NORTH CAROLINA

COUNTY OF NEW HANOVER

IN RE:

OCTOBER 26, 2018 APPLICATION OF THE NORTH CAROLINA STATE PORTS AUTHORITY FOR A CAMA MAJOR DEVELOPMENT PERMIT TO EXPAND THE PORT OF WILMINGTON'S TURNING BASIN

AFFIDAVIT OF BRIAN E. CLARK

I, Brian E. Clark, appearing before the undersigned notary and being duly sworn, do hereby depose and say:

- 1. I am employed as the Deputy Executive Director and Chief Operating Officer for the North Carolina State Ports Authority ("NC Ports").
- 2. I have been employed with NC Ports for 1 year and 9 months and have worked in the Shipping Industry for a total of 24 years.
- 3. I was appointed Chief Operating Officer of the NC Ports Authority in June of 2017.
- 4. As Deputy Executive Director and Chief Operating Officer, I am responsible for directing terminal operations, engineering, maintenance and purchasing for NC Ports.
- 5. I am familiar with NC Ports' request for a CAMA Major Development Permit for removal of an existing wooden pier, dredging in the Cape Fear River to widen the existing boat turning basin and installation of a 1,416 foot submerged toe wall on the eastern side of the basin (hereinafter, the "Project").
- 6. The Project is estimated to cost approximately \$30 million, and construction is estimated to take 7 months between July 1, 2019 and January 31, 2020.
- 7. The Project is needed to allow the Port of Wilmington ("Port") to accommodate larger cargo and container vessels known as 14,000 TEU ships (capable of caring up to 14,000 "twenty equivalent units" which is the size of a standard shipping container). The 14,000 TEU ships are currently deployed in vessel services calling at other ports on the US East Coast, and projected to be used in other existing services that are currently deploying smaller vessels on the US East Coast. The 14,000 TEU ships are the maximum size of vessel that can safely transit the new locks of the Panama Canal. These vessels can have a length over 1,200' long and a beam of up to 161'. The original Panama Canal locks limited vessel dimensions to 950' long and 106' wide.
- 8. 14,000 TEU ships existed in 2015 but they were not expected to safely navigate the new Panama Canal. The maximum safest vessel for the new Canal was thought to be 8500-12,000 TEU ships with lengths of about 1100 feet. In 2017, the Canal operators tried and

- were successful in navigating a 1200 foot, 14,000 TEU vessel through the Canal (with just a few feet to spare) and now companies plan to use 14,000 TEU ships through the Canal.
- 9. NC Ports' facility at Wilmington is the only port in North Carolina that accommodates container vessels.
- 10. The annual revenue for the Wilmington Port is approximately \$38.2 million. Container business accounts for 48% of that revenue.
- 11. To prepare for the initial opening of the new Panama Canal several years ago, NCSPA undertook a project to increase the size of the Wilmington channel turning basin to the current dimension of 1,400'. Since that time, several new container services commenced calling at the Port of Wilmington and several of those services are with Neo-Panamax vessels that have 8,500 12,000 TEU capacities. The Port of Wilmington had projected for over 150 vessels calls in the coming year with vessels that require the 1,400' turning basin that could not have been accommodated without the initial project. However, two of the services with weekly vessel calls to the Port of Wilmington consolidated their services into a single weekly call since the time of the previous turning basin expansion. Therefore, we expect over 100 vessels calls in the coming year with significantly larger capacity vessels then were previously anticipated at the time of the previous turning basin expansion.
- 12. The Port currently has a total of six container services (reduced from a previous seven container services in November 2018), with two of these services made up of a consortium of different shipping companies.
 - a. The Alliance (THEA) operates the EC2 service that calls the Port of Wilmington and is comprised of the shipping companies Yang Ming Lines (YML), Hapag Lloyd and Ocean Network Express (ONE). Each of these shipping companies deploys vessels in this weekly container service that range from 1,098' to 1,102' long and between 140' and 150' wide.
 - b. The ZCP Service, is comprised of the shipping companies ZIM Integrated Shipping (ZIM), Maersk Line and Mediterranean Shipping Company (MSC). ZIM provides all vessels in this weekly container service that range from 1,083' to 1,145' long and between 140' and 159' wide. Both of these services originate in the Far East and make calls at multiple ports on the US East Coast. The largest vessel in both of the services has a capacity of 12,000 TEUs (twenty foot equivalent units).
 - c. Prior to the start of the ZCP service, ZIM operated the Z7S Service with 8,500 TEU vessels and Maersk and MSC, collectively known as the 2M Alliance, operated the TP10 Service with 4,500 TEU vessels. Both of these service had a weekly call to the Port of Wilmington, but were consolidated into a single weekly call known as the ZCP Service in December 2018.

