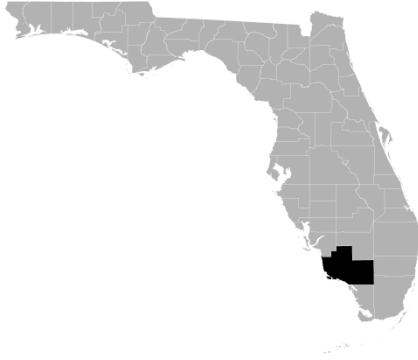


# FLOOD INSURANCE STUDY

## FEDERAL EMERGENCY MANAGEMENT AGENCY

VOLUME 2 OF 6



## COLLIER COUNTY, FLORIDA

### AND INCORPORATED AREAS

COMMUNITY NAME	COMMUNITY NUMBER
COLLIER COUNTY, UNINCORPORATED AREAS	120067
EVERGLADES CITY, CITY OF	125104
MARCO ISLAND, CITY OF	120426
NAPLES, CITY OF	125130
SEMINOLE TRIBE OF FLORIDA	120685



# FEMA

**REVISED:**

**February 8, 2024**

FLOOD INSURANCE STUDY NUMBER

12021CV002C

Version Number 2.5.3.5

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### Exhibit 1

Transect Profiles	<u>Panel</u>
Transect 1	001-002 T
Transect 2	003-004 T
Transect 3	005-006 T
Transect 4	007-008 T
Transect 5	009-010 T
Transect 6	011-012 T
Transect 7	013-014 T
Transect 8	015-016 T
Transect 9	017-018 T
Transect 10	019-020 T
Transect 11	021-023 T
Transect 12	024-026 T
Transect 13	027-028 T
Transect 14	029-030 T
Transect 15	031-032 T
Transect 16	033-034 T
Transect 17	035-036 T
Transect 18	037-038 T
Transect 19	039-040 T
Transect 20	041-042 T
Transect 21	043-044 T
Transect 22	045-046 T
Transect 23	047-048 T
Transect 24	049-050 T
Transect 25	051-052 T
Transect 26	053-054 T
Transect 27	055-056 T
Transect 28	057-058 T
Transect 29	059-060 T
Transect 30	061-062 T
Transect 31	063-064 T
Transect 32	065-066 T
Transect 33	067-068 T
Transect 34	069-070 T
Transect 35	071-072 T
Transect 36	073-074 T
Transect 37	075-076 T
Transect 38	077-078 T
Transect 39	079-080 T
Transect 40	081-082 T
Transect 41	083-084 T
Transect 42	085-086 T
Transect 43	087-088 T
Transect 44	089-090 T

## Volume 4

### Exhibit 1

Transect Profiles	<u>Panel</u>
Transect 45	091-092 T
Transect 46	093-094 T
Transect 47	095-096 T
Transect 48	097-098 T
Transect 49	099-100 T
Transect 50	101-102 T
Transect 51	103-104 T
Transect 52	105-106 T
Transect 53	107-108 T
Transect 54	109-110 T
Transect 55	111-112 T
Transect 56	113-114 T
Transect 57	115-117 T
Transect 58	118-119 T
Transect 59	120-121 T
Transect 60	122-123 T
Transect 61	124-126 T
Transect 62	127-128 T
Transect 63	129-130 T
Transect 64	131-132 T
Transect 65	133-134 T
Transect 66	135-136 T
Transect 67	137-139 T
Transect 68	140-142 T
Transect 69	143-145 T
Transect 70	146-148 T
Transect 71	149-151 T
Transect 72	152-154 T
Transect 73	155-157 T
Transect 74	158-160 T
Transect 75	161-163 T
Transect 76	164-166 T
Transect 77	167-169 T
Transect 78	170-172 T
Transect 79	173-174 T
Transect 80	175-176 T
Transect 81	177-178 T

## Volume 5

### Exhibit 1

Transect Profiles	<u>Panel</u>
Transect 82	179-181 T
Transect 83	182-183 T
Transect 84	184-185 T
Transect 85	186-186 T
Transect 86	187-189 T
Transect 87	190-192 T
Transect 88	193-195 T
Transect 89	196-198 T
Transect 90	199-201 T
Transect 91	202-204 T
Transect 92	205-207 T
Transect 93	208-210 T
Transect 94	211-213 T
Transect 95	214-217 T
Transect 96	218-222 T
Transect 97	223-226 T
Transect 98	227-231 T
Transect 99	232-234 T
Transect 100	235-237 T
Transect 101	238-239 T
Transect 102	240-241 T
Transect 103	242-243 T
Transect 104	244-245 T
Transect 105	246-247 T
Transect 106	248-249 T
Transect 107	250-252 T
Transect 108	253-255 T
Transect 109	256-258 T
Transect 110	259-261 T
Transect 111	262-267 T



**Volume 6**

**Exhibit 1**

Transect Profiles	Panel
Transect 112	268-269 T
Transect 113	270-271 T
Transect 114	272-273 T
Transect 115	274-275 T
Transect 116	276-277 T
Transect 117	278-279 T
Transect 118	280-281 T
Transect 119	282-282 T
Transect 120	283-283 T
Transect 121	284-288 T
Transect 122	289-290 T
Transect 123	291-292 T
Transect 124	293-295 T
Transect 125	296-300 T
Transect 126	301-305 T
Transect 127	306-310 T
Transect 128	311-314 T
Transect 129	315-319 T
Transect 130	320-324 T
Transect 131	325-329 T
Transect 132	330-333 T
Transect 133	334-337 T
Transect 134	338-341 T
Transect 135	342-346 T
Transect 136	347-351 T
Transect 137	352-355 T
Transect 138	356-360 T

**Published Separately**

Flood Insurance Rate Map (FIRM)

**Table 16: Coastal Transect Parameters**

Flood Source	Coastal Transect	Starting Wave Conditions for the 1% Annual Chance		Starting Stillwater Elevations (ft. NAVD88) Range of Stillwater Elevations (ft. NAVD88)				
		Significant Wave Height H <sub>s</sub> (ft.)	Peak Wave Period T <sub>p</sub> (sec)	10% Annual Chance	4% Annual Chance	2% Annual Chance	1% Annual Chance	0.2% Annual Chance
Gulf of Mexico	1	11.0	8.8	5.0 4.6-5.1	7.2 6.4-7.2	9.0 7.8-9.0	10.3 9.1-10.3	14.3 13.5-14.3
Gulf of Mexico	2	11.1	8.8	5.0 4.6-5.0	7.2 6.4-7.2	9.0 7.9-9.0	10.3 9.2-10.3	14.3 13.5-14.3
Gulf of Mexico	3	11.3	8.7	5.0 4.7-5.1	7.2 6.6-7.2	9.0 8.0-9.0	10.2 9.4-10.2	14.3 13.9-14.3
Gulf of Mexico	4	11.4	8.7	5.0 4.7-5.0	7.2 6.6-7.2	8.9 8.0-8.9	10.1 9.2-10.1	14.1 13.7-14.1
Gulf of Mexico	5	11.3	8.7	5.0 4.7-5.0	7.1 6.5-7.2	8.8 8.0-8.9	10.0 9.1-10.0	14.1 13.6-14.1
Gulf of Mexico	6	11.2	8.8	5.0 4.7-5.0	7.2 6.5-7.2	9.0 7.9-9.0	10.2 9.0-10.2	14.2 13.6-14.2
Gulf of Mexico	7	11.1	8.8	5.0 4.7-5.0	7.1 6.5-7.1	8.9 7.9-8.9	10.0 9.0-10.0	14.1 13.6-14.1
Gulf of Mexico	8	11.0	9.1	5.1 4.7-5.1	7.2 6.5-7.2	9.0 7.9-9.0	10.2 9.0-10.2	14.3 13.6-14.3
Gulf of Mexico	9	10.9	9.2	5.0 4.6-5.0	7.1 6.5-7.2	8.9 7.9-9.0	10.0 9.0-10.0	14.1 13.7-14.1
Gulf of Mexico	10	10.9	9.3	5.0 4.6-5.0	7.1 6.4-7.1	8.9 7.8-8.9	10.0 9.0-10.0	14.0 13.7-14.1
Gulf of Mexico	11	11.1	9.3	5.0 4.6-5.0	7.1 6.4-7.2	8.9 7.8-9.1	10.1 9.0-10.2	14.2 13.3-14.4
Gulf of Mexico	12	11.3	9.4	5.0 4.6-5.0	7.1 6.4-7.1	8.8 7.8-8.8	9.9 8.9-9.9	14.0 13.3-14.1

**Table 16: Coastal Transect Parameters (continued)**

Flood Source	Coastal Transect	Starting Wave Conditions for the 1% Annual Chance		Starting Stillwater Elevations (ft. NAVD88) Range of Stillwater Elevations (ft. NAVD88)				
		Significant Wave Height H <sub>s</sub> (ft.)	Peak Wave Period T <sub>p</sub> (sec)	10% Annual Chance	4% Annual Chance	2% Annual Chance	1% Annual Chance	0.2% Annual Chance
Gulf of Mexico	13	11.6	9.3	4.9 4.6-5.0	7.1 6.4-7.1	8.8 7.8-8.8	9.8 8.9-9.9	14.0 13.2-14.0
Gulf of Mexico	14	11.9	9.5	4.9 4.6-4.9	7.0 6.3-7.1	8.7 7.7-8.7	9.7 8.8-9.7	13.8 13.2-13.9
Gulf of Mexico	15	12.3	9.4	4.9 4.5-4.9	6.9 6.3-7.0	8.5 7.7-8.7	9.8 8.7-9.8	13.9 12.6-13.9
Gulf of Mexico	16	12.3	9.4	4.9 4.5-4.9	7.0 6.2-7.0	8.6 7.6-8.6	9.6 8.7-9.7	13.8 12.5-13.8
Gulf of Mexico	17	12.2	9.1	5.0 4.5-5.0	7.1 6.2-7.1	8.8 7.6-8.8	9.8 8.7-9.8	13.9 12.5-14.0
Gulf of Mexico	18	12.0	9.2	4.9 4.5-5.0	7.0 6.2-7.1	8.7 7.5-8.7	9.7 8.6-9.7	13.8 12.5-14.0
Gulf of Mexico	19	11.9	9.6	4.9 4.5-5.0	7.0 6.1-7.1	8.6 7.5-8.7	9.5 8.6-9.6	13.7 12.2-14.6
Gulf of Mexico	20	11.8	9.6	4.9 4.5-4.9	7.0 6.1-7.0	8.6 7.4-8.6	9.5 8.5-9.5	13.6 12.2-14.4
Gulf of Mexico	21	11.6	9.6	4.9 4.5-4.9	7.0 6.1-7.0	8.6 7.4-8.6	9.6 8.5-9.6	13.7 12.3-14.5
Gulf of Mexico	22	11.5	9.6	4.9 4.4-4.9	6.9 6.1-7.0	8.5 7.4-8.6	9.5 8.4-9.5	13.6 12.3-14.5
Gulf of Mexico	23	11.5	9.5	4.9 4.4-4.9	7.0 6.1-7.0	8.6 7.3-8.6	9.6 8.4-9.6	13.6 12.3-14.3
Gulf of Mexico	24	11.5	9.6	4.9 4.4-4.9	7.0 6.0-7.0	8.6 7.3-8.6	9.5 8.4-9.5	13.5 12.5-14.3

**Table 16: Coastal Transect Parameters (continued)**

Flood Source	Coastal Transect	Starting Wave Conditions for the 1% Annual Chance		Starting Stillwater Elevations (ft. NAVD88) Range of Stillwater Elevations (ft. NAVD88)				
		Significant Wave Height H <sub>s</sub> (ft.)	Peak Wave Period T <sub>p</sub> (sec)	10% Annual Chance	4% Annual Chance	2% Annual Chance	1% Annual Chance	0.2% Annual Chance
Gulf of Mexico	25	11.5	9.7	4.9 4.6-4.9	7.0 5.9-7.0	8.6 7.7-8.6	9.5 8.9-9.6	13.6 12.5-14.8
Gulf of Mexico	26	11.8	9.8	4.9 4.6-4.9	7.0 5.8-7.0	8.6 7.8-8.6	9.5 8.9-9.5	13.5 12.5-14.9
Gulf of Mexico	27	11.8	9.9	4.9 4.6-4.9	7.0 5.7-7.0	8.6 7.7-8.6	9.6 8.9-9.7	13.7 12.5-15.0
Gulf of Mexico	28	11.8	9.9	4.8 4.6-4.8	6.9 5.7-6.9	8.5 7.6-8.5	9.4 8.3-9.5	13.6 12.5-15.0
Gulf of Mexico	29	11.4	10.3	4.8 4.6-4.9	6.9 5.7-6.9	8.4 7.7-8.5	9.4 8.3-9.4	13.5 12.4-14.9
Gulf of Mexico	30	11.4	10.3	4.8 3.9-4.8	6.9 5.8-6.9	8.4 7.7-8.4	9.4 8.2-9.5	13.4 12.2-14.6
Gulf of Mexico	31	11.0	10.7	4.7 4.6-4.9	6.7 6.5-6.9	8.2 7.9-8.5	9.1 8.2-9.5	13.1 12.1-14.4
Gulf of Mexico	32	10.8	11.1	4.8 4.6-4.9	6.7 6.5-6.9	8.2 7.9-8.5	9.1 8.2-9.6	13.2 12.0-14.4
Gulf of Mexico	33	11.0	10.6	4.8 4.6-4.8	6.8 6.4-6.8	8.3 7.9-8.5	9.2 8.2-9.6	13.2 11.9-14.4
Gulf of Mexico	34	10.7	10.4	4.7 4.6-4.8	6.7 6.4-7.2	8.2 7.9-8.7	9.1 8.2-9.8	13.1 11.2-14.5
Gulf of Mexico	35	10.8	10.3	4.8 4.6-5.0	6.8 6.4-7.2	8.2 7.9-8.7	9.1 8.2-9.8	13.0 11.2-14.6
Gulf of Mexico	36	10.9	10.4	4.8 4.6-5.0	6.8 6.4-7.1	8.3 7.9-8.7	9.1 8.2-9.8	13.0 11.2-14.4

