

STATE OF DELAWARE DEPARTMENT OF NATURAL RESOURCES AND ENVIRONMENTAL CONTROL **DIVISION OF FISH AND WILDLIFE**

ASSAWOMAN WILDLIFE AREA VIEWING TOWER

MULBERRY LANDING ROAD, FRANKFORD, DE 19945

CONTRACT NO. NAT25-001-ASSAWOMAN JANUARY 2025 **ISSUED FOR BID**









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(302) 539-3120 (FAX) CONTRACT NO.:

SIGNATURE

DATE

NAT25-001-ASSAWOMAN

MANMADE ROADSIDE FEATURES			
FEATURE DESCRIPTION	EXISTING	PROPOSED	ID
BOLLARD – STEEL POLE	©	۲	
BOLLARD – WOOD POST			
CURB, TYPE 1 AND TYPE 3			
CURB, TYPE 2			
CURB & GUTTER, TYPE 1			$\begin{pmatrix} c \\ X \end{pmatrix}$
CURB & GUTTER, TYPE 2]		
CURB & GUTTER, TYPE 3			
FENCE – CHAINLINK OR STRANDED	X	x	
FENCE – STOCKADE OR SPLIT RAIL	O	o	
FLAG POLE	FP ⊕	FP	
GUARDRAIL – STEEL BEAM, TYPE 1	· 0 0 0 0 0 0		
LAMP AND POST	LAMP		
MAILBOX	MB	MB	
PAVEMENT			
PILLAR OR MISCELLANEOUS POST	0	•	
TRAFFIC SIGN AND POST		•	

DRAINAGE FEATURES			
FEATURE DESCRIPTION	EXISTING	PROPOSED	ID
BIOFILTRATION SWALE		──← BFS ─► X──	
DITCH OR STREAM CENTERLINE	00	XX	
DIRECTIONAL STREAM FLOW ARROW	►		
DRAINAGE INLET	C.B.		
DRAINAGE JUNCTION BOX	J.B.		JB X
DRAINAGE MANHOLE	D		MH
DRAINAGE PIPE AND FLOW ARROW	SIZE TYPE		P X
FLARED END SECTION			FES X
RIPRAP – AREA FEATURE	020202	202020	RR X
SAFETY END SECTION			SES X
UNDERDRAIN			UD X
UNDERDRAIN OUTLET			UDO X

UTIL		
FEATURE DESCRIPTION	EXISTING	PROPOSED
CABLE TV DISTRIBUTION BOX	TV	
COMMUNICATIONS - UNDERGROUND	СОММ ——	coMM
ELECTRIC - UNDERGROUND	UG-E	UG-E
ELECTRIC MANHOLE	Ē	
ELECTRIC METER	E.M.	
ELECTRIC TRANSFORMER	E.T.	
GAS – UNDERGROUND	UG-G	UG-G
GAS MANHOLE	G	
GAS METER	G.M.	
GAS VALVE	G.V.	
GAS PUMP – SERVICE STATION	G.P.	
IRRIGATION - UNDERGROUND	IR IR	IR IR
ITMS - UNDERGROUND	ITMS	ITMS
LIGHTING - UNDERGROUND	LI LI	—_u —_u —
LUMINAIRE – POLE MOUNTED	¢-	
MANHOLE – UNDETERMINED OWNER	(H)	
RAILROAD TRACKS		
SANITARY – UNDERGROUND	S S S	<u> </u>
SANITARY SEWER MANHOLE	(S)	
SANITARY SEWER VALVE	S.V.	-
SANITARY SEWER CLEANOUT OR VENT	CO CO	CO
SEPTIC DRAIN FIELD	S.D.F.	
SIGNALIZATION – UNDERGROUND		SIG
SOIL BORING LOCATION		
TELEPHONE BOOTH	B	
TELEPHONE MANHOLE	(T)	
TELEPHONE TEST POINT		
TRAFFIC - CONDUIT JUNCTION WELL	J.W.	
TRAFFIC - PEDESIRIAN PULE & BASE		
TRAFFIC - SIGNAL CABINET & BASE	<u> </u>	
TRAFFIC - SIGNAL POLE AND BASE	®	
	UB	
UTILITY POLE GUY WIRE ANCHOR	 	⊘→
UTILITY POLE		Q
UTILITY TEST HOLE LOCATION		
WATER – UNDERGROUND	W	W
WATER – FIRE HYDRANT		
WATER METER	₩.MI.	vy.lVI. ■
WATER VALVE	W.V.	₩.V. ●
WATER – FIRE DEPARTMENT CONNECTION	FDC O	\bowtie
WELL HEAD	WELL	

PAVEMENT SECTION(S)	
MILL AND OVERLAY – SEE TYPICAL SECTIONS FOR MATERIAL AND DEPTHS	
FULL DEPTH PAVEMENT	
SHARED USE PATH	
GRAVEL	
CONCRETE	

NATURAL ROADSIDE FEATURES		
FEATURE DESCRIPTION	EXISTING	
HEDGEROW OR THICKET		
MARSH BOUNDARY LINE		
TREE – CONIFEROUS	*	
TREE – DECIDUOUS	\bigcirc	
TREE STUMP	2	
SHRUBBERY	Ś	
WETLAND BOUNDARY – DELINEATED		
WOODS LINE BOUNDARY		~

RIGHT-OF-WAY FEATURES	
FEATURE DESCRIPTION	EXISTING
DENIAL OF ACCESS	DA
EASEMENT - OTHERS	
PERMANENT EASEMENT	PE
PROPERTY LINE	
PROPERTY MARKER – CONCRETE	СМ
PROPERTY MARKER – IRON PIPE	I.P. O
RIGHT-OF-WAY BASELINE	100+00
RIGHT-OF-WAY LINE	RW
RIGHT-OF-WAY & DENIAL OF ACCESS	R/W-DA
RIGHT-TO-ENTER	
TEMPORARY CONSTRUCTION EASEMENT	
CLEAR ZONE	
HORIZONTAL CLEARANCE	

SURVEY CONTROL & MONUMENTATION		
FEATURE DESCRIPTION EXISTING		
SURVEY BENCHMARK LOCATION	B.M. ∳	
SURVEY TIE POINT LOCATION	T.P. +	
SURVEY TRAVERSE POINT	Δ	

MISCELLANEOUS FEATURES		
FEATURE DESCRIPTION	PROPOSED	
BUTT JOINT		
CLEAR ZONE	CZ	
CONSTRUCTION BASELINE	100+00	
LIMIT OF CONSTRUCTION	LOC	
DEMOLITION		
P.C.C. SIDEWALK		
6" P.C.C. SIDEWALK		
PAVEMENT PATCH		

