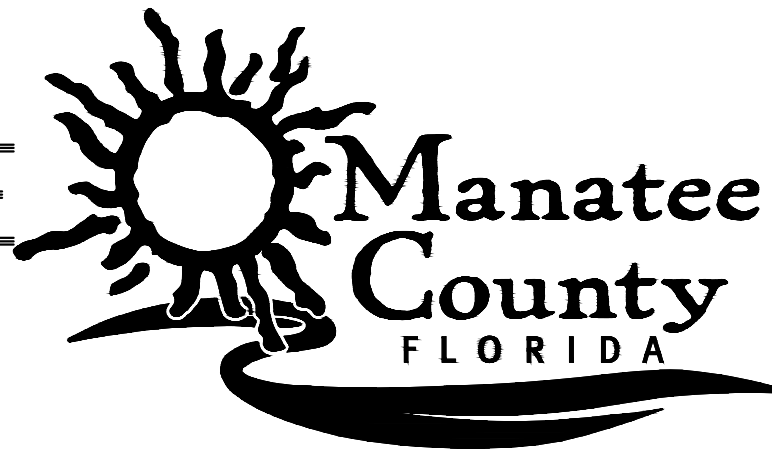


ATTENTION IS DIRECTED TO THE FACT THAT THESE PLANS MAY HAVE BEEN ENLARGED IN SIZE BY REPRODUCTION. THIS MUST BE CONSIDERED WHEN OBTAINING SCALED DATA.



PUBLIC WORKS DEPARTMENT
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1022 26th Avenue East, Bradenton, FL 34208



COQUINA BEACH DRAINAGE IMPROVEMENTS

MANATEE COUNTY

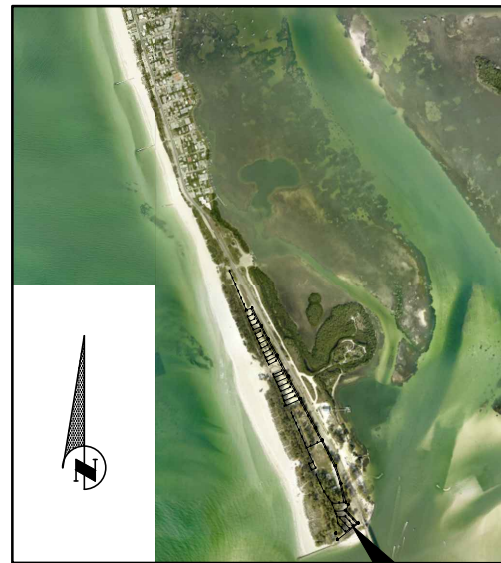
465-6005719

APRIL 2020

PHASE 2

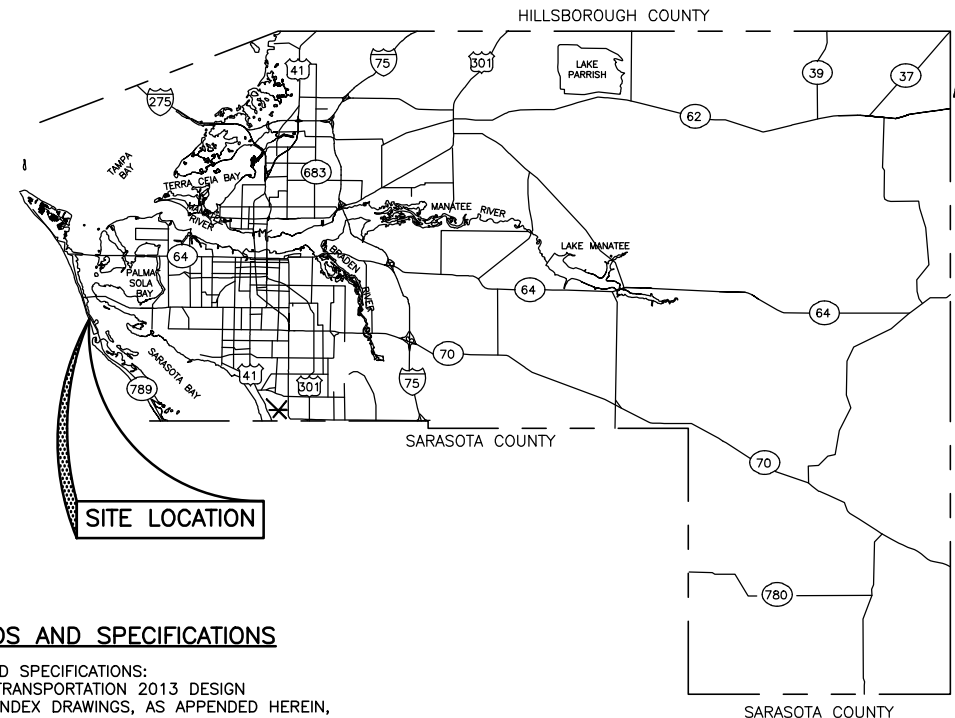
100% PLANS

COQUINA BEACH DRAINAGE IMPROVEMENTS
MANATEE COUNTY
COVER SHEET



VICINITY MAP
N.T.S.

PROJECT SITE



SITE LOCATION

RELATED STANDARDS AND SPECIFICATIONS

GOVERNING STANDARDS AND SPECIFICATIONS:
FLORIDA DEPARTMENT OF TRANSPORTATION 2013 DESIGN STANDARDS AND REVISED INDEX DRAWINGS, AS APPENDED HEREIN, AND APPLICABLE ARTICLES AND SUBARTICLES OF DIVISION I AND ALL OF DIVISIONS II & III OF THE 2013 STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, AS AMENDED BY CONTRACT DOCUMENTS.

FOR DESIGN STANDARDS CLICK ON THE "DESIGN STANDARDS" LINK AT THE FOLLOWING WEB SITE:
[HTTP://WWW.DOT.STATE.FL.US/RDDISIGN/](http://www.dot.state.fl.us/rddesign/)

FOR THE STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION CLICK ON THE "SPECIFICATIONS" LINK AT THE FOLLOWING WEB SITE:
[HTTP://WWW.DOT.STATE.FL.US/SPECIFICATIONSOFFICE/](http://www.dot.state.fl.us/specificationsoffice/)

ROADWAY SHOP DRAWINGS TO BE SUBMITTED TO:
CHRIS MOWBRAY P.E.
1022 26TH AVENUE EAST BRADENTON FLORIDA 34208

PROJECT DESCRIPTION

PROJECT SCOPE IS TO PROVIDE PERVIOUS CONCRETE PARKING AND DRAINAGE.

NO	INDEX OF SHEETS
1	COVER SHEET
2-3	GENERAL NOTES AND LEGEND
4-4A	AERIAL SITE PLANS
5-10	EXISTING CONDITIONS
11	BEST MANAGEMENT PRACTICES
12	EROSION CONTROL DETAILS
13-18	GEOMETRY PLAN
19-22	COORDINATE DATA TABLES
23	TYPICAL SECTIONS
24-29	GRADING AND PAVING PLAN
30-35	DRAINAGE AND UNDERDRAIN PLAN
36-37	DETAILS
38-43	TREE REMOVAL PLAN
UAS1-UAS6	UTILITY ADJUSTMENT PLAN

KEY SHEET REVISIONS	
DATE	DESCRIPTION

NO.	REVISION DESCRIPTION	BY	DATE

PROJECT #	465-6005719
SURVEY #	6982
SEC./TWN./RGE	10/35S/18E
SCALE	N/A
	BY DATE
SURVEYED	ZNS 08/05/15
DESIGNED	MS/ES 08/2015
DRAWN	08/2015
CHECKED	MS 08/2015

MICHAEL L. STURM
FLORIDA P.E. # 46005



Know what's below
Call before you dig

Signature & Date

I:\Highway Engineering\Proj\MSA\Coquina Beach\Partials\CA\DWG\Phase 2\CB_CVR & GN-2.dwg, 1 Cover, 7/21/2020, 9:06 AM, Ken Lamber, 1:1, ANSI, full bleed B (11.00 x 17.00 inches)



PUBLIC WORKS DEPARTMENT
ENGINEERING SERVICES
1022 26th Avenue East, Bradenton, FL 34208

**COQUINA BEACH DRAINAGE
IMPROVEMENTS
MANATEE COUNTY
GENERAL NOTES & LEGEND**

GENERAL

- ALL CONSTRUCTION ACTIVITIES SHALL BE COORDINATED WITH THE PROJECT MANAGEMENT DIVISION. THE PROJECT MANAGER IS: MICHAEL STURM, P.E. AND CAN BE REACHED AT (941) 708-7450; EXT. 7322.
- SITE VISITS ARE MANDATORY FOR ALL BIDDERS. THESE SITE VISITS CAN BE ARRANGED THROUGH THE PROJECT MANAGER.
- ALL CONSTRUCTION ON THIS PROJECT SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF MANATEE COUNTY PUBLIC WORKS STANDARDS AND/OR FDOT "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION" UNLESS OTHERWISE INDICATED ON THE PLANS.
- VERTICAL CONTROL FOR THIS PROJECT WAS ESTABLISHED BY A MINIMUM OF TWO REFERENCE BENCHMARKS DESCRIBED ON THE "NORTH AMERICAN VERTICAL DATUM OF 1988", (NAVD '88). BEARINGS ARE BASED ON FLORIDA STATE PLANE COORDINATE SYSTEM (WEST ZONE) NAD 83/2011. ELEVATIONS ARE BASED ON NAVD 1988, AND ARE DERIVED FROM BENCHMARK GIS-106, HAVING AN ELEVATION OF 4.15 FEET (NAVD 1988), AND BENCHMARK GIS-105 (PID AG9210) HAVING AN ELEVATION OF 3.29 FEET (NAVD 1988).
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR MEETING ALL CONDITIONS AND REQUIREMENTS OF ALL PERMITS AND ALL GOVERNING FEDERAL, STATE, AND LOCAL AGENCIES. THE CONTRACTOR SHALL OBTAIN AND PAY FOR ALL REQUIRED PERMITS THAT ARE NOT PROVIDED IN THE BID DOCUMENTS, AT NO ADDITIONAL COST TO THE OWNER.
- THE INFORMATION PROVIDED IN THESE PLANS IS SOLELY TO ASSIST THE CONTRACTOR IN ASSESSING THE NATURE AND EXTENT OF THE CONDITIONS WHICH MAY BE ENCOUNTERED DURING THE COURSE OF WORK. ALL CONTRACTORS ARE DIRECTED, PRIOR TO BIDDING, TO CONDUCT WHATEVER INVESTIGATION THEY MAY DEEM NECESSARY TO ARRIVE AT THEIR OWN CONCLUSIONS REGARDING THE ACTUAL CONDITIONS THAT WILL BE ENCOUNTERED, AND UPON WHICH THEIR BIDS WILL BE BASED.
- THE CONTRACTOR SHALL REVIEW AND VERIFY ALL DIMENSIONS ON THE PLANS AND REVIEW ALL FIELD CONDITIONS THAT MAY AFFECT CONSTRUCTION. SHOULD DISCREPANCIES OCCUR, THE CONTRACTOR SHALL NOTIFY THE ENGINEER TO OBTAIN THE ENGINEER'S CLARIFICATION BEFORE COMMENCING WITH CONSTRUCTION.
- AT LEAST 48 HOURS PRIOR TO ANY EXCAVATION, THE CONTRACTOR SHALL CONTACT SUNSHINE STATE ONE CALL OF FLORIDA AT 1-800-432-4770 OR THE NATIONAL 811 ONE CALL NUMBER WHEN APPLICABLE FOR UTILITY LOCATIONS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING WITH ALL UTILITIES FOR THE POSSIBLE RELOCATION OR THE TEMPORARY MOVEMENT OF ANY EXISTING UTILITIES WITHIN THE RIGHTS-OF-WAY.
- ALL STATIONS AND OFFSETS REFER TO BASELINE OF CONSTRUCTION, UNLESS OTHERWISE NOTED.
- THE CONSTRUCTION LENGTHS IN THESE PLANS ARE APPROXIMATE. ACTUAL LIMITS MAY BE SET IN THE FIELD AS DIRECTED BY THE ENGINEER.
- SEPARATE PAYMENT SHALL BE MADE ONLY FOR THE ITEMS OF WORK LISTED AND IDENTIFIED BY APPROPRIATE PAY ITEM ON THE BID FORM. THE COST OF ANY RELATED WORK NOT SPECIFICALLY IDENTIFIED, BUT WHICH IS REQUIRED FOR SATISFACTORY COMPLETION OF THE WORK, SHALL BE CONSIDERED TO BE INCLUDED IN THE CONTRACT PRICE FOR THE APPROPRIATE BID ITEM.
- THE CONTRACTOR SHALL HAVE A FOREMAN, OR RESPONSIBLE PARTY, ON SITE AT ALL TIMES WHEN WORK IS BEING PERFORMED. ALL WORKERS ON THE JOB SITE WILL BE COURTEOUS TO THE PUBLIC AT ALL TIMES, AND SHALL REFER ANY QUESTIONS OR CONCERNS TO THE CONTRACTOR'S FOREMAN OR THE COUNTY INSPECTOR. THE FOREMAN SHALL SPEAK AND UNDERSTAND ENGLISH AND SHALL BE AVAILABLE AT ALL TIMES FOR TIMELY RESOLUTION OF PROJECT-RELATED ISSUES.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE COMPLETE COORDINATION OF CONSTRUCTION SCHEDULING BETWEEN CONTRACTOR AND ALL UTILITY AGENCIES.
NOTE:
THIS INCLUDED MEETING WITH UTILITY AGENCIES PRIOR TO THE PRE-CONSTRUCTION CONFERENCE TO ADJUST THEIR SCHEDULES TO COINCIDE WITH THE CONTRACTORS CONSTRUCTION SCHEDULE. (REFERENCE CONTRACT DOCUMENTS)
- ANY DAMAGE TO STATE, COUNTY, OR LOCAL ROADS CAUSED BY THE CONTRACTOR'S HAULING OR EXCAVATION EQUIPMENT SHALL BE REPAIRED BY THE CONTRACTOR TO THE SATISFACTORY OF THE COUNTY PROJECT MANAGER. PAYMENT SHALL NOT BE MADE FOR THIS WORK.
- ALL CONSTRUCTION WITHIN FDOT RIGHT-OF-WAY IS TO BE IN ACCORDANCE WITH CURRENT FDOT STANDARD SPECIFICATIONS FOR ROADWAY CONSTRUCTION AND THE DESIGN STANDARDS.
- ALL SIGNING, STRIPING AND RPM PLACEMENT WITHIN THE FDOT RIGHT-OF-WAY IS TO BE IN ACCORDANCE WITH FDOT STANDARD INDEX 17346.

- VALUES: 28. ALL SWALES, DITCHES, AND CHANNELS LEADING FROM THE SITE SHALL BE PROTECTED FROM SILTATION AND EROSION DURING CONSTRUCTION AND BE SODDED WITHIN THREE (3) DAYS OF EXCAVATION.
- SOIL DISPLACED BY CONSTRUCTION WILL BE REMOVED. EROSION CONTROL SHALL BE IMPLEMENTED IN AREAS WHICH ARE CONSIDERED ENVIRONMENTALLY SENSITIVE. EROSION CONTROL SYSTEMS SHALL BE REQUIRED FOR ALL WORK WITHIN JURISDICTIONAL AREAS. THESE SYSTEMS MAY INCLUDE STAKED FIBER LOGS, SILT SCREENS, FILTER FABRIC, AND TURBIDITY SCREENS.
- ALL EROSION AND POLLUTION CONTROL DEVICES SHALL BE CHECKED REGULARLY, ESPECIALLY AFTER EACH RAINFALL AND SHALL BE CLEANED OUT AND/OR REPAIRED AS REQUIRED.
- THE CONTRACTOR SHALL NOT ENTER UPON OR IN ANY WAY ALTER WETLAND AREAS THAT MAY BE ON OR NEAR THE CONSTRUCTION SITE. ALL WORK IN THE VICINITY OF OPEN WATER AND/OR WETLANDS IS TO BE PERFORMED IN COMPLIANCE WITH THE ENVIRONMENTAL REGULATIONS AND/OR PERMITS FOR THE SITE. THE CONTRACTOR WILL BE RESPONSIBLE FOR ANY FINES RESULTING FROM HIS VIOLATION OF ANY REGULATIONS OR PERMIT CONDITIONS.
- FOR MORE INFORMATION, SEE THE EROSION CONTROL DETAIL SHEET INCLUDED IN THE PLANS.

RIGHT-OF-WAY

- ALL CONSTRUCTION ACTIVITIES SHALL BE LIMITED TO WITHIN THE MANATEE COUNTY/FDOT RIGHT-OF-WAY AND/OR EASEMENTS SHOWN ON THE DRAWINGS.
- THE CONTRACTOR SHALL EMPLOY A LAND SURVEYOR REGISTERED IN THE STATE OF FLORIDA TO REFERENCE AND RESTORE PROPERTY CORNER MONUMENTS, PINS, AND LANDMARKS THAT MAY BE DISTURBED BY CONSTRUCTION AT NO ADDITIONAL COST TO THE OWNER.
- THE CONTRACTOR, PRIOR TO CONSTRUCTION AND RESTRICTING ANY TRAFFIC, MUST OBTAIN A RIGHTS-OF-WAY USE PERMIT AND A TRAFFIC CONTROL PLAN. THE CONTRACTOR SHALL OBTAIN ALL REQUIRED PERMITS FROM OTHER GOVERNMENTAL AGENCIES HAVING RELEVANT JURISDICTION. ALL MAINTENANCE AND PROTECTION OF TRAFFIC SHALL BE IN ACCORDANCE WITH THE APPLICABLE REQUIREMENTS OF THE CURRENT FEDERAL HIGHWAY ADMINISTRATION "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" (MUTCD). A TRAFFIC CONTROL PLAN SHALL BE SUPPLIED BY THE CONTRACTOR AT THE PRE-CONSTRUCTION MEETING.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR REPLACING ALL DAMAGED STORM WATER STRUCTURES, PIPING, ENTRANCE PIPE AND HEADWALLS, THAT ARE TO REMAIN, WHETHER SHOWN ON THE PLANS OR NOT.
- IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO ESTABLISH IN THE FIELD THE RIGHT-OF-WAY LINES, BASE LINES, BENCH MARKS (ELEV.), CENTER LINES, AND STATIONING AS REQUIRED TO CONSTRUCT THIS PROJECT. ROADWAY PLANS AND PROPOSED DESIGN ARE BASED ON TOPOGRAPHIC SURVEYS PROVIDED BY MANATEE COUNTY PROJECT MANAGEMENT AND ZNS ENGINEERING UNDER COUNTY PROJECT NO. 465-6005719 REFER TO THE ORIGINAL SIGNED AND SEALED SURVEY CONTROL SHEETS IN THE PROJECT FILE.
- THE CONTRACTOR SHALL COORDINATE THE CUTTING OF DRIVEWAYS WITH THE PROPERTY OWNER PRIOR TO CUT. ALL DRIVEWAYS WILL BE IN PASSABLE CONDITION AT THE END OF THE WORK DAY AND FULLY RESTORED PER PLAN. THE CONTRACTOR SHALL COORDINATE WITH THE AFFECTED UTILITY COMPANY FOR THE ADJUSTMENT OF ANY EXISTING UTILITIES AND STRUCTURES IN ORDER TO MATCH THE PROPOSED ELEVATIONS AND ALIGNMENTS.
- A RIGHT OF ENTRY AGREEMENT SHALL BE OBTAINED BY THE PROJECT MANAGER FROM THE PROPERTY OWNER BEFORE ANY DRIVEWAY CONSTRUCTION WORK IS DONE OUTSIDE OF THE RIGHT-OF-WAY OR EASEMENT.

UTILITIES

- LOCATIONS, ELEVATIONS AND DIMENSIONS OF EXISTING UTILITIES, STRUCTURES AND OTHER FEATURES ARE SHOWN TO THE BEST INFORMATION AVAILABLE AT THE TIME OF PREPARATION OF THESE PLANS BUT DO NOT PURPORT TO BE ABSOLUTELY CORRECT. THERE MAY BE OTHER IMPROVEMENTS, UTILITIES, ETC. WHICH ARE WITHIN THE PROJECT AREA AND WHICH HAVE NOT BEEN LOCATED OR IDENTIFIED, MAY NOT BE IN THE EXACT LOCATION SHOWN OR RELOCATED SINCE THE PREPARATION OF THESE PLANS. THE CONTRACTOR SHALL VERIFY, PRIOR TO CONSTRUCTION, THE LOCATIONS, ELEVATIONS AND DIMENSIONS OF ALL EXISTING UTILITIES STRUCTURES AND OTHER FEATURES (WHETHER OR NOT SHOWN ON THE PLANS) THAT MAY AFFECT HIS WORK. ALL EXISTING UTILITIES TO BE EXTENDED, CROSSED OR CONNECTION POINTS SHALL BE EXPOSED PRIOR TO CONSTRUCTION TO VERIFY LOCATION AND ELEVATION. ANY DISCREPANCIES OR CONFLICTS FOUND SHALL BE BROUGHT TO THE ENGINEER'S ATTENTION FOR RESOLUTION. UTILITIES DESIGNATED VV, VH, AND VVH ARE BASED ON LIMITED INVESTIGATION TECHNIQUES AND SHOULD BE CONSIDERED APPROXIMATE ONLY. THE VERIFIED LOCATIONS/ELEVATIONS APPLY ONLY AT THE POINTS SHOWN. INTERPOLATIONS BETWEEN THESE POINTS HAVE NOT BEEN VERIFIED. EXTREME CAUTION SHALL BE EXERCISED WHEN WORKING NEAR THE EXISTING GAS MAINS AND POTABLE WATER MAINS. THE CONTRACTOR SHALL PROTECT ALL EXISTING STRUCTURES, WATER AND SEWER LINES, STORM DRAINS, UTILITIES, DRIVEWAYS, SIDEWALKS, SIGNS, MAIL BOXES, FENCES, TREES, LANDSCAPING, AND ANY OTHER IMPROVEMENT OR FACILITY IN THE CONSTRUCTION AREA. THE CONTRACTOR SHALL REPAIR AND/OR REPLACE ANY DAMAGED ITEM DUE TO HIS CONSTRUCTION ACTIVITIES TO EQUAL OR BETTER THAN PRE-CONSTRUCTION CONDITIONS AT NO ADDITIONAL COST TO THE OWNER.
- THE CONTRACTOR SHALL USE APPROPRIATE TECHNIQUES, AS APPROVED, RECOMMENDED OR OFFERED BY FLORIDA POWER AND LIGHT TO PREVENT UNDERMINING OF POWER POLES DURING CONSTRUCTION. IF HOLDING OF POWER POLES IS RECOMMENDED OR REQUIRED BY THE UTILITY, THE CONTRACTOR SHALL COORDINATE THIS ACTIVITY WITH THE UTILITY AND BEAR ALL RELATED COSTS.
- EXCEPT WERE THE PLANS AND SPECIFICATIONS PROVIDE THAT SUCH WORK SHALL BE PERFORMED UNDER THE CONTRACT FOR THIS PROJECT. ALL UTILITIES INTERFERING WITH CONSTRUCTION SHALL BE REMOVED, RELOCATED OR ADJUSTED BY THEIR OWNERS, AT THEIR EXPENSE. THE CONTRACTOR SHALL ARRANGE HIS SCHEDULE TO ALLOW UTILITY OWNERS TIME FOR THE NECESSARY RELOCATION AND ADJUSTMENT OF UTILITIES AND RELATED STRUCTURES.
- A FLORIDA POWER AND LIGHT SPECIAL PROVISION IS THAT THE TYPE OF EQUIPMENT USED IN THE INSTALLATION OF MAST ARMS/FOUNDATIONS, OVERHEAD/CANTILEVER SIGNS/FOUNDATIONS, AND THE MOVEMENT/INSTALLATION OF STRAIN POLES SHALL MEET THE FOLLOWING REQUIREMENTS: 1) OVERHEAD LINES SHALL STAY IN PLACE BOTH VERTICALLY AND HORIZONTALLY 2) CONTRACTOR SHALL MEET ALL APPLICABLE OSHA REQUIREMENTS (SEPARATION SHALL FOLLOW FPL GUIDELINES). ANY COST ASSOCIATED WITH THIS TYPE OF EQUIPMENT REQUIRED FOR THIS INSTALLATION IS INCLUDED IN THE RELATED PAY ITEMS. PLEASE REFER TO THE SPECIAL CONDITIONS IN THE UTILITY WORK SCHEDULE AND UTILITY COORDINATION.
- CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING WITH ALL UTILITY COMPANIES FOR THE RELOCATION AND ADJUSTMENT OF ALL UTILITIES, INCLUDING, ANY EXISTING POWER POLES AND/OR UTILITY CONDUITS WITHIN RIGHT-OF-WAY.
- PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL BE RESPONSIBLE TO COORDINATE WITH THE APPROPRIATE PARTIES TO DETERMINE THE COUNTY'S FIBER COMMUNICATION NETWORK, KNOWN AS ATMS (COUNTY ISD, SCHOOL BOARD, AND TRAFFIC MANAGEMENT CENTER) IN THE AREA TO ACCOMMODATE ANY POTENTIAL CONFLICTS. AS-BUILT INFORMATION FOR EXISTING COMMUNICATION CONDUIT AND FIBER IS AVAILABLE FROM FRANK CONETTA, WITH UTILITY RECORDS (941-792-8811 EXT. 5027).

DRAINAGE AND GRADING

- ALL CONSTRUCTION IS TO BE STAKED IN THE FIELD BY OR UNDER THE SUPERVISION OF A FLORIDA REGISTERED LAND SURVEYOR.
- THE CONTRACTOR IS TO PROVIDE THE ENGINEER OF RECORD WITH REPRODUCIBLE RECORD DRAWINGS SHOWING ALL IMPROVEMENT LOCATIONS AND ELEVATIONS IN ACCORDANCE WITH LATEST MANATEE COUNTY TRANSPORTATION DEPARTMENT STANDARDS AND SOUTHWEST FLORIDA WATER MANAGEMENT DISTRICT (SWFWMMD) STANDARDS. THE CONTRACTOR SHALL ALSO PROVIDE FIVE SETS OF PRINTS, SIGNED AND SEALED BY A PROFESSIONAL LAND SURVEYOR, OF THE RECORD DRAWINGS TO THE ENGINEER OF RECORD. THESE RECORD DRAWINGS SHALL BE CERTIFIED TO THE OWNER, APPROPRIATE GOVERNMENTAL AGENCIES. RECORD DRAWINGS SHALL SPECIFICALLY INCLUDE STORMWATER FACILITY LOCATIONS, INCLUDING TOP OF BANK, UNDERDRAIN AND CONTROL STRUCTURES, SHALL BE PERFORMED BY A REGISTERED LAND SURVEYOR AND REVIEWED BY THE ENGINEER OF RECORD PRIOR TO ACCEPTANCE AND PAYMENT. BENCH MARKS WITH THE ELEVATION CLEARLY AND PERMANENTLY MARKED ARE TO BE PLACED ON THE TOP OF ALL PROPOSED OUTFALL CONTROL STRUCTURES. RECORD DRAWINGS OF ALL MITIGATION AREAS INCLUDING ELEVATIONS, ZONES AND LIMITS SHALL BE PERFORMED BY A REGISTERED LAND SURVEYOR AND REVIEWED BY THE ENGINEER OF RECORD PRIOR TO ACCEPTANCE AND PAYMENT. THE RECORD DRAWINGS SHALL SPECIFICALLY INCLUDE THE SURFACE AREA OF STORMWATER FACILITY AREAS AT NORMAL WATER), TOP OF BANK AND ELEVATION (NWL), AT HIGH WATER ELEVATION (HWL ALL MITIGATION AND/OR LITTORAL SHELF AREAS.
- TO PREVENT SEDIMENTARY RUNOFF DURING CONSTRUCTION, STAKED FIBER LOGS, STAKED SILT SCREENS OR INLET DEBRIS CONTROL SCREENS ARE TO BE PLACED AT STORM INLETS, OUTFALL LOCATIONS AND ADJACENT PROPERTY LINES AS REQUIRED PRIOR TO ANY CONSTRUCTION ACTIVITIES. SEDIMENT AND EROSION CONTROL DEVICES SHALL BE INSTALLED AND THEN VERIFIED/INSPECTED BY MANATEE COUNTY INFRASTRUCTURE INSPECTIONS RESOURCES DIVISION (708-7450) PRIOR TO COMMENCEMENT OF CONSTRUCTION. THE CONTRACTOR IS RESPONSIBLE FOR

MAINTAINING THE SEDIMENTATION BARRIERS IN A WORKING MANNER FOR THE DURATION OF CONSTRUCTION AND SHOULD BE CHECKED DAILY. SILTATION ACCUMULATIONS GREATER THAN THE LESSER OF 12 INCHES OR ONE-HALF OF THE DEPTH OF THE SEDIMENTATION BARRIER SHALL BE IMMEDIATELY REMOVED AND REPLACED IN UPLAND AREAS. IN ADDITION TO SPECIFIED EROSION CONTROL LOCATIONS, THE CONTRACTOR SHALL PERFORM DAILY SITE INSPECTIONS FOR POTENTIAL EROSION PROBLEMS. IF PROBLEMS OCCUR, THE CONTRACTOR IS RESPONSIBLE FOR INSTALLING APPROPRIATE EROSION CONTROL IMMEDIATELY. AN INSPECTION LOG SHALL BE MAINTAINED AND AVAILABLE ONSITE AT ALL TIMES. STORMWATER TREATMENT FACILITIES INCLUDING OUTFALL PER DETAIL ARE TO BE CONSTRUCTED EARLY IN SITE DEVELOPMENT, WITH NO OFF-SITE UNTREATED RUN-OFF OCCURRING DURING CONSTRUCTION. THE CONTRACTOR IS RESPONSIBLE FOR REMOVING TEMPORARY EROSION CONTROL DEVICES FOLLOWING COMPLETION OF ALL CONSTRUCTION AND FINAL STABILIZATION.

- ALL PIPE LENGTHS SHOWN ON PLAN VIEW ARE TO THE END OF THE MITERED END SECTION. REFER TO MITERED END SECTION DETAIL FOR LENGTH OF PIPE TO BE INCLUDED IN PRICE FOR MITERED END SECTION.
- TOPOGRAPHIC AND PROPERTY SURVEYS GIVING LOT SIZE, GROUND ELEVATIONS, OBSTRUCTIONS ON SITE, LOCATIONS AND DEPTHS OF SEWERS, CONDUITS, PIPES, EXISTING STRUCTURES, CURBS, PAVEMENTS, TRACTS, AND SOIL BORING DATA GIVING THE NATURE OF GROUND AND SUBSURFACE CONDITIONS HAVE BEEN OBTAINED FROM RELIABLE SOURCES. THE ACCURACY OF THIS DATA IS NOT GUARANTEED, AND IS FURNISHED SOLELY AS AN ACCOMMODATION TO THE CONTRACTOR. USE OF THIS DATA SHALL BE MADE AT THE CONTRACTOR'S DISCRETION. NO ADDITIONAL COMPENSATION WILL BE GRANTED DUE TO THE CONTRACTOR'S LACK OF KNOWLEDGE OF SITE CONDITIONS. PRIOR TO BID SUBMISSION, THE CONTRACTOR SHALL CONDUCT ANY ADDITIONAL SURVEYS AND SOILS TESTS HE MAY DEEM NECESSARY TO VERIFY THE ACCURACY OF THE INFORMATION PROVIDED.
- THE CONTRACTOR SHALL VERIFY TOPOGRAPHY AND SATISFY HIMSELF AS TO THE EXTENT OF FILL NECESSARY TO ACHIEVE FINISHED GRADE PRIOR TO AWARD OF CONTRACT. THERE SHALL BE NO CLAIM FOR EXTRAS NOTWITHSTANDING SITE PLAN REVISIONS PROMULGATED SUBSEQUENT TO AWARD OF CONTRACT.
- ROADSIDE UNDERDRAIN SHOWN ON PLAN IS MINIMUM AND EXTENSION SHALL BE REQUIRED AS DETERMINED NECESSARY BY THE ENGINEER OF RECORD AND/OR MCPWD INSPECTION DEPARTMENT DURING THE COURSE OF CONSTRUCTION.
- SUITABLE FILL MATERIAL FROM EXCAVATION SHALL BE UTILIZED FOR PROJECT FILL PER GRADING SPECIFICATIONS. UNSUITABLE MATERIAL SHALL BE PLACED IN OPEN AREAS ONLY AS DIRECTED BY THE PROJECT ENGINEER AND SOILS ENGINEER IN ACCORDANCE WITH FDOT INDEX 505.
- THE CONTRACTOR SHALL SUBMIT SHOP DRAWINGS FOR ALL STRUCTURES PRIOR TO INSTALLATIONS.
- REFER TO CONSTRUCTION TECHNICAL SPECIFICATIONS FOR COMPACTION REQUIREMENTS, GRASSING/SODDING REQUIREMENTS, AND PAVING CONSTRUCTION MATERIAL SPECIFICATIONS.
- ALL FILL AREAS ARE TO BE CONSTRUCTED IN 12" MAXIMUM LIFTS.
- THE CONTRACTOR SHALL REVIEW SOILS TESTS AS PERFORMED BY THE SOIL CONSULTANT AND IS ENCOURAGED TO CONDUCT ON-SITE TESTING TO SATISFY HIMSELF AS TO ACTUAL LIMITS OF REMOVAL AND REPLACEMENT OF UNSUITABLE MATERIALS PRIOR TO BIDDING.
- ON SLOPES GREATER THAN 3:1 PEGGING OR PINNING OF SOD MAY BE REQUIRED.
- COORDINATE POINTS FOR STORM DRAIN INLETS, UNDERDRAIN CLEANOUTS AND MANHOLES REFERENCE THE CENTER OF THE SPECIFIED STRUCTURE BOTTOM. FOR PIPES WITH MITERED END SECTIONS, THE PROPOSED LENGTHS SHOWN ON THE PLANS INCLUDE THE LENGTH OF THE MITERED END SECTION. PAYMENT FOR PIPE SHALL NOT INCLUDE THE LENGTH OF THE MITERED END SECTION. AS SPECIFIED BY DIMENSION "T" AS SHOWN IN FDOT INDEX 272 AND 273. PAYMENT SHALL BE FROM INSIDE STRUCTURE WALL TO INSIDE STRUCTURE WALL. ANY EXTRA PIPE LENGTH LISTED SHALL BE CONSIDERED CONTINGENT.
- ALL CURB INLET AND JUNCTION BOX STORMWATER STRUCTURES SHALL HAVE HEAVY DUTY RING AND COVER MANHOLE ACCESS. ALL DRAINAGE BOX DETAIL SHALL FOLLOW MANATEE COUNTY CURRENT STANDARD 202 UNLESS IT IS DESIGNATED IN THE PLAN. ALL DRAINAGE BOXES SHALL HAVE A WALL THICKNESS OF 6" MINIMUM.
- DURING DEWATERING OPERATIONS, THE CONTRACTOR SHALL NOT DISCHARGE DIRECTLY TO RECEIVING WATERS, EXISTING CONVEYANCES TO RECEIVING WATERS, OR WETLAND SYSTEMS. TEMPORARY SEDIMENT BASINS, TRAPS, OR SILTATION REDUCTION DEVICES SHALL BE UTILIZED TO COLLECT THE DISCHARGE FROM DEWATERING ACTIVITIES TO ELIMINATE THE POTENTIAL FOR OFFSITE SEDIMENT TRANSPORT AND TO ENSURE THAT DIRECT DISCHARGE DOES NOT OCCUR.
- SLURRY WALL - CONSTRUCTION OF THE SLURRY WALL SHOULD BE UNDERTAKEN IN ACCORDANCE WITH THE SPECIAL PROVISIONS OF THE CONTRACTOR BY A GEOTECHNICAL SPECIALTY CONTRACTOR EXPERIENCED IN CONSTRUCTION OF CLAY SLURRY WALLS. CONTRACTOR SHOULD REVIEW GEOTECHNICAL REPORT, PLANS, AND RETAIN EXPERIENCED PERSONNEL TO CARRY OUT THE OPERATIONS, SAFETY, TESTING AND QUALITY CONTROL AS SPECIFIED. PRIOR TO CONSTRUCTION, CONTRACTOR SHALL SUBMIT TECHNICAL SPECIFICATIONS, FOR ENGINEER'S APPROVED THAT COVER MATERIALS, EQUIPMENT, EXCAVATION OF THE WORK (I.E. SLURRY TRENCHING, KEY, CLEANING TRENCH BOTTOM, BACKFILL MIXING & BACKFILL PLACEMENT), CLEAN-UP, SPILL CONTINGENCY PLAN, QUALITY CONTROL, AND TESTING. IN ADDITION, THE FOLLOWING SHALL BE SUPPLIED PRIOR TO START OF CONSTRUCTION:
A. SOIL-BENTONITE SLURRY MIX DESIGN AND TRIAL MIX REPORTS, INCLUDING MIX PROPORTIONS, DENSITY, MOISTURE CONTENT, GRADATIONS, AND HYDRAULIC CONDUCTIVITY SHALL BE PERFORMED.
B. SPECIFICATIONS OF THE BATCH PLANT AND LAYOUTS SHOWING LOCATIONS OF EQUIPMENT, PONDS, TANKS, PUMPS, VALVES, HOSES AND SUPPLY LINES.
C. SOURCE OF ALL IMPORTED MATERIAL, INCLUDING BENTONITE. SHIPMENT OF MATERIALS TO THE SITE SHALL BE ACCOMPANIED BY THE SHIPPER'S WRITTEN VERIFICATION OF THE QUALITY OR SPECIFICATION OF THE MATERIAL, A COPY OF WHICH SHALL BE RETAINED BY THE CONTRACTOR.
D. CERTIFICATION OF BENTONITE QUALITY, SHOWING COMPLIANCE WITH API STANDARD 13A.
E. CERTIFICATION OF QUALITY OF ANY ADMIXTURE.
F. CONTRACTOR IS TO PERFORM WORK WITH MINIMAL IMPACT TO PARK USERS. A SUBPHASING PLAN WILL BE REQUIRED AND APPROVED BEFORE WORK WILL START
G. EXCAVATED MATERIAL WILL BE USED TO FILL LOW AREAS NEXT TO PROPOSED CONSTRUCTION, BEFORE EXCESS WILL BE ALLOWED OFFSITE. COST TO BE BORNE BY THE UNIT PRICE FOR PERVIOUS CONCRETE OR LINE ITEM ON THE BID FORM ,IF BROKEN OUT.

SAFETY

- THE CONTRACTOR SHALL BE RESPONSIBLE FOR COMPLIANCE WITH THE FLORIDA TRENCH SAFETY ACT, 90-96, LAWS OF FLORIDA EFFECTIVE OCTOBER 1, 1990 AND THE OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION EXCAVATION SAFETY STANDARDS, 29 CFR 1926.650, SUBPART P, AS AMENDED. THE CONTRACTOR SHALL INCLUDE IN THE TOTAL BID PRICE ALL COSTS FOR COMPLIANCE WITH THESE REGULATIONS.
- THE CONTRACTOR SHALL USE SHEET PILING, SHEETING, BRACING, ETC., AS REQUIRED IN ALL EXCAVATION AREAS AND CONFORM TO ALL OSHA REQUIREMENTS.
- THE CONTRACTOR SHALL USE ALL NECESSARY SAFETY PRECAUTIONS TO AVOID CONTACT WITH OVERHEAD AND UNDERGROUND UTILITIES, POWER LINES, ETC.
- THESE DRAWINGS DO NOT INCLUDE NECESSARY COMPONENTS FOR CONSTRUCTION SAFETY. THIS EXCLUSION DOES NOT ALLEVIATE THE CONTRACTOR FOR PROVIDING A CONTINUOUS SAFE WORKSPACE.

