

BEFORE YOU DIG CALL  
1-800-257-7777 OR DIAL 811



# HARNES CREEK PADDLING & ROWING FACILITY DEPARTMENT OF PUBLIC WORKS ANNE ARUNDEL COUNTY, MARYLAND

PROJECT NO. P567400  
CONTRACT NO. P567408

## SHEET LIST TABLE

SHEET NUMBER	SHEET TITLE
1	COVER SHEET
2	EXISTING CONDITIONS & DEMOLITION PLAN
3	SITE PLAN
4	WATERSIDE AMENITIES DETAILS

## GENERAL SITE NOTES

- THE MEAN TIDAL RANGE IS APPROXIMATELY 0.97 FEET BASED ON NOAA TIDE STATION 8575512 IN ANNAPOLIS, MD.
  - TOPOGRAPHIC SURVEY PERFORMED BY BAYLAND CONSULTANTS & DESIGNERS, INC., DATED JUNE 4, 2020 AND JUNE 10, 2020.
  - HORIZONTAL AND VERTICAL CONTROL ESTABLISHED FROM REAL TIME KINEMATIC (RTK) GLOBAL POSITIONING SYSTEM (GPS) CONTROL POINTS. TRAVERSE POINTS ARE YELLOW PLASTIC CAP UNLESS OTHERWISE SPECIFIED. COORDINATES AND BEARINGS SHOWN HEREON ARE REFERRED TO THE MARYLAND COORDINATE SYSTEM (NAD83/1991). ELEVATIONS SHOWN HEREON ARE REFERRED TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD'88).
- | INT    | NORTHING    | EASTING       | ELEVATION | DESCRIPTION |
|--------|-------------|---------------|-----------|-------------|
| TPS# 1 | 462,083.84' | 1,453,602.58' | 26.67'    |             |
| TPS# 2 | 461,856.29' | 1,453,530.91' | 26.95'    |             |
| TPS# 3 | 461,847.94' | 1,453,344.74' | 27.39'    |             |
| TPS# 4 | 461,781.70' | 1,453,241.66' | 12.51'    |             |
| TPS# 5 | 461,824.43' | 1,453,084.24' | 7.18'     |             |
| TPS# 6 | 461,875.91' | 1,452,962.58' | 3.08'     |             |
| TPS# 7 | 462,009.30' | 1,452,836.79' | 3.78'     |             |
- CONTOURS SHOWN OUTSIDE OF LIMIT OF WORK ARE BASED ON ANNE ARUNDEL COUNTY 2011 GIS TOPOGRAPHY.
  - PROPERTY LINES SHOWN ARE BASED ON ANNE ARUNDEL COUNTY CADASTRAL DATA.
  - TREES WITH A 6" DIAMETER OR GREATER WITHIN THE CRITICAL AREA BUFFER AND TREES WITH A 12" DIAMETER OR GREATER WITHIN THE PROJECT LIMITS WERE LOCATED AND IDENTIFIED. ADDITIONAL TREES OF SIGNIFICANCE WERE ALSO FIELD LOCATED.
  - THE DISTURBED AREA WILL IMPACT EXISTING NON-TIDAL WETLAND AND THEIR BUFFERS. THE MARYLAND DEPARTMENT OF THE ENVIRONMENT TRACKING NUMBER IS XX-XX-XXXX AND THE U.S. ARMY CORPS OF ENGINEERS TRACKING NUMBER IS XXXXXXXX. WETLAND DELINEATION WAS PERFORMED BY BAYLAND CONSULTANTS AND DESIGNERS, INC., DATED JUNE 2020.
  - RIPRAP SHOWN IN PLAN VIEW AND PROFILE ARE SYMBOLIC AND DO NOT REPRESENT INDIVIDUAL STONES.
  - THE PROJECT SITE IS LOCATED WITHIN RESOURCE CONSERVATION AREA (RCA) OF THE CHESAPEAKE BAY CRITICAL AREA.
  - THE PROJECT SITE IS WITHIN 100' CRITICAL AREA BUFFER.
  - FEMA FIRMETTE #240030242F EFFECTIVE FEBRUARY 18, 2015 SHOWS THAT A PORTION OF THE PROJECT SITE IS WITHIN THE FEMA TIDAL FLOODPLAIN LIMITS - ZONE AE ELEVATION +5' NAVD88.
  - MARYLAND WETLAND LICENSE NO. XX-WL-XXXX. U.S. ARMY CORPS OF ENGINEERS PERMIT 2020XXXX.

