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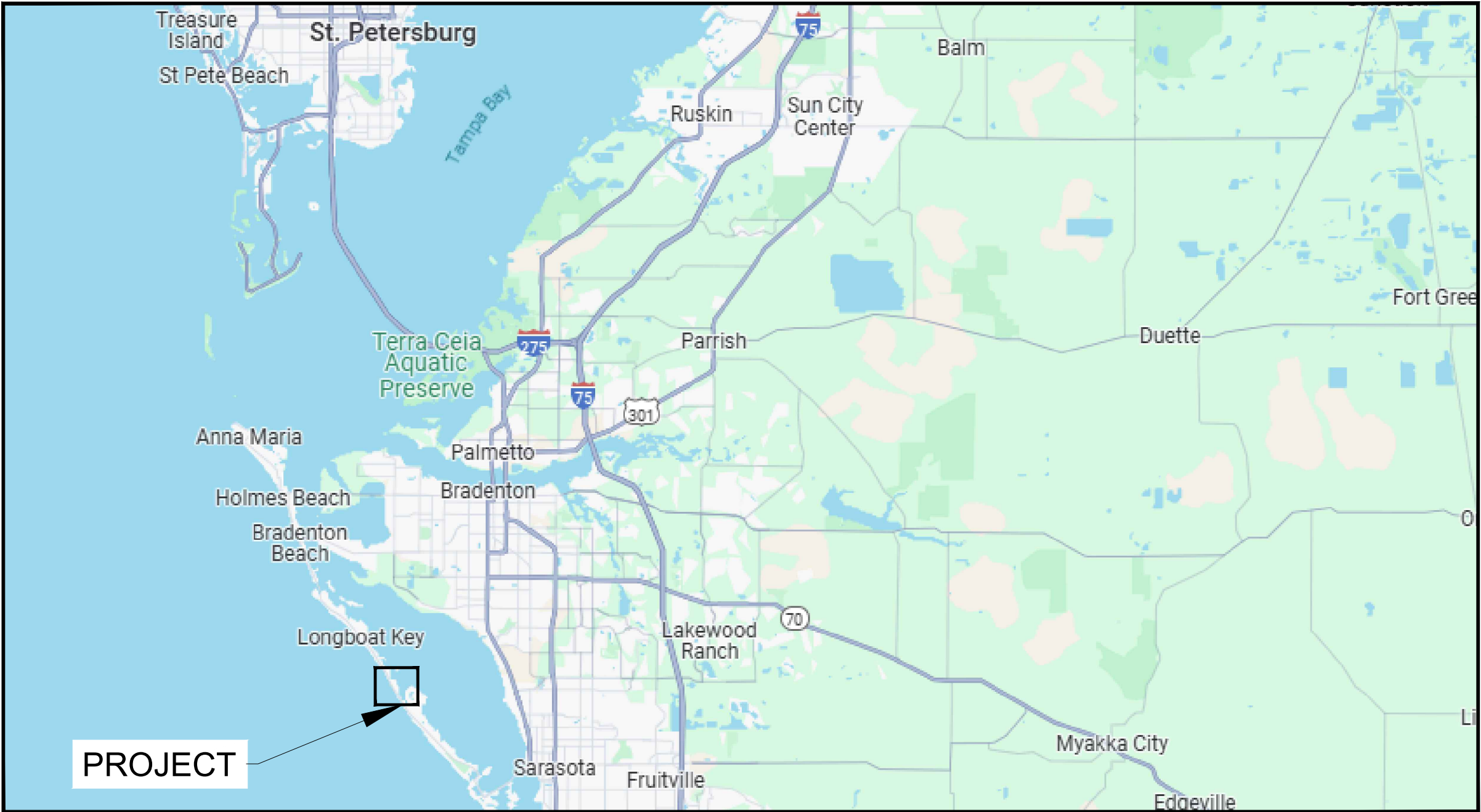
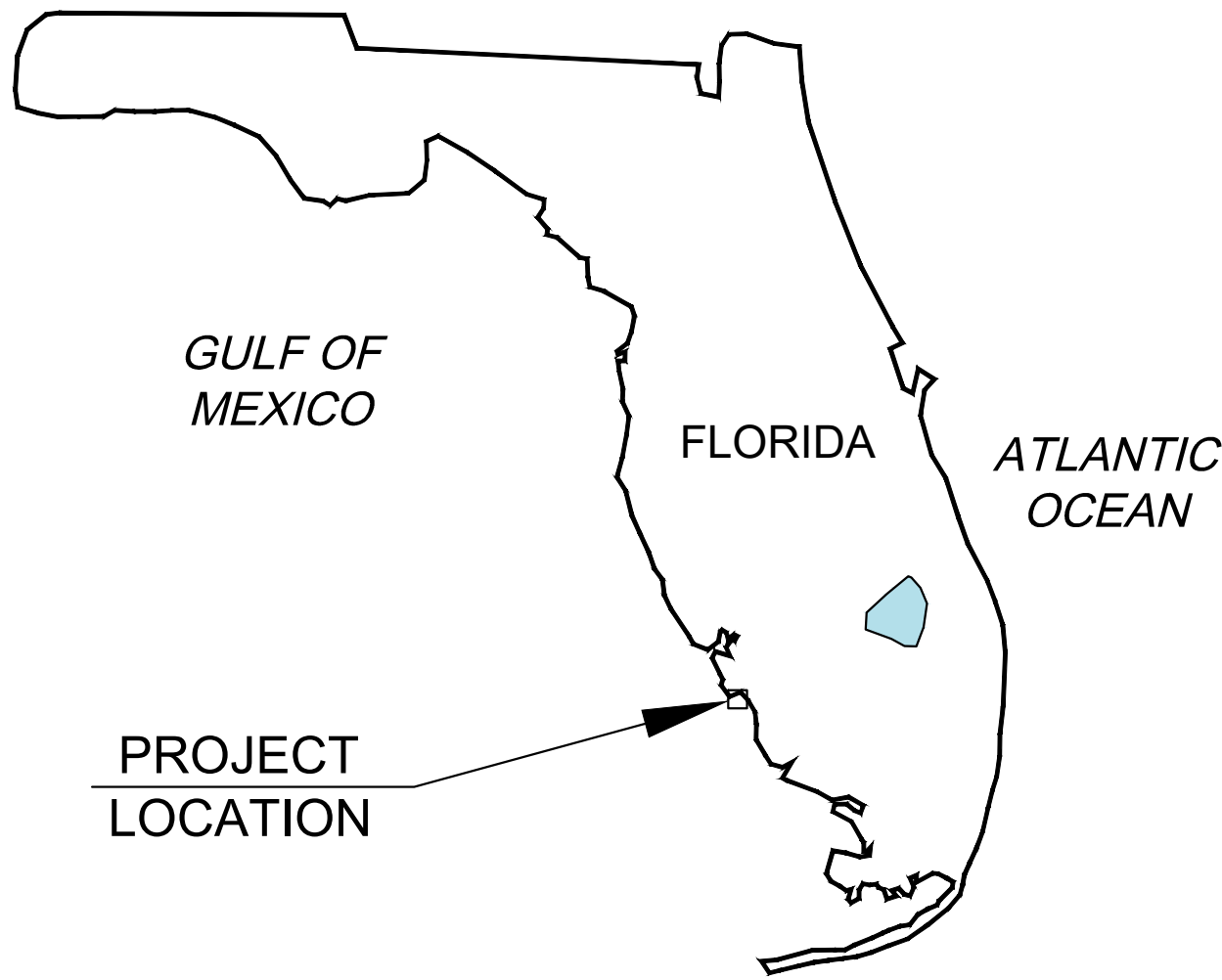


