STATE OF DELAWARE
DEPARTMENT OF NATURAL RESOURCES &
ENVIRONMENTAL CONTROL
DIVISION OF FISH &WILDLIFE
89 Kings Highway
Dover, DE 19901

CONTRACT DOCUMENTS & TECHNICAL SPECIFICATIONS
ADDENDUM NO. 2

BOWERS BEACH PARKING AREA IMPROVEMENTS – PHASE I
CONTRACT NO. NAT19001-BOWERS

Project Name: Bowers Beach Parking Area Improvements – Phase I

Contract No.: NAT19001-BOWERS

Date of Issue: October 10, 2019

Notice No. 1: Attach this addendum to the Project Manual for this project. It modifies and becomes part of the Bidding Documents. Work or material not specifically mentioned herein is to be as described in the main body of the specifications and as shown on the drawings.

Bids Due: October 23, 2019, 2:00 PM local time

"**DNREC CONTRACT NO. NAT19001-BOWERS - SEALED BID - DO NOT OPEN**"
Dept. of Natural Resources & Environmental Control
Division of Fish and Wildlife
89 Kings Highway, Dover DE 19901
Attn: Anthony T. Gonzon, Jr, Delaware Bayshore Initiative Coordinator

1. **DRAWINGS:**
   1. **The following drawings have been revised:**
      a. C103 – Site Plan
      b. C104 – Entrance Details
      c. C105 – Landscaping Plan
      d. C106 – Erosion & Sediment Control Plan

2. **SPECIFICATIONS:**
   None

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through Science and Service

3. <u>ADDITIONAL INFORMATION:</u>

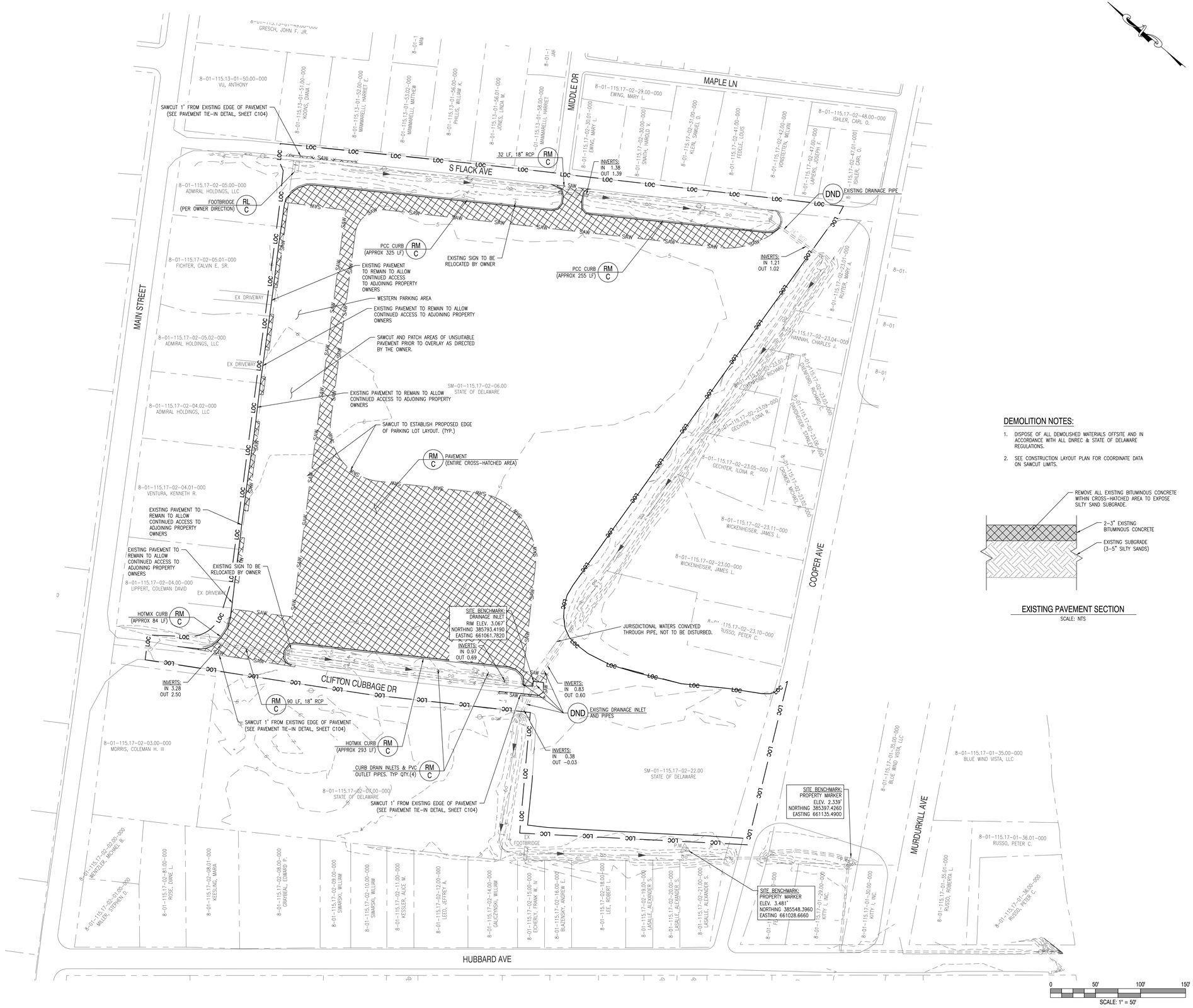
1. The Pre-Bid Attendance List has been revised to correct an email address error.

<u>ALL OTHER TERMS AND CONDITIONS REMAIN THE SAME.</u>

<u>IF YOU HAVE ANY QUESTIONS, PLEASE CONTACT</u>:

Anthony Gonzon (anthony.gonzon@delaware.gov)

Attachments: 1 - Drawing Sheet C103 – Site Plan
2 - Drawing Sheet C104 – Entrance Details
3 - Drawing Sheet C105 – Landscaping Plan
4 - Drawing Sheet C106 – Erosion & Sediment Control Plan
5 - Pre-Bid Attendance - corrected



DEMOLITION NOTES:

1. DISPOSE OF ALL DEMOLISHED MATERIALS OFFSITE AND IN ACCORDANCE WITH ALL DNREC & STATE OF DELAWARE REGULATIONS.
2. SEE CONSTRUCTION LAYOUT PLAN FOR COORDINATE DATA ON SAWCUT LIMITS.

EXISTING PAVEMENT SECTION

SCALE: NTS

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ADDRESS: 550 BAY ROAD DOVER, DE 19901
P: (302) 734-9188 F: (302) 734-4589
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REVISIONS

ADDENDUM

DESCRIPTION	DATE
2 SAWCUT AND PATCH WESTERN PARKING	10/09/19
1 ~~SAWCUT AND PATCH~~	~~10/09/19~~

PROJECT

CONSTRUCTION PLANS

FOR

DELAWARE DIVISION OF FISH & WILDLIFE

BOWERS BEACH PARKING AREA IMPROVEMENTS - PHASE 1

SOUTH FLACK AVENUE
FREDERICA, DELAWARE 19946

SHEET TITLE

EXISTING CONDITIONS & DEMOLITION PLAN

100% CONSTRUCTION DOCUMENT SUBMISSION
AUGUST, 2019

DRAWN	CHK'D/DESIGNER
DFS / MDS	AES

SCALE	SHEET NO.
1" = 50'	C102

PROJECT NO. 175013.36

GENERAL NOTES:

1. PARCEL LINES REFERENCED FROM STATE OF DELAWARE (FIRSTMAP.DELAWARE.GOV).
2. TOPOGRAPHY PROVIDED BY DELAWARE DEPARTMENT OF NATURAL RESOURCES AND ENVIRONMENTAL CONTROL.
3. EXISTING CONTOURS SHOWN, PROPOSED SLOPES AND SPOT ELEVATIONS SHALL GOVERN IN ANY AREAS OF PROPOSED GRADING.
4. THE TOWN OF BOWERS SHALL OBTAIN APPROVAL FROM ADJACENT LAND OWNERS TO SECURE TRESPASS RIGHTS PRIOR TO CONSTRUCTION.
5. SEE LANDSCAPING PLANS FOR PROPOSED PLANTING LAYOUT.

