

# CONSTRUCTION DOCUMENTS FOR

# WILDWOOD PARK - TOWER AND TRAILS

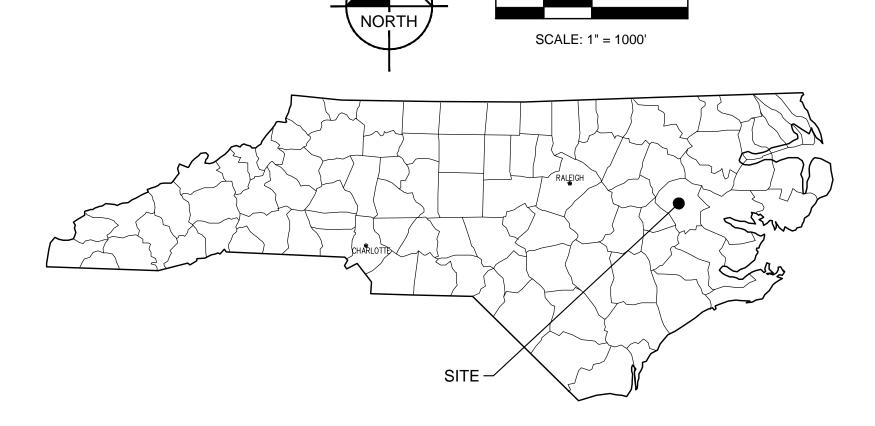
# BID PACKAGE B1

CITY OF GREENVILLE
RECREATION & PARKS DEPARTMENT
2000 CEDAR LANE
GREENVILLE, NC 27858
PITT COUNTY

OVERALL SITE DATA				
MUNICIPALITY:	CITY OF GREENVILLE			
OWNER:	CITY OF GREENVILLE, PO BOX 7207 GREENVILLE, NC 27835			
LAND USE CLASSIFICATION:	(6) RECREATIONAL/ENTERTAINMENT			
TOTAL PARCEL ACREAGE:	566 ACRES			
TOTAL SITE ACREAGE:	283 ACRES			
PROPOSED TOWER GROSS FLOOR AREA:	1,023 SF (0.02 ACRES)			
PROPOSED TOWER HEIGHT:	120 FEET (12 STORIES)			
TOTAL PARKING:	N/A			
TOTAL ACCESSIBLE PARKING:	N/A			
TOTAL AREA DISTURBED:	1.83 ACRES			
EXISTING IMPERVIOUS AREA:	134,600 SF (3.09 ACRES)			
PROPOSED IMPERVIOUS AREA:	22,652 SF (0.52 ACRES)			
TOTAL IMPERVIOUS AREA:	157,252 SF (3.61 ACRES)			
WATERSHED:	JOHNSON MILL/PARKERS CREEK /TAR-PAMLICO WATERSHED			

PARCEL DATA						
PARCEL	1	2	3	4	5	
NCPIN:	4698725454	4698536478	4698436559	4698432018	4688635909	
PARCEL NUMBER:	086710	022504	035488	024274	028893	
OWNER	CITY OF GREENVILLE	CITY OF GREENVILLE	CITY OF GREENVILLE	CITY OF GREENVILLE	CITY OF GREENVILLE	
PHYSICAL ADDRESS:	3450 BLUE HERON DR	0 NE GREENVILLE BV	0 OLD PACTOLUS RD	0 OLD PACTOLUS RD	1000 MUMFORD RD	
LEGAL DESCRIPTION:	PHILLIP E. CARROLL	BOYD	TRIPP	RED BANKS (PITT #37)	RIVER PARK NORTH	
MAP/BLOCK/LOT	4698.15-72-5454.000	4698.15-53-6478.000	4698.14-43-6559.000	4698.14-43-2018.000	4688.15-63-5909.000	
DEED REFERENCE	DB. 4012 PG. 124	DB. 4049 PG. 261	DB. 4049 PG. 261	DB. 4049 PG. 261	NOT FOUND	
CURRENT ZONING	HEAVY COMMERCIAL	OFFICE-RESIDENTIAL	OFFICE-RESIDENTIAL	OFFICE-RESIDENTIAL	INDUSTRY	
CENSUS TRACT:	900	800	800	800	800	
PARCEL ACREAGE:	101	137	28	7	293	
APPROXIMATE IMPERVIOUS AREA:	3.09 AC	0.00 AC	0.00 AC	0.00 AC	0.00 AC	

PACKAGE B THE SWAMP (AREA 4)	OLD PACTOLUS ROAD
EXISTING TRAILS	PACKAGE A
THE CONNECTION (AREA 3)  EXISTING TRAILS	THE TOWER (AREA 1)
	APPROXIMATE SITE BOUNDARY  THE BEACH (AREA 2)



## SHEET LIST TABLE - BID PACKAGE B1 SHEET NUMBER SHEET TITLE COVER SHEET **GENERAL NOTES EXISTING CONDITIONS** OVERALL DEMOLITION AND EROSION CONTROL PLAN DEMOLITION AND PH 1 EROSION CONTROL PLAN - THE SWAM PLAN AND PROFILE - THE SWAMP (AREA 4 SIDEWALK DETAILS **EROSION CONTROL DETAILS EROSION CONTROL DETAILS** C4.2.B **BRIDGE GENERAL NOTES** S.02.B STRUCTURE LOCATIONS PLAN AND PROFILE - THE SWAMP (AREA 4) S.08.B S.09.B TIMBER BOARDWALK DETAILS S.10.B TIMBER BOARDWALK FRAMING DETAILS S.11.B TIMBER BOARDWALK BRACING DETAILS S.20.B STRUCTURAL STANDARD NOTES

# PROJECT DESIGN TEAM

## OWNER/DEVELOPER

CITY OF GREENVILLE
GREENVILLE RECREATION & PARKS DEPARTMENT
2000 CEDAR LANE
GREENVILLE, NC 27858
PHONE: (252) 329-4242
CONTACT: MARK NOTTINGHAM, AICP
EMAIL: MNOTTINGHAM@GREENVILLENC.GOV

## **SURVEYOR**

RIVERS & ASSOCIATES, INC.

107 EAST SECOND STREET

GREENVILLE, NC 27858

PHONE: (252) 752-4135

CONTACT: PATRICK HARTMAN, P.L.S.

EMAIL: PHARTMAN@RIVERSANDASSOCIATES.COM

## LANDSCAPE ARCHITECT

KIMLEY-HORN & ASSOCIATES, INC
421 FAYETTEVILLE STREET
SUITE 600
RALEIGH, NC 27601
PHONE: (919) 653-2928
CONTACT: BRANDON WHITE, PLA, ASLA
EMAIL: BRANDON.WHITE@KIMLEY-HORN.COM

## **GEOTECHNICAL ENGINEER**

FALCON ENGINEERING, INC.
1210 TRINITY ROAD, SUITE 110
CARY, NC 27513
PHONE: (919) 302-9758
CONTACT: JEREMY R. HAMM, P.E.
EMAIL: JHAMM@FALCONENGINEERS.COM

# CIVIL ENGINEER KIMLEY-HORN & ASSOCIATES, INC 421 FAYETTEVILLE STREET

GRAPHIC SCALE IN FEET

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SUITE 600 RALEIGH, NC 27601 PHONE: (919) 653-2990 CONTACT: JOHN KUZENSKI, P.E. EMAIL: JOHN.KUZENSKI@KIMLEY-HORN.COM

## STRUCTURAL ENGINEER

KIMLEY-HORN & ASSOCIATES, INC
421 FAYETTEVILLE STREET
SUITE 600
RALEIGH, NC 27601
PHONE: (919) 653-2990
CONTACT: MITCH MAGEE, P.E.
EMAIL: MITCH.MAGEE@KIMLEY-HORN.COM

## <u>ARCHITECT</u>

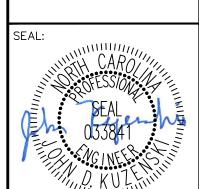
IN SITU STUDIO 704 N PERSON STREET RALEIGH, NC 27604 PHONE: (919) 397-3949 CONTACT: MATTHEW GRIFFITH, AIA EMAIL: MATT@INSITUSTUDIO.US

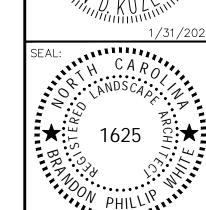
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No. REVISIONS
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24 KIMLEY-HORN AND ASSOCIATES, INC.
EVILLE STREET, SUITE 600, RALEIGH, NC 27607
E: 919-677-2000 FAX: 919-677-2050

www.kimley-horn.com





	ON	PHIL	LIP 1/	'31/2	2C
012654010	DATE 1/31/2024	SCALE AS SHOWN	DESIGNED BY MRG	DRAWN BY ASA	

OVER SHEET

WILDWOOD PARK TOWER AND TRAILS
BID PACKAGE B
PREPARED FOR

DANCE WITH THE APPROPRIATE APPROVING AUTHORITIES,

AL MAJERI LAN CON TRUCTION SHALL CONFORM TO THE CITY OF GREENVILLE AND GREEN CALL FILLY COMMISSION MUNICIPAL CODES.

LEGAN ACTOR FOR THE RESPONSIBLE TO FURNISH ALL MATERIAL AND LABOR TO THE CONSTRUCTION OF THE CONSTRUCTION OF

REQUIREMENTS.

Know inhat's Delowsponsibility to contact the various utility companies which may have underground or aerial utilities within or the contractor shall provide 72 hours minimum notice to all utility companies and the city of greenville and greenville utilities commission prior to

BEGINNING CONSTRUCTION. AN INFORMAL LIST OF UTILITY CONTACTS ARE AS

ELECTRIC - BRIAN MURPHY
PHONE: 252-329-4416
GAS - JASON CYPHERS
PHONE: 252-551-3313
DRAINAGE - KENDALL PARAMORE
PHONE: 252-524-4000
WATER AND SANITARY SEWER- MICKEY TRIPP
PHONE: 252-551-1555
FIRE - BRYANT BEDDARD

PHONE: 252-329-4416

4. IT WILL BE THE RESPONSIBILITY OF THE CONTRACTOR TO PROTECT ALL PUBLIC UTILITIES IN THE CONSTRUCTION OF THIS PROJECT. ALL MANHOLES, CLEANOUTS, VALVE BOXES, FIRE HYDRANTS, ETC., MUST BE ADJUSTED TO PROPER GRADE BY THE CONTRACTOR PRIOR TO AND AFTER PLACING OF PERMANENT PAVING. UTILITIES MUST BE MAINTAINED TO PROPER LINE AND GRADE DURING CONSTRUCTION OF THE PAVING FOR THIS PROJECT.

- 5. THE LOCATIONS, ELEVATIONS, AND DIMENSIONS OF EXISTING UTILITIES SHOWN ON THE PLANS WERE OBTAINED FROM AVAILABLE UTILITY COMPANY RECORDS AND PLANS AND ARE CONSIDERED APPROXIMATE. IT SHALL BE THE CONTRACTOR'S SOLE RESPONSIBILITY TO VERIFY LOCATIONS, ELEVATIONS, AND DIMENSIONS OF ADJACENT AND/OR CONFLICTING UTILITIES SUFFICIENTLY IN ADVANCE OF CONSTRUCTION IN ORDER THAT ADJUSTMENTS CAN BE MADE TO PROVIDE ADEQUATE CLEARANCES. THE CONTRACTOR SHALL PRESERVE AND PROTECT PUBLIC UTILITIES AT ALL TIMES DURING CONSTRUCTION. ANY DAMAGE TO UTILITIES RESULTING FROM CONTRACTOR'S OPERATIONS SHALL BE RESTORED AT CONTRACTOR'S EXPENSE. THE ARCHITECT/ENGINEER SHALL BE IMMEDIATELY NOTIFIED WHEN PROPOSED GRADES CONFLICT WITH EXISTING UTILITIES.
- 6. THE CONTRACTOR SHALL COORDINATE THE EXACT LOCATION AND DEPTH OF ALL FRANCHISE UTILITY SERVICES AND ANY REQUIRED RELOCATIONS AND/OR EXTENSIONS
- 7. THE CONTRACTOR SHALL IMMEDIATELY REPAIR OR REPLACE ANY PHYSICAL DAMAGE TO OWNER'S PROPERTY OR ANY ADJACENT PROPERTIES, INCLUDING, BUT NOT LIMITED TO FENCES, WALLS, PAVEMENT, GRASS, TREES, AND LAWN SPRINKLER AND IRRIGATION SYSTEMS AT NO COST TO THE OWNER, OR OWNER'S AGENTS.
- 8. THE CONTRACTOR SHALL REMOVE AND DISPOSE ALL SURPLUS MATERIALS, SPOILS, AND DEBRIS OFF SITE. THIS WORK IS INCIDENTAL TO THE CONTRACT.
- 9. THE CONTRACTOR SHALL BE RESPONSIBLE TO OBTAIN ALL NECESSARY PERMITS AND APPROVALS PRIOR TO CONSTRUCTION.
- 10. THE CONTRACTOR SHALL HAVE AVAILABLE AT THE JOB SITE AT ALL TIMES ONE COPY OF THE CONTRACT DOCUMENTS INCLUDING PLANS, SPECIFICATIONS, AND SPECIAL CONDITIONS, COPIES OF ANY REQUIRED CONSTRUCTION PERMITS, EROSION CONTROL PLANS, SWPPP AND INSPECTION REPORTS.
- 11. ANY DISCREPANCIES ON THE DRAWINGS SHALL BE IMMEDIATELY BROUGHT TO THE ATTENTION OF THE ARCHITECT/ENGINEER BEFORE COMMENCING WORK. NO FIELD CHANGES OR DEVIATIONS FROM DESIGN ARE TO BE MADE WITHOUT PRIOR APPROVAL OF THE OWNER AND NOTIFICATION TO THE ARCHITECT/ ENGINEER.
- 12. ALL COPIES OF COMPACTION, CONCRETE AND OTHER REQUIRED TEST RESULTS ARE TO BE SENT TO THE OWNER, ARCHITECT AND ENGINEER. ALLIANCE GEOTECHNICAL GROUP WILL PROVIDE TESTING FOR CONSTRUCTION.
- 13. CONTRACTOR SHALL VERIFY BENCHMARKS AND DATUMS PRIOR TO COMMENCING CONSTRUCTION OR STAKING OF IMPROVEMENTS. CONTRACTOR SHALL IMMEDIATELY REPORT DISCREPANCIES TO THE ARCHITECT AND ENGINEER.
- 14. CONTRACTOR SHALL THOROUGHLY CHECK COORDINATION OF CIVIL, LANDSCAPE, ARCHITECTURAL, AND OTHER PLANS PRIOR TO COMMENCING CONSTRUCTION. OWNER AND ENGINEER SHALL BE NOTIFIED OF ANY DISCREPANCY PRIOR TO COMMENCING WITH CONSTRUCTION.
- 15. REFER TO EXISTING CONDITIONS AND DEMOLITION PLAN SHEETS FOR ALL TREE REMOVAL REQUIREMENTS.
- 16. CONTRACTOR ADJUSTMENTS TO SPOT GRADES TO MAINTAIN POSITIVE DRAINAGE IS ALLOWED WITH THE PRIOR APPROVAL OF THE ARCHITECT / ENGINEER.
- 17. THE CONTRACTOR SHALL SALVAGE AND PROTECT ALL EXISTING POWER POLES, SIGNS, MANHOLES, TELEPHONE RISERS, WATER VALVES, ETC. DURING ALL CONSTRUCTION PHASES UNI ESS NOTED OTHERWISE
- 18. CONTRACTOR STAGING AREA TO BE AGREED UPON BY OWNER PRIOR TO CONSTRUCTION.
- 19. ALL EXISTING CONCRETE PAVING, SIDEWALK, STRUCTURES AND CURBS NOTED FOR DEMOLITION SHALL BE REMOVED IN THEIR ENTIRETY AND DISPOSED OF BY THE CONTRACTOR, OFFSITE UNLESS OTHERWISE DIRECTED BY THE OWNER, ARCHITECT /
- 20. UPON COMPLETION OF CONSTRUCTION, CONTRACTOR SHALL PROVIDE AS-BUILT PLANS IDENTIFYING ALL DEVIATIONS OF VARIATIONS OF ORIGINAL PLANS.
- 21. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE CONTROL OF DUST AND DIRT RISING AND SCATTERING IN THE AIR DURING CONSTRUCTION AND SHALL PROVIDE WATER SPRINKLING OR OTHER SUITABLE METHODS OF CONTROL. THE CONTRACTOR SHALL COMPLY WITH ALL GOVERNING REGULATIONS PERTAINING TO ENVIRONMENTAL PROTECTION. THIS OR ANY OTHER MEANS OF CONTROL SHALL BE PROVIDED AT NO ADDITIONAL COST TO THE OWNER.
- 22. THE CONTRACTOR SHALL BE RESPONSIBLE FOR TAKING MEASURES TO MINIMIZE DAMAGE TO TREE LIMBS, TREE TRUNKS, AND TREE ROOTS ALONG THE ROUTE OF THE PROJECT. ALL SUCH MEASURES SHALL BE CONSIDERED AS INCIDENTAL WORK INCLUDED IN THE CONTRACT UNIT PRICE BID FOR APPLICABLE SITE WORK OR STRUCTURE INSTALLATION. WHEN CONSTRUCTION PASSES BY OR CLOSE TO TREES, THE CONTRACTOR SHALL ERECT TEMPORARY CONSTRUCTION FENCE TO LIMIT ACTIVITY OUTSIDE OF THE EASEMENT IN THE TREE AREAS. NO PARKING WILL BE ALLOWED UNDER DRIP LINE OR MINIMUM OF TEN (10) FEET OF ANY TREE TO REMAIN. CONTRACTOR SHALL INSPECT EACH WORK SITE IN ADVANCE AND ARRANGE TO HAVE ANY TREE LIMBS PRUNED THAT MIGHT BE DAMAGED BY EQUIPMENT OPERATIONS. THE OWNER SHALL BE NOTIFIED AT LEAST 24 HOURS PRIOR TO ANY TREE TRIMMING WORK. NOTHING SHALL BE STORED OVER THE TREE ROOT SYSTEM WITHIN THE DRIP LINE AREA OF ANY TREE. THE CONTRACTOR SHALL EMPLOY A QUALIFIED LANDSCAPER FOR ALL THE WORK REQUIRED FOR TREE CARE TO ENSURE UTILIZATION OF THE BEST AGRICULTURAL PRACTICES AND PROCEDURES.

## **GRADING NOTES**

- ALL PUBLIC WORKS CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LOCAL DESIGN AND TECHNICAL CONSTRUCTION STANDARDS.
- 2. CONTRACTOR SHALL FIELD VERIFY HORIZONTAL AND VERTICAL LOCATION OF ALL EXISTING UTILITIES BEFORE CONSTRUCTION. CONTRACTOR IS RESPONSIBLE FOR PROTECTING EXISTING UTILITIES (SHOWN OR NOT SHOWN) WITHIN SCOPE OF CONSTRUCTION. IF ANY EXISTING UTILITIES ARE DAMAGED, THE CONTRACTOR SHALL REPLACE THEM AT HIS
- 3. UPON COMPLETION OF CONSTRUCTION, CONTRACTOR SHALL PROVIDE AS-BUILT PLANS IDENTIFYING ALL DEVIATIONS OR VARIATIONS OF ORIGINAL PLANS.
- 4. ALL SPOT ELEVATIONS ARE PROPOSED PAVEMENT, OR TOP OF GRADE ELEVATIONS UNLESS OTHERWISE NOTED. TC= TOP OF CURB, EX= EXIST. GRADE, FF= FINISH FLOOR, ME = MATCH EXISTING, TD = TOP OF DRAIN, TW = TOP OF WALL, BW= BOTTOM OF WALL, TS = TOP OF STAIRS
- THE CONTRACTOR SHALL PROTECT ALL MANHOLE COVERS, VALVE COVERS, VAULT LIDS, FIRE HYDRANTS, POWER POLES,
- 6. REFERENCE GEOTECH REPORT AND SPECIFICATIONS PREPARED BY FALCON ENGINEERING, DATED OCTOBER 27, 2021 FOR BUILDING SLAB, POOL, PAVEMENT PREPARATION, COMPACTION, AND ALL EARTHWORK OPERATIONS.

GUY WIRES, AND TELEPHONE BOXES WHICH ARE TO REMAIN IN PLACE AND UNDISTURBED DURING CONSTRUCTION.

- 7. THE CONTRACTOR SHALL CLEAR AND GRUB THE SITE AND PLACE, COMPACT, AND MOISTURE CONDITION ALL FILL PER THE GEOTECHNICAL ENGINEER'S SPECIFICATIONS. ANY FILL MATERIAL TO BE USED SHALL BE APPROVED BY THE GEOTECHNICAL ENGINEER PRIOR TO PLACEMENT.
- 8. ALL SLOPES AND AREAS DISTURBED BY CONSTRUCTION SHALL BE GRADED SMOOTH. THE AREAS SHALL THEN BE SEEDED, IRRIGATED, AND STABILIZED AS INDICATED IN THE PLANS AND SPECIFICATIONS, AND MAINTAINED UNTIL SOIL IS STABILIZED IN ALL AREAS. ANY AREAS DISTURBED FOR ANY REASON PRIOR TO FINAL ACCEPTANCE OF THE CONSTRUCTION SHALL BE CORRECTED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER. ALL EARTHEN AREAS WILL BE STABILIZED AND MULCHED AS SHOWN ON THE LANDSCAPE, GRADING, AND EROSION CONTROL PLANS.

ALL CUT OR FILL SLOPES SHALL BE 4:1 OR FLATTER UNLESS OTHERWISE INDICATED.

## **ACCESSIBILITY NOTES**

- 1. ALL ACCESSIBLE SPACES AND ACCESSIBLE ROUTES SHALL COMPLY WITH THE CITY OF GREENVILLE AND NORTH CAROLINA ACCESSIBILITY STANDARDS AND CITY REQUIREMENTS.
- 2. PARKING SPACES AND ACCESS AISLES SHALL BE LEVEL WITH SURFACE SLOPES NOT EXCEEDING 1:50 (2%) IN ALL DIRECTIONS.
- 3. EACH ACCESSIBLE PARKING SPACE SHALL BE DESIGNATED AS RESERVED BY A VERTICALLY MOUNTED OR SUSPENDED SIGN SHOWING THE SYMBOL OF ACCESSIBILITY. VAN ACCESSIBLE SPACES SHALL HAVE AN ADDITIONAL SIGN "VAN-ACCESSIBLE" MOUNTED BELOW THE SYMBOL OF ACCESSIBILITY.
- (A) CHARACTERS AND SYMBOLS ON SUCH SIGNS SHALL BE LOCATED 60" (1525 MM) MINIMUM ABOVE THE GROUND, FLOOR, OR PAVING SURFACE SO THEY CANNOT BE OBSCURED BY A VEHICLE PARKED IN THE SPACE.
- (B) SIGNS LOCATED WITHIN AN ACCESSIBLE ROUTE SHALL COMPLY WITH THE LATEST STANDARDS.
- (C) CHARACTERS AND SYMBOLS ON OVERHEAD SIGNS SHALL COMPLY WITH THE LATEST STANDARDS.
- 4. SLOPES OF CURB RAMPS SHALL COMPLY WITH 2010 ADA STANDARDS FOR ACCESSIBLE DESIGN. TRANSITIONS FROM RAMPS TO WALKS, GUTTERS, OR STREETS SHALL BE FLUSH AND FREE OF ABRUPT CHANGES. MAXIMUM SLOPES OF ADJOINING GUTTERS, ROAD SURFACE IMMEDIATELY ADJACENT TO THE CURB RAMP, OR ACCESSIBLE ROUTE SHALL NOT EXCEED 1:20.
- 5. ALL ACCESSIBLE RAMPS, CURB RAMPS, STRIPING, AND PAVEMENT MARKING SHALL CONFORM TO ADA , LATEST EDITION.
- 6. CURB RAMPS ALONG PUBLIC STREETS AND IN THE PUBLIC RIGHT-OF-WAY SHALL BE CONSTRUCTED BASED ON THE CITY STANDARD CONSTRUCTION DETAIL AND SPECIFICATIONS.
- 7. PRIVATE CURB RAMPS ON THE SITE (I.E. OUTSIDE PUBLIC STREET RIGHT-OF-WAY) SHALL CONFORM TO ADA AND SHALL HAVE A DETECTABLE WARNING SURFACE THAT IS FULL WIDTH AND FULL DEPTH OF THE CURB RAMP, NOT INCLUDING
- 8. CONTRACTOR SHALL CONSTRUCT PROPOSED PAVEMENT TO MATCH EXISTING PAVEMENT WITH A SMOOTH, FLUSH,
- 9. CONTRACTOR SHALL FURNISH AND INSTALL ALL PAVEMENT MARKING FOR FIRE LANES, PARKING STALLS, HANDICAPPED PARKING SYMBOLS, AND MISCELLANEOUS STRIPING WITHIN PARKING LOT AND AROUND BUILDING AS SHOWN ON THE PLANS. ALL PAINTED AND PAVEMENT MARKINGS SHALL ADHERE TO CITY AND OWNER STANDARDS.
- 10. BEFORE PLACING PAVEMENT, CONTRACTOR SHALL VERIFY THAT SUITABLE ACCESSIBLE PEDESTRIAN ROUTES (PER ADA, AND FHA) EXIST TO AND FROM EVERY DOOR AND ALONG SIDEWALKS, ACCESSIBLE PARKING SPACES, ACCESS AISLES, AND ACCESSIBLE ROUTES. IN NO CASE SHALL AN ACCESSIBLE RAMP SLOPE EXCEED 1 VERTICAL TO 12 HORIZONTAL. IN NO CASE SHALL SIDEWALK CROSS SLOPE EXCEED 2.0 PERCENT. IN NO CASE SHALL LONGITUDINAL SIDEWALK SLOPE EXCEED 5.0 PERCENT. ACCESSIBLE PARKING SPACES AND ACCESS AISLES SHALL NOT EXCEED 2.0 PERCENT SLOPE IN ANY DIRECTION.
- 11. CONTRACTOR SHALL TAKE FIELD SLOPE MEASUREMENTS ON FINISHED SUBGRADE AND FORM BOARDS PRIOR TO PLACING PAVEMENT TO VERIFY THAT ADA SLOPE REQUIREMENTS ARE PROVIDED. CONTRACTOR SHALL CONTACT ENGINEER PRIOR TO PAVING IF ANY EXCESSIVE SLOPES ARE ENCOUNTERED. NO CONTRACTOR CHANGE ORDER WILL BE ACCEPTED FOR ADA SLOPE COMPLIANCE ISSUES.