- 13. Revenue from THEA EC2 Service and the ZCP Service comprises approximately 62% of the Port's total revenue from container business. These companies have notified the Port that they intend to utilize 14,000 TEU ships and if the Port is not able to accommodate these ships, they will bypass the Port for other ports on the East Coast.
- 14. As a regular course of business, the NC Ports maintain business reports and notes of communications with shipping customers. These records are created on or about the time of the communication and information contained therein. I have included a portion of these business records as an Exhibit which contains Carrier Feedback from August 3, 2018 to February 8, 2019. These include several notes and comments from several different carriers that currently call on the POW. These records describe the carrier's plans to use 14,000 TEU ships in the near future and the concern that a 14,000 TEU vessel cannot turn at the POW.
- 15. The opening of the new Panama Canal locks has resulted in an unprecedented advancement in the container shipping industry. Vessels transiting the canal have tripled in size due to its increased dimensions. As ships become larger, both their length and beam increase in size. As such, many of the Port of Wilmington's shipping customers are looking to enhance services by deploying larger vessels, much like we saw this past year with the consolidation of the Z7S and TP10 services in November 2018. In order to continue to include the Port of Wilmington in the service rotations, the shipping customers require further modification to the turning basin in order to support these larger container ships. The largest of these container vessels are expected to be capable of carrying 14,000 TEU with lengths over 1,200 feet and beams over 160 feet. Accordingly, the turning basin needs to be lengthened to accommodate the larger vessels. These vessels are currently deployed is several services calling US East Coast Ports and can transit both the Panama Canal and the Suez Canal to access these Ports.
- 16. Included as an exhibit is a list, including dimensions, of ships that currently call on the Port of Wilmington. These ships range from 8,000-12,000 TEU with lengths up to 1145 feet. Also included in this exhibit is a list, including dimensions, of larger 13,000 14,000 TEU ships that were launched into service in 2017 and are owned by POW customers. These ships reach lengths over 1200 feet and up to 168 feet in beam.
- 17. The Port of Wilmington currently has the capability to service a 14,000 TEU ship with the exception of the turning basin in the Cape Fear River. In other words, vessels would not be able to physically turn around and head back out to sea.
- 18. The Port's existing cranes, berths, storage, trucking operation, rail system and other infrastructure are currently able to service a 14,000 TEU ship.
- 19. The current turning basin is 1,400 feet wide, and while it can accommodate the existing vessels calling the Port of Wilmington, it cannot accommodate a 14,000 TEU ship that are calling on other US East Coast Ports.
- 20. For safety reasons, the turning basin needs to be larger than the length of the vessel. This is because winds, tides, river currents, pilot abilities and other factors make it impossible

to turn a ship in a perfect 180 degree turn. Therefore, to accommodate the largest vessels calling on the US East Coast, the turning basin would need to be approximately 1,524 feet wide with a 1,416' long submerged toe-wall along the eastern edge of the project to stabilize the shoreline and maintain the basin width and navigable depth. To achieve the necessary dimensions, NC Ports seeks to dredge the eastern and western sides of the present basin, deepening approximately 17.76 acres of shallow and deep soft bottom to a final depth of -42 feet + 2 feet + 1 overage MLW.