## GENERAL CONSTRUCTION NOTES

- ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE ANNE ARUNDEL COUNTY STANDARD SPECIFICATIONS OR DETAILS FOR CONSTRUCTION UNLESS OTHERWISE NOTED. THE STATE HIGHWAY ADMINISTRATOR'S HIGHWAY STANDARD SPECIFICATIONS FOR CONSTRUCTION AND MATERIALS AND THE BOOK OF STANDARDS FOR HIGHWAY & INCIDENTAL STRUCTURES SHALL BE USED IF NO ANNE ARUNDEL COUNTY STANDARD OR DETAIL EXIST.
- THE EXISTING UTILITIES AND OBSTRUCTIONS SHOWN ARE FROM THE BEST AVAILABLE RECORDS AND SHALL BE VERIFIED BY THE CONTRACTOR TO THEIR SATISFACTION PRIOR TO CONSTRUCTION. NECESSARY PRECAUTIONS SHALL BE TAKEN BY THE CONTRACTOR TO PROTECT EXISTING SERVICES AND MAINS AND ANY DAMAGE TO THEM SHALL BE REPAIRED IMMEDIATELY AT THE CONTRACTORS OWN EXPENSE.
- IT SHALL BE DISTINCTLY UNDERSTOOD THAT FAILURE TO MENTION SPECIFICALLY ANY WORK WHICH WOULD NATURALLY BE REQUIRED TO COMPLETE THE PROJECT SHALL NOT RELIEVE THE CONTRACTOR OF THEIR RESPONSIBILITY TO COMPLETE SUCH WORK.
- THE CONTRACTOR SHALL CONTACT "MISS UTILITY" AT 1-800-257-7777 A MINIMUM OF 48 HOURS IN ADVANCE OF ANY EXCAVATION, BORING, PILE DRIVING AND/OR DIGGING FOR THE LOCATION OF GAS, ELECTRIC, TELEPHONE, WATER AND SEWER LINES.
- THE CONTRACTOR MAY NOT REMOVE ANY PIERS, PILINGS, OR STRUCTURES WITHOUT PRIOR APPROVAL OF THE OWNER AND THE COUNTY.
- THE CONTRACTOR SHALL PROTECT EXISTING STRUCTURES INCLUDING BUT NOT LIMITED TO ROADS, CURBS, SIDEWALKS, BUILDINGS, BULKHEADS, BOAT RAMPS, PIERS, AND MOORING PILES FROM DAMAGE.
- WORK IS TO BE CONFINED TO WITHIN THE LIMITS SHOWN ON THE SITE PLAN. DEBRIS ON SITE WILL BE REMOVED AND PROPERLY DISPOSED OF OFF-SITE. ALL EXCESS MATERIALS WILL BE REMOVED FROM THE SITE AND DISPOSED OF AT AN APPROVED DISPOSAL LOCATION.
- DISTURBANCES THAT DO NOT DRAIN TO A SEDIMENT CONTROL DEVICE SHALL BE STABILIZED BY THE END OF THE WORKDAY. NO MORE AREA SHALL BE DISTURBED THAN CAN BE STABILIZED BY THE END OF THE WORKDAY. NO DISTURBED AREA SHALL BE LEFT UNSTABILIZED OVERNIGHT UNLESS THE RUNOFF IS DIRECTED TO AN APPROVED SEDIMENT CONTROL DEVICE. SLOPES SHALL BE STABILIZED IMMEDIATELY WITH TOPSOIL, SEED AND EROSION CONTROL MATTING (IF REQUIRED). SEE NOTE 18.
- MECHANICAL EXCAVATION SHALL NOT BE CONDUCTED WITHIN 3 FEET HORIZONTALLY OR WITHIN 2 FEET VERTICALLY OF KNOWN UTILITY LOCATIONS. HAND OR SOFT DIGGING SHALL BE DONE WITHIN THESE LIMITS. UNDERGROUND UTILITIES, ONCE UNCOVERED, SHALL BE PROTECTED FROM BEING STRUCK BY EQUIPMENT.
- ALL TREES WITH A DIAMETER GREATER THAN 12 INCHES WITHIN THE LIMIT OF DISTURBANCE SHALL NOT BE REMOVED UNLESS PRIOR APPROVAL IS OBTAINED OR EXPLICITLY SHOWN ON THE PLANS TO BE REMOVED. ALL TREES TO REMAIN WITHIN THE LIMIT OF DISTURBANCE THAT ARE NOT TO BE REMOVED SHALL BE PROTECTED.
- ALL FILL AREAS SHALL BE CLEANED OF ALL VEGETATION AND DEBRIS, SCARIFIED TO A MINIMUM DEPTH OF 12 INCHES PRIOR TO THE PLACEMENT OF FILL. FILL MATERIAL SHALL BE PLACED IN CONTROLLED LIFTS WITH A MAXIMUM THICKNESS OF 8" PRIOR TO COMPACTION THAT IS CONTINUOUS OVER THE ENTIRE AREA OF FILL. EACH LAYER OF FILL SHALL BE COMPACTED WITH THE MINIMUM NUMBER OF PASSES NECESSARY TO PRODUCE A FULL ASYMPTOTIC COMPACTION.
- THE WORK INSTALLED AS A PART OF THE PROJECT WILL CONTAIN NO FAULTY MATERIALS OR ANY CARELESS OR UNSKILLED WORKMANSHIP.
- THE CONTRACTOR SHALL CORRECT, REPAIR OR REMOVE AND REPLACE WITH PROPER WORK AT NO COST TO THE COUNTY ANY WORK FOUND NOT TO BE AS PER THE GUARANTEE. THE CONTRACTOR SHALL ALSO MAKE GOOD ALL DAMAGES CAUSED TO OTHER WORK OR MATERIALS IN THE PROCESS OF FULFILLING GUARANTEE.
- CONTRACTOR MUST STAY WITHIN THE LIMITS OF DISTURBANCE (LOD) WHEN STOCKPILING MATERIAL OR STORING EQUIPMENT.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL MATERIALS TESTING INCLUDING CONCRETE, FLOWABLE FILL, HOT MIX ASPHALT AND FILL COMPACTION. ALL MATERIALS TESTING SHALL BE PERFORMED BY THE CONTRACTOR AND SHALL BE COMPENSATED FOR AS PART OF THE APPROPRIATE PAY ITEM.
- SEE STANDARD GEOTECHNICAL NOTES FOR FILL COMPACTION TESTING REQUIREMENTS.
- ALL DISTURBED AREAS SHALL HAVE PERMANENT OR TEMPORARY STABILIZATION COMPLETED WITHIN:
  - END OF THE WORK DAY FOR AREAS WITHIN WATERWAYS.
  - THREE CALENDAR DAYS ON SLOPES GREATER THAN 3:1 AND TO THE SURFACE OF ALL PERIMETER SEDIMENT CONTROLS.
  - SEVEN CALENDAR DAYS AS TO ALL OTHER DISTURBED OR GRADED AREAS.
  - ALL STABILIZATION MUST BE IN ACCORDANCE WITH MARYLAND DEPARTMENT OF AGRICULTURE (MDA) FERTILIZER LAW.
- ALL DISTURBED AREAS WITH SLOPES GREATER THAN 3:1 SHALL BE STABILIZED WITH 100% BIODEGRADABLE SOIL STABILIZATION MATTING THAT HAS A SUFFICIENT DESIGN SHEAR STRESS FOR THE APPLICATION OR AS SHOWN ON THE APPROVED SEDIMENT AND EROSION CONTROL PLANS.
- ALL PERMANENTLY STABILIZED AREAS SHALL INCLUDE A MINIMUM OF 4" OF TOPSOIL PER THE 2011 MDE SPECIFICATIONS.
- ALL STAKING, RESTAKING, AND CUT SHEETS SHALL BE PERFORMED BY A REGISTERED LAND SURVEYOR OR PROFESSIONAL ENGINEER AT THE CONTRACTOR'S EXPENSE.
- ALL ROADS SHALL BE CLEANED AND CLEARED BY THE END OF EACH DAY. ANY MUD OR ROCKS TRACKED ON THE ROADWAYS SHALL BE SWEEPED BEFORE THE END OF SHIFT EACH DAY.
- CONTRACTOR SHALL RESTORE ALL AREAS IMPACTED BY CONSTRUCTION ACTIVITY. THIS SHALL INCLUDE BUT IS NOT LIMITED TO GRASS AREAS, ROADS, PAVED AREAS, ETC...
- ALL CONSTRUCTION TO BE PERFORMED IN ACCORDANCE WITH STATE OF MARYLAND OCCUPATIONAL SAFETY LAWS.
- CONTRACTOR MUST ENSURE THAT COPIES OF FEDERAL, STATE, AND COUNTY PERMITS ARE POSTED ON SITE PRIOR TO THE START OF ANY WORK.