PROPOSED
~~~~~
PROPOSED
DA
PL
С.М.
I.P. ●
100+00
RW
K/W-DA
RTE
TCE
CZ
НС

	]	
IDENTIFIERS		
FEATURE DESCRIPTION	ID	
ABANDON BY CONTRACTOR	AB C	
ABANDON BY OTHERS	(AB) O	
ADJUST BY CONTRACTOR	A C	
ADJUST BY OTHERS	A O	
BEST MANAGEMENT PRACTICE	BMP XX	
BUS STOP PAD / TYPE	BSP XX	
BUS STOP WITH SHELTER PAD / TYPE	BSSP XX	
CONCRETE SAFETY BARRIER	B XX	
CONVERT TO JUNCTION BOX	CJB XX	
CONVERT TO DRAINAGE MANHOLE	CDM XX	
DO NOT DISTURB	DND	
ENERGY DISSIPATOR	ED XX	
FILL WITH FLOWABLE FILL	(FF C	
LANDSCAPE PLANTINGS	LS XX	
PEDESTRIAN CONNECTION / TYPE	PC XX	
RELOCATE BY CONTRACTOR	RL C	
RELOCATE BY OTHERS	RL	
RELOCATE BY PROPERTY OWNER	RL PO	
REMOVE BY CONTRACTOR	(RM) C	
REMOVE BY OTHERS	RM O	
REMOVE BY TRAFFIC CONTRACTOR	(RM) TC	
RIGHT-OF-WAY MONUMENT	(RM) XX	

EROSION & SEDIMENT CONTROL FEATURES		
FEATURE DESCRIPTION	PROPOSED	
LIMIT OF DISTURBANCE	LOD	
PORTABLE SEDIMENT TANK	ST	
PUMPING PIT	(PP-2)	
SILT FENCE	SF	
COMPOST FILTER LOG	CFL	
SENSITIVE AREA PROTECTION	SAP	
CONCRETE WASHOUT	CW	
STABILIZED CONSTRUCTION ENTRANCE	SCE L	
STOCKPILE AREA	SP SP	



 BORING LEGEND

 FEATURE DESCRIPTION
 PROPOSED

 HAND AUGER LOCATION
 HA1

 DYNAMIC CONE PENETROMETER LOCATION
 B1

NOTE: SUBSOIL INVESTIGATION PERFORMED BY CENTURY ENGINEERING GEOTECHNICAL SECTION.

	BY:						
REVISIONS:	DATE: DESCRIPTION:						
	VIEWING TOWER				LEGEND		
SEAL:	SEAL: * NO. 11204 * NO. 11204 * NO. 11204 * NO. 11204 * A W A B * A W A						
CEI C	CEI CONTRACT NO.: 175013.97						
DRAV	WJH DRAWN BY: WJH						
DATE	CHECKED BY: JB DATE:						
SCAL	JANUARY 2025 SCALE: 1" = 1'						
SHEE	SHEET NO.: C301						
	CONTRACT NO.: NAT25-001-ASSAWOMAN						

	ABBREVIATION SCHEDULE	PROJECT NOTES
ABBREVIATION		
		CENTER.
ASD	ALLOWABLE STRESS DESIGN	1.2. REMOVE EXISTING
ALUM	ALUMINUM	1.3. CONSTRUCT ACCES
BL	BASE LINE	1.4. CONSTRUCT TIMBER
BOTT	BOTTOM	1.5. CONSTRUCT ONE (
BRG	BEARING	1.6. CONSTRUCT GRAVE
CJ		1.7. CONSTRUCT ALTERN
CL	CENTER LINE	1.8. INSTALL LANDSCAPI
CLR	CLEAR	1.9. PROVIDE MAINTENAI
CONC	CONCRETE	2. THESE PLANS WERE
CONN	CONNECTION	CONTROL POINTS FOR FOR PROVIDING ALL AI
CORR	CORRUGATED	COST TO THE OWNER.
DEM	CONSTRUTION JOINT	
DIAG	DIAGONAL	4. THE CONTRACTOR SHAL
DL	DEAD LOAD	MAINTAIN TWO (2) LANE
	DEPARTMENT OF NATURAL RESOURCES AND	5. EXISTING UTILITIES SHO
DOL	DEPARTMENT OF LABOR	CONTRACTOR IS RESPON
DOT	DEPARTMENT OF TRANSPORTATION	
E.F.	EACH FACE	
EL., ELEV	ELEVATION	IN THESE PLANS OR TH
EQU.	EQUAL	REFER TO THE "STAN
EX., EXIST.	EXISTING	OTHERWISE, THE COST WHETHER THE INDIVIDUA
F'c	COMPRESSIVE STRENGH OF CONCRETE	7. CLEARING AND GRUBBI
FIN. FL.	FINISHED FLOOR	TREE ROOTS SHALL NO
FIN. GR.	FINISHED GRADE	8. ALL TREE REMOVAL AN INCIDENTAL TO THE CO
FND	FOUNDATION	BY THE CONTRACTOR A SHALL BE FLAGGED BY
FTG	FOOTING	THE ENGINEER WILL NO
Fy	YIELD STRENGTH OF STEEL	9. TREES NOT DESIGNATED
GABC	GRADED AGGREGATE BASE COURSE	DETAIL DE-ESC-3.7.2,
HORIZ		10. THE CONTRACTOR MAY
JT	JOINT	DISTURBANCE (LOD) SH
KSI	KIPS PER SQUARE INCH	DETERMINED BY THE
LL	LIVE LOAD	COORDINATED WITH TH PROGRAM PRIOR TO TH
LLV	LONG LEG VERTICAL	AND REDRESSED AFTER COST SHALL BE INCLUD
	LONG LEG HORIZONTAL	12. THE CONTRACTOR IS A
	LING LEG BACK TO BACK	THE CONTRACT PLANS, BACKFILLED AND RESTO
LOD		
LRFD	LOAD RESISTANCE FACTORED DESIGN	OF ALL NEW AT-GRADE
мнพ	MEAN HIGH WATER	14. NO CONSTRUCTION EQU WITHIN THE LOD.
MTL	METAL	15. TEMPORARY CONSTRUC
NO	NUMBER	WETLANDS.
		16. THE LIMIT OF CONSTRU
0.C.	ON CENTER	17. WETLANDS DISTURBED E
ОНЖ	ORDINARY HIGH WATER	18 THE CONTRACTOR SHAL
OPP	OPPOSITE	AND EXCAVATIONS TO F
P.L.	PROPERTY LINE	19. REFER TO THE SEDIMEN
PL	PLATE	
PSI	POUNDS PER SQUARE INCH	TIME OF YEAR RES
	PRESSURE TREATED	
ROW RW R/W	REINFORCING BAR	2. NO IN-WATER CONSTRU
SF		3. NU WURK WITHIN THE M
SIM	SIMILAR	
SLBB	SHORT LEG BACK TO BACK	
SS	STAINLESS STEEL	
STA	STATION	
STD	STANDARD	
STL	STEAL	
SIK T&B		
TYP	TYPICAL	
UHMW	ULTRA HIGH MOLECULAR WEIGHT	
UNIF	UNIFORM	
UNO	UNLESS NOTED OTHERWISE	
VERT	VERTICAL	
WSE	WATER SURFACE ELEVATION	
WWF	WELDED WIRE FABRIC	

1. 1. ⁻	THE INTENT OF THIS PROJECT IS TO PROVIDE THE FOLLOWING IMPROVEMENTS 1. DISASSEMBLE AND DELIVER THE EXISTING STEEL OBSERVATION TOWER CENTER.
1.2	2. REMOVE EXISTING CONCRETE TOWER FOUNDATIONS AND BACKFILL WITH D
1.	3. CONSTRUCT ACCESSIBLE BOARDWALK ON HELICAL STEEL PILES AS SHOW
1.4	4. CONSTRUCT TIMBER OBSERVATION TOWER ON STEEL SUPPORTS FRAMES /
1.5	5. CONSTRUCT ONE (1) PAVED AREA FOR ACCESSIBLE PARKING.
1.6	6. CONSTRUCT GRAVEL TOWER PARKING AREA AS SHOWN ON THE CONTRACT
1.	7. CONSTRUCT ALTERNATE #1 GRAVEL PARKING AREA ALONG MULBERRY LAN
1.8	3. INSTALL LANDSCAPING AS SHOWN ON THE CONTRACT PLANS.
1.9	9. PROVIDE MAINTENANCE OF TRAFFIC AND INSTALL SAFETY FEATURES FOR
2.	THESE PLANS WERE DEVELOPED FROM CONVENTIONAL SURVEY PERFORM CONTROL POINTS FOR THE SURVEY HAVE BEEN INCLUDED IN THESE PLANS FOR PROVIDING ALL ADDITIONAL PHYSICAL CONTROL AS REQUIRED TO COM COST TO THE OWNER.
3.	THE CONTRACTOR SHALL INCLUDE A SIGNED COPY OF THE "BUILD AMERICA, IN SECTION 004113 - BID FORM, ALONG WITH THE REST OF THE BID FORM.
4.	THE CONTRACTOR SHALL DEVELOP AND SUBMIT A PHASING PLAN FOR THE MAINTAIN TWO (2) LANES OF TRAFFIC THROUGH THE CONSTRUCTION SITE.
5.	EXISTING UTILITIES SHOWN ARE BASED ON THE BEST INFORMATION AVAIL DEVELOPED. COMPLETENESS OR CORRECTNESS OF THE UTILITIES SHOWN CONTRACTOR IS RESPONSIBLE FOR EMPLOYING AN UNDERGROUND UTILITY LOC UTILITIES WITHIN THE LIMIT OF DISTURBANCE PRIOR TO BEGINNING CONSTRUCT