CONSTRUCTION NOTES:

1. CONTRACTOR SHALL REVIEW OVERLAY PAVEMENT AREA W/ OWNER TO DETERMINE AREAS FOR FULL DEPTH PATCHING, PRIOR TO DEMO OR OVERLAY PAVEMENT.
2. ALL IDENTIFIED AREAS FOR PATCHING SHALL BE SAWCUT AND ALL BITUMINOUS MATERIAL SHALL BE REMOVED. PLACE BORROW, TYPE B AS NEEDED BELOW EXISTING PAVEMENT SECTION. PLACE 2" MIN LIFT OF BITUMINOUS TYPE C TO MEET SURROUNDING GRADES, PRIOR TO OVERLAY LIFT.
3. TOPSOIL GRADES SHALL MEET EDGE OF PAVEMENT.
4. BASE BID AREA FOR FULL DEPTH PATCHING = 326 SY.
5. FINAL PAVEMENT GRADES SHALL PROVIDE A SLOPE OF 2% OR LESS IN ALL DIRECTIONS.
6. AREAS OF FULL DEPTH PAVEMENT SHALL BE PROOF-ROLLED USING A LOADED DUMP TRUCK WITH A MINIMUM WEIGHT OF 30 TONS.

LIMITS OF SAWCUT BOUNDARY

POINT NO.	NORTHING	EASTING	DESCRIPTION	ELEVATION
300	385910.4912	661623.5007	POB	4.590
301	385999.3860	661637.5827	RADIUS: 90.00'	
302	385943.1679	661567.2967	PT	4.680
303	386258.7923	661357.8023	PC	5.040
304	386242.2018	661332.8071		
305	386267.4903	661316.6673	PT	5.340
306	386154.7824	661140.0730	PC	6.050
307	386104.2055	661172.3527	RADIUS: 60.00'	
308	386071.0247	661122.3624	PT	5.770
309	385980.5249	661182.4313	PC	5.120
310	385939.0488	661119.9434	RADIUS: 75.00'	
311	385876.5610	661161.4195	PT	4.430
312	385811.9980	661064.1490	PC	4.720
313	385832.8273	661050.3236	RADIUS: 25.00'	
314	385818.7603	661029.6567	PT	5.580
315	385790.1830	661078.6286	SAWCUT	0.000
316	385775.3912	661056.7568	SAWCUT	

DITCH LAYOUT

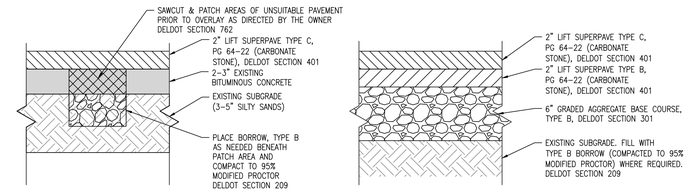
POINT NO.	NORTHING	EASTING	ELEVATION
400	386029.5721	660907.6790	2.930
401	386001.5517	660925.7843	2.670
402	385959.5546	660952.9208	2.270
403	385917.5572	660980.0573	1.870
404	385875.5588	661007.1945	1.470
405	385821.2130	661042.3100	0.970
406	386319.9396	661364.8223	2.550
407	386278.4467	661392.7211	2.400

WESTERN PARKING AREA LAYOUT

POINT NO.	NORTHING	EASTING	ELEVATION
201	386346.1394	661294.9145	5.800
202	386292.1907	661329.3462	5.280
203	386101.3516	660911.3732	5.590
204	386047.4030	660945.8049	5.410

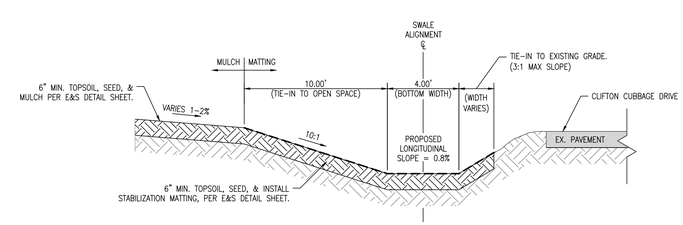
DRAINAGE PIPE SCHEDULE (DELDOT SECTION 601)

NO.	SIZE / TYPE	CLASS	LENGTH	SLOPE	INLET EL.	DIS. EL.
1	15" RCP	V	64'	0.30%	2.74	2.55
2	15" RCP	V	64'	0.42%	3.20	2.93

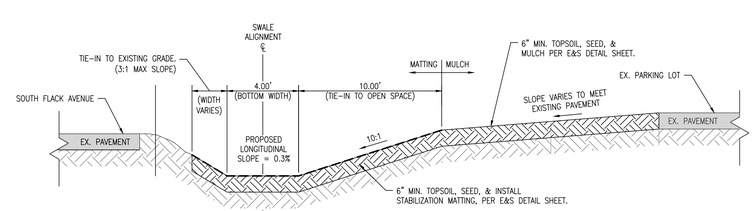


OVERLAY PAVEMENT SECTION
SCALE: NTS

FULL DEPTH PAVEMENT SECTION
SCALE: NTS



SECTION A-A - SWALE
SCALE: NTS



SECTION B-B - SWALE
SCALE: NTS

0 50' 100' 150'
SCALE: 1" = 50'

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ADDENDUM

DESCRIPTION	DATE
2 TRANSLATE WESTERN PARKING	10/09/19

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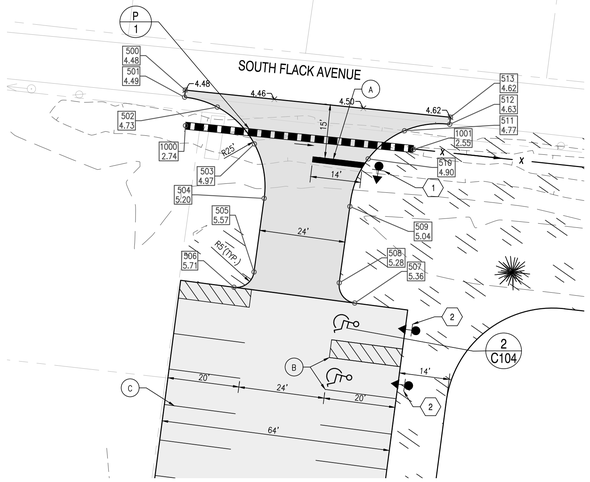
FOR
DELAWARE DIVISION OF FISH & WILDLIFE
BOWERS BEACH PARKING AREA IMPROVEMENTS - PHASE 1
SOUTH FLACK AVENUE
FREDERICA, DELAWARE 19946

