

THERE IS TO BE NO FILL WITHIN THE LIMITS OF THE DESIGNATED 100-YR FLOOD PLAIN.

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# MURPHEY CANDLER PARK NATURE TRAIL

1551 W. NANCY CREEK DR.
CITY OF BROOKHAVEN
GEORGIA, 30319

LAND LOTS 326 & 327; 18TH DISTRICT DEKALB COUNTY

TAX PARCEL ID 18-326-01-041
DEKALB CO. PROJECT AP#3061996
BROOKHAVEN PROJECT NO. LDP20-00016

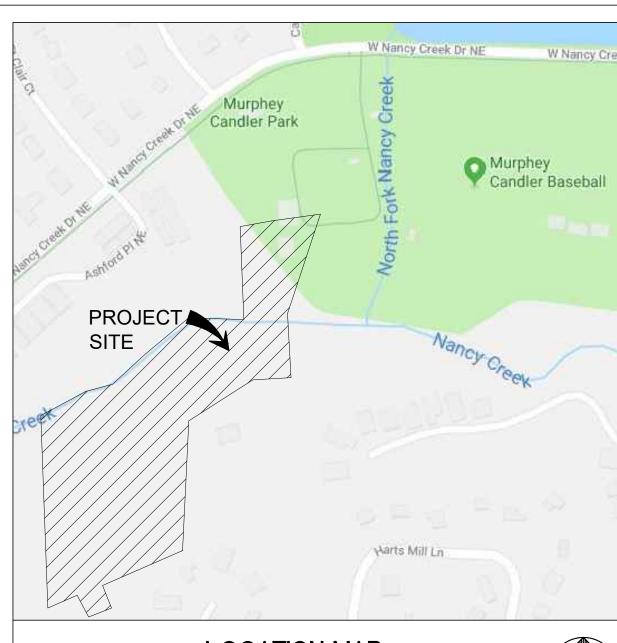
# OWNER:

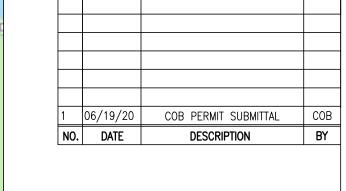
# CITY OF BROOKHAVEN

CONTACT: BRIAN BORDEN
PARKS & RECREATION DEPARTMENT
4362 PEACHTREE ROAD
BROOKHAVEN, GA 30319
(404) 637-0542

# 24-HOUR EMERGENCY CONTACT:

BRIAN BORDEN (404) 275-9901 BRIAN.BORDEN@BROOKHAVENGA.GOV





LOCATION MAP (N.T.S)



# CONTACTS:

CITY FIRE MARSHAL
JOE BURGE
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BROOKHAVEN, GA 30319
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CITY ARBORIST
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COMMUNITY DEVELOPMENT DIRECTOR PATRICE S.

RUFFIN, AICP 4362 PEACHTREE RD BROOKHAVEN, GA 30319 TEL: (404) 637-0532 EMAIL: PATRICE.RUFFIN@BROOKHAVENGA.GOV

IMPERVIOUS AREA CALCULATIONS						
EXISTING (SF) PROPOSED (SF)						
CONCRETE TRAIL	0	2,181				
TOTAL	0	2,181				

# SURVEYOR

BOUNDARY, TOPO & UTILITY SURVEY BY:

TERRAMARK LAND SURVEYING, INC. CONTACT: BILL WOHLFORD, JR

CONTACT: BILL WOHLFORD, JR 1396 BELLS FERRY ROAD MARIETTA, GA 30066 (770) 421-1927 TOTAL PROJECT AREA = 2.31 AC. DISTURBED AREA = 0.25 AC.



# ISSUED FOR PERMIT

JOB NO. 20180239.0

DATE: 19 JUNE 2019

# **GENERAL NOTES:**

- 1. THE PURPOSE OF THIS PROJECT IS TO INSTALL A 10'-0" WIDE MULTI-PURPOSE TRAIL
- 2. TOTAL LIMITS OF DISTURBANCE = ±0.25 ACRES PROJECT AREA = 2.31 ACRES
- 3. PORTION OF THE PROPERTY IS LOCATED WITHIN ZONE AE PER FEMA FIRM MAPS 13089C0012K AND 13089C0014K, LAST UPDATED AUGUST 15, 2019, FOR DEKALB COUNTY GA. FLOOD ZONE AE IS DEFINED AS SPECIAL FLOOD AREA HAZARD AREAS SUBJECT TO INUNDATION BY THE 1% ANNUAL CHANCE FLOOR WITH BASE FLOOD ELEVATIONS DETERMINED.
- 4. THE SITE IS CURRENTLY ZONED R-100 MULTI-FAMILY RESIDENTIAL.
- 5. A PORTION OF NANCY CREEK IS LOCATED ON THE SITE. THE 25' GA EPD UNDISTURBED STREAM BUFFER, 50' CITY OF BROOKHAVEN UNDISTURBED STREAM BUFFER, AND 75' CITY OF BROOKHAVEN UN-IMPERVIOUS, STREAM BUFFER, AS MEASURED FROM THE POINT OF WRESTED VEGETATION, WILL APPLY TO THIS PROJECT.
- 6. ALL WORK AND MATERIALS SHALL BE IN ACCORDANCE WITH CITY OF BROOKHAVEN STANDARDS AND SPECIFICATIONS. ALL CONSTRUCTION METHODS SHALL ADHERE TO O.S.H.A. REGULATIONS.
- 7. CONTRACTOR SHALL VERIFY EXISTING SITE CONDITIONS AND NOTIFY THE OWNER OF ANY DISCREPANCIES IMMEDIATELY.
- 8. PROPOSED CONTOURS AND SPOT ELEVATIONS REPRESENT FINAL GRADE ELEVATIONS. PROPOSED GRADE ELEVATIONS SHOWN WITHIN PAVED AREA REPRESENT TOP OF PAVEMENT ELEVATIONS. CONTRACTOR SHALL ALLOW FOR PAVEMENT THICKNESS, TOPSOIL, BASE COURSE, SLABS, ETC. WHEN GRADING TO SUBGRADE ELEVATIONS.
- 9. THE LOCATIONS OF EXISTING UTILITIES ARE APPROXIMATE AND SHALL BE VERIFIED BY THE CONTRACTOR PRIOR TO BEGINNING CONSTRUCTION. IF UNCHARTED UTILITIES ARE ENCOUNTERED DURING EXCAVATION OPERATIONS, THE CONTRACTOR SHALL NOTIFY THE OWNER IMMEDIATELY FOR INSTRUCTIONS. ANY DAMAGE OR INTERRUPTION OF EXISTING UTILITIES SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR AND SHALL BE REPAIRED PROMPTLY AT THE CONTRACTOR'S EXPENSE.
- 10. NAME AND ADDRESS OF OWNER:
  CITY OF BROOKHAVEN
  3360 OSBORNE ROAD NE
  BROOKHAVEN, GEORGIA 30319
  PHONE: (404) 637-0542
  CONTACT: BRIAN BORDEN
- 11. PRIOR TO COMMENCING LAND DISTURBANCE ACTIVITY, THE LIMITS OF LAND DISTURBANCE SHALL BE CLEARLY AND ACCURATELY DEMARCATED WITH STAKES, RIBBONS, OR OTHER APPROPRIATE MEANS. THE LOCATION AND EXTENT OF ALL AUTHORIZED DISTURBANCE SHALL BE DEMARCATED FOR THE DURATION OF THE CONSTRUCTION ACTIVITY. NO DISTURBANCE SHALL OCCUR OUTSIDE THE LIMITS INDICATED ON THE DRAWINGS WITHOUT WRITTEN APPROVAL FROM THE OWNER.
- 12. THROUGHOUT CONSTRUCTION, THE CONTRACTOR SHALL MAINTAIN NECESSARY BARRICADES, SUFFICIENT LIGHTS, SIGNS AND OTHER TRAFFIC CONTROL METHODS AS NECESSARY FOR THE PROTECTION AND SAFETY OF THE PUBLIC.
- 13. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE LAYOUT OF ALL CONSTRUCTION ELEMENTS, WITH SOME FIELD ADJUSTMENTS AS NECESSARY BY THE OWNER. IN ADDITION, THE CONTRACTOR SHALL BE RESPONSIBLE FOR ENSURING THAT ALL SITE AMENITY CONSTRUCTION COMPLIES WITH ADA HANDICAPPED ACCESSIBILITY REQUIREMENTS, PARTICULARLY WITH RESPECT TO CROSS—SLOPES AND GRADIENTS.
- 14. THE CONTRACTOR SHALL BE RESPONSIBLE FOR TEMPORARY AND PERMANENT GROUNDWATER CONTROL DURING CONSTRUCTION, AS WELL AS PROVISIONS FOR CONTROLLING SURFACE WATER RUN-OFF, IN ORDER TO PREVENT PONDING IN OPEN EXCAVATIONS AND POTENTIAL UNDERMINING OF PERMANENT CONSTRUCTION FEATURES.
- 15. EARTHWORK OPERATIONS AND SOIL COMPACTION SHALL BE PERFORMED IN STRICT ACCORDANCE WITH THE PROJECT SPECIFICATIONS AND DRAWINGS. CONSTRUCTION ACTIVITIES SHALL BE MONITORED BY A GEOTECHNICAL ENGINEER APPROVED BY THE OWNER TO VERIFY THAT EARTHWORK AND OTHER OPERATIONS CONFORM WITH THE CONTRACT DOCUMENTS.
- 16. DEMOLITION DEBRIS SHALL BECOME PROPERTY OF THE CONTRACTOR AND WASTE SOILS, VEGETATION, AND OTHER DELETERIOUS MATERIALS SHALL BE HAULED OFF—SITE AND BE DISPOSED OF AT AN APPROVED LOCATION IN ACCORDANCE WITH LOCAL, STATE, AND FEDERAL REGULATIONS. BURNING WILL NOT BE ALLOWED ON THE PROJECT SITE UNLESS APPROVED IN WRITING BY THE CITY OF BROOKHAVEN.
- 17. ALL MATERIALS AND METHODS OF CONSTRUCTION SHALL COMPLY WITH PROJECT SPECIFICATIONS, ALONG WITH APPLICABLE CITY OF BROOKHAVEN AND DEKALB COUNTY REQUIREMENTS AND STANDARDS.
- 18. ALL TREE SAVE AREAS SHALL BE CLEARLY IDENTIFIED WITH FENCING AND TREE SAVE TAPE PRIOR TO COMMENCEMENT OF ANY LAND DISTURBANCE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PERFORMING EARTHWORK OPERATIONS SO THAT NO DAMAGE TO EXISTING TREES AND ROOT SYSTEMS OCCURS. TREE PROTECTION MEASURES SHALL BE COORDINATED WITH THE OWNER AND CITY ARBORIST.
- 19. CONTRACTOR SHALL TAKE ALL PRECAUTIONS NECESSARY TO AVOID PROPERTY DAMAGE TO ADJACENT PROPERTIES DURING THE CONSTRUCTION PHASES OF THIS PROJECT. ANY OFF—SITE AREAS DISTURBED OR DAMAGED SHALL BE RETURNED TO A CONDITION EQUAL TO OR BETTER THAN THE EXISTING CONDITION AT NO ADDITIONAL COST TO OWNER.
- 20. THE DESIGNS REPRESENTED IN THESE PLANS ARE IN ACCORDANCE WITH ESTABLISHED PRACTICES OF LANDSCAPE ARCHITECTURE AND CIVIL ENGINEERING FOR THE DESIGN FUNCTIONS AND USES INTENDED BY THE OWNER AT THIS
- 21. IN ACCORDANCE WITH GENERALLY ACCEPTED CONSTRUCTION PRACTICES, THE CONTRACTOR SHALL BE SOLELY AND COMPLETELY RESPONSIBLE FOR CONDITIONS OF THE JOB SITE, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY DURING PERFORMANCE OF THE WORK, THIS REQUIREMENT WILL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS.
- 22. ANY DEVELOPMENT, EXCAVATION, CONSTRUCTION, OR FILLING IN A U.S. ARMY CORPS OF ENGINEERS DESIGNATED WETLAND IS SUBJECT TO LOCAL, STATE AND FEDERAL APPROVALS. THE CONTRACTOR SHALL COMPLY WITH ALL PERMIT REQUIREMENTS AND/OR RESTRICTIONS AND ANY VIOLATION WILL BE SUBJECT TO FEDERAL PENALTY. THE CONTRACTOR SHALL HOLD THE OWNER AND THE LOCAL GOVERNING AGENCIES HARMLESS AGAINST SUCH VIOLATION.
- 23. ADA ACCESSIBLE AREAS AND ROUTES INDICATED ON THIS SHEET HAVE BEEN DESIGNED TO MEET 2010 ADA STANDARDS FOR ACCESSIBLE DESIGN. CONTRACTOR SHALL PAY CAREFUL ATTENTION TO ENSURE THAT THESE AREAS ARE CONSTRUCTED TO MEET THE SAME STANDARDS.
- ADA STANDARDS FOR ACCESSIBLE DESIGN:
- 23.1. ALL ACCESSIBLE SPACES ARE TO HAVE 98" VERTICAL CLEARANCE.
   23.2. CROSS SLOPES OF ACCESSIBLE ROUTES, ACCESSIBLE PARKING SPACES, PASSENGER LOADING ZONES AND OTHER ACCESSIBLE FEATURES SHALL BE NO MORE THAN 2% WITH CHANGES IN LEVEL 1/2" WITH A BEVEL, OR LESS.
- 23.3. MINIMUM HEIGHT AT PASSENGER LOADING ZONES AND DRIVE—THRUS IS 13'—6".
- 23.4. RAMPS SHALL HAVE A SLOPE NO GREATER THAN 1:12. WHERE CURB RAMPS ARE FLARED, FLARES SHALL BE A SLOPE NO GREATER THAN 1:14.
- A SLOPE NO GREATER THAN 1:14.

  23.5. STEEPEST RUNNING SLOPE OF ACCESSIBLE ROUTES NOT TO EXCEED 5%.
- 23.6. OPENINGS IN ANY GRATING ALONG ACCESSIBLE ROUTES SHALL NOT BE MORE THAN 1/2" WIDE. 23.7. ALL PEDESTRIAN APPROACHES TO BUILDINGS SHALL BE FREE OF PROTRUDING OBJECTS.

# **CITY OF BROOKHAVEN EROSION CONTROL NOTES:**

- 1. PRIOR TO ANY OTHER CONSTRUCTION, A STABILIZED CONSTRUCTION ENTRANCE SHALL BE CONSTRUCTED AT EACH ENTRY TO OR EXIT FROM THE SITE.
- 2. THE CONSTRUCTION EXIT(S) SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOW OF MUD ON TO PUBLIC RIGHT—OF—WAY. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH STONE, AS CONDITIONS DEMANDS, AND REPAIR AND/OR CLEAN—OUT OF ANY STRUCTURES USED TO TRAP SEDIMENT. ALL MATERIALS SPILLED, DROPPED, WASHED, OR TRACKED FROM VEHICLE ONTO PUBLIC ROADWAY OR INTO STORM DRAIN MUST BE REMOVED IMMEDIATELY. THE CONTRACTOR SHALL INSPECT THE CONTROL MEASURES AT THE END OF EACH WORK DAY TO ENSURE MEASURES ARE FUNCTIONING PROPERLY.
- 3. PRIOR TO COMMENCING LAND DISTURBANCE ACTIVITY, THE LIMITS OF LAND DISTURBANCE SHALL BE CLEARLY AND ACCURATELY DEMARCATED WITH STAKES, RIBBONS, OR OTHER APPROPRIATE MEANS. THE LOCATION AND EXTENT OF ALL AUTHORIZED LAND DISTURBANCE SHALL OCCUR WITHIN THE APPROVED LIMITS INDICATED ON THE APPROVED PLANS.
- 4. IMMEDIATELY AFTER THE ESTABLISHMENT OF CONSTRUCTION ENTRANCE/EXIT(S), ALL PERIMETER EROSION CONTROL DEVICES AND STORMWATER MANAGEMENT DEVICES SHALL BE INSTALLED PRIOR TO ANY OTHER CONSTRUCTION.
- 5. OWNER AGREES TO PROVIDE AND MAINTAIN OFF—STREET PARKING ON THE SUBJECT PROPERTY DURING THE ENTIRE CONSTRUCTION PERIOD.
- 6. THE CONTRACTOR SHALL FURNISH AND MAINTAIN ALL NECESSARY BARRICADES WHILE ROADWAY FRONTAGE IMPROVEMENTS ARE BEING MADE.
- 7. THE CONSTRUCTION OF THE SITE WILL INITIATE WITH THE INSTALLATION OF EROSION CONTROL MEASURES SUFFICIENT TO CONTROL SEDIMENT DEPOSITS AND EROSION. ALL SEDIMENT CONTROL WILL BE MAINTAINED UNTIL ALL UPSTREAM GROUND WITHIN THE CONSTRUCTION AREA HAS BEEN COMPLETELY STABILIZED WITH PERMANENT VEGETATION AND ALL ROADS/DRIVEWAYS HAVE BEEN PAVED.
- 8. FAILURE TO INSTALL, OPERATE OR MAINTAIN ALL EROSION CONTROL MEASURES WILL RESULT IN ALL CONSTRUCTION BEING STOPPED ON THE JOB SITE UNTIL SUCH MEASURES ARE CORRECTED CONSISTENT WITH THE CITY OF BROOKHAVEN EROSION CONTROL ORDINANCE.
- 9. A COPY OF THE APPROVED LAND DISTURBANCE PLAN AND PERMIT SHALL BE PRESENT ON THE SITE WHENEVER LAND DISTURBANCE ACTIVITY IS IN PROGRESS.
- 10. ALL SEWER EASEMENTS DISTURBED MUST BE DRESSED AND GRASSED TO CONTROL EROSION.
- 11. IF FULL IMPLEMENTATION OF THE APPROVED PLAN DOES NOT PROVIDE FOR EFFECTIVE EROSION CONTROL, ADDITIONAL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE IMPLEMENTED TO CONTROL OR TREAT THE SEDIMENT SOURCE AS NECESSARY.
- 12. ANY DISTURBED AREA LEFT EXPOSED SHALL BE TEMPORARILY STABILIZED WITH MULCH OR TEMPORARY SEEDING AS SOON AS POSSIBLE AFTER ROUGH GRADING IS COMPLETED BUT WITHIN 14 DAYS AFTER DISTURBANCE; PERMANENT VEGETATION SHALL BE PLANTED IF THE AREA IS TO BE LEFT UNDISTURBED FOR GREATER THAN 6 MONTHS.
- 13. IF CONCRETE WORK IS DONE ON SITE THEN A CONCRETE WASHDOWN BMP SHALL BE PROVIDED OR A NOTE "CONCRETE WASHDOWN IS NOT ALLOWED ON SITE". THE CONCRETE WASHDOWN AREA SHALL BE FOR THE TOOLS, CONCRETE MIXER CHUTES, HOPPERS AND THE REAR OF VEHICLES. WASHOUT OF THE DRUM AT THE CONSTRUCTION SITE IS PROHIBITED.

# **ENVIRONMENTAL NOTES**

- 1. TREES WITHIN THE LIMITS OF DISTURBANCE HAVE BEEN DESIGNATED FOR PROTECTION WITHIN TREE SAVE AREAS. ANY TREES DESIGNATED FOR PROTECTION THAT ARE REMOVED OR DAMAGED SHALL REQUIRE REPLACEMENT BY THE CONTRACTOR AT NO COST TO THE OWNER. REQUIRED REPLACEMENT SHALL MEET THE SATISFACTION OF THE CITY OF BROOKHAVEN.
- 2. CONTRACTOR IS TO MAINTAIN CONSTRUCTION RELATED ACTIVITIES WITHIN THE DESIGNATED LIMITS SHOWN ON THE DRAWINGS.
- 3. CONSTRUCTION SITE STAGING AND STORAGE SHALL NOT INFRINGE UPON, DAMAGE OR DESTROY ANY TREE SAVE AREAS AND SHALL BE LIMITED TO THE AREA DESIGNATED BY THE LIMIT OF CONSTRUCTION BOUNDARY.

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DATE DESCRIPTION

PROFESSIONAL SEAL

PROFESSIONAL IN CHARGE

PROJECT MANAGER

QUALITY CONTROL

**DRAWN BY** 

MURPHEY
CANDLER PARK

# NATURE TRAIL BROOKHAVEN

GEORGIA
WEST NANCY CREEK
DRIVE AND CANDLER
LAKE CIRCLE WEST
BROOKHAVEN, GA 30341

LAND LOTS 326 & 327

**18TH DISTRICT** 



PROJECT NUMBER

SHEET TITLE
GENERAL NOTES

SHEET NUMBER

**C-001** 

A TRIMBLE "S" SERIES TOTAL STATION WAS USED TO OBTAIN ANGULAR MEASUREMENTS AND DISTANCE MEASUREMENTS

A TRIMBLE R-10 DUAL FREQUENCY GPS UNIT WAS USED FOR ESTABLISHING CONTROL. A NETWORK ADJUSTED RTK SURVEY WAS PERFORMED AND ADJUSTED BY RELATIVE POSITIONAL ACCURACY.

FRACT 1 HAS BEEN CALCULATED FOR CLOSURE AND IS ACCURATE

FRACT 2 HAS BEEN CALCULATED FOR CLOSURE AND IS ACCURATE

THE FIELD DATA UPON WHICH THIS SURVEY IS BASED HAD A CLOSURE OF ONE FOOT IN 31,741 FEET AND AN ANGULAR ERROR OF 1" PER ANGLE POINT AND WAS ADJUSTED USING THE COMPASS RULE.

THE BEARINGS SHOWN ON THIS SURVEY ARE COMPUTED ANGLES BASED ON A GRID BEARING BASE (GA WEST ZONE) NAD83.

ALL HORIZONTAL DISTANCES SHOWN ARE GROUND DISTANCES. MEASURING UNITS

CONTOURS ARE SHOWN AT ONE FOOT INTERVALS. ELEVATIONS ARE BASED ON RTK GLOBAL POSITIONING SYSTEMS OBSERVATION AND ARE RELATIVE TO NAVD 88 DATUM.

FIELD WORK FOR THIS PROPERTY WAS COMPLETED ON AUGUST 17, 2016

NFORMATION REGARDING SIZE, LOCATION, AND SPECIES OF EXISTING TREES IS SHOWN HEREON. THERE IS NO CERTAINTY OF THE SIZE AND SPECIES OF THE SAID TREES WITHOUT VERIFICATION FROM THE DESIGNATED ARBORIST BY THE LOCAL REGULATORY AUTHORITY. THE OWNER, HIS EMPLOYEES, HIS CONSULTANTS, HIS CONTRACTORS, AND/OR HIS AGENTS SHALL HEREBY DISTINCTLY UNDERSTAND THAT THE SURVEYOR IS NOT RESPONSIBLE FOR THE CORRECTNESS OR SUFFICIENCY OF THIS INFORMATION SHOWN HEREON EXCEPT BY APPROVAL OF

THIS SURVEY MAY NOT REPRESENT OFFSITE PAINT STRIPING TO THE ACCURACY REQUIRED FOR LANE DESIGN. TERRAMARK LOCATES THE EDGE OF PAVING AND CRITICAL POINTS TO REFLECT ACCURATE TOPOGRAPHIC DATA ONLY. ACCURACY OF PAINT LOCATIONS SHOULD BE VERIFIED WITH SURVEYOR PRIOR TO USING THIS

INFORMATION REGARDING THE REPUTED PRESENCE, SIZE, CHARACTER, AND LOCATION OF EXISTING UNDERGROUND UTILITIES AND STRUCTURES IS SHOWN HEREON. THERE IS NO CERTAINTY TO THE ACCURACY OF THIS INFORMATION AND T SHALL BE CONSIDERED IN THAT LIGHT BY THOSE USING THIS DRAWING. THE LOCATION AND ARRANGEMENT OF UNDERGROUND UTILITIES AND STRUCTURES SHOWN HEREON MAY BE INACCURATE AND UTILITIES AND STRUCTURES NOT SHOWN MAY BE ENCOUNTERED. THE OWNER, HIS EMPLOYEES, HIS CONSULTANTS, HIS CONTRACTORS, AND/OR HIS AGENTS SHALL HEREBY DISTINCTLY UNDERSTAND THAT THE SURVEYOR IS NOT RESPONSIBLE FOR THE CORRECTNESS OR SUFFICIENCY OF THIS INFORMATION SHOWN HEREON AS TO SUCH UNDERGROUND

NFORMATION REGARDING STORM SEWER AND SANITARY SEWER AS SHOWN HEREON, IS BASED ON OBSERVATIONS TAKEN BY TERRAMARK EMPLOYEES AT THE GROUND ELEVATION OF THE EXISTING STRUCTURE. TERRAMARK EMPLOYEES ARE NOT AUTHORIZED TO ENTER A CONFINED SPACE SUCH AS A STRUCTURE. THEREFORE. THERE IS NO CERTAINTY OF THE PIPE SIZES AND PIPE MATERIAL THAT ARE SHOWN ON THIS SURVEY. EXCAVATION BY A CERTIFIED CONTRACTOR IS THE ONLY WAY TO VERIFY PIPE SIZE AND MATERIAL. THE OWNER, HIS EMPLOYEES, HIS CONSULTANTS, HIS CONTRACTORS, AND/OR HIS AGENTS SHALL HEREBY DISTINCTLY JNDERSTAND THAT THE SURVEYOR IS NOT RESPONSIBLE FOR THE CORRECTNESS OR SUFFICIENCY OF THE PIPE INFORMATION SHOWN HEREON.

STATE WATERS AND BUFFERS AS SHOWN OR NOT SHOWN HEREON ARE SUBJECT TO REVIEW BY LOCAL JURISDICTION OFFICIALS. IT IS THE RESPONSIBILITY OF THE LOCAL ERRAMARK LAND SURVEYING ACCEPTS NO RESPONSIBILITY IN THE IDENTIFICATION OF SAID WATERS OR BUFFERS IDENTIFIED OR NOT IDENTIFIED HEREON.

PROPERTY IS SUBJECT TO RIGHTS OF UPPER AND LOWER RIPARIAN OWNERS IN AND TO THE WATER OF CREEKS AND BRANCHES CROSSING OR ADJOINING SUBJECT PROPERTY AND THE NATURAL FLOW THEREOF, FREE FROM DIMINUTION

THIS SURVEY WAS PREPARED FOR THE EXCLUSIVE USE OF THE PERSON, PERSONS OR ENTITY NAMED HEREON. THIS SURVEY DOES NOT EXTEND TO ANY UNNAMED PERSON PERSONS OR ENTITY WITHOUT THE EXPRESS CERTIFICATION BY THE SURVEYOR NAMING SAID PERSON, PERSONS OR ENTITY

TERRAMARK LAND SURVEYING, INC. DOES NOT WARRANT THE EXISTENCE OR NON -EXISTENCE OF ANY WETLANDS OR HAZARDOUS WASTE IN THE SURVEY

# SITE INFORMATION

REFERENCE MATERIAL

1. PLAT FOR CANDLER LAKE ESTATES, UNIT ONE

3. PLAT FOR CANDLER LAKE VIEW SUBDIVISION

4. FINAL PLAT FOR ASHFORD GLEN, UNIT 4

AMONG THE LAND RECORDS OF DEKALB COUNTY

6. CONDOMINIUM PLAT FOR ASHFORD LAKE CONDOMINIUM ASSOCIATION

7. DEED FOR ASHFORD PLACE CONDOMINIUM ASSOCIATION

RECORDED IN PB. 45 PG. 14

RECORDED IN PB. 58 PG. 161 AFORESAID RECORDS

RECORDED IN PB. 84 PG. 29

5. PLAT FOR FOX GLEN SUBDIVISION

RECORDED IN DB. 3529 PG. 379

AFORESAID RECORDS

AFORESAID RECORDS

RECORDED IN PB. 6 PG. 9 AFORESAID RECORDS

AFORESAID RECORDS

2. PLAT FOR ASHWOODY SUBDIVISION RECORDED IN PB. 45 PG. 35 AFORESAID RECORDS

CURRENT OWNER: CITY OF BROOKHAVEN DB. 24965 PG. 50

TAX PARCEL ID # 18 331 01 005 & 18 326 01 041 ADDRESS: 1551 WEST NANCY CREEK DRIVE ZONING: R-100 (MULTI FAMILY RESIDENTIAL) JURISDICTION: CITY OF BROOKHAVEN

SETBACKS:FRONT 35' SIDE 20' (ULESS ADJOINER IS ANY R LOT THEN 50') REAR 40' (ULESS ADJOINER IS ANY R LOT THEN 50')

> REGULAR PARKING - 228 HANDICAPPED PARKING -TOTAL PARKING COUNT - 233

PARKING COUNT:

# **AREA TABLE**

3,630,024 SQ.FT. OR 83.3339 AC. 1,602,679 SQ.FT. OR 36.7924 AC.

TOTAL AREA 5,232,703 SQ.FT. OR 120.1263 AC.

# TITLE NOTES

ACCORDING TO THE "FIRM" (FLOOD INSURANCE RATE MAP) OF DEKALB COUNTY, GEORGIA (PANEL NUMBERS 13089C0012J & 13089C0014J), DATED MAY 16, 2013; A PORTION OF THIS PROPERTY LIES WITHIN A SPECIAL FLOOD HAZARD AREA.

THIS SURVEY WAS PREPARED WITHOUT THE BENEFIT OF A TITLE REPORT, WHICH COULD REVEAL ENCUMBRANCES NOT SHOWN ON THIS SURVEY. SUBJECT PROPERTY HAS ACCESS TO THE PUBLIC RIGHT OF WAY OF

WEST NANCY CREEK DRIVE, CANDLER LAKE WEST & CANDLER LAKE EAST.

# TRACT 1 PROPERTY DESCRIPTION

Being a tract or parcel of land lying and being in Land Lots 326 & 331, 18th District, DeKalb County Georgia and being more particularly described as follows:

To find the Point of Beginning, commence at a ½ rebar capped rebar set representing the intersection of the extension of right of lines of the West Right of Way Line of Candler Lake Circle East (having an apparent 60 feet wide right of way) and the North Right of Way Line of West Nancy Creek Drive (having an apparent 100 feet wide right of way), said right of way lines being shown on a plat of subdivision entitled "Candler Lake Estates, Unit One" and recorded among the Land Records of DeKalb County, Georgia in Plat Book 45, Page 14; thence, leaving the said point and running, 26.38 feet along the arc of a curve deflecting to the right, having a radius of 506.58 feet and a chord bearing and distance of South 47° 01' 01" West, 26.37 feet to a ½ inch capped rebar set at the True Point of Beginning of the herein described tract or parcel of land; thence eaving the said Point of Beginning and running with the said line of West Nancy Creek Drive

- 380.40 feet along the arc of a curve deflecting to the right, having a radius of 506.58 feet and a chord bearing and distance of South 70° 01' 15" West, 371.53 feet to a ½ inch capped rebar set; thence,
- North 88° 28' 01" West. 1.159.48 feet to a ½ inch capped rebar set; thence, 146.06 feet along the arc of a curve deflecting to the left, having a radius of 622.95 feet and a chord bearing and distance of South 84° 48' 59" West, 145.72 feet to a ½ inch capped rebar set at the intersection of aforesaid West Nancy Creek Drive and the East Right of Way Line of Candler Lake Circle West (having an apparent variable width right of way);
- thence, running with the said line of Candler Lake Circle West
  212.67 feet along the arc of a curve deflecting to the right, having a radius of 773.40 feet and a chord bearing and distance of North 01° 17' 06" East, 212.00 feet to a ½ inch capped North 09° 09' 45" East, 20.00 feet to a 1/2 inch capped rebar set; thence,
- North 24° 06' 45" East, 46.16 feet to a 1/2 inch capped rebar set; thence, 408.95 feet along the arc of a curve deflecting to the left, having a radius of 539.87 feet and a chord bearing and distance of North 13° 35' 58" West, 399.24 feet; thence, North 35° 18' 01" West, 29.88 feet; thence,
- 435.41 feet along the arc of a curve deflecting to the right, having a radius of 686.20 feet and a chord bearing and distance of North 17° 07' 22" West, 428.14 feet; thence, North 01° 03' 18" East, 191.24 feet; thence, 523.78 feet along the arc of a curve deflecting to the left, having a radius of 1,794.83 feet and a chord bearing and distance of North 07° 18' 19" West, 521.93 feet; thence,
- North 15° 39' 56" West, 1,182.85 feet to a 1/2 inch capped rebar set; thence, leaving the said line of Candler Lake Circle West and running with the South Right of Way Line of an undeveloped City Street (having an apparent 60 feet right of way) as shown on a plat of subdivision entitled "Ashwoody" and recorded among the aforesaid Land Records in Plat
- 215.29 feet along the arc of a curve deflecting to the right, having a radius of 162.68 feet and a chord bearing and distance of North 40° 25' 23" East, 199.92 feet; thence,
- North 78° 06' 13" East, 98.19 feet; thence, 109.79 feet along the arc of a curve deflecting to the right, having a radius of 170.80 feet and a chord bearing and distance of South 76° 39' 12" East, 107.91 feet; thence, South 58° 15' 31" East, 39.59 feet; thence, 171.51 feet along the arc of a curve deflecting to the right, having a radius of 855.80 feet
- and a chord bearing and distance of South 52° 34' 06" East, 171.23 feet; thence, South 46° 48' 38" East, 109.64 feet; thence, 150.99 feet along the arc of a curve deflecting to the right, having a radius of 1,060.00 feet and a chord bearing and distance of South 42° 42' 47" East. 150.86 feet; thence South 38° 37' 57" East, 185.42 feet to a 1/2 inch capped rebar set; thence,
- South 27° 52' 26" East, 267.98 feet; thence, 134.69 feet along the arc of a curve deflecting to the right, having a radius of 3,888.00 feet and a chord bearing and distance of South 26° 52' 53" East, 134.68 feet to a 1/2 capped South 25° 53' 21" East, 89.96 feet to a ½ inch capped rebar set on the developed West
- Right of Way Line of Candler Lake Circle East (having an apparent 60 feet wide right of way) as shown on a plat of subdivision entitled "Candler Lake View" and recorded among the aforesaid Land Records in Plat Book 58, Page 161; thence, running with the said line of Candler Lake Circle East
- 87.43 feet along the arc of a curve deflecting to the right, having a radius of 476.00 feet and a chord bearing and distance of South 21° 03' 58" East, 87.31 feet; thence, South 17° 19' 19" East, 233.10 feet; thence, 576.41 feet along the arc of a curve deflecting to the left, having a radius of 750.28 feet and a chord bearing and distance of South 39° 19' 51" East, 562.34 feet; thence,
- South 61° 20' 23" East, 277.04 feet; thence, 372.07 feet along the arc of a curve deflecting to the left, having a radius of 709.22 feet and a chord bearing and distance of South 76° 22' 09" East, 367.82 feet; thence, North 88° 36' 05" East, 106.79 feet; thence,
- 428.21 feet along the arc of a curve deflecting to the right, having a radius of 186.47 feet and a chord bearing and distance of South 25° 36' 38" East, 340.13 feet; thence, South 40° 10' 39" West, 291.39 feet; thence. 397.43 feet along the arc of a curve deflecting to the left, having a radius of 312.01 feet and
- a chord bearing and distance of South 03° 41' 11" West, 371.10 feet to a 1/2 inch capped South 32° 48' 16" East, 104.23 feet to a 1/2 inch capped rebar set; thence South 33° 54' 42" East, 127.33 feet to a 1/2 inch capped rebar set; thence,
- 43.16 feet along the arc of a curve deflecting to the right, having a radius of 30.00 feet and a chord bearing and distance of South 07° 17' 54" West, 39.53 feet to the Point of Beginning, containing 3,630,024 square feet or 83.3339 acres of land, more or less.