## **RECORD DRAWING NOTES:**

- 1. RECORD DRAWING CERTIFICATIONS REQUIRED FOR THIS PROJECT INCLUDES, BUT MAY NOT BE LIMITED TO WATER AND SEWER MAINS, STORM DRAINAGE PIPING, STORMWATER CONTROL MEASURES AND INDIVIDUAL WATER AND SEWER SERVICE LOCATIONS. ALL RECORD DRAWING DATA SHALL BE PROVIDED BY THE CONTRACTOR PRIOR THE ISSUANCE OF CERTIFICATE OF OCCUPANCY PER CITY OF GREENVILLE, NCDOT, AND NCDEQ REQUIREMENTS.
- 2. THE CONTRACTOR IS RESPONSIBLE FOR COORDINATING AND PROVIDING ALL SURVEY DATA REQUIRED BY THE CITY OF GREENVILLE, NCDOT, NCFMP AND NCDEQ IN ORDER TO PREPARE THE RECORD DRAWING CERTIFICATIONS. RECORD DRAWINGS SHALL BE PREPARED AND CERTIFIED BY A NORTH CAROLINA LICENSED SURVEYOR IN ACCORDANCE WITH ALL APPLICABLE REQUIREMENTS.
- 3. CONTRACTOR SHALL PROVIDE ALL NECESSARY ITEMS INCLUDING ANY TESTING, REPORTS OR CERTIFICATION DOCUMENTS REQUIRED BY GOVERNING JURISDICTIONS TO PROPERLY CLOSE OUT THE PROJECT BEFORE IT CAN BE DEEMED COMPLETE.

## **ABBREVIATIONS**

\*NOT ALL ABBREVIATIONS MAY BE USED FOR THIS PROJECT. CO - CLEAN OUT DIP- DUCTILE IRON PIPE DI - DROP INLET STRM - STORM YI - YARD INLET MH - MANHOLE EX - EXISTING SD - STORM DRAIN ME - MATCH EXISTING RD - ROOF DRAIN FES - FLARED-END-SECTION TC - TOP OF CONCRETE LOD - LIMITS OF DISTURBANCE CI - CAST IRON PIPE PVC - POLYVINYL CHLORIDE TW - TOP OF WALL RCP - REINFORCED CONCRETE PIPE BW - BOTTOM OF WALL TYP. - TYPICAL PIV - POST INDICATOR VALVE

## STORM DRAINAGE NOTES

- ALL STORM SEWER MATERIALS AND CONSTRUCTION SHALL COMPLY WITH CITY STANDARD CONSTRUCTION DETAILS AND SPECIFICATIONS.
- THE SITE UTILITY CONTRACTOR SHALL PROVIDE ALL MATERIALS AND APPURTENANCES NECESSARY FOR COMPLETE INSTALLATION OF THE STORM SEWER.
- 3. THE CONTRACTOR SHALL FIELD VERIFY THE SIZE, CONDITION, HORIZONTAL, AND VERTICAL LOCATIONS OF ALL EXISTING STORM SEWER FACILITIES THAT ARE TO BE CONNECTED TO, PRIOR TO START OF CONSTRUCTION OF ANY STORM SEWER, AND SHALL NOTIFY THE ENGINEER OF ANY CONFLICTS DISCOVERED.
- 4. THE CONTRACTOR SHALL VERIFY AND COORDINATE ALL DIMENSIONS SHOWN, INCLUDING THE HORIZONTAL AND VERTICAL LOCATION OF CURB INLETS AND GRATE INLETS AND ALL UTILITIES CROSSING THE STORM SEWER.
- 5. FLOW LINE, TOP-OF-CURB, RIM, THROAT, AND GRATE ELEVATIONS OF PROPOSED INLETS SHALL BE VERIFIED WITH THE GRADING PLAN AND FIELD CONDITIONS PRIOR TO THEIR INSTALLATION.
- 6. ALL PUBLIC STORM SEWER CONSTRUCTION, PIPE, STRUCTURES, AND FITTINGS SHALL ADHERE TO CITY PUBLIC WORKS STANDARD DETAILS AND SPECIFICATIONS. CONTRACTOR SHALL ARRANGE FOR REQUIRED CITY INSPECTIONS.
- 7. ALL PRIVATE STORM SEWER CONSTRUCTION, PIPE, STRUCTURES, AND FITTINGS SHALL ADHERE TO THE APPLICABLE
- 8. ALL PVC TO RCP CONNECTIONS AND ALL STORM PIPE CONNECTIONS ENTERING STRUCTURES OR OTHER STORM PIPES
- SHALL HAVE A CONCRETE COLLAR AND BE GROUTED TO ASSURE THE CONNECTION IS WATERTIGHT.
- 9. ALL PUBLIC STORM SEWER LINES SHALL BE MINIMUM CLASS III RCP. PRIVATE STORM SEWER LINES 18-INCHES AND
- 10. WHERE COVER EXCEEDS 20-FEET OR IS LESS THAN 2-FEET, CLASS IV RCP SHALL BE USED.

PLUMBING CODE. CONTRACTOR SHALL ARRANGE FOR REQUIRED CITY INSPECTIONS.

- 11. IF CONTRACTOR PROPOSES TO USE HDPE OR PVC IN LIEU OF RCP FOR PRIVATE STORM SEWER, CONTRACTOR SHALL SUBMIT TECHNICAL DATA TO THE OWNER, ENGINEER AND CITY ENGINEER/INSPECTOR FOR APPROVAL PRIOR TO ORDERING THE MATERIAL. ANY PROPOSED HDPE AND PVC SHALL BE WATERTIGHT.
- 13. EMBEDMENT FOR ALL STORM SEWER LINES, PUBLIC OR PRIVATE, SHALL BE PER CITY STANDARD DETAILS.
- 14. THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING AND SUBMITTING A TRENCH SAFETY PLAN, PREPARED BY A PROFESSIONAL ENGINEER IN THE STATE OF NORTH CAROLINA, TO THE CITY PRIOR TO CONSTRUCTION. CONTRACTOR IS RESPONSIBLE FOR MAINTAINING TRENCH SAFETY REQUIREMENTS IN ACCORDANCE WITH CITY, STATE, AND FEDERAL REQUIREMENTS, INCLUDING OSHA FOR ALL TRENCHES. NO OPEN TRENCHES SHALL BE ALLOWED OVERNIGHT WITHOUT PRIOR WRITTEN APPROVAL OF THE CITY.
- 15. THE CONTRACTOR SHALL KEEP TRENCHES FREE FROM WATER.

GREATER SHALL BE CLASS III RCP OR OTHER APPROVED MATERIAL

- 16. RIM ELEVATIONS FOR STORM CATCH BASINS ARE MEASURED TO THE GUTTER FLOW LINE.
- 17. THE LOCATIONS OF STORM SEWER STRUCTURES SHOWN ON THESE PLANS (AND PROVIDED IN ASSOCIATED CAD FILES) ARE APPROXIMATE. THE CONTRACTOR SHALL STAKE ALL CURB INLET STRUCTURES SUCH THAT INLET TOPS ALIGN HORIZONTALLY WITH PROPOSED CURB LOCATIONS (PER DETAIL, IF PROVIDED). WHERE PROPOSED STORM SEWERS TIE TO EXISTING STRUCTURES, PIPES, ETC., THE CONTRACTOR SHALL FIELD ADJUST PROPOSED STORM SEWERS TO MATCH THE LOCATIONS OF THESE EXISTING FEATURES.

## **EROSION CONTROL NOTES**

- 1. UNLESS OTHERWISE INDICATED, ALL VEGETATIVE AND STRUCTURAL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE CONSTRUCTED AND MAINTAINED IN ACCORDANCE WITH THE MINIMUM STANDARDS AND SPECIFICATIONS OF THE NORTH CAROLINA EROSION AND SEDIMENT CONTROL HANDBOOK.
- 2. THE CONTRACTOR SHALL INSTALL AND MAINTAIN THROUGHOUT THE PROJECT CONSTRUCTION ALL EROSION CONTROL MEASURES SHOWN WITHIN THESE PLANS IN ACCORDANCE WITH APPLICABLE NORTH CAROLINA DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES (NCDENR) AND NCDEQ EROSION AND SEDIMENT CONTROL REGULATIONS.
- 3. ALL CONSTRUCTION SHALL COMPLY WITH NCDEQ STANDARDS AND SPECIFICATIONS.
- 4. ALL CONSTRUCTION WORK SHALL BE IN COMPLIANCE WITH REGULATIONS OF THE NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) STORM WATER GENERAL PERMIT.
- 5. ALL EROSION CONTROL MEASURES ARE TO BE PLACED PRIOR TO CLEARING AND/OR LAND DISTURBANCE.
- 6. A COPY OF THE APPROVED EROSION AND SEDIMENT CONTROL PLAN AND PERMIT SHALL BE MAINTAINED ON THE SITE AT ALL TIMES.
- 7. STABILIZATION IS THE BEST FORM OF EROSION CONTROL. ALL DISTURBED AREAS WHICH ARE NOT OTHERWISE STABILIZED SHALL BE TOP SOILED AND SEEDED, TEMPORARILY OR PERMANENTLY IN ACCORDANCE WITH THE NORTH CAROLINA SEDIMENT CONTROL REGULATIONS. PERMANENT SEEDING AND GRASS ESTABLISHMENT IS REQUIRED PRIOR TO PROJECT COMPLETION AND ACCEPTANCE. STABILIZE DISTURBED AREAS WITH TEMPORARY VEGETATION. DENUDED AREAS MUST BE SEEDED WITHIN FOURTEEN (14) DAYS OF COMPLETION OF ANY PHASE OF CONSTRUCTION.
- 8. INSTALL ANY ADDITIONAL EROSION CONTROL MEASURES AS NECESSARY TO PREVENT SEDIMENT RUNOFF.
- 9. WHERE POSSIBLE, EROSION CONTROL DEVICES SHALL BE INSTALLED PRIOR TO CONSTRUCTION AND SHALL BE ADEQUATE TO MAINTAIN SEDIMENT ON SITE.
- 10. ALL EXCAVATED SOILS NOT NEEDED ON SITE FOR BACKFILL OPERATIONS SHALL BE TAKEN OFF SITE AND LEGALLY DISPOSED OF, NO SOIL CAN BE REMOVED FROM SITE WITHOUT EHS APPROVAL, REFER TO THE PROJECT'S SITE SOIL MANAGEMENT PROGRAM.
- PROVIDE EROSION CONTROL MEASURES AS NECESSARY TO PREVENT SOIL FROM GETTING OFF SITE OR INTO EXISTING DRAINAGE STRUCTURES. SOIL PILES AND CONTRACTOR STAGING AND MATERIALS LAY DOWN AREAS SHOULD BE A MINIMUM OF 50' AWAY FROM ANY STORM DRAIN OR WATERCOURSE.
   APPROVAL OF THIS PLAN IS NOT AN AUTHORIZATION TO GRADE ADJACENT PROPERTIES. WHEN FIELD CONDITIONS

WARRANT OFF-SITE GRADING, PERMISSION MUST BE OBTAINED FROM THE AFFECTED PROPERTY OWNERS. CONTACT

- PROJECT ENGINEER AND PROJECT EROSION CONTROL INSPECTOR TO ENSURE ADDITIONAL EROSION CONTROL MEASURES ARE INSTALLED PRIOR TO OFF-SITE GRADING.

  13. PRIOR TO COMMENCING LAND DISTURBING ACTIVITIES IN AREAS OTHER THAN INDICATED ON THESE PLANS (INCLUDING, BUT NOT LIMITED TO OFF-SITE BORROW OR WASTE AREAS, STAGING OR STORAGE AREAS), THE CONTRACTOR SHALL PREPARE AND SUBMIT A SUPPLEMENTARY EROSION CONTROL PLAN TO THE OWNER FOR REVIEW AND TO THE NODEO
- FOR APPROVAL. CONTRACTOR SHALL PAY ALL FEES REQUIRED AND SHALL INSTALL NECESSARY MEASURES AT NO SEPARATE PAYMENT. THE CONTRACTOR SHALL PROVIDE THE OWNER AND THE ENGINEER A COPY OF THE AMENDED PERMIT.

  14. EROSION AND SEDIMENT CONTROL MEASURES SHALL BE MAINTAINED CONTINUOUSLY, RELOCATED WHEN AND AS
- SHALL BE WATERED, FERTILIZED, RESEEDED AND MULCHED AS NECESSARY TO OBTAIN A DENSE STAND OF GRASS.

  15. CONTRACTOR TO ENSURE THAT SEDIMENT LADEN RUNOFF DOES NOT LEAVE SITE LIMITS OR ENTER PROTECTED AREAS.

NECESSARY, AND SHALL BE CHECKED AFTER EVERY RAINFALL. SEEDED AREAS SHALL BE CHECKED REGULARLY AND

- ANY SEDIMENT DEPOSITED BEYOND DISTURBED AREA WITHIN SITE LIMITS SHALL BE REMOVED.

  16. ALL EROSION CONTROLS MEASURES AND DEVICES SHALL BE IN ACCORDANCE WITH STATE AND LOCAL EROSION.
- ALL EROSION CONTROLS MEASURES AND DEVICES SHALL BE IN ACCORDANCE WITH STATE AND LOCAL EROSION CONTROL REGULATIONS.
- 17. ALL DISTURBED AREAS WHERE WORK HAS CEASED SHALL BE STABILIZED WITHIN 14 DAYS UNLESS OTHERWISE NOTED.
- 18. ALL SEDIMENT AND EROSION CONTROL DEVICES SHALL BE INSPECTED EVERY (7) CALENDAR DAYS OR AFTER EACH RAINFALL OCCURRENCE THAT EXCEEDS 1 INCH. DAMAGED OR INEFFECTIVE DEVICES SHALL BE REPAIRED OR REPLACED IMMEDIATELY.
- 19. WHERE SEDIMENT IS TRANSPORTED ONTO A PAVED OR PUBLIC ROAD SURFACE, THE ROAD SURFACE SHALL BE CLEANED THOROUGHLY AT THE END OF EACH DAY. SEDIMENT SHALL BE REMOVED FROM ROADS BY SHOVELING OR SWEEPING AND TRANSPORTED TO A SEDIMENT CONTROL DISPOSAL AREA. STREET WASHING SHALL BE ALLOWED ONLY AFTER SEDIMENT IS REMOVED IN THIS MANNER.
- 20. WHEN THE CRUSHED STONE CONSTRUCTION ENTRANCE HAS BEEN COVERED WITH SOIL OR HAS BEEN PUSHED INTO THE SOIL BY CONSTRUCTION TRAFFIC, IT SHALL BE REPLACED WITH A DEPTH OF STONE EQUAL TO THAT OF THE ORIGINAL APPLICATION.
- 21. ADDITIONAL EROSION CONTROL MEASURES MAY BE REQUIRED FOR ADDITIONAL CONTRACTOR LAYDOWN AREA. CONTRACTOR TO COORDINATE WITH ENGINEER DURING CONSTRUCTION.
- 22. ROLLED EROSION CONTROL PRODUCTS (RECP'S) SHOULD BE USED TO AID PERMANENT VEGETATED STABILIZATION OF SLOPES 2:1 OR GREATER AND WITH MORE THAN 10' OF VERTICAL RELIEF. RECP'S SHOULD ALSO BE USED WHEN MULCH CANNOT BE ADEQUATELY TACKED AND WHERE IMMEDIATE GROUND COVER IS REQUIRED TO PREVENT EROSION DAMAGE
- 23. CONCRETE WASHOUT MUST BE LOCATED AT LEAST 50 FEET FROM ANY STORM DRAIN, AND THAT CONCRETE DUST/WASTE/WASTEWATER MAY NOT BE RELEASED TO THE STORM DRAIN, INCLUDING RINSING CONCRETE TRUCK CHUTES.
- 24. ALL STOCKPILES TO REMAIN COVERED EXCEPT WHILE IN USE.
- 25. DURING DEWATERING OPERATIONS, WATER SHALL BE PUMPED INTO AN APPROVED FILTERING DEVICE PRIOR TO DISCHARGE TO RECEIVING OUTLET. DEWATERING DIRECTLY TO THE STORM DRAINS IS PROHIBITED.
- 26. ALL HANDLING PROCEDURES SHALL BE IN ACCORDANCE TO NCG010000 PART II SECTION F.
- 27. THE CONTRACTOR SHALL DILIGENTLY AND CONTINUOUSLY MAINTAIN ALL EROSION CONTROL DEVICES AND STRUCTURES TO MINIMIZE EROSION. THE CONTRACTOR SHALL MAINTAIN CLOSE CONTACT WITH THE NCDENR EROSION CONTROL INSPECTOR SO THAT PERIODIC INSPECTIONS CAN BE PERFORMED AT APPROPRIATE STAGES OF CONSTRUCTION. NO SEDIMENT AND EROSION CONTROL MEASURE SHALL BE REMOVED WITHOUT INSPECTOR APPROVAL.
- 28. ALL TEMPORARY EROSION CONTROL MEASURES SHALL BE REMOVED BY CONTRACTOR ONCE STABILIZATION OR A SUFFICIENT GROUND COVER HAS BEEN ESTABLISHED OR AS DIRECTED BY THE ENGINEER. NCDEQ INSPECTOR'S FINAL APPROVAL IS REQUIRED.
- 29. STABILIZATION MEASURES SHALL BE APPLIED TO STRUCTURES SUCH AS DAMS, DIKES AND DIVERSIONS IMMEDIATELY AFTER INSTALLATION.

## **EROSION CONTROL NOTES**

- 30. ADDITIONAL EROSION CONTROL MEASURES MAY BE REQUIRED DEPENDING UPON FIELD
- 31. LIMITS OF GRADING SHOWN ON THE PLAN ARE MAXIMUM LIMITS FOR EROSION CONTROL PURPOSES ONLY. SURVEYOR TO DETERMINE ACTUAL LIMIT.

OF THE NCDEQ EROSION CONTROL ORDINANCE AND IS SUBJECT TO A FINE.

- 32. ANY GRADING BEYOND THE DENUDED LIMITS SHOWN ON THE PLAN IS A VIOLATION OF THE NCDEQ
- EROSION CONTROL ORDINANCE, AND IS SUBJECT TO A FINE.

  33. GRADING MORE THAN 1 ACRE WITHOUT AN APPROVED EROSION CONTROL PLAN IS A VIOLATION

THREE INCH STONE SHALL BE USED FOR THE TEMPORARY GRAVEL CONSTRUCTION ENTRANCE.

- 34. TEMPORARY CONSTRUCTION ENTRANCES SHALL BE REQUIRED AT ALL CONSTRUCTION STAGING AREA ENTRANCES AND ALL CONSTRUCTION ACCESS LOCATIONS INTO NON-PAVED AREAS. TWO TO
- 35. ALL DRAINAGE INLETS SHALL BE PROTECTED FROM SILTATION. INEFFECTIVE PROTECTION DEVICES SHALL BE IMMEDIATELY REPLACED AND THE INLET CLEANED. FLUSHING IS NOT AN ACCEPTABLE METHOD OF CLEANING.
- 36. DURING CONSTRUCTION OF THE PROJECT, SOIL STOCKPILES SHALL BE STABILIZED OR PROTECTED WITH SEDIMENT TRAPPING MEASURES. THE APPLICANT IS RESPONSIBLE FOR THE TEMPORARY PROTECTION AND PERMANENT STABILIZATION OF ALL SOIL STOCKPILES ON SITE AS WELL AS SOIL INTENTIONALLY TRANSPORTED FROM THE PROJECT SITE.
- 37. SEDIMENT BASINS AND TRAPS, PERIMETER DIKES, SEDIMENT BARRIERS AND OTHER MEASURES INTENDED TO TRAP SEDIMENT SHALL BE CONSTRUCTED AS A FIRST STEP IN ANY LAND-DISTURBING ACTIVITY AND SHALL BE MADE FUNCTIONAL BEFORE UPSLOPE LAND DISTURBANCE TAKES PLACE.
- 38. ALL DISTURBED AREAS ARE TO DRAIN TO APPROVED SEDIMENT CONTROL MEASURES AT ALL TIMES DURING LAND DISTURBING ACTIVITIES AND DURING SITE DEVELOPMENT UNTIL FINAL STABILIZATION IS ACHIEVED.
- 39. ALL TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES SHALL BE REMOVED WITHIN 21 DAYS AFTER FINAL SITE STABILIZATION OR AFTER THE TEMPORARY MEASURES ARE NO LONGER NEEDED. TRAPPED SEDIMENT AND THE DISTURBED SOIL AREAS RESULTING FROM THE DISPOSITION OF TEMPORARY MEASURES SHALL BE PERMANENTLY STABILIZED TO PREVENT FURTHER EROSION AND SEDIMENTATION.
- 40. THIS PROJECT IS LOCATED IN THE TAR/PAMLICO RIVER BASIN.

## CITY OF GREENVILLE GENERAL NOTES

- . CITY OR NCDOT DRIVEWAY PERMIT REQUIRED. ANY ENCROACHMENT AGREEMENTS SHALL BE APPROVED BEFORE INSTALLATION.
- AN UNUSED DRIVEWAY MUST BE CLOSED IN ACCORDANCE WITH THE CITY OF GREENVILLE'S DRIVEWAY ORDINANCE.
- CONTRACTOR MUST NOTIFY ONE-CALL CENTER INC. (NC ONE-CALL) (811) AT LEAST 72 HOURS PRIOR TO THE START OF EXCAVATION OR TRENCHING TO HAVE ALL UNDERGROUND UTILITIES LOCATED.
- 4. ALL REQUIRED IMPROVEMENTS SHALL CONFORM TO THE CITY OF GREENVILLE MANUAL OF STANDARD DESIGNS AND DETAILS (MSDD).
- CONTRACTOR SHALL NOTIFY PUBLIC WORKS, STREET MAINTENANCE DIVISION 48 HOURS PRIOR TO MAKING CONNECTION TO EXISTING STORM DRAINS LOCATED WITHIN PUBLIC STORM DRAINAGE EASEMENTS OR RIGHT-OF-WAY.
- 6. THIS PROPERTY IS LOCATED IN A SPECIAL FLOOD HAZARD AREA AS DETERMINED BY THE FEDERAL EMERGENCY MANAGEMENT AGENCY. THIS PROPERTY IS LOCATED IN ZONE "AE" AS SHOWN ON FIRM PANEL NUMBER 3720468800K, COMMUNITY NUMBER 370191, INDEX DATE 7/7/2014.
- 7. LANE CLOSURES ON THOROUGHFARE ROADS ARE ONLY PERMITTED BETWEEN THE HOURS OF 9:00 AM AND 4:00 PM, MONDAY THROUGH FRIDAY, UNLESS OTHERWISE PERMITTED BY THE TRAFFIC ENGINEER. IN ADDITION, THERE WILL BE NO LANE CLOSURES ON HOLIDAYS INCLUDING THE DAY BEFORE OR AFTER SAID HOLIDAY. A TRAFFIC CONTROL PLAN PREPARED IN ACCORDANCE WITH THE NCDOT MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES IS REQUIRED FOR ALL LANE CLOSURES AND MUST BE APPROVED BY THE TRAFFIC ENGINEER.
- 8. ANY LAND DISTURBING ACTIVITY WHICH WILL UNCOVER MORE THAN ONE (1) ACRE, OR IF ANY PORTION OF THE PROPERTY IS LOCATED IN THE FLOODWAY, SHALL OBTAIN SOIL EROSION AND SEDIMENTATION CONTROL PLAN APPROVAL OF THE CITY ENGINEER PRIOR TO INITIATION OF SUCH ACTIVITY.
- 9. ANY LAND DISTURBING ACTIVITY THAT RESULTS IN A NET INCREASE OF IMPERVIOUS AREA AND DISTURBS GREATER OR EQUAL TO  $\frac{1}{2}$  ACRE FOR NON-SINGLE FAMILY RESIDENTIAL, SHALL OBTAIN APPROVAL OF A STORMWATER MANAGEMENT PLAN PRIOR TO INITIATION OF SUCH ACTIVITY.

## **VEGETATION NOTES**

DURATION OF CONSTRUCTION.

ANY AND ALL REQUIREMENTS.

- 1. EXISTING VEGETATION SHALL BE PROTECTED TO THE GREATEST EXTENT PRACTICABLE AND SHALL BE CREDITED TOWARDS THE REQUIREMENTS OF THE CITY OF GREENVILLE'S ZONING
- ORDINANCE.
  2. ALL CONTINUOUS STANDS OF VEGETATION SHALL BE PROTECTED AND HAVE BEEN IDENTIFIED

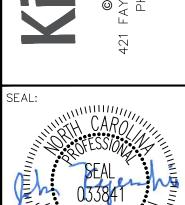
4. ALL BUFFERS SHALL BE LEFT UNDISTURBED AND EXISTING VEGETATION SHALL COUNT TOWARDS

ALL INFRASTRUCTURE REQUIRING ADDITIONAL VEGETATION (I.E. PARKING LOTS, BUILDINGS, ETC)
HAVE BEEN REVIEWED AND PERMITTED UNDER A SEPARATE SUBMITTAL.