**Table 16: Coastal Transect Parameters (continued)**

Flood Source	Coastal Transect	Starting Wave Conditions for the 1% Annual Chance		Starting Stillwater Elevations (ft. NAVD88) Range of Stillwater Elevations (ft. NAVD88)				
		Significant Wave Height H <sub>s</sub> (ft.)	Peak Wave Period T <sub>p</sub> (sec)	10% Annual Chance	4% Annual Chance	2% Annual Chance	1% Annual Chance	0.2% Annual Chance
Gulf of Mexico	37	10.9	10.6	4.7 4.5-5.0	6.6 6.4-7.1	8.0 7.8-8.6	8.9 8.7-9.7	12.8 12.5-14.3
Gulf of Mexico	38	11.0	10.4	4.8 4.5-5.0	6.8 6.4-7.1	8.3 7.8-8.6	9.1 8.6-9.6	13.1 12.5-14.2
Gulf of Mexico	39	10.9	10.4	4.7 4.5-5.0	6.6 6.4-7.0	8.0 7.8-8.6	8.9 8.2-9.6	12.8 11.2-14.1
Gulf of Mexico	40	10.8	10.5	4.8 4.5-5.0	6.7 6.4-7.0	8.2 7.8-8.5	9.1 8.2-9.6	13.0 11.2-14.1
Gulf of Mexico	41	10.7	10.4	4.8 4.5-4.9	6.7 6.4-7.0	8.2 7.8-8.5	9.0 8.2-9.6	12.8 11.2-14.0
Gulf of Mexico	42	10.7	10.4	4.8 4.5-4.9	6.8 6.4-6.9	8.3 7.8-8.5	9.1 8.2-9.5	12.9 11.2-14.0
Gulf of Mexico	43	10.4	10.5	4.8 4.5-4.9	6.7 6.4-6.9	8.1 7.7-8.4	9.0 8.2-9.4	12.8 11.1-14.0
Gulf of Mexico	44	10.3	10.5	4.8 4.5-4.9	6.8 6.3-6.9	8.2 7.7-8.4	9.0 8.2-9.3	12.8 11.0-13.9
Gulf of Mexico	45	10.1	10.5	4.7 4.5-4.9	6.6 6.3-6.9	8.1 7.7-8.3	8.9 8.2-9.3	12.7 11.0-13.8
Gulf of Mexico	46	10.1	10.5	4.7 4.5-4.8	6.6 6.3-6.8	8.0 7.6-8.3	8.8 8.2-9.3	12.6 11.2-13.9
Gulf of Mexico	47	10.0	10.5	4.6 4.5-4.8	6.5 6.3-6.8	7.9 7.6-8.3	8.7 8.3-9.2	12.4 11.3-13.7
Gulf of Mexico	48	9.9	10.4	4.7 4.5-4.8	6.7 6.3-6.7	8.1 7.7-8.2	8.8 8.4-9.2	12.6 12.1-13.7

**Table 16: Coastal Transect Parameters (continued)**

Flood Source	Coastal Transect	Starting Wave Conditions for the 1% Annual Chance		Starting Stillwater Elevations (ft. NAVD88) Range of Stillwater Elevations (ft. NAVD88)				
		Significant Wave Height H <sub>s</sub> (ft.)	Peak Wave Period T <sub>p</sub> (sec)	10% Annual Chance	4% Annual Chance	2% Annual Chance	1% Annual Chance	0.2% Annual Chance
Gulf of Mexico	49	10.0	10.8	4.7 4.5-4.8	6.7 6.3-6.8	8.1 7.7-8.2	8.9 8.4-9.2	12.7 12.1-13.5
Gulf of Mexico	50	9.9	10.8	4.8 4.5-4.9	6.7 6.3-6.9	8.1 7.7-8.3	9.0 8.4-9.2	12.8 11.3-13.4
Gulf of Mexico	51	9.9	10.9	4.9 4.5-4.9	6.8 6.3-6.8	8.3 7.7-8.3	9.0 8.4-9.1	12.8 11.3-13.2
Gulf of Mexico	52	10.1	11.2	4.8 4.5-4.8	6.7 6.3-6.7	8.1 7.7-8.1	8.9 8.3-9.0	12.6 11.3-13.3
Gulf of Mexico	53	10.2	11.2	4.7 4.5-4.8	6.7 6.3-6.7	8.1 7.6-8.1	8.8 8.3-9.1	12.5 11.2-13.5
Gulf of Mexico	54	10.2	10.9	4.8 4.5-4.8	6.7 6.3-6.7	8.1 7.6-8.2	8.9 8.3-9.1	12.6 11.2-13.7
Gulf of Mexico	55	10.3	10.9	4.7 4.5-4.8	6.7 6.3-6.7	8.1 7.5-8.1	8.8 8.2-9.2	12.5 11.1-13.6
Gulf of Mexico	56	10.3	10.9	4.8 4.5-4.8	6.7 6.3-6.7	8.1 7.5-8.1	8.9 8.2-9.2	12.6 11.0-13.5
Gulf of Mexico	57	10.2	10.9	4.8 4.5-4.8	6.7 6.3-6.7	8.1 7.5-8.1	8.8 8.2-9.1	12.5 11.0-13.3
Gulf of Mexico	58	10.2	10.8	4.7 4.5-4.8	6.7 6.3-6.7	8.1 7.5-8.1	8.8 8.2-9.2	12.5 11.1-13.4
Gulf of Mexico	59	10.2	10.8	4.7 4.5-4.8	6.6 6.3-6.6	8.0 7.5-8.1	8.7 8.1-9.2	12.4 11.2-13.4
Gulf of Mexico	60	10.2	10.8	4.7 4.5-4.8	6.6 6.3-6.6	8.0 7.4-8.0	8.7 8.1-9.0	12.4 11.1-13.2

**Table 16: Coastal Transect Parameters (continued)**

Flood Source	Coastal Transect	Starting Wave Conditions for the 1% Annual Chance		Starting Stillwater Elevations (ft. NAVD88) Range of Stillwater Elevations (ft. NAVD88)				
		Significant Wave Height H <sub>s</sub> (ft.)	Peak Wave Period T <sub>p</sub> (sec)	10% Annual Chance	4% Annual Chance	2% Annual Chance	1% Annual Chance	0.2% Annual Chance
Gulf of Mexico	61	10.2	10.9	4.6 4.5-4.8	6.5 6.3-6.6	7.8 7.4-8.0	8.6 8.1-8.9	12.2 11.1-12.8
Gulf of Mexico	62	10.2	10.8	4.7 4.5-4.8	6.5 6.1-6.6	7.9 7.4-7.9	8.6 8.1-8.7	12.3 11.1-12.7
Gulf of Mexico	63	10.3	10.8	4.7 4.5-4.8	6.6 6.3-6.6	7.9 7.4-7.9	8.7 8.1-8.7	12.3 11.1-12.5
Gulf of Mexico	64	10.3	11.0	4.6 4.5-4.7	6.5 6.2-6.5	7.9 7.4-7.9	8.6 8.1-8.6	12.2 11.1-12.4
Gulf of Mexico	65	10.2	11.1	4.7 4.5-4.7	6.6 6.2-6.6	8.0 7.5-8.0	8.7 8.1-8.7	12.3 11.1-12.4
Gulf of Mexico	66	10.2	11.2	4.7 4.5-4.7	6.6 6.2-6.6	8.0 7.4-8.1	8.7 8.1-8.7	12.2 10.9-12.3
Gulf of Mexico	67	10.3	11.3	4.6 4.5-4.7	6.4 6.2-6.6	7.7 7.4-8.1	8.5 8.0-8.7	12.1 9.6-12.5
Gulf of Mexico	68	10.3	11.5	4.7 4.5-4.8	6.5 6.2-6.6	7.9 7.3-8.0	8.6 8.0-8.6	12.2 9.6-12.3
Gulf of Mexico	69	10.3	11.5	4.7 4.5-4.8	6.6 6.2-6.7	8.0 7.3-8.0	8.7 7.9-8.7	12.2 9.6-12.2
Gulf of Mexico	70	10.2	11.5	4.7 4.5-4.8	6.6 6.1-6.7	7.9 7.3-8.1	8.6 7.9-8.6	12.1 9.6-12.1
Gulf of Mexico	71	10.2	11.5	4.7 4.5-4.7	6.6 6.1-6.6	8.0 7.3-8.0	8.7 7.9-8.7	12.2 9.6-12.2
Gulf of Mexico	72	10.1	11.7	4.7 4.5-4.7	6.6 6.2-6.6	8.0 7.3-8.0	8.6 7.9-8.6	12.2 9.6-12.2

**Table 16: Coastal Transect Parameters (continued)**

Flood Source	Coastal Transect	Starting Wave Conditions for the 1% Annual Chance		Starting Stillwater Elevations (ft. NAVD88) Range of Stillwater Elevations (ft. NAVD88)				
		Significant Wave Height H <sub>s</sub> (ft.)	Peak Wave Period T <sub>p</sub> (sec)	10% Annual Chance	4% Annual Chance	2% Annual Chance	1% Annual Chance	0.2% Annual Chance
Gulf of Mexico	73	10.1	11.2	4.7 4.5-4.7	6.5 6.1-6.6	7.9 7.3-7.9	8.6 7.9-8.6	12.1 9.6-12.2
Gulf of Mexico	74	10.0	11.2	4.7 4.5-4.7	6.5 6.1-6.6	7.9 7.3-8.0	8.6 7.9-8.6	12.1 9.6-12.2
Gulf of Mexico	75	10.0	11.6	4.7 4.5-4.8	6.5 6.1-6.6	7.8 7.3-8.0	8.5 7.9-8.5	11.9 9.6-12.0
Gulf of Mexico	76	10.1	11.9	4.7 4.5-4.7	6.6 6.1-6.6	7.9 7.2-7.9	8.6 7.2-8.6	12.0 9.6-12.1
Gulf of Mexico	77	10.1	11.9	4.7 4.5-4.8	6.6 6.1-6.6	7.9 7.1-8.0	8.6 7.2-8.6	12.0 9.6-12.1
Gulf of Mexico	78	10.1	11.9	4.7 4.5-4.7	6.6 5.8-6.6	7.9 6.9-7.9	8.6 6.7-8.6	12.0 9.6-12.1
Gulf of Mexico	79	10.0	11.5	4.7 4.4-4.7	6.6 5.6-6.6	7.9 6.7-7.9	8.6 6.7-8.6	12.1 9.5-12.1
Gulf of Mexico	80	9.8	11.5	4.7 4.1-4.7	6.5 5.5-6.5	7.8 6.7-7.9	8.5 7.1-8.5	11.9 10.1-11.9
Gulf of Mexico	81	9.7	11.6	4.6 4.1-4.7	6.5 5.5-6.5	7.8 6.6-7.8	8.4 7.1-8.5	11.8 10.2-11.8
Gulf of Mexico	82	9.7	11.5	4.6 4.1-4.7	6.5 5.4-6.5	7.8 6.6-7.9	8.5 7.3-8.6	11.8 10.4-12.1
Gulf of Mexico	83	9.7	12.0	4.6 4.1-4.7	6.4 5.5-6.5	7.8 6.6-7.8	8.4 7.5-8.4	11.8 10.9-11.8
Gulf of Mexico	84	9.5	12.0	4.6 4.4-4.6	6.4 6.0-6.4	7.7 7.2-7.7	8.4 8.0-8.4	11.7 11.2-11.7



**Table 16: Coastal Transect Parameters (continued)**

Flood Source	Coastal Transect	Starting Wave Conditions for the 1% Annual Chance		Starting Stillwater Elevations (ft. NAVD88) Range of Stillwater Elevations (ft. NAVD88)				
		Significant Wave Height H <sub>s</sub> (ft.)	Peak Wave Period T <sub>p</sub> (sec)	10% Annual Chance	4% Annual Chance	2% Annual Chance	1% Annual Chance	0.2% Annual Chance
Gulf of Mexico	85	10.7	11.9	4.7 4.4-4.7	6.5 6.0-6.5	7.9 7.2-7.9	8.6 7.9-8.6	11.9 11.2-11.9
Gulf of Mexico	86	10.6	11.7	4.5 4.2-4.7	6.2 5.5-6.5	7.4 6.6-7.8	8.1 6.7-8.2	11.3 9.5-11.6
Gulf of Mexico	87	10.7	11.3	4.7 4.2-4.7	6.5 5.7-6.6	7.9 6.3-8.1	8.6 6.7-8.9	12.0 9.6-12.3
Gulf of Mexico	88	10.6	11.2	4.7 4.3-4.7	6.6 5.7-6.6	7.9 6.2-7.9	8.5 6.7-8.6	11.8 9.6-11.8
Gulf of Mexico	89	10.6	11.6	4.7 4.1-4.7	6.5 5.4-6.6	7.8 6.1-7.9	8.5 6.7-8.5	11.8 9.5-11.9
Gulf of Mexico	90	10.6	11.1	4.7 4.0-4.7	6.5 5.5-6.5	7.8 6.5-7.9	8.4 6.7-8.5	11.7 9.6-11.8
Gulf of Mexico	91	10.9	11.5	4.7 4.1-4.7	6.5 5.5-6.5	7.8 6.3-7.8	8.5 6.9-8.5	11.6 9.7-11.7
Gulf of Mexico	92	11.4	11.6	4.7 4.1-4.7	6.5 5.4-6.5	7.8 6.5-7.9	8.6 7.1-8.6	11.7 9.7-11.7
Gulf of Mexico	93	11.5	11.6	4.7 4.1-4.8	6.5 5.5-6.6	7.9 6.8-7.9	8.6 7.2-8.6	11.7 9.5-11.7
Gulf of Mexico	94	11.3	10.9	4.7 4.2-4.7	6.6 5.7-6.6	7.9 6.9-7.9	8.5 7.2-8.6	11.6 9.1-11.7
Gulf of Mexico	95	11.2	10.9	4.7 4.4-4.7	6.5 5.8-6.5	7.8 6.7-7.8	8.5 5.6-8.6	11.6 9.1-11.7
Gulf of Mexico	96	11.3	11.0	4.7 4.0-4.7	6.4 5.5-6.5	7.8 6.7-7.8	8.5 5.6-8.5	11.5 9.1-11.6

**Table 16: Coastal Transect Parameters (continued)**

Flood Source	Coastal Transect	Starting Wave Conditions for the 1% Annual Chance		Starting Stillwater Elevations (ft. NAVD88) Range of Stillwater Elevations (ft. NAVD88)				
		Significant Wave Height H <sub>s</sub> (ft.)	Peak Wave Period T <sub>p</sub> (sec)	10% Annual Chance	4% Annual Chance	2% Annual Chance	1% Annual Chance	0.2% Annual Chance
Gulf of Mexico	97	11.1	10.9	4.7 4.1-4.7	6.5 5.6-6.5	7.8 6.7-7.8	8.5 5.6-8.7	11.5 9.0-11.9
Gulf of Mexico	98	10.2	11.0	4.7 4.4-4.8	6.5 5.7-6.7	7.9 6.9-8.1	8.6 5.6-8.9	11.6 9.1-11.9
Gulf of Mexico	99	9.7	10.9	4.8 4.4-4.8	6.5 5.1-6.6	7.9 5.8-7.9	8.6 6.3-8.7	11.6 9.3-11.7
Gulf of Mexico	100	6.1	10.4	4.6 4.5-4.7	6.3 6.0-6.3	7.5 7.3-7.7	8.2 7.9-8.3	11.2 10.8-11.2
Gulf of Mexico	101	10.0	11.2	4.6 4.5-4.6	6.2 6.1-6.3	7.4 7.3-7.6	8.1 7.8-8.2	11.0 10.6-11.1
Gulf of Mexico	102	9.2	11.1	4.6 4.5-4.6	6.2 6.1-6.3	7.5 7.2-7.6	8.1 7.8-8.2	11.0 10.6-11.2
Gulf of Mexico	103	9.8	10.9	4.5 4.4-4.6	6.1 6.1-6.3	7.4 7.3-7.5	8.0 7.9-8.1	10.8 10.8-11.0
Gulf of Mexico	104	10.2	10.6	4.5 4.4-4.6	6.2 6.0-6.3	7.4 7.2-7.6	7.9 7.8-8.2	10.7 10.7-11.0
Gulf of Mexico	105	10.5	10.9	4.6 4.4-4.7	6.2 6.0-6.4	7.4 7.2-7.6	7.9 7.7-8.2	10.7 10.5-11.0
Gulf of Mexico	106	11.3	11.2	4.6 4.4-4.8	6.3 6.0-6.6	7.5 7.2-7.9	8.1 7.8-8.4	10.9 10.5-11.2
Gulf of Mexico	107	11.3	10.7	4.8 4.4-4.9	6.5 6.0-6.8	7.8 7.1-8.2	8.3 7.7-8.8	11.1 10.5-11.7
Gulf of Mexico	108	10.9	9.8	4.6 4.4-4.9	6.4 6.0-6.9	7.7 7.2-8.3	8.4 7.8-9.0	11.2 10.6-11.8