6.	PORTIONS OF THIS CONTRACT ARE TO BE CONSTRUCTED IN ACCORDANC TRANSPORTATION STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONST CURRENT EDITION, INCLUDING ALL REVISIONS UP TO ADVERTISEMENT OF THIS IN THESE PLANS OR THE SPECIFICATIONS. ITEMS INCLUDE, BUT ARE NOT LIM SUPERPAVE TYPE B, PG 64–22, AND 401044 – SUPERPAVE TYPE C, P REFER TO THE "STANDARD SPECIFICATIONS" FOR MATERIALS AND METHOD OTHERWISE, THE COST FOR ALL WORK SHALL BE PAID FOR IN THE LUMP WHETHER THE INDIVIDUAL SECTION IS INCLUDED IN THE SPECIFICATION PACKE
7.	CLEARING AND GRUBBING SHALL INCLUDE CUTTING OFF TREES AND BRUSH TREE ROOTS SHALL NOT BE REMOVED.
8.	ALL TREE REMOVAL AND TREE TRIMMING WITHIN THE LIMITS OF DISTURBANI INCIDENTAL TO THE CONTRACT. INDIVIDUAL TREES ARE NOT SHOWN ON TH BY THE CONTRACTOR AS NECESSARY WITHIN THE LIMITS OF DISTURBANCE. SHALL BE FLAGGED BY THE CONTRACTOR FOR REVIEW AND APPROVAL BY THE ENGINEER WILL NOT ACCEPT REMOVAL OF TREES INTENDED TO BE PROTE
9.	TREES NOT DESIGNATED TO BE REMOVED SHALL BE PROTECTED FROM CONST OF SOIL WITHIN THE DRIP LINE BY MEANS OF 3'-0" HIGH SENSITIVE AREA F DETAIL DE-ESC-3.7.2, SENSITIVE AREA PROTECTION.

 THE CONTRACTOR MAY STORE AND/OR STOCKPILE EQUIPMENT AND MATERIAL DISTURBANCE (LOD) SHOWN ON PLAN.

- 11. EXCESS EXCAVATED MATERIAL MAY BE TEMPORARILY STOCKPILED WITHIN DETERMINED BY THE ENGINEER. ANY ADDITIONAL LOCATIONS FOR STO COORDINATED WITH THE ENGINEER AND APPROVED BY THE DNREC SEDIMI PROGRAM PRIOR TO THE START OF WORK. ALL STOCKPILE AREAS SHALL BI AND REDRESSED AFTER CONSTRUCTION IN ACCORDANCE WITH EROSION AND COST SHALL BE INCLUDED IN THE LUMP SUM PRICE BID FOR THE PROJECT.
- 12. THE CONTRACTOR IS ADVISED THAT CONTRACTOR EMPLOYEE PARKING SHALL E THE CONTRACT PLANS, UNLESS APPROVED BY THE ENGINEER. AREAS D BACKFILLED AND RESTORED TO MATCH THE SURROUNDING AREAS.
- 13. CROSS SLOPE OF ALL NEW WALKWAYS AND TRAILS SHALL NOT EXCEED A SL OF ALL NEW AT-GRADE WALKWAYS SHALL NOT EXCEED 1:20, UNLESS SHOWN
- 14. NO CONSTRUCTION EQUIPMENT, WORK, OR TEMPORARY FILLS SHALL BE ALLO WITHIN THE LOD.
- 15. TEMPORARY CONSTRUCTION MATTING SHALL BE USED FOR ALL EQUIPMENT WETLANDS.
- 16. THE LIMIT OF CONSTRUCTION (LOC) SHALL BE NO WIDER THAN 20-FEET WIDE
- 17. WETLANDS DISTURBED BY CONSTRUCTION SHALL BE RESTORED TO MATCH AD BE PLANTED AS NOTED ON THE EROSION AND SEDIMENT CONTROL PLANS.
- 18. THE CONTRACTOR SHALL PROVIDE AND INSTALL TEMPORARY BARRICADES ON AND EXCAVATIONS TO PREVENT ACCESS BY PATRONS TO WORK AREAS.
- 19. REFER TO THE SEDIMENT AND EROSION CONTROL PLANS FOR THE SEQUENCE

TIME OF YEAR RESTRICTIONS:	
<ol> <li>NO TIMBER CLEARING:</li> <li>NO IN-WATER CONSTRUCTION:</li> <li>NO WORK WITHIN THE MARSH/WETLANDS:</li> </ol>	JANUARY MARCH 1 APRIL 1

JANUARY 1 THROUGH MAY 15. MARCH 1 THROUGH JUNE 30. APRIL 1 THROUGH JULY 31.

NOTE: NOT ALL ABBREVIATIONS INCLUDED IN THESE PLANS

WOOD PRESERVATIVE APPLICATION AND RETENTION						
LOCATION	USE CATEGORY	ACQ (PCF)	CA-C (PCF)			
DECKING BOARDS	3B	0.15	0.06			
JOIST AND BEAMS, ABOVE GROUND	3B OR 4A	0.15 OR 0.40	0.006 OR 0.15			
JOIST AND BDAMS, GROUND CONTACT	4A	0.40	0.15			
RAILING	3B	0.15	0.06			
POSTS, STRUCTURAL	4A	0.40	0.15			
STAIRS	3B OR 4A	0.15 or 0.40	0.06 or 0.15			

USE CATEGORIES SOURCES FROM AWPA BOOK OF STANDARDS.
RETENTION PROVIDED IN POUNDS PER CUBIC FOOT (PCF).

	GENERAL NOTES	STRUCTURAL NOTES
MENTS AT THE ASSAWOMAN WILDLIFE AREA: WER TO A LOCATION WITHIN THE WILDLIFE	<ol> <li>THE TERM "ENGINEER," "STATE," AND/OR "ARCHITECT" NOTED THROUGHOUT THE CONTRACT PLANS AND SPECIFICATIONS SHALL REFER TO DNREC / DIVISION OF FISH AND WILDLIFE, OR THEIR APPOINTED REPRESENTATIVE. THE TERM "SITE" AND "WILDLIFE AREA" MAY BE USED INTERCHANGEABLY THROUGHOUT THESE DOCUMENTS AS A MEANS OF IDENTIFYING THE ASSAWOMAN WILDLIFE AREA.</li> </ol>	LOADS 1. RAILING LOADS = GREATER OF 50 LBS/LF OR 200 LBS POINT PER INTERNA CURRENT EDITION.
WIH DELDOT BORROW, TYPE F. SHOWN ON THE CONTRACT PLANS.	<ol> <li>THE CONTRACTOR SHALL RESTORE ALL AREAS AFFECTED BY THE CONSTRUCTION SHOWN HEREON AS SHOWN ON THESE PLANS AND SPECIFICATIONS, TO A CONDITION COMPARABLE TO THAT EXISTING PRIOR TO CONSTRUCTION. AND TO THE SATISFACTION OF DNRFC.</li> </ol>	2. PEDESTRIAN LIVE LOAD = 60 PSF PER INTERNATIONAL BUILDING CODE, CURREN
MES AND STEEL HELICAL PILES.	3. THE CONTRACTOR SHALL PROVIDE NECESSARY FACILITIES, INCLUDING, BUT NOT LIMITED TO, RESTROOMS DURING CONSTRUCTION. WILDLIFE AREA FACILITIES SHALL NOT BE USED. EQUIPMENT PARKING AND MATERIAL STACING, SHALL BE LIMITED TO DESIGNATED STACING & STOCKPUT ADDAG	IIMBER CONSTRUCTION:           1.         ALL MEMBERS SHALL BE FRAMED, ANCHORED, TIED AND BRACED IN ACCONSTRUCTION PRACTICE AND APPLICABLE CODES.
NTRACT PLANS. Y LANDING ROAD.	<ul> <li>MATERIAL STAGING SHALL BE LIMITED TO DESIGNATED STAGING &amp; STOCKPILE AREAS.</li> <li>THE CONTRACTOR SHALL NOTE THAT IN CASE OF DISCREPANCY BETWEEN THE SCALED AND THE FIGURED DIMENSIONS SHOWN ON THE PLANS, THE FIGURED DIMENSIONS SHALL GOVERN. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONFIRMING ALL DIMENSIONS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DIMENSIONS. ANY DIMENSIONAL DISCREPANCIES TO THE ADDITION OF THE FIGURED FOR OUTPOLY OF THE STAGING ANY DIMENSIONAL DISCREPANCIES TO THE ADDITION.</li> </ul>	<ol> <li>ALL WOOD FRAMING, INCLUDING POSTS, JOISTS, AND BLOCKING, SHALL BE SUND.2 OR BETTER. REFER TO SECTION 061083 – EXTERIOR ROUGH CARPENTR</li> <li>JOIST TO CROSS BEAM TIE-DOWNS SHALL BE SIMPSON STRONG-TIE H8SS. OR</li> </ol>