---

PHOTO #1

perty is subject to all easements and rights of way recorded and unrecorded.

# **BOUNDARY AND TOPOGRAPHIC SURVEY**

FOR THE CITY OF BROOKHAVEN (MURPHEY CANDLER PARK)

LOCATED IN LAND LOTS 326, 327 & 331, 18TH DISTRICT DEKALB COUNTY, GEORGIA

SITE MAP





PHOTO #5



**PHOTO #3** 



# TRACT 2 PROPERTY DESCRIPTION

Being a tract or parcel of land lying and being in Land Lots 326 & 327, 18th District, DeKalb County Georgia and being more particularly described as follows:

To find the Point of Beginning, commence at a ½ rebar capped rebar set representing the intersection of the extension of right of lines of the West Right of Way Line of Candler Lake Circle East (having an apparent 60 feet wide right of way) and the North Right of Way Line of West Nancy Creek Drive (having an apparent 100 feet wide right of way), said right of way lines being shown on a plat of subdivision entitled "Candler Lake Estates, Unit One" and recorded among the Land Records of DeKalb County, Georgia in Plat Book 45, Page 14; thence, leaving the said point and running, 26.38 feet along the arc of a curve deflecting to the right, having a radius of 506.58 feet and a chord bearing and distance of South 47° 01' 01" West, 26.37 feet to a ½ inch capped rebar set; thence, running with the said line of West Nancy Creek Drive, 380.40 feet along the arc of a curve deflecting to the right, having a radius of 506.58 feet and a chord bearing and distance of South 70° 01' 15" West, 371.53 feet to a ½ inch capped rebar set; thence, leaving said line of West Nancy Creek Drive and running across West Nancy Creek Drive, South 01° 31' 59" West, 100.00 feet to a ½ inch capped rebar set on the South Right of Way Line of said West Nancy Creek Drive, said point being the True Point of Beginning of the herein described tract or parcel of land; thence leaving the said Point of Beginning and the said line of West Nancy Creek Drive and

running with Lots 1 & 2 of said Candler Lake Estates South 07° 53' 34" East, 251.24 feet to a  $\frac{1}{2}$  inch rebar found; thence, South 63° 13' 35" East, 114.76 feet to a  $\frac{1}{2}$  inch rebar found; thence, South 63° 13' 35" East, 90.56 feet to the centerline of Nancy Creek; thence, running with South 16° 56' 36" West, 42.41 feet; thence, South 18° 32' 17" West, 29.82 feet; thence South 20° 58' 38" West, 36.64 feet; thence, South 04° 30' 15" West, 35,95 feet; thence, South 22° 41' 01" West, 38.11 feet; thence, South 21° 49' 30" West, 30.95 feet; thence, South 24° 10' 56" West, 68.61 feet; thence, South 17° 16' 24" West, 60.36 feet; thence, South 04° 30' 25" West, 31.46 feet; thence, South 16° 16' 46" West, 80,59 feet; thence South 49° 29' 49" West, 79,16 feet; thence North 52° 54' 36" West, 59.22 feet; thence, North 54° 46' 17" West, 47.01 feet; thence, North 74° 14' 36" West, 39.71 feet; thence, South 64° 54' 47" West, 80.80 feet; thence South 66° 18' 02" West, 69.42 feet; thence, South 43° 02' 26" West, 79.95 feet; thence North 84° 06' 37" West, 49.03 feet: thence

North 68° 19' 45" West, 70.37 feet; thence North 47° 28' 51" West, 29.90 feet; thence, North 19° 33' 10" West, 13.84 feet; thence, North 87° 08' 50" West, 35.40 feet; thence North 85° 17' 50" West, 29.34 feet; thence, South 52° 09' 46" West, 50.88 feet; thence South 65° 43' 09" West, 55.32 feet; thence, South 59° 20' 03" West, 103.25 feet; thence, North 64° 57' 35" West, 56.55 feet; thence, North 39° 36' 17" West, 33.84 feet; thence, North 64° 31' 24" West, 12.26 feet; thence, North 44° 39' 48" West, 60.27 feet; thence, North 63° 17' 35" West. 65.38 feet; thence North 63° 40' 39" West, 28,35 feet; thence North 67° 33' 36" West, 67.19 feet; thence, North 82° 19' 41" West, 61.10 feet; thence, South 85° 21' 00" West, 42.42 feet; thence, North 89° 46' 50" West, 32.85 feet; thence,

South 84° 04' 20" West, 25.14 feet; thence, North 76° 17' 54" West, 19.75 feet to the intersection with the West Line of Lot 5, Block B as shown on a Final Plat entitled "Ashford Glen, Unit IV" and recorded among the aforesaid Land Records in Plat Book 84, Page 29; thence,

North 76° 17' 58" West, 19.37 feet; thence, leaving the aforesaid centerline of Nancy Creek and running through Lots 6 & 7, Block B of said Ashford Glen, Unit IV South 12° 16' 26" West, 71.01 feet to a 1/2 inch capped rebar set; thence, 80.04 feet along the arc of a curve deflecting to the right, having a radius of 65.00 feet and a chord bearing and distance of South 47° 33' 06" West, 75.08 feet; thence,

South 83° 52' 52" West, 43,47 feet to a 1/2 inch rebar found; thence. South 82° 43' 05" West, 223.17 feet to a 1/2 inch rebar found; thence, South 47° 02' 10" West, 199.78 feet to a 1/2 inch rebar found; thence, running with the West South 04° 11' 57" East, 218.65 feet to a 1/2 inch rebar found at the Northwest Corner of Lot 8 of said Ashford Glen, Unit IV; thence, running with the West Line of Lot 8 South 04° 16' 01" East, 121.17 feet to an axle found at the rear angle point of Lot 14, Block

A of a subdivision entitled "Fox Glen" and recorded among the aforesaid Land Records in Plat Book 46, Page 87; thence, running with northwesterly lines of the said Fox Glen South 59° 14' 40" West, 139.41 feet to a 1/2 inch rebar found at the common corner of Lot 14 and Lot 15; thence, continuing South 59° 43' 56" West, 226.46 feet to a 1/2 inch rebar found (disturbed); thence, running with the property now or formerly owned by the Ashford Lake Condominium Association

and as shown on a Condominium Plat recorded among the aforesaid Land Records in Condo Plat 6, Page 9 North 21° 20' 40" West, 531.83 feet to the centerline of Nancy Creek; thence, running with the said centerline of Nancy Creek

North 71° 54' 28" East, 7.91 feet; thence North 66° 19' 18" East, 82.67 feet; thence North 64° 36' 33" East, 53.19 feet; thence North 75° 47' 51" East, 43.73 feet; thence, North 62° 37' 43" East, 37.34 feet; thence, North 57° 08' 00" East, 40.21 feet; thence, North 37° 54' 19" East, 43.48 feet; thence, North 17° 22' 00" East, 38.67 feet; thence, North 41° 58' 49" East, 36.15 feet; thence North 49° 59' 23" East, 71.28 feet; thence, North 69° 07' 51" East, 58.11 feet; thence, North 70° 12' 41" East, 44.21 feet; thence, North 75° 17' 14" East, 36.76 feet; thence, South 81° 48' 34" East, 46.21 feet; thence, South 88° 02' 59" East, 75.21 feet; thence, North 71° 58' 41" East, 16.97 feet; thence, North 88° 16' 49" East, 17.50 feet; thence

North 78° 06' 07" East, 39.74 feet; thence, North 79° 38' 04" East, 19.32 feet; thence, North 67° 27' 55" East, 52.14 feet; thence, leaving the centerline of Nancy Creek and running with the property now or formerly owned by the Ashford Place Condominium ociation as described in a deed recorded among the aforesaid Land Records in Deed

North 25° 16' 40" West, 37.04 feet; thence, North 25° 16' 40" West, 525.00 feet to a 1/2 inch rebar found on the aforesaid South Line of West Nancy Creek Drive; thence, running with the said line of West Nancy Creek Drive North 49° 33' 44" East, 170.98 feet; thence,

382.39 feet along the arc of a curve deflecting to the right, having a radius of 522.95 feet and a chord bearing and distance of North 70° 35' 08" East, 373.93 feet to a 1/2 inch capped South 88° 28' 01" East, 1,159.48 feet to the Point of Beginning, containing 1,602,679 square feet or 36.7924 acres of land, more or less.

Property is subject to all easements and rights of way recorded and unrecorded.

PICTURE LOCATION AND DIRECTION

# **LOCATION MAP** LAT - 33°54'34.29"N LONG - 84°19'34.42"V

# **BENCHMARK 1 BENCHMARK 2** DETAIL DETAIL





# **UTILITY NOTES**

THE UNDERGROUND UTILITIES SHOWN HEREON ARE BASED ON LOCATION OF

UTILISURVEY, LLC 154 GRANT ROAD FAYETTEVILLE, GA. 30215 PHONE: 404-312-6912 ATTENTION: HANS WONNEBERGER

THE UNDERGROUND UTILITIES (EXCEPT THE LOCATION OF EXISTING DRAINAGE, SEWER, AND IRRIGATION UTILITIES AS WELL AS UNDERGROUND STORAGE TANKS) WERE LOCATED BY UTILISURVEY, LLC. UTILIZING RADIO FREQUENCY TECHNIQUE AND IN ACCORDANCE TO LEVEL "B" UTILITY LOCATION CRITERIA. THIS TECHNIQUE S CAPABLE OF LOCATING METALLIC UTILITIES AND TRACER WIRES ANY NON- METALLIC UTILITIES (WITHOUT TRACER WIRE) ARE NOT LOCATED.

THE SURVEYOR MAKES NO GUARANTEES THAT THE UNDERGROUND UTILITIES SHOWN COMPRISE ALL SUCH UTILITIES IN THE AREA. FITHER IN- SERVICE OR ABANDONED UNDERGROUND UTILITIES NOT OBSERVED OR LOCATED UTILIZING THIS FECHNIQUE MAY EXIST ON THIS SITE BUT ARE NOT SHOWN, AND MAY BE FOUND UPON EXCAVATION. THE SURVEYOR FURTHER DOES NOT WARRANT THAT THE UNDERGROUND UTILITIES SHOWN ARE IN THE EXACT LOCATION INDICATED ALTHOUGH THE SURVEYOR DOES CERTIFY THAT THEY ARE LOCATED AS ACCURATELY AS POSSIBLE FROM INFORMATION AVAILABLE.

INFORMATION REGARDING MATERIAL AND SIZE OF UTILITIES IS BASED ON RECORDS ACQUIRED FROM THE UTILITY OWNERS.

# **UTILITY PROVIDERS**

ATLANTA GAS LIGHT COMPANY AGL 10 PEACHTREE STREET NE ATLANTA, GA 30309 MARTIN MAREK

GEORGIA POWER COMPANY

(404) 584-4126

823 JEFFERSON STREET ATLANTA, GA 30318 (404) 506-4569 **İKE COLLINS** 

DEKALB COUNTY WATER AND SEWER DEPARTMENT 1580 ROADHAVEN DR. STONE MOUNTAIN, GA. 30083 (770) 612-7222 JEFÉ WOODS (770) 724-1490 JDWOODS@DEKALBCOUNTYGA.GOV COMMUNICATION

208 S. AKARD ST. DALLAS, TX 75202 (210) 821-4105 ANGELO HINES (770) 784-3972 COMCAST

> (770) 559-6879 SANDRA ANDREWS LEVEL 3 COMMUNICATIONS, INC 1025 ELDORADO BOULEVARD BROOMFIELD, CO 80021

(877) 366-8344 EXT. 3 VERIZON / MCI 2400 N GLENVILLE RICHARDSON, TX 75082 (478) 471-1042 DENNIS RAINEY CENTURYLINK 100 CENTURYLINK DRIVE

MONROE, LA 71203

(888) 723-8010

ZAYO FIBER SOLUTIONS 400 CENTENNIAL PKWY, SUITE 200 LOUSVILL, CO 80027 (678) 666-2493 NIC FLORES

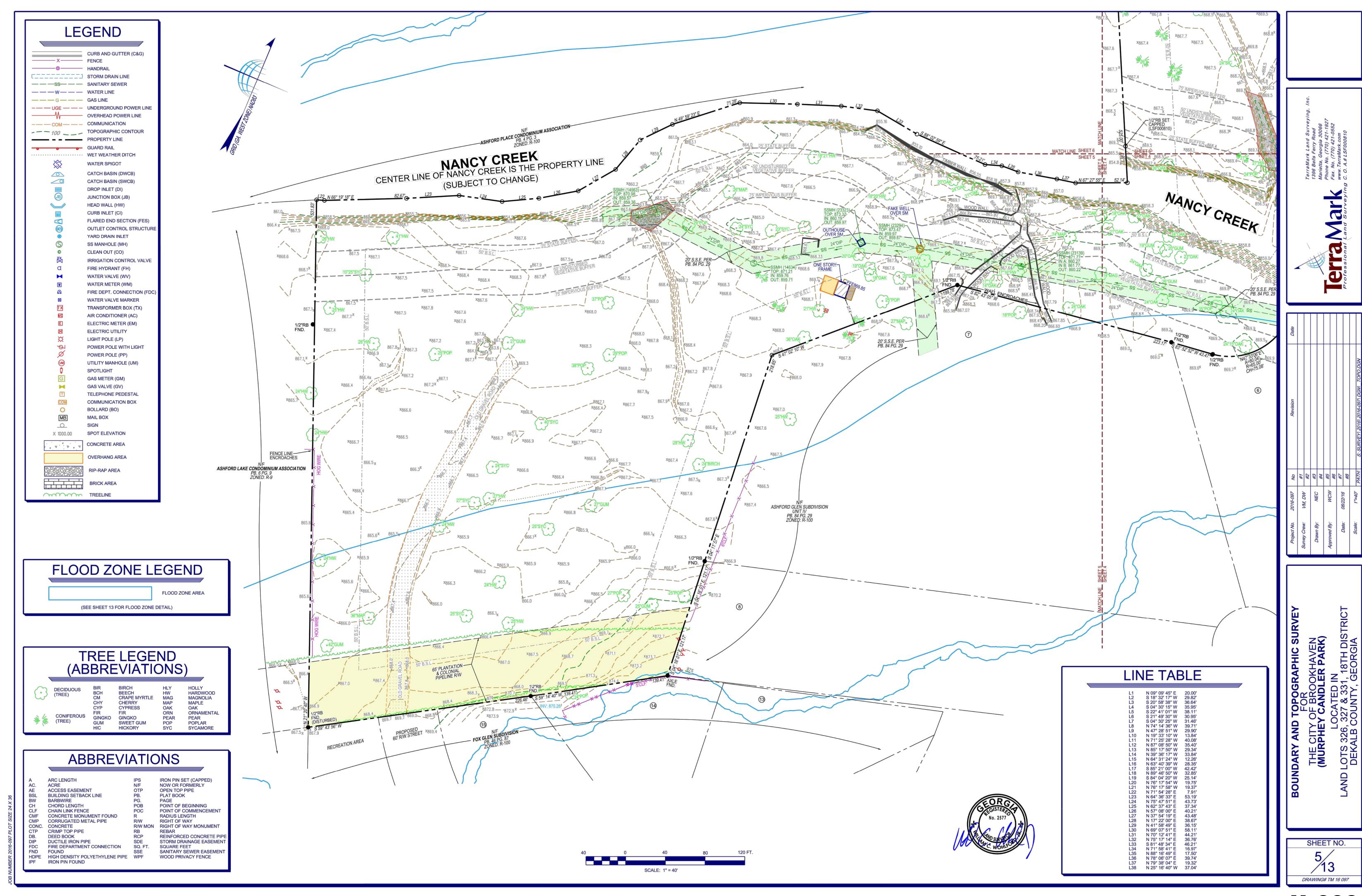
# SURVEYOR'S CERTIFICATE

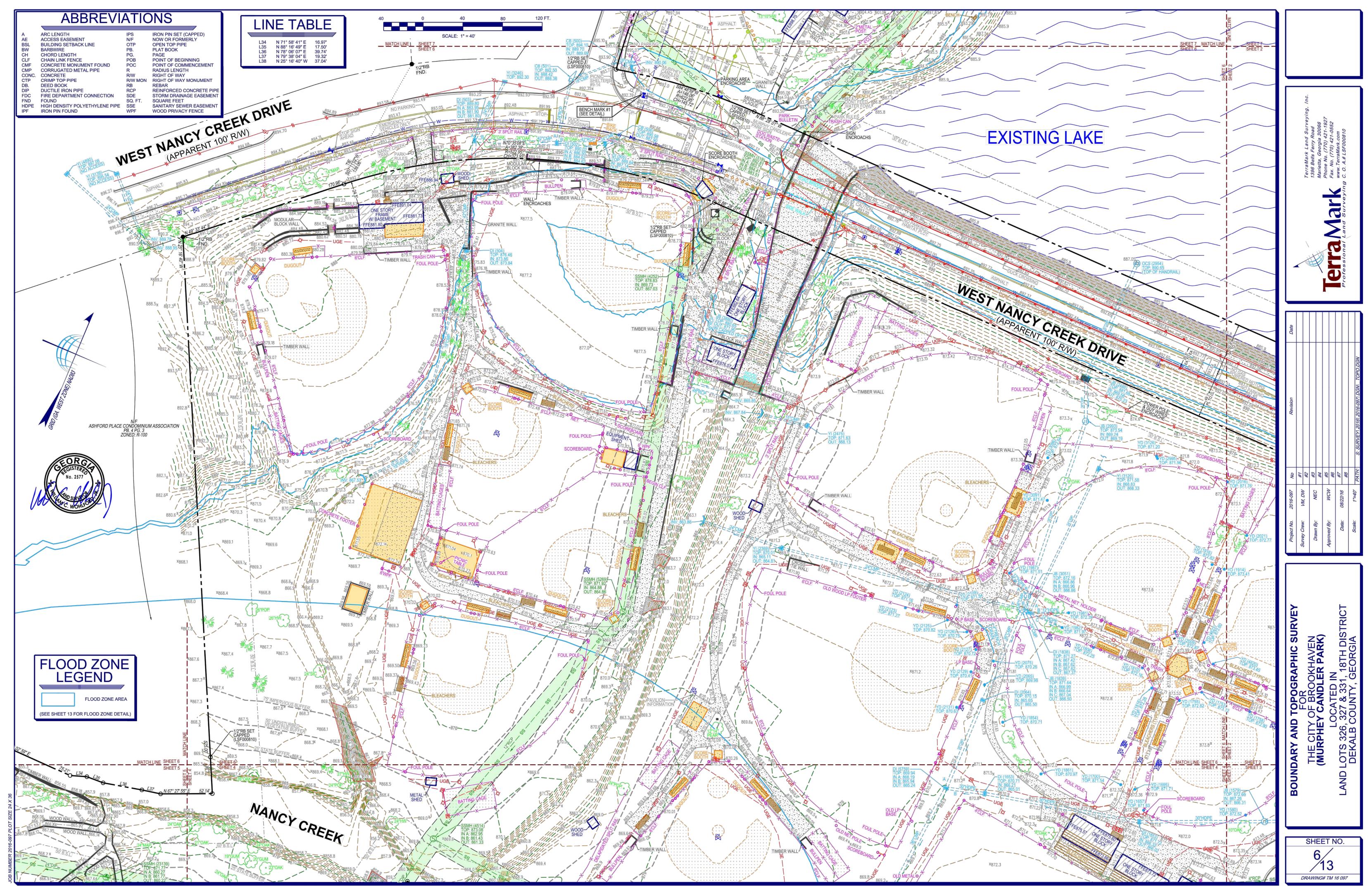
THIS SURVEY WAS PREPARED IN CONFORMITY WITH THE TECHNICAL STANDARDS FOR PROPERTY SURVEYS IN GEORGIA AS SET FORTH IN CHAPTER 180-7 OF THE RULES OF GEORGIA BOARD OF REGISTRATION FOR PROFESSIONAL ENGINEERS AND LAND SURVEYORS AND AS SET FORTH IN THE GEORGIA SURVEY ACT O.C.G.A 15-6-6 AUTHORITY O.C.G.A. SECS. 15-6-67, 43-15-4, 43-15-6, 43-15-19, 43-15-2

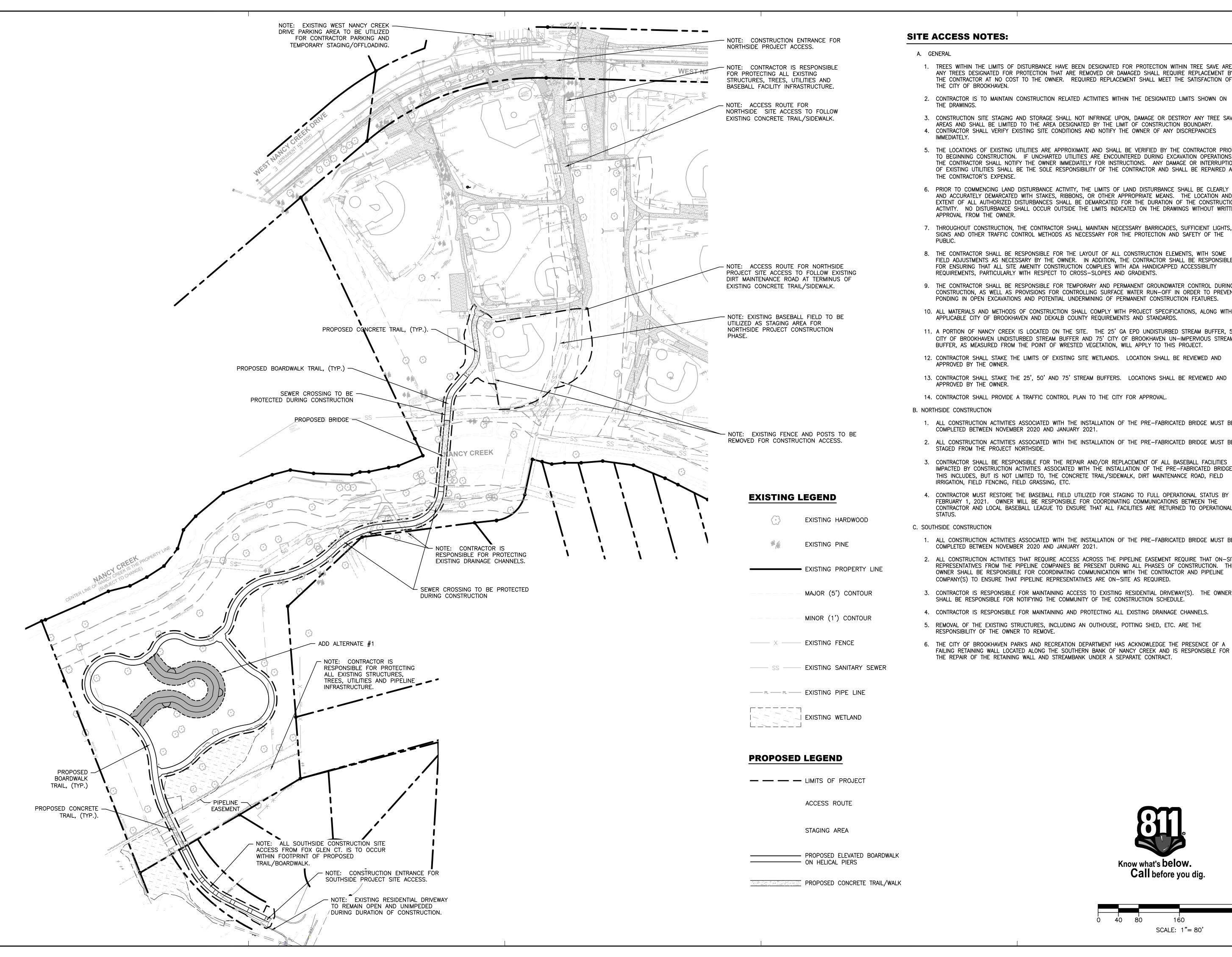
> WILLIAM C. WOHLFORD, JR., R **REGISTERED NUMBER: 2577**

SHEET NO.

HAVE PARI







- 1. TREES WITHIN THE LIMITS OF DISTURBANCE HAVE BEEN DESIGNATED FOR PROTECTION WITHIN TREE SAVE AREAS. ANY TREES DESIGNATED FOR PROTECTION THAT ARE REMOVED OR DAMAGED SHALL REQUIRE REPLACEMENT BY THE CONTRACTOR AT NO COST TO THE OWNER. REQUIRED REPLACEMENT SHALL MEET THE SATISFACTION OF
- 2. CONTRACTOR IS TO MAINTAIN CONSTRUCTION RELATED ACTIVITIES WITHIN THE DESIGNATED LIMITS SHOWN ON
- 3. CONSTRUCTION SITE STAGING AND STORAGE SHALL NOT INFRINGE UPON, DAMAGE OR DESTROY ANY TREE SAVE AREAS AND SHALL BE LIMITED TO THE AREA DESIGNATED BY THE LIMIT OF CONSTRUCTION BOUNDARY.
- 4. CONTRACTOR SHALL VERIFY EXISTING SITE CONDITIONS AND NOTIFY THE OWNER OF ANY DISCREPANCIES
- 5. THE LOCATIONS OF EXISTING UTILITIES ARE APPROXIMATE AND SHALL BE VERIFIED BY THE CONTRACTOR PRIOR TO BEGINNING CONSTRUCTION. IF UNCHARTED UTILITIES ARE ENCOUNTERED DURING EXCAVATION OPERATIONS, THE CONTRACTOR SHALL NOTIFY THE OWNER IMMEDIATELY FOR INSTRUCTIONS. ANY DAMAGE OR INTERRUPTION OF EXISTING UTILITIES SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR AND SHALL BE REPAIRED AT
- 6. PRIOR TO COMMENCING LAND DISTURBANCE ACTIVITY, THE LIMITS OF LAND DISTURBANCE SHALL BE CLEARLY AND ACCURATELY DEMARCATED WITH STAKES, RIBBONS, OR OTHER APPROPRIATE MEANS. THE LOCATION AND EXTENT OF ALL AUTHORIZED DISTURBANCES SHALL BE DEMARCATED FOR THE DURATION OF THE CONSTRUCTION ACTIVITY. NO DISTURBANCE SHALL OCCUR OUTSIDE THE LIMITS INDICATED ON THE DRAWINGS WITHOUT WRITTEN
- 7. THROUGHOUT CONSTRUCTION, THE CONTRACTOR SHALL MAINTAIN NECESSARY BARRICADES, SUFFICIENT LIGHTS, SIGNS AND OTHER TRAFFIC CONTROL METHODS AS NECESSARY FOR THE PROTECTION AND SAFETY OF THE
- 8. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE LAYOUT OF ALL CONSTRUCTION ELEMENTS, WITH SOME FIELD ADJUSTMENTS AS NECESSARY BY THE OWNER. IN ADDITION, THE CONTRACTOR SHALL BE RESPONSIBLE FOR ENSURING THAT ALL SITE AMENITY CONSTRUCTION COMPLIES WITH ADA HANDICAPPED ACCESSIBILITY REQUIREMENTS, PARTICULARLY WITH RESPECT TO CROSS-SLOPES AND GRADIENTS.
- 9. THE CONTRACTOR SHALL BE RESPONSIBLE FOR TEMPORARY AND PERMANENT GROUNDWATER CONTROL DURING CONSTRUCTION. AS WELL AS PROVISIONS FOR CONTROLLING SURFACE WATER RUN-OFF IN ORDER TO PREVENT PONDING IN OPEN EXCAVATIONS AND POTENTIAL UNDERMINING OF PERMANENT CONSTRUCTION FEATURES.
- 10. ALL MATERIALS AND METHODS OF CONSTRUCTION SHALL COMPLY WITH PROJECT SPECIFICATIONS, ALONG WITH APPLICABLE CITY OF BROOKHAVEN AND DEKALB COUNTY REQUIREMENTS AND STANDARDS.
- 11. A PORTION OF NANCY CREEK IS LOCATED ON THE SITE. THE 25' GA EPD UNDISTURBED STREAM BUFFER, 50' CITY OF BROOKHAVEN UNDISTURBED STREAM BUFFER AND 75' CITY OF BROOKHAVEN UN-IMPERVIOUS STREAM BUFFER, AS MEASURED FROM THE POINT OF WRESTED VEGETATION, WILL APPLY TO THIS PROJECT.
- 12. CONTRACTOR SHALL STAKE THE LIMITS OF EXISTING SITE WETLANDS. LOCATION SHALL BE REVIEWED AND
- 13. CONTRACTOR SHALL STAKE THE 25', 50' AND 75' STREAM BUFFERS. LOCATIONS SHALL BE REVIEWED AND
- 14. CONTRACTOR SHALL PROVIDE A TRAFFIC CONTROL PLAN TO THE CITY FOR APPROVAL.
- 1. ALL CONSTRUCTION ACTIVITIES ASSOCIATED WITH THE INSTALLATION OF THE PRE-FABRICATED BRIDGE MUST BE COMPLETED BETWEEN NOVEMBER 2020 AND JANUARY 2021.
- 2. ALL CONSTRUCTION ACTIVITIES ASSOCIATED WITH THE INSTALLATION OF THE PRE-FABRICATED BRIDGE MUST BE
- 3. CONTRACTOR SHALL BE RESPONSIBLE FOR THE REPAIR AND/OR REPLACEMENT OF ALL BASEBALL FACILITIES IMPACTED BY CONSTRUCTION ACTIVITIES ASSOCIATED WITH THE INSTALLATION OF THE PRE-FABRICATED BRIDGE. THIS INCLUDES, BUT IS NOT LIMITED TO, THE CONCRETE TRAIL/SIDEWALK, DIRT MAINTENANCE ROAD, FIELD
- 4. CONTRACTOR MUST RESTORE THE BASEBALL FIELD UTILIZED FOR STAGING TO FULL OPERATIONAL STATUS BY FEBRUARY 1, 2021. OWNER WILL BE RESPONSIBLE FOR COORDINATING COMMUNICATIONS BETWEEN THE CONTRACTOR AND LOCAL BASEBALL LEAGUE TO ENSURE THAT ALL FACILITIES ARE RETURNED TO OPERATIONAL
- 1. ALL CONSTRUCTION ACTIVITIES ASSOCIATED WITH THE INSTALLATION OF THE PRE-FABRICATED BRIDGE MUST BE
- 2. ALL CONSTRUCTION ACTIVITIES THAT REQUIRE ACCESS ACROSS THE PIPELINE EASEMENT REQUIRE THAT ON-SITE REPRESENTATIVES FROM THE PIPELINE COMPANIES BE PRESENT DURING ALL PHASES OF CONSTRUCTION. THE OWNER SHALL BE RESPONSIBLE FOR COORDINATING COMMUNICATION WITH THE CONTRACTOR AND PIPELINE COMPANY(S) TO ENSURE THAT PIPELINE REPRESENTATIVES ARE ON-SITE AS REQUIRED.
- 3. CONTRACTOR IS RESPONSIBLE FOR MAINTAINING ACCESS TO EXISTING RESIDENTIAL DRIVEWAY(S). THE OWNER SHALL BE RESPONSIBLE FOR NOTIFYING THE COMMUNITY OF THE CONSTRUCTION SCHEDULE.
- 4. CONTRACTOR IS RESPONSIBLE FOR MAINTAINING AND PROTECTING ALL EXISTING DRAINAGE CHANNELS.
- 5. REMOVAL OF THE EXISTING STRUCTURES, INCLUDING AN OUTHOUSE, POTTING SHED, ETC. ARE THE RESPONSIBILITY OF THE OWNER TO REMOVE.
- 6. THE CITY OF BROOKHAVEN PARKS AND RECREATION DEPARTMENT HAS ACKNOWLEDGE THE PRESENCE OF A



