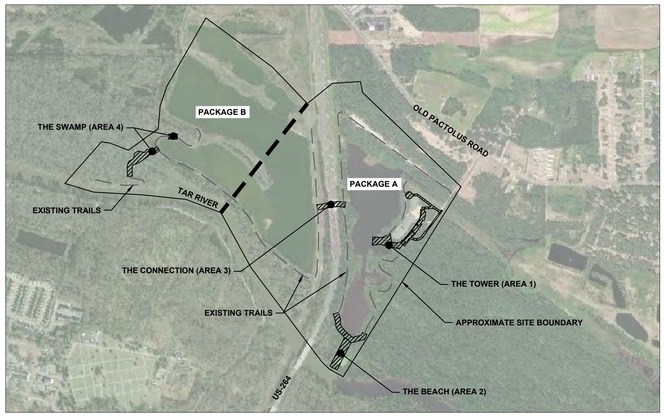
CONSTRUCTION DRAWINGS FOR BID
FOR
WILDWOOD PARK - TOWER AND TRAILS
BID PACKAGE B
CITY OF GREENVILLE
RECREATION & PARKS DEPARTMENT
2000 CEDAR LANE
GREENVILLE, NC 27858
PITT COUNTY

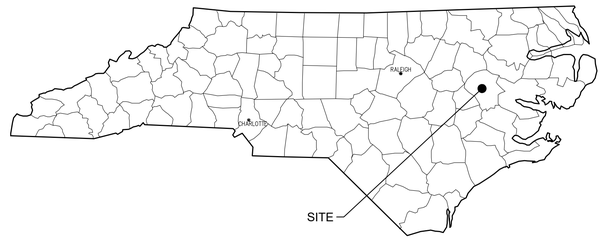
OVERALL SITE DATA	
MUNICIPALITY:	CITY OF GREENVILLE
OWNER:	CITY OF GREENVILLE, PO BOX 7207 GREENVILLE, NC 27835
LAND USE CLASSIFICATION:	(6) RECREATIONAL/ENTERTAINMENT
TOTAL PARCEL ACREAGE:	566 ACRES
TOTAL SITE ACREAGE:	283 ACRES
PROPOSED TOWER GROSS FLOOR AREA:	1,023 SF (0.02 ACRES)
PROPOSED TOWER HEIGHT:	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



NORTH

GRAPHIC SCALE IN FEET
0 500 1000 2000
SCALE: 1" = 1000'



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S.18.B	OBSERVATION DECK DETAILS
S.19.B	OBSERVATION DECK DETAILS
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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
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LANDSCAPE ARCHITECT
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CONTACT: MATT GROSS, RLA
EMAIL : MATT.GROSS@KIMLEY-HORN.COM

CIVIL ENGINEER
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421 FAYETTEVILLE STREET
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SURVEYOR
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107 EAST SECOND STREET
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GEOTECHNICAL ENGINEER
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1210 TRINITY ROAD, SUITE 110
CARY, NC 27513
PHONE: (919) 302-9758
CONTACT: JEREMY R. HAMM, P.E.
EMAIL: JHAMM@FALCONENGINEERS.COM

STRUCTURAL ENGINEER
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ARCHITECT
IN SITU STUDIO
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PHONE: (919) 397-3949
CONTACT: MATTHEW GRIFFITH, AIA
EMAIL: MATT@INSITUSTUDIO.US

City of Greenville Site Plan Approval
Date _____

☐ Approved	☐ Approved as Noted
Zoning	Engineering
Surveyor/Floodplain	Inspections
Fire/Rescue	GUC electric
GUC water/sewer	GUC gas
NCDOT	Vegetation
Traffic Services	Notes

**Site plan approval ONLY. Engineer/Architect/Surveyor shall be responsible for adequacy of design, errors or omissions in the plans. All plans shall meet all specifications, standards and applicable regulations.*

No.	REVISIONS	DATE	BY
1	ISSUED FOR BID	08/02/22	ASA

Kimley»Horn
© 2022 KIMLEY-HORN AND ASSOCIATES, INC.
421 FAYETTEVILLE STREET, SUITE 600, RALEIGH, NC 27601
PHONE: 919-677-2000 FAX: 919-677-2050
WWW.KIMLEY-HORN.COM
#F-0102

SEAL: NORTH CAROLINA PROFESSIONAL SEAL 033841 ENGINEER JOHN D KUZENSKI — 08/02/2022

SEAL: NORTH CAROLINA REGISTERED LANDSCAPE ARCHITECT 2063 MATTHEW R GROSS — 08/02/2022

KHA PROJECT	012654010
DATE	08/02/2022
SCALE	AS SHOWN
DESIGNED BY	MRG
DRAWN BY	ASA
CHECKED BY	JDK

COVER SHEET

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

SHEET NUMBER
C0.0

GENERAL CONSTRUCTION NOTES

1. ALL MATERIAL AND CONSTRUCTION SHALL CONFORM TO THE CITY OF GREENVILLE AND GREENVILLE UTILITIES COMMISSION MUNICIPAL CODES.
2. THE CONTRACTOR SHALL BE RESPONSIBLE TO FURNISH ALL MATERIAL AND LABOR TO CONSTRUCT THE FACILITY AS SHOWN AND DESCRIBED IN THE CONSTRUCTION DOCUMENTS IN ACCORDANCE WITH THE APPROPRIATE APPROVING AUTHORITIES, SPECIFICATIONS AND REQUIREMENTS.
3. IT IS THE CONTRACTOR'S RESPONSIBILITY TO CONTACT THE VARIOUS UTILITY COMPANIES WHICH MAY HAVE UNDERGROUND OR AERIAL UTILITIES WITHIN OR NEAR THE CONSTRUCTION AREA BEFORE COMMENCING WORK. 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 FOLLOWS:

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 UNLESS 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 / ENGINEER.
20. UPON COMPLETION OF CONSTRUCTION, CONTRACTOR SHALL PROVIDE AS-BUILT PLANS IDENTIFYING ALL DEVIATIONS OR 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

1. 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 OWN EXPENSE.
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
5. THE CONTRACTOR SHALL PROTECT ALL MANHOLE COVERS, VALVE COVERS, VAULT LIDS, FIRE HYDRANTS, POWER POLES, GUY WIRES, AND TELEPHONE BOXES WHICH ARE TO REMAIN IN PLACE AND UNDISTURBED DURING CONSTRUCTION.
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.
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 FLARES.
8. CONTRACTOR SHALL CONSTRUCT PROPOSED PAVEMENT TO MATCH EXISTING PAVEMENT WITH A SMOOTH, FLUSH, CONNECTION.
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
DI - DROP INLET
YI - YARD INLET
EX - EXISTING
ME - MATCH EXISTING
FES - FLARED-END-SECTION
LOD - LIMITS OF DISTURBANCE
PVC - POLYVINYL CHLORIDE
RCP - REINFORCED CONCRETE PIPE
TYP. - TYPICAL
DIP- DUCTILE IRON PIPE
STRM - STORM
MH - MANHOLE
SD - STORM DRAIN
RD - ROOF DRAIN
TC - TOP OF CONCRETE
CI - CAST IRON PIPE
TW - TOP OF WALL
BW - BOTTOM OF WALL
PIV - POST INDICATOR VALVE

STORM DRAINAGE NOTES

1. ALL STORM SEWER MATERIALS AND CONSTRUCTION SHALL COMPLY WITH CITY STANDARD CONSTRUCTION DETAILS AND SPECIFICATIONS.
2. 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 PLUMBING CODE. CONTRACTOR SHALL ARRANGE FOR REQUIRED CITY INSPECTIONS.
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 GREATER SHALL BE CLASS III RCP OR OTHER APPROVED MATERIAL.
10. WHERE COVER EXCEEDS 20-FEET OR IS LESS THAN 2-FEET, CLASS IV RCP SHALL BE USED.
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.
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.
11. 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.
12. 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 NCDEQ 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 NECESSARY, AND SHALL BE CHECKED AFTER EVERY RAINFALL. SEEDED AREAS SHALL BE CHECKED REGULARLY AND SHALL BE WATERED, FERTILIZED, RESEEDED AND MULCHED AS NECESSARY TO OBTAIN A DENSE STAND OF GRASS.
15. CONTRACTOR TO ENSURE THAT SEDIMENT LADEN RUNOFF DOES NOT LEAVE SITE LIMITS OR ENTER PROTECTED AREAS. 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 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 CONDITIONS.
31. LIMITS OF GRADING SHOWN ON THE PLAN ARE MAXIMUM LIMITS FOR EROSION CONTROL PURPOSES ONLY. SURVEYOR TO DETERMINE ACTUAL LIMIT.
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 OF THE NCDEQ EROSION CONTROL ORDINANCE AND IS SUBJECT TO A FINE.
34. TEMPORARY CONSTRUCTION ENTRANCES SHALL BE REQUIRED AT ALL CONSTRUCTION STAGING AREA ENTRANCES AND ALL CONSTRUCTION ACCESS LOCATIONS INTO NON-PAVED AREAS. TWO TO THREE INCH STONE SHALL BE USED FOR THE TEMPORARY GRAVEL CONSTRUCTION ENTRANCE.
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

1. CITY OR NCDOT DRIVEWAY PERMIT REQUIRED. ANY ENCROACHMENT AGREEMENTS SHALL BE APPROVED BEFORE INSTALLATION.
2. AN UNUSED DRIVEWAY MUST BE CLOSED IN ACCORDANCE WITH THE CITY OF GREENVILLE'S DRIVEWAY ORDINANCE.
3. 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).
5. 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

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 HEREIN.
3. ALL INFRASTRUCTURE REQUIRING ADDITIONAL VEGETATION (I.E. PARKING LOTS, BUILDINGS, ETC) HAVE BEEN REVIEWED AND PERMITTED UNDER A SEPARATE SUBMITTAL.
4. ALL BUFFERS SHALL BE LEFT UNDISTURBED AND EXISTING VEGETATION SHALL COUNT TOWARDS ANY AND ALL REQUIREMENTS.

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 DURATION OF CONSTRUCTION.

No.	REVISIONS	DATE	BY
1	ISSUED FOR BID	08/02/22	ASA

Kimley»Horn

421 FAYETTEVILLE STREET, SUITE 600, RALEIGH, NC 27601
PHONE: 919-677-2000 FAX: 919-677-2050
WWW.KIMLEY-HORN.COM
#F-0102

SEAL:
033841
JOHN D. KUZENSKI
08/02/2022

KHA PROJECT
012654010
DATE
08/02/2022
SCALE AS SHOWN
DESIGNED BY MRG
DRAWN BY ASA
CHECKED BY JDK

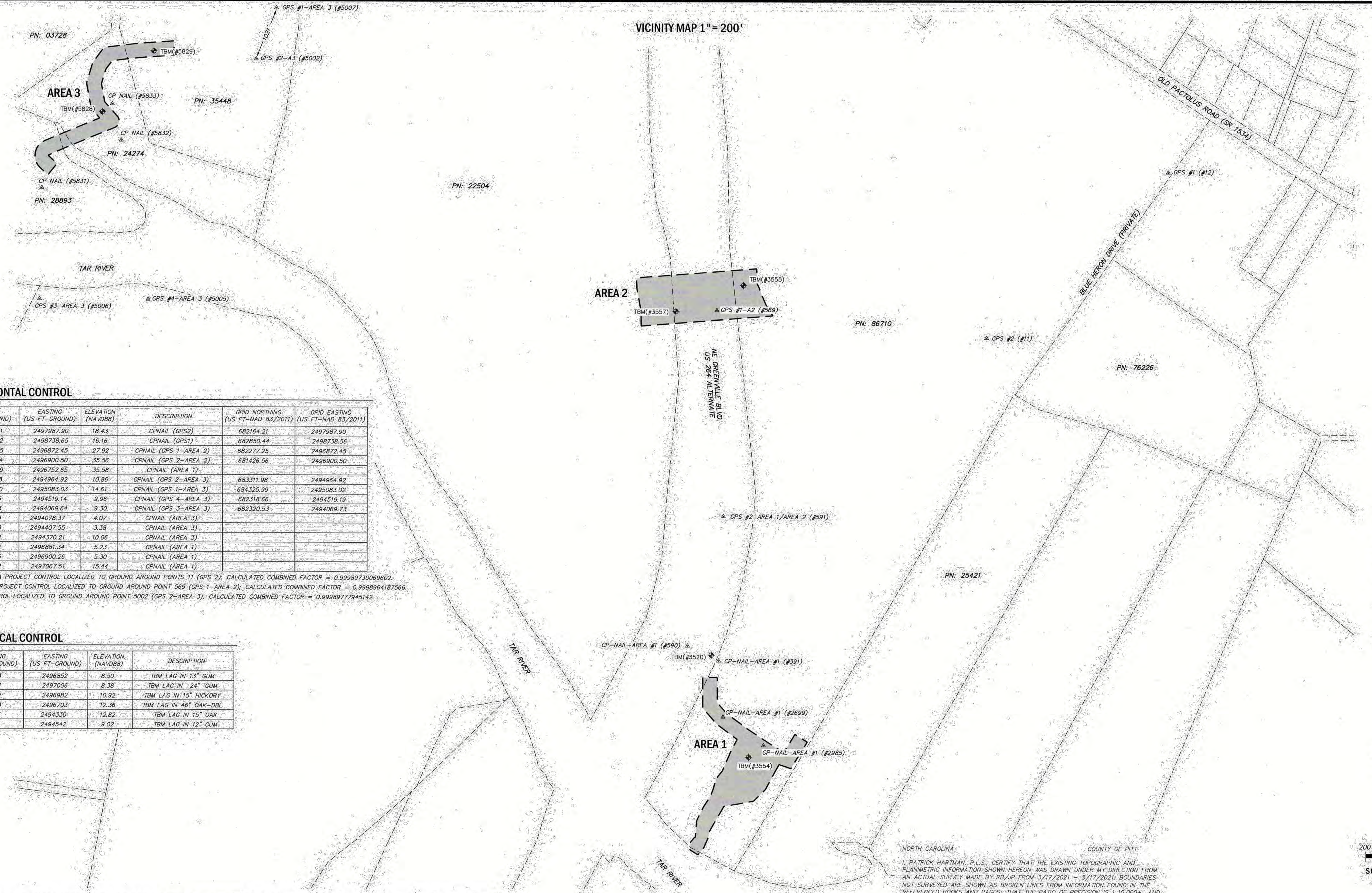
GENERAL NOTES

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

GREENVILLE NC

SHEET NUMBER
C0.1

VICINITY MAP 1" = 200'



SURVEY HORIZONTAL CONTROL

POINT	NORTHING (US FT-GROUND)	EASTING (US FT-GROUND)	ELEVATION (NAVD88)	DESCRIPTION	GRID NORTHING (US FT-NAD 83/2011)	GRID EASTING (US FT-NAD 83/2011)
11	682164.21	2497987.90	18.43	CPNAIL (GPS2)	682164.21	2497987.90
12	682850.52	2498738.65	16.16	CPNAIL (GPS1)	682850.44	2498738.56
569	682277.25	2496872.45	27.92	CPNAIL (GPS 1-AREA 2)	682277.25	2496872.45
591	681426.44	2496900.50	35.56	CPNAIL (GPS 2-AREA 2)	681426.56	2496900.50
590	680889.89	2496752.65	35.58	CPNAIL (AREA 1)		
5002	683311.98	2494964.92	10.86	CPNAIL (GPS 2-AREA 3)	683311.98	2494964.92
5007	684326.10	2495083.03	14.61	CPNAIL (GPS 1-AREA 3)	684325.99	2495083.02
5005	682318.55	2494519.14	9.96	CPNAIL (GPS 4-AREA 3)	682318.66	2494519.19
5006	682320.43	2494069.64	9.30	CPNAIL (GPS 3-AREA 3)	682320.53	2494069.73
5831	682778.99	2494078.37	4.07	CPNAIL (AREA 3)		
5832	682974.90	2494407.55	3.38	CPNAIL (AREA 3)		
5833	683125.88	2494370.21	10.06	CPNAIL (AREA 3)		
391	680828.47	2496881.34	5.23	CPNAIL (AREA 1)		
2699	680597.25	2496900.26	5.30	CPNAIL (AREA 1)		
2985	680479.72	2497067.51	15.44	CPNAIL (AREA 1)		

ORIGINAL SHELTER AREA PROJECT CONTROL LOCALIZED TO GROUND AROUND POINTS 11 (GPS 2); CALCULATED COMBINED FACTOR = 0.99989730069602.
AREA 1 AND AREA 2 PROJECT CONTROL LOCALIZED TO GROUND AROUND POINT 569 (GPS 1-AREA 2); CALCULATED COMBINED FACTOR = 0.9998964187566.
AREA 3 PROJECT CONTROL LOCALIZED TO GROUND AROUND POINT 5002 (GPS 2-AREA 3); CALCULATED COMBINED FACTOR = 0.99989777945142.

SURVEY VERTICAL CONTROL

POINT	NORTHING (US FT-GROUND)	EASTING (US FT-GROUND)	ELEVATION (NAVD88)	DESCRIPTION
3520	680853	2496852	8.50	TBM LAG IN 13" GUM
3554	680431	2497006	8.38	TBM LAG IN 24" GUM
3555	682382	2496982	10.92	TBM LAG IN 15" HICKORY
3557	682273	2496703	12.36	TBM LAG IN 46" OAK-DBL
5828	683093	2494330	12.82	TBM LAG IN 15" OAK
5829	683344	2494542	9.02	TBM LAG IN 12" GUM

REFERENCES:

P.N. 35488
P.N. 24274
P.N. 22504
P.N. 86710
D.B. 3863 PG. 527
D.B. 4049 PG. 261
D.B. Q41 PG. 206
D.B. Z39 PG. 161
D.B. W39 PG. 460
D.B. 340 PG. 337
M.B. 22 PG. 25
M.B. 24 PG. 125
D.B. M 43 PG. 384
D.B. 696 PG. 437
M.B. 60 PG. 174
M.B. 37 PG. 5
STATE HIGHWAY PLAN 6.8017568
RIVERS DRAWING W-1520
RIVERS DRAWING W-2682
RIVERS DRAWING W-2731

OWNER

CITY OF GREENVILLE
P.O. BOX 7207
GREENVILLE, NC 27804

NOTES

1. ALL DISTANCES ARE HORIZONTAL GROUND MEASUREMENTS.
2. NO POINTS SET UNLESS OTHERWISE INDICATED.
3. THESE PROPERTIES ARE LOCATED WITHIN FEMA FLOODWAY AND A "ZONE AE" (AREAS DETERMINED TO BE INSIDE THE 1% ANNUAL CHANCE FLOODPLAIN), AS DETERMINED FROM FIRM MAP NUMBER 3720468800K, EFFECTIVE JULY 7, 2014. BASE FLOOD ELEVATIONS = 21.5 – 20.4 FEET +/- (NAVD88)
4. ELEVATIONS AND CONTOURS SHOWN ARE BASED ON NAVD88 DATUM. VERTICAL CONTROL ESTABLISHED FROM MULTIPLE NCGS RTN OBSERVATIONS (CLASS C). CONTOURS BELOW THE WATER SURFACE, IN RIPRAP AREA, AND LOW AREAS ALONG THE TAR RIVER (DUE TO INCONSISTENT TERRAIN FEATURES) MAY EXCEED THE 1/2 ALLOWABLE ERROR.
5. THIS SURVEY WAS PERFORMED WITHOUT THE BENEFIT OF A TITLE COMMITMENT REPORT. RIVERS AND ASSOCIATES DOES NOT CLAIM THAT ALL MATTERS OF RECORD WHICH MAY OR MAY NOT AFFECT THIS PROPERTY ARE SHOWN HEREON.
6. PROPERTY SUBJECT TO ANY AND ALL EASEMENTS, RIGHTS OF WAY, RESTRICTIVE COVENANTS WHICH MAY BE OF RECORD.
7. UTILITIES: UNDERGROUND UTILITIES PLOTTED FROM PRIOR SURVEYS AND MAPS PROVIDED BY OTHERS AS NOTED. ACTUAL LOCATIONS MAY VARY. OTHER UTILITIES MAY EXIST. SURVEYOR CANNOT PROVIDED ACCURACY OF UNDERGROUND UTILITIES. CONTRACTOR SHOULD CONTACT NC811 AT 1-800-632-4949 TO HAVE UNDERGROUND UTILITIES LOCATED PRIOR TO EXCAVATING OR TRENCHING. NC811 TICKETS: NO TICKETS WERE REQUESTED.
8. UTILITIES: THE SURVEYOR MAKES NO GUARANTEE THAT THE UTILITIES SHOWN ARE COMPRISED OF ALL SUCH UTILITIES IN THE AREA OF SURVEY EITHER IN SERVICE OR ABANDONED. THE SURVEY FURTHER DOES NOT WARRANT THAT THE UNDERGROUND UTILITIES SHOWN ARE IN THE EXACT LOCATION INDICATED. THE SURVEYOR DOES HEREBY CERTIFY THAT ALL UTILITIES ARE LOCATED AS ACCURATELY AS POSSIBLE FROM INFORMATION AVAILABLE. THE SURVEYOR HAS NOT PHYSICALLY UNCOVERED AND LOCATED ANY UNDERGROUND UTILITIES.
9. PIPE INVERTS SHOWN HEREON WERE OBTAINED WITHOUT CONFINED SPACE ENTRY BY THE MOST PRACTICAL METHODS AVAILABLE TO THE SURVEYOR.
10. WETLANDS WERE DELINEATED BY KIMLEY HORN'S ENVIRONMENTAL SPECIALIST ON 4/16/2021. RIPARIAN BUFFER LOCATION IS SURVEYORS INTERPRETATION OF INFORMATION PROVIDED BY THE CITY OF GREENVILLE. THE LOCATION MAY CHANGE BASED ON ENVIRONMENTAL SPECIALIST'S SITE DETERMINATION.

SHEET INDEX

NORTH CAROLINA — COUNTY OF PITT

I, PATRICK HARTMAN, P.L.S., CERTIFY THAT THE EXISTING TOPOGRAPHIC AND PLANIMETRIC INFORMATION SHOWN HEREON WAS DRAWN UNDER MY DIRECTION FROM AN ACTUAL SURVEY MADE BY RB/JP FROM 3/17/2021 – 5/17/2021. BOUNDARIES NOT SURVEYED ARE SHOWN AS BROKEN LINES FROM INFORMATION FOUND IN THE REFERENCED BOOKS AND PAGES; THAT THE RATIO OF PRECISION IS 1:10,000+; AND IN ACCORDANCE WITH THE US NATIONAL MAPPING ACCURACY STANDARDS, THE MAXIMUM VERTICAL ERROR IS NOT GREATER THAN ONE HALF THE CONTOUR INTERVAL EXCEPT AS NOTED (SEE NOTE 4); AND HORIZONTAL AND VERTICAL CONTROL WAS ESTABLISHED AT THE SITE BY NCGS RTN SOLUTION.

1) CLASS OF SURVEY: CLASS A (HORZ.) CLASS C (VERT.)
2) POSITIONAL ACCURACY: 2 CM(HORZ.)
3) TYPE OF GPS FIELD PROCEDURE: NCGS RTN
4) DATE OF SURVEY WORK: 3/17/2021-05/17/2021
5) DATUM/EPOCH: NAD83/2011
6) PUBLISHED CONTROL/FIXED CONTROL: NCGS RTN OR AS NOTED
7) GEOID MODEL: 2012B
8) COMBINED GRID FACTOR: AS NOTED
9) UNITS: US SURVEY FEET

WITNESS MY ORIGINAL SIGNATURE, LICENSE NUMBER AND SEAL THIS 17TH DAY OF MAY, 2021.

PROFESSIONAL LAND SURVEYOR — LICENSE NO. L-4262

REVISIONS: –

NORTH CAROLINA PROFESSIONAL LAND SURVEYOR SEAL L-4262 PATRICK W. HARTMAN

DATE 5/17/21

Rivers & ASSOCIATES, INC.
NC License: F-0334
riversandassociates.com Since 1918
Engineers Planners Surveyors Landscape Architects
107 East Second Street
Greenville, NC 27858
(252) 752-4135

TOPOGRAPHIC SURVEY FOR
KIMLEY-HORN & CITY OF GREENVILLE
OF
A PORTION OF THE FUTURE
WILDWOOD PARK
CITY OF GREENVILLE, PACTOLUS TOWNSHIP, PITT COUNTY, NC

SURVEY RB/JP	DRAFT PH/MS	SCALE	DRAWING NO.	PROJECT NO.	SHEET
DESIGN	CHECK PWH	1" = 200'	W-3927	2021019	1 OF 4

EXISTING CONDITIONS

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

C2.1.B

C2.2.B

PARCEL 5

PARCEL 3

PARCEL 2

PARCEL 4

THE SWAMP (AREA 4)

EXISTING TRAIL ALIGNMENT CONNECTING TO RIVER PARK NORTH

APPROXIMATE EXISTING TRAIL ALIGNMENT

FLOODWAY

EXISTING LAKE

NCPIN: 4698313793
OWNER: FLANAGAN, CURTIS J HEIRS
PHYSICAL ADDRESS: 0 BEECH STREET
DB: 2824 PG. 576
CURRENT ZONING: R6 - RESIDENTIAL

EXISTING SOUTH TAR RIVER GREENWAY

NCPIN: 4698411224
OWNER: CITY OF GREENVILLE
PHYSICAL ADDRESS: 2805 E SECOND STREET
CURRENT ZONING: INDUSTRY

TAR RIVER

GREENVILLE BLVD (ALT HWY-264)

APPROXIMATE EXISTING TRAIL ALIGNMENT

FLOODWAY

PARCEL 1

PARK ENTRANCE AT BLUE HERON ROAD

NCPIN: 4697495737
OWNER: CITY OF GREENVILLE
PHYSICAL ADDRESS: 2900 E SECOND STREET
CURRENT ZONING: RESIDENTIAL - AGRICULTURAL

NCPIN: 4698507427
OWNER: CITY OF GREENVILLE
PHYSICAL ADDRESS: 0 NE GREENVILLE BLVD
CURRENT ZONING: RESIDENTIAL - AGRICULTURAL

NCPIN: 4697594379
OWNER: EWT 77 LLC
PHYSICAL ADDRESS: 2209 NE GREENVILE BV
DB: 4066 PG. 585
CURRENT ZONING: OFFICE - RESIDENTIAL

NORTH

GRAPHIC SCALE IN FEET
0 75 150 300

SCALE: 1" = 150'

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.

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

No.	REVISIONS	DATE	BY
1	ISSUED FOR BID	08/02/22	ASA

Kimley»Horn

421 FAYETTEVILLE STREET, SUITE 600, RALEIGH, NC 27601
PHONE: 919-677-2000 FAX: 919-677-2050
WWW.KIMLEY-HORN.COM
#F-0102

SEAL:

NORTH CAROLINA PROFESSIONAL SEAL 033841 ENGINEER JOHN D. KULENKA

08/02/2022

KHA PROJECT 012654010
DATE 08/02/2022
SCALE AS SHOWN
DESIGNED BY MRG
DRAWN BY ASA
CHECKED BY JDK

OVERALL DEMOLITION AND EROSION CONTROL PLAN

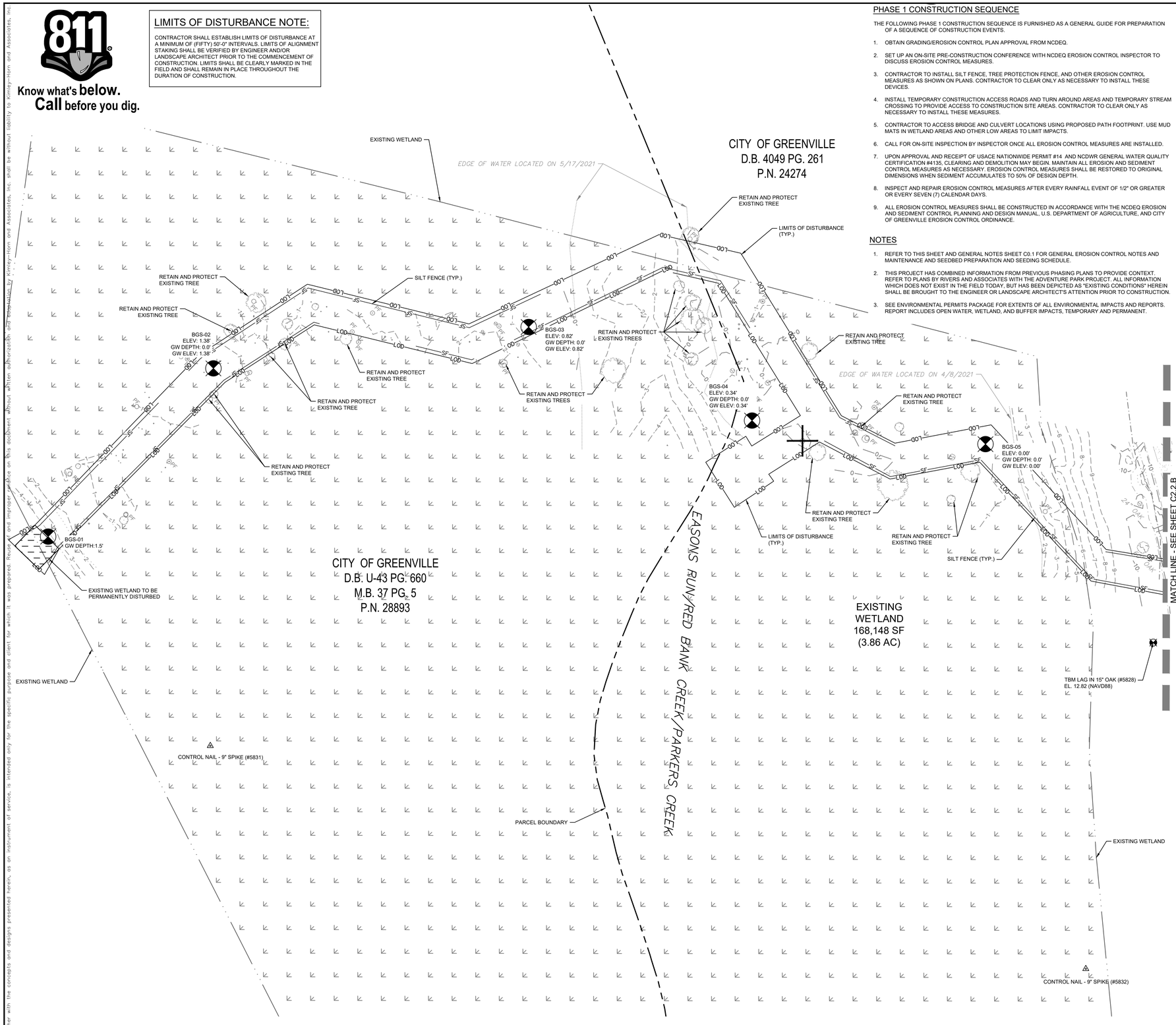
WILDWOOD PARK - TOWER AND TRAILS
BID PACKAGE B
PREPARED FOR
CITY OF GREENVILLE

NC GREENVILLE

SHEET NUMBER
C2.0.B

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 DURATION OF CONSTRUCTION.



PHASE 1 CONSTRUCTION SEQUENCE

THE FOLLOWING PHASE 1 CONSTRUCTION SEQUENCE IS FURNISHED AS A GENERAL GUIDE FOR PREPARATION OF A SEQUENCE OF CONSTRUCTION EVENTS.

1. OBTAIN GRADING/EROSION CONTROL PLAN APPROVAL FROM NCDEQ.
2. SET UP AN ON-SITE PRE-CONSTRUCTION CONFERENCE WITH NCDEQ EROSION CONTROL INSPECTOR TO DISCUSS EROSION CONTROL MEASURES.
3. CONTRACTOR TO INSTALL SILT FENCE, TREE PROTECTION FENCE, AND OTHER EROSION CONTROL MEASURES AS SHOWN ON PLANS. CONTRACTOR TO CLEAR ONLY AS NECESSARY TO INSTALL THESE DEVICES.
4. INSTALL TEMPORARY CONSTRUCTION ACCESS ROADS AND TURN AROUND AREAS AND TEMPORARY STREAM CROSSING TO PROVIDE ACCESS TO CONSTRUCTION SITE AREAS. CONTRACTOR TO CLEAR ONLY AS NECESSARY TO INSTALL THESE MEASURES.
5. CONTRACTOR TO ACCESS BRIDGE AND CULVERT LOCATIONS USING PROPOSED PATH FOOTPRINT. USE MUD MATS IN WETLAND AREAS AND OTHER LOW AREAS TO LIMIT IMPACTS.
6. CALL FOR ON-SITE INSPECTION BY INSPECTOR ONCE ALL EROSION CONTROL MEASURES ARE INSTALLED.
7. UPON APPROVAL AND RECEIPT OF USACE NATIONWIDE PERMIT #14 AND NCDWR GENERAL WATER QUALITY CERTIFICATION #4135, CLEARING AND DEMOLITION MAY BEGIN. MAINTAIN ALL EROSION AND SEDIMENT CONTROL MEASURES AS NECESSARY. EROSION CONTROL MEASURES SHALL BE RESTORED TO ORIGINAL DIMENSIONS WHEN SEDIMENT ACCUMULATES TO 50% OF DESIGN DEPTH.
8. INSPECT AND REPAIR EROSION CONTROL MEASURES AFTER EVERY RAINFALL EVENT OF 1/2" OR GREATER OR EVERY SEVEN (7) CALENDAR DAYS.
9. 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.

