

PortMiami Phase III

Julia Tuttle Seagrass Mitigation Area – Select Fill Placement



Presentation Outline

- Project Overview
- Construction Approach
- Challenges
- Phasing
- Milestones
- Acknowledgements

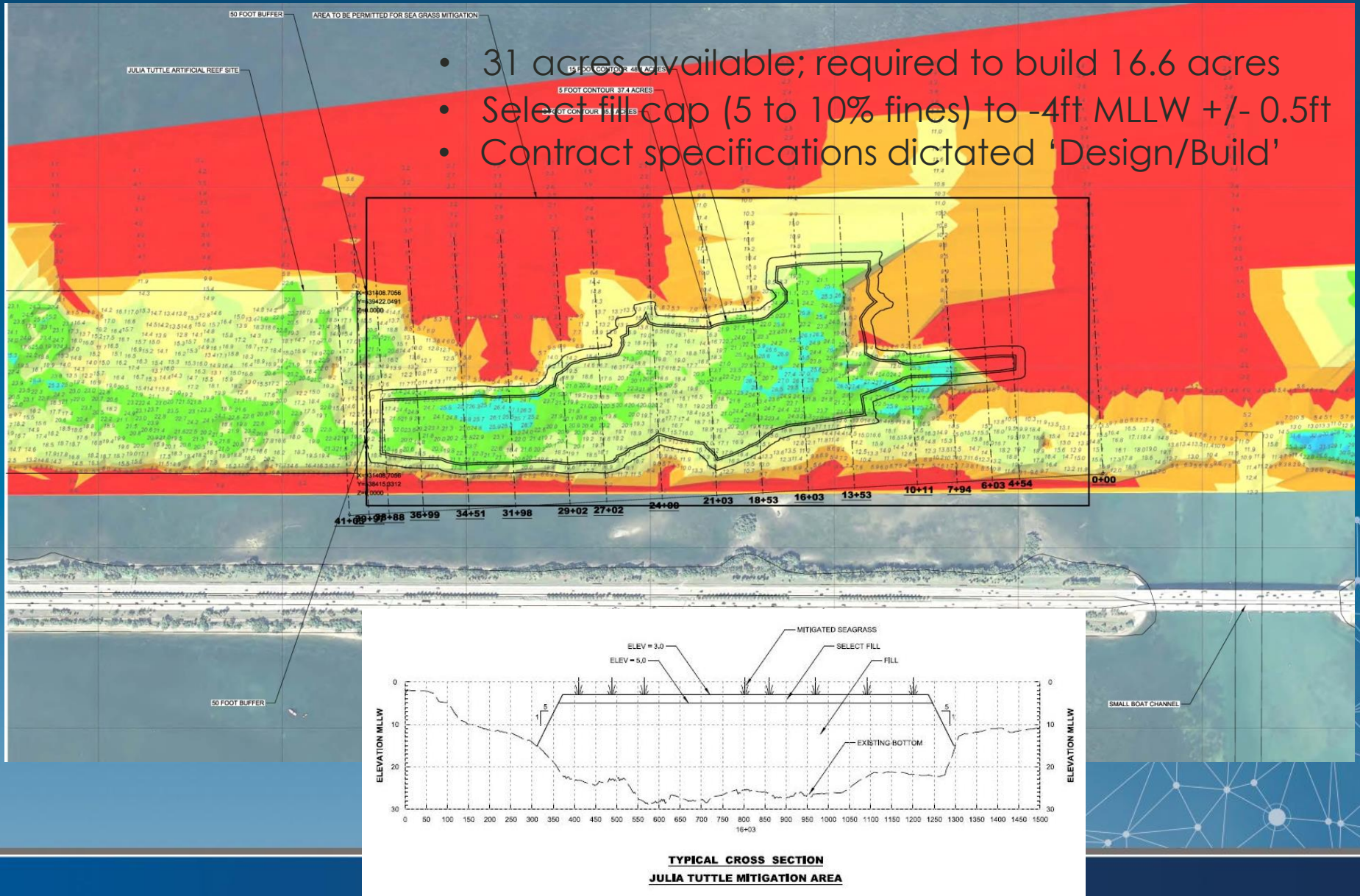
Project Overview

- **PortMiami Phase III Harbor Deepening & Widening**
 - \$205M Project
 - July 2013 – Sept 2015
- **Environmental Components**
 - Environmental Management
 - Coral Relocation (1,300+)
 - **17 acres of Seagrass Habitat Restoration (JTSMA)**
 - 11.6 acres of Natural Limestone Artificial Reef



