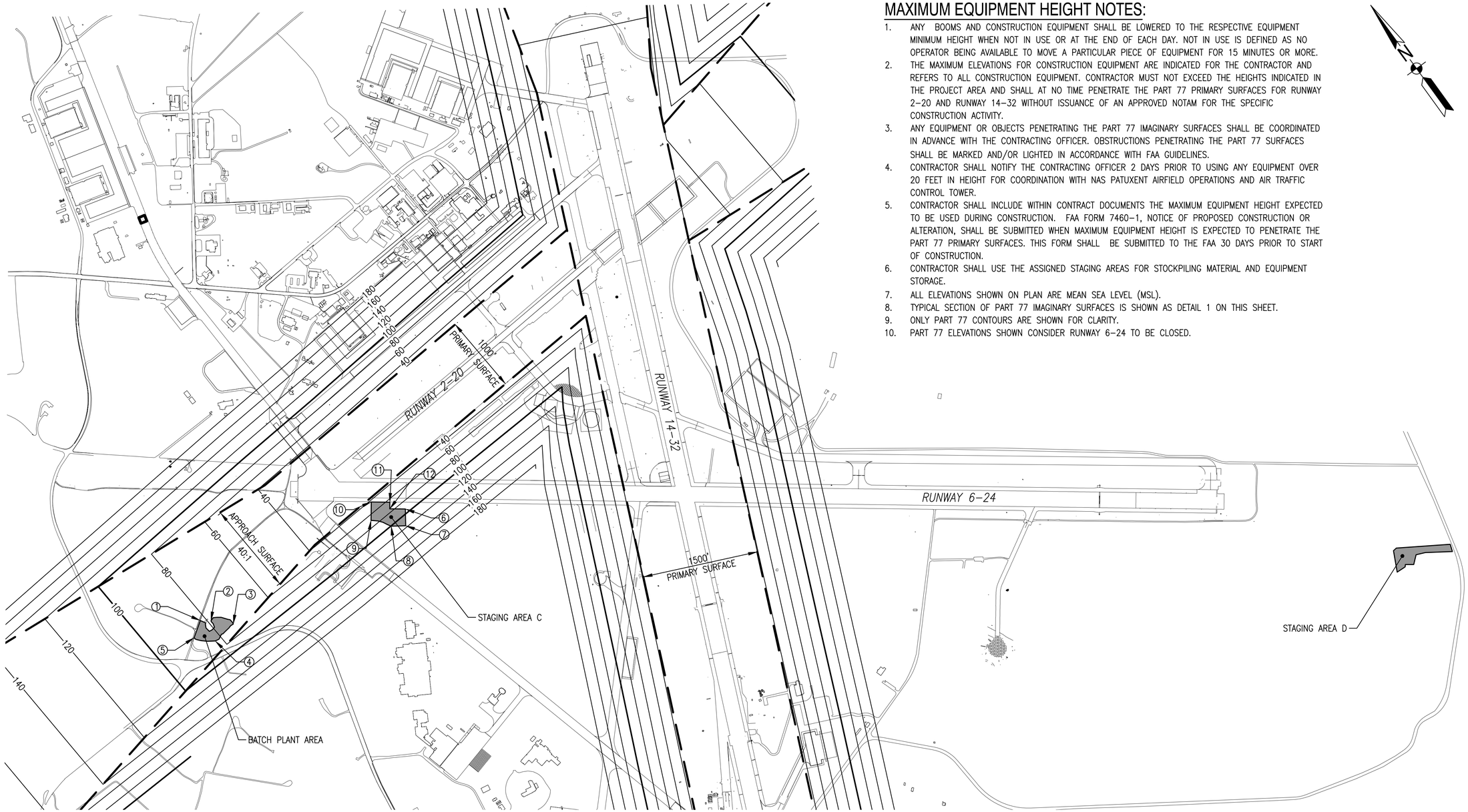
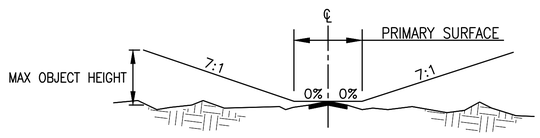


MAXIMUM EQUIPMENT HEIGHT NOTES:

1. ANY BOOMS AND CONSTRUCTION EQUIPMENT SHALL BE LOWERED TO THE RESPECTIVE EQUIPMENT MINIMUM HEIGHT WHEN NOT IN USE OR AT THE END OF EACH DAY. NOT IN USE IS DEFINED AS NO OPERATOR BEING AVAILABLE TO MOVE A PARTICULAR PIECE OF EQUIPMENT FOR 15 MINUTES OR MORE.
2. THE MAXIMUM ELEVATIONS FOR CONSTRUCTION EQUIPMENT ARE INDICATED FOR THE CONTRACTOR AND REFERS TO ALL CONSTRUCTION EQUIPMENT. CONTRACTOR MUST NOT EXCEED THE HEIGHTS INDICATED IN THE PROJECT AREA AND SHALL AT NO TIME PENETRATE THE PART 77 PRIMARY SURFACES FOR RUNWAY 2-20 AND RUNWAY 14-32 WITHOUT ISSUANCE OF AN APPROVED NOTAM FOR THE SPECIFIC CONSTRUCTION ACTIVITY.
3. ANY EQUIPMENT OR OBJECTS PENETRATING THE PART 77 IMAGINARY SURFACES SHALL BE COORDINATED IN ADVANCE WITH THE CONTRACTING OFFICER. OBSTRUCTIONS PENETRATING THE PART 77 SURFACES SHALL BE MARKED AND/OR LIGHTED IN ACCORDANCE WITH FAA GUIDELINES.
4. CONTRACTOR SHALL NOTIFY THE CONTRACTING OFFICER 2 DAYS PRIOR TO USING ANY EQUIPMENT OVER 20 FEET IN HEIGHT FOR COORDINATION WITH NAS PATUXENT AIRFIELD OPERATIONS AND AIR TRAFFIC CONTROL TOWER.
5. CONTRACTOR SHALL INCLUDE WITHIN CONTRACT DOCUMENTS THE MAXIMUM EQUIPMENT HEIGHT EXPECTED TO BE USED DURING CONSTRUCTION. FAA FORM 7460-1, NOTICE OF PROPOSED CONSTRUCTION OR ALTERATION, SHALL BE SUBMITTED WHEN MAXIMUM EQUIPMENT HEIGHT IS EXPECTED TO PENETRATE THE PART 77 PRIMARY SURFACES. THIS FORM SHALL BE SUBMITTED TO THE FAA 30 DAYS PRIOR TO START OF CONSTRUCTION.
6. CONTRACTOR SHALL USE THE ASSIGNED STAGING AREAS FOR STOCKPILING MATERIAL AND EQUIPMENT STORAGE.
7. ALL ELEVATIONS SHOWN ON PLAN ARE MEAN SEA LEVEL (MSL).
8. TYPICAL SECTION OF PART 77 IMAGINARY SURFACES IS SHOWN AS DETAIL 1 ON THIS SHEET.
9. ONLY PART 77 CONTOURS ARE SHOWN FOR CLARITY.
10. PART 77 ELEVATIONS SHOWN CONSIDER RUNWAY 6-24 TO BE CLOSED.

