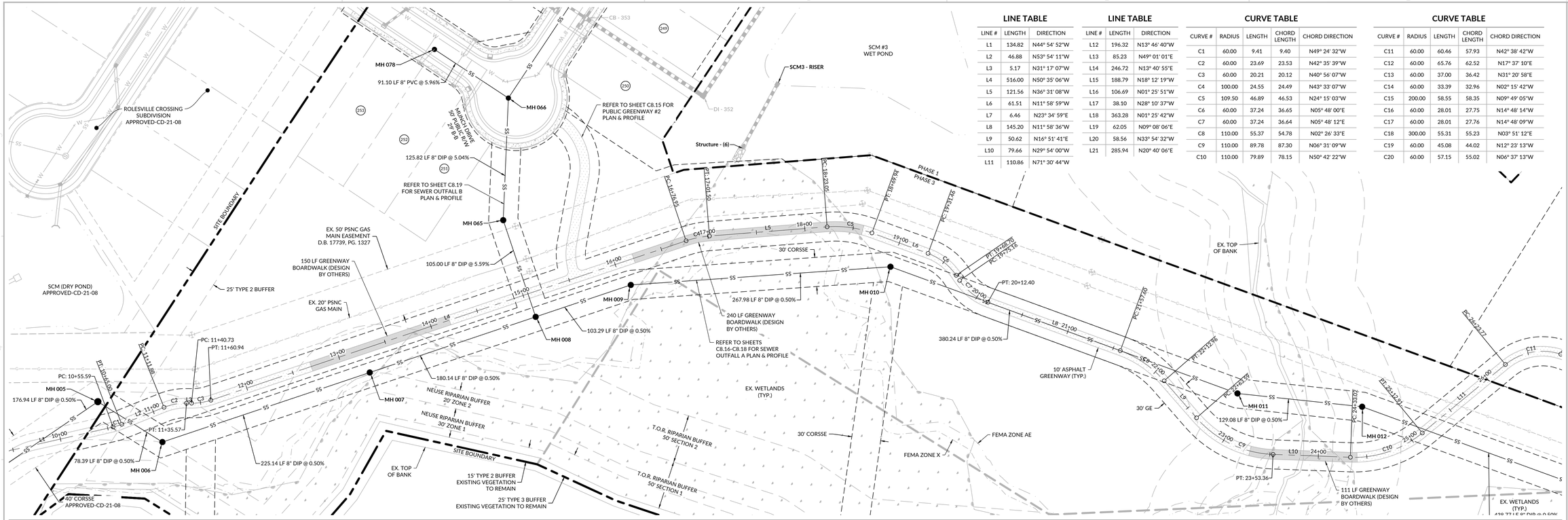
0 25 50
SCALE: 1 inch = 50 ft. H
1 inch = 5 ft. V

INITIAL PLAN DATE: 11/01/2024
REVISIONS:

WR JOB NUMBER 23-0045
DRN: WR DGN: WR CKD: WR

DARE DRIVE & WARHOL COURT PLAN & PROFILE

C8.11



LINE TABLE

LINE #	LENGTH	DIRECTION
L1	134.82	N44° 54' 52"W
L2	46.88	N53° 54' 11"W
L3	5.17	N31° 17' 07"W
L4	516.00	N50° 35' 06"W
L5	121.56	N36° 31' 08"W
L6	61.51	N11° 58' 59"W
L7	6.46	N23° 34' 59"E
L8	145.20	N11° 58' 36"W
L9	50.62	N16° 51' 41"E
L10	79.66	N29° 54' 00"W
L11	110.86	N71° 30' 44"W

LINE TABLE

LINE #	LENGTH	DIRECTION
L12	196.32	N13° 46' 40"W
L13	85.23	N49° 01' 01"E
L14	246.72	N13° 40' 55"E
L15	188.79	N18° 12' 19"W
L16	106.69	N01° 25' 51"W
L17	38.10	N28° 10' 37"W
L18	363.28	N01° 25' 42"W
L19	62.05	N09° 08' 06"E
L20	58.56	N33° 54' 32"W
L21	285.94	N20° 40' 06"E

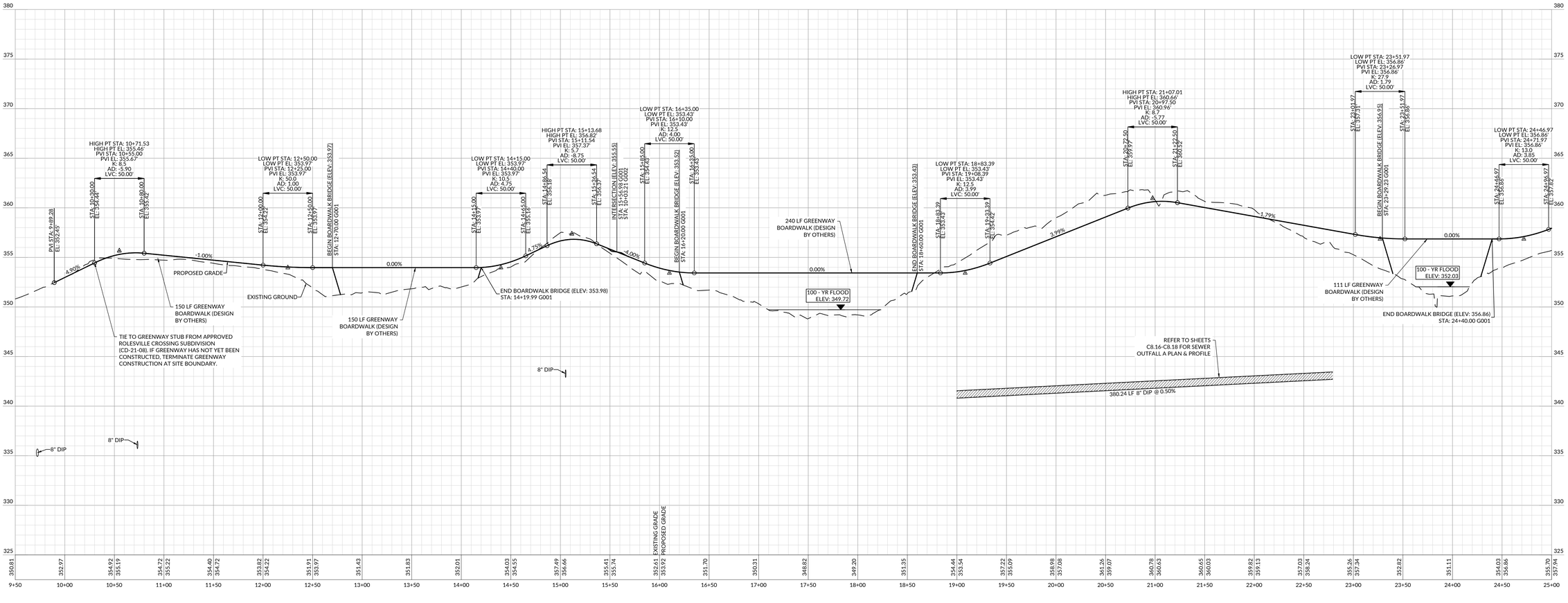
CURVE TABLE

CURVE #	RADIUS	LENGTH	CHORD LENGTH	CHORD DIRECTION
C1	60.00	9.41	9.40	N49° 24' 32"W
C2	60.00	23.69	23.53	N42° 35' 39"W
C3	60.00	20.21	20.12	N40° 56' 07"W
C4	100.00	24.55	24.49	N43° 33' 07"W
C5	109.50	46.89	46.53	N24° 15' 03"W
C6	60.00	37.24	36.65	N05° 48' 00"E
C7	60.00	37.24	36.64	N05° 48' 12"E
C8	110.00	55.37	54.78	N02° 26' 33"E
C9	110.00	89.78	87.30	N06° 31' 09"W
C10	110.00	79.89	78.15	N50° 42' 22"W

CURVE TABLE

CURVE #	RADIUS	LENGTH	CHORD LENGTH	CHORD DIRECTION
C11	60.00	60.46	57.93	N42° 38' 42"W
C12	60.00	65.76	62.52	N17° 37' 10"E
C13	60.00	37.00	36.42	N31° 20' 58"E
C14	60.00	33.39	32.96	N02° 15' 42"W
C15	200.00	58.55	58.35	N09° 49' 05"W
C16	60.00	28.01	27.75	N14° 48' 14"W
C17	60.00	28.01	27.76	N14° 48' 09"W
C18	300.00	55.31	55.23	N03° 51' 12"E
C19	60.00	45.08	44.02	N12° 23' 13"W
C20	60.00	57.15	55.02	N06° 37' 13"W

GREENWAY 1 (10+00 - 25+00)



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CONSTRUCTION INFRASTRUCTURE DRAWINGS
BROADMOOR
CID-YR-XX
ROLESVILLE ROAD | ROLESVILLE, NC 27587 | WAKE COUNTY

NORTH CAROLINA PROFESSIONAL ENGINEER
PRELIMINARY
NOT APPROVED FOR CONSTRUCTION
LAWRENCE COOK

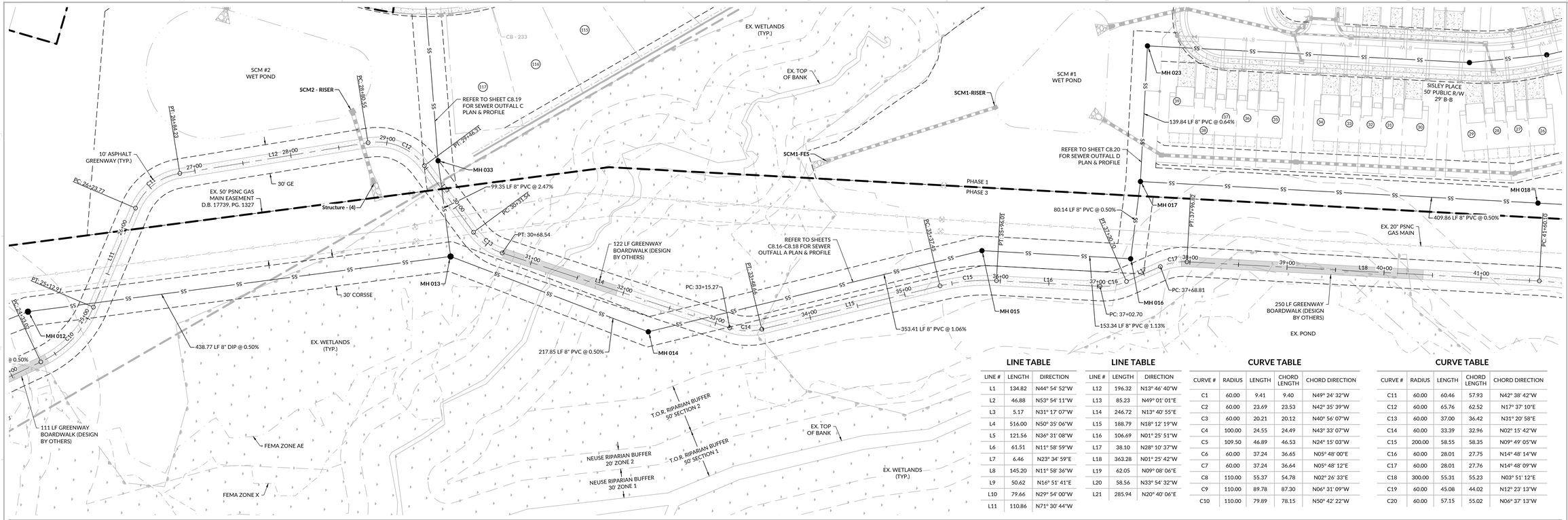
SCALE: 1 inch = 50 ft. H
1 inch = 5 ft. V

INITIAL PLAN DATE: 11/01/2024
REVISIONS:

WR JOB NUMBER 23-0045
DRN: WR DGN: WR CKD: WR

GREENWAY 1 PLAN & PROFILE (10+00 - 25+00)

C8.12



LINE TABLE

LINE #	LENGTH	DIRECTION
L1	134.82	N44° 54' 52"W
L2	46.88	N53° 54' 11"W
L3	5.17	N31° 17' 07"W
L4	516.00	N50° 35' 06"W
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L6	61.51	N11° 58' 59"W
L7	6.46	N23° 34' 59"E
L8	145.20	N11° 58' 36"W
L9	50.62	N16° 51' 41"E
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L17	38.10	N28° 10' 37"W
L18	363.28	N01° 25' 42"W
L19	62.05	N09° 08' 06"E
L20	58.56	N33° 54' 32"W
L21	285.94	N20° 40' 06"E

CURVE TABLE

CURVE #	RADIUS	LENGTH	CHORD LENGTH	CHORD DIRECTION
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C6	60.00	37.24	36.65	N05° 48' 00"E
C7	60.00	37.24	36.64	N05° 48' 12"E
C8	110.00	55.37	54.78	N02° 26' 33"E
C9	110.00	89.78	87.30	N06° 31' 09"W
C10	110.00	79.89	78.15	N50° 42' 22"W

CURVE TABLE

CURVE #	RADIUS	LENGTH	CHORD LENGTH	CHORD DIRECTION
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C14	60.00	33.39	32.96	N02° 15' 42"W
C15	200.00	58.55	58.35	N09° 49' 05"W
C16	60.00	28.01	27.75	N14° 48' 14"W
C17	60.00	28.01	27.76	N14° 48' 09"W
C18	300.00	55.31	55.23	N03° 51' 12"E
C19	60.00	45.08	44.02	N12° 23' 13"W
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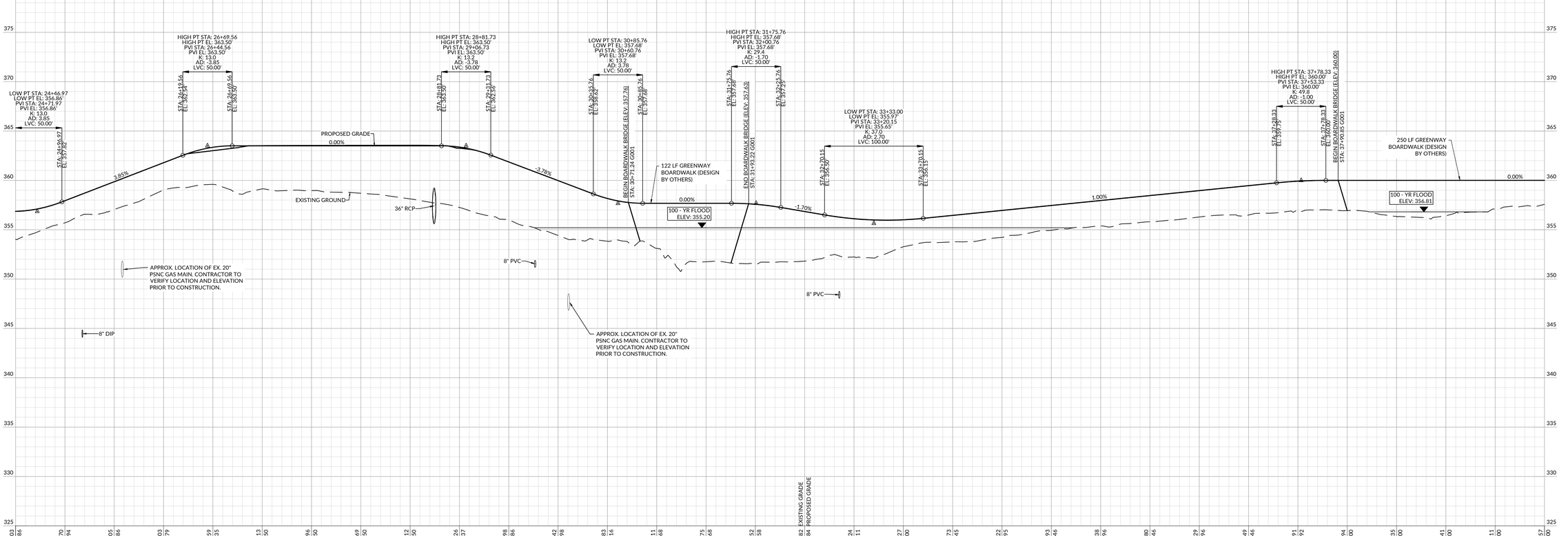
GREENWAY 1 (24+50 - 40+00)



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CONSTRUCTION INFRASTRUCTURE DRAWINGS
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NORTH CAROLINA PROFESSIONAL ENGINEER
PRELIMINARY
NOT APPROVED FOR CONSTRUCTION
JOHN LAWRENCE COOK

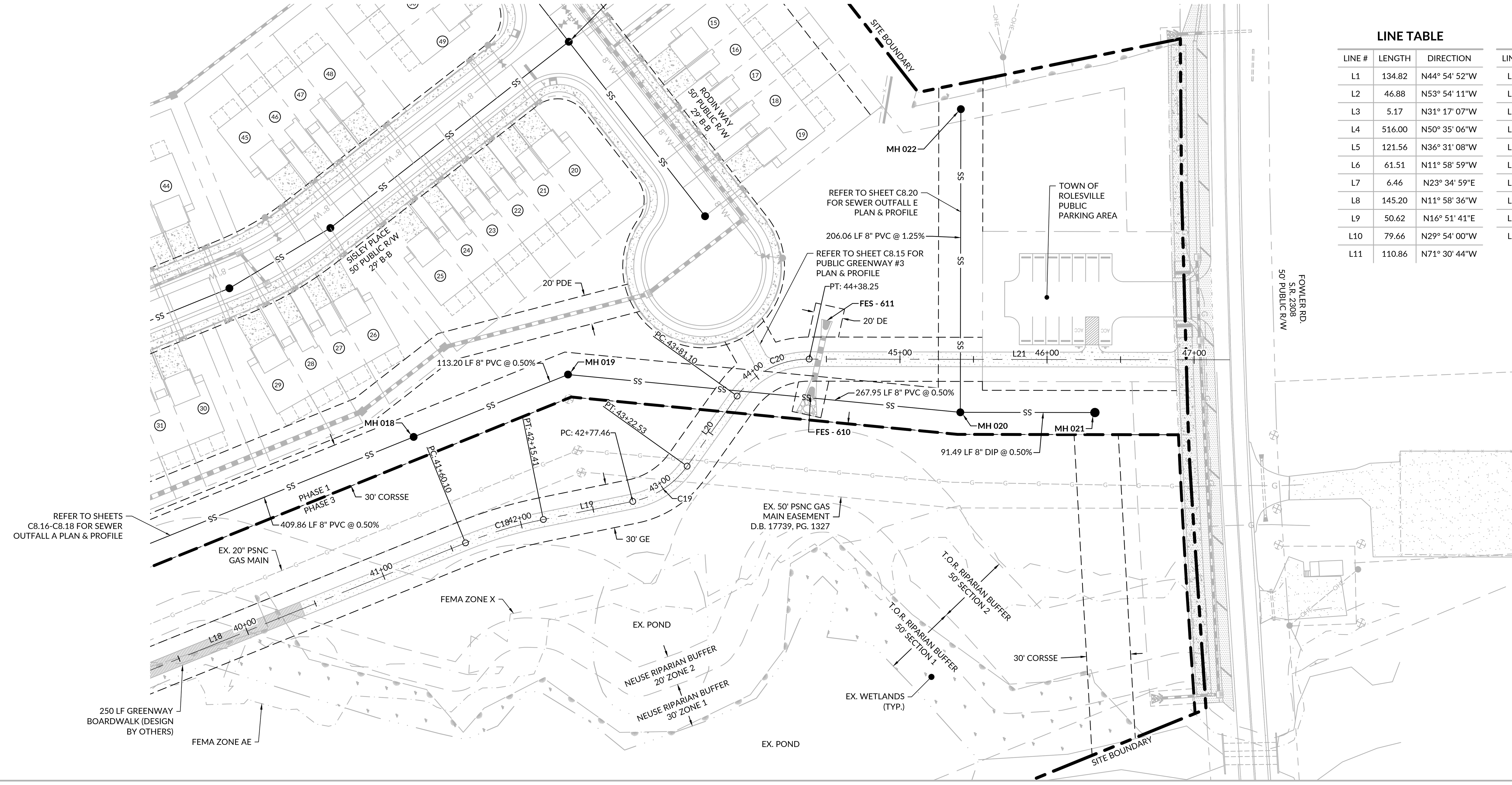
SCALE: 1 inch = 50 ft. H
1 inch = 5 ft. V

INITIAL PLAN DATE: 11/01/2024
REVISIONS:

WR JOB NUMBER 23-0045
DRN: WR DGN: WR CKD: WR

GREENWAY 1 PLAN & PROFILE (39+50 - 48+00)

C8.13



LINE TABLE

LINE #	LENGTH	DIRECTION
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L8	145.20	N11° 58' 36"W
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C7	60.00	37.24	36.64	N05° 48' 12"E
C8	110.00	55.37	54.78	N02° 26' 33"E
C9	110.00	89.78	87.30	N06° 31' 09"W
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CURVE TABLE

CURVE #	RADIUS	LENGTH	CHORD LENGTH	CHORD DIRECTION
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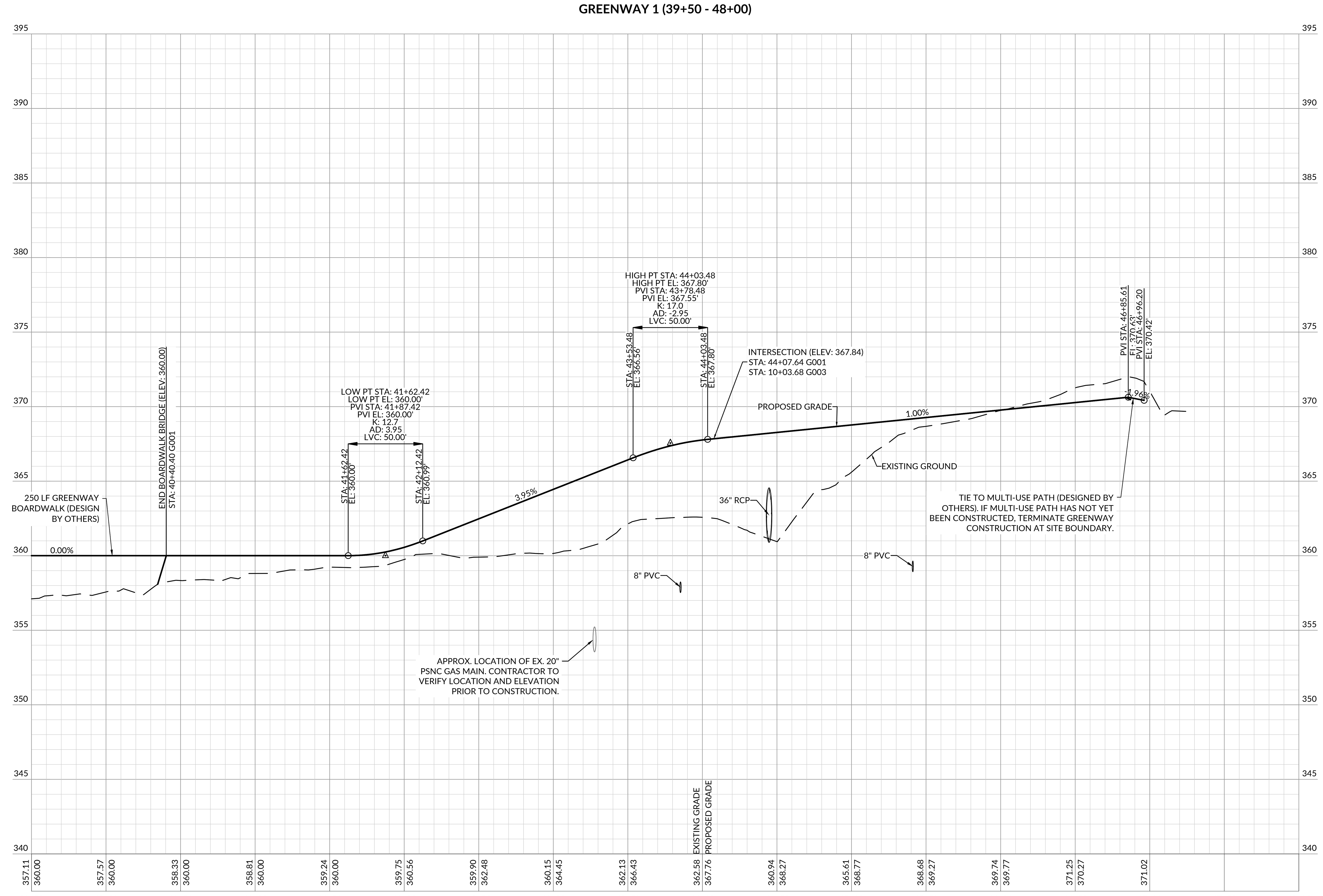
C13	60.00	37.00	36.42	N31° 20' 58"E
C14	60.00	33.39	32.96	N02° 15' 42"W
C15	200.00	58.55	58.35	N09° 49' 05"W
C16	60.00	28.01	27.75	N14° 48' 14"W
C17	60.00	28.01	27.76	N14° 48' 09"W
C18	300.00	55.31	55.23	N03° 51' 12"E
C19	60.00	45.08	44.02	N12° 23' 13"W
C20	60.00	57.15	55.02	N06° 37' 13"W

GREENWAY 1 (39+50 - 48+00)



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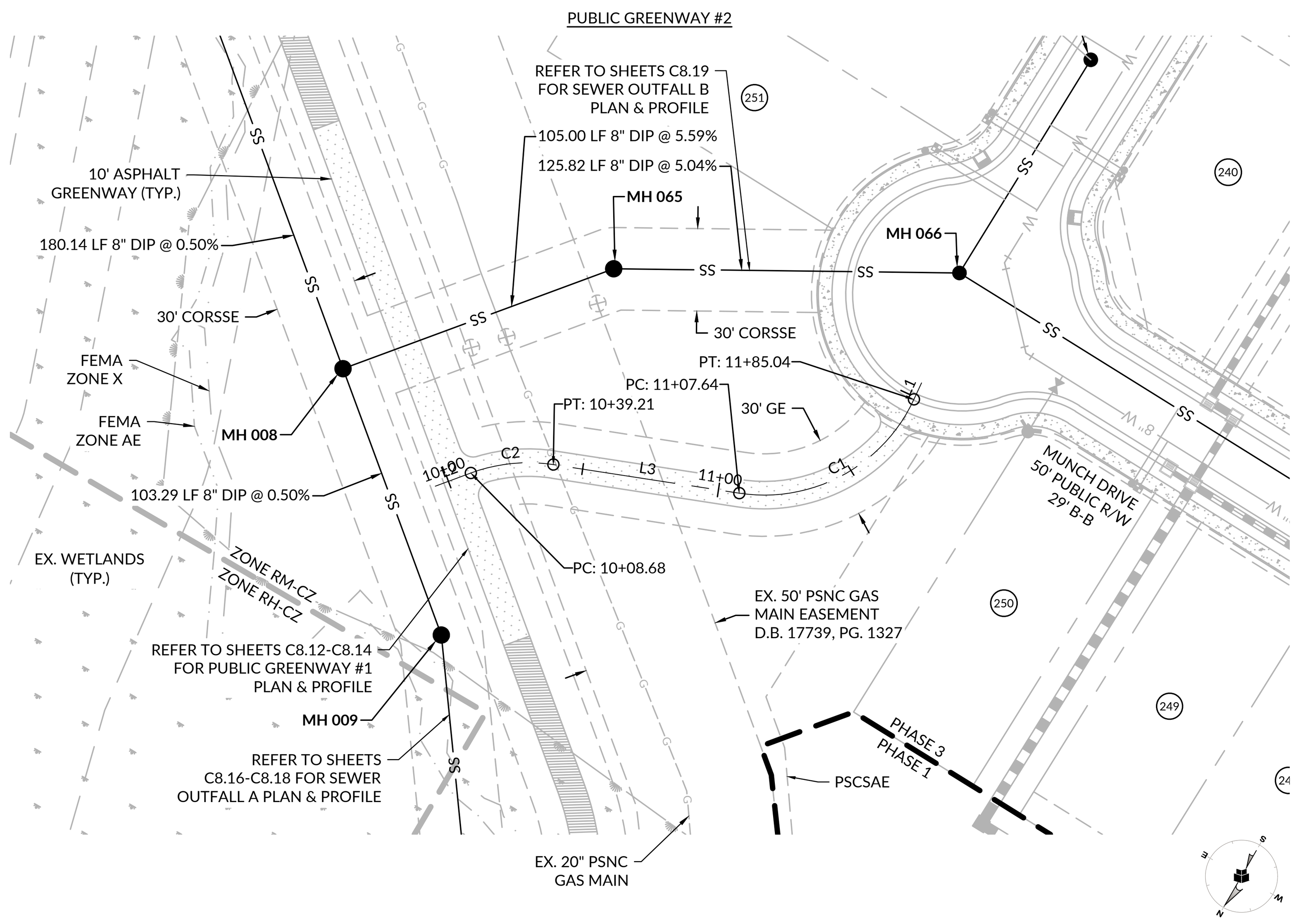
INITIAL PLAN DATE: 11/01/2024
REVISIONS:

WR JOB NUMBER 23-0045
DRN: WR DGN: WR CKD: WR

GREENWAY 1 PLAN & PROFILE (24+50 - 40+00)

C8.14

PUBLIC GREENWAY #2



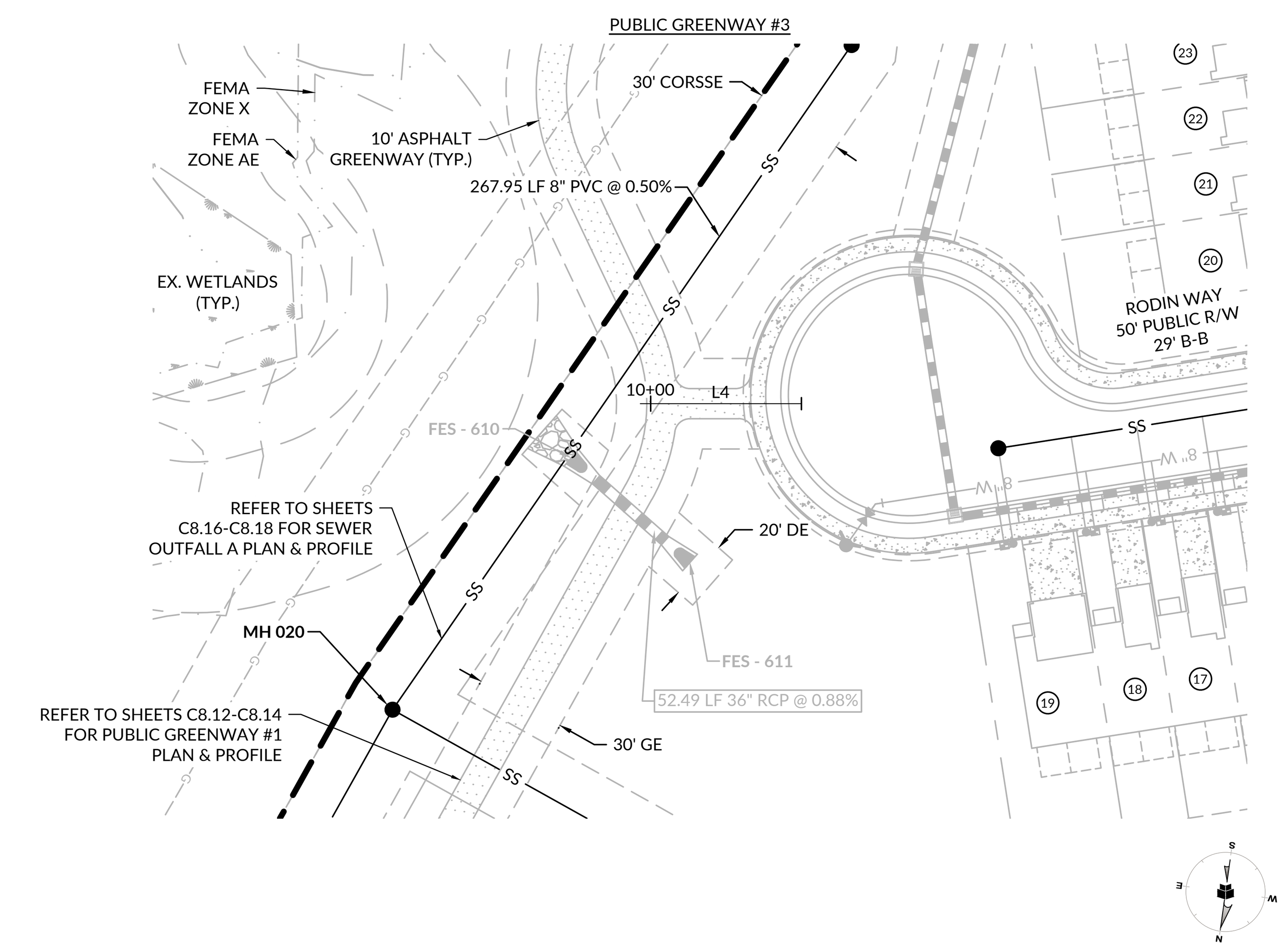
LINE TABLE

LINE #	LENGTH	DIRECTION
L1	6.63	S05° 29' 44"E
L2	13.76	S39° 15' 36"W
L3	68.43	S68° 24' 54"W
L4	53.58	S81° 26' 19"W

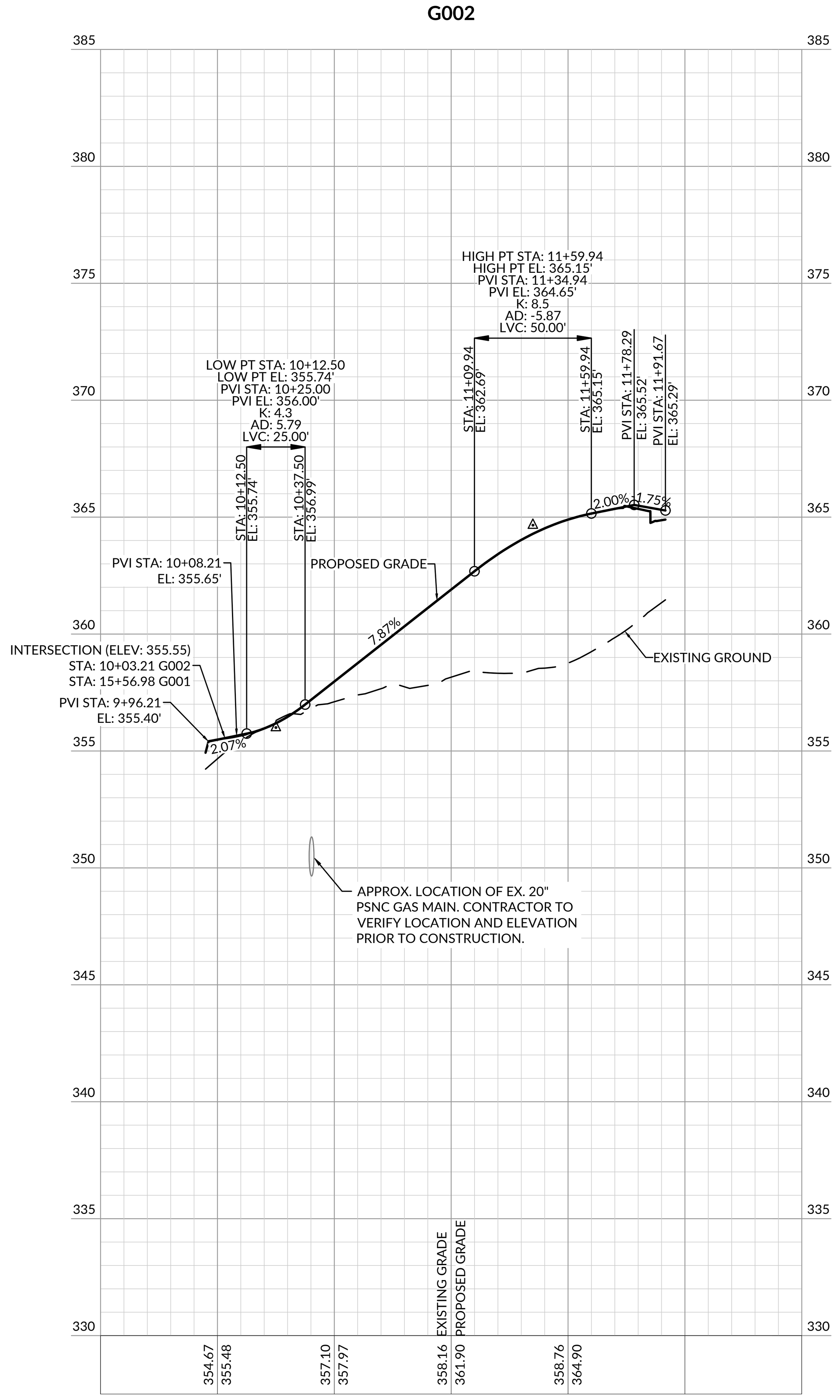
CURVE TABLE

CURVE #	RADIUS	LENGTH	CHORD LENGTH	CHORD DIRECTION
C1	60.00	77.40	72.14	S31° 27' 35"W
C2	60.00	30.53	30.20	S53° 50' 15"W

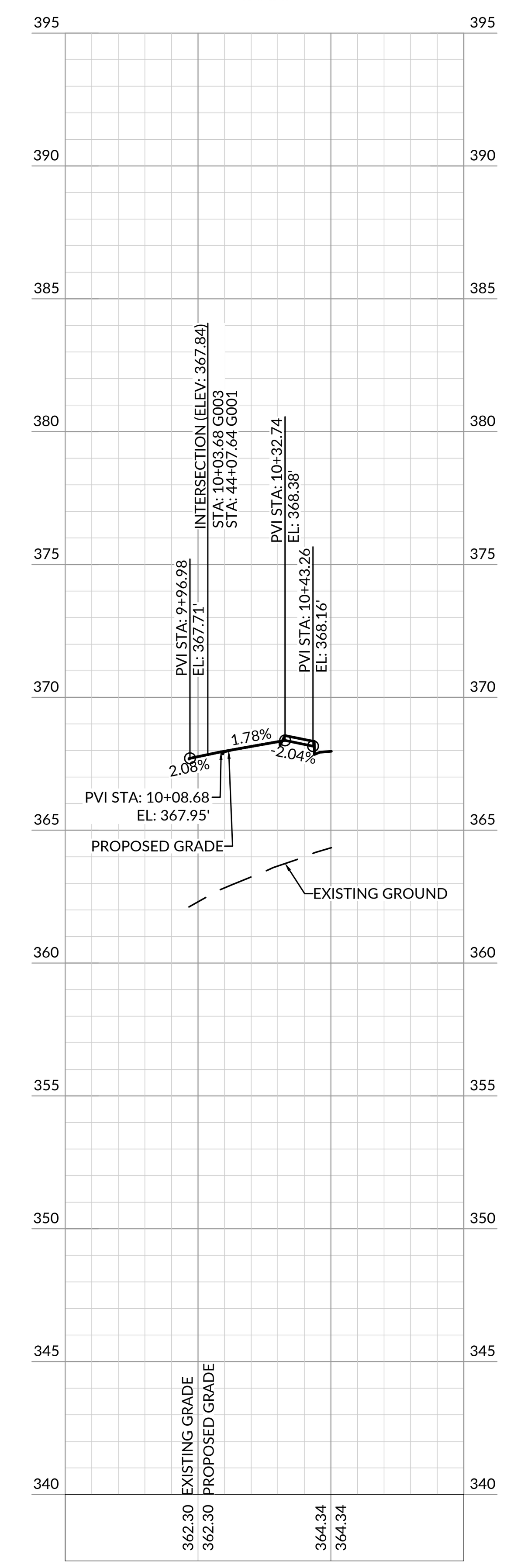
PUBLIC GREENWAY #3



G002



G003



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PRELIMINARY
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INITIAL PLAN DATE: 11/01/2024
REVISIONS:

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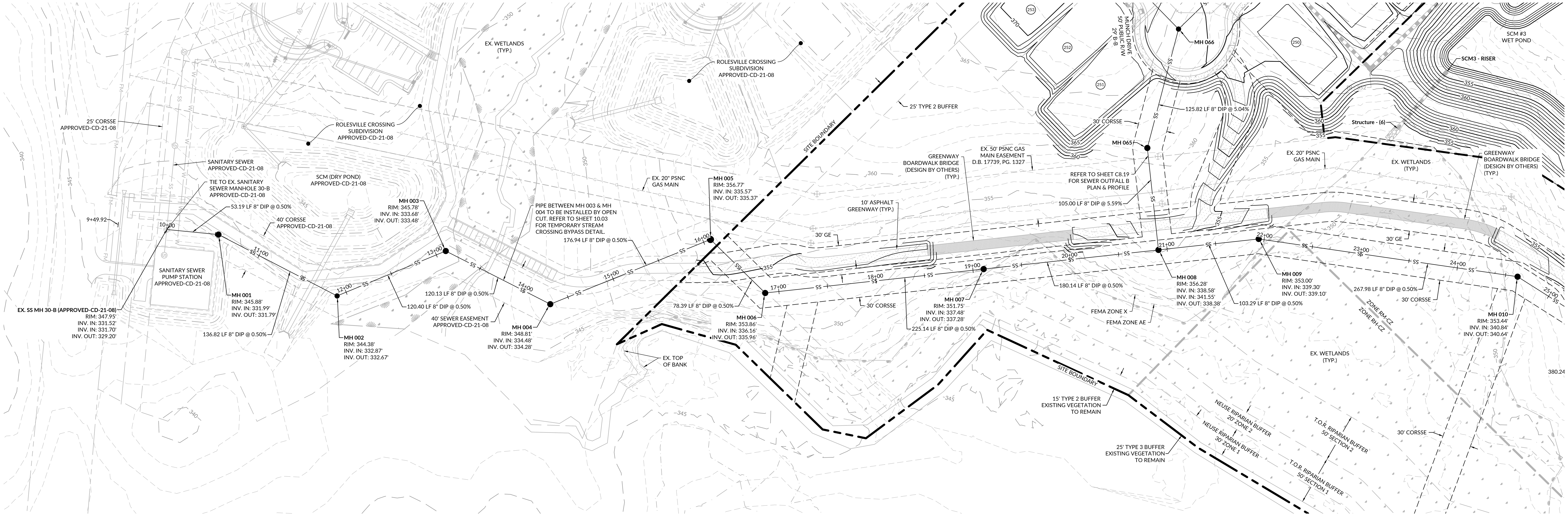
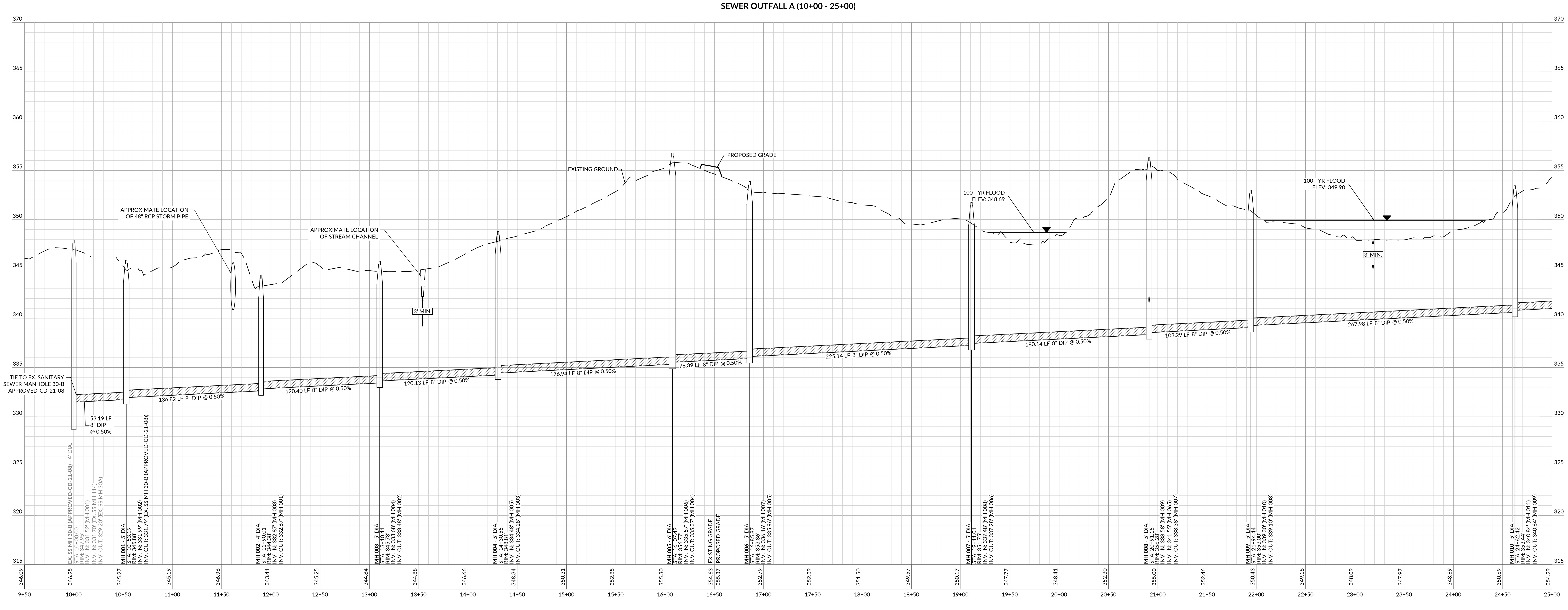
DRN: WR DGN: WR CKD: WR

GREENWAYS 2 & 3
PLAN & PROFILE

C8.15



SEWER OUTFALL A (10+00 - 25+00)



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CONSTRUCTION INFRASTRUCTURE DRAWINGS
BROADMOOR
CID-YR-XX
ROLESVILLE ROAD | ROLESVILLE, NC 27587 | WAKE COUNTY

PRELIMINARY
NOT APPROVED FOR CONSTRUCTION

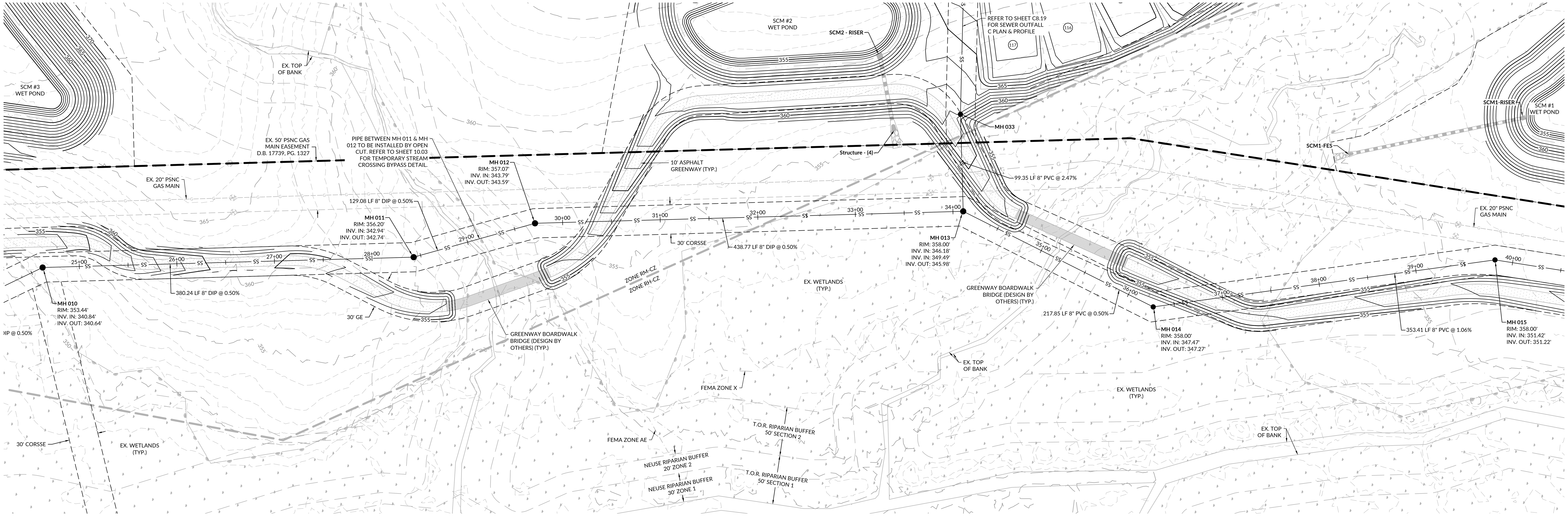
SCALE: 1 inch = 50 ft. H
1 inch = 5 ft. V

INITIAL PLAN DATE: 11/01/2024
REVISIONS:

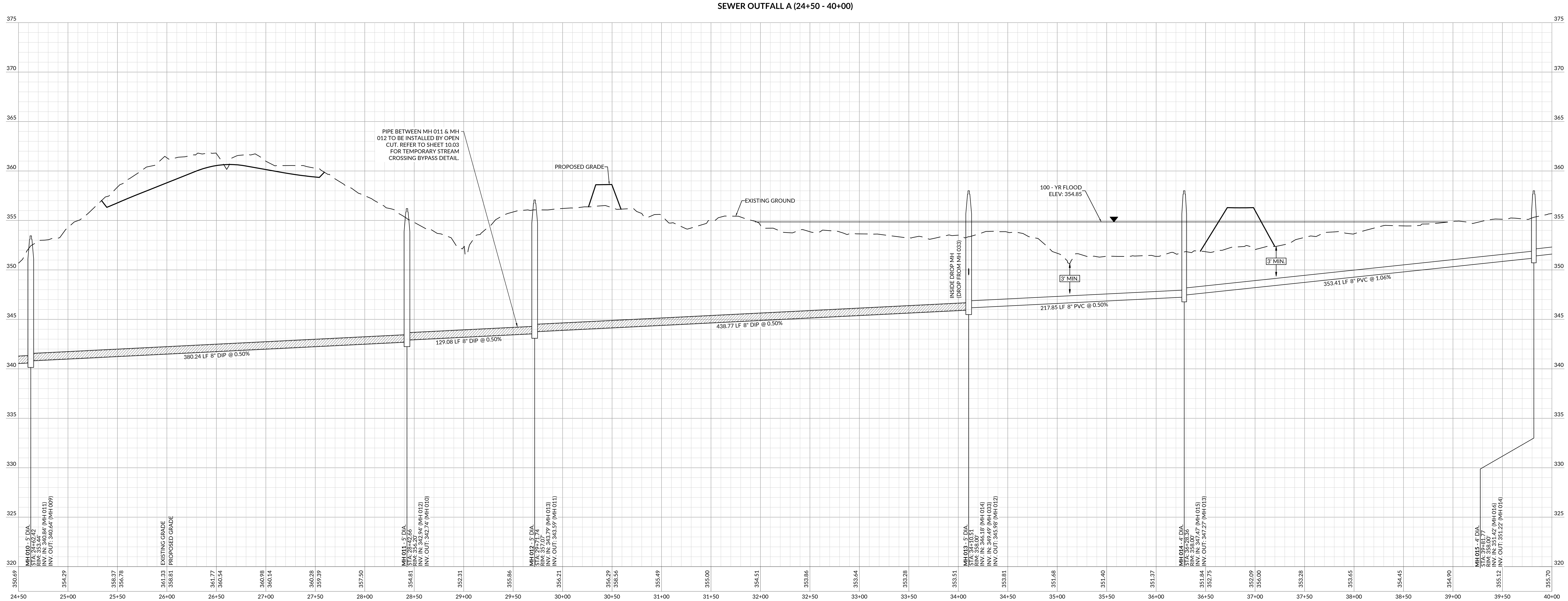
WR JOB NUMBER	23-0045
DRN: WR	DGN: WR CKD: WR

SEWER OUTFALL A (10+00 - 25+00) PLAN & PROFILE

C8.16



SEWER OUTFALL A (24+50 - 40+00)



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INITIAL PLAN DATE: 11/01/2024
REVISIONS:

WR JOB NUMBER 23-0045
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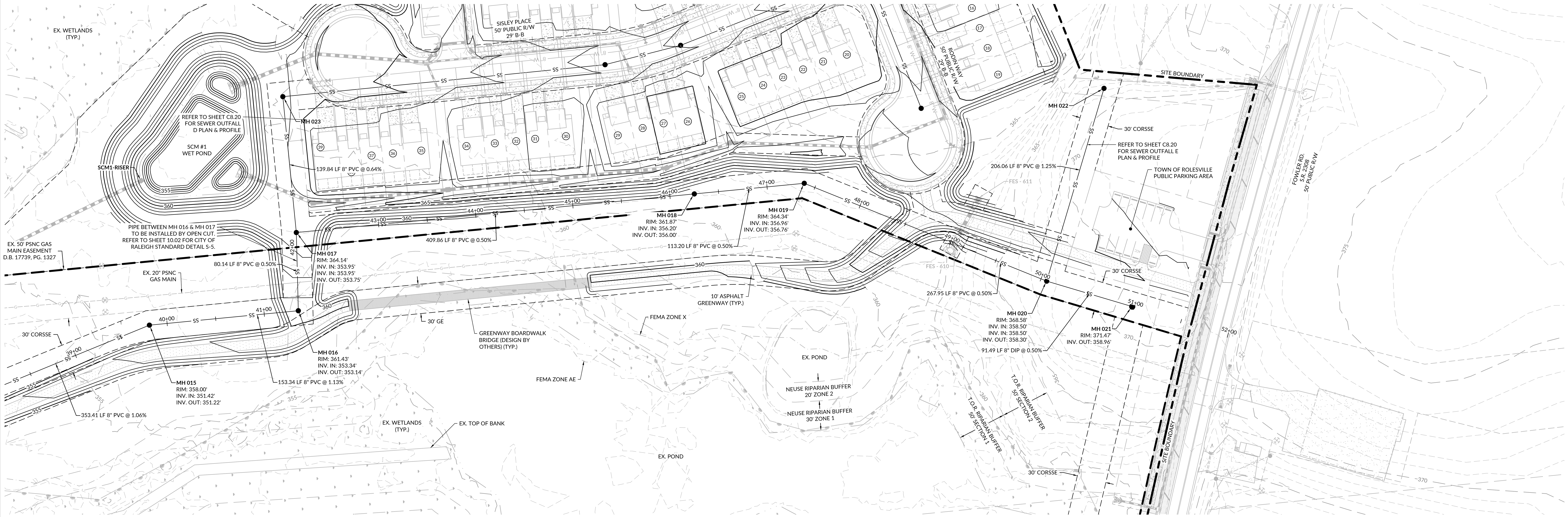
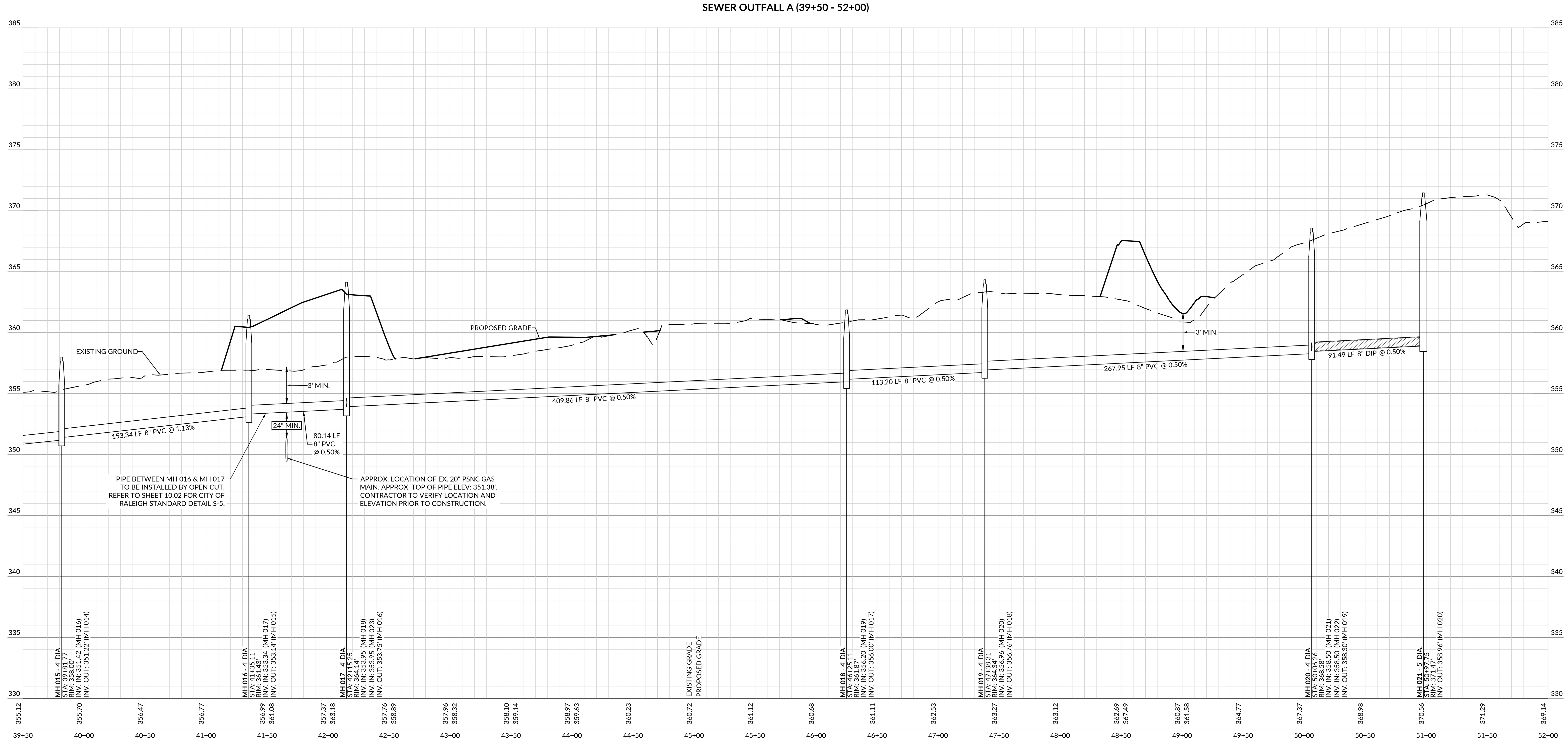
SEWER OUTFALL A (24+50 - 40+00) PLAN & PROFILE

C8.17



SEWER OUTFALL A (39+50 - 52+00)



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PRELIMINARY
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SCALE: 1 inch = 50 ft. H
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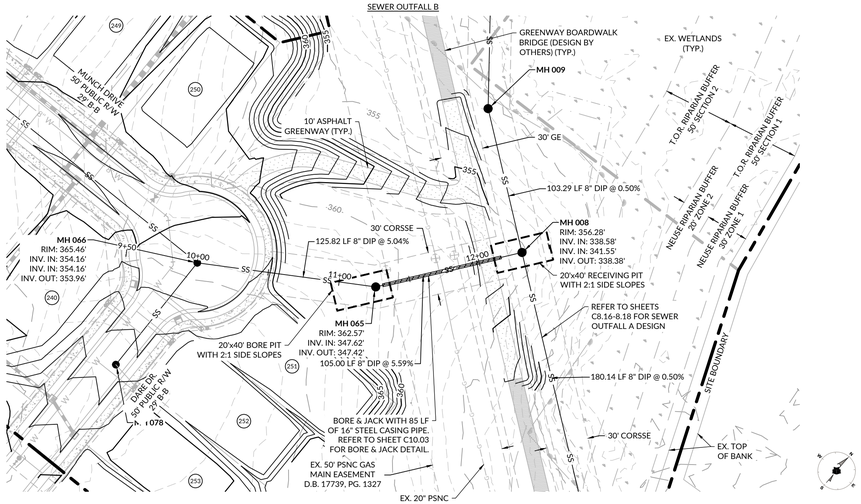
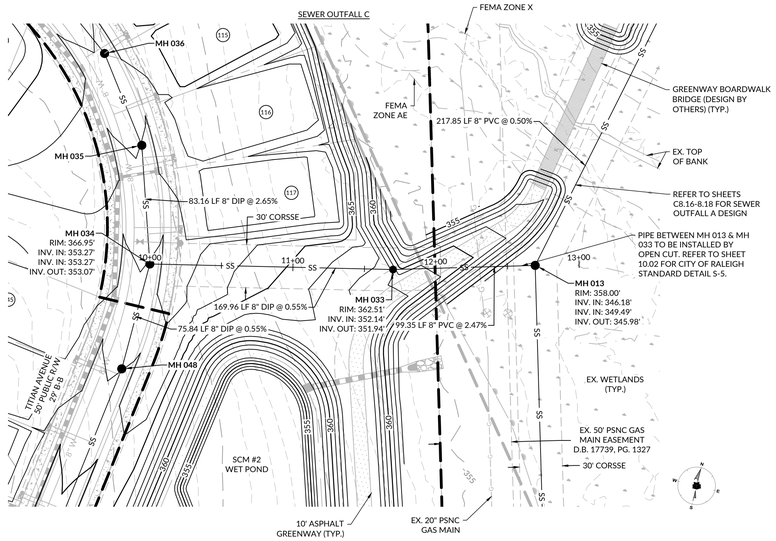
INITIAL PLAN DATE: 11/01/2024
REVISIONS:

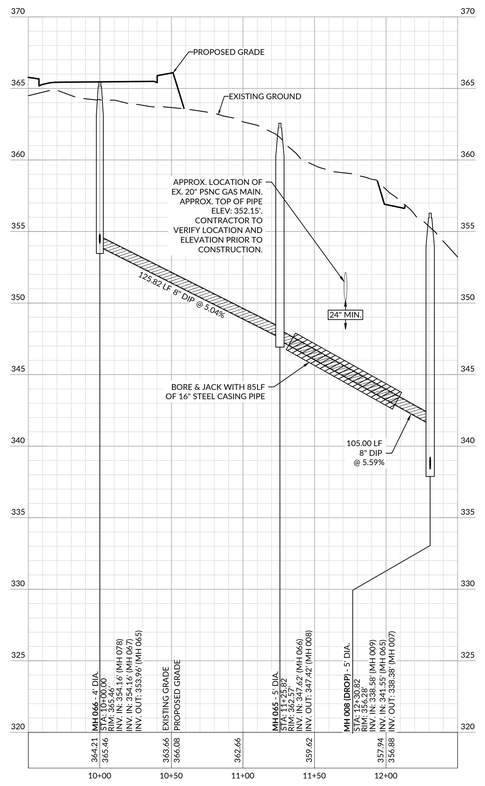
WR JOB NUMBER 23-0045
DRN: WR DGN: WR CKD: WR

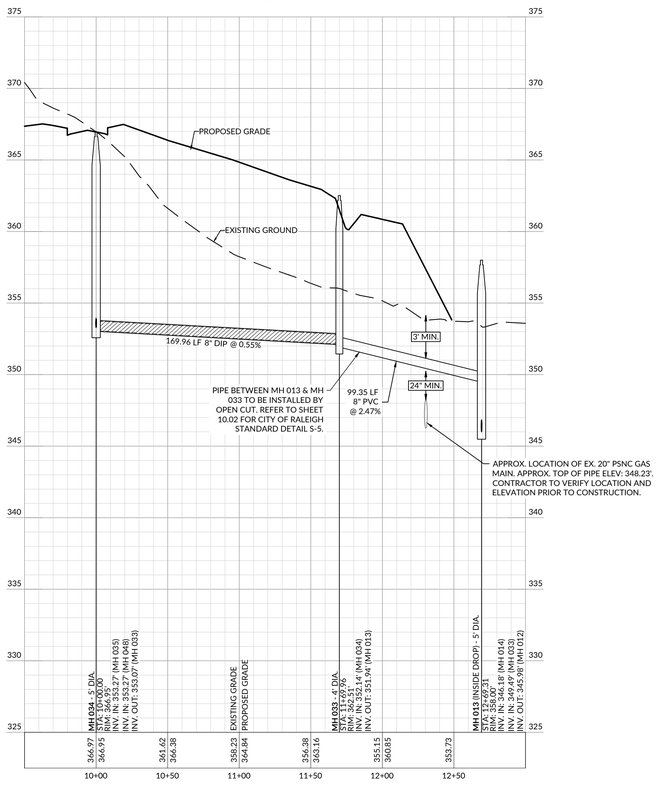
SEWER OUTFALL A (39+50 - 52+00) PLAN & PROFILE

C8.18









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NORTH CAROLINA PROFESSIONAL ENGINEER TERRENCE COOK
PRELIMINARY
NOT APPROVED FOR CONSTRUCTION
TERRENCE COOK

SCALE: 1 inch = 50 ft. H
1 inch = 5 ft. V

INITIAL PLAN DATE: 11/01/2024
REVISIONS:

WR JOB NUMBER 23-0045
DRN: WR DGN: WR CKD: WR

SEWER OUTFALLS B & C PLAN & PROFILE

C8.19

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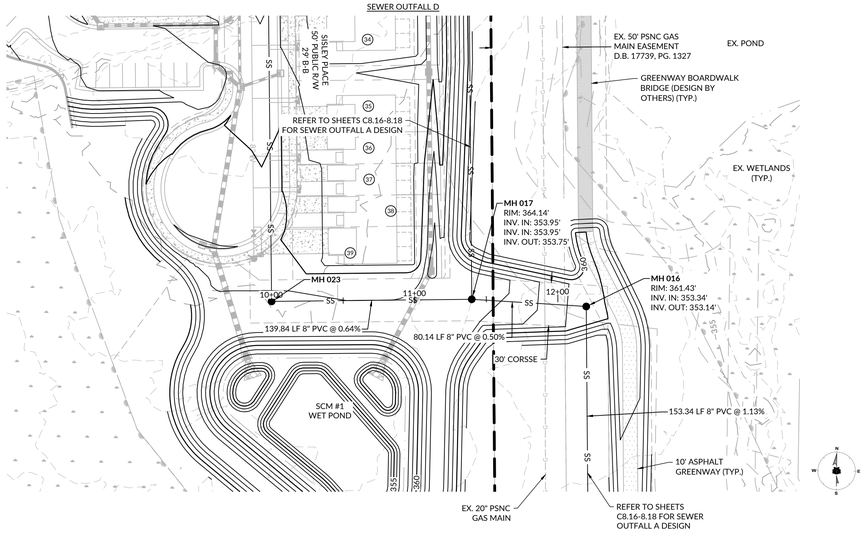