SCALE: 1"= 80'

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ISSUE/REVISION RECORD

DESCRIPTION

PROFESSIONAL SEAL

PROFESSIONAL IN CHARGE

**PROJECT MANAGER** 

**QUALITY CONTROL** 

**DRAWN BY** 

PROJECT NAME **MURPHEY CANDLER PARK NATURE TRAIL** 

**BROOKHAVEN GEORGIA** 

**WEST NANCY CREEK DRIVE AND CANDLER** LAKE CIRCLE WEST **BROOKHAVEN, GA 30341** LAND LOTS 326 & 327 **18TH DISTRICT** 

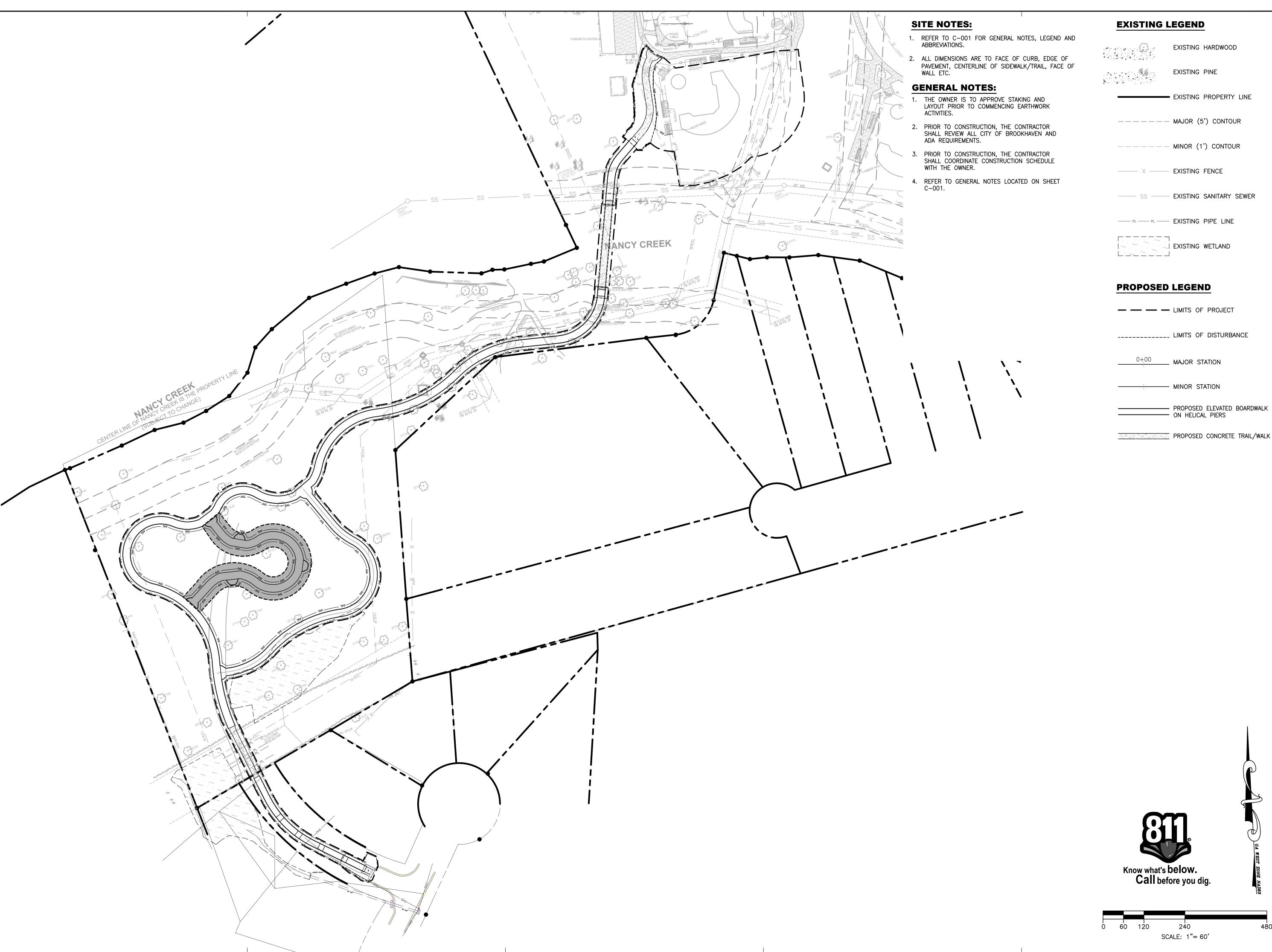


**DEKALB COUNTY** 

PROJECT NUMBER

SHEET TITLE SITE ACCESS AND

**STAGING PLAN** 



EXISTING PROPERTY LINE

PROFESSIONAL IN CHARGE

PROFESSIONAL SEAL

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10/21/2020 MODIFY PIPELINE CROSSING

DESCRIPTION

ISSUE/REVISION RECORD

PROJECT MANAGER

QUALITY CONTROL

DRAWN BY

PROJECT NAME **MURPHEY CANDLER PARK NATURE TRAIL** 

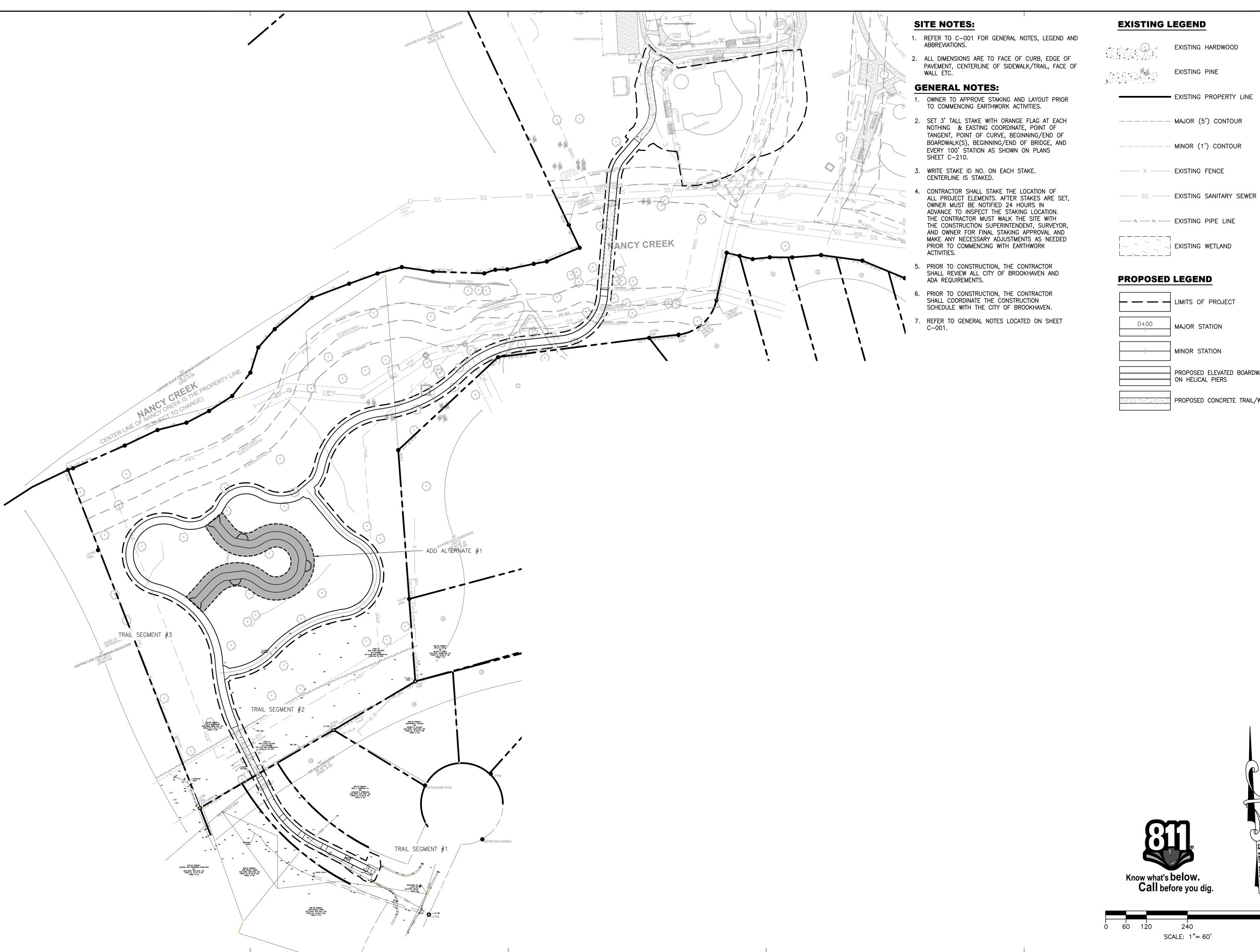
# **BROOKHAVEN GEORGIA**

**WEST NANCY CREEK DRIVE AND CANDLER** LAKE CIRCLE WEST BROOKHAVEN, GA 30341 **LAND LOTS 326 & 327 18TH DISTRICT DEKALB COUNTY** 



PROJECT NUMBER

SHEET TITLE SITE PLAN



# EXISTING LEGEND

EXISTING HARDWOOD EXISTING PINE EXISTING PROPERTY LINE

---- MINOR (1') CONTOUR

---- PL ---- EXISTING PIPE LINE

| EXISTING WETLAND

# PROPOSED LEGEND

	LIMITS OF PROJECT
0+00	MAJOR STATION
+	MINOR STATION
	PROPOSED ELEVATED BOARDWALK ON HELICAL PIERS
	PROPOSED CONCRETE TRAIL/WALK

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ISSUE/REVISION RECORD

DATE DESCRIPTION

PROFESSIONAL SEAL

PROFESSIONAL IN CHARGE

PROJECT MANAGER

QUALITY CONTROL

DRAWN BY

PROJECT NAME **MURPHEY CANDLER PARK NATURE TRAIL** 

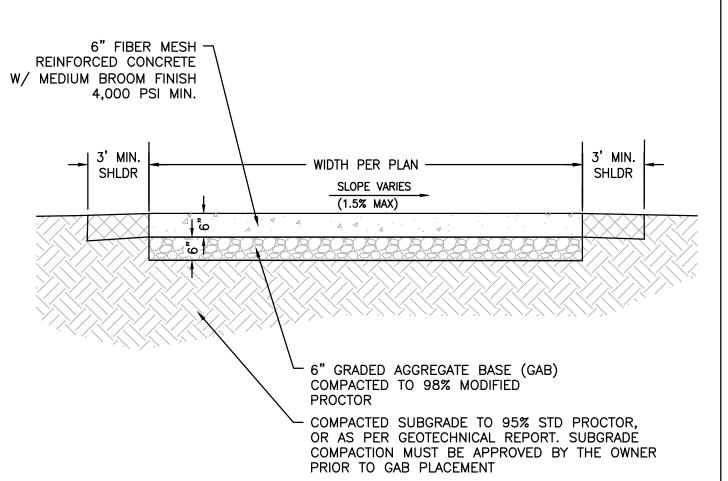
# **BROOKHAVEN GEORGIA**

**WEST NANCY CREEK DRIVE AND CANDLER LAKE CIRCLE WEST** BROOKHAVEN, GA 30341 **LAND LOTS 326 & 327 18TH DISTRICT DEKALB COUNTY** 



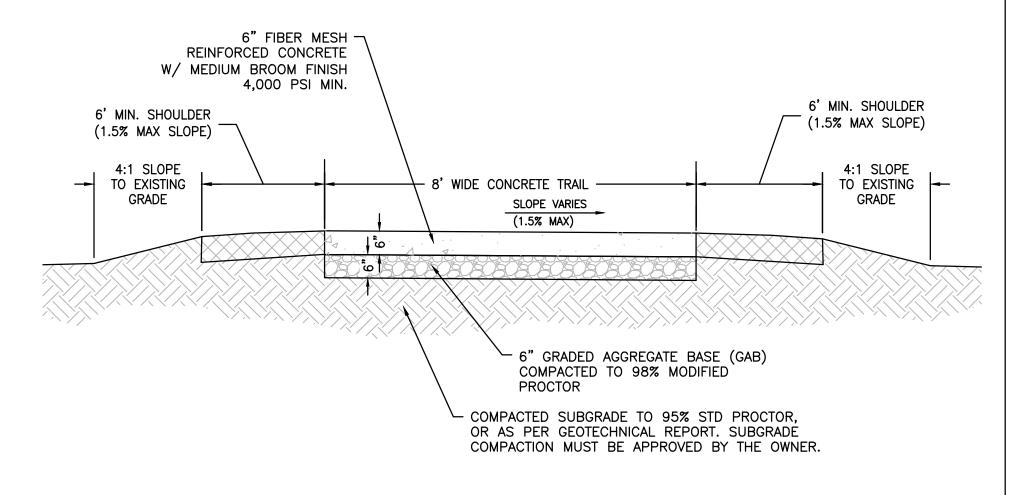
PROJECT NUMBER

SHEET TITLE SITE STAKING **PLAN** 



# **GENERAL NOTES:**

- . THE CONTRACTOR SHALL INSURE THAT THE CONCRETE TRAIL SECTION DOES NOT EXCEED 1.5% CROSS SLOPE. IF EXISTING GRADES IN THE FIELD DICTATE A STEEPER CROSS SLOPE, THE LOWER SIDE OF TRAIL SECTION SHALL MATCH EXISTING GRADE, AND THE COMPACTED SUBGRADE SHOULDERS SHALL BE TRANSITIONED AT 3:1 MAX SLOPE TO MAINTAIN THE 1.5% MAX CROSS-SLOPE ACROSS TRAIL.
- 2. CONTROL JOINTS SHALL BE INSTALLED AND SPACED AT REGULAR INTERVALS MATCHING TRAIL WIDTH, BUT NOT TO EXCEED 30 TIMES PAVEMENT THICKNESS. EXPANSION JOINTS SHALL BE INSTALLED AT 30' O.C. AND ADJACENT TO EXISTING CONCRETE. REFER TO CONCRETE JOINTS DETAIL 3/C-220.
- 3. GRADED AGGREGATE BASE SHALL BE PLACED IN 6" LOOSE LAYERS. EACH LAYER SHALL BE COMPACTED TO 98% OF THE MATERIAL'S MAXIMUM DRY DENSITY AS PER ASTM D1557 MODIFIED PROCTOR.
- 4. SOME AREAS MAY CONTAIN EXCEPTIONALLY WEAK SUBGRADE MATERIALS WHICH WILL REQUIRE ADDITIONAL SOIL STABILIZATION MEASURES PER DIRECTION OF THE GEOTECHNICAL ENGINEER. DIRECTION IS SUBJECT TO APPROVAL OF THE OWNER.



**CONCRETE WALK AT GAS EASEMENT CROSSING** 

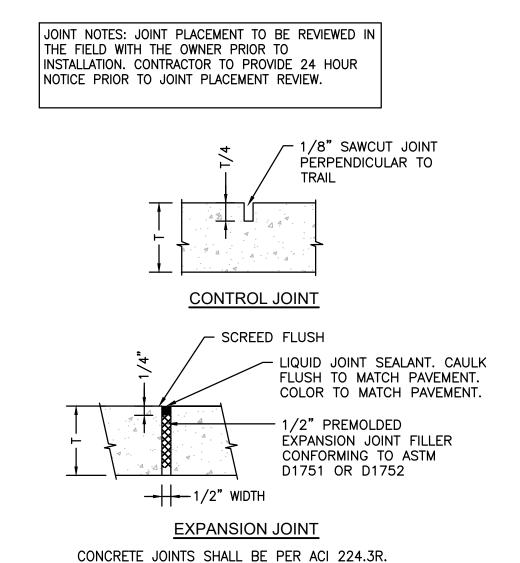
GENERAL NOTES: GENERAL BOLLARD NOTES:

- 1. THE CONTRACTOR SHIALBOHNSRIPE SHAAT PHE6"DIAMETER. CONCRETE TRAIL SECTION DOUBLESHINGS 35.5". THE BOLLARDS EXCEED 1.5% CROSSIABLORE.COMSERVISTING OF HEAVY GAUGE GRADES IN THE FIRST DELDIE THAT'S WELDE PRIOR TO PRIMING & CROSS SLOPE, THE ALIONWER OF DEPTOPNAIRAL OT DIP GALVANIZING. SECTION SHALL MAGALYANIANGHAGRACOMPLY WITH ASTM A123 AND THE COMPACTEOR STABOARAZING BOTH FABRICATED AND SHOULDERS SHALLUBEABRICANEEDIORED AND ASTEEL PRODUCTS MAX SLOPE TO MANATATINOTHENCOSTEDMAQLLED, FRESSED, AND CROSS-SLOPE ACROSSEDRAHAPES, PLATES, BARS, AND STRIP
- . CONTROL JOINTS SHEANUERBETHNESTARTILINED WARNIGHT IS 15-22LBS. SPACED AT REGULAR INTERVALS MATCHING TRAIL WIDTH, BUT NOT TO EXCEED 30 TIMES PAVEMENT2.THENDEKIBLESSAREXWIALLSCOME IN ITS SLEEVE JOINTS SHALL BE RESIDALITED INSTAUD' AO CAT SCAN SHOULD BE AND ADJACENT TO PERISTRING DOOR ETIGE. CUTTING THE HOLE TO REFER TO CONCRETMAKEOSWESE DIETAINSTALLATION SITE IS FREE OF ANY OBSTACLES. THE HOLE WILL THEN BE CUT AND THE BOLLARD INSTALLED. TO

0.0299 INCH (0.7595 MM) THICK AND

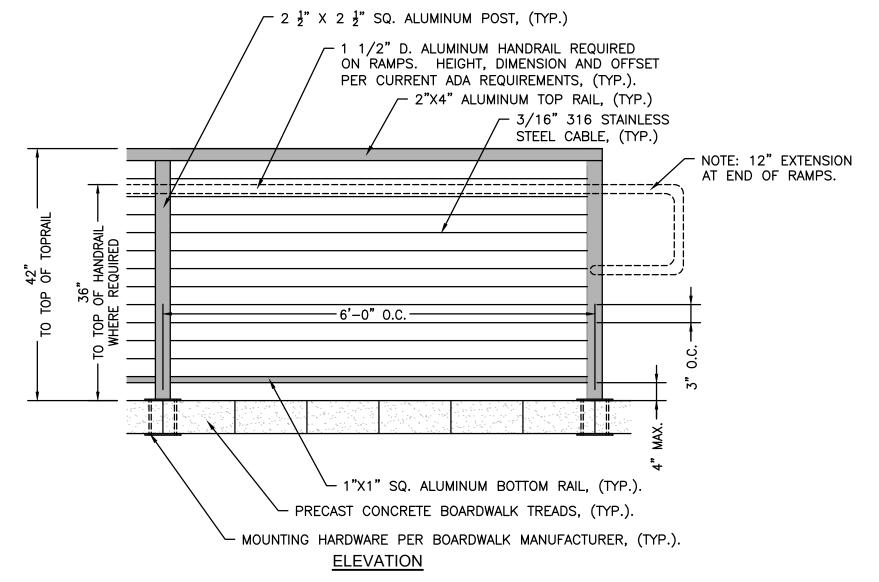
- 3. GRADED AGGREGATE BUSE WATER INSTITUTE HOLE, PEA SHINGLE PLACED IN 6" LOON LEFE SCHERCH TRYER THE FOUNDATION SHALL BE COMPACYHOL TO 58% DEGP AND 15-3/4" WIDE. MATERIAL'S MAXIMUM DRY DENSITY AS PER ASTM D1557 MODIFIED PROCTOR.
- 4. SOME AREAS MAY CONTAIN EXCEPTIONALLY WEAK SUBGRADE MATERIALS WHICH WILL REQUIRE ADDITIONAL SOIL STABILIZATION MEASURES PER DIRECTION OF THE GEOTECHNICAL ENGINEER. DIRECTION IS SUBJECT TO APPROVAL OF THE OWNER.

# **CONCRETE TRAIL**



**CONCRETE JOINTS** SCALE: N.T.S.

**MANUALLY OPERATED RISING BOLLARD** SCALE: N.T.S.



1. ALUMINUM COMPONENTS TO BE POWDER COATED BLACK. POWDER COAT TO MEET AAMA 2605 SPECIFICATIONS. 2. CONTRACTOR TO PROVIDE SHOP DRAWINGS INDICATING ALL DIMENSIONS, CONNECTIONS, WELDS AND HARDWARE.

5

SCALE: N.T.S.

SCALE: N.T.S.

**ELEVATED BOARDWALK HANDRAIL** 

- 2"X4" ALUMINUM TOP RAIL, (TYP.) 1.5" CLEARANCE FROM SIDE OF HANDRAIL TO POST, (TYP.) — 1.5" D. ALUMINUM HANDRAIL, (TYP.) BRACKET. ATTACHED TO POST WITH COUNTERSUNK FLAT HEAD MACHINE SCREWS, (TYP.). RETURN RAIL TO POST PER ADA REQUIREMENTS. WELD TO POST OR ATTACH WITH BRACKET, (TYP.). - 2  $\frac{1}{2}$ " SQUARE POST, (TYP.) - STAINLESS STEEL CABLES, (TYP.) ─ 1" SQUARE BOTTOM RAIL, (TYP.) **SECTION** 

**PROJECT NAME MURPHEY CANDLER PARK NATURE TRAIL** 

**BROOKHAVEN GEORGIA** 

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**ISSUE/REVISION RECORD** 

DATE DESCRIPTION

PROFESSIONAL SEAL

PROFESSIONAL IN CHARGE

PROJECT MANAGER

**QUALITY CONTROL** 

**DRAWN BY** 

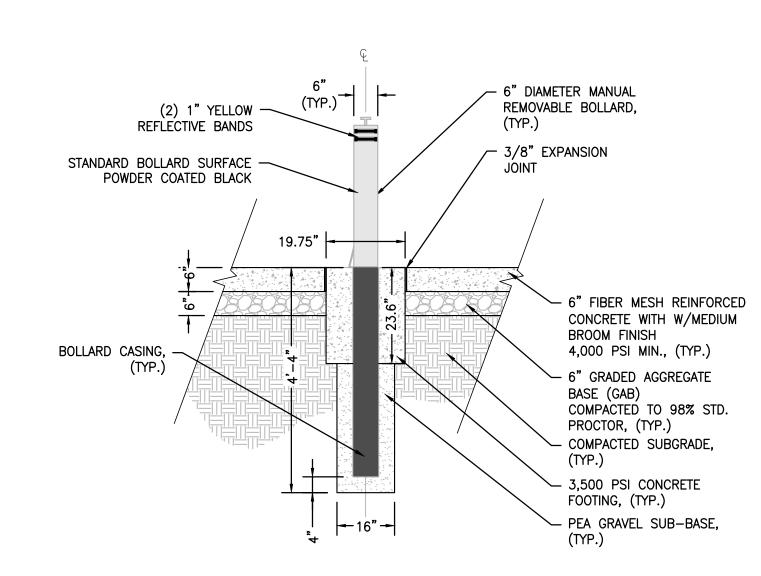
**WEST NANCY CREEK DRIVE AND CANDLER** LAKE CIRCLE WEST **BROOKHAVEN, GA 30341** LAND LOTS 326 & 327 **18TH DISTRICT DEKALB COUNTY** 



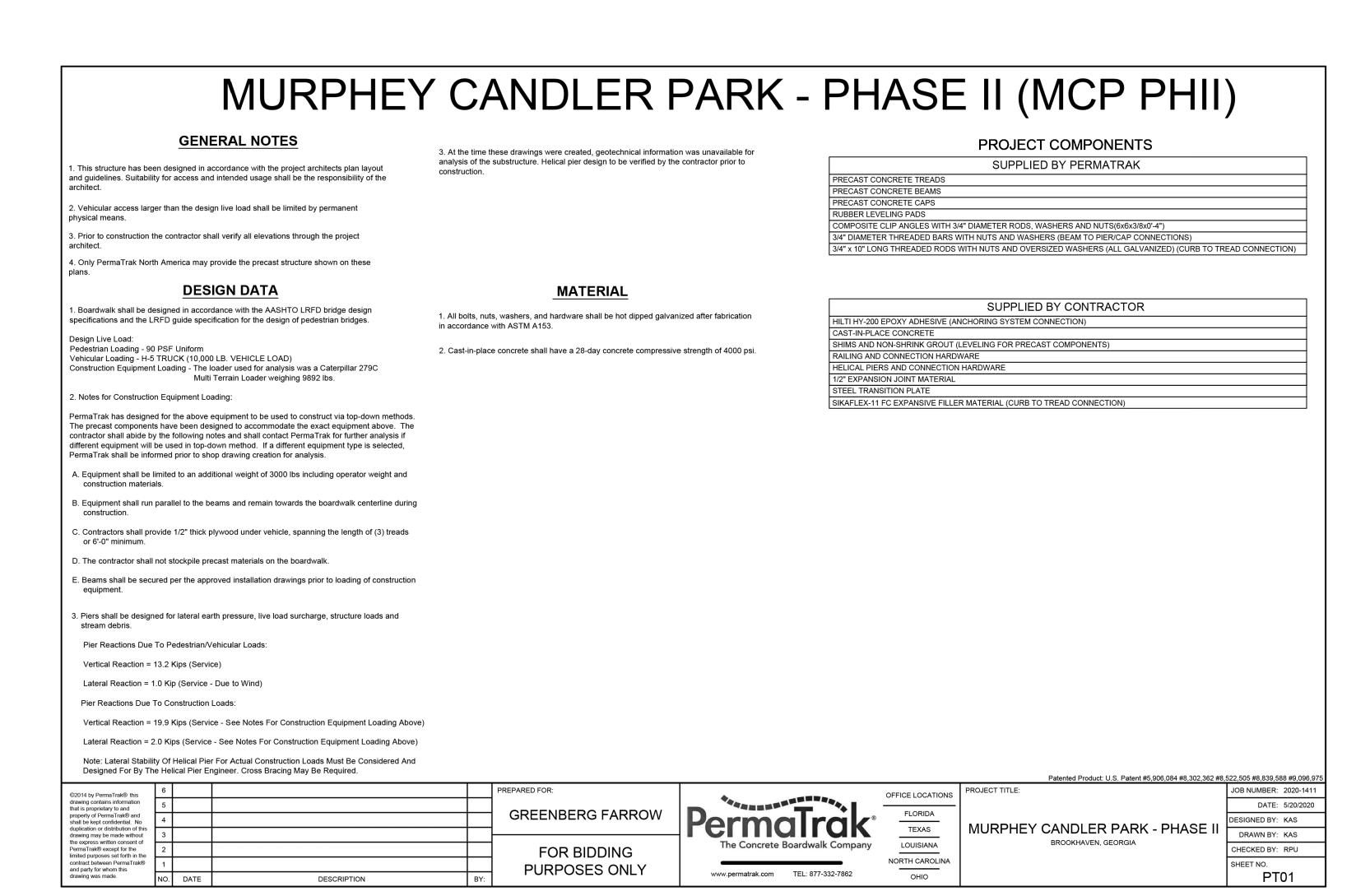
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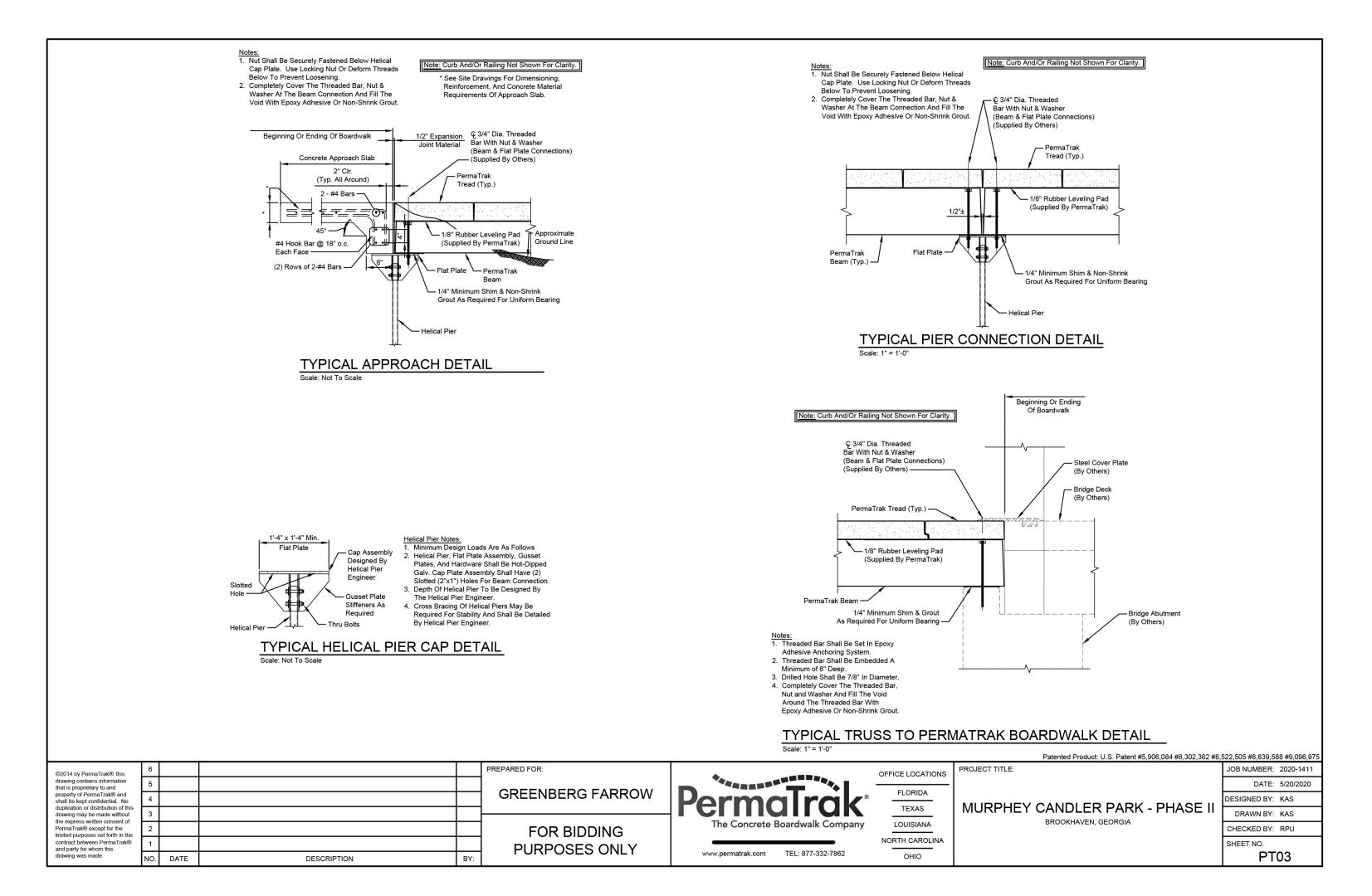
SHEET TITLE SITE DETAILS