NOTES

1. REFER TO THIS SHEET AND GENERAL NOTES SHEET C0.1 FOR GENERAL EROSION CONTROL NOTES AND MAINTENANCE AND SEEDBED PREPARATION AND SEEDING SCHEDULE.
2. THIS PROJECT HAS COMBINED INFORMATION FROM PREVIOUS PHASING PLANS TO PROVIDE CONTEXT. REFER TO PLANS BY RIVERS AND ASSOCIATES WITH THE ADVENTURE PARK PROJECT. ALL INFORMATION WHICH DOES NOT EXIST IN THE FIELD TODAY, BUT HAS BEEN DEPICTED AS "EXISTING CONDITIONS" HEREIN SHALL BE BROUGHT TO THE ENGINEER OR LANDSCAPE ARCHITECT'S ATTENTION PRIOR TO CONSTRUCTION.
3. SEE ENVIRONMENTAL PERMITS PACKAGE FOR EXTENTS OF ALL ENVIRONMENTAL IMPACTS AND REPORTS. REPORT INCLUDES OPEN WATER, WETLAND, AND BUFFER IMPACTS, TEMPORARY AND PERMANENT.

LEGEND

- CONTOURS
- DEPRESSED CONTOUR
- BOUNDARY LINE
- RIGHT OF WAY (R/W)
- STORM DRAINAGE
- GIS PARCEL LINE
- TOE OF BANK (DITCH)
- TOP OF BANK (DITCH)
- CENTERLINE OF DITCH
- FENCE
- OVERHEAD ELECTRIC LINE
- EASEMENT LINE
- WATER LINE (WL)
- SANITARY SEWER LINE (SS)
- GAS LINE
- UNDERGROUND COMMUNICATION
- WOODS LINE
- BUILDING
- JOINT ROADWAY EASEMENT
- SANITARY SEWER EASEMENT
- DRAINAGE EASEMENT
- UTILITY EASEMENT
- ELECTRIC EASEMENT
- CONCRETE
- ASPHALT
- RIPRAP
- FIRE HYDRANT
- WATER VALVE
- LIGHT POLE
- METAL POST
- CLEAN OUT
- TEMPORARY BENCHMARK
- GAS METER
- CREPE MYRTLE TREE
- BRADFORD PEAR TREE
- CORRUGATED METAL PIPE
- TELEPHONE PEDESTAL
- GPS CONTROL POINT
- CHAIN LINK FENCE WITH BARBED WIRE
- SANITARY SEWER MANHOLE (MHSS)
- SANITARY SEWER CARSONITE MARKER
- CATCH BASIN AT BACK OF CURB
- ACRYLONITRILE BUTADIENE STYRENE

- RADIUS
- ARC LENGTH
- CHORD BEARING
- CHORD LENGTH
- NO POINT FOUND
- EXISTING IRON PIPE
- EXISTING IRON REBAR
- POLY-VINYL CHLORIDE
- PVC TRUSS PIPE
- DRAINAGE INLET
- ORNAMENTAL TREE
- CONCRETE PIPE
- PARCEL NUMBER
- MAP BOOK
- DEED BOOK
- PAGE
- ELEVATION
- INVERT
- TYPICAL
- CONCRETE
- CRUSHED ROCK
- BACK OF CURB

DEMOLITION AND EROSION CONTROL LEGEND

- PROPERTY LINE
- LOD — LIMITS OF DISTURBANCE
- DEMOLISH SITE ITEM
- SF — SILT FENCE
- TPF — TREE PROTECTION FENCE
- DEMOLISH SITE ITEM/TREE TO BE REMOVED
- CONCRETE WASHOUT STATION
- NATURAL TRAIL TO BE REMOVED
- PERMANENT WETLAND DISTURBANCE
- TEMPORARY WETLAND DISTURBANCE
- TEMPORARY/PERMANENT OPEN WATER DISTURBANCE (SEE NOTE #3)
- SPOIL PILE TO BE REMOVED
- TEMPORARY HEAVY DUTY GRAVEL CONSTRUCTION ACCESS
- 20' FIRE ACCESS DRIVE

BORINGS

Description	Northing	Easting
BGS-01	682792.95	2493966.99
BGS-02	682892.95	2493965.96
BGS-03	683000.02	2494048.00
BGS-04	683039.01	2494143.00
BGS-05	683102.00	2494220.00
BGS-06	683134.01	2494399.00
BT-01	680328.00	2496924.00
BW-01	680778.00	2496865.01
BW-02	680688.98	2496877.96
BW-03	680537.96	2497117.98
BW-04	680538.00	2497235.95
CT-01	682368.01	2496810.98
EB-01	680591.02	2496938.96
TB-01	681864.00	2497416.99
TB-02	681879.00	2497532.00
WB-01	683318.01	2494539.98

NOTES:
BGS - BLACK GUM SWAMP
WB - WESTERN BRIDGE
CT - CONNECTOR TRAIL
TB - TOWER BRIDGE
BW - BOARDWALK
EB - EAST BRIDGE
BT - BEACH TRAIL

NORTH

GRAPHIC SCALE IN FEET
0 10 20 40
SCALE: 1" = 20'

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.

No.	DATE	BY
1	08/02/22	ASA

ISSUED FOR BID
REVISIONS

Kimley»Horn
© 2022 KIMLEY-HORN AND ASSOCIATES, INC.
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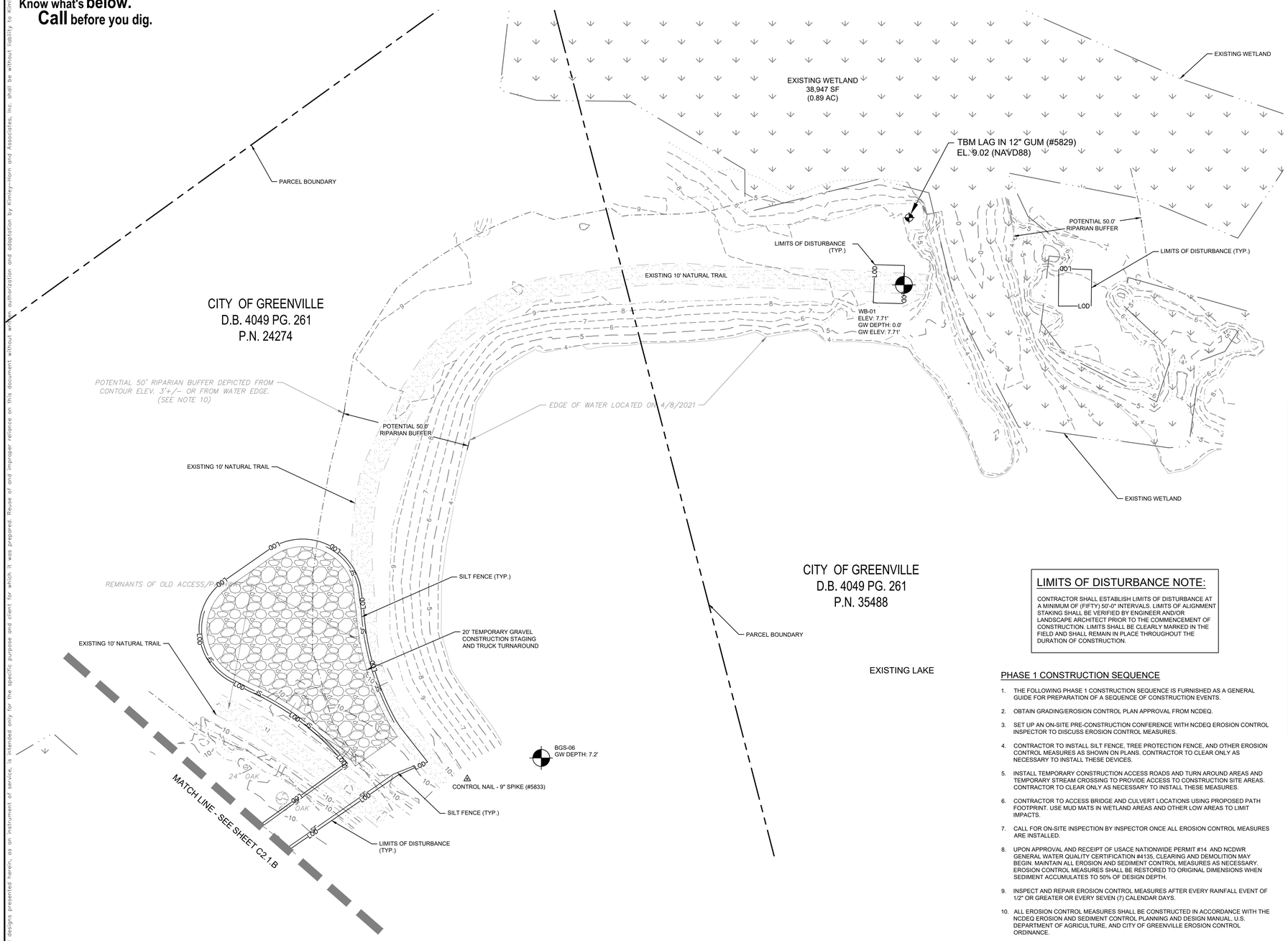
SEAL:
NORTH CAROLINA PROFESSIONAL SEAL 033841 ENGINEER JOHN D. KILLENAT
08/02/2022

KHA PROJECT 012654010
DATE 08/02/2022
SCALE AS SHOWN
DESIGNED BY MRG
DRAWN BY ASA
CHECKED BY JDK

PLAN AND PROFILE - THE SWAMP (AREA 4)

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

SHEET NUMBER
C2.1.B



LEGEND

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DEMOLITION AND EROSION CONTROL LEGEND

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NOTES:
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WB - WESTERN BRIDGE
CT - CONNECTOR TRAIL
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BW - BOARDWALK
EB - EAST BRIDGE
BT - BEACH TRAIL

NORTH

GRAPHIC SCALE IN FEET
0 10 20 40
SCALE: 1" = 20'

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.

No.	REVISIONS	DATE	BY
1	ISSUED FOR BID	08/02/22	ASA

Kimley»Horn
© 2022 KIMLEY-HORN AND ASSOCIATES, INC.
421 FAYETTEVILLE STREET, SUITE 600, RALEIGH, NC 27601
PHONE: 919-677-2000 FAX: 919-677-2050
WWW.KIMLEY-HORN.COM
#F-0102

SEAL:
NORTH CAROLINA PROFESSIONAL SEAL 033841 ENGINEER JOHN D. KILLENEK
08/02/2022

KHA PROJECT 012654010
DATE 08/02/2022
SCALE AS SHOWN
DESIGNED BY MRG
DRAWN BY ASA
CHECKED BY JDK

DEMOLITION AND PH 1 EROSION CONTROL - THE SWAMP

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

SHEET NUMBER
C2.2.B

C3.1.B

C3.2.B

C3.3.B

THE SWAMP (AREA 4)

PARCEL 5

PARCEL 3

PARCEL 4

PARCEL 2

EXISTING TRAIL ALIGNMENT CONNECTING TO RIVER PARK NORTH

EXISTING SOUTH TAR RIVER GREENWAY

NCPIN: 4698313793
OWNER: FLANAGAN, CURTIS J HEIRS
PHYSICAL ADDRESS: 0 BEECH STREET
DB: 2824 PG. 576
CURRENT ZONING: R6 - RESIDENTIAL

NCPIN: 4698411224
OWNER: CITY OF GREENVILLE
PHYSICAL ADDRESS: 2805 E SECOND STREET
CURRENT ZONING: INDUSTRY

TAR RIVER

EXISTING LAKE

APPROXIMATE EXISTING TRAIL ALIGNMENT

FLOODWAY

GREENVILLE BLVD (ALT HWY-264)

APPROXIMATE EXISTING TRAIL ALIGNMENT

FLOODWAY

EXISTING LAKE

PARCEL 1

NCPIN: 4697495737
OWNER: CITY OF GREENVILLE
PHYSICAL ADDRESS: 2900 E SECOND STREET
CURRENT ZONING: RESIDENTIAL - AGRICULTURAL

NCPIN: 4698507427
OWNER: CITY OF GREENVILLE
PHYSICAL ADDRESS: 0 NE GREENVILLE BLVD
CURRENT ZONING: RESIDENTIAL - AGRICULTURAL

NCPIN: 4697594379
OWNER: EWT 77 LLC
PHYSICAL ADDRESS: 2209 NE GREENVILE BV
DB: 4066 PG. 585
CURRENT ZONING: OFFICE - RESIDENTIAL

NORTH

GRAPHIC SCALE IN FEET
0 75 150 300

SCALE: 1" = 150'

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

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SEAL:

NORTH CAROLINA PROFESSIONAL SEAL 033841 ENGINEER JOHN D. KULENKAY

08/02/2022

KHA PROJECT 012654010
DATE 08/02/2022
SCALE AS SHOWN
DESIGNED BY MRG
DRAWN BY ASA
CHECKED BY JDK

OVERALL SITE PLAN

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

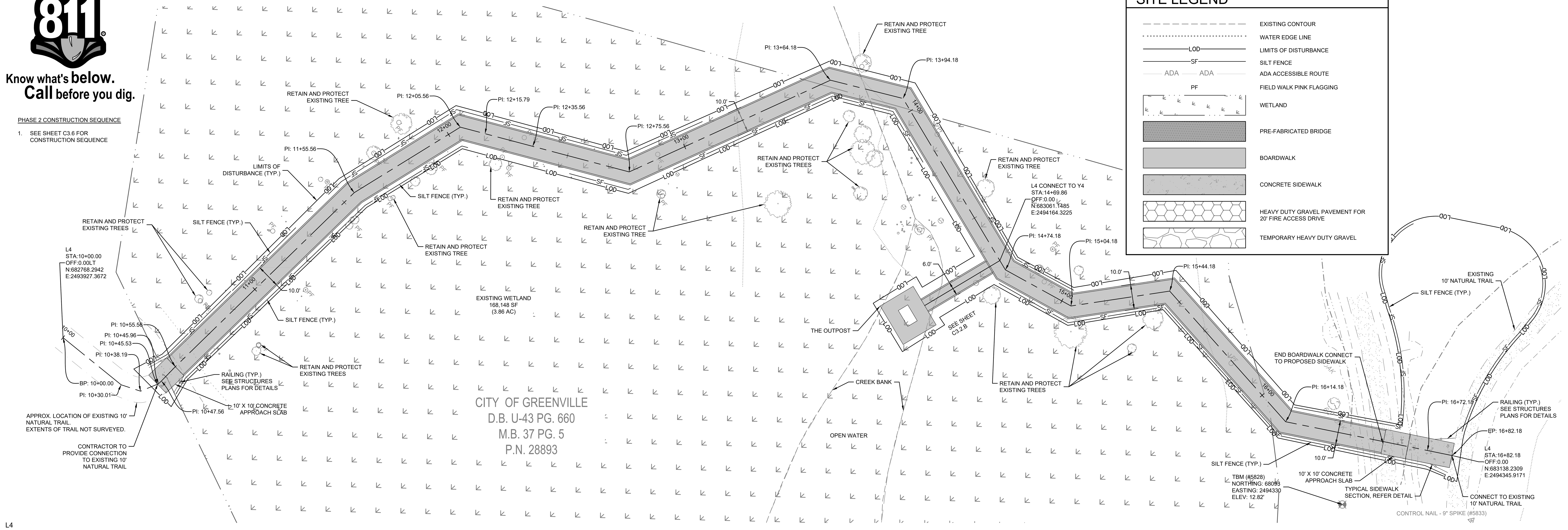
GREENVILLE NC

SHEET NUMBER
C3.0.B

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

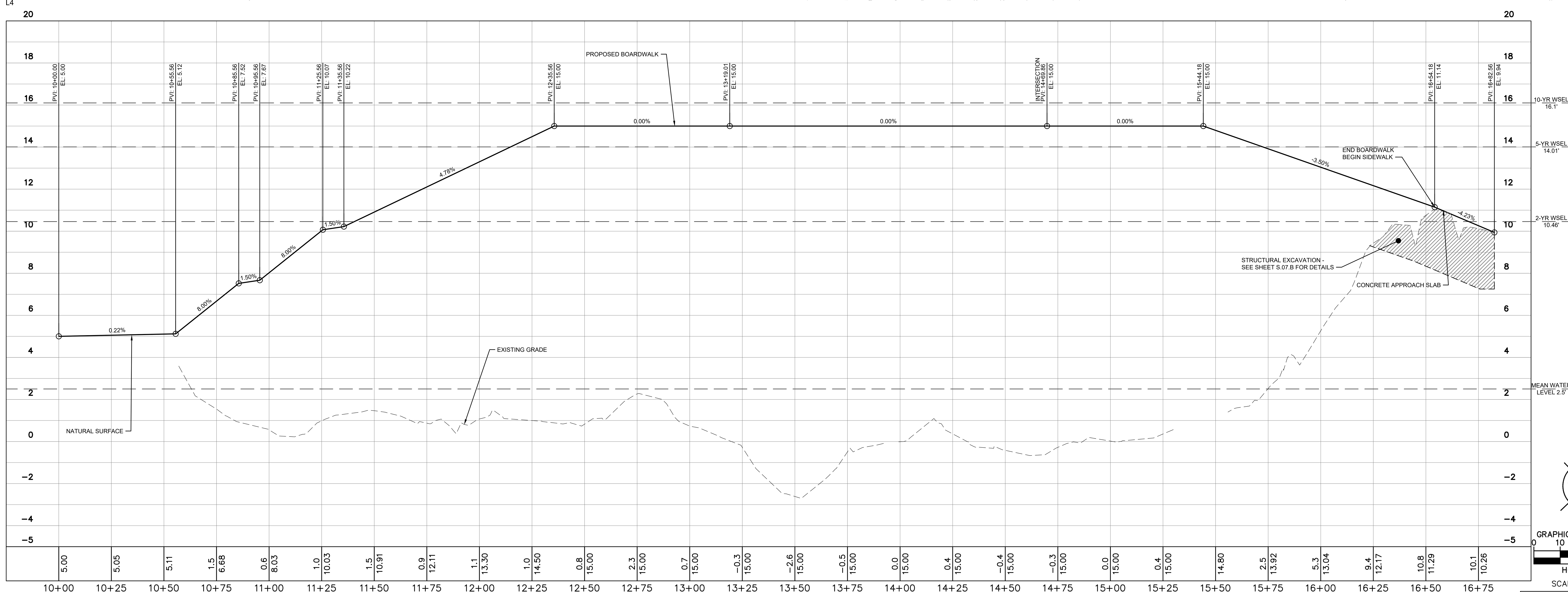
PHASE 2 CONSTRUCTION SEQUENCE

1. SEE SHEET C3.6 FOR CONSTRUCTION SEQUENCE



SITE LEGEND

(dashed line)	EXISTING CONTOUR
(dotted line)	WATER EDGE LINE
LOD	LIMITS OF DISTURBANCE
SF	SILT FENCE
ADA	ADA ACCESSIBLE ROUTE
PF	FIELD WALK PINK FLAGGING
(hatch)	WETLAND
(hatch)	PRE-FABRICATED BRIDGE
(hatch)	BOARDWALK
(hatch)	CONCRETE SIDEWALK
(hatch)	HEAVY DUTY GRAVEL PAVEMENT FOR 20' FIRE ACCESS DRIVE
(hatch)	TEMPORARY HEAVY DUTY GRAVEL



GRAPHIC SCALE IN FEET
HORIZONTAL SCALE: 1" = 20'
VERTICAL

SURVEY NOTE:

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NC LICENSE #F-0102

SEAL: NORTH CAROLINA PROFESSIONAL SEAL 033841 ENGINEER JOHN D. KUZENSKI
08/02/2022

KHA PROJECT	DATE	SCALE	DESIGNED BY	DRAWN BY	CHECKED BY
012654010	08/02/2022	AS SHOWN	MRG	ASA	JDK

PLAN AND PROFILE - THE SWAMP (AREA 4)

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

SHEET NUMBER
C3.1.B

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

SITE LEGEND

— — — — —	EXISTING CONTOUR
· · · · · · ·	WATER EDGE LINE
——LOD——	LIMITS OF DISTURBANCE
——SF——	SILT FENCE
ADA ADA	ADA ACCESSIBLE ROUTE
PF	FIELD WALK PINK FLAGGING
(hatch)	WETLAND
(hatch)	PRE-FABRICATED BRIDGE
(hatch)	BOARDWALK
(hatch)	CONCRETE SIDEWALK
(hatch)	HEAVY DUTY GRAVEL PAVEMENT FOR 20' FIRE ACCESS DRIVE
(hatch)	TEMPORARY HEAVY DUTY GRAVEL

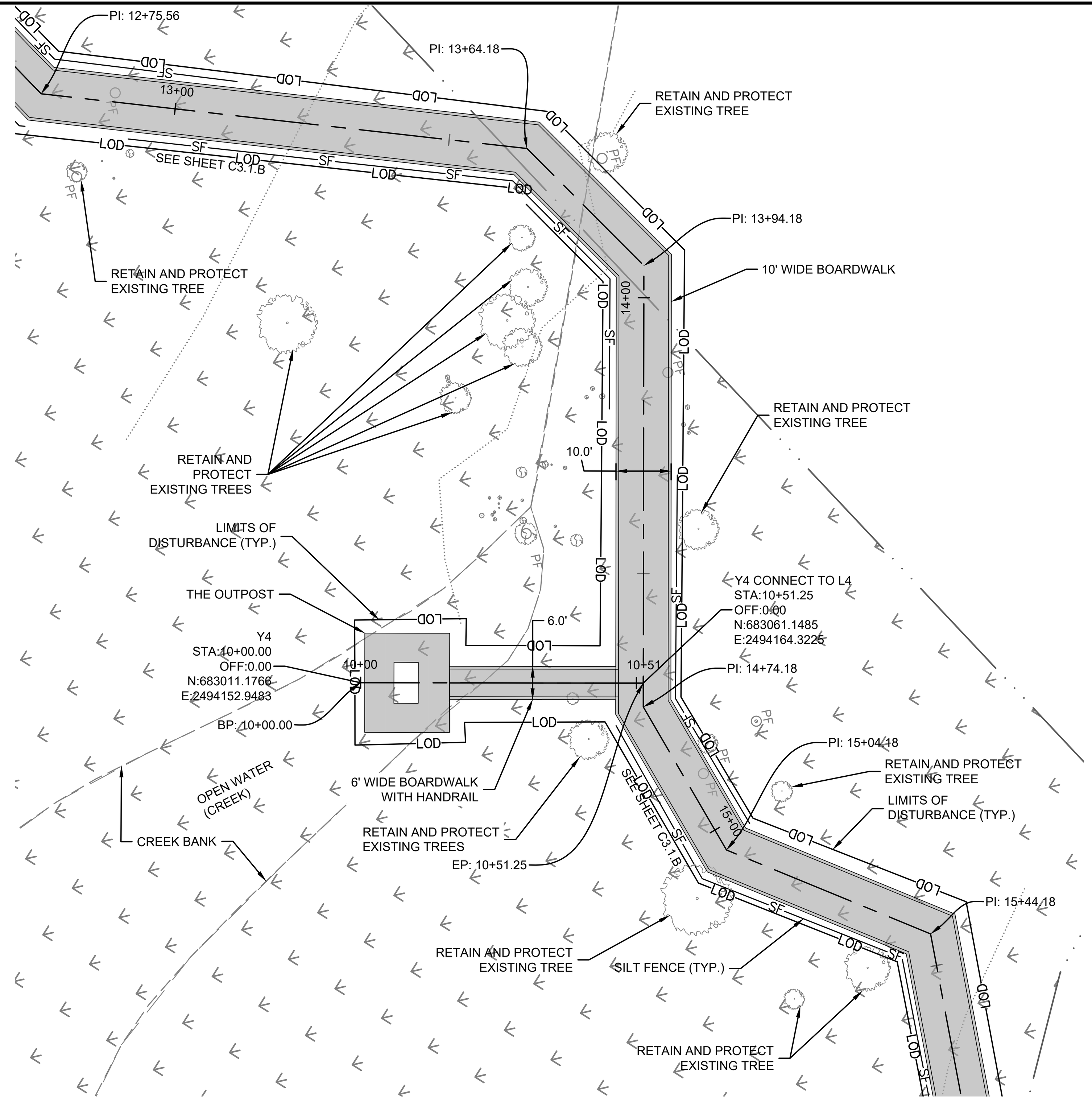
PHASE 2 CONSTRUCTION SEQUENCE

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

1. BEGIN MASS GRADING OF PROPOSED SIDEWALKS AND TRAILS. MAINTAIN EROSION CONTROL DEVICES AS NEEDED.
2. 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.
5. 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.

NOTES

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



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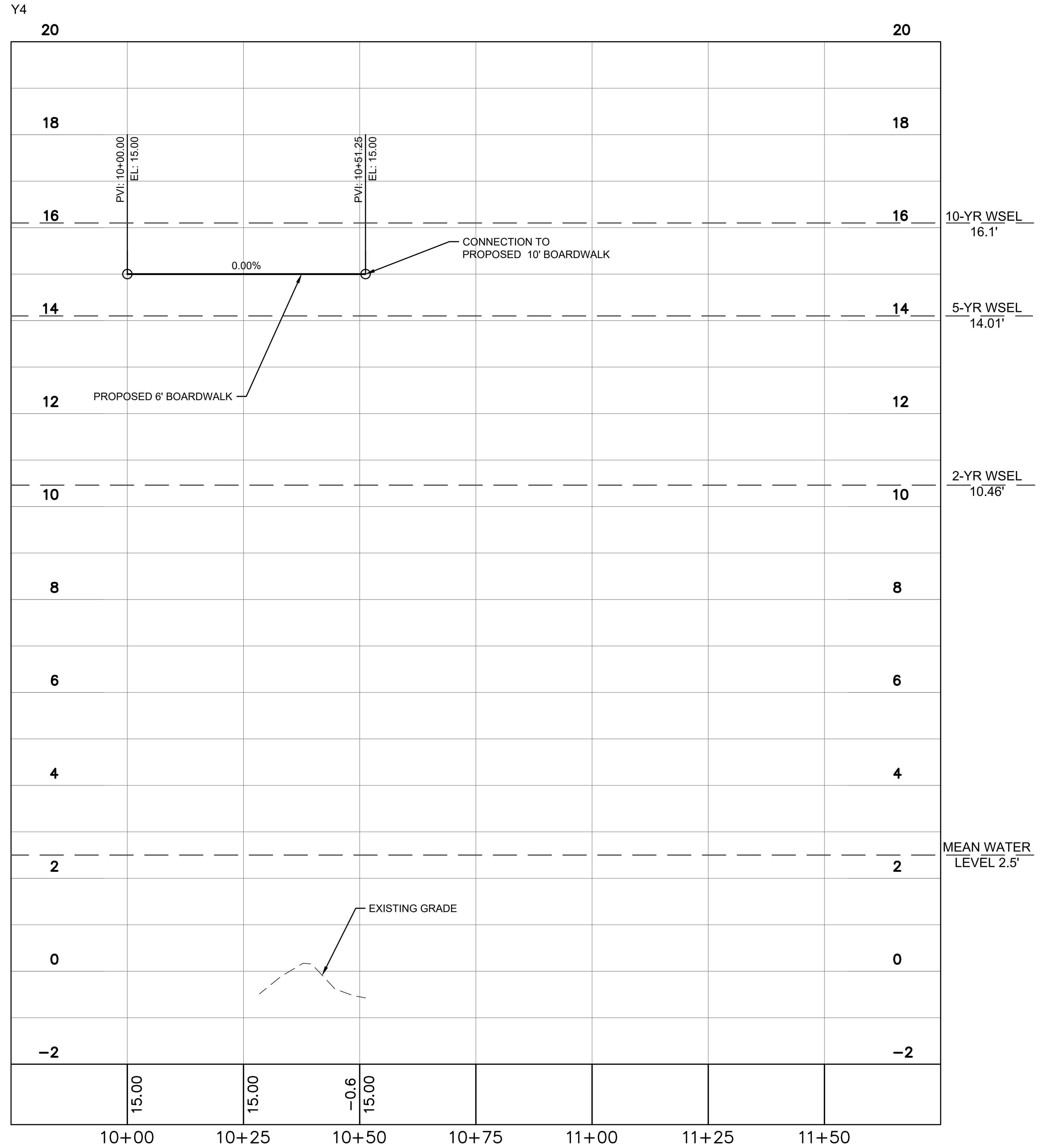

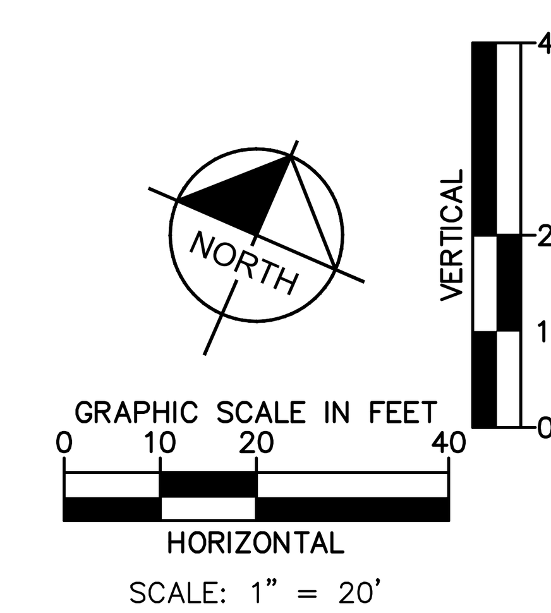

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No.	REVISIONS	DATE	BY
1	ISSUED FOR BID	08/02/22	ASA

Kimley»Horn
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421 FAYETTEVILLE STREET, SUITE 600, RALEIGH, NC 27601
PHONE: 919-677-2000 FAX: 919-677-2050
WWW.KIMLEY-HORN.COM
#F-0102

SEAL: NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 033841 JOHN D. KUZENSKI 08/02/2022

KHA PROJECT	012654010
DATE	08/02/2022
SCALE	AS SHOWN
DESIGNED BY	MRG
DRAWN BY	ASA
CHECKED BY	JDK

PLAN AND PROFILE - THE SWAMP (AREA 4)

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

SHEET NUMBER
C3.2.B

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

SITE LEGEND

Symbol	Description
— — — — —	EXISTING CONTOUR
··········	WATER EDGE LINE
—LOD—	LIMITS OF DISTURBANCE
—SF—	SILT FENCE
ADA — ADA	ADA ACCESSIBLE ROUTE
PF	FIELD WALK PINK FLAGGING
(hatch)	WETLAND
(hatch)	PRE-FABRICATED BRIDGE
(hatch)	BOARDWALK
(hatch)	CONCRETE SIDEWALK
(hatch)	HEAVY DUTY GRAVEL PAVEMENT FOR 20' FIRE ACCESS DRIVE
(hatch)	TEMPORARY HEAVY DUTY GRAVEL

PHASE 2 CONSTRUCTION SEQUENCE

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

1. BEGIN MASS GRADING OF PROPOSED SIDEWALKS AND TRAILS. MAINTAIN EROSION CONTROL DEVICES AS NEEDED.
2. 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.
5. 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.