**Table 16: Coastal Transect Parameters (continued)**

Flood Source	Coastal Transect	Starting Wave Conditions for the 1% Annual Chance		Starting Stillwater Elevations (ft. NAVD88) Range of Stillwater Elevations (ft. NAVD88)				
		Significant Wave Height H <sub>s</sub> (ft.)	Peak Wave Period T <sub>p</sub> (sec)	10% Annual Chance	4% Annual Chance	2% Annual Chance	1% Annual Chance	0.2% Annual Chance
Gulf of Mexico	109	10.5	10.1	4.7 4.4-5.1	6.4 5.3-7.0	7.7 6.2-8.4	8.4 6.8-9.1	11.3 10.1-12.0
Gulf of Mexico	110	9.7	10.9	4.7 4.3-5.1	6.4 5.5-7.1	7.7 6.2-8.5	8.5 6.6-9.1	11.4 10.0-12.0
Gulf of Mexico	111	9.1	11.0	4.7 4.0-5.1	6.4 5.0-7.1	7.7 6.2-8.4	8.5 5.6-9.1	11.4 9.1-12.0
Gulf of Mexico	112	8.6	11.0	4.7 4.5-5.2	6.4 6.1-7.2	7.7 7.3-8.6	8.4 8.0-9.3	11.3 10.9-12.2
Gulf of Mexico	113	8.5	10.6	4.8 4.5-5.3	6.5 6.1-7.3	7.8 7.3-8.7	8.4 8.0-9.4	11.3 10.9-12.4
Gulf of Mexico	114	8.6	10.7	4.6 4.5-5.5	6.3 6.1-7.6	7.6 7.4-9.2	8.4 8.0-10.1	11.2 10.7-13.5
Gulf of Mexico	115	8.6	10.8	4.7 4.5-5.7	6.4 6.1-7.7	7.7 7.3-9.1	8.3 7.9-10.0	11.1 10.7-13.3
Gulf of Mexico	116	8.6	10.8	4.7 4.5-5.5	6.4 6.1-7.5	7.7 7.3-9.0	8.2 7.9-9.9	11.0 10.7-13.2
Gulf of Mexico	117	8.8	10.8	4.6 4.4-5.4	6.2 6.0-7.4	7.5 7.3-8.9	8.1 7.9-9.7	10.9 10.6-13.0
Gulf of Mexico	118	9.1	10.7	4.5 4.4-5.4	6.1 6.0-7.4	7.4 7.2-8.9	8.0 7.8-9.7	10.7 10.5-12.9
Gulf of Mexico	119	10.1	10.3	4.4 4.3-4.5	5.9 5.9-6.5	7.1 7.1-8.0	7.7 7.6-8.6	10.4 10.3-11.6
Gulf of Mexico	120	5.7	11.1	4.8 4.6-4.8	6.6 6.3-6.7	8.0 7.6-8.1	8.6 8.3-8.7	11.6 11.2-11.7

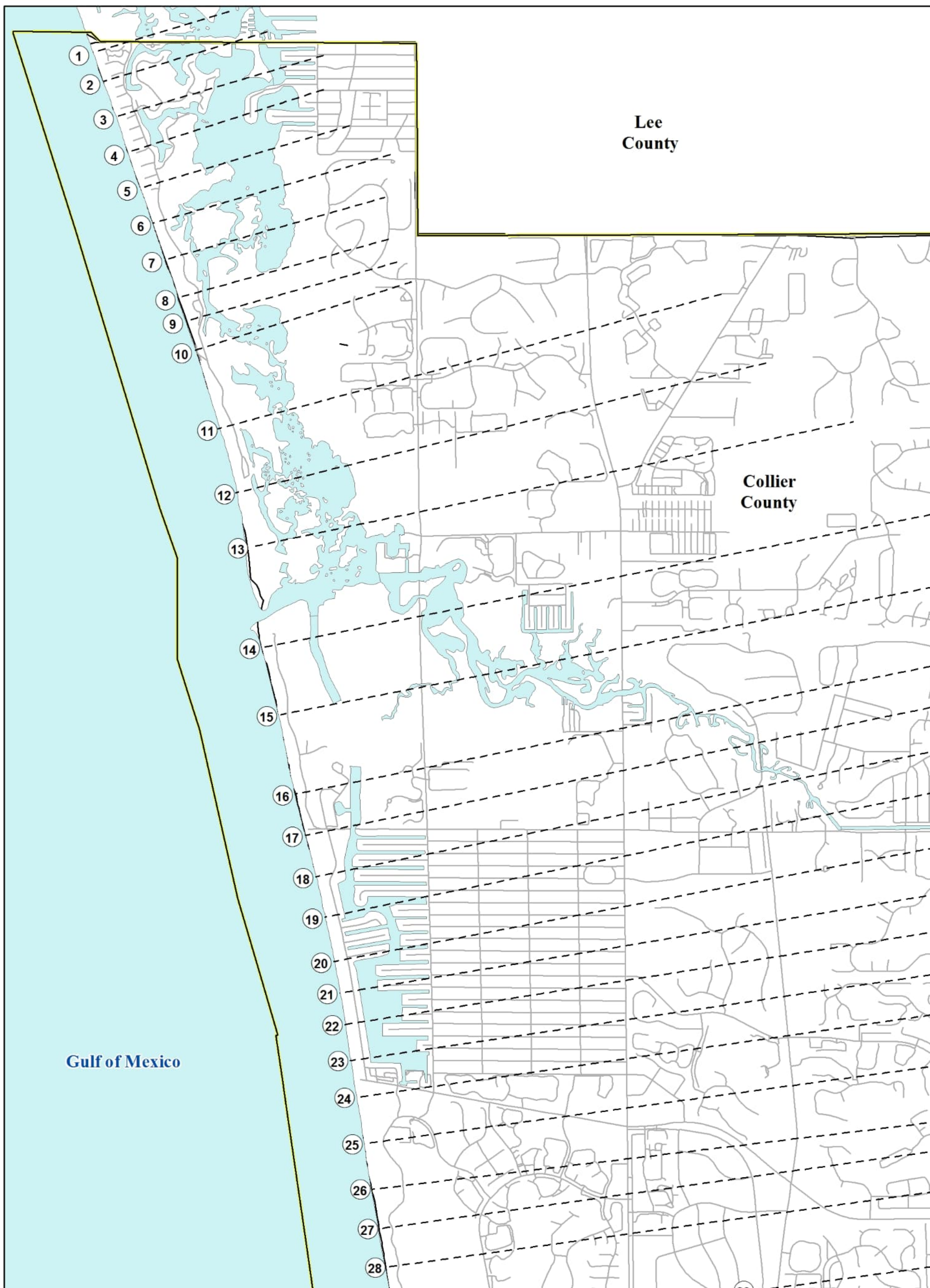
**Table 16: Coastal Transect Parameters (continued)**

Flood Source	Coastal Transect	Starting Wave Conditions for the 1% Annual Chance		Starting Stillwater Elevations (ft. NAVD88) Range of Stillwater Elevations (ft. NAVD88)				
		Significant Wave Height H <sub>s</sub> (ft.)	Peak Wave Period T <sub>p</sub> (sec)	10% Annual Chance	4% Annual Chance	2% Annual Chance	1% Annual Chance	0.2% Annual Chance
Gulf of Mexico	121	9.9	11.1	4.9 4.1-5.8	6.6 5.3-7.7	7.9 6.5-9.2	8.6 5.9-10.0	11.5 9.8-13.3
Gulf of Mexico	122	9.2	11.5	4.8 4.4-5.9	6.5 6.0-8.0	7.8 7.2-9.5	8.5 7.7-10.4	11.4 10.4-13.8
Gulf of Mexico	123	9.2	11.9	4.8 4.4-5.9	6.5 5.9-8.0	7.8 7.0-9.6	8.5 7.4-10.4	11.3 10.0-13.7
Gulf of Mexico	124	8.4	11.6	4.8 4.4-5.8	6.5 5.9-7.8	7.8 7.0-9.3	8.4 7.4-10.1	11.3 10.0-13.3
Gulf of Mexico	125	6.3	5.0	6.1 4.4-6.2	8.3 5.0-8.4	9.9 6.0-10.1	10.9 6.8-11.1	14.6 9.8-14.8
Gulf of Mexico	126	7.0	5.2	6.1 4.3-6.2	8.3 5.8-8.5	9.9 6.8-10.1	10.9 7.3-11.1	14.5 10.0-14.9
Gulf of Mexico	127	7.2	5.6	6.0 4.2-6.2	8.1 5.1-8.5	9.7 6.2-10.2	10.5 6.8-11.1	14.1 10.0-14.8
Gulf of Mexico	128	7.5	5.9	6.1 4.3-6.2	8.2 5.6-8.4	9.9 6.6-10.1	10.8 6.8-11.0	14.4 8.6-14.8
Gulf of Mexico	129	7.4	6.1	6.1 4.3-6.3	8.3 5.4-8.5	10.0 6.4-10.2	10.9 6.7-11.2	14.5 8.6-15.1
Gulf of Mexico	130	7.5	5.9	6.2 3.9-6.3	8.4 5.2-8.5	10.0 6.3-10.1	11.0 6.5-11.1	14.7 8.8-15.0
Gulf of Mexico	131	7.4	6.2	6.1 3.9-6.3	8.2 5.2-8.5	9.8 6.3-10.2	10.7 6.4-11.2	14.3 8.8-15.1
Gulf of Mexico	132	6.8	5.9	6.4 4.0-6.4	8.7 5.3-8.7	10.3 6.3-10.3	11.3 5.9-11.4	15.2 8.8-15.2

**Table 16: Coastal Transect Parameters (continued)**

Flood Source	Coastal Transect	Starting Wave Conditions for the 1% Annual Chance		Starting Stillwater Elevations (ft. NAVD88) Range of Stillwater Elevations (ft. NAVD88)				
		Significant Wave Height $H_s$ (ft.)	Peak Wave Period $T_p$ (sec)	10% Annual Chance	4% Annual Chance	2% Annual Chance	1% Annual Chance	0.2% Annual Chance
Gulf of Mexico	133	6.7	6.0	6.4 4.0-6.4	8.6 5.3-8.7	10.3 6.2-10.3	11.3 5.9-11.3	15.1 8.8-15.3
Gulf of Mexico	134	7.0	6.1	6.3 4.3-6.3	8.5 4.7-8.6	10.1 5.5-10.3	11.1 5.9-11.3	14.9 8.9-15.2
Gulf of Mexico	135	6.5	6.2	6.2 3.4-6.5	8.4 4.2-8.7	9.9 5.3-10.4	10.9 5.4-11.4	14.6 7.9-15.3
Gulf of Mexico	136	7.2	6.3	6.0 4.0-6.3	8.0 4.6-8.5	9.5 3.8-10.1	10.4 4.0-11.0	14.0 7.0-14.9
Gulf of Mexico	137	6.0	5.8	6.3 4.2-6.3	8.5 3.1-8.5	10.1 3.9-10.1	10.9 3.7-10.9	14.9 5.5-14.9
Gulf of Mexico	138	6.5	6.2	6.2 3.9-6.5	8.3 4.7-8.6	9.8 4.5-10.2	10.6 3.8-11.0	14.5 5.3-15.0

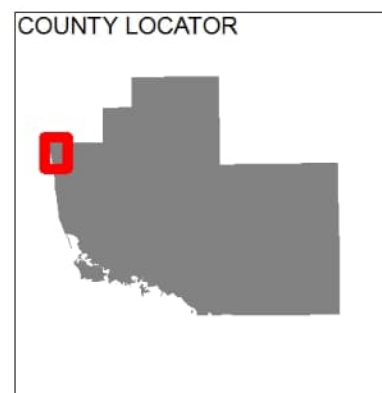
Figure 9: Transect Location Map



1 inch = 2,500 feet 1:30,000


0 650 1,300 2,600 3,900 5,200 Feet

Map Projection:  
 State Plane Transverse Mercator, Florida East Zone 0901, North American Datum 1983,  
 Western Hemisphere, Vertical Datum: NAVD 88



**NATIONAL FLOOD INSURANCE PROGRAM**  
 Transect Locator Map

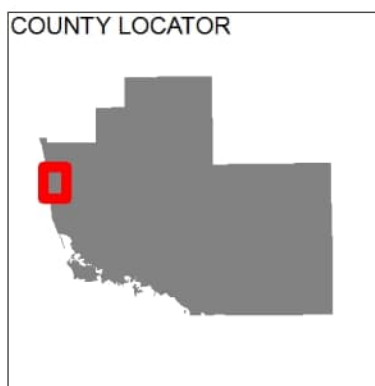
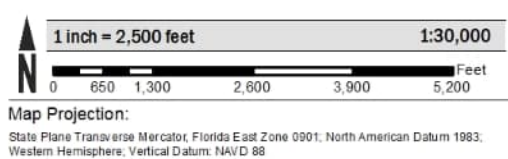
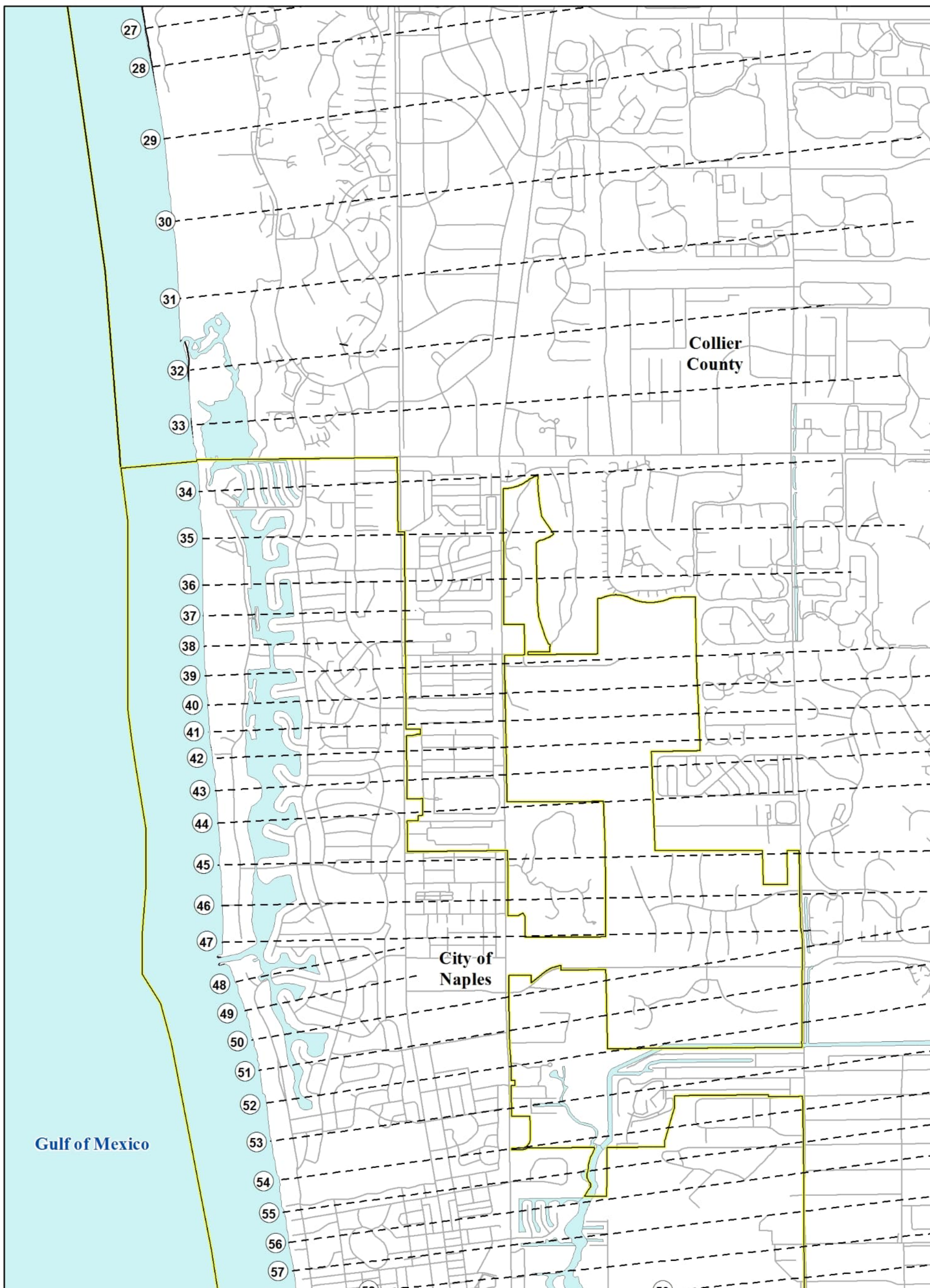
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FEMA