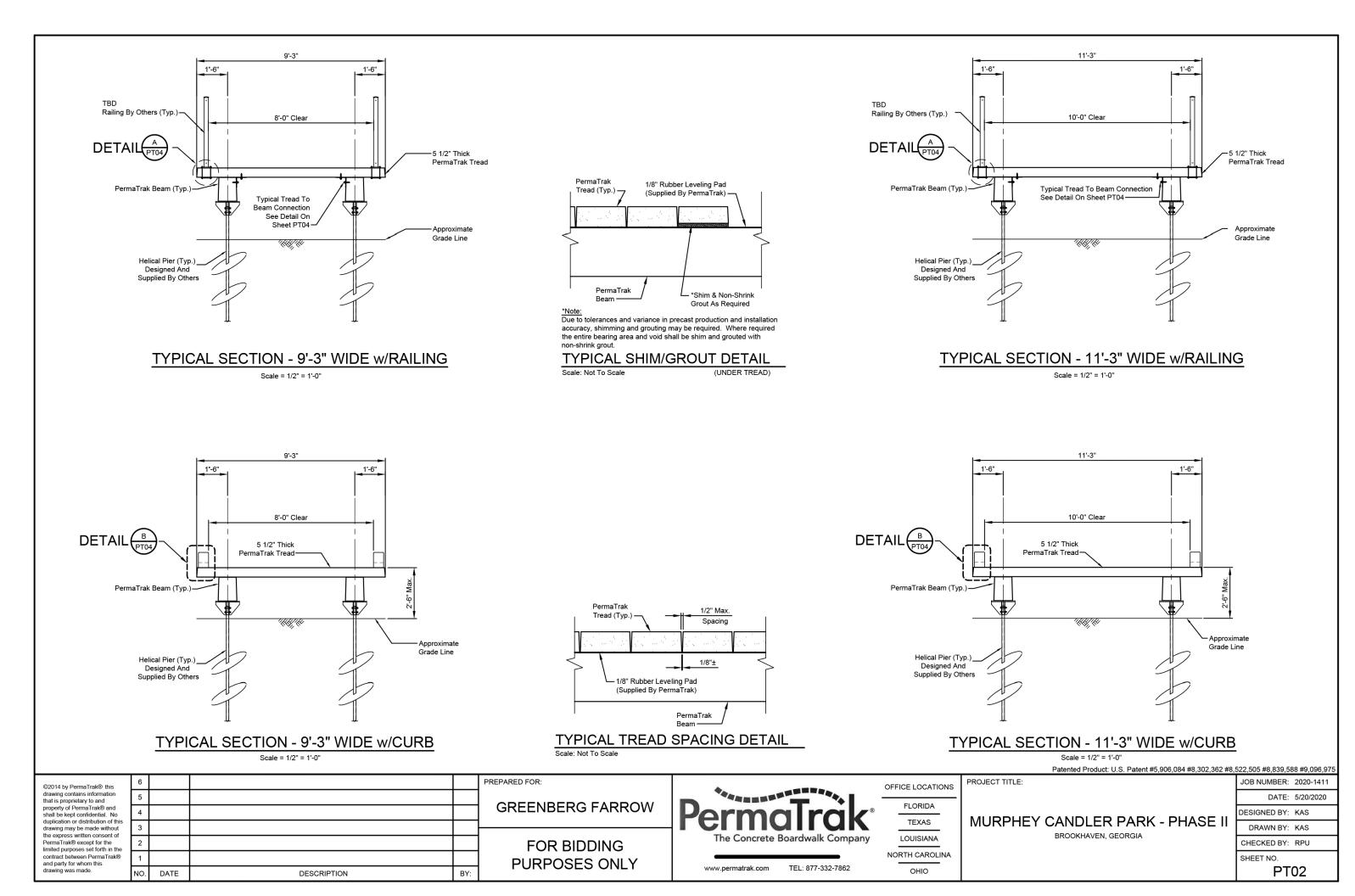
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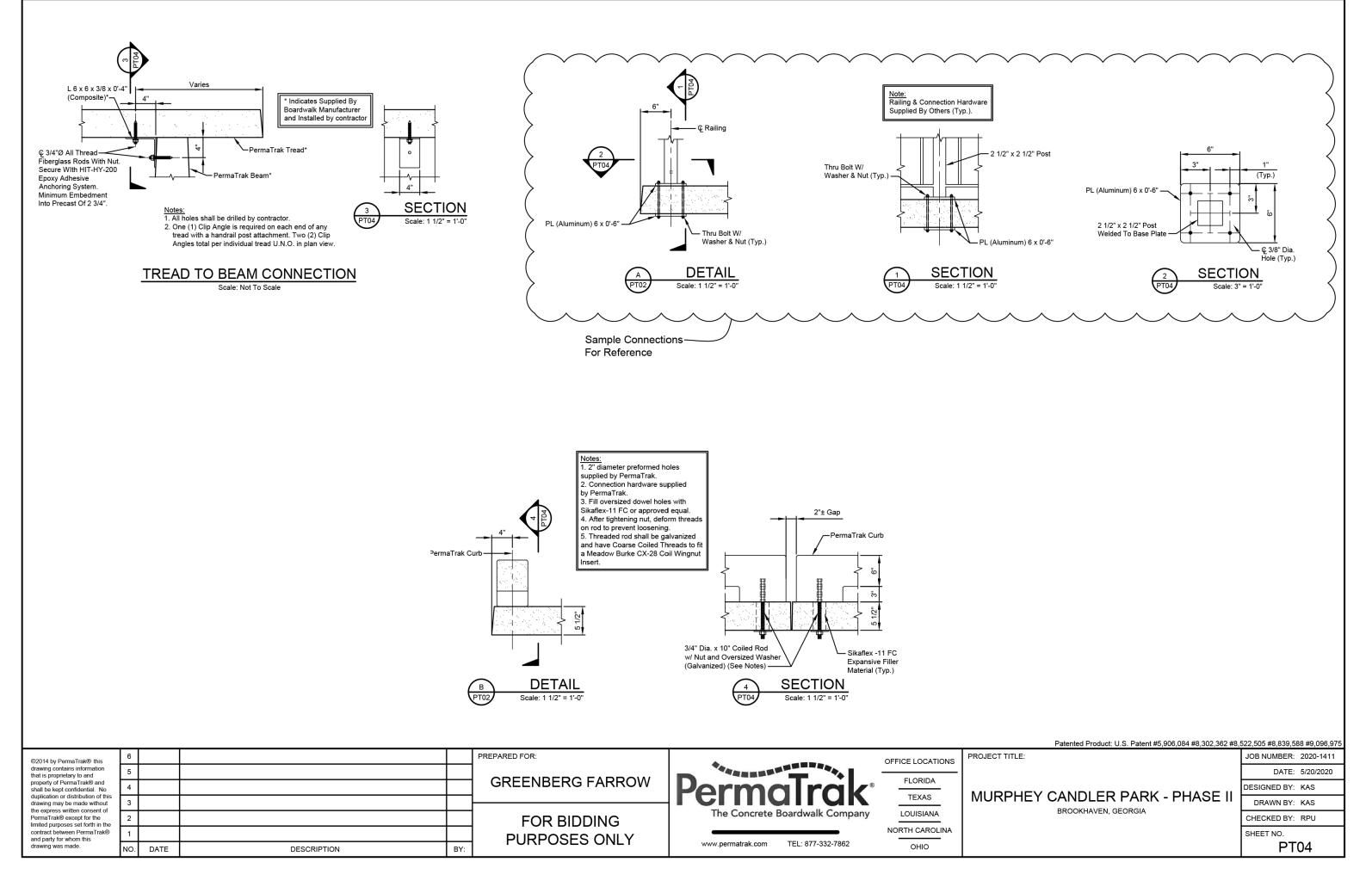


BOLLARD TO BE AMERISTAR 6" X35.5" PART NUMBER 963221-US-35.5









### HELICAL PIER/ANCHOR NOTES

### V2.2 LAST MODIFIED MAY. 2020

PREPARED FOR:

**GREENBERG FARROW** 

FOR BIDDING

**PURPOSES ONLY** 

### Design and Performance Requirements

A.Helical piers shall be designed to support the nominal compression and lateral load(s) as shown on the project plans. The overall length, helix configuration and minimum effective torsional resistance of a

helical pier shall be such that the required geotechnical capacity is developed by the helix plate(s) in an appropriate bearing stratum(s).

B. All steel structure pier components shall be designed within the limits provided by the American Institute of Steel Construction (AISC). Either Allowable Stress Design (ASD) or Load and Resistance Factor Design (LRFD) are acceptable methods of analysis. 2. Except where noted otherwise on the project plans, all piers shall be installed to provide a minimum factor of safety against ultimate compression resistance of 2.0, a maximum axial deflection at design compression load of 0.5 inches, and must satisfy the deflection criteria as stated on the plans or drawings.

D.Except where noted otherwise on the project plans, each pier shall be designed to meet a corrosion service life of 50 years.

E. The anchorage design shall take into account such pier spacing, soil stratification, corrosion and strain compatibility issues as are present for the project.

### Qualifications of Installing Contractor and Designer

The installing contractor and pier designer shall submit to the owner or owner's representative a proposal including the following documentation. Work shall not begin until all the submittals have been received and approved by the owner. All costs associated with incomplete or unacceptable submittals shall be the responsibility of the installing contractor. A. Evidence of installing contractor's competency in installation of helical piers shall be provided to the owner's satisfaction and may include any or all of the following

Pier manufacturer's certificate of competency in installation of helical piers, or A list of at least three projects completed within the previous three years wherein the installing contractor installed helical piers similar to those shown in the project plans, such list to include names and hone numbers of those project owner's representatives who can verify the installing contractor's participation in those projects, or

A letter from the pier manufacturer, distributor or manufacturer's representative expressing ability and intent to provide on-site supervision of the pier installation. A listing of all safety violations logged against the installing contractor within the previous three years and the current status or final resolutions thereof. Descriptions of safety improvements instituted within

the previous three years may also be submitted, at the installing contractor's discretion. Evidence of pier designer's competence in the design of helical piers shall be provided to the owner's satisfaction and shall include all of the following:

Registration as a professional engineer or recognition by the local jurisdictional authority. A list of at least three projects completed within the previous three years wherein the pier designer designed helical piers similar to those shown in the project plans, such list to include names and phone umbers of those project owner's representatives who can verify the engineer's participation in those projects. Recommendation from the pier manufacturer, distributor or manufacturer's representative.

### Pre-Construction Submittals

A. Within two weeks of receiving the contract award, the installing contractor and/or pier designer shall submit the following helical pier design documentation: Shop drawing submittal including at minimum, the helical plate and specific helical pier cut sheet, which shall be signed and sealed by a structural engineer.

Certification from the pier designer that the proposed piers meet the requirements stated herein. Qualifications of pier installer per sections 2A and 2B

Qualifications of pier designer per section 2C Product designations for helix and extension sections and all ancillary products to be supplied at each helical pier location

Individual anchorage nominal loads

Individual anchorage pre-tensioning requirements (if any) Manufacturer's published allowable system capacities for the pier assemblies, including load transfer devices

Calculated theoretical geotechnical capacity of piers Minimum effective torsional resistance criteria

Maximum allowable installation torque of pier Minimum embedment lengths and other site-specific embedment depth requirements that may be appropriate for the site soil profiles

Inclination angle and location tolerance requirements 14. Copies of certified calibration reports for torque measuring equipment and load test measuring equipment to be used on the project. The calibrations shall have been performed within one year of the proposed starting date for helical pile installation or as recommended by the equipment manufacturer based on the proposed starting date.

### Placement Requirements

resistance as shown on the project plans.

014 by PermaTrak® this

ıplication or distribution of th awing may be made withou

ne express written consent of PermaTrak® except for the

nd party for whom this

nited purposes set forth in the

A. When helical pier placement is shown on the project plans, production piers shall be placed such that the anchor head is within 1 inch laterally and 1 inch longitudinally, and the pier shaft alignment is within 2 degrees of the inclination angle, shown on the project plans. B. When pier placement is not shown on the project plans, the placements, alignments and their respective tolerances shall be included as part of the design submittal.

A.Helical pier installation shall only begin after review and approval of the submitted testing data.

B. Before entering the construction site to begin work, the installing contractor shall provide proof of insurance coverage as stated in the general specifications and/or contract.

C. Installing contractor shall furnish and install all helical piers per the project plans and approved anchorage design documentation. In the event of conflict between the project plans and the approved anchorage design documentation, the installing contractor shall not begin construction on any affected items until such conflict has been resolved. D.The installing contractor shall conduct his construction operations in a manner to ensure the safety of persons and property in the vicinity of the work. The installing contractor's personnel shall comply with safety procedures in accordance with OSHA standards and any established project safety plan.

E. The installing contractor shall request marking of underground utilities by an underground utility location service as required by law and shall avoid contact with all marked underground facilities. F. The portion of the construction site occupied by the installing contractor, his equipment and his material stockpiles shall be kept reasonably clean and orderly. 3. Installation of helical piers may be observed by representatives of the owner for quality assurance purposes. The installing contractor shall give the owner's representative at least 24 hours prior notice of pier

H.The helical pier installation technique shall be such that it is consistent with the geotechnical, logistical, environmental, and load carrying conditions of the project. The lead section shall be positioned at the location as shown on the pier design drawings. The helical pier sections shall be engaged and advanced into the soil in a smooth, continuous manner at a rate of rotation of 5 to 25 rpms. Sufficient down pressure (crowd) shall be applied to uniformly advance the helical pier sections a distance approximately equal to the pitch of the helix plate (typically 3 inches) per revolution. The rate of rotation and magnitude of down pressure shall be adjusted for different soil conditions and depths. Extension sections shall be provided to obtain the required minimum overall length and minimum effective torsional

### 6. Termination Criteria

The minimum overall length criteria and the minimum effective torsional resistance criteria as specified in the pre-construction submittals must be satisfied prior to terminating the pier installation. In the event any helical pier fails to meet these production quality control criteria, the following pre-qualified remedies are authorized: A.If the installation fails to meet the minimum effective torsional resistance criterion at the minimum embedment length:

Continue the installation to greater depths until the torsional resistance criterion is met, provided that, if a maximum length constraint is applicable, continued installation does not exceed said maximum length constraint, or

Replace the pier with one having a different helix configuration. The replacement pier must not exceed any applicable maximum embedment length and either (a) be embedded to a length that places its B.If the torsional resistance during installation reaches the helical pier's maximum allowable torque rating prior to satisfaction of the minimum embedment length criterion:

Terminate the installation at the depth obtained if allowed by the owner's representative, or Replace the pier with one having a shaft with a higher torsional strength rating. This replacement pier must be installed to satisfy the minimum embedment length criterion. It must also be embedded to a length that places its last helix at least three times its own diameter beyond the position of the helix of the replaced pier without exceeding any applicable maximum embedment length requirements and it mus Replace the pier with one having a different helix configuration. This replacement pier must be installed to satisfy the minimum embedment length criterion. It must also be embedded to a length that

places its last helix at least three times its own diameter beyond the position of the first helix of the replaced pier without exceeding any applicable maximum embedment length requirements, and it must meet 4. If allowed by the pier location tolerance or approved by the owner's representative, remove and reinstall the pier at a position at least three times the diameter of the largest helix away from the initial location. Original embedment length and torsional resistance criteria must be met. This pier repositioning may require the installation of additional helical piers with nominal loads adjusted for these spacing

C. If the installation reaches a specified maximum embedment length without achieving the minimum effective torsional resistance criterion: I. If allowed by the pier location tolerance or approved by the owner's representative, remove and reinstall the pier at a position at least three times the diameter of the largest helix away from the initial location. Original embedment length and torsional resistance criteria must be met. This pier repositioning may require the installation of additional helical piers with nominal loads adjusted for these spacing

Demonstrate acceptable pier performance through proof testing, or De-rate the load capacity of the helical pier and install additional piers, as necessary. The de-rated capacity and additional pier location shall be subject to the approval of the owner's representative, or

Replace the pier with one having a different helix configuration. This replacement pier must be installed to satisfy the minimum embedment length criterion and it must meet the minimum effective D.If a helical pier fails to meet acceptance criteria in a performance or proof test: Install the pier to a greater depth and installation torque and re-test provided that, if a maximum embedment length constraint is applicable, continued installation will not exceed said maximum length

Replace the pier with one having more and/or larger helix plates. It must be embedded to a length that places its last helix at least three times its own diameter beyond the position of the first helix of the replaced pile without exceeding any applicable maximum embedment length requirements. This replacement pile must be re-tested, or 3. If approved by the owner's representative, de-rate the load capacity of the helical pier and install additional piers. Additional piers must be installed at positions that are at least three times the diameter of the largest helix away from any other pier locations and are approved by the owner's representative. Piers installed in cohesive soils shall not be spaced closer than four helix diameters. E. Proof testing to qualify a pier under any of the foregoing remedial actions shall not be used to satisfy proof testing frequency requirements shown in the project plans or the design documentation. If a helical

# 7. Installation Record Submittals

A.The installing contractor shall provide the owner, or his authorized representative, copies of individual helical pier installation records within 24 hours after each installation is completed. Formal copies shall

Location of helical pier

Actual helical pier type and configuration Pier reveal . Total length of installed pie Actual inclination of the pier

Actual effective torsional resistance Calculated geotechnical capacity based on actual torsional resistance 9. Comments pertaining to interruptions, obstructions, or other relevant information

# 8. Pier Testing

Two load tests shall be performed in accordance with the latest version of ASTM D1143 and the following criteria:

be submitted (within 5 days). These installation records shall include, but are not limited to, the following information:

A.Load tests shall be performed on two (2) helical piers after installation in accordance with the plans. The static load capacity test shall be conducted one at a time and shall consist of the following. An initial axial setting force of 5,000 lbs shall be applied to the helical pier or helical pile. Load increments of 10 to 25% of the design allowable load shall be subsequently applied with a constant time interval between each increment, in accordance with ASTM D1143 quick load test method for individual piles, until the proof load specified on the plans is reached. After the final hold period, the maximum pile head displacement shall be recorded. The test shall be deemed successful provided helical pier and helical pile maximum pile head displacement is less than one half (1/2) inch of the design load. In the event of an unsatisfactory test, the helical pier or helical pile shall be installed to additional length and torque until a successful proof load capacity test has been completed. Axial load shall be applied to the helical pier and helical pile during the proof load capacity test utilizing the final bracket assembly configuration. Through the duration of installation and testing, the horizontal movement of the structure to which the helical piers are attached shall be limited as shown on the plans.

B.If pier testing is required, the installing contractor shall furnish all labor, equipment and pre-production helical piers necessary to accomplish the testing as shown in the approved pier design documentation ontractor shall apply the specified loads for the specified durations and record the specified data, for the specified number of piers. No deviations from the test plan(s) will be allowed without C. Installing contractor shall provide the owner, or owner's representative, copies of raw field test data or reports within 24 hours after completion of each load test. Formal test reports shall be submitted within (5

days) following test completion. Formal test reports shall include, but are not limited to, the following information:

Name of project and installing contractor Name of installing contractor's supervisor during installation

Name of third party test agency, if any

Date, time, and duration of test Unique identifier and location of helical pier tested

Type of test (performance of proof) Description of calibrated testing equipment and test set-up

Actual helical pier type and configuration

Steps and duration of each load increment Cumulative pier head movement at each load step

	Within (2 weeks) of completion of the work, the installic contractor or used under the installing contractor's direction		y and all material, equipment, tools, building materials, concrete forms, debris, or other items belonging Patented Product: U.S. Patent #5,906,084 #8,302,362 #8,		38 #9 09
		OFFICE LOCATIONS	PROJECT TITLE:	JOB NUMBER:	
,	THE RESERVE OF THE PARTY OF THE			DATE:	5/20/20
,	Permalrak*	FLORIDA	MUDDUEV CANDLED DADY DUACE II	DESIGNED BY:	KAS
		TEXAS	MURPHEY CANDLER PARK - PHASE II  BROOKHAVEN, GEORGIA	DRAWN BY:	KAS
	The Concrete Boardwalk Company	LOUISIANA	BROOKHAVEN, GEORGIA	CHECKED BY:	RPU
	www.permatrak.com TEL: 877-332-7862	NORTH CAROLINA OHIO		SHEET NO.  Helical	Note

ELEVATED PRECAST CONCRETE BOARDWALK PROJECT SPECIFICATIONS V3.6 UPDATED APRIL 2020

PRECAST CONCRETE BOARDWALK SYSTEM

PART 1-GENERAL 1 SUMMARY

These specifications are for a precast concrete boardwalk and shall be regarded as minimum standards for this project. These specifications are based upon products designed and supplied

Ph: (864) 354-4870 Fax: 704-541-3675 www.permatrak.com Contact: Mr. John Pyle

jpyle@permatrak.com

PermaTrak North America LLC

This item shall also include the design, specification, and construction of a railing and foundation

system that is attached to the proposed boardwalk system. ALTERNATE REQUIREMENTS: Alternates are allowed provided that the following

minimum standards and these "Precast Concrete Boardwalk System" specifications are met.

"Minimum Standards" as outlined in section 1.3 below must be met. B. A drawing of the precast boardwalk system (including tread layout, structural details designed for the design loads shown on the contract documents, foundation design and layout) must be submitted 2 weeks before the bid date and signed and sealed by a Professional Engineer in the

3 MINIMUM STANDARDS: The selected boardwalk shall have the following minimum

. Submittal must meet the requirements set forth in section 1.6a

state of the project location.

uplication or distribut rawing may be made

the express written co PermaTrak® except fo

limited purposes set for

and party for whom th

. The precast system shall be designed as a modular flexible system allowing a prescribed settlement at pier locations. Joints shall be designed for such movement to occur without

damage to the structural integrity of the system Boardwalk system (beams, treads, and curbs if applicable) must be reinforced precast concrete.

A material change, including cast-in-place concrete, is not considered an equal to the design

Walking surface (treads) shall be made of reinforced precast concrete, and supported by reinforced precast concrete beams. Where applicable, edges of treads will receive precast

Walking surface (finish) of top surface of treads shall have a formliner finish with one of PermaTrak's standard textures. Texture must be integral with the concrete and shall not be an

. Precast concrete treads shall be structural load bearing elements and shall interlock with one another via a "tongue and groove" connection.

All precast shall consist of integrally colored concrete in a color selected by the owner from one of PermaTrak's "standard colors". G. DESIGN LOADS: See PT01 for pedestrian and vehicular design live loads.

Treads shall maintain a "boardwalk appearance", specifically meaning each tread shall have a width: length ratio ranging from a minimum of 3:1 to a maximum of 14:1. Width is defined as the tread dimension perpendicular to the normal direction of travel. Length is defined as the tread

Tread width shall be as noted on the contract drawings. Alignment should follow the horizontal and vertical alignment shown on the contract plans.

J. Connectors for curbs (if applicable) to treads shall not be visible to boardwalk users while viewed from the top of the walkway.

K. All tread-to-beam connectors shall be non-corrosive, and hidden from view. Metallic tread-to-beam connectors are not acceptable for this project.

L. Boardwalk supplier shall provide a field representative on site for a minimum of 2 days. Field

date for this project. The contractor shall submit a list containing at least three (3) projects

length similar to those shown on the plans. The list of projects shall contain names and phone

numbers of owner's representatives who can verify the Contractor's participation on those

ompleted in the last three (3) years on which the contractor has installed piles of a size and

representative shall be knowledgeable in the installation of precast concrete boardwalks.

1.4 QUALITY ASSURANCE A. The contractor performing the installation of the pile foundations shall have installed piles of size and length similar to those shown on the plans for a minimum of three (3) years prior to the bid

B. Manufacturer Qualifications: Not less than 10 years experience in the actual production of

1. Components shall be factory fabricated and engineered by single entity. This entity shall be registered to do business in the State of the project location.

2. Boardwalk supplier (Precaster) for the boardwalk shall have in-house color mixing facilities 3. Boardwalk supplier (Precaster) shall have either a minimum experience of 5 years or 50 boardwalk projects in design, production, and field consultation.

steel forms. Temporary (i.e., Timber) and/or single use forms are unacceptable unless approved in writing by the Boardwalk Engineer. C. Acceptability Criteria for Treads and Curbs (if applicable): The finished visible (in the final installed position) surface shall have no obvious imperfections other than minimal color or texture

Precast components must be manufactured with the use of hot rolled steel skin in reinforced

variations from the approved samples or evidence of repairs when viewed in good typical daylight illumination with the unaided naked eye at a 20 ft. viewing distance. Appearance of the surface shall not be evaluated when light is illuminating the surface from an extreme angle as it tends to accentuate the minor surface irregularities. The following is a list of finish defects that shall be properly repaired, if obvious when viewed at a 20 ft. distance. Patching (by a trained skilled concrete repair person) is an acceptable repair method.

Boardwalk supplier (Precaster) must be certified by PCI or NPCA.

Ragged or irregular surfaces.

Excessive air voids (commonly called bug holes) larger than ¼ in. evident on the top surface of the tread or curbs (if applicable). Adjacent flat and return surfaces with greater texture and/or color differences than the approved samples or mockups.

Casting and/or aggregate segregation lines evident from different concrete placement lifts

and consolidation Visible mold joints or irregular surfaces. Rust stains on exposed surfaces.

Units with excessive variation in texture and/or color from the approved samples, within the unit or compared with adjacent units. 8 Blocking stains evident on exposed surfaces

Areas of backup concrete bleeding through the facing concrete. 10. Foreign material embedded in the surface. 11. Visible repairs at a 20 ft. viewing distance.

Reinforcement shadow lines. 13. Cracks visible at a 20 ft. viewings distance.

D. Installer Qualifications: Firm with 3 years experience in installation of systems similar in complexity to those required for this Project.

E. Mock-Up: Provide, if required by Architect/ Engineer, a mock-up for evaluation of the boardwalk showing the surface preparation techniques and application workmanship.

Refinish mock-up area as required to produce acceptable work.

Finish areas designated by Architect / Engineer. Do not proceed with remaining work until mock-up is accepted by Architect / Engineer.

A. For applications requiring minimum disturbance due to tree roots or other existing objects specified by the Owner to be avoided during construction, the Boardwalk Manufacturer requires the Contractor or Engineer/Architect to provide a survey of the proposed boardwalk location dentifying items of interest including tree roots that cannot be disturbed per the Owner.

B. The designer of the boardwalk, foundation and railing system shall be a qualified registered Professional Engineer licensed in the State of the project location and having a minimum of 20 years of experience in the design of concrete structures, foundation and railing systems.

C. The foundation design shown on the boardwalk drawings are based recommendations found in the geotechnical report entitled referenced on PT01 (if applicable).

D. DESIGN CRITERIA: The design of the boardwalk and railing system shall comply with the following guidelines:

AASHTO LRFD Guide Specifications for The Design of Pedestrian Bridges, 2<sup>nd</sup> Edition with 2015 Interim Revisions.

Latest Version of AASHTO LRFD Bridge Design Specifications for Highway Bridges. Latest Version of American Concrete Institute - Building Code and Commentar 4. In addition to the dead loads of the system, the structure shall be designed for the live loads defined in Section 1.3.G above.

SUBMISSIONS: Prior to the start of fabrication or construction, the Contractor shall submit to the Engineer a design package, which shall include, but is not limited to, the following:

A. PRELIMINARY SUBMISSIONS: Prior to the start of fabrication or construction, the Contractor shall submit to the Engineer a design package, which shall include but not limited to the

DETAILED PLANS:

a. REGISTRATION / SEAL: Sealed by a licensed Professional Engineer in the state of . PLAN VIEW: Full plan view of the boardwalk, foundation and railing system drawn to

scale. The plan view must reflect the proposed horizontal alignment as shown on the ELEVATION VIEW: Full elevation view of the boardwalk, railing and foundation system drawn to scale which reflect the actual vertical alignment. Elevation views shall indicate the elevation at the top and bottom of the boardwalk and foundation system components, horizontal and vertical break points, and location of the finished grade.

d. DETAILS: Details of all boardwalk and railing system components and their connections such as the length, size and where changes occur; connections; etc. e. CODE REFERENCE: Design parameters used along with AASHTO references.

2. DESIGN COMPUTATIONS: computations shall:

a. Be stamped by a licensed Professional Engineer in the State of the project location. b. Clearly refer to the applicable AASHTO provisions.

c. Include documentation of computer programs including all design parameters. d. Clearly show that all reinforced precast treads and beams meet AASHTO requirements for the loading per Section 1.3.F. e. Include sketches of reinforcement in treads and beams, shear and moment diagrams, and all equations used shall be referenced to applicable code.

3. CONSTRUCTION SPECIFICATIONS:

a. Construction methods specific to the boardwalk vendor chosen. Submittal requirements such as certification, quality and acceptance/rejection criteria shall be included. Details on connection of boardwalk units and foundation system such that assurance of uniform load transfer shall be checked.

B. FINAL SUBMISSION: Once a boardwalk, foundation and railing system design has been reviewed and accepted by the Owner, the Contractor shall submit the final plans. The designer of the boardwalk, foundation and railing system is responsible for the review of any drawings prepared for fabrication. One set of all approved shop drawings shall be submitted to the

C. SUBMITTALS: Product Data: Submit Manufacturer's technical product data for railing components and accessories.

Manufacturer to supply submittal drawings for approval to include the following: Section-thru details. Mounting methods.

Typical Elevations. Key plan layout.

D. SHOP DRAWINGS: Shop drawings shall:

a. Be stamped by a licensed Professional Engineer in the State of the project location. b. Show actual field conditions and true elevation and location supplied after field

c. Clearly detail reinforcement in beams, treads and curbs including clear dimension from

concrete edge, size and amount of rebar. d. Clearly state concrete compressive strength, steel type and strength, and a listing of al component weights including lifting locations.

1.7 DELIVERY, STORAGE, AND HANDLING

A. Store products in manufacturer's unopened packaging until ready for installation.

B. Field Measurements: Where handrails and railings are indicated to fit to other construction, check actual dimensions of other construction by accurate field measurements before fabrication; show recorded measurements on final shop drawings:

Where field measurements cannot be made without delaying the railing fabrication and delivery, obtain guaranteed dimensions in writing by the Contractor and proceed with fabrication of products so as not to delay fabrication, delivery and installation.

C. Coordinate fabrication and delivery schedule of handrails with construction progress and sequence to avoid delay of railing installation.

e. Air entrained composed of Portland cement, fine and course aggregates, admixtures and water. The air-entraining feature may be obtained by the use of either an air entraining Portland cement or an air entraining admixture. The entrained air-content

shall be not less than four percent or more than seven percent.

1.8 WARRANTY: A. Contractor will be responsible for installation defects associated with the boardwalk and abutment components, foundation system, and railings for a period of 12 calendar months from

the date of final acceptance by the Owner. B. Boardwalk manufacturer shall warranty all precast concrete components against defects in

material and workmanship for a period of 10 years.

C. Railing manufacturer shall warranty the railing against defects in materials and workmanship for

1.9 MEASUREMENT AND PAYMENT

A. Precast concrete boardwalk, railings, and foundations shall be paid for at the contract lump sum price as listed in the bid proposal for "Precast Concrete Boardwalk". This price shall include all materials, equipment, labor and work necessary for and incidental to the design, construction,

delivery, unloading, assembly, and placement of the boardwalk and foundation as shown in the contract plans including all railings on the superstructure.