FOR THE DURATION OF THE PROJECT. RFORMED BY CENTURY ENGINEERING, INC. PLANS. THE CONTRACTOR IS RESPONSIBLE COMPLETE THE WORK AT NO ADDITIONAL	<ul> <li>BRINGING ANY DIMENSIONAL DISCREPANCIES TO THE ATTENTION OF THE ENGINEER FOR CLARIFICATION.</li> <li>THE CONTRACTOR SHALL DESIGNATE A PERSON WHO SHALL BE RESPONSIBLE FOR IMPLEMENTING AND MAINTAINING THE EROSION AND SEDIMENT CONTROL PLANS, A PERSON WHO SHALL BE RESPONSIBLE FOR IMPLEMENTING AND MAINTAINING THE TRAFFIC CONTROL, AND A PERSON WHO SHALL BE RESPONSIBLE FOR WORKER SAFETY. THE PERSON RESPONSIBLE FOR IMPLEMENTING AND MAINTAINING THE EROSION AND SEDIMENT CONTROL PLANS SHALL BE CERTIFIED BY DNREC FOR EROSION AND SEDIMENT CONTROL</li> </ul>	<ol> <li>A. NAILED CONNECTIONS WILL NOT BE PERMITTED EXCEPT WHERE NOTED OTHERWIS</li> <li>BOLTED TIMBER CONNECTIONS SHALL FOLLOW SECTION 061063 - EXTERIOR RC</li> <li>6. WOOD DECKING</li> </ol>
IERICA, BUY AMERICA REQUIREMENT" FOUND FORM.	<ul> <li>RESPONSIBILITY (CERTIFIED CONSTRUCTION REVIEWER).</li> <li>6. THE CONTRACTOR IS RESPONSIBLE FOR SECURING THE AREA AND EXCAVATIONS WITHIN THE LIMITS OF CONSTRUCTION TO PROHIBIT PUBLIC ACCESS UNTIL COMPLETION OF THE PROJECT. AT A MINIMUM, ALL EXCAVATION SHALL BE BARRICADED WITH ORANGE SAFETY FENCE. THE CONTRACTOR'S PROCEDURE/METHOD</li> </ul>	6.1. ALL WOOD DECKING SHALL BE SOUTHERN YELLOW PINE, NO. 2 OR BETTE DECKING CONTINUOUS EDGE TO EDGE UNLESS KILN DRIED AFTER PRESERV PLACE WITH 1/8-INCH GAP IF KILN DRIED.
THE PROJECT. THE PHASING PLAN SHALL E. AVAILABLE AT THE TIME THIS PLAN WAS OWN THEREOF IS NOT GUARANTEED. THE	FOR LIMITING ACCESS SHALL BE REVIEWED BY, AND COORDINATED WITH THE OWNER PRIOR TO THE START OF WORK. THE COST TO INSTALL, RELOCATE, AND MAINTAIN SITE SECURITY SHALL BE INCIDENTAL TO THE CONTRACT. CONTRACTOR SHALL MAINTAIN PUBLIC ACCESS ON ALL ROADS. IF CONTRACTOR MUST CLOSE ANY ROAD THE CONTRACTOR SHALL PROVIDE NOTICE 48 HOURS IN ADVANCE FOR APPROVAL BY THE ENCINEER	<ul> <li>6.2. CONNECTIONS SHALL BE #10 X 4.5" LONG TYPE 316 STAINLESS STEEL OF SCREWS INSTALLED FLUSH WITH THE SURFACE OF THE DECKING. PREDRIL AVOID SPLITTING.</li> <li>6.3. NAILS SHALL NOT BE ALLOWED FOR DECK ATTACHMENT.</li> </ul>
Y LOCATOR TO LOCATE AND MARK EXISTING STRUCTION. RDANCE WITH DELAWARE DEPARTMENT OF CONSTRUCTION (STANDARD SPECIFICATIONS)	<ol> <li>THE CONTRACTOR IS SOLELY RESPONSIBLE FOR OBTAINING OFF-SITE SPOIL AREAS FOR LEGAL DISPOSAL OF ANY EXCESS MATERIAL NOT ACCEPTED BY THE PARK AND/OR UNSUITABLE MATERIALS AS NECESSARY IN ACCORDANCE WITH ALL FEDERAL, STATE, AND LOCAL REQUIREMENTS. ALL COST FOR RECYCLING, TRANSPORTING TO, PROCURING AND UTILIZING THE OFF-SITE SPOIL AREAS ARE TO BE INCIDENTAL TO THE</li> </ol>	<ul> <li>6.4. 2X6 DECKING SHALL BE ATTACHED TO EACH JOISTS WITH 2- DECK SCREW NO LESS THAN 1-SCREW AT EACH JOIST.</li> <li>7. WOOD PRESERVATIVE TREATMENT</li> </ul>
THIS PROJECT, UNLESS NOTED OTHERWISE THIS PROJECT, UNLESS NOTED OTHERWISE TIMITED TO, 301001 – GABC, 401014 – C, PG 64–22 (NON–CARBONATE STONE). ETHOD OF CONSTRUCTION. UNLESS NOTED	<ol> <li>IN CASE OF CONFLICT BETWEEN THE "MANUFACTURER'S RECOMMENDATIONS" FOR AN APPROVED MATERIAL AND THE GOVERNING "CONTRACT SPECIFICATIONS" FOR THE MATERIAL, THE MORE RESTRICTIVE OF THE TWO</li> </ol>	7.1. PRESSURE TREAT BOARDS AND DIMENSION LUMBER WITH WATERBORNE PRE TO AWPA U1: USE CATEGORY UC3b FOR EXTERIOR CONSTRUCTION NOT IN ROUND, AND USE CATEGORY UC4α FOR ITEMS IN CONTACT WITH THE GROU SHEET.
DUMP SUM PRICE BID FOR THE PROJECT, PACKET OR NOT. BRUSH FLUSH WITH THE EXISTING GRADE.	<ul> <li>SHALL PREVAIL, UNLESS OTHERWISE DIRECTED BY THE ENGINEER.</li> <li>THE CONSTRUCTION PLANS PRESENT A CONCEPT OF THE RELATIONSHIP BETWEEN TRAFFIC CONTROL, EROSION CONTROL, ETC. ANY REVISION TO THE DETAILS OR SEQUENCE SHOWN ON THE CONSTRUCTION PLANS SHALL BE PREPARED BY THE CONTRACTOR ON STANDARD DNREC PLAN SHEETS AND SUBMITTED FOR REVIEW AND APPROVAL BY THE ENGINEER. THE PLANS SHALL BE PREPARED IN ACCORDANCE WITH</li> </ul>	7.2. ALL HOLES, CUTS, AND INJURIES SUCH AS ABRASIONS OR HOLES FROM R SPIKES WHICH MAY PENETRATE THE TREATED ZONE SHALL BE FIELD TREAT ACCEPTED PRESERVATIVE SYSTEM SHALL BE USED FOR TREATMENT. FIELD PRESERVATIVES SHALL BE APPLIED IN ACCORDANCE WITH THE PRODUCT LA
JRBANCE, REGARDLESS OF SIZE, SHALL BE ON THE DRAWINGS BUT MUST BE REMOVED CE. TREES GREATER THAN 6" IN DIAMETER AL BY THE ENGINEER PRIOR TO REMOVAL. PROTECTED.	REVIEW AND APPROVAL BY THE ENGINEER. THE PLANS SHALL BE PREPARED IN ACCORDANCE WITH CURRENT DNREC STANDARDS FOR TRAFFIC CONTROL, EROSION AND SEDIMENT CONTROL (PREPARED BY A CERTIFIED CONSTRUCTION REVIEWER), STORM WATER MANAGEMENT, ETC. AND SHALL BE SIGNED AND SEALED BY A PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF DELAWARE. ALL REQUIRED CALCULATIONS, REPORTS, ETC. SHALL ALSO ACCOMPANY THE SUBMISSION. THE NUMBER OF COPIES REQUIRED TO BE SUBMITTED FOR REVIEW SHALL BE DETERMINED BY DNREC, DEPENDING ON THE NATURE OF THE PROPOSED DEVISION. THE CONTRACTOR SHALL NOTE THAT THE REVISIONS OF THE CONSTRUCTION DIANS AS WELL	APPLICATION METHOD SHALL COAT ANY SURFACE THAT IS EXPOSED BY DA FABRICATION WHILE NOT USING EXCESSIVE PRESERVATIVE. ANY EXCESS PI ABSORBED BY THE WOOD PRODUCT SHALL BE CLEANED FROM THE SURFA THE PRODUCT. 7.3. ALL TREATMENT SHALL BE DONE IN ACCORDANCE WITH THE LATEST AWPA