Figure 9: Transect Location Map



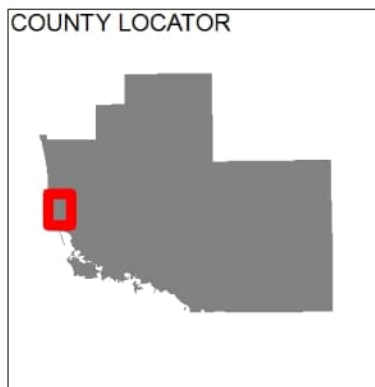
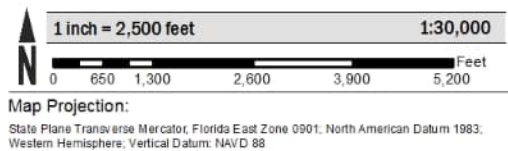
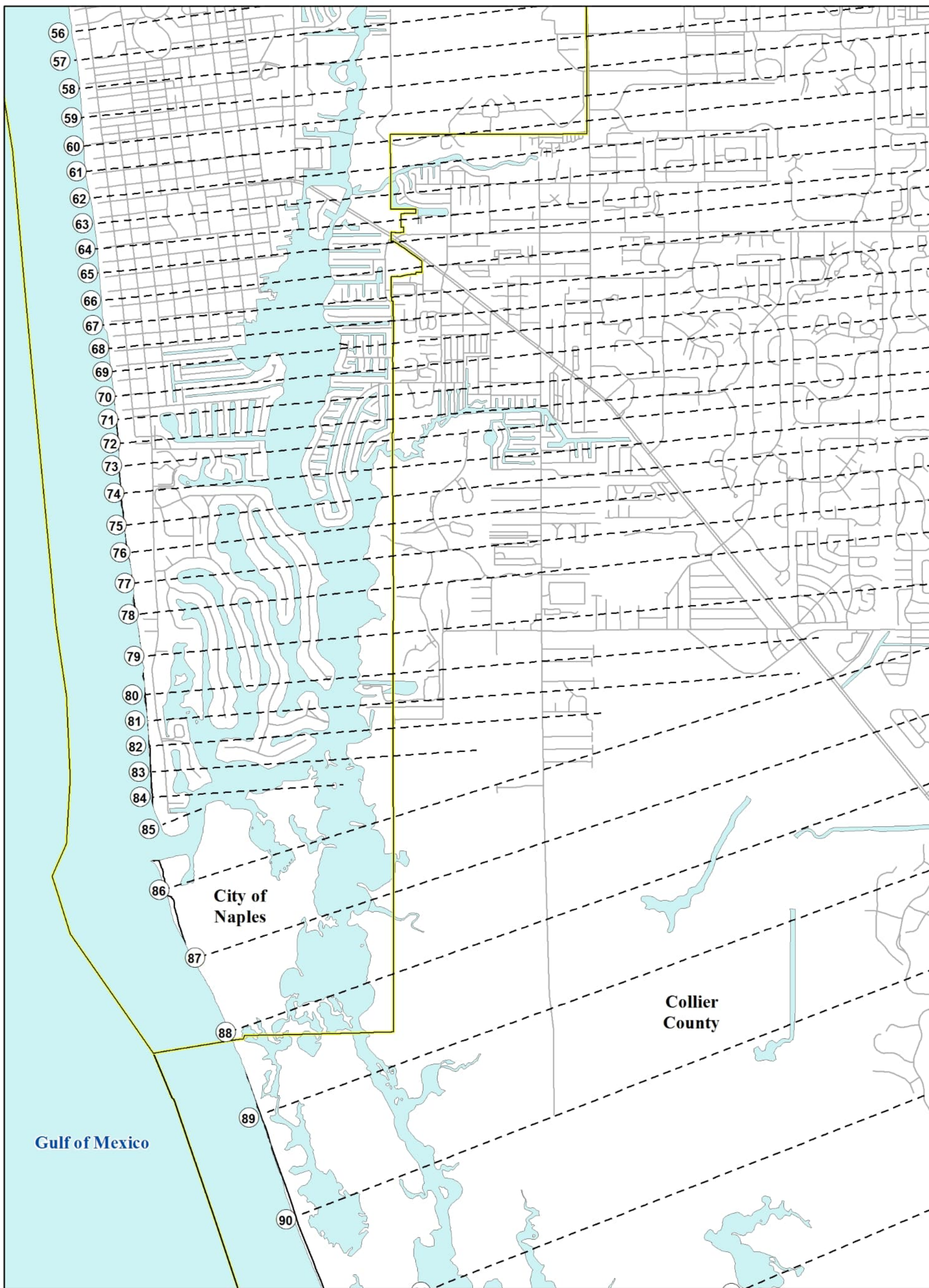
**NATIONAL FLOOD INSURANCE PROGRAM**  
Transect Locator Map  
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FEMA



Figure 9: Transect Location Map



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Transect Locator Map

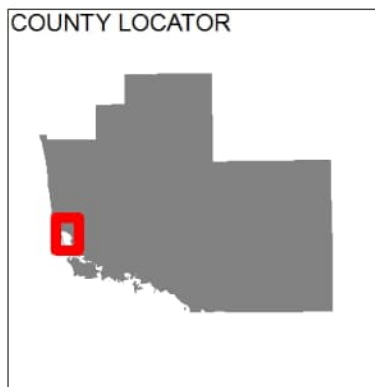
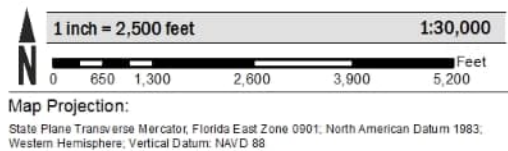
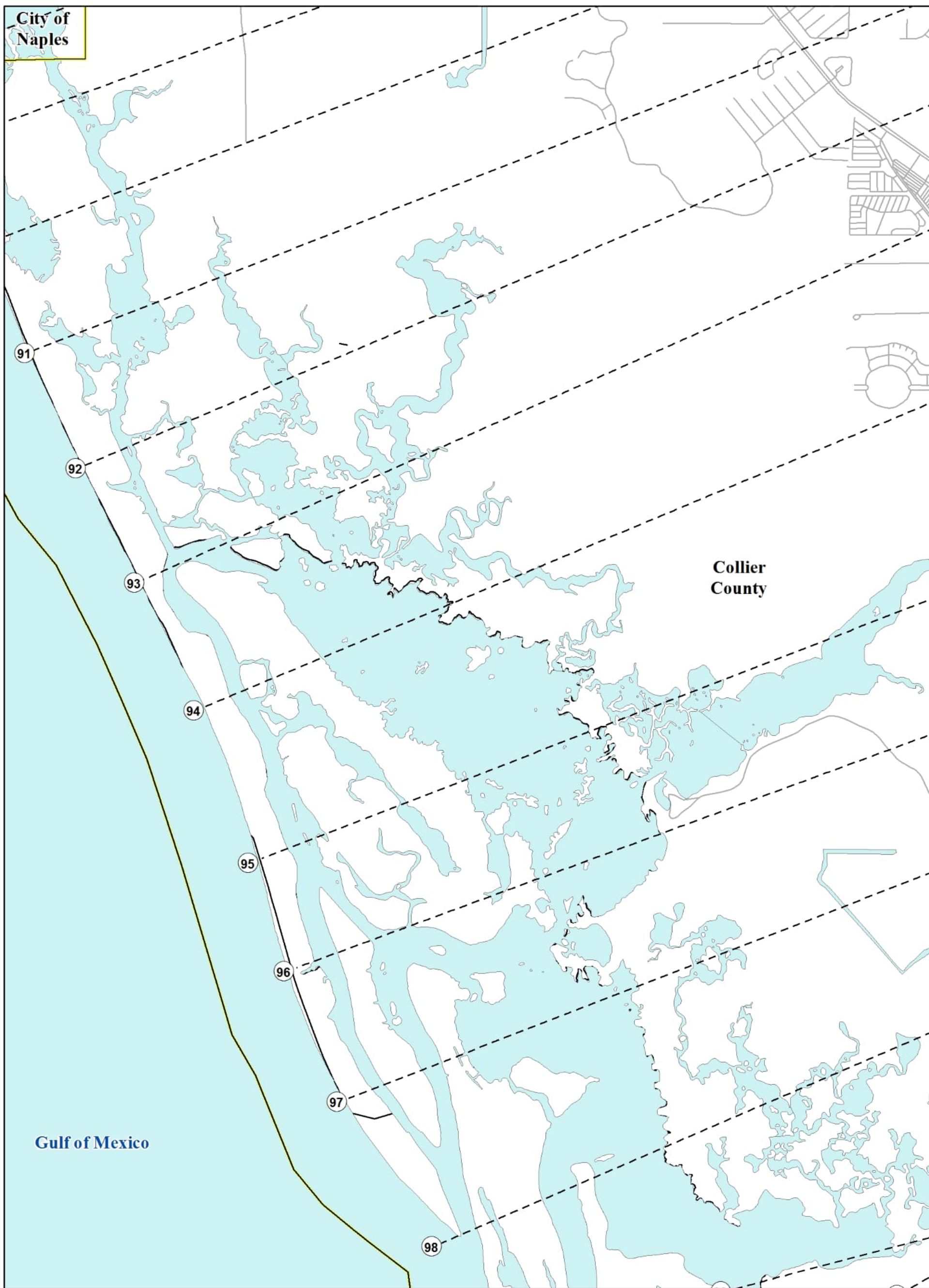
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FEMA



Figure 9: Transect Location Map



**NATIONAL FLOOD INSURANCE PROGRAM**

Transect Locator Map

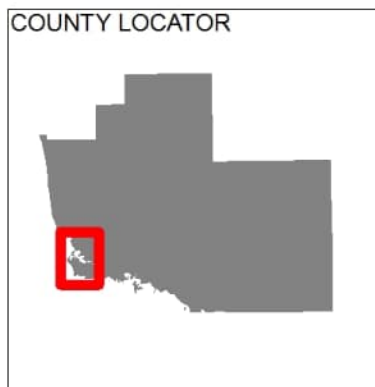
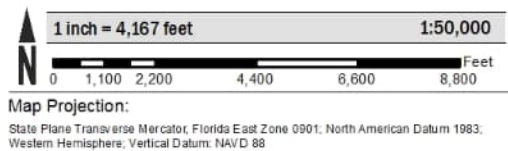
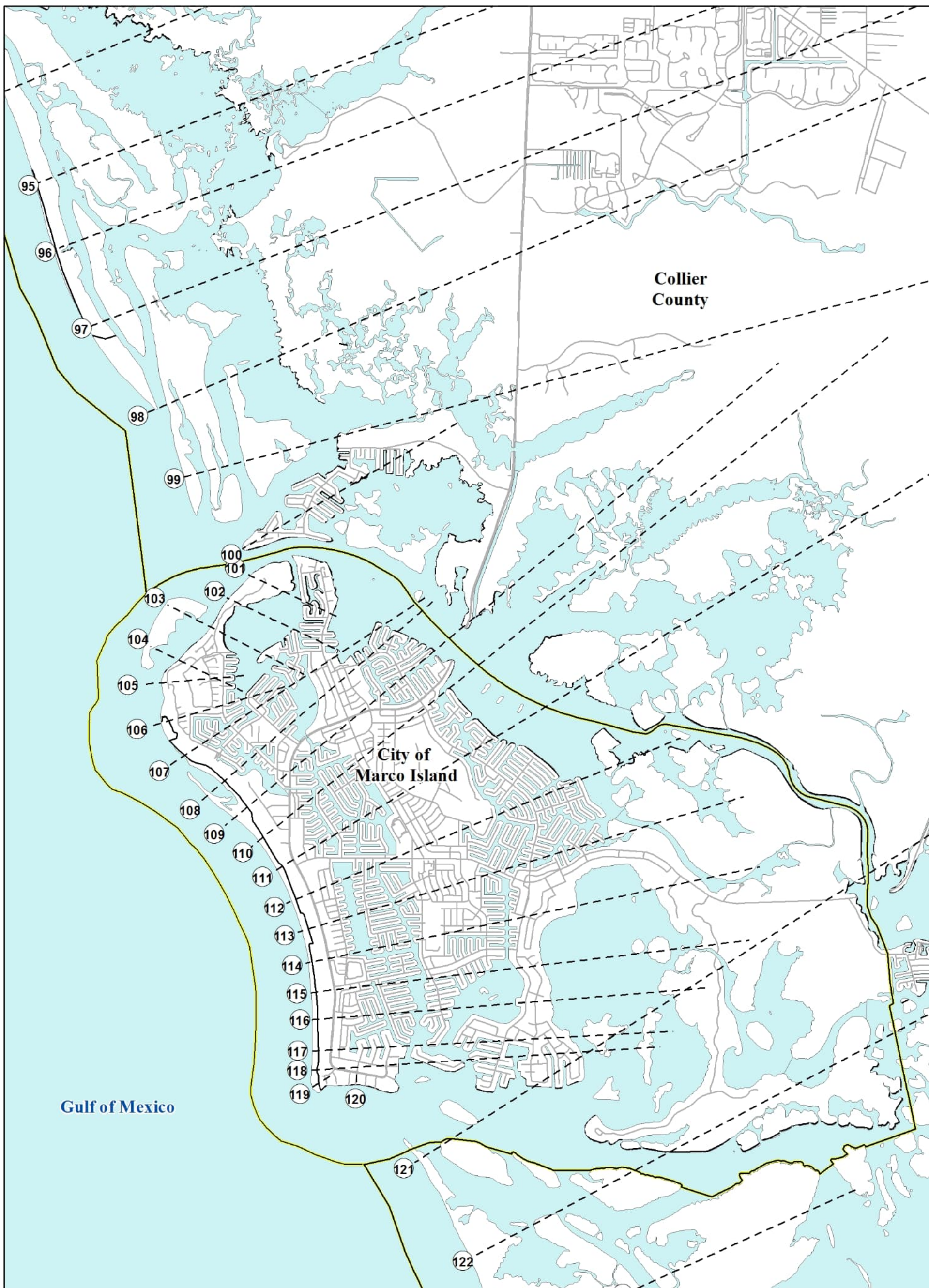
0583J, 0584J, 0595J, 0603J, 0604J, 0612J, 0615J,  
0810J, 0826J, 0827J