- 21. I and other employees of NC Ports have travelled to Asia and Europe and have had several meetings with representatives with the leading container ship carriers such as Maersk Line, MSC, CMA-CGM, ZIM Integrated Shipping, Hapag Lloyd, Yang Ming Lines and Ocean Network Express to discuss their intentions to deploy larger capacity vessels in services calling the ports in the US East Coast starting in the summer of 2019. In all cases these shipping lines stated that a turning basin capable of handling a 14,000 TEU vessel would be required if the Port wants to continue to serve these lines. In order to remain in consideration for the vessel services when they are upgraded with larger capacity vessels, we have provided these shipping lines with the expected completion of the turning basin project by January 2020. Although this does not meet the carrier's expectations of the summer of 2019, it will meet their network design timeline for services the first quarter of 2020.
- 22. If one or both of the current services detailed above were to cease calling at the Wilmington Port, the Port would lose its largest container revenue source, thereby impacting the Port's sustainability, jobs, and growth. The loss of this business would also negatively impact the various industries such as trucking, rail, and warehousing that play a role in the movement of container cargo. A single Far East Service has a direct economic impact of \$3.8 billion per year, and therefore the potential impact of losing one or both of the current Far East services is significant to the North Carolina economy.
- 23. North Carolina citizens, businesses and taxpayers would be impacted by the loss of the ability to ship and receive goods via the Port the Wilmington. If the turning basin is not expanded to accommodate a 14,000 TEU vessel, then current customers that rely on the Port to ship and receive goods via the container vessels would have to ship and receive their goods via port facilities in other states, thereby increasing their costs, which are likely to be passed down to the consumers.
- 24. In an attempt to expedite the necessary permits and to further convey the great need for this Project, NC Ports has proposed the following mitigation measures:
 - a. Delaying construction until July 1, 2019 to minimize potential adverse effects on fish during their annual migration for spawning.
 - b. NC Ports currently owns over 30.0 acres on the Brunswick River. Most of the property is brackish tidal marsh and Section 404 wetlands. The property serves to enhance water quality and serves as habitat for a myriad of invertebrates, juvenile fish and birds. NC Ports will convey a conservation easement and ownership of the 30.2 acres to an approved non-governmental organization.

- c. NC Ports will enhance 6.75 acres of *Phragmites* dominated habitat to shallow water tidal pool habitat on the Brunswick River Property for water quality and juvenile fish benefits in the PNA.
- d. NC Ports will donate \$800,000.00 towards construction and monitoring costs of Lock and Dam # 1 Rock Ramp Fish Passage modification upstream on the Cape Fear River. The contribution from NC Ports will fulfill the total cost required to move forward with construction in 2019. The project redesign will enhance the rock structures and increase the success rate for striped bass and other anadromous species to move through the rock ramp and above the dam. The primary purpose of the proposed modification is to increase striped bass passage rate and is needed to increase their spawning success rates to levels that will ultimately lead to the restoration of striped bass population in the CFR.
- e. For mitigating wetland impacts, NC Ports has proposed enhancement of 1.75 acres from *Phragmites* dominated habitat to coastal tidal marsh for land adjoining the project site, and enhancement of 2.25 acres from *Phragmites* dominated habitat to brackish tidal marsh on NCSPA owned land on the Brunswick River.

Deputy Executive Director / Chief Operating Officer

25. In addition, NC Ports will conduct compliance monitoring for wetland and tidal pool enhancement measures for 7 years or more as needed with annual reporting as well as sturgeon monitoring during dredging. Other measures include use of best management practices, good engineering practices, turbidity barriers, and maximize dredging during falling tides to avoid and minimize impacts during dredging operations.

The information contained in this affidavit is based on the personal knowledge of the affiant and the public records of the North Carolina Department of Transportation.

This the _____ day of April, 2019.