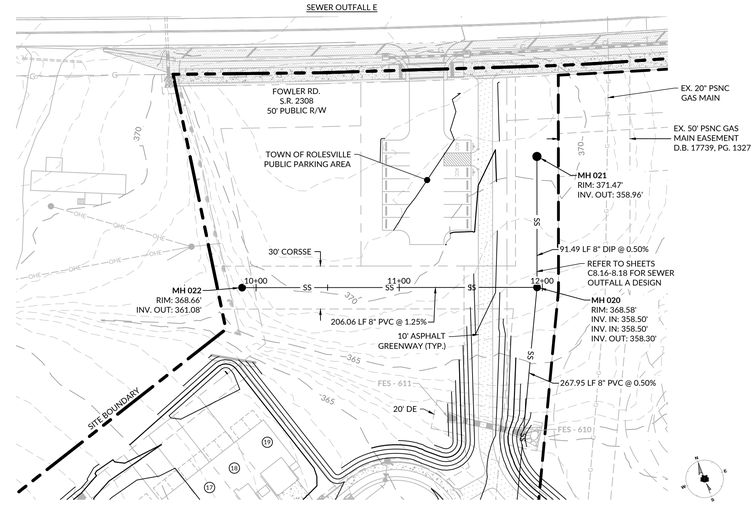

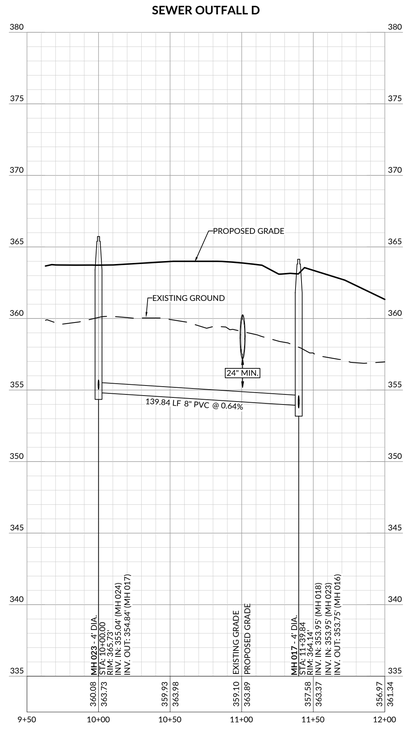

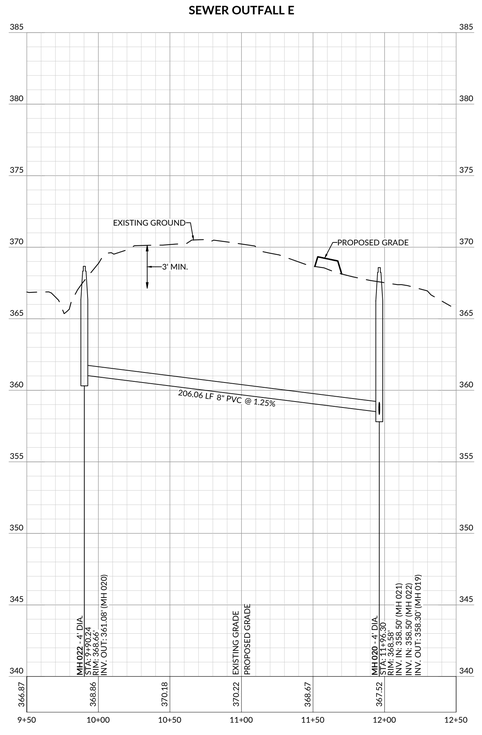

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CONSTRUCTION INFRASTRUCTURE DRAWINGS FOR
BROADMOOR CID-YR-XX
ROLESVILLE ROAD | ROLESVILLE, NC 27587 | WAKE COUNTY

NORTH CAROLINA PROFESSIONAL ENGINEER TERRENCE COOK
PRELIMINARY
NOT APPROVED FOR CONSTRUCTION

0 25 50
SCALE: 1 inch = 50 ft. H
1 inch = 5 ft. V

INITIAL PLAN DATE: 11/01/2024
REVISIONS:

WR JOB NUMBER		23-0045
DRN: WR	DGN: WR	CKD: WR

SEWER OUTFALLS D & E PLAN & PROFILE

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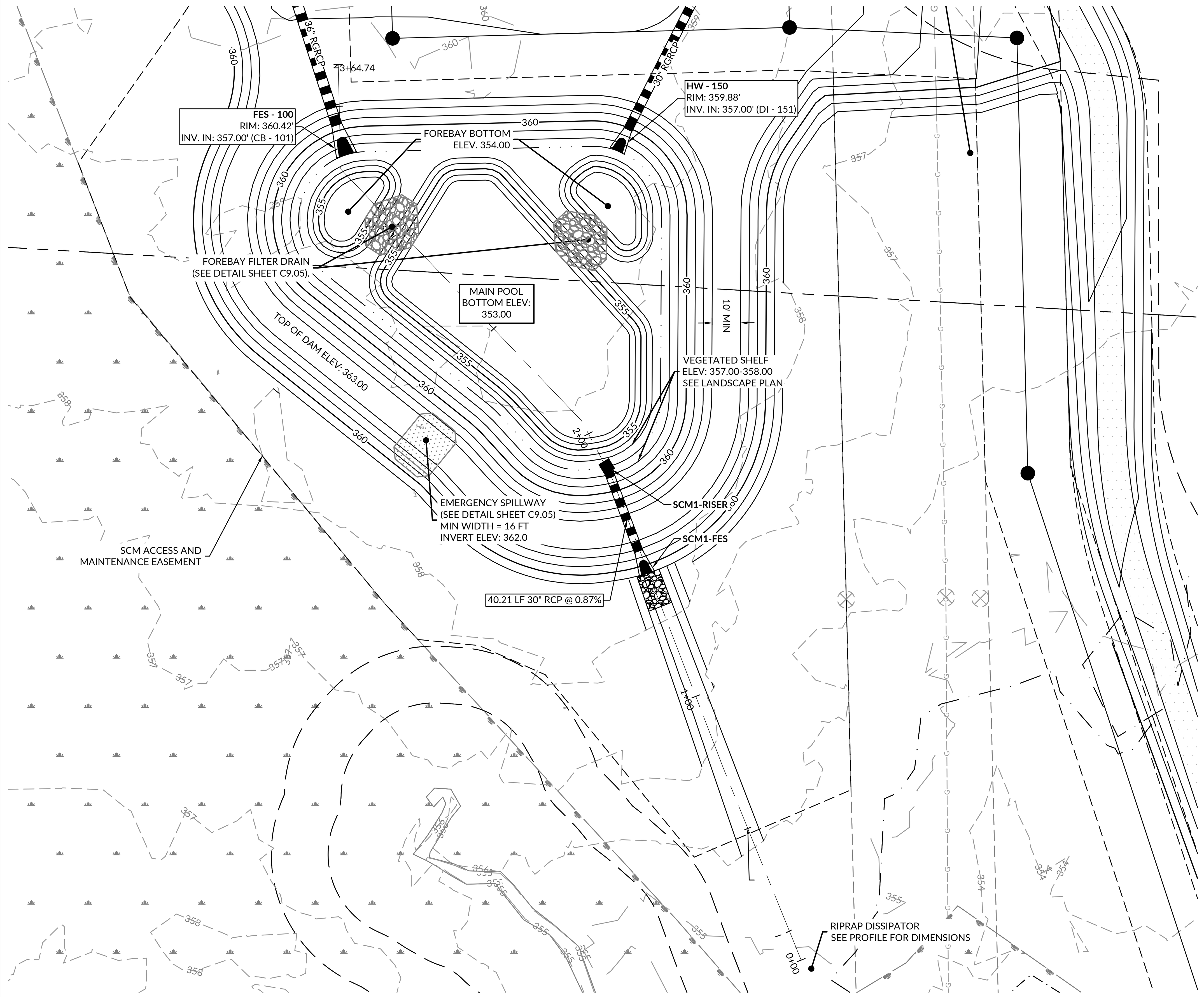
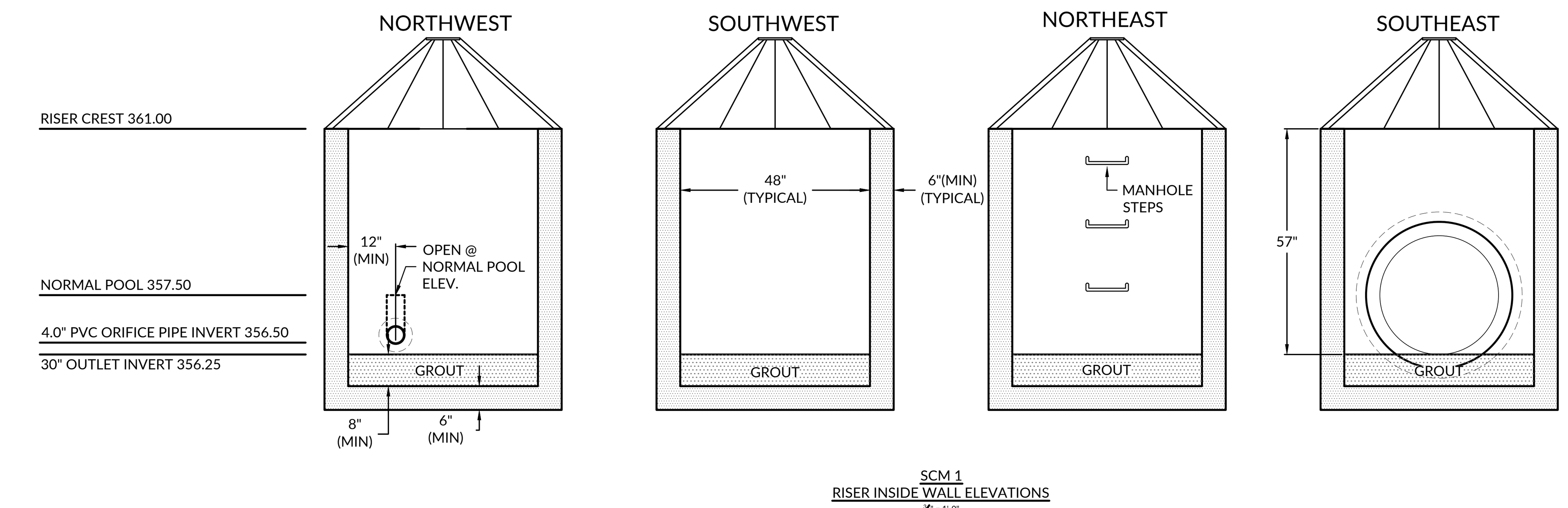
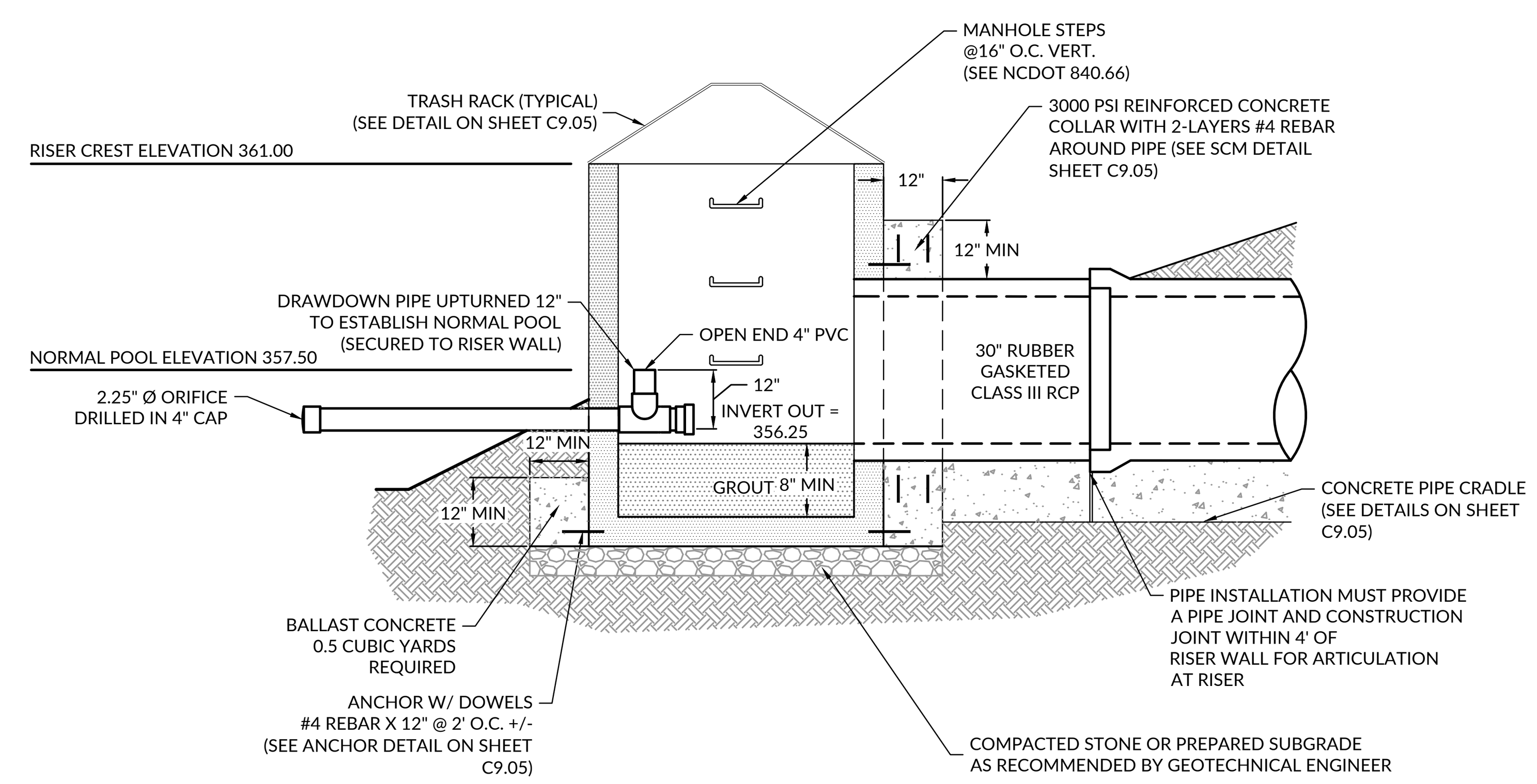


WET POND SCM #1 PLAN VIEW

SCALE: 1" = 30'

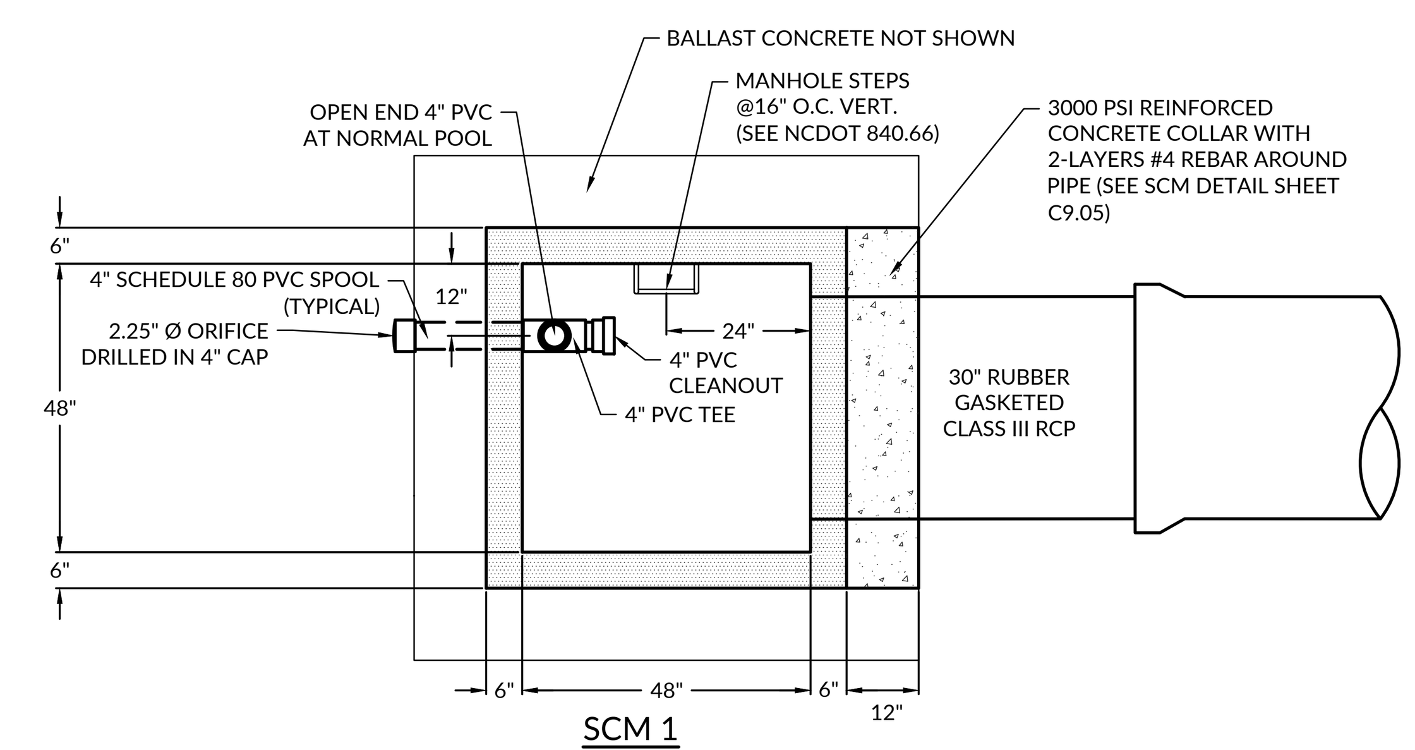


SCM 1
RISER INSIDE WALL ELEVATIONS

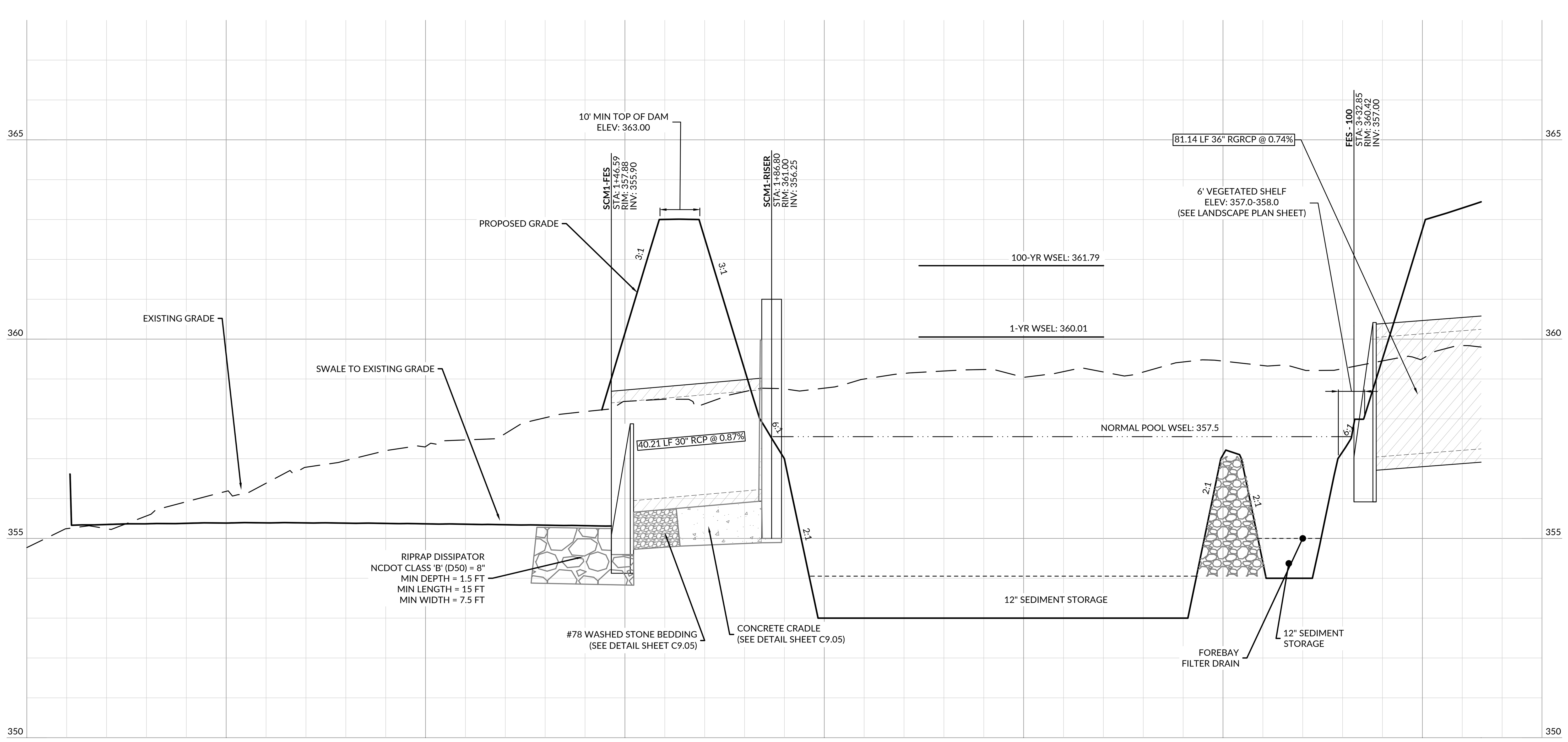


SCM 1
RISER DRAWDOWN DEVICE DETAIL

NOTE:
RISER AND BALLAST CONCRETE HAVE BEEN SIZED BASED ON BUOYANCY CALCULATIONS. ADJUSTMENTS TO CONCRETE DIMENSIONS ARE NOT PERMITTED WITHOUT PRIOR WRITTEN APPROVAL. ANY DIMENSIONAL CHANGES TO BALLAST CONCRETE BASE AND RISER MUST BE REQUESTED IN WRITING AND MUST BE ACCOMPANIED BY BUOYANCY CALCULATIONS SIGNED AND SEALED BY A NORTH CAROLINA REGISTERED PROFESSIONAL ENGINEER.



SCM 1
RISER DRAWDOWN DEVICE PLAN



WET POND SCM #1 PROFILE VIEW

SCALE: 1" = 20' HORIZONTAL, 1" = 2' VERTICAL

WET POND STORMWATER CONTROL MEASURE (SCM) GENERAL NOTES:

1. PRIOR TO OR DURING CONSTRUCTION, THE CONTRACTOR SHALL NOTIFY THE ENGINEER OF ANY DISCREPANCIES IN THE PLANS OR SPECIFICATIONS.
2. ALL CONSTRUCTION AND MINIMUM DESIGN CRITERIA SHALL BE IN ACCORDANCE WITH ALL APPLICABLE FEDERAL, STATE, AND LOCAL STANDARDS AND SPECIFICATIONS, HEREBY INCORPORATED BY REFERENCE.
3. UPON COMPLETION OF CONSTRUCTION, CERTIFICATION OF THE SCM BY THE GEOTECHNICAL ENGINEER WILL BE REQUIRED PRIOR TO FINAL SCM ACCEPTANCE.
4. THE GEOTECHNICAL ENGINEER SHALL EVALUATE SOILS FOR SUITABILITY OF DAM CONSTRUCTION AND SLOPE STABILITY.
5. PRIOR TO PLACEMENT OF EMBANKMENT FILL, THE GEOTECHNICAL ENGINEER SHALL SUPERVISE THE FOUNDATION PREPARATION AND APPROVE THE DEPTH AND EXTENT OF THE CUTOFF TRENCH, A MINIMUM OF 1 FOOT SHALL BE EXCAVATED.
6. THE DAM AND FOREBAY BERMS SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE FOLLOWING SPECIFICATIONS UNLESS SUPERCEDED BY THE GEOTECHNICAL ENGINEER'S RECOMMENDATIONS.
   - BORROW MATERIALS FOR USE AS EMBANKMENT FILL SHALL BE FREE OF ORGANICS, ROOTS AND OTHER WOODY VEGETATION OR ORGANIC DEBRIS.
   - FILL MATERIALS SHALL CONSIST OF SOILS WHICH CLASSIFY AS SC, SM, CL, CL-CH AND ML IN ACCORDANCE WITH THE UNIFIED CLASSIFICATION SYSTEM OR AS APPROVED BY THE GEOTECHNICAL ENGINEER.
   - FILL MATERIALS SHALL HAVE A MAXIMUM PARTICLE SIZE OF 3 INCHES IN MEAN DIAMETER.
   - FILL SHALL BE PLACED IN 8 INCH (MAXIMUM) LOOSE LIFTS FOR MATERIAL COMPACTED BY HEAVY COMPACTION EQUIPMENT AND IN 4 INCH (MAXIMUM) LOOSE LIFTS FOR MATERIAL COMPACTED BY HAND OPERATED TAMPERS UNDER THE SUPERVISION OF THE GEOTECHNICAL ENGINEER OR THEIR REPRESENTATIVE. FILL SHALL BE BROUGHT UP BY BENCHING INTO THE EXISTING SLOPE. A MAXIMUM HEIGHT OF 2 FEET SHALL BE USED FOR EACH BENCH LIFT TAKING CARE TO REMOVE ROOT STRUCTURES AS THE FILL PROCEEDS. THE SURFACE OF EACH LIFT SHALL BE SCARIFIED PRIOR TO PLACEMENT OF THE NEXT LIFT IN ORDER TO EFFECTIVELY TIE THE FILL LIFTS TOGETHER.
   - ALL COMPACTION SHALL BE TESTED BY THE NUCLEAR METHOD (ASTM D-6938) OR SAND CONE METHOD (ASTM D-1556) AT A RATE OF AT LEAST ONE TEST PER 5,000 SF PER ONE FOOT OF COMPACTED FILL THICKNESS IN GENERAL AREA FILLS AND ONE TEST PER 50 LINEAL FEET PER LIFT ALONG THE BARREL.
   - THE MINIMUM COMPACTION SHALL BE A MINIMUM OF 95% OF THE MAXIMUM STANDARD PROCTOR DENSITY (ASTM D-698) AT MOISTURE CONTENTS VARYING FROM 2 PERCENT BELOW TO 3 PERCENT ABOVE OPTIMUM MOISTURE CONTENT DETERMINED BY STANDARD PROCTOR TEST.
7. SUBGRADE FOR THE RISER STRUCTURE AND OUTLET PIPE SHALL BE APPROVED BY THE GEOTECHNICAL ENGINEER PRIOR TO PLACEMENT.IF THE GEOTECHNICAL ENGINEER REQUIRES ADDITIONAL SUBGRADE PREPARATION, THE ADDITIONAL COST SHALL BE APPROVED BY THE ENGINEER PRIOR TO PLACEMENT.
8. THE OUTLET PIPE SHALL BE BEDDED IN CONCRETE FOR 2/3 OF THE PIPE LENGTH, BEGINNING AT THE RISER, AND IN #78 STONE FOR 1/3 OF PIPE LENGTH TO THE OUTLET. SEE DETAILS ON SHEET CX.X.
9. EMBANKMENT AND SIDE SLOPES OF THE BASIN SHALL BE STABILIZED PER SEEDING SCHEDULE ON EROSION CONTROL DETAILS SHEET OR SODDED. SEE LANDSCAPE PLAN ON SHEETS LX.X AND LX.X FOR FURTHER PLANTING DETAILS.
10. IF, DURING CONSTRUCTION, THE SCM IS TO BE USED AS AN EROSION CONTROL MEASURE, THE FOREBAY BERM(S) SHALL NOT BE INSTALLED DURING THE INITIAL CONSTRUCTION OR WHILE THE SCM IS USED AS AN EROSION CONTROL MEASURE.
11. UNLESS OTHERWISE NOTED, ALL PERMANENT STRUCTURES (e.g. RISER/BARREL, WEIR WALLS, ETC.) ARE TO BE INSTALLED WITH THE INITIAL DAM CONSTRUCTION.
12. FOR SITE BUILT FEATURES (e.g. WEIR WALLS, DROP STRUCTURES, BRIDGES, ETC.), THE CONTRACTOR SHALL PROVIDE STRUCTURAL DRAWINGS TO BE SIGNED AND SEALED BY A NC PROFESSIONAL ENGINEER AND TO THE DESIGN ENGINEER FOR REVIEW AND APPROVAL PRIOR TO CONSTRUCTION.
13. PRIOR TO FINAL GRADING OF THE SCM, THE CONTRACTOR SHALL PROVIDE SUFFICIENT AS-BUILT SURVEY INFORMATION TO CONFIRM THAT THE FINISHED SCM WILL MEET THE SPECIFIC DIMENSIONAL REQUIREMENTS APPLICABLE TO THE SCM. THOSE REQUIREMENTS INCLUDE:
   - POND BOTTOM ELEVATION = 353.00 FT
   - DRAWDOWN OVERFLOW ELEVATION (NORMAL POOL) = 357.5 FT
   - MINIMUM SURFACE AREA AT NORMAL POOL ELEVATION = 5,779 SF
   - RISER CREST ELEVATION= 361.00 FT
   - LOW POINT TOP OF EMBANKMENT (AUXILIARY SPILLWAY) = 362.00 FT
   - AVERAGE TOP OF EMBANKMENT = 363.00 FT
15. ELEVATIONS SHALL BE WITHIN 0.1 FEET OF THE ABOVE ELEVATIONS FOR EARTHWORK, AND 0.05 FEET FOR OUTLET STRUCTURE. ALL SURFACE AREAS ARE THE MINIMUM AREAS. REQUEST FOR A REDUCTIONS IN THE MINIMUM VALUES WILL BE CONSIDERED ON A CASE BY CASE BASIS.
16. ONCE THE PROJECT SITE HAS BEEN STABILIZED, CONTRACTOR SHALL OBTAIN APPROVAL BY EROSION CONTROL INSPECTOR IN ORDER TO REMOVE TEMPORARY EROSION CONTROL DEVICES.
   - ONCE ALL SEDIMENT AND EROSION CONTROL DEVICES HAVE BEEN REMOVED, THE SCM SHALL BE CONVERTED TO A PERMANENT SCM.
   - ALL SEDIMENT SHALL BE REMOVED AND DISPOSED OF PROPERLY.
   - FOREBAY AND VEGETATED SHELF SHALL BE CONSTRUCTED AS SHOWN ON THE PLAN.
   - VEGETATED SHELF SHALL BE PLANTED PER PLANT SCHEDULE ON LANDSCAPE PLAN (SEE LITTLE DIVERSIFIED ARCHITECTS).
17. FINAL CERTIFICATION OF THE SCM BY A PROFESSIONAL ENGINEER LICENSED IN THE STATE IN WHICH THE PROJECT IS LOCATED IS REQUIRED.

CLAY LINER SPECIFICATIONS:

THE CONTRACTOR SHALL INSTALL A CLAY LINER TO MAINTAIN A PERMANENT POOL AT THE DESIGN ELEVATION. IF THE SITE GEOTECHNICAL ENGINEER DETERMINES THAT THE EXISTING SITE CONDITIONS (SOIL PROPERTIES, EXISTING WATER TABLE, ETC.) INDICATE THAT NORMAL POOL CAN BE MAINTAINED WITHOUT A CLAY LINER, THE GEOTECHNICAL ENGINEER WILL PROVIDE NOTICE IN WRITING TO THE PROJECT ENGINEER THAT THE CLAY LINER IS NOT REQUIRED. IF THE CLAY LINER IS NOT INSTALLED, THE OWNER SHALL RECEIVE A CREDIT FOR THE DELETION OF THE LINER.

AT A MINIMUM, THE CLAY LINER MATERIAL FOR THE WET POND SHALL MEET THE FOLLOWING SPECIFICATIONS:

- UNIFIED SOIL CLASSIFICATION SYSTEM DESIGNATION OF CL, CH, ML, OR SC
- MINIMUM OF 40% PASSING #200 SIEVE
- MINIMUM PLASTICITY INDEX OF 12
- MAXIMUM PERMEABILITY OF 1×10^{-5} cm/sec
- A MINIMUM OF 2 TESTS OF EACH ABOVE PARAMETER SHALL BE PROVIDED FROM AN APPROVED LABORATORY ON THE LINER MATERIAL AND PRESENTED TO THE ENGINEER FOR APPROVAL PRIOR TO PLACEMENT OF THE MATERIAL.
- COMPACTION TO A MINIMUM OF 95% OF THE MAXIMUM STANDARD PROCTOR DENSITY (ASTM D-698), AND WITHIN 3% OF THE OPTIMUM MOISTURE CONTENT (MINIMUM OF 1 COMPACTION DENSITY TEST PER 2500 SQUARE FEET).
- AN IN-PLACE MAXIMUM INFILTRATION RATE OF 0.01 INCHES PER HOUR.
- RECOMMENDATIONS OF THE SITE GEOTECHNICAL ENGINEER MAY SUPERCEDE THE ABOVE SPECIFICATIONS.

THE CLAY LINER SHALL BE PLACED UNDER THE BOTTOM OF THE SCM PERMANENT POOL TO A MINIMUM THICKNESS OF 8 INCHES. A MINIMUM OF 4 INCHES OF TOPSOIL SHALL BE PLACED ABOVE THE CLAY LINER TO THE FINISHED GRADE AS SHOWN ON THE DRAWINGS AND/OR DETAILS. CARE SHALL BE TAKEN WHEN PLACING THE TOPSOIL SO AS NOT TO DAMAGE THE CLAY LINER. A CLAY/SOIL, NO ORGANICS, MIXTURE MAY BE USED IF THE ABOVE SPECIFICATIONS ARE SATISFIED AND WITH WRITTEN APPROVAL BY THE GEOTECHNICAL ENGINEER.

PRECAST CONCRETE MATERIALS NOTES:

1. ALL PRECAST CONCRETE STRUCTURES SHALL CONFORM TO ASTM C913 (RECTANGULAR) OR C478 (ROUND).
2. ALL REINFORCED CONCRETE PIPE SHALL CONFORM TO ASTM C76, CLASS III (UNLESS OTHERWISE NOTED),
   - 2.1. O-RING JOINTS (RGRCP) SHALL CONFORM TO ASTM C443 & ASTM C361.
   - 2.2. NON O-RING JOINTS (RCP) SHALL CONFORM TO ASTM C990

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PRELIMINARY
NOT APPROVED FOR CONSTRUCTION

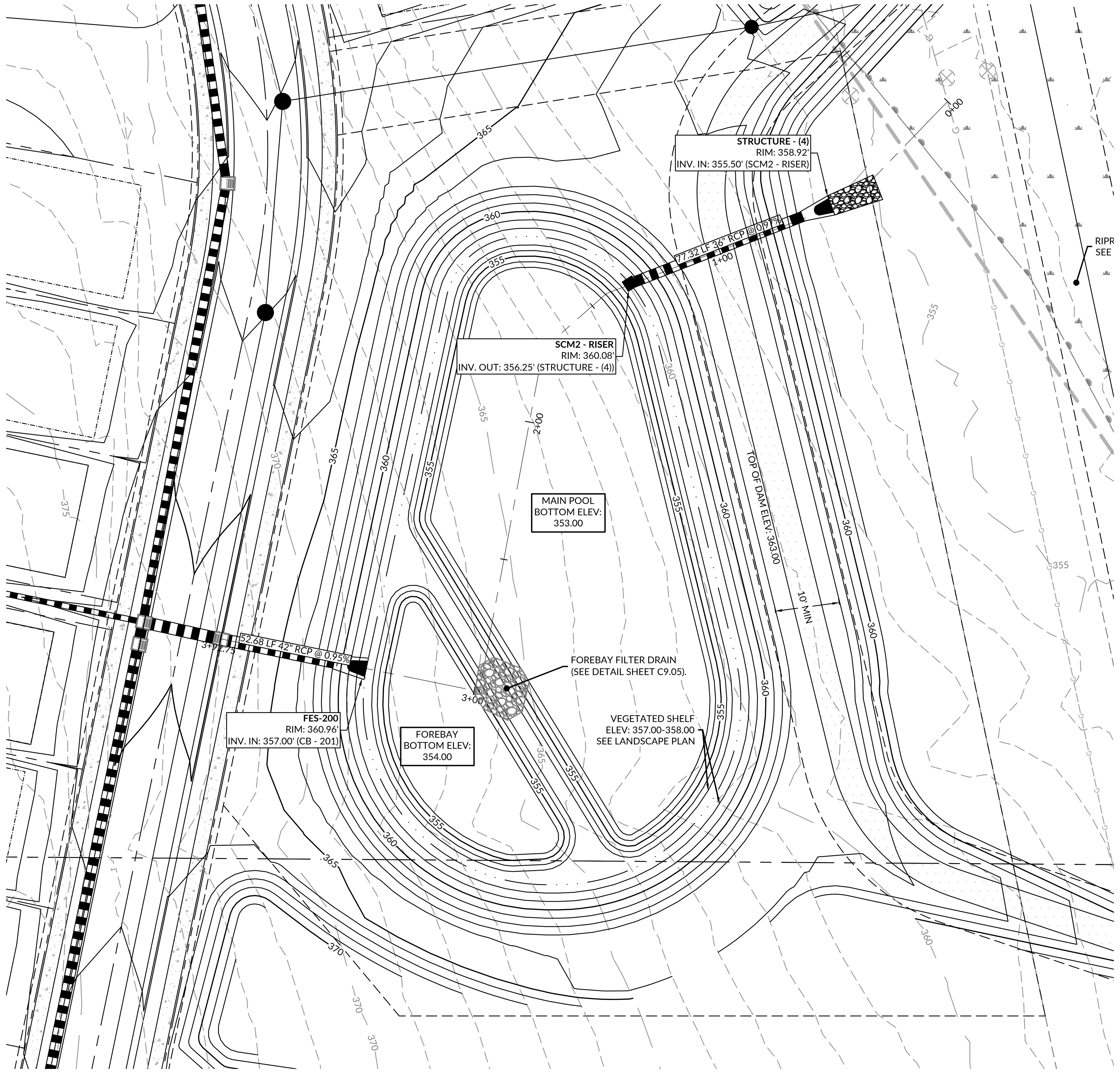
SCALE: 1 inch = 30 ft. H
1 inch = 3 ft. V

INITIAL PLAN DATE: 11/01/2024
REVISIONS:

WR JOB NUMBER	23-0045	
DRN: WR	DGN: WR	CKD: WR

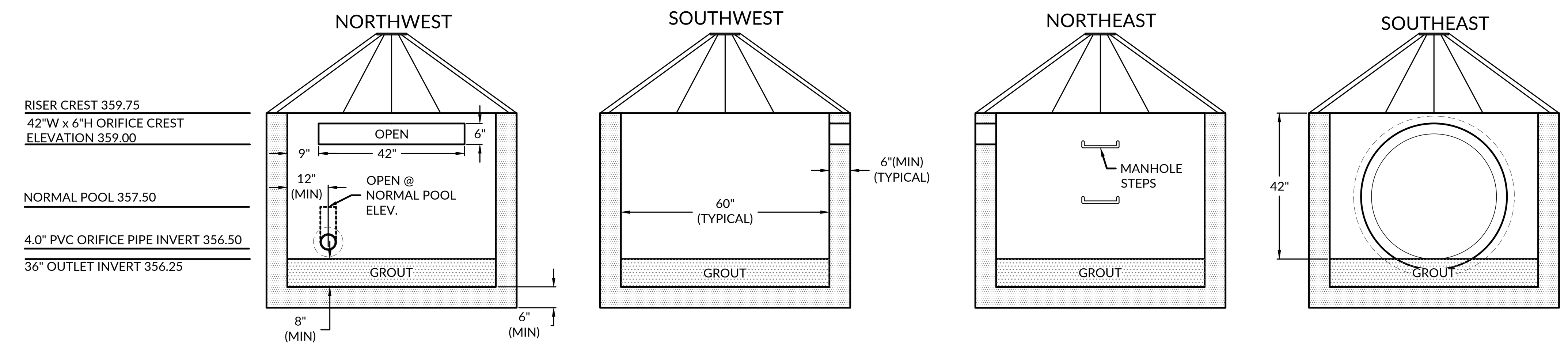
SCM 1 PLAN & PROFILE

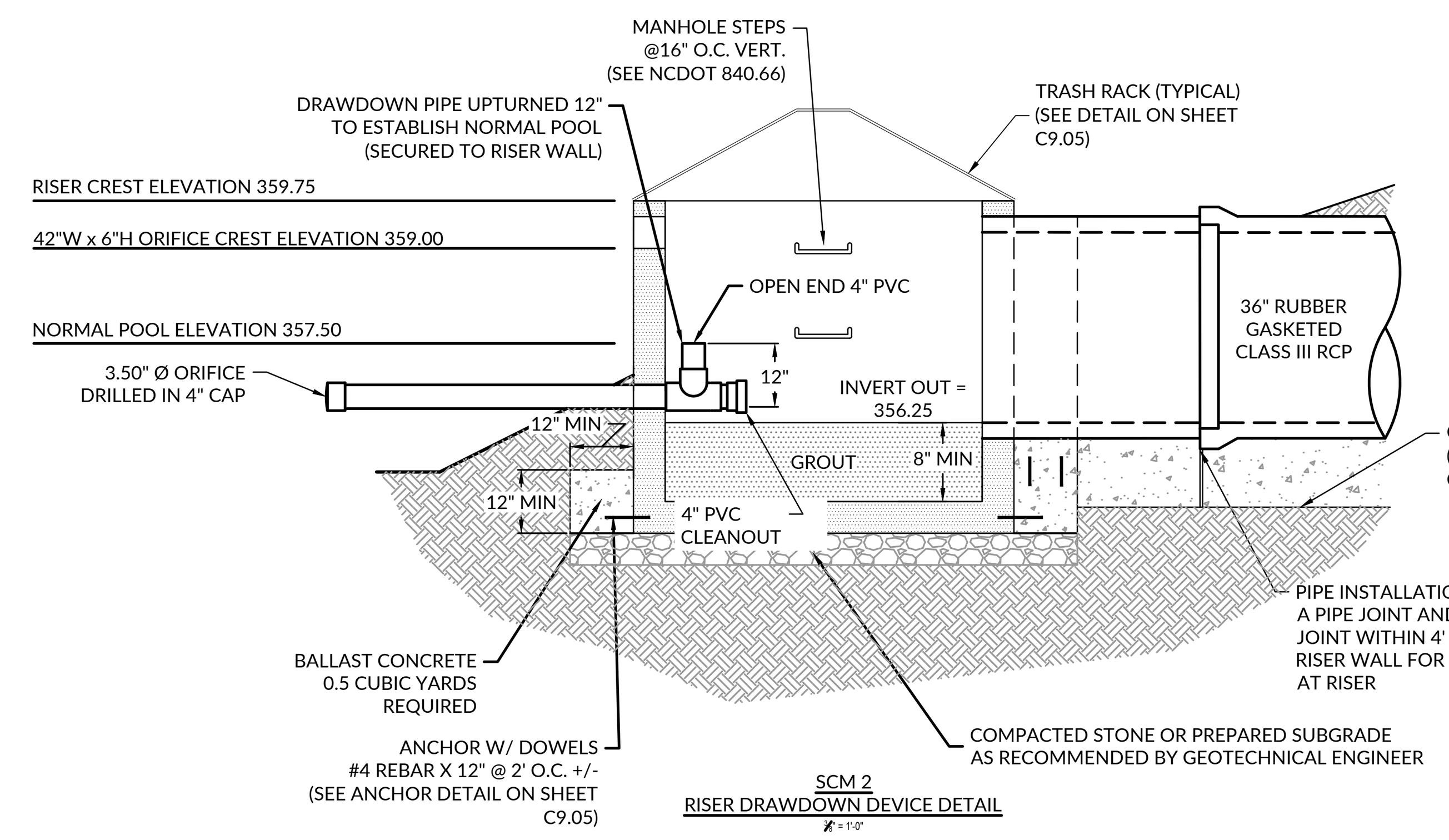
C9.01



WET POND SCM #2 PLAN VIEW

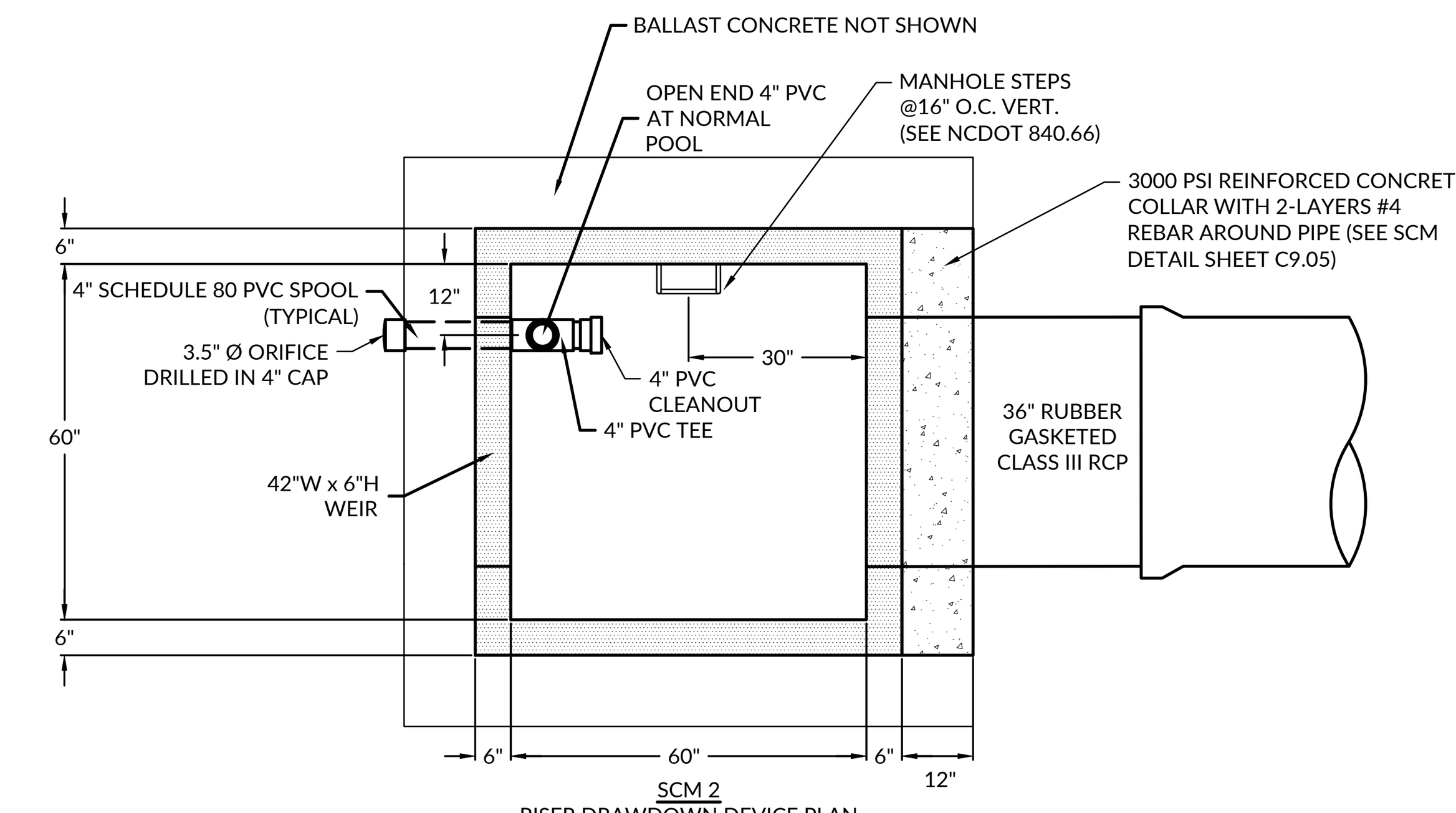
SCALE: 1" = 30'



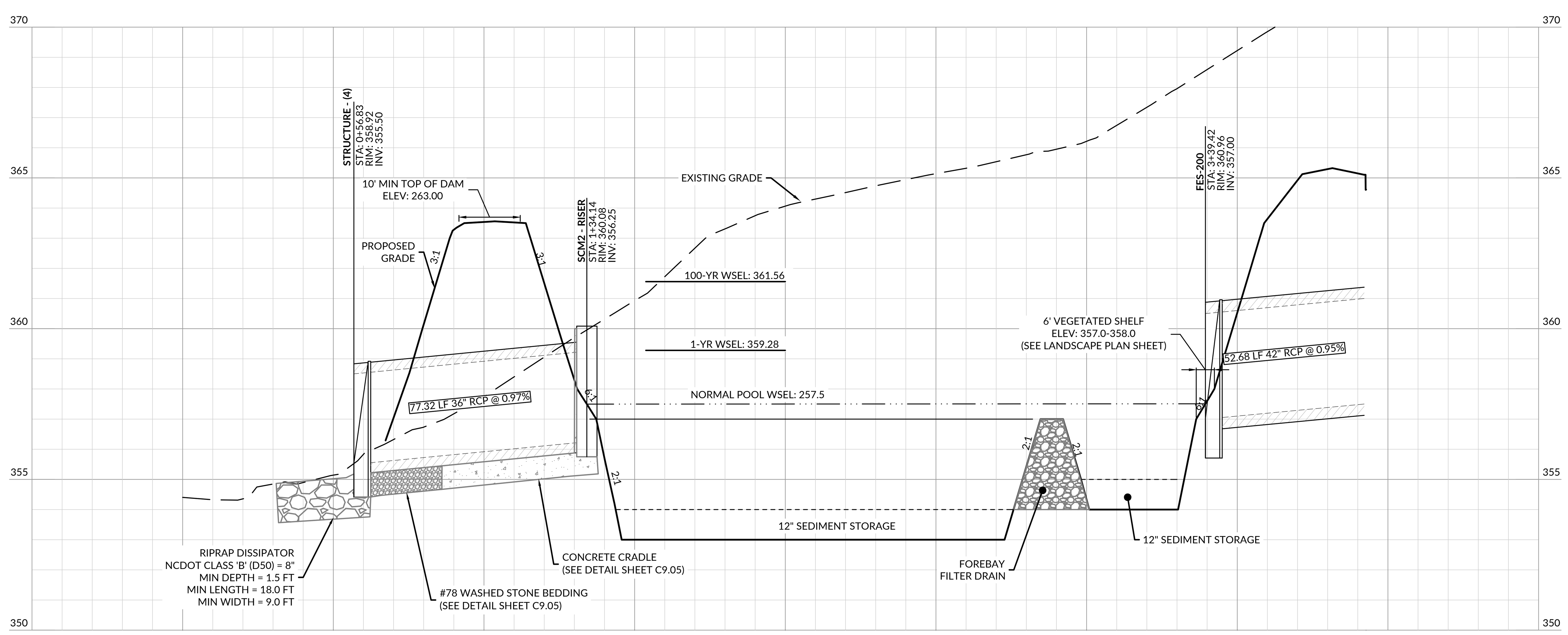


SCM 2
RISER DRAWDOWN DEVICE DETAIL

NOTE:
RISER AND BALLAST CONCRETE HAVE BEEN SIZED BASED ON BUOYANCY CALCULATIONS. ADJUSTMENTS TO CONCRETE DIMENSIONS ARE NOT PERMITTED WITHOUT PRIOR WRITTEN APPROVAL. ANY DIMENSIONAL CHANGES TO BALLAST CONCRETE BASE AND RISER MUST BE REQUESTED IN WRITING AND MUST BE ACCOMPANIED BY BUOYANCY CALCULATIONS SIGNED AND SEALED BY A NORTH CAROLINA REGISTERED PROFESSIONAL ENGINEER.



SCM 2
RISER DRAWDOWN DEVICE PLAN



WET POND SCM #2 PROFILE VIEW

SCALE: 1" = 30' HORIZONTAL, 1" = 3' VERTICAL

WET POND STORMWATER CONTROL MEASURE (SCM) GENERAL NOTES:

1. PRIOR TO OR DURING CONSTRUCTION, THE CONTRACTOR SHALL NOTIFY THE ENGINEER OF ANY DISCREPANCIES IN THE PLANS OR SPECIFICATIONS.
2. ALL CONSTRUCTION AND MINIMUM DESIGN CRITERIA SHALL BE IN ACCORDANCE WITH ALL APPLICABLE FEDERAL, STATE, AND LOCAL STANDARDS AND SPECIFICATIONS, HEREBY INCORPORATED BY REFERENCE.
3. UPON COMPLETION OF CONSTRUCTION, CERTIFICATION OF THE SCM BY THE GEOTECHNICAL ENGINEER WILL BE REQUIRED PRIOR TO FINAL SCM ACCEPTANCE.
4. THE GEOTECHNICAL ENGINEER SHALL EVALUATE SOILS FOR SUITABILITY OF DAM CONSTRUCTION AND SLOPE STABILITY.
5. PRIOR TO PLACEMENT OF EMBANKMENT FILL, THE GEOTECHNICAL ENGINEER SHALL SUPERVISE THE FOUNDATION PREPARATION AND APPROVE THE DEPTH AND EXTENT OF THE CUTOFF TRENCH, A MINIMUM OF 1 FOOT SHALL BE EXCAVATED.
6. THE DAM AND FOREBAY BERMS SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE FOLLOWING SPECIFICATIONS UNLESS SUPERCEDED BY THE GEOTECHNICAL ENGINEER'S RECOMMENDATIONS.
   - BORROW MATERIALS FOR USE AS EMBANKMENT FILL SHALL BE FREE OF ORGANICS, ROOTS AND OTHER WOODY VEGETATION OR ORGANIC DEBRIS.
   - FILL MATERIALS SHALL CONSIST OF SOILS WHICH CLASSIFY AS SC, SM, CL, CL-CH AND ML IN ACCORDANCE WITH THE UNIFIED CLASSIFICATION SYSTEM OR AS APPROVED BY THE GEOTECHNICAL ENGINEER.
   - FILL MATERIALS SHALL HAVE A MAXIMUM PARTICLE SIZE OF 3 INCHES IN MEAN DIAMETER.
   - FILL SHALL BE PLACED IN 8 INCH (MAXIMUM) LOOSE LIFTS FOR MATERIAL COMPACTED BY HEAVY COMPACTION EQUIPMENT AND IN 4 INCH (MAXIMUM) LOOSE LIFTS FOR MATERIAL COMPACTED BY HAND OPERATED TAMPERS UNDER THE SUPERVISION OF THE GEOTECHNICAL ENGINEER OR THEIR REPRESENTATIVE. FILL SHALL BE BROUGHT UP BY BENCHING INTO THE EXISTING SLOPE. A MAXIMUM HEIGHT OF 2 FEET SHALL BE USED FOR EACH BENCH LIFT TAKING CARE TO REMOVE ROOT STRUCTURES AS THE FILL PROCEEDS. THE SURFACE OF EACH LIFT SHALL BE SCARIFIED PRIOR TO PLACEMENT OF THE NEXT LIFT IN ORDER TO EFFECTIVELY TIE THE FILL LIFTS TOGETHER.
   - ALL COMPACTION SHALL BE TESTED BY THE NUCLEAR METHOD (ASTM D-6938) OR SAND CONE METHOD (ASTM D-1556) AT A RATE OF AT LEAST ONE TEST PER 5,000 SF PER ONE FOOT OF COMPACTED FILL THICKNESS IN GENERAL AREA FILLS AND ONE TEST PER 50 LINEAL FEET PER LIFT ALONG THE BARREL.
   - THE MINIMUM COMPACTION SHALL BE A MINIMUM OF 95% OF THE MAXIMUM STANDARD PROCTOR DENSITY (ASTM D-698) AT MOISTURE CONTENTS VARYING FROM 2 PERCENT BELOW TO 3 PERCENT ABOVE OPTIMUM MOISTURE CONTENT DETERMINED BY STANDARD PROCTOR TEST.
7. SUBGRADE FOR THE RISER STRUCTURE AND OUTLET PIPE SHALL BE APPROVED BY THE GEOTECHNICAL ENGINEER PRIOR TO PLACEMENT.IF THE GEOTECHNICAL ENGINEER REQUIRES ADDITIONAL SUBGRADE PREPARATION, THE ADDITIONAL COST SHALL BE APPROVED BY THE ENGINEER PRIOR TO PLACEMENT.
8. THE OUTLET PIPE SHALL BE BEDDED IN CONCRETE FOR 2/3 OF THE PIPE LENGTH, BEGINNING AT THE RISER, AND IN #78 STONE FOR 1/3 OF PIPE LENGTH TO THE OUTLET. SEE DETAILS ON SHEET CX.X.
9. EMBANKMENT AND SIDE SLOPES OF THE BASIN SHALL BE STABILIZED PER SEEDING SCHEDULE ON EROSION CONTROL DETAILS SHEET OR SODDED. SEE LANDSCAPE PLAN ON SHEETS LX.X AND LX.X FOR FURTHER PLANTING DETAILS.
10. IF, DURING CONSTRUCTION, THE SCM IS TO BE USED AS AN EROSION CONTROL MEASURE, THE FOREBAY BERM(S) SHALL NOT BE INSTALLED DURING THE INITIAL CONSTRUCTION OR WHILE THE SCM IS USED AS AN EROSION CONTROL MEASURE.
11. UNLESS OTHERWISE NOTED, ALL PERMANENT STRUCTURES (e.g. RISER/BARREL, WEIR WALLS, ETC.) ARE TO BE INSTALLED WITH THE INITIAL DAM CONSTRUCTION.
12. FOR SITE BUILT FEATURES (e.g. WEIR WALLS, DROP STRUCTURES, BRIDGES, ETC.), THE CONTRACTOR SHALL PROVIDE STRUCTURAL DRAWINGS TO BE SIGNED AND SEALED BY A NC PROFESSIONAL ENGINEER AND TO THE DESIGN ENGINEER FOR REVIEW AND APPROVAL PRIOR TO CONSTRUCTION.
13. PRIOR TO FINAL GRADING OF THE SCM, THE CONTRACTOR SHALL PROVIDE SUFFICIENT AS-BUILT SURVEY INFORMATION TO CONFIRM THAT THE FINISHED SCM WILL MEET THE SPECIFIC DIMENSIONAL REQUIREMENTS APPLICABLE TO THE SCM. THOSE REQUIREMENTS INCLUDE:
   - POND BOTTOM ELEVATION = 353.00 FT
   - DRAWDOWN OVERFLOW ELEVATION (NORMAL POOL) = 357.50 FT
   - MINIMUM SURFACE AREA AT NORMAL POOL ELEVATION = 13,963 SF
   - WEIR CREST ELEVATION= 359.00 FT
   - RISER CREST ELEVATION= 359.75 FT
   - LOW POINT TOP OF EMBANKMENT (AUXILIARY SPILLWAY) = 362.00 FT
   - AVERAGE TOP OF EMBANKMENT = 363.00 FT
15. ELEVATIONS SHALL BE WITHIN 0.1 FEET OF THE ABOVE ELEVATIONS FOR EARTHWORK, AND 0.05 FEET FOR OUTLET STRUCTURE. ALL SURFACE AREAS ARE THE MINIMUM AREAS. REQUEST FOR A REDUCTIONS IN THE MINIMUM VALUES WILL BE CONSIDERED ON A CASE BY CASE BASIS.
16. ONCE THE PROJECT SITE HAS BEEN STABILIZED, CONTRACTOR SHALL OBTAIN APPROVAL BY EROSION CONTROL INSPECTOR IN ORDER TO REMOVE TEMPORARY EROSION CONTROL DEVICES.
   - ONCE ALL SEDIMENT AND EROSION CONTROL DEVICES HAVE BEEN REMOVED, THE SCM SHALL BE CONVERTED TO A PERMANENT SCM.
   - ALL SEDIMENT SHALL BE REMOVED AND DISPOSED OF PROPERLY.
   - FOREBAY AND VEGETATED SHELF SHALL BE CONSTRUCTED AS SHOWN ON THE PLAN.
   - VEGETATED SHELF SHALL BE PLANTED PER PLANT SCHEDULE ON LANDSCAPE PLAN (SEE LITTLE DIVERSIFIED ARCHITECTS).
17. FINAL CERTIFICATION OF THE SCM BY A PROFESSIONAL ENGINEER LICENSED IN THE STATE IN WHICH THE PROJECT IS LOCATED IS REQUIRED.

CLAY LINER SPECIFICATIONS:

THE CONTRACTOR SHALL INSTALL A CLAY LINER TO MAINTAIN A PERMANENT POOL AT THE DESIGN ELEVATION. IF THE SITE GEOTECHNICAL ENGINEER DETERMINES THAT THE EXISTING SITE CONDITIONS (SOIL PROPERTIES, EXISTING WATER TABLE, ETC.) INDICATE THAT NORMAL POOL CAN BE MAINTAINED WITHOUT A CLAY LINER, THE GEOTECHNICAL ENGINEER WILL PROVIDE NOTICE IN WRITING TO THE PROJECT ENGINEER THAT THE CLAY LINER IS NOT REQUIRED. IF THE CLAY LINER IS NOT INSTALLED, THE OWNER SHALL RECEIVE A CREDIT FOR THE DELETION OF THE LINER.

AT A MINIMUM, THE CLAY LINER MATERIAL FOR THE WET POND SHALL MEET THE FOLLOWING SPECIFICATIONS:

- UNIFIED SOIL CLASSIFICATION SYSTEM DESIGNATION OF CL, CH, ML, OR SC
- MINIMUM OF 40% PASSING #200 SIEVE
- MINIMUM PLASTICITY INDEX OF 12
- MAXIMUM PERMEABILITY OF 1 X 10^{-5} cm/sec
- A MINIMUM OF 2 TESTS OF EACH ABOVE PARAMETER SHALL BE PROVIDED FROM AN APPROVED LABORATORY ON THE LINER MATERIAL AND PRESENTED TO THE ENGINEER FOR APPROVAL PRIOR TO PLACEMENT OF THE MATERIAL.
- COMPACTION TO A MINIMUM OF 95% OF THE MAXIMUM STANDARD PROCTOR DENSITY (ASTM D-698), AND WITHIN 3% OF THE OPTIMUM MOISTURE CONTENT (MINIMUM OF 1 COMPACTION DENSITY TEST PER 2500 SQUARE FEET).
- AN IN-PLACE MAXIMUM INFILTRATION RATE OF 0.01 INCHES PER HOUR.
- RECOMMENDATIONS OF THE SITE GEOTECHNICAL ENGINEER MAY SUPERCEDE THE ABOVE SPECIFICATIONS.

THE CLAY LINER SHALL BE PLACED UNDER THE BOTTOM OF THE SCM PERMANENT POOL TO A MINIMUM THICKNESS OF 8 INCHES. A MINIMUM OF 4 INCHES OF TOPSOIL SHALL BE PLACED ABOVE THE CLAY LINER TO THE FINISHED GRADE AS SHOWN ON THE DRAWINGS AND/OR DETAILS. CARE SHALL BE TAKEN WHEN PLACING THE TOPSOIL SO AS NOT TO DAMAGE THE CLAY LINER. A CLAY/SOIL, NO ORGANICS, MIXTURE MAY BE USED IF THE ABOVE SPECIFICATIONS ARE SATISFIED AND WITH WRITTEN APPROVAL BY THE GEOTECHNICAL ENGINEER.