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BC-DSL-25-0002
Dylan Calella

Reviewed by Philip Charnock PBP1751

LONGBOAT KEY BAYFRONT PARK LIVING SEAWALL

4052 GULF OF MEXICO DRIVE
LONGBOAT KEY FL, 34228



SHEET INDEX	
SHEET NUMBER	TITLE
CM-1.0	COVER SHEET
CM-1.1	GENERAL NOTES
CM-1.2	EXISTING SITE
CM-2.0	PROPOSED SITE PLAN
CM-2.1	LIVING REEF TILES SECTIONS & ELEVATIONS
CM-2.2	LIVING REEF TILES STRUCTURAL DETAILS
CM-3.0	TURBIDITY BARRIER DETAIL

00001

OWNER:



TOWN OF LONGBOAT KEY
501 BAY ISLES ROAD
LONGBOAT KEY, FL 34228

CLIENT:



SARASOTA BAY ESTUARY PROGRAM
111 S. ORANGE AVE.
SUITE 200W
SARASOTA, FL. 34236

CONTRACTOR:



2550 S. BAYSHORE DR.
SUITE 206B
COCONUT GROVE, FL. 33133

ENGINEER:

CUMMINS | CEDERBERG
Coastal & Marine Engineering

MIAMI | FORT LAUDERDALE | JUPITER
SARASOTA | ST. PETERSBURG | TALLAHASSEE
TEL: +1 305-741-6155 FAX: 305-974-1969
WWW.CUMMINSCEDERBERG.COM

TILE MANUFACTURER:



3007 NW SOUTH RIVER DRIVE
MIAMI, FL. 33142

NOT FOR CONSTRUCTION

PERMIT DRAWINGS
FOR REGULATORY REVIEW ONLY
02/12/2025



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REVIEWED FOR
1. CODE COMPLIANCE

