Annual Marine Monitoring Report
Parallel Thimble Shoal Tunnel Project
Virginia Beach, Virginia

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CONTENTS

1. Executive Summary 54

2. Introduction and Project Description 6

3. Monitoring and Methodology 6

3.1 Monitoring Procedures……...6
3.2 Marine Mammal Observer Qualifications...……17

4. Observations and Findings 168

4.1 Schedule of Activities……... 8
4.2 Marine Species Observed in Project Area…….. 15

5. Mitigation Measures 167

5.1 General Construction Mitigation……. 17

LIST OF TABLES

Table 1: Actual Pile Installation Schedule Under 2020 IHA

Table 2: Observed Mammals During Pile Driving Activities Under March 2020 Issued IHA

Table 3: Level A and Level B Harassment, By Species and Stock

APPENDIXES

Appendix A – 2020 Marine Mammal Monitoring Plan

Appendix B – Daily Marine Mammal Observer Reports, Protected Species Sighting & Shut-Down Forms

ACRONYMS AND ABBREVIATIONS

CTJV	**Chesapeake Tunnel Joint Venture**
DTH	**Down the Hole**
GPS	**Global Positioning System**
IHA	**Incidental Harassment Authorization**
MHW	**Mean High Water**
MMMP	**Marine Mammal Monitoring Plan**
MMO	**Marine Mammal Observer**
NOAA	**National Oceanic and Atmospheric Administration**
NOAA Fisheries	**National Marine Fisheries Service**
PTS	**Permanent Threshold Shift**
PTST	**Parallel Thimble Shoal Tunnel**
SOE	**Support of Excavation**
TBM	**Tunnel Boring Machine**

1. EXECUTIVE SUMMARY

Under the Incidental Harassment Authorization (IHA), issued by NOAA on March 10, 2020, a total of 76 in-water 36" steel pipe piles and 58 42" steel casing were installed/ removed on the project. This work was done using a Down The Hole (DTH) hammer, traditional impact hammering and vibratory hammer extraction.

In-water pile driving construction began on March 20th and was concluded on September 23rd, of which 64 days were spent driving in- water pile. Upland pile driving is has been occurring since November 2020 on Island 2. During this 2020 period, Marine Mammal Observers (MMOs) were onsite 134 days to observe both upland and in-water pile installation. There were a total of 158 marine mammals observed, 154 being bottlenose dolphins. Of these days, no Level A takes were recorded and only 5 Level B takes occurred for bottlenose dolphins.

Due to construction delays related to weather and unforeseen geotechnical conditions, the Chesapeake Tunnel Joint Venture (CTJV) will be unable to complete all of the planned work allowed in the 2020 IHA at the Parallel Thimble Shoals Tunnel Project (PTST) before the expiration date of March 10, 2021 and, therefore, is requesting a Renewal IHA to authorize takes of marine mammals for the subset of the initially planned work that was not completed. The work would be identical to a subset of the activities analyzed in the 2019 IHA application. Specifically, the location, timing, and nature of the activities, including the types of equipment planned for use, are identical to those approved in the 2020 authorized IHA.

2. INTRODUCTION

The CTJV's PTST project consists of the construction of a two-lane parallel tunnel to the west of the existing Thimble Shoal Tunnel, connecting Portal Island Numbers (Nos.) 1 and 2. Upon completion, the new tunnel will carry two lanes of southbound traffic and the existing tunnel will remain in operation and carry two lanes of northbound traffic. The 6,525 linear feet (ft.) of new tunnel will be constructed using a Tunnel Boring Machine (TBM), with 5,356 linear ft. located below Mean High Water (MHW).

Pile driving activities for the PTST Project have the potential to cause sound levels that exceed Level A and Level B acoustic harassment thresholds for marine mammals, as defined by the National Oceanic and Atmospheric Administration (NOAA) National Marine Fisheries Service (NOAA Fisheries) Office of Protected Resources (NOAA Fisheries 2016h) and therefor required the need for an IHA.

This project is occurring in areas of the lower Chesapeake Bay that overlap with the range of several marine mammal species. The granted 2020 IHA allowed takes for five species of marine mammals: harbor seals (*Phoca vitulina*), gray seals (*Halichoerus grypus*), humpback whale (*Megaptera* novaeangliae), harbor porpoises (*Phocoena phocoena*), and bottlenose dolphin (*Tursiops spp.*). These takes are associated with pile driving activities associated with the PTST Project Area.

3. MONITORING AND METHIDOLOGY

3.1 MONITORING PROCEDURES

The PTST Marine Mammal Monitoring Plan (MMMP)(Appendix A) was updated to reflect updates in the March 10, 2020 authorized IHA. This plan served as the protocol for monitoring marine mammals during pile installation activities in the Project Area. The goal of the MMMP was to prevent unauthorized Level A or Level B takes and to minimize Level B harassment using clearly defined methods for monitoring and shutdown procedures during construction.

3.2 OBSERVER QUALIFICATIONS

The CTJV employed NOAA Fisheries-approved MMOs from REMSA Incorporated, to monitor Level A Shutdown Zones and Level B ZOI. These individuals met the qualifications and experience outlined in Section 5 of the March 10, 2020 Issued IHA.

Days where pile installation activities occurred, observers were on site and observation records were completed.

The following data was included in the observation records:

- Dates and times (begin and end) of all marine mammal monitoring.
- Construction activities occurring during each daily observation period, including how many and what type of piles were driven or removed and by what method (*i.e.*, impact or vibratory).
- Weather parameters and water conditions during each monitoring period (*e.g.*, wind speed, percent cover, visibility, sea state).
- The number of marine mammals observed, by species, relative to the pile location and if pile driving or removal was occurring at time of sighting.
- Age and sex class, if possible, of all marine mammals observed.
- MMO locations during marine mammal monitoring.
- Distances and bearings of each marine mammal observed to the pile being driven or removed for each sighting (if pile driving or removal was occurring at time of sighting).
- Description of any marine mammal behavior patterns during observation, including direction of travel.
- Number of individuals of each species (differentiated by month as appropriate) detected within the monitoring zone, and estimates of number of marine mammals taken, by species (a correction factor may be applied to total take numbers, as appropriate).
- Detailed information about any implementation of any mitigation triggered (e.g., shutdowns and delays), a description of specific actions that ensued, and resulting behavior of the animal, if any.
- Description of attempts to distinguish between the number of individual animals taken and the number of incidences of take, such as ability to track groups or individuals.
- Level A and Level B harassment exposures recorded by PSOs must be extrapolated based upon the number of observed takes and the percentage of respective harassment zones that are not visible.
- Marine mammal observational datasheets or raw data.

The MMOs followed the approved ZOI for each activity based on guidance from the March 10, 2020 issued IHA.

4. OBSERVATIONS AND FINDINGS

4.1 SCHEDULE OF ACTIVITIES

The PTST Project in- water pile driving activities under the current 2020 IHA did not begin until March 20th 2020 and were concluded on September 23rd, 2020. During this construction window, 76- 36" steel pipe piles were installed and 58- 42" casing were installed and removed.

In-water activities that occurred during 2020 IHA Construction Window:

Construction of a temporary dock on the west side of Portal Island No. 1. The installation of the 58- 36" diameter hollow steel pipe piles were completed by initially driving a 42" steel casing with a DTH hammer through the armor stone, then using an impact hammer to install the 36" piles. A bubble curtain was used during the impact driving of each 36" pile in water deeper than 10 feet.

Construction of the Portal Island No. 1 temporary trestle, composed of 18- 36" diameter hollow steel piles on the west side of the island. The installation of the piles involved using the DTH to get the pile through the initial armor stone and finishing with a traditional impact hammer. A bubble curtain was used during the impact driving of each pile in water deeper than 10 feet.

Table 1, outlines the progression of in- water pile installation throughout the 2020 IHA Construction Window.

Table 1- Actual Pile Installation Schedule Under 2020 Issued IHA

	HALF DAY BEFORE HOLIDAY	HOLIDAY DID NOT WORK	HIGH WINDS/INCLIMATE WEATHER COULD NOT WORK	PRODUCTION WORK	UNFORESEEN CONDITIONS	Drive/Drill 42" Ø Casing	Drive 36" Ø Pipe Pile (Set-Up Bubble Curtain)	Rmv/Inspect 42" Ø Casing	Total Completely Driven Pipe Piles		Actual Weekly Qty	Actual Driving Day (Below MHW)
	BERMINGHAMMER/MINCON RELATED WORK	SAFETY/TRAINING RELATED ITEMS	Water Treatment Plant (WTP) or Muck Pit Work	BREAK IN IHA PERMIT COULDN'T WORK IN WATER		0.00 EA	0.00 EA	0.00 EA	0.000 EA			
% of Total =>	Description / Pipe Pile #					35%	31.5%	10%	100% Actual Daily Qty	Actual Cumulative Qty		
Date	Actual					Actual Daily Qty Break Down						
3/7/2020	Mobilize Set Up A-0 (Dock Extension)								0.100 EA	6.300 EA		0
3/8/2020									0.000 EA	6.300 EA	0.100 EA	0
3/9/2020	Set-Up for Casing C0P1	Begin Leveling Armor Stone at C0P1							0.100 EA	6.400 EA		0
3/10/2020	Finish Leveling Armor Stone at C0P1	Drive Casing C0P1	Splash Wall settlement began to impact temp roadway.			1.00 EA			0.350 EA	6.750 EA		0
3/11/2020	Begin Splash Wall Stabilization	Begin Set-Up for Casing C0P1							0.025 EA	6.775 EA		0
3/12/2020	Finish Splash Wall Stabilization	Finish Set-Up for Casing C0P1							0.075 EA	6.850 EA		0
3/13/2020	Drive Casing C0P2					1.00 EA			0.350 EA	7.200 EA		0
3/14/2020	Build C6P7-8 Casing Template								0.000 EA	7.200 EA		0
3/15/2020									0.000 EA	7.200 EA	0.900 EA	0
3/16/2020	Build C6P7-8 Casing Template								0.100 EA	7.300 EA		0
3/17/2020	Attempted to Drive C6P7 Casing, but the crane power pack bracket impeaded roadway.								0.000 EA	7.300 EA		0
3/18/2020	Installed 19 Mats onto B1 Spans 4 & 5, relocate LB 298 to B1 Span 5, prepare 1300 to drill								0.000 EA	7.300 EA		0
3/19/2020	Begin Drilling Casing C6P7								0.050 EA	7.350 EA		0
3/20/2020	Finished Drilling Casing C6P7	Drilled Holes in Timber Deck for Survey Point				1.00 EA			0.350 EA	7.700 EA		1
3/21/2020	Set-Up for Casing C6P8								0.150 EA	7.850 EA		0
3/22/2020									0.000 EA	7.850 EA	0.650 EA	0
3/23/2020	Drilled Casing C6P8					1.00 EA			0.350 EA	8.200 EA		1
3/24/2020	Cleaned up work area and prep for H-Piles Extraction (for Night Shift)	Began Main Dock Template Assembly							0.050 EA	8.250 EA		0
3/25/2020	Worked on Template Assembly	High Winds/Rain Stopped Work @11:30AM							0.050 EA	8.300 EA		0
3/26/2020	Continued Template Assembly								0.100 EA	8.400 EA		0
3/27/2020	Completed Template Assembly								0.100 EA	8.500 EA		0
3/28/2020	Installed Template @ C5P7-8, C4P7-8								0.100 EA	8.600 EA		0
3/29/2020	Drilled Casing C5P7					1.00 EA			0.400 EA	9.000 EA	1.150 EA	1
3/30/2020	Drilled Casings C4P7 & C4P8	Unload/Store/Mark 98" Pipe Piles (4 EA)				2.00 EA			0.800 EA	9.800 EA		1
3/31/2020	Attempted to thread casing on to drill but got stuck at splice. Removed casing, brought								0.000 EA	9.800 EA		0
4/1/2020	Begin Drilling Casing C5P8								0.050 EA	9.850 EA		0
4/2/2020	Finished Drilling Casing C5P8					1.00 EA			0.350 EA	10.200 EA		1
4/3/2020	Begin Switch from CAS to D-80	Probe Casings C6P7-P8, C5P7-P8, & C4P7-P8							0.210 EA	10.410 EA		0
4/4/2020	Finish Switch from CAS to D-80	Drive C6P7 Pile					1.00 EA		0.315 EA	10.725 EA		1
4/5/2020									0.000 EA	10.725 EA	1.725 EA	0
4/6/2020	Drive C6P8 & C5P7 Piles	Cut C6P7 to Top of Casing			NS: Muck Out C5P8 Casing		2.00 EA		0.668 EA	11.393 EA		1
4/7/2020	Drive C5P8 & C4P8 Piles	Cut C6P8 & C5P7 to Top of Casing			NS: Muck Out C4P7 Casing		2.00 EA		0.705 EA	12.098 EA		1
4/8/2020	Drive C4P7 Pile	Cut C4P7, C4P8, & C5P8 to Top of Casing		NS: Remove C4P7-P8, C5P7-P8, & C6P7-P8 Casings	NS: Muck Out C0P1, C0P2 Casings		1.00 EA	6.00 EA	1.028 EA	13.125 EA		1
4/9/2020	HIGH WINDS ALL DAY	Cut C4P7, C4P8, C5P7, & C5P8 to Grade	Unload/Store/Mark 98" Pipe Piles (2 EA)	NS: Muck Out C0P1, C0P2 Casings	NS: Begin Moving Dock Template to Bents 2 & 3				0.120 EA	13.245 EA		0
4/10/2020	HIGH WINDS ALL DAY	Drive C0P1 & C0P2 Piles					2.00 EA		0.630 EA	13.875 EA		1
4/11/2020	CREW HAD WEEKDEND OFF								0.000 EA	13.875 EA		0
4/12/2020									0.000 EA	13.875 EA	3.150 EA	0
4/13/2020	HIGH WINDS & RAIN ALL DAY								0.000 EA	13.875 EA		0
4/14/2020	Installed Template @ C3P6-7, C2P4			NS: Switch from D-80 to CAS					0.350 EA	14.225 EA		0
4/15/2020	High Winds/Rain Stopped Work 6:30AM to 11:30AM	Drilled Casings C3P6 & C3P7		NS: Cut C6P7 & C6P8 Piles to Grade	NS: Muck Out C3P6, C3P7 Casings Test Trash Pump	2.00 EA			0.775 EA	15.000 EA		1
4/16/2020	Drilled Casing C2P4	Begin Drilling Casing C1P4	Unload/Store/Mark 98" Pipe Piles (2 EA)	NS: Continued Drilling Casing C1P4	NS: Cut C0P1 & C0P2 to Top of Casing	1.00 EA			0.575 EA	15.575 EA		1
4/17/2020	Finished Drilling Casing C1P4	Begin Switch from CAS to D-80	NS: Finish Switch from CAS to D-80	NS: Muck Out C2P4, C1P4 Casings	NS: Probe C3P6, C3P7, C2P4, & C1P4	1.00 EA			0.540 EA	16.115 EA		1
4/18/2020	Attempted to Drive PDA Piles, but Survey Left due to Heavy Rain								0.000 EA	16.115 EA		0

4/19/2020									0.000 EA	16.115 EA	**2.240 EA**	0
4/20/2020	Drive C3P6, C3P7, C2P4, & C1P4 Piles	NS: Cut C3P6, C3P7, & C2P4 to Top of Casing	NS: Rmv C3P6, C3P7, & C2P4 Casings	NS: Began Relocating Materials/Eqpt. for Crane Switch			4.00 EA	3.00 EA	1.673 EA	17.788 EA		1
4/21/2020	Cut C3P6, C3P7, & C2P4 to Grade	Swap 298 & 1300 Crane Positions	NS: Cut C1P4 to Top of Casing	NS: Rmv C1P4, C0P1, & C0P2 Casings				3.00 EA	0.375 EA	18.163 EA		0
4/22/2020	Switch from D-80 to CAS	Rmv Template from B1-Bents 2/3 Prep Template for B2-Bents 6/7	Unload/Store/Mark 98" Pipe Piles (2 EA)	NS: Installed Template @ C6P9-10, C7P9-10	NS: Cut C1P4 & C0P1 Piles to Grade				0.425 EA	18.588 EA		0
4/23/2020	Drilled Casing C6P9				NS: Cut C0P2 Pile to Grade	1.00 EA			0.413 EA	19.000 EA		1
4/24/2020	Drilled Casing C7P9	Begin Drilling Casing C7P10				1.00 EA			0.450 EA	19.450 EA		1
4/25/2020	Continued Drilling Casing C7P10								0.000 EA	19.450 EA		0
4/26/2020									0.000 EA	19.450 EA	**3.335 EA**	0
4/27/2020	Finished Drilling Casing C7P10					1.00 EA			0.350 EA	19.800 EA		1
4/28/2020	Had to Change Out Pilot Bit								0.000 EA	19.800 EA		0
4/29/2020	Begin Drilling Casing C6P10								0.050 EA	19.850 EA		0
4/30/2020	Finished Drilling Casing C6P10					1.00 EA			0.350 EA	20.200 EA		1
5/1/2020	**Issues removing DTH Hammer from Casing**								0.000 EA	20.200 EA		0
5/2/2020	Install Template Extention for C7P11, C7P12								0.200 EA	20.400 EA		0
5/3/2020									0.000 EA	20.400 EA	**0.950 EA**	0
5/4/2020	Drilled Casing C7P11					1.00 EA			0.400 EA	20.800 EA		1
5/5/2020	Drilled Casing C7P12					1.00 EA			0.400 EA	21.200 EA		1
5/6/2020	Drilled Casing C6P11	Install Template Extention for C6P11, C6P12				1.00 EA			0.600 EA	21.800 EA		1
5/7/2020	Drilled Casing C6P12	Begin Switch from CAS to D-80	NS: Finish Switch from CAS to D-80	Row C1 C6-C7 casings not probed due to min. rock during drilling.	**NS: Muck Out C6P12 Casing**	1.00 EA			0.540 EA	22.340 EA		1
5/8/2020	Drove Pile C6P12				**NS: Muck Out C6P10, C6P11, C7P12 Casings**		1.00 EA		0.315 EA	22.655 EA		0
5/9/2020	DID NOT WORK DUE TO 60 HOURS WEEKLY MAN HOUR LIMIT								0.000 EA	22.655 EA		0
5/10/2020									0.000 EA	22.655 EA	**2.255 EA**	0
5/11/2020	Drive C6P10, C6P11, & C7P12 Piles	Place 2nd Layer of Timber Mats Row B1 Bay 3	NS: Cut C6P11, C6P12, & C7P12 to Top of Casing	Row B2 C6-C7 casings not probed due to min. rock during drilling.	**NS: Muck Out C6P9, C7P9-P11 Casings**		3.00 EA		1.198 EA	23.853 EA		1
5/12/2020	Drive C6P9, C7P9, C7P10, & C7P11 Piles	Cut C6P10 Pile to Grade (Unload 2 EA 36"Ø x 98' Piles)	NS: Cut C6P10, C7P9, C7P10, & C7P11 to Top of Casing	NS: Rmv C6P11, C6P12, & C7P12 Casings	**NS: Weld Extension to C6P10 Casing for Extraction**		4.00 EA	3.00 EA	1.760 EA	25.613 EA		1
5/13/2020	Begin Switch from D-80 to CAS	Rmv C7P11 Casing	Cut C6P11, C6P12, C7P11, & C7P12 Piles to Grade	NS: Rmv Template Extention from Bents 6-7				1.00 EA	0.150 EA	25.763 EA		0
5/14/2020	Rmv C6P9, C6P10, C7P9, & C7P10 Casings	Finish Switch from D-80 to CAS	Cut C6P9, C7P9, & C7P10 Piles to Grade	NS: Installed Template @ C4P9-10, C5P9-10				4.00 EA	0.838 EA	26.600 EA		0
5/15/2020	Drilled Casings C4P10 & C5P10	Need to Change Out Pilot Bit	Install Template Extention for C4P11, C4P12, C5P11, & C5P12			2.00 EA			1.200 EA	27.800 EA		1
5/16/2020	DID NOT WORK DUE TO 60 HOURS WEEKLY MAN HOUR LIMIT								0.000 EA	27.800 EA		0
5/17/2020									0.000 EA	27.800 EA	**5.145 EA**	0
5/18/2020	Waiting to Receive New Pilot Bit	Place 2nd Layer of Timber Mats Row B1 Bay 2	**High Winds/Rain Stopped Work @2:30PM**						0.000 EA	27.800 EA		0
5/19/2020	Change Out Pilot Bit	**HIGH WINDS & RAIN ALL DAY**	Unload 2 EA 36"Ø x 98' Piles	**NS: High Winds/Rain Stopped Work @8:30PM**					0.000 EA	27.800 EA		0
5/20/2020	**High Winds/Rain Stopped Work @9:30AM**		NS: Assemble CAS						0.000 EA	27.800 EA		0
5/21/2020	Welded Holes on DTH Hammer	Drill Broke while threading DTHH into Casing C5P9 **Dock Work On Hold Until Replacement Arrives**		NS: Load Out Drill to Warehouse					0.000 EA	27.800 EA		0
5/22/2020	**Drove 3 EA Sheet Piles @ NE End of Muck Pit**								0.000 EA	27.800 EA		0
5/23/2020	**Drove 1 EA Sheet Piles @ NE End of Muck Pit**	**Thread Omega Interlock onto Sheet Pile North of "L" King Piles**							0.000 EA	27.800 EA		0
5/24/2020									0.000 EA	27.800 EA	**0.000 EA**	0
5/25/2020	**MEMORIAL DAY - DID NOT WORK**								0.000 EA	27.800 EA		0
5/26/2020	**Drove 7 EA Sheet Piles @ NE End of Muck Pit**								0.000 EA	27.800 EA		0
5/27/2020	**Drove 16 EA Sheet Piles @ Muck Pit**								0.000 EA	27.800 EA		0
5/28/2020	**Tried to Drive 1 EA Sheet Pile Using D-19 Impact Hammer @ Muck Pit**								0.000 EA	27.800 EA		0

5/29/2020	Drove 7 EA Sheet Piles (Initial) @ Muck Pit	Unload Refurbished Drill / Attached Drill to VTL	NS: Relocate Dock Crew Box, Materials, & Equipment from the North End of the Dock to the South End in Preparation to Relocate 5 EA Air						0.000 EA	27.800 EA		0
5/30/2020	Drove 2 EA Sheet Piles (Initial) @ Muck Pit	Drove 9 EA Sheet Piles to Grade @ Muck Pit	Tested Drill / Install Drill Stem / Install DTH Hammer	NS: Relocate 5 EA Air Compressors from the Island to the Dock to Clear Space for					0.000 EA	27.800 EA		0
5/31/2020					↓				0.000 EA	27.800 EA	0.000 EA	0
6/1/2020	Connected Hoses / Eq Dept. Fixed Hole Covers on DTHH	MMO's Arrived at 12:00PM	Drilled Casing C5P9	Threaded Casing C4P9	NS: Move Vac Tank from the Dock to Ground for Atlantic H&C Access	1.00 EA			0.450 EA	28.250 EA		1
6/2/2020	Drilled Casing C4P9	Greaser Broke while Drilling C4P9 Down for 2.5 Hours - Fixed	Stood/Drove 5 EA Sheet Piles @ North End of Muck Pit	Threaded Casing C4P11	NS: Move Vac Tank from the Dock to Ground for Atlantic H&C Access	1.00 EA			0.400 EA	28.650 EA		1
6/3/2020	Drilled Casings C4P11 & C4P12			NS: Threaded Casing C5P11		2.00 EA			0.800 EA	29.450 EA		1
6/4/2020	Drilled Casings C5P11 & C5P12					2.00 EA			0.750 EA	30.200 EA		1
6/5/2020	Begin Switch from CAS to D-80	NS: Finish Switch from CAS to D-80		Rows B2/C1, Bents 4-5 casings not probed due to min. rock @ drilling.	NS: Muck Out C4P9, C5P9 Casings				0.280 EA	30.480 EA		0
6/6/2020	DID NOT WORK DUE TO 60 HOURS WEEKLY MAN HOUR LIMIT								0.000 EA	30.480 EA		0
6/7/2020									0.000 EA	30.480 EA	2.680 EA	0
6/8/2020	Muck Out C4P9, C5P12 Casings	Drive C4P9 & C5P12(PDA) Piles	NS: Cut C4P9 & C5P12 Piles to Top of Casing	NS: Muck Out C4P12, C5P10, & C5P11 Casings			2.00 EA		0.705 EA	31.185 EA		1
6/9/2020	Continue to Muck Out C4P12, C5P10, & C5P11 Casings	Drive C4P12, C5P10, & C5P11 Piles	NS: Cut C4P12, C5P10, & C5P11 Piles to Top of Casing	NS: Muck Out C4P10, C4P11, & C5P9 Casings			3.00 EA		1.058 EA	32.243 EA		1
6/10/2020	Drive C4P10 & C4P11 Piles	Cut C4P10 & C4P11 Piles to Top of Casing	Continue to Muck Out C5P9 Casing Loose Rock Found While Digging	NS: Continue to Muck Out C5P9 Casing Loose Rock Found While Digging			2.00 EA		0.705 EA	32.948 EA		1
6/11/2020	Continue to Muck Out C5P9 Casing Large Loose Rock Found While Digging	NS: Continue to Muck Out C5P9 Casing Loose Rock Found While Digging							0.000 EA	32.948 EA		0
6/12/2020	Continue to Muck Out C5P9 Casing Large Loose Rock Found While Digging	NS: Continue to Muck Out C5P9 Casing Loose Rock Found While Digging							0.000 EA	32.948 EA		0
6/13/2020									0.000 EA	32.948 EA		0
6/14/2020									0.000 EA	32.948 EA	2.468 EA	0
6/15/2020	Drive C5P9 Pile	Cut C5P9 Pile to Top of Casing	Rmv C4P11, C4P12, C5P11, & C5P12 Casings	NS: Cut C4P11, C4P12, C5P11, & C5P12 Piles to Grade	NS: Begin Removing Template Extention from Bents 4-5		1.00 EA	4.00 EA	0.803 EA	33.750 EA		1
6/16/2020	High Winds/Rain Stopped Work @11:30AM	Continuing Removing Template Extention from Bents 4-5	Prep Piles C4P9, C4P10, C5P9, & C5P10 for Casing Extraction	NS: High Winds/Rain DID NOT WORK					0.000 EA	33.750 EA		0
6/17/2020	Rmv Template Extention from Bents 4-5	Rmv C4P9, C4P10, C5P9, & C5P10 Casings	Cut C4P9, C4P10, C5P9, & C5P10 Piles to Grade	NS: Rmv Main Dock Template from Bents 4-5	NS: Begin Main Dock Template Installation at Bents 2-3			4.00 EA	0.450 EA	34.200 EA		0
6/18/2020	Installed Template @ C2P5, C3P8-9	Switch from D-80 to CAS							0.450 EA	34.650 EA		0
6/19/2020	Drilled Casings C2P5 & C3P9			NS: Begin to Install Template Extention for C2P6, C3P10, & C3P11	NS: Last Night for Night Shift R. Parkerson Transferred to HRBT	2.00 EA			0.925 EA	35.575 EA		1
6/20/2020	0700-0800: Lightning	0800-0930: Waiting on Equip. for Compressor	0930-1300: Communication Issues with Survey						0.000 EA	35.575 EA		0
6/21/2020									0.000 EA	35.575 EA	2.628 EA	0
6/22/2020	Electricians Worked on the LR 1300 All Day	Complete Template Extention Installation for C2P6, C3P10, & C3P11							0.225 EA	35.800 EA		0
6/23/2020	Drilled Casings C2P6, C3P8, & C3P11					3.00 EA			1.050 EA	36.850 EA		1
6/24/2020	Drilled Casing C3P10					1.00 EA			0.350 EA	37.200 EA		1
6/25/2020	Drilled Casings C1P5 & C1P6					2.00 EA			1.000 EA	38.200 EA		1
6/26/2020	Switch from CAS to D-80	Muck Out C2P6, C3P9, C3P10, & C3P11 Casings							0.070 EA	38.270 EA		0
6/27/2020	Continue to Muck Out C2P6, C3P9, C3P10, & C3P11 Casings								0.070 EA	38.340 EA		0
6/28/2020									0.000 EA	38.340 EA	2.765 EA	0
6/29/2020	Attempt to Drive C3P11, but D-80 Hammer Would Not Fire	Muck Out C1P5 & C3P8 Casings							0.070 EA	38.410 EA		0
6/30/2020	Drive C2P6, C3P8, & C3P11 Piles	Attempt to Drive C3P9, but Casing Drove Down w/ Pile to Top of Template					3.00 EA		0.945 EA	39.355 EA		1

7/1/2020	Drive C3P10(PDA) & C1P5 Piles	Cut C1P5, C2P6, C3P8, C3P10, & C3P11 Piles to Top of Casing	**Attempt to Pull Casing at Location C3P9**	**Muck Out C1P6 & C2P5 Casings**	Assist ECSFI with Row B2/C1, Bay 3 Fit Test		2.00 EA		0.818 EA	40.173 EA		1
7/2/2020	**Continue to Muck Out C1P6, C2P5, & C3P9 Casings**	**Pull Up C3P9 Casing for Pile Driving Attempt #2**			Assist ECSFI with Row B2/C1, Bay 3 Fit Test				0.035 EA	40.208 EA		0
7/3/2020	**JULY 4TH OBSERVED HOLIDAY**	**DID NOT WORK**							0.000 EA	40.208 EA		0
7/4/2020									0.000 EA	40.208 EA		0
7/5/2020									0.000 EA	40.208 EA	**1.868 EA**	0
7/6/2020	Drive C2P5 & C3P9 Piles	**Muck Out C1P6 Casing**	**Attempt to Drive C1P6, but Casing Drove Down w/ Pile; Pulled Out Pile**				2.00 EA		0.665 EA	40.873 EA		1
7/7/2020	**Pull Up C1P6 Casing for Pile Driving Attempt #2**	**Muck Out C1P6 Casing**	Drive C1P6 Pile	Cut C1P6, C2P5, & C3P9 Piles to Top of Casing	Switch crane locations and begin switching the drill motor air intake.		1.00 EA		0.428 EA	41.300 EA		1
7/8/2020	Extract C1P6, C2P6, C3P10, & C3P11 Casings	Remove Template Extention from Bents 2-3	Extract C2P5, C3P8, & C3P9 Casings	Cut C1P6, C2P5, C2P6, C3P8, C3P9, C3P10 & C3P11 Piles to Grade				7.00 EA	0.788 EA	42.088 EA		0
7/9/2020	Begin Switch from D-80 to CAS	Switch Drill Air Intake Support to Other Side of Drill	Extract C1P5 Casing	Cut C1P6 Pile to Grade	**Relocate Materials from the Island to the Dock to Clear Space for Pacchiosi.**			1.00 EA	0.113 EA	42.200 EA		0
7/10/2020	**Begin Working on South Ramp**	**Clear Equipment / Materials Off Dock Extension**	**Remove 8 EA 4'x24' Timber Mats from Dock Extension**						0.000 EA	42.200 EA		0
7/11/2020	**Working on South Ramp**	**Off-Load / Set 18 EA 4'x30' Timber Mats on Dock Extension / South Ramp**	**Remove 2 EA 4'x24' Timber Mats from Dock Extension**	**Load-Out 8 EA 4'x24' Timber Mats to Yard**					0.000 EA	42.200 EA		0
7/12/2020									0.000 EA	42.200 EA	**1.993 EA**	0
7/13/2020	**Move Equipment / Materials Back to the Dock Extension**	**Secure 18 EA 4'x30' Timber Mats on Dock Extension / South Ramp**	**Cut 1 EA 4'x30' Timber Mat to Fit**	Finish Switch from D-80 to CAS					0.000 EA	42.200 EA		0
7/14/2020	Remove Main Dock Template Installation from Bents 2-3	Begin Main Dock Template Installation at Bents 8-9	**Had to make modifications to template due to previous piles being off.**	**Extract Casing at C8P9 (originally installed July 2019)**					0.150 EA	42.350 EA		0
7/15/2020	Finish Main Dock Template Installation at Bents 8-9	Drilled Casings C8P9 & C9P6				2.00 EA			0.850 EA	43.200 EA		1
7/16/2020	Begin Template Extension Installation at Bents 8-9	Drilled Casing C8P8				0.50 EA			0.350 EA	43.550 EA		1
7/17/2020	Finish Template Extension Installation at Bents 8-9	Drilled Casings C8P10, C8P11, & C9P7				3.00 EA			1.450 EA	45.000 EA		1
7/18/2020									0.000 EA	45.000 EA		0
7/19/2020									0.000 EA	45.000 EA	**2.800 EA**	0
7/20/2020	**Move Air Compressors, Water Tanks, Equipment to the Middle of the Dock**	**Muck Out C8P11 & C9P7 Casings**							0.170 EA	45.170 EA		0
7/21/2020	Drilled Casings C10P5 & C10P6	**Unload 4 EA 36" Ø x 98' Piles**	Begin Switch from CAS to D-80			2.00 EA			0.900 EA	46.070 EA		1
7/22/2020	**Muck Out C8P9 & C8P10 Casings**	Finish Switch from CAS to D-80	Drive C8P9, C8P10, C8P11, & C9P7 Piles				4.00 EA		1.330 EA	47.400 EA		1
7/23/2020	**Mechanics Inspecting LR 1300 / VTL System Whip Line Sheave**	**Remove D-80 Hammer from Leads, Lower VTL, Assist with Man Basket**	**Muck Out C8P8, C9P6, C10P5, & C10P6 Casings**	Cut C8P9, C8P10, C8P11, & C9P7 Piles to Top of Casing					0.220 EA	47.620 EA		0
7/24/2020	**Muck Out C8P8, C9P6, C10P5, & C10P6 Casings**	**Unload 4 EA 36" Ø x 98' Piles**	Drive C8P8 & C9P6 Piles	Cut C8P8 & C9P6 Piles to Top of Casing			2.00 EA		0.740 EA	48.360 EA		1
7/25/2020									0.000 EA	48.360 EA		0
7/26/2020									0.000 EA	48.360 EA	**3.360 EA**	0
7/27/2020	**Muck Out C10P5 & C10P6 Casings**	Drive C10P5 & C10P6 Piles					2.00 EA		0.665 EA	49.025 EA		1
7/28/2020	Cut C10P5 & C10P6 Piles to Top of Casing	Extract C8P8-P11, C9P6, C9P7, C10P5, & C10P6 Casings	Begin Template Extension Demobilization					8.00 EA	0.875 EA	49.900 EA		0
7/29/2020	Cut C8P8-P11, C9P6, C9P7, C10P5, & C10P6 Piles to Grade	Finish Template Extension Demobilization	Place 2nd Layer of Timber Mats Row B2/C1 Bay 3						0.150 EA	50.050 EA		0
7/30/2020	Load Out Template Extension to Yard	Load Out 4 EA Casings to Yard							0.050 EA	50.100 EA		0
7/31/2020	**PREPARE SITE FOR HURRICANE ISAIAS**	Remove Existing Submerged Steel Plate	Set-Up Bubble Curtian in the Water for Row C2 Piles						0.000 EA	50.100 EA		0
8/1/2020	**PREPARE SITE FOR HURRICANE ISAIAS**								0.000 EA	50.100 EA		0
8/2/2020									0.000 EA	50.100 EA	**1.740 EA**	0
8/3/2020	**PREPARE SITE FOR HURRICANE ISAIAS**								0.000 EA	50.100 EA		0
8/4/2020	**HURRICANE ISAIAS**								0.000 EA	50.100 EA		0
8/5/2020	**REMOBILIZE SITE FROM HURRICANE ISAIAS DEMOB**	Remove Main Dock Template Installation from Bents 8-9	Begin Main Dock Template Installation at Bents 4-5	Begin Switch from D-80 to CAS					0.150 EA	50.250 EA		0
8/6/2020	Finish Main Dock Template Installation at Bents 4-5	Finish Switch from D-80 to CAS							0.150 EA	50.400 EA		0
8/7/2020	Begin Drilling Casing C4P14					0.50 EA			0.275 EA	50.675 EA		1
8/8/2020	Finished Drilling Casing C4P14	Begin Drilling Casing C4P13				1.00 EA			0.350 EA	51.025 EA		1
8/9/2020									0.000 EA	51.025 EA	**0.925 EA**	0

8/10/2020	Finished Drilling Casing C4P13	Drilled Casing C5P13	Begin Drilling Casing C5P14			2.00 EA			0.800 EA	51.825 EA		1
8/11/2020	Finished Drilling Casing C5P14	Begin Switch from CAS to D-80				0.50 EA			0.175 EA	52.000 EA		0
8/12/2020	Finish Switch from CAS to D-80	**Muck Out C4P14, C5P13, & C5P14 Casings**							0.070 EA	52.070 EA		0
8/13/2020	**Muck Out C4P13, C4P14, C5P13, & C5P14 Casings**	Drive C4P14, C5P13, & C5P14 Piles	Cut C4P14, C5P13, & C5P14 Piles to Top of Casing				3.00 EA		1.093 EA	53.163 EA		1
8/14/2020	**Muck Out C4P13 Casing**	Drive C4P13 Pile	Cut C4P13 Pile to Top of Casing				1.00 EA		0.388 EA	53.550 EA		1
8/15/2020									0.000 EA	53.550 EA		0
8/16/2020									0.000 EA	53.550 EA	**2.525 EA**	0
8/17/2020	**Weld Splice to C4P13 Casing for Extraction**	Extract C4P13, C4P14, C5P13, & C5P14 Casings	Begin Switch from D-80 to CAS					4.00 EA	0.400 EA	53.950 EA		0
8/18/2020	Cut C4P13, C4P14, C5P13, & C5P14 Piles to Grade	Relocate Main Dock Template from Bents 4-5 to Bents 2-3	Finish Switch from D-80 to CAS	Thread Casing C2P7					0.400 EA	54.350 EA		0
8/19/2020	Drilled Casings C2P7, C3P12, & C3P13					3.00 EA			1.150 EA	55.500 EA		1
8/20/2020	Assist East Coast Steel with Rows B2/C1, Bay 1 Superstructure	Thread Casing C1P7	**Begin to Muck Out C2P7, C3P12, & C3P13 Casings**	**Unload 4 EA 36"Ø x 98' Piles**					0.000 EA	55.500 EA		0
8/21/2020	**Attempted to Drill C1P7, but the Pilot Bit/Hammer Came a Part in the Casing While Unlocking the Drill**		**Pulled Out C1P7 Casing and Removed Pilot Bit/DTH Hammer**						0.150 EA	55.650 EA		0
8/22/2020									0.000 EA	55.650 EA		0
8/23/2020									0.000 EA	55.650 EA	**2.100 EA**	0
8/24/2020	Installed Back-Up DTH Hammer	**Could Not Get Back-Up DTH Hammer to Work**							0.035 EA	55.685 EA		0
8/25/2020	**Attempted to Get the Back-Up DTH Hammer to Work**	**Remove Back-Up DTH Hammer to Send Out for Repairs**	Begin Switch from CAS to D-80	**Continue to Muck Out C2P7, C3P12, & C3P13 Casings**					0.035 EA	55.720 EA		0
8/26/2020	Finish Switch from CAS to D-80	**Finish Mucking Out C2P7, C3P12, & C3P13 Casings**	Drive C2P7, C3P12, & C3P13 Piles				3.00 EA		0.980 EA	56.700 EA		1
8/27/2020	Cut C3P12 & C3P13 Piles to Grade	Cut C2P7 Pile to Top of Casing	**Weld On Casing Extensions to C2P7, C3P12, & C3P13 for Extraction**						0.138 EA	56.838 EA		0
8/28/2020	**Finish Welding On Extensions to C2P7, C3P12, & C3P13 Casings**	Extract C2P7, C3P12, & C3P13 Casings	Cut C2P7 Pile to Grade					3.00 EA	0.313 EA	57.150 EA		0
8/29/2020									0.000 EA	57.150 EA		0
8/30/2020									0.000 EA	57.150 EA	**1.500 EA**	0
8/31/2020	**Waiting on DTH Hammer to Return**	Relocate Main Dock Template from Bents 2-3 to Bents 6-7	**Prepare Drill for DTH Hammer Return**	Unload 1 EA 42"Ø x 55' Casing	Assist ECSFI with the Installation of 22 Timber Mats				0.300 EA	57.450 EA		0
9/1/2020	**Waiting on DTH Hammer to Return**	Relocate Materials and Equipment on Dock	Repaired Old Plywood Hole Coverings	Perform Full Inspection of the LR 1300 Vertical Travel Leads					0.000 EA	57.450 EA		0
9/2/2020	**Unload DTH Hammer Pilot Bit**	Assist ECSFI with the Installation of Timber Mats	Finish Switch from D-80 to CAS						0.000 EA	57.450 EA		0
9/3/2020	Drilled Casing C1P7					1.00 EA			0.350 EA	57.800 EA		1
9/4/2020	Drilled Casings C6P14, C7P13, & C7P14					3.00 EA			1.200 EA	59.000 EA		1
9/5/2020									0.000 EA	59.000 EA		0
9/6/2020									0.000 EA	59.000 EA	**1.850 EA**	0
9/7/2020	**LABOR DAY - DID NOT WORK**								0.000 EA	59.000 EA		0
9/8/2020	Drilled Casing C6P13	**Begin to Muck Out C6P14, C7P13, & C7P14 Casings**	Drive C6P14 Pile			1.00 EA	1.00 EA		0.885 EA	59.885 EA		1
9/9/2020	**Continue to Muck Out C1P7, C6P13, C7P13, & C7P14 Casings**	**Unload 4 EA 36"Ø x 98' Piles**	Drive C7P13 & C7P14 Piles				2.00 EA		0.665 EA	60.550 EA		1
9/10/2020	**Continue to Muck Out C1P7 & C6P13 Casings**	Drive C1P7 Pile					1.00 EA		0.350 EA	60.900 EA		1
9/11/2020	**Continue to Muck Out C6P13 Casing**	Drive C6P13 Pile	Cut C6P13, C6P14, C7P13, & C7P14 Piles to Top of Casing				1.00 EA		0.500 EA	61.400 EA		1
9/12/2020									0.000 EA	61.400 EA		0
9/13/2020									0.000 EA	61.400 EA	**2.400 EA**	0
9/14/2020	Began Notching Piles & Prepared Casings for Extraction	Extract C7P13 Casing	**H-Pile Extraction - Day 1 of 3**					1.00 EA	0.100 EA	61.500 EA		0
9/15/2020		Extract C6P13 & C6P14 Casings	**H-Pile Extraction - Day 2 of 3**					2.00 EA	0.200 EA	61.700 EA		0
9/16/2020	Cut C6P13, C6P14, C7P13, & C7P14 Piles to Grade	Relocated Template to Row C2, Bents 8 & 9	**H-Pile Extraction - Day 3 of 3**	**Unload 4 EA 36"Ø x 98' Piles**					0.500 EA	62.200 EA		0
9/17/2020	Drilled Casings C8P12, C8P13, & C9P8	Cut C1P7 Pile to Grade	Unload 1 EA 42"Ø x 55' Casing from Little Creek Yard			3.00 EA			1.100 EA	63.300 EA		1
9/18/2020	**NO WORK DUE TO WEATHER & OVER 50 HOURS**								0.000 EA	63.300 EA		0
9/19/2020									0.000 EA	63.300 EA		0
9/20/2020									0.000 EA	63.300 EA	**1.900 EA**	0

9/21/2020	Drilled Casing C10P7	**Begin to Muck Out C8P12, C8P13, C9P8, & C10P7 Casings**				1.00 EA			0.535 EA	63.835 EA		1
9/22/2020	**Continue to Muck Out C8P12, C8P13, C9P8, & C10P7 Casings**								0.105 EA	63.940 EA		0
9/23/2020	Drive C8P12, C8P13, C9P8, & C10P7 Piles	Cut C8P12, C8P13, C9P8, & C10P7 Piles to Top of Casing					4.00 EA		1.410 EA	65.350 EA		1
9/24/2020	**Load Out Drilling Equipment, Materials, & Demob**								0.000 EA	65.350 EA		0
9/25/2020	**Load Out Drilling Equipment, Materials, & Demob**								0.000 EA	65.350 EA		0
9/26/2020									0.000 EA	65.350 EA		0
9/27/2020									0.000 EA	65.350 EA	**2.050 EA**	0
9/28/2020	Extract C8P12, C8P13, & C9P8 Casings	Cut C8P12 & C8P13 Piles to Grade						3.00 EA	0.325 EA	65.675 EA		0
9/29/2020	Cut C9P8 & C10P7 Piles to Grade	Disassemble Casing Advancement Template; Load Out							0.025 EA	65.700 EA		0
9/30/2020	**Disassemble Berminghammer Leads**								0.000 EA	65.700 EA		0
10/1/2020	Extract C10P7 Casing							1.00 EA	0.100 EA	65.800 EA		0
10/2/2020	Extract C1P7 & C7P14 Casings							2.00 EA	0.200 EA	66.000 EA	**0.650 EA**	0
10/3/2020									0.000 EA	66.000 EA		0
									Total Days of Pile Installation:			**64**

A detailed description of the construction activities for which takes were authorized may be found in the Federal Register notice of proposed IHA for the 2020 authorization (84 FR 64848; November 25, 2019). The location, timing (e.g., seasonality), and nature of the pile driving operations, including the type and size of piles and the methods of pile driving, that will be analyzed in the 2021 IHA Renewal Request are identical to those analyzed in the current 2020 IHA.

4.2 Marine Species Observed in the Project Area

During the 2020 construction window, MMOs were on site for 108 days to observe both upland and in-water pile driving activities. Of those 108 days, only 64 were used for in-water pile driving activities. At no time during both upland and in-water pile driving did MMOs observe Level A exposures to marine mammals. On two separate days, a total of 5 Level B takes occurred for bottlenose dolphins.

Table 2, details the actual marine mammal sighting that occurred during the current 2020 issued IHA. Daily MMO reports and "Daily Protected Species Sighting & Shut-Down Form" can be found in Appendix A.

Table 2- Observed Mammals During Pile Driving Activities Under March 2020 Issued IHA

Date Observed:	Island:	Pile Driving Activity During Observation:	Pile Size:	Bubble Curtain:	Species Observed:	# Mammals Observed:	Mammal Distance From Driving Activity:	Level A or B Take:	Shutdown:	Reason:
3/28/2020	1	None	N/A	NO	Unknown, believed Whale	2	1000+ meters	None	No	No pile driving activity taking place during mammal observation
5/4/2020	1	DTH Hammer (Grinding Stone, Not Yet BMHW)	42" Steel Casing	NO	Bottle Nose Dolphin	3	1000 meters	None	No	Dolphins observed out of Level A or B Zones
5/15/2020	1	DTH Hammer	36" Steel Pipe Pile	NO	Bottle Nose Dolphin	3	200 meters	B	Yes	Level B ZOI is 215 meters for DTH
6/19/2020	1	DTH Hammer	36" Steel Pipe Pile	NO	Bottle Nose Dolphin	4	1100 meters	None	No	Dolphins observed out of Level A or B Zones
6/19/2020	1	None (DTH Hammer Not Active)	N/A	NO	Bottle Nose Dolphin	3	800 meters	None	No	No pile driving activity taking place during mammal observation
6/25/2020	1	None	N/A	NO	Bottle Nose Dolphin	4	1500 meters	None	No	No pile driving activity taking place during mammal observation
6/25/2020	1	None (DTH Hammer Not Active)	N/A	NO	Bottle Nose Dolphin	1	500 meters	None	No	No pile driving activity taking place during mammal observation
7/21/2020	1	DTH Hammer	36" Steel Pipe Pile	NO	Bottle Nose Dolphin	6	500 meters			Level B ZOI is 215 meters for DTH
7/22/2020	1	None (Impact Hammer Not Active)	N/A	NO	Bottle Nose Dolphin	12	900 meters	None	No	No pile driving activity taking place during mammal observation
8/8/2020	1	None (DTH Hammer Not Active)	N/A	NO	Bottle Nose Dolphin	6	200 meters	None	No	No pile driving activity taking place during mammal observation
8/10/2020	1	None (DTH Hammer Not Active)	N/A	NO	Bottle Nose Dolphin	3	500 meters	None	No	No pile driving activity taking place during mammal observation
8/10/2020	1	None (DTH Hammer Not Active)	N/A	NO	Bottle Nose Dolphin	6	400 meters	None	No	No pile driving activity taking place during mammal observation
8/11/2020	1	None (Impact Hammer Not Active)	N/A	NO	Bottle Nose Dolphin	15	200 meters	None	No	No pile driving activity taking place during mammal observation
8/11/2020	1	None	N/A	NO	Bottle Nose Dolphin	4	700 meters	None	No	No pile driving activity taking place during mammal observation
8/11/2020	1	None	N/A	NO	Bottle Nose Dolphin	1	50 meters	None	No	No pile driving activity taking place during mammal observation
8/12/2020	1	Impact Hammer	36" Steel Pipe Pile	YES	Bottle Nose Dolphin	3	750 meters	None	No	Level B ZOI is 545 meters for Impact Hammer w/ Bubble Curtain
8/13/2020	1	Impact Hammer	36" Steel Pipe Pile	YES	Bottle Nose Dolphin	2	300 meters	B	No	Level B ZOI is 545 meters for Impact Hammer w/ Bubble Curtain
8/17/2020	1	Impact Hammer	36" Steel Pipe Pile	YES	Bottle Nose Dolphin	10	700 meters	None	No	Level B ZOI is 545 meters for Impact Hammer w/ Bubble Curtain
8/24/2020	1	None	N/A	NO	Bottle Nose Dolphin	7	600 meters	None	No	No pile driving activity taking place during mammal observation
8/25/2020	1	None (Vibratory Hammer Not Active during sighting)	N/A	NO	Bottle Nose Dolphin	1	500 meters	None	No	No pile driving activity taking place during mammal observation
8/25/2020	1	Impact Hammer	36" Steel Pipe Pile	YES	Bottle Nose Dolphin	2	600 meters	None	No	Level B ZOI is 545 meters for Impact Hammer w/ Bubble Curtain
8/26/2020	1	None	N/A	NO	Bottle Nose Dolphin	3	350 meters	None	No	No pile driving activity taking place during mammal observation
8/26/2020	1	None	N/A	NO	Bottle Nose Dolphin	9	700 meters	None	No	No pile driving activity taking place during mammal observation
8/28/2020	1	None	N/A	NO	Bottle Nose Dolphin	12	750 meters	None	No	No pile driving activity taking place during mammal observation
9/4/2020	1	None (DTH Hammer Not Active)	42" Casing	NO	Bottle Nose Dolphin	3	700 meters	None	No	No pile driving activity taking place during mammal observation
9/4/2020	1	None	N/A	NO	Bottle Nose Dolphin	4	800 meters	None	No	No pile driving activity taking place during mammal observation
9/17/2020	1	DTH Hammer	36" Steel Pipe Pile	NO	Deceased Sea Turtle	1	20 meters	None	No	Deceased Sea Turtle was called into NMFS. Appeared to have been dead many days.
11/4/2020	2	DTH Upland Pile Driving	36" Steel Pipe Pile	NO	Bottle Nose Dolphin	16	150-500 meters	None	No	Upland Pile Driving.
11/23/2020	2	DTH Upland Pile Driving	36" Steel Pipe Pile	NO	Humpback Whale	1	2000 meters	None	No	Upland Pile Driving.
11/24/2020	1	DTH Upland Pile Driving	36" Steel Pipe Pile	NO	Bottle Nose Dolphin	1	200 meters	None	No	Upland Pile Driving.
11/25/2020	2	DTH Upland Pile Driving	36" Steel Pipe Pile	NO	Bottle Nose Dolphin	10	350 meters	None	No	Upland Pile Driving.

Table 3- Level A and Level B Harassment, By Species and Stock

Species	Stock	Level A Takes Allowed in 2020 IHA	Level B Takes Allowed in 2020 IHA	Level A Takes Occurred Under 2020 IHA	Level B Takes Occurred Under 2020 IHA
Humpback Whale	Gulf of Maine	0	12	0	0
Harbor Porpise	Gulf of Maine/ Bay of Fundy	5	7	0	0
Bottlenose Dolphin	WNA Coastal, Northern Migratory	142	14095	0	5
	WNA Coastal, Southern Migratory	142	14095	0	0
	NNCES	2	198	0	0
Harbor Seal	Western North Atlantic	1296	2124	0	0
Gray Seal	Western North Atlantic	1	3	0	0

Since there were no Level A takes and only 5 Level B takes to occur, the subset of Level A and Level B takes remaining from the 2020 IHA authorization will be sufficient to cover the 2021-2022 pile installation and removal activities in the CTJV's 2021 Renewal Request.

5. MITIGATION MEASURES

5.1 GENERAL CONSTRUCTION MITIGATION

The Project followed the guidance of NOAA's March 10, 2020 issued IHA Mitigation Measures. These measures include:

- For in-water construction heavy machinery activities other than pile driving (*e.g.*, use of barge-mounted excavators, or dredging), if a marine mammal comes within 10 m, CTJV must cease operations and reduce vessel speed to the minimum level required to maintain steerage and safe working conditions.

- CTJV is required to conduct briefings for construction supervisors and crews, the monitoring team, and CTJV staff prior to the start of all pile driving activity, and when new personnel join the work, in order to explain responsibilities, communication procedures, the marine mammal monitoring protocol, and operational procedures.

- CTJV is required to employ between two and four MMOs per the activity as outlined in the issued March 10, 2020 IHA.

- Marine mammal monitoring must take place from 30 minutes prior to initiation of pile driving activity through 30 minutes post-completion of pile driving activity. Pre-activity monitoring must be conducted for 30 minutes to ensure that the shutdown zone is clear of marine mammals, and pile driving may commence when observers have declared the shutdown zone clear of marine mammals. In the event of a delay or shutdown of activity resulting from marine mammals in the shutdown zone, animals shall be allowed to remain in the shutdown zone (*i.e.*, must leave of their own volition) and their behavior shall be monitored and documented.

CTJV must establish shutdown zones at the following distances:

i. 100 meters for harbor porpoise and bottlenose dolphin.

ii. 15 meters for harbor seal and gray seal.

iii. For humpback whales isopleths in low-frequency cetaceans, depending on activity type, has a shutdown zone between 90- 2,920 meters.

- If a marine mammal enters or is observed within an established shutdown zone pile driving must be halted or delayed. Pile driving may not commence or resume until either the animal has voluntarily left and been visually confirmed beyond the

shutdown zone or 15 minutes have passed without subsequent detections of the animal.

- Should environmental conditions deteriorate such that marine mammals within the entire shutdown zone would not be visible (e.g., fog, heavy rain), pile driving and removal must be delayed until the MMO(s) is confident marine mammals within the shutdown zone could be detected.

- CTJV must use soft start techniques when impact pile driving. Soft start requires contractors to provide an initial set of strikes at reduced energy, followed by a thirty-second waiting period, then two subsequent reduced energy strike sets. A soft start must be implemented at the start of each day's impact pile driving and at any time following cessation of impact pile driving for a period of thirty minutes or longer.

- CTJV must use an air bubble curtain system during impact pile driving of steel pipe piles. Bubble curtains must meet the following requirements:

  i. The bubble curtain must distribute air bubbles around 100 percent of the piling perimeter for the full depth of the water column.

  ii. The lowest bubble ring must be in contact with the mudline and/or rock bottom for the full circumference of the ring, and the weights attached to the bottom ring shall ensure 100 percent mudline and/or rock bottom contact. No parts of the ring or other objects shall prevent full mudline and/or rock bottom contact.

  iii. The bubble curtain must be operated such that there is proper (equal) balancing of air flow to all bubblers.

  iv. CTJV must employ the bubble curtain during impact pile driving of all steel piles in water depths greater than 3 m (10 ft.).

- CTJV must establish Level A harassment and B harassment monitoring zones as.

If a species for which authorization has not been granted, or a species for which authorization has been granted but the authorized takes are met, is observed entering or within the monitoring zones outlined in March 10, 2020 IHA, pile driving activities must shut down immediately using delay and shutdown procedures. Activities must not resume until the animal has been confirmed to have left the area or the 15 minute observation time period has elapsed.

Appendix A:
2020 Marine Mammal Monitoring Plan

Marine Mammal Monitoring Plan
for the
Parallel Thimble Shoal Tunnel Project

Prepared by:

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Submitted to:

National Marine Fisheries Service
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March 2020

CONTENTS

1. Introduction 1
2. Methods 5
2.1 Monitoring Procedures 5
2.2 Observer Qualifications 6
2.3 Data Collection 6
2.4 Equipment 7
3. Level A and Level B Monitoring Zones 7
4. Observer Locations 8
5. Response to Observed Marine Mammals 8
5.1 Observations of Healthy Marine Mammals 8
5.2 Observations of Injured or Dead Marine Mammals 9
5.3 Unauthorized Exposures 9
6. Reporting 9
7. References 9

LIST OF FIGURES

Figure 1: Distance (meters) to Shutdown Zone using an Impact Hammer with Bubble Curtain for Non-Simultaneous 36- and 42-in Steel Pile Driving for the Temporary Dock - 7 Piles per day at Portal Island No. 1

Figure 2: Distance (meters) to Shutdown Zone using a Vibratory Hammer for Non-SimultaneousTimber Pile Driving for the Mooring Dolphins - 10 Piles per day at Portal Island No. 1 and No. 2

Figure 3: Distance (meters) to Shutdown Zone using a Vibratory Hammer for Non-Simultaneous36- and 42-in Steel Pile Driving for the Temporary Dock - 10 Piles per day at Portal Island No. 1

Figure 4: Distance (meters) to Shutdown Zone using two Down-the-Hole Hammers for Simultaneous 36- and 42-in Steel Pile Driving for the Omega Trestle/West O-Pile Wall/Mooring Piles and Templates - 6 Piles

Figure 5: Distance (meters) to Shutdown Zone using two Down-the-Hole Hammers for Simultaneous 36- and 42-in Steel Pile Driving for the Omega Trestle/West O-Pile Wall/Mooring Piles and Templates - 6 Piles per day at Portal Island No. 2

Figure 6: Distance (meters) to Shutdown Zone using two Down-the-Hole Hammers for Simultaneous 36- and 42-in Steel Pile Driving for the East O-Pile Wall - 6 Piles per day at Portal Island No. 1

Figure 7: Distance (meters) to Shutdown Zone using two Down-the-Hole Hammers for Simultaneous 36- and 42-in Steel Pile Driving for the East O-Pile Wall - 6 Piles per day at Portal Island No. 2

Figure 8: Distance (meters) to Shutdown Zone using two Down-the-Hole Hammers for Simultaneous 36- and 42-in Steel Pile Driving for the Temporary Dock - 6 Piles per day at Portal Island No. 1 per day at Portal Island No. 1 Piles per Day

Figure 9: Distance (meters) to Shutdown Zone using a Down-the-Hole & Impact Hammers for Simultaneous 36- and 42-in Steel Pile Driving for the Omega Trestle/West O-Pile Wall/Mooring Piles and Templates – 3-DTH & 10 Impact Piles per day at Portal Island No. 1

Figure 10: Distance (meters) to Shutdown Zone using a Down-the-Hole & Impact Hammers for Simultaneous 36- and 42-in Steel Pile Driving for the Omega Trestle/West O-Pile Wall/Mooring Piles and Templates – 3-DTH & 10 Impact Piles per day at Portal Island No. 2

Figure 11: Distance (meters) to Shutdown Zone using a Down-the-Hole & Impact Hammers for Simultaneous 36- and 42-in Steel Pile Driving for the East O-Pile Wall – 3-DTH & 10 Impact Piles per day at Portal Island No. 1

Figure 12: Distance (meters) to Shutdown Zone using a Down-the-Hole & Impact Hammers for Simultaneous 36- and 42-in Steel Pile Driving for the East O-Pile Wall – 3-DTH & 10 Impact Piles per day at Portal Island No. 2

Figure 13: Distance (meters) to Level B Threshold Using an Impact Hammer or Impact Hammer with Bubble Curtain for Non-Simultaneous 36- and 42-in Steel Pile Driving for the Temporary Dock at Portal Island No. 1

Figure 14: Distance (meters) to Level B Threshold Using a Vibratory Hammer for Non-Simultaneous36- and 42-in Steel Pile Driving for the Omega Trestle/West O-Pile Wall/Mooring Piles and Templates at Portal Island No. 1

Figure 15: Distance (meters) to Level B Threshold Using a Vibratory Hammer for Non-Simultaneous36- and 42-in Steel Pile Driving for the Omega Trestle/West O-Pile Wall/Mooring Piles and Templates at Portal Island No. 1

Figure 16: Distance (meters) to Level B Threshold Using a Vibratory Hammer for Non-Simultaneous36- and 42-in Steel Pile Driving for the Omega Trestle/West O-Pile Wall/Mooring Piles and Templates at Portal Island No. 2

Figure 16: Distance (meters) to Level B Threshold Using a Vibratory Hammer for Non-Simultaneous36- and 42-in Steel Pile Driving for the Temporary Dock at Portal Island No. 1

LIST OF TABLES

Table 1 Authorized Amounts of Taking, by Level A Harrasment and Level B Harraasment, by species and stock.

Table 2 Level A and B Harrassment Monitoring Zones During Project Activity

ACRONYMS AND ABBREVIATIONS

CT JV	Chesapeake Tunnel Joint Venture
DTH	Down the Hole
ft	feet
GPS	Global Positioning System

IHA	Incidental Harassment Authorization
MHW	Mean High Water
MLW	Mean Low Water
MMMP	Marine Mammal Monitoring Plan
NOAA	National Oceanic and Atmospheric Administration
NOAA Fisheries	National Marine Fisheries Service
Nos.	Numbers
PTS	Permanent Threshold Shift
PTST	Parallel Thimble Shoal Tunnel
SOE	Support of Excavation
TBM	Tunnel boring machine
ZOI	Zone of impact

1. INTRODUCTION

The Parallel Thimble Shoal Tunnel (PTST) Project consists of the construction of a two-lane parallel tunnel to the west of the existing Thimble Shoal Tunnel, connecting Portal Island Numbers (Nos.) 1 and 2 (Figure 1). Upon completion, the new tunnel will carry two lanes of southbound traffic and the existing tunnel will remain in operation and carry two lanes of northbound traffic. The 6,525 linear feet (ft) of new tunnel will be constructed using a tunnel boring machine (TBM), with 5,356 linear ft located below Mean High Water (MHW).

Pile driving during construction of the PTST Project has the potential to cause sound levels that exceed Level A and Level B acoustic harassment thresholds for marine mammals as defined by the National Oceanic and Atmospheric Administration (NOAA) National Marine Fisheries Service (NOAA Fisheries) Office of Protected Resources (NOAA Fisheries 2016).

During a 12-month construction period extending from September 2019 through August 2020 (Table 1), up to 130 hollow steel piles measuring 36 inches in diameter will be installed to support a temporary dock at Portal Island No. 1. Of these, 64 will be placed in-water and 47 will be placed upland (above the Mean High Water [MHW] line). Up to 30 hollow steel piles (36-inch diameter) will be installed to provide mooring facilities on the west side of the portal islands (a total of 6 dolphin moorings comprised of 5 piles each).

Construction will also include two temporary Omega trestles, each with 28 in-water and 8 upland piles, for a total of 36, 36-inch hollow steel pipe piles offset to the west side of each engineered berm and extending channelward from Portal Island Nos. 1 and 2, respectively. In-water pile driving activities, will also include installation of o-piles for berm Support of Excavation (SOE) walls at each portal island. Up to a total of 488 36-inch diameter hollow steel interlocked piles will be installed in-water for the SOE walls. There will also be driving of landside sheet pile on Portal Island No. 1 to construct the holding bins (muck bin) for excavated tunnel material and to support tunnel excavation activities.

Table 1. Authorized Amount of Taking, by Level A Harassment and Level B Harassment, by species and stock

Species	Stock	Level A Takes	Level B Takes
Humpback whale	Gulf of Maine	--	12
Harbor porpoise	Gulf of Maine/Bay of Fundy	5	7
Bottlenose dolphin	WNA Coastal, Northern Migratory	142	14,095
	WNA Coastal, Southern Migratory	142	14,095
	NNCES	2	198
Harbor seal	Western North Atlantic	1,296	2,124
Gray seal	Western North Atlantic	1	3

The Chesapeake Tunnel Joint Venture (CTJV) has submitted an Incidental Harassment Authorization (IHA) application to request takes for four species: harbor seals (*Phoca vitulina*), gray seals (*Halichoerus grypus*), bottlenose dolphin (*Tursiops* spp.), and humpback whales (*Megaptera novaeangliae*) by Level B harassment. Fin whales (*Balaenoptera physalus*), North Atlantic right whales (*Eubalaena glacialis*), and harbor porpoise (*Phocoena phocoena*) are expected to be rare in the PTST Project Area, and no takes have been requested for these species. Pile and sheet pile driving operations will cease if any marine mammal species enters the Level A Shutdown Zones (Section 3) or if fin whales, humpback whales, North Atlantic right whales, and harbor porpoise are observed in the level B monitoring zones (Section 3). No takes are requested for airborne noise associated with on-land pile driving. Prior to the issuance of the IHA, pile driving on Portal Islands will cease if gray or harbor seals are observed entering the Level B airborne noise monitoring zone associated with these activities. Takes requested are summarized in Table 2.

Table 2. Level A and B Harrassment Monitoring Zones During Project Activities (meters)

Scenario		Level A Harassment Zones				Level B Monitoring Zones
		Low-Frequency Cetaceans	Mid-Frequency Cetaceans	High-Frequency Cetaceans	Phocid Pinnipeds	
Driving Type	Pile Type	Island 1 & 2	Island 1 & 2	Island 1 & 2	Island 1 & 2	Island 1 & 2
Impact	12-in. Timber	90	--	105	--	25
	36-in. Steel	2,920	105	3,480	1,565	1,585
Impact with Bubble Curtain	36-in. Steel	1,000	--	1,190	535	545
DTH – Impulsive	42-in. Steel	970	--	1,155	520	215
DTH Simultaneous at same island	42-in. Steel	1,535	--	1,830	825	215
DTH & Impact Hammer with bubble curtain: Simultaneous at the same island	36-and 42-in. Steel	1,970	--	2,400	1,055	545

DTH at PI 1. And Impact with Bubble Curtain Hammer at PI 2	36-and 42-in. Steel	970	--	1,155	520	215 from PI 1 545 from PI 2
Continuous (Vibratory)	12-in. Timber	--	--	--	--	1,360
	36-in. Steel	20	--	--	--	21,545
	42-in.** Steel	20	--	--	--	21,545

-- indicates that shutdown zone is larger than calculated harassment zone.
**Activity only planned at Portal Island 1 as part of project pile driving plan.

Level A Shutdown Zones and B Zones of Impact (ZOI) are calculated based on the type of activity occurring and the hearing frequency of the marine mammal. Animals that may inhabit or pass through the area of construction are classified within the following hearing frequencies:

<u>High Frequency Cetacean:</u>

- Harbor Porpoise (*Phocoena phocoena*)

<u>Mid-Frequency Cetacean:</u>

- Bottlenose Dolphins (*Tursiops spp.*)

<u>Low Frequency Cetacean:</u>

- Baleen Whales:
    - Fin Whale (*Balaenoptera physalus*)
    - Humpback Whale (*Megaptera novaeangliae*)
    - North Atlantic Right Whale (*Eubalaena glacialis*)

<u>Phocid Pinnipeds:</u>

- Harbor Seals (*Phoca vitulina*)
- Gray Seals (*Halichoerus grypus*)

This PTST Marine Mammal Monitoring Plan (MMMP) proposes a protocol for monitoring marine mammals during round pile and sheet pile driving activities in the Project Area. The goal of this MMMP is to prevent unauthorized Level A or Level B takes and to minimize Level B harassment using clearly defined methods for monitoring and shutdown procedures during construction. Incidents of harassment and construction shutdown events will be recorded and reported.

2. METHODS

2.1 MONITORING PROCEDURES

The CTJV, the design-build contractor for the PTST Project, proposes the following MMMP procedures:

- Use of marine mammal observers during pile and sheet pile driving activities. Observers will meet the criteria defined in Section 2.2.

- Monitoring distances, in accordance with the Level A Shutdown Zone and Level B ZOI identified in Section 3, will be determined by using a range finder, scope, hand-held global positioning system (GPS) device or landmarks with known distances from the monitoring positions. Monitoring locations will be based on land at either Portal Island No. 1 or Portal Island No. 2.

- If the entire Level B monitoring zone is not visible, pile driving activities may continue, and the number of individual listed animals within the Level B zone will be estimated and recorded. Estimated numbers of individuals will be extrapolated by dividing the number of observed individuals by the percentage of the monitoring zone that was visible.

- Zones will be monitored for the presence of marine mammals 30 minutes before, during, and 30 minutes after any pile driving activity. Observers will scan the waters within the area of potential sound effects using binoculars (10X42 or similar) or spotting scopes (20-60 zoom or equivalent), and make visual observations.

- Monitoring will be continuous unless the contractor takes a break longer than 2 hours from active pile and sheet pile driving, in which case, monitoring will be required 30 minutes prior to restarting pile installation.

- If marine mammals are observed, their location within the zones, and their reaction (if any) to pile activities will be documented.

- If a marine mammal crosses into the designated ZOIs for that species, additional monitoring or a temporary stop to pile driving activity will occur, in accordance with the procedures outlined in Section 5 of this Monitoring Plan.

- If weather or sea conditions restrict the observer's ability to observe, or become unsafe, pile installation will be suspended until conditions allow for monitoring to resume.

- For in-water pile driving, under conditions of fog or poor visibility that might obscure the presence of a marine mammal within the shutdown zone, the pile in progress will be completed and then pile driving suspended until visibility conditions improve. Visibility will be confirmed and approved by the MMO at the beginning of the shift. Likewise, the certified MMO will determine the number of observers needed to cover the ZOI based on

the visibility conditions anticipated for the following shift and their best professional judgement call.

Monitoring will occur year-round, during pile driving operations, because some marine mammal species have the potential to be present at any time of the year.

2.2 OBSERVER QUALIFICATIONS

The CTJV will employ NOAA Fisheries-approved marine mammal observers to monitor Level A Shutdown Zones and Level B ZOI. These individuals will be independent (i.e., not construction personnel) trained biologists with:

- Visual acuity in both eyes sufficient to see moving objects on the water's surface; ability to estimate object size and distance.
- The ability to make visual field observations and collect data as described in the protocol.
- Experience or training with identifying marine mammals in the field.
- Sufficient training, orientation or experience with the construction operation to provide for personal safety during observations.
- Ability to communicate orally, by radio or in person, with project personnel to provide real-time information on marine mammals observed in the area as necessary.
- Experience and ability to conduct field observations and collect data according to assigned protocols (this may include academic experience).
- The ability to prepare a status report of monitoring activities that describes the species and number of individuals observed, dates and times of construction activities; dates of when construction activities were ceased or shutdown to avoid Level A harassment to any species or Level B harassment for any species for that the PTST Project is not authorized to take.

If only one marine mammal observer is needed, this individual will have prior experience with observing marine mammals in the field. If teams of two or more observers are needed, one observer will be designated as the lead observer. The lead observer will have prior experience working as a marine mammal observer, and additional observers may substitute education or training for experience.

2.3 DATA COLLECTION

Marine mammal observers at the PTST Project Area will use Observation Record Forms approved by NOAA. An observation record will be completed by each observer for each location and day of survey.

The following data will be included in the observation records:

- Date and time that in-water or upland round pile or sheet pile driving/installation begins and/or ends;

- Sea state using the Beaufort Wind Force Scale and weather including percent cloud cover, percent glare, visibility;

- Species, numbers of individuals, and when possible the sex and age class of observed marine mammals;

- Pile driving or sheet pile activities occurring during each sighting;

- Behaviors exhibited by observed marine mammals, including bearing and direction of travel, and behavioral responses to soft-start and shutdown procedures;

- Location of marine mammal, distance from observer to marine mammal, and distance from the pile driving activities to the marine mammal.

- Whether the observation required implementation of shutdown procedures and the duration of each shutdown;

- Other human activity in the area such as fishing or transit of navy or cargo ships in the navigation channel. Hull numbers of fishing, cargo, or navy vessels will be recorded if possible.

2.4 EQUIPMENT

Marine mammal observers will have the following equipment available during monitoring:

- Binoculars
- Range finder
- Logbook
- Cell phone or other wireless communication
- GPS Unit (for all vessel based observations, if implemented).

3. LEVEL A AND LEVEL B MONITORING ZONES

Impact hammer and Down-the-hole (DTH) drill will be used to install hollow steel and king piles. Above Mean High Water, sheet piles will be installed using a vibratory and impact hammer. No airborne sound data were available for impact driving of King Piles and Sheet Piles to determine in-air Level B monitoring zones and therefore, the Level B ZOI for impact driving of the hollow steel pile should be followed during such activity. The Level B ZOI will remain constant in size through the daily pile driving activities. The Level A Shutdown Zones will depend on the duration of pile driving activity and the presence of marine mammals per 24-hour period. For impact driving, up to 3 piles will be driven per 24-hour period using the following adaptive monitoring approach: Monitoring will begin each day using the 3-hour (i.e., 3-pile) Level A Shutdown Zone. If after the first pile is driven, no marine mammals have been observed in the Level A Shutdown Zone, then the Level A Shutdown Zone will reduce to the 2-hour Zone.

If no marine mammals are observed within the 2-hour Level A Shutdown Zone during the driving of the second pile, then the Level A Shutdown Zone will reduce to the 1-hour Zone. However, if a mammal is observed entering the 3-hour Level A Shutdown Zone during the driving of the first pile, then the 3-hour Level A Shutdown Zone will be monitored for the remainder of pile driving activities for that day. Likewise, if a marine mammal is observed within the 2-hour Shutdown Zone, then the 3-hour Level A Shutdown Zone will be monitored for the remainder of pile driving activities for that day.

The monitoring zone sizes for Level A (shutdown) depend on the number of piles to be driven each day and whether simultaneous pile driving will occur. For this Project, simultaneous pile driving refers to one hammer operating on each Portal Island or two hammers operating on the same island.

4. OBSERVER LOCATIONS

Marine mammal observers will be located on Portal Island Nos. 1 and 2.

5. RESPONSE TO OBSERVED MARINE MAMMALS

5.1 OBSERVATIONS OF HEALTHY MARINE MAMMALS

If a whale or harbor porpoise is observed entering the Level A or Level B monitoring zones, the observer will directly contact the construction supervisor to indicate that pile driving needs to be stopped immediately. The observer will track the individual until it has left the Level A Shutdown Zone. After the whale or porpoise has been out of the Level A Shutdown Zone and B monitoring zones for 30 minutes, the observer will notify the construction supervisor that pile driving activities may resume.

If a seal or bottlenose dolphin enters the Level A Shutdown Zones, the observer will directly contact the construction supervisor to indicate that pile driving needs to be stopped immediately. The observer(s) tracks the individual until it has left the Level A Shutdown Zone. After the seal or dolphin has been out of the Level A Shutdown Zone for 30 minutes, the observer will notify the construction supervisor that pile driving activities may resume.

If a seal or bottlenose dolphin enters the Level B monitoring zone for in-water activities, the observer will record a take of the species observed. Each individual marine mammal will count once as a take in a 24-hour period. If a seal enters the Level B monitoring zone for in water or in-air pile driving activities the observer will record a take of the species observed. If the seal hauls out it or is recorded hauled out it is not recorded again in the reciprocal environment. The observer(s) will track the individual until it has left the Level B monitoring zone.

All observations and takes of marine mammals will be documented on observation forms and compiled records will be reported to NOAA in accordance with the reporting procedures described in Section 6.

5.2 OBSERVATIONS OF INJURED OR DEAD MARINE MAMMALS

If dead or dying marine mammals are observed in the monitoring zones, regardless of known cause, the observer(s) will:

- Record the species type (if known), date, time, and location of the observation,
- Take a photograph of the specimen, and
- Immediately notify NOAA Fisheries.

5.3 UNAUTHORIZED EXPOSURES

If an unauthorized exposure occurs (e.g., a marine mammal occurring in a Level A Shutdown Zone or Level B ZOI without an authorized take), the observer(s) will:

- Record the species type (if known), date, time, and location of the observation,
- Record any behavioral changes that occur during observation,
- Contact the construction manager to cease pile driving activity immediately, and
- Immediately notify NOAA Fisheries.

6. REPORTING

An annual report will be prepared and distributed to NOAA Fisheries once per calendar year that pile or sheet pile driving occurs. The report will be provided to NOAA Fisheries by December 31 of each year where a report is needed. This annual report will include an executive summary, monitoring methodology, tabulation of marine mammal observations (including number, type, and location of observations), dates and times when monitoring occurred, and pile driving was completed, and dates and times when in-water construction was suspended because of marine mammals.