PRECAST CONCRETE MATERIALS NOTES:

1. ALL PRECAST CONCRETE STRUCTURES SHALL CONFORM TO ASTM C913 (RECTANGULAR) OR C478 (ROUND).
2. ALL REINFORCED CONCRETE PIPE SHALL CONFORM TO ASTM C76, CLASS III (UNLESS OTHERWISE NOTED),
   - 2.1. O-RING JOINTS (RGRCP) SHALL CONFORM TO ASTM C443 & ASTM C361.
   - 2.2. NON O-RING JOINTS (RCP) SHALL CONFORM TO ASTM C990

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PRELIMINARY
NOT APPROVED FOR CONSTRUCTION

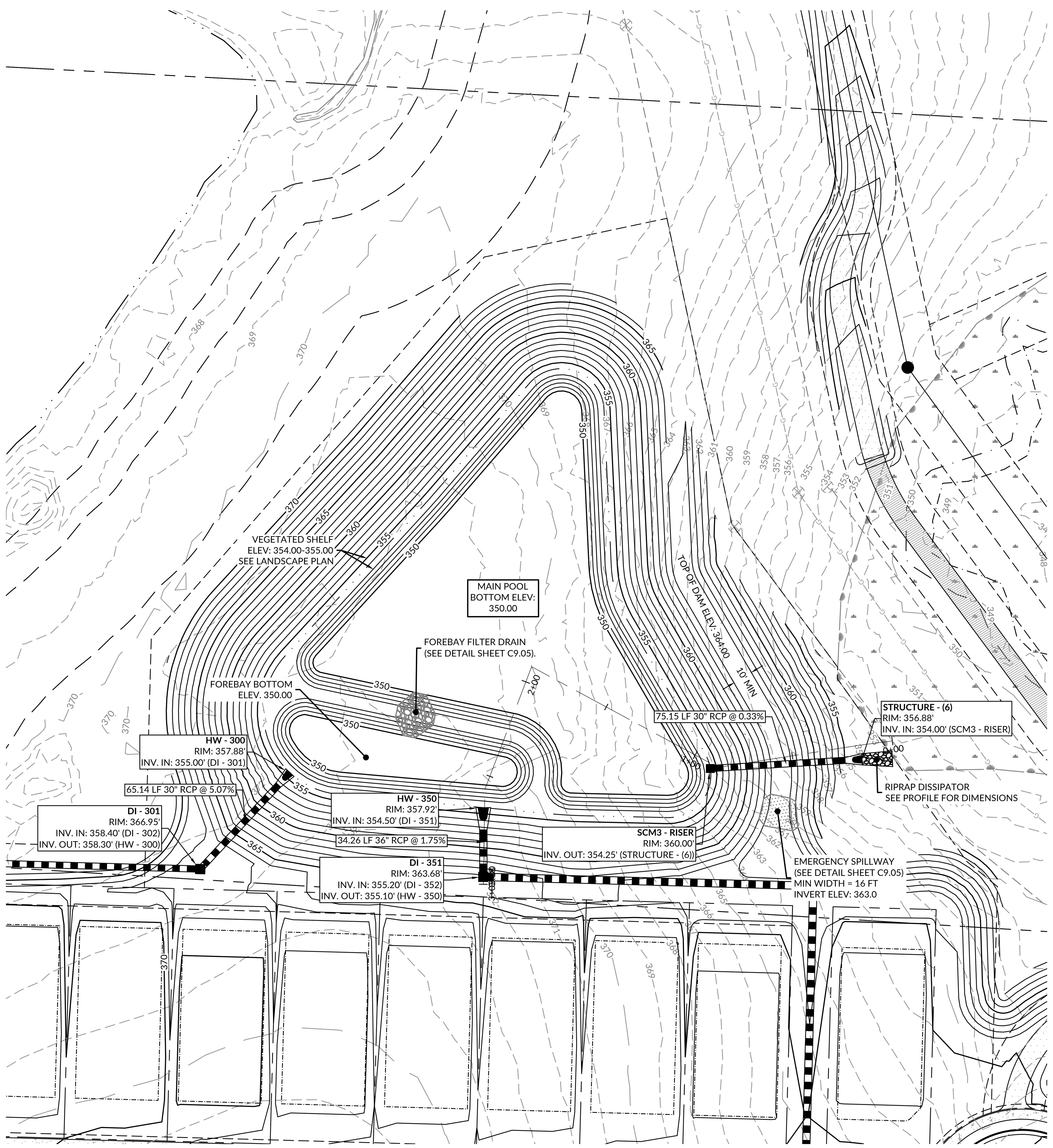
SCALE: 1 inch = 30 ft. H; 1 inch = 3 ft. V

INITIAL PLAN DATE: 11/01/2024
REVISIONS:

WR JOB NUMBER 23-0045
DRN: WR DGN: WR CKD: WR

SCM 2 PLAN & PROFILE

C9.02



WET POND SCM #3 PLAN VIEW

SCALE: 1" = 40'

WET POND STORMWATER CONTROL MEASURE (SCM) GENERAL NOTES:

1. PRIOR TO OR DURING CONSTRUCTION, THE CONTRACTOR SHALL NOTIFY THE ENGINEER OF ANY DISCREPANCIES IN THE PLANS OR SPECIFICATIONS.
2. ALL CONSTRUCTION AND MINIMUM DESIGN CRITERIA SHALL BE IN ACCORDANCE WITH ALL APPLICABLE FEDERAL, STATE, AND LOCAL STANDARDS AND SPECIFICATIONS, HEREBY INCORPORATED BY REFERENCE.
3. UPON COMPLETION OF CONSTRUCTION, CERTIFICATION OF THE SCM BY THE GEOTECHNICAL ENGINEER WILL BE REQUIRED PRIOR TO FINAL SCM ACCEPTANCE.
4. THE GEOTECHNICAL ENGINEER SHALL EVALUATE SOILS FOR SUITABILITY OF DAM CONSTRUCTION AND SLOPE STABILITY.
5. PRIOR TO PLACEMENT OF EMBANKMENT FILL, THE GEOTECHNICAL ENGINEER SHALL SUPERVISE THE FOUNDATION PREPARATION AND APPROVE THE DEPTH AND EXTENT OF THE CUTOFF TRENCH, A MINIMUM OF 1 FOOT SHALL BE EXCAVATED.
6. THE DAM AND FOREBAY BERMS SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE FOLLOWING SPECIFICATIONS UNLESS SUPERCEDED BY THE GEOTECHNICAL ENGINEER'S RECOMMENDATIONS.
   - BORROW MATERIALS FOR USE AS EMBANKMENT FILL SHALL BE FREE OF ORGANICS, ROOTS AND OTHER WOODY VEGETATION OR ORGANIC DEBRIS.
   - FILL MATERIALS SHALL CONSIST OF SOILS WHICH CLASSIFY AS SC, SM, CL, CL-CH AND ML IN ACCORDANCE WITH THE UNIFIED CLASSIFICATION SYSTEM OR AS APPROVED BY THE GEOTECHNICAL ENGINEER.
   - FILL MATERIALS SHALL HAVE A MAXIMUM PARTICLE SIZE OF 3 INCHES IN MEAN DIAMETER.
   - FILL SHALL BE PLACED IN 8 INCH (MAXIMUM) LOOSE LIFTS FOR MATERIAL COMPACTED BY HEAVY COMPACTION EQUIPMENT AND IN 4 INCH (MAXIMUM) LOOSE LIFTS FOR MATERIAL COMPACTED BY HAND OPERATED TAMPERS UNDER THE SUPERVISION OF THE GEOTECHNICAL ENGINEER OR THEIR REPRESENTATIVE. FILL SHALL BE BROUGHT UP BY BENCHING INTO THE EXISTING SLOPE. A MAXIMUM HEIGHT OF 2 FEET SHALL BE USED FOR EACH BENCH LIFT TAKING CARE TO REMOVE ROOT STRUCTURES AS THE FILL PROCEEDS. THE SURFACE OF EACH LIFT SHALL BE SCARIFIED PRIOR TO PLACEMENT OF THE NEXT LIFT IN ORDER TO EFFECTIVELY TIE THE FILL LIFTS TOGETHER.
   - ALL COMPACTION SHALL BE TESTED BY THE NUCLEAR METHOD (ASTM D-6938) OR SAND CONE METHOD (ASTM D-1556) AT A RATE OF AT LEAST ONE TEST PER 5,000 SF PER ONE FOOT OF COMPACTED FILL THICKNESS IN GENERAL AREA FILLS AND ONE TEST PER 50 LINEAL FEET PER LIFT ALONG THE BARREL.
   - THE MINIMUM COMPACTION SHALL BE A MINIMUM OF 95% OF THE MAXIMUM STANDARD PROCTOR DENSITY (ASTM D-698) AT MOISTURE CONTENTS VARYING FROM 2 PERCENT BELOW TO 3 PERCENT ABOVE OPTIMUM MOISTURE CONTENT DETERMINED BY STANDARD PROCTOR TEST.
7. SUBGRADE FOR THE RISER STRUCTURE AND OUTLET PIPE SHALL BE APPROVED BY THE GEOTECHNICAL ENGINEER PRIOR TO PLACEMENT.IF THE GEOTECHNICAL ENGINEER REQUIRES ADDITIONAL SUBGRADE PREPARATION, THE ADDITIONAL COST SHALL BE APPROVED BY THE ENGINEER PRIOR TO PLACEMENT.
8. THE OUTLET PIPE SHALL BE BEDDED IN CONCRETE FOR 2/3 OF THE PIPE LENGTH, BEGINNING AT THE RISER, AND IN #78 STONE FOR 1/3 OF PIPE LENGTH TO THE OUTLET. SEE DETAILS ON SHEET CX.X.
9. EMBANKMENT AND SIDE SLOPES OF THE BASIN SHALL BE STABILIZED PER SEEDING SCHEDULE ON EROSION CONTROL DETAILS SHEET OR SODDED. SEE LANDSCAPE PLAN ON SHEETS LX.X AND LX.X FOR FURTHER PLANTING DETAILS.
10. IF, DURING CONSTRUCTION, THE SCM IS TO BE USED AS AN EROSION CONTROL MEASURE, THE FOREBAY BERM(S) SHALL NOT BE INSTALLED DURING THE INITIAL CONSTRUCTION OR WHILE THE SCM IS USED AS AN EROSION CONTROL MEASURE.
11. UNLESS OTHERWISE NOTED, ALL PERMANENT STRUCTURES (e.g. RISER/BARREL, WEIR WALLS, ETC.) ARE TO BE INSTALLED WITH THE INITIAL DAM CONSTRUCTION.
12. FOR SITE BUILT FEATURES (e.g. WEIR WALLS, DROP STRUCTURES, BRIDGES, ETC.), THE CONTRACTOR SHALL PROVIDE STRUCTURAL DRAWINGS TO BE SIGNED AND SEALED BY A NC PROFESSIONAL ENGINEER AND TO THE DESIGN ENGINEER FOR REVIEW AND APPROVAL PRIOR TO CONSTRUCTION.
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   - POND BOTTOM ELEVATION = 350.00 FT
   - DRAWDOWN OVERFLOW ELEVATION (NORMAL POOL) = 354.5 FT
   - MINIMUM SURFACE AREA AT NORMAL POOL ELEVATION = 9,722 SF
   - WEIR CREST ELEVATION= 357.25 FT
   - RISER CREST ELEVATION= 360.00 FT
   - LOW POINT TOP OF EMBANKMENT (AUXILIARY SPILLWAY) = 363.00 FT
   - AVERAGE TOP OF EMBANKMENT = 364.00 FT
15. ELEVATIONS SHALL BE WITHIN 0.1 FEET OF THE ABOVE ELEVATIONS FOR EARTHWORK, AND 0.05 FEET FOR OUTLET STRUCTURE. ALL SURFACE AREAS ARE THE MINIMUM AREAS. REQUEST FOR A REDUCTIONS IN THE MINIMUM VALUES WILL BE CONSIDERED ON A CASE BY CASE BASIS.
16. ONCE THE PROJECT SITE HAS BEEN STABILIZED, CONTRACTOR SHALL OBTAIN APPROVAL BY EROSION CONTROL INSPECTOR IN ORDER TO REMOVE TEMPORARY EROSION CONTROL DEVICES.
   - ONCE ALL SEDIMENT AND EROSION CONTROL DEVICES HAVE BEEN REMOVED, THE SCM SHALL BE CONVERTED TO A PERMANENT SCM.
   - ALL SEDIMENT SHALL BE REMOVED AND DISPOSED OF PROPERLY.
   - FOREBAY AND VEGETATED SHELF SHALL BE CONSTRUCTED AS SHOWN ON THE PLAN.
   - VEGETATED SHELF SHALL BE PLANTED PER PLANT SCHEDULE ON LANDSCAPE PLAN (SEE LITTLE DIVERSIFIED ARCHITECTS).
17. FINAL CERTIFICATION OF THE SCM BY A PROFESSIONAL ENGINEER LICENSED IN THE STATE IN WHICH THE PROJECT IS LOCATED IS REQUIRED.

CLAY LINER SPECIFICATIONS:

THE CONTRACTOR SHALL INSTALL A CLAY LINER TO MAINTAIN A PERMANENT POOL AT THE DESIGN ELEVATION. IF THE SITE GEOTECHNICAL ENGINEER DETERMINES THAT THE EXISTING SITE CONDITIONS (SOIL PROPERTIES, EXISTING WATER TABLE, ETC.) INDICATE THAT NORMAL POOL CAN BE MAINTAINED WITHOUT A CLAY LINER, THE GEOTECHNICAL ENGINEER WILL PROVIDE NOTICE IN WRITING TO THE PROJECT ENGINEER THAT THE CLAY LINER IS NOT REQUIRED. IF THE CLAY LINER IS NOT INSTALLED, THE OWNER SHALL RECEIVE A CREDIT FOR THE DELETION OF THE LINER.

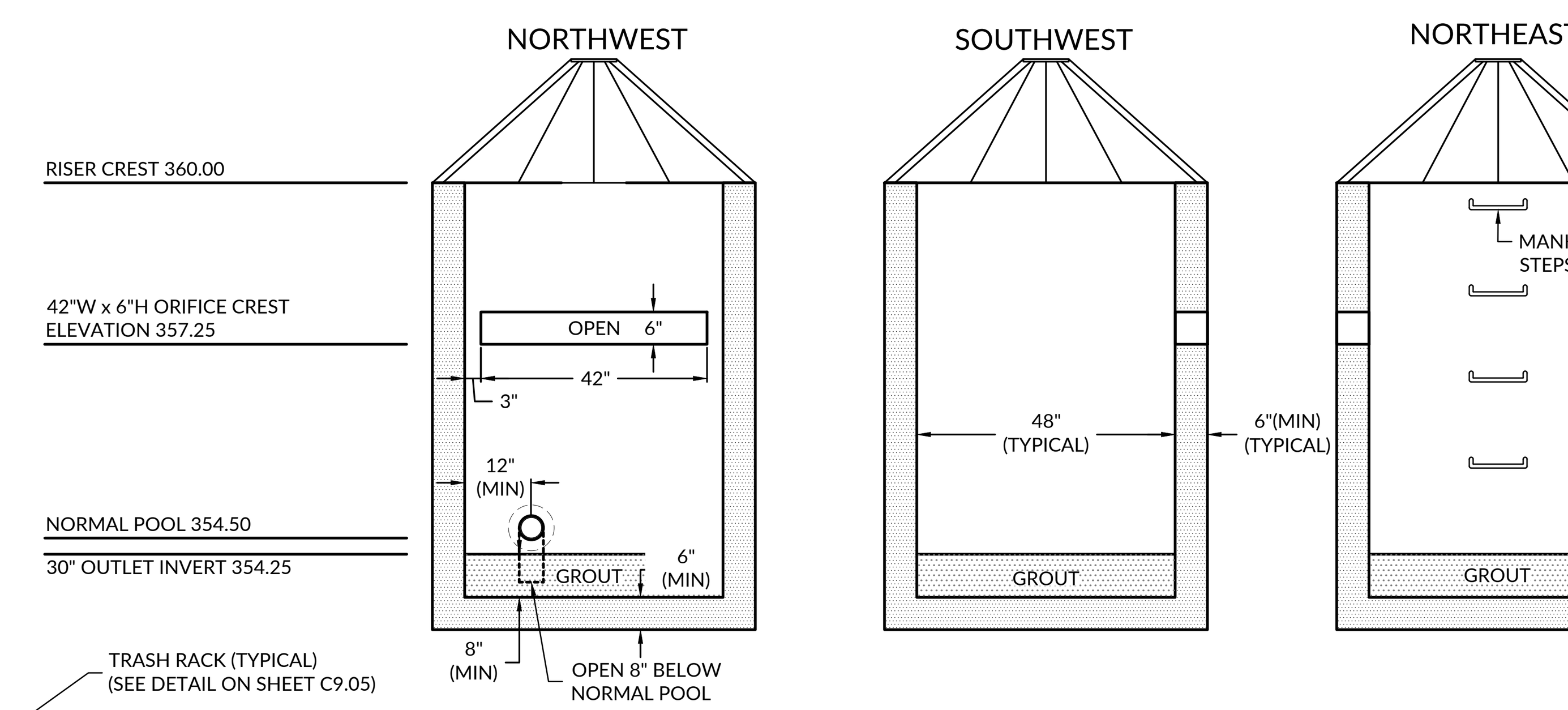
AT A MINIMUM, THE CLAY LINER MATERIAL FOR THE WET POND SHALL MEET THE FOLLOWING SPECIFICATIONS:

- UNIFIED SOIL CLASSIFICATION SYSTEM DESIGNATION OF CL, CH, ML, OR SC
- MINIMUM OF 40% PASSING #200 SIEVE
- MINIMUM PLASTICITY INDEX OF 12
- MAXIMUM PERMEABILITY OF 1 X 10^{-5} cm/sec
- A MINIMUM OF 2 TESTS OF EACH ABOVE PARAMETER SHALL BE PROVIDED FROM AN APPROVED LABORATORY ON THE LINER MATERIAL AND PRESENTED TO THE ENGINEER FOR APPROVAL PRIOR TO PLACEMENT OF THE MATERIAL.
- COMPACTION TO A MINIMUM OF 95% OF THE MAXIMUM STANDARD PROCTOR DENSITY (ASTM D-698), AND WITHIN 3% OF THE OPTIMUM MOISTURE CONTENT (MINIMUM OF 1 COMPACTION DENSITY TEST PER 2500 SQUARE FEET).
- AN IN-PLACE MAXIMUM INFILTRATION RATE OF 0.01 INCHES PER HOUR.
- RECOMMENDATIONS OF THE SITE GEOTECHNICAL ENGINEER MAY SUPERCEDE THE ABOVE SPECIFICATIONS.

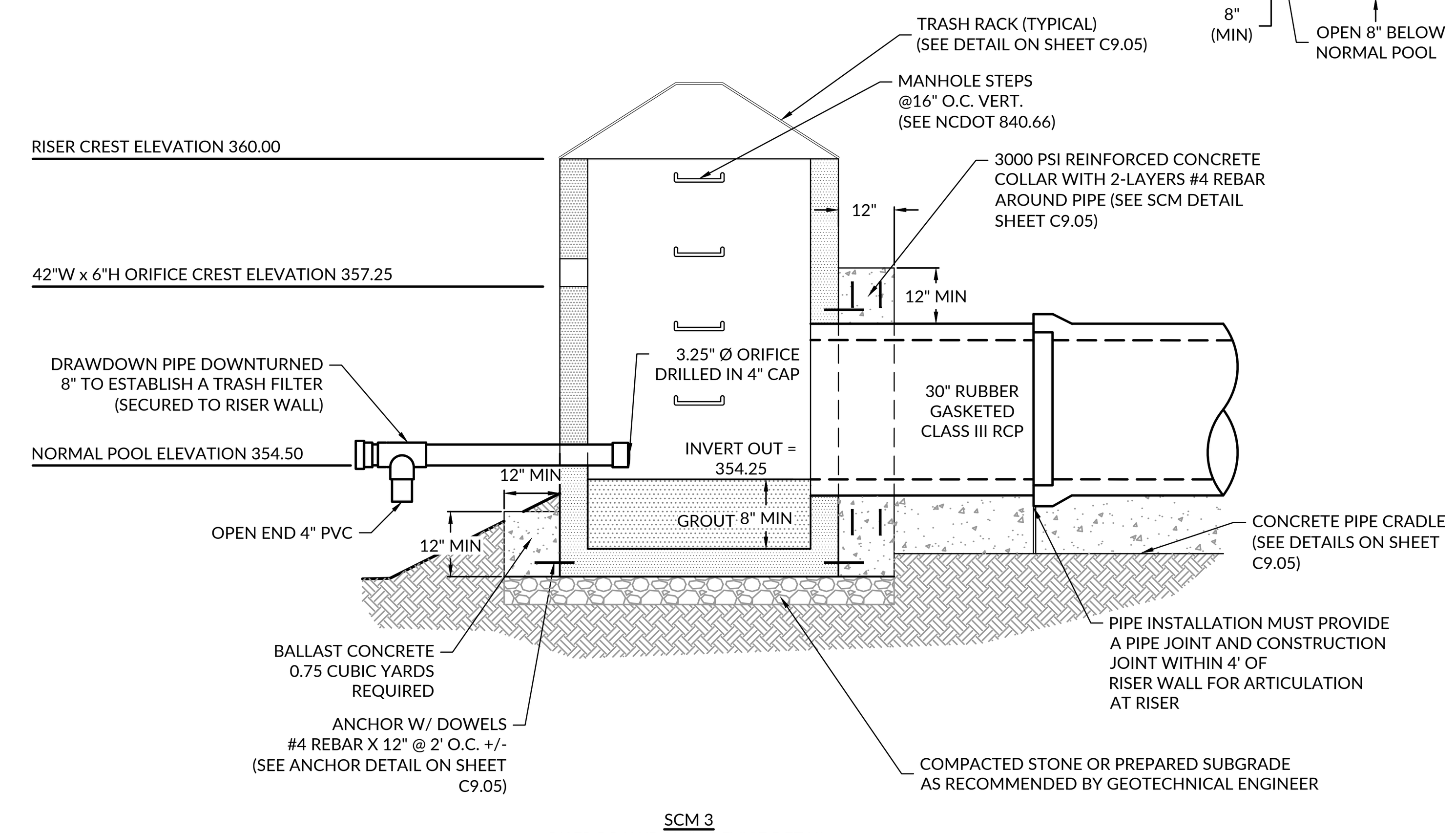
THE CLAY LINER SHALL BE PLACED UNDER THE BOTTOM OF THE SCM PERMANENT POOL TO A MINIMUM THICKNESS OF 8 INCHES. A MINIMUM OF 4 INCHES OF TOPSOIL SHALL BE PLACED ABOVE THE CLAY LINER TO THE FINISHED GRADE AS SHOWN ON THE DRAWINGS AND/OR DETAILS. CARE SHALL BE TAKEN WHEN PLACING THE TOPSOIL SO AS NOT TO DAMAGE THE CLAY LINER. A CLAY/SOIL, NO ORGANICS, MIXTURE MAY BE USED IF THE ABOVE SPECIFICATIONS ARE SATISFIED AND WITH WRITTEN APPROVAL BY THE GEOTECHNICAL ENGINEER.

PRECAST CONCRETE MATERIALS NOTES:

1. ALL PRECAST CONCRETE STRUCTURES SHALL CONFORM TO ASTM C913 (RECTANGULAR) OR C478 (ROUND).
2. ALL REINFORCED CONCRETE PIPE SHALL CONFORM TO ASTM C76, CLASS III (UNLESS OTHERWISE NOTED),
   2.1. O-RING JOINTS (RGRCP) SHALL CONFORM TO ASTM C443 & ASTM C361.
   2.2. NON O-RING JOINTS (RCP) SHALL CONFORM TO ASTM C990

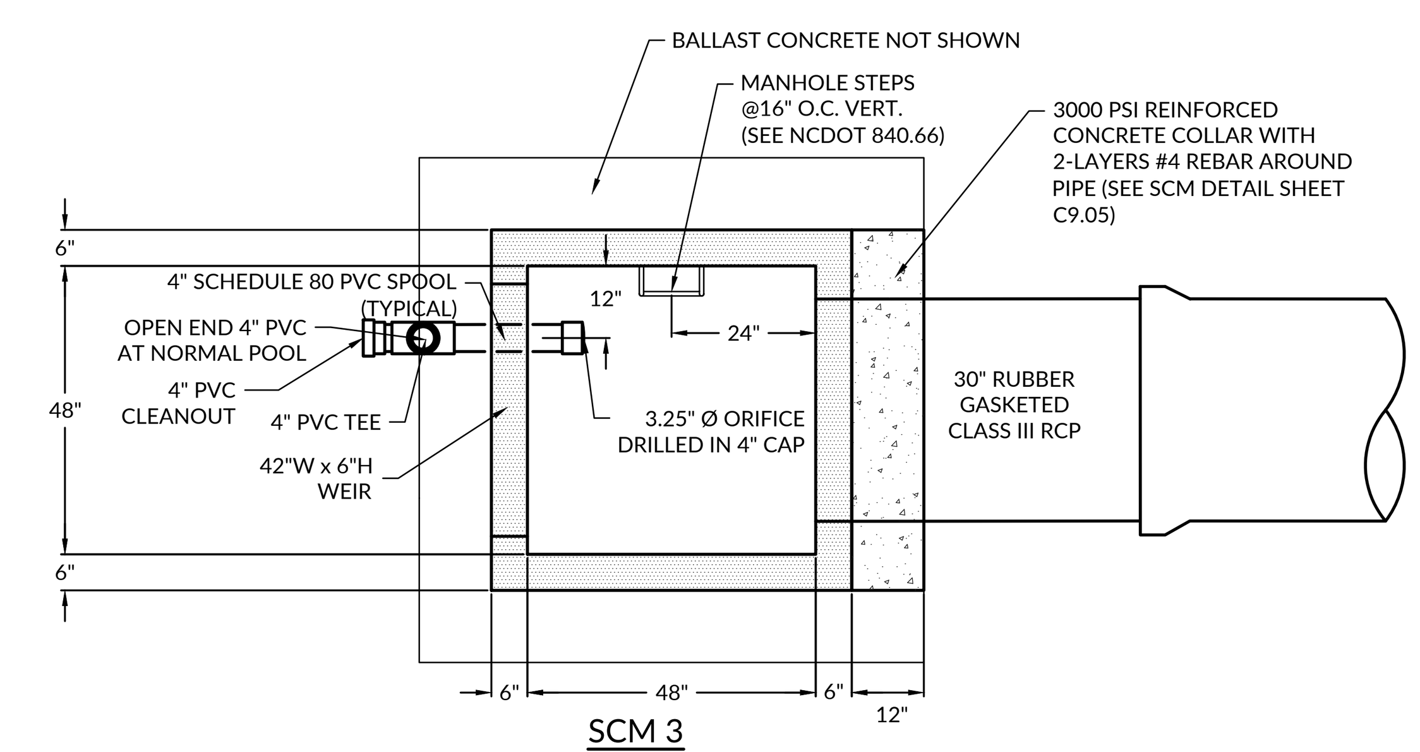


SCM 3
RISER INSIDE WALL ELEVATIONS

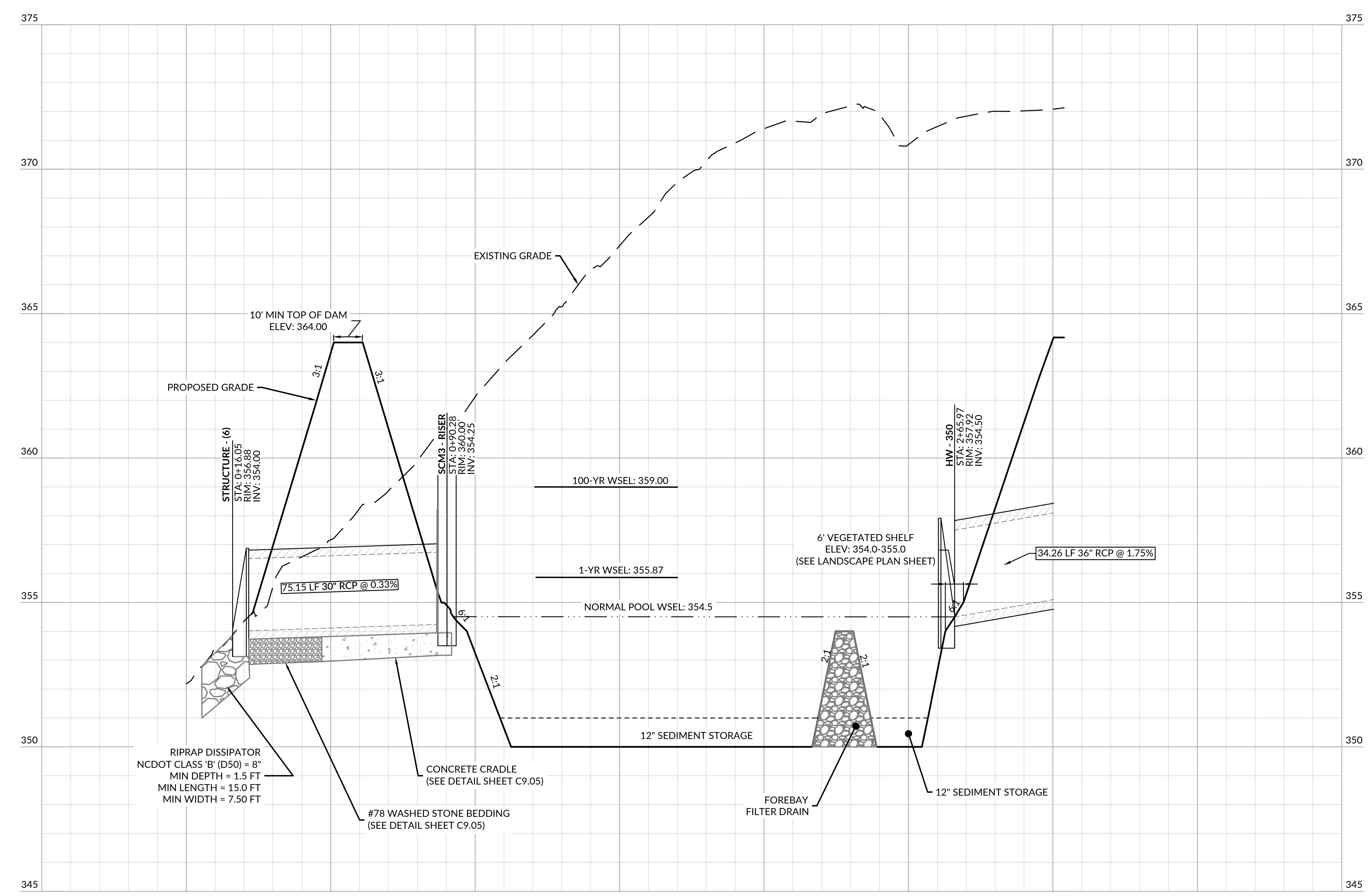


SCM 3
RISER DRAWDOWN DEVICE DETAIL

NOTE:
RISER AND BALLAST CONCRETE HAVE BEEN SIZED BASED ON BUOYANCY CALCULATIONS. ADJUSTMENTS TO CONCRETE DIMENSIONS ARE NOT PERMITTED WITHOUT PRIOR WRITTEN APPROVAL. ANY DIMENSIONAL CHANGES TO BALLAST CONCRETE BASE AND RISER MUST BE REQUESTED IN WRITING AND MUST BE ACCOMPANIED BY BUOYANCY CALCULATIONS SIGNED AND SEALED BY A NORTH CAROLINA REGISTERED PROFESSIONAL ENGINEER.



SCM 3
RISER DRAWDOWN DEVICE PLAN



WET POND SCM #3 PROFILE VIEW

SCALE: 1" = 30' HORIZONTAL, 1" = 3' VERTICAL

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PRELIMINARY
NOT APPROVED FOR CONSTRUCTION

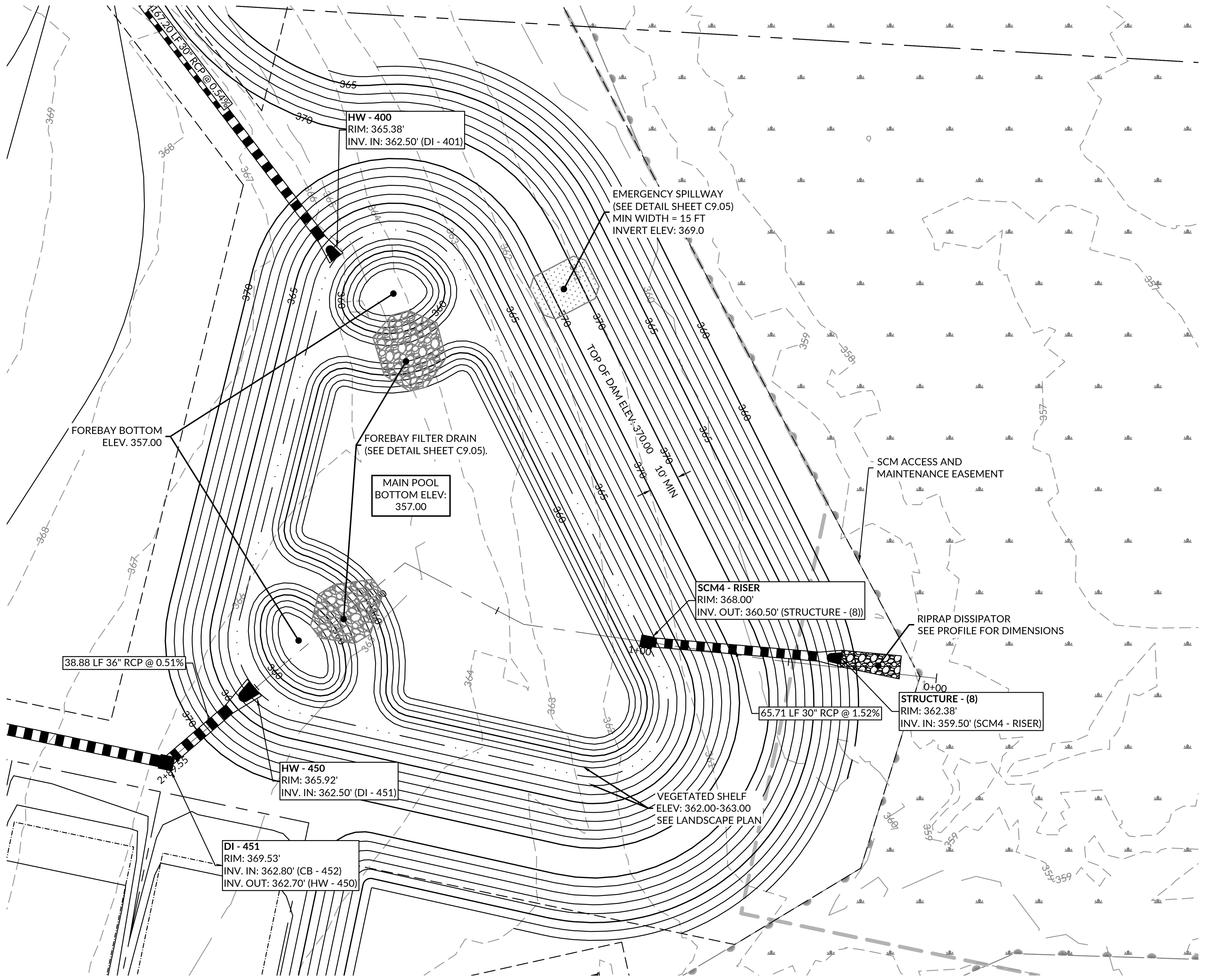
SCALE: 1 inch = 40 ft. H
1 inch = 4 ft. V

INITIAL PLAN DATE: 11/01/2024
REVISIONS:

WR JOB NUMBER		23-0045
DRN: WR	DGN: WR	CKD: WR

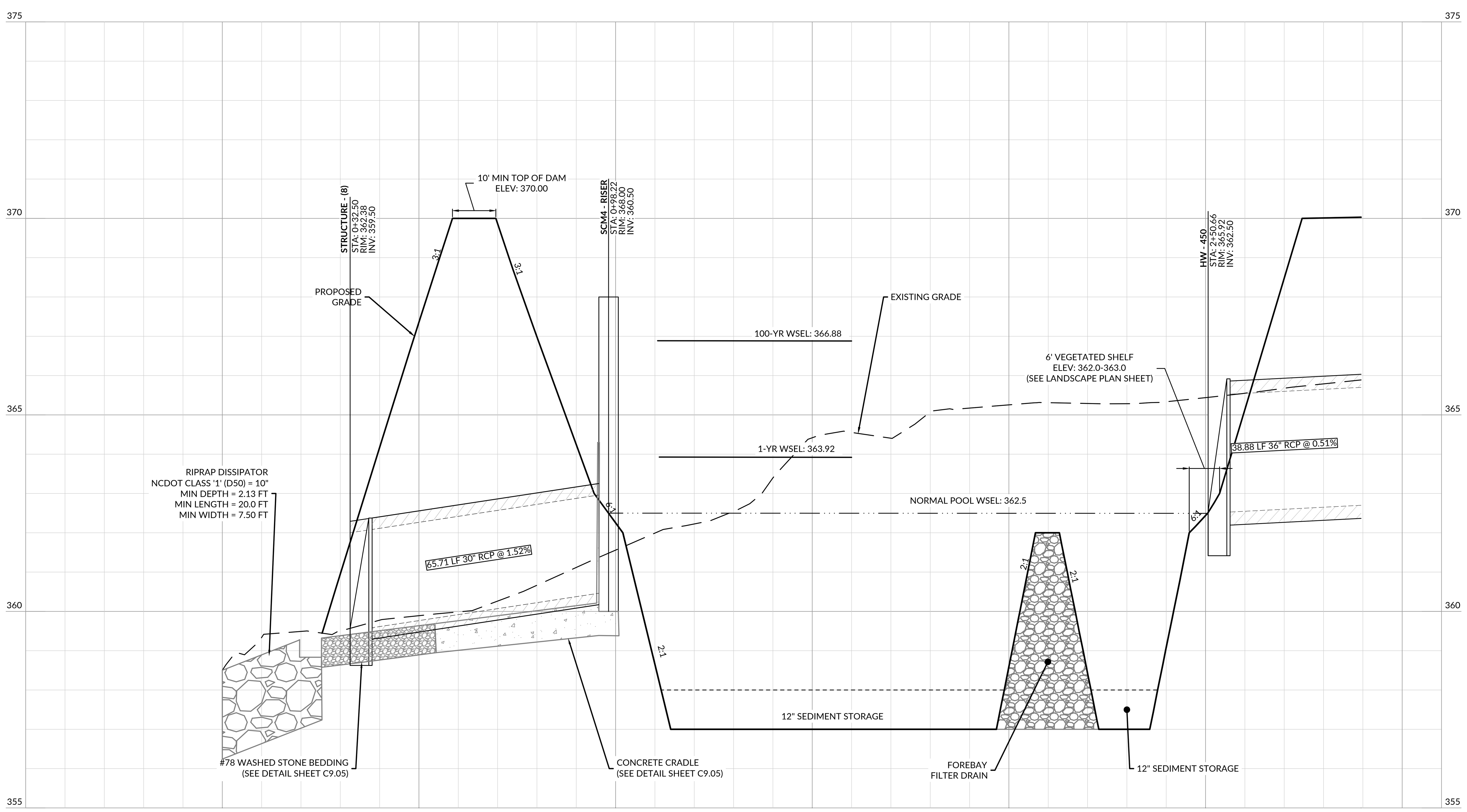
SCM 3 PLAN & PROFILE

C9.03



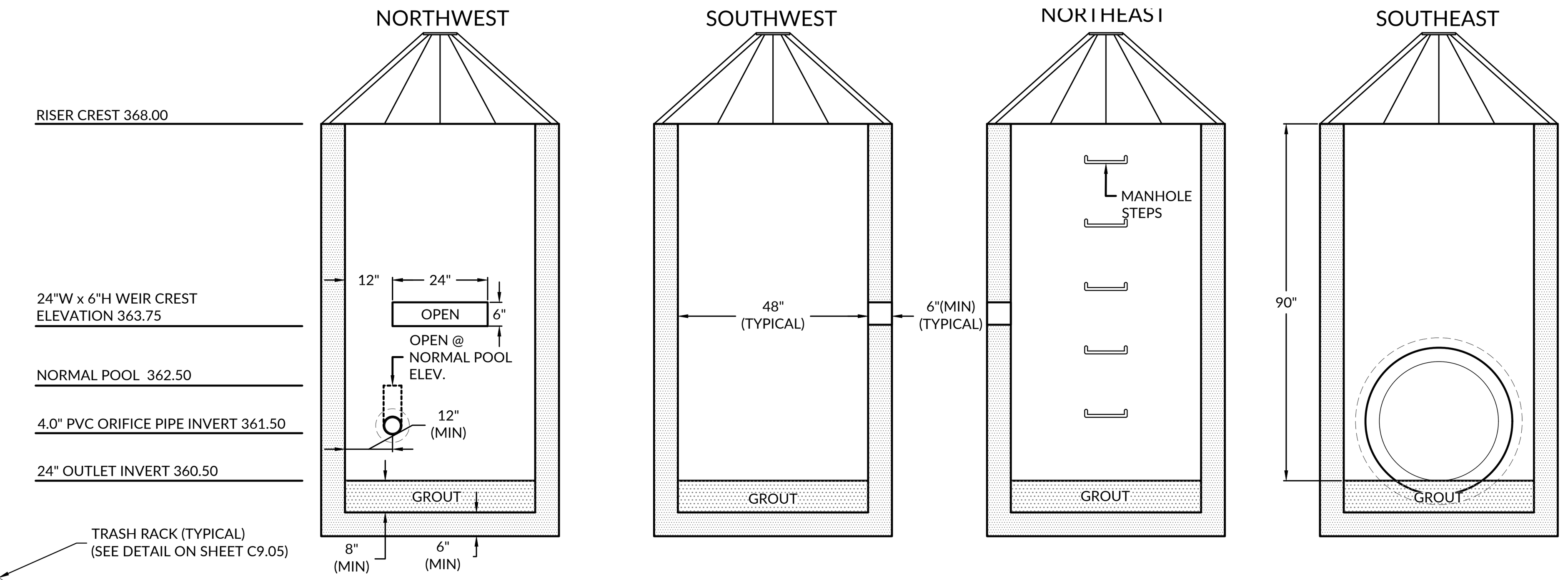
WET POND SCM #4 PLAN VIEW

SCALE: 1" = 30'

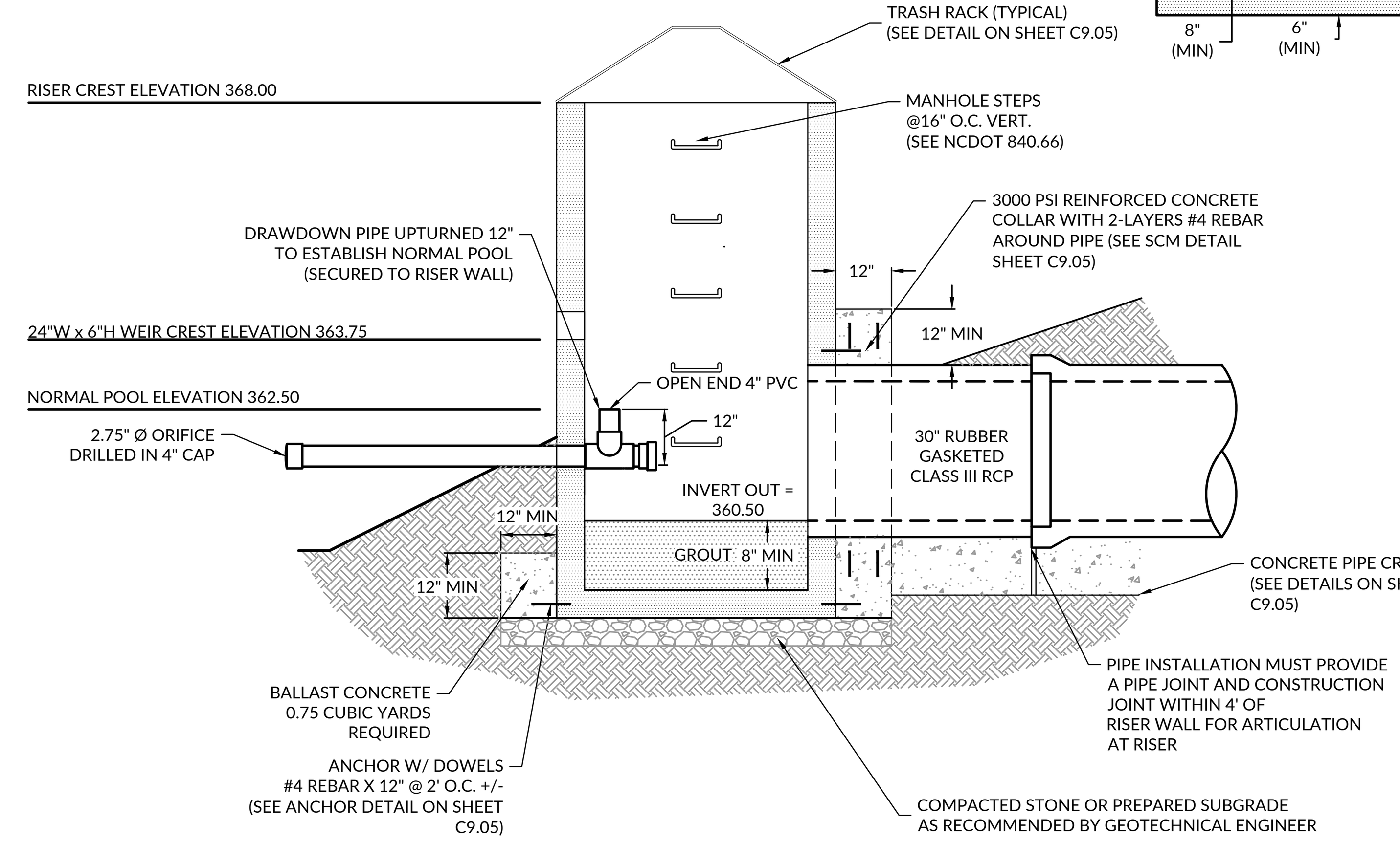


WET POND SCM #4 PROFILE VIEW

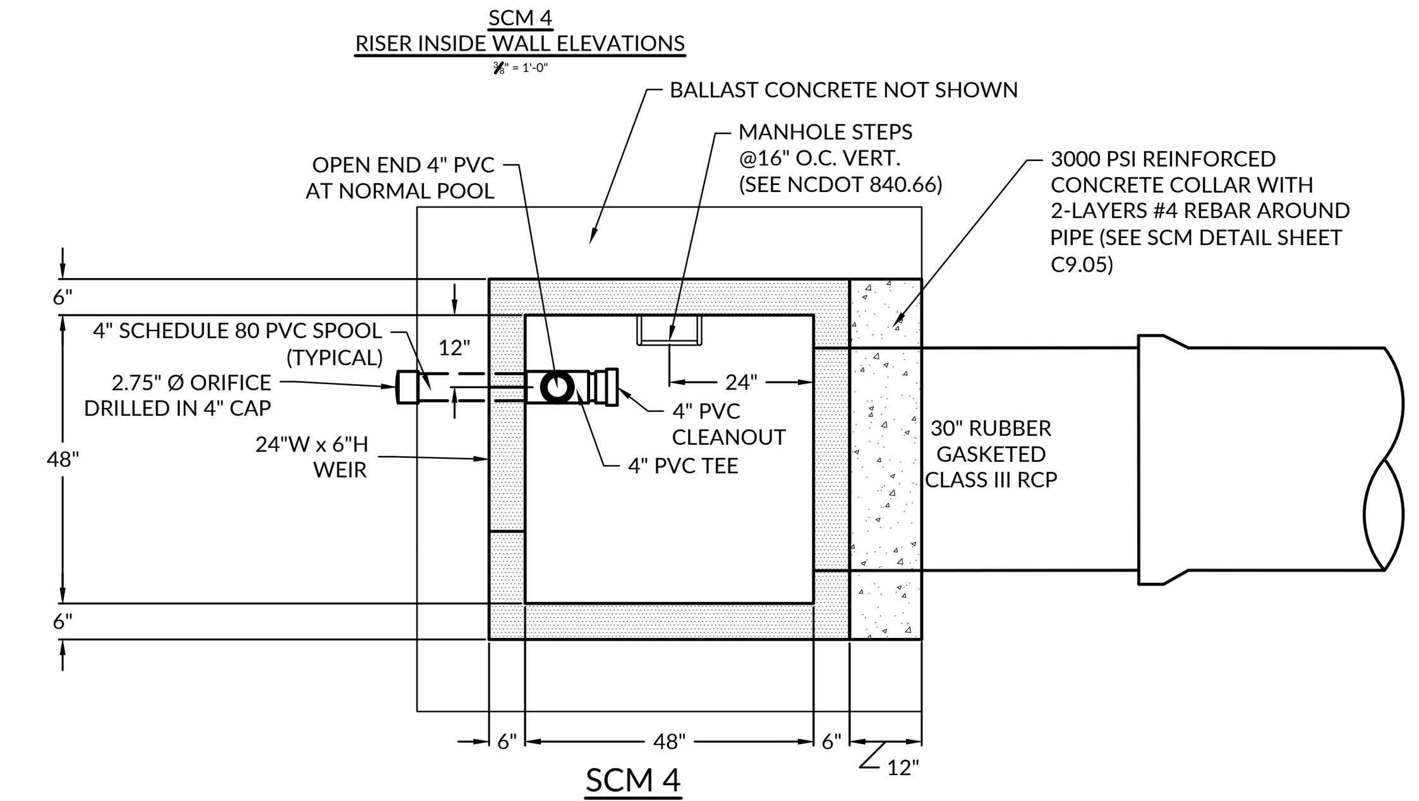
SCALE: 1" = 20' HORIZONTAL, 1" = 2' VERTICAL



SCM 4
RISER INSIDE WALL ELEVATIONS



SCM 4
RISER DRAWDOWN DEVICE DETAIL



SCM 4
RISER DRAWDOWN DEVICE PLAN

NOTE:
RISER AND BALLAST CONCRETE HAVE BEEN SIZED BASED ON BUOYANCY CALCULATIONS. ADJUSTMENTS TO CONCRETE DIMENSIONS ARE NOT PERMITTED WITHOUT PRIOR WRITTEN APPROVAL. ANY DIMENSIONAL CHANGES TO BALLAST CONCRETE BASE AND RISER MUST BE REQUESTED IN WRITING AND MUST BE ACCOMPANIED BY BUOYANCY CALCULATIONS SIGNED AND SEALED BY A NORTH CAROLINA REGISTERED PROFESSIONAL ENGINEER.

WET POND STORMWATER CONTROL MEASURE (SCM) GENERAL NOTES:

1. PRIOR TO OR DURING CONSTRUCTION, THE CONTRACTOR SHALL NOTIFY THE ENGINEER OF ANY DISCREPANCIES IN THE PLANS OR SPECIFICATIONS.
2. ALL CONSTRUCTION AND MINIMUM DESIGN CRITERIA SHALL BE IN ACCORDANCE WITH ALL APPLICABLE FEDERAL, STATE, AND LOCAL STANDARDS AND SPECIFICATIONS, HEREBY INCORPORATED BY REFERENCE.
3. UPON COMPLETION OF CONSTRUCTION, CERTIFICATION OF THE SCM BY THE GEOTECHNICAL ENGINEER WILL BE REQUIRED PRIOR TO FINAL SCM ACCEPTANCE.
4. THE GEOTECHNICAL ENGINEER SHALL EVALUATE SOILS FOR SUITABILITY OF DAM CONSTRUCTION AND SLOPE STABILITY.
5. PRIOR TO PLACEMENT OF EMBANKMENT FILL, THE GEOTECHNICAL ENGINEER SHALL SUPERVISE THE FOUNDATION PREPARATION AND APPROVE THE DEPTH AND EXTENT OF THE CUTOFF TRENCH, A MINIMUM OF 1 FOOT SHALL BE EXCAVATED.
6. THE DAM AND FOREBAY BERMS SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE FOLLOWING SPECIFICATIONS UNLESS SUPERCEDED BY THE GEOTECHNICAL ENGINEER'S RECOMMENDATIONS.
   - BORROW MATERIALS FOR USE AS EMBANKMENT FILL SHALL BE FREE OF ORGANICS, ROOTS AND OTHER WOODY VEGETATION OR ORGANIC DEBRIS.
   - FILL MATERIALS SHALL CONSIST OF SOILS WHICH CLASSIFY AS SC, SM, CL, CL-CH AND ML IN ACCORDANCE WITH THE UNIFIED CLASSIFICATION SYSTEM OR AS APPROVED BY THE GEOTECHNICAL ENGINEER.
   - FILL MATERIALS SHALL HAVE A MAXIMUM PARTICLE SIZE OF 3 INCHES IN MEAN DIAMETER.
   - FILL SHALL BE PLACED IN 8 INCH (MAXIMUM) LOOSE LIFTS FOR MATERIAL COMPACTED BY HEAVY COMPACTION EQUIPMENT AND IN 4 INCH (MAXIMUM) LOOSE LIFTS FOR MATERIAL COMPACTED BY HAND OPERATED TAMPERS UNDER THE SUPERVISION OF THE GEOTECHNICAL ENGINEER OR THEIR REPRESENTATIVE. FILL SHALL BE BROUGHT UP BY BENCHING INTO THE EXISTING SLOPE. A MAXIMUM HEIGHT OF 2 FEET SHALL BE USED FOR EACH BENCH LIFT TAKING CARE TO REMOVE ROOT STRUCTURES AS THE FILL PROCEEDS. THE SURFACE OF EACH LIFT SHALL BE SCARIFIED PRIOR TO PLACEMENT OF THE NEXT LIFT IN ORDER TO EFFECTIVELY TIE THE FILL LIFTS TOGETHER.
   - ALL COMPACTION SHALL BE TESTED BY THE NUCLEAR METHOD (ASTM D-6938) OR SAND CONE METHOD (ASTM D-1556) AT A RATE OF AT LEAST ONE TEST PER 5,000 SF PER ONE FOOT OF COMPACTED FILL THICKNESS IN GENERAL AREA FILLS AND ONE TEST PER 50 LINEAL FEET PER LIFT ALONG THE BARREL.
   - THE MINIMUM COMPACTION SHALL BE A MINIMUM OF 95% OF THE MAXIMUM STANDARD PROCTOR DENSITY (ASTM D-698) AT MOISTURE CONTENTS VARYING FROM 2 PERCENT BELOW TO 3 PERCENT ABOVE OPTIMUM MOISTURE CONTENT DETERMINED BY STANDARD PROCTOR TEST.
7. SUBGRADE FOR THE RISER STRUCTURE AND OUTLET PIPE SHALL BE APPROVED BY THE GEOTECHNICAL ENGINEER PRIOR TO PLACEMENT.IF THE GEOTECHNICAL ENGINEER REQUIRES ADDITIONAL SUBGRADE PREPARATION, THE ADDITIONAL COST SHALL BE APPROVED BY THE ENGINEER PRIOR TO PLACEMENT.
8. THE OUTLET PIPE SHALL BE BEDDED IN CONCRETE FOR 2/3 OF THE PIPE LENGTH, BEGINNING AT THE RISER, AND IN #78 STONE FOR 1/3 OF PIPE LENGTH TO THE OUTLET. SEE DETAILS ON SHEET CX.X.
9. EMBANKMENT AND SIDE SLOPES OF THE BASIN SHALL BE STABILIZED PER SEEDING SCHEDULE ON EROSION CONTROL DETAILS SHEET OR SODDED. SEE LANDSCAPE PLAN ON SHEETS LX.X AND LX.X FOR FURTHER PLANTING DETAILS.
10. IF, DURING CONSTRUCTION, THE SCM IS TO BE USED AS AN EROSION CONTROL MEASURE, THE FOREBAY BERM(S) SHALL NOT BE INSTALLED DURING THE INITIAL CONSTRUCTION OR WHILE THE SCM IS USED AS AN EROSION CONTROL MEASURE.
11. UNLESS OTHERWISE NOTED, ALL PERMANENT STRUCTURES (e.g. RISER/BARREL, WEIR WALLS, ETC.) ARE TO BE INSTALLED WITH THE INITIAL DAM CONSTRUCTION.
12. FOR SITE BUILT FEATURES (e.g. WEIR WALLS, DROP STRUCTURES, BRIDGES, ETC.), THE CONTRACTOR SHALL PROVIDE STRUCTURAL DRAWINGS TO BE SIGNED AND SEALED BY A NC PROFESSIONAL ENGINEER AND TO THE DESIGN ENGINEER FOR REVIEW AND APPROVAL PRIOR TO CONSTRUCTION.
13. PRIOR TO FINAL GRADING OF THE SCM, THE CONTRACTOR SHALL PROVIDE SUFFICIENT AS-BUILT SURVEY INFORMATION TO CONFIRM THAT THE FINISHED SCM WILL MEET THE SPECIFIC DIMENSIONAL REQUIREMENTS APPLICABLE TO THE SCM. THOSE REQUIREMENTS INCLUDE:
    - POND BOTTOM ELEVATION = 357.00 FT
    - DRAWDOWN OVERFLOW ELEVATION (NORMAL POOL) = 362.5 FT
    - MINIMUM SURFACE AREA AT NORMAL POOL ELEVATION = 7,114 SF
    - WEIR CREST ELEVATION= 363.75 FT
    - RISER CREST ELEVATION= 368.00 FT
    - LOW POINT TOP OF EMBANKMENT (AUXILIARY SPILLWAY) = 369.00 FT
    - AVERAGE TOP OF EMBANKMENT = 370.00 FT
15. ELEVATIONS SHALL BE WITHIN 0.1 FEET OF THE ABOVE ELEVATIONS FOR EARTHWORK, AND 0.05 FEET FOR OUTLET STRUCTURE. ALL SURFACE AREAS ARE THE MINIMUM AREAS. REQUEST FOR A REDUCTIONS IN THE MINIMUM VALUES WILL BE CONSIDERED ON A CASE BY CASE BASIS.
16. ONCE THE PROJECT SITE HAS BEEN STABILIZED, CONTRACTOR SHALL OBTAIN APPROVAL BY EROSION CONTROL INSPECTOR IN ORDER TO REMOVE TEMPORARY EROSION CONTROL DEVICES.
    - ONCE ALL SEDIMENT AND EROSION CONTROL DEVICES HAVE BEEN REMOVED, THE SCM SHALL BE CONVERTED TO A PERMANENT SCM.
    - ALL SEDIMENT SHALL BE REMOVED AND DISPOSED OF PROPERLY.
    - FOREBAY AND VEGETATED SHELF SHALL BE CONSTRUCTED AS SHOWN ON THE PLAN.
    - VEGETATED SHELF SHALL BE PLANTED PER PLANT SCHEDULE ON LANDSCAPE PLAN (SEE LITTLE DIVERSIFIED ARCHITECTS).
17. FINAL CERTIFICATION OF THE SCM BY A PROFESSIONAL ENGINEER LICENSED IN THE STATE IN WHICH THE PROJECT IS LOCATED IS REQUIRED.

CLAY LINER SPECIFICATIONS:

THE CONTRACTOR SHALL INSTALL A CLAY LINER TO MAINTAIN A PERMANENT POOL AT THE DESIGN ELEVATION. IF THE SITE GEOTECHNICAL ENGINEER DETERMINES THAT THE EXISTING SITE CONDITIONS (SOIL PROPERTIES, EXISTING WATER TABLE, ETC.) INDICATE THAT NORMAL POOL CAN BE MAINTAINED WITHOUT A CLAY LINER, THE GEOTECHNICAL ENGINEER WILL PROVIDE NOTICE IN WRITING TO THE PROJECT ENGINEER THAT THE CLAY LINER IS NOT REQUIRED. IF THE CLAY LINER IS NOT INSTALLED, THE OWNER SHALL RECEIVE A CREDIT FOR THE DELETION OF THE LINER.

AT A MINIMUM, THE CLAY LINER MATERIAL FOR THE WET POND SHALL MEET THE FOLLOWING SPECIFICATIONS:

- UNIFIED SOIL CLASSIFICATION SYSTEM DESIGNATION OF CL, CH, ML, OR SC
- MINIMUM OF 40% PASSING #200 SIEVE
- MINIMUM PLASTICITY INDEX OF 12
- MAXIMUM PERMEABILITY OF 1 X 10^{-5} cm/sec
- A MINIMUM OF 2 TESTS OF EACH ABOVE PARAMETER SHALL BE PROVIDED FROM AN APPROVED LABORATORY ON THE LINER MATERIAL AND PRESENTED TO THE ENGINEER FOR APPROVAL PRIOR TO PLACEMENT OF THE MATERIAL.
- COMPACTION TO A MINIMUM OF 95% OF THE MAXIMUM STANDARD PROCTOR DENSITY (ASTM D-698), AND WITHIN 3% OF THE OPTIMUM MOISTURE CONTENT (MINIMUM OF 1 COMPACTION DENSITY TEST PER 2500 SQUARE FEET).
- AN IN-PLACE MAXIMUM INFILTRATION RATE OF 0.01 INCHES PER HOUR.
- RECOMMENDATIONS OF THE SITE GEOTECHNICAL ENGINEER MAY SUPERCEDE THE ABOVE SPECIFICATIONS.

THE CLAY LINER SHALL BE PLACED UNDER THE BOTTOM OF THE SCM PERMANENT POOL TO A MINIMUM THICKNESS OF 8 INCHES. A MINIMUM OF 4 INCHES OF TOPSOIL SHALL BE PLACED ABOVE THE CLAY LINER TO THE FINISHED GRADE AS SHOWN ON THE DRAWINGS AND/OR DETAILS. CARE SHALL BE TAKEN WHEN PLACING THE TOPSOIL SO AS NOT TO DAMAGE THE CLAY LINER. A CLAY/SOIL, NO ORGANICS, MIXTURE MAY BE USED IF THE ABOVE SPECIFICATIONS ARE SATISFIED AND WITH WRITTEN APPROVAL BY THE GEOTECHNICAL ENGINEER.