POINT NO.	NORTHING	EASTING	EXISTING ELEVATION	PROPOSED MAXIMUM ALLOWABLE PART 77 ELEVATION	ALLOWABLE EQUIPMENT HEIGHT
1	220664.12	1478566.52	37	82	45
2	220752.61	1478670.84	37	79	42
3	220914.68	1478911.04	37	74	37
4	220597.55	1478884.50	35	82	47
5	220445.97	1478655.06	33	87	54
6	223492.80	1479564.98	27	93	66
7	22335.20	1479712.52	27	117	90
8	223207.16	1479577.50	28	100	72
9	223089.00	1479335.09	31	69	38
10	223266.7333	1479179.475	33	43	10
11	223424.2966	1479359.259	31	65	34
12	223361.0739	1479414.666	29	74	45



PART 77 IMAGINARY SURFACE (1)

NTS

NOTES:

1. THE ELEVATION OF ANY POINT ON THE PRIMARY SURFACE IS THE SAME AS THE THE ELEVATION OF THE NEAREST POINT ON THE RUNWAY CENTERLINE.
2. PRIMARY SURFACE WIDTH VARIES PER RUNWAY. SEE PLAN VIEW FOR DIMENSIONS.

1"=500' 0 500' 1000' 2000'

NOTE:

MDE NO 17-SF-0058

SYM	DESCRIPTION	DATE	APPR

NAVFAC

COMMONWEALTH OF PENNSYLVANIA — REGISTERED PROFESSIONAL — MARK J TIGER — ENGINEER 041439-E

SEAL

JOHNSON, MIRMIRAN & THOMPSON
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272 Bendix Road, Suite 260
Virginia Beach, Virginia, 23452
Telephone: (757) 499-1895
Web: www.jmt.com
A/E INFO

APPROVED

FOR COMMANDER NAVFAC

ACTIVITY

JAMES FLETCHER PER CHECKLIST
SATISFACTORY TO DATE 9/27/2016

DES DFD DRW MSC CHK MJT

PM/DM RH

BRANCH MANAGER

CHIEF ENG/ARCH E. GALLAHER, PE

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
WASHINGTON, D.C.
NAVFAC WASHINGTON
NAVAL AIR STATION PATUXENT RIVER
PATUXENT RIVER, MARYLAND
FY16 SPECIAL PROJECT RM12-2137
REPAIR RUNWAYS 14-32 & 6-24 - PHASE 3
MAXIMUM EQUIPMENT HEIGHT PLAN
RUNWAY 14-32 AND RUNWAY 2-20
PT. BLUE

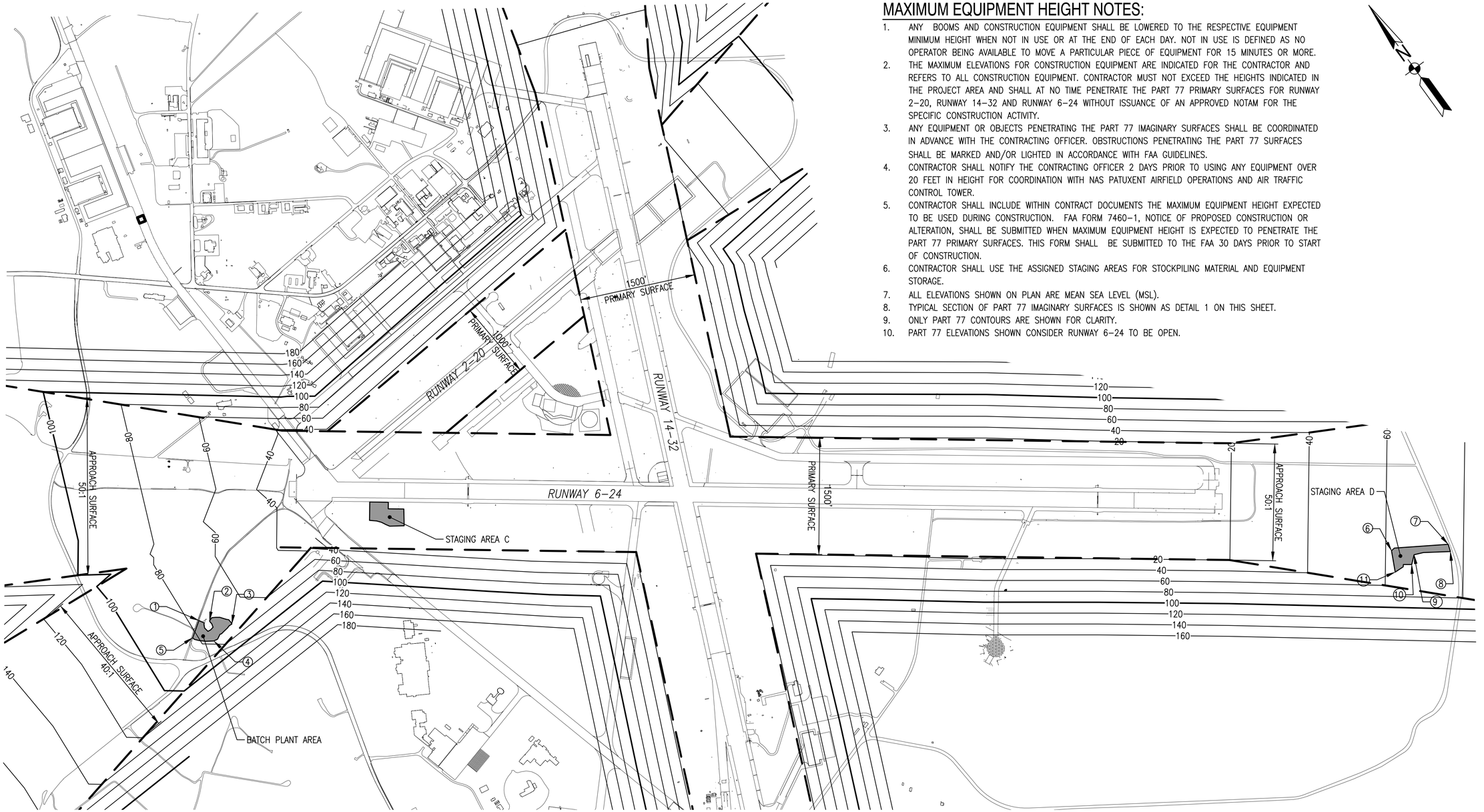
SCALE: AS NOTED
EPROJECT NO.: 1382138
CONSTR. CONTR. NO. N40080-17-R-0002
NAVFAC DRAWING NO. 13080069
SHEET 11 OF 206

G-107

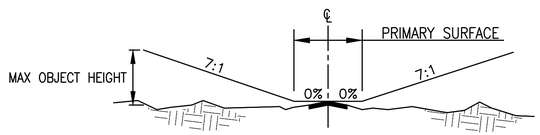
DRAWFORM REVISION: 10 MARCH 2009

MAXIMUM EQUIPMENT HEIGHT NOTES:

1. ANY BOOMS AND CONSTRUCTION EQUIPMENT SHALL BE LOWERED TO THE RESPECTIVE EQUIPMENT MINIMUM HEIGHT WHEN NOT IN USE OR AT THE END OF EACH DAY. NOT IN USE IS DEFINED AS NO OPERATOR BEING AVAILABLE TO MOVE A PARTICULAR PIECE OF EQUIPMENT FOR 15 MINUTES OR MORE.
2. THE MAXIMUM ELEVATIONS FOR CONSTRUCTION EQUIPMENT ARE INDICATED FOR THE CONTRACTOR AND REFERS TO ALL CONSTRUCTION EQUIPMENT. CONTRACTOR MUST NOT EXCEED THE HEIGHTS INDICATED IN THE PROJECT AREA AND SHALL AT NO TIME PENETRATE THE PART 77 PRIMARY SURFACES FOR RUNWAY 2–20, RUNWAY 14–32 AND RUNWAY 6–24 WITHOUT ISSUANCE OF AN APPROVED NOTAM FOR THE SPECIFIC CONSTRUCTION ACTIVITY.
3. ANY EQUIPMENT OR OBJECTS PENETRATING THE PART 77 IMAGINARY SURFACES SHALL BE COORDINATED IN ADVANCE WITH THE CONTRACTING OFFICER. OBSTRUCTIONS PENETRATING THE PART 77 SURFACES SHALL BE MARKED AND/OR LIGHTED IN ACCORDANCE WITH FAA GUIDELINES.
4. CONTRACTOR SHALL NOTIFY THE CONTRACTING OFFICER 2 DAYS PRIOR TO USING ANY EQUIPMENT OVER 20 FEET IN HEIGHT FOR COORDINATION WITH NAS PATUXENT AIRFIELD OPERATIONS AND AIR TRAFFIC CONTROL TOWER.
5. CONTRACTOR SHALL INCLUDE WITHIN CONTRACT DOCUMENTS THE MAXIMUM EQUIPMENT HEIGHT EXPECTED TO BE USED DURING CONSTRUCTION. FAA FORM 7460–1, NOTICE OF PROPOSED CONSTRUCTION OR ALTERATION, SHALL BE SUBMITTED WHEN MAXIMUM EQUIPMENT HEIGHT IS EXPECTED TO PENETRATE THE PART 77 PRIMARY SURFACES. THIS FORM SHALL BE SUBMITTED TO THE FAA 30 DAYS PRIOR TO START OF CONSTRUCTION.
6. CONTRACTOR SHALL USE THE ASSIGNED STAGING AREAS FOR STOCKPILING MATERIAL AND EQUIPMENT STORAGE.
7. ALL ELEVATIONS SHOWN ON PLAN ARE MEAN SEA LEVEL (MSL).
8. TYPICAL SECTION OF PART 77 IMAGINARY SURFACES IS SHOWN AS DETAIL 1 ON THIS SHEET.
9. ONLY PART 77 CONTOURS ARE SHOWN FOR CLARITY.
10. PART 77 ELEVATIONS SHOWN CONSIDER RUNWAY 6–24 TO BE OPEN.



POINT NO.	NORTHING	EASTING	EXISTING ELEVATION	PROPOSED MAXIMUM ALLOWABLE PART 77 ELEVATION	ALLOWABLE EQUIPMENT HEIGHT
1	220664.12	1478566.52	37	77	40
2	220752.61	1478670.84	37	74	37
3	220914.68	1478911.04	37	71	34
4	220597.55	1478884.50	35	79	44
5	220445.97	1478655.06	33	82	49
6	223492.80	1479564.98	19	62	43
7	232140.91	1489847.32	16	76	60
8	232090.34	1489931.38	16	77	61
9	231746.65	1489611.47	17	67	50
10	231633.0503	1489673.083	20	67	47
11	231419.3743	1489580.76	20	62	42



PART 77 IMAGINARY SURFACE (1)

NTS

NOTES:

1. THE ELEVATION OF ANY POINT ON THE PRIMARY SURFACE IS THE SAME AS THE THE ELEVATION OF THE NEAREST POINT ON THE RUNWAY CENTERLINE.
2. PRIMARY SURFACE WIDTH VARIES PER RUNWAY. SEE PLAN VIEW FOR DIMENSIONS.

1"=500' 0 500' 1000' 2000'

NOTE:

MDE NO 17–SF–0058

SYM	DESCRIPTION	DATE	APPR

NAVFAC

COMMONWEALTH OF PENNSYLVANIA — REGISTERED PROFESSIONAL — MARK J TIGER — ENGINEER 041439-E — SEAL

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JAMES FLETCHER PER CHECKLIST
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PM/DM RH

BRANCH MANAGER

CHIEF ENG/ARCH E. GALLAHER, PE

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WASHINGTON, D.C.
NAVFAC WASHINGTON
NAVAL AIR STATION PATUXENT RIVER
PATUXENT RIVER, MARYLAND
FY16 SPECIAL PROJECT RM12-2137
REPAIR RUNWAYS 14-32 & 6-24 - PHASE 3
MAXIMUM EQUIPMENT HEIGHT PLAN – RUNWAY 6–24
PT BLUE

SCALE: AS NOTED
EPROJECT NO.: 1382138
CONSTR. CONTR. NO. N40080–17–R–0002
NAVFAC DRAWING NO. 13080070
SHEET 12 OF 206

G-108

DRAWFORM REVISION: 10 MARCH 2009

FILE NAME: G:\PHPA\100863_009_FY16_Repair_Runways_\CAD\Phase 3\GENERAL–CIVIL_Phase 3\10–0863–009–G–108.dwg LAYOUT NAME: MAXIMUM EQUIPMENT HEIGHT PLAN PLOTTED: Sunday, September 25, 2016 – 8:37pm USER: BConcentino

TEMPORARY BENCHMARK DATA			
DESCRIPTION	NORTHING	EASTING	ELEVATION (FT)
JMT7	226386.67	1481287.78	16.85
JMT8	225765.07	1482159.42	17.16
JMT14	228594.18	1485406.57	12.33
JMT15	228139.74	1484854.29	13.80
JMT16	227668.17	1484322.07	14.87
JMT17	227325.02	1483918.23	15.59
JMT18	226877.34	1483402.91	16.07
JMT19	226472.96	1482946.30	16.26
JMT21	225339.85	1481637.08	16.35
JMT22	224894.70	1481102.77	17.37
JMT23	224435.93	1480571.54	18.57
JMT24	223976.09	1480041.19	23.11
JMT25	223518.61	1479509.64	28.59
JMT26	223047.54	1478973.74	33.32
JMT27	222502.71	1478560.84	36.48
JMT28	222873.88	1478027.22	36.90
JMT29	222525.04	1477597.63	38.12
JMT30	222171.38	1477149.06	39.70
JMT101	230037.85	1487047.05	16.61
JMT102	230470.43	1487510.52	16.75
JMT103	228097.20	1485742.19	14.55
JMT104	227436.54	1486298.15	15.75
JMT105	230722.73	1487151.31	17.35
JMT106	227562.86	1483572.50	16.08
JMT109	223250.11	1478495.30	37.62
BUSEA	221757.00	1476691.18	37.65
DODGE	229046.93	14885901.63	13.49
DODGEA	229566.14	1486528.24	16.12
TC7A	222440.25	1485392.13	13.54