# LIMITS OF DISTURBANCE NOTE:

CONTRACTOR SHALL ESTABLISH LIMITS OF DISTURBANCE AT A MINIMUM OF (FIFTY) 50'-0" INTERVALS. LIMITS OF ALIGNMENT STAKING SHALL BE VERIFIED BY ENGINEER AND/OR LANDSCAPE ARCHITECT PRIOR TO THE COMMENCEMENT OF CONSTRUCTION. LIMITS SHALL BE CLEARLY MARKED IN THE FIELD AND SHALL REMAIN IN PLACE THROUGHOUT THE 8 IFC PACKAGE B1
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CITY OF GREENVILLE – TRC – 3RD SUBMITTAL 12/
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MLEY-HORN AND ASSOCIATES, INC.
E STREET, SUITE 600, RALEIGH, NC
9-677-2000 FAX: 919-677-2050



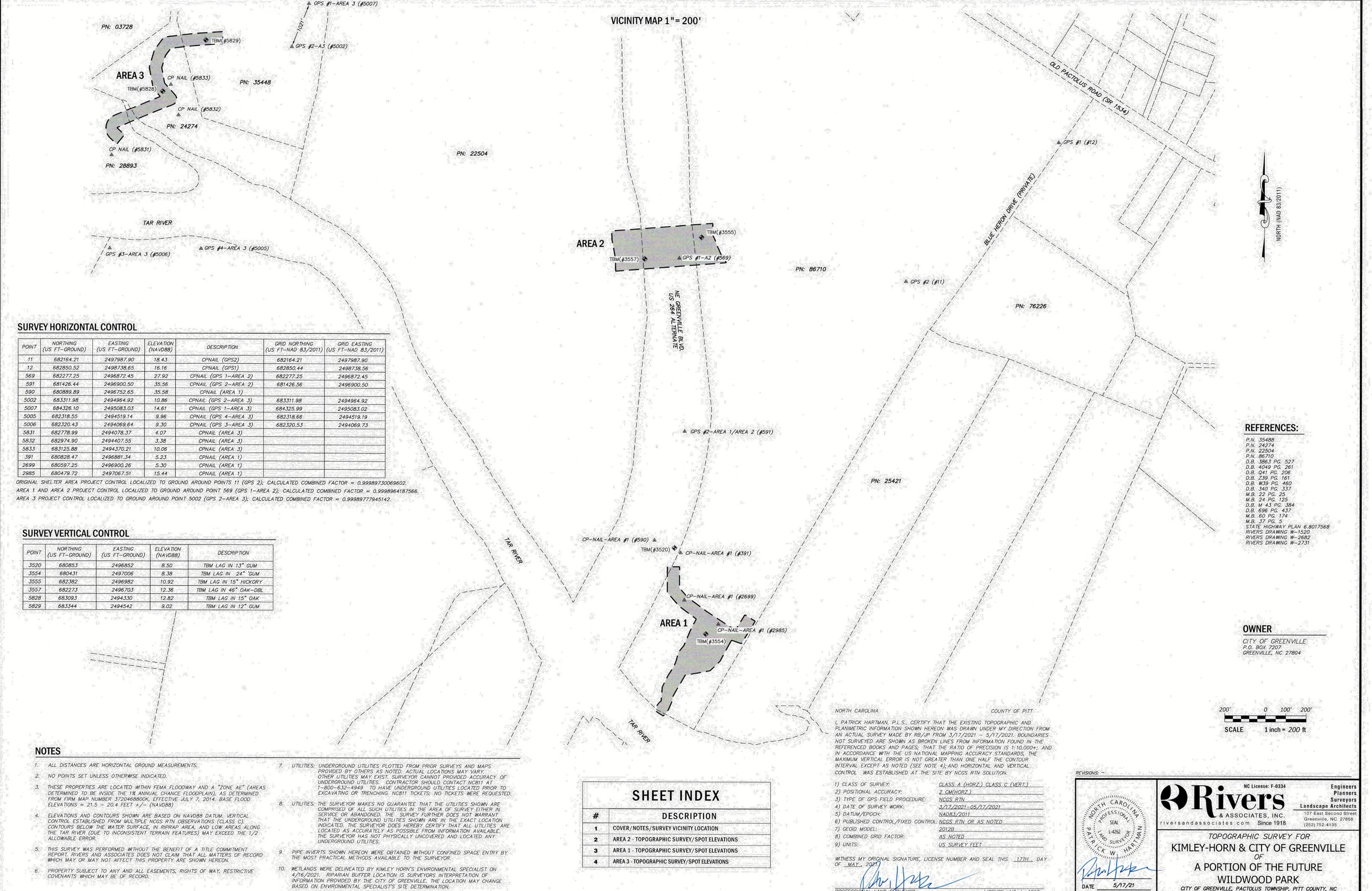
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DESIGNED BY MRG

=NFRAL NOTES

WILDWOOD PARK TOWER AND TRAILS
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PREPARED FOR

SURVEY NOTE:

ALL EXISTING TOPOGRAPHICAL AND BOUNDARY INFORMATION WAS PROVIDED BY RIVERS & ASSOCIATES, INC., DATED 05/17/21 LOCATED AT 107 EAST SECOND STREET GREENVILLE, NC 27858 PHONE: 252-752-4135.

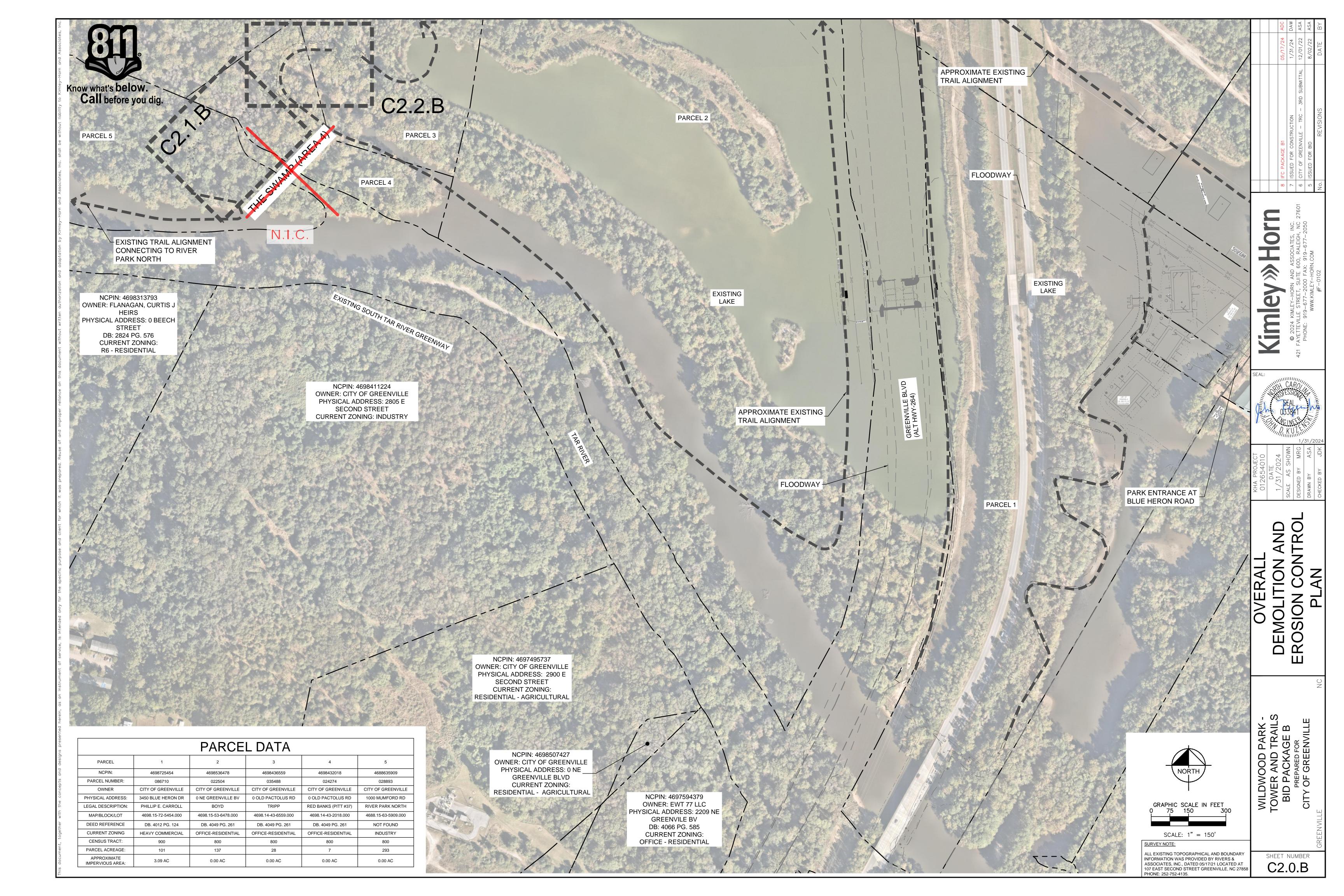


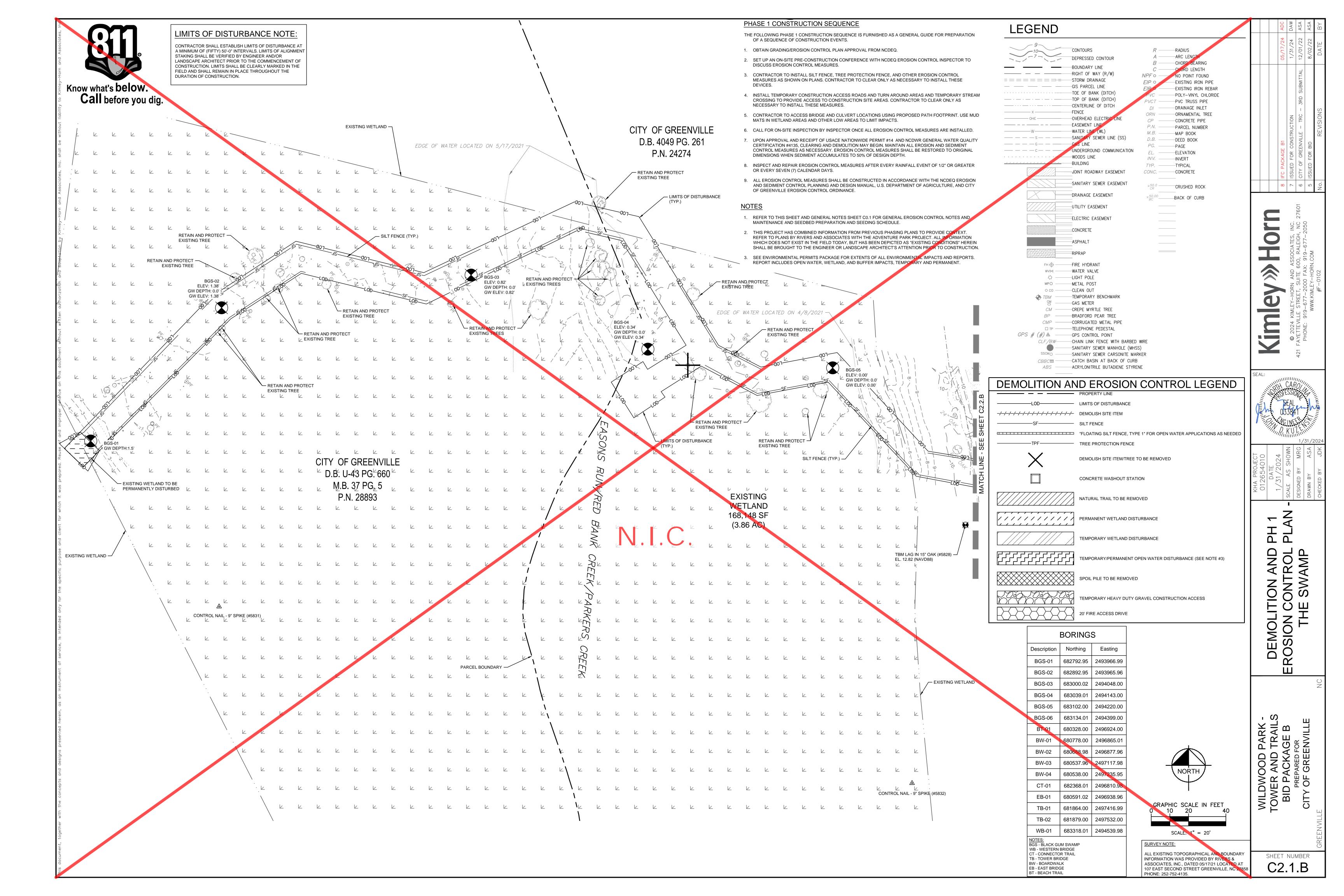
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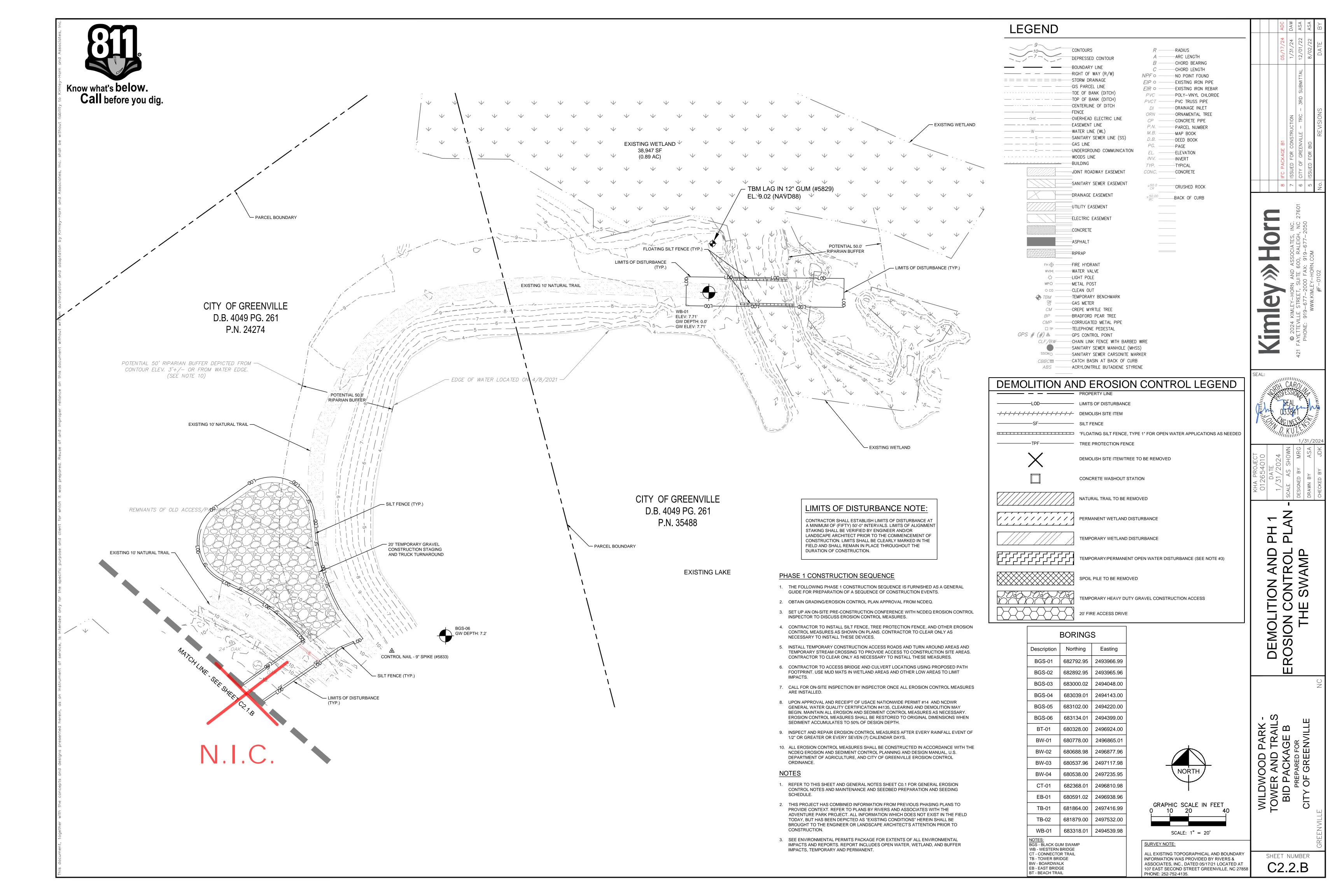
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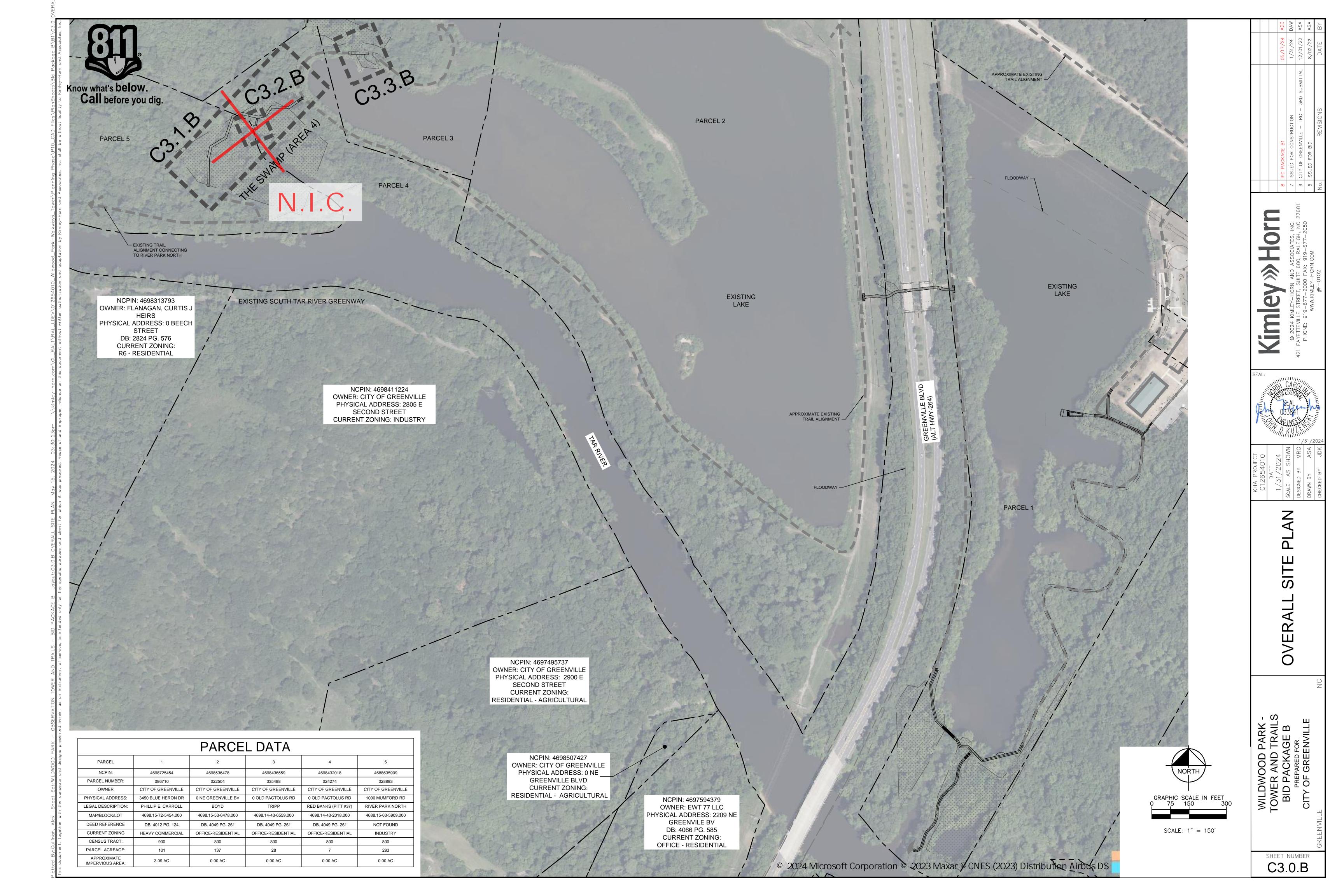
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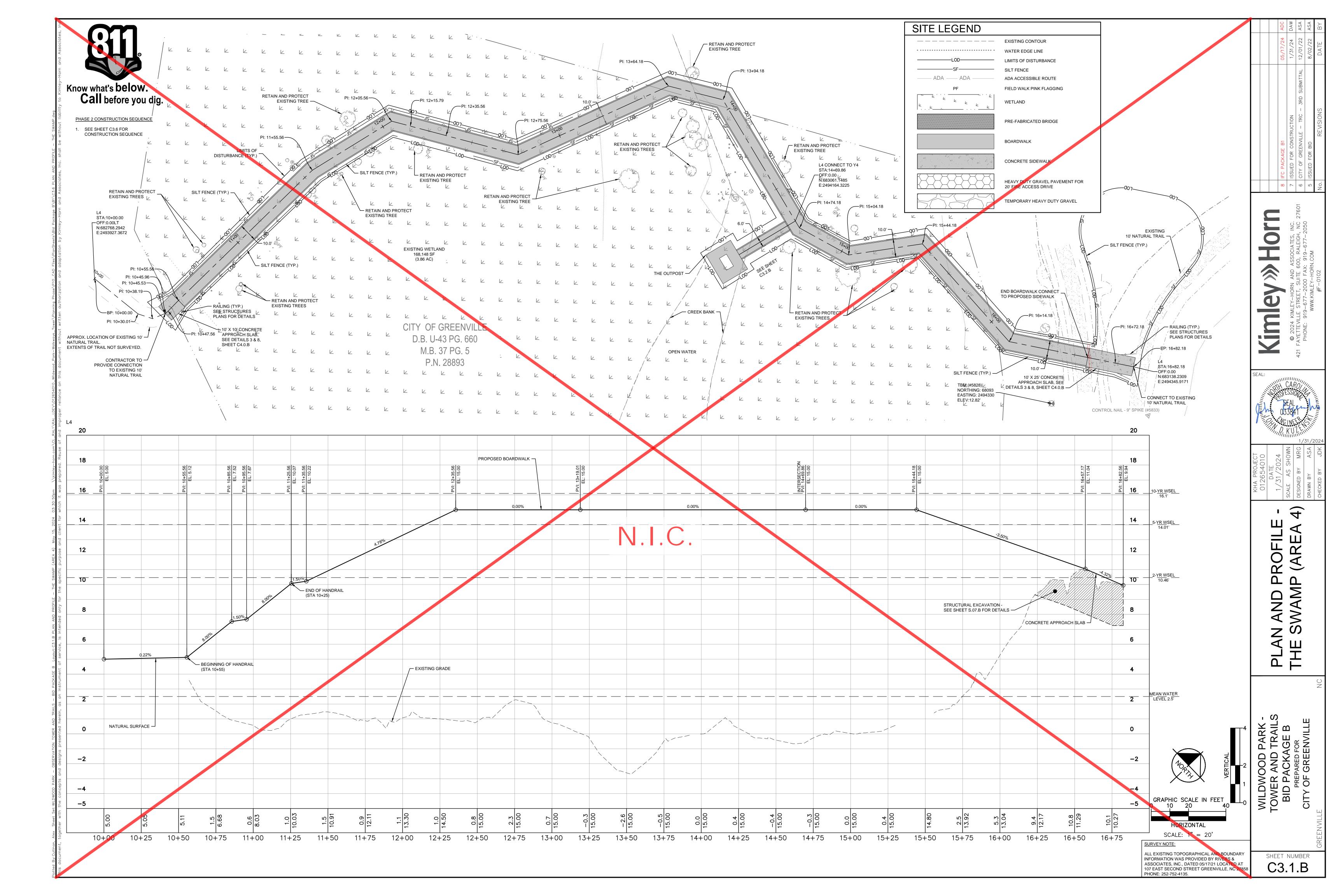
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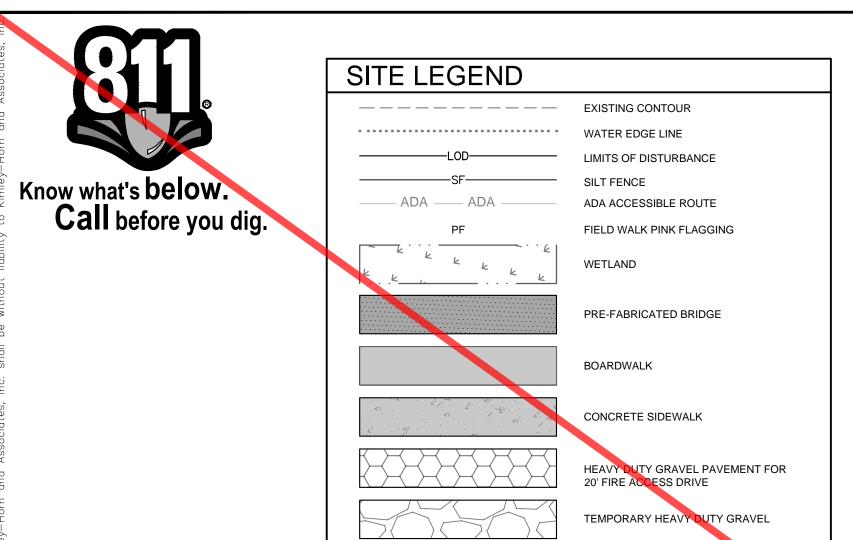












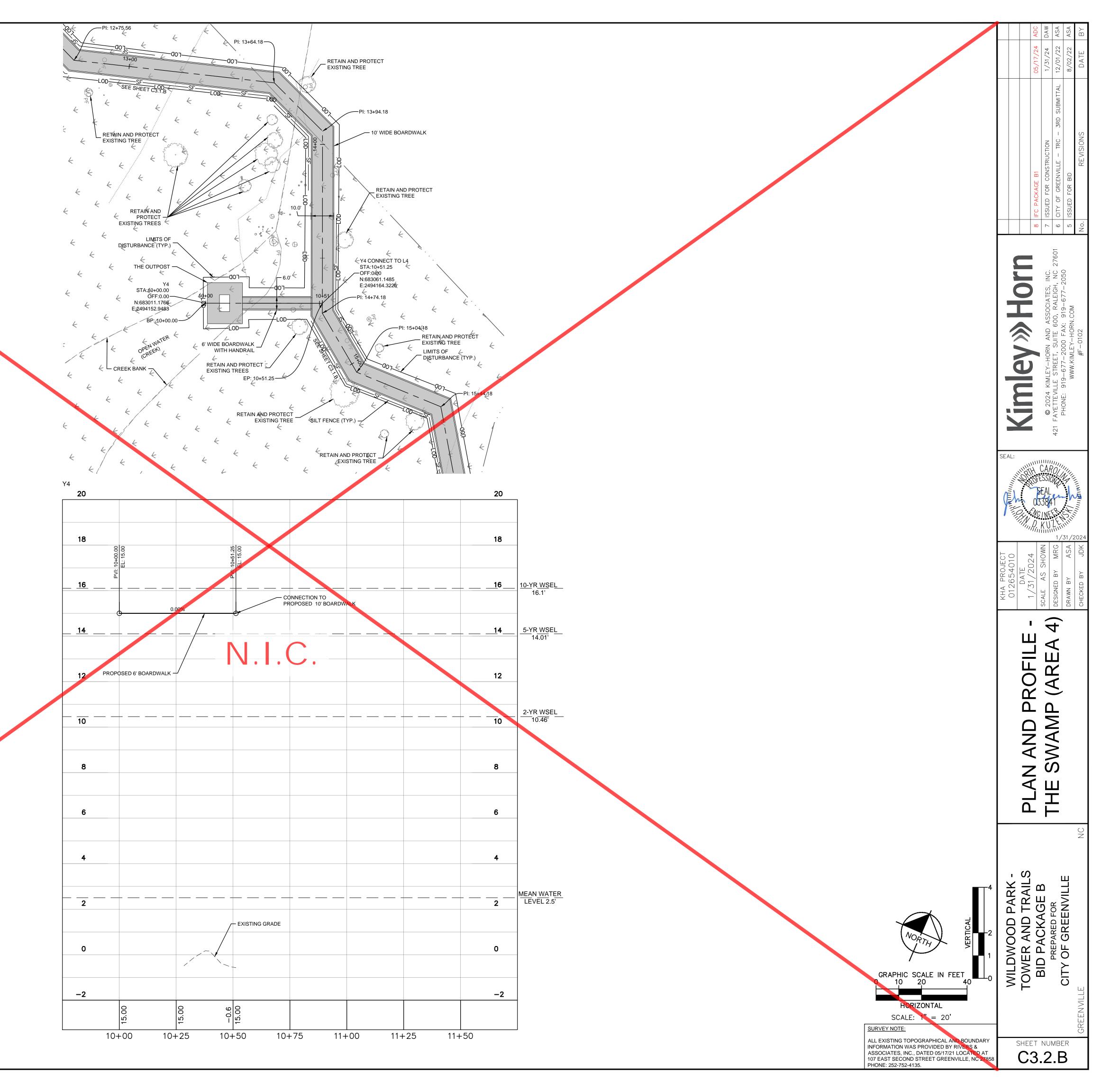
## PHASE 2 CONSTRUCTION SEQUENCE

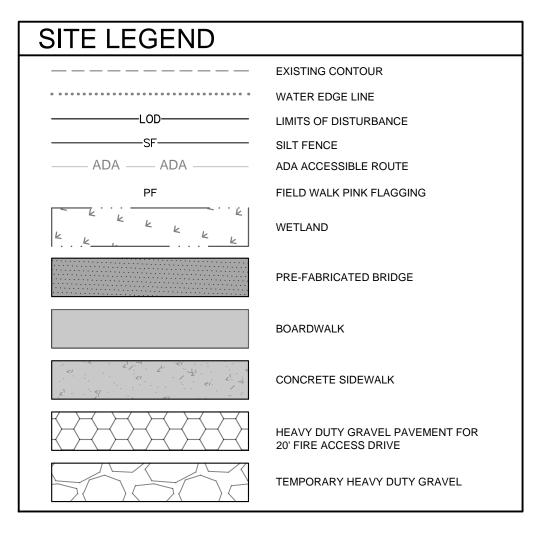
THE FOLLOWING PHASE 2 CONSTRUCTION SEQUENCE IS FURNISHED AS A GENERAL GUIDE FOR PREPARATION OF A SEQUENCE OF CONSTRUCTION