PRECAST CONCRETE MATERIALS NOTES:

1. ALL PRECAST CONCRETE STRUCTURES SHALL CONFORM TO ASTM C913 (RECTANGULAR) OR C478 (ROUND).
2. ALL REINFORCED CONCRETE PIPE SHALL CONFORM TO ASTM C76, CLASS III (UNLESS OTHERWISE NOTED),
   - 2.1. O-RING JOINTS (RGRCP) SHALL CONFORM TO ASTM C443 & ASTM C361.
   - 2.2. NON O-RING JOINTS (RCP) SHALL CONFORM TO ASTM C990

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NORTH CAROLINA PROFESSIONAL ENGINEER BRANDON J. MILLER
PRELIMINARY
NOT APPROVED FOR CONSTRUCTION

SCALE: 1 inch = 30 ft. H
1 inch = 3 ft. V

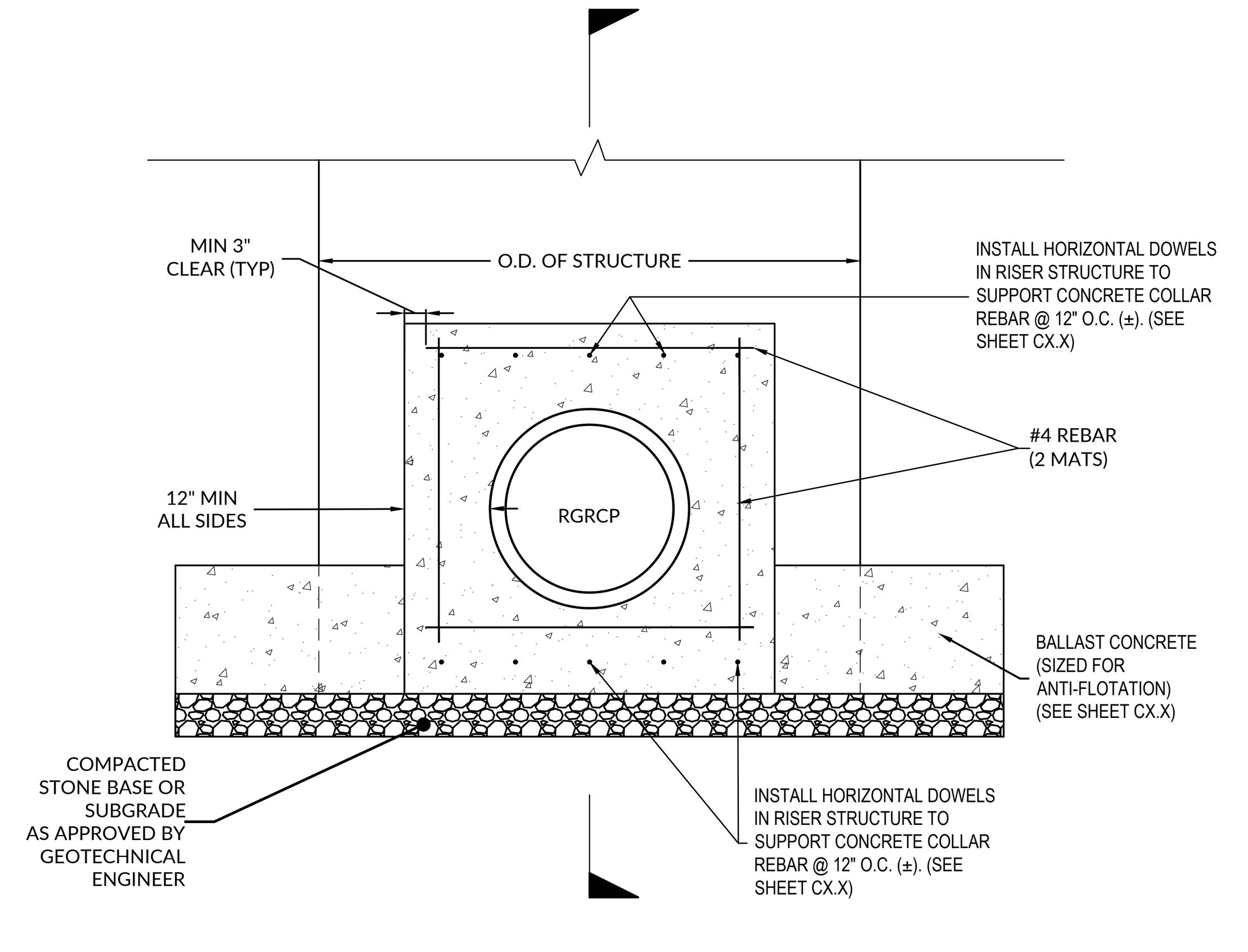
INITIAL PLAN DATE: 11/01/2024
REVISIONS:

WR JOB NUMBER		23-0045
DRN: WR	DGN: WR	CKD: WR

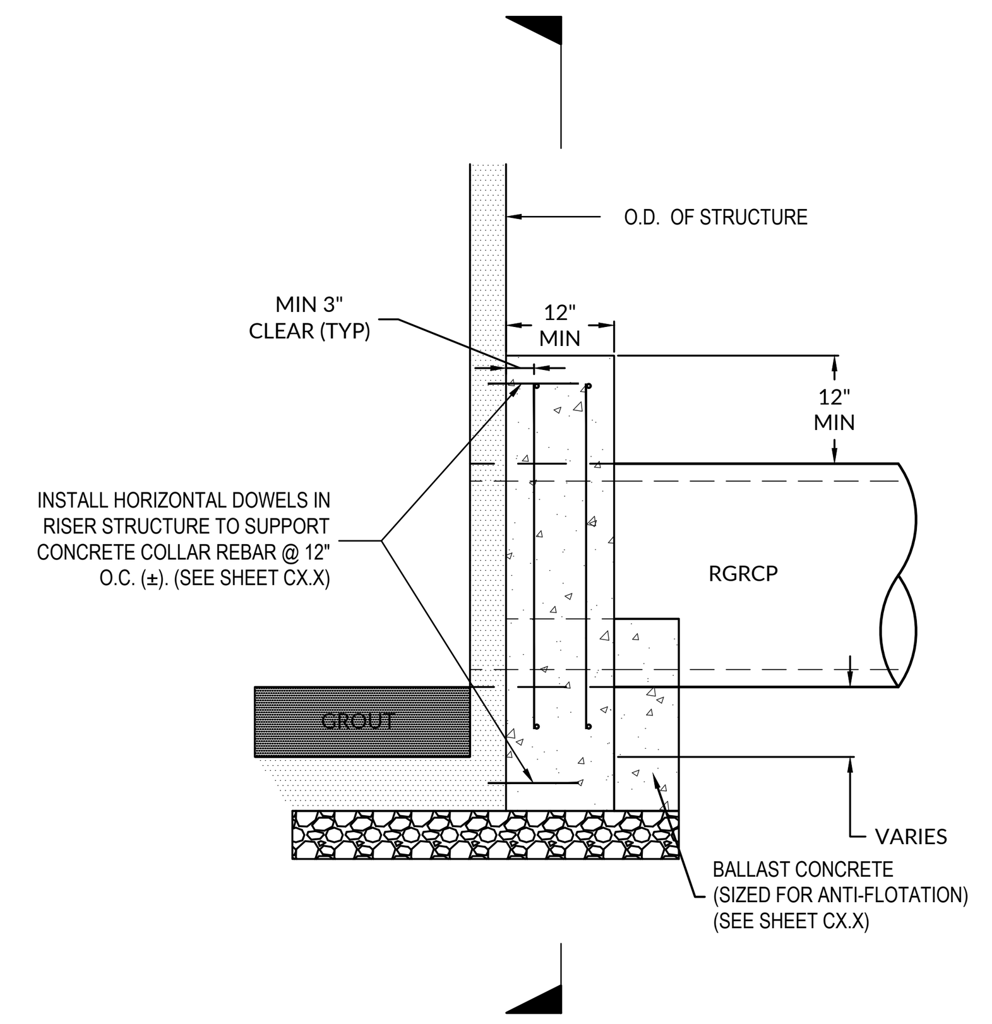
SCM 4 PLAN & PROFILE

C9.04

Need headwall detail also if SCM#4 outfall needs to change



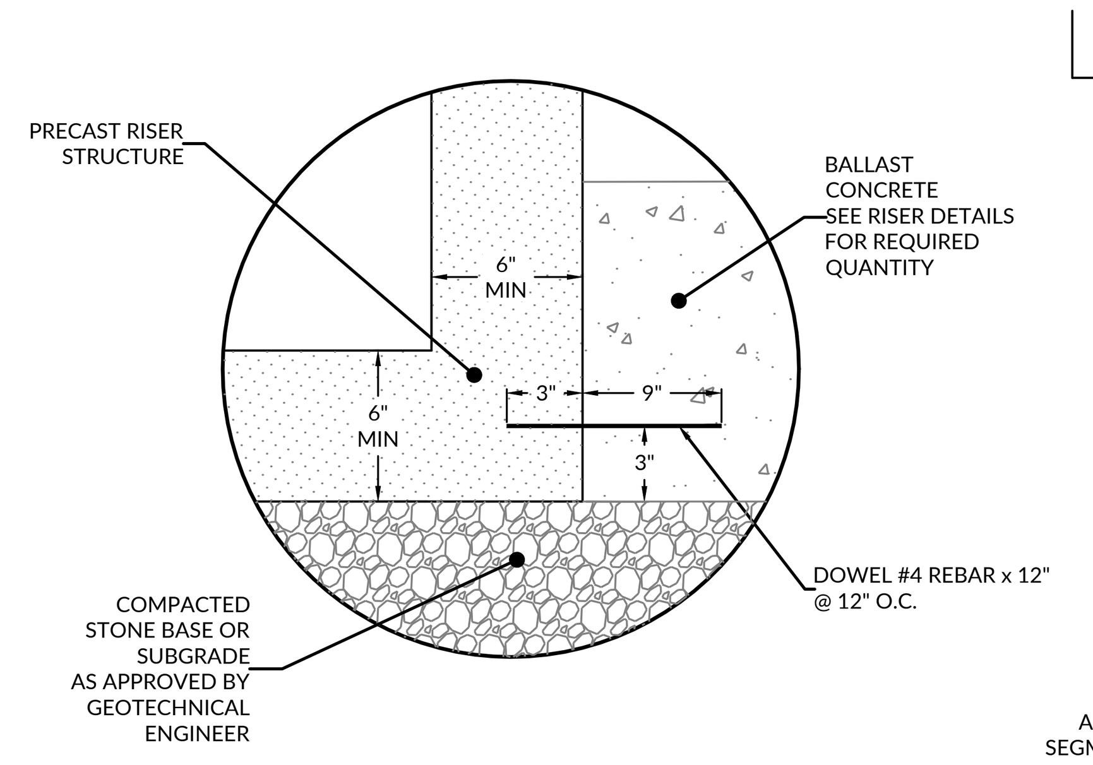
CROSS-SECTION VIEW



LONGITUDINAL SECTION VIEW

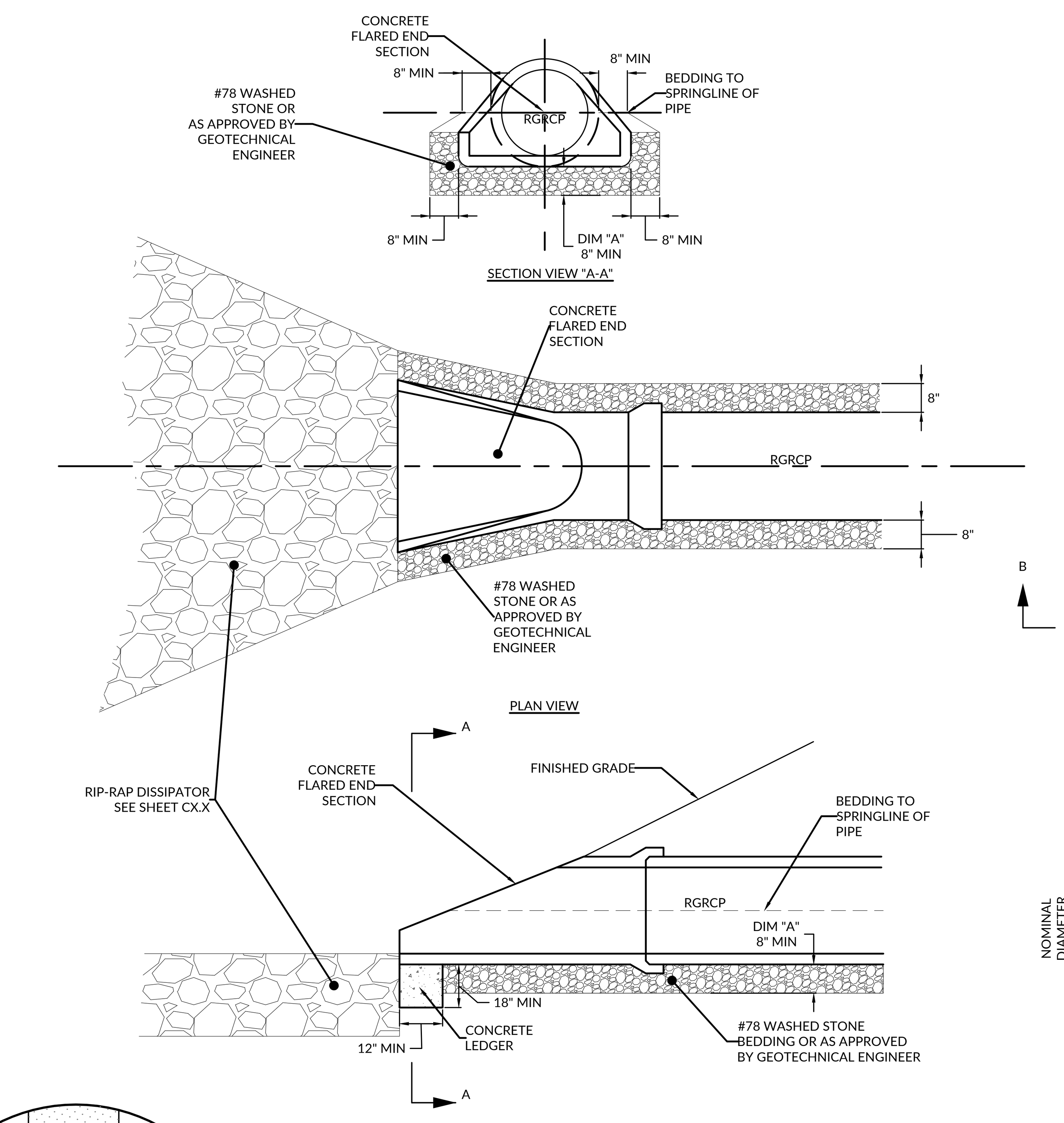
CONCRETE PIPE COLLAR AT STRUCTURE DETAIL

NOT TO SCALE



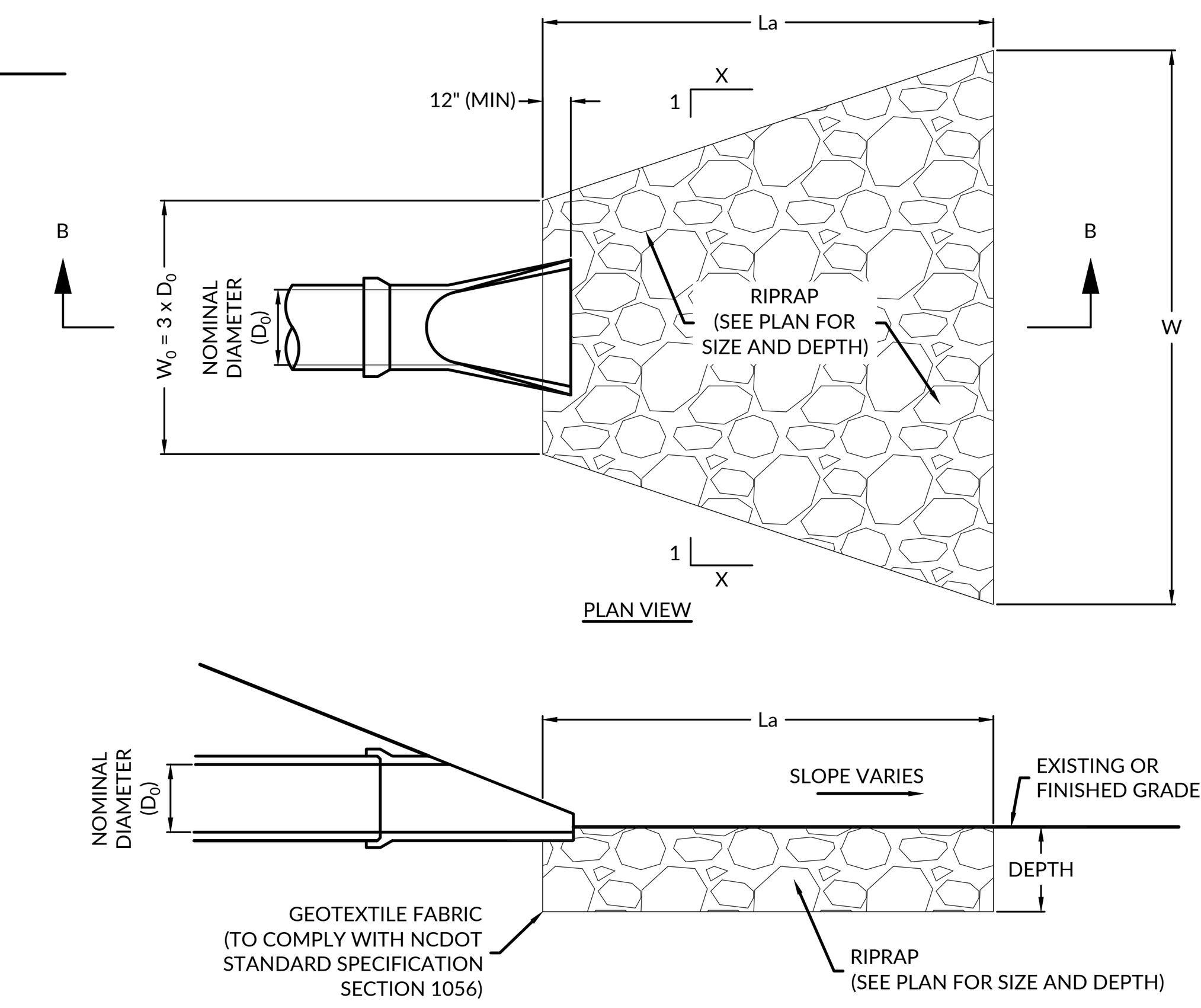
ANCHOR DETAIL (TYPICAL)

NOT TO SCALE



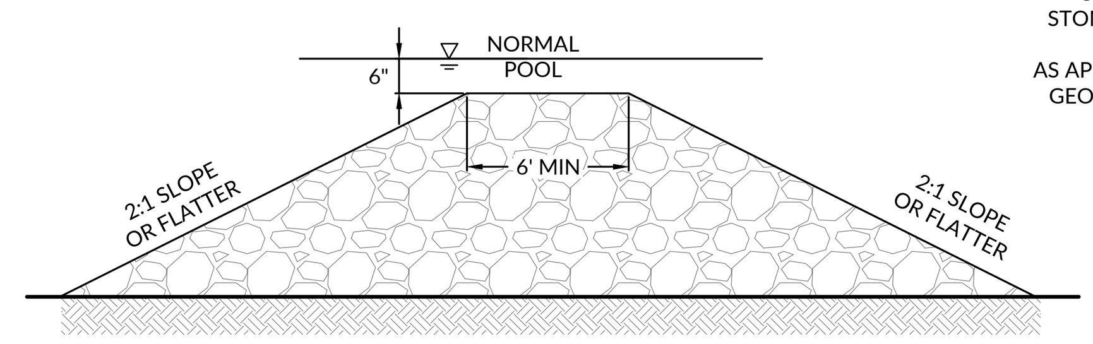
NOMINAL PIPE SIZE	DIM A* (⅓ D)	DIM B (PIPE ID)	DIM C (DIM A + 12")	SCM #
18	8	18	20	
24	8	24	20	
30	10	30	22	1, 3, & 4
36	12	36	24	2
42	14	42	26	
48	16	48	28	

ALL DIMENSIONS IN INCHES
DIM A = 8" MINIMUM
18" MINIMUM PIPE DIAMETER

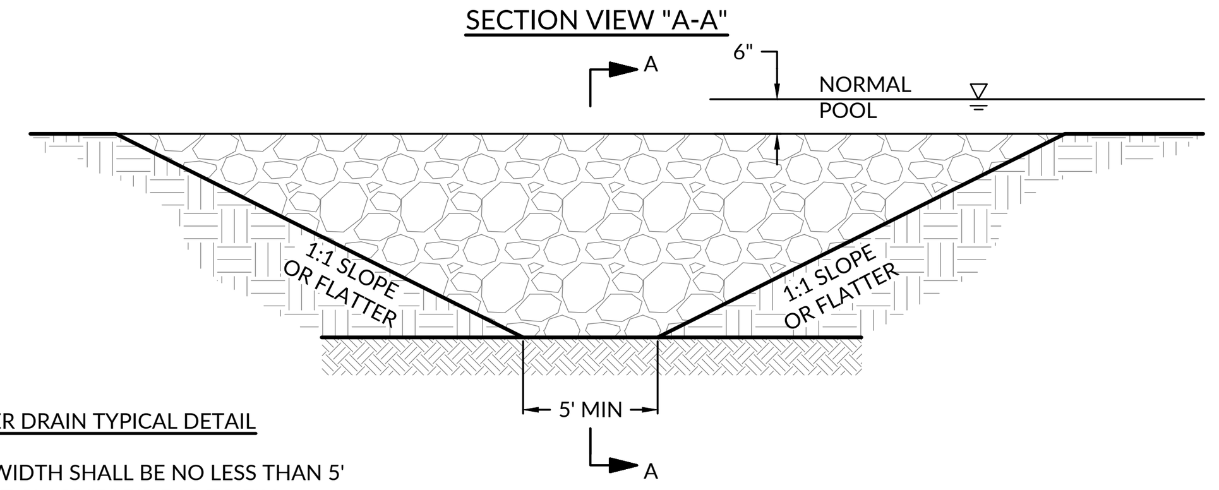


OUTLET DETAIL (FLARED END SECTION) & RIPRAP VELOCITY DISSIPATOR (ADAPTED FROM HEC-14 & NYSDOT)

NOT TO SCALE



SECTION VIEW "A-A"



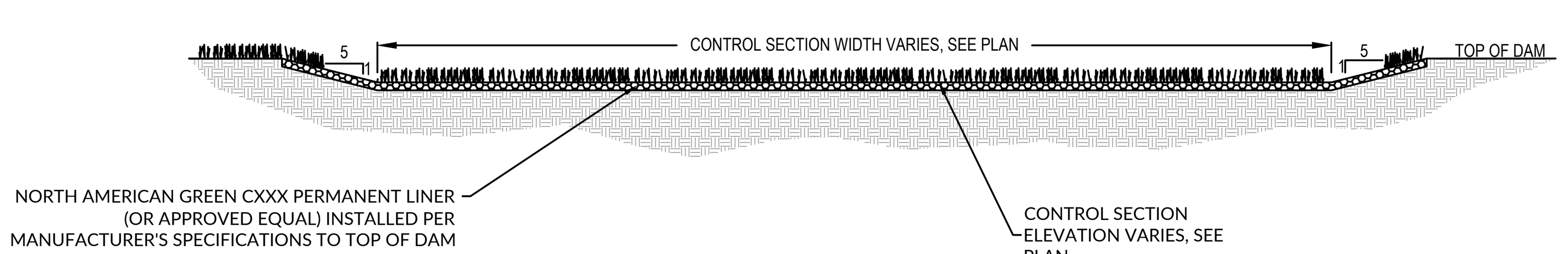
ELEVATION

FOREBAY FILTER DRAIN TYPICAL DETAIL

- BOTTOM WIDTH SHALL BE NO LESS THAN 5'
- USE NCDOT CLASS "B" RIP RAP TO FILL SPILLWAY
- SLOPES FROM SPILLWAY BOTTOM TO TOP OF BERM SHOULD BE NO STEEPER THAN 2:1

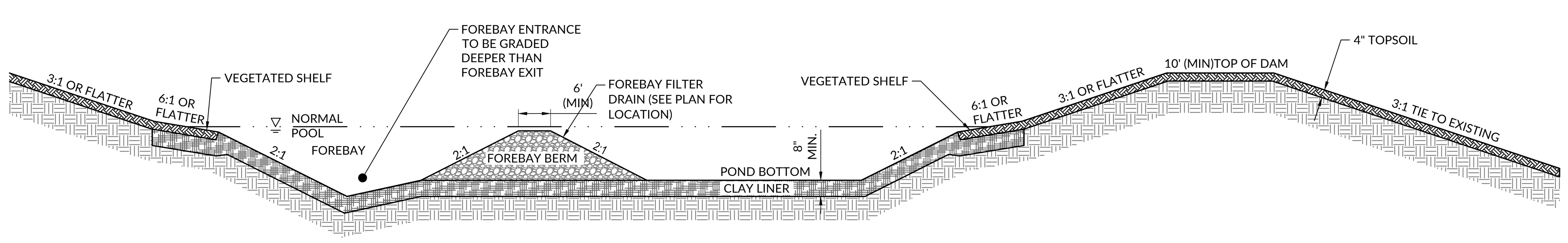
FOREBAY FILTER DRAIN DETAIL

NOT TO SCALE



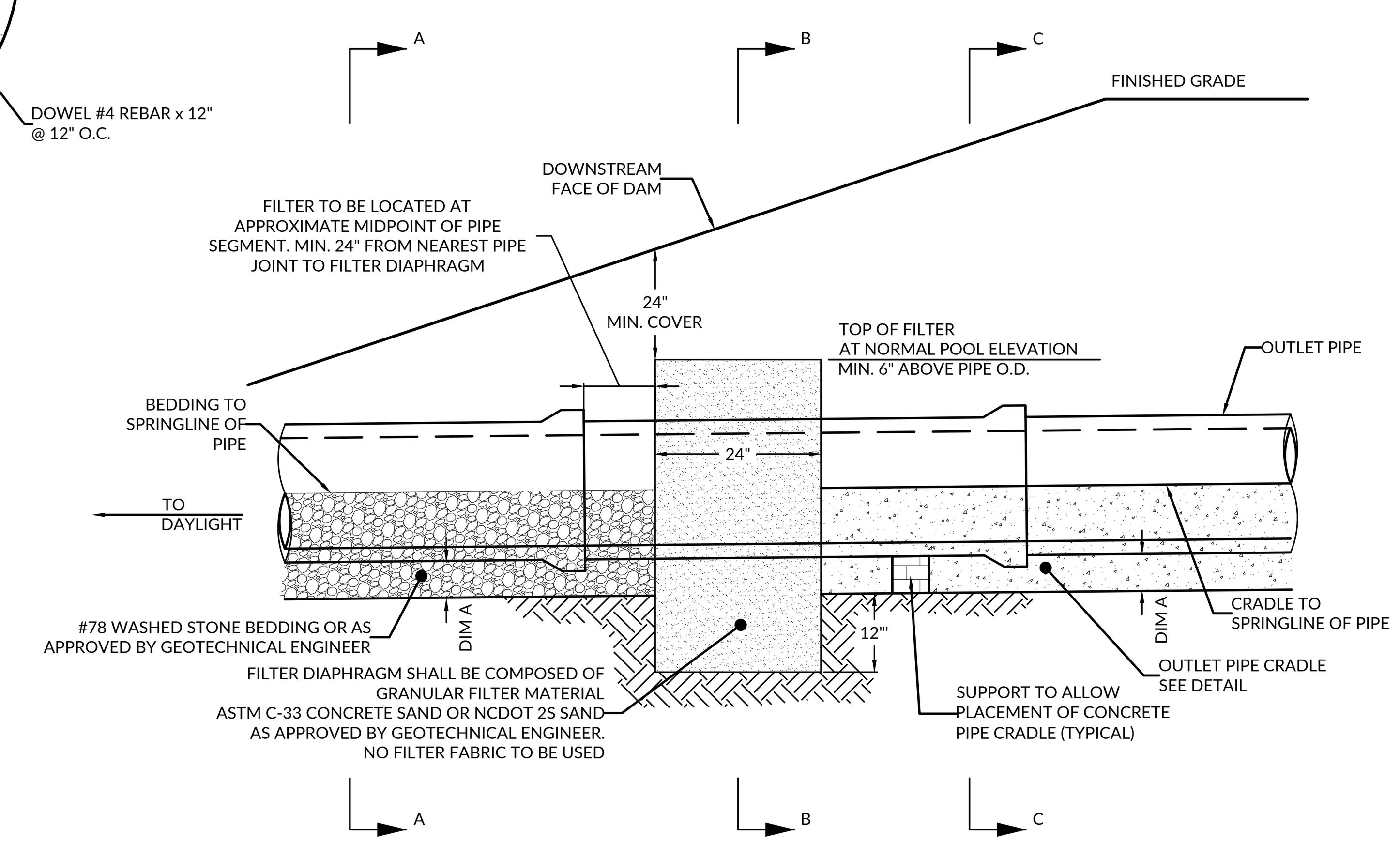
AUXILIARY SPILLWAY CONTROL SECTION

NOT TO SCALE

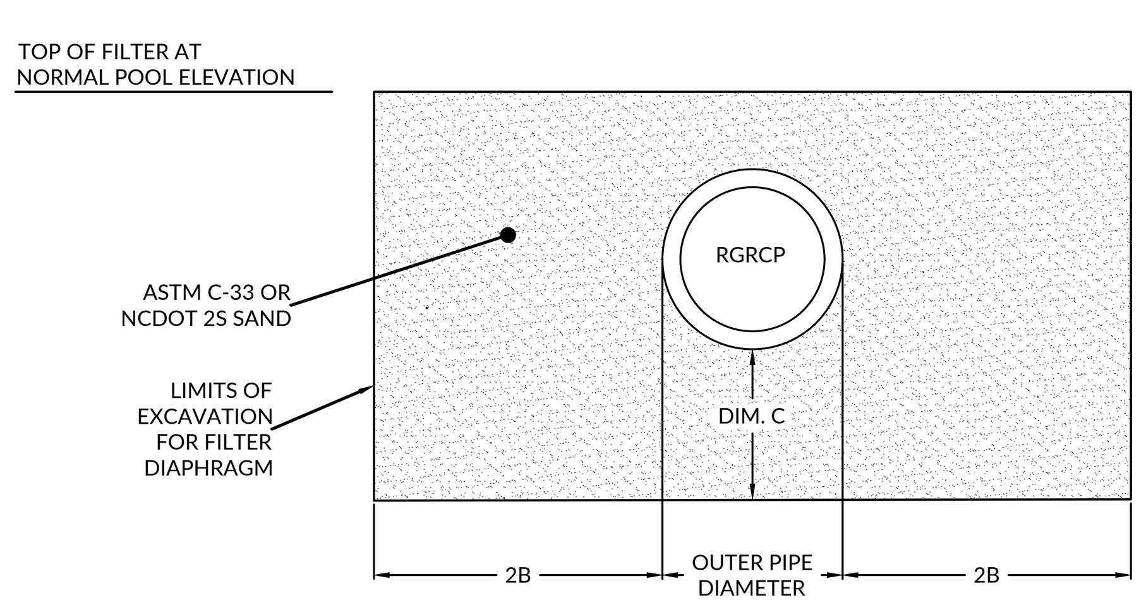


WET POND GRADING DETAIL

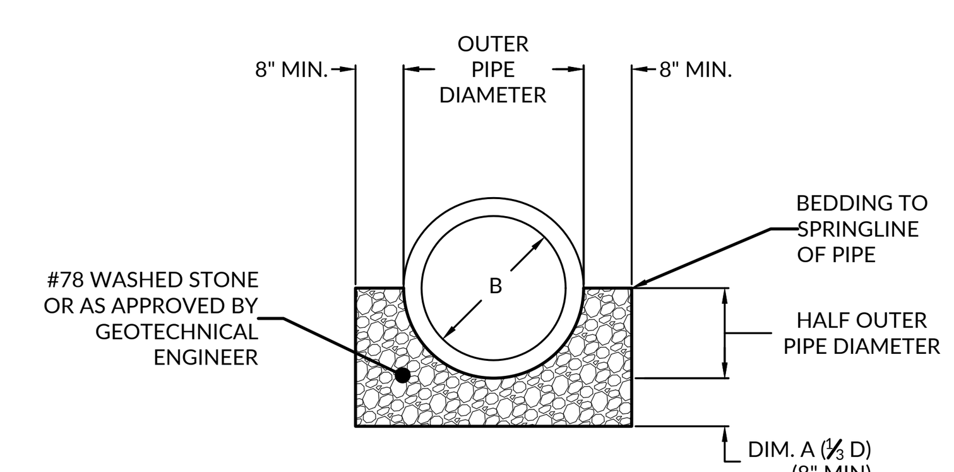
NOT TO SCALE



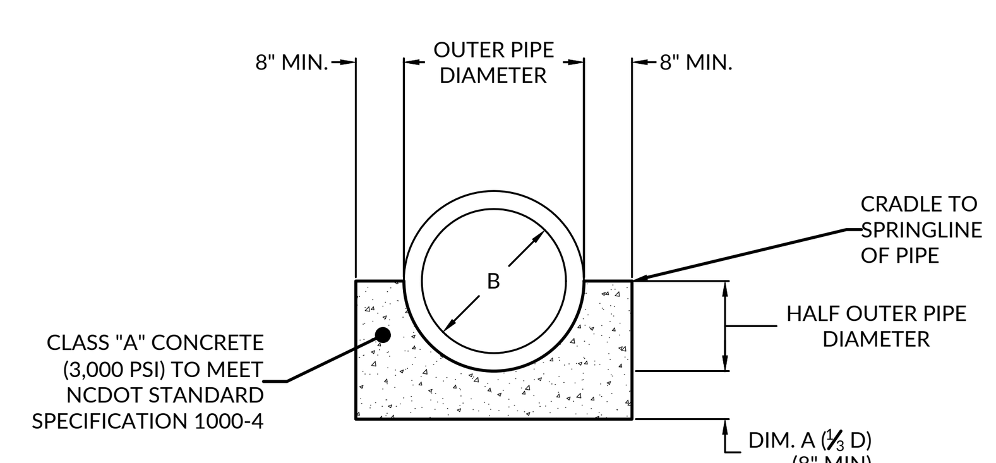
LONGITUDINAL SECTION VIEW



FILTER DIAPHRAGM DETAIL SECTION VIEW "B-B"



GRAVEL BEDDING DETAIL SECTION "A-A"



PIPE CRADLE DETAIL SECTION VIEW "C-C"

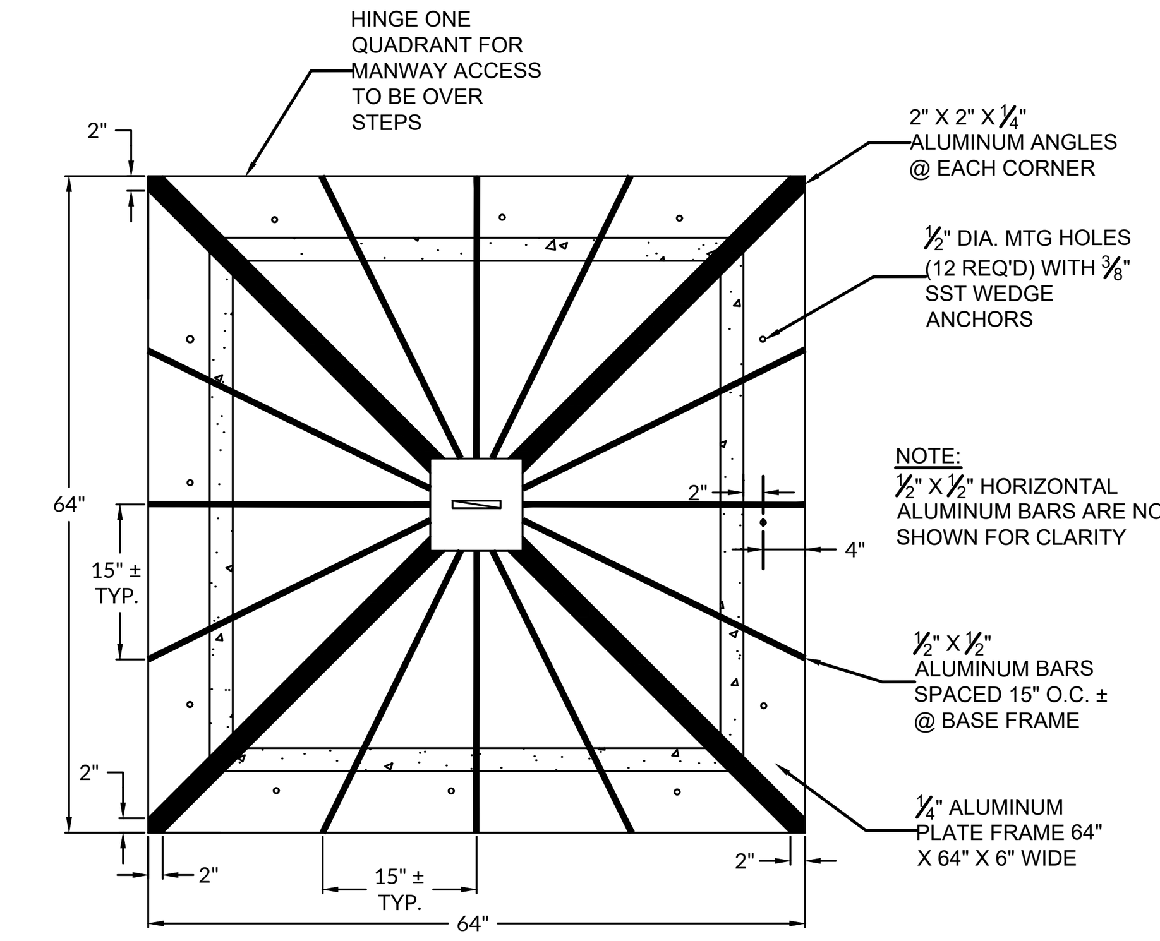
NOTE:
IF PIPE IS INSTALLED IN EXCAVATED TRENCH, THEN SIDE WALLS MAY CONFORM TO TRENCH (TRENCH MAY BE USED AS CRADLE FORM)

NOMINAL PIPE SIZE (D)	DIM A* (⅓ D)	DIM B (PIPE ID)	DIM C (DIM A + 12")	SCM #
18	8	18	20	
24	8	24	20	
30	10	30	22	1, 3, & 4
36	12	36	24	2
42	14	42	26	
48	16	48	28	

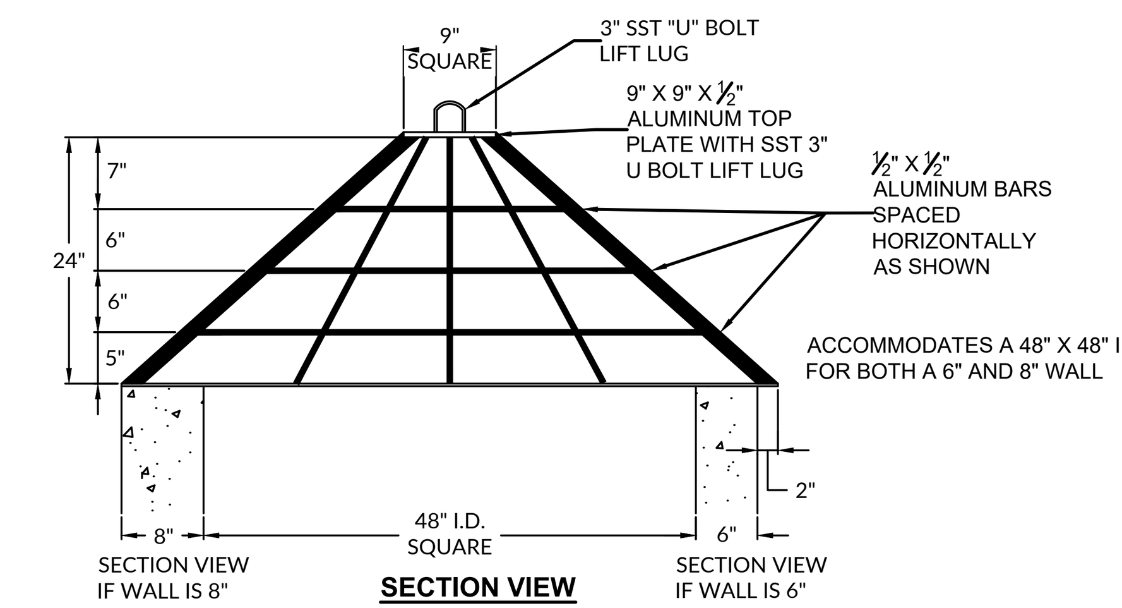
ALL DIMENSIONS IN INCHES
DIM A = 8" MINIMUM
18" MINIMUM PIPE DIAMETER

OUTLET PIPE, FILTER DIAPHRAGM, AND CONCRETE CRADLE DETAIL

NOT TO SCALE



PLAN VIEW



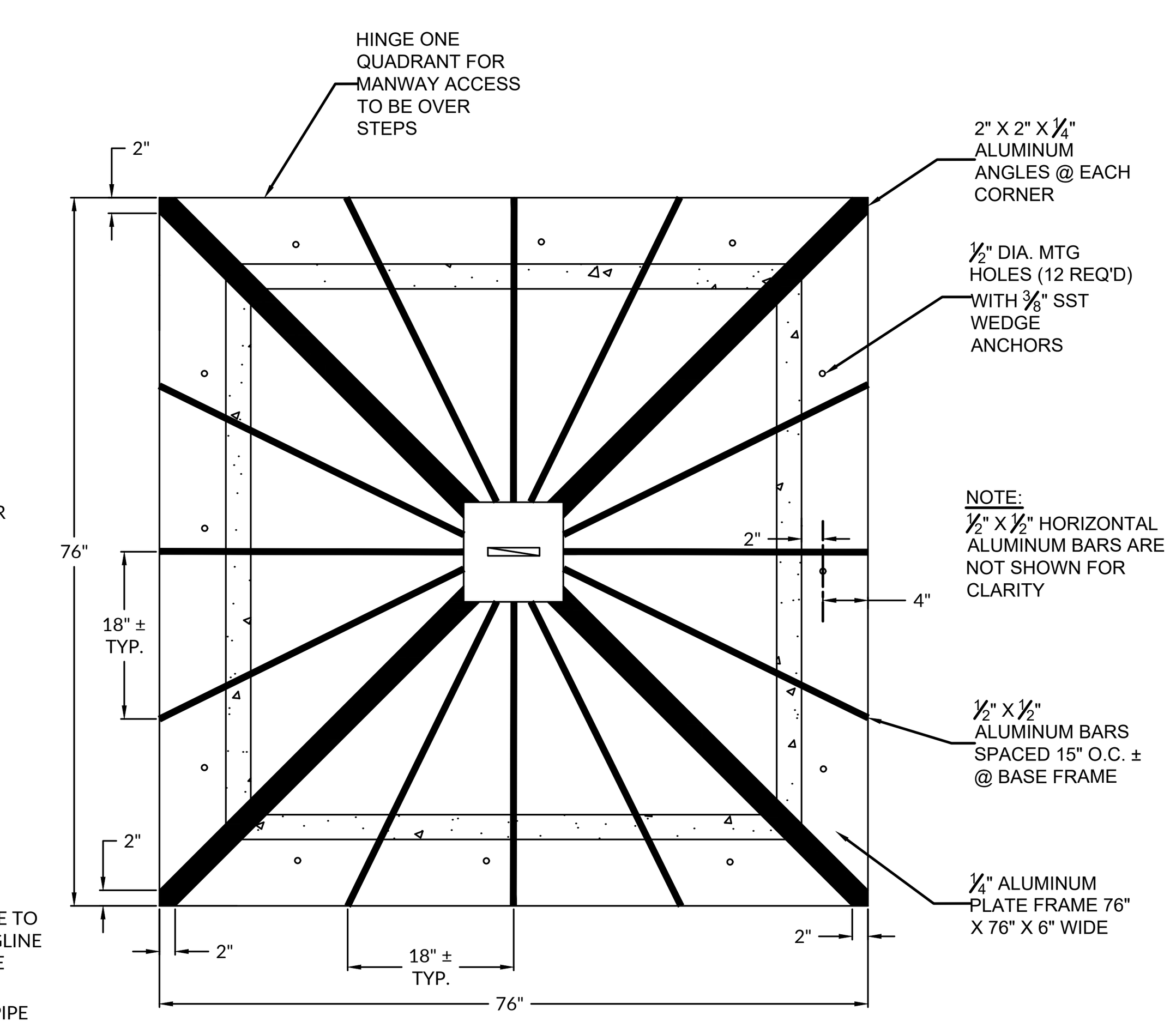
SECTION VIEW

NOTES

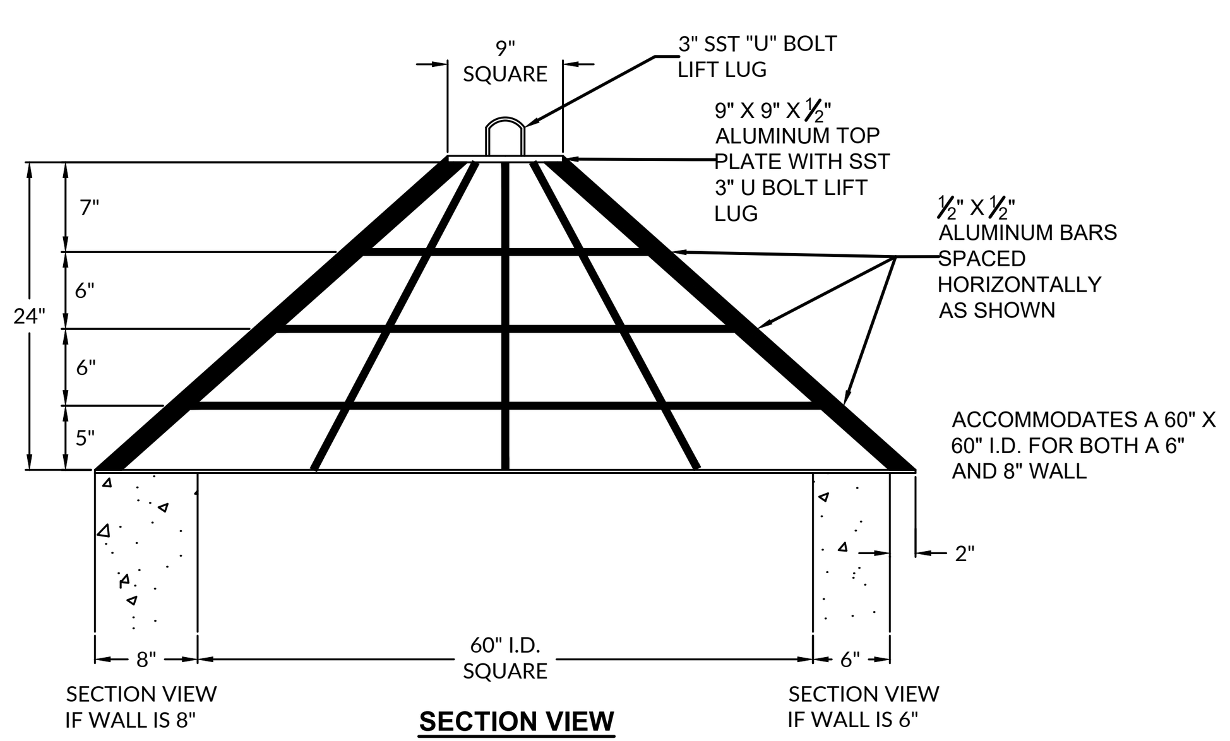
1. TRASH RACK DETAIL BASED ON POMONA PIPE PRODUCTS "STANDARD ALUMINUM BAR & ANGLE PEAKED ROOF TRASH RACK WITH ONE QUADRANT HINGED FOR MANWAY ACCESS TO FIT 48"x48" I.D. CONCRETE RISER WITH 6" OR 8" THICK WALLS".
2. TRASH RACK TO BE POWDER-COATED BLACK.
3. REQUIRES SS HARDWARE TO ATTACH TO RISER.

4' TRASH RACK

NOT TO SCALE



PLAN VIEW



SECTION VIEW

NOTES

1. TRASH RACK DETAIL BASED ON POMONA PIPE PRODUCTS "STANDARD ALUMINUM BAR & ANGLE PEAKED ROOF TRASH RACK WITH ONE QUADRANT HINGED FOR MANWAY ACCESS TO FIT 60"x60" I.D. CONCRETE RISER WITH 6" OR 8" THICK WALLS".
2. TRASH RACK TO BE POWDER-COATED BLACK.
3. REQUIRES SS HARDWARE TO ATTACH TO RISER.

5' TRASH RACK

NOT TO SCALE

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CONSTRUCTION INFRASTRUCTURE DRAWINGS
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PRELIMINARY
NOT APPROVED FOR CONSTRUCTION
NORTH CAROLINA PROFESSIONAL ENGINEER BRANDON J. MILLER

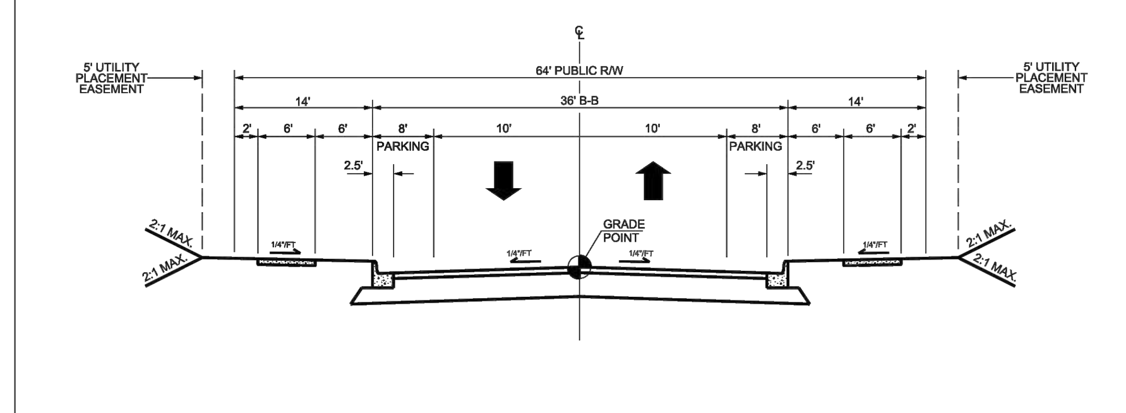
SCALE: 1 inch = ## ft. H
1 inch = # ft. V

INITIAL PLAN DATE: 11/01/2024
REVISIONS:

WR JOB NUMBER 23-0045
DRN: WR DGN: WR CKD: WR

SCM DETAILS

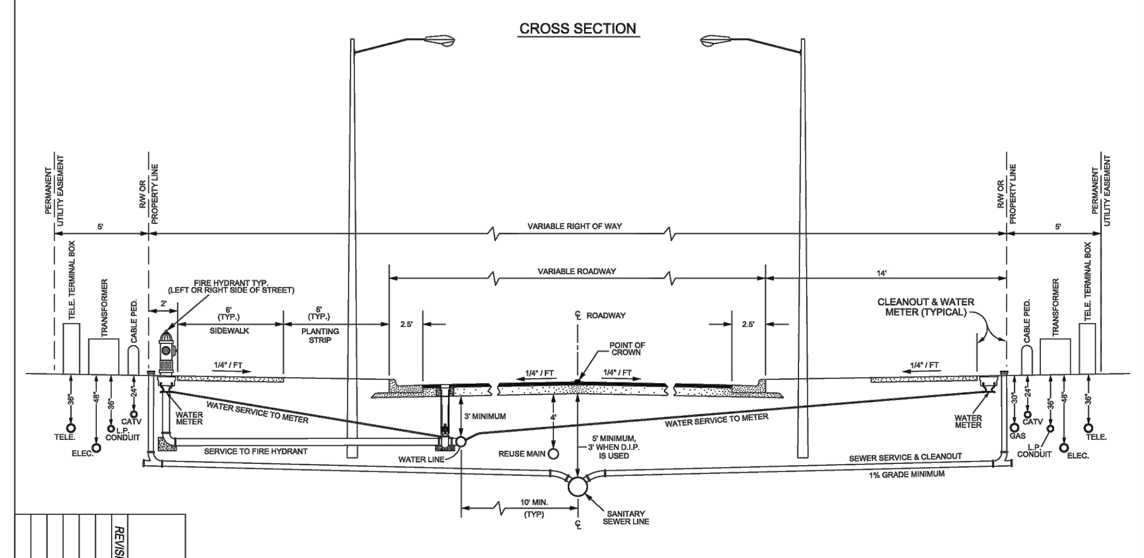
C9.05



GENERAL	
WALKWAY TYPE	SIDEWALK BOTH SIDES
PLANTING TYPE	TREE/LAWN
TREE SPACING	40' O.C. AVG
PARKING TYPE	PARALLEL ON 2 SIDES

PAVEMENT DESIGN
3" SF9.5A
8" ABC

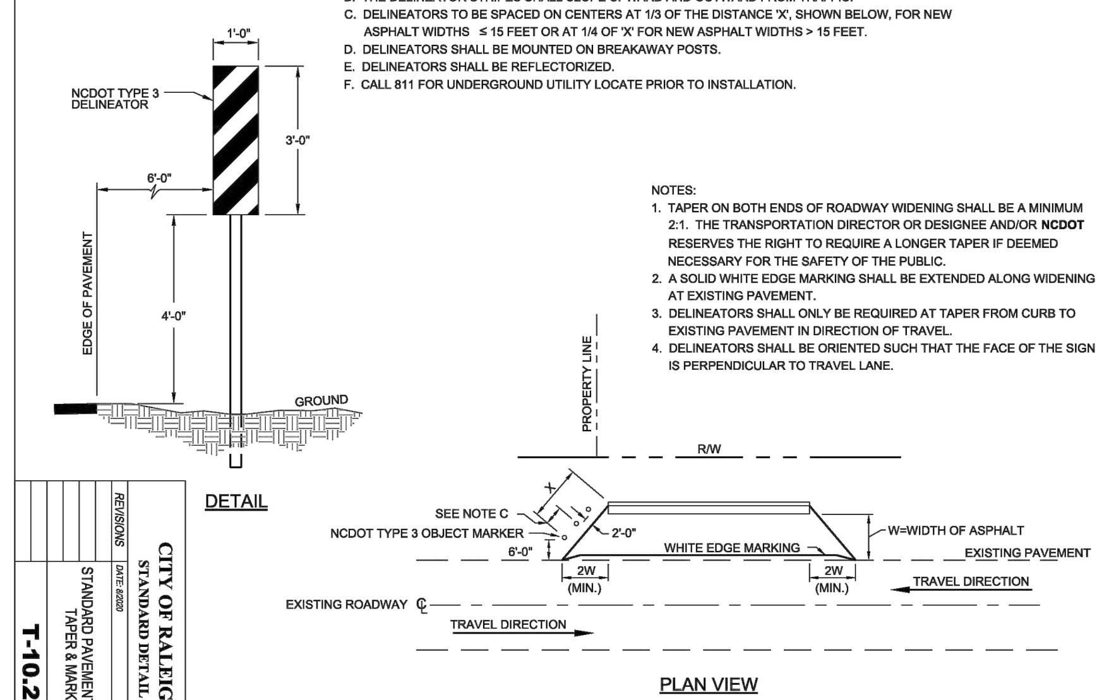
CITY OF RALEIGH
STANDARD DETAIL
NEIGHBORHOOD STREET
T-10.12



NOTES:
1. WATER AND/OR SANITARY SEWER LINES SHALL BE A MINIMUM OF TWO FEET FROM THE EDGE OF THE CURB AND GUTTER
2. ENCROACHMENT ONTO CITY MAINTAINED RIGHT OF WAY SHALL FOLLOW CONDITIONS OF THE APPLICABLE ENCROACHMENT AGREEMENT OR FRANCHISE AGREEMENT.
3. FOR HYDRANT LOCATION SEE PUBLIC UTILITIES STANDARD DETAIL W-4.
4. PUE TO BE EXPANDED ON A CASE BY CASE BASIS AS NEEDED TO ACCOMMODATE PRIVATE UTILITIES APPURTENANT FACILITIES AND EQUIPMENT.

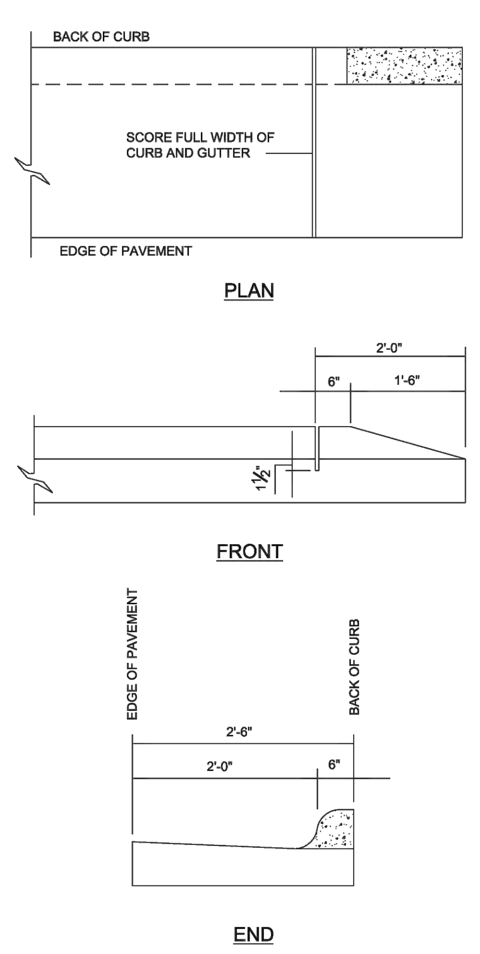
CITY OF RALEIGH
STANDARD DETAIL
DATE: 8/2020 NOT TO SCALE
T-10.29

NOTES:
A. BOTTOM EDGE OF DELINEATOR SHALL BE 4 FEET ABOVE ROADWAY.
B. THE DELINEATOR STRIPES SHALL SLOPE UPWARD AND OUTWARD FROM TRAFFIC.
C. DELINEATORS TO BE SPACED ON CENTERS AT 1/3 OF THE DISTANCE 'X', SHOWN BELOW, FOR NEW ASPHALT WIDTHS ≤ 15 FEET OR AT 1/4 OF 'X' FOR NEW ASPHALT WIDTHS > 15 FEET.
D. DELINEATORS SHALL BE MOUNTED ON BREAKAWAY POSTS.
E. DELINEATORS SHALL BE REFLECTORIZED.
F. CALL 811 FOR UNDERGROUND UTILITY LOCATE PRIOR TO INSTALLATION.

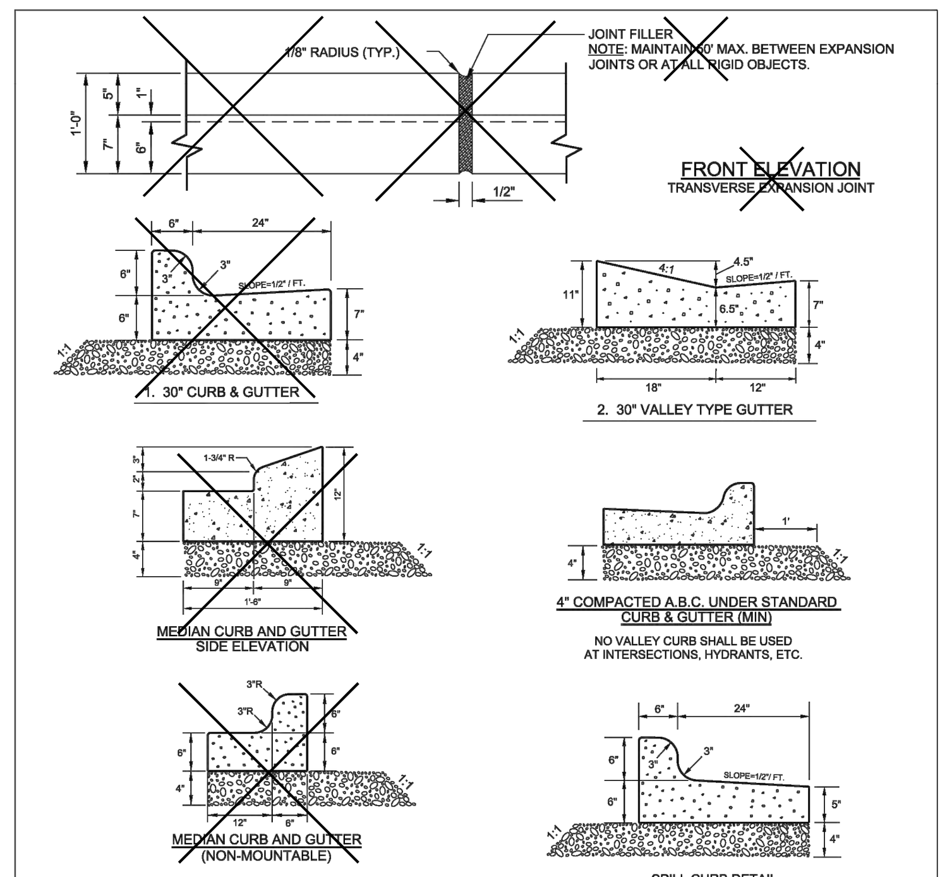


NOTES:
1. TAPER ON BOTH ENDS OF ROADWAY WIDENING SHALL BE A MINIMUM 2:1. THE TRANSPORTATION DIRECTOR OR DESIGNEE AND/OR **NCDOT** RESERVES THE RIGHT TO REQUIRE A LONGER TAPER IF DEEMED NECESSARY FOR THE SAFETY OF THE PUBLIC.
2. A SOLID WHITE EDGE MARKING SHALL BE EXTENDED ALONG WIDENING AT EXISTING PAVEMENT.
3. DELINEATORS SHALL ONLY BE REQUIRED AT TAPER FROM CURB TO EXISTING PAVEMENT IN DIRECTION OF TRAVEL.
4. DELINEATORS SHALL BE ORIENTED SUCH THAT THE FACE OF THE SIGN IS PERPENDICULAR TO TRAVEL LANE.

CITY OF RALEIGH
STANDARD DETAIL
TAPER & MARKINGS
T-10.27



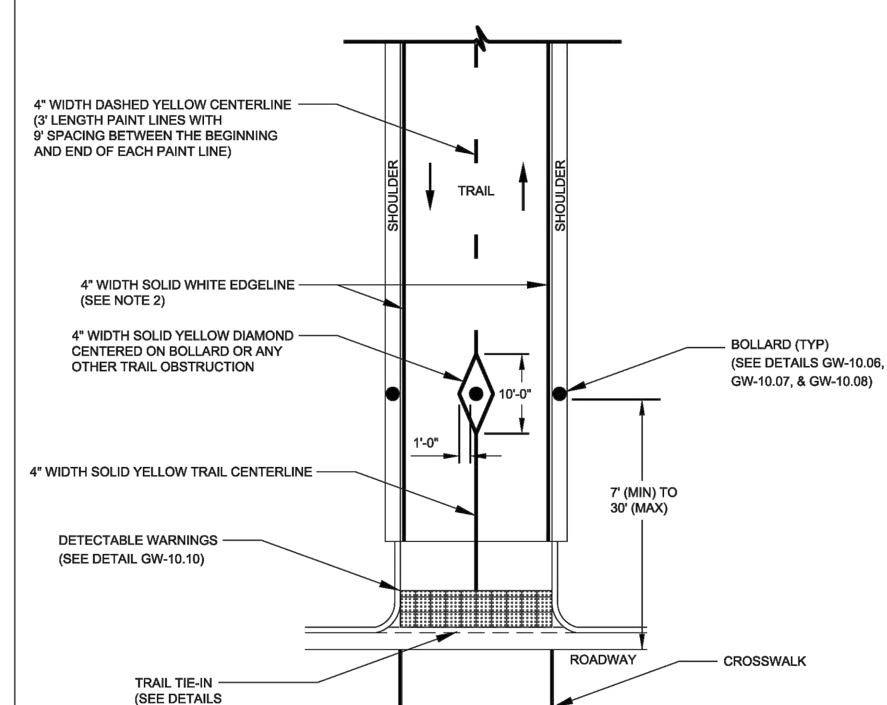
CITY OF RALEIGH
STANDARD DETAIL
STANDARD METHOD OF ENDING CURB AND GUTTER
T-10.25



NOTES:
1. 10' MAXIMUM BETWEEN DUMMY JOINTS. 15' MAXIMUM BETWEEN DUMMY JOINTS ON MACHINE POURS.
2. 1/2" EXPANSION JOINT EVERY 50'.
3. 3000 PSI CONCRETE MINIMUM, 4" SLUMP MAXIMUM.
4. LIQUID MEMBRANE CURING COMPOUND SHALL MEET THE REQUIREMENTS OF SECTION 1026-2 OF NCDOT STANDARDS & SPECIFICATIONS FOR ROADS AND STRUCTURES.
5. ALL CONSTRUCTION JOINTS SHALL BE FILLED WITH JOINT FILLER AND SEALER IN ACCORDANCE WITH NCDOT ROADWAY STANDARD DETAIL 846.01 THE JOINT MATERIAL SHALL CONFORM TO SECTION 1028-2 OF NCDOT STANDARD & SPECIFICATIONS FOR ROADS AND STRUCTURES.
6. REFER TO NCDOT DETAIL 846.01 FOR CURB AND GUTTER SUPERELEVATION RATES.

SHEET 1 OF 2

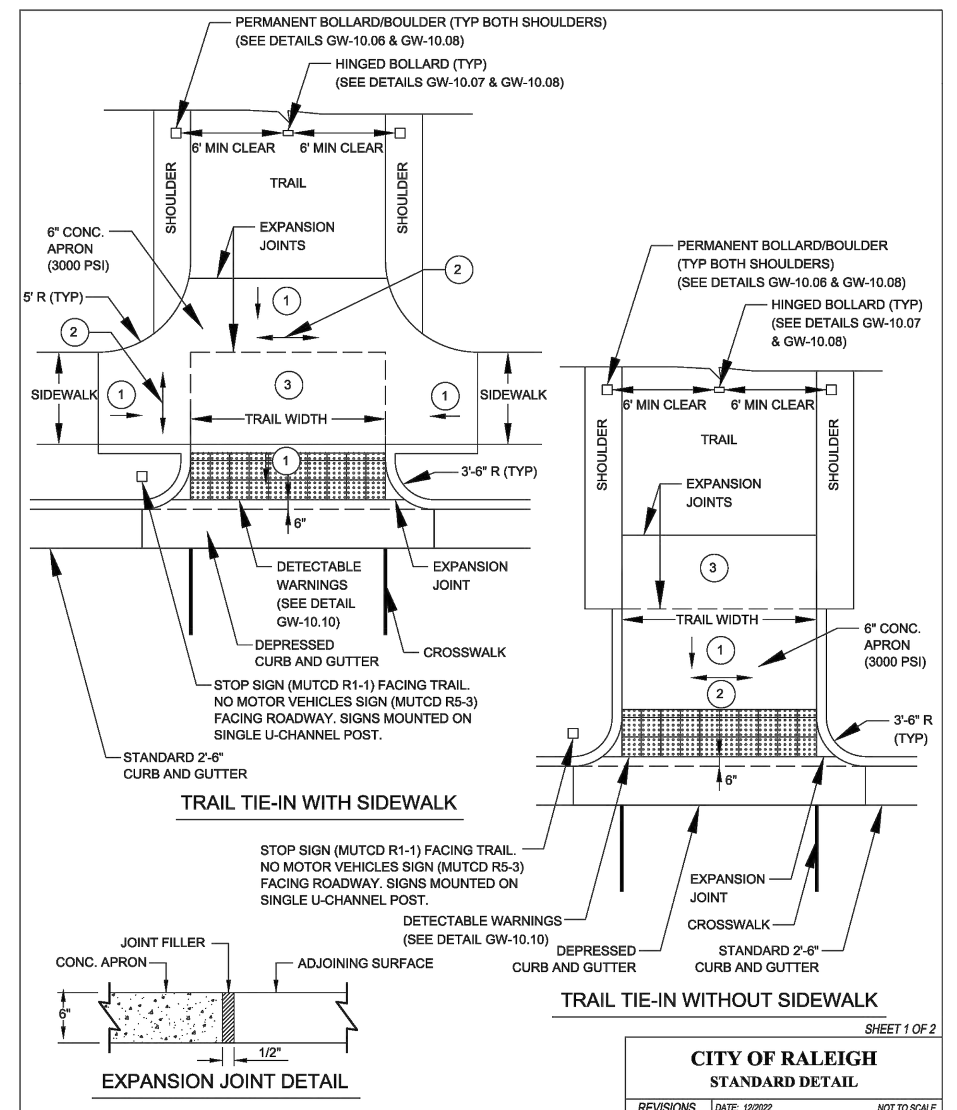
CITY OF RALEIGH
STANDARD DETAIL
REVISIONS | DATE: 8/2020 | NOT TO SCALE
CURB AND GUTTER
T-10.26.1



TRAIL PAVEMENT MARKINGS

NOTES:
1. TRAIL STRIPING MATERIAL SHALL BE STANDARD ROAD PAINT UNLESS OTHERWISE NOTED. UTILIZE NON-SLIP/NON-SKID STRIPING MATERIALS TO AVOID HAZARDS WHEN TRAILS ARE WET.
2. WHEN TRAIL STRIPING IS REQUIRED PER THE CITY OF RALEIGH, 4" WIDTH DASHED YELLOW CENTERLINE STRIPE IS TYPICALLY USED. 4" WIDTH SOLID YELLOW CENTERLINES ARE RECOMMENDED ON TIGHT OR BLIND CORNERS, ON TRAIL SWITCHBACKS, AND ON THE APPROACHES TO ROADWAY CROSSINGS. 4" WIDTH SOLID WHITE EDGE LINES OFFSET 4" FROM EDGE OF TRAIL SHALL ONLY BE USED WHEN HAZARDOUS CONDITIONS ARE PRESENT. THESE HAZARDOUS CONDITIONS INCLUDE BUT ARE NOT LIMITED TO WHEN A TRAIL IS ADJACENT TO A WALL OR STEEP SLOPE. ADDITIONAL TRAIL WIDTH IS TYPICALLY REQUIRED WHEN THESE HAZARDOUS CONDITIONS ARE PRESENT.
3. STRIPING AN ENVELOPE AROUND THE BOLLARD POST WITH 4" SOLID YELLOW IS RECOMMENDED. SEE GW-10.06, GW-10.07, AND GW-10.08 FOR BOLLARD DETAILS.