HANGAR 111
HANGAR 110
TRAFFIC CONTROL TOWER
HANGAR 101
HANGAR 109
CEDAR POINT ROAD
TAXIWAY A
TAXIWAY B
TAXIWAY E
TAXIWAY F
RUNWAY 2-20
RUNWAY 14-32
A/G #1
RUNWAY 20 OVERRUN
PIROUETTE & TETHERED HOVER COURSE STRUCTURE
BRONSON ROAD
PRESIDENTIAL HANGAR
VERTICAL TAKE OFF RAMP
A/G #2
RUNWAY 6-24
TAXIWAY H
TAXIWAY G
TAXIWAY C
A/G #4
BRONSON ROAD
TAXIWAY G STATION 4+50 = RUNWAY 6-24 STATION 303+02.61 OFFSET 450' LEFT
TAXIWAY C STATION 4+50 = RUNWAY 6-24 STATION 348+50.30 OFFSET 450' LEFT
PT#=BUSEA PT#=JMT30 PT#=JMT29 PT#=JMT28 PT#=JMT109 PT#=JMT7 PT#=JMT105
200+00 210+00 220+00 230+00 240+00 250+00 260+00 270+00 280+00 290+00 300+00 310+00 320+00 330+00 340+00 350+00 359+07
PT#=JMT27 PT#=JMT26 PT#=JMT25 PT#=JMT24 PT#=JMT23 PT#=JMT22 PT#=JMT21 PT#=JMT8 PT#=JMT19 PT#=JMT18 PT#=JMT17 PT#=JMT16 PT#=JMT15 PT#=JMT14 PT#=DODGE PT#=DODGEA PT#=JMT101 PT#=JMT102
STATION=200+00 N=220716.80 E=1476037.17
RUNWAY 6 END STATION=231+03.93 N=222762.53 E=1478371.56
END CONSTRUCTION RUNWAY 6-24 STATION=271+90.17
BEGIN CONSTRUCTION RUNWAY 6-24 STATION=284+00.00
TAXIWAY G STATION 0+00 = RUNWAY 6-24 STATION 303+02.61 OFFSET 0.00
EMP TOWWAY STATION 0+00 = RUNWAY 6-24 STATION 325+46.81 OFFSET 149.70
STATION=359+07 N=231200.75 E=1488000.43
RUNWAY 24 END STATION=349+02.71 N=230538.85 E=1487245.13
TAXIWAY C STATION 0+00 = RUNWAY 6-24 STATION 348+50.30 OFFSET 0.00
PT#=JMT103 YOUNG ROAD
EMP TOWWAY
EMP TOWWAY PT = STATION 11+53.39 N:227783.74 E:1485953.78
EMP TOWWAY PI = STATION 10+19.53 N:227903.37 E:1485885.35
R=335'
PT#=JMT104
EMP TOWWAY STATION 19+81.22 = N:227168.85 E:1486500.50
ELECTROMAGNETIC PULSATOR SITE (EMP)
A/G #3
COMBAT AIRCRAFT LOADING AREA
BROAD AREA MARITIME SURVEILLANCE
JOHNSON ROAD
CATAPULT TC-7
COMPASS ROSE
PT#=TC7A
TAXIWAY D
TAITE ROAD
SHAW ROAD

NOTE:
MDE NO 17-SF-0058

HORIZONTAL AND VERTICAL CONTROL NOTES:

1. TEMPORARY BENCHMARKS ASSOCIATED WITH SURVEY COMPLETED BY JMT IN 2014 CAN BE FOUND ON SHEETS C-101 TO C-112.
2. NORTHING AND EASTING DATA PROVIDED THROUGH THE JMT SURVEY CONDUCTED IN 2014.

GRAPHIC SCALE

1"=650' 0 650' 1300' 2600'

APPR | DATE | DESCRIPTION | SYM

NAVFAC

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL MARK J TIGER ENGINEER 041439-E

SEAL

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Virginia Beach, Virginia, 23452
Telephone: (757) 499-1895
Web: www.jmt.com
A/E INFO

APPROVED
FOR COMMANDER NAVFAC
ACTIVITY
JAMES FLETCHER PER CHECKLIST
SATISFACTORY TO DATE 9/27/2016
DES DFD DRW MSC CHK MJT
PM/DM RH
BRANCH MANAGER
CHIEF ENG/ARCH E. GALLAHER, PE

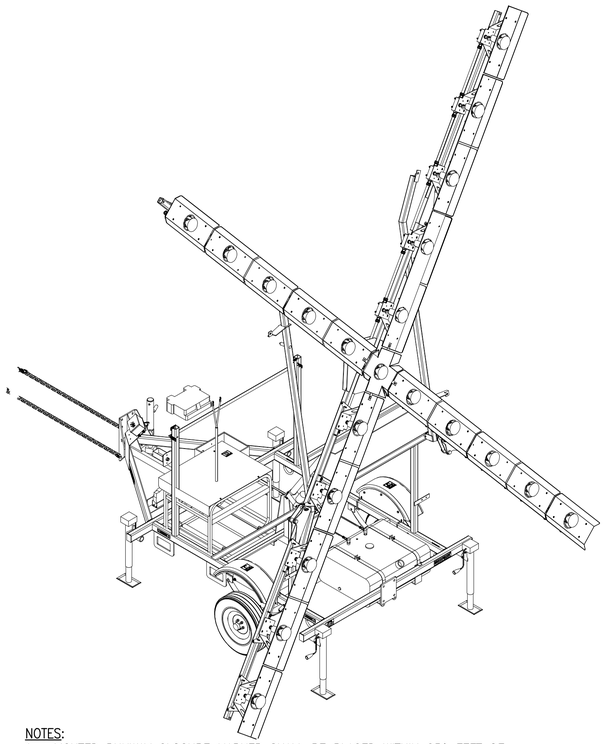
DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
WASHINGTON, D.C.
NAVFAC WASHINGTON
NAVAL AIR STATION PATUXENT RIVER
PATUXENT RIVER, MARYLAND
FY16 SPECIAL PROJECT RM12-2137
REPAIR RUNWAYS 14-32 & 6-24 - PHASE 3
HORIZONTAL AND VERTICAL CONTROLS, AND NOTES
PT BLUE

SCALE: AS NOTED
EPROJECT NO.: 1382138
CONSTR. CONTR. NO.: N40080-17-R-0002
NAVFAC DRAWING NO.: 13080071
SHEET 13 OF 206

G-109

DRAWFORM REVISION: 10 MARCH 2009

FILE NAME: G:\PHPA\10861_009_FY16_Repair_Runways_\CAD\Phase 3\GENERAL-CIVIL_Phase 3\10-0861-009-C-109.dwg LAYOUT NAME: HORIZONTAL AND VERTICAL CONTROLS AND NOTES PLOTTED: Tuesday, September 27, 2016 - 9:38am USER: mcosenza

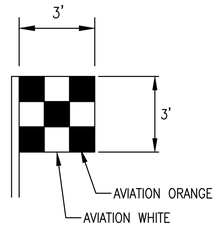


NOTES:
1. LIGHTED RUNWAY CLOSURE MARKER SHALL BE PLACED WITHIN 250 FEET OF BOTH RUNWAY ENDS AND SHALL BE COORDINATED WITH RUNWAY CLOSURES. REFER TO NAVAIR 51-50AAA-1 FOR FURTHER GUIDANCE.

2. CONTRACTOR SHALL PROVIDE NON-LIGHTED CLOSED RUNWAY MARKINGS TO BE LOCATED AT THE RUNWAY DESIGNATION MARKINGS. SEE DETAIL 4 ON THIS SHEET FOR FURTHER GUIDANCE.