- 1.1. THE WORK CONSISTS OF PROVIDING ALL CONSTRUCTION, LABOR, EQUIPMENT, MATERIAL AND UTILITIES IN CONNECTION WITH THE REPAIR OF THE BULKHEAD AND RELATED IMPROVEMENTS AS SHOWN ON THESE DRAWINGS.
- 1.2. ANY DISCREPANCIES IN THE PLANS WITH THE FIELD CONDITIONS SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE ENGINEER. CONSTRUCTION SHALL NOT CONTINUE UNTIL THE ENGINEER HAS APPROVED ANY DISCREPANCIES.
- 1.3. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PROTECT EXISTING STRUCTURES IN THE PROJECT VICINITY. ANY DAMAGE TO PRIVATE OR PUBLIC PROPERTY WITHIN THE PROJECT VICINITY, INCLUDING STAGING SITES, WORK AND ACCESS AREAS SHALL BE REPAIRED PROMPTLY BY THE CONTRACTOR. ANY DAMAGE AS A RESULT OF THE CONTRACTOR'S OPERATIONS SHALL BE REPAIRED AT NO COST TO THE OWNER. ALL ACCESS AND STAGING AREAS SHALL BE KEPT NEAT, ORDERLY AND IN A SAFE MANNER. ALL ACCESS AND STAGING AREAS SHALL BE RESTORED TO THE PRE-CONSTRUCTION CONDITION UPON PROJECT COMPLETION AT THE COST OF THE CONTRACTOR. THE SITE SHALL BE RESTORED BY REMOVING AND FINISHING ALL EVIDENCE FOR CONSTRUCTION. IN THE EVENT INFRASTRUCTURE (SUCH AS WALKWAYS, SIDEWALKS, FENCES, VEGETATION, ETC.) IS TEMPORARILY REMOVED OR RELOCATED OR THERE IS UNAUTHORIZED DAMAGE TO VEGETATION AND/OR FACILITIES BY THE CONTRACTOR, THE CONTRACTOR SHALL RESTORE ALL DAMAGE TO STRUCTURES AND NATURAL FEATURES TO PRE-CONSTRUCTION CONDITIONS OR BETTER.
- 1.4. UTILITIES ARE NOT SHOWN IN THE PLANS. CONTRACTOR IS RESPONSIBLE FOR LOCATING ALL PRESENT UTILITIES PRIOR TO CONSTRUCTION.
- 1.5. CONTRACTOR IS RESPONSIBLE FOR PROVIDING PROPER CLEARANCE AND PROTECTION TO ALL OVERHEAD WIRES AND OBSTRUCTIONS.
- 1.6. THE CONTRACTOR SHALL EXCLUDE THE PUBLIC FROM THE WORK AREAS IN THE IMMEDIATE VICINITY OF OPERATIONS. CONTRACTOR SHALL PROVIDE APPROPRIATE SAFETY MEASURES TO PROTECT THE PUBLIC.
- 1.7. ALL NEW STRUCTURAL WORK SHALL BE ACCURATELY FIELD MEASURED AND DIMENSIONS VERIFIED BY THE CONTRACTOR PRIOR TO ORDERING MATERIALS. CONTRACTOR SHALL BE PREPARED TO MAKE FIELD ADJUSTMENTS TO ACCURATELY FIT THE NEW WORK TO EXISTING CONDITIONS.
- 1.8. NO CONSTRUCTION SHALL COMMENCE UNTIL ALL REQUIRED PERMITS AND APPROVALS HAVE BEEN SECURED AND THE CONTRACTOR HAS BEEN ISSUED NOTICE TO PROCEED.
- 1.9. ATTENTION IS DIRECTED TO THE FACT THAT THESE PLANS MAY HAVE BEEN CHANGED IN SIZE BY REPRODUCTION. THIS SHOULD BE CONSIDERED WHEN OBTAINING SCALED DATA.
- 1.10. CONSTRUCTION WORK SHALL BE EXECUTED IN ACCORDANCE WITH ALL LOCAL, STATE, AND NATIONAL BUILDING CODES AND GOVERNING REGULATIONS INCLUDING FDEP, USACE, AND PORT TAMPA BAY. CONTRACTOR SHALL ADHERE TO ALL CONDITIONS OF THE PERMITS AND EXEMPTIONS.

2. SURVEY

- 2.1. WALL SURVEY PROVIDED BY SURVTECH SOLUTIONS, INC. DATED 11/18/2024.

3. DESIGN CRITERIA

- 3.1. MARINE GROWTH = 83 PCF
3.2. WAVE PRESSURE = 475 PSF
3.3. 2.3 DESIGN CODES:
3.3.1. FBC 2023
3.3.2. ASCE 7-22
3.3.3. ACI 318-19
3.3.4. ACI 440.1R-06

4. LIVING SHORELINE TILES

- 4.1. EXISTING VINYL SHEET PILE IS TO BE CLEAN AND FREE OF DEBRIS AND MARINE GROWTH AT THE LOCATIONS WHERE LIVING SHORELINE TILES ARE INDICATED BY THESE DRAWINGS TO BE INSTALLED.

5. LAYOUT AND TESTING

- 5.1. ALL CONSTRUCTION STAKEOUT SHALL BE PERFORMED BY AND PAID FOR BY THE CONTRACTOR UNDER THE SUPERVISION OF A SURVEYOR REGISTERED IN THE STATE OF FLORIDA.

6. TIDAL DATA

- 6.1. CONTRACTOR MAY NEED TO ADJUST HIS WORK PLAN TO ACCOUNT FOR ACTUAL WATER LEVELS AND CHANGING WATER LEVELS. THE SITE MAY BE SUBJECT TO VARIABLE WAVE AND SURGE CONDITIONS AND IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO PROVIDE TEMPORARY SUPPORT FOR MARINE STRUCTURES AND SHORELINE DURING CONSTRUCTION. TIDAL DATA OBTAINED FROM NOAA LONGBOAT KEY, SARASOTA BAY FL, STATION ID 8726089.

