

# LANDSCAPE PLAN FOR POCKET PARKS

MADEIRA BEACH, FLORIDA

POCKET PARKS

CITY OF MADEIRA BEACH  
MADEIRA BEACH, FL.



3300 NORTH A ST.  
BUILDING 2, SUITE 120  
TAMPA, FLORIDA 33602  
TEL (813) 253-2329



NORTH  
Scale 1"=200'



PREPARED BY:



1000 N. ASHLEY DR., SUITE 900  
TAMPA, FLORIDA 33602  
TEL: (813) 620-4500

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REVISION NO.	DATE	DESCRIPTION

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MARTIN STEFFEN, FLA 6667386  
NAME LICENSE NO.  
DATE 7/3/2024  
28000636 FL  
FIRM / BUSINESS NO. STATE

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SHEET TITLE  
COVER SHEET

L001

FILE NAME: A:\38000s\38545\01\1\LA\CA\DD\SitePlan-BASE-HARD-38545.001.dwg DATE: July 3, 2024, TIME: 1:24 PM, USER: ah4588



**EXISTING TO REMAIN PLANT CARE:**

1. FLAG ALL TREES AND PALMS TO BE SAVED IN PLACE. PROVIDE BARRICADING IN ACCORDANCE WITH LOCAL STANDARDS AROUND TREES AND PALMS TO BE SAVED IN PLACE PRIOR TO SITE DEMOLITION.
2. ALL WORK INVOLVING EXISTING TREES TO REMAIN SHALL BE UNDERTAKEN IN THE PRESENCE OF A REGISTERED ARBORIST. ALL TREES AND PALMS TO BE SAVED SHALL BE EXAMINED FOR DAMAGE, DISEASE AND INSECT INFESTATION. PARTS OF THE TREE SHOWING THESE CONDITIONS SHALL BE TREATED OR PRUNED IN ACCORDANCE WITH THE ARBORIST'S RECOMMENDATIONS. REMOVE ALL DEAD LIMBS AND VINES.
3. ROOT PRUNE ALL TREES TO BE SAVED PER DRAWINGS PRIOR TO GRADING AROUND TREES.
4. TREAT ALL CUTS WITH A FUNGICIDAL BARRIER. BACKFILL THE TRENCH, WITHIN 4 HOURS OF DIGGING, WITH A 1:1 MIXTURE OF SITE SOIL AND SAWDUST OR OTHER FINE ORGANIC MATERIAL. DO NOT COMPACT.
5. FERTILIZE THE PLANT AS DIRECTED BY THE CONSULTING ARBORIST.

**GENERAL NOTES:**

1. LANDSCAPE CONTRACTOR IS RESPONSIBLE FOR VERIFYING PROJECT SITE CONDITIONS AND DETERMINING REQUIRED QUANTITIES AND AVAILABILITY OF ALL MATERIALS PRIOR TO BIDDING. QUANTITIES ARE PROVIDED FOR INFORMATIONAL PURPOSES ONLY. IF ANY DISCREPANCIES OCCUR BETWEEN QUANTITIES CALLED FOR ON THE PLANT LIST AND THOSE INDICATED ON THE DRAWINGS, THE DRAWINGS SHALL GOVERN.
2. PRIOR TO COMMENCEMENT OF CONSTRUCTION, CONTRACTOR SHALL INSPECT PLANTING AREAS AND VERIFY THAT NO OBJECTIONABLE MATERIALS OR OBSTRUCTIONS ARE PRESENT. PRESENT FINDINGS TO OWNER'S REPRESENTATIVE FOR APPROVAL. ALL EXISTING PLANTING SHALL REMAIN INTACT AND UNDISTURBED UNLESS OTHERWISE NOTED ON THE DRAWINGS. ALL EXISTING SITE FURNISHINGS, PAVING, LANDSCAPE, AND OTHER ELEMENTS TO REMAIN SHALL BE PROTECTED FROM ANY DAMAGE UNLESS OTHERWISE NOTED.
3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING ADJACENT IMPROVEMENTS FROM DAMAGE AND EROSION INCLUDING BUT NOT LIMITED TO EXISTING PLANT MATERIAL, GRADES, SIDEWALKS, SITE FURNISHINGS, CURBS, AND UTILITIES. ANY ADJACENT IMPROVEMENTS DAMAGED DURING CONSTRUCTION SHALL, AT A MINIMUM, BE RESTORED TO A STATE EQUAL TO ITS PRE-CONSTRUCTION STATE AT THE CONTRACTOR'S EXPENSE. THE LANDSCAPE CONTRACTOR IS RESPONSIBLE FOR SODDING ALL AREAS DISTURBED BY OTHER CONTRACTORS OR BY LANDSCAPE INSTALLATION.
4. IN GENERAL, THE WORK SHALL PROCEED AS RAPIDLY AS THE SITE BECOMES AVAILABLE. CONTRACTOR TO COORDINATE PROJECT SCHEDULE WITH OWNER'S REPRESENTATIVE. WORK TO BEGIN WITHIN 5 BUSINESS DAYS OF RECEIPT OF NOTICE TO PROCEED.
5. THE CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS TO COMPLETE WORK, AND SHALL COMPLY WITH ALL LOCAL, STATE, AND FEDERAL REGULATIONS.
6. THE LANDSCAPE CONTRACTOR SHALL COORDINATE CONSTRUCTION OF PLANTING AREAS WITH HARDSCAPE, ELECTRICAL, AND IRRIGATION WORK.
7. LANDSCAPE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING ANY HOISTING EQUIPMENT NECESSARY FOR THE PLACEMENT OF PLANT MATERIAL.
8. COLLECT SOIL SAMPLES AT A MINIMUM OF (3) PLANTING LOCATIONS THROUGHOUT THE PROJECT. SUBMIT TESTING LOCATIONS TO OWNER'S REPRESENTATIVE PRIOR TO TAKING SAMPLES. SAMPLES SHALL BE SENT TO AN APPROVED AGRONOMIC SOILS TESTING LABORATORY, STATING PROPOSED PLANT MATERIAL AT EACH TEST LOCATION. ANALYSIS SHALL INCLUDE, AT A MINIMUM, PH, NPK, ORGANIC CONTENT, TEXTURE, AND SOLUBLE SALTS. SUBMIT RESULTS/RECOMMENDATIONS AND PROPOSED FERTILIZER ANALYSIS/AMENDMENTS TO OWNER'S REPRESENTATIVE. COSTS OF FERTILIZER AND AMENDMENTS ARE TO BE INCLUDED IN THE COST OF THE PROJECT.
9. LANDSCAPE CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING AND VERIFYING THE CONDITION OF UNDERGROUND UTILITIES THAT AFFECT PLANTING LOCATIONS. IF ANY CONFLICTS OCCUR BETWEEN PROPOSED LOCATION OF TREES ON THE DRAWINGS AND ANY UNDERGROUND, SUBSURFACE, OR OVERHEAD UTILITIES OR STRUCTURES THE LANDSCAPE CONTRACTOR SHALL NOTIFY THE OWNER'S REPRESENTATIVE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE LOCATIONS AND PROTECTION OF ALL EXISTING UTILITIES SHOWN OR NOT SHOWN, AND ALL PROPOSED UTILITIES ON THESE DRAWINGS.
10. IF THE LANDSCAPE CONTRACTOR DAMAGES ANY STAKED OR IN PLACE UTILITIES OR STRUCTURES BY HIS OWN NEGLIGENCE THEY SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE.
11. THE LANDSCAPE CONTRACTOR SHALL REFER TO THE LANDSCAPE PLANTING DETAILS, NOTES, AND THE LANDSCAPE SCHEDULE FOR COMPLETE LANDSCAPE INSTALLATION INSTRUCTIONS. NOTIFY OWNER'S REPRESENTATIVE OF ANY AND ALL DISCREPANCIES PRIOR TO CONSTRUCTION OR INSTALLATION.
12. THE LANDSCAPE CONTRACTOR SHALL RE-GRADE ALL AREAS DISTURBED BY PLANT REMOVAL, RELOCATION, AND/OR INSTALLATION WORK. ANY DAMAGED PLANT MATERIAL SHALL BE REPLACED WITH PLANTS OF SAME SPECIES (MIN 12' HT, 3" CAL, 6" CT) EQUALING THE TOTAL DIAMETER BREST HEIGHT (DBH) OF THE DAMAGED TREE AND SHALL BE SUBJECT TO ALL REQUIREMENTS HEREIN.
11. ALL UNPAVED DISTURBED AREAS WITHIN PROJECT LIMITS SHALL BE SODDED TO MATCH EXISTING TURF. UNLESS OTHERWISE SPECIFIED, ENSURE EXISTING GRADES ARE RE-ESTABLISHED, TRIM EDGES EVENLY AND BUTT SOO PIECES TOGETHER CLOSELY. PEG SOD IN PLACE WHERE SLURGE MAY OCCUR. ALL OTHER AREAS NOT SPECIFICALLY ADDRESSED IN THESE PLANS MUST BE CONDUCTED AT THE CONTRACTOR'S RISK. DISTURBING ACTIVITIES: CONTRACTOR IS RESPONSIBLE FOR ACHIEVING STABILIZATION FREE OF WASH-OUTS UNTIL FINAL ACCEPTANCE BY OWNER.
12. THE LANDSCAPE CONTRACTOR SHALL BE RESPONSIBLE FOR WATERING ALL NEWLY INSTALLED PLANT MATERIAL AS NEEDED TO MAINTAIN HEALTH AND VIGOR THROUGHOUT THE 90 DAY MAINTENANCE PERIOD REGARDLESS OF THE STATUS OF EXISTING OR PROPOSED IRRIGATION AND/OR RAINFALL.

**DAMAGES AND WARRANTY:**

1. ALL PLANT MATERIAL, INCLUDING TRANSPLANTED PLANT MATERIAL, SHALL BE GUARANTEED AT OR ABOVE THE SPECIFIED CONDITIONS THROUGH SUBSTANTIAL COMPLETION AND UNTIL THE END OF THE (1) YEAR WARRANTY PERIOD. MAINTENANCE SHALL BE PROVIDED BY THE LANDSCAPE CONTRACTOR FOR 90 DAYS AFTER SUBSTANTIAL COMPLETION. AFTER WHICH THE LANDSCAPE CONTRACTOR WILL COORDINATE MAINTENANCE WITH OWNER'S REPRESENTATIVE. DECLINE IN CONDITION OF PLANT MATERIAL DURING INSTALLATION AND/OR WARRANTY PERIOD SHALL BE GROUNDS FOR REJECTION AND REPLACEMENT AT THE CONTRACTOR'S EXPENSE.
2. THE LANDSCAPE CONTRACTOR SHALL BE RESPONSIBLE FOR RE-STAKING OF TREES DURING THE WARRANTY PERIOD. IF NECESSARY, MINIMUM TOLERANCE FROM VERTICAL SHALL BE 3 INCHES. GUYING / STAKING PRACTICES SHALL NOT PERMIT NAILS, SCREWS, WIRES ETC., TO PENETRATE OUTER SURFACE OF TREES OR PALMS. TREES OR PALMS REJECTED DUE TO THIS PRACTICE SHALL BE REPLACED AT THE CONTRACTOR'S EXPENSE.
3. THE OWNER AND/OR THE OWNER'S REPRESENTATIVE HAS THE RIGHT TO REJECT ANY AND ALL WORK WHICH DOES NOT MEET WITH THE REQUIREMENTS OF THE SPECIFICATIONS AT ANY STAGE OF THE PROJECT. CONTRACTOR TO REPLACE REJECTED PLANT MATERIAL WITHIN ONE WEEK (5 BUSINESS DAYS) OF NOTICE.
4. CONTRACTOR TO REQUEST INSPECTION OF PROJECT IN WRITING TO OWNER'S REPRESENTATIVE. IF ALL WORK IS SATISFACTORY AND COMPLETE IN ACCORDANCE WITH CONDITIONS OF CONTRACT DOCUMENTS, THEN THE OWNER AND/OR THEIR REPRESENTATIVE SHALL DECLARE THE PROJECT TO BE SUBSTANTIALLY COMPLETE. SUBSTANTIAL COMPLETION CONSTITUTES THE BEGINNING OF THE 1 YEAR WARRANTY PERIOD AND THE 90 DAY MAINTENANCE PERIOD.
5. CONTRACTOR SHALL REMOVE ALL PLANT SAUCERS, GRADE SMOOTH, AND RE-MULCH AS WELL AS REMOVE PLANTING STAKES FROM SITE AFTER THE (1) YEAR WARRANTY PERIOD.

**PROJECT SUBMITTALS:**

1. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS FOR APPROVAL FOR ALL PROPOSED MATERIALS INCLUDING BUT NOT LIMITED TO PLANTS, STAKING, SOIL AMENDMENTS, FERTILIZER, MULCH, ETC. PRIOR TO PURCHASING. CONTRACTOR SHALL PROVIDE REPRESENTATIVE SAMPLES OF ALL PLANT MATERIAL ON-SITE FOR REVIEW BY OWNER'S REPRESENTATIVE. NOTIFY OWNER'S REPRESENTATIVE IN WRITING AT A MINIMUM OF 3 BUSINESS DAYS PRIOR TO INSPECTION. IF APPROVED BY OWNER'S REPRESENTATIVE, THEN DATED AND SCALED COLOR PHOTOGRAPHS MAY ALSO BE SUBMITTED.
2. ALL PROJECT SUBMITTALS MUST BE COMPLETED AND COMPILED IN AN EASILY REPRODUCIBLE FORM. SUBMITTAL SHEETS THAT ARE NOT LEGIBLE AND REPRODUCIBLE WILL BE REJECTED. SUBMITTAL SHEETS THAT DO NOT CLEARLY IDENTIFY THE PRODUCTS OR MATERIALS SELECTED WILL BE REJECTED.
3. CONTRACTOR SHALL SUBMIT TO THE OWNER'S REPRESENTATIVE THE GROWER'S AND/OR STATE INSPECTION CERTIFICATE FOR PLANT MATERIAL TWO (2) WEEKS PRIOR TO COMMENCEMENT OF WORK.
4. PRODUCTS INSTALLED ON THE PROJECT SITE THAT ARE NOT CONSISTENT WITH THE PROJECT SUBMITTALS WILL BE REMOVED AND REPLACED WITH THE PRODUCTS IDENTIFIED IN THE PROJECT SUBMITTAL PACKAGE AT THE CONTRACTOR'S EXPENSE.
5. PRIOR TO ISSUING SUBSTANTIAL COMPLETION NOTICE THE CONTRACTOR SHALL SUBMIT TO THE OWNER THREE (3) COPIES OF AS BUILT PLANS DOCUMENTS AND THREE (3) COPIES OF AN ANNUALIZED MAINTENANCE AND OPERATION MANUAL DETAILING ALL SCHEDULES, NURSERY PRACTICES, WATERING REQUIREMENTS, FERTILIZATION, TRIMMING, ETC., FOR ALL PLANT MATERIALS AND PLANT AREAS OF THE PROJECT.

**SITE REQUIREMENTS:**

1. CONTRACTOR SHALL AGREE TO ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THIS PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY, THAT THIS REQUIREMENT SHALL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS, AND THAT THE CONTRACTOR SHALL DEFEND, INDEMNIFY, AND HOLD THE OWNER HARMLESS FROM ANY AND ALL LIABILITY, REAL OR ALLEGED, IN THE CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT, EXCEPTING FOR LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF THE OWNER.
2. LANDSCAPE HOLDING AREA, INGRESS, EGRESS, AND SITE ACCESS SHALL BE COORDINATED WITH THE OWNER'S REPRESENTATIVE. THE CONTRACTOR SHALL NOT DISTURB OR IMPED ACCESS TO THE SITE BY OTHERS.
3. CONTRACTOR SHALL BE RESPONSIBLE FOR THE DAILY CLEANUP OF PREMISES AND REMOVAL OF DISCARDED OR SURPLUS MATERIALS AND RUBBISH IN A LAWFUL MANNER. ANY OPEN PITS OR TRENCHES SHALL BE COMPLETELY AND THOROUGHLY BARRICADED DURING THE WORKDAY AND COMPLETELY FILLED IN AT THE END OF EACH WORKDAY. ALL MATERIALS, PRODUCTS, AND EQUIPMENT REMAINING ON SITE AT THE END OF THE WORK DAY SHALL BE STORED IN AN ORGANIZED FASHION IN THE AREA DESIGNATED BY THE OWNER'S REPRESENTATIVE.
4. ALL CONTRACTORS AND SUBCONTRACTORS SHALL HAVE A SET OF APPROVED CONSTRUCTION DOCUMENTS ON SITE AT ALL TIMES.
5. DURING CONSTRUCTION, CREWS ARE REQUIRED TO HAVE AT LEAST ONE (1) ENGLISH SPEAKING PERSON ON SITE.

**SITE PLAN AND COORDINATE GIOMETRY:**

1. MONUMENTS AND OTHER SURVEY CONTROL POINTS SHALL BE PROTECTED FROM DAMAGE AND DISTURBANCE. IF ANY CONTROL POINTS ARE DAMAGED OR DISTURBED, IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO NOTIFY THE ENGINEER AND REPLACE THE CONTROL POINTS TO THEIR ORIGINAL CONDITION AT HIS OWN EXPENSE.
2. LOCATIONS, ELEVATIONS, AND DIMENSIONS OF EXISTING UTILITIES, STRUCTURES AND OTHER FEATURES ARE SHOWN ACCORDING TO THE BEST INFORMATION AVAILABLE AT THE TIME OF PREPARATION OF THESE PLANS. THE CONTRACTOR SHALL VERIFY THE LOCATIONS, ELEVATIONS AND DIMENSIONS OF ALL EXISTING UTILITIES, STRUCTURES AND OTHER FEATURES AFFECTING THIS WORK PRIOR TO CONSTRUCTION.

POCKET PARKS

CITY OF MADEIRA BEACH  
MADEIRA BEACH, FL.



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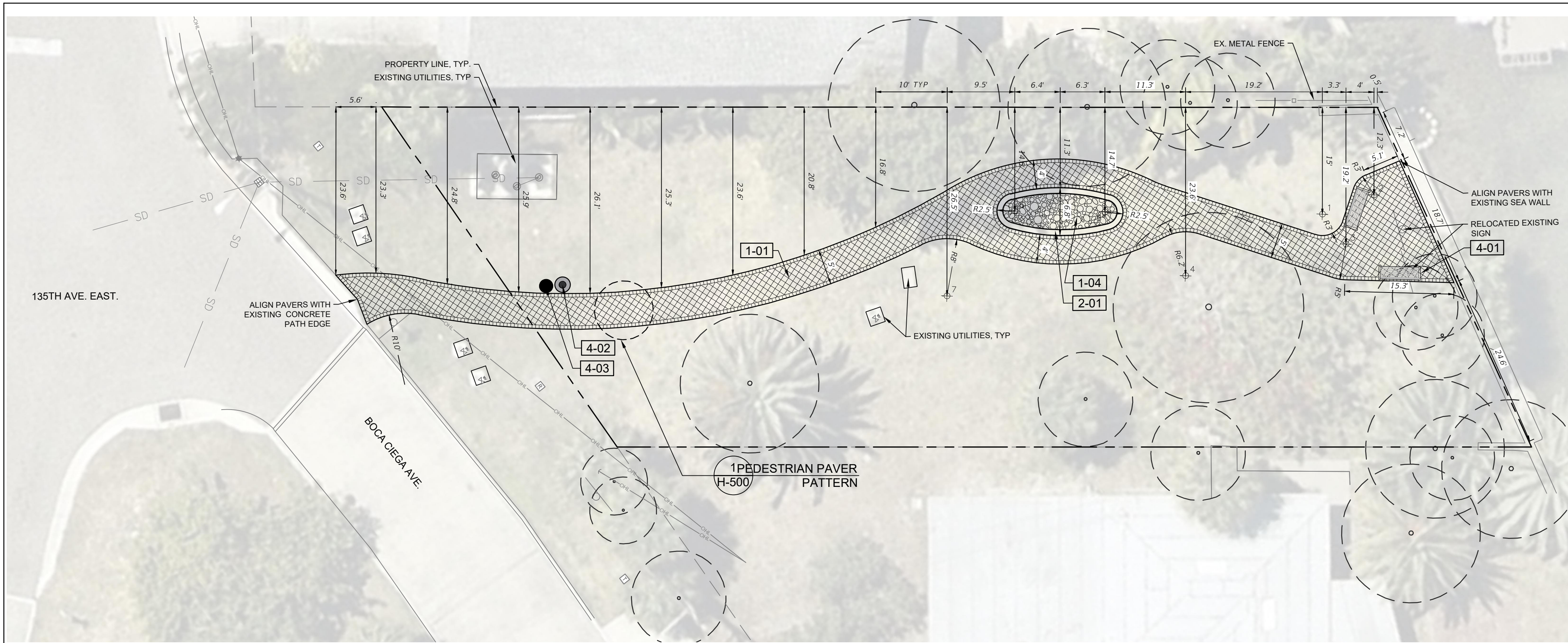
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2600036 FL  
FIRM / BUSINESS NO. STATE

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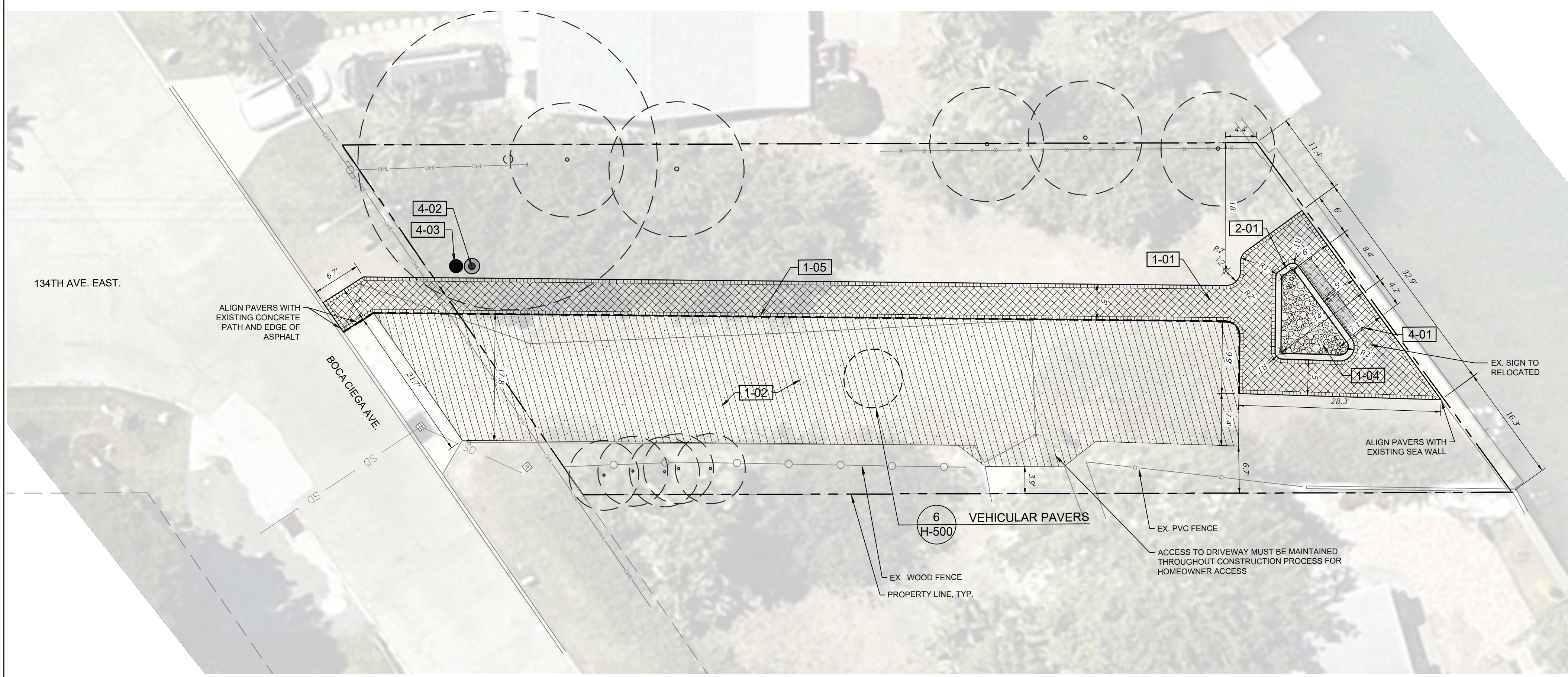
OVERALL SITE PLAN & GENERAL NOTES

H-100

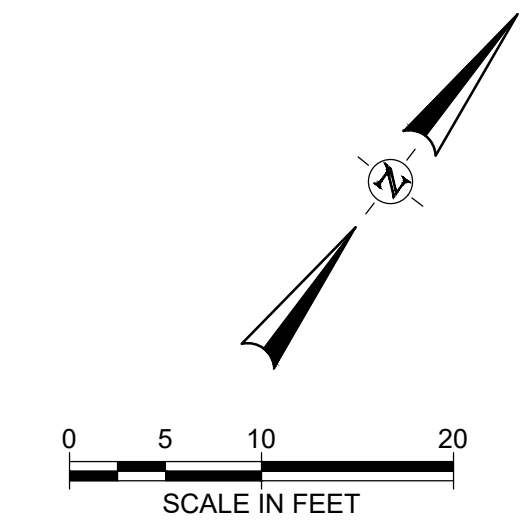
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1 135TH AVE. EAST



2 134TH AVE. EAST



REFERENCE NOTES SCHEDULE

SYMBOL	DESCRIPTION	DETAIL
	1-01 PEDESTRIAN PERMEABLE PAVERS - BELGARD AQUALINE, NAPOLI FINISH	4/4-500
	1-02 VEHICULAR PERMEABLE PAVERS - BELGARD AQUALINE, NAPOLI FINISH	6/4-500
	1-04 CRUSHED SHELL ROCK SHELL FINES 1/8" - 1/2" TRIPLE WASHED AND UNIFORMLY SPRED, 3" WETTED DEPTH	
	1-05 ISOLATION JOINT	
	1-06 CONCRETE MOW CURB	4/4-500
	2-01 BLOCK WALL WITH CAP - BELGARD CASTLEMANOR, NAPOLI FINISH	5/4-500
	4-01 BENCH - POLYWOOD VINEYARD 48" BENCH, PROVIDED BY CITY OF MADEIRA BEACH	6/4-500
	4-02 MOUNTING TRASH RECEPTACLE, 32 GALLON, 28.75" DIA. X 28.75" HT, RECYCLED PLASTIC MATERIAL, PROVIDED BY CITY OF MADEIRA BEACH	7/4-500
	4-03 PET WASTE STATION - PET WASTE ELIMINATOR, 12" X 18" ALUMINUM SIGN; DISPENSER BOX; 10 GAL WASTE RECEPTACLE WITH ATTACHED LID; (3) MOUNTING HARDWARE SETS EACH SET INCLUDES: (2) NUTS, BOLTS AND WASHERS, PROVIDED BY CITY OF MADEIRA BEACH	8/4-500

POCKET PARKS

CITY OF MADEIRA BEACH  
MADEIRA BEACH, FL.

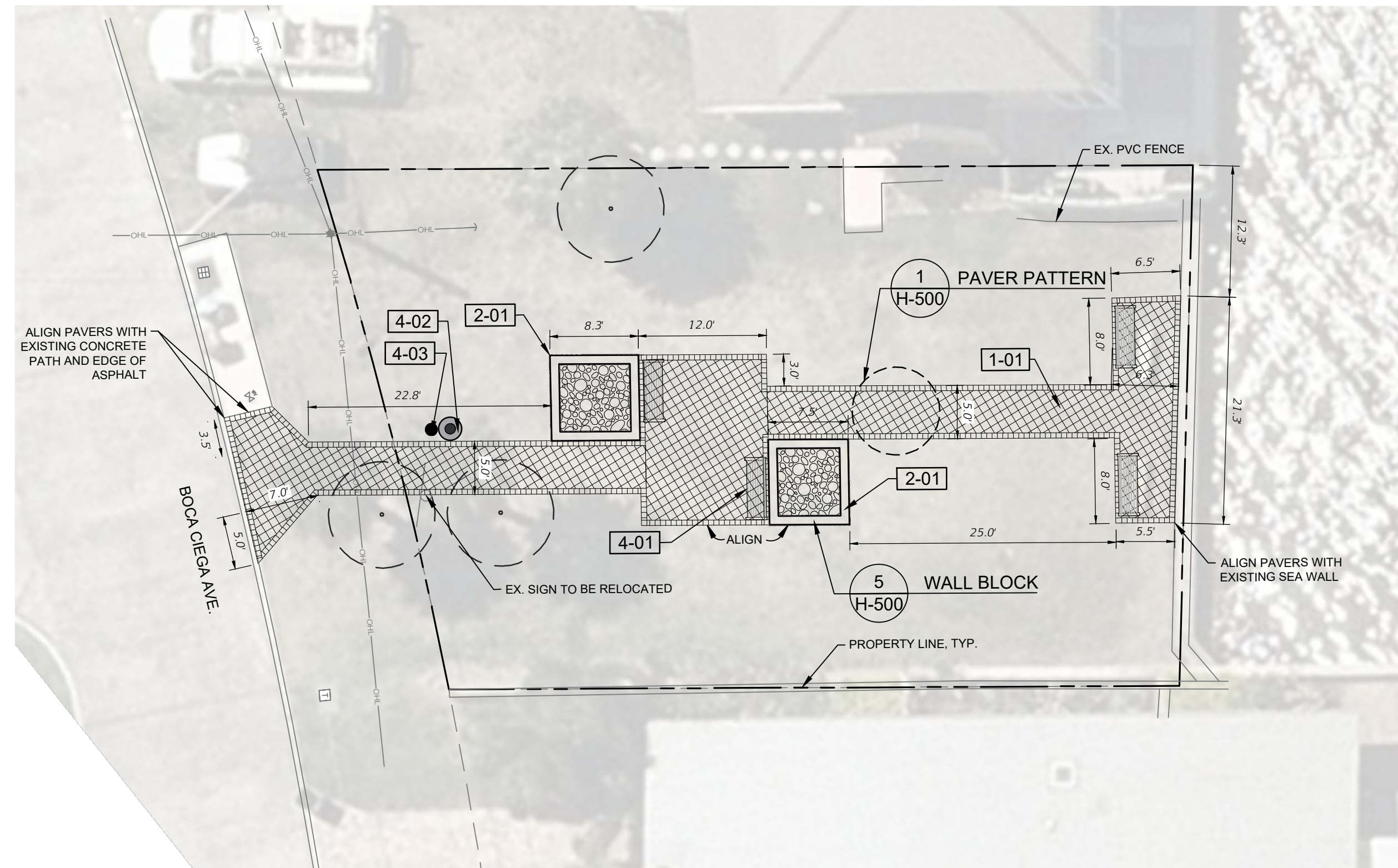


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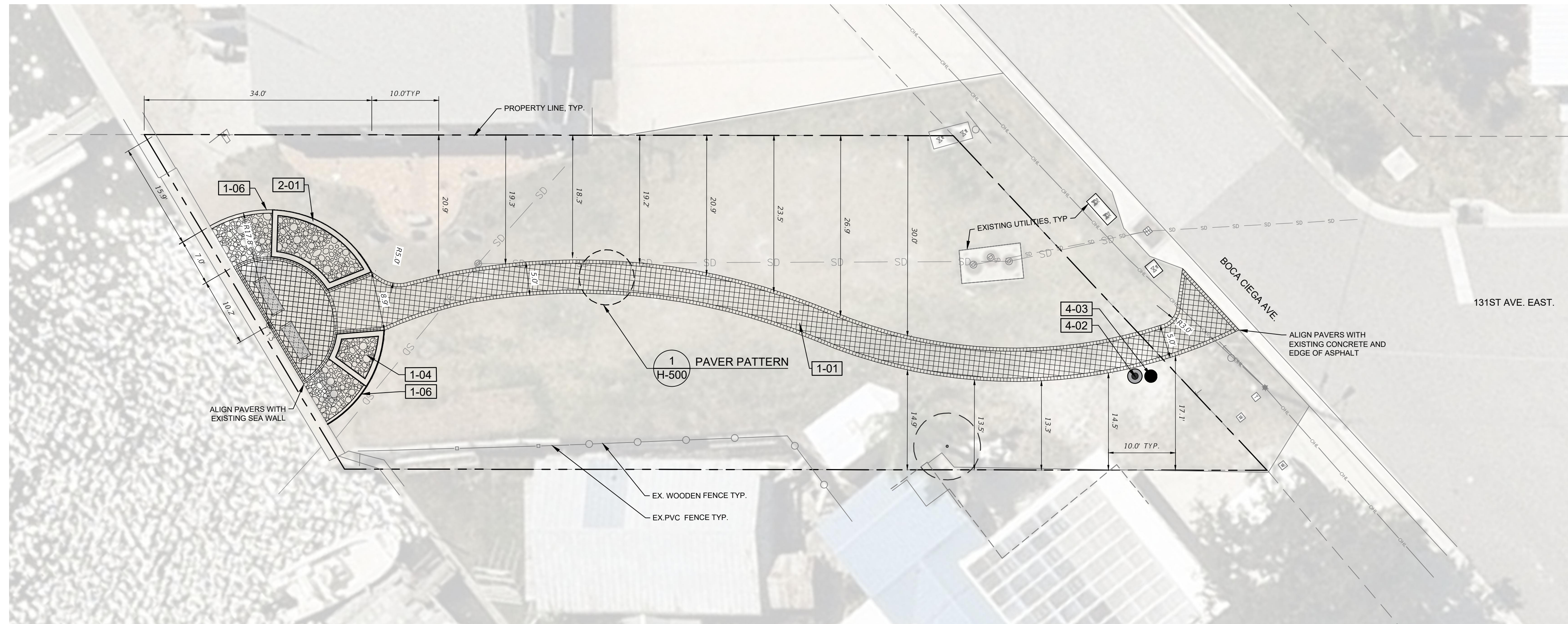
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SHEET TITLE  
HARDSCAPE PLANS

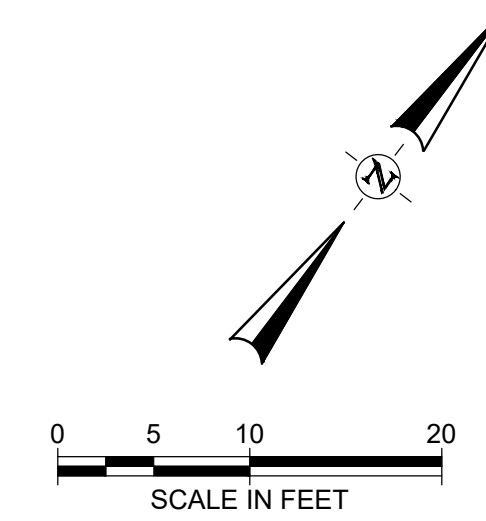
H-101



3 132ND AVE. EAST



4 131ST AVE. EAST



REFERENCE NOTES SCHEDULE

SYMBOL	DESCRIPTION	DETAIL
<b>1 PAVEMENTS, CURBS &amp; RAMPS</b>		
1-01	PEDESTRIAN PERMEABLE PAVERS - BELGARD AQUALINE, NAPOLI FINISH	4/H-500
1-02	VEHICULAR PERMEABLE PAVERS - BELGARD AQUALINE, NAPOLI FINISH	6/H-500
1-04	CRUSHED SHELL ROCK, SHELL FINES 1/8" - 1/2" TRIPLE WASHED AND UNIFORMLY SPREAD, 3" WETTED DEPTH	
1-05	ISOLATION JOINT	
1-06	CONCRETE MOW CURB	4/H-500
<b>2 STEPS, WALLS &amp; EMBANKMENTS</b>		
2-01	BLOCK WALL WITH CAP - BELGARD CASTLEMANOR, NAPOLI FINISH	5/H-500
<b>4 SITE FURNISHINGS</b>		
4-01	BENCH - POLYWOOD VINEYARD 48" BENCH, PROVIDED BY CITY OF MADEIRA BEACH	6/H-500
4-02	MOUNTING TRASH RECEPTACLE, 32 GALLON, 26.75" DIA. X 28.75" HT, RECYCLED PLASTIC MATERIAL. PROVIDED BY CITY OF MADEIRA BEACH	7/H-500
4-03	PET WASTE STATION - PET WASTE ELIMINATOR, 12" X 18" ALUMINUM SIGN, DISPENSER BOX, 10 GAL. WASTE RECEPTACLE WITH ATTACHED LID, (3) MOUNTING HARDWARE SETS EACH SET INCLUDES: (2) NUTS, BOLTS AND WASHERS. PROVIDED BY CITY OF MADEIRA BEACH	8/H-500

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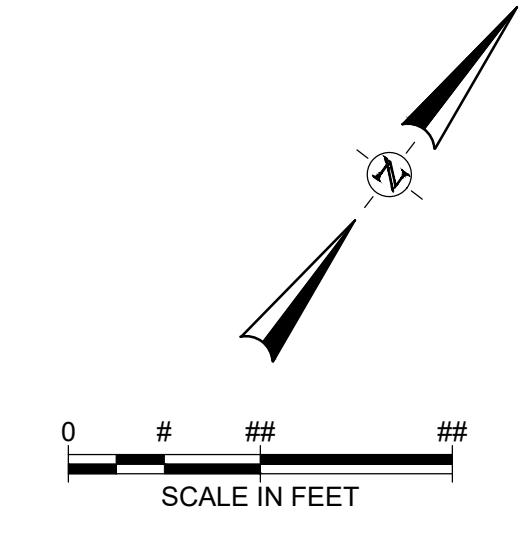
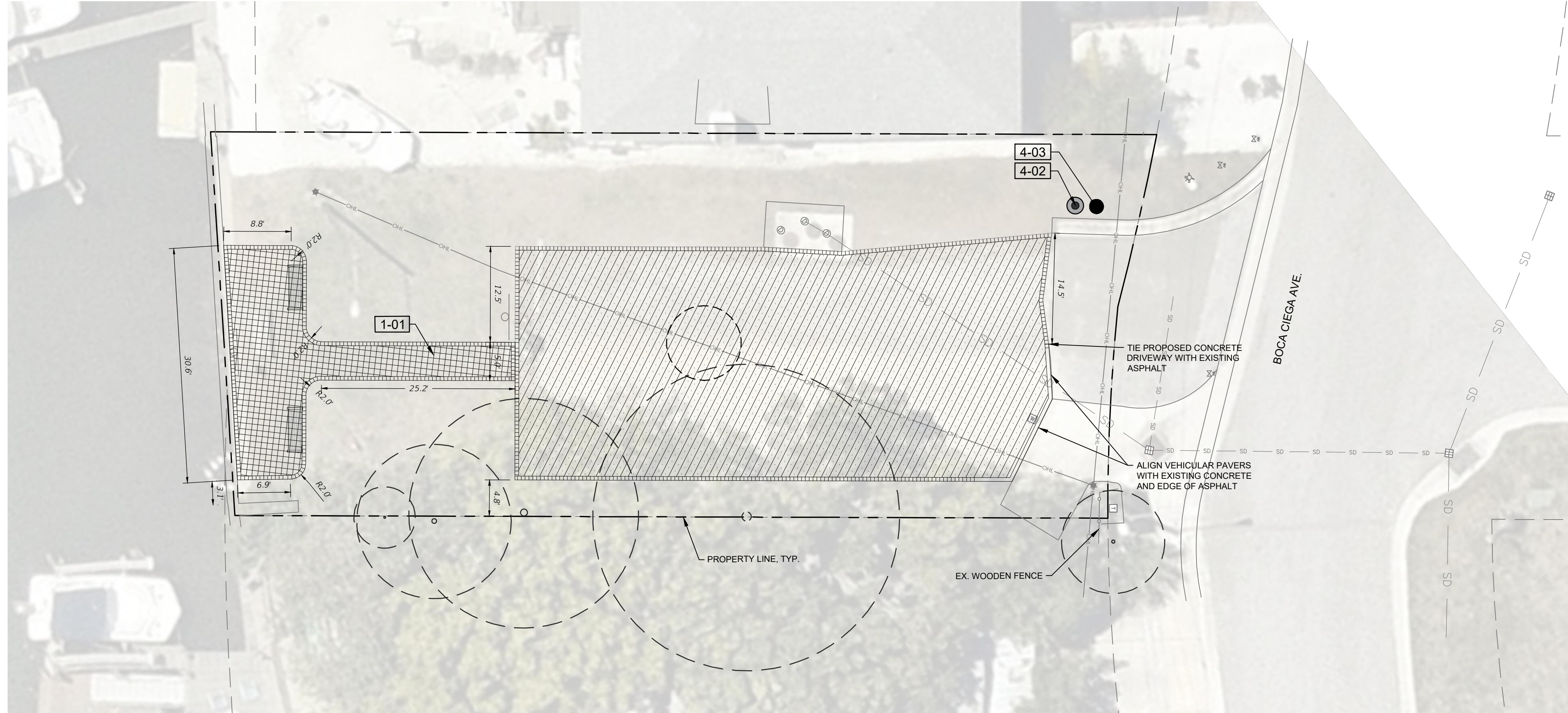
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SHEET TITLE  
HARDSCAPE PLAN

H-102



**REFERENCE NOTES SCHEDULE**

1 PAVEMENTS, CURBS & RAMPS		DETAIL
SYMBOL	DESCRIPTION	
[Symbol]	1-01 PEDESTRIAN PERMEABLE PAVERS - BELGARD AQUALINE, NAPOLI FINISH	4H-500
[Symbol]	1-02 VEHICULAR PERMEABLE PAVERS - BELGARD AQUALINE, NAPOLI FINISH	6H-500
[Symbol]	1-04 CRUSHED SHELL ROCK, SHELL FINES 1/8" - 1/2" TRIPLE WASHED AND UNIFORMLY SPRED, 3" WETTED DEPTH	
[Symbol]	1-05 ISOLATION JOINT	
[Symbol]	1-06 CONCRETE MOW CURB	4H-500
2 STEPS, WALLS & EMBANKMENTS		DETAIL
SYMBOL	DESCRIPTION	
[Symbol]	2-01 BLOCK WALL WITH CAP - BELGARD CASTLEMANOR, NAPOLI FINISH	5H-500
4 SITE FURNISHINGS		DETAIL
SYMBOL	DESCRIPTION	
[Symbol]	4-01 BENCH - POLYWOOD VINEYARD 48" BENCH, PROVIDED BY CITY OF MADEIRA BEACH	6H-500
[Symbol]	4-02 MOUNTING TRASH RECEPTACLE, 32 GALLON, 28.75" DIA. X 28.75" HT, RECYCLED PLASTIC MATERIAL. PROVIDED BY CITY OF MADEIRA BEACH	7H-500
[Symbol]	4-03 PET WASTE STATION - PET WASTE ELIMINATOR, 12" X 18" ALUMINUM SIGN, DISPENSER BOX, 10 GAL. WASTE RECEPTACLE WITH ATTACHED LID, (3) MOUNTING HARDWARE SETS EACH SET INCLUDES: (2) NUTS, BOLTS AND WASHERS. PROVIDED BY CITY OF MADEIRA BEACH	8H-500

5 132ND AVE. EAST

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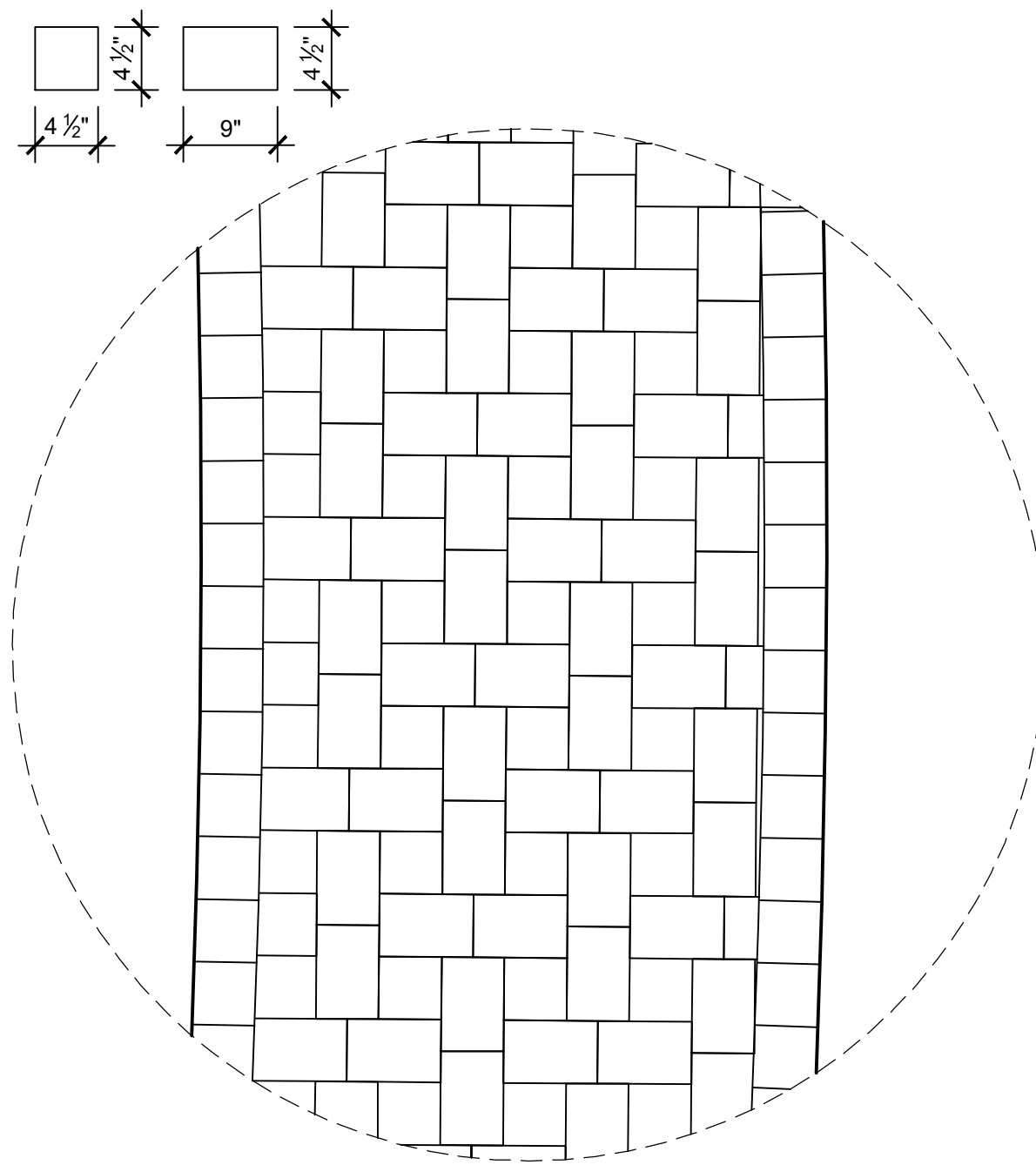
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**HARDSCAPE PLAN**

H-103

**PEDESTRIAN PAVERS**

(2) PIECE - PATTERN B - BELGARD  
 40% 4 1/2" x 4 1/2" x 3 1/8"  
 60% 4 1/2" x 9" x 3 1/8"



**PAVER NOTES:**

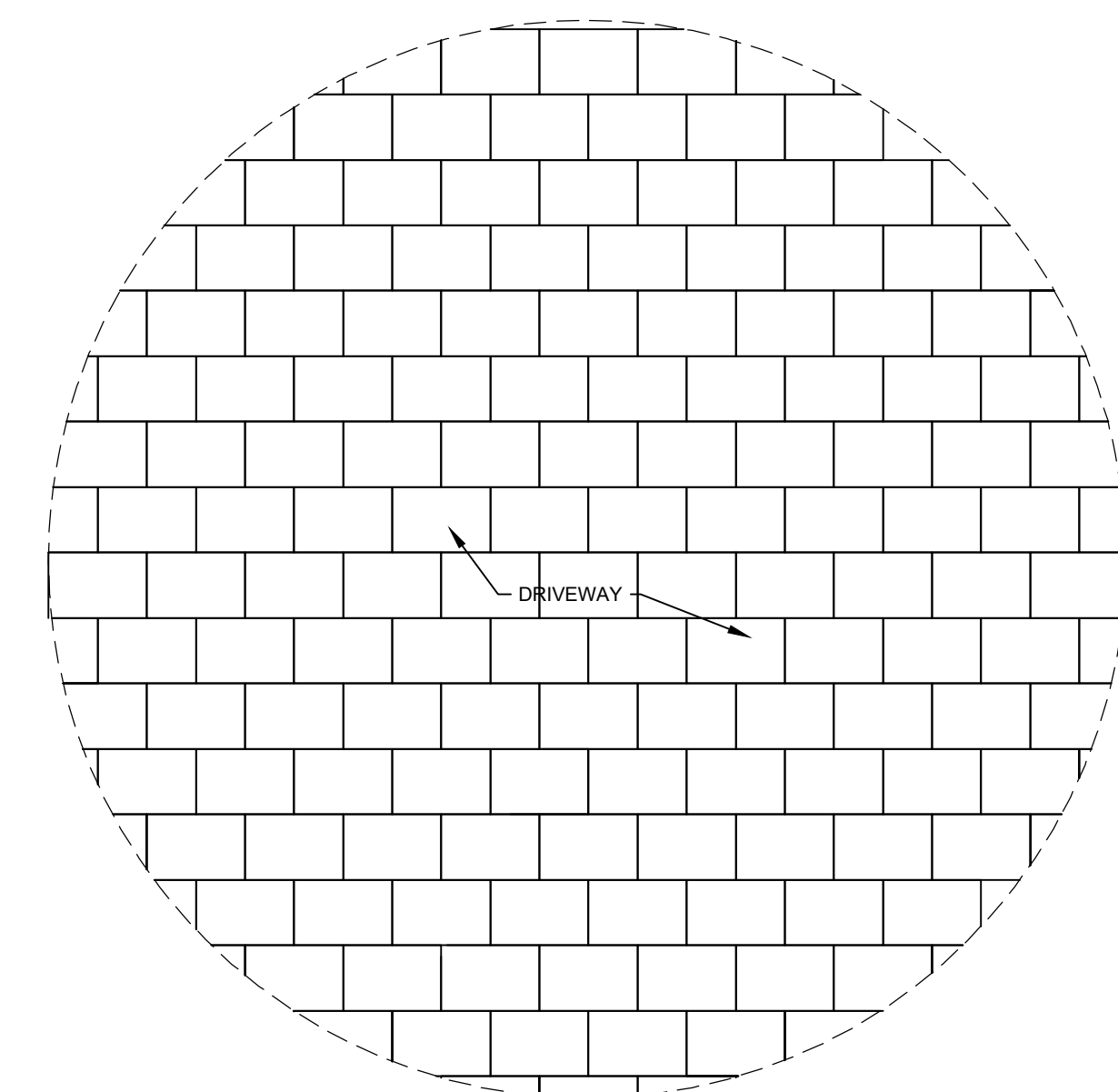
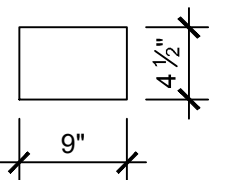
1. CONTRACTOR TO INSTALL ALL PAVERS PER MANUFACTURER'S SPECIFICATIONS
2. ALL AREAS OF PAVERS AS SHOWN ON THE PLANS SHALL BE SET WITH FLUSH TOP SURFACE AND SHALL MAINTAIN A MINIMUM SLOPE OF 0.5% UNLESS OTHERWISE NOTED ON THE PLANS OR DETAILS.
3. BEDDING SAND SHALL CONFORM TO THE GRADING REQUIREMENTS OF ASTM C33. MASON SAND IS NOT ACCEPTABLE. ALL BEDDING SAND SHALL BE SCREENED TO AN EVEN THICKNESS.
4. ALL AREAS OF PAVERS SHALL COMPLY WITH CURRENT ADA (AMERICANS WITH DISABILITIES ASSOCIATION) REQUIRED FOR ACCESSIBLE ROUTES.
5. ALL PAVERS "CUTS" SHALL BE MADE WITH A SPLITTER OR MASONRY SAW.

**1 PEDESTRIAN PAVER PATTERN**

3/4" = 1'-0"

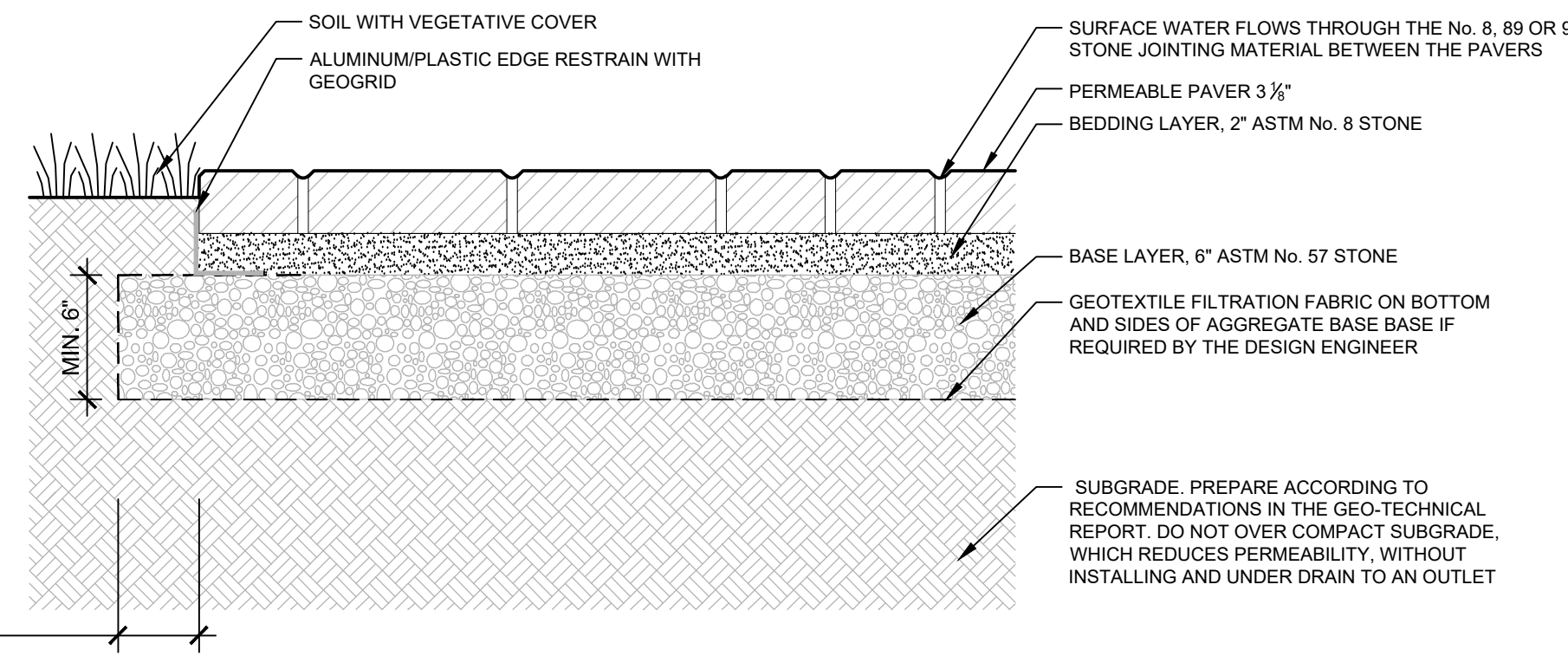
**VEHICULAR PAVERS**

SIZE: 4 1/2" x 9" x 3 1/8"  
 PATTERN: RUNNING BOND



**2 PARKING VEHICULAR PAVER PATTERN**

3/4" = 1'-0"

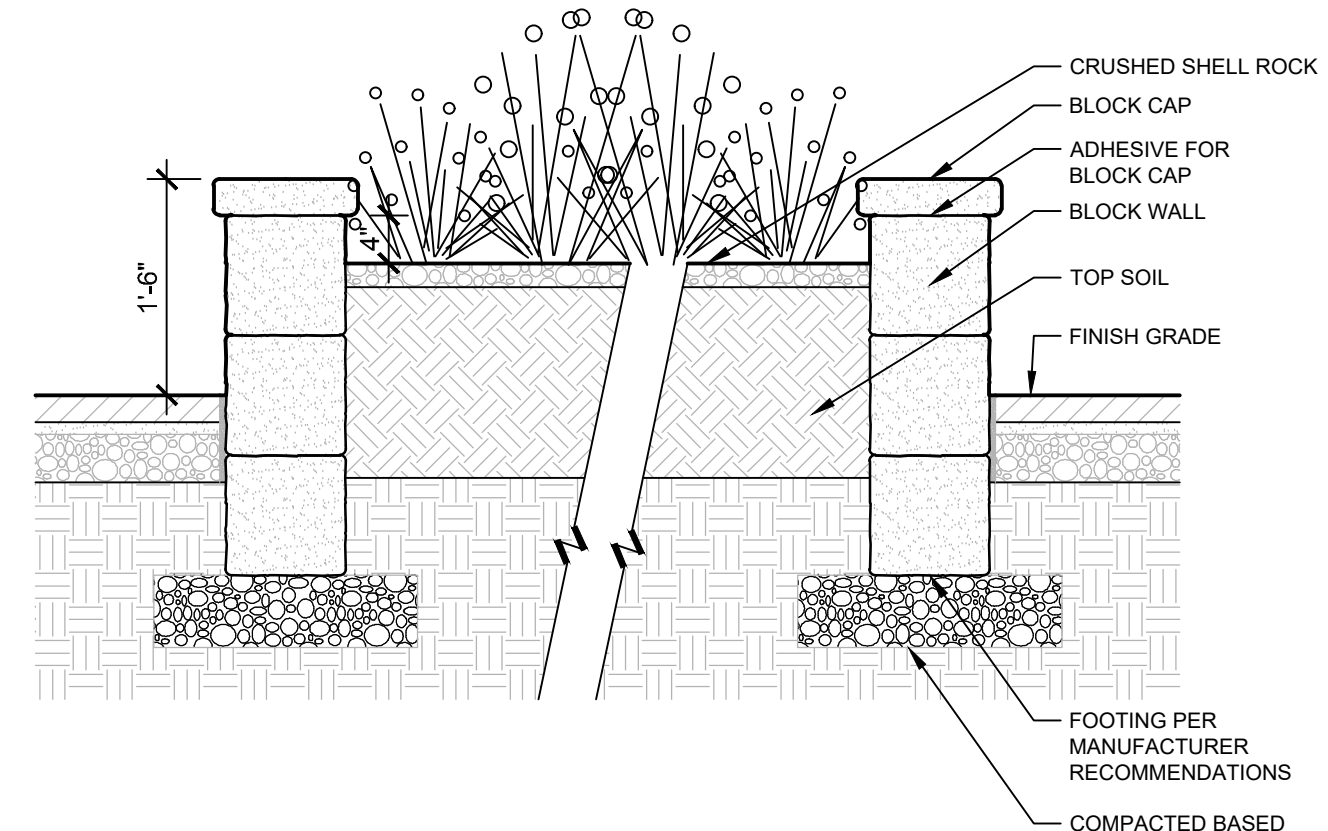
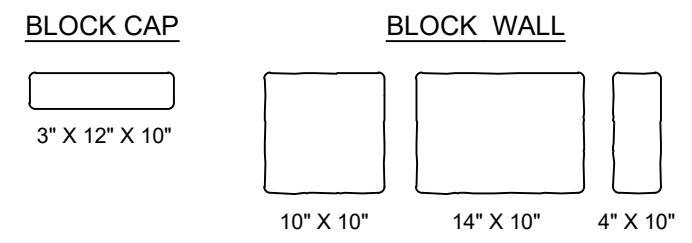


**DESIGN NOTES:**

1. CROSS SECTION AS SHOWN IS SUITABLE FOR PEDESTRIAN APPLICATIONS AND RESIDENTIAL DRIVEWAYS, PATIOS, AND SIDEWALKS.
2. DEPTH OF AGGREGATE BASE SUBJECT TO SITE SPECIFIC CONDITIONS (SOIL CONDITIONS, GROUNDWATER LEVELS, CLIMATIC CONDITIONS). CONTACT LOCAL BELGARD SALES REPRESENTATIVE.
3. DRAIN PIPES MAY BE REQUIRED WITHIN THE AGGREGATE BASE DEPENDING ON THE PERMEABILITY OF THE SUBGRADE SOILS. VERIFY DRAINAGE NEEDS WITH THE GEOTECHNICAL ENGINEER. ENSURE DRAIN PIPES ARE ABLE TO DAYLIGHT VIA GRAVITY FLOW TO SURFACE, OR CONNECT TO CATCH BASIN.

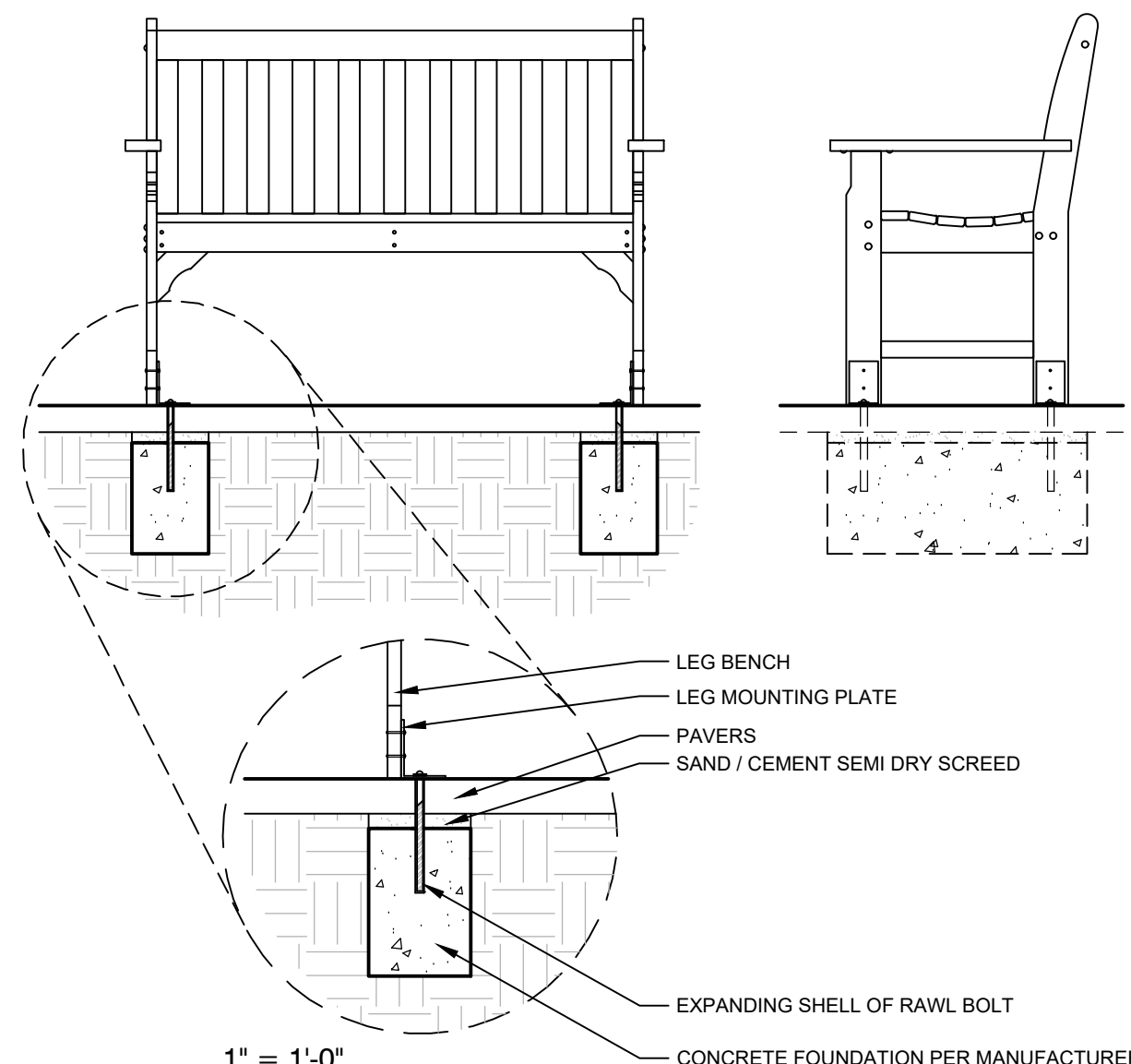
**3 VEHICULAR / PEDESTRIAN PERMEABLE PAVERS**

1 1/2" = 1'-0"



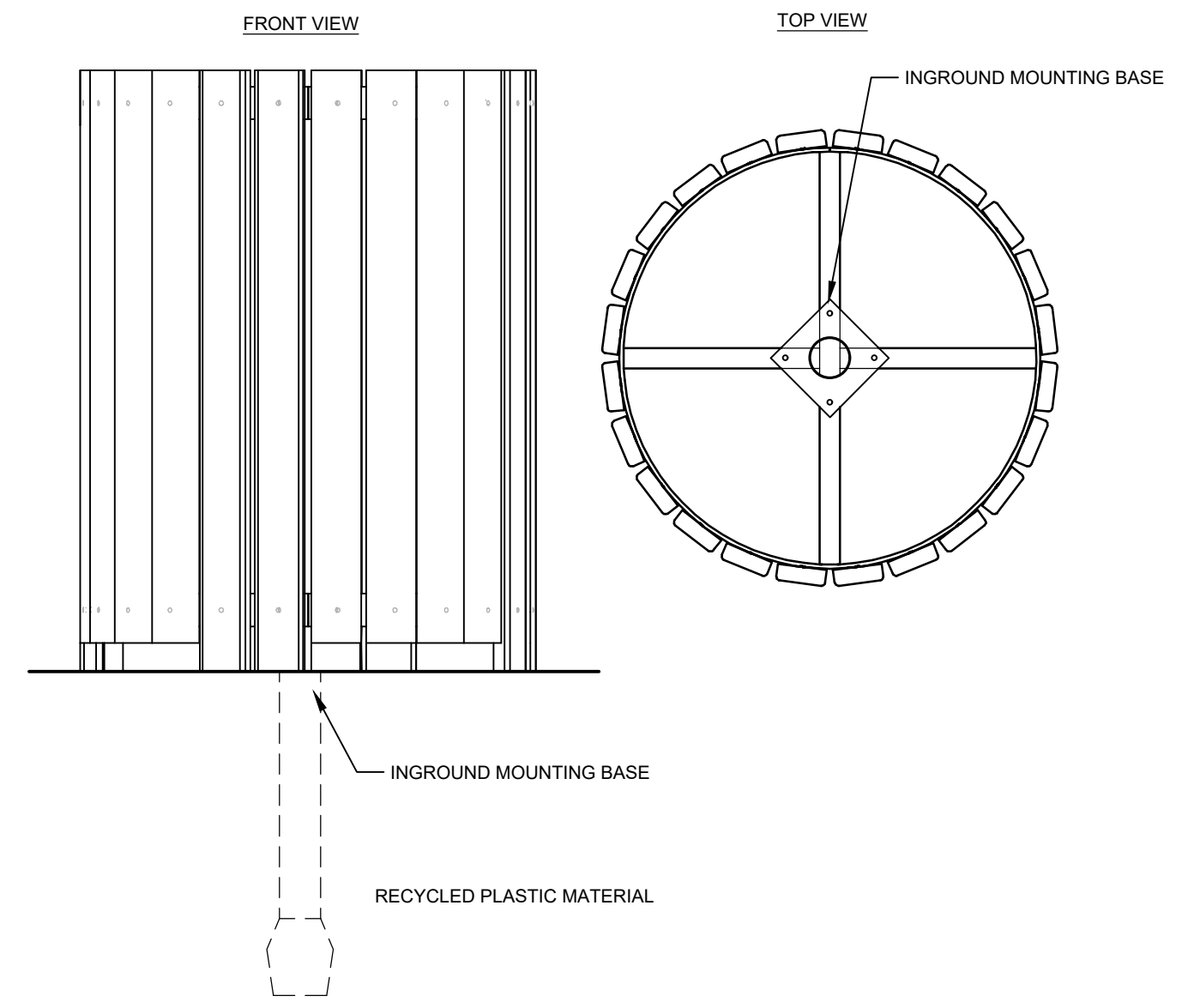
**5 WALL BLOCK**

3/4" = 1'-0"



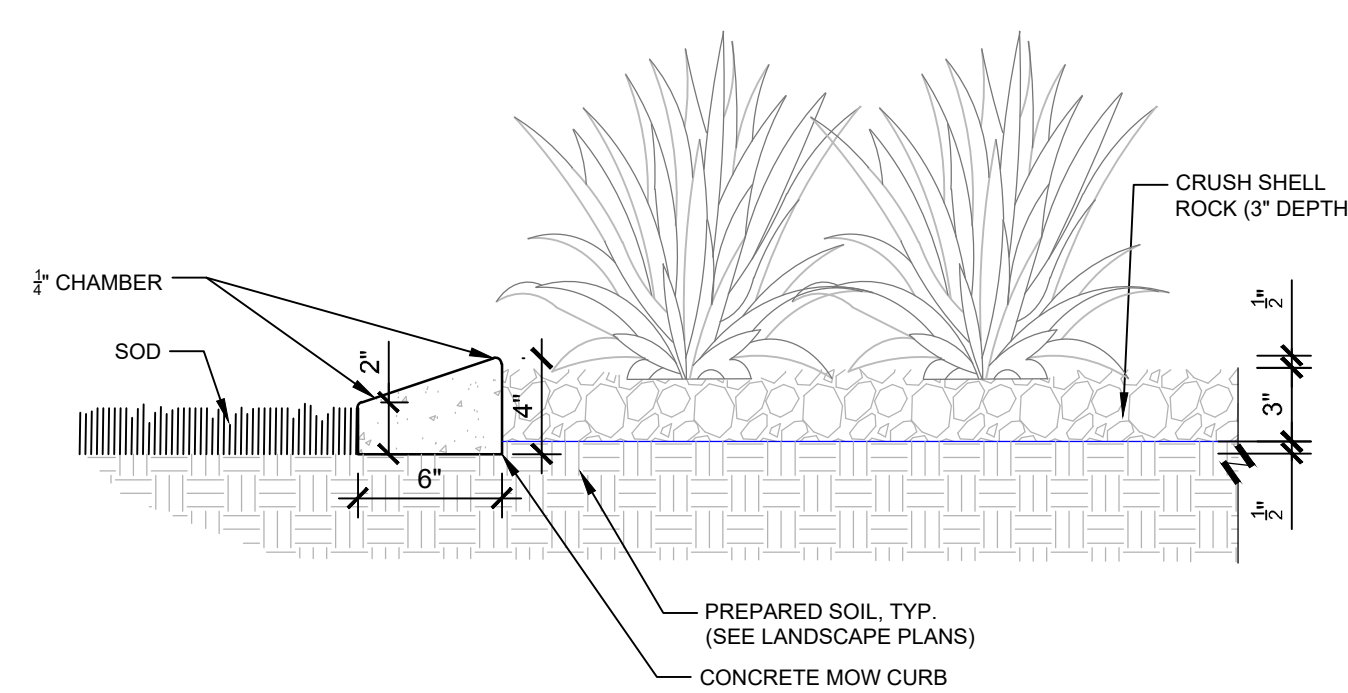
**6 MOUNTING BENCH**

3/4" = 1'-0"



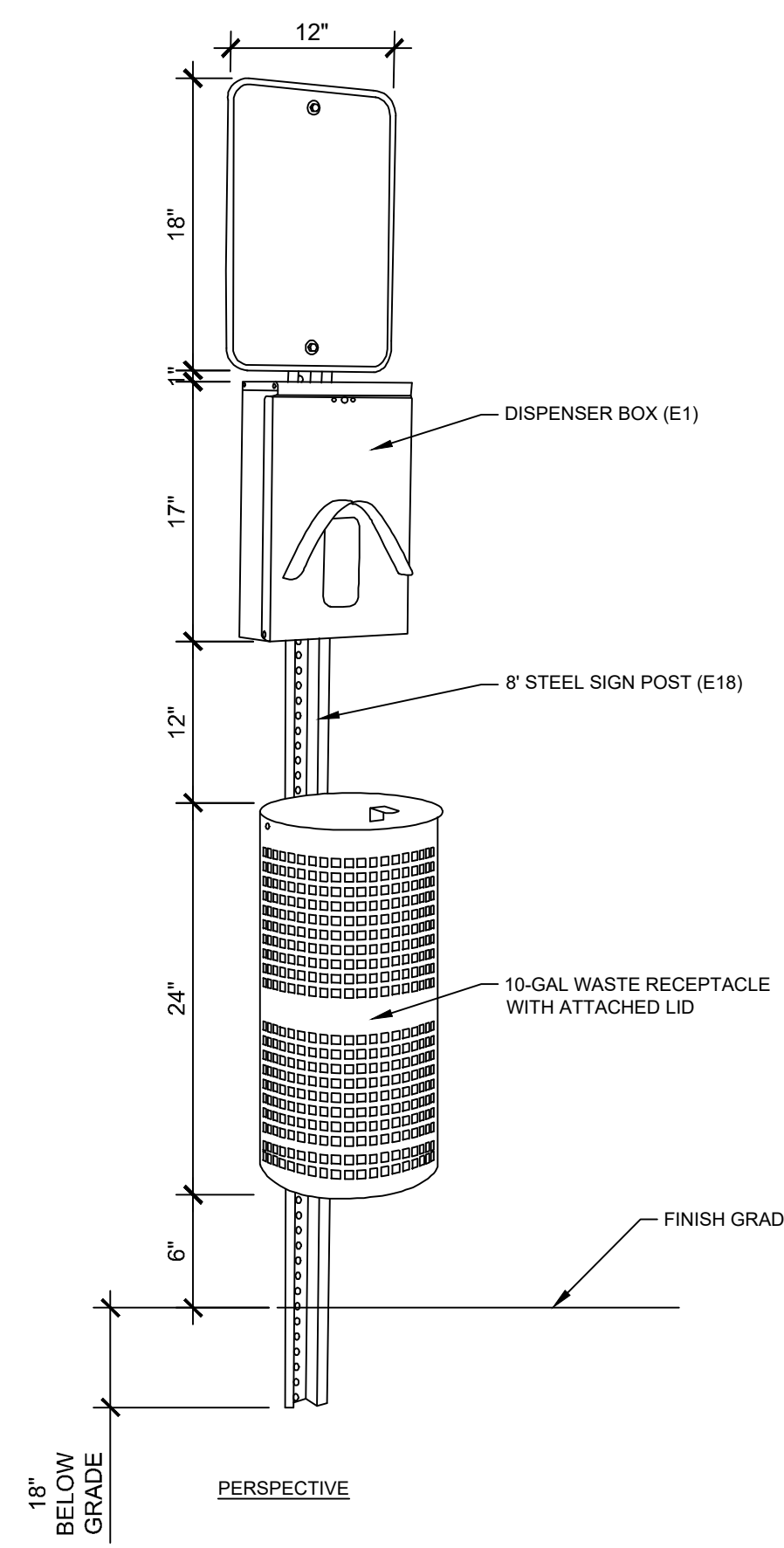
**7 TRASH RECEPTACLE**

3/4" = 1'-0"



**4 CONCRETE MOW CURB**

1 1/2" = 1'-0"



**SPECIFICATIONS**

- SUPERIOR KIT INCLUDES:**
1. 12" X 18" ALUMINUM SIGN.
  2. DISPENSER BOX.
  3. 10 GAL WASTE RECEPTACLE WITH ATTACHED LID.
  4. 3-MOUNTING HARDWARE SETS EACH SET INCLUDES: 2 NUTS, BOLTS AND WASHERS.
  5. 80 PET WASTE BAGS.
  6. 50 WASTE RECEPTACLE LINERS.

**8 PET WASTE STATION**

3/4" = 1'-0"

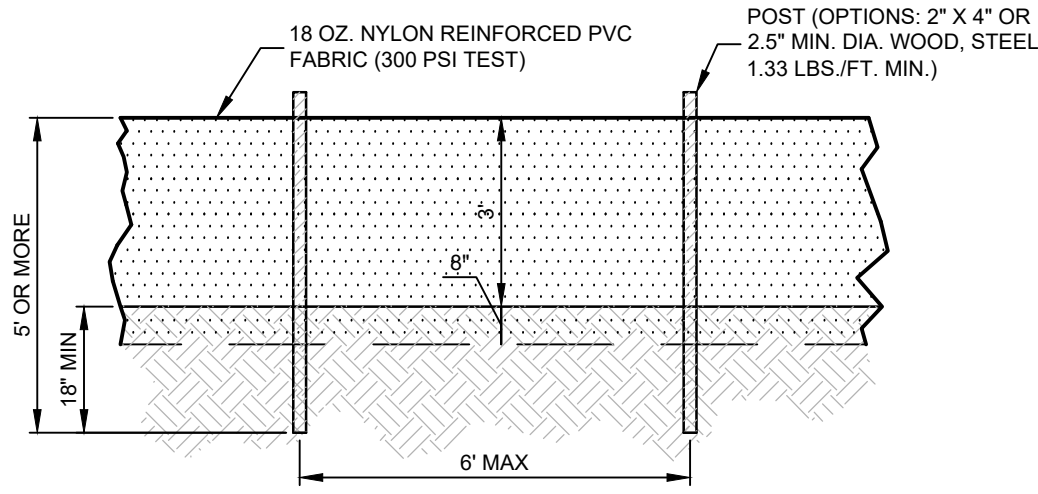
POCKET PARKS  
 CITY OF MADEIRA BEACH  
 MADEIRA BEACH, FLORIDA



REVISION NO.	DATE	DESCRIPTION

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 MARTIN STEFFEN, PLA 6667386  
 NAME LICENSE NO.  
 DATE: 7/3/2024  
 28000636 FL  
 FIRM / BUSINESS NO. STATE

PROJECT NO.: 38545.001  
 ISSUED: OCTOBER 2023  
 DRAWN BY: IG  
 CHECKED BY: LMD  
 SCALE: NTS  
 SHEET TITLE:  
 HARDSCAPE DETAILS  
 H-500



### EROSION CONTROL & SEDIMENTATION CONTROL DEVICES:

- REFER TO LATEST EDITION OF FDOT "ROADWAY AND TRAFFIC DESIGN STANDARDS" INDEX NO. 103 FOR ADDITIONAL DETAILS AND SPECIFICATIONS.
- CONTRACTOR SHALL INSTALL EROSION CONTROL DEVICES PRIOR TO ANY OTHER CONSTRUCTION ACTIVITIES. THE DEVICE SHALL BE INSTALLED IN THE LOCATIONS ON THE DRAWINGS AND ANYWHERE ELSE THERE IS A POTENTIAL FOR EROSION AS SEDIMENT TO EXIT THE WORK AREA.
- CONTRACTOR SHALL INSPECT INSTALLED EROSION CONTROL DEVICE WEEKLY DURING CONSTRUCTION AND AFTER HEAVY RAINS FOR DAMAGE. MAINTENANCE SHALL INCLUDE CLEANING BUILT-UP SEDIMENT BEHIND THE BARRIERS AND/OR REPLACING DAMAGED SECTIONS.
- THE EROSION CONTROL DEVICE SHALL BE MAINTAINED BY THE CONTRACTOR UNTIL A PERMANENT STAND OF GRASS (OR OTHER PERMANENT STABILIZATION) IS ESTABLISHED.

### EROSION / TURBIDITY CONTROL NOTES:

- THE INSTALLATION OF TEMPORARY EROSION CONTROL BARRIERS SHALL BE COORDINATED WITH THE CONSTRUCTION OF THE PERMANENT EROSION CONTROL FEATURES TO THE EXTENT NECESSARY TO ASSURE ECONOMICAL, EFFECTIVE AND CONTINUOUS CONTROL OF EROSION AND WATER POLLUTION THROUGHOUT THE LIFE OF THE CONSTRUCTION PHASE.
- THE TYPE OF EROSION CONTROL BARRIERS USED SHALL BE GOVERNED BY THE NATURE OF THE CONSTRUCTION OPERATION AND SOIL TYPE THAT WILL BE EXPOSED. SILTY AND CLAYEY MATERIAL USUALLY REQUIRE SOLID SEDIMENT BARRIERS TO PREVENT TURBID WATER DISCHARGE, WHILE SANDY MATERIAL MAY NEED ONLY SILT SCREENS OR HAY BALES TO PREVENT EROSION. FLOATING TURBIDITY CURTAINS SHALL BE USED IN OPEN WATER SITUATIONS. DIVERSION DITCHES OR SWALES MAY BE REQUIRED TO PREVENT TURBID STORM WATER RUNOFF FROM BEING DISCHARGED TO WETLANDS OR OTHER WATER BODIES. IT MAY BE NECESSARY TO EMPLOY A COMBINATION OF BARRIERS, DITCHES AND OTHER EROSION/TURBIDITY CONTROL MEASURES IF CONDITIONS WARRANT.
- THE CONTRACTOR SHALL SCHEDULE HIS OPERATIONS SUCH THAT THE AREA OF UNPROTECTED ERODIBLE EARTH EXPOSED AT ANY ONE TIME IS NOT LARGER THAN THE MINIMUM AREA NECESSARY FOR EFFICIENT CONSTRUCTION OPERATIONS, AND THE DURATION OF EXPOSED, UNCOMPLETED CONSTRUCTION TO THE ELEMENTS SHALL BE AS SHORT AS PRACTICABLE AND GRUBBING SHALL BE SO SCHEDULED AND PERFORMED THAT GRADING OPERATIONS CAN FOLLOW IMMEDIATELY THEREAFTER, AND GRADING OPERATIONS SHALL BE SCHEDULED AND PERFORMED THAT PERMANENT EROSION CONTROL FEATURES CAN FOLLOW IMMEDIATELY THEREAFTER IF CONDITIONS ON THE PROJECT PERMIT.
- THE CONTRACTOR PROVIDE ROUTINE MAINTENANCE OF PERMANENT AND TEMPORARY EROSION CONTROL FEATURES UNTIL THE PROJECT IS COMPLETE AND ALL BARED SOILS ARE STABILIZED.
- ALL GREEN AND/OR DISTURBED AREAS TO BE SODDED/RESODDED TO MATCH EXISTING TURF SPECIES, UNLESS OTHERWISE NOTED.
- ANY SOD PLACED ON SLOPES EXCEEDING 3:1 TO BE ANCHORED BY STAKES, NETS, AND/OR OWNER'S REPRESENTATIVE WRITTEN APPROVED METHOD.
- REQUIRED TREE BARRICADES AND EROSION CONTROL MUST REMAIN INTACT THROUGHOUT CONSTRUCTION. ENCROACHMENT INTO OR FAILURE TO MAINTAIN THESE BARRICADES WILL RESULT IN ENFORCEMENT ACTION WHICH MAY INCLUDE CITATIONS AND/OR PERMIT REVOCATION AS PROVIDED BY LOCAL JURISDICTION.
- ROOT PRUNING SHALL BE CONDUCTED AFTER STAKING FOR, AND PRIOR TO INSTALLATION OF SILT FENCE, A CERTIFIED ARBORIST, INTERNATIONAL SOCIETY OF ARBORICULTURE-CERTIFIED, SHALL CONDUCT OR OVERSEE ROOT PRUNING ACTIVITIES. THE CERTIFIED ARBORIST SHALL DETERMINE SPECIFIC EQUIPMENT AND METHODS TO BE USED. THE CERTIFIED ARBORIST SHALL REVIEW ROOT PRUNING SHOWN ON THE PLANS, AND SHALL VERIFY OR MODIFY AS NEEDED THE LIMITS AND LOCATIONS OF ROOT PRUNING TO MINIMIZE IMPACTS TO AFFECTED TREES. THE CERTIFIED ARBORIST SHALL RECOMMEND ANY ASSOCIATED TREATMENTS SUCH AS FERTILIZERS, FUNGICIDES, PESTICIDES, ETC. TO THE OWNER FOR REVIEW AND APPROVAL.

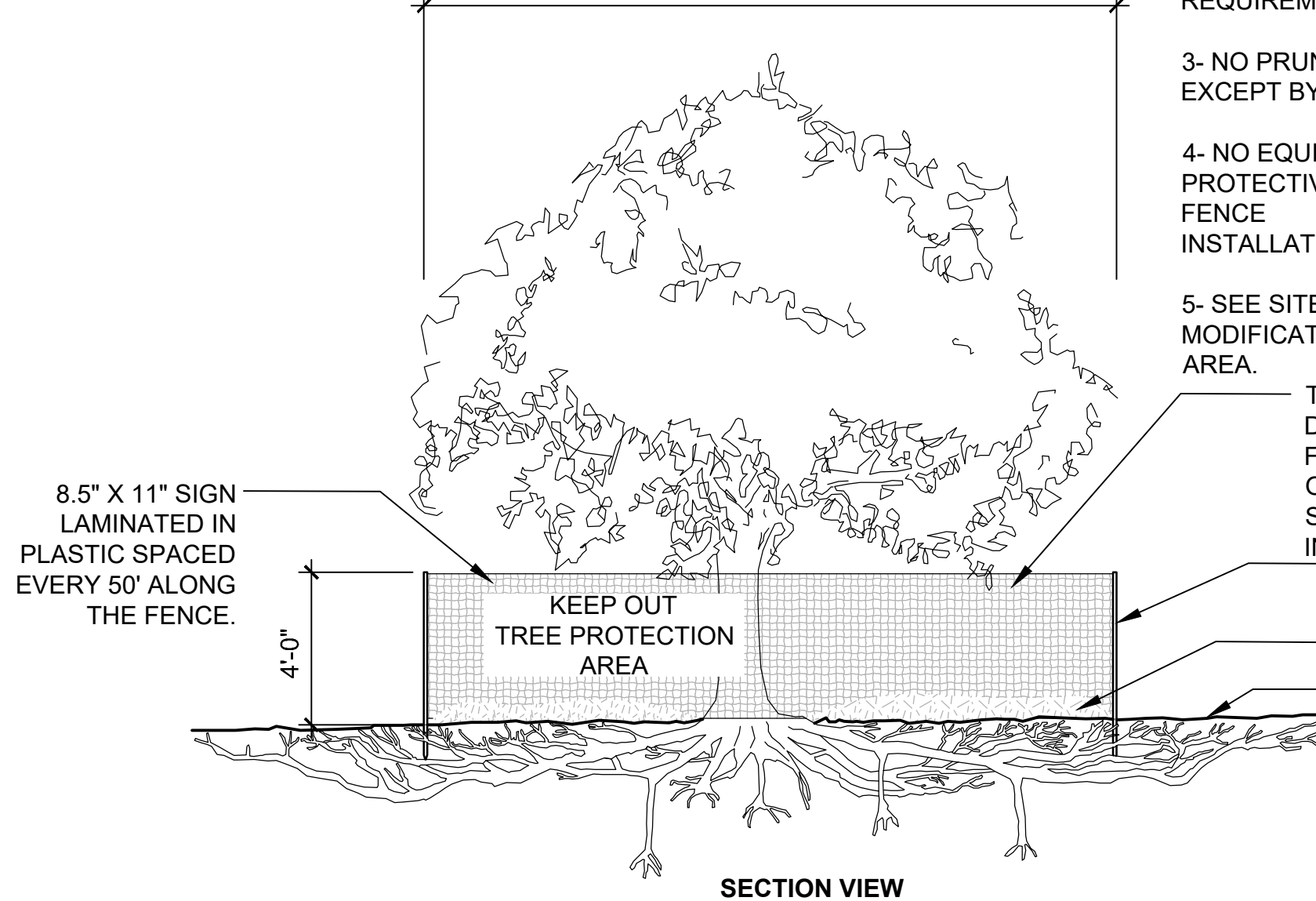
### SITE DEMOLITION NOTES:

- ALL MATERIALS TO BE DEMOLISHED INCLUDING BUT NOT LIMITED TO PLANT MATERIAL, HARDSCAPE BASE MATERIAL, CONCRETE, AND OVERHEAD STRUCTURE SHALL BE REMOVED FROM SITE AND DISPOSED OF IN A LAWFUL MANNER.
- EXISTING TREES THAT ARE SHOWN TO REMAIN, SHALL MAINTAIN PROTECTIVE BARRIERS AT ALL TIMES. REFER TO DETAIL BELOW.
- THE CONTRACTOR SHALL LOCATE ALL EXISTING UTILITIES PRIOR TO DEMOLITION AND WILL BE RESPONSIBLE FOR THE DAMAGE OF ANY ON-SITE OR OFF-SITE UTILITIES THAT ARE NOT A PART OF THIS PROJECT OR ARE NOT IDENTIFIED TO BE REMOVED. CONTRACTOR SHALL REPAIR ANY DAMAGED IRRIGATION LINES, IRRIGATION APPENDICES, UTILITIES, AND STORM PIPES NOT IDENTIFIED TO BE REMOVED TO THEIR PRE-CONSTRUCTION CONDITION.
- THE CONTRACTOR SHALL BARRICADE THE SITE AND PROPERLY CONTROL TRAFFIC.
- EXISTING SITE FURNITURE SHALL BE RELOCATED OUTSIDE OF CONSTRUCTION LIMITS SHOWN ON PLANS. THE CONTRACTOR SHALL EXERCISE CAUTION NOT TO DAMAGE AND SHALL PRESERVE ALL EXISTING SITE FURNITURE. DAMAGED SITE FURNITURE SHALL BE REPLACED AT THE CONTRACTOR EXPENSE WITH LIKE FURNISHINGS OR APPROVED EQUAL. EXACT POINT(S) OF RELOCATION AND/OR REPLACEMENT SHALL BE COORDINATED WITH THE OWNER'S REPRESENTATIVE.

#### NOTES:

- SEE SPECIFICATIONS FOR ADDITIONAL TREE PROTECTION REQUIREMENTS.
- IF THERE IS NO EXISTING IRRIGATION, SEE SPECIFICATIONS FOR WATERING REQUIREMENTS.
- NO PRUNING SHALL BE PERFORMED EXCEPT BY APPROVED ARBORIST.
- NO EQUIPMENT SHALL OPERATE INSIDE THE PROTECTIVE FENCING INCLUDING DURING FENCE INSTALLATION AND REMOVAL.
- SEE SITE PREPARATION PLAN FOR ANY MODIFICATIONS WITH THE TREE PROTECTION AREA.

CROWN DRIP LINE OR OTHER LIMIT OF TREE PROTECTION AREA. SEE TREE PRESERVATION PLAN FOR FENCE ALIGNMENT.



SECTION VIEW

### 9 TREE PROTECTION

3/16" = 1'-0"

URBAN TREE FOUNDATION © 2014  
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HDI-MA-05

### HARDSCAPE NOTES:

- ALL MATERIALS AND CONSTRUCTION SHALL BE IN ACCORDANCE WITH CITY OF MADEIRA BEACH REQUIREMENTS.
- CONTRACTOR SHALL PROTECT EXISTING BLOCK WALL FACE AND CONCRETE DURING CONSTRUCTION TO PREVENT CHIPPING, CONCRETE SPLATTER, CRACKING, TOPPLING, AND ANY OTHER STRUCTURAL OR AESTHETIC DEFECTS.
- ALL EARTHWORK, PLACEMENT OF FILL AND PAVEMENT PREPARATION TO CONFORM TO THE MORE STRICT OF CITY OF MADEIRA BEACH FOR TECHNICAL SPECIFICATIONS, FDOT STANDARD SPECIFICATIONS, OR THE OWNER'S REPRESENTATIVE'S RECOMMENDATIONS.
- ALL DELETERIOUS SUBSURFACE MATERIAL (I.E. MUCK, PEAT, BURIED DEBRIS) IS TO BE EXCAVATED IN ACCORDANCE WITH THESE PLANS OR AS DIRECTED BY THE OWNER'S REPRESENTATIVE. DELETERIOUS MATERIAL IS TO BE REMOVED AND DISCARDED FROM THE SITE IN A LAWFUL MANNER. EXCAVATED AREAS TO BE BACK FILLED WITH APPROVED MATERIALS AND COMPACTED AS DETAILED ON THESE PLANS.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING EXCAVATIONS AGAINST COLLAPSE AND SHALL PROVIDE BRACING, SHEETING OR SHORING AS NECESSARY. DEWATERING METHODS SHALL BE USED AS REQUIRED TO KEEP TRENCHES DRY WHILE PIPE AND APPURTENANCES ARE BEING PLACED.
- ANY UNDERGROUND UTILITIES INCLUDING CONDUIT FOR ELECTRICAL, IRRIGATION LINES AND SLEEVING, CABLE TV AND TELEPHONE CROSSINGS SHALL BE INSTALLED PRIOR TO PAVEMENT CONSTRUCTION. CONTRACTOR TO COORDINATE INSTALLATION OF ANY ADDITIONAL CONDUIT LOCATIONS WITH OWNER.
- ALL CURB CUT RAMPS TO BE CONSTRUCTED PER FLORIDA DEPARTMENT OF TRANSPORTATION STANDARDS (FDOT INDEX 304) AND BE ADA COMPLIANT INCLUDING USE OF TRUNCATED DOME TACTILE SURFACE. TERMINATION OF CURB SHALL INCLUDE A 3' TRANSITION TO FLUSH UNLESS OTHERWISE NOTED ON THE PLANS.
- SLOPES, SLOPE DIRECTION, AND HIGH POINTS HAVE BEEN PROVIDED FOR INFORMATIONAL PURPOSES ONLY. FINAL GRADE ELEVATIONS ARE TO BE DETERMINED BY CONTRACTOR. IN GENERAL ALL NEWLY POURED CONCRETE SHALL BE 6" HIGHER THAN DEMOLISHED CONCRETE CREATING A SMOOTH TRANSITION. HIGH POINTS, AND SWALES MAY BE CREATED TO DIVERT WATER IN AN EFFICIENT MANNER. CROSS SLOPES SHALL NOT BE GREATER THAN 1:5% ON HARDSCAPES. CONTRACTOR SHALL BE RESPONSIBLE FOR ENSURING POSITIVE SLOPES AND DRAINAGE TO PREVENT POOLING OF WATER WITHIN AND ADJACENT TO HARDSCAPE AREAS.
- CONTRACTOR SHALL RE-ESTABLISH SMOOTH TRANSITION TO SURROUNDING SODDED AREAS. ADDITIONAL GRADING AND SODDING MAY BE REQUIRED TO ESTABLISH TRANSITION. FINISHED GRADE OF SURROUNDING SODDED AREA TO BE 2" BELOW FINISHED HARDSCAPE. CONTRACTOR IS RESPONSIBLE FOR ENSURING STANDING WATER DOES NOT OCCUR WHERE PROPOSED HARDSCAPE EDGE MEETS TURF/SOD OR ANYWHERE ELSE ON SITE NOT INTENDED TO HOLD WATER.
- CONTRACTOR SHALL COORDINATE WITH AWNING WORKS TO VERIFY LOCATION OF FOOTERS AND OVERHEAD STRUCTURE PRIOR TO INSTALLATION OF ANY PAVING/HARDSCAPE MATERIALS.
- COMPACTED SUB-GRADE SHALL BE MECHANICALLY MIXED TO THE SPECIFIED DEPTH PRIOR TO GRADING, COMPACTION, AND TESTING.
- CONTRACTOR SHALL SAW CUT AND PROVIDE CONSTRUCTION JOINT AT LOCATIONS WHERE NEW PAVEMENT MEETS EXISTING PAVEMENT.
- CONTRACTOR IS RESPONSIBLE FOR PROTECTING EXISTING WALL DURING ALL CONCRETE INSTALLATION ACTIVITIES.
- CONTRACTOR TO UTILIZE SAME PAVEMENT BASE OPTION MATERIAL FOR ALL PAVING WITHIN PROJECT.
- CONCRETE PAVING TO BE 4" DEPTH AND 3500 PSI WITH FIBER REINFORCEMENT. BASE TO BE 6" COMPACTED SUBGRADE AT 98% COMPACTION (AASHTO T-99).
- PROVIDE SAMPLES OF CONCRETE MATERIAL AND FINISHING TECHNIQUES TO OWNER'S REPRESENTATIVE PRIOR TO ORDERING. FINAL APPROVAL FROM OWNER'S REPRESENTATIVE IS REQUIRED PRIOR TO INSTALLATION.

### PLANTER NOTES:

- THE CONTRACTOR SHALL MAINTAIN AND PROTECT FROM MUD, DIRT, DEBRIS, ETC. THE STORM DRAINAGE SYSTEM UNTIL FINAL ACCEPTANCE OF THE PROJECT. THE CONTRACTOR MAY BE REQUIRED TO RECLEAN PIPES AND INLETS FOR THESE PURPOSES.
- CONTRACTOR SHALL FURNISH ALL MATERIALS AND CONSTRUCT BLOCK RETAINING WALLS USING GEOGRID REINFORCEMENT AND MODULAR BLOCKS. PREPARE FOUNDATION SOIL, FURNISH AND INSTALL LEVELING PAD AND DRAINAGE FILL PER MANUFACTURER'S RECOMMENDATIONS.
- FOR BIDDING PURPOSES ONLY, CONTRACTOR SHALL ASSUME: "BELGARD CASTLEMANOR, NAPOLI FINISH". WALL CAP TO BE 12"x10"x3" "BELGARD CASTLEMANOR, NAPOLI FINISH". BLOCK FACE TO BE SINGLE OR STRAIGHT PLANE CONFIGURATION (NO ANGLES). BOND CONFIGURATION SHALL BE RUNNING BONDS MINIMALLY LOCATED AT MIDPOINT VERTICALLY OF ADJACENT UNITS. CONTRACTOR SHALL ENSURE EXPOSED SURFACES BE FREE OF CHIPS, CRACKS AND OTHER VISIBLE IMPERFECTIONS. THE OVERALL ANTICIPATED WALL LENGTH IS SHOWN IN THE PLANS. CONTRACTOR SHALL DETERMINE THE QUANTITIES OF ALL ANCILLARY ITEMS INCLUDING, BUT NOT LIMITED TO, WALL UNITS, GEOGRID, FILTER FABRIC, CRUSHED STONE SAND, BACKFILL, SURVEY, ENGINEERING, EQUIPMENT AND LABOR AND INCLUDE ALL COSTS ASSOCIATED WITH THE WALL CONSTRUCTION IN THE LUMP SUM COST OF THE PROJECT. CONTRACTOR SHALL COORDINATE FINAL COLOR, WALL CAP, AND FACE FINISH WITH OWNER'S REPRESENTATIVE.
- SUBMIT COMPLETE WORKING DRAWINGS, CALCULATIONS, AND SPECIFICATIONS FOR THE INSTALLATION OF THE RETAINING/SEAT WALL. INCLUDE THE FOLLOWING, AT A MINIMUM: DETAILS AND DIMENSIONS FOR ALL ELEMENTS, COMPONENTS AND APPURTENANCES.
- WALL CONSTRUCTION SHALL BE BASED ON NATIONAL CONCRETE MASONRY ASSOCIATION DESIGN GUIDELINES FOR SEGMENTAL RETAINING WALLS. DESIGN MUST ALSO BE IN COMPLIANCE WITH FLORIDA BUILDING CODE (LATEST EDITION) AND THE CITY OF MADEIRA BEACH.
- ALL BACKFILL SOIL AND SUB-SURFACE SHALL BE PREPARED TO MEET THE REQUIREMENTS OF MANUFACTURER'S RECOMMENDATIONS.
- ALL FEATURES OF THE SYSTEM FURNISHED, INCLUDING PRECAST ELEMENTS, FASTENERS, CONNECTIONS, SOIL REINFORCEMENTS, GEOGRID REINFORCEMENT, AND OTHER NECESSARY COMPONENTS, SHALL BE APPROVED BY THE OWNER'S REPRESENTATIVE.
- VISIBLE WALL HEIGHT (ABOVE GRADE) SHALL BE EIGHTEEN INCHES. HEIGHTS AND LENGTHS SHALL NOT BE LESS THAN THOSE SHOWN ON THE PLANS.
- PRIOR TO INSTALLATION, CONTRACTOR SHALL STAKE LOCATIONS AND LIMITS OF WALL TO REFLECT PLANS TO GREATEST EXTENT POSSIBLE. COORDINATE WITH OWNER'S REPRESENTATIVE TO REVIEW STAKING PRIOR TO INSTALLATION. PROVIDE A MINIMUM OF TWO BUSINESS DAYS NOTICE OF PROPOSED STAKING REVIEW. OWNER'S REPRESENTATIVE MAY DIRECT ADJUSTMENTS IN THE FIELD TO ENSURE NO CONFLICT WITH UTILITIES OR OTHER SITE FEATURES. NO CHANGES TO WALL LAYOUT WILL BE MADE WITHOUT THE OWNER'S REPRESENTATIVE'S APPROVAL.
- ANY SURVEY WORK REQUIRED TO LAY OUT WALLS WILL BE PROVIDED BY THE CONTRACTOR AND WILL BE INCLUDED IN THE LUMP SUM COST OF THE PROJECT.
- ALL UNSUITABLE MATERIAL SUCH AS ROCK, BRUSH AND ORGANIC SOIL SHALL BE REMOVED FROM BENEATH FOUNDATION. PREPARED SURFACE SHALL MEET OR EXCEED ALLOWABLE BEARING CAPACITY OF 2,000 POUNDS PER SQ. FT. AND VERIFIED BY CONTRACTOR'S ENGINEER PRIOR TO START OF LEVELING PAD CONSTRUCTION. ANY OVER-EXCAVATION OR REQUIRED FILL SHALL COMPLY WITH ASTM (D-1557).
- BACKFILL MATERIAL AND COMPACTION RATE SHALL BE PER THE MANUFACTURER'S RECOMMENDATION.
- FILTER FABRIC SHALL BE FDOT TYPE D-3, NON-WOVEN GEOTEXTILE. PROVIDE 12 INCH OVERLAP AT VERTICAL JOINTS AND 2 INCHES TURNING AT EACH LAYER OF GEOGRID.
- EXISTING SLOPE SHALL BE IMPACTED AS MINIMALLY AS IS FEASIBLE TO COMPLETE THE WORK.
- INSTALL FOUNDATION MATERIAL IN 2" LIFTS USING A VIBRATORY ROLLER OR PLATE COMPACTOR TO PROVIDE A UNIFORM COMPACTED FOUNDATION. ANY VOID ENCOUNTERED SHALL BE FILLED AND BROUGHT TO GRADE WITH COMPACTED GRANULAR MATERIAL CONFORMING TO THE MANUFACTURER'S SPECIFICATIONS FOR AGGREGATE BASE COURSE. IF APPROVED BY THE OWNER'S REPRESENTATIVE, A CONCRETE BASE COURSE MAY BE USED.
- USE CLEAN GRAVEL TO FILL OPENINGS IN, BETWEEN, AND BEHIND THE WALL UNITS.
- ALL SEGMENTAL BLOCK UNITS WITHIN THE LAST 3 FEET OF END OF EACH WALL WILL BE ATTACHED WITH ADHESIVE. IN ADDITION TO ANY OTHER STRUCTURAL MATERIALS RECOMMENDED BY THE MANUFACTURER, THE MINIMUM EMBEDMENT DEPTH MUST BE MAINTAINED AT THE END OF EACH WALL WHERE IT RETURNS AND STEPS UP INTO THE EXISTING EMBANKMENT SLOPE.
- ADDITIONAL WALL MATERIAL MAY BE REQUIRED TO MEET MANUFACTURER'S WALL END EMBANKMENT RECOMMENDATIONS. ANY ADDITIONAL MATERIAL AND LABOR TO MEET MANUFACTURER'S RECOMMENDATION SHALL BE INCLUDED IN THE BID.
- CONTRACTOR SHALL INSTALL GEOGRID SOIL REINFORCEMENT PER MANUFACTURER'S RECOMMENDATION.
- BACKFILL WILL BE PLACED FROM THE WALL REARWARD INTO THE EMBANKMENT TO ENSURE THAT THE GEOGRID REMAINS TAUT.
- TRACK MOUNTED CONSTRUCTION EQUIPMENT WILL NOT BE OPERATED DIRECTLY ON THE GEOGRID. A MINIMUM BACKFILL THICKNESS OF 6 INCHES IS REQUIRED PRIOR TO OPERATION OF TRACK MOUNTED VEHICLES OVER THE GEOGRID.
- RUBBER Tired EQUIPMENT MAY PASS OVER THE GEOGRID AT SLOW SPEED, LESS THAN 10 MPH. SUDDEN BRAKING AND SHARP TURNING SHALL BE AVOIDED.

POCKET PARKS

CITY OF MADEIRA BEACH

MADEIRA BEACH, FLORIDA



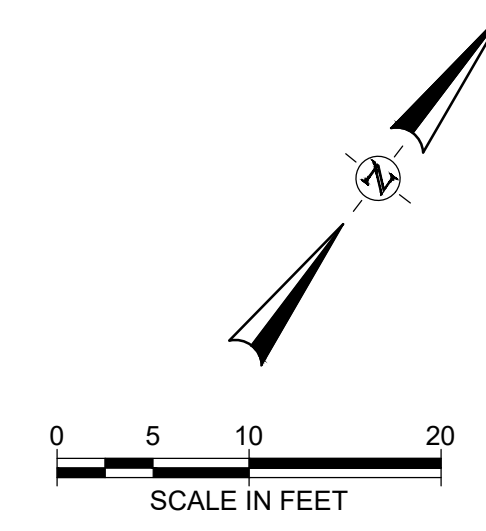
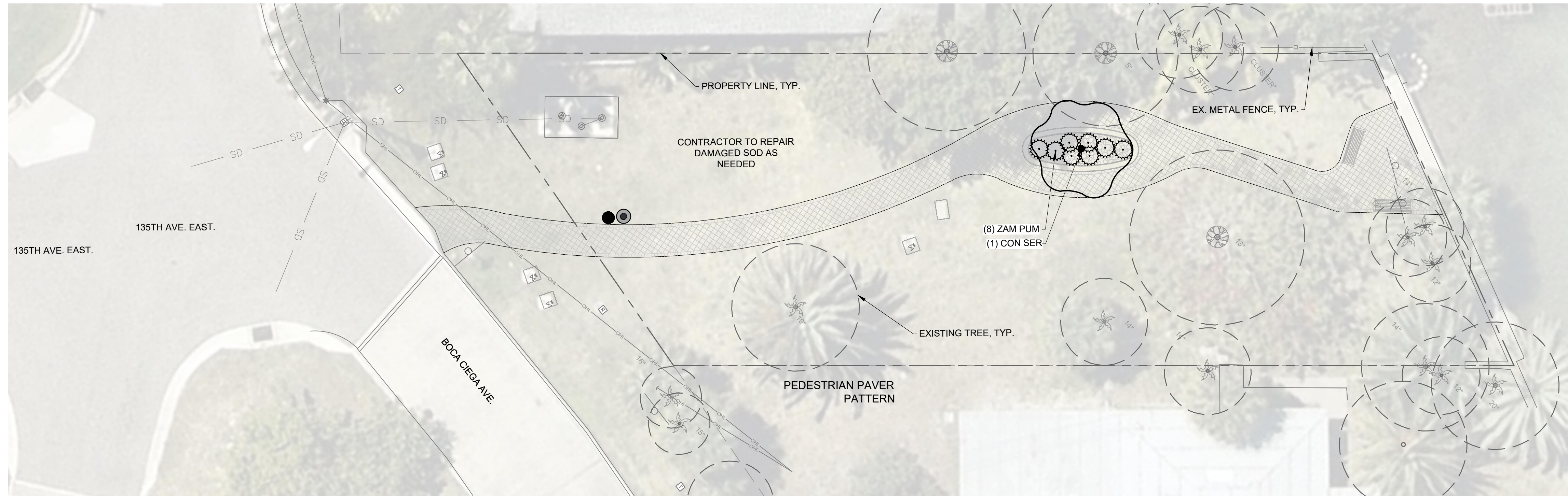
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MARTIN STEFFEN, FLA 6667386  
NAME LICENSE NO.  
7/3/2024  
DATE  
28090358 FL  
FIRM / BUSINESS NO. STATE

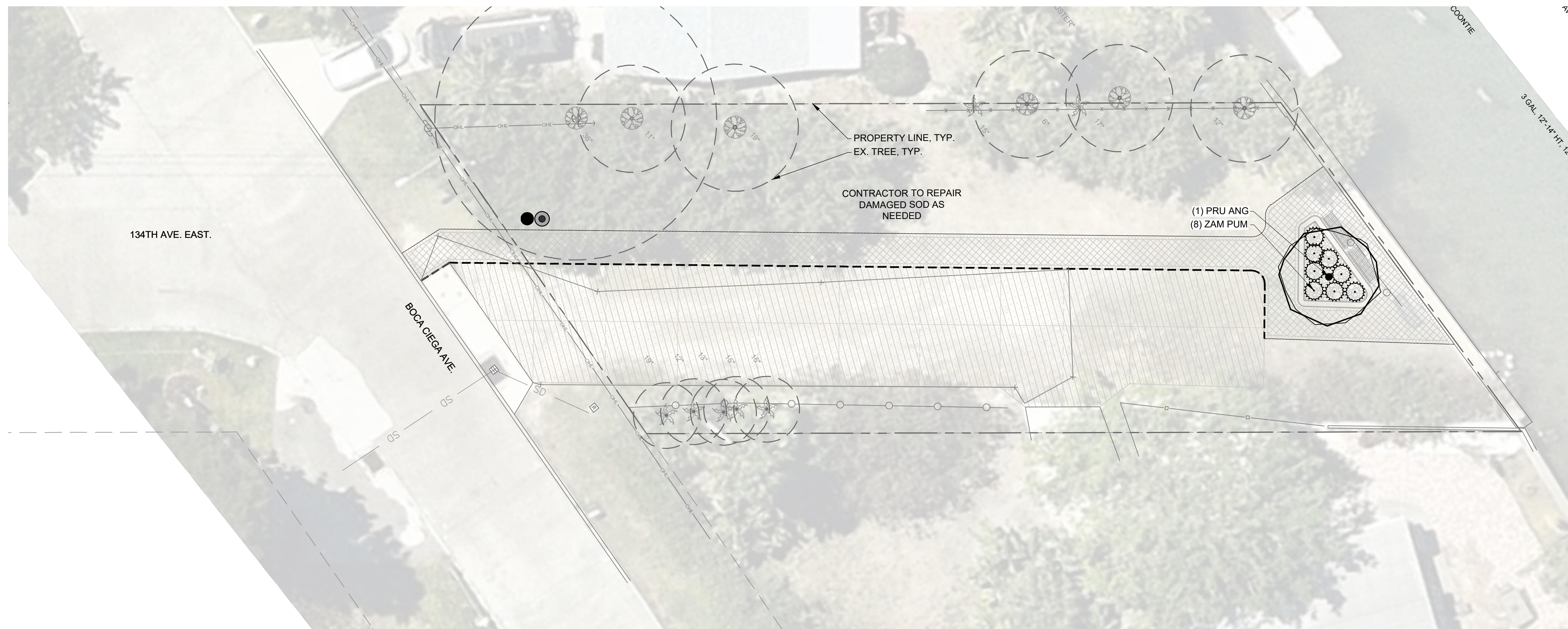
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ISSUED: OCTOBER 2023  
DRAWN BY: IG  
CHECKED BY: LMD  
SCALE: NTS  
SHEET TITLE:

HARDSCAPE NOTES

H-501



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POCKET PARKS

CITY OF MADEIRA BEACH  
MADEIRA BEACH, FL.



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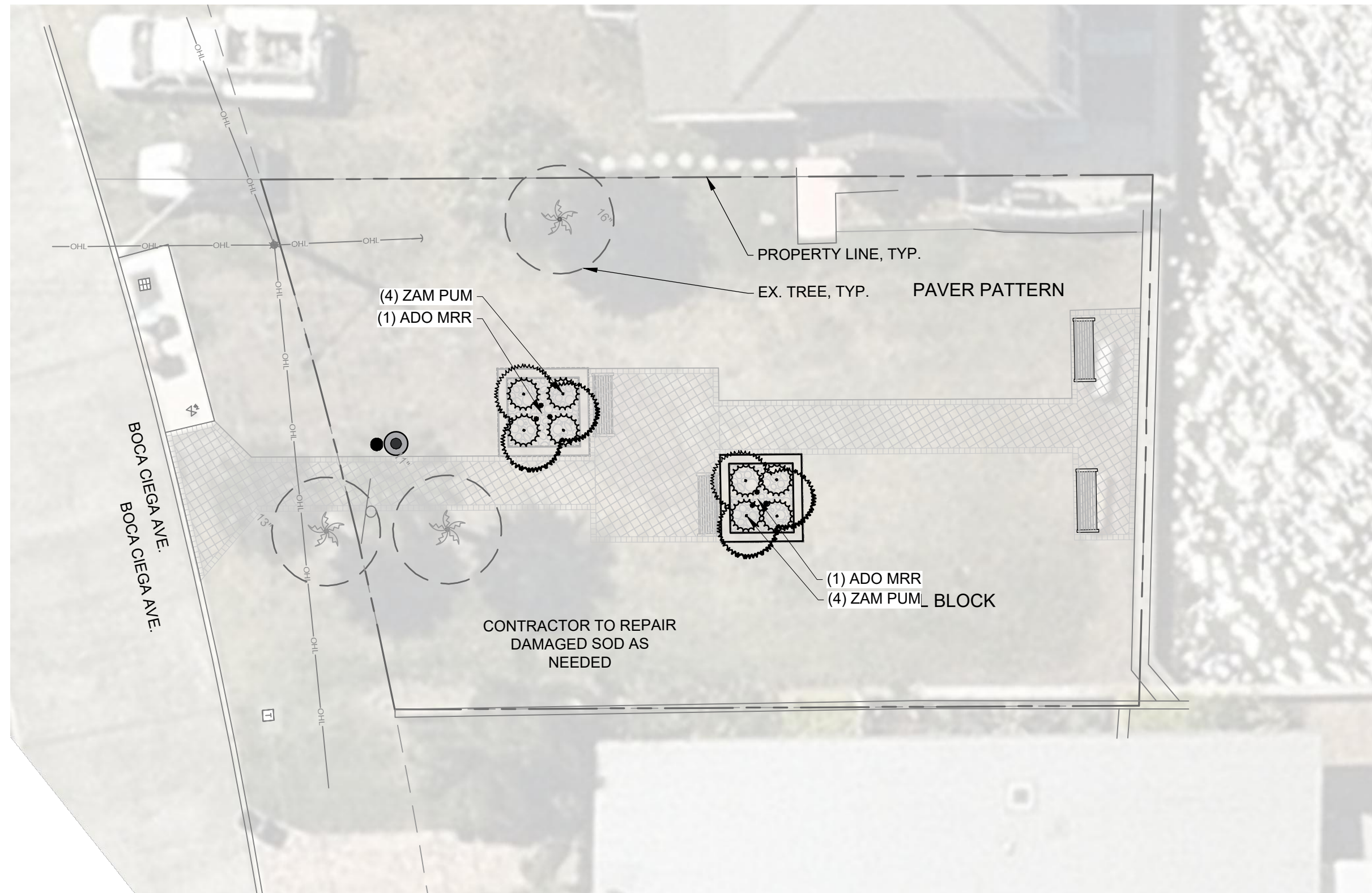
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NAME: 6667386  
7/3/2024  
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28000638 FL  
FIRM / BUSINESS NO. STATE

PROJECT NO.: 38545.001  
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SCALE: 1" = 10'

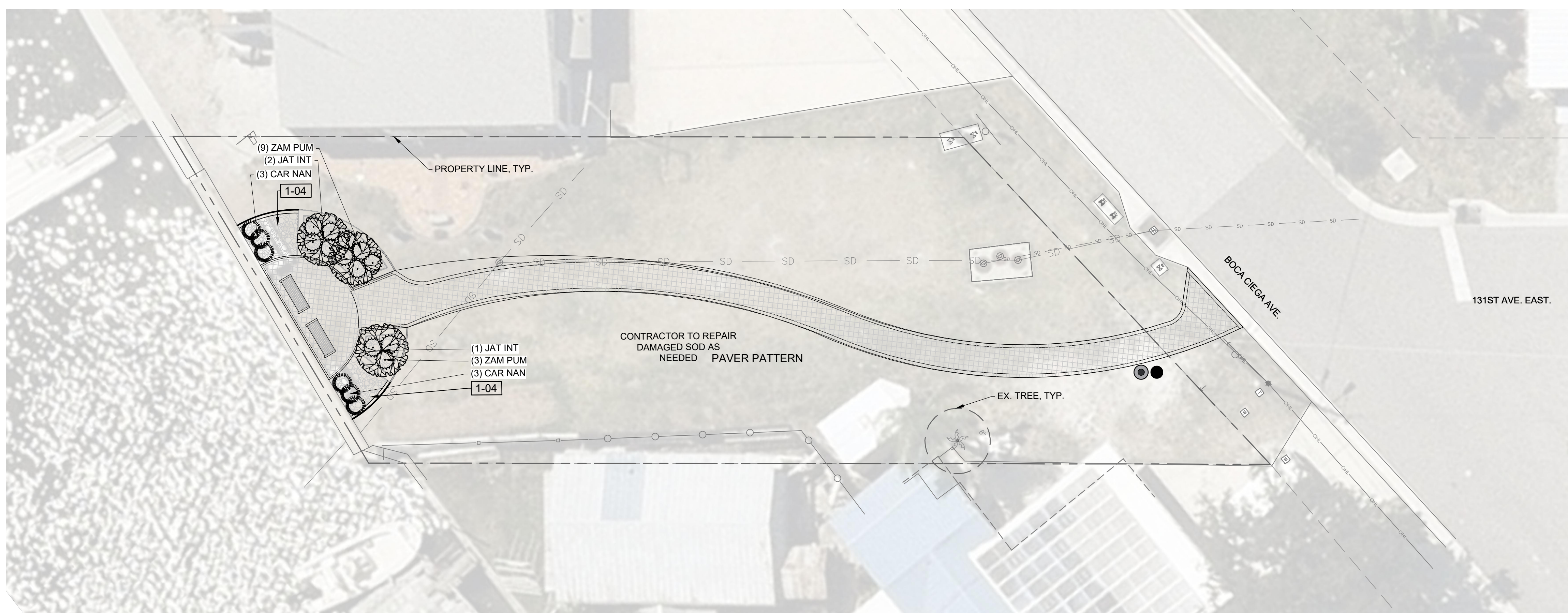
PLANTING PLANS

L-101

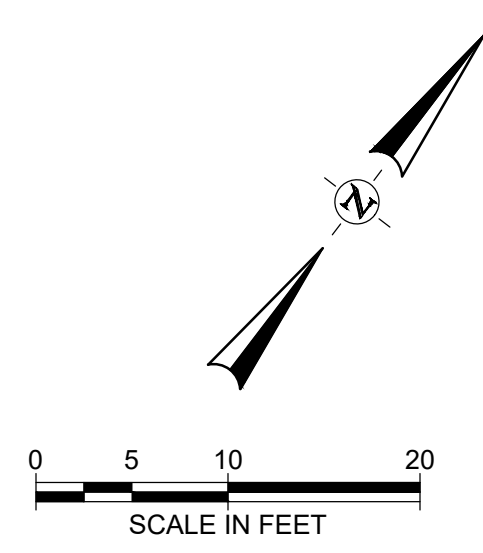




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POCKET PARKS

CITY OF MADEIRA BEACH  
MADEIRA BEACH, FL.



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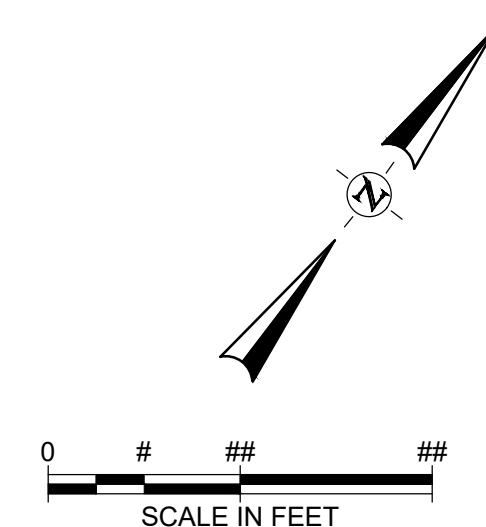
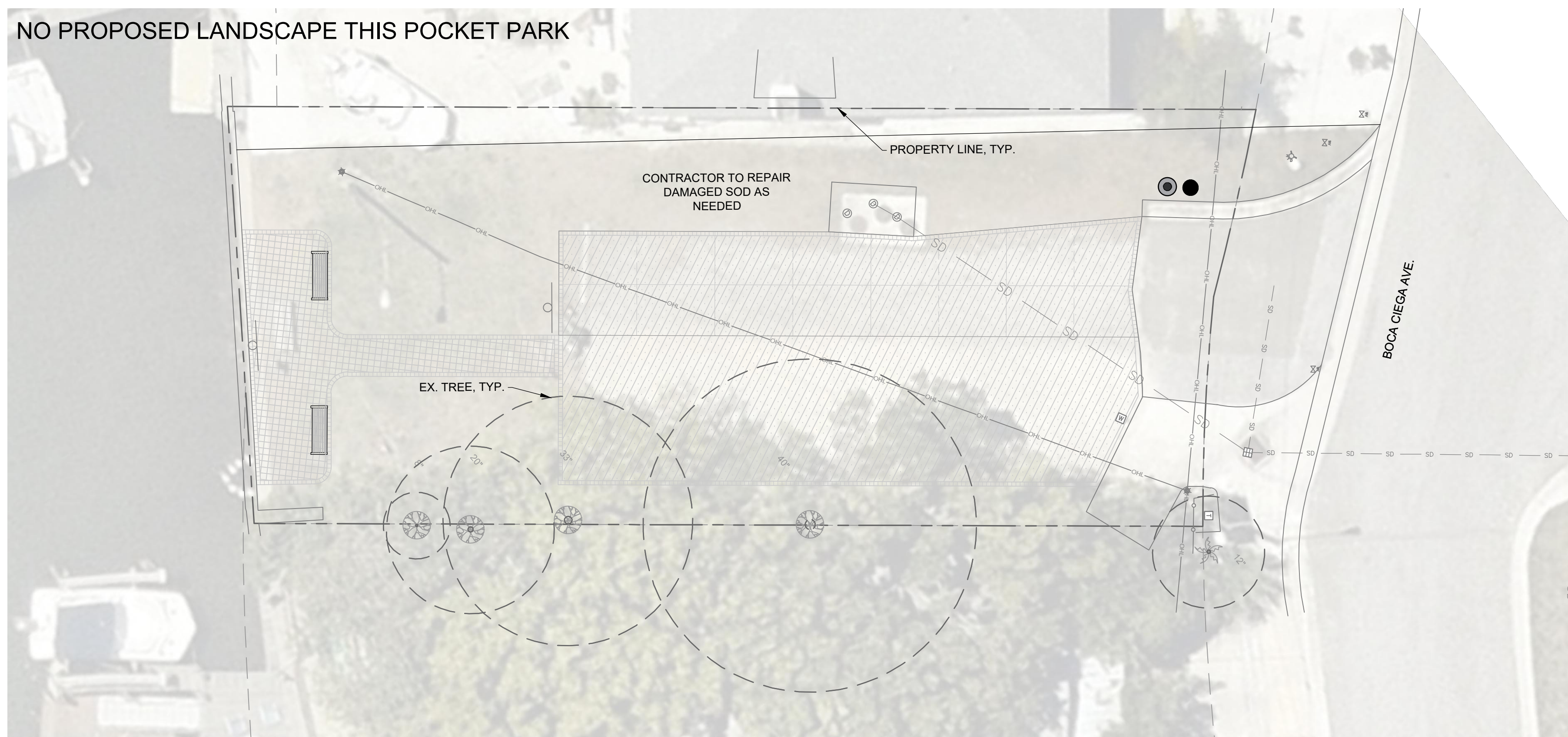
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DRAWN BY: IG  
CHECKED BY: LMD  
SCALE: 1" = 10'  
SHEET TITLE

PLANTING PLAN

L-102

NO PROPOSED LANDSCAPE THIS POCKET PARK



5 132ND AVE. EAST

PLANTING SCHEDULE - CITY TO PROVIDE

SYMBOL	QTY	BOTANICAL / COMMON NAME	CONT	CAL	HT	REMARKS	REMARKS
<b>TREES</b>							
	1	CONOCARPUS ERECTUS F. SERICEUS / BUTTWOOD	B&B	3" CAL	12'-14' HT	STANDARD TRUNK	
	1	PRUNUS ANGUSTIFOLIA / CHICKSAW PLUM	B&B	2" CAL	8' HT	STANDARD TRUNK	
<b>PALMS</b>							
	2	ADONIDIA MERRILLII / CHRISTMAS PALM	B&B		8' HT		FG, B&B, TRIPLE, 10'-12' HT
SYMBOL	QTY	BOTANICAL / COMMON NAME	CONT	SIZE			REMARKS
<b>SHRUBS</b>							
	6	GARISSA MACROCARPA 'NANA' / DWARF NATAL PLUM	3 GAL			Agave - Foxtail	3 GAL, 10"-12" HT, 18"-24" SPD, FULL
	3	JATROPHA INTEGERRIMA / JATROPHA	25 GAL			Agave - False	30 GAL, 5'-6' HT, 3'-4" SPD, STANDARD
	36	ZAMIA PUMILA / COONTIE	3 GAL			Agave - Ray of Light	3 GAL, 12"-14" HT, 12"-14" SPD, FULL

NOTE:  
IF NEEDED, CONTRACTOR MAY PROPOSE ALTERNATIVE PLANTS SPECIES FOR WRITTEN APPROVAL BY THE CITY

POCKET PARKS

CITY OF MADEIRA BEACH  
MADEIRA BEACH, FL.



REVISION NO.	DATE	DESCRIPTION

**PRELIMINARY**  
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MARTIN STEFFEN, FLA 6667386  
NAME LICENSE NO.  
DATE 7/3/2024  
2600036 FL  
FIRM / BUSINESS NO. STATE

PROJECT NO.: 38545.001  
ISSUED: OCTOBER 2023  
DRAWN BY: IG  
CHECKED BY: LMD  
SCALE: 1" = 10'  
SHEET TITLE

PLANTING PLAN

L-103

GENERAL LANDSCAPE NOTES:

- 1. LANDSCAPE CONTRACTOR IS RESPONSIBLE FOR VERIFYING PROJECT SITE CONDITIONS AND DETERMINING REQUIRED QUANTITIES AND AVAILABILITY OF ALL MATERIALS PRIOR TO BIDDING... 2. PRIOR TO COMMENCEMENT OF CONSTRUCTION, CONTRACTOR SHALL INSPECT PLANTING AREAS AND VERIFY THAT NO OBJECTIONABLE MATERIALS OR OBSTRUCTIONS ARE PRESENT... 3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING ADJACENT IMPROVEMENTS FROM DAMAGE AND EROSION INCLUDING BUT NOT LIMITED TO EXISTING PLANT MATERIAL, GRADES, SIDEWALKS, CURBS, AND UTILITIES... 4. IN GENERAL, THE WORK SHALL PROCEED AS RAPIDLY AS THE SITE BECOMES AVAILABLE... 5. THE CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS TO COMPLETE WORK... 6. THE LANDSCAPE CONTRACTOR SHALL COORDINATE CONSTRUCTION OF PLANTING AREAS WITH HARDSCAPE, ELECTRICAL, AND IRRIGATION WORK... 7. LANDSCAPE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING ANY HOISTING EQUIPMENT NECESSARY FOR THE PLACEMENT OF PLANT MATERIAL... 8. COLLECT SOIL SAMPLES AT A MINIMUM OF (3) PLANTING LOCATIONS THROUGHOUT THE PROJECT... 9. LANDSCAPE CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING AND VERIFYING THE CONDITION OF UNDERGROUND UTILITIES THAT AFFECT PLANTING PROCEDURES... 10. IF THE LANDSCAPE CONTRACTOR DAMAGES ANY STAKED OR IN PLACE UTILITIES OR STRUCTURES BY HIS OWN NEGLIGENCE THEY SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE... 11. THE LANDSCAPE CONTRACTOR SHALL REFER TO THE LANDSCAPE PLANTING DETAILS, NOTES, AND THE LANDSCAPE SCHEDULE FOR COMPLETE LANDSCAPE INSTALLATION INSTRUCTIONS... 12. THE LANDSCAPE CONTRACTOR SHALL RE-GRADE ALL AREAS DISTURBED BY PLANT REMOVAL, RELOCATION, AND/OR INSTALLATION WORK... 13. THE LANDSCAPE CONTRACTOR SHALL BE RESPONSIBLE FOR WATERING ALL NEWLY INSTALLED PLANT MATERIAL AS NEEDED TO MAINTAIN HEALTH AND VIGOR THROUGHOUT THE 90 DAY MAINTENANCE PERIOD... DAMAGES AND WARRANTY: 1. ALL PLANT MATERIAL, INCLUDING TRANSPLANTED PLANT MATERIAL, SHALL BE GUARANTEED AT OR ABOVE THE SPECIFIED CONDITIONS THROUGH SUBSTANTIAL COMPLETION AND UNTIL THE END OF THE (1) YEAR WARRANTY PERIOD... 2. THE LANDSCAPE CONTRACTOR SHALL BE RESPONSIBLE FOR RE-STAKING OF TREES DURING THE WARRANTY PERIOD... 3. THE OWNER AND/OR THE OWNER'S REPRESENTATIVE HAS THE RIGHT TO REJECT ANY AND ALL WORK WHICH DOES NOT MEET WITH THE REQUIREMENTS OF THE SPECIFICATIONS AT ANY STAGE OF THE PROJECT... 4. CONTRACTOR TO REQUEST INSPECTION OF PROJECT IN WRITING TO OWNERS REPRESENTATIVE... 5. CONTRACTOR SHALL REMOVE ALL PLANT SAUCERS, GRADE SMOOTH, AND RE-MULCH AS WELL AS REMOVE PLANTING STAKES FROM SITE AFTER THE (1) YEAR WARRANTY PERIOD... PROJECT SUBMITTALS: 1. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS FOR APPROVAL FOR ALL PROPOSED MATERIALS INCLUDING BUT NOT LIMITED TO PLANTS, STAKING, SOIL AMENDMENTS, FERTILIZER, MULCH, ETC. PRIOR TO PURCHASING... 2. ALL PROJECT SUBMITTALS MUST BE COMPLETED AND COMPILED IN AN EASILY REPRODUCIBLE FORM... 3. CONTRACTOR SHALL SUBMIT TO THE OWNER'S REPRESENTATIVE THE GROWER'S AND/OR STATE INSPECTION CERTIFICATE FOR PLANT MATERIAL TWO (2) WEEKS PRIOR TO COMMENCEMENT OF WORK... 4. PRODUCTS INSTALLED ON THE PROJECT SITE THAT ARE NOT CONSISTENT WITH THE PROJECT SUBMITTALS WILL BE REMOVED AND REPLACED WITH THE PRODUCTS IDENTIFIED IN THE PROJECT SUBMITTAL PACKAGE... 5. PRIOR TO ISSUING SUBSTANTIAL COMPLETION NOTICE THE CONTRACTOR SHALL SUBMIT TO THE OWNER THREE (3) COPIES OF AS BUILT PLANS/DOCUMENTS AND THREE (3) COPIES OF AN ANNUALIZED MAINTENANCE AND OPERATION MANUAL... SITE REQUIREMENTS: 1. CONTRACTOR SHALL AGREE TO ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THIS PROJECT... 2. LANDSCAPE HOLDING AREA, INGRESS, EGRESS, AND SITE ACCESS SHALL BE COORDINATED WITH THE OWNER'S REPRESENTATIVE... 3. CONTRACTOR SHALL BE RESPONSIBLE FOR THE DAILY CLEANUP OF PREMISES AND REMOVAL OF DISCARDED OR SURPLUS MATERIALS AND RUBBISH IN A LAWFUL MANNER... 4. ALL CONTRACTORS AND SUBCONTRACTORS SHALL HAVE A SET OF APPROVED CONSTRUCTION DOCUMENTS ON SITE AT ALL TIMES... 5. DURING CONSTRUCTION, CREWS ARE REQUIRED TO HAVE AT LEAST ONE (1) ENGLISH SPEAKING PERSON ON SITE.

PLANT MATERIAL NOTES:

- 1. ALL PLANT MATERIAL SHALL BE FLORIDA GRADE NO. 1 OR BETTER AS SPECIFIED IN GRADES AND STANDARDS FOR NURSERY PLANTS PARTS I AND II, DIVISION OF PLANT INDUSTRY, FLORIDA DEPARTMENT OF AGRICULTURE AND CONSUMER SERVICES, LATEST EDITION, AND SHALL CONFORM TO CURRENT AMERICAN ASSOCIATION OF NURSERYMAN STANDARDS FOR NURSERY STOCK... 2. CONTAINER GROWN PLANTS: A MINIMUM OF 80% OF THE CONTAINER ROOTBALL MUST BE BOUND BY THE ROOT SYSTEM... 3. ALL SOD SHALL BE WEED AND WEED SEED FREE, WITH A 2" THICKNESS OF ROOTS CAPABLE OF HOLDING SAND... 4. ALL PLANT MATERIAL SHALL BE PROTECTED DURING TRANSPORT AND DELIVERY TO JOB SITE WITH SHADE CLOTH OR OTHER ACCEPTABLE MEANS OF WINDBURN PREVENTION... 5. SUBSTITUTION OF PLANT MATERIALS WILL NOT BE PERMITTED UNLESS AUTHORIZED BY THE OWNER'S REPRESENTATIVE... 6. SUBSTITUTION OF FIELD GROWN TREES FOR TREES THAT ARE SPECIFIED AS CONTAINER GROWN WILL NOT BE PERMITTED UNLESS OTHERWISE APPROVED BY THE OWNER'S REPRESENTATIVE... 7. NEW PLANT MATERIAL WILL BE FIELD ADJUSTED TO ACCOMMODATE EXISTING PLANT MATERIAL... 8. ALL TREES SHALL BE LOCATED AT LEAST SIX FEET AWAY FROM THE CENTERLINE OF SWALES AND FROM PROPOSED STORMWATER INLETS... PLANTING: 1. TREES GROWN IN GROW BAGS OR GROW BAG TYPE MATERIAL MUST HAVE THE GROW BAG REMOVED ENTIRELY PRIOR TO PLANTING... 2. BALLED AND BURLAPPED OR ANY BASKETED MATERIAL SHALL HAVE THE TOP ONE THIRD (1/3) OF DEGRADABLE BURLAP AND TOP ONE THIRD (1/3) OF WIRE CAGE PULLED BACK AND REMOVED FROM THE BASE OF THE TRUNK... 3. CONTRACTOR SHALL NOTIFY OWNERS REPRESENTATIVE IF ANY CONFLICTS EXIST BETWEEN THE BUILT ENVIRONMENT AND PLANS (I.E. UTILITY CABINETS, UTILITY VALVES, STREET SIGNS, SIDEWALK LOCATIONS)

PLANTING AREA PREPARATION NOTES:

- 1. THE CONTRACTOR SHALL STAKE LOCATIONS AND LIMITS OF TREES, PLANTING, MULCH, AND SOD AREAS TO REFLECT PLANS TO GREATEST EXTENT POSSIBLE... 2. WORK WITHIN 15' OF EXISTING TREES TO REMAIN SHALL BE PERFORMED USING HAND TOOLS... 3. HERBICIDE APPLICATION: BEGIN TURF SPRAYING PROCESS A MINIMUM 30 DAYS PRIOR TO PLANTING AS FOLLOWS... 4. FOR PROPOSED INDIVIDUAL TREE PLANTING PITS KILLED TURF TO BE REMOVED SHALL BE CLEARED AND GRUBBED TO A MINIMUM DEPTH OF 4"... TO ASSURE DRAINAGE/PERCOLATION OF INDIVIDUAL TREE PLANTING PITS PRIOR TO INSTALLATION, CONTRACTOR SHALL FILL SAMPLE TREE PITS (1 IN 5) WITH WATER AND OBSERVE PERCOLATION... INSTALL BACKFILL MIXTURE IN LIFTS AND TAMP LIGHTLY AROUND EACH AND EVERY PLANT... 5. FOR PROPOSED PLANTING AREAS KILLED TURF TO BE REMOVED SHALL BE CLEARED AND GRUBBED TO A MINIMUM DEPTH OF 6"... 6. FOR PROPOSED MULCH ON GRADE AREAS LEAVE KILLED TURF IN PLACE... 7. FOR PROPOSED SOD AREAS KILLED TURF TO BE REMOVED SHALL BE CLEARED AND GRUBBED TO A MINIMUM DEPTH OF 4"... 8. AN EVEN, WELL DEFINED LINE SHALL SEPARATE PLANTING AND MULCH ON GRADE AREAS FROM ALL SOD OR SEEDED AREAS... 9. BACKFILL MIXTURE FOR TREES AND SHRUBS SHALL CONSIST OF 25% COARSE SAND, 25% "BLENDED SOIL" OR EQUAL, AND 50% EXISTING SOIL... 1 GALLON: 0.003 CY (0.08 CF) COARSE SAND AND 0.003 CY (0.08 CF) "BLENDED SOIL" 3 GALLON: 0.006 CY (0.16 CF) COARSE SAND AND 0.006 CY (0.16 CF) "BLENDED SOIL" 7 GALLON: 0.015 CY (0.4 CF) COARSE SAND AND 0.015 CY (0.4 CF) "BLENDED SOIL" 15 GALLON: 0.03 CY (0.8 CF) COARSE SAND AND 0.03 CY (0.8 CF) "BLENDED SOIL" 30 GALLON: 0.06 CY (1.6 CF) COARSE SAND AND 0.06 CY (1.6 CF) "BLENDED SOIL" 45 GALLON: 0.11 CY (2.9 CF) COARSE SAND AND 0.11 CY (2.9 CF) "BLENDED SOIL" 65 GALLON: 0.17 CY (4.6 CF) COARSE SAND AND 0.17 CY (4.6 CF) "BLENDED SOIL" 100 GALLON: 0.26 CY (7.1 CF) COARSE SAND AND 0.26 CY (7.1 CF) "BLENDED SOIL" 200 GALLON: 0.88 CY (23.8 CF) COARSE SAND AND 0.88 CY (23.8 CF) "BLENDED SOIL" 300 GALLON: 1.37 CY (37 CF) COARSE SAND AND 1.37 CY (37 CF) "BLENDED SOIL" "BLENDED SOIL" SHALL CONSIST OF: 1/3 MUSHROOM COMPOST OR PEAT, 1/3 COMMERCIALY PROCESSED AND COMPOSTED COW MANURE AND 1/3 COMPOSTED BARK... 10. TOPSOIL IMPORTED TO THE SITE SHALL BE SIEVED TOPSOIL, FREE OF ROCKS AND DEBRIS... LANDSCAPE CONTRACTOR SHALL BEAR FINAL RESPONSIBILITY FOR PROPER SURFACE DRAINAGE OF PLANTED AREAS... 11. INSTALL FERTILIZER PER MANUFACTURER RECOMMENDATIONS... FOR INITIAL INSTALLATION OF TREES AND SHRUBS, FERTILIZER IS ASSUMED TO BE CONTROLLED RELEASE FERTILIZER WITH A 15-9-12 ANALYSIS... FOR INSTALLATION OF BAHIA, ST. AUGUSTINE AND ZOYSIA SOD, FERTILIZER IS ASSUMED TO BE CONTROLLED RELEASE FERTILIZER WITH A 16-4-8... APPLICATION RATES ARE PROVIDED AS A RECOMMENDATION ONLY... 1.0 Z PER EA 1 GALLON CONTAINER 3.0 Z PER EA 3 GALLON CONTAINER 16.0 OZ PER EA 30 GALLON CONTAINER 6.0 OZ PER EA 7 GALLON CONTAINER 9.0 OZ PER EA 15 GALLON CONTAINER 48.0 OZ PER EA 100 GALLON CONTAINER 4.0 OZ PER EA 45 GALLON CONTAINER 32.0 OZ PER EA 65 GALLON CONTAINER 64.0 OZ PER EA 200 GALLON CONTAINER 96.0 OZ PER EA 300 GALLON CONTAINER FOR GRASSING AND SOD AREAS: APPLY 6 LBS/1000SF... 12. BUILD EARTHEN SAUCER TO CONTAIN WATER AROUND EACH INDIVIDUAL TREE PLANTING PIT AND AT THE PERIMETER OF ALL PLANTING AREAS... 13. SPREAD MULCH AROUND INDIVIDUAL TREE RINGS, PLANTING AND MULCH AREAS... MULCHING FOR INDIVIDUAL TREE RINGS, PLANTING, AND MULCH AREAS SHALL BE PINE STRAW MULCH... 14. PRE-EMERGENT HERBICIDE SHALL BE APPLIED TO ALL INDIVIDUAL TREE RINGS, PLANTING, AND MULCH AREAS... 15. PLANTING: CONTRACTOR SHALL NOTIFY OWNERS REPRESENTATIVE IF ANY CONFLICTS EXIST BETWEEN THE BUILT ENVIRONMENT AND PLANS (I.E. UTILITY CABINETS, UTILITY VALVES, STREET SIGNS, SIDEWALK LOCATIONS)

CITY OF MADEIRA BEACH MADEIRA BEACH, FL.



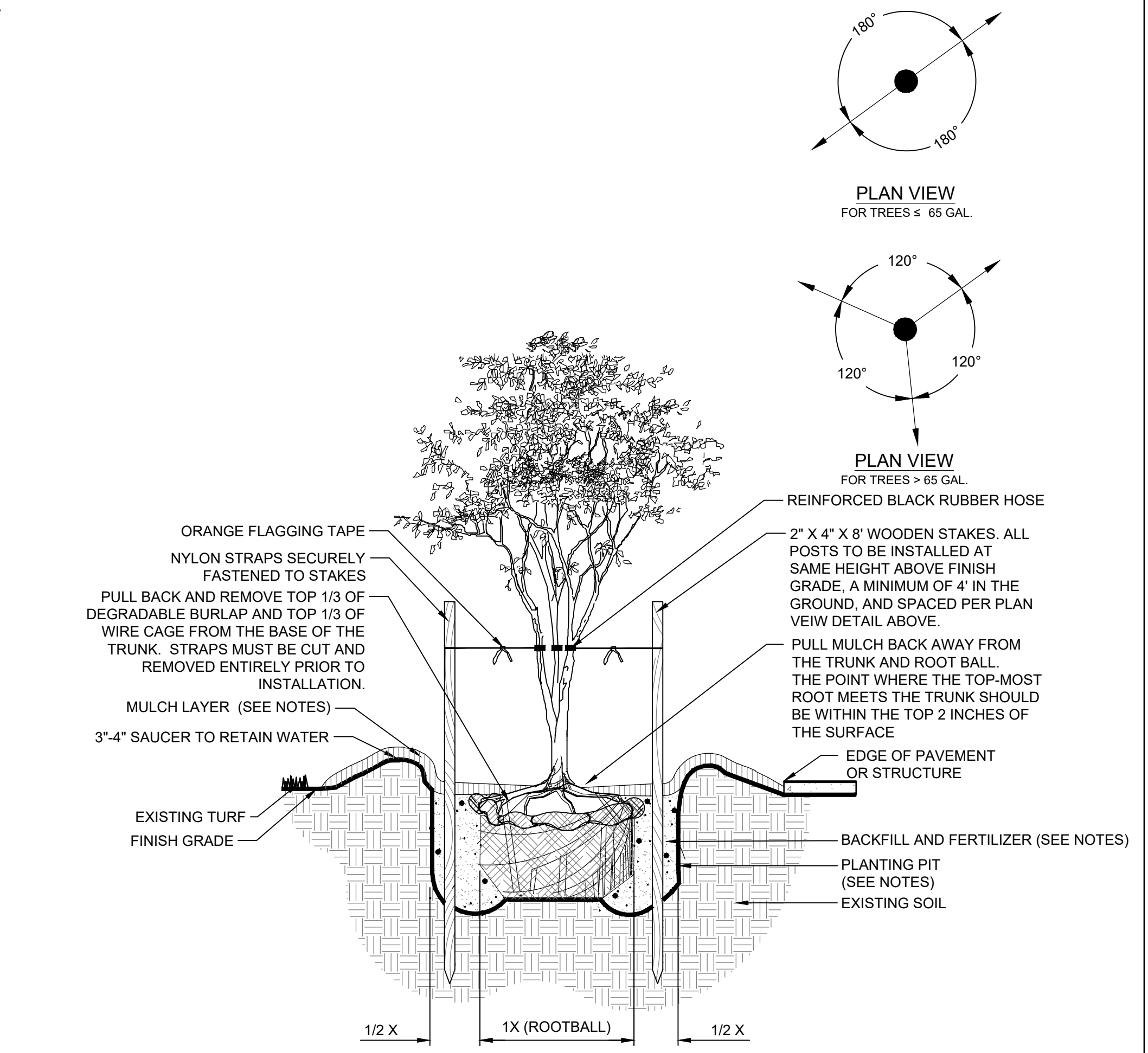
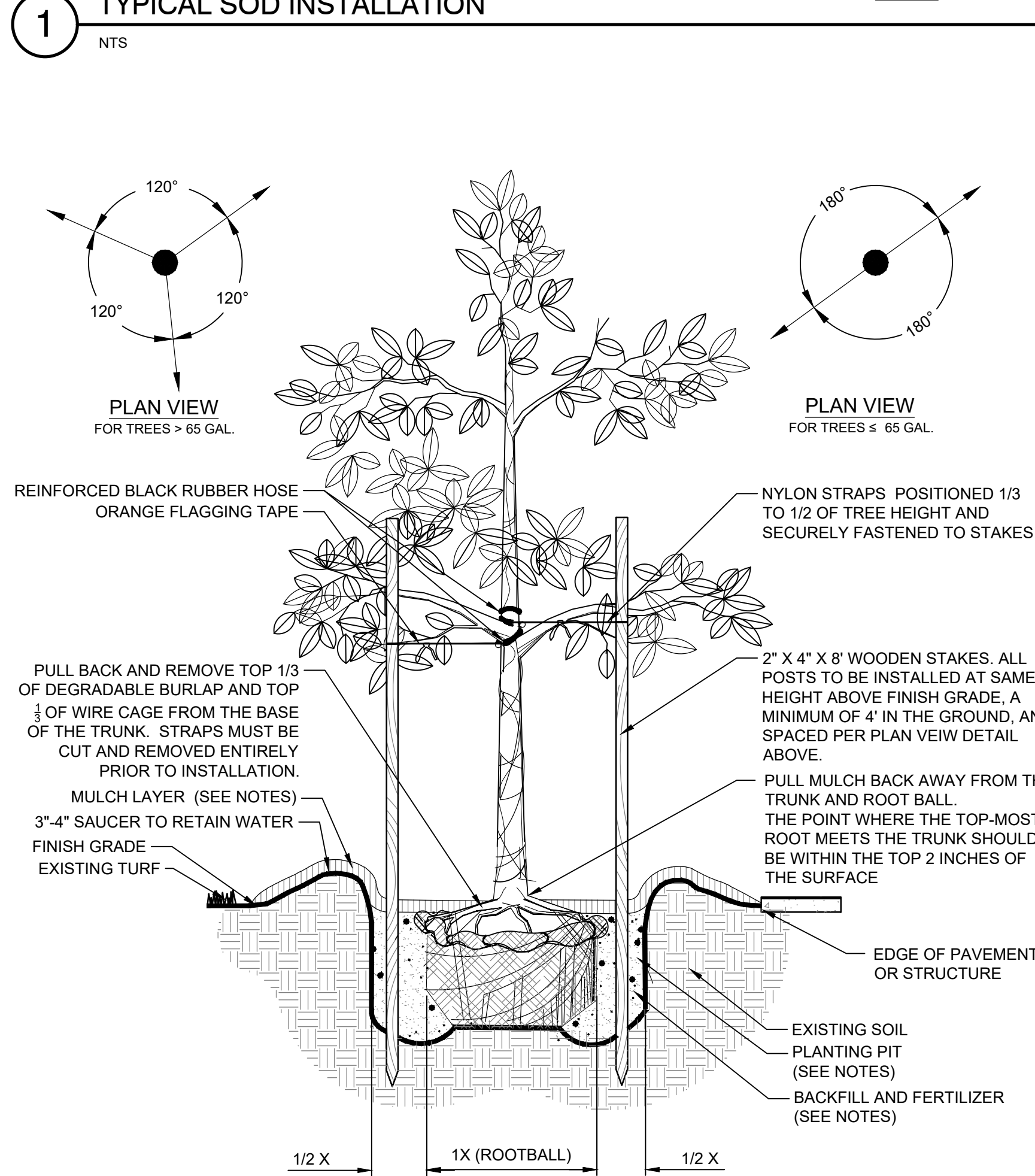
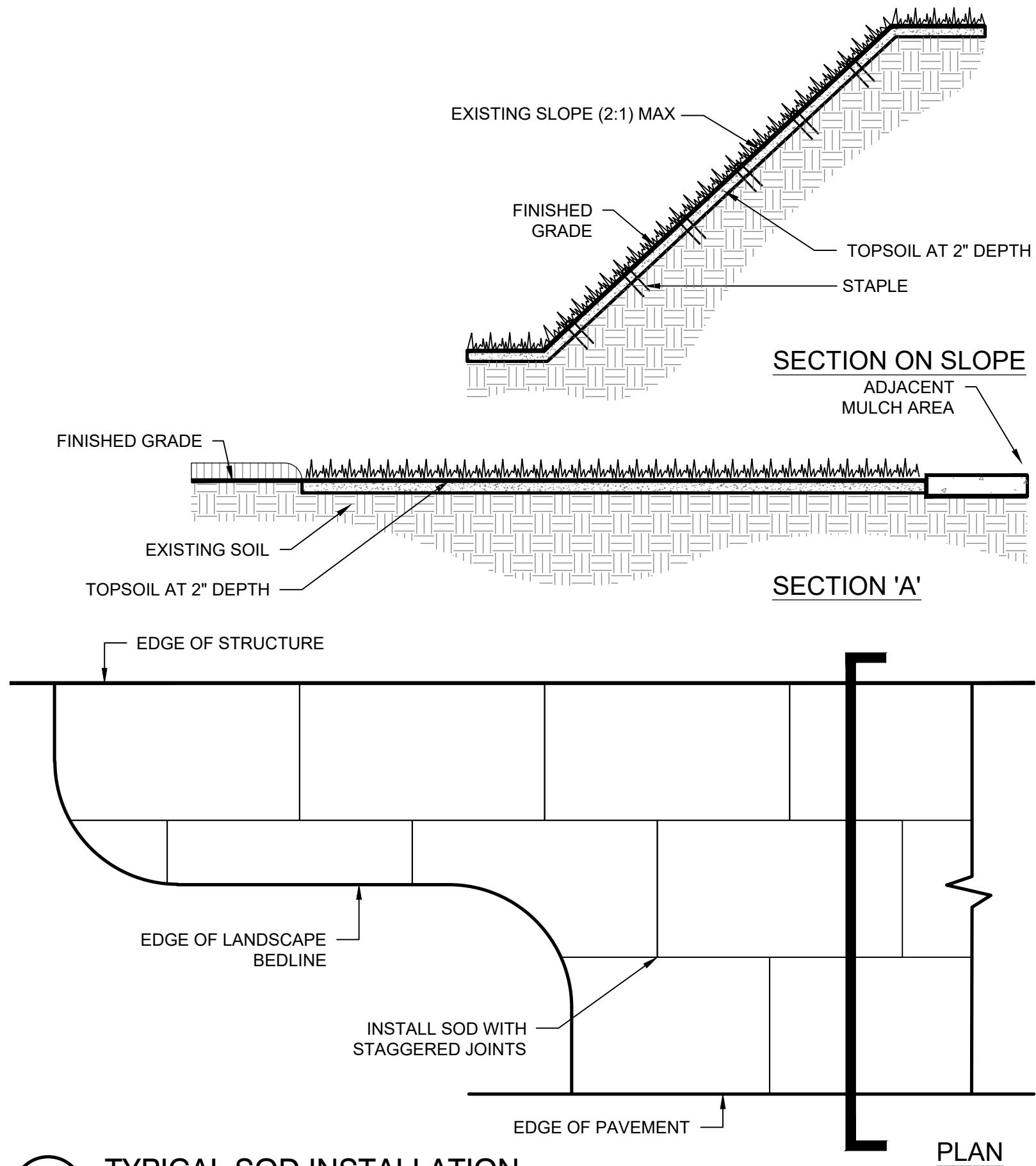
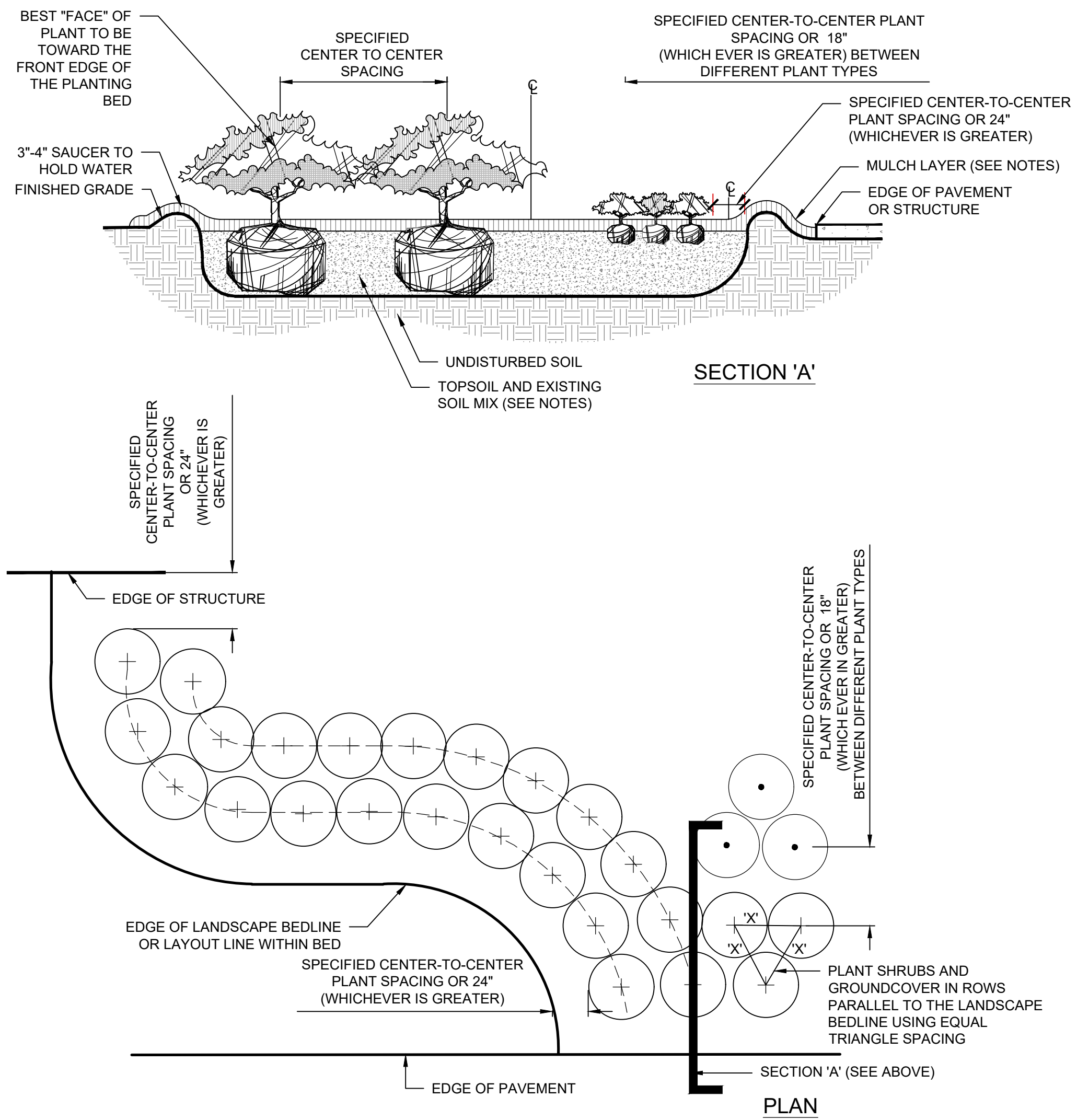
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PROJECT NO.: 38545.001 ISSUED: OCTOBER 2023 DRAWN BY: IG CHECKED BY: LMD SCALE: NTS SHEET TITLE PLANTING NOTES

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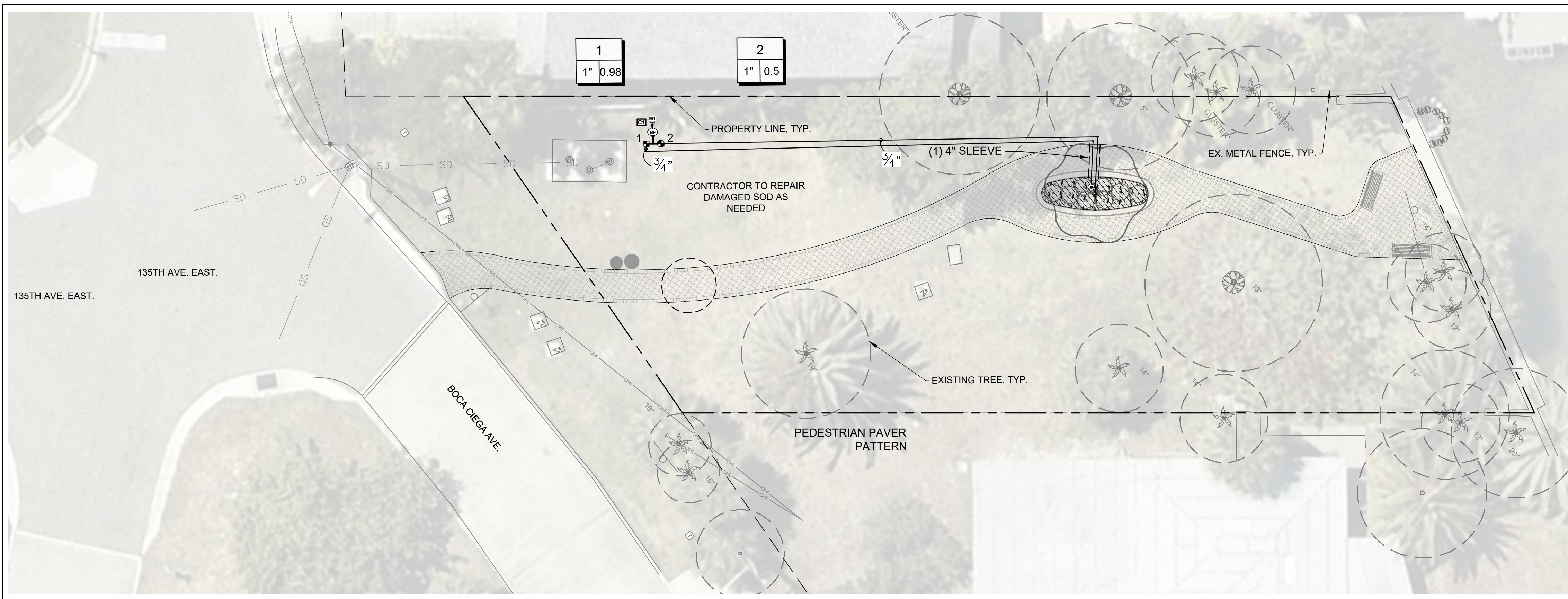
POCKET PARKS  
CITY OF MADEIRA BEACH  
MADEIRA BEACH, FLORIDA



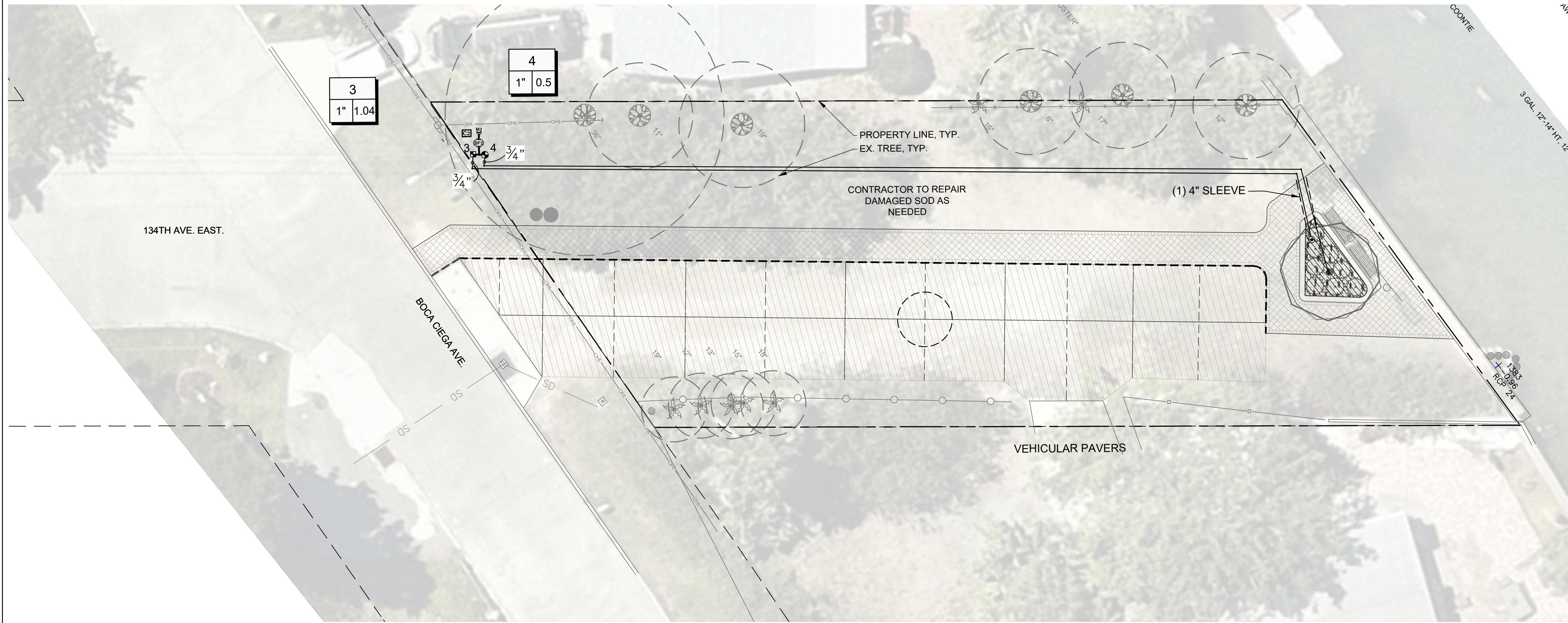
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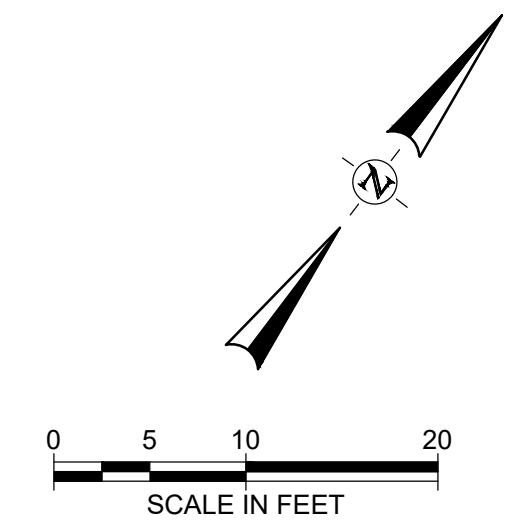
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SHEET TITLE: PLANTING DETAILS  
L-501



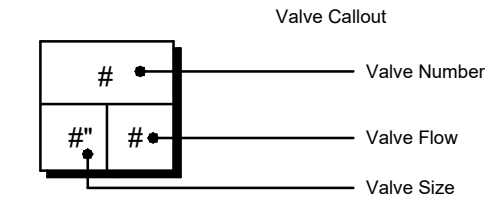
1 135TH AVE. EAST



2 134TH AVE. EAST



IRRIGATION SCHEDULE	
SYMBOL	MANUFACTURER/MODEL/DESCRIPTION
	HUNTER PCB FLOOD BUBBLER, 1/2IN. FIPT.
	HUNTER ICZ-101-25 1" DRIP CONTROL ZONE KIT. 1IN. ICV GLOBE VALVE WITH 1IN. HY100 FILTER SYSTEM. PRESSURE REGULATION: 25PSI. FLOW RANGE: 2 GPM TO 20 GPM. 150 MESH STAINLESS STEEL SCREEN.
	PIPE TRANSITION POINT IN DRIP BOX. PIPE TRANSITION POINT FROM PVC LATERAL TO DRIP TUBING WITH RISER IN 6IN. DRIP BOX.
	AREA TO RECEIVE DRIPLINE HUNTER HDL-09-12-CV HDL-09-12-CV HUNTER DRIPLINE W/ 0.9 GPH EMITTERS AT 12" O.C. CHECK VALVE, DARK BROWN TUBING W/ BLACK STRIPING. DRIPLINE LATERALS SPACED AT 12" APART. WITH EMITTERS OFFSET FOR TRIANGULAR PATTERN. INSTALL WITH HUNTER PLD BARBED OR PLD-LOC FITTINGS.
	HUNTER ICV-G 1" 1", 1-1/2", 2", AND 3" PLASTIC ELECTRIC REMOTE CONTROL VALVES, GLOBE CONFIGURATION, WITH NPT THREADED INLET/OUTLET, FOR COMMERCIAL/MUNICIPAL USE.
	FESCO 825V 2" REDUCED PRESSURE BACKFLOW PREVENTER
	HUNTER P2C-400 LIGHT COMMERCIAL & RESIDENTIAL CONTROLLER, 4-STATION BASE MODULE CONTROLLER, 120 VAC, OUTDOOR/INDOOR MODEL.
	WATER METER 1-1/2"
	IRRIGATION LATERAL LINE: PVC CLASS 200 SDR 21 3/4"
	IRRIGATION MAINLINE: PVC CLASS 200 SDR 21
	PIPE SLEEVE: PVC SCHEDULE 40



POCKET PARKS  
CITY OF MADEIRA BEACH  
MADEIRA BEACH, FL.

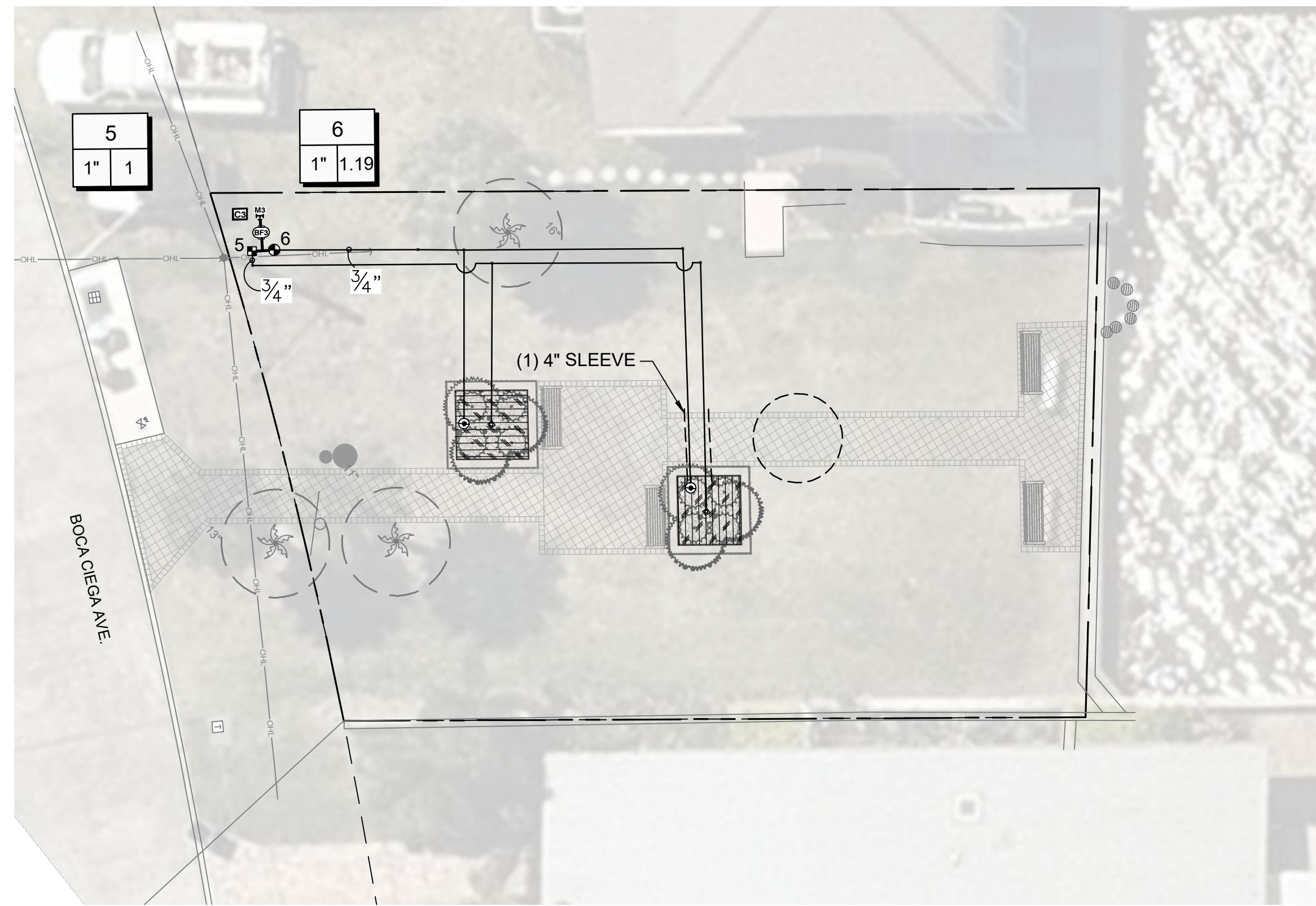


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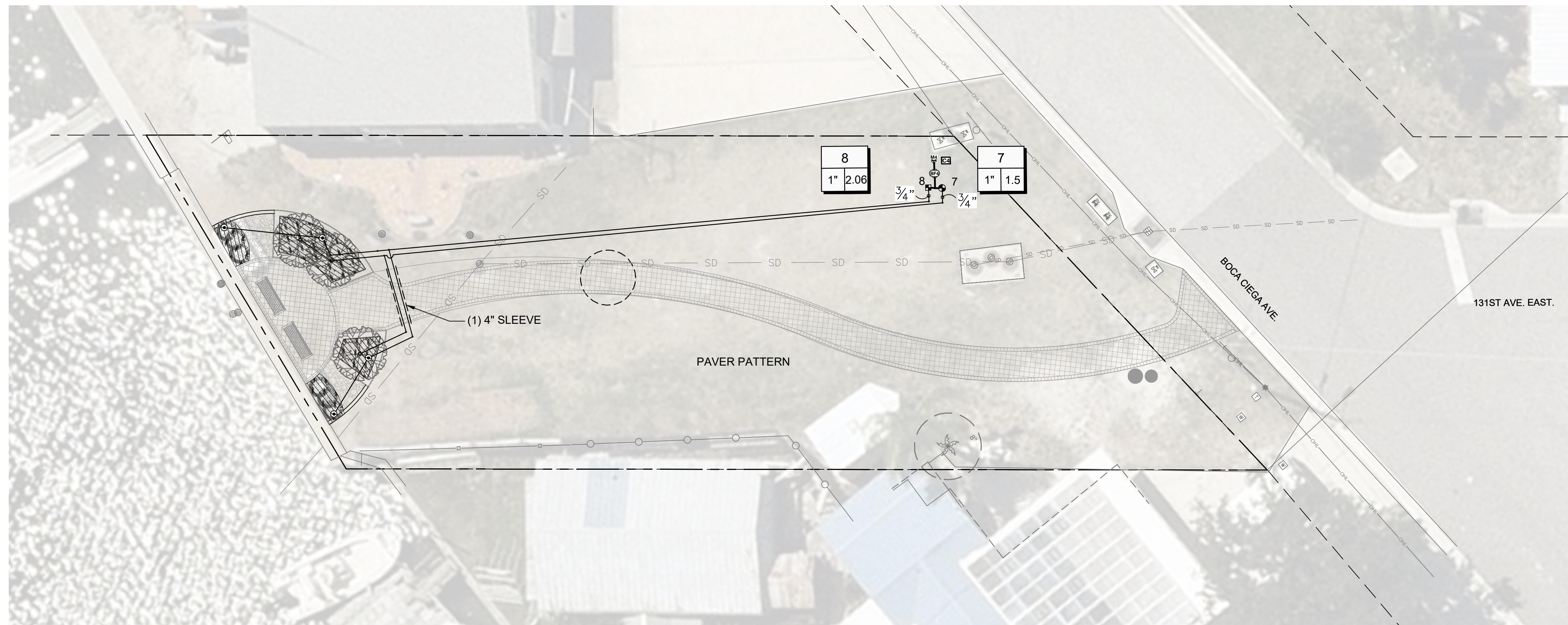
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PROJECT NO.: 38545.001  
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SCALE: 1" = 10'  
SHEET TITLE  
IRRIGATION PLAN  
IR-101

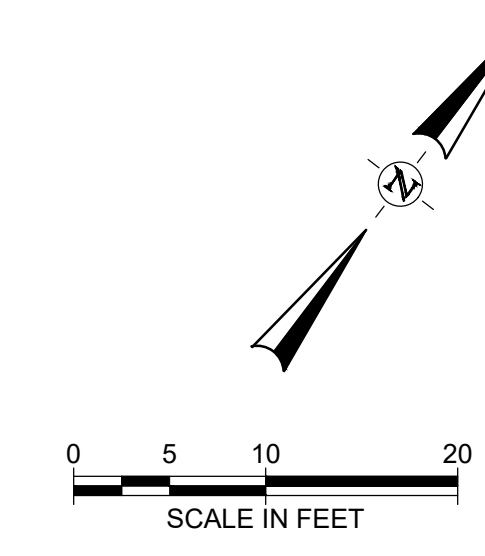
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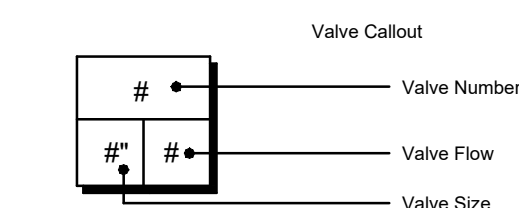


4 131ST AVE. EAST



**IRRIGATION SCHEDULE**

SYMBOL	MANUFACTURER/MODEL/DESCRIPTION
	HUNTER PCB FLOOD BUBBLER, 1/2IN. FIPT.
	HUNTER ICZ-101-25 1\"/>
	HUNTER HDL-09-12-CV HUNTER DRIPLINE W/ 0.9 GPH EMITTERS AT 12\"/>
	HUNTER ICV-G 1\"/>
	FEBCO B25Y 2\"/>
	HUNTER P2C-400 LIGHT COMMERCIAL & RESIDENTIAL CONTROLLER, 4-STATION BASE MODULE CONTROLLER, 120 VAC, OUTDOOR/INDOOR MODEL
	WATER METER 1-1/2\"/>
	IRRIGATION LATERAL LINE: PVC CLASS 200 SDR 21 3/4\"/>
	IRRIGATION MAINLINE: PVC CLASS 200 SDR 21
	PIPE SLEEVE: PVC SCHEDULE 40



POCKET PARKS

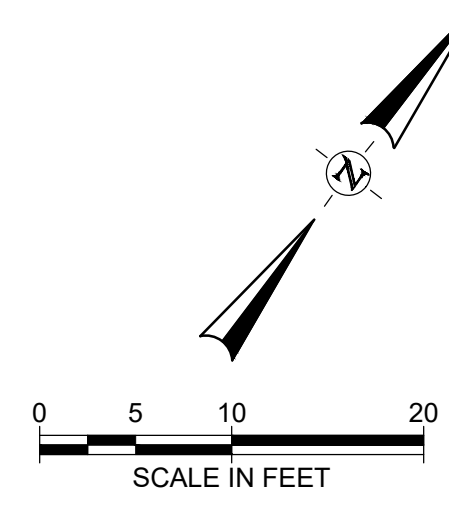
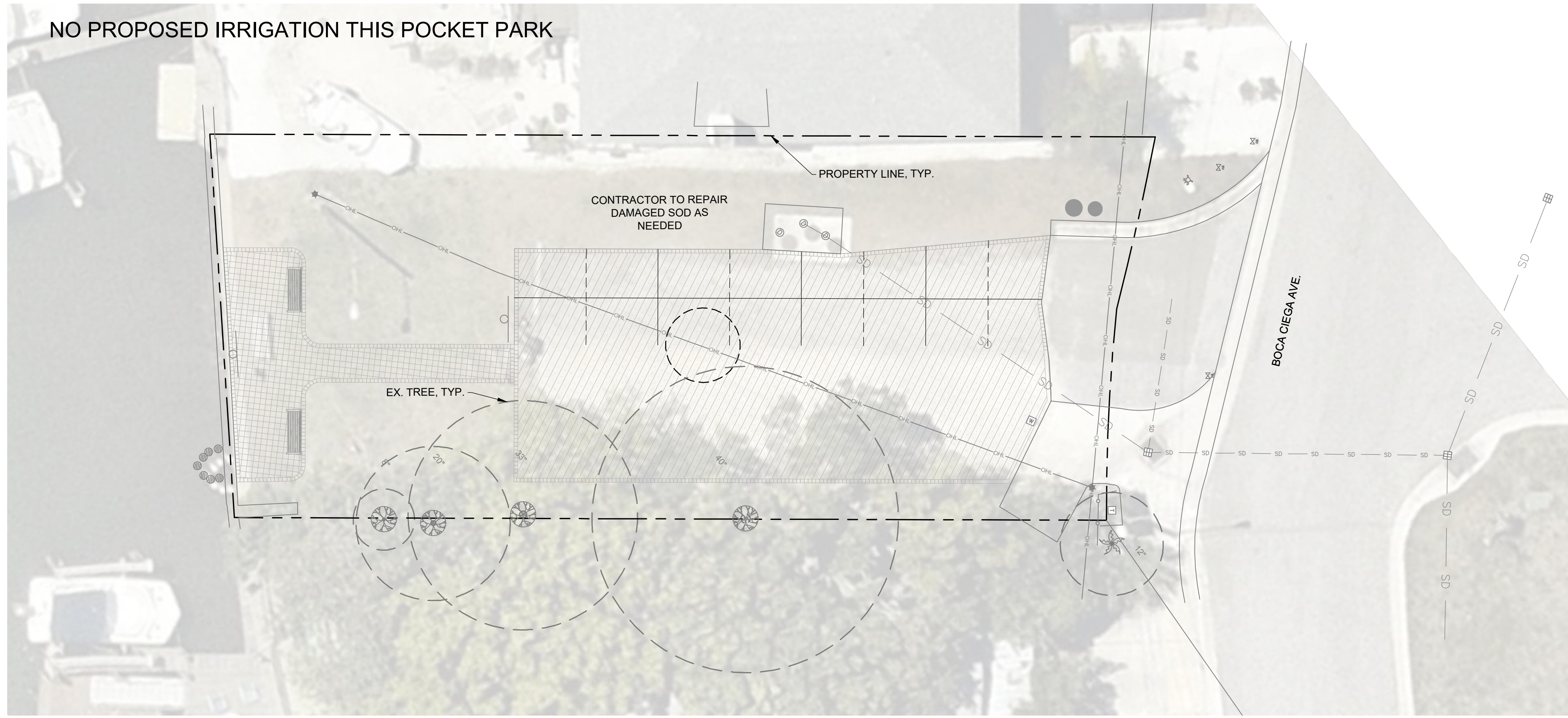
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ISSUED: OCTOBER 2023  
DRAWN BY: IG  
CHECKED BY: LMD  
SCALE: 1" = 10'  
SHEET TITLE  
**IRRIGATION PLAN**  
IR-102



5 132ND AVE. EAST

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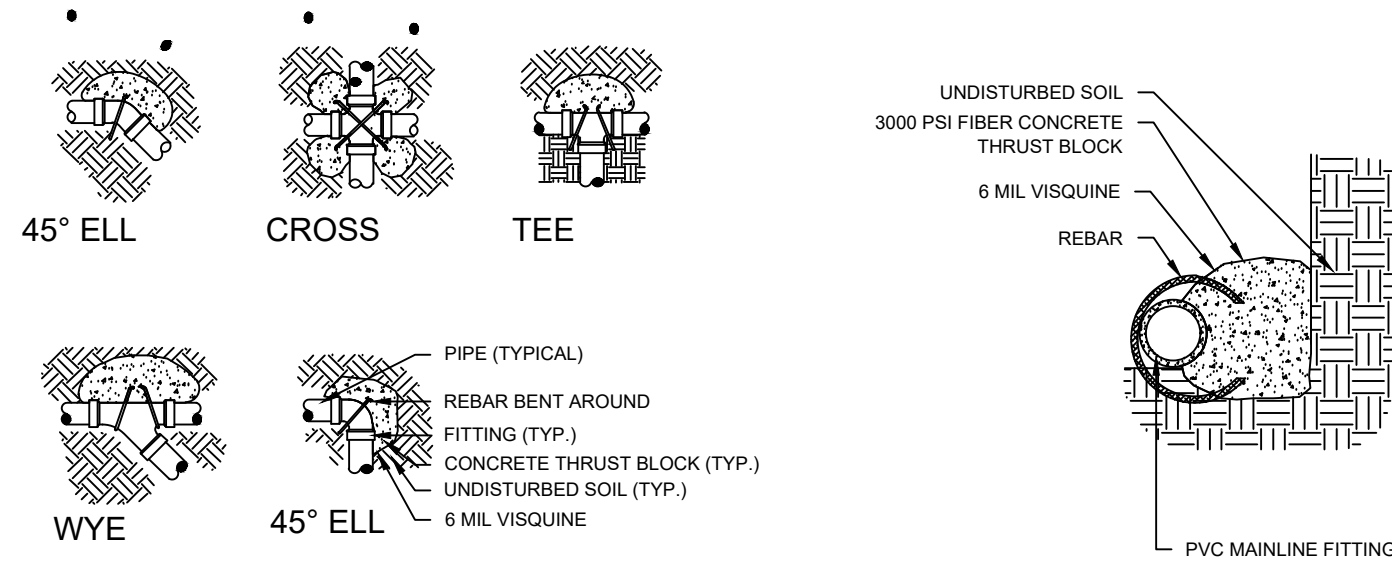
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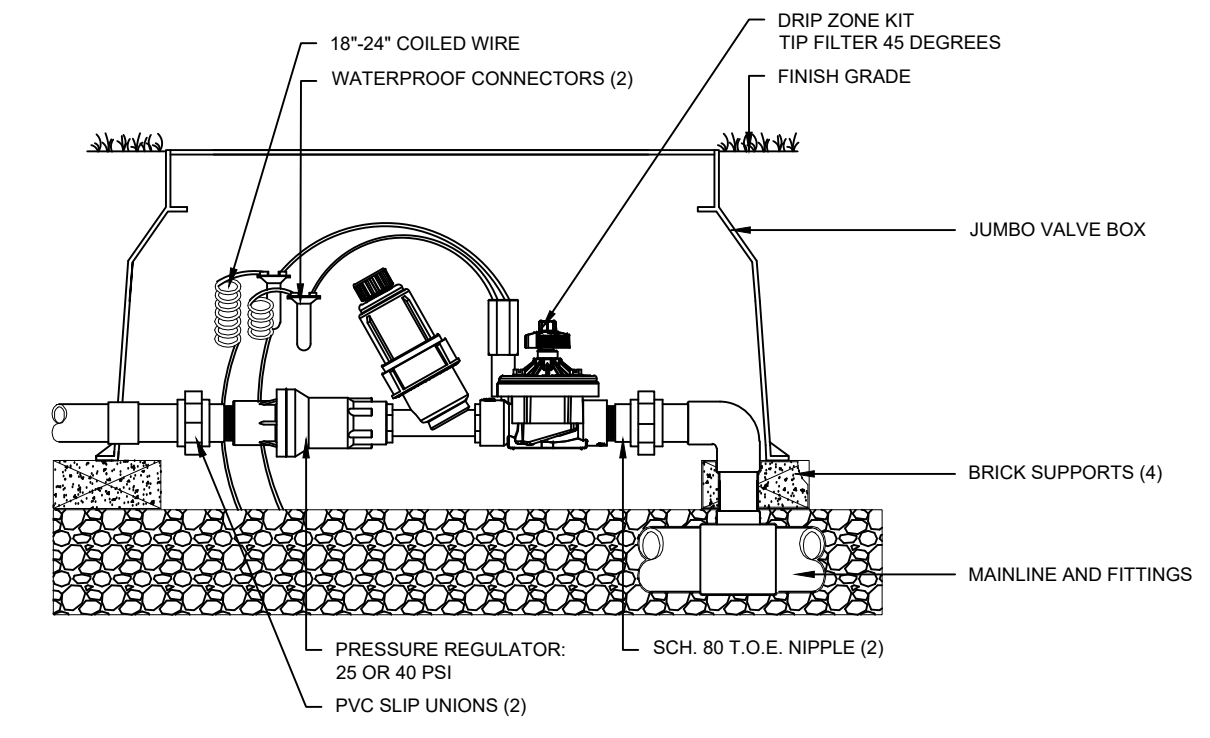
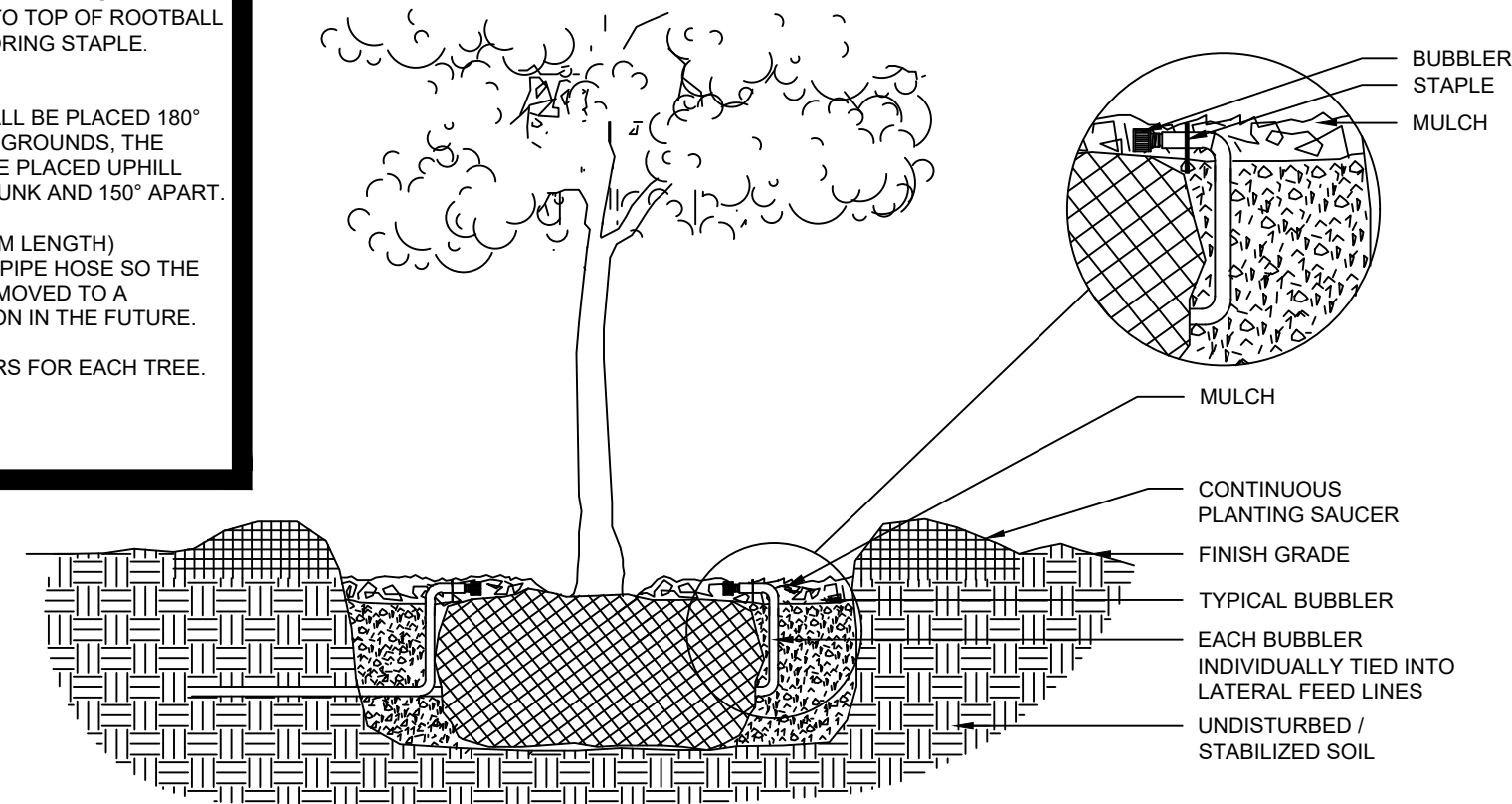
SHEET TITLE  
IRRIGATION  
PLAN

IR-103

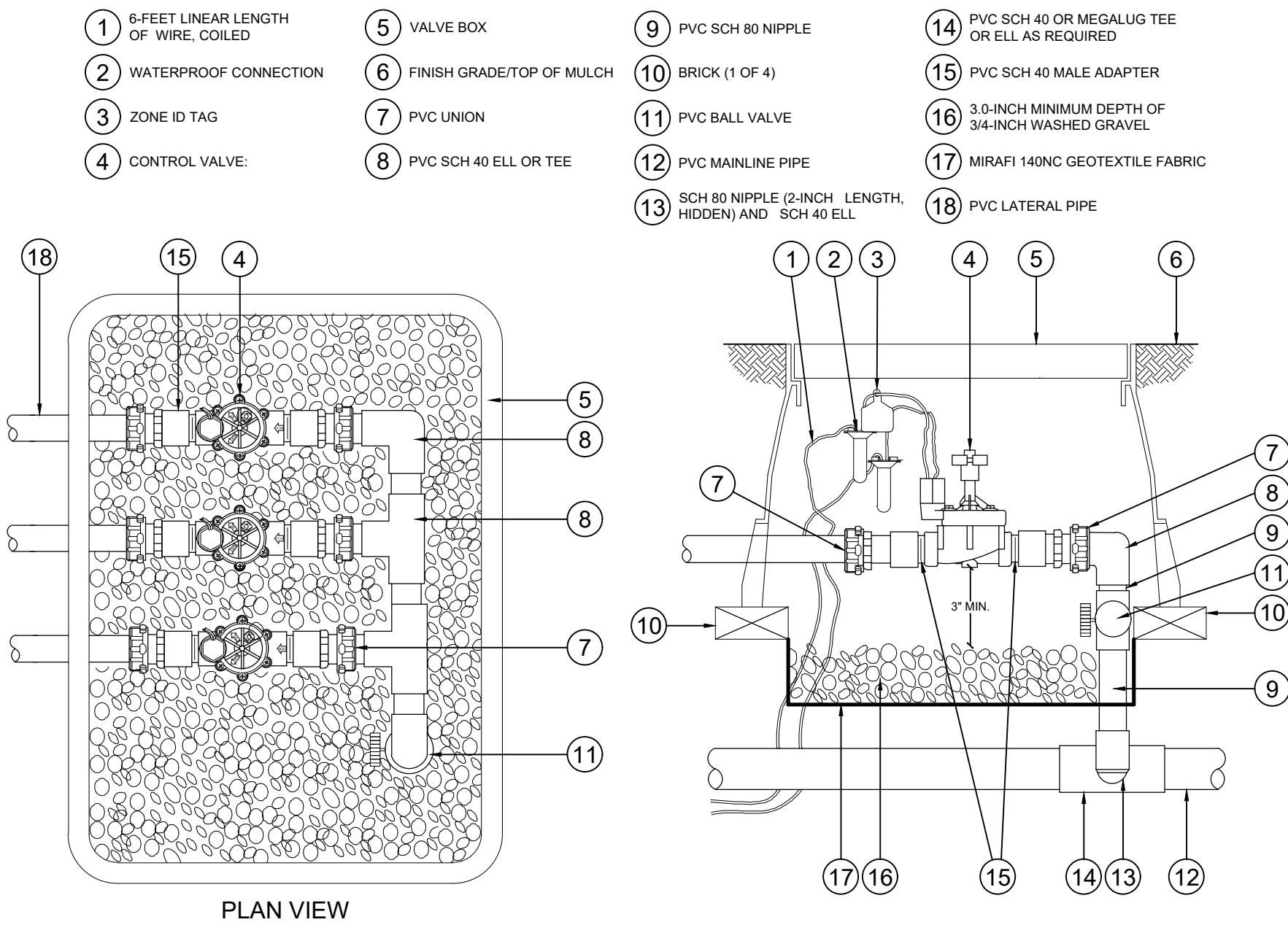


- NOTES:**
- SUPPLY LINES 2.0 INCHES IN DIAMETER AND LARGER SHALL RECEIVE CONCRETE THRUST BLOCKS AS SPECIFIED HEREIN & AS APPLICABLE.
  - ALL CONCRETE TO BE 2800 PSI OR STRONGER.
  - ALL REBAR SHALL BE RUST-FREE.
  - FITTINGS TO BE WRAPPED IN VISQUEEN BEFORE POURING THE THRUST BLOCK.
  - CONCRETE IS NOT TO INCREASE THE IRRIGATION MAINLINE.

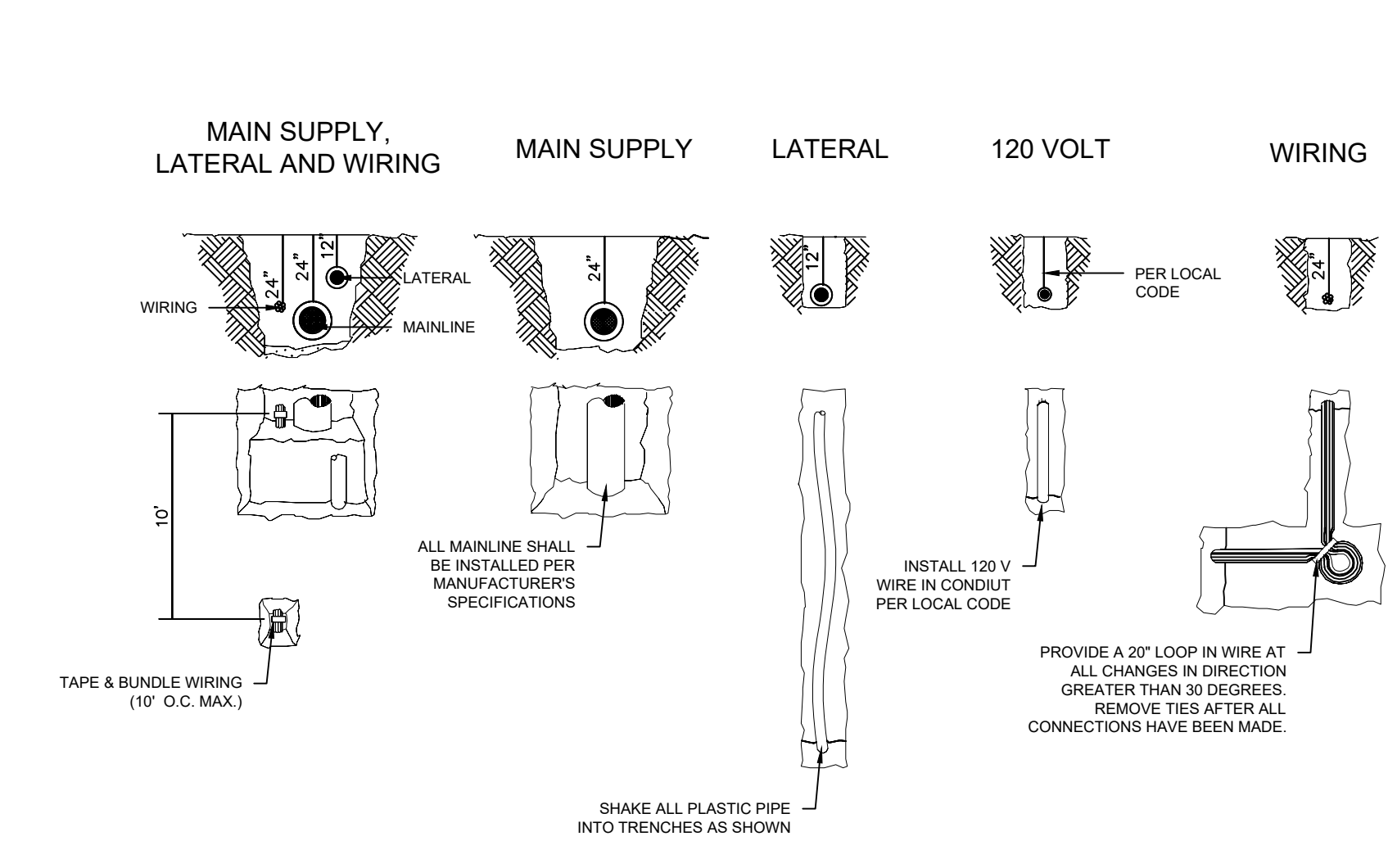
- NOTES:**
- BUBBLERS ARE TO BE PLACED AT THE MIDPOINT BETWEEN THE EDGE OF THE ROOTBALL AND THE MAIN TRUNK. SECURE BUBBLER TO TOP OF ROOTBALL WITH A SOIL ANCHORING STAPLE.
  - THE BUBBLERS SHALL BE PLACED 180° APART. IN SLOPING GROUNDS, THE BUBBLERS SHALL BE PLACED UPHILL FROM THE TREE TRUNK AND 150" APART.
  - PROVIDE (5' MINIMUM LENGTH) SUFFICIENT FUNNY PIPE HOSE SO THE BUBBLERS CAN BE MOVED TO A DIFFERENT LOCATION IN THE FUTURE.
  - PROVIDE 2 BUBBLERS FOR EACH TREE.



**1 TYPICAL THRUST BLOCKING DETAILS**  
NTS

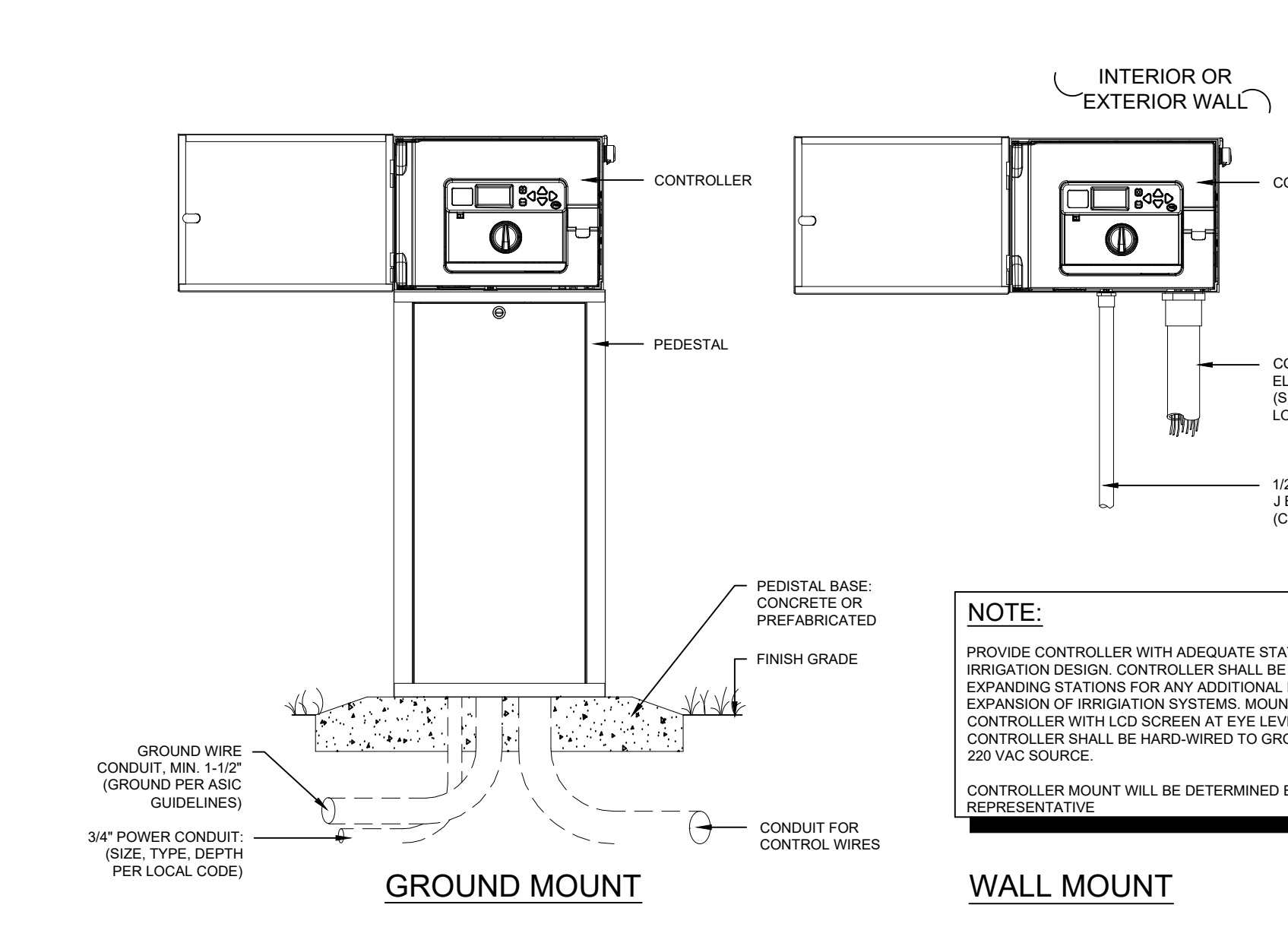


**4 TYPICAL VALVE MANIFOLD (BUBBLERS)**  
NTS

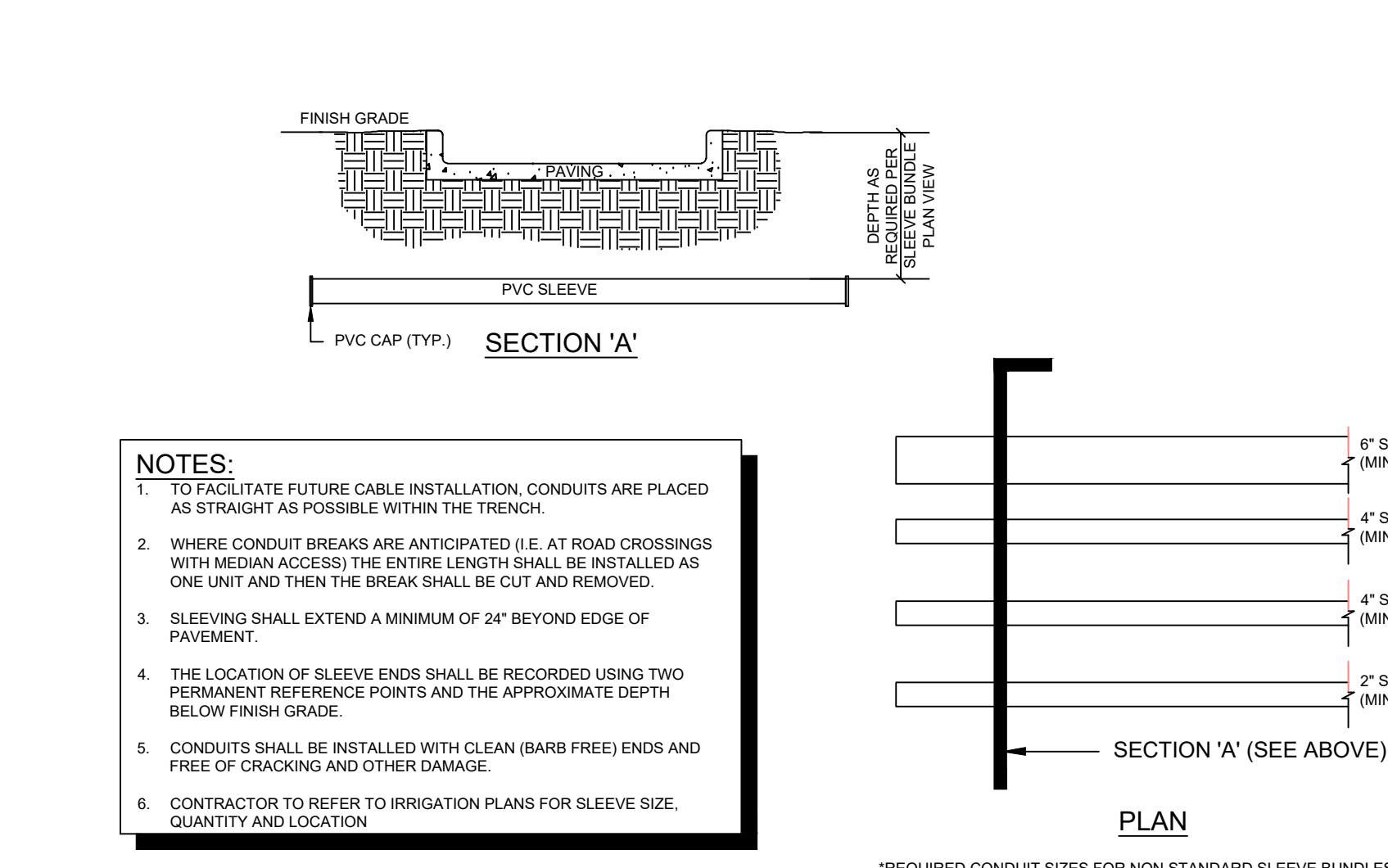


**7 TYPICAL TRENCH DETAIL**  
NTS

**2 TYPICAL BUBBLER DETAIL**  
NTS