- BEGIN MASS GRADING OF PROPOSED SIDEWALKS AND TRAILS.
   MAINTAIN EROSION CONTROL DEVICES AS NEEDED.
- CONSTRUCT BOARDWALKS, PRE-FABRICATED BRIDGES, AND PROPOSED SIDEWALKS AS SHOWN ON PLANS.
- 3. WHILE IMPROVEMENTS ARE BEING INSTALLED, CONTRACTOR IS TO STABILIZE ALL DISTURBED AREAS AND STREAM BANK SLOPES USING EROSION CONTROL MATTING, SEEDING, AND MULCH TO MAINTAIN A DENSE VEGETATIVE COVER.
- 4. UPON RECEIPT OF BUILDING PERMIT, CONSTRUCT OBSERVATION TOWER AS SHOWN ON ARCHITECTURAL PLANS. CONTRACTOR TO PROVIDE CONSTRUCTION SEQUENCE FOR CRANE ACCESS AND OPERATIONS AND MATERIAL LAY-DOWN AREA.
- INSPECT AND REPAIR EROSION CONTROL MEASURE AFTER EVERY RAINFALL EVENT OF 1/2" OR GREATER OR EVERY SEVEN (7) CALENDAR DAYS.
- 6. REMOVE TEMPORARY CONSTRUCTION ACCESSES UPON PROJECT COMPLETION.
- 7. WHEN CONSTRUCTION IS COMPLETE AND ALL AREAS ARE STABILIZED COMPLETELY, CALL NCDEQ INSPECTORS FOR INSPECTIONS.
- 8. REMOVE TEMPORARY EROSION CONTROL MEASURES AND SEED OR STABILIZE ANY RESULTING BARE AREAS.
- 9. WHEN VEGETATION HAS BECOME ESTABLISHED, CALL FOR A FINAL SITE INSPECTION BY NCDEQ INSPECTOR.
- 10. ALL EROSION CONTROL MEASURES SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE NCDEQ EROSION AND SEDIMENT CONTROL PLANNING AND DESIGN MANUAL, U.S. DEPARTMENT OF AGRICULTURE, AND CITY OF GREENVILLE EROSION CONTROL ORDINANCE.

## NOTE

 REFER TO THIS SHEET, EROSION CONTROL DETAILS SHEETS AND GENERAL NOTES SHEET FOR GENERAL EROSION CONTROL NOTES AND MAINTENANCE AND SEEDBED PREPARATION AND SEEDING





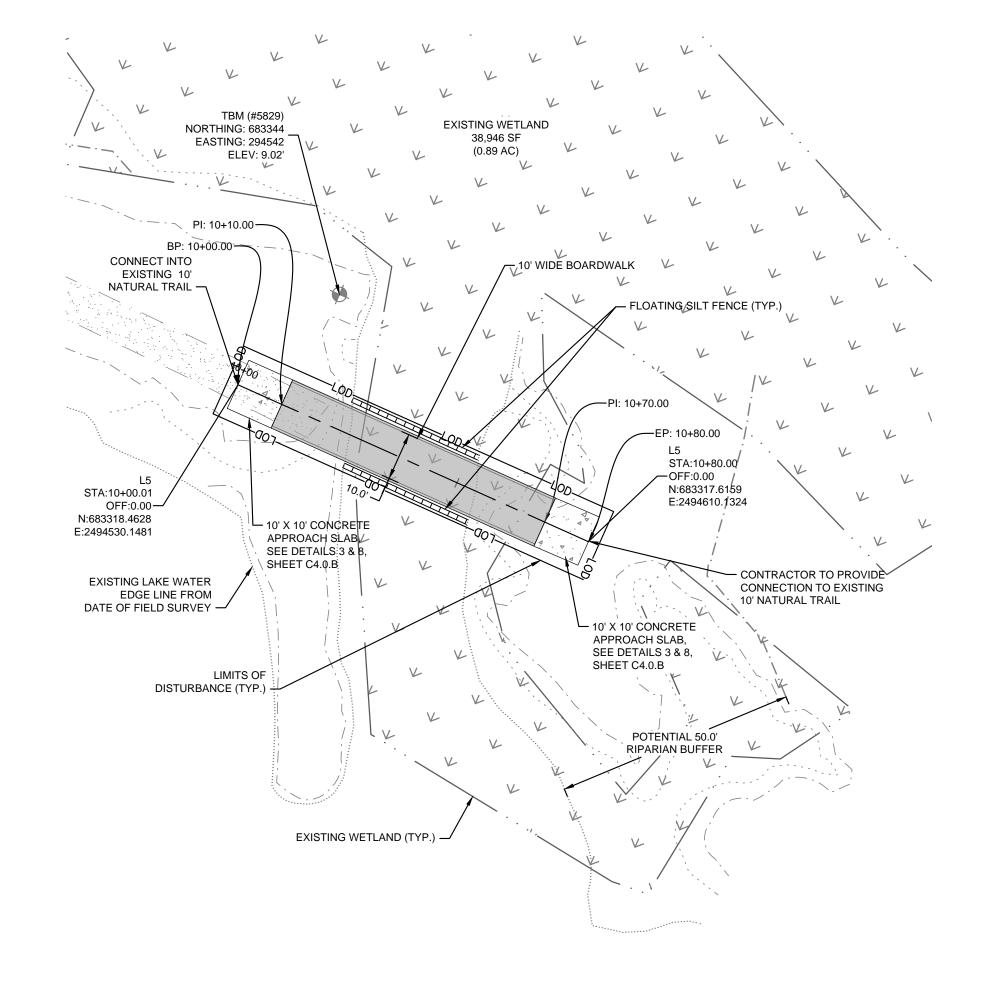
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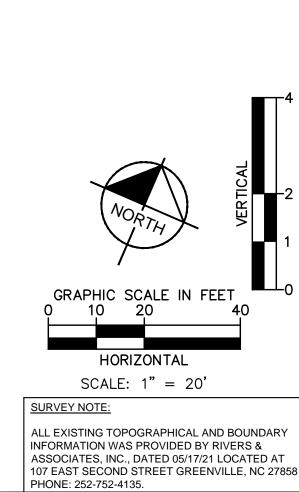
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\_\_\_\_\_\_**16**\_\_\_\_\_\_10-YR\_WSEL\_ 16.1' \_\_14\_\_\_ 14 5-YR WSEL 12 12 2-YR WSEL 10.46' 10 - PROPO\$ED BOARDWALK 6 4 EXISTING GRADE MEAN WATER LEVEL 2.5 2 0 10+00 10 + 2510 + 7510+50



EY-HORN AND ASSOCIATES, INC.

STREET, SUITE 600, RALEIGH, NC 27601

6 CITY OF GREENVILLE - TRC - 3R

WW.KIMLEY-HORN.COM

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No. REVISIONS



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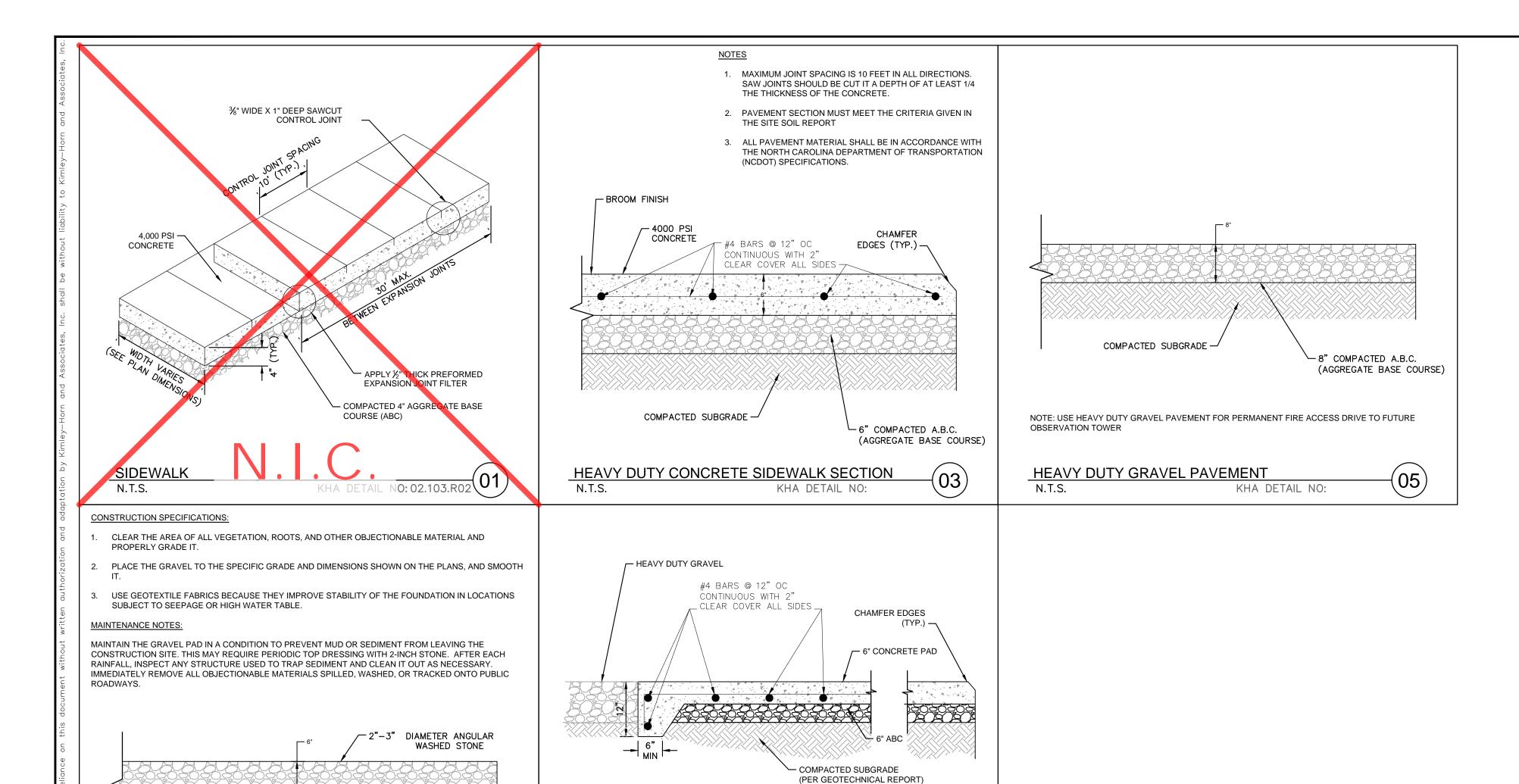
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WILDWOOD PARK TOWER AND TRAILS
BID PACKAGE B
PREPARED FOR

SHEET NUMBER
C3.3.B



1. EXPANSION JOINTS AT BUILDINGS OR IMMOVABLE OBJECTS.

HEAVY DUTY SIDEWALK CONNECTION TO HEAVY

DUTY GRAVEL DETAIL

N.T.S. KHA DETAIL NO: 02.107.R0

2. CONTROL JOINTS 10' O.C.

3. EXPANSION JOINTS 30' O.C. (MAX)

COMPACTED SUBGRADE -

TEMPORARY GRAVEL SECTION FOR

CONSTRUCTION ACCESS AND TURNAROUNDS

N.T.S. KHA DETAIL NO:

PROOF-ROLLED IN PRESENCE OF GEOTECHNICAL ENGINEER

KHA DETAIL NO: 02.107.R01 08

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**DETAILS** SIDEWALK

WILDWOOD PARK TOWER AND TRAILS
BID PACKAGE B
PREPARED FOR
CITY OF GREENVILLE

SURVEY NOTE:

ALL EXISTING TOPOGRAPHICAL AND BOUNDARY INFORMATION WAS PROVIDED BY RIVERS & ASSOCIATES, INC., DATED 05/17/21 LOCATED AT 107 EAST SECOND STREET GREENVILLE, NC 27858 PHONE: 252-752-4135.

SHEET NUMBER C4.0.B

SIDE VIEW

## CONSTRUCTION SPECIFICATIONS

## <u>MATERIALS</u>

- 1. USE A SYNTHETIC FILTER FABRIC OF AT LEAST 95% BY WEIGHT OF POLYOLEFINS OR POLYESTER, WHICH IS CERTIFIED BY THE MANUFACTURER OR SUPPLIER AS CONFORMING TO THE REQUIREMENTS IN ASTM D 6461. SYNTHETIC FILTER FABRIC SHOULD CONTAIN ULTRAVIOLET RAY INHIBITORS AND STABILIZERS TO PROVIDE
- A MINIMUM OF 6 MONTHS OF EXPECTED USABLE CONSTRUCTION LIFE AT A TEMPERATURE RANGE OF 0 TO 120 F.
- 2. ENSURE THAT POSTS FOR SEDIMENT FENCES ARE 1.25 LB/LINEAR FT MINIMUM STEEL WITH A MINIMUM LENGTH OF 5 FEET. MAKE SURE THAT STEEL POSTS HAVE PROJECTIONS TO FACILITATE FASTENING THE FABRIC 3. FOR REINFORCEMENT OF STANDARD STRENGTH FILTER FABRIC, USE WIRE FENCE WITH A MINIMUM 14 GAUGE AND A MAXIMUM MESH SPACING OF 6 INCHES.

- 1. CONSTRUCT THE SEDIMENT BARRIER OF STANDARD STRENGTH OR EXTRA STRENGTH SYNTHETIC FILTER FABRICS. 2. ENSURE THAT THE HEIGHT OF THE SEDIMENT FENCE DOES NOT EXCEED 24 INCHES ABOVE THE GROUND SURFACE. (HIGHER FENCES MAY IMPOUND VOLUMES OF
- WATER SUFFICIENT TO CAUSE FAILURE OF THE STRUCTURE.) 3. CONSTRUCT THE FILTER FABRIC FROM A CONTINUOUS ROLL CUT TO LENGTH OF THE BARRIER TO AVOID JOINTS. WHEN JOINTS ARE NECESSARY, SECURELY
- FASTEN THE FILTER CLOTH ONLY AT A SUPPORT POST WITH 4 FEET MINIMUM OVERLAP TO THE NEXT POST.
- 4. SUPPORT STANDARD STRENGTH FILTER FABRIC BY WIRE MESH SUPPORT TO THE BOTTOM OF THE TRENCH. FASTEN THE WIRE REINFORCEMENT, THEN FABRIC ON THE UPSLOPE SIDE OF THE FENCE POST. WIRE OR PLASTIC ZIP TIES SHOULD HAVE MINIMUM 50 POUND TENSILE STRENGTH.
- 5. WHEN A WIRE MESH SUPPORT FENCE IS USED, SPACE POSTS A MAXIMUM OF 8 FEET APART. SUPPORT POSTS SHOULD BE DRIVEN SECURELY INTO THE GROUND A MINIMUM OF 24 INCHES. 6. EXTRA STRENGTH FILTER FABRIC WITH 6 FEET POST SPACING DOES NOT REQUIRE WIRE MESH SUPPORT FENCE. SECURELY FASTEN THE FILTER FABRIC DIRECTLY
- TO POSTS. WIRE OR PLASTIC ZIP TIES SHOULD HAVE MINIMUM 50 POUND TENSILE STRENGTH.
- 8. PLACE 12 INCHES OF THE FABRIC ALONG THE BOTTOM AND SIDE OF THE TRENCH. 9. BACKFILL THE TRENCH WITH SOIL PLACED OVER THE FILTER FABRIC AND COMPACT. THOROUGH COMPACTION OF THE BACKFILL IS CRITICAL TO SILT FENCE

7. EXCAVATE A TRENCH APPROXIMATELY 4 INCHES WIDE AND 8 INCHES DEEP ALONG THE PROPOSED LINE OF POSTS AND UPSLOPE FROM THE BARRIER.

10. DO NOT ATTACH FILTER FABRIC TO EXISTING TREES.

## **MAINTENANCE**

STEEL POST SET

MAX 2' APART MIN

2' INTO SOLID GROUND

09/20/2011 - 10:56:17 AM

INSPECT SEDIMENT FENCES AT LEAST ONCE A WEEK AND AFTER EACH RAINFALL. MAKE ANY REQUIRED REPAIRS IMMEDIATELY. SHOULD THE FABRIC OF A SEDIMENT FENCE COLLAPSE, TEAR, DECOMPOSE OR BECOME INEFFECTIVE, REPLACE IT PROMPTLY. REMOVE SEDIMENT DEPOSITS AS NECESSARY TO PROVIDE ADEQUATE STORAGE VOLUME FOR THE NEXT RAIN AND TO REDUCE PRESSURE ON THE FENCE. TAKE CARE TO AVOID UNDERMINING THE FENCE DURING CLEANOUT. REMOVE ALL FENCING MATERIALS AND UNSTABLE SEDIMENT DEPOSITS AND BRING THE AREA TO GRADE AND STABILIZE IT AFTER THE CONTRIBUTING DRAINAGE AREA HAS BEEN PROPERLY STABILIZED.

1. MUD MAT(S) SHOULD BE LOCATED TO PROVIDE FOR UTILIZATION BY ALL CONSTRUCTION VEHICLES. 2. MAINTENANCE: MUST BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR DIRECT FLOW OF MUD INTO WETLAND. MUD MAT(S) SHALL BE UTILIZED IN WETLAND AREAS TO LIMIT IMPACTS FOR BRIDGE AND BOARDWALK CONSTRUCTION. FREQUENT CHECKS OF THE DEVICE AND TIMELY MAINTENANCE MUST BE PROVIDED BY THE CONTRACTOR. 4. NUMBER AND LOCATION OF MUD MATS TO MINIMIZE IMPACTS OR DETERMINED BY THE ENGINEER. 5. CONTRACTOR MAY SUBMIT ALTERNATE MUD MAT FOR APPROVAL. (6" MIN DEPTH) 6. CONSTRUCTION ENTRANCE APPROACHES TO MUD MAT SHALL BE INCIDENTAL TO THE MUD MAT PAY ITEM. (6" MIN) MAT OVERLAP PER MANUFACTURE SPECIFICATION ISOMETRIC VIEW MUD MAT DETAIL

KHA DETAIL NO: 01.302.R02

STEEL POST -TOP OF SILT FENCE MUST BE AT LEAST WOVEN WIRE FABRIC -ABOVE THE TOP OF THE WASHED STONE. HARDWARE CLOTH -FILTER OF #57 WASHED STONE -3' FILTER FABRIC APRON ON GROUND +FRONT VIEW -BURY 6" UPPER EDGE OF BURY WIRE FENCE AND FILTER FABRIC APRON IN TRENCH

- BURY WIRE FENCE,

CLOTH IN TRENCH.

FILTER FABRIC,

AND HARDWARE

MAINTENANCE/SPECIFICATION NOTES 1. REMOVE SEDIMENT WHEN HALF OF STONE OUTLET IS COVERED.

- 2. REPLACE STONE AS NEEDED TO ENSURE DEWATERING.
- 3. SILT FENCE OUTLETS SHOULD NOT BE LOCATED WHERE THE OUTFLOW WILL ERODE THE SOIL BELOW.

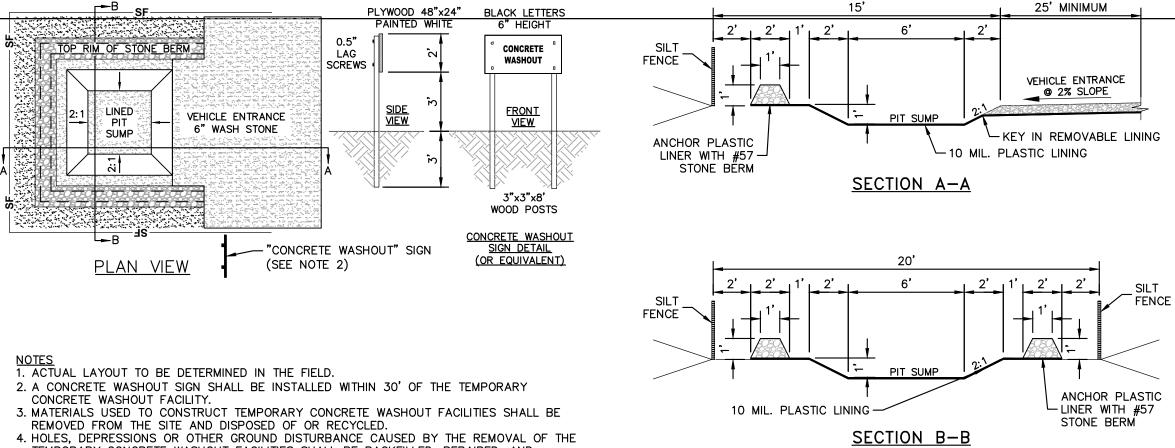
SILT FENCE OUTLET

N.T.S.

TEMPORARY SILT FENCE

KHA DETAIL NO: 01.303.R02

SIDE VIEW



TEMPORARY CONCRETE WASHOUT FACILITIES SHALL BE BACKFILLED, REPAIRED, AND

STABILIZED TO PREVENT EROSION. 5. PIT CAPACITY IS MINIMUM OF 6 CUBIC FEET PER 10 CUBIC YARDS OF CONCRETE.

CONCRETE WASHOUT STATION

09/20/2011 - 10:55:28 AM

MUDMAT DETAIL

N.T.S.

------(04)

09/20/2011 - 12:17:56 PM

SEDIMENTATION AND EROSION CONTROL

## EROSION CONTROL GUIDE

ANY EROSION CONTROL DEVICES OR METHODS SHALL BE IN ACCORDANCE WITH THE NORTH CAROLINA DEPARTMENT OF NATURAL RESOURCES - EROSION AND SEDIMENTATION CONTROL PANNING AND DESIGN MANUAL AND ALL AMENDMENTS. THE EROSION CONTROL DEVICES AND METHODS THAT FOLLOW ARE SUPPLEMENTAL TO THE STATE MANUAL. OTHER DEVICES & METHODS NOT INCLUDED IN THE STATE MANUAL, MAY BE SUBMITTED TO THE CITY ENGINEER FOR APPROVAL.

## **EROSION CONTROL NOTES:**

- 1. Scheduling of a preconstruction conference with the Engineering Division is required prior to initiating land disturbing activities. For scheduling please call (252) 329-4467. A 24-hour notice is required. No person may initiate a land disturbing activity before notifying the City of the date of the land disturbing activity.
- 2. No land disturbing activity beyond that required to install appropriate erosion control may proceed until erosion control measures are inspected and approved by the City.
- 3. Seeding and mulching or otherwise providing ground cover devices or structures sufficient to restrain erosion for all exposed slopes is required within 21 working days of completing any phase of grading.
- 4. Contractor shall inspect and maintain all erosion control devices on a weekly basis and after each major storm event. Failure to maintain erosion control devices may result in an issuance of stop work order or civil penalties up to \$5,000 per day of violation. Sites utilizing sediment traps must also specify a maximum depth of sediment prior to clean out.
- 5. The City Engineer reserves the right to require additional erosion control measures should the plan or its implementation prove to be inadequate.
- 6. Acceptance and approval of this plan is conditioned upon your compliance with Federal and State water quality laws, regulations and rules. In addition, local City and County ordinances or rules may also apply to this land disturbing activity. Approval by the City does not supersede any other permit or approval.
- A. Please be advised of the rules to protect and maintain existing buffers along watercourses in the Neuse and Tar River basins. These rules are enforced by the Division of Water Quality (DWQ). Direct any questions about the applicability of these rules to your project to the regional water quality supervisor, Washington



## SEEDING AND MULCHING:

HARDWARE CLOTH -

The kinds of seed and fertilizer, and the rates of application of seed, fertilizer, and limestone, shall be stated below. During periods of overlapping dates, the kind of seed to be used shall be determined. All rates are in pounds per acre.

		All Roadway Areas	
March 1 -	August 31	Septembe	er 1 - February 28
50#	Tall Fescue	50#	Tall Fescue
10#	Centipede	10#	Centipede
25#	Bermudagrass (hulled)	35#	Bermudagrass (hulled
500#	Fertilizer	500#	Fertilizer
400011		100011	

10#	Centipede	10#	Centipede
25#	Bermudagrass (hulled)	35#	Bermudagrass (hulled
500#	Fertilizer	500#	Fertilizer
4000#	Limestone	4000#	Limestone

March 1 - August 31 September 1 - February 28 75# Tall Fescue 75# Tall Fescue 25# Bermudagrass (hulled) 35# Bermudagrass (hulled) 500# 500# Fertilizer Fertilizer 4000# Limestone 4000# Limestone Note: 50# of Bahiagrass may be substituted for either Centipede or Bermudagrass only upon Engineer's request.