NOTES

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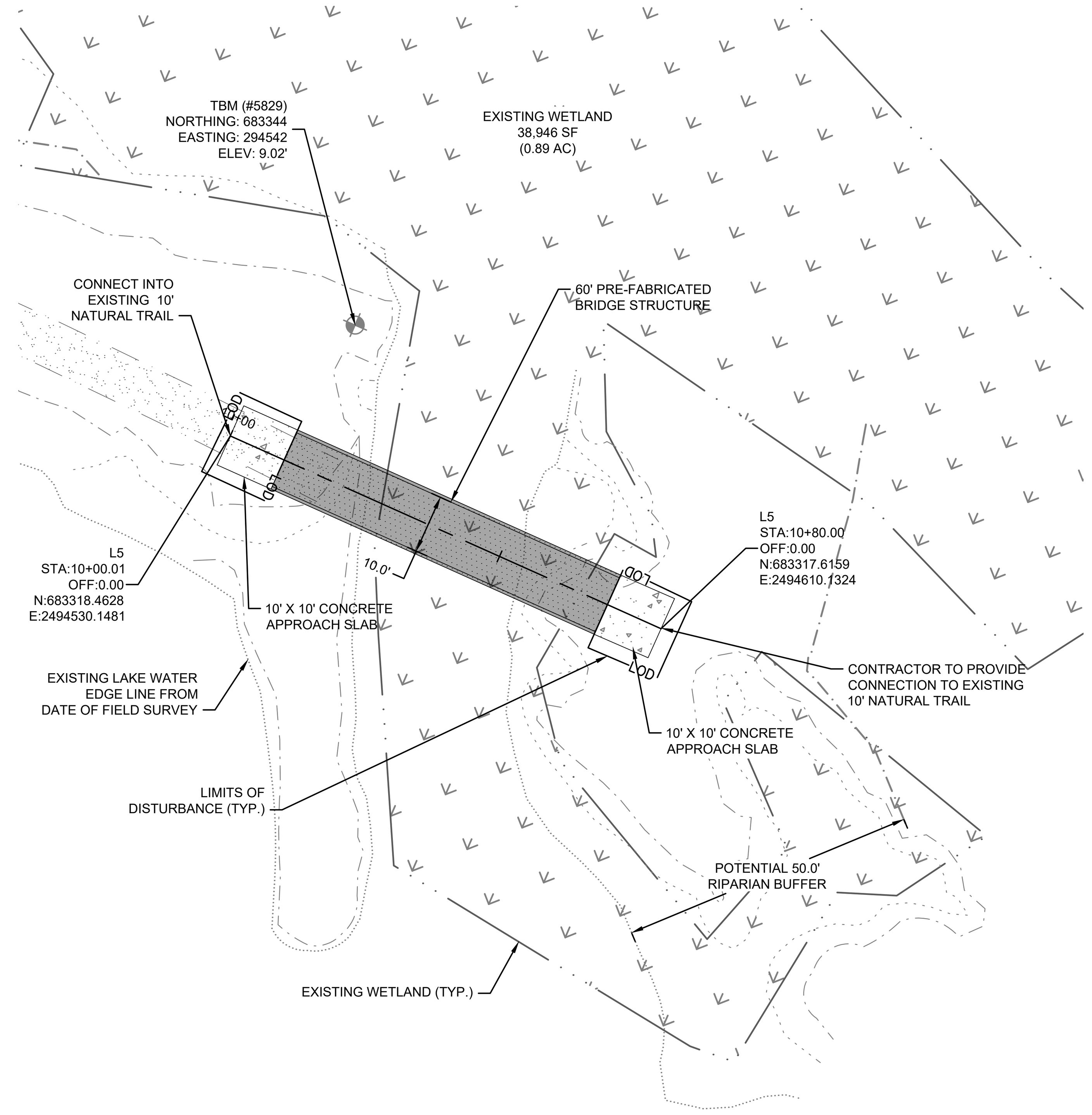

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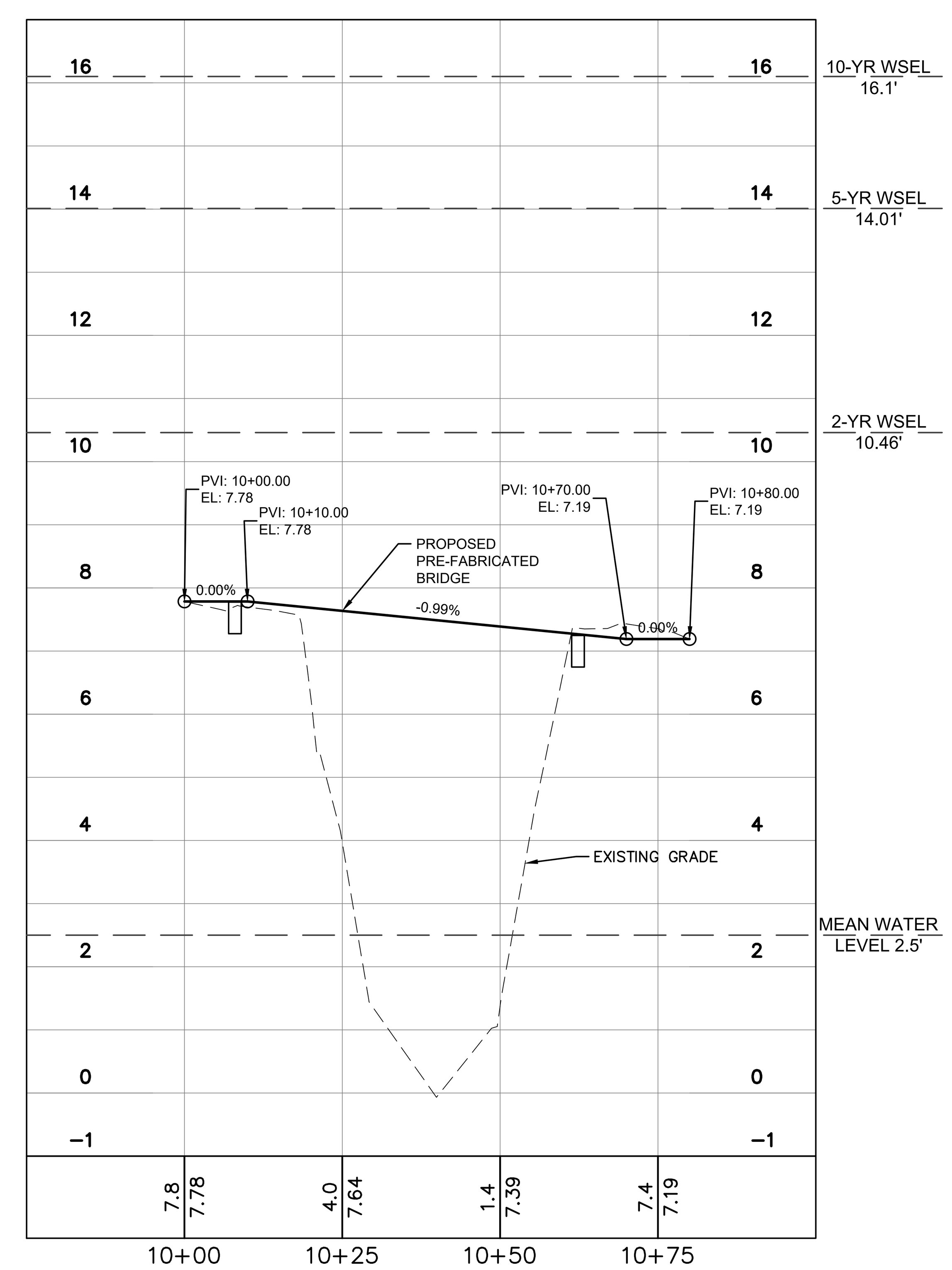

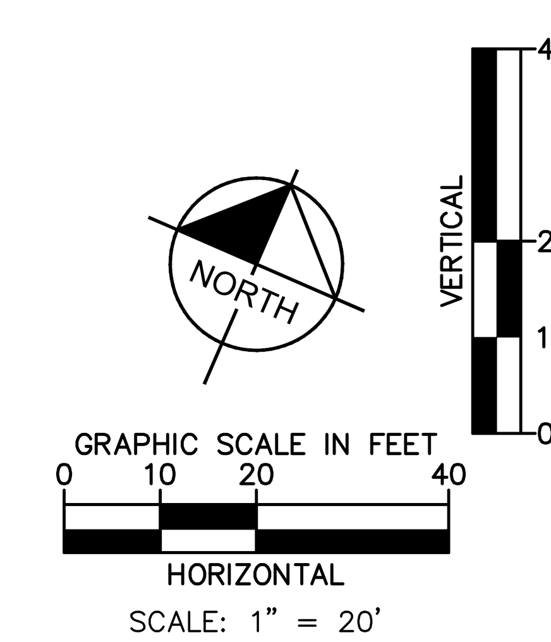

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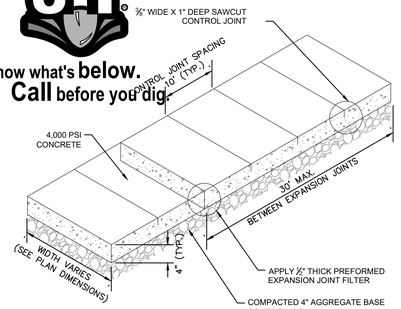
SEAL:
NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 033841 JOHN D. KUZENSKI
08/02/2022

KHA PROJECT	012654010
DATE	08/02/2022
SCALE	AS SHOWN
DESIGNED BY	MRG
DRAWN BY	ASA
CHECKED BY	JDK

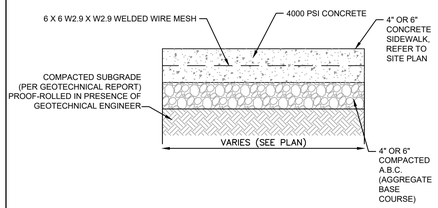
PLAN AND PROFILE - THE SWAMP (AREA 4)

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

SHEET NUMBER
C3.3.B



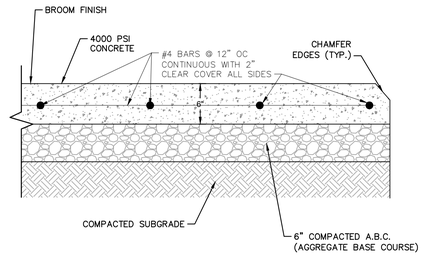
SIDEWALK
N.T.S. KHA DETAIL NO: 02.103.R02 (01)



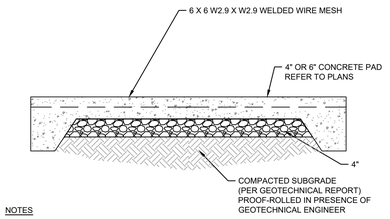
TYPICAL SIDEWALK SECTION
N.T.S. KHA DETAIL NO: 02.102.R01 (02)

NOTES

1. MAXIMUM JOINT SPACING IS 10 FEET IN ALL DIRECTIONS. SAW JOINTS SHOULD BE CUT IT A DEPTH OF AT LEAST 1/4 THE THICKNESS OF THE CONCRETE.
2. PAVEMENT SECTION MUST MEET THE CRITERIA GIVEN IN THE SITE SOIL REPORT
3. ALL PAVEMENT MATERIAL SHALL BE IN ACCORDANCE WITH THE NORTH CAROLINA DEPARTMENT OF TRANSPORTATION (NCDOT) SPECIFICATIONS.



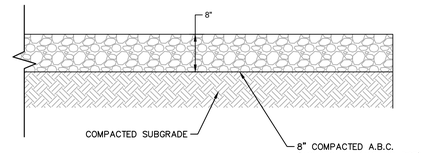
HEAVY DUTY CONCRETE SIDEWALK SECTION
N.T.S. KHA DETAIL NO: (03)



NOTES

1. EXPANSION JOINTS AT BUILDINGS OR IMMOVABLE OBJECTS.
2. CONTROL JOINTS 10' O.C.
3. EXPANSION JOINTS 30' O.C. (MAX)

TURN DOWN FOR TYPICAL SIDEWALK DETAIL
N.T.S. KHA DETAIL NO: 02.107.R01 (04)



NOTE: USE HEAVY DUTY GRAVEL PAVEMENT FOR PERMANENT FIRE ACCESS DRIVE TO FUTURE OBSERVATION TOWER

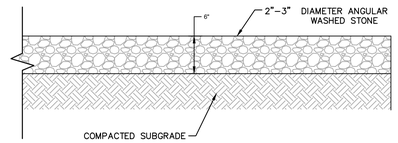
HEAVY DUTY GRAVEL PAVEMENT
N.T.S. KHA DETAIL NO: (05)

CONSTRUCTION SPECIFICATIONS:

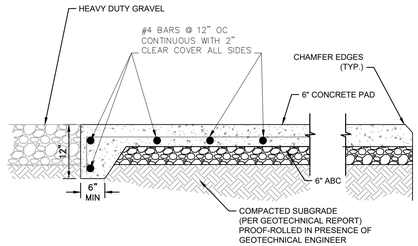
1. CLEAR THE AREA OF ALL VEGETATION, ROOTS, AND OTHER OBJECTIONABLE MATERIAL AND PROPERLY GRADE IT.
2. PLACE THE GRAVEL TO THE SPECIFIC GRADE AND DIMENSIONS SHOWN ON THE PLANS, AND SMOOTH IT.
3. USE GEOTEXTILE FABRICS BECAUSE THEY IMPROVE STABILITY OF THE FOUNDATION IN LOCATIONS SUBJECT TO SEEPAGE OR 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 GRAVEL SECTION FOR CONSTRUCTION ACCESS AND TURNAROUNDS
N.T.S. KHA DETAIL NO: (07)



NOTES

1. EXPANSION JOINTS AT BUILDINGS OR IMMOVABLE OBJECTS.
2. CONTROL JOINTS 10' O.C.
3. EXPANSION JOINTS 30' O.C. (MAX)

HEAVY DUTY SIDEWALK CONNECTION TO HEAVY DUTY GRAVEL DETAIL
N.T.S. KHA DETAIL NO: 02.107.R01 (08)

SURVEY NOTE:

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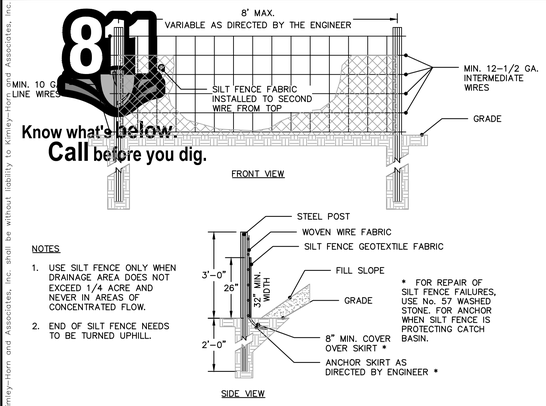
08/02/2022

KHA PROJECT	012654010
DATE	08/02/2022
SCALE	AS SHOWN
DESIGNED BY	MRG
DRAWN BY	ASA
CHECKED BY	JDK

SIDEWALK DETAILS

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

SHEET NUMBER
C4.0.B



NOTES

1. USE SILT FENCE ONLY WHEN DRAINAGE AREA DOES NOT EXCEED 1/4 ACRE AND NEVER IN AREAS OF CONCENTRATED FLOW.
2. END OF SILT FENCE NEEDS TO BE TURNED UPHILL.

CONSTRUCTION SPECIFICATIONS

MATERIALS

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.

CONSTRUCTION

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.
7. EXCAVATE A TRENCH APPROXIMATELY 4 INCHES WIDE AND 8 INCHES DEEP ALONG THE PROPOSED LINE OF POSTS AND UPSLOPE FROM THE BARRIER.
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 PERFORMANCE.
10. DO NOT ATTACH FILTER FABRIC TO EXISTING TREES.

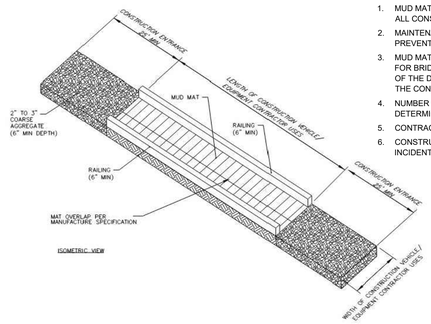
MAINTENANCE

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.

TEMPORARY SILT FENCE

N.T.S.

KHA DETAIL NO: 01.302.R02 — 01



MUD MAT DETAIL

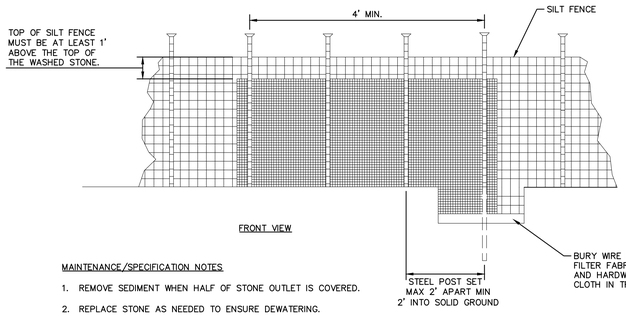
NOTES:

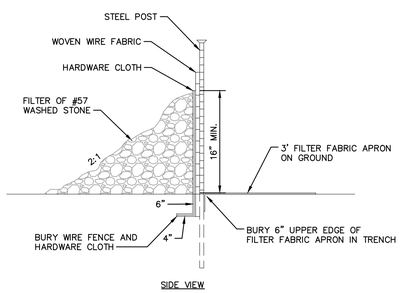
1. MUD MAT(S) SHOULD BE LOCATED TO PROVIDE FOR UTILIZATION BY ALL CONSTRUCTION VEHICLES.
2. MAINTENANCE: MUST BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR DIRECT FLOW OF MUD INTO WETLAND.
3. MUD MAT(S) SHALL BE UTILIZED IN WETLAND AREAS TO LIMIT IMPACTS FOR BRIDGE AND BOARDWALK CONSTRUCTION. 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. CONSTRUCTION ENTRANCE APPROACHES TO MUD MAT SHALL BE INCIDENTAL TO THE MUD MAT PAY ITEM.

MUDMAT DETAIL

N.T.S.

02





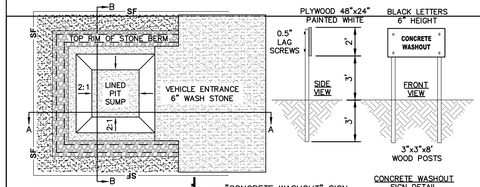
MAINTENANCE/SPECIFICATION NOTES

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

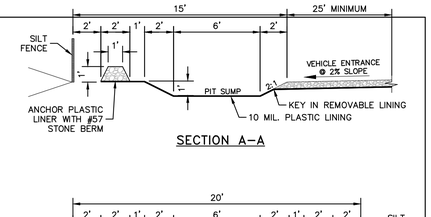
N.T.S.

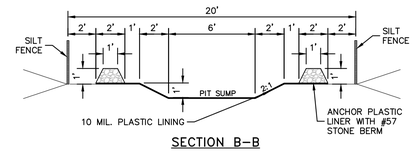
KHA DETAIL NO: 01.303.R02 — 03



NOTES

1. ACTUAL LAYOUT TO BE DETERMINED IN THE FIELD.
2. A CONCRETE WASHOUT SIGN SHALL BE INSTALLED WITHIN 30' OF THE TEMPORARY CONCRETE WASHOUT FACILITY.
3. MATERIALS USED TO CONSTRUCT TEMPORARY CONCRETE WASHOUT FACILITIES SHALL BE REMOVED FROM THE SITE AND DISPOSED OF OR RECYCLED.
4. HOLES, DEPRESSIONS OR OTHER GROUND DISTURBANCE CAUSED BY THE REMOVAL OF THE 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

N.T.S.

01.102.R01 — 04

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

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 Regional Office at (252) 946-6481.

PUBLIC WORKS DEPARTMENT
1500 Beatty Street
Greenville, North Carolina 27834

CITY OF GREENVILLE, N.C.
USE WITH THE CITY OF GREENVILLE, N.C. STANDARD SPECIFICATIONS ONLY

www.greenvillenc.gov

No.	Date	Description
1	9/16/11	APPROVAL

EROSION CONTROL GUIDE

Scale: not to scale | Sheet #: 1 of 3 | Detail # 310.01

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

SEEDING AND MULCHING:

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		September 1 - February 28	
50#	Tall Fescue	50#	Tall Fescue
10#	Centipede	10#	Centipede
25#	Bermudagrass (hulled)	35#	Bermudagrass (hulled)
500#	Fertilizer	500#	Fertilizer
4000#	Limestone	4000#	Limestone

Water and Borrow Locations

March 1 - August 31		September 1 - February 28	
75#	Tall Fescue	75#	Tall Fescue
25#	Bermudagrass (hulled)	35#	Bermudagrass (hulled)
500#	Fertilizer	500#	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

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

PUBLIC WORKS DEPARTMENT
1500 Beatty Street
Greenville, North Carolina 27834

CITY OF GREENVILLE, N.C.
USE WITH THE CITY OF GREENVILLE, N.C. STANDARD SPECIFICATIONS ONLY

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No.	Date	Description
1	9/16/11	APPROVAL

EROSION CONTROL GUIDE

Scale: not to scale | Sheet #: 2 of 3 | Detail # 310.01

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

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 allowed on projects.

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".

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No.	Date	Description
1	9/16/11	APPROVAL

EROSION CONTROL GUIDE

Scale: not to scale | Sheet #: 3 of 3 | Detail # 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.

No.	DATE	BY
1	08/02/22	ASA

ISSUED FOR BID

REVISIONS

Kimley»Horn
© 2022 KIMLEY-HORN AND ASSOCIATES, INC.
421 FAYETTEVILLE STREET, SUITE 600, RALEIGH, NC 27601
PHONE: 919-677-2000 FAX: 919-677-2050
WWW.KIMLEY-HORN.COM
##-0102

SEAL:

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 033841 JOHN D. KUZENKO

08/02/2022

KHA PROJECT 012654010	
DATE	08/02/2022
SCALE	AS SHOWN
DESIGNED BY	MRC
DRAWN BY	ASA
CHECKED BY	JDK

EROSION CONTROL DETAILS

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

SHEET NUMBER
C4.1.B

Know what's below. Call before you dig.

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

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

SECTION E: GROUND STABILIZATION

Required Ground Stabilization Timeframes

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

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

GROUND STABILIZATION SPECIFICATION

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

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

POLYACRYLAMIDES (PAMS) AND FLOCCULANTS

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

EQUIPMENT AND VEHICLE MAINTENANCE

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

LITTER, BUILDING MATERIAL AND LAND CLEARING WASTE

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

PAINT AND OTHER LIQUID WASTE

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

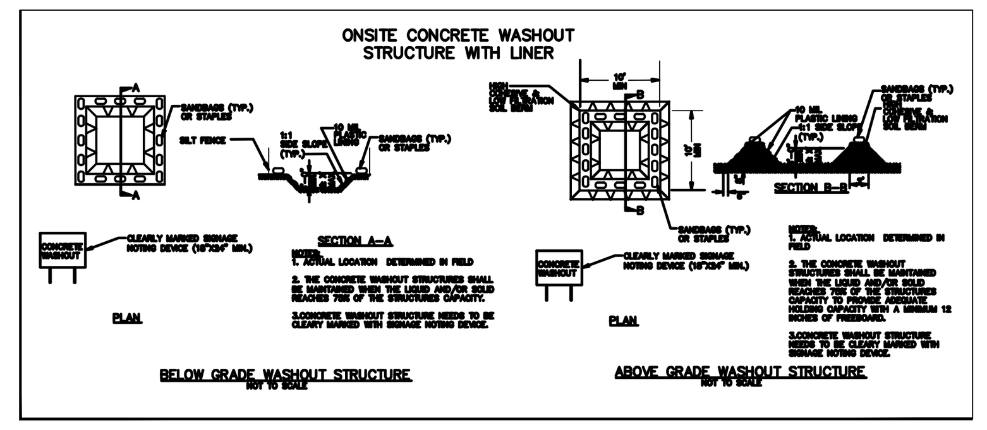
PORTABLE TOILETS

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

EARTHEN STOCKPILE MANAGEMENT

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

ONSITE CONCRETE WASHOUT STRUCTURE WITH LINER



CONCRETE WASHOUTS

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

HERBICIDES, PESTICIDES AND RODENTICIDES

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

HAZARDOUS AND TOXIC WASTE

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

NCG01 GROUND STABILIZATION AND MATERIALS HANDLING

EFFECTIVE: 04/01/19

PART III
SELF-INSPECTION, RECORDKEEPING AND REPORTING

SECTION A: SELF-INSPECTION

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

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

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

PART III
SELF-INSPECTION, RECORDKEEPING AND REPORTING

SECTION B: RECORDKEEPING

1. E&SC Plan Documentation

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

2. Additional Documentation

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

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

(b) Records of inspections made during the previous 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.

(c) 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]

PART III
SELF-INSPECTION, RECORDKEEPING AND REPORTING

SECTION C: REPORTING

1. Occurrences that must be reported

Permittees shall report the following occurrences:

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

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

(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.

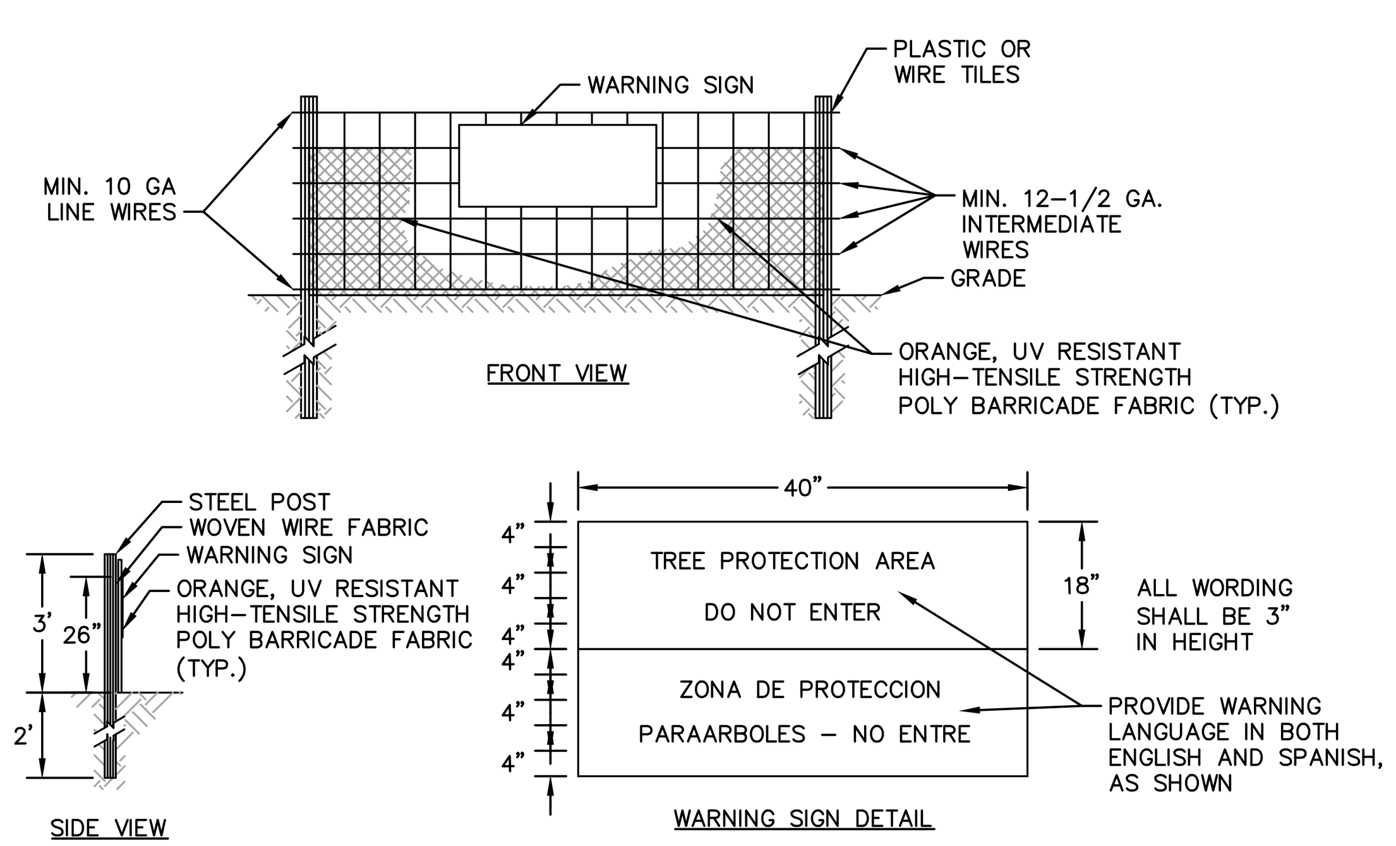
2. Reporting Timeframes and Other Requirements

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

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

NCG01 SELF-INSPECTION, RECORDKEEPING AND REPORTING

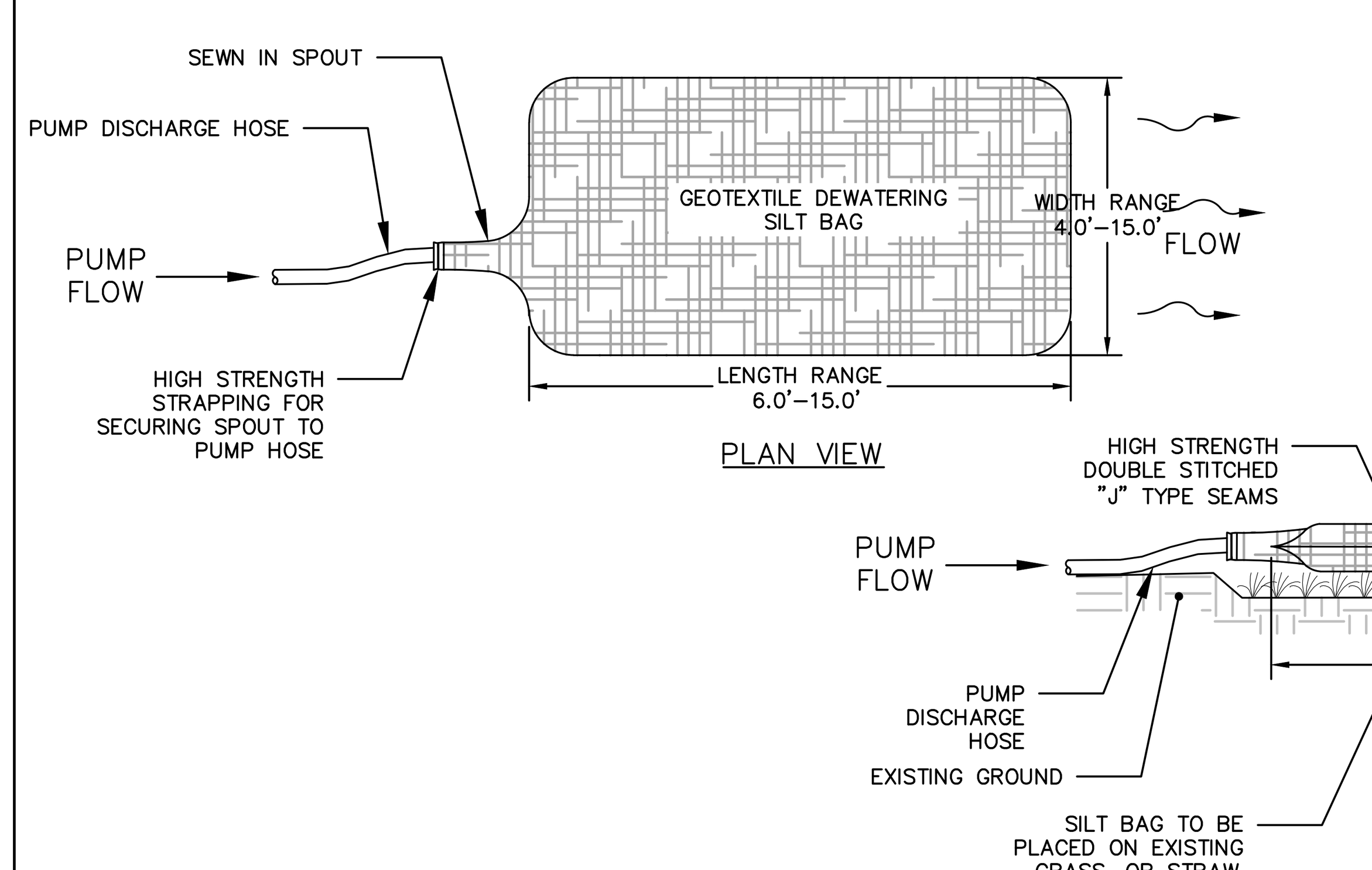
EFFECTIVE: 04/01/19



NOTES

1. TREE PROTECTION FENCING MUST BE INSTALLED AT A MINIMUM RADIUS OF THE CRITICAL ROOT ZONE (CRZ) OF TREES. (CRZ DEFINED AS RADIUS x 1.25' (FT) PER INCH AT DBH FROM TRUNK OF TREE.
2. IF CONSTRUCTION OCCURS WITHIN THE CRZ AT LEAST 12" OF MULCH AND/OR LOGGING MATTS SHALL BE PLACED WHERE MACHINERY MANEUVERS TO REDUCE SOIL COMPACTION IN THIS ZONE.
3. THE TREE PROTECTION FENCING MUST NOT BE VIOLATED FOR THE ENTIRE DURATION OF THE PROJECT.
4. THERE WILL BE ZERO TOLERANCE FOR STORING OR PARKING VEHICLES, SUPPLIES, OR EQUIPMENT UNDER PROTECTED TREES.
5. IMPACT PROTECTION DEVICES MUST BE REMOVED AFTER CONSTRUCTION.
6. WARNING SIGNS TO BE MADE OF DURABLE, WEATHERPROOF MATERIAL. LETTERS TO BE 3" HIGH MINIMUM, CLEARLY LEGIBLE AND SPACED AS SHOWN.
7. SIGNS SHALL BE PLACED AT 50' MAXIMUM INTERVALS. PLACE A SIGN AT EACH END OF LINEAR TREE PROTECTION AND 50' ON CENTER THEREAFTER. FOR TREE PROTECTION AREAS LESS THAN 200' IN PERIMETER, PROVIDE NO LESS THAN ONE SIGN PER PROTECTION AREA.
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, DECOMPOSE OR BECOME INEFFECTIVE, CONTRACTOR SHALL REPLACE IT PROMPTLY.

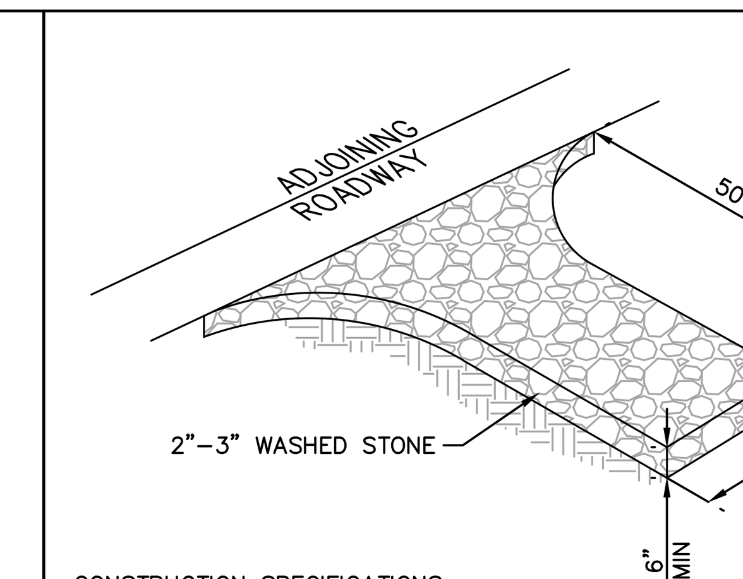
TREE PROTECTION FENCE
N.T.S.
01.304.R01 (01)



NOTES

1. GEOTEXTILE DEWATERING SILT BAG DIMENSIONS ARE VARIABLE AND DEPENDENT ON SPECIFIC SITE CONSTRAINTS AND PROPOSED CONSTRUCTION OPERATIONS.
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR SUBMITTING THE SIZE AND LOCATION OF THE GEOTEXTILE DEWATERING SILT BAG FOR APPROVAL BY NCDENR PRIOR TO CONSTRUCTION.
3. THE CONTRACTOR SHALL ENSURE THAT THE SILT BAG IS OF A SUFFICIENT SIZE AND STRENGTH TO PROPERLY DEWATER THE PUMP HOSE INFLUENT.
4. SILT BAG SHALL BE REPLACED WHEN FULL OF SEDIMENT OR WHEN FLOW THROUGH BAG IS LIMITED BY SEDIMENT ACCUMULATION.

GEOTEXTILE DEWATERING SILT BAG
N.T.S.
01.404.R01 (02)



NOTES:
APPLICABLE AT ALL POINTS OF INGRESS & EGRESS UNTIL SITE IS STABILIZED. FREQUENT CHECKS OF THE DEVICE AND TIMELY MAINTENANCE MUST BE PROVIDED.