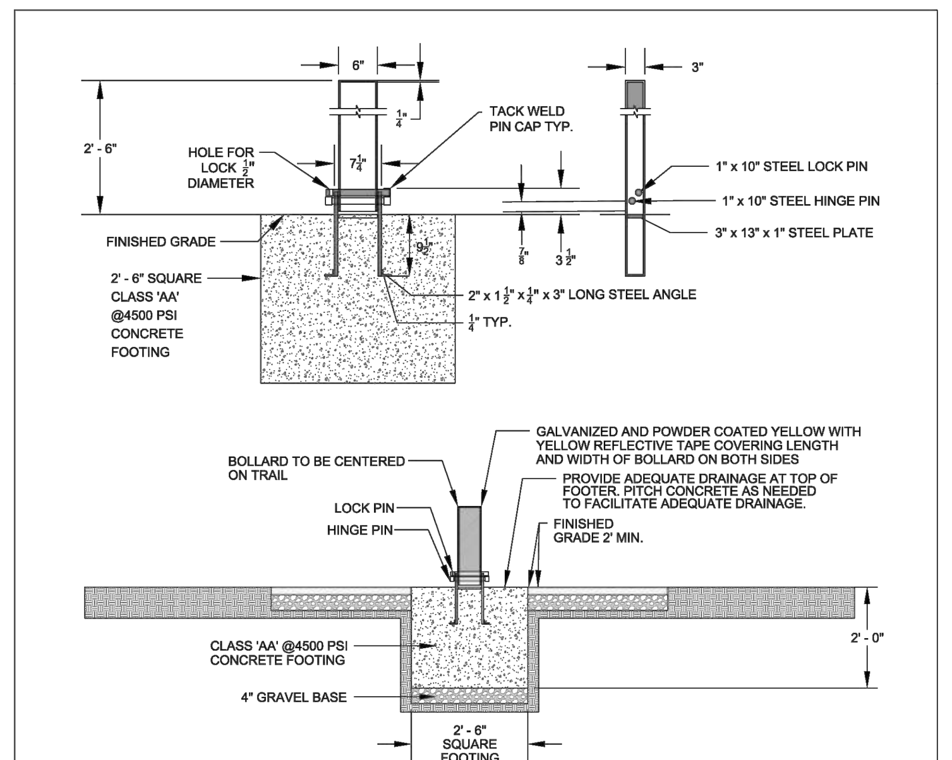
CITY OF RALEIGH
STANDARD DETAIL
REVISIONS | DATE: 12/2022 | NOT TO SCALE
TRAIL PAVEMENT MARKINGS
GW-10.05



DRIVEWAY, SIDEWALK, AND TRAIL TIE-IN

SHEET 1 OF 2

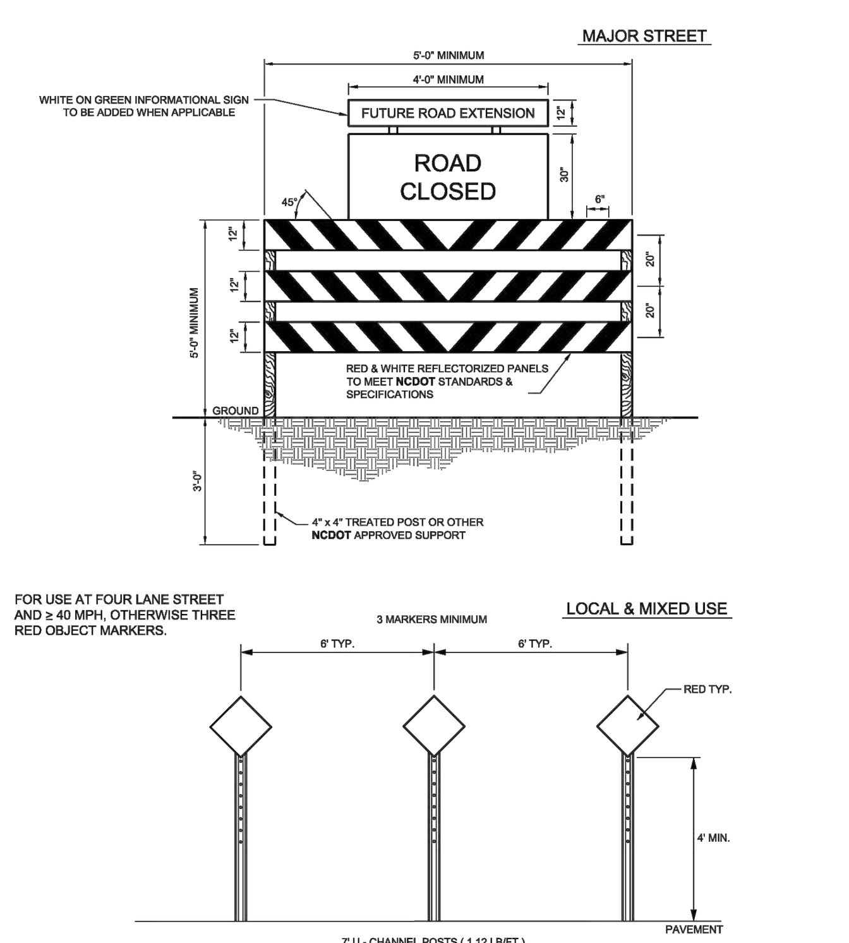
CITY OF RALEIGH
STANDARD DETAIL
REVISIONS | DATE: 12/2022 | NOT TO SCALE
DRIVEWAY, SIDEWALK, AND TRAIL TIE-IN
GW-10.04.1



HINGED BOLLARD

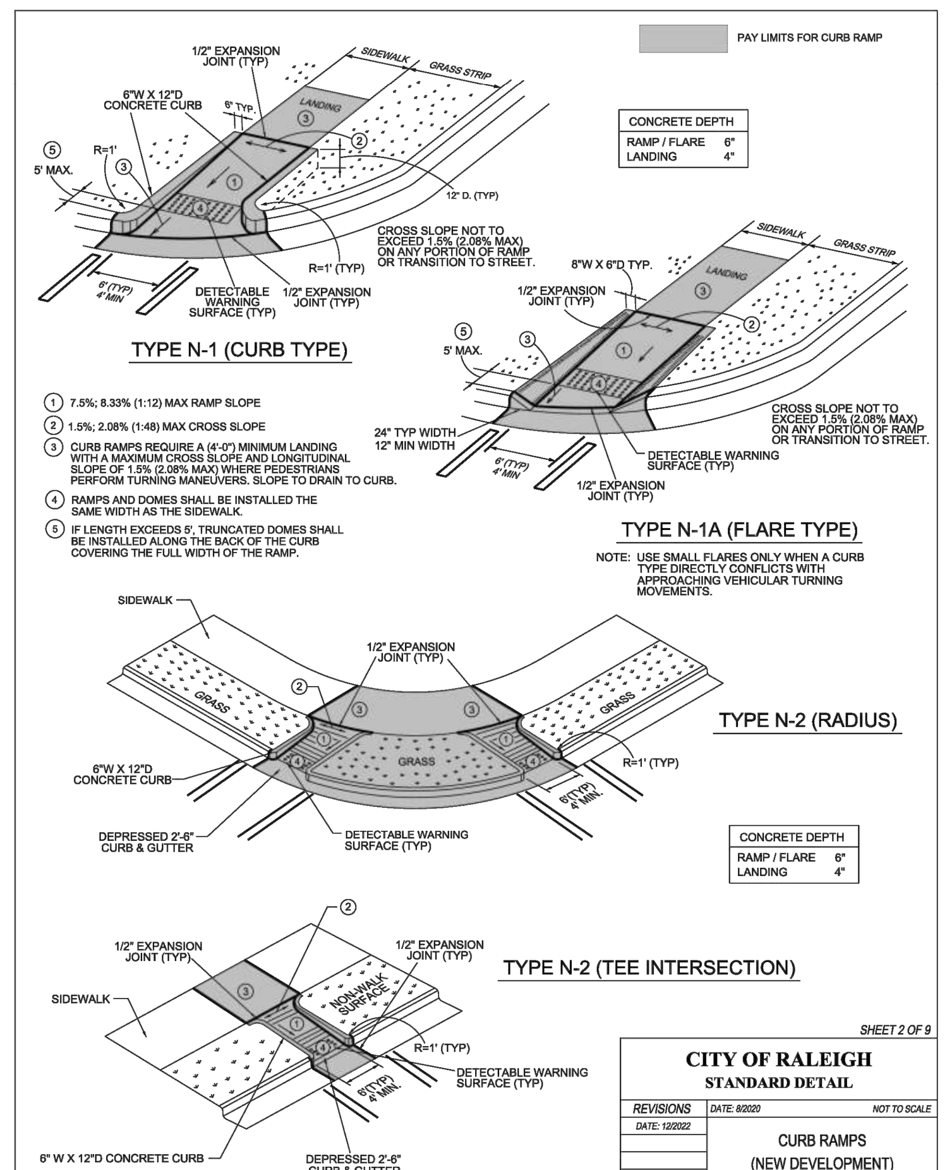
NOTES:
1. A HINGED BOLLARD IS TYPICALLY USED IN THE CENTER OF TRAILS TO PREVENT UNAUTHORIZED MOTOR VEHICLE ENTRY. HINGED BOLLARDS MAY BE USED IN COMBINATION WITH PERMANENT BOLLARDS AND BOULDERS. SEE DETAIL GW-10.08 FOR THE VARIOUS BOLLARD AND BOULDER COMBINATIONS. HINGED BOLLARDS SHOULD BE UTILIZED AT ALL MAJOR ACCESS POINTS AND TRAIL HEADS. "NO MOTOR VEHICLES" SIGNAGE (MUTCD R5-3) MAY BE USED TO REINFORCE ACCESS RULES.
2. BOLLARDS SHOULD BE SET BACK FROM THE ROADWAY EDGE A MINIMUM OF 7 FEET AND A MAXIMUM OF 30 FEET AND WILL VARY DEPENDING ON LOCATION. OWNER SHALL INDICATE WHICH OPTION IS BEST FOR THE SITE LOCATION. BOLLARD SHALL NOT BE PLACED WITHIN THE ROADWAY RIGHT-OF-WAY UNLESS AN APPROVED RIGHT-OF-WAY OBSTRUCTION PERMIT IS SECURED WITH THE CITY OF RALEIGH RIGHT OF WAY SERVICES.
3. STRIPING AN ENVELOPE AROUND THE POST IS RECOMMENDED IF THE BOLLARD IS LOCATED WITHIN THE PAVED LIMITS OF THE TRAIL (SEE DETAIL GW-10.05).
4. LOCKABLE, REMOVABLE BOLLARDS ALLOW ENTRANCE BY AUTHORIZED VEHICLES. WHERE USED, THE TOP OF THE MOUNT POINT SHOULD BE FLUSH WITH THE PATH SURFACE.
5. SEE MIDDLE BOLLARD WITH TRAIL SIDE BOLLARDS DETAIL, GW-10.08, FOR TYPICAL BOLLARD PLACEMENT.

CITY OF RALEIGH
STANDARD DETAIL
REVISIONS | DATE: 12/2022 | NOT TO SCALE
HINGED BOLLARD
GW-10.07



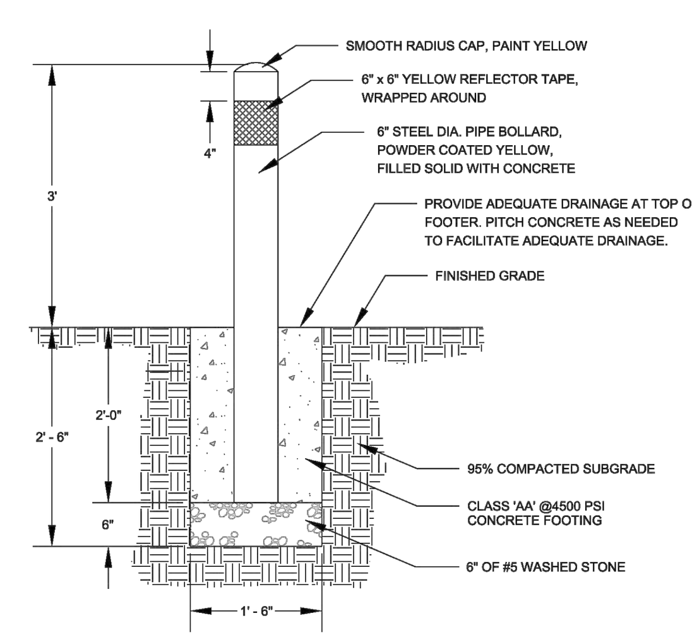
NOTES:
1. BARRICADE(S) TO BE ERECTED ACROSS ENTIRE ROADWAY INCLUDING CURB & GUTTER.
2. ADVANCE WARNING SIGN W14-1 (DEAD END) SHALL BE PLACED JUST AFTER LAST INTERSECTING STREET.
3. MARKINGS FOR BARRICADE RAILS SHALL BE REFLECTIVE AND ALTERNATE RED & WHITE STRIPS.
4. "ROAD CLOSED" SIGN SHALL MEET SPECIFICATIONS OF M.U.T.C.D. R11-2 AND BE REQUIRED ATOP EACH BARRICADE USED.
5. CALL 811 FOR UNDERGROUND UTILITY LOCATE PRIOR TO INSTALLATION.

CITY OF RALEIGH
STANDARD DETAIL
REVISIONS | DATE: 8/2020 | NOT TO SCALE
TEMPORARY BARRICADE FOR DEAD END ROADS
T-10.28



SHEET 2 OF 9

CITY OF RALEIGH
STANDARD DETAIL
REVISIONS | NOT TO SCALE
CURB RAMPS (NEW DEVELOPMENT)
T-20.01.2



PERMANENT BOLLARD

NOTES:
1. A PERMANENT BOLLARD IS TYPICALLY USED ON THE OUTSIDE OF TRAILS TO PREVENT UNAUTHORIZED MOTOR VEHICLE ENTRY. PERMANENT BOLLARDS MAY BE USED IN COMBINATION WITH HINGED BOLLARDS. IN SOME CASES, A PERMANENT BOLLARD CAN BE USED IN THE CENTER OF THE TRAIL IN LIEU OF A HINGED BOLLARD WHEN REQUESTED BY THE OWNER. SEE DETAIL GW-10.08 FOR THE VARIOUS BOLLARD COMBINATIONS. PERMANENT BOLLARDS SHOULD BE UTILIZED AT ALL MAJOR ACCESS POINTS AND TRAIL HEADS. "NO MOTOR VEHICLES" SIGNAGE (MUTCD R5-3) MAY BE USED TO REINFORCE ACCESS RULES.
2. BOLLARDS SHOULD BE SET BACK FROM THE ROADWAY EDGE A MINIMUM OF 7 FEET AND A MAXIMUM OF 30 FEET AND WILL VARY DEPENDING ON LOCATION. OWNER SHALL INDICATE WHICH OPTION IS BEST FOR THE SITE LOCATION. BOLLARD SHALL NOT BE PLACED WITHIN THE ROADWAY RIGHT-OF-WAY UNLESS AN APPROVED RIGHT-OF-WAY OBSTRUCTION PERMIT IS SECURED WITH THE CITY OF RALEIGH RIGHT OF WAY SERVICES.
3. STRIPING AN ENVELOPE AROUND THE POST IS RECOMMENDED IF THE BOLLARD IS LOCATED WITHIN THE PAVED LIMITS OF THE TRAIL (SEE DETAIL GW-10.05).
4. SEE MIDDLE BOLLARD WITH TRAIL SIDE BOLLARDS DETAIL, GW-10.08, FOR TYPICAL BOLLARD PLACEMENT.

CITY OF RALEIGH
STANDARD DETAIL
REVISIONS | DATE: 12/2022 | NOT TO SCALE
PERMANENT BOLLARD
GW-10.06

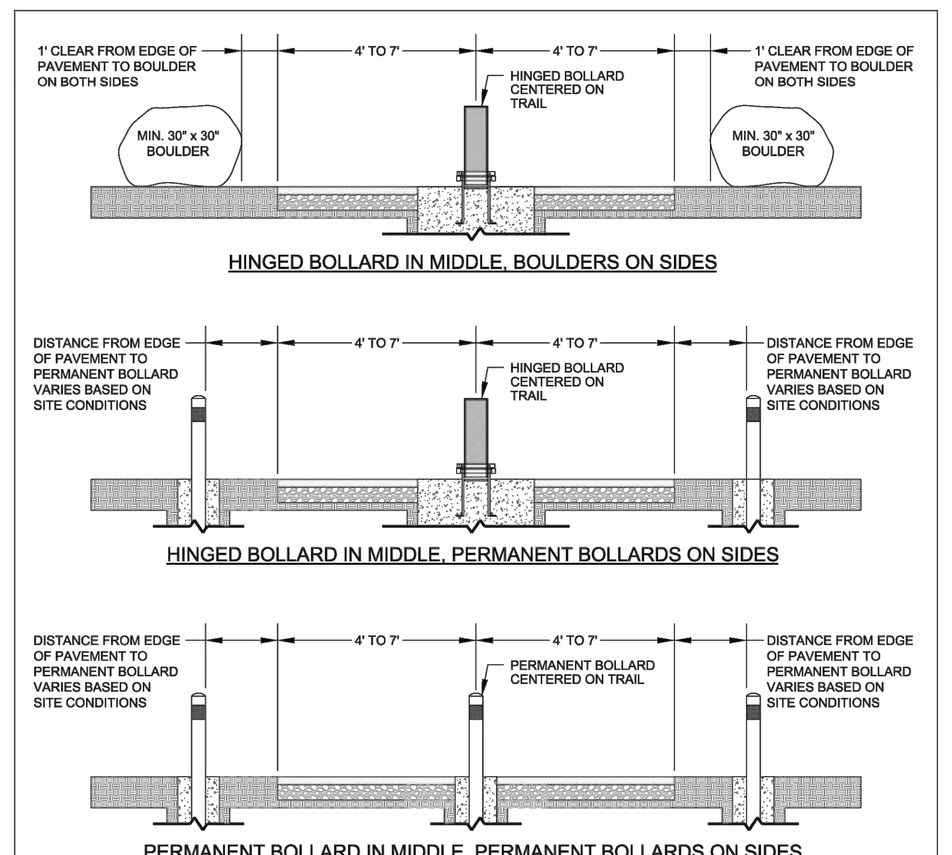
DRIVEWAY, SIDEWALK, AND TRAIL TIE-IN - NOTES:

1. THE DRIVEWAY, SIDEWALK, TRAIL TIE-IN SHALL BE BUILT IN ACCORDANCE WITH THE AMERICANS WITH DISABILITIES ACT (ADA) AND PUBLIC RIGHT-OF-WAY ACCESSIBILITY GUIDELINES (PROWAG).
2. THE DRIVEWAY, SIDEWALK, TRAIL TIE-IN SHALL BE PLACED PARALLEL TO THE TRAIL DIRECTION OF TRAVEL.
3. DETECTABLE WARNINGS SHALL BE INSTALLED ALONG THE BACK OF CURB COVERING THE FULL WIDTH OF THE RAMP.
4. FOR THE TRAIL APRON, USE CLASS A (3000 PSI) CONCRETE WITH A SIDEWALK FINISH IN ORDER TO OBTAIN A ROUGH, NONSKID SURFACE.
5. A 1/2" EXPANSION JOINT INSTALLED FULL DEPTH WILL BE REQUIRED WHERE THE CONCRETE RAMP JOINS THE CURB AND ALSO WHERE NEW CONCRETE ABUTS EXISTING CONCRETE.
6. REMOVE AND REPLACE CURB AND GUTTER TO NEAREST JOINT.
7. BOLLARDS/BOULDERS SHOULD BE SET BACK FROM THE ROADWAY EDGE A MINIMUM OF 7 FEET AND A MAXIMUM OF 30 FEET AND WILL VARY DEPENDING ON LOCATION. OWNER SHALL INDICATE WHICH OPTION IS BEST FOR THE SITE LOCATION. BOLLARD SHALL NOT BE PLACED WITHIN THE ROADWAY RIGHT-OF-WAY UNLESS AN APPROVED RIGHT-OF-WAY OBSTRUCTION PERMIT IS SECURED WITH THE CITY OF RALEIGH RIGHT OF WAY SERVICES. SEE DETAILS GW-10.06, GW-10.07, AND GW-10.08 FOR BOLLARD/BOULDER DETAILS.
8. STOP SIGN (MUTCD R1-1) AND NO MOTOR VEHICLES SIGN (MUTCD R5-3) SHALL BE 0.063 GAUGE, 3105 ALLOY ALUMINUM AND SHALL CONFORM TO THE MANUAL OF UNIFORM TRAFFIC CONTROL GUIDELINES.

(1) 8.33% (12:1) MAX RAMP SLOPE (DRAIN TO ROADWAY)
(2) CROSS SLOPE: MAXIMUM 2.00%
(3) RAMP REQUIRES A (4'-0") MINIMUM LANDING WITH A MAXIMUM CROSS SLOPE AND LONGITUDINAL SLOPE OF 2.00% WHERE PEDESTRIANS PERFORM TURNING MANEUVERS. SLOPE TO DRAIN CURB.

SHEET 2 OF 2

CITY OF RALEIGH
STANDARD DETAIL
REVISIONS | DATE: 12/2022 | NOT TO SCALE
DRIVEWAY, SIDEWALK, AND TRAIL TIE-IN
GW-10.04.2



MIDDLE BOLLARD WITH TRAIL SIDE BOLLARDS

NOTES:
1. OWNER SHALL INDICATE WHICH OF THE THREE BOLLARD/BOULDER PLACEMENT OPTIONS IS BEST FOR THE SITE LOCATION.
2. BOLLARDS/BOULDERS ARE EFFECTIVE IN PREVENTING UNAUTHORIZED MOTOR VEHICLE ENTRY AND SHOULD BE UTILIZED AT ALL MAJOR ACCESS POINTS AND TRAIL HEADS. "NO MOTOR VEHICLES" SIGNAGE (MUTCD R5-3) MAY BE USED TO REINFORCE ACCESS RULES.
3. BOLLARDS SHOULD BE SET BACK FROM THE ROADWAY EDGE A MINIMUM OF 7 FEET AND A MAXIMUM OF 30 FEET AND WILL VARY DEPENDING ON LOCATION. OWNER SHALL INDICATE WHICH OPTION IS BEST FOR THE SITE LOCATION. BOLLARD SHALL NOT BE PLACED WITHIN THE ROADWAY RIGHT-OF-WAY UNLESS AN APPROVED RIGHT-OF-WAY OBSTRUCTION PERMIT IS SECURED WITH THE CITY OF RALEIGH RIGHT OF WAY SERVICES.
4. STRIPING AN ENVELOPE AROUND THE POST IS RECOMMENDED IF THE BOLLARD IS LOCATED WITHIN THE PAVED LIMITS OF THE TRAIL (SEE DETAIL GW-10.05).

SHEET 2 OF 2

CITY OF RALEIGH
STANDARD DETAIL
REVISIONS | DATE: 12/2022 | NOT TO SCALE
MIDDLE BOLLARD WITH TRAIL SIDE BOLLARDS
GW-10.08

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INITIAL PLAN DATE: 11/01/2024
REVISIONS:

WR JOB NUMBER 23-0045
DRN: WR DGN: WR CKD: WR

SITE DETAILS

C10.00

CONTINUOUS LINES

EDGE LINE — YELLOW OR WHITE — 4"/6"

LANE LINE — WHITE — 4"/6"

CENTER LINE — YELLOW — 4"/6"

GORE LINE — WHITE — 8"/12"

DIAGONAL LINE — YELLOW OR WHITE — 12" 45 MPH OR HIGHER; 8" LESS THAN 45 MPH

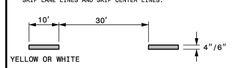
CROSSWALK LINE — WHITE — 8" TRANSVERSE; 24" LONGITUDINAL

RxR LINE — WHITE — 16"

STOP OR TRANSVERSE BAR — WHITE — 24"

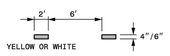
10'-30'/SP SKIP LINE

UNLESS OTHERWISED SHOWN, USE 10'-30'/SP SKIPS FOR SKIP LANE LINES AND SKIP CENTER LINES.



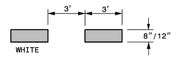
2'-6'/SP MINI-SKIP LINE

UNLESS OTHERWISED SHOWN, USE 2'-6'/SP MINI-SKIPS FOR LANE LINE EXTENSIONS THROUGH INTERSECTIONS, EDGE LINE EXTENSIONS THROUGH INTERSECTIONS AND MINI-SKIPS USED FOR BICYCLE LANE LINES.



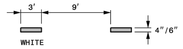
3'-3'/SP MINI-SKIP LINE

UNLESS OTHERWISED SHOWN, USE 3'-3'/SP MINI-SKIPS FOR THE WHITE EDGE LINE EXTENSIONS AT ROUNDABOUTS.



3'-9'/SP MINI-SKIP LINE

UNLESS OTHERWISED SHOWN, USE 3'-9'/SP MINI-SKIPS FOR WINI-SKIP LANE LINES AND LINE EXTENSIONS THROUGH TAPERS.



GENERAL NOTES:

1- USE 6" LANE, EDGE, AND CENTER LINES ON ALL FULL CONTROL OF ACCESS FACILITIES AND OTHER ROUTES AS DIRECTED BY THE ENGINEER.

2- LANE LINES INDICATED AS "WIDE" ON THE ROADWAY STANDARD DRAWINGS SHALL BE AT LEAST TWICE THE WIDTH OF THE NORMAL LINE.

3- GORE LINES SHALL BE TWICE THE WIDTH OF THE NORMAL LINE.

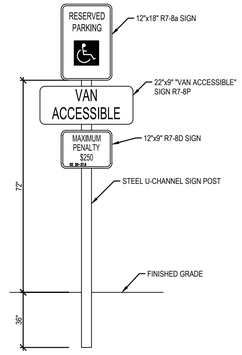
STATE OF NORTH CAROLINA
DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.

1-18

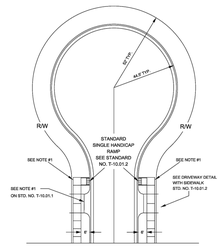
ROADWAY STANDARD DRAWING FOR
PAVEMENT MARKINGS
LINE TYPES AND OFFSETS

SHEET 1 OF 2
1205.01

NOTE:
1. R7-8D SIGNS ARE TO ACCOMPANY ALL R7-8a PARKING SIGNS
2. ALL SIGNS TO MEET CURRENT MUTCD STANDARDS FOR SIZE AND MATERIAL.



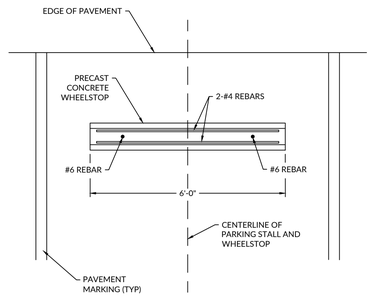
ADA "VAN ACCESSIBLE" SIGN ELEVATION
N.T.S.

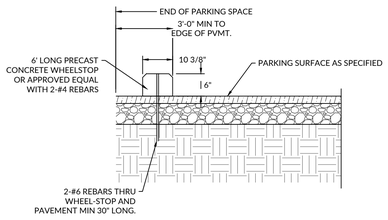


NOTES:
1. IF DRIVEWAY IS WITHIN CLOSE PROXIMITY OF ACCESS RAMP, TIE SIDEWALK INTO DRIVEWAY.
2. REFER TO STANDARD DETAIL T-10.01.2, DRIVE WAY AND SIDEWALK DETAIL, SHEET 1 OF 2.

CITY OF RALEIGH
STANDARD DETAIL

REVISIONS	DATE #####	NOT TO SCALE
	STANDARD RESIDENTIAL CUL-DE-SAC	
	T-10.06	





WHEELSTOP — STREET
Scale:NTS — C3051

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WR JOB NUMBER 23-0045
DRN: WR DGN: WR CKD: WR

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C10.01

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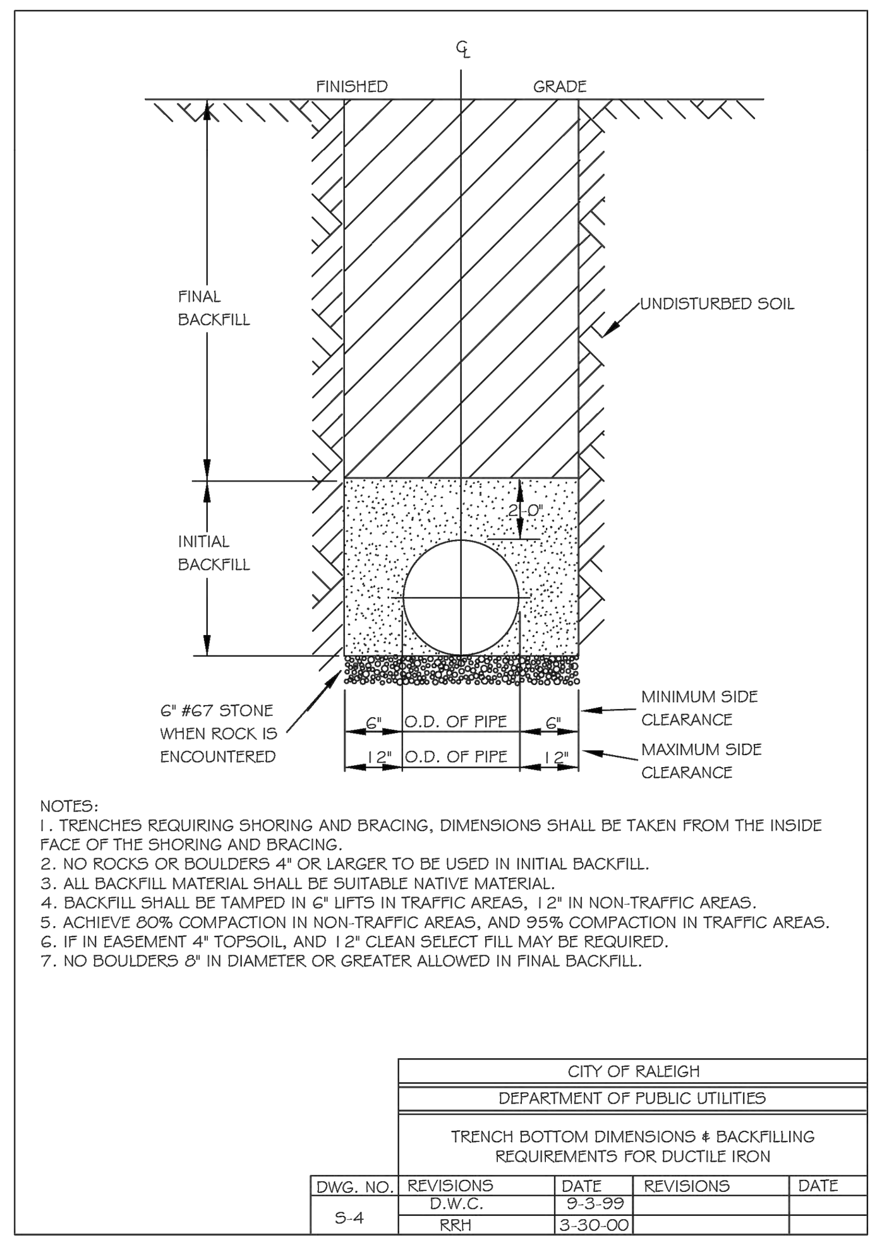