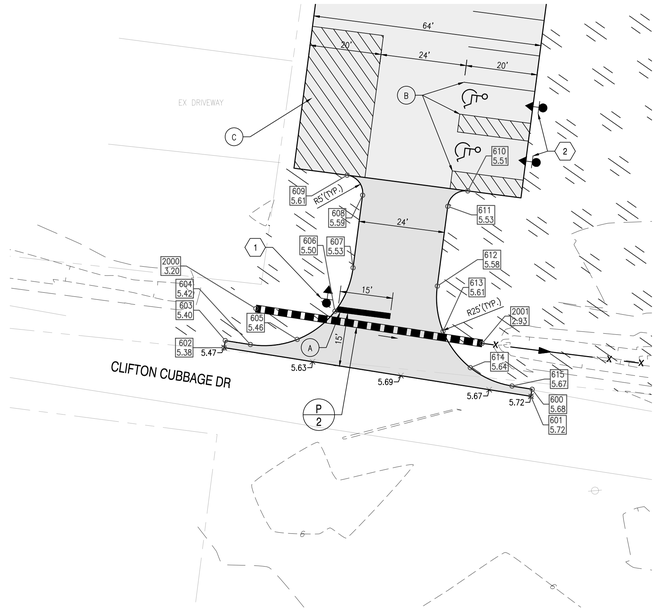
SHEET TITLE
SITE LAYOUT PLAN

100% CONSTRUCTION DOCUMENT SUBMISSION
AUGUST, 2019

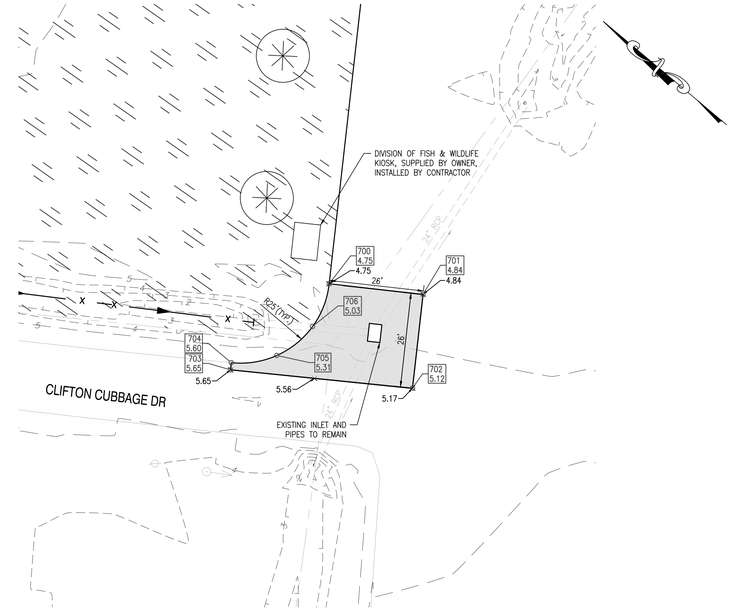
DRAWN: DFS / MDS
CHK'D/DESIGNER: AES
SCALE: 1" = 50'
SHEET NO. C103
PROJECT NO. 175013.36



SOUTH FLACK AVENUE
ENTRANCE DETAIL
SCALE: 1" = 20'



CLIFTON CUBBAGE DRIVE - NORTH
ENTRANCE DETAIL
SCALE: 1" = 20'



CLIFTON CUBBAGE DRIVE - SOUTH
ENTRANCE DETAIL
SCALE: 1" = 20'

SOUTH FLACK AVENUE ENTRANCE PIPE

POINT NO.	NORTHING	EASTING	DESCRIPTION	INVERT
1000	386372.9004	661328.8897	P-1 INLET	2.740
1001	386319.8251	661364.7077	P-1 OUTLET	2.550

SOUTH FLACK AVENUE ENTRANCE

POINT NO.	NORTHING	EASTING	ELEVATION
500	386379.3127	661336.4878	4.480
501	386378.1898	661334.8327	4.490
502	386369.3996	661338.5908	4.730
503	386354.8565	661337.3576	4.970
504	386342.9851	661327.4569	5.200
505	386331.9259	661309.8792	5.570
506	386333.4680	661303.0018	5.710
507	386304.8017	661321.2975	5.360
508	386311.7274	661322.8555	5.280
509	386323.1845	661341.1216	5.040
510	386327.8190	661354.5979	4.900
511	386325.0924	661367.1483	4.770
512	386316.5617	661376.6449	4.630
513	386317.6846	661378.2999	4.620

CLIFTON CUBBAGE DRIVE ENTRANCE PIPE

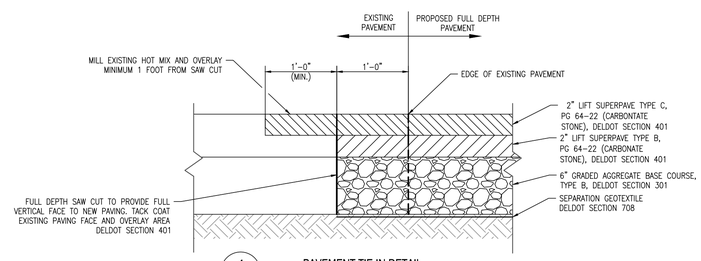
POINT NO.	NORTHING	EASTING	DESCRIPTION	INVERT
2000	386084.2860	660874.4766	P-2 INLET	3.200
2001	386029.5721	660907.6790	P-2 OUTLET	2.930

CLIFTON CUBBAGE DRIVE - NORTH ENTRANCE

POINT NO.	NORTHING	EASTING	ELEVATION
600	386010.6336	660906.8354	5.680
601	386009.6394	660905.1005	5.724
602	386084.0497	660860.4044	5.380
603	386085.0795	660862.1188	5.400
604	386078.9878	660865.7779	5.420
605	386069.8882	660875.2840	5.460
606	386066.8765	660888.0940	5.500
607	386070.7871	660900.6588	5.530
608	386081.8027	660917.9184	5.590
609	386088.7074	660919.4432	5.610
610	386060.0472	660937.7350	5.510
611	386061.5719	660930.8303	5.530
612	386049.4754	660911.8771	5.580
613	386040.1274	660903.2474	5.610
614	386027.7428	660900.3356	5.640
615	386015.5288	660903.8960	5.670

CLIFTON CUBBAGE DRIVE - SOUTH ENTRANCE

POINT NO.	NORTHING	EASTING	ELEVATION
700	385811.9980	661064.1490	4.750
701	385789.9925	661078.7550	4.840
702	385775.3912	661056.7568	5.120
703	385817.6350	661028.0034	5.650
704	385818.7603	661029.6567	5.600
705	385810.3539	661039.3718	5.310
706	385807.8822	661051.9789	5.030



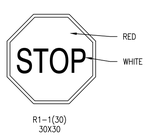
4 C104 PAVEMENT TIE-IN DETAIL
SCALE: NONE

PAVEMENT MARKINGS LEGEND (DELDOT SECTION 817)

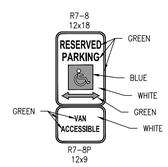
SYMBOL	ITEM
A	16" SOLID WHITE ALKYD THERMOPLASTIC PAINT PAVEMENT STRIPING
B	4" SOLID BLUE ALKYD PAVEMENT STRIPING
C	4" SOLID WHITE ALKYD PAVEMENT STRIPING

SIGNING LEGEND (DELDOT SECTION 819)

SYMBOL	ITEM
1	STOP SIGN
2	ACCESSIBLE PARKING SIGN DETAIL

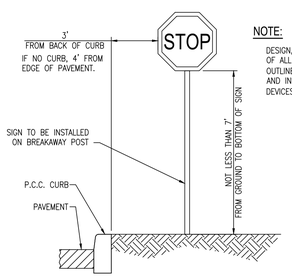


1 STOP SIGN DETAIL
NOT TO SCALE



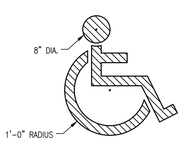
NOTE:
*1. PLACE ON "VAN ACCESSIBLE" SIGN ON VAN ACCESSIBLE SPOTS ONLY (2)

2 ACCESSIBLE PARKING SIGN DETAIL
NOT TO SCALE



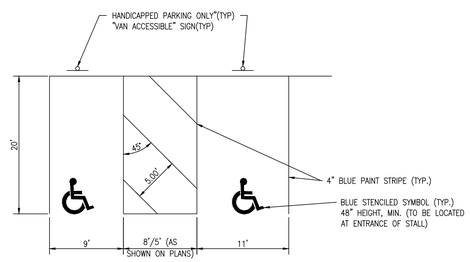
NOTE:
DESIGN, FABRICATION AND INSTALLATION OF ALL PERMANENT SIGNING SHALL BE AS OUTLINED IN THE "GUIDE FOR FABRICATION AND INSTALLATION OF TRAFFIC CONTROL DEVICES" LATEST EDITION.

1 C104 TYPICAL STOP SIGN DETAIL
SCALE: NTS

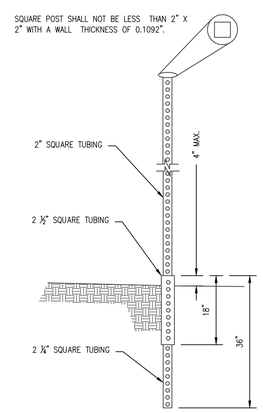


NOTES:
1. SYMBOL STRIPING SHALL BE 3" WIDE (MIN.) AND PAINTED ON EACH HANDICAPPED SPACE.
2. HANDICAPPED SPACES SHALL BE MIN 8'-0" WIDE.