## ABBREVIATIONS

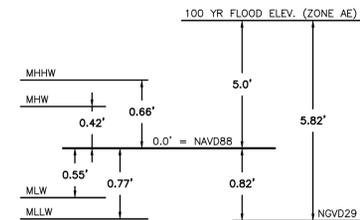
AC	=	ACRE
CY	=	CUBIC YARD
ELEV.	=	ELEVATION
EX.	=	EXISTING
FT	=	FEET
HORIZ	=	HORIZONTAL
LF	=	LINEAR FEET
PR.	=	PROPOSED
SF	=	SQUARE FEET
STD.	=	STANDARD
STA.	=	STATION
TYP.	=	TYPICAL
WSE	=	WATER SURFACE ELEVATION

## LOCATION MAP

ANNE ARUNDEL COUNTY ADC MAP COORDINATES: MAP COPYRIGHT ©ADC THE MAP PEOPLE, (800) 829-6277  
MAP 25 GRID H-5 PERMITTED USE NUMBER 031205BJE

## LEGEND

TRAVERSE POINT	TPS #1	PR. PIER	
EX. MEAN HIGH WATER	---	PR. BOARDWALK	
EX. MEAN LOW WATER	---	PR. BOAT LIFT	
EX. EPHEMERAL CHANNEL	---	PR. PILE	
EX. PROPERTY LINE	---	PR. BORING	
EX. SOILS	---	EX. TREE	
EX. MAJOR CONTOUR	---	EX. TREE TO BE REMOVED	
EX. MINOR CONTOUR	---	EX. TREE TO BE PROTECTED	
EX. ROAD	---		
EX. CRITICAL AREA BUFFER	CAB		
EX. FEMA FLOODPLAIN	---		
EX. WETLAND BUFFER	WB		
EX. TIDAL WETLANDS	---		
EX. NON-TIDAL WETLAND	---		



## DATUM CONVERSIONS

NOTE: DATUM COMPARISON BASED ON NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION (NOAA) FROM SITE LOCATION (-76°34'25", 39°11'17").  
SCALE: NOT TO SCALE

## CONSULTANT'S CERTIFICATION

THE DEVELOPER'S PLAN TO CONTROL SILT AND EROSION IS ADEQUATE TO CONTAIN THE SILT AND EROSION ON THE PROPERTY COVERED BY THE PLAN. I CERTIFY THAT THIS PLAN OF EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THIS SITE, AND WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE AASCD PLAN SUBMITTAL GUIDELINES AND THE CURRENT MARYLAND STANDARDS AND SPECIFICATION FOR SOIL EROSION AND SEDIMENT CONTROL. I HAVE REVIEWED THIS EROSION AND SEDIMENT CONTROL PLAN WITH THE OWNER / DEVELOPER

MD P.E. LICENSE # 21194  
NAME SEPEHR BAHARLOU  
FIRM NAME BAYLAND CONSULTANTS & DESIGNERS, INC.  
ADDRESS 7455 NEW RIDGE ROAD, SUITE T  
CITY HANOVER, STATE MD, ZIP CODE 21076

SIGNATURE

## SITE INFORMATION

- OWNER INFORMATION: ANNE ARUNDEL COUNTY, 2662 RIVA ROAD, ANNAPOLIS, MD 21404-7377, (410) 222-7500
- DEVELOPER INFORMATION: ANNE ARUNDEL COUNTY DEPARTMENT OF PUBLIC WORKS, 2662 RIVA ROAD - 3RD FLOOR, ANNAPOLIS, MD 21401, PH: (410) 222-7575, ATTN: MASOUD GHATNEH, P.E., BAYLAND CONSULTANTS & DESIGNERS, INC.
- ENGINEER: BAYLAND CONSULTANTS & DESIGNERS, INC.
- ENGINEER INFORMATION: 7455 NEW RIDGE ROAD, SUITE T, HANOVER, MARYLAND 21076, PH: 410-694-9401
- TAX MAP: 56
- PARCEL: 88
- DEED REF: 4224/711
- DISTRICT: 02
- USE: EXEMPT COMMERCIAL
- ZONING: R2 RESIDENTIAL
- PROPERTY AREA: 336.13 ACRES
- SUBWATERSHED: HARNES CREEK
- WATERSHED: SOUTH RIVER
- AA, CO GRADING PERMIT: GXXXXXXX
- MDE TIDAL WETLANDS PERMIT NO.: XX-WL-XXXX
- SITE AREA LOCATED WITHIN CRITICAL AREA: 38.11 ACRES (RESOURCE CONSERVATION AREA)

## SITE ANALYSIS

- TOTAL SITE AREA: 336.13 ACRES  
1.1 PROPOSED DISTURBED AREA: 1.07 ACRES
- TOTAL AREA TO BE STABILIZED: 1.07 ACRES  
2.1 TOTAL EX. IMPERVIOUS AREA: 0.07 ACRES  
2.2 TOTAL EX. IMPERVIOUS AREA TO REMAIN: 0.07 ACRES  
2.3 TOTAL PR. IMPERVIOUS AREA: 0.00 ACRES  
2.4 TOTAL TO BE STABILIZED WITH VEGETATION: 0.79 ACRES  
2.5 TOTAL PR. BOARDWALK: 0.12 ACRES  
2.6 TOTAL PR. MULCH: 0.05 ACRES
- PROPOSED IMPERVIOUS AREA: 0.00 ACRES
- ESTIMATED CUT: 0.00 CY
- EXTIMATED FILL: 0.00 CY

- NOTES:
- THE EARTHWORK QUANTITIES SHOWN HEREON ARE FOR INFORMATION PURPOSES ONLY. BAYLAND MAKES NO GUARANTEES OF ACCURACY OF QUANTITIES OR BALANCE OF SITE. THE DEVELOPER AND CONTRACTOR SHALL TAKE FULL RESPONSIBILITY OF ACTUAL EARTHWORK QUANTITIES ENCOUNTERED DURING CONSTRUCTION. CUT/FILL ESTIMATES ARE BASED ON FINISHED GRADE AND DO NOT INCLUDE UNDERCUT TO SUBGRADE FOR PROPOSED STRUCTURES.
  - THE QUANTITY OF EXCAVATION HAS BEEN ESTIMATED BASED ON THE EXISTING CONDITIONS SURVEY SHOWN AND SHALL SERVE AS BASIS FOR PAYMENT. THE TOTAL QUANTITY SHALL BE CONSIDERED FIXED AND THE CONTRACTOR SHALL BE PAID THE TOTAL QUANTITY AT COMPLETION OF GRADING WITHOUT RECALCULATION OF ACTUAL QUANTITIES. IT SHALL BE THE CONTRACTOR'S SOLE RESPONSIBILITY TO VERIFY ANY CHANGE IN EXISTING CONDITIONS AND DETERMINE THE EFFORT NECESSARY TO ACHIEVE THE GRADE SHOWN WITHIN THE PAYMENT QUANTITIES LISTED.

## PROFESSIONAL CERTIFICATION

I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND. LICENSE NO. 21194, EXPIRATION DATE: 04/20/2022.