CONSTRUCTION EQUIPMENT AND COMPACTION REA PROTECTION (SAP) FENCE, SEE DNREC	REVISION. THE CONTRACTOR SHALL NOTE THAT THE REVISIONS TO THE CONSTRUCTION PLANS, AS WELL AS REVIEW TIME BY DNREC, WILL NOT JUSTIFY A DELAY IN THE CONSTRUCTION SCHEDULE. REVISIONS INVOLVING UTILITIES WILL REQUIRE THE COMPLETION OF A UTILITY STATEMENT APPROVED BY THE RESPECTIVE UTILITIES AS PART OF THE PLAN DOCUMENTS. ALL COSTS INVOLVED IN PREPARING THE PLAN REVISIONS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.	CONCRETE: 1. CONCRETE SHALL HAVE A MINIMUM 28-DAY COMPRESSIVE STRENGTH OF 500
IERIALS WITHIN THE PROJECT SITE LIMIT OF /ITHIN THE SITE AT A LOCATION TO BE R STOCKPILE/STORAGE AREAS SHALL BE SEDIMENT AND STORMWATER MANAGEMENT	10. THESE DRAWINGS DO NOT INCLUDE NECESSARY ELEMENTS OF CONSTRUCTION SAFETY. ALL CONSTRUCTION, INCLUDING EXCAVATION, MUST BE COMPLETED IN ACCORDANCE WITH THE REQUIREMENTS OF THE OCCUPATIONAL SAFETY AND HEALTH ACT, CFR §1926.652(b)(2), AND ALL FEDERAL, STATE AND LOCAL REQUIREMENTS. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR ALL SITE SAFETY.	WATER TO CEMENT RATIO OF 0.40. 2. CONCRETE SHALL HAVE AN AIR CONTENT BETWEEN 4 AND 7 PERCENT. 3. FOUNDATIONS SHALL BE INSTALLED A MINIMUM OF 30-INCHES BELOW G OTHERWISE.
IALL BE STABILIZED DURING CONSTRUCTION, N AND SEDIMENT CONTROL REQUIREMENTS. JECT.	<ol> <li>NO DEBRIS SHALL BE BURIED OR BURNED ON THE SITE UNLESS SPECIFICALLY NOTED WITHIN THESE PLANS OR SPECIFICATIONS.</li> <li>THE CONTRACTOR SHALL CONTACT MISS UTILITY TWO (2) CONSECUTIVE WORKING DAYS PRIOR TO</li> </ol>	4. MINIMUM CONCRETE COVER FOR REINFORCING STEEL SHALL BE: 3" MINIMUM AGAINST EARTH, AND 2" FOR ALL OTHER FIELD-FORMED SURFACES.
HALL BE LIMITED TO THE AREAS SHOWN ON EAS DISTURBED FROM PARKING SHALL BE	EXCAVATION, OR AS REQUIRED BY LAW, AT 1-800-282-8555. 13. THE CONTRACTOR SHALL MAINTAIN A CLEAN SET OF AS-BUILT PLANS THAT SHALL ACCURATELY ILLUSTRATE ALL FIELD CHANGES NEATLY DRAWN AND LABELED IN RED INK. FINAL AS-BUILT PLANS SHALL BE DATED	<ol> <li>ALL REINFORCING STEEL, INCLUDING WELDED WIRE FABRIC, SHALL BE EPO (ASTM A615).</li> <li>MINIMUM LAP LENGTHS FOR #5 REINFORCEMENT BARS SHALL BE 26–INCF</li> </ol>
A SLOPE OF 1:50. LONGITUDINAL SLOPES HOWN OTHERWISE ON THE PLANS. BE ALLOWED WITHIN THE WETLANDS EXCEPT	AND SIGNED BY THE CONTRACTOR AND SUBMITTED TO THE OWNER AT THE END OF THE PROJECT FOR RECORDATION. 14. THE CONTRACTOR SHALL PROVIDE A MINIMUM OF 48 HOURS NOTICE IN ADVANCE FOR ANY UTILITY	SHORTER SPLICE LENGTHS MAY BE USED FOR STAGGERED SPLICE LOCATIONS ACI-318. 7. STANDARD HOOKS SHALL BE USED FOR REINFORCING STEEL WHERE SHOWN ON
IPMENT AND WORKER ACCESS WITHIN THE	DISRUPTION FOR APPROVAL BY THE ENGINEER. HIERARCHY OF CONTRACT DOCUMENTS	<ol> <li>PRE AND POST INSTALLED ANCHORS SHALL BE STAINLESS STEEL COMPLYING OR ASTM A320. POST INSTALLED ANCHORS SHALL BE EPOXY ANCHORS. EXF NOT BE ALLOWED</li> </ol>
T WIDE WITHIN THE WETLAND.	ELEMENTS UNDER THIS CONTRACT SHALL BE CONSTRUCTED UTILIZING THE FOLLOWING INFORMATION IN THE HIERARCHY LISTED BELOW:	HELICAL ANCHOR FOUNDATIONS:
IN ADJACENT AREA. WEITAND PLANTS SHALL NS. S ON THE TRAILS AND AROUND EQUIPMENT	<ol> <li>CONTRACT AGREEMENT BETWEEN OWNER AND CONTRACTOR.</li> <li>APPROVED PLANS.</li> <li>DEDUCTOR MANUAL</li> </ol>	1. THE HELICAL ANCHOR FOUNDATION INFORMATION PROVIDED ON THESE PL PURPOSES ONLY. THE CONTRACTOR SHALL SUBMIT SEALED COMPUTATIONS FO HELICAL ANCHORS.
JENCE OF CONSTRUCTION.	<ol> <li>PROJECT MANUAL.</li> <li>REFERENCED TECHNICAL SPECIFICATIONS.</li> <li>STATE OF DELAWARE DEPARTMENT OF NATURAL RESOURCES AND ENVIRONMENTAL CONTROL EROSION AND SEDIMENT CONTROL HANDBOOK, APRIL 2019 OR MOST CURRENT AT DATE OF ADVERTISEMENT.</li> </ol>	<ol> <li>THE TERMS HELICAL PILES AND HELICAL ANCHOR FOUNDATIONS ARE THROUGHOUT THESE PLANS AND SPECIFICATIONS.</li> <li>HELICAL ANCHOR FOUNDATIONS (HELICAL PILES) SHALL CONFORM TO (DECAPTE 007, 10 (40 (41), 00, 40000 (50, 50 (41)))</li> </ol>
	TRAFFIC CONTROL NOTES	<ul> <li>(RS2875.203 10/12/14), OR APPROVED EQUAL.</li> <li>4. HELICAL PILES SHALL BE DRIVEN TO A MINIMUM DEPTH OF 14.0 FEET DECUMPED TO ACUTE A MINIMUM VEDTICAL ALLOWADLE CADACITY OF 23 KIPS</li> </ul>
Y 15. 30. 31.	<ol> <li>ADVANCED WARNING SIGNS SHALL BE PLACED ON MULBERRY LANDING ROAD IN ADVANCE OF ANY LANE RESTRICTIONS OR CLOSURES AS SHOWN ON THESE PLANS.</li> <li>ALL TEMPORARY TRAFFIC CONTROL AND TEMPORARY TRAFFIC CONTROL DEVICES SHALL BE IN ACCORDANCE WITH: THE CONTRACT DOCUMENTS, THE LATEST VERSION OF THE DELAWARE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (HEREINAFTER REFERRED TO AS THE "DELAWARE MUTCD"), CURRENT STATE OF DELAWARE DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, AND SUPPLEMENTAL SPECIFICATIONS, INCLUDING ALL REVISIONS AS OF THE DATE OF THE</li> </ol>	<ul> <li>5. INSTALLATION OF HELICAL PILES SHALL BE IN ACCORDANCE WITH SECTION ANCHOR FOUNDATIONS, INCLUDING TESTING AND TERMINATION CRITERIA.</li> <li><u>STRUCTURAL STEEL:</u></li> <li>1. STRUCTURAL STEEL SHALL CONFORM TO SECTION 051200. STRUCTURAL STEEL</li> </ul>