	North Carolina State Por	ts Authority
Sworn to and subscribed before me this the[st day of April	, 2019.	T NOTARY PUBLIC OF BRUNSWICK COUNTY COUNTY EXP.
Patricial Signature of Notary Public Patricial Hamuc Notary's printed name	, Notary Public	COUNT EXP. MY COMM. EXP. MY COMM. EXP. OA-10-2021 Official Seal ORTH CARO OR
My Commission Expires: 4.10	.21	

Brian E. Clark

Current Vessels Calling Port of Wilmington

Service	String	Vessel	LOA M	LOA FT	BEAM M	BEAM FT	TEUs
THEA	EC2	Hangzhou Bay Bridge	335	1099	46.6	153	8,974
THEA	EC2	Helsinki Bridge	335	1099	45.6	150	8,930
THEA	EC2	Houston Bridge	335	1099	45.6	150	8,930
THEA	EC2	Humen Bridge	336	1102	45.8	150	8,212
THEA	EC2	Northern Justice	333	1092	43.2	142	8,400
THEA	EC2	YM Ubiquity	333	1092	42.8	140	8,626
THEA	EC2	YM Uniformity	333	1092	42.8	140	8,626
THEA	EC2	YM Upward	333	1092	42.8	140	8,241
THEA	EC2	YM Utopia	333	1092	42.8	140	8,626
2M+Z	ZCP	America	334	1096	43	141	8,468
2M+Z	ZCP	Cape Sounio	330	1082	48	157	11,000
2M+Z	ZCP	CCNI Andes	300	984	48	157	9,000
2M+Z	ZCP	Kota Pekarang	330	1082	48	157	11,923
2M+Z	ZCP	Parsifal	334	1096	43	141	8,204
2M+Z	ZCP	Santa Linea	337	1105	46	151	9,178
2M+Z	ZCP	TBD					
2M+Z	ZCP	Tianjin	349	1145	45.6	150	10,062
2M+Z	ZCP	Zim Antwerp	349	1145	45.6	150	10,062
2M+Z	ZCP	Zim Djibouti	349	1145	45.6	150	10,062
2M+Z	ZCP	Zim Rotterdam	349	1145	45.6	150	10,062

Service	String	Vessel	LOA M	LOA FT	BEAM M	BEAM FT	TEUs
THEA	EC4 - SUEZ1	YM World	368	1210	51	167	14,080
THEA	EC4 - SUEZ1	NYK Blue Jay	364	1197	50.6	166	14,026
THEA	EC4 - SUEZ1	NYK Crane	364	1197	50.6	166	14,026
THEA	EC4 - SUEZ1	ONE Stork	364	1197	50.6	166	14,026
THEA	EC4 - SUEZ1	Milano Bridge	366	1203	51.2	168	13,870
THEA	EC4 - SUEZ1	Monaco Bridge	366	1203	51.2	168	13,870
THEA	EC4 - SUEZ1	Madrid Bridge	366	1203	51.2	168	13,870
THEA	EC4 - SUEZ1	Meishan Bridge	366	1203	51.2	168	13,870
THEA	EC4 - SUEZ1	ONE Minato	366	1203	51.2	168	13,870
THEA	EC4 - SUEZ1	Essen Express	367	1205	48.2	158	13,169
THEA	EC4 - SUEZ1	Antwerpen Express	367	1205	48.2	158	13,169



Alphaliner - Service data

	THE Alliance - FE-USEC - EC4 / SUEZ1
Participants	Hapag-Lloyd / Yang Ming / ONE
Coverage	FE / USEC
Туре	FC
Sailling frequency	7
Duration of rotation	77
Proforma fleet	11 x 10 000 / 14 000 teu
Weekly capacity (teu)	12517

Port rotation

Kaohsiung, Hong Kong, Yantian, Cai Mep, Singapore ...(Suez Canal)... New York, Norfolk (Va), Savannah, Charleston, New York ...(Suez Canal)... Singapore, Kaohsiung

Comments

Service launched in April 2017 (See news).