FEMA



Figure 9: Transect Location Map



**NATIONAL FLOOD INSURANCE PROGRAM**

Transect Locator Map

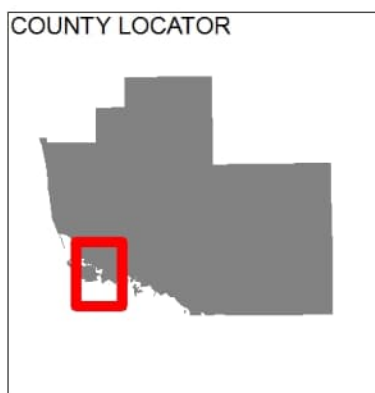
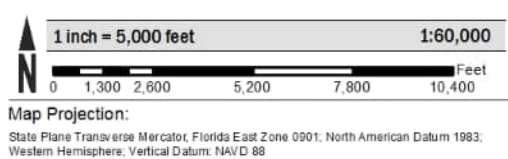
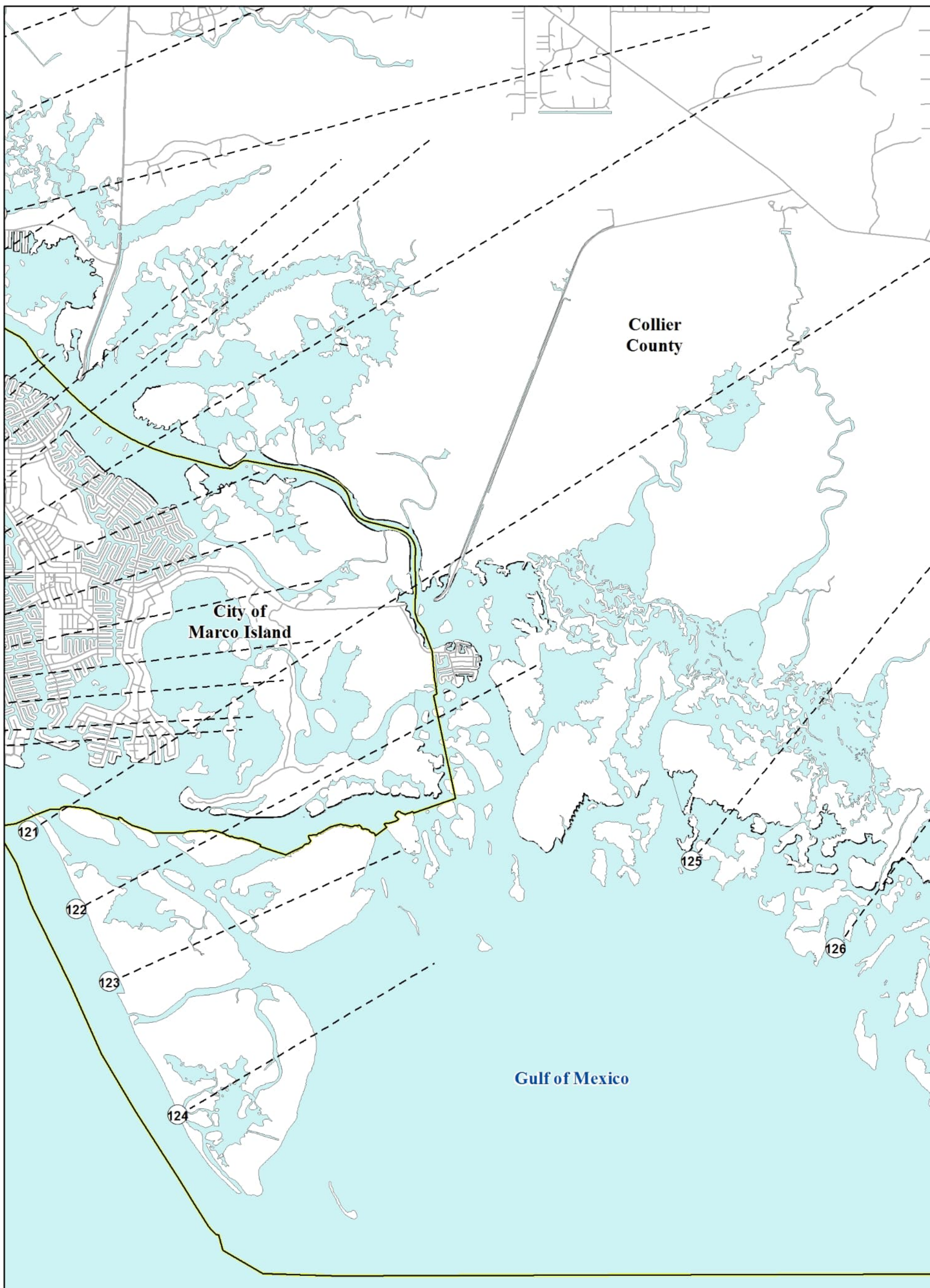
0595J, 0612J, 0615J, 0616J, 0620J, 0810J, 0825J, 0826J,  
0827J, 0828J, 0829J, 0835J, 0836J, 0837J, 0840J, 0841J,  
0842J, 0845J



FEMA



Figure 9: Transect Location Map



**NATIONAL FLOOD INSURANCE PROGRAM**

Transect Locator Map

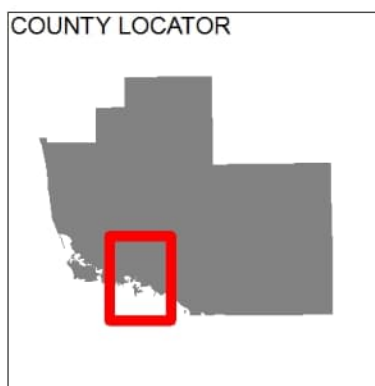
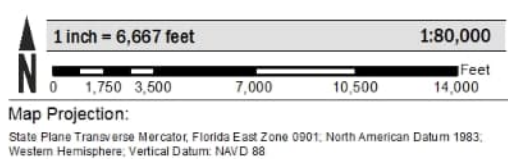
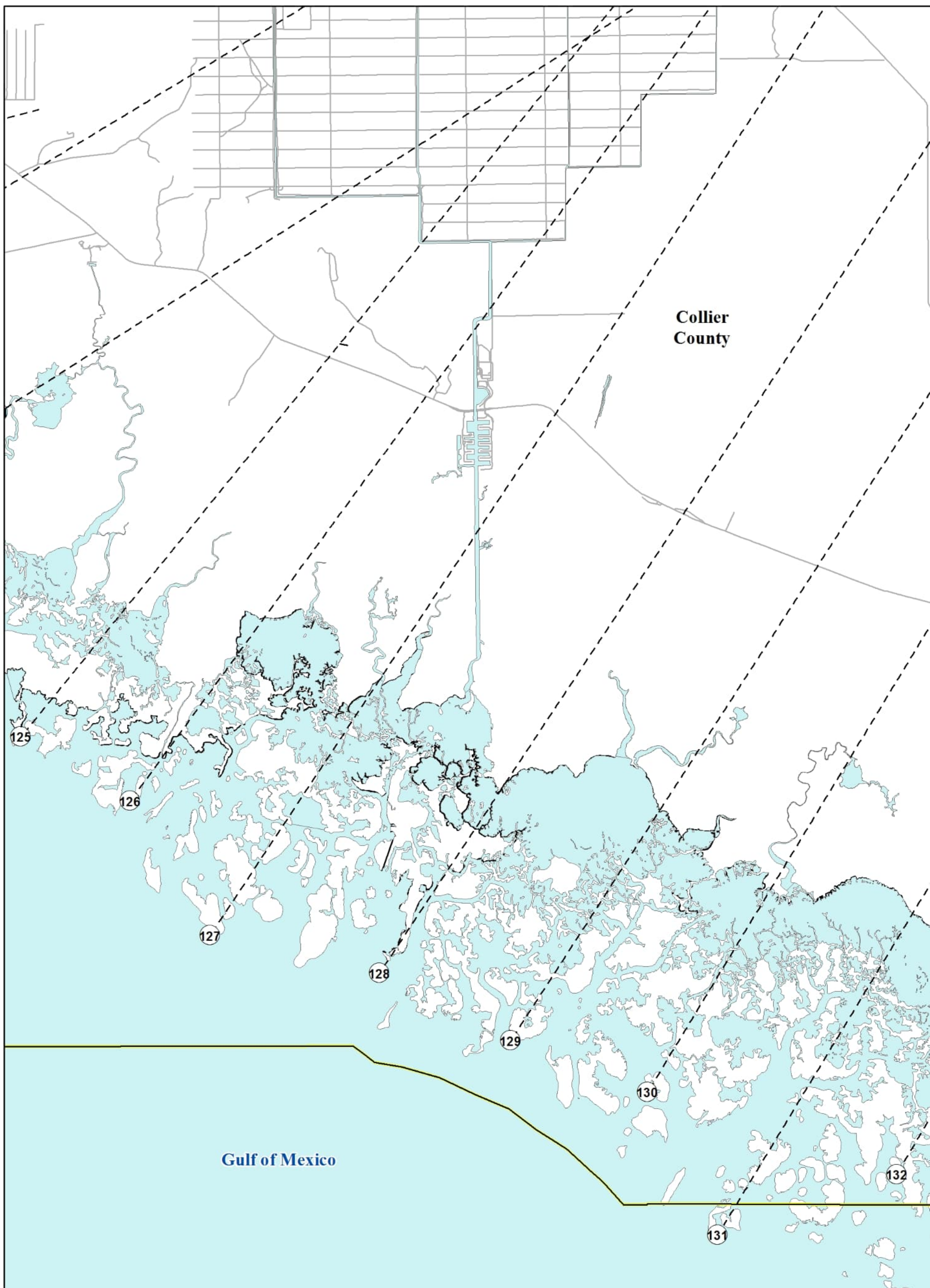
0615J, 0620J, 0640J, 0827J, 0829J, 0835J, 0837J,  
0840J, 0841J, 0842J, 0845J, 0855J, 0875J, 1030J,  
1035J, 1075J




FEMA



Figure 9: Transect Location Map



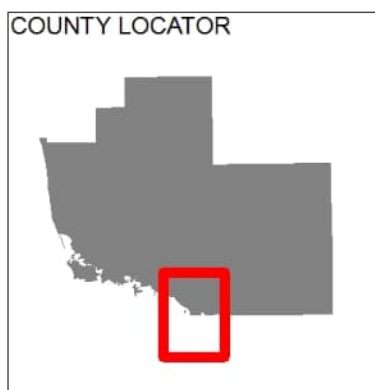
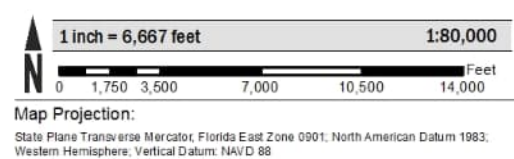
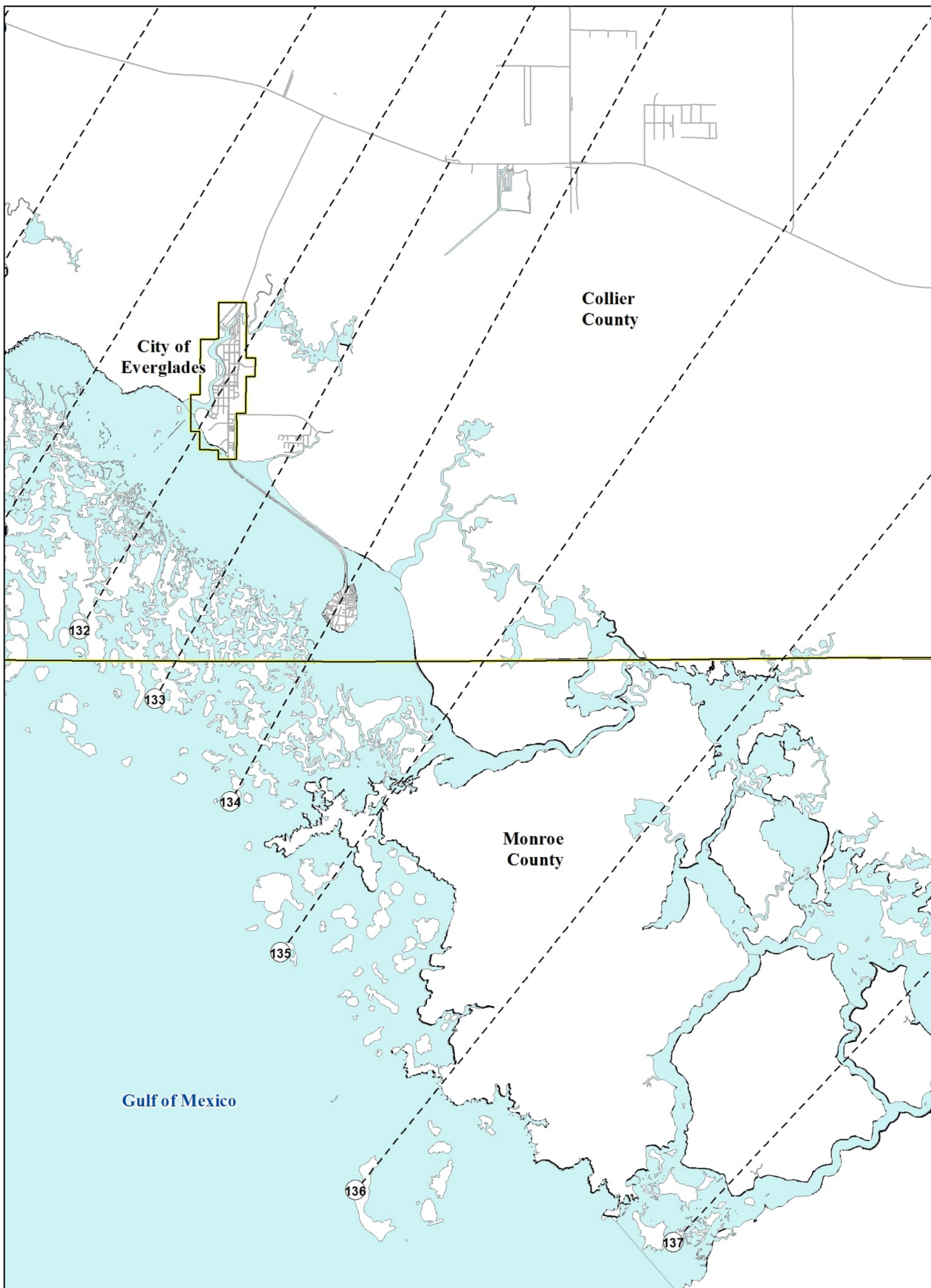
**NATIONAL FLOOD INSURANCE PROGRAM**  
Transect Locator Map  
0640J, 0650J, 0675J, 0855J, 0860J, 0875J, 0880J,  
0885J, 0890J, 0895J, 1075J, 1085J, 1100J



FEMA



Figure 9: Transect Location Map



**NATIONAL FLOOD INSURANCE PROGRAM**

Transect Locator Map

0895J, 0915J, 0920J, 0950J, 1085J, 1100J,  
1105J, 1125J, 1150J



FEMA

## 5.4 Alluvial Fan Analyses

This section is not applicable to this Flood Risk Project.