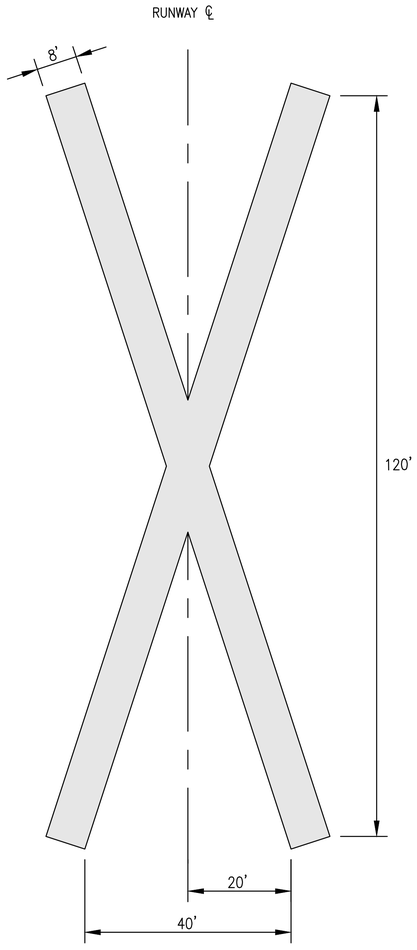
LIGHTED RUNWAY CLOSURE MARKER (LIGHTED "X") 1

NTS G-101, G-102, G-103, G-104, CP101, CP110



VEHICLE/EQUIPMENT FLAG 2

NTS



NOTES:
1. THE COLOR OF THE CLOSED RUNWAY MARKING SHALL BE YELLOW.

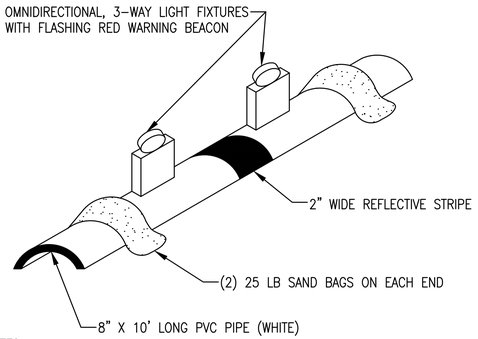
2. THE CONTRACTOR MUST PROVIDE THE MATERIAL TYPE TO BE USE FOR THE YELLOW CLOSED RUNWAY MARKING TO THE CONTRACTING OFFICER FOR REVIEW.

3. THE CLOSED RUNWAY MARKING MUST BE PROPERLY CONFIGURED AND APPROPRIATELY SECURED TO PREVENT MOVEMENT.

4. PLACE CLOSED RUNWAY MARKING OVER RUNWAY DESIGNATION MARKINGS. COORDINATE PLACEMENT WITH RUNWAY CLOSURES. REFER TO NAVAIR 51-50AAA-1 FOR FURTHER GUIDANCE.

CLOSED RUNWAY MARKING (RUNWAY CLOSED "X") 4

NTS G-101, G-102, G-103, G-104, CP101, CP110



NOTES:
1. CONTRACTOR SHALL PROVIDE BARRICADES, BATTERIES, SAND BAGS, AND ITEMS REQUIRED FOR INSTALLATION AND MAINTENANCE. UPON COMPLETION OF PROJECT, BARRICADES WILL REMAIN PROPERTY OF THE GOVERNMENT AND BE DELIVERED TO A DESIGNATED STORAGE AREA DESIGNATED BY THE CONTRACTING OFFICER.

2. OPENING BETWEEN BARRICADE SECTIONS SHALL NOT EXCEED 4 FEET.

LOW PROFILE CONSTRUCTION BARRICADES 3

NTS G-102, G-103, G-104, G-105

NOTE:
MDE NO 17-SF-0058

SYM	DESCRIPTION	DATE	APPR

NAVFAC

SEAL
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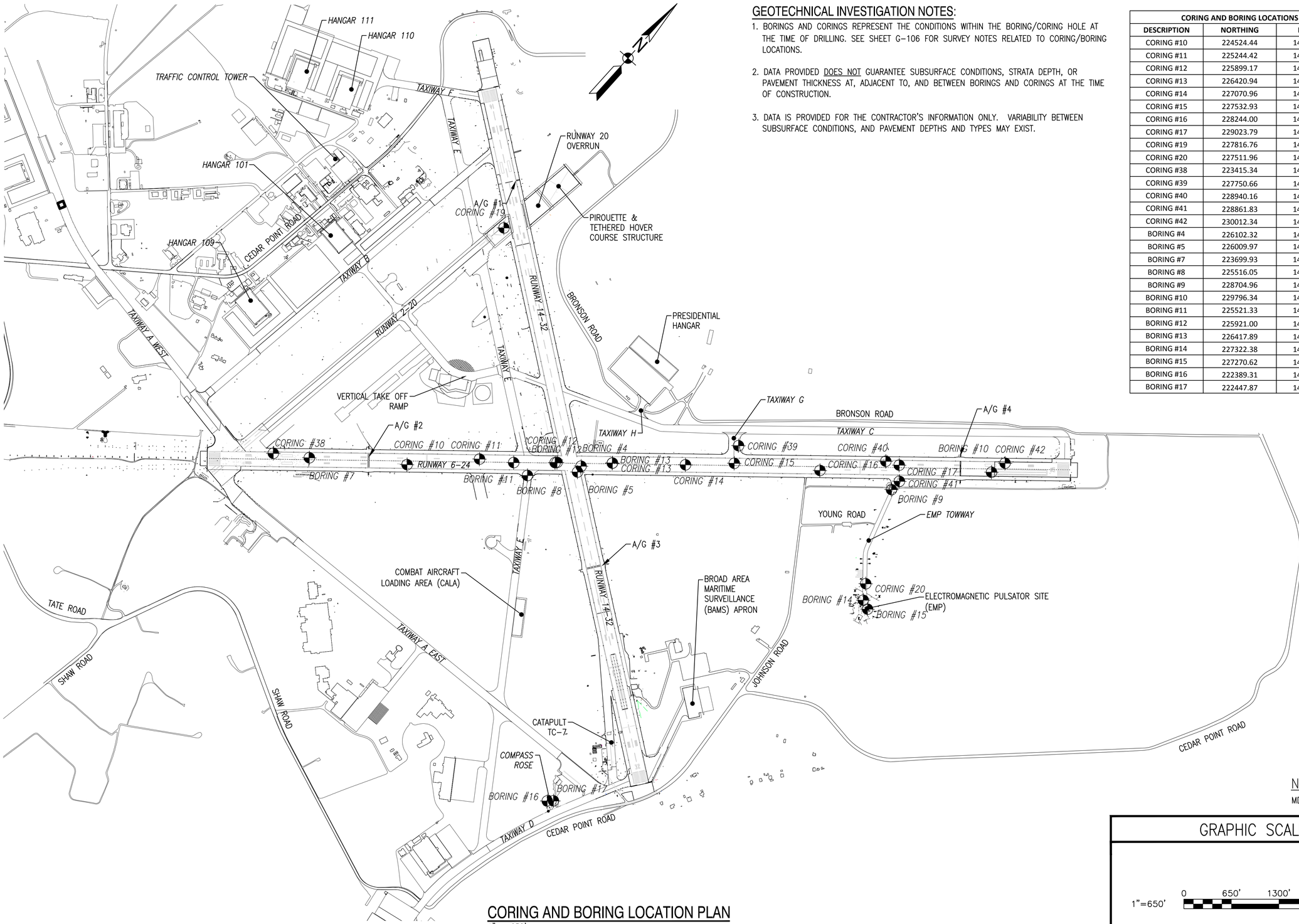
NAVAL AIR STATION PATUXENT RIVER
PATUXENT RIVER, MARYLAND
IPT BLUE
FY16 SPECIAL PROJECT RM12-2137
REPAIR RUNWAYS 14-32 & 6-24 - PHASE 3
CONSTRUCTION SAFETY DETAILS