- > Apr 2018 MOL, NYK and K Line participations are retaken by ONE on 1 April (further to the merger of their respective container businesses).
- > Jan 2018 13,000 teu-class ships start to be introduced (See news).
- > Apr 2018 Jacksonville removed (shifted to EC3 See details and to EC5 See details) New York eastbound call added. Part of a wider network revision (See news) (Former rotation until end March: Kaohsiung, Hong Kong, Yantian, Cai Mep, Singapore ...(Suez Canal)... New York, Norfolk (Va), Savannah, Jacksonville, Charleston ...(Suez Canal)... Singapore, Kaohsiung).
- > © Alphaliner

Service	String	Vessel	LOA M	LOA FT	BEAM M	BEAM FT	TEUs
OCEAN	AWE5	COSCO Shipping Peony	366	1200	48.2	158	13,800
OCEAN	AWE5	OOCL Poland	366	1199	48.4	159	13,208
OCEAN	AWE5	OOCL Brussels	366	1199	48.4	159	13,208
OCEAN	AWE5	OOCL Berlin	366	1199	48.4	159	13,208
OCEAN	AWE5	OOCL Chongqing	366	1199	48.4	159	13,208
OCEAN	AWE5	OOCL Bangkok	366	1199	48.4	159	13,208
OCEAN	AWE5	OOCL Malaysia	366	1199	48.4	159	13,208
OCEAN	AWE5	COSCO Glory	366	1200	48.2	158	13,092
OCEAN	AWE5	COSCO Hope	366	1200	48.2	158	13,092
OCEAN	AWE5	COSCO Development	366	1200	48.2	158	13,092
OCEAN	AWE5	COSCO Excellence	366	1200	48.2	158	13,092



Alphaliner - Service data

	OCEAN Alliance - FE-ECNA - AWE5
Participants	CMA CGM / COSCO / OOCL / slots : Evergreen / APL > CMA CGM : SAX > COSCO : AWE3 > Evergreen : SAX > OOCL : ECX1 > APL : AW2
Coverage	FE / USEC
Туре	FC
Sailling frequency	7
Duration of rotation	77
Proforma fleet	11 x 13 000 / 14 400 teu
Weekly capacity (teu)	13219

Port rotation

Hong Kong, Yantian, Xiamen, Shanghai ... (Pan Canal)... Colon, New York, Savannah, Charleston ... (Suez Canal)... Hong Kor

> TO BECOME (April 2019): Cai Mep, Hong Kong, Yantian, Xiamen, Shanghai ...(Pan canal)... Colon, New York, Savannah, Charleston, Cai Mep

Comments

Service launched in April 2017 (See news).

- > Oct 2017 New York added. Colon-Coco Solo removed (See news).
- > Aug 2017 Fully harmonized to the 13,000-14,000 teu scale (up from 10,000-13,000 teu in early 2017).
- > Apr 2018 Rotation revised (Former rotation until end March : Hong Kong, Yantian, Ningbo, Shanghai ...(Pan Canal)... New York, Norfolk (Va), Savannah, Charleston ...(Suez Canal or CGH)*... Hong Kong).
- > Sep 2018 Xiamen served after Yantian instead of before Hong Kong, allowing to improve Xiamen-US transit times.
- > Apr 2019 Service extended to Cai Mep. Part of a wider service revision within the 'Day 3 Product' (See news).
- > @ Alphaliner

Service	String	Vessel	LOA M	LOA FT	BEAM M	BEAM FT	TEUs
OCEAN	AWE1	CMA CGM T. Roosevelt	366	1203	48.2	158	14,414
OCEAN	AWE1	CMA CGM J. Adams	366	1203	48.2	158	14,414
OCEAN	AWE1	CMA CGM J. Madison	366	1203	48.2	158	14,414
OCEAN	AWE1	COSCO Shipping Jasmine	366	1203	48.2	158	13,800
OCEAN	AWE1	COSCO Shipping Sakura	366	1203	48.2	158	13,800
OCEAN	AWE1	COSCO Faith	366	1203	48.2	158	13,092
OCEAN	AWE1	COSCO Pride	366	1203	48.2	158	13,092
OCEAN	AWE1	COSCO Fortune	366	1203	48.2	158	13,092
OCEAN	AWE1	COSCO Harmony	366	1203	48.2	158	13,092
OCEAN	AWE1	Earving	366	1204	48.2	158	13,092
OCEAN	AWE1	TBD					
OCEAN	AWE1	TBD					