ENVIRONMENTAL

- CONTRACTOR IS RESPONSIBLE FOR INSTALLATION ALL SEDIMENT AND EROSION CONTROL (SEC) DEVICES (E.G., BARRIERS, SEDIMENT TRAPS/BASINS, VEGETATIVE BUFFERS, ETC.) AS SPECIFIED IN THE FINAL APPROVED PLANS FOR THE PROJECT. CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING ALL SEC DEVICES UTILIZED DURING THE PROJECT, AS WELL AS INSTALLATION & MAINTENANCE OF ANY ADDITIONAL MEASURES DEEMED NECESSARY DURING PROJECT IMPLEMENTATION, TO PREVENT EROSION AND OFF-SITE SEDIMENT MIGRATION. CONTRACTOR SHALL ALSO BE RESPONSIBLE FOR REMOVAL AND PROPER DISPOSAL OF ALL SEC DEVICES UPON CONCLUSION OF THE PROJECT, AND UPON ADEQUATE STABILIZATION OF DISTURBED SOILS.
- WHEN A BENTONITE SPILL OR FRACK-OUT OCCURS OR THERE IS A LOSS OF RETURN INDICATING EXCESSIVE SEEPAGE OR LOSS OF DRILLING FLUID, DRILLING MUST BE STOPPED UNTIL THE LOCATION OF THE SPILL IS IDENTIFIED. UNDER NO CIRCUMSTANCES WILL DRILLING CONTINUE WHEN A SPILL IS APPARENT.
- ONCE LOCATED, THE BENTONITE SPILL MUST BE ISOLATED AND SEEPAGE INTO ANY NEARBY WATER BODIES WILL BE BLOCKED DEPENDING ON THE DEGREE OF THE SPILL, THE ISOLATED BENTONITE MUST BE REMOVED MANUALLY OR MECHANICALLY AND DISPOSED OF BY APPROPRIATE MEANS OR REUSED.
- THE CONTRACTOR SHALL PROVIDE AND INSTALL ALL NECESSARY STORM WATER, EROSION, AND SEDIMENTATION CONTROL MEASURES IN ACCORDANCE WITH THE STATE OF FLORIDA EROSION AND SEDIMENT CONTROL DESIGNER AND REVIEWER MANUAL. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO CONTROL AND PREVENT EROSION AND TRANSPORT OF SEDIMENT TO SURFACE DRAINS AND TO DITCHES DURING CONSTRUCTION.
- STOCKPILES SHALL BE PROTECTED AT ALL TIMES BY ON-SITE DRAINAGE CONTROLS WHICH PREVENT EROSION OF THE STOCKPILED MATERIAL. CONTROL OF DUST FROM SUCH STOCKPILES IS REQUIRED, DEPENDING UPON THEIR LOCATION AND THE EXPECTED LENGTH OF TIME THE STOCKPILES WILL BE PRESENT. IN NO CASE SHALL ANY STOCKPILED MATERIAL REMAIN AFTER THIRTY (30) CALENDAR DAYS.
- STORM WATER INLETS IN THE VICINITY OF THE PROJECT SHALL BE PROTECTED BY SEDIMENT TRAPS SUCH AS SECURED FIBER LOGS, SOD, STONE, ETC., WHICH SHALL BE MAINTAINED AND MODIFIED AS REQUIRED BY CONSTRUCTION PROGRESS, AND WHICH MUST BE APPROVED BY THE ENGINEER BEFORE INSTALLATION. THIS WILL BE MAINTAINED TO PREVENT DEGRADATION OF THE WATERS OF THE COUNTY AND STATE.
- SEDIMENT BASINS AND TRAPS, PERIMETER BERMS, SEDIMENT BARRIERS, VEGETATIVE BUFFERS, AND OTHER MEASURES INTENDED TO TRAP SEDIMENT AND/OR PREVENT THE TRANSPORT OF SEDIMENT ONTO ADJACENT PROPERTIES, OR INTO EXISTING BODIES OF WATER, MUST BE INSTALLED, CONSTRUCTED, OR IN THE CASE OF VEGETATIVE BUFFERS, PROTECTED FROM DISTURBANCE, AS A FIRST STEP IN THE LAND ALTERATION PROCESS. SUCH SYSTEMS SHALL BE FULLY OPERATIVE BEFORE ANY OTHER DISTURBANCE OF THE SITE BEGINS. EARTHEN STRUCTURES INCLUDING BUT NOT LIMITED TO BERMS, EARTH FILTERS, DAMS OR DIKES SHALL BE STABILIZED AND PROTECTED FROM DRAINAGE DAMAGE OR EROSION WITHIN ONE (1) WEEK OF INSTALLATION.

NO.	DATE	BY	REVISION DESCRIPTION

PROJECT #	465-6005719
SURVEY #	6982
SEC./TWN./RGE	10/35S/16E
SCALE	1"=60'
	BY DATE
SURVEYED	ZNS 08/05/15
DESIGNED	MS/ES 08/2015
DRAWN	08/2015
CHECKED	MS 08/2015

MICHAEL L. STURM
FLORIDA P.E. # 46005

Signature & Date
SHEET 2

H:\Highway Engineering\PROJ\MISC\Coquina Beach Parking Lot\DWG\Phase 2\CB_CDR & ON-2.dwg 2 01L 1 Trans. 7/27/2020 9:08 AM Ken Leather, I.T. ANSI full bleed B (11.00 x 17.00 inches)



PUBLIC WORKS DEPARTMENT
ENGINEERING SERVICES
1022 26th Avenue East, Bradenton, FL 34208

COQUINA BEACH DRAINAGE
IMPROVEMENTS
MANATEE COUNTY
GENERAL NOTES & LEGEND

BOX CULVERT DESIGN SPECIFICATIONS:

- 64. AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS (AASHTO), STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES, 1998 EDITION, AND APPROVED REVISIONS.
DESIGN LOADING: HS-20-44 LIVE LOAD, FUTURE WEARING SURFACE OF (15 LB/SF) AND ALL DEAD LOADS AS SHOWN ON THE PLANS.
DESIGN METHOD: LOAD FACTOR DESIGN
ENVIRONMENT: EXTREMELY AGGRESSIVE
MATERIALS: ALL MATERIALS SHALL CONFORM TO FLORIDA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION (2007 EDITION & SUPPLEMENTS THERE TO)
ALLOWABLE SOIL BEARING: 2,500 PSF
PRECAST BOX CULVERT: THE PRECAST BOX CULVERT SHALL CONFORM TO THE FLORIDA DEPARTMENT OF TRANSPORTATION DESIGN STANDARDS FOR A TRIPLE-BARREL, 4 FOOT X 8 FOOT STRUCTURE OR AN APPROVED EQUAL
SUBMITTALS: THE CONTRACTOR SHALL PROVIDE SHOP DRAWINGS OF THE PRECAST BOX CULVERT FOR THE ENGINEERS APPROVAL AND GEOTECHNICAL REPORTS FOR FOUNDATION DESIGN.

MITIGATION NOTES

- 65. CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTENANCE OF ENHANCED/ CREATED WETLANDS UNTIL PROJECT DRAINAGE AND GRADING IS COMPLETED AND ACCEPTED BY THE OWNER.
66. MAINTENANCE SHALL BE IN ACCORDANCE WITH PERMIT CONDITIONS. WETLAND BOUNDARY AND BUFFER AREAS SHALL BE CLEARLY DELINEATED ON SITE PRIOR TO INITIAL CLEARING AND GRUBBING ACTIVITIES. THE DELINEATION SHALL ENDURE THROUGHOUT THE CONSTRUCTION PERIOD, AND BE READILY DISCERNIBLE TO CONSTRUCTION PERSONNEL. THE WETLAND (JURISDICTIONAL) AND BUFFER AREAS ARE TO BE IDENTIFIED IN THE FIELD WITH STAKES AND FLAGGED STRING LINES (STRING LINE 5' ABOVE GRADE WITH FLAGGING AT 10' INTERVALS) PRIOR TO COMMENCEMENT OF CLEARING AND GRUBBING. THE STRING LINE SHALL BE MAINTAINED THROUGHOUT CONSTRUCTION. THE CONTRACTOR SHALL STAY OUT OF THE EXISTING WETLAND AND BUFFER AREAS, EXCEPT WHERE PLANS CALL OUT SPECIFIC WORK TO BE PERFORMED.
67. ALL RESTORATION WORK PERFORMED THROUGHOUT THE PROJECT SHALL CONFORM TO EXISTING LINES AND GRADES UNLESS SHOWN OTHERWISE.
68. ALL DISTURBED GRASSED AREAS SHALL BE SODDED. THE TYPE OF SOD USED TO REPLACE OWNER MAINTAINED AREAS IN RIGHT-OF-WAY SHALL BE COORDINATED WITH THE PROPERTY OWNER. ALL EXISTING SHRUBS, TREES, PLANTINGS AND OTHER VEGETATION, OUTSIDE OF RIGHT-OF-WAY DISTURBED DURING CONSTRUCTION SHALL BE REPLACED WITH EQUIVALENT MATERIAL BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER.
69. CONCRETE DRIVEWAYS OR SIDEWALKS THAT ARE CUT SHALL BE RESTORED TO MATCH EXISTING ACCORDING TO THE CURRENT EDITIONS OF THE F.D.O.T. SPECIFICATIONS FOR ROAD AND BRIDGE DESIGN, SECTION 522, AND SECTION 310 OF THE F.D.O.T. DESIGN STANDARDS LATEST REVISION.
70. WHENEVER A PERMANENT ROADWAY SURFACE IS NOT PLACED IMMEDIATELY AFTER BACKFILLING AND COMPACTION OF THE NEWLY INSTALLED PIPE LINE IN AREAS WHERE TRAFFIC MUST PASS, THE CONTRACTOR SHALL INSTALL A TEMPORARY SURFACE CONSISTING OF NINE INCHES OF COMPACTED LIME ROCK BASE AND A COAT OF ASPHALT EMULSION. PERMANENT ROADWAY REPAIR SHALL BE PERFORMED A MAXIMUM OF TWENTY-ONE CALENDAR DAYS AFTER THE INITIAL OPEN CUTTING.
71. RESTORATION OF CURBS, DRIVEWAYS, SIDEWALKS, AND PLACEMENT OF SOD SHALL BE COMPLETED WITHIN FORTY-FIVE CALENDAR DAYS OF INITIAL DISTURBANCE, OR TWENTY-ONE CALENDAR DAYS OF SUBSTANTIAL COMPLETION, WHICHEVER OCCURS FIRST.

CONSTRUCTION

- 72. THE EXHAUST SYSTEM OF ALL GASOLINE AND DIESEL ENGINES SHALL BE EQUIPPED WITH MUFFLERS THAT MEET THE EQUIPMENT MANUFACTURER'S REQUIREMENTS FOR NOISE SUPPRESSION. THE CONTRACTOR SHALL INSTALL NOISE ABATEMENT BAFFELS POSITIONED TO BREAK LINE-OF-SITE FROM THE NOISE SOURCE TO AFFECTED RESIDENCES, AS APPROVED BY THE ENGINEER.
73. NO MATERIAL SHALL BE STOCKPILED IN ROADWAYS. ALL DIRT AND DEBRIS SHALL BE REMOVED FROM THE JOB SITE DAILY. ROADS SHALL BE SWEEPED DAILY AS PART OF DAILY CLEAN UP.
74. THE CONTRACTOR IS TO CONTROL ALL FUGITIVE DUST ORIGINATING ON THIS PROJECT BY WATERING OR OTHER METHODS AS REQUIRED.
75. INGRESS AND EGRESS TO ALL THE PROPERTIES IN THE CONSTRUCTION AREA SHALL BE MAINTAINED AT ALL TIMES.
76. PRIOR APPROVAL WILL BE REQUIRED FOR REMOVAL OF ANY TREE WITHIN THE CONSTRUCTION AREA, UNLESS OTHERWISE NOTED ON THE PLANS.
77. THE CONTRACTOR SHALL PROVIDE ALL DEWATERING EQUIPMENT NECESSARY TO KEEP ALL EXCAVATIONS DRY. DEWATERING IS REQUIRED TO 18" BELOW TRENCH BOTTOM. THE CONTRACTOR SHALL SUBMIT DEWATERING PLAN TO DISTRICT FOR APPROVAL PRIOR TO CONSTRUCTION.
78. ALL PIPING AND FITTINGS USED ON THIS PROJECT SHALL BE AS NOTED ON THE PLANS AND IN THE CONTRACT DOCUMENT AND SHALL BE INSTALLED TO THE LINES AND GRADES SHOWN ON THE PLANS AND PROFILES.
79. ALL PIPE LENGTHS ARE PLUS OR MINUS AND MAY BE ADJUSTED IN THE FIELD AS REQUIRED. PIPE MEASUREMENTS AND STATION OFFSETS ARE TO CENTER OF STRUCTURES OR FITTINGS. REFER TO DETAIL SHEET FOR ALL REFERENCE POINTS.
80. ALL ROCKS OR STONES LARGER THAN SIX INCH DIAMETER SHALL BE REMOVED FROM THE BACKFILL MATERIAL. BACKFILL MATERIAL PLACED WITHIN ONE FOOT OF PIPING AND APPURTENANCES SHALL NOT CONTAIN ANY STONES LARGER THAN TWO INCH DIAMETER.
81. ALL PENETRATION OF EXISTING STRUCTURES SHALL BE BY THE MECHANICAL ROTARY CORE BORING METHOD.
82. ALL CONCRETE AND REBAR PENETRATED OR DISTURBED SHALL BE COATED WITH TWO COATS OF EPOXY.
83. CONTRACTOR IS RESPONSIBLE FOR ALL UNSUITABLE MATERIAL REMOVAL WITHIN PROJECT LIMITS. EXCAVATION, EMBANKMENT, INCLUDING UTILIZATION, AND UNSUITABLE MATERIAL REMOVAL SHALL BE IN ACCORDANCE WITH FDOT DESIGN STANDARDS, LATEST VERSION.
84. WHERE EXCAVATION IS REQUIRED FOR CONSTRUCTION OF SIDEWALK, ALL STUMPS, ROOTS, ETC. SHALL BE REMOVED COMPLETELY FROM THE SIDEWALK AREA. ALL STUMPS WITHIN THE PROJECT LIMITS SHALL BE REMOVED COMPLETELY AND REPLACED WITH COMPACTED BACKFILL BEFORE THE AREA IS FILLED. TREE ROOTS IN AREA OF PROPOSED SIDEWALK, RAMP, OR DRIVEWAY REPLACEMENT SHALL BE GROUND OUT TO A DEPTH OF 6" BELOW BOTTOM OF NEW SIDEWALK OR DRIVEWAY. ALL PRUNED ROOT DEBRIS SHALL BE REMOVED FROM THE SUB-BASE MATERIAL PRIOR TO POURING CONCRETE, ASPHALT, OR APPLICATION OF OTHER SPECIFIED MATERIALS. THIS WORK SHALL BE INCLUDED IN AND PAID FOR UNDER THE PAY ITEM FOR CLEARING AND GRUBBING.

- 85. ALL STUMPS, ROOTS, AND OTHER DEBRIS PROJECTING THROUGH OR APPEARING ON THE SURFACE OF THE GROUND SHALL BE REMOVED TO A DEPTH OF 1-FOOT BELOW THE COMPLETED SURFACE. THIS WORK SHALL BE INCLUDED IN AND PAID FOR UNDER THE PAY ITEM FOR CLEARING AND GRUBBING.
86. ALL MATERIALS NOT CLAIMED BY THE COUNTY SHALL BECOME PROPERTY OF THE CONTRACTOR, AND SHALL BE DISPOSED OF BY THE CONTRACTOR IN AREAS PROVIDED BY THE CONTRACTOR. THIS WORK SHALL BE INCLUDED IN AND PAID UNDER THE PAY ITEM CLEARING AND GRUBBING.
87. THE CONTRACTOR SHALL PROVIDE ALL SHEETING, SHORING, AND BRACING REQUIRED TO PROTECT ADJACENT STRUCTURES OR TO MINIMIZE TRENCH WIDTH. WHERE A SEPARATE PAY ITEM IS NOT PROVIDED, THE COST OF ALL SHEETING, SHORING, AND BRACING REQUIRED SHALL BE INCLUDED IN THE CONTRACT PRICE FOR THE ITEM OF WORK FOR WHICH SHEETING, SHORING, AND BRACING IS REQUIRED.
88. THE CONTRACTOR SHALL DISTURB NO MORE GROUND THAN WHAT IS NECESSARY FOR CONSTRUCTION. NO OPEN EXCAVATED TRENCH, OR OTHER UNSAFE CONDITION WILL BE LEFT OVERNIGHT. ALL WORK SITES WILL BE COMPLETELY RESTORED WITHIN SEVEN (7) CALENDAR DAYS OF THE CONCRETE POUR FOR SIDEWALK. THE INTENT OF THIS PROVISION IS TO "SAFE-UP" THE PROJECT SITE AS WORK PROGRESSES, AND SHALL INCLUDE REMOVING FORMS, FILLING HOLES, GRADING, AND REMOVAL OF DEBRIS.
89. ALL EXISTING SIGNS WITHIN THE PROJECT LIMITS SHALL REMAIN UNLESS OTHERWISE NOTED IN THE PLANS, OR AS DIRECTED BY THE ENGINEER.
90. ANY EXISTING SIGN TO REMAIN THAT IS DISTURBED OR RELOCATED DURING CONSTRUCTION SHALL BE RESET TO CURRENT STANDARDS FOR HEIGHT, OFFSET, AND METHOD OF INSTALLATION AT NO ADDITIONAL COST TO THE COUNTY.
91. ALL EXISTING SWALES NOT DESIGNATED FOR RECONSTRUCTION SHALL BE REGRADED TO PROMOTE POSITIVE DRAINAGE AND MATCH PROPOSED CENTERLINE SWALE ELEVATION AND ALIGNMENT.
92. ALL STORM DRAINS AND STRUCTURES TO REMAIN SHALL BE CLEANED OF DEBRIS, DIRT, VEGETATION AND OTHER MATERIAL. STORM SEWER INLETS SHALL BE MODIFIED (RAISED/LOWERED) TO MATCH PROPOSED FINISHED GRADE.
93. ALL EXISTING FENCES DISTURBED DURING CONSTRUCTION SHALL BE REPAIRED OR REPLACED AND REINSTALLED BY THE CONTRACTOR AT NO ADDITIONAL COST. (EXISTING FENCES WITHIN R/W TAKING LIMITS SHALL BE RECONSTRUCTED TO THE NEW R/W LINE AND ARE TO BE REIMBURSED UNDER THE MISCELLANEOUS BID ITEM).
94. ALL EXISTING TREES LOCATED WITHIN R/W LIMITS SHALL REMAIN UNLESS OTHERWISE NOTED.
95. ALL EXISTING STORM DRAINAGE STRUCTURES SHALL BE REMOVED UNLESS OTHERWISE NOTED.
96. ALL EXISTING BUILDINGS SHALL REMAIN UNLESS OTHERWISE NOTED.
97. REMOVE AND REPLACE BASE AND SUB-BASE ACCORDING TO FDOT STANDARDS.
98. EXISTING WHEEL STOPS REMOVED DURING CONSTRUCTION SHALL BE SORTED AND THE WHEEL STOPS THAT ARE SIGNIFICANTLY DAMAGED OR OTHERWISE UNSUITABLE FOR REUSE SHALL BE PROPERLY DISPOSED OF. WHEEL STOPS TO BE REUSED SHALL BE STOCKPILED ONSITE.

CONTACTS

- MANATEE COUNTY PUBLIC WORKS DEPT. INFRASTRUCTURE ENGINEERING SCOTT MAY, P.E. 1022 26TH AVENUE EAST BRADENTON, FL 34208 (941) 708-7450 EXT. 7650 FAX: (941) 708-7431
TECO/PEOPLES GAS CO. DAN SHANAHAN 8261 VICO COURT SARASOTA, FL 34240 (941) 342-4030 FAX: (941) 342-4011 EMERGENCY: 1-877-832-6911 djshanahan@tecoenergy.com
SUNSHINE STATE ONE CALL OF FLORIDA 1-(800) 432-4770
FRONTIER COMMUNICATIONS DENISE HUTTON 1701 RINGLING BLVD. SARASOTA, FL 34236 (941) 330-9203 denise.hutton@frc.com
FLORIDA POWER & LIGHT DISTRIBUTION GREG COKER 1253 12TH AVENUE EAST PALMETTO, FL 34221 (941) 723-4430 FAX: (941) 723-4444 EMERGENCY: 1-800-4-OUTAGE Greg_Coker@fpl.com
FLORIDA POWER & LIGHT TRANSMISSION GARY PETERSON 15430 ENDEAVOR DRIVE JUPITER, FL 33478 (561) 904-3665 Gary.n.peterson@fpl.com
MANATEE COUNTY HEALTH DEPT. HANS C. ROESE 410 6th AVENUE EAST BRADENTON, FL 34208 (941) 748-0747 EXT. 1342 FAX: (941) 750-9364 hans_roese@doh.state.fl.us
SOUTHWEST FLORIDA WATER MANAGEMENT DISTRICT SARASOTA SERVICE OFFICE 6750 FRUITVILLE ROAD SARASOTA, FL 34240 (941) 377-3722 FAX: (941) 373-7660
FLORIDA GAS TRANSMISSION SAFETY HARBOR TEAM 7804 ANDERSON RD. TAMPA, FL 33634 CHRIS LEE (813) 466-3327 CELL : (727) 639-7512 christopher.lee@sug.com
CHARTER COMMUNICATIONS JAMES CRUZAN 5413 E. STATE ROAD 64 BRADENTON, FL. 34208-5535 (941) 748-3816 EXT. 24051 james.cruzan@charter.com
DEPARTMENT OF ENVIRONMENTAL PROTECTION ED WATSON 13051 N. TELECOM PKWY 6750 FRUITVILLE ROAD TEMPLE TERRACE, FL 33637 PHONE: (813) 470-5875 FAX: (813) 470-5993
PEACE RIVER ELECTRIC COOPERATIVE, INC. P.O. BOX 1310 WACHULA, FL 33873 ERIN RUHTZ (863) 767-4660 erin.ruhtz@preco.coop
MANATEE COUNTY PUBLIC WORKS DEPT. TRAFFIC ENGINEERING MUKUNDA GOPALAKRISNA, P.E. (941) 749-3500 EXT. 7813 FAX: (941) 749-3571

PHASE 1 NOTES

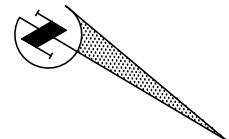
- 1. UNDERDRAIN PIPE THAT EXTENDS PAST PHASE LIMIT IS TO BE CAPPED PRIOR TO CLEANOUT. COST IS PAID AS PART OF THE UNDERDRAIN PIPE

LEGEND
EXISTING: BENCH MARK, CONCRETE MONUMENT, IRON PIPE, IRON ROD, HUB, NAIL & DISK, ELEVATION, PARCEL ID NO., PARCEL ID NO., LOT NO., GUY WIRE, POWER POLE, LIGHT POLE, MAIL BOX, SIGN, REFLECTOR, SPRINKLER, GAS MARKER, BACKFLOW PREVENTER, BLOW OFF VALVE, FIRE HYDRANT, WATER VALVE, AIR RELEASE VALVE, WATER METER, SANITARY SEWER MANHOLE, SANITARY SEWER CLEAN OUT, SOIL BORING LOCATION, TELEPHONE SERVICE BOX, FLOW DIRECTION, GRATE INLET, MITERED END SECTION.
PROPOSED: POTABLE WATER, RECLAIMED WATER, SANITARY SEWER, STORM DRAIN, GAS LINE, FRONTIER, BRIGHT HOUSE NETWORK, OVERHEAD ELECTRIC, BURIED ELECTRIC, OVERHEAD VERIZON, BURIED VERIZON, VERIZON, BURIED UTILITY, OVERHEAD UTILITY, RAIL ROAD TRACKS, EDGE OF CONCRETE, EDGE OF ROAD, TOE OF SLOPE, TOP OF BANK, PROPERTY LINE, RIGHT OF WAY.
ABBREVIATIONS: R/W RIGHT OF WAY, CONC CONCRETE, ASPH ASPHALT, DRWY DRIVEWAY, SWK SIDEWALK, EP EDGE OF PAVEMENT, BOC BACK OF CURB, CCCL COSTAL CONSTRUCTION CONTROL LINE, MWL MEAN HIGH WATER LINE.
STORM MANHOLE, DBI TYPE D, CLEAN OUT, Q OF SWALE.

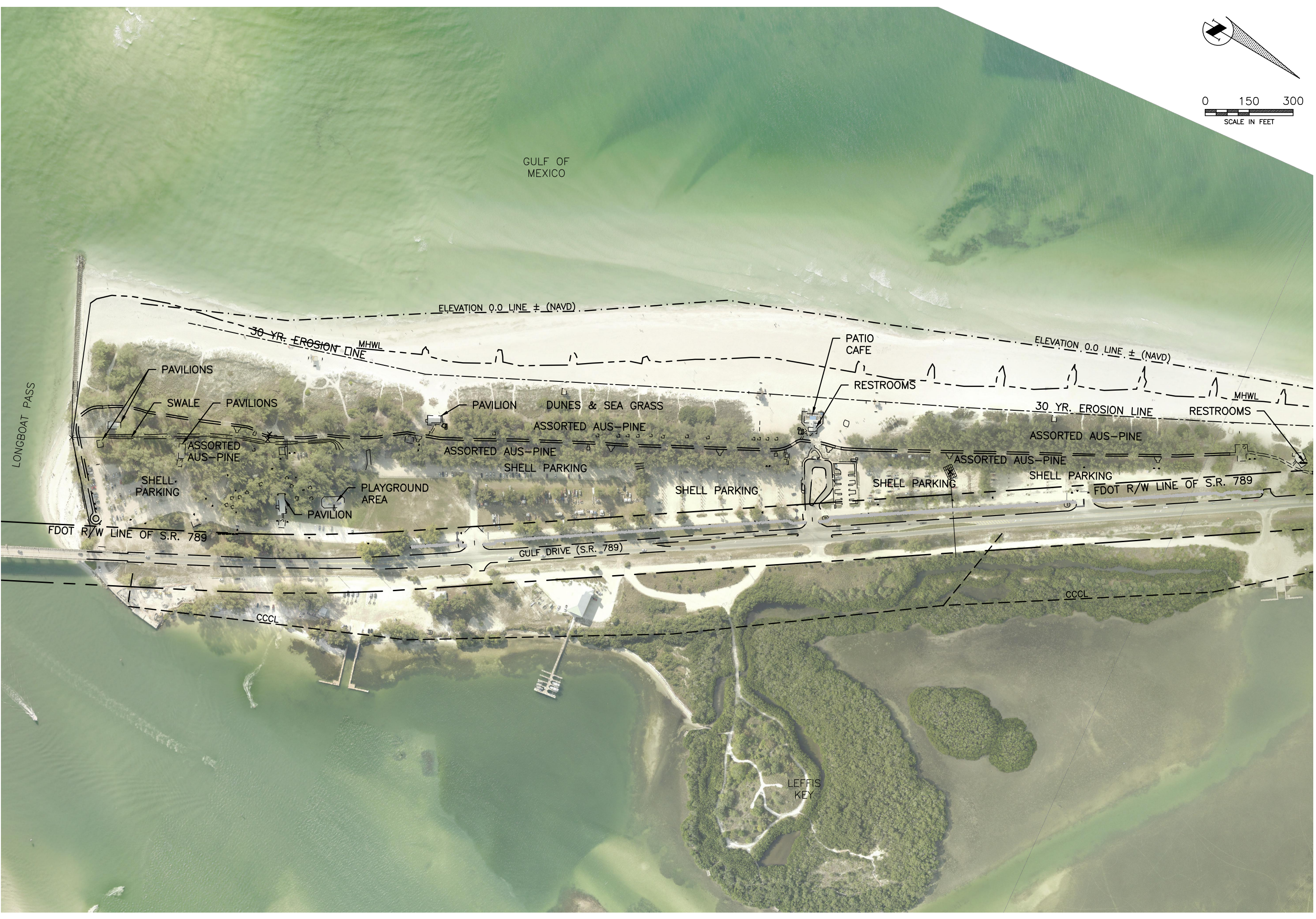
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PUBLIC WORKS DEPARTMENT
ENGINEERING SERVICES
1022 26th Avenue East, Bradenton, FL 34208



0 150 300
SCALE IN FEET



**COQUINA BEACH DRAINAGE
IMPROVEMENTS
MANATEE COUNTY
EXISTING AERIAL SITE PLAN**

NO.	REVISION DESCRIPTION	BY	DATE

PROJECT #	465-6005719
SURVEY #	6982
SEC./TWN./RGE	10/35S/16E
SCALE	1"=300'
	BY DATE
SURVEYED	ZNS 07/16/04
DESIGNED	MS 08/2015
DRAWN	KR 08/2015
CHECKED	MS 08/2015

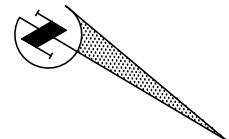
MICHAEL L. STURM
FLORIDA P.E. # 46005

Signature & Date

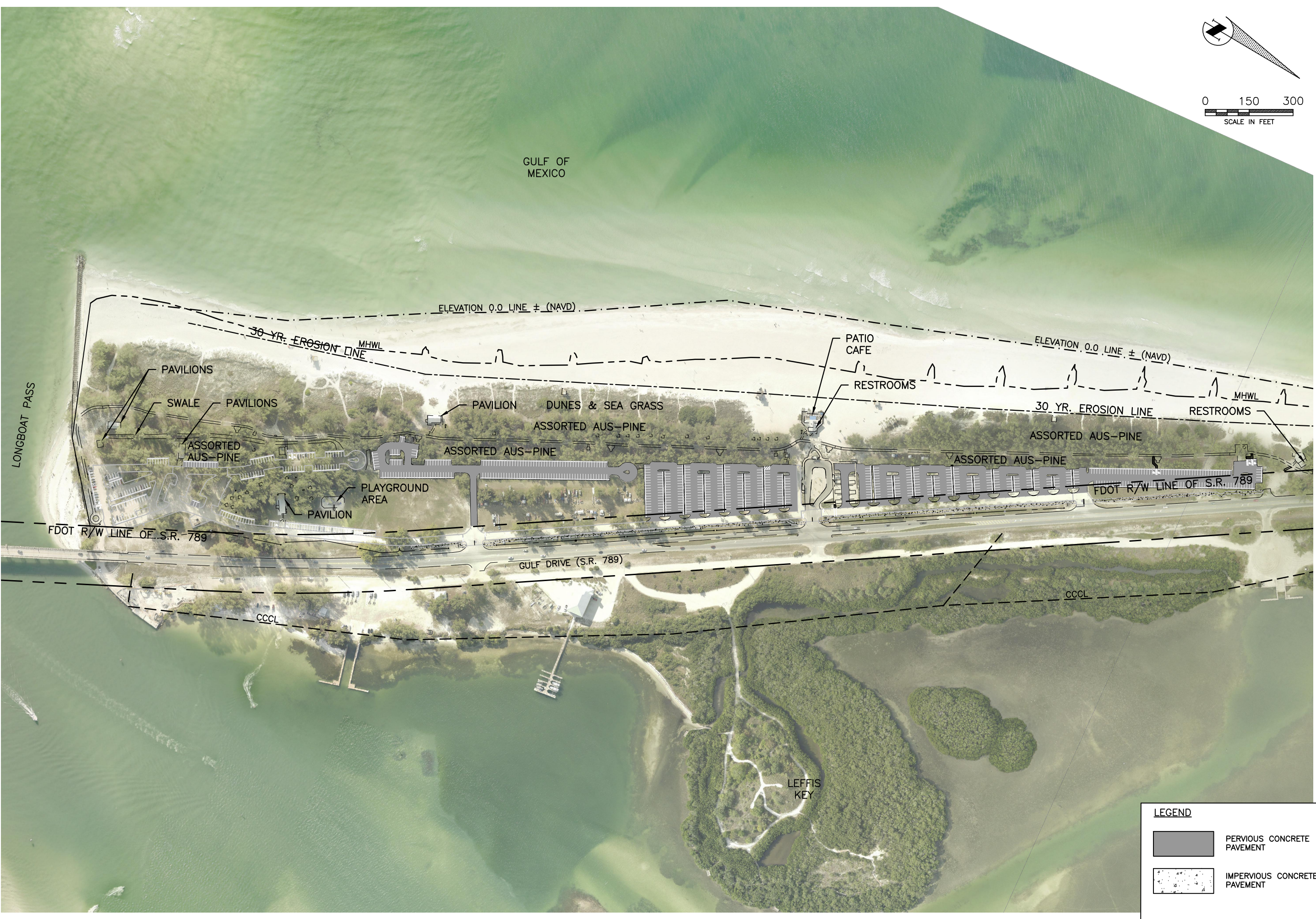
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PUBLIC WORKS DEPARTMENT
ENGINEERING SERVICES
1022 26th Avenue East, Bradenton, FL 34208



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SCALE IN FEET



**COQUINA BEACH DRAINAGE
IMPROVEMENTS
MANATEE COUNTY
PROPOSED AERIAL SITE PLAN**

NO.	REVISION DESCRIPTION	BY	DATE

PROJECT #	465-6005719
SURVEY #	6982
SEC./TWN./RGE	10/35S/16E
SCALE	1"=300'
	BY DATE
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DESIGNED	MS 08/2015
DRAWN	KR 08/2015
CHECKED	MS 08/2015

MICHAEL L. STURM
FLORIDA P.E. # 46005

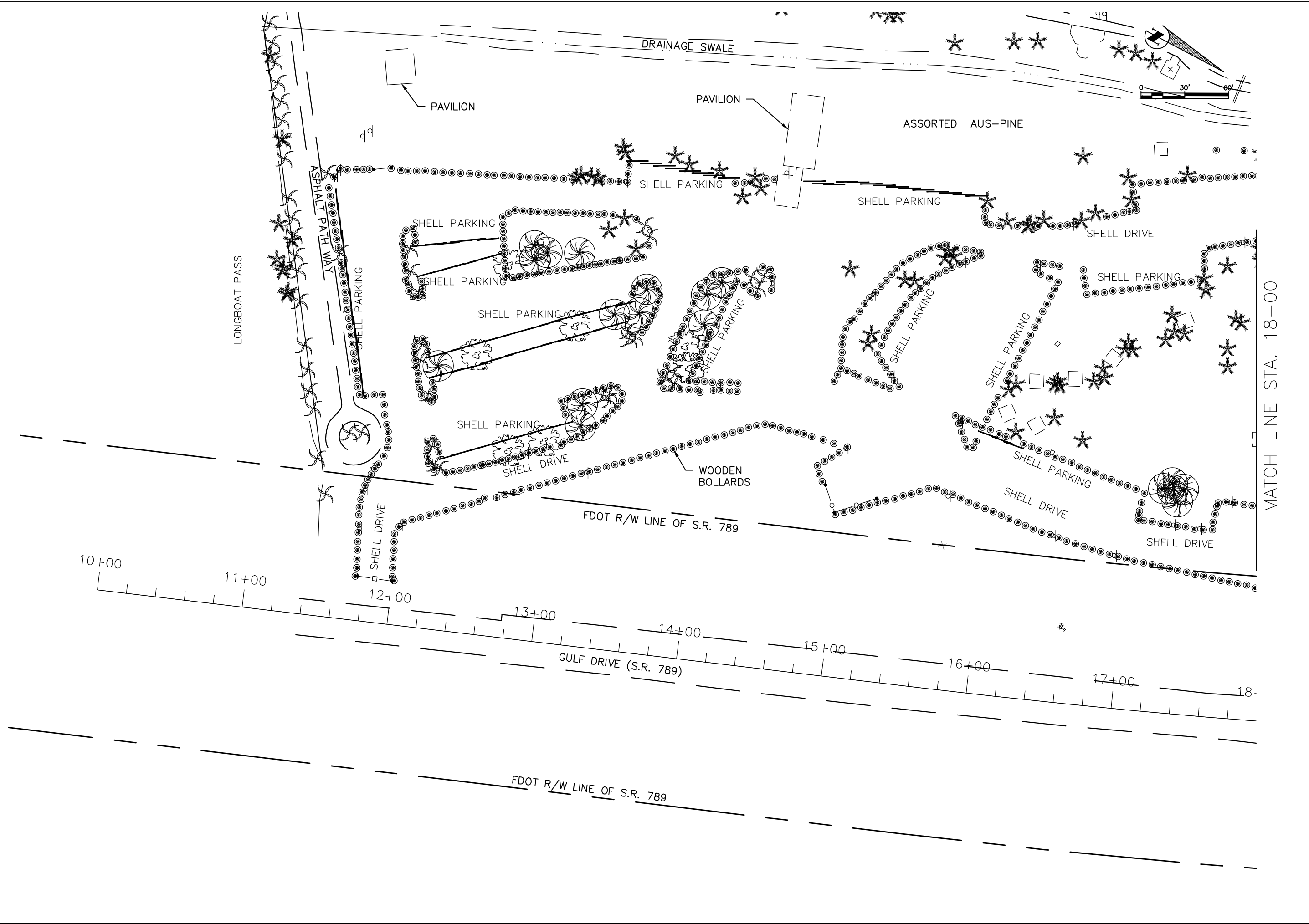
Signature & Date
SHEET 4A

LEGEND

- PERVIOUS CONCRETE PAVEMENT
- IMPERVIOUS CONCRETE PAVEMENT

I:\Highway Engineering\PROJ\MISC\Coquina Beach Parking Lot\DWG\Phase 2\CB PR AERIAL-2.dwg AA PR AERIAL 7/21/2020 9:07 AM Ken Lusher, 1:1, ANSI full sheet B (11.00 x 17.00 inches)

**COQUINA BEACH DRAINAGE
IMPROVEMENTS
MANATEE COUNTY
EXISTING CONDITIONS**



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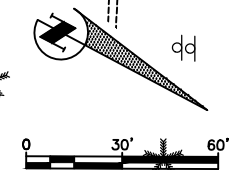
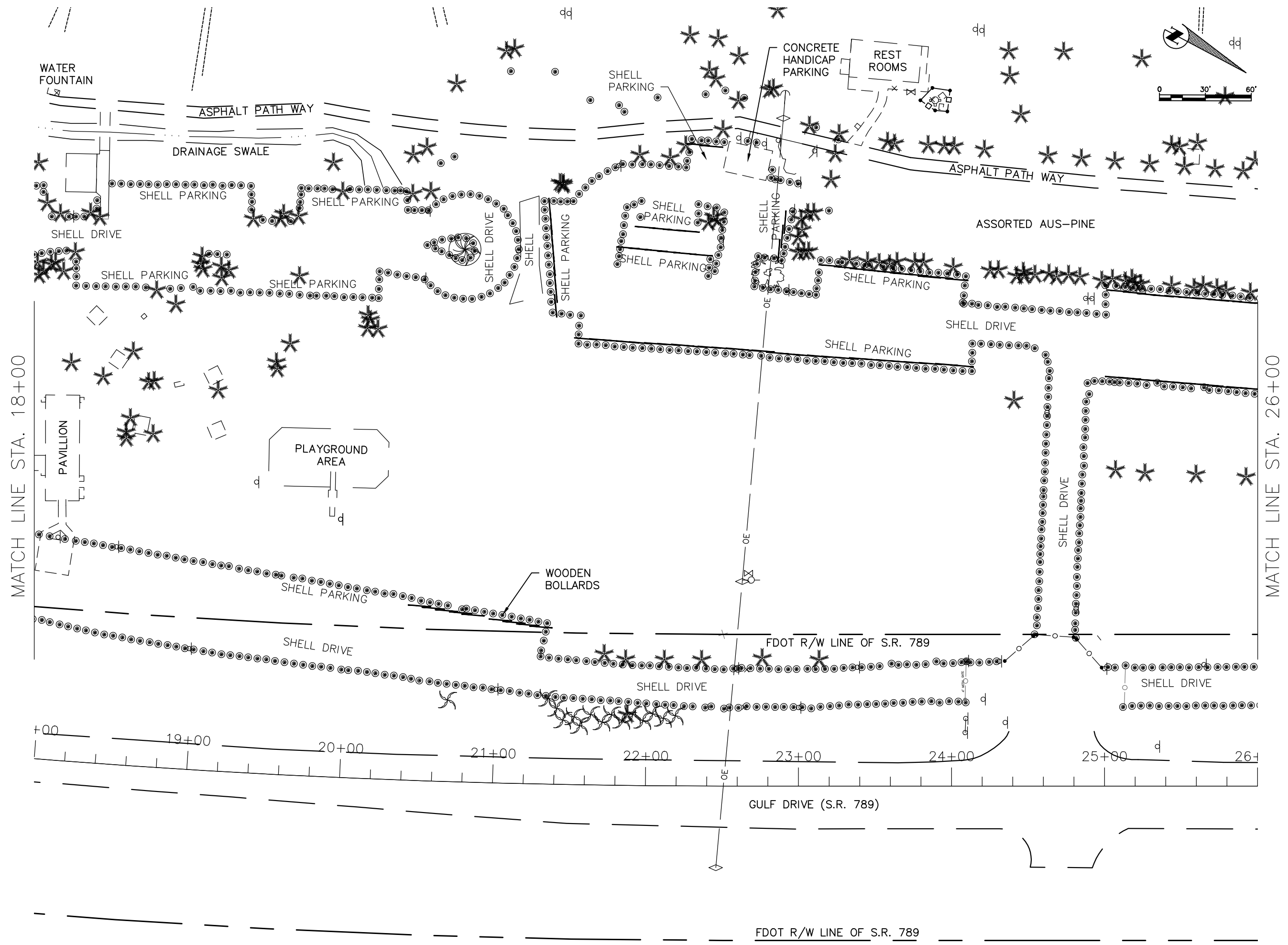
NO.	REVISION DESCRIPTION	BY	DATE

PROJECT #	465-6005719
SURVEY #	6982
SEC./TWN./RGE	10/35S/18E
SCALE	1"=60'
	BY DATE
SURVEYED	ZNS 08/05/15
DESIGNED	MS/ES 08/2015
DRAWN	TMF 08/2016
CHECKED	MS/ES 8/2016