7. REFERENCES

NOAA. 2016. Underwater Acoustic Thresholds for Onset of Permanent and Temporary Threshold Shifts. Technical Memorandum NMFS-OPR-55.

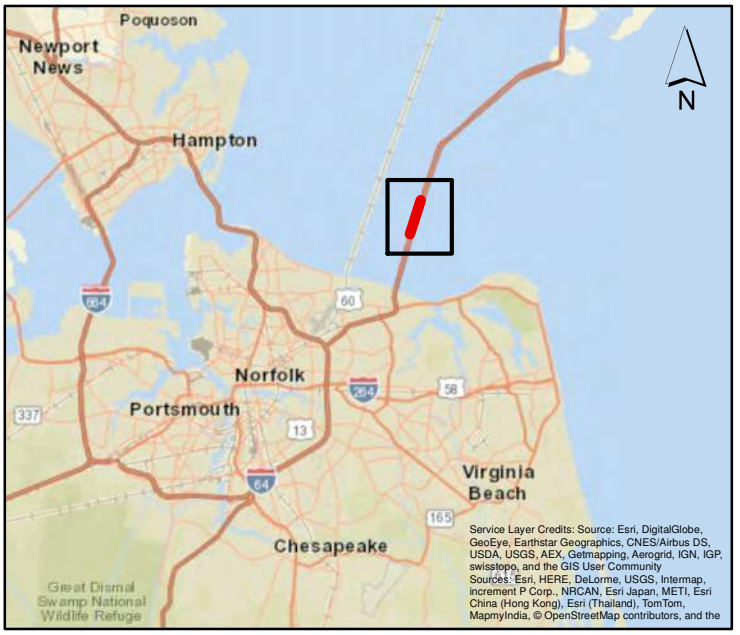
Figure 1. Project Location Map
Chesapeake Bay Bridge and Tunnel District
Thimble Shoal Parallel Tunnel

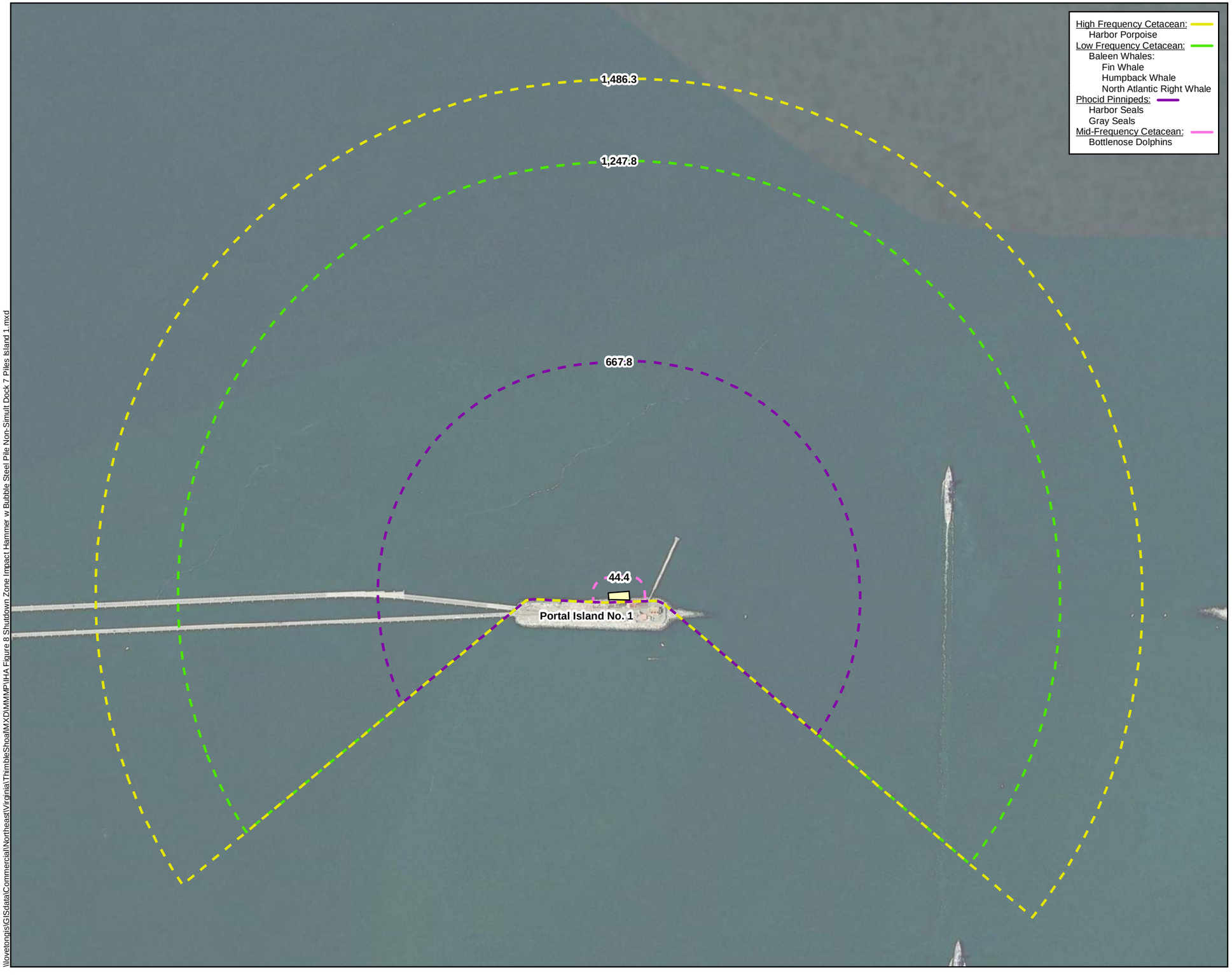
CHESAPEAKE TUNNEL JV

CHESAPEAKE BAY BRIDGE-TUNNEL

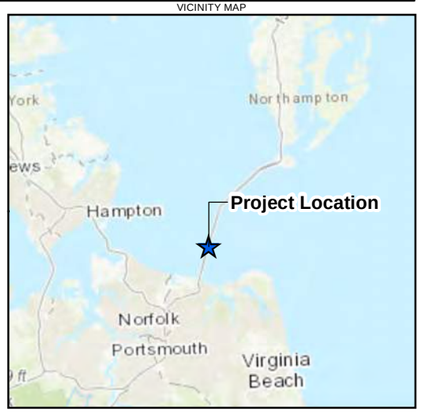
MOTT MACDONALD

0 0.5 1 Miles





VICINITY MAP



Legend

Temporary Dock

7 Impact Piles per Day - Shutdown Zone

1,486.3 m - High-Frequency Cetaceans

1,247.8 m - Low-Frequency Cetaceans

667.8 m - Phocid Pinnipeds

44.4 m - Mid-Frequency Cetaceans

Map Date: 10/3/2019
Source: ESRI 2018, Mott MacDonald 2017
Projection: NAD 1983, State Plane Virginia South, US Feet

0 200 400
Meters

N

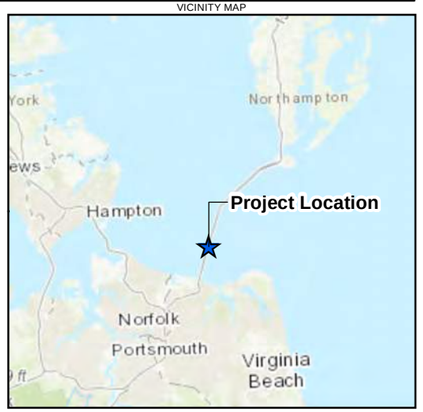
CHESAPEAKE TUNNEL JV

MOTT MACDONALD

Figure 1
Distance (meters) to Shutdown Zone Using an Impact Hammer with Bubble Curtain for Non-Simultaneous 36- and 42-in Steel Pile Driving for the Temporary Dock – 7 Piles per Day at Portal Island No. 1
Marine Mammal Protection Act
Parallel Thimble Shoal Tunnel

\\lovetongis\GISdata\Commercial\Northeast\Virginia\ThimbleShoal\MXD\MMP\IHA Figure 8 Shutdown Zone Impact Hammer w Bubble Steel Pile Non-Simult Dock 7 Piles Island 1.mxd

VICINITY MAP



Legend

⊗ Mooring Dolphin

10 Vibratory Piles per Day - Shutdown Zone

- 7.4 m - High-Frequency Cetaceans
- 5.0 m - Low-Frequency Cetaceans
- 3.0 m - Phocid Pinnipeds
- 0.4 m - Mid-Frequency Cetaceans

Map Date: 10/3/2019
Source: ESRI 2018, Mott MacDonald 2017
Projection: NAD 1983, State Plane Virginia South, US Feet

0 100 200
Meters

N

CHESAPEAKE TUNNEL JV

EA

MOTT MACDONALD

Figure 2
Distance (meters) to Shutdown Zone Using a Vibratory Hammer for Non-Simultaneous Timber Pile Driving for the Mooring Dolphins – 10 Piles per Day at Portal Island Nos. 1 and 2
Marine Mammal Protection Act
Parallel Thimble Shoal Tunnel

\\lovetonpis\GISdata\Commercial\Northeast\VirginiaThimbleShoal\MXD\MMPI\HA Figure 9 Shutdown Zone Vibratory Hammer Timber Pile Non-Simult Mooring Dolphins 10 Piles Island 1 and 2.mxd

High Frequency Cetacean:
Harbor Porpoise
Low Frequency Cetacean:
Baleen Whales:
Fin Whale
Humpback Whale
North Atlantic Right Whale
Phocid Pinnipeds:
Harbor Seals
Gray Seals
Mid-Frequency Cetacean:
Bottlenose Dolphins

63.8

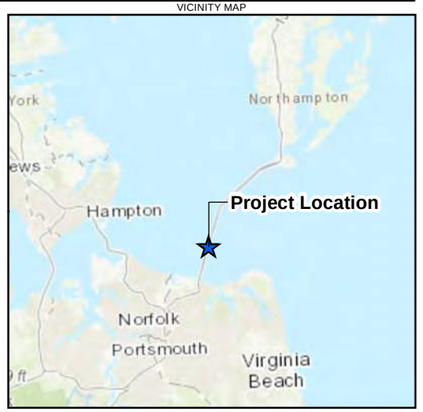
43.2

26.2

3.8

Portal Island No. 1

VICINITY MAP



Legend

Temporary Dock

10 Vibratory Piles per Day - Shutdown Zone

63.8 m - High-Frequency Cetaceans

43.2 m - Low-Frequency Cetaceans

26.2 m - Phocid Pinnipeds

3.8 m - Mid-Frequency Cetaceans

Map Date: 10/3/2019
Source: ESRI 2018, Mott MacDonald 2017
Projection: NAD 1983, State Plane Virginia South, US Feet

0 20 40
Meters

N

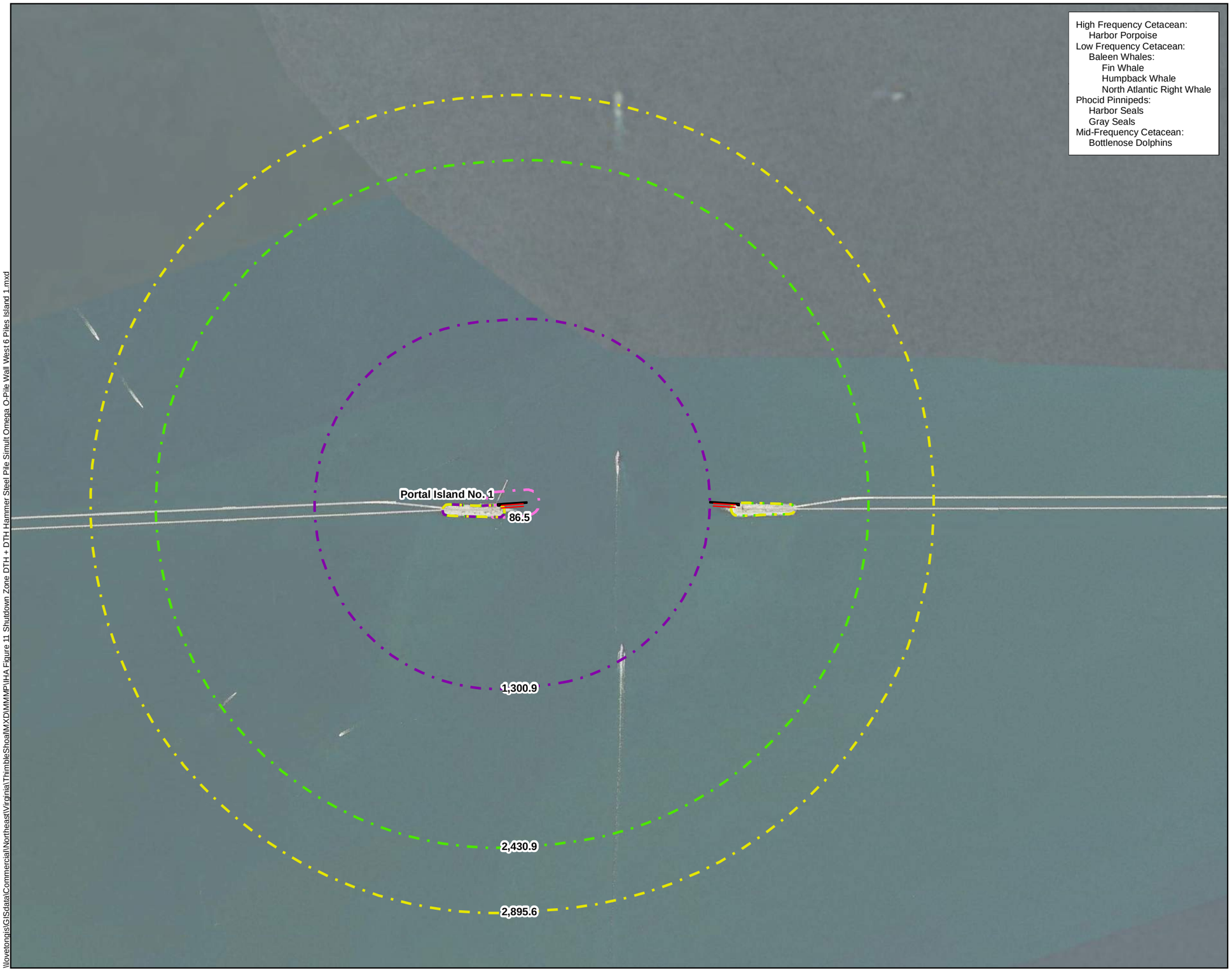
CHESAPEAKE TUNNEL JV

EA

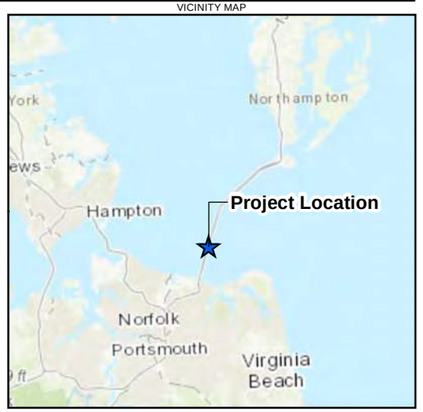
MOTT MACDONALD

Figure 3
Distance (meters) to Shutdown Zone Using a Vibratory Hammer for Non-Simultaneous 36- and 42-in Steel Pile Driving for the Temporary Dock – 10 Piles per Day at Portal Island No. 1
Marine Mammal Protection Act
Parallel Thimble Shoal Tunnel

\\lovetongis\GIS\data\Commercial\Northeast\Virginia\ThimbleShoal\MXD\MMPI\HA Figure 10 Shutdown Zone Vibratory Hammer Steel Pile Non-Simult Dock 10 Piles Island 1 and 2.mxd



VICINITY MAP



Legend

- O-Pile Wall
- Omega Trestle

6 Down-the-Hole Piles per Day - Shutdown Zone

- 2,895.6 m - High-Frequency Cetaceans
- 2,430.9 m - Low-Frequency Cetaceans
- 1,300.9 m - Phocid Pinnipeds
- 86.5 m - Mid-Frequency Cetaceans

Map Date: 10/3/2019
Source: ESRI 2017, Mott MacDonald 2017
Projection: NAD 1983, State Plane Virginia South, US Feet

0 500 1,000
Meters

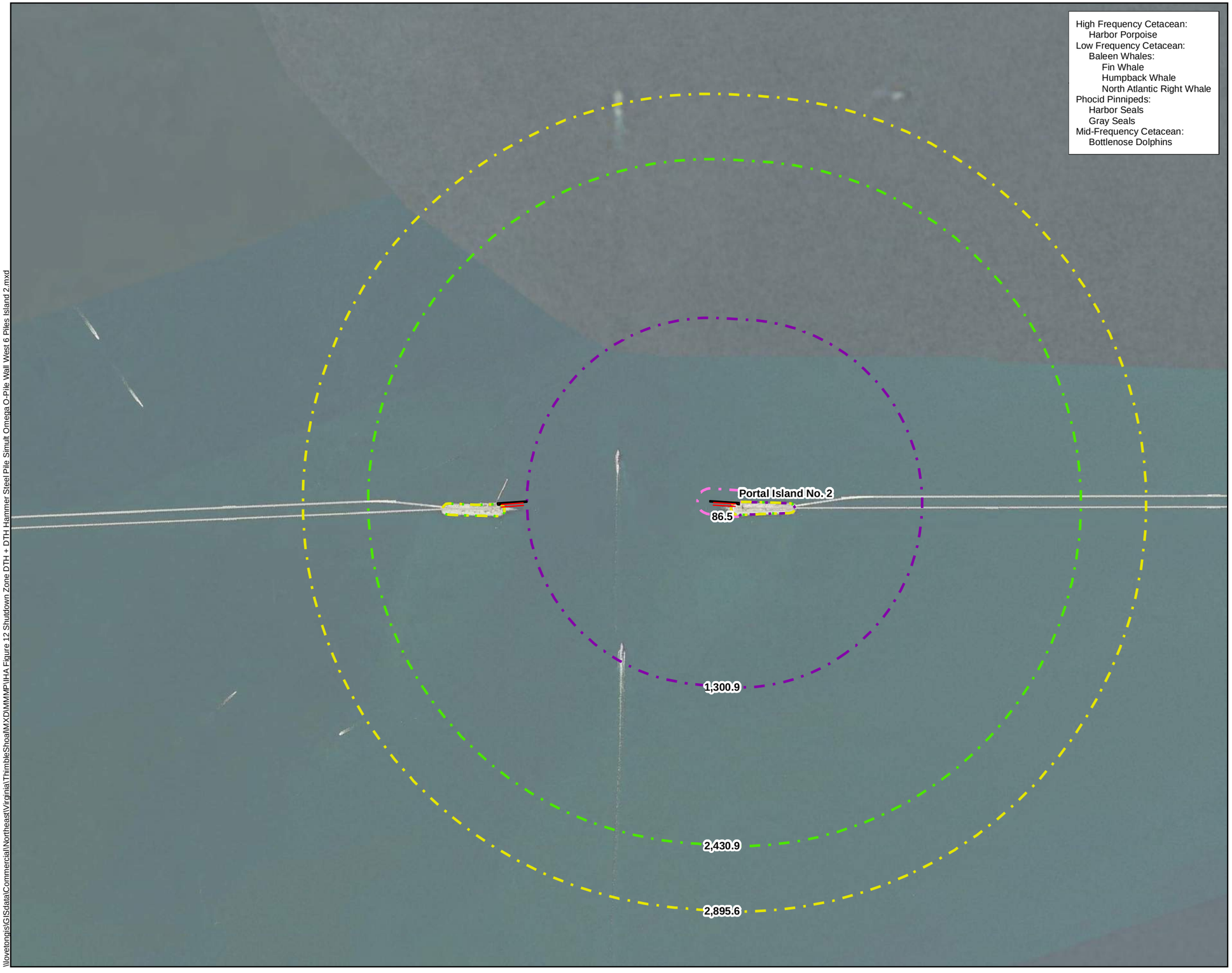
N

CHESAPEAKE TUNNEL JV

MOTT MACDONALD

Figure 4
Distance (meters) to Shutdown Zone Using Two Down-the-Hole Hammers for Simultaneous 36- and 42-in Steel Pile Driving for the Omega Trestle/West O-Pile Wall/ Mooring Piles and Templates – 6 Piles per Day at Portal Island No. 1
Marine Mammal Protection Act
Parallel Thimble Shoal Tunnel

\\lovetongis\GIS\data\Commercial\Northeast\Virginia\ThimbleShoal\MXD\MMMP\IHA Figure 11 Shutdown Zone DTH + DTH Hammer Steel Pile Simult Omega O-Pile Wall West 6 Piles Island 1.mxd



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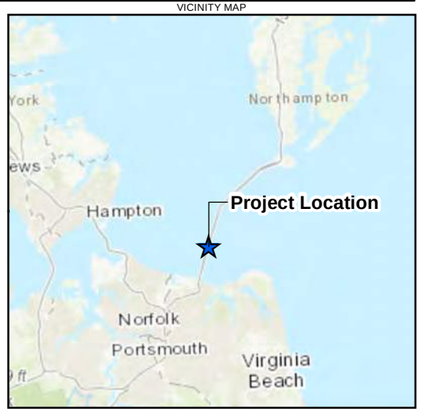


Legend

- O-Pile Wall
- Omega Trestle

6 Down-the-Hole Piles per Day - Shutdown Zone

- 2,895.6 m - High-Frequency Cetaceans
- 2,430.9 m - Low-Frequency Cetaceans
- 1,300.9 m - Phocid Pinnipeds
- 86.5 m - Mid-Frequency Cetaceans

Map Date: 10/3/2019
Source: ESRI 2017, Mott MacDonald 2017
Projection: NAD 1983, State Plane Virginia South, US Feet

0 500 1,000
Meters

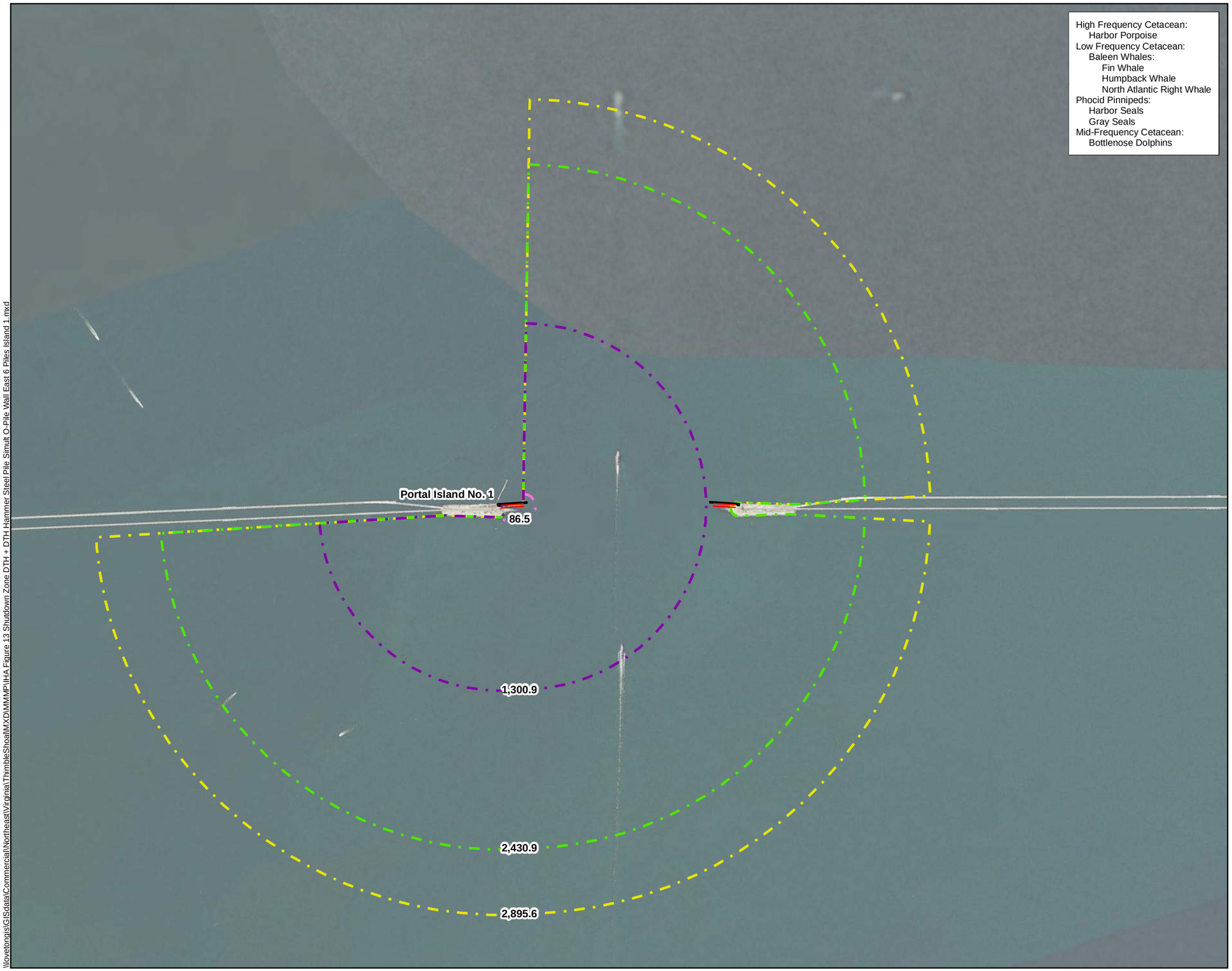
N

CHESAPEAKE TUNNEL JV

MOTT MACDONALD

Figure 5
Distance (meters) to Shutdown Zone Using Two Down-the-Hole Hammers for Simultaneous 36- and 42-in Steel Pile Driving for the Omega Trestle/West O-Pile Wall/ Mooring Piles and Templates – 6 Piles per Day at Portal Island No. 2
Marine Mammal Protection Act
Parallel Thimble Shoal Tunnel

\\lovetongis\GISdata\Commercial\Northeast\Virginia\ThimbleShoal\MXD\MMPI\HA Figure 12 Shutdown Zone DTH + DTH Hammer Steel Pile Simult Omega O-Pile Wall West 6 Piles Island 2.mxd



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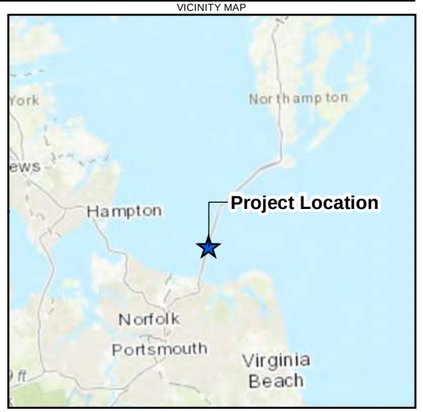


Legend

- O-Pile Wall
- Omega Trestle

6 Down-the-Hole Piles per Day - Shutdown Zone

- 2,895.6 m - High-Frequency Cetaceans
- 2,430.9 m - Low-Frequency Cetaceans
- 1,300.9 m - Phocid Pinnipeds
- 86.5 m - Mid-Frequency Cetaceans

Map Date: 10/3/2019
Source: ESRI 2017, Mott MacDonald 2017
Projection: NAD 1983, State Plane Virginia South, US Feet

0 500 1,000
Meters

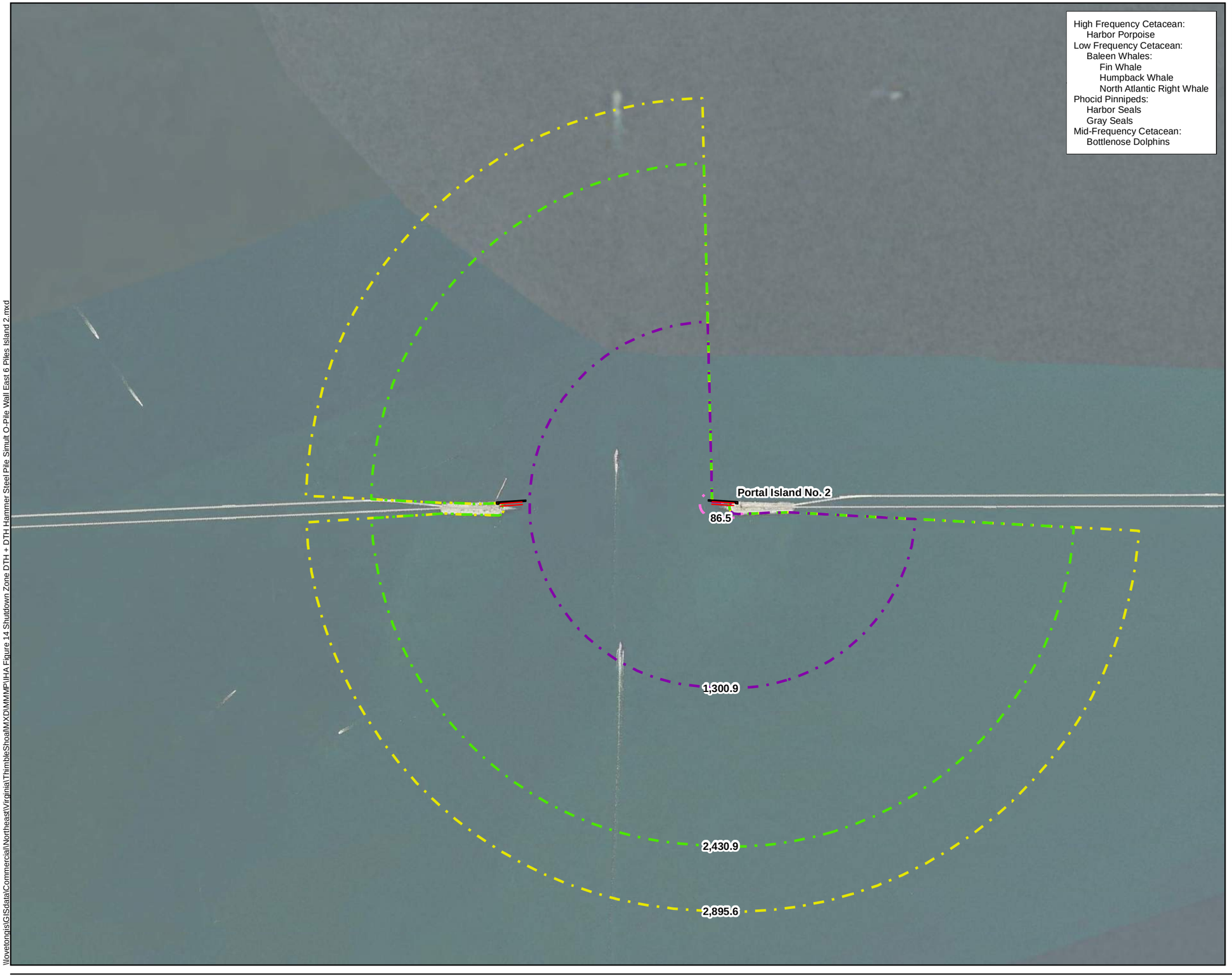
N

CHESAPEAKE TUNNEL JV

MOTT MACDONALD

Figure 6
Distance (meters) to Shutdown Zone Using Two Down-the-Hole Hammers for Simultaneous 36- and 42-in Steel Pile Driving for the East O-Pile Wall – 6 Piles per Day at Portal Island No. 1
Marine Mammal Protection Act
Parallel Thimble Shoal Tunnel

\\lovetonqis\GISdata\Commercial\Northeast\Virginia\ThimbleShoal\MXD\MMPI\IHA Figure 13 Shutdown Zone DTH + DTH Hammer Steel Pile Simult O-Pile Wall East 6 Piles Island 1.mxd



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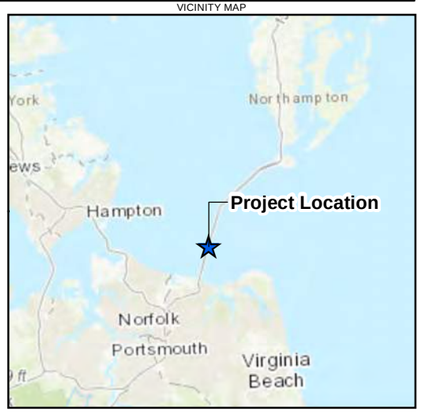


Legend

- O-Pile Wall
- Omega Trestle

6 Down-the-Hole Piles per Day - Shutdown Zone

- 2,895.6 m - High-Frequency Cetaceans
- 2,430.9 m - Low-Frequency Cetaceans
- 1,300.9 m - Phocid Pinnipeds
- 86.5 m - Mid-Frequency Cetaceans

Map Date: 10/3/2019
Source: ESRI 2017, Mott MacDonald 2017
Projection: NAD 1983, State Plane Virginia South, US Feet

0 500 1,000
Meters

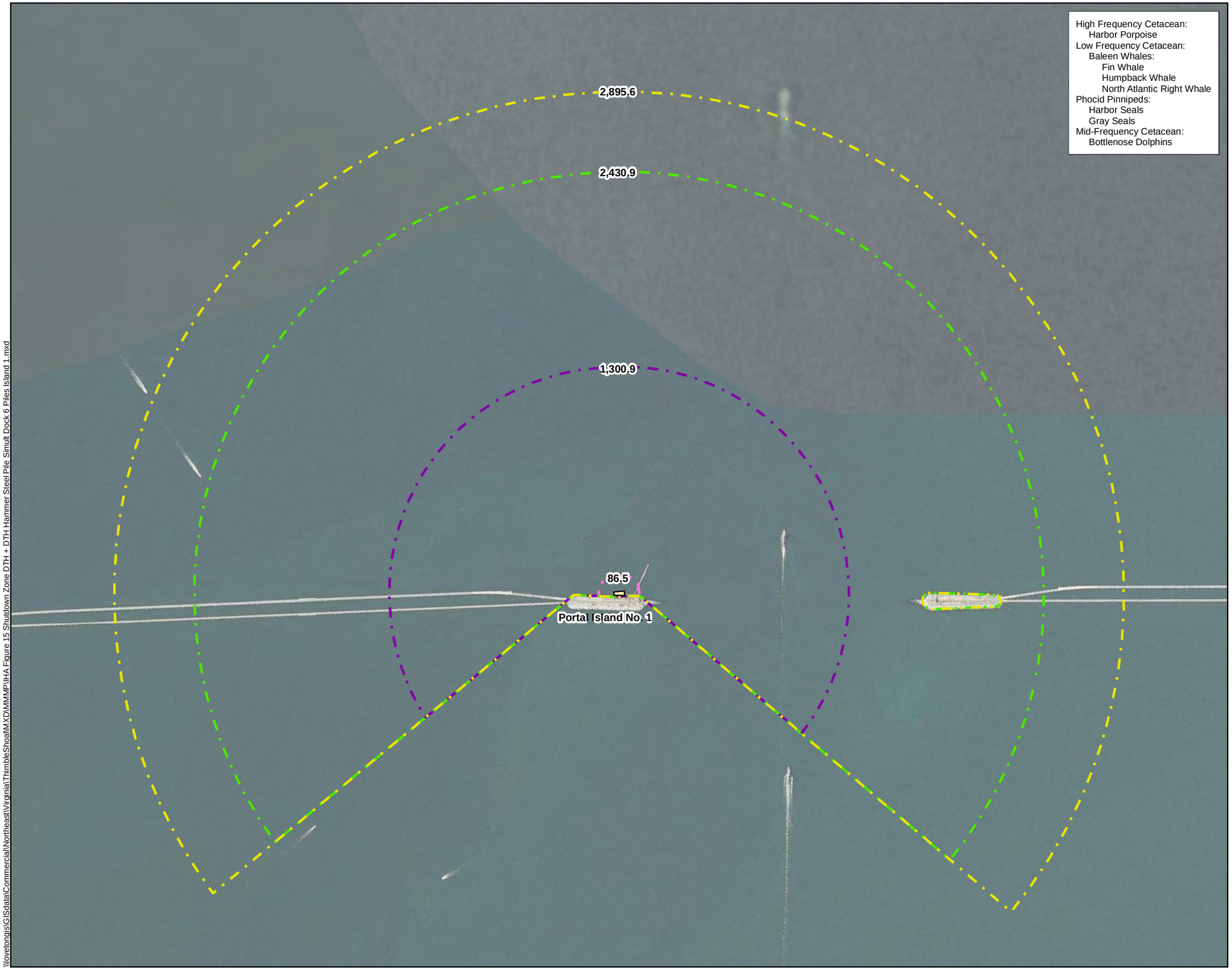
N

CHESAPEAKE TUNNEL JV

MOTT MACDONALD

Figure 7
Distance (meters) to Shutdown Zone Using Two Down-the-Hole Hammers for Simultaneous 36- and 42-in Steel Pile Driving for the East O-Pile Wall – 6 Piles per Day at Portal Island No. 2
Marine Mammal Protection Act
Parallel Thimble Shoal Tunnel

\\lovetongis\GIS\data\Commercial\Northeast\Virginia\ThimbleShoal\MXD\MMPI\HA Figure 14 Shutdown Zone DTH + DTH Hammer Steel Pile Simult O-Pile Wall East 6 Piles Island 2.mxd



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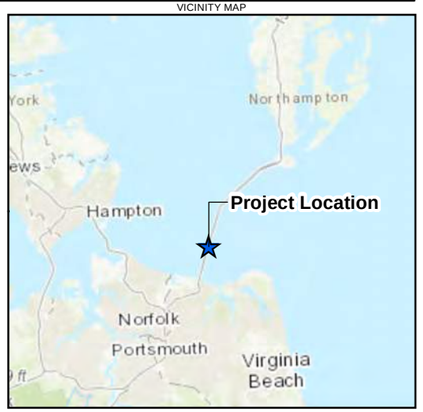


Legend

Temporary Dock

6 Down-the-Hole Piles per Day - Shutdown Zone

- 2,895.6 m - High-Frequency Cetaceans
- 2,430.9 m - Low-Frequency Cetaceans
- 1,300.9 m - Phocid Pinnipeds
- 86.5 m - Mid-Frequency Cetaceans

Map Date: 10/3/2019
Source: ESRI 2018, Mott MacDonald 2017
Projection: NAD 1983, State Plane Virginia South, US Feet

0 400 800
Meters

N

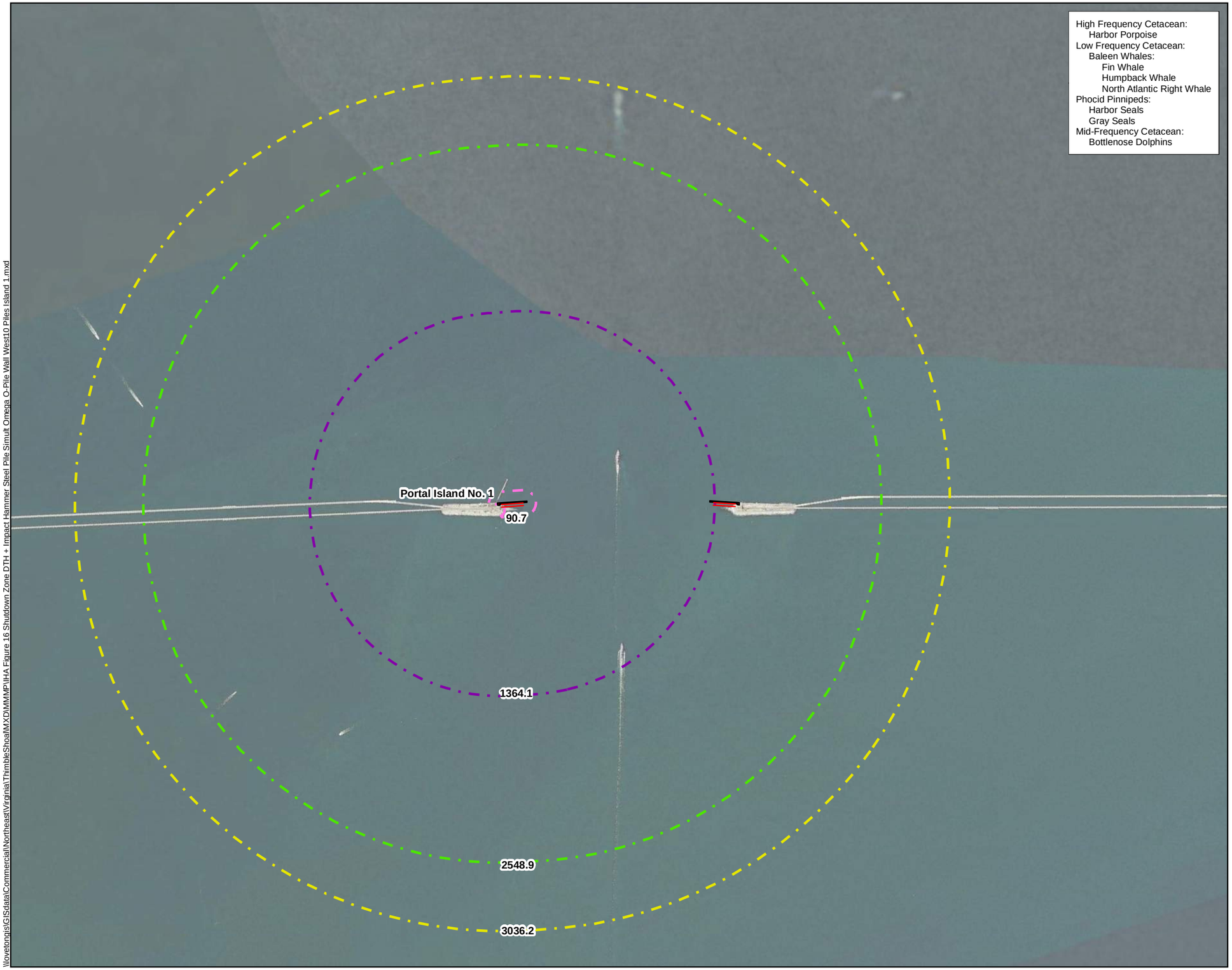
CHESAPEAKE TUNNEL JV

EA

MOTT MACDONALD

Figure 8
Distance (meters) to Shutdown Zone Using Two Down-the-Hole Hammers for Simultaneous 36- and 42-in Steel Pile Driving for the Temporary Dock – 6 Piles per Day at Portal Island No. 1
Marine Mammal Protection Act
Parallel Thimble Shoal Tunnel

\\lovetongis\GISdata\Commercial\Northeast\Virginia\ThimbleShoal\MXD\MMPI\HA Figure 15 Shutdown Zone DTH + DTH Hammer Steel Pile Simult Dock 6 Piles Island 1.mxd



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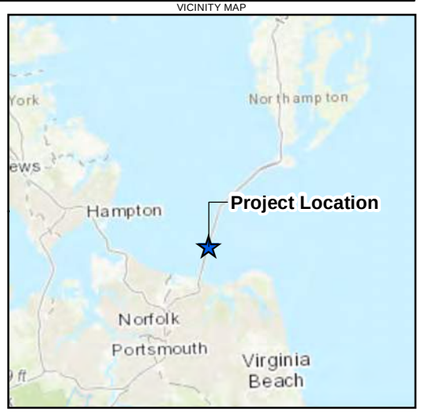


Legend

- O-Pile Wall
- Omega Trestle

3 Down-the-Hole and 10 Impact Piles per Day - Shutdown Zone

- 3036.2 m - High-Frequency Cetaceans
- 2548.9 m - Low-Frequency Cetaceans
- 1364.1 m - Phocid Pinnipeds
- 90.7 m - Mid-Frequency Cetaceans

Map Date: 10/3/2019
Source: ESRI 2017, Mott MacDonald 2017
Projection: NAD 1983, State Plane Virginia South, US Feet

0 500 1,000
Meters

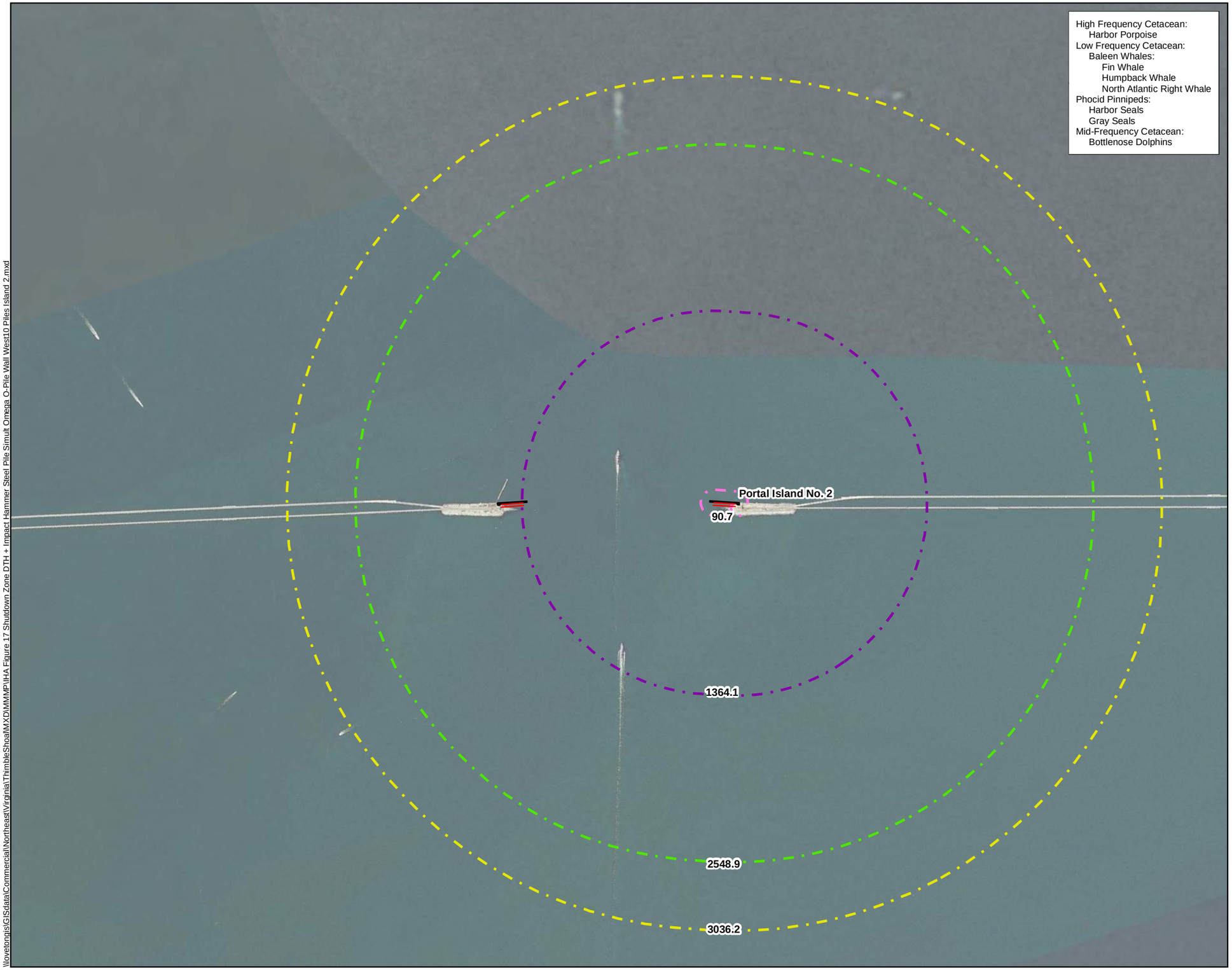
N

CHESAPEAKE TUNNEL JV

MOTT MACDONALD

Figure 9
Distance (meters) to Shutdown Zone Using a Down-the-Hole and Impact Hammers for Simultaneous 36- and 42-in Steel Pile Driving for the Omega Trestle/West O-Pile Wall/ Mooring Piles and Templates – 3 DTH and 10 Piles per Day at Portal Island No. 1
Marine Mammal Protection Act
Parallel Thimble Shoal Tunnel

\\loveton\s\GIS\data\Commercial\Northeast\Virginia\ThimbleShoal\MXD\MMP\IHA Figure 16 Shutdown Zone DTH + Impact Hammer Steel Pile Simult Omega O-Pile Wall West10 Piles Island 1.mxd



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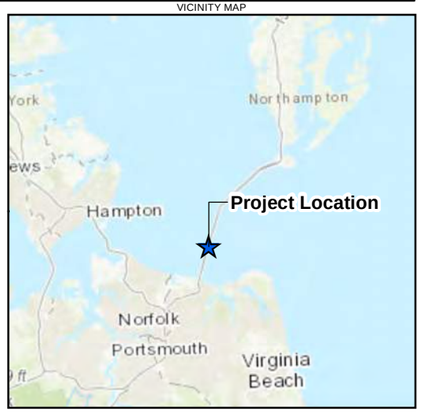


Legend

- O-Pile Wall
- Omega Trestle

3 Down-the-Hole and 10 Impact Piles per Day - Shutdown Zone

- 3036.2 m - High-Frequency Cetaceans
- 2548.9 m - Low-Frequency Cetaceans
- 1364.1 m - Phocid Pinnipeds
- 90.7 m - Mid-Frequency Cetaceans

Map Date: 10/3/2019
Source: ESRI 2017, Mott MacDonald 2017
Projection: NAD 1983, State Plane Virginia South, US Feet

0 500 1,000
Meters

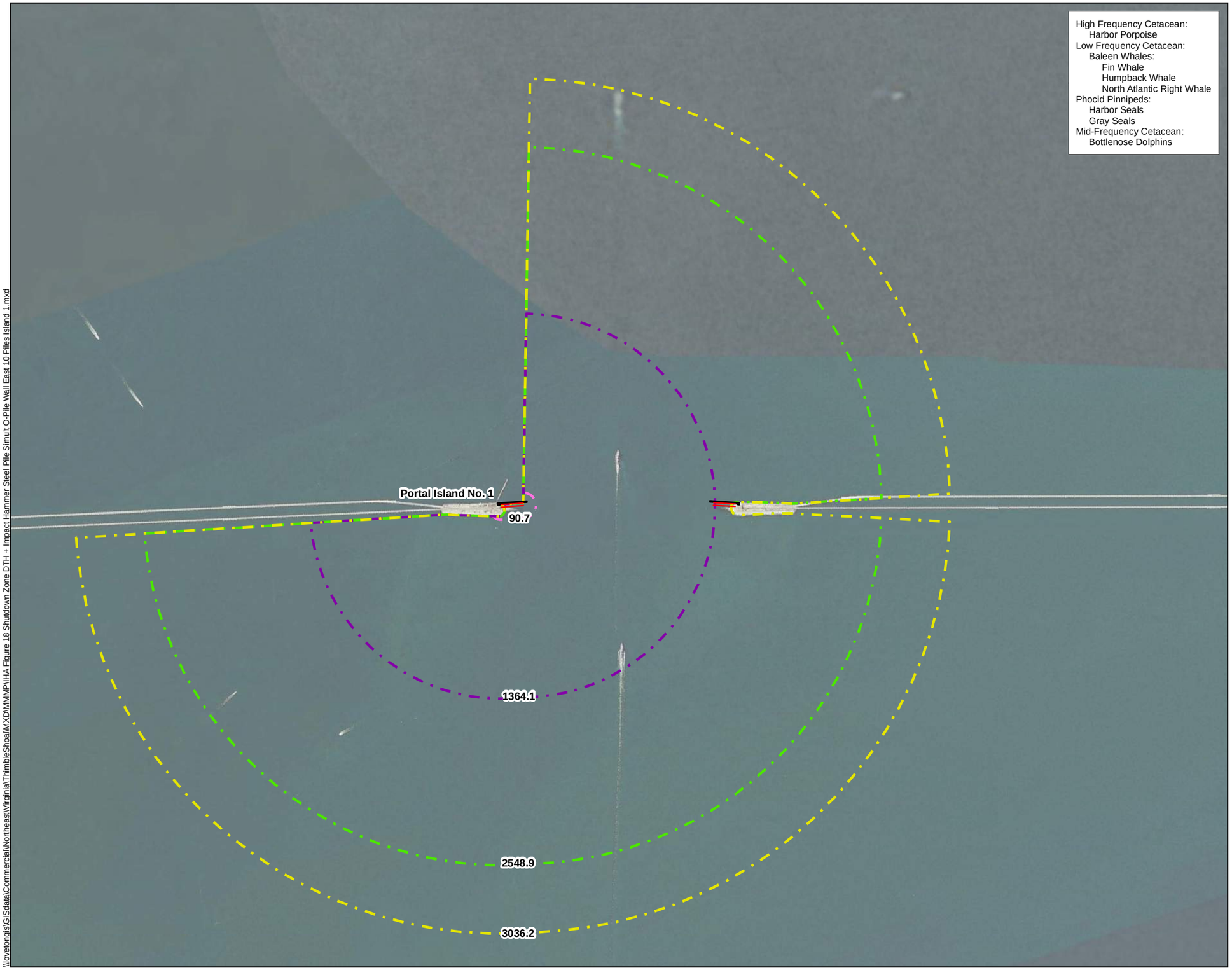
N

CHESAPEAKE TUNNEL JV

MOTT MACDONALD

Figure 10
Distance (meters) to Shutdown Zone Using a Down-the-Hole and Impact Hammers for Simultaneous 36- and 42-in Steel Pile Driving for the Omega Trestle/West O-Pile Wall/ Mooring Piles and Templates – 3 DTH and 10 Piles per Day at Portal Island No. 2
Marine Mammal Protection Act
Parallel Thimble Shoal Tunnel

\\loveton\s\GIS\data\Commercial\Northeast\Virginia\ThimbleShoal\MXD\MMP\IHA Figure 17 Shutdown Zone DTH + Impact Hammer Steel Pile Simult Omega O-Pile Wall West10 Piles Island 2.mxd



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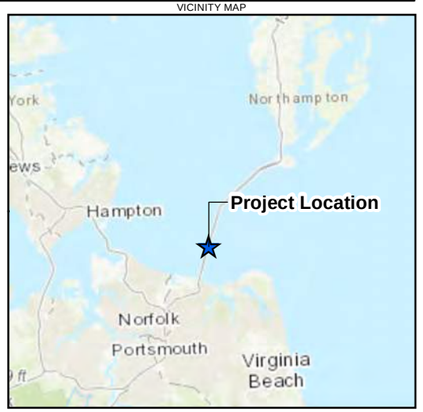


Legend

- O-Pile Wall
- Omega Trestle

3 Down-the-Hole and 10 Impact Piles per Day - Shutdown Zone

- 3036.2 m - High-Frequency Cetaceans
- 2548.9 m - Low-Frequency Cetaceans
- 1,364.1 m - Phocid Pinnipeds
- 90.7 m - Mid-Frequency Cetaceans

Map Date: 10/3/2019
Source: ESRI 2017, Mott MacDonald 2017
Projection: NAD 1983, State Plane Virginia South, US Feet

0 500 1,000
Meters

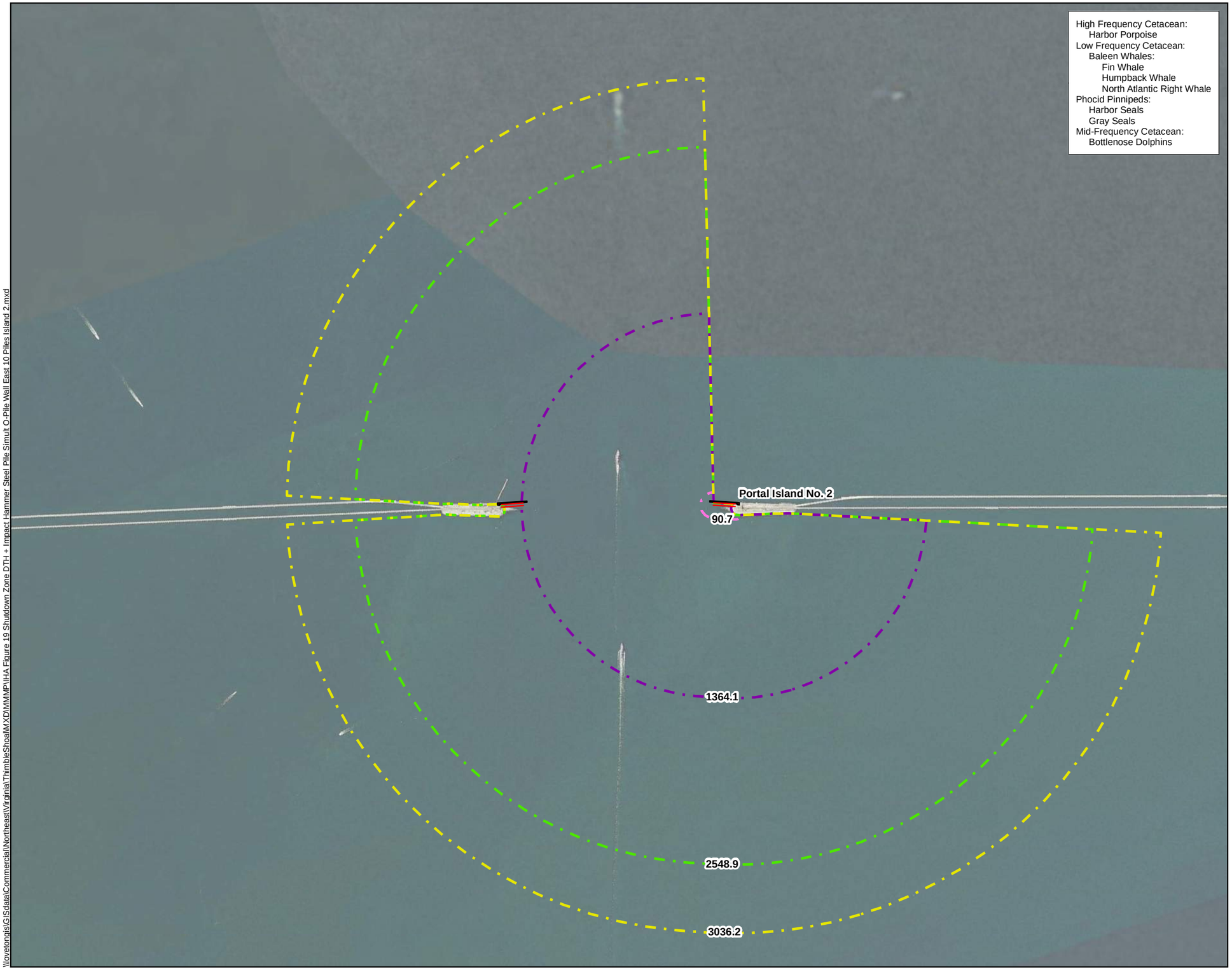
N

CHESAPEAKE TUNNEL JV

MOTT MACDONALD

Figure 11
Distance (meters) to Shutdown Zone Using a Down-the-Hole and Impact Hammers for Simultaneous 36- and 42-in Steel Pile Driving for the East O-Pile Wall – 3 DTH and 10 Impact Piles per Day at Portal Island No. 1
Marine Mammal Protection Act
Parallel Thimble Shoal Tunnel

\\lovetongis\GISdata\Commercial\Northeast\Virginia\ThimbleShoal\MXD\MMPI\IHA Figure 18 Shutdown Zone DTH + Impact Hammer Steel Pile Simult O-Pile Wall East 10 Piles Island 1.mxd



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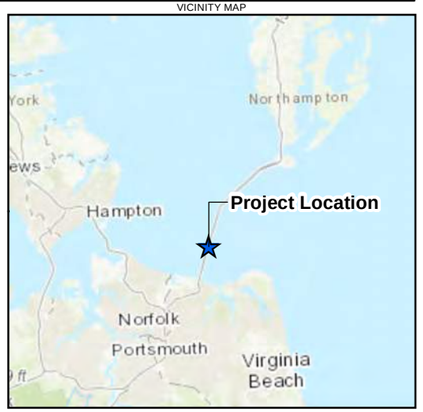


Legend

- O-Pile Wall
- Omega Trestle

3 Down-the-Hole and 10 Impact Piles per Day - Shutdown Zone

- 3036.2 m - High-Frequency Cetaceans
- 2548.9 m - Low-Frequency Cetaceans
- 1364.1 m - Phocid Pinnipeds
- 90.7 m - Mid-Frequency Cetaceans

Map Date: 10/3/2019
Source: ESRI 2017, Mott MacDonald 2017
Projection: NAD 1983, State Plane Virginia South, US Feet

0 500 1,000
Meters

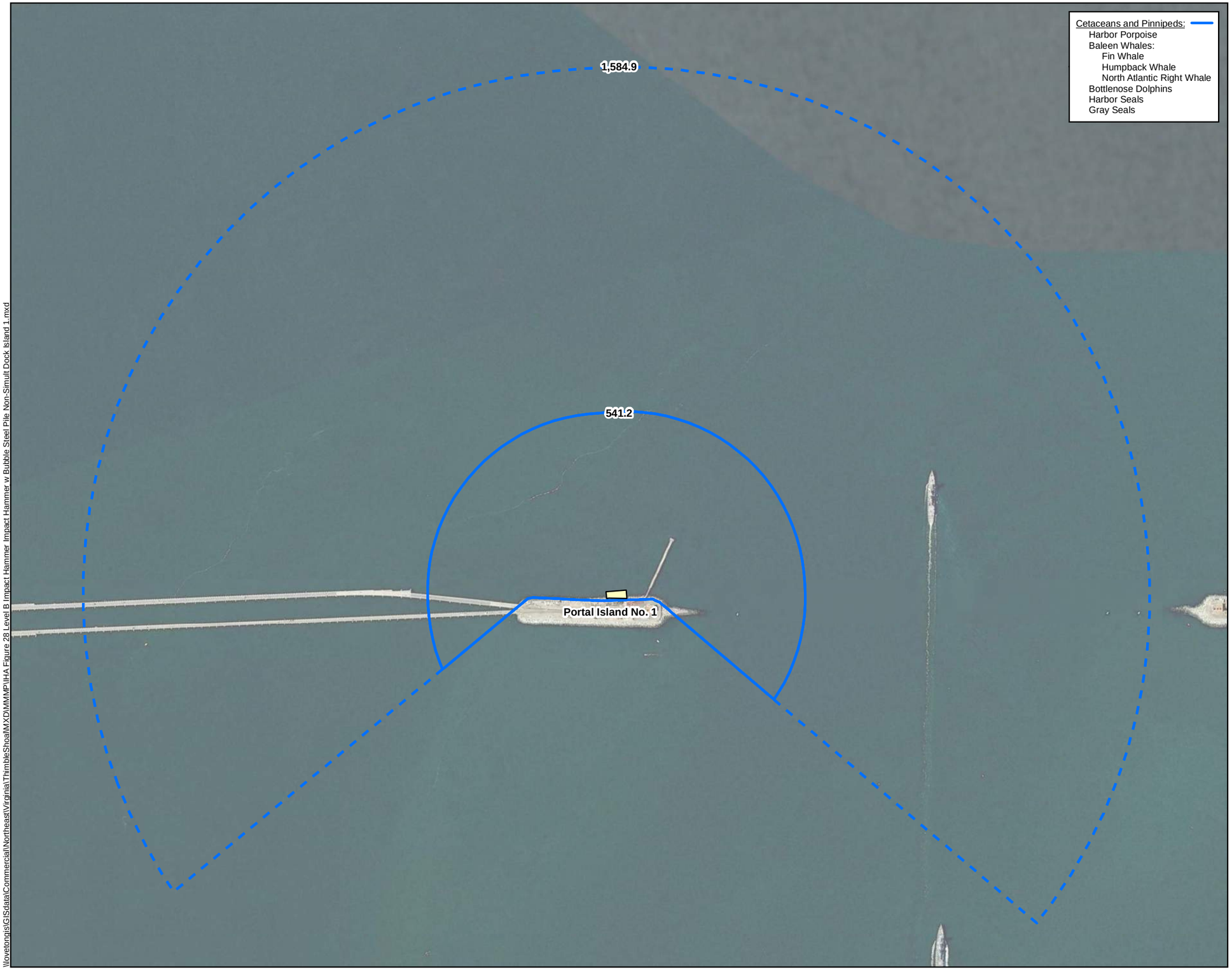
N

CHESAPEAKE TUNNEL JV

MOTT MACDONALD

Figure 12
Distance (meters) to Shutdown Zone Using a Down-the-Hole and Impact Hammers for Simultaneous 36- and 42-in Steel Pile Driving for the East O-Pile Wall – 3 DTH and 10 Impact Piles per Day at Portal Island No. 2
Marine Mammal Protection Act
Parallel Thimble Shoal Tunnel

\\lovetongis\GISdata\Commercial\Northeast\Virginia\ThimbleShoal\MXD\MMPI\IHA Figure 19 Shutdown Zone DTH + Impact Hammer Steel Pile Simult O-Pile Wall East 10 Piles Island 2.mxd



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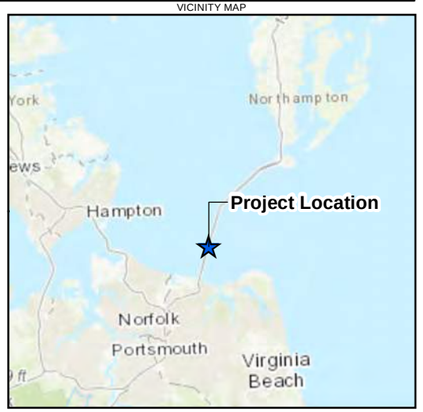


Legend

Temporary Dock

Impact Pile - Level B

1,584.9 m - Cetaceans and Pinnipeds

Impact Pile with Bubble Curtain - Level B

541.2 m - Cetaceans and Pinnipeds

Map Date: 10/3/2019
Source: ESRI 2018, Mott MacDonald 2017
Projection: NAD 1983, State Plane Virginia South, US Feet

0 200 400
Meters

N

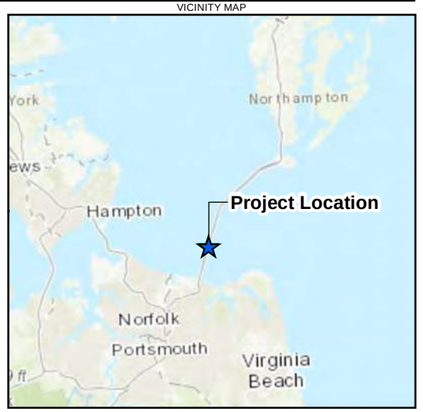
CHESAPEAKE TUNNEL JV

MOTT MACDONALD

Figure **13**
Distance (meters) to Level B Threshold Using an Impact Hammer or Impact Hammer with Bubble Curtain for Non-Simultaneous 36- and 42-in Steel Pile Driving for the Temporary Dock at Portal Island No. 1
Marine Mammal Protection Act
Parallel Thimble Shoal Tunnel

\\lovetongis\GISdata\Commercial\Northeast\Virginia\ThimbleShoal\MXD\MMPIUHA Figure 28 Level B Impact Hammer Impact Hammer w Bubble Steel Pile Non-Simult Dock Island 1.mxd

VICINITY MAP



Legend

⊗ Mooring Dolphin

Impact Pile - Level B

21.5 m - Cetaceans and Pinnipeds

Vibratory Pile - Level B

1,359.4 m - Cetaceans and Pinnipeds

Map Date: 10/3/2019
Source: ESRI 2018, Mott MacDonald 2017
Projection: NAD 1983, State Plane Virginia South, US Feet

0 200 400
Meters

N

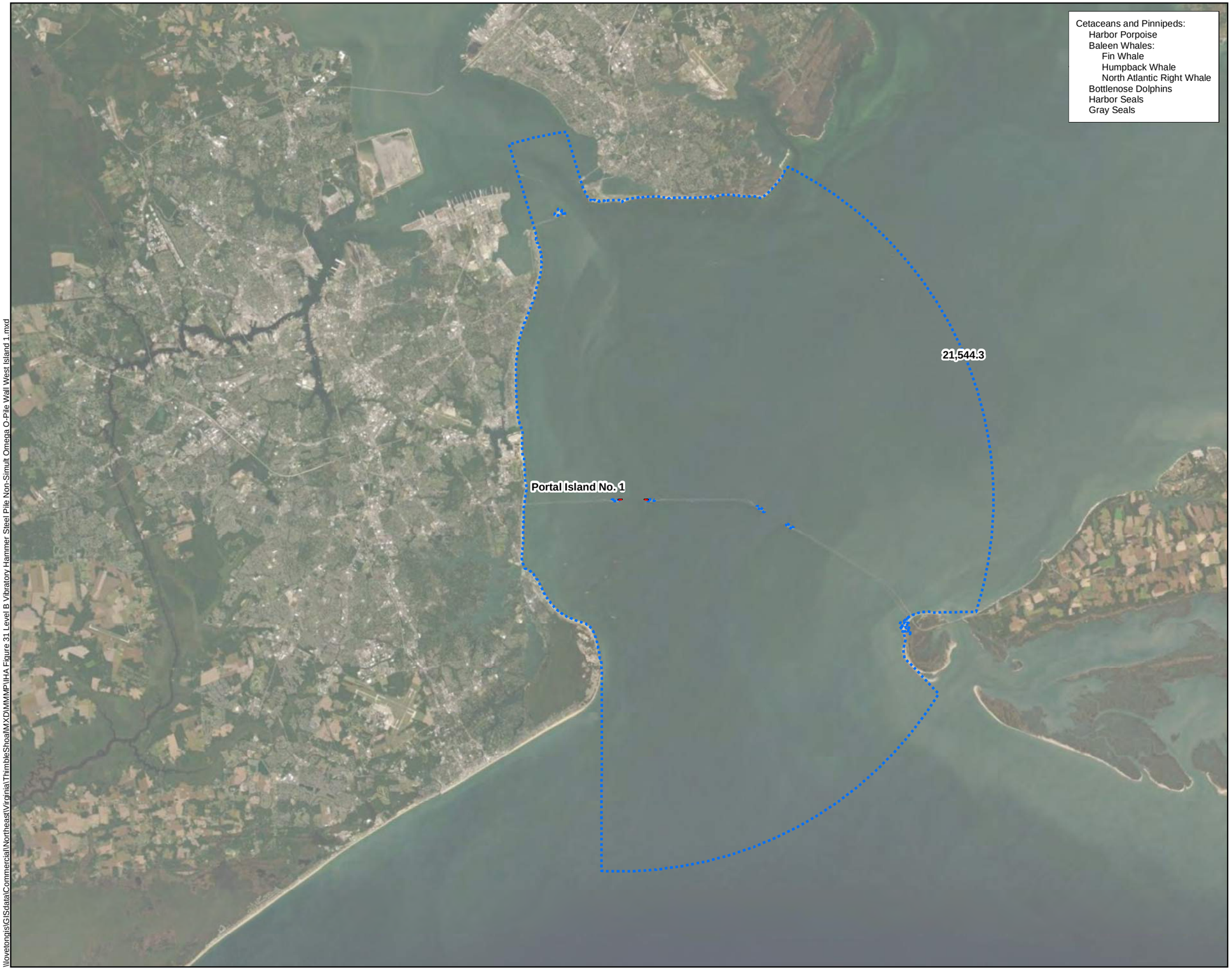
CHESAPEAKE TUNNEL JV

EA

MOTT MACDONALD

Figure **14**
Distance (meters) to Level B Threshold Using an Impact Hammer or Vibratory Hammer for Non-Simultaneous Timber Pile Driving for the Mooring Dolphins at Portal Island Nos. 1 and 2
Marine Mammal Protection Act
Parallel Thimble Shoal Tunnel

\\lovetongis\GIS\data\Commercial\Northeast\Virginia\ThimbleShoal\MXD\MMPI\HA Figure 30 Level B Impact Hammer Vibratory Hammer Timber Pile Non-Simult Mooring Dolphins Island 1 and 2.mxd



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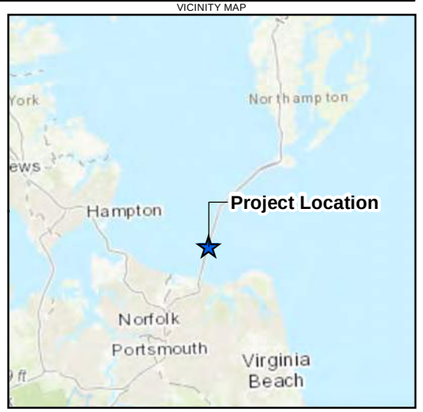


Legend

O-Pile Wall

Omega Trestle

Vibratory Steel Piles - Level B

21,544.3 m - Cetaceans and Pinnipeds

Map Date: 10/3/2019
Source: ESRI 2018, Mott MacDonald 2017
Projection: NAD 1983, State Plane Virginia South, US Feet

0 4,000 8,000
Meters

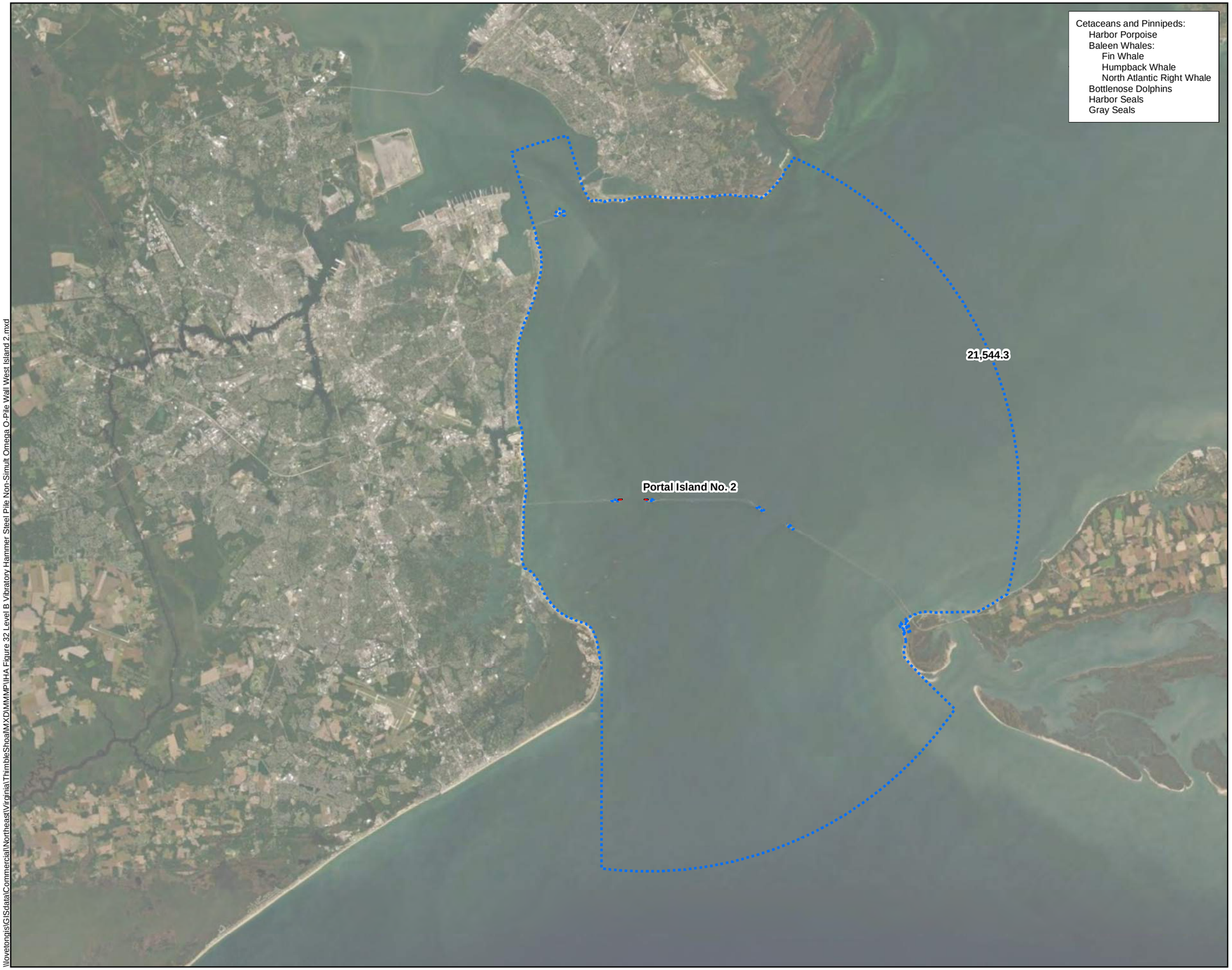
N

CHESAPEAKE TUNNEL JV

MOTT MACDONALD

Figure **15**
Distance (meters) to Level B Threshold Using a Vibratory Hammer for Non-Simultaneous 36- and 42-in Steel Pile Driving for the Omega Trestle/West O-Pile Wall/ Mooring Piles and Templates at Portal Island No. 1
Marine Mammal Protection Act
Parallel Thimble Shoal Tunnel

\\lovetongis\GIS data\Commercial\Northeast\Virginia\ThimbleShoal\MXD\MMP\IHA Figure 31 Level B Vibratory Hammer Steel Pile Non-Simult Omega O-Pile Wall West Island 1.mxd



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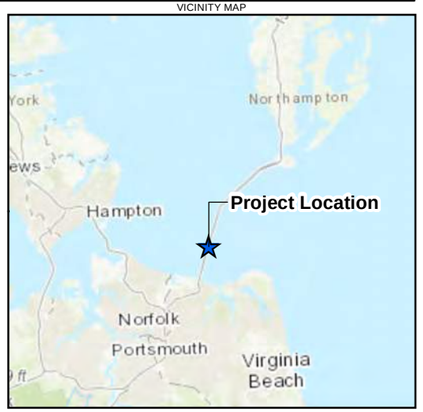


Legend

O-Pile Wall

Omega Trestle

Vibratory Steel Piles - Level B

21,544.3 m - Cetaceans and Pinnipeds

Map Date: 10/3/2019
Source: ESRI 2018, Mott MacDonald 2017
Projection: NAD 1983, State Plane Virginia South, US Feet

0 4,000 8,000
Meters

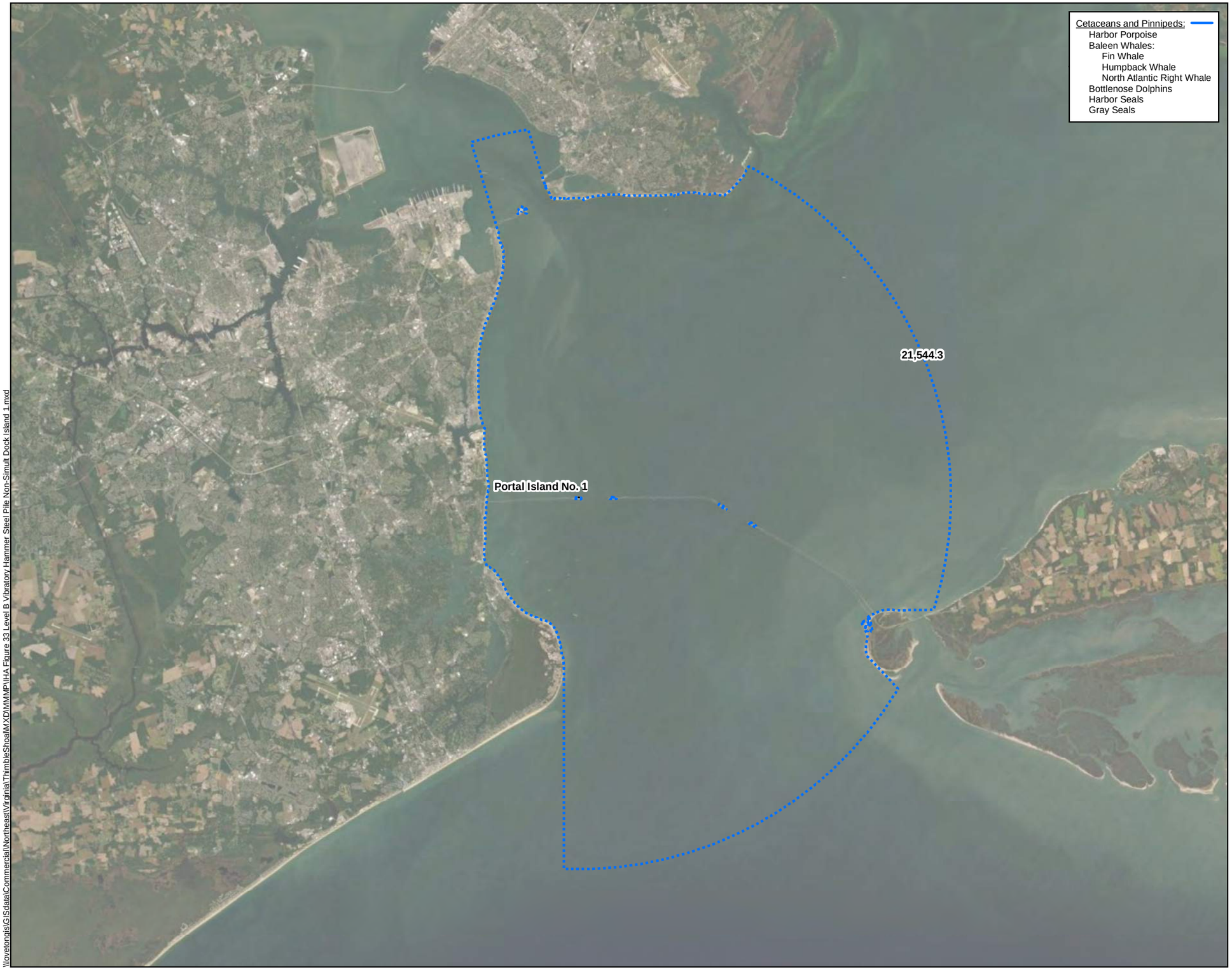
N

CHESAPEAKE TUNNEL JV

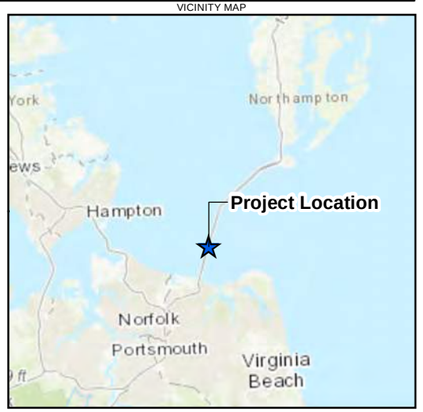
MOTT MACDONALD

Figure **16**
Distance (meters) to Level B Threshold Using a Vibratory Hammer for Non-Simultaneous 36- and 42-in Steel Pile Driving for the Omega Trestle/West O-Pile Wall/ Mooring Piles and Templates at Portal Island No. 2
Marine Mammal Protection Act
Parallel Thimble Shoal Tunnel

\\lovetongis\GISdata\Commercial\Northeast\Virginia\ThimbleShoal\MXD\MMPI\IHA Figure 32 Level B Vibratory Hammer Steel Pile Non-Simult Omega O-Pile Wall West Island 2.mxd



VICINITY MAP



Legend

Temporary Dock

Vibratory Steel Piles - Level B

21,544.3 m - Cetaceans and Pinnipeds

Map Date: 10/3/2019
Source: ESRI 2018, Mott MacDonald 2017
Projection: NAD 1983, State Plane Virginia South, US Feet

0 4,000 8,000
Meters

N

CHESAPEAKE TUNNEL JV

MOTT MACDONALD

Figure **17**
Distance (meters) to Level B Threshold Using a Vibratory Hammer for Non-Simultaneous 36- and 42-in Steel Pile Driving for the Temporary Dock at Portal Island No. 1
Marine Mammal Protection Act
Parallel Thimble Shoal Tunnel

\\lovetongis\GISdata\Commercial\Northeast\Virginia\ThimbleShoal\MXD\MMPI\IHA Figure 33 Level B Vibratory Hammer Steel Pile Non-Simult Dock Island 1.mxd

Daily Marine Mammal Observer Report

Contractor: CTJV / Dragados	Project Name: CTJV Parallel Thimble Shoals Tunnel
NOAA/NMFS Permit: IHA August 1, 2018	Observer Location (Island #): 1
Date: 05/05/2020	Shift Start: 1000
Sunrise: 0618 Sunset: 1803	Shift End: 1825

REMSA MESO

Weather and Visibility Information

Location	Time	Air Temp (F)	Water Temp (F)	Visibility (Good, Fair, Poor)	Cloud Cover (%)	Wave Height (ft)	Wind Speed & Direction	Precipitation	Beaufort Scale
ISLAND 1	1000	50°	47.1°	GOOD	90%	1.8	12 KTS 30° NE	50%	2
ISLAND 1	1430	57°	47.7°	GOOD	90%	1.0	5 KTS SW	40%	1
ISLAND 1	1700	49°	47.1°	GOOD	90%	0.8	4 KTS SW	50%	1

Observer Log

Time	Notes: (pre-watch times, start and stop times for pile driving activities, shift changes, human activities)
0945	CAUGHT SHUTTLE
1000	DISEMBARKED ONTO ISLAND. INFORMED SITE SUPERVISOR. SCANNED MARINE DREDGING NW OF ISLAND TEMP.
1022	SITE SUPERVISOR COMES TO THE CONNEX, HOWEVER NO INSTRUCTION. REMAINING IN CONNEX UNTIL FURTHER NOTICE.
1430	ISLAND WALK, STAND WATCH. ISLAND ALL-CLEAR.
1500	DRY CARGO SHIP TRAVELLING EAST THROUGH THIMBLE CHANNEL.
1514	DRILLING BEGINS
1545	DRILLING STOPS DUE TO HOSE LEAK.
1546	DRILLING RESUMES
1908	UPDATED BY SITE SUPERVISOR OF HIS PLAN TO GROUND STONE UNTIL DARK, THEN RESUME IN THE MORNING
1805	CAUGHT RIDE BACK TO YARD WITH MARIA
1825	BACK AT YARD.