Alphaliner - Service data

	OCEAN Alliance - FE-USEC - AWE1
Participants	Evergreen / CMA CGM / COSCO / OOCL / APL > CMA CGM : MTX (Manhattan Bridge) > COSCO : AWE2 > Evergreen : NUE2 > OOCL : ECX2 > APL : AW1
Coverage	FE / USEC
Туре	FC
Sailling frequency	7
Duration of rotation	84
Proforma fleet	12 x 13 000 / 14 000 teu
Weekly capacity (teu)	11255

weekiy capacity (teu) 11255

Port rotation

Qingdao, Ningbo, Shanghai, Busan ... (Pan Canal)... New York, Norfolk (Va), Norfolk, Savannah ... (Suez Canal)... Qingdao

Comments

Service launched in April 2017 (See news).

- > Aug 2017 Yokohama Call added for COSCO only.
- > May 2018 FE-PNW string (PNW2) de-coupled from FE-USEC string (AWE1) and grafted to the existing FE-ME 'MEA5' service (See details). FE-USEC string (AWE1) de-coupled from FE-PNW string and replaced by end-to-end shuttle. Boston and Yokohama WB calls removed. Savannah EB call added. Boston call shifted to AWE4 (See details).
- > Dec 2018 Rotation stretched by one week (from 11 to 12 weeks).
- > © Alphaliner

Business report (BMM): August 3, 2018
Customer: Evergreen
Location: Jersey City, NJ

Meeting participants: Benjamin Tsai – President

Peter Wan – Deputy Manager Marine Director

Applicable remarks: 10 x 14,000 TEU ordered and all Asia / USEC strings are to be at this

size. Subsequently, it is imperative that we push this project forward will all vigor.

Customer: Yang Ming Location: Newark, NJ

Meeting participants: Joseph Tsao – President

Wen-Jin Lee – Senior ExVP

TR Lee – SVP Marine & Terminal Ops Lance Lin – VP Logistics & Procurement

Applicable remarks: YM also stressed the necessity of being able to handle 14,000 TEU vessels. Ports not able to handle this class of vessels will not be considered in any future strings or expansion.

E-Mail (BI Chung): August 7, 2018
Customer: Yang Ming
Location: Taipei, Taiwan

Meeting participants: Sandy Pan – AVP Americas Logistics

Applicable remarks: While chatting with Yang Ming team in Taiwan, Sandy Pan asked me about NC Ports' plan to expansion of turning basin to 1,500'. She said that THEA have some 14,000 TEU ships to come and they are studying where to deploy the ships and if Wilmington can be ready for 14,000 asap, it definitely can be included in the options.

"There is one thing for your reference. Our ship captains are worried about the narrow Cape Fear river and the restriction of turning basin for 14,000 TEU ships. Do you think the port can ask the pilot to simulate the sailing/berthing of 14,000 TEU, the tugs/escort tugs required and to issue some kind of certificate to ensure the safety for 14,000 TEU ships? I guess it will be a good reference for THEA members."

According to her, the vessel deployment is not yet decided and whether the big ships are planned in EC or Europe loops is still under discussion by THEA members.

I asked for the big ship's specification and found the spec. of YM 14,000 TEU ship as below.

LOA: 368 m Breadth: 51m

Draft (scantling): 16m Draft (design): 14.5m

Would you check if the ship of the above size is capable of sailing on the Cape Fear River and can make a turn in the turning basin? And would

you let me know if NC Ports has a specific time plan of Phase 2 turning basin expansion? In order to keep pace with the big-ship trend of shipping carriers, our Wilmington Port should have the ability to accommodate 14,000 TEUs quickly.