Approved Tall Fescue Cultivars Titan Ltd. 2nd Millennium Chipper Quest Focus Masterpiece Rebel Exeda Avenger Coronado Grande II Matador Titanium Barlexas Coyote Greenkeeper Matador GT Rebel Sentry Tomohawk Barlexas II Davinci Greystone Millennium Regiment II Tacer Dynasty Inferno Montauk Rembrandt Trooper Barrera Barrington Dominion Justice Mustang 3 Rendition Turbo Biltmore Duster Jaguar 3 Olympic Gold Scorpion Ultimate Bingo Endeavor Kalahari Padre Shelby Watchdog Paraiso Signia Kentucky 31 Wolfpack Escalade Bravo Cayenne Falcon II, III, IV & Kitty Hawk Picasso Silverstar Chapel Hill Fidelity Kitty Hawk 2000 Piedmont Southern Choice II Pure Gold Stetson Chesapeake Finesse II Lexington

Water and Borrow Locations

Tarheel Constitution Firebird Magellan Prospect JBLIC WORKS DEPARTMENT **CITY OF GREENVILLE, N.C.** 00 Beatty Street APPROVAL enville, North Carolina 27834 **EROSION CONTROL GUIDE** Detail # 310.01 On cut and fill slopes 2:1 or steeper Centipede shall be applied at a rate of 5 pounds per acre and add 20# of Sericea Lespedeza from January 1 - December 21.

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

All areas seeded and mulched shall be tacked with asphalt. Crimping of straw in lieu of asphalt tack shall not be

## CRIMPING STRAW MULCH:

Crimping shall be required on projects adjacent to any section of roadway where traffic is to be maintained or allowed during construction. In areas within six feet of the edge of pavement, straw is to be applied and then crimped. After the crimping operation is complete, an additional application of straw shall be applied and immediately tacked with a sufficient amount of undiluted emulsified asphalt.

Straw mulch shall be sufficient length and quality to withstand the crimping operation.

Crimping equipment including power source shall be subject to the approval of the Engineer providing that maximum spacing of crimper blades shall not exceed 8".

UBLIC WORKS DEPARTMENT CITY OF GREENVILLE, N.C. 500 Beatty Street APPROVAL eenville, North Carolina 27834 **EROSION CONTROL GUIDE** 310.01

SURVEY NOTE:

ALL EXISTING TOPOGRAPHICAL AND BOUNDARY INFORMATION WAS PROVIDED BY RIVERS & ASSOCIATES, INC., DATED 05/17/21 LOCATED AT 107 EAST SECOND STREET GREENVILLE, NC 27858 PHONE: 252-752-4135

WILDWOOD F TOWER AND BID PACKA

SHEET NUMBER C4.1.B

## SECTION E: GROUND STABILIZATION

	Re	equired Ground Stabil	ization 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	<ul> <li>-7 days for slopes greater than 50' in length and with slopes steeper than 4:1</li> <li>-7 days for perimeter dikes, swales, ditches, perimeter slopes and HQW Zones</li> <li>-10 days for Falls Lake Watershed</li> </ul>
(e)	Areas with slopes flatter than 4:1	14	<ul> <li>-7 days for perimeter dikes, swales, ditches, perimeter slopes and HQW Zone</li> <li>-10 days for Falls Lake Watershed unless there is zero slope</li> </ul>

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 grass seed covered with straw or Permanent grass seed covered with straw or
- other mulches and tackifiers • Rolled erosion control products with or

Plastic sheeting

LINE WIRES

N.T.S.

- WOVEN WIRE FABRIC

- ORANGE, UV RESISTANT

TREE PROTECTION FENCE

HIGH-TENSILE STRENGTH

POLY BARRICADE FABRIC

- WARNING SIGN

(TYP)

- Geotextile fabrics such as permanent soil without temporary grass seed Appropriately applied straw or other mulch with mulch
  - reinforcement matting • Shrubs or other permanent plantings covered • Uniform and evenly distributed ground cove sufficient to restrain erosion Structural methods such as concrete, asphalt or retaining walls

Rolled erosion control products with grass seed

WARNING SIGN

TREE PROTECTION AREA

DO NOT ENTER

ZONA DE PROTECCION

PARAARBOLES - NO ENTRE

WARNING SIGN DETAIL

FRONT VIEW

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

## QUIPMENT AND VEHICLE MAINTENANCE

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

Remove leaking vehicles and construction equipment from service until the problem

## ITER, BUILDING MATERIAL AND LAND CLEARING WASTE

- Never bury or burn waste. Place litter and debris in approved waste containers. Provide a sufficient number and size of waste containers (e.g dumpster, trash
- receptacle) on site to contain construction and domestic wastes. Locate waste containers at least 50 feet away from storm drain inlets and surface waters unless no other alternatives are reasonably available.
- Locate waste containers on areas that do not receive substantial amounts of runoff from upland areas and does not drain directly to a storm drain, stream or wetland. Cover waste containers at the end of each workday and before storm events or
- provide secondary containment. Repair or replace damaged waste containers. Anchor all lightweight items in waste containers during times of high winds. Empty waste containers as needed to prevent overflow. Clean up immediately if
- Dispose waste off-site at an approved disposal facility. On business days, clean up and dispose of waste in designated waste containers.
- PAINT AND OTHER LIQUID WASTE Do not dump paint and other liquid waste into storm drains, streams or wetlands.
- Locate paint washouts at least 50 feet away from storm drain inlets and surface waters unless no other alternatives are reasonably available. Contain liquid wastes in a controlled area.
- . Containment must be labeled, sized and placed appropriately for the needs of site. Prevent the discharge of soaps, solvents, detergents and other liquid wastes from construction sites.

containers overflow.

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

WIRE TILES

INTERMEDIATE

— ORANGE, UV RESISTANT

HIGH-TENSILE STRENGTH

POLY BARRICADE FABRIC (TYP.)

ALL WORDING

SHALL BE 3'

- PROVIDE WARNING

LANGUAGE IN BOTH

IN HEIGHT

AS SHOWN

WIRES

– GRADE

. Divert all surface water from the construction site onto undisturbed areas

4. Align road approaches with the center line of the crossing for a minimu

of 30 feet. Raise bridge abutments and culvert fills a minimum of

5. Stabilize all disturbed areas subject to flowing water, including planned

6. Ensure that bypass channels necessary to dewater the crossing site a

eeded. Restore the stream channel to its original cross-section, and smooth

. Any in-stream sediment control measures must be removed upon

or piping. Make all repairs immediately to prevent further damage to the

NCDEQ TEMPORARY STREAM CROSSING DETAIL INFORMATION

. Keep stream crossings at right angles to the stream flow

ne allowable for the in-place soil (Table 8.05a, Appendix 8.05).

- Show stockpile locations on plans. Locate earthen-material stockpile areas at least 50 feet away from storm drain inlets, sediment basins, perimeter sediment controls and surface waters unless it can be shown no other alternatives are reasonably
- Protect stockpile with silt fence installed along toe of slope with a minimum offset of five feet from the toe of stockpile.
- Provide stable stone access point when feasible.

NCG01 GROUND STABILIZATION AND MATERIALS HANDLING

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.

# 3.CONCRETE WASHOUT STRUCTURE NEEDS TO BE CLEARY MARKED WITH SIGNAGE NOTING DEVICE. SCONCRETE WASHOUT STRUCTURE NEEDS TO BE CLEARY MARKED WITH SIGNAGE MOTING DEVICE. ABOVE GRADE WASHOUT STRUCTURE BELOW GRADE WASHOUT STRUCTURE

## ONCRETE WASHOUTS

- Do not discharge concrete or cement slurry from the site. Dispose of, or recycle settled, hardened concrete residue in accordance with local
- and state solid waste regulations and at an approved facility. 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 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. Do not use concrete washouts for dewatering or storing defective curb or sidewalk sections. Stormwater accumulated within the washout may not be pumped into or discharged to the storm drain system or receiving surface waters. Liquid waste must be pumped out and removed from project
- Locate washouts at least 50 feet from storm drain inlets and surface waters unless it can be shown that no other alternatives are reasonably available. At a minimum, install protection of storm drain inlet(s) closest to the washout which could receive
- spills or overflow. Locate washouts in an easily accessible area, on level ground and install a stone entrance pad in front of the washout. Additional controls may be required by the
- approving authority. 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.

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. 0. 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

- Store and apply herbicides, pesticides and rodenticides in accordance with label
- Store herbicides, pesticides and rodenticides in their original containers with the label, which lists directions for use, ingredients and first aid steps in case of accidental poisonin
  - 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. Do not stockpile these materials onsite.

## IAZARDOUS AND TOXIC WASTE

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

| EFFECTIVE: 04/01/19

SEWN IN SPOUT -

HIGH STRENGTH -

PUMP HOSE

**GEOTEXTILE DEWATERING SILT BAG** 

STRAPPING FOR

SECURING SPOUT TO

PUMP DISCHARGE HOSE -

FLOW

## SELF-INSPECTION, RECORDKEEPING AND REPORTING

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 o holiday periods, and no individual-day rainfall information i available, record the cumulative rain measurement for those un attended days (and this will determine if a site inspection i needed). Days on which no rainfall occurred shall be recorded a "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	I. Identification of the measures inspected,     Date and time of the inspection,     Name of the person performing the inspection,     Indication of whether the measures were operating properly,     Description of maintenance needs for the measure,     Description, evidence, and date of corrective actions taken.
(3) Stormwater discharge outfalls (SDOs)	At least once per 7 calendar days and within 24 hours of a rain event ≥ 1.0 inch in 24 hours	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 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.

WIDTH RANGE

HIGH STRENGTH -

DOUBLE STITCHED

SILT BAG TO BE

PLACED ON EXISTING

GRASS, OR STRAW.

"J" TYPE SEAMS

GEOTEXTILE DEWATERING

SILT BAG

LENGTH RANGE

6.0'-15.0'

<u>PLAN VIEW</u>

FLOW

DISCHARGE

EXISTING GROUND -

## SELF-INSPECTION, RECORDKEEPING AND REPORTING

### CTION B: RECORDKEEPING . E&SC Plan Documentation

The approved E&SC plan as well as any approved deviation shall be kept on the site. The approved E&SC plan must be kept up-to-date throughout the coverage under this permit. The following items pertaining to the E&SC plan shall be documented in the manner described:

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

## Additional Documentation

- In addition to the E&SC Plan documents above, the following items shall be kept on the
- and available for agency inspectors at all times during normal business hours, unless the Division provides a site-specific exemption based on unique site conditions that make this requirement not practical:
- (a) This general permit as well as the certificate of coverage, after it is received.
- (b) Records of inspections made during the previous 30 days. The permittee shall record the required observations on the Inspection Record Form provided by the Division or a similar inspection form that includes all the required elements. Use of electronically-available records in lieu of the required paper copies will be allowed if shown to provide equal access and utility as the hard-copy records.
- All data used to complete the Notice of Intent and older inspection records shall be maintained for a period of three years after project completion and made available upon request. [40 CFR 122.41]

GEOTEXTILE

SILT BAG

FILTERED SHEET FLOW TO -

(STABILIZE AS NECESSARY

WITH STONE OR MATTING)

NEAREST STORM INLET

DEWATERING

------(02)

NCG01 SELF-INSPECTION, RECORDKEEPING AND REPORTING

GEOTEXTILE DEWATERING SILT BAG DIMENSIONS ARE VARIABLE AND DEPENDENT ON SPECIFIC SITE CONSTRAINTS AND PROPOSED

2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR SUBMITTING THE

3. THE CONTRACTOR SHALL ENSURE THAT THE SILT BAG IS OF A SUFFICIENT SIZE AND STRENGTH TO PROPERLY DEWATER THE

4. SILT BAG SHALL BE REPLACED WHEN FULL OF SEDIMENT OR

WHEN FLOW THROUGH BAG IS LIMITED BY SEDIMENT

FOR APPROVAL BY NCDENR PRIOR TO CONSTRUCTION.

SIZE AND LOCATION OF THE GEOTEXTILE DEWATERING SILT BAG

CONSTRUCTION OPERATIONS.

PUMP HOSE INFLUENT.

LENGTH RANGE

6.0'-15.0'

ACCUMULATION.

## SELF-INSPECTION, RECORDKEEPING AND REPORTING

Occurrences that must be reported Permittees shall report the following occurrences: (a) Visible sediment deposition in a stream or wetland.

## (b)Oil spills if:

They are 25 gallons or more They are less than 25 gallons but cannot be cleaned up within 24 hours, They cause sheen on surface waters (regardless of volume), or

They are within 100 feet of surface waters (regardless of volume).

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

## (b) Anticipated bypasses and unanticipated bypasses.

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

## Reporting Timeframes and Other Requirements

After a permittee becomes aware of an occurrence that must be reported, he shall contact the appropriate Division regional office within the timeframes and in accordance with the other requirements listed below. Occurrences outside normal business hours may also be reported to the Division's Emergency Response personnel at (800) 662-7956, (800) 858-0368 or (919) 733-3300.

## deposition in a stream or wetland

(b) Oil spills and

release of

hazardous

- Reporting Timeframes (After Discovery) and Other Requirements (a) Visible sediment • 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 <u>NC 303(d) list</u> 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 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. substances per Item 1(b)-(c) above

- (c) Anticipated A report at least ten days before the date of the bypass, if possible. bypasses [40 CFR The report shall include an evaluation of the anticipated quality and 122.41(m)(3)]
- (d) Unanticipated Within 24 hours, an oral or electronic notification. • Within 7 calendar days, a report that includes an evaluation of the
- bypasses [40 CFR 122.41(m)(3)] quality and effect of the bypass (e) Noncompliance Within 24 hours, an oral or electronic notification
- with the conditions Within 7 calendar days, a report that contains a description of the noncompliance, and its causes; the period of noncompliance, may endanger including exact dates and times, and if the noncompliance has not health or the been corrected, the anticipated time noncompliance is expected to environment[40
- continue; and steps taken or planned to reduce, eliminate, and CFR 122.41(I)(7)] prevent reoccurrence of the noncompliance. [40 CFR 122.41(I)(6). Division staff may waive the requirement for a written report on a

# EFFECTIVE: 04/01/

APPLICABLE AT ALL POINTS OF

THE DEVICE AND TIMELY

INGRESS & EGRESS UNTIL SITE IS STABILIZED. FREQUENT CHECKS OF

MAINTENANCE MUST BE PROVIDED.

## CONSTRUCTION SPECIFICATIONS:

2"-3" WASHED STONE

- CLEAR THE ENTRANCE AND EXIT AREA OF ALL VEGETATION, ROOTS, AND OTHER OBJECTIONABLE MATERIAL AND PROPERLY GRADE IT.
- PLACE THE GRAVEL TO THE SPECIFIC GRADE AND DIMENSIONS SHOWN ON THE PLANS, AND SMOOTH IT.
- PROVIDE DRAINAGE TO CARRY WATER TO A SEDIMENT TRAP OR OTHER SUITABLE OUTLET. USE GEOTEXTILE FABRICS BECAUSE THEY IMPROVE STABILITY OF THE FOUNDATION IN

## LOCATIONS SUBJECT TO SEEPAGE OR HIGH WATER TABLE. MAINTENANCE NOTES:

MAINTAIN THE GRAVEL PAD IN A CONDITION TO PREVENT MUD OR SEDIMENT FROM LEAVING THE CONSTRUCTION SITE. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH 2-INCH STONE. AFTER EACH RAINFALL, INSPECT ANY STRUCTURE USED TO TRAP SEDIMENT AND CLEAN IT OUT AS NECESSARY. IMMEDIATELY REMOVE ALL OBJECTIONABLE MATERIALS SPILLED, WASHED, OR TRACKED ONTO PUBLIC ROADWAYS.

## TEMPORARY CONSTRUCTION ENTRANCE KHA DETAIL NO: 01.101.R02



# $\mathbf{\Omega}$

WILD\ TOWE BID

SHEET NUMBER

## **SURVEY NOTE:**

ALL EXISTING TOPOGRAPHICAL AND BOUNDARY INFORMATION WAS PROVIDED BY RIVERS & ASSOCIATES, INC., DATED 05/17/21 LOCATED AT 107 EAST SECOND STREET GREENVILLE, NC 2785 PHONE: 252-752-4135

IN GENERAL, ALL EROSION AND SEDIMENT CONTROL MEASURES WILL BE CHECKED AND MAINTAINED DAILY AND AFTER EACH RAINFALL GREATER THAN 0.5 INCHES. ANY SEDIMENT THAT HAS BEEN TRANSPORTED BEYOND THE

## CONSTRUCTION ENTRANCE:

INSPECT CONSTRUCTION ROADS AND PARKING AREAS PERIODICALLY FOR CONDITION OF SURFACE. TOP DRESS WITH NEW GRAVEL AS NEEDED. CHECK ROAD DITCHES AND OTHER SEEDED AREAS FOR EROSION AND SEDIMENTATION AFTER RUNOFF-PRODUCING RAINS. MAINTAIN ALL VEGETATION IN A HEALTHY, VIGOROUS CONDITION. SEDIMENT PRODUCING AREAS SHOULD BE TREATED IMMEDIATELY.

## SILT FENCE GRAVEL OUTLET:

INSPECT SEDIMENT FENCE GRAVEL OUTLETS AT LEAST ONCE A WEEK AND AFTER EACH RAINFALL. MAKE ANY

## SELF MONITORING AND INSPECTION NOTIFICATION

THE SEDIMENTATION POLLUTION CONTROL ACT WAS AMENDED IN 2006 TO REQUIRE THAT PERSONS RESPONSIBLE FOR LAND-DISTURBING ACTIVITIES INSPECT A PROJECT AFTER EACH PHASE OF THE PROJECT TO MAKE SURE THAT THE APPROVED EROSION AND SEDIMENTATION CONTROL PLAN IS BEING FOLLOWED. RULES DETAILING THE DOCUMENTATION OF THESE INSPECTIONS BECAME EFFECTIVE OCTOBER 1, 2010. TO SIMPLIFY DOCUMENTATION OF SELF-INSPECTION REPORTS AND NPDES SELF-MONITORING REPORTS, A COMBINED FORM IS NOW AVAILABLE. THE NEW FORM WAS DEVELOPED TO SATISFY THE REQUIREMENTS OF THE SEDIMENTATION POLLUTION CONTROL ACT AND THE NPDES STORMWATER PERMIT FOR CONSTRUCTION ACTIVITIES, NCG 010000. BEGINNING AUGUST 1, 2013, THE DIVISION OF ENERGY, MINERAL, AND LAND RESOURCES IS RESPONSIBLE FOR ADMINISTERING BOTH THE SPCA AND THE NPDES STORMWATER PERMIT FOR CONSTRUCTION ACTIVITIES, NCG 010000. THE COMBINED FORM SHOULD MAKE IT EASIER TO COMPLY WITH SELF-INSPECTION REQUIREMENTS. THE COMBINED SELF-MONITORING FORM IS AVAILABLE AS A PDF AND WORD DOCUMENT FROM THE LAND QUALITY WEB SITE,

https://files.nc.gov/ncdeq/Energy%20Mineral%20and%20Land%20Resources/Stormwater /NCG010000\_Final\_Permit\_2019\_04\_01.pdf.

IF YOU HAVE QUESTIONS, PLEASE CONTACT THE LAND QUALITY SECTION AT NCDEQ REGIONAL OFFICE.

# 01.304.R0° MAINTENANCE NOTES:

PROJECT LIMITS SHALL BE REMOVED. THE FOLLOWING ITEMS WILL BE CHECKED IN PARTICULAR:

## SILT FENCE

1. TREE PROTECTION FENCING MUST BE INSTALLED AT A MINIMUM RADIUS OF

3. THE TREE PROTECTION FENCING MUST NOT BE VIOLATED FOR THE ENTIRE

4. THERE WILL BE ZERO TOLERANCE FOR STORING OR PARKING VEHICLES,

5. IMPACT PROTECTION DEVICES MUST BE REMOVED AFTER CONSTRUCTION.

LETTERS TO BE 3" HIGH MINIMUM, CLEARLY LEGIBLE AND SPACED AS

7. SIGNS SHALL BE PLACED AT 50' MAXIMUM INTERVALS. PLACE A SIGN AT

DECOMPOSE OR BECOME INEFFECTIVE, CONTRACTOR SHALL REPLACE IT

EACH END OF LINEAR TREE PROTECTION AND 50' ON CENTER THEREAFTER.

FOR TREE PROTECTION AREAS LESS THAN 200' IN PERIMETER, PROVIDE NO

6. WARNING SIGNS TO BE MADE OF DURABLE, WEATHERPROOF MATERIAL.

2. IF CONSTRUCTION OCCURS WITHIN THE CRZ AT LEAST 12" OF MULCH

1.25' (FT) PER INCH AT DBH FROM TRUNK OF TREE.

SUPPLIES, OR EQUIPMENT UNDER PROTECTED TREES.

TO REDUCE SOIL COMPACTION IN THIS ZONE.

LESS THAN ONE SIGN PER PROTECTION AREA.

ENGLISH AND SPANISH, 8. ATTACH SIGNS SECURELY TO FENCE POSTS AND FABRIC. MAINTAIN TREE

PROTECTION FENCE THROUGHOUT DURATION OF PROJECT.

9. SHOULD THE FABRIC OF A PROTECTION FENCE COLLAPSE, TEAR,

DURATION OF THE PROJECT.

THE CRITICAL ROOT ZONE (CRZ) OF TREES. (CRZ DEFINED AS RADIUS x

AND/OR LOGGING MATTS SHALL BE PLACED WHERE MACHINERY MANEUVERS

INSPECT SEDIMENT FENCES AT LEAST ONCE A WEEK AND AFTER EACH RAINFALL. MAKE ANY REQUIRED REPAIRS IMMEDIATELY. SHOULD THE FABRIC OF A SEDIMENT FENCE COLLAPSE, TEAR, DECOMPOSE, OR BECOME INEFFECTIVE, REPLACE IT IMMEDIATELY. REMOVE SEDIMENT DEPOSITS AS NECESSARY TO PROVIDE ADEQUATE STORAGE VOLUME FOR THE NEXT RAIN AND TO REDUCE PRESSURE ON THE FENCE. TAKE CARE TO AVOID UNDERMINING THE FENCE DURING CLEANOUT. REMOVE ALL FENCING MATERIALS AND UNSTABLE SEDIMENT DEPOSITS AND BRING THE AREA TO GRADE AND STABILIZE IT AFTER THE CONTRIBUTING DRAINAGE AREA HAS BEEN PROPERLY STABILIZED.

REQUIRED REPAIRS IMMEDIATELY. REMOVE SEDIMENT DEPOSITS AS NECESSARY TO PROVIDE ADEQUATE STORAGE VOLUME FOR THE NEXT RAIN. ANY RIP RAP DISPLACED MUST BE REPLACED IMMEDIATELY.



## GENERAL NOTES

## SPECIFICATION

- 1. CURRENT EDITIONS OF THE AASHTO LRFD GUIDE SPECIFICATIONS FOR PEDESTRIAN BRIDGES, NORTH CAROLINA DEPARTMENT OF TRANSPORTATION BICYCLE FACILITIES PLANNING AND DESIGN GUIDELINES, NORTH CAROLINA DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN MANUAL, NORTH CAROLINA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROADS AND STRUCTURES, AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, AND THE INCORPORATED PROJECT SPECIAL PROVISIONS.
- 2. FOR CRANE SAFETY, SEE SPECIAL PROVISIONS.
- 3. FOR TIMBER BOARDWALK, SEE SPECIAL PROVISIONS.
- 4. FOR STRUCTURAL STANDARD NOTES REFER TO SHEET S.20.B.

## MATERIAL AND WORKMANSHIP

1. PROVIDE ALL MATERIAL AND WORKMANSHIP IN ACCORDANCE WITH THE NORTH CAROLINA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROADS AND STRUCTURES, 2018 EDITION, UNLESS OTHERWISE SPECIFIED ON THE PLANS OR IN THE SPECIAL PROVISIONS.

## DESIGN DATA

1. UNIFORM PEDESTRIAN LIVE LOAD\_\_\_\_\_\_90 PSF 2. VEHICULAR LIVE LOAD\_\_\_\_\_\_AASHTO H-5 3. WIND LOAD\_\_\_\_\_PER AASHTO 4. WATER LOAD\_\_\_\_\_PER AASHTO STREAM VELOCITIES: A. "THE SWAMP" STRUCTURES: 2.99 FEET/SEC 5. SEISMIC LOAD\_\_\_\_\_PER AASHTO 6. TEMPERATURE LOAD\_\_\_\_\_PER AASHTO

## WATER ELEVATIONS

- 1. THE WATER ELEVATIONS SHOWN IN THE PLANS ARE FOR INFORMATION ONLY AND THE ACTUAL WATER ELEVATION DURING CONSTRUCTION MAY VARY DEPENDING ON WEATHER CONDITIONS AND SEASONAL FLUCTUATIONS.
- 2. THE GROUND WATER ELEVATIONS, AS DETERMINED DURING GEOTECHNICAL BORINGS, ARE AS FOLLOWS:
  - A. "THE SWAMP" TIMBER BOADWALK AND OBSERVATION DECK L BGS-04: N/A II. BGS-06: 2.4 FEET
  - B. "THE SWAMP" -L5- TIMBER BOARDWALK SECTION I. WB-01: 4.6 FEET
- 3. ADDITIONAL PAYMENT FOR DEWATERING WILL NOT BE ALLOWED. CONTRACTOR SHALL INCLUDE COST IN INCIDENTAL ITEMS.

## STRUCTURAL TIMBER AND LUMBER

- 1. STRUCTURAL FRAMING, DECKING, NAILERS, AND PEDESTRIAN RAIL COMPONENTS SHALL BE PRESSURE TREATED SOUTHERN PINE SURFACE DRY (S4S) WITH A MOISTURE CONTENT OF 19% OR LESS, MEETING THE REQUIREMENTS OF SECTION 1082 OF THE STANDARD SPECIFICATIONS, UNLESS NOTED OTHERWISE.
- 2. ALL TIMBER PILES SHALL BE SOUTHERN PINE CONFORMING TO ASTM D25. WHERE PILES ARE CUT OFF AT TOP OF PILE CAP, MINIMUM BUTT DIAMETER SHALL BE 8".
- 3. TIMBER AND LUMBER SHALL BE TREATED WITH WATERBORNE PRESERVATIVES (CCA OR ACQ) IN ACCORDANCE WITH AWPA STANDARD U1, COMMODITY SPECIFICATION A, TO THE REQUIREMENTS OF THE FOLLOWING USE CATEGORIES: A. PILES: UC4C
  - B. BACKWALLS, WINGWALLS, CAP BEAMS AND STRINGERS: UC4B D. DECKING, PEDESTRIAN RAILING COMPONENTS, ALL OTHER LUMBER: UC3B
- 4. EACH DECKING MEMBER SHALL BE INSTALLED BARK SIDE UP TO PREVENT CUPPING. WHEN JOINTS ARE REQUIRED FOR DECKING MEMBERS, STAGGER THE JOINT ALONG BOARDWALK ALIGNMENT.
- 5. MAXIMUM SPACING BETWEEN DECKING MEMBERS SHALL BE 1/8".
- 6. ALL VERTICAL MEMBERS SHALL BE PLUMB.