Sighting Log

Time	Species	Total Number	# Adults	# of Juveniles	Closest Distance to Pile Driving	Activity or Behaviors	Shut down? (yes/no)	Time of Shut-down	Time of Start Up	Time last seen

Daily Summary

Species	Total Number	Takes in Zone A	Takes in Zone B	# Shut-Downs	Comments

Observer Names: GABBY THORNTON / EMILY TOYE

Daily Marine Mammal Observer Report

Contractor: CTJV / Dragados	Project Name: CTJV Parallel Thimble Shoals Tunnel
NOAA/NMFS Permit: IHA August 1, 2018	Observer Location (Island #): 1
Date: 03/06/2020	Shift Start: 0630
Sunrise: 0626 Sunset: 1804	Shift End: 1450

Weather and Visibility Information

Location	Time	Air Temp (F)	Water Temp (F)	Visibility (Good, Fair, Poor)	Cloud Cover (%)	Wave Height (ft)	Wind Speed & Direction	Precipitation	Beaufort Scale
ISLAND 1	0700	46°	47.1	POOR	90%	1.3	8KTS 20°NE	100%	1
ISLAND 1	1200	49°	47.1	POOR	90%	3.0	28KTS 333°NW	100%	3

Observer Log

Time	Notes: (pre-watch times, start and stop times for pile driving activities, shift changes, human actiivties)
0630	CAUGHT SHUTTLE
0700	DISEMBARKED ONTO ISLAND INTO MORNING MEETING. INFORMED
	BY SITE SUPERVISOR THAT IT WAS KNOWN TO BE A "LITTLE WHILE"
	BEFORE WE WERE NEEDED. SEEKING SHELTER IN CONNEX FROM
	RAIN. SEWARD DREDGING WEST OF ISLAND ON SOUTH SIDE.
0840	INFORMED BY SITE SUPERVISOR OF PLANS TO START DRILLING
0855	DRILLING BEGINS
1022	STOP IN DRILLING
1050	DRILLING RESUMES AGAIN
1300	DRILLING STOPS ALL TOGETHER
1420	CONFIRMED WORK IS COMPLETE FOR TODAY WITH BOTH
	SUPERVISORS
1430	CAUGHT SHUTTLE BACK TO THE YARD
1450	ARRIVED BACK AT THE YARD

Sighting Log

Time	Species	Total Number	# Adults	# of Juveniles	Closest Distance to Pile Driving	Activity or Behaviors	Shut down? (yes/no)	Time of Shut-down	Time of Start Up	Time last seen

Daily Summary

Species	Total Number	Takes in Zone A	Takes in Zone B	# Shut-Downs	Comments

Observer Names: GABBY THORNTON / EMILY TOYE

Daily Marine Mammal Observer Report

Contractor: CTJV / Dragados	Project Name: CTJV Parallel Thimble Shoals Tunnel
NOAA/NMFS Permit: IHA August 1, 2018	Observer Location (Island #): 1
Date: 03/09/2020	Shift Start: 0630
Sunrise: 0722 Sunset: 1907	Shift End: ~~1745~~ 1800

Weather and Visibility Information

Location	Time	Air Temp (F)	Water Temp (F)	Visibility (Good, Fair, Poor)	Cloud Cover (%)	Wave Height (ft)	Wind Speed & Direction	Precipitation	Beaufort Scale
ISLAND 1	0700	59°	46.6°	GOOD	1%	2.0	15KTS 220° SW	0%	2
ISLAND 1	1200	63°	46.6°	GOOD	1%	1.3	20KTS 220° SW	0%	2
ISLAND 1	1600	72°	49.6°	GOOD	1%	1.2	10KTS 220° SW	0%	1

Observer Log

Time	Notes: (pre-watch times, start and stop times for pile driving activities, shift changes, human actiivties)
0630	CAUGHT THE SHUTTLE
0700	DISEMBARKED ONTO THE ISLAND INTO MORNING MEETING.
	INFORMED THAT WE WOULD NOT BE NEEDED FOR A WHILE.
1000	BEGIN WATCH. SEWARD TUG 237° W OF ISLAND 1. WE ARE
	NOW WORKING ON THE SOUTHWEST SIDES CASINGS.
1030	ALL-CLEAR COMMUNICATED TO OPERATOR.
1055	DRILLING BEGINS INTERMITTENLY WITH GRINDING.
1300	DRILLING STOPS. COMPLETE FOR THE DAY VIA SUPERVISOR.
1310	DRILLING BEGINS AGAIN.
1713	STOP DRILLING. BEGIN POST-WATCH.
1743	POST WATCH COMPLETE AND ALL CLEAR.
1745	CAUGHT ARIDE WITH SARAH FALIN
1800	ARRIVED BACK AT YARD.

Sighting Log

Time	Species	Total Number	# Adults	# of Juveniles	Closest Distance to Pile Driving	Activity or Behaviors	Shut down? (yes/no)	Time of Shut-down	Time of Start Up	Time last seen

Daily Summary

Species	Total Number	Takes in Zone A	Takes in Zone B	# Shut-Downs	Comments

Observer Names: GABBY THORNTON / JOE CALDWELL

Daily Marine Mammal Observer Report

Contractor: CTJV / Dragados	Project Name: CTJV Parallel Thimble Shoals Tunnel
NOAA/NMFS Permit: IHA August 1, 2018	Observer Location (Island #): 1
Date: 03/10/2020	Shift Start: 0630
Sunrise: 0720 Sunset: 1908	Shift End: 1505

Weather and Visibility Information

Location	Time	Air Temp (F)	Water Temp (F)	Visibility (Good, Fair, Poor)	Cloud Cover (%)	Wave Height (ft)	Wind Speed & Direction	Precipitation	Beaufort Scale
ISLAND 1	0700	58°	48.0°	GOOD	80%	1.5	12 KTS 200°	10%	1
ISLAND 1	1200	68°	48.1°	GOOD	70%	2.5	20 KTS 205°	10%	3

Observer Log

Time	Notes: (pre-watch times, start and stop times for pile driving activities, shift changes, human actiivties)
0630	CAUGHT SHUTTLE
0730	DISEMBARKED ONTO ISLAND INTO MORNING MEETING.
0800	MORNING WALK AND BEGIN WATCH.
0830	DRILLING BEGINS
0930	PERSONAL WATERCRAFT TRAVELING THROUGH THE SOUTH BRIDGE
	TRAVELING NE AROUND THE ISLAND.
1050	DRILLING ENDS. FAST PILE COMPLETE
1411	INFORMED OF NO MORE DRILLING FOR THE DAY. CONFIRMED BY
	SUPERINTENDENT AND FORMAN
1442	CAUGHT SHUTTLE
1505	ARRIVED BACK AT THE YARD

Sighting Log

Time	Species	Total Number	# Adults	# of Juveniles	Closest Distance to Pile Driving	Activity or Behaviors	Shut down? (yes/no)	Time of Shut-down	Time of Start Up	Time last seen

Daily Summary

Species	Total Number	Takes in Zone A	Takes in Zone B	# Shut-Downs	Comments

Observer Names: GABBY THORNTON / EMILY TOYE

Daily Marine Mammal Observer Report

Contractor: CTJV / Dragados	Project Name: CTJV Parallel Thimble Shoals Tunnel
NOAA/NMFS Permit: IHA August 1, 2018	Observer Location (Island #): 1
Date: 03/11/2020	Shift Start: 0630
Sunrise: 0719 Sunset: 1909	Shift End: 1930

Weather and Visibility Information

Location	Time	Air Temp (F)	Water Temp (F)	Visibility (Good, Fair, Poor)	Cloud Cover (%)	Wave Height (ft)	Wind Speed & Direction	Precipitation	Beaufort Scale
ISLAND 1	0700	58°	48.9°	GOOD	90%	0.3	6KTS 30°	1/2	1
ISLAND 1	1200	60°	48.9°	GOOD	75%	0.5	10KTS 360°	1/2	1
ISLAND 1	1600	62°	48.9°	GOOD	90%	0.3	12KTS 50°	1/2	1

Observer Log

Time	Notes: (pre-watch times, start and stop times for pile driving activities, shift changes, human actiivties)
0630	CAUGHT SHUTTLE
0700	DISEMBARK ONTO ISLAND
0720	MORNING MEETING FOR SAFETY STAND-DOWN
0815	MORNING MEETING WITH SITE SUPERVISOR + FORMAN
0850	MORNING WALK AROUND THE ISLAND. BEGIN WATCH. SEWARD DREDGING TRUE NORTH OF ISLAND 1.
1040	SURVEY WATERCRAFT 270° W OF ISLAND
1105	TWO TUGS PULLING A SHIP EAST THROUGH THIMBLE CHANNEL
1133	NAVY SHIP TRAVELING WEST THROUGH THIMBLE CHANNEL
1155	SEWARD SHIFT CHANGE.
1350	AIRCRAFT CARRIER AND (3) ESCORTS TRAVELING EAST THROUGH THIMBLE CHANNEL.
1400	BEGIN PRE-WATCH
1430	PRE-WATCH COMPLETE. ALL CLEAR.
1510	DRILLING BEGINS
1540	DRILLING STOPS
1550	DRILLING RESUMES
1630	DRILLING STOPS TO ASSESS A LEAK
1645	DRILLING RESUMES
1832	DRILLING COMPLETE. BEGIN POST WATCH.
1833	CONTAINER SHIP TRAVELING EAST THROUGH THIMBLE CHANNEL
1902	POST WATCH COMPLETE. ALL CLEAR.
1915	CAUGHT SHUTTLE
1930	BACK AT THE YARD.

Sighting Log

Time	Species	Total Number	# Adults	# of Juveniles	Closest Distance to Pile Driving	Activity or Behaviors	Shut down? (yes/no)	Time of Shut-down	Time of Start Up	Time last seen

Daily Summary

Species	Total Number	Takes in Zone A	Takes in Zone B	# Shut-Downs	Comments

Observer Names: GABBY THORNTON / JOE CALDWELL

Daily Marine Mammal Observer Report

Contractor: CTJV / Dragados

NOAA/NMFS Permit: IHA August 1, 2018

Date: 03/12/2020

Sunrise: 0718 Sunset: 1911

Project Name: CTJV Parallel Thimble Shoals Tunnel

Observer Location (Island #): 1

Shift Start: 0755

Shift End: 1450

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Weather and Visibility Information

Location	Time	Air Temp (F)	Water Temp (F)	Visibility (Good, Fair, Poor)	Cloud Cover (%)	Wave Height (ft)	Wind Speed & Direction	Precipitation	Beaufort Scale
ISLAND 1	0700	48°	50.4°	GOOD	1%	0.5	4KTS 50°	10%	1
ISLAND 1	1200	72°	51°	GOOD	75%	1	10KTS 10°	20%	1

Observer Log

Time	Notes: (pre-watch times, start and stop times for pile driving activities, shift changes, human actiivties)
0755	CAUGHT A RIDE WITH SARAH FALIN
0810	DISEMBARK ONTO ISLAND. UPDATED FROM SITE SUPERVISOR WE WOULD
	NOT BE NEEDED FOR A WHILE.
0812	MORNING WALK AROUND THE ISLAND. BEGIN WATCH.
1206	SEWARD SHIFT CHANGE. SEWARD ALSO BEGINS DREDGING ISLAND
	TWO
1215	NOAA SHIP AND LNG CONTAINER SHIP TRAVELING EAST THROUGH
	THIMBLE CHANNEL.
1230	BEGIN 30 MINUTE PRE-WATCH.
1235	NAVY SUB TRAVELING WEST THROUGH THIMBLE CHANNEL.
1320	START DRILLING
1415	DRILLING COMPLETED FOR THE DAY AS CONFIRMED BY
	BOTH SITE SUPERVISORS.
1435	CAUGHT SHUTTLE BACK TO THE YARD.
1450	BACK AT THE YARD.

Sighting Log

Time	Species	Total Number	# Adults	# of Juveniles	Closest Distance to Pile Driving	Activity or Behaviors	Shut down? (yes/no)	Time of Shut-down	Time of Start Up	Time last seen

Daily Summary

Species	Total Number	Takes in Zone A	Takes in Zone B	# Shut-Downs	Comments

Observer Names: GABBY THORNTON / EMILY TOYE

Daily Marine Mammal Observer Report

Contractor: CTJV / Dragados	Project Name: CTJV Parallel Thimble Shoals Tunnel
NOAA/NMFS Permit: IHA August 1, 2018	Observer Location (Island #): island #1
Date: 3/13/20	Shift Start: 6:30 am
Sunrise: 7:18 am Sunset: 7:10 pm	Shift End: 13:35

Weather and Visibility Information

Location	Time	Air Temp (F)	Water Temp (F)	Visibility (Good, Fair, Poor)	Cloud Cover (%)	Wave Height (ft)	Wind Speed & Direction	Precipitation	Beaufort Scale
island 1	7:00	64°	47°	fair	100%	1	10 kt SW	90%	2
island 1	12:00	74°	50°	good	50%	2	12 kt SW	0%	1

Observer Log

Time	Notes: (pre-watch times, start and stop times for pile driving activities, shift changes, human actiivties)
6:30	Shift start, catch bus at yard
6:50	arrive to island 1
7:00 - 7:20	meeting w/ crew, observers make gameplan for best coverage.
7:30	island walk. Seward Marine placing rocks in water w/ crane
7:40	New to observing posts, start pre-watch (Emily @ east pile. Joe @ S pile)
7:45	US Navy ship 172 passing through channel W to E
8:35	US Navy submarine passing through channel E to W
8:50	Rigging up E pile in preparation to drill, pile in water to thread drill
9:20	Cargo ship passing through channel E to W
9:25	South side operation starts grinding. US Navy ship #50 travel W→E in channel.
10:08	NOAA vessel passing through E to W
10:40	S side operation switches from grinding to drilling.
11:09	Finished drilling the pile on South side operation, start post-watch
11:24	Starting to grind E pile w/ intermittent drilling
11:33	US Navy submarine passing through channel W to E.
11:45	Island walk
11:48	Bulk carrier passing through channel E to W. Switch to 100% drilling E pile
12:08	Finished drilling E pile, start post-watch.
12:35	confirmed w/ both supervisors done drilling for the day.
13:20	Tom picked us up to go home
13:35	back to yard, end of shift

Sighting Log

Time	Species	Total Number	# Adults	# of Juveniles	Closest Distance to Pile Driving	Activity or Behaviors	Shut down? (yes/no)	Time of Shut-down	Time of Start Up	Time last seen

Daily Summary

Species	Total Number	Takes in Zone A	Takes in Zone B	# Shut-Downs	Comments

Observer Names: Emily Toye & Joe Caldwell

REMSA, Inc. 142 W Queeens Way Hampton, VA 23669
757-722-0113

Scanned with CamScanner

Daily Marine Mammal Observer Report

Contractor: CTJV / Dragados	Project Name: CTJV Parallel Thimble Shoals Tunnel
NOAA/NMFS Permit: IHA August 1, 2018	Observer Location (Island #): 1
Date: 03/16/2020	Shift Start: 1130
Sunrise: 0712 Sunset: 1913	Shift End: 1452

Weather and Visibility Information

Location	Time	Air Temp (F)	Water Temp (F)	Visibility (Good, Fair, Poor)	Cloud Cover (%)	Wave Height (ft)	Wind Speed & Direction	Precipitation	Beaufort Scale
ISLAND 1	1130	50°	51.4°	FAIR	90%	2.8	21 KTS 70°	20%	3

Observer Log

Time	Notes: (pre-watch times, start and stop times for pile driving activities, shift changes, human actiivties)
1130	CAUGHT THE SHUTTLE
1145	ARRIVED ONTO THE ISLAND AND INFORMED THAT THEY MAY NOT
	HAVE WORK FOR US, BUT TO STAY JUST IN CASE.
1150	WAITING IN THE CONNEX FOR FURTHER UPDATES OUT OF THE WIND.
1435	INFORMED BY SITE SUPERINTENDENT THAT THEY WILL NOT BE
	DRILLING TODAY
1437	RAN TO CATCH SHUTTLE
1452	BACK AT THE YARD.

Sighting Log

Time	Species	Total Number	# Adults	# of Juveniles	Closest Distance to Pile Driving	Activity or Behaviors	Shut down? (yes/no)	Time of Shut-down	Time of Start Up	Time last seen

Daily Summary

Species	Total Number	Takes in Zone A	Takes in Zone B	# Shut-Downs	Comments

Observer Names: GABBY THORNTON / JOE CALDWELL

Daily Marine Mammal Observer Report

Contractor: CTJV / Dragados	Project Name: CTJV Parallel Thimble Shoals Tunnel
NOAA/NMFS Permit: IHA August 1, 2018	Observer Location (Island #): 1
Date: 03/17/2020	Shift Start: 0630
Sunrise: 0710 Sunset: 1914	Shift End: 1229

Weather and Visibility Information

Location	Time	Air Temp (F)	Water Temp (F)	Visibility (Good, Fair, Poor)	Cloud Cover (%)	Wave Height (ft)	Wind Speed & Direction	Precipitation	Beaufort Scale
ISLAND 1	0700	43°	50.4°	GOOD	75%	0.8	9 KTS 320°	10%	1
ISLAND 1	1136	57°	50.2°	GOOD	75%	1	8 KTS 230°	10%	1

Observer Log

Time	Notes: (pre-watch times, start and stop times for pile driving activities, shift changes, human actiivties)
0630	CAUGHT THE SHUTTLE
0700	DISEMBARKED ONTO ISLAND
0715	SPLIT INTO SMALLER GROUPS DUE TO COVID-19 AND
	DISCUSS PRECAUTIONS AND THE DAYS DRA.
0745	BEGIN WATCH
0900	UPDATED BY SITE SUPERVISOR THAT THEY CANNOT DRILL
	DUE TO TRAFFIC ISSUES
0930	WAITING IN THE CONNEX FOR FURTHER INSTRUCTION
1015	UPDATED BY SITE SUPERVISOR THAT DRILLING WILL
	CONTINUE TO BE DELAYED
1155	GOT IN CONTACT WITH SITE SUPERVISOR FOR AN UPDATE.
	INFORMED THAT WE ARE NOT NEEDED.
1215	CAUGHT A SHUTTLE BACK
1229	BACK AT THE YARD.

Sighting Log

Time	Species	Total Number	# Adults	# of Juveniles	Closest Distance to Pile Driving	Activity or Behaviors	Shut down? (yes/no)	Time of Shut-down	Time of Start Up	Time last seen

Daily Summary

Species	Total Number	Takes in Zone A	Takes in Zone B	# Shut-Downs	Comments

Observer Names: GABBY THORNTON / JOE CALDWELL

Daily Marine Mammal Observer Report

Contractor: CTJV / Dragados	Project Name: CTJV Parallel Thimble Shoals Tunnel
NOAA/NMFS Permit: IHA August 1, 2018	Observer Location (Island #): 1
Date: 03/18/2020	Shift Start: 1200
Sunrise: 0709 Sunset: 1915	Shift End: 1418

Weather and Visibility Information

Location	Time	Air Temp (F)	Water Temp (F)	Visibility (Good, Fair, Poor)	Cloud Cover (%)	Wave Height (ft)	Wind Speed & Direction	Precipitation	Beaufort Scale
ISLAND 1	1215	57°	50.7°	GOOD	75%	1.3	12KTS 60°	10%	1
ISLAND 1	1600	60°	50.7°	GOOD	80%	1.0	10KTS 90°	10%	1
ISLAND 1	1730	54°	50.7°	GOOD	80%	0.8	8KTS	10%	1

Observer Log

Time	Notes: (pre-watch times, start and stop times for pile driving activities, shift changes, human actiivties)
1200	CAUGHT SHUTTLE
1215	DISEMBARKED ONTO ISLAND AND UPDATED BY SITE SUPERVISOR
1220	RECIEVED IHA REFERENCE TABLE AND MAPS FROM SARAH FALIN
1220	BEGIN WATCH
1250	30 MIN PRE-WATCH COMPLETE. ALL-CLEAR COMMUNICATED.
1330	DRILLING BEGINS
1414	DRILLING COMPLETE ON NORTH SIDE. BEGIN POST WATCH.
1429	POST WATCH COMPLETE, ALL CLEAR.
1515	BEGIN PRE-WATCH ON SOUTH SIDE
1530	PRE-WATCH ALL CLEAR AND COMMUNICATED
1617	BEGIN DRILLING
1621	SUPERVISOR REQUESTS ONE NMO COME BACK TO THE NORTH SIDE TO DRILL ANOTHER PILE
1622	SOUTH SIDE DRILLING STOPS TO FIX TEMPLATE
1643	SOUTH SIDE DRILLING BEGINS AGAIN
1700	SOUTH SIDE DRILLING STOPS DUE TO ROCK COMPLICATIONS
1723	DRILLING BEGINS ON NORTH SIDE
1750	DRILLING COMPLETE AT BOTH ENDS FOR THE DAY. BEGIN POST WATCH
1800	CAUGHT SHUTTLE
1818	BACK AT THE YARD

Sighting Log

Time	Species	Total Number	# Adults	# of Juveniles	Closest Distance to Pile Driving	Activity or Behaviors	Shut down? (yes/no)	Time of Shut-down	Time of Start Up	Time last seen

Daily Summary

Species	Total Number	Takes in Zone A	Takes in Zone B	# Shut-Downs	Comments

Observer Names: GABBY THORNTON / JOE CALDWELL

Daily Marine Mammal Observer Report

Contractor: CTJV / Dragados	Project Name: CTJV Parallel Thimble Shoals Tunnel
NOAA/NMFS Permit: IHA August 1, 2018	Observer Location (Island #): 1
Date: 03 / 19 / 2020	Shift Start: 0630
Sunrise: 0707 Sunset: 1916	Shift End: 2010

Weather and Visibility Information

Location	Time	Air Temp (F)	Water Temp (F)	Visibility (Good, Fair, Poor)	Cloud Cover (%)	Wave Height (ft)	Wind Speed & Direction	Precipitation	Beaufort Scale
ISLAND 1	0700	57°	52.9	GOOD	90%	1.0	9 KTS 190°	100%	1
ISLAND 1	1200	64°	52.4	GOOD	15%	0.5	1 KTS 260°	10%	1
ISLAND 1	1700	84°	52.6	GOOD	20%	1.1	3 KTS 280°	10%	1

Observer Log

Time	Notes: (pre-watch times, start and stop times for pile driving activities, shift changes, human actiivties)
0630	CAUGHT SHUTTLE
0700	DISEMBARK ONTO ISLAND INTO SPLIT MORNING MEETINGS
0730	BEGIN WATCH
0800	ALL-CLEAR COMMUNICATED TO FORMAN
0900	DRILLING BEGINS. WATER QUALITY TESTING W of ISLAND 1
1035	DRILLING STOPS TO FIX THE DRILL. STAYING ON ACTIVE WATCH.
1141	DRILLING BEGINS AGAIN
1307	(2) PW 100M SE of PILE; FISHING
1310	STOP DRILLING
1355	BEGIN DRILLING AGAIN
1515	DRILLING STOPS
1525	DRILLING BEGINS AGAIN
1725	DRILLING STOPS COMPLETELY. ASKED TO GO TO N SIDE TO COVER PILE DRIVING.
1750	INFORMED BY SITE SUPERVISOR THEY WILL BE DRIVING BOTH PILE REGARDLESS OF LETHAL LIMITATION
1805	SARAH FALIN INFORMED. BEGIN WATCH
1846	DRIVING BEGINS WITH SOFT START.
1916	DRIVING STOPS TO SWITCH PILES
1933	DRIVING BEGINS ON NW PILE
1944	DRIVING COMPLETE FOR THE DAY.
1949	CAUGHT A RIDE BACK TO THE YARD
2010	BACK AT THE YARD.

Sighting Log

Time	Species	Total Number	# Adults	# of Juveniles	Closest Distance to Pile Driving	Activity or Behaviors	Shut down? (yes/no)	Time of Shut-down	Time of Start Up	Time last seen

Daily Summary

Species	Total Number	Takes in Zone A	Takes in Zone B	# Shut-Downs	Comments

Observer Names: GABBY THORNTON / EMILY TOYE

Daily Marine Mammal Observer Report

Contractor: CTJV / Dragados	Project Name: CTJV Parallel Thimble Shoals Tunnel
NOAA/NMFS Permit: IHA August 1, 2018	Observer Location (Island #): 1
Date: 03 / 20 / 2020	Shift Start: 0645
Sunrise: 0706 Sunset: 1917	Shift End: 2010

Weather and Visibility Information

Location	Time	Air Temp (F)	Water Temp (F)	Visibility (Good, Fair, Poor)	Cloud Cover (%)	Wave Height (ft)	Wind Speed & Direction	Precipitation	Beaufort Scale
ISLAND 1	0915	77°	52.3°	FAIR	75%	2.8	15KTS 220°	30%	2
ISLAND 1	1230	86°	54.4°	GOOD	40%	3.0	25KTS 230°	40%	3
ISLAND 1	1700	87°	54.5°	GOOD	30%	2.5	27KTS 240°	40%	2

Observer Log

Time	Notes: (pre-watch times, start and stop times for pile driving activities, shift changes, human actiivties)
0645	CAUGHT A RIDE TO THE ISLAND VIA SARAH PALIN
0900	DISEMBARK ONTO ISLAND INTO SUPERVISOR UPDATE
0915	BEGIN WATCH ON NORTH SIDE
0938	NAVY SHIP TRAVELING EAST THROUGH THIMBLE CHANNEL
0945	POST WATCH COMPLETE. ALL-CLEAR COMMUNICATED TO SUPERVISOR
1029	PILE DRIVING BEGINS WITH A SOFT START
1050	DRIVING STOPS TO SWITCH PILES
1194	PILE DRIVING BEGINS ON NEW PILE WITH A SOFT START
1204	DRIVING COMPLETE. BEGIN POSTWATCH
1234	POST WATCH COMPLETE. ALL CLEAR.
1430	CALLED TO GET AN UPDATE ON SOUTH SIDE. SUPERVISOR INFORMED ME THAT THEY ARE GETTING READY TO DRILL.
1493	DRILLING BEGINS ON SOUTH SIDE.
1447	NOTE: WINDS ARE PUSHING 40 KNOTS OUT OF THE SW
1900	DRILLING STOPS FOR THE DAY. BEGIN POSTWATCH.
1930	POST WATCH COMPLETE. ALL CLEAR
1950	CAUGHT A SHUTTLE BACK TO THE YARD
2010	BACK AT THE YARD.

Sighting Log

Time	Species	Total Number	# Adults	# of Juveniles	Closest Distance to Pile Driving	Activity or Behaviors	Shut down? (yes/no)	Time of Shut-down	Time of Start Up	Time last seen

Daily Summary

Species	Total Number	Takes in Zone A	Takes in Zone B	# Shut-Downs	Comments

Observer Names: GABBY THORNTON / EMILY TOYE

Daily Marine Mammal Observer Report

Contractor: CTJV / Dragados	Project Name: CTJV Parallel Thimble Shoals Tunnel
NOAA/NMFS Permit: IHA August 1, 2018	Observer Location (Island #): 1
Date: 21 - March	Shift Start: 0630
Sunrise: 0705 Sunset: 1916	Shift End: 1140

Weather and Visibility Information

Location	Time	Air Temp (F)	Water Temp (F)	Visibility (Good, Fair, Poor)	Cloud Cover (%)	Wave Height (ft)	Wind Speed & Direction	Precipitation	Beaufort Scale
Conex	0900	63.1	53.1	Good	100%	3 feet	W 3.9 kts	None	2

Observer Log

Time	Notes: (pre-watch times, start and stop times for pile driving activities, shift changes, human activities)
0630	Arrive at ~~Island~~ yard, catch van for Island 1
0650	Arrive at Island 1
0705	Meet with crew - testing warmers on mat to be used Monday, would like MMOs to stay.
0725	Island walk and new MMO orientation
1036	Crew informed MMOs that we will be having a break at 30 minutes
1128	catch van to yard
1140	Arrive at yard

Sighting Log

Time	Species	Total Number	# Adults	# of Juveniles	Closest Distance to Pile Driving	Activity or Behaviors	Shut down? (yes/no)	Time of Shut-down	Time of Start Up	Time last seen

Daily Summary

Species	Total Number	Takes in Zone A	Takes in Zone B	# Shut-Downs	Comments

Observer Names: Elizabeth Janz / Sibly McCullers

Daily Marine Mammal Observer Report

Contractor: CTJV / Dragados	Project Name: CTJV Parallel Thimble Shoals Tunnel
NOAA/NMFS Permit: IHA August 1, 2018	Observer Location (Island #): 1
Date: 23 March 2020	Shift Start: 0630
Sunrise: 0702 Sunset: 1918	Shift End: 1813

Weather and Visibility Information

Location	Time	Air Temp (F)	Water Temp (F)	Visibility (Good, Fair, Poor)	Cloud Cover (%)	Wave Height (ft)	Wind Speed & Direction Knots	Precipitation	Beaufort Scale
Connex	0655	48.7	48.9	Poor	100%	8.5	ENE 19.4	Heavy Rain	6
Connex	1123	51.6	48.9	Fair	100%	7.5	NNW 11.7	none	5

Observer Log

Time	Notes: (pre-watch times, start and stop times for pile driving activities, shift changes, human actiivties)
0630	Catch bus to Island 1
0650	Arrive at Island 1
0700	Meeting with crew
0750	Island walk
0813	Navy vessel travelling E to W thru channel
0828	L. canadensis drifting/diving
0835	Submarine travelling E to W thru channel
0930	Cargo ship travelling W to E thru channel
0953	Lifting Impact hammer from temp. dock
1003	Navy vessel 90 travelling E to W thru channel
1008	Hammer placed on pile
1013	gave "all clear" to crew
1015	Begin soft start protocol
1021	Full force hammer
1022	stop to switch from W to E pile
1027	Hammer placed on E pile
1029	Pile driving begins and ends
1059	End watch
1405	Hoses connected to crane for drilling with DTH hammer
1411	Begin watch
1436	Crew working to place DTH hammer
1454	Begin DTH pile driving with low pressure
1509	Cargo ship travelling E to W
1517	Navy vessel 94 W to E thru channel
1527	container ship travelling E to W thru channel

Sighting Log

Time	Species	Total Number	# Adults	# of Juveniles	Closest Distance to Pile Driving	Activity or Behaviors	Shut down? (yes/no)	Time of Shut-down	Time of Start Up	Time last seen
0808	L. canadensis	2	2	0	35 m	Foraging	No	N/A	N/A	0822

Daily Summary

Species	Total Number	Takes in Zone A	Takes in Zone B	# Shut-Downs	Comments

Observer Names: Elizabeth Jantz / Joe Caldwell

REMSA, Inc. 142 W Queeens Way Hampton, VA 23669
757-722-0113

Daily Marine Mammal Observer Report

Contractor: CTJV / Dragados	Project Name: CTJV Parallel Thimble Shoals Tunnel
NOAA/NMFS Permit: IHA August 1, 2018	Observer Location (Island #):
Date: 23-March-2020	Shift Start:
Sunrise: Sunset:	Shift End:

Weather and Visibility Information

Location	Time	Air Temp (F)	Water Temp (F)	Visibility (Good, Fair, Poor)	Cloud Cover (%)	Wave Height (ft)	Wind Speed & Direction	Precipitation	Beaufort Scale

Observer Log

Time	Notes: (pre-watch times, start and stop times for pile driving activities, shift changes, human actiivties)
1537	Pressure added to drill (became louder)
1632	End drilling
1646	Cargo ship W to E thru channel
1652	Cargo ship W to E thru channel
1702	End of watch
1820	catch van to yard
1813	arrive at Yard

Sighting Log

Time	Species	Total Number	# Adults	# of Juveniles	Closest Distance to Pile Driving	Activity or Behaviors	Shut down? (yes/no)	Time of Shut-down	Time of Start Up	Time last seen

Daily Summary

Species	Total Number	Takes in Zone A	Takes in Zone B	# Shut-Downs	Comments

Observer Names: _____

REMSA MESO

Daily Marine Mammal Observer Report

Contractor: CTJV / Dragados	Project Name: CTJV Parallel Thimble Shoals Tunnel
NOAA/NMFS Permit: IHA ~~August 1, 2018~~ March 10, 2020	Observer Location (Island #): 1
Date: 28-March-2020	Shift Start: 0630
Sunrise: 0654 Sunset: 1922	Shift End: 1330

Weather and Visibility Information

Location	Time	Air Temp (F)	Water Temp (F)	Visibility (Good, Fair, Poor)	Cloud Cover (%)	Wave Height (ft)	Wind Speed & Direction (Kts)	Precipitation	Beaufort Scale
Pier	0730	56.3	50.4	Good	50%	≤ 2.6	SE 11.1	none	2
Pier	1100	58.1	50.7	Good	10%	3	E 8	none	2

Observer Log

Time	Notes: (pre-watch times, start and stop times for pile driving activities, shift changes, human actiivties)
0630	catch bus to Island 1
0650	Arrive at Island 1
0655	Robert informs us it will be a while until we are needed due to issues encountered by night shift.
0705	Meeting with crew
0825	Tugboat pulling barge WNW through channel; Seaward marine actively working with dappler in water
0935	Cargo ship travelling W to E through channel
1010	Island walk, fog rolling in (N to S)
1030	Seaward Marine idling
1100	Pair of whales seen 300° SW of pier 1,200m from observers travelling further from pier last seen 1110
1144	Cargo ship travelling E to W through channel
1236	Crew called a van to pick up MMOs, not going to need us today
1308	Catch van to yard
1330	arrive at yard

Sighting Log

Time	Species	Total Number	# Adults	# of Juveniles	Closest Distance to Pile Driving	Activity or Behaviors	Shut down? (yes/no)	Time of Shut-down	Time of Start Up	Time last seen

Daily Summary

Species	Total Number	Takes in Zone A	Takes in Zone B	# Shut-Downs	Comments

Observer Names: Elizabeth Jantz / GABBY THORNTON

REMSA, Inc. 142 W Queeens Way Hampton, VA 23669
757-722-0113

Protected Species Sighting & Shut-Down Form

Corresponding Sighting # for the Day: 1 Shutdown # for the Day: Ø

Date (DD/MM/YYYY): 03/28/2020 **Time of Initial Sighting** 1100 **Time Animals Left Area:** 1115

Project Name: CTJV Thimble Shoals Parallel Tunnel **Island No.** 1

Areas Observed: N + S PILE SITES **Upland Pile Driving** N/A **In-Water Pile Driving** N/A

Air Temp: 56 | **Water Temp:** 50.7 **Wave Height** 3ft **Beaufort Sea State** 2

Weather Conditions:

Percent Cloud Cover: 25% **Percent Glare:** 10% **Visibility Issues:** NONE

Animal Location & Distance to Pile Driving: 300° NW of OBSERVER; 200' S of PIER; 1000+ M OUT
Type of Pile Driving NONE
Distance From Observer When Initially Observed: 1000+ M
Species Observed: N/A
Number of Animals Sighted (include age classes): 2; 1 ADULT 1 JUVENILE
Sex of Animals Observed: N/A
Animal Behaviors Observed: SWIMMING, SURFACING
Animal Heading/Direction: SW
Human Activities in Area: (2) SENARD MARINE TUGS MOORED TO MOORING BUOYS.

Shutdown Information

Time Begin:	1100
Time End:	1115
Total Down Time (mins):	Ø MIN

Shutdown # for the day: Ø

Video or Photograph Taken?: No (Yes)

Brief Description of Footage or Photograph: IN THIS VIDEO YOU CAN SEE ONE LARGE BLOW 48 SECONDS IN. THE TYPE OF ANIMAL IS UNKNOWN. BEST JUDGEMENT WOULD BE WHALE.

Notes:

REMSA, Inc.
124 W. Queens Way
Hampton, VA 23669
(757)722-0113

REMSA MESO

Observer Name / Signature

GABBY THORNTON

Daily Marine Mammal Observer Report

Contractor: CTJV / Dragados	Project Name: CTJV Parallel Thimble Shoals Tunnel
NOAA/NMFS Permit: IHA August 1, 2018	Observer Location (Island #): 1
Date: 24 - March - 2020	Shift Start: 0800
Sunrise: 0653 Sunset: 1923	Shift End: 1403

Weather and Visibility Information

Location	Time	Air Temp (F)	Water Temp (F)	Visibility (Good, Fair, Poor)	Cloud Cover (%)	Wave Height (ft)	Wind Speed & Direction (Kts)	Precipitation	Beaufort Scale
Pier	0825	52.9	52.7	Poor	100% Fog	2.6	N 4.1	none / Fog	2

Observer Log

Time	Notes: (pre-watch times, start and stop times for pile driving activities, shift changes, human actiivties)
0500	catch a ride to Island 1
0820	Arrive at Island 1
0825	Begin watch
0902	Gave all clear for crew to start
0905	Fishing boat approaching Island south of pier travelling W to E then turning south letting the boat idle / drift south, circled on its port side once then continued travelling south
0929	Seaward marine working in water N of Island
0933	fishing boat travelling W to E under bridge S of Island
1003	turning on the air, DTH hammer begins drilling, 2 fishing boats along the island south of DTH
1024	stopped drilling to adjust casing
1128	resume drilling
1046	stopped drilling
1056	Fishing boats have departed
1106	resume drilling
1129	Seaward Marine no longer working in water
1142	stopped drilling, flushing the line
1202	End watch
1216	call from Vince, that is the only casing they are doing today
1343	catch ride to yard
1403	arrive at yard

Sighting Log

Time	Species	Total Number	# Adults	# of Juveniles	Closest Distance to Pile Driving	Activity or Behaviors	Shut down? (yes/no)	Time of Shut-down	Time of Start Up	Time last seen

Daily Summary

Species	Total Number	Takes in Zone A	Takes in Zone B	# Shut-Downs	Comments

Observer Names: Elizabeth Jantz

REMSA, Inc. 142 W Queeens Way Hampton, VA 23669
757-722-0113

REMSA MESO

Daily Marine Mammal Observer Report

Contractor: CTJV / Dragados	Project Name: CTJV Parallel Thimble Shoals Tunnel
NOAA/NMFS Permit: IHA August 1, 2018	Observer Location (Island #): 1
Date: 20-March-2020	Shift Start: 0630
Sunrise: 0651 Sunset: 1924	Shift End: 1750

Weather and Visibility Information

Location	Time	Air Temp (F)	Water Temp (F)	Visibility (Good, Fair, Poor)	Cloud Cover (%)	Wave Height (ft)	Wind Speed & Direction (Kts)	Precipitation	Beaufort Scale
Pier	0800	50	52.2	Fair	100%	3.3	NE 15	none/fog	3

Observer Log

Time	Notes: (pre-watch times, start and stop times for pile driving activities, shift changes, human actiivties)
0630	Catch bus to Island 1
0690	Arrive at Island 1
0700	Meet with crew
0726	Island walk - heavy fog, seaward marine using grappler in water
0748	walk out to pier to start watch
0805	Crew working to place threaded casing in template
0830	tugboat travelling N to S beyond pier
0847	pile placed on rock
0853	fishing boat idling SW of Island 1 W of bridge
0904	Navy vessel travelling W to E through channel (#61 on side)
0911	tugboat pulling barge travelling W to E through channel
0941	Crew unloading casings from truck
0945	Drilling begins
0951	Hapag - Lloyd cargo ship travelling E to W through channel
0953	Evergreen Ever Legion travelling W to E through channel
0958	Crew also working to unload truck of casing / piles
1009	speedboat travelling E to W through channel
1010	for some reason the DTH will not hit - drill and casing moving, no hammering sound
1013	DTH begins hitting
1033	pile in sand, DTH stops and is flushed with intermittant hitting
1054	smoke coming out of pile, Crew says, "we lost the hammer"
1103	Crew working to flush pile while also unloading piles from truck with a ~~same~~ different crane

Sighting Log

Time	Species	Total Number	# Adults	# of Juveniles	Closest Distance to Pile Driving	Activity or Behaviors	Shut down? (yes/no)	Time of Shut-down	Time of Start Up	Time last seen

Daily Summary

Species	Total Number	Takes in Zone A	Takes in Zone B	# Shut-Downs	Comments

Observer Names: Elizabeth Janz / Gabby Thornton

Daily Marine Mammal Observer Report

Contractor: CTJV / Dragados	Project Name: CTJV Parallel Thimble Shoals Tunnel
NOAA/NMFS Permit: IHA August 1, 2018	Observer Location (Island #):
Date:	Shift Start:
Sunrise: Sunset:	Shift End:

Weather and Visibility Information

Location	Time	Air Temp (F)	Water Temp (F)	Visibility (Good, Fair, Poor)	Cloud Cover (%)	Wave Height (ft)	Wind Speed & Direction (Kts)	Precipitation	Beaufort Scale
Pier	1327	69	55.8	Good	80%	3	SW 1.9	none	1

Observer Log

Time	Notes: (pre-watch times, start and stop times for pile driving activities, shift changes, human actiivties)
1106	Shutting down air to DTH
1113	Seaward Marine no longer working in water
1119	Navy vessel travelling W to E through channel
1124	End watch
1300	Return to pier, start watch; seaward marine has a barge ~~in~~ West of channel, south of Island 2 working in the water and a second barge NW of Island 1
1308	Fishing yacht travelling E to W through channel
1310	Tug boat pulling barge travelling W to E through channel
1317	Tugboat pulling barge travelling E to W through channel
1342	Crew working to thread pile for drilling
1426	Navy vessel 67 travelling ~~E~~ W to E through the channel
1440	Tug boat pushing barge through channel E to W
1449	Hapag-Lloyd container ship travelling E to W through channel
1509	Seaward Marine barge NW of Island 1 resumed work in water; Seaward Marine surveying W of Island 1
1517	Survey gave okay, 2 men on template
1530	Air On
1532	Begin DTH
1534	DTH hammer begins hitting
1537	Coast Guard vessel travelling E to W through channel
1545	Stopped + resumed DTH
1548	Maersk Line cargo ship travelling E to W through channel
1604	crew works to flush the line with variable DTH hammering
1651	crew works to remove DTH

Sighting Log

Time	Species	Total Number	# Adults	# of Juveniles	Closest Distance to Pile Driving	Activity or Behaviors	Shut down? (yes/no)	Time of Shut-down	Time of Start Up	Time last seen

Daily Summary

Species	Total Number	Takes in Zone A	Takes in Zone B	# Shut-Downs	Comments

Observer Names: _____

Daily Marine Mammal Observer Report

Contractor: CTJV / Dragados	Project Name: CTJV Parallel Thimble Shoals Tunnel
NOAA/NMFS Permit: IHA August 1, 2018	Observer Location (Island #):
Date:	Shift Start:
Sunrise: Sunset:	Shift End:

Weather and Visibility Information

Location	Time	Air Temp (F)	Water Temp (F)	Visibility (Good, Fair, Poor)	Cloud Cover (%)	Wave Height (ft)	Wind Speed & Direction	Precipitation	Beaufort Scale

Observer Log

Time	Notes: (pre-watch times, start and stop times for pile driving activities, shift changes, human actiivties)
1704	Seaward Marine moving barge from SW of Island 2 E through channel then back W
1721	End watch
1723	catch van to yard
1780	Arrive at yard

Sighting Log

Time	Species	Total Number	# Adults	# of Juveniles	Closest Distance to Pile Driving	Activity or Behaviors	Shut down? (yes/no)	Time of Shut-down	Time of Start Up	Time last seen

Daily Summary

Species	Total Number	Takes in Zone A	Takes in Zone B	# Shut-Downs	Comments

Observer Names: _____

REMSA, Inc. 142 W Queens Way Hampton, VA 23669
757-722-0113

Daily Marine Mammal Observer Report

Contractor: CTJV / Dragados	Project Name: CTJV Parallel Thimble Shoals Tunnel
NOAA/NMFS Permit: IHA August 1, 2018	Observer Location (Island #):
Date: 21 - March - 2020	Shift Start: 0800
Sunrise: 0650 Sunset: 1925	Shift End: 1640

Weather and Visibility Information

Location	Time	Air Temp (F)	Water Temp (F)	Visibility (Good, Fair, Poor)	Cloud Cover (%)	Wave Height (ft)	Wind Speed & Direction (kts)	Precipitation	Beaufort Scale
Pier	1000	47.8	54.5	Good	100	3.3	E 9.7	none	2

Observer Log

Time	Notes: (pre-watch times, start and stop times for pile driving activities, shift changes, human actiivties)
0800	Catch ride to Island 1
0820	Arrive at Island 1
0830	Walk out to pier / begin watch
0850	Crew working to thread pile
0852	Yang Ming Cargo ship travelling W to E through channel, seaward
	marine working in water N of Island 1
0902	sea fox + vessel possibly research or construction travelling W to E through
	channel
1053	Issue with threading pile, End watch
1436	Crew working to thread pile
1536	Robert called to say MMOs should go home on the bus in ½
	hour
1604	Catch bus to yard
1640	Arrive at yard

Sighting Log

Time	Species	Total Number	# Adults	# of Juveniles	Closest Distance to Pile Driving	Activity or Behaviors	Shut down? (yes/no)	Time of Shut-down	Time of Start Up	Time last seen

Daily Summary

Species	Total Number	Takes in Zone A	Takes in Zone B	# Shut-Downs	Comments

Observer Names: Elizabeth Janz / Gabby Thornton

REMSA, Inc. 142 W Queeens Way Hampton, VA 23669
757-722-0113

Daily Marine Mammal Observer Report

Contractor: CTJV / Dragados	Project Name: CTJV Parallel Thimble Shoals Tunnel
NOAA/NMFS Permit: IHA August 1, 2018	Observer Location (Island #):
Date: 01-April-2020	Shift Start: 0730
Sunrise: 0649 Sunset: 1926	Shift End: 1922

Weather and Visibility Information

Location	Time	Air Temp (F)	Water Temp (F)	Visibility (Good, Fair, Poor)	Cloud Cover (%)	Wave Height (ft)	Wind Speed & Direction	Precipitation	Beaufort Scale
Connex	0900	43	51.3	Good	100%	10.8	NNE 23.3	none	6
connex	1400	43	49.1	Good	90%	8.9	NNE 23.3	none	6

Observer Log

Time	Notes: (pre-watch times, start and stop times for pile driving activities, shift changes, human actiivties)
0730	Meet with Sarah Falin at office
0755	depart for Island 7
0809	Arrive at Island 7
0900	Begin watch
0930	Begin drilling with DTH
1036	turn off air to more west roller
1100	turn on air
1110	survey checks position and drilling resumes
1320	stopped drilling
1348	drilling resumes
1443	stopped drilling
1513	resume drilling
1603	readjusting pile
1635	stopped drilling, issue with pile slipping at base
1646	resume drilling
1652	lifting and adjusting pile
1745	Day crew swapping with night crew
1755	stopped, lifting drill
1801	drilling resumes with brief hammering then lifting the drill
1812	lifting the pile then resume drilling
1819	lifting and replacing pile
1827	lifting and replacing pile
1830	Begin post watch
1900	End watch
1905	catch ride to yard
1922	Arrive at yard

Sighting Log

Time	Species	Total Number	# Adults	# of Juveniles	Closest Distance to Pile Driving	Activity or Behaviors	Shut down? (yes/no)	Time of Shut-down	Time of Start Up	Time last seen

Daily Summary

Species	Total Number	Takes in Zone A	Takes in Zone B	# Shut-Downs	Comments

Observer Names: Elizabeth Jantz / Gabby Thornton

REMSA, Inc. 142 W Queeens Way Hampton, VA 23669
757-722-0113

Daily Marine Mammal Observer Report

Contractor: CTJV / Dragados	Project Name: CTJV Parallel Thimble Shoals Tunnel
NOAA/NMFS Permit: IHA August 1, 2018	Observer Location (Island #): 1
Date: 01/02/2020	Shift Start: 0730
Sunrise: 0647 Sunset: 1928	Shift End: 1250

Weather and Visibility Information

Location	Time	Air Temp (F)	Water Temp (F)	Visibility (Good, Fair, Poor)	Cloud Cover (%)	Wave Height (ft)	Wind Speed & Direction	Precipitation	Beaufort Scale
ISLAND 1	0745	44°	52.5°	GOOD	1%	3.5	30KTS 350°	0%	3

Observer Log

Time	Notes: (pre-watch times, start and stop times for pile driving activities, shift changes, human actiivties)
0730	CAUGHT A RIDE WITH SARAH FALIN
0745	ARRIVE ON ISLAND AND BEGIN WATCH. EXTREMELY HIGH WINDS.
0830	TAKING SHELTER IN THE CONVEX UNTIL THE CREW BEGINS
0928	CREW BEGINS GRINDING
1055	CREW BEGINS HAMMERING
1110	CREW GOES BACK TO GRINDING
1116	HAMMERING BEGINS AGAIN
1122	DRILLING AND HAMMERING COMPLETE. BEGIN POST WATCH.
1140	INFORMED BY SUPERINTENDANT THAT THE DRILLING IS COMPLETE FOR THE DAY, BUT THEY WILL HAVE TO PROBE THE CASING AND TO REMAIN ONSITE.
1220	CONFIRMED WITH SARAH FALIN THAT IT WAS NOT NECESSARY TO REMAIN ONSITE IN CARRYING OUT IHA REGULATIONS.
1234	CAUGHT A RIDE BACK TO THE YARD
1250	BACK AT THE YARD.

Sighting Log

Time	Species	Total Number	# Adults	# of Juveniles	Closest Distance to Pile Driving	Activity or Behaviors	Shut down? (yes/no)	Time of Shut-down	Time of Start Up	Time last seen

Daily Summary

Species	Total Number	Takes in Zone A	Takes in Zone B	# Shut-Downs	Comments

Observer Names: GABBY THORNTON / EMILY TOYE

Daily Marine Mammal Observer Report

Contractor: CTJV / Dragados	Project Name: CTJV Parallel Thimble Shoals Tunnel
NOAA/NMFS Permit: IHA August 1, 2018	Observer Location (Island #): 1
Date: 04-April-2020	Shift Start: 0630
Sunrise: 0641 Sunset: 1928	Shift End: 1600

Weather and Visibility Information

Location	Time	Air Temp (F)	Water Temp (F)	Visibility (Good, Fair, Poor)	Cloud Cover (%)	Wave Height (ft)	Wind Speed & Direction kts	Precipitation	Beaufort Scale
Pier	0800	51.1	48.9	Good	60%	4.3	NNE 15.6	none	2
Pier	1100	50.9	49.1	Good	99%	4.9	NNE 15.6	none	3

Observer Log

Time	Notes: (pre-watch times, start and stop times for pile driving activities, shift changes, human actiivties)
0630	Meet with crew at yard
0636	Ride van to Island 1
0653	Arrive at Island 1
0720	Meet with crew on Island 1
0737	Start wat ch on pier
0843	Fishing boat drifting W to E under bridge just S of Island 1
0938	Cargo ship "Maersk Line" travelling E to W through channel
0952	Cargo ship "Maersk Line" travelling E to W through channel
0953	Cargo ship "Safmarine" travelling W to E through channel
1029	Navy speed boat travelling W to E through channel
1123	crew lifting pile, survey on site
1124	Tugboat pulling barge through channel W to E
1131	"Patancia Rio" ship travelling E to W through channel
1151	Pile on casing, moving Inspect hammer to pile
1216	Navy speedboat travelling E to W through channel
1219	All clear to crew
1223	Commence Soft Start
1243	Normal interval
1244	Stop
1245	2 more hits
1246	1 hit
1248	2 hits
1252	2 hits
1302	Pilot boat travelling NW to SE through channel
1307	Survey barge travelling W to E through channel

Sighting Log

Time	Species	Total Number	# Adults	# of Juveniles	Closest Distance to Pile Driving	Activity or Behaviors	Shut down? (yes/no)	Time of Shut-down	Time of Start Up	Time last seen

Daily Summary

Species	Total Number	Takes in Zone A	Takes in Zone B	# Shut-Downs	Comments

Observer Names: _____

Daily Marine Mammal Observer Report

Contractor: CTJV / Dragados	Project Name: CTJV Parallel Thimble Shoals Tunnel
NOAA/NMFS Permit: IHA August 1, 2018	Observer Location (Island #): 1
Date: 04/06/2020	Shift Start: 0800
Sunrise: 0641 Sunset: 1932	Shift End: 1745

Weather and Visibility Information

Location	Time	Air Temp (F)	Water Temp (F)	Visibility (Good, Fair, Poor)	Cloud Cover (%)	Wave Height (ft)	Wind Speed & Direction	Precipitation	Beaufort Scale
ISLAND 1	0830	55°	53.1°	GOOD	75%	1.0	10KTS 180°	75%	1
ISLAND 1	1400	73°	53.4°	GOOD	40%	0.8	15KTS 320°	10%	1
ISLAND 1	1720	69°	56.5°	GOOD	%	1.0	16KTS 70°	60%	1

Observer Log

Time	Notes: (pre-watch times, start and stop times for pile driving activities, shift changes, human actiivties)
0800	CAUGHT SHUTTLE
0815	DISEMBARK ONTO ISLAND. MET WITH SITE SUPERVISOR WHO
	INFORMED US THAT WE WOULD NOT BE NEEDED FOR A
	COUPLE HOURS.
0820	SEWARD MARINE WEIGHING ANCHOR AND MOVING THE
	BARGE BACK TO BASE
0927	CARGO SHIP TRAVELING EAST THROUGH THIMBLE CHANNEL
0954	TUG PULLING BARGE TRAVELING EAST THROUGH THIMBLE CHANNEL
1000	BEGIN PRE-WATCH
1025	HAMMER MOVED IN POSITION
1030	ALL-CLEAR AND COMMUNICATED TO FOREMAN
1049	HAMMERING BEGINS ON THE SOUTH SIDE WITH SOFT START.
1050	HAMMERING STOPS
1107	HAMMERING RESUMES
1118	PILE COMPLETE, BEGIN POST-WATCH
1133	PWC FISHING THE NORTH JETTY
1148	POST-WATCH COMPLETE. ALL CLEAR.
1215	FISHING TRAWLER TRAVELING EAST THROUGH THIMBLE CHANNEL.
1518	CARGO SHIP TRAVELING EAST AND A TUG PULLING A BARGE
	TRAVELING WEST THROUGH THIMBLE CHANNEL.
1530	BEGIN PRE-WATCH, SEWARD DROPPING ANCHOR ON A BARGE
	ON THE NORTH JETTY
1540	PILE BEING PLACED IN A CASING
1600	ALL-CLEAR AND COMMUNICATED TO FOREMAN
1601	CARGO SHIP TRAVELING WEST THROUGH THIMBLE CHANNEL

Sighting Log

Time	Species	Total Number	# Adults	# of Juveniles	Closest Distance to Pile Driving	Activity or Behaviors	Shut down? (yes/no)	Time of Shut-down	Time of Start Up	Time last seen

Daily Summary

Species	Total Number	Takes in Zone A	Takes in Zone B	# Shut-Downs	Comments

Observer Names: GABBY THORNTON / ELIZABETH JANZ

Daily Marine Mammal Observer Report

Contractor: CTJV / Dragados	Project Name: CTJV Parallel Thimble Shoals Tunnel
NOAA/NMFS Permit: IHA August 1, 2018	Observer Location (Island #): 1
Date: 04/06/2020	Shift Start: 0800
Sunrise: 0641 Sunset: 1932	Shift End: 1745

Weather and Visibility Information

Location	Time	Air Temp (F)	Water Temp (F)	Visibility (Good, Fair, Poor)	Cloud Cover (%)	Wave Height (ft)	Wind Speed & Direction	Precipitation	Beaufort Scale
ISLAND 1	0830	55°	53.1°	GOOD	75%	1.0	10 KTS 180°	75%	1
ISLAND 1	1400	73°	53.4°	GOOD	40%	0.8	15 KTS 320°	10%	1
ISLAND 1	1720	69°	56.5°	GOOD	1%	1.0	16 KTS 70°	60%	1

Observer Log

Time	Notes: (pre-watch times, start and stop times for pile driving activities, shift changes, human actiivties)
1638	HAMMERING BEGINS ON THE SOUTH SIDE WITH A SOFT START
1700	HAMMERING COMPLETE. BEGIN POST-WATCH.
1710	CARGO SHIP TRAVELING EAST THROUGH THIMBLE CHANNEL
1730	POST-WATCH COMPLETE AND ALL-CLEAR
1731	CAUGHT SHUTTLE
1745	BACK AT THE YARD.