	<ul> <li>ENTRANCE PERMIT APPROVAL.</li> <li>3. THE DEPARTMENT RESERVES THE RIGHT TO STOP THE CONTRACTOR'S OPERATIONS, IF, IN THE OPINION OF THE DEPARTMENT'S REPRESENTATIVE, THE CONTRACTOR'S OPERATIONS ARE NOT IN COMPLIANCE WITH THE DELAWARE MUTCD, THE SPECIFICATIONS OR THE PLANS OR IF THE CONTRACTOR'S OPERATIONS ARE</li> </ul>	<ol> <li>STRUCTURAL STEEL SHALL CONFORM TO SECTION 031200 - STRUCTURAL STEEL</li> <li>STEEL PIPE PILES SHALL CONFORM TO SECTION 316217 - STEEL PILES.</li> <li>ALL WELDING SHALL BE IN ACCORDANCE WITH AWS D1.1 - STRUCTURAL WE</li> </ol>
	<ul> <li>DEEMED UNSAFE.</li> <li>THE CONTRACTOR SHALL BE RESPONSIBLE FOR NOTIFYING THE ASSAWOMAN WILDLIFE AREA MANAGER OF ALL ROADS AND LANES TO BE CLOSED A MINIMUM OF SEVEN (7) CALENDAR DAYS BEFORE THE CLOSURE.</li> <li>THE CONTRACTOR SHALL BE RESPONSIBLE FOR ENSURING THAT THE ASSAWOMAN WILDLIFE AREA MANAGER IN NOTIFYING THAT THE ASSAWOMAN WILDLIFE AREA MANAGER OF AN AN ADDITION OF A DAYS AND LANES AND AN A DAYS AND AN A DAYS AND A DAY</li></ul>	CURRENT EDITION. 4. WELDING TO WEATHERING STEEL SHALL USE MATERIALS SUITABLE FOR THE STE APPLICATIONS.
	<ul> <li>IS NOTIFIED EACH AND EVERY DAY WHEN WORK IS BEING PERFORMED ROADWAY. THE CONTRACTOR SHALL IDENTIFY THE TYPE OF WORK, ANY LANE(S) OR SHOULDER(S) CLOSED, THE LENGTH OF TIME FOR WORK, WHEN THE LANE RESTRICTIONS ARE IN PLACE AND WHEN LANE RESTRICTIONS ARE LIFTED.</li> <li>6. THE CONTRACTOR IS RESPONSIBLE FOR THE MAINTENANCE OF EXISTING ROADWAYS WITHIN THE PROJECT</li> </ul>	<ol> <li>BOLTED CONNECTIONS OF STEEL TO STEEL MEMBERS SHALL FOLLOW SECTION STEEL FRAMING. ALL STRUCTURAL STEEL BOLTS SHALL BE WEATHERING OTHERWISE.</li> </ol>
	<ul> <li>LIMITS FOR THE DURATION OF THE CONTRACT OR AS DIRECTED BY THE ENGINEER.</li> <li>TYPICAL APPLICATIONS PER THE DELAWARE MUTCD SHALL BE INCORPORATED TO ACHIEVE REQUIRED TEMPORARY TRAFFIC CONTROL AND SAFETY REQUIREMENTS. THIS PROJECT IS SUBJECT TO THE FOLLOWING TYPICAL APPLICATIONS UNLESS DIRECTED OTHERWISE BY THE ENGINEER:</li> <li>TYPICAL APPLICATION TA-6: SHOULDER WORK WITH MINOR ENCROACHMENT.</li> <li>TYPICAL APPLICATION TA-10: LANE CLOSURE ON A TWO-LANE ROAD WITH LOW TRAFFIC VOLUMES.</li> </ul>	6. ALL WELDS SHALL BE 1/4–INCH FILLET WELDS, UNLESS NOTED OTHERWISE.
	8. WITHIN THE MAINLINE WORK AREA, PERMANENT ADVANCE WARNING SIGNS WITH THE LEGENDS ROAD WORK AHEAD SHALL BE INSTALLED IN ADVANCE OF THE WORK AREA IN BOTH DIRECTIONS. AN END ROAD WORK SIGN SHALL BE LOCATED 500 FEET DOWNSTREAM FROM THE WORK AREA. ON INTERSECTING ROADWAYS WITHIN THE PROJECT LIMITS, A ROAD WORK AHEAD SIGN SHALL BE PLACED AT A DISTANCE NOT LESS THAN 500 FEET IN ADVANCE OF THE WORK AREA. ALL PERMANENT ADVANCE WARNING SIGNS SHALL BE GROUND MOUNTED ON TWO NCHRP-350 OR MASH APPROVED BREAKAWAY POSTS AND SHALL BE MOUNTED IN COMPLIANCE WITH THE DELAWARE MUTCD. PERMANENT ADVANCE WARNING SIGNS SHALL BE MOUNTED AT A HEIGHT OF 7 FEET, MEASURED FROM THE ROADWAY TO THE BOTTOM OF THE SIGN. THE USE OF SKID MOUNTED SIGN SUPPORTS IS NOT ALLOWED UNLESS THE CONTRACTOR CAN DEMONSTRATE THAT A UTILITY CONFLICT EXISTS, WHICH SHALL BE VERIFIED BY THE DISTRICT SAFETY OFFICER; OR CONCRETE MEDIANS PREVENT THE INSTALLATION OF THE PERMANENT ADVANCE WARNING SIGNS IN THE APPROPRIATE LOCATION.	
	9. THE USE OF GRADED AGGREGATE BASE COURSE (GABC) IN THE TRAVEL WAY, TEMPORARY TRAVEL WAY, HIGH VOLUME ENTRANCES AND ACCESS RAMP FOR THE PURPOSE OF PROVIDING A TEMPORARY ROADWAY SURFACE, POTHOLE REPAIR, TAPERED EDGE FOR UTILITIES, BUTT JOINTS, AND LONGITUDINAL DROP-OFFS (MILLING AND PAVING OPERATIONS) IS PROHIBITED UNLESS IT IS OTHERWISE DESIGNATED TO BE USED IN THE CONTRACT PLANS. USE COLD PATCH, BITUMINOUS CONCRETE, BITUMINOUS CONCRETE WEDGE, OR TAPER MILL, AS NOTED IN THE CONTRACT DOCUMENTS OR APPROVED BY THE ENGINEER.	
	<ul> <li>GABC SHALL BE USED AT THE FOLLOWING LOCATIONS WHERE THE EDGE DROP OFF NEEDS TO BE MAINTAINED. ALL GABC WILL BE ROLLED AND COMPACTED TO HELP PREVENT THE MATERIAL FROM UNRAVELLING:</li> <li>a. DRIVEWAYS</li> <li>b. ENTRANCES</li> <li>c. LOW VOLUME ROADWAYS</li> <li>d. EDGE DROP-OFFS ADJACENT TO LIVE ROADWAY (LANES AND SHOULDER) AND THE PROPOSED ROAD CONSTRUCTION</li> </ul>	
	e. EDGE OF ROADWAY DROP-OFF THE BASE COURSE MATERIAL SHALL BE PLACED AT NO GREATER THAN THE SLOPE SPECIFIED IN THE DELAWARE MUTCD, TABLE 6G-1 AND SHALL BE COMPACTED. VERTICAL DIFFERENCES SHALL BE CORRECTED IN ACCORDANCE WITH THE DELAWARE MUTCD. TABLE 6G-1	

	DATA COLUMN		_		
	1. TAX PARCEL NUMBER:	134-20.00-10.00		BY:	
NURDENT FRITION	2. JUSSEA COUNTE FILE NUMBER: 3. ADDRESS OF SITE:	MULBERRY LANDING ROAD			
CURRENT EDITION.		FRANKFORD DE, 19945			
IN ACCORDANCE WITH GOOD	4. ZONING:	AR-1: AGRICULTURAL RESIDENTIAL			
	6. NUMBER OF LOTS:	1			
PENTRY.	7. LOT AREA:	477.69± ACRES (BASED ON SUSSEX COUNTY GIS MAPPING)			
SS, OR APPROVED EQUAL.	8. TOTAL NUMBER OF LOTS	1 (NO NEW BUILDING LOTS OR DWELLINGS PROPOSED BY THIS PLAN)	<u>iiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiii</u>		
IOR ROUGH CARPENTRY.	9. MONUMENTS: EXISTING:	0 (MONUMENT)		DE	
	PROPOSED:	0 (MONUMENT)	<u>S</u>		
RETTER, 2X6 S4S. LAY RESERVATIVE TREATMENT.	11. SEWER PROVIDER:	NONE		···	
EEL OR EPOXY COATED	12. WATER PROVIDER:	NONE		DA	