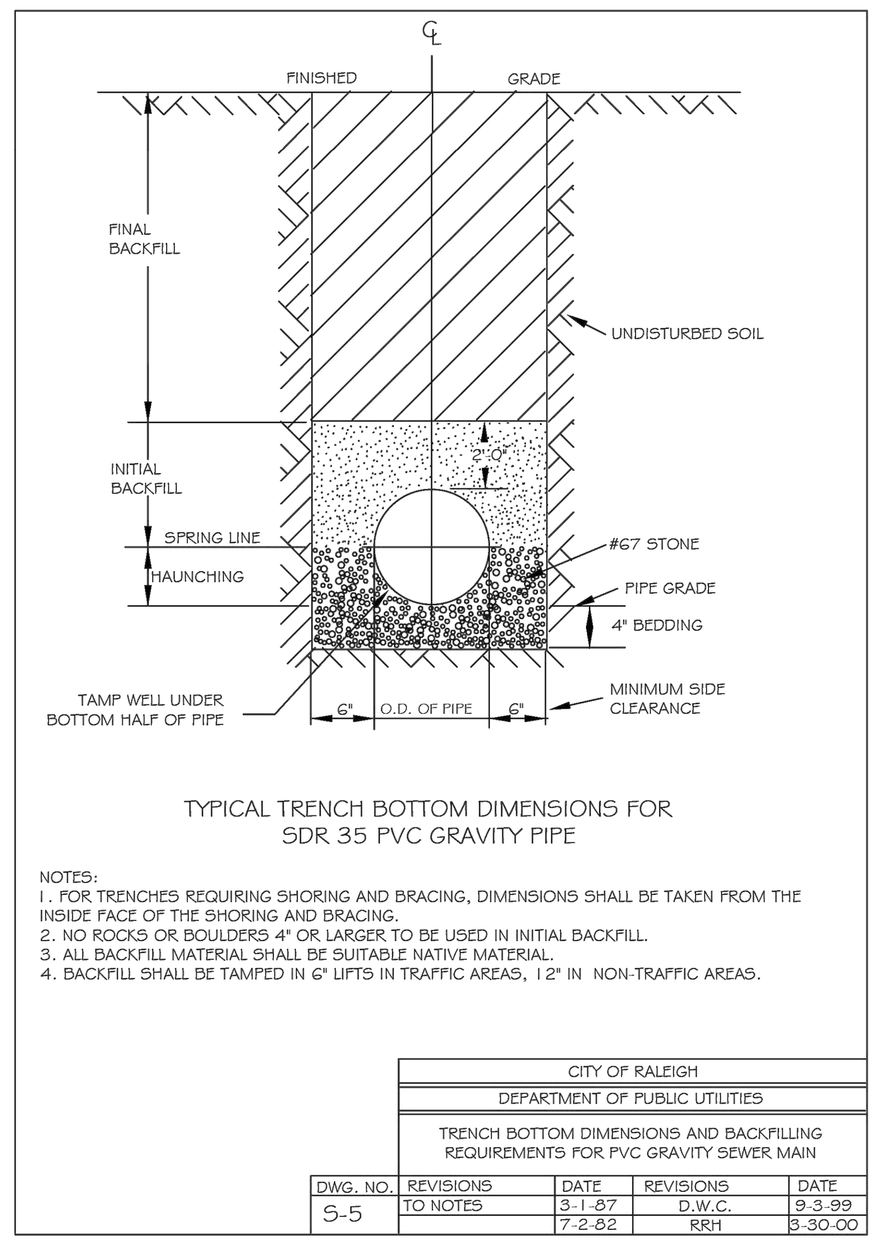

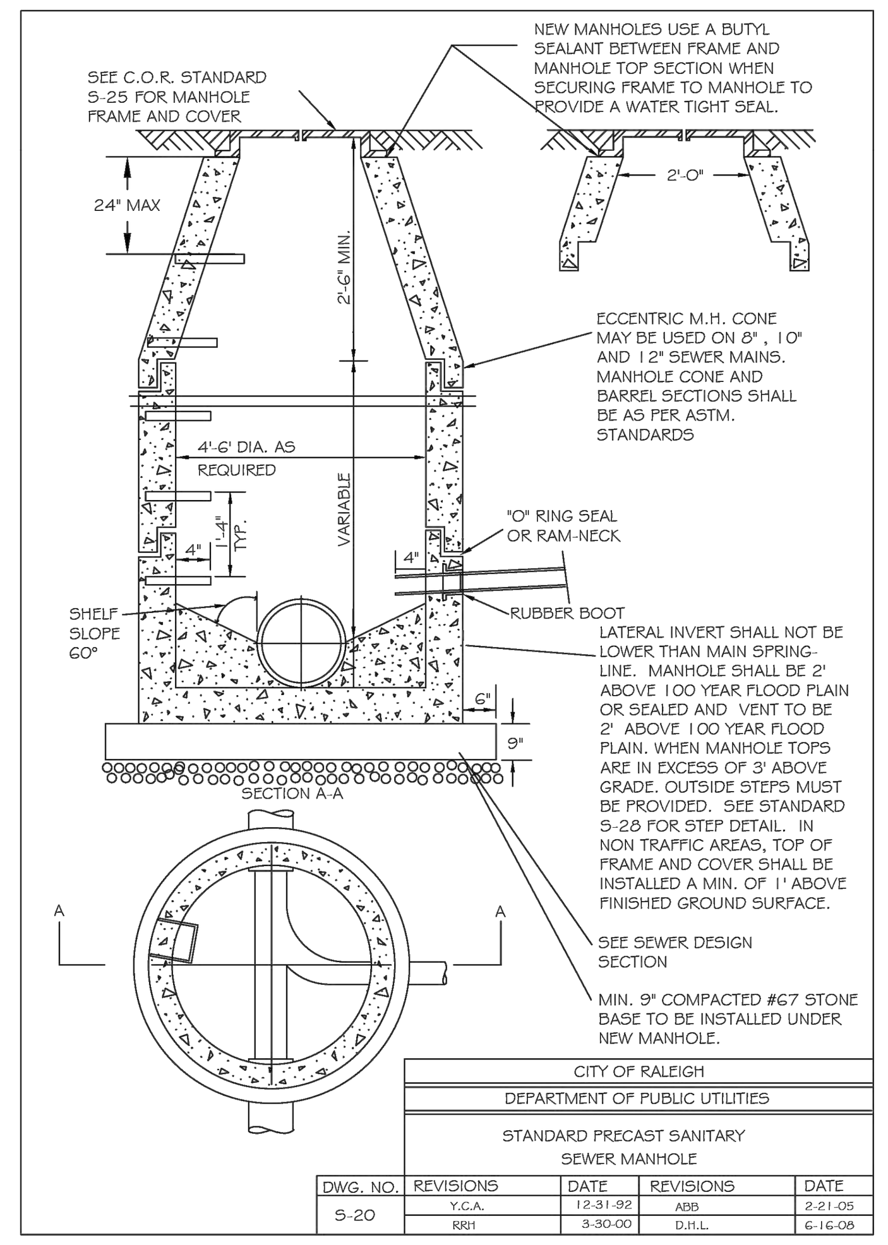

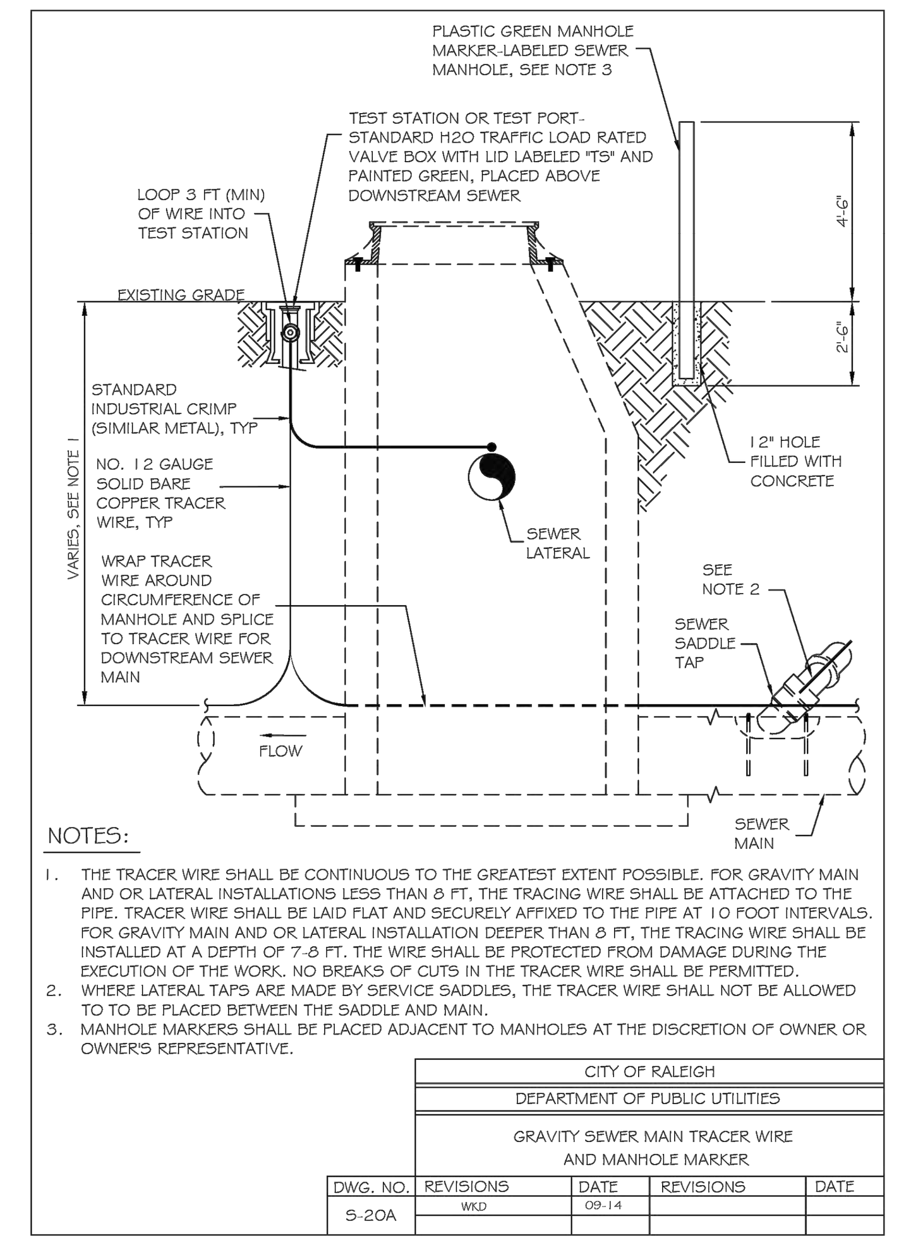

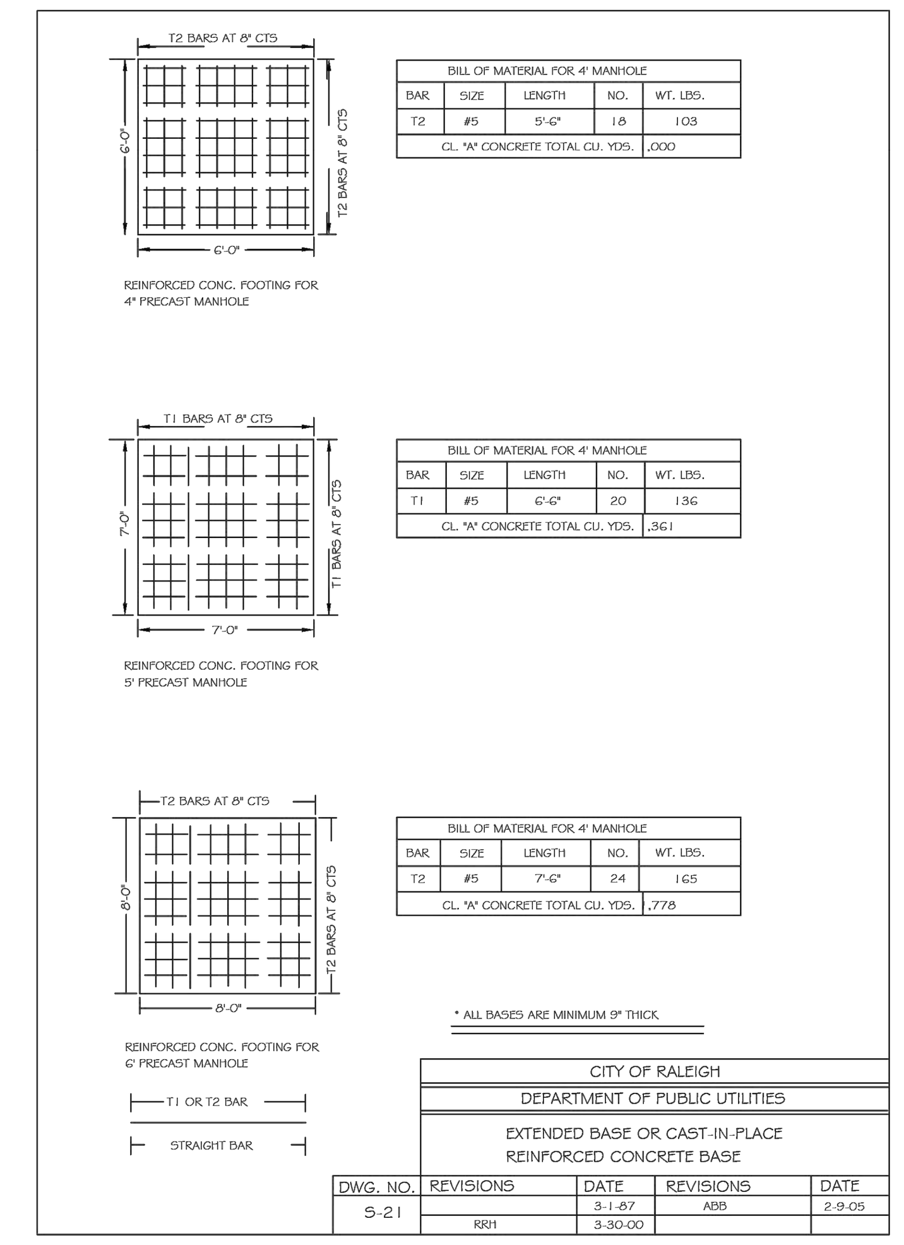

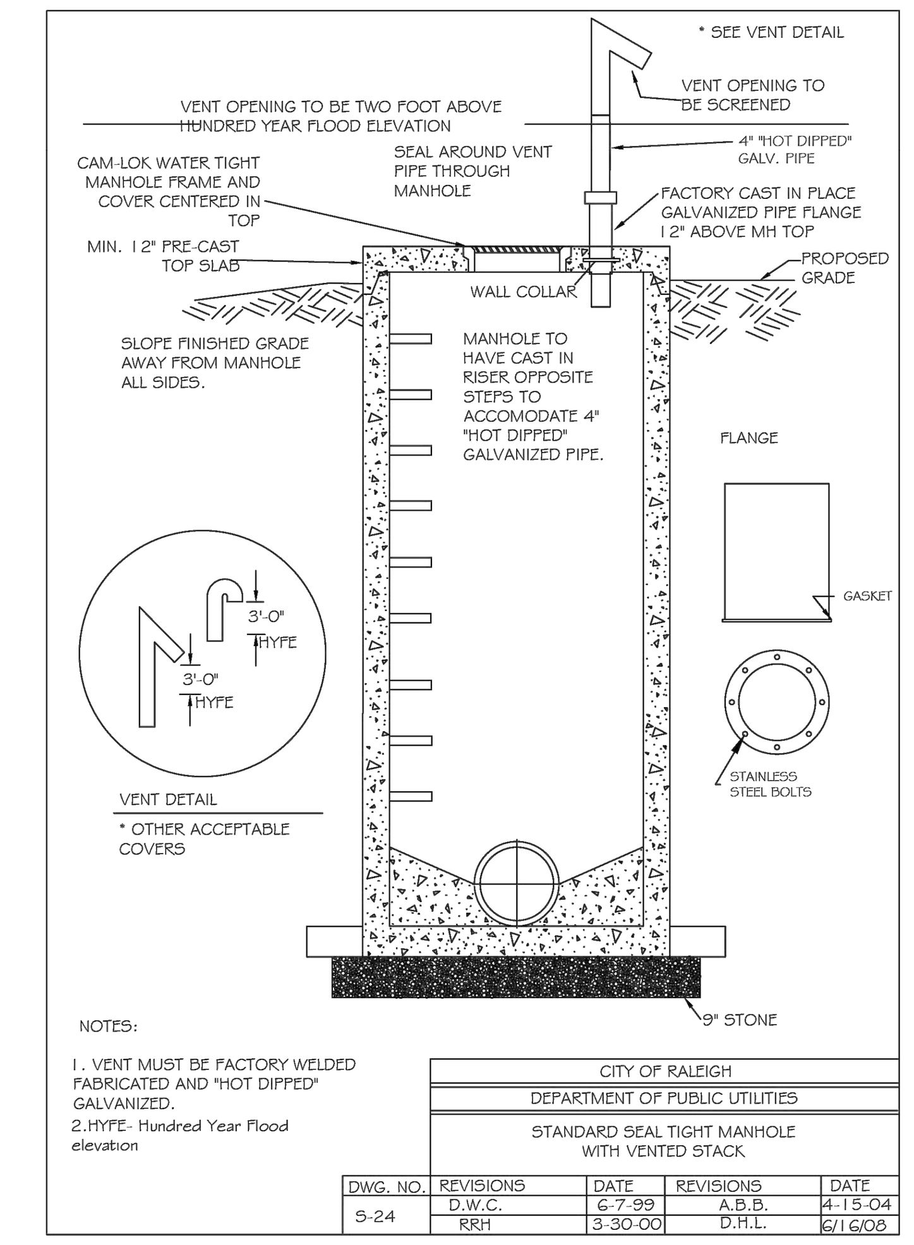

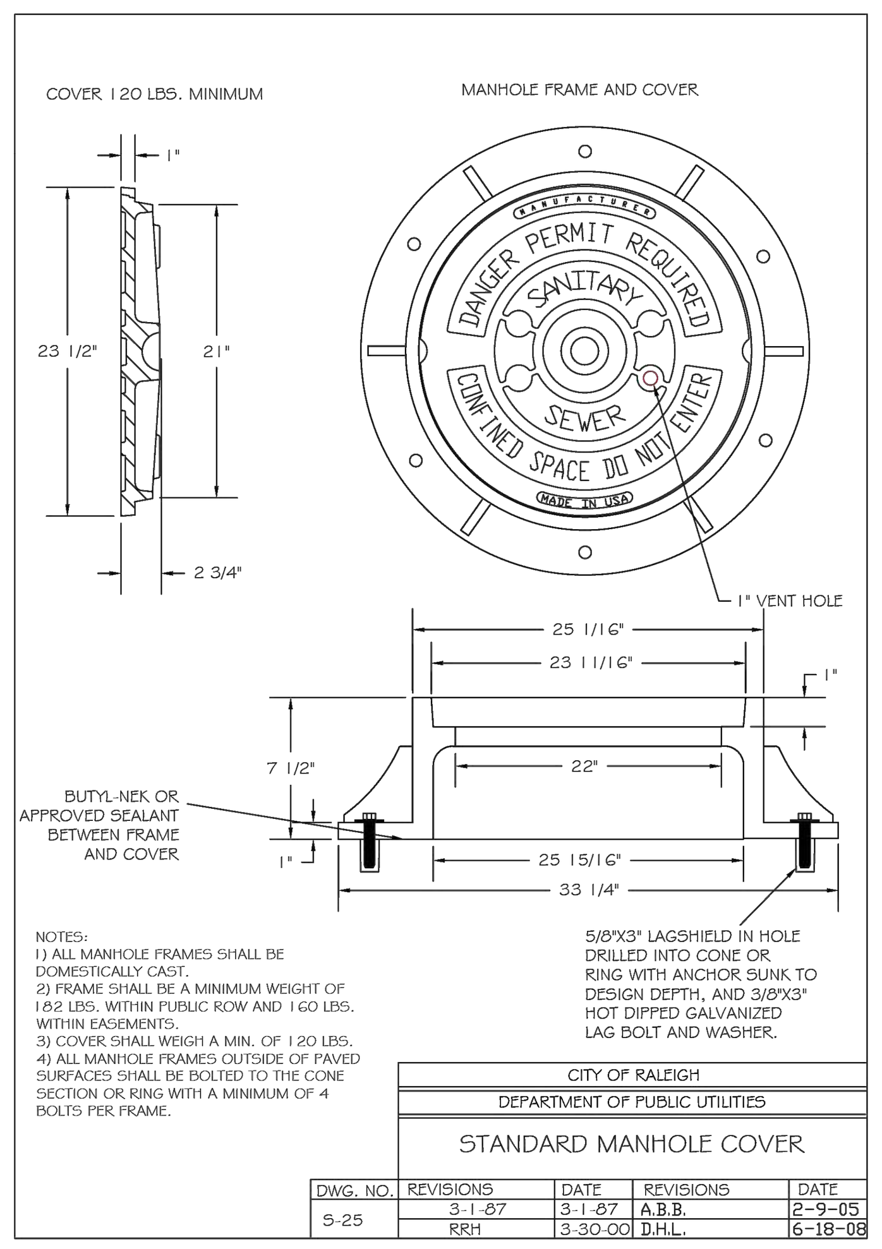

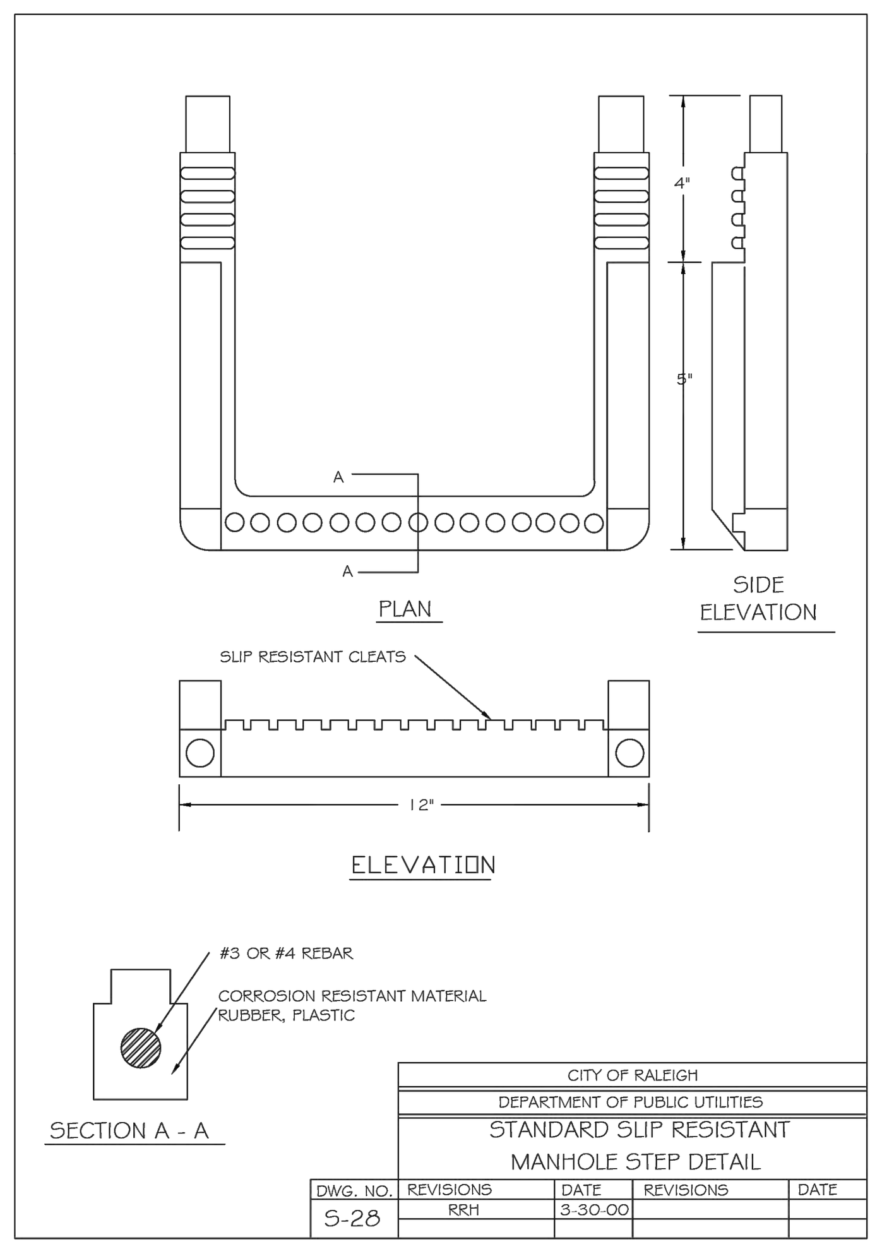

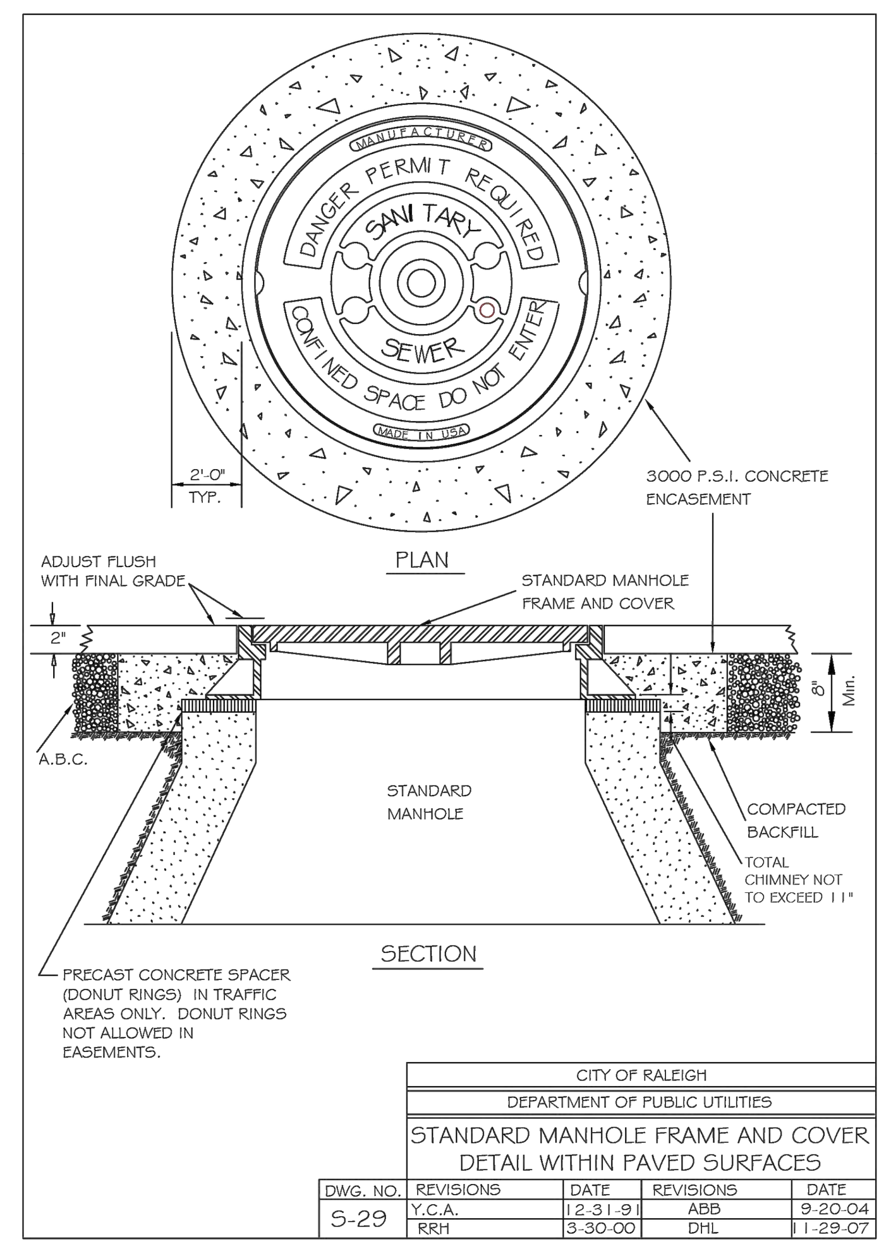

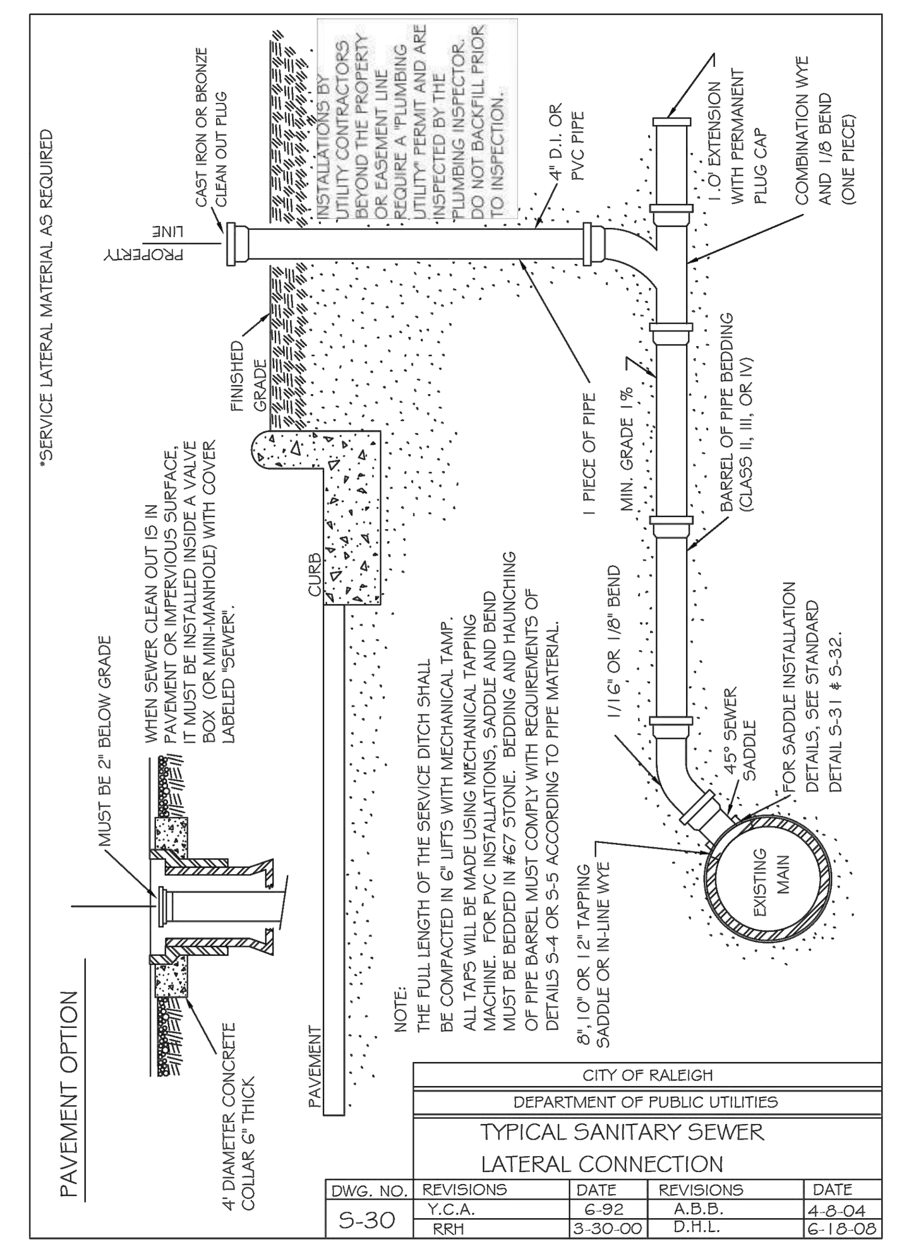

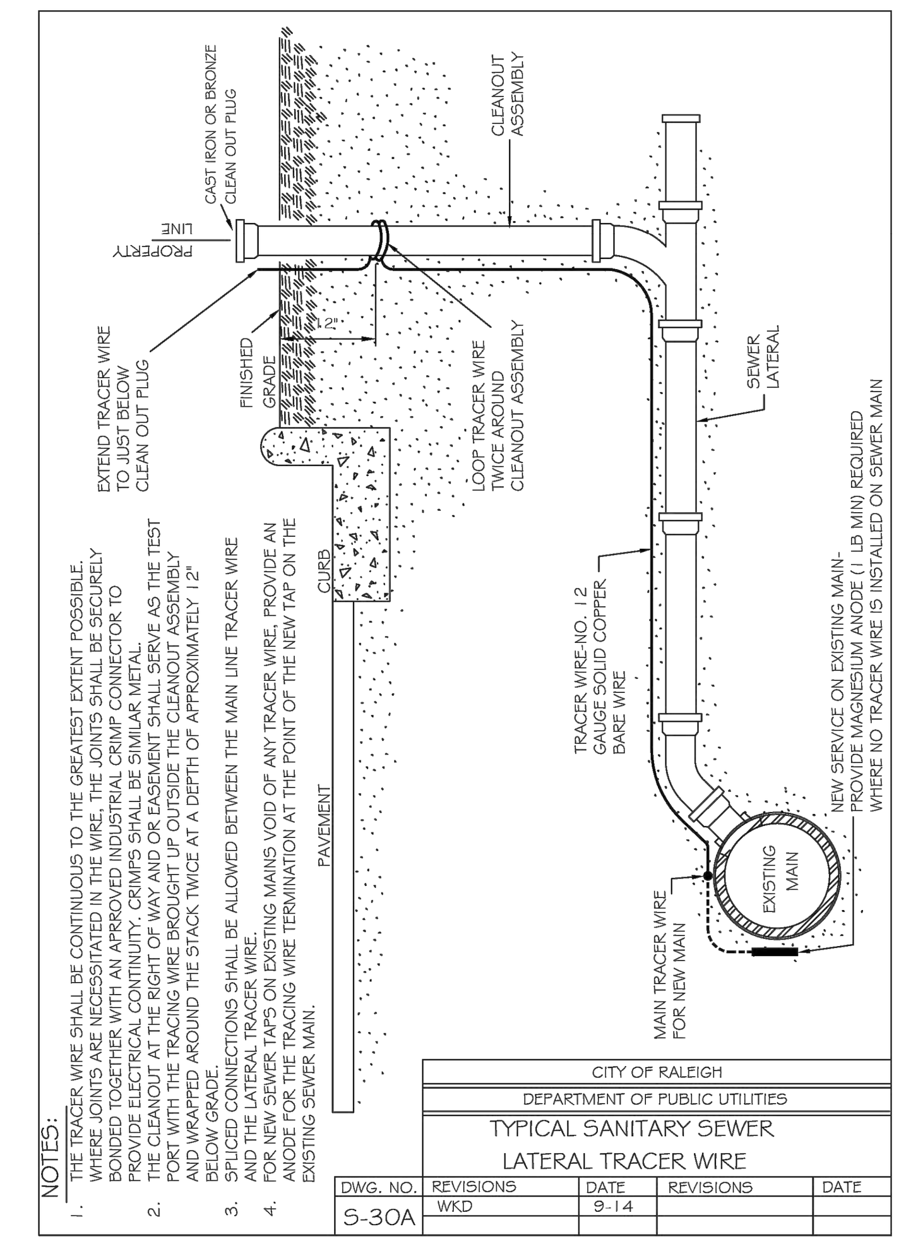

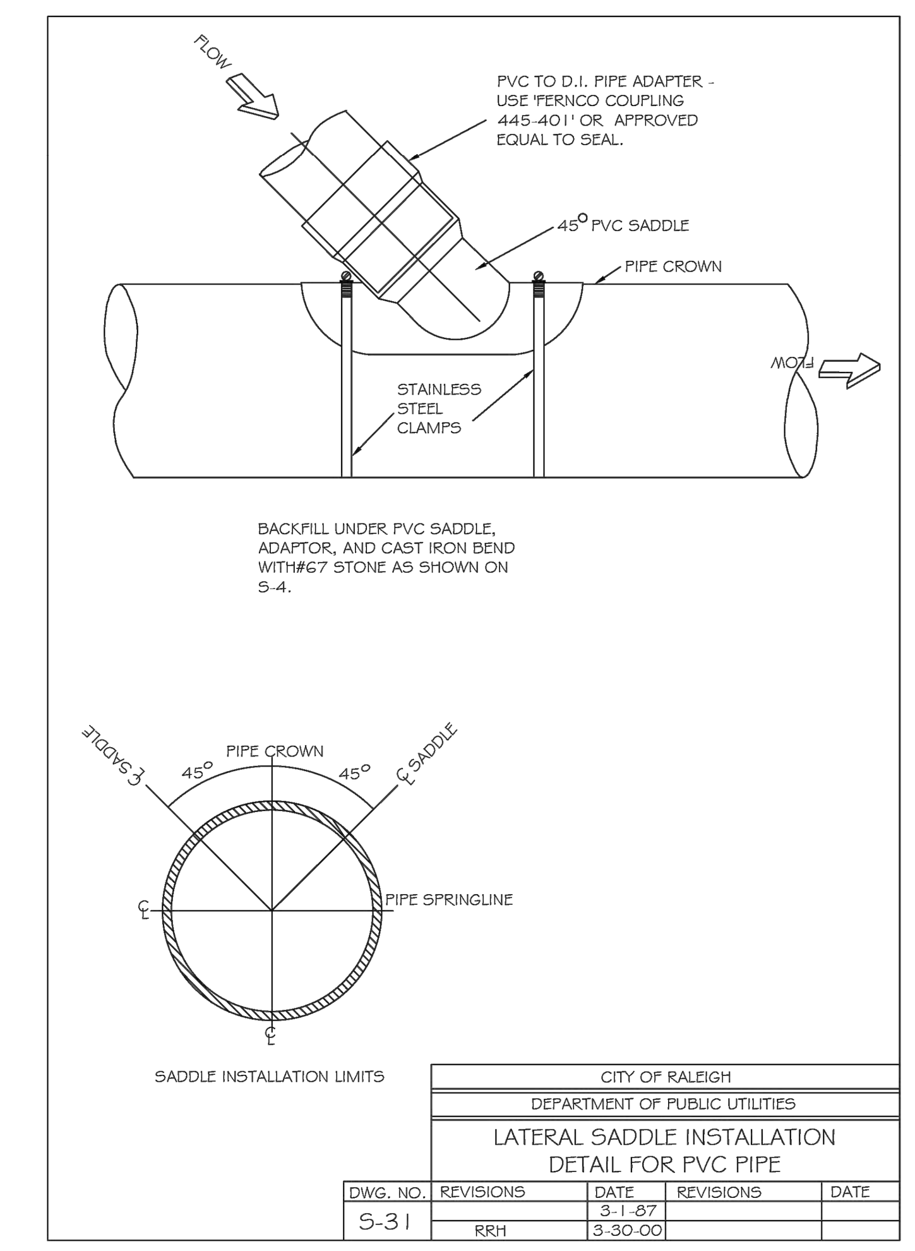

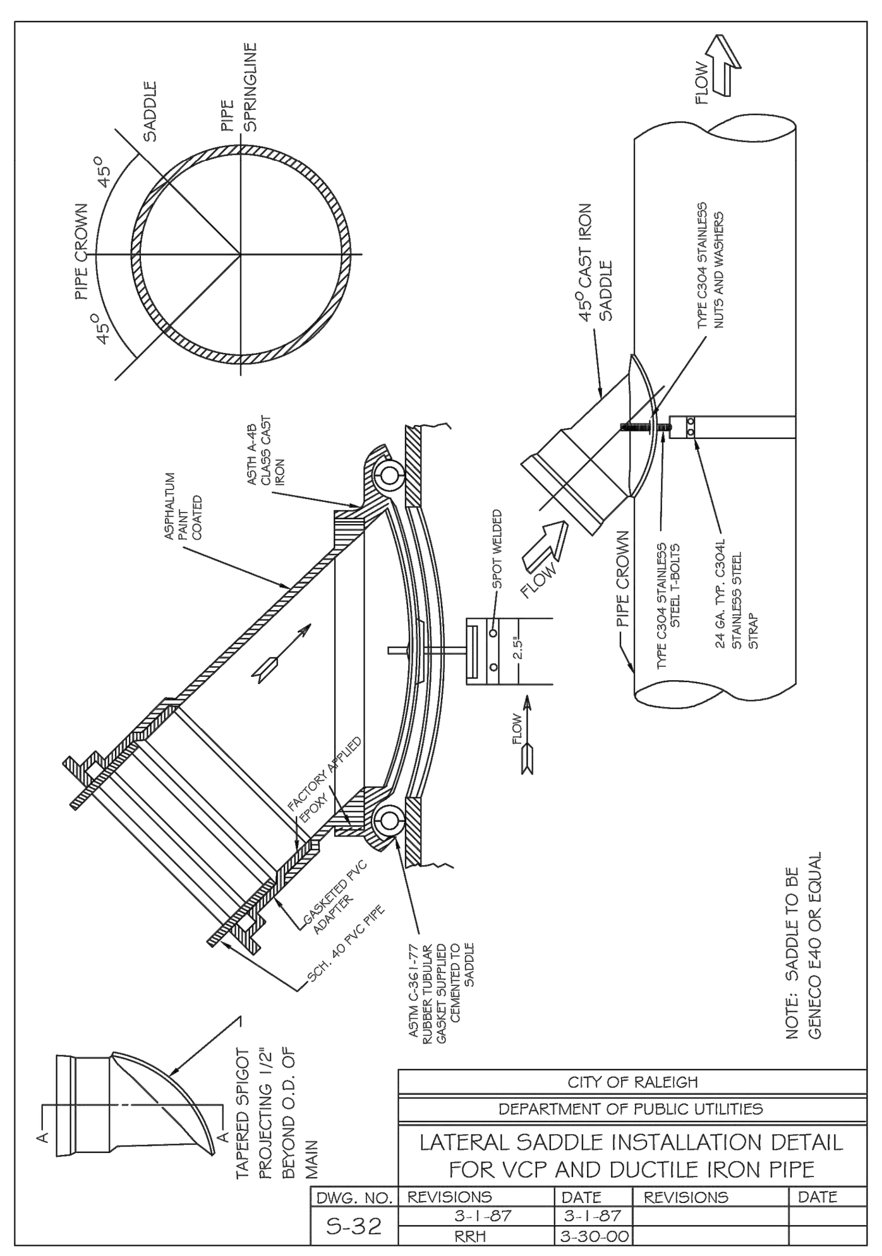

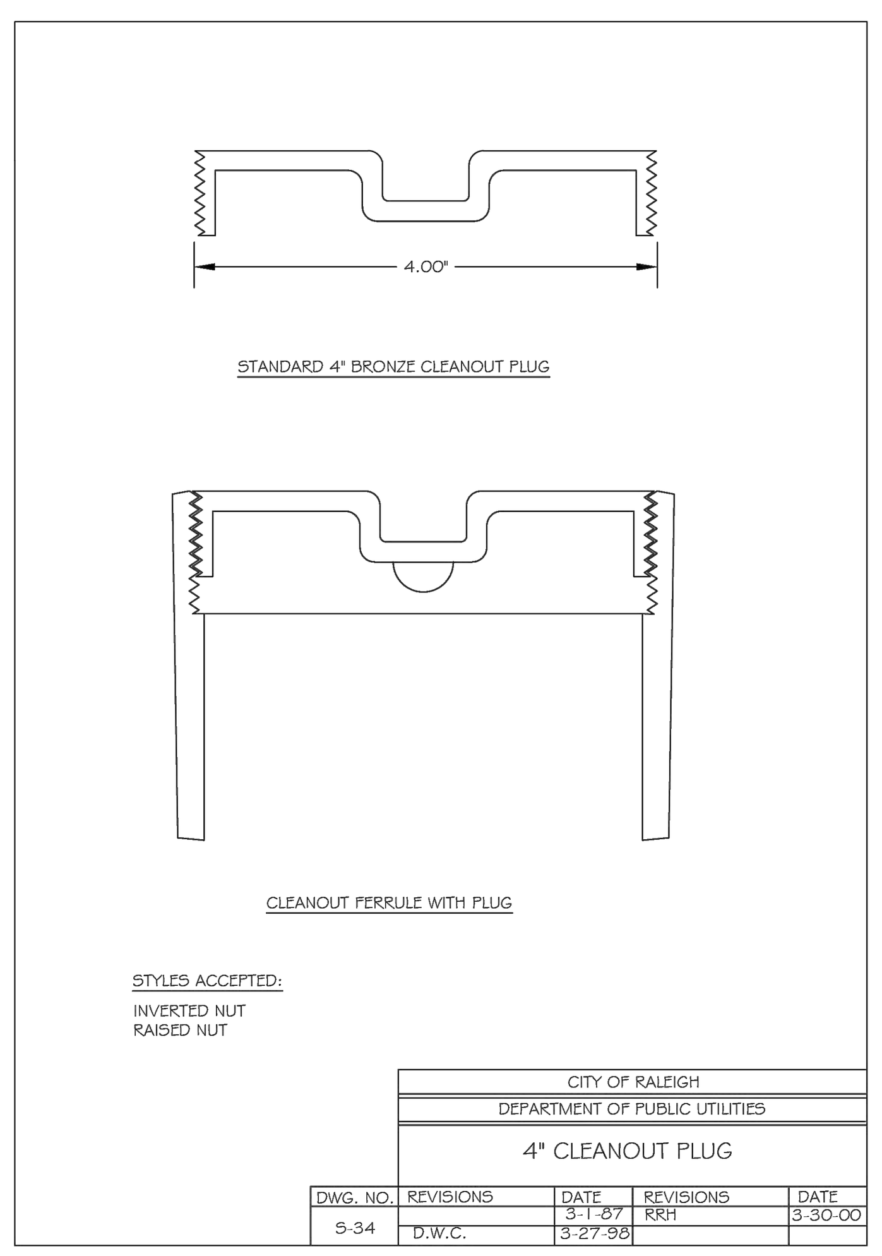

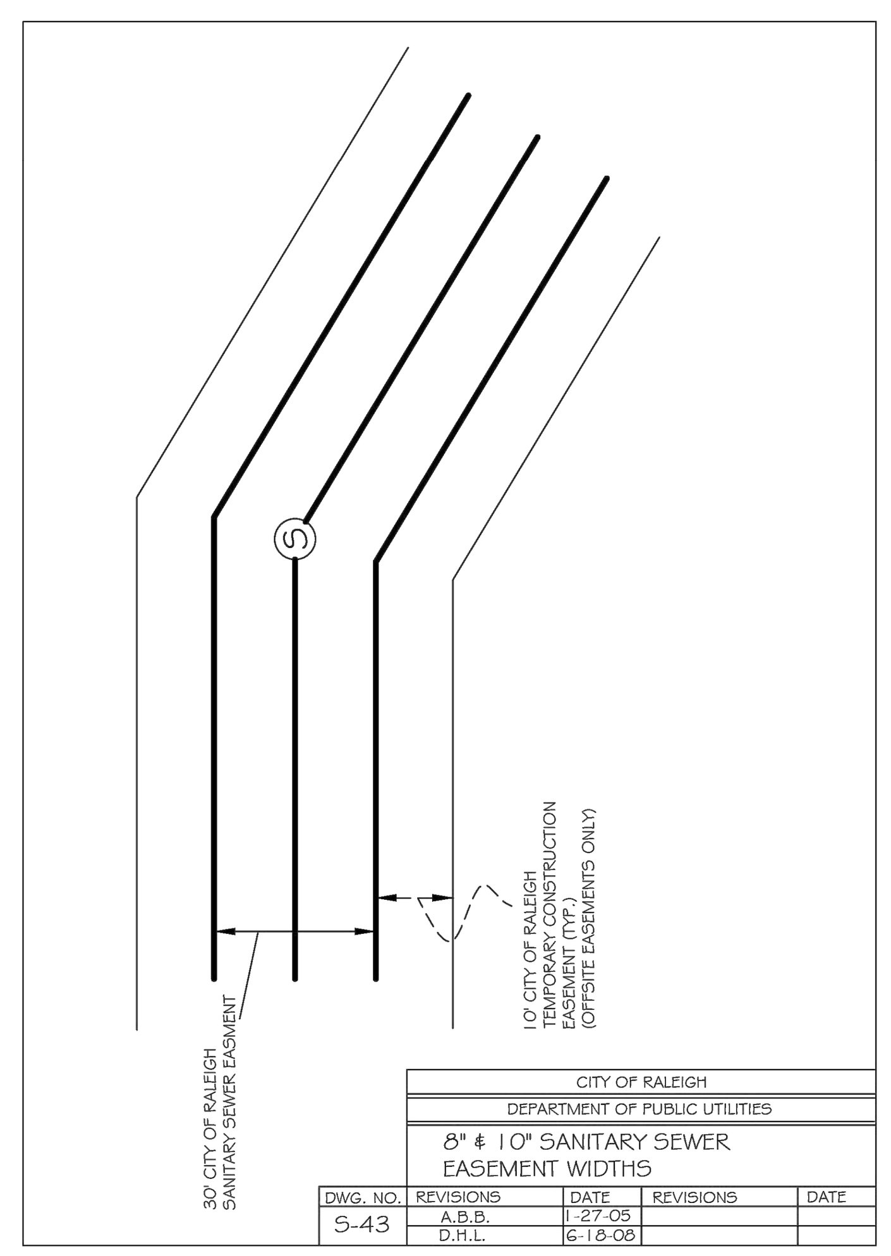

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SEWER DETAILS

C10.02

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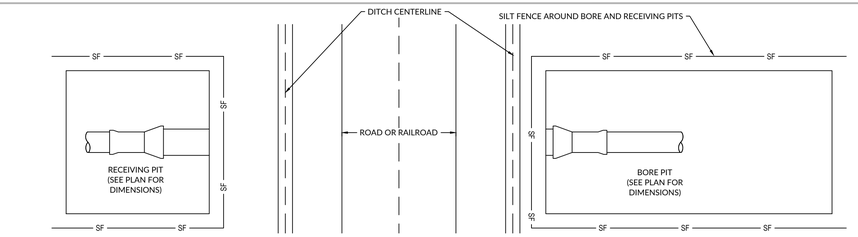
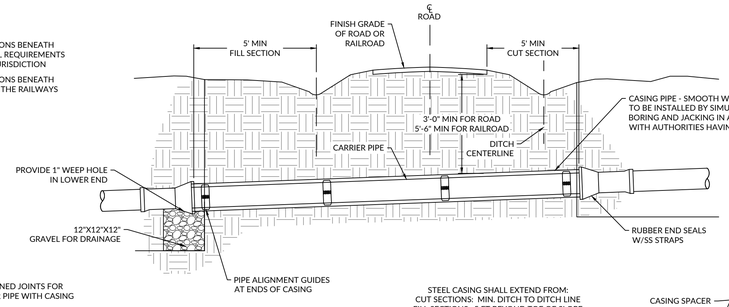
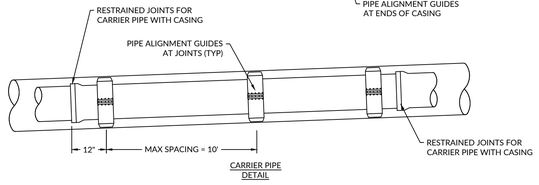


NOTES:

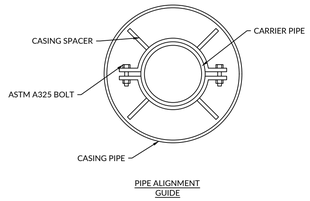
1. ALL BORE AND JACK INSTALLATIONS BENEATH ROADS SHALL COMPLY WITH ALL REQUIREMENTS OF THE AUTHORITIES HAVING JURISDICTION
2. ALL BORE AND JACK INSTALLATIONS BENEATH RAILROAD SHALL COMPLY WITH THE RAILWAYS POLICIES AND PROCEDURES.



STEEL CASING SHALL EXTEND FROM:
CUT SECTIONS: MIN. DITCH TO DITCH LINE
FILL SECTIONS: 5 FT BEYOND TOE OF SLOPE
CURB SECTIONS: 3 FT BEYOND CURB



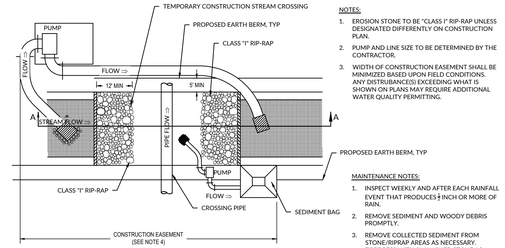
CARRIER PIPE
DETAIL



PIPE ALIGNMENT
GUIDE

BORE AND JACK
Scale:NTS

UTILITY TRENCHES
C5051



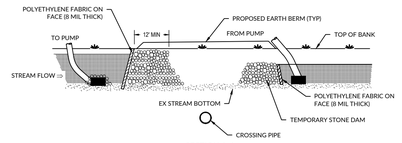
PLAN

NOTES:

1. EROSION STONE TO BE "CLASS I" RIP-RAP UNLESS DESIGNATED DIFFERENTLY ON CONSTRUCTION PLAN.
2. PUMP AND LINE SIZE TO BE DETERMINED BY THE CONTRACTOR.
3. WIDTH OF CONSTRUCTION EASEMENT SHALL BE MINIMIZED BASED UPON FIELD CONDITIONS. ANY DISTRUBANCE(S) EXCEEDING WHAT IS SHOWN ON PLANS MAY REQUIRE ADDITIONAL WATER QUALITY PERMITTING.

MAINTENANCE NOTES:

1. INSPECT WEEKLY AND AFTER EACH RAINFALL EVENT THAT PRODUCES ½ INCH OR MORE OF RAIN.
2. REMOVE SEDIMENT AND WOODY DEBRIS PROMPTLY.
3. REMOVE COLLECTED SEDIMENT FROM STONE/RIPRAP AREAS AS NECESSARY. TOPDRESS WITH 2", WASHED STONE AS NECESSARY.



SECTION A-A

CONSTRUCTION SEQUENCE

1. INSTALL PUMPS UPSTREAM OF TEMPORARY STREAM CROSSING AND PUMP TO AREA DOWNSTREAM OF CONSTRUCTION AREA. BEGIN PUMPING AND CONTINUE PUMPING WHILE WORKING WITHIN THE STREAM.
2. INSTALL UPSTREAM DAM AND DOWNSTREAM DAM WITH POLYETHYLENE FACING.
3. INSTALL EARTH BERMS ALONG TOP OF BANK ON EACH SIDE OF STREAM IN THE CONSTRUCTION AREA.
4. INSTALL SEDIMENT FILTER BAG AT TOP OF BANK. DEWATER CONSTRUCTION AREA BETWEEN STONE DAM USING THE FILTER BAG.
5. INSTALL THE NEW PIPELINE.
6. UPON CONSTRUCTION COMPLETION, REMOVE TEMPORARY DAMS, POLYETHYLENE, AND TEMPORARY CMP, DEPRESS TEMPORARY DAM BOTTOMS INTO STREAM BED UNTIL TOP OF RIP RAP IS LEVEL WITH STREAM BOTTOM.
7. REMOVE TEMPORARY EARTH BERM AND SEDIMENT BAGS AND STABILIZE AREAS AS INDICATED ON DRAWINGS.

TEMPORARY STREAM CROSSING BYPASS
Scale:NTS

RESIDENTIAL
C5070

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CONSTRUCTION

INITIAL PLAN DATE: 11/01/2024
REVISIONS:

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SEWER DETAILS

C10.03

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1225 CRESCENT GREEN DRIVE, SUITE 250 CARY, NC 27518

CONSTRUCTION INFRASTRUCTURE DRAWINGS
BROADMOOR
ROLESVILLE ROAD | ROLESVILLE, NC 27587 | WAKE COUNTY

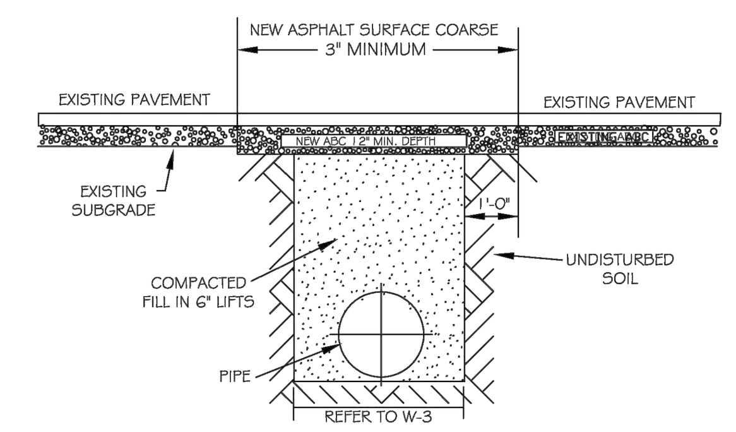
PRELIMINARY NOT APPROVED FOR CONSTRUCTION
NORTH CAROLINA PROFESSIONAL ENGINEER TERRENCE COOK

INITIAL PLAN DATE: 11/01/2024
REVISIONS:

WR JOB NUMBER 23-0045
DRN: WR DGN: WR CKD: WR

WATER DETAILS

C10.04

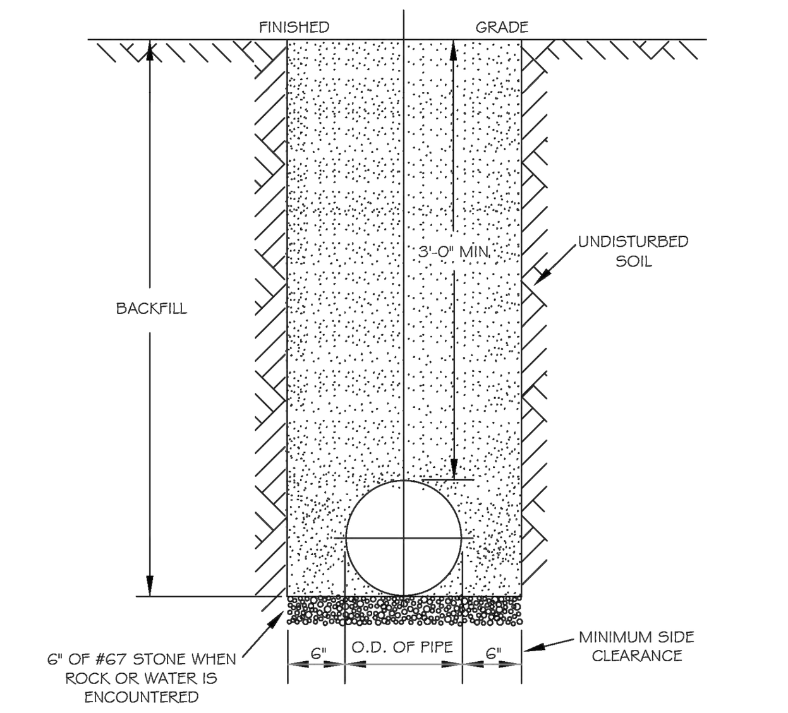


NOTES:

1. THE PAVEMENT CUT SHALL BE DEFINED BY A STRAIGHT EDGE AND CUT WITH AN APPROPRIATE SAW CUT MACHINE.
2. THE TRENCH SUBGRADE MATERIAL SHALL BE BACKFILLED WITH SUITABLE MATERIAL AND COMPACTED TO A DENSITY OF AT LEAST 95% OF THAT OBTAINED BY COMPACTING A SAMPLE OF THE MATERIAL IN ACCORDANCE WITH AASHTO T-99 AS MODIFIED BY NCDOT.
3. THE FINAL 1' OF FILL SHALL CONSIST OF ABC MATERIAL COMPACTED TO A DENSITY EQUAL TO 100% OF THAT OBTAINED BY COMPACTING A SAMPLE OF THE MATERIAL IN ACCORDANCE WITH AASHTO T-80 AS MODIFIED BY NCDOT.
4. THE ENTIRE THICKNESS/ VERTICAL EDGE OF CUT SHALL BE TACKED.
5. THE SAME DEPTH OF PAVEMENT MATERIAL WHICH EXISTS SHALL BE REINSTALLED, BUT IN NO CASE SHALL THE ASPHALT BE LESS THAN 3" THICK.
6. THE ASPHALT PAVEMENT MATERIAL SHALL BE INSTALLED AND COMPACTED THOROUGHLY WITH A SMOOTH DRUM ROLLER TO ACHIEVE A SMOOTH LEVEL PATCH.
7. REFER TO CITY OF RALEIGH STANDARDS FOR TRENCHES AND PIPE BEDDING, W-3. FOR ADDITIONAL DETAILS.
8. NO HAND PATCHING ALLOWED.
9. PAVEMENT CUTS WITHIN NCDOT ROW SHALL CONFORM TO THE APPROVED ON SITE ENCROACHMENT PERMIT.

CITY OF RALEIGH
DEPARTMENT OF PUBLIC UTILITIES
STANDARD ASPHALT PAVEMENT PATCH DETAIL

DWG. NO.	REVISIONS	DATE	REVISIONS	DATE
W-2	RRH	3-31-00	A.B.B.	4-16-04
	D.W.C.	11-1-99	J.P.S.	10-29-10

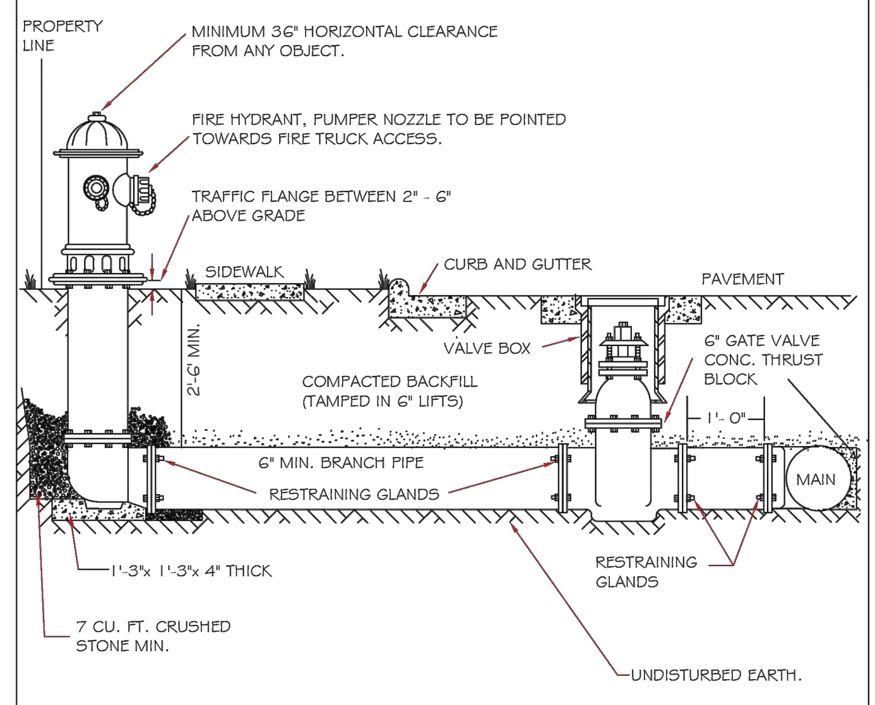


NOTES:

1. TRENCHES REQUIRING SHORING AND BRACING, DIMENSIONS SHALL BE TAKEN FROM THE INSIDE FACE OF THE SHORING AND BRACING.
2. NO ROCKS OR BOULDERS 4" OR LARGER TO BE USED IN BACKFILL.
3. ALL BACKFILL MATERIAL SHALL BE SUITABLE NATIVE MATERIAL.
4. BACKFILL SHALL BE TAMPED IN 6" LIFTS.
5. ACHIEVE 95% COMPACTION IN BACKFILL.

CITY OF RALEIGH
DEPARTMENT OF PUBLIC UTILITIES
TRENCH BOTTOM DIMENSIONS & BACKFILLING REQUIREMENTS FOR DUCTILE IRON

DWG. NO.	REVISIONS	DATE	REVISIONS	DATE
W-3	D.W.C.	9-3-99	ABB	2-15-05
	RRH	3-31-00	J.P.S.	10-29-10



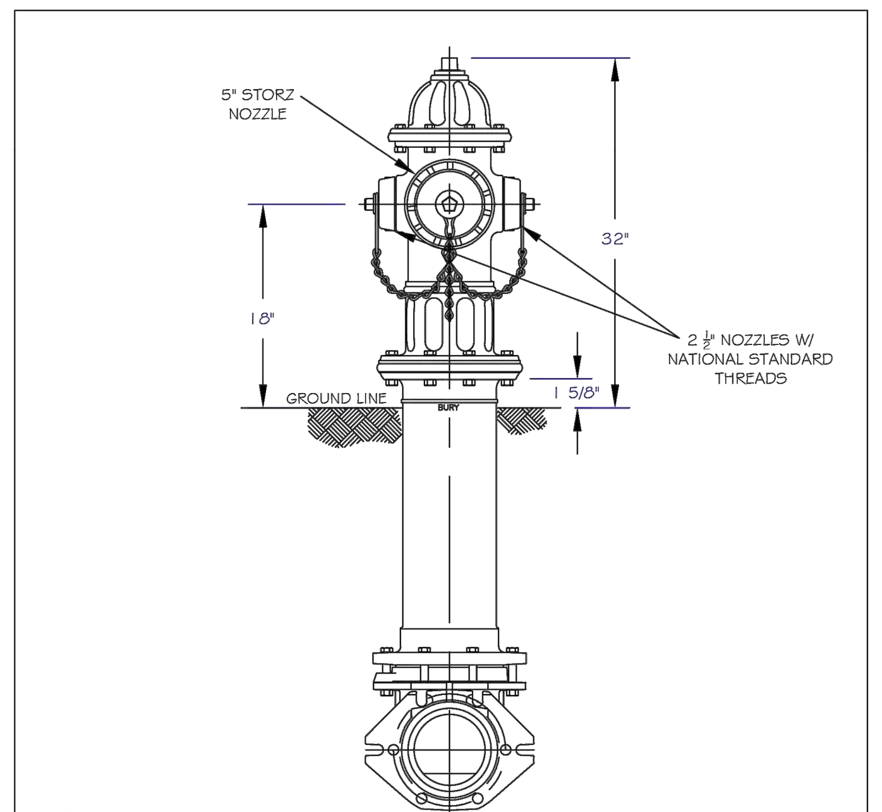
NOTES:

1. FIRE HYDRANT SHALL BE AS MANUFACTURED: MUELLER, AMERICAN DARLING, KENNEDY, M&H, WATEROUS, CLOW, EAST JORDAN IRON WORKS, OR US PIPE.
2. BRANCH PIPE SHALL BE DUCTILE IRON AWWA C150-96
3. 6" GATE VALVE SHALL BE AWWA C500-86 OPEN LEFT
4. STEEL RODS AND BOLTS SHALL BE ¾" HOT DIPPED GALVANIZED
5. FIRE HYDRANTS WILL BE INSTALLED IN TRUE VERTICAL POSITION RODS SHALL NOT BE COUPLED MORE THAN ONCE. IF THE LENGTH FROM THE VALVE TO THE HYDRANT EXCEEDS 20' THEN A MECHANICAL RESTRAINING GLAND WITH A REBAR CAGE SHALL BE INSTALLED NO MORE THAN 10' FROM HYDRANT AND POURED IN CONCRETE. FIRE HYDRANTS TO BE LOCATED IN ROW OR 2 FOOT EASEMENT ADJACENT TO ROW

ANYTIME SITE WORK, CONSTRUCTION, ROAD WORK, OR ANY OTHER WORK CHANGES THE GRADE OF THE FIRE HYDRANT, THE PERSON RESPONSIBLE FOR THE WORK IS RESPONSIBLE FOR ADJUSTING THE FIRE HYDRANT TO STAY WITHIN COMPLIANCE.

CITY OF RALEIGH
DEPARTMENT OF PUBLIC UTILITIES
STANDARD FIRE HYDRANT INSTALLATION DETAIL

DWG. NO.	REVISIONS	DATE	REVISIONS	DATE
W-4	ABB	4-6-04	PAP	2/17/09
	DHL	2/14/08		

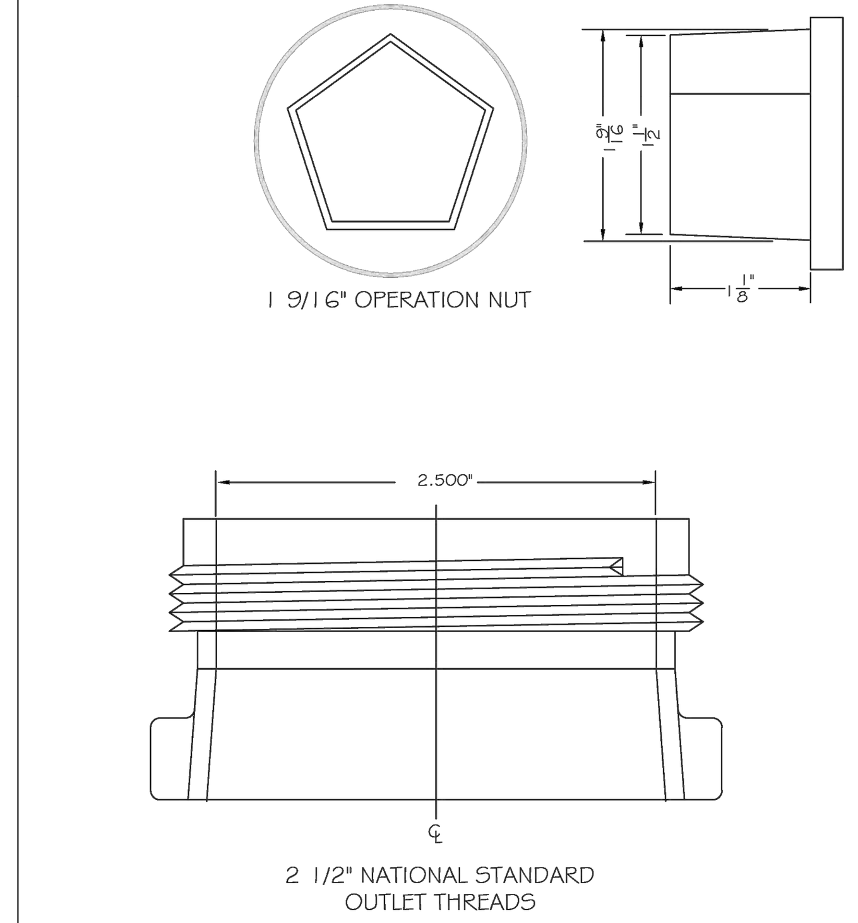


NOTES:

1. RALEIGH PUBLIC HYDRANTS SHALL BE PAINTED SOLID RED.
2. KNIGHTDALE, & ROLESVILLE PUBLIC HYDRANTS SHALL BE PAINTED RED W/SILVER OPERATING NUTS.
3. ZEBULON PUBLIC HYDRANTS SHALL BE PAINTED RED W/ SILVER BONNETS AND OPERATING NUTS.
4. WAKE FOREST AND GARNER, AND WENDELL PUBLIC AND PRIVATE HYDRANTS TO BE PAINTED SAFETY YELLOW W/SILVER CAPS AND OPERATING NUTS.
5. OPERATING NUTS ON HYDRANTS CONNECTED TO PUBLIC MAINS LARGER THAN 12" SHALL BE PAINTED BLACK.

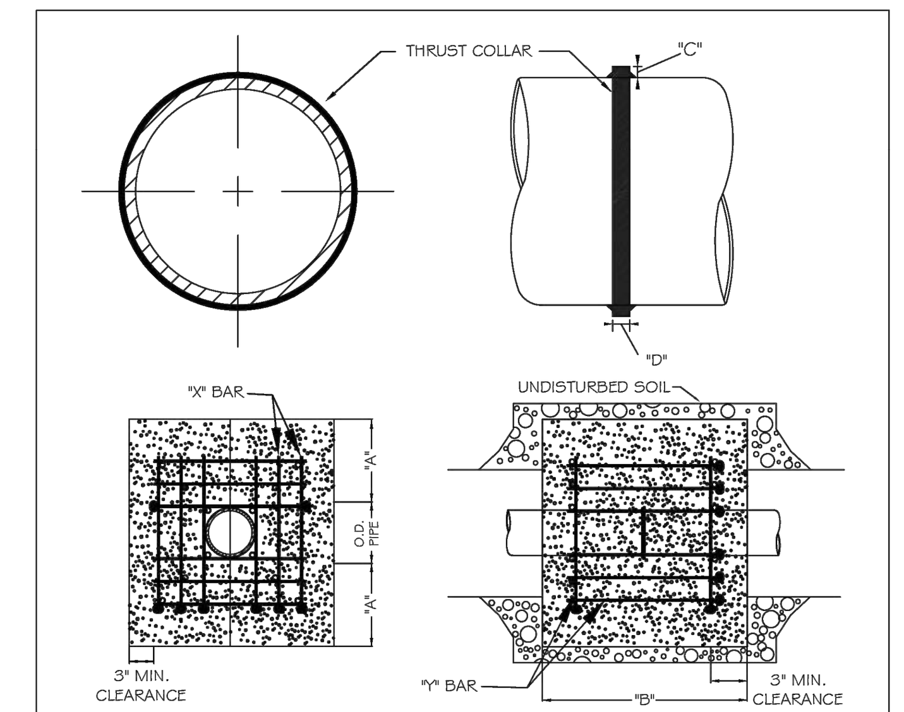
CITY OF RALEIGH
DEPARTMENT OF PUBLIC UTILITIES
RALEIGH, GARNER, KNIGHTDALE, ROLESVILLE, WAKE FOREST, WENDELL & ZEBULON
STANDARD FIRE HYDRANT WITH 5" STORZ PUMPER NOZZLE

DWG. NO.	REVISIONS	DATE	REVISIONS	DATE
W-5		3-1-87	ABB	7-21-05
	RRH	3-31-00	DHL	2-18-08



CITY OF RALEIGH
DEPARTMENT OF PUBLIC UTILITIES
HYDRANT OPERATING NUT AND 2 1/2" OUTLET THREADS

DWG. NO.	REVISIONS	DATE	REVISIONS	DATE
W-6	RRH	3-31-00	DHL	2-18-08
	A.B.B	4-13-04	J.P.S	11-1-10



REINFORCING REQUIREMENTS

I.D. PIPE	REBAR SIZE	"X" BAR LENGTH	"X" BAR WEIGHT	"Y" BAR LENGTH	"Y" BAR WEIGHT	NO. REQUIRED
6" - 36"	#5	2'-2"+ O.D. PIPE	1.043 LBS/FT	1'-1"	1.1 LBS. EACH	X-24, Y-12
48" & greater	#6	3'-0"+ O.D. PIPE	1.502 LBS/FT	1'-3"	1.9 LBS. EACH	X-24, Y-12

THRUST COLLAR, AND THRUST SCHEDULE

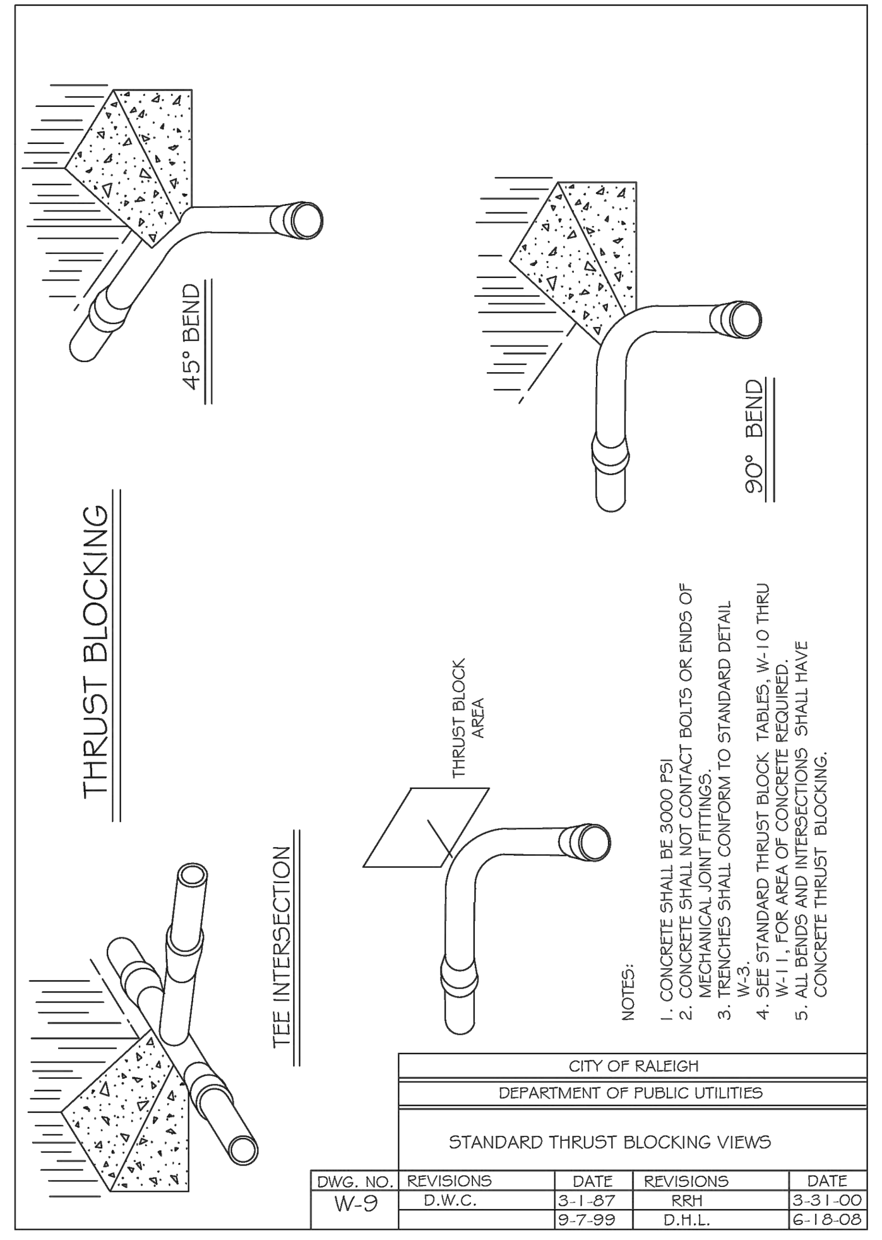
I.D. PIPE	"A"	"B"	"C"	"D"
6" - 16"	1'-4"	1'-7"	2"	3/8"
20" - 24"	1'-4"	1'-7"	3"	1/2"
30" - 36"	1'-4"	1'-7"	4"	5/8"
48" & greater	1'-8"	1'-9"	6"	7/8"

NOTES:

1. SEE STANDARD DETAIL W-9 FOR THRUST BLOCK LOCATIONS.
2. CONCRETE SHALL BE 3000 PSI AND TRANSIT MIXED.
3. REINFORCING BARS SHALL BE DEFORMED AND TIED TOGETHER.
4. TRENCH BOTTOM WIDTH IN VICINITY OF THRUST BLOCK INSTALLATION SHALL BE THE MINIMUM WIDTH AS SHOWN ON STANDARD DETAIL W-3.
5. BACKFILL TAMPED IN 6" LIFTS PER STANDARD DETAIL W-3.
6. THRUST COLLAR MUST BE FACTORY WELDED ON BOTH SIDES ALONG BOTH EDGES OF COLLAR AROUND CIRCUMFERENCE.

CITY OF RALEIGH
DEPARTMENT OF PUBLIC UTILITIES
THRUST BLOCKING DESIGN DATA FOR WATER MAINS

DWG. NO.	REVISIONS	DATE	REVISIONS	DATE
W-7	RRH	1-21-00	J.P.S.	11-1-10
	D.H.L.	6-18-08		



CITY OF RALEIGH
DEPARTMENT OF PUBLIC UTILITIES
STANDARD THRUST BLOCKING VIEWS

DWG. NO. W-9

REACTION BEARING AREAS FOR HORIZONTAL WATER PIPE BENDS
BASED ON TEST PRESSURE OF 200 P.S.I.
ALL AREAS GIVEN IN SQUARE FEET.

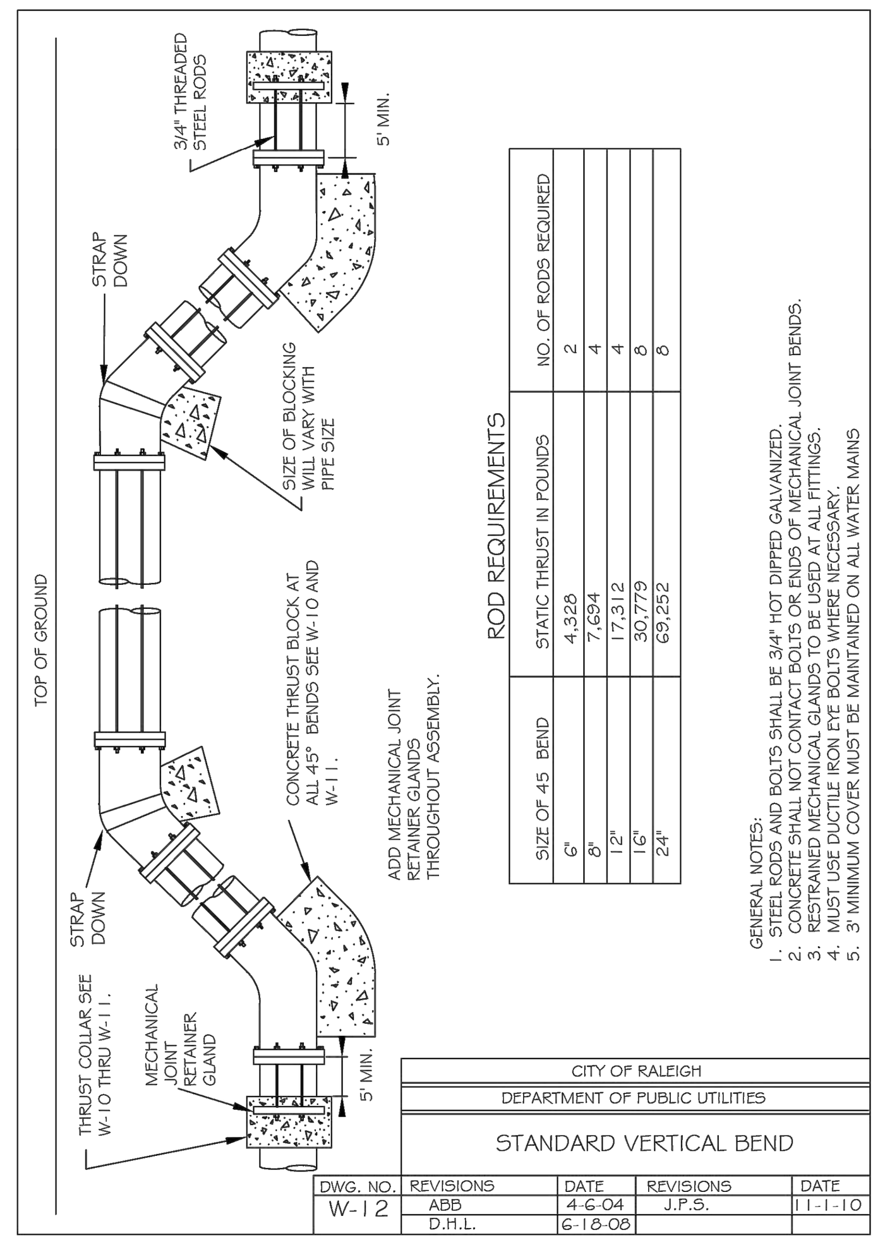
SIZE AND DEGREE OF BEND	STATIC THRUST IN POUNDS	MODERATELY DRY CLAY 4000 LBS/FT²	SOFT CLAY 2000 LBS/FT²	1600 LBS/FT² GRAVEL / COARSE SAND	8000 LBS/FT² DRY CLAY - ALWAYS DRY	SAND, COMPACT FIRM 8000 LBS/FT²	SAND - CLEAN DRY 4000 LBS/FT²	SOIL 1000 LBS/FT² QUICKSAND - VERY POOR	ROCK - POOR 10,000 LBS/FT²
6"									
11 1/4°	1,108	1	1	1	1	1	1	2	1
22 1/2°	2,207	1	2	2	1	1	1	3	1
45°	4,328	2	3	3	1	1	2	5	1
90°	7,996	2	4	5	1	1	2	8	1
PLUG	5,655	2	3	4	1	1	2	6	1
8"									
11 1/4°	1,970	1	1	2	1	1	1	2	1
22 1/2°	3,922	1	2	3	1	1	1	4	1
45°	7,694	2	4	5	1	1	2	8	1
90°	14,215	4	8	9	2	2	4	15	2
PLUG	10,053	3	5	6	2	2	3	10	1
12"									
11 1/4°	4,433	2	3	3	1	1	2	5	1
22 1/2°	8,826	3	5	6	2	2	3	9	1
45°	17,312	5	9	11	3	3	5	18	2
90°	31,983	8	16	19	4	4	8	32	4
PLUG	22,619	6	12	14	3	3	6	23	3
16"									
11 1/4°	7,881	2	4	5	1	1	2	8	1
22 1/2°	15,691	4	8	10	2	2	4	16	2
45°	30,779	8	16	19	4	4	8	31	4
90°	56,861	15	29	35	8	8	15	57	6
PLUG	40,213	10	21	25	5	5	10	41	5

REACTION BEARING AREAS ARE IN SQUARE FEET MEASURED IN A VERTICAL PLANE IN THE TRENCH SIDE AT AN ANGLE OF 90° TO THE THRUST VECTOR.

USE 6" - 90 BEND VALUE FOR HYDRANTS FOR ADDITIONAL SAFETY FACTOR.

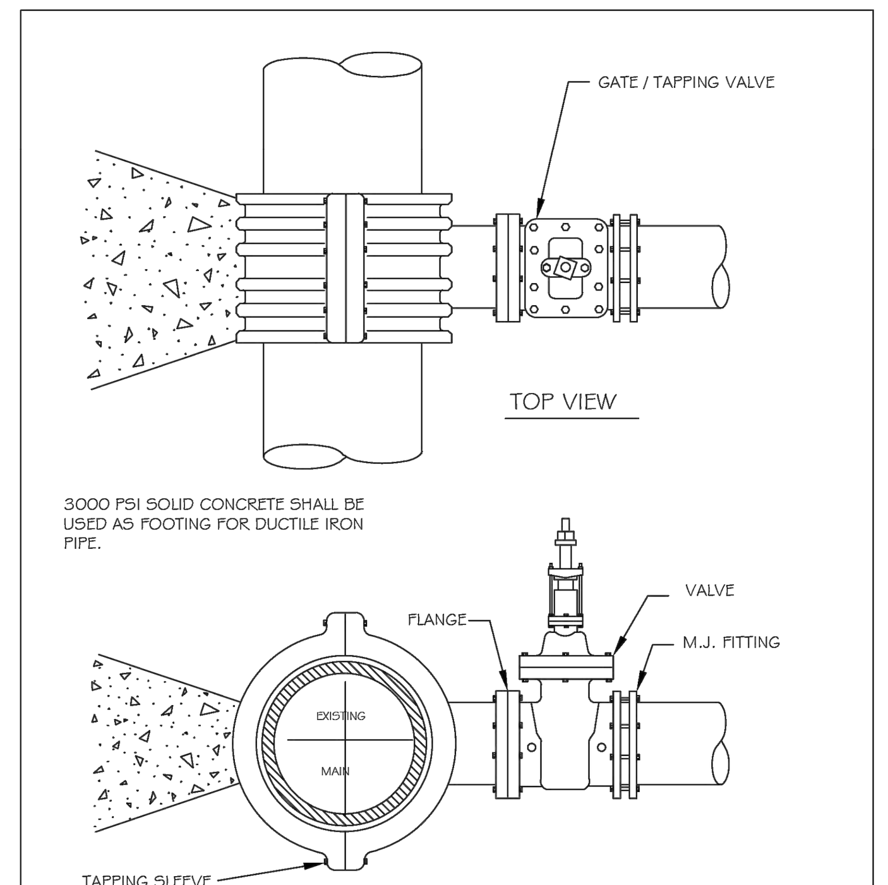
CITY OF RALEIGH
DEPARTMENT OF PUBLIC UTILITIES
THRUST BLOCKING DESIGN QUANTITY TABLE

DWG. NO.	REVISIONS	DATE	REVISIONS	DATE
W-10	D.W.C.	6-23-99		



CITY OF RALEIGH
DEPARTMENT OF PUBLIC UTILITIES
STANDARD VERTICAL BEND

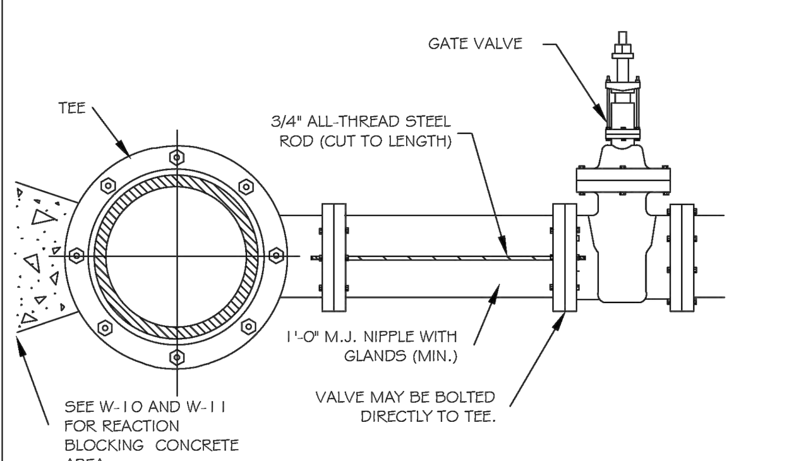
DWG. NO. W-12



NOTES:
1. CONCRETE SHALL NOT CONTACT BOLTS OR ENDS OF MECHANICAL JOINT FITTINGS.
2. SEE STANDARD REACTION BLOCK TABLES, W-10 AND W-11 FOR AREA OF CONCRETE REQUIRED.

CITY OF RALEIGH
DEPARTMENT OF PUBLIC UTILITIES
4" - 24" STANDARD TAPPING SLEEVE AND VALVE ASSEMBLY

DWG. NO.	REVISIONS	DATE	REVISIONS	DATE
W-14	Y.C.A.	12-31-91	RRH	3-31-00
	D.W.C.	9-7-99	J.P.S.	11-1-10



ROD REQUIREMENTS

NO. OF RODS	BRANCH SIZE
4"	2
6"	2
8"	4
12"	4
16"	6
24"	6
30"	8
36"	8

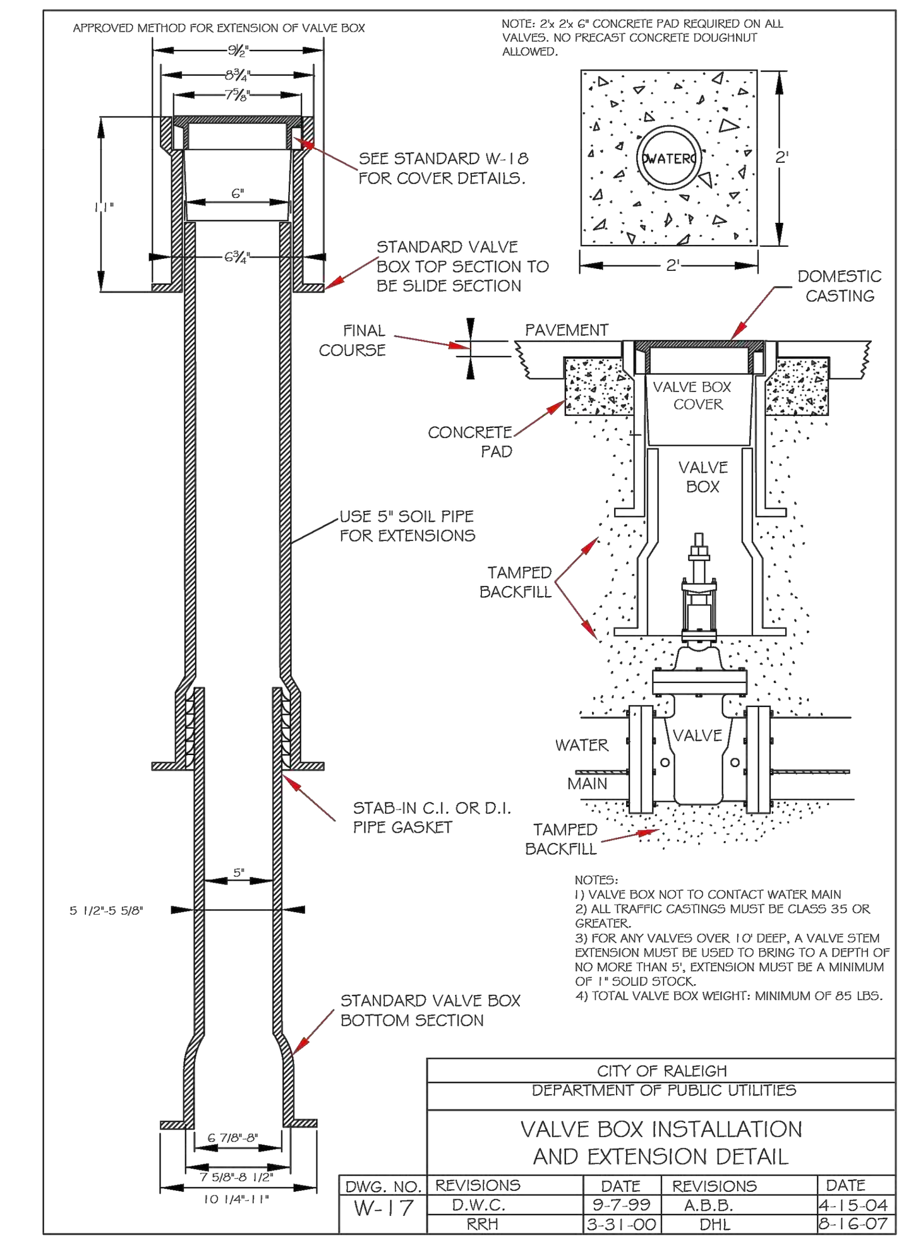
NOTES:
1. STEEL RODS AND BOLTS SHALL BE 3/4" HOT DIPPED GALVANIZED.
2. SEE STANDARD THRUST BLOCK. TABLES W-10 AND W-11 FOR CONCRETE.
3. CONCRETE SHALL NOT CONTACT BOLTS OR ENDS OF MECHANICAL FITTINGS.
4. THIS RODDING REQUIREMENT DOES NOT APPLY TO FIRE HYDRANTS.

CITY OF RALEIGH
DEPARTMENT OF PUBLIC UTILITIES
VALVE RESTRAINT AT TEES AND CROSSES FOR LINES (4"-24")

DWG. NO.	REVISIONS	DATE	REVISIONS	DATE
W-15	RRH	3-31-00	D.H.L.	6-16-08
	A.B.B.	4-19-04	J.P.S.	11-1-10

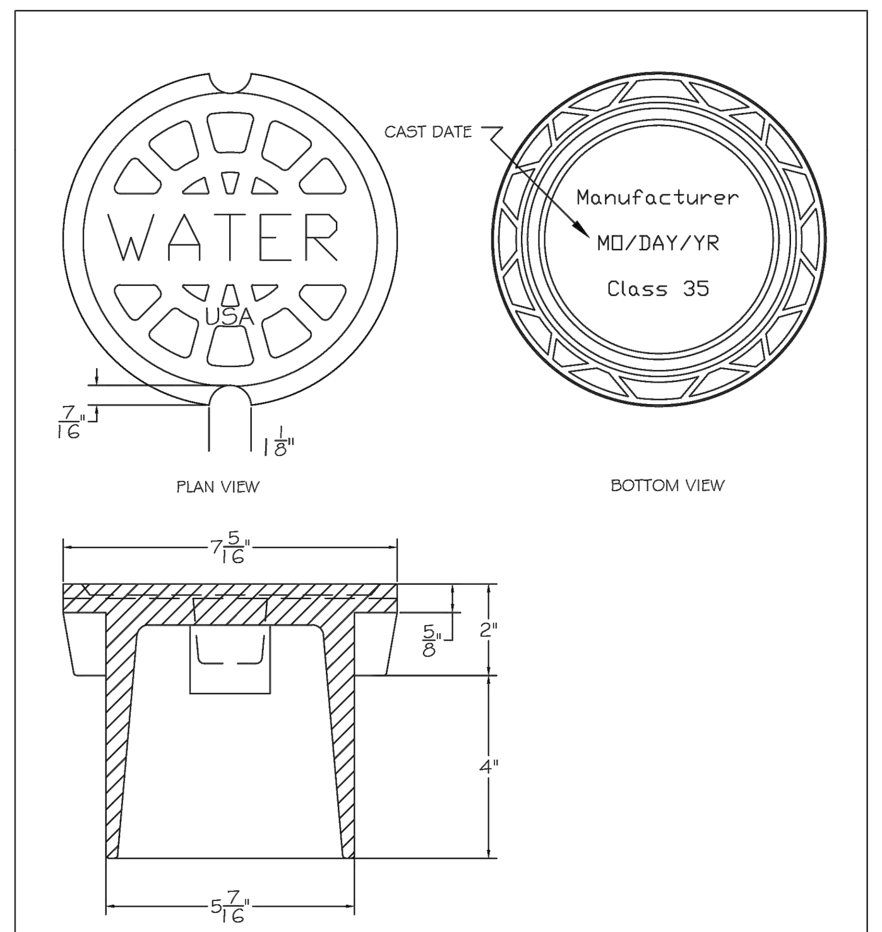
APPROVED METHOD FOR EXTENSION OF VALVE BOX

NOTE: 2'x 2'x 6" CONCRETE PAD REQUIRED ON ALL VALVES. NO PRECAST CONCRETE DOUGHNUT ALLOWED.



CITY OF RALEIGH
DEPARTMENT OF PUBLIC UTILITIES
VALVE BOX INSTALLATION AND EXTENSION DETAIL

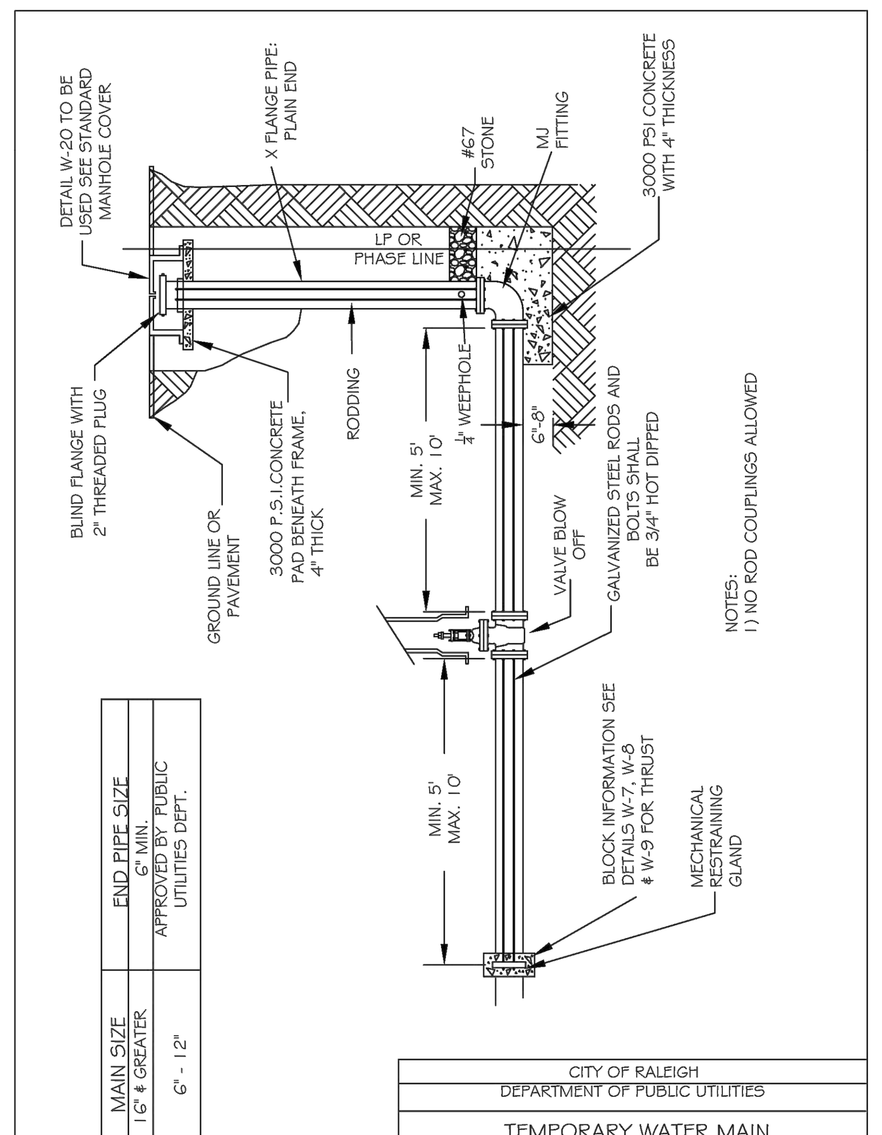
DWG. NO. W-17



NOTE 1 - "WATER" LETTERING MUST BE 1" RAISED (RECESSED FLUSH)
NOTE 2 - VALVE COVER SHALL BE DOMESTICALLY CAST.
NOTE 3 - COVER MUST HAVE A MINIMUM WEIGHT OF 25 POUNDS.
NOTE 4 - COVER MUST BE CLASS 35 OR GREATER.
NOTE 5 - COVER MUST MEET OR EXCEED AASHTO H-20 LOAD REQUIREMENTS.