Project Requirements - JTSMA

- 31 acres available; required to build 16.6 acres
- Select fill cap (5 to 10% fines) to -4ft MLLW +/- 0.5ft
- Contract specifications dictated 'Design/Build'



TYPICAL CROSS SECTION
JULIA TUTTLE MITIGATION AREA

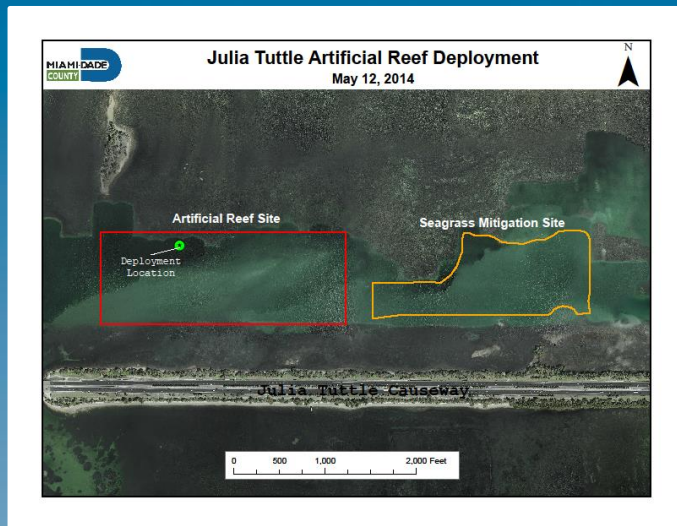
JTSMA - Challenges

- Timing/sequencing placement of sediment from both dredge areas and upland sand sources in less than 2 years
- *Maintain water quality standards in Biscayne Bay Aquatic Preserve*
- Level placement over irregular bottom



JTSMA - Challenges (continued)

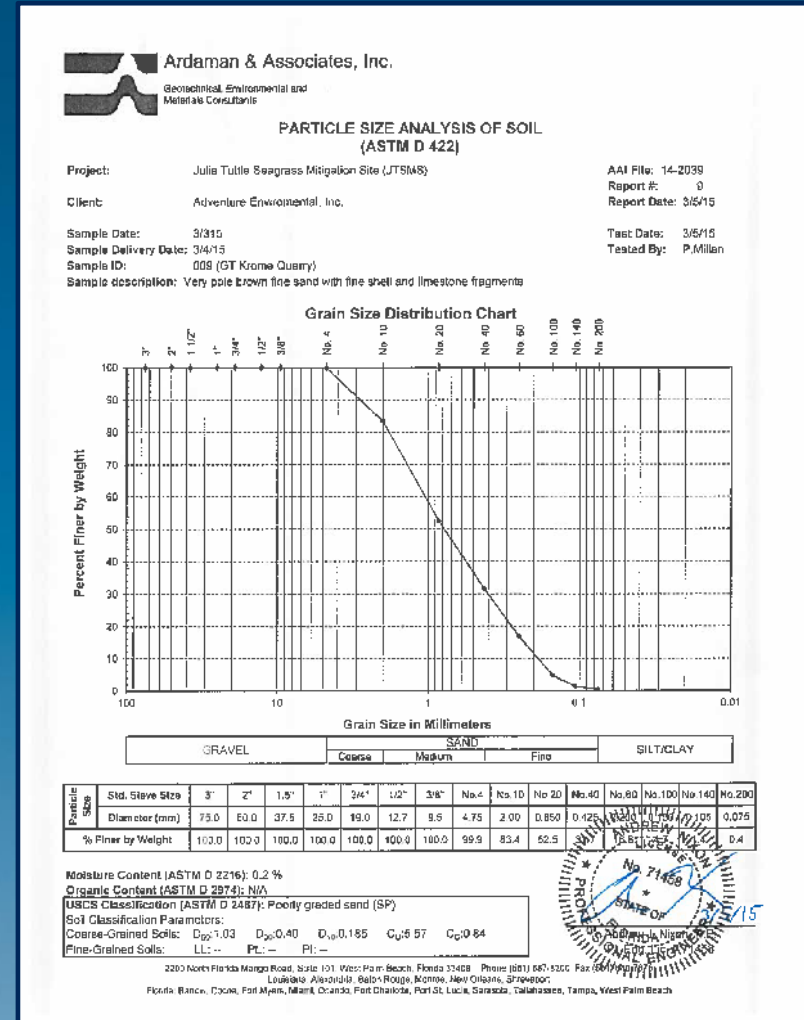
- Transiting vessels in very close proximity to turbidity curtain containment area
- Miami-Dade County artificial reef construction nearby
- Manatees inside containment curtains
- Complete ALL work (including seagrass plantings) by Contract end date