7. SUBMITTALS

- 7.1. REVIEW OF SUBMITTALS BY THE STRUCTURAL ENGINEER IS FOR GENERAL CONFORMANCE WITH THE DESIGN CONCEPT AS PRESENTED BY THE CONTRACT DOCUMENTS. NO DETAILED CHECK OF QUANTITIES OR DIMENSIONS WILL BE MADE.
- 7.2. ALL SHOP DRAWINGS MUST BEAR EVIDENCE OF THE CONTRACTOR'S APPROVAL PRIOR TO SUBMITTING TO THE ENGINEER.
- 7.3. THE FOLLOWING MINIMUM SUBMITTALS SHALL BE PREPARED BY THE CONTRACTOR AND SUBMITTED TO THE ENGINEER FOR REVIEW AND APPROVAL PRIOR TO RELATED CONSTRUCTION ACTIVITY:
- SCHEDULE FOR COMPLETION OF WORK WITH TASKS AND DURATIONS DEFINED
 - SHEET PILE CLEANING PLAN
 - LIVING SEAWALL TILE SHOP DRAWINGS
 - LIVING SEAWALL TILE ATTACHMENT DETAILS AND PLAN
 - FASTENERS AND HARDWARE

8. ENVIRONMENTAL

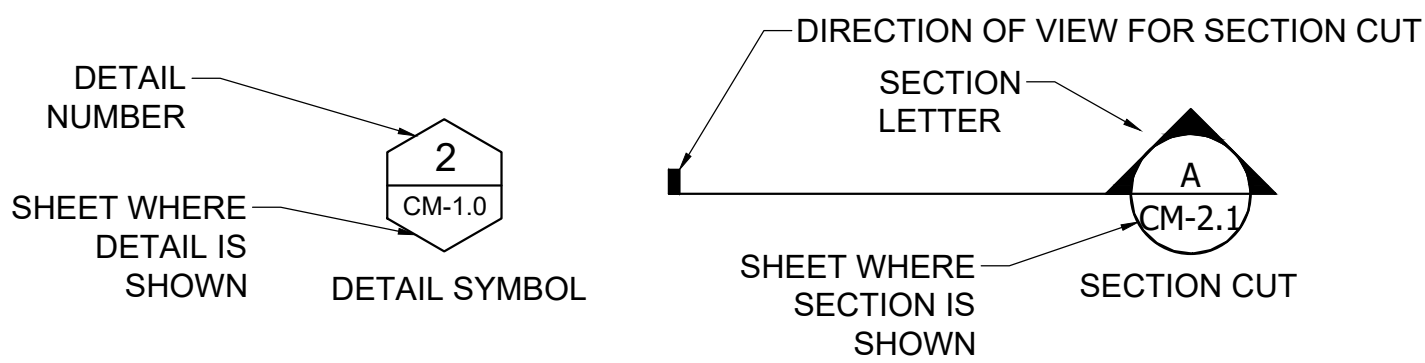
- 8.1. CONTRACTOR SHALL SUBMIT A TURBIDITY CONTROL AND MONITORING PLAN FOR REVIEW AND APPROVAL PRIOR TO CONSTRUCTION IN ACCORDANCE WITH REGULATORY PERMITS.
- 8.2. TURBIDITY CURTAINS SHALL BE DEPLOYED FOR THE PROJECT ALONG THE ENTIRE AREA, PROJECT TURBIDITY CONTROL LIMITS AS DIRECTED BY APPROVED PERMITS.
- 8.3. TURBIDITY CURTAINS SHALL NOT BE RELOCATED/REMOVED FROM THE PROJECT AREA UNTIL LEVELS WITHIN ENCLOSED AREA RETURN TO BACKGROUND LEVELS OUTSIDE THE CURTAINS.
- 8.4. TURBIDITY CURTAINS SHALL EXTEND TO WITHIN 1 FOOT OF THE SEA BOTTOM.
- 8.5. ALL LINES SHALL BE TAUT AND NON-LOOPING TO PREVENT WILDLIFE ENTANGLEMENT.
- 8.6. CONSTRUCTION PERSONNEL WILL OBSERVE ANY ESA-LISTED SPECIES OR MARINE MAMMALS. IF ANY

- INTERACTION OCCURS,THE INCIDENT WILL BE IMMEDIATELY REPORTED TO THE APPROPRIATE AGENCY. VESSEL OPERATORS WILL OPERATE AT "IDLE SPEED/ NO WAKE" AT ALL TIMES WHILE OPERATING IN WATER DEPTHS WITH LESS THAN 4-FOOT CLEARANCE, OR IF A PROTECTED SPECIES HAS BEEN OBSERVED. ALL VESSELS WILL FOLLOW MARKED CHANNEL ROUTES. OPERATION OF MECHANICAL EQUIPMENT SHALL CEASE IF A PROTECTED SPECIES IS OBSERVED WITHIN A 50-FOOT RADIUS OF CONSTRUCTION EQUIPMENT AND SHALL RESUME ONLY WHEN THE SPECIES HAS LEFT THE AREA OF ITS OWN VOLITION.
- 8.7. TURBIDITY CONTROLS SHALL BE MAINTAINED SUFFICIENTLY TO ENSURE 29 NTUS ABOVE BACKGROUND IN TIDAL WATERS.