30% SCHEMATIC DESIGN

**Bayland Consultants & Designers, Inc.**  
"Integrating Engineering and Environment"  
7455 New Ridge Road, Suite T Phone: (410) 694-9401  
Hanover, Maryland 21076 Fax: (410) 694-9105  
www.baylandinc.com  
BAYLAND JOB NO. 5\_18201

**ANNE ARUNDEL COUNTY DEPARTMENT OF PUBLIC WORKS**

REVISED DATE	APPROVED BY	DATE	APPROVED DATE	SCALE:	AS SHOWN
				DESIGNED BY:	MB
	CHIEF ENGINEER		PROJECT MANAGER	DRAWN BY:	MW
	APPROVED	DATE	APPROVED DATE	CHECKED BY:	MB
	ENGINEER ADMINISTRATOR		CHIEF, RIGHT OF WAY	SHEET NO.	1 OF 4

**HARNES CREEK PADDLING & ROWING FACILITY COVER SHEET**

**EXISTING TREE SURVEY**

TREE NUMBER	COMMON NAME	DBH 1	DBH 2
TR 1	SWEET GUM	12.5	--
TR 2	SWEET GUM	13.1	--
TR 3	TULIP POPLAR	12.5	--
TR 4	SWEET GUM	14.0	--
TR 5	TULIP POPLAR	20.8	--
TR 6	TULIP POPLAR	27.0	--
TR 7	RED MAPLE	25.7	--
TR 8	RED MAPLE	27.4	--
TR 9	SWEET GUM	12.7	--
TR 10	BOX ELDER	13.2	--
TR 11	TULIP POPLAR	25.5	--
TR 12	TULIP POPLAR	15.2	--
TR 13	TULIP POPLAR	19.8	--
TR 14	TULIP POPLAR	13.1	--
TR 15	TULIP POPLAR	21.8	--
TR 16	SWEET GUM	16.3	--
TR 17	TULIP POPLAR	19.0	--
TR 18	TULIP POPLAR	12.9	--
TR 19	TULIP POPLAR	27.8	--
TR 20	TULIP POPLAR	13.4	--
TR 21	TULIP POPLAR	18.7	--
TR 22	TULIP POPLAR	17.5	--
TR 23	SWEET GUM	11.9	--
TR 24	TULIP POPLAR	12.7	--
TR 25	TULIP POPLAR	10.6	18.2
TR 26	TULIP POPLAR	19.2	--
TR 27*	TULIP POPLAR	18.6	--
TR 28	TULIP POPLAR	18.8	--

\*DENOTES TREE TO BE REMOVED

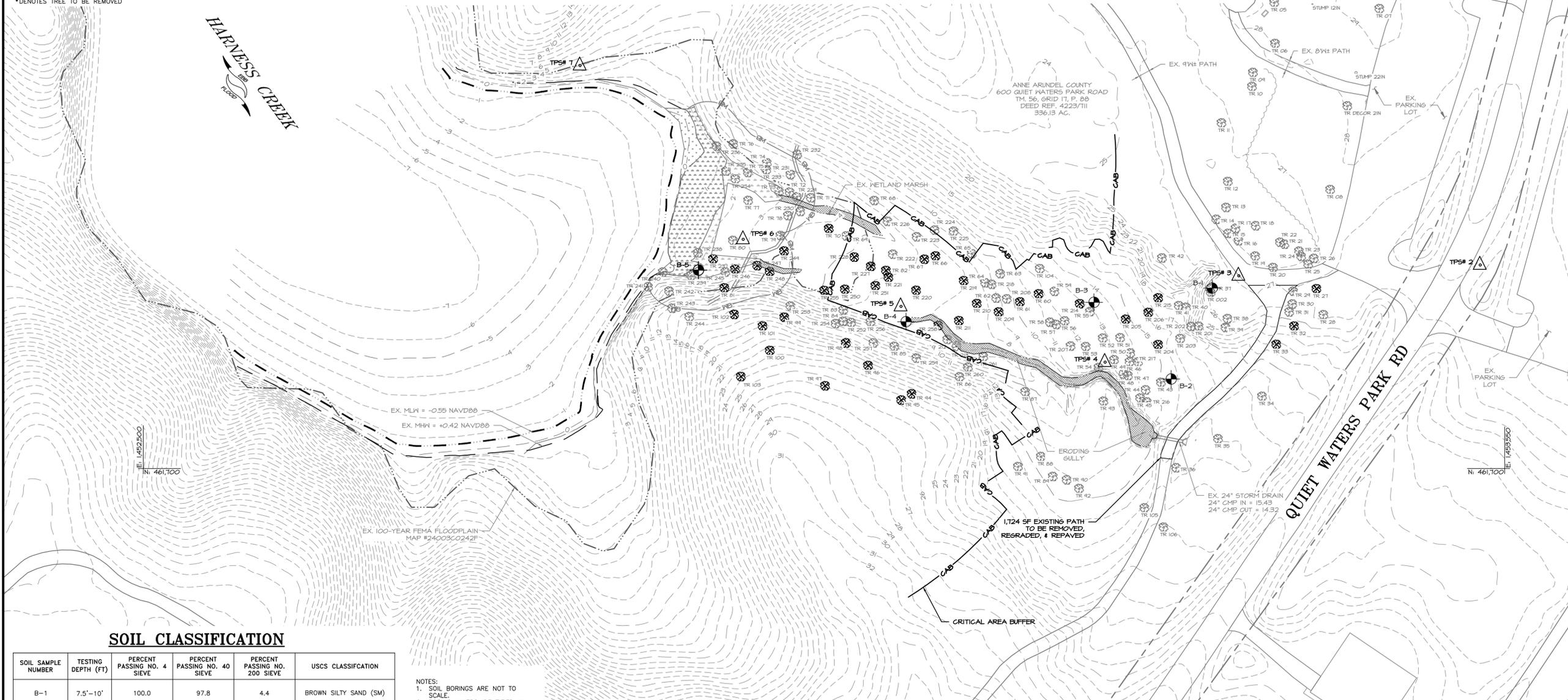
TREE NUMBER	COMMON NAME	DBH 1	DBH 2
TR 29	TULIP POPLAR	24.9	--
TR 30	TULIP POPLAR	14.7	--
TR 31	SWEET GUM	14.6	--
TR 32*	SWEET GUM	13.5	--
TR 33*	TULIP POPLAR	16.6	--
TR 34	SWEET GUM	12.4	--
TR 35	TULIP POPLAR	14.0	--
TR 36	TULIP POPLAR	25.1	--
TR 37	AMERICAN SYCAMORE	26.4	--
TR 38	DEAD	12.0	--
TR 39	SASSAFRAS	16.1	--
TR 40	TULIP POPLAR	16.4	--
TR 41	TULIP POPLAR	39.4	--
TR 42	TULIP POPLAR	44.9	--
TR 43	SWEET GUM	17.2	--
TR 44	TULIP POPLAR	19.8	--
TR 45	TULIP POPLAR	24.2	--
TR 46	TULIP POPLAR	31.6	--
TR 47	TULIP POPLAR	28.9	--
TR 48	SWEET GUM	18.4	--
TR 49	SWEET GUM	21.4	--
TR 50	SWEET GUM	12.9	--
TR 51	TULIP POPLAR	27.8	--
TR 52	SWEET GUM	15.1	--
TR 53	AMERICAN SYCAMORE	19.0	--
TR 54	SWEET GUM	13.5	--
TR 55	TULIP POPLAR	34.7	--
TR 56	SWEET GUM	29.0	--