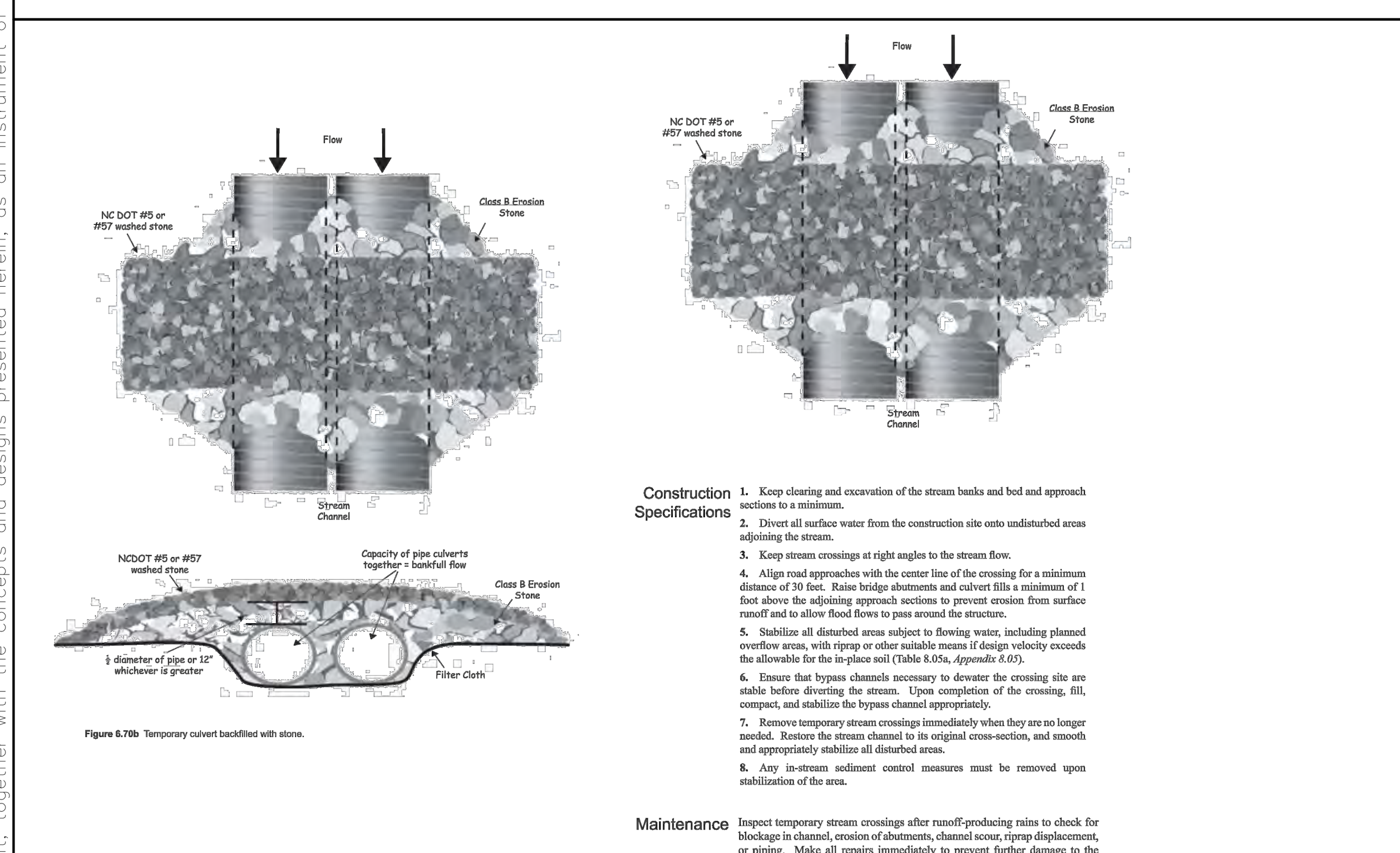
CONSTRUCTION SPECIFICATIONS:

1. CLEAR THE ENTRANCE AND EXIT AREA OF ALL VEGETATION, ROOTS, AND OTHER OBJECTIONABLE MATERIAL AND PROPERLY GRADE IT.
2. PLACE THE GRAVEL TO THE SPECIFIC GRADE AND DIMENSIONS SHOWN ON THE PLANS, AND SMOOTH IT.
3. PROVIDE DRAINAGE TO CARRY WATER TO A SEDIMENT TRAP OR OTHER SUITABLE OUTLET.
4. 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
N.T.S.
KHA DETAIL NO: 01.101.R02 (03)



NCDEQ TEMPORARY STREAM CROSSING DETAIL INFORMATION
N.T.S.
(04)

MAINTENANCE NOTES:

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

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:

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.

SILT FENCE GRAVEL OUTLET:

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

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.

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.

No.	REVISIONS	DATE	BY
1	ISSUED FOR BID	08/02/22	ASA

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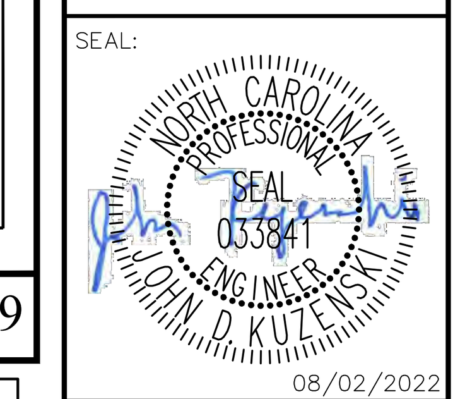
SEAL:



KHA PROJECT	DATE	SCALE	DESIGNED BY	DRAWN BY	CHECKED BY
012654010	08/02/2022	AS SHOWN	MRG	ASA	JDK

EROSION CONTROL DETAILS

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

SHEET NUMBER
C4.2.B

Know what's **below.**
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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 PREFABRICATED PEDESTRIAN BRIDGE, SEE SPECIAL PROVISIONS.
4. FOR TIMBER BOARDWALK, SEE SPECIAL PROVISIONS.
5. 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
      I. BGS-04: N/A
      II. BGS-06: 2.4 FEET
   B. "THE SWAMP" PREFABRICATED PEDESTRIAN BRIDGE
      I. WB-01: 4.6 FEET
3. ADDITIONAL PAYMENT FOR DEWATERING WILL NOT BE ALLOWED. CONTRACTOR SHALL INCLUDE COST IN INCIDENTAL ITEMS.

CAST-IN-PLACE CONCRETE

1. SUBSTRUCTURE CONCRETE: TO BE CLASS "A" (CAST-IN-PLACE) F'c = 3000 PSI EXCEPT AS NOTED OTHERWISE.
2. BRIDGE DECKS: CLASS "AA" (CAST-IN-PLACE) F'c = 4000 PSI FOR BRIDGE DECKS SHALL BE IN ACCORDANCE WITH SECTION 1000 OF THE STANDARD SPECIFICATIONS.
3. CONCRETE WORK SHALL FOLLOW THE PROVISIONS OF SECTION 1000 OF THE STANDARD SPECIFICATIONS.
4. REINFORCING STEEL: SHALL BE ASTM A615 GRADE 60 UNLESS NOTED OTHERWISE. SEE SECTION 1070 OF THE STANDARD SPECIFICATIONS.
5. CHAMFER ALL EXPOSED EDGES ¾" UNLESS OTHERWISE NOTED.

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.
5. MAXIMUM SPACING BETWEEN DECKING MEMBERS SHALL BE ¼".
6. ALL VERTICAL MEMBERS SHALL BE PLUMB.
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 SIDE 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 3-½" HOT-DIP GALVANIZED WOOD SCREWS, CONFORMING TO ASTM A153, AT EACH POST. PREDRILL AS REQUIRED TO AVOID SPLITTING.
15. ALL LONGITUDINAL RAILING MEMBERS SHALL SPAN A MINIMUM OF TWO RAIL POST SPACINGS.

PREFABRICATED STEEL PEDESTRIAN BRIDGE SUPERSTRUCTURE

1. PREFABRICATED STEEL PEDESTRIAN BRIDGE SUPERSTRUCTURE, ANCHOR BOLTS, AND BEARING PADS SHALL BE DESIGNED BY THE CONTRACTOR'S ENGINEER BASED UPON THE SPECIFIED DESIGN CRITERIA. THE PREFABRICATED STEEL PEDESTRIAN BRIDGE SUPERSTRUCTURE 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 PREFABRICATED STEEL PEDESTRIAN BRIDGE SUPERSTRUCTURE CALCULATIONS SHALL INCLUDE A SUMMARY OF REACTIONS FOR ABUTMENTS. THE PREFABRICATED STEEL PEDESTRIAN BRIDGE SUPERSTRUCTURE FABRICATION SHALL NOT BEGIN UNTIL ALL APPROVALS HAVE BEEN RECEIVED.
2. PREFABRICATED STEEL PEDESTRIAN BRIDGE SHALL BE A STEEL PRATT TRUSS.
3. THE BRIDGE CLEAR PATH WIDTH SHALL BE 10'-0", AND SHALL BE MEASURED BETWEEN THE INSIDE FACES OF SAFETY AND RUB RAILING ELEMENTS.
4. SAFETY RAILING SYSTEM SHALL BE A MINIMUM OF 4'-6" ABOVE THE TOP OF BRIDGE DECK.
5. ALL STRUCTURAL STEEL FOR PREFABRICATED STEEL PEDESTRIAN BRIDGE SHALL BE WEATHERING STEEL AND SHALL CONFORM TO NCDOT STANDARD SPECIFICATIONS AND PREFABRICATED STEEL PEDESTRIAN BRIDGE SPECIAL PROVISION.
   A. ALL STRUCTURAL STEEL TUBE SHAPES SHALL CONFORM TO ASTM A847.
   B. ALL STRUCTURAL STEEL CHANNEL AND ANGLES SHALL CONFORM TO ASTM A588.
   C. ALL OTHER STEEL PLATES, SHAPES AND BARS SHALL CONFORM TO ASTM A588.
   D. ALL ANCHORS BOLTS ARE GALVANIZED AND SHALL CONFORM TO ASTM A499. ALL HIGH STRENGTH BOLTS SHALL BE WEATHERING STEEL AND CONFORM TO ASTM F3125 GRADE A325. WASHERS & NUTS SHALL MATCH FINISH OF BOLT.
6. ALL STRUCTURAL STEEL WELDS SHALL CONFORM TO THE LATEST PROVISIONS OF THE STRUCTURAL WELDING CODE, AWS D1.5. ALL WELDERS SHALL BE QUALIFIED IN ACCORDANCE WITH THE ABOVE AWS CODE.
7. SPLICES, IF REQUIRED FOR THE PREFABRICATED STEEL PEDESTRIAN BRIDGE SUPERSTRUCTURE, SHALL BE CLEARLY NOTED ON THE SHOP DRAWINGS AND NECESSARY CALCULATIONS PROVIDED.
8. WEEP HOLES SHALL BE PROVIDED FOR DRAINAGE OF BRIDGE TUBULAR MEMBERS, AND SHALL BE CLEARLY NOTED ON THE SHOP DRAWINGS.
9. THE BRIDGE DECK SHALL BE CAST-IN-PLACE CONCRETE.

PEDESTRIAN BRIDGE SUBSTRUCTURE

1. THE SUBSTRUCTURE DESIGN WAS BASED UPON THE INFORMATION AVAILABLE FROM THE PREFABRICATED PEDESTRIAN BRIDGE MANUFACTURERS. THE DESIGN OF THE BRIDGE CANNOT PROVIDE REACTIONS WHICH EXCEED THOSE SHOWN BELOW WITHOUT APPROVAL FROM THE ENGINEER. ALL REACTIONS ARE ALLOWABLE LOADS FROM THE PREFABRICATED TRUSS. VERTICAL REACTIONS SHOWN ARE PER BASE PLATE (4 PER BRIDGE). LATERAL AND LONGITUDINAL REACTIONS SHOWN ARE PER BENT (2 PER BRIDGE).

   60' BRIDGE:

   A. VERTICAL LOADS:
      DEAD LOAD_____ 11,000 LBS
      UNIFORM LIVE LOAD_____ 13,000 LBS
      VEHICLE LOAD_____ 5,000 LBS
      WIND UPLIFT_____ 5,025 LBS
      BUOYANCY_____ 12,640 LBS

   B. LATERAL LOADS:
      WIND_____ 3,400 LBS
      STREAM FLOW_____ 4,260 LBS

   C. LONGITUDINAL LOADS:
      TEMPERATURE_____ 3,200 LBS
2. CONSTRUCTION OF THE PEDESTRIAN BRIDGE END BENTS AND BENTS SHALL NOT BEGIN UNTIL ALL APPROVALS FOR PREFABRICATED PEDESTRIAN BRIDGE SUPERSTRUCTURE HAVE BEEN RECEIVED.
3. PEDESTRIAN BRIDGE END BENT AND BENT DETAILS SHALL BE COORDINATED WITH THE PREFABRICATED PEDESTRIAN BRIDGE PLANS, TO BE PROVIDED BY THE PREFABRICATED PEDESTRIAN BRIDGE MANUFACTURER. NOTIFY ENGINEER IMMEDIATELY IF CONFLICTS ARE IDENTIFIED. CONSTRUCTION OF THE END BENTS AND BENTS SHALL NOT BEGIN UNTIL SUPERSTRUCTURE SHOP DRAWINGS ARE APPROVED AND ALL CONFLICTS RESOLVED.
4. REINFORCEMENT IN CAP MAY BE SHIFTED TO CLEAR ANCHOR BOLTS.
5. THE TOP SURFACE OF END BENTS AND BENTS CAPS, EXCEPT AT BRIDGE SEATS, SHALL BE SLOPED TRANSVERSELY AT A MINIMUM RATE OF 2%.
6. END BENTS BACKWALL SHALL BE PLACED AFTER BRIDGE HAS BEEN ERECTED. TOP OF BACKWALL SHALL FOLLOW BRIDGE DECK GRADE.
7. THE END BENTS AND BENTS SHALL BE CURED IN ACCORDANCE WITH NCDOT STANDARD SPECIFICATIONS.

APPROACH RAILINGS

1. APPROACH RAILINGS SHALL BE PROVIDED AT EACH CORNER OF THE BRIDGE AS SHOWN ON THE PLANS, AND PER PREFABRICATED STEEL PEDESTRIAN BRIDGE SPECIAL PROVISION.

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.

PREFABRICATED FRP PEDESTRIAN BRIDGE SUPERSTRUCTURE

1. PREFABRICATED FRP PEDESTRIAN BRIDGE SUPERSTRUCTURE, ANCHOR BOLTS, AND BEARING PADS SHALL BE DESIGNED BY THE CONTRACTOR'S ENGINEER BASED UPON THE SPECIFIED DESIGN CRITERIA. THE PREFABRICATED FRP PEDESTRIAN BRIDGE SUPERSTRUCTURE 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 PREFABRICATED STEEL PEDESTRIAN BRIDGE SUPERSTRUCTURE CALCULATIONS SHALL INCLUDE A SUMMARY OF REACTIONS FOR ABUTMENTS. THE PREFABRICATED FRP PEDESTRIAN BRIDGE SUPERSTRUCTURE FABRICATION SHALL NOT BEGIN UNTIL ALL APPROVALS HAVE BEEN RECEIVED.
2. THE BRIDGE CLEAR PATH WIDTH SHALL BE 10'-0", AND SHALL BE MEASURED BETWEEN THE INSIDE FACES OF SAFETY AND RUB RAILING ELEMENTS.
3. SAFETY RAILING SYSTEM SHALL BE A MINIMUM OF 4'-6" ABOVE THE TOP OF BRIDGE DECK.
4. SEE FRP COMPOSITE BRIDGE AND BOARDWALK ALTERNATIVE SPECIAL PROVISION.

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.

No.	DESCRIPTION	DATE	BY
1	ISSUED FOR BID	08/02/22	ASA
	REVISIONS		

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#F-0102

SEAL:
NORTH CAROLINA PROFESSIONAL SEAL 039152 ENGINEER MITCHELL D MCGEE
08/02/2022

KHA PROJECT	012654010
DATE	08/02/2022
SCALE	AS SHOWN
DESIGNED BY	BMK
DRAWN BY	JIK
CHECKED BY	MDM

BRIDGE GENERAL NOTES

WILDWOOD PARK - OBSERVATION TOWER AND TRAILS
BID PACKAGE A
PREPARED FOR
CITY OF GREENVILLE
GREENVILLE NC

SHEET NUMBER
S.01.B

Know what's **below.**
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CABLE STRANDS FOR PEDESTRIAN RAILS AT OBSERVATION DECK

1. CABLE STRANDS SHALL BE ⅛" 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. PILES FOR FOUNDATION TYPE NO. 7 ARE DESIGNED FOR A FACTORED RESISTANCE OF 30 TONS PER PILE.
7. DRIVE PILES FOR FOUNDATION TYPE NO. 7 TO A REQUIRED DRIVING RESISTANCE OF 50 TONS PER PILE.
8. STEEL PILE POINTS ARE REQUIRED FOR TIMBER PILES FOR FOUNDATION TYPES 2 THROUGH 6.
9. STEEL H-PILE POINTS ARE REQUIRED FOR FOUNDATION TYPE. NO. 7 FOR STEEL PILE POINTS, SEE SECTION 450 OF THE STANDARD SPECIFICATIONS.
10. INSTALL PILES FOR FOUNDATION TYPES NO. 2, 4, AND 6 TO A TIP ELEVATION NO HIGHER THAN 10 FEET BELOW EXISTING GROUND SURFACE.
11. INSTALL PILES FOR FOUNDATION TYPES NO. 3 AND 5 TO A TIP ELEVATION NO HIGHER THAN 12 FEET BELOW EXISTING GROUND SURFACE.
12. INSTALL PILES FOR FOUNDATION TYPE NO. 7 TO A TIP ELEVATION NO HIGHER THAN 14 FEET BELOW EXISTING GROUND SURFACE.
13. IF NECESSARY, PREDRILL PILE LOCATIONS FOR FOUNDATION TYPES 2 THROUGH 7 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]	PREFABRICATED STEEL PEDESTRIAN BRIDGE [2]	RIP RAP CLASS II (2'-0" THICK)	GEOTEXTILE FOR DRAINAGE	BID ALTERNATIVE #1 - FRP PREFABRICATED PEDESTRIAN BRIDGE [3]	BID ALTERNATIVE #2 - FRP BOARDWALK [4]
	LUMP SUM	LUMP SUM	TONS	S.Y.	LUMP SUM	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		LUMP SUM	55	35	LUMP SUM	

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 PREFABRICATED STEEL PEDESTRIAN BRIDGE SHALL INCLUDE ALL ENGINEERING, LABOR, MATERIALS, EQUIPMENT, DELIVERY, AND OTHER INCIDENTALS NECESSARY FOR THE PREFABRICATED STEEL PRATT TRUSS PEDESTRIAN BRIDGE, CAST-IN-PLACE CONCRETE SUBSTRUCTURE, PILES, BEARING PADS, ANCHOR BOLTS, APPROACH RAILINGS, PILE PREDRILLING, STEEL PILE POINTS, PILE DRIVE SETUP, PILE TESTING (WHERE REQUIRED), DEWATERING, EPOXY PROTECTIVE COATING, ETC.
3. LUMP SUM PAYMENT FOR PREFABRICATED FRP PEDESTRIAN BRIDGE SHALL INCLUDE ALL ENGINEERING, LABOR, MATERIALS, EQUIPMENT, DELIVERY, AND OTHER INCIDENTALS NECESSARY FOR THE PREFABRICATED FRP PEDESTRIAN BRIDGE, CAST-IN-PLACE CONCRETE SUBSTRUCTURE, PILES, BEARING PADS, ANCHOR BOLTS, APPROACH RAILINGS, PILE PREDRILLING, STEEL PILE POINTS, PILE DRIVE SETUP, PILE TESTING (WHERE REQUIRED), DEWATERING, EPOXY PROTECTIVE COATING, ETC.
4. 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.

SURVEY NOTE:

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

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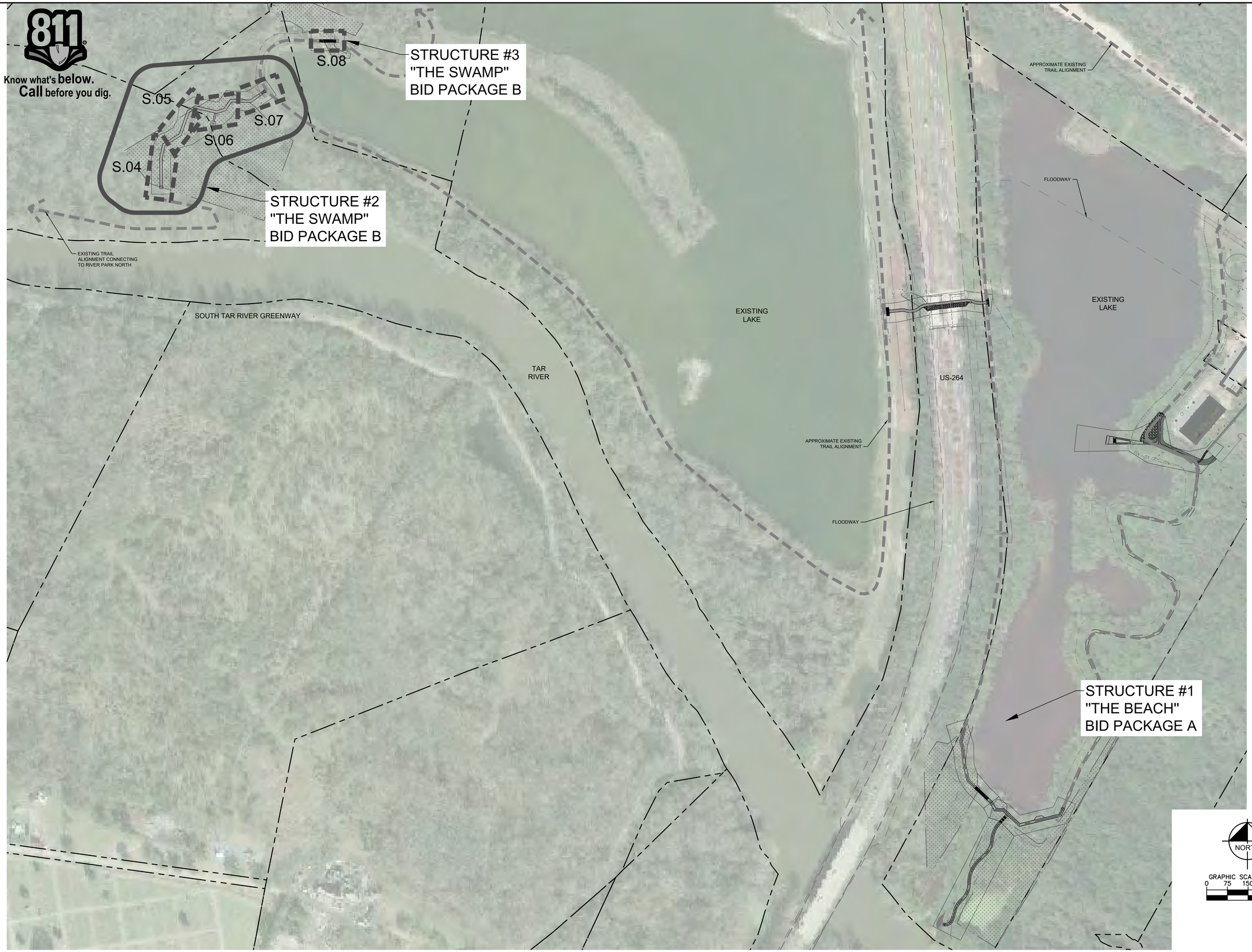
SEAL:
NORTH CAROLINA PROFESSIONAL SEAL 039152 ENGINEER MITCHELL D MCGEE
08/02/2022

KHA PROJECT 012654010
DATE 08/02/2022
SCALE AS SHOWN
DESIGNED BY BMK
DRAWN BY JIK
CHECKED BY MDM

BRIDGE GENERAL NOTES

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

SHEET NUMBER
S.02.B



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08/02/2022

KHA PROJECT	012654010
DATE	08/02/2022
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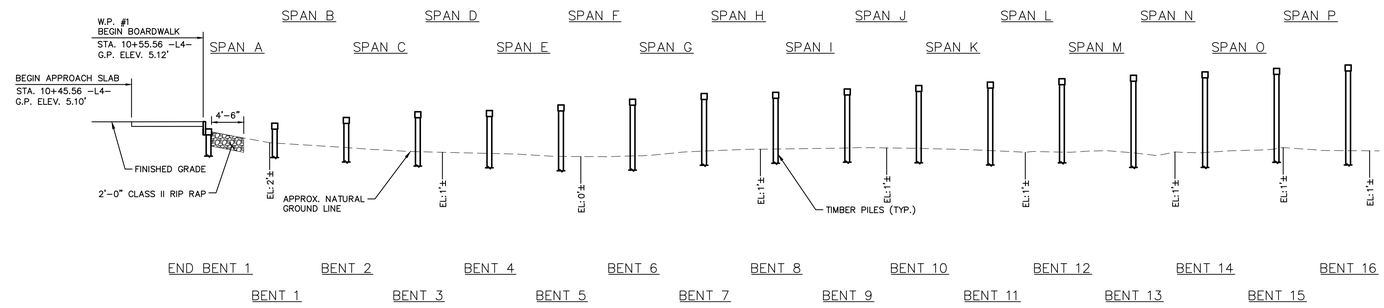
STRUCTURE LOCATIONS

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

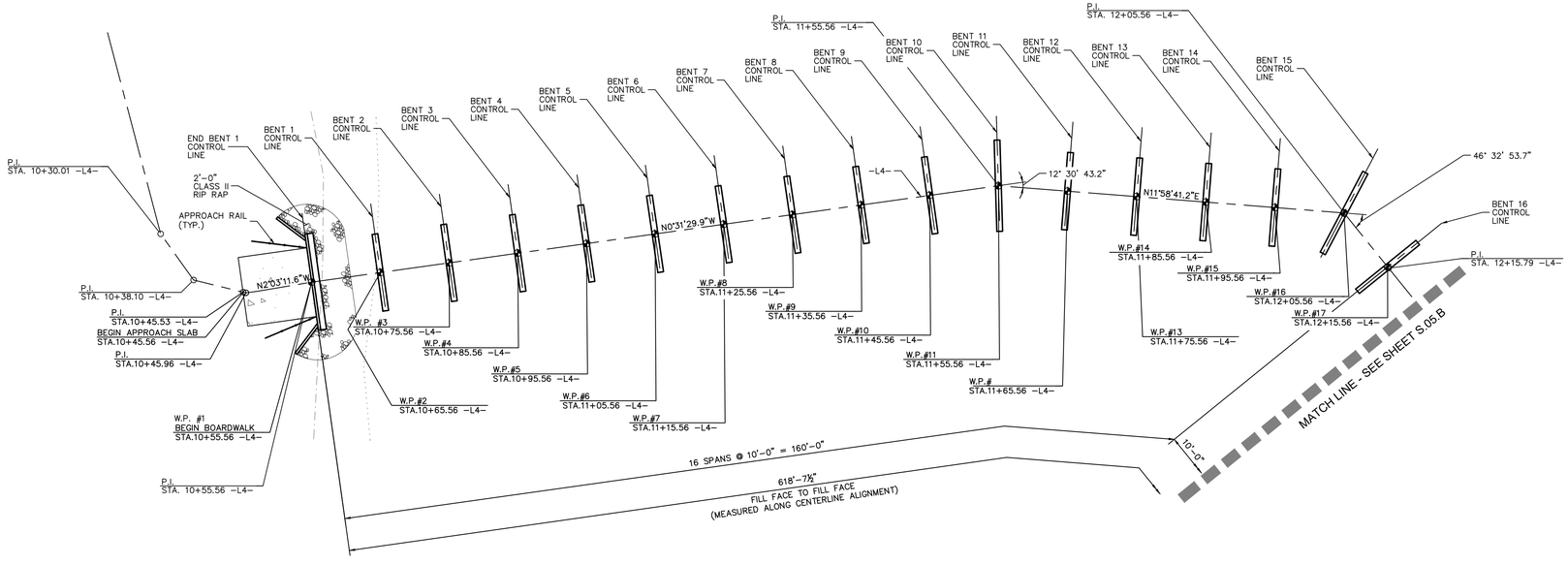
SHEET NUMBER
S.03.B

11+00 12+00



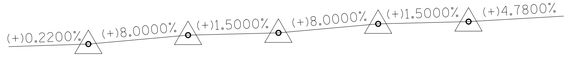
SECTION ALONG -L4-

(SECTIONS @ BENTS AND END BENTS ARE @ RIGHT ANGLES)
(LONGITUDINAL BRACING NOT SHOWN FOR CLARITY)



PLAN

(PILES NOT SHOWN IN PLAN VIEW)



-L4- VERTICAL CURVE DATA

PVI STA. = 10+55.56 -L4-	PVI STA. = 10+85.56 -L4-	PVI STA. = 10+95.56 -L4-	PVI STA. = 11.25.56 -L4-	PVI STA. = 11+35.56 -L4-
EL. = 5.12'	EL. = 7.52'	EL. = 7.67'	EL. = 10.07'	EL. = 10.22'
V.C. = 0'	V.C. = 0'	V.C. = 0'	V.C. = 0'	V.C. = 0'

NORTH

GRAPHIC SCALE IN FEET
0 5 10 20

SURVEY NOTE:

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

No.	REVISIONS	DATE	BY
1	ISSUED FOR BID	08/02/22	ASA

Kimley»Horn
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PHONE: 919-677-2000 FAX: 919-677-2050
WWW.KIMLEY-HORN.COM
##-0102

SEAL:
NORTH CAROLINA PROFESSIONAL SEAL 039152 ENGINEER MITCHELL D MCGEE
08/02/2022

KHA PROJECT	012654010
DATE	08/02/2022
SCALE	AS SHOWN
DESIGNED BY	BMK
DRAWN BY	JIK
CHECKED BY	MDM

PLAN AND PROFILE - THE SWAMP (AREA 4) (STRUCTURE #2)

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

SHEET NUMBER
S.04.B

13+00 14+00

20
15
10
5
0
−5
−10

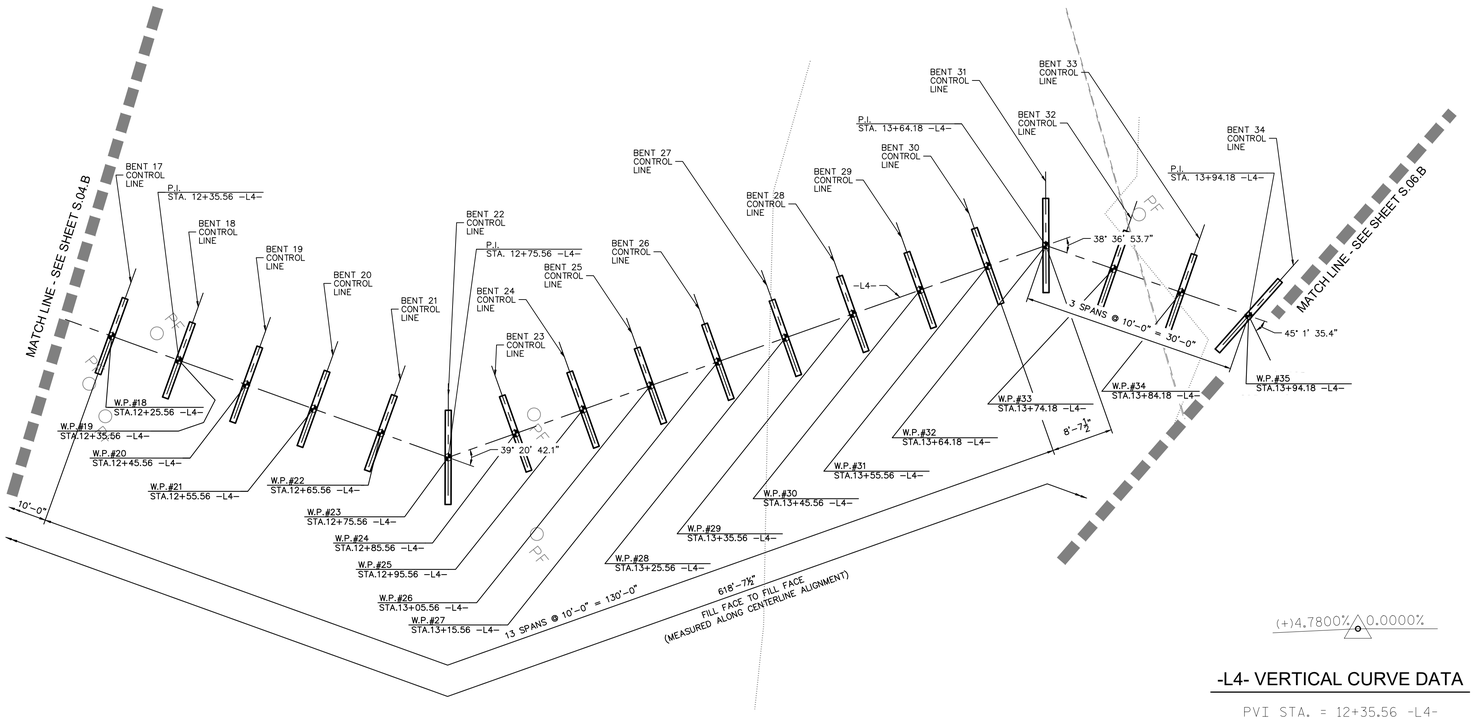
SPAN Q SPAN R SPAN S SPAN T SPAN U SPAN V SPAN W SPAN X SPAN Y SPAN Z SPAN AA SPAN BB SPAN CC SPAN DD SPAN EE SPAN FF SPAN GG