2 C104 HANDICAPPED SYMBOL DETAIL
SCALE: NTS



3 C104 TYPICAL ACCESSIBLE PARKING DETAIL
SCALE: NTS



NOTES:

1. SQUARE TUBES ARE TO BE FORMED FROM GALVANIZED SHEET STRUCTURAL (PHYSICAL) QUALITY, ASTM A 446, GRADE A, COATING DESIGNATION G 90, REGULAR SPANGLE, OR HOT ROLLED CARBON SHEET STEEL STRUCTURAL (PHYSICAL) QUALITY, ASTM A 570, GRADE 33.
   A. NOMINAL OUTSIDE DIMENSION, (INCHES):
      2 X 2
      2 1/4 X 2 1/4
      2 1/2 X 2 1/2
   B. ALL FOUR SIDES ARE TO HAVE EVENLY SPACED 7/16" DIAMETER HOLES ON 1" CENTERS THE ENTIRE LENGTH OF THE TUBE.
   C. TOLERANCE ON HOLE SIZE IS ± 1/64". TOLERANCE ON HOLE SPACING IS ± 1/8" IN 20 FEET.
   D. STANDARD CORNER RADIUS SHALL BE 5/32" ± 1/64".
   E. THE FASTENERS TO BE SUPPLIED UNDER THIS SPECIFICATION SHALL BE 5/16" GRADE 5 UNC CORNER BOLTS WITH CADMIUM OR ZINC PLATING, INSTALLATION OF SIGNS SHALL BE WITH 3/8" X 2 1/2" BOLT WITH LOCKNUT AND WASHER.
2. REGULATORY SIGNS WIDER THAN 30" SHALL BE MOUNTED ON TWO POSTS. WHEN MORE THAN ONE REGULATORY SIGN IS TO BE INSTALLED ON THE SAME POST ASSEMBLY, THE MOUNTING HOLES SHALL BE DRILLED IN THE FIELD AS THE ASSEMBLY IS BEING CONSTRUCTED.
3. DEVELOPMENT SIGNS THAT ARE GREATER THAN 36" WIDE SHALL BE DISPLAYED ON TWO POSTS.
   A. DEVELOPMENT SIGN FACE BACKGROUNDS SHALL BE GREEN; LEGENDS SHALL BE SILVER (WHITE).
   B. LEGEND SHALL BE 5" SERIES "C" LETTERS.
   C. NO BORDER ON DEVELOPMENT SIGN PANELS.
   D. MAXIMUM DEVELOPMENT SIGN WIDTH OF 36" FOR SINGLE LINE SIGNS, 54" FOR TWO OR MORE LINES.
   E. DEVELOPMENT SIGNS SHALL BE INSTALLED WITHIN THE RIGHT-OF-WAY OF THE HIGHWAY ON WHICH THE ENTRANCE(S) IS (ARE) LOCATED. THE SIGNS SHALL BE PLACED WITHIN 750 FEET OF THE CENTERLINE OF THE ENTRANCE(S).

5 C104 TELESCOPING STEEL SIGN POST BREAKAWAY ASSEMBLY
SCALE: NTS

0 20' 40' 60'
SCALE: 1" = 20'

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DELAWARE DIVISION OF FISH & WILDLIFE
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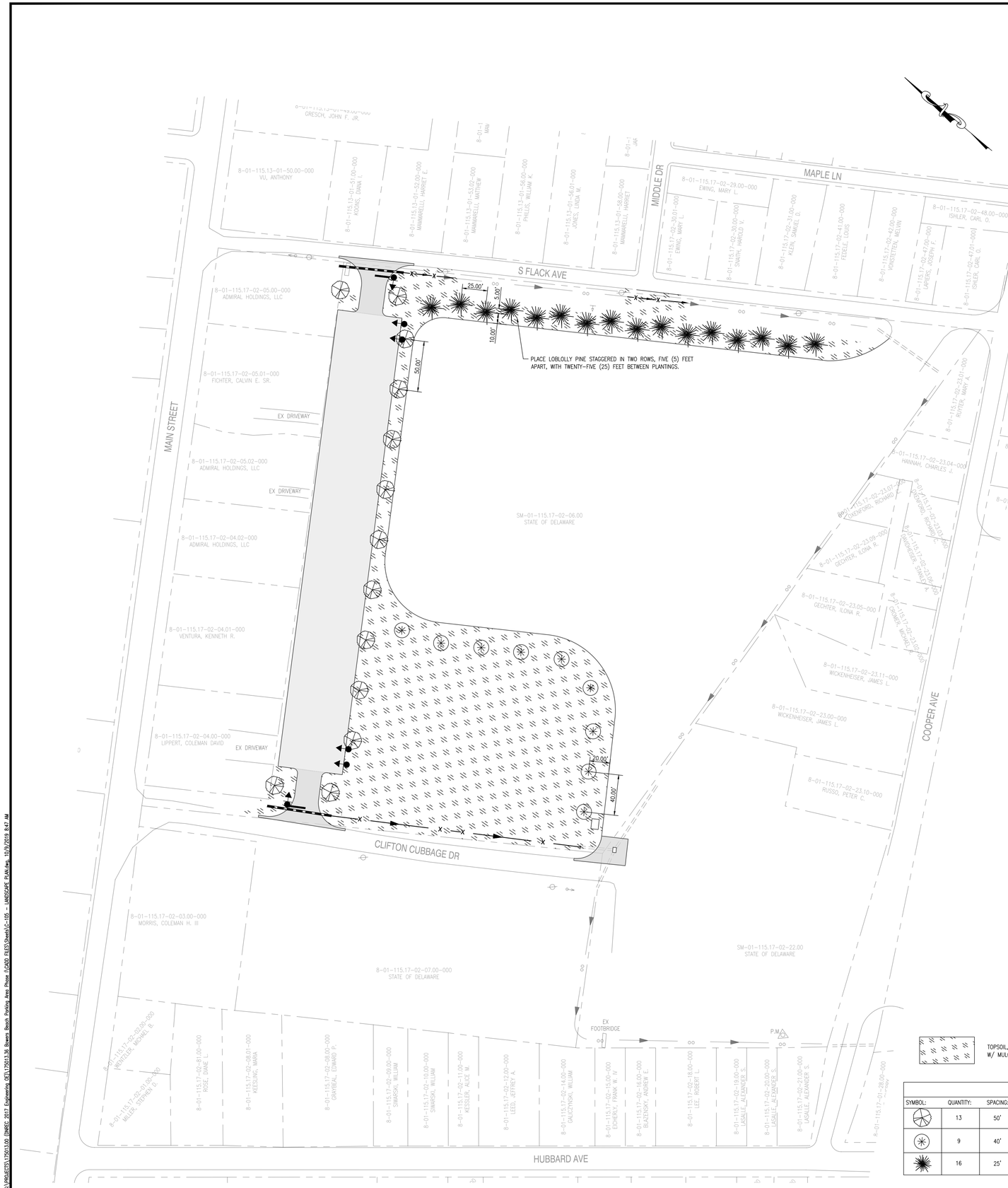
SHEET TITLE
ENTRANCE & CONSTRUCTION DETAILS

100% CONSTRUCTION DOCUMENT SUBMISSION
AUGUST, 2019

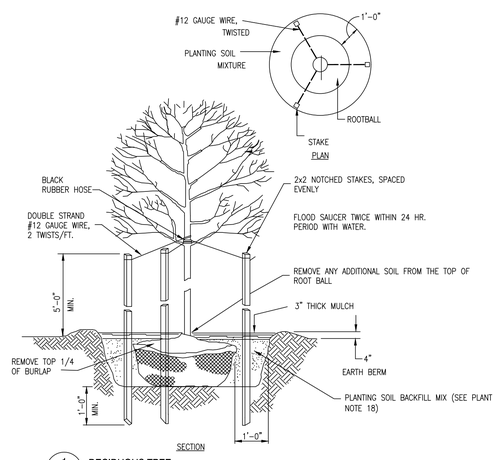
DRAWN: DFS / MDS
CHK'D/DESIGNER: AES
SCALE: 1" = 20'
SHEET NO.: C104
PROJECT NO. 175013.36