Sighting Log

Time	Species	Total Number	# Adults	# of Juveniles	Closest Distance to Pile Driving	Activity or Behaviors	Shut down? (yes/no)	Time of Shut-down	Time of Start Up	Time last seen

Daily Summary

Species	Total Number	Takes in Zone A	Takes in Zone B	# Shut-Downs	Comments

Observer Names: GABBY THORNTON / ELIZABETH JANZ

4/6/2020

Daily Marine Mammal Observer Report

Contractor: CTJV / Dragados	Project Name: CTJV Parallel Thimble Shoals Tunnel
NOAA/NMFS Permit: IHA August 1, 2018	Observer Location (Island #):
Date:	Shift Start:
Sunrise: Sunset:	Shift End:

Weather and Visibility Information

Location	Time	Air Temp (F)	Water Temp (F)	Visibility (Good, Fair, Poor)	Cloud Cover (%)	Wave Height (ft)	Wind Speed & Direction	Precipitation	Beaufort Scale

Observer Log

Time	Notes: (pre-watch times, start and stop times for pile driving activities, shift changes, human actiivties)
1308	2hits (deminishing)
1309	2hits (deminishing)
1311	2hits (deminishing)
1316	3hits, need more fule
1321	2hits (deminishing)
1323	2hits (deminishing)
1326	3hits (deminishing)
1329	3hits (deminishing)
1333	3hits (deminishing)
1338	3hits (deminishing)
1344	4hits (deminishing)
1347	3hits (deminishing)
1353	2hits(diminishing) "Sangan winds" Cargoship travelling wtoE through channel
1356	Begin normal interval hammering
1400	Stop
1410	Resume
1430	Cargo vessel travelling E to W through channel
1436	Cargo vessel "Humen Bridge" travelling w to E through channel
1437	stop
1507	End watch
1536	catch ride to yard
1600	Arrive at yard

Sighting Log

Time	Species	Total Number	# Adults	# of Juveniles	Closest Distance to Pile Driving	Activity or Behaviors	Shut down? (yes/no)	Time of Shut-down	Time of Start Up	Time last seen

Daily Summary

Species	Total Number	Takes in Zone A	Takes in Zone B	# Shut-Downs	Comments

Observer Names: Elizabeth Janz / Sibly McCullers

REMSA, Inc. 142 W Queens Way Hampton, VA 23669
757-722-0113

Daily Marine Mammal Observer Report

Contractor: CTJV / Dragados	Project Name: CTJV Parallel Thimble Shoals Tunnel
NOAA NMFS Permit: IHA August 1, 2018	Observer Location (Island #): 1
Date: 7-April-2020	Shift Start: 0750
Sunrise: 0610 Sunset: 1931	Shift End: 1917

Weather and Visibility Information

Location	Time	Air Temp (F)	Water Temp (F)	Visibility (Good, Fair, Poor)	Cloud Cover (%)	Wave Height (ft)	Wind Speed & Direction kts	Precipitation	Beaufort Scale
Pier	0915	56.3	52.8	Good	20%	1	SSE 3.9	none	1
Pier	1600	62	55.4	Good	20%	1	SE 7.8	none	1

Observer Log

Time	Notes: (pre-watch times, start and stop times for pile driving activities, shift changes, human actiivties)
0750	catch van to Island 1
0810	Arrive at Island 1
0815	Start watch on Pier, Seaward Marine working in water
0820	Island walk
0900	Gave DTH crew all clear
0938	DTH begins drilling (no hammering)
0954	Speedboat travelling E to W through channel
0957	Cargo ship "priscilla venture" travelling E to W through channel
0959	tugboat travelling W to E through channel
1004	DTH begins hammering, stops hammering but still drilling
1025	Whale research boat travelling W of Island 2 SE through channel, idled E of Seaward Marine and NE of DTH source
1029	Boat turned E, DTH resumed hammering, boat travelled SE and out of sight E of Island 1
1032	DTH stopped
1034	Whale research boat reappeared W of pier travelling N again, idled E of Seaward Marine, NE of DTH
1041	Seaward Marine survey boat travelled N between Seaward Marine barge and Whale Research boat. Someone came out on Seaward marine boat deck and turned facing whale research boat, research boat moved N into channel drifting E
1048	Cargo ship "May" travelling W to E through channel
1049	Island walk
1051	2 speedboats travelling E of Island 2 S to E of Island 1
1052	DTH hammering resumes, Seaward marine survey boat idling N of DTH, whale research boat out of sight E of Island 1

Sighting Log

Time	Species	Total Number	# Adults	# of Juveniles	Closest Distance to Pile Driving	Activity or Behaviors	Shut down? (yes/no)	Time of Shut-down	Time of Start Up	Time last seen

Daily Summary

Species	Total Number	Takes in Zone A	Takes in Zone B	# Shut-Downs	Comments

Observer Names: Elizabeth Janz / Gabby Thornton

REMSA, Inc. 142 W Queens Way Hampton, VA 23669
757-722-0113

Daily Marine Mammal Observer Report

Contractor: CTJV / Dragados	Project Name: CTJV Parallel Thimble Shoals Tunnel
NOAA/NMFS Permit: IHA August 1, 2018	Observer Location (Island #):
Date: 7-April-2020	Shift Start:
Sunrise: Sunset:	Shift End:

Weather and Visibility Information

Location	Time	Air Temp (F)	Water Temp (F)	Visibility (Good, Fair, Poor)	Cloud Cover (%)	Wave Height (ft)	Wind Speed & Direction	Precipitation	Beaufort Scale

Observer Log

Time	Notes: (pre-watch times, start and stop times for pile driving activities, shift changes, human activities)
1110	speed boat travelling E to W through channel
1116	mic Island 1 crew, Cofaire to place pile in casing
1122	Coast guard speed boat travelling W to E through channel
1125	tugboat travelling W to E through channel
1127	Seaward marine transport boat dropping off crew at barge
1130	Seaward marine transport travelled N to barge 5 of Island 2
1138	Stopped DTH
1145	Crew working to flush the line on DTH
1150	resume drilling, Seaward marine no longer working in water
1155	stopped DTH, Mid Island 1 crew working to put Impact hammer on pile
1156	Crew removing DTH from pile
1201	Seaward Marine transport boat returns to barge N of Island 1
1202	Seaward Marine transport boat travels SW from barge
1216	stopped trying to remove DTH, problem w/ back of crane
1228	Seaward Marine resuming work 225 m North of DTH
1241	Island walk
1252	Speed boat travelling E to W through channel, Fishing boat anchored 172 meters NE of DTH
1300	Commence soft start (Impact Hammer)
1302	Fishing boat lifted anchor and travelled SE approx mile E of Island 1
1306	have stopped Impact Hammer
1319	Impact Hammer resumes hammering
1331	Sailboat travelling E to W through channel
1334	Finished Impact hammering

Sighting Log

Time	Species	Total Number	# Adults	# of Juveniles	Closest Distance to Pile Driving	Activity or Behaviors	Shut down? (yes/no)	Time of Shut-down	Time of Start Up	Time last seen

Daily Summary

Species	Total Number	Takes in Zone A	Takes in Zone B	# Shut-Downs	Comments

Observer Names: _____

Daily Marine Mammal Observer Report

Contractor: CTJV / Dragados	Project Name: CTJV Parallel Thimble Shoals Tunnel
NOAA/NMFS Permit: IHA August 1, 2018	Observer Location (Island #):
Date: 7 - April - 2020	Shift Start:
Sunrise: Sunset:	Shift End:

Weather and Visibility Information

Location	Time	Air Temp (F)	Water Temp (F)	Visibility (Good, Fair, Poor)	Cloud Cover (%)	Wave Height (ft)	Wind Speed & Direction	Precipitation	Beaufort Scale

Observer Log

Time	Notes: (pre-watch times, start and stop times for pile driving activities, shift changes, human actiivties)
1342	Cargo ship "New Venture" travelling E to W through channel
1345	US Coast Guard travelling W to E through channel
1347	Tugboat pulling barge E to W through channel
1402	Universal Labratories Steiger speedboat lowering a chord overboard South of pier 100m and 50m W of Impact hammer Sarce
1407	Island walk
1437	DTH resumes hammering
1450	DTH stops
1453	DTH resumes
1459	Yang Ming "YM Essence" cargo ship travelling W to E thrugh channel
1501	DTH finished for the day. Impact hammer trying to do one more pile
1525	Navy vessel 196 travelling W to E through channel
1547	tugboat pulling barge W to E through channel
1607	tugboat pulling barge W to E through channel
1612	Commercial fishing boat travelling W to E through channel
1638	US coast Guard travelling E to W through channel
1641	Impact Hammer crew bringing pile to casing
1652	3 Navy Escort speedboats travelling E to W through channel
1655	Tugboat pulling barge E to W through channel
1710	Speed boat travelling NW to SE through channel
1716	Night crew arrives
1731	Hapag-Lloyd "Charleston Express" Cargo ship travelling W to E thrugh channel

Sighting Log

Time	Species	Total Number	# Adults	# of Juveniles	Closest Distance to Pile Driving	Activity or Behaviors	Shut down? (yes/no)	Time of Shut-down	Time of Start Up	Time last seen

Daily Summary

Species	Total Number	Takes in Zone A	Takes in Zone B	# Shut-Downs	Comments

Observer Names: _____

Daily Marine Mammal Observer Report

Contractor: CTJV / Dragados	Project Name: CTJV Parallel Thimble Shoals Tunnel
NOAA/NMFS Permit: IHA August 1, 2018	Observer Location (Island #):
Date	Shift Start:
Sunrise: Sunset:	Shift End:

Weather and Visibility Information

Location	Time	Air Temp (F)	Water Temp (F)	Visibility (Good, Fair, Poor)	Cloud Cover (%)	Wave Height (ft)	Wind Speed & Direction	Precipitation	Beaufort Scale

Observer Log

Time	Notes: (pre-watch times, start and stop times for pile driving activities, shift changes, human actiivties)
1746	Begin Soft Start
1806	Impact hammer no longer hitting
1808	Cargo ship "Cap Arnauti" travelling W to E through channel
1809	Impact hammer resumed hitting at normal interval
1827	commercial fishing boat travelling W to E through channel
1831	Stopped hammering
1842	night crew working to thread pile
1851	End watch
1905	Catch Van to yard
1917	Arrive at yard

Sighting Log

Time	Species	Total Number	# Adults	# of Juveniles	Closest Distance to Pile Driving	Activity or Behaviors	Shut down? (yes/no)	Time of Shut-down	Time of Start Up	Time last seen

Daily Summary

Species	Total Number	Takes in Zone A	Takes in Zone B	# Shut-Downs	Comments

Observer Names: _____

Daily Marine Mammal Observer Report

Contractor: CTJV / Dragados	Project Name: CTJV Parallel Thimble Shoals Tunnel
NOAA/NMFS Permit: IHA August 1, 2018	Observer Location (Island #): 1
Date: 8-April-2020	Shift Start: 0745
Sunrise: 0638 Sunset: 1932	Shift End: 1803

Weather and Visibility Information

Location	Time	Air Temp (F)	Water Temp (F)	Visibility (Good, Fair, Poor)	Cloud Cover (%)	Wave Height (ft)	Wind Speed & Direction Kts	Precipitation	Beaufort Scale
Pier	0930	62.2	55.2	Good	90%	1	WNW 7.8	none	2
Pier	1215	71.2	52.9	Good	80%	2	N17.5	none	3

Observer Log

Time	Notes: (pre-watch times, start and stop times for pile driving activities, shift changes, human actiivties)
0745	Catch ride to Island 1
0800	Arrive at Island 1, check-in with Shawn - they still need to empty the Frag tank and connect hoses
0924	Start watch, Seaward Marine working in water 173m N of DTH
0931	Hapag-Lloyd "Yantian Express" travelling E to W through channel
0937	Island Walk
0951	All clear on E side of Island 1
0955	Navy vessel 13 traveling W to E through channel
1005	Vibratory Hammer pulled up 1 casing
1010	Vibratory Hammer pulled up second casing
1019	Cargo ship "Izumat" travelling E to W through channel
1050	Gave DTH all clear to start
1056	US Coast Guard travelling E to W through channel
1119	Seaward Marine no longer working in the water
1123	US Coast Guard travelling NW to SE from W of Island 2 to E of Island 1
1124	DTH begins drilling
1145	Seaward Marine transport boat docks at barge
1150	Seaward Marine transport boat goes E then N to barge S of Island 2
1155	DTH starts hammering
1157	Fishing boat drifts N on East side of Island 1 then travels E
1200	Seaward Marine transport boat travelling S, N of Pier
1202	DTH stops hammering, still drilling
1206	DTH stops drilling, checking pile with level
1210	Impact hammer crew working to lift pile
1215	DTH resumes drilling and hammering

Sighting Log

Time	Species	Total Number	# Adults	# of Juveniles	Closest Distance to Pile Driving	Activity or Behaviors	Shut down? (yes/no)	Time of Shut-down	Time of Start Up	Time last seen

Daily Summary

Species	Total Number	Takes in Zone A	Takes in Zone B	# Shut-Downs	Comments

Observer Names: _____

4/8/2020

Daily Marine Mammal Observer Report

Contractor: CTJV / Dragados	Project Name: CTJV Parallel Thimble Shoals Tunnel
NOAA/NMFS Permit: IHA August 1, 2018	Observer Location (Island #):
Date:	Shift Start:
Sunrise: Sunset:	Shift End:

Weather and Visibility Information

Location	Time	Air Temp (F)	Water Temp (F)	Visibility (Good, Fair, Poor)	Cloud Cover (%)	Wave Height (ft)	Wind Speed & Direction	Precipitation	Beaufort Scale

Observer Log

Time	Notes: (pre-watch times, start and stop times for pile driving activities, shift changes, human actiivties)
1226	DTH still drilling, Stopped hammering; Impact Hammer crew placing pile
1230	DTH resume hammering
1235	DTH stopped hammering
1241	Seaward Marine resumed work on barge N of Island 1
1242	DTH resumed hammering
1248	motorboat traveling W to E through channel
1250	tugboat pulling barge W to E through channel
1316	Stopped and resumed hammering (DTH); Begin soft start (Impact)
1319	DTH stopped, 3rd soft start strike from Impact (Survey checking both piles)
1324	Bag in Impact hammer
1328	Impact hammer stops, yacht travelling W to E through channel
1331	Impact hammer crew blown on trestle
1336	Motorboat travelling W to E through channel
1339	Sailboat travelling W to E through channel
1352	tugboat pulling barge E to W through channel
1409	Crew removed Impact hammer from pile, DTH crew cutting pile ears
1435	Island Walk
1440	Crew working to pull pile out of casing w/o vibratory hammer
1443	Impact hammer crew removed pile from 1316 to be laid on dock
1448	DTH resumes drilling/hammering
1457	DTH stopped, removing hammer
	checked in with both crews - DTH crew is done for the day; Impact hammer crew needs to lift the casing then try to drive the pile again
1507	Universal laboratories lowering and lifting black and white chord W of Impact hammer source

Sighting Log

Time	Species	Total Number	# Adults	# of Juveniles	Closest Distance to Pile Driving	Activity or Behaviors	Shut down? (yes/no)	Time of Shut-down	Time of Start Up	Time last seen

Daily Summary

Species	Total Number	Takes in Zone A	Takes in Zone B	# Shut-Downs	Comments

Observer Names: _____

Daily Marine Mammal Observer Report

Contractor: CTJV / Dragados	Project Name: CTJV Parallel Thimble Shoals Tunnel
NOAA/NMFS Permit: IHA August 1, 2018	Observer Location (Island #):
Date:	Shift Start:
Sunrise: Sunset:	Shift End:

Weather and Visibility Information

Location	Time	Air Temp (F)	Water Temp (F)	Visibility (Good, Fair, Poor)	Cloud Cover (%)	Wave Height (ft)	Wind Speed & Direction	Precipitation	Beaufort Scale
Pier	1625	79	55.9	Good	75%	1.3	N 7.8	none	3

Observer Log

Time	Notes: (pre-watch times, start and stop times for pile driving activities, shift changes, human actiivties)
1514	Impact hammer crew removed toe from casing
1525	Crew getting vibratory hammer on casing
1530	Begin casing removal with vibratory hammer
1531	Stop vibratory hammer and remove from casing
1537	Cargo ship "SBI Rock" traveling W to E through channel
1557	Cargo ship "Amber Bay" traveling W to E through channel
1558	replaced toe on casing
1607	Navy ship #11 travelling E to W through channel
1613	replacing pile in casing
1630	Impact hammer replaced on pile
1640	Gave the okay to start
1641	Redo soft start
1645	Begin pile driving with Impact Hammer
1656	Speedboat travelling E to W through channel
1711	Night Crew arrived
1716	Stopped Impact hammer
1718	Removing hammer from pile
1728	US Coast Guard traveling W TO E through channel
1729	Island walk
1737	Speedboat travelling NE to SW through channel
1741	End Watch
1745	Ride to yard
1803	Arrive at yard

Sighting Log

Time	Species	Total Number	# Adults	# of Juveniles	Closest Distance to Pile Driving	Activity or Behaviors	Shut down? (yes/no)	Time of Shut-down	Time of Start Up	Time last seen

Daily Summary

Species	Total Number	Takes in Zone A	Takes in Zone B	# Shut-Downs	Comments

Observer Names: Elizabeth Janz / Gabby Thornton

Daily Marine Mammal Observer Report

Contractor: CTJV / Dragados	Project Name: CTJV Parallel Thimble Shoals Tunnel
NOAA/NMFS Permit: IHA August 1, 2018	Observer Location (Island #):
Date: 9 - April - 2020	Shift Start: 1145
Sunrise: 0639 Sunset: 1933	Shift End: 1719

Weather and Visibility Information

Location	Time	Air Temp (F)	Water Temp (F)	Visibility (Good, Fair, Poor)	Cloud Cover (%)	Wave Height (ft)	Wind Speed & Direction kts	Precipitation	Beaufort Scale
Pier	1300	74	55.8	Good	10%	2	W 17.5	none	3
Pier	1600	73.9	53.6	Good	20%	2	WNW 19.4	none	4

Observer Log

Time	Notes: (pre-watch times, start and stop times for pile driving activities, shift changes, human actiivties)
1145	Ride to Island 1
1200	Arrive at Island 1, check in with crews - Shawn's crew says 2 or 3pm; Kenny said pile should arrive around 2 and if the wind allows, they will be able to pile drive
1215	Submarine travelling E to W through channel
1316	Tugboat pulling barge W to E through channel
1327	Tugboat pulling barge and series of 8 rafts E to W through channel
1424	Cargo ship "CMA CGM Titus" travelling E to W through channel
1454	Crane all clear to Shawn's crew
1503	Speed boat travelling NE to SW, W of bridge
1515	Shawn's crew putting Impact hammer on East pile
1531	1st Navy Escort speed boat traveling W to E through channel
1534	2nd Navy Escort speed boat and Submarine travelling W to E through channel
1537	Begin Soft start on East pile
1544	Begin normal impact hammer pile driving
1546	stopped, checked in with survey
1551	resume pile driving
1555	Stopped
1601	remove hammer from East pile
1610	placing Impact hammer on West pile
1622	Gave okay to start
1624	Resumed Impact hammer
1636	Stopped
1641	remove hammer from West pile
1642	Yacht traveling W to E through channel

Sighting Log

Time	Species	Total Number	# Adults	# of Juveniles	Closest Distance to Pile Driving	Activity or Behaviors	Shut down? (yes/no)	Time of Shut-down	Time of Start Up	Time last seen

Daily Summary

Species	Total Number	Takes in Zone A	Takes in Zone B	# Shut-Downs	Comments

Observer Names: _____

1650 Mee motioned and called for us to come in from the pier

1704 end watch to catch a ride to the yard

1719 Arrive at yard

Observer Names: Elizabeth Janz / Emily Toye

Daily Marine Mammal Observer Report

Contractor: CTJV / Dragados	Project Name: CTJV Parallel Thimble Shoals Tunnel
NOAA NMFS Permit: IHA August 1, 2018	Observer Location (Island #): 1
Date: 10-April-2020	Shift Start: 0745
Sunrise: 0634 Sunset: 1932	Shift End: 1557

Weather and Visibility Information

Location	Time	Air Temp (F)	Water Temp (F)	Visibility (Good, Fair, Poor)	Cloud Cover (%)	Wave Height (ft)	Wind Speed & Direction kts	Precipitation	Beaufort Scale
Comer K Pier	0830	49.1	50.2	Good	30	5.6	NW 21.4	none	4
	1230	51.1	50.2	Good	40	4.6	WNW 23.3	none	4

Observer Log

Time	Notes (pre-watch times, start and stop times for pile driving activities, shift changes, human activities)
0740	call from Tom, due to wind restriction, van still on way back couldn't take bus this morning
0800	Take van to Island 1
0920	check in with crew
0930	start watch
0957	soft start up and Impact hammer
0913	Begin normal Impact hammering
0923	Navy vessel sailing E to W through channel
0934	stopped, finished driving pile
1004	walk out to pier
1031	Lee - crane operator - clocked winds maintaining 33 mph then dropping to 27, crew cut top off pile, Lee picking up 2nd pile
1045	stopped, winds at 35 mph
1116	lifting pile
1126	Pile swinging too much due to wind, Lee lowered pile to reduce swing and continued to place pile for driving
1139	40mph winds, crew slowly lifting hammer to put on pile
1200	issue with hammer, crew needs to fix before driving 2nd pile
1307	Island walk
1407	Hammer fixed, able to resume placing hammer on pile
1417	check in with survey
1434	soft start
1438	check in with survey, begin normal hammering
1493	stopped, issue with rope or something being fried

Sighting Log

Time	Species	Total Number	# Adults	# of Juveniles	Closest Distance to Pile Driving	Activity or Behaviors	Shut down? (yes/no)	Time of Shut-down	Time of Start Up	Time last seen

Daily Summary

Species	Total Number	Takes in Zone A	Takes in Zone B	# Shut-Downs	Comments

Observer Names: _____

Daily Marine Mammal Observer Report

Contractor: CTJV / Dragados	Project Name: CTJV Parallel Thimble Shoals Tunnel
NOAA/NMFS Permit: IHA August 1, 2018	Observer Location (Island #):
Date:	Shift Start:
Sunrise: Sunset:	Shift End:

Weather and Visibility Information

Location	Time	Air Temp (F)	Water Temp (F)	Visibility (Good, Fair, Poor)	Cloud Cover (%)	Wave Height (ft)	Wind Speed & Direction	Precipitation	Beaufort Scale

Observer Log

Time	Notes: (pre-watch times, start and stop times for pile driving activities, shift changes, human actiivties)
1446	resumed hammering
1504	stopped, finished
1534	end watch
1541	catch van to yard
1557	arrive at yard

Sighting Log

Time	Species	Total Number	# Adults	# of Juveniles	Closest Distance to Pile Driving	Activity or Behaviors	Shut down? (yes/no)	Time of Shut-down	Time of Start Up	Time last seen

Daily Summary

Species	Total Number	Takes in Zone A	Takes in Zone B	# Shut-Downs	Comments

Observer Names: Elizabeth Janz / Emily Toye

REMSA, Inc. 142 W Queens Way Hampton, VA 23669
757-722-0113

Daily Marine Mammal Observer Report

Contractor: CTJV / Dragados	Project Name: CTJV Parallel Thimble Shoals Tunnel
NOAA/NMFS Permit: IHA August 1, 2018	Observer Location (Island #): 1
Date: 13 - April - 2020	Shift Start: 0620
Sunrise: 0621 Sunset: 1936	Shift End: 0835

Weather and Visibility Information

Location	Time	Air Temp (F)	Water Temp (F)	Visibility (Good, Fair, Poor)	Cloud Cover (%)	Wave Height (ft)	Wind Speed & Direction	Precipitation	Beaufort Scale
Connex	0730	68.4	53.2	Good	100	3.3	S 25.3 kts	light	6

Observer Log

Time	Notes: (pre-watch times, start and stop times for pile driving activities, shift changes, human actiivties)
0620	Ride bus to Island 1
0640	Arrive at Island 1
0700	Meeting with crew - Liebherr reading winds between 45-50mph
0715	shown in for med MMOs, if winds do not die down in a few hours, they will determine if they will continue or go home
0813	Catch van to toll plaza to transfer to bus
0835	Arrive at yard

Sighting Log

Time	Species	Total Number	# Adults	# of Juveniles	Closest Distance to Pile Driving	Activity or Behaviors	Shut down? (yes/no)	Time of Shut-down	Time of Start Up	Time last seen

Daily Summary

Species	Total Number	Takes in Zone A	Takes in Zone B	# Shut-Downs	Comments

Observer Names: Elizabeth Janz / Gabby Thornton

REMSA, Inc. 142 W Queeens Way Hampton, VA 23669
757-722-0113

Daily Marine Mammal Observer Report

Contractor: CTJV / Dragados	Project Name: CTJV Parallel Thimble Shoals Tunnel
NOAA/NMFS Permit: IHA August 1, 2018	Observer Location (Island #): 1
Date: 14-April-2020	Shift Start: 0620
Sunrise: 0630 Sunset: 1937	Shift End: 1454

Weather and Visibility Information

Location	Time	Air Temp (F)	Water Temp (F)	Visibility (Good, Fair, Poor)	Cloud Cover (%)	Wave Height (ft)	Wind Speed & Direction kts	Precipitation	Beaufort Scale
Pier	0730	54.1	51.8	Good	75%	4.6	NNE 21.4	none	5
Pier	1215	52	51.8	Good	1%	3	NNE 17.5	none	4

Observer Log

Time	Notes: (pre-watch times, start and stop times for pile driving activities, shift changes, human actiivties)
0620	Catch bus to Island 1
0640	Arrive at Island 1
0700	Meeting with Shawn's crew
0715	checked in with Robert's crew, no MMOs needed today
0720	Walk out to pier, start watch
0733	Navy vessel #4 traveling E to W through channel
0843	Island walk
0867	End watch - survey failed pile, welders need to resplice
1000	Island walk
1010	Met with Shawn, still 1 hour out for welders to finish working on pile then inspection needs to clear the pile
1110	Resume watch
1129	Navy vessel #196 traveling W to E through channel
1138	Survey reporting positions to crew about E pile
1139	Crane all clear to start
1142	Soft start (1 hit)
1144	fired normally then slowed and stopped
1146	fired normally then slowed and stopped (7 hits)
1148	fired normally
1208	slowed and stopped, crew in man lift looking at Impact hammer
1217	resumed impact hammer on E pile
1221	stopped, crew in man lift looking at hammer
1228	Impact hammer removed from E pile
1242	moving hammer to W pile

Sighting Log

Time	Species	Total Number	# Adults	# of Juveniles	Closest Distance to Pile Driving	Activity or Behaviors	Shut down? (yes/no)	Time of Shut-down	Time of Start Up	Time last seen

Daily Summary

Species	Total Number	Takes in Zone A	Takes in Zone B	# Shut-Downs	Comments

Observer Names: _____

Daily Marine Mammal Observer Report

Contractor: CTJV / Dragados	Project Name: CTJV Parallel Thimble Shoals Tunnel
NOAA/NMFS Permit: IHA August 1, 2018	Observer Location (Island #):
Date: 14 - April - 2020	Shift Start:
Sunrise: Sunset:	Shift End:

Weather and Visibility Information

Location	Time	Air Temp (F)	Water Temp (F)	Visibility (Good, Fair, Poor)	Cloud Cover (%)	Wave Height (ft)	Wind Speed & Direction	Precipitation	Beaufort Scale

Observer Log

Time	Notes: (pre-watch times, start and stop times for pile driving activities, shift changes, human actiivties)
1254	checking position with survey
1257	gave all clear
1258	began hammering 2nd pile
1326	fishing boat traveling W to E through channel
1403	slowed, stopped, finished pile driving
1433	End watch, catch bus to yard
1454	Arrive at yard

Sighting Log

Time	Species	Total Number	# Adults	# of Juveniles	Closest Distance to Pile Driving	Activity or Behaviors	Shut down? (yes/no)	Time of Shut-down	Time of Start Up	Time last seen

Daily Summary

Species	Total Number	Takes in Zone A	Takes in Zone B	# Shut-Downs	Comments

Observer Names: Elizabeth Janz / Emily Toye

Daily Marine Mammal Observer Report

Contractor: CTJV / Dragados	Project Name: CTJV Parallel Thimble Shoals Tunnel
NOAA/NMFS Permit: IHA August 1, 2018	Observer Location (Island #): 1
Date: 15-April-2020	Shift Start: 0815
Sunrise: 0629 Sunset: 1938	Shift End: 1630

Weather and Visibility Information

Location	Time	Air Temp (F)	Water Temp (F)	Visibility (Good, Fair, Poor)	Cloud Cover (%)	Wave Height (ft)	Wind Speed & Direction	Precipitation	Beaufort Scale
Conner	0930	43.7	51.6	Good	100%	6.6	NNE 23.8	light	5
Pier	1344	43.2	55.9	Good	90%	3.3	ENE 11.7	none	3

Observer Log

Time	Notes: (pre-watch times, start and stop times for pile driving activities, shift changes, human activities)
0815	Check in with Sarah, Tom is on Island 1, will pick us up
0833	Catch van to Island 1
0850	Arrive at Island 1
0852	check in with Vince, still waiting for wind to die down
0938	Kerry informed us that they will likely start at 10 or 10:15,
	winds likely to pick up at 1100, start watch by conners
1030	Survey checking pile (DTH)
1032	gave all clear
1036	Start DTH drill
1054	Start DTH hammer
1218	Stopped hammering
1220	Island walk
1228	Start hammering
1229	stop hammering but still drilling
1243	Issue with water hoses
1250	Stopped, finished with casing
1256	Removal of DTH from casing
1338	Threading second casing
1427	Placing casing in template
1443	Begin drilling
1448	Begin hammering
1450	stopped hammering, still drilling, check in w/survey
1452	resumed hammering then stopped, still drilling
1456	resumed hammering
1500	Sailboat traveling SW to NE passing W of pier then through channel

Sighting Log

Time	Species	Total Number	# Adults	# of Juveniles	Closest Distance to Pile Driving	Activity or Behaviors	Shut down? (yes/no)	Time of Shut-down	Time of Start Up	Time last seen

Daily Summary

Species	Total Number	Takes in Zone A	Takes in Zone B	# Shut-Downs	Comments

Observer Names: Elizabeth Jane / Sibly McCullers

REMSA, Inc. 142 W Queens Way Hampton, VA 23669
757-722-0113

MESO

Daily Observer Log Form

Contractor: CTJV	Project Name: CTJV Parallel Thimble Shoals
NOAA NMFS Permit: IHA March 2020	Location (Island Number) 1
USACE Permit:	State Permits:
Observer Name:	Observer Location: Pier
Date: 15 - April - 2020	Shift Start: 0815 Shift End: 1630
Sunrise: 0629	Sunset: 1938

Weather and Visibility Information

Location	Time	Air Temp (F)	Water Temp	Visibility (Good, Fair,	Could Cover (%)	Wave Height (ft)	Wind Speed & Direction	Precipitation	Beaufort Scale

Observer Logs

Time	Notes: (i.e., start and stop times for pile driving activities, shift changes, nearby human actiivties.)
1529	stopped and resumed hammer
1530	stopped to check in with survey and adjust
1534	resumed hammering
1537	stopped, finished file
1608	finished watch
1615	catch van to yard
1630	arrive at yard

Sighting Log

Time	Species	Total Number	Adults	Juveniles	Closest Distance to Observer	Activity or Behaviors	Shut down? (yes/no)	Time of Shut-down	Time of Start Up	Time last seen

Daily Summary

Species	Total Number	Takes in Zone A	Takes in Zone B	# Shut-Downs	Comments

Daily Observer Log Form

Contractor: CTJV	Project Name: CTJV Parallel Thimble Shoals
NOAA NMFS Permit: IHA March 2020	Location (Island Number): 1
USACE Permit: —	State Permits: —
Observer Name: Elizabeth Jantz / Emily Tove	Observer Location: pier
Date: 16 - April - 2020	Shift Start: 0740 Shift End: 2020
Sunrise: 0627	Sunset: 1939

Weather and Visibility Information

Location	Time	Air Temp (F)	Water Temp	Visibility (Good, Fair,	Could Cover (%)	Wave Height (ft)	Wind Speed & Direction kts	Precipitation	Beaufort Scale
Pier	0815	45.5	51.8	Good	0%	3	W 13.6	rain	4
Pier	1215	49.5	52.2	Good	10%	2	N 9.7	rain	3
Pier	1527	49.5	57.2	Good	10%	2	ENE 7.8	none	2

Observer Logs

Time	Notes: (i.e., start and stop times for pile driving activities, shift changes, nearby human activities)
0740	ride to Island 1
0756	arrive at Island 1
0758	check in with crews - Vince's crew is getting ready w/ DTH, Shawn's crew will be ready around 1230
0803	start watch, Seaward marine "Cashman" barge sitting N of Island 1
0808	unidentified object floating in water N of pier, appears to be mostly submerged yellow buoy, Seaward marine barge/barge w/ rocks W of pier to barge N of Island 1
0839	Tugboat travelling E to W through channel, Seaward Marine tugboat travelling SW from barges
0842	Island walk
0856	Vince's crew has an issue with their trog tank, will swap tanks w/ Shawn's crew; tugboat traveling W to E through "channel
0900	Coast guard speedboat traveling W to E through channel
0903	Cargo ship "CMA CGM Tage" travelling W to E through channel
0906	Coast Guard boat travelling W to E through channel

Sighting Log

Time	Species	Total Number	Adults	Juveniles	Closest Distance to Observer	Activity or Behaviors	Shut down? (yes/no)	Time of Shut-down	Time of Start Up	Time last seen

Daily Summary

Species	Total Number	Takes in Zone A	Takes in Zone B	# Shut-Downs	Comments

Daily Observer Log Form

Contractor: CTJV	Project Name: CTJV Parallel Thimble Shoals
NOAA/NMFS Permit: IHA March 2020	Location: (Island Number)
USACE Permit:	State Permits:
Observer Name:	Observer Location:
Date: 16 - April - 2020	Shift Start: Shift End:
Sunrise:	Sunset:

Weather and Visibility Information

Location	Time	Air Temp (F)	Water Temp	Visibility (Good, Fair,	Could Cover (%)	Wave Height (ft)	Wind Speed & Direction	Precipitation	Beaufort Scale

Observer Logs

Time	Notes: (i.e., start and stop times for pile driving activities, shift changes, nearby human actiivties.)
0911	Seaward Marine actively working in water N of Island 1
0929	Maersk Line cargo ship traveling E to W through channel
0938	Barge traveling W to E through channel
0948	USNS 196 traveling E to W through channel
0959	speed boat traveling E to W through channel, waiting for survey
1016	Cargo ship traveling W to E through channel
1026	Tugboat pushing barge E to W through channel
1028	Survey returned
1043	Ready to go from survey
1050	Tugboat pulling Coast Guard #209 E to W through channel
1053	waiting for QC
1057	turning on air for DTH, Universal Laboratories Steiner speedboat lowering and lifting black and white chord off port Aft W of DTH, dragging in water closer to DTH, lifting chord looks red and gray with black on end
1101	Universal Laboratories boat departed & then E under bridge

Sighting Log

Time	Species	Total Number	Adults	Juveniles	Closest Distance to Observer	Activity or Behaviors	Shut down? (yes/no)	Time of Shut-down	Time of Start Up	Time last seen

Daily Summary

Species	Total Number	Takes in Zone A	Takes in Zone B	# Shut-Downs	Comments

Daily Observer Log Form

Contractor: CTJV	Project Name: CTJV Parallel Thimble Shoals
NOAA/NMFS Permit: IHA March 2020	Location: (Island Number)
USACE Permit:	State Permits:
Observer Name:	Observer Location:
Date: 16-April-2020	Shift Start: Shift End:
Sunrise:	Sunset:

Weather and Visibility Information

Location	Time	Air Temp (F)	Water Temp	Visibility (Good, Fair,	Could Cover (%)	Wave Height (ft)	Wind Speed & Direction	Precipitation	Beaufort Scale

Observer Logs

Time	Notes: (i.e., start and stop times for pile driving activities, shift changes, nearby human actiivties.)
1107	Stopped, pile needs to be adjusted, need to adjust template
1112	Tugboat pulling barge E to W through channel
1118	Seaward marine no longer working in water
1122	check in w/ survey, casing is good, ~~resume drilling~~
1123	Universal Laboratories boat reappears S of Island, traveling SW, DTH resumes
1125	Coast Guard speed boat traveling E to W through channel
1131	casing slipping, need to adjust
1134	Speed boat traveling NE to SW through channel
1136	casing slipping, need to readjust
1138	Seaward marine transport boat traveling SW to NE passing W of pier approaching barge N of Island I
1142	speed boat traveling W to E through channel
1145	Seaward marine transport boat traveling SW passing W of pier
1147	USNS 51 traveling W to E through channel, stopped drilling
1149	Yacht traveling SW to NE, West of pier toward Island 2 passing through channel
1151	Navy Airboat LCAC-26 traveling SW to NE, W of pier through channel

Sighting Log

Time	Species	Total Number	Adults	Juveniles	Closest Distance to Observer	Activity or Behaviors	Shut down? (yes/no)	Time of Shut-down	Time of Start Up	Time last seen

Daily Summary

Species	Total Number	Takes in Zone A	Takes in Zone B	# Shut-Downs	Comments

Daily Observer Log Form

Contractor: CTJV	Project Name: CTJV Parallel Thimble Shoals
NOAA/NMFS Permit: IHA March 2020	Location (Island Number)
USACE Permit:	State Permits:
Observer Name	Observer Location
Date: 16-April-2020	Shift Start: Shift End:
Sunrise:	Sunset:

Weather and Visibility Information

Location	Time	Air Temp (F)	Water Temp	Visibility (Good, Fair,	Could Cover (%)	Wave Height (ft)	Wind Speed & Direction	Precipitation	Beaufort Scale

Observer Logs

Time	Notes: (i.e., start and stop times for pile driving activities, shift changes, nearby human actiivties.)
1153	drilling resumed
1158	begin hammering (DTH)
1201	Tugboat traveling E to W through channel
1203	stopped, need to readjust
1210	gave all clear to impact hammer, they are waiting for survey to check in
1215	Seaward Marine working in water N of Impact hammer
1219	soft start (impact) West pile
1221	DTH resumes hammering, coast guard traveling E to W through channel
1224	Impact hammer normal hitting begins
1225	Impact hammer stops
1231	Impact hammer switching to East pile, DTH still hammering
1238	Begin impact hammer on East pile
1239	End restrike
1242	Fishing boat drifting W, South of Island 1
1245	Island walk, USNS 13 traveling E to W through channel, DTH stopped and resumed hammering

Sighting Log

Time	Species	Total Number	Adults	Juveniles	Closest Distance to Observer	Activity or Behaviors	Shut down? (yes/no)	Time of Shut-down	Time of Start Up	Time last seen

Daily Summary

Species	Total Number	Takes in Zone A	Takes in Zone B	# Shut-Downs	Comments

pg 6

Daily Observer Log Form

Contractor: CTJV	Project Name: CTJV Parallel Thimble Shoals
NOAA/NMFS Permit: IHA March 2020	Location: (Island Number)
USACE Permit:	State Permits:
Observer Name: Elizabeth Jamz/Emily Toye	Observer Location: island 1
Date: 4/14/20	Shift Start: 7:30 Shift End: 20:20
Sunrise: 6:27	Sunset: 19:39

Weather and Visibility Information

Location	Time	Air Temp (F)	Water Temp	Visibility (Good, Fair,	Could Cover (%)	Wave Height (ft)	Wind Speed & Direction	Precipitation	Beaufort Scale

Observer Logs

Time	Notes: (i.e., start and stop times for pile driving activities, shift changes, nearby human actiivties.)
15:46	Cargo ship E to W through channel
16:12	coast guard 909 traveling E to W through channel
16:32	survey equipment malfunctioning
16:51	Equipment fixed, begin drilling
1700	sporadic hammering then stopped, issues w radio
17:10	got new radio, resumed
17:15	nhour crew arrives, stopped
17:19	resume drilling
17:47	cargo ship E to W via channel, Seaward marine still working
17:53	tugboat pulling barge E to W via channel
18:10	lift casing + replace
18:11	start + stop hammering lift casing
18:12	replace casing, start + stop hammer, lift casing, replace, start/stop hammer
18:13	Lift casing, replace, start hammering + stop
18:20	night crew dredging casings placed earlier this week
18:26	E/V traveling E to W South of island 1

ighting Log

ime	Species	Total Number	Adults	Juveniles	Closest Distance to Observer	Activity or Behaviors	Shut down? (yes/no)	Time of Shut-down	Time of Start Up	Time last seen

Daily Summary

Species	Total Number	Takes in Zone A	Takes in Zone B	# Shut-Downs	Comments

Scanned with CamScanner

pg 5

Daily Observer Log Form

Contractor: CTJV	Project Name: CTJV Parallel Thimble Shoals
NOAA/NMFS Permit: IHA March 2020	Location: (Island Number)
USACE Permit:	State Permits:
Observer Name: Elizabeth Janz/Emily Toye	Observer Location: Island 1
Date: 4/14/20	Shift Start: 7:30 Shift End: 20:20
Sunrise: 06:27	Sunset: 19:39

Weather and Visibility Information

Location	Time	Air Temp (F)	Water Temp	Visibility (Good, Fair,	Could Cover (%)	Wave Height (ft)	Wind Speed & Direction	Precipitation	Beaufort Scale

Observer Logs

Time	Notes: (i.e., start and stop times for pile driving activities, shift changes, nearby human actiivties.)
12:46	Stopped + resumed hammering
12:48	stopped hammering
12:49	resumed hammer
12:53	stopped + resumed hammer
12:54	stopped hammer
12:57	resumed hammer
13:02	stopped + resumed hammer
13:04	tugboat traveling W to E through channel
13:05	resumed hammering
13:06	stopped hammering
13:08	remove hammer, F/V traveling SE to NW, S of I2 to W of pier, then towards I2.
13:20	planning on doing a second pile w/ DTH today
13:36	island walk
13:38	tug pulling barge E to W through channel
13:45	Skydra moving 2nd barge W of pier towards island 2
14:11	cargo ship W to E

ighting Log

ime	Species	Total Number	Adults	Juveniles	Closest Distance to Observer	Activity or Behaviors	Shut down? (yes/no)	Time of Shut-down	Time of Start Up	Time last seen

Daily Summary

Species	Total Number	Takes in Zone A	Takes in Zone B	# Shut-Downs	Comments

Scanned with CamSca

1246 stopped and resumed hammering
1248 stopped hammering
1249 resumed hammer
1253 stopped and resumed hammer
1256 stopped hammer
1257 resumed hammer
1302 stopped and resumed hammering
1304 tugboat traveling w to e through channel
1305 resumed hammering
1306 stopped hammering
1308 removing hammer, fishing boat travelling SE to NW from south of I1 to W of pier then towards I2
1320 planning to do a second pile with DTH today
1336 Island walk,
1338 tugboat pulling barge e to w through channel
1345 seaward marine moving second barge w of pier towards island2
1417 Mustafa dayi turkon line cargo ship w to e
1546 maersk line cargo ship traveling e to w through channel
1612 coast guard 909 traveling w to e through channel
1632 survey equipment malfunctioning.
1657, equipment fixed, begin drilling
1700 sporadic hammering then stopped, issues with radios
1710 got new radio, resumed
1715 night crew arrives, stopped
1719 resumed drilling
1747 cargo ship traveling e to w through channel, seaward marine still working in water
1753 tugboat pulling barge e to w through channel
1810 lift casing and replace
1811 start and stop hammering, lift casing
1812 replace casing, start and stop hammering, lift casing, replace, start hammering and stop
1813 lift casing, replace, start hammering and stop
1820 night crew dredging casings that were placed earlier this week
1826 fishing boat traveling e to w south of island 1
1832 start and stop hammering
1837 start, stop, start hammering
1838 stop hammering start
1839 stop and start hammering
1840 stop but still drilling
1909 lift pile, replace
1917 stop drilling
1921 resume drilling
1924 start and stop hammering, still drilling
Sunset 1940, 1949 reminded crew their permit is only for daylight hours and the sun has set, supervisor advised
1950 told they are wrapping up and we can get a ride to the yard, end watch
2004 catch ride to yard
2020 arrive at yard

Daily Observer Log Form

Contractor: CTJV	Project Name: CTJV Parallel Thimble Shoals
NOAA/NMFS Permit: IHA March 2020	Location: (Island Number) 1
USACE Permit: –	State Permits: –
Observer Name: Elizabeth Jan=/Sidney McCullers	Observer Location: Conner
Date: 18-April-2020	Shift Start: 0750 Shift End: 1146
Sunrise: 0625	Sunset: 1941

Weather and Visibility Information

Location	Time	Air Temp (F)	Water Temp	Visibility (Good, Fair,	Could Cover (%)	Wave Height (ft)	Wind Speed & Direction kts	Precipitation	Beaufort Scale
Conner	0830	63.5	55.6	Fair	100	4	WSW 17.5	light rain	3

Observer Logs

Time	Notes: (i.e., start and stop times for pile driving activities, shift changes, nearby human actiivties.)
0750	Catch ride to Island 1
0805	Arrive at Island 1
0810	meet with Kerry, plan to start Impact hammer in 30min
0830	start watch
0858	crew ready, waiting for survey
0905	Maersk Line cargo ship traveling E to W, NW of pier
0912	survey walked out to middle of pier and back
0921	crew said they would wait for storm to pass, end watch
0952	survey leaves, equipment malfunctioning due to rain, crew may still pile drive without survey
1120	Crew decides to end shift
1133	catch van to yard
1146	Arrive at yard

Sighting Log

Time	Species	Total Number	Adults	Juveniles	Closest Distance to Observer	Activity or Behaviors	Shut down? (yes/no)	Time of Shut-down	Time of Start Up	Time last seen

Daily Summary

Species	Total Number	Takes in Zone A	Takes in Zone B	# Shut-Downs	Comments

Daily Observer Log Form

Contractor: CTJV	Project Name: CTJV Parallel Thimble Shoals
NOAA/NMFS Permit: IHA March 2020	Location: (Island Number) 1
USACE Permit:	State Permits:
Observer Name: GABBY THORNTON / ELIZABETH JANE	Observer Location: PIER
Date: 04/20/2020	Shift Start: 0615 Shift End: 1638
Sunrise: 0622	Sunset: 1944

Weather and Visibility Information

Location	Time	Air Temp (F)	Water Temp	Visibility (Good, Fair,	Could Cover (%)	Wave Height (ft)	Wind Speed & Direction	Precipitation	Beaufort Scale
ISLAND1	0700	44°	56.7°	FAIR	90%	1.0	10 KTS 280°	100%	1
ISLAND1	1200	46°	56.7°	FAIR	90%	2.0	25 KTS 285°	100%	2
ISLAND1	1500	50°	56.7°	GOOD	90%	2.8	9 KTS 350°	100%	2

Observer Logs

Time	Notes: (i.e., start and stop times for pile driving activities, shift changes, nearby human actiivties.)
0615	CAUGHT SHUTTLE.
0630	ARRIVED ONSITE. MORNING MEETING WITH SITE SUPERVISOR
0707	BEGIN WATCH. SEWARD BEGINS THE NORTH SIDE OF ISLAND ONE AND THE SOUTH SIDE OF ISLAND 2.
0708	NAVY SUB TRAVELING WEST THROUGH THIMBLE CHANNEL
0745	CARGO SHIP TRAVELING EAST THROUGH THIMBLE CHANNEL.
0810	PILE DRIVING BEGINS WITH A SOFT START
0812	COMMUNICATION SHIP TRAVELING EAST THROUGH THIMBLE CHANNEL.
0841	PILE DRIVING STOPS TO FIX AN ISSUE WITH THE HAMMER.
0905	DRIVING RESUMES
0935	PILE DRIVING COMPLETE, SWITCHING PILES
1030	PRE-WATCH AGAIN, AT THINGS DELAY LONGER.
1100	ALL-CLEAR.
1216	PILE DRIVING BEGINS WITH A SOFT START
1239	PILE COMPLETE, PICKING UP ANOTHER PILE. CONTINUED WATCH.

Sighting Log

Time	Species	Total Number	Adults	Juveniles	Closest Distance to Observer	Activity or Behaviors	Shut down? (yes/no)	Time of Shut-down	Time of Start Up	Time last seen

Daily Summary

Species	Total Number	Takes in Zone A	Takes in Zone B	# Shut-Downs	Comments

Daily Observer Log Form

Contractor: CTJV	Project Name: CTJV Parallel Thimble Shoals
NOAA/NMFS Permit: IHA March 2020	Location: (Island Number) 1
USACE Permit:	State Permits:
Observer Name: GABBY THORNTON / ELIZABETH JAMES	Observer Location: PIER
Date : 04/20/2020	Shift Start: 0615 Shift End: 1635
Sunrise: 0622.	Sunset: 1944

Weather and Visibility Information

Location	Time	Air Temp (F)	Water Temp	Visibility (Good, Fair,	Could Cover (%)	Wave Height (ft)	Wind Speed & Direction	Precipitation	Beaufort Scale

Observer Logs

Time	Notes: (i.e., start and stop times for pile driving activities, shift changes, nearby human actiivties.)
1345	NAVY SHIP TRAVELING EAST THROUGH THIMBLE CHANNEL.
1405	PILE DRIVING BEGINS WITH SOFT START
1431	PILE DRIVING COMPLETE. SWITCHING PILES.
1456	DRIVING STOPS AND STARTS AGAIN
1519	DRIVING COMPLETE. BEGIN POST WATCH.
1549	POST WATCH COMPLETE. ALL-CLEAR.

Sighting Log

Time	Species	Total Number	Adults	Juveniles	Closest Distance to Observer	Activity or Behaviors	Shut down? (yes/no)	Time of Shut-down	Time of Start Up	Time last seen

Daily Summary

Species	Total Number	Takes in Zone A	Takes in Zone B	# Shut-Downs	Comments

Daily Observer Log Form

Contractor: CTJV	Project Name: CTJV Parallel Thimble Shoals
NOAA/NMFS Permit: IHA March 2020	Location: (Island Number) 1
USACE Permit: —	State Permits: —
Observer Name: Elizabeth Jantz/Sidd McCullers	Observer Location: Pier
Date: 24-April-2020	Shift Start: 0629 Shift End: 2034
Sunrise: 0617	Sunset: 1946

Weather and Visibility Information

Location	Time	Air Temp (F)	Water Temp	Visibility (Good, Fair,	Could Cover (%)	Wave Height (ft)	Wind Speed & Direction	Precipitation	Beaufort Scale
Pier	0755	61.5	55.8	Good	80%	1.5	SSW 7.8	none	2

Observer Logs

Time	Notes: (i.e., start and stop times for pile driving activities, shift changes, nearby human actiivties.)
0629	Ride to Island 1
0649	Arrive at Island 1
0655	Meet with Vince's crew
0700	Start watch, Seaward Marine working in water
0810	Issues with pile placement, will move pile to a different pocket
0852	Start drilling (3" tolerance)
0858	Speedboat passing SW to NE under bridge S of Island 1
0905	Start + stop hammering, speedboat with fishing gear traveling SE to NW from bridge to W of pier
0910	hole in yellow feedline, shut down
0914	resume drilling
0915	Speedboat (Universal Laboratories) came around East side of Island 1 S under pier and dropped a line in the water 100 meters W of source
0919	Universal Laboratories departed W + stopped 500 meters W of source
0921	USNS 94 traveling E to W through channel
0925	start, stop, start, stop hammering, check-in w/ survey

Sighting Log

Time	Species	Total Number	Adults	Juveniles	Closest Distance to Observer	Activity or Behaviors	Shut down? (yes/no)	Time of Shut-down	Time of Start Up	Time last seen

Daily Summary

Species	Total Number	Takes in Zone A	Takes in Zone B	# Shut-Downs	Comments

Daily Observer Log Form

Contractor: CTJV	Project Name: CTJV Parallel Thimble Shoals
NOAA/NMFS Permit: IHA March 2020	Location: (Island Number)
USACE Permit:	State Permits:
Observer Name:	Observer Location:
Date :	Shift Start: Shift End:
Sunrise:	Sunset:

Weather and Visibility Information

Location	Time	Air Temp (F)	Water Temp	Visibility (Good, Fair,	Could Cover (%)	Wave Height (ft)	Wind Speed & Direction kts	Precipitation	Beaufort Scale
Pier	1030	66	57.2	Good	75%	1.5	WSW 15.6	none	3

Observer Logs

Time	Notes: (i.e., start and stop times for pile driving activities, shift changes, nearby human actiivties.)
0929	start hammering
0930	stop hammering, check-in w/ survey, lift casing
0935	"CMA Bremen" cargoship traveling E to W through channel
0942	adjust casing
0952	Tugboat traveling W to E through channel
0953	"Spring Progress" cargoship traveling E to W through channel
1052	Tugboat pulling barge W to E through channel
1056	start & stop hammering, check-in w/ survey, resume hammering
1057	stop hammering, casing skipping
1111	ship "Regulus" traveling E to W through channel, seaward Marine no longer working in water
1128	Seaward Marine tugboat traveling SW to NE, S of pier
1131	start & stop hammering, Seaward Marine speedboat traveling SW to NE, SW of pier (survey)
1137	start, stop, and start hammering
1136	Seaward marine transport traveling SW to NE, SW of pier, stop & start hammering

Sighting Log

Time	Species	Total Number	Adults	Juveniles	Closest Distance to Observer	Activity or Behaviors	Shut down? (yes/no)	Time of Shut-down	Time of Start Up	Time last seen

Daily Summary

Species	Total Number	Takes in Zone A	Takes in Zone B	# Shut-Downs	Comments

Daily Observer Log Form

Contractor: CTJV	Project Name: CTJV Parallel Thimble Shoals
NOAA/NMFS Permit: IHA March 2020	Location: (Island Number)
USACE Permit:	State Permits:
Observer Name:	Observer Location:
Date :	Shift Start: Shift End:
Sunrise:	Sunset:

Weather and Visibility Information

Location	Time	Air Temp (F)	Water Temp	Visibility (Good, Fair,	Could Cover (%)	Wave Height (ft)	Wind Speed & Direction	Precipitation	Beaufort Scale

Observer Logs

Time	Notes: (i.e., start and stop times for pile driving activities, shift changes, nearby human actiivties.)
1141	Stopped hammering, check-in w/survey
1146	Drill is also stopped, working to get casing plumb
1149	resumed drilling
1151	Stopped, clearing lines, seaward marine transport traveling SW, W of pier
1210	Seaward Marine survey traveling SW, W of pier
1325	NEW casing lowered into place, begin watching water
1335	Free divers anchored speed boat on E side of NE jetty, swimming/diving N of NE jetty
1350	Speedboat traveling NW to SE through channel and E of T. Island
1423	"Northern Debonair" Cargoship traveling W to E through channel
1431	Free divers returned to boat and packed up
1435	Seaward marine transport boat traveling NE, W of pier
1443	Waiting for survey
1448	Survey checking in w/crew

Sighting Log

Time	Species	Total Number	Adults	Juveniles	Closest Distance to Observer	Activity or Behaviors	Shut down? (yes/no)	Time of Shut-down	Time of Start Up	Time last seen

Daily Summary

Species	Total Number	Takes in Zone A	Takes in Zone B	# Shut-Downs	Comments

4/24/2020

Daily Observer Log Form

Contractor: CTJV	Project Name: CTJV Parallel Thimble Shoals
NOAA/NMFS Permit: IHA March 2020	Location: (Island Number)
USACE Permit:	State Permits:
Observer Name:	Observer Location:
Date :	Shift Start: Shift End:
Sunrise:	Sunset:

Weather and Visibility Information

Location	Time	Air Temp (F)	Water Temp	Visibility (Good, Fair,	Could Cover (%)	Wave Height (ft)	Wind Speed & Direction	Precipitation	Beaufort Scale
Pier	1600	77	59.9	Good	98%	1.3	WNW 5.8	Light	4

Observer Logs

Time	Notes: (i.e., start and stop times for pile driving activities, shift changes, nearby human actiivties.)
1453	Turn on air, start drilling 2nd casing
1455	stop, check-in with survey
1456	start and stop hammering, check in with survey
1457	resume hammering and stop, casing sliding
1458	resume drilling
1501	lift casing and check in with survey
1502	lift casing and check in with survey
1631	stopped drilling
1646	restart drill
1654	Start hammering
1655	stopped, casing slipped
1707	casing slipped, replace on rock
1718	stopping due to storm, told to come in from pier
1748	return to pier, night crew takes over drilling
2008	finished drilling for the night
2034	Arrive at yard

Sighting Log

Time	Species	Total Number	Adults	Juveniles	Closest Distance to Observer	Activity or Behaviors	Shut down? (yes/no)	Time of Shut-down	Time of Start Up	Time last seen

Daily Summary

Species	Total Number	Takes in Zone A	Takes in Zone B	# Shut-Downs	Comments

Daily Observer Log Form

Contractor: CTJV	Project Name: CTJV Parallel Thimble Shoals
NOAA/NMFS Permit: March 2020	Location: (Island Number) 1
Observer Name: GABBY THORNTON / LIBBY MCCULLEY	Observer Location: PIER
Date: 04/25/2020	Shift Start: 0630 Shift End: 1440
Sunrise: 0616	Sunset: 1948

Weather and Visibility Information

Location	Time	Air Temp (F)	Water Temp	Visibility (Good, Fair,	Could Cover (%)	Wave Height (ft)	Wind Speed & Direction	Precipitation	Beaufort Scale
ISLAND 1	0700	53°	58.3°	GOOD	90%	2.8	18KTS 60°	10%	3
ISLAND 1	1300	60°	58.3°	GOOD	90%	1.8	10KTS 90°	30%	2

Observer Logs

Time	Notes: (i.e., start and stop times for pile driving activities, shift changes, nearby human actiivties.)
0630	CAUGHT THE SHUTTLE
0645	ARRIVE AT ISLAND 1, DISEMBARK AND MEETING BEGINS WITH SUPERINTENDENTS & FORMAN.
0705	BEGIN WATCH
0735	PRE-WATCH COMPLETE, ALL-CLEAR AND COMMUNICATED TO FORMAN
0740	CARGO SHIP TRAVELING EAST THROUGH THIMBLE CHANNEL
0751	CARGO SHIP TRAVELING EAST THROUGH THIMBLE CHANNEL
0835	CREW BEGINS GRINDING WITH DTH
0847	CREW BEGINS HAMMER DRILLING
0848	CREW GOES BACK TO GRINDING
0902	(5) PLEASURE CRAFT APPROACH ISLAND 1 228° SE OF THE PIER ~150M SW OF DRILLING OPERATIONS. FISHING.
0910	CARGO SHIP TRAVELING WEST THROUGH THIMBLE CHANNEL
0938	FISHING TRAWLER TRAVELING EAST THROUGH THIMBLE CHANNEL.
0940	ONE OF THE FOR MENTIONED PLEASURE CRAFT COME FROM THE SW OF THE ISLAND TO FISH UNDER THE PIER.
1025	CREW GOES BACK TO HAMMERING THE DTH
1030	CREW SWITCHES BACK TO GRINDING
1055	CARGO SHIP TRAVELING EAST THROUGH THIMBLE CHANNEL
1118	DRILLING STOPS TO ADJUST THE PILE. REMAIN ON ACTIVE WATCH.
1208	CREW BEGINS GRINDING WITH THE DTH ONCE AGAIN.

Sighting Log

Time	Species	Total Number	Adults	Juveniles	Closest Distance to Observer	Activity or Behaviors	Shut down? (yes/no)	Time of Shut-down	Time of Start Up	Time last seen

Daily Summary

Species	Total Number	Takes in Zone A	Takes in Zone B	# Shut-Downs	Comments

Daily Observer Log Form

Contractor: CTJV	Project Name: CTJV Parallel Thimble Shoals
NOAA/NMFS Permit: March 2020	Location: (Island Number) 1
Observer Name: GABBY THORNTON / SIBLY MCMILLEN	Observer Location: PIER
Date: 04/25/2020	Shift Start: 0630 Shift End: 1440
Sunrise: 0616	Sunset: 1948

Weather and Visibility Information

Location	Time	Air Temp (F)	Water Temp	Visibility (Good, Fair,	Could Cover (%)	Wave Height (ft)	Wind Speed & Direction	Precipitation	Beaufort Scale
ISLAND 1	0700	53°	58.3°	GOOD	90%	2.8	18KTS 60°	10%	3
ISLAND 1	1300	60°	58.3°	GOOD	90%	1.8	10KTS 90°	30%	2

Observer Logs

Time	Notes: (i.e., start and stop times for pile driving activities, shift changes, nearby human actiivties.)
1240	CARGO SHIP TRAVELING WEST THROUGH THIMBLE CHANNEL
1300	CARGO SHIP TRAVELING WEST THROUGH THIMBLE CHANNEL
1301	RESEARCH VESSEL TRAVELING EAST THROUGH THIMBLE CHANNEL
1343	DRILLING STOPS TO SWITCH PILES. REMAINING ON WATCH.
1345	CARGO SHIP TRAVELING WEST THROUGH THIMBLE CHANNEL
1345	INFORMED THAT THE CREW IS DONE FOR THE DAY, BEGIN POST-WATCH.
1415	POST-WATCH DONE, ALL-CLEAR
1425	CAUGHT SHUTTLE
1440	BACK AT THE YARD.

Sighting Log

Time	Species	Total Number	Adults	Juveniles	Closest Distance to Observer	Activity or Behaviors	Shut down? (yes/no)	Time of Shut-down	Time of Start Up	Time last seen

Daily Summary

Species	Total Number	Takes in Zone A	Takes in Zone B	# Shut-Downs	Comments

Daily Observer Log Form

Contractor: CTJV		Project Name: CTJV Parallel Thimble Shoals	
NOAA/NMFS Permit: March 2020		Location: (Island Number) 1	
Observer Name: Elizabeth Janz / Cubby Thornton		Observer Location: Connex	
Date: 27-April-2020		Shift Start: 0620	Shift End: 1455
Sunrise: 0613		Sunset: 1949	

Weather and Visibility Information

Location	Time	Air Temp (F)	Water Temp	Visibility (Good, Fair,	Could Cover (%)	Wave Height (ft)	Wind Speed & Direction (kts)	Precipitation	Beaufort Scale
connex	0815	51°	54.3	Fair	100%	3	NW 27.2	none	5

Observer Logs

Time	Notes: (i.e., start and stop times for pile driving activities, shift changes, nearby human actiivties.)
0620	Catch bus to Island 1
0640	Arrive at Island 1
0700	Meet with Vince's crew - Wait out wind
0815	Start watch
0848	looking/waiting for survey
0903	check in with survey
0905	Begin drilling
0915	Casing steadily slipping
0945	Casing still slipping out of place
0950	Start hitting, Casing still slipping
1000	Stop hitting
1015	Working to get casing plumb
1024	Finished casing, not sure if they will do another
1054	End watch
1130	Shawn's crew unlikely to drill, Vince's crew still not sure
1200	Harry checked in to say they will try to thread another pile
1252	Vince's crew will not be drilling today, they need to fix the drill, Shawn's crew would like us to stay in case the wind goes down
1350	Shawn's crew will not be drilling
1433	catch bus to yard
1455	Arrive at yard

Sighting Log

Time	Species	Total Number	Adults	Juveniles	Closest Distance to Observer	Activity or Behaviors	Shut down? (yes/no)	Time of Shut-down	Time of Start Up	Time last seen

Daily Summary

Species	Total Number	Takes in Zone A	Takes in Zone B	# Shut-Downs	Comments

Daily Observer Log Form

Contractor: CTJV	Project Name: CTJV Parallel Thimble Shoals
NOAA/NMFS Permit: March 2020	Location: (Island Number) 1
Observer Name: GABBY THORNTON / EMILY TOYE	Observer Location: PIER
Date: 04/28/2020	Shift Start: 0630 Shift End: 1730
Sunrise: 0612	Sunset: 1951

Weather and Visibility Information

Location	Time	Air Temp (F)	Water Temp	Visibility (Good, Fair,	Could Cover (%)	Wave Height (ft)	Wind Speed & Direction	Precipitation	Beaufort Scale
ISLAND1	0700	39°	57.7°	GOOD	1%	1.5	5KTS 186°	0%	1
ISLAND1	1500	67	59.2°	GOOD	90%	2.3	12KTS	0%	2

Observer Logs

Time	Notes: (i.e., start and stop times for pile driving activities, shift changes, nearby human actiivties.)
0630	CAUGHT THE SHUTTLE
0645	DISEMBARK ONTO ISLAND. MORNING MEETING WITH SUPERVISORS.
0720	BEGIN WATCH, SEWARD MARINE DREDGING NORTH JETTY
0750	PRE-WATCH COMPLETE, ALL-CLEAR
0945	DRILLING BEGINS WITH GRINDING
1118	DRILLING STOPS TO SWITCH TO THE EAST PILE DUE TO TEMPLATE DIFFICULTY
1129	TWO NAVY LAND ROVERS E → W THROUGH THIMBLE CHANNEL
1131	CONTAINER SHIP TRAVELING EAST THROUGH THIMBLE CHANNEL
1140	GRINDING BEGINS AGAIN
1240	CREW BEGINS HAMMERING & QUICKLY GOES BACK TO GRINDING
1327	CARGO SHIP TRAVELING EAST THROUGH THIMBLE CHANNEL
1347	TWO PERSONAL WATERCRAFT WITH ACTIVE DIVERS ANCHORED SE OF ICLAND 1 35 M OFF THE ROCKS.
1400	SEWARD MARINE CREW BOAT ALSO EXPLORING THE ROCK.
1540	VINCE'S CREW THREADING PILE ON THE SOUTH SIDE
1602	DRILLING STOPS ON THE NORTH SIDE.
1632	POST-WATCH COMPLETE, ALL-CLEAR. SETTING UP FOR SOUTH SIDE DRILLING
1700	INFORMED THAT ALL DRIVING DONE FOR THE DAY
1717	CAUGHT SHUTTLE
1730	BACK AT THE YARD

Sighting Log

Time	Species	Total Number	Adults	Juveniles	Closest Distance to Observer	Activity or Behaviors	Shut down? (yes/no)	Time of Shut-down	Time of Start Up	Time last seen

Daily Summary

Species	Total Number	Takes in Zone A	Takes in Zone B	# Shut-Downs	Comments

REMSA MESO

Daily Observer Log Form

Contractor: CTJV	Project Name: CTJV Parallel Thimble Shoals
NOAA/NMFS Permit: March 2020	Location: (Island Number) 1
Observer Name: Elizabeth Jane/Gabby Thornton	Observer Location:
Date: 29-April-2020	Shift Start: 0620 Shift End: 2030
Sunrise: 0611	Sunset: 1951

Weather and Visibility Information

Location	Time	Air Temp (F)	Water Temp	Visibility (Good, Fair,	Could Cover (%)	Wave Height (ft)	Wind Speed & Direction (kts)	Precipitation	Beaufort Scale
Pier	0730	56	55.9	Good	10%	1	SSW 7.8	none	2
Pier	1350	77	—	Good	70%	1	ESE 5.8	none	2

Observer Logs

Time	Notes: (i.e., start and stop times for pile driving activities, shift changes, nearby human actiivties.)
0620	Catch bus to Island 1
0640	Arrive at Island 1
0700	Meet with both crews: Shawn's crew - could be 0930 or 1030, Vince's crew right away
0720	Walk out to pier, Start watch, Seaward marine working in water N of NW jetty
0731	Seaward Marine Tugboat pushing secondary barge to Island 2
0750	Navy escort boats leading Submarine E to W through channel
0812	Seaward Marine tugboat pushing barge NE, W of pier
0817	Issue with casing moving out of alignment while being placed
0827	standby, Asking Seaward marine to send divers to see what is happening underwater where they are trying to place the pile
1025	Speed boat mooring where DTH was this morning (presumed dive team)
1127	dive team reports that there are many rocks in the location
1135	Seaward marine cashman barge no longer working in water
1210	Shawn's Crew working to pick up pile to be threaded (DTH)
1222	Seaward marine cashman crew resumed working in water
1258	Dive crew departs
1335	Shawn's crew placing pile in W pocket N of Island 1
1337	Vince's crew placing casing in SW pocket S of pier on Island 1
1338	"Monaco Bridge" cargo ship traveling E to W through channel
1348	Fishing boat traveling NW to SE off Island 1
1351	Shawn's crew checking in with survey
1356	Vince's crew turns on air and drill

Sighting Log

Time	Species	Total Number	Adults	Juveniles	Closest Distance to Observer	Activity or Behaviors	Shut down? (yes/no)	Time of Shut-down	Time of Start Up	Time last seen

Daily Summary

Species	Total Number	Takes in Zone A	Takes in Zone B	# Shut-Downs	Comments

4/29/2020

Daily Observer Log Form

Contractor: CDV	Project Name: CDV Parallel Thimble Shoals
NOAA NMFS Permit: March 2020	Location: (Island Number)
Observer Name:	Observer Location:
Date: 29 April 2020	Shift Start: Shift End:
Sunrise:	Sunset:

Weather and Visibility Information

Location	Time	Air Temp (F)	Water Temp	Visibility (Good, Fair,	Could Cover (%)	Wave Height (ft)	Wind Speed & Direction	Precipitation	Beaufort Scale

Observer Logs

Time	Notes: (i.e., start and stop times for pile driving activities, shift changes, nearby human actiivties.)
1357	Vince's crew starts + stops hitting, Shawn's crew turns on water
1359	Vince's crew starts, stops, starts and stops hitting and starts + stops and starts hitting (1400 stops again)
1400	Vince's crew intermittant hammering casing slipping, stop hammering
1404	resume intermittant hammering
1405	tugboat pulling 4 barges E to W through channel
1407	Fishing boat traveling SE to NW from bridge S of Island 1
1414	Vince's crew trying to move debris out of the way to put casing in location
1427	USNS #24 traveling E to W through channel
1441	Speedboat idling S of N of Island 1, 100 m SW of DTH
1442	Frag tank almost full, fishing boat travelling NW to SE, NW of DTH
1500	Shawn's crew starts hammering
1511	Stop hammering, and resume
1517	Both DTH hammering
1518	CMA CGM J ADAMS" Cargo ship traveling E to W through channel
1537	Both drills stopped hammering
1542	Mid Island DTH starts hammering
1546	Both DTH hammers hitting
1550	Both hammers stopped, Mid Island hammer resumed
1611	Issues with Frag tank on Shawn's side, also seems to have an issue with the hammer being struck
1626	Resume hammering (Shawn's crew)
1653	Stop hammering (Shawn's crew) Done with pile

Sighting Log

Time	Species	Total Number	Adults	Juveniles	Closest Distance to Observer	Activity or Behaviors	Shut down? (yes/no)	Time of Shut-down	Time of Start Up	Time last seen

Daily Summary

Species	Total Number	Takes in Zone A	Takes in Zone B	# Shut-Downs	Comments

4/29/2020

Daily Observer Log Form

Contractor: CTJV		Project Name: CTJV Parallel Thimble Shoals	
NOAA/NMFS Permit: March 2020		Location: (Island Number)	
Observer Name:		Observer Location:	
Date		Shift Start:	Shift End:
Sunrise:		Sunset:	

Weather and Visibility Information

Location	Time	Air Temp (F)	Water Temp	Visibility (Good, Fair,	Could Cover (%)	Wave Height (ft)	Wind Speed & Direction kts	Precipitation	Beaufort Scale
Pier	1820	74	—	Good	99%	1'	SE 13.6	none	3

Observer Logs

Time	Notes: (i.e., start and stop times for pile driving activities, shift changes, nearby human actiivties.)
1657	Survey checking location for Vince's crew
1719	Start drilling and hammering and stop hammering, continue to grind with DTH
1733	Day crew relieved by night crew
1815	Issues with casing slipping continue
1922	Start and stop hammering
1928	start and stop hammering
1944	Seaward Marine tugboat pushing "Cashman" barge S. Wof pier
1947	Robert called for a shutdown
2004	End watch due to low light / visibility
2010	Catch a ride to the yard
2030	Arrive at yard

Sighting Log

Time	Species	Total Number	Adults	Juveniles	Closest Distance to Observer	Activity or Behaviors	Shut down? (yes/no)	Time of Shut-down	Time of Start Up	Time last seen

Daily Summary

Species	Total Number	Takes in Zone A	Takes in Zone B	# Shut-Downs	Comments

Daily Observer Log Form

Contractor: CTJV		Project Name: CTJV Parallel Thimble Shoals	
NOAA/NMFS Permit: March 2020		Location: (Island Number) 1	
Observer Name: GABBY THORNTON / SARAH MCMILLEN		Observer Location: PIER	
Date: 04/30/2020		Shift Start: 0915	Shift End: 1140
Sunrise: 0610		Sunset: 1953	

Weather and Visibility Information

Location	Time	Air Temp (F)	Water Temp	Visibility (Good, Fair,	Could Cover (%)	Wave Height (ft)	Wind Speed & Direction	Precipitation	Beaufort Scale
ISLAND 1	0940	72°	58.6°	FAIR	75%	4.8	40 KTS 160°	100%	4

Observer Logs

Time	Notes: (i.e., start and stop times for pile driving activities, shift changes, nearby human actiivties.)
0915	CAUGHT A RIDE TO THE ISLAND VIA SARAH FALLN
0930	DISEMBARK ONTO ISLAND AND BEGIN WATCH.
0950	CREW BEGINS BREAKING ROCK WITH DTH
1030	CREW BEGINS HAMMERING DTH
1050	HAMMERING STOPS. CREW BEGINS GRINDING DTH
1100	DRILLING COMPLETE. BEGIN POSTWATCH
1130	ALL-CLEAR AND DISEMBARKING IMMEADIATLY DUE TO WEATHER.
1131	CAUGHT THE SHUTTLE
1140	BACK AT THE YARD

Sighting Log

Time	Species	Total Number	Adults	Juveniles	Closest Distance to Observer	Activity or Behaviors	Shut down? (yes/no)	Time of Shut-down	Time of Start Up	Time last seen

Daily Summary

Species	Total Number	Takes in Zone A	Takes in Zone B	# Shut-Downs	Comments

Daily Observer Log Form

Contractor: CTJV	Project Name: CTJV Parallel Thimble Shoals
NOAA/NMFS Permit: March 2020	Location: (Island Number) 1
Observer Name: Elizabeth Jurz/Emily Toye	Observer Location: Pier
Date: 1 - May - 2020	Shift Start: 0915 Shift End: 1500
Sunrise: 0609	Sunset: 1953

Weather and Visibility Information

Location	Time	Air Temp (F)	Water Temp	Visibility (Good, Fair,	Could Cover (%)	Wave Height (ft)	Wind Speed & Direction kts	Precipitation	Beaufort Scale
Pier	1005	60	—	Good	80%	1	W 7 8	none	2

Observer Logs

Time	Notes: (i.e., start and stop times for pile driving activities, shift changes, nearby human actiivties.)
0915	catch ride to Island 1
0935	Arrive at Island 1
0940	Meet with crews: Shawn's crew just threaded pile, Vince's crew - drill is jammed, meeting to discuss next steps
0950	start watch, Secured marine not in water, cargo ship traveling E to W thrugh channel
0959	US Coast Guard boat traveling W to E through channel
1012	3 Navy escort boats traveling W to E through channel
1041	fishing boat traveling W to E through channel
1046	Shawn's crew drilling, not hitting in E packet on NW jetty
1052	casing slipping out of alignment
1053	commercial fishing boat traveling W to E through channel
1101	commercial fishing boat traveling W to E through channel
1107	2 speed boats traveling E to W through channel
1115	start hitting
1119	stop hitting to adjust tide
1127	resume hitting, then stop, check-in w/ survey
1135	resume hitting
1147	Shawn called for a shut down, Island 1 meeting, thank you for working during COVID-19 + Raffle
1210	resume watch and crew checking in w/ survey
1214	resume hitting
1239	stopped hitting, finished DTH

Sighting Log

Time	Species	Total Number	Adults	Juveniles	Closest Distance to Observer	Activity or Behaviors	Shut down? (yes/no)	Time of Shut-down	Time of Start Up	Time last seen

Daily Summary

Species	Total Number	Takes in Zone A	Takes in Zone B	# Shut-Downs	Comments

Daily Observer Log Form

Contractor: CTJV	Project Name: CTJV Parallel Thimble Shoals
NOAA/NMFS Permit: March 2020	Location: (Island Number)
Observer Name:	Observer Location:
Date: 1 - May - 2020	Shift Start: 0715 Shift End: 1500
Sunrise:	Sunset:

Weather and Visibility Information

Location	Time	Air Temp (F)	Water Temp	Visibility (Good, Fair,	Could Cover (%)	Wave Height (ft)	Wind Speed & Direction	Precipitation	Beaufort Scale
Pier	1250	60	54.9	Good	85%	2	N 15.6	<0.1"	4

Observer Logs

Time	Notes: (i.e., start and stop times for pile driving activities, shift changes, nearby human actiivties.)
1253	USNS #72 traveling E to W through channel
1302	DTH resumed hitting, possibly to clear discharge hose
1303	Stopped hitting
1333	end watch
1433	catch bus to yard
1500	Arrive at yard

Sighting Log

Time	Species	Total Number	Adults	Juveniles	Closest Distance to Observer	Activity or Behaviors	Shut down? (yes/no)	Time of Shut-down	Time of Start Up	Time last seen

Daily Summary

Species	Total Number	Takes in Zone A	Takes in Zone B	# Shut-Downs	Comments

Daily Observer Log Form

Contractor: CTJV	Project Name: CTJV Parallel Thimble Shoals
NOAA/NMFS Permit: IHA March 2020	Location: (Island Number) 1
USACE Permit: —	State Permits: —
Observer Name:	Observer Location: Pier
Date: 4 - May - 2020	Shift Start: 0630 Shift End:
Sunrise: 0606	Sunset: 1957

Weather and Visibility Information

Location	Time	Air Temp (F)	Water Temp	Visibility (Good, Fair,	Could Cover (%)	Wave Height (ft)	Wind Speed & Direction	Precipitation	Beaufort Scale
Pier	0740	65	60.3	Good	99%	1'	NW 7.8	<0.1"	2
Pier	0955	71	—	Good	10%	2'	NNW 15.6	none	4
Pier	1352	75	59.7	Good	0%	1	NNW 11.7	none	4

Observer Logs

Time	Notes: (i.e., start and stop times for pile driving activities, shift changes, nearby human actiivties.)
0630	Catch bus to Island 1
0700	Meet with Shawn's crew: pile driving w/ Impact hammer then will have a 48hr silent period
0730	walkout to pier, start watch: Norwegian Encore cruise traveling E to W through channel, seaward Marine working in 1120 S of Island 2
0744	US Naval Ship Maury traveling E to W through channel
0802	Shawn's crew placing Impact hammer on West pile on NW jetty
0811	Tugboat pulling barge E to W through channel
0819	Fishing boat in channel ≈ 200 m NE of source
0830	Crave all clear
0833	commence Soft start, fishing boat moved to Island 2
0850	USNS 201 traveling E to W through channel
0853	Commence normal hitting interval
0859	US Navy boat traveling W to E through channel
0903	stopped, finished with West pile, move to East pile
0917	Norwegian Bliss cruise ship traveling E to W through channel

Sighting Log

Time	Species	Total Number	Adults	Juveniles	Closest Distance to Observer	Activity or Behaviors	Shut down? (yes/no)	Time of Shut-down	Time of Start Up	Time last seen
1736	T. truncatus	3	3	Ø	1,000 M	leaping	No	N/A	N/A	1742

Daily Summary

Species	Total Number	Takes in Zone A	Takes in Zone B	# Shut-Downs	Comments

5/4/2020

Daily Observer Log Form

Contractor: CTJV		Project Name: CTJV Parallel Thimble Shoals	
NOAA NMFS Permit:	March 2020	Location: (Island Number)	
Observer Name:		Observer Location:	
Date		Shift Start:	Shift End:
Sunrise:		Sunset:	

Weather and Visibility Information

Location	Time	Air Temp (F)	Water Temp	Visibility (Good, Fair,	Could Cover (%)	Wave Height (ft)	Wind Speed & Direction	Precipitation	Beaufort Scale

Observer Logs

Time	Notes: (i.e., start and stop times for pile driving activities, shift changes, nearby human actiivties.)
0927	Vessel "Emory Kate" traveling E to W 200m N of source then S, W of pier
0935	commence soft start on East pile
0939	commence normal hammering interval
0940	pile dropped 5-10 feet, stopped hammering, check-in w/ survey
0947	soft start interval hammering
0950	normal interval hammering
0951	2 tugboats and barge traveling W to E through channel
0958	US Navy boat traveling E to W through channel
1002	Yacht traveling E to W through channel
1003	Stopped Impact hammer, done with East pile & Impact hammer
1005	USNS 41 traveling W to E through channel followed by a speedboat and 4 Navy speedboats
1019	USNS 74 traveling W to E through channel
1020	checked in with Vince, they are waiting for casings to arrive so they can pile drive today
1024	USNS Hunter 3 traveling W to E through channel
1029	speedboat traveling E to W through channel
1033	End watch
1055	Vince's crew placing casing in template to be threaded with DTH, resume watch
1118	casing threaded
1127	Norwegian Spirit cruise ship traveling E to W through channel

Sighting Log

Time	Species	Total Number	Adults	Juveniles	Closest Distance to Observer	Activity or Behaviors	Shut down? (yes/no)	Time of Shut-down	Time of Start Up	Time last seen

Daily Summary

Species	Total Number	Takes in Zone A	Takes in Zone B	# Shut-Downs	Comments

5/4/2020

Daily Observer Log Form

Contractor: CTJV	Project Name: CTJV Parallel Thimble Shoals
NOAA NMFS Permit: March 2020	Location (Island Number)
Observer Name	Observer Location:
Date	Shift Start: Shift End:
Sunrise	Sunset:

Weather and Visibility Information

Location	Time	Air Temp (F)	Water Temp	Visibility (Good, Fair,	Could Cover (%)	Wave Height (ft)	Wind Speed & Direction	Precipitation	Beaufort Scale

Observer Logs

Time	Notes: (i.e., start and stop times for pile driving activities, shift changes, nearby human actiivties.)
1150	crew on loading truck
1201	2 commercial fishing boats traveling W to E through channel
1249	DTH starts drilling (W side of Island & midway on Island)
1258	DTH start and stop hitting
1300	DTH stopped drilling
1302	DTH resume drilling
1335	start and stop hitting, continue drilling
1339	start hammering/hitting
1345	stop hitting, continue drilling
1346	start hitting then full stop
1347	start and stop hitting
1352	resume drilling and hitting
1401	stopped pile driving, finished pile
1418	"The Ocean Intervention II" vessel traveling E to W through channel
1431	End watch
1517	Casing placed in template
1535	threading casing (DTH), resume watch
1543	tugboat pulling barge E to W, Yacht traveling W to E through channel
1601	shift in requests MMOs first thing tomorrow
1610	tugboat traveling E to W through channel
1617	tugboat pulling barge E to W through channel
1629	Navy Airboat traveling SW to NE, W of pier and through channel

Sighting Log

Time	Species	Total Number	Adults	Juveniles	Closest Distance to Observer	Activity or Behaviors	Shut down? (yes/no)	Time of Shut-down	Time of Start Up	Time last seen

Daily Summary

Species	Total Number	Takes in Zone A	Takes in Zone B	# Shut-Downs	Comments

5/4/2020

Daily Observer Log Form

Contractor: CTJV	Project Name: CTJV Parallel Thimble Shoals
NOAA NMFS Permit: March 2020	Location: (Island Number)
Observer Name	Observer Location:
Date	Shift Start: Shift End:
Sunrise	Sunset:

Weather and Visibility Information

Location	Time	Air Temp (F)	Water Temp	Visibility (Good, Fair,	Could Cover (%)	Wave Height (ft)	Wind Speed & Direction	Precipitation	Beaufort Scale

Observer Logs

Time	Notes: (i.e., start and stop times for pile driving activities, shift changes, nearby human actiivties.)
1652	Cargo ship traveling E to W through channel
1719	DTH starts drilling, night crew arrives
1734	Tugboat pulling barge W to E through channel, casing slipped, picked up and reset
1736	3 dolphins leaping N of pier W of tunnel (see page 5)
1742	dolphins observed W of first sighting location (traveling)
1746	shut down for the day
1757	Navy Airboat traveling SW to NE through channel
1816	End watch
1820	catch a ride to yard
1840	Arrive at yard

Sighting Log

Time	Species	Total Number	Adults	Juveniles	Closest Distance to Observer	Activity or Behaviors	Shut down? (yes/no)	Time of Shut-down	Time of Start Up	Time last seen

Daily Summary

Species	Total Number	Takes in Zone A	Takes in Zone B	# Shut-Downs	Comments

Protected Species Sighting & Shut-Down Form

Corresponding Sighting # for the Day: 01 Shutdown # for the Day: Ø

Date (DD/MM/YYYY): 04/05/2020 Time of Initial Sighting 1736 Time Animals Left Area: 1742

Project Name: CTJV Thimble Shoals Parallel Tunnel Island No. 1

Areas Observed: W of tunnel / tunnel Upland Pile Driving N/A In-Water Pile Driving DTH (10M down)

Air Temp: 78° Water Temp: — Wave Height 1' Beaufort Sea State 3

Weather Conditions: sunny

Percent Cloud Cover: 15 Percent Glare: 0% Visibility Issues: some white horses in SOEC of sighting and sailboat

Animal Location & Distance to Pile Driving: 4100

Type of Pile Driving DTH grinding stone but not hitting

Distance From Observer When Initially Observed: ~1,000m

Species Observed: Tursiops truncatus

Number of Animals Sighted (include age classes): 3 adults

Sex of Animals Observed: undetermined

Animal Behaviors Observed: leaping in a circular formation (possibly foraging)

Animal Heading/Direction: West, North West from pile driving

Human Activities in Area: tugboat / barge had just traveled East of that location and a sailboat headed towards them from East of the tunnel

Shutdown Information

Time Begin:	
Time End:	
Total Down Time (mins):	

Shutdown # for the day: Ø

Video or Photograph Taken?: (No) Yes

Brief Description of Footage or Photograph:

Notes: brief sighting - one MMO watched while other grabbed camera, dolphins reappeared West of original sighting close to sailboat, 1746 pile drivers finished for the day Seaward Marine barge working approx 1,100 m NE of dolphin sighting

REMSA, Inc.
124 W. Queens Way
Hampton, VA 23669
(757)722-0113

Elizabeth Jantz / E

Observer Name / Signature

Daily Observer Log Form

Contractor: CTJV		Project Name: CTJV Parallel Thimble Shoals	
NOAA/NMFS Permit: March 2020		Location: (Island Number) 1	
Observer Name: Elizabeth Jantz/Emily Taye		Observer Location: Pier	
Date: 5 May 2020		Shift Start: 0620	Shift End: 1750
Sunrise: 0609		Sunset: 1956	

Weather and Visibility Information

Location	Time	Air Temp (F)	Water Temp	Visibility (Good, Fair,	Could Cover (%)	Wave Height (ft)	Wind Speed & Direction kts	Precipitation	Beaufort Scale
Pier	0740	59.9	57.9	Good	80%	1.5	E 15.6	none	3

Observer Logs

Time	Notes: (i.e., start and stop times for pile driving activities, shift changes, nearby human actiivties.)
0620	catch bus to Island 1
0700	Meet with crews: Vince - DTH 2 casings, Shawn - Impact 2 piles
0730	Start watch - Survey giving location directions to DTH West side of island, middle of island, seaward marine barge S of island 2 working in water
0737	turned on air to DTH
0739	start drilling, sporatic hitting then continuous hitting
0742	stop hitting, checking in with survey
0747	resume hitting
0751	stop hitting, check-in w/ survey
0752	Universal Laboratories boat traveling from E of Island 1 jetties, W through channel and S under pier, dropped line in water W of DTH (112 m from source drifting SW)
0756	Crane Operator called for shut down to move casing and possibly template
0804	Tugboat traveling E to W through channel
0808	Give Impact hammer crew all clear, DTH crew working to move casing
0825	Yang Ming "Yu Evolution" cargo ship traveling W to E through channel
0832	Submarine traveling E to W through channel. Impact hammer set up on West pile on NW jetty of island 1
0841	US Navy air boat traveling W to E through channel
0845	Impact hammer soft start, DTH getting directions from survey
0848	DTH drilling