TREE NUMBER	COMMON NAME	DBH 1	DBH 2
TR 57	NORTHERN RED OAK	14.2	--
TR 58	NORTHERN RED OAK	32.1	--
TR 59	TULIP POPLAR	40.2	--
TR 60*	SWEET GUM	21.4	--
TR 61*	SWEET GUM	26.5	--
TR 62	AMERICAN SYCAMORE	32.9	--
TR 63	SWEET GUM	19.7	--
TR 64	SWEET GUM	17.3	--
TR 65	SWEET GUM	31.9	--
TR 66*	SWEET GUM	12.8	--
TR 67*	TULIP POPLAR	38.1	--
TR 68	DEAD	37.8	--
TR 69	SWEET GUM	19.9	--
TR 70*	AMERICAN SYCAMORE	33.6	--
TR 71	SWEET GUM	23.2	--
TR 72	SWEET GUM	13.5	--
TR 73	SWEET GUM	22.2	--
TR 74	TULIP POPLAR	29.1	--
TR 75	AMERICAN SYCAMORE	16.7	--
TR 76	TULIP POPLAR	34.7	--
TR 77	RED MAPLE	21.4	--
TR 78	AMERICAN SYCAMORE	29.0	--
TR 79	SWEET GUM	18.9	--
TR 80	BOX ELDER	12.4	--
TR 81*	DEAD	40.4	--
TR 82*	TULIP POPLAR	18.5	--
TR 83	TULIP POPLAR	17.3	--
TR 84	CHESTNUT OAK	22.3	--

TREE NUMBER	COMMON NAME	DBH 1	DBH 2
TR 85	RED MAPLE	11.8	--
TR 86	WHITE OAK	29.1	--
TR 87	TULIP POPLAR	19.5	--
TR 88	AMERICAN SYCAMORE	33.7	13.2
TR 89	SWEET GUM	13.7	--
TR 90	SWEET GUM	16.1	--
TR 91	TULIP POPLAR	36.6	--
TR 92	DEAD	12.6	--
TR 93	AMERICAN SYCAMORE	27.1	--
TR 94*	DEAD	36.0	--
TR 95*	DEAD	36.9	--
TR 96*	DEAD	18.5	18.5
TR 97*	DEAD	18.9	--
TR 98*	DEAD	23.9	27.8
TR 99*	DEAD	29.3	--
TR 100*	DEAD	24.8	--
TR 101*	DEAD	23.5	--
TR 102*	DEAD	17	26.5
TR 103*	DEAD	17.8	19.9
TR 104	SWEET GUM	22.8	--
TR 105	TULIP POPLAR	22.8	--
TR 106	TULIP POPLAR	24.7	--
TR 100	BLACK CHERRY	6.0	--
TR 201	BLACK CHERRY	6.1	--
TR 202	TULIP POPLAR	7.9	--
TR 203	BLACK TUPELO	9.7	--
TR 204*	SWEET GUM	6.5	--
TR 205*	SWEET GUM	6.2	--

TREE NUMBER	COMMON NAME	DBH 1	DBH 2
TR 206*	SWEET GUM	8.0	--
TR 207	SWEET GUM	5.9	--
TR 208	AMERICAN HOLLY	8.4	--
TR 209*	TULIP POPLAR	8.5	--
TR 210*	AMERICAN HOLLY	10.6	--
TR 211*	AMERICAN HOLLY	5.9	--
TR 212	RED MAPLE	9.2	--
TR 213	RED MAPLE	10.9	--
TR 214*	BLACK TUPELO	11.0	--
TR 215*	SWEET GUM	9.9	--
TR 216	BLACKHAW	6.0	--
TR 217	SWEET GUM	11.0	--
TR 218	SWEET GUM	10.9	--
TR 219*	BOX ELDER	7.1	--
TR 220*	AMERICAN HOLLY	6.8	--
TR 221*	SWEET GUM	11.4	--
TR 222	AMERICAN ELM	6.6	--
TR 223	RED MAPLE	8.1	--
TR 224	SWEET GUM	9.7	--
TR 225	SWEET GUM	8.5	--
TR 226	RED MAPLE	11.0	--
TR 227*	AMERICAN ELM	6.4	--
TR 228*	DEAD	9.0	--
TR 229	SWEET GUM	10.3	--
TR 230	BOX ELDER	5.9	--
TR 231	SWEET GUM	7.3	--
TR 232	SWEET GUM	9.3	--
TR 233	TULIP POPLAR	8.8	--

TREE NUMBER	COMMON NAME	DBH 1	DBH 2
TR 234	SWEET GUM	9.1	--
TR 235	SWEET GUM	7.7	--
TR 236	BLACKHAW	6.0	--
TR 237*	RED MAPLE	6.1	--
TR 238	RED MAPLE	16.0	--
TR 239	BLACK TUPELO	10.6	--
TR 240	BLACK TUPELO	10.7	--
TR 241	CHESTNUT OAK	6.2	--
TR 242	RED MAPLE	10.5	--
TR 243	CHESTNUT OAK	10.4	--
TR 244	BLACK OAK	30.9	--
TR 245	BLACK TUPELO	9.7	--
TR 246*	SWEET GUM	8.0	--
TR 247*	BLACK TUPELO	8.1	--
TR 248*	AMERICAN HOLLY	7.0	--
TR 249*	RED MAPLE	8.9	4.9
TR 250*	BLACKHAW	5.8	4.0
TR 251*	AMERICAN ELM	7.6	--
TR 252	RED MAPLE	7.6	--
TR 253	BLACK TUPELO	7.1	--
TR 254	RED MAPLE	9.2	--
TR 255*	BLACKHAW	6.0	--
TR 256	RED MAPLE	7.7	--
TR 257	RED MAPLE	6.8	--
TR 258*	RED MAPLE	6.8	--
TR 259	RED MAPLE	7.1	--
TR 260	RED MAPLE	9.2	--
TR 261	RED MAPLE	6.0	--



**SOIL BORING LOG BORING #1**

DEPTH/ELEV.	EL.	DESCRIPTION
0.0'	26.1	GROUND SURFACE
1.0'/25.1		DARK BROWN SILTY SAND WITH ORGANICS (SM)
4.0'/22.1		BROWN CLAYEY SAND (SC)
7.5'/18.6		BROWN POORLY-GRADED SAND WITH SILT (SP-SM)
10.0'/16.1		BROWN SILTY SAND (SM)
BOTTOM EL. 16.1		

SCALE: NOT TO SCALE  
SAMPLE DATE: 06/2020

**SOIL BORING LOG BORING #2**

DEPTH/ELEV.	EL.	DESCRIPTION
0.0'	16.1	GROUND SURFACE
1.0'/15.1		DARK BROWN SILTY SAND WITH ORGANICS (SM)
3.0'/13.1		BROWN POORLY-GRADED SAND WITH SILT (SP-SM)
5.5'/10.6		BROWN SILTY SAND (SM)
8.5'/7.6		BROWN POORLY-GRADED SAND WITH SILT (SP-SM)
BOTTOM EL. 7.6		

SCALE: NOT TO SCALE  
SAMPLE DATE: 06/2020

**SOIL BORING LOG BORING #3**

DEPTH/ELEV.	EL.	DESCRIPTION
0.0'	13.8	GROUND SURFACE
1.0'/12.8		DARK BROWN SILTY SAND WITH ORGANICS (SM)
6.0'/7.8		BROWN/ORANGE CLAYEY SAND (SP-SC)
9.0'/4.8		BROWN SANDY LEAN CLAY (CL)
BOTTOM EL. 4.8		

