



MACTEC ENGINEERING AND CONSULTING, INC.
3301 ATLANTIC AVENUE
RALEIGH, NORTH CAROLINA 27604

N.C.D.O.T./AASHTO CLASSIFICATIONS

REPORT ON SAMPLES OF: SOILS FOR QUALITY

MACTEC PROJECT NAME AND NUMBER: Currituck and Knotts Island Ferry Basins (6468-03-0470)

PROJECT: 3.6722.1.1 (F-4700)

COUNTY: Currituck

OWNER: N.C.D.O.T.

DATE SAMPLED: Nov. -Dec. 2003

RECEIVED: 12/08/03

REPORTED BY: MACTEC

SAMPLED FROM: BH-2, BH-3, BH-4

SUBMITTED BY: MACTEC ENGINEERING AND CONSULTING, INC.

1992 STANDARD SPECIFICATIONS

TEST RESULTS

| Lab Sample No. | SS-25 | SS-26 | SS-27 | SS-28 | SS-29 | SS-30 |
|----------------------------|-------|-------|-------|-------|-------|-------|
| Retained 4.75 mm Sieve (%) | 0.4 | 4.9 | 1.1 | 2.7 | 0.4 | 0.4 |
| Passing 2.00 mm Sieve (%) | 99.2 | 93.8 | 97.7 | 95.5 | 97.7 | 98.9 |
| Passing 425 µm Sieve (%) | 94.5 | 89.8 | 84.4 | 92.1 | 80.8 | 39.3 |
| Passing 75 µm Sieve (%) | 4.7 | 6.8 | 20.1 | 8.1 | 12.6 | 14.6 |

MINUS 2.00mm FRACTION

| SOIL MORTAR - 100% | | | | | | |
|------------------------------|-------|-------|-------|-------|-------|-------|
| Coarse Sand Ret - 250 µm (%) | 12.9 | 22.8 | 41.2 | 10.2 | 31.8 | 70.0 |
| Fine Sand Ret - 53 µm (%) | 83.4 | 71.4 | 40.0 | 83.8 | 57.1 | 16.9 |
| Silt 0.05 - 0.005 mm (%) | 1.5 | 3.1 | 9.1 | 2.8 | 3.9 | 9.3 |
| Clay < 0.005 mm (%) | 2.2 | 2.7 | 9.6 | 3.2 | 7.2 | 3.8 |
| | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |

| | | | | | | |
|------------------------|-----|-----|----------|-----|----------|-------|
| Moisture Content (%) | ND | ND | ND | ND | ND | ND |
| Liquid Limit, L.L. | 13 | 13 | 17 | 15 | 14 | 22 |
| Plasticity Index, P.I. | NP | NP | NP | NP | NP | NP |
| AASHTO Classification | A-3 | A-3 | A-2-4(0) | A-3 | A-2-4(0) | A-1-b |
| Organic Content (%) | ND | ND | ND | ND | ND | ND |

| | | | | | | |
|------------|------|------|------|------|------|------|
| Boring No. | BH-2 | BH-2 | BH-3 | BH-3 | BH-3 | BH-4 |
| Station | N/A | N/A | N/A | N/A | N/A | N/A |
| Offset | N/A | N/A | N/A | N/A | N/A | N/A |
| Alignment | N/A | N/A | N/A | N/A | N/A | N/A |
| Depth (ft) | From | 12.4 | 27.4 | 0.0 | 17.2 | 32.2 |
| | to | 13.9 | 28.9 | 1.5 | 18.7 | 33.7 |
| | | | | | | 5.0 |

REMARKS: N/A=Not Applicable; ND=Not Determined

Reviewed by:

M. h



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MACTEC PROJECT NAME AND NUMBER: Currituck and Knotts Island Ferry Basins (6468-03-0470)

PROJECT: 36722.1.1 (F-4700)

COUNTY: Currituck

OWNER: N.C.D.O.T.

DATE SAMPLED: Nov.-Dec. 2003

RECEIVED: 12/08/03

REPORTED BY: MACTEC

SAMPLED FROM: BH-4

SUBMITTED BY: MACTEC ENGINEERING AND CONSULTING, INC.

1992 STANDARD SPECIFICATIONS

TEST RESULTS

| Lab Sample No. | SS-31 | | | | |
|----------------------------|-------|--|--|--|--|
| Retained 4.75 mm Sieve (%) | 0.1 | | | | |
| Passing 2.00 mm Sieve (%) | 99.6 | | | | |
| Passing 425 µm Sieve (%) | 78.9 | | | | |
| Passing 75 µm Sieve (%) | 12.3 | | | | |

MINUS 2.00mm FRACTION

| SOIL MORTAR - 100% | | | | | | |
|------------------------------|-------|-----|-----|-----|-----|-----|
| Coarse Sand Ret - 250 µm (%) | 38.3 | | | | | |
| Fine Sand Ret - 53 µm (%) | 52.4 | | | | | |
| Silt 0.05 - 0.005 mm (%) | 6.5 | | | | | |
| Clay < 0.005 mm (%) | 2.8 | | | | | |
| | 100.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

| | | | | | | |
|------------------------|----------|--|--|--|--|--|
| Moisture Content (%) | ND | | | | | |
| Liquid Limit, L.L. | 16 | | | | | |
| Plasticity Index, P.I. | NP | | | | | |
| AASHTO Classification | A-2-4(0) | | | | | |
| Organic Content (%) | ND | | | | | |

| | | | | | |
|------------|------|-----|--|--|--|
| Boring No. | BH-4 | | | | |
| Station | N/A | | | | |
| Offset | N/A | | | | |
| Alignment | N/A | | | | |
| Depth (ft) | From | 7.5 | | | |
| | to | 9.0 | | | |

REMARKS: N/A=Not Applicable; ND=Not Determined

Reviewed by:

M. h