PREDRILL FOR SCREWS TO	13. FLOODPLAIN: PER FEMA MAP NO. 10005CO.	212K, DATED MARCH 16, 2015, THE SUBJECT PARCEL IS DETERMINED TO BE IN			
SCREWS AT FACH END AND	14. FEDERAL PERMIT USACE NUMBER: N	AP-2023-00894-103			
	15. GROWTH ZONE: THE SUBJECT PARCEL LIES O	UTSIDE THE DESIGNATED GROWTH ZONE.			
NE PRESERVATIVE ACCORDING	16. BOUNDARY: NO BOUNDARY SURVEY HAS F	REEN COMPLETED			
NOT IN CONTACT WITH THE G E GROUND. SEE TABLE, THIS	17. TOPOGRAPHY:				လ
ROM REMOVAL OF NAILS AND	18. DATUM:	NAD83	Ц Ц	ļ	NC
FIELD TREATED. AN AWPA FIELD TREATMENT UCT LABEL. THE	19 + 00 = 0.31  ACRES	NAVD88	₹		TI(
BY DAMAGE OR FIELD ESS PRESERVATIVE NOT SUBFACE PRIOR TO USE OF	20. OWNER/APPLICANT:			- E E R	۷IA
	STATE OF DELAWARE DIVISION OF FISH AND WILDLIF 89 KINGS HIGHWAY	Ē		M	Έ
AWPA STANDARDS.	DOVER, DE 19901 ANTHONY GONZON				3BF
NE 5000 PSI AND A MAYIMUM	(302) 735-8673 21. ENGINEER:			Ð	AE
F JUUU FSI ANU A MAAIMUMI	CENTURY ENGINEERING, LLC. 550 BAY ROAD DOVER DF 19901			VIN	
LOW GRADE. UNLESS NOTED	WALTER HOEY, P.E. EMAIL: WHOEY@KLEINFELDER.C	ОМ		ΕΛ	A
	PHONE: (302) 734–9188 FAX: (302) 734–4589			>	ES ES
IINIMUM FOR SURFACES CAST	FIRE MARSHAL NOTES		SA	5	0T
E EPOXY COATED GRADE 60	NAME OF PROJECT:	ASSAWOMAN WILDLIFE AREA WILDLIFE OBSERVATION TOWER	AS AS		Ž
6-INCHES, CLASS C SPLICE. ATIONS IN ACCORDANCE WITH	ADDRESS OF SITE:	MULBERRY LANDING ROAD FRANKFORD, DE 19945			
WN ON THE PLANS.	TAX PARCEL NUMBER:	134-20.00-10.00			
PLYING WITH ASTM A193 B8M,	OWNER/APPLICANT:	STATE OF DELAWARE DNREC DIVISION OF FISH AND WILDLIFE			
. EXPANSION ANCHORS WILL		DOVER, DE 19901 ANTHONY GONZON			
SE PLANS IS FOR BIDDING		(302) 735–8673	SEAL:		
ONS FOR THE DESIGN OF THE	ENGINEER:	CENTURY ENGINEERING, INC. 550 BAY ROAD		TER J.	HOEV
ARE USED INTERCHANGED		WALTER HOEY, P.E. (302) 734–9188		* NO 1	1204 *
RM TO "CHANCE ANCHOR"	INTENDED USE OF SITE:	WILDLIFE AREA/OBSERVATION TOWER		PRO CAW	NER A
FEET BELOW GRADE OR AS	WATER SUPPLIER:	NONE	1	S'S /ONA I	ENG
KIPS.	NUMBER OF FIRE HYDRANTS: BUILDING USE:	NONE			
SECTION 132450 – HELICAL	MAXIMUM HEIGHT OF BUILDING:	N/A	CIVIL EN	JGUSL JU GINEER:	), 2024
	BUILDING(S) SIZE:	N/A			
L STEEL FRAMING.	PROPOSED BUILDING CONSTRUCTION;	N/A			NTURY
	FIRE LANES:	NONE		A Kleinfelder	Company
KAL WELDING CODE – STEEL,	NOTES:				
HE STEEL AND EXPOSED BARE	1. ALL FIRE LANES, FIRE HYDRANTS, A THE STATE FIRE PREVENTION REGUL	AND FIRE DEPARTMENT CONNECTIONS SHALL BE MARKED IN ACCORDANCE WITH ATIONS.	CEI COI	NTRACT NO	D.: 175013.97
CTION 051200 – STRUCTURAL RING STEFL UNLESS NOTED	2. ALL PROPOSED FIRE HYDRANTS A CURRENT EDITION OF THE DELAWARE	AND WATER MAINS SHALL BE INSTALLED IN ACCORDANCE WITH THE MOST E STATE FIRE REGULATIONS. (DSFPR REGULATION 702, CHAPTER 6 & 7.		DELAW	ARS
_,	3. FIRE HYDRANTS SHALL BE COLOR SECTION 4 THIS INCLUDES BOTH	CODED IN ACCORDANCE WITH THE DSFPR REGULATION 703, CHAPTER 3, COLOR CODING THE BONNET AND 2 INCH REFLECTIVE TAPE ADDITION THE			
ISE.	BARREL UNDER THE TOP FLANGE.				
	4. ALL INREADS PROVIDED FOR FIR HYDRANTS OR ANY OTHER FIRE DEPARTMENT IN WHOSE DISTRICT TH	HOSE CONNECTIONS SHALL BE UNIFORM TO THOSE USED BY THE FIRE EY ARE LOCATED. (DSFRP REGULATION 703, CHAPTER 1, SECTION 1.5)		FE DIVISION OF FIS	SH AND MIL
	5. THE STEAMER CONNECTION OF ALL	FIRE HYDRANTS SHALL BE SO POSITIONED SO AS TO BE FACING THE STREET	DESIGN	IED BY:	
				WJł	4
			DRAWN	I BY:	
	BABA REQUIREMENTS:			WJł	1
	DUNTRACTOR IS RESPONSIBLE FOR DELIVERY TICKETS OR OTHER APPRO OWNER AND ENGINEER FOR APP	ODEMONSTRATING MATERIAL COMPLIANCE WITH BABA REQUIREMENTS. ALL OVED DOCUMENTATION FOR BABA COMPONENTS SHALL BE PROVIDED TO THE PROVAL PRIOR TO INSTALLATION. AS PART OF PROJECT CLOSE-OUT	CHECK	ED BY:	
	DOCUMENTATION, PRIOR TO THE IN SUBMISSION CONTAINING ALL TIC ALONGSIDE THE APPROVED SUBMIT	NITIAL INSPECTION THE CONTRACTOR SHALL PROVIDE THE OWNER A FINAL CKETS OR OTHER APPROVED DOCUMENTATION FOR BABA COMPLIANCE, FAL FROM THE ENGINEER. FAILURE TO PROVIDE THIS DOCUMENTATION WILL		JB	
	RESULT IN WITHOLDING OF THE DEM	MOBILIZATION PAYMENT.	DATE:		( 0005
	ALL BIDDERS SHALL COMPL	LETE AND SUBMIT THE "BUILD AMERICA, BUY AMERICA		JANUAR	r 2025
	REQUIREMENT" FORM FOUN	D IN SECTION 004113 - BID FORM.	SCALE:	NIO 60	
	<u> </u>		<u>ا</u>	110 30	
			SHEET	NO.:	
				C30	2
				ACT NO.: T25-001-49	SAWOMAN
				0 001-70	-,



	BY:	
	NS: Escription:	
	REVISIOI     DATE:   D	
	ASSAWOMAN WILDLIFE AREA VIEWING TOWER	DEMOLITION PLAN & TYPICAL SECTIONS
	SEAL: NO. 1 * NO. 1	HOEL
		NTURY NEERING Company
7,553 SQ. FT. T.	DESIGNED BY: WJF 	Η
		Η
RAVEL		
N /EL	DATE: JANUARY	Y 2025
	SCALE: 1"=2	20'
301001). CONTRACTOR	SHEET NO.: C30	)3
SIDEWALKS WITH	CONTRACT NO.:	

NAT25-001-ASSAWOMAN





PIER TABLE				
PIER NUMBER	STATION			
1	1+07.38			
2	1+17.15			
3	1+24.15			
4	1+36.09			
5	1+48.03			
6	1+59.97			
7	1+71.91			
8	1+74.99			
9	1+77.56			
10	1+88.85			
11	1+99.63			
12	2+10.42			
13	2+21.21			
14	2+32.00			
15	2+37.27			
16	2+44.80			
17	2+50.07			
18	2+59.21			
19	2+68.36			
20	2+77.50			
21	2+84.50			
22	2+95.78			
23	3+07.78			
24	3+19.78			
25	3+23.83			
26	3+27.66			
27	3+38.98			
28	3+50.53			
29	3+62.28			
30	3+66.28			
31	3+78.28			
32	3+82.28			
33	3+93.62			
34	4+05.17			
35	4+16.71			
36	4+23.71			
37	4+53.71			
38	4+67.71			
39	4+97.71			
40	5+04.71			
41	5+34.71			
42	5+58.71			
43	4+39.71			