Select Fill Specifications

Contract Section 35 20 23 Part 3.4.3.4

The Contractor shall confirm by certified laboratory thru gradation testing, that the material for use as the 'Select Fill' shall consist of materials classified in accordance with ASTM D 2487 as a clean (SP or SW) sand, either quartz or calcareous, containing maximum 5% fines passing the #200 sieve.



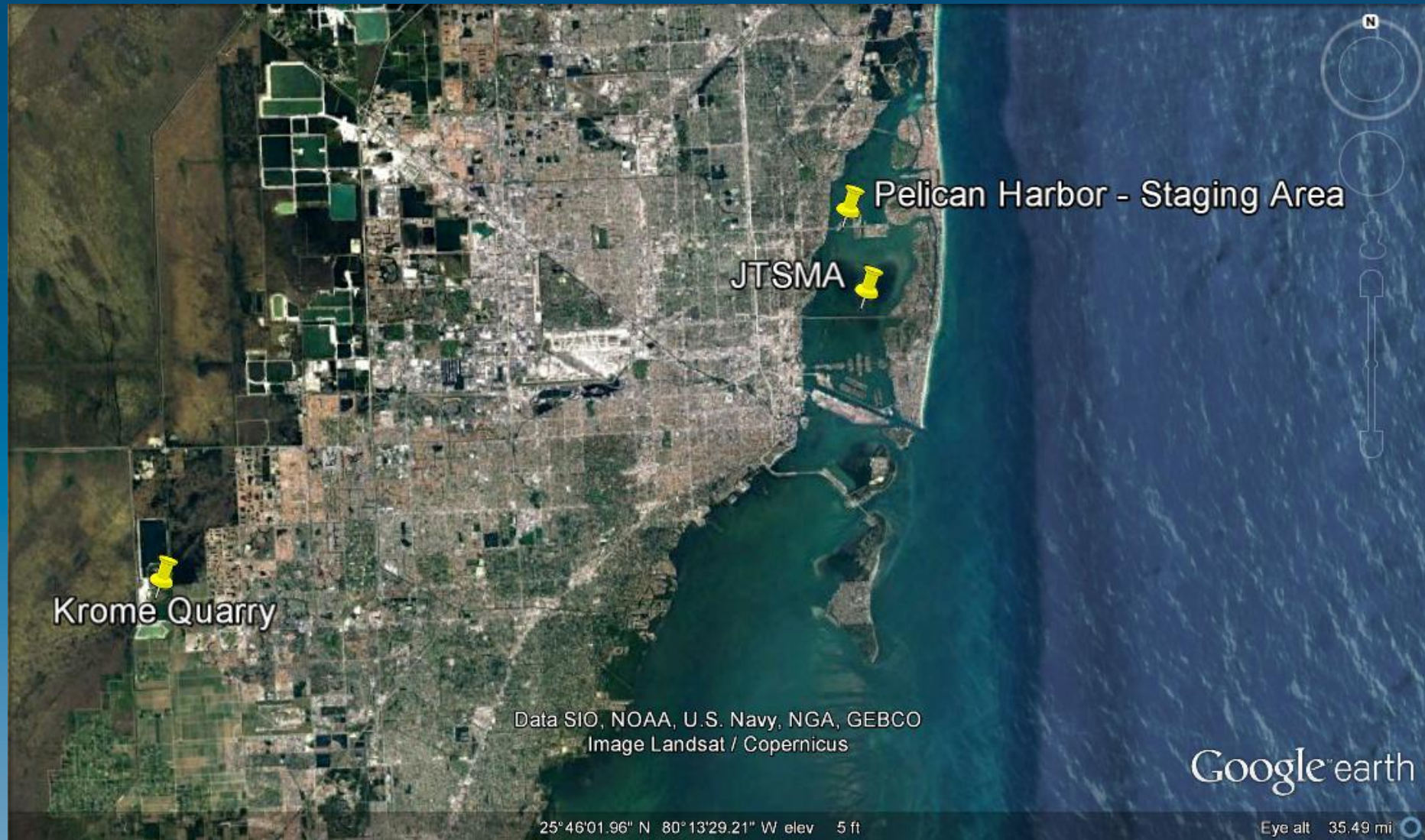
Incompatible Fill



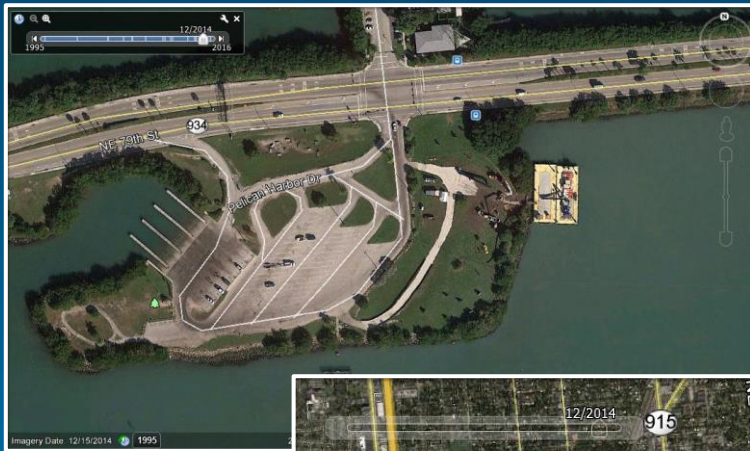
Incompatible Fill



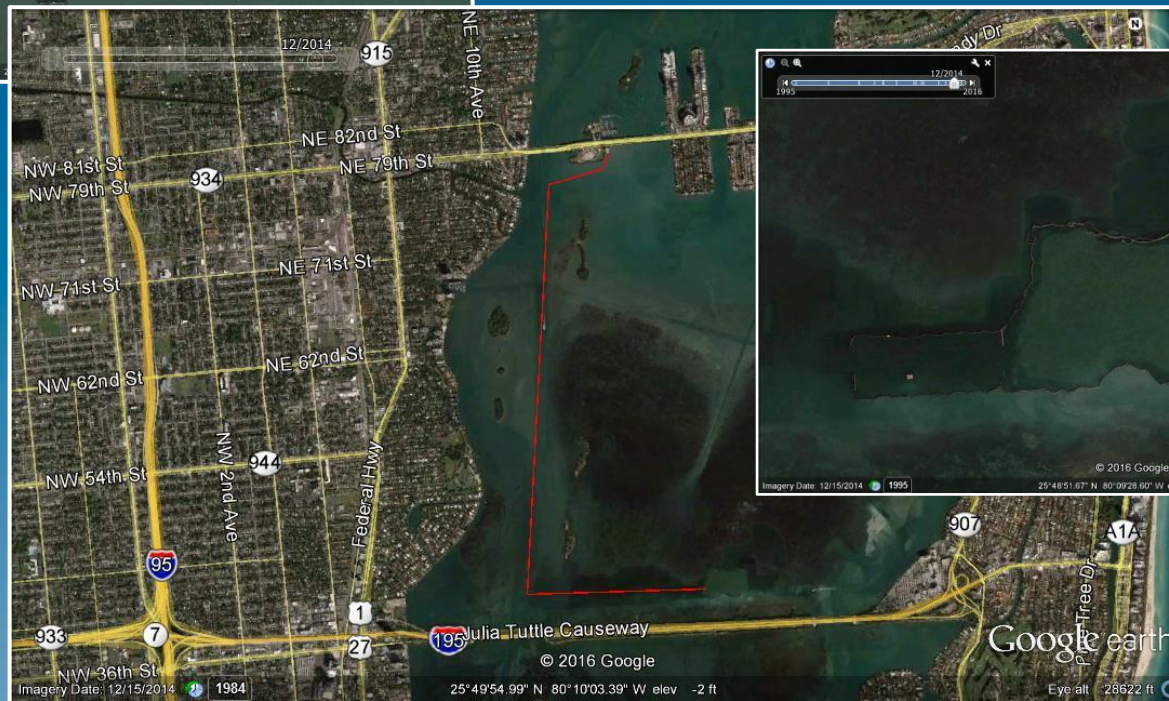
JTSMA Sand Source, Placement & Staging Areas