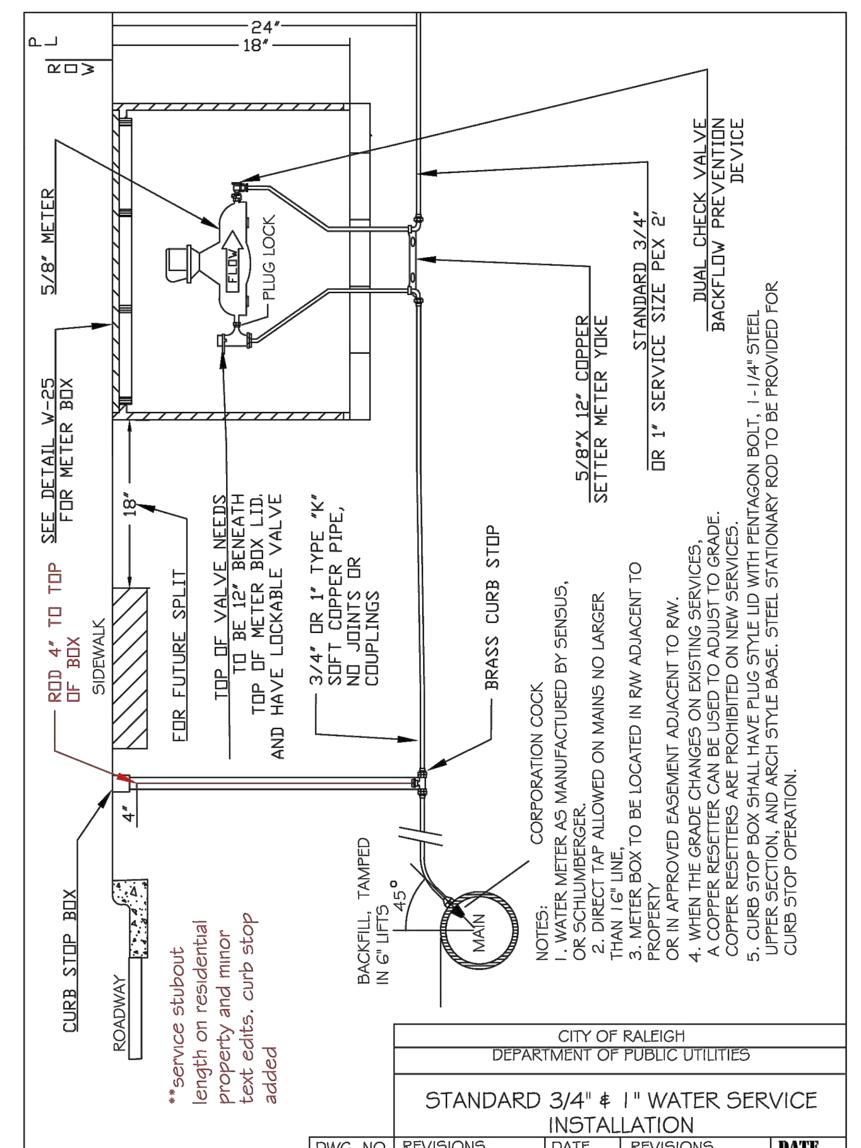
CITY OF RALEIGH
DEPARTMENT OF PUBLIC UTILITIES
5 1/4" VALVE BOX DROP LID WITH 4" SKIRT

DWG. NO.	REVISIONS	DATE	REVISIONS	DATE
W-18				



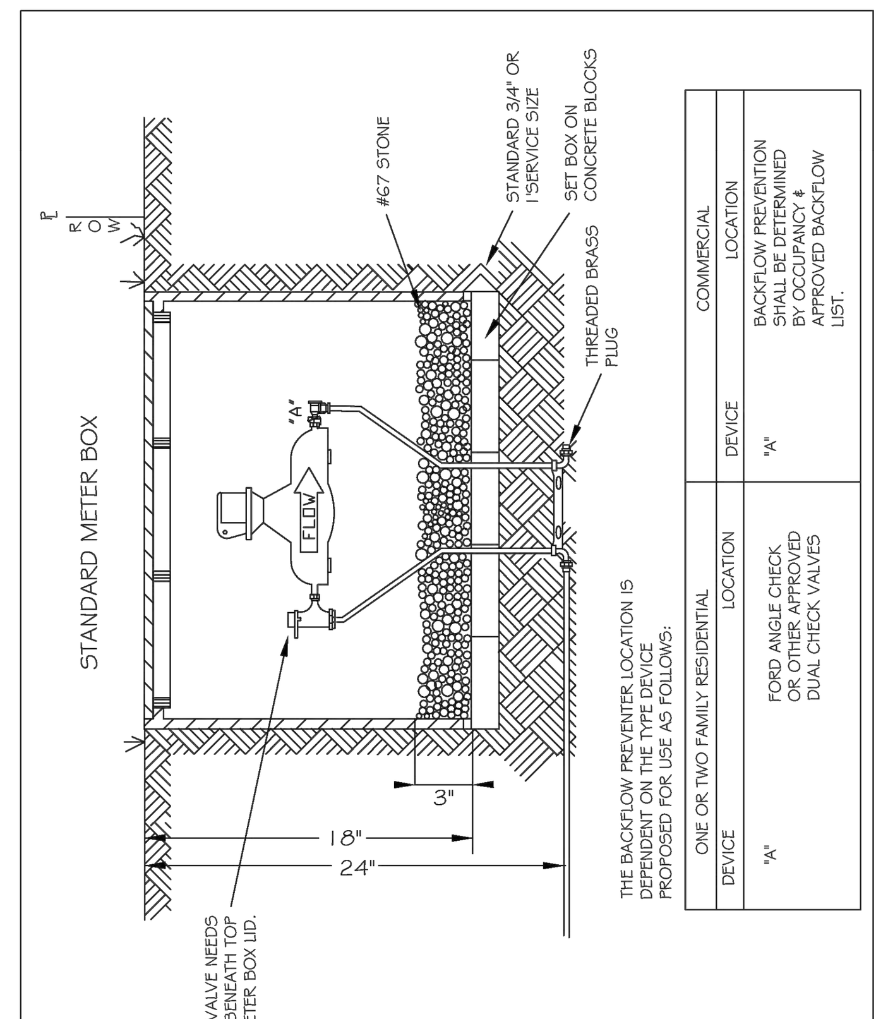
CITY OF RALEIGH
DEPARTMENT OF PUBLIC UTILITIES
TEMPORARY WATER MAIN BLOW OFF ASSEMBLY

DWG. NO. W-21



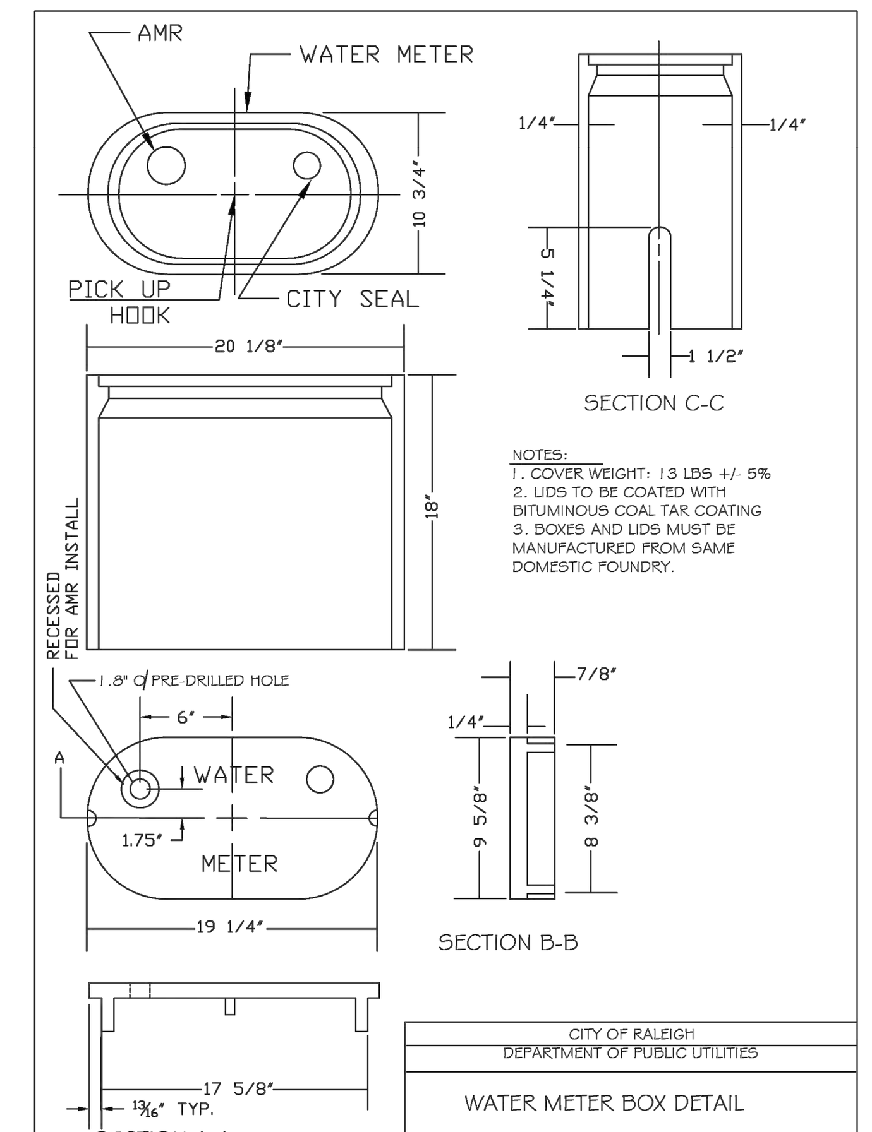
CITY OF RALEIGH
DEPARTMENT OF PUBLIC UTILITIES
STANDARD 3/4" & 1" WATER SERVICE INSTALLATION

DWG. NO. W-23



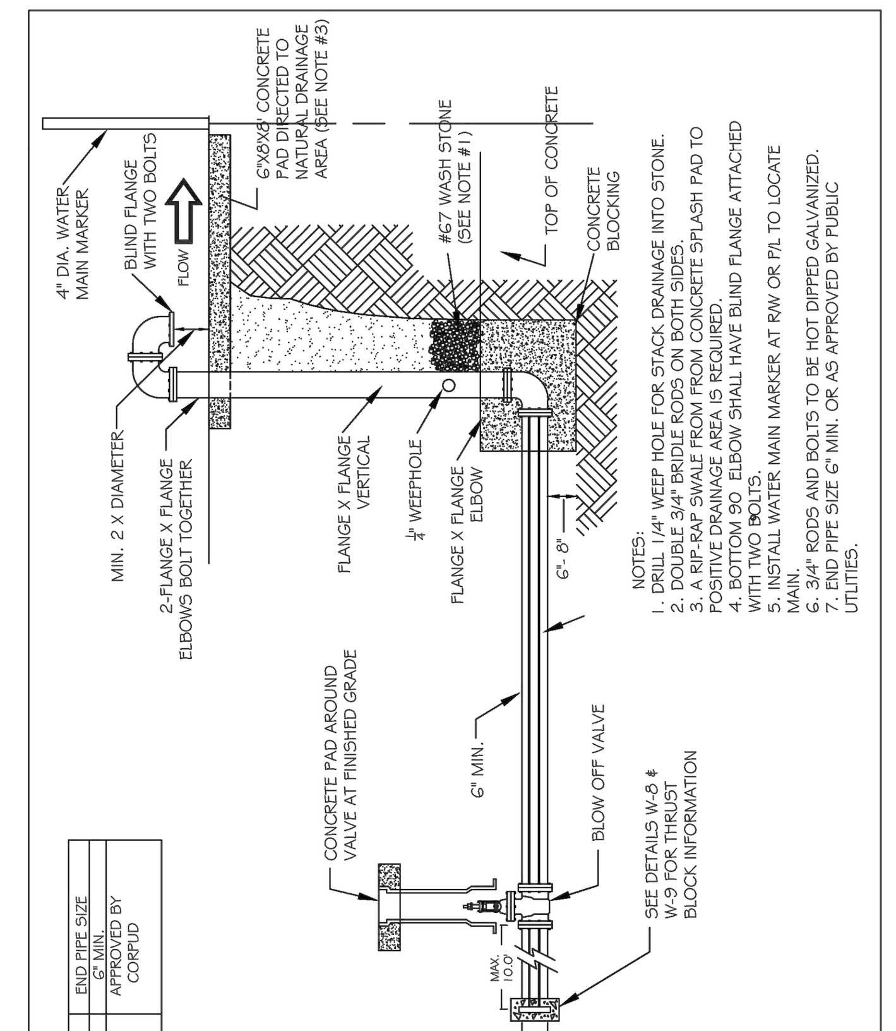
CITY OF RALEIGH
DEPARTMENT OF PUBLIC UTILITIES
ONE OR TWO FAMILY DWELLINGS BACKFLOW PREVENTION METER ASSEMBLY INSTALLATION

DWG. NO. W-24



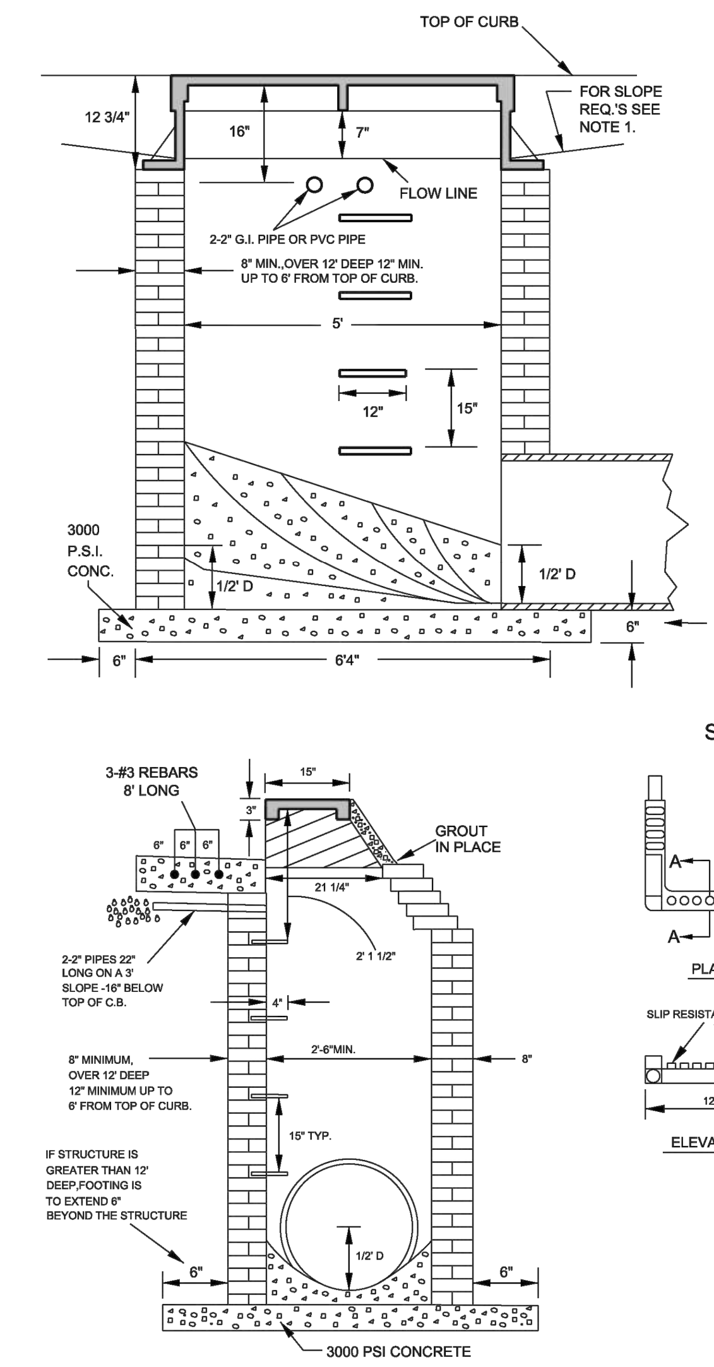
CITY OF RALEIGH
DEPARTMENT OF PUBLIC UTILITIES
WATER METER BOX DETAIL

DWG. NO. W-25



CITY OF RALEIGH
DEPARTMENT OF PUBLIC UTILITIES
PERMANENT WATER MAIN BLOW OFF ASSEMBLY

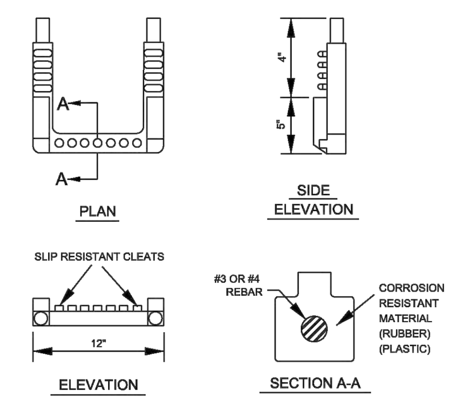
DWG. NO. W-22



NOTES:

1. THE SLOPE OF THE GUTTER TO THE CATCH BASIN ON THE UPHILL SIDE SHALL BEGIN 10' FROM THE THE CATCH BASIN. THE SLOPE OF THE GUTTER TO THE CATCH BASIN ON THE DOWNHILL SIDE, SHALL BEGIN 10' FROM THE CATCH BASIN.
2. STEPS SHALL BE INSTALLED IN ALL CATCH BASINS OVER 3' IN DEPTH. DEPTH SHALL BE MEASURED FROM THE TOP OF CURB TO THE INVERT OF THE CATCH BASIN.
3. SOLID CONCRETE BRICKS MAY BE USED IN 4X4X8 OR 4X8X16 SIZES.
4. NCDOT APPROVED PRECAST CONCRETE BOXES ACCEPTABLE USING STANDARD 5' CASTINGS.
5. DOMESTIC CASTING REQUIRED WITHIN STREET RIGHT OF WAY.
6. 1" MAXIMUM EXTENSION OF PIPE INTO THE STORM BOX.

STANDARD C.B. STEP

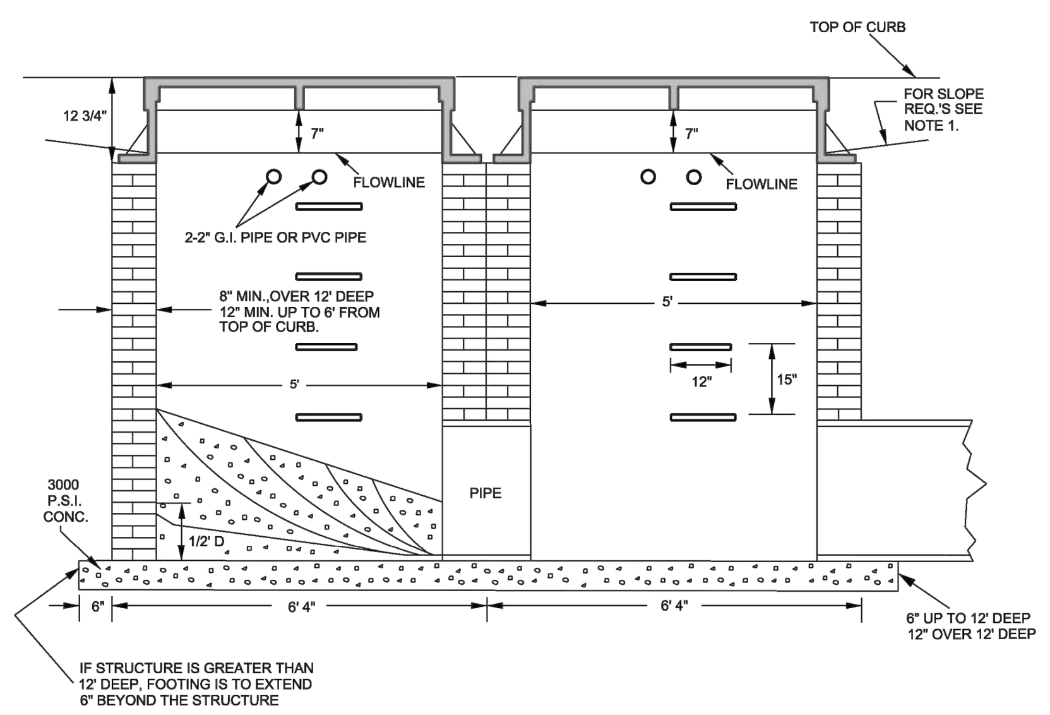


CITY OF RALEIGH
STANDARD DETAIL

REVISIONS | DATE: 8/2020 | NOT TO SCALE

5' OM CATCH BASIN

SW-10.01



NOTES:

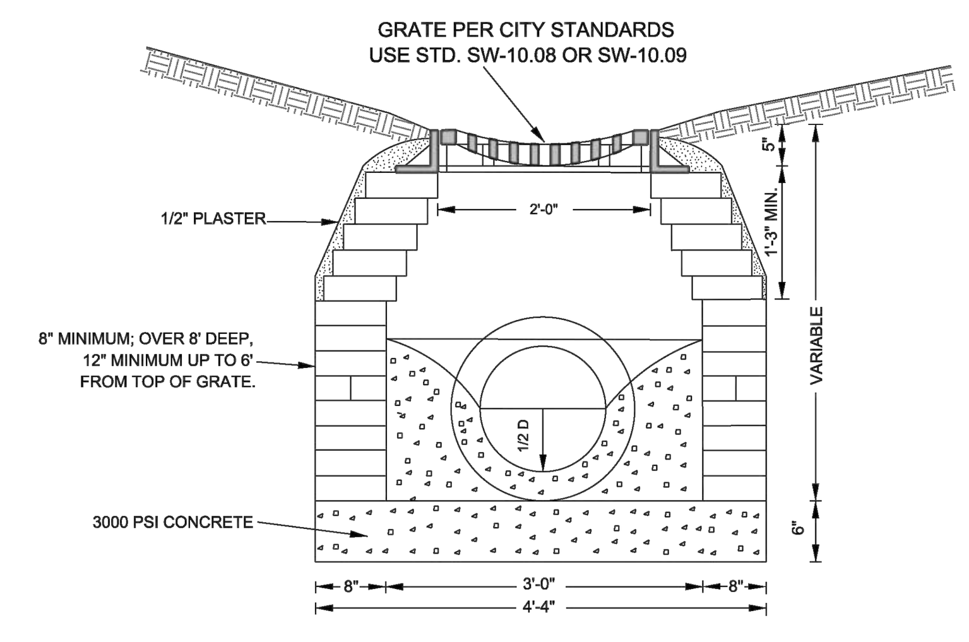
1. THE SLOPE OF THE GUTTER TO THE CATCH BASIN ON THE UPHILL SIDE SHALL BEGIN 10' FROM THE CATCH BASIN. THE SLOPE OF THE GUTTER TO THE CATCH BASIN ON THE DOWNHILL SIDE , SHALL BEGIN 10' FROM THE CATCH BASIN.
2. STEPS SHALL BE INSTALLED IN ALL CATCH BASINS OVER 3' IN DEPTH. DEPTH SHALL BE MEASURED FROM THE TOP OF CURB TO THE INVERT OF THE CATCH BASIN.
3. SOLID CONCRETE BRICKS MAY BE USED IN 4" X 4" X 16" OR 4" X 8" X 16" SIZES.
4. NCDOT APPROVED PRECAST CONCRETE BOXES ACCEPTABLE, USING STANDARD 5' CASTINGS.
5. DOMESTIC CASTING REQUIRED WITHIN STREET RIGHT OF WAY.

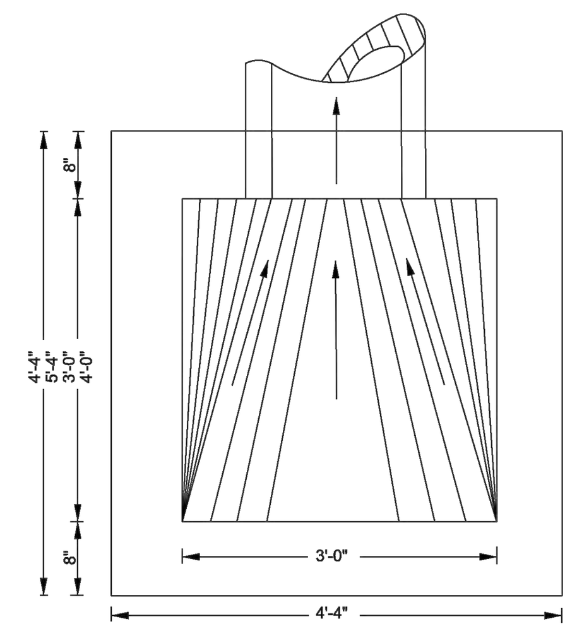
CITY OF RALEIGH
STANDARD DETAIL

REVISIONS | DATE: 8/2020 | NOT TO SCALE

DOUBLE WIDTH CATCH BASIN

SW-10.02





NOTES:

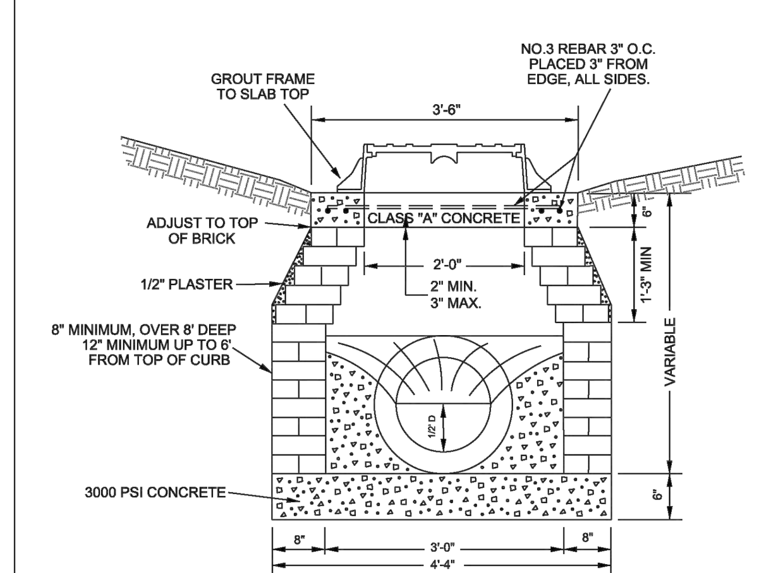
1. FOR 24" RCP & LARGER USE PIPE DIAMETER PLUS 12" FOR MINIMUM INSIDE DIMENSION.
2. 24" X 24" CASTING WITH 12", 15" & 18" PIPE, 24" X 36" CASTING USED WITH 24" PIPE OR LARGER. IF PLACED WITHIN PUBLIC R/W CASTING MUST BE TRAFFIC BEARING TYPE PER NCDOT STANDARDS.
3. USE 4" X 4" X 8" OR 4" X 8" X 16" SOLID CONCRETE BLOCK. CAST IN PLACE OR PRECAST CONCRETE TO MEET N.C.D.O.T. STANDARDS ACCEPTABLE.
4. STEPS SHALL BE INSTALLED IN ALL DROP INLETS OVER 3' IN DEPTH. DEPTH SHALL BE MEASURED FROM THE TOP OF GRATE TO THE INVERT OF THE DROP INLET.

CITY OF RALEIGH
STANDARD DETAIL

REVISIONS | DATE: 8/2020 | NOT TO SCALE

STANDARD DROP INLET

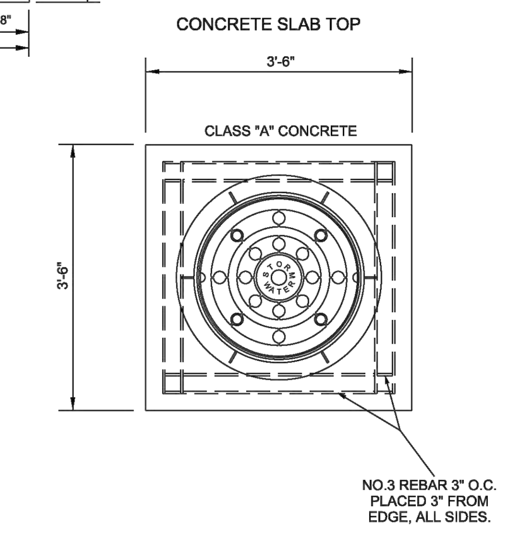
SW-10.03

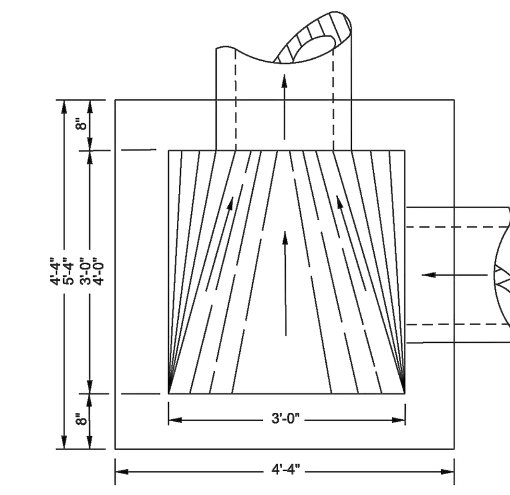


NOTES:

1. FOR 24" PIPE & LARGER USE PIPE DIAMETER PLUS 12" FOR MINIMUM INSIDE DIMENSION.
2. USE 4" X 4" X 8" OR 4" X 8" X 16" SOLID CONCRETE BLOCK. CAST IN PLACE OR PRECAST CONCRETE TO MEET NCDOT STANDARDS ACCEPTABLE.
3. FOR STEP REQUIREMENTS, SEE NOTE 4 ON STANDARD DETAIL SW-10.03.

CONCRETE SLAB TOP



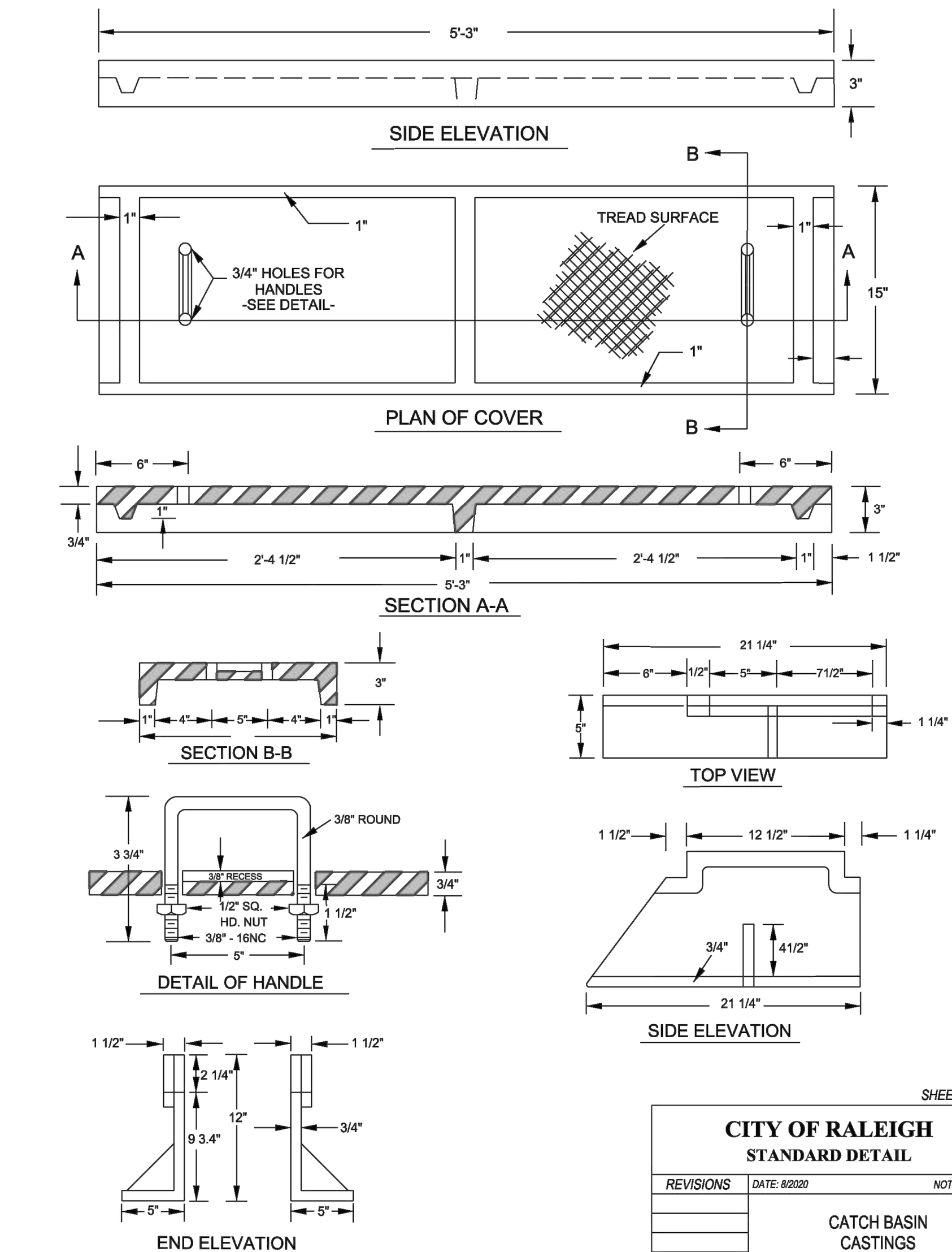


CITY OF RALEIGH
STANDARD DETAIL

REVISIONS | DATE: 8/2020 | NOT TO SCALE

STANDARD JUNCTION BOX

SW-10.04



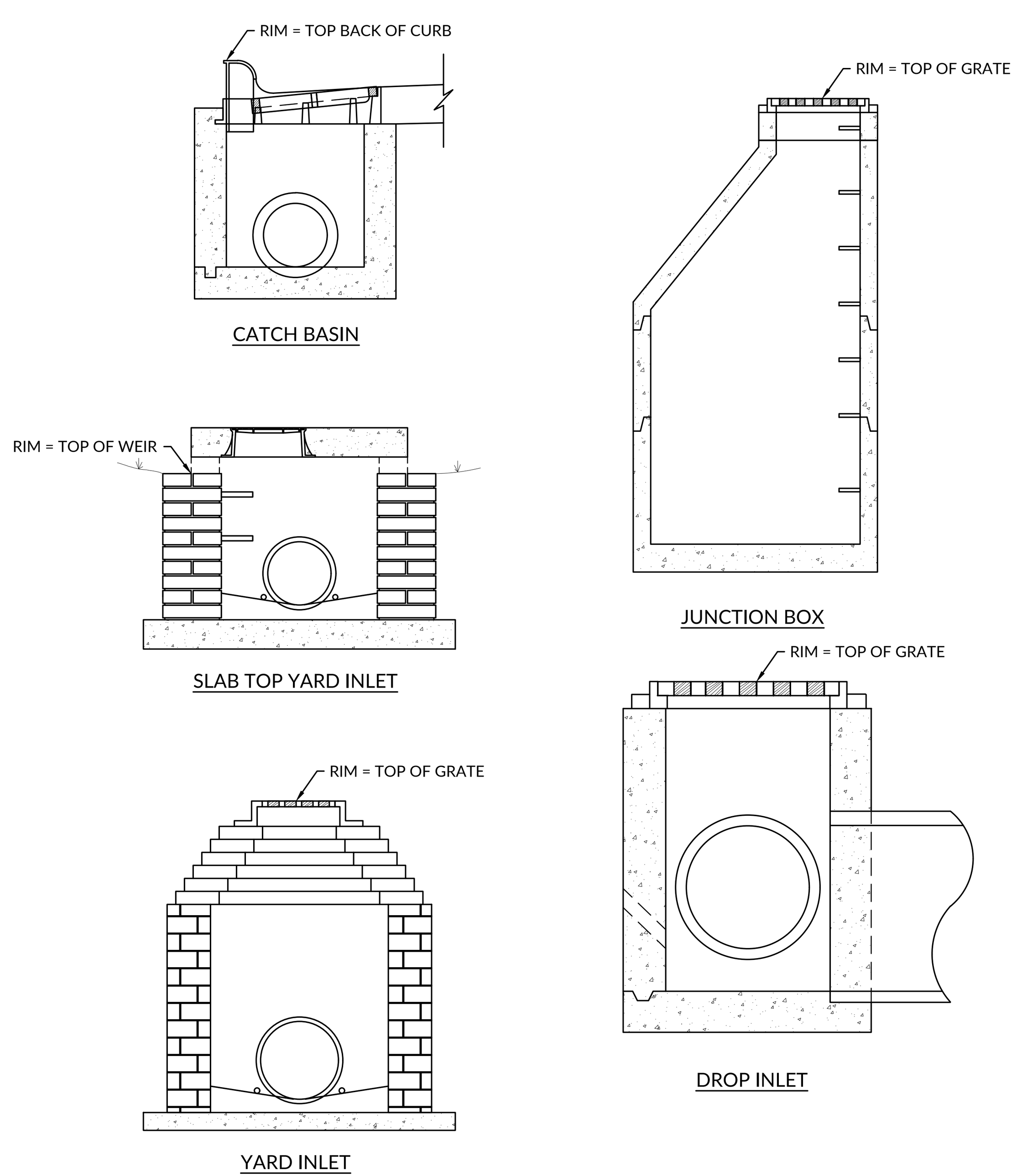
SHEET 1 OF 2

CITY OF RALEIGH
STANDARD DETAIL

REVISIONS | DATE: 8/2020 | NOT TO SCALE

CATCH BASIN CASTINGS

SW-10.06.1

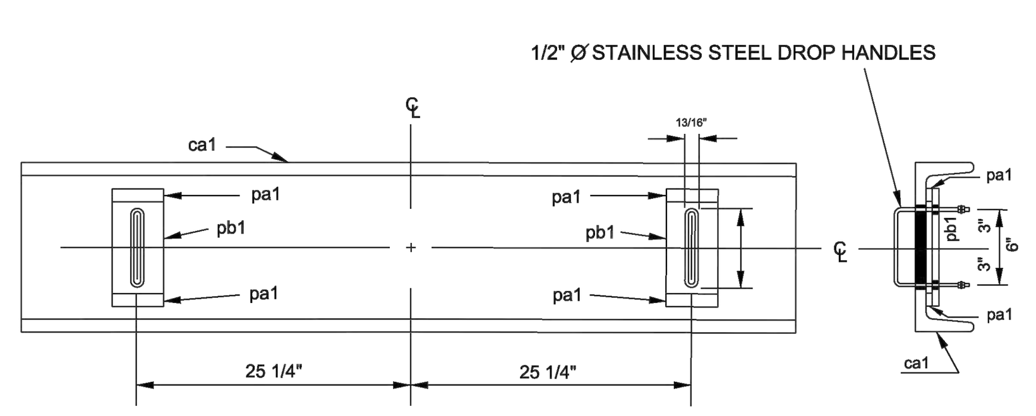


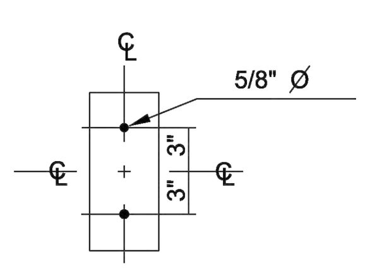
NOTES:

1. THIS DETAIL IS PROVIDED TO CLARIFY RIM ELEVATIONS ONLY.
2. REFER TO OTHER DETAILS AS APPROPRIATE FOR DETAILED REQUIREMENTS.

STRUCTURE RIM ELEVATIONS — STORM DRAINAGE COLLECTION SYSTEMS

Scale:NTS — C8013





DETAIL OF pb1 PLATES

NOTES:
PAINT WITH RUST INHIBITING BLACK PAINT.

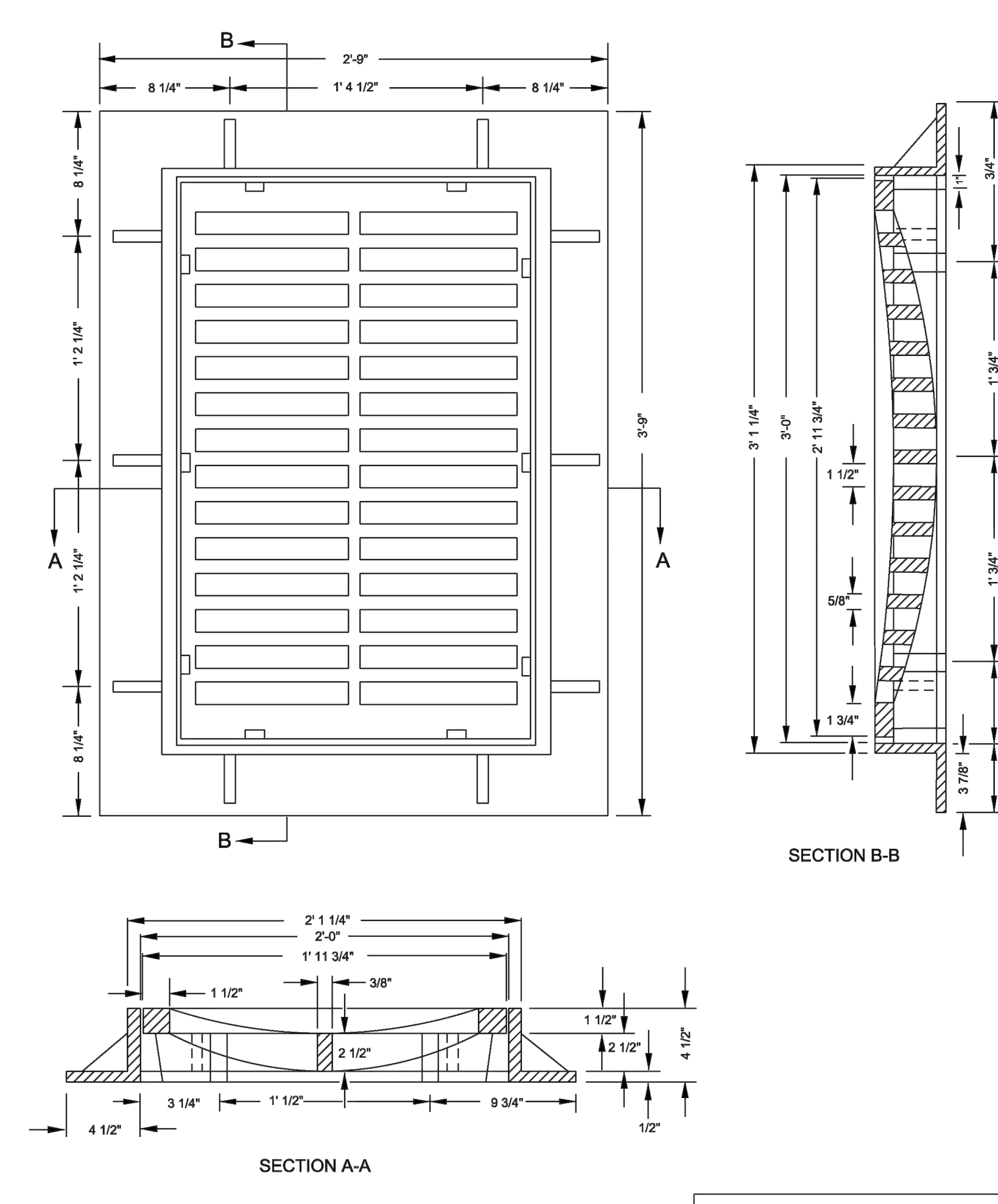
BILL OF MATERIAL		
MATERIAL LIST FOR ONE UNIT - MAKE ( ) UNITS		
1	C15 X 33.9# CHANNEL 62 1/2"	MK-ca1
4	1/8" X 1" H.R. FLAT BAR 3"	MK-pa1
2	3/8" x 3" H.R. FLAT BAR 10"	MK-pb1
2	1/2" STAINLESS STEEL ROUND ROD 18"	
8	1/2" STAINLESS STEEL HEX NUTS	
4	1/2" STAINLESS STEEL FLAT WASHERS	

CITY OF RALEIGH
STANDARD DETAIL

REVISIONS | DATE: 8/2020 | NOT TO SCALE

CATCH BASIN STEEL TOP

SW-10.07



STANDARD 24" X 36" DROP INLET CASTING

CITY OF RALEIGH
STANDARD DETAIL

REVISIONS | DATE: 8/2020 | NOT TO SCALE

STANDARD DROP INLET CASTING

SW-10.09

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CONSTRUCTION INFRASTRUCTURE DRAWINGS
BROADMOOR
ROLESVILLE ROAD | ROLESVILLE, NC 27587 | WAKE COUNTY

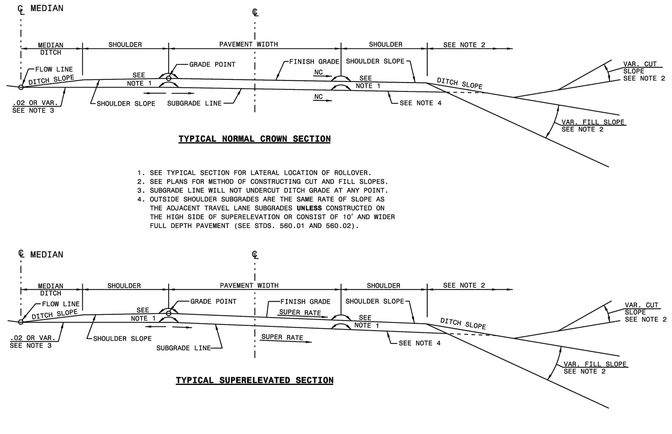
NORTH CAROLINA PROFESSIONAL ENGINEER TERRENCE COOK
PRELIMINARY
NOT APPROVED FOR CONSTRUCTION

INITIAL PLAN DATE: 11/01/2024
REVISIONS:

WR JOB NUMBER 23-0045
DRN: WR DGN: WR CKD: WR

STORM DRAINAGE DETAILS

C10.05



TYPICAL NORMAL CROWN SECTION

1. SEE TYPICAL SECTION FOR LATERAL LOCATION OF ROLLOVER.
2. SEE PLANS FOR METHOD OF CONSTRUCTING CUT AND FILL SLOPES.
3. SUBGRADE LINE WILL NOT UNDERCUT DITCH GRADE AT ANY POINT.
4. OUTSIDE SHOULDER SUBGRADES ARE THE SAME RATE OF SLOPE AS THE ADJACENT TRAVEL LANE SUBGRADES **UNLESS** CONSTRUCTED ON THE HIGH SIDE OF SUPERELEVATION OR CONSIST OF 10' AND WIDER FULL DEPTH PAVEMENT (SEE STDS. 560.01 AND 560.02).

TYPICAL SUPERELEVATED SECTION

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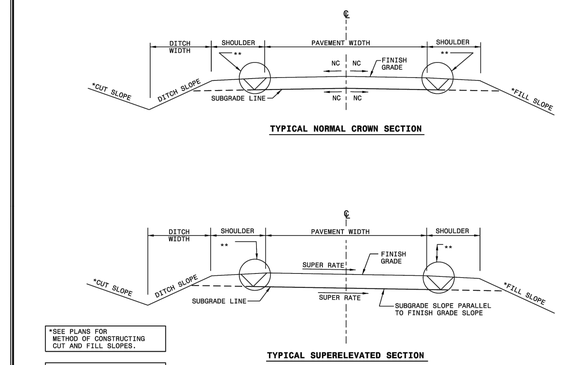
DIVISION OF HIGHWAYS
RALEIGH, N.C.

1-24

ROADWAY STANDARD DRAWING FOR
GUIDE FOR GRADING SUBGRADE
INTERSTATE AND FREEWAY

SHEET 1 OF 1
225.01



TYPICAL NORMAL CROWN SECTION

TYPICAL SUPERELEVATED SECTION

*SEE PLANS FOR METHOD OF CONSTRUCTING CUT AND FILL SLOPES.

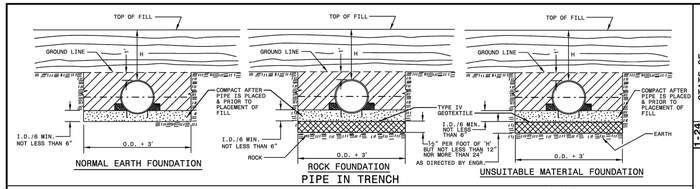
** TRENCH OR GRADED SECTION. SEE PLANS.

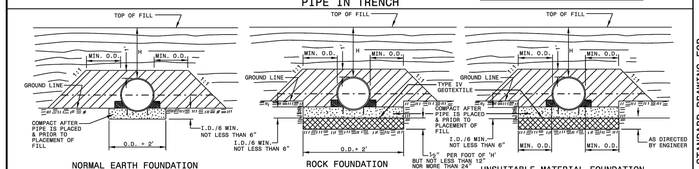
STATE OF NORTH CAROLINA
DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.

1-24

ROADWAY STANDARD DRAWING FOR
GUIDE FOR GRADING SUBGRADE
SECONDARY AND LOCAL

SHEET 1 OF 1
225.02





GENERAL NOTES:

I.D. = THE MAXIMUM HORIZONTAL INSIDE DIAMETER DIMENSION.
O.D. = THE MAXIMUM HORIZONTAL OUTSIDE DIAMETER DIMENSION.
H = THE FILL HEIGHT MEASURED VERTICALLY AT ANY POINT ALONG THE PIPE FROM THE TOP OF THE PIPE TO THE TOP OF THE EMBANKMENT AT THAT POINT.

APPROVED SUITABLE LOCAL MATERIAL.

TAKE CARE TO FULLY COMPACT HAUNCH ZONE OF PIPE BACKFILL.

LOOSELY LAYED SELECT MATERIAL CLASS III OR CLASS II, TYPE 1 FOR PIPE BEDDING. LEAVE SECTION DIRECTLY BENEATH PIPE UNCOMPACTED AS PIPE SEATING AND BACKFILL WILL ACCOMPLISH COMPACTION.

DO NOT OPERATE HEAVY EQUIPMENT OVER ANY PIPE CULVERT UNTIL THE PIPE CULVERT HAS BEEN PROPERLY BACKFILLED AND COVERED WITH AT LEAST 3 FEET OF APPROVED MATERIAL.

REFER TO NCDOT PIPE MATERIAL SELECTION GUIDE AND STANDARD SPECIFICATIONS FOR ALLOWABLE PIPE FILL HEIGHTS AND PIPE SPECIFICATIONS.

SPRINGLINE OF PIPE

SELECT BACKFILL MATERIAL CLASS III OR CLASS II, TYPE 1 ABOVE AND BELOW SPRINGLINE.

UNDISTURBED EARTH MATERIAL

SELECT MATERIAL CLASS V OR VI FOR FOUNDATION CONDITIONING. ENCAPSULATE WITH TYPE IV GEOTEXTILE AS DIRECTED BY THE ENGINEER.

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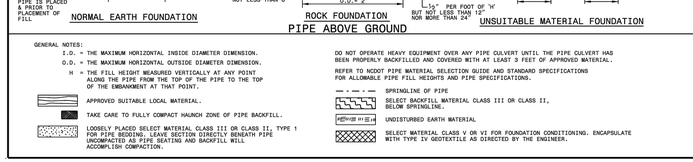
DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.

1-24

ROADWAY STANDARD DRAWING FOR
METHOD OF PIPE INSTALLATION
FLEXIBLE PIPE

SHEET 1 OF 2
300.01



GENERAL NOTES:

I.D. = THE MAXIMUM HORIZONTAL INSIDE DIAMETER DIMENSION.
O.D. = THE MAXIMUM HORIZONTAL OUTSIDE DIAMETER DIMENSION.
H = THE FILL HEIGHT MEASURED VERTICALLY AT ANY POINT ALONG THE PIPE FROM THE TOP OF THE PIPE TO THE TOP OF THE EMBANKMENT AT THAT POINT.

APPROVED SUITABLE LOCAL MATERIAL.

TAKE CARE TO FULLY COMPACT HAUNCH ZONE OF PIPE BACKFILL.

LOOSELY PLACED SELECT MATERIAL CLASS III OR CLASS II, TYPE 1 FOR PIPE BEDDING. LEAVE SECTION DIRECTLY BENEATH PIPE UNCOMPACTED AS PIPE SEATING AND BACKFILL WILL ACCOMPLISH COMPACTION.

DO NOT OPERATE HEAVY EQUIPMENT OVER ANY PIPE CULVERT UNTIL THE PIPE CULVERT HAS BEEN PROPERLY BACKFILLED AND COVERED WITH AT LEAST 3 FEET OF APPROVED MATERIAL.

REFER TO NCDOT PIPE MATERIAL SELECTION GUIDE AND STANDARD SPECIFICATIONS FOR ALLOWABLE PIPE FILL HEIGHTS AND PIPE SPECIFICATIONS.

SPRINGLINE OF PIPE

SELECT BACKFILL MATERIAL CLASS III OR CLASS II, BELOW SPRINGLINE.

UNDISTURBED EARTH MATERIAL

SELECT MATERIAL CLASS V OR VI FOR FOUNDATION CONDITIONING. ENCAPSULATE WITH TYPE IV GEOTEXTILE AS DIRECTED BY THE ENGINEER.

STATE OF NORTH CAROLINA
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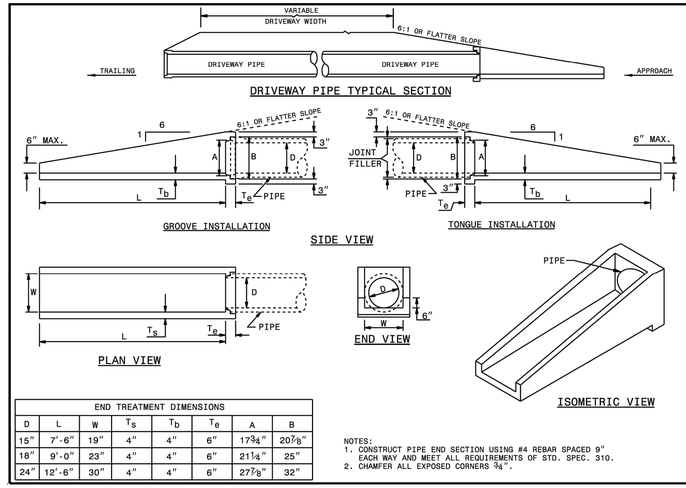
RALEIGH, N.C.

1-24

ROADWAY STANDARD DRAWING FOR
METHOD OF PIPE INSTALLATION
RIGID PIPE

SHEET 2 OF 2
300.01



END TREATMENT DIMENSIONS							
D	L	W	T_S	T_D	T_e	A	B
15"	7'-6"	19"	4"	4"	6"	17¾"	20⅞"
18"	9'-0"	23"	4"	4"	6"	21¼"	25"
24"	12'-6"	30"	4"	4"	6"	27⅞"	32"

NOTES:
1. CONSTRUCT PIPE END SECTION USING #4 REBAR SPACED 9" EACH WAY AND MEET ALL REQUIREMENTS OF STD. SPEC. 310.
2. CHAMFER ALL EXPOSED CORNERS ¾".

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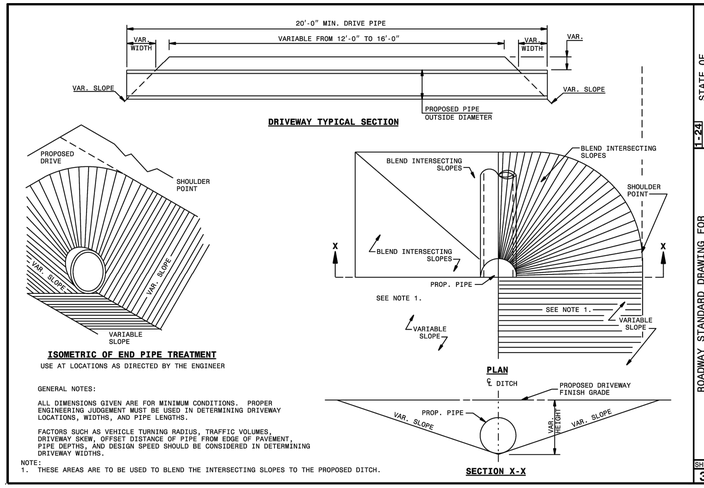
1-24

ROADWAY STANDARD DRAWING FOR
PARALLEL PIPE END SECTION
PRECAST CONCRETE SECTION FOR 15" TO 24" PIPE

SHEET 1 OF 1
310.02



GENERAL NOTES:

ALL DIMENSIONS GIVEN ARE FOR MINIMUM CONDITIONS. PROPER ENGINEERING JUDGEMENT MUST BE USED IN DETERMINING DRIVEWAY LOCATIONS, WIDTHS, AND PIPE LENGTHS.

FACTORS SUCH AS VEHICLE TURNING RADIUS, TRAFFIC VOLUMES, DRIVEWAY SKEW, OFFSET DISTANCE OF PIPE FROM EDGE OF PAVEMENT, PIPE DEPTHS, AND DESIGN SPEED SHOULD BE CONSIDERED IN DETERMINING DRIVEWAY WIDTHS.

NOTE:
1. THESE AREAS ARE TO BE USED TO BLEND THE INTERSECTING SLOPES TO THE PROPOSED DITCH.

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RALEIGH, N.C.

1-24

ROADWAY STANDARD DRAWING FOR
DRIVEWAY PIPE CONSTRUCTION
USING NO SPECIAL END SECTIONS

SHEET 1 OF 1
310.10

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NORTH CAROLINA PROFESSIONAL ENGINEER
PRELIMINARY
NOT APPROVED FOR CONSTRUCTION
LAWRENCE COOK

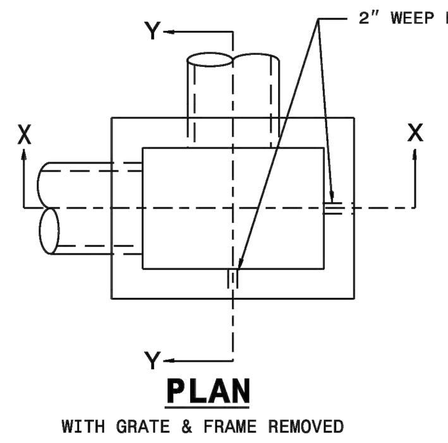
INITIAL PLAN DATE: 11/01/2024
REVISIONS:

WR JOB NUMBER 23-0045
DRN: WR DGN: WR CKD: WR

NCDOT DETAILS

C10.06

J:\23\0045-Pulte_Woodleaf Assemblage\CAD\Drawing Sets\Construction\C10.00-10.XX SITE DETAILS.dwg, Thursday, October 31, 2024 11:16:29 AM, AJSMASTER



GENERAL NOTES:

USE CLASS "B" CONCRETE THROUGHOUT.

PROVIDE ALL DROP INLETS OVER 3'-6" IN DEPTH WITH STEPS 12" ON CENTER. USE STEPS WHICH COMPLY WITH STD. DRAWING 840.66.

OPTIONAL CONSTRUCTION - MONOLITHIC POUR 2" KEYWAY OR #4 BAR DOWELS AT 12" CENTERS AS DIRECTED BY THE ENGINEER.

USE FORMS FOR THE CONSTRUCTION OF THE BOTTOM SLAB.

IF REINFORCED CONCRETE PIPE IS SET IN BOTTOM SLAB OF BOX, ADD TO SLAB AS SHOWN ON STD. NO. 840.00.

MAX.DEPTH OF THIS STRUCTURE FROM TOP OF BOTTOM SLAB TO TOP ELEVATION IS 12'-0". STD. DWG. 840.45 OR 840.46 CONTROLS MAXIMUM DEPTH IF PRECAST BOX IS USED.

CONSTRUCT WITH PIPE CROWNS MATCHING.

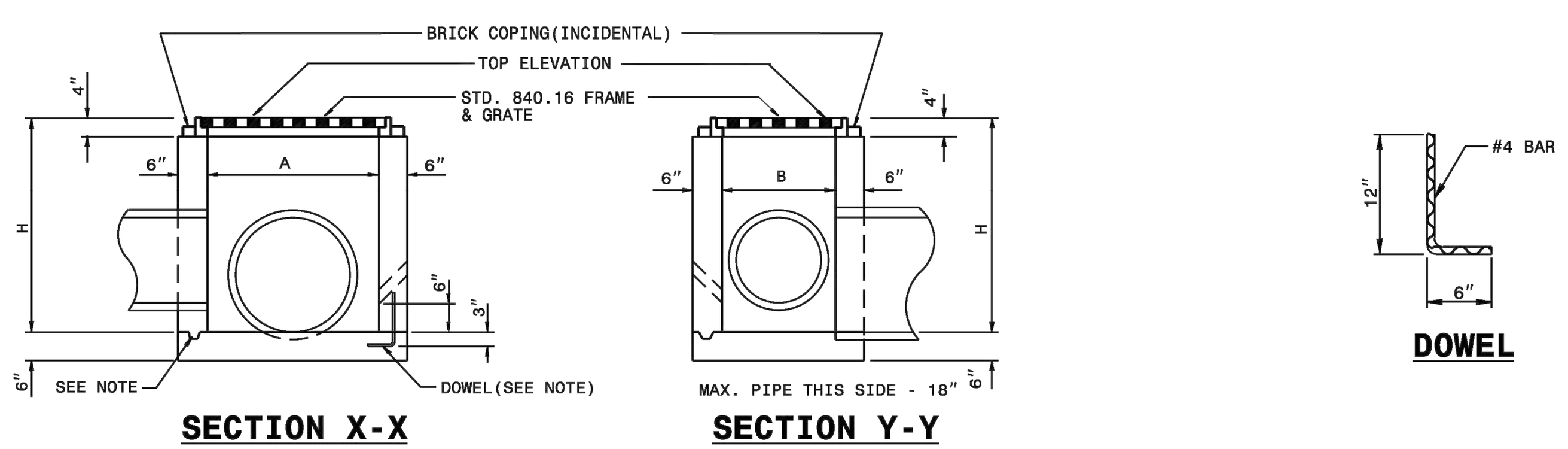
SEE STANDARD DRAWING 840.25 FOR ATTACHMENT OF FRAMES AND GRATES NOT SHOWN.

INSTALL 2" WEEPHOLES AS DIRECTED BY THE ENGINEER.

INSTALL STONE DRAINS, OF A MINIMUM OF 1 CUBIC FOOT OF NO. 78M STONE IN A POROUS FABRIC BAG OR WRAP, AT EACH WEEP HOLE OR AS DIRECTED BY THE ENGINEER.

CHAMFER ALL EXPOSED CORNERS 1".

DRAWING NOT TO SCALE.



DIMENSIONS AND QUANTITIES FOR DROP INLET(BASED ON MIN. HEIGHT, H)

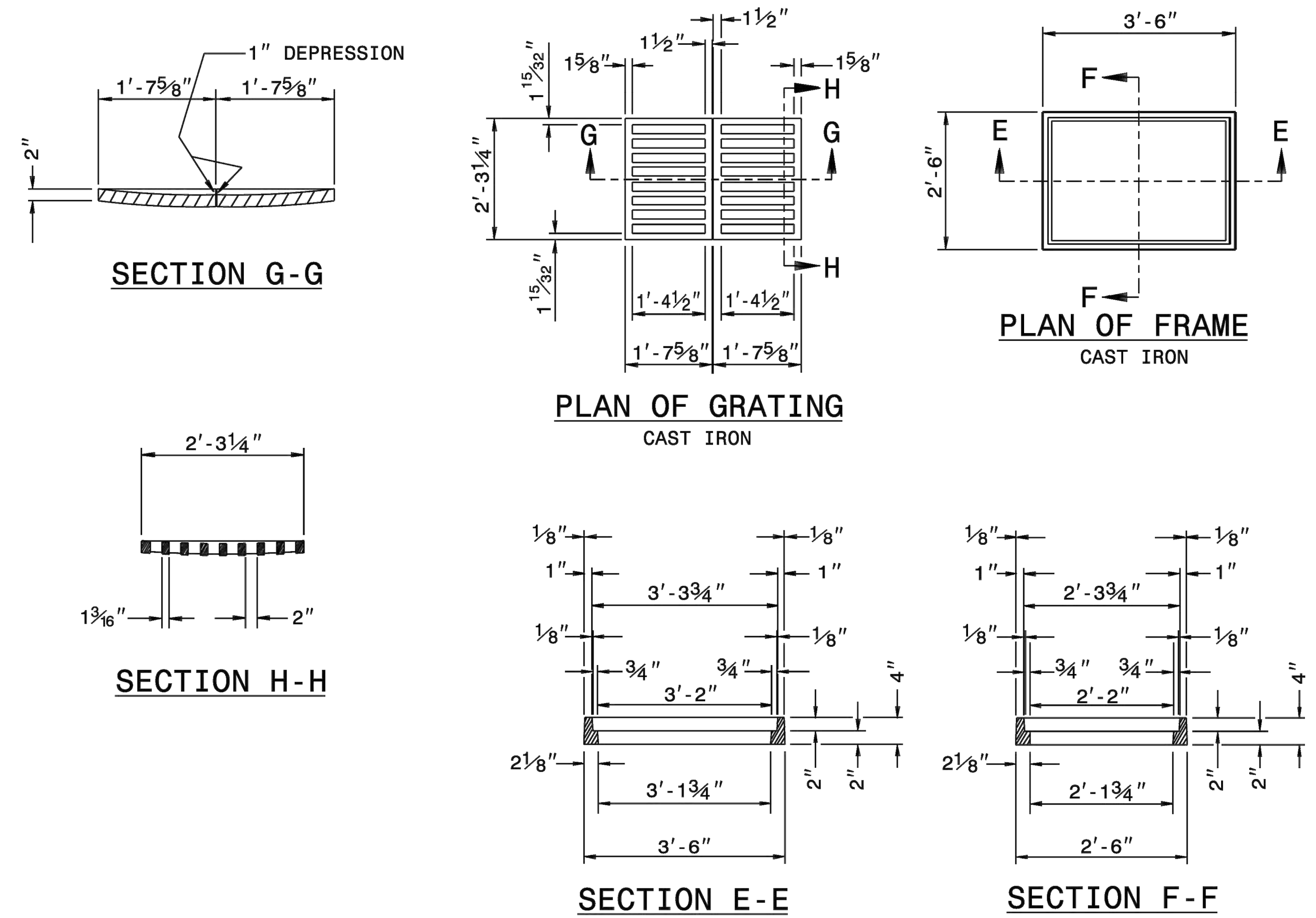
DIMENSIONS OF BOX & PIPE				CUBIC YARDS CONC. IN BOX			DEDUCTIONS FOR ONE PIPE	
PIPE	SPAN	WIDTH	MIN. HEIGHT					
D	A	B	H	BOTTOM SLAB	WALL PER FT. HT.	TOTAL CONCRETE FOR MINIMUM HEIGHT, H	C.M.	R.C.
12"	3'-0"	2'-0"	2'-0"	0.222	0.222	0.592	0.015	0.026
15"			2'-3"			0.648	0.023	0.036
18"			2'-6"			0.703	0.033	0.049
24"			3'-0"			0.814	0.059	0.085
30"	3'-0"	2'-0"	3'-6"	0.222	0.222	0.925	0.092	0.127

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

1-24

ROADWAY STANDARD DRAWING FOR **CONCRETE DROP INLET** 12" THRU 30" PIPE

SHEET 1 OF 1 **840.14**

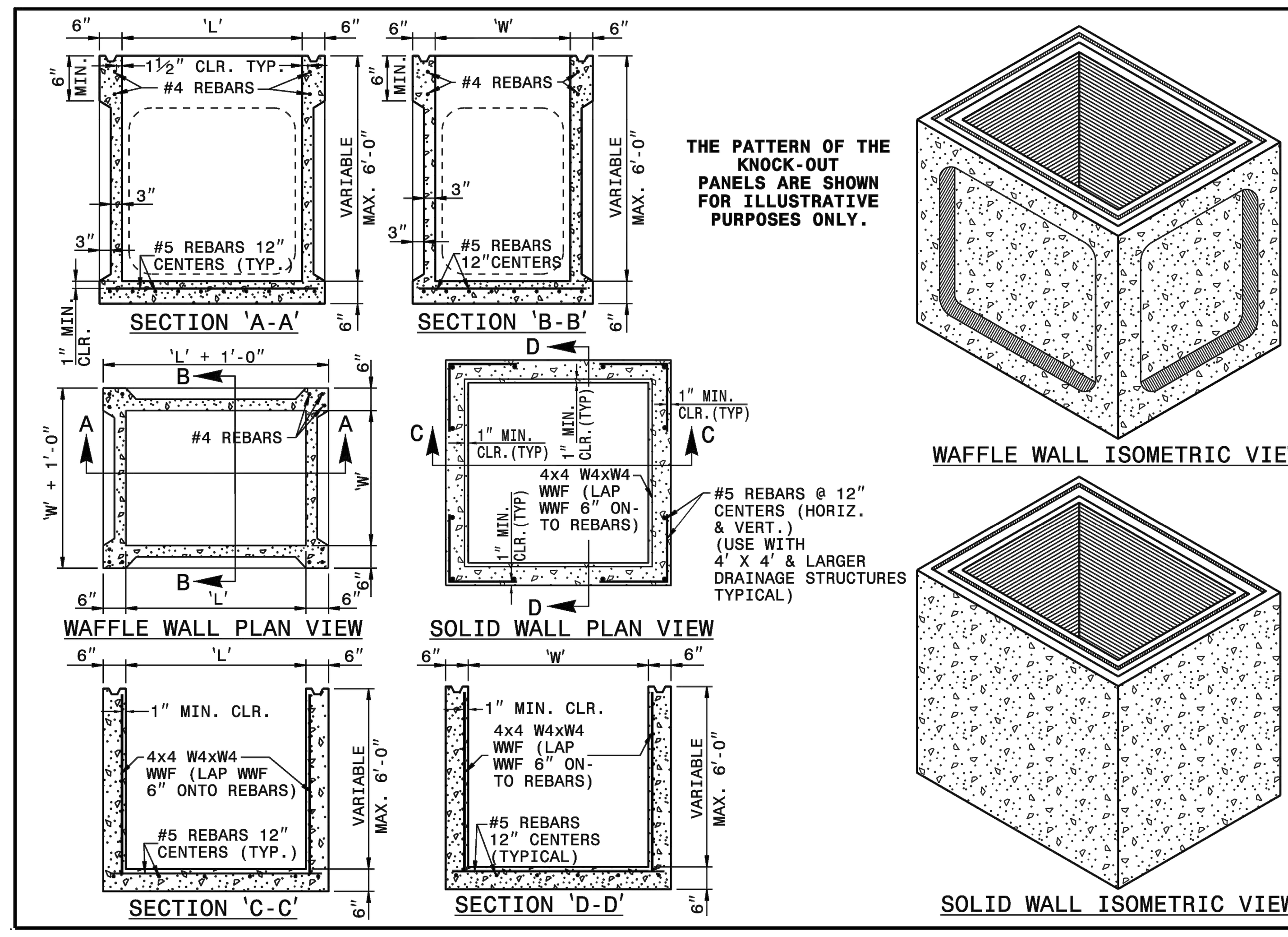


STATE OF NORTH CAROLINA DEPT. OF TRANSPORTATION DIVISION OF HIGHWAYS RALEIGH, N.C.