Business report (BMM): October 12, 2018

Customer: Evergreen Location: Taipei, Taiwan

Meeting participants: Mike Kuo – Deputy Jr VP Ops

Felix Huang – Asst Mgr Ops

Fred Chen – Deputy Mgr North America Marketing

Vanson Lee- Manager Project Dept Louis Wang – Deputy Manager Ops

Applicable remarks: By 2020 all TPEC vessels for the OA will be 14K TEUs.

Customer: Yang Ming Location: Taipei, Taiwan

Meeting participants: Gerry Liu – CLO/Sr VP Logistics

Ted Chen – Sr Manager Europe and North America Michelle Hsieh – Europe and North America Planning Capt James Jeng – Chief Ops and Logistics Officer

Eddie Wang – Senior Manager Marketing, Pricing and Commercial

Transpacific

Sandy Pan – AVP Americas Logistics

Applicable remarks:

be deployed.

Believe that late 2019 may see an additional 10 x 14,000 TEU vessels to

Business report (BMM): October 19, 2018

Customer: OOCL

Location: Hong Kong, China

Meeting participants: Andrew Lam – GM Procurement & Cost Management

Applicable remarks: See a 14,000 TEU EC trend.

Customer: COSCO

Location: Shanghai, China

Meeting participants: Chase Zhang Feng – Head of America Trade

Lynn Wu – manager Vendor Management Americas Trade

Isabelle Wang – Deputy Manager Americas Trade

Applicable remarks: Ships in strings: CMA-CGM & COSCO 14,000, EMC 8500

Customer: HMM

Location: Seoul, Korea

Meeting participants: GB Kim – Senior VP Head of Port & Terminal

Ryan Shin – GM Global Terminal Contract Team

Applicable remarks:

Looking at their own EC service in 2020. 8 x 14000 vessels come online

2020.

Business report (BMM): November 2, 2018

Customer: Hapag Lloyd Location: Piscataway, NJ

Meeting participants: Torsten Hartman – Senior VP Transpacific

Applicable remarks: Major hurdle is that ALL EC4 vessels are 14,000 TEUs.

Customer: Evergreen
Location: Jersey City, NJ

Meeting participants: Wilson Chan – Executive VP

Mitchell Hsu – Senior VP

Applicable remarks: EMC is concerned with our water depth. Savannah has announced that they will be at 48' by 2020-2022. Agreed to provide EMC our draft simulation results as they are concerned with our ability to handle 14,000 TEU vessels.

Business report (BMM): December 7, 2018

Customer: Hapag Lloyd

Location: Charleston, SC

Meeting participants: Sean Otoole – Operations Manager

Applicable remarks: Reportedly Hapag gave Wilmington a "hard review" for the EC4 but the

planners were not convinced the port could operationally handle the 14,000 TEU vessels.

Business report (BMM): January 26, 2019

Customer: HMM

Location: Seoul, Korea

Meeting participants: Ryan (Yong Guen) Shin – GM Leader Global Terminal Contract

Alex (Tae Soo) Kim – GM Global Terminal Contract Yun Young-Duck – GN Global Terminal Contract Donggyu (Drake) Lee – Deputy GM Network Planning

Amy Park - Manager Network Planning

Applicable remarks: Updated HMM with the current status of our master plan and current developments at the Port of Wilmington. HMM is interested in our development as they will receive 10 x 15,000 vessels for the USEC in 2021. Their current plan is to commence a USEC service in 2020 with slightly smaller ships and then transition into the 15,000 TEU vessels. These 15,000 TEU vessels will require a draft of 47.5' (minimum).

Customer: Yang Ming Location: Taipei, Taiwan

Meeting participants: James Jeng – Chief Operations & Logistics Officer

David Huang - VP Operation

Sandy Pan - AVP American Logistics

Eddie Wang – Senior Manager Commercial TPEB Raison Chu – Deputy Manager America Logistics

Zoe Huang – Manager American Logistics

Luna Mei – America Logistics

Applicable remarks: We agreed to target the EC4 for a Wilmington port call in 2020 when

we can handle 14,000 TEU vessels.