Staging Area to Placement Site – Barge Transport



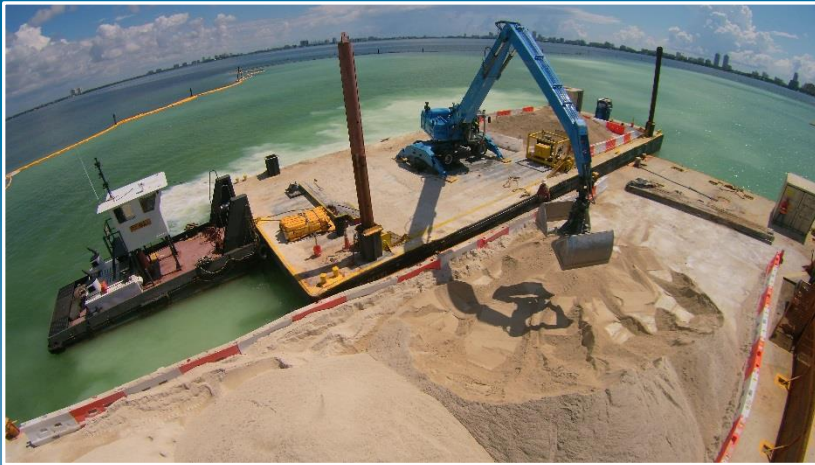
3.2 Nautical Mile transit distance



Project Photos



Project Photos

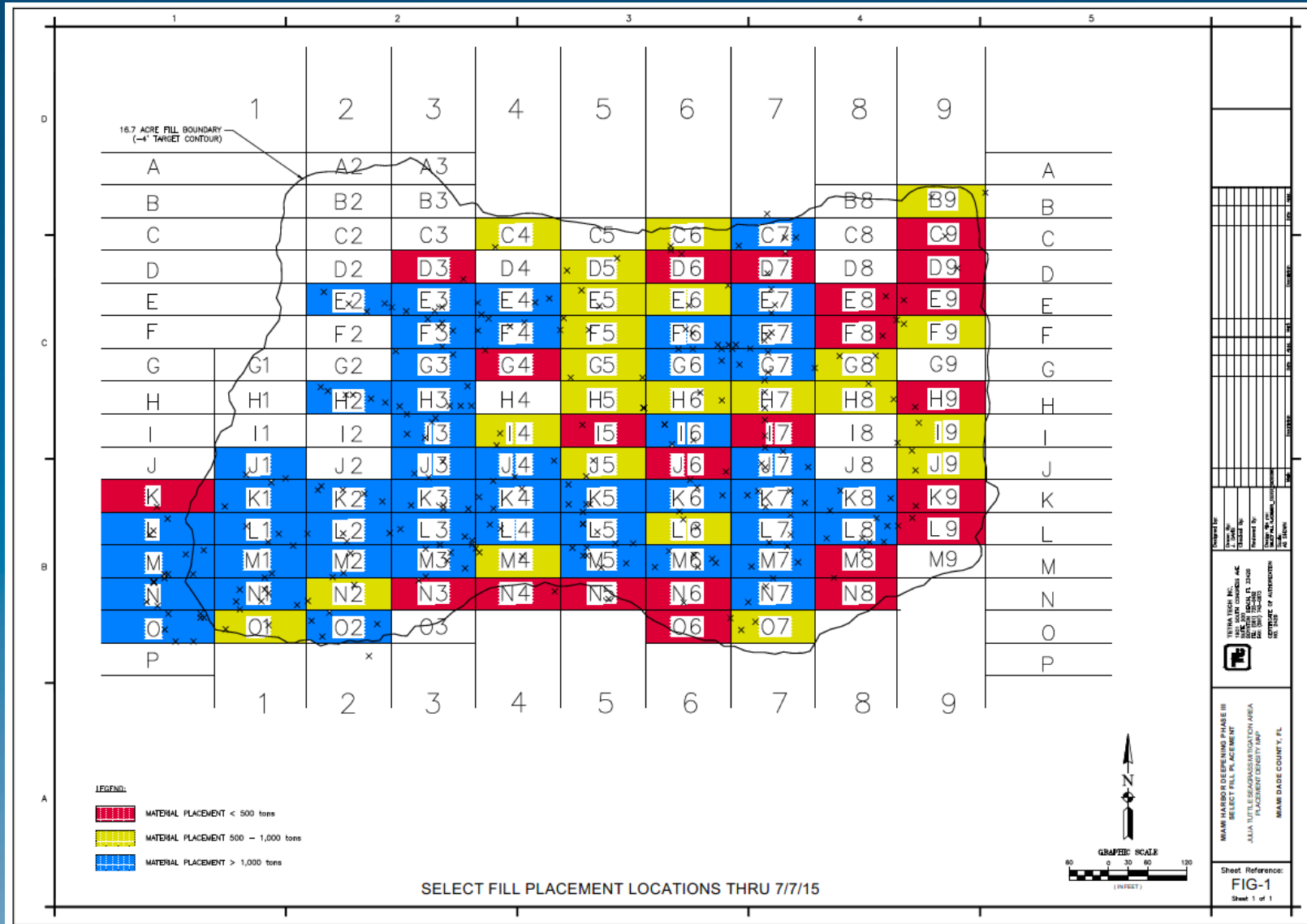


Submittals

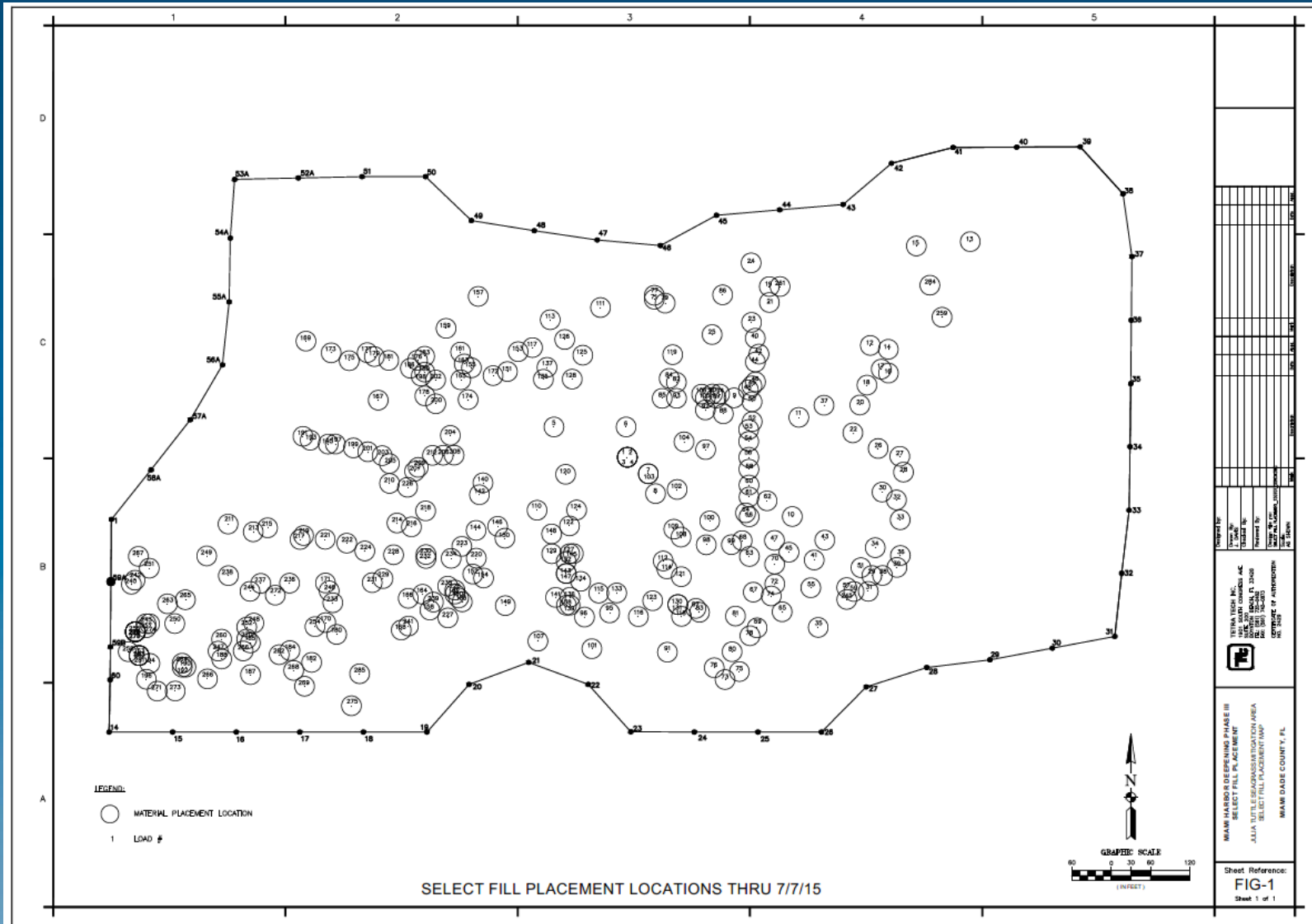
SELECT FILL PLACEMENT LOG										
Load #	Date	Barge Name	Loaded Draft	Draft at Arrival	Time of Dump	Weight (tons)	Volume (CY)	Cumulative Volume Placed (CY)	Latitude	Longitude
1	1/8/2015	Davis	3.5	3.5	1200	200	150	150	25.81392	80.15763
2	1/8/2015	Mobro 605	4.5	4.5	1400	225	168	318	25.81392	80.15763
3	1/8/2015	Mobro 605	4.5	4.5	1600	225	168	486	25.81392	80.15763
4	1/8/2015	Mobro 160	4.5	4.5	1730	350	262	748	25.81392	80.15763
5	1/9/2015	Mobro 160	5.1	5.1	1145	400	299	1048	25 48.843	80 09.478
6	1/9/2015	Mobro 605	4.5	4.5	1645	250	187	1235	25 48.843	80 09.458