Sighting Log

Time	Species	Total Number	Adults	Juveniles	Closest Distance to Observer	Activity or Behaviors	Shut down? (yes/no)	Time of Shut-down	Time of Start Up	Time last seen

Daily Summary

Species	Total Number	Takes in Zone A	Takes in Zone B	# Shut-Downs	Comments

5/5/2020

Daily Observer Log Form

Contractor: CTJV	Project Name: CTJV Parallel Thimble Shoals
NOAA/NMFS Permit: March 2020	Location: (Island Number)
Observer Name:	Observer Location:
Date:	Shift Start: Shift End:
Sunrise:	Sunset:

Weather and Visibility Information

Location	Time	Air Temp (F)	Water Temp	Visibility (Good, Fair,	Could Cover (%)	Wave Height (ft)	Wind Speed & Direction	Precipitation	Beaufort Scale

Observer Logs

Time	Notes: (i.e., start and stop times for pile driving activities, shift changes, nearby human actiivties.)
0849	Impact hammer normal hammering interval, DTH still drilling
0852	DTH start hitting + stop + start
0853	Impact stop, DTH still hitting
0856	DTH stop hitting, still drilling
0902	Both crews checking in w/ survey, Seaward Marine pushing barge N, W of pier
0907	Resume Impact hammer on W pile
0908	Seaward marine dropping off barge N of Impact hammer
0910	"Louisiana" vessel traveling W to E through channel, DTH starts stop hitting
0911	Yacht traveling W to E through channel
0913	Barge dropping Spuds NW of impact and mooring dolphins, raised Spud to move closer to mooring dolphins and moored to SW dolphin
0917	Fishing boat off S of island, Impact hammer stopped, done w/ pile
0920	"Arami's" cargoship traveling E to W through channel
0926	Upland pile driving with impact hammer sporatic start and stop
0931	Upland impact hammer resumes with normal hammering interval
0935	Tugboat departs from barge
0936	DTH starts and stops hitting, Impact hammer on East pile
0941	SE corner of barge 28m from Impact hammer
0946	Seaward marine lifting vibratory hammer, Impact hammer starts on East pile
0947	fishing boat traveling E to W through channel
0949	Impact hammer stopped, seaward marine attaching vibratory hammer to mooring dolphin 26m from impact

Sighting Log

Time	Species	Total Number	Adults	Juveniles	Closest Distance to Observer	Activity or Behaviors	Shut down? (yes/no)	Time of Shut-down	Time of Start Up	Time last seen

Daily Summary

Species	Total Number	Takes in Zone A	Takes in Zone B	# Shut-Downs	Comments

5/5/2020

Daily Observer Log Form

Contractor: CTJV	Project Name: CTJV Parallel Thimble Shoals
NOAA/NMFS Permit: March 2020	Location: (Island Number)
Observer Name:	Observer Location:
Date:	Shift Start: Shift End:
Sunrise:	Sunset:

Weather and Visibility Information

Location	Time	Air Temp (F)	Water Temp	Visibility (Good, Fair,	Could Cover (%)	Wave Height (ft)	Wind Speed & Direction	Precipitation	Beaufort Scale
Pier	1115	55.9	52	Good	90%	1'	ESE 9.7	none	2

Observer Logs

Time	Notes: (i.e., start and stop times for pile driving activities, shift changes, nearby human actiivties.)
0950	Start vibratory hammer, DTH hitting
0954	Vibratory hammer stopped
0955	DTH stopped, vibratory resumed and stopped, Impact checking with survey
1000	Impact resumed
1005	Yacht traveling E to W through channel
1008	Vibratory hammer attaching to mooring dolphin 62 m NW of Impact
1011	Stopped Impact, start vibratory
1015	Vibratory stopped and resumed and stopped, DTH stopped
1016	Vibratory resumed and stopped
1017	Vibratory hammer moved to dolphin 24 m north of Impact
1020	Start vibratory hammer
1025	Stop and start vibratory
1026	DTH clearing lines
1036	Fishing boat traveling N, W of pier
1042	Seaward marine switched out Vibratory hammer with a lasso, fishing boat traveling E to W through channel
1050	Speed boat traveling W to E through channel
1055	Seaword marine lassoed and pulled out a mooring dolphin
1102	Submarine traveling W to E through channel
1119	Seaward marine pushing barge to barge w/ mooring dolphins
1159	Seaward marine removed 3 mooring dolphins from water and switched to clamshell dredge, left clamshell with mooring dolphins on barge

Sighting Log

Time	Species	Total Number	Adults	Juveniles	Closest Distance to Observer	Activity or Behaviors	Shut down? (yes/no)	Time of Shut-down	Time of Start Up	Time last seen

Daily Summary

Species	Total Number	Takes in Zone A	Takes in Zone B	# Shut-Downs	Comments

Daily Observer Log Form

Contractor: CTJV		Project Name: CTJV Parallel Thimble Shoals	
NOAA/NMFS Permit: March 2020		Location: (Island Number)	
Observer Name:		Observer Location:	
Date: 5-May-2020		Shift Start:	Shift End:
Sunrise:		Sunset:	

Weather and Visibility Information

Location	Time	Air Temp (F)	Water Temp	Visibility (Good, Fair,	Could Cover (%)	Wave Height (ft)	Wind Speed & Direction kts	Precipitation	Beaufort Scale
Pier	1244	56	--	Good	100%	1'	E 7.8	light rain	2

Observer Logs

Time	Notes: (i.e., start and stop times for pile driving activities, shift changes, nearby human actiivties.)
1228	checked in with Vince's crew, stopped because they are trying to pick up something they dropped in the water
1235	USNS 13 traveling E to W through channel
1241	Speedboat traveling W to E through channel
1242	Universal Laboratories traveling N from pier around seaward marine through channel and S on E side of Island 1
1249	Seaward marine boat traveling N from S of pier, yacht traveling W to E through channel
1304	Tugboat pulling barge W to E through channel
1315	Vince's crew working to remove hammer from 1st casing, tugboat traveling W to E through channel
1338	DTH removed from casing
1341	Seaward marine pulling spuds from barge
1354	tugboat pulling barge W to E through channel
1356	Seaward marine using vibratory hammer on 4th mooring dolphin
1404	moving vibratory hammer to 5th mooring dolphin
1406	Start vibratory hammer
1409	STOP vibratory hammer, finished with vibratory hammer today
1412	Switch from hammer to lasso
1419	pull 4th mooring dolphin from water and place on barge
1438	tugboat traveling W to E through channel
1439	Seaward marine removing barge w/ 5 mooring dolphins
1447	Seaward marine tugboat picking up dredging barge, DTH crew picked up casing #2

Sighting Log

Time	Species	Total Number	Adults	Juveniles	Closest Distance to Observer	Activity or Behaviors	Shut down? (yes/no)	Time of Shut-down	Time of Start Up	Time last seen

Daily Summary

Species	Total Number	Takes in Zone A	Takes in Zone B	# Shut-Downs	Comments

Daily Observer Log Form

Contractor: CTJV		Project Name: CTJV Parallel Thimble Shoals	
NOAA/NMFS Permit:	March 2020	Location: (Island Number)	
Observer Name:		Observer Location:	
Date: 5/5/2020		Shift Start: 0620	Shift End: 1750
Sunrise:		Sunset:	

Weather and Visibility Information

Location	Time	Air Temp (F)	Water Temp	Visibility (Good, Fair,	Could Cover (%)	Wave Height (ft)	Wind Speed & Direction	Precipitation	Beaufort Scale

Observer Logs

Time	Notes: (i.e., start and stop times for pile driving activities, shift changes, nearby human actiivties.)
1455	Placing casing in template to be threaded by DTH hammer
1519	DTH ~~being~~ ~~thrumble~~ threading casing
1532	USNS 6th traveling E to W through channel followed by tugboat
1542	lifting threaded casing
1554	Placing casing in new location on template
1601	commercial fishing boat traveling E to W through channel
1615	adjusting casing
1637	start drilling with DTH
1649	start hitting and stop
1654	sporatic hitting
1655	stop hitting
1657	resume hitting, survey leaves. Vince informs MMOs that they will work for 15 more minets then stop for the day
1711	Crew stops for the night
1733	End watch to catch van to yard
1750	Arrive at yard

Sighting Log

Time	Species	Total Number	Adults	Juveniles	Closest Distance to Observer	Activity or Behaviors	Shut down? (yes/no)	Time of Shut-down	Time of Start Up	Time last seen

Daily Summary

Species	Total Number	Takes in Zone A	Takes in Zone B	# Shut-Downs	Comments

Daily Observer Log Form

Contractor: CTJV	Project Name: CTJV Parallel Thimble Shoals
NOAA NMFS Permit: IHA March 2020	Location: (Island Number) 1
USACE Permit: —	State Permits: —
Observer Name: Elizabeth Jantz / Gabby Thurston, Gibby McCullers	Observer Location: Pier
Date: 6-May-2020	Shift Start: 0615 Shift End: 1605
Sunrise: 0604	Sunset: 1957

Weather and Visibility Information

Location	Time	Air Temp (F)	Water Temp	Visibility (Good, Fair,	Could Cover (%)	Wave Height (ft)	Wind Speed & Direction	Precipitation	Beaufort Scale
Pier	0800	51	59.9	Good	100	2.6	E 9.7	none	3

Observer Logs

Time	Notes: (i.e., start and stop times for pile driving activities, shift changes, nearby human actiivties.)
0615	catch bus to island 1
0640	Meet with crews: shown waiting 48hrs for restrike, Vince continue casing from yesterday and will try to get a second casing today
0730	start watch on pier
0758	start DTH drill
0805	start hitting
0810	Stop hitting, adjusting casing
0812	Universal Laboratories traveling N on E side of Island 1 then around the island to W of DTH (mid island)
0815	Start hitting
0816	stop hitting and resume hitting
0817	Stop + start hitting
0822	stop hitting + start hitting
0823	stop, tugboat pulling barge E tow through channel
0825	lifting and resetting casing, resume hitting
0828	Stopped hitting

Sighting Log

Time	Species	Total Number	Adults	Juveniles	Closest Distance to Observer	Activity or Behaviors	Shut down? (yes/no)	Time of Shut-down	Time of Start Up	Time last seen

Daily Summary

Species	Total Number	Takes in Zone A	Takes in Zone B	# Shut-Downs	Comments

Daily Observer Log Form

Contractor: CTJV	Project Name: CTJV Parallel Thimble Shoals
NOAA/NMFS Permit: IHA March 2020	Location: (Island Number)
USACE Permit:	State Permits:
Observer Name:	Observer Location:
Date: 5/6/2020	Shift Start: Shift End:
Sunrise:	Sunset:

Weather and Visibility Information

Location	Time	Air Temp (F)	Water Temp	Visibility (Good, Fair,	Could Cover (%)	Wave Height (ft)	Wind Speed & Direction	Precipitation	Beaufort Scale

Observer Logs

Time	Notes: (i.e., start and stop times for pile driving activities, shift changes, nearby human activities.)
0840	start hitting + Stop + resume, fishing boat 5 W of DTH
0848	Crew sporatically hitting to break up the rocks causing the casing to slide out of alignment
0851	vessel "Terrapin Island" traveling E to W through channel
0852	crane operator called for a shut down, something fell from the crane into water
0903	resume hitting
0909	stop hitting
0906	resume hitting
0912	stop hitting, readjust casing
0913	resume hitting
0914	Stop hitting and resume
0917	Stop, check in Survey
0918	resume hitting, seaward moive tugboat pushing barge towards Island 1, SW of DTH; sailboat traveling E to W through channel
0920	Stop hitting, readjust casing and resume

Sighting Log

Time	Species	Total Number	Adults	Juveniles	Closest Distance to Observer	Activity or Behaviors	Shut down? (yes/no)	Time of Shut-down	Time of Start Up	Time last seen

Daily Summary

Species	Total Number	Takes in Zone A	Takes in Zone B	# Shut-Downs	Comments

Daily Observer Log Form

Contractor: CTJV		Project Name: CTJV Parallel Thimble Shoals	
NOAA/NMFS Permit:	March 2020	Location: (Island Number)	
Observer Name:		Observer Location:	
Date: 5/6/2020		Shift Start:	Shift End:
Sunrise:		Sunset:	

Weather and Visibility Information

Location	Time	Air Temp (F)	Water Temp	Visibility (Good, Fair,	Could Cover (%)	Wave Height (ft)	Wind Speed & Direction	Precipitation	Beaufort Scale

Observer Logs

Time	Notes: (i.e., start and stop times for pile driving activities, shift changes, nearby human actiivties.)
0921	stop and resume hitting
0922	stop and resume hitting
0924	stop hitting and resume, seaward marine docking SW of DTH
0927	stop and resume hitting
0930	stop hitting, yacht traveling E to W through channel, resume hitting
0934	stop hitting
0935	resume hitting
0936	stop hitting, resume
0943	stop and resume hitting, seaward marine barge S of Island 2 working in water
0953	stop and resume hitting
1009	seaward marine transport dropping off crew at barge W of Island 1, stop hitting, keep grinding with drill
1023	resume hitting
1025	stopped hitting, crane jumped, readjusting casing
1029	resume hitting
1030	stop, readjusting
1032	resume hitting
1033	tugboat pulling barge W to E through channel
1036	stop hitting, check-in w/ Survey
1037	resume hitting
1046	stop, readjust, still drilling
1105	4 Navy speed boats traveling W to E through channel

Sighting Log

Time	Species	Total Number	Adults	Juveniles	Closest Distance to Observer	Activity or Behaviors	Shut down? (yes/no)	Time of Shut-down	Time of Start Up	Time last seen

Daily Summary

Species	Total Number	Takes in Zone A	Takes in Zone B	# Shut-Downs	Comments

Daily Observer Log Form

Contractor: CTJV		Project Name: CTJV Parallel Thimble Shoals	
NOAA/NMFS Permit:	March 2020	Location: (Island Number)	
Observer Name:		Observer Location:	
Date: 5/6/2020		Shift Start:	Shift End:
Sunrise:		Sunset:	

Weather and Visibility Information

Location	Time	Air Temp (F)	Water Temp	Visibility (Good, Fair,	Could Cover (%)	Wave Height (ft)	Wind Speed & Direction	Precipitation	Beaufort Scale
Pier	13:30	61	—	Good	75%	2	WSW 9 T	none	3

Observer Logs

Time	Notes: (i.e., start and stop times for pile driving activities, shift changes, nearby human actiivties.)
1119	Start hitting
1121	Stop hitting
1122	resume
1126	Stop still drilling
1137	Start hammering
1141	Stop, casing slipped
1144	full stop, survey switching radios
1153	starting up again (drilling)
1156	Start hitting
1201	Stop hitting
1206	commercial fishing boat traveling E to W through channel
1214	start hitting
1223	Stop hitting, check in w/ survey
1224	resume hitting
1228	Stopped, casing slid, readjusting
1229	resume hitting + stopped
1247	Starboard marine tugboat W of island 1 pulling barge W
1317	resume hitting
1340	Stopped hitting, check in w/ survey
1345	resume hitting, universal Laboratories boat collecting data W of DTH
1353	Stopped hitting and drilling
1355	resume hitting and drilling
1400	Stop, moving noses, resume hitting and drilling

Sighting Log

Time	Species	Total Number	Adults	Juveniles	Closest Distance to Observer	Activity or Behaviors	Shut down? (yes/no)	Time of Shut-down	Time of Start Up	Time last seen

Daily Summary

Species	Total Number	Takes in Zone A	Takes in Zone B	# Shut-Downs	Comments

Daily Observer Log Form

Contractor: CTJV		Project Name: CTJV Parallel Thimble Shoals	
NOAA/NMFS Permit:	March 2020	Location: (Island Number)	
Observer Name:		Observer Location:	
Date: 5/6/2020		Shift Start:	Shift End:
Sunrise:		Sunset:	

Weather and Visibility Information

Location	Time	Air Temp (F)	Water Temp	Visibility (Good, Fair,	Could Cover (%)	Wave Height (ft)	Wind Speed & Direction	Precipitation	Beaufort Scale

Observer Logs

Time	Notes: (i.e., start and stop times for pile driving activities, shift changes, nearby human actiivties.)
1402	Stop
1403	resume drilling and hitting
1404	stop, adjusting casing
1407	resume drilling
1409	stop, clearing hoses
1411	working to remove drill
1457	Seaway Aimery" traveling E to W through channel
1510	DTH removed from casing. End watch
1520	Checked in with Vince, they will set up for tomorrow
	but not drilling any more today
1550	catch van to yard
1605	arrive at yard

Sighting Log

Time	Species	Total Number	Adults	Juveniles	Closest Distance to Observer	Activity or Behaviors	Shut down? (yes/no)	Time of Shut-down	Time of Start Up	Time last seen

Daily Summary

Species	Total Number	Takes in Zone A	Takes in Zone B	# Shut-Downs	Comments

Daily Observer Log Form

Contractor: CTJV	Project Name: CTJV Parallel Thimble Shoals
NOAA/NMFS Permit: March 2020	Location: (Island Number) 1
Observer Name: Elizabeth Janz / Sibly McCullers	Observer Location: pier
Date: 07 - May - 2020	Shift Start: 0625 Shift End: 1330
Sunrise: 0602	Sunset: 1958

Weather and Visibility Information

Location	Time	Air Temp (F)	Water Temp	Visibility (Good, Fair,	Could Cover (%)	Wave Height (ft)	Wind Speed & Direction	Precipitation	Beaufort Scale
Pier	0730	50	60.3	Good	80%	3.5	NNE 19.4	none	5

Observer Logs

Time	Notes: (i.e., start and stop times for pile driving activities, shift changes, nearby human actiivties.)
0625	catch bus to Island 1
0650	Meet with crews: Vince doing 1 casing, Shawn doing restrike
0715	Start watch on pier, ~~seaward marine barge~~ S of island 2 not working
0731	Crew moving casing toward template
0741	cargo ship traveling W to E through channel
0800	Shawn's crew moving impact hammer to NW jetty for restrike
0803	yacht traveling W to E through channel, placing hammer on E pile
0822	yacht traveling E to W through channel
0827	Moving DTH casing to location on template
0853	Impact crew moving tanks
0903	QC checked in with US
0904	USNS 8 traveling E to W through channel
0907	cargo ship traveling E to W through channel
0908	Survey giving instructions to Impact crew
0909	Cargo ship W to E through channel, told Impact crew all clear
0910	Begin soft start on E pile
0916	normal hammering interval
0917	stop, switch to W pile
0928	Yacht traveling W to E through channel
0929	cargo ship traveling E to W through channel
0930	waiting for Survey, they moved locations
0934	Impact starts driving W pile
0935	STOP Impact hammer

Sighting Log

Time	Species	Total Number	Adults	Juveniles	Closest Distance to Observer	Activity or Behaviors	Shut down? (yes/no)	Time of Shut-down	Time of Start Up	Time last seen

Daily Summary

Species	Total Number	Takes in Zone A	Takes in Zone B	# Shut-Downs	Comments

Daily Observer Log Form

Contractor: CTJV	Project Name: CTJV Parallel Thimble Shoals
NOAA/NMFS Permit: March 2020	Location: (Island Number)
Observer Name:	Observer Location:
Date: 5/7/2020	Shift Start: Shift End:
Sunrise:	Sunset:

Weather and Visibility Information

Location	Time	Air Temp (F)	Water Temp	Visibility (Good, Fair,	Could Cover (%)	Wave Height (ft)	Wind Speed & Direction	Precipitation	Beaufort Scale

Observer Logs

Time	Notes: (i.e., start and stop times for pile driving activities, shift changes, nearby human actiivties.)
0941	remove impact hammer from pile
0944	USNS 72 W to E through channel
0949	USNS Prevail E to W through channel
0957	DTH being placed in template
1010	casing in 15 to 20 feet of water for DTH pile driving
1029	Shawn informed MMOs his side is done pile driving for the day
1030	Navy air boat LCAC 34 and commercial fishing boat traveling E to W through channel
1033	USNS Hunter traveling E to W through channel
1042	3 Navy ships (16644, 1650, and unidentified) traveling E to W through channel
1050	Survey check-in w/ DTH positioning
1054	start drilling
1059	start hitting
1102	stop to adjust casing
1105	Navy air boat traveling E to W through channel
1116	fully stopped to add a roller to casing
1123	Yacht traveling W to E and Navy air boat traveling E to W through channel
1134	resume drilling
1142	Seaward Marine transport traveling N, Wolf pier
1149	start hitting
1207	Stop, finished with DTH, start 30 min post watch

Sighting Log

Time	Species	Total Number	Adults	Juveniles	Closest Distance to Observer	Activity or Behaviors	Shut down? (yes/no)	Time of Shut-down	Time of Start Up	Time last seen

Daily Summary

Species	Total Number	Takes in Zone A	Takes in Zone B	# Shut-Downs	Comments

Daily Observer Log Form

Contractor: CTJV		Project Name: CTJV Parallel Thimble Shoals	
NOAA/NMFS Permit:	March 2020	Location: (Island Number)	
Observer Name:		Observer Location:	
Date: 5/7/2020		Shift Start:	Shift End:
Sunrise:		Sunset:	

Weather and Visibility Information

Location	Time	Air Temp (F)	Water Temp	Visibility (Good, Fair,	Could Cover (%)	Wave Height (ft)	Wind Speed & Direction	Precipitation	Beaufort Scale

Observer Logs

Time	Notes: (i.e., start and stop times for pile driving activities, shift changes, nearby human actiivties.)
1237	End watch, check in with Vince, only one welder so not
	sure if MMOs will be needed tomorrow, will be in contact
	with S. Falin
1310	catch van to yard
1330	arrive at yard

Sighting Log

Time	Species	Total Number	Adults	Juveniles	Closest Distance to Observer	Activity or Behaviors	Shut down? (yes/no)	Time of Shut-down	Time of Start Up	Time last seen

Daily Summary

Species	Total Number	Takes in Zone A	Takes in Zone B	# Shut-Downs	Comments

Daily Observer Log Form

Contractor: CTJV	Project Name: CTJV Parallel Thimble Shoals
NOAA/NMFS Permit: March 2020	Location: (Island Number) 1
Observer Name: Elizabeth Janz / Sibly McCullers	Observer Location: Pier
Date: 11 - May - 2020	Shift Start: 0620 Shift End: 1635
Sunrise: 0659	Sunset: 2002

Weather and Visibility Information

Location	Time	Air Temp (F)	Water Temp	Visibility (Good, Fair,	Could Cover (%)	Wave Height (ft)	Wind Speed & Direction kts	Precipitation	Beaufort Scale
Pier	0720	56	59.7	Good	60%	1.3	WSW 15 6	none	3
Pier	1005	62	—	Good	90%	1	WSW 11. 7	none	3

Observer Logs

Time	Notes: (i.e., start and stop times for pile driving activities, shift changes, nearby human actiivties.)
0620	Catch boats to Island 1
0650	meet with crews. Shawn's crew does not need MMOs today, Vince's crew planning to drive piles w/ impact hammer all day (as many as they can)
0720	start watch on pier; Seaward marine dredge "Cashman" actively working in the water SW of pile driving location
0741	tugboat traveling N, W of pier
0749	Seaward marine transport boat docking at dredge
0750	Cargo ship traveling E to W through channel
0757	cargo ship traveling W to E through channel
0818	Second tugboat approaching dredge / barge
0836	One tugboat departs with barge
0847	Seaward marine places grappler on deck, done working in water
0857	Seaward marine picked up grappler, resume work in water
0900	Cargeship traveling E to W through channel
0918	USNS Mavty traveling W to E through channel
1000	Crew placing pile on / in casing
1019	working on placing impact hammer on pile
1028	Survey checking pile, Seaward marine transport departs SW
1033	Universal Laboratories speedboat coming around Island 1 from E side to W side, taking data W of impact hammer
1039	Universal Laboratories taking data further West
1040	could have an issue w/ pump but going to start anyway

Sighting Log

Time	Species	Total Number	Adults	Juveniles	Closest Distance to Observer	Activity or Behaviors	Shut down? (yes/no)	Time of Shut-down	Time of Start Up	Time last seen

Daily Summary

Species	Total Number	Takes in Zone A	Takes in Zone B	# Shut-Downs	Comments

5/11/2020

Daily Observer Log Form

Contractor: CTJV

NOAA/NMFS Permit: March 2020 — Project Name: CTJV Parallel Thimble Shoals

Observer Name: — Location: (Island Number)

Date: — Observer Location:

Sunrise: — Shift Start: — Shift End:

Sunset:

Weather and Visibility Information

Location	Time	Air Temp (F)	Water Temp	Visibility (Good, Fair,	Could Cover (%)	Wave Height (ft)	Wind Speed & Direction	Precipitation	Beaufort Scale
Pier	1500	67	60.8	Good	40%	1-6	W 11.7	none	3

Observer Logs

Time	Notes: (i.e., start and stop times for pile driving activities, shift changes, nearby human activities.)
1042	Soft start
1054	Normal hammer interval
1056	stopped, pile sliding down, working on opening gates
1059	resume hitting
1105	Seaward marine placing guards on deck, stop hammering, finished this pile
1110	Third US NS tug boat W to E through channel
1130	picking up 2nd pile
1136	placing pile in casing
1141	Tugboat traveling E to W through channel
1142	moving impact hammer to be placed on pile
1156	waiting for Survey
1204	Survey checking in w/ crew?
1223	Survey checking in w/ crew, soft start
1224	USNS III E to W through channel
1226	check in w/ Survey
1231	Normal hammering interval, navy escort boats (3) and Submarine E to W through channel
1235	stop, open gates, Survey checking in w/ crew
1237	resume hitting
1240	Seaward marine resumes work in water SW of impact hammer
1243	Stop hammering, finished pile
1302	Seaward Marine transport boat traveling N, W of pier

Sighting Log

Time	Species	Total Number	Adults	Juveniles	Closest Distance to Observer	Activity or Behaviors	Shut down? (yes/no)	Time of Shut-down	Time of Start Up	Time last seen

Daily Summary

Species	Total Number	Takes in Zone A	Takes in Zone B	# Shut-Downs	Comments

Daily Marine Mammal Observation Report

Contractor: CTJV/ Dragados	Project Name: CTJV Parallel Thimble Shoals Tunnel
NOAA/NMFS PERMIT: IHA March 2020	Observer Location (Island #) 1
Date: 11 - May - 2020	Shift Start:
Sunrise: Sunset:	Shift End:

Time:	OBSERVER LOG: Notes: (pre-watch times, start and stop times for pile driving activities)
1307	Seaward marine transport boat traveling S. W of pier and
1328	then E towards dredge "Cashman"
1332	Crew placing centralizer on casing
1338	Seaward marine transport boat departs dredge heading S W
1406	Tugboat traveling E to W through channel
1408	seaward marine stopped working in water
1415	crew picking up pile #3
1426	placing pile in casing
1429	moving impact hammer to pile
	Seaward marine switched grappler to clamshell, resume
1433	work in water
1435	USNS 15 E to W through channel
1446	Crew checking in w/ survey
	Crew decides to make the pile plumb even if it is out of
1448	Location survey
1450	Seaward marine ~~transport~~ approaching dredge / tug boat
1456	Soft start
1500	Normal hammering interval
1502	Stop
1506	seaward marine stopped working in water
	resume hitting, first of 3 navy escort speedboats traveling
1510	W to E through channel
	2 navy escort boats with "Regulus" and submarine
1513	through channel W to E
1520	stopped hammering, finished w/ this pile
1530	Seaward marine survey traveling E under bridge S of Island 1
1532	Seaward marine survey traveling E to W under bridge S of Island 1
1543	seaward marine picking up clamshell, resume work in water
1545	End watch
1615	check-in w/ Vince, needs MMOs tomorrow first thing
1635	Catch bus to yard
	Arrive at yard

Observer(s) Names:

Daily Observer Log Form

Contractor: CTJV	Project Name: CTJV Parallel Thimble Shoals
NOAA NMFS Permit: March 2020	Location: (Island Number) 1
Observer Name: Elizabeth Janz / Emily Taye	Observer Location: Pier
Date: 12 - May - 2020	Shift Start: 0620 Shift End: 1350
Sunrise: 0559	Sunset: 2003

Weather and Visibility Information

Location	Time	Air Temp (F)	Water Temp	Visibility (Good, Fair,	Could Cover (%)	Wave Height (ft)	Wind Speed & Direction kts	Precipitation	Beaufort Scale
Midland Deck	0700	47	57	Good	50%	4.3	NNW 19.4	None	4
Pier	1145	55	56.7	Good	60%	3.9	N 16.7	none	3

Observer Logs

Time	Notes: (i.e., start and stop times for pile driving activities, shift changes, nearby human actiivties.)
0620	catch bus to island 1
0650	meet with Vince's crew, it will be an hour before they are ready to stand the pile
0740	pile lifted, walk out to pier, start watch, Seaward Marine "cashman" SN of impact hammer (not working w/ crane yet), centrilizers have already been placed on last 4 casings
0756	working to place impact hammer on pile
0809	Survey giving positioning directions to crew
0812	waiting for QC
0823	Soft Start
0827	Normal hammering interval
0845	Yacht traveling W to E through channel
0846	stop hitting, finished pile
0909	lifting 2nd pile of the day
0925	placing impact hammer on pile
0933	climbing in w/ survey
0937	told them to do 3 hits (soft start) as it has been more than 30 min since they stopped
0942	soft start
0948	Normal hammering interval
1008	stop
1011	USNS (x) W to E through channel
1013	standing up 3rd pile of the day

Sighting Log

Time	Species	Total Number	Adults	Juveniles	Closest Distance to Observer	Activity or Behaviors	Shut down? (yes/no)	Time of Shut-down	Time of Start Up	Time last seen

Daily Summary

Species	Total Number	Takes in Zone A	Takes in Zone B	# Shut-Downs	Comments

Daily Marine Mammal Observation Report

Contractor: CTJV/ Dragados	Project Name: CTJV Parallel Thimble Shoals Tunnel
NOAA/NMFS PERMIT: IHA March 2020	Observer Location (Island #)
Date: 5/12/2020	Shift Start:
Sunrise: Sunset:	Shift End:

OBSERVER LOG:

Time:	Notes: (pre-watch times, start and stop times for pile driving activities)
1024	commercial fishing boat traveling E to W through channel
1037	gave okay to start, did a soft start anyway
1042	US coast guard speedboat traveling N, S of pier, start normal hammering
1049	stop
1051	resume hitting
1106	stop, finished pile
1125	Universal Laboratories taking data W of Impact hammer
1139	Crew standing up 4th pile
1147	moving impact hammer to pile
1151	Yacht traveling W to E through channel
1156	Seaward marine transport traveling SW from "Cashman" dredge
1159	Crew checking in w/ survey
1204	soft start
1208	normal hammering interval
1219	Yacht traveling E to W through channel
1234	stop, finished pile
1236	Seaward marine tugboat moving "cashman" dredge
1245	commercial fishing boat traveling W to E through channel
1256	US Coast Guard speed boat traveling E to W through channel
1304	End watch
1306	Checked in w/ vince, they might not need us for a couple days depending on what night crew is able to get done for all 3 island 1 crews, he will be in touch w/ S. Falin
1330	catch van to yard
1350	arrive at yard

Observer(s) Names:

Daily Observer Log Form

Contractor: CTJV		Project Name: CTJV Parallel Thimble Shoals	
NOAA NMFS Permit: March 2020		Location: (Island Number) 1	
Observer Name: Elizabeth Janz / Sibly McCullers		Observer Location: Pier	
Date: 15 - May - 2020		Shift Start: 0945	Shift End: 2021
Sunrise: 0556		Sunset: 2005	

Weather and Visibility Information

Location	Time	Air Temp (F)	Water Temp	Visibility (Good, Fair,	Could Cover (%)	Wave Height (ft)	Wind Speed & Direction kts	Precipitation	Beaufort Scale
Pier	1015	71.8	—	Good	80%	1.5	WSW 13.6	none	3
Pier	1325	77.3	60.6	Good	25%	2	W 9.7	none	3

Observer Logs

Time	Notes: (i.e., start and stop times for pile driving activities, shift changes, nearby human actiivties.)
0945	catch van to island 1
1005	check-in w/ crews, both will be using DTH, one mid island on west side, other on NW jetty
1014	start watch on pier, seaward marine barge and dredge sitting S of Island 2, containership traveling E to W through channel
1039	Yacht traveling E to W through channel
1044	gave all clear, turn on air
1045	start drilling mid island
1054	survey checking-in w/ NW jetty crew
1057	mid land DTH stopped, need to adjust template
1059	seaward marine working in water S of Island 2
1109	mid island DTH checking in w/ survey, finishing up work on template
1115	resume drilling mid island
1119	start hitting
1124	stop hitting, casing slipped
1131	drilling, checking location w/ survey (mid land)
1135	survey checking location for NW jetty DTH
1140	survey checking in w/ mid island crew
1143	resume hitting + stop, check-in w/ survey
1148	resume hitting + stop, check-in w/ survey
1203	NW jetty crew placing threaded pile in E pocket, seaward marine transport boat traveling N to S, W of pier
1221	NW jetty crew checking-in w/ survey for location

Sighting Log

Time	Species	Total Number	Adults	Juveniles	Closest Distance to Observer	Activity or Behaviors	Shut down? (yes/no)	Time of Shut-down	Time of Start Up	Time last seen
1501	T. truncatus	3	3	0	200 m	traveling Foraging	Yes	1501	1527	1513

Daily Summary

Species	Total Number	Takes in Zone A	Takes in Zone B	# Shut-Downs	Comments

Daily Marine Mammal Observation Report

Contractor: CTJV/ Dragados	Project Name: CTJV Parallel Thimble Shoals Tunnel
NOAA/NMFS PERMIT: IHA March 2020	Observer Location (Island #): 1
Date: 15- May/2020	Shift Start:
Sunrise: Sunset	Shift End:

OBSERVER LOG:

Time:	Notes: (pre-watch times, start and stop times for pile driving activities)
1222	Midland crew checking location w/survey
1224	Midland DTH start and stop, resume hitting
1225	midland DTH stop hitting, check in w/ survey
1233	fishing boat sitting NE of N island DTH (anchored)
1235	USNS 58 W to E through channel
1239	Both DTH drilling
1300	midland DTH start and stop hitting
1305	midland DTH start hitting + stop
1306	resume hitting
1308	stop hitting, adjust casing
1319	Midland crew stopping DTH, out of plumb, want to meet w/ survey in person
1338	midland DTH restarting/checking-in w/survey
1341	Both DTH drilling
1342	midland DTH hitting and stopped
1343	N island DTH start and stop hitting & resume hitting sporatically
1346	continuous hitting N DTH
1347	N DTH stop hitting, check-in w/ survey
1353	Mid island DTH start and stop hitting
1402	N DTH start + stop hammering
1405	Cargo ship traveling W to E through channel
1409	Yacht traveling W to E through channel
1413	mid island DTH hitting
1415	Yacht traveling E to W through channel
1424	N DTH start and stop hitting, still drilling
1440	mid island stopped hitting, flushing hoses
1441	resume hitting (mid island)
1445	stop hitting mid land, start hitting N DTH
1446	mid island DTH resume hitting, removing drill, only N DTH hitting
1451	Yacht and fishing boat traveling W to E through channel
1456	N DTH stopped hitting, still drilling
1501	Spotted dolphins just N of N DTH heading W to E through channel, called for shut down
1509	USCG vessel E to W through channel
1515	2 fishing boats enter area dolphins spotted
1525	resume drilling/end shut down
1540	Stopped drilling
1558	mid island crew placing casing #2, N DTH removed from pile
1607	US NS E to W through channel
1614	Threading casing
1639	checking-in w/survey
1644	USNS 1 traveling W to E through channel
1648	start drilling
1651	Start hitting
1652	Stop hitting

Observer(s) Names:

Daily Marine Mammal Observation Report

Contractor CTJV/ Dragados	Project Name CTJV Parallel Thimble Shoals Tunnel
NOAA/NMFS PERMIT IHA March 2020	Observer Location (Island #)
Date 5/15/2020	Shift Start
Sunrise Sunset	Shift End

OBSERVER LOG:

Time	Notes: (pre-watch times, start and stop times for pile driving activities)
1713	Stopped, moving something on the template
1720	USNS 67 traveling W to E through channel
1741	check-in w/survey
1748	check-in w/survey
1800	resume drilling
1803	start hitting
1808	speedboat traveling S to N, W of DTH (pontoon boat)
1817	USNS 72 traveling W to E through channel
1827	Stopped hitting and drilling
1839	resume drilling
1841	start + stop hitting
1843	Start + stop hitting
1853	Start hitting
1854	Stop hitting
1906	USNS 81 traveling W to E through channel
1908	start hitting
1925	motorized barge traveling W to E through channel
1929	stopped hitting + resume
1932	stopped, finished casing, start post watch
2007	End watch
2008	catch van to yard
2021	Arrive at yard

Observer(s) Names:

Protected Species Sighting & Shut-Down Form

Corresponding Sighting # for the Day: 01 Shutdown # for the Day: 01

Date (DD/MM/YYYY): 15/08/2013 Time of Initial Sighting: 1501 Time Animals Left Area: 1513

Project Name: CTJV Thimble Shoals Parallel Tunnel Island No.: 1

Areas Observed: Inchannel N of Island 1 Upland Pile Driving: N/A In-Water Pile Driving: X

Air Temp: 83 Water Temp: 62.8 Wave Height: 1' Beaufort Sea State: 3

Weather Conditions: Sunny with SW wind 11.7 kts

Percent Cloud Cover: 15% Percent Glare: 0% Visibility Issues: white caps in channel

Animal Location & Distance to Pile Driving: 90 - 150 m
Type of Pile Driving: DTH
Distance From Observer When Initially Observed: 200 M
Species Observed: Tursiops Truncatus
Number of Animals Sighted (include age classes): approx. 3 adults
Sex of Animals Observed: N/A
Animal Behaviors Observed: traveling / diving
Animal Heading/Direction: East through channel then N to Island 2 and S to Island 1
Human Activities in Area: Fishing boats (2 to 3)

Shutdown Information

Time Begin:	1501
Time End:	1527
Total Down Time (mins):	26 min

Shutdown # for the day: 01

Video or Photograph Taken?: No (Yes)

Brief Description of Footage or Photograph: dolphins seen N of DTH

Notes:

REMSA, Inc.
124 W. Queens Way
Hampton, VA 23669
(757)722-0113

Elizabeth Janz / E

Observer Name / Signature

Daily Observer Log Form

Contractor: CTJV		Project Name: CTJV Parallel Thimble Shoals	
NOAA/NMFS Permit: March 2020		Location: (Island Number) 1	
Observer Name: Elizabeth Janz / Sibly McCulley		Observer Location: Pier	
Date: 16- May -2020		Shift Start: 0640	Shift End: 0923
Sunrise: 0555		Sunset: 2006	

Weather and Visibility Information

Location	Time	Air Temp (F)	Water Temp	Visibility (Good, Fair,	Could Cover (%)	Wave Height (ft)	Wind Speed & Direction	Precipitation	Beaufort Scale
Pier	0800	67.3	59.2	Good	0%	3	WSW 13.6	none	3

Observer Logs

Time	Notes: (i.e., start and stop times for pile driving activities, shift changes, nearby human actiivties.)
0640	catch van to island 1
0658	Arrive at Island 1
0700	Meet w/ crew - still need to empty frack tank
0725	Walk out to pier, start watch
0745	US Coast Guard traveling E to W, Cargo ship traveling W to E through channel
0818	Frack tank being emptied
0841	Cargo ship traveling E to W through channel, 2 fishing boats E of Island 1
0903	Crew wrapping up for the day, catch ride to yard
0923	Arrive at yard, First thing Monday

Sighting Log

Time	Species	Total Number	Adults	Juveniles	Closest Distance to Observer	Activity or Behaviors	Shut down? (yes/no)	Time of Shut-down	Time of Start Up	Time last seen

Daily Summary

Species	Total Number	Takes in Zone A	Takes in Zone B	# Shut-Downs	Comments

Daily Observer Log Form

Contractor: CTJV		Project Name: CTJV Parallel Thimble Shoals	
NOAA NMFS Permit: March 2020		Location: (Island Number) 1	
Observer Name: Elizabeth Jane Sindy McCallister		Observer Location: pier	
Date: 18-May-2020		Shift Start: 0635	Shift End: 1145
Sunrise: 0553		Sunset: 2007	

Weather and Visibility Information

Location	Time	Air Temp (F)	Water Temp	Visibility (Good, Fair,	Could Cover (%)	Wave Height (ft)	Wind Speed & Direction	Precipitation	Beaufort Scale
pier	0810	61.2	59.9	Fair	100%	1.6	ENE 21.4	none	5

Observer Logs

Time	Notes: (i.e., start and stop times for pile driving activities, shift changes, nearby human actiivties.)
0635	catch van to Island I
0650	arrive at island I
0655	meet with crews : Vince - DTH broken, Shawn - planning to use DTH
0805	start watch on pier
0815	pile placed in pocket NW jetty, crew in man lift checking pile, survey setting up
0833	crew checking in w/ survey for location
0843	crew rechecking location w/ survey
0845	start drilling
0848	crew rechecking location w/ survey
0858	cargo ship traveling W to E through channel and USNS 61 E to W through channel
0900	starts raining, crew announces they plan to work until 0930 then wait out the storm
0903	crew announces shut down
0933	end watch from corner due to high winds on pier
1101	Foreman informs us they are calling it for the day, needed first thing tomorrow
1130	catch bus to yard
1145	arrive at yard

Sighting Log

Time	Species	Total Number	Adults	Juveniles	Closest Distance to Observer	Activity or Behaviors	Shut down? (yes/no)	Time of Shut-down	Time of Start Up	Time last seen

Daily Summary

Species	Total Number	Takes in Zone A	Takes in Zone B	# Shut-Downs	Comments

Daily Observer Log Form

Contractor: CTJV	Project Name: CTJV Parallel Thimble Shoals
NOAA/NMFS Permit: March 2020	Location: (Island Number) 1
Observer Name: Elizabeth Jane/Libby McCullers	Observer Location: Temp. Dock
Date: 20- May	Shift Start: 0625 Shift End: 0843
Sunrise: 0552	Sunset: 2009

Weather and Visibility Information

Location	Time	Air Temp (F)	Water Temp	Visibility (Good, Fair,	Could Cover (%)	Wave Height (ft)	Wind Speed & Direction	Precipitation	Beaufort Scale

Observer Logs

Time	Notes: (i.e., start and stop times for pile driving activities, shift changes, nearby human actiivties.)
0625	catch van to island 1
0650	arrive island 1
0700	meet w/ crews: shawn's crew - crane still not fixed plan for Friday
	Vince's crew - too windy to work, not safe to be on pier
0730	Vince's crew called it for the day, will need NMOs first thing
	tomorrow
0800	catch ride to yard but road being worked on, no exit route
0829	road cleared
0843	arrive at yard

Sighting Log

Time	Species	Total Number	Adults	Juveniles	Closest Distance to Observer	Activity or Behaviors	Shut down? (yes/no)	Time of Shut-down	Time of Start Up	Time last seen

Daily Summary

Species	Total Number	Takes in Zone A	Takes in Zone B	# Shut-Downs	Comments

Daily Observer Log Form

Contractor: CTJV		Project Name: CTJV Parallel Thimble Shoals	
NOAA NMFS Permit: March 2020		Location: (Island Number) 1	
Observer Name: Elizabeth Janz / Emily Tove		Observer Location: connex, pier	
Date: 21- May - 2020		Shift Start: 0800	Shift End: 1310
Sunrise: 0551		Sunset: 2010	

Weather and Visibility Information

Location	Time	Air Temp (F)	Water Temp	Visibility (Good, Fair,	Could Cover (%)	Wave Height (ft)	Wind Speed & Direction kts	Precipitation	Beaufort Scale
connex	0900	60	60.1	Good	100%	4.6	E 19.4	none	4
Pier	1105	58.6	56.8	Good	90%	6.2	E 15.6	none	4

Observer Logs

Time	Notes: (i.e., start and stop times for pile driving activities, shift changes, nearby human actiivties.)
0800	Catch van to Island 1
0820	Arrive at island 1
0825	meet with crew - still fixing DTH, going to be a couple hours
0930	welder still working to fix DTH
1055	walk out to pier with survey, start watch
1058	No ships or boats visible on the bay, crew threading casing w/ DTH
1142	DTH appears to be disconnected from crane at the top
1157	DTH drill stem disconnected from crane, mid-island crew on stand-by until crane is fixed; NW jetty crew removing DTH from pile, placing pile on deck
1230	pile moved to truck, end watch
1248	Confirm w/ Shawn, no drilling/pile driving today, catch ride to yard
1310	arrive at yard

Sighting Log

Time	Species	Total Number	Adults	Juveniles	Closest Distance to Observer	Activity or Behaviors	Shut down? (yes/no)	Time of Shut-down	Time of Start Up	Time last seen

Daily Summary

Species	Total Number	Takes in Zone A	Takes in Zone B	# Shut-Downs	Comments

Daily Observer Log Form

Contractor: CTJV	Project Name: CTJV Parallel Thimble Shoals
NOAA NMFS Permit: IHA March 2020	Location: (Island Number) 1
USACE Permit: —	State Permits: —
Observer Name: Elizabeth Janz/Kirby McCullers	Observer Location: connex / pier
Date: 28 - May - 2020	Shift Start: 0630 Shift End: 1347
Sunrise: 0548	Sunset: 2015

Weather and Visibility Information

Location	Time	Air Temp (F)	Water Temp	Visibility (Good, Fair,	Could Cover (%)	Wave Height (ft)	Wind Speed & Direction kts	Precipitation	Beaufort Scale
connex	0820	70	66	Good	100%	1.6	SSE 9.7	light rain	2

Observer Logs

Time	Notes: (i.e., start and stop times for pile driving activities, shift changes, nearby human actiivties.)
0630	Catch bus to Island 1
0650	Arrive at Island 1
0700	Meet with crew
0730	Drill stem connected to crane, pile not threaded
0841	Crew threading pile, walk out to pier
0845	Start watch, Maersk Line ship traveling E to W through channel
0848	USNS 67 W to E through channel
0903	Crew inspecting pile, releasing pile from whip line
0917	Seaword marine speedboat traveling N, W of pier
0920	Seaword marine speedboat approaching barge SW of island 2
0924	Seaword marine transport boat traveling W from barge then S
0928	Tugboat traveling W to E through channel
0931	Crew connecting hoses to crane
0933	Seaword marine working in water from barge

Sighting Log

Time	Species	Total Number	Adults	Juveniles	Closest Distance to Observer	Activity or Behaviors	Shut down? (yes/no)	Time of Shut-down	Time of Start Up	Time last seen

Daily Summary

Species	Total Number	Takes in Zone A	Takes in Zone B	# Shut-Downs	Comments

Daily Marine Mammal Observation Report

Contractor: CTJV/ Dragados	Project Name: CTJV Parallel Thimble Shoals Tunnel
NOAA/NMFS PERMIT: IHA March 2020	Observer Location (Island #): 1
Date: 28- May -2020	Shift Start: 0630
Sunrise: 0548 Sunset: 2015	Shift End: 1347

OBSERVER LOG:

Time:	Notes: (pre-watch times, start and stop times for pile driving activities)
0952	putting pile in W side of template
1001	tugboat traveling E to W through channel
1008	survey setting up
1016	tugboat pulling barge W to E through channel
1022	crew asks survey for directions w/ pile location
1023	sailboat traveling W to E through channel
1027	turn on air for DTH
1028	check in w/ survey, start drilling
1046	USNS 1664 traveling W to E through channel
1052	seaward marine tugboat traveling SW from barge
1058	stopped drill so survey could check location
1100	resume drilling
1106	check w/ survey
1112	seaward marine no longer working in water
1113	USNS airboat traveling W to E through channel
1123	USNS airboat traveling W to E through channel
1131	police speedboat traveling E to W through channel
1134	USNS aircraft carrier 78 traveling W to E through channel
1139	sailboat traveling W to E through channel, seaward marine boat traveling to barge
1140	start hammering w/ DTH
1142	stop DTH, check location
1143	Universal Laboratories boat taking readings E of NE jetty on island 1, drifting N
1145	universal Laboratories boat traveling E to W through channel then S, passing under pier to take data W of Island 1
1148	seaward marine boat traveling SW from barge
1150	crane operator left cab, checking back of crane, turned off air to DTH
1158	tugboat traveling E to W through channel
1203	turned on air to DTH
1205	start & stop drill, check-in w/ survey
1208	start drill
1209	start hammer
1210	seaward marine barge working in water SW of island 2
1211	tugboat traveling E to W through channel, DTH stopped
1213	tugboat traveling E to W through channel
1219	USNS 1664 traveling E to W through channel
1226	resume drilling
1229	resume hammer and stop DTH
1230	start, stop, resume hitting
1235	USNS airboat traveling E to W through channel
1238	USNS Airboat traveling E to W through channel
1243	seaward marine tugboat traveling from W of pier to barge
1250	stop hammering, clearing hoses, working to remove drill

Observer(s) Names:

Daily Marine Mammal Observation Report

Contractor: CTJV/ Dragados	Project Name: CTJV Parallel Thimble Shoals Tunnel
NOAA/NMFS PERMIT. IHA March 2020	Observer Location (Island #)
Date: 5/28/2020	Shift Start:
Sunrise: Sunset:	Shift End:

OBSERVER LOG:

Time:	Notes: (pre-watch times, start and stop times for pile driving activities)
1253	Start + stop hitting
1308	Turn off air, seaward marine boat w/ 2 Port-a-potties turned S by Navy escort boat so submarine can pass
1310	navy escort boat W to E through channel
1312	2nd navy escort boat W to E through channel followed by submarine and 3rd Escort boat
1314	seaward marine boat returning N to barge
1322	Cargo ship traveling W to E through channel
1323	End watch
1329	Catch van to yard
1347	arrive at yard

Observer(s) Names:

Daily Observer Log Form

Contractor: CTJV	Project Name: CTJV Parallel Thimble Shoals
NOAA NMFS Permit: IHA March 2020	Location: (Island Number) 1
USACE Permit: —	State Permits: —
Observer Name: Elizabeth Jantz/Kelsey Fielder	Observer Location: Connex/pier
Date: 29-May-2020	Shift Start: 1125 Shift End: 2105
Sunrise: 0547	Sunset: 2016

Weather and Visibility Information

Location	Time	Air Temp (F)	Water Temp	Visibility (Good, Fair,	Could Cover (%)	Wave Height (ft)	Wind Speed & Direction kts	Precipitation	Beaufort Scale
Connex	1205	75	65.1	Good	75%	0.5	S 7.8	none	2
Pier	1805	75	—	Good	100%	0.5	SSW 3.9	none	1

Observer Logs

Time	Notes: (i.e., start and stop times for pile driving activities, shift changes, nearby human actiivties.)
1125	catch van to Island 1
1140	arrive at Island 1
1145	Meet w/ Shawn, still need to take down DTH drill stem and switch to Impact, will probably be a while
1350	Discharge hoses still connected to crane
1417	Crew shutting down/stand by due to incoming lightning storm
1518	Crew putting rain gear on to go out and set up Impact hammer
1708	Impact hammer standing by crane, bonnet not on yet
1753	head out to pier
1801	start watch, seaward Marine barge SW of Island 2
1812	told Shawn that we need until 1831 for our 30 min pre-watch
1837	commence soft start
1904	Start and stop hammering at normal interval
1906	Strike with soft start interval

Sighting Log

Time	Species	Total Number	Adults	Juveniles	Closest Distance to Observer	Activity or Behaviors	Shut down? (yes/no)	Time of Shut-down	Time of Start Up	Time last seen

Daily Summary

Species	Total Number	Takes in Zone A	Takes in Zone B	# Shut-Downs	Comments

Daily Marine Mammal Observation Report

Contractor CTJV/ Dragados	Project Name CTJV Parallel Thimble Shoals Tunnel
NOAA/NMFS PERMIT IHA March 2020	Observer Location (Island #)
Date 5/29/2020	Shift Start
Sunrise Sunset	Shift End:

OBSERVER LOG:

Time:	Notes: (pre-watch times, start and stop times for pile driving activities)
1909	resume normal interval striking (Impact hammer)
1922	stop hitting, finished East pile
1933	placing Impact hammer on west pile, seaward marine barge working in water
1948	Tugboat traveling W to E through channel
1953	soft start
1959	start & stop normal hammering interval
2001	resume normal hitting interval
2015	stop, finished pile
2032	cargo ship traveling W to E through channel
2037	End watch, low visibility
2050	catch van to yard
2105	Arrive at yard

Observer(s) Names:

Daily Observer Log Form

Contractor CTIV	Project Name CTIV Parallel Humble Shoals
NOAA NMFS Permit IHA March 2020	Location (Island Number) 1
USACE Permit –	State Permits –
Observer Name Elizabeth Jane / Fielder	Observer Location Pier
Date 1 - June - 2020	Shift Start 1130 Shift End 1837
Sunrise 0546	Sunset 2018

Weather and Visibility Information

Location	Time	Air Temp (F)	Water Temp	Visibility (Good, Fair,	Could Cover (%)	Wave Height (ft)	Wind Speed & Direction kts	Precipitation	Beaufort Scale
Pier	1220	64	60.9	Good.	10%	2.6	E 13.6	none	3
Pier	1650	65	62.2	Good.	15%	1	SE 9.7	none	2

Observer Logs

Time	Notes: (i.e., start and stop times for pile driving activities, shift changes, nearby human activities)
1130	catch van to Island 1
1150	Arrive island 1, meet w/crew - QC did not approve of pile splicing, crew working to correct, will be a while
1210	start watch on pier, 3 navy escort boats (potentially police boats) idling W of channel
1217	survey checks in w/crew on casing location, mid-island
1221	sailboat traveling W to E through channel
1223	Navy speedboats travel E through channel
1229	survey checking in w/crew
1233	Navy speedboats traveling E to W through channel followed by Sub.
1236	survey checking in w/crew
1237	DTH starts grinding/drilling
1239	start & stop hitting, still drilling
1253	lifting DTH, checking in w/survey
1256	survey asked for a full stop so they could get an accurate reading
1300	checking pile location and plumb

Sighting Log

Time	Species	Total Number	Adults	Juveniles	Closest Distance to Observer	Activity or Behaviors	Shut down? (yes/no)	Time of Shut-down	Time of Start Up	Time last seen

Daily Summary

Species	Total Number	Takes in Zone A	Takes in Zone B	# Shut-Downs	Comments

Daily Marine Mammal Observation Report

Contractor: CTJV/ Dragados	Project Name: CTJV Parallel Thimble Shoals Tunnel
NOAA/NMFS PERMIT: IHA March 2020	Observer Location (Island #)
Date: 6/1/2020	Shift Start
Sunrise: Sunset	Shift End

OBSERVER LOG:

Time:	Notes: (pre-watch times, start and stop times for pile driving activities)
1307	crew going on template to extend rollers
1330	cargo ship traveling E to W through channel
1333	Fishing boat traveling NW from bridge S of Island 1
1336	check-in w/ survey, fishing boat idling 150 m WSW of DTH, fishing
1341	Fishing boat continues NW, passing W of pier
1350	fishing boat traveling NW from Bridge S of Island 1
1358	lowering DTH
1359	start hitting w/ DTH
1400	stop, adjust casing, still drilling
1402	resume hitting
1403	fishing boat from 1350 traveling SE from pier to bridge
1405	fishing boat idling W of bridge, SW of Island 1
1406	lifting pile casing to adjust location, stop hitting
1407	Vince call all stop
1422	Crew in man lift looking at DTH stem where it connects to crane
1429	Catamaran and 3 additional fishing boats approach SW of Island 1
1431	Issue with a valve / air to DTH
1440	seaward marine transport boat traveling N to S, W of pier
1441	1 of 4 fishing boats W of Island 1 traveling E, S of Island 1
1442	starting up DTH again
1447	start drilling, survey check-in, start hitting, casing moved, stopped hitting
1451	start/ stop hitting, 2 speedboats traveling N, W of bridge
1456	one speedboat stopped, S of pier to fish, other returned S
1503	Fishing boat traveling from S W of Island 1 to W of pier
1510	Navy escort boat approaching channel W to E
1516	SUBMarine and 2 Navy escorts traveling W to E through channel
1524	All Stop, Crew going on template to weld
1535	tugboat traveling W to E through channel
1551	starting up again, checking in w/ survey, start hitting
1621	stop hitting, seaward marine tugboat pushing dredge barge N. W of pier
1626	resume hitting
1627	stop hitting/ clearing hoses
1630	Full stop, seaward marine tugboat pushing dredge barge towards N side of Island 1,
1632	continue turning DTH in casing,
1636	Tugboat bringing "CASHMAN" dredge to NW of mooring dolphins NW of Island 1
1654	USNS Escort boats (5) traveling E to W through channel
1725	Survey vessel traveling W to E through channel
1734	Survey said crew was done drilling for the day, drill stem partially lifted but still in casing, seaward marine using clamshell in water w/ no barge to place waste / dredge material
1740	DTH fully removed from casing

Observer(s) Names:

Daily Marine Mammal Observation Report

page 3 of 3

Contractor: CTJV/ Dragados	Project Name: CTJV Parallel Thimble Shoals Tunnel
NOAA/NMFS PERMIT: IHA March 2020	Observer Location (Island #):
Date: 6/1/2020	Shift Start:
Sunrise: Sunset	Shift End:

OBSERVER LOG:

Time	Notes (pre-watch times, start and stop times for pile driving activities)
1751	Threading casing w/ DTH
1753	checked in w/ crew, done for the day, threading casing for tomorrow
1800	End watch, Shawn thinks 9am we will need J-, Vince thinks first thing in the morning
1825	catch ride to yard
1837	arrive at yard

Observer(s) Names:

Daily Observer Log Form

Contractor: CTJV	Project Name: CTJV Parallel Thimble Shoals
NOAA/NMFS Permit: IHA March 2020	Location: (Island Number) 1
USACE Permit: —	State Permits: —
Observer Name: Elizabeth Jantz / Libby McCullers	Observer Location: Pier
Date: 7-June-2020	Shift Start: 0620 Shift End: 1810
Sunrise: 0545	Sunset: 2019

Weather and Visibility Information

Location	Time	Air Temp (F)	Water Temp	Visibility (Good, Fair,	Could Cover (%)	Wave Height (ft)	Wind Speed & Direction	Precipitation	Beaufort Scale
Pier	0725	60	66.4	Good	75%	1.3	SW 5.6	none	3
pier	1100	69	66.4	Good	100%	1	WSW 13.6	none	3

Observer Logs

Time	Notes: (i.e., start and stop times for pile driving activities, shift changes, nearby human actiivties.)
0620	cat cb bus to Island 1
0650	meet w/crews: Vince - DTH, Shawn - QC needs to approve spliced piles then they can drive w/ impact then 48 hr until restrike
0720	Start watch on pier, Seaward marine working in water (clamshell) N of NW jetty on Island 1
0730	Threaded casing being lowered into template W side of Island 1
0805	Survey setting up,
0811	DTH checking pile casing location
0817	Tug boat pulling barge E to W through channel
0821	Impact hammer being placed on E pile, NW jetty Island 1
0834	Start drilling (mid-island)
0843	Impact hammer checking in w/ survey
0851	HMM Cargo Ship and USNS Hunter 3 traveling W to E through channel DTH stopped
0901	Start + stop hitting (Impact) 3 hits at normal hammering interval
0902	Impact soft start (2 hits at 1.5-2 min interval)

Sighting Log

Time	Species	Total Number	Adults	Juveniles	Closest Distance to Observer	Activity or Behaviors	Shut down? (yes/no)	Time of Shut-down	Time of Start Up	Time last seen
1031	T. truncatus	2	2	0	300 m	traveling	no	N/A	N/A	1031

Daily Summary

Species	Total Number	Takes in Zone A	Takes in Zone B	# Shut-Downs	Comments

Daily Marine Mammal Observation Report

Contractor: CTJV/ Dragados	Project Name: CTJV Parallel Thimble Shoals Tunnel
NOAA/NMFS PERMIT: IHA March 2020	Observer Location (Island #):
Date: 2/6/2020	Shift Start: 0620
Sunrise: Sunset:	Shift End:

OBSERVER LOG:

Time:	Notes: (pre-watch times, start and stop times for pile driving activities)
0907	Impact hammer normal hammering interval
0910	"Lindholm" vessel traveling W to E through channel
0916	DTH crew checking in w/ survey, issue w/ equipment, standby
0926	Impact stop, finished E pile, will move to W pile
0930	DTH drill stem turning but crew says they are still down
0945	Impact hammer starts hitting West pile
0946	stopped, checking in w/ survey
0947	cargo ship traveling W to E through channel
0948	Impact hammer resumes on W pile
0956	Seaward marine stopped dredging, fishing boat drifting W. S of Island 1
1002	fishing boat returned E under bridge S of Island 1
1009	Impact hammer stopped, finished pile
1028	Cargo ship traveling E to W through channel
1029	tugboat pulling barge W to E through channel
1031	tug sions trinearus (2) traveling W to E through channel
1043	USNS Airboat traveling W to E through channel
1101	DTH spinning then stopped
1107	DTH spinning, air not on
1110	DTH stopped
1129	Universal Laboratories taking samples/data W of DTH, Issue with DTH again
1133	crew reports they are ready
1146	start + stop hitting w/ DTH
1150	Wisdom Venture traveling E to W through channel
1205	Issue with reading location of casing, jumping around a lot
1299	Seaward marine resumes work in water
1305	USNS Airboat traveling E to W through channel
1324	Hitting w/ DTH + stop
1417	Start + stop hitting DTH
1432	Start hitting DTH
1436	Tugboat pulling barge W to E through channel, also being pushed by tugboat in back with a tugboat on the side
1445	stopped hitting, check in w/ survey
1446	resume hitting
1453	stopped hitting then resume
1505	stopped, crane operator checking back of crane
1507	resume hitting
1508	cargo ship traveling W to E through channel
1516	Seaward marine no longer working in water
1526	Cargo ship traveling W to E through channel
1545	cargo ship traveling E to W through channel
1606	stopped hitting, drill still turning
1620	Seaward marine resumed work in water
1707	start hitting
1709	Stop hitting, USNS 13 traveling W to E through channel
1713	Pulling lines, working to remove drill stem

Observer(s) Names:

Daily Marine Mammal Observation Report

Contractor: CTJV/ Dragados	Project Name: CTJV Parallel Thimble Shoals Tunnel
NOAA/NMFS PERMIT: IHA March 2020	Observer Location (Island #)
Date: 6/2/2020	Shift Start:
Sunrise: Sunset:	Shift End:

OBSERVER LOG:

Time:	Notes: (pre-watch times, start and stop times for pile driving activities)
1729	Drill removed from casing
1735	End watch - check in w/ Vince, first thing tomorrow
1745	Catch van to yard
1810	Arrive at yard

Observer(s) Names:

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Daily Observer Log Form

Contractor: CTJV	Project Name: CTJV Parallel Thimble Shoals
NOAA/NMFS Permit:	Location: (Island Number) 1
USACE Permit: —	State Permits: —
Observer Name: Elizabeth Janz / Sidy McCullers	Observer Location: Pier
Date: 3-June-2020	Shift Start: 0625 Shift End: 1815
Sunrise 0545	Sunset: 2019

Weather and Visibility Information

Location	Time	Air Temp (F)	Water Temp	Visibility (Good, Fair,	Could Cover (%)	Wave Height (ft)	Wind Speed & Direction kts	Precipitation	Beaufort Scale
Pier	0730	70	67.3	Good	60	3	WSW 17	none	4
Pier	1130	73	68	Good	80	3.8	WSW 14	none	3
Pier	1500	80	66.2	Good	~~80~~ 30	3.6	WSW 14	none	3

Observer Logs

Time	Notes: (i.e., start and stop times for pile driving activities, shift changes, nearby human actiivties.)
0625	catch bus to Island 1
0650	Arrive at Island 1, meet w/ vince's crew - DTH 1 or 2 casings
0707	walk out to pier, start watch, seaward marine barge working in water SW of Island 2
0727	cargo ship traveling W to E through channel
0736	tugboat pulling barge, W to E through channel
0737	crew moving casing from temp dock mid-island to template (threaded)
0748	putting casing in template
0830	survey should be ready in 5 min
0835	Tote'N Line cargo ship and HOS Mavo vessel traveling E to W through channel
0841	crew correcting pile location based on survey directions
0846	Evergreen state Cargo ship traveling W to E through channel, start drilling
0921	start and stop hitting then resume hitting and stop
0922	resume hitting and stop, adjust casing location

Sighting Log

Time	Species	Total Number	Adults	Juveniles	Closest Distance to Observer	Activity or Behaviors	Shut down? (yes/no)	Time of Shut-down	Time of Start Up	Time last seen

Daily Summary

Species	Total Number	Takes in Zone A	Takes in Zone B	# Shut-Downs	Comments

Daily Marine Mammal Observation Report

Contractor: CTJV/ Dragados	Project Name: CTJV Parallel Thimble Shoals Tunnel
NOAA/NMFS PERMIT: IHA March 2020	Observer Location (Island #): 1
Date: 3-June-2020	Shift Start: 0625
Sunrise: 0645 Sunset: 2019	Shift End: 1815

OBSERVER LOG:

Time:	Notes: (pre-watch times, start and stop times for pile driving activities)
0923	hitting, and stop to readjust casing
0950	start hitting
1001	"BE Lindholm" vessel traveling W to E through channel
1023	stop hitting, still spinning, resume hitting
1025	stop hitting
1026	resume hitting
1046	stop hitting
1047	resume hitting
1050	stopped and resumed hitting
1052	stopped and resumed hitting
1055	stopped, finished casing, working on removing DTH and clearing lines
1113	drill removed from casing, seaward marine no longer working in water
1148	place casing to be threaded in template
1157	working on threading casing
1205	start drilling and stop
1210	tugboat traveling E to W through channel, pulling barge
1213	seaward marine raising crane to resume work in water
1221	universal laboratories boat traveling N, under pier then E
1245	pulling drill up and lowering down
1249	pulling casing up drill stem and lowering back down
1301	"BE Lindholm" vessel traveling E to W through channel
1302	Threaded casing back on temp. deck
1312	placing threaded casing in template
1335	checking in w/ survey
1341	Air to DTH on drill spinning
1430	Tugboat pulling barge W to E through channel, survey equipment froze
1455	survey back on-line checking-in w/ crew
1516	survey equipment malfunctioning, stop drilling
1526	survey back online ; checking in w/ crew
1531	crew grabbing a welder to modify template ; casing keeps slipping
1616	welders leaving template
1619	checking in w/ survey
1645	"Be Lindholm" vessel traveling W to E through channel
1656	stopped drill, tried to hit w/ and w/o drill rotating but cannot get it to hit, low air
1658	resume drilling, potentially in sand, still not hitting
1701	working on increasing PSI to DTH
1715	start hitting
1718	stop and resume then stop
1719	resume hitting and stop
1720	resume hitting
1721	stop hitting and resume drilling & stop
1723	unlocking, clearing lines
1751	End watch, First thing tomorrow
1801	switch van to yard
1815	Arrive at yard

Observer(s) Names:

Daily Observer Log Form

Contractor: CTJV	Project Name: CTJV Parallel Thimble Shoals
NOAA/NMFS Permit: IHA March 2020	Location: (Island Number) 1
USACE Permit: —	State Permits: —
Observer Name: Elizabeth Janz / Ben Fielder	Observer Location: Pier
Date: 4 - June - 2020	Shift Start: 0625 Shift End: 1545
Sunrise: 0545	Sunset: 2020

Weather and Visibility Information

Location	Time	Air Temp (F)	Water Temp	Visibility (Good, Fair,	Could Cover (%)	Wave Height (ft)	Wind Speed & Direction kts	Precipitation	Beaufort Scale
Pier	0750	73	67.1	Good	10	3.2	WSW 9	none	3
Pier	1100	76	67.8	Good	5	2.7	WSW 6	none	2
Pier	1400	79	—	Good	10	2.4	SW 10	none	2

Observer Logs

Time	Notes: (i.e., start and stop times for pile driving activities, shift changes, nearby human actiivties.)
0625	Catch bus to Island 1
0650	meet w/ Crews: Vince - DTH, 2 casings; Shawn-restrike w/ Impact
0720	walk out to pier, start watch, seaward marine working in water NW of Island 1
0740	Vince's crew placing threaded casing in template (mid island)
0819	Crew checking in w/ survey
0823	Start drilling w/ DTH
0825	Start hitting
0826	Stop so survey can check location and plumb
0833	resume drilling
0848	Stop so survey can check location and plumb
0852	resume drilling, Shawn's crew placing impact on E pile for restrike
0913	tugboat pulling barge E to W through channel
0916	DTH starts hitting
0918	stopped so survey can check location + plumb

Sighting Log

Time	Species	Total Number	Adults	Juveniles	Closest Distance to Observer	Activity or Behaviors	Shut down? (yes/no)	Time of Shut-down	Time of Start Up	Time last seen

Daily Summary

Species	Total Number	Takes in Zone A	Takes in Zone B	# Shut-Downs	Comments

Daily Marine Mammal Observation Report

Contractor: CTJV/ Dragados	Project Name: CTJV Parallel Thimble Shoals Tunnel
NOAA/NMFS PERMIT: IHA March 2020	Observer Location (Island #)
Date: 4 June 2020	Shift Start:
Sunrise: Sunset:	Shift End:

OBSERVER LOG:

Time:	Notes: (pre-watch times, start and stop times for pile driving activities)
0920	resume hitting and drilling
0925	Maersk Lyx cargo ship traveling E to W through channel, stopped hitting, check in w/ survey
0927	start + stop hitting (DTH
0929	resume hitting
0932	USNS 13 traveling E to W through channel
0934	stop hitting, check in w/ survey
0935	start and stop hitting
0936	resume hitting, check-in w/ survey
0945	Shawn's crew checked in to start, gave all clear
0946	Impact starts hitting (about 6 hits before stop)
0948	Impact 2 hits
0949	Impact 3 hits diminishing
0950	Shawn's crew checked in to start, gave all clear, did 3 recons then start regular interval hitting w/ Impact
0952	Shawn's crew stop hitting, finished E pile
1001	Impact moved to W pile
1009	Impact hammer hitting W pile
1010	Impact hammer stops, finished W pile
1018	3 Navy escort boats traveling W to E through channel
1040	Vince asks DTH water to STOP to replace a cup, DTH will STOP
1041	DTH resume hitting + drilling
1042	Survey reports equipment batteries died
1055	stop hitting and resume
1109	stop hitting + resume
1118	stop, removing DTH
1127	DTH removed from casing
1135	Seaward Marine no longer working in water
1138	submarine traveling E to W through channel
1143	pause watch until crew picks up next casing
1200	placing 2nd casing in template to be threaded
1219	placing DTH in casing
1225	Seaward Marine getting ready to work in water
1239	lifting casing and DTH, put it back on temp. dock
1308	moving threaded casing from temp. dock to template
1315	placing threaded casing in dock in water, connecting hoses
1325	leaving leads
1330	checking in w/ survey
1335	turn on air
1336	start drilling
1337	start hitting
1338	stop, check-in w/ survey
1339	resume hitting
1340	US Coast Guard 902 traveling E to W through channel
1344	stop hitting, check-in w/ survey, still drilling

Observer(s) Names:

Daily Marine Mammal Observation Report

Contractor: CTJV/ Dragados	Project Name: CTJV Parallel Thimble Shoals Tunnel
NOAA/NMFS PERMIT: IHA March 2020	Observer Location (Island #)
Date: 4 - June - 2020	Shift Start:
Sunrise: Sunset:	Shift End:

OBSERVER LOG:

Time:	Notes: (pre-watch times, start and stop times for pile driving activities)
1404	resume hitting
1405	stop hitting, still drilling
1420	resume hitting
1427	stop hitting / drilling
1433	removing drill stem from casing
1457	end watch
1505	check-in w/ vine, they are going to try to update software this afternoon / tomorrow morning, may not need MMOs tomorrow, will know more later
1527	catch ride to yard
1545	arrive at yard

Observer(s) Names:

Daily Observer Log Form

Contractor: CTJV	Project Name: CTJV Parallel Thimble Shoals
NOAA/NMFS Permit: IHA March 2020	Location: (Island Number) 1
USACE Permit: —	State Permits: —
Observer Name: Elizabeth Janz / Libby McCullers	Observer Location: Conrex
Date: 5 - June - 2020	Shift Start: 1130 Shift End: 1451
Sunrise: 0545	Sunset: 2021

Weather and Visibility Information

Location	Time	Air Temp (F)	Water Temp	Visibility (Good, Fair,	Could Cover (%)	Wave Height (ft)	Wind Speed & Direction	Precipitation	Beaufort Scale

Observer Logs

Time	Notes: (i.e., start and stop times for pile driving activities, shift changes, nearby human actiivties.)
1130	catch van to Island 1
1150	Meet w/ Vince, not ready, may not be ready until Monday/Tues
	check in w/ Shawn, no MMOs needed for about 8 days
1200	sit on pier
1230	move to Conrex because it started to rain
1350	check in w/ Vince, won't need us until Monday
1426	catch bus to yard
1451	Arrive at yard

Sighting Log

Time	Species	Total Number	Adults	Juveniles	Closest Distance to Observer	Activity or Behaviors	Shut down? (yes/no)	Time of Shut-down	Time of Start Up	Time last seen

Daily Summary

Species	Total Number	Takes in Zone A	Takes in Zone B	# Shut-Downs	Comments

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Daily Observer Log Form

Contractor: CTJV	Project Name: CTJV Parallel Thimble Shoals
NOAA/NMFS Permit: IHA March 2020	Location: (Island Number) 1
USACE Permit: —	State Permits: —
Observer Name: Elizabeth / Ben Fielder	Observer Location: Pier
Date: 8-June-2020	Shift Start: 0620 Shift End: 1815
Sunrise: 0514	Sunset: 2022

Weather and Visibility Information

Location	Time	Air Temp (F)	Water Temp	Visibility (Good, Fair,	Could Cover (%)	Wave Height (ft)	Wind Speed & Direction Kts	Precipitation	Beaufort Scale
Pier	0800	69	67.3	Good	5	1.5	NW 7	none	2
Pier	1400	73	—	Good	10	1.4	NE 4	none	1

Observer Logs

Time	Notes: (i.e., start and stop times for pile driving activities, shift changes, nearby human actiivties.)
0620	catch bus to Island 1
0650	meet w/ Vinci's crew - using impact hammer
0720	walk out to pier, start watch — seaward marine using grappler in water NW of Island 1 jetties, seaward marine survey boat collecting data SW of barge, fishing boat W at S tip of Island 1
0745	crew taking soundings of casing
0820	crew working to pick up pile, Osurvey coming out to pier, setting up
0835	Norwegian Encore cruise ship traveling E to W through channel, crew standing up pile
0840	placing pile in casing (mid-island)
0855	checking in w/ survey, survey needs to get radio from dropbox
0909	moving impact hammer to top of pile
0917	submarine and Navy escort boats traveling WTOE through channel
0933	crew ready to start Impact

Sighting Log

Time	Species	Total Number	Adults	Juveniles	Closest Distance to Observer	Activity or Behaviors	Shut down? (yes/no)	Time of Shut-down	Time of Start Up	Time last seen

Daily Summary

Species	Total Number	Takes in Zone A	Takes in Zone B	# Shut-Downs	Comments

Daily Marine Mammal Observation Report

Contractor: CTJV/ Dragados	Project Name: CTJV Parallel Thimble Shoals Tunnel
NOAA/NMFS PERMIT: IHA March 2020	Observer Location (Island #)
Date: 6/8/2020	Shift Start
Sunrise: Sunset	Shift End

OBSERVER LOG:

Time:	Notes: (pre-watch times, start and stop times for pile driving activities)
0935	commence soft start
0939	crew checking location w/ survey (stop hitting)
0949	Universal Laboratories speedboat traveling S under pier, stopped W of Impact hammer location taking data in water
0954	Another soft start
0957	Universal Laboratories speedboat travels W
0958	3 rapid hits then stop
1000	1 hit
1002	1 hit
1004	Norwegian Bliss traveling E to W through channel, 1 hit
1005	1 hit
1006	normal hammering rate
1020	stop hitting, finished pile
1035	crew off loading piles from trucks
1050	submarine aircraft boats traveling E to W through channel, End post watch
1100	Several marine species working in water
1159	check-in w/ vince, next pile will be closer to end of shift because they need to dig out casing
1328	finished dredging casing, removed clamshell, survey returned
1358	Several marine species working in water Not Island 1 and 5 of Island 2 (2 different barges), crew needs to dig 1 more foot out of casing meanwhile off loading trucks
1411	Submarine traveling W to E through channel
1505	hooking up clamshell to dredge last foot in casing
1534	crew using manlift to check depth in casing / sounding
1548	placing centralizer on casing
1600	Placing pile in casing, resume watch (50 min pre-watch)
1608	Survey setting up
1619	placing Impact hammer on pile
1624	checking plumb w/ survey
1648	Begin soft start
1650	checking in w/ survey
1652	Normal hitting interval
1704	stop, finished pile
1719	remove hammer from pile
1734	End watch
1755	catch van to yard
1815	Arrive at Yard

Observer(s) Names:

Daily Observer Log Form

Contractor: CTJV	Project Name: CTJV Parallel Thimble Shoals
NOAA/NMFS Permit: IHA March 2020	Location: (Island Number) 1
USACE Permit: –	State Permits: –
Observer Name: Elizabeth Janz / Ben Fielder	Observer Location: Pier
Date: 9 - June - 2020	Shift Start: 0620 Shift End: 1740
Sunrise: 0544	Sunset: 2023

Weather and Visibility Information

Location	Time	Air Temp (F)	Water Temp	Visibility (Good, Fair,	Could Cover (%)	Wave Height (ft)	Wind Speed & Direction kts	Precipitation	Beaufort Scale
Pier	0745	72	70.2	Good	80	1.5	SW 5	none	1
Pier	1300	81	75.9	Good	40	0.7	ESE 3.9	none	1
Pier	1700	77	75.4	Good	20	1.5	ESE 11	none	3

Observer Logs

Time	Notes: (i.e., start and stop times for pile driving activities, shift changes, nearby human actiivties.)
0620	Catch bus to Island 1
0650	Meet with Vince's crew, night shift had difficulty digging out casings, seemed to refill, start today w/ dredging casings, then pile driving (hoping to do N casings (3) today)
0720	Gather materials from connex and walk out to pier Seaward marine has 1 barge (cashman) working in water N of Island 1
0811	Crew working on dredging casings
1012	Crew dredging 3rd casing
1015	Universal laboratories taking data S of pier, W of casings mid-island
1122	1 foot left to dredge in 3rd casing
1206	Seaward marine stopped working in water
1313	Dredging 4th casing. Seaward marine resumed work N of Island 1
1416	placing 0 stabilizer on casing
1423	placing stabilizer on a second casing
1439	picking up pile (start watch) 4 fishing boats along bridge S of Island 1

Sighting Log

Time	Species	Total Number	Adults	Juveniles	Closest Distance to Observer	Activity or Behaviors	Shut down? (yes/no)	Time of Shut-down	Time of Start Up	Time last seen

Daily Summary

Species	Total Number	Takes in Zone A	Takes in Zone B	# Shut-Downs	Comments

Daily Marine Mammal Observation Report

Contractor: CTJV/ Dragados	Project Name: CTJV Parallel Thimble Shoals Tunnel
NOAA/NMFS PERMIT: IHA March 2020	Observer Location (Island #)
Date: 6/9/2020	Shift Start:
Sunrise: Sunset:	Shift End:

OBSERVER LOG:

Time:	Notes: (pre-watch times, start and stop times for pile driving activities)
1453	moving Impact hammer into place
1458	fishing boat furthest south departed East under bridge
1502	Checking-in w/ Survey
1509	USNS EB1 traveling W to E through channel; commence Soft start
1508	Normal hitting interval
1517	STOP hitting
1525	standing up 2nd pile
1530	moving impact hammer to 2nd pile, fishing boat moving from S of island N to W of pile driving then back S
1537	fishing boat S of Island traveling N past pier
1538	fishing boat drifting W from under bridge then N (stop SW of casings)
1539	soft start on 2nd pile
1541	Normal hitting rate
1545	Fishing boat departs W then N of pier
1555	STOP hitting, finished pile
1558	picking up 3rd pile
1603	Fishing boat traveling S from pier parallel to Island
1604	placing pile in casing
1605	fishing boat traveled E under bridge
1611	moving Impact hammer to 3rd pile
1615	speedboat traveling N, E of Seaward marine barrel buoys
1617	Check in w/ Survey
1622	Begin hitting 3rd pile
1625	Fishing boat traveling S from pier towards bridge
1631	Fishing boat traveling S, W of pier
1635	Speedboat traveling S, W of pier
1636	Speedboat traveling W under bridge then N
1641	STOP hitting, finished pile
1648	cargo ship traveling W to E through channel
1705	seaward marine survey boat traveling from barge SW under pier
1710	Speedboat traveling S, W of pier
1711	End watch
1718	Check in w/ Vince, first thing in the morning
1729	catch van to yard
1740	arrive at yard

Observer(s) Names:

Daily Observer Log Form

Contractor: CTJV	Project Name: CTJV Parallel Thimble Shoals
NOAA/NMFS Permit: IHA March 2020	Location: (Island Number) 1
USACE Permit: –	State Permits: –
Observer Name: Elizabeth Janz / Ben Fielder	Observer Location: Pier
Date: 10 - June - 2020	Shift Start: 0620 Shift End: 1825
Sunrise: 0544	Sunset: 2023

Weather and Visibility Information

Location	Time	Air Temp (F)	Water Temp	Visibility (Good, Fair,	Could Cover (%)	Wave Height (ft)	Wind Speed & Direction kts	Precipitation	Beaufort Scale
Pier	0740	73	72.9	Good	90%	2.4	SSW 10	none	3
Pier	1400	81	74.8	Good	80%	2.7	S 13	none	3
Pier	1717	82	73.4	Good	40%	4	S 16	none	4

Observer Logs

Time	Notes: (i.e., start and stop times for pile driving activities, shift changes, nearby human actiivties.)
0620	catch bus to Island 1
0650	Meet w/ Vince's crew - start with digging out casings then drive 3 piles
0730	start watch on pier - seaward marine working in water N of Island 1
1026	Dolphins spotted traveling E through channel
1103	Universal Laboratories taking data W of Island 1
1115	Seaward marine stopped working in water
1218	Seaward marine resuming work N of Island 1
1421	crew removing clam shell, checking casings
1438	crew moving centrilizers to casings they were digging from
1445	picking up pile, COSCO cargo ship traveling E to W through channel
1503	moving Impact hammer to top of pile
1516	check-in w/ survey for plumb
1526	need to go more than 1 foot 5 for plumb, taking out a roller
1536	Fishing boat just S of pier departs S towards bridge

Sighting Log

Time	Species	Total Number	Adults	Juveniles	Closest Distance to Observer	Activity or Behaviors	Shut down? (yes/no)	Time of Shut-down	Time of Start Up	Time last seen
1026	T. truncatus	4	4	Ø	410 m	traveling	NO	N/A	N/A	1032

Daily Summary

Species	Total Number	Takes in Zone A	Takes in Zone B	# Shut-Downs	Comments

Daily Marine Mammal Observation Report

Contractor: CTJV/ Dragados	Project Name: CTJV Parallel Thimble Shoals Tunnel
NOAA/NMFS PERMIT: IHA March 2020	Observer Location (Island #)
Date: 6/10/2020	Shift Start:
Sunrise: Sunset:	Shift End:

OBSERVER LOG:

Time:	Notes: (pre-watch times, start and stop times for pile driving activities)
1545	Vince calling higher wps to check if they are within tolerance
1551	check-in w/ PSOs, gave all clear
1552	commence soft start
1555	Normal hammering interval
1602	Stop hitting, online shut down
1606	resume hitting
1612	stop hitting
1616	lifting 2nd pile
1622	placing pile in casing
1627	placing impact hammer on pile
1631	checking plumb
1639	plan to strong hit to see how pile moves
1641	1 hit, decide to drive
1642	1 hit
1643	Normal hitting interval
1652	fishing boat traveling N from bridge
1706	Stop hitting, last pile for the day
1719	fishing boat traveling S from pier toward bridge
1732	Crew cutting off tops of piles
1736	End watch, seaward marine still working in water
1800	Catch van to yard
1825	Arrive at yard

Observer(s) Names:

Daily Observer Log Form

Contractor: CTJV	Project Name: CTJV Parallel Thimble Shoals
NOAA/NMFS Permit: IHA March 2020	Location: (Island Number) 1
USACE Permit: —	State Permits: —
Observer Name: Elizabeth Janz/Ben Fielder	Observer Location: pier
Date: 11 - June - 2020	Shift Start: 0625 Shift End: 1634
Sunrise: 0544	Sunset: 2024

Weather and Visibility Information

Location	Time	Air Temp (F)	Water Temp	Visibility (Good, Fair,	Could Cover (%)	Wave Height (ft)	Wind Speed & Direction knots	Precipitation	Beaufort Scale
Pier	0803	74	68.5	Good	40%	3.9	SSW 15	none	3
Pier	1347	80	—	Good	100%	3.7	S 13	sprinkling	3

Observer Logs

Time	Notes: (i.e., start and stop times for pile driving activities, shift changes, nearby human actiivties.)
0620	catch bus to Island 1
0650	meet w/ crew - going to use a smaller vibratory hammer to break up material in casing so they can dredge casing for pile driving
0740	walk out to pier, start watch, seaward marine working in water N of Island 1, Universal Laboratories taking data W of Island 1
0750	crew picking up I-beam w/ point at one end, placing pointed end in casing
0837	crew lifting vibratory hammer to attach to probe (probe)
0843	Begin moving vibratory hammer/poke around inside casing
0859	Spinnaker traveling W to E through channel
0911	disengaged vibratory hammer from probe
0921	removing poke from casing
0941	End 30 min post watch
1005	hooking up bucket to crane so they can dredge material in casing
1105	switched bucket for poke, attempting to break up more material in casing

Sighting Log

Time	Species	Total Number	Adults	Juveniles	Closest Distance to Observer	Activity or Behaviors	Shut down? (yes/no)	Time of Shut-down	Time of Start Up	Time last seen

Daily Summary

Species	Total Number	Takes in Zone A	Takes in Zone B	# Shut-Downs	Comments

Daily Marine Mammal Observation Report

Contractor: CTJV / Dragados	Project Name: CTJV Parallel Thimble Shoals Tunnel
NOAA/NMFS PERMIT: LOA March 2020	Observer Location (Island #)
Date: 11 - June - 2020	Shift Start:
Sunrise: Sunset:	Shift End:

OBSERVER LOG:

Time:	Notes: (pre-watch times, start and stop times for pile driving activities)
1113	Seaward marine moving Cashman barge, no longer working in water, crew attaching vibratory hammer to probe
1116	start probing w/ vibratory hammer in casing
1137	stop probing, remove vibratory hammer
1202	Crew adjusting casing w/ vibratory hammer
1209	stopped, moved casing down
1209	Seaward marine tug boats & pushing barges 5
1234	End 30 min post watch
1245	Crew dredging casing
1440	Crew sounding the casing. Still have 6' + to go
1550	radio crew, they will not get to pile driving today
1617	catch bus to yard
1634	Arrive at yard

Observer(s) Names:

Daily Observer Log Form

Contractor: CTJV	Project Name: CTJV Parallel Thimble Shoals
NOAA/NMFS Permit: IHA March 2020	Location: (Island Number) 1
USACE Permit: –	State Permits: –
Observer Name: Elizabeth Jantz / Abby McCullers	Observer Location:
Date: 12 - June - 2020	Shift Start: 0630 Shift End: 1635
Sunrise: 0544	Sunset: 2024

Weather and Visibility Information

Location	Time	Air Temp (F)	Water Temp	Visibility (Good, Fair,	Could Cover (%)	Wave Height (ft)	Wind Speed & Direction kts	Precipitation	Beaufort Scale
connex	0741	73	66.7	Good	99	2.4	N 9	Light rain	2

Observer Logs

Time	Notes: (i.e., start and stop times for pile driving activities, shift changes, nearby human actiivties.)
0630	catch bus to Island 1
0650	meet with crew - still need to dig 3-4 feet out of casing
0832	crew still digging out casing
1130	Crew still digging out casing, Vince reports they still have 2 feet to dig out
1250	Walk out to pier, casing hooked up to Crane
1304	relase casing from crane, release leads from crane
1306	Pick up vibratory
1311	attaching vibratory to casing
1322	Start + stop vibratory hammer
1323	Cargo ship "S Santiago" traveling EtoW through channel
1324	Star + vibratory and stop
1340	resume dredging casing
1354	End 30 min post + watch
1618	Catch bus to yard

Sighting Log 1633 Arrive at yard

Time	Species	Total Number	Adults	Juveniles	Closest Distance to Observer	Activity or Behaviors	Shut down? (yes/no)	Time of Shut-down	Time of Start Up	Time last seen

Daily Summary

Species	Total Number	Takes in Zone A	Takes in Zone B	# Shut-Downs	Comments

#1 of 2

Daily Observer Log Form

REMSA MESO

Contractor: CTJV	Project Name: CTJV Parallel Thimble Shoals
NOAA/NMFS Permit:	Location: (Island Number) #1
USACE Permit:	State Permits:
Observer Name: Ben Fiedler | Seth McClellan	Observer Location: Island #1 : pile
Date: 06 | 15 | 2020	Shift Start: 06:30 Shift End: 15:00
Sunrise: 05:45	Sunset: ~~20:25~~

Weather and Visibility Information

Location	Time	Air Temp (F)	Water Temp	Visibility (Good, Fair,	Could Cover (%)	Wave Height (ft)	Wind Speed & Direction	Precipitation	Beaufort Scale
CBBT	07:00	67°	71°F	Fair	100%	3-5ft	SE	70-90%	

Observer Logs

Time	Notes: (i.e., start and stop times for pile driving activities, shift changes, nearby human actiivties)
06:30	leave yard
07:00	safety meeting (Ben W, Sean, Seth M, Vince)
07:50	start watch
08:11	NS 57 passes E to W through channel
08:28	setting up hammer
08:43	Cargo passes E to W through channel
08:57	vibe (MLV starts): first & second hit
09:59	third hit
09:00	fourth hit
09:01	fifth hit
09:03	Start hitting
09:23	Stop hitting
09:26	NS through channel W to E
09:27	mechanic fixing something on casing / pile
09:46	Start hitting
09:52	Stop hitting

Sighting Log

Time	Species	Total Number	Adults	Juveniles	Closest Distance to Observer	Activity or Behaviors	Shut down? (yes/no)	Time of Shut-down	Time of Start Up	Time last seen

Daily Summary

Species	Total Number	Takes in Zone A	Takes in Zone B	# Shut-Downs	Comments

#2 of 2

Daily Observer Log Form

Contractor: CTJV	Project Name: CTJV Parallel Thimble Shoals
NOAA/NMFS Permit:	Location: (Island Number) #1
USACE Permit:	State Permits:
Observer Name: TJ	Observer Location:
Date: 6/15/2020	Shift Start: Shift End:
Sunrise:	Sunset:

Weather and Visibility Information

Location	Time	Air Temp (F)	Water Temp	Visibility (Good, Fair,	Could Cover (%)	Wave Height (ft)	Wind Speed & Direction	Precipitation	Beaufort Scale
OBS									

Observer Logs

Time	Notes: (i.e., start and stop times for pile driving activities, shift changes, nearby human activities.)
09:52	Stop hitting
10:17	Walking
10:16	NS 98 through channel W to E
10:25	NS 98 through channel W to E
10:28	Start hitting
10:32	NS 98 through channel E to W
10:32	Stop hitting
11:02	end post-watch
11:02	check in WJ both crews; vessels crew done driving
11:20	check in WJ seen; potentially drilling later, MMOs leaving
19:19	Shuttle called it, coming @ 19:20 DT home

Sighting Log

Time	Species	Total Number	Adults	Juveniles	Closest Distance to Observer	Activity or Behaviors	Shut down? (yes/no)	Time of Shut-down	Time of Start Up	Time last seen

Daily Summary

Species	Total Number	Takes in Zone A	Takes in Zone B	# Shut-Downs	Comments

Daily Observer Log Form

Contractor: CTJV	Project Name: CTJV Parallel Thimble Shoals
NOAA NMFS Permit:	Location (Island Number): 1
USACE Permit:	State Permits:
Observer Name: Ben Fielder / Desmond Turner	Observer Location: Pier @ island 1
Date: 17-June-2020	Shift Start: 0940 Shift End: 1218
Sunrise: 0544	Sunset: 2026

Weather and Visibility Information

Location	Time	Air Temp (F)	Water Temp	Visibility (Good, Fair,	Could Cover (%)	Wave Height (ft)	Wind Speed & Direction	Precipitation	Beaufort Scale
Pier	1043	68	70	Fair	100%	3.5	14Kt W	None	4.5

Observer Logs

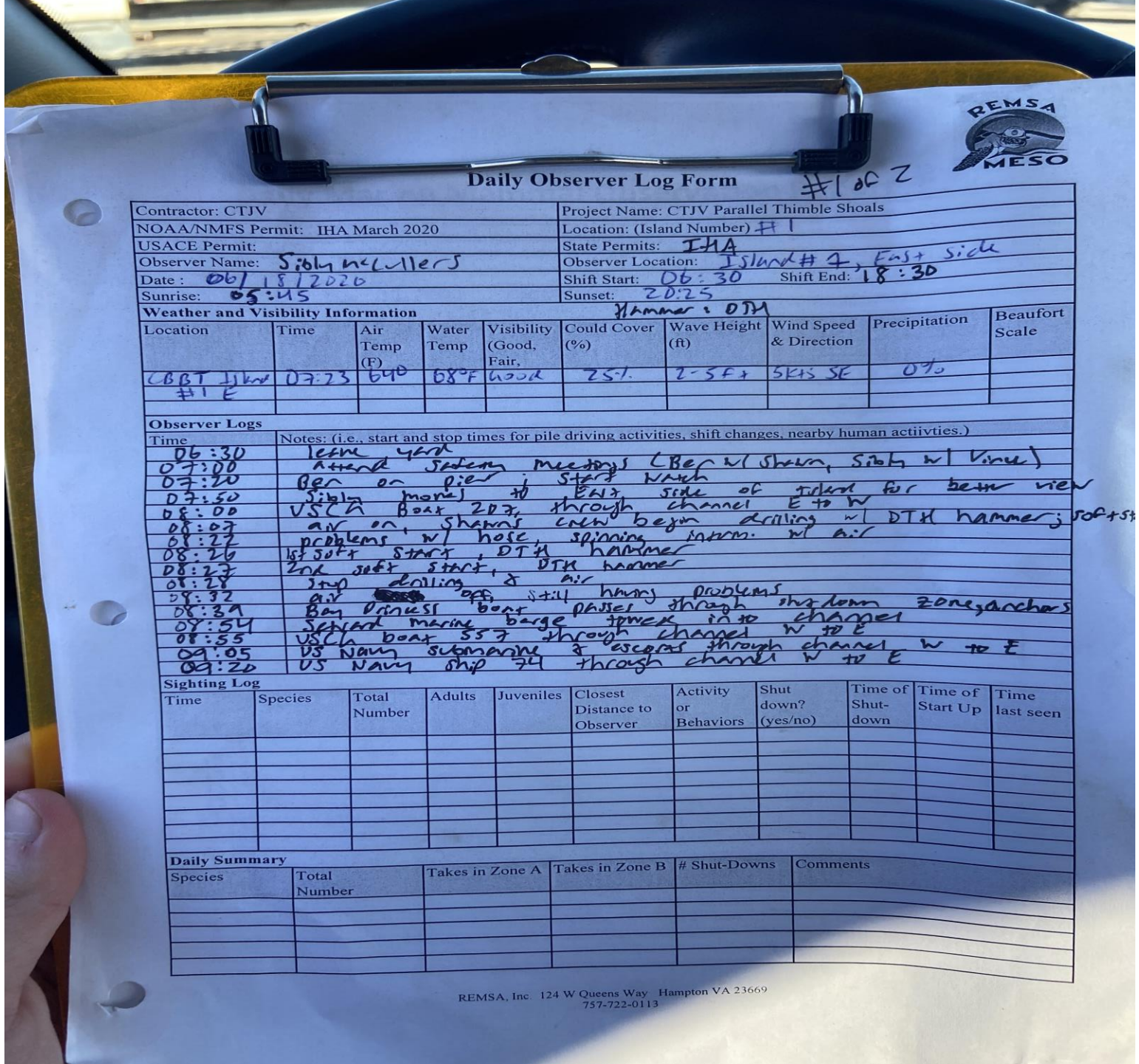
Time	Notes: (i.e., start and stop times for pile driving activities, shift changes, nearby human actiivties.)
0940	Catch Ride To Island 1
1005	Arrive at Island 1
1020	Walk out to Pier
1140	Informed MMOs will not be needed today
1157	Catch Ride to yard
1218	Arrive at Yard

Sighting Log

Time	Species	Total Number	Adults	Juveniles	Closest Distance to Observer	Activity or Behaviors	Shut down? (yes/no)	Time of Shut-down	Time of Start Up	Time last seen

Daily Summary

Species	Total Number	Takes in Zone A	Takes in Zone B	# Shut-Downs	Comments



Daily Observer Log Form

#1 of 2

REMSA MESO

Contractor: CTJV	Project Name: CTJV Parallel Thimble Shoals
NOAA/NMFS Permit: IHA March 2020	Location: (Island Number) #1
USACE Permit:	State Permits: IHA
Observer Name: Sibly McLellers	Observer Location: Island #1, East side
Date: 06/18/2020	Shift Start: 06:30 Shift End: 18:30
Sunrise: 05:45	Sunset: 20:25

Weather and Visibility Information Hammer: DTH

Location	Time	Air Temp (F)	Water Temp	Visibility (Good, Fair,	Could Cover (%)	Wave Height (ft)	Wind Speed & Direction	Precipitation	Beaufort Scale
CBBT Island #1 E	07:23	64°	68°F	Good	25%.	2-5 ft	5kts SE	0%	

Observer Logs

Time	Notes: (i.e., start and stop times for pile driving activities, shift changes, nearby human actiivties.)
06:30	leave yard
07:00	Attend Safety meetings (Ben w/ Shawn, Sibly w/ Vince)
07:20	Ben on pier, start watch
07:50	Sibly moved to East side of Island for better view
08:00	VSCA Boat 207 through channel E to W
08:07	air on, Shawns crew began drilling w/ DTH hammer; 50 ft soft start
08:22	problems w/ hose, spinning intern. w/ air
08:26	1st soft start, DTH hammer
08:27	2nd soft start, DTH hammer
08:28	stop drilling & air
08:32	air [redacted] off, still having problems
08:39	Ben Dimuest boat passed through shutdown zone, anchors
08:54	Seaward marine barge towed in to channel
08:55	VSCA boat 557 through channel W to E
09:05	US Navy submarine 3 escorts through channel W to E
09:20	US Navy ship 74 through channel W to E

Sighting Log

Time	Species	Total Number	Adults	Juveniles	Closest Distance to Observer	Activity or Behaviors	Shut down? (yes/no)	Time of Shut-down	Time of Start Up	Time last seen

Daily Summary

Species	Total Number	Takes in Zone A	Takes in Zone B	# Shut-Downs	Comments

Daily Marine Mammal Observation Report #2 of 2

Contractor: CTJV/ Dragados	Project Name: CTJV Parallel Thimble Shoals Tunnel
NOAA/NMFS PERMIT: IHA March 2020	Observer Location (Island #) #1
Date: 08/18/2020	Shift Start: 06:30
Sunrise: 05:45 Sunset: 20:25	Shift End: 18:30
waves: 0-1ft by 10:00	Hammer: DTH
clouds: 90% by 12:00	

OBSERVER LOG:

Time:	Notes: (pre-watch times, start and stop times for pile driving activities)
09:38	cargo ship Norfolk through channel E to W
09:41	eskaias back through channel E to W
09:49	air on + check-in w/ survey
09:57	start hammering (DTH hammer)
10:08	Virginia trawling boat through channel W to E
10:00	start drilling w/ DTH hammer
10:01	Seward Marine setting buoys for barge
10:37	start hammering (DTH) continuously
10:45	stop hammering, still drilling
10:46	start & stop hammering
10:47	start & stop hammering
10:48	start & stop hammering
10:48	BE LINDHOLM ship through channel W to E
10:50	Seward marine tows rock barge into place
11:03	Pacific Trawling boat through channel E to W
11:28	private yacht + two kayakers through channel W to E / E to W
11:29	start hammering continuously
11:34	stop hammering, still drilling
11:49	start hammering continuously
12:03	Seward Marine towing third barge into place
11:55	stop hammering, still drilling
12:12	start hammering, on & off
12:13	stop hammering, still drilling
12:30	USCG boat 557 through channel E to W
12:35	Tugboat & barge through channel W to E
12:35	start hammering intermit.
12:[redacted]40	[redacted] start hammering continuously
13:24	stop hammering
13:29	start hammering
13:30	stop hammering
13:32	start hammering
13:33	stop hammering
13:34	start hammering
13:3[redacted]6	stop hammering
14:06	post-watch over	Ban & Sibby switch watch stations
14:06	drill pulled up; team begins prep to transit new casing
17:04	Shawna crew setting up to drill second casing
17:05	start watch
17:17	end watch - Shawna called it for the day
18:30	arrive at yard

Observer(s) Names: Sibby McCullers | Ban Fielder

REMSA MESO

Daily Observer Log Form

Contractor: CTJV	Project Name: CTJV Parallel Thimble Shoals
NOAA/NMFS Permit:	Location: (Island Number) 1
USACE Permit:	State Permits:
Observer Name: Desmond Tolmi / Ben Fielder	Observer Location: Pier / North End Island 1
Date: 19-June-2020	Shift Start: 0630 Shift End: 1650
Sunrise: 05:48	Sunset: 20:26

Weather and Visibility Information

Location	Time	Air Temp (F)	Water Temp	Visibility (Good, Fair,	Could Cover (%)	Wave Height (ft)	Wind Speed & Direction	Precipitation	Beaufort Scale
Island 1	0922	70	72	Good	50	1.5	6KTNNE	None	1

Observer Logs

Time	Notes: (i.e., start and stop times for pile driving activities, shift changes, nearby human actiivties.)
0630	Catch Bus
0655	Arrive Island 1
0706	Meet Vince Crew - Plan to install 3 casings w/ DTH
0716	Meet Shawn Crew - Plan to install 2 casing w/ DTH
0750	Walk out to Pier, Desmond to North End of Island
	Seaward Marine Operating Nat Island 1. Vince's crew
	already has 1st casing threaded in template. Begin Watch
0825	Container Ship - Vienna Express heading E tow in channel
0827	3 Dolphins spotted 5 of Island 1 heading E
0833	3Dolphins Last seen Traveling E under bridge
0838	Shawn Crew placing casing in template
0842	Vince - Air on, Start Drilling
0853	Start Hammering - Drilling continues
0855	Stop Hammering & Drilling - Fixing a hose
0925	2 Yatang + Liberty Island Hopper Dredge Heading E to W in channel
0930	Shawn - Lowering casing into template

Sighting Log

Time	Species	Total Number	Adults	Juveniles	Closest Distance to Observer	Activity or Behaviors	Shut down? (yes/no)	Time of Shut-down	Time of Start Up	Time last seen
0827	T. Truncatus	3	3	0	700m	Traveling	No	N/A	N/A	0833
1020	T. Truncatus	4	4	0	1.1km	Traveling	No	N/A	N/A	1045

Daily Summary

Species	Total Number	Takes in Zone A	Takes in Zone B	# Shut-Downs	Comments
T. Truncatus	7	0	0	0	

6/19/2020

Daily Marine Mammal Observation Report

Contractor: CTJV/ Dragados	Project Name: CTJV Parallel Thimble Shoals Tunnel
NOAA/NMFS PERMIT: IHA March 2020	Observer Location (Island #)
Date:	Shift Start:
Sunrise: Sunset:	Shift End:

OBSERVER LOG:

Time:	Notes: (pre-watch times, start and stop times for pile driving activities)
0932	Sail Boat W to E in channel
0934	Shipping Container Ship MSC Antonia + Yatch E to W in Channel
0938	Shawn - Air on, start Drilling
0945	Yatch traveling E to W in Channel
0948	Shawn begin Hammering then stop/Vince start Drilling
0953	Yatch traveling E to W in channel
0956	Tug w/ Barge in tow Heading E to W in Channel
	Vince - Stop Drill - low air pressure - Crew checking
1000	Vince - Air off
1011	Hammer then stop - Drilling continues (Shawn crew)
1020	4 Dolphins spotted NE of Island 1 Heading away NE
1029	Vince - Air on then start Drilling
1014	Shawn - Stop Drilling
1031	Vince - Hamper then stop, stop Drilling
1036	Shawn - start Drilling
1037	Vince - start Drilling
1038	Shawn - Begin Hammering continuously
1041	Shawn - Stop Hammering and Drilling
1044	Vince - Begin Hammering continuously
1045	Dolphins from 1020 lost sight of heading NE - away
1046	Vince - Stop Hammering - Drill continues
1049	Shawn - Air off, then back on
1051	Shawn - start Drilling
1058	Shawn - Start Hammering off/on
1100	Shawn - Stop Hammering & Drilling continues
1101	Tanker Ship - Sparta Pave heading E to W in channel
1102	Shawn - Hammer ~~stop~~ off/on
1103	Tug Traveling N to S across channel from Island 2
1105	Shawn Stop Hammering off/on
1107	Vince - Pause Drilling - Check w/ Survey
1107	Shawn - Begin Hammering Continuously
1109	Vince - Resume Drilling then Start Hammering Continuously
1110	USNS 74 traveling E to W in channel
1111	Shawn - Stop Hammering - Drilling continues
1112	Vince - Stop Hammering + Drilling
1113	Vince - Resume Drilling
1116	Vince - Stop Drilling - Air off - check w/ Survey
1125	Seaward Marine not operating, Boom Down
1134	USNS Prevail traveling E to W in channel
1138	Vince - Air Back on
1140	Small Boat From South to Seaward Marine Barge
1143	Vince - Begin Hammering Off/on
1146	Vince - Hammering Stops
1146	USNS 98 traveling E to W ~~Annapolis~~
1148	Vince - Hammer 3 times and stops
1150	Small coast Guard Boat travels W to E in channel

Observer(s) Names: Benjamin Fielder, Dezmond Turner

6/19/2020

Daily Marine Mammal Observation Report

Contractor: CTJV/ Dragados	Project Name: CTJV Parallel Thimble Shoals Tunnel
NOAA/NMFS PERMIT: IHA March 2020	Observer Location (Island #)
Date:	Shift Start:
Sunrise: Sunset:	Shift End:

OBSERVER LOG:

Time:	Notes: (pre-watch times, start and stop times for pile driving activities)
1151	Small Boat Departs Seaward Marine Barge Heading S
1153	Vince - Begin Hammering Continuously
1157	Tug Traveling E to W in channel
1202	Vince - Stop Hammering then Restart continuously
1203	Vince - Stop Hammering - Done With 1st Casing
1210	3 Navy Speed Boats heading W to E through Channel
1214	Tug Heading W to E in channel / Seaward Marine Barge Operating
1215	Vince - Air off - Removing Drill From Casing
1230	HOS Bed Rock traveling E to W in channel / universal Labs taking measurements SW of pier
1240	Shawn - Begin Hammering continuously
1243	Vince - Lifting Casing #2
1247	Shawn - Stop Hammering - Drilling continues
1253	Shawn - Begin Hammering continuously
1305	Shawn - Stop Hammering and Drilling
1306	Vince - Placing Drill in Casing
1308	Large Yatch traveling E to W / Speed Boat W to E in channel
1315	Shawn - Begin Hammering continuously and Drilling
1319	Shawn - Stop Hammering & Drilling - Done w/ Casing Begin Post Watch
1326	Shawn - Removing Drill From Casing
1334	Vince - Placing Casing w/ Drill in Template
1341	Drill out of casing
1348	3 Tugs + Largeship - Cape Bay in tow headed W to E in channel
1349	Shawn - End of Post Watch - Dezmond heads Back to Pier
	Watch continues for Vince's Crew
1357	Air on, Start Drilling
1401	Unknown Naval ship traveling E to W in channel
1429	Hammering on and off
1433	Stop Hammering, Drilling Continues
1506	Power Drilling - Air Pressure low
1509	Air off then on then Resume Drilling
1527	MAERSK Gairloch traveling E to W in channel
1532	Begin Hammering Continuously / 3 Navy Gunships Travel W to E in Channel
1540	MAERSK Albert Maersk traveling E to W in channel
1544	Stop Hammering + Drilling - Casing 2 finished, Begin Post Watch
1546	Removing Drill From Casing
1614	End Post Watch - Leave Pier
1630	Catch Ride to Yard
1650	Arrive at Yard.

Observer(s) Names: Benjamin Fields, Dezmond Tulnel

Protected Species Sighting & Shut-Down Form

Corresponding Sighting # for the Day: #1 Shutdown # for the Day: N/A

Date (DD/MM/YYYY): 19/06/2020 Time of Initial Sighting 0827 Time Animals Left Area: 0833

Project Name: CTJV Thimble Shoals Parallel Tunnel Island No. 1

Areas Observed: West side of Island 1 From Pier Upland Pile Driving no In-Water Pile Driving no

Air Temp: 70°F Water Temp: 72°F Wave Height 1.5 ft Beaufort Sea State 1

Weather Conditions: Partly Cloudy / No Precip

Percent Cloud Cover: 60% Percent Glare: 0% Visibility Issues: None

Animal Location & Distance to Pile Driving: SW of Island 1 - 700m from Crane (not active)
Type of Pile Driving DTH - Not Active
Distance From Observer When Initially Observed: 800 m
Species Observed: Tursiops Truncatus
Number of Animals Sighted (include age classes): 3 Adult
Sex of Animals Observed: Unknown
Animal Behaviors Observed: Traveling
Animal Heading/Direction: East
Human Activities in Area: Seaward Marine Operating North of Island 1 Container ship Vienna Express traveling E tow in channel, Vince's crew preparing to start but not yet operating.

Shutdown Information

Time Begin:	N/A
Time End:	N/A
Total Down Time (mins):	N/A

Shutdown # for the day: N/A

Video or Photograph Taken?: No Yes

Brief Description of Footage or Photograph: N/A

Notes: N/A

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Benjamin Fielder / BF
Observer Name / Signature

Protected Species Sighting & Shut-Down Form

Corresponding Sighting # for the Day: #2 Shutdown # for the Day: N/A

Date (DD/MM/YYYY): 19/06/2020 Time of Initial Sighting 10:20 Time Animals Left Area: 10:45

Project Name: CTJV Thimble Shoals Parallel Tunnel Island No. 1

Areas Observed: North + East of Island 1 Upland Pile Driving ____ In-Water Pile Driving ✓

Air Temp: 70°F Water Temp: 72°F Wave Height 1ft Beaufort Sea State 1

Weather Conditions: Overcast, 70% cloudy, No Precip

Percent Cloud Cover: ____ Percent Glare: 10% Visibility Issues: None

Animal Location & Distance to Pile Driving: NE of Island 1.1 km from pile driving
Type of Pile Driving DTH
Distance From Observer When Initially Observed: 1.1 KM
Species Observed: Tursiops Truncatus
Number of Animals Sighted (include age classes): 4 Adult
Sex of Animals Observed: Unknown
Animal Behaviors Observed: Traveling
Animal Heading/Direction: NE
Human Activities in Area: Tanker Spar Pavo Traveling Etow in channel at 11:01, Seaward Marine Barge operating N of Island 1,

Shutdown Information

Time Begin:	N/A
Time End:	N/A
Total Down Time (mins):	N/A

Shutdown # for the day: N/A

Video or Photograph Taken?: No Yes

Brief Description of Footage or Photograph: N/A

Notes: N/A

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REMSA MESO

Dezmond Turner D.

Observer Name / Signature

Daily Marine Mammal Observer Report

Contractor: CTJV : Dragados	Project Name: CTJV Parallel Thimble Shoals Tunnel
NOAA/NMFS Permit: IHA March 2020	Observer Location (Island #): #1
Date: 6/20/2020	Shift Start: 06:30
Sunrise: 05:45 Sunset: 20:25	Shift End: 13:51

Weather and Visibility Information

Location	Time	Air Temp (F)	Water Temp (F)	Visibility (Good, Fair, Poor)	Cloud Cover (%)	Wave Height (ft)	Wind Speed & Direction	Precipitation	Beaufort Scale
CBBT Island #1	06:58	71°F	63°F	Good	90%	0-1 Ft	8 mph SSE	0 - 100%	

Observer Log

Time	Notes: (pre-watch times, start and stop times for pile driving activities, shift changes, human actiivties)
06:30	Leave CTJV yard
06:52	Arrive at tunnel; Sibly attends Virtual meeting; Ben attends Shawns
07:30	Lightning Delay
08:00	Crew goes back to work
08:55	Lightning in Area
09:56	Crew goes Back to work
09:57	start watch on Pier - Seaward Marine operating N of Island 1
10:10	3 escort boats traveling W to E in channel
11:53	USNS 1664 traveling E to W in channel
12:29	Sub & 3 escort boats traveling E to W in channel
12:50	End watch - Will not Do any pile driving today
13:36	Catch Ride to yard
13:51	Arrive at yard

Sighting Log

Time	Species	Total Number	# Adults	# of Juveniles	Closest Distance to Pile Driving	Activity or Behaviors	Shut down? (yes/no)	Time of Shut-down	Time of Start Up	Time last seen

Daily Summary

Species	Total Number	Takes in Zone A	Takes in Zone B	# Shut-Downs	Comments

Observer Names: Sibly McMillen | Ben Fielder

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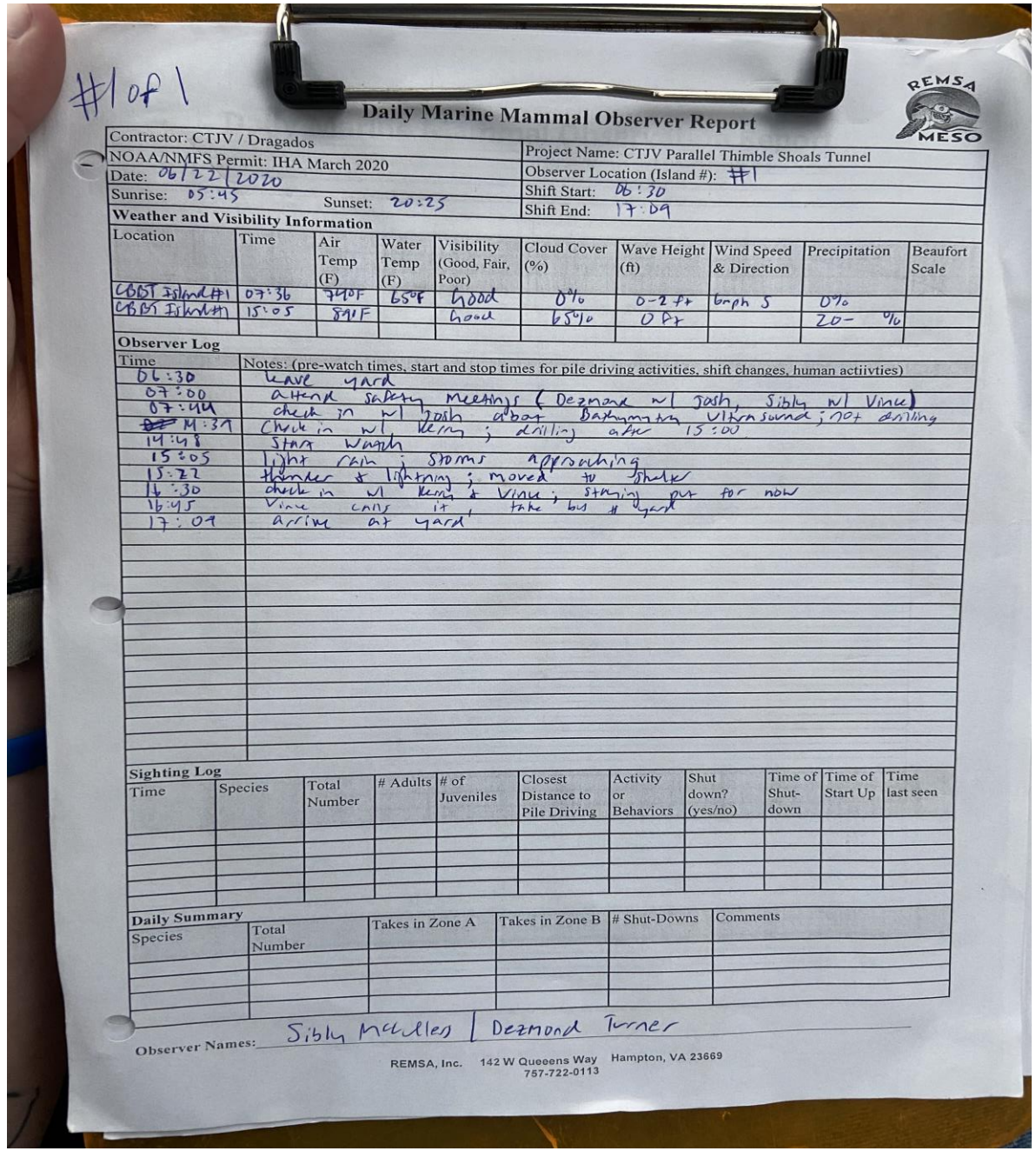

#1 of 1

Daily Marine Mammal Observer Report

REMSA MESO

Contractor: CTJV / Dragados
NOAA/NMFS Permit: IHA March 2020
Date: 06/22/2020
Sunrise: 05:45 Sunset: 20:25

Project Name: CTJV Parallel Thimble Shoals Tunnel
Observer Location (Island #): #1
Shift Start: 06:30
Shift End: 17:09

Weather and Visibility Information

Location	Time	Air Temp (F)	Water Temp (F)	Visibility (Good, Fair, Poor)	Cloud Cover (%)	Wave Height (ft)	Wind Speed & Direction	Precipitation	Beaufort Scale
CBBT Island #1	07:36	74°F	65°F	Good	0%	0-2 ft	6mph S	0%	
CBBT Island #1	15:05	84°F		Good	65%	0 ft		20-%	

Observer Log

Time	Notes: (pre-watch times, start and stop times for pile driving activities, shift changes, human actiivties)
06:30	leave yard
07:00	attend safety meetings (Dezmond w/ Josh, Sibly w/ Vince)
07:44	check in w/ Josh about Bathymetry Ultrasound; not drilling
~~07~~ M:37	Check in w/ Kemp; drilling after 15:00
14:48	Start Weigh
15:05	light rain; storms approaching
15:22	thunder & lightning; moved to Shaker
16:30	check in w/ Kemp & Vince; staying put for now
16:45	Vince calls it, take bus to yard
17:09	arrive at yard

Sighting Log

Time	Species	Total Number	# Adults	# of Juveniles	Closest Distance to Pile Driving	Activity or Behaviors	Shut down? (yes/no)	Time of Shut-down	Time of Start Up	Time last seen

Daily Summary

Species	Total Number	Takes in Zone A	Takes in Zone B	# Shut-Downs	Comments

Observer Names: Sibly Mullen | Dezmond Turner

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Daily Marine Mammal Observer Report

Contractor: CTJV / Dragados	Project Name: CTJV Parallel Thimble Shoals Tunnel
NOAA/NMFS Permit: IHA March 2020	Observer Location (Island #): 1
Date: 06/23/2020	Shift Start: 06:30
Sunrise: 05:46 Sunset: 20:28	Shift End: 1845

Weather and Visibility Information

Location	Time	Air Temp (F)	Water Temp (F)	Visibility (Good, Fair, Poor)	Cloud Cover (%)	Wave Height (ft)	Wind Speed & Direction	Precipitation	Beaufort Scale
Island 1	06:45	75°F	73°F	Clear	15%	1.5	SW 8mph	0%	2

Observer Log

Time	Notes: (pre-watch times, start and stop times for pile driving activities, shift changes, human actiivties)
06:30	Caught shuttle
06:45	Arrive on Island 1
07:00	Morning meeting with foreman
07:30	Island walk conducted
08:10	Channel traffic (cargo ship) traveling eastbound
08:55	DTH Drilling begins
10:26	DTH Drilling ends
10:38	Marine traffic in channel
11:50	Island Walk Conducted
13:31	Island Walk Conducted
13:33	DTH Drilling begins
14:41	DTH Drilling ends
16:09	Island Walk Conducted
16:15	DTH Drilling begins
16:46	DTH Drilling ends
17:20	Completed Post Watch
18:05	Completed Island Walk
18:30	Caught Shuttle
1845	Arrived at parking Lot

Sighting Log

Time	Species	Total Number	# Adults	# of Juveniles	Closest Distance to Pile Driving	Activity or Behaviors	Shut down? (yes/no)	Time of Shut-down	Time of Start Up	Time last seen

Daily Summary

Species	Total Number	Takes in Zone A	Takes in Zone B	# Shut-Downs	Comments

Observer Names: Desmond Turner, Kyle Farrington

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Daily Marine Mammal Monitoring Log

Contractor: CTJV / Dragados	Project Name: CTJV Parallel Thimble Shoals Tunnel
NOAA/NMFS Permit: IHA March 2020	Observer Location (Island #): #1
Date: 06/24/2020	Shift Start: 06:30
Sunrise: 05:45 Sunset: 20:25	Shift End:

Weather and Visibility Information

Location	Time	Air Temp (F)	Water Temp (F)	Visibility (Good, Fair, Poor)	Cloud Cover (%)	Wave Height (ft)	Wind Speed & Direction	Precipitation	Beaufort Scale
CBBT Island #1	08:28	77°F	65°F	Good	20%	1-2 ft	10kts W	0%	

Observer Log

Time	Notes: (pre-watch times, start and stop times for pile driving activities, shift changes, human actiivties)
06:30	leave yard
06:55	Safety meeting (Sib w/ Kemp, Dez w/ Josh)
07:00	Josh's team not drilling, Kemp's team drilling N [redacted] 09:00
07:30	Island Walk; no Mammals sighted
14:15	check-in w/ Vince; waiting for crane maintenance (start ~ 1hr)
14:20	Island walk; no mammals sighted
16:18	Survey checking in w/ Vince's crew about possible drilling today
16:40	Vince's crew still trying to drill; Josh's crew left; MMO's to lock condos
17:12	NO DRILL WARNING. Crew started DTH drilling w/ no warning to MMOs
17:15	MMO on pier, start Watch
17:24	start hammering (DTH)
17:33	Stop hammering, still drilling
17:37	NS speedboats through channel W to E
17:41	Dez performs Island Walk; Sibly stays to Watch on pier
17:43	Stop drilling [redacted], pulling drill up
17:44	Cargo ship [redacted] through channel E to W
18:01	Dolphin sighted – outside of shutdown zone
18:13	End post-Watch
18:44	arrive at yard

Sighting Log

Time	Species	Total Number	# Adults	# of Juveniles	Closest Distance to Pile Driving	Activity or Behaviors	Shut down? (yes/no)	Time of Shut-down	Time of Start Up	Time last seen
18:01	Dolphin - BN	1	1	0	>3000m	Heading E	NO			18:02

Daily Summary

Species	Total Number	Takes in Zone A	Takes in Zone B	# Shut-Downs	Comments
Bottlenose Dolphin	1	N/A	N/A	N/A	outside of shutdown zone

Daily Marine Mammal Observer Report

Contractor: CTJV Dragados	Project Name: CTJV Parallel Thimble Shoals Tunnel
NOAA/NMFS Permit: IHA March 2020	Observer Location (Island #): 1
Date: 06/26/2020	Shift Start: 0630
Sunrise: 05:46 Sunset 20:27	Shift End:

Weather and Visibility Information

Location	Time	Air Temp (F)	Water Temp (F)	Visibility (Good, Fair, Poor)	Cloud Cover (%)	Wave Height (ft)	Wind Speed & Direction	Precipitation	Beaufort Scale
Island 1	0743	75°F	76°F	Good	100%	.7ft	6kt NNE	Light Rain	1
Island 1	1252	78°F	76°F	Good	100%	.7ft	11kt N	None	1

Observer Log

Time	Notes: (pre-watch times, start and stop times for pile driving activities, shift changes, human activities)
0630	Caten Bus to Island 1
0653	Arrive Island 1
0705	Meet w/Vince's crew - Plan to Drill 2 casings using DTH
0740	Walk out to Pier, start watch
0930	4 Bottlenose Feeding mid channel, 1000m from Crane
1015	Dolphins Heading West
1100	Dolphins West out of view
1103	Walk Around Island
1115	Resume watch on Pier
1217	Begin Drilling 1st Casing w/ DTH
1233	Sub w/ 3 escorts Traveling E to W in channel
1248	Finish Casing 1, Stop Drilling with DTH
1315	Walk around Island
1325	Return to Pier, Resume Watch
1410	1 Bottlenose traveling E, 300m SW of Crane
1415	Bottlenose traveled out of view under bridge
1450	Start Drilling Casing #2 DTH
1518	Finish Casing 2, Start Post-Watch
1524	Sub w/ 3 escorts traveling W to E in channel
1548	Done Post Watch, Walk around Island
1625	Caten Bus
1645	Arrive at Yard

Sighting Log

Time	Species	Total Number	# Adults	# of Juveniles	Closest Distance to Pile Driving	Activity or Behaviors	Shut down? (yes/no)	Time of Shut-down	Time of Start Up	Time last seen
0930	T. Truncatus	4	4	0	N/A	Feeding	no	N/A	N/A	1100
1410	T. Truncatus	1	1	0	N/A	Traveling	No	N/A	N/A	1415

Daily Summary

Species	Total Number	Takes in Zone A	Takes in Zone B	# Shut-Downs	Comments
T. Truncatus	5	0	0	0	

Observer Names: Benjamin Fielder, Dezmond Turner

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Protected Species Sighting & Shut-Down Form

Corresponding Sighting # for the Day: 2 Shutdown # for the Day: N/A

Date (DD/MM/YYYY): 25/06/2020 Time of Initial Sighting 1410 Time Animals Left Area: 1415

Project Name: CTJV Thimble Shoals Parallel Tunnel Island No. 1

Areas Observed: South West of Island 1 Upland Pile Driving No In-Water Pile Driving No

Air Temp: 73°F Water Temp: 76°F Wave Height 1FT Beaufort Sea State 1.5

Weather Conditions: 100% cloudy, no precipitation

Percent Cloud Cover: 100% Percent Glare: 0% Visibility Issues: None

Animal Location & Distance to Pile Driving: 300m SSW of crane
Type of Pile Driving OTH - not active
Distance From Observer When Initially Observed: 500 m
Species Observed: Tursiops Truncatus
Number of Animals Sighted (include age classes): 1 Adult
Sex of Animals Observed: Unknown
Animal Behaviors Observed: Traveling
Animal Heading/Direction: East
Human Activities in Area: None

Shutdown Information

Time Begin:	NA
Time End:	NA
Total Down Time (mins):	NA

Shutdown # for the day: NA

Video or Photograph Taken?: No Yes

Brief Description of Footage or Photograph:

Notes:

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124 W. Queens Way
Hampton, VA 23669
(757)722-0113

Benjamin Fields / BF
Observer Name / Signature

Protected Species Sighting & Shut-Down Form

Corresponding Sighting # for the Day: 1 Shutdown # for the Day: N/A

Date (DD/MM/YYYY): 06/25/22 Time of Initial Sighting 0930 Time Animals Left Area: 1100

Project Name: CTJV Thimble Shoals Parallel Tunnel Island No. 1

Areas Observed: North of Island 1 Upland Pile Driving ____ In-Water Pile Driving ____

Air Temp: 75°F Water Temp: 76°F Wave Height .7 Beaufort Sea State 2

Weather Conditions: Good

Percent Cloud Cover: 100% Percent Glare: 0% Visibility Issues: None

Animal Location & Distance to Pile Driving: 1500 m NW
Type of Pile Driving N/A
Distance From Observer When Initially Observed: 1000 m
Species Observed: Bottlenose Dolphin
Number of Animals Sighted (include age classes): 4, Adults
Sex of Animals Observed: Unknown
Animal Behaviors Observed: Feeding
Animal Heading/Direction: West
Human Activities in Area: None

Shutdown Information

Time Begin:	N/A
Time End:	N/A
Total Down Time (mins):	N/A

Shutdown # for the day: N/A

Video or Photograph Taken?: No Yes

Brief Description of Footage or Photograph: ____

Notes: ____

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Desmond Turner / D.

Observer Name / Signature

Daily Observer Log Form

Contractor: CTJV	Project Name: CTJV Parallel Thimble Shoals
NOAA NMFS Permit: IHA March 2020	Location (Island Number) 1
USACE Permit	State Permits
Observer Name: Ben Fielder, Tom Caldwell	Observer Location: Pier + North End Island 1
Date: 06-20-2020	Shift Start: 0850 Shift End: 1625
Sunrise: 0547	Sunset: 2027

Weather and Visibility Information

Location	Time	Air Temp (F)	Water Temp	Visibility (Good, Fair,	Could Cover (%)	Wave Height (ft)	Wind Speed & Direction	Precipitation	Beaufort Scale
Island 1	10:10	77	76	Good	10	1.5	8Kt SE	None	2

Observer Logs

Time	Notes: (i.e., start and stop times for pile driving activities, shift changes, nearby human actiivties.)
0850	Catch Ride to island 1
0850-0905	Arrive on Island 1, Walk around Island
0910	Begin Watch, Joe on Pier Ben on North End
0945	Begin Hammering East Pile With Soft Start (Impact Hammer)
1014	Finish East Pile
1029	Begin Impact Hammer - West Pile
1040	Finish West Pile, Begin Post Watch
1110	Post watch Finished
1120	Talk to Vince - Standby for Pile Driving
1520	Informed Vince will not be Pile Driving Today
1605	Catch Bus to yard
1625	Arrive at Yard

Sighting Log

Time	Species	Total Number	Adults	Juveniles	Closest Distance to Observer	Activity or Behaviors	Shut down? (yes/no)	Time of Shut-down	Time of Start Up	Time last seen

Daily Summary

Species	Total Number	Takes in Zone A	Takes in Zone B	# Shut-Downs	Comments

Daily Marine Mammal Observer Report

Contractor: CTJV Dragados	Project Name: CTJV Parallel Thimble Shoals Tunnel
NOAA/NMFS Permit: IHA March 2020	Observer Location (Island #): 1
Date: 06/27/2020	Shift Start: 0632
Sunrise: 0547 Sunset: 2027	Shift End: 1225

Weather and Visibility Information

Location	Time	Air Temp (F)	Water Temp (F)	Visibility (Good, Fair, Poor)	Cloud Cover (%)	Wave Height (ft)	Wind Speed & Direction	Precipitation	Beaufort Scale
Island 1	0716	76	76	Good	5%	1 ft	11 kt ENE	None	3

Observer Log

Time	Notes (pre-watch times, start and stop times for pile driving activities, shift changes, human activities)
0632	Catch Ride
0646	Arrive Island 1
0656	Morning Safety Meeting, Shared Crew plans to weld and Drive 2A
0930	Walk Around Island
0943	Begin Watch
1047	Give Crew #'s Clear
1054	Soft start on E casing - Impact Hammer
1059	Begin normal Hammer Interval
1109	BE Linehaul Traveling E to W in channel
1110	Eight in Hammering E casing
1115	Setting up on West Casing
1122	USACE Traveling E to W in channel
1125	Start Hammering West Casing at Normal Interval
1136	Finish West Casing. Begin Post Watch
1206	End post watch
1210	Catch Ride to yard
1225	Arrive at Yard

Sighting Log

Time	Species	Total Number	# Adults	# of Juveniles	Closest Distance to Pile Driving	Activity or Behaviors	Shut down? (yes/no)	Time of Shut-down	Time of Start Up	Time last seen

Daily Summary

Species	Total Number	Takes in Zone A	Takes in Zone B	# Shut-Downs	Comments

Observer Names: Benjamin Fielder, Joe Caldwell

Daily Marine Mammal Observer Report

Contractor: CTJV / Dragados	Project Name: CTJV Parallel Thimble Shoals Tunnel
NOAA/NMFS Permit: IHA March 2020	Observer Location (Island #): 1
Date: 06/29/2020	Shift Start: 0631
Sunrise: 0548 Sunset: 2027	Shift End: 1900

Weather and Visibility Information

Location	Time	Air Temp (F)	Water Temp (F)	Visibility (Good, Fair, Poor)	Cloud Cover (%)	Wave Height (ft)	Wind Speed & Direction	Precipitation	Beaufort Scale
Island 1	0800	76	78	Good	5%	1 ft	8 kt SE	None	2
Island 1	1130	78	78	Good	25%	2 ft	12 kt SSE	None	2-3
Island 1	1487	79	77	Good	5%	1.5 ft	13 kt S	None	

Observer Log

Time	Notes: (pre-watch times, start and stop times for pile driving activities, shift changes, human actiivties)
0631	Eaten Bus
0650	Arrive on Island 1
0700	Morning Meetings w/Crews - Shawn's - restrike around 12, Vince Dig Casings then Pile drive
0741	Do morning walk around Island
0753	Walk out to pier
1020	Begin Watch, Dezmond Walk around Island and Watches from Both Ends
1040	Setting up on West Pile
1101	Soft start on West Pile
1106	Hammering at regular intervals
1108	Done w/ the West [redacted] Pile, Beg in Setting up on East Pile
1120	Begin Hitting at regular intervals on East Pile
1121	Finish East Pile, ship to tie in channel, Start Post Watch
1161	End Post Watch, Take walk around Island
1320	Vince's Crew Putting Pile in casing
1410	Start Soft Start on Pile 1
1413	Vince's Crew having issues getting Hanger to fire
1600	Vince's Crew still cannot get hammer to fire
1830	Will not Pile Drive today, someone is coming to Weld on Hammer in A.M.
1847	Eaten Ride to yard
1900	Arrive at yard

Sighting Log

Time	Species	Total Number	# Adults	# of Juveniles	Closest Distance to Pile Driving	Activity or Behaviors	Shut down? (yes/no)	Time of Shut-down	Time of Start Up	Time last seen

Daily Summary

Species	Total Number	Takes in Zone A	Takes in Zone B	# Shut-Downs	Comments

Observer Names: Ben Fielder, Dezmond Turner

Daily Marine Mammal Observer Report

Contractor: CTJV / Dragados	Project Name: CTJV Parallel Thimble Shoals Tunnel
NOAA/NMFS Permit: IHA March 2020	Observer Location (Island #): 1
Date: 06/29/2020	Shift Start: 0631
Sunrise: 0548 Sunset: 2027	Shift End: 1900

Weather and Visibility Information

Location	Time	Air Temp (F)	Water Temp (F)	Visibility (Good, Fair, Poor)	Cloud Cover (%)	Wave Height (ft)	Wind Speed & Direction	Precipitation	Beaufort Scale
Island 1	0800	76	78	Good	5%	1 ft	8 kt SE	None	2
Island 1	1130	78	78	Good	25%	2 ft	12 kt SSE	None	2-3
Island 1	1487	79	77	Good	5%	1.5 ft	13 kt S	None	

Observer Log

Time	Notes: (pre-watch times, start and stop times for pile driving activities, shift changes, human actiivties)
0631	Eaten Bus
0650	Arrive on Island 1
0700	Morning Meetings w/Crews - Shawn's - restrike around 12, Vince Dig Casings then Pile drive
0741	Do morning walk around Island
0753	Walk out to pier
1020	Begin Watch, Dezmond Walk around Island and Watches from Both Ends
1040	Setting up on West Pile
1101	Soft start on West Pile
1106	Hammering at regular intervals
1108	Done w/ the West [redacted] Pile, Beg in Setting up on East Pile
1120	Begin Hitting at regular intervals on East Pile
1121	Finish East Pile, ship to tie in channel, Start Post Watch
1161	End Post Watch, Take walk around Island
1320	Vince's Crew Putting Pile in casing
1410	Start Soft Start on Pile 1
1413	Vince's Crew having issues getting Hanger to fire
1600	Vince's Crew still cannot get hammer to fire
1830	Will not Pile Drive today, someone is coming to Weld on Hammer in A.M.
1847	Eaten Ride to yard
1900	Arrive at yard

Sighting Log

Time	Species	Total Number	# Adults	# of Juveniles	Closest Distance to Pile Driving	Activity or Behaviors	Shut down? (yes/no)	Time of Shut-down	Time of Start Up	Time last seen

Daily Summary

Species	Total Number	Takes in Zone A	Takes in Zone B	# Shut-Downs	Comments

Observer Names: Ben Fielder, Dezmond Turner

Daily Marine Mammal Observer Report

Contractor: CTJV Dragados	Project Name: CTJV Parallel Thimble Shoals Tunnel
NOAA/NMFS Permit: IHA March 2020	Observer Location (Island #): 2
Date: 06/30/2020	Shift Start: 0630
Sunrise: 0548 Sunset: 2027	Shift End: 1745

Weather and Visibility Information

Location	Time	Air Temp (F)	Water Temp (F)	Visibility (Good, Fair, Poor)	Cloud Cover (%)	Wave Height (ft)	Wind Speed & Direction	Precipitation	Beaufort Scale
Island 2	0736	77	77	Good	40%	1ft	8kt ESE	None	2
Island 2	1137	79	78	Good	30%	1ft	3kt ESE	None	1

Observer Log

Time	Notes: (pre-watch times, start and stop times for pile driving activities, shift changes, human actiivties)
0630	Catch Bus
0652	Arrive Island 2
0700	Morning Mustang w/ Vince
0720	Walk around Island
0730	Finish walk, head out to Pier + Start Watch. Vince's crew
	working together working seaward Marine operating S of Island 2
1011	Crescent tug Pic, BE Lindholm + 2 smaller crafts
1016	Soft start on 1st pile
1022	Hitting at normal intervals
1032	Finish 1st Pile, Universal labs taking Measurement S of Pier
1117	Soft start on 2nd Pile
1120	Hitting at normal interval
1130	Finish 2nd Pile - Watch continues
1221	Soft start on 3rd Pile
1226	Hitting at normal interval
1230	Stop Hitting - Unknown issue
1300	Channel Traffic Tanker + USNS17
1352	Restart 3rd Pile with Soft Start
1359	Casing is being driven down with the Pile, Removing
	Pile and placing in another Casing
1550	Starting again on 3rd Pile w/ soft start
1559	Hitting at Normal interval
1613	End 3rd Pile, Begin Post Watch
1642	End Post Watch, Take Final Walk around Island
1730	Catch Ride to Yard
Sighting Log 1746	Home at Yard

Time	Species	Total Number	# Adults	# of Juveniles	Closest Distance to Pile Driving	Activity or Behaviors	Shut down? (yes/no)	Time of Shut-down	Time of Start Up	Time last seen

Daily Summary

Species	Total Number	Takes in Zone A	Takes in Zone B	# Shut-Downs	Comments

Observer Names: Ben Fuller, Desmond Tunnel

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Daily Observer Log Form

Contractor: CTJV	Project Name: CTJV Parallel Thimble Shoals
NOAA/NMFS Permit: IHA March 2020	Location (Island Number) 1
USACE Permit: —	State Permits: —
Observer Name: Elizabeth Jane / Joe Caldwell	Observer Location: pier
Date: 01 - July - 2020	Shift Start 0625 Shift End: 1542
Sunrise: 0548	Sunset: 2028

Weather and Visibility Information

Location	Time	Air Temp (F)	Water Temp	Visibility (Good, Fair,	Could Cover (%)	Wave Height (ft)	Wind Speed & Direction	Precipitation	Beaufort Scale
Pier	0750	78	73	Good	50%	0.9	SW 5kts	none	1
Pier	1442	82		Good	75%	2.3	ESE 7kts	none	2

Observer Logs

Time	Notes: (i.e., start and stop times for pile driving activities, shift changes, nearby human actiivties.)
0625	Catch bys to Island 1
0650	Meet with crews - Vince using impact hammer, Shawn's crew doesnot need MMOs
0742	Crew inspecting Impact Hammer, digging out casing
0812	rearranging Cranes
0814	Island walk
0836	placing pile in casing
0905	Survey setting up on pier, start watch
0917	picking up Impact Hammer
0922	placing hammer on pile
0924	Checking in w/survey, Island walk
0932	soft start (3 dry hits)
0936	Normal pile driving interval hits
0942	USCG 207 traveling W to E through channel
0946	Stop finished pile
1004	Island walk

Sighting Log

Time	Species	Total Number	Adults	Juveniles	Closest Distance to Observer	Activity or Behaviors	Shut down? (yes/no)	Time of Shut-down	Time of Start Up	Time last seen

Daily Summary

Species	Total Number	Takes in Zone A	Takes in Zone B	# Shut-Downs	Comments

Daily Marine Mammal Observation Report

Contractor: CTJV/ Dragados	Project Name: CTJV Parallel Thimble Shoals Tunnel
NOAA/NMFS PERMIT: IHA March 2020	Observer Location (Island #) 1
Date: 01 - July - 2020	Shift Start: 0625
Sunrise: Sunset:	Shift End: 1542

OBSERVER LOG:

Time:	Notes: (pre-watch times, start and stop times for pile driving activities)
1016	End 30 min post watch
1344	placing pile in casing, resume watch
1348	Isla is walk
1408	checking in w/ survey
1419	50 ft start
1424	Begin normal hitting interval
1427	fishing boat traveling from bridge to pier, W of pile driving
1431	Stop pile driving, finished
1441	USNS Arcboat traveling W to E through channel
1451	Crew trimming pile
1500	End 30 min watch
1512	check-in w/ vince - not sure when MMOs needed again will check-in w/ sarah tonight
1529	catch bus to yard
1542	Arrive at yard

Observer(s) Names:

Daily Marine Mammal Observer Report

Contractor: CTJV / Dragados	Project Name: CTJV Parallel Thimble Shoals Tunnel
NOAA/NMFS Permit: IHA March 2020	Observer Location (Island #): 1
Date: 07/06/20	Shift Start: 0630
Sunrise: 0551 Sunset: 2026	Shift End: 1822

Weather and Visibility Information

Location	Time	Air Temp (F)	Water Temp (F)	Visibility (Good, Fair, Poor)	Cloud Cover (%)	Wave Height (ft)	Wind Speed & Direction	Precipitation	Beaufort Scale
Island 1	0739	77	79	Good	35%	1ft	7kts NNE	None	1.5
Island 1	1446	84	79	Good	10%	1.3ft	11kts NW	None	2

Observer Log

Time	Notes: (pre-watch times, start and stop times for pile driving activities, shift changes, human activties)
0630	Catch Bus
0650	Arrive Island 1
0700	Morning Meetings - Vince memo if they will Drive, Shawn not needed
0857	Take Walk around Island
0928	Walk out to Pier + Begin Watch
1034	Soft start on First Pile Begin Hitting at Normal Interval @1101
1114	Finish First Pile Begin Post Watch
1144	End Post Watch
1220	Take Walk around Island
1225	Resume Watch
1312	Soft Start on 2nd Pile then adjusting Position + Plumb
1400	2nd Soft start on 2nd Pile / Begin Normal Interval Hitting @ 1408
1421	Finish 2nd Pile, Begin Post Watch
1451	Post Watch Done
1623	Return to Pier + Start Watch
1718	Start 3rd Pile with Soft Start Normal Interval @ 1722
1723	Stop striking, Casing being Driven with Pile, Begin Post Watch
1753	End Post Watch
1809	Catch Ride to Yard
1827	Arrive at Yard

Sighting Log

Time	Species	Total Number	# Adults	# of Juveniles	Closest Distance to Pile Driving	Activity or Behaviors	Shut down? (yes/no)	Time of Shut-down	Time of Start Up	Time last seen

Daily Summary

Species	Total Number	Takes in Zone A	Takes in Zone B	# Shut-Downs	Comments

Observer Names: Ben Fielder, Joe Caldwell

Daily Marine Mammal Observer Report

Contractor: CTV Dragados	Project Name: CTV Parallel Thimble Shoals Tunnel
NOAA/NMFS Permit: IHA March 2020	Observer Location (Island #): 1
Date: 07 - July - 2020	Shift Start: 0615
Sunrise: 0551 Sunset: 2027	Shift End: 1357

Weather and Visibility Information

Location	Time	Air Temp (F)	Water Temp (F)	Visibility (Good, Fair, Poor)	Cloud Cover (%)	Wave Height (ft)	Wind Speed & Direction	Precipitation	Beaufort Scale
Pier	1115	80	78.8	Good	30%	1 Ft	ESE 5kts	none	1

Observer Log

Time	Notes: (pre-watch times, start and stop times for pile driving activities, shift changes, human activities)
0625	catch bus to Island 1
0650	Meet with crews. Vince's crew will be ready for MMOs by midday. Shacun's crew does not need MMOs today
0847	Vince's crew digging out casing
1040	Putting hammer on casing, start watch from pier, other MMO - Island walk
1049	soft start
1054	fishing boats traveling W of source, one N bound, one SE bound then idling W of Island 1, S of source
1057	fishing boat traveling S'E, W of source, idling W of Island 1, S of source
1100	continue dry hits, waiting for QC
1101	start o stop normal interval hammering
1102	resume hitting
1103	Stop hitting
1110	Crew in manlift attaching leads to casing
1115	Crew reports they are putting a shaggle(?) in
1117	2 kayaks traveling N, W of Island 1
1131	Removing leads from casing
1138	USNS 57 traveling W to E through channel
1143	resume + stop hitting
1157	resume + stop hitting
1159	resume hitting
1208	stop hitting
1212	resume hitting

Sighting Log

Time	Species	Total Number	# Adults	# of Juveniles	Closest Distance to Pile Driving	Activity or Behaviors	Shut down? (yes/no)	Time of Shut-down	Time of Start Up	Time last seen

Daily Summary

Species	Total Number	Takes in Zone A	Takes in Zone B	# Shut-Downs	Comments

Observer Names: Elizabeth Janz / Joe Caldwell

7/7/2020

Daily Marine Mammal Observer Report

Contractor: CTJV / Dragados	Project Name: CTJV Parallel Thimble Shoals Tunnel
NOAA/NMFS Permit: IHA March 2020	Observer Location (Island #):
Date:	Shift Start
Sunrise: Sunset:	Shift End:

Weather and Visibility Information

Location	Time	Air Temp (F)	Water Temp (F)	Visibility (Good, Fair, Poor)	Cloud Cover (%)	Wave Height (ft)	Wind Speed & Direction	Precipitation	Beaufort Scale

Observer Log

Time	Notes (pre-watch times, start and stop times for pile driving activities, shift changes, human activities)
12|3	stop hitting
1214	USCG ship traveling W to E through channel
1227	crew in man lift (inspecting casing/pile)
1243	check in W/ Vince, last pile end 30 min post watch
1249	Vince does not need MMOs tomorrow, neither will Shawn
1340	catch van to yard
1357	Arrive at yard

Sighting Log

Time	Species	Total Number	# Adults	# of Juveniles	Closest Distance to Pile Driving	Activity or Behaviors	Shut down? (yes/no)	Time of Shut-down	Time of Start Up	Time last seen

Daily Summary

Species	Total Number	Takes in Zone A	Takes in Zone B	# Shut-Downs	Comments

Observer Names: _____

REMSA, Inc. 142 W Queens Way Hampton, VA 23669
757-722-0113

Daily Marine Mammal Observer Report

Contractor: CTJV / Dragados	Project Name: CTJV Parallel Thimble Shoals Tunnel
NOAA/NMFS Permit: IHA March 2020	Observer Location (Island #):
Date: 13-Jul-2020	Shift Start: 0630
Sunrise: 0555 Sunset: 2024	Shift End: 1654

Weather and Visibility Information

Location	Time	Air Temp (F)	Water Temp (F)	Visibility (Good, Fair, Poor)	Cloud Cover (%)	Wave Height (ft)	Wind Speed & Direction	Precipitation	Beaufort Scale
Island 1	0836	79	80	Good	80%	1-2	10 Kts E	None	1-2
Island 1	1600	81	83	Good	40%	2-3	5 Kts NW	None	2

Observer Log

Time	Notes: (pre-watch times, start and stop times for pile driving activities, shift changes, human actiivties)
0630	Catch Bus
0645	Arrive Island 1
0700	Majors Meeting, Show crew plans to drill one casing w/DTH
1345	Walk around Island
1350	Ship Traffic - Indian Vision traveling W to E in channel
1400	Start Watch - Joe on Pier, Ben at North End
1434	Begin Drilling East Casing w/ DTH
1446	Begin Hammering on and off, still Drilling
1454	Hammering continuously
1501	Stop Drilling + Hitting, cutting Ears of Casing and will Resume - Watch continues
1539	Resume Drilling + Hitting on + off
1545	- Ship Traffic - Large Naval Vessel traveling W to E
1604	- Ship Traffic - USNS 10 traveling E to W
1605	- Hitting Continuously
1606	- Finish East Casing - Begin Post Watch
1636	- End Post Watch, take walk around Island
1642	- Catch Ride to Yard w/ Seavee
1655	- Arrive at yard

Sighting Log

Time	Species	Total Number	# Adults	# of Juveniles	Closest Distance to Pile Driving	Activity or Behaviors	Shut down? (yes/no)	Time of Shut-down	Time of Start Up	Time last seen

Daily Summary

Species	Total Number	Takes in Zone A	Takes in Zone B	# Shut-Downs	Comments

Observer Names: Ben Fielder, Joe Caldwell

Daily Marine Mammal Observer Report

Contractor: CTJV / Dragados	Project Name: CTJV Parallel Thimble Shoals Tunnel
NOAA NMFS Permit: HA March 2020	Observer Location (Island #): 1
Date: [redacted] 07/14/20	Shift Start: 0844
Sunrise: 0556 Sunset: 2023	Shift End:

Weather and Visibility Information

Location	Time	Air Temp (F)	Water Temp (F)	Visibility (Good, Fair, Poor)	Cloud Cover (%)	Wave Height (ft)	Wind Speed & Direction	Precipitation	Beaufort Scale
Island 1	0918	80	82	Good	0	.7	5K4S	None	1

Observer Log

Time	Notes: (pre-watch times, start and stop times for pile driving activities, shift changes, human activities)
0844	Catch Ride to Island 1
0857	Arrive Island 1 - Joe Walk around Island - Ben spoke w/Shawn will be drilling west casing
0904	Begin Watch - Joe on Bird, Ben North end
0921	Ship Traffic - Atlantic Sail Cargo ship E bound 1 small craft W to E
0935	Start Drilling
1010	Start Hitting on + off, Drilling continues
1032	Hammering Continuously, Drilling continues
1039	Stop Hammer/Drill - Hitting, cut off casing, Watch continues
1121	Resume Drilling
1122	Hammering continuously
1124	Finish West Casing
1154	Finish Post Watch, Take final Walk around Island
1304	Catch Ride to Yard
1322	Arrive at Yard

Sighting Log

Time	Species	Total Number	# Adults	# of Juveniles	Closest Distance to Pile Driving	Activity or Behaviors	Shut down? (yes/no)	Time of Shut-down	Time of Start Up	Time last seen

Daily Summary

Species	Total Number	Takes in Zone A	Takes in Zone B	# Shut-Downs	Comments

Observer Names: Ben Fielder, Joe Caldwell

Daily Marine Mammal Observer Report

Contractor: CTJV / Dragados	Project Name: CTJV Parallel Thimble Shoals Tunnel
NOAA/NMFS Permit: IHA March 2020	Observer Location (Island #): 1
Date: 07/15/2020	Shift Start: 1042
Sunrise: 0557 Sunset: 2023	Shift End: 1940

Weather and Visibility Information

Location	Time	Air Temp (F)	Water Temp (F)	Visibility (Good, Fair, Poor)	Cloud Cover (%)	Wave Height (ft)	Wind Speed & Direction	Precipitation	Beaufort Scale
Island 1	1150	81	82	Good	5%	.7ft	7Kt WSW	None	1
Island 1	1502	82	83	Good	5%	1ft	7Kt WSW	None	1.5