EL: 1'±
APPROX. NATURAL GROUND LINE
EL: 1'±
EL: 2'±
TIMBER PILES (TYP.)
EL: 0'±
EL: −3'±
EL: 0'±

BENT 17 BENT 18 BENT 19 BENT 20 BENT 21 BENT 22 BENT 23 BENT 24 BENT 25 BENT 26 BENT 27 BENT 28 BENT 29 BENT 30 BENT 31 BENT 32 BENT 33 BENT 34

SECTION ALONG -L4-

(SECTIONS @ BENTS AND END BENTS ARE @ RIGHT ANGLES)
(LONGITUDINAL BRACING NOT SHOWN FOR CLARITY)



PLAN

(PILES NOT SHOWN IN PLAN VIEW)

(+)4.7800% (−)0.0000%

-L4- VERTICAL CURVE DATA

PVI STA. = 12+35.56 -L4-
EL. = 15.00'
V.C. = 0'

NORTH

GRAPHIC SCALE IN FEET
0 5 10 20

SURVEY NOTE:

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No.	REVISIONS	DATE	BY
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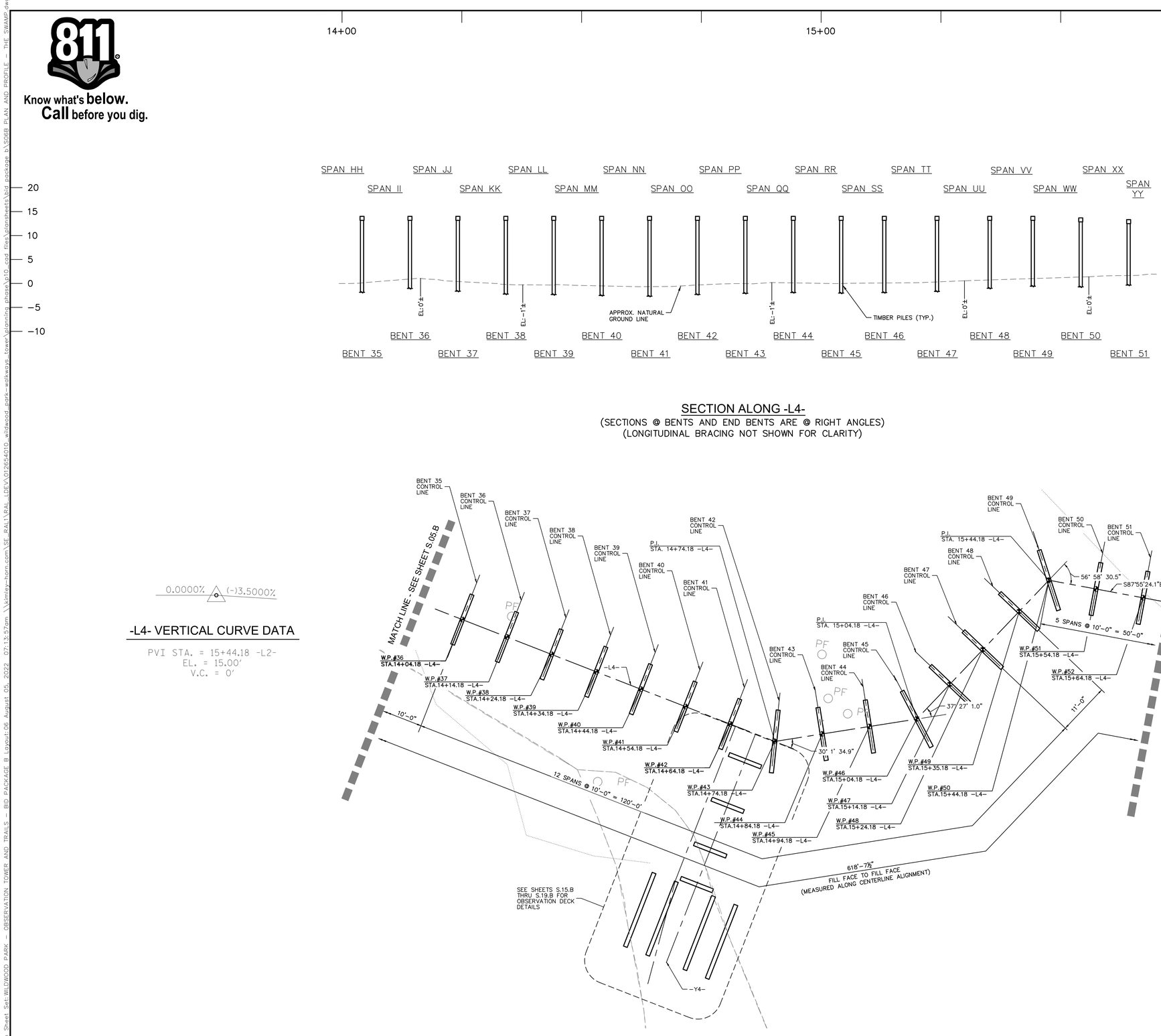
SEAL:
NORTH CAROLINA PROFESSIONAL SEAL 039152 ENGINEER MITCHELL D MAGEE
08/02/2022

KHA PROJECT	012654010
DATE	08/02/2022
SCALE	AS SHOWN
DESIGNED BY	BMK
DRAWN BY	JIK
CHECKED BY	MDM

PLAN AND PROFILE - THE SWAMP (AREA 4) (STRUCTURE #2)

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

SHEET NUMBER
S.05.B



SECTION ALONG -L4-

(SECTIONS @ BENTS AND END BENTS ARE @ RIGHT ANGLES)
(LONGITUDINAL BRACING NOT SHOWN FOR CLARITY)

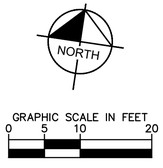
PLAN

(PILES NOT SHOWN IN PLAN VIEW)

0.0000% (-)3.5000%

-L4- VERTICAL CURVE DATA

PVI STA. = 15+44.18 -L2-
EL. = 15.00'
V.C. = 0'



GRAPHIC SCALE IN FEET
0 5 10 20

SURVEY NOTE:

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No.	REVISIONS	DATE	BY
1	ISSUED FOR BID	02/28/22	ASA

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#F-0102

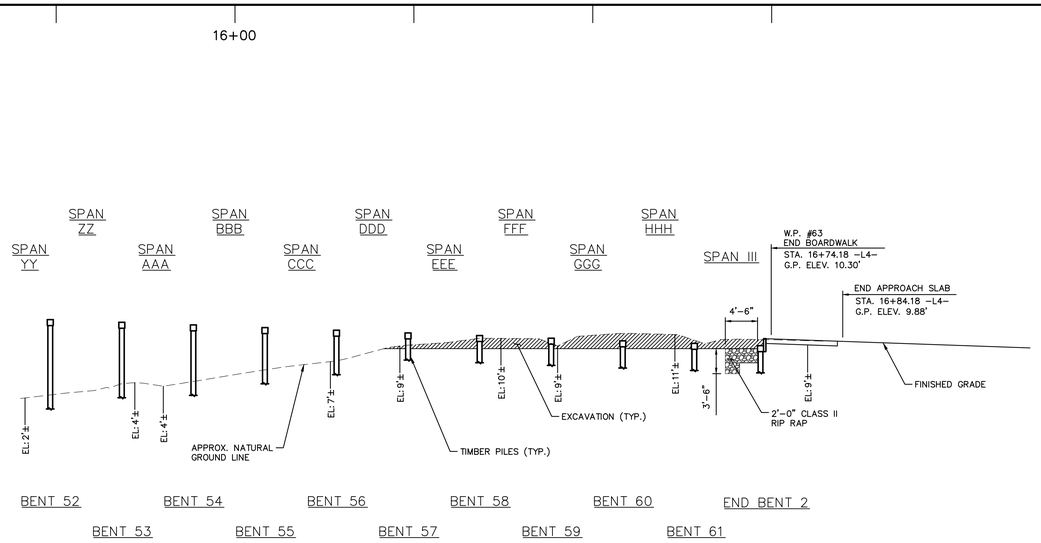
SEAL:
NORTH CAROLINA PROFESSIONAL SEAL 039152 ENGINEER MITCHELL D MCGEE
02/28/2022

KHA PROJECT	012654010
DATE	02/28/2022
SCALE	AS SHOWN
DESIGNED BY	BMK
DRAWN BY	JIK
CHECKED BY	MDM

PLAN AND PROFILE - THE SWAMP (AREA 4) (STRUCTURE #2)

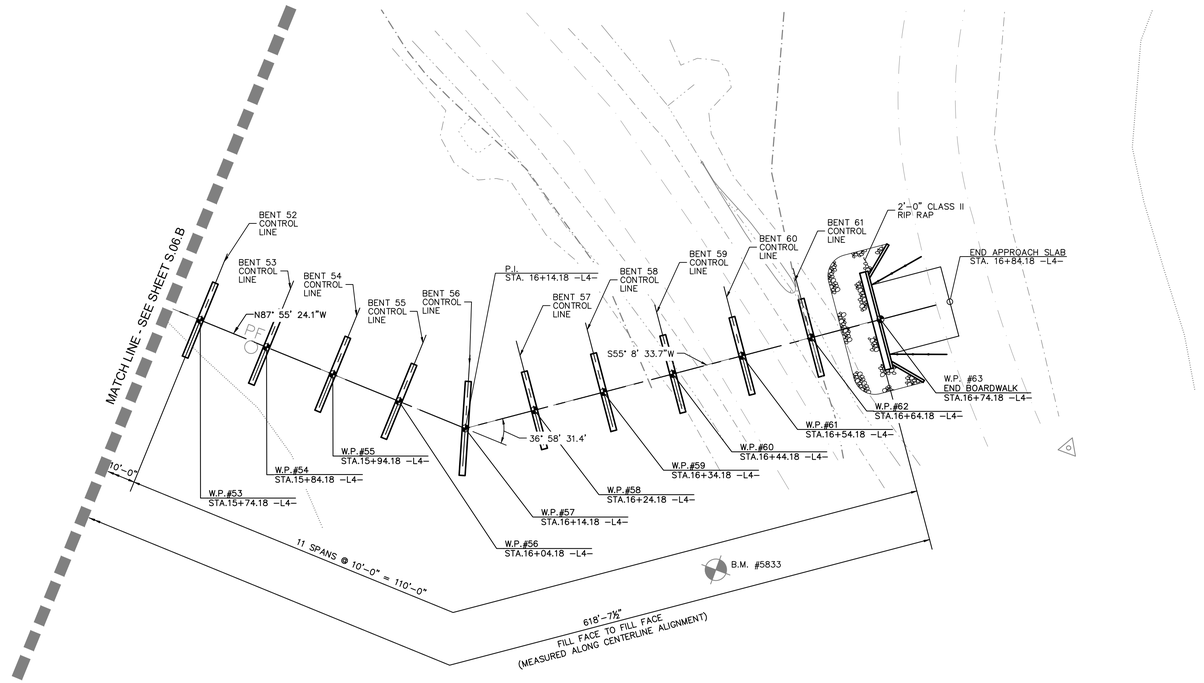
WILDWOOD PARK - OBSERVATION TOWER AND TRAILS - BID PACKAGE B
PREPARED FOR
CITY OF GREENVILLE
NC
GREENVILLE

SHEET NUMBER
S.06.B



SECTION ALONG -L4-

(SECTIONS @ BENTS AND END BENTS ARE @ RIGHT ANGLES)
(LONGITUDINAL BRACING NOT SHOWN FOR CLARITY)



PLAN

(PILES NOT SHOWN IN PLAN VIEW)

(-)3.5000% (-)4.2300%

-L4- VERTICAL CURVE DATA

PVI STA. = 16+54.18 -L4-
EL. = 11.14'
V.C. = 0'

GRAPHIC SCALE IN FEET
0 5 10 20

NORTH

SURVEY NOTE:

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No.	REVISIONS	DATE	BY
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##-0102

SEAL:
NORTH CAROLINA PROFESSIONAL SEAL 039152 ENGINEER MITCHELL D MCGEE
08/02/2022

KHA PROJECT	012654010
DATE	08/02/2022
SCALE	AS SHOWN
DESIGNED BY	BMK
DRAWN BY	JIK
CHECKED BY	MDM

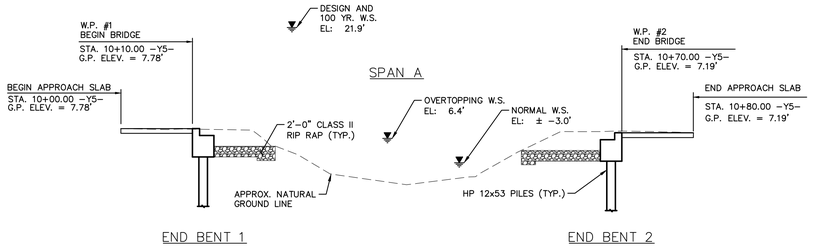
PLAN AND PROFILE - THE SWAMP (AREA 4) (STRUCTURE #2)

WILDWOOD PARK - TOWER AND TRAILS
PACKAGE A
PREPARED FOR
CITY OF GREENVILLE
NC
GREENVILLE

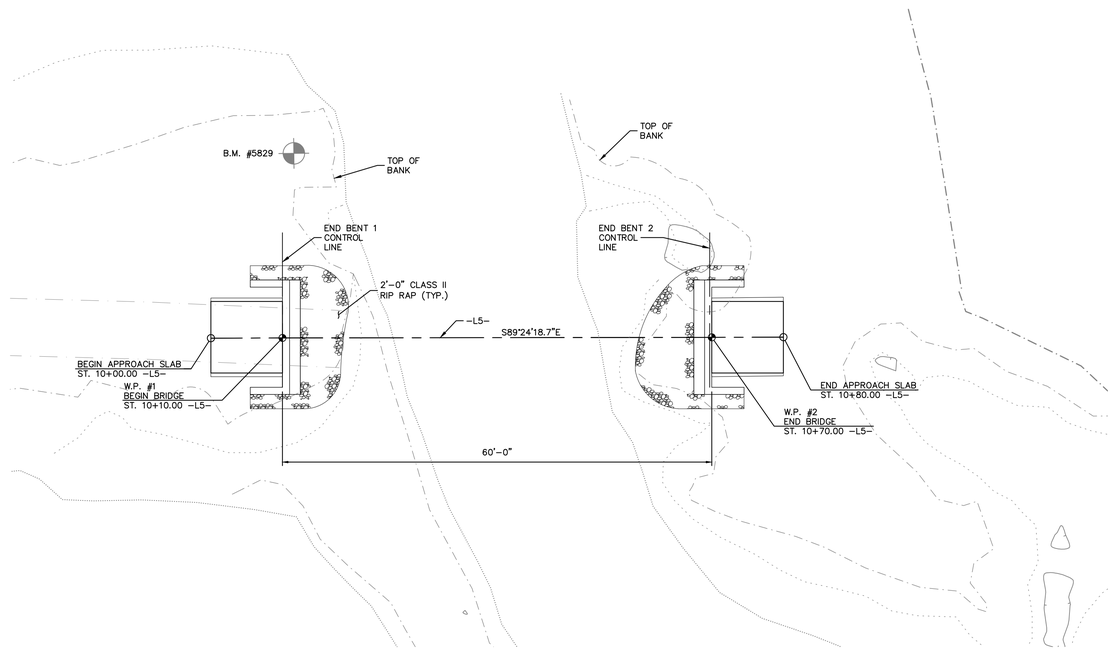
SHEET NUMBER
S.07.B

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

10+00



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



PLAN
(PILES NOT SHOWN IN PLAN VIEW)

-L5- VERTICAL CURVE DATA

PVI STA. = 10+10.00 -L5-	PVI STA. = 10+70.00 -L5-
EL. = 7.78'	EL. = 7.19'
V.C. = 0'	V.C. = 0'

GRAPHIC SCALE IN FEET
0 5 10 20

SURVEY NOTE:

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No.	REVISIONS	DATE	BY
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SEAL:
NORTH CAROLINA PROFESSIONAL SEAL 039152 ENGINEER MITCHELL D MCGEE
08/02/2022

KHA PROJECT	012654010
DATE	08/02/2022
SCALE	AS SHOWN
DESIGNED BY	BMK
DRAWN BY	JIK
CHECKED BY	MDM

PLAN AND PROFILE - THE SWAMP (AREA 4) (STRUCTURE #3)

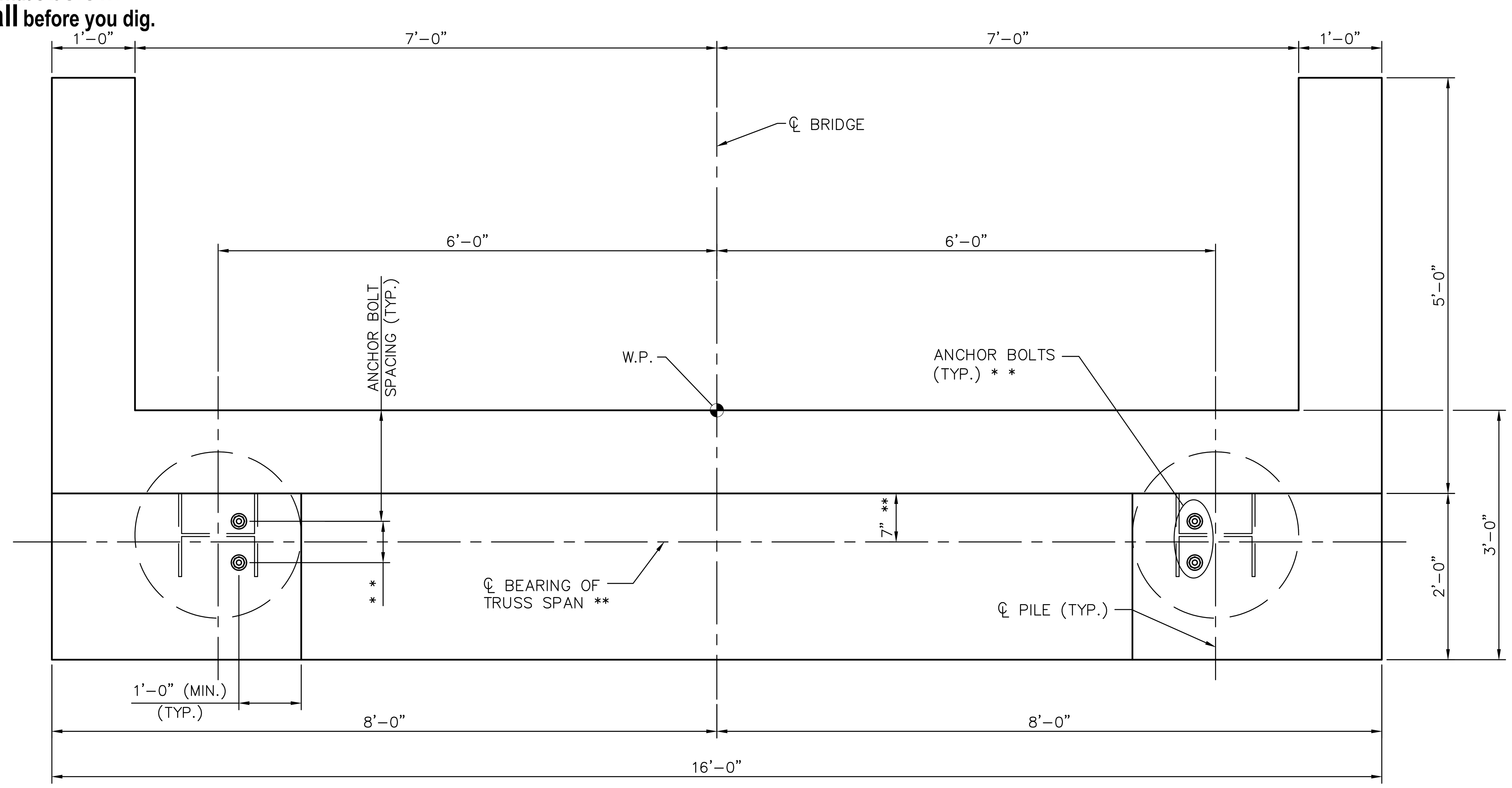
WILDWOOD PARK - TOWER AND TRAILS
PACKAGE A
PREPARED FOR
CITY OF GREENVILLE
NC
GREENVILLE

SHEET NUMBER
S.08.B

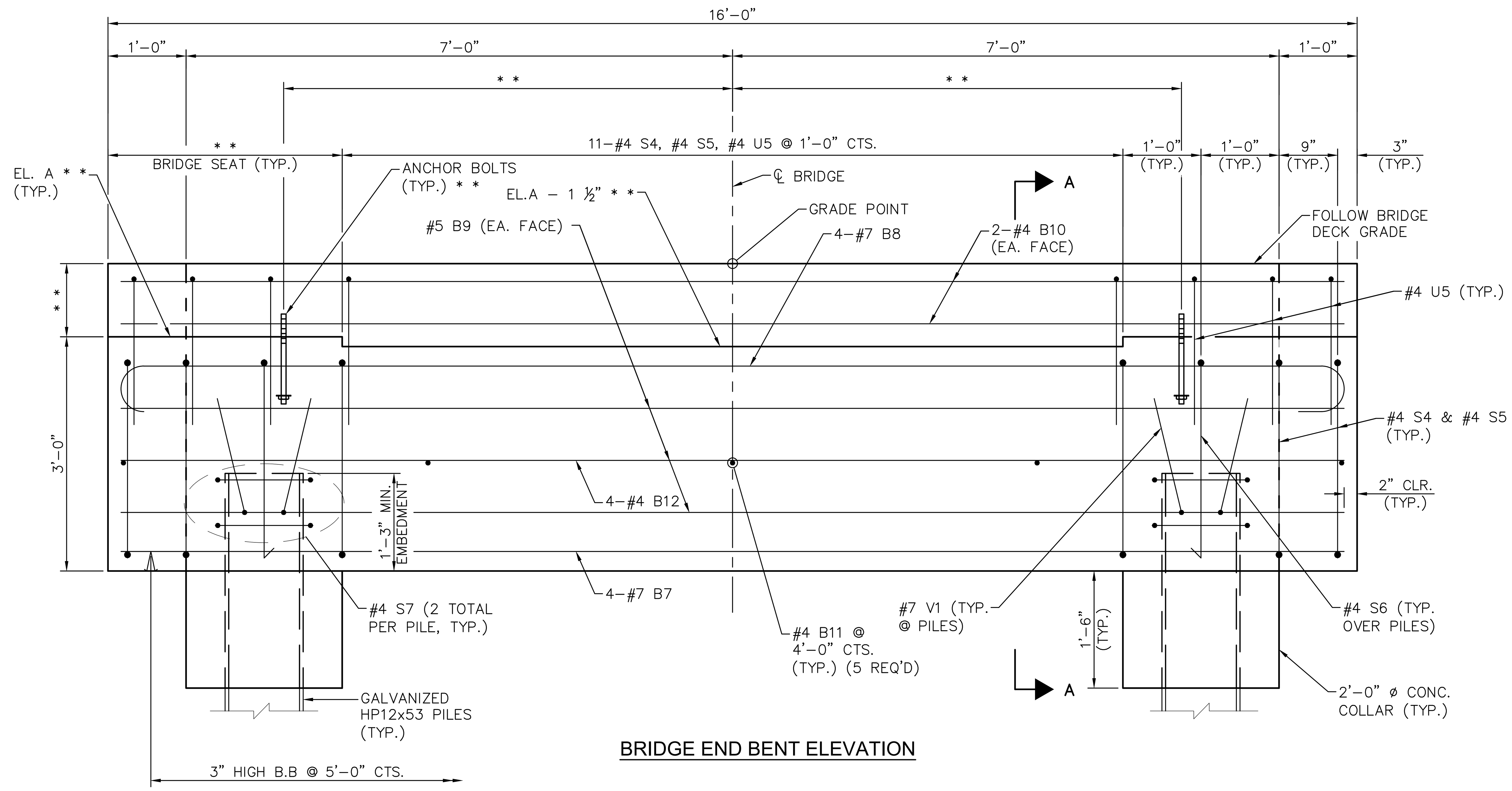
811 Know what's below. Call before you dig.

NOTES

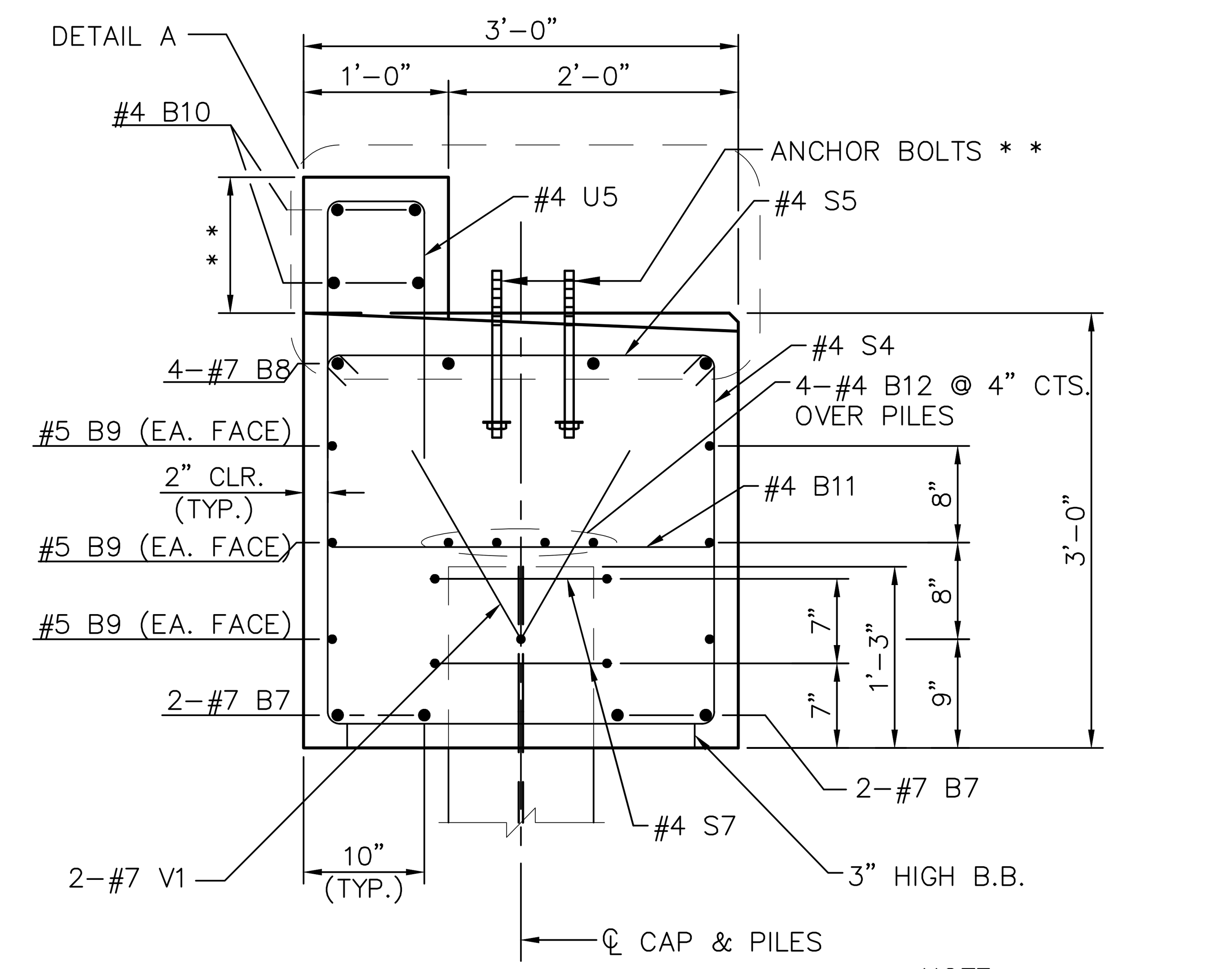
* * REFER TO PREFABRICATED PEDESTRIAN BRIDGE PLANS (BY OTHERS) FOR ANCHOR BOLT PLACEMENT, DETAILS, AND FOR DIMENSIONS NOT SHOWN. MINIMUM EMBEDMENT OF ANCHOR BOLTS SHALL BE 15".



BRIDGE END BENT PLAN

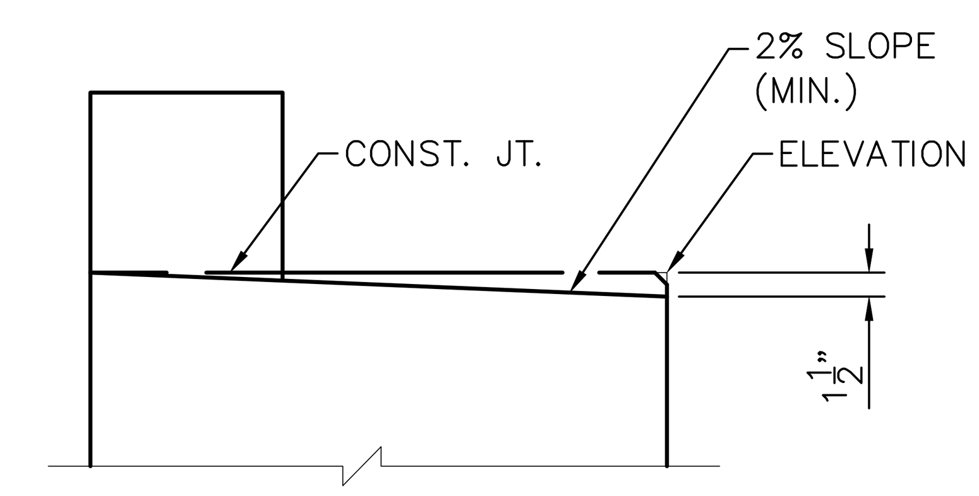


BRIDGE END BENT ELEVATION



NOTE:
CONCRETE COLLAR NOT SHOWN FOR CLARITY.

SECTION A-A



DETAIL A

No.	REVISIONS	DATE	BY
1	ISSUED FOR BID	08/02/22	ASA

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#F-0102

SEAL:
NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 049152 MITCHELL D. MAGEE
08/02/2022

KHA PROJECT 012654010
DATE 08/02/2022
SCALE AS SHOWN
DESIGNED BY BMK
DRAWN BY JJK
CHECKED BY MDM

BRIDGE END BENT DETAILS

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

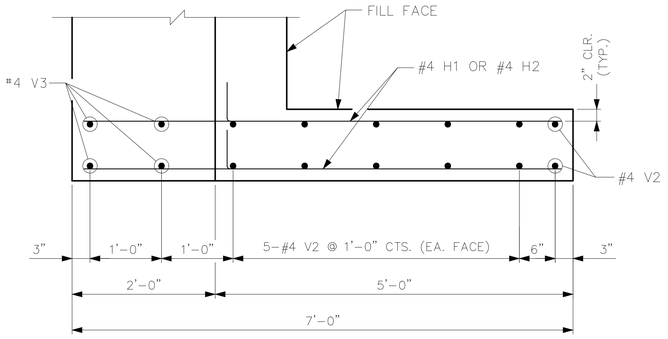
SHEET NUMBER
S.09.B

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

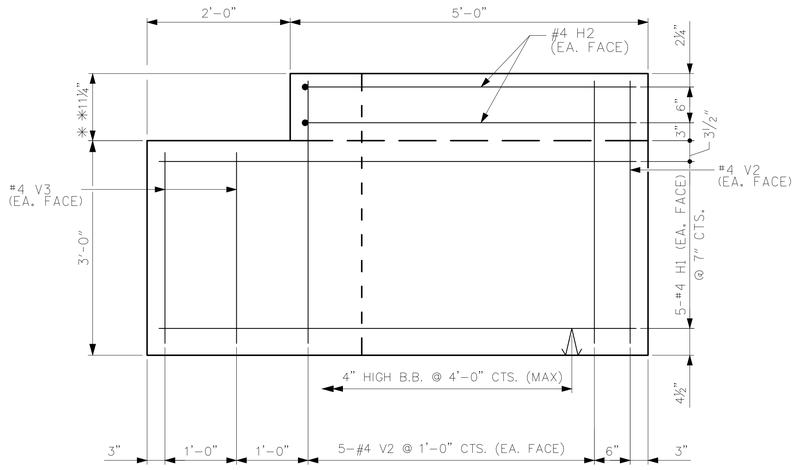
NOTES

* * REFER TO PREFABRICATED PEDESTRIAN BRIDGE AND PRECAST CONCRETE BOARDWALK PLANS (BY OTHERS) FOR ANCHOR BOLT PLACEMENT AND DETAILS, AND FOR DIMENSIONS NOT SHOWN OR REQUIRING VERIFICATION BY THE PREFABRICATED BRIDGE ENGINEER.

CONTRACTOR MUST UPDATE DIMENSIONS BASED ON ACTUAL INFORMATION PROVIDED BY THE PEDESTRIAN BRIDGE FABRICATOR.

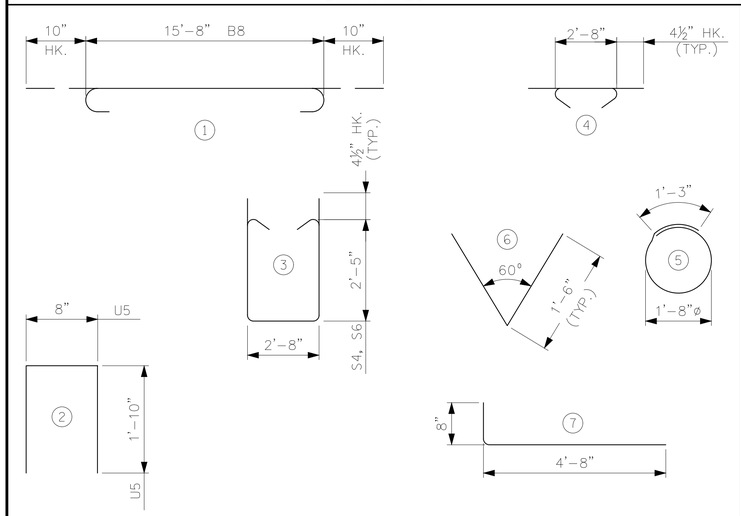


BRIDGE END BENT WING PLAN



BRIDGE END BENT WING ELEVATION

BAR TYPES



ALL BAR DIMENSIONS ARE OUT-TO-OUT.