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- 7. ALL SAW CUTS, BOLT HOLES, AND OTHER HOLES SHALL BE TREATED WITH APPROPRIATE PRESERVATION SOLUTION PRIOR TO INSTALLING BOLTS.
- 8. UNLESS NOTED OTHERWISE, MECHANICAL WOOD CONNECTIONS SHALL BE INSTALLED PER MANUFACTURER RECOMMENDATIONS, WITH ALL FASTENER HOLES FULLY POPULATED.
- 9. ALL CONNECTORS SHALL BE INSTALLED PER THE MANUFACTURER'S RECOMMENDATIONS.
- 10. ALL FASTENERS, CONNECTORS AND BOLTS SHALL BE HOT—DIP GALVANIZED AND CONFORM TO ASTM F3125 GRADE A325, WITH NUTS CONFORMING TO ASTM A563 AND WASHERS CONFORMING TO ASTM F436, UNLESS NOTED OTHERWISE.
- 11. ALL BOLTED CONNECTIONS SHALL INCLUDE OVERSIZED OGEE WASHERS INSTALLED BETWEEN THE WOOD AND THE BOLT HEAD AND BETWEEN THE WOOD AND THE NUT.
- 12. ATTACH BLOCKING TO JOIST USING TWO (2) #12 x 5" HOT-DIP GALVANIZED WOOD SCREWS, CONFORMING TO ASTM A153, AT EACH SIDÉ OF BLOCKING. PREDRILL AS REQUIRED TO AVOID SPLITTING.
- 13. ATTACH FLOOR DECKING TO EACH JOIST USING TWO (2) #12 X 5" HOT-DIP GALVANIZED WOOD SCREWS, CONFORMING TO ASTM A153, AT EACH JOIST. PREDRILL AS REQUIRED TO AVOID SPLITTING.
- 14. ATTACH SIDE RAIL TO POST USING TWO (2), AND TOP RAIL TO POST USING FOUR (4), #8 x 3-" HOT-DIP GALVANIZED WOOD SCREWS, CONFORMING TO ASTM A153, AT ÈÁCH POST. PREDRILL AS REQUIRED TO AVOID SPLITTING.
- 15. ALL LONGITUDINAL RAILING MEMBERS SHALL SPAN A MINIMUM OF TWO RAIL POST SPACINGS.

## APPROACH RAILINGS

1. APPROACH RAILINGS SHALL BE PROVIDED AT EACH CORNER OF THE BRIDGE AS SHOWN ON THE PLANS.

## CONSTRUCTION

1. SPECIAL NOTE TO CONTRACTOR: CONTRACTOR SHALL USE EXTREME CARE AND TAKE ANY MEASURES NECESSARY TO ENSURE THAT NO DEBRIS IS DROPPED INTO THE WATERWAY. ANY DEBRIS WHICH IS ALLOWED TO DROP ON THE BANKS BELOW THE BRIDGE SHALL NOT BE ALLOWED TO ENTER THE STREAM AND SHALL BE REMOVED AND DISPOSED OF BY THE CONTRACTOR. COST OF REMOVAL AND DISPOSAL OF DEBRIS SHALL BE INCLUDED IN THE UNIT PRICE BID FOR OTHER ITEMS.

## FRP BOARDWALK ALTERNATIVE

- 1. FRP BOARDWALK ALTERNATIVE SHALL BE DESIGNED BY THE CONTRACTOR'S ENGINEER BASED UPON THE SPECIFIED DESIGN CRITERIA. THE FRP BOARDWALK ALTERNATIVE PLANS AND CALCULATIONS SHALL BE SIGNED AND SEALED BY A PROFESSIONAL ENGINEER LICENSED IN THE STATE OF NORTH CAROLINA. PLANS AND CALCULATIONS SHALL BE SUBMITTED TO THE PROJECT ENGINEER FOR REVIEW AND APPROVAL. THE FRP BOARDWALK ALTERNATIVE FABRICATION SHALL NOT BEGIN UNTIL ALL APPROVALS HAVE BEEN RECEIVED.
- 2. FRP BOARDWALK ALTERNATIVE SHALL MAINTAIN GEOMETRY CONSTRAINTS SHOWN IN THE PLANS FOR THE TIMBER BOARDWALK.
- 3. TIMBER DECKING AND RAILING SHALL BE MAINTAINED AS DETAILED IN THE PLANS FOR THE TIMBER BOARDWALK.
- 4. SEE FRP COMPOSITE BRIDGE AND BOARDWALK ALTERNATIVE SPECIAL PROVISION.

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TOWER AND
BID PACK
PREPARED
CITY OF GRE

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## CABLE STRANDS FOR PEDESTRIAN RAILS AT OBSERVATION DECK

- 1. CABLE STRANDS SHALL BE 1/8" DIAMETER 1x19 TYPE 316 STAINLESS STEEL.
- 2. END ANCHORAGES SHALL BE AS SHOWN ON THE PLANS AND SHALL BE ANCHORED ON BACK SIDE OF POST.
- 3. CABLES SHALL BE TENSIONED USING TURNBUCKLE ASSEMBLY. TENSION CABLES TO A MAXIMUM LOAD OF 50 POUNDS. INITIAL TENSION SHALL PREVENT SAGGING UNDER SELF WEIGHT OF CABLE.
- 4. BARRIER CABLES THAT PASS THROUGH A HOLE IN THEIR ANCHORAGE SHALL HAVE THE HOLE SEALED TO PREVENT WATER FROM FOLLOWING THE PATH OF THE BARRIER CABLE TO THE ANCHORAGE.
- 5. INSTALL TOP RAIL, RUB RAIL, AND SIDE RAIL PRIOR TO INSTALLATION OF CABLES.
- 6. TOP RAIL, RUB RAIL AND SIDE RAIL SHALL SPAN A MINIMUM OF TWO RAIL POSTS SPACINGS.
- 7. CONTACT ENGINEER IF RAIL POST EXPERIENCES EXCESSIVE DEFLECTION DURING CABLE INSTALLATION.

## FOUNDATIONS

- 1. FOR PILES, SEE SECTION 450 OF THE STANDARD SPECIFICATIONS.
- 2. PILES FOR FOUNDATION TYPES NO. 1, 2, 4 AND 6 ARE DESIGNED FOR A FACTORED RESISTANCE OF 5 TONS PER PILE.
- 3. DRIVE PILES FOR FOUNDATION TYPES NO. 1, 2, 4 AND 6 TO A REQUIRED DRIVING RESISTANCE OF 8.5 TONS PER PILE.
- 4. PILES FOR FOUNDATION TYPES NO. 3 AND 5 ARE DESIGNED FOR A FACTORED RESISTANCE OF 6.5 TONS PER PILE.
- 5. DRIVE PILES FOR FOUNDATION TYPES NO. 3 AND 5 TO A REQUIRED DRIVING RESISTANCE OF 11 TONS PER PILE.
- 6. STEEL PILE POINTS ARE REQUIRED FOR TIMBER PILES FOR FOUNDATION TYPES 2 THROUGH 6.
- 7. INSTALL PILES FOR FOUNDATION TYPES NO. 2, 4, AND 6 TO A TIP ELEVATION NO HIGHER THAN 10 FEET BELOW EXISTING GROUND SURFACE.
- 8. INSTALL PILES FOR FOUNDATION TYPES NO. 3 AND 5 TO A TIP ELEVATION NO HIGHER THAN 12 FEET BELOW EXISTING GROUND SURFACE.
- 9. IF NECESSARY, PREDRILL PILE LOCATIONS FOR FOUNDATION TYPES 2 THROUGH 6 TO AN ELEVATION NO LOWER THAN THE "TIP NO HIGHER THAN" ELEVATIONS IN NOTES 9 THROUGH 11 WITH EQUIPMENT THAT WILL RESULT IN A MAXIMUM PREDRILLING DIAMETER OF 8 INCHES. FOR PREDRILLING FOR PILES, SEE SECTION 450 OF THE STANDARD SPECIFICATIONS.

	TOTAL BILL OF MATERIALS					
	TIMBER BOARDWALK 1	RIP RAP CLASS II (2'-0" THICK)	GEOTEXTILE FOR DRAINAGE	BID ALTERNATIVE #2 - FRP BOARDWALK <sub>4</sub>		
	LUMP SUM	TONS	S.Y.	LUMP SUM		
STRUCTURE #2 (-L4- STA. 10+45.56 - STA. 11+55.56)	LUMP SUM	25	15	LUMP SUM		
STRUCTURE #2 (-L4- STA. 11+55.56 - STA. 15+74.18)	LUMP SUM			LUMP SUM		
STRUCTURE #2 (-L4- STA. 15+74.18 - STA. 16+84.18)	LUMP SUM	20	15	LUMP SUM		
STRUCTURE #2 (OBSERVATION DECK @ -Y4-)	LUMP SUM			LUMP SUM		
STRUCTURE #3 (TIMBER BOARDWALK @ -L5-)	LUMP SUM	40	30	LUMP SUM		

N.I.C.

1. LUMP SUM PAY ITEMS FOR TIMBER BOARDWALK SHALL INCLUDE LABOR, MATERIALS, EQUIPMENT, DELIVERY AND OTHER INCIDENTALS AS NECESSARY FOR THE TIMBER BOARDWALK, APPROACH RAILING, PEDESTRIAN RAILINGS, PILE PREDRILLING, STEEL PILE POINTS, PILE DRIVE SETUP, PILE TESTING (WHERE REQUIRED) DEWATERING, ETC.

2. LUMP SUM PAYMENT FOR FRP BOARDWALK SHALL INCLUDE ALL ENGINEERING, LABOR, MATERIALS, EQUIPMENT, DELIVERY, AND OTHER INCIDENTALS NECESSARY FOR THE FRP BOARDWALK, TIMBER DECKING, TIMBER PEDESTRIAN RAILING, APPROACH RAILINGS, PILE PREDRILLING, STEEL PILE POINTS, PILE DRIVE SETUP, PILE TESTING (WHERE REQUIRED), DEWATERING, EPOXY PROTECTIVE COATING, ETC.

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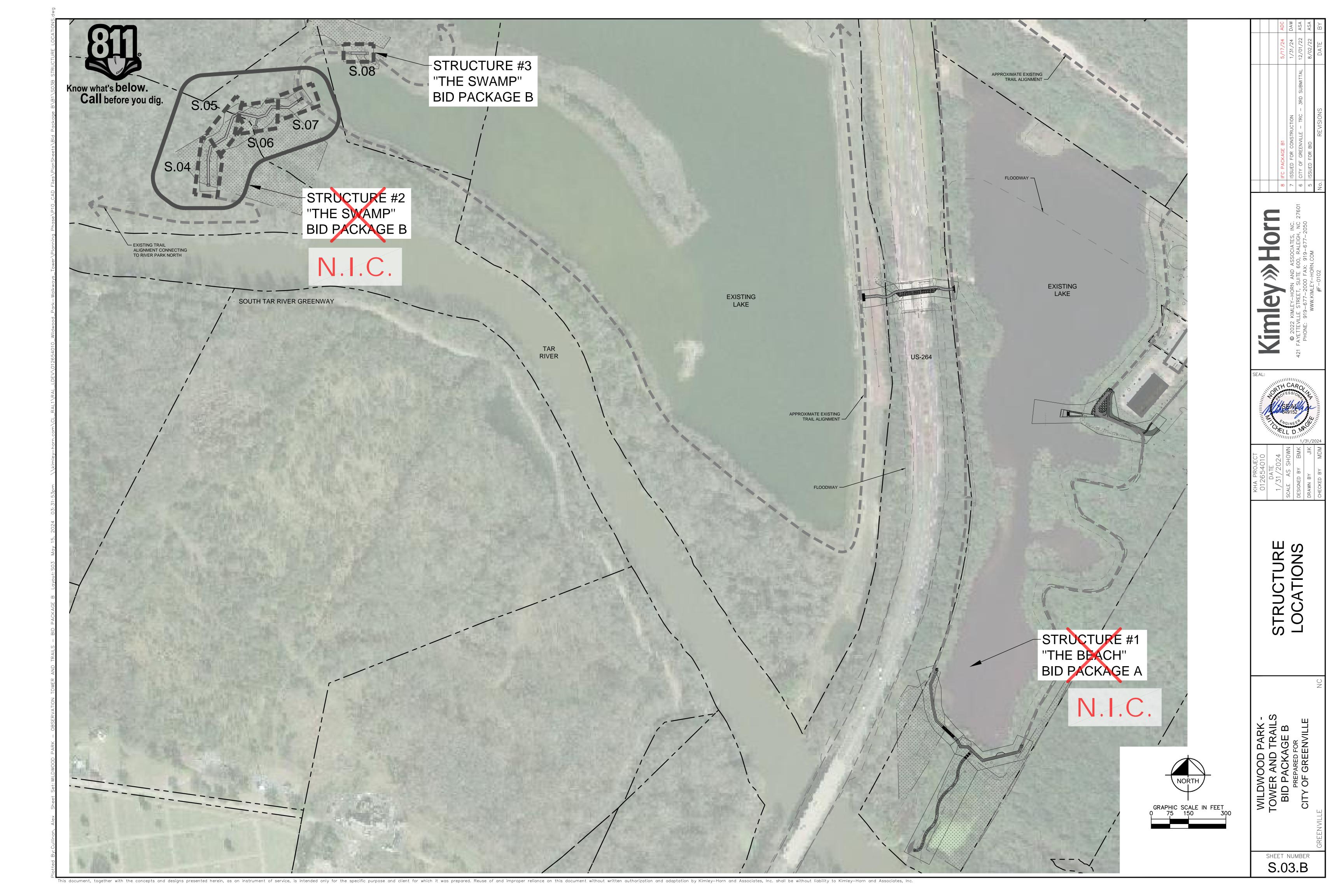
WILDWOOD PARK TOWER AND TRAILS
BID PACKAGE B
PREPARED FOR
CITY OF GREENVILLE

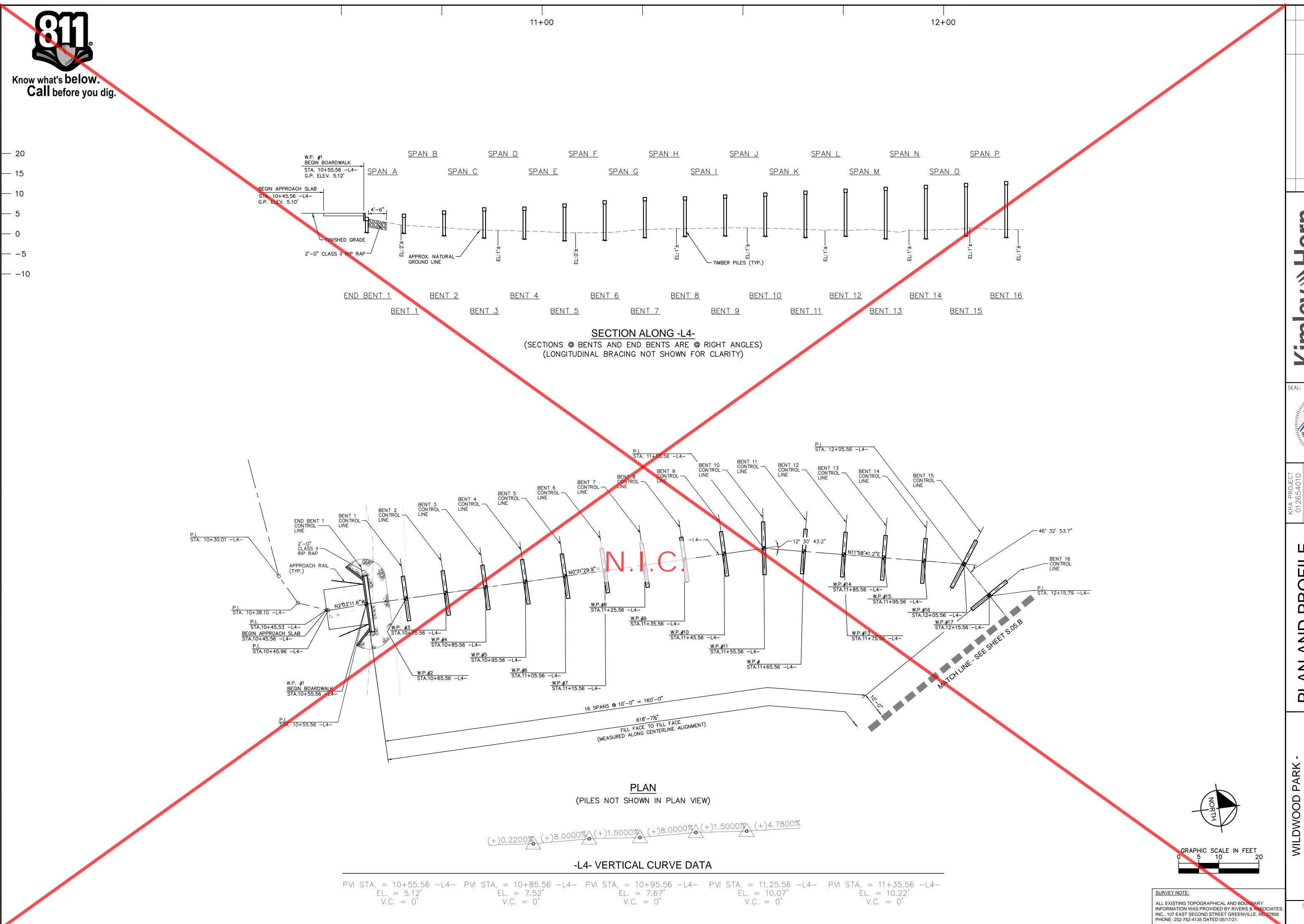
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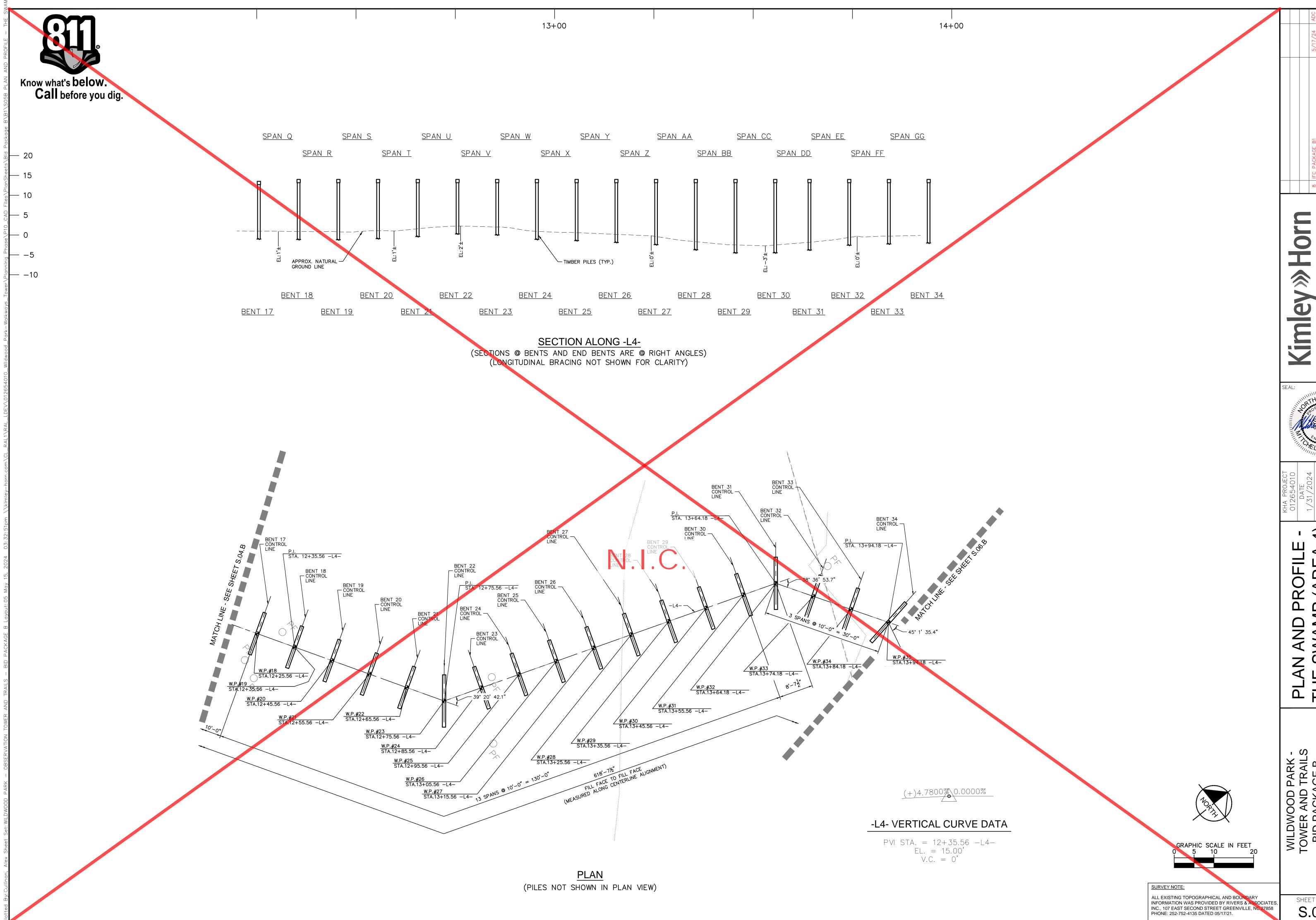


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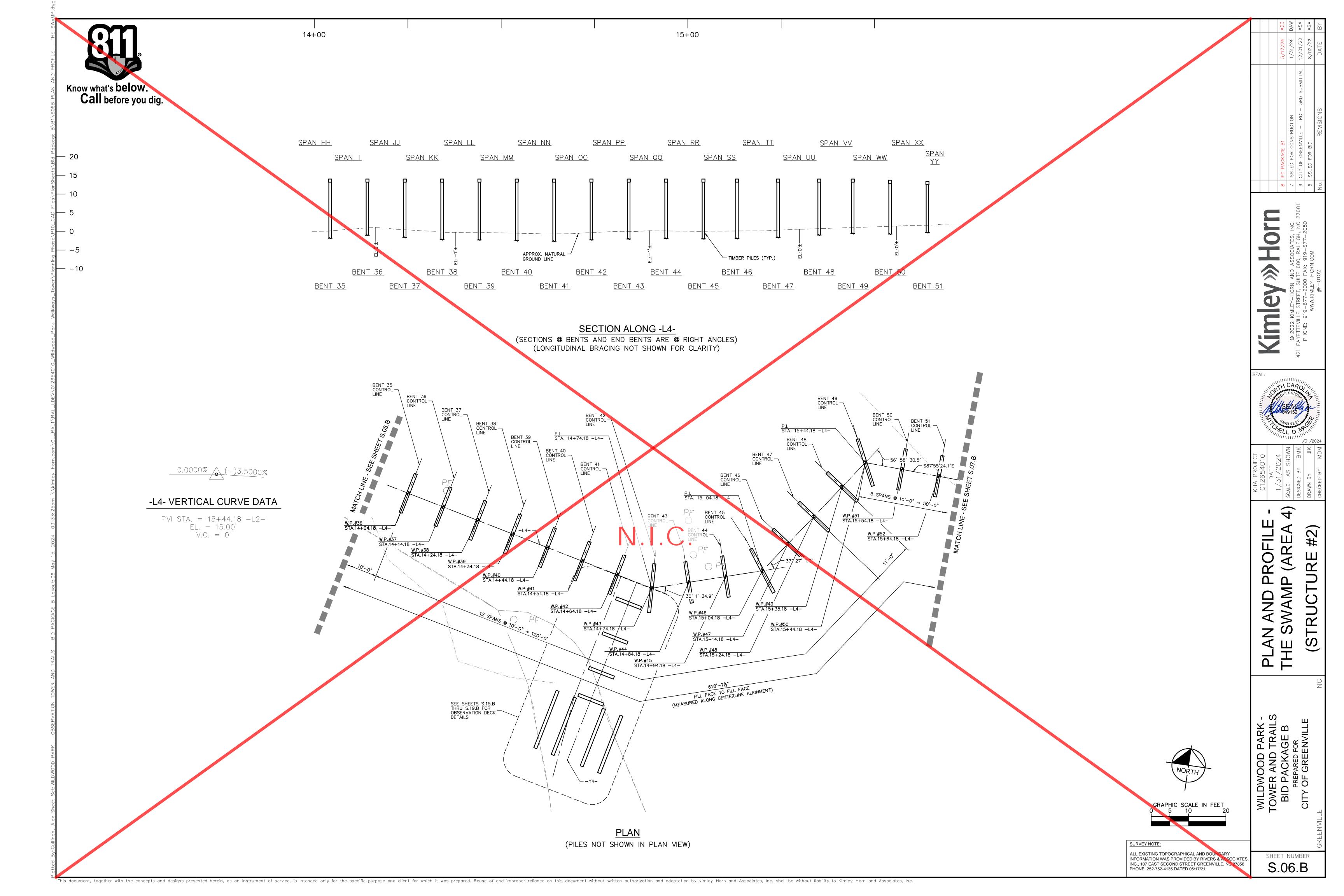
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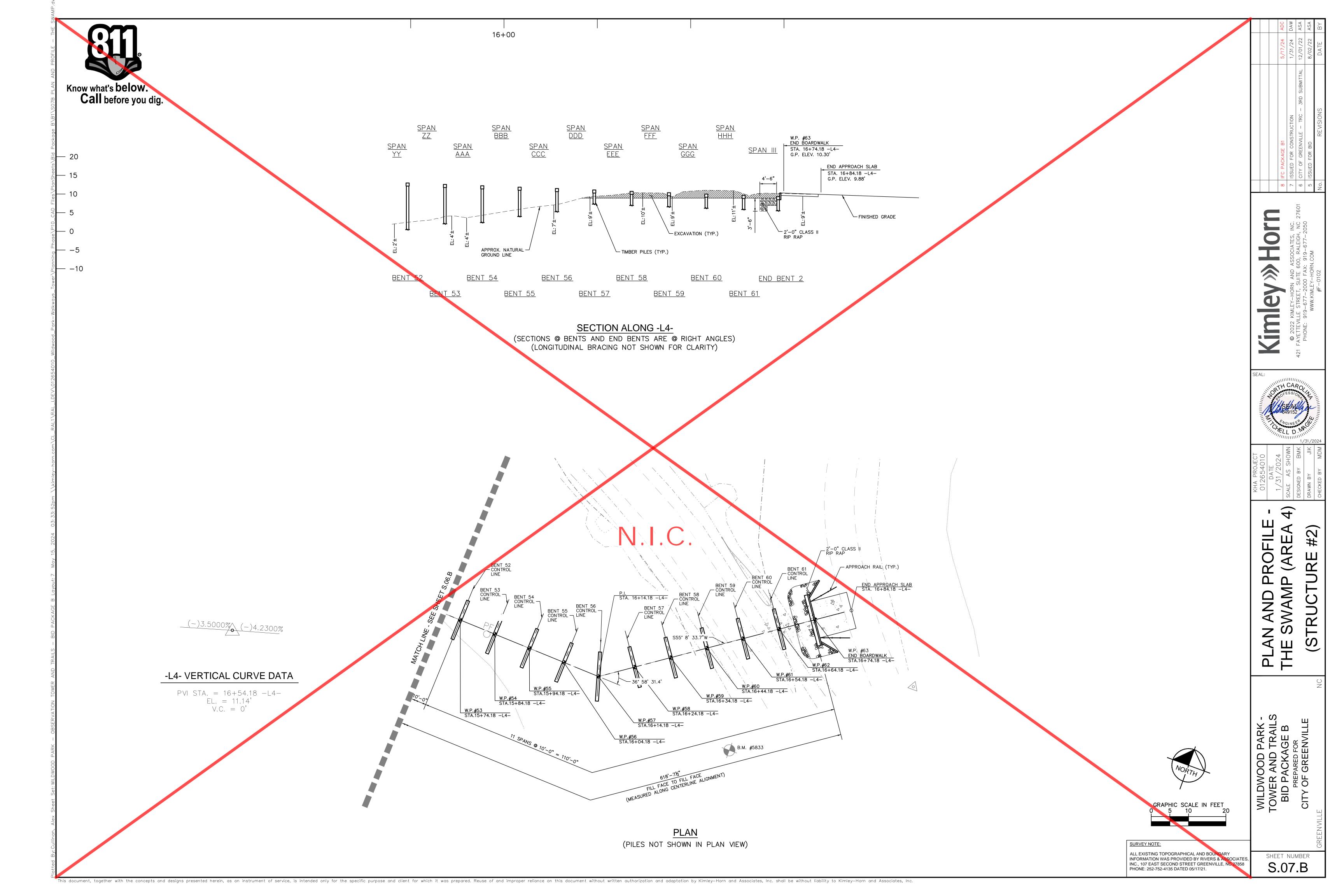


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SHEET NUMBER S.05.B





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DESIGN AND 100 YR. W.S. EL: 21.9' W.P. #1 BEGIN BOARDWALK W.P. #2 END BOARDWALK <u>SPAN B</u> STA. 10+10.00 -Y5-G.P. ELEV. = 8.28' <u>SPAN D</u> SPAN F STA. 10+70.00 -Y5-G.P. ELEV. = 7.69' <u>SPAN A</u> <u>SPAN C</u> <u>SPAN E</u> BEGIN APPROACH SLAB STA. 10+00.00 -Y5-G.P. ELEV. = 7.78' END APPROACH SLAB OVERTOPPING W.S.
EL: 6.4' STA. 10+80.00 -Y5-NORMAL W.S. 4'-6"
EL: ± -3.0' G.P. ELEV. = 7.19'EXCAVATION (TYP.) └ 2'-0" CLASS II RIP RAP 2'-0" CLASS II — RIP RAP APPROX. NATURAL — GROUND LINE

BENT 3

BENT 5

10+00

SECTION ALONG -L5-(SECTIONS @ BENTS AND END BENTS ARE @ RIGHT ANGLES)

BENT 1

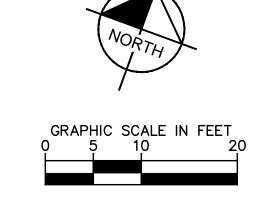
BENT 5
CONTROL END BENT 2
CONTROL LINE BENT 4 CONTROL LINE APPROACH \_ RAIL (TYP.)