G:\PROJECTS\175013.00 (NAGIC 2017 Engineering QC)\175013.36 Bowers Beach Parking Area Phase 1\CADD FILES\Sheets\C-104 - ENTRANCE & CONSTRUCTION DETAILS.dwg, 10/9/2019 8:59 AM



PLANTING NOTES

1. THE CONTRACTOR SHALL FURNISH AND PLANT ALL PLANTS SHOWN ON THE DRAWINGS AS SPECIFIED AND IN QUANTITIES INDICATED ON THE PLANT LIST.
2. ALL PLANTS SHALL BE FRESHLY DUG AND NURSERY GROWN. THEY SHALL HAVE BEEN GROWN UNDER CLIMATIC CONDITIONS SIMILAR TO THOSE AT THE SITE OR PROPERLY ACCLIMATED TO LOCAL CONDITIONS.
3. ALL PLANTS SHALL BE IN ACCORDANCE WITH ANSI Z60.1–2004.
4. ALL PLANTS SHALL BE TYPICAL OF THEIR SPECIES OR VARIETY AND SHALL HAVE A NORMAL HABIT OF GROWTH. THEY SHALL BE SOUND, HEALTHY, AND VIGOROUS, WELL BRANCHED AND DENSELY FOLIATED WHEN IN LEAF. EXCEPT FOR CERTAIN PLANTS WITH UNUSUAL HABIT, THEY SHALL HAVE A STRAIGHT SINGLE CENTRAL LEADER. THE TRUCK SHALL HAVE ON FROST SPLITS. THEY SHALL BE FREE OF DISEASE AND INSECT PESTS, EGGS, OR LARVAE. THEY SHALL HAVE HEALTHY, WELL–DEVELOPED ROOT SYSTEMS.
5. THE CONTRACTOR SHALL SUBMIT A LIST OF THE NURSERY SOURCES FOR ALL PLANT MATERIALS. THE OWNER RESERVES THE RIGHT TO REQUIRE THE TAGGING OF ALL TREES PRIOR TO DIGGING FOR INSTALLATION.
6. SUBSTITUTIONS: WHEN PLANTS OF A SPECIFIED KIND OR SIZE ARE NOT AVAILABLE WITHIN A REASONABLE DISTANCE, SUBSTITUTIONS MAY BE MADE UPON REQUEST BY THE CONTRACTOR, BUT MUST BE PRIOR APPROVED BY THE OWNER AND THE REGULATING PLANNING REVIEW AGENCY.
7. MEASUREMENT: DIMENSIONS OF TREES AND SHRUBS SHALL CONFORM TO ANSI Z60.1–2004.
8. SIZE: ALL PLANTS SHALL CONFORM TO THE MEASUREMENTS SPECIFIED ON THIS SHEET.
9. BALLED AND BURLAPPED PLANTS SHALL BE DUG WITH FIRM NATURAL BALLS OF EARTH, OF DIAMETER AND DEPTH TO INCLUDE MOST OF THE FIBROUS ROOTS. CONTAINER GROWN STOCK SHALL HAVE BEEN GROWN IN A CONTAINER LONG ENOUGH FOR THE ROOT SYSTEM TO HAVE DEVELOPED SUFFICIENTLY TO HOLD ITS SOIL TOGETHER FIRM AND WHOLE. NO PLANTS SHALL BE LOOSE IN THE CONTAINER.
10. ROOT BALLS OF ALL PLANTS SHALL BE ADEQUATELY PROTECTED AT ALL TIMES FROM SUN AND DRYING WINDS OR FROST.
11. WHEN PLANTING TREES, THE CONTRACTOR SHALL REMOVE EXCESS SOIL FROM THE TOP OF THE ROOT BALL EXPOSING THE ROOT CROWN AND STRUCTURAL ROOTS. EACH TREE SHOULD HAVE A MINIMUM OF 3 STRUCTURAL ROOTS EQUALLY SPACED AROUND THE ROOT BALL, OTHERWISE IT SHOULD BE REJECTED AND SENT BACK TO NURSERY. THE ROOT CROWN MUST BE PLANTED A MAXIMUM OF 2" BELOW FINISHED GRADE. THE TOP OF THE STRUCTURAL ROOTS SHALL BE NO GREATER THAN 5" BELOW FINISHED GRADE.
12. THE OWNER SHALL BE NOTIFIED PRIOR TO BEGINNING PLANTING OPERATIONS.
13. PLANTS WITH BROKEN ROOT BALLS OR EXCESSIVE DAMAGE TO THE CROWN SHALL BE REPLACED PRIOR TO PLANTING.
14. ALL TREES SHALL BE STAKED AND GUYED ACCORDING TO ACCEPTED INDUSTRY PRACTICE.
15. EACH TREE AND SHRUB SHALL BE PRUNED IN ACCORDANCE WITH THE ANSI Z60.1–2004 TO PRESERVE THE NATURAL CHARACTER OF THE PLANT. DO NOT PRUNE MAIN LEADERS. ALL DEAD WOOD, "SUCKERS", AND ALL BROKEN OR BADLY BRUISED BRANCHES SHALL BE REMOVED.
16. MULCH FOR TREES, SHRUBS, AND GROUND COVER SHALL BE FINELY SHREDDED OAK BARK, DARK BROWN IN COLOR, AGED AT LEAST ONE YEAR, AND CLEAN AND FREE OF WEEDS. PRE–EMERGENT WEED KILLER SHALL BE TREFLAN OR APPROVED EQUAL. APPLY WEED KILLER TO TOPSOIL PRIOR TO MULCHING BED PLANTING.
17. TREES IN LEAF WHEN SHIPPED SHALL BE TREATED WITH ANTI–DESICCANT BEFORE LEAVING THE NURSERY.
18. PREPARATION OF PLANTING SOIL – BEFORE MIXING, CLEAN TOPSOIL OF ROOTS, PLANTS, STONES, CLAY LUMPS, AND OTHER EXTRANEOUS MATERIALS HARMFUL OR TOXIC TO PLANT GROWTH. SOIL BACKFILL FOR TREES, SHRUBS, AND GROUND COVER SHALL BE A MIXTURE BY VOLUME OF THE FOLLOWING MATERIALS IN QUANTITIES SPECIFIED: 25 PERCENT COMPOST AND 75 PERCENT TOPSOIL. MIX IN 2 LBS OF 6–1–1 ORGANIC FERTILIZER PER TREE OR SHRUB, WITH BACKFILL MIX, UNDER AND AROUND THE ROOTBALLS OF TREES AND SHRUBS. OR MIX ORGANIC FERTILIZER WITH COMPOST AT A RATE OF 15 LBS PER CUBIC YD. BEFORE ADDING TO PLANT BACKFILL MIX. OTHER SOIL CONDITIONERS MAY BE REQUIRED PER SOIL TESTING OF FURNISHED TOPSOIL.
19. THE CONTRACTOR SHALL PROVIDE A REPLACEMENT WARRANTY PER DELDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, SECTION 911 – PLANTINGS (AUGUST 2016, OR LATEST EDITION).
20. ALL PLANTINGS SHALL BE AT THE LOCATIONS INDICATED ON THE DRAWINGS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PLANTING AT THE CORRECT GRADES, ALIGNMENT, AND TO THE INDICATED LAYOUT OF THE PLANTING BEDS. MINOR ADJUSTMENTS TO TREE LOCATION MAY BE NECESSARY DUE TO FIELD CONDITIONS AND FINAL GRADING. THE CONTRACTOR SHALL NOTIFY THE OWNER IF MAJOR ADJUSTMENTS ARE REQUIRED. COORDINATE PLANT MATERIAL LOCATIONS WITH SITE UTILITIES. SEE SITE LAYOUT, GRADING, LIGHTING, AND/OR UTILITY PLANS FOR STORM, SANITARY, WATER, ELECTRIC AND GAS LINES. EXERCISE CARE WHEN DIGGING IN AREAS OF POTENTIAL CONFLICT WITH UNDERGROUND OR OVERHEAD UTILITIES. THE CONTRACTOR IS RESPONSIBLE FOR ANY DAMAGE DUE TO CONTRACTOR'S NEGLIGENCE AND SHALL REPLACE OR REPAIR ANY DAMAGE AT CONTRACTOR'S EXPENSE.
21. CONDITIONS DETRIMENTAL TO PLANTS: THE CONTRACTOR SHALL NOTIFY THE OWNER IN WRITING OF ALL SOIL OR DRAINAGE CONDITIONS WHICH THE CONTRACTOR CONSIDERS DETRIMENTAL TO THE GROWTH OF PLANTS. HE SHALL STATE THE CONDITIONS AND SUBMIT A PROPOSAL FOR CORRECTING THE CONDITIONS, INCLUDING ANY CHANGE IN COST FOR REVIEW AND ACCEPTANCE BY THE PROJECT REPRESENTATIVE.
22. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO ADEQUATELY AND PROPERLY MAINTAIN THE LANDSCAPED AREAS, WHICH RESPONSIBILITY SHALL INCLUDE WATERING, CLEANING OF WEEDS AND DEBRIS, PRUNING AND TRIMMING, REPLACEMENT OF DEAD OR DISEASED PLANTINGS AND FERTILIZING TO MAINTAIN HEALTHY GROWTH.
23. THE LANDSCAPE PLAN IS FOR LANDSCAPING INFORMATION ONLY. PLEASE REFER TO THE OTHER SHEETS IN THE CONSTRUCTION PLANS FOR ALL OTHER INFORMATION.
24. ANY DISTURBED AREAS NOT SHOWN AS HATCHED SHALL BE SEEDED W/ DNREC PERMANENT SEED MIX #2 PER THE E&S DETAIL SHEETS.