SCALE: AS NOTED
EPROJECT NO.: 1382138
CONSTR. CONTR. NO.: N40080-17-R-0002
NAVFAC DRAWING NO.: 13080072
SHEET 14 OF 206

G-501

DRAWFORM REVISION: 10 MARCH 2009



GEOTECHNICAL INVESTIGATION NOTES:

1. BORINGS AND CORINGS REPRESENT THE CONDITIONS WITHIN THE BORING/CORING HOLE AT THE TIME OF DRILLING. SEE SHEET G-106 FOR SURVEY NOTES RELATED TO CORING/BORING LOCATIONS.
2. DATA PROVIDED DOES NOT GUARANTEE SUBSURFACE CONDITIONS, STRATA DEPTH, OR PAVEMENT THICKNESS AT, ADJACENT TO, AND BETWEEN BORINGS AND CORINGS AT THE TIME OF CONSTRUCTION.
3. DATA IS PROVIDED FOR THE CONTRACTOR'S INFORMATION ONLY. VARIABILITY BETWEEN SUBSURFACE CONDITIONS, AND PAVEMENT DEPTHS AND TYPES MAY EXIST.

CORING AND BORING LOCATIONS

DESCRIPTION	NORTHING	EASTING
CORING #10	224524.44	1480455.45
CORING #11	225244.42	1481141.05
CORING #12	225899.17	1481942.76
CORING #13	226420.94	1482528.02
CORING #14	227070.96	1483287.42
CORING #15	227532.93	1483768.74
CORING #16	228244.00	1484705.70
CORING #17	229023.79	1485462.86
CORING #19	227816.76	1479274.25
CORING #20	227511.96	1486207.48
CORING #38	223415.34	1478992.99
CORING #39	227750.66	1483651.35
CORING #40	228940.16	1485290.67
CORING #41	228861.83	1485612.40
CORING #42	230012.34	1486520.59
BORING #4	226102.32	1482238.45
BORING #5	226009.97	1482255.88
BORING #7	223699.93	1479400.00
BORING #8	225516.05	1481778.88
BORING #9	228704.96	1485608.07
BORING #10	229796.34	1486465.52
BORING #11	225521.33	1481520.49
BORING #12	225921.00	1481959.52
BORING #13	226417.89	1482528.57
BORING #14	227322.38	1486333.46
BORING #15	227270.62	1486458.92
BORING #16	222389.31	1484959.19
BORING #17	222447.87	1485020.31

CORING AND BORING LOCATION PLAN

1" = 650'

NOTE:

MDE NO 17-SF-0058

GRAPHIC SCALE

1"=650' 0 650' 1300' 2600'

APPR | DATE | DESCRIPTION | SYM

NAVFAC

COMMONWEALTH OF PENNSYLVANIA — REGISTERED PROFESSIONAL — MARK J TIGER — ENGINEER 041439-E — SEAL

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A/E INFO

APPROVED
FOR COMMANDER NAVFAC
ACTIVITY
JAMES FLETCHER PER CHECKLIST
SATISFACTORY TO DATE 9/27/2016
DES DFD DRW BAC CHK MJT
PM/DM RH
BRANCH MANAGER
CHIEF ENG/ARCH E. GALLAHER, PE

DEPARTMENT OF THE NAVY — NAVAL FACILITIES ENGINEERING COMMAND WASHINGTON, D.C.
NAVFAC WASHINGTON
NAVAL AIR STATION PATUXENT RIVER — PATUXENT RIVER, MARYLAND
FY16 SPECIAL PROJECT RM12-2137
REPAIR RUNWAYS 14-32 & 6-24 - PHASE 3
GEOTECHNICAL INVESTIGATION LOCATION PLAN
PT BLUE

SCALE: AS NOTED
EPROJECT NO.: 1382138
CONSTR. CONTR. NO. N40080-17-R-0002
NAVFAC DRAWING NO. 13080073
SHEET 15 OF 206

B-001

DRAWFORM REVISION: 10 MARCH 2009

FILE NAME: G:\PHPA\100863_009_fy16_repair_runways_\CADD\Phase 3\general-civil_phase 3\10-0863-009-B-001.dwg LAYOUT NAME: GEOTECHNICAL INVESTIGATION LOCATION PLAN PLOTTED: Sunday, September 25, 2016 - 3:43pm USER: BCronzenlino

CORING ID: C-10

Depth (ft)	STRATA DESCRIPTION	Strata Legend
0.38	4.5" Asphalt	
0.29	3.5" Asphalt	

CORING ID: C-11

Depth (ft)	STRATA DESCRIPTION	Strata Legend
0.54	6.5" Asphalt	
UNK	Concrete	

CORING ID: C-12

Depth (ft)	STRATA DESCRIPTION	Strata Legend
0.69	8.25" Asphalt	
UNK	Concrete	

CORING ID: C-13

Depth (ft)	STRATA DESCRIPTION	Strata Legend
0.65	7.75" Asphalt	
UNK	Concrete	

CORING ID: C-14

Depth (ft)	STRATA DESCRIPTION	Strata Legend
0.42	5" Asphalt	
0.29	3.5" Asphalt	

CORING ID: C-15

Depth (ft)	STRATA DESCRIPTION	Strata Legend
0.31	3.75" Asphalt	
0.23	2.75" Asphalt	

CORING ID: C-16

Depth (ft)	STRATA DESCRIPTION	Strata Legend
0.29	3.5" Asphalt	
0.33	4" Asphalt	

CORING ID: C-17

Depth (ft)	STRATA DESCRIPTION	Strata Legend
0.35	4.25" Asphalt	
0.29	3.5" Asphalt	

CORING ID: C-19

Depth (ft)	STRATA DESCRIPTION	Strata Legend
1.85	22.25" Asphalt	
.85	10.25" Concrete	

CORING ID: C-20

Depth (ft)	STRATA DESCRIPTION	Strata Legend
0.10	1.25" Asphalt	
0.42	5" Asphalt	

CORING ID: C-38

Depth (ft)	STRATA DESCRIPTION	Strata Legend
1.08	13" Concrete	

CORING ID: C-39

Depth (ft)	STRATA DESCRIPTION	Strata Legend
0.65	7.75" Asphalt	
0.85	10.25" Concrete	

NOTE:
MDE NO 17-SF-0058

APPR | DATE | DESCRIPTION | SYM

NAVFAC

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
MARK J TIGER
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NAVAL AIR STATION PATUXENT RIVER
PATUXENT RIVER, MARYLAND
FY16 SPECIAL PROJECT RM12-2137
REPAIR RUNWAYS 14-32 & 6-24 - PHASE 3
BORING AND CORING DETAILS – SHEET 1