ABBREVIATIONS

ACI	AMERICAN CONCRETE INSTITUTE
ASTM	AMERICAN SOCIETY FOR TESTING AND MATERIALS
CONT	CONTINUOUS
CONT'D	CONTINUED
EF	EACH FACE
FDEP	FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION
FDOT	FLORIDA DEPARTMENT OF TRANSPORTATION
KSI	KIPS PER SQUARE INCH
MHW	MEAN HIGH WATER
MIN	MINIMUM
MLW	MEAN LOW WATER
NAVD	NORTH AMERICAN VERTICAL DATUM
NGVD	NATIONAL GEODETIC VERTICAL DATUM
PERA	PERMITTING, ENVIRONMENT, AND REGULATORY AFFAIRS
PSI	POUNDS PER SQUARE INCH
TYP	TYPICAL
USACE	UNITED STATES ARMY CORPS OF ENGINEERS
W/C	WATER/CEMENT RATIO

SYMBOLS LEGEND



VERTICAL DATUM
NOAA STA.ID 8726089

+0.19' MHW
NAVD 88

-1.08' MLW

N.T.S.

PROJECT:
LONGBOAT KEY
BAYFRONT PARK
LIVING SEAWALL

ADDRESS:
4052 GULF OF MEXICO DRIVE
LONGBOAT KEY FL, 34228

CLIENT:
SARASOTA BAY ESTUARY
PROGRAM
ADDRESS:
111 S. ORANGE AVE, SUITE
200W SARASOTA, FL 34236

OWNER:
TOWN OF LONGBOAT KEY
ADDRESS:
501 BAY ISLES ROAD
LONGBOAT KEY, FL 34228

CONTRACTOR:

ADDRESS:
2550 S BAYSHORE DR #206B
COCONUT GROVE, FL 33133

ENGINEER:

CUMMINS | CEDERBERG
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COA # 29062

TILE MANUFACTURER:

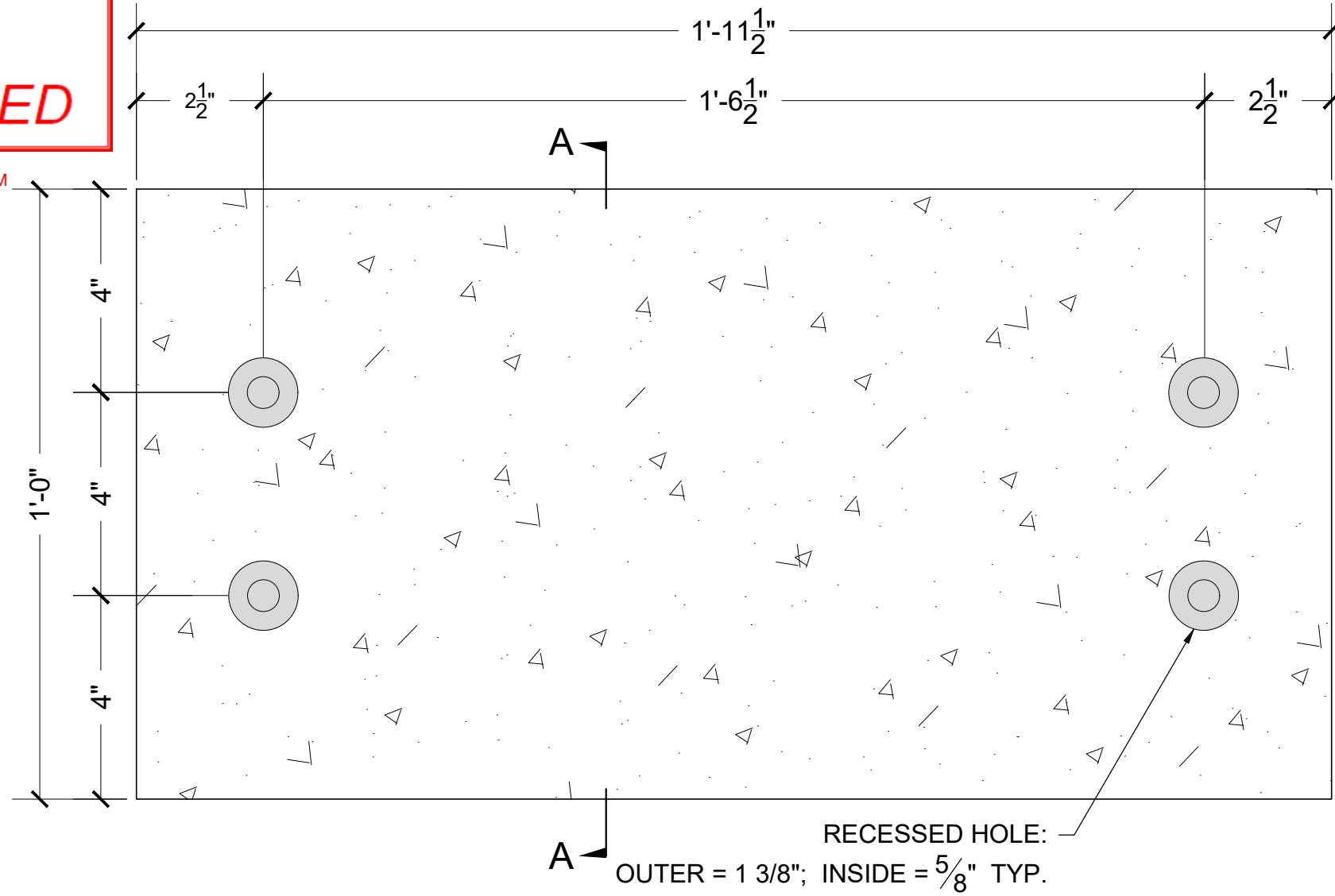
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3007 NW SOUTH RIVER DRIVE
MIAMI, FL. 33142