**Table 17: Summary of Alluvial Fan Analyses**  
**[Not Applicable to this Flood Risk Project]**

**Table 18: Results of Alluvial Fan Analyses**  
**[Not Applicable to this Flood Risk Project]**

## SECTION 6.0 – MAPPING METHODS

### 6.1 Vertical and Horizontal Control

All FIS Reports and FIRMs are referenced to a specific vertical datum. The vertical datum provides a starting point against which flood, ground, and structure elevations can be referenced and compared. Until recently, the standard vertical datum used for newly created or revised FIS Reports and FIRMs was the National Geodetic Vertical Datum of 1929 (NGVD29). With the completion of the North American Vertical Datum of 1988 (NAVD88), many FIS Reports and FIRMs are now prepared using NAVD88 as the referenced vertical datum.

Flood elevations shown in this FIS Report and on the FIRMs are referenced to NAVD88. These flood elevations must be compared to structure and ground elevations referenced to the same vertical datum. For information regarding conversion between NGVD29 and NAVD88 or other datum conversion, visit the National Geodetic Survey website at [www.ngs.noaa.gov](http://www.ngs.noaa.gov).

Temporary vertical monuments are often established during the preparation of a flood hazard analysis for the purpose of establishing local vertical control. Although these monuments are not shown on the FIRM, they may be found in the archived project documentation associated with the FIS Report and the FIRMs for this community. Interested individuals may contact FEMA to access these data.

To obtain current elevation, description, and/or location information for benchmarks in the area, please visit the NGS website at [www.ngs.noaa.gov](http://www.ngs.noaa.gov).

The datum conversion locations and values that were calculated for Collier County are provided in Table 19.

**Table 19: Countywide Vertical Datum Conversion**

Quadrangle Name	Quadrangle Corner	Latitude	Longitude	Conversion from NGVD29 to NAVD88 (feet)
Average Conversion from NGVD29 to NAVD88 = -1.300 ft.				

**Table 20: Stream-Based Vertical Datum Conversion**  
**[Not Applicable to this Flood Risk Project]**

**6.2 Base Map**

The FIRMs and FIS Report for this project have been produced in a digital format. The flood hazard information was converted to a Geographic Information System (GIS) format that meets FEMA's FIRM Database specifications and geographic information standards. This information is provided in a digital format so that it can be incorporated into a local GIS and be accessed more easily by the community. The FIRM Database includes most of the tabular information contained in the FIS Report in such a way that the data can be associated with pertinent spatial features. For example, the information contained in the Floodway Data table and Flood Profiles can be linked to the cross sections that are shown on the FIRMs. Additional information about the FIRM Database and its contents can be found in FEMA's *Guidelines and Standards for Flood Risk Analysis and Mapping*, [www.fema.gov/media-library/resources-documents/collections/361](http://www.fema.gov/media-library/resources-documents/collections/361).

Base map information shown on the FIRM was derived from the sources described in Table 21.

**Table 21: Base Map Sources**

Data Type	Data Provider	Data Date	Data Scale	Data Description
Digital Orthophoto	U.S. Bureau of Land Management	01/01/2005	1:24,000	Ground Conditions.
Digital Orthophoto	USDA-FSA Aerial Photography Field Office	01/28/2018	1:12,000	NAIP aerial Imagery for Collier County, Florida.
HUC Boundaries	United States Geological Survey (USGS)	01/01/1994	N/A	8-digit watershed boundary dataset.
Political boundaries	Collier County BCC IT/GIS	11/10/2003	N/A	Collier County Florida Unincorporated Boundaries
Political boundaries	Collier County BCC IT/GIS	01/20/2010	1:5,000	Collier County Florida Incorporated Boundaries
Surface Water Features	National Oceanic and Atmospheric Administration National Ocean Services (NOAA)	01/01/2004	N/A	Tide stations used in Collier County coastal model.
Surface Water Features	South Florida Water Management District (SFWMD)	01/01/2005	N/A	Locations of rain gages used in Collier County modeling. Stage and flow gages used for Collier County models.
Surface Water Features	Collier County Government	01/01/2008	N/A	Gulf of Mexico shoreline for Collier County.

**Table 21 Base Map Sources (continued)**

Data Type	Data Provider	Data Date	Data Scale	Data Description
Surface Water Features	South Florida Water Management District (SFWMD)	01/01/2006	N/A	Subbasins for Collier County.
Transportation Features	Federal Emergency Management Agency	10/28/2009	N/A	Location of general structures: bridges, culverts, etc.
Transportation Features	Collier County BCC IT/GIS	07/29/2019	1:5,000	Collier County Florida transportation features

**6.3 Floodplain and Floodway Delineation**

The FIRM shows tints, screens, and symbols to indicate floodplains and floodways as well as the locations of selected cross sections used in the hydraulic analyses and floodway computations.

For riverine flooding sources, the mapped floodplain boundaries shown on the FIRM have been delineated using the flood elevations determined at each cross section; between cross sections, the boundaries were interpolated using the topographic elevation data described in Table 22. For each coastal flooding source studied as part of this FIS Report, the mapped floodplain boundaries on the FIRM have been delineated using the flood and wave elevations determined at each transect; between transects, boundaries were delineated using land use and land cover data, the topographic elevation data described in Table 22, and knowledge of coastal flood processes. In ponding areas, flood elevations were determined at each junction of the model; between junctions, boundaries were interpolated using the topographic elevation data described in Table 22.

In cases where the 1-percent and 0.2-percent-annual-chance floodplain boundaries are close together, only the 1-percent-annual-chance floodplain boundary has been shown. Small areas within the floodplain boundaries may lie above the flood elevations but cannot be shown due to limitations of the map scale and/or lack of detailed topographic data.

The floodway widths presented in this FIS Report and on the FIRM were computed for certain stream segments on the basis of equal conveyance reduction from each side of the floodplain. Floodway widths were computed at cross sections. Between cross sections, the floodway boundaries were interpolated. Table 2 indicates the flooding sources for which floodways have been determined. The results of the floodway computations for those flooding sources have been tabulated for selected cross sections and are shown in Table 23, "Floodway Data."



**Table 22: Summary of Topographic Elevation Data used in Mapping**

Community	Flooding Source	Source for Topographic Elevation Data			
		Description	Vertical Accuracy	Horizontal Accuracy	Citation
Entire Coastline of Collier County	Gulf of Mexico	Light Detection and Ranging data (LiDAR)	9.5 cm RMSEz	1 meter at 95% confidence level	USACE 2015
Entire Coastline of Collier County	Gulf of Mexico	Light Detection and Ranging data (LiDAR)	9.1 cm RMSEz	1.15 meter at 95% confidence level	FDEM 2007

BFEs shown at cross sections on the FIRM represent the 1-percent-annual-chance water surface elevations shown on the Flood Profiles and in the Floodway Data tables in the FIS Report. Rounded whole-foot elevations may be shown on the FIRM in coastal areas, areas of ponding, and other areas with static base flood elevations.

**Table 23: Floodway Data**

**[Not Applicable to this Flood Risk Project]**

**Table 24: Flood Hazard and Non-Encroachment Data for Selected Streams**

**[Not Applicable to this Flood Risk Project]**

#### 6.4 Coastal Flood Hazard Mapping

Flood insurance zones and BFEs including the wave effects were identified on each transect based on the results from the onshore wave hazard analyses. Between transects, elevations were interpolated using topographic maps, land-use and land-cover data, and knowledge of coastal flood processes to determine the aerial extent of flooding. Sources for topographic data are shown in Table 22.

Zone VE is subdivided into elevation zones and BFEs are provided on the FIRM.

The limit of Zone VE shown on the FIRM is defined as the farthest inland extent of any of these criteria (determined for the 1-percent-annual-chance flood condition):

- The *primary frontal dune zone* is defined in 44 CFR Section 59.1 of the NFIP regulations. The primary frontal dune represents a continuous or nearly continuous mound or ridge of sand with relatively steep seaward and landward slopes that occur immediately landward and adjacent to the beach. The primary frontal dune zone is subject to erosion and overtopping from high tides and waves during major coastal storms. The inland limit of the primary frontal dune zone occurs at the point where there is a distinct change from a relatively steep slope to a relatively mild slope.
- The *wave runup zone* occurs where the (eroded) ground profile is 3.0 feet or more below the 2-percent wave runup elevation.

- The *wave overtopping splash zone* is the area landward of the crest of an overtopped barrier, in cases where the potential 2-percent wave runup exceeds the barrier crest elevation by 3.0 feet or more.
- The *breaking wave height zone* occurs where 3-foot or greater wave heights could occur (this is the area where the wave crest profile is 2.1 feet or more above the total stillwater elevation).
- The *high-velocity flow zone* is landward of the overtopping splash zone (or area on a sloping beach or other shore type), where the product of depth of flow times the flow velocity squared ( $hv^2$ ) is greater than or equal to  $200 \text{ ft}^3/\text{sec}^2$ . This zone may only be used on the Pacific Coast.

The SFHA boundary indicates the limit of SFHAs shown on the FIRM as either “V” zones or “A” zones.

Table 25 indicates the coastal analyses used for floodplain mapping and the criteria used to determine the inland limit of the open-coast Zone VE and the SFHA boundary at each transect.

**Table 25: Summary of Coastal Transect Mapping Considerations**

Coastal Transect	Primary Frontal Dune (PFD) Identified	Wave Runup Analysis	Wave Height Analysis	Zone VE Limit	SFHA Boundary
		Zone Designation and BFE (ft NAVD88)	Zone Designation and BFE (ft NAVD88)		
1	✓	N/A	VE 13-16 AE 10-12	Wave Height	N/A
2	✓	N/A	VE 12-16 AE 10-12	Wave Height	N/A
3	✓	N/A	VE 12-16 AE 10-12	Wave Height	SWEL
4	✓	N/A	VE 11-15 AE 9-11	Wave Height	SWEL
5	✓	N/A	VE 11-15 AE 9-11	Wave Height	SWEL
6	✓	N/A	VE 11-15 AE 10-11	Wave Height	SWEL
7	✓	N/A	VE 11-15 AE 10-11	Wave Height	SWEL
8	✓	N/A	VE 12-16 AE 10-11	Wave Height	SWEL
9	✓	N/A	VE 12-15 AE 10-11	PFD	SWEL
10	✓	N/A	VE 11-15 AE 10-11	PFD	SWEL
11	✓	N/A	VE 12-15 AE 9-10	PFD	SWEL
12	✓	N/A	VE 11-15 AE 9-11	PFD	SWEL
13	✓	N/A	VE 11-15 AE 9-11	PFD	SWEL
14	✓	N/A	VE 11-15 AE 9-11	PFD	SWEL
15	✓	N/A	VE 11-15 AE 9-11	PFD	SWEL
16	✓	N/A	VE 11-15 AE 9-11	PFD	SWEL
17	✓	N/A	VE 12-15 AE 9-11	PFD	SWEL
18	✓	N/A	VE 11-14 AE 9-11	PFD	SWEL
19	✓	N/A	VE 11-14 AE 9-10	PFD	SWEL

**Table 25: Summary of Coastal Transect Mapping Considerations (continued)**

Coastal Transect	Primary Frontal Dune (PFD) Identified	Wave Runup Analysis	Wave Height Analysis	Zone VE Limit	SFHA Boundary
		Zone Designation and BFE (ft NAVD88)	Zone Designation and BFE (ft NAVD88)		
20	✓	N/A	VE 11-14 AE 9-10	PFD	SWEL
21	✓	N/A	VE 11-14 AE 9-10	PFD	SWEL
22	✓	N/A	VE 11-14 AE 9-10	PFD	SWEL
23	✓	N/A	VE 11-15 AE 9-10	PFD	SWEL
24	✓	N/A	VE 12-15 AE 9-11	PFD	SWEL
25	✓	N/A	VE 12-15 AE 9-11	Wave Height	SWEL
26	✓	N/A	VE 12-15 AE 9-11	PFD	SWEL
27	✓	N/A	VE 12-15 AE 9-11	PFD	SWEL
28	✓	N/A	VE 11-14 AE 9-11	Wave Height	SWEL
29	✓	N/A	VE 11-14 AE 9-11	PFD	SWEL
30	✓	N/A	VE 11-14 AE 9-11	PFD	SWEL
31	✓	N/A	VE 11-14 AE 10-11	PFD	SWEL
32	✓	N/A	VE 11-14 AE 10-11	Wave Height	SWEL
33	✓	N/A	VE 11-14 AE 10-11	Wave Height	SWEL
34	✓	N/A	VE 11-14 AE 8-11	Wave Heights	SWEL
35	✓	N/A	VE 11-14 AE 8-11	PFD	SWEL
36	✓	N/A	VE 11-14 AE 10-11	PFD	SWEL
37	✓	N/A	VE 11-14 AE 10-11	PFD	SWEL
38	✓	N/A	VE 11-14 AE 10-11	PFD	SWEL

**Table 25: Summary of Coastal Transect Mapping Considerations (continued)**

Coastal Transect	Primary Frontal Dune (PFD) Identified	Wave Runup Analysis	Wave Height Analysis	Zone VE Limit	SFHA Boundary
		Zone Designation and BFE (ft NAVD88)	Zone Designation and BFE (ft NAVD88)		
39	✓	N/A	VE 11-14 AE 10-11	PFD	SWEL
40	✓	N/A	VE 11-14 AE 10-11	PFD	SWEL
41	✓	N/A	VE 11-14 AE 10-11	PFD	SWEL
42		N/A	VE 11-14 AE 8-11	Wave Height	SWEL
43	✓	N/A	VE 11-14 AE 8-11	PFD	SWEL
44	✓	N/A	VE 11-14 AE 8-11	PFD	SWEL
45	✓	N/A	VE 11-14 AE 8-11	PFD	SWEL
46	✓	N/A	VE 11-13 AE 8-11	PFD	SWEL
47	✓	N/A	VE 12-13 AE 8-11	PFD	SWEL
48		N/A	VE 11-14 AE 9-10	Wave Height	SWEL
49	✓	N/A	VE 11-14 AE 9-11	PFD	SWEL
50	✓	N/A	VE 11-14 AE 8-10	PFD	SWEL
51	✓	N/A	VE 11-14 AE 7-10	PFD	SWEL
52	✓	N/A	VE 11-14 AE 8-11	PFD	SWEL
53	✓	N/A	VE 11-14 AE 8-10	PFD	SWEL
54		N/A	VE 11-14 AE 8-11	Wave Height	SWEL
55	✓	N/A	VE 11-13 AE 8-10	PFD	SWEL
56	✓	N/A	VE 11-14 AE 8-10	PFD	SWEL
57	✓	N/A	VE 11-13 AE 8-10	PFD	SWEL