SCALE: AS NOTED
EPROJECT NO.: 1382138
CONSTR. CONTR. NO. N40080-17-R-0002
NAVFAC DRAWING NO. 13080074
SHEET 16 OF 206
BB101
DRAWFORM REVISION: 10 MARCH 2009

FILE NAME: G:\PHPA\100863_009_fy16_repair_runways_\CAD\Phase 3\general-civil_phase 3\10-0863-009-BB101.dwg LAYOUT NAME: BORING AND CORING DETAILS – SHEET 1 PLOTTED: Sunday, September 25, 2016 – 3:47pm USER: BCorcentino

CORING ID: C-40

Depth (ft)	STRATA DESCRIPTION	Strata Legend
0.65	7.75" Asphalt	
0.83	10" Concrete REINFORCED - REBAR AND WWF	

CORING ID: C-41

Depth (ft)	STRATA DESCRIPTION	Strata Legend
0.49	5.5" Asphalt	
0.42	5" Concrete	

CORING ID: C-42

Depth (ft)	STRATA DESCRIPTION	Strata Legend
1.83	22" Concrete	

NOTE:

MDE NO 17-SF-0058

NO.	DESCRIPTION	DATE	APPR

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SATISFACTORY TO DATE 9/27/2016

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NAVFAC WASHINGTON
WASHINGTON, D.C.
BT BLUE
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PATUXENT RIVER, MARYLAND
FY16 SPECIAL PROJECT RM12-2137
REPAIR RUNWAYS 14-32 & 6-24 - PHASE 3
BORING AND CORING DETAILS – SHEET 2

SCALE: AS NOTED
EPROJECT NO.: 1382138
CONSTR. CONTR. NO. N40080-17-R-0002
NAVFAC DRAWING NO. 13080075
SHEET 17 OF 206

BB102

DRAWFORM REVISION: 10 MARCH 2009

BORING ID: B-4

Depth (ft)	STRATA DESCRIPTION	Strata Legend	Sample ID	Sample Type	Sample Recovery (in.)	Blow Counts (N-Values)
0.7	8.75-in Asphalt					
1.6	10.5-in Concrete - Reinforced (Rebar)					
2.0	Gray, moist, Silty fine to coarse SAND (SM) with trace fine to medium Gravel, medium dense "Possible Fill"		1	X	6	12
4.0	Brown, moist, Clayey fine to medium SAND (SC), medium dense		2	X	20	8-9-13-12 (22)
5	Brown, moist, poorly-graded fine to coarse SAND (SP) with trace fine Gravel, medium dense to very dense		3	X	18	10-10-7-10 (17)
			4	X	15	4-8-12-18 (20)
			5	X	12	20-23-32-37 (55)
10 10.0	Boring terminated at 10 feet below existing grade.					

BORING ID: B-5

Depth (ft)	STRATA DESCRIPTION	Strata Legend	Sample ID	Sample Type	Sample Recovery (in.)	Blow Counts (N-Values)
0.7	8.5-in Asphalt					
1.5	9.5-in Concrete - Reinforced (Rebar/WWF)					
2.0	Brown, moist, Silty fine to coarse SAND (SM) with trace fine Gravel, medium dense		1	X	8	10-8
4.0	Brown, moist, Clayey fine to medium SAND (SC), medium dense		2	X	16	8-8-9-13 (17)
5	Brown, moist, poorly-graded fine to coarse SAND (SP-SM) with Silt and trace fine Gravel, medium dense to very dense		3	X	18	14-14-15-16 (29)
			4	X	18	12-17-24-23 (41)
			5	X	24	25-36-50 (86)
10 10.0	Boring terminated at 10 feet below existing grade.					

BORING ID: B-7

Depth (ft)	STRATA DESCRIPTION	Strata Legend	Sample ID	Sample Type	Sample Recovery (in.)	Blow Counts (N-Values)
0.5	6.5-in Asphalt					
1.2	8-in Concrete					
1.4	Dark brown, moist, Silty fine to coarse SAND (SM) with fine to medium Gravel and Clay, very dense "Fill"		1	X	2	50
	Auger Refusal Boring terminated at 1.42 feet below existing grade.					

BORING ID: B-8

Depth (ft)	STRATA DESCRIPTION	Strata Legend	Sample ID	Sample Type	Sample Recovery (in.)	Blow Counts (N-Values)
0.5	5.75-in Asphalt					
1.3	9.5-in Concrete - Reinforced (Rebar/WWF)					
2.0	Brown, moist, Silty fine to coarse SAND (SM) with trace fine Gravel, medium dense		1	X	8	10-14
4.0	Brown, moist, fine Sandy lean CLAY (CL) with trace fine Gravel, very stiff		2	X	18	9-10-10-10 (20)
5	Mottled orange-gray, moist, Silty fine to medium SAND (SM), medium dense		3	X	20	10-10-7-7 (17)
6.0	Mottled orange-gray, moist, poorly-graded fine to coarse SAND (SP) with trace fine Gravel, medium dense		4	X	20	7-6-11-9 (17)
			5	X	24	10-9-15-19 (24)
10 10.0	Boring terminated at 10 feet below existing grade.					

BORING ID: B-9

Depth (ft)	STRATA DESCRIPTION	Strata Legend	Sample ID	Sample Type	Sample Recovery (in.)	Blow Counts (N-Values)
0.4	5.25-in Asphalt					
1.0	7-in Concrete					
	Mottled orange-gray, moist, Silty fine to medium SAND (SM) with varying amounts of Clay, loose		1	X	6	5-3
			2	X	12	2-3-3-4 (6)
5			3	X	24	3-4-4-4 (8)
6.0	Mottled orange-gray, moist, Clayey fine to medium SAND (SC), very loose to loose		4	X	18	2-3-4-3 (7)
			5	X	24	2-2-2-1 (4)
10 10.0	Boring terminated at 10 feet below existing grade.					

BORING ID: B-10

Depth (ft)	STRATA DESCRIPTION	Strata Legend	Sample ID	Sample Type	Sample Recovery (in.)	Blow Counts (N-Values)
0.5	5.5-in Asphalt					
1.2	9-in Concrete					
	Mottled orange-gray, moist, lean CLAY (CL) with trace to little fine Sand, medium stiff		1	X	8	5-4
4.0			2	X	14	4-3-5-7 (8)
5	Mottled orange-gray, moist, Silty fine to medium SAND (SM) with varying amounts of Clay, loose		3	X	12	5-4-5-5 (9)
			4	X	18	4-4-4-4 (8)
8.0	Mottled orange-gray, moist, Silty fine to medium SAND (SM), medium dense		5	X	24	4-5-6-5 (11)
10 10.0	Boring terminated at 10 feet below existing grade.					

BORING ID: B-11

Depth (ft)	STRATA DESCRIPTION	Strata Legend	Sample ID	Sample Type	Sample Recovery (in.)	Blow Counts (N-Values)
	12-in. Asphalt		1			
1.0	10-in. Concrete					
1.8	Brown, moist, lean CLAY (CL) with varying amounts of fine Sand, stiff to very stiff		2	X	17	6-8-10-8 (18)
5			3	X	14	2-4-7-8 (11)
6.0	Brown, moist, Silty fine to medium SAND (SM), medium dense		4	X	24	7-6-7-7 (13)
8.0	Tan/gray, moist, poorly graded fine to coarse SAND (SP) with trace fine Gravel, medium dense		5	X	17	6-6-7-13 (13)
10			6	X	24	6-12-17-20 (29)
12.0	Boring terminated at 12 feet below existing grade.					