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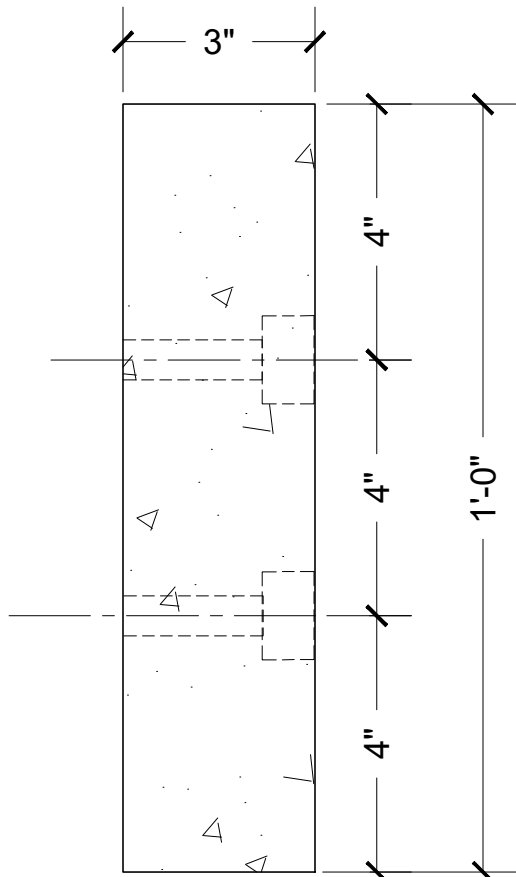
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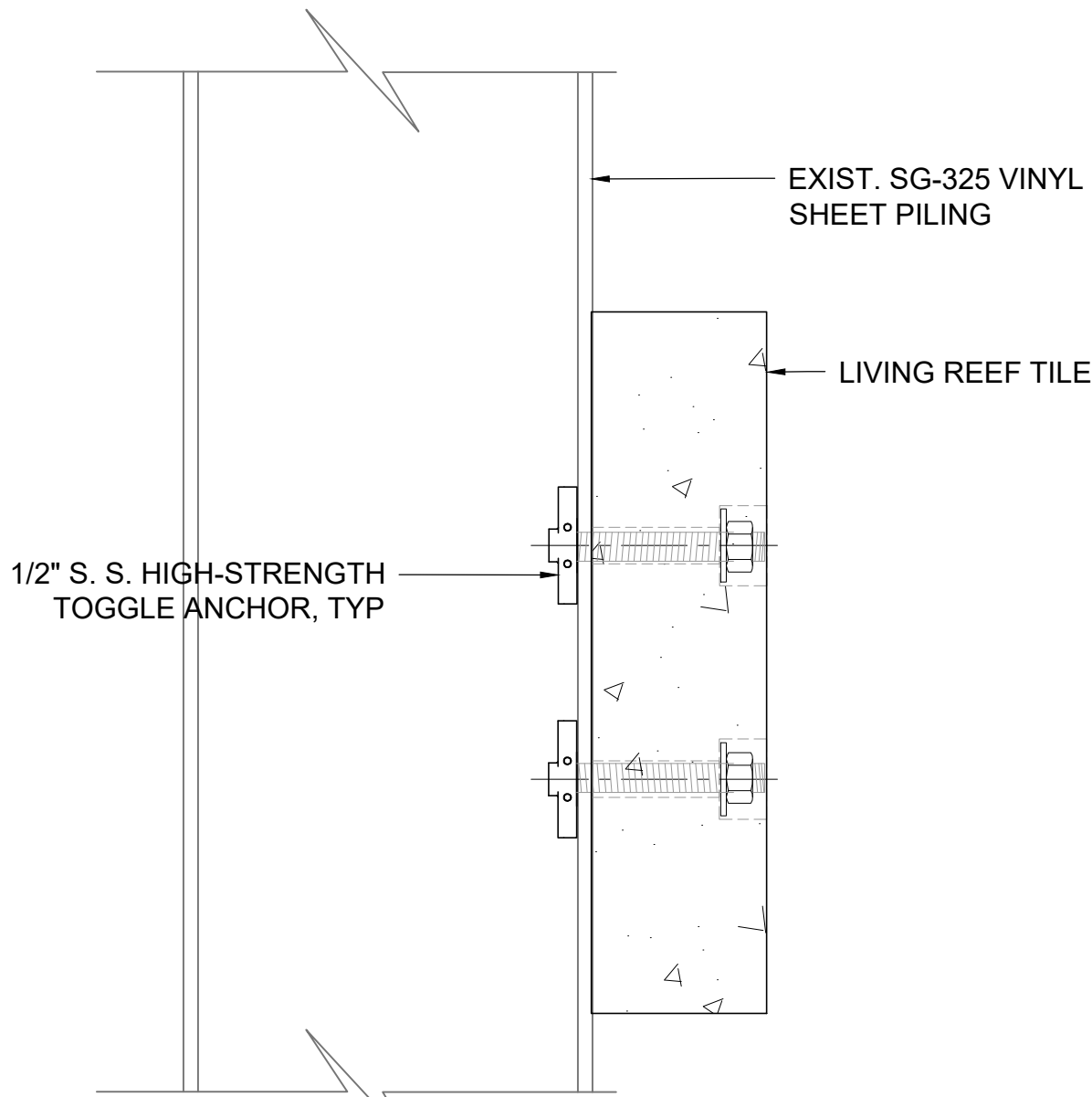
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Dylan Calella