Observer Log

Time	Notes: (pre-watch times, start and stop times for pile driving activities, shift changes, human actiivties)
1042	Catch Van to Island 1
1056	Arrive Island 1, Joe Walk around Island, Ben meet w/ Vince + Josh. Vince crew Drilling 2 casing w/ DTH
1110	Walk out to pier + Begin Watch (Vince crew)
1210	USNS 51 traveling E to W in channel
1254	Start Drilling w/ DTH - First Casing
1300	Begin Hammering off and on / Tanker traveling W to E in channel
1306	Stop Hammering + Drilling, checking w/ survey and adjusting
1320	Resume Drilling
1357	Start Hammering on and off
1403	Hammering Continuously
1418	Stop Drilling + Hammering, done w/ 1st Casing Watch Continues
1436	Container Ship traveling E to W in channel
1534	Start Drilling 2nd Casing
1542	Start Hammering off and on
1550	Hammering Continuously
1606	Stop Hammer / Drilling - Letting Hydraulic fluid cool down
1634	Resume Drilling + Hammering
1641	Finish 2nd Casing, Watch Continues for channel crew, Boats North End
1742	Begin Driving East Pile w/ soft start - 1808 Hitting at Normal Interval
1817	Finish E Pile, Setting up on W pile
1830	Begin Driving West Pile
1844	Finish West Pile, Begin Post Watch
1914	End Post Watch
1926	Catch Ride to Yard - Arrive at Yard at 1940

Sighting Log

Time	Species	Total Number	# Adults	# of Juveniles	Closest Distance to Pile Driving	Activity or Behaviors	Shut down? (yes/no)	Time of Shut-down	Time of Start Up	Time last seen

Daily Summary

Species	Total Number	Takes in Zone A	Takes in Zone B	# Shut-Downs	Comments

Observer Names: Ben Fielder, Joe Caldwell

REMSA, Inc. 142 W Queeens Way Hampton, VA 23669
757-722-0113

Daily Marine Mammal Observer Report

Contractor: CTJV / Dragados	Project Name: CTJV Parallel Thimble Shoals Tunnel
NOAA/NMFS Permit: IHA March 2020	Observer Location (Island #): 1
Date: 16 - July - 2020	Shift Start: 0620
Sunrise: 0556 Sunset: 2023	Shift End: 1640

Weather and Visibility Information

Location	Time	Air Temp (F)	Water Temp (F)	Visibility (Good, Fair, Poor)	Cloud Cover (%)	Wave Height (ft)	Wind Speed & Direction	Precipitation	Beaufort Scale
Pier	0730	79	79.7	Good	10%	1 foot	E 8 kts	none	2
Pier	1300	79	80.2	Good	20%	1.5	E 13 kts	none	

Observer Log

Time	Notes: (pre-watch times, start and stop times for pile driving activities, shift changes, human actiivties)
0620	catch van for Island 1
0650	Meet with crews: Vince - start DTH first thing, Shawn - maybe in afternoon
0715	gather materials from conex & Island walk
0720	start watch from pier - a couple fishing boats off southern tip of Island 1, seaward marine working in water off Island 2
0742	crew lifting threaded casing to be placed in templat
0755	placing casing in template
0821	connecting hoses (casing approx 13' under water)
0837	Turn on air to PTH
0840	checking in w/ survey
0844	start hitting
0848	stop, check-in w/ survey
0851	start hitting & stop, moving crane, check w/ survey
0855	resume hitting
0858	stop, turning off air / issue w/ a buckle
0903	Navy escort boat sitting in channel
0908	Submarine and Navy escort boats traveling W to E through channel
0916	checked in w/ shawn's crew, getting ready w/ impact hammer, DTH checking in w/ survey
0920	placing impact hammer, DTH resumes hitting
0922	stop DTH, slidding out of location (still spinning, not hitting)
0930	soft start on E pile, DTH continue to grind a groove into rock
0935	Impact starts pile driving

Sighting Log

Time	Species	Total Number	# Adults	# of Juveniles	Closest Distance to Pile Driving	Activity or Behaviors	Shut down? (yes/no)	Time of Shut-down	Time of Start Up	Time last seen

Daily Summary

Species	Total Number	Takes in Zone A	Takes in Zone B	# Shut-Downs	Comments

Observer Names: Elizabeth Janz / Ben Fielder

Daily Marine Mammal Observation Report

Contractor: CTJV/ Dragados	Project Name: CTJV Parallel Thimble Shoals Tunnel
NOAA/NMFS PERMIT: IHA March 2020	Observer Location (Island #) 1
Date: 16 - July - 2020	Shift Start: 0620
Sunrise: 0556 Sunset: 2023	Shift End: 1640

OBSERVER LOG:

Time:	Notes: (pre-watch times, start and stop times for pile driving activities)
0736	Stop Impact hammer, DTH check-in w/survey
0734	mob impact hammer to w/ pile
0740	USNS 42 traveling E to W through channel
0946	soft-start on w/ pile w/ Impact hammer, DTH still grinding
0948	Normal hitting (Impact)
0949	Impact hammer, SNBS hitting (finished), DTH still grinding
0954	Cargo ship traveling E to W through channel
0956	3 Navy Escort boats traveling E to W through channel
1015	Cargo ship traveling E to W through channel
1022	USNS 67 traveling E to W through channel
1041	checking in w/survey
1045	start hitting (DTH)
1047	stop, adjusting casing
1055	resume hitting
1103	stop DTH
1116	working w/survey to get casing plumb
1133	resume drilling (DTH)
1119	Issue with survey's radio
1154	Issue w/ radio resolved, continue giving directions.
1225	DTH still grinding
1345	Cargo ship traveling W to E through channel
1408	stop so crane operator can have a break
1421	turn on air, check in w/ survey
1422	resume drilling
1435	Cargo ship traveling W to E through channel
1505	checking in w/ survey, try drilling to see how far out it goes
1508	9" out of location at bottom
1511	start hitting
1523	stop hitting, going to remove drill, air hose stuck on gate
1539	drill stem removed from casing, moving to deck
1553	End post watch
~1600	check in w/ crews, first thing in the morning tomorrow
1618	catch bus to yard
1640	Arrive at yard

Observer(s) Names:

Daily Marine Mammal Observer Report

Contractor: CTJV / Dragados	Project Name: CTJV Parallel Thimble Shoals Tunnel
NOAA/NMFS Permit: IHA March 2020	Observer Location (Island #): 1
Date: 17 - July - 2020	Shift Start: 0630
Sunrise: 0557 Sunset: 2023	Shift End: 1640

Weather and Visibility Information

Location	Time	Air Temp (F)	Water Temp (F)	Visibility (Good, Fair, Poor)	Cloud Cover (%)	Wave Height (ft)	Wind Speed & Direction kn's	Precipitation	Beaufort Scale
Pier	0840	78	79.3	Good	50%	1.4	SSW 5kts	none	2
Pier	1210	83	79.9	Good	40%	1.2	SE 9	none	2
Pier	1500	85	80.8	Good	25%	2.5	SSE 10	rain	

Observer Log

Time	Notes: (pre-watch times, start and stop times for pile driving activities, shift changes, human actiivties)
0630	Catch bus to yard
0650	Meet with crews: Vince - ready by 8, Shawn - ready ASAP
0715	Island walk, orient new MMO
0740	4 MMOs to stations (Pier & N side of island) start watch
	Seacord Marine working in water S of Island 2
0754	placing impact hammer on E pile (N side of Island)
0809	Check in w/ Shawn's crew, ask them to wait until 0811 to start for our 30 min pre-watch
0810	gave go ahead for crew to start
0811	Fishing boat traveling E to W then N, N of source
0815	soft start
0819	Normal hammering on E pile
0821	Fishing boat traveling N, S of pier; yacht traveling W to E through channel
0822	sail boat traveling W to E through channel
0832	stop hitting E pile, moving to W pile
0836	Bay Princess Ferry travelling E to W through channel, stopping just W of channel
0839	Low lands Rise cargo ship traveling W to E through channel
0844	Start hitting W pile
0848	Fishing boat from 0821 was hanging out by pier, departed S
0850	Fishing boat traveling S, E of NE Jetty
0852	APL Southampton cargo ship traveling W to E through channel
0855	Bay Princess traveling E from channel
0856	Stop hitting, finished impact N of Island 1

Sighting Log

Time	Species	Total Number	# Adults	# of Juveniles	Closest Distance to Pile Driving	Activity or Behaviors	Shut down? (yes/no)	Time of Shut-down	Time of Start Up	Time last seen

Daily Summary

Species	Total Number	Takes in Zone A	Takes in Zone B	# Shut-Downs	Comments

Observer Names: Elizabeth Janz / Cassandra Dahl

Daily Marine Mammal Observer Report

Contractor: CTJV / Dragados	Project Name: CTJV Parallel Thimble Shoals Tunnel
NOAA/NMFS Permit: IHA March 2020	Observer Location (Island #):
Date: 7/17/2020	Shift Start:
Sunrise: Sunset:	Shift End:

Weather and Visibility Information

Location	Time	Air Temp (F)	Water Temp (F)	Visibility (Good, Fair, Poor)	Cloud Cover (%)	Wave Height (ft)	Wind Speed & Direction	Precipitation	Beaufort Scale

Observer Log

Time	Notes: (pre-watch times, start and stop times for pile driving activities, shift changes, human actiivties)
0906	Navy Escort boat traveling W to E, sitting just E of channel
0908	Submarine and Navy Escort boat traveling W to E through channel
0912	Midland Crew placing casing in template; tug boat traveling W to E through channel
0931	Crew working to thread pile/casing
0936	cargo ship traveling E to W through channel and another traveling W to E through channel
1024	placing threaded casing in template (approx 20' below water)
1051	turn off air/start drill
1052	start hitting
1102	stop hitting, open gates, finished casing
1113	Universal Laboratories taking data w/ Midland Source
1146	placing casing in template
1159	threading casing
1212	check-in w/ Survey
1227	Cargo ship traveling E to W through channel
1255	start drilling
1257	start hitting
1306	stop hitting/finish casing
1340	USNS Sa traveling E to W through channel
1347	Offshore supply ship Polaris traveling W to E through channel
1355	picking up Sta casing
1411	working to thread casing
1436	start drilling/checking location

Sighting Log

Time	Species	Total Number	# Adults	# of Juveniles	Closest Distance to Pile Driving	Activity or Behaviors	Shut down? (yes/no)	Time of Shut-down	Time of Start Up	Time last seen

Daily Summary

Species	Total Number	Takes in Zone A	Takes in Zone B	# Shut-Downs	Comments

Observer Names: _____

Daily Marine Mammal Observer Report

Contractor: CTJV / Dragados	Project Name: CTJV Parallel Thimble Shoals Tunnel
NOAA/NMFS Permit: IHA March 2020	Observer Location (Island #):
Date: 7/17/2020	Shift Start:
Sunrise: Sunset:	Shift End:

Weather and Visibility Information

Location	Time	Air Temp (F)	Water Temp (F)	Visibility (Good, Fair, Poor)	Cloud Cover (%)	Wave Height (ft)	Wind Speed & Direction	Precipitation	Beaufort Scale

Observer Log

Time	Notes: (pre-watch times, start and stop times for pile driving activities, shift changes, human actiivties)
1437	Cargo ship traveling E to W through channel
1448	turn on air, check w/ survey
1451	start to stop hitting
1454	USNS 5 traveling W to E through channel
1459	start hitting
1500	stop hitting
1502	start hitting
1508	stop hitting
1536	Cargo ship traveling E to W through channel, fishing boat traveling S from pier, W of Buoy 2
1542	start hitting
1546	USNS 41 traveling W to E through channel
1557	stop hitting, finished pile
1607	drill stem removed from casing
1617	End watch to catch van to yard
1640	Arrive at yard

Sighting Log

Time	Species	Total Number	# Adults	# of Juveniles	Closest Distance to Pile Driving	Activity or Behaviors	Shut down? (yes/no)	Time of Shut-down	Time of Start Up	Time last seen

Daily Summary

Species	Total Number	Takes in Zone A	Takes in Zone B	# Shut-Downs	Comments

Observer Names: _____

Daily Marine Mammal Observer Report

Contractor: CTJV / Dragados	Project Name: CTJV Parallel Thimble Shoals Tunnel
NOAA/NMFS Permit: IHA March 2020	Observer Location (Island #): 1
Date: 20 - July - 2020	Shift Start: 0625
Sunrise: 0559 Sunset: 2021	Shift End: 1540

Weather and Visibility Information

Location	Time	Air Temp (F)	Water Temp (F)	Visibility (Good, Fair, Poor)	Cloud Cover (%)	Wave Height (ft)	Wind Speed & Direction	Precipitation	Beaufort Scale
Pier	0750	83	80.4	Good	60%	2	W 14 kts	none	3
Pier	1140	86	79.9	Good	25%	2.9	NW 9kts	none	1

Observer Log

Time	Notes: (pre-watch times, start and stop times for pile driving activities, shift changes, human actiivties)
0625	catch bus to Island 1
0650	Meet with crews; Shawn - restrike; Vince move air compressors then drill 2, Corey Barnes meets w/ crew to discuss hazards
0730	collect materials and set up on pier (other MMO - Island
0740	walk, set up on N side of I sland for restrike
0802	start watch
0809	tugboat pushing barge E to W through channel
0817	Universal Laboratories speed boat traveling around N of Island E to W, stop W of Mid Island to take data
0821	Commence soft start (restrike on E pile, NW jetty)
0822	Begin driving at normal rate
0826	stop hitting E pile
0832	moving Impact to W pile
0833	start pile driving at normal rate on W pile
0903	stop pile driving on W pile (Shawn's crew does not need MMOs for the rest of the day)
1030	End 30 min post watch, mid island crew still moving air compressors, Island walk
1137	Air compressors moved, moving other machinery / hoses for DTH, CBBT
1228	Survey boat taking data W of Island 1
1320	Crew still moving machinery
1342	Crew lifted casing, resume watch
1436	USNS 11 traveling W to E through channel
	Crew placing 2nd casing, fishing boat 130 m (W) of source
	Crew moving frag tank

Sighting Log

Time	Species	Total Number	# Adults	# of Juveniles	Closest Distance to Pile Driving	Activity or Behaviors	Shut down? (yes/no)	Time of Shut-down	Time of Start Up	Time last seen
1234	Tursiops	4	4	0	752 m	swimming	NO	N/A	N/A	1249

Daily Summary

Species	Total Number	Takes in Zone A	Takes in Zone B	# Shut-Downs	Comments

Observer Names: Elizabeth Janz & Ben Fielder

7/20/2020

Daily Marine Mammal Observer Report

Contractor: CTJV / Dragados	Project Name: CTJV Parallel Thimble Shoals Tunnel
NOAA/NMFS Permit: IHA March 2020	Observer Location (Island #):
Date:	Shift Start:
Sunrise: Sunset:	Shift End:

Weather and Visibility Information

Location	Time	Air Temp (F)	Water Temp (F)	Visibility (Good, Fair, Poor)	Cloud Cover (%)	Wave Height (ft)	Wind Speed & Direction	Precipitation	Beaufort Scale

Observer Log

Time	Notes: (pre-watch times, start and stop times for pile driving activities, shift changes, human actiivties)
1448	crew threading casing
1456	lifting threaded casing from pocket
1501	Vinke radioed to say they won't drill (DTH) today, First thing tomorrow
1520	catch ride to yard
1540	Arrive at yard

Sighting Log

Time	Species	Total Number	# Adults	# of Juveniles	Closest Distance to Pile Driving	Activity or Behaviors	Shut down? (yes/no)	Time of Shut-down	Time of Start Up	Time last seen

Daily Summary

Species	Total Number	Takes in Zone A	Takes in Zone B	# Shut-Downs	Comments

Observer Names: Elizabeth Janz & Ben Fielder

Daily Marine Mammal Observer Report

Contractor: CTJV / Dragados	Project Name: CTJV Parallel Thimble Shoals Tunnel
NOAA/NMFS Permit: IHA March 2020	Observer Location (Island #): 1
Date: 2 1 - July - 2020	Shift Start: 0630
Sunrise: 0600 Sunset: 2019	Shift End: 1205

Weather and Visibility Information

Location	Time	Air Temp (F)	Water Temp (F)	Visibility (Good, Fair, Poor)	Cloud Cover (%)	Wave Height (ft)	Wind Speed & Direction	Precipitation	Beaufort Scale
Pier	0750	82	81.5	Good	5%	3	W 7kts	none	3

Observer Log

Time	Notes: (pre-watch times, start and stop times for pile driving activities, shift changes, human actiivties)
0630	catch van to yard
0650	Meet w/ crew - 2 casings then House keeping
0715	Orient new MMO + Island walk
0740	start watch from pier
0758	Crew working w/ survey to place casing
0820	Crew connecting hoses to DTH
0827	Turning on air to hose / DTH
0831	start DTH drilling, hitting starts / stops
0832	resume hitting, survey reports casing is slipping out of location, stop hitting to readjust
0834	start hitting, fishing boat traveling W, S of Island 1 then turning N while drifting E
0835	stop hitting / resume hitting
0838	resume hitting w/ location updates from survey
0842	stop hitting to readjust, resume hitting
0907	stop hitting, removing DTH from casing
0917	try to flush discharge hose to make it, 2 fishing boats traveling N from S of Island 1
0921	1 fishing boat idling S of source, W of Island 1, 1 fishing boat continuing N, W of pier
0924	Drill removed, fishing boat S of source continued N, under pier
0929	Placing DTH in and casing
0937	lifting threaded casing
0941	check-in w/ survey, their battery died, need to set up again
0955	Survey checking-in w/ crew

Sighting Log

Time	Species	Total Number	# Adults	# of Juveniles	Closest Distance to Pile Driving	Activity or Behaviors	Shut down? (yes/no)	Time of Shut-down	Time of Start Up	Time last seen

Daily Summary

Species	Total Number	Takes in Zone A	Takes in Zone B	# Shut-Downs	Comments
T. truncatus	6	0	0	0	closest distance 286 m Zone B 215 m

Observer Names: Elizabeth Jantz / Sabrina Dahl

7/21/2020

Daily Marine Mammal Observer Report

Contractor: CTJV / Dragados	Project Name: CTJV Parallel Thimble Shoals Tunnel
NOAA/NMFS Permit: IHA March 2020	Observer Location (Island #):
Date:	Shift Start:
Sunrise: Sunset:	Shift End:

Weather and Visibility Information

Location	Time	Air Temp (F)	Water Temp (F)	Visibility (Good, Fair, Poor)	Cloud Cover (%)	Wave Height (ft)	Wind Speed & Direction	Precipitation	Beaufort Scale

Observer Log

Time	Notes: (pre-watch times, start and stop times for pile driving activities, shift changes, human actiivties)
1019	Turn on air to DTH
1025	check-in w/survey
1026	start hitting (DTH)
1030	free divers between jetties on N side of Island 1
1035	stop so survey can check casing location
1041	readjusting casing
1050	begin intermittent hitting (approx 18' of water)
1101	Finished 2nd casing, vibro radioed, done for day (MMOs)
1139	End 30 min post watch
1145	catch van to yard
1205	Arrive at yard

Sighting Log

Time	Species	Total Number	# Adults	# of Juveniles	Closest Distance to Pile Driving	Activity or Behaviors	Shut down? (yes/no)	Time of Shut-down	Time of Start Up	Time last seen
1047	T. truncatus	6	6	0	283 m	traveling	no	N/A	N/A	1105

Daily Summary

Species	Total Number	Takes in Zone A	Takes in Zone B	# Shut-Downs	Comments

Observer Names: _____

Protected Species Sighting & Shut-Down Form

Corresponding Sighting # for the Day: 01 Shutdown # for the Day: 00

Date (DD/MM/YYYY): 21/07/2020 Time of Initial Sighting 1047 Time Animals Left Area: 1105

Project Name: CTJV Thimble Shoals Parallel Tunnel Island No. 1

Areas Observed: In channel / W of channel Upland Pile Driving NO In-Water Pile Driving Yes

Air Temp: 84 Water Temp: 79.3 Wave Height 2.6 Beaufort Sea State 2

Weather Conditions: Sunny, slight breeze

Percent Cloud Cover: 10 Percent Glare: none Visibility Issues: none

Animal Location & Distance to Pile Driving: channel, first observed W of channel
Type of Pile Driving DTH
Distance From Observer When Initially Observed: 500m
Species Observed: Tursiops truncatus
Number of Animals Sighted (include age classes): 6 Adults
Sex of Animals Observed: N/A
Animal Behaviors Observed: Traveling, foraging, traveling
Animal Heading/Direction: W
Human Activities in Area: fishing boat traveling N through channel, Bay Princess boat sitting in channel

Shutdown Information

Time Begin:	
Time End:	
Total Down Time (mins):	

Shutdown # for the day: 00

Video or Photograph Taken?: (No) Yes

Brief Description of Footage or Photograph:

Notes: Originally observed 3 dolphins traveling W, 3 more dolphins later traveling W, circled and returned East

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Elizabeth Janz / EJ
Observer Name / Signature

Daily Marine Mammal Observer Report

Contractor: CTJV / Dragados	Project Name: CTJV Parallel Thimble Shoals Tunnel
NOAA/NMFS Permit: IHA March 2020	Observer Location (Island #): 1
Date: 22 - July - 2020	Shift Start: 1140
Sunrise: 0601 Sunset: 2020	Shift End: 1650

Weather and Visibility Information

Location	Time	Air Temp (F)	Water Temp (F)	Visibility (Good, Fair, Poor)	Cloud Cover (%)	Wave Height (ft)	Wind Speed & Direction	Precipitation	Beaufort Scale
Pier	1215	85	-	Good	10%	2.8	SW 5kts	none	2
Pier	1505	87	82.6	Good	75%	2	SE 4 kts	none	1

Observer Log

Time	Notes: (pre-watch times, start and stop times for pile driving activities, shift changes, human actiivties)
1140	catch van to Island 1
1200	Arrive at Island 1 - Immo Island walk, Immo check-in
	W/ vinci - almost done digging out casings, plan to drive
	4 piles today
1210	set up on pier
1240	crew setting centralizer on casing and using crane to assist
	East coast
1308	Bringing 2nd centralizer to casing 5
1317	placing 3rd centralizer to casing 3
1321	placing 4th centralizer
1336	crew lifting pile
1348	requested crew delay start
1405	soft start
1409	start + stop Impact driving
1410	1 hit
1411	1 hit
1417	normal hitting interval
1428	stop hitting, finish pile, bringing over 2nd pile
1442	placing impact on pile
1447	start driving 2nd pile
1449	stop driving
1451	start + stop driving
1453	resume driving
1459	stop driving
1502	placing pile #3 in casing

Sighting Log

Time	Species	Total Number	# Adults	# of Juveniles	Closest Distance to Pile Driving	Activity or Behaviors	Shut down? (yes/no)	Time of Shut-down	Time of Start Up	Time last seen
1325	T. trunc.	3	3	0	40 m	traveling	no	N/A	N/A	1331
1345	"	12	9	3	900 m	Foraging / driving	no	N/A	N/A	1351

Daily Summary

Species	Total Number	Takes in Zone A	Takes in Zone B	# Shut-Downs	Comments
T. truncatus	12	0	12	0	

Observer Names: Elizabeth Janz / Ben Fielder

7/22/2020

Daily Marine Mammal Observer Report

Contractor: CTJV / Dragados	Project Name: CTJV Parallel Thimble Shoals Tunnel
NOAA/NMFS Permit: IHA March 2020	Observer Location (Island #):
Date:	Shift Start:
Sunrise: Sunset:	Shift End:

Weather and Visibility Information

Location	Time	Air Temp (F)	Water Temp (F)	Visibility (Good, Fair, Poor)	Cloud Cover (%)	Wave Height (ft)	Wind Speed & Direction	Precipitation	Beaufort Scale

Observer Log

Time	Notes: (pre-watch times, start and stop times for pile driving activities, shift changes, human actiivties)
1516	crew going out on man lift to repaint numbers on pile in casing
1524	start hitting 3rd pile
1529	stop
1530	start + stop
1531	resume
1537	stop, finished 3rd pile
1540	placing 4th pile
1551	start hitting 4th pile
1605	stop hitting (finished for day
1615	end watch to catch bus, Vince said likely no MMO's
	until Friday
1620	catch bus to yard
1650	Arrive at yard

Sighting Log

Time	Species	Total Number	# Adults	# of Juveniles	Closest Distance to Pile Driving	Activity or Behaviors	Shut down? (yes/no)	Time of Shut-down	Time of Start Up	Time last seen

Daily Summary

Species	Total Number	Takes in Zone A	Takes in Zone B	# Shut-Downs	Comments

Observer Names: _____

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Protected Species Sighting & Shut-Down Form

Corresponding Sighting # for the Day: 01 Shutdown # for the Day: 00

Date (DD/MM/YYYY): 22/07/2020 Time of Initial Sighting 1325 Time Animals Left Area: 1351

Project Name: CTJV Thimble Shoals Parallel Tunnel Island No. 1

Areas Observed: W. of Bridge Upland Pile Driving NO In-Water Pile Driving Not yet

Air Temp: 87° Water Temp: — Wave Height 2.1 Beaufort Sea State 2

Weather Conditions: Sunny, slight breeze

Percent Cloud Cover: 20 Percent Glare: none Visibility Issues: none

Animal Location & Distance to Pile Driving: W. of Bridge, S of Island 1, 800m from source.
Type of Pile Driving Impact hammer
Distance From Observer When Initially Observed: 900m
Species Observed: Tursiops truncatus
Number of Animals Sighted (include age classes): 12 (9 adults, 3 juvenile)
Sex of Animals Observed: N/A
Animal Behaviors Observed: Traveling + foraging
Animal Heading Direction: Multiple directions
Human Activities in Area: none directly, had fishing boats in area earlier and after

Shutdown Information

Time Begin:	
Time End:	
Total Down Time (mins):	

Shutdown # for the day: 00

Video or Photograph Taken?: (No) Yes

Brief Description of Footage or Photograph:

Notes: First observed single dolphins heading N, W, E from 1325 to 1331, 800 to 1000 m from pier, observed 12 dolphins diving at that distance at 1349. Last sighting of 3 dolphins at that distance heading East at 1351

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Hampton, VA 23669
(757)722-0113

REMSA MESO

Elizabeth Janz / EJ
Observer Name / Signature

Daily Marine Mammal Observer Report

Contractor: CTJV Dragados	Project Name: CTJV Parallel Thimble Shoals Tunnel
NOAA/NMFS Permit: IHA March 2020	Observer Location (Island #): 1
Date: 07/24/2020	Shift Start: 0940
Sunrise: 0603 Sunset: 2017	Shift End: 1450

Weather and Visibility Information

Location	Time	Air Temp (F)	Water Temp (F)	Visibility (Good, Fair, Poor)	Cloud Cover (%)	Wave Height (ft)	Wind Speed & Direction	Precipitation	Beaufort Scale
Island 1	1200	81	82	Good	90%	2ft	12Kt W	None	2.5

Observer Log

Time	Notes: (pre-watch times, start and stop times for pile driving activities, shift changes, human activities)
0940	Catch Ride
0955	Arrive at Island 1 - Vince's crew Driving Piles w/Impact Hammer
1140	Take walk around Island
1145	Walk out to Pier + Begin Watch
1211	Sub with 3 escorts traveling E to W in channel
1218	Start first Pile with soft start
1230	Begin Hitting at Normal Interval
1244	Finish 1st Pile - Watch Continues
1335	Start on 2nd Pile with soft start
1340	Start Hitting at Normal Interval
1400	Finish 2nd Pile, Begin Post Watch
1428	Finish Post watch to catch Bus
1450	Arrive at Yard

Sighting Log

Time	Species	Total Number	# Adults	# of Juveniles	Closest Distance to Pile Driving	Activity or Behaviors	Shut down? (yes/no)	Time of Shut-down	Time of Start Up	Time last seen

Daily Summary

Species	Total Number	Takes in Zone A	Takes in Zone B	# Shut-Downs	Comments

Observer Names: Ben Fielder, Cassandra Dahl

Daily Marine Mammal Observer Report

Contractor: CTV - Dragados	Project Name: CTV Parallel Thimble Shoals Tunnel
NMFS Permit: LOA March 2020	Observer Location (Island #): Island 2
Date: 07/27/2020	Shift Start: 1143
Sunrise: 0606 Sunset: 2015	Shift End: 1730

Weather and Visibility Information

Location	Time	Air Temp (F)	Water Temp (F)	Visibility (Good, Fair, Poor)	Cloud Cover (%)	Wave Height (ft)	Wind Speed & Direction	Precipitation	Beaufort Scale
Island 2	1309	88	83	Good	10%	1.0ft	6kt W	None	1

Observer Log

Time	Notes (pre-watch times, start and stop times for pile driving activities, shift changes, human activities)
1143	Catch Ride
1157	Arrive at Island 2 - Vlad's crew Plans to Drive 2 Pile w/ Impact Hamm
1445	Take Walk around Island
1450	Start Watch on Pier
1543	Start 1st pile w/ soft start
1547	Begin Hitting at Normal Interval
1550	USDS 4 Traveling W to E in Channel
1601	Finish First Pile - Watch continues
1630	Begin Hitting 2nd Pile at Normal Interval
1647	Finish 2nd Pile, Lightning in the area, Leave Pier
1713	Catch Ride
1730	Arrive at yard

Sighting Log

Time	Species	Total Number	# Adults	# of Juveniles	Closest Distance to Pile Driving	Activity or Behaviors	Shut down? (yes/no)	Time of Shut-down	Time of Start Up	Time last seen

Daily Summary

Species	Total Number	Takes in Zone A	Takes in Zone B	# Shut-Downs	Comments

Observer Names: Ben Fielder, Cassandra Dahl

Daily Marine Mammal Observer Report

Contractor: CTJV / Dragados	Project Name: CTJV Parallel Thimble Shoals Tunnel
NOAA/NMFS Permit: IHA March 2020	Observer Location (Island #): 1
Date: 28-July-2020	Shift Start: 1130
Sunrise: 0606 Sunset: 2014	Shift End: 1338

Weather and Visibility Information

Location	Time	Air Temp (F)	Water Temp (F)	Visibility (Good. Fair, Poor)	Cloud Cover (%)	Wave Height (ft)	Wind Speed & Direction	Precipitation	Beaufort Scale
Pier	1245	86.9	78.6	Good	5%	2.6	WNW 6 kts	none	2

Observer Log

Time	Notes: (pre-watch times, start and stop times for pile driving activities, shift changes, human actiivties)
1130	catch van to Island 1
1200	Arrive @ Island 1 - check in w/ crews - vince does not need us
	Shawn's crew called for us. May not need us, check-in later
1230	Island walk
1322	Shawn called to say they will not get to it today, first thing tomorrow
1325	catch ride to yard
1338	Arrive at yard

Sighting Log

Time	Species	Total Number	# Adults	# of Juveniles	Closest Distance to Pile Driving	Activity or Behaviors	Shut down? (yes/no)	Time of Shut-down	Time of Start Up	Time last seen

Daily Summary

Species	Total Number	Takes in Zone A	Takes in Zone B	# Shut-Downs	Comments

Observer Names: Elizabeth Jantz / Cassandra Dahl

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Daily Marine Mammal Observer Report

Contractor: CTJV / Dragados	Project Name: CTJV Parallel Thimble Shoals Tunnel
NOAA NMFS Permit: IHA March 2020	Observer Location (Island #): 1
Date: 29 - July - 2020	Shift Start: 0840
Sunrise: 0607 Sunset: 2015	Shift End: 1544

Weather and Visibility Information

Location	Time	Air Temp (F)	Water Temp (F)	Visibility (Good, Fair, Poor)	Cloud Cover (%)	Wave Height (ft)	Wind Speed & Direction	Precipitation	Beaufort Scale
Pier	1030	87	–	Good	35%	2.3	NNE 2	none	1

Observer Log

Time	Notes: (pre-watch times, start and stop times for pile driving activities, shift changes, human activities)
0840	catch van to Island 1
0900	check-in w/ crews - vince doesn't need MMO's today. Shawn's crew has issue w/ crane, may need MMOs later, stand by for now)
1030	Island walk
1200	Island walk - crew reports mechanics are currently looking at the crane
1306	Check-in w/ crew, crane needs to be fixed, no MMO's today
1325	catch van to yard
1344	Arrive at yard

Sighting Log

Time	Species	Total Number	# Adults	# of Juveniles	Closest Distance to Pile Driving	Activity or Behaviors	Shut down? (yes/no)	Time of Shut-down	Time of Start Up	Time last seen

Daily Summary

Species	Total Number	Takes in Zone A	Takes in Zone B	# Shut-Downs	Comments

Observer Names: Elizabeth Jantz / Cassandra Dahl

Daily Marine Mammal Observer Report

Contractor: CTJV / Dragados	Project Name: CTJV Parallel Thimble Shoals Tunnel
NOAA/NMFS Permit: IHA March 2020	Observer Location (Island #): 1
Date: 6 - Aug - 2020	Shift Start: 1140
Sunrise: 0614 Sunset: 2006	Shift End: 1450

Weather and Visibility Information

Location	Time	Air Temp (F)	Water Temp (F)	Visibility (Good, Fair, Poor)	Cloud Cover (%)	Wave Height (ft)	Wind Speed & Direction	Precipitation	Beaufort Scale
Pier	1240	80.8	75.4	Good	20%	2.4	E 6kts	none	2

Observer Log

Time	Notes: (pre-watch times, start and stop times for pile driving activities, shift changes, human actiivties)
1140	Catch van to Island 1
1200	Meet w/crews - Vince setting up DTH, may need us later this afternoon; Shaun's crew still fixing crane that may have been struck by lightning
1350	crews continuing to attach DTH to crane
1358	Crew reports not on work clr to thunder/lightning coming closer (5 miles out)
1421	Clock in w/ vince, come back first thing tomorrow
1430	catch bus to yard
1450	Arrive at yard

Sighting Log

Time	Species	Total Number	# Adults	# of Juveniles	Closest Distance to Pile Driving	Activity or Behaviors	Shut down? (yes/no)	Time of Shut-down	Time of Start Up	Time last seen

Daily Summary

Species	Total Number	Takes in Zone A	Takes in Zone B	# Shut-Downs	Comments

Observer Names: Elizabeth Janz / Ben Fielder

Daily Marine Mammal Observer Report

Contractor: CTJV / Dragados	Project Name: CTJV Parallel Thimble Shoals Tunnel
NOAA/NMFS Permit: IHA March 2020	Observer Location (Island #): 1
Date: 7 Aug 2025	Shift Start: 0615
Sunrise: 0614 Sunset: 2031	Shift End: ~~1630~~ 1740

Weather and Visibility Information

Location	Time	Air Temp (F)	Water Temp (F)	Visibility (Good, Fair, Poor)	Cloud Cover (%)	Wave Height (ft)	Wind Speed & Direction	Precipitation	Beaufort Scale
Pier	0720	77	75.4	Good	60%	2.4	SW 3kts	None	1
Pier	1210	78.9	77.9	Good	80%	2.3	ENE 2.9	None	1

Observer Log

Time	Notes: (pre-watch times, start and stop times for pile driving activities, shift changes, human actiivties)
0615	Catch bus to Island 1
0650	Meet with crews - Vince's crew should be ready w/ DTH by 9am, Shawn's crew does not need MMOs today
0837	Island walk
0850	Met Shawn on walk, says may need MMOs tomorrow, still fixing crane but will let Sarah know for sure by the end of the day
0855	Vince's crew threading casing, crane boom stopped
0917	Crew setting up hoses to back of crane
0929	resume threading casing
1006	working to separate the hammer from the whip line
1046	Survey equipment won't show E/W only N/S standby for trouble shooting
1055	Survey able to load E/W now, Universal Laboratories taking data
	W of source
1132	Turned on Air to DTH
1134	Drill stem starts turning
1200	Start + stop hitting
1208	Stop, crane issue
1219	Start up Air / DTH
1222	Crane operator (Lee) claims issue with air valve
1225	Call for shut down, pouring concrete in the hole
1235	Crew reports frac tank leaking into Corey's worksite, East Coast working where they would like to move the tank, waiting on mechanic to come out, shutdown for now

Sighting Log

Time	Species	Total Number	# Adults	# of Juveniles	Closest Distance to Pile Driving	Activity or Behaviors	Shut down? (yes/no)	Time of Shut-down	Time of Start Up	Time last seen

Daily Summary

Species	Total Number	Takes in Zone A	Takes in Zone B	# Shut-Downs	Comments

Observer Names: Elizabeth Janz / Ben Fielder

Daily Marine Mammal Observer Report

Contractor: CTJV / Dragados	Project Name: CTJV Parallel Thimble Shoals Tunnel
NOAA NMFS Permit: IHA March 2020	Observer Location (Island #):
Date: 7 Aug 2020	Shift Start:
Sunrise: Sunset:	Shift End:

Weather and Visibility Information

Location	Time	Air Temp (F)	Water Temp (F)	Visibility (Good, Fair, Poor)	Cloud Cover (%)	Wave Height (ft)	Wind Speed & Direction	Precipitation	Beaufort Scale

Observer Log

Time	Notes: (pre-watch times, start and stop times for pile driving activities, shift changes, human actiivties)
1255	End 30 min post watch
1332	frag tank moved, crew going to try one more time! resume official watch)
1335	Air on again, gagare for air reportedly working
1340	valve still seems to be off / not working properly but might still be workable
1356	crew planning to get this casing in then try to get someone out to look at valve
1357	valve less responsive now
1404	DTH stopped
1462	crew borrowing crane parts from another crane
1501	Island walk
1534	Checking on valve / air flow to DTH
1537	resume pile driving
1602	stop, check-in w/ Survey
1605	resume pile driving
1647	Vince called, stop working due to incoming thunderstorm
1650	retrieve radio to vince, will need MMOs first thing tomorrow want to van to wait for crew
1740	Arrive at yard

Sighting Log

Time	Species	Total Number	# Adults	# of Juveniles	Closest Distance to Pile Driving	Activity or Behaviors	Shut down? (yes/no)	Time of Shut-down	Time of Start Up	Time last seen

Daily Summary

Species	Total Number	Takes in Zone A	Takes in Zone B	# Shut-Downs	Comments

Observer Names: _____

Daily Marine Mammal Observer Report

Contractor: CTJV Dragados	Project Name: CTJV Parallel Thimble Shoals Tunnel
NOAA NMFS Permit: IHA March 2020	Observer Location (Island #): Island 2
Date: 08/08/2020	Shift Start: 0630
Sunrise: 0615 Sunset: 2003	Shift End: 1430

Weather and Visibility Information

Location	Time	Air Temp (F)	Water Temp (F)	Visibility (Good, Fair, Poor)	Cloud Cover (%)	Wave Height (ft)	Wind Speed & Direction	Precipitation	Beaufort Scale
Island 2	0743	78	83	Good	75	.7	5 kt ESE	None	1

Observer Log

Time	Notes (pre-watch times, start and stop times for pile driving activities, shift changes, human actiivties)
0630	Catch Ride
0648	Arrive at Island 2
0705	Take Walk around Island
0710	Spotted 6 Bottle nose 200 m off N end of Island 2 Traveling W
0715	Walk out to pier + Begin Watch
0819	Vinco's Crew Begins Drilling 1st casing w/DTH
0835	Pause Drilling - Mechanical Issue
0901	Resume Drilling
0925	0925 Dolphins @ 910 Now Traveling East, 800 m from DTH
0930	Dolphins Last Seen
1010	Finish 1st Casing - Watch continues
1105	Sub w/3 escorts heading East in channel
1238	Vinco's crew start on 2nd Pile
1255	Informed Shawn's Crew will not Drive today
1343	Vinco Crew Stop Drilling, Casing is too short, will Remove and use longer one Monday - Start Post Watch.
1355	Ben - walk around Island, Elizabeth continues Post Watch
1413	End Post Watch
1417	Catch Bus
1430	Arrive at Yard

Sighting Log

Time	Species	Total Number	# Adults	# of Juveniles	Closest Distance to Pile Driving	Activity or Behaviors	Shut down? (yes/no)	Time of Shut-down	Time of Start Up	Time last seen 0930
0710	T. Truncatus	6	6	0	N/A	Traveling	No	N/A	N/A	0930

Daily Summary

Species	Total Number	Takes in Zone A	Takes in Zone B	# Shut-Downs	Comments
T. Truncatus	6	0	0	0	

Observer Names: Ben Fiedler, Elizabeth Damon

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Protected Species Sighting & Shut-Down Form

Corresponding Sighting # for the Day: 1 Shutdown # for the Day: NA

Date (DD/MM/YYYY): 08/08/2020 Time of Initial Sighting 0710 Time Animals Left Area: 930

Project Name: CTJV Thimble Shoals Parallel Tunnel Island No. 1

Areas Observed: North and west of Island 1 Upland Pile Driving ____ In-Water Pile Driving X

Air Temp: 78°F Water Temp: 83°F Wave Height .7 ft Beaufort Sea State 1

Weather Conditions: clear, mostly cloudy, Wind 5 kt ESE

Percent Cloud Cover: 75% Percent Glare: 0% Visibility Issues: None

Animal Location & Distance to Pile Driving: No Pile Driving Active @ 710 DTH @ 925
Type of Pile Driving N/A @ 710, DTH @ 925
Distance From Observer When Initially Observed: 200 m - off North End, Island 1
Species Observed: Tursiops Truncatus
Number of Animals Sighted (include age classes): 6 Adults
Sex of Animals Observed: Unknown
Animal Behaviors Observed: Traveling
Animal Heading/Direction: West, Then East
Human Activities in Area: None

Shutdown Information

Time Begin:	
Time End:	
Total Down Time (mins):	

Shutdown # for the day: N/A

Video or Photograph Taken?: No Yes

Brief Description of Footage or Photograph: ____

Notes: 6 Adult Bottle nose originally spotted at 710 heading West. Dolphins spotted again at 925 heading Back East and out of view by 930.

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Benjamin Fielder
Observer Name / Signature

Daily Marine Mammal Observer Report

Contractor: CTJV / Dragados	Project Name: CTJV Parallel Thimble Shoals Tunnel
NOAA/NMFS Permit: IHA March 2020	Observer Location (Island #): 1
Date: 08/10/2020	Shift Start: 0630
Sunrise: 0617 Sunset: 2001	Shift End: 1800

Weather and Visibility Information

Location	Time	Air Temp (F)	Water Temp (F)	Visibility (Good, Fair, Poor)	Cloud Cover (%)	Wave Height (ft)	Wind Speed & Direction	Precipitation	Beaufort Scale
Island 1	0804	79	83	Good	6%	.7	2 Kt N	None	2
Island 1	1307	82	84	Good	40%	1	11Kt WNW	None	2

Observer Log

Time	Notes: (pre-watch times, start and stop times for pile driving activities, shift changes, human activities)
0630	Catch Bus
0650	Arrive at Island 1
0700	Meet w/ Vince, Plan to Drill 3 Casings w/ DTH
0714	Walk around Island
0732	Begin Water on Pier
0810	Start Drilling 1st Casing w/ DTH
0823	Finish 1st Casing
0830	6 Dolphins feeding 400 m SW of temp dock, Last seen @ 1146
0905	USNS 21 traveling W to E in channel
0911	Siem Dorado & USNS 96 traveling E to W in channel
0955	Container ship heading E to W in channel
1305	Start Drilling 2nd Casing w/ DTH
1334	Finish 2nd Casing
1400	Lightering in Area Made to connex
1606	Begin Water
1650	Start Drilling 3rd Casing w/ DTH (Bow)
1714	Issue w/ Crane, Stopping for the day. Begin Post Water, Nichole takes walk around Island
1744	Finish Post Water
1746	Catch Bus
1800	Arrive at Yard
0938	3 Adult Dolphins spotted Feeding ~ 600 m NW of Island 1, then last seen heading West @ 0937

Sighting Log

Time	Species	Total Number	# Adults	# of Juveniles	Closest Distance to Pile Driving	Activity or Behaviors	Shut down? (yes/no)	Time of Shut-down	Time of Start Up	Time last seen
08:30	T. Truncatus	5	4	1	N/A	Feeding	no	N/A	N/A	1146
09:30	T. Truncatus	3	3	0	N/A	Feeding	no	N/A	N/A	09:37

Daily Summary

Species	Total Number	Takes in Zone A	Takes in Zone B	# Shut-Downs	Comments
T. Truncatus	8	0	0	0	

Observer Names: Ben Fielder, Nichole Pierce

Protected Species Sighting & Shut-Down Form

Corresponding Sighting # for the Day: 2 Shutdown # for the Day: N/A

Date (DD MM YYYY): 8/10/2020 Time of Initial Sighting: 0930 Time Animals Left Area: 0937

Project Name: CTJV Thimble Shoals Parallel Tunnel Island No. 1

Areas Observed: NW of Island 1 Upland Pile Driving ____ In-Water Pile Driving X

Air Temp: 80 Water Temp: 83 Wave Height 1ft Beaufort Sea State 1

Weather Conditions: Clear, Sunny

Percent Cloud Cover: 20 Percent Glare: 0 Visibility Issues: None

Animal Location & Distance to Pile Driving: 650 m NW
Type of Pile Driving DTH (not Active)
Distance From Observer When Initially Observed: 500m
Species Observed: Bottlenose Dolphin
Number of Animals Sighted (include age classes): 3 Adult
Sex of Animals Observed: Unknown
Animal Behaviors Observed: Feeding, Traveling
Animal Heading/Direction: West
Human Activities in Area: Small Boat Traffic, DTH (inactive)

Shutdown Information

Time Begin:	
Time End:	
Total Down Time (mins):	

Shutdown # for the day: N/A

Video or Photograph Taken?: No Yes

Brief Description of Footage or Photograph: ____

Notes: First spotted feeding for a short time @ 0930 NW of Island 1. Last seen heading Traveling W @ 0937.

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Ben Fielder
Observer Name / Signature

Protected Species Sighting & Shut-Down Form

Corresponding Sighting # for the Day: 1 Shutdown # for the Day: N/A

Date (DD/MM/YYYY): 8/10/2020 Time of Initial Sighting: 8:30a Time Animals Left Area: 1145am

Project Name: CTJV Thimble Shoals Parallel Tunnel Island No. 1

Areas Observed: West + North of Island 1 Upland Pile Driving: ____ In-Water Pile Driving: X

Air Temp: 79 Water Temp: 84 Wave Height: 2ft Beaufort Sea State: 1

Weather Conditions: Sunny

Percent Cloud Cover: 0 Percent Glare: 0 Visibility Issues: N/A

Animal Location & Distance to Pile Driving: 400m SW of temp dock
Type of Pile Driving: DTH (Not Active)
Distance From Observer When Initially Observed: 550m
Species Observed: Bottlenose Dolphins
Number of Animals Sighted (include age classes): 5 w/ one juvenile
Sex of Animals Observed: Unknown
Animal Behaviors Observed: Surface feeding, Traveling
Animal Heading/Direction: Various
Human Activities in Area: DTH on temp. dock, small craft traffic (Not Active)

Shutdown Information

Time Begin:	
Time End:	
Total Down Time (mins):	

Shutdown # for the day: N/A

Video or Photograph Taken?: No Yes

Brief Description of Footage or Photograph: ____

Notes: Initial sighting @8:30, 400m SW of temp dock, feeding. Last sight at 9:30 heading E. Spotted again @1127 300m W of Island 1, feeding. Last seen N of Island 1 heading NE @ 1145.

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Nichole Pierce Ben Felder
Observer Name / Signature

Daily Marine Mammal Observer Report

Contractor: CTJV / Dragados	Project Name: CTJV Parallel Thimble Shoals Tunnel
NOAA/NMFS Permit: IHA March 2020	Observer Location (Island #): 1
Date: 02/11/2020	Shift Start: 0630
Sunrise: 0618 Sunset: 2020	Shift End: 1743

Weather and Visibility Information

Location	Time	Air Temp (F)	Water Temp (F)	Visibility (Good, Fair, Poor)	Cloud Cover (%)	Wave Height (ft)	Wind Speed & Direction	Precipitation	Beaufort Scale
Island 1	1027	83	85	Good	20	1 ft	7kt, N	None	1.5
Island 1	1536	84	85	Good	70%	2	11kt, NW	Rain	2

Observer Log

Time	Notes: (pre-watch times, start and stop times for pile driving activities, shift changes, human actiivties)
0630	Catch Bus
0653	Arrive at Island 1
0700	Morning Meetings, Vince 1 casing w/DTH - Shawn Drive 2 Piles w/Impact H.
0715	Walk around Island
0820	Start Watch on Pier
0840	USNS 188 traveling E to W in channel
0851	Sub w/ 3 escorts heading W to E in channel
0857	Begin Drilling Casing on Temp Dock w/DTH / Oil tanker traveling W to E
0935	Container Ship Traveling E to W in Channel
0952	Cargo Ship traveling W to E in channel
1032	Stop Drilling - Issue with Crane
1043	USNS 189 Traveling E to W in channel
1130	1 Dolphin Spotted 50m South of Pier heading N. Last seen 1140 still heading N
1320	Erica Takes walk around Island
1351	Vince - Restart Drilling Casing
1155*	4 Adult Dolphins Feeding N of Island 1. Last seen 1242
1518	Erica Start Watch at North End Island 1 for Shawns Crew
1546	15 Adult Dolphins spotted off east side of Island. Lastseen at 1600 when operations halted for lightning in the area
1556	Vince's Crew Finish Casing
1558	Told to go to connex due to lightning in the area
1725	Catch Ride to Yard
1743	Arrive at the Yard

Sighting Log

Time	Species	Total Number	# Adults	# of Juveniles	Closest Distance to Pile Driving	Activity or Behaviors	Shut down? (yes/no)	Time of Shut-down	Time of Start Up	Time last seen
1130	T. truncatus	1	1	0	N/A	Traveling	NO	N/A	N/A	1140
1155	T. truncatus	4	4	0	N/A	Feeding	NO	N/A	N/A	1242
1546	T. truncatus	15	15	0	N/A	Traveling	NO	N/A	N/A	1600

Daily Summary

Species	Total Number	Takes in Zone A	Takes in Zone B	# Shut-Downs	Comments
T. truncatus	20	0	0	0	

Observer Names: Ben Fielder, Erica Wolff

Protected Species Sighting & Shut-Down Form

Corresponding Sighting # for the Day: 1 Shutdown # for the Day: N/A

Date (DD/MM/YYYY): 01/08/2020 Time of Initial Sighting 1130 Time Animals Left Area: 1140

Project Name: CTJV Thimble Shoals Parallel Tunnel Island No. 1

Areas Observed: W/NW of Island 1 Upland Pile Driving NA In-Water Pile Driving NA

Air Temp: 83°F Water Temp: 85°F Wave Height 1ft Beaufort Sea State 1

Weather Conditions: Sunny, wind 7kts NNW

Percent Cloud Cover: 20 Percent Glare: 5 Visibility Issues: None

Animal Location & Distance to Pile Driving: 50m South of Pier, 75m West of Island
Type of Pile Driving None Active, setting up for DTH + Impact
Distance From Observer When Initially Observed: 50 m
Species Observed: Bottlenose Dolphin
Number of Animals Sighted (include age classes): 1 Adult
Sex of Animals Observed: Unknown
Animal Behaviors Observed: Traveling
Animal Heading/Direction: N
Human Activities in Area: Small boat traffic

Shutdown Information

Time Begin:	
Time End:	
Total Down Time (mins):	

Shutdown # for the day: N/A

Video or Photograph Taken?: (No) Yes

Brief Description of Footage or Photograph:

Notes: Dolphin First spotted 50 m south of pier, heading N. Passed under Pier and continued North. Last seen at 1140 still headed North, 900m from pier.

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Ben Fielder / [signature]
Observer Name / Signature

Protected Species Sighting & Shut-Down Form

Corresponding Sighting # for the Day: 2 Shutdown # for the Day: N/A

Date (DD/MM/YYYY): 11/08/2020 **Time of Initial Sighting** 11:55 **Time Animals Left Area:** 12:42

Project Name: CTJV Thimble Shoals Parallel Tunnel **Island No.** 1

Areas Observed: North of Island 1 **Upland Pile Driving** none **In-Water Pile Driving** _____

Air Temp: 84 **Water Temp:** 85 **Wave Height** 1ft **Beaufort Sea State** _____

Weather Conditions: sunny

Percent Cloud Cover: 4% **Percent Glare:** 1% **Visibility Issues:** none

Animal Location & Distance to Pile Driving: 700m
Type of Pile Driving none at time of sighting
Distance From Observer When Initially Observed: 700m
Species Observed: Bottle nose Dolphins
Number of Animals Sighted (include age classes): 4 adults
Sex of Animals Observed: undetermined
Animal Behaviors Observed: possible feeding with travel
Animal Heading/Direction: Southeastern
Human Activities in Area: small craft passing

Shutdown Information

Time Begin:	
Time End:	
Total Down Time (mins):	

Shutdown # for the day: _____

Video or Photograph Taken?: (No) Yes

Brief Description of Footage or Photograph: _____

Notes: First sighted swimming in a tight circle with very short distances traveld between breathing intervals. Small finish craft passed through the area. Dolphins last sighted traveling away from area in a southeasterly direction. Returned at 1221 continuing to circle with minimun travel possible feeding. small vessel passed by and Dolphins inshore. road, than continued to mill in the area until last sighting at 1242.

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REMSA MESO

Erica Wolff Erica Wolff
Observer Name / Signature

Protected Species Sighting & Shut-Down Form

Corresponding Sighting # for the Day: 3 Shutdown # for the Day: N/A

Date (DD/MM/YYYY): 11/08/2020 **Time of Initial Sighting** 1546 **Time Animals Left Area:** 1600

Project Name: CTJV Thimble Shoals Parallel Tunnel **Island No.** 1

Areas Observed: East Pile **Upland Pile Driving** ____ **In-Water Pile Driving** ✓

Air Temp: 84 **Water Temp:** 85 **Wave Height** 2ft **Beaufort Sea State** ____

Weather Conditions: cloudy with scattered showers

Percent Cloud Cover: 90% **Percent Glare:** 1% **Visibility Issues:** none

Animal Location & Distance to Pile Driving: 200m traveling towards piling
Type of Pile Driving impact - getting set up
Distance From Observer When Initially Observed: 200m
Species Observed: Bottlenose Dolphins
Number of Animals Sighted (include age classes): 15 all adults
Sex of Animals Observed: unknown
Animal Behaviors Observed: traveling
Animal Heading/Direction: North
Human Activities in Area: The Dina Polarus passed by pod at 1552

Shutdown Information

Time Begin:	
Time End:	
Total Down Time (mins):	

Shutdown # for the day: ____

Video or Photograph Taken?: (No) Yes

Brief Description of Footage or Photograph: ____

Notes: First sighted pod of 15 Dolphins traveling parallel to East shore. They than turned into channel and towards pile drive at about 200m. The Dina Polarus and a tow tug passed through the area as dolphins made their dive. The next sighting of the dolphins had six individuals coming within 105m of pile driving operation while the rest of pod stayed out 250m. Lighting watch came into effect before a hold on operations was implemented.

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REMSA MESO

Erica Wolff Erica Wolff
Observer Name / Signature

Daily Marine Mammal Observer Report

Contractor: CTJV / Dragados	Project Name: CTJV Parallel Thimble Shoals Tunnel
NOAA/NMFS Permit: IHA March 2020	Observer Location (Island #): 1
Date: 08/12/2020	Shift Start: 0630
Sunrise: 0618 Sunset: 2020	Shift End: 1752

Weather and Visibility Information

Location	Time	Air Temp (F)	Water Temp (F)	Visibility (Good, Fair, Poor)	Cloud Cover (%)	Wave Height (ft)	Wind Speed & Direction	Precipitation	Beaufort Scale
Island 1	0723	79	84	Good	0	.7	6 kt, NNE	None	1
Island 1	1541	83	86	Good	50	1	13kt, NW	None	2

Observer Log

Time	Notes: (pre-watch times, start and stop times for pile driving activities, shift changes, human actiivties)
0630	Caten Bus
0650	Arrive at Island 1
0655	Take Walk around Island.
0713	Begin Watch. Ben on Pier, Nichole at North End
0739	USNS 19 Traveling E to W in channel
0744	Begin Driving West Pile w/soft start. Bubble curtain Active
0820	3 Dolphins Spotted 600m North of Trestle. Last seen 1km N at 1133.
0844	USNS 50 traveling E to W in channel
0941	Stop Driving West Pile. Mechanical Issue. Hammer Won't Fire.
1225	USNS 7 traveling W to E in channel
1518	Cargo Ship traveling E to W in channel
1521	Restart West Pile w/soft start. Bubble curtain active.
1537	Oil Tanker traveling E to W in channel
1550	Begin Hitting West Pile at Normal Interval
1556	Finish West Pile, Begin setting up on East Pile. Water continues
1643	Begin Driving East Pile w/soft start. Bubble Curtain Active
1652	Begin hitting at Normal Interval.
1701	Finish East Pile. Begin Post Watch
1731	Finish Post Watch. Take Walk around Island.
1740	Caten Ride to Yard
1752	Arrive at Yard

Sighting Log

Time	Species	Total Number	# Adults	# of Juveniles	Closest Distance to Pile Driving	Activity or Behaviors	Shut down? (yes/no)	Time of Shut-down	Time of Start Up	Time last seen
0820	Bottlenose	3	2	1	600m	Feeding	No	NA	NA	1133

Daily Summary

Species	Total Number	Takes in Zone A	Takes in Zone B	# Shut-Downs	Comments
TT Bottlenose	3	0	0	0	

Observer Names: Ben Fielder, Nichole Pierce

Protected Species Sighting & Shut-Down Form

Corresponding Sighting # for the Day: 1 Shutdown # for the Day: ~~#3~~ NA

Date (DD/MM/YYYY): 12/08/2020 Time of Initial Sighting 0820 Time Animals Left Area: 1133

Project Name: CTJV Thimble Shoals Parallel Tunnel Island No. 1

Areas Observed: East, North, North West Island 1 Upland Pile Driving _____ In-Water Pile Driving X

Air Temp: 80°F Water Temp: 84 Wave Height .7 Beaufort Sea State 1

Weather Conditions: Sunny, Wind 6kt NNE

Percent Cloud Cover: 10 Percent Glare: 1 Visibility Issues: None

Animal Location & Distance to Pile Driving:
Type of Pile Driving Impact with Bubble Curtain
Distance From Observer When Initially Observed: 750m
Species Observed: Bottlenose Dolphin
Number of Animals Sighted (include age classes): 3 Adults 1 Juvenile
Sex of Animals Observed: Unknown
Animal Behaviors Observed: Feeding, Traveling
Animal Heading/Direction: East then West
Human Activities in Area: Impact Hammer with Bubble Curtain, Large Ship Traffic.

Shutdown Information

Time Begin:	
Time End:	
Total Down Time (mins):	

Shutdown # for the day: N/A

Video or Photograph Taken?: (No) Yes

Brief Description of Footage or Photograph:

Notes: At 0820 3 Dolphins spotted feeding 600m North of Impact Hammer on trestle. At 0835 Dolphins were seen heading East. At 0959 Dolphins returned from the east and again began feeding 600m North of trestle. Dolphins last seen at 1133 1km NW of Island 1 heading West.

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Ben Fifield

Observer Name / Signature

Daily Marine Mammal Observer Report

Contractor: CTJV / Dragados	Project Name: CTJV Parallel Thimble Shoals Tunnel
NOAA/NMFS Permit: IHA March 2020	Observer Location (Island #): 1
Date: 8/13/2020	Shift Start: 0630
Sunrise: 0621 Sunset: 1958	Shift End: 1800

Weather and Visibility Information

Location	Time	Air Temp (F)	Water Temp (F)	Visibility (Good, Fair, Poor)	Cloud Cover (%)	Wave Height (ft)	Wind Speed & Direction	Precipitation	Beaufort Scale
Island 1	0700	79	85	Good	20	1	7kt N	none	3
Island 1	1735	79	85	Good	90	4	9kt N	none	3

Observer Log

Time	Notes: (pre-watch times, start and stop times for pile driving activities, shift changes, human actiivties)
0630	Nichole catches bus
0653	Nichole arrives on Island
0700	Erica catches bus
0753	Erica arrives on Island
0800	Walk around Island
0820	Start watch on pier
0927	Container ship Maersk Ohio in channel W to E
1034	US Maury in channel W to E
1151	Start 30 minute pre watch
1221	Vince starts pile driving
1306	Pile driving stops
1316	Container ship Hyundai Speed in channel E to W
1330	Vince starts next pile driving
1330	USS 19 in channel W to E
1419	USS 12 in channel W to E
1425	Vince ends pile driving
1534	Container ship Maersk Yukon in channel E to W
1631	East Island pile drive starts
1623	Erica spots two adult Dolphins traveling north at 300 m last seen 1627
1633	Tug and house barg in channel W to E
1705	East Island pile drive ends
1735	Stop watch
1800	catch ride at yard
1810	Arrive at yard

Sighting Log

Time	Species	Total Number	# Adults	# of Juveniles	Closest Distance to Pile Driving	Activity or Behaviors	Shut down? (yes/no)	Time of Shut-down	Time of Start Up	Time last seen
1623	T. truncatus	2	2	0	300m	Traveling	No	N/A	N/A	1627

Daily Summary

Species	Total Number	Takes in Zone A	Takes in Zone B	# Shut-Downs	Comments
T. truncatus	2	0	0	0	

Observer Names: Erica, Nichole

Protected Species Sighting & Shut-Down Form

Corresponding sighting # for the day: _____

Shutdown: N/A for the day

Date (DD/MM/YYYY): 13/08/2020 **Time of Initial Sighting** 1623 **Time Animals Left Area:** 1627

Project Name: CTJV Thimble Shoals Parallel Tunnel **Island No.** 1

Areas Observed: North of Island 1 **Upland Pile Driving** NA **In-Water Pile Driving** ✓

Air Temp: 79 **Water Temp:** 85 **Wave Height** 3ft **Beaufort Sea State** 3

Weather Conditions: cloudy with winds of 9 kts NE

Percent Cloud Cover: 90% **Percent Glare:** 1% **Visibility Issues:** none

Animal Location & Distance to Pile Driving: 300m
Type of Pile Driving impact
Distance From Observer When Initially Observed: 300m
Species Observed: Bottle nose Dolphins
Number of Animals Sighted (include age classes): two
Sex of Animals Observed: unknown
Animal Behaviors Observed: traveling
Animal Heading/Direction: north
Human Activities in Area: n/a

Shutdown Information

Time Begin:	
Time End:	
Total Down Time (mins):	

Shutdown # for the day: _____

Video or Photograph Taken?: (No) Yes

Brief Description of Footage or Photograph: _____

Notes: First sighted single pair of Dolphins traveling North and parrallel to shore. Once animals dove did not see next surfacing.

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REMSA MESO

Erica Wolff / Erica Wolff
Observer Name / Signature

Daily Marine Mammal Observer Report

Contractor: CTJV / Dragados	Project Name: CTJV Parallel Thimble Shoals Tunnel
NOAA/NMFS Permit: IHA March 2020	Observer Location (Island #): 1
Date: 08/14/2020	Shift Start: 0620
Sunrise: 0620 Sunset: 1956	Shift End: 1215

Weather and Visibility Information

Location	Time	Air Temp (F)	Water Temp (F)	Visibility (Good, Fair, Poor)	Cloud Cover (%)	Wave Height (ft)	Wind Speed & Direction	Precipitation	Beaufort Scale
Island 1	0740	80	82	Good	60%	1.3	9kt, SSW	None	3

Observer Log

Time	Notes (pre-watch times, start and stop times for pile driving activities, shift changes, human activities)
0630	Catch Bus
0655	Take walk around Island
0715	Morning Meetings - Vince Crew Drive 1 pile later, Shaun Drive First thing
0735	Begin Watch. Erica at North End, Ben on Pier
0835	Begin Driving West Pile with soft start, Bubble curtain active
0839	Begin hitting at normal interval
0843	Pause hitting West Pile
0859	Resume Hitting West Pile at normal interval
0911	Finish West Pile. Begin Post Watch
0938	Sub w/ 2 escorts traveling W to E in channel
0941	Finish Post Watch. Erica Walk around Island. Begin watch for Vince's Crew
1036	Coast Guard 911 Traveling W to E in channel
1039	Start Driving Pile on Tempdock w/ soft start
1043	Begin hitting at normal interval.
1047	USNS ER traveling W to E in channel
1058	Finish Pile
1128	Finish Post Watch, take final walk around Island
1130	Catch Ride
1215	Arrive at yard

Sighting Log

Time	Species	Total Number	# Adults	# of Juveniles	Closest Distance to Pile Driving	Activity or Behaviors	Shut down? (yes/no)	Time of Shut-down	Time of Start Up	Time last seen

Daily Summary

Species	Total Number	Takes in Zone A	Takes in Zone B	# Shut-Downs	Comments

Observer Names: Ben Fielder, Erica Voller

Daily Marine Mammal Observer Report

Contractor: CTJV / Dragados	Project Name: CTJV Parallel Thimble Shoals Tunnel
NOAA/NMFS Permit: IHA March 2020	Observer Location (Island #): 1
Date: 17/08/2020	Shift Start: 0630
Sunrise: 0625 Sunset: 1953	Shift End: 1030

Weather and Visibility Information

Location	Time	Air Temp (F)	Water Temp (F)	Visibility (Good, Fair, Poor)	Cloud Cover (%)	Wave Height (ft)	Wind Speed & Direction	Precipitation	Beaufort Scale
Island 1	0700	70	50	Good	60	5	2mph W	none	4
Island 1	1000	70	50	Good	60	5	2mph W	none	4

Observer Log

Time	Notes: (pre-watch times, start and stop times for pile driving activities, shift changes, human actiivties)
0630	catch Bus
0653	on Island
0713	Island walk around
0722	start of pre watch
0744	Erica spots 10 Dolphins East of impact hammer in mid-channel at 700m last seen at 0750
0815	soft start of impact hammer
0803	PFC Eugene A Obregon container ship in channel W to E
0841	impact hammer stops
0848	two navy hovercrafts in channel W to E
0853	Magdalen container ship in channel W to E
0854	USS havercraft in channel W to E
0902	Container ship in channel E to W
0911	end post watch
0912	CLS Kallopic container ship in channel W to E
0917	MOL Modern container ship in channel W to E
0921	USS 50 in channel W to E
0945	US Coast Gaurd 557 in channel W to E
1025	catch van
1030	arrive at yard

Sighting Log

Time	Species	Total Number	# Adults	# of Juveniles	Closest Distance to Pile Driving	Activity or Behaviors	Shut down? (yes/no)	Time of Shut-down	Time of Start Up	Time last seen
0744	T. truncatus	10	10	Ø	700m	traveling	no	N/A	N/A	0750

Daily Summary

Species	Total Number	Takes in Zone A	Takes in Zone B	# Shut-Downs	Comments
T. truncatus	10	Ø	Ø	Ø	

Observer Names: Erica, Nichole

Protected Species Sighting & Shut-Down Form

Corresponding sighting # for the day: 1

Shutdown: N/A for the day

Date (DD/MM/YYYY): 17/08/2020 **Time of Initial Sighting** 0744 **Time Animals Left Area:** 0750

Project Name: CTJV Thimble Shoals Parallel Tunnel **Island No.** 1

Areas Observed: North of Island 1 **Upland Pile Driving** N/A **In-Water Pile Driving** N/A

Air Temp: 70 **Water Temp:** 50 **Wave Height** 5 ft **Beaufort Sea State** 3

Weather Conditions: partly cloudy

Percent Cloud Cover: 60% **Percent Glare:** 1% **Visibility Issues:** good

Animal Location & Distance to Pile Driving: 700m to southeast
Type of Pile Driving impact
Distance From Observer When Initially Observed: 700m
Species Observed: Bottlenose Dolphins
Number of Animals Sighted (include age classes): 10 adults
Sex of Animals Observed: unknown
Animal Behaviors Observed: Traveling
Animal Heading/Direction: East to south East
Human Activities in Area: N/A

Shutdown Information

Time Begin:	
Time End:	
Total Down Time (mins):	

Shutdown # for the day:

Video or Photograph Taken?: (No) Yes

Brief Description of Footage or Photograph:

Notes: Dolphins first sighted south of green channel marker. Traveled a short distance across channel to red marker and dove. Did not see next surfacing.

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Erica Wolff
Observer Name / Signature

Erica Wolff

Daily Marine Mammal Observer Report

Contractor: CTJV / Dragados	Project Name: CTJV Parallel Thimble Shoals Tunnel
NOAA/NMFS Permit: IHA March 2020	Observer Location (Island #): 1
Date: 08/20/2020	Shift Start: 1130
Sunrise: 0625 Sunset: 1949	Shift End: 1626

Weather and Visibility Information

Location	Time	Air Temp (F)	Water Temp (F)	Visibility (Good, Fair, Poor)	Cloud Cover (%)	Wave Height (ft)	Wind Speed & Direction	Precipitation	Beaufort Scale
Island 1	1258	78	81	Good	70	1.6	12Kt, NW	None	2-3

Observer Log

Time	Notes: (pre-watch times, start and stop times for pile driving activities, shift changes, human activities)
1130	Catch Ride to Island 1
1150	Arrive Island 1
1204	Walk around Island
1210	Begin Watch on Pier
1455	Hopper Dredge traveling E to W, Cargo Ship traveling W to E
1503	USNS 50 traveling E to W in channel
1545	Hopper Dredge traveling E to W in channel
1605	Informed Vince's crew will not drive today
1610	Catch Bus
1626	Arrive at yard.

Sighting Log

Time	Species	Total Number	# Adults	# of Juveniles	Closest Distance to Pile Driving	Activity or Behaviors	Shut down? (yes/no)	Time of Shut-down	Time of Start Up	Time last seen

Daily Summary

Species	Total Number	Takes in Zone A	Takes in Zone B	# Shut-Downs	Comments

Observer Names: Ben Fielder, Erica Wolff

REMSA, Inc. 142 W Queeens Way Hampton, VA 23669
757-722-0113

Daily Marine Mammal Observer Report

Contractor: CTJV / Dragados	Project Name: CTJV Parallel Thimble Shoals Tunnel
NOAA/NMFS Permit: IHA March 2020	Observer Location (Island #): 1
Date: 08/21/2020	Shift Start: 0630
Sunrise: 0626 Sunset: 1947	Shift End: 1535

Weather and Visibility Information

Location	Time	Air Temp (F)	Water Temp (F)	Visibility (Good, Fair, Poor)	Cloud Cover (%)	Wave Height (ft)	Wind Speed & Direction	Precipitation	Beaufort Scale
Island 1	0723	76	82	Good	40%	.7	4kt WSW	None	2

Observer Log

Time	Notes: (pre-watch times, start and stop times for pile driving activities, shift changes, human activities)
0630	Catch Bus
0648	Arrive Island 1
0700	Morning Safety Meetings - Vince Drill 1 Casing
0705	Walk around Island.
0715	Begin Watch on Pier
0829	Cape Race traveling E to W in channel
0840	Container ship traveling W to E in Channel
0851	Begin drilling Casing.
0901	Hopper Dredge traveling W to E in channel
0911	Finish Casing, Begin Post Watch
0941	Finish post watch, take walk around Island
	Drill bit broke off in casing. Casing will be pulled to retrieve it
1340	Resume Watch on Pier
1415	Begin Pulling Casing
1440	Casing out of the Water
1510	Casing Draining on deck
1518	Catch Ride
1535	Arrive at Yard.

Sighting Log

Time	Species	Total Number	# Adults	# of Juveniles	Closest Distance to Pile Driving	Activity or Behaviors	Shut down? (yes/no)	Time of Shut-down	Time of Start Up	Time last seen

Daily Summary

Species	Total Number	Takes in Zone A	Takes in Zone B	# Shut-Downs	Comments

Observer Names: Ben Fielder, Erica Wolff

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Daily Marine Mammal Observer Report

Contractor: CTJV / Dragados	Project Name: CTJV Parallel Thimble Shoals Tunnel
NOAA/NMFS Permit: IHA March 2020	Observer Location (Island #): 1
Date: 08/24/2020	Shift Start: 1135
Sunrise: 0628 Sunset: 1943	Shift End: 1810

Weather and Visibility Information

Location	Time	Air Temp (F)	Water Temp (F)	Visibility (Good, Fair, Poor)	Cloud Cover (%)	Wave Height (ft)	Wind Speed & Direction	Precipitation	Beaufort Scale
Island 1	1241	84	82	Good	100	1.3	14kt, NE	None	2

Observer Log

Time	Notes: (pre-watch times, start and stop times for pile driving activities, shift changes, human actiivties)
1135	Catch Ride
1150	Arrive on Island 1
1155	Meet with crews. Shawn - Driving w/Impact, Vince Drilling w/ DTH
1205	Walk around Island. Fixed Pigeon Stuck in netting.
1215	Walk out to pier + start watch
1347	Erica starts watch at North End
1428	7 Dolphins spotted East (600m) of East Pile. Last Seen 1439 1.5 km West
1435	USNS 1 W to E in channel
1448	Cargo Ship traveling W to E in channel
1622	USNS 189 traveling W to E in channel
1654	Vince crew begin drilling casing
1700	Informed Shawn's crew will not drive today
1720	Issue with Air compressor, bringing casing on deck, Post Watch
1750	End post watch
1753	Catch Ride
1810	Arrive at Yard

Sighting Log

Time	Species	Total Number	# Adults	# of Juveniles	Closest Distance to Pile Driving	Activity or Behaviors	Shut down? (yes/no)	Time of Shut-down	Time of Start Up	Time last seen
1428	Bottlenose	7	7	0	N/A	Traveling	No	N/A	N/A	1439

Daily Summary

Species	Total Number	Takes in Zone A	Takes in Zone B	# Shut-Downs	Comments
Bottlenose	7	0	0	0	

Observer Names: Ben Fielder, Erica Wolff

Protected Speci Sighting & Shut-Down Form Corresponding sighting # f the day: 1 for the day

Shutdown:

Date (DD/MM/YYYY): 24/08/2020 **Time of Initial Sighting** 1428 **Time Animals Left Area:** 1439

Project Name: CTJV Thimble Shoals Parallel Tunnel **Island No.**

Areas Observed: eastern pile drive **Upland Pile Driving** **In-Water Pile Driving**

Air Temp: 82 **Water Temp:** 80 **Wave Height** 1ft **Beaufort Sea State**

Weather Conditions: cloudy

Percent Cloud Cover: 90% **Percent Glare:** 1% **Visibility Issues:** none

Animal Location & Distance to Pile Driving: east of eastern pile drive @ 600m
Type of Pile Driving none
Distance From Observer When Initially Observed: 600m
Species Observed: Bottlenose Dolphins
Number of Animals Sighted (include age classes): 7
Sex of Animals Observed: adults
Animal Behaviors Observed: traveling
Animal Heading/Direction: West bound
Human Activities in Area: none

Shutdown Information

Time Begin:	
Time End:	
Total Down Time (mins):	

Shutdown # for the day: N/A

Video or Photograph Taken?: (No) Yes

Brief Description of Footage or Photograph:

Notes: Animals first sighted on east side of Island 1 about 600m out. The Dolphins were traveling in a Westward direction through the middle of the channel

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Erica Wolff
Observer Name / Signature

Daily Marine Mammal Observer Report

Contractor: CTJV / Dragados	Project Name: CTJV Parallel Thimble Shoals Tunnel
NOAA/NMFS Permit: IHA March 2020	Observer Location (Island #):
Date: 08/25/2020	Shift Start: 0630
Sunrise: 0631 Sunset: 1743	Shift End: 1745

Weather and Visibility Information

Location	Time	Air Temp (F)	Water Temp (F)	Visibility (Good, Fair, Poor)	Cloud Cover (%)	Wave Height (ft)	Wind Speed & Direction	Precipitation	Beaufort Scale
Island 1	9:39	76	65	Good	0	1.6	9.3 Kts SSE	None	2
Island 1	4:13	89	68	Good	10%	1.6	11 Kts SW	None	3

Observer Log

Time	Notes: (pre-watch times, start and stop times for pile driving activities, shift changes, human actiivties)
0630	Caught Bus
0651	Arrive at Island 1, strong winds
0744	Nordic Ace cargo traveled through channel E to W
0837	USN 10 traveled travel through channel W to E
0839	Positioning bubble curtain on E pile
0927	Soft start on R pile, no sightings noted
0951	Driving stopped due to technical problems
1021	Resumed driving on E pile (R side) - 3 hits then complete.. Start 30min post
1051	30 min watch ends, no sightings
1108	Begin L side of E pile, soft start
1119	Two dolphins observed ~ 600m from E pile
1128	Driving complete, 30 min post watch begins
1158	Watch complete, no further sightings
1229	Harbour Progress tanker traveling E to W
1537	Seamax Fairfield cargo traveling E to W
1539	One dolphin sighted on NW side of Island, 450m from temp dock
1613	W pile (Vince's team) begins moving pile in water
1616	Placed pile in water, then situated continuous vibratory hammer
1627	Pile driving begins
1702	Pile swaying, not secure. Removed from current position, placed back in template
1702	30 min post watch begins
1732	Post watch ends, no further sightings
1737	Ride back to yard
1745	Arrive at yard

Sighting Log

Time	Species	Total Number	# Adults	# of Juveniles	Closest Distance to Pile Driving	Activity or Behaviors	Shut down? (yes/no)	Time of Shut-down	Time of Start Up	Time last seen
11:19a	Tursiops	2			600m	Traveling	NO	N/A	N/A	11:23a
1539	Tursiops	1	1		450m	Traveling	NO	N/A	N/A	1601

Daily Summary

Species	Total Number	Takes in Zone A	Takes in Zone B	# Shut-Downs	Comments
Tursiops	3	Ø	Ø	Ø	
Truncatus	1				

Observer Names: Nichole Pierce

Made with Scanner for Me

Protected Species Sighting & Shut-Down Form

Corresponding sighting # for the day: 1

Shutdown: Ø for the day

Date (DD/MM/YYYY): 25/08/2020 Time of Initial Sighting 11:19a Time Animals Left Area: 11:23a

Project Name: CTJV Thimble Shoals Parallel Tunnel Island No. Island 1

Areas Observed: NE of Island 1 Upland Pile Driving ____ In-Water Pile Driving X

Air Temp: 79°F Water Temp: 65.8°F Wave Height 1.6ft Beaufort Sea State 3

Weather Conditions: Sunny, Windy (9.3 kts)

Percent Cloud Cover: 0 Percent Glare: 0 Visibility Issues: None

Animal Location & Distance to Pile Driving: NE of Island 1, 600m from dock
Type of Pile Driving Impact w/ bubble curtain
Distance From Observer When Initially Observed: 600m
Species Observed: Bottlenose dolphin
Number of Animals Sighted (include age classes): 2, unknown
Sex of Animals Observed: Unknown
Animal Behaviors Observed: Traveling
Animal Heading/Direction: East
Human Activities in Area: Small fishing boats

Shutdown Information

Time Begin:	
Time End:	
Total Down Time (mins):	

Shutdown # for the day: N/A

Video or Photograph Taken?: (No) Yes

Brief Description of Footage or Photograph:

Notes: Two bottlenose dolphins sighted about 600m NE of pile driving activity. Traveled E. Last sighted 11:23a.