SCALE: NOT TO SCALE  
SAMPLE DATE: 06/2020

**SOIL BORING LOG BORING #4**

DEPTH/ELEV.	EL.	DESCRIPTION
0.0'	7.3	GROUND SURFACE
0.5'/6.8		BROWN POORLY-GRADED SAND (SP)
3.5'/3.3		BROWN/RED CLAYEY SAND (SC)
6.0'/1.3		TAN/ORANGE SAND WITH CLAY (SP-SC)
8.0'/-0.7		ORANGE/GRAY CLAYEY SAND (SC)
9.0'/-1.7		ORANGE/BROWN SAND WITH CLAY (SP-SC)
10.0'/-2.7		BROWN/RED CLAYEY SAND (SC)
BOTTOM EL. -2.7		

SCALE: NOT TO SCALE  
SAMPLE DATE: 06/2020

**SOIL BORING LOG BORING #5**

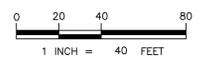
DEPTH/ELEV.	EL.	DESCRIPTION
0.0'	2.4	GROUND SURFACE
3.0'/-1.4		BROWN SILTY SAND (SM)
6.0'/-4.4		GRAY SILTY, CLAYEY, SAND (SC-SM)
8.5'/-6.1		DARK GRAY SILTY, CLAYEY SAND WITH ORGANICS (SC-SM)
BOTTOM EL. -6.1		

SCALE: NOT TO SCALE  
SAMPLE DATE: 06/2020

**SOIL CLASSIFICATION**

SOIL SAMPLE NUMBER	TESTING DEPTH (FT)	PERCENT PASSING NO. 4 SIEVE	PERCENT PASSING NO. 40 SIEVE	PERCENT PASSING NO. 200 SIEVE	USCS CLASSIFICATION
B-1	7.5'-10'	100.0	97.8	4.4	BROWN SILTY SAND (SM)
B-2	3.5'-5.5'	100.0	91.9	17.7	BROWN SILTY SAND (SM)
B-3	1.0'-6.0'	99.0	92.2	19.2	BROWN/ORANGE CLAYEY SAND (SC)
B-4	3.5'-6'	99.7	90.5	14.8	TAN/ORANGE SAND WITH CLAY (SP-SC)
B-5	0'-3'	100.0	91.0	18.6	BROWN SILTY SAND (SM)

NOTES:  
1. SOIL BORINGS ARE NOT TO SCALE.  
2. BORING LAYERS IDENTIFIED IN THE SOIL CLASSIFICATION TABLE HAVE BEEN VISUALLY CLASSIFIED AND VERIFIED WITH A GRADATION ANALYSIS. ALL OTHER BORING LOGS ARE BASED ON VISUAL FIELD CLASSIFICATION ONLY.  
3. SOIL BORINGS WERE OBTAINED FOR DESIGN PURPOSES ONLY. BORING DATA IS PROVIDED FOR THE CONTRACTOR'S CONVENIENCE AND IS APPLICABLE ONLY AT THE SPECIFIC POINTS WHERE THE BORINGS WERE PERFORMED. NO WARRANTY IS IMPLIED FOR THE CONTINUITY OF SUBSURFACE CONDITIONS.



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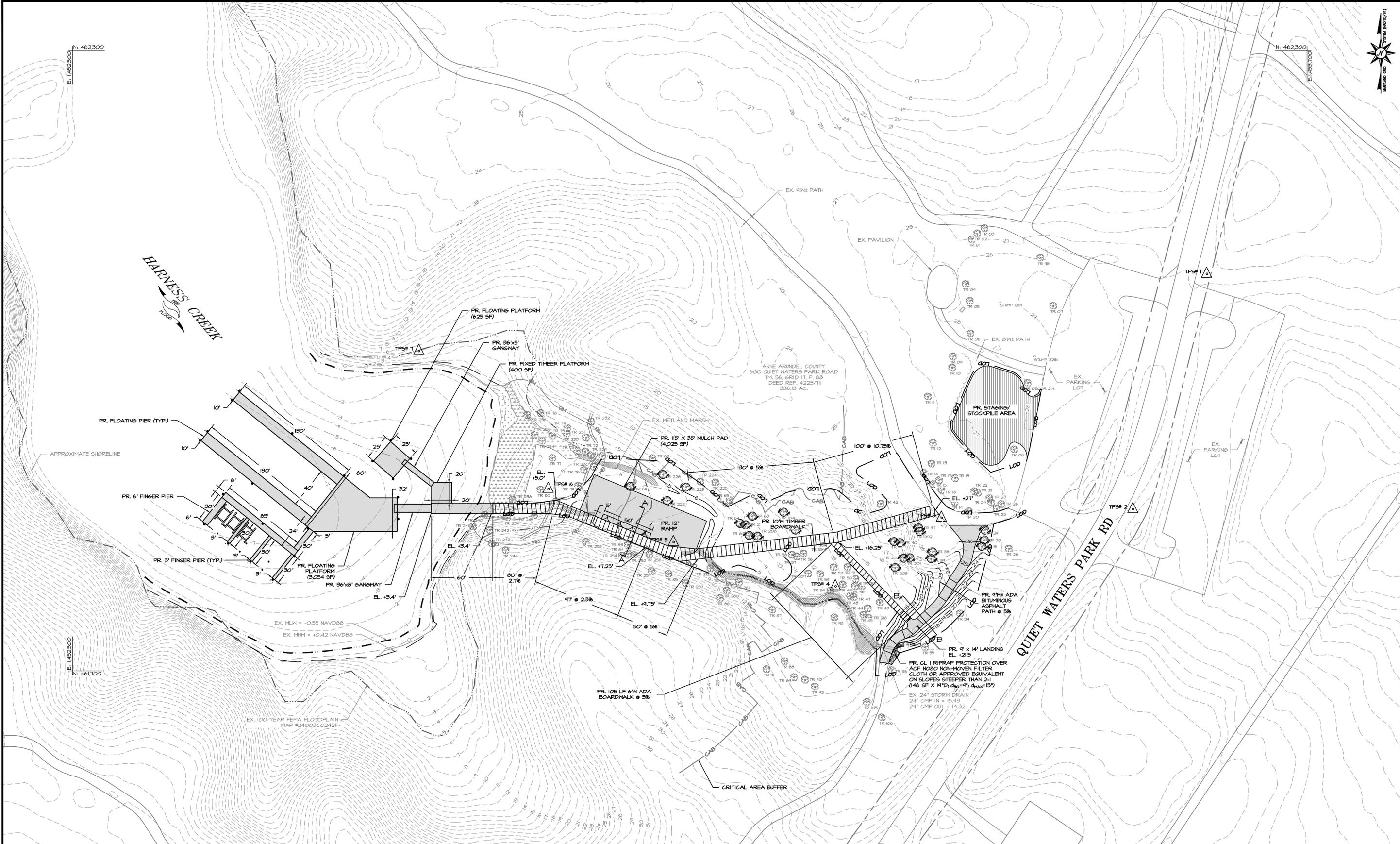
7455 New Ridge Road, Suite T Hanover, Maryland 21076  
Phone: (410) 694-9401 Fax: (410) 694-9105  
www.baylandinc.com  
BAYLAND JOB NO. 5\_18201