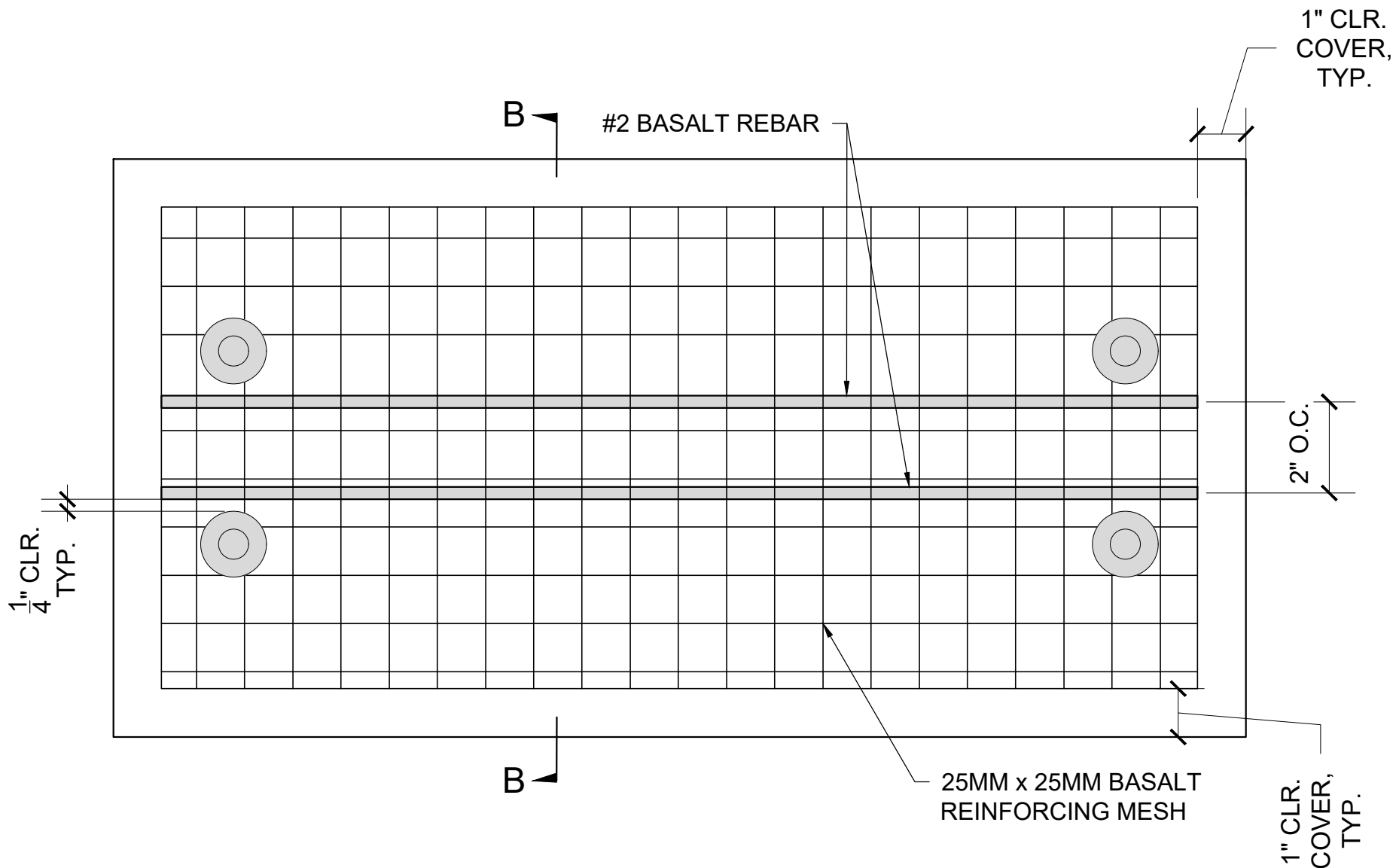
1
CM-2.1
LIVING REEF TILE
ELEVATION DETAIL
SCALE: 1/4" = 1'