44	4+32.71			
ABUTMENT	0+95.37			

	BY:						
REVISIONS:	DATE: DESCRIPTION:						
		VIEWING TOWER					
SEAL:	Augu	NC NC	J. J. D. 11 ( A W ONAL	$\frac{1}{120}$		A A	
				N E Com	FU E E F pamy		Y ig
		AC DE	LAW.	ARE	175	)	.97
DESI	GNED	BY: \	VJF	-			
		N BY:	VJF	-			
DATE			JB				
SCAL	JAI E:			( 20)	)25		
SHEE				)5	<u></u>	N	
CON ⁻	rract At25-	-001	.: -AS\$	SAW	/OM	AN	



### NOTE:

- 1. ALL WOOD SHALL BE PRESSURE TREATED.
- FIBER CEMENT SIDING & TRIM. 6" EXPOSURE LAP SIDING, 1"X6" TRIM. TO BE INSTALLED PER MANUFACTURE RECOMMENDATION (INCLUDING CAULKING EDGES).
- 3. PAINT TOP CAP AND TRIM WHITE.
- 4. PAINT SIDING AND EXPOSED SHEATHING, COLOR TO BE SELECTED BY OWNER PRIOR TO ORDERING.
- 5. ALL FASTENERS SHALL BE STAINLESS STEEL.







- 1. REFER TO DELDOT ITEM 701505 CONCRETE BUMPER FOR ADDITIONAL INFORMATION.
- 2. ALL VERTICAL SURFACES HAVE DRAFT.
- 3. FLOW CHANNELS SHALL BE PROVIDED AS SHOWN.
- 4. ATTACH BUMPER TO PAVEMENT WITH (2) #4–24" LONG REBARS.





1 SITE PLAN C307 SCALE: 1" = 5'



 NOTES:
 SYMBOL STRIPING SHALL BE 3" WIDE (MIN.) AND PAINTED ON EACH ACCESSIBLE SPACE.
 ACCESSIBLE SPACES SHALL BE 8'-0" WIDE AT MINIMUM, OR AS SHOWN ON PLANS.
 PAVEMENT MARKINGS TO BE WHITE EPOXY RESIN, CONFORMING TO DELDOT ITEM 817001 - PAINTING OF WHITE OR YELLOW SYMBOL/LEGEND.

2 HANDICAPPED PARKING PAVEMENT MARKING SCALE: 1"= 1'-0"

	ΒΥ:						
REVISIONS:	DATE: DESCRIPTION:						
	VIEWING TOWER	STRIPING PLAN AND SIGN DETAILS					
SEAL:	AUGUSE 3	HOESTERSON 1204 * 1204 * 1204 * 0, 2024 NTURY INEERING Company					
CEI C	ONTRACT N	O.: 175013.97					
DESIC DRAV CHEC	DESIGNED BY: WJH DRAWN BY: WJH CHECKED BY:						
DATE SCAL	JB DATE: JANUARY 2025 SCALE:						
SHEE	AS SHOWN SHEET NO.: C307						
N	CONTRACT NO.: NAT25-001-ASSAWOMAN						



STRUCTURAL NOTES: DESIGN: ALLOWABLE STRESS DESIGN.		BY:	
<ul> <li>LOADS: LIVE LOAD - 60 PSF PEDESTRIAN LOAD, IN ACCORDANCE WITH THE INTERNATIONAL BUILDING CODE. FOUNDATION PILES:</li> <li>1. HELICAL ANCHORS SHALL BE BY A.B. CHANCE, OR APPROVED EQUAL. HELICAL ANCHORS SHALL BE INSTALLED TO OBTAIN A MINIMUM ULTIMATE BEARING CAPACITY OF 10 KIPS WITH A FACTOR OF SAFETY OF 2.0.</li> <li>2. ALLOWABLE BEARING CAPACITY = 5 KIPS.</li> <li>3. HELICAL ANCHORS SHALL BE INSTALLED TO A MINIMUM ULTIMATE CAPACITY OF 10 KIPS, AS DETERMINED BY TORQUE VALUE READINGS DURING INSTALLATION. TORQUE VALVE READINGS SHALL BE USED IN CONJUNCTION WITH APPLICABLE TABLES AND/OR CHARTS PROVIDED BY CHANCE ANCHOR AND SHALL TAKE INTO ACCOUNT THE SOIL TYPE AND CONDITIONS.</li> <li>4. BEARING ANCHORS SHALL BE INSTALLED A MINIMUM OF 4'-0" AS MEASURED FROM THE UPPER MOST HELIX AND THE FINAL GRADE WITH A MINIMUM TIP 20'-0" BELOW FINAL GRADE. DIAGONAL ANCHORS SHALL BE THE SAME LENGTH AND CONFIGURATION AS BEARING ANCHORS AND SHALL BE INSTALLED A MINIMUM DEPTH OF 4'-0" AS MEASURED FROM THE UPPERMOST HELIX AND THE FINAL GRADE.</li> <li>5. INSTALL TS12 TWIST STRAPS AS MANUFACTURED BY SIMPSON STRONG TIE OR APPROVED EQUAL AT EACH JOIST AS SHOWN ON PLANS. TWIST STRAPS SHALL BE HOT DIPPED GALVANIZED. TWIST STRAPS SHALL BE INSTALLED PER MANUFACTURES REQUIREMENTS.</li> </ul>	REVISIONS:	DATE: DESCRIPTION:	
<ul> <li>DIMENSION LUMBER SHALL BE PRESSURE TREATED WITH CHROMATED COPPER ARSENATE (CCA-C) WITH A MINIMUM RETENTION OF 0.15 POUNDS PER CUBIC FOOT.</li> <li>APPROACH RAMP AND OBSERVATION PLATFORM DECKING SHALL BE 2X6 TIMBER EXCEPT DECKING AT STEEL SUPPORT RAMPS SHALL BE 3X6 TIMBER.</li> <li>ALL TIMBER DECKING SHALL BE ATTACHED TO EACH SUPPORTING JOIST USING TWO (2) STAINLESS STEEL DECK SCREWS AT EACH JOIST.</li> <li>THRU-FLOW DECK SHALL BE ATTACHED TO EACH SUPPORTING JOIST USING #10 PAN HEAD STAINLESS STEEL SCREWS AND ANCHOR CLIPS, AS RECOMMENDED BY THE MANUFACTURER.</li> <li>TIMBER FASTENERS SHALL BE COMPLY WITH SECTION 061063 - EXTERIOR ROUGH CARPENTRY.</li> <li>STEEL CONSTRUCTION</li> <li>ALL STRUCTURAL STEEL SHALL CONFORM TO ASTM A242 OR A588, WITH A MINIMUM YELD STRENGTH OF 50 KSI., UNLESS NOTED OTHERWISE. REFER TO SECTION 051200 - STRUCTURAL STEEL FRAMMC.</li> <li>fastENERS SHALL BE HIGH STRENGTH WEATHERING STEEL BOLTS (ASTM A325-3 OR A490-3), UNLESS NOTED OTHERWISE.</li> <li>PIPE PLIES SHALL HAVE A MINIMUM WALL THICKNESS OF 0.25 INCHES AND CONFORM TO ASTM A690, WITH A MINIMUM YIELD STRENGTH OF SIL.</li> <li>PUPE PLIES SHALL HAVE A MINIMUM WALL THICKNESS OF 0.25 INCHES AND CONFORM TO ASTM A690, WITH A MINIMUM YIELD STRENGTH OF SIL.</li> <li>DUBLE 3'', 3''', 3/8' ANGLE DIAGONAL BRACES, AS SHOWN ON 1/S601 AND 2/S601, MAY BE STRUCTURAL STEEL.</li> </ul>		VIEWING TOWER	TOWER ELEVATIONS
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![](_page_9_Figure_0.jpeg)

![](_page_9_Figure_2.jpeg)

![](_page_10_Figure_0.jpeg)

![](_page_11_Figure_0.jpeg)

![](_page_11_Figure_2.jpeg)

![](_page_12_Figure_0.jpeg)

![](_page_13_Figure_0.jpeg)

![](_page_13_Figure_1.jpeg)

2 VIEWING PLATFORM 2 SECTION S606 SCALE: 3/8" = 1'-0"

### BATTERED HELICAL PILES SHOWN OFFSET IN PLAN VIEW FOR CLARITY. CONTRACTOR SHALL INSTALL BATTERED PILES AS CLOSE TO PARALLEL TO TIMBER CROSS BEAMS AS POSSIBLE.

EL. 1/C305

- HELICAL PILES (TYP.)

EX. GR. EL. 1.90± — 1:1 BATTERED HELICAL PILES (TYP. EACH ROW)

![](_page_13_Figure_10.jpeg)

CONTRACT NO .: NAT25-001-ASSAWOMAN

![](_page_14_Figure_0.jpeg)

![](_page_15_Figure_0.jpeg)