**ANNE ARUNDEL COUNTY DEPARTMENT OF PUBLIC WORKS**

REVISOR	DATE	BY	APPROVED	DATE	APPROVED	DATE	SCALE: 1" = 40'
							DESIGNED BY: MB
							DRAWN BY: MW
							CHECKED BY: MB
							SHEET NO. 2 OF 4

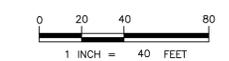
**30% SCHEMATIC DESIGN**

**HARNES CREEK PADDLING & ROWING FACILITY EXISTING CONDITIONS & DEMOLITION PLAN**



**CRITICAL AREA MITIGATION REQUIRED**

BUFFER LOD MITIGATION	7,045 SF
BUFFER CANOPY MITIGATION	2,329 SF
FOREST MITIGATION OUTSIDE OF BUFFER	5,186 SF
BUFFER ESTABLISHMENT REQUIRED	2,523 SF
FIDS MITIGATION	6,215 SF
TOTAL MITIGATION PLANTINGS REQUIRED	23,298 SF

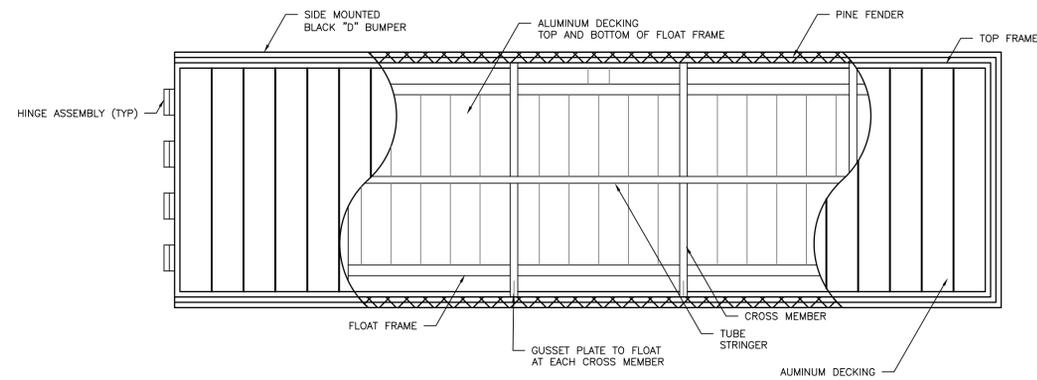


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REVISED		APPROVED		APPROVED		APPROVED		SCALE: 1" = 40'	
DATE	BY	DATE	BY	DATE	BY	DATE	BY	DESIGNED BY:	MB
			CHIEF ENGINEER		PROJECT MANAGER			DRAWN BY:	MW
			APPROVED		APPROVED			CHECKED BY:	MB
			ENGINEER ADMINISTRATOR		CHIEF, RIGHT OF WAY			SHEET NO.	3 OF 4

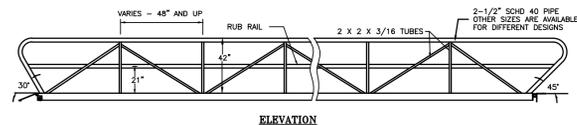
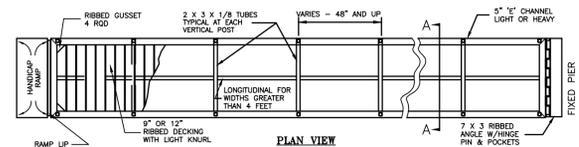
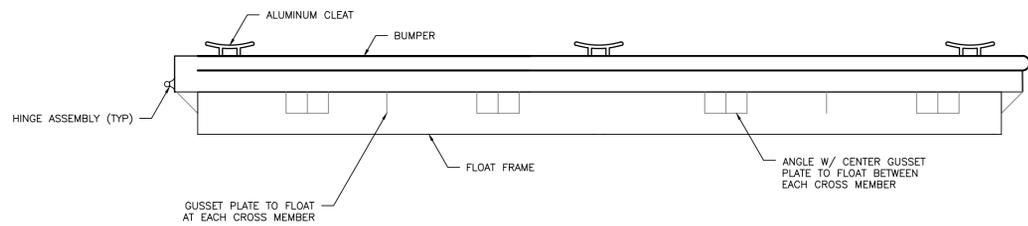
30% SCHEMATIC DESIGN

**HARNES CREEK  
 PADDLING & ROWING FACILITY  
 SITE PLAN**



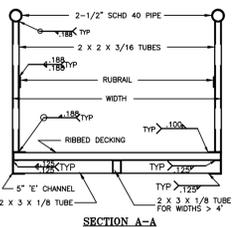
**FLOATING PIER PROFILE**

SCALE: 1" = 2'



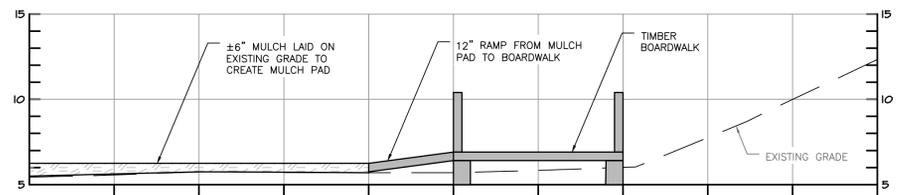
**ALUMINUM GANGWAY DETAILS**

SCALE: NOT TO SCALE



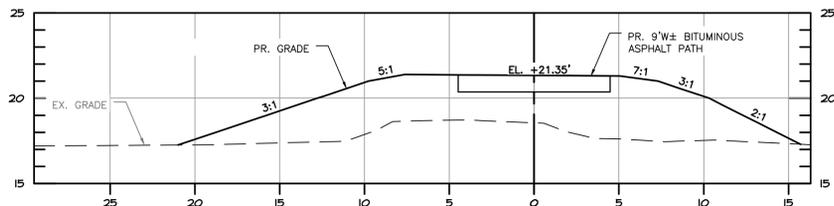
**SECTION A-A**

SCALE: 1" = 5'



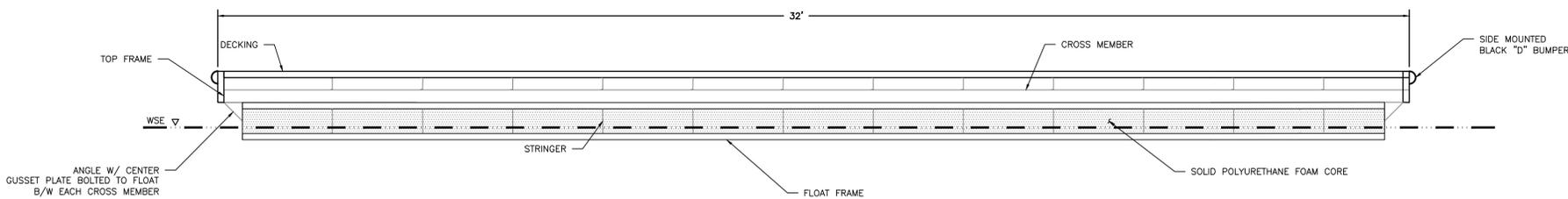
**SECTION B-B**

SCALE: 1" = 5'