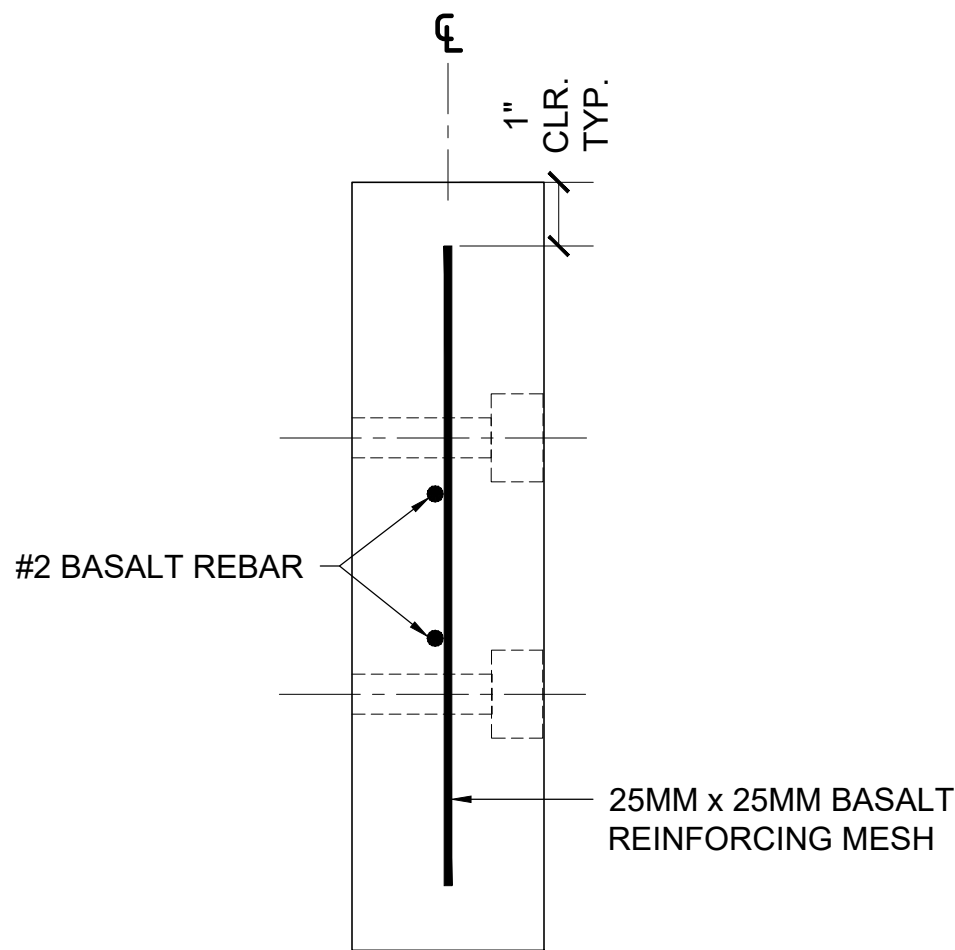
SECTION A-A



3
CM-2.2
LIVING REEF TILE
CONNECTION DETAIL
SCALE: 1/4" = 1'



2
CM-2.2
LIVING REEF TILE
REINFORCEMENT DETAIL
SCALE: 1/4" = 1'



SECTION B-B

PROJECT:
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BAYFRONT PARK
LIVING SEAWALL

ADDRESS:
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LONGBOAT KEY FL, 34228

CLIENT:
SARASOTA BAY ESTUARY
PROGRAM
ADDRESS:
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200W SARASOTA, FL 34236

OWNER:
TOWN OF LONGBOAT KEY
ADDRESS:
501 BAY ISLES ROAD
LONGBOAT KEY, FL 34228

CONTRACTOR:
KEARNS
CONSTRUCTION CO - CGC 060194

ADDRESS:
2550 S BAYSHORE DR #206B
COCONUT GROVE, FL 33133

ENGINEER:
CUMMINS | CEDERBERG
Coastal & Marine Engineering

201 ALHAMBRA CIRCLE, SUITE 601
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COA # 29062

TILE MANUFACTURER:
**KIND
DESIGNS**

ADDRESS:
3007 NW SOUTH RIVER DRIVE
MIAMI, FL. 33142

SEAL:

PERMIT DRAWINGS												SUBMISSION / REVISION
DATE	ISSUE											
02/12/2025												
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CC PROJECT NO:	115900
DRAWN	SV
CHECKED	CLK

SCALES PERTAIN TO 22"x34" SHEET

SHEET TITLE
LIVING REEF TILES
STRUCTURAL
DETAILS

CM-2.2