7	1/12/2015	Davis	3.5	3.5	915	150	112	1347	25 48.831	80 09.452
8	1/12/2015	Mobro 160	4.5	4.5	1405	300	224	1571	25 48.826	80 09.450
9	1/12/2015	Mobro 605	4.8	4.8	1740	200	150	1721	25 48.850	80 09.428
10	1/13/2015	Mobro 160	4.8	4.8	1145	380	284	2005	25 48.820	80 09.412
11	1/13/2015	Mobro 605	4.8	4.8	1615	250	187	2192	25 48.845	80 09.410
12	1/14/2015	Mobro 160	5	5	1022	425	318	2510	25 48.863	80 09.390
13	1/14/2015	MB 605	4.9	4.9	1530	275	206	2716	25 48.889	80 09.362
14	1/15/2015	Mobro 160	5.4	5.4	1002	475	355	3071	25 48.862	80 09.385
15	1/15/2015	MB 605	5.2	5.2	1440	325	243	3315	25 48.888	80 09.377
16	1/16/2015	Mobro 160	5.4	5.4	952	450	337	3651	25 48.856	80 09.385
17	1/16/2015	MB 605	4.9	4.9	1410	320	239	3891	25 48.857	80 09.387
18	1/19/2015	Mobro 160	5.4	5.4	1122	475	355	4246	25 48.853	80 09.341



Submittals



Submittals



Submittals

SELECT FILL OPERATIONS VESSEL TRACKING

March 4, 2015 Activity



Service Layer Credits: © 2015 DigitalGlobe Image courtesy of USGS © 2015 GeoEye Earthstar Geographics SIO © 2015 Microsoft Corporation



Turbidity Curtain Containment System



Project Specifics – JTSMA Readied for Seagrass Plantings

- **560,000 CY of dredged material ‘Base Fill’**
 - 1,192 scow loads
 - Commence January 8, 2014; complete October 19, 2014

- **85,000 CY of ‘Select Fill’**
 - 2 ft “cap” of upland mined sand over Base Fill
 - 285 barge loads
 - 5,500 dump trucks from local quarry (Krome)
 - Commence January 8, 2015; complete July 7, 2015

- **17.1 Acres restored to -4 ft MLLW**



Acknowledgements



ADVENTURE
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Becky Hope – PortMiami

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Environmental