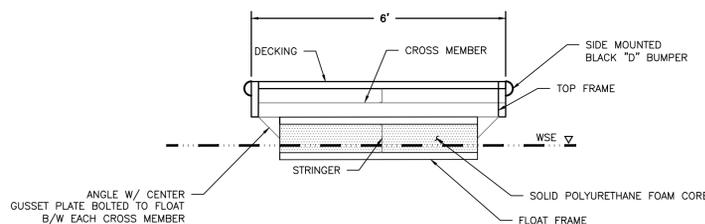
**NOTES:**

- ALL PILES SHALL BE 12" DIA. TIMBER TYPE 'B' AND TREATED W/ 2.5 CCA
- ALL DIMENSIONAL LUMBER SHALL BE NO.1 SYP  
2.1. STRUCTURAL LUMBER SHALL BE TREATED W/ 1.0 CCA  
2.2. DECKING, POSTS, & CAPS SHALL BE TREATED W/ 0.06 CA-C
- ALL HARDWARE SHALL BE HOT DIPPED GALVANIZED (GALV.) OR 305 STAINLESS STEEL (S.S.)
- ALL EXPOSED HARDWARE SHALL BE COUNTERSUNK
- PILES SHALL BE DRIVEN TO A MINIMUM TIP ELEVATION OF 12 FT BELOW EXISTING GRADE TO ACHIEVE A VERTICAL BEARING CAPACITY OF 10 TONS MINIMUM.



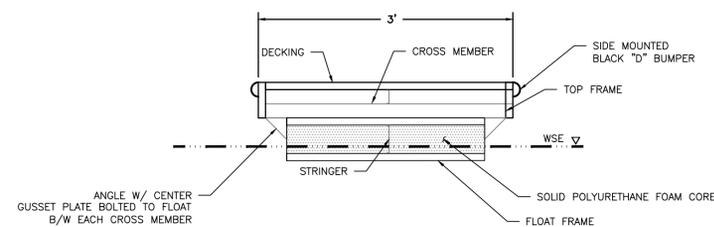
**TYPICAL FLOATING PLATFORM SECTION**

SCALE: 1" = 2'



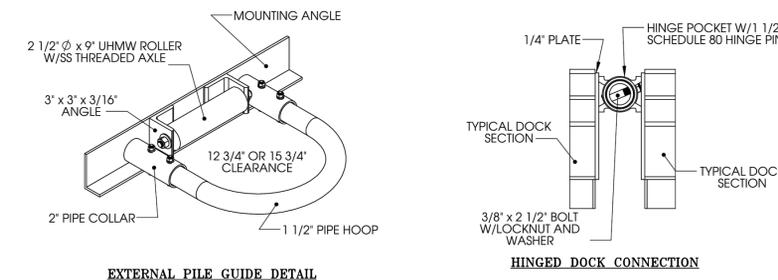
**6' FLOATING FINGER PIER SECTION**

SCALE: NOT TO SCALE



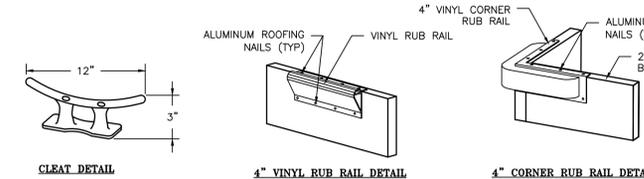
**3' FLOATING FINGER PIER SECTION**

SCALE: NOT TO SCALE



**EXTERNAL PILE GUIDE DETAIL**

**HINGED DOCK CONNECTION**

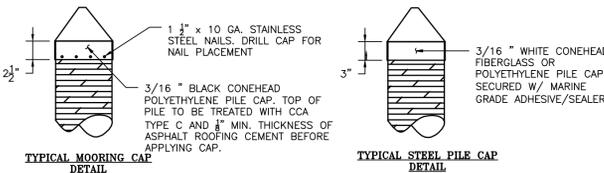


**CLEAT DETAIL**

**4" VINYL RUB RAIL DETAIL**

**4" CORNER RUB RAIL DETAIL**

NOTE: MAY BE BOLTED OR WELDED TO DOCK

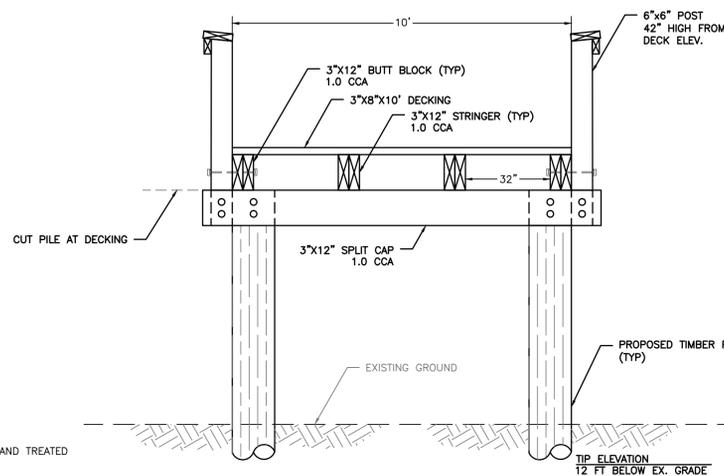


**TYPICAL MOORING CAP DETAIL**

**TYPICAL STEEL PILE CAP DETAIL**

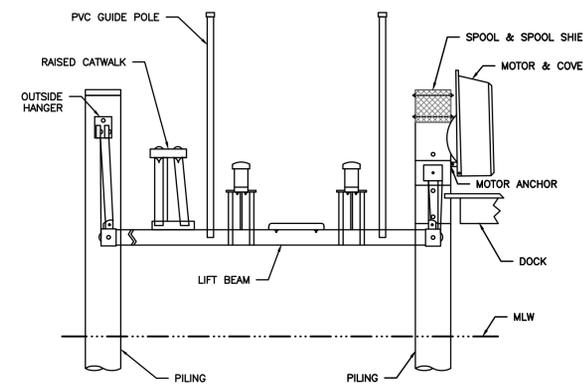
**DOCK ACCESSORY DETAILS**

SCALE: NOT TO SCALE



**TYPICAL BOARDWALK/PIER SECTION**

SCALE: NOT TO SCALE



**TYPICAL BOAT LIFT SECTION**

SCALE: NOT TO SCALE

30% SCHEMATIC DESIGN

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DEPARTMENT OF PUBLIC WORKS							
REVISOR	DATE	BY	APPROVED	DATE	APPROVED	DATE	SCALE: AS SHOWN
			CHIEF ENGINEER		PROJECT MANAGER		DESIGNED BY: MB
			APPROVED		APPROVED		DRAWN BY: MW
			ENGINEER ADMINISTRATOR		CHIEF, RIGHT OF WAY		CHECKED BY: MB
							SHEET NO. 4 OF 4

**HARNES CREEK  
 PADDLING & ROWING FACILITY  
 WATERSIDE AMENITIES DETAILS**