PART 2-MATERIALS & TESTING

2.1 PRECAST CONCRETE: shall conform to the following:

a. The minimum compressive strength of the concrete shall be 4000 psi measured at 28 b. All precast concrete shall contain structural steel reinforcement as designed by the

Engineer of record. c. All precast concrete components shall be air entrained composed of Portland cement fine and course aggregates, admixtures and water. The air-entraining feature may be obtained by the use of either an air entraining Portland cement or an air entraining

admixture. The entrained air-content shall be not less than four percent or more than seven percent. d. All reinforcing steel shall be standard uncoated steel conforming to ASTM A615

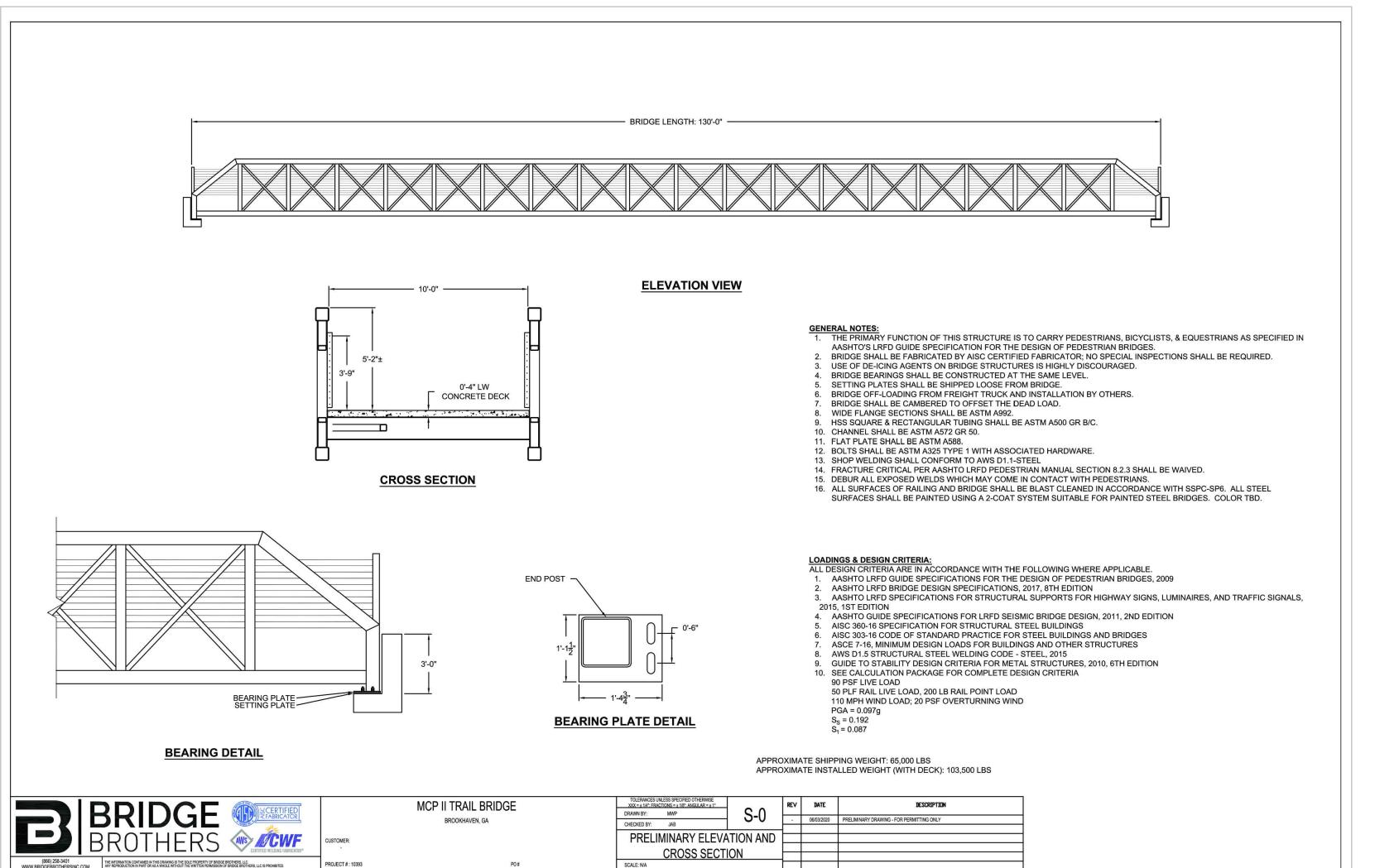
PART 3 - EXECUTION

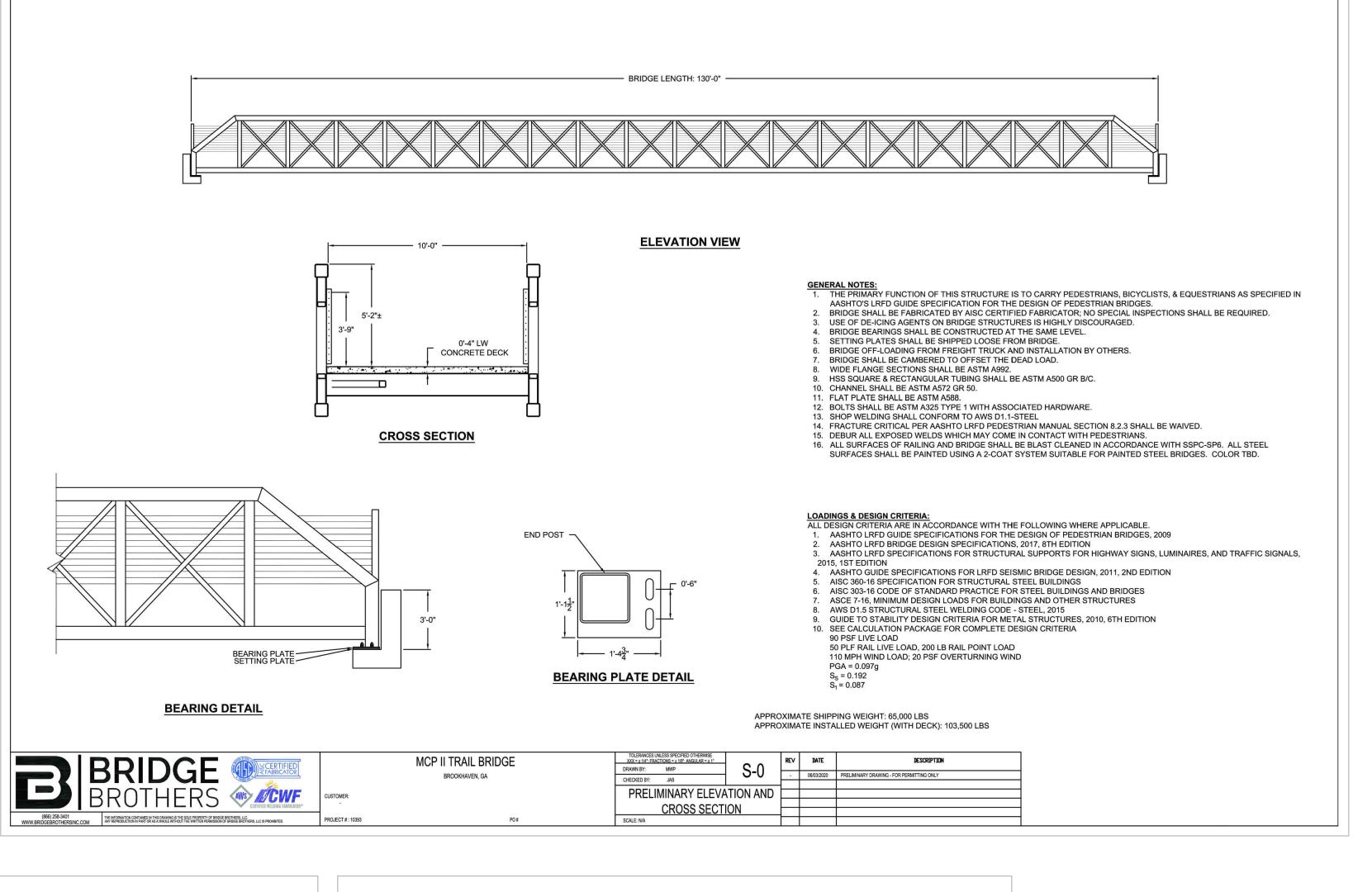
1.1 PRECAST CONCRETE BOARDWALK A. Installation of the precast concrete boardwalk system and railings, if applicable, shall be

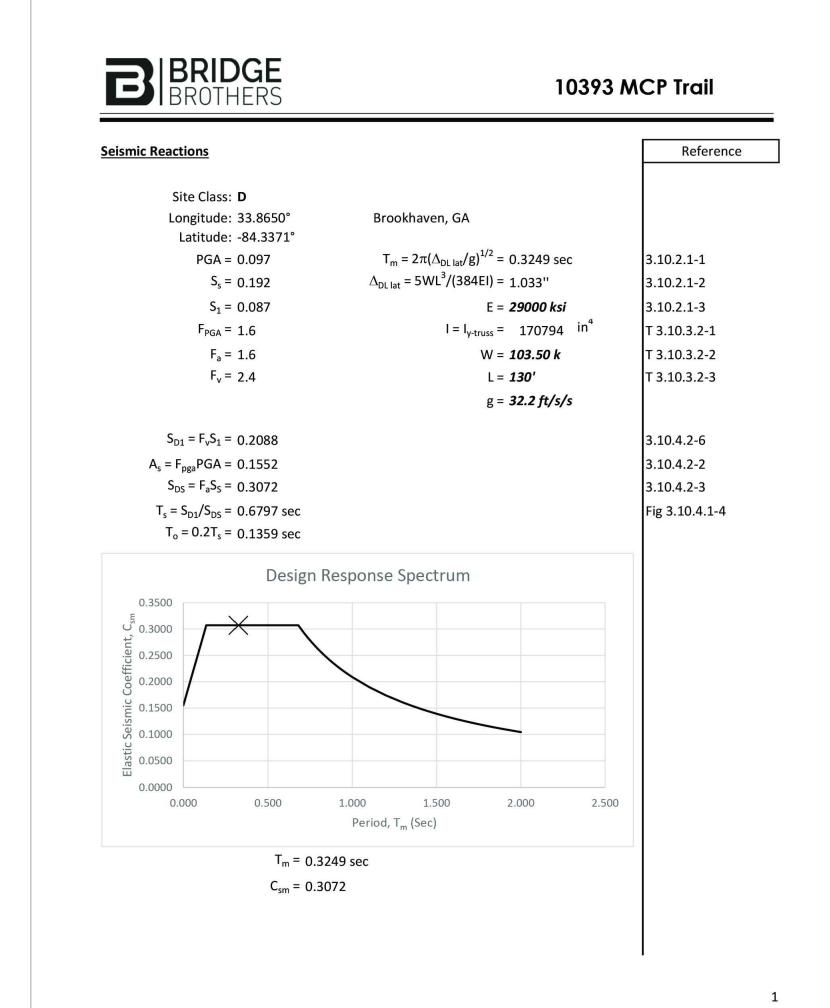
performed in accordance to the approved plans and manufacturers installation instructions. Boardwalk manufacturer shall provide a field representative to review installation instruction with the Contractor and Engineer and to certify that the installation has been performed according to the approved drawings and manufacturer's instructions.

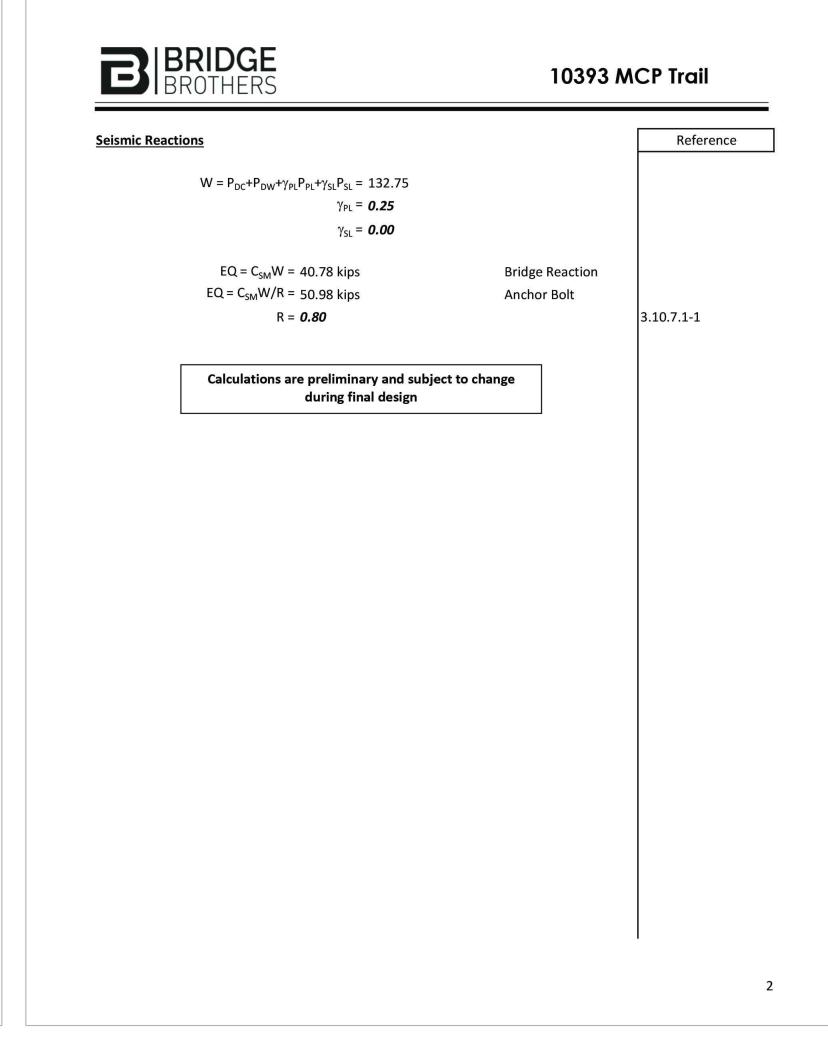
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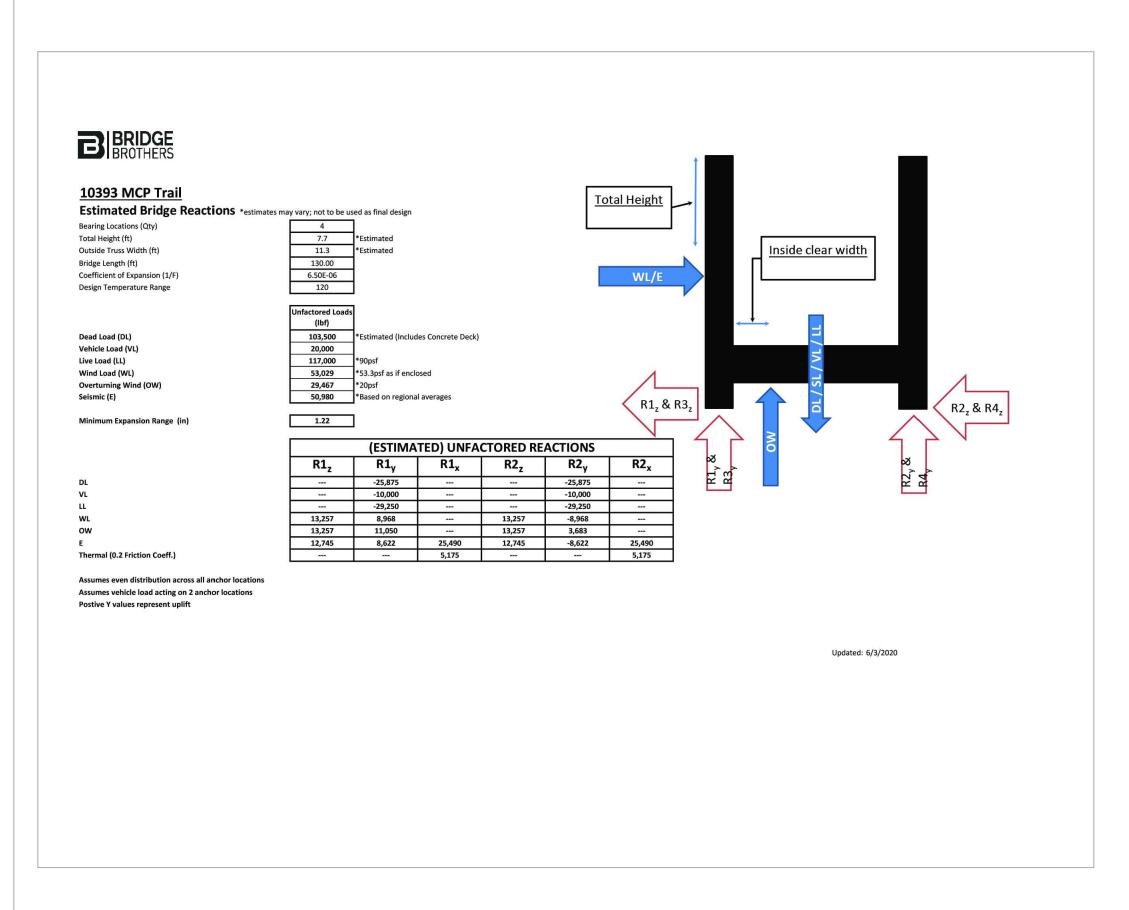
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# STRUCTURAL GENERAL NOTES

- GENERAL: A. THE FOLLOWING NOTES ARE APPLICABLE TO ALL DRAWINGS IN ADDITION TO THE
- PROJECT SPECIFICATIONS. B. APPLICABLE STRUCTURAL CODE GEORGIA BUILDING CODE, 2018 IBC EDITION WITH AMENDMENTS AND AASHTO LRFD GUIDE SPECIFICATIONS FOR THE DESIGN OF
- PEDESTRIAN BRIDGES LATEST EDITION. C. THE STANDARDS REFERENCED IN THE DRAWINGS (i.e. ACI, AISC, ETC.) SHALL BE THE
- EDITION SPECIFIED IN CHAPTER 35 OF THE BUILDING CODE. D. THE CONTRACTOR SHALL USE MATERIALS AND EMPLOY CONSTRUCTION METHODS IN ORDER TO COMPLY WITH THE DRAWINGS AND SPECIFICATIONS. WHERE A CONFLICT OCCURS, THE STRICTEST DESIGN SHALL GOVERN. ENGINEER'S REVIEW OF SHOP DRAWINGS, PRODUCT DATA, ETC. DOES NOT RELIEVE THE CONTRACTOR FROM MEETING THE CONTRACT DOCUMENTS. THE CONTRACTOR SHALL INFORM THE ENGINEER IN WRITING OF ANY SPECIFIC DEVIATIONS AND OBTAIN ENGINEER'S WRITTEN APPROVAL FOR THE SPECIFIC DEVIATION.
- E. THE STRUCTURE SHOWN ON THESE DRAWINGS IS STRUCTURALLY SOUND ONLY IN ITS COMPLETED FORM. THE CONTRACTOR SHALL FURNISH TEMPORARY SHORING AND
- F. THE STRUCTURAL DRAWINGS SHALL BE USED IN CONJUNCTION WITH CIVIL, BRIDGE, AND LANDSCAPE DRAWINGS. THE CONTRACTOR IS RESPONSIBLE FOR COORDINATION OF ALL REQUIREMENTS INTO THE SHOP DRAWINGS AND CONSTRUCTION.
- G. IT IS THE CONTRACTOR'S SOLE RESPONSIBILITY TO FOLLOW ALL APPLICABLE SAFETY
- CODES AND REGULATIONS DURING ALL PHASES OF CONSTRUCTION. H. CONNECTIONS OF ALL ITEMS SUPPORTED BY THE STRUCTURE ARE THE RESPONSIBILITY OF THE DISCIPLINES WHO ARE MAKING THESE ATTACHMENTS. THESE ATTACHMENTS SHALL BE DESIGNED TO RESIST ALL GRAVITY, WIND, WIND UPLIFT, THERMAL LOADS,
- I. WHERE A DETAIL, TYPICAL DETAIL, SECTION, TYPICAL SECTION OR A NOTE IS SHOWN FOR ONE CONDITION, IT SHALL APPLY FOR ALL LIKE OR SIMILAR CONDITIONS UNLESS OTHERWISE NOTED.
- J. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CONDITIONS.
- K. UNLESS NOTED, ELEVATIONS SHOWN ARE TO TOP OF BEAMS AND FOUNDATIONS. UNLESS NOTED, SUBMIT SHOP DRAWINGS OF ALL FABRICATED MATERIALS FOR REVIEW. DESIGN DRAWINGS SHALL NOT BE REPRODUCED FOR USE AS SHOP DRAWINGS. SHOP DRAWINGS WILL NOT BE REVIEWED UNLESS THEY WERE CHECKED, BEAR THE INITIAL OF
- THE CHECKER AND ARE STAMPED "APPROVED" BY THE GENERAL CONTRACTOR. M. ALL REQUIRED TESTING REPORTS SHALL BE AVAILABLE AT THE JOB SITE.
- A. DEAD & LIVE LOADS:
  - 1. DEAD LOAD: SELF WEIGHT OF STRUCTURE 2. HORIZONTAL EARTH PRESSURE, EH = 45 PSF ACTIVE EARTH PRESSURE
- 3. SEE TABLE ON THIS SHEET FOR BRIDGE LOADS
- B. WIND LOADS:
- 1. OVERTURNING WIND 20 PSF
- 2. WIND LOAD IMPORTANCE FACTOR = 1.0C. EARTHQUAKE DESIGN DATA
- 1. SEISMIC IMPORTANCE FACTOR, I = 1.02. MAPPED SPECTRAL RESPONSE ACCELERATIONS
- Ss = 0.192
- II.  $S_1 = 0.087$
- 3. SITE CLASS = D4. DESIGN SPECTRAL RESPONSE PARAMETERS
- SDS = 0.205
- II. Sp1 = 0.138D. DESIGN LOAD COMBINATIONS
- 2. D + L
- 3. D + (Lr OR S OR R)4. D + W
- 5. D + 0.75(0.6W OR 0.7E) + 0.75L
- 6. 0.6D + 0.6(W OR 0.7E)STRESS INCREASES: INCREASES IN ALLOWABLE STRESSES SPECIFIED IN THE APPROPRIATE MATERIAL CHAPTER OR THE REFERENCED STANDARDS SHALL NOT BE USED WITH THE LOAD COMBINATIONS, EXCEPT THAT A DURATION OF LOAD INCREASE
- SHALL BE PERMITTED. 2B. DESIGN CRITERIA FOR AASHTO:
- A. DEAD & LIVE LOADS:
- 7. DEAD LOAD: SELF WEIGHT OF STRUCTURE
- 8. HORIZONTAL EARTH PRESSURE, EH = 45 PSF ACTIVE EARTH PRESSURE
- 9. SEE TABLE ON THIS SHEET FOR BRIDGE LOADS
- B. WIND LOADS: 1. OVERTURNING WIND 20 PSF
- 2. WIND LOAD IMPORTANCE FACTOR = 1.0
- C. EARTHQUAKE DESIGN DATA
- 1. SEISMIC IMPORTANCE FACTOR, I = 1.02. MAPPED SPECTRAL RESPONSE ACCELERATIONS
- I. Ss = 0.192II.  $S_1 = 0.087$
- 3. SITE CLASS = D4. DESIGN SPECTRAL RESPONSE PARAMETERS
- I. SDS = 0.3072II. Sp1 = 0.2088
- D. DESIGN LOAD COMBINATIONS
- SERVICE 1. DC + PL + 0.3WS
- 2. DC + 1.3PL
- 3. DC + 0.7WS EXTREME EVENT I
- 1. Y<sub>P</sub>DC + Y<sub>FO</sub>PL + EL
- LOAD COMBINATIONS PER IBC 2018 OR AASHTO LATEST EDITION, WHICHEVER CONTROLS.

# FOUNDATIONS

- A. THE DESIGN OF FOUNDATIONS IS BASED ON A HELICAL PILE FOUNDATION PER THE RECOMMENDATIONS PROVIDED IN THE GEOTECHNICAL ENGINEERING REPORT NO. 2019162, DATED APRIL 14, 2020 ELABORATED BY NOVA. ACTUAL DEPTH OF PILE TO ACHIEVE THE MINIMUM TENSION OR COMPRESSION LOADS INDICATED IN SECTION 5; SHALL BE VERIFIED IN THE FIELD BY A GEOTECHNICAL ENGINEER, LICENSED IN THE STATE OF GEORGIA, AT THE TIME OF PILE INSTALLATION.
- B. THE EVALUATION OF THE CONDITION AND/OR ADEQUACY OF ALL SUBGRADES, FILLS AND BACKFILLS SHALL BE PERFORMED UNDER THE DIRECTION OF A GEOTECHNICAL ENGINEER REGISTERED IN THE STATE OF GEORGIA. ALL SUBGRADE WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS AND THE GEOTECHNICAL REPORTS BEFORE PLACEMENT OF FOUNDATIONS, FOOTINGS, SLABS, WALLS, FILLS, BACKFILLS, ETC.
- C. WHERE RETAINED SOILS ARE NOT COVERED BY CONCRETE OR PAVEMENT AND ARE EXPOSED TO WEATHER, THE TOPSOIL REQUIREMENTS OF BACKFILL SHALL BE COORDINATED WITH LANDSCAPE
- D. DRAINAGE SYSTEM BEHIND CONCRETE WALLS SHALL BE A SUBSURFACE BLANKET DRAIN UNDERNEATH AND SURROUNDING THE PERIMETER OF THE STRUCTURE WITH A MINIMUM DEPTH OF 12 INCHES OF #57 STONE. FURTHER DETAILS SHALL BE IN ACCORDANCE WITH THE RECOMMENDATIONS IN THE GEOTECHNICAL REPORT AND SET FORTH IN THE PROJECT MANUAL.
- E. GROUND WATER SHALL BE KEPT AT LEAST 3 FEET BELOW THE DEEPEST FOUNDATION BEARING ELEVATION DURING CONSTRUCTION. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR DEWATERING FOR ALL MEASURES NECESSARY.
- F. AFTER STRIPPING ALL PAVEMENTS, VEGETATION, ROOTMAT, TOPSOIL, AND ANY OTHER SOFT OR UNSUITABLE MATERIAL FROM THE CONSTRUCTION AREA, AND PRIOR TO FILL PLACEMENT, THE STRIPPED SURFACE SHOULD BE EVALUATED UNDER THE DIRECTION OF A GEOTECHNICAL ENGINEER LICENSED IN THE STATE OF GEORGIA.
- G. ALL FILL OPERATIONS SHOULD BE OBSERVED, ON A FULL-TIME BASIS BY A QUALIFIED SOIL TECHNICIAN TO DETERMINE THAT MINIMUM COMPACTION REQUIREMENTS ARE BEING MET.
- H. FILL MATERIALS SHOULD BE PLACED IN IFTS NOT EXCEEDING 8" IN LOOSE THICKNESS AND MOISTURE CONDITIONED TO WITHIN ±3% OF THE OPTIMUM MOISTURE CONTENT TO FACILITATE PROPER COMPACTION. CONTROLLED FILL SOILS SHOULD BE COMPACTED TO MINIMUM OF 95% OF THE MAXIMUM DRY DENSITY OBTAINED IN ACCORDANCE WITH ASTM SPECIFICATION D-698, STANDARD PROCTOR METHOD.

### 4. REINFORCING STEEL:

- A. ALL CONCRETE WORK SHALL CONFORM TO ACI 301, SPECIFICATIONS FOR STRUCTURAL CONCRETE FOR BUILDINGS.
- B. ALL REINFORCING LAP SPLICES IN CONCRETE SHALL CONFORM TO ACI 350-06 PROVIDE CONTINUOUS REINFORCEMENT WHEREVER POSSIBLE: SPLICE ONLY AS SHOWN OR APPROVED; STAGGER SPLICES WHERE POSSIBLE; USE TENSION SPLICE (CLASS "B") UNLESS NOTED OTHERWISE. DOWELS SHALL MATCH THE SIZE AND SPACING OF THE SPECIFIED REINFORCEMENT AND SHALL BE LAPPED WITH TENSION SPLICES (CLASS "B") UNLESS NOTED OTHERWISE.
- C. ALL CONCRETE SHALL BE NORMAL WEIGHT AND HAVE THE A MINIMUM 28 DAY STRENGTH OF 4000PSI.
- D. THE PROPOSED MATERIALS AND MIX DESIGN SHALL BE FULLY DOCUMENTED AND REVIEWED BY THE OWNER'S TESTING LABORATORY. RESPONSIBILITY FOR OBTAINING THE REQUIRED DESIGN STRENGTH IS THE CONTRACTOR'S.
- E. USE OF CALCIUM CHLORIDE, CHLORIDE IONS, OR OTHER SALTS IN CONCRETE IS NOT PERMITTED.
- F. HORIZONTAL CONSTRUCTION JOINTS ARE PERMITTED ONLY WHERE INDICATED. CONSTRUCTION JOINTS SHALL BE THOROUGHLY ROUGHENED BY MECHANICAL MEANS, AND CLEANED.
- G. WELD WIRE FABRIC (W.W.F.) REINFORCING STEEL SHALL CONFORM TO ASTM D-185 UNLESS NOTED
- H. WHEN PLACING CONCRETE UNDER HOT OR COLD WEATHER CONDITIONS COMPLY WITH THE LATEST EDITIONS OF ACI 305R: "HOT WEATHER CONCRETING" OR ACI 306R: "COLD WEATHER CONCRETING".
- I. REINFORCING STEEL SHALL HAVE THE FOLLOWING CONCRETE COVER UNLESS NOTED OTHERWISE: (NON-PRESTRESSED CONCRETE)
- CONCRETE EXPOSED TO EARTH, LIQUID, WEATHER, OR CAST AGAINST A CONCRETE WORK MAT:
- J. DO NOT WELD OR TACK WELD REINFORCING BARS.
- K. CHAMFER OR ROUND ALL EXPOSED CORNERS MINIMUM 3/4", UNLESS NOTED OTHERWISE.
- L. DO NOT PLACE PIPES OR DUCTS EXCEEDING ONE-THIRD THE SLAB OR WALL THICKNESS WITHIN THE SLAB OR WALL UNLESS SPECIFICALLY SHOWN AND DETAILED ON THE STRUCTURAL DRAWINGS.
- M. DETAIL ALL CONCRETE BEAMS ON THE SHOP DRAWINGS IN ELEVATION UNLESS SPECIFICALLY APPROVED OTHERWISE.
- 5. HELICAL PILES:
- A. HELICAL PILES SHALL BE MANUFACTURED AND INSTALLED IN CONFORMANCE TO ICC-ES AC358 "ACCEPTANCE CRITERIA FOR HELICAL FOUNDATION SYSTEMS AND DEVICES" (LATEST
- B. PILES SHALL BE INSTALLED BY AN AUTHORIZED INSTALLING CONTRACTOR HAS SATISFIED THE CERTIFICATION REQUIREMENTS RELATING TO THE TECHNICAL ASPECTS OF THE PRODUCT AND THE ASCRIBED CERTIFICATION REQUIREMENTS RELATING TO THE TECHNICAL ASPECTS OF THE PRODUCT AND BE THE ASCRIBED INSTALLATION TECHNIQUES. PROOF OF CURRENT CERTIFICATION BY THE MANUFACTURER MUST BE PROVIDED.

C. UNLESS NOTED, SITE PREPARATION, MATERIALS PROCEDURES, TESTING AND INSTALLATION

- OF PILES SHALL BE IN ACCORDANCE WITH GEOTECHNICAL INVESTIGATION RECOMMENDATIONS D. HELICAL PILES SHALL BE DESIGNED FOR THE FOLLOWING ALLOWABLE APPLIED LOADS
- AND SETTLEMENTS D.A. VERTICAL COMPRESSIVE/TENSILE LOAD: 35 KIPS
- D.B. MAXIMUM TOTAL VERTICAL SETTLEMENT OF 1 INCH D.C. MAXIMUM DIFFERENTIAL SETTLEMENT (BETWEEN PILES) OF 1/2 INCH ALONG
- HORIZONTAL DISTANCE OF 50 FEET ALLOWABLE APPLIED LOADS AND SETTLEMENTS SHALL BE VERIFIED BY THE
- GEOTECHNICAL ENGINEER DEPTH SHALL BE ESTABLISHED BY A QUALIFIED GEOTECHNICAL ENGINEER.
- PILE INSTALLATION AND TESTING SHALL BE PERFORMED UNDER THE SUPERVISION OF A QUALIFIED GEOTECHNICAL ENGINEER OR THEIR AUTHORIZED AGENT G. SUBMIT TEST DATA AND PILE INSTALLATION RECORDS TO THE ARCHITECT. H. ALL BEARING MATERIAL SHALL BE INSPECTED BY THE INDEPENDENT TESTING AGENCY PRIOR TO CONCRETE PLACEMENT. THE INDEPENDENT TESTING AGENCY SHALL BE THE

SOLE JUDGE AS TO THE SUITABILITY OF THE BEARING MATERIAL.

- FOUNDATION WALLS THAT RETAIN EARTH SHALL BE BRACED AGAINST BACKFILLING PRESSURES UNTIL THE CONCRETE ABUTMENT IS IN PLACE. J. ALL PILES SHALL BE SUPPLIED WITH HOT DIP GALVANIZATION TO ASTM A123 GRADE 100
- K. INSTALLATION TORSION SHALL BE CONSTANTLY MONITORED DURING THE INSTALLTION AND A RECORD OF THESE VALUES SHALL BE RECORDED AT REGULAR INTERVALS.
- INSTALLATION SHALL CONTINUE UNTIL THE REQUIRED TORSION IS INDICATED AND THE PILE HAS ADVANCED TO AT LEAST THE MINIMUM DEPTH SPECIFIED. TORSION SHALL BE AVERAGED OVER THE FINAL THREE FEET.
- M. THE PILE CAP SHALL BE SIZED TO FIT THE PILE SHAFT AND TO HAVE A BEARING AREA SUITABLE TO TRANSFER THE STRUCTURAL LOAD.
- N. PILE CAP PLATE SIZE AND ALL CONNECTIONS DESIGNED BY MANUFACTURER PER SCHEDULE/DETAIL LOADS.
- O. THE HELICAL PILES SHALL BE SELECTED USING A MINIMUM FACTOR OF SAFETY 2.0 TIMES THE DESIGN OR WORKING LOAD. P. SIZE AND NUMBER OF HELICAL PLATES SHALL BE DEPENDENT UPON DESIGN LOAD AND
- SOIL STRENGTH. Q. HELICAL PILES, ASSOCIATED HARDWARE, AND ALL STEEL EXPOSED TO EARTH OR WEATHER SHALL BE HOT DIP GALVANIZED IN CONFORMANCE WITH ICC-ES AC228 "ACCEPTANCE CRITERIA FOR CORROSION PROTECTION OF STEEL FOUNDATION SYSTEMS USING POLYMER
- (EAA) COATINGS" (LATEST EDITION). SEE DETAILS FOR FINISH RESTRICTIONS. R. MINIMUM WARRANTY ON MATERIALS AND LABOR SHALL NOT BE LESS THAN 30 YEARS.

### 6. CAST-IN-PLACE CONCRETE:

- A. THE CONCRETE QUALITY, MIXING, & PLACING OF CONCRETE SHALL COMPLY WITH THE MINIMUM
- REQUIREMENTS OF ACI 318, CHAPTER 5, & AS MODIFIED BY THE GEORGIA BUILDING CODE. B. CONCRETE STRENGTHS AND TYPES SHALL BE USED IN THE AREAS AS SPECIFIED BELOW, UNLESS NOTED OTHERWISE.