**Table 25: Summary of Coastal Transect Mapping Considerations (continued)**

Coastal Transect	Primary Frontal Dune (PFD) Identified	Wave Runup Analysis	Wave Height Analysis	Zone VE Limit	SFHA Boundary
		Zone Designation and BFE (ft NAVD88)	Zone Designation and BFE (ft NAVD88)		
58	✓	N/A	VE 11-13 AE 8-10	PFD	SWEL
59	✓	N/A	VE 11-13 AE 8-10	PFD	SWEL
60	✓	N/A	VE 11-13 AE 8-10	PFD	SWEL
61	✓	N/A	VE 11-13 AE 8-10	PFD	SWEL
62	✓	N/A	VE 11-13 AE 8-10	PFD	SWEL
63	✓	N/A	VE 11-13 AE 8-10	PFD	SWEL
64	✓	N/A	VE 11-13 AE 8-10	PFD	SWEL
65	✓	N/A	VE 11-13 AE 8-10	PFD	SWEL
66	✓	N/A	VE 11-13 AE 8-10	PFD	SWEL
67	✓	N/A	VE 11-13 AE 8-10	PFD	SWEL
68	✓	N/A	VE 11-13 AE 8-10	PFD	SWEL
69	✓	N/A	VE 11-13 AE 8-10	PFD	SWEL
70	✓	N/A	VE 11-13 AE 8-10	PFD	SWEL
71	✓	N/A	VE 11-13 AE 8-10	PFD	SWEL
72	✓	VE13 AO 3	VE 11-13 AE 8-10	Runup	SWEL
73	✓	VE 13 AO 3	VE 13 AE 8-10	Runup	Overtopping
74	✓	VE 12 AO 3	VE 12 AE 8-10	Runup	SWEL
75	✓	VE 13 AE 13 AO 1	VE 13 AE 8-13	Runup	SWEL

**Table 25: Summary of Coastal Transect Mapping Considerations (continued)**

Coastal Transect	Primary Frontal Dune (PFD) Identified	Wave Runup Analysis	Wave Height Analysis	Zone VE Limit	SFHA Boundary
		Zone Designation and BFE (ft NAVD88)	Zone Designation and BFE (ft NAVD88)		
76	✓	VE 12 AE 12 AO 1	VE 11-13 AE 8-12	Runup	SWEL
77	✓	VE 12	VE 12-13 AE 8-10	Runup	SWEL
78	✓	VE 12	VE 12-13 AE 8-10	Runup	SWEL
79		VE 13 AO 2	VE 13 AE 7-10	Runup	SWEL
80	✓	N/A	VE 11-13 AE 7-10	Wave Height	SWEL
81	✓	N/A	VE 11-13 AE 7-10	Wave Height	SWEL
82		N/A	VE 10-13 AE 7-10	Wave Height	SWEL
83		N/A	VE 12-13 AE 8-10	Wave Height	SWEL
84		N/A	VE 10-13 AE 8-10	Wave Height	N/A
85	✓	VE 13 AE 12 AO 2	VE 13 AE 8-12	Runup	N/A
86	✓	N/A	VE 10-11 AE 7-10	PFD	SWEL
87	✓	N/A	VE 10-13 AE 7-10	PFD	SWEL
88	✓	N/A	VE 10-13 AE 7-10	Wave Height	SWEL
89	✓	N/A	VE 10-13 AE 7-10	Wave Height	SWEL
90	✓	N/A	VE 10-13 AE 7-10	Wave Height	SWEL
91	✓	N/A	VE 10-13 AE 7-10	PFD	SWEL
92	✓	N/A	VE 10-13 AE 7-10	PFD	SWEL
93	✓	N/A	VE 10-13 AE 7-10	PFD	SWEL

**Table 25: Summary of Coastal Transect Mapping Considerations (continued)**

Coastal Transect	Primary Frontal Dune (PFD) Identified	Wave Runup Analysis	Wave Height Analysis	Zone VE Limit	SFHA Boundary
		Zone Designation and BFE (ft NAVD88)	Zone Designation and BFE (ft NAVD88)		
94	✓	N/A	VE 11-13 AE 8-10	PFD	SWEL
95	✓	N/A	VE 10-13 AE 7-10	Wave Height	SWEL
96	✓	N/A	VE 10-13 AE 7-10	Wave Height	SWEL
97	✓	N/A	VE 11-13 AE 7-10	Wave Height	SWEL
98	✓	N/A	VE 11-13 AE 7-10	Wave Height	SWEL
99	✓	N/A	VE 11-13 AE 7-10	PFD	SWEL
100		N/A	VE 10-13 AE 8-9	Wave Height	SWEL
101	✓	N/A	VE 10-12 AE 9-10	PFD	N/A
102	✓	N/A	VE 10-11 AE 9-10	PFD	N/A
103	✓	N/A	VE 10-12 AE 9-10	PFD	N/A
104	✓	N/A	VE 10-12 AE 8-10	PFD	N/A
105		N/A	VE 10-12 AE 8-10	Wave Height	N/A
106	✓	N/A	VE 10-12 AE 8-10	PFD	N/A
107	✓	N/A	VE 10-13 AE 8-10	Wave Height	N/A
108	✓	N/A	VE 10-13 AE 8-10	PFD	SWEL
109	✓	N/A	VE 10-13 AE 7-10	PFD	SWEL
110	✓	N/A	VE 10-13 AE 7-10	PFD	SWEL
111	✓	N/A	VE 10-13 AE 7-10	PFD	SWEL
112	✓	N/A	VE 10-14 AE 9-11	PFD	SWEL



**Table 25: Summary of Coastal Transect Mapping Considerations (continued)**

Coastal Transect	Primary Frontal Dune (PFD) Identified	Wave Runup Analysis	Wave Height Analysis	Zone VE Limit	SFHA Boundary
		Zone Designation and BFE (ft NAVD88)	Zone Designation and BFE (ft NAVD88)		
113		N/A	VE 10-13 AE 9-11	Wave Height	SWEL
114	✓	N/A	VE 11-13 AE 9-12	PFD	SWEL
115	✓	N/A	VE 11-13 AE 9-12	PFD	SWEL
116	✓	N/A	VE 10-13 AE 9-12	PFD	SWEL
117	✓	N/A	VE 10-12 AE 9-12	PFD	SWEL
118	✓	N/A	VE 10-12 AE 9-11	PFD	SWEL
119		N/A	VE 11-12 AE 9	Wave Height	SWEL
120		N/A	VE 13 AE 9	Wave Height	N/A
121		N/A	VE 11-13 AE 7-12	Wave Height	SWEL
122		N/A	VE 11-13 AE 10-12	Wave Height	SWEL
123		N/A	VE 11-14 AE 10-11	Wave Height	SWEL
124		N/A	VE 11-15 AE 11	Wave Height	SWEL
125		N/A	VE 13-16 AE 7-13	Wave Height	SWEL
126		N/A	VE 14-16 AE 8-13	Wave Height	SWEL
127		N/A	VE 13-16 AE 8-13	Wave Height	SWEL
128		N/A	VE 13-16 AE 7-13	Wave Height	SWEL
129		N/A	VE 13-16 AE 7-13	Wave Height	SWEL
130		N/A	VE 13-16 AE 7-13	Wave Height	SWEL
131		N/A	VE 13-15 AE 7-13	Wave Height	SWEL

**Table 25: Summary of Coastal Transect Mapping Considerations (continued)**

Coastal Transect	Primary Frontal Dune (PFD) Identified	Wave Runup Analysis	Wave Height Analysis	Zone VE Limit	SFHA Boundary
		Zone Designation and BFE (ft NAVD88)	Zone Designation and BFE (ft NAVD88)		
132		N/A	VE 13-16 AE 6-13	Wave Height	SWEL
133		N/A	VE 13-16 AE 6-13	Wave Height	SWEL
134		N/A	VE 9-16 AE 6-13	Wave Height	SWEL
135		N/A	VE 8 AE 5-10	Wave Height	SWEL
136		N/A	VE 6 AE 4-8	Wave Height	SWEL
137		N/A	AE 4	N/A	SWEL
138		N/A	N/A	N/A	SWEL

A LiMWA boundary has also been added in coastal areas subject to wave action for use by local communities in safe rebuilding practices. The LiMWA represents the approximate landward limit of the 1.5-foot breaking wave.

## **6.5 FIRM Revisions**

This FIS Report and the FIRM are based on the most up-to-date information available to FEMA at the time of its publication; however, flood hazard conditions change over time. Communities or private parties may request flood map revisions at any time. Certain types of requests require submission of supporting data. FEMA may also initiate a revision. Revisions may take several forms, including Letters of Map Amendment (LOMAs), Letters of Map Revision Based on Fill (LOMR-Fs), Letters of Map Revision (LOMRs) (referred to collectively as Letters of Map Change (LOMCs)), Physical Map Revisions (PMRs), and FEMA-contracted restudies. These types of revisions are further described below. Some of these types of revisions do not result in the republishing of the FIS Report. To assure that any user is aware of all revisions, it is advisable to contact the community repository of flood-hazard data (shown in Table 30, “Map Repositories”).

### **6.5.1 Letters of Map Amendment**

A LOMA is an official revision by letter to an effective NFIP map. A LOMA results from an administrative process that involves the review of scientific or technical data submitted by the owner or lessee of property who believes the property has incorrectly been included in a designated SFHA. A LOMA amends the currently effective FEMA map and establishes that a specific property is not located in a SFHA. A LOMA cannot be issued for properties located on the PFD (primary frontal dune).

To obtain an application for a LOMA, visit [www.fema.gov/letter-map-amendment-loma](http://www.fema.gov/letter-map-amendment-loma) and download the form “MT-1 Application Forms and Instructions for Conditional and Final Letters of Map Amendment and Letters of Map Revision Based on Fill”. Visit the “Flood Map-Related Fees” section to determine the cost, if any, of applying for a LOMA.

FEMA offers a tutorial on how to apply for a LOMA. The LOMA Tutorial Series can be accessed at [www.fema.gov/online-tutorials](http://www.fema.gov/online-tutorials).

For more information about how to apply for a LOMA, call the FEMA Map Information eXchange; toll free, at 1-877-FEMA MAP (1-877-336-2627).

### **6.5.2 Letters of Map Revision Based on Fill**

A LOMR-F is an official revision by letter to an effective NFIP map. A LOMR-F states FEMA’s determination concerning whether a structure or parcel has been elevated on fill above the base flood elevation and is, therefore, excluded from the SFHA.

Information about obtaining an application for a LOMR-F can be obtained in the same manner as that for a LOMA, by visiting [www.fema.gov/letter-map-amendment-loma](http://www.fema.gov/letter-map-amendment-loma) for the “MT-1 Application Forms and Instructions for Conditional and Final Letters of Map Amendment and Letters of Map Revision Based on Fill” or by calling the FEMA Map Information eXchange, toll free, at 1-877-FEMA MAP (1-877-336-2627). Fees for applying for a LOMR-F, if any, are listed in the “Flood Map-Related Fees” section.

A tutorial for LOMR-F is available at [www.fema.gov/online-tutorials](http://www.fema.gov/online-tutorials).

### **6.5.3 Letters of Map Revision**

A LOMR is an official revision to the currently effective FEMA map. It is used to change flood zones, floodplain and floodway delineations, flood elevations and planimetric features. All requests for LOMRs should be made to FEMA through the chief executive officer of the community, since it is the community that must adopt any changes and revisions to the map. If the request for a LOMR is not submitted through the chief executive officer of the community, evidence must be submitted that the community has been notified of the request.

To obtain an application for a LOMR, visit [www.fema.gov/media-library/assets/documents/1343](http://www.fema.gov/media-library/assets/documents/1343) and download the form “MT-2 Application Forms and Instructions for Conditional Letters of Map Revision and Letters of Map Revision”. Visit the “Flood Map-Related Fees” section to determine the cost of applying for a LOMR. For more information about how to apply for a LOMR, call the FEMA Map Information eXchange; toll free, at 1-877-FEMA MAP (1-877-336-2627) to speak to a Map Specialist.

Previously issued mappable LOMCs (including LOMRs) that have been incorporated into the Collier County FIRM are listed in Table 26.

**Table 26: Incorporated Letters of Map Change  
[Not Applicable to this Flood Risk Project]**

### **6.5.4 Physical Map Revisions**

A Physical Map Revisions (PMR) is an official republication of a community’s NFIP map to effect changes to base flood elevations, floodplain boundary delineations, regulatory floodways and planimetric features. These changes typically occur as a result of structural works or improvements, annexations resulting in additional flood hazard areas or correction to base flood elevations or SFHAs.

The community’s chief executive officer must submit scientific and technical data to FEMA to support the request for a PMR. The data will be analyzed and the map will be revised if warranted. The community is provided with copies of the revised information and is afforded a review period. When the base flood elevations are changed, a 90-day appeal period is provided. A 6-month adoption period for formal approval of the revised map(s) is also provided.

For more information about the PMR process, please visit [www.fema.gov](http://www.fema.gov) and visit the “Flood Map Revision Processes” section.

### **6.5.5 Contracted Restudies**

The NFIP provides for a periodic review and restudy of flood hazards within a given community. FEMA accomplishes this through a national watershed-based mapping needs assessment strategy, known as the Coordinated Needs Management Strategy (CNMS). The CNMS is used by FEMA to assign priorities and allocate funding for new flood hazard analyses used to update the FIS Report and FIRM. The goal of CNMS is to define the validity of the engineering study data within a mapped inventory. The CNMS

is used to track the assessment process, document engineering gaps and their resolution, and aid in prioritization for using flood risk as a key factor for areas identified for flood map updates. Visit [www.fema.gov](http://www.fema.gov) to learn more about the CNMS or contact the FEMA Regional Office listed in Section 8 of this FIS Report.

### 6.5.6 Community Map History

The current FIRM presents flooding information for the entire geographic area of Collier County. Previously, separate FIRMs, Flood Hazard Boundary Maps (FHBM) and/or Flood Boundary and Floodway Maps (FBFMs) may have been prepared for the incorporated communities and the unincorporated areas in the county that had identified SFHAs. Current and historical data relating to the maps prepared for the project area are presented in Table 27, "Community Map History." A description of each of the column headings and the source of the date is also listed below.

- *Community Name* includes communities falling within the geographic area shown on the FIRM, including those that fall on the boundary line, nonparticipating communities, and communities with maps that have been rescinded. Communities with No Special Flood Hazards are indicated by a footnote. If all maps (FHBM, FBFM, and FIRM) were rescinded for a community, it is not listed in this table unless SFHAs have been identified in this community.
- *Initial Identification Date (First NFIP Map Published)* is the date of the first NFIP map that identified flood hazards in the community. If the FHBM has been converted to a FIRM, the initial FHBM date is shown. If the community has never been mapped, the upcoming effective date or "pending" (for Preliminary FIS Reports) is shown. If the community is listed in Table 27 but not identified on the map, the community is treated as if it were unmapped.
- *Initial FHBM Effective Date* is the effective date of the first FHBM. This date may be the same date as the Initial NFIP Map Date.
- *FHBM Revision Date(s)* is the date(s) that the FHBM was revised, if applicable.
- *Initial FIRM Effective Date* is the date of the first effective FIRM for the community.
- *FIRM Revision Date(s)* is the date(s) the FIRM was revised, if applicable. This is the revised date that is shown on the FIRM panel, if applicable. As countywide studies are completed or revised, each community listed should have its FIRM dates updated accordingly to reflect the date of the countywide study. Once the FIRMs exist in countywide format, as PMRs of FIRM panels within the county are completed, the FIRM Revision Dates in the table for each community affected by the PMR are updated with the date of the PMR, even if the PMR did not revise all the panels within that community.

The initial effective date for the Collier County FIRMs in countywide format was 11/17/2005.