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Nichole Pierce

Observer Name / Sig

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Protected Species Sighting & Shut-Down Form

Corresponding Sighting # for the Day: 2 Shutdown # for the Day: Ø

Date (DD/MM/YYYY): 25/08/2020 Time of Initial Sighting 3:59p Time Animals Left Area: 4:01p

Project Name: CTJV Thimble Shoals Parallel Tunnel Island No. Island 1

Areas Observed: NW of Island 1 Upland Pile Driving ____ In-Water Pile Driving X

Air Temp: 89°F Water Temp: 80.8°F Wave Height 1.0ft Beaufort Sea State 3

Weather Conditions: Sunny, windy (11.7 kts)

Percent Cloud Cover: 10% Percent Glare: 0 Visibility Issues: None

Animal Location & Distance to Pile Driving: NW of Island 1, 450m from temp dock
Type of Pile Driving Continuous (vibratory)
Distance From Observer When Initially Observed: ~500m
Species Observed: Bottlenose dolphin
Number of Animals Sighted (include age classes): 1 adult
Sex of Animals Observed: Unknown
Animal Behaviors Observed: Traveling
Animal Heading/Direction: E
Human Activities in Area: None

Shutdown Information

Time Begin:	
Time End:	
Total Down Time (mins):	

Shutdown # for the day: N/A

Video or Photograph Taken?: (No) Yes

Brief Description of Footage or Photograph: ____

Notes: One adult dolphin sighted 450m from temporary dock. Initially observed to be possibly feeding, then headed E and was not seen again

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Nichole Pierce

Observer Name / Sig

Made with Scanner for Me

Daily Marine Mammal Observer Report

Contractor: CTJV / Dragados	Project Name: CTJV Parallel Thimble Shoals Tunnel
NOAA/NMFS Permit: IHA March 2020	Observer Location (Island #):
Date: 08/26/2020	Shift Start: 0636
Sunrise: 0630 Sunset: 1940	Shift End: 18:15

Weather and Visibility Information

Location	Time	Air Temp (F)	Water Temp (F)	Visibility (Good, Fair, Poor)	Cloud Cover (%)	Wave Height (ft)	Wind Speed & Direction	Precipitation	Beaufort Scale
Island 1	0802	78	82	Good	5	2.3	13Kt, SSW	None	3
Island 1	1230	80	83	Good	0	1.6	8Kt, SSW	None	2

Observer Log

Time	Notes: (pre-watch times, start and stop times for pile driving activities, shift changes, human activities)
0636	Catch Ride
0653	Arrive on Island 1
0700	Morning meetings, shown Drive 2 with DTH. Vince may drive later
1027	Walk around Island
1032	Begin Watch, Ben on Pier Nichole at North End
1108	Begin Hitting West Pile w/ Soft start, Bubble Curtain on.
1113	Hitting at Normal Interval
1124	Finish West Pile. Setting up on East Pile
1141	Begin hitting East Pile at normal interval. Bubble Curtain on.
1151	Finish East Pile, Begin Post Watch
1221	Finish Post Watch
1425	Begin Watch for Vince's crew on temporary dock. MMO's on Pier.
1442	9 Dolphins spotted 700m from temp dock. Last seen 1.5Km W of dock heading W at 1456
1458	3 dolphins spotted 350m N of temp dock. Last seen at 1505 750m W of temp dock heading W.
1523	Begin hitting 1st Pile w/ soft start
1534	Hitting at Normal interval
1542	Finish 1st Pile. Watch Continues
1600	3 Navy Hovercraft traveling W to E in channel
1629	Begin hitting at Normal Interval - 2nd Pile, No soft start
1638	Finish 2nd Pile, Watch continues
1701	Begin Hitting 3rd Pile at Normal interval
1712	Finish 3rd Casing, Begin Post Watch, Ben walk around P3(and).
1732	Finish Post Watch

Sighting Log

Time	Species	Total Number	# Adults	# of Juveniles	Closest Distance to Pile Driving	Activity or Behaviors	Shut down? (yes/no)	Time of Shut-down	Time of Start Up	Time last seen
1442	Bottlenose	9	9	0	N/A	Traveling	No	N/A	N/A	1456
1458	Bottlenose	3	3	0	N/A	Traveling	No	N/A	N/A	1505

Daily Summary

Species	Total Number	Takes in Zone A	Takes in Zone B	# Shut-Downs	Comments
Bottlenose	12	0	0	0	

Observer Names: Ben Fielder, Nichole Pierce

8/26/2020

Daily Marine Mammal Observer Report

Contractor: CTJV / Dragados	Project Name: CTJV Parallel Thimble Shoals Tunnel
NOAA/NMFS Permit: IHA March 2020	Observer Location (Island #):
Date:	Shift Start:
Sunrise: Sunset:	Shift End:

Weather and Visibility Information

Location	Time	Air Temp (F)	Water Temp (F)	Visibility (Good, Fair, Poor)	Cloud Cover (%)	Wave Height (ft)	Wind Speed & Direction	Precipitation	Beaufort Scale

Observer Log

Time	Notes: (pre-watch times, start and stop times for pile driving activities, shift changes, human actiivties)
1800	Catch Ride
1815	Arrive at Yard.

Sighting Log

Time	Species	Total Number	# Adults	# of Juveniles	Closest Distance to Pile Driving	Activity or Behaviors	Shut down? (yes/no)	Time of Shut-down	Time of Start Up	Time last seen

Daily Summary

Species	Total Number	Takes in Zone A	Takes in Zone B	# Shut-Downs	Comments

Observer Names: _____

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Protected Species Sighting & Shut-Down Form

Corresponding sighting # for the day: 1

Shutdown: 0 for the day

Date (DD/MM/YYYY): 26/08/2020 **Time of Initial Sighting** 1442 **Time Animals Left Area:** 1456

Project Name: CTJV Thimble Shoals Parallel Tunnel **Island No.** 1

Areas Observed: Southwest of Island 1 **Upland Pile Driving** _____ **In-Water Pile Driving** _____

Air Temp: 80°F **Water Temp:** 84°F **Wave Height** 1.3 ft **Beaufort Sea State** 1

Weather Conditions: Clear, Sunny

Percent Cloud Cover: 5 **Percent Glare:** 10 **Visibility Issues:** None

Animal Location & Distance to Pile Driving: 700m SW of temp. dock
Type of Pile Driving None Active, setting up to Impact on temp. dock
Distance From Observer When Initially Observed: 800 m S
Species Observed: Bottlenose
Number of Animals Sighted (include age classes): 9 Adults
Sex of Animals Observed: Unknown
Animal Behaviors Observed: Traveling
Animal Heading/Direction: West
Human Activities in Area: Small boat traffic

Shutdown Information

Time Begin:	
Time End:	
Total Down Time (mins):	

Shutdown # for the day: N/A

Video or Photograph Taken?: ~~No~~ Yes

Brief Description of Footage or Photograph: _____

Notes: Group of 9 dolphins first spotted 700m SW of temp. dock at 1442. Dolphins traveled west and were last seen at 1486 still heading west, approximately 1.5 km from temp. dock

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Ben Fielder

Observer Name / Signature

Protected Species Sighting & Shut-Down Form

Corresponding sighting # for the day: 2

Shutdown: _____ for the day

Date (DD/MM/YYYY): 26/08/2029 Time of Initial Sighting 1458 Time Animals Left Area: 1505

Project Name: CTJV Thimble Shoals Parallel Tunnel Island No. 1

Areas Observed: North + West of Island 1 Upland Pile Driving _____ In-Water Pile Driving _____

Air Temp: 80°F Water Temp: 84°F Wave Height 1.3ft Beaufort Sea State 1

Weather Conditions: Sunny, Clear

Percent Cloud Cover: 5 Percent Glare: 0 Visibility Issues: None

Animal Location & Distance to Pile Driving: 350m NW of temp. Dock
Type of Pile Driving None Active
Distance From Observer When Initially Observed: 200m North
Species Observed: Bottlenose
Number of Animals Sighted (include age classes): 3 Adults
Sex of Animals Observed: Unknown
Animal Behaviors Observed: Traveling
Animal Heading/Direction: West
Human Activities in Area: Small ship traffic

Shutdown Information

Time Begin:	
Time End:	
Total Down Time (mins):	

Shutdown # for the day: N/A

Video or Photograph Taken?: (No) Yes

Brief Description of Footage or Photograph: _____

Notes: Dolphins first spotted just North of Island 1, 350m NW of temp dock. Dolphins continued West and were last seen at 1505, 750 ft west of temp dock.

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REMSA MESO

Ben Fielder

Observer Name / Signature

Incorrectly Dated: 8/28/2020

Daily Marine Mammal Observer Report

Contractor: CTJV / Dragados	Project Name: CTJV Parallel Thimble Shoals Tunnel
NOAA/NMFS Permit: IHA March 2020	Observer Location (Island #):
Date: 08/22/2020	Shift Start: 1021
Sunrise: 0632 Sunset: 1938	Shift End: 1301

Weather and Visibility Information

Location	Time	Air Temp (F)	Water Temp (F)	Visibility (Good, Fair, Poor)	Cloud Cover (%)	Wave Height (ft)	Wind Speed & Direction	Precipitation	Beaufort Scale
Island 1	1105	81	82	Good	80	1.5	6Kt W	None	2

Observer Log

Time	Notes: (pre-watch times, start and stop times for pile driving activities, shift changes, human actiivties)
1021	Eaten Ride
1038	Arrive on Island 1. Shawn's Crew doing 48hr Restrike
1047	Take walk around Island
1051	Begin Watch. Erica on Pier, Ben at North End.
1112	Group of 12 Bottlenose Dolphins spotted 600m north of the trestle, traveling East. Last seen at 1122, 2km East of Island 1, still traveling East
1138	Begin hitting West Pile w/ soft start. Bubble Curtain active
1146	Begin hitting at normal interval.
1147	Finish hitting West Pile. Begin setting up on East Pile
1207	Begin hitting East Pile at normal interval. Bubble curtain active
1209	Finish East Pile, begin Post watch
1239	Finish Post watch, take final walk around the island
1245	Eaten Ride to yard
1301	Arrive at yard

Sighting Log

Time	Species	Total Number	# Adults	# of Juveniles	Closest Distance to Pile Driving	Activity or Behaviors	Shut down? (yes/no)	Time of Shut-down	Time of Start Up	Time last seen

Daily Summary

Species	Total Number	Takes in Zone A	Takes in Zone B	# Shut-Downs	Comments

Observer Names: Ben Fielder, Erica Wolff

REMSA, Inc. 142 W Queeens Way Hampton, VA 23669
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Protected Species Sighting & Shut-Down Form

Corresponding sighting # for the day: 1 2/2

Shutdown: N/A for the day

Date (DD/MM/YYYY): 28/08/2020 **Time of Initial Sighting** 1112 **Time Animals Left Area:** 1122

Project Name: CTJV Thimble Shoals Parallel Tunnel **Island No.** 1

Areas Observed: North + East of Island 1 **Upland Pile Driving** _____ **In-Water Pile Driving** _____

Air Temp: _____ **Water Temp:** _____ **Wave Height** _____ **Beaufort Sea State** _____

Weather Conditions: _____

Percent Cloud Cover: _____ **Percent Glare:** _____ **Visibility Issues:** _____

Animal Location & Distance to Pile Driving: North of Island 1, Mid-channel, 600m from trestle
Type of Pile Driving None Active
Distance From Observer When Initially Observed: 750 m
Species Observed: Bottlenose Dolphin
Number of Animals Sighted (include age classes): 12 Adults
Sex of Animals Observed: Unknown
Animal Behaviors Observed: Traveling
Animal Heading/Direction: East
Human Activities in Area: Light, small boat traffic

Shutdown Information

Time Begin:	
Time End:	
Total Down Time (mins):	

Shutdown # for the day: N/A

Video or Photograph Taken?: (No) Yes

Brief Description of Footage or Photograph: _____

Notes: Group of 12 Dolphins spotted Mid Channel, North of Island 1. Dolphins were traveling East and Approximately 600m from the end of the trestle. Dolphins continued East and were last seen about 2km East of Island 1

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124 W. Queens Way
Hampton, VA 23669
(757)722-0113

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Ben Fielder

Observer Name / Signature

Daily Marine Mammal Observer Report

Contractor: CTJV / Dragados	Project Name: CTJV Parallel Thimble Shoals Tunnel
NOAA/NMFS Permit: IHA March 2020	Observer Location (Island #): 1
Date: 03/09/2020	Shift Start: 11:35
Sunrise: 0638 Sunset: 1929	Shift End: 1726

Weather and Visibility Information

Location	Time	Air Temp (F)	Water Temp (F)	Visibility (Good, Fair, Poor)	Cloud Cover (%)	Wave Height (ft)	Wind Speed & Direction	Precipitation	Beaufort Scale
Island 1	1226	88	72	Good	90%	1ft	6mph SW	Ø	2
Island 1	1726	91	72	Good	90%	1ft	11mph SW	Ø	3

Observer Log

Time	Notes: (pre-watch times, start and stop times for pile driving activities, shift changes, human actiivties)
1135	Got on Van
1150	Arrived on Island
1215	Did walk around the island
1410	start pre-watch
1425	Maersk Seville passing mid channel W to E container ship
1531	Container ship Maersk Towa passing E to W in mid-channel
1539	Container ship Northern Debonair passing E to W in mid-channel
1626	stopped casing drilling
1645	Tanker Evergreen State passing E to W in mid-channel
1656	end post watch
1702	end day island walk
1711	leave island
1726	get off van
1440	Start of casing drive

Sighting Log

Time	Species	Total Number	# Adults	# of Juveniles	Closest Distance to Pile Driving	Activity or Behaviors	Shut down? (yes/no)	Time of Shut-down	Time of Start Up	Time last seen

Daily Summary

Species	Total Number	Takes in Zone A	Takes in Zone B	# Shut-Downs	Comments

Observer Names: Erica and Nichole

Daily Marine Mammal Observer Report

Contractor: CTJV / Dragados	Project Name: CTJV Parallel Thimble Shoals Tunnel
NOAA/NMFS Permit: IHA March 2020	Observer Location (Island #):
Date: 04/09/2020	Shift Start: 0638
Sunrise: 0640 Sunset: 1928	Shift End: 1548

Weather and Visibility Information

Location	Time	Air Temp (F)	Water Temp (F)	Visibility (Good, Fair, Poor)	Cloud Cover (%)	Wave Height (ft)	Wind Speed & Direction	Precipitation	Beaufort Scale
Island 1	726	86	72	Good	10%	2ft	6mph NW	0	2
Island 1	1528	90	72	Good	10%	1ft	10mph ME	0	3

Observer Log

Time	Notes: (pre-watch times, start and stop times for pile driving activities, shift changes, human actiivties)
0630	Get on Van
0655	Arrive on Island
0710	Walk around Island
0850	Navy vessel 41 passing mid-channel E to W
0859	Start 30 minute pre watch
0929	Casing drive start
0934	Casing drive stop
0949	Container ship Albert Maersk passing mid-channel E to W
0955	Container ship MSC VIDHI passing mid-channel E to W
1004	end 30 minute post watch
1007	Erica spots four adult Dolphins traveling East at 800m last seen 1010
1014	Tanker Stengeb passing mid-channel E to W
1012	Start 30 minute pre watch
1036	Navy sub passing midchannel E to W
1042	Start of casing drive
1107	US Navy vessel 196 passing mid-channel E to W
1120	Tanker passing mid-channel E to W
1127	US Navy vessel 17 passing mid-channel W to E
1135	Casing drive stop
1205	End 30 minute post watch
1257	US Sub passing mid-channel W to E
1319	Start 30 minute post watch
1330	Cassandra spots three Dolphins traveling West at 700m last seen 1337
1349	Casing drive starts
1458	Casing drive ends

Sighting Log

Time	Species	Total Number	# Adults	# of Juveniles	Closest Distance to Pile Driving	Activity or Behaviors	Shut down? (yes/no)	Time of Shut-down	Time of Start Up	Time last seen
1007	T. truncatus	4	4		800m	Traviling	no	N/A	N/A	1010
1331	T. truncatus	3	3		700m	Traviling	no	N/A	N/A	1337

Daily Summary

Species	Total Number	Takes in Zone A	Takes in Zone B	# Shut-Downs	Comments
T. truncatus	7	0	0	0	

Observer Names: Erica Wolff and Cassandra Dahl

Daily Marine Mammal Observer Report

Contractor: CTJV / Dragados	Project Name: CTJV Parallel Thimble Shoals Tunnel
NOAA/NMFS Permit: IHA March 2020	Observer Location (Island #):
Date: 9/4/2020	Shift Start:
Sunrise: Sunset:	Shift End:

Weather and Visibility Information

Location	Time	Air Temp (F)	Water Temp (F)	Visibility (Good, Fair, Poor)	Cloud Cover (%)	Wave Height (ft)	Wind Speed & Direction	Precipitation	Beaufort Scale

Observer Log

Time	Notes: (pre-watch times, start and stop times for pile driving activities, shift changes, human actiivties)
1528	End 30 minute post watch
1530	off Island
1548	get off van

Sighting Log

Time	Species	Total Number	# Adults	# of Juveniles	Closest Distance to Pile Driving	Activity or Behaviors	Shut down? (yes/no)	Time of Shut-down	Time of Start Up	Time last seen

Daily Summary

Species	Total Number	Takes in Zone A	Takes in Zone B	# Shut-Downs	Comments

Observer Names: _____

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Protected Species Sighting & Shut-Down Form

Corresponding Sighting # for the Day: ~~04/09/2020~~ #1 Shutdown # for the Day: N/A

Date (DD/MM/YYYY): 04/09/2020 **Time of Initial Sighting** 1007 **Time Animals Left Area:** 1010

Project Name: CTJV Thimble Shoals Parallel Tunnel **Island No.** 1

Areas Observed: Island 1 **Upland Pile Driving** _____ **In-Water Pile Driving** _____

Air Temp: 90°F **Water Temp:** 83°F **Wave Height** 0.5 ft **Beaufort Sea State** 1

Weather Conditions: Clear

Percent Cloud Cover: 10 **Percent Glare:** 1 **Visibility Issues:** Distance

Animal Location & Distance to Pile Driving: Located a little pasoed 800m
Type of Pile Driving none occuring at time of sighting
Distance From Observer When Initially Observed: 800m
Species Observed: T. truncatus
Number of Animals Sighted (include age classes): four all adults
Sex of Animals Observed: unknown
Animal Behaviors Observed: Traveling
Animal Heading/Direction: East
Human Activities in Area: none

Shutdown Information

Time Begin:	
Time End:	
Total Down Time (mins):	

Shutdown # for the day: _____

Video or Photograph Taken?: (No) Yes

Brief Description of Footage or Photograph: N/A

Notes: Animals first sighted about 800m from observers location. Animals were traveling east at time of observation. Made two surfacings than made a dive. Could not relocate on next breathing interval. Last sighted at 1010

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REMSA MESO

Erica Wolff Erica Wolff
Observer Name / Signature

Protected Species Sighting & Shut-Down Form

Corresponding sighting # for the day: 2

Shutdown: N/A for the day

Date (DD/MM/YYYY): 04/09/2020 **Time of Initial Sighting** 1331 **Time Animals Left Area:** 1337

Project Name: CTJV Thimble Shoals Parallel Tunnel **Island No.** one

Areas Observed: Island 1 **Upland Pile Driving** _____ **In-Water Pile Driving** _____

Air Temp: 90.0°F **Water Temp:** 83.0°F **Wave Height** 0.5 **Beaufort Sea State** 1

Weather Conditions: Clear

Percent Cloud Cover: 10 **Percent Glare:** 1 **Visibility Issues:** Distance

Animal Location & Distance to Pile Driving: Located mid channel approx. 700m away.
Type of Pile Driving Casing
Distance From Observer When Initially Observed: 500m
Species Observed: T. truncatus
Number of Animals Sighted (include age classes): 3
Sex of Animals Observed: Unknown
Animal Behaviors Observed: traveling
Animal Heading/Direction: West
Human Activities in Area: Recreational vessel observed in same area. Vessel passed the dolphins heading east. Dolphins not spotted again after vessel

Shutdown Information

Time Begin:	
Time End:	
Total Down Time (mins):	

Shutdown # for the day: N/A

Video or Photograph Taken?: (No) Yes

Brief Description of Footage or Photograph: N/A

Notes: Animals first spotted ~500m mid channel heading east while the project was driving a casing for a pile. Animals did not appear affected by the construction. The 3 Animals last spotted ~700 m away still transiting east until a recreational vessel passed them and they weren't sighted again.

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Cassandra Dahl /

Observer Name / Signature

Daily Marine Mammal Observer Report

Contractor: CTJV / Dragados	Project Name: CTJV Parallel Thimble Shoals Tunnel
NOAA/NMFS Permit: IHA March 2020	Observer Location (Island #):
Date: 03/04/2020	Shift Start: 1145
Sunrise: 0642 Sunset: 1920	Shift End: 1858

Weather and Visibility Information

Location	Time	Air Temp (F)	Water Temp (F)	Visibility (Good, Fair, Poor)	Cloud Cover (%)	Wave Height (ft)	Wind Speed & Direction	Precipitation	Beaufort Scale
Island	1020	79	72	Good	90%	3ft	19kt E	Ø	5
Island	1840	79	72	poor	100%	3ft	17kt E	yes	5

Observer Log

Time	Notes: (pre-watch times, start and stop times for pile driving activities, shift changes, human actiivties)
1159	Get on Van
1220	Arrive on Island
1229	Walk around Island
1427	US Navy ship 67 passing mid channel W to E
1603	US Navy ship 189 passing mid channel W to E
1638	Start 30 minute pre watch
1708	East side pile drive soft start
1753	pile drive paused to fix coupling
1811	pile drive started back up
1822	pile drive end
1842	end post watch because of heavy rain
1844	off Island
1858	off van

Sighting Log

Time	Species	Total Number	# Adults	# of Juveniles	Closest Distance to Pile Driving	Activity or Behaviors	Shut down? (yes/no)	Time of Shut-down	Time of Start Up	Time last seen
	N/A									

Daily Summary

Species	Total Number	Takes in Zone A	Takes in Zone B	# Shut-Downs	Comments
N/A					

Observer Names: Erica, Nichole

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Daily Marine Mammal Observer Report

Contractor: CTJV / Dragados	Project Name: CTJV Parallel Thimble Shoals Tunnel
NOAA/NMFS Permit: IHA March 2020	Observer Location (Island #):
Date: 10/09/2020	Shift Start: 0937
Sunrise: 0643 Sunset: 1918	Shift End: 1800

Weather and Visibility Information

Location	Time	Air Temp (F)	Water Temp (F)	Visibility (Good, Fair, Poor)	Cloud Cover (%)	Wave Height (ft)	Wind Speed & Direction	Precipitation	Beaufort Scale
Island 1	1003	77	72	Good	100%	2ft	SE 11Kf	Yes	
Island 1	1735	82	72	Good	75%	0ft	SE 7mph	yes	

Observer Log

Time	Notes: (pre-watch times, start and stop times for pile driving activities, shift changes, human actiivties)
0937	Get on the Van
0955	On Island
1134	Get on bus and leave Island for lunch meeting
1311	Back on Island
1413	Seamelody container ship passing mid-channel W to E
1423	Walk around Island
1520	US Navy ship 74 passing mid-channel E/W to E
1532	Taizhou Pioneer tanker passing mid-channel E to W
1611	Start of 30 minute pre watch
1641	Soft Start
1708	Pile driving stop
1738	end 30 minute post watch
1740	end shift walk around Island
1748	off Island
1800	arrive at parking area

Sighting Log

Time	Species	Total Number	# Adults	# of Juveniles	Closest Distance to Pile Driving	Activity or Behaviors	Shut down? (yes/no)	Time of Shut-down	Time of Start Up	Time last seen
	N/A									

Daily Summary

Species	Total Number	Takes in Zone A	Takes in Zone B	# Shut-Downs	Comments
N/A					

Observer Names: Erica and Nichole

Daily Marine Mammal Observer Report

Contractor: CTJV / Dragados	Project Name: CTJV Parallel Thimble Shoals Tunnel
NOAA/NMFS Permit: IHA March 2020	Observer Location (Island #):
Date: 11/09/2020	Shift Start: 0633
Sunrise: 0644 Sunset: 1917	Shift End: 1208

Weather and Visibility Information

Location	Time	Air Temp (F)	Water Temp (F)	Visibility (Good, Fair, Poor)	Cloud Cover (%)	Wave Height (ft)	Wind Speed & Direction	Precipitation	Beaufort Scale
Island 1	0731	77	72	good	90%	2ft	6mph WNW	ø	
Island 1	1134	79	72	Good	90%	2ft	11mph N	yes	

Observer Log

Time	Notes: (pre-watch times, start and stop times for pile driving activities, shift changes, human actiivties)
0633	Arrive on yard and get on Van
0650	Arrive on Island
0729	Walk around Island
0816	Isaan Kalkavan container ship passing mid-channel W to E
1006	Aristomenis container ship passing mid-channel W to E
1034	Start of 30 minute pre watch
1104	Start of soft start pile drive
1121	Adventure oil tanker passing mid-channel W to E
1126	End of pile drive
1156	End of 30 minute post watch
1158	off Island
1208	Arrive back at yard

Sighting Log

Time	Species	Total Number	# Adults	# of Juveniles	Closest Distance to Pile Driving	Activity or Behaviors	Shut down? (yes/no)	Time of Shut-down	Time of Start Up	Time last seen
	N/A									

Daily Summary

Species	Total Number	Takes in Zone A	Takes in Zone B	# Shut-Downs	Comments
N/A					

Observer Names: Erica, Sabrina

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Daily Marine Mammal Observer Report

Contractor: CTJV / Dragados	Project Name: CTJV Parallel Thimble Shoals Tunnel
NOAA/NMFS Permit: IHA March 2020	Observer Location (Island #):
Date: 09/17/2020	Shift Start: 0945
Sunrise: 0650 Sunset: 1907	Shift End: 1751

Weather and Visibility Information

Location	Time	Air Temp (F)	Water Temp (F)	Visibility (Good, Fair, Poor)	Cloud Cover (%)	Wave Height (ft)	Wind Speed & Direction	Precipitation	Beaufort Scale
Island 1	1100	75.0	76.0	Poor	100%.	2.0	10.0KtsSSE	Heavy	2
Island 1	1430	70.9	76.0	Fair	100%.	4.0	8.9KtsENE	Light	4

Observer Log

Time	Notes: (pre-watch times, start and stop times for pile driving activities, shift changes, human actiivties)
0945	Arrived at Parking lot/ Get on van
1012	Arrive on Island
~~1050~~ 1021	Walk ground Island
~~1051~~ 1050	Start 30 min pre-watch observations
1051	Navy Ship traffic traveling West to East
1108	Waiting on survey equipment (weather delay)
1117	Ship traffic (Navy vessel) traveling east to west
1128	Start pile driving
1139	Stop pile driving
1140	Navy ship traffic traveling west to east
1206	Navy Ship traffic traveling east to west
1231	Cargo vessel traveling east to west
1312	Start pile driving
1322	Stop pile driving
1349	Cargo vessel traveling East to West
1400	End 30 min post watch
1410	Start 30 min pre watch
1443	Pile driving starts
1451	Tanker traveling East to west
1706	End pile driving
1736	End 30 min post watch
1738	Left Island
1751	Arrive back at parking lot

Sighting Log

Time	Species	Total Number	# Adults	# of Juveniles	Closest Distance to Pile Driving	Activity or Behaviors	Shut down? (yes/no)	Time of Shut-down	Time of Start Up	Time last seen
1639	Unidentified Sea turtle	01	01	0	125 m	deceased	NO	N/A	N/A	1644

Daily Summary

Species	Total Number	Takes in Zone A	Takes in Zone B	# Shut-Downs	Comments
Unidentified Sea turtle	01	0	0	0	decayed carcass floated past work site.

Observer Names: Cassandra Dahl & Sabrina Dahl

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Protected Species Sighting & Shut-Down Form

Corresponding sighting # for the day: 1

Shutdown: N/A for the day

Date (DD/MM/YYYY): 09-17-2020 **Time of Initial Sighting** 1639 **Time Animals Left Area:** 1644

Project Name: CTJV Thimble Shoals Parallel Tunnel **Island No.** 1

Areas Observed: South of Pier **Upland Pile Driving** ____ **In-Water Pile Driving** X

Air Temp: 70.9 **Water Temp:** 76.0 **Wave Height** 4.0 **Beaufort Sea State** 4

Weather Conditions: cloudy, light rain at time of incident

Percent Cloud Cover: 100 **Percent Glare:** 10 **Visibility Issues:** FOG

Animal Location & Distance to Pile Driving: 125 meters
Type of Pile Driving DTH
Distance From Observer When Initially Observed: 20 meters
Species Observed: Sea Turtle Unidentified
Number of Animals Sighted (include age classes): 1
Sex of Animals Observed: unknown
Animal Behaviors Observed: Deceased and floating
Animal Heading/Direction: South towards Chic's Beach
Human Activities in Area: Navy Ship traffic and recreational anglers

Shutdown Information

Time Begin:	N/A
Time End:	N/A
Total Down Time (mins):	N/A

Shutdown # for the day: N/A

Video or Photograph Taken?: No (Yes)

Brief Description of Footage or Photograph: Zoomed in iPhone photo of carcass floating at surface

Notes: large wound on dorsal forward carapace, possibly a strike noticably decayed floating South from Pier towards Chic's Beach. Stranding team notified, Carcass floated out of work site unaffected

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Sabrina Dahl Sabrina Dahl
Observer Name / Signature
Cassandra Dahl

Daily Marine Mammal Observer Report

Contractor: CTJV / Dragados	Project Name: CTJV Parallel Thimble Shoals Tunnel
NOAA/NMFS Permit: IHA March 2020	Observer Location (Island #):
Date: 09/21/2020	Shift Start: 0630
Sunrise: 0651 Sunset: 1902	Shift End: 1510

Weather and Visibility Information

Location	Time	Air Temp (F)	Water Temp (F)	Visibility (Good, Fair, Poor)	Cloud Cover (%)	Wave Height (ft)	Wind Speed & Direction	Precipitation	Beaufort Scale
Island 1	0710	63	71	Good	100%	4.9	23kt SW	None	6
Island 1	1310	64	71	Good	90%	5.2	20kt SW	None	5

Observer Log

Time	Notes: (pre-watch times, start and stop times for pile driving activities, shift changes, human actiivties)
0630	Catch Ride
0653	Arrive on Island 1
0700	Meet w/ Vince's crew, Drilling 1 casing w/ DTH
1050	Walk around Island.
1100	Begin watch on pier
1133	Container Ship traveling E to W in channel
1229	Container Ship traveling E to W in channel
1413	Begin Drilling Casing
1419	Finish Casing. Begin Post Watch
1449	Finish Post Watch. ~~Begin~~ Take walk around Island
1456	Catch Bus
1510	Arrive at Yard

Sighting Log

Time	Species	Total Number	# Adults	# of Juveniles	Closest Distance to Pile Driving	Activity or Behaviors	Shut down? (yes/no)	Time of Shut-down	Time of Start Up	Time last seen

Daily Summary

Species	Total Number	Takes in Zone A	Takes in Zone B	# Shut-Downs	Comments

Observer Names: Ben Fielder, Erica Wolff

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Daily Marine Mammal Observer Report

Contractor: CTJV / Dragados	Project Name: CTJV Parallel Thimble Shoals Tunnel
NOAA/NMFS Permit: IHA March 2020	Observer Location (Island #):
Date: 09/23/2020	Shift Start: 0630
Sunrise: 0653 Sunset: 1859	Shift End: 1555

Weather and Visibility Information

Location	Time	Air Temp (F)	Water Temp (F)	Visibility (Good, Fair, Poor)	Cloud Cover (%)	Wave Height (ft)	Wind Speed & Direction	Precipitation	Beaufort Scale
Island 1	1100	66	69	Good	20	3.0	8kt SE	None	2.5

Observer Log

Time	Notes: (pre-watch times, start and stop times for pile driving activities, shift changes, human actiivties)
0630	Catch Bus
0656	Arrive at Island 1
0700	Meet w/ Vince's crew - Plan to drive 4 w/ Impact Hammer
1050	Take Walk around Island
1100	Begin Watch on Pier
1133	USNS 69 W to E
1145	Start Driving 1st Pile w/ Soft Start
1150	Start Hitting at normal interval
1152	Pause hitting
1157	Resume hitting at normal interval
1210	Finish 1st Pile, watch continues
1319	Begin Driving 2nd Pile w/ Soft start
1323	Begin hitting at normal interval
1334	Finish 2nd Pile, Watch continues
1403	Begin Driving 3rd Pile at normal interval
1410	Finish 3rd Pile Watch continues
1450	Begin Driving 4th pile w/ soft start
1453	Begin hitting at normal interval
1502	Finish 4th Pile, Begin Post watch
1532	Finish Post Watch, Take Walk around island.
1540	Catch Ride
1555	Arrive at Yard

Sighting Log

Time	Species	Total Number	# Adults	# of Juveniles	Closest Distance to Pile Driving	Activity or Behaviors	Shut down? (yes/no)	Time of Shut-down	Time of Start Up	Time last seen

Daily Summary

Species	Total Number	Takes in Zone A	Takes in Zone B	# Shut-Downs	Comments

Observer Names: Ben Fielder, [redacted] Nichole Pierce

Daily Marine Mammal Observer Report

Contractor: CTJV / Dragados	Project Name: CTJV Parallel Thimble Shoals Tunnel
NOAA/NMFS Permit: IHA March 2020	Observer Location (Island #):
Date: 04/11/2020	Shift Start: 1130
Sunrise: Sunset: 1704	Shift End: 1736

Weather and Visibility Information

Location	Time	Air Temp (F)	Water Temp (F)	Visibility (Good, Fair, Poor)	Cloud Cover (%)	Wave Height (ft)	Wind Speed & Direction	Precipitation	Beaufort Scale
Island 2	1210	64	53	Good	5%	2ft	E 7mph	Ø	2
Island 2	1706	63	53	Good	5%	2ft	E 7mph	Ø	2

Observer Log

Time	Notes: (pre-watch times, start and stop times for pile driving activities, shift changes, human actiivties)
1130	Arrive at parking lot
1210	Arrive on Island
1505	Bottlenose Dolphins spotted 500m from pile driver heading west last seen 1522
1510	Start pre-watch
1544	start pile drive
1601	pile drive passed to weld off brackets
1624	pile drive starts again
1636	end pile drive and start of post watch
1706	end post watch
1736	Arrive back at parking lot

Sighting Log

Time	Species	Total Number	# Adults	# of Juveniles	Closest Distance to Pile Driving	Activity or Behaviors	Shut down? (yes/no)	Time of Shut-down	Time of Start Up	Time last seen
1505	T. truncatus	10	10	Ø	500m	travel/feeding	no	n/A	n/A	1522
1519	T. truncatus	6	4	2	150m	travel/feeding	no	n/A	n/A	1522

Daily Summary

Species	Total Number	Takes in Zone A	Takes in Zone B	# Shut-Downs	Comments
T. truncatus	16	Ø	Ø	Ø	

Observer Names: Erica Wolff Nichole Pierce

Protected Species Sighting & Shut-Down Form

Corresponding sighting # for the day: 1

Shutdown: Ø for the day

Date (DD/MM/YYYY): 04/11/2020 **Time of Initial Sighting** 1505 **Time Animals Left Area:** 1522

Project Name: CTJV Thimble Shoals Parallel Tunnel **Island No.** 2

Areas Observed: West side **Upland Pile Driving** 1 **In-Water Pile Driving** ____

Air Temp: 63 **Water Temp:** 53 **Wave Height** 2ft **Beaufort Sea State** 2

Weather Conditions: Sunny

Percent Cloud Cover: 5% **Percent Glare:** 10% **Visibility Issues:** sunglare off to the left

Animal Location & Distance to Pile Driving: first group 500m from pile second group 150m
Type of Pile Driving upland pile driving
Distance From Observer When Initially Observed: 500m for first group 150m for second group
Species Observed: Bottlenose Dolphins (Tursiops truncatus)
Number of Animals Sighted (include age classes): 14 adults 2 juveniles 16 total
Sex of Animals Observed: unknows
Animal Behaviors Observed: traveling and feeding
Animal Heading/Direction: west / north west
Human Activities in Area: N/A

Shutdown Information

Time Begin:	
Time End:	
Total Down Time (mins):	

Shutdown # for the day: Ø

Video or Photograph Taken?: (No) Yes

Brief Description of Footage or Photograph: N/A

Notes: Group of six Bottlenose Dolphins sighted 500m from pile driver. First sighted traveling southwest where they stopped at channel edge and milled around than changed directions to travel in a northwest direction. At 1519 first group was than joined by another group of six individuals as they traveled in a northwest direction. All animals than milled about feeding about 1 mile out before traveling beyond visual contact at 1522.

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Erica Wolff Nichole Pierce

Observer Name / Signature

Daily Marine Mammal Observer Report

Contractor: CTJV / Dragados	Project Name: CTJV Parallel Thimble Shoals Tunnel
NOAA/NMFS Permit: IHA March 2020	Observer Location (Island #):
Date: 05/11/2020	Shift Start: 0630
Sunrise: 0635 Sunset: 1703	Shift End: 1259

Weather and Visibility Information

Location	Time	Air Temp (F)	Water Temp (F)	Visibility (Good, Fair, Poor)	Cloud Cover (%)	Wave Height (ft)	Wind Speed & Direction	Precipitation	Beaufort Scale
Island 2	0649	52	53	Good	10%	1ft	NW 1mph	Ø	1
Island 2	1232	72	53	Good	10%	1ft	E 7mph	Ø	2

Observer Log

Time	Notes: (pre-watch times, start and stop times for pile driving activities, shift changes, human actiivties)
0630	Arrive at parking lot
0649	Arrive on island
1016	pre watch start
1046	Pile drive start
1103	pause in pile drive to weld off brackets
1150	pile drive start
1202	stop of pile drive and start of post watch
1232	end post watch
1235	off island
1259	Arrive back at parking lot

Sighting Log

Time	Species	Total Number	# Adults	# of Juveniles	Closest Distance to Pile Driving	Activity or Behaviors	Shut down? (yes/no)	Time of Shut-down	Time of Start Up	Time last seen

Daily Summary

Species	Total Number	Takes in Zone A	Takes in Zone B	# Shut-Downs	Comments

Observer Names: Miranda Sharpe Erica Wolff

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Daily Marine Mammal Observer Report

Contractor: CTJV / Dragados	Project Name: CTJV Parallel Thimble Shoals Tunnel
NOAA/NMFS Permit: IHA March 2020	Observer Location (Island #): Island 2
Date: 11/6/2020	Shift Start: 1115
Sunrise: 0638 Sunset: 1702	Shift End: 1635

Weather and Visibility Information

Location	Time	Air Temp (F)	Water Temp (F)	Visibility (Good, Fair, Poor)	Cloud Cover (%)	Wave Height (ft)	Wind Speed & Direction	Precipitation	Beaufort Scale
Island 2	1335	65°F	50.7F	Poor	100%	1.4ft	SSE 11.7kts	0%	4

Observer Log

Time	Notes: (pre-watch times, start and stop times for pile driving activities, shift changes, human actiivties)
1115	Meet at yard
1140	Arrive on Island 2 - No seals present
1335	Pre-watch begins. Very dense fog. Visibility ~ 50m around pile
1350	QC check
1425	Begin driving. Visibility improving. Est. ~500m around pile
1438	Stopped driving. Removing brackets from pile
1523	Resume driving - no animals spotted during break. Visibility now 100%
1532	Driving complete. Begin post-watch
1602	End watch. No mammals sighted.
1635	Arrive at yard

Sighting Log

Time	Species	Total Number	# Adults	# of Juveniles	Closest Distance to Pile Driving	Activity or Behaviors	Shut down? (yes/no)	Time of Shut-down	Time of Start Up	Time last seen

Daily Summary

Species	Total Number	Takes in Zone A	Takes in Zone B	# Shut-Downs	Comments

Observer Names: Nichole Pierce Erica Wolff

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Daily Marine Mammal Observer Report

Contractor: CTJV / Dragados	Project Name: CTJV Parallel Thimble Shoals Tunnel
NOAA/NMFS Permit: IHA March 2020	Observer Location (Island #): Island 2
Date: 11/16/2020	Shift Start: 0630
Sunrise: 0645 Sunset: 1655	Shift End:

Weather and Visibility Information

Location	Time	Air Temp (F)	Water Temp (F)	Visibility (Good, Fair, Poor)	Cloud Cover (%)	Wave Height (ft)	Wind Speed & Direction	Precipitation	Beaufort Scale
Island 2	[redacted]	54	49.8	Good	0%	6.2 ft	SW 17.5 Kts	0%	5
	0655								

Observer Log

Time	Notes: (pre-watch times, start and stop times for pile driving activities, shift changes, human actiivties)
0630	Meet at yard
0655	Arrive on Island 2
0932	Begin 30 min pre-watch, windy, White caps
1007	Positioning Pile
1008	Stop - maintenance on crane
1105	completed maintenance
1106	Begin drilling
1213	Pause drilling. Windy. White caps
1217	Continue drilling
1254	Pause drilling
1301	Continue drilling
1404	Complete. Begin 30min post
1435	Post watch complete. No mammals sighted
1502	Back at yard

Sighting Log

Time	Species	Total Number	# Adults	# of Juveniles	Closest Distance to Pile Driving	Activity or Behaviors	Shut down? (yes/no)	Time of Shut-down	Time of Start Up	Time last seen

Daily Summary

Species	Total Number	Takes in Zone A	Takes in Zone B	# Shut-Downs	Comments

Observer Names: Nichole Pierce Erin Wolff

REMSA, Inc. 142 W Queeens Way Hampton, VA 23669
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Daily Marine Mammal Observer Report

Contractor: CTJV / Dragados	Project Name: CTJV Parallel Thimble Shoals Tunnel
NOAA/NMFS Permit: IHA March 2020	Observer Location (Island #): Island 2
Date: 11/17/2020	Shift Start: 0630
Sunrise: 0647 Sunset: 1454	Shift End: 1157

Weather and Visibility Information

Location	Time	Air Temp (F)	Water Temp (F)	Visibility (Good, Fair, Poor)	Cloud Cover (%)	Wave Height (ft)	Wind Speed & Direction	Precipitation	Beaufort Scale
Island 2	0715	41.5	49.3	Good	70%	3.3ft	15.5kts W	0%	4-6

Observer Log

Time	Notes: (pre-watch times, start and stop times for pile driving activities, shift changes, human actiivties)
0630	Meet at yard
0707	Arrive Island 2, very windy, water calm on N side
0730	Begin 30 min pre-watch
0754	Positioning pile
0824	Drilling begins. Wind gusts up to 24 kts. White caps on W side
1054	Drilling complete, begin 30 min post watch
1124	Watch complete. No sightings.
1157	Arrive at yard

Sighting Log

Time	Species	Total Number	# Adults	# of Juveniles	Closest Distance to Pile Driving	Activity or Behaviors	Shut down? (yes/no)	Time of Shut-down	Time of Start Up	Time last seen

Daily Summary

Species	Total Number	Takes in Zone A	Takes in Zone B	# Shut-Downs	Comments

Observer Names: Nicholl Pierce

REMSA, Inc. 142 W Queeens Way Hampton, VA 23669
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Daily Marine Mammal Observer Report

Contractor: CTJV / Dragados	Project Name: CTJV Parallel Thimble Shoals Tunnel
NOAA/NMFS Permit: IHA March 2020	Observer Location (Island #): Island 2
Date: 19/11/2020	Shift Start: 0700
Sunrise: 0648 Sunset: 16.52	Shift End: 16.56

Weather and Visibility Information

Location	Time	Air Temp (F)	Water Temp (F)	Visibility (Good, Fair, Poor)	Cloud Cover (%)	Wave Height (ft)	Wind Speed & Direction	Precipitation	Beaufort Scale
Island 2	0700	39	62	Good	10	1ft	SW 4mph	0	2
Island 2	1654	39	62	Good	10	1ft	SW 4mph	0	2

Observer Log

Time	Notes: (pre-watch times, start and stop times for pile driving activities, shift changes, human activities)
0700	Arrive on Island
0731	Start pre watch
0811	Drilling start on pile one
1034	Drilling stop on pile one
1104	End post watch for pile one
1315	Start 30 minute pre watch for pile two drilling
1345	Start Drilling pile two
1624	Drilling stopped on pile two
1654	End Post watch
1656	Off Island

Sighting Log

Time	Species	Total Number	# Adults	# of Juveniles	Closest Distance to Pile Driving	Activity or Behaviors	Shut down? (yes/no)	Time of Shut-down	Time of Start Up	Time last seen

Daily Summary

Species	Total Number	Takes in Zone A	Takes in Zone B	# Shut-Downs	Comments

Observer Names: Erica Wolff

REMSA, Inc. 142 W Queeens Way Hampton, VA 23669
757-722-0113

Daily Marine Mammal Observer Report

Contractor: CTJV / Dragados	Project Name: CTJV Parallel Thimble Shoals Tunnel
NOAA/NMFS Permit: IHA March 2020	Observer Location (Island #): Island 2
Date: 11/18/2020	Shift Start: 0630
Sunrise: ~~0656~~ 0648 Sunset: 1654	Shift End: 1725

Weather and Visibility Information

Location	Time	Air Temp (F)	Water Temp (F)	Visibility (Good, Fair, Poor)	Cloud Cover (%)	Wave Height (ft)	Wind Speed & Direction	Precipitation	Beaufort Scale
Island 2	1230	43	48.4	Good	20%	3ft	19.4 NNW kts	0%	5

Observer Log

Time	Notes: (pre-watch times, start and stop times for pile driving activities, shift changes, human actiivties)
0630	Left yard
0707	Arrived at Island 2
1000	High wind advisory. Unable to work
1235	Begin watch. Very Windy, High waves, white caps
1311	Begin drilling
1637	Stopped drilling. Pile moved back to land. Will start over in AM
1650	Ended watch. Too dark to see. No mammals sighted
1725	Arrive at yard

Sighting Log

Time	Species	Total Number	# Adults	# of Juveniles	Closest Distance to Pile Driving	Activity or Behaviors	Shut down? (yes/no)	Time of Shut-down	Time of Start Up	Time last seen

Daily Summary

Species	Total Number	Takes in Zone A	Takes in Zone B	# Shut-Downs	Comments

Observer Names: Nichole Pierce

REMSA, Inc. 142 W Queeens Way Hampton, VA 23669
757-722-0113

Daily Marine Mammal Observer Report

Contractor: CTJV / Dragados	Project Name: CTJV Parallel Thimble Shoals Tunnel
NOAA/NMFS Permit: IHA March 2020	Observer Location (Island #): Island 2
Date: 19/11/2020	Shift Start: 0700
Sunrise: 0648 Sunset: 16.52	Shift End: 16.56

Weather and Visibility Information

Location	Time	Air Temp (F)	Water Temp (F)	Visibility (Good, Fair, Poor)	Cloud Cover (%)	Wave Height (ft)	Wind Speed & Direction	Precipitation	Beaufort Scale
Island 2	0700	39	62	Good	10	1ft	SW 4mph	0	2
Island 2	1654	39	62	Good	10	1ft	SW 4mph	0	2

Observer Log

Time	Notes: (pre-watch times, start and stop times for pile driving activities, shift changes, human activities)
0700	Arrive on Island
0731	Start pre watch
0811	Drilling start on pile one
1034	Drilling stop on pile one
1104	End post watch for pile one
1315	Start 30 minute pre watch for pile two drilling
1345	Start Drilling pile two
1624	Drilling stopped on pile two
1654	End Post watch
1656	Off Island

Sighting Log

Time	Species	Total Number	# Adults	# of Juveniles	Closest Distance to Pile Driving	Activity or Behaviors	Shut down? (yes/no)	Time of Shut-down	Time of Start Up	Time last seen

Daily Summary

Species	Total Number	Takes in Zone A	Takes in Zone B	# Shut-Downs	Comments

Observer Names: Erica Wolff

REMSA, Inc. 142 W Queeens Way Hampton, VA 23669
757-722-0113

Daily Marine Mammal Observer Report

Contractor: CTJV / Dragados	Project Name: CTJV Parallel Thimble Shoals Tunnel
NOAA/NMFS Permit: IHA March 2020	Observer Location (Island #): Island 2
Date: 11/23/2020	Shift Start: 0630
Sunrise: 0652 Sunset: 1651	Shift End: 1650

Weather and Visibility Information

Location	Time	Air Temp (F)	Water Temp (F)	Visibility (Good, Fair, Poor)	Cloud Cover (%)	Wave Height (ft)	Wind Speed & Direction	Precipitation	Beaufort Scale
Island 2	0900	59.9	58.6	Good	40%	3ft	12 kts NNW	0%	4
Island 2	1430	55.9	59.7	Good	10%	3.6ft	25 kts N	0%	6

Observer Log

Time	Notes: (pre-watch times, start and stop times for pile driving activities, shift changes, human actiivties)
0630	Arrive at yard
0658	Leave yard
0728	Arrive Island 2
0753	Begin Watch
0842	Begin drilling
0910	Pause drilling to unload trucks
0914	Humpback whale spotted SW of Island 2, ~ 2100m
1015	Begin drilling, whale has left the area, heading North
1031	Winds at 23 kts, gusts up to 27 kts, cloudy, white caps
1223	End drilling
1405	Begin watch
1458	Begin drilling 2nd pile. Strong winds, white caps
1620	Finish for the day. Will resume in AM. No further sightings
1650	Leave Island 2

Sighting Log

Time	Species	Total Number	# Adults	# of Juveniles	Closest Distance to Pile Driving	Activity or Behaviors	Shut down? (yes/no)	Time of Shut-down	Time of Start Up	Time last seen
0914	Humpback Whale	1	Ø	1	2,000m	Breaching Fin slap Traveling	No	Ø	Ø	1004

Daily Summary

Species	Total Number	Takes in Zone A	Takes in Zone B	# Shut-Downs	Comments
Humpback	1	Ø	Ø	Ø	

Observer Names: Nicole Evans Nichole Pierce

REMSA, Inc. 142 W Queeens Way Hampton, VA 23669
757-722-0113

Protected Species Sighting & Shut-Down Form

Corresponding sighting # for the day: 1

Shutdown: Ø for the day

Date (DD/MM/YYYY): 11/23/20 **Time of Initial Sighting** 0914 **Time Animals Left Area:** 1004

Project Name: CTJV Thimble Shoals Parallel Tunnel **Island No.** Island 2

Areas Observed: SW of Island 2 **Upland Pile Driving** X **In-Water Pile Driving** _____

Air Temp: 59.5°F **Water Temp:** 58.6°F **Wave Height** 1.0ft **Beaufort Sea State** 4

Weather Conditions: Sunny, windy

Percent Cloud Cover: 60 **Percent Glare:** 0 **Visibility Issues:** White caps as wind speed increased

Animal Location & Distance to Pile Driving: SW of Island 2, approximately 2000m from Island

Type of Pile Driving DTH

Distance From Observer When Initially Observed: 2100m

Species Observed: Humpback Whale (Megaptera novaeangliae)

Number of Animals Sighted (include age classes): 1 juvenile

Sex of Animals Observed: Unknown

Animal Behaviors Observed: Breaching, traveling

Animal Heading/Direction: North

Human Activities in Area: Navy submarine with two police escorts, large cargo ship

Shutdown Information

Time Begin:	
Time End:	
Total Down Time (mins):	

Shutdown # for the day: Ø

Video or Photograph Taken?: (No) Yes

Brief Description of Footage or Photograph: _____

Notes: One juvenile Humpback spotted at 0914, breaching. The whale slowly moved North, continuing to breach and fin slap. Last seen around 1004, as it became difficult to discern white caps from the blow/fin slap.

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Nichole Pierce

Observer Name / Signature

Daily Marine Mammal Observer Report

Contractor: CTJV / Dragados	Project Name: CTJV Parallel Thimble Shoals Tunnel
NOAA/NMFS Permit: IHA March 2020	Observer Location (Island #): Island 2
Date: 11/24/2020	Shift Start: 0630
Sunrise: 0654 Sunset: 1650	Shift End: 1636

Weather and Visibility Information

Location	Time	Air Temp (F)	Water Temp (F)	Visibility (Good, Fair, Poor)	Cloud Cover (%)	Wave Height (ft)	Wind Speed & Direction	Precipitation	Beaufort Scale
Island 2	0800	48.2	57.6	Good	10%	2.6	14 kts N	0%	4
Island 2	1113	48.4	57.4	Good	70%	2.0	7 kts NNE	0%	3

Observer Log

Time	Notes: (pre-watch times, start and stop times for pile driving activities, shift changes, human actiivties)
0700	Arrive Island 2.
0723	Begin Watch for pile #1
0820	Begin drilling. Clear skies, water calm.
1000	End drilling. Begin post-watch
1030	No mammals sighted
1113	Begin watch for pile #2.
1147	Begin drilling pile #2
1225	One dolphin spotted near island. Traveling NE away from pile driving
1535	End drilling pile #2
1605	Leave Island 2. No further sightings

Sighting Log

Time	Species	Total Number	# Adults	# of Juveniles	Closest Distance to Pile Driving	Activity or Behaviors	Shut down? (yes/no)	Time of Shut-down	Time of Start Up	Time last seen
1225	Tursiops truncatus	1	1	0	250m	Traveling	No	0	0	1226

Daily Summary

Species	Total Number	Takes in Zone A	Takes in Zone B	# Shut-Downs	Comments
Tursiops truncatus	1	0	0	0	

Observer Names: Nichole Pierce Erica Wolff

Protected Species Sighting & Shut-Down Form

Corresponding sighting # for the day: Ø

Shutdown: _____ for the day

Date (DD/MM/YYYY): 11/24/20 **Time of Initial Sighting** 1225 **Time Animals Left Area:** 1226

Project Name: CTJV Thimble Shoals Parallel Tunnel **Island No.** Island 2

Areas Observed: N of Island 2 **Upland Pile Driving** X **In-Water Pile Driving** _____

Air Temp: 49.6°F **Water Temp:** 56.8°F **Wave Height** 1.4ft **Beaufort Sea State** 3

Weather Conditions: Sunny, breezy

Percent Cloud Cover: 15% **Percent Glare:** 0 **Visibility Issues:** None

Animal Location & Distance to Pile Driving: NW of Island 2, 250m from pile driving
Type of Pile Driving DTH
Distance From Observer When Initially Observed: 200m
Species Observed: Tursiops Truncatus - Bottlenose dolphin
Number of Animals Sighted (include age classes): 1, adult
Sex of Animals Observed: Unknown
Animal Behaviors Observed: Traveling
Animal Heading/Direction: NE
Human Activities in Area: None at time of sighting

Shutdown Information

Time Begin:	
Time End:	
Total Down Time (mins):	

Shutdown # for the day: Ø

Video or Photograph Taken?: (No) Yes

Brief Description of Footage or Photograph: _____

Notes: One adult dolphin was briefly sighted traveling NE. The dolphin was close to the island, estimated 250m from pile driving activity. The dolphin surfaced twice and was not seen again.

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Nichole Pierce

Observer Name / Signature

Daily Marine Mammal Observer Report

Contractor: CTJV / Dragados	Project Name: CTJV Parallel Thimble Shoals Tunnel
NOAA/NMFS Permit: IHA March 2020	Observer Location (Island #): Island 2
Date: 11/25/20	Shift Start: 0630
Sunrise: 0655 Sunset: 1650	Shift End: 1219

Weather and Visibility Information

Location	Time	Air Temp (F)	Water Temp (F)	Visibility (Good, Fair, Poor)	Cloud Cover (%)	Wave Height (ft)	Wind Speed & Direction	Precipitation	Beaufort Scale
Island 2	0800	50.7	54.9	Good	40%	1.0	7kts SSW	0%	3

Observer Log

Time	Notes: (pre-watch times, start and stop times for pile driving activities, shift changes, human actiivties)
0658	Arrive Island 2
0725	Begin watch
0820	Begin drilling
0914	Stopped
0945	Continued
0947	Dolphins spotted traveling S then through channel ~300m from pile
1040	Stopped for maintenance.
1123	Continued drilling
1149	Finished drilling pile
1219	End watch, no sightings. Leave Island 2

Sighting Log

Time	Species	Total Number	# Adults	# of Juveniles	Closest Distance to Pile Driving	Activity or Behaviors	Shut down? (yes/no)	Time of Shut-down	Time of Start Up	Time last seen
0947	Tursiops truncatus	~10	10	Ø	300m	Traveling	No	Ø	Ø	0949

Daily Summary

Species	Total Number	Takes in Zone A	Takes in Zone B	# Shut-Downs	Comments
Tursiops truncatus	10	Ø	Ø	Ø	

Observer Names: Nichole Pierce

REMSA, Inc. 142 W Queeens Way Hampton, VA 23669
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Protected Species Sighting & Shut-Down Form

Corresponding sighting # for the day: 8

Shutdown: _____ for the day

Date (DD/MM/YYYY): 25/11/20 **Time of Initial Sighting** 0947 **Time Animals Left Area:** 0949

Project Name: CTJV Thimble Shoals Parallel Tunnel **Island No.** Island 2

Areas Observed: W of pile driving **Upland Pile Driving** X **In-Water Pile Driving** _____

Air Temp: 52°F **Water Temp:** 55.2°F **Wave Height** 0.7 ft **Beaufort Sea State** 2

Weather Conditions: Cloudy, slight breeze

Percent Cloud Cover: 90% **Percent Glare:** 0% **Visibility Issues:** None

Animal Location & Distance to Pile Driving: W of Island 2, traveling S, ~ 300m out

Type of Pile Driving DTH

Distance From Observer When Initially Observed: 350 m

Species Observed: Tursiops truncatus - Bottlenose dolphin

Number of Animals Sighted (include age classes): Estimated about 10 adults

Sex of Animals Observed: Unknown

Animal Behaviors Observed: Traveling

Animal Heading/Direction: S along Island 2, then into channel between Island 1 & 2

Human Activities in Area: One large tanker, one tug boat, 3 small fishing boats

Shutdown Information

Time Begin:	
Time End:	
Total Down Time (mins):	

Shutdown # for the day: Ø

Video or Photograph Taken?: (No) Yes

Brief Description of Footage or Photograph: _____

Notes: An estimated pod of about 10 dolphins briefly surfaced along Island 2 as they traveled south towards Island 1, then turned into the channel. They were not spotted again after passing fishing boats at entrance of channel

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Nichole Pierce

Observer Name / Signature

Daily Marine Mammal Observer Report

Contractor: CTJV / Dragados	Project Name: CTJV Parallel Thimble Shoals Tunnel
NOAA/NMFS Permit: IHA March 2020	Observer Location (Island #): Island 2
Date: 12/02/2020	Shift Start: 1130
Sunrise: 0702 Sunset: 1649	Shift End: 1609

Weather and Visibility Information

Location	Time	Air Temp (F)	Water Temp (F)	Visibility (Good, Fair, Poor)	Cloud Cover (%)	Wave Height (ft)	Wind Speed & Direction	Precipitation	Beaufort Scale
Island 2	1200	48.6	55.2	Good	100%	1.6 ft	WNW 12kts	0%	4

Observer Log

Time	Notes: (pre-watch times, start and stop times for pile driving activities, shift changes, human actiivties)
1157	Arrive Island 2, may not drive today. Welding not yet complete.
1539	No pile driving today
1609	Arrived back at yard.

Sighting Log

Time	Species	Total Number	# Adults	# of Juveniles	Closest Distance to Pile Driving	Activity or Behaviors	Shut down? (yes/no)	Time of Shut-down	Time of Start Up	Time last seen

Daily Summary

Species	Total Number	Takes in Zone A	Takes in Zone B	# Shut-Downs	Comments

Observer Names: [signature] Nichole Pierce

REMSA, Inc. 142 W Queeens Way Hampton, VA 23669
757-722-0113

Daily Marine Mammal Observer Report

Contractor: CTJV / Dragados	Project Name: CTJV Parallel Thimble Shoals Tunnel
NOAA/NMFS Permit: IHA March 2020	Observer Location (Island #): Island 2
Date: 12/03/2020	Shift Start: 0630
Sunrise: 0702 Sunset: 1648	Shift End: 0953

Weather and Visibility Information

Location	Time	Air Temp (F)	Water Temp (F)	Visibility (Good, Fair, Poor)	Cloud Cover (%)	Wave Height (ft)	Wind Speed & Direction	Precipitation	Beaufort Scale
Island 2	0744	36	54.9	Good	10%	1.0 ft	E 2.9 kts	0%	1

Observer Log

Time	Notes: (pre-watch times, start and stop times for pile driving activities, shift changes, human actiivties)
0714	Arrive on Island 2
0721	Begin watch. Sea calm, sunny
0820	Begin pile driving with impact hammer
0854	Finish driving pile. Begin post-watch
0924	End watch. No mammals sighted
0929	Left Island 2
0953	Arrive at yard

Sighting Log

Time	Species	Total Number	# Adults	# of Juveniles	Closest Distance to Pile Driving	Activity or Behaviors	Shut down? (yes/no)	Time of Shut-down	Time of Start Up	Time last seen

Daily Summary

Species	Total Number	Takes in Zone A	Takes in Zone B	# Shut-Downs	Comments

Observer Names: Erica Wolff Nichole Pierce

REMSA, Inc. 142 W Queeens Way Hampton, VA 23669
757-722-0113

Daily Marine Mammal Observer Report

Contractor: CTJV / Dragados	Project Name: CTJV Parallel Thimble Shoals Tunnel
NOAA/NMFS Permit: IHA March 2020	Observer Location (Island #): Island 2
Date: 12/07/2020	Shift Start: 0630
Sunrise: 0704 Sunset: 1648	Shift End: 1431

Weather and Visibility Information

Location	Time	Air Temp (F)	Water Temp (F)	Visibility (Good, Fair, Poor)	Cloud Cover (%)	Wave Height (ft)	Wind Speed & Direction	Precipitation	Beaufort Scale
Island 2	1100	39.2	52.5	Fair	100%	2-3ft	15.9 kts NNE	Light Rain	4

Observer Log

Time	Notes: (pre-watch times, start and stop times for pile driving activities, shift changes, human actiivties)
0707	Arrive Island 2
1100	Begin pre-watch
1146	Begin driving pile
1152	Stop piling driving for QC check
1258	Continue driving pile
1327	End pile driving. Begin 30 min post-watch
1357	End watch
1431	Arrive at yard

Sighting Log

Time	Species	Total Number	# Adults	# of Juveniles	Closest Distance to Pile Driving	Activity or Behaviors	Shut down? (yes/no)	Time of Shut-down	Time of Start Up	Time last seen

Daily Summary

Species	Total Number	Takes in Zone A	Takes in Zone B	# Shut-Downs	Comments

Observer Names: Nicole Pierce Erica Wolff

REMSA, Inc. 142 W Queeens Way Hampton, VA 23669
757-722-0113

Daily Marine Mammal Observer Report

Contractor: CTJV / Dragados	Project Name: CTJV Parallel Thimble Shoals Tunnel
NOAA/NMFS Permit: IHA March 2020	Observer Location (Island #): Island 2
Date: 12/04/2020	Shift Start: 0730
Sunrise: 0703 Sunset: 1648	Shift End: 1149

Weather and Visibility Information

Location	Time	Air Temp (F)	Water Temp (F)	Visibility (Good, Fair, Poor)	Cloud Cover (%)	Wave Height (ft)	Wind Speed & Direction	Precipitation	Beaufort Scale
Island 2	0830	49.3	53.6	Good	80%	1.3 ft	WSW 15.9 KTS	0%	4

Observer Log

Time	Notes: (pre-watch times, start and stop times for pile driving activities, shift changes, human actiivties)
0758	Arrive on Island 2
0832	Began watch
1036	Began pile driving, No mammals sighted. Cloudy, windy
1055	End pile driving, begin post-watch
1125	End post watch, no mammals sighted
1128	Leave Island 2
1149	Back at yard

Sighting Log

Time	Species	Total Number	# Adults	# of Juveniles	Closest Distance to Pile Driving	Activity or Behaviors	Shut down? (yes/no)	Time of Shut-down	Time of Start Up	Time last seen

Daily Summary

Species	Total Number	Takes in Zone A	Takes in Zone B	# Shut-Downs	Comments

Observer Names: Nichole Pierce Erica Wolff

REMSA, Inc. 142 W Queeens Way Hampton, VA 23669
757-722-0113

Daily Marine Mammal Observer Report

Contractor: CTJV / Dragados	Project Name: CTJV Parallel Thimble Shoals Tunnel
NOAA/NMFS Permit: IHA March 2020	Observer Location (Island #): Island 2
Date: 12/08/2020	Shift Start: 0845
Sunrise: 0707 Sunset: 1648	Shift End: 1406

Weather and Visibility Information

Location	Time	Air Temp (F)	Water Temp (F)	Visibility (Good, Fair, Poor)	Cloud Cover (%)	Wave Height (ft)	Wind Speed & Direction	Precipitation	Beaufort Scale
Island 2	1142	39.7	50.5	Good	40%	3.0ft	NW 21 KTS	Ø	5

Observer Log

Time	Notes: (pre-watch times, start and stop times for pile driving activities, shift changes, human actiivties)
0902	Arrived on Island 2
1142	Begin watch. Waiting on QC check. Windy, white caps
1255	Begin driving pile
1309	End driving. Begin post-watch
1339	End watch. No mammals sighted
1342	Left Island 2

Sighting Log

Time	Species	Total Number	# Adults	# of Juveniles	Closest Distance to Pile Driving	Activity or Behaviors	Shut down? (yes/no)	Time of Shut-down	Time of Start Up	Time last seen

Daily Summary

Species	Total Number	Takes in Zone A	Takes in Zone B	# Shut-Downs	Comments

Observer Names: Erica Woff Nichole Pierce

REMSA, Inc. 142 W Queeens Way Hampton, VA 23669
757-722-0113

Daily Marine Mammal Observer Report

Contractor: CTJV / Dragados	Project Name: CTJV Parallel Thimble Shoals Tunnel
NOAA/NMFS Permit: IHA March 2020	Observer Location (Island #): Island 2
Date: 12/11/2020	Shift Start: 0800
Sunrise: 0708 Sunset: 1649	Shift End: 1440

Weather and Visibility Information

Location	Time	Air Temp (F)	Water Temp (F)	Visibility (Good, Fair, Poor)	Cloud Cover (%)	Wave Height (ft)	Wind Speed & Direction	Precipitation	Beaufort Scale
Island 2	0930	51.1°F	48.6°F	Good	10%	0.7 ft	2.9 kts SSE	0	1
Island 2	1015	52.3°F	49.3°F	Good	80%	0.7 ft	2.9 kts SE	0	1
Island 2	1330	57.9°F	50.5°F	Good	75%	0.7 ft	1.9 kts SE	0	1

Observer Log

Time	Notes: (pre-watch times, start and stop times for pile driving activities, shift changes, human actiivties)
0807	Arrive on Island 2
0925	Begin watch. Sunny, Calm waters
0959	Begin driving pile #1
1006	Finished driving pile #1
1011	Positioning drill on pile #2
1021	Begin driving pile #2
1031	Finished driving pile #2. Begin post-watch
1101	End watch. No mammals sighted
1325	Begin watch
1401	Begin restrike - pile #3
1406	End driving pile #3. Begin post-watch
1436	End watch. No mammals sighted
1440	Left Island 2

Sighting Log

Time	Species	Total Number	# Adults	# of Juveniles	Closest Distance to Pile Driving	Activity or Behaviors	Shut down? (yes/no)	Time of Shut-down	Time of Start Up	Time last seen

Daily Summary

Species	Total Number	Takes in Zone A	Takes in Zone B	# Shut-Downs	Comments

Observer Names: Nichole Pierce Erica Wolff

REMSA, Inc. 142 W Queeens Way Hampton, VA 23669
757-722-0113

Daily Marine Mammal Observer Report

Contractor: CTJV / Dragados	Project Name: CTJV Parallel Thimble Shoals Tunnel
NOAA/NMFS Permit: IHA March 2020	Observer Location (Island #): Island 2
Date: 12/21/20	Shift Start: 0700
Sunrise: 0715 Sunset: 1652	Shift End: 1000

Weather and Visibility Information

Location	Time	Air Temp (F)	Water Temp (F)	Visibility (Good, Fair, Poor)	Cloud Cover (%)	Wave Height (ft)	Wind Speed & Direction	Precipitation	Beaufort Scale
Island 2	0745	41.0	46.4	Fair	100%	1.3ft	4.1kts NW	0%	2
Island 2	0900	40.1	46.4	Fair	100%	1.3ft	8.0kts NW	0%	3

Observer Log

Time	Notes: (pre-watch times, start and stop times for pile driving activities, shift changes, human actiivties)
0732	Begin watch
0831	Begin driving pile #1
0852	End driving
0902	Moving over to pile #2
0910	Begin driving. Now foggy, decreased visibility
0930	End driving pile #2
0930	Begin watch
1000	End watch. No mammals sighted.

Sighting Log

Time	Species	Total Number	# Adults	# of Juveniles	Closest Distance to Pile Driving	Activity or Behaviors	Shut down? (yes/no)	Time of Shut-down	Time of Start Up	Time last seen

Daily Summary

Species	Total Number	Takes in Zone A	Takes in Zone B	# Shut-Downs	Comments

Observer Names: Nichole Pierce

Daily Marine Mammal Observer Report

Contractor: CTJV / Dragados	Project Name: CTJV Parallel Thimble Shoals Tunnel
NOAA/NMFS Permit: IHA March 2020	Observer Location (Island #): Island 2
Date: 12/29/2020	Shift Start: 0920
Sunrise: 0718 Sunset: 1657	Shift End: 1211

Weather and Visibility Information

Location	Time	Air Temp (F)	Water Temp (F)	Visibility (Good, Fair, Poor)	Cloud Cover (%)	Wave Height (ft)	Wind Speed & Direction	Precipitation	Beaufort Scale
Island 2	0949	43.7°F	46.0°F	Good	10%	3.0 ft	N 19 kts	Ø	5

Observer Log

Time	Notes: (pre-watch times, start and stop times for pile driving activities, shift changes, human actiivties)
0920	Arrive Island 2
0958	Begin watch. No mammals sighted. White caps
1105	Start driving pile. Wind dying down.
1141	End driving pile. Start post watch.
1211	End watch. Leave Island 2

Sighting Log

Time	Species	Total Number	# Adults	# of Juveniles	Closest Distance to Pile Driving	Activity or Behaviors	Shut down? (yes/no)	Time of Shut-down	Time of Start Up	Time last seen

Daily Summary

Species	Total Number	Takes in Zone A	Takes in Zone B	# Shut-Downs	Comments

Observer Names: Nichole Pierce

REMSA, Inc. 142 W Queeens Way Hampton, VA 23669
757-722-0113

Daily Marine Mammal Observer Report

Contractor: CTJV / Dragados	Project Name: CTJV Parallel Thimble Shoals Tunnel
NOAA/NMFS Permit: IHA March 2020	Observer Location (Island #): Island 2
Date: 12/30/2020	Shift Start: 0711
Sunrise: 0718 Sunset: 1658	Shift End: 1126

Weather and Visibility Information

Location	Time	Air Temp (F)	Water Temp (F)	Visibility (Good, Fair, Poor)	Cloud Cover (%)	Wave Height (ft)	Wind Speed & Direction	Precipitation	Beaufort Scale
Island 2	1015	44.8°F	46.0°F	Good	30%	1.0 ft	19kts WNW	0	1

Observer Log

Time	Notes: (pre-watch times, start and stop times for pile driving activities, shift changes, human actiivties)
0711	Arrive on Island 2
1008	Begin pre-watch
1023	Siate strike on pile
1026	Begin pile driving
1054	End pile driving, begin post-watch
1124	End post-watch. No mammals sighted
1126	Leave Island 2

Sighting Log

Time	Species	Total Number	# Adults	# of Juveniles	Closest Distance to Pile Driving	Activity or Behaviors	Shut down? (yes/no)	Time of Shut-down	Time of Start Up	Time last seen

Daily Summary

Species	Total Number	Takes in Zone A	Takes in Zone B	# Shut-Downs	Comments

Observer Names: Nichole Pierce

REMSA, Inc. 142 W Queeens Way Hampton, VA 23669
757-722-0113

Daily Marine Mammal Observer Report

Contractor: CTJV / Dragados	Project Name: CTJV Parallel Thimble Shoals Tunnel
NOAA/NMFS Permit: IHA March 2020	Observer Location (Island #): ISLAND TWO
Date: 12/23/2020	Shift Start: 0700
Sunrise: 0715 Sunset: 1652	Shift End: 1030

Weather and Visibility Information

Location	Time	Air Temp (F)	Water Temp (F)	Visibility (Good, Fair, Poor)	Cloud Cover (%)	Wave Height (ft)	Wind Speed & Direction	Precipitation	Beaufort Scale
ISLAND 2	0700	30°	47.1°	GOOD	1%	1FT	6KTS 80°	0%	1

Observer Log

Time	Notes: (pre-watch times, start and stop times for pile driving activities, shift changes, human actiivties)
0700	ARRIVE ON ISLAND 2. ISLAND 3 CLEAR AND ISLAND 2 CLEAR. BEGIN PRE-WATCH.
0730	PRE-WATCH COMPLETE. ALL CLEAR.
0732	PLACING THE DIESEL HAMMER ON PILE 1 OF 3.
0745	HAMMERING BEGINS WITH A SOFT START
0815	PILE ONE COMPLETE. MOVING HAMMER TO PILE 2 OF 3
0830	HAMMER PLACED ON PILE 2
0836	HAMMERING BEGINS ON PILE TWO
0840	DREDGE TRAVELING WEST TO EAST THROUGH THIMBLE CHANNEL
0905	HAMMERING ON PILE 2 COMPLETE. MOVING HAMMER TO PILE 3 OF 3.
0910	PLACING HAMMER ON PILE 3
0925	HAMMERING BEGINS ON PILE 3
0934	CONTAINER SHIP MOVING EAST TO WEST THROUGH THIMBLE CHANNEL
1000	HAMMERING ON PILE 3 COMPLETE. BEGIN POST WATCH.
1030	POST WATCH COMPLETE. ALL CLEAR

Sighting Log

Time	Species	Total Number	# Adults	# of Juveniles	Closest Distance to Pile Driving	Activity or Behaviors	Shut down? (yes/no)	Time of Shut-down	Time of Start Up	Time last seen

Daily Summary

Species	Total Number	Takes in Zone A	Takes in Zone B	# Shut-Downs	Comments

Observer Names: GABBY THORNTON

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