1 / C105 DECIDUOUS TREE
SCALE: N.T.S.

TOPSOIL, 6" MIN., SEED W/ DNREC PERMANENT SEED MIX #2, STABILIZE W/ MULCH OR MATTING AS SHOWN ON THE SITE LAYOUT PLAN.

PLANTING SCHEDULE

SYMBOL:	QUANTITY:	SPACING:	SCIENTIFIC:	COMMON:	PLANTING SIZE:	NOTES:
	13	50'	QUERCUS STELLATA	POST OAK	6' MIN. HEIGHT	40'–50' HEIGHT AT MATURITY, 25'–50' CROWN SPREAD, BALL & BURLAP
	9	40'	CELTIS OCCIDENTALIS	HACKBERRY	6' MIN. HEIGHT	30'–50' HEIGHT AT MATURITY, 25'–50' CROWN SPREAD, BALL & BURLAP
	16	25'	PINUS TAEDA	LOBLOLLY PINE	3' MIN. HEIGHT	60'–100' HEIGHT AT MATURITY, 20'–30' CROWN SPREAD, BALL & BURLAP

0 50' 100' 150'
SCALE: 1" = 50'

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CENTURY ENGINEERING, INC.
CONSULTING ENGINEERS ■ SURVEYORS
ADDRESS: 550 BAY ROAD DOVER, DE 19901
P: (302) 734-9188 F: (302) 734-4589
WEBSITE: www.centuryeng.com
EMAIL: ce@centuryeng.com

REVISIONS

ADDENDUM

	DESCRIPTION	DATE
2	TRANSLATE WESTERN PARKING	10/09/19

PROJECT

CONSTRUCTION PLANS

FOR

DELAWARE DIVISION OF FISH & WILDLIFE
BOWERS BEACH PARKING AREA IMPROVEMENTS - PHASE 1

SOUTH FLACK AVENUE
FREDERICA, DELAWARE 19946

SHEET TITLE

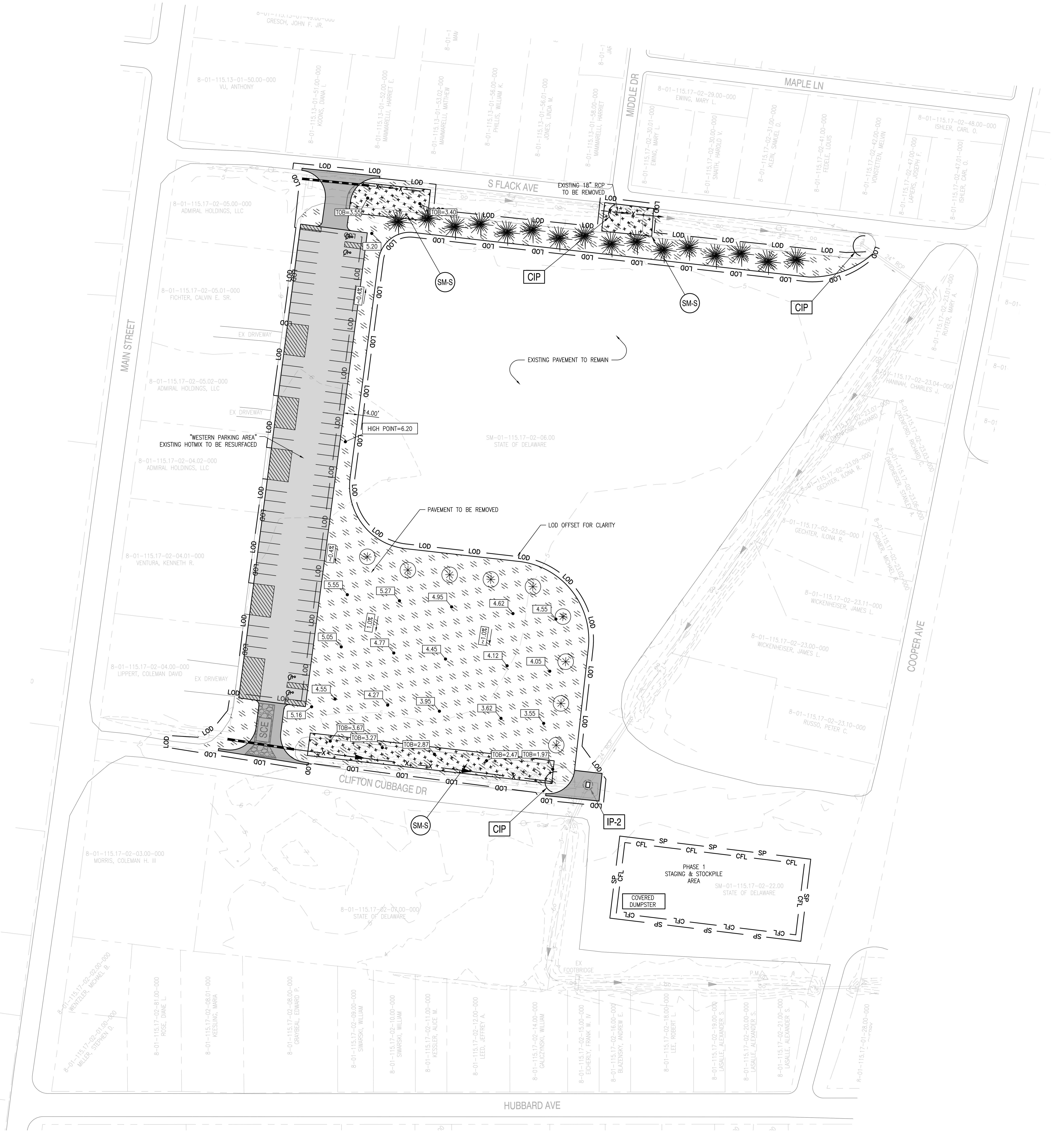
LANDSCAPING PLAN

100% CONSTRUCTION DOCUMENT SUBMISSION
AUGUST, 2019

DRAWN	CHK'D/DESIGNER
DFS / MDS	AES

SCALE: 1" = 50'
SHEET NO.: C105
PROJECT NO. 175013.36

G:\99DEVGS\175013.00 (DNREC 2017 Engineering QC)\175013.36 Bowers Beach Parking Area Phase 1\CADD FILES\Sheets\C-105 - LANDSCAPE PLAN.dwg, 10/9/2019 8:47 AM



SEQUENCE OF CONSTRUCTION:

1. PRIOR TO ANY CLEARING, INSTALLATION OF SEDIMENT CONTROL MEASURES OR GRADING, A PRECONSTRUCTION MEETING MUST BE SCHEDULED AND CONDUCTED. THE LANDOWNER/DEVELOPER AND CONTRACTOR ARE REQUIRED TO BE IN ATTENDANCE AT THE PRE-CONSTRUCTION MEETING; THE DESIGNER IS RECOMMENDED TO ATTEND.
2. THE CONTRACTOR SHALL AT ALL TIMES PROTECT AGAINST SEDIMENT OR DEBRIS LADEN RUNOFF OR WIND FROM LEAVING THE SITE. PERIMETER CONTROLS SHOULD BE CHECKED DAILY AND ADJUSTED AND/OR REPAIRED TO FULLY CONTAIN AND CONTROL SEDIMENTATION ON THE SITE. ACCUMULATED SEDIMENT SHALL BE REMOVED WHEN IT HAS REACHED HALF OF THE EFFECTIVE CAPACITY OF THE CONTROL. IN ADDITION, THE CONTRACTOR MAY NEED TO ADJUST OR REPAIR MEASURES IN TIMES OF ADVERSE WEATHER CONDITIONS, OR AS DIRECTED BY THE AGENCY CONSTRUCTION SITE REVIEWER.
3. INSTALL STABILIZED CONSTRUCTION ENTRANCE. INSTALL CULVERT INLET PROTECTIONS AND COMPOST FILTER LOGS. INSTALL SITE POLLUTION PREVENTION DEVICES PER DNREC STANDARD DETAILS & SPECIFICATIONS.
4. PERFORM CLEARING AND GRUBBING AS NEEDED.
5. THE CONTRACTOR SHALL REVIEW THE EXISTING CONDITION OF THE PARKING AREA WITH THE OWNER TO DETERMINE THE EXTENT OF AREAS REQUIRED TO BE PATCHED PRIOR TO PLACING THE OVERLAY HOT MIX.
6. SAW CUT EXISTING PAVEMENT AS SHOWN ON THE EXISTING CONDITIONS AND DEMOLITION SHEET AS WELL AS ALL AREAS IDENTIFIED FOR PATCHING BY THE OWNER. MILL AREAS FOR PAVEMENT TIE-INS. REMOVE ALL PAVEMENT DEBRIS AND MILLINGS. THE CONTRACTOR SHALL ENSURE THAT ALL TEMPORARY STABILIZATION IS COMPLETED AS CONSTRUCTION PROGRESSES SUCH THAT NO MORE THAN 1.0 ACRE OF AREA IS DISTURBED AT ANY POINT IN TIME.
7. COMPLETE ROUGH SITE GRADING.
8. INSTALL ENTRANCE PIPES. PLACE BORROW TYPE B (AS NEEDED), GABC, AND BITUMINOUS TYPE B FOR FULL DEPTH PAVEMENT SECTIONS AT ENTRANCES AND PATCHING AREAS.
9. COMPLETE BITUMINOUS TYPE C OVERLAY OF ALL PAVED AREAS.
10. PLACE TOPSOIL, PERFORM FINAL GRADING, SEED, AND MULCH ALL DISTURBED AREAS. STABILIZATION MATTING SHALL BE USED ALONG DRAINAGE SWALES AS SHOWN ON THE EROSION AND SEDIMENT CONTROL PLAN. COMPLETE LANDSCAPING PLANTINGS PER THE LANDSCAPING PLAN.
11. EROSION AND SEDIMENT CONTROL DEVICES SHALL BE REMOVED ONLY AFTER ALL WORK IN AN AREA HAS BEEN COMPLETED AND STABILIZED, WITH WRITTEN APPROVAL FROM THE AGENCY CONSTRUCTION SITE REVIEWER.
12. THE TERMINATION OF THE CONSTRUCTION GENERAL PERMIT WILL REQUIRE SUBMISSION AND ACCEPTANCE OF ALL POST CONSTRUCTION VERIFICATION DOCUMENTS AND FINAL STABILIZATION THROUGHOUT THE SITE.

EROSION & SEDIMENT CONTROL GENERAL NOTES

1. REVIEW AND APPROVAL OF THE SEDIMENT AND STORMWATER MANAGEMENT PLAN SHALL NOT RELIEVE THE CONTRACTOR FROM HIS OR HER RESPONSIBILITIES FOR COMPLIANCE WITH THE REQUIREMENTS OF THE DELAWARE SEDIMENT AND STORMWATER REGULATIONS, NOR SHALL IT RELIEVE THE CONTRACTOR FROM ERRORS OR OMISSIONS IN THE APPROVED PLAN.
2. IF THE APPROVED PLAN NEEDS TO BE MODIFIED, ADDITIONAL SEDIMENT AND STORMWATER CONTROL MEASURES MAY BE REQUIRED AS DEEMED NECESSARY BY DNREC OR THE DELEGATED AGENCY.
3. FOLLOWING THE SOIL DISTURBANCE OR RE-DISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION SHALL BE COMPLETED FOR ALL PERIMETER SEDIMENT CONTROLS, SOIL STOCKPILES, AND ALL OTHER DISTURBED OR GRADED AREAS ON THE PROJECT SITE WITHIN FOURTEEN (14) CALENDAR DAYS UNLESS MORE RESTRICTIVE FEDERAL REQUIREMENTS APPLY.
4. ALL EROSION AND SEDIMENT CONTROL PRACTICES SHALL COMPLY WITH THE DELAWARE EROSION AND SEDIMENT CONTROL HANDBOOK, LATEST EDITION.
5. AT ANY TIME A DEWATERING OPERATION IS USED, IT SHALL BE PREVIOUSLY APPROVED BY THE AGENCY CONSTRUCTION SITE REVIEWER FOR A NON-EROSIVE POINT OF DISCHARGE, AND A DEWATERING PERMIT SHALL BE APPROVED BY THE DNREC WELL PERMITTING BRANCH.
6. APPROVED PLANS REMAIN VALID FOR FIVE (5) YEARS FROM THE DATE OF APPROVAL.
7. POST CONSTRUCTION VERIFICATION DOCUMENTS ARE TO BE SUBMITTED TO THE DNREC SEDIMENT AND STORMWATER PROGRAM WITHIN SIXTY (60) DAYS OF STORMWATER MANAGEMENT FACILITY COMPLETION.
8. APPROVAL OF A SEDIMENT AND STORMWATER PLAN DOES NOT GRANT OR IMPLY A RIGHT TO DISCHARGE STORMWATER RUNOFF. THE OWNER/DEVELOPER IS RESPONSIBLE FOR ACQUIRING ANY AND ALL AGREEMENTS, EASEMENTS, ETC., NECESSARY TO COMPLY WITH STATE DRAINAGE AND OTHER APPLICABLE LAWS.
9. THE NOTICE OF INTENT FOR STORM WATER DISCHARGES ASSOCIATED WITH CONSTRUCTION ACTIVITY UNDER NPDES GENERAL PERMIT FOR THIS PROJECT IS # ______. AT ANY TIME THE OWNERSHIP FOR THIS PROJECT CHANGES, A TRANSFER OF AUTHORIZATION OR A CO-PERMITEE APPLICATION MUST BE SUBMITTED TO DNREC. THE PERMITTEE OF RECORD SHALL NOT BE RELIEVED OF THEIR RESPONSIBILITIES UNTIL A NOTICE OF TERMINATION HAS BEEN PROCESSED BY DNREC.
10. THE OWNER SHALL BE FAMILIAR WITH AND COMPLY WITH ALL ASPECTS OF THE NPDES CONSTRUCTION GENERAL PERMIT ASSOCIATED WITH THE PROJECT, INCLUDING, BUT NOT LIMITED TO, PERFORMING WEEKLY SITE INSPECTIONS DURING CONSTRUCTION AND AFTER RAIN EVENTS, AND MAINTAINING WRITTEN LOGS OF THESE INSPECTIONS.
11. THE CONTRACTOR SHALL AT ALL TIMES PROTECT AGAINST SEDIMENT OR DEBRIS LADEN RUNOFF OR WIND FROM LEAVING THE SITE. PERIMETER CONTROLS SHALL BE CHECKED DAILY AND ADJUSTED AND/OR REPAIRED TO FULLY CONTAIN AND CONTROL SEDIMENT FROM LEAVING THE SITE. ACCUMULATED SEDIMENT SHALL BE REMOVED WHEN IT HAS REACHED HALF OF THE EFFECTIVE CAPACITY OF THE CONTROL. IN ADDITION, THE CONTRACTOR MAY NEED TO ADJUST OR ALTER MEASURES IN TIMES OF ADVERSE WEATHER CONDITIONS, OR AS DIRECTED BY THE AGENCY CONSTRUCTION SITE REVIEWER.
12. BEST AVAILABLE TECHNOLOGY (BAT) SHALL BE EMPLOYED TO MANAGE TURBID DISCHARGES IN ACCORDANCE WITH REQUIREMENTS OF 7 DEL C. CHAPTER 60, REGULATIONS GOVERNING THE CONTROL OF WATER POLLUTION, SECTION 9.1.02, KNOWN AS SPECIAL CONDITIONS FOR STORMWATER DISCHARGES ASSOCIATED WITH CONSTRUCTION ACTIVITIES AND DEPARTMENT POLICIES, PROCEDURES, AND GUIDANCE.
13. DOCUMENTATION OF SOIL TESTING AND MATERIALS USED FOR TEMPORARY OR PERMANENT STABILIZATION INCLUDING BUT NOT LIMITED TO SOIL TEST RESULTS, SEED TAGS, SOIL AMENDMENT TAGS, ETC. SHALL BE PROVIDED TO THE DEPARTMENT OR DELEGATED AGENCY TO VERIFY THAT THE PERMANENT OR TEMPORARY STABILIZATION HAS BEEN COMPLETED IN ACCORDANCE WITH THE APPROVED PLAN. THE DEPARTMENT OR DELEGATED AGENCY MAY REQUIRE ADDITIONAL SOIL TESTING AND REAPPLICATION OF PERMANENT OR TEMPORARY STABILIZATION IN ACCORDANCE WITH SPECIFICATIONS PROVIDED IN THE DELAWARE EROSION AND SEDIMENT CONTROL HANDBOOK, OR ALTERNATIVE MEASURES THAT PROVIDE FUNCTIONAL EQUIVALENCY.