BILL OF MATERIAL

FOR ONE BRIDGE END BENT (2 REQ'D)

BAR	NO.	SIZE	TYPE	LENGTH	WEIGHT
B7	4	7	STR	15'-8"	128
B8	4	7	1	17'-4"	142
B9	6	5	STR	15'-8"	98
B10	4	4	STR	15'-8"	42
B11	5	4	STR	2'-8"	9
B12	4	4	STR	15'-8"	42
U5	17	4	2	4'-4"	49
S4	15	4	3	8'-3"	83
S5	15	4	4	3'-5"	34
S6	2	4	3	8'-3"	11
S7	4	4	5	6'-6"	17
V1	4	7	6	3'-0"	25
V2	24	4	STR	3'-6"	56
V3	8	4	STR	2'-7"	14
H1	20	4	STR	6'-8"	89
H2	8	4	7	5'-4"	29
REINFORCING STEEL				LBS.	868
CLASS A CONCRETE				C. Y.	7.0

No.	DATE	BY
1	ISSUED FOR BID REVISIONS	08/02/22 ASA

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#F-0102

SEAL:
NORTH CAROLINA PROFESSIONAL SEAL 039152 ENGINEER MITCHELL D MCGEE
08/02/2022

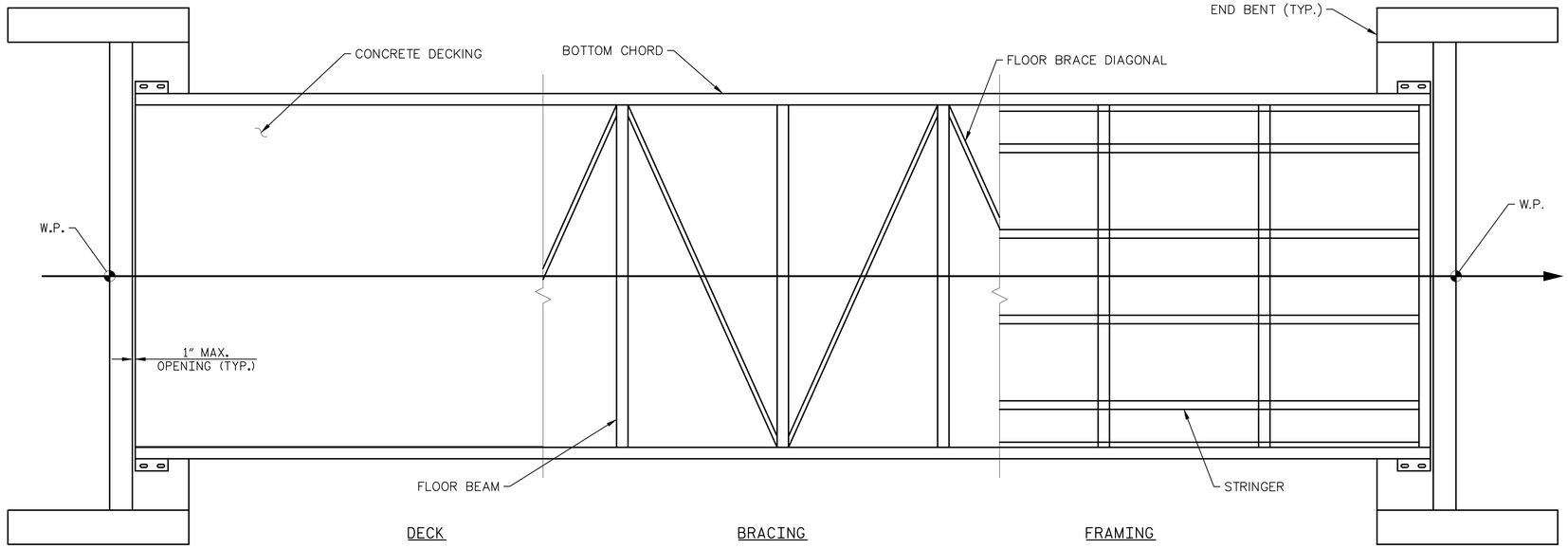
KHA PROJECT	012654010
DATE	08/02/2022
SCALE	AS SHOWN
DESIGNED BY	BMK
DRAWN BY	JJK
CHECKED BY	MDM

BRIDGE END BENT BILL OF MATERIAL

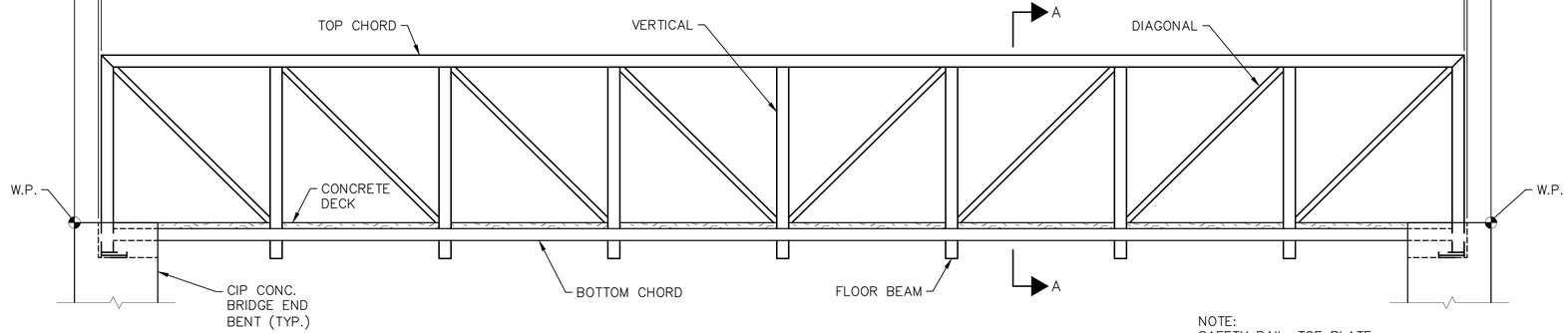
WILDWOOD PARK - TOWER AND TRAILS
BID PACKAGE B
PREPARED FOR
CITY OF GREENVILLE
NC
GREENVILLE

SHEET NUMBER
S.10.B

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

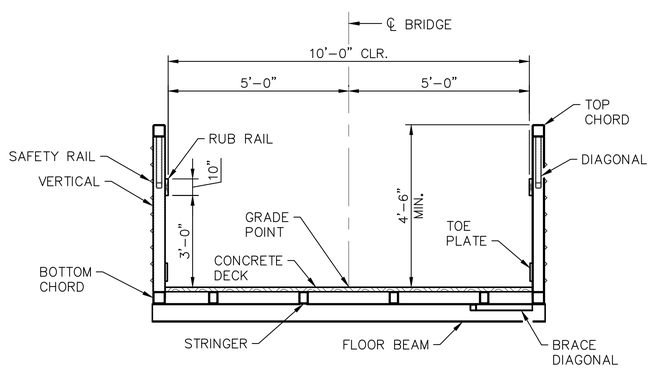


PREFABRICATED PEDESTRIAN BRIDGE PLAN



NOTE:
SAFETY RAIL, TOE PLATE, RUB RAIL AND ANCHOR BOLTS NOT SHOWN FOR CLARITY.

PROPOSED 60' PREFABRICATED STEEL BRIDGE ELEVATION
(PRATT TRUSS)



SECTION A-A

NOTES

PREFABRICATED PEDESTRIAN BRIDGE DETAILS SHOWN FOR AESTHETIC REQUIREMENT AND MINIMUM LAYOUT REQUIREMENTS ONLY. CONTRACTOR'S ENGINEER SHALL BE RESPONSIBLE FOR THE DESIGN AND DETAIL OF THE SUPERSTRUCTURE. SEE SPECIAL PROVISIONS.

No.	REVISIONS	DATE	BY
1	ISSUED FOR BID	08/02/22	ASA

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SEAL:
NORTH CAROLINA PROFESSIONAL SEAL 039152 ENGINEER MITCHELL D MCGEE
08/02/2022

KHA PROJECT	012654010
DATE	08/02/2022
SCALE	AS SHOWN
DESIGNED BY	BMK
DRAWN BY	JJK
CHECKED BY	MDM

PREFABRICATED PEDESTRIAN BRIDGE DETAILS

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

SURVEY NOTE:
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SHEET NUMBER
S.11.B

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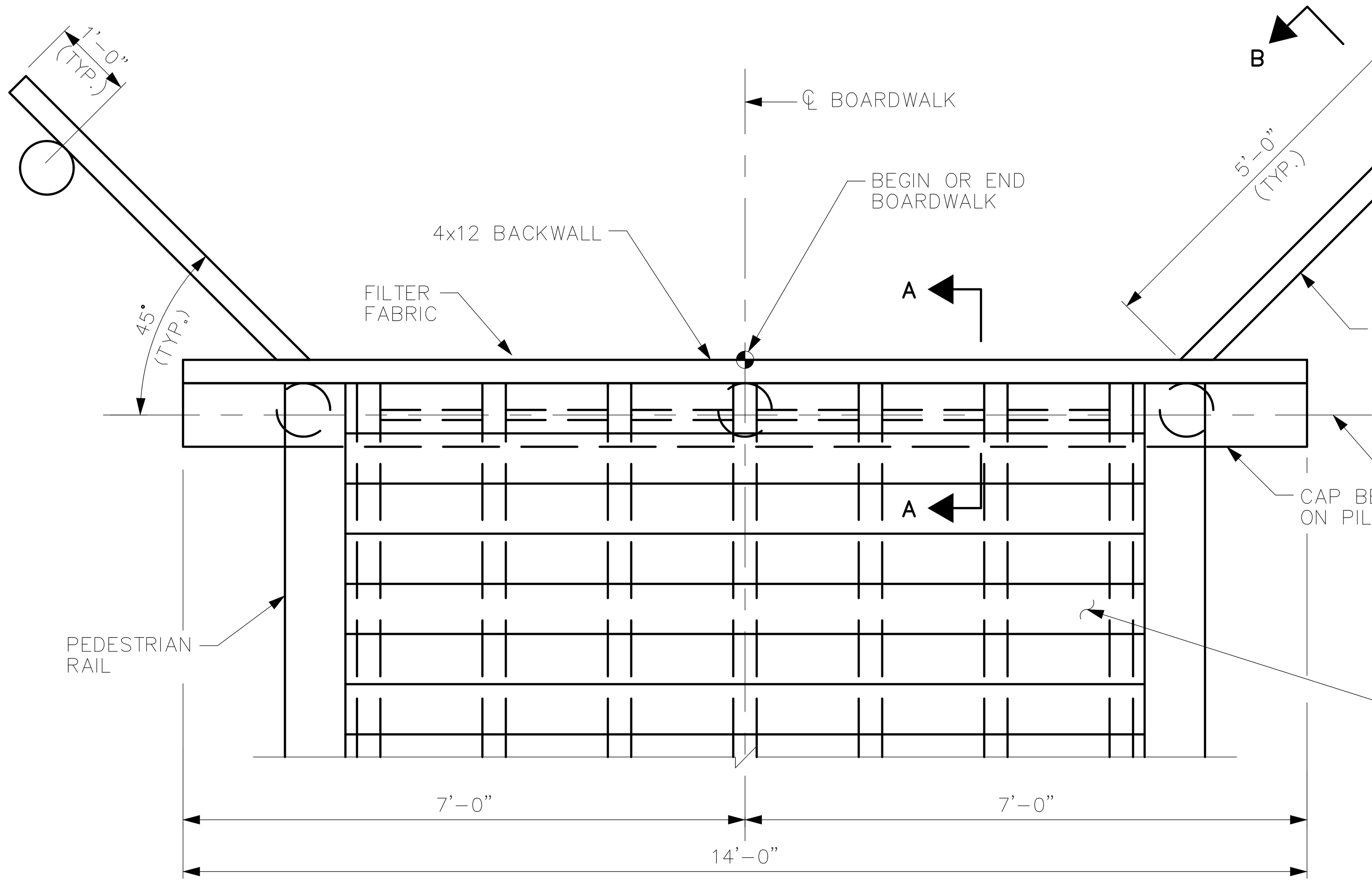
NOTES

STRINGER TO CAP BEAM CLIP SHALL BE:
1. SIMPSON STRONG TIE LTS12
2. USP TIE RT4
3. OR APPROVED EQUAL

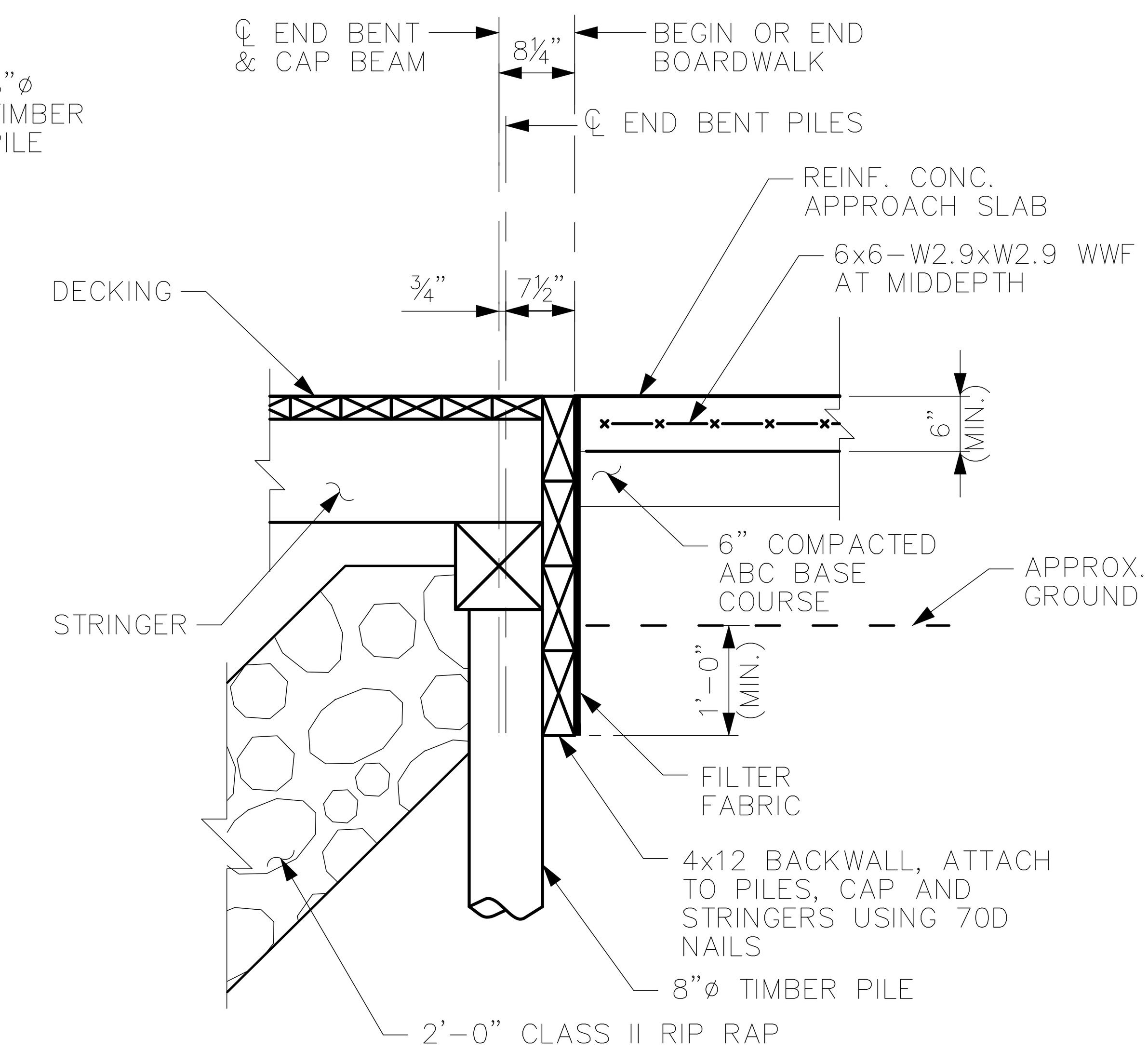
CAP BEAM TO PILING STRAP SHALL BE:
1. SIMPSON MSTA12 FLAT STRAP
2. USP MSTA12 FLAT STRAP
3. OR APPROVED EQUAL

TIMBER PILES SHALL HAVE MINIMUM TIP DIAMETER OF 8"

STRINGERS MAY BE SPACED AS NECESSARY WITHOUT EXCEEDING DECKING SPAN OF 1'-6¾".

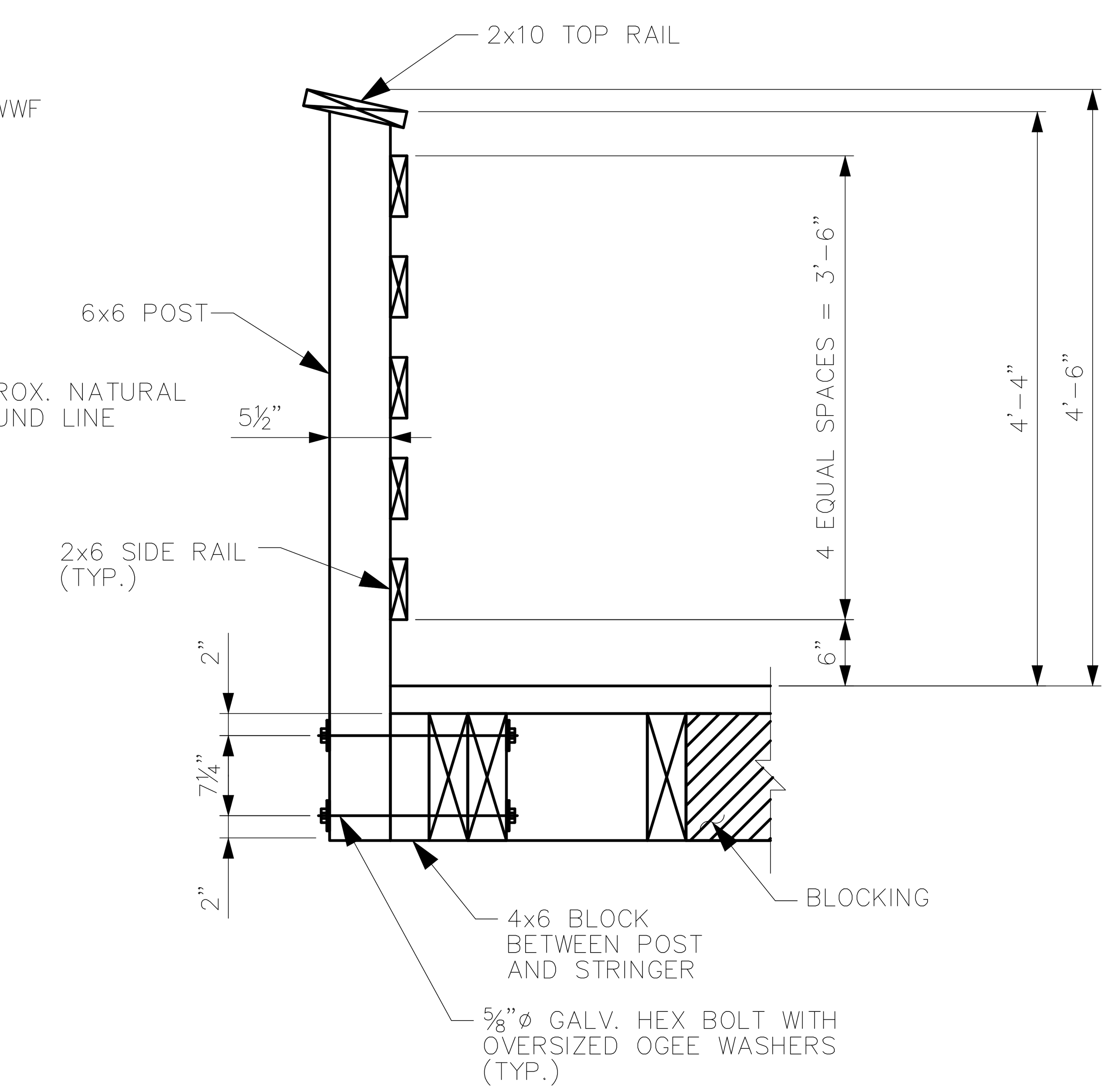


TIMBER BOARDWALK END BENT PLAN

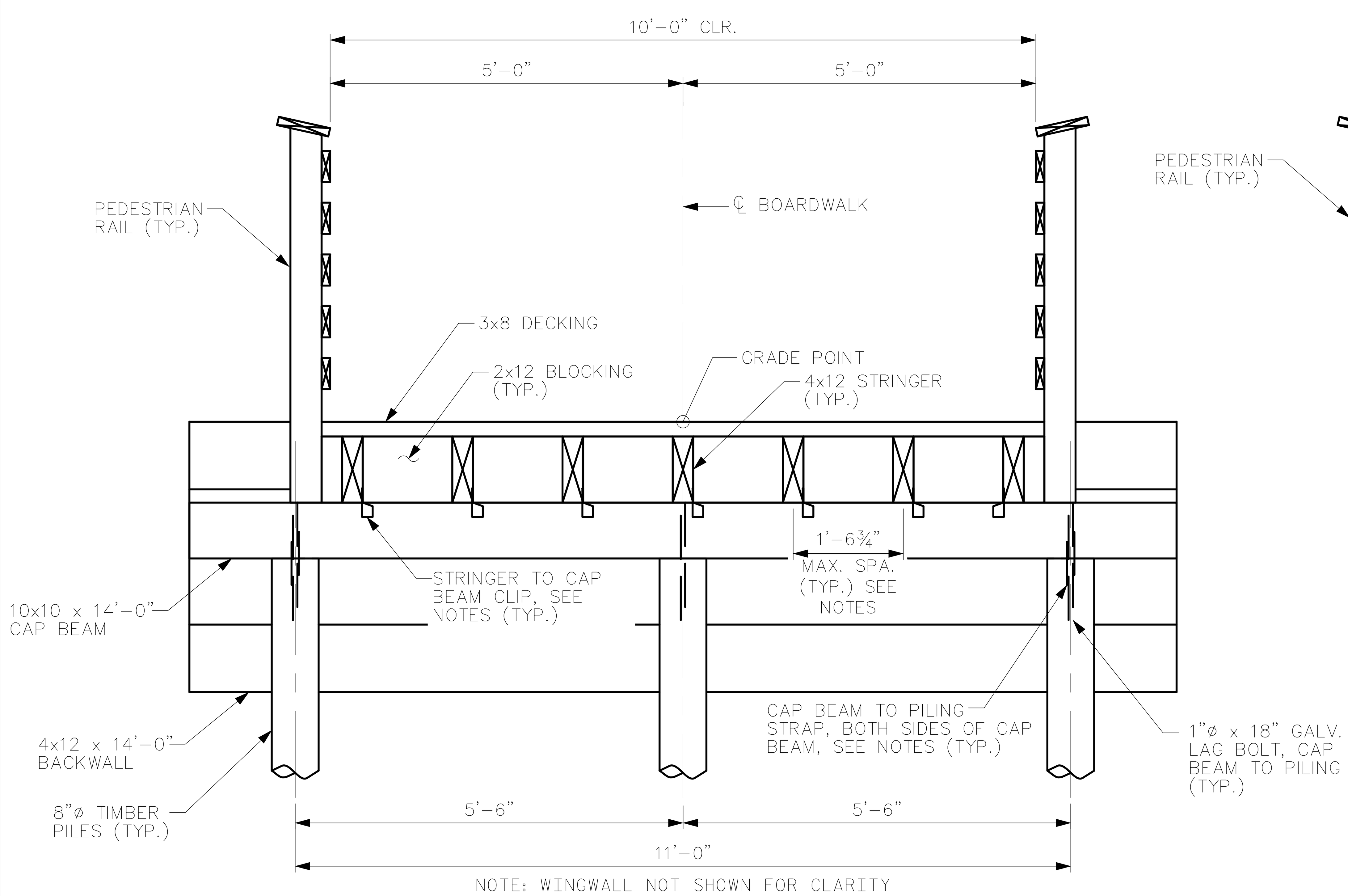


SECTION A-A

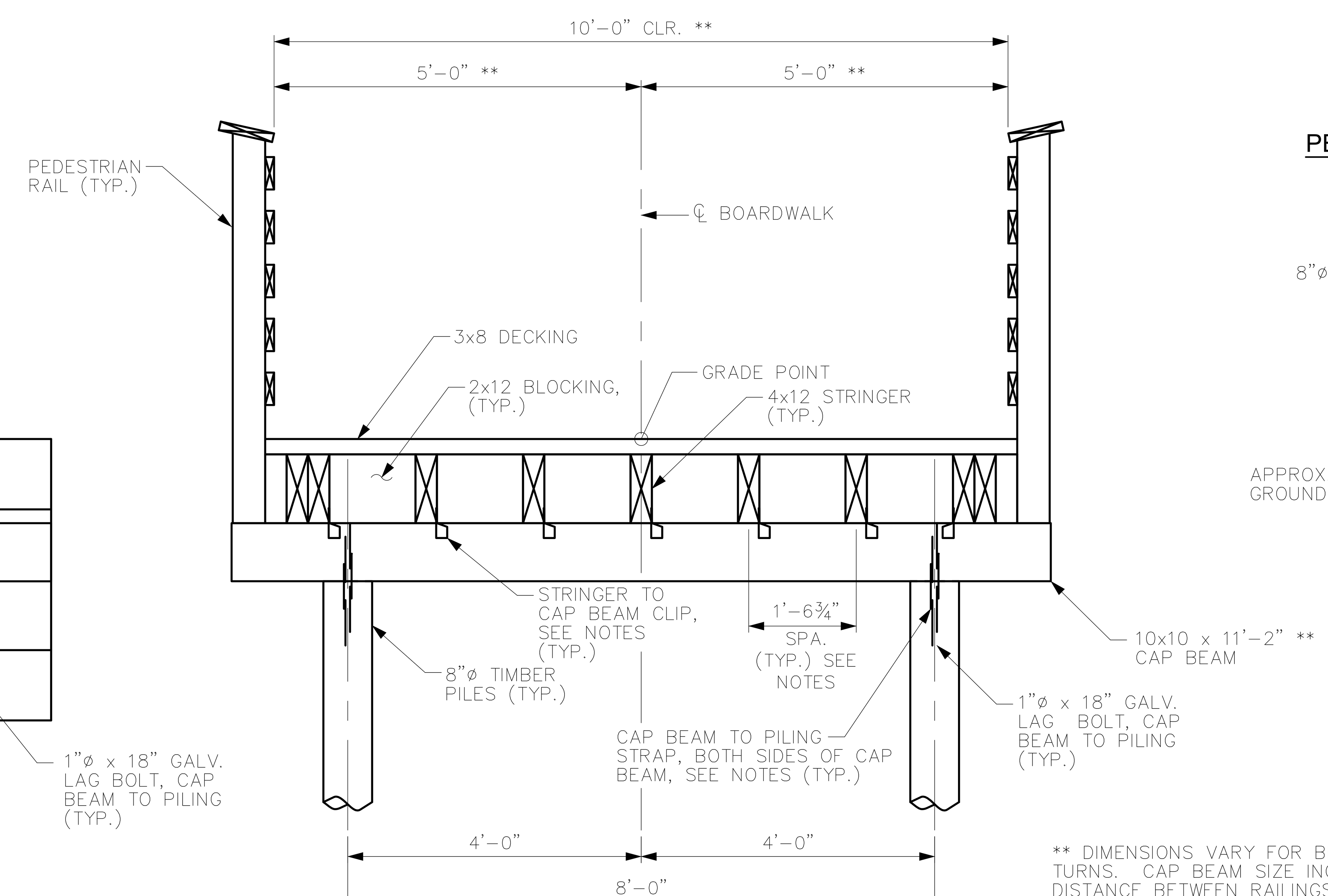
(RAILING NOT SHOWN FOR CLARITY)



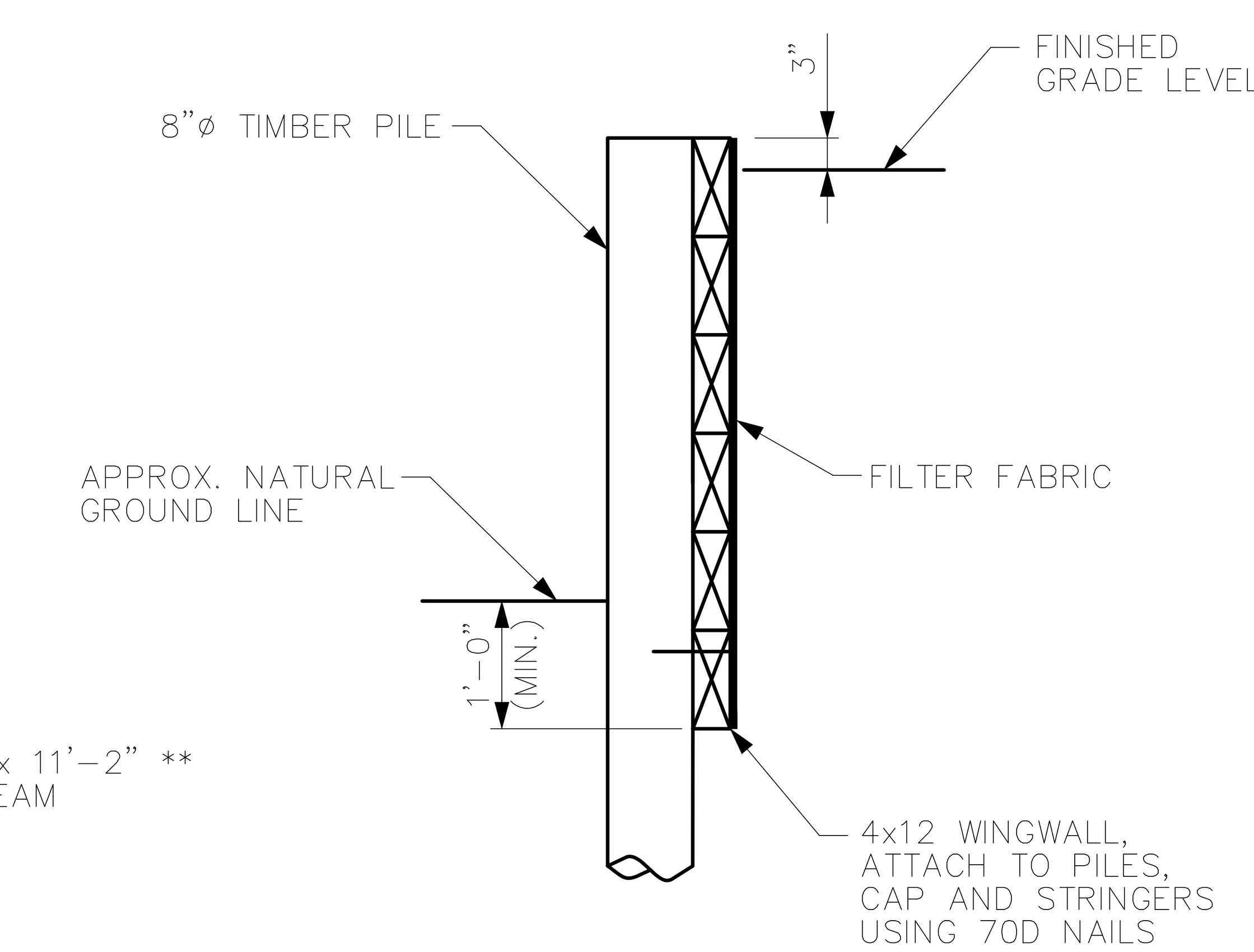
PEDESTRIAN RAIL DETAIL



TIMBER BOARDWALK END BENT ELEVATION



TIMBER BOARDWALK BENT ELEVATION



SECTION B-B

** DIMENSIONS VARY FOR BENTS LOCATED AT BOARDWALK TURNS. CAP BEAM SIZE INCREASES TO 10x10x13'-2". CLEAR DISTANCE BETWEEN RAILINGS VARIES FOR THESE LOCATIONS BUT SHALL NOT BE LESS THAN 10'-0".
-L2- BENTS AT TURNS: BENT 6, BENT 8, BENT 15, BENT 21, BENT 28, BENT 31, BENT 34, BENT 43, BENT 59.
-L4- BENTS AT TURNS: BENT 10, BENT 15, BENT 22, BENT 31, BENT 34, BENT 42, BENT 45, BENT 49, BENT 56.