MICHAEL L. STURM
FLORIDA P.E. # 46005

Signature & Date

**COQUINA BEACH DRAINAGE
IMPROVEMENTS
MANATEE COUNTY
EXISTING CONDITIONS**



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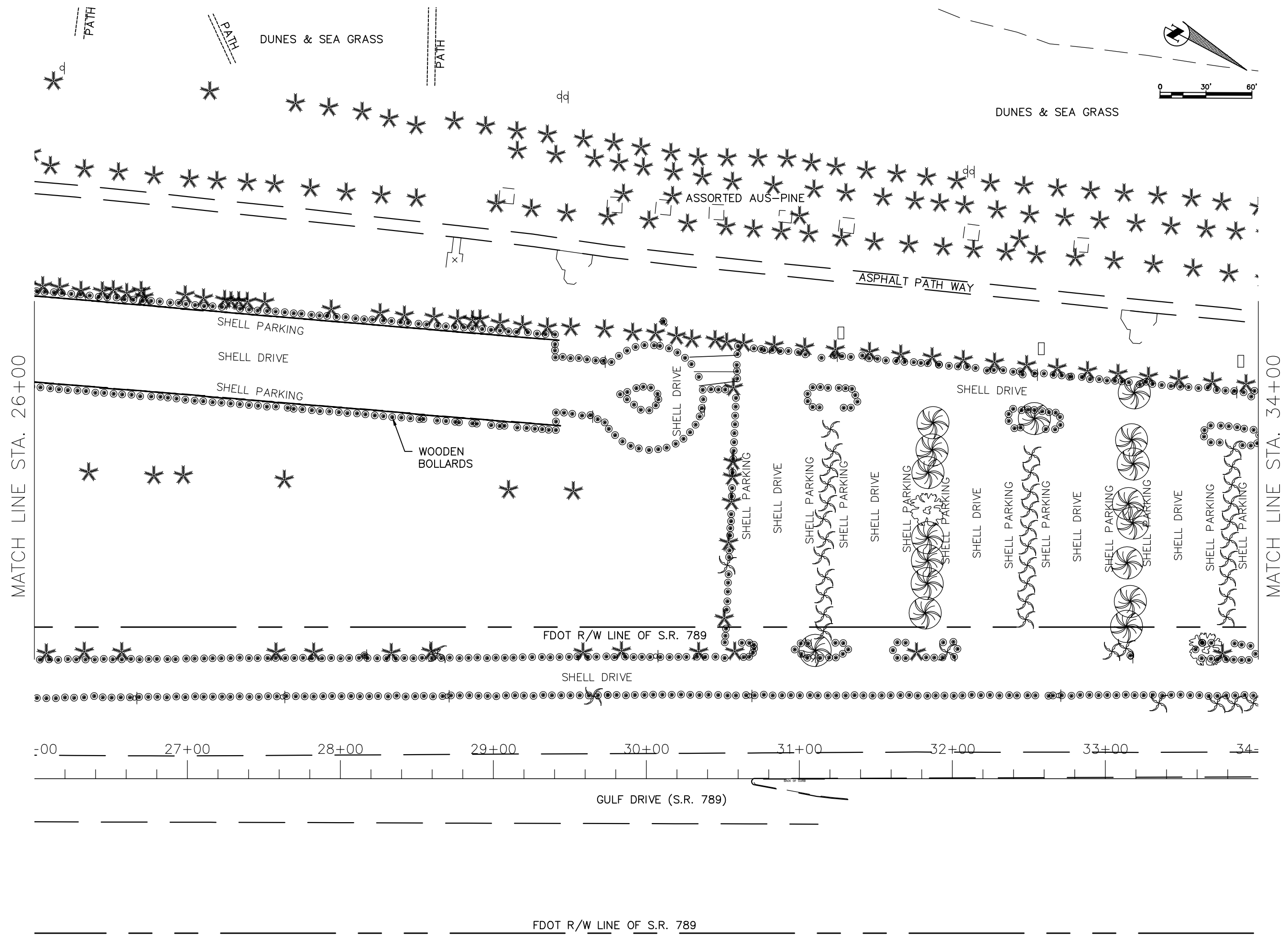
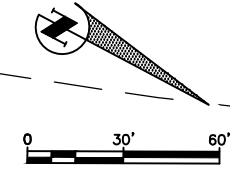
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DRAWN	TMF 08/2016
CHECKED	MS/ES 8/2016

MICHAEL L. STURM
FLORIDA P.E. # 46005

Signature & Date

**COQUINA BEACH DRAINAGE
IMPROVEMENTS
MANATEE COUNTY
EXISTING CONDITIONS**



1:1 Highway Engineering PRO: MESA Coquina Beach Partion LA VWD Phase 2 V8 EX CON-2.dwg 7 EX CON-7/21/2020 9:07 AM Ken Lasher, 1:1 ANS full sheet B (11.00 x 17.00 inches)

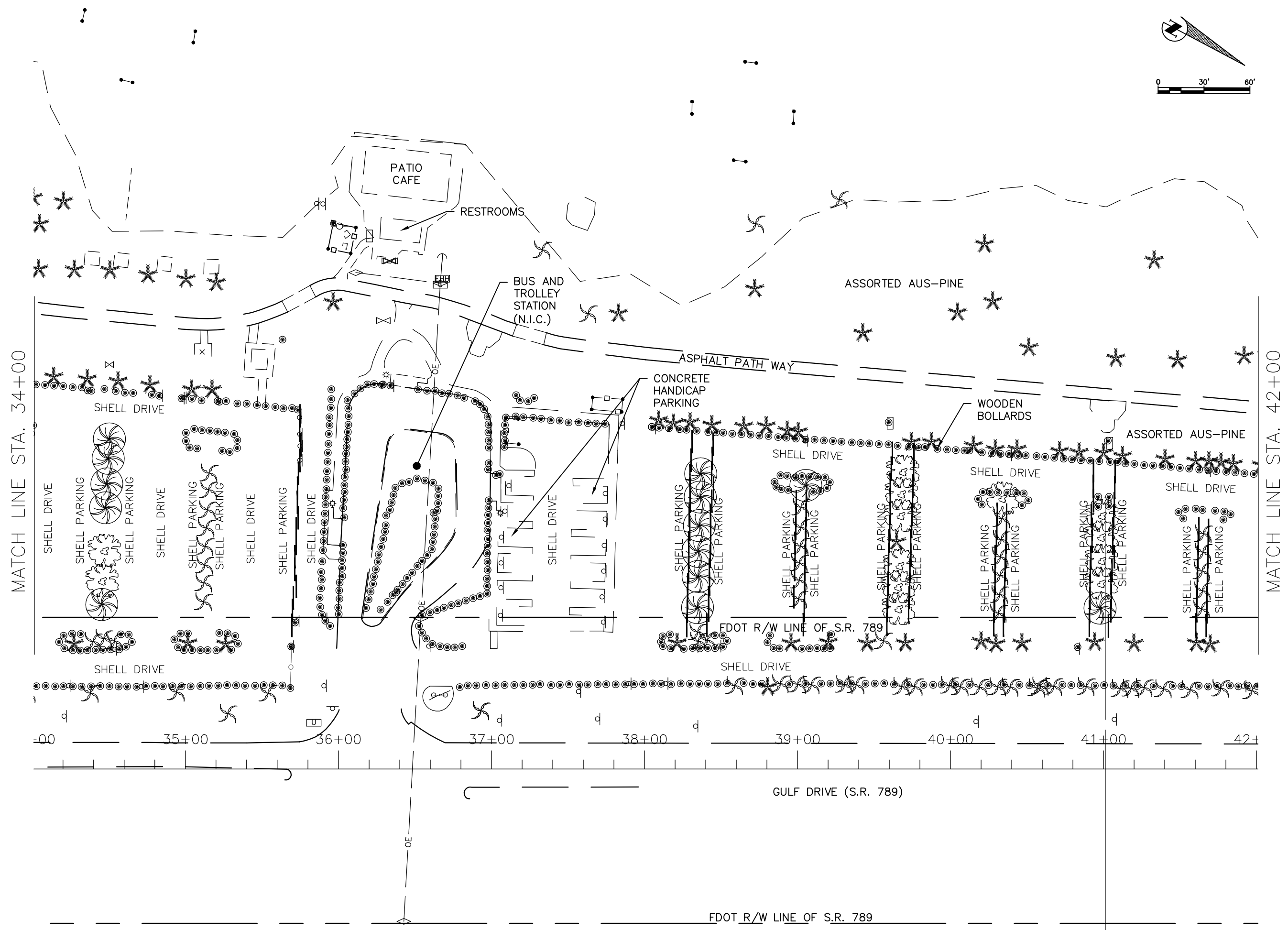
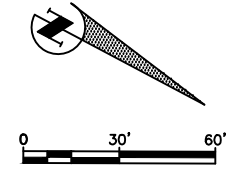
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MICHAEL L. STURM
FLORIDA P.E. # 46005

Signature & Date

SHEET 7



**COQUINA BEACH DRAINAGE
IMPROVEMENTS
MANATEE COUNTY
EXISTING CONDITIONS**

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DRAWN	TMF 08/2016
CHECKED	MS/ES 8/2016

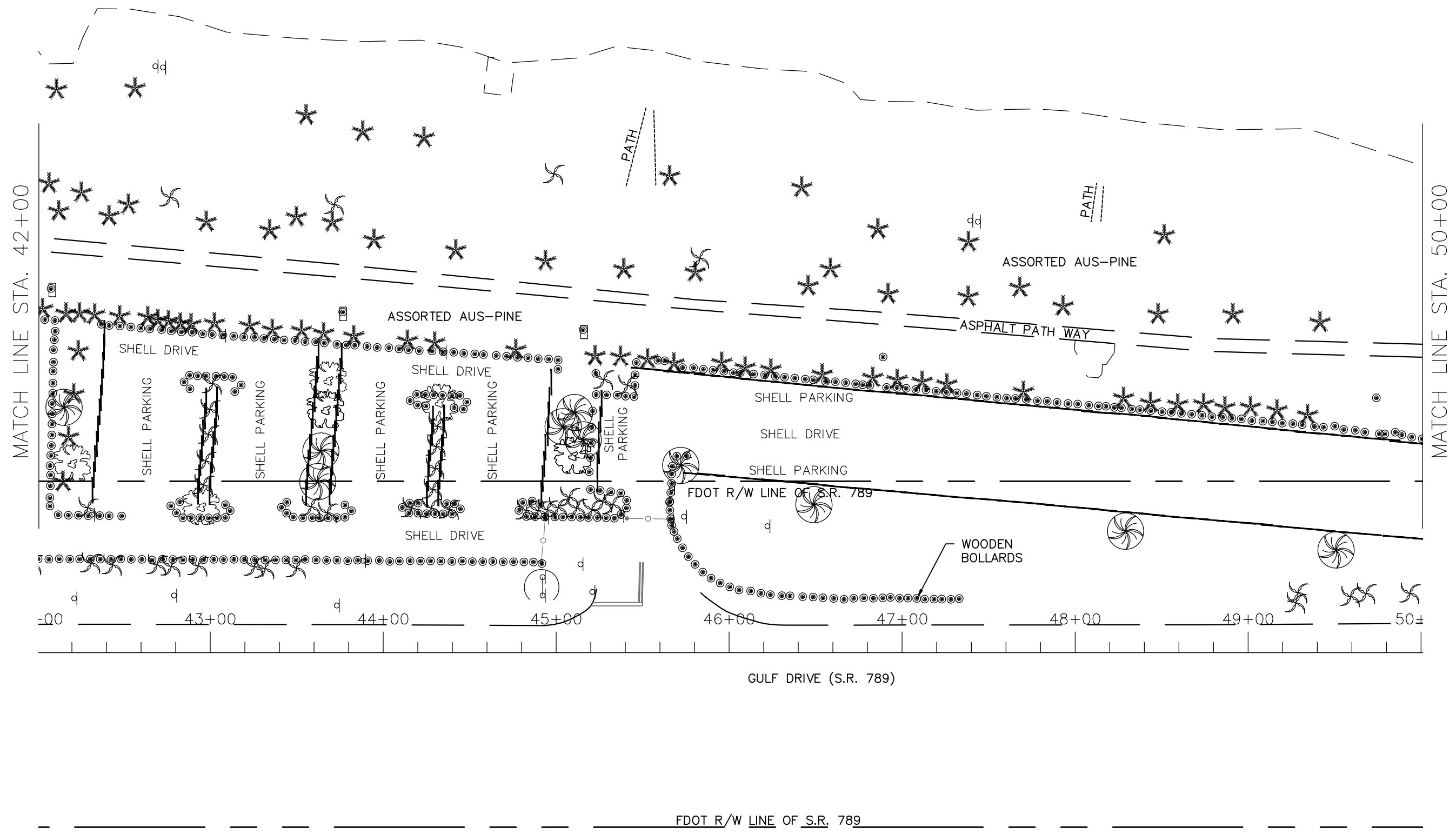
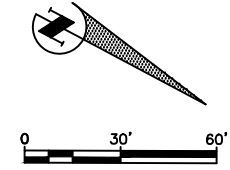
MICHAEL L. STURM
FLORIDA P.E. # 46005

Signature & Date
SHEET 8

I:\HA Highway Engineering\PROJ\MSA\Coquina Beach\Partials\CA\DWG\Phase 2\08 EX CON-2.dwg, 8 EX CON-7/21/2020 9:07 AM Ken Lamber, 1:1 ANS) full sheet B (11.00 x 17.00 inches)



PUBLIC WORKS DEPARTMENT
ENGINEERING SERVICES
1022 26th Avenue East, Bradenton, FL 34208



**COQUINA BEACH DRAINAGE
IMPROVEMENTS
MANATEE COUNTY
EXISTING CONDITIONS**

NO.	REVISION DESCRIPTION	BY	DATE

PROJECT #	465-6005719
SURVEY #	6982
SEC./TWN./RGE	10/35S/18E
SCALE	1"=60'
SURVEYED	ZNS 08/05/15
DESIGNED	MS/ES 08/2015
DRAWN	TMF 08/2016
CHECKED	MS/ES 8/2016

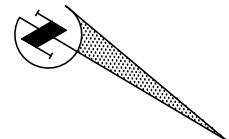
MICHAEL L. STURM
FLORIDA P.E. # 46005

Signature & Date

I:\HA Highway Engineering\PROJ\MSA\Coquina Beach\Partials\CA\DWG\Phase 2\08 EX CON-2.dwg 9 EX CON 7/21/2020 9:05 AM Ken Lusher, L1, ANSI full bleed B (11.00 x 17.00 inches)

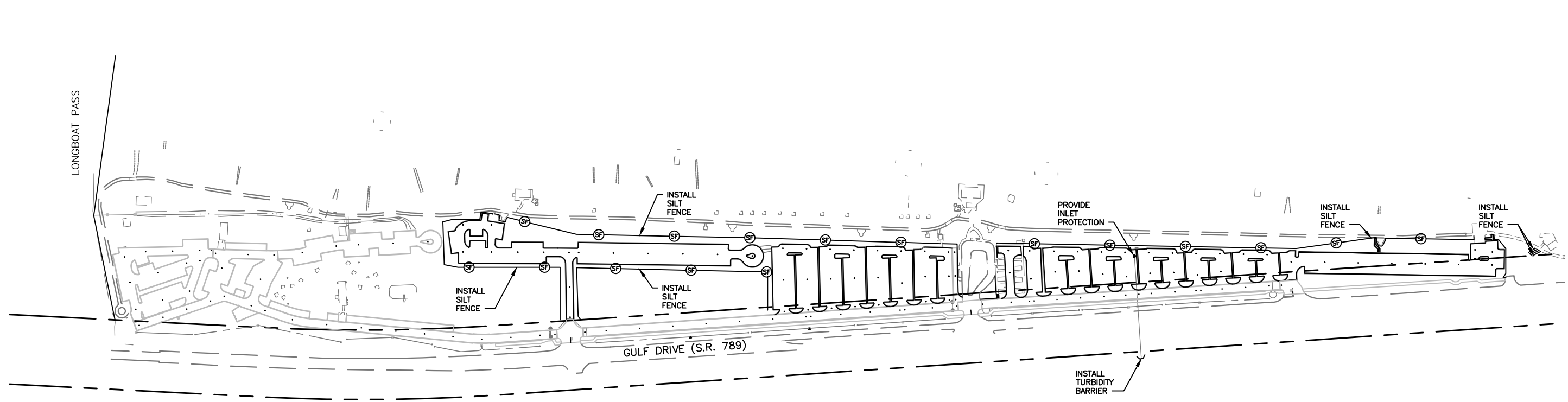


PUBLIC WORKS DEPARTMENT
ENGINEERING SERVICES
1022 26th Avenue East, Bradenton, FL 34208



0 150 300
SCALE IN FEET

**COQUINA BEACH DRAINAGE
IMPROVEMENTS
MANATEE COUNTY
BEST MANAGEMENT PRACTICES PLAN**



NO.	REVISION DESCRIPTION	BY	DATE

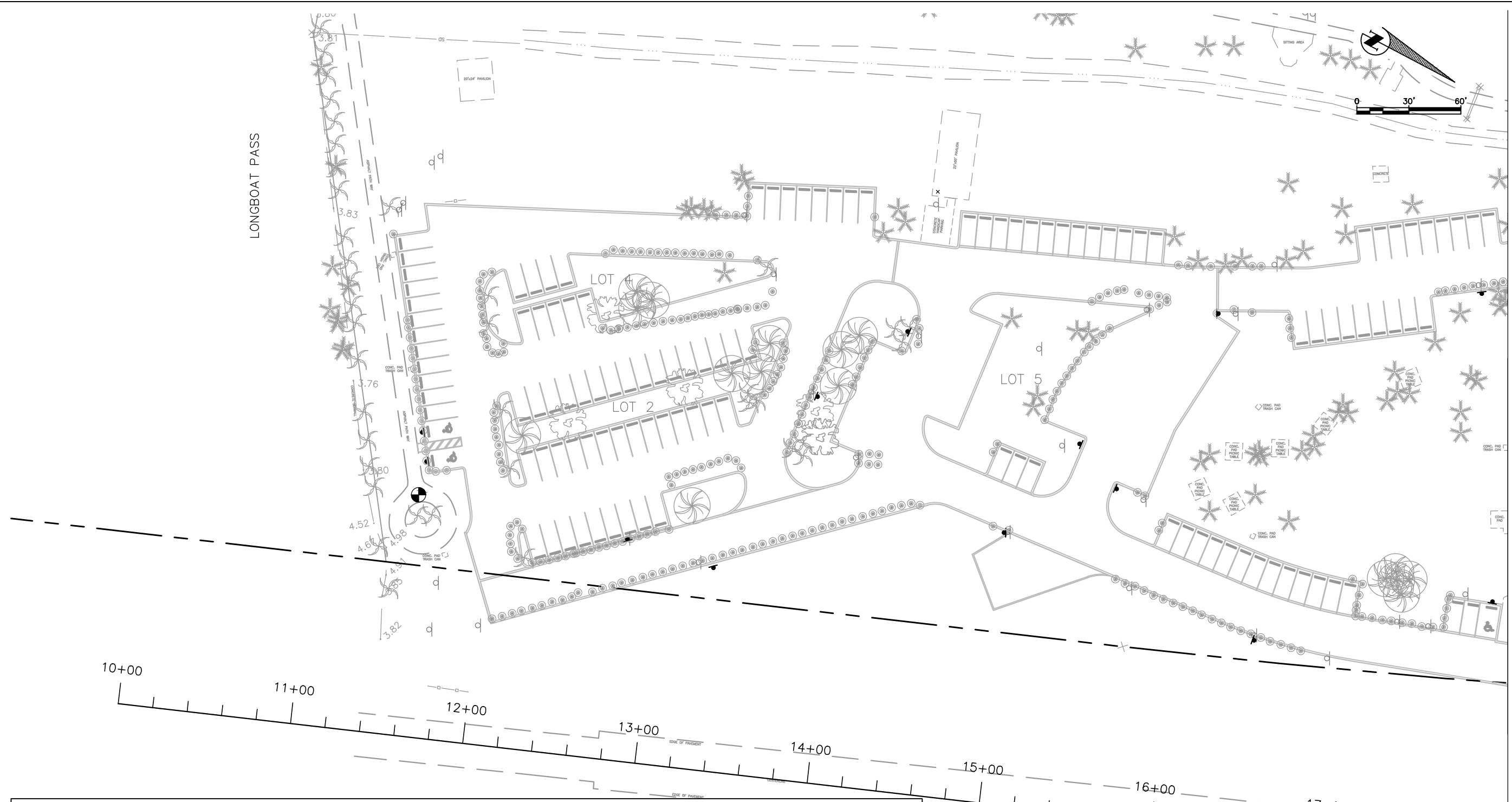
PROJECT #	465-6005719
SURVEY #	6982
SEC./TWN./RGE	10/35S/16E
SCALE	1"=300'
	BY DATE
SURVEYED	ZNS 07/16/04
DESIGNED	MS 08/2015
DRAWN	KR 08/2015
CHECKED	MS 08/2015

MICHAEL L. STURM
FLORIDA P.E. # 46005

Signature & Date
SHEET 11

H:\Highway Engineering\PROJ\MISC\Coquina Beach Parking Lot\DWG\Phase 2\BMP & DETAILS-2.dwg, 11 BMP, 300 SCALE, 7/21/2020 9:08 AM Ken Lecher, 1:1, ANSI full bleed B (11.00 x 17.00 inches)

**COQUINA BEACH DRAINAGE
IMPROVEMENTS
MANATEE COUNTY
GEOMETRY PLAN**



MATCH LINE STA. 18+00

- NOTES:**
- COORDINATES ARE BASED ON FLORIDA STATE PLANE COORDINATE SYSTEM (WEST ZONE) NAD 83/2011.
 - ALL DIMENSIONS ON THIS SHEET ARE FROM FACE OF CURB.
 - ALL RADII ARE 2 FEET UNLESS OTHERWISE NOTED.
 - ALL STRIPING TO BE PAINT UNLESS OTHERWISE NOTED.
 - WOODEN BOLLARDS SHALL BE INSTALLED IN UNPAVED AREAS 2 FEET BEHIND CURB, SPACED 5 FEET ON CENTER, ALONG ALL PROPOSED CURBING TO PREVENT VEHICLES FROM ENTERING UNPAVED AREAS. BOLLARDS SHALL NOT BE INSTALLED IN LOCATIONS THAT BLOCK EXISTING EMERGENCY AND MAINTENANCE VEHICLE ACCESS LOCATIONS. BOLLARDS SHALL MATCH EXISTING BOLLARDS IN DIAMETER AND MATERIAL. SEE DETAIL.
 - ALL THE SIGNING, PAVEMENT MARKINGS AND TRAFFIC CONTROL DEVICES SHALL BE PROVIDED IN ACCORDANCE WITH THE LATEST EDITION OF THE MANUAL ON TRAFFIC CONTROL DEVICES (MUTCH), FDOT DESIGN STANDARDS, AND THE MANATEE COUNTY PUBLIC WORKS DEPARTMENT - HIGHWAY, TRAFFIC, AND STORMWATER STANDARDS.

LEGEND:

R5'	EOP RADIUS	R1-1	R8-3	RV-R
674	COORDINATE POINT	R2-1	R8-3a	RV-L
R1-1	30" STOP SIGN AND 24" WHITE STOP BAR	EV-L	EV-R	
R5-1	REGULATORY SIGN AND TYPE			
9	NUMBER OF PARKING SPACES			
25'	PVM'T/STRIPING DIMENSION			
PR. GATE	PROPOSED 4' METAL GATE AND POLES			
TRIP. BOL.	TRIPLE WOODEN BOLLARDS			

NO.	REVISION DESCRIPTION	BY	DATE

PROJECT #	465-6005719
SURVEY #	6982
SEC./TWN./RGE	10/35S/16E
SCALE	1"=60'
BY	DATE
SURVEYED	ZNS 07/16/04
DESIGNED	MS/ES 08/2015
DRAWN	TMF 03/2016
CHECKED	MS 03/2016

MICHAEL L. STURM
FLORIDA P.E. # 46005

Signature & Date

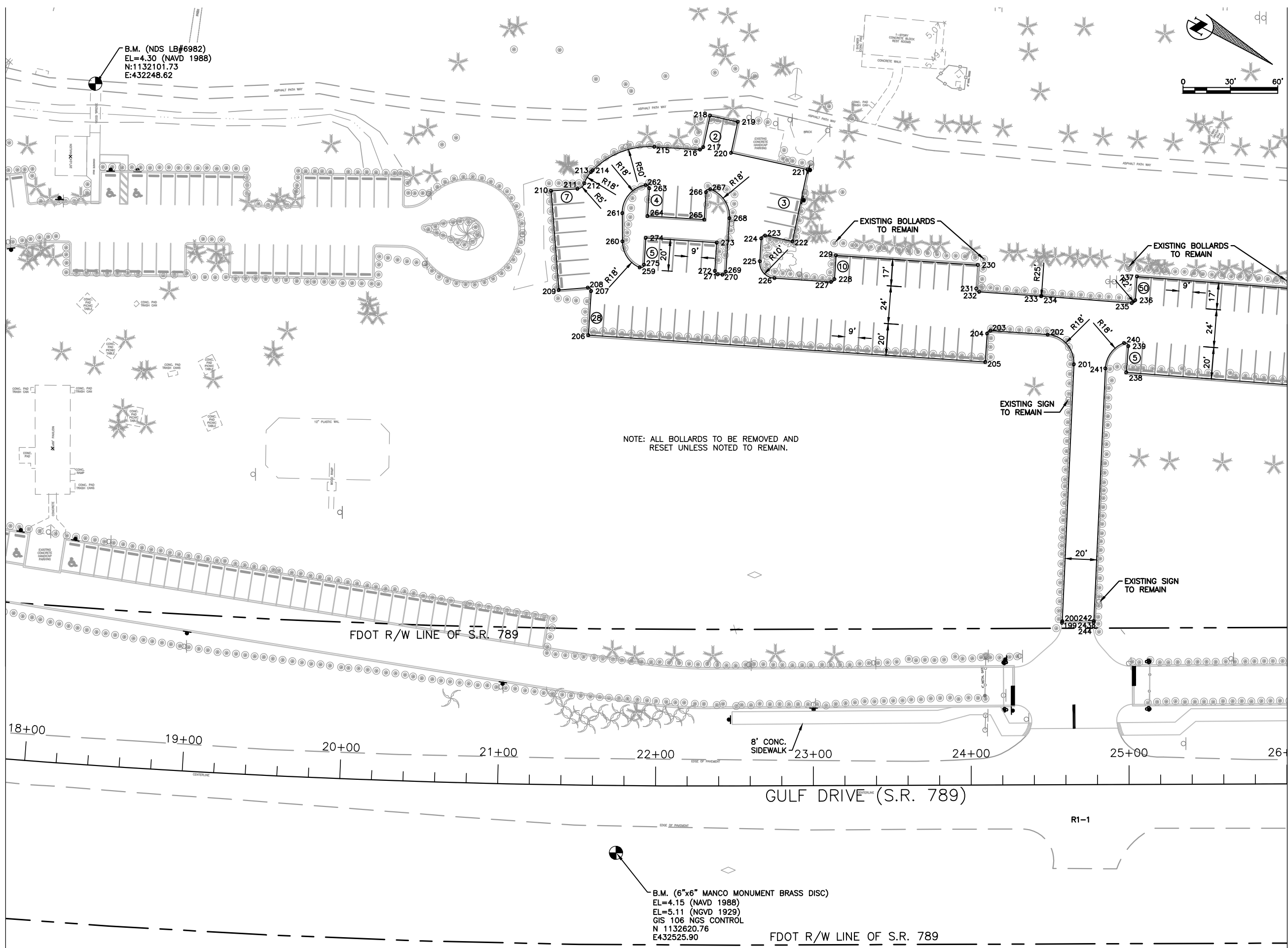
SHEET 13

I:\Highway Engineering\PROJ\MS\Coquina Beach Parking Lot\DWG\Phase 2\CB GEO-2.dwg,13 GEO USE, 11x17 PDF GEO THIS SHEET ONLY, 7/21/2020 9:08 AM Ken Luther, 1:1, ANSI full bleed B (11.00 x 17.00 inches)

**COQUINA BEACH DRAINAGE
IMPROVEMENTS
MANATEE COUNTY
GEOMETRY PLAN**

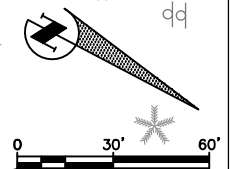
MATCH LINE STA. 18+00

MATCH LINE STA. 26+00



B.M. (NDS LB#6982)
EL=4.30 (NAVD 1988)
N:1132101.73
E:432248.62

B.M. (6"x6" MANCO MONUMENT BRASS DISC)
EL=4.15 (NAVD 1988)
EL=5.11 (NGVD 1929)
GIS 106 NGS CONTROL
N 1132620.76
E432525.90



I:\Highway Engineering\PROJ\MSA\Coquina Beach Parking Lot\DWG\Phase 2\CB_GEO-2.dwg, 14 GEO, 7/21/2020 9:09 AM Ken Cochran, 1:1, ANSI full bleed B (11.00 x 17.00 inches)

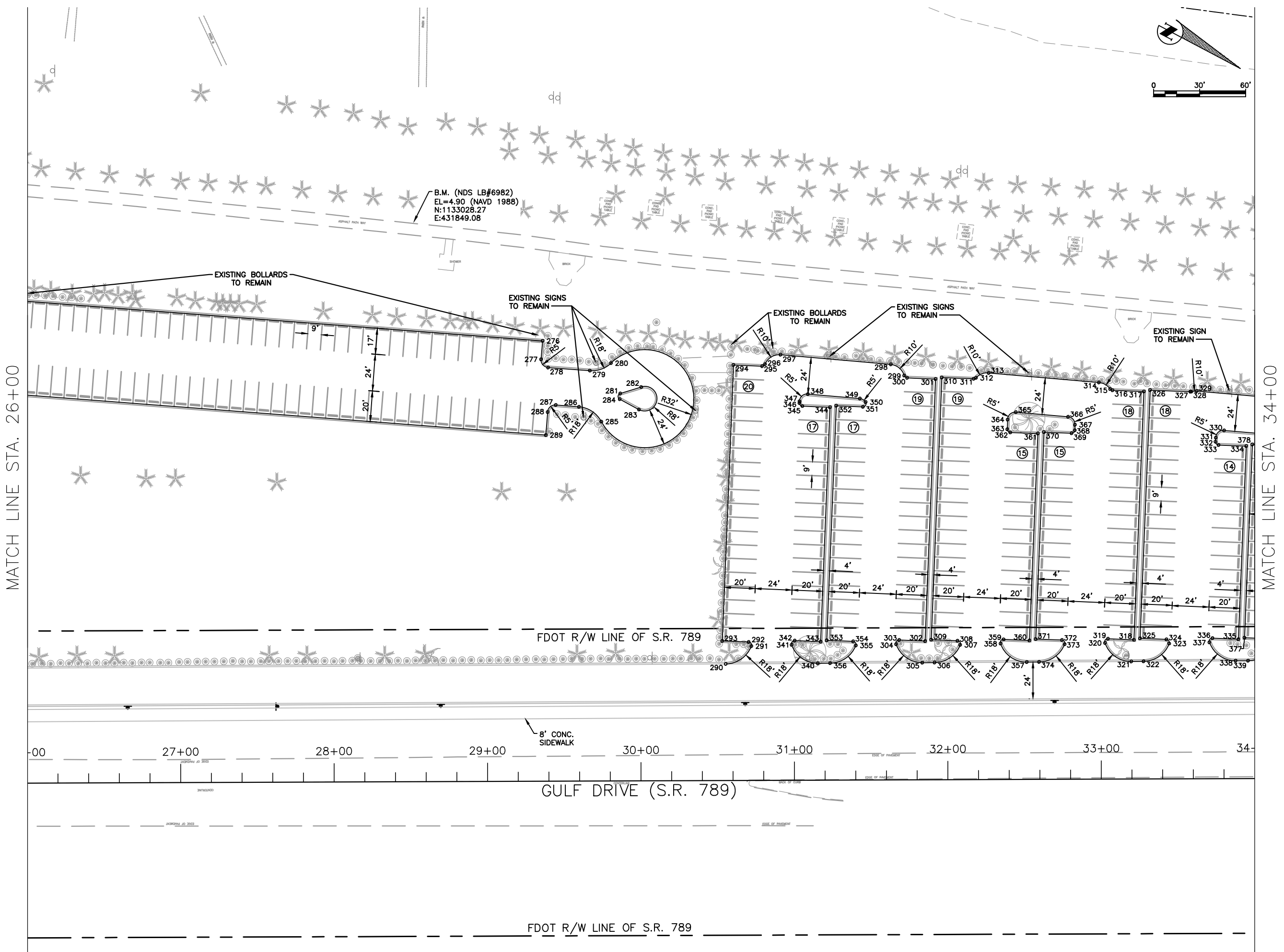
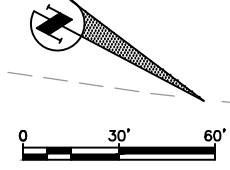
NO.	REVISION DESCRIPTION	BY	DATE

PROJECT #	465-6005719
SURVEY #	6982
SEC./TWN./RGE	10/35S/16E
SCALE	1"=60'
	BY DATE
SURVEYED	ZNS 07/16/04
DESIGNED	MS/ES 08/2015
DRAWN	TMF 03/2016
CHECKED	MS 03/2016

MICHAEL L. STURM
FLORIDA P.E. # 46005

Signature & Date

**COQUINA BEACH DRAINAGE
IMPROVEMENTS
MANATEE COUNTY
GEOMETRY PLAN**



I:\Highway Engineering\PROJ\MISC\Coquina Beach Parking Lot\DWG\Phase 2\CB GEO-2.dwg, 15 GEO, 7/21/2020 9:09 AM Ken Cochran, 1:1, ANSI full bleed B (11.00 x 17.00 inches)

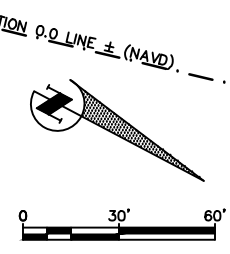
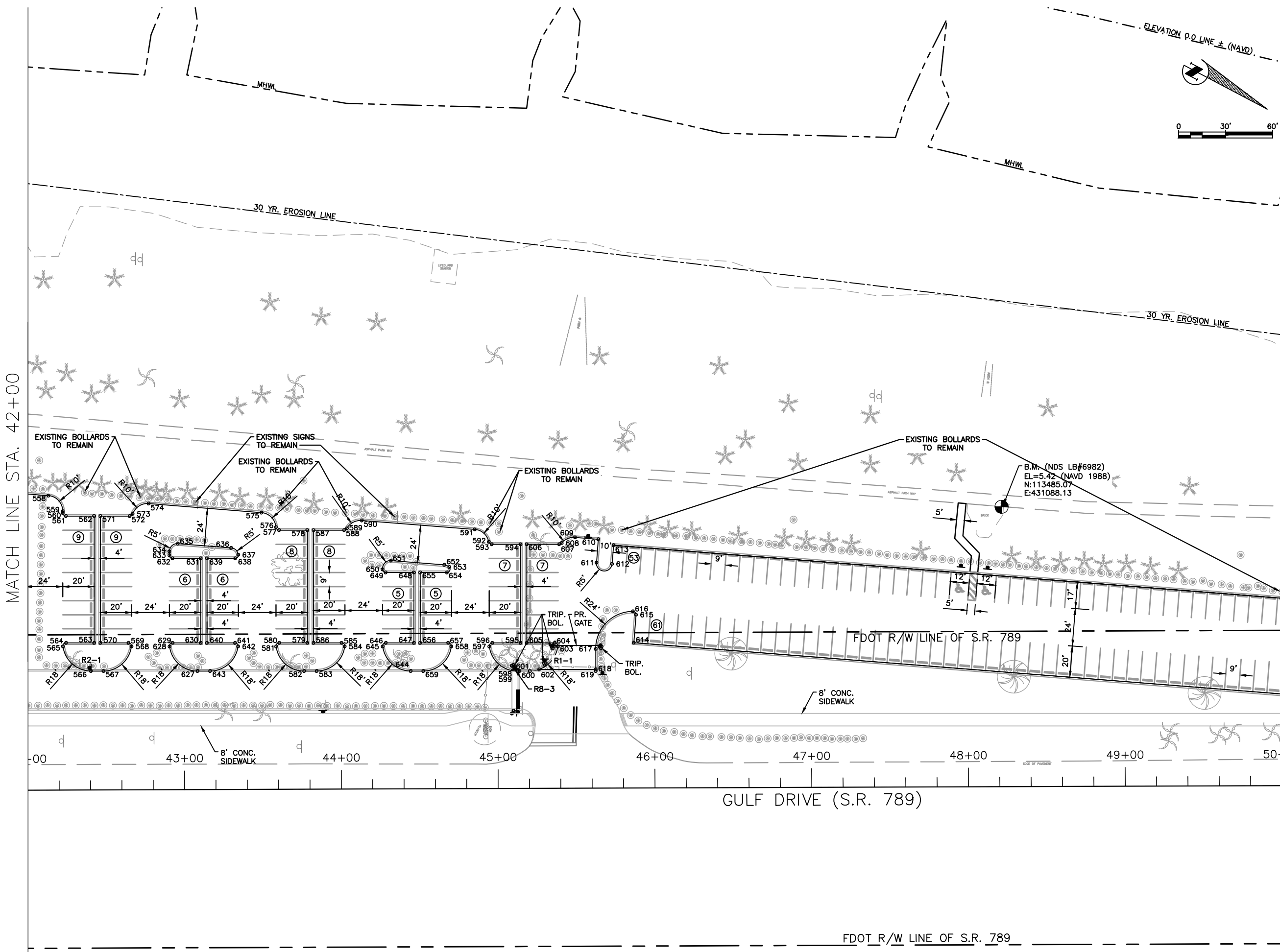
NO.	REVISION DESCRIPTION	BY	DATE

PROJECT #	465-6005719
SURVEY #	6982
SEC./TWN./RGE	10/35S/16E
SCALE	1"=60'
SURVEYED	ZNS 07/16/04
DESIGNED	MS/ES 08/2015
DRAWN	TMF 03/2016
CHECKED	MS 03/2016

MICHAEL L. STURM
FLORIDA P.E. # 46005

Signature & Date
SHEET 15

**COQUINA BEACH DRAINAGE
IMPROVEMENTS
MANATEE COUNTY
GEOMETRY PLAN**



I:\Highway Engineering\PROJ\MSA\Coquina Beach Parking Lot\W\Phase 2\CB_GEO-2.dwg, 17 GEO, 7/21/2020 9:09 AM Ken Cochran, 1:1, ANSI full sheet B (11.00 x 17.00 inches)

NO.	REVISION DESCRIPTION	BY	DATE

PROJECT #	465-6005719
SURVEY #	6982
SEC./TWN./RGE	10/35S/16E
SCALE	1"=60'
SURVEYED	ZNS 07/16/04
DESIGNED	MS/ES 08/2015
DRAWN	TMF 03/2016
CHECKED	MS 03/2016

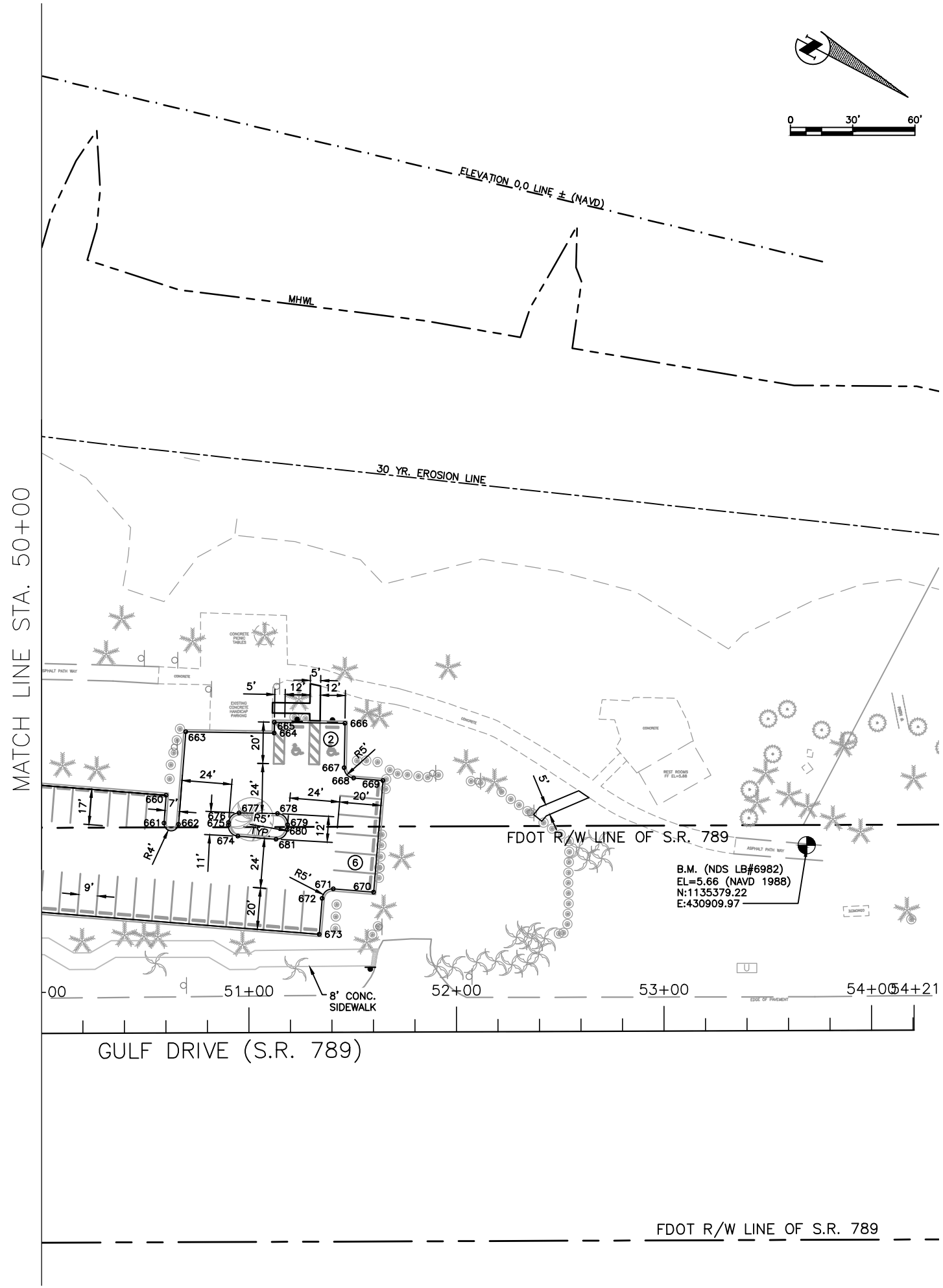
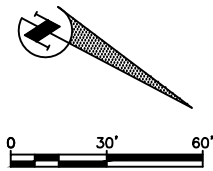
MICHAEL L. STURM
FLORIDA P.E. # 46005

Signature & Date



PUBLIC WORKS DEPARTMENT
ENGINEERING SERVICES
1022 26th Avenue East, Bradenton, FL 34208

COQUINA BEACH DRAINAGE IMPROVEMENTS MANATEE COUNTY GEOMETRY PLAN



NO.	REVISION DESCRIPTION	BY	DATE

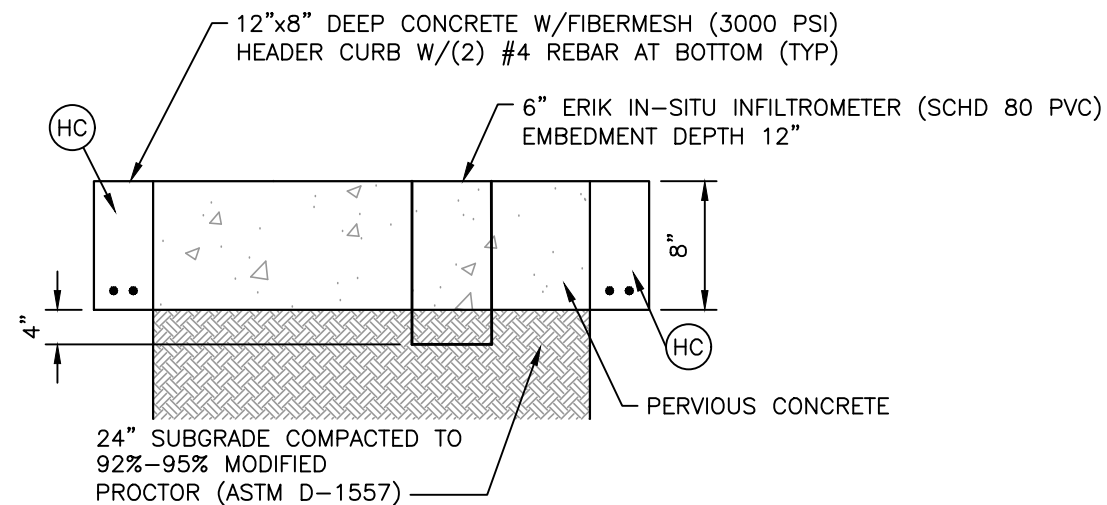
PROJECT #	465-6005719
SURVEY #	6982
SEC./TWN./RGE	10/35S/16E
SCALE	1"=60'
	BY DATE
SURVEYED	ZNS 07/16/04
DESIGNED	MS/ES 08/2015
DRAWN	TMF 03/2016
CHECKED	MS 03/2016

MICHAEL L. STURM
FLORIDA P.E. # 46005

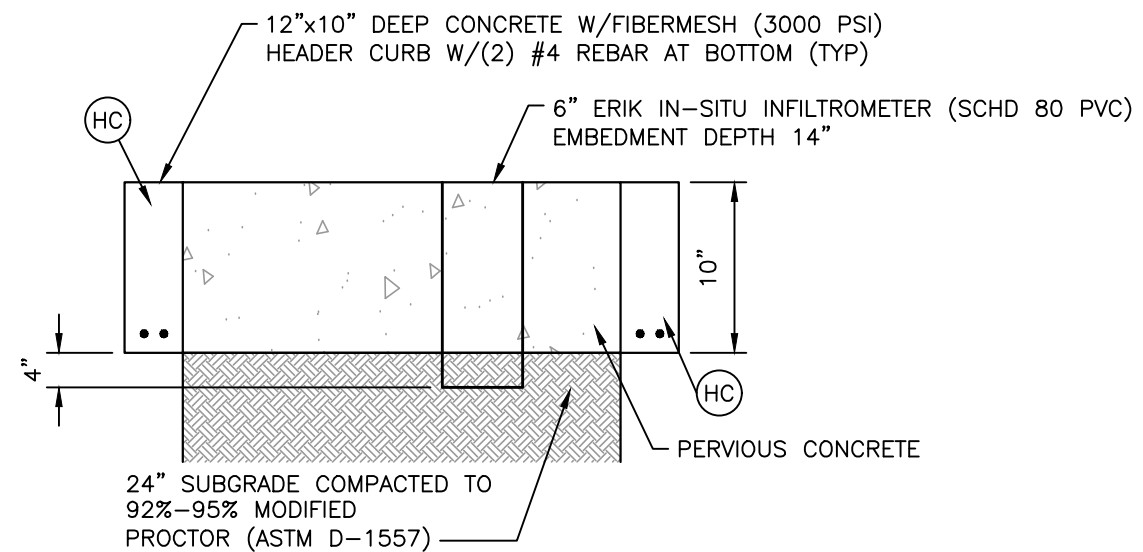
Signature & Date

I:\Highway Engineering\Proj\MSA\Coquina Beach Parking Lot\DWG\Phase 2\CB GEO-2.dwg, 18 GEO, 7/21/2020 9:09 AM Ken Cochran, 1:1, ANSI full bleed B (11.00 x 17.00 inches)

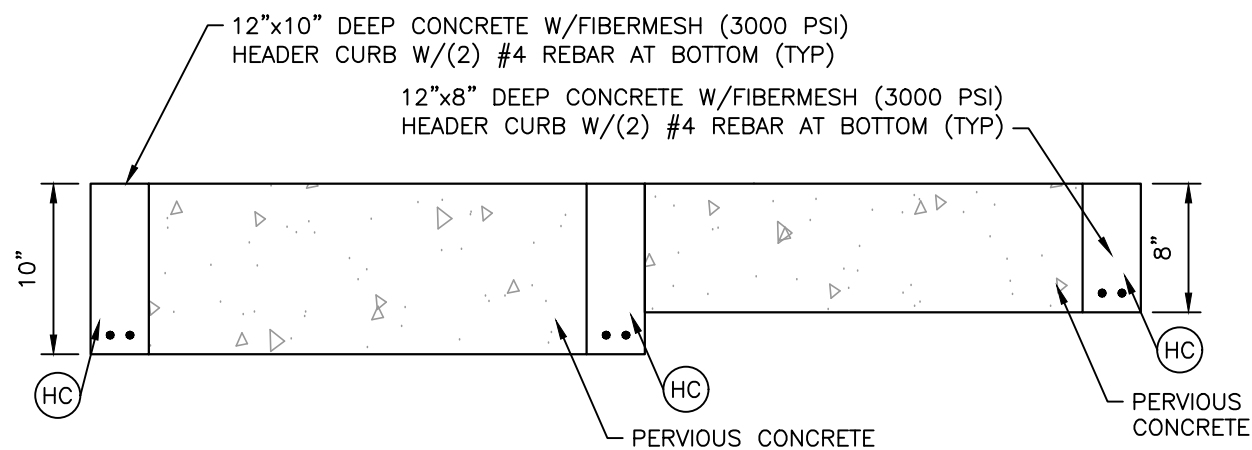
**COQUINA BEACH DRAINAGE
IMPROVEMENTS
MANATEE COUNTY
TYPICAL SECTIONS**



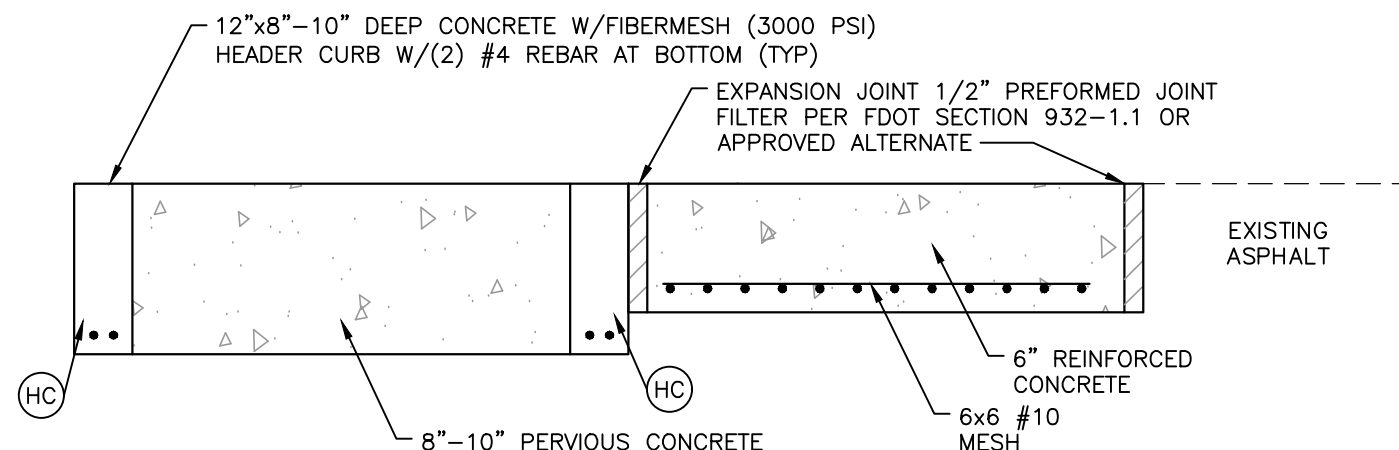
PERVIOUS CONCRETE SECTION
FOR PARKING AREAS (NORMAL LOADING)



PERVIOUS CONCRETE SECTION
FOR RV PARKING AREAS (HEAVY LOADING)



8" PERVIOUS CONCRETE BUTTING UP TO
10" PERVIOUS CONCRETE TYPICAL SECTION



EXPANSION JOINT DETAIL

NO.	REVISION DESCRIPTION	BY	DATE

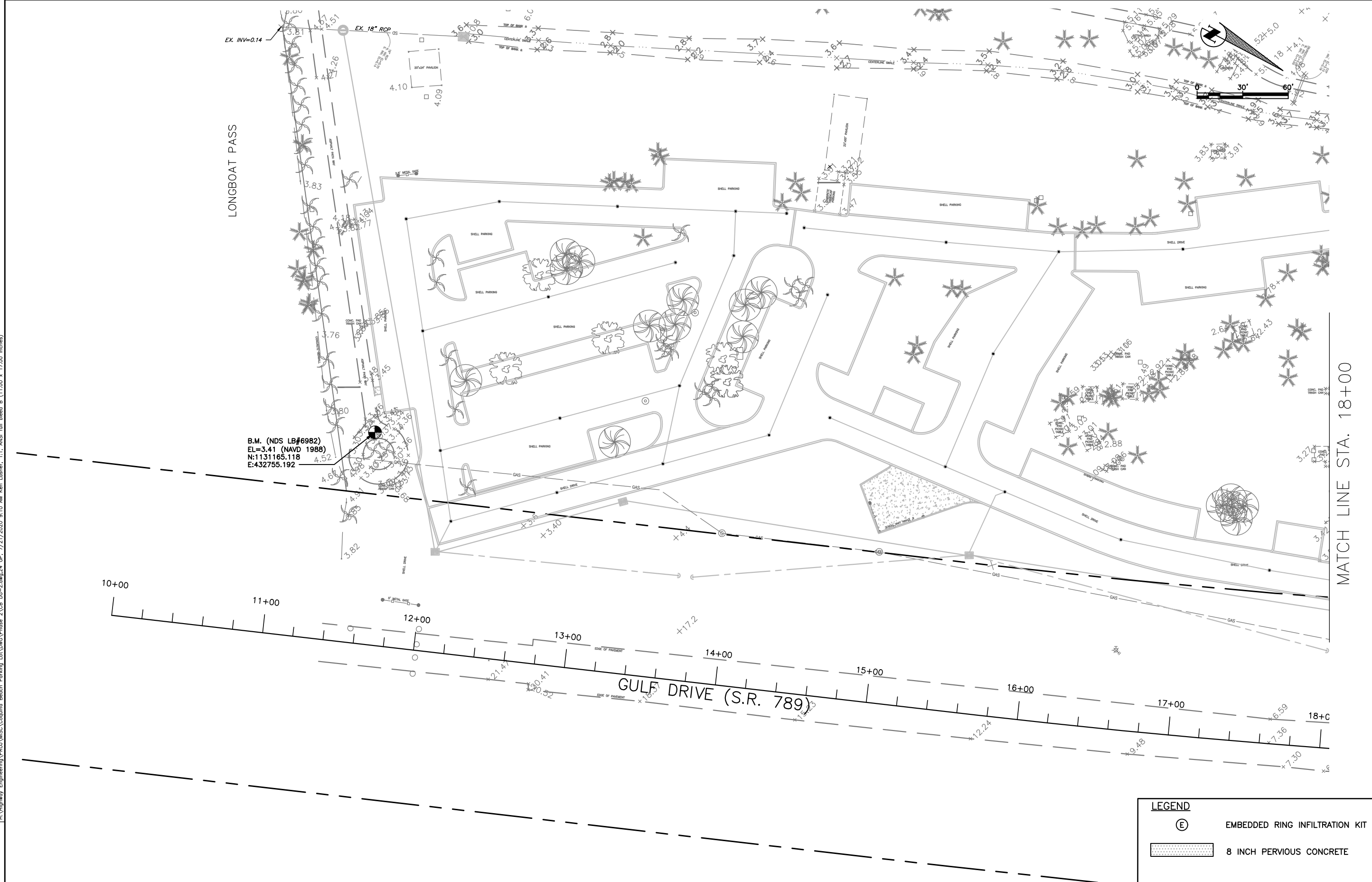
PROJECT #	465-6005719
SURVEY #	000
SEC./TWN./RGE	10/35S/18E
SCALE	N.T.S.
	BY DATE
SURVEYED	ZNS 07/16/04
DESIGNED	MS/ES 08/2015
DRAWN	TMF 10/2016
CHECKED	MS/ES 10/2016

MICHAEL L. STURM
FLORIDA P.E. # 46005

Signature & Date

I:\HA Highway Engineering\PROJ\MSC\Coquina Beach\Partion LA\DWG\Phase 2\TYP SECTION-2.dwg, 23 TYP SEC, 7/21/2020 9:10 AM Ken Lecher, 1:1, ANSI full bleed B (11.00 x 17.00 inches)

**COQUINA BEACH DRAINAGE
IMPROVEMENTS
MANATEE COUNTY
GRADING AND PAVING PLAN**



I:\Highway Engineering\PROJ\MSA\Coquina Beach Parking\CA\DWG\Phase 2\CB_DG-2.dwg, 24 GP, 7/21/2020, 9:10 AM, Ken Lasher, 1:1, ANS, full bleed, B (11.00 x 17.00 inches)

B.M. (NDS LB#6982)
EL=3.41 (NAVD 1988)
N:1131165.118
E:432755.192

LEGEND

(E)	EMBEDDED RING INFILTRATION KIT
[Pattern]	8 INCH PERVIOUS CONCRETE

- COORDINATES ARE BASED ON FLORIDA STATE PLANE COORDINATE SYSTEM (WEST ZONE) NAD 83/2011.
- ELEVATIONS ARE BASED ON NAVD 1988, AND ARE DERIVED FROM BENCHMARK GIS-106, HAVING AN ELEVATION OF 4.15 FEET (NAVD 1988), AND BENCHMARK GIS-105 (PID AG9210) HAVING AN ELEVATION OF 3.29 FEET (NAVD 1988).

NO.	REVISION DESCRIPTION	BY	DATE

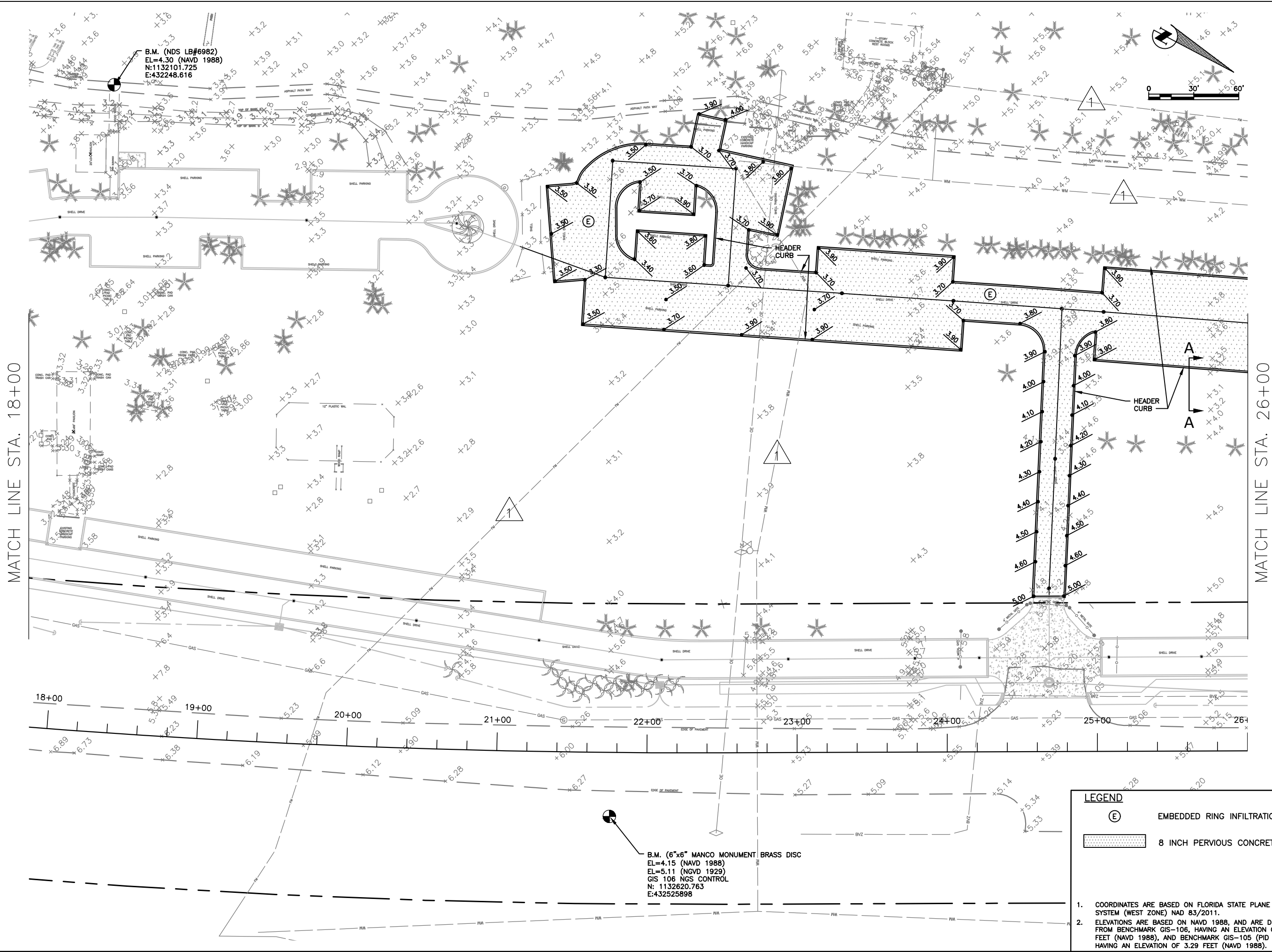
PROJECT #	465-6005719
SURVEY #	000-32835
SEC./TWN./RGE	10/35S/16E
SCALE	1"=60'

	BY	DATE
SURVEYED	ZNS	07/16/04
DESIGNED	MS	08/2015
DRAWN	TMF	03/2016
CHECKED	MS	03/2016

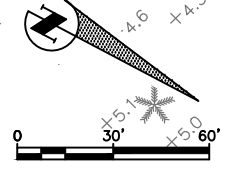
MICHAEL L. STURM
FLORIDA P.E. # 46005

Signature & Date

**COQUINA BEACH DRAINAGE
IMPROVEMENTS
MANATEE COUNTY
GRADING AND PAVING PLAN**



I:\Highway Engineering\PROJ\MISC\Coquina Beach Parking Lot\DWG\Phase 2\CB_DG-2.dwg, 25 GP, 7/21/2020, 9:10 AM, Ken Lashner, L1, ANS full bleed B (11.00 x 17.00 inches)



B.M. (NDS LB#6982)
EL=4.30 (NAVD 1988)
N:1132101.725
E:432248.616

B.M. (6"x6" MANCO MONUMENT BRASS DISC)
EL=4.15 (NAVD 1988)
EL=5.11 (NGVD 1929)
GIS 106 NGS CONTROL
N: 1132620.763
E:432525898

LEGEND

	EMBEDDED RING INFILTRATION KIT
	8 INCH PERVIOUS CONCRETE

- COORDINATES ARE BASED ON FLORIDA STATE PLANE COORDINATE SYSTEM (WEST ZONE) NAD 83/2011.
- ELEVATIONS ARE BASED ON NAVD 1988, AND ARE DERIVED FROM BENCHMARK GIS-106, HAVING AN ELEVATION OF 4.15 FEET (NAVD 1988), AND BENCHMARK GIS-105 (PID AG9210) HAVING AN ELEVATION OF 3.29 FEET (NAVD 1988).

NO.	REVISION DESCRIPTION	BY	DATE

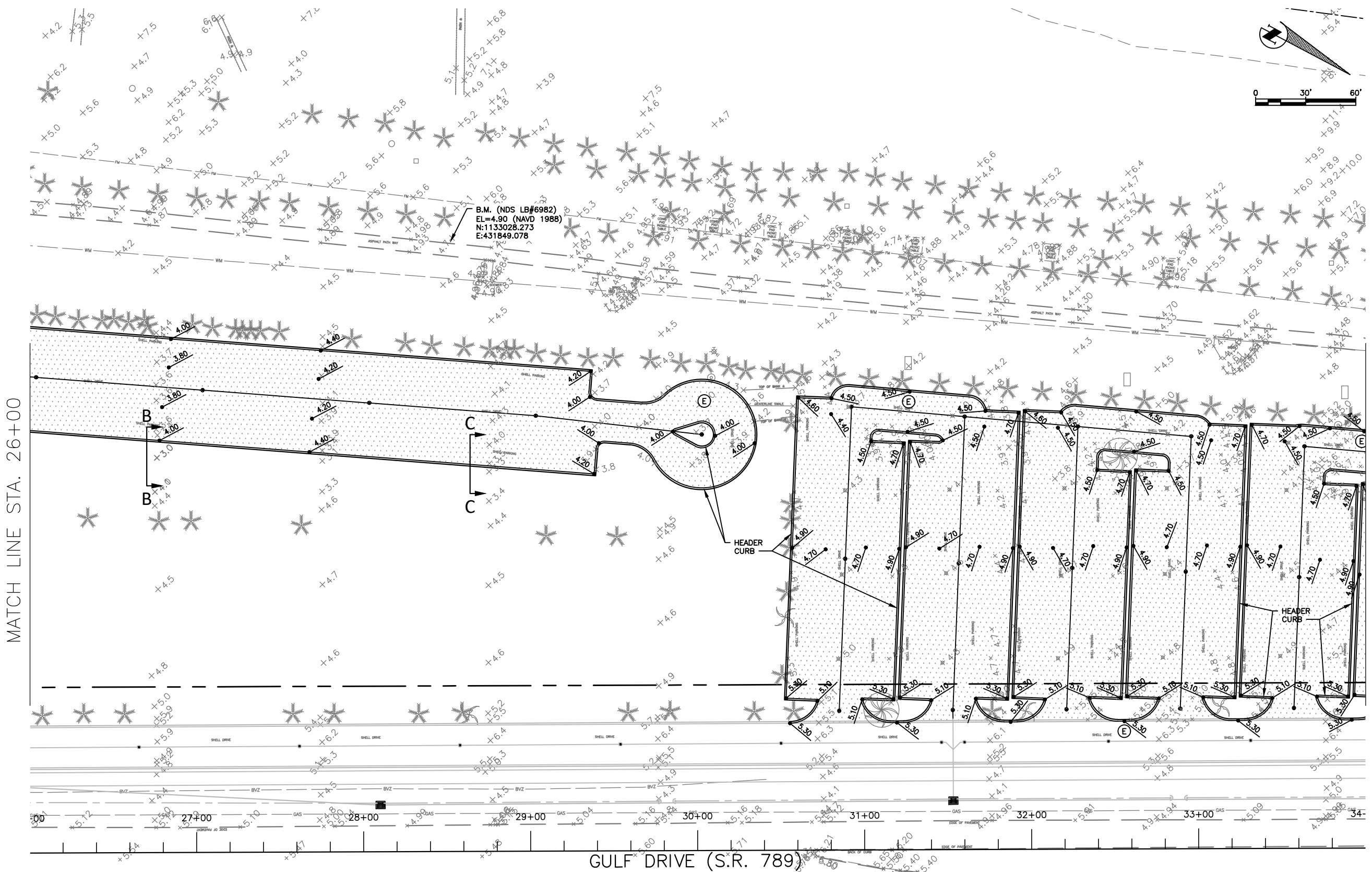
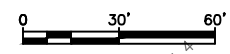
PROJECT #	465-6005719
SURVEY #	000-32835
SEC./TWN./RGE	10/35S/16E
SCALE	1"=60'

BY	DATE
SURVEYED ZNS	07/16/04
DESIGNED MS	08/2015
DRAWN TMF	03/2016
CHECKED MS	03/2016

MICHAEL L. STURM
FLORIDA P.E. # 46005

Signature & Date

**COQUINA BEACH DRAINAGE
IMPROVEMENTS
MANATEE COUNTY
GRADING AND PAVING PLAN**



MATCH LINE STA. 26+00

MATCH LINE STA. 34+00

GULF DRIVE (S.R. 789)

LEGEND

	EMBEDDED RING INFILTRATION KIT
	8 INCH PERVIOUS CONCRETE

- COORDINATES ARE BASED ON FLORIDA STATE PLANE COORDINATE SYSTEM (WEST ZONE) NAD 83/2011.
- ELEVATIONS ARE BASED ON NAVD 1988, AND ARE DERIVED FROM BENCHMARK GIS-106, HAVING AN ELEVATION OF 4.15 FEET (NAVD 1988), AND BENCHMARK GIS-105 (PID AG9210) HAVING AN ELEVATION OF 3.29 FEET (NAVD 1988).

NO.	REVISION DESCRIPTION	BY	DATE

PROJECT #	465-6005719
SURVEY #	000-32835
SEC./TWN./RGE	10/35S/16E
SCALE	1"=60'

	BY	DATE
SURVEYED	ZNS	07/16/04
DESIGNED	MS	08/2015
DRAWN	TMF	03/2016
CHECKED	MS	03/2016

MICHAEL L. STURM
FLORIDA P.E. # 46005

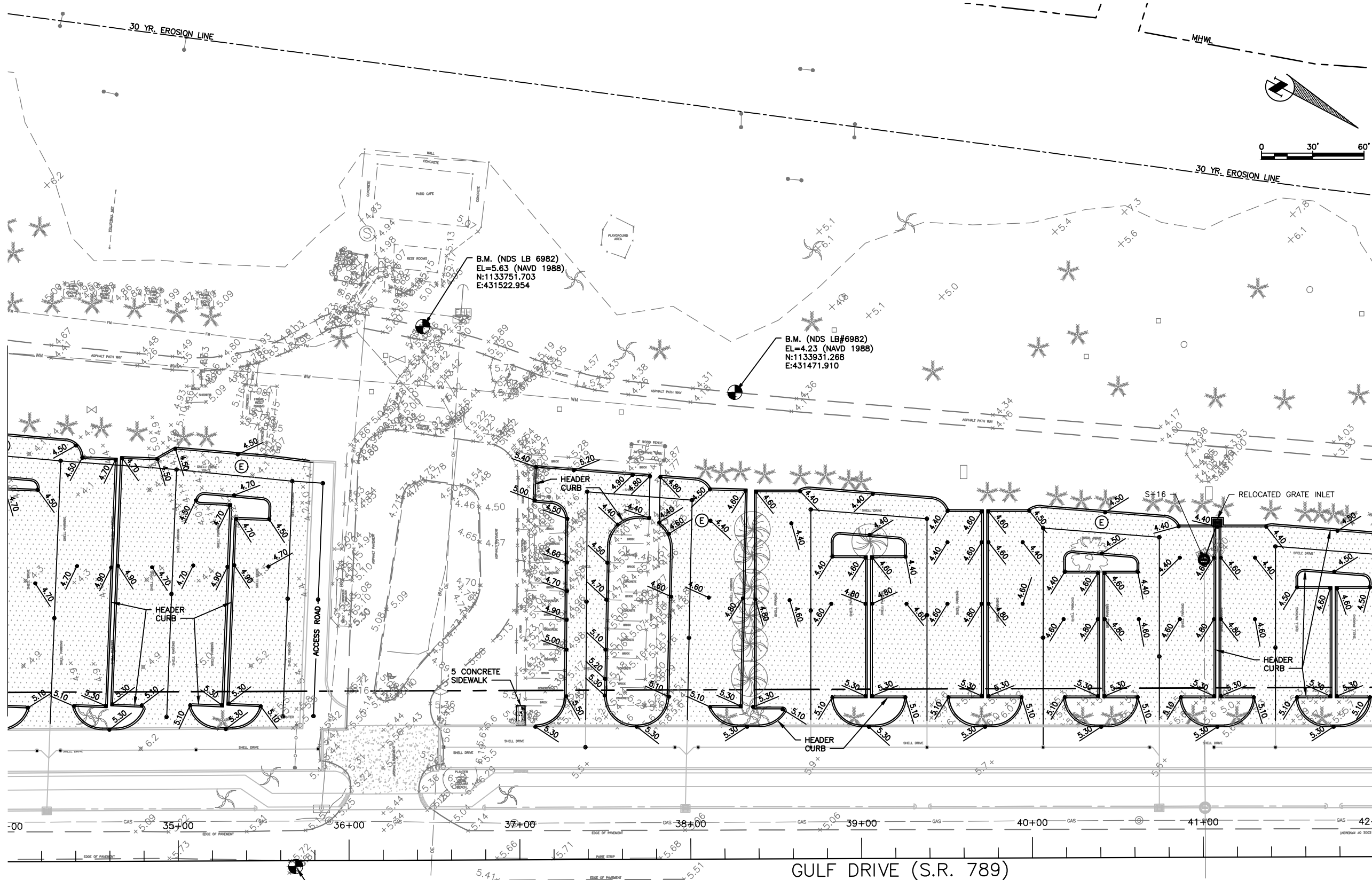
Signature & Date

I:\Highway Engineering\PROJ\MSC\Coquina Beach Parking Lot\DWG\Phase 2\CB DG-2.dwg, 26 GP, 7/21/2020, 9:11 AM, Ken Lasher, 1:1, ANS full bleed B (11.00 x 17.00 inches)

**COQUINA BEACH DRAINAGE
IMPROVEMENTS
MANATEE COUNTY
GRADING AND PAVING PLAN**

MATCH LINE STA. 34+00

MATCH LINE STA. 42+00



LEGEND

(E)	EMBEDDED RING INFILTRATION KIT
[Stippled Area]	8 INCH PERVIOUS CONCRETE

- COORDINATES ARE BASED ON FLORIDA STATE PLANE COORDINATE SYSTEM (WEST ZONE) NAD 83/2011.
- ELEVATIONS ARE BASED ON NAVD 1988, AND ARE DERIVED FROM BENCHMARK GIS-106, HAVING AN ELEVATION OF 4.15 FEET (NAVD 1988), AND BENCHMARK GIS-105 (PID AG9210) HAVING AN ELEVATION OF 3.29 FEET (NAVD 1988).

NO.	REVISION DESCRIPTION	BY	DATE

PROJECT #	465-6005719
SURVEY #	000-32835
SEC./TWN./RGE	10/35S/16E
SCALE	1"=60'

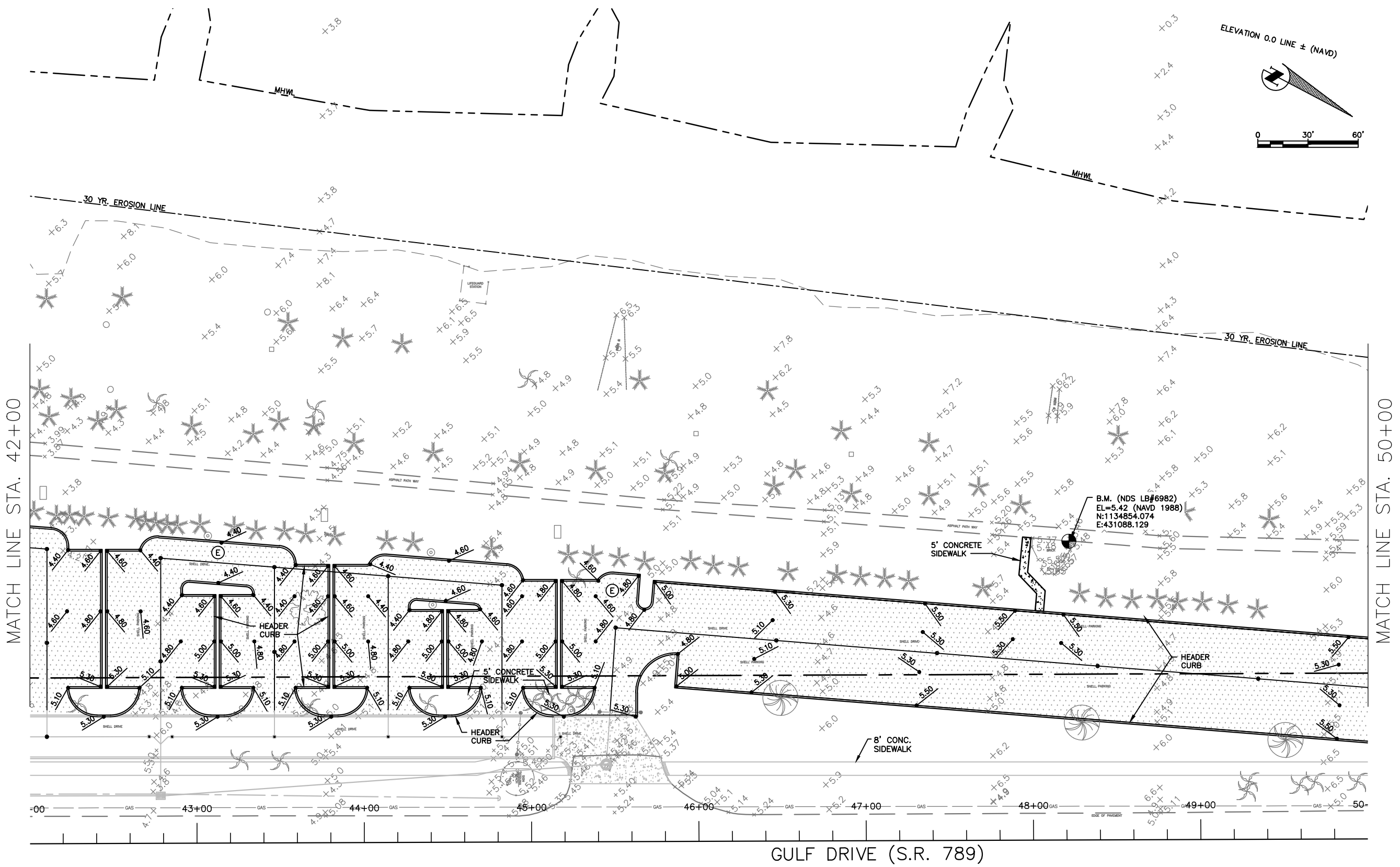
BY	DATE
SURVEYED ZNS	07/16/04
DESIGNED MS	08/2015
DRAWN TMF	03/2016
CHECKED MS	03/2016

MICHAEL L. STURM
FLORIDA P.E. # 46005

Signature & Date

I:\Highway Engineering\PROJ\MSC\Coquina Beach Parking Lot\DWG\Phase 2\CB-DG-2.dwg, 27 BP, 7/21/2020 9:11 AM Ken Lasher, 1:1 ANS full bleed B (11.00 x 17.00 inches)

**COQUINA BEACH DRAINAGE
IMPROVEMENTS
MANATEE COUNTY
GRADING AND PAVING PLAN**



I:\Highway Engineering\Proj\MS\Coquina Beach Parking Lot\DWG\Phase 2\CB-DC-2.dwg, 28 BP, 7/21/2020, 9:11 AM, Ken Lasher, 1:1, ANS full bleed B (11.00 x 17.00 inches)

NO.	REVISION DESCRIPTION	BY	DATE

PROJECT #	465-6005719
SURVEY #	000-32835
SEC./TWN./RGE	10/35S/16E
SCALE	1"=60'

	BY	DATE
SURVEYED	ZNS	07/16/04
DESIGNED	MS	08/2015
DRAWN	TMF	03/2016
CHECKED	MS	03/2016

MICHAEL L. STURM
FLORIDA P.E. # 46005

LEGEND

(E) EMBEDDED RING INFILTRATION KIT

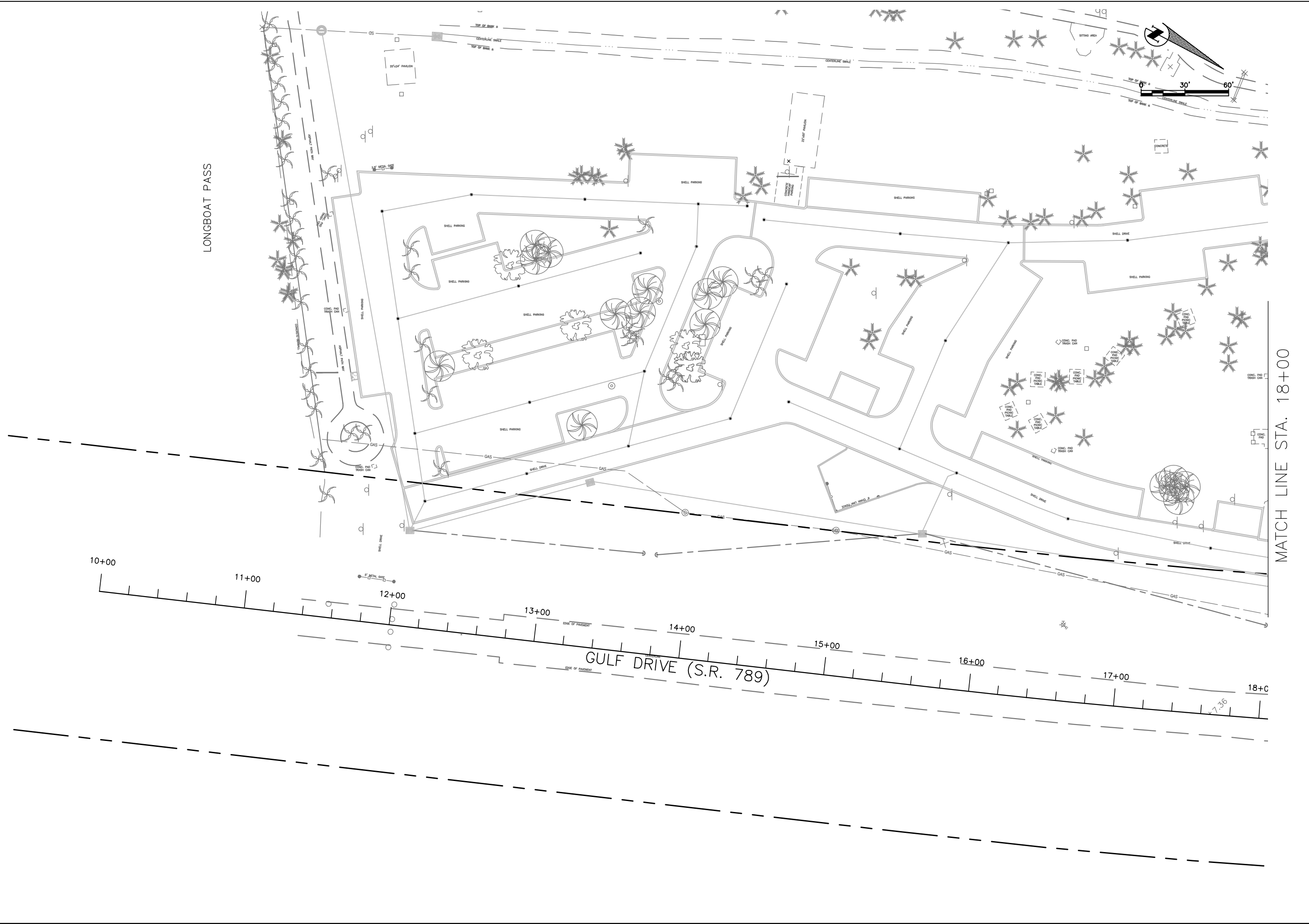
[Pattern] 8 INCH PERVIOUS CONCRETE

- COORDINATES ARE BASED ON FLORIDA STATE PLANE COORDINATE SYSTEM (WEST ZONE) NAD 83/2011.
- ELEVATIONS ARE BASED ON NAVD 1988, AND ARE DERIVED FROM BENCHMARK GIS-106, HAVING AN ELEVATION OF 4.15 FEET (NAVD 1988), AND BENCHMARK GIS-105 (PID AG9210) HAVING AN ELEVATION OF 3.29 FEET (NAVD 1988).



PUBLIC WORKS DEPARTMENT
ENGINEERING SERVICES
1022 26th Avenue East, Bradenton, FL 34208

**COQUINA BEACH DRAINAGE
IMPROVEMENTS
MANATEE COUNTY
DRAINAGE AND UNDERDRAIN PLAN**



I:\Highway Engineering\PROJ\MSA\Coquina Beach Parking Lot\DWG\Phase 2\CB_UD-2.dwg, 30.10.17.21.2020, 9:11 AM, Ken Laitner, 1:1, ANS, full sheet B (11.00 x 17.00 inches)

NO.	REVISION DESCRIPTION	BY	DATE
1	UPDATED PUBLIC UTILITIES	KHL	01/11/19

PROJECT #	465-6005719
SURVEY #	000-32835
SEC./TWN./RGE	10/35S/16E
SCALE	1"=60'
SURVEYED	ZNS 07/16/04
DESIGNED	MS 08/2015
DRAWN	TMF/KL 03/2016
CHECKED	MS 03/2016

MICHAEL L. STURM
FLORIDA P.E. # 46005

Signature & Date
SHEET 30

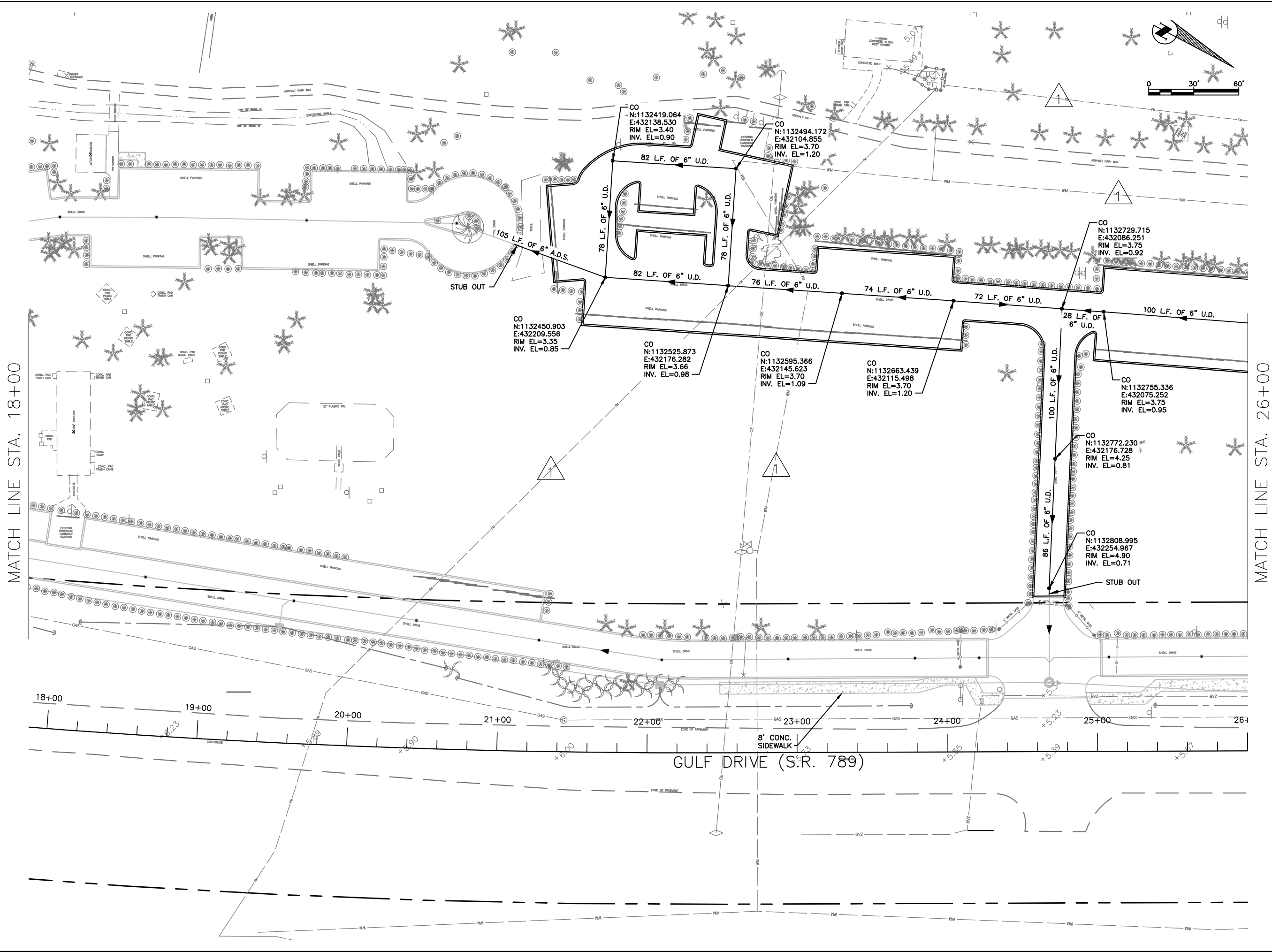
**COQUINA BEACH DRAINAGE
IMPROVEMENTS
MANATEE COUNTY
DRAINAGE AND UNDERDRAIN PLAN**

NO.	REVISION DESCRIPTION	BY	DATE
1	UPDATED PUBLIC UTILITIES	KHL	01/11/19

PROJECT #	465-6005719
SURVEY #	000-32835
SEC./TWN./RGE	10/35S/16E
SCALE	1"=60'
	BY DATE
SURVEYED	ZNS 07/16/04
DESIGNED	MS 08/2015
DRAWN	TMF/KL 03/2016
CHECKED	MS 03/2016

MICHAEL L. STURM
FLORIDA P.E. # 46005

Signature & Date

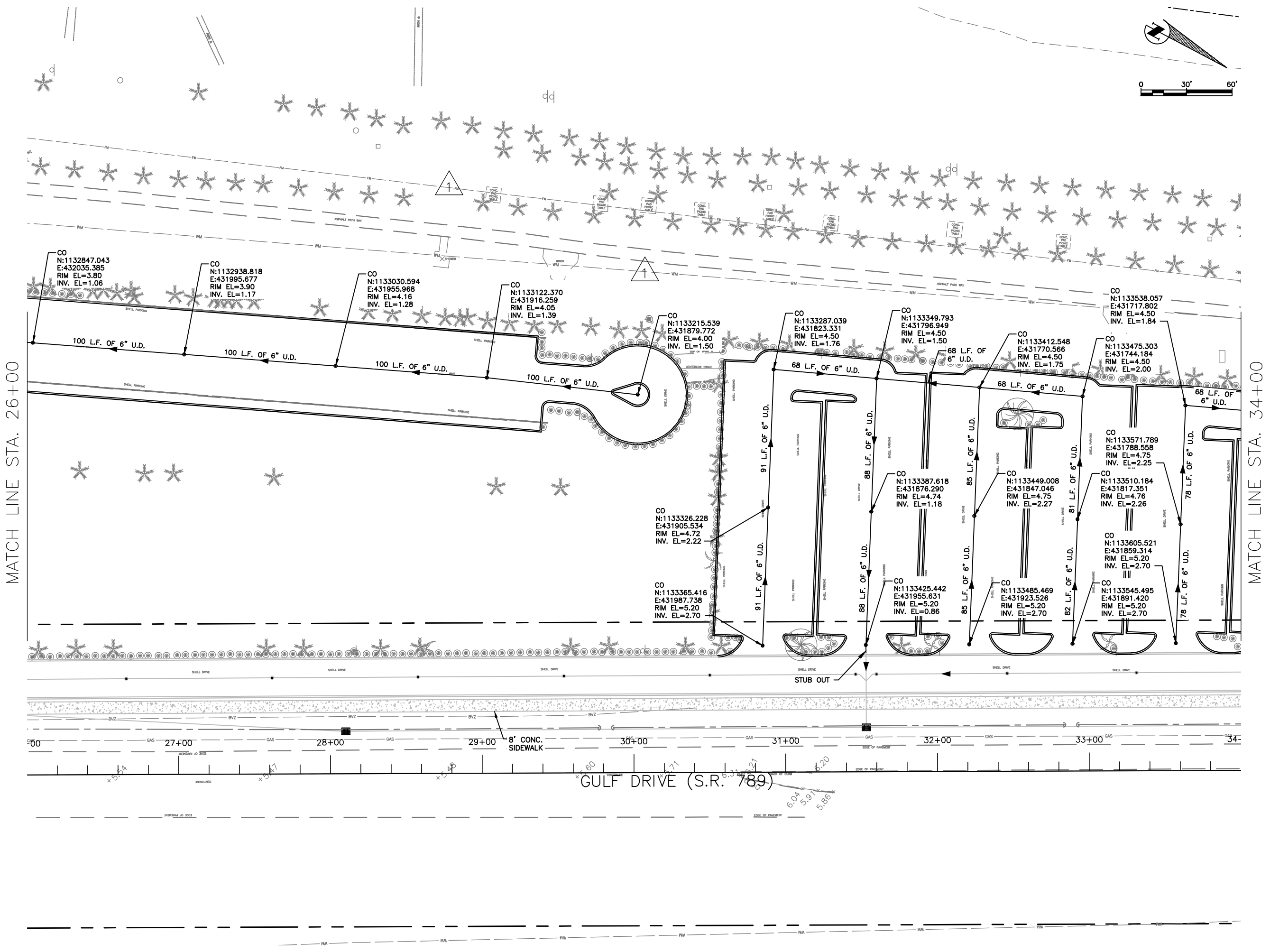
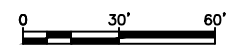


I:\Highway Engineering\PROJ\MSO\Coquina Beach Parking\CA\DWG\Phase 2\CB_UD-2.dwg, 31 UD, 7/21/2020, 9:12 AM, Ken Laitner, 1:1, ANS full bleed B (11.00 x 17.00 inches)

MATCH LINE STA. 18+00

MATCH LINE STA. 26+00

GULF DRIVE (S.R. 789)



MATCH LINE STA. 26+00

MATCH LINE STA. 34+00

**COQUINA BEACH DRAINAGE
IMPROVEMENTS
MANATEE COUNTY
DRAINAGE AND UNDERDRAIN PLAN**

NO.	REVISION DESCRIPTION	BY	DATE
1	UPDATED PUBLIC UTILITIES	KHL	01/11/19

PROJECT #	465-6005719
SURVEY #	000-32835
SEC./TWN./RGE	10/35S/16E
SCALE	1"=60'
SURVEYED	ZNS 07/16/04
DESIGNED	MS 08/2015
DRAWN	TMF/KL 03/2016
CHECKED	MS 03/2016

MICHAEL L. STURM
FLORIDA P.E. # 46005

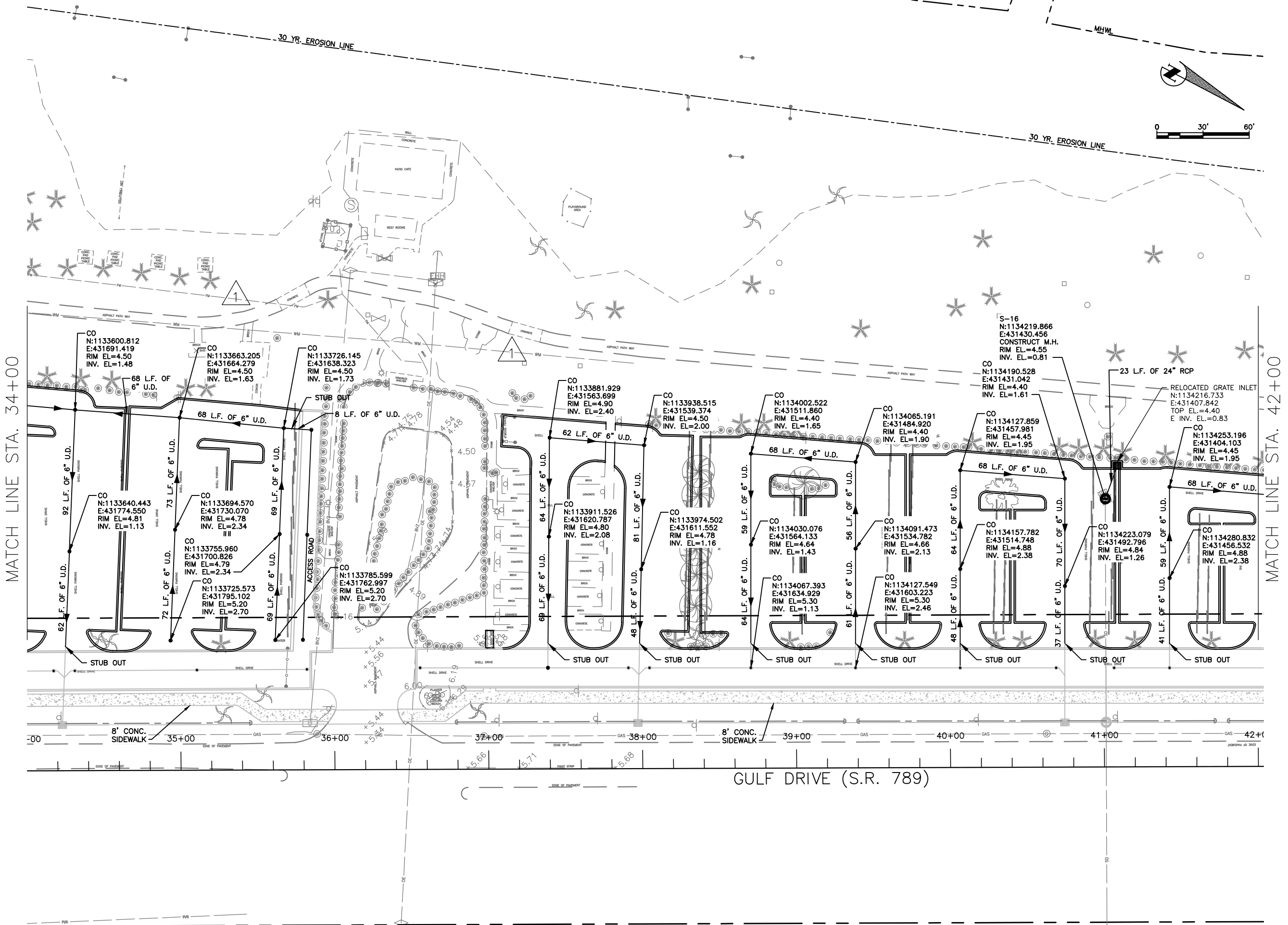
Signature & Date

I:\Highway Engineering\PROJ\MISC\Coquina Beach Parking Lot\DWG\Phase 2\CB_UD-2.dwg, 32 UD_7/21/2020 9:12 AM Ken Laitner, 1:1, ANS full bleed B (11.00 x 17.00 inches)



PUBLIC WORKS DEPARTMENT
ENGINEERING SERVICES
1022 26th Avenue East, Bradenton, FL 34208

**COQUINA BEACH DRAINAGE
IMPROVEMENTS
MANATEE COUNTY
DRAINAGE AND UNDERDRAIN PLAN**



I:\Highway Engineering\PROJ\MSC\Coquina Beach Parking LA\DWG\Phase 2\CB_U.D.-2.dwg, 33_U.D._8/20/2020, 1:48 PM, Ken Labber, 1:1, ANSI full bleed E (17.00 x 11.00 inches)

NO.	REVISION DESCRIPTION	BY	DATE
1	UPDATED PUBLIC UTILITIES	KHL	01/11/19

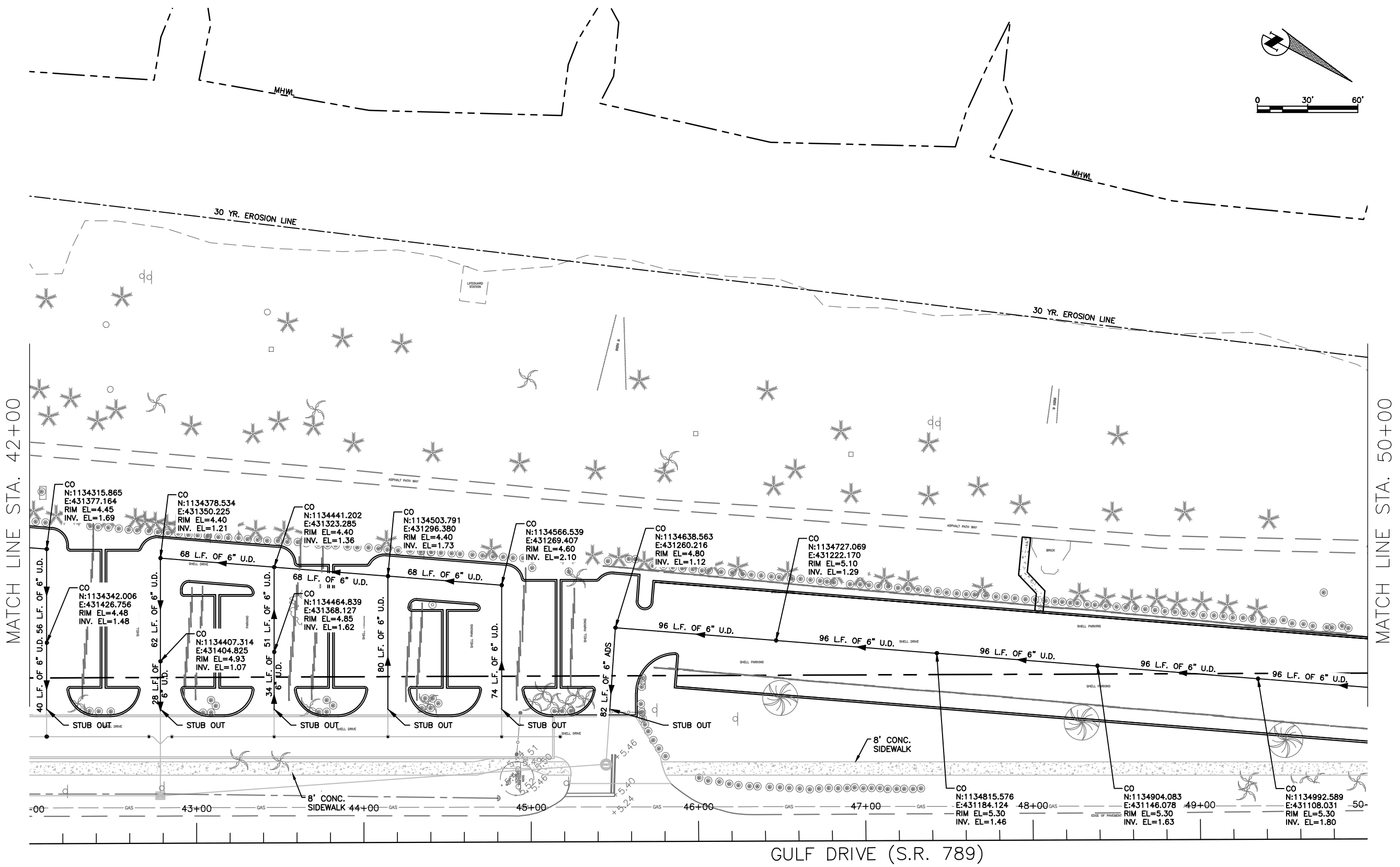
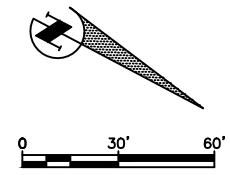
PROJECT #	465-6005719
SURVEY #	000-32835
SEC./TWN./RGE	10/35S/16E
SCALE	1"=60'
SURVEYED	ZNS 07/16/04
DESIGNED	MS 08/2015
DRAWN	TMF/KL 03/2016
CHECKED	MS 03/2016

MICHAEL L. STURM
FLORIDA P.E. # 46005



PUBLIC WORKS DEPARTMENT
ENGINEERING SERVICES
1022 26th Avenue East, Bradenton, FL 34208

**COQUINA BEACH DRAINAGE
IMPROVEMENTS
MANATEE COUNTY
DRAINAGE AND UNDERDRAIN PLAN**



I:\Highway Engineering\PROJ\MSO\Coquina Beach Parking Lot\DWG\Phase 2\CB_UD-2.dwg, 34 UD, 8/20/2020, 1:48 PM, Ken Lamber, 1:1, ANSI full bleed E (17.00 x 11.00 inches)

NO.	REVISION DESCRIPTION	BY	DATE
1	UPDATED PUBLIC UTILITIES	KHL	01/11/19

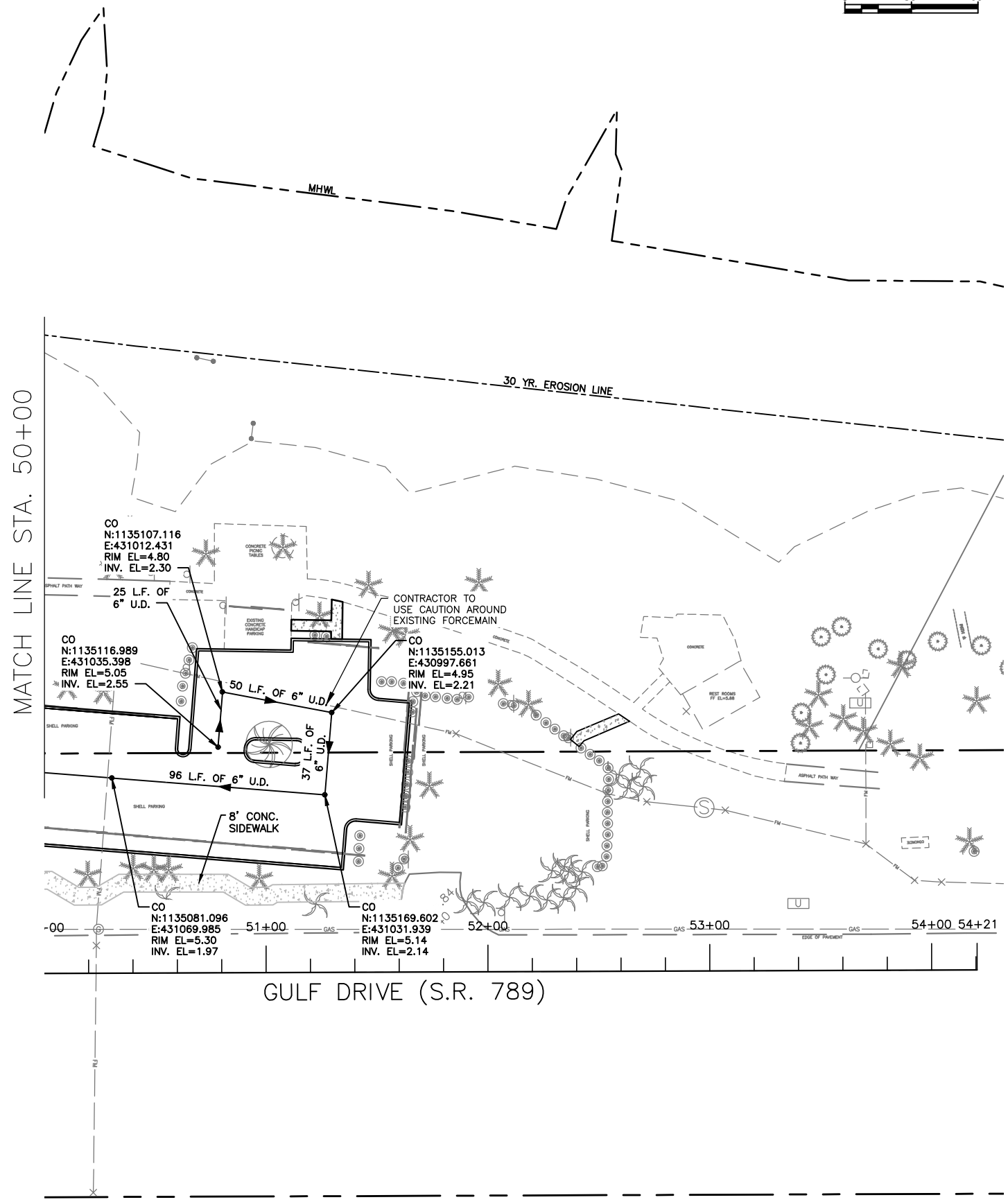
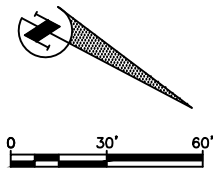
PROJECT #	465-6005719
SURVEY #	000-32835
SEC./TWN./RGE	10/35S/16E
SCALE	1"=60'
SURVEYED	ZNS 07/16/04
DESIGNED	MS 08/2015
DRAWN	TMF/KL 03/2016
CHECKED	MS 03/2016

MICHAEL L. STURM
FLORIDA P.E. # 46005

I:\Highway Engineering\PROJ\MISS\Coquina Beach Parking Lot\DWG\Phase 2\CB UD-2.dwg, 35 UD_7/21/2020 9:12 AM Ken Laitner, 1:1, ANSI full bleed B (11.00 x 17.00 inches)



PUBLIC WORKS DEPARTMENT
ENGINEERING SERVICES
1022 26th Avenue East, Bradenton, FL 34208



**COQUINA BEACH DRAINAGE
IMPROVEMENTS
MANATEE COUNTY
DRAINAGE AND UNDERDRAIN PLAN**

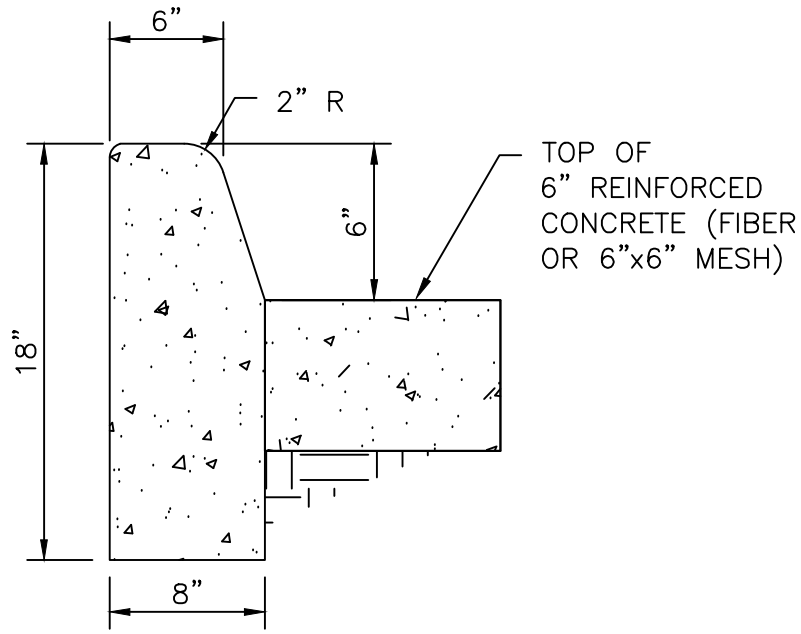
NO.	REVISION DESCRIPTION	BY	DATE
1	UPDATED PUBLIC UTILITIES	KHL	01/11/19

PROJECT #	465-6005719
SURVEY #	000-32835
SEC./TWN./RGE	10/35S/16E
SCALE	1"=60'

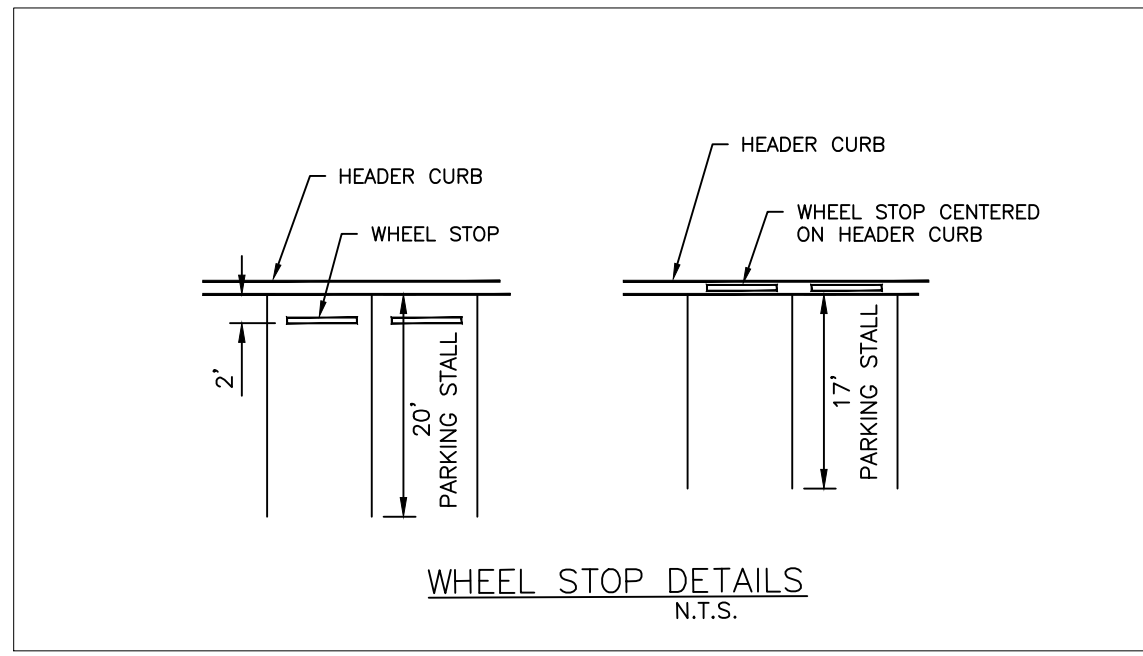
	BY	DATE
SURVEYED	ZNS	07/16/04
DESIGNED	MS	08/2015
DRAWN	TMF/KL	03/2016
CHECKED	MS	03/2016

MICHAEL L. STURM
FLORIDA P.E. # 46005

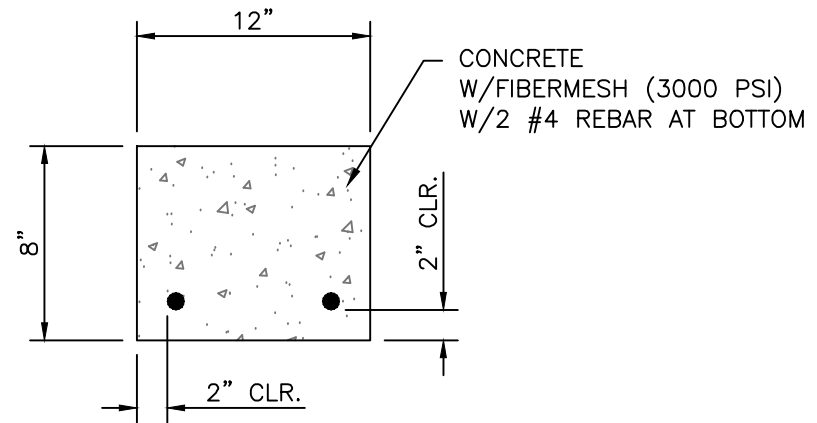
**COQUINA BEACH DRAINAGE
IMPROVEMENTS
MANATEE COUNTY
DETAILS**



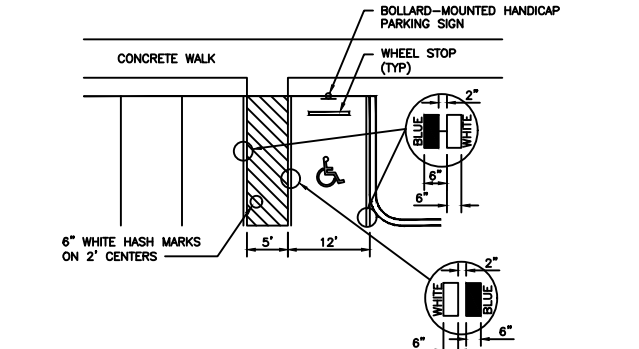
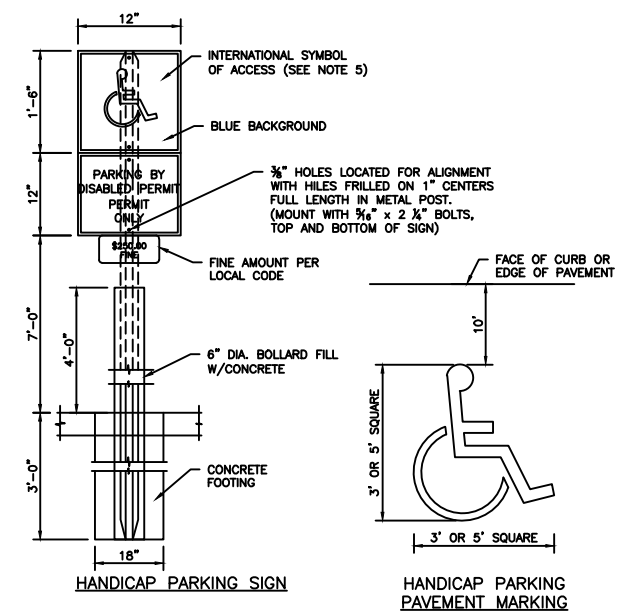
TYPE "D" CURB (D)
N.T.S.



WHEEL STOP DETAILS
N.T.S.

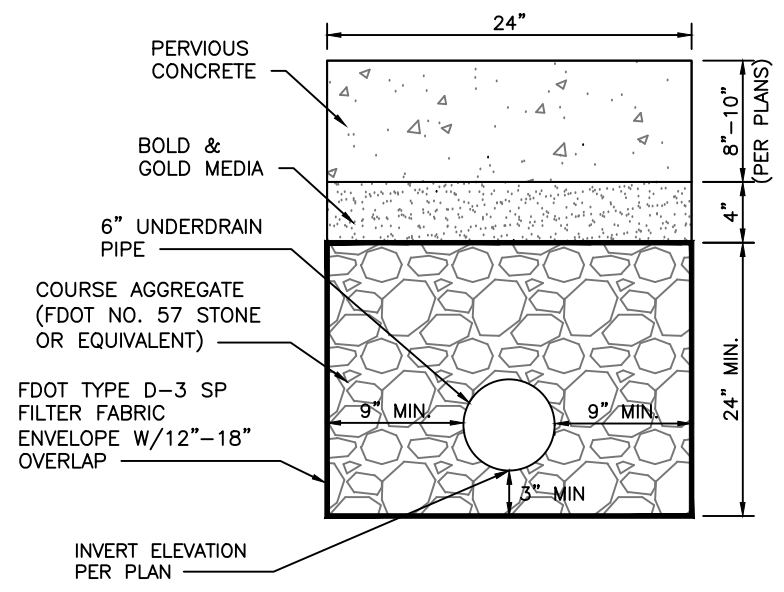


HEADER CURB
N.T.S.

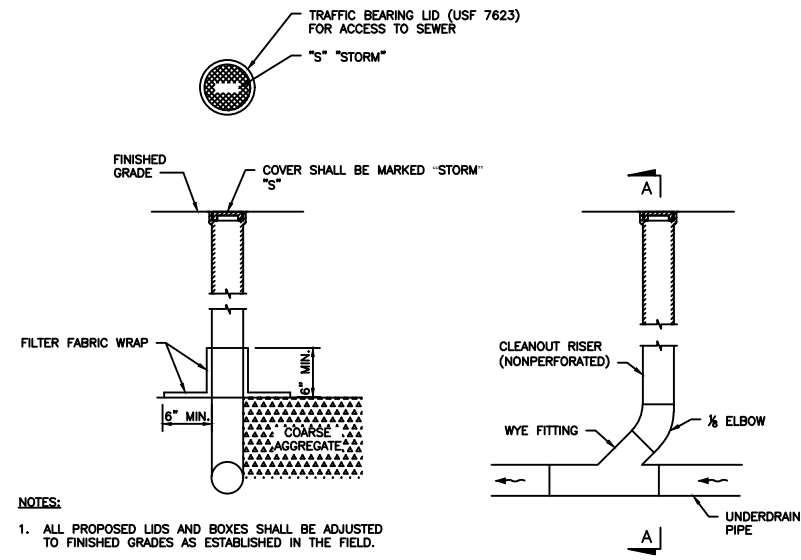


- NOTES:**
1. METAL POST TO BE GALVANIZED. ALL BOLTS, NUTS, WASHERS AND SCREWS MUST BE RUSTPROOF.
 2. CONCRETE FOOTING SHALL BE PORTLAND CEMENT AND HAVE A MINIMUM COMPRESSIVE STRENGTH (3,000 p.s.i.).
 3. SIGNS WILL BE FABRICATED BY USING REFLECTING COATING IN THE SYMBOL, MESSAGE AND BORDER TO A SHEET ALUMINUM BACKING (.080) IN THICKNESS.
 4. MESSAGE LETTERING SHALL BE UPPER CASE (WHITE) (SERIES B) 2" HIGH IN ACCORDANCE WITH M UNIFORM TRAFFIC CONTROL DEVICES.
 5. THE SYMBOL IS COMPOSED OF TWO ELEMENTS, A WHITE WHEELCHAIR FIGURE (WHICH SHALL ALWAYS BE RIGHT) IN A SQUARE BACKGROUND, INTERNATIONAL BLUE IN COLOR (FED. STD. 595a, COLOR #151).
 6. SIGN POST SHALL BE MIN. 2'-0" CLEAR FROM BACK OF CURB.
 7. PARKING SPACES AND ACCESS AISLES SHALL BE LEVEL WITH SURFACE SLOPES NOT EXCEEDING 1:1 ALL DIRECTIONS.

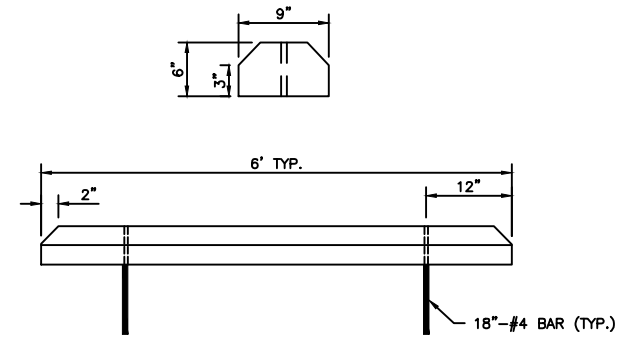
HANDICAP PARKING/MARKING DETAIL
N.T.S.



UNDERDRAIN DETAIL FDOT TYPE II
(INDEX 286) N.T.S.



UNDERDRAIN CLEAN-OUT
(INDEX 286) N.T.S.



RECYCLED MATERIAL WHEEL STOP
N.T.S.

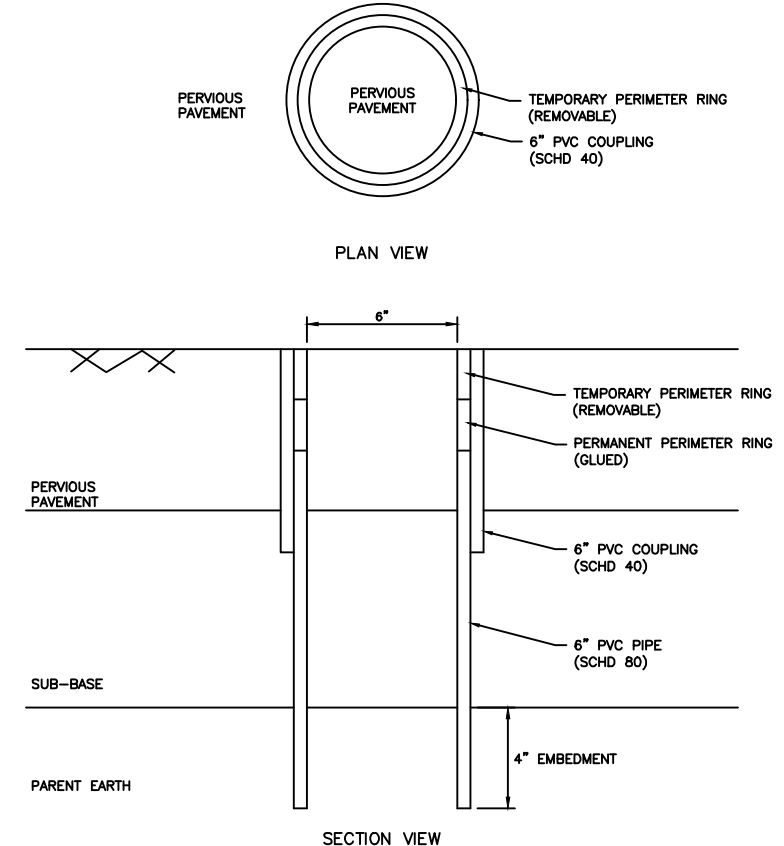
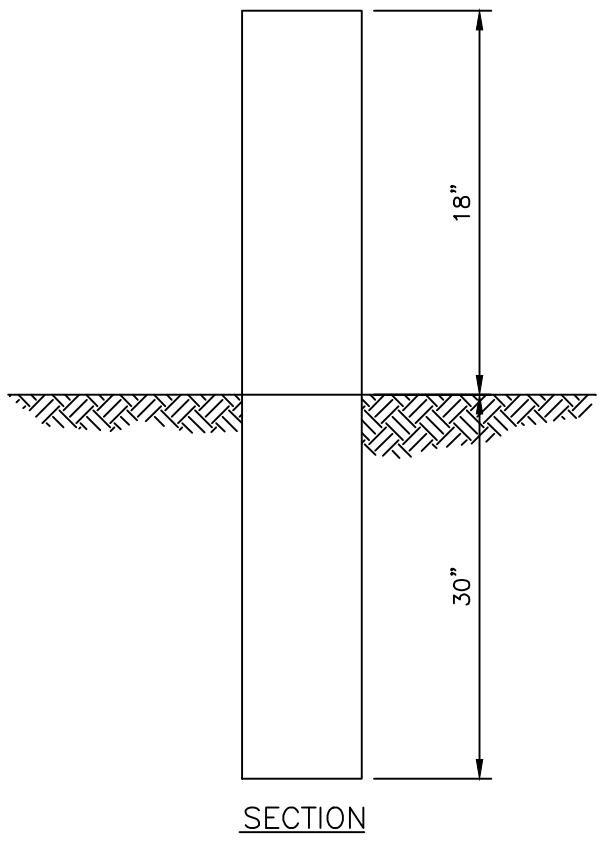
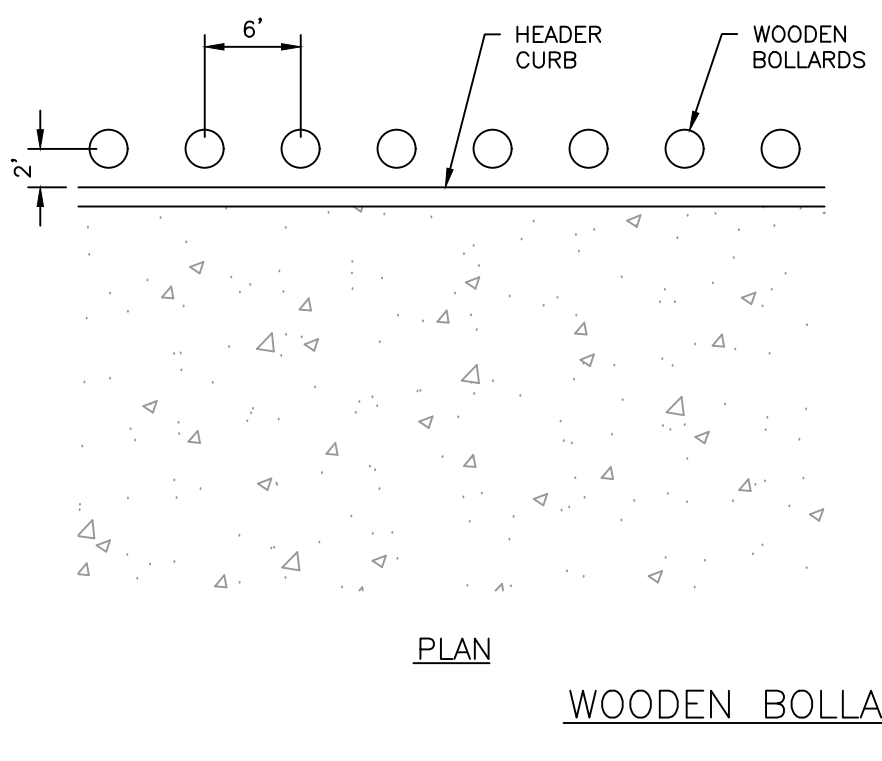
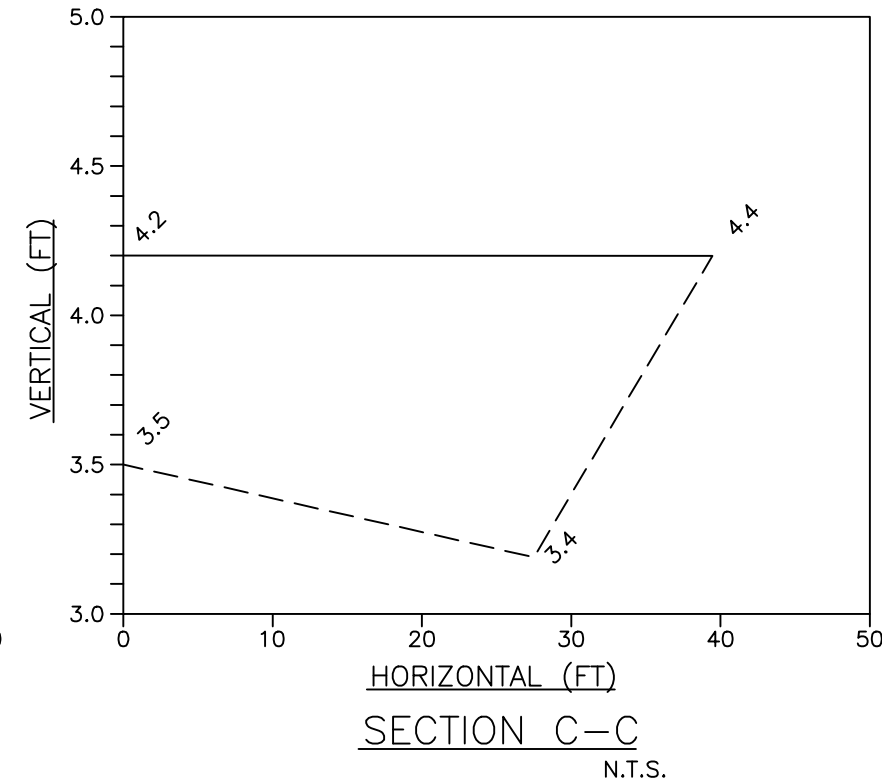
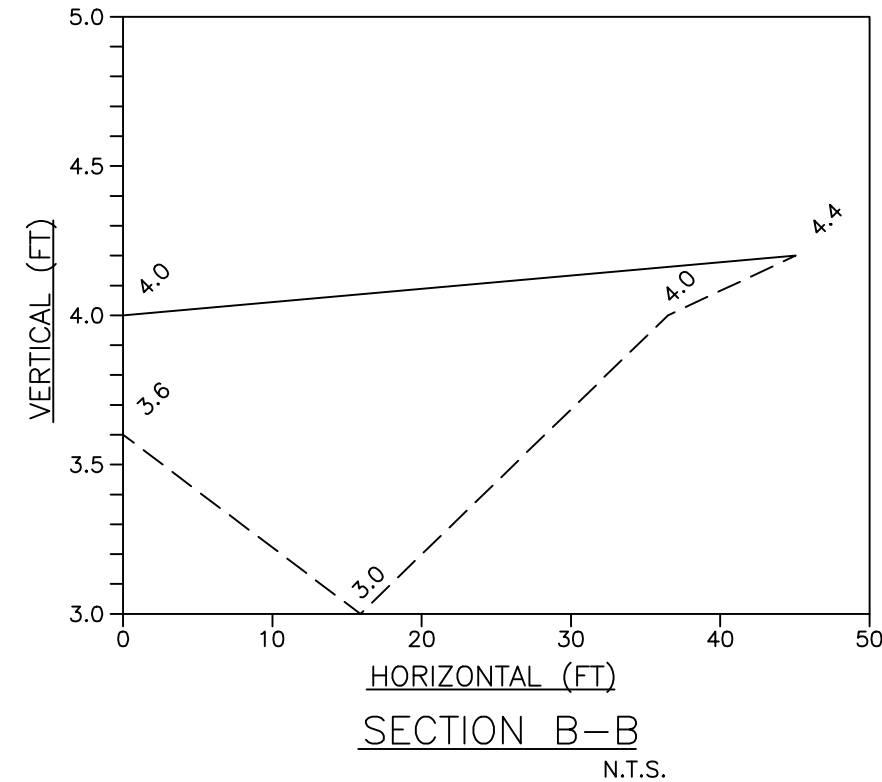
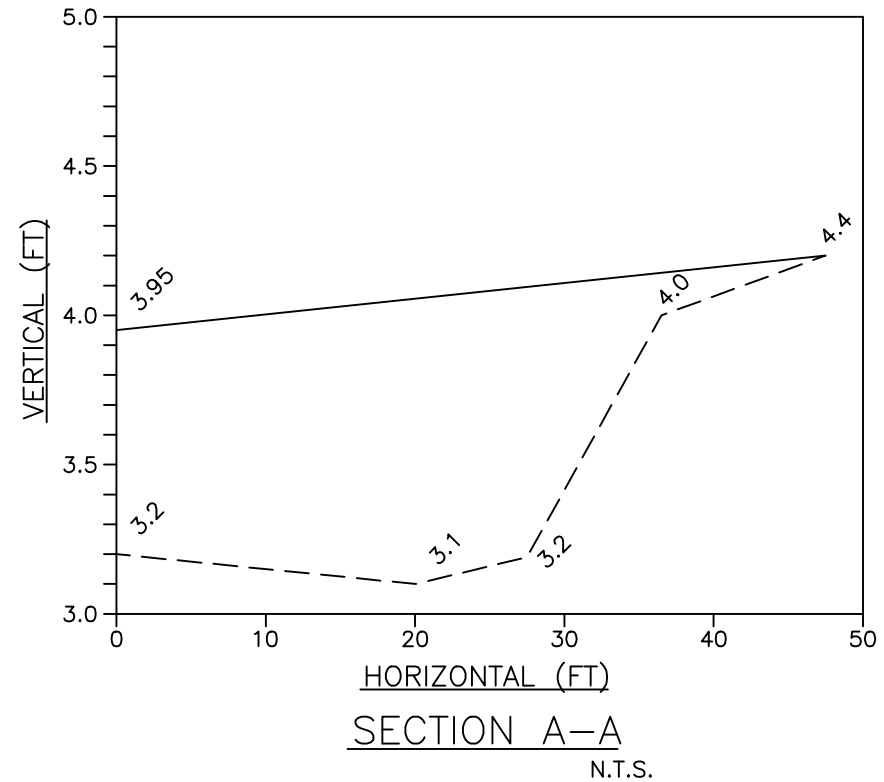
NO.	REVISION DESCRIPTION	BY	DATE

PROJECT #	465-6005719
SURVEY #	6982
SEC./TWN./RGE	10/35S/16E
SCALE	NTS
BY	DATE
SURVEYED	ZNS 07/16/04
DESIGNED	MS 08/2015
DRAWN	KR 08/2015
CHECKED	MS 08/2015

MICHAEL L. STURM
FLORIDA P.E. # 46005

I:\Highway Engineering\PROJ\MSC\Coquina Beach Parking Lot\DWG\Phase 2\BMP & DETAILS-2.dwg, 36 DETAILS, 7/21/2020 9:13 AM Ken Luehrer, 1:1, ANSI full bleed B (11.00 x 17.00) inches

**COQUINA BEACH DRAINAGE
IMPROVEMENTS
MANATEE COUNTY
DETAILS**



NOTE:
A MINIMUM OF ONE (1) ERIK IN-SITU INFILTRATOR WILL BE
REQUIRED FOR EACH SECTION OF PERVIOUS PAVEMENT INSTALLED.
FOR LARGER SECTIONS, A MINIMUM OF TWO (2) ERIK IN-SITU
INFILTRATORS PER ACRE OF PERVIOUS PAVEMENT WILL BE REQUIRED.

**EMBEDDED RING INFILTRATION KIT (ERIK)
IN-SITU INFILTRATOR**
N.T.S.

NO.	REVISION DESCRIPTION	BY	DATE

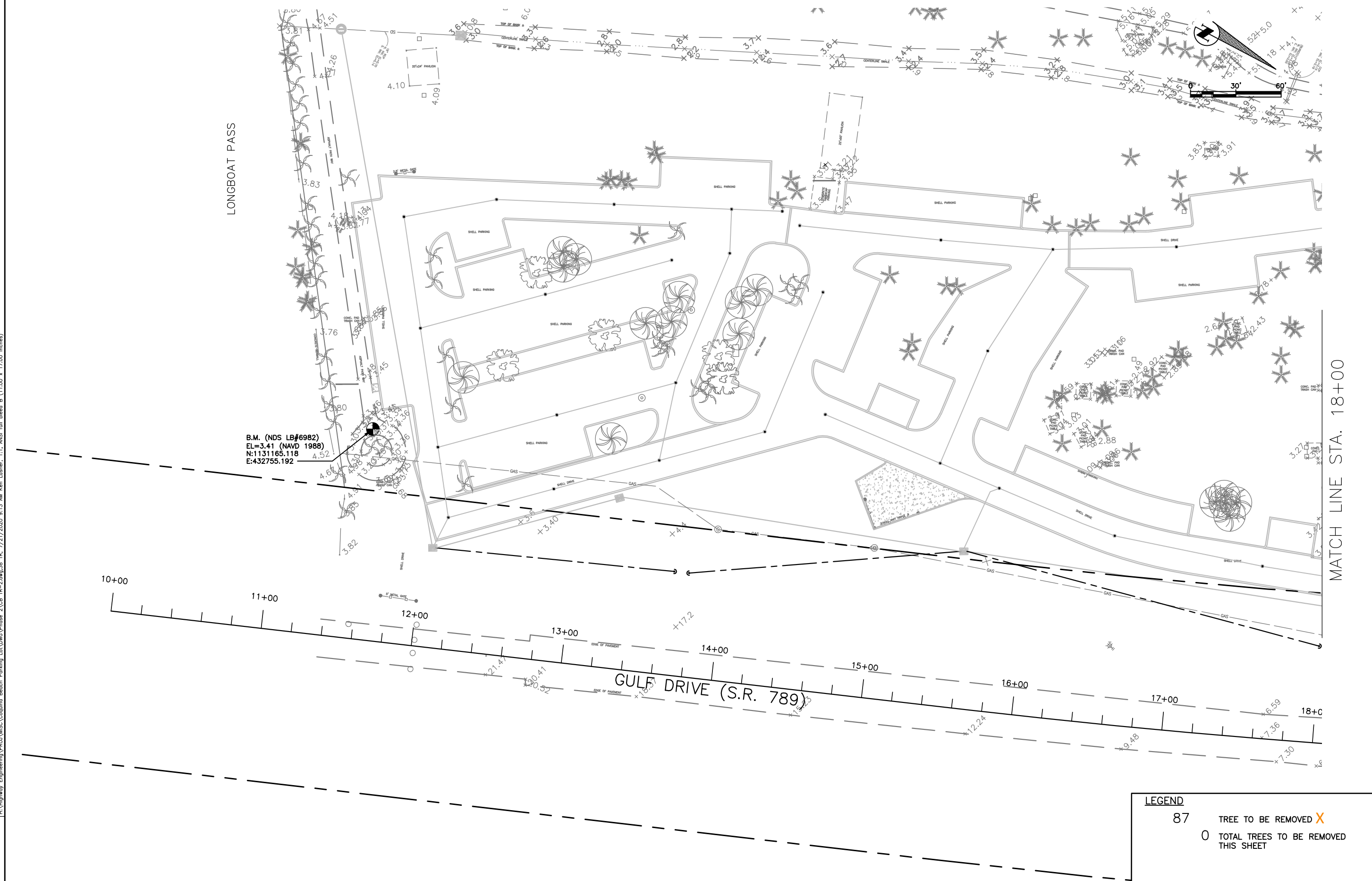
PROJECT #	465-6005719
SURVEY #	6982
SEC./TWN./RGE	10/35S/16E
SCALE	NTS
	BY DATE
SURVEYED	ZNS 07/16/04
DESIGNED	MS 08/2015
DRAWN	KR 08/2015
CHECKED	MS 08/2015

MICHAEL L. STURM
FLORIDA P.E. # 46005

Signature & Date
SHEET 37

I:\Highway Engineering\PROJ\MISC\Coquina Beach Parking Lot\DWG\Phase 2\BMP & DETAILS-2.dwg, 37 DETAILS, 7/21/2020 9:13 AM Ken Loster, 1:1, ANSI full bleed B (11.00 x 17.00) inches

**COQUINA BEACH DRAINAGE
IMPROVEMENTS
MANATEE COUNTY
TREE REMOVAL PLAN**



I:\Highway Engineering\PROJ\MSA\Coquina Beach Parking Lot\DWG\Phase 2\CB TR-2.dwg, 38 TR-7/21/2020 9:13 AM Ken Carter, 1:1 ANSI full bleed B (11.00 x 17.00 inches)

NO.	REVISION DESCRIPTION	BY	DATE

PROJECT #	465-6005719
SURVEY #	000-32835
SEC./TWN./RGE	10/35S/16E
SCALE	1"=60'

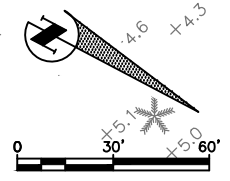
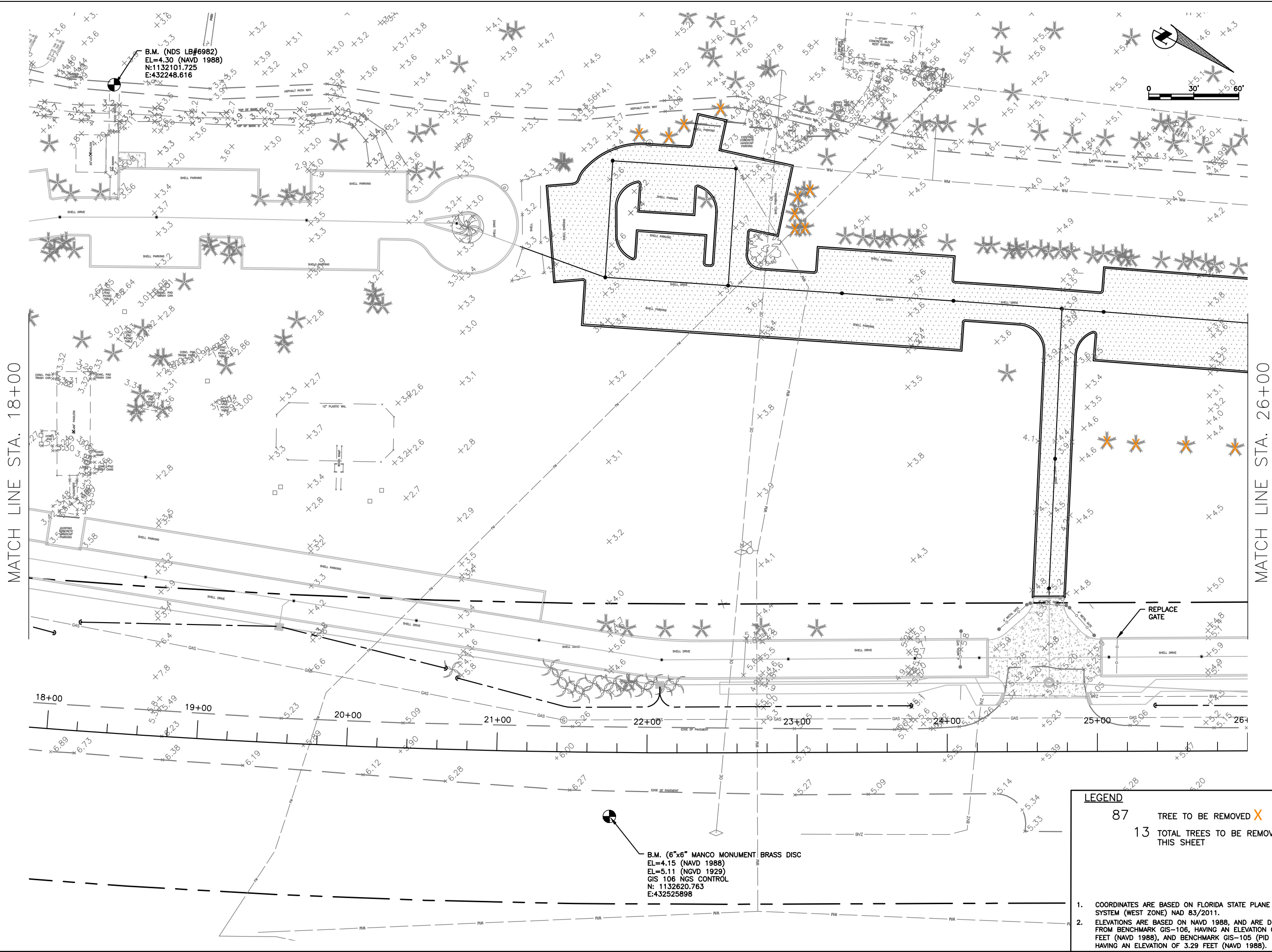
	BY	DATE
SURVEYED	ZNS	07/16/04
DESIGNED	MS	08/2015
DRAWN	TMF	03/2016
CHECKED	MS	03/2016

MICHAEL L. STURM
FLORIDA P.E. # 46005

LEGEND
 87 TREE TO BE REMOVED X
 O TOTAL TREES TO BE REMOVED THIS SHEET

1. COORDINATES ARE BASED ON FLORIDA STATE PLANE COORDINATE SYSTEM (WEST ZONE) NAD 83/2011.
 2. ELEVATIONS ARE BASED ON NAVD 1988, AND ARE DERIVED FROM BENCHMARK GIS-106, HAVING AN ELEVATION OF 4.15 FEET (NAVD 1988), AND BENCHMARK GIS-105 (PID AG9210) HAVING AN ELEVATION OF 3.29 FEET (NAVD 1988).

**COQUINA BEACH DRAINAGE
IMPROVEMENTS
MANATEE COUNTY
TREE REMOVAL PLAN**



B.M. (NDS LB#6982)
EL=4.30 (NAVD 1988)
N:1132101.725
E:432248.616

B.M. (6"x6" MANCO MONUMENT BRASS DISC)
EL=4.15 (NAVD 1988)
EL=5.11 (NGVD 1929)
GIS 106 NGS CONTROL
N: 1132620.763
E:432525898

LEGEND

87 TREE TO BE REMOVED X

13 TOTAL TREES TO BE REMOVED THIS SHEET

- COORDINATES ARE BASED ON FLORIDA STATE PLANE COORDINATE SYSTEM (WEST ZONE) NAD 83/2011.
- ELEVATIONS ARE BASED ON NAVD 1988, AND ARE DERIVED FROM BENCHMARK GIS-106, HAVING AN ELEVATION OF 4.15 FEET (NAVD 1988), AND BENCHMARK GIS-105 (PID AG9210) HAVING AN ELEVATION OF 3.29 FEET (NAVD 1988).

MATCH LINE STA. 18+00

MATCH LINE STA. 26+00

NO.	REVISION DESCRIPTION	BY	DATE

PROJECT #	465-6005719
SURVEY #	000-32835
SEC./TWN./RGE	10/35S/16E
SCALE	1"=60'

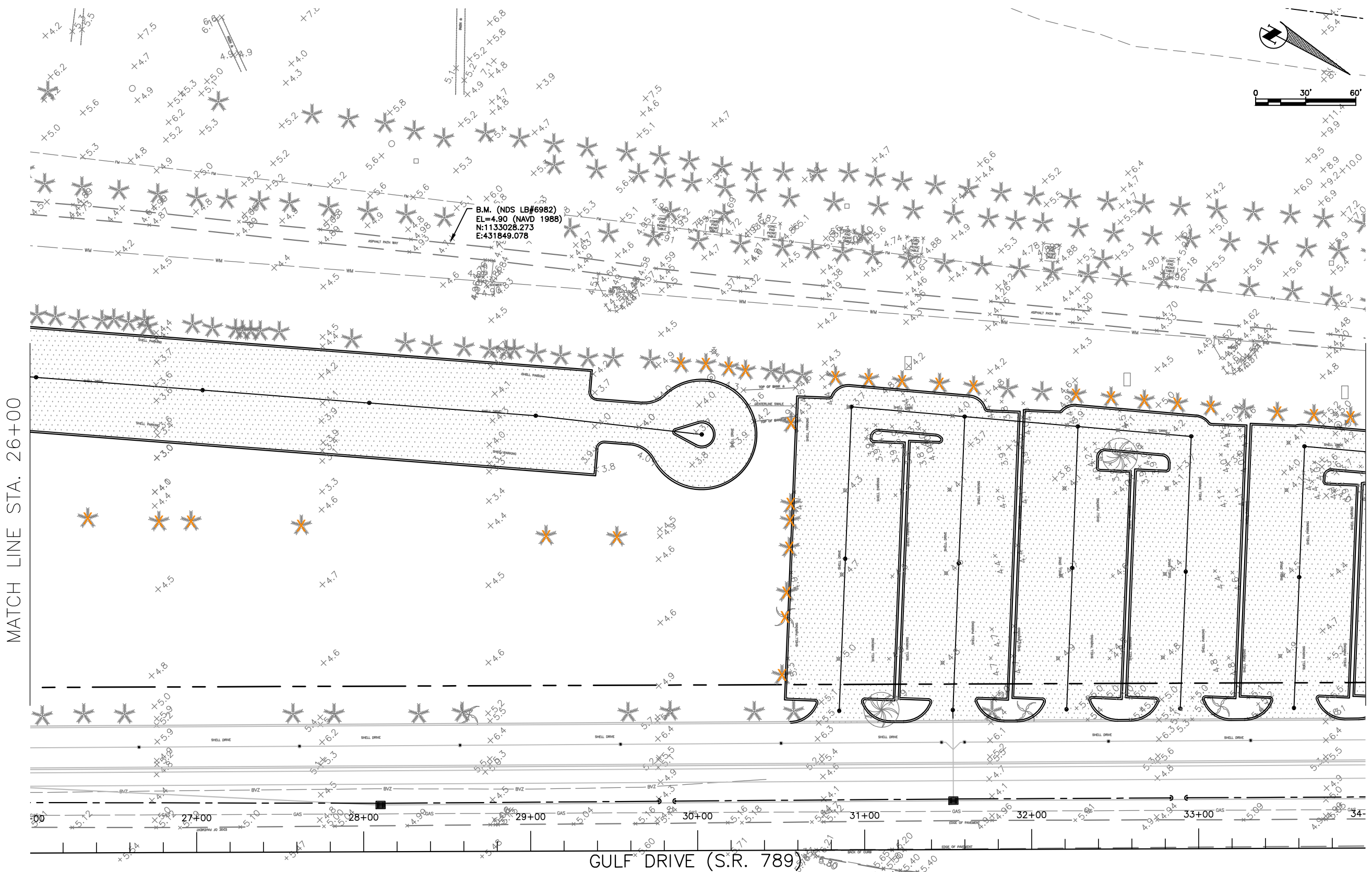
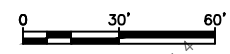
	BY	DATE
SURVEYED	ZNS	07/16/04
DESIGNED	MS	08/2015
DRAWN	TMF	03/2016
CHECKED	MS	03/2016

MICHAEL L. STURM
FLORIDA P.E. # 46005

Signature & Date
SHEET 39

I:\Highway Engineering\PROJ\MSC\Coquina Beach Parking Lot\DWG\Phase 2\CB TR-2.dwg, 39 TR-7/21/2020 9:13 AM Ken Cochran, 1:1, ANSI full bleed B (11.00 x 17.00 inches)

**COQUINA BEACH DRAINAGE
IMPROVEMENTS
MANATEE COUNTY
TREE REMOVAL PLAN**



MATCH LINE STA. 26+00

MATCH LINE STA. 34+00

GULF DRIVE (S.R. 789)

LEGEND

87	TREE TO BE REMOVED X
30	TOTAL TREES TO BE REMOVED THIS SHEET

- COORDINATES ARE BASED ON FLORIDA STATE PLANE COORDINATE SYSTEM (WEST ZONE) NAD 83/2011.
- ELEVATIONS ARE BASED ON NAVD 1988, AND ARE DERIVED FROM BENCHMARK GIS-106, HAVING AN ELEVATION OF 4.15 FEET (NAVD 1988), AND BENCHMARK GIS-105 (PID AG9210) HAVING AN ELEVATION OF 3.29 FEET (NAVD 1988).

NO.	REVISION DESCRIPTION	BY	DATE

PROJECT #	465-6005719
SURVEY #	000-32835
SEC./TWN./RGE	10/35S/16E
SCALE	1"=60'

BY	DATE
SURVEYED ZNS	07/16/04
DESIGNED MS	08/2015
DRAWN TMF	03/2016
CHECKED MS	03/2016

MICHAEL L. STURM
FLORIDA P.E. # 46005

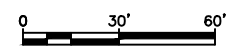
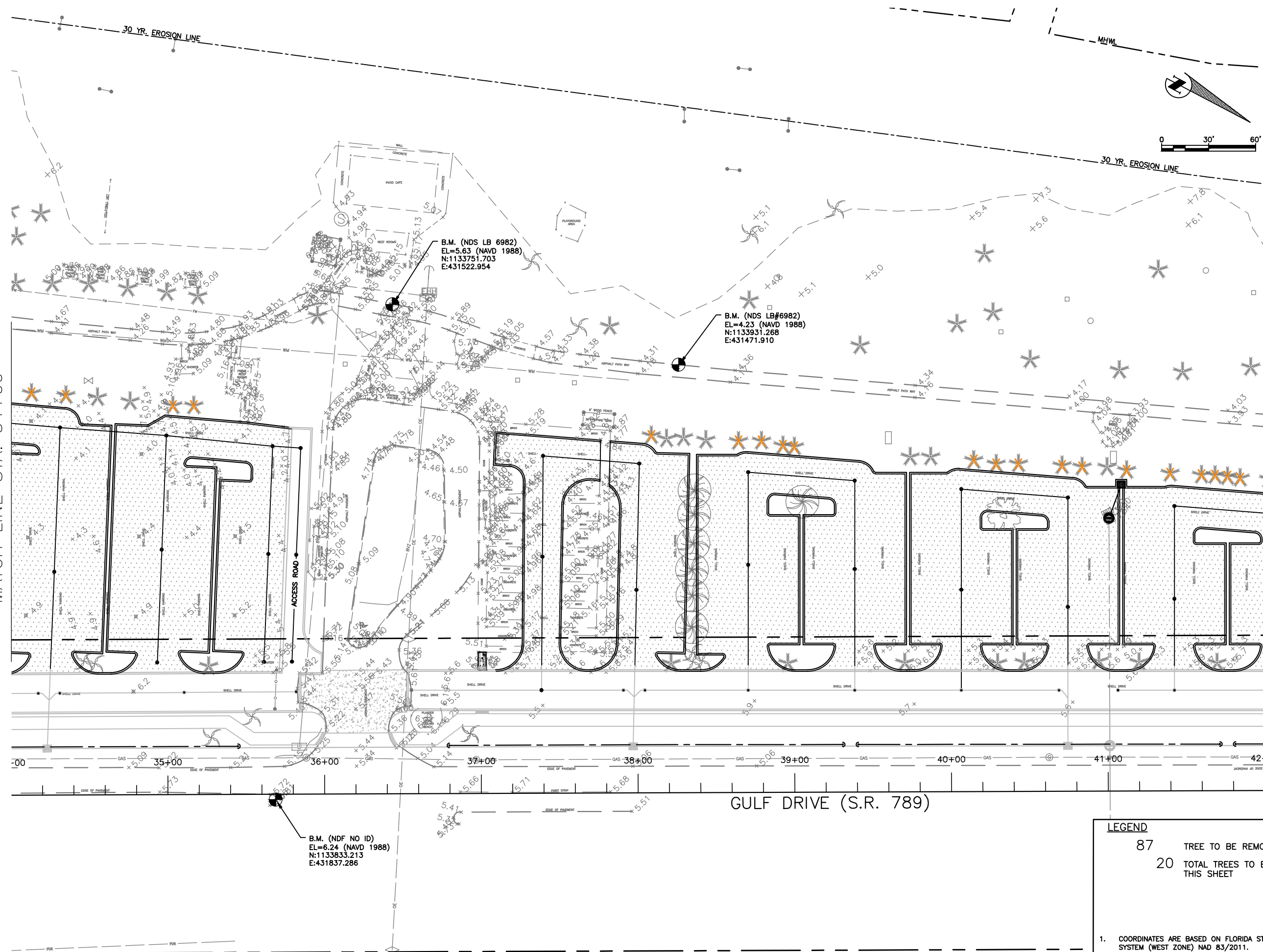
Signature & Date

I:\Highway Engineering\PROJ\MSC\Coquina Beach Parking Lot\DWG\Phase 2\CB TR-2.dwg, 40 TR, 7/21/2020 9:13 AM Ken Carver, 1:1, ANSI full bleed B (11.00 x 17.00 inches)

**COQUINA BEACH DRAINAGE
IMPROVEMENTS
MANATEE COUNTY
TREE REMOVAL PLAN**

MATCH LINE STA. 34+00

MATCH LINE STA. 42+00



B.M. (NDS LB 6982)
EL=5.63 (NAVD 1988)
N:1133751.703
E:431522.954

B.M. (NDS LB#6982)
EL=4.23 (NAVD 1988)
N:1133931.268
E:431471.910

B.M. (NDF NO ID)
EL=6.24 (NAVD 1988)
N:1133833.213
E:431837.286

LEGEND
87 TREE TO BE REMOVED X
20 TOTAL TREES TO BE REMOVED THIS SHEET

1. COORDINATES ARE BASED ON FLORIDA STATE PLANE COORDINATE SYSTEM (WEST ZONE) NAD 83/2011.
2. ELEVATIONS ARE BASED ON NAVD 1988, AND ARE DERIVED FROM BENCHMARK GIS-106, HAVING AN ELEVATION OF 4.15 FEET (NAVD 1988), AND BENCHMARK GIS-105 (PID AG9210) HAVING AN ELEVATION OF 3.29 FEET (NAVD 1988).

NO.	REVISION DESCRIPTION	BY	DATE

PROJECT #	465-6005719
SURVEY #	000-32835
SEC./TWN./RGE	10/35S/16E
SCALE	1"=60'

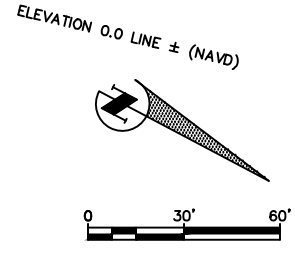
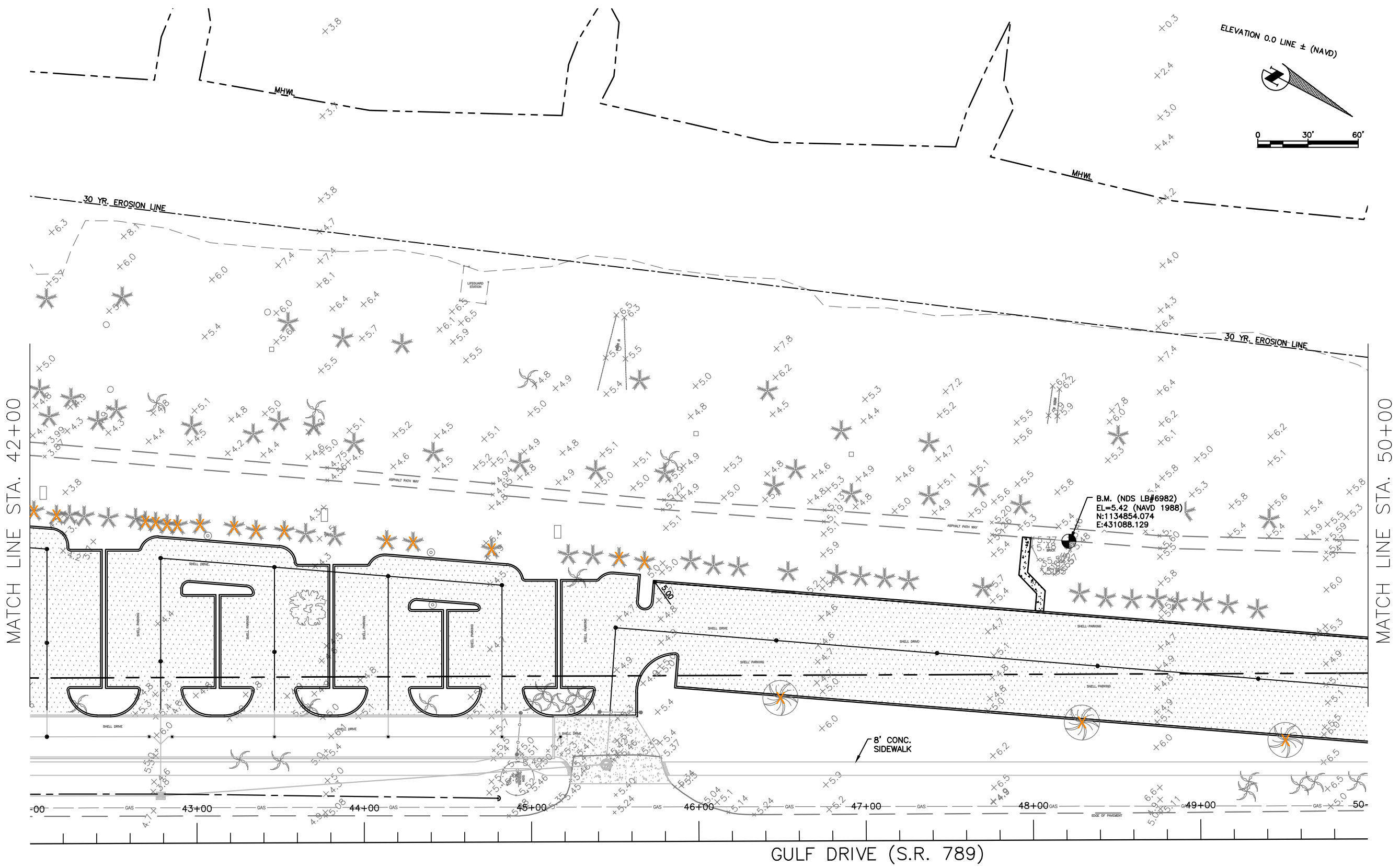
	BY	DATE
SURVEYED	ZNS	07/16/04
DESIGNED	MS	08/2015
DRAWN	TMF	03/2016
CHECKED	MS	03/2016

MICHAEL L. STURM
FLORIDA P.E. # 46005

Signature & Date

I:\Highway Engineering\PROJ\MSC\Coquina Beach Parking Lot\DWG\Phase 2\CB TR-2.dwg, 41 TR, 7/21/2020 9:14 AM Ken Cochran, 1:1, ANSI full bleed B (11.00 x 17.00 inches)

**COQUINA BEACH DRAINAGE
IMPROVEMENTS
MANATEE COUNTY
TREE REMOVAL PLAN**



I:\Highway Engineering\PROJ\MSO\Coquina Beach Parking Lot\DWG\Phase 2\CB TR-2.dwg, 42 TR, 7/21/2020 9:14 AM Ken Carber, 1:1, ANSI full bleed B (11.00 x 17.00 inches)

MATCH LINE STA. 42+00

MATCH LINE STA. 50+00

GULF DRIVE (S.R. 789)

NO.	REVISION DESCRIPTION	BY	DATE

PROJECT #	465-6005719
SURVEY #	000-32835
SEC./TWN./RGE	10/35S/16E
SCALE	1"=60'

	BY	DATE
SURVEYED	ZNS	07/16/04
DESIGNED	MS	08/2015
DRAWN	TMF	03/2016
CHECKED	MS	03/2016

MICHAEL L. STURM
FLORIDA P.E. # 46005

Signature & Date

LEGEND

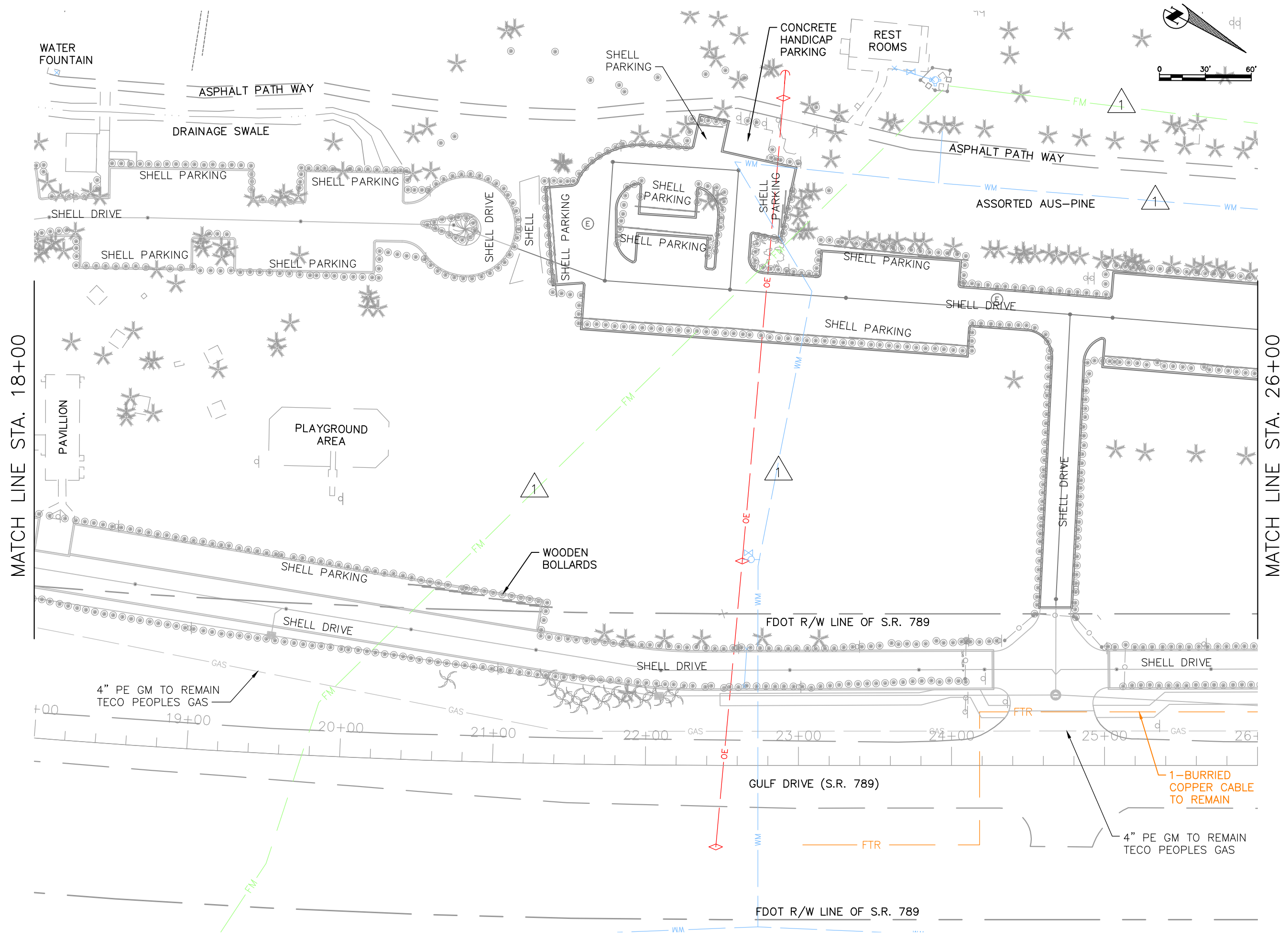
87 TREE TO BE REMOVED X

18 TOTAL TREES TO BE REMOVED THIS SHEET

1. COORDINATES ARE BASED ON FLORIDA STATE PLANE COORDINATE SYSTEM (WEST ZONE) NAD 83/2011.

2. ELEVATIONS ARE BASED ON NAVD 1988, AND ARE DERIVED FROM BENCHMARK GIS-106, HAVING AN ELEVATION OF 4.15 FEET (NAVD 1988), AND BENCHMARK GIS-105 (PID AG9210) HAVING AN ELEVATION OF 3.29 FEET (NAVD 1988).

**COQUINA BEACH DRAINAGE
IMPROVEMENTS
MANATEE COUNTY
UTILITY ADJUSTMENT SHEET**



NO.	REVISION DESCRIPTION	BY	DATE

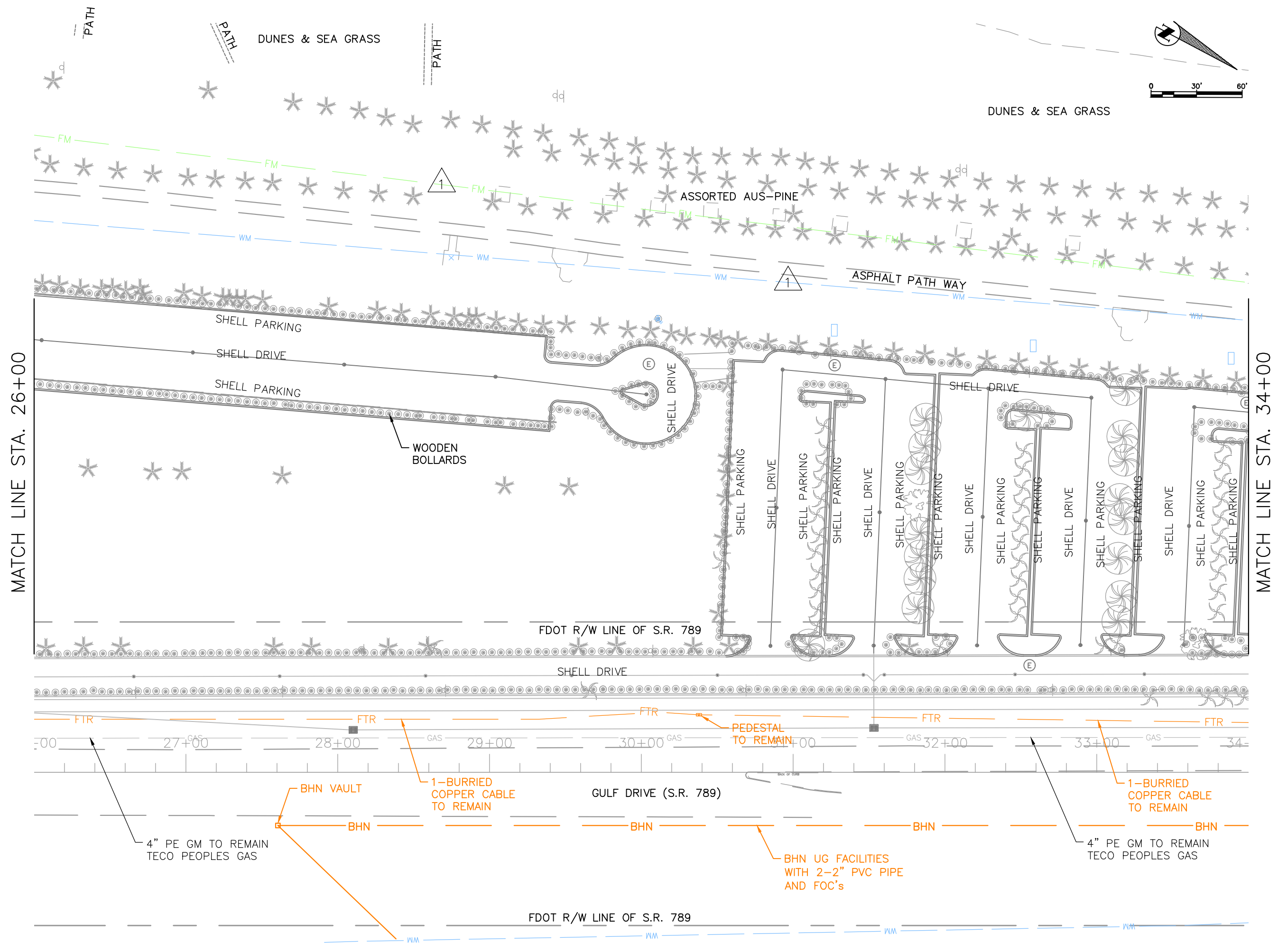
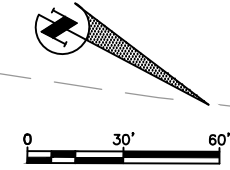
PROJECT #	465-6005719
SURVEY #	6982
SEC./TWN./RGE	10/35S/18E
SCALE	1"=60'
SURVEYED	ZNS 08/05/15
DESIGNED	MS/ES 08/2015
DRAWN	TMF 08/2016
CHECKED	MS/ES 8/2016

MICHAEL L. STURM
FLORIDA P.E. # 46005

Signature & Date
SHEET UAS2

I:\Highway Engineering\PROJ\MSA\Coquina Beach\Partion\CA\DWG\Phase 2\UG_UAS-2.dwg, UAS-7/21/2020 9:14 AM, User: Lcopher, 1:1, ANS, full sheet B (11.00 x 17.00 inches)

**COQUINA BEACH DRAINAGE
IMPROVEMENTS
MANATEE COUNTY
UTILITY ADJUSTMENT SHEET**



MATCH LINE STA. 26+00

MATCH LINE STA. 34+00

I:\HA Highway Engineering\PROJ\MSO\Coquina Beach\Partion\CA\DWG\Phase 2\UG UAS-2.dwg, 3 UAS-7/21/2020, 9:15 AM, User: Lcopher, 1:1, ANS, full sheet B (11.00 x 17.00 inches)

NO.	REVISION DESCRIPTION	BY	DATE

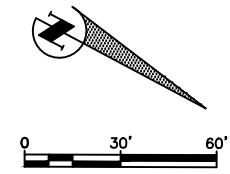
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SURVEY #	6982	
SEC./TWN./RGE	10/35S/18E	
SCALE	1"=60'	
SURVEYED	ZNS	08/05/15
DESIGNED	MS/ES	08/2015
DRAWN	TMF	08/2016
CHECKED	MS/ES	8/2016

MICHAEL L. STURM
FLORIDA P.E. # 46005

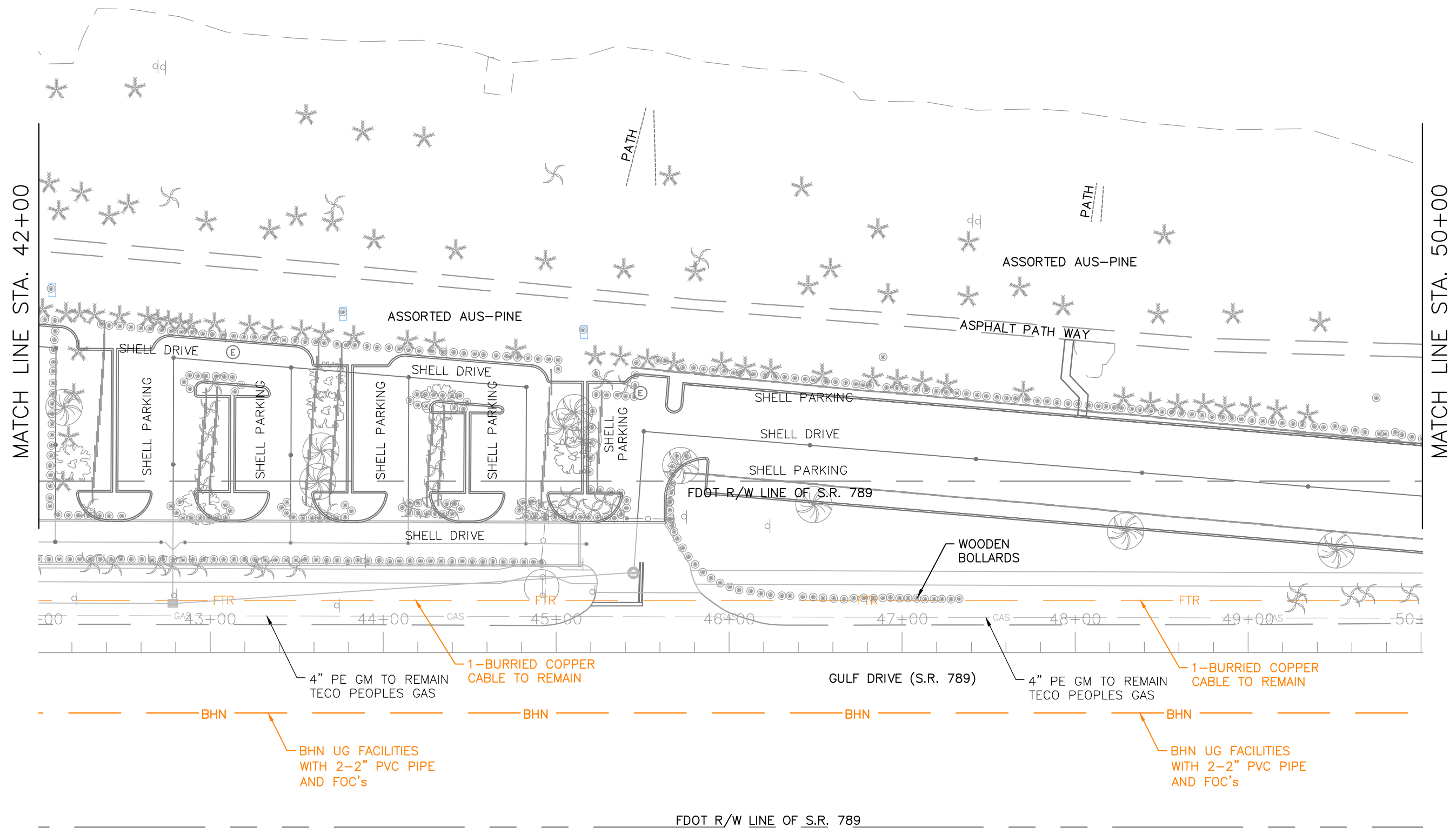
Signature & Date
SHEET UAS3



PUBLIC WORKS DEPARTMENT
ENGINEERING SERVICES
1022 26th Avenue East, Bradenton, FL 34208



**COQUINA BEACH DRAINAGE
IMPROVEMENTS
MANATEE COUNTY
UTILITY ADJUSTMENT SHEET**



NO.	REVISION DESCRIPTION	BY	DATE

PROJECT #	465-6005719
SURVEY #	6982
SEC./TWN./RGE	10/35S/18E
SCALE	1"=60'
SURVEYED	ZNS 08/05/15
DESIGNED	MS/ES 08/2015
DRAWN	TMF 08/2016
CHECKED	MS/ES 8/2016

MICHAEL L. STURM
FLORIDA P.E. # 46005

Signature & Date
SHEET UAS5

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CONSTRUCTION PLANS

FOR

COQUINA BEACH IPO PHASE 2

MANATEE COUNTY, FLORIDA

AUGUST 2020



PROJECT TEAM:

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 BRADENTON, FL 34208
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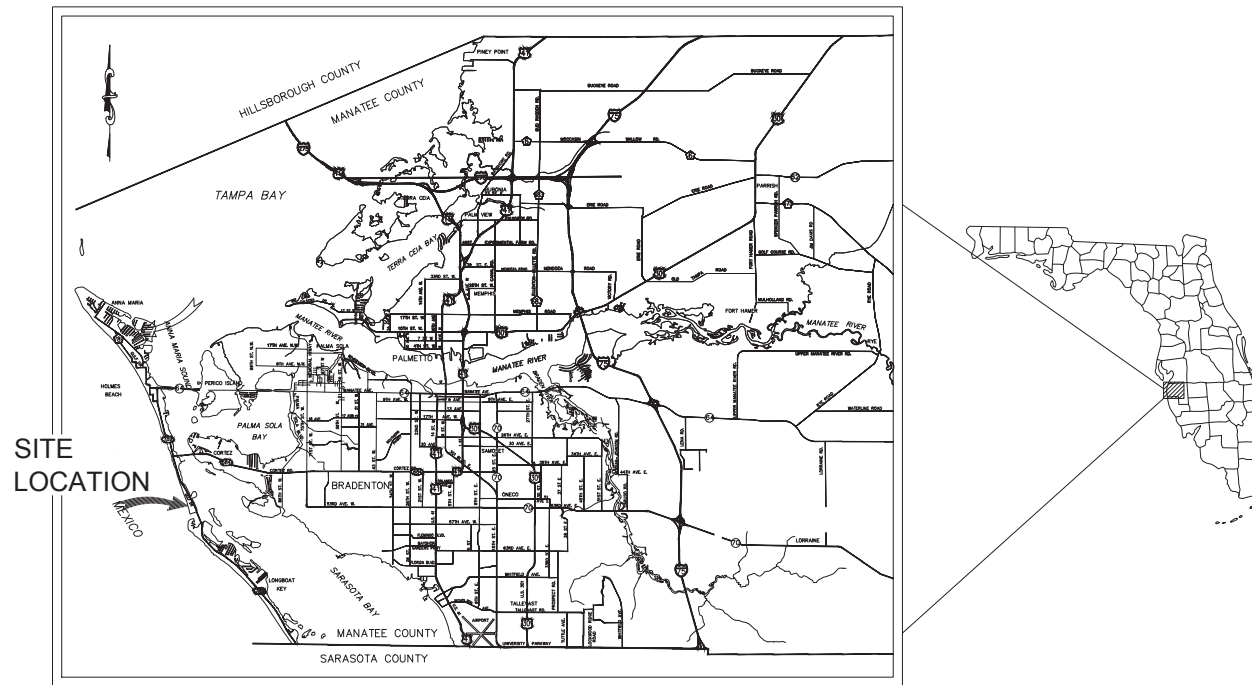
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 941-792-8811 EXT. 5002

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 TAMPA, FL 33607
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TAMPA ELECTRIC COMPANY TECO
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 786-610-7073



PROJECT VICINITY MAP
 N.T.S.

Sheet List Table	
Sheet Number	Sheet Title
00	COVER SHEET
L-201	PHASE 2 LANDSCAPE PLAN
L-150	LANDSCAPE NOTES
I-201	PHASE 2 IRRIGATION PLAN
I-150	IRRIGATION DETAILS
I-151	IRRIGATION NOTES

PREPARED BY
Kimley»Horn

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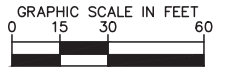
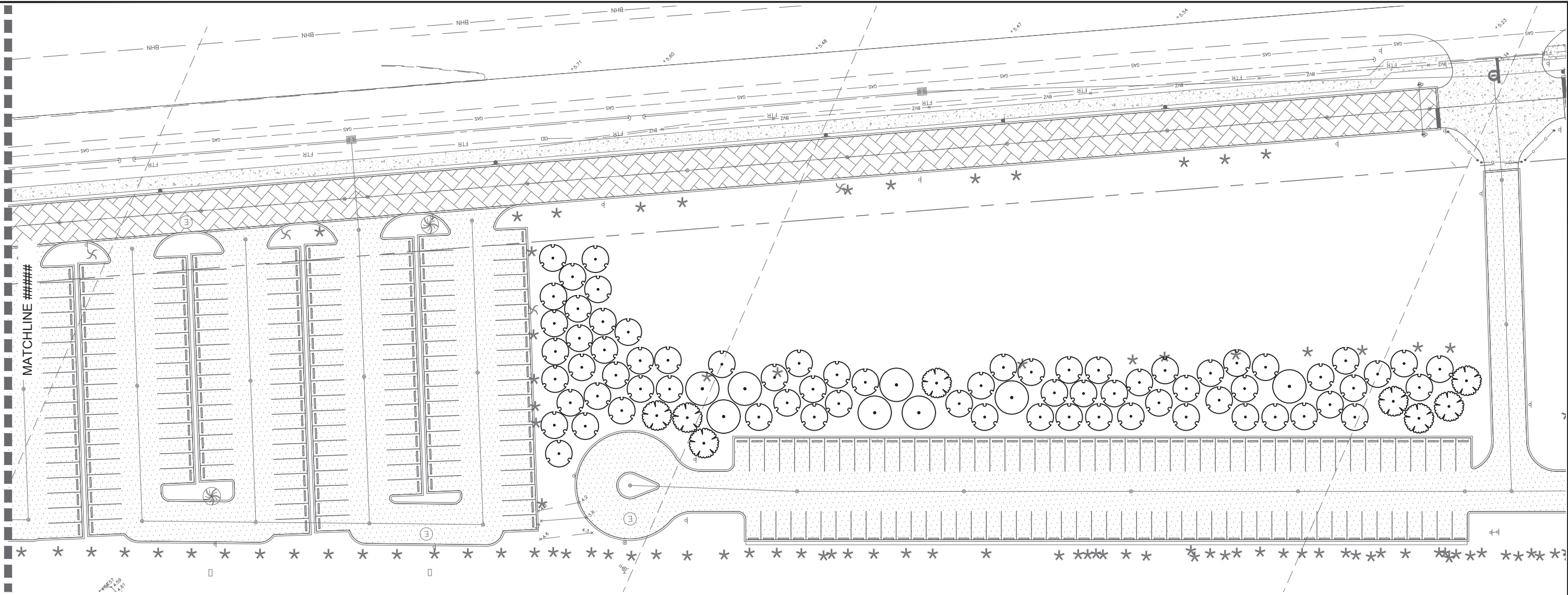
DAVID J. FLANAGAN
 FLORIDA LICENSE NUMBER:
 00001495

DATE MAY 2020
KHA PROJECT NO. 148400041
SHEET NUMBER 00

THE SITE CONSTRUCTION STAKEOUT SHALL BE PERFORMED UNDER THE DIRECTION OF A FLORIDA REGISTERED SURVEYOR. AUTOCAD FILES WILL BE FURNISHED TO AID IN THE SITE CONSTRUCTION STAKEOUT. ANY DISCREPANCIES FOUND BETWEEN AUTOCAD FILES AND SITE CONSTRUCTION PLANS SHALL BE BROUGHT TO THE ENGINEER'S ATTENTION FOR CLARIFICATION PRIOR TO THAT STAKEOUT.

Plotted By: Douglas, Jennifer Sheet Set: COQUINA BEACH IPO - LANDSCAPE Layout: L-201 PHASE 2 LANDSCAPE PLAN August 20, 2020 01:05:39pm K:\STP_LALP\148400 - Manatee County\041 - Coquina Beach IPO\CADD\PlanSheets\L-1 LANDSCAPE PLAN - COQUINA KEY IPO.dwg

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PLANT SCHEDULE PHASE 2

TREES	QTY	BOTANICAL NAME	COMMON NAME	CAL.	CONT.	HT	SPREAD	SPACING	REMARKS
	8	BUCIDA BUCERAS 'SHADY LADY'	SHADY LADY BLACK OLIVE	30 GAL.	CONTAINER	12 FT MIN	3-4 FT MIN	AS SHOWN	PLANT SIZES BASED ON AVAILABILITY.
	8	BURSERA SIMARUBA	GUMBO LIMBO	30 GAL.	CONTAINER	12 FT MIN	3-4 FT MIN	AS SHOWN	PLANT SIZES BASED ON AVAILABILITY.
	71	CONOCARPUS ERECTUS	GREEN BUTTONWOOD	30 GAL.	CONTAINER	10 - 12 FT	3-4 FT MIN	AS SHOWN	STANDARD. PLANT SIZES BASED ON AVAILABILITY.

CALL 2 WORKING DAYS BEFORE YOU DIG

IT'S THE LAW! DIAL 811

Know what's below. Call before you dig.

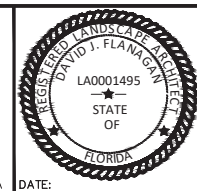
SUNSHINE STATE ONE CALL OF FLORIDA, INC.

Kimley»Horn

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KHA PROJECT
 148400041
 DATE
 MAY 2020
 SCALE AS SHOWN
 DESIGNED BY KHA
 DRAWN BY JLD
 CHECKED BY DJF

COQUINA BEACH IPO



PHASE 2 LANDSCAPE PLAN

SHEET NUMBER
L-201

No.	REVISIONS	DATE	BY

MANATEE COUNTY

FLORIDA

DATE:

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LANDSCAPE SPECIFICATIONS

1. SCOPE OF WORK

- THE WORK CONSISTS OF: FURNISHING ALL LABOR, MATERIALS, EQUIPMENT, TOOLS, TRANSPORTATION, AND ANY OTHER APPURTENANCES NECESSARY FOR THE COMPLETION OF THIS PROJECT AS SHOWN ON THESE PLANS.
- WORK SHALL INCLUDE MAINTENANCE AND WATERING OF ALL CONTRACT PLANTING AREAS UNTIL CERTIFICATION OF ACCEPTANCE BY THE OWNER.
- WORK SHALL BE COORDINATED WITH OTHER TRADES TO PREVENT CONFLICTS.

2. PROTECTION OF EXISTING AND PROPOSED SITE ELEMENTS

- PROTECT ALL EXISTING SITE ITEMS, ALREADY COMPLETED OR ESTABLISHED AND DESIGNATED TO REMAIN FROM DAMAGE BY THE CONTRACTOR UNLESS OTHERWISE SPECIFIED. ALL DAMAGE RESULTING FROM THE CONTRACTOR'S WORK SHALL BE REPAIRED OR REPLACED TO THE SATISFACTION OF THE OWNER, AT NO COST TO THE OWNER.
- MAINTAIN ALL NECESSARY BMP DEVICES THROUGHOUT THE DURATION OF ALL CONSTRUCTION ACTIVITIES.
- WHERE APPLICABLE, SUBMIT A DETAILED PROJECT SPECIFIC WORK ZONE TRAFFIC CONTROL PLAN IN ACCORDANCE WITH THE APPROPRIATE REGULATORY AGENCY STANDARDS UNLESS THE WORK REQUIRES NOTHING MORE THAN A DIRECT APPLICATION OF FOOT STANDARD PLANS FOR ROAD AND BRIDGE CONSTRUCTION, INDEX 102-600.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING ALL UTILITIES, WHETHER PUBLIC OR PRIVATE, PRIOR TO CONSTRUCTION ACTIVITIES. THE INFORMATION AND DATA SHOWN WITH RESPECT TO EXISTING UTILITIES IS APPROXIMATE. THE OWNER AND DESIGN PROFESSIONAL SHALL NOT BE RESPONSIBLE FOR THE ACCURACY AND COMPLETENESS OF ANY SUCH INFORMATION OR DATA. THE CONTRACTOR SHALL HAVE FULL RESPONSIBILITY FOR: REVIEWING AND CHECKING ALL SUCH INFORMATION AND DATA; LOCATING ALL UTILITIES PRIOR TO CONSTRUCTION; THE SAFETY AND PROTECTION THEREOF; REPAIRING ANY DAMAGE RESULTING FROM THE WORK. THE COST OF ALL WILL BE CONSIDERED AS HAVING BEEN INCLUDED IN THE CONTRACT PRICE. THE CONTRACTOR SHALL NOTIFY ANY AFFECTED UTILITY COMPANIES OR AGENCIES IN WRITING AT LEAST 48 HOURS PRIOR TO BEGINNING CONSTRUCTION. THE CONTRACTOR SHALL NOTIFY THE LANDSCAPE ARCHITECT IN WRITING WHEN ANY CONFLICT BETWEEN UTILITIES AND THESE PLANS EXIST PRIOR TO PLANTING.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL UNAUTHORIZED CUTTING OR DAMAGE TO PLANT MATERIAL EXISTING OR OTHERWISE. THIS SHALL INCLUDE COMPACTION AND SPILLING OF ANY DELETERIOUS MATERIALS WITHIN THE DRIP-LINE OF EXISTING TREES TO REMAIN. PLANT MATERIAL KILLED OR DAMAGED THAT IS MISSHAPEN AND/OR UNSIGHTLY SHALL BE REPLACED WITH LIKE SIZE AND KIND TO THE SATISFACTION OF THE OWNER OR REGULATORY AGENCY AT THE COST TO THE CONTRACTOR.
- SEE TREE MITIGATION PLAN AND NOTES, IF APPLICABLE.

3. SUBMITTALS

- SUBMIT MATERIAL SAMPLES LISTED BELOW FOR APPROVAL, ON SITE OR AS DETERMINED BY THE OWNER. UPON APPROVAL, DELIVERY OF MATERIALS MAY COMMENCE.

MATERIAL	SAMPLE SIZE
MULCH	ONE (1) GALLON PLASTIC BAG
SOIL MIXTURE	ONE (1) GALLON PLASTIC BAG
PLANTS	ONE (1) OF EACH VARIETY (OR TAGGED IN NURSERY)
- SUBMIT TESTING RESULTS OF SOIL MIXTURE AS PER SECTION 6 BELOW.

4. PLANT MATERIALS

- ALL PLANT MATERIAL SHALL CONFORM TO THE SPECIFICATIONS INDICATED ON THE DRAWINGS AND SHALL BE IN ACCORDANCE WITH GRADES AND STANDARDS FOR NURSERY PLANTS, LATEST EDITION, PUBLISHED BY THE FLORIDA DEPARTMENT OF AGRICULTURE AND CONSUMER SERVICES. ALL PLANTS SHALL BE FLORIDA GRADE NO. 1 OR BETTER AS DETERMINED BY THE FLORIDA DIVISION OF PLANT INDUSTRY. ALL MATERIALS SHALL BE SUBJECT TO APPROVAL BY THE OWNER OR OWNER'S REPRESENTATIVE. NO SUBSTITUTIONS SHALL BE MADE WITHOUT WRITTEN PERMISSION FROM THE LANDSCAPE ARCHITECT AND OWNER.
- ALL TREE SPECIES INSTALLED SHALL BE MATCHED IN SIZE AND SHAPE UNLESS NOTED OTHERWISE.
- PLANTS SHALL BE SUBJECT TO INSPECTION AND APPROVAL AT THE PLACE OF GROWTH, UPON DELIVERY TO THE SITE, DURING PROGRESS OF THE WORK AND/OR AFTER COMPLETION. REJECTED PLANTS SHALL BE REMOVED AND REPLACED IMMEDIATELY.

5. DIGGING AND HANDLING

- PROTECT ROOTS OR ROOT BALLS OF PLANTS AT ALL TIMES FROM SUN, DRYING WINDS, WATER AND FREEZING, AS NECESSARY UNTIL PLANTING. NO PLANT MATERIAL SHALL BE HANDLED BY STEMS.

6. SOIL MIXTURE (PLANTING MEDIUM, PLANTING MIX, TOPSOIL MIX)

- TEST EXISTING SOIL AND AMEND AS NECESSARY IN ACCORDANCE WITH THE GUIDELINES BELOW.
- SOIL MIXTURE (PLANTING MEDIUM FOR PLANT PITS) SHALL CONSIST OF TWO PARTS OF TOPSOIL AND ONE PART SAND, AS DESCRIBED BELOW. SUBMIT SAMPLES AND PH TESTING RESULTS OF SOIL MIXTURE FOR OWNER'S REPRESENTATIVE APPROVAL PRIOR TO PLANT INSTALLATION OPERATIONS COMMENCE.
- TOPSOIL FOR USE IN PREPARING SOIL MIXTURE FOR BACKFILLING PLANT PITS SHALL BE FERTILE, FRIABLE, AND OF A LOAMY CHARACTER, REASONABLY FREE OF SUBSOIL, CLAY LUMPS, BRUSH WEEDS AND OTHER LITTER; FREE OF ROOTS, STUMPS, STONES LARGER THAN 2" IN ANY DIRECTION, AND OTHER EXTRANEOUS OR TOXIC MATTER HARMFUL TO PLANT GROWTH. IT SHALL CONTAIN THREE (3) TO FIVE (5) PERCENT DECOMPOSED ORGANIC MATTER AND HAVE A PH BETWEEN 5.5 AND 7.0.
- SAND SHALL BE COARSE, CLEAN, WELL-DRAINING, NATIVE SAND.
- PLANT TREES IN THE EXISTING NATIVE SOIL ON SITE, UNLESS DETERMINED TO BE UNSUITABLE - AT WHICH POINT THE CONTRACTOR SHALL CONTACT OWNER'S REPRESENTATIVE TO DISCUSS ALTERNATE RECOMMENDATION PRIOR TO PLANTING.

7. WATER

- PROVIDE WATER NECESSARY FOR PLANTING ESTABLISHMENT AND MAINTENANCE. WATER SHALL BE OF SATISFACTORY QUALITY TO SUSTAIN ADEQUATE PLANT GROWTH AND SHALL NOT CONTAIN HARMFUL, NATURAL OR MAN-MADE ELEMENTS DETRIMENTAL TO PLANTS.
- WATERING/IRRIGATION RESTRICTIONS MAY APPLY - REFER TO PROPERTY'S JURISDICTIONAL AUTHORITY.

8. FERTILIZER

- PROVIDE FERTILIZER APPLICATION SCHEDULE TO OWNER, AS APPLICABLE TO SOIL TYPE, PLANT INSTALLATION TYPE, AND SITE'S PROPOSED USE. SUGGESTED FERTILIZER TYPES SHALL BE ORGANIC OR OTHERWISE NATURALLY-DERIVED.
- FERTILIZER RESTRICTIONS MAY APPLY - REFER TO PROPERTY'S JURISDICTIONAL AUTHORITY.

9. MULCH

- MOISTEN MULCH MATERIAL AT THE TIME OF APPLICATION TO PREVENT WIND DISPLACEMENT, AND APPLIED AT A MINIMUM DEPTH OF THREE (3) INCHES. CONTRACTOR SHALL CLEAR MULCH FROM WITHIN A SIX (6) INCH RADIUS AROUND TRUNK / STEM FLARE. MULCH SHALL BE "FLORIMULCH", EUCALYPTUS MULCH, OR SIMILAR SUSTAINABLY HARVESTED MULCH UNLESS SPECIFIED OTHERWISE.
- PROVIDE A THREE (3) INCH MINIMUM LAYER OF SPECIFIED MULCH OVER THE ENTIRE AREA OF EACH PLANTING BED AND TREE RING (SIX (6) FOOT DIAMETER MINIMUM).

10. CONTAINER GROWN STOCK

- CONTAINER GROWN PLANTS SHALL HAVE BEEN GROWN IN ITS CONTAINER SUFFICIENTLY LONG ENOUGH FOR THE NEW FIBROUS ROOTS TO HAVE DEVELOPED SO THAT THE ROOT MASS WILL RETAIN ITS SHAPE AND HOLD TOGETHER WHEN

- REMOVED FROM THE CONTAINER.
- INSUFFICIENT OR POORLY STRUCTURED ROOT SYSTEMS ARE NOT ACCEPTABLE AND WILL BE REJECTED.
- ROOTS PLUS GROWER (RPG) PRODUCTS SHALL BE USED WHERE SPECIFIED.

11. MATERIALS LIST

- ALL QUANTITIES ARE PROVIDED FOR CONVENIENCE ONLY. CONTRACTOR SHALL CONFIRM ALL QUANTITIES PER PLAN PRIOR TO BIDDING AND CONSTRUCTION.

12. FINE GRADING

- THE CONTRACTOR SHALL BE RESPONSIBLE FOR FINE GRADING WHICH CONSISTS OF FINAL FINISHED GRADING (INCLUDING ADDITIONAL SOIL MIXTURE AS NEEDED) FOR LAWN AND PLANTING AREAS THAT HAVE BEEN ROUGH GRADED BY OTHERS. FINISH GRADE SHALL ACCOUNT FOR THICKNESS OF SOD AND/OR MULCH DEPTH.
- ALL PLANTING AREAS SHALL BE GRADED AND MAINTAINED FOR POSITIVE DRAINAGE TO SURFACE/SUBSURFACE STORM DRAIN SYSTEMS. AREAS ADJACENT TO BUILDINGS SHALL SLOPE AWAY FROM THE BUILDINGS. REFER TO CIVIL ENGINEER'S PLANS FOR FINAL GRADES, IF APPLICABLE.

13. PLANTING PROCEDURES

- CLEAN WORK AND SURROUNDING AREAS OF ALL RUBBISH OR OBJECTIONABLE MATTER DAILY. REMOVE ALL MORTAR, CEMENT, AND TOXIC MATERIAL FROM THE SURFACE OF ALL PLANT BEDS. DO NOT MIX THESE MATERIALS WITH THE SOIL. SHOULD THE CONTRACTOR FIND SUCH SOIL CONDITIONS BENEATH THE SOIL WHICH WILL IN ANY WAY ADVERSELY AFFECT THE PLANT GROWTH, IMMEDIATELY CALL IT TO THE ATTENTION OF THE OWNER'S REPRESENTATIVE.
- LOCATE, MAINTAIN AND PROTECT ALL UTILITIES ABOVE AND BELOW GROUND. CALL SUNSHINE STATE ONE CALL OF FLORIDA, INC. (811) TO LOCATE UTILITIES AT LEAST 48 HOURS PRIOR TO CONSTRUCTION.
- NOTIFY LANDSCAPE ARCHITECT IN WRITING IMMEDIATELY IF CONFLICT(S) EXIST WITH PROPOSED TREE LOCATIONS AND EXISTING OVERHEAD POWER LINES IN ACCORDANCE WITH SETBACK REQUIREMENTS OF FPL'S "RIGHT TREE, RIGHT PLACE" PROGRAM. CONSULT THE UNIVERSITY OF FLORIDA'S "TREES AND POWER LINE" WEBSITE FOR TREE SIZE CATEGORIES.
- NOTIFY LANDSCAPE ARCHITECT IN WRITING IMMEDIATELY IF CONFLICT(S) EXIST WITH PROPOSED TREE LOCATIONS AND EXISTING / PROPOSED LIGHT POLES. TREES INSTALLED IN CONFLICT WITH LIGHT POLES ARE SUBJECT TO RELOCATION AT THE EXPENSE OF THE CONTRACTOR.
- REMOVE ALL EXISTING AND IMPORTED DELETERIOUS MATERIAL AND SUB-BASE FROM ALL LANDSCAPE PLANTING AREAS TO A MINIMUM DEPTH OF 36" OR TO NATIVE SOIL. CONTRACTOR IS RESPONSIBLE TO BACKFILL THESE PLANTING AREAS TO ROUGH FINISHED GRADE AS NEEDED WITH CLEAN SOIL MIXTURE.
- FURNISH NURSERY'S CERTIFICATE OF COMPLIANCE WITH ALL APPLICABLE REQUIREMENTS, COMPLY WITH APPLICABLE FEDERAL, STATE, COUNTY, AND LOCAL REGULATIONS GOVERNING LANDSCAPE MATERIALS AND WORK.
- EXCAVATE ALL PLANTING PITS IN ACCORDANCE WITH LANDSCAPE DETAILS PROVIDED. TEST ALL TREE PITS WITH WATER BEFORE PLANTING TO ASSURE PROPER DRAINAGE PERCOLATION IS AVAILABLE. IF POOR DRAINAGE EXISTS, NOTIFY LANDSCAPE ARCHITECT IN WRITING. NO ALLOWANCE WILL BE MADE FOR LOST PLANTS DUE TO IMPROPER DRAINAGE. CONTRACTOR SHALL ENSURE ELIMINATION OF ALL AIR POCKETS AROUND ROOTS.
- SET TREES AND SHRUBS STRAIGHT AT AN ELEVATION THAT, AFTER SETTLEMENT, THE PLANT CROWN WILL STAND ONE (1) TO TWO (2) INCHES ABOVE GRADE. EACH PLANT SHALL BE SET IN THE CENTER OF THE PIT. PLANTING SOIL MIXTURE SHALL BE BACK FILLED, THOROUGHLY TAMPED AROUND THE BALL, AND SETTLED BY WATER (AFTER TAMPING).
- DO NOT COVER TOP OF BALL WITH SOIL MIXTURE. ALL BURLAP, ROPE, WIRES, BASKETS, ETC., SHALL BE REMOVED FROM UPPER ONE THIRD (1/3) OF ROOT BALLS.
- ALL SUCKER GROWTH AND BROKEN OR BADLY DAMAGED BRANCHES SHALL BE REMOVED WITH A CLEAN CUT IN ACCORDANCE WITH ANSI A-300.
- SHRUBS AND GROUND COVER PLANTS SHALL BE SPACED IN ACCORDANCE WITH THE DRAWINGS, LANDSCAPE DETAILS AND AS INDICATED ON THE PLANT LIST.
- TREE GUYING AND BRACING SHALL BE INSTALLED BY THE CONTRACTOR IN ACCORDANCE WITH THE PLANS TO INSURE STABILITY AND MAINTAIN TREES IN A PLUMB AND UPRIGHT POSITION.
- FAILURE TO FOLLOW THE ABOVE PLANTING PROCEDURE SHALL MAKE THE CORRECTIVE MEASURES THE RESPONSIBILITY OF THE CONTRACTOR.

14. LAWN SODDING

- THE WORK CONSISTS OF LAWN BED PREPARATION, SOIL PREPARATION, AND SODDING NECESSARY TO PRODUCE A TURF GRASS LAWN ACCEPTABLE TO THE OWNER.
- ALL AREAS THAT ARE TO BE SODDED SHALL BE CLEARED OF ANY ROUGH GRASS, WEEDS, AND DEBRIS TO A MINIMUM DEPTH OF THREE (3) INCHES. PROVIDE ONE (1) INCH OF TOPSOIL ACROSS ENTIRE LAWN BED AND MIX THOROUGHLY INTO TOP FOUR (4) INCHES OF SOIL TO BRING THE GROUND TO AN EVEN GRADE. THE ENTIRE SURFACE SHALL BE ROLLED WITH A ROLLER WEIGHING NOT MORE THAN ONE-HUNDRED (100) POUNDS PER FOOT OF WIDTH. DURING THE ROLLING, ALL DEPRESSIONS CAUSED BY SETTLEMENT SHALL BE FILLED WITH ADDITIONAL TOPSOIL, AND THE SURFACE SHALL BE REGRADED AND ROLLED UNTIL PRESENTING A SMOOTH AND EVEN FINISH TO THE REQUIRED GRADE.
- HAND RAKE LAWN BED UNTIL ALL BUMPS AND DEPRESSIONS ARE REMOVED. WET PREPARED AREA THOROUGHLY.
- SOD ALL AREAS THAT ARE NOT PAVED OR PLANTED AS DESIGNATED ON THE DRAWINGS WITHIN THE CONTRACT LIMITS, UNLESS SPECIFICALLY NOTED OTHERWISE.
- THE SOD SHALL BE CERTIFIED TO MEET FLORIDA STATE PLANT BOARD SPECIFICATIONS, ABSOLUTELY TRUE TO VARIETAL TYPE, AND FREE FROM WEEDS, FUNGUS, INSECTS AND DISEASE OF ANY KIND.
- SOD PANELS SHALL BE LAID TIGHTLY TOGETHER SO AS TO MAKE A SOLID SODDED LAWN AREA. SOD SHALL BE LAID UNIFORMLY AGAINST THE EDGES OF ALL CURBS AND OTHER HARDSCAPE ELEMENTS, PAVED AND PLANTED AREAS.
- IMMEDIATELY FOLLOWING SOD LAYING, ROLL LAWN AREAS WITH A LAWN ROLLER AND THEN THOROUGHLY IRRIGATED.
- IF, IN THE OPINION OF THE OWNER, TOP-DRESSING IS NECESSARY AFTER ROLLING TO FILL THE VOIDS BETWEEN THE SOD PANELS AND TO EVEN OUT INCONSISTENCIES IN THE SOD, CLEAN SAND, AS APPROVED BY THE OWNER'S REPRESENTATIVE, SHALL BE UNIFORMLY SPREAD OVER THE ENTIRE SURFACE OF THE SOD AND THOROUGHLY WATERED IN. FERTILIZE INSTALLED SOD AS ALLOWED BY PROPERTY'S JURISDICTIONAL AUTHORITY.
- DURING DELIVERY, PRIOR TO, AND DURING THE PLANTING OF THE LAWN AREAS, THE SOD PANELS SHALL AT ALL TIMES BE PROTECTED FROM EXCESSIVE DRYING AND UNNECESSARY EXPOSURE OF THE ROOTS TO THE SUN. ALL SOD SHALL BE STACKED SO AS NOT TO BE DAMAGED BY EXCESSIVE HEAT AND MOISTURE.
- WITHIN THE CONTRACT LIMITS, PRODUCE AND MAINTAIN A DENSE, WELL ESTABLISHED LAWN. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE REPAIR AND RE-SODDING OF ALL ERODED, SUNKEN OR BARE SPOTS UNTIL CERTIFICATION OF ACCEPTANCE BY THE OWNER'S REPRESENTATIVE. REPAIRED SODDING SHALL BE ACCOMPLISHED AS IN THE ORIGINAL WORK (INCLUDING REGRADE IF NECESSARY).

15. CLEANUP

- UPON COMPLETION OF ALL PLANTING WORK AND BEFORE FINAL ACCEPTANCE, REMOVE ALL MATERIAL, EQUIPMENT, AND DEBRIS RESULTING FROM HIS WORK. ALL PAVED AREAS SHALL BE CLEANED AND THE SITE LEFT IN A NEAT AND ACCEPTABLE CONDITION AS APPROVED BY THE OWNER'S REPRESENTATIVE.

16. PLANT MATERIAL MAINTENANCE

- ALL PLANT MATERIAL SHALL BE MAINTAINED BY WATERING, CULTIVATING, SPRAYING, AND ALL OTHER OPERATIONS (SUCH AS RE-STAKING OR REPAIRING GUY SUPPORTS) AS NECESSARY TO INSURE HEALTHY AND VIGOROUS GROWING CONDITIONS BY THE CONTRACTOR UPON DELIVERING TO THE SITE AND UNTIL FINAL ACCEPTANCE OF WORK.

17. FINAL INSPECTION AND ACCEPTANCE OF WORK

- ALL PLANT BEDS SHALL BE KEPT FREE OF NOXIOUS WEEDS UNTIL FINAL ACCEPTANCE OF WORK. PRIOR TO FINAL INSPECTION, TREAT ALL PLANTING BEDS WITH AN APPROVED PRE-EMERGENT HERBICIDE PER MANUFACTURER RECOMMENDATIONS. (AS ALLOWED BY JURISDICTIONAL AUTHORITY)

- PROVIDE WATERING/IRRIGATION SCHEDULE FOR ALL PLANT MATERIAL TO OWNER. OBSERVE ALL APPLICABLE WATERING RESTRICTIONS AS SET FORTH BY THE PROPERTY'S JURISDICTIONAL AUTHORITY.

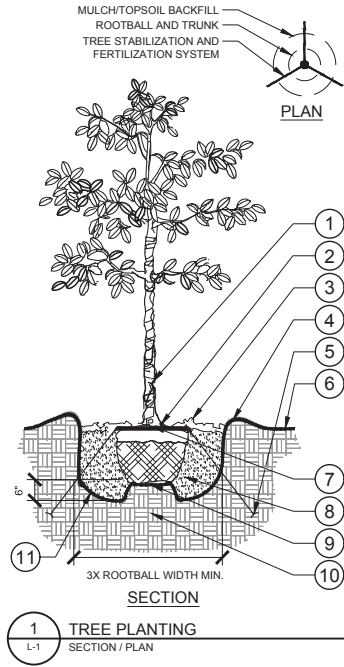
- UPON COMPLETION OF ALL WORK, A FINAL INSPECTION SHALL BE PERFORMED BY THE OWNER AND/OR OWNER'S REPRESENTATIVE. ALL PLANTING, CONSTRUCTION AND ALL OTHER INCIDENTAL WORK PERTAINING TO THIS CONTRACT SHALL BE INSPECTED FOR COMPLIANCE WITH THE CONTRACT DOCUMENTS. ANY ITEMS FOUND TO NOT BE IN COMPLIANCE SHALL BE CORRECTED AT THE COST OF THE CONTRACTOR.

18. WARRANTY

- THE LIFE AND SATISFACTORY CONDITION OF ALL PLANT MATERIAL INSTALLED BY THE LANDSCAPE CONTRACTOR SHALL BE WARRANTED BY THE CONTRACTOR FOR A MINIMUM OF ONE (1) CALENDAR YEAR COMMENCING AT THE TIME OF CERTIFICATION AND ACCEPTANCE OF THE WORK BY THE OWNER AND/OR OWNER'S REPRESENTATIVE.
- ANY PLANT NOT FOUND IN A HEALTHY GROWING CONDITION THROUGHOUT THE WARRANTY PERIOD SHALL BE REMOVED FROM THE SITE AND REPLACED AS SOON AS WEATHER CONDITIONS PERMIT. ALL REPLACEMENTS SHALL BE PLANTS OF THE SAME KIND AND SIZE AS SPECIFIED IN THE PLANT LIST. THEY SHALL BE FURNISHED, PLANTED AND MULCHED AS SPECIFIED AT NO ADDITIONAL COST TO THE OWNER. ANY REPLACED PLANT MATERIAL SHALL BE SUBJECT TO A NEW ONE (1) YEAR WARRANTY.
- IN THE EVENT THE OWNER DOES NOT CONTRACT WITH THE CONTRACTOR FOR LANDSCAPE AND IRRIGATION MAINTENANCE, THE CONTRACTOR SHOULD VISIT THE PROJECT SITE PERIODICALLY DURING THE ONE (1) YEAR WARRANTY PERIOD TO EVALUATE MAINTENANCE PROCEDURES BEING PERFORMED BY THE OWNER. CONTRACTOR SHALL NOTIFY THE OWNER IN WRITING OF MAINTENANCE PROCEDURES OR CONDITIONS WHICH THREATEN VIGOROUS AND HEALTHY PLANT GROWTH.

19. ABBREVIATIONS

B&B -	BALLED AND BURLAPPED
BR -	BARE ROOT
CAL -	CALIPER
CT -	CLEAR TRUNK
DBH -	DIAMETER AT BREAST HEIGHT
FG -	FIELD GROWN
FTG -	FULL TO GROUND
GW -	GREY WOOD
HO -	HARDENED OFF
OA -	OVERALL HEIGHT
RPG -	ROOTS PLUS GROWER



- TRUNK/ROOT BALL TO BE CENTERED AND PLUMB/LEVEL IN PLANTING PIT.
- 6" DIA. CLEAR OF MULCH AT TRUNK FLARE.
- 3" MINIMUM MULCH AS SPECIFIED. WHERE TREES ARE PLACED IN SOD, MULCH RING FOR TREES SHALL BE 6" DIAMETER (MIN.) OR AS DIRECTED BY OWNER'S REPRESENTATIVE.
- 4" HIGH BERM, FIRMLY COMPACTED.
- ANCHOR SYSTEM INSTALLED PER MANUFACTURER'S RECOMMENDATIONS.
- FINISHED GRADE. (SEE GRADING PLAN)
- TOP OF ROOTBALL MIN. 1" ABOVE FINISHED GRADE.
- PREPARED PLANTING SOIL AS SPECIFIED.
- TOP OF ROOTBALL SHALL BE 1" ABOVE FINISHED GRADE. ROOTBALLS GREATER THAN 24" DIAMETER SHALL BE PLACED ON MOUND OF UNDISTURBED SOIL TO PREVENT SETTLING. ROOTBALLS SMALLER THAN 24" IN DIAMETER MAY SIT ON COMPACTED EARTH.
- UNDISTURBED NATIVE SOIL.
- SCARIFY BOTTOM AND SIDES OF PLANTING PIT.

- NOTES:**
- FINAL TREE STAKING DETAILS AND PLACEMENT TO BE APPROVED BY OWNER.
 - REMOVE BURLAP, WIRE AND STRAPS (ANYTHING THAT COULD GIRDLING TREE OR RESTRICT ROOT GROWTH) ON UPPER 1/3 OF ROOTBALL.
 - PRUNE ALL TREES IN ACCORDANCE WITH ANSI A-300.

No.	REVISIONS	DATE	BY

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KHA PROJECT	148400041
DATE	MAY 2020
SCALE	AS SHOWN
DESIGNED BY	KHA
DRAWN BY	JLD
CHECKED BY	DJF

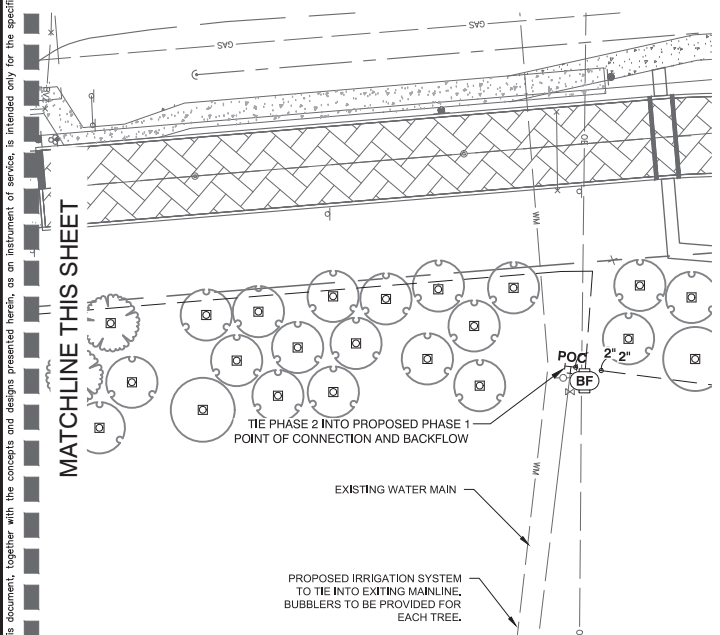
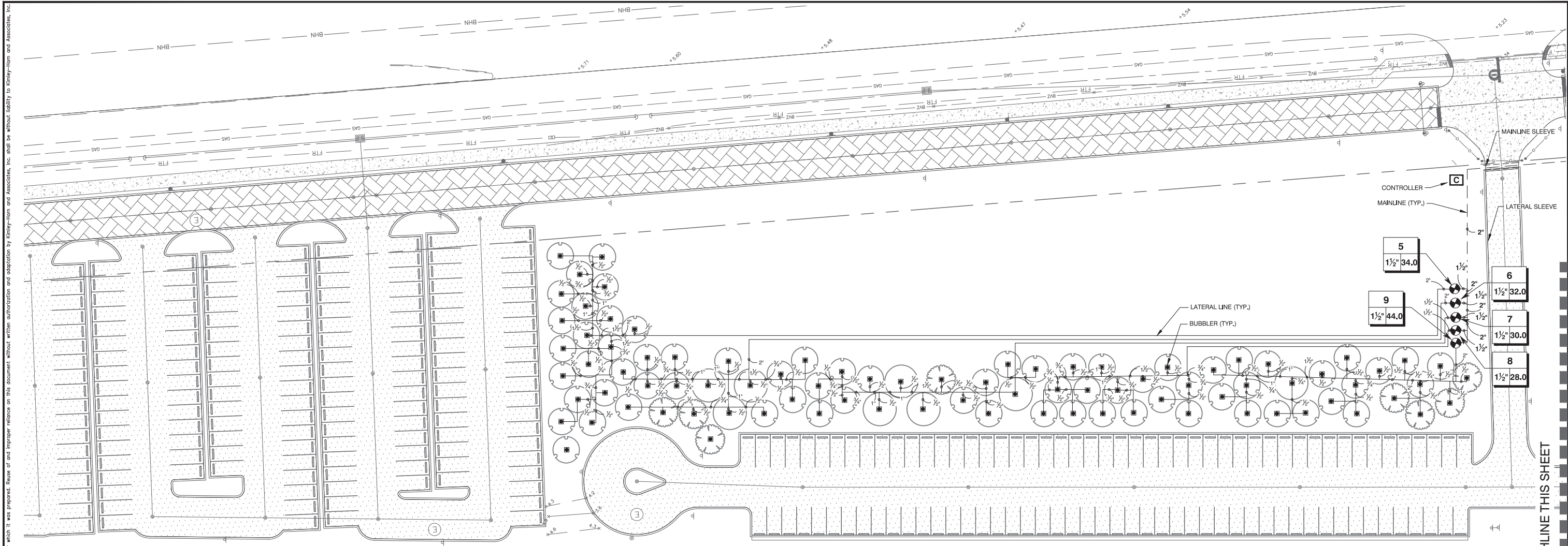
COQUINA BEACH IPO

FLORIDA
 DATE:

LANDSCAPE NOTES

SHEET NUMBER
L-150

Plotted By: Daoules, Jennifer Sheet Set: COQUINA BEACH IPO - LANDSCAPE Layout: I-201 August 20, 2020 01:06:37pm K:\STIP_LALP\148400 - Manatee County\041 - Coquina Beach IPO\CADD\PlanSheets\IRRIGATION PLAN PH 2 - COQUINA KEY.dwg



IRRIGATION SCHEDULE PHASE 2

SYMBOL	MANUFACTURER/MODEL/DESCRIPTION	QTY
	HUNTER PCB FLOOD BUBBLER, 1/2" FIPT.	87
	HUNTER ICV-G 1-1/2" 1", 1-1/2" 2" AND 3" PLASTIC ELECTRIC REMOTE CONTROL VALVES, GLOBE CONFIGURATION, WITH NPT THREADED INLET/OUTLET, FOR COMMERCIAL/MUNICIPAL USE.	5
	AIR RELIEF VALVE	5
	HUNTER NODE-63508 6-STATION CONTROLLER, OUTDOOR, BATTERY POWERED.	1
	IRRIGATION LATERAL LINE: PVC SCHEDULE 40	5.1 L.F.
	IRRIGATION LATERAL LINE: PVC SCHEDULE 40 1/2"	937.6 L.F.
	IRRIGATION LATERAL LINE: PVC SCHEDULE 40 3/4"	183.0 L.F.
	IRRIGATION LATERAL LINE: PVC SCHEDULE 40 1"	137.1 L.F.
	IRRIGATION LATERAL LINE: PVC SCHEDULE 40 1 1/2"	756.5 L.F.
	IRRIGATION LATERAL LINE: PVC SCHEDULE 40 2"	1,063 L.F.
	IRRIGATION MAINLINE: PVC SCHEDULE 40 1 1/2"	28.5 L.F.
	IRRIGATION MAINLINE: PVC SCHEDULE 40 2"	377.6 L.F.
	PIPE SLEEVE: PVC CLASS 200 SDR 21	21.0 L.F.



VALVE SCHEDULE

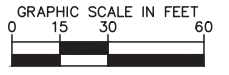
NUMBER	MODEL	SIZE	TYPE	GPM	WIRE	PSI	PSI @ POC	PRECIP
5	HUNTER ICV-G	1-1/2"	BUBBLER	34.00	88.8	30.18	49.20	6.81 in/h
6	HUNTER ICV-G	1-1/2"	BUBBLER	32.00	97.0	28.80	47.31	6.81 in/h
7	HUNTER ICV-G	1-1/2"	BUBBLER	30.00	105.4	34.08	52.07	6.81 in/h
8	HUNTER ICV-G	1-1/2"	BUBBLER	28.00	113.4	29.23	46.72	6.81 in/h
9	HUNTER ICV-G	1-1/2"	BUBBLER	44.00	120.6	25.73	48.18	6.81 in/h
	Common Wire				406.1			

WATERING SCHEDULE

NUMBER	MODEL	TYPE	PRECIP	IN./WEEK	MIN./WEEK	GAL./WEEK	GAL./DAY
5	HUNTER ICV-G	BUBBLER	6.81 in/h	2	18	612	306
6	HUNTER ICV-G	BUBBLER	6.81 in/h	2	18	576	288
7	HUNTER ICV-G	BUBBLER	6.81 in/h	2	18	540	270
8	HUNTER ICV-G	BUBBLER	6.81 in/h	2	18	504	252
9	HUNTER ICV-G	BUBBLER	6.81 in/h	2	18	792	396
	TOTALS:				90	3,024	1,512

CRITICAL ANALYSIS

Generated: 2020-05-22 11:14
 P.O.C. NUMBER: 01
 Water Source Information:
 FLOW AVAILABLE
 Point of Connection Size: 2"
 Flow Available: 78.62 gpm
 PRESSURE AVAILABLE
 Static Pressure at POC: 60.00 psi
 Pressure Available: 60.00 psi
 DESIGN ANALYSIS
 Maximum Station Flow: 44.00 gpm
 Flow Available at POC: 78.62 gpm
 Residual Flow Available: 34.62 gpm
 Critical Station: 7
 Design Pressure: 20.00 psi
 Friction Loss: 11.44 psi
 Fittings Loss: 1.14 psi
 Elevation Loss: 0.00 psi
 Loss through Valve: 1.50 psi
 Pressure Req. at Critical Station: 34.08 psi
 Loss for Fittings: 0.27 psi
 Loss for Main Line: 2.72 psi
 Loss for POC to Valve Elevation: 0.00 psi
 Loss for Backflow: 15.00 psi
 Critical Station Pressure at POC: 52.07 psi
 Pressure Available: 60.00 psi
 Residual Pressure Available: 7.93 psi



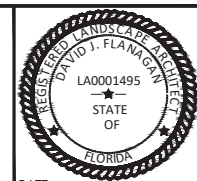
CALL 2 WORKING DAYS BEFORE YOU DIG
 IT'S THE LAW! DIAL 811
 Know what's below. Call before you dig.
 SUNSHINE STATE ONE CALL OF FLORIDA, INC.



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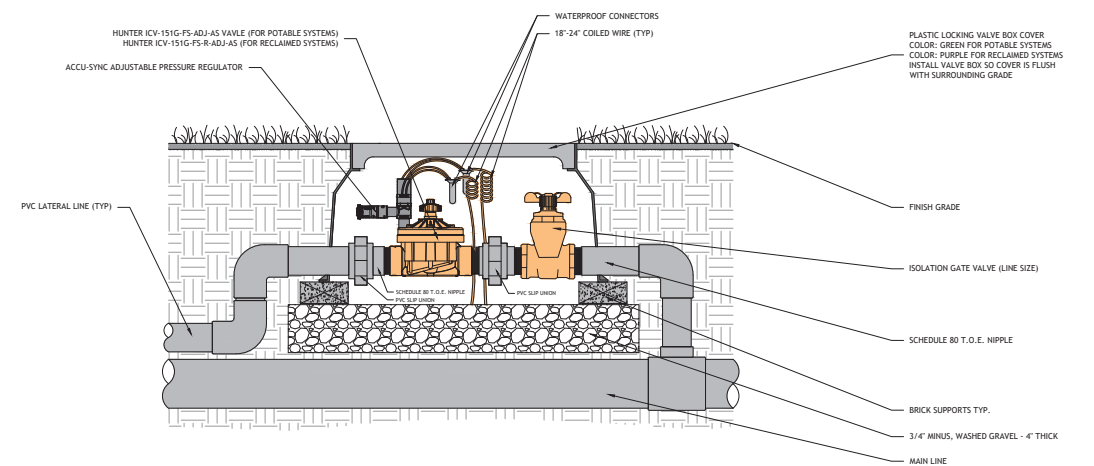
PHASE 2 IRRIGATION PLAN

SHEET NUMBER
 I-201

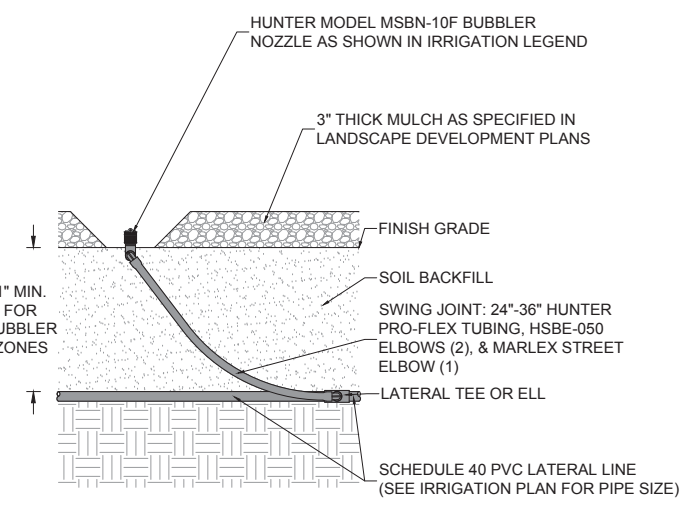
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Sheet Set: COQUINA BEACH IPO - LANDSCAPE IRRIGATION DETAILS August 20, 2020 01:06:56pm K:\STP_LALP\148400 - Manatee County\041 - Coquina Beach IPO\CADD\PlanSheets\1-1 IRRIGATION PLAN - COQUINA KEY (PO.dwg)

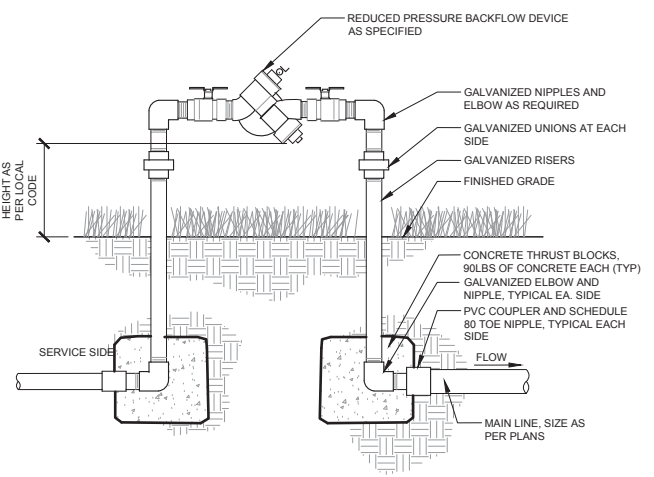
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1 HUNTER ICV ZONE CONTROL VALVE W/ ISOLATION GLOBE VALVE - SECTION VIEW
 1 1/2" = 1'-0" P-148-COQ-20



2 HUNTER BUBBLER MSBN - 10F DETAIL
 1 1/2" = 1'-0" P-148-COQ-03



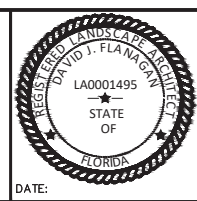
3 BACKFLOW PREVENTER SECTION
 NTS

No.	REVISIONS	DATE	BY

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COQUINA BEACH IPO
 MANATEE COUNTY FLORIDA



IRRIGATION DETAILS
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IRRIGATION SPECIFICATIONS

1. SCOPE OF WORK

- 1.1. THE WORK CONSISTS OF: FURNISHING ALL LABOR, MATERIALS, EQUIPMENT, TOOLS, TRANSPORTATION, AND ANY OTHER APPURTENANCES NECESSARY FOR THE COMPLETION OF THIS PROJECT AS SHOWN ON THESE PLANS.
- 1.2. INSTALL THE IRRIGATION SYSTEM TO PROVIDE 100% UNIFORM COVERAGE INCLUDING ANY CHANGES MADE IN THE LAYOUT DUE TO FIELD CONDITIONS. ALL FIELD CHANGES SHALL BE IN ACCORDANCE WITH THESE PLANS. ANY SYSTEMS THAT REQUIRE FIELD ADJUSTMENT TO PROVIDE FULL AND UNIFORM COVERAGE SHALL BE MADE PRIOR TO FINAL ACCEPTANCE AT THE DIRECTION OF THE OWNER'S REPRESENTATIVE AT NO ADDITIONAL COST.
- 1.3. SECURE ANY AND ALL NECESSARY PERMITS FOR THE WORK PRIOR TO COMMENCEMENT OF OPERATIONS ON-SITE. SEND COPIES OF THE PERMIT(S) TO THE OWNER'S REPRESENTATIVE. FOR WORK LOCATED IN THE R.O.W., CONFORM TO THE STANDARDS AND SPECIFICATIONS OF THE AGENCY HAVING JURISDICTION.
- 1.4. WORK SHALL BE COORDINATED WITH OTHER TRADES TO PREVENT CONFLICTS.

2. PROTECTION OF EXISTING AND PROPOSED SITE ELEMENTS

- 2.1. ALL EXISTING SITE ITEMS, ALREADY COMPLETED OR ESTABLISHED AND DESIGNATED TO REMAIN SHALL BE PROTECTED FROM DAMAGE BY THE CONTRACTOR UNLESS OTHERWISE SPECIFIED. ALL DAMAGE RESULTING FROM THE CONTRACTOR'S WORK SHALL BE REPAIRED OR REPLACED TO THE SATISFACTION OF THE OWNER, AT NO COST TO THE OWNER.
- 2.2. MAINTAIN ALL NECESSARY BMP DEVICES THROUGHOUT THE DURATION OF ALL CONSTRUCTION ACTIVITIES.
- 2.3. WHERE APPLICABLE, SUBMIT A DETAILED PROJECT SPECIFIC WORK ZONE TRAFFIC CONTROL PLAN IN ACCORDANCE WITH THE APPROPRIATE REGULATORY AGENCY STANDARDS UNLESS THE WORK REQUIRES NOTHING MORE THAN A DIRECT APPLICATION OF FDOT STANDARD PLANS FOR ROAD AND BRIDGE CONSTRUCTION, INDEX 102-600.
- 2.4. LOCATE ALL UTILITIES, WHETHER PUBLIC OR PRIVATE, PRIOR TO CONSTRUCTION ACTIVITIES. THE INFORMATION AND DATA SHOWN WITH RESPECT TO UTILITIES IS APPROXIMATE. THE OWNER AND DESIGN PROFESSIONAL SHALL NOT BE RESPONSIBLE FOR THE ACCURACY AND COMPLETENESS OF ANY SUCH INFORMATION OR DATA. THE CONTRACTOR SHALL HAVE FULL RESPONSIBILITY FOR REVIEWING AND CHECKING ALL SUCH INFORMATION AND DATA. LOCATING ALL UTILITIES PRIOR TO CONSTRUCTION, THE SAFETY AND PROTECTION THEREOF, AND REPAIRING ANY DAMAGE RESULTING FROM THE WORK. THE COST OF ALL WILL BE CONSIDERED AS HAVING BEEN INCLUDED IN THE CONTRACT PRICE. NOTIFY ANY AFFECTED UTILITY COMPANIES OR AGENCIES IN WRITING AT LEAST 48 HOURS PRIOR TO BEGINNING CONSTRUCTION. NOTIFY THE LANDSCAPE ARCHITECT IN WRITING WHEN ANY CONFLICT BETWEEN UTILITIES AND THESE PLANS EXIST PRIOR TO INSTALLATION.

3. SUBMITTALS

- 3.1. SUBMIT FULL AND COMPLETE SHOP DRAWINGS OF ALL IRRIGATION EQUIPMENT AS SHOWN ON THESE PLANS TO OWNER'S REPRESENTATIVE FOR APPROVAL PRIOR TO INSTALLATION.
- 3.2. SUBMIT PRODUCT DATA SHEETS FOR ALL IRRIGATION EQUIPMENT TO BE INSTALLED TO OWNER'S REPRESENTATIVE FOR APPROVAL PRIOR TO INSTALLATION. THE IRRIGATION SYSTEM, AS SHOWN ON THESE PLANS, HAS BEEN DESIGNED AND CALCULATED WITH THE EQUIPMENT AS SPECIFIED. SUBMIT ANY REQUEST FOR PRODUCT SUBSTITUTION(S) IN WRITING. IF APPROVED, THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY NECESSARY MODIFICATION(S) AS A RESULT OF PRODUCT SUBSTITUTIONS TO THE IRRIGATION SYSTEM IN THE SHOP DRAWINGS TO MEET THE DESIGN INTENT OF THESE PLANS.

4. EQUIPMENT LIST

- 4.1. ALL QUANTITIES ARE PROVIDED FOR CONVENIENCE ONLY. CONFIRM ALL QUANTITIES PER PLAN PRIOR TO BIDDING AND CONSTRUCTION.

5. POINT OF CONNECTION

- 5.1. FIELD VERIFY ALL POINT OF CONNECTION SOURCE INFORMATION INCLUDING STATIC PSI AND GPM AVAILABLE PRIOR TO CONSTRUCTION. NOTIFY OWNER'S REPRESENTATIVE IN WRITING IF DISCREPANCIES BETWEEN THE FLOW AND PRESSURE AS LISTED IN THE CRITICAL ANALYSIS AND THE FIELD CONDITIONS EXIST.
- 5.2. COORDINATE INSTALLATION OF ANY METERS AND BACKFLOW ASSEMBLIES WITH THE AGENCY HAVING JURISDICTION AND OWNER'S REPRESENTATIVE.

6. MAINLINE INSTALLATION

- 6.1. INSTALL ALL MAINLINES AND LATERALS UNDER PAVEMENT WITHIN SLEEVES. WHERE VALVE CONTROL LINES PASS THROUGH A SLEEVE WITH OTHER MAIN OR LATERAL LINES, CONTAIN WIRES WITHIN A SEPARATE, SMALLER CONDUIT.
- 6.2. INSTALL COLOR CODED METAL DETECTABLE MARKING TAPE WHICH CLEARLY NOTES: "CAUTION: IRRIGATION LINE BURIED BELOW" ABOVE THE FULL LENGTH OF THE IRRIGATION MAINLINE.
- 6.3. WHERE MAINLINE RUNS PARALLEL TO PAVEMENT OR CURBING, OFFSET THE MAINLINE 24" FROM THE EDGE OF PAVEMENT OR CURB.
- 6.4. PERFORM HYDROSTATIC PRESSURE TESTING AS FOLLOWS:
 - 6.4.1. AFTER FLUSHING, AND THE INSTALLATION OF VALVES CONDUCT THE FOLLOWING TESTS IN THE SEQUENCE LISTED BELOW. FURNISH ALL EQUIPMENT, MATERIALS AND LABOR NECESSARY TO PERFORM THE TESTS. CONDUCT ALL TESTS IN THE PRESENCE OF THE OWNER'S REPRESENTATIVE. NOTIFY THE OWNER'S REPRESENTATIVE FORTY-EIGHT (48) HOURS IN ADVANCE OF TESTING.
 - 6.4.2. PERFORM WATER PRESSURE TESTS ON ALL PRESSURE MAIN LINES BEFORE ANY COUPLINGS, FITTINGS, VALVES AND THE LIKE ARE CONCEALED.
 - 6.4.3. IMMEDIATELY PRIOR TO TESTING, PURGE ALL IRRIGATION LINES OF ALL ENTRAPPED AIR OR DEBRIS BY ADJUSTING CONTROL VALVES AND INSTALLING TEMPORARY CAPS FORCING WATER AND DEBRIS TO BE DISCHARGED FROM A SINGLE OUTLET.
 - 6.4.4. TEST ALL PRESSURE MAIN LINE AT 150 PSI FOR A MINIMUM OF FOUR (4) HOURS WITH AN ALLOWABLE LOSS OF 5 PSI. PRESSURE AND GAUGES SHALL BE READ IN PSI, AND CALIBRATED SUCH THAT ACCURATE DETERMINATION OF POTENTIAL PRESSURE LOSS CAN BE ASCERTAINED.
 - 6.4.5. RE-TEST AS REQUIRED UNTIL THE SYSTEM MEETS THE REQUIREMENTS. REPAIR ANY LEAKS, WHICH OCCUR DURING TEST PERIOD, IMMEDIATELY FOLLOWING THE TEST.
 - 6.4.6. PROVIDE DOCUMENTATION STATING THE WEATHER CONDITIONS, DATE, THE START TIME AND INITIAL WATER PRESSURE READINGS, THE FINISH TIME AND FINAL WATER PRESSURE READINGS AND THE TYPE OF EQUIPMENT USED TO PERFORM THE TEST. THE DOCUMENTATION MUST BE SIGNED BY A WITNESS ACCEPTABLE TO THE OWNER, VERIFYING ALL OF THE ABOVE-MENTIONED CONDITIONS.
 - 6.4.7. SUBMIT A WRITTEN REPORT OF THE PRESSURE TESTING RESULTS WITH THE OTHER ABOVE REQUIRED INFORMATION TO THE OWNER'S REPRESENTATIVE FOR APPROVAL.

7. IRRIGATION VALVES AND WIRING

- 7.1. LOCATE ALL VALVES, SPLICES WITHIN CONTROL LINES, QUICK COUPLERS, AND HOSE BIBBS WITHIN VALVE BOXES. PROVIDE PURPLE VALVE BOX LIDS FOR SYSTEMS UTILIZING A NON-POTABLE WATER SOURCE.

- 7.2. NUMBER THE TOP OF ALL VALVE BOX LIDS WITH MINIMUM 1" HEIGHT BLACK LETTERS TO CORRESPOND TO THE VALVE DESIGNATIONS.
- 7.3. WHEN POSSIBLE, LOCATE ALL VALVES IN PLANTING BEDS A MINIMUM OF 24" FROM BACK OF CURB OR EDGE OF PAVEMENT, UNLESS OTHERWISE NOTED.
- 7.4. SEPARATE IRRIGATION ZONES FOR HIGH AND LOW WATER USE REQUIREMENTS AND OPERATED ON DIFFERENT WATERING CYCLES. AT NO TIME SHALL MULTIPLE IRRIGATION HEAD TYPES BE LOCATED ON THE SAME VALVE UNLESS NOTED OTHERWISE.
- 7.5. INSTALL ALL DRIP ZONES WITH A FLUSH VALVE AND AIR RELIEF VALVE. IN THE EVENT THAT A DRIP ZONE HAS MORE THAN ONE HIGH OR LOW POINT, MORE THAN ONE AIR RELIEF VALVE OR FLUSH VALVE WILL BE REQUIRED FOR THAT ZONE.
- 7.6. FOLLOW MANUFACTURER'S SPECIFICATIONS FOR ALL WIRING FOR CONNECTION OF THE VALVES TO THE CONTROLLER. ALL WIRE RUNS SHALL BE CONTINUOUS WITH SPLICING OCCURRING IN VALVE BOXES ONLY. WIRE CONNECTIONS SHALL BE MADE USING DBR/Y-6 CONNECTIONS OR APPROVED EQUAL.
- 7.7. INSTALL VALVE CONTROL WIRING IN THE SAME TRENCH AS THE MAINLINE WHERE PRACTICAL.
- 7.8. FOR NON TWO-WIRE SYSTEMS, RUN TWO (2) SPARE VALVE CONTROL WIRES FROM THE CONTROLLER ALONG THE ENTIRE MAINLINE TO LAST REMOTE CONTROLLED VALVE ON EACH AND EVERY LEG OF MAINLINE.

8. PIPES AND SLEEVING

- 8.1. DO NOT INSTALL IRRIGATION SYSTEM THROUGH PRESERVED PLANT COMMUNITIES, DRIPLINE OF EXISTING TREES, OR WITHIN WETLANDS UNLESS SPECIFICALLY NOTED OTHERWISE.
- 8.2. LOCATE ALL IRRIGATION LINES WITHIN LANDSCAPED AREAS WHENEVER POSSIBLE. ALL LINES UNDER PAVEMENT MUST BE SLEEVED.
- 8.3. SIZE ALL PIPE SLEEVES TWO PIPE SIZES GREATER THAN THE PIPE / CUMULATIVE SUM OF THE PIPES IT CARRIES.
- 8.4. SLEEVES UNDER EXISTING PAVEMENT MUST BE DIRECTIONAL BORE UNLESS APPROVED BY OWNER IN WRITING.
- 8.5. SOLVENT CEMENTS SHALL COMPLY WITH ASTM D2564.

9. CONTROLLER AND SENSORS

- 9.1. COORDINATE WITH OWNER'S REPRESENTATIVE FOR FINAL CONTROLLER AND RAIN SENSOR LOCATIONS. THE CONTROLLER SHALL BE PLACED IN A LOCKING CABINET APPROPRIATE FOR ITS LOCATION, (INDOOR VS. OUTDOOR USE)
- 9.2. LOCATE THE AUTOMATIC RAIN SENSOR SHUTOFF DEVICE IN AN AREA THAT IS UNOBSTRUCTED BY TREES, ROOF OVERHANGS, OR ANY OTHER OVERHEAD OBJECT. THE SENSOR SHALL NOT BE PLACED WITHIN THE SPRAY ZONE OF ANY SPRINKLER HEAD, INCLUDING OFF-SITE IRRIGATION. CONTRACTOR SHALL LOCATE SENSOR WITHIN CLOSE PROXIMITY TO THE IRRIGATION CONTROLLER.

10. CLEANUP

- 10.1. UPON COMPLETION OF ALL WORK AND BEFORE FINAL ACCEPTANCE, REMOVE ALL MATERIAL, EQUIPMENT, AND DEBRIS RESULTING FROM HIS WORK. ALL PAVED AREAS SHALL BE CLEANED AND THE SITE LEFT IN A NEAT AND ACCEPTABLE CONDITION AS APPROVED BY THE OWNER'S REPRESENTATIVE.

11. AS-BUILT IRRIGATION PLANS

- 11.1. PROVIDE "AS-BUILT" DRAWINGS OF THE FINAL INSTALLATION TO OWNER'S REPRESENTATIVE PRIOR TO FINAL ACCEPTANCE OF WORK. INCLUDE THE FOLLOWING ON THE AS-BUILT DRAWINGS AT A MINIMUM:
 - CONTROLLER LOCATION
 - CONNECTION ASSEMBLY
 - MAINLINE ROUTING
 - PIPE SLEEVING
 - VALVE(S)
 - COLORIZED ZONING DIAGRAM
- 11.2. LOCATE ALL SLEEVES UTILIZED BY THE IRRIGATION CONTRACTOR WHETHER INSTALLED BY THE IRRIGATION CONTRACTOR OR NOT ON THE "AS-BUILT" DRAWINGS. THE DEPTH BELOW FINISH GRADE, TO THE NEAREST FOOT OF EACH END OF THE SLEEVE SHALL BE NOTED AT EACH SLEEVE LOCATION ON THE "AS-BUILT" DRAWINGS.

12. FINAL INSPECTION AND ACCEPTANCE OF WORK

- 12.1. MINIMIZE IRRIGATION OVERTHROW TO IMPERVIOUS AND NATURAL AREAS THROUGH FIELD ADJUSTMENTS TO INDIVIDUAL HEADS.
- 12.2. PROGRAM CONTROLLER TO IRRIGATE ALL ZONES WITHIN APPLICABLE WATERING WINDOWS AND PROVIDE WATERING SCHEDULE TO OWNER'S REPRESENTATIVE.
- 12.3. EQUIPMENT TO BE FURNISHED TO OWNER PRIOR TO ACCEPTANCE OF WORK:
 - TWO (2) SETS OF KEYS FOR EACH AUTOMATIC CONTROLLER.
 - TWO (2) 48 INCH TEE WRENCHES FOR OPERATING GATE VALVES (WHEN INSTALLED AS PART OF WORK).
 - THREE (3) SETS OF SPECIAL TOOLS REQUIRED FOR REMOVING, DISASSEMBLING AND ADJUSTING EACH TYPE OF SPRINKLER AND VALVE SUPPLIED ON THIS PROJECT.
 - FIVE (5) EXTRA SPRINKLER HEADS, NOZZLES, SHRUB ADAPTERS, NOZZLE FILTER SCREENS, FOR EACH TYPE USED ON THE PROJECT.
 - TWO (2) QUICK COUPLER KEYS TO MATCH MANUFACTURER TYPE OF QUICK COUPLER.
- 12.4. UPON COMPLETION OF ALL WORK, A FINAL INSPECTION SHALL BE PERFORMED BY THE OWNER AND/OR OWNER'S REPRESENTATIVE. THE IRRIGATION SYSTEM, CONSTRUCTION AND ALL OTHER INCIDENTAL WORK PERTAINING TO THIS CONTRACT SHALL BE INSPECTED FOR COMPLIANCE WITH THE CONTRACT DOCUMENTS. ANY ITEMS FOUND TO NOT BE IN COMPLIANCE SHALL BE CORRECTED AT NO COST TO THE OWNER.

13. WARRANTY

- 13.1. THE CONTRACTOR SHALL WARRANT ALL WORKMANSHIP AND MATERIALS FOR A PERIOD OF 1 YEAR FOLLOWING THE ACCEPTANCE OF THE WORK.
- 13.2. ANY PART OF THE IRRIGATION WORK THAT FAILS OR IS DEFECTIVE SHALL BE REPLACED OR RECONSTRUCTED AT NO COST TO THE OWNER INCLUDING BUT NOT LIMITED TO: RESTORING GRADES THAT HAVE SETTLED IN TRENCHES AND EXCAVATIONS RELATED TO THE WORK. RECONSTRUCTION SHALL INCLUDE ANY PLANTINGS, SOIL, MULCH OR OTHER PARTS OF THE CONSTRUCTED LANDSCAPE THAT MAY BE DAMAGED DURING THE REPAIR OR THAT RESULTS FROM SOIL SETTLEMENT.
- 13.3. THE DATE OF ACCEPTANCE OF THE WORK AND START OF THE GUARANTEE PERIOD SHALL BE DETERMINED BY THE OWNER, UPON THE FINDING THAT THE ENTIRE IRRIGATION SYSTEM IS INSTALLED AS DESIGNED AND SPECIFIED, AND FOUND TO BE OPERATING CORRECTLY, SUPPLYING WATER EVENLY TO ALL PLANTING AND/OR LAWN AREAS.
- 13.4. NEITHER THE FINAL ACCEPTANCE NOR ANY PROVISION IN THE CONTRACT DOCUMENTS SHALL RELIEVE THE CONTRACTOR OF RESPONSIBILITY FOR FAULTY MATERIALS OR WORKMANSHIP. REMEDY ANY DEFECTS WITHIN A PERIOD OF 7 DAYS (S) FROM THE DATE OF NOTIFICATION OF A DEFECT.

14. ABBREVIATIONS

- GPM - GALLONS PER MINUTE
- GPH - GALLONS PER HOUR
- PSI - POUNDS PER SQUARE INCH

LATERAL PIPE SIZING REQUIREMENTS

MAXIMUM FLOW	MINIMUM PIPE SIZE
10 GPM	3/4"
16 GPM	1"
26 GPM	1-1/4"
35 GPM	1-1/2"
55 GPM	2"
80 GPM	2-1/2"
120 GPM	3"

PIPE SIZES ILLUSTRATED IN THE ABOVE CHART ARE MINIMUM ACCEPTABLE SIZES. PIPE SIZES INDICATED ON PLAN ARE FOR CONVENIENCE ONLY. FIELD SIZE ALL LATERAL PIPING TO KEEP ALL FRICTION LOSS VELOCITIES BELOW 5.0 FPS.

No.	REVISIONS	DATE	BY



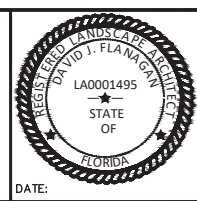
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COQUINA BEACH IPO

MANATEE COUNTY FLORIDA



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