EROSION & SEDIMENT CONTROL PROJECT NOTES

1. TOTAL LOD: 1.84 AC
2. NOTICE OF INTENT (NOI) ID#: 6033
3. ALL SOILS WITHIN THE PROPOSED LIMITS OF DISTURBANCE ARE CLASSIFIED AS:
   SuA, SUNKEN MUCKY SILT LOAM, 0-2% SLOPES, HSG = C/D
   FOR STORMWATER MANAGEMENT PURPOSES, SOILS WILL BE CONSIDERED HSG = C, DUE TO THE OPEN DRAINAGE SYSTEM SURROUNDING THE PROJECT SITE.
4. THE CONTRACTOR SHALL PROVIDE TEMPORARY STABILIZATION AS WORK PROGRESSES SUCH THAT NO MORE THAN 1.0 AC IS DISTURBED AT ANY POINT IN TIME.
5. ALL DISTURBED AREAS WITHIN THE LOD SHALL BE STABILIZED WITH 6" MIN TOPSOIL, SEED, AND MULCH/STABILIZATION MATTING.
6. TEMPORARY SEEDING SHALL MEET SPECIFICATIONS OF DNREC TEMPORARY SEED MIX #3. TOPSOIL SHALL NOT BE REQUIRED FOR TEMPORARY SEEDING.
7. MULCH SHALL BE BLOWN STRAW MULCHING PER THE MULCHING DETAIL ON THE EROSION AND SEDIMENT CONTROL DETAIL SHEETS.
8. SLOPE STABILIZATION MATTING SHALL BE TYPE SSM-1.
   EXAMPLE PRODUCTS INCLUDE:
   - NORTH AMERICAN GREEN S75BN
   - EAST COAST EROSION BLANKETS ECS-1B
9. GEOTEXTILE FOR THE STABILIZED CONSTRUCTION ENTRANCES SHALL MEET DNREC TYPE GS-1 SPECIFICATIONS.
   EXAMPLE PRODUCTS INCLUDE:
   - MIRAFI 600X
   - AMOCO 2006
   - GEOTEX 315ST
10. SPRINKLING SHALL BE THE STABILIZATION MEASURE INITIATED IF DUST CONTROL BECOMES A PROBLEM.
11. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO MAINTAIN AND REPAIR ALL EROSION AND SEDIMENT CONTROL PRACTICES DURING CONSTRUCTION.
12. LOCATIONS OF THE DUMPSTER AND STAGING AREAS ARE SHOWN ON THIS SHEET. IF THESE LOCATIONS MUST BE MOVED, THE NEW LOCATION SHALL BE APPROVED BY THE AGENCY CONSTRUCTION SITE REVIEWER.
13. CULVERT INLET PROTECTION AT PIPE INLETS SHALL BE 3MIL HDPE COMPOST FILTER LOGS, INSTALLED PER DNREC CULVERT INLET PROTECTION STANDARD DETAIL.
14. PER FIRM MAP NUMBER 10001C0267J, DATED JULY 7, 2014, THE ENTIRE SITE LIES WITHIN ZONE AE. AREAS WITHIN ZONE AE ARE SUBJECT TO INUNDATION BY THE 1.0% ANNUAL CHANCE FLOOD EVENT DETERMINED BY FEMA. BASE FLOOD ELEVATIONS VARY BETWEEN 10.0' AND 11.0' AT THE PROJECT SITE.

0 50' 100' 150'
SCALE: 1" = 50'

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CENTURY ENGINEERING, INC.
CONSULTING ENGINEERS ■ SURVEYORS
ADDRESS: 550 BAY ROAD, DOVER, DE 19901
P: (302) 734-9188 F: (302) 734-4589
WEBSITE: www.centuryeng.com
EMAIL: cei@centuryeng.com

REVISIONS

ADDENDUM

DESCRIPTION	DATE
TRANSLATE WESTERN PARKING	10/09/19

PROJECT

CONSTRUCTION PLANS
FOR
DELAWARE DIVISION OF FISH & WILDLIFE
BOWERS BEACH PARKING AREA IMPROVEMENTS - PHASE 1
SOUTH FLACK AVENUE
FREDERICA, DELAWARE 19946

SHEET TITLE

EROSION & SEDIMENT CONTROL PLAN

100% CONSTRUCTION DOCUMENT SUBMISSION
AUGUST, 2019

DRAWN	CHK'D/DESIGNER
DFS / MDS	AES
SCALE	SHEET NO.
1" = 50'	C106
PROJECT NO.	
175013.36	

MANDATORY PRE-BID CONFERENCE ATTENDANCE SHEET

Contract No. NAT19001-BOWERS

Bowers Beach Parking Area Improvements – Phase 1

October 2, 2019 - 10:00 AM

NAME	AGENCY/COMPANY	TELEPHONE	EMAIL
Kevin Lamborn	Carrow Construction	302-275-7592	Danny.carrow@carrowconstruction.com
Aaron Fibelkorn	Zack Excavating	302-387-9011	afibelkorn@icloud.com
Dwayne Bosley	Dixon Contracting	302-653-4623	DIXONCONDE@AOL.COM
Jeff Norman	George & Lynch	302-342-3126	jnorman@geolyn.com
Rick Mazol	Chesapeake Turf	302-922-1317	RICK@CHESAPEAKETURF.COM
Matt Tarr	GES	302-757-2883	MTARR@GESONCALL.COM
Mark Strickland	Century Engineering	302-734-9188	MSTRICKLAND@CENTURYENG.COM
Anthony Gonzon	DNREC - DFW	302-735-8673	anthony.gonzon@delaware.gov
Bob McDevitt	Town of Bowers	302-670-4766	
Ada Puzzo	Town of Bowers	302-382-2501	adaleecarter@comcast.net
Judy Martin	Town of Bowers	302-222-6341	judym24@hotmail.com
Marge Ventura	Town of Bowers	302-751-1730	marge.ventura@gmail.com