-L5- VERTICAL CURVE DATA

PVI STA. = 10+10.00 - L5- PVI STA. = 10+70.00 - L5-EL. = 8.28' V.C. = 0'

<u>PLAN</u> (PILES NOT SHOWN IN PLAN VIEW)

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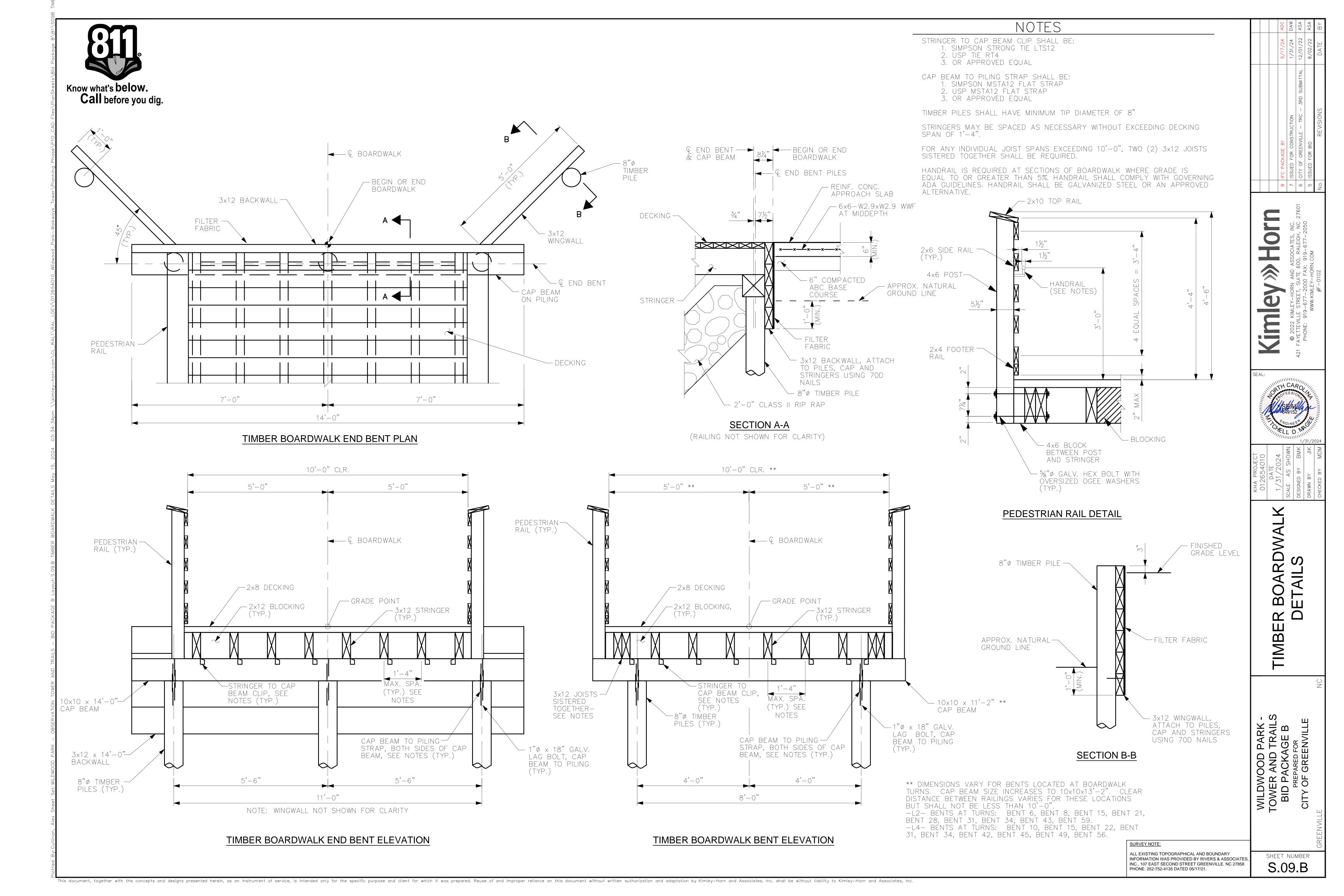
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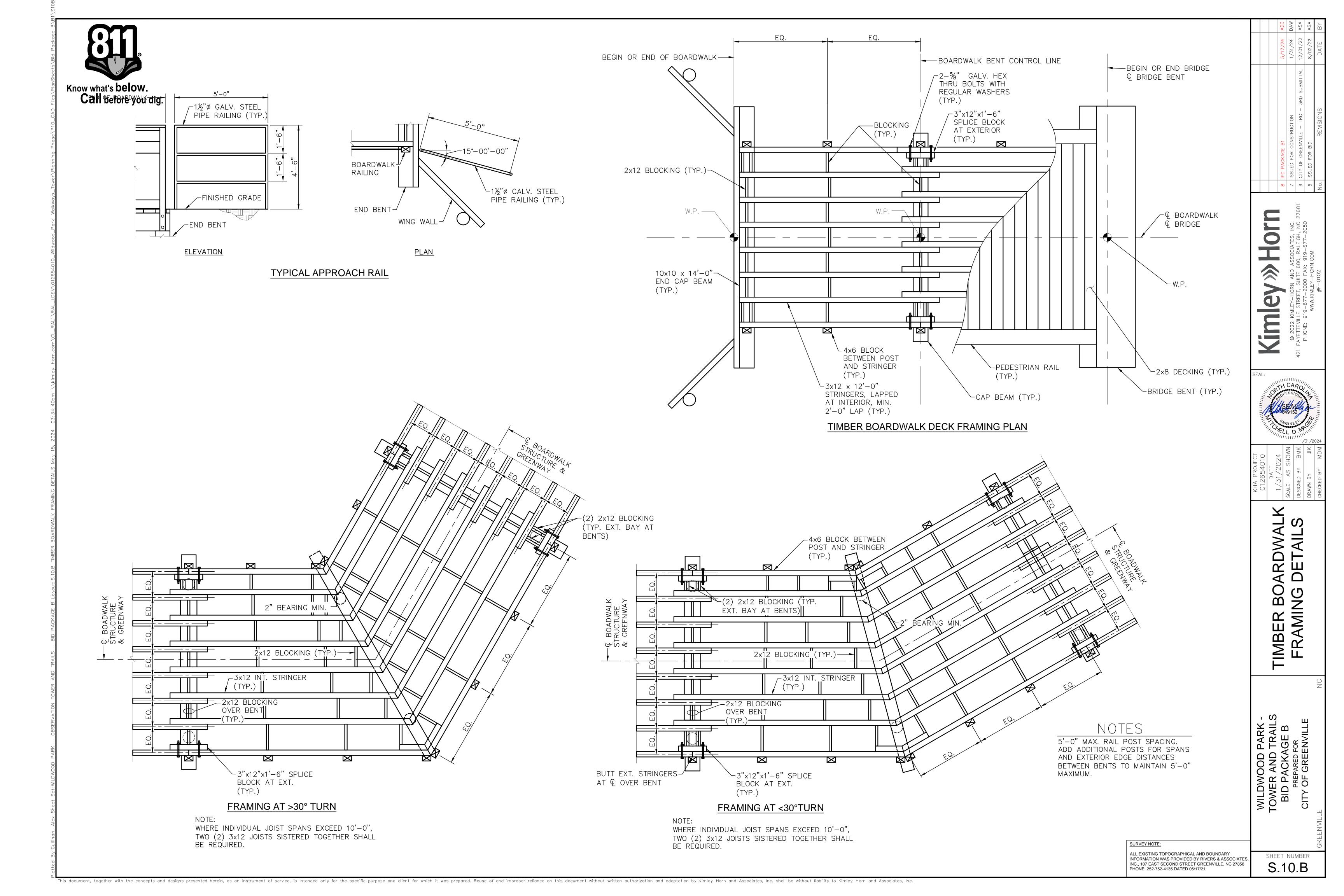
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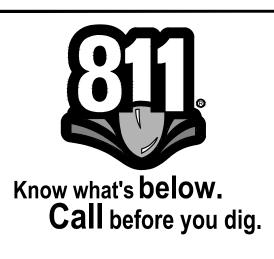
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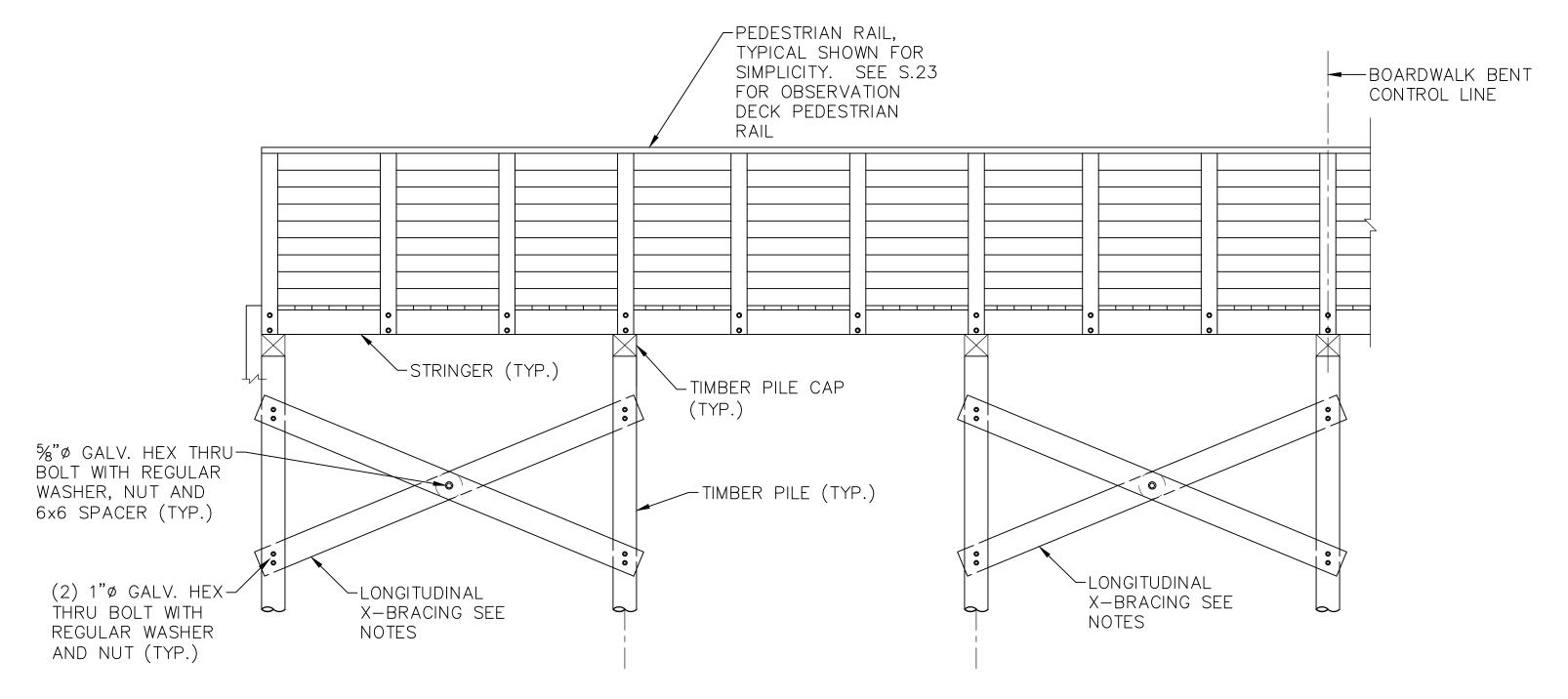






			FOUNDATION AND BE	RACING REQUI	KEIVIEIN I S		LONGITUDINA
ALIGNMENT	BENT NO.	PILE TYPE	NO. PILES (PER SUBSTRUCTURE UNIT), EA.	FOUNDATION TYPE	ESTIMATED PILE LENGTH (PER PILE), FT.	LATERAL BRACING (DETAIL B)	LONGITUDINA BRACING (DETAIL A)
	END BENT 1	8" DIA. TIMBER	3	1	35	NO	NO
	1 - 4	8" DIA. TIMBER	2	2	40	NO	NO
	5 - 9	8" DIA. TIMBER	2	2	40	YES	NO
	10	8" DIA. TIMBER	2	3	45	YES	NO
	11 - 13	8" DIA. TIMBER	2	2	40	YES	YES
	14	8" DIA. TIMBER	2	4	50	YES	YES
	15	8" DIA. TIMBER	2	3	45	YES	YES
	16 - 23	8" DIA. TIMBER	2	4	50	YES	YES
	24	8" DIA. TIMBER	2	3	45	YES	YES
	25 - 32	8" DIA. TIMBER	2	4	50	YES	YES
-L4- (THE SWAMP)	33	8" DIA. TIMBER	2	5	55	YES	YES
	34 - 43	8" DIA. TIMBER	2	4	50	YES	YES
	44	8" DIA. TIMBER	2	5	55	YES	YES
	45 - 46	8" DIA. TIMBER	2	4	50	YES	YES
	47	8" DIA. TIMBER	2	5	55	YES	YES
	48 - 50	8" DIA. TIMBER	2	4	50	YES	YES
	51	8" DIA. TIMBER	2	5	55	YES	YES
	52 - 53	8" DIA. TIMBER	2	4	50	YES	YES
	54	8" DIA. TIMBER	2	2	40	YES	YES
	55 - 56	8" DIA. TIMBER	2	2	40	YES	NO
	57	8" DIA. TIMBER	2	2	40	NO	NO
	58	8" DIA. TIMBER	2	3	45	NO	NO
	59 - 61	8" DIA. TIMBER	2	2	40	NO	NO
	END BENT 2	8" DIA. TIMBER	3	1	35	NO	NO
-Y4- (THE	1 - 4	8" DIA. TIMBER	4	6	50	YES **	YES **
SWAMP)	5 - 8	8" DIA. TIMBER	2	4	50	YES **	YES **
	END BENT 1	8" DIA. TIMBER	3	1	35	NO	NO
15 /TUS	1	8" DIA. TIMBER	2	2	40	NO	NO
-L5- (THE SWAMP)	2-4	8" DIA. TIMBER	2	2	40	YES	NO
SVVAIVIE)	5	8" DIA. TIMBER	2	2	40	NO	NO
	END BENT 2	8" DIA. TIMBER	3	1	35	NO	NO

<sup>\*\*</sup> TWO ROWS OF BRACING REQUIRED; SEE `DETAIL C' THIS SHEET.



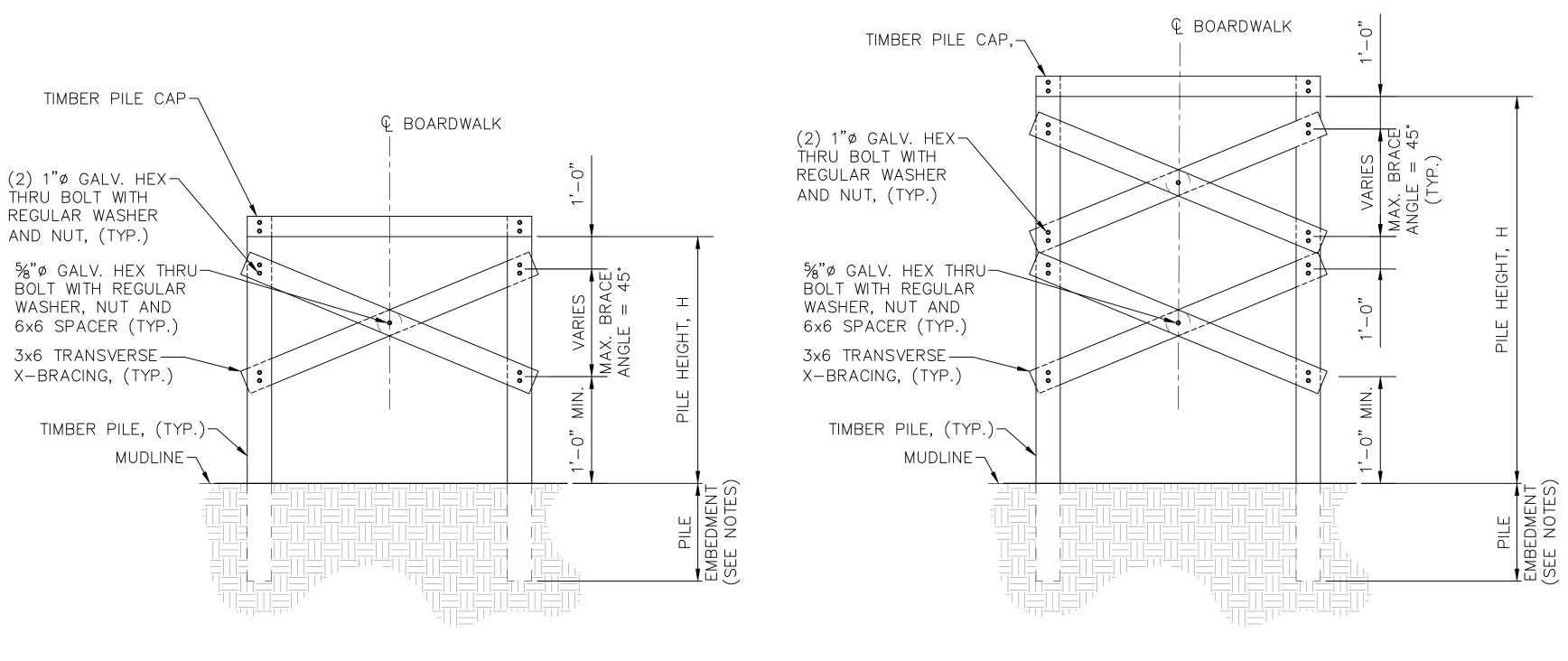
1. PROVIDE LONGITUDINAL 3x6 X—BRACING ON EACH SIDE OF BOARDWALK WHEN DICTATED IN "FOUNDATION AND BRACING REQUIREMENT" TABLE.

2. WHERE REQUIRED, PROVIDE TWO ROWS OF LONGITUDINAL BRACING SIMILAR TO 'DETAIL C'.

## DETAIL A - LONGITUDINAL BRACING

# N.I.C.

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## DETAIL B - LATERAL BRACING

## DETAIL C - LATERAL BRACING

- 1. SEE GEOTECHNICAL REPORT FOR FOUNDATION TYPE INFORMATION AND
- MINIMUM PILE EMBEDMENT.
- 2. PROVIDE MIN CLEARANCE OF  $7\times$  BOLT DIAMETER FROM BOLT TO END OF
- 3. WHERE BRACES ARE REQUIRED, BRACE ANGLE TO BE MAXIMIZED UP TO 45°.

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ALL EXISTING TOPOGRAPHICAL AND BOUNDARY