1-24

ROADWAY STANDARD DRAWING FOR **DROP INLET FRAME AND GRATES** FOR USE WITH STD. DWG.S 840.14 AND 840.15

SHEET 1 OF 1 **840.16**



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

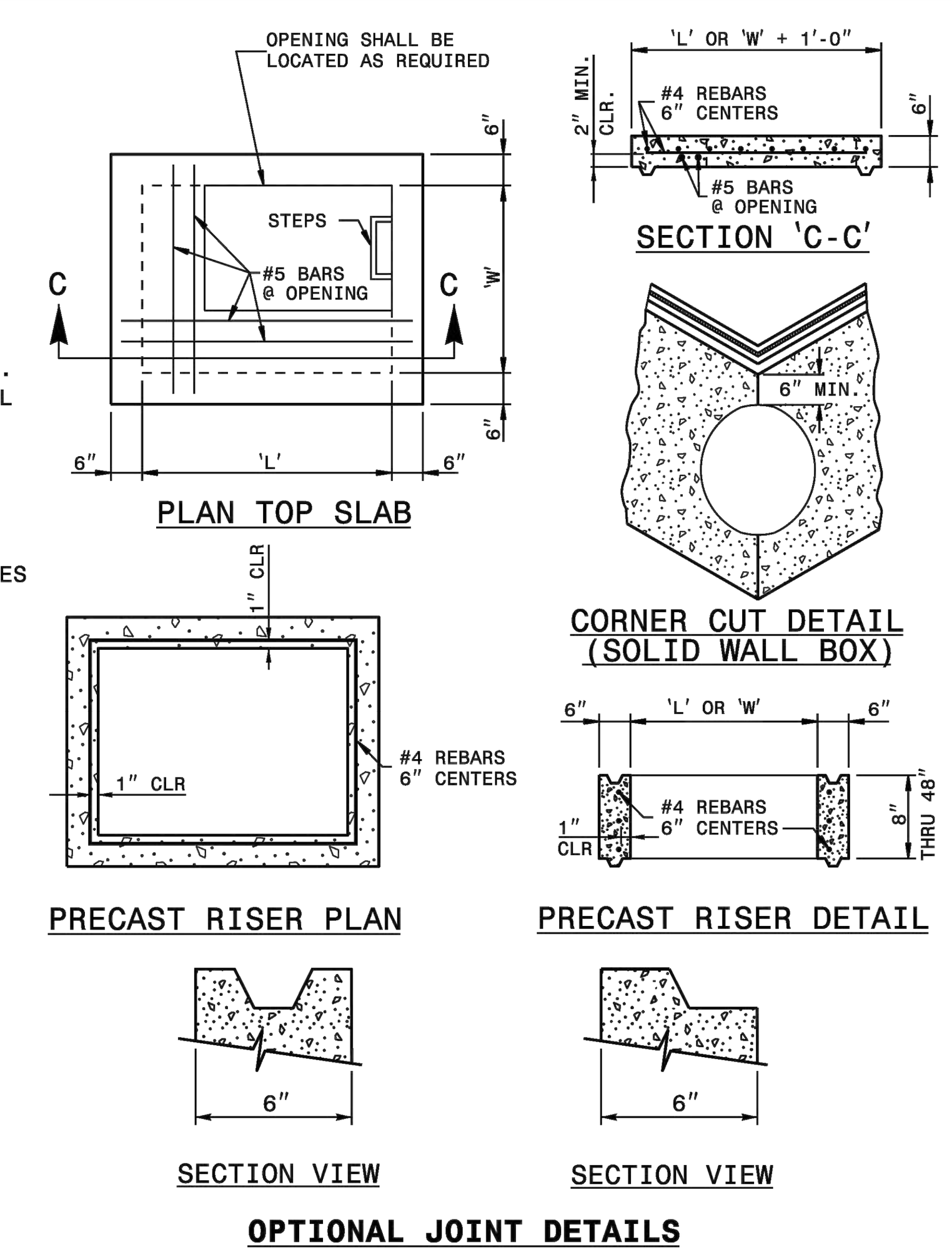
1-24

ROADWAY STANDARD DRAWING FOR **PRECAST DRAINAGE STRUCTURE** (SOLID AND WAFFLE WALL)

SHEET 1 OF 2 **840.45**

GENERAL NOTES:

- THIS PRECAST BOX MAY BE USED FOR THE FOLLOWING STANDARDS: 840.01, 840.02, 840.04, 840.05, 840.13, 840.14, 840.15, 840.17, 840.18, 840.19, 840.26, 840.27, 840.28, 840.31, 840.32 AND 840.41.
- INSTALL PRECAST DRAINAGE STRUCTURES AND PAY FOR IN ACCORDANCE WITH SPECIFICATION SECTION 840.
- DO NOT PLACE PRECAST DRAINAGE STRUCTURES UNDER TRAFFIC OR WHERE TRAFFIC WILL BE DETOURED.
- USE 4000 PSI CONCRETE.
- PROVIDE ALL REINFORCING STEEL WHICH MEETS ASTM A615 FOR GRADE 60 AND WELDED WIRE FABRIC CONFORMING TO ASTM A1064.
- LIMIT MAXIMUM DEPTH TO TOP OF BOTTOM SLAB FOR WAFFLE WALL STRUCTURE TO 10'-0"; LIMIT SOLID WALL STRUCTURE TO 15'-0".
- PLACE LIFT HOLES OR PINS IN ACCORDANCE WITH OSHA STANDARD 1926.704.
- CUT OR FORM OPENINGS FOR PIPE TO PROVIDE REQUIRED SIZE AND LOCATION. ORIENT WAFFLE WALL STRUCTURES SO THAT PIPES ENTER THROUGH THE KNOCKOUT/WAFFLE PANELS ONLY. PIPES MAY ENTER THROUGH THE CORNERS OF SOLID WALL BOXES IF A MINIMUM OF 6" OF WALL IS PROVIDED ABOVE THE HOLE.
- ALL ELEMENTS PRECAST TO MEET ASTM C913.
- FRAME AND GRATE HEIGHT MAY BE ADJUSTED WITH CONCRETE OR BRICK IN ACCORDANCE WITH STANDARD 840.25.
- PROVIDE PRECAST STRUCTURES OVER 3'-6" IN DEPTH WITH STEPS AS DIRECTED BY THE ENGINEER.
- WELDED WIRE FABRIC MAY BE SUBSTITUTED FOR REBAR AS LONG AS THE SAME AREA OF STEEL IS PROVIDED.
- SEAL JOINTS WITH A FLEXIBLE BUTYL RUBBER BASE CONFORMING TO FEDERAL SPECIFICATION SS-S-21A, AASHTO M-198, TYPE B - BUTYL RUBBER.
- LIMIT MAXIMUM STRUCTURE SIZE TO INSIDE CLEAR DIMENSIONS OF 5'-0" X 5'-0".
- THE OUTSIDE PIPE DIAMETER PLUS 2" OR THE OPENING REQUIRED FOR FRAME AND GRATE IS THE MINIMUM STRUCTURE SIZE WHICHEVER IS GREATER.
- USE MANHOLE FRAME AND COVER AS INDICATED ON THE PLANS. REINFORCE OPENING AS SHOWN ON THIS SHEET.

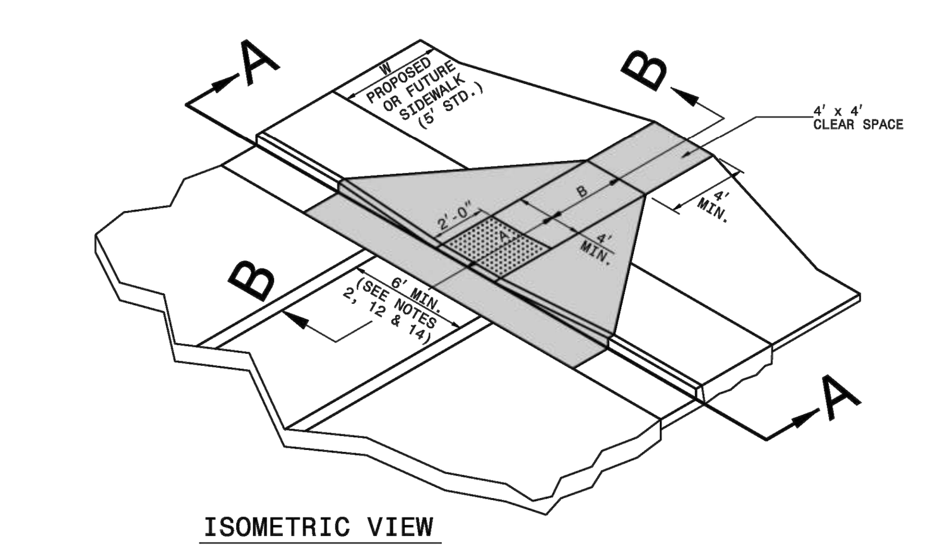


STATE OF NORTH CAROLINA DEPT. OF TRANSPORTATION DIVISION OF HIGHWAYS RALEIGH, N.C.

1-24

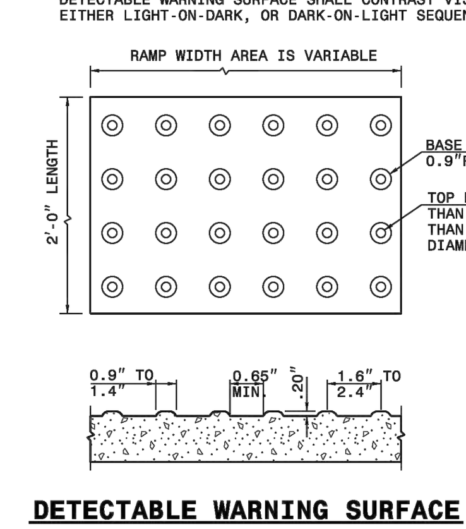
ROADWAY STANDARD DRAWING FOR **PRECAST DRAINAGE STRUCTURE** (GENERAL NOTES AND DETAILS)

SHEET 2 OF 2 **840.45**



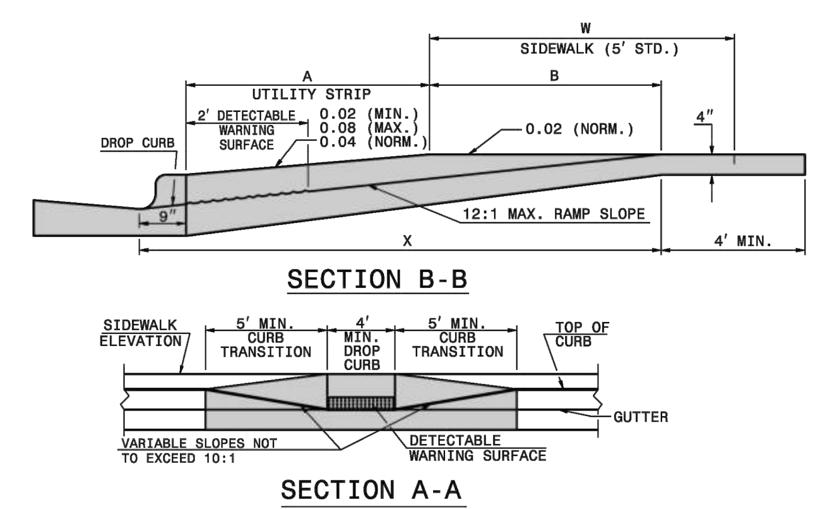
PAY LIMITS FOR CURB RAMP

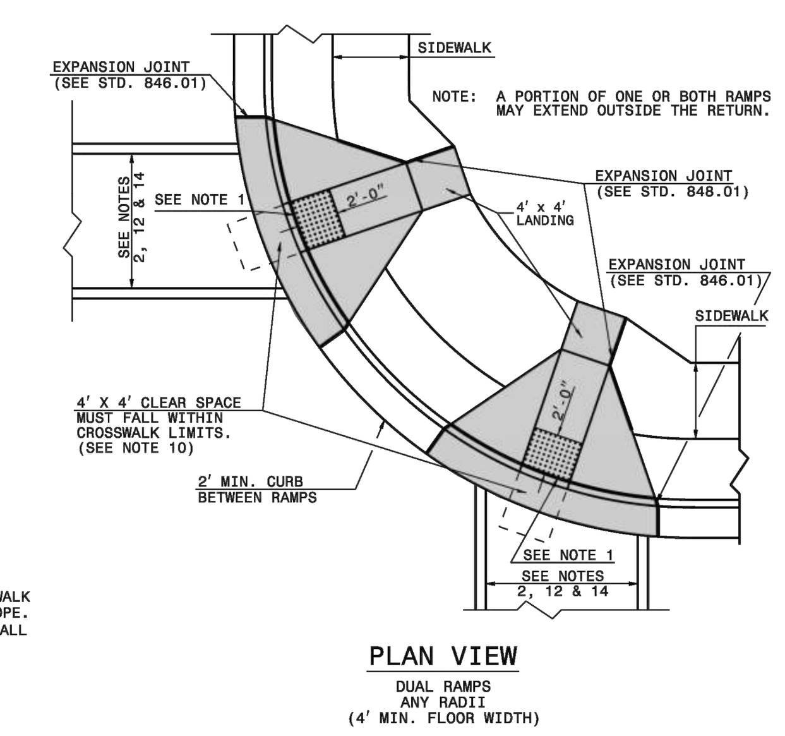
NOTES:
DETECTABLE WARNING SURFACE SHALL COVER 2'-0" LENGTH AND FULL WIDTH OF THE RAMP FLOOR AS SHOWN ON THE DETAILS.
DETECTABLE WARNING SURFACE SHALL CONTRAST VISIBLY WITH ADJOINING SURFACE, EITHER LIGHT-ON-DARK, OR DARK-ON-LIGHT SEQUENCE COVERING THE ENTIRE RAMP.



W	A	W+A+9"	X	B
5'	0.0'	5.8'	5.8'	5.0'*
6'	0.0'	6.8'	6.8'	6.0'**
7'	0.0'	7.8'	7.3'	6.5'**
8'	0.0'	8.8'	7.3'	6.5'**
5'	2.0'	7.8'	7.8'	5.0'
5'	2.5'	8.3'	8.1'	4.8'
5'	3.0'	8.8'	8.3'	4.4'
5'	3.5'	9.3'	8.4'	4.1'
5'	4.0'	9.8'	8.6'	3.8'
5'	4.5'	10.3'	8.7'	3.4'
5'	5.0'	10.8'	8.9'	3.1'

B = X-(A+9")
B = DISTANCE FROM FRONT EDGE OF SIDEWALK TO BACK POINT OF 12:1 (8.33%) SLOPE.
* BACK OF SIDEWALK DROP REQUIRED FOR ALL SIDEWALK SLOPES.
** BACK OF SIDEWALK DROP REQUIRED FOR SIDEWALK SLOPES 0.04.



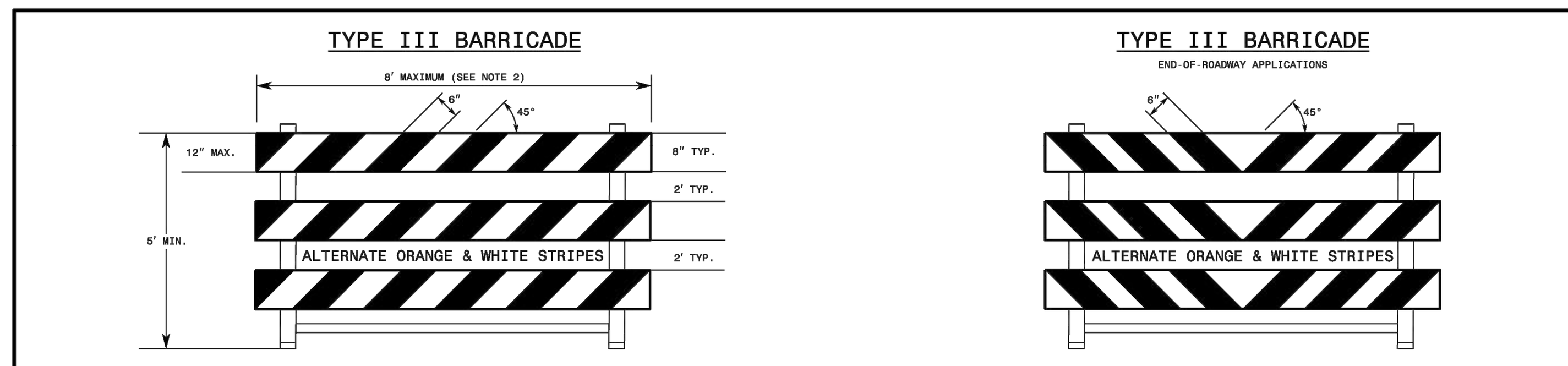


STATE OF NORTH CAROLINA DEPT. OF TRANSPORTATION DIVISION OF HIGHWAYS RALEIGH, N.C.

1-24

ROADWAY STANDARD DRAWING FOR **CURB RAMP** PROPOSED CURB AND GUTTER

SHEET 1 OF 13 **848.06**



GENERAL NOTES

1- HORIZONTAL RAILS FOR BARRICADES MAY BE CONSTRUCTED OF APPROVED COMPOSITE, HOLLOW/ CORRUGATED EXTRUDED RIGID POLYOLEFIN, HIGH DENSITY POLYETHYLENE, OR OTHER NCDOT APPROVED MATERIAL.

2- BARRICADE SHALL BE LIMITED TO A MAXIMUM LENGTH OF 8 FT UNLESS NCDOT APPROVED.

3- ONLY NCDOT APPROVED COMPOSITE AND ROLL-UP SIGNS MAY BE MOUNTED ON THE BARRICADE RAILS. MOUNT SIGNS TO BARRICADE RAILS TO ENSURE SIGN WILL NOT BECOME DETACHED UNDER NORMAL WIND AND TRAFFIC CONDITIONS.

4- SIGNS SHALL BE MOUNTED A MINIMUM OF 1 FOOT FROM THE GROUND TO THE BOTTOM OF THE SIGN UNLESS SIGN R11-3 IS REQUIRED BY THE PLANS OR DIRECTED BY THE ENGINEER.

5- ASSEMBLY OF THE GENERIC BARRICADES MUST BE SELF CERTIFIED BY THE ASSEMBLER.

6- BARRICADES USED TO CLOSE A ROADWAY SHALL EXTEND ACROSS THE ENTIRE ROADWAY. WHERE LOCAL TRAFFIC MUST BE MAINTAINED, THEY MAY BE PLACED IN A STAGGERED PATTERN.

7- STRIPES ON WORK ZONE BARRICADE RAILS SHALL BE ALTERNATE ORANGE AND WHITE RETROREFLECTIVE STRIPES, SLOPED DOWNWARD TOWARDS THE SIDE WHICH TRAFFIC IS TO PASS OR TURN IN DETOURING. WHERE NO TURNS ARE INTENDED, THE STRIPES SHOULD SLOPE DOWNWARD TOWARD THE CENTER OF THE BARRICADE OR BARRICADES.

8- USE RED AND WHITE STRIPES FOR PERMANENT BARRICADES.

9- ALL BARRICADES MUST BE LISTED ON THE DEPARTMENT'S APPROVED PRODUCTS LIST.

10- PLACE SANDBAGS OR OTHER APPROVED BALLASTING METHODS ON THE FEET OF THE FRAME. DO NOT PLACE SANDBAGS ON TOP OF A STRIPED RAIL OR STABILIZER BAR. DO NOT BALLAST BARRICADES BY HEAVY OBJECTS SUCH AS ROCKS, CHUNKS OF CONCRETE OR OTHER ITEMS THAT WOULD CAUSE DAMAGE IF THE BARRICADE IS STRUCK BY A VEHICLE.

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

1-24

ROADWAY STANDARD DRAWING FOR **BARRICADES** TYPE-III

SHEET 1 OF 1 **1145.01**

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CONSTRUCTION INFRASTRUCTURE DRAWINGS
BROADMOOR
ROLESVILLE ROAD | ROLESVILLE, NC 27587 | WAKE COUNTY

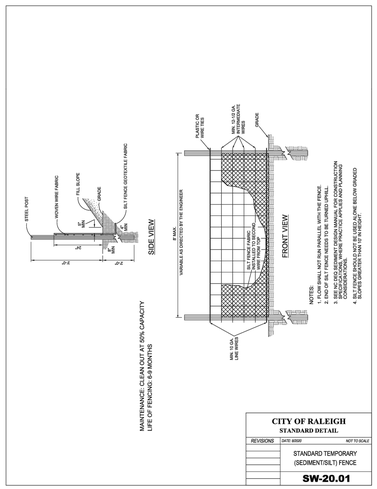
NORTH CAROLINA PROFESSIONAL ENGINEER TERRENCE COOK
PRELIMINARY NOT APPROVED FOR CONSTRUCTION

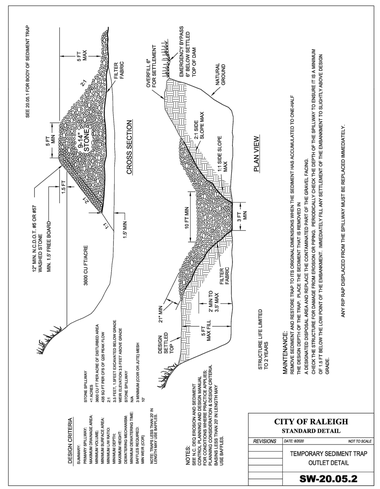
INITIAL PLAN DATE: 11/01/2024
REVISIONS:

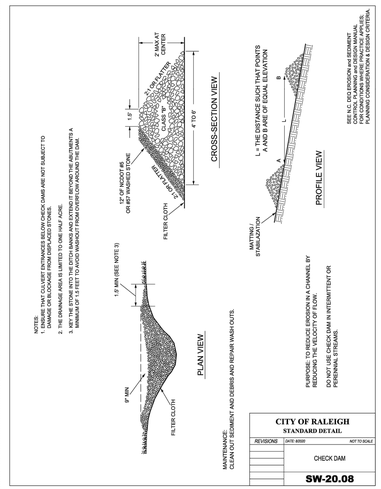
WR JOB NUMBER 23-0045
DRN: WR DGN: WR CKD: WR

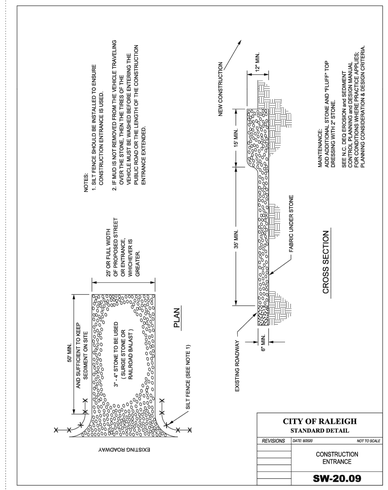
NCDOT DETAILS

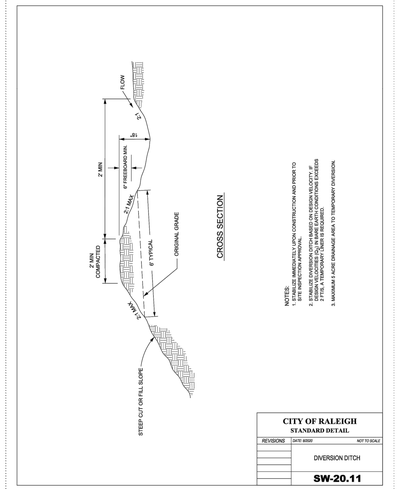
C10.07

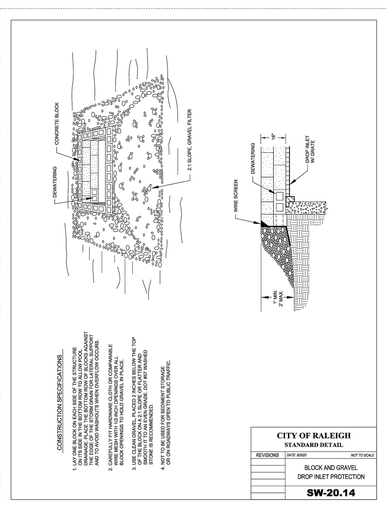


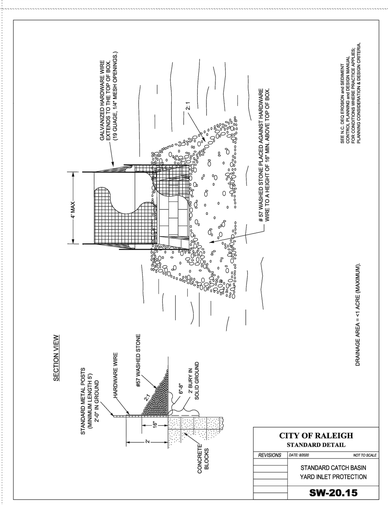


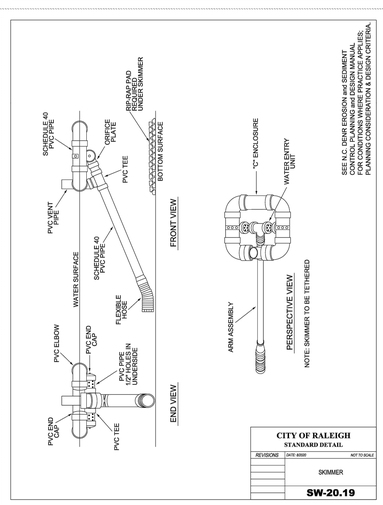


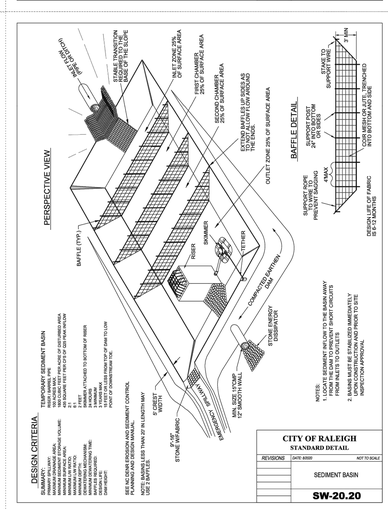


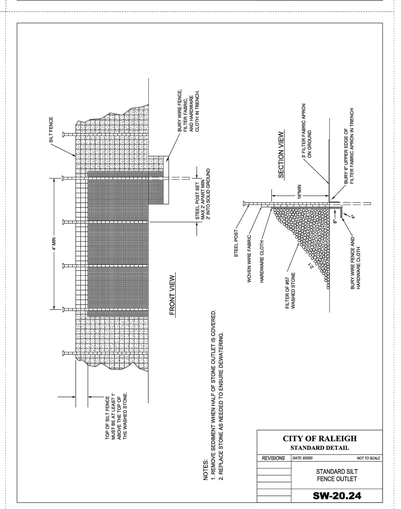












PERMANENT SEEDING -
SHOULDERS, SIDE DITCHES, SLOPES (MAX. 3:1)

DATE	TYPE	PLANTING RATE
AUG. 15 - NOV. 1	TALL FESCUE	200 LBS./ACRE
NOV. 1 - MAR.1	TALL FESCUE AND ABRUZZI RYE *(NURSE CROP)	200 LBS./ACRE 25 LBS./ACRE
MAR. 1 - APR. 15	TALL FESCUE	200 LBS./ACRE
APR. 15 - JUN. 30	HULLED COMMON BERMUDAGRASS	15 LBS./ACRE

PERMANENT SEEDING -
SLOPES (3:1 TO 2:1)

AUG. 15-NOV.1	TALL FESCUE AND SERICEA LESPEDEZA (UNHULLED, UNSCARIFIED)	200 LBS/ACRE 60 TO 70 LBS/ACRE
NOV. 1-MAR.1	TALL FESCUE AND CERICEA LESPEDEZA (UNHULLED, UNSCARIFIED) AND ABRUZZI RYE	200 LBS/ACRE 60 TO 70 LBS/ACRE 25 LBS/ACRE
MAR. 1-JUNE 1	TALL FESCUE AND SERICEA LESPEDEZA (SCARIFIED)	200 LBS/ACRE 40 TO 50 LBS/ACRE
MAR. 15-JUNE 30	WEEPING LOVEGRASS AND SERICEA LESPEDEZA (SCARIFIED)	10 LBS/ACRE 40 TO 50 LBS/ACRE
MAR. 15-JUNE 30	HULLED COMMON BERMUDAGRASS AND SERICEA LESPEDEZA (SCARIFIED)	15 LBS/ACRE 40 TO 50 LBS/ACRE

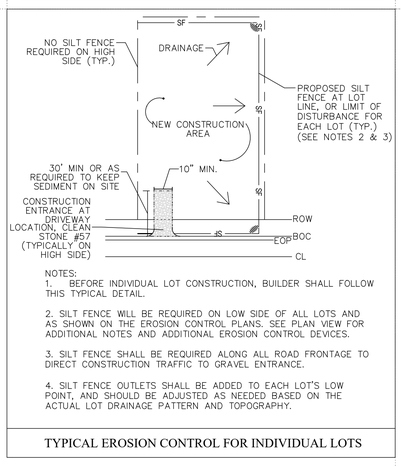
TEMPORARY SEEDING

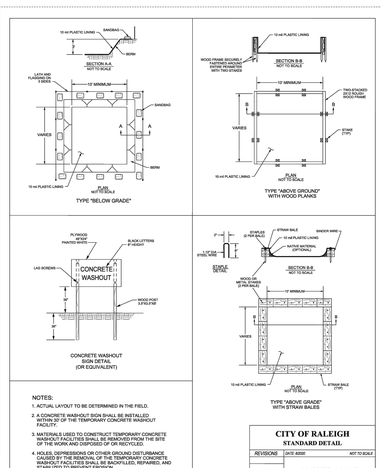
JUNE 1-SEPT. 1	TALL FESCUE AND BROWN TOP MILLET *(NURSE CROP) OR SORGHUM-SUDAN HYBRIDS *(NURSE CROP)	200 LBS/ACRE 35 LBS/ACRE 30 LBS/ACRE

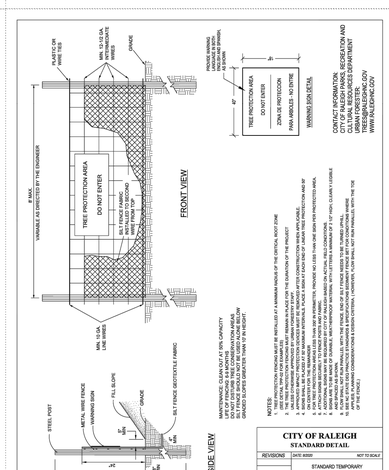
CONSULT CONSERVATION ENGINEER OR SOIL CONSERVATION SERVICE FOR ADDITIONAL INFORMATION CONCERNING OTHER ALTERNATIVES FOR VEGETATION OF DENUDED AREAS. THE ABOVE VEGETATION RATES ARE THOSE WHICH DO WELL UNDER LOCAL CONDITIONS; OTHER SEEDING RATE COMBINATIONS ARE POSSIBLE.

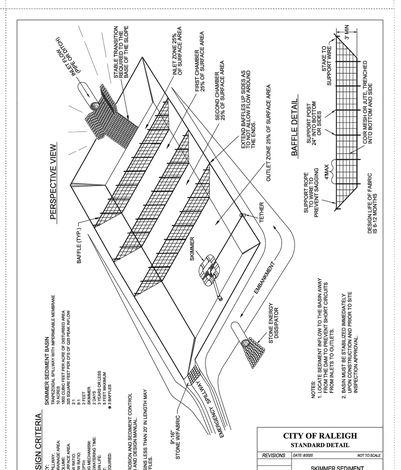
*NURSE CROP/TEMPORARY - RESEED ACCORDING TO OPTIMUM SEASON FOR DESIRED PERMANENT VEGETATION. DO NOT ALLOW TEMPORARY COVER TO GROW OVER 12" IN HEIGHT BEFORE MOWING, OTHERWISE FESCUE MAY BE SHADED OUT.

MULCH WITH WHEAT STRAW AT 2,000 LBS/AC.









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PULTEGROUP
1225 CRESCENT GREEN DRIVE, SUITE 250
CARY, NC 27518

PRELIMINARY
NOT APPROVED FOR CONSTRUCTION
10/11/2024
TERRENCE COOK
NORTH CAROLINA PROFESSIONAL ENGINEER

INITIAL PLAN DATE: 11/01/2024
REVISIONS:

WR JOB NUMBER 23-0045
DRN: WR DGN: WR CKD: WR

EROSION CONTROL DETAILS

C10.08

J:\2024\045-Pulte_Woodleaf Assemblage\CAD\Drawing Set\Construction\C10.00-10.XX SITE DETAILS.dwg Thursday, October 31, 2024 11:16:48 AM by JEMASTER

NCGO1-DETAIL GROUND STABILIZATION AND HANDLING PLAN

EFFECTIVE: 04/01/19

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

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

SECTION E: GROUND STABILIZATION

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

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

GROUND STABILIZATION SPECIFICATION

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

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

POLYACRYLAMIDES (PAMS) AND FLOCCULANTS

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

EQUIPMENT AND VEHICLE MAINTENANCE

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

LITTER, BUILDING MATERIAL AND LAND CLEARING WASTE

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

PAINT AND OTHER LIQUID WASTE

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

PORTABLE TOILETS

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

EARTHEN STOCKPILE MANAGEMENT

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

CONCRETE WASHOUTS

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

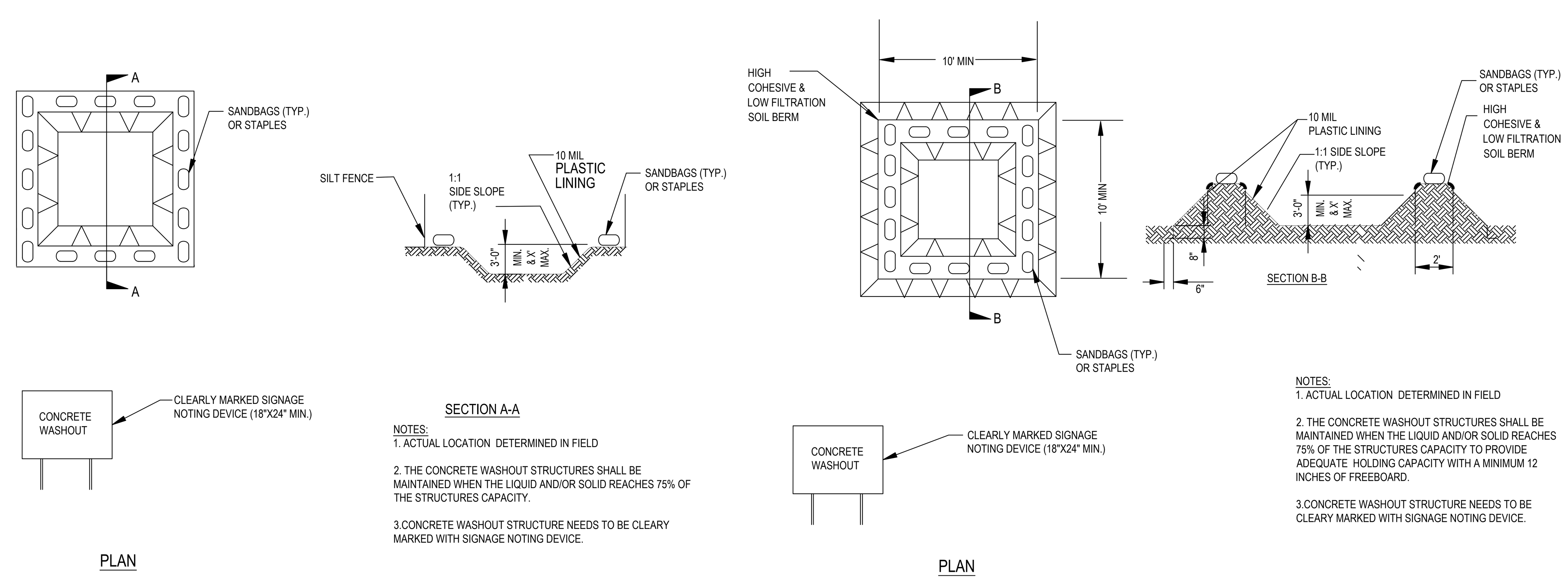
HERBICIDES, PESTICIDES AND RODENTICIDES

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

HAZARDOUS AND TOXIC WASTE

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

ONSITE CONCRETE WASHOUT
STRUCTURE WITH LINER



NOTES:
1. ACTUAL LOCATION DETERMINED IN FIELD
2. THE CONCRETE WASHOUT STRUCTURES SHALL BE MAINTAINED WHEN THE LIQUID AND/OR SOLID REACHES 75% OF THE STRUCTURES CAPACITY.
3. CONCRETE WASHOUT STRUCTURE NEEDS TO BE CLEARY MARKED WITH SIGNAGE NOTING DEVICE.

BELOW GRADE WASHOUT STRUCTURE

NOT TO SCALE

NOTES:
1. ACTUAL LOCATION DETERMINED IN FIELD
2. THE CONCRETE WASHOUT STRUCTURES SHALL BE MAINTAINED WHEN THE LIQUID AND/OR SOLID REACHES 75% OF THE STRUCTURES CAPACITY TO PROVIDE ADEQUATE HOLDING CAPACITY WITH A MINIMUM 12 INCHES OF FREEBOARD.
3. CONCRETE WASHOUT STRUCTURE NEEDS TO BE CLEARY MARKED WITH SIGNAGE NOTING DEVICE.

ABOVE GRADE WASHOUT STRUCTURE

NOT TO SCALE

NCGO1-SELF INSPECTION, RECORDKEEPING & REPORTING

EFFECTIVE: 05/17/19

PART III
SELF-INSPECTION, RECORDKEEPING AND REPORTING

SECTION A: SELF-INSPECTION

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

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

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

PART III
SELF-INSPECTION, RECORDKEEPING AND REPORTING

SECTION B: RECORDKEEPING

1. E&SC Plan Documentation

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

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

2. Additional Documentation to be Kept Onsite

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

(a) This general permit as well as the certificate of coverage, after it is received.

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

3. Documentation to be Retained for Three Years

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

PART III
SELF-INSPECTION, RECORDKEEPING AND REPORTING

SECTION C: REPORTING

1. Occurrences that must be reported

Permittees shall report the following occurrences:

(a) Visible sediment deposition in a stream or wetland.

(b) Oil spills if:
- They are 25 gallons or more,
- They are less than 25 gallons but cannot be cleaned up within 24 hours,
- They cause sheen on surface waters (regardless of volume), or
- They are within 100 feet of surface waters (regardless of volume).

(c) Releases of hazardous substances in excess of reportable quantities under Section 311 of the Clean Water Act (Ref: 40 CFR 110.3 and 40 CFR 117.3) or Section 102 of CERCLA (Ref: 40 CFR 302.4) or G.S. 143-215.85.

(d) Anticipated bypasses and unanticipated bypasses.

(e) Noncompliance with the conditions of this permit that may endanger health or the environment.

2. Reporting Timeframes and Other Requirements

After a permittee becomes aware of an occurrence that must be reported, he shall contact the appropriate Division regional office within the timeframes and in accordance with the other requirements listed below. Occurrences outside normal business hours may also be reported to the Division's Emergency Response

personnel at (800) 858-0368.

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

PART II, SECTION G, ITEM (4)
DRAW DOWN OF SEDIMENT BASINS FOR MAINTENANCE OR CLOSE OUT

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

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

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CONSTRUCTION INFRASTRUCTURE DRAWINGS
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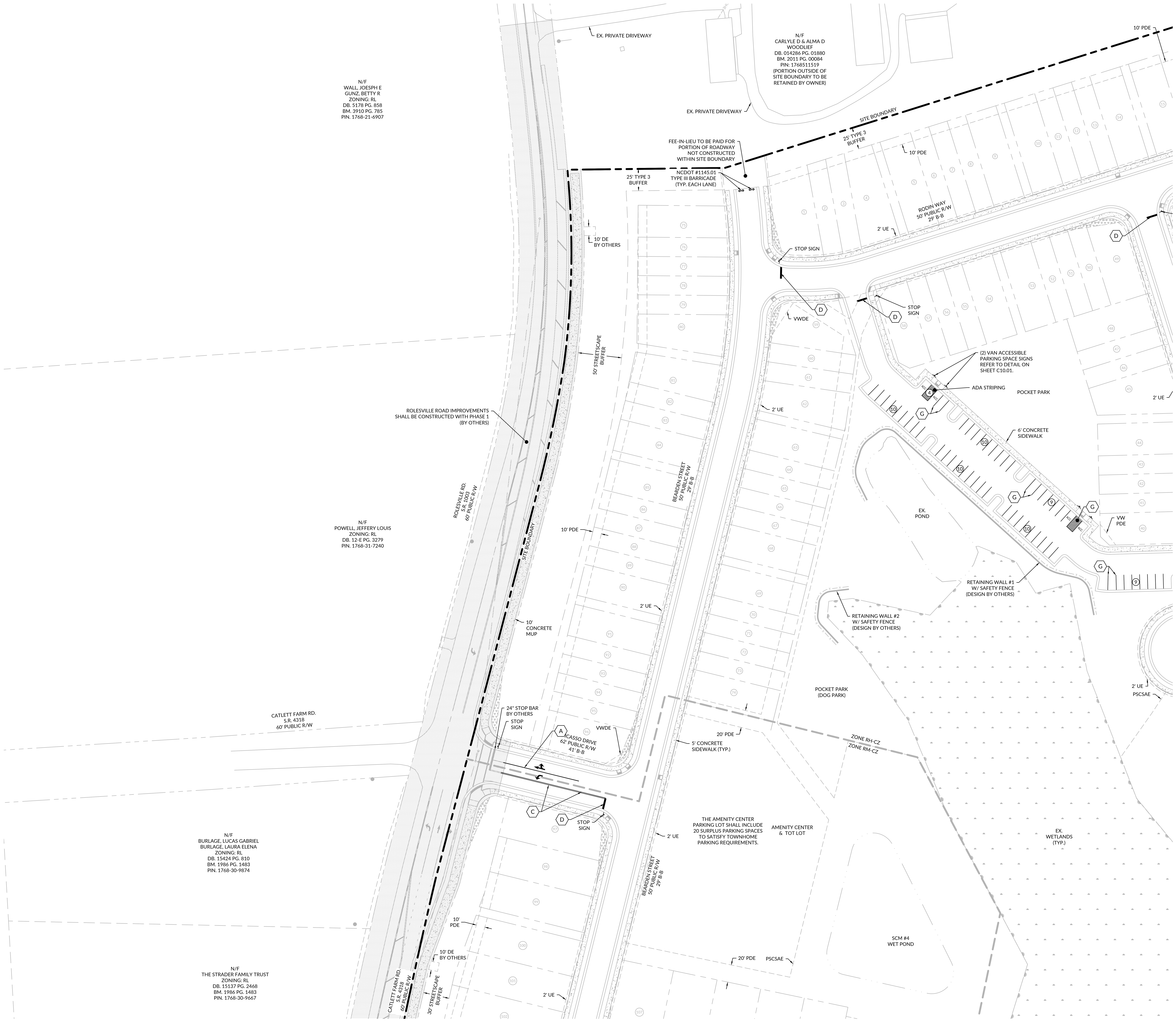
NORTH CAROLINA PROFESSIONAL ENGINEER TERRENCE COOK
PRELIMINARY
NOT APPROVED FOR CONSTRUCTION

INITIAL PLAN DATE: 11/01/2024
REVISIONS:

WR JOB NUMBER 23-0045
DRN: WR DGN: WR CKD: WR

EROSION CONTROL DETAILS

C10.09



PAVEMENT MARKING LEGEND

↰↱	PAVEMENT MARKING SYMBOLS
A	4" WHITE LANE LINE
C	4" WIDE DOUBLE YELLOW SOLID LINE
D	24" WHITE STOP BAR (MIN 4' BEHIND CROSSWALK)
G	4" WHITE PARKING SPACE LINE

STRIPING NOTES:

1. ALL MARKINGS AND SIGNAGE SHALL BE CONSTRUCTED IN ACCORDANCE WITH MUTCD STANDARDS, INCLUDING COLOR, LETTER HEIGHT, AND LETTER CASE OF THE STREET NAME SIGNS.
2. ALL PAVEMENT MARKINGS SHALL BE THERMOPLASTIC.
3. ANY EXISTING PAVEMENT STRIPING THAT IS IN CONFLICT WITH THE PROPOSED STRIPING SHOWN ON THIS PLAN SHALL BE REMOVED.

KEY MAP

NOT TO SCALE

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0 25 50
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SIGNAGE & PAVEMENT MARKINGS PLAN

C11.01

PAVEMENT MARKING LEGEND

- PAVEMENT MARKING SYMBOLS
- (A) 4" WHITE LANE LINE
- (C) 4" WIDE DOUBLE YELLOW SOLID LINE
- (D) 24" WHITE STOP BAR (MIN 4' BEHIND CROSSWALK)
- (G) 4" WHITE PARKING SPACE LINE

STRIPING NOTES:

1. ALL MARKINGS AND SIGNAGE SHALL BE CONSTRUCTED IN ACCORDANCE WITH MUTCD STANDARDS, INCLUDING COLOR, LETTER HEIGHT, AND LETTER CASE OF THE STREET NAME SIGNS.
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KEY MAP

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SCALE: 1 inch = 50 ft.

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SIGNAGE & PAVEMENT MARKINGS PLAN

C11.02

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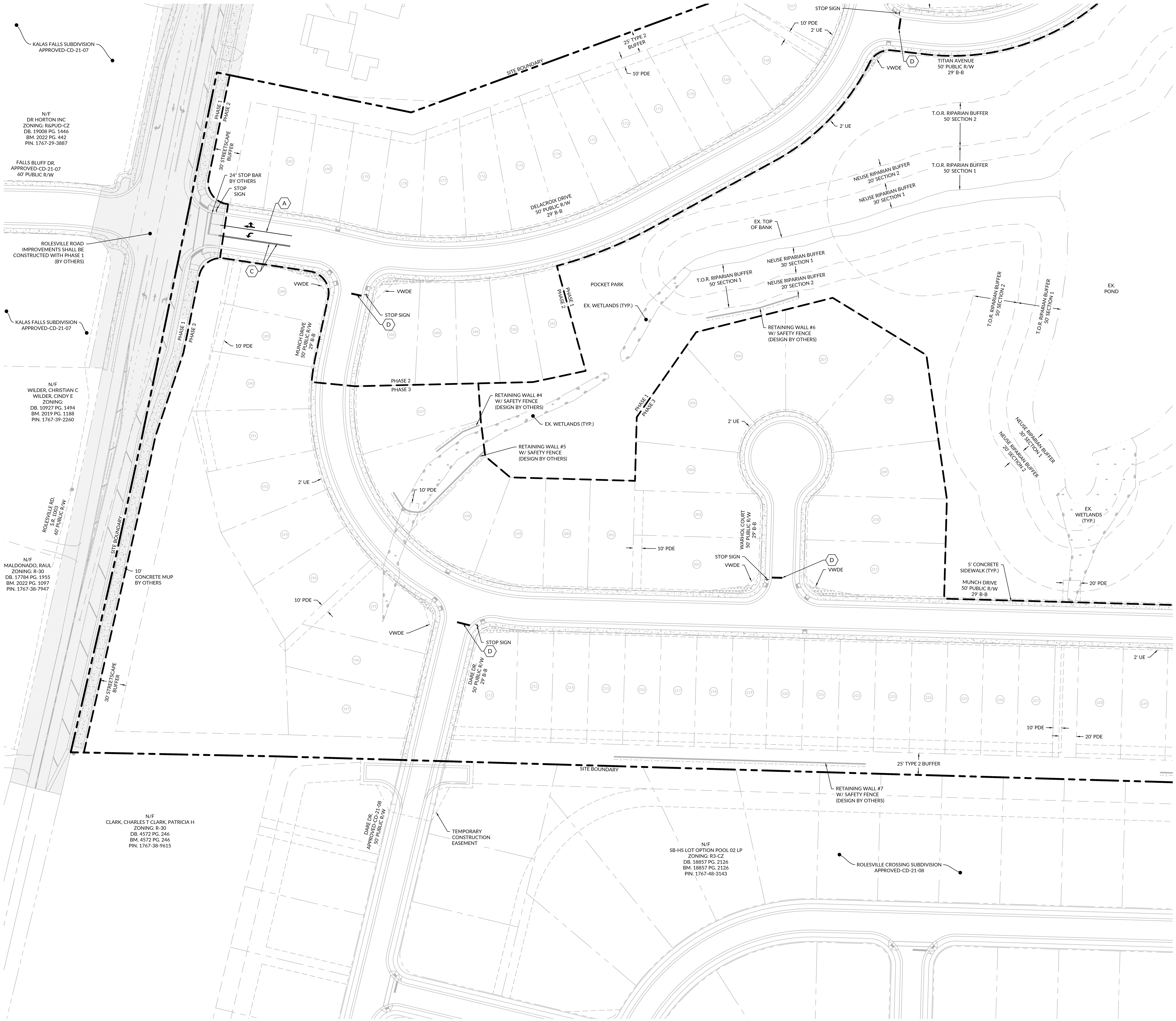

PAVEMENT MARKING LEGEND

Symbol	Description
↰↱	PAVEMENT MARKING SYMBOLS
(A)	4" WHITE LANE LINE
(C)	4" WIDE DOUBLE YELLOW SOLID LINE
(D)	24" WHITE STOP BAR (MIN 4' BEHIND CROSSWALK)
(G)	4" WHITE PARKING SPACE LINE

STRIPING NOTES:

1. ALL MARKINGS AND SIGNAGE SHALL BE CONSTRUCTED IN ACCORDANCE WITH MUTCD STANDARDS, INCLUDING COLOR, LETTER HEIGHT, AND LETTER CASE OF THE STREET NAME SIGNS.
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KEY MAP
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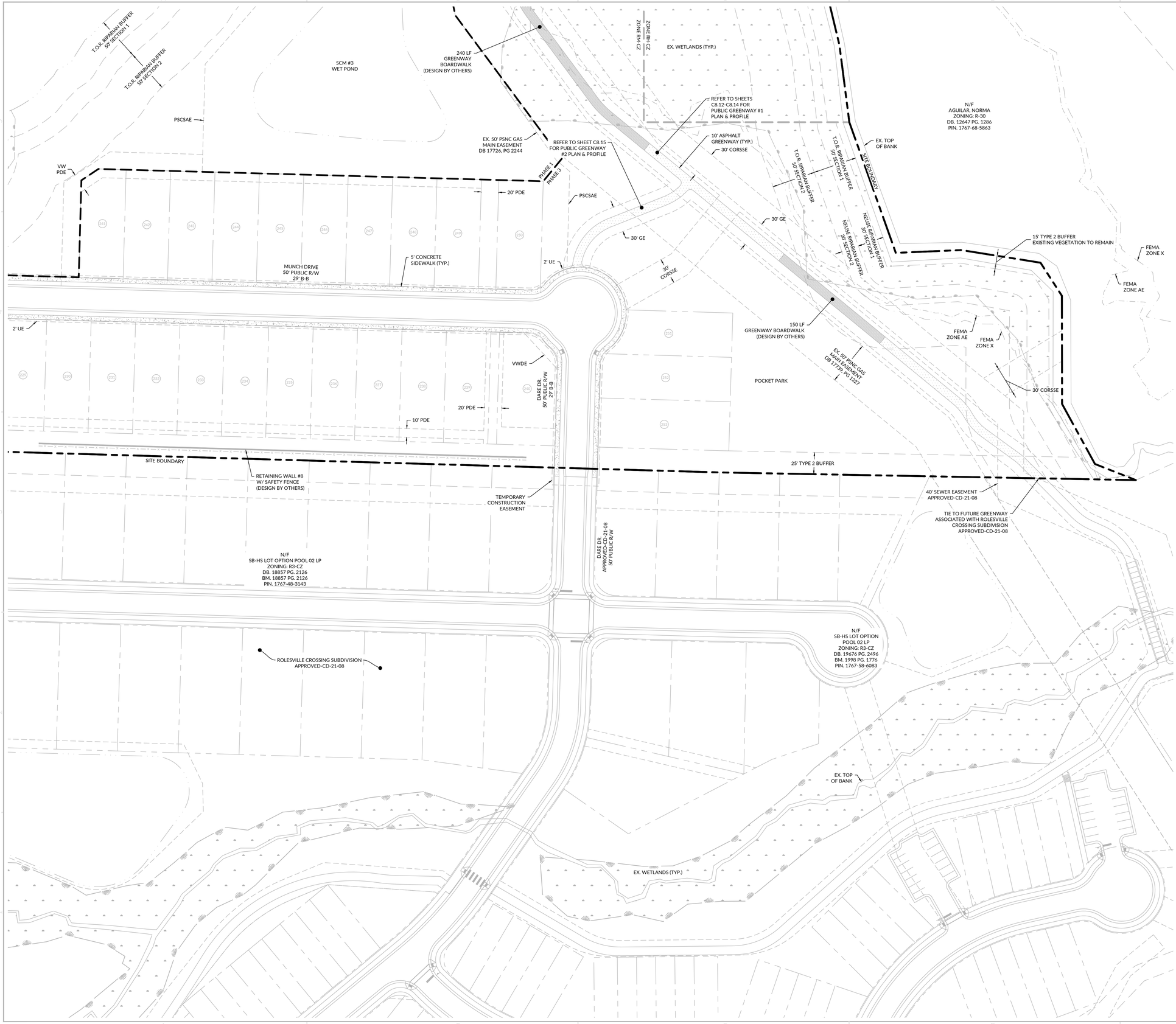
SIGNAGE & PAVEMENT MARKINGS PLAN

C11.03



PAVEMENT MARKING LEGEND

- PAVEMENT MARKING SYMBOLS
- (A) 4" WHITE LANE LINE
- (C) 4" WIDE DOUBLE YELLOW SOLID LINE
- (D) 24" WHITE STOP BAR (MIN 4' BEHIND CROSSWALK)
- (G) 4" WHITE PARKING SPACE LINE

STRIPING NOTES:

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KEY MAP

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SIGNAGE & PAVEMENT MARKINGS PLAN

C11.04

PAVEMENT MARKING LEGEND

- PAVEMENT MARKING SYMBOLS
- (A) 4" WHITE LANE LINE
- (C) 4" WIDE DOUBLE YELLOW SOLID LINE
- (D) 24" WHITE STOP BAR (MIN 4' BEHIND CROSSWALK)
- (G) 4" WHITE PARKING SPACE LINE

STRIPING NOTES:

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KEY MAP

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SIGNAGE & PAVEMENT MARKINGS PLAN

C11.05

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PAVEMENT MARKING LEGEND

↰ ↱	PAVEMENT MARKING SYMBOLS
A	4" WHITE LANE LINE
C	4" WIDE DOUBLE YELLOW SOLID LINE
D	24" WHITE STOP BAR (MIN 4' BEHIND CROSSWALK)
G	4" WHITE PARKING SPACE LINE

STRIPING NOTES:

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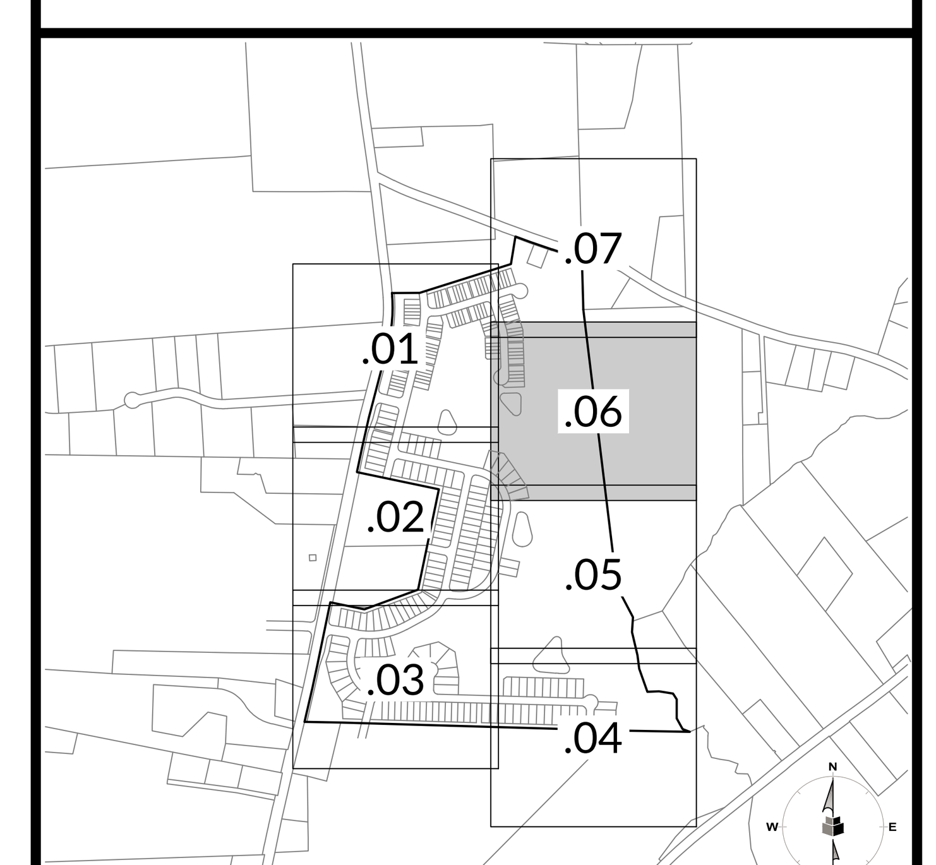
KEY MAP

NOT TO SCALE



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SIGNAGE & PAVEMENT MARKINGS PLAN

C11.06

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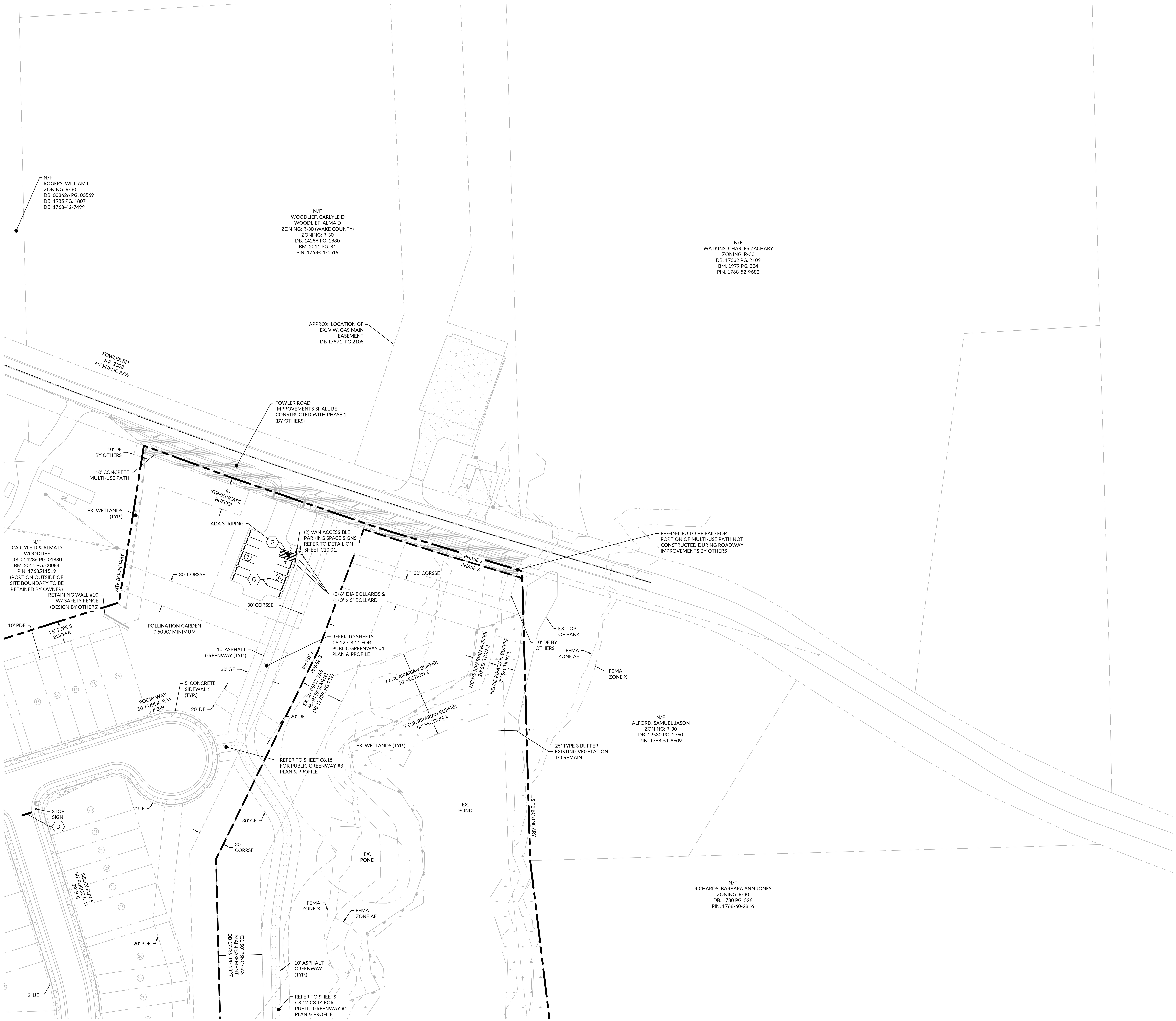

PAVEMENT MARKING LEGEND

↰ ↱	PAVEMENT MARKING SYMBOLS
A	4" WHITE LANE LINE
C	4" WIDE DOUBLE YELLOW SOLID LINE
D	24" WHITE STOP BAR (MIN 4' BEHIND CROSSWALK)
G	4" WHITE PARKING SPACE LINE

STRIPING NOTES:

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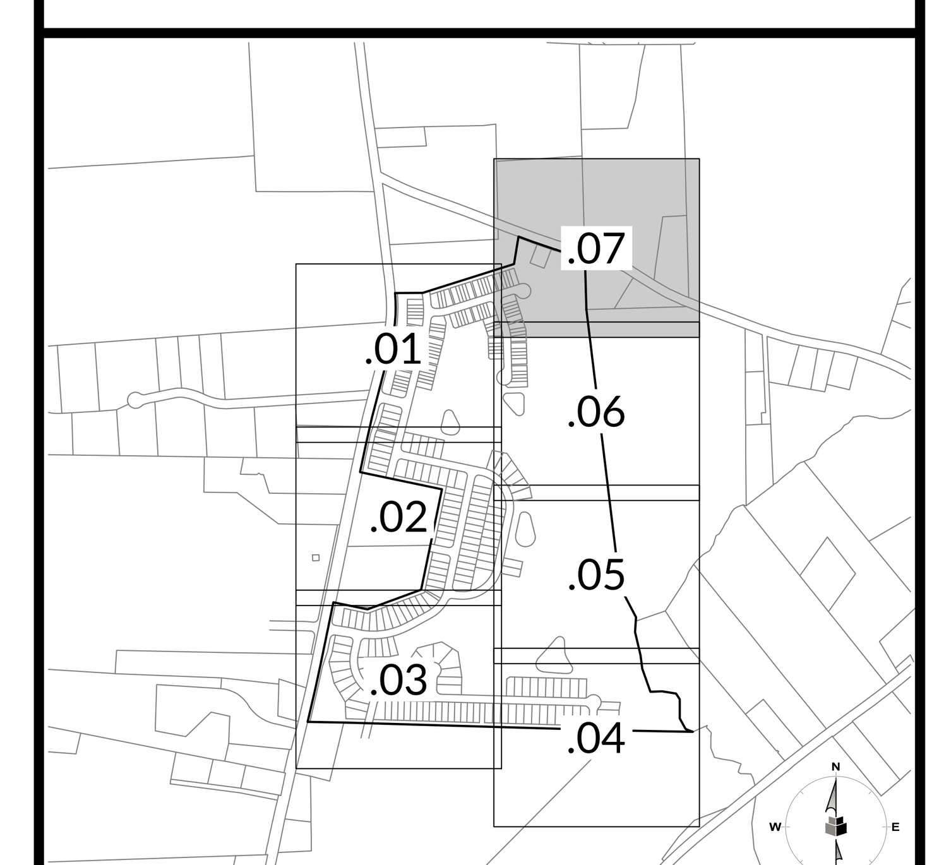

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SIGNAGE & PAVEMENT MARKINGS PLAN

C11.07