### <u>MAX</u> <u>AGGREGATE</u> <u>USAGE</u> a. GRADE BEAMS/FOUNDATIONS — 4000 PSI SC b. STRUCTURAL SLAB - 4000 PSI SC c. NON-STRUCTURAL FILL - 3000 PSI SC

- d. ALL OTHER CONCRETE 4000 PSI SC D. CONCRETE NOTED IN THESE GENERAL NOTES. ON THE DRAWINGS OR IN THE SPECIFICATIONS AS SC OR STONE CONCRETE SHALL HAVE NATURAL SAND FINE AGGREGATE, NORMAL WEIGHT COARSE AGGREGATES CONFORMING TO ASTM C33 AND TYPE 1 PORTLAND CEMENT CONFORMING TO ASTM
- F. MIXING, TRANSPORTING AND PLACING OF CONCRETE SHALL CONFORM TO THE LATEST EDITION OF
- ACI 301. H. CONCRETE SHALL BE CAST MONOLITHICALLY EXCEPT WHERE OTHERWISE SHOWN.
- I. REINFORCEMENT MARKED "CONT." (CONTINUOUS) SHALL BE LAPPED A PROPER DISTANCE AT SPLICES AND CORNERS AND SHALL BE HOOKED OR EXTENDED A PROPER DISTANCE AT NON-CONTINOUS ENDS AS PER SPLICE & DEVELOPMENT LENGTH REQUIREMENTS SHOWN ON THE
- DRAWINGS. ALL HORIZONTAL/LONGITUDINAL REINFORCING SHALL BE CONTINUOUS. J. ALL CONCRETE SHALL CONTAIN A CONCRETE MIXING USING A MINIMUM OF 5.0 SACKS OF CEMENT PER CUBIC YARD. NO FLY ASH SHALL BE USED IN ANY CONCRETE. ALL EXPOSED CONCRETE TO BE AIR ENTRAINED.
- K. GENERAL CONTRACTOR SHALL VERIFY DIMENSIONS AND LOCATIONS OF ALL SLOTS, PIPE SLEEVES, ANCHOR BOLTS, ETC. AS REQUIRED FOR TRADES BEFORE CONCRETE IS POURED; NO CONCRETE IS TO BE POURED UNTIL ALL HOLES AND OPENINGS SHOWN ON PLANS AND SHOP DRAWINGS ARE REVIEWED AND VERIFIED.
- L. THE CONTRACTOR SHALL PROVIDE SLAB BOLSTERS, HIGH CHAIRS AND ALL ACCESSORIES REQUIRED FOR PROPER PLACEMENT OF REINFORCING BARS AND WIRE MESH AS PER A.C.I. & C.R.S.I. STANDARDS
- M. PRIOR TO PLACING CONCRETE. ALL REINFORCING SHALL BE FREE OF LOOSE FLAKY RUST. MUD. OIL OR OTHER COATING THAT WILL DESTROY, REDUCE OR HAMPER FULL BOND CAPACITY.

- 7. SPECIAL INSPECTIONS: A. SPECIAL INSPECTOR (SI) SHALL BE RETAINED AND PAID BY THE OWNER AND PROVIDE INSPECTIONS DURING CONSTRUCTION ON THE TYPES OF WORK LISTED UNDER SECTION 1704 OF THE CODE AS PER TABLE ON THIS SHEET.
- B. THE SPECIAL INSPECTOR SHALL BE A QUALIFIED PERSON WHO SHALL DEMONSTRATE COMPETENCE, TO THE SATISFACTION OF THE BUILDING OFFICIAL, FOR INSPECTION OF THE PARTICULAR TYPE OF CONSTRUCTION OR OPERATION REQUIRING SPECIAL INSPECTION. C. THE DUTIES OF THE SPECIAL INSPECTOR SHALL INCLUDE, BUT ARE NOT LIMITED TO, VERIFICATION OF CONSTRUCTION QUALITY CONTROL, TESTING, COMPLIANCE WITH THE

CONSTRUCTION DOCUMENTS, BUILDING CODE REQUIREMENTS, AND LOCAL BUILDING

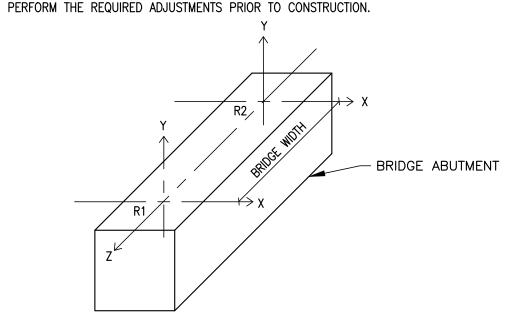
- DEPARTMENT REQUIREMENTS. D. IT IS THE CONTRACTOR'S RESPONSIBILITY TO PROVIDE PROPER NOTIFICATION TO THE SPECIAL INSPECTOR AND PROCEED WITH THE CONSTRUCTION ONLY AFTER THE SPECIAL
- INSPECTOR'S APPROVAL. E. DUTIES AND RESPONSIBILITIES OF THE SPECIAL INSPECTOR:
- 1. THE SPECIAL INSPECTOR SHALL OBSERVE THE WORK ASSIGNED FOR CONFORMANCE WITH THE APPROVED DESIGN DRAWINGS AND SPECIFICATIONS. THE INSPECTOR MAY NOT ALTER, MODIFY, ENLARGE OR WAIVE ANY OF THE REQUIREMENTS OF THE
- 2. SPECIAL INSPECTORS SHALL KEEP RECORDS OF INSPECTIONS. THE SPECIAL INSPECTOR SHALL FURNISH INSPECTION REPORTS TO THE CONSTRUCTION OFFICIAL, AND TO THE REGISTERED DESIGN PROFESSIONAL IN RESPONSIBLE CHARGE. THE CONTRACTOR AND THE OWNER. REPORTS SHALL INDICATE THAT WORK INSPECTED WAS DONE IN CONFORMANCE TO APPROVED CONSTRUCTION DOCUMENTS. DISCREPANCIES SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE CONTRACTOR AND THE OWNER FOR CORRECTION, IF THE DISCREPANCIES ARE NOT CORRECTED, THE DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE BUILDING OFFICIAL
- AND TO THE REGISTERED DESIGN PROFESSIONAL IN RESPONSIBLE CHARGE AND THE OWNER PRIOR TO THE COMPLETION OF THAT PHASE OF THE WORK. 3. A FINAL REPORT OF INSPECTIONS DOCUMENTING REQUIRED SPECIAL INSPECTIONS AND CORRECTION OF ANY DISCREPANCIES NOTED IN THE INSPECTIONS SHALL BE SUBMITTED PERIODICALLY AT A FREQUENCY AGREED UPON BY THE PERMIT APPLICANT
- F. WHERE SPECIAL INSPECTION REQUIREMENTS DUPLICATE THE REQUIREMENTS OF SPECIFIED QUALITY ASSURANCE TESTING, DUPLICATE INSPECTIONS SHALL NOT BE REQUIRED.

AND THE BUILDING OFFICIAL PRIOR TO THE START OF WORK.

# 8. BRIDGE REACTIONS:

SERVICE LOADS PROVIDED BY BRIDGE MANUFACTURER PER ABUTMENT (KIPS)						
LOAD TYPE	R1Z	R1Y	R1X	R2Z	R2Y	R2X
DEAD LOAD	_	-25.875	_	-	-25.875	_
VEHICLE LOAD	-	-10	_	-	-10	_
LIVE LOAD	-	-29.250	_	-	-29.250	-
WIND LOAD	13.257	-8.968	-	13.257	-8.968	-
OVERTURNING WIND LOAD	13.257	-11.050	_	13.257	-11.050	_
SEISMIC I, SEE NOTE 1	5.098	8.622	10.195	5.098	-8.622	10.195
SEISMIC II, SEE NOTE 2	12.745	8.622	25.490	12.745	-8.622	25.490
THERMAL	_	_	5.175	_	_	5.175

1. SEISMIC I FORCES AT EACH ABUTMENT USING A RESPONSE MODIFICATION FACTOR OF 2 PER AASHTO. SEISMIC II FORCES AT ANCHOR LOCATION USING A RESPONSE MODIFICATION FACTOR OF 0.8 PER AASHTO. REACTIONS AND BRIDGE LAYOUT ARE BASED ON PRELIMINARY INFORMATION PROVIDED BY BRIDGE MANUFACTURER DATED ON 06-03-2020. SHOULD ANY INFORMATION CHANGE, GF SHALL BE INFORMED TO

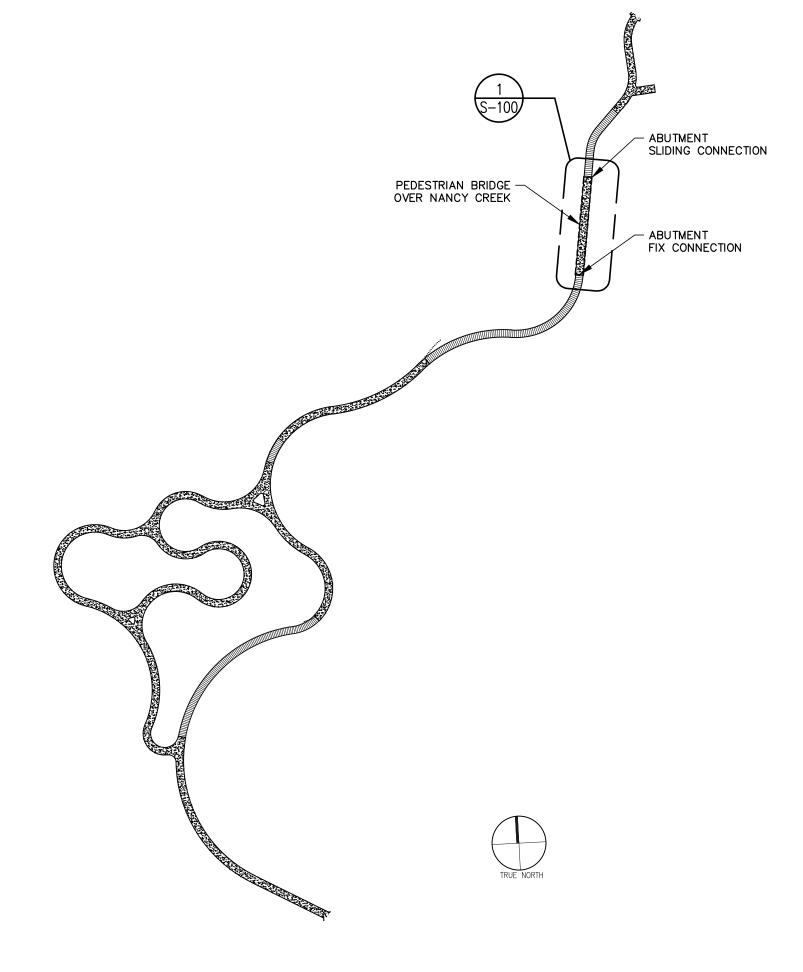


# SPECIAL INSPECTIONS APPLY TO WORK PERFORMED AT JOBSITE (U.N.)

SOILS: (1704.7)	FREQUENCY	REFERENCED STANDARD
<ol> <li>VERIFY MATERIALS BELOW SHALLOW FOUNDATIONS ARE ADEQUATE TO ACHIEVE THE DESIGN BEARING CAPACITY.</li> </ol>	PERIODIC	GEOTECHNICAL ENGINEERING REPORT
<ol> <li>VERIFY EXCAVATIONS ARE EXTENDED TO PROPER DEPTH AND HAVE REACHED PROPER MATERIAL.</li> </ol>	PERIODIC	GEOTECHNICAL ENGINEERING REPORT
<ol> <li>PERFORM CLASSIFICATION AND TESTING OF COMPACTED FILL MATERIALS.</li> </ol>	PERIODIC	GEOTECHNICAL ENGINEERING REPORT
<ol> <li>VERIFY USE OF PROPER MATERIALS, DENSITIES AND LIFT THICKNESSES DURING PLACEMENT AND COMPACTION OF COMPACTED FILL.</li> </ol>	CONTINUOUS	GEOTECHNICAL ENGINEERING REPORT
5. PRIOR TO PLACEMENT OF CONTROLLED FILL, OBSERVE SUBGRADE AND VERIFY THAT SITE HAS BEEN PREPARED PROPERLY.	PERIODIC	GEOTECHNICAL ENGINEERING REPORT

CONCRETE (1704.4)  (NOT APPLICABLE TO ISOLATED SPREAD FOOTINGS OR NON-STRUCTURAL SLABS ON GROUND	FREQUENCY	REFERENCED STANDARD
INSPECTION OF REINFORCING STEEL, INCLUDING PRESTRESSED TENDONS, AND PLACEMENT.	PERIODIC	ACI 318: 3.5, 7.1-7.7
2. INSPECTION OF REINFORCING STEEL WELDING IN ACCORDANCE WITH TABLE 1704.3, ITEM 5b		AWS D1.4 ACI 318: 3.5.2
3. INSPECTION OF BOLTS TO BE INSTALLED IN CONCRETE PRIOR TO AND DURING PLACEMENT OF CONCRETE WHERE ALLOWABLE LOADS HAVE BEEN INCREACED OR WHERE STRENGTH DESIGN IS USED.	CONTINUOUS	ACI 318: 8.1.3, 21.2.8
4. INSPECTION OF ANCHORS INSTALLED IN HARDENED CONCRETE.	PERIODIC	ACI 318: 3.8.6 8.1.3, 21.2.8
5. VERIFYING USE OF REQUIRED DESIGN MIX.	PERIODIC	ACI 318: Ch. 4, 5.2-5.4
<ol> <li>AT THE TIME FRESH CONCRETE IS SAMPLED TO FABRICATE SPECIMENS FOR STRENGTH TESTS, PERFORM SLUMP AND AIR CONTENT TESTS, AND DETERMINE THE TEMPERATURE OF THE CONCRETE.</li> </ol>	CONTINUOUS	ASTM C 172 ASTM C 31 ACI 318: 5.6, 5.8
7. INSPECTION OF CONCRETE AND SHOTCRETE PLACEMENT FOR PROPER APPLICATION TECHNIQUES.	CONTINUOUS	ACI 318: Ch. 5.9, 5.10
INSPECTION FOR MAINTENANCE OF SPECIFIED CURING,     TEMPERATURE AND TECHNIQUES.	PERIODIC	ACI 318: 5.11-5.13
9. INSPECT FORMWORK FOR SHAPE, LOCATION AND DIMENSIONS OF THE CONCRETE MEMBER BEING FORMED.	PERIODIC	ACI 318: 6.1.1

HELI	CAL PIER/PILE FOUNDATIONS	FREQUENCY	REFERENCED STANDARD
1.	VERIFY ELEMENT MATERIALS, SIZES, AND LENGTHS COMPLY WITH THE REQUIREMENTS.		GEOTECHNICAL ENGINEERING REPORT
2.	DETERMINE CAPACITIES OF ELEMENTS AND CONDUCT ADDITIONAL LOAD TESTS, AS REQUIRED.	CONTINUOUS	ENGINEERING REPORT
3.	OBSERVE DRIVING OPERATIONS AND MAINTAIN COMPLETE AND ACCURATE RECORDS FOR EACH ELEMENT.	CONTINUOUS	GEOTECHNICAL ENGINEERING REPORT
4.	VERIFY PLACEMENT LOCATIONS AND PLUMBNESS, CONFIRM TYPE OF INSTALLATION EQUIPMENT USED, PILES DIMENSIONS, TIP ELEVATIONS FINAL DEPTH, FINAL INSTALLATION TORQUE.	CONTINUOUS	GEOTECHNICAL ENGINEERING REPORT
5.	INSTALLATION DATA/REQUIREMENTS INCLUDED IN THE DESIGN DOCUMENTS AND GEOTECHNICAL REPORT.	CONTINUOUS	GEOTECHNICAL ENGINEERING REPORT
6.	FOR SPECIALTY ELEMENTS, PERFORM ADDITIONAL INSPECTIONS AS DETERMINED BY THE REGISTERED DESIGN PROFESSIONAL IN RESPONSIBLE CHARGE.	CONTINUOUS	GEOTECHNICAL ENGINEERING REPORT



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**PROJECT TEAM** 

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ISSUE/REVISION RECORD DATE DESCRIPTION 06-19-20 COB PERMIT SUBMITTAL

**PROFESSIONAL SEAL** 



PROFESSIONAL IN CHARGE **WILLIAM BORNHORST** PROFESSIONAL ENGINEER LICENSE NO. PE017517

**PROJECT MANAGER** W. BORNHORST **QUALITY CONTROL** F. BERNAL

**PROJECT NAME** 

DRAWN BY S. SARMIENTO

**MURPHEY CANDLER PARK NATURE TRAIL BROOKHAVEN** 

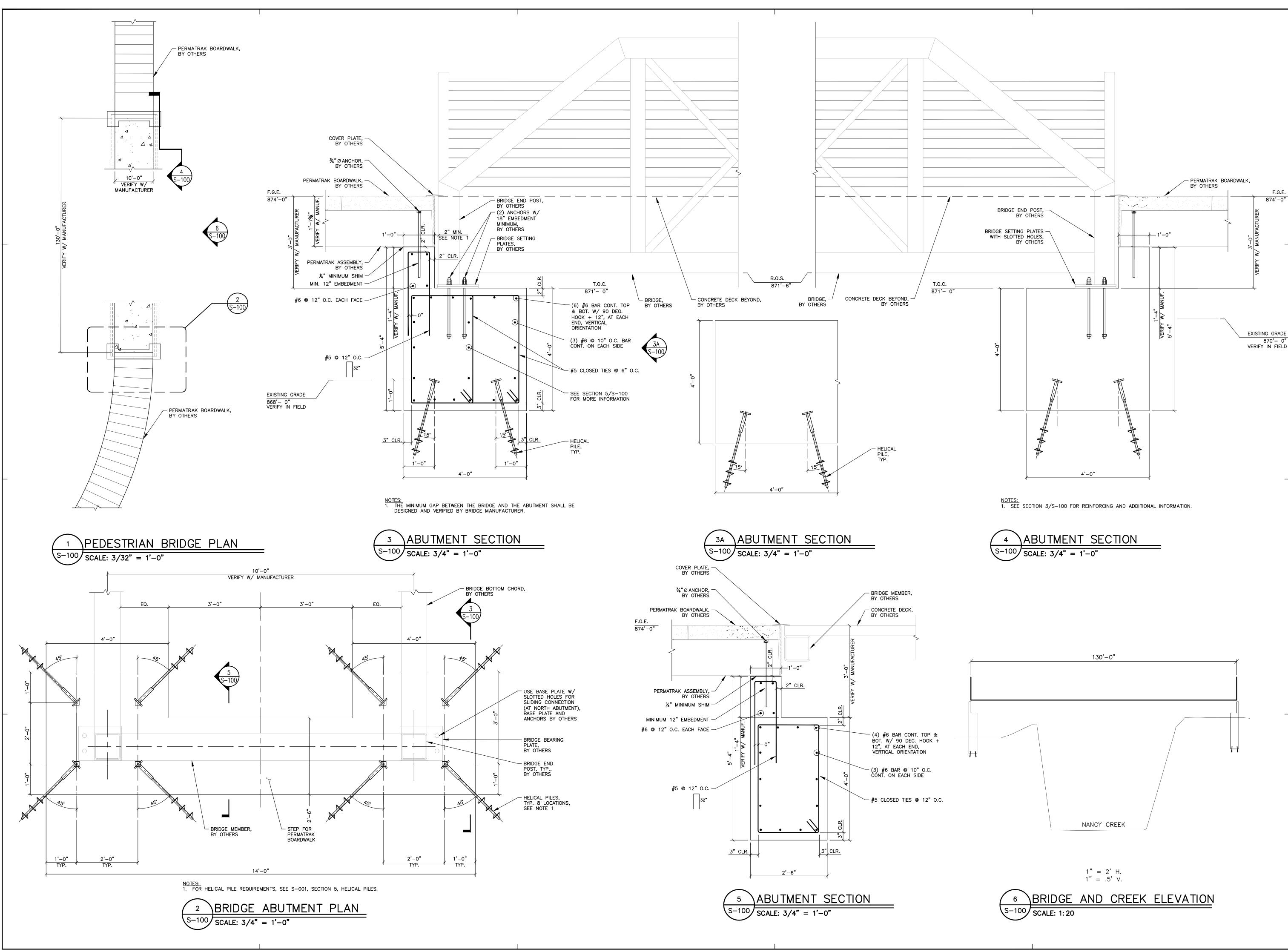
**GEORGIA WEST NANCY CREEK DRIVE AND CANDLER** LAKE CIRCLE WEST **BROOKHAVEN. GA 30341** 



**DEKALB COUNTY** 

**PROJECT NUMBER** 20191332.0

SHEET TITLE **GENERAL NOTES** 



**GreenbergFarrow** 

1430 W. Peachtree St. NW Suite 200 Atlanta, GA 30309 t: 404 601 4000 f: 404 601 3970

**PROJECT TEAM** 

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**ISSUE/REVISION RECORD** DATE DESCRIPTION 06-19-20 COB PERMIT SUBMITTAL

PROFESSIONAL SEAL



PROFESSIONAL IN CHARGE **WILLIAM BORNHORST** PROFESSIONAL ENGINEER

LICENSE NO. PE017517 PROJECT MANAGER W. BORNHORST **QUALITY CONTROL** 

F. BERNAL **DRAWN BY** S. SARMIENTO

**PROJECT NAME** 

**MURPHEY CANDLER PARK NATURE TRAIL** 

**BROOKHAVEN GEORGIA** 

**WEST NANCY CREEK DRIVE AND CANDLER LAKE CIRCLE WEST BROOKHAVEN, GA 30341 DEKALB COUNTY** 

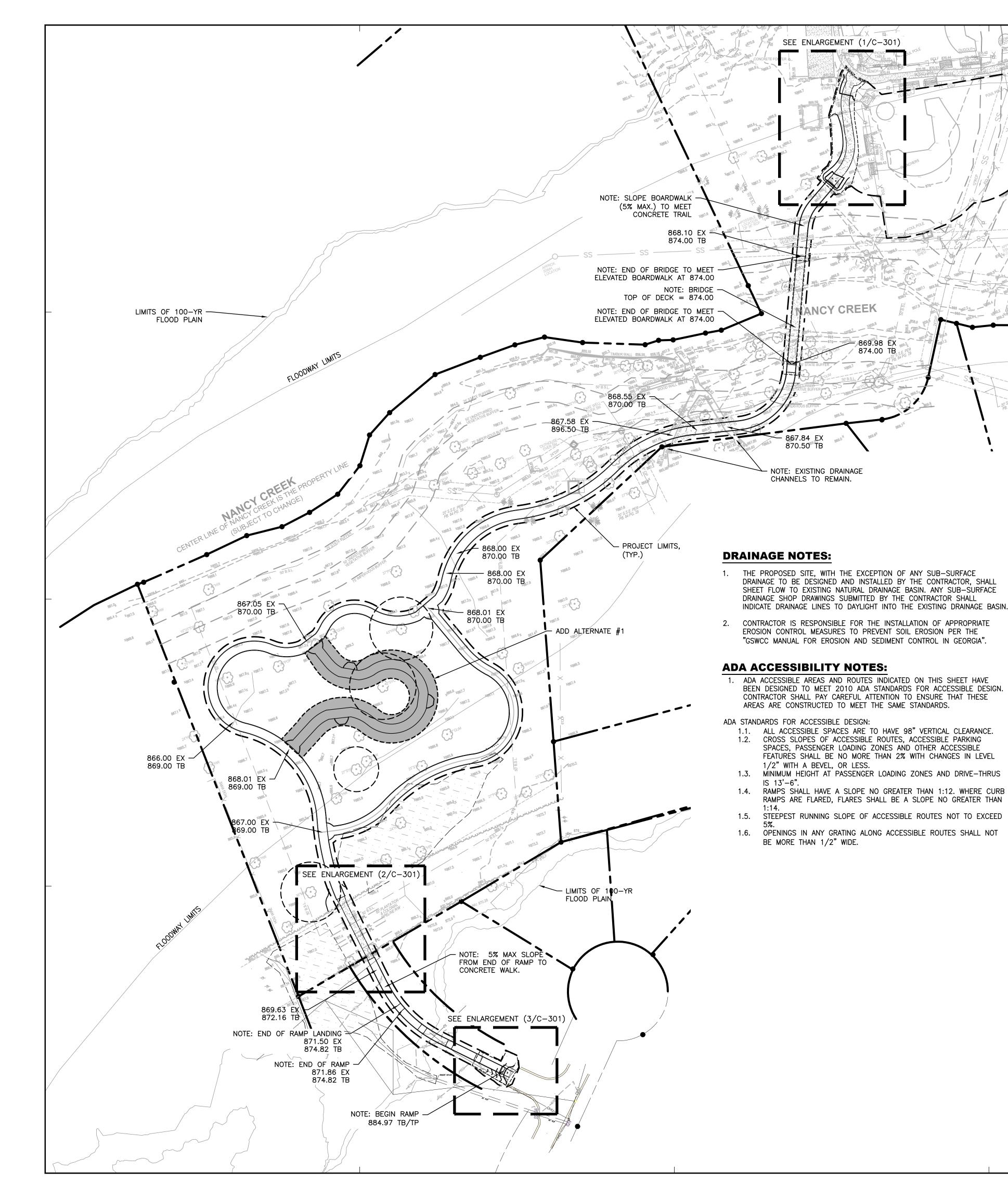


PROJECT NUMBER 20191332.0

SHEET TITLE **ABUTMENT PLAN & DETAILS** 

SHEET NUMBER

**S-100** 



### **ABBREVIATION LEGEND**

EX - EXISTING

TP - TOP OF PAVING

TB - TOP OF BOARDWALK

# **EXISTING LEGEND**

EXISTING HARDWOOD

EXISTING PROPERTY LINE

MINOR (1') CONTOUR

---- MAJOR (5') CONTOUR

----- SS ----- EXISTING SANITARY SEWER

---- PL ---- EXISTING PIPE LINE

EXISTING WETLAND

# PROPOSED LEGEND

— — — LIMITS OF PROJECT

LIMITS OF DISTURBANCE

\_\_\_\_\_ SF \_\_\_\_ DOUBLE ROW TYPE-C SILT FENCE

\_\_\_\_\_OOO\_\_\_\_\_ MAJOR CONTOUR

----- MINOR CONTOUR

PROPOSED ELEVATED BOARDWALK ON HELICAL PIERS

PROPOSED CONCRETE TRAIL/WALK

# **GRADING NOTES:**

874.00 TB

- 1. NO FILL IS TO BE ALLOWED WITHIN LIMITS OF 100-YEAR FLOOD PLAIN. IMPORTED MATERIALS, IF ANY, ARE LIMITED TO BASE MATERIALS FOR STABILIZATION OF SIDEWALK AS REQUIRED. NO EXCAVATED MATERIALS FROM LIMITS OF PROJECT TO BE STOCKPILED, STORED OR SPREAD WITHIN LIMITS OF 100-YEAR FLOOD PLAIN.
- 2. SIDEWALK TO BE GRADED IN A MANNER TO ALLOW FINISH GRADE TO MATCH EXISTING GROUND ELEVATION WITHIN LIMITS OF 100-YEAR FLOOD PLAIN.
- 3. ALL IMPORTED FILL AND BORROW SOILS SHALL BE CLEAN AND FREE OF DEBRIS, ORGANICS AND DELETRIOUS MATERIAL. SUITABLE FILL SHALL HAVE PLASTICITY INDEX LESS THAN 25, MAXIMUM PARTICLE SIZE OF FOUR INCHES WITH NOT MORE THAN 30% GREATER THAN 3/4 INCH. FILL SHALL BE PLACED IN THIN LIFTS NOT TO EXCEED 8 INCH LOOSÉ THICKNESS, AND COMPACTED. FILL WITHIN TOP TWO FEET SHALL BE COMPACTED TO AT LEAST 98% STANDARD PROCTOR (ASTM D698) MAXIMUM DRY DENSITY.
- 4. ALL SPOT ELEVATIONS ARE TO TOP OF PAVEMENT. TOP OF CURB. TOP OF TOPSOIL ETC. CONTRACTOR TO ADJUST SUBGRADE ELEVATION AS NECESSARY ACCORDING TO PAVEMENT/SLAB THICKNESS.
- 5. POSITIVE DRAINAGE SHALL BE MAINTAINED AT ALL TIMES TO PREVENT SATURATION OF EXPOSED SOILS. ALL DRAINAGE SHALL BE AWAY FROM STRUCTURES.
- 6. ALL LANDSCAPED AREAS DISTURBED BY CONSTRUCTION SHALL BE GRADED SMOOTH AND FOUR INCHES OF TOPSOIL APPLIED. IF ADEQUATE TOPSOIL IS NOT AVAILABLE ON SITE, THE CONTRACTOR SHALL PROVIDE TOPSOIL AS NEEDED. THESE AREAS SHALL BE SEEDED, FERTILIZED, MULCHED, WATERED AND MAINTAINED UNTIL HARDY GRASS GROWTH IS ESTABLISHED IN ALL AREAS.
- 7. EXISTING UTILITIES SHOWN ON THESE PLANS MAY NOT BE EXACT OR COMPLETE. THE CONTRACTOR SHALL CONTACT THE APPROPRIATE UTILITY COMPANY AT LEAST 72 HOURS BEFORE ANY EXCAVATION TO VERIFY EXACT FIELD LOCATION OF UTILITIES. CONTRACTOR IS RESPONSIBLE FOR HIRING PRIVATE LOCATOR AS NECESSARY TO LOCATE EXISTING UTILITIES.
- 8. CONTRACTOR TO FIELD VERIFY ELEVATIONS OF ALL TIE-IN POINTS AND NOTIFY THE OWNER OF RECORD OF ANY DISCREPANCIES PRIOR TO CONSTRUCTION.
- 9. ALL EXISTING UTILITY BOXES, METER BOXES AND VALVE BOXES THAT ARE TO REMAIN SHALL BE SET TO FLUSH WITH PROPOSED GRADE.
- 10. ALL HARD SURFACE ROUTES DESIGNATED AS ADA ACCESSIBLE SHALL HAVE MAXIMUM RUNNING SLOPE OF 4.9% AND MAXIMUM CROSS SLOPE OF 1.5%.
- 11. CONTRACTOR SHALL ADHERE TO PROPER DEWATERING PRACTICES IN ACCORDANCE WITH LOCAL AND STATE REGULATIONS. ONLY UNCONTAMINATED GROUNDWATER CAN BE DISCHARGED FROM THE SITE, AS ALLOWED BY AND IN ACCORDANCE WITH APPLICABLE LOCAL GROUNDWATER DEWATERING PERMITS/REGULATIONS. ALL DISCHARGE POINTS SHALL BE MONITORED TO ENSURE IT DOES NOT CAUSE UNCONTROLLED EROSION OF THE SOIL DURING DISCHARGE.
- 12. SANITARY SEWER CROSSINGS TO BE PROTECTED DURING CONSTRUCTION.