SURVEY NOTE:
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No.	REVISIONS	DATE	BY
1	ISSUED FOR BID	08/02/22	ASA

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#F-0102

SEAL: NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 049152 MITCHELL D. MAGEE 08/02/2022

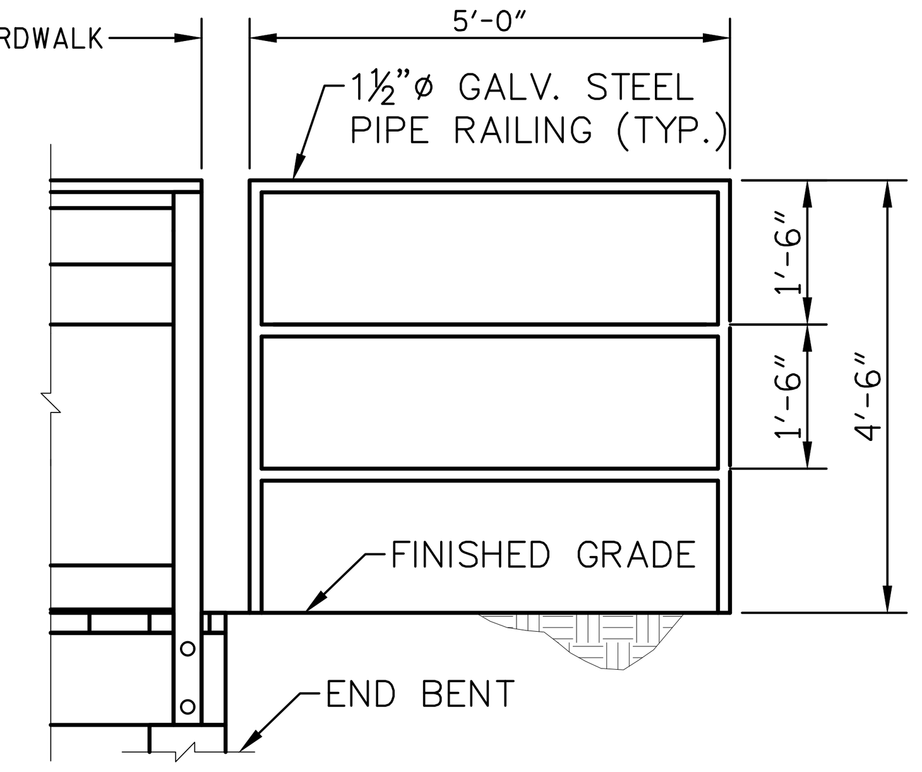
KHA PROJECT 012654010
DATE 08/02/2022
SCALE AS SHOWN
DESIGNED BY BMK
DRAWN BY JJK
CHECKED BY MDM

TIMBER BOARDWALK DETAILS

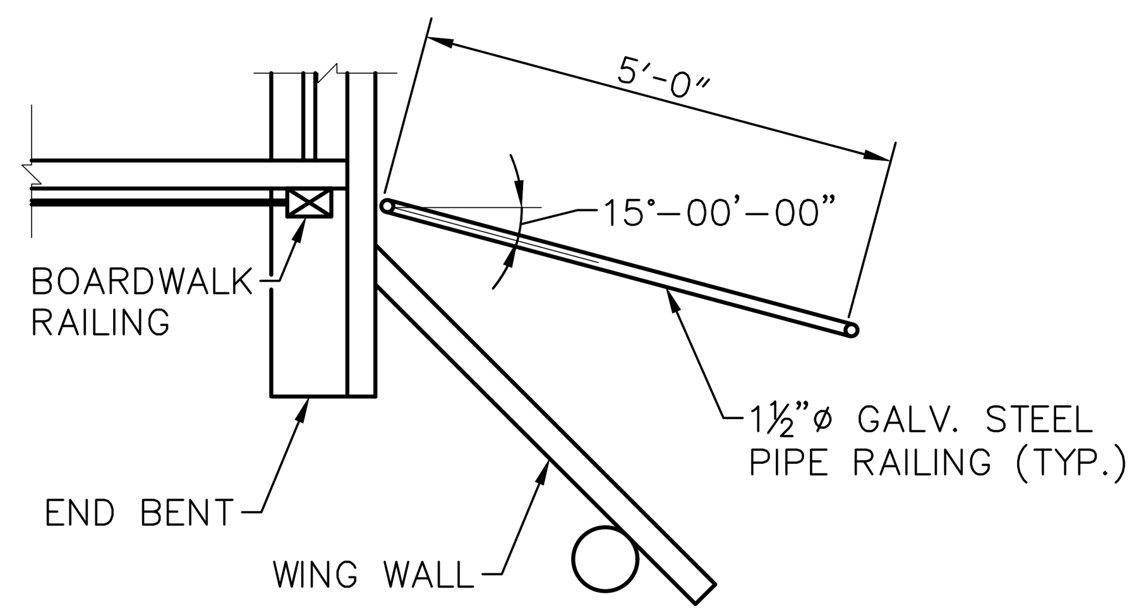
WILDWOOD PARK - TOWER AND TRAILS BID PACKAGE B
PREPARED FOR CITY OF GREENVILLE
GREENVILLE NC

SHEET NUMBER S.12.B

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

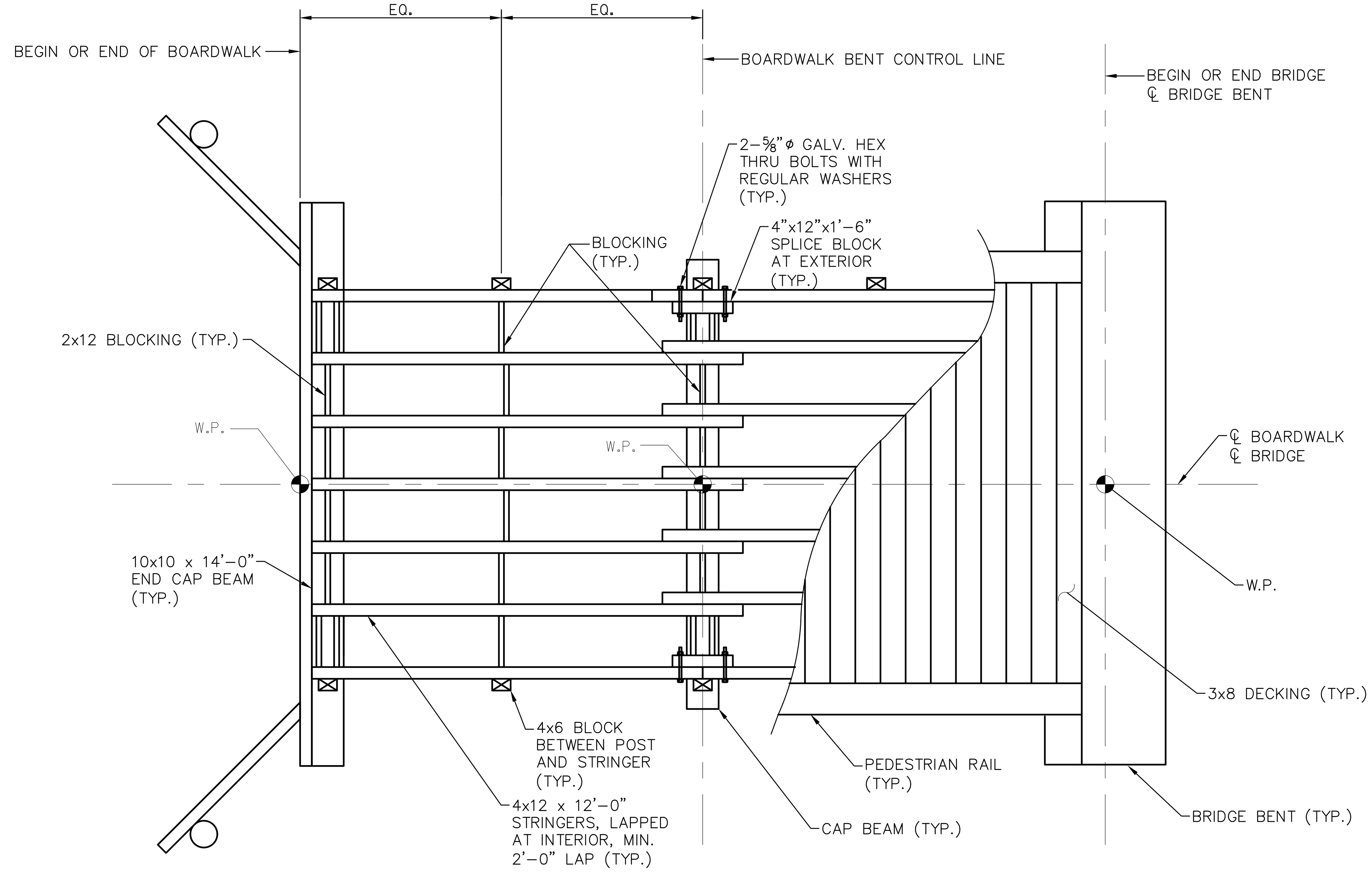


ELEVATION

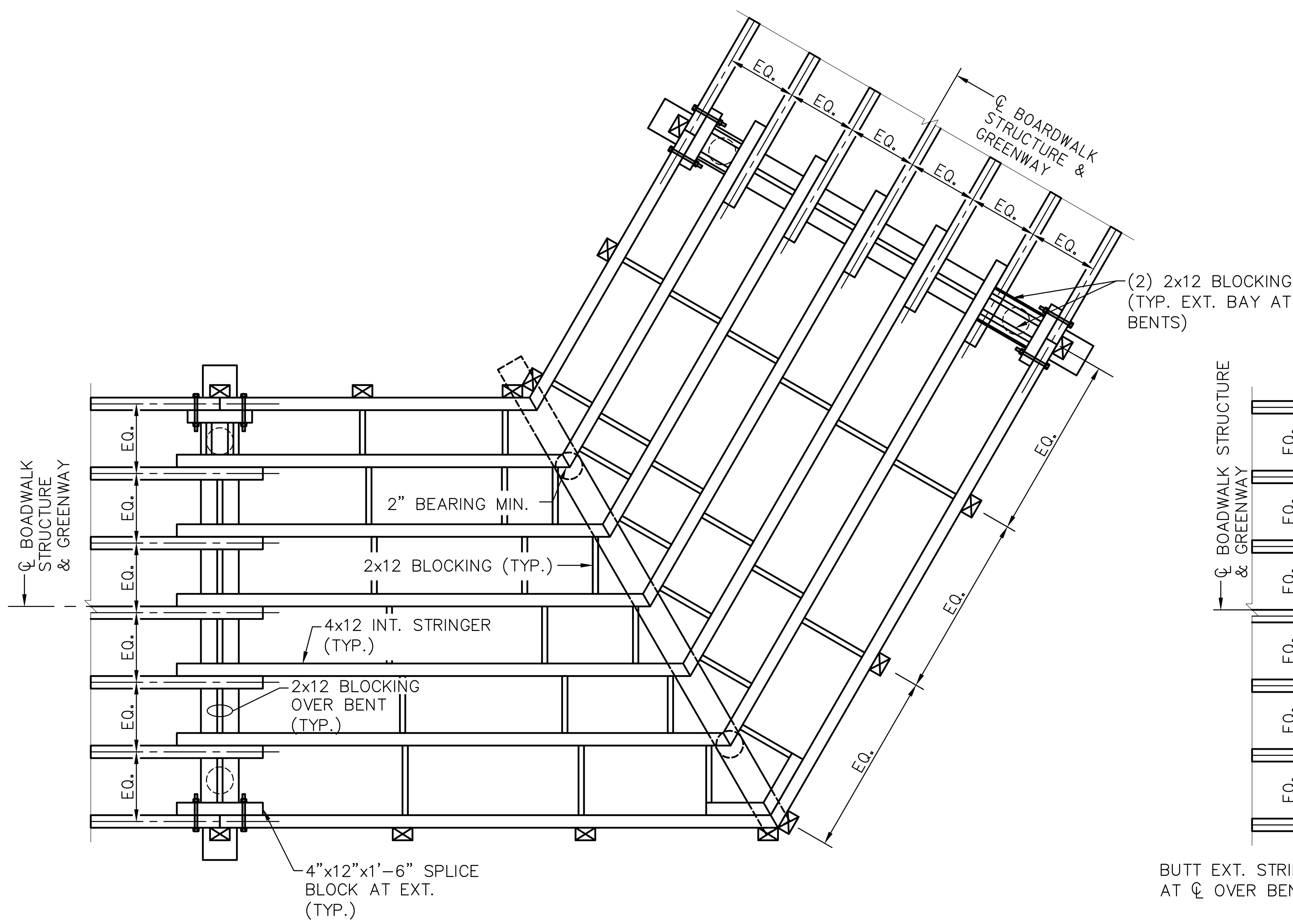


PLAN

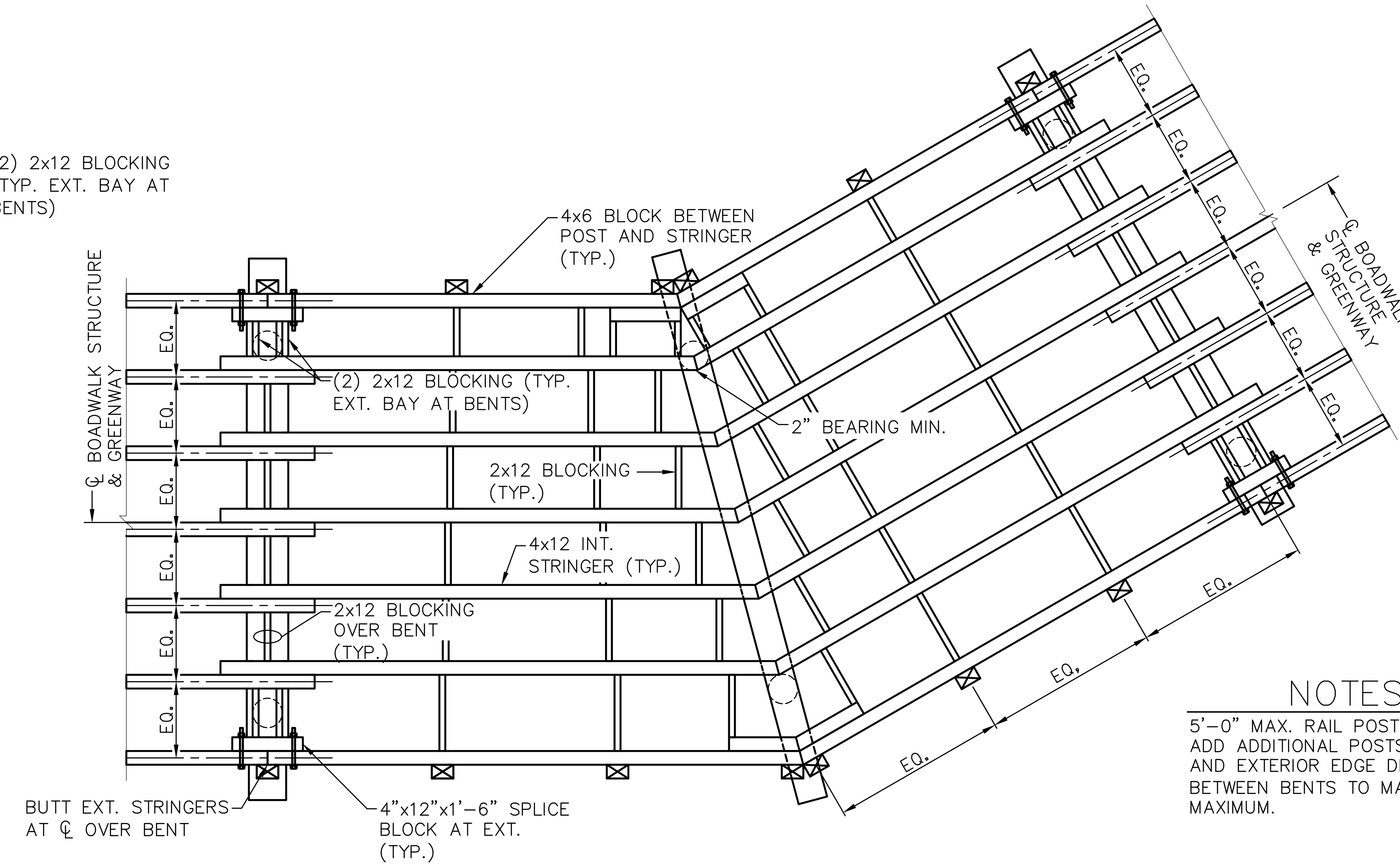
TYPICAL APPROACH RAIL



TIMBER BOARDWALK DECK FRAMING PLAN



FRAMING AT >30° TURN



FRAMING AT <30°TURN

NOTES

5'-0" MAX. RAIL POST SPACING. ADD ADDITIONAL POSTS FOR SPANS AND EXTERIOR EDGE DISTANCES BETWEEN BENTS TO MAINTAIN 5'-0" MAXIMUM.

SURVEY NOTE:

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KHA PROJECT 012654010
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TIMBER BOARDWALK FRAMING DETAILS

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

SHEET NUMBER S.13.B

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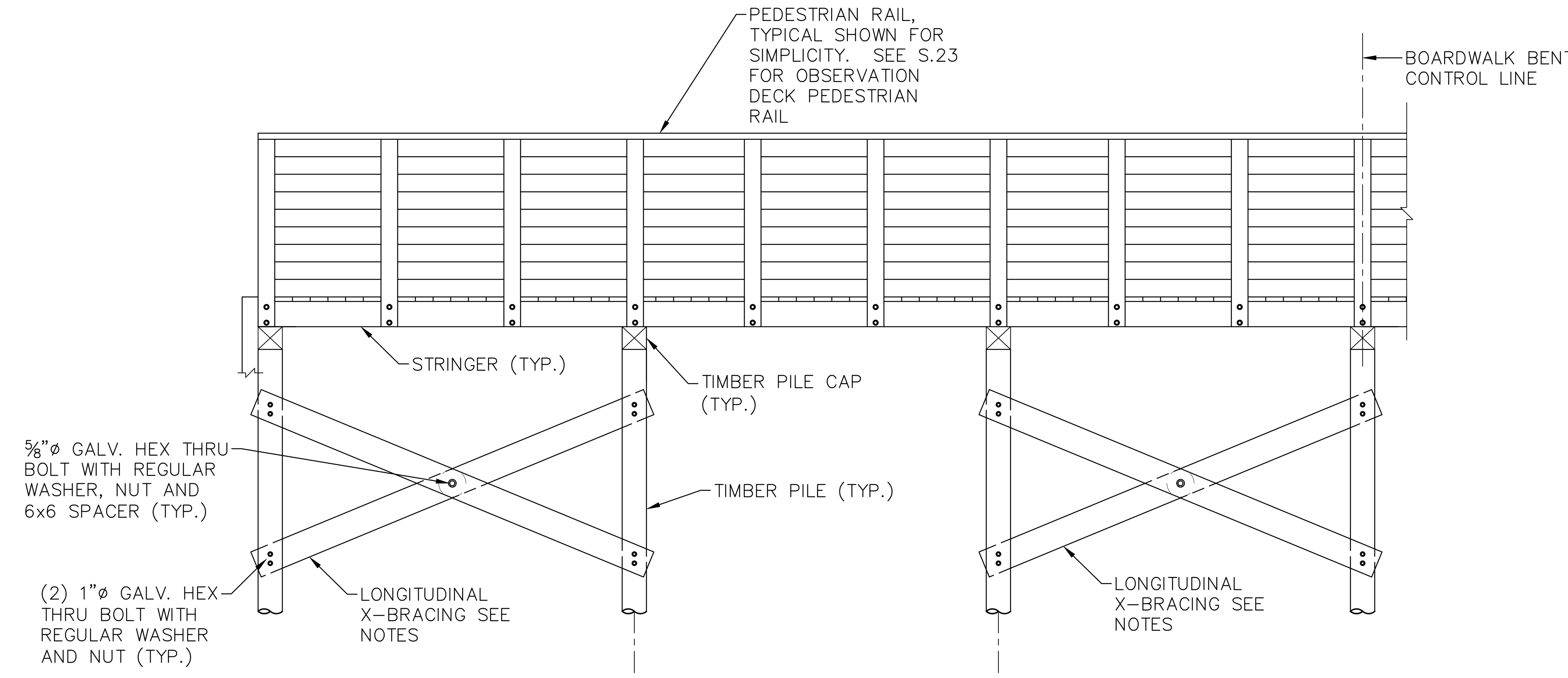
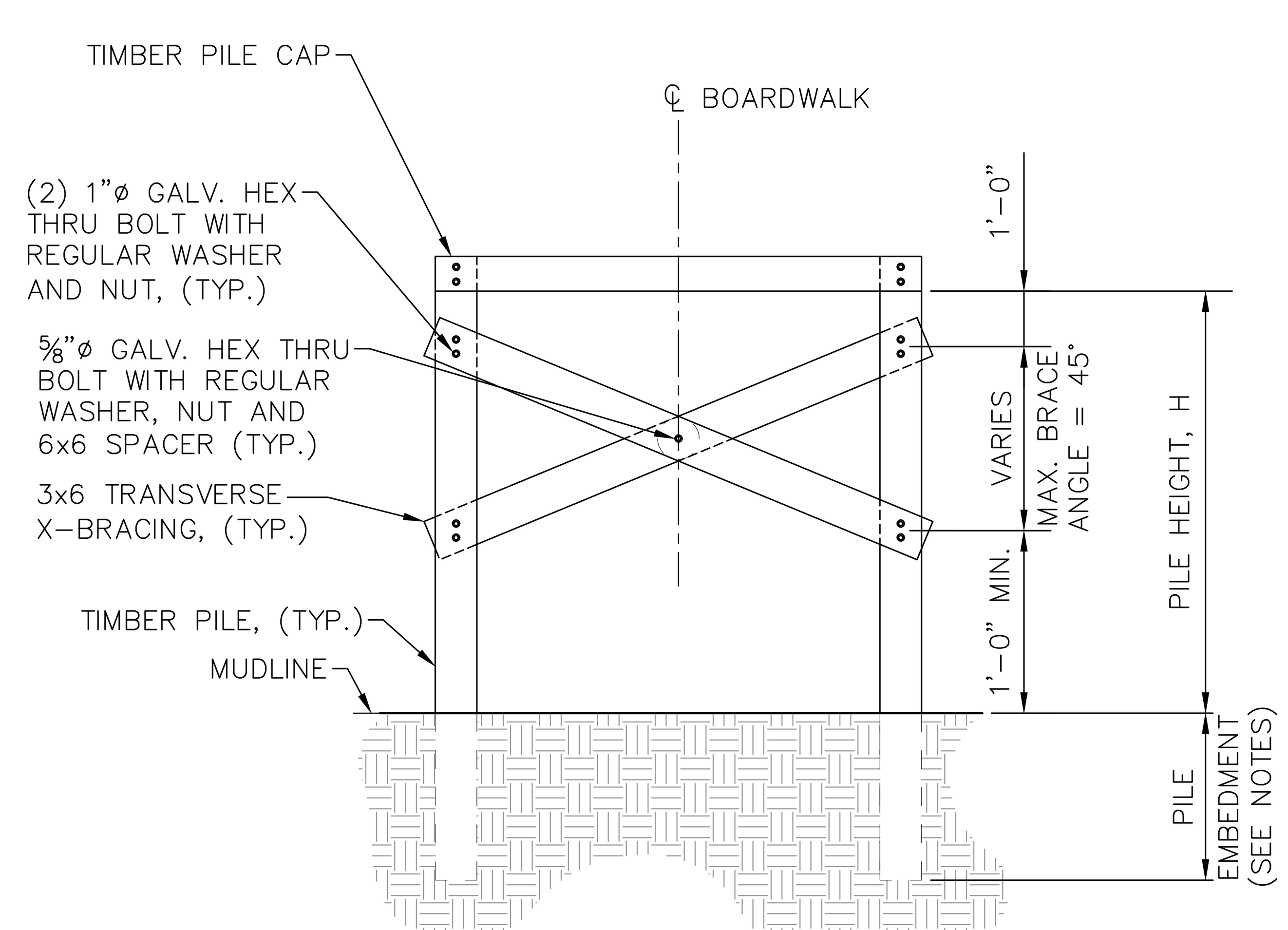
FOUNDATION AND BRACING REQUIREMENTS							
ALIGNMENT	BENT NO.	PILE TYPE	NO. PILES (PER SUBSTRUCTURE UNIT), EA.	FOUNDATION TYPE	ESTIMATED PILE LENGTH (PER PILE), FT.	LATERAL BRACING (DETAIL B)	LONGITUDINAL BRACING (DETAIL A)
-L4- (THE SWAMP)	END BENT 1	8" DIA. TIMBER	3	1	35	NO	NO
	1 - 4	8" DIA. TIMBER	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
	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 SWAMP)	1 - 4	8" DIA. TIMBER	4	6	50	YES **	YES **
	5 - 8	8" DIA. TIMBER	2	4	50	YES **	YES **
-Y5- (THE SWAMP)	END BENT 1	HP 12x53	2	7	55	NO	NO
	END BENT 2	HP 12x53	2	7	55	NO	NO

** TWO ROWS OF BRACING REQUIRED; SEE `DETAIL C' THIS SHEET.

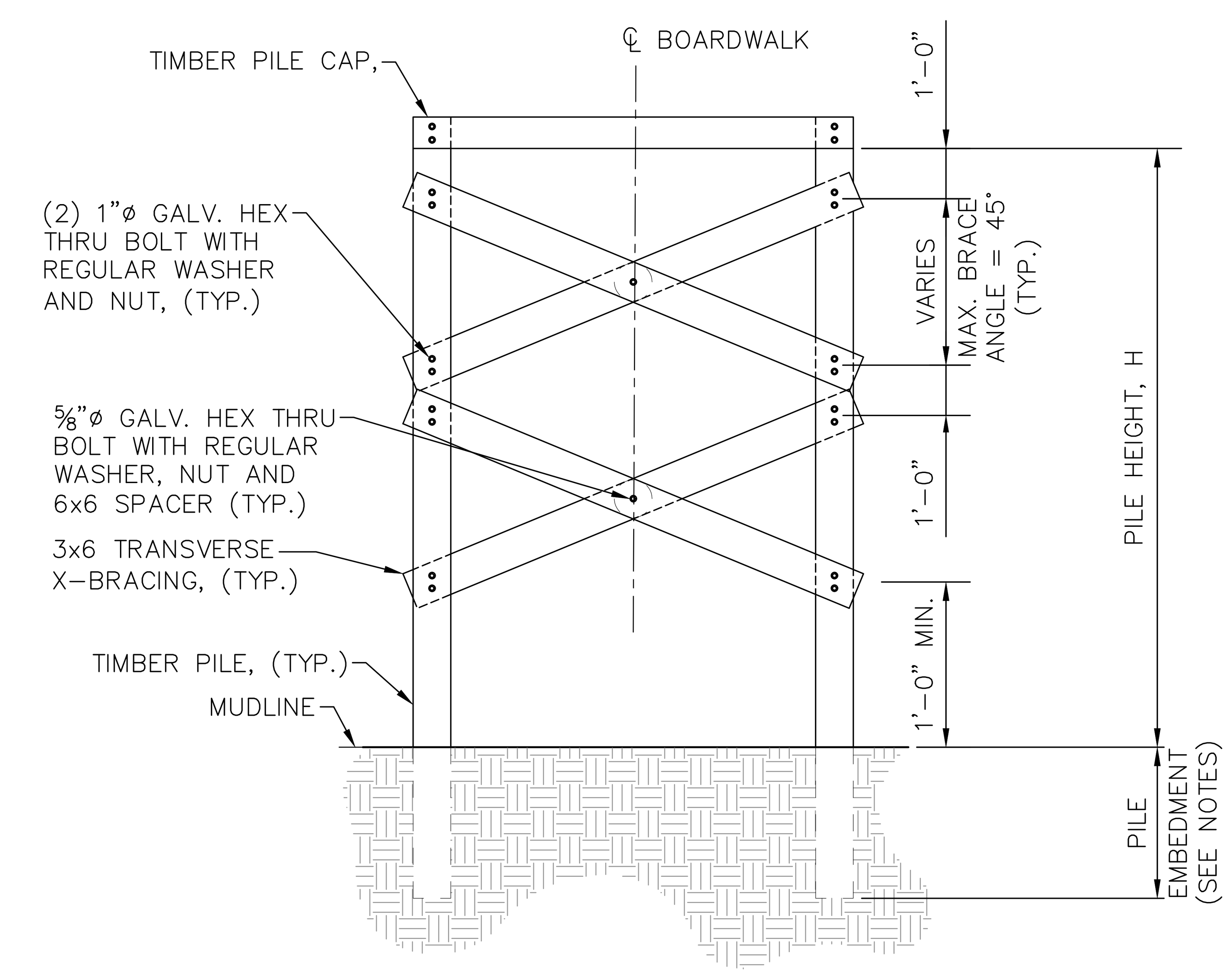


NOTES:
1. PROVIDE LONGITUDINAL 3x6 X-BRACING ON EACH SIDE OF BOARDWALK WHEN DICTATED IN "FOUNDATION AND BRACING REQUIREMENT" TABLE.
2. WHERE REQUIRED, PROVIDE TWO ROWS OF LONGITUDINAL BRACING SIMILAR TO 'DETAIL C'.

DETAIL A - LONGITUDINAL BRACING



DETAIL B - LATERAL BRACING



DETAIL C - LATERAL BRACING

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

SURVEY NOTE:
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KHA PROJECT 012654010
DATE 08/02/2022
SCALE AS SHOWN
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DRAWN BY JJK
CHECKED BY MDM

TIMBER BOARDWALK BRACING DETAILS

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

SHEET NUMBER
S.14.B

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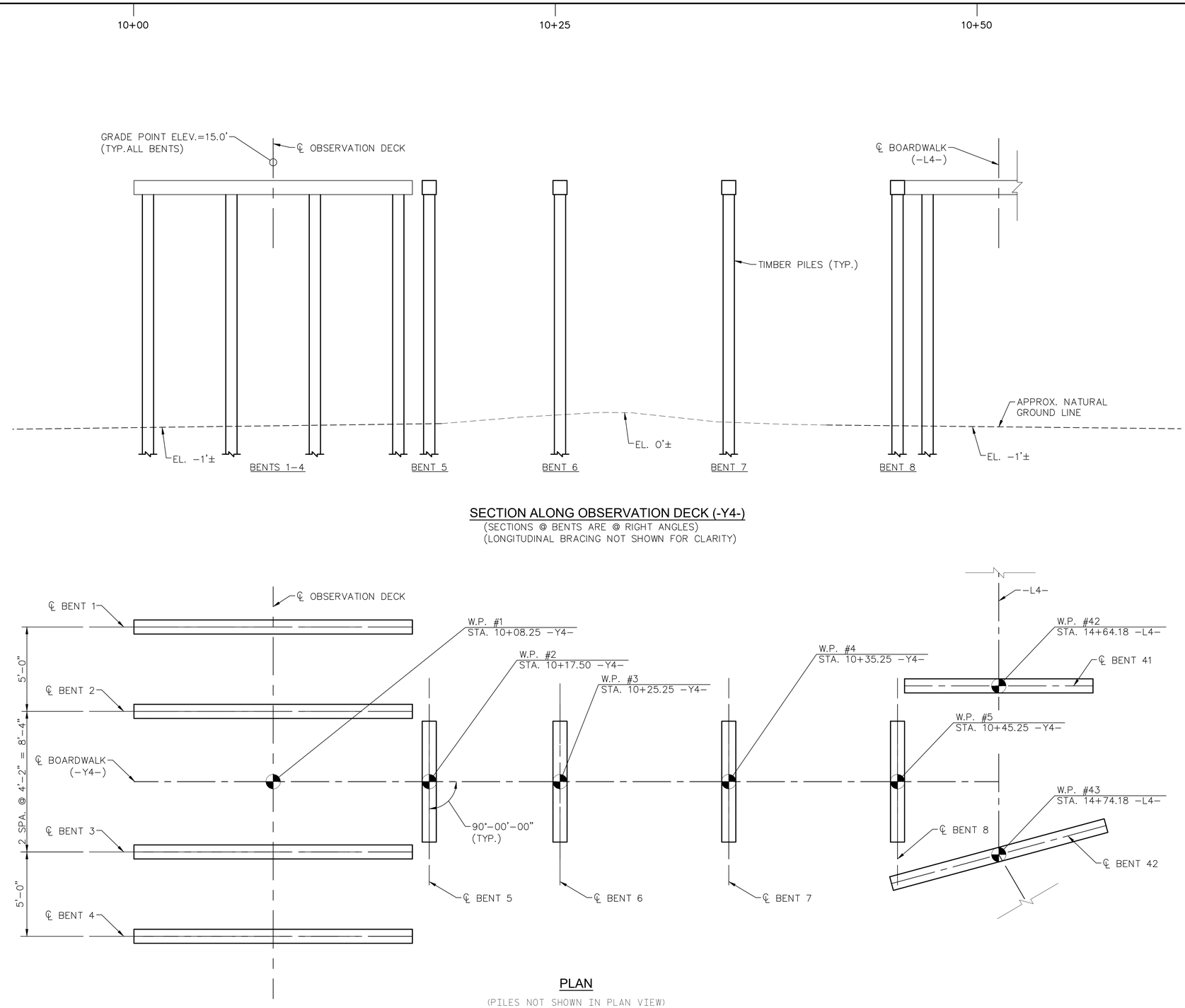

SECTION ALONG OBSERVATION DECK (-Y4-)

(SECTIONS @ BENTS ARE @ RIGHT ANGLES)
(LONGITUDINAL BRACING NOT SHOWN FOR CLARITY)

PLAN

(PILES NOT SHOWN IN PLAN VIEW)

NORTH

SURVEY NOTE:

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08/02/2022

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OBSERVATION DECK DETAILS

WILDWOOD PARK - TOWER AND TRAILS
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GREENVILLE NC

SHEET NUMBER
S.15.B

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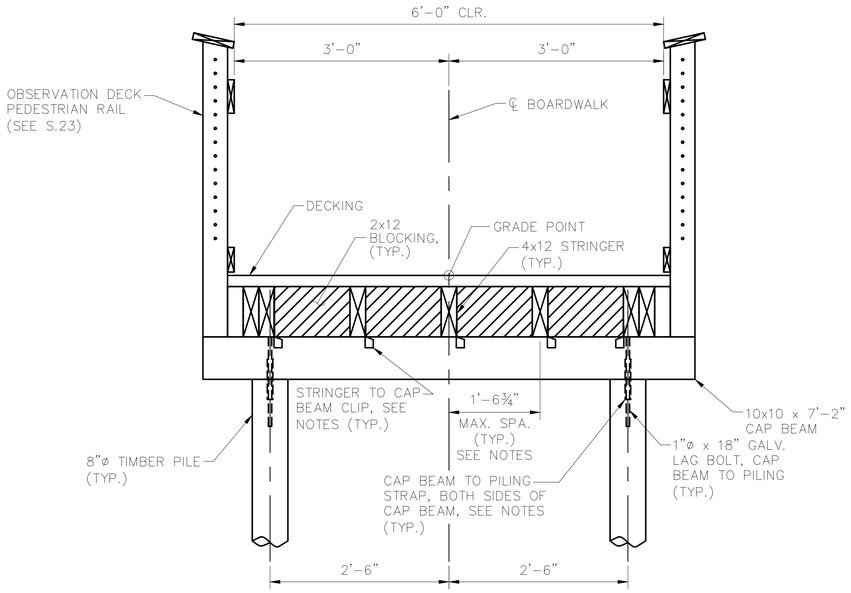
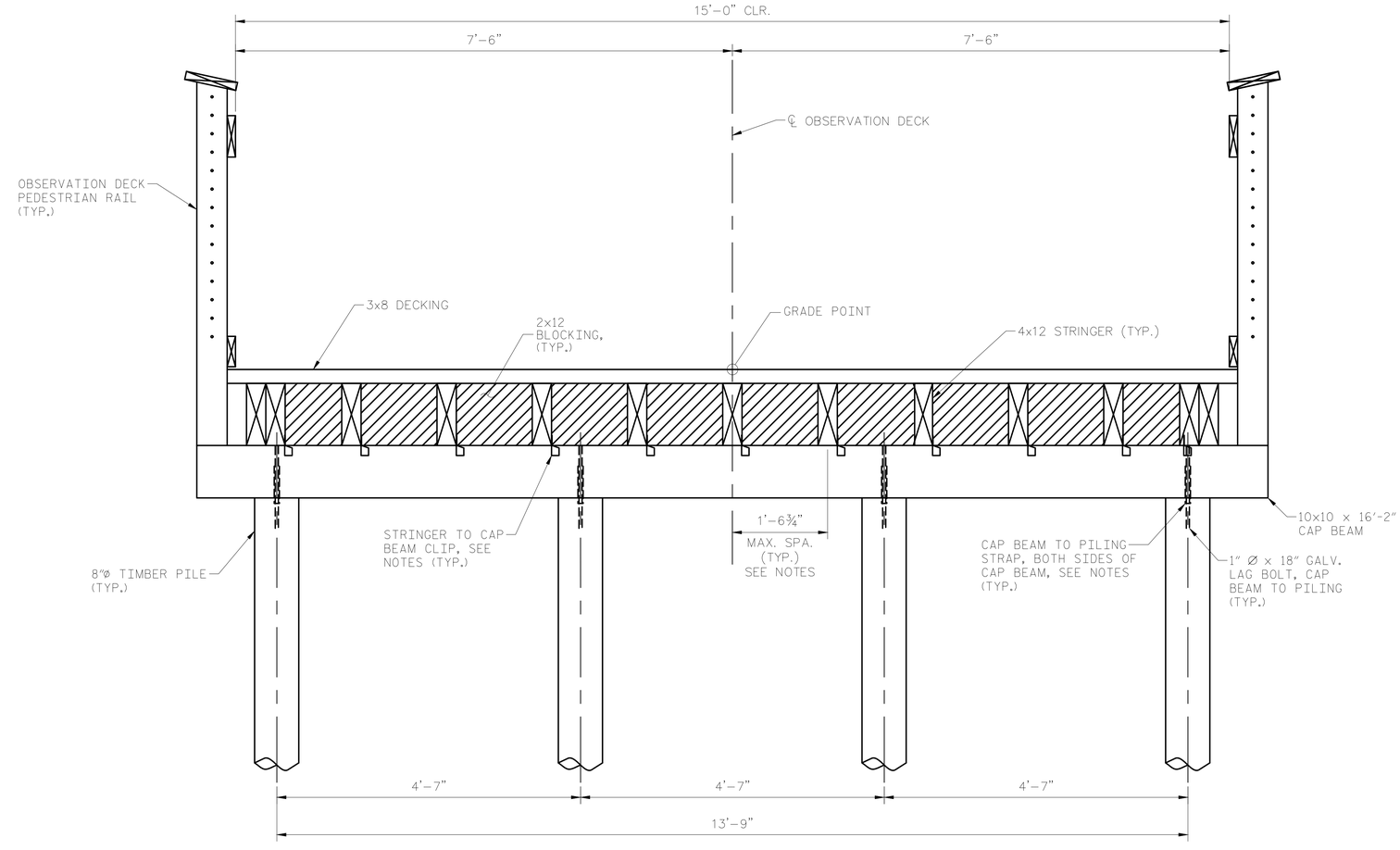


TIMBER BOARDWALK BENT ELEVATION
BENTS 5 THROUGH 8



TIMBER OBSERVATION DECK BENT ELEVATION

NOTES

STRINGER TO CAP BEAM CLIP SHALL BE:
1. SIMPSON STRONG TIE LTS12
2. USP TIE RT4
3. OR APPROVED EQUAL

CAP BEAM TO PILING STRAP SHALL BE:
1. SIMPSON MSTA12 FLAT STRAP
2. USP MSTA12 FLAT STRAP
3. OR APPROVED EQUAL

STRINGERS MAY BE SPACED AS NECESSARY WITHOUT EXCEEDING DECKING SPAN OF 1'-6¾".