BORING ID: B-12

Depth (ft)	STRATA DESCRIPTION	Strata Legend	Sample ID	Sample Type	Sample Recovery (in.)	Blow Counts (N-Values)
0.8	9.25-in. Asphalt					
1.6	9.75-in. Concrete		1			
	Mottled orange/gray, moist, lean CLAY (CL) with varying amounts of fine Sand, stiff		2	X	16	5-6-5-11 (11)
5			3	X	24	9-7-5-9 (12)
6.0	Brown, moist, Silty fine to medium SAND (SM), medium dense		4	X	20	7-5-7-5 (12)
8.0	Tan/gray, moist, poorly graded fine to coarse SAND (SP), medium dense		5	X	20	5-6-7-11 (13)
10						
	Wet below 12-ft.		6	X	22	9-8-10-12 (18)
12.0	Boring terminated at 12 feet below existing grade.					

BORING ID: B-13

Depth (ft)	STRATA DESCRIPTION	Strata Legend	Sample ID	Sample Type	Sample Recovery (in.)	Blow Counts (N-Values)
0.7	7.75-in. Asphalt					
	Brown, moist, Clayey fine to medium SAND (SC), medium dense		1			
4.0			2	X	20	4-6-9-11 (15)
5	Brown, moist, Silty fine to medium SAND (SM), medium dense		3	X	24	6-6-7-9 (13)
8.0			4	X	24	6-7-9-12 (16)
	Tan/gray, moist to wet, poorly graded fine to coarse SAND (SP) with trace fine Gravel, medium dense		5	X	24	6-9-12-15 (21)
10						
	Wet below 11.5-ft.		6	X	24	9-10-11-11 (21)
12.0	Boring terminated at 12 feet below existing grade.					

NOTE:
MDE NO 17-SF-0058

APPR	DATE	DESCRIPTION	SYM

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PATUXENT RIVER, MARYLAND
FY16 SPECIAL PROJECT RM12-2137
REPAIR RUNWAYS 14-32 & 6-24 - PHASE 3
BORING AND CORING DETAILS – SHEET 3
PT BLUE

SCALE: AS NOTED
EPROJECT NO.: 1382138
CONSTR. CONTR. NO.: N40080-17-R-0002
NAVFAC DRAWING NO.: 13080076
SHEET 18 OF 206
BB103
DRAWFORM REVISION: 10 MARCH 2009

BORING ID: B-14

Elevation (ft)	Depth (ft)	STRATA DESCRIPTION	Strata Legend	Sample ID	Sample Type	Sample Recovery (in.)	Blow Counts (N-Values)
		12-in. Concrete		1			
	1.0	Brown, moist, lean CLAY (CL) with trace fine Sand, stiff		2	X	17	2-4-5-7 (9)
	4.0	Brown, moist, Silty fine to medium SAND (SM), very loos to loose		3	X	24	2-3-3-3 (6)
5				4	X	16	1-2-2-4 (4)
	8.0	Gray, moist, poorly graded fine to medium SAND (SP), medium dense		5	X	14	5-6-11-11 (17)
10	10.0	Mottled orange/gray, moist to wet, Silty fine to medium SAND (SM), loose to medium dense		6	X	20	6-10-12-14 (22)
▽		Wet below 12-ft.					
				7	X	24	3-4-5-5 (9)
15	15.0	Gray, wet, poorly graded fine to coarse SAND (SP), loose		8	X	24	3-3-5-6 (8)
	17.0	Boring terminated at 17 feet below existing grade.					

BORING ID: B-15

Elevation (ft)	Depth (ft)	STRATA DESCRIPTION	Strata Legend	Sample ID	Sample Type	Sample Recovery (in.)	Blow Counts (N-Values)
		14.5-in. Concrete		1			
	1.2	Brown, moist, lean CLAY (CL) with varying amounts of fine Sand, medium stiff to stiff		2	X	16	3-4-5-6 (9)
5				3	X	24	3-4-4-6 (8)
	6.0	Brown, moist, Silty fine to medium SAND (SM), loose		4	X	24	4-3-3-4 (6)
	8.0	Gray, moist, poorly graded fine to coarse SAND (SP), loose to medium dense		5	X	13	3-4-8-9 (12)
10				6	X	14	7-7-6-5 (13)
▽		Wet below 12-ft.					
				7	X	24	3-4-4-6 (8)
15	15.0	Boring terminated at 15 feet below existing grade.					

BORING ID: B-16

Elevation (ft)	Depth (ft)	STRATA DESCRIPTION	Strata Legend	Sample ID	Sample Type	Sample Recovery (in.)	Blow Counts (N-Values)
	0.7	8-in. Concrete					
		Gray, moist to wet, lean CLAY (CL) with trace fine Sand, soft		1	X	11	2-2-3 (4)
	2.0	Gray, moist, poorly graded fine to coarse SAND (SP) with fine to medium Gravel, medium dense to very dense		2	X	24	4-7-10-30 (17)
5				3	X	20	13-27-29-26 (56)
				4	X	20	14-21-18-22 (39)
	8.0	Brown, moist, Silty fine to medium SAND (SM), medium dense		5	X	16	6-7-13-14 (20)
10	10.0	Mottled orange/gray, wet, poorly graded fine to medium SAND (SP), medium dense		6	X	16	4-7-12-13 (19)
▽		Wet below 10-ft.					
				7	X	12	6-11-16-20 (27)
15	15.0	Boring terminated at 15 feet below existing grade.					

BORING ID: B-17

Elevation (ft)	Depth (ft)	STRATA DESCRIPTION	Strata Legend	Sample ID	Sample Type	Sample Recovery (in.)	Blow Counts (N-Values)
	0.6	7.5-in. Concrete					
		Brown, moist, Silty fine to medium SAND (SM), very loose		1	X	12	1-1-1-1 (2)
	4.0	Brown, moist, fine Sandy lean CLAY (CL) with trace fine Gravel, medium stiff		2	X	18	2-2-1-3 (3)
5				3	X	24	2-3-3-4 (6)
	8.0	Brown, moist to wet, Silty fine to medium SAND (SM), medium dense to dense		4	X	24	2-3-3-14 (6)
10				5	X	24	9-15-17-22 (32)
▽		Wet below 10-ft.		6	X	16	5-10-14-10 (24)
	13.0	Gray, wet, poorly graded fine to medium SAND (SP), medium dense		7	X	16	6-9-15-18 (24)
15	15.0	Boring terminated at 15 feet below existing grade.					

NOTE:
MDE NO 17-SF-0058

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FY16 SPECIAL PROJECT RM12-2137
REPAIR RUNWAYS 14-32 & 6-24 - PHASE 3
BORING AND CORING DETAILS – SHEET 4

SCALE: AS NOTED
EPROJECT NO.: 1382138
CONSTR. CONTR. NO. N40080-17-R-0002
NAVFAC DRAWING NO. 13080077
SHEET 19 OF 206
BB104
DRAWFORM REVISION: 10 MARCH 2009