Business report (BMM): February 8, 2019

Customer: OOCL

Location: Hong Kong, China

Meeting participants: Andrew Lam – GM Procurement

Steve Chan – Asst GM Procurement Amanda Au Manager Procurement

• OOCL – 6 x 21,000

Applicable remarks: We need 14,000 TEU capability to be considered as a port of call.

New builds coming in 2020 –
• COSCO – 7 x 23,000

Customer: COSCO

Location: Shanghai, China

Meeting participants: Lynn Wu – Section Manager America's Trade

Isabel Wang – Deputy Manager America Trade

Huang Yitao – Deputy Section Manager – America's Trade

Zhang Di – Senior Supervisor Network Planning

Applicable remarks: The AWE4 (SEA through the Suez) has 14,000 TEU ships

COSCO will have 2 USEC loops both with 14,000 TEU vessels

COSCO would like an update on our progress to handle 14,000 TEU

vessels and on our intermodal improvements. BI will handle this request.

Customer: ONE

Location: Singapore, Singapore

Meeting participants: Arthur Schoof – VP Procurement

Sabrina Sun – Senior Manager – Procurement

Elizabeth Tay – GM Trade

Masahiro Sakikubo – Deputy GM Trade

Applicable remarks: Our current depth is not sufficient to permit 14,000 TEU vessels. Their

captains require 14.5m draft (47.5 feet). Reportedly ONE are very strict about this issue.

Article 23 – Time of Completion, Delays, Extension of Time

To Paragraph "a", add the following: The Contractor shall commence work under this contract on a date to be specified in a written order from the Designer and shall fully complete all phases of the work within the number of calendar days as stated in the following schedule. The scheduled Start Date, or day designated as the beginning of a particular Bid Alternate, is the number of calendar days from the date of the Notice to Proceed (NTP) as provided in written order from the Designer to the Contractor. The Completion Date, or day designated as the end of a given Bid Alternate and the day the work must be completed, is the number of consecutive calendar days from the date of Notice to Proceed.

The initial NTP will be limited in scope (while the required permits are obtained by the Owner) to only allow for procurement of materials, but no mobilization to the site. Additionally, in-water dredging and construction activities will not be allowed prior to July 1, 2019. It is anticipated that the limited NTP will occur no later than May 1, 2019.

Bid Alternate	Start Date	Completion Date	Beneficial Occupancy by NCSPA	Applicable Liquidated Damages
Base Bid	7/1/19	11/1/19	Yes	\$4,000.00/day
Additive Bid No. 1	7/1/19	12/1/19	No	\$2,000.00/day
Additive Bid No. 2	7/1/19	1/31/20	Yes	\$2,000.00/day
Additive Bid No. 3	7/1/19	1/31/20	Yes	\$2,000.00/day

Description of Bid Alternates:

Base Bid: Complete removal of an existing timber pier and adjacent dolphins.

Partial removal and replacement of an existing security fence.

Installation of approximately 685 linear feet of new steel king pile toe wall with sacrificial anode type cathodic protection system. Dredge approximately 155,000 cubic yards and removal of approximately 8,000

tons of debris. Installation of eight (8) new self-contained solar

powered navigation lights.

Additive Bid No. 1: Installation of approximately 731 linear feet of new steel king pile toe

wall with sacrificial anode type cathodic protection system. Installation

of seven (7) new self-contained solar powered navigation lights.

Additive Bid No. 2: Dredging of approximately 215,000 cubic yards and removal of

approximately 10,000 tons of debris.

Additive Bid No. 3: Dredging of approximately 190,000 cubic yards and removal of

approximately 4,000 tons of debris.

To Paragraph "b", add the following: For each day in excess of the above number of days, the Contractor shall pay to the Owner the sum indicated in the above schedule as liquidated damages, in lieu of actual damages, reasonably estimated in advance to cover losses to be incurred by the Owner by reason of failure of the Contractor to complete the total work within the time specified, such time being in the essence of this contract and a material consideration thereof.

Delete Paragraph "e" and replace with the following: Request for extension of time shall be made in writing within **seven (7)** days following cause of delay. In case of continuing cause for delay, the