PROFESSIONAL SEAL

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10/21/2020 MODIFY PIPELINE CROSSING

PROFESSIONAL IN CHARGE

**PROJECT MANAGER** 

**QUALITY CONTROL** 

**DRAWN BY** 

PROJECT NAME **MURPHEY CANDLER PARK NATURE TRAIL** 

# **BROOKHAVEN GEORGIA**

**WEST NANCY CREEK DRIVE AND CANDLER** LAKE CIRCLE WEST **BROOKHAVEN, GA 30341** LAND LOTS 326 & 327 **18TH DISTRICT DEKALB COUNTY** 



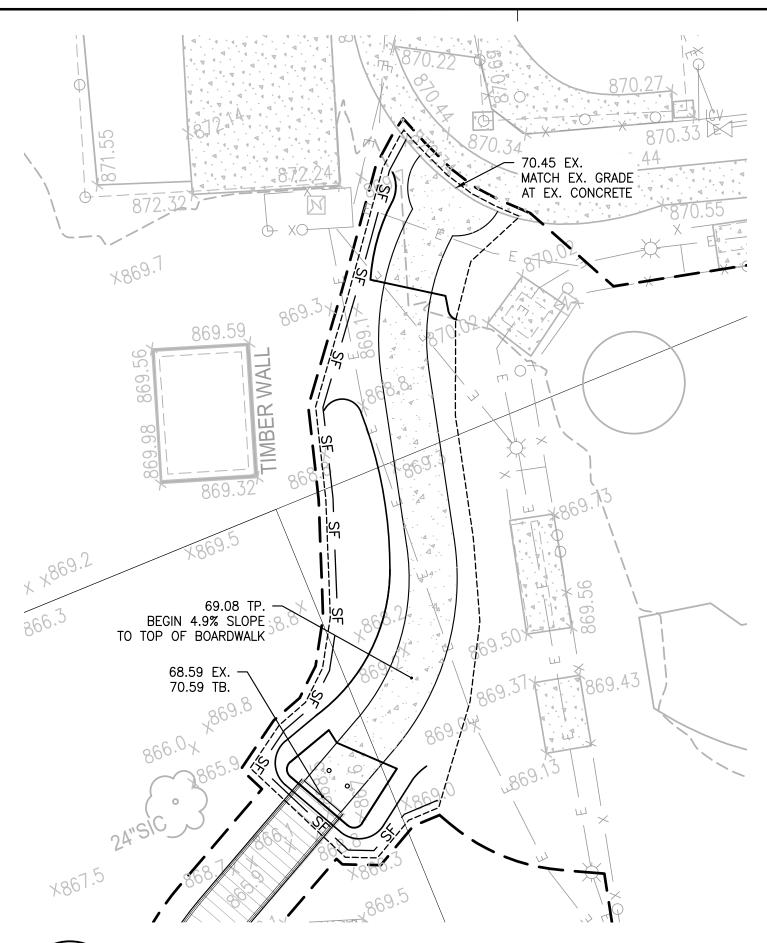
PROJECT NUMBER

SHEET TITLE SITE GRADING PLAN

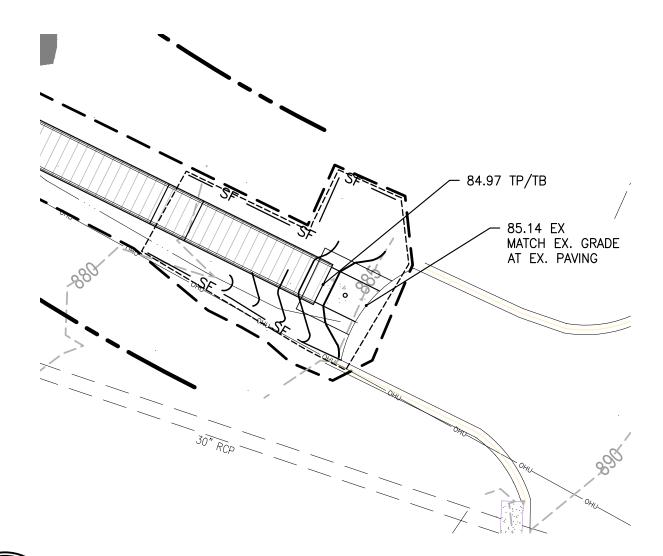
SHEET NUMBER

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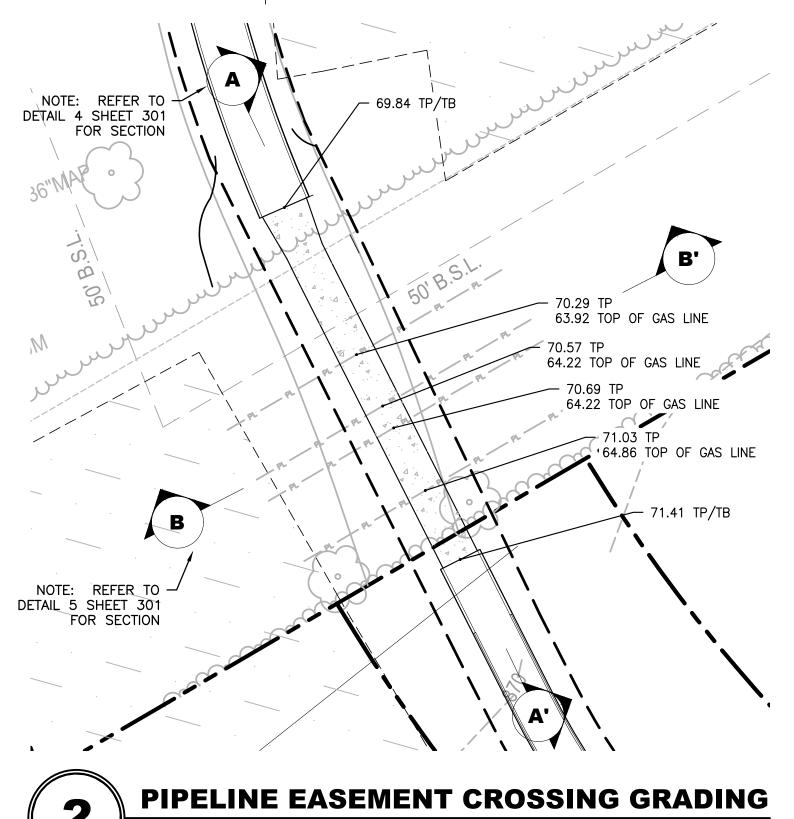
SCALE: 1"= 60'



**BASEBALL FIELD CONNECTION GRADING** SCALE: 1"=20'



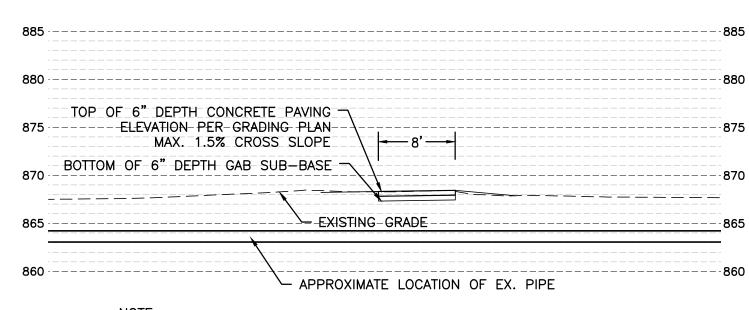
**NEIGHBOORHOOD CONNECTION GRADING** SCALE: 1"=20'



SCALE: 1"=20'

### - EXISTING PIPELINE EASEMENT -- TOP OF ELEVATED BOARDWALK---- 875 BOTTOM-OF-GAB-SUB-BASE-TOP OF CONCRETE PAVING -TOP OF ELEVATED ¬ 870 ----BOARDWALK-- EXISTING GRADE EX. 28" PIPE EX. 8" PIPE TOP = 60" BELOW EX. GRADE TOP = 52" BELOW EX. GRADE 76" BELOW PROP. SUB-BASE 74" BELOW PROP. SUB-BASE EX. 10" PIPE -EX. 14" PIPE TOP = 47" BELOW EX. GRADE TOP = 53" BELOW EX. GRADE 76" BELOW PROP. SUB-BASE 78" BELOW PROP. SUB-BASE

SECTION A-A' CONCRETE WALK PROFILE AT PIPELINE EASEMENT CROSSING SCALE: 1"=10'



NO VIBRATORY COMPACTION EQUIPMENT MAY BE USED WITHIN THE PIPELINE EASEMENT. NO FILL IS TO TAKE PLACE WITHIN PIPELINE EASEMENT. TRAIL TO BE PLACED AT GRADE.



# **DRAINAGE NOTES:**

- THE PROPOSED SITE, WITH THE EXCEPTION OF ANY SUB-SURFACE DRAINAGE TO BE DESIGNED AND INSTALLED BY THE CONTRACTOR, SHALL SHEET FLOW TO EXISTING NATURAL DRAINAGE BASIN. ANY SUB-SURFACE DRAINAGE SHOP DRAWINGS SUBMITTED BY THE CONTRACTOR SHALL INDICATE DRAINAGE LINES TO DAYLIGHT INTO THE EXISTING DRAINAGE BASIN.
- CONTRACTOR IS RESPONSIBLE FOR THE INSTALLATION OF APPROPRIATE EROSION CONTROL MEASURES TO PREVENT SOIL EROSION PER THE "GSWCC MANUAL FOR EROSION AND SEDIMENT CONTROL IN GEORGIA".

# **ADA ACCESSIBILITY NOTES:**

ADA ACCESSIBLE AREAS AND ROUTES INDICATED ON THIS SHEET HAVE BEEN DESIGNED TO MEET 2010 ADA STANDARDS FOR ACCESSIBLE DESIGN. CONTRACTOR SHALL PAY CAREFUL ATTENTION TO ENSURE THAT THESE AREAS ARE CONSTRUCTED TO MEET THE SAME STANDARDS.

### ADA STANDARDS FOR ACCESSIBLE DESIGN:

- 1.1. ALL ACCESSIBLE SPACES ARE TO HAVE 98" VERTICAL CLEARANCE. CROSS SLOPES OF ACCESSIBLE ROUTES, ACCESSIBLE PARKING SPACES, PASSENGER LOADING ZONES AND OTHER ACCESSIBLE FEATURES SHALL BE NO MORE THAN 2% WITH CHANGES IN LEVEL 1/2" WITH A BEVEL, OR LESS
- 1.3. MINIMUM HEIGHT AT PASSENGER LOADING ZONES AND DRIVE-THRUS IS 13'-6".
- RAMPS SHALL HAVE A SLOPE NO GREATER THAN 1:12. WHERE CURB RAMPS ARE FLARED, FLARES SHALL BE A SLOPE NO GREATER THAN
- STEEPEST RUNNING SLOPE OF ACCESSIBLE ROUTES NOT TO EXCEED
- 1.6. OPENINGS IN ANY GRATING ALONG ACCESSIBLE ROUTES SHALL NOT BE MORE THAN 1/2" WIDE.

# **GRADING NOTES:**

- ALL IMPORTED FILL AND BORROW SOILS SHALL BE CLEAN AND FREE OF DEBRIS, ORGANICS AND DELETRIOUS MATERIAL. SUITABLE FILL SHALL HAVE PLASTICITY INDEX LESS THAN 25, MAXIMUM PARTICLE SIZE OF FOUR INCHES WITH NOT MORE THAN 30% GREATER THAN 3/4 INCH. FILL SHALL BE PLACED IN THIN LIFTS NOT TO EXCEED 8 INCH LOOSE THICKNESS, AND COMPACTED. FILL WITHIN TOP TWO FEET SHALL BE COMPACTED TO AT LEAST 98% STANDARD PROCTOR (ASTM D698) MAXIMUM DRY DENSITY.
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- 9. CONTRACTOR SHALL ADHERE TO PROPER DEWATERING PRACTICES IN ACCORDANCE WITH LOCAL AND STATE REGULATIONS. ONLY UNCONTAMINATED GROUNDWATER CAN BE DISCHARGED FROM THE SITE, AS ALLOWED BY AND IN ACCORDANCE WITH APPLICABLE LOCAL GROUNDWATER DEWATERING PERMITS/REGULATIONS. ALL DISCHARGE POINTS SHALL BE MONITORED TO ENSURE IT DOES NOT CAUSE UNCONTROLLED EROSION OF THE SOIL DURING DISCHARGE.

**ABBREVIATION LEGEND EXISTING LEGEND** EXISTING HARDWOOD

TP - TOP OF PAVING

TB - TOP OF BOARDWALK

EX - EXISTING

EXISTING PINE

---- MAJOR (5') CONTOUR

MINOR (1') CONTOUR

EXISTING PROPERTY LINE

**EXISTING WETLAND** 

PROPOSED LEGEND

— — — LIMITS OF PROJECT

LIMITS OF DISTURBANCE \_\_\_\_\_ SF \_\_\_\_ DOUBLE ROW TYPE-C SILT FENCE

MINOR CONTOUR

\_\_\_\_\_OOO \_\_\_\_ MAJOR CONTOUR

— PROPOSED ELEVATED BOARDWALK — ON HELICAL PIERS

PROPOSED CONCRETE TRAIL/WALK

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10/21/2020 MODIFY PIPELINE CROSSING

PROFESSIONAL SEAL

PROFESSIONAL IN CHARGE

**PROJECT MANAGER** 

**QUALITY CONTROL** 

**DRAWN BY** 

PROJECT NAME

**MURPHEY CANDLER PARK NATURE TRAIL** 

**BROOKHAVEN GEORGIA** 

**WEST NANCY CREEK DRIVE AND CANDLER** LAKE CIRCLE WEST **BROOKHAVEN, GA 30341** LAND LOTS 326 & 327 **18TH DISTRICT** 



**DEKALB COUNTY** 

PROJECT NUMBER

SHEET TITLE **GRADING PLAN DETAILS** 



MATCHLINE

# **CITY OF BROOKHAVEN EROSION CONTROL NOTES:**

- PRIOR TO ANY OTHER CONSTRUCTION, A STABILIZED CONSTRUCTION ENTRANCE SHALL BE CONSTRUCTED AT EACH ENTRY TO OR EXIT FROM THE SITE.
- 2. THE CONSTRUCTION EXIT(S) SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOW OF MUD ON TO PUBLIC RIGHT-OF-WAY. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH STONE, AS CONDITIONS DEMANDS, AND REPAIR AND/OR CLEAN-OUT OF ANY STRUCTURES USED TO TRAP SEDIMENT. ALL MATERIALS SPILLED, DROPPED, WASHED, OR TRACKED FROM VEHICLE ONTO PUBLIC ROADWAY OR INTO STORM DRAIN MUST BE REMOVED IMMEDIATELY. THE CONTRACTOR SHALL INSPECT THE CONTROL MEASURES AT THE END OF EACH WORK DAY TO ENSURE MEASURES ARE FUNCTIONING PROPERLY.
- 3. PRIOR TO COMMENCING LAND DISTURBANCE ACTIVITY. THE LIMITS OF LAND DISTURBANCE SHALL BE CLEARLY AND ACCURATELY DEMARCATED WITH STAKES, RIBBONS, OR OTHER APPROPRIATE MEANS, THE LOCATION AND EXTENT OF ALL AUTHORIZED LAND DISTURBANCE SHALL OCCUR WITHIN THE APPROVED LIMITS INDICATED ON THE APPROVED PLANS.
- 4. IMMEDIATELY AFTER THE ESTABLISHMENT OF CONSTRUCTION ENTRANCE/EXIT(S), ALL PERIMETER EROSION CONTROL DEVICES AND STORMWATER MANAGEMENT DEVICES SHALL BE INSTALLED PRIOR TO ANY OTHER CONSTRUCTION.
- 5. OWNER AGREES TO PROVIDE AND MAINTAIN OFF-STREET PARKING ON THE SUBJECT PROPERTY DURING THE ENTIRE CONSTRUCTION
- 6. THE CONTRACTOR SHALL FURNISH AND MAINTAIN ALL NECESSARY BARRICADES WHILE ROADWAY FRONTAGE IMPROVEMENTS ARE BEING
- 7. THE CONSTRUCTION OF THE SITE WILL INITIATE WITH THE INSTALLATION OF EROSION CONTROL MEASURES SUFFICIENT TO CONTROL SEDIMENT DEPOSITS AND EROSION. ALL SEDIMENT CONTROL WILL BE MAINTAINED UNTIL ALL UPSTREAM GROUND WITHIN THE CONSTRUCTION AREA HAS BEEN COMPLETELY STABILIZED WITH PERMANENT VEGETATION AND ALL ROADS/DRIVEWAYS HAVE BEEN PAVED.
- 8. FAILURE TO INSTALL, OPERATE OR MAINTAIN ALL EROSION CONTROL MEASURES WILL RESULT IN ALL CONSTRUCTION BEING STOPPED ON THE JOB SITE UNTIL SUCH MEASURES ARE CORRECTED CONSISTENT WITH THE CITY OF BROOKHAVEN EROSION CONTROL
- 9. A COPY OF THE APPROVED LAND DISTURBANCE PLAN AND PERMIT SHALL BE PRESENT ON THE SITE WHENEVER LAND DISTURBANCE ACTIVITY IS IN PROGRESS.
- 10. ALL SEWER EASEMENTS DISTURBED MUST BE DRESSED AND GRASSED TO CONTROL EROSION.

MATCHLINE

- 11. IF FULL IMPLEMENTATION OF THE APPROVED PLANS DOES NOT PROVIDE FOR EFFECTIVE EROSION CONTROL, ADDITIONAL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE IMPLEMENTED TO CONTROL OR TREAT THE SEDIMENT SOURCE AS NECESSARY.
- 12. ANY DISTURBED AREA LEFT EXPOSED SHALL BE TEMPORARILY STABILIZED WITH MULCH OR TEMPORARY SEEDING AS SOON AS POSSIBLE AFTER ROUGH GRADING IS COMPLETED BUT WITHIN 14 DAYS AFTER DISTURBANCE. PERMANENT VEGETATION SHALL BE PLANTED IF THE AREA IS TO BE LEFT UNDISTURBED FOR GREATER THAN 6 MONTHS.
- 13. IF CONCRETE WORK IS DONE ON SITE, THEN A CONCRETE WASHDOWN BMP SHALL BE PROVIDED OR A NOTE "CONCRETE WASHDOWN IS NOT ALLOWED ON SITE." THE CONCRETE WASHDOWN AREA, IF ALLOWED SHALL BE FOR THE TOOLS, CONCRETE MIXER CHUTES, HOPPERS AND THE REAR OF VEHICLES. WASHOUT OF THE DRUM AT THE CONSTRUCTION SITE IS PROHIBITED.

	SOILS LEGEND						
MAP UNIT SYMBOL	MAP UNIT NAME	HSG					
PuE	Pacolet-URBAN LAND COMPLEX, 10 to 25 PERCENT SLOPES	В					

# **ESC NOTES:**

- 1. SEE SHEET C-001 FOR GENERAL NOTES, LEGEND AND ABBREVIATIONS.
- 2. SEE SHEET C-400 FOR EROSION, SEDIMENTATION AND POLLUTION CONTROL PLAN AND SHEET C-401-402 FOR EROSION CONTROL DETAILS AND LEGEND.
- 3. STORM STRUCTURES MAY EXIST THAT ARE NOT SHOWN ON PLANS, ALL EXISTING STORM STRUCTURES LOCATED IN THE FIELD WITHIN AND ADJACENT TO LIMITS OF DISTURBANCE SHALL HAVE FILTER FABRIC INLET PROTECTION.
- 4. CONCRETE WASHOUT WILL NOT BE REMOVED UNTIL ALL CONCRETE WORK IS COMPLETE.

# **ESC PHASING NOTES:**

- 1. DISTURBED AREA IN INITIAL EROSION CONTROL PLAN (C-400): - .25 ACRES
- 2. WORK TO BE COMPLETED/IMPLEMENTED IN THE EROSION
- CONTROL PLAN (C-400): 2.1. CONSTRUCTION ENTRANCE
- 2.2. CONCRETE WASH-OUT AREA
- 2.3. TREE PROTECTION FENCE
- 2.4. COMPOST FILTER SOCK
- 2.5. SILT FENCE
- 2.6. HAY BALES WITHIN CRITICAL ROOT ZONES 2.7. TEMPORARY MULCHING

24-HOUR EMERGENCY CONTACT:

BRIAN BORDEN (404) 275-9901 BRIAN.BORDEN@BROOKHAVENGA.GOV

- 2.8. PERMANENT MULCHING
- 2.9. PERMANENT SEEDING

# **EROSION CONTROL BMP LEGEND**

DUST CONTROL ON DISTURBED AREAS

DISTURBED AREA STABILIZATION (WITH MULCHING ONLY)

DISTURBED AREA STABILIZATION (WITH TEMPORARY SEEDING)

SEDIMENT BARRIER (SENSITIVE AREAS) - TYPE "C"

COMPOST FILTER SOCK

CONSTRUCTION EXIT

# **EXISTING LEGEND**





EXISTING HARDWOOD **EXISTING PINE** EXISTING PROPERTY LINE - MAJOR (5') CONTOUR MINOR (1') CONTOUR EXISTING FENCE - EXISTING SANITARY SEWER | EXISTING WETLAND PROPOSED LEGEND — — LIMITS OF PROJECT LIMITS OF DISTURBANCE \_\_\_\_\_ SF \_\_\_\_ DOUBLE ROW TYPE-C SILT FENCE COMPOST FILTER SOCK \_\_\_OOO\_\_\_\_\_ MAJOR CONTOUR — MINOR CONTOUR PROPOSED ELEVATED BOARDWALKON HELICAL PIERS PROPOSED CONCRETE TRAIL/WALK

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PROFESSIONAL IN CHARGE

PROJECT MANAGER

**QUALITY CONTROL DRAWN BY** 

**MURPHEY** 

**GEORGIA** 

**CANDLER PARK** 

**NATURE TRAIL** 

**BROOKHAVEN** 

**WEST NANCY CREEK** 

**DRIVE AND CANDLER** 

**BROOKHAVEN, GA 30341** LAND LOTS 326 & 327

**LAKE CIRCLE WEST** 

**18TH DISTRICT DEKALB COUNTY** 

PROJECT NAME

Brookhaven

**PROJECT NUMBER** 

SHEET TITLE **EROSION CONTROL PLAN** 

MATERIAL	RATE	DEPTH
STRAW OR HAY	-	2" TO 4"
WOOD WASTE, CHIPS, SAWDUST, BARK	-	2" TO 3"
CUTBACK ASPHALT	1,200 GAL/AC, 1/3 GAL/SY OR SEE MANUFACTURER'S RECOMMENDATIONS	-
POLYETHYLENE FILM	SECURE WITH SOIL, ANCHORS, WEIGHTS	_
GEOTEXTILES, JUTE MATTING, NETTING, ETC.	SEE MANUFACTURER'S RECOMMENDATIONS	_

- APPLY STRAW OR HAY UNIFORMLY, AS SHOWN IN TABLE, BY HAND OR MECHANICAL EQUIPMENT, AND ANCHOR BY PRESSING INTO SOIL OR USING NETTING.
- MULCH ON SLOPES GREATER THAN 3% SHOULD BE ANCHORED WITH EMULSIFIED ASPHALT (GRADE AE-5 OR SS-1) OR OTHER SUITABLE

. MULCH SHALL BE USED DURING THE MONTHS THAT GRASSING SHOULD NOT BE APPLIED BASED ON THE SCHEDULE BELOW. Ds1 MULCHING RATES

	RATE PER ACRE			
SPECIES	ALONE	IN MIXTURES	PLANTING DATES	
LESPEDEZA, ANNUAL (LESPEDEZA STRIATA)	40 LBS	10 LBS	3/1 - 3/31	
LOVEGRASS, WEEPING (ERAGROSTIS CURVULA)	4 LBS	2 LBS	4/1 - 5/31	
MILLET, PEARL (PENNESETUM GLAUCUM)	50 LBS	DO NOT MIX	5/1 - 7/31	
RYEGRASS (LOLIUM TENULENTUM)	40 LBS	DO NOT MIX	9/1 - 12/15	
RYE (SECALE CEREALE)	168 LBS	28 LBS	9/15 - 11/30	
WHEAT	3 BU	0.5 BU	10/1 - 12/15	

TEMPORARY GRASSES SHALL CONSIST OF SOWING A QUICK GRASS SUCH AS RYE, BROWN TOP MILLET, OR GRASS SUITABLE TO THE AREA AND SEASON. LIME AND FERTILIZER WILL BE OMITTED. MULCH IS NOT REQUIRED BUT SHOULD BE USED AS DICTATED BY SITE CONDITIONS. TEMPORARY GRASSING IS REQUIRED WHEN DISTURBED AREA IS LEFT EXPOSED FOR MORE THAN 14 DAYS.

	RATE PER ACRE			
SPECIES	ALONE	IN MIXTURES	PLANTING DATES	
BAHIA, WILMINGTON	60 LBS	30 LBS	3/1 - 5/31	
BERMUDA, COMMON (HULLED SEED)	10 LBS	6 LBS	4/1 - 5/31	
FESCUE, TALL	50 LBS	30 LBS	9/1 - 10/15	
LESPEDEZA, SERICEA (LESPEDEZA CUINEATE)	60 LBS (SCARIFIED)	-	3/15 - 5/31	
	75 LBS (UNSCARIFIED)	-	9/1 - 2/28	
LESPEDEZA, AMBRO (VIRGATA OR APPALOW)	60 LBS (SCARIFIED)	_	3/15 - 5/31	
	75 LBS (UNSCARIFIED)	_	9/1 - 2/28	
LOVEGRASS, WEEPING	4 LBS	2 LBS	3/15 - 5/31	

PERMANENT GRASSING SHALL CONSIST OF GROUND PREPARATION, LIMING, FERTILIZATION, MULCHING, AND SEEDING. THE GROUND SHALL BE PREPARED BY PLOWING AND DISKING TO A DEPTH NOT LESS THAN 4". FERTILIZER AND LIME SHALL BE UNIFORMLY MIXED INTO THE GROUND, WITH FERTILIZER AT THE RATE OF 1500 LBS PER ACRE AND LIME AT THE RATE OF 2000 LBS PER ACRE. THE GROUND SHALL BE FINISHED OFF AS SMOOTH AND UNIFORM AND BE FREE OF ROCKS, CLODS, ROOTS, AND WEEDS. FERTILIZER SHALL BE APPLIED PER THE TABLE BELOW. WEATHER PERMITTING, SEEDING SHALL BE DONE WITHIN 24 HOURS OF FERTILIZER APPLICATION. SEED SHALL BE UNIFORMLY SPREAD AT THE RATES SHOWN BELOW. MULCHING IS REQUIRED AND SHALL BE DONE IMMEDIATELY AFTER SEEDING. MULCH SHALL BE UNIFORMLY APPLIED OVER THE AREA LEAVING APPROXIMATELY 25% OF THE GROUND SURFACE EXPOSED. THE RATE OF APPLICATION SHALL

# PERMANENT GRASSING

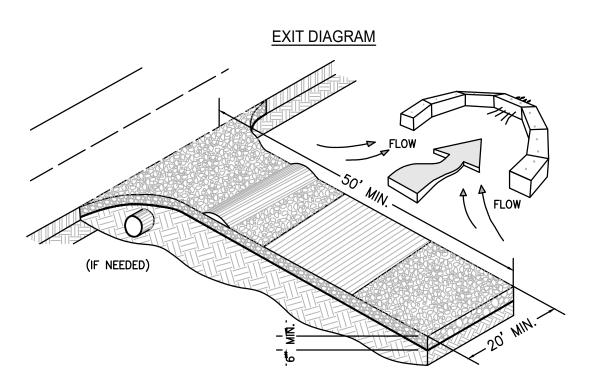


DISTURBED AREA STABILIZATION

BE DOUBLED ON SLOPES STEEPER THAN 4:1.



Ds1 Ds2 Ds3





**ENTRANCE ELEVATION** 

# NOTES:

USED TO TRAP SEDIMENT.

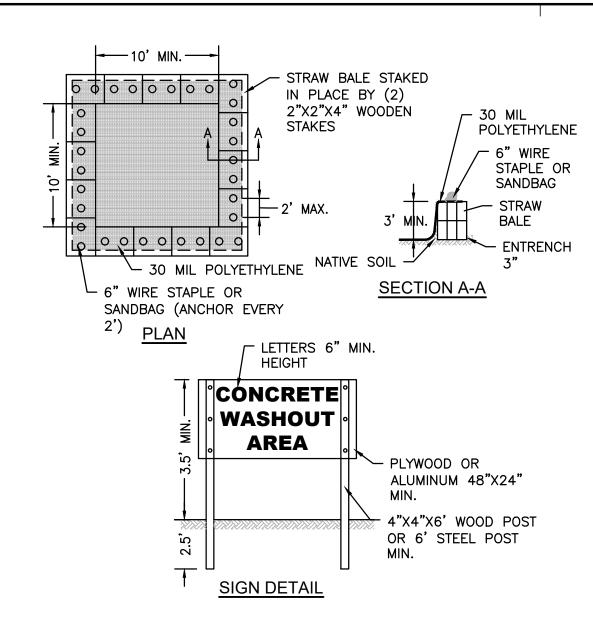
- 1. AVOID LOCATING ON STEEP SLOPES OR AT CURVES ON PUBLIC ROADS. 2. REMOVE ALL VEGETATION AND OTHER UNSUITABLE MATERIAL FROM THE FOUNDATION AREA, GRADE, AND
- 3. AGGREGATE SIZE SHALL BE IN ACCORDANCE WITH NATIONAL STONE ASSOCIATION R-2 (1.5"-3.5" STONE).
- 4. GRAVEL PAD SHALL HAVE A MINIMUM THICKNESS OF 6". 5. PAD WIDTH SHALL BE EQUAL FULL WIDTH AT ALL POINTS OF VEHICULAR EGRESS, BUT NO LESS THAN 20'.
- 6. A DIVERSION RIDGE SHOULD BE CONSTRUCTED WHEN GRADE TOWARD PAVED AREA IS GREATER THAN 2%. 7. INSTALL PIPE UNDER THE ENTRANCE IF NEEDED TO MAINTAIN DRAINAGE DITCHES. 8. WHEN WASHING IS REQUIRED, IT SHOULD BE DONE ON AN AREA STABILIZED WITH CRUSHED STONE THAT DRAINS INTO AN APPROVED SEDIMENT TRAP OR SEDIMENT BASIN (DIVERT ALL SURFACE RUNOFF AND DRAINAGE FROM THE ENTRANCE TO A SEDIMENT CONTROL DEVICE).
- 9. WASHRACKS AND/OR TIRE WASHERS MAY BE REQUIRED DEPENDING ON SCALE AND CIRCUMSTANCE. IF NECESSARY, WASHRACK DESIGN MAY CONSIST OF ANY MATERIAL SUITABLE FOR TRUCK TRAFFIC THAT
- 10.MAINTAIN AREA IN A WAY THAT PREVENTS TRACKING AND/OR FLOW OF MUD ONTO PUBLIC RIGHTS-OF-WAYS. THIS MAY REQUIRE TOP DRESSING, REPAIR AND/OR CLEANOUT OF ANY MEASURES





AGRICULTURAL LIME IS REQUIRED AT THE RATE OF ONE TO TWO TONS PER ACRE UNLESS SOIL TESTS INDICATE OTHERWISE. GRADED AREAS REQUIRE LIME APPLICATION. IF LIME IS APPLIED WITHIN SIX MONTHS OF PLANTING PERMANENT PERRENIAL VEGETATION, ADDITIONAL LIME IS NOT REQUIRED. AGRICULTURAL LIME SHALL BE WITHIN THE SPECIFICATIONS OF THE GEORGIA DEPARTMENT OF AGRICULTURE.

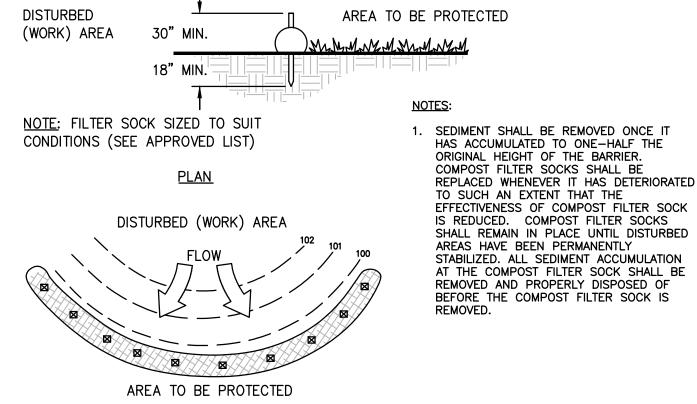
- 1. THE ABOVE APPLICATION RATES ARE FOR EROSION CONTROL
- PURPOSES ONLY. 2. RESOURCE AREA "P" REPRESENTS SOUTHERN PIEDMONT MAJOR LAND RESOURCE AREA (MLRA).



- 1. WASHOUT OF THE CONCRETE DRUM AT THE CONSTRUCTION SITE IS PROHIBITED.
- 2. PREFABRICATED CONCRETE WASHOUT FACILITIES MAY BE USED. PREFABRICATED FACILITIES SHALL BE WATER-TIGHT AND OF SUFFICIENT VOLUME AND QUANTITY TO CONTAIN ALL THE LIQUIDS AND CONCRETE WASTE GENERATED BY WASHOUT
- 3. PERFORM WASHOUT OF CONCRETE MIXER TRUCKS IN DESIGNATED AREAS ONLY.
- 4. EACH FACILITY SHALL HAVE APPROPRIATE SIGNAGE TO INFORM CONCRETE EQUIPMENT OPERATORS OF THE PROPER WASHOUT LOCATION(S).
- 5. EACH FACILITY SHALL BE LOCATED IN AN AREA PROTECTED FROM POSSIBLE DAMAGE FROM CONSTRUCTION TRAFFIC AND HAVE A STABILIZED ACCESS TO PREVENT TRACKING ONTO STREETS.
- 6. WASHOUT FACILITIES SHALL BE LOCATED ON LEVEL GROUND A MINIMUM OF 50FT FROM STORM DRAIN INLETS AND ALL OPEN DRAINAGE FACILITIES.
- 7. THE WASHOUT FACILITY SHALL BE INSPECTED DAILY AND REPAIRED, CLEANED, OR ENLARGED AS NECESSARY TO MAINTAIN THE CAPACITY OF CONCRETE WASTE. ACCUMULATED MATERIALS SHALL BE REMOVED ONCE THE FACILITY IS TWO-THIRDS
- 7. WASHOUT WATER SHALL NOT BE DISCHARGED INTO THE ENVIRONMENT.
- 8. SOLIDIFIED CONCRETE WASTE FROM WASHOUT FACILITIES SHALL BE DISPOSED OF IN ACCORDANCE WITH STATE LAWS.



# **CONCRETE WASHOUT AREA**



CROSS-SECTION

# **COMPOST FILTER MEDIA SPECIFICATIONS:**

SCALE: N.T.S.

C - 402

AND COMPOST GUIDELINES FOR LABORATORY PROCEDURES:

FLOW

COMPOST USED FOR COMPOST FILTER SOCK FILLER MATERIAL (FILTER MEDIA) SHALL BE WEED FREE AND DERIVED FROM A WELL-DECOMPOSED SOURCE OF ORGANIC MATTER. THE COMPOST SHALL BE PRODUCED USING AN AEROBIC COMPOSTING PROCESS MEETING CFR 503 REGULATIONS INCLUDING TIME AND TEMPERATURE DATA. THE COMPOST SHALL BE FREE OF ANY REFUSE, CONTAMINANTS OR OTHER MATERIALS TOXIC TO PLANT GROWTH. NON-COMPOSTED PRODUCTS WILL NOT BE ACCEPTED. TEST METHODS FOR THE ITEMS BELOW SHOULD FOLLOW US COMPOSTING COUNCIL TEST METHODS FOR THE EXAMINATION OF COMPOSTING

- A. PH 5.0-8.0 IN ACCORDANCE WITH TMECC 04.11-A, "ELECTROMETRIC PH DETERMINATIONS FOR COMPOST"
- B. PARTICLE SIZE 99% PASSING A 2 IN (50MM) SIEVE AND A MAXIMUM OF 40% PASSING A 3/8 IN (9.5MM) SIEVE, IN ACCORDANCE WITH TMECC 02.02-B, "SAMPLE SIEVING FOR AGGREGATE SIZE CLASSIFICATION". (NOTE- IN THE FIELD, PRODUCT COMMONLY IS BETWEEN 1/2 IN [12.5MM] AND 2 IN [50MM] PARTICLE SIZE.)
- C. MOISTURE CONTENT OF LESS THAN 60% IN ACCORDANCE WITH STANDARDIZED TEST METHODS FOR MOISTURE DETERMINATION.
- D. MATERIAL SHALL BE RELATIVELY FREE (<1% BY DRY WEIGHT) OF INERT OR FOREIGN MAN MADE MATERIALS.
- E. SOCK CONTAINMENT SYSTEM FOR COMPOST FILTER MEDIA SHALL BE A PHOTODEGRADABLE OR BIODEGRADABLE KNITTED MESH MATERIAL AND SHOULD HAVE 1/8 IN TO 3/8 IN OPENINGS.