SHEET NUMBER S.11.B

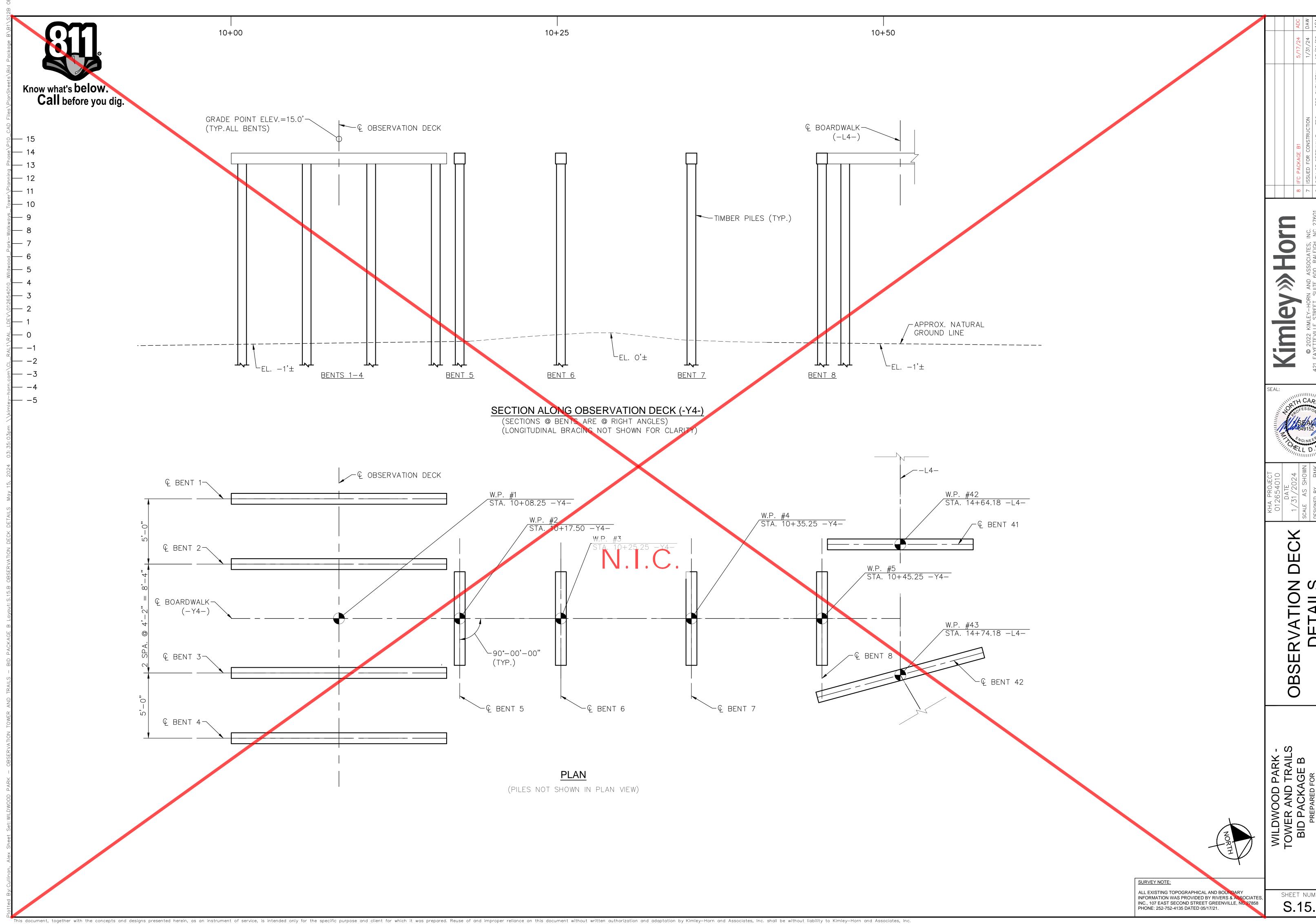
WILDWOOD PARK TOWER AND TRAILS
BID PACKAGE B
PREPARED FOR
CITY OF GREENVILLE

ARDW, DETAIL

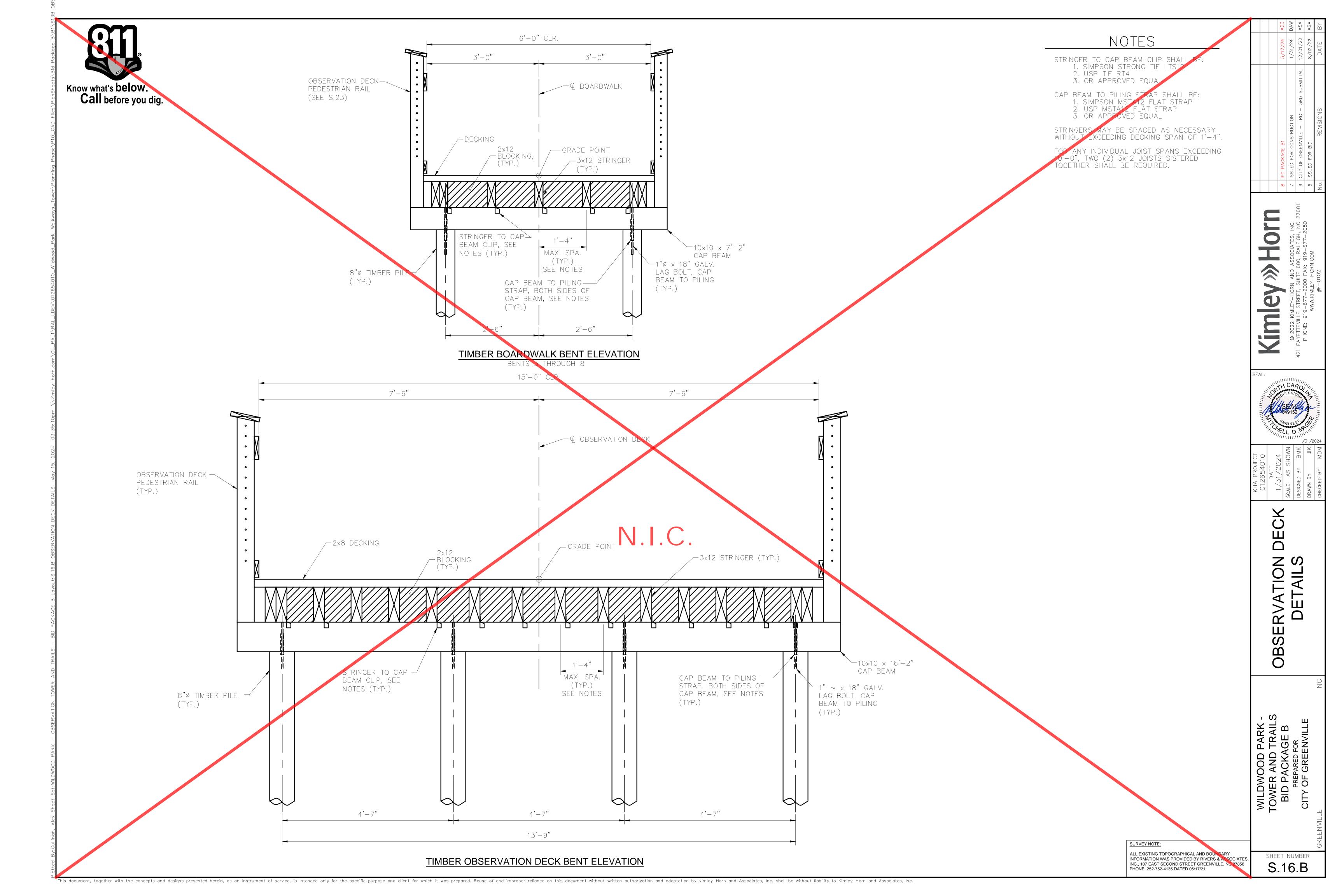
TIMBER BO/ BRACING

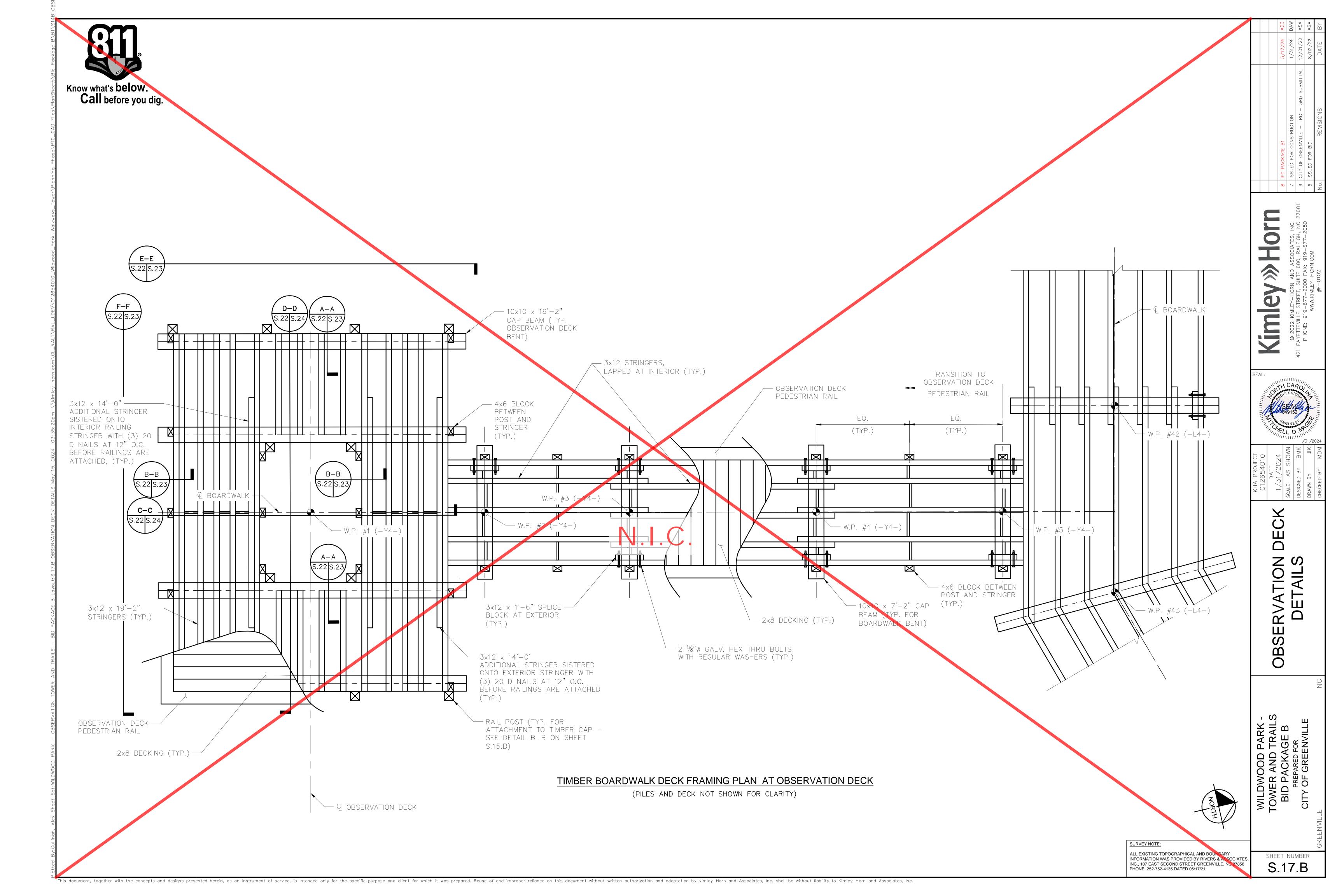
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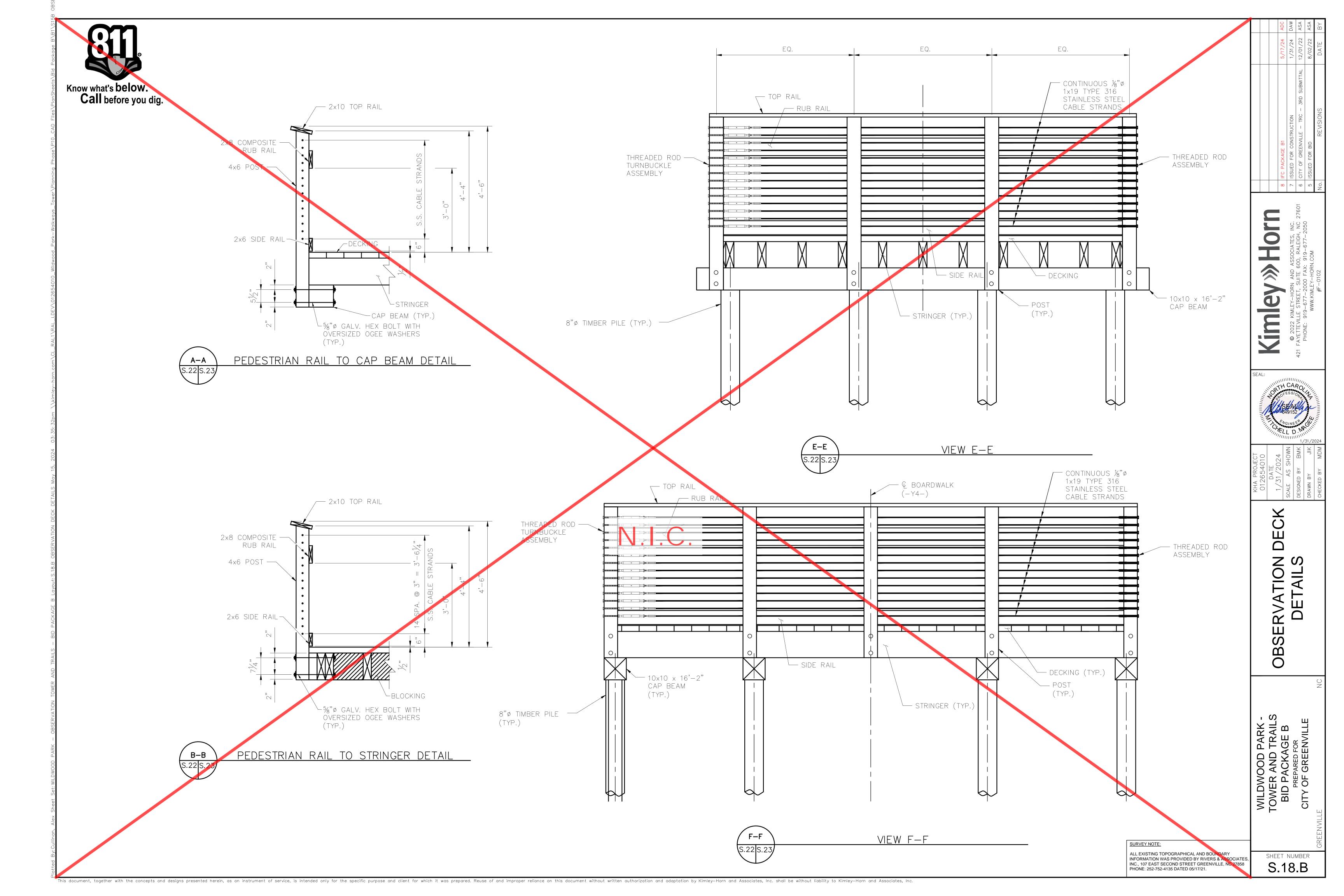
Kimley

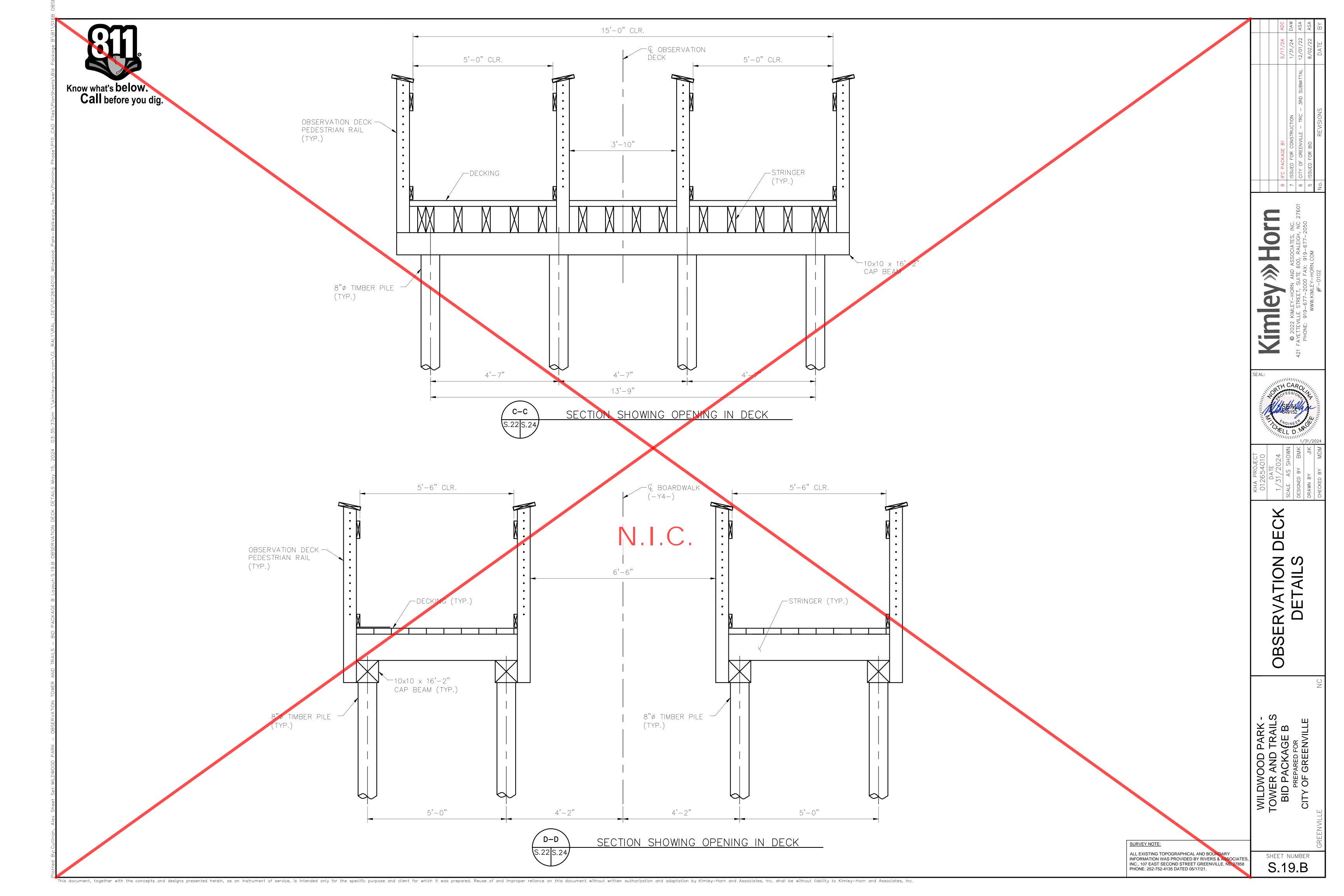


SHEET NUMBER S.15.B









# STANDARD NOTES

## DESIGN DATA:

SPECIFICATIONS - - - - - - - - - - - - - - - - - A.A.S.H.T.O. (CURRENT)

LIVE LOAD - - - - - - - - - - - - - - - - - SEE PLANS

IMPACT ALLOWANCE - - - - - - - - - - - - SEE A.A.S.H.T.O.

STRESS IN EXTREME FIBER OF

STRUCTURAL STEEL - AASHTO M270 GRADE 36 - - 20,000 LBS. PER SQ. IN.

- AASHTO M270 GRADE 50W - 27,000 LBS. PER SQ. IN.

- AASHTO M270 GRADE 50 - - 27,000 LBS. PER SQ. IN.

REINFORCING STEEL IN TENSION - GRADE 60 - - - 24,000 LBS. PER SQ. IN.

CONCRETE IN COMPRESSION - - - - - - - - 1,200 LBS. PER SQ. IN.

CONCRETE IN SHEAR - - - - - - - - - - SEE A.A.S.H.T.O.

STRUCTURAL TIMBER - TREATED OR UNTREATED

EXTREME FIBER STRESS - - - 1,800 LBS. PER SQ. IN.

COMPRESSION PERPENDICULAR TO GRAIN OF TIMBER - 375 LBS. PER SQ. IN.

EQUIVALENT FLUID PRESSURE OF EARTH - - - - - - 30 LBS. PER CU. FT. (MINIMUM)

## MATERIAL AND WORKMANSHIP:

EXCEPT AS MAY OTHERWISE BE SPECIFIED ON PLANS OR IN THE SPECIAL PROVISIONS, ALL MATERIAL AND WORKMANSHIP SHALL BE IN ACCORDANCE WITH THE 2018 "STANDARD SPECIFICATIONS FOR ROADS AND STRUCTURES" OF THE N. C. DEPARTMENT OF TRANSPORTATION.

STEEL SHEET PILING FOR PERMANENT OR TEMPORARY APPLICATIONS SHALL BE HOT ROLLED.

## CONCRETE:

UNLESS OTHERWISE REQUIRED ON PLANS, CLASS A CONCRETE SHALL BE USED FOR ALL PORTIONS OF ALL STRUCTURES WITH THE EXCEPTION THAT: CLASS AA CONCRETE SHALL BE USED IN BRIDGE SUPERSTRUCTURES, ABUTMENT BACKWALLS, AND APPROACH SLABS; AND CLASS B CONCRETE SHALL BE USED FOR SLOPE PROTECTION AND RIP RAP.

## CONCRETE CHAMFERS:

UNLESS OTHERWISE NOTED ON THE PLANS, ALL EXPOSED CORNERS ON STRUCTURES SHALL BE CHAMFERED ¾" WITH THE FOLLOWING EXCEPTIONS: TOP CORNERS OF CURBS MAY BE ROUNDED TO 1½" RADIUS WHICH IS BUILT INTO CURB FORMS; CORNERS OF TRANSVERSE FLOOR EXPANSION JOINTS SHALL BE ROUNDED WITH A ¼" FINISHING TOOL UNLESS OTHERWISE REQUIRED ON PLANS; AND CORNERS OF EXPANSION JOINTS IN THE ROADWAY FACES AND TOPS OF CURBS AND SIDEWALKS SHALL BE ROUNDED TO A ¼" RADIUS WITH A FINISHING STONE OR TOOL UNLESS OTHERWISE REQUIRED ON PLANS.

## DOWELS:

DOWELS WHEN INDICATED ON PLANS AS FOR CULVERT EXTENSIONS, SHALL BE EMBEDDED AT LEAST 12" INTO THE OLD CONCRETE AND GROUTED INTO PLACE WITH 1:2 CEMENT MORTAR.

## ALLOWANCE FOR DEAD LOAD DEFLECTION, SETTLEMENT,

## ETC. IN CASTING SUPERSTRUCTURES:

BRIDGES SHALL BE BUILT ON THE GRADE OR VERTICAL CURVE SHOWN ON PLANS.
SLABS, CURBS AND PARAPETS SHALL CONFORM TO THE GRADE OR CURVE.

ALL DIMENSIONS WHICH ARE GIVEN IN SECTION AND ARE AFFECTED BY DEAD LOAD DEFLECTIONS ARE DIMENSIONS AT CENTER LINE OF BEARING UNLESS OTHERWISE NOTED ON PLANS. IN SETTING FORMS FOR STEEL BEAM BRIDGES AND PRESTRESSED CONCRETE GIRDER BRIDGES, ADJUSTMENTS SHALL BE MADE DUE TO THE DEAD LOAD DEFLECTIONS FOR THE ELEVATIONS SHOWN. WHERE BLOCKS ARE SHOWN OVER BEAMS FOR BUILDING UP TO THE SLAB, THE VERTICAL DIMENSIONS OF THE BLOCKS SHALL BE ADJUSTED BETWEEN BEARINGS TO COMPENSATE FOR DEAD LOAD DEFLECTIONS, VERTICAL CURVE ORDINATE, AND ACTUAL BEAM CAMBER. WHERE BOTTOM OF SLAB IS IN LINE WITH BOTTOM OF TOP FLANGES, DEPTH OF SLAB BETWEEN BEARINGS SHALL BE ADJUSTED TO COMPENSATE FOR DEAD LOAD DEFLECTION, VERTICAL CURVE ORDINATE, AND ACTUAL BEAM CAMBER.

IN SETTING FALSEWORK AND FORMS FOR REINFORCED CONCRETE SPANS, AN ALLOWANCE SHALL BE MADE FOR DEAD LOAD DEFLECTIONS, SETTLEMENT OF FALSEWORK, AND PERMANENT CAMBER WHICH SHALL BE PROVIDED FOR IN ADDITION TO THE ELEVATIONS SHOWN. AFTER REMOVAL OF THE FALSEWORK, THE FINISHED STRUCTURES SHALL CONFORM TO THE PROFILE AND ELEVATIONS SHOWN ON THE PLANS AND CONSTRUCTION ELEVATIONS FURNISHED BY THE ENGINEER.

DETAILED DRAWINGS FOR FALSEWORK OR FORMS FOR BRIDGE SUPERSTRUCTURE AND ANY STRUCTURE OR PARTS OF A STRUCTURE AS NOTED ON THE PLANS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL BEFORE CONSTRUCTION OF THE FALSEWORK OR FORMS IS STARTED.

REINFORCING STEEL:

ALL REINFORCING STEEL SHALL BE DEFORMED. DIMENSIONS RELATIVE TO PLACEMENT OF REINFORCING ARE TO CENTERS OF BARS UNLESS OTHERWISE INDICATED IN THE PLANS. DIMENSIONS ON BAR DETAILS ARE TO CENTERS OF BARS OR ARE OUT TO OUT AS INDICATED ON PLANS.

WIRE BAR SUPPORTS SHALL BE PROVIDED FOR REINFORCING STEEL WHERE INDICATED ON THE PLANS. WHEN BAR SUPPORT PIECES ARE PLACED IN CONTINUOUS LINES, THEY SHALL BE SO PLACED THAT THE ENDS OF THE SUPPORTING WIRES SHALL BE LAPPED TO LOCK LEGS ON ADJOINING PIECES.

## STRUCTURAL STEEL:

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AT THE CONTRACTOR'S OPTION, HE MAY SUBSTITUTE  $\frac{7}{8}$  % SHEAR STUDS FOR THE  $\frac{3}{4}$  % STUDS SPECIFIED ON THE PLANS. THIS SUBSTITUTION SHALL BE MADE AT THE RATE OF  $3-\frac{7}{8}$  % STUDS FOR  $4-\frac{3}{4}$  % STUDS, AND STUD SPACING CHANGES SHALL BE MADE AS NECESSARY TO PROVIDE THE SAME EQUIVALENT NUMBER OF  $\frac{7}{8}$  % STUDS ALONG THE BEAM AS SHOWN FOR  $\frac{3}{4}$  % STUDS BASED ON THE RATIO OF  $3-\frac{7}{8}$  % STUDS FOR  $4-\frac{3}{4}$  % STUDS. STUDS OF THE LENGTH SPECIFIED ON THE PLANS MUST BE PROVIDED. THE MAXIMUM SPACING SHALL BE  $2^{\circ}-0^{\circ}$ .

EXCEPT AT THE INTERIOR SUPPORTS OF CONTINUOUS BEAMS WHERE THE COVER PLATE IS IN CONTACT WITH BEARING PLATE, THE CONTRACTOR MAY, AT HIS OPTION, SUBSTITUTE FOR THE COVER PLATES DESIGNATED ON THE PLANS COVER PLATES OF THE EQUIVALENT AREA PROVIDED THESE PLATES ARE AT LEAST \( \frac{1}{6} \) IN THICKNESS AND DO NOT EXCEED A WIDTH EQUAL TO THE FLANGE WIDTH LESS 2" OR A THICKNESS EQUAL TO 2 TIMES THE FLANGE THICKNESS. THE SIZE OF FILLET WELDS SHALL CONFORM TO THE REQUIREMENTS OF THE CURRENT ANSI/AASHTO/AWS "BRIDGE WELDING CODE". ELECTROSLAG WELDING WILL NOT BE PERMITTED.

WITH THE SOLE EXCEPTION OF EDGES AT SURFACES WHICH BEAR ON OTHER SURFACES, ALL SHARP EDGES AND ENDS OF SHAPES AND PLATES SHALL BE SLIGHTLY ROUNDED BY SUITABLE MEANS TO A RADIUS OF APPROXIMATELY INCH OR EQUIVALENT FLAT SURFACE AT A SUITABLE ANGLE PRIOR TO PAINTING, GALVANIZING, OR METALLIZING.

## HANDRAILS AND POSTS:

METAL STANDARDS AND FACES OF THE CONCRETE END POSTS FOR THE METAL RAIL SHALL BE SET NORMAL TO THE GRADE OF THE CURB, UNLESS OTHERWISE SHOWN ON PLANS. THE METAL RAIL AND TOPS OF CONCRETE POSTS USED WITH THE ALUMINUM RAIL SHALL BE BUILT PARALLEL TO THE GRADE OF THE CURB.

METAL HANDRAILS SHALL BE IN ACCORDANCE WITH THE PLANS. RAILS SHALL BE AS MANUFACTURED FOR BRIDGE RAILING. CASTINGS SHALL BE OF A UNIFORM APPEARANCE. FINS AND OTHER DEFORMATIONS RESULTING FROM CASTING OR OTHERWISE SHALL BE REMOVED IN A MANNER SO THAT A UNIFORM COLORING OF THE COMPLETED CASTING SHALL BE OBTAINED. CASTINGS WITH DISCOLORATIONS OR OF NON-UNIFORM COLORING WILL NOT BE ACCEPTED. CERTIFIED MILL REPORTS ARE REQUIRED FOR METAL RAILS AND POSTS.

## SPECIAL NOTES:

GENERALLY, IN CASE OF DISCREPANCY, THIS STANDARD SHEET OF NOTES SHALL GOVERN OVER THE SPECIFICATIONS, BUT THE REMAINDER OF THE PLANS SHALL GOVERN OVER NOTES HEREON, AND SPECIAL PROVISIONS SHALL GOVERN OVER ALL. SEE SPECIFICATIONS ARTICLE 105-4.

8 IFC PACKAGE B1
7 ISSUED FOR CONSTRUCTION
6 CITY OF GREENVILLE — TRC — 36
5 ISSUED FOR BID

EY-HORN AND ASSOCIATES, INC.
STREET, SUITE 600, RALEIGH, NC 276C
-677-2000 FAX: 919-677-2050
WW.KIMLEY-HORN.COM



1/31/2024

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RAWN BY UIK

STRUCTURAL TANDARD NOTES

WILDWOOD PARK TOWER AND TRAILS
BID PACKAGE B
PREPARED FOR
CITY OF GREENVILLE

SHEET NUMBER
S.20.B