SURVEY NOTE:

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SEAL:
NORTH CAROLINA PROFESSIONAL SEAL 039152 ENGINEER MITCHELL D MCGEE
08/02/2022

KHA PROJECT	012654010
DATE	08/02/2022
SCALE	AS SHOWN
DESIGNED BY	BMK
DRAWN BY	JIK
CHECKED BY	MDM

OBSERVATION DECK DETAILS

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

SHEET NUMBER
S.16.B

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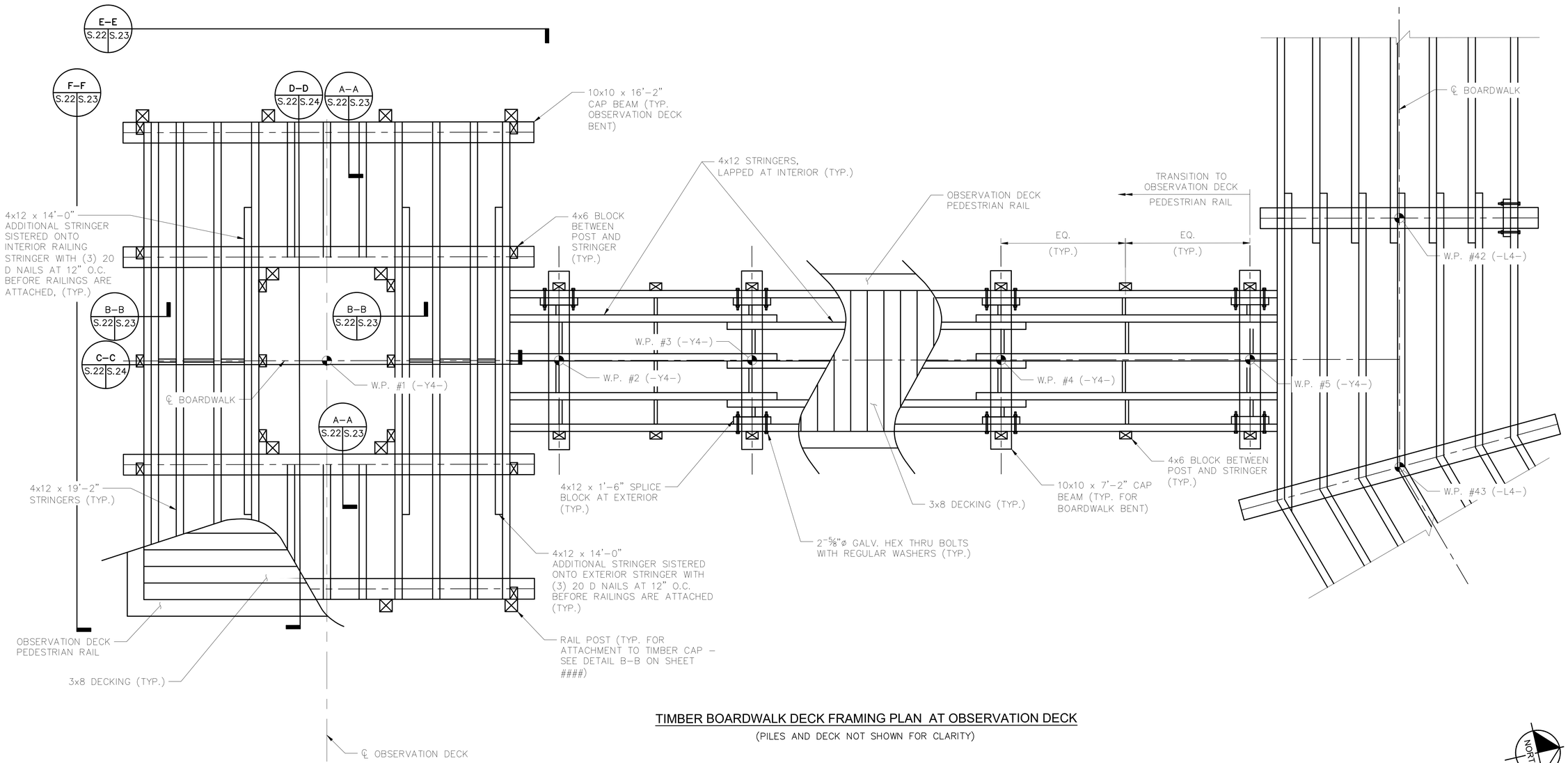

TIMBER BOARDWALK DECK FRAMING PLAN AT OBSERVATION DECK

(PILES AND DECK NOT SHOWN FOR CLARITY)

NORTH

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08/02/2022

KHA PROJECT	012654010
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OBSERVATION DECK DETAILS

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GREENVILLE NC

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S.17.B

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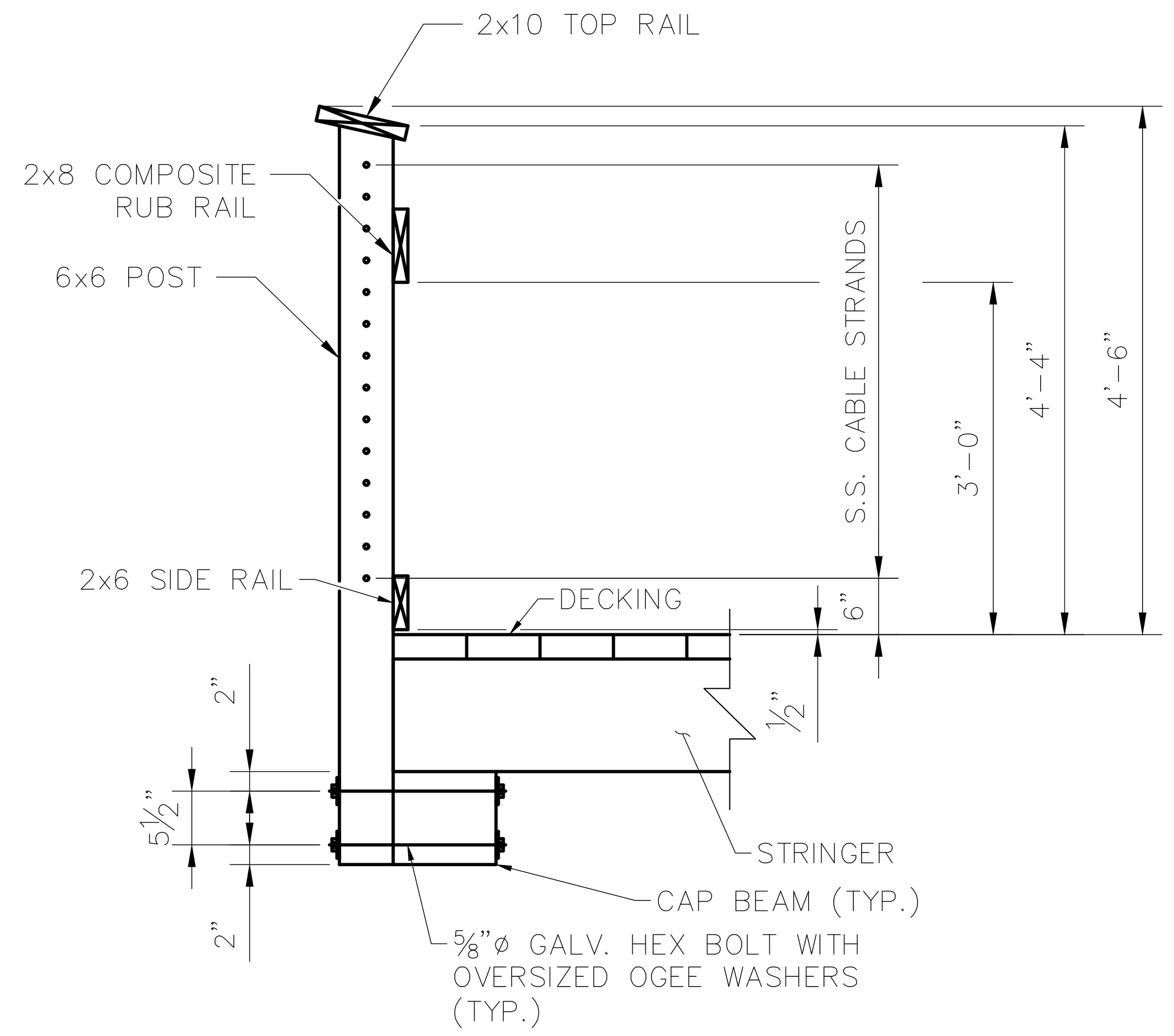
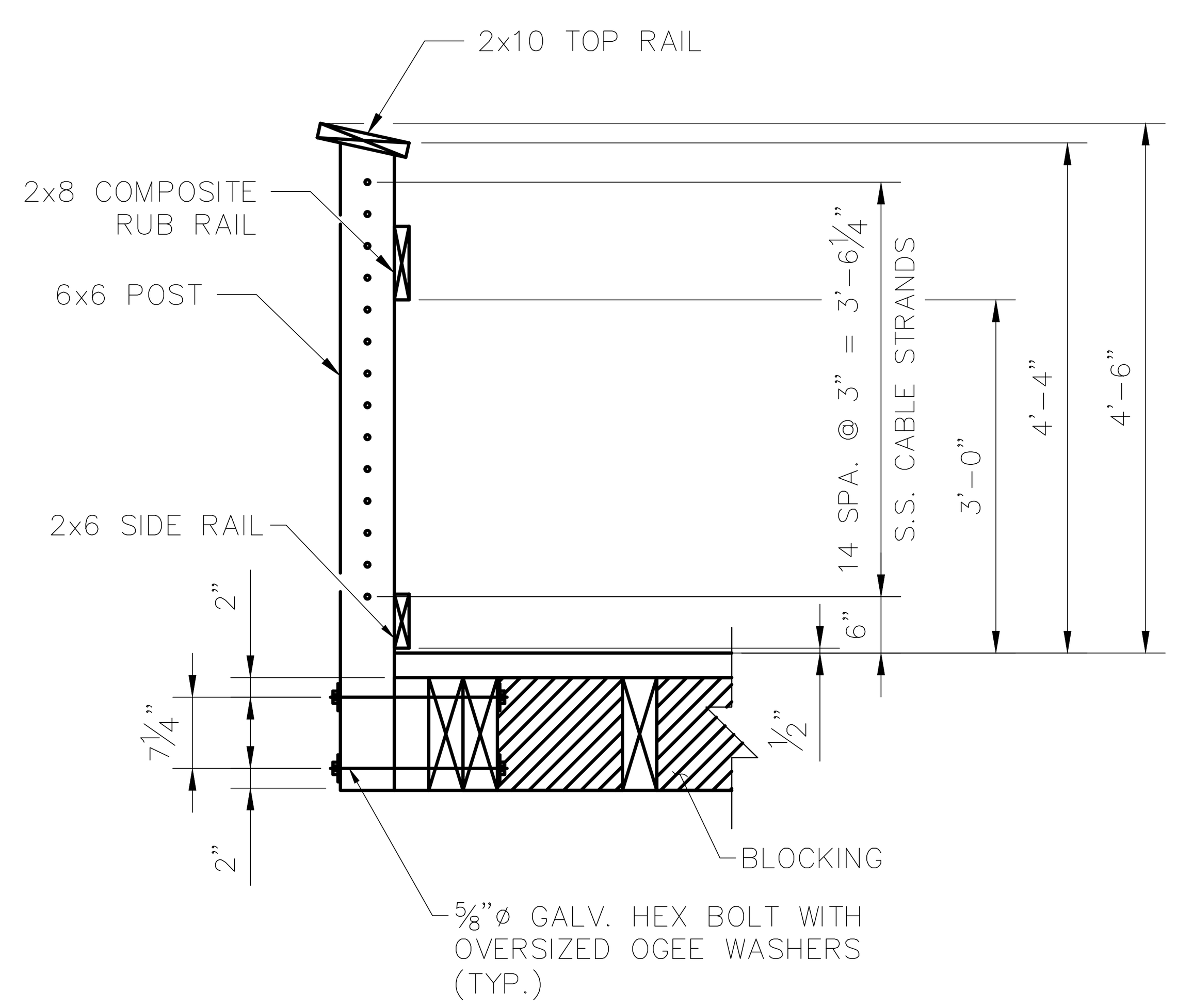
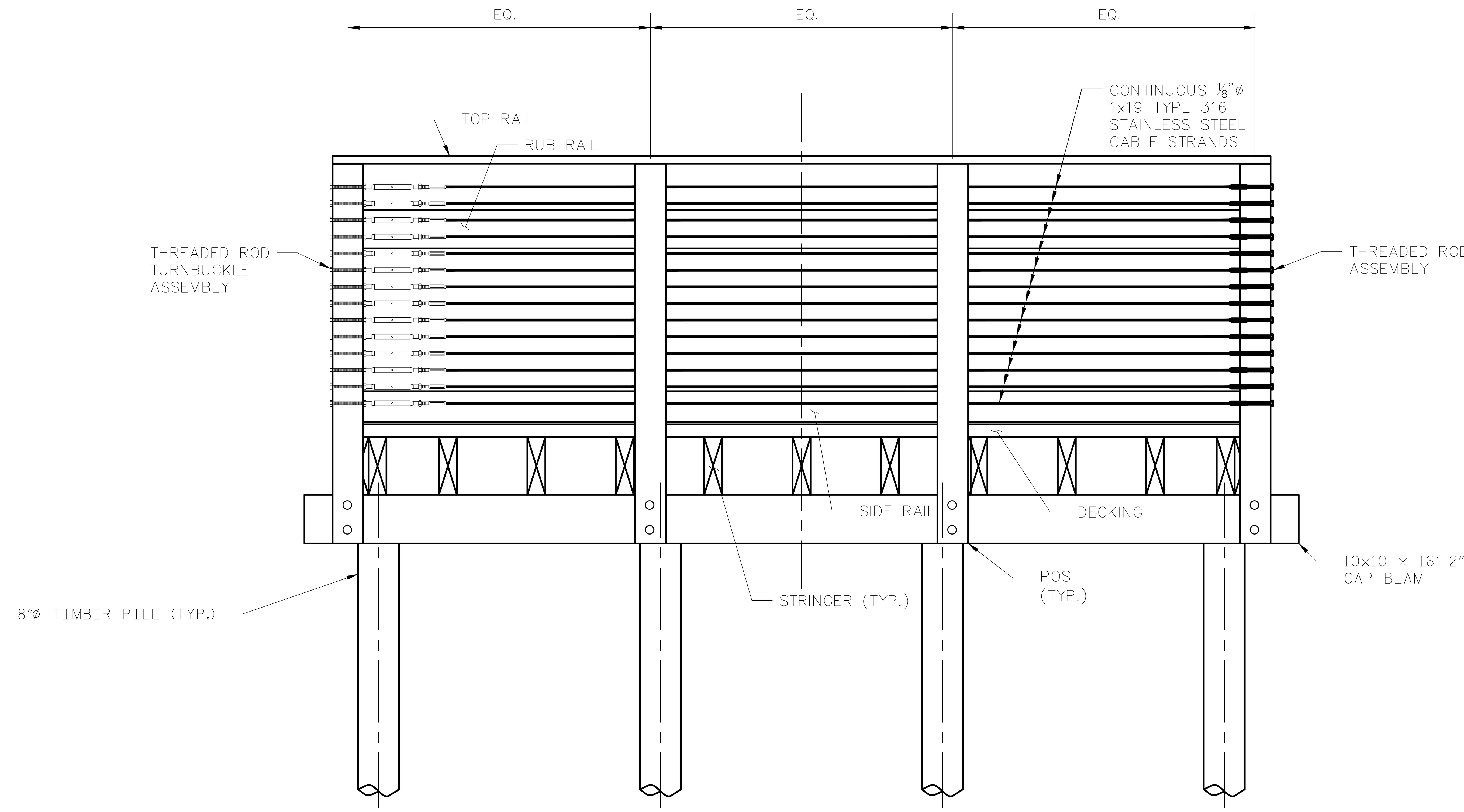


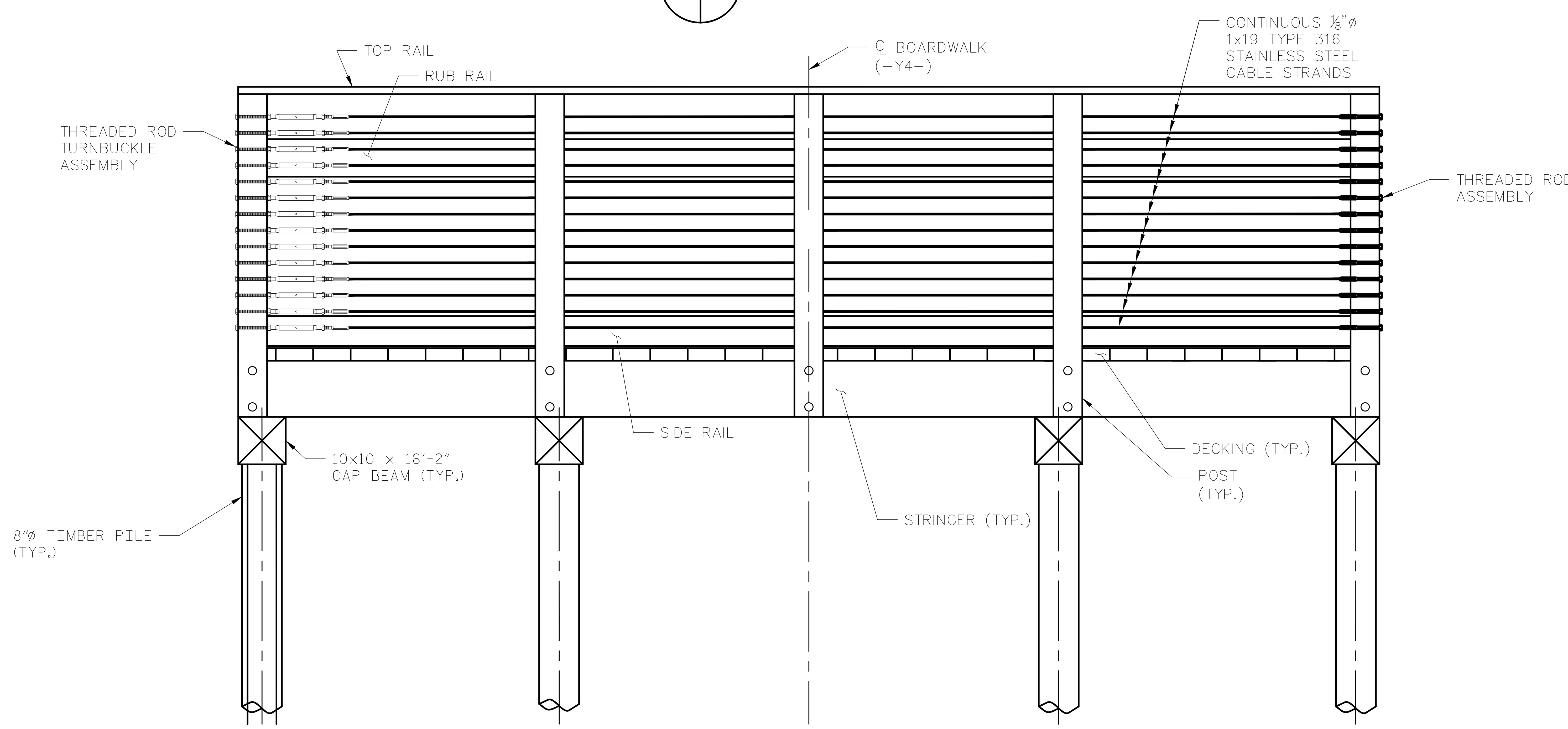
A–A S.22 S.23 PEDESTRIAN RAIL TO CAP BEAM DETAIL



B–B S.22 S.23 PEDESTRIAN RAIL TO STRINGER DETAIL



E–E S.22 S.23 VIEW E-E



F–F S.22 S.23 VIEW F-F

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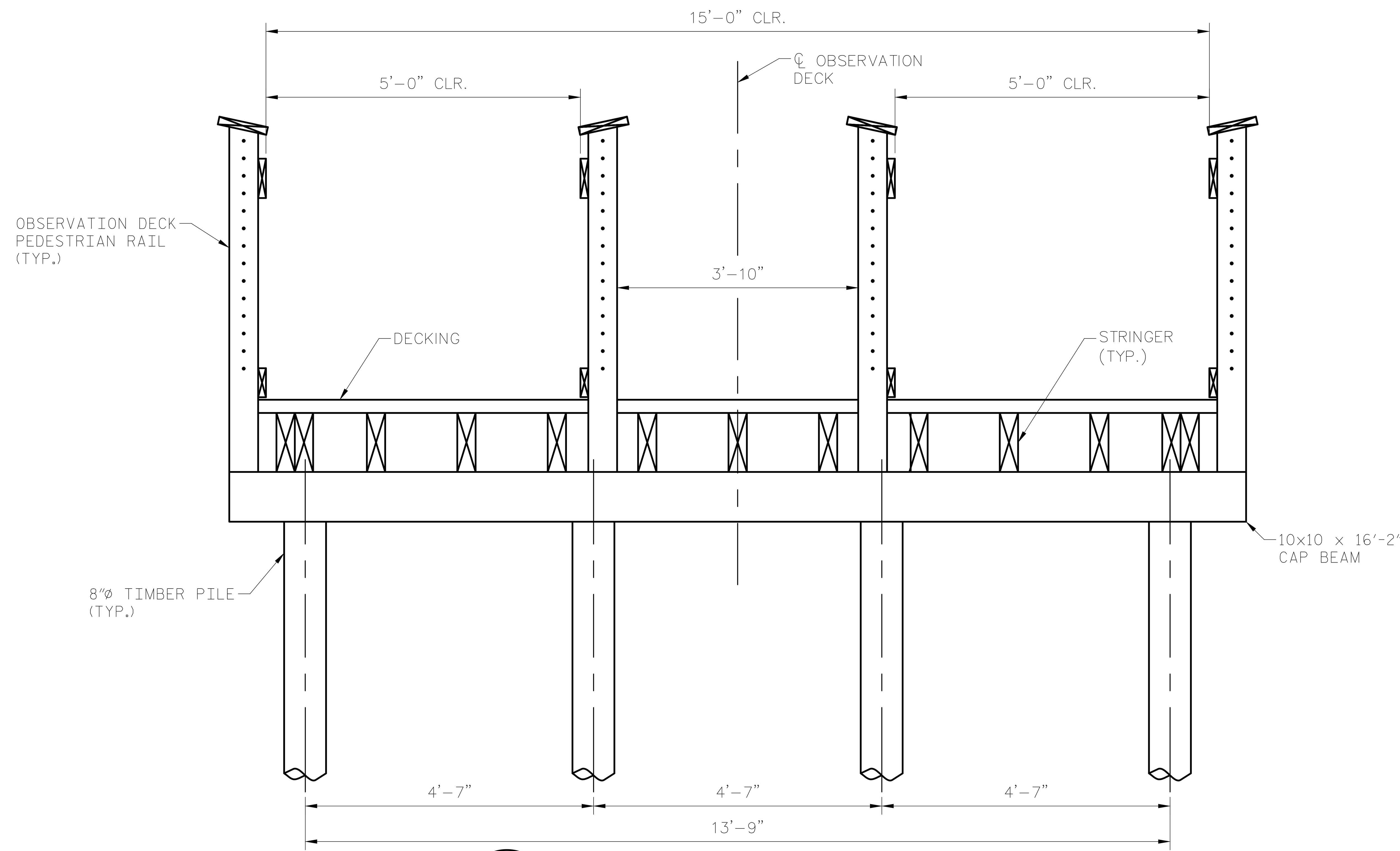
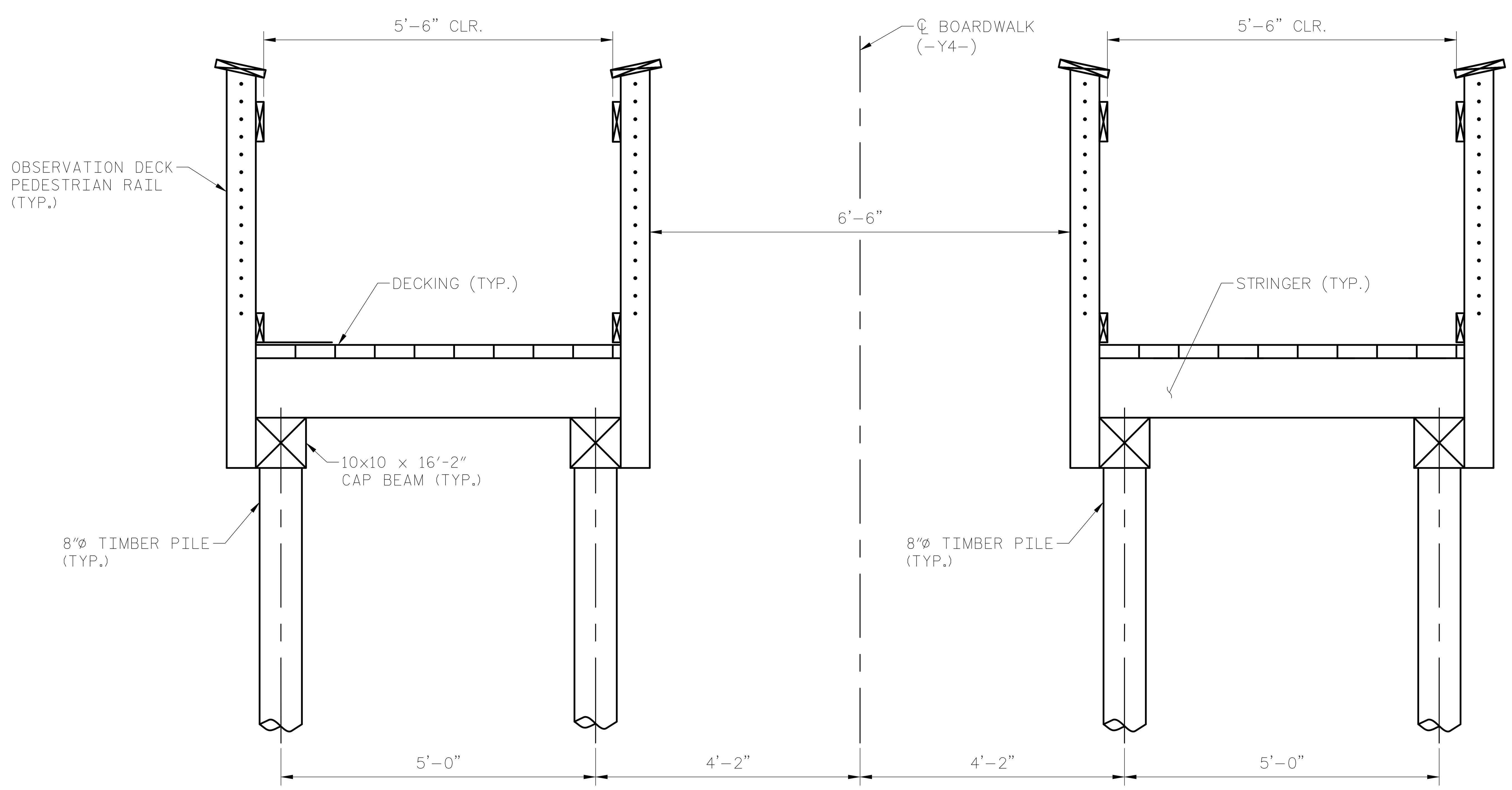


C-C
S.22 | S.24

SECTION SHOWING OPENING IN DECK



D-D
S.22 | S.24

SECTION SHOWING OPENING IN DECK

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S.19.B

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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 ½" 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:

AT THE CONTRACTOR'S OPTION, HE MAY SUBSTITUTE ⅞"ø SHEAR STUDS FOR THE ¾"ø STUDS SPECIFIED ON THE PLANS. THIS SUBSTITUTION SHALL BE MADE AT THE RATE OF 3 – ⅞"ø STUDS FOR 4 – ¾"ø STUDS, AND STUD SPACING CHANGES SHALL BE MADE AS NECESSARY TO PROVIDE THE SAME EQUIVALENT NUMBER OF ⅞"ø STUDS ALONG THE BEAM AS SHOWN FOR ¾"ø STUDS BASED ON THE RATIO OF 3 – ⅞"ø STUDS FOR 4 – ¾"ø STUDS. STUDS OF THE LENGTH SPECIFIED ON THE PLANS MUST BE PROVIDED. THE MAXIMUM SPACING SHALL BE 2'–0".

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 5/16" 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 1NCH 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.

No.	REVISIONS	DATE	BY
1	ISSUED FOR BID	08/02/22	ASA

Kimley»Horn
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#F–0102

SEAL:
NORTH CAROLINA PROFESSIONAL SEAL 039152 ENGINEER MITCHELL D MCGEE
08/02/2022

KHA PROJECT 012654010
DATE 08/02/2022
SCALE AS SHOWN
DESIGNED BY BMK
DRAWN BY JIK
CHECKED BY MDM

STRUCTURAL STANDARD NOTES

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

SHEET NUMBER
S.20.B