COMPOST FILTER SOCK





DEFINITION Controlling surface and air movement of dust on construction sites, roads, and demolition sites.

# PURPOSE

\*To prevent surface and air movement of dust from exposed soil surfaces.

 To reduce the presence of airborne substances that may be harmful or injurious to human health, welfare, or safety, or to animals or plant life.

# CONDITIONS

This practice is applicable to areas subject to surface and air movement of dust where on and off-site damage may occur without treatment.

# METHOD AND MATERIALS

# A. Temporary Methods

Mulches. See standard Ds1 - Disturbed Area Stabilization (With Mulching Only). Synthetic resins may be used instead of asphalt to bind mulch material. Refer to specification Tac - Tackifiers. Resins should be used according to manufacturer's recommendations.

Vegetative Cover. See specification Ds2 -Disturbed Area Stabilization (With Temporary Seeding).

Spray-on Adhesives. These are used on mineral soils (not effective on muck soils). Keep traffic off these areas. Refer to specification Tac - Tackifiers.

Tillage. This practice is designed to roughen and bring clods to the surface. It is an emergency GSWCC 2016 Edition

measure that should be used before wind erosion starts. Begin plowing on windward side of site. Chisel-type plows spaced about 12 inches apart, spring-toothed harrows, and similar plows are examples of equipment that may produce the

STRUCTURAL PRACTICES

SYMBOL

**VEGETATIVE PRACTICES** 

SYMBO

DESCRIPTION

construction site exit to provide a place fo

removing mud from tires thereby protecting

A barrier to prevent sediment from leaving

the construction site. It may be sandbags,

bales of straw or hay, brush, logs and pole

To protect desirable trees from injury during

DESCRIPTION

disturbed areas where seedlings may not ha

a suitable growing season to produce an

Establishing a temporary vegetative cover

Establishing a permanent vegetative cover

Controlling surface and air movement of

dust on construction site, roadways and

such as trees, shrubs, vines, grasses, or

legumes on disturbed areas.

with fast growing seedings on disturbed

A crushed stone pad located at the

I public streets.

gravel, or a silt fence.

construction activity.

erosion retarding cover.

DETAIL

DETAIL

CODE PRACTICE

CODE PRACTICE

Ds1 stabilization (with

Ds2 STABILIZATION (WITH

Ds3 stabilization (with

DISTURBED AREA

MULCHING ONLY)

TEMP SEEDING)

DISTURBED AREA

CONSTRUCTION

**SEDIMENT** 

EXIT

Irrigation. This is generally done as an emergency treatment. Site is sprinkled with water until the surface is wet. Repeat as needed.

Barriers. Solid board fences, snowfences, burlap fences, crate walls, bales of hay and similar material can be used to control air currents and soil blowing. Barriers placed at right angles to prevailing currents at intervals of about 15 times their height are effective in controlling wind erosion.

Calcium Chloride. Apply at rate that will keep surface moist. May need retreatment.

# B. Permanent Methods

desired effect.

Permanent Vegetation. See specification Ds3 -Disturbed Area Stabilization (With Permanent Vegetation). Existing trees and large shrubs may afford valuable protection if left in place.

Topsoiling. This entails covering the surface with less erosive soil material. See specification Tp - Topsoiling.

Stone. Cover surface with crushed stone or coarse gravel. See specification Cr-Construction Road Stabilization.

6-55

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**ISSUE/REVISION RECORD** 

DESCRIPTION

**PROFESSIONAL SEAL** 

PROFESSIONAL IN CHARGE

**PROJECT MANAGER** 

**QUALITY CONTROL** 

PROJECT NAME

**MURPHEY** 

**GEORGIA** 

**CANDLER PARK** 

**NATURE TRAIL** 

**WEST NANCY CREEK** 

**DRIVE AND CANDLER** 

LAKE CIRCLE WEST

**BROOKHAVEN, GA 30341** 

LAND LOTS 326 & 327

**18TH DISTRICT** 

**DEKALB COUNTY** 

**DRAWN BY** 

**PROJECT NUMBER** 

**SHEET TITLE EROSION CONTROL DETAILS** 

Sensitive Areas\*

Sediment barriers being used as Type S shall have a support spacing of no greater than 4 feet on center, with each being driven into the ground a minimum of 18 inches.

\*As of January 1 2016, in the existing Georgia Department of Transportation Qualified Products list #36 (QPL- 36), Type A, B, or C will fall under sensitive and non-sensitive applications. Type C will be classified as sensitive and Type A and B as non-sensitive. Refer to Appendix A-2 and the Equivalent BMP List.

### PRACTICE CLASSIFICATIONS

For silt fence Type A, B, or C, refer to Table

### Type A Silt Fence

This 36-inch wide filter fabric shall be used on developments where the life of the project is great than or equal to six months. Type A is classified as non-sensitive application.

### Type B Silt Fence

Though only 22-inches wide, this filter fabric allows the same flow rate as Type A silt fence. Type B silt fence shall be limited to use on minor projects, such as residential home sites or small commercial developments where permanent stabilization will be achieved in less than six months. Type B is classified as non-sensitive application.

### Type C Silt Fence

Type C fence is 36-inches wide with wire reinforcement or equivalent. The wire reinforcement is necessary because this fabric allows almost three times the flow rate as Type A silt fence. Type C silt fence shall be used where runoff flows or velocities are particularly high or where slopes exceed a vertical height of 10 feet. Type C is classified as sensitive application.

### Filter Media Sock Specifications

Compost filter media used for sediment barrier filler material shall be weed free and derived from a well-decomposed source of organic matter. Filter Media Sock is classified as a Type B, non-sensitive application. The compost shall be produced using an aerobic composting

process meeting CFR 503 regulations including time and temperature data. The compost shall be free of any refuse, contaminants or other materials toxic to plant growth. Non-composted products will not be accepted without applicable water quality test results. Test methods for the items below should follow US Composting Council Test Methods for the Examination of Composting and Compost guidelines for laboratory procedures:

A. pH – 5.0-8.0 in accordance with TMECC 04.11-A, "Electrometric pH Determinations for Compost"

B. Particle size – 99% passing a 2 inch (50mm) sieve and a maximum of 40% passing a 3/8 inche (9.5mm) sieve, in accordance with TMECC 02.02-B, "Sample Sieving for Aggregate Size Classification". (Note: In the field, product commonly is between 1/2 in./12.5mm and 2 in./50 mm in particle size.)

C. Moisture content of less than 60% in accordance with standardized test methods for moisture determination.

D. Material shall be relatively free (<1% by dry weight) of inert or foreign manmade materials.

 E. Sock containment system for compost filter media shall be a photodegradable or biodegradable knitted mesh material and should have 1/8 in. to 3/8 in., openings.

Brush Barrier ( Sd1-BB

(Only during timber clearing operations)

Brush obtained from clearing and grubbing operations may be piled in a row along the perimeter of disturbance at the time of clearing and grubbing. Brush barriers should not be used in developed areas or locations where aesthetics are a concern.

Brush should be wind-rowed on the contour as nearly as possible and may require compaction. Construction equipment may be utilized to satisfy this requirement.

The minimum base width of the brush barrier shall be 5 feet and should be no wider 10 feet. The height of the brush barrier should be between 3 and 5 feet tall.

Sediment Barrier (Sd1



DEFINITION

Sediment Barriers are temporary structures made up of a porous material typically supported by steel or wood posts. Types of sediment barriers may include silt fence, brush piles, mulch berms, compost filter socks or other filtering material.

### **PURPOSE**

To minimize and prevent sediment carried by sheet flow from leaving the site and entering natural drainage ways or storm drainage systems by slowing storm water runoff and causing the deposition and/or filtration of sediment at the structure. The barriers retain the soil on the disturbed land until the activities disturbing the land are completed and vegetation is established.

### CONDITIONS

Barriers should be installed where runoff can be stored behind the barrier without damaging the submerged area behind the barrier or the structure itself. Sediment barriers shall not be installed across streams, ditches, waterways, or other concentrated flow areas.

# **DESIGN CRITERIA**

Sediment barriers are designed to retain sediment transported by sheet flow from disturbed areas. It is important for the design professional to take into account the profile of the product for use on the site.

Sediment Barriers should also provide a riprap splash pad or other outlet protection device for any point where flow may overtop the sediment barrier. Ensure that the maximum height of the barrier at a protected, reinforced outlet does not exceed 1 foot and that the support spacing does not exceed 4 feet.

Where all runoff is to be stored behind the sediment barrier (where no storm water disposal system is present), maximum continuous slope length behind a sediment barrier shall not exceed those shown in Table 6-27.1. For longer slope lengths, slope interrupters must be used. The drainage area shall not exceed 1/4 acre for every 100 feet of sediment barrier.

Table 6-27.1 Criteria for Sediment Barrier

Land Slope	Maximum Slope Length Above Fence		
Percent	Feet		
< 2	100		
2 to 5	75		
5 to 10	50		
10 to 20	25		
>20*	15		

\*In areas where the slope is greater than 20%, a flat area length of 10 feet between the toe of slope to the barrier should be provided.

### Placement

The type of sediment barrier depends on whether the area is sensitive or nonsensitive. Sensitive areas can be defined as any area that needs additional protection, these areas include but are not limited to, state waters, wetlands, or any area the design professional designates as sensitive.

When using multiple types of sediment barriers on a site in a single run, the barriers must be overlapped 18 inches or as specified by design professional. See Figure 6-27.5

# CONSTRUCTION SPECIFICATIONS

Non-sensitive Areas \* ( Sd1-NS

Sediment barriers being used as Type NS shall have a support spacing of no greater than 6 feet on center, with each being driven into the ground a minimum of 18 inches.

6-137

GSWCC 2016 Edition

ing pasture in an agricultural situation to prevent sediment from leaving the site until the pasture is stabilized.

A brush barrier is a good tool to use in develop-

If greater filtering capacity is required, a commercially available sediment barrier may be placed on the side of the brush barrier receiving the sediment-laden runoff. The lower edge of the fabric must be buried in a 6-inch deep trench immediately uphill from the barrier. The upper edge must be stapled, tied or otherwise fastened to the brush barrier. Edges of adjacent fabric pieces must overlap each other. See Figure 6-27.5.

# Installation

Sediment barriers should be installed along the contour.

Temporary sediment barriers shall be installed according to the following specifications as shown on the plans or as directed by the design professional.

For installation of the barriers, See Figures 6-27.1, 6-27.2, 6-27.3 and 6-27.4, respectively. It is important to remember that not all sediment barriers need to be trenched into the ground but most taller sediment barriers do.

Post installation shall start at the center of a low point (if applicable) with the remaining posts spaced no greater than 6 feet apart for Type NS sediment barriers and no greater than 4 feet apart for Type C sediment barriers. For post size requirements, see Table 6-27.2. Fasteners for wood posts are listed in Table 6-27.3.

### Static Slicing Method

The static slicing machine pulls a narrow blade through the ground to create a slit 12" deep, and simultaneously inserts the silt fence fabric into this slit behind the blade. The blade is designed to slightly disrupt soil upward next to the slit and to minimize horizontal compaction, thereby creating an optimum condition for compacting the soil vertically on both sides of the fabric. Compaction is achieved by rolling a tractor wheel along both sides of the slit in the ground 2 to 4 times to achieve nearly the same or greater compaction as the original undisturbed soil. This vertical compaction reduces the air spaces between soil particles, which minimizes infiltration. Without this compaction infiltration can saturate the soil, and water may find a pathway under the fence. When a silt fence is holding back several tons of accumulated water and sediment, it needs to be supported by posts that are driven 18 inches into the soil. Driving in the posts and attaching the fabric to them completes the installation.

### Trenching Method

Trenching machines have been used for over twenty-five years to dig a trench for burying part of the filter fabric underground. Usually the trench is about 2-"6" wide with a 6" excavation. Post setting and fabric installation often precede compaction, which make effective compaction more difficult to achieve. EPA supported an independent technology evaluation (ASCE 2001), which compared three progressively better variations of the trenching method with static slicing method. The static slicing method performed better than two lower performance levels of the trenching method, and was as good as or better than the trenching method's highest performance level. The best trenching method typically required nearly triple the time and effort to achieve results comparable to the static slicing method.

Along all state waters and other sensitive areas, two rows of Type S sediment barriers shall be used. The two rows of Type S should be placed a minimum of 36 inches apart.

### MAINTENANCE

Sediment shall be removed once it has accumulated to one-half the original height of the barrier.

Sediment barriers shall be replaced whenever they have deteriorated to such an extent that the effectiveness of the product is reduced (approximately six months) or the height of the product is not maintaining 80% of its properly installed

Temporary sediment barriers shall remain in place until disturbed areas have been permanently stabilized. All sediment accumulated at the barrier shall be removed and properly disposed of before the barrier is removed.

TO BE SHOWN ON THE EROSION, SEDIMENTATION, AND POLLUTION CONTROL PLAN When a SEDIMENT BARRIER is used, show the product height in inches for each barrier being used on site.

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A brush barrier is a good tool to use in develop-soil. This vertical compaction reduces the air ing pasture in an agricultural situation to prevent

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6-139

TO BE SHOWN ON THE EROSION, SEDIMENTATION, AND POLLUTION CONTROL PLAN When a SEDIMENT BARRIER is used, show the product height in inches for each barrier being used on site. PROFESSIONAL IN CHARGE

**PROJECT MANAGER** 

**PROFESSIONAL SEAL** 

**QUALITY CONTROL** 

**DRAWN BY** 

PROJECT NAME **MURPHEY CANDLER PARK** 

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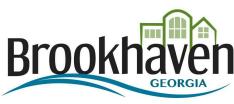
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ISSUE/REVISION RECORD

DATE DESCRIPTION

# **NATURE TRAIL BROOKHAVEN GEORGIA**

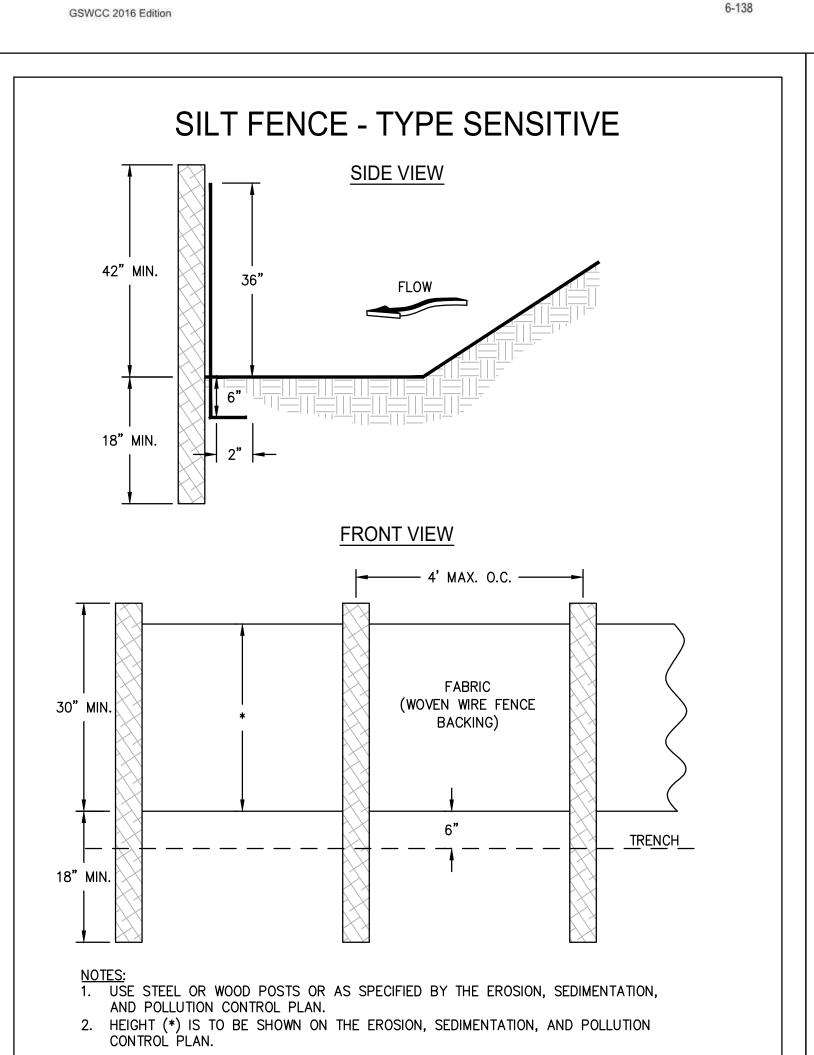
**WEST NANCY CREEK DRIVE AND CANDLER** LAKE CIRCLE WEST **BROOKHAVEN, GA 30341** LAND LOTS 326 & 327 **18TH DISTRICT DEKALB COUNTY** 



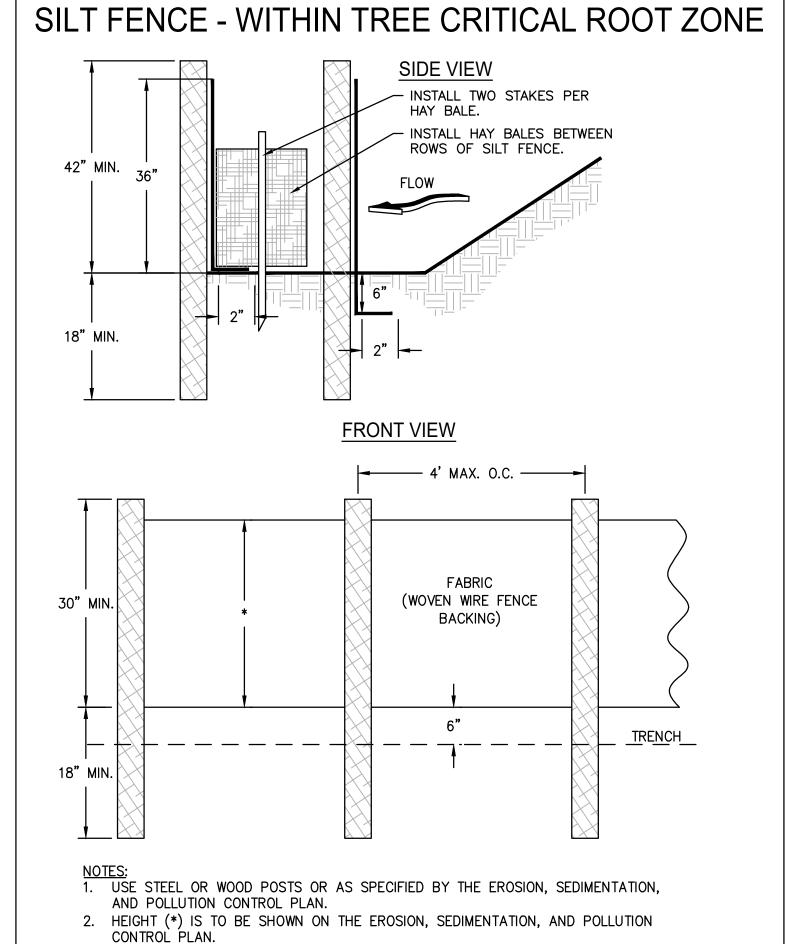
PROJECT NUMBER

SHEET TITLE **EROSION CONTROL DETAILS** 

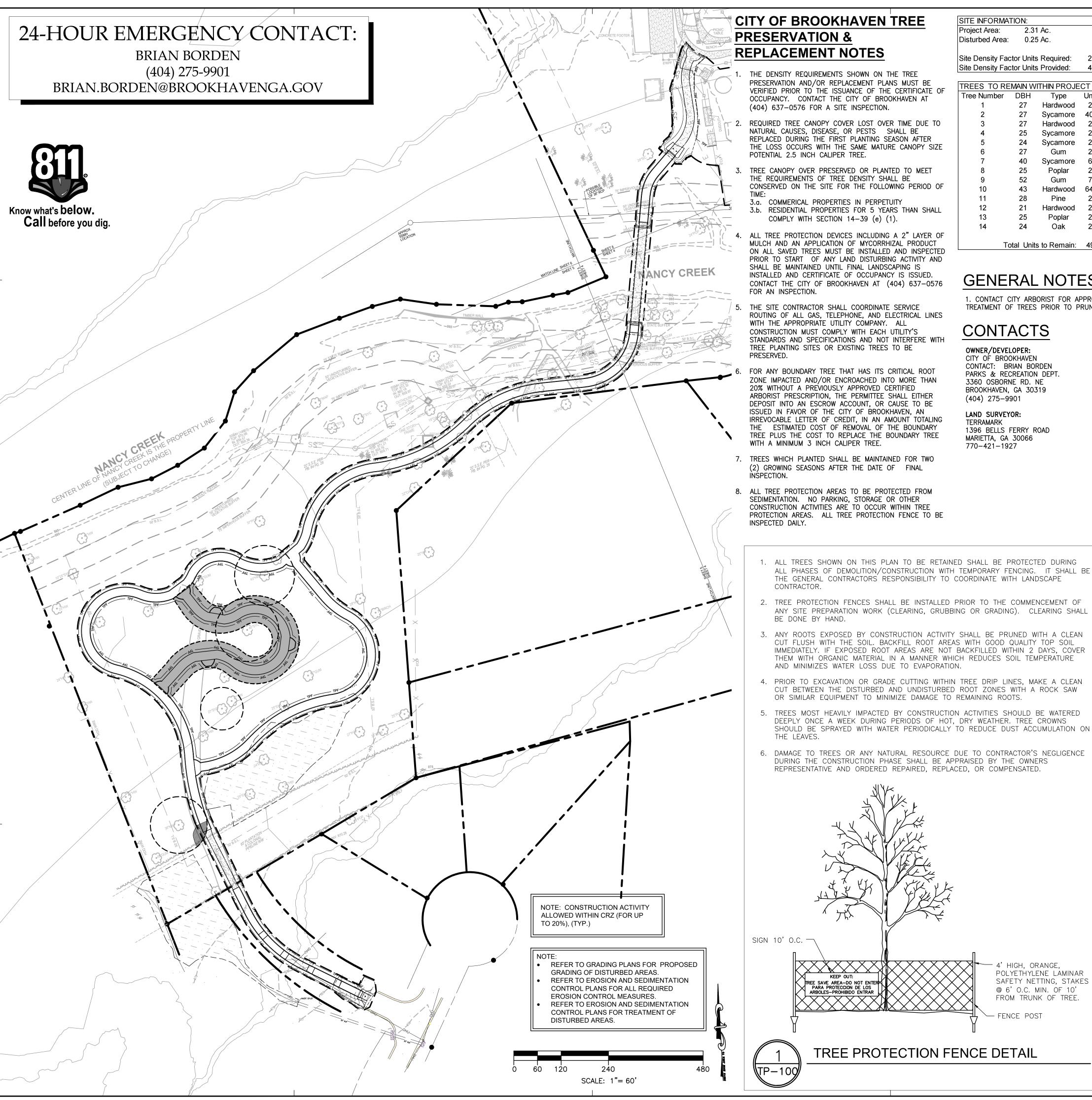
SHEET NUMBER



SD1-C SILT FENCE DETAIL A



SD1-C SILT FENCE DETAIL B



# **CITY OF BROOKHAVEN TREE** PRESERVATION &

REPLACEMENT NOTES THE DENSITY REQUIREMENTS SHOWN ON THE TREE PRESERVATION AND/OR REPLACEMENT PLANS MUST BE

VERIFIED PRIOR TO THE ISSUANCE OF THE CERTIFICATE OF OCCUPANCY. CONTACT THE CITY OF BROOKHAVEN AT (404) 637-0576 FOR A SITE INSPECTION. 2. REQUIRED TREE CANOPY COVER LOST OVER TIME DUE TO

NATURAL CAUSES, DISEASE, OR PESTS SHALL BE REPLACED DURING THE FIRST PLANTING SEASON AFTER THE LOSS OCCURS WITH THE SAME MATURE CANOPY SIZE POTENTIAL 2.5 INCH CALIPER TREE.

TREE CANOPY OVER PRESERVED OR PLANTED TO MEET THE REQUIREMENTS OF TREE DENSITY SHALL BE CONSERVED ON THE SITE FOR THE FOLLOWING PERIOD OF 3.a. COMMERICAL PROPERTIES IN PERPETUITY

COMPLY WITH SECTION 14-39 (e) (1). ALL TREE PROTECTION DEVICES INCLUDING A 2" LAYER OF MULCH AND AN APPLICATION OF MYCORRHIZAL PRODUCT

ON ALL SAVED TREES MUST BE INSTALLED AND INSPECTED PRIOR TO START OF ANY LAND DISTURBING ACTIVITY AND SHALL BE MAINTAINED UNTIL FINAL LANDSCAPING IS INSTALLED AND CERTIFICATE OF OCCUPANCY IS ISSUED. CONTACT THE CITY OF BROOKHAVEN AT (404) 637-0576

THE SITE CONTRACTOR SHALL COORDINATE SERVICE ROUTING OF ALL GAS, TELEPHONE, AND ELECTRICAL LINES WITH THE APPROPRIATE UTILITY COMPANY. ALL CONSTRUCTION MUST COMPLY WITH EACH UTILITY'S STANDARDS AND SPECIFICATIONS AND NOT INTERFERE WITH TREE PLANTING SITES OR EXISTING TREES TO BE

FOR ANY BOUNDARY TREE THAT HAS ITS CRITICAL ROOT ZONE IMPACTED AND/OR ENCROACHED INTO MORE THAN 20% WITHOUT A PREVIOUSLY APPROVED CERTIFIED ARBORIST PRESCRIPTION, THE PERMITTEE SHALL EITHER DEPOSIT INTO AN ESCROW ACCOUNT, OR CAUSE TO BE ISSUED IN FAVOR OF THE CITY OF BROOKHAVEN, AN IRREVOCABLE LETTER OF CREDIT, IN AN AMOUNT TOTALING THE ESTIMATED COST OF REMOVAL OF THE BOUNDARY TREE PLUS THE COST TO REPLACE THE BOUNDARY TREE WITH A MINIMUM 3 INCH CALIPER TREE.

7. TREES WHICH PLANTED SHALL BE MAINTAINED FOR TWO (2) GROWING SEASONS AFTER THE DATE OF FINAL

8. ALL TREE PROTECTION AREAS TO BE PROTECTED FROM SEDIMENTATION. NO PARKING, STORAGE OR OTHER CONSTRUCTION ACTIVITIES ARE TO OCCUR WITHIN TREE PROTECTION AREAS. ALL TREE PROTECTION FENCE TO BE INSPECTED DAILY.

REE SAVE AREA-DO NOT ENTER

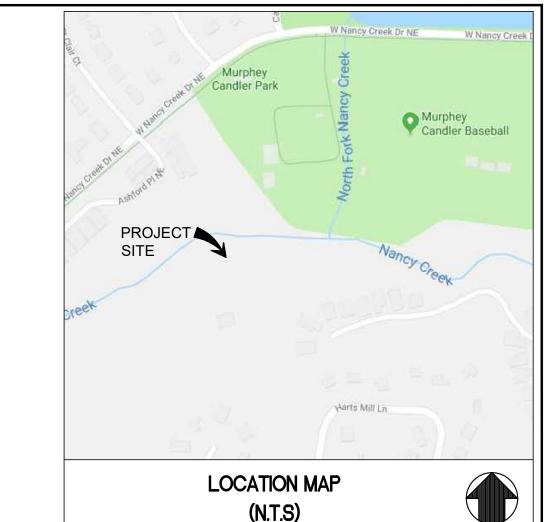
TREE PROTECTION FENCE DETAIL

SITE INFORMATION: Project Area: 2.31 Ac. Disturbed Area: 0.25 Ac.

Site Density Factor Units Required: 278.4 = (2.27 x 120) Site Density Factor Units Provided: 496.0 (ReC TREES TO REMAIN WITHIN PROJECT LIMITS: Tree Number DBH Type Units 27 Hardwood 27

1	27	Hardwood	27	
2	27	Sycamore	40.5	Specimen
3	27	Hardwood	27	
4	25	Sycamore	25	
5	24	Sycamore	24	
6	27	Gum	27	
7	40	Sycamore	60	Specimen
8	25	Poplar	25	
9	52	Gum	78	Specimen
10	43	Hardwood	64.5	Specimen
11	28	Pine	28	
12	21	Hardwood	21	
13	25	Poplar	25	
14	24	Oak	24	

Total Units to Remain: 496



# **GENERAL NOTES**

1. CONTACT CITY ARBORIST FOR APPROPRIATE TREATMENT OF TREES PRIOR TO PRUNING.

# CONTACTS

OWNER/DEVELOPER: CITY OF BROOKHAVEN CONTACT: BRIAN BORDEN PARKS & RECREATION DEPT. 3360 OSBORNE RD. NE BROOKHAVEN, GA 30319 (404) 275-9901

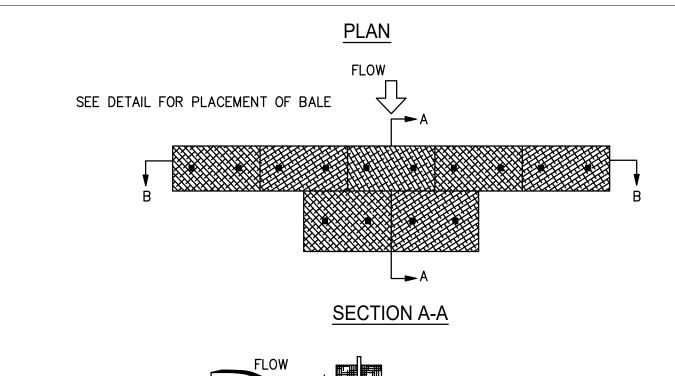
LAND SURVEYOR: 1396 BELLS FERRY ROAD MARIETTA, GA 30066 770-421-1927

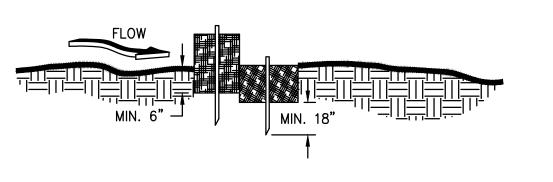
# LEGEND:

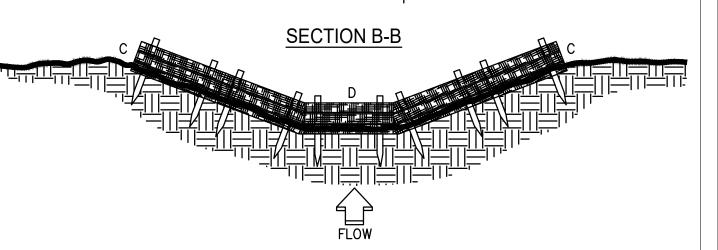
EXISTING HARDWOOD — — LIMITS OF PROJECT ----- LIMITS OF DISTURBANCE EXISTING PINE  $-s_f - s_f - s_f - s_f - s_f - DOUBLE ROW TYPE C SILT FENCE$ TREE TO BE REMOVED ------870--------PROPOSED INDEX CONTOUR TREE TO REMAIN (NO CREDIT TAKEN) PROPOSED MINOR CONTOUR TREE UTILIZED FOR SITE DENSITY (SEE CHART) PROPOSED ELEVATED BOARDWALK ON HELICAL PIERS ---- CRITICAL ROOT ZONE PROPOSED CONCRETE DRAIL SWALK

CRITICAL ROOT ZONE DISTURBED BY CONSTRUCTION

TREE PROTECTION FENCE



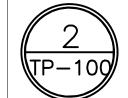




1. BALES SHOULD BE BOUND WITH WIRE OR NYLON STRING AND SHOULD BE PLACED IN ROWS WITH BALE ENDS <u>TIGHTLY</u> ABUTTING THE ADJACENT BALES.

REMOVE #4 REBAR AFTER STRAW BALES ARE NO LONGER IN PLACE.

POINT C OF SECTION B—B SHOULD <u>ALWAYS</u> BE HIGHER THAN POINT D.



POLYETHYLENE LAMINAR

@ 6' O.C. MIN. OF 10'

FROM TRUNK OF TREE.

- FENCE POST

SAFETY NETTING, STAKES

STRAW BALE CHECK DAM

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PROJECT NAME

**MURPHEY CANDLER PARK NATURE TRAIL BROOKHAVEN** 

**GEORGIA WEST NANCY CREEK DRIVE AND CANDLER** LAKE CIRCLE WEST **BROOKHAVEN, GA 30341** LAND LOTS 326 & 327 **18TH DISTRICT** 



PROJECT NUMBER

**DEKALB COUNTY** 

SHEET TITLE TREE PROTECTION **PLAN**