**Table 27: Community Map History**

Community Name	Initial Identification Date	Initial FHBM Effective Date	FHBM Revision Date(s)	Initial FIRM Effective Date	FIRM Revision Date(s)
Collier County, Unincorporated Areas	09/14/1979	N/A	N/A	09/14/1979	02/08/2024 05/16/2012 11/17/2005 07/20/1998 02/16/1995 08/03/1992 06/03/1986 12/18/1984 10/01/1983
Everglades City, City of	07/14/1970	07/14/1970	N/A	10/11/1972	02/08/2024 05/16/2012 11/17/2005 06/03/1986 11/28/1975 05/23/1975 07/01/1974
Marco Island, City of <sup>1</sup>	09/14/1979	N/A	N/A	09/14/1979	02/08/2024 05/16/2012 11/17/2005 07/20/1998 02/16/1995 08/03/1992 06/03/1986 12/18/1984 10/01/1983
Naples, City of	07/02/1971	N/A	N/A	07/02/1971	02/08/2024 05/16/2012 11/17/2005 11/04/1992 06/03/1986 07/16/1980 02/13/1976 07/01/1974
Seminole Tribe of Florida <sup>1,2</sup>	05/16/2012	N/A	N/A	05/16/2012	N/A

<sup>1</sup> Dates for this community were taken from Collier County, Unincorporated Areas

<sup>2</sup> This community did not have a FIRM prior to the first countywide FIRM for Collier County

**SECTION 7.0 – CONTRACTED STUDIES AND COMMUNITY COORDINATION**

**7.1 Contracted Studies**

Table 28 provides a summary of the contracted studies, by flooding source, that are included in this FIS Report.

**Table 28: Summary of Contracted Studies Included in this FIS Report**

Flooding Source	FIS Report Dated	Contractor	Number	Work Completed Date	Affected Communities
Airport Road Canal	05/16/2012	Tomasello Consulting Engineers, Inc.	N/A	06/01/2009	Collier County, Unincorporated Areas
Alligator Alley Canal	05/16/2012	Tomasello Consulting Engineers, Inc.	N/A	06/01/2009	Collier County, Unincorporated Areas
Ava Maria Basin	05/16/2012	Tomasello Consulting Engineers, Inc.	N/A	06/01/2009	Collier County, Unincorporated Areas; Seminole Tribe of Florida
Cocohatchee A Basin	05/16/2012	Tomasello Consulting Engineers, Inc.	N/A	06/01/2009	Collier County, Unincorporated Areas
Cocohatchee B Basin	05/16/2012	Tomasello Consulting Engineers, Inc.	N/A	06/01/2009	Collier County, Unincorporated Areas
Cocohatchee C Basin	05/16/2012	Tomasello Consulting Engineers, Inc.	N/A	06/01/2009	Collier County, Unincorporated Areas
951 Canal	05/16/2012	Tomasello Consulting Engineers, Inc.	N/A	06/01/2009	Collier County, Unincorporated Areas
Cocohatchee Canal	05/16/2012	Tomasello Consulting Engineers, Inc.	N/A	06/01/2009	Collier County, Unincorporated Areas
Cypress Canal	05/16/2012	Tomasello Consulting Engineers, Inc.	N/A	06/01/2009	Collier County, Unincorporated Areas
District 6 Basin	05/16/2012	Tomasello Consulting Engineers, Inc.	N/A	06/01/2009	Collier County, Unincorporated Areas; Marco Island, City of; Naples, City of
Faka Union Canal	05/16/2012	Tomasello Consulting Engineers, Inc.	N/A	06/01/2009	Collier County, Unincorporated Areas
Faka Union / Fakahatchee Strand Basin	05/16/2012	Tomasello Consulting Engineers, Inc.	N/A	06/01/2009	Collier County, Unincorporated Areas; Everglades City, City of
Faka Union / Miller Canal Basin	05/16/2012	Tomasello Consulting Engineers, Inc.	N/A	06/01/2009	Collier County, Unincorporated Areas
Golden Gate Estates Basin	05/16/2012	Tomasello Consulting Engineers, Inc.	N/A	07/01/2011	Collier County, Unincorporated Areas
Golden Gate Main Canal	05/16/2012	Tomasello Consulting Engineers, Inc.	N/A	06/01/2009	Collier County, Unincorporated Areas; Naples, City of
Golden Gate Main West Basin	05/16/2012	Tomasello Consulting Engineers, Inc.	N/A	07/01/2011	Collier County, Unincorporated Areas; Naples, City of

**Table 28: Summary of Contracted Studies Included in this FIS Report (continued)**

Flooding Source	FIS Report Dated	Contractor	Number	Work Completed Date	Affected Communities
Gulf of Mexico <sup>1</sup>	02/08/2024	Compass	HSFE60-15-D-0003	08/01/2022	Collier County, Unincorporated Areas; Marco Island, City of; Naples, City of
Gulf of Mexico	02/08/2024	RAMPP	HSFE04-13-J-0097	09/01/2019	Collier County, Unincorporated Areas; Everglades City, City of; Marco Island, City of
Harvey Canal	05/16/2012	Tomasello Consulting Engineers, Inc.	N/A	06/01/2009	Collier County, Unincorporated Areas
Henderson Canal	05/16/2012	Tomasello Consulting Engineers, Inc.	N/A	06/01/2009	Collier County, Unincorporated Areas
Henderson Creek Basin	05/16/2012	Tomasello Consulting Engineers, Inc.	N/A	06/01/2009	Collier County, Unincorporated Areas
I-75 Canal	05/16/2012	Tomasello Consulting Engineers, Inc.	N/A	06/01/2009	Collier County, Unincorporated Areas
Merritt Canal	05/16/2012	Tomasello Consulting Engineers, Inc.	N/A	06/01/2009	Collier County, Unincorporated Areas
Miller Canal	05/16/2012	Tomasello Consulting Engineers, Inc.	N/A	06/01/2009	Collier County, Unincorporated Areas
Prairie Canal	05/16/2012	Tomasello Consulting Engineers, Inc.	N/A	06/01/2009	Collier County, Unincorporated Areas
Southern Coastal Basin	05/16/2012	Tomasello Consulting Engineers, Inc.	N/A	06/01/2009	Collier County, Unincorporated Areas; Marco Island, City of
SR 29 Canal	05/16/2012	Tomasello Consulting Engineers, Inc.	N/A	06/01/2009	Collier County, Unincorporated Areas

<sup>1</sup> The following revisions were made by Compass, per comments addressed during the appeal-period.



## **7.2 Community Meetings**

The dates of the community meetings held for this Flood Risk Project and previous Flood Risk Projects are shown in Table 29. These meetings may have previously been referred to by a variety of names (Community Coordination Officer (CCO), Scoping, Discovery, etc.), but all meetings represent opportunities for FEMA, community officials, study contractors, and other invited guests to discuss the planning for and results of the project.

**Table 29: Community Meetings**

Community	FIS Report Dated	Date of Meeting	Meeting Type	Attended By
Collier County, Unincorporated Areas	02/08/2024	03/06/2013	Discovery	FEMA, study contractors, and the community
		05/12/2015	Technical Update	FEMA, study contractors, and the community
		03/06/2018	Storm Surge Analysis	FEMA, study contractors, and the community
		03/02/2020	Final CCO	FEMA, study contractors, and the community
Everglades City, City of	02/08/2024	03/06/2013	Discovery	FEMA, study contractors, and the community
		05/12/2015	Technical Update	FEMA, study contractors, and the community
		03/06/2018	Storm Surge Analysis	FEMA, study contractors, and the community
		03/02/2020	Final CCO	FEMA, study contractors, and the community
Marco Island, City of	02/08/2024	03/06/2013	Discovery	FEMA, study contractors, and the community
		05/12/2015	Technical Update	FEMA, study contractors, and the community
		03/06/2018	Storm Surge Analysis	FEMA, study contractors, and the community
		03/02/2020	Final CCO	FEMA, study contractors, and the community

**Table 29: Community Meetings (continued)**

Community	FIS Report Dated	Date of Meeting	Meeting Type	Attended By
Naples, City of	02/08/2024	03/06/2013	Discovery	FEMA, study contractors, and the community
		05/12/2015	Technical Update	FEMA, study contractors, and the community
		03/06/2018	Storm Surge Analysis	FEMA, study contractors, and the community
		03/02/2020	Final CCO	FEMA, study contractors, and the community
Seminole Tribe of Florida	05/16/2012	06/22/2005	Initial CCO	Representatives from FEMA, Collier County, the City of Naples, Tomasello Consulting Engineers, and the SFWMD
		08/16/2010 08/24/2010	Final CCO	Representatives from FEMA, Collier County, the City of Naples, the City of Marco Island, the City of Everglades City, the Seminole Tribe of Florida, Tomasello Consulting Engineers, and the SFWMD

## SECTION 8.0 – ADDITIONAL INFORMATION

Information concerning the pertinent data used in the preparation of this FIS Report can be obtained by submitting an order with any required payment to the FEMA Engineering Library. For more information on this process, see [www.fema.gov](http://www.fema.gov).

Table 30 is a list of the locations where FIRMs for Collier County can be viewed. Please note that the maps at these locations are for reference only and are not for distribution. Also, please note that only the maps for the community listed in the table are available at that particular repository. A user may need to visit another repository to view maps from an adjacent community.

**Table 30: Map Repositories**

Community	Address	City	State	Zip Code
Collier County, Unincorporated Areas	Growth Management Department 2800 North Horseshoe Drive	Naples	FL	34104
Everglades City, City of	City Hall 102 Copeland Avenue North	Everglades City	FL	34139
Marco Island, City of	Growth Management Department 50 Bald Eagle Drive	Marco Island	FL	34145
Naples, City of	Building Department 295 Riverside Circle	Naples	FL	34102
Seminole Tribe of Florida	Seminole Tribal Council Headquarters 6300 Stirling Road	Hollywood	FL	33024

The National Flood Hazard Layer (NFHL) dataset is a compilation of effective FIRM Databases and LOMCs. Together they create a GIS data layer for a State or Territory. The NFHL is updated as studies become effective and extracts are made available to the public monthly. NFHL data can be viewed or ordered from the website shown in Table 31.

Table 31 contains useful contact information regarding the FIS Report, the FIRM, and other relevant flood hazard and GIS data. In addition, information about the State NFIP Coordinator and GIS Coordinator is shown in this table. At the request of FEMA, each Governor has designated an agency of State or territorial government to coordinate that State's or territory's NFIP activities. These agencies often assist communities in developing and adopting necessary floodplain management measures. State GIS Coordinators are knowledgeable about the availability and location of State and local GIS data in their state.

**Table 31: Additional Information**

FEMA and the NFIP	
FEMA and FEMA Engineering Library website	<a href="http://www.fema.gov/national-flood-insurance-program-flood-hazard-mapping/engineering-library">www.fema.gov/national-flood-insurance-program-flood-hazard-mapping/engineering-library</a>
NFIP website	<a href="http://www.fema.gov/national-flood-insurance-program">www.fema.gov/national-flood-insurance-program</a>
NFHL Dataset	<a href="http://msc.fema.gov">msc.fema.gov</a>
FEMA Region IV	Federal Emergency Management Agency 3005 Chamblee Tucker Road Atlanta, GA 30341 (770) 220-5200
Other Federal Agencies	
USGS website	<a href="http://www.usgs.gov">www.usgs.gov</a>
Hydraulic Engineering Center website	<a href="http://www.hec.usace.army.mil">www.hec.usace.army.mil</a>
State Agencies and Organizations	
State NFIP Coordinator	Conn H. Cole, MBA/PA, CFM Florida NFIP State Coordinator, State Floodplain Manager State Floodplain Management Office Florida Division of Emergency Management 2555 Shumard Oak Boulevard Tallahassee, FL 32399-2100 (850) 815-4507 <a href="mailto:Conn.Cole@em.myflorida.com">Conn.Cole@em.myflorida.com</a>
State GIS Coordinator	Richard Butgereit GIS Administrator Florida Division of Emergency Management 2555 Shumard Oak Boulevard Tallahassee, FL 32399-2100 (850) 413-9907 <a href="mailto:Richard.Butgereit@dca.state.fl.us">Richard.Butgereit@dca.state.fl.us</a>

**SECTION 9.0 – BIBLIOGRAPHY AND REFERENCES**

Table 32 includes sources used in the preparation of and cited in this FIS Report as well as additional studies that have been conducted in the study area.

**Table 32: Bibliography and References**

Citation in this FIS	Publisher / Issuer	Publication Title, "Article," Volume, Number, etc.	Author / Editor	Place of Publication	Publication Date / Date of Issuance	Link
CC 2015	Collier County	"Floodplain Management Plan, Collier County, FL"	AMEC Foster Wheeler		March 2015	
FDEM 2007	Florida Division of Emergency Management	LiDAR Project		Tallahassee, Florida	Collected July 7, 2007 to December 22, 2007	
FEMA 2003	Federal Emergency Management Agency	"Guidelines and Specifications for Mapping Partners, Appendix D"			April 2003	
FEMA 2018	Federal Emergency Management Agency	Guidance for Flood Risk Analysis and Mapping, Coastal Wave Runup and Overtopping			February 2018	
FIS 2012	Federal Emergency Management Agency	Flood Insurance Study, Collier County, Florida and Incorporated Areas		Washington, D.C.	May 16, 2012	FEMA Flood Map Service Center <a href="http://msc.fema.gov">msc.fema.gov</a>
FIS 2005	Federal Emergency Management Agency	Flood Insurance Study, Collier County, Florida and Incorporated Areas		Washington, D.C.	November 17, 2005	FEMA Flood Map Service Center <a href="http://msc.fema.gov">msc.fema.gov</a>
FIS 1986	Federal Emergency Management Agency	Flood Insurance Study, Collier County, Florida		Washington, D.C.	June 3, 1986	FEMA Flood Map Service Center <a href="http://msc.fema.gov">msc.fema.gov</a>
FSGP 1997	Florida Sea Grant Program	"Florida Hurricanes and Tropical Storms, Revised Edition"	Williams, John M. and Duedall, Iver W.		1997	
ML 2011	Miller Legg	Immokalee Drainage Study, May 2011 Update and FEMA Data Analysis			May 2011	
SFWMD 2000	South Florida Water Management District	"Environmental Resource Permit Information Manual Volume IV"			2000	
SFWMD 2003	South Florida Water Management District	Manual of Water Control Structures Big Cypress Basin			February 2003	
SFWMD 2006	South Florida Water Management District	Manual of Water Control Structures Big Cypress Basin			May 2006	

**Table 32: Bibliography and References (continued)**

Citation in this FIS	Publisher / Issuer	Publication Title, "Article," Volume, Number, etc.	Author / Editor	Place of Publication	Publication Date / Date of Issuance	Link
SU 1968	Stanford University	"Probability Distribution for Texas Gulf Coast Hurricane Effects of Engineering Interest" Ph.D. Thesis, Stanford University	Russell, L. R.		1968	
TCE 2008	Tomasello Consulting Engineer, Inc.	S2DMM Model Documentation Report, Version 8Q10C		Jupiter, Florida	February 2008	FEMA Mapping Information Platform <a href="https://hazards.fema.gov">hazards.fema.gov</a>
TCE 2010	Tomasello Consulting Engineer, Inc.	"Hydrologic/Hydraulic Analysis and Engineering Report, Collier County and Incorporated Areas"			June 2010	FEMA Mapping Information Platform <a href="https://hazards.fema.gov">hazards.fema.gov</a>
USACE 2015	U.S. Army Corps of Engineers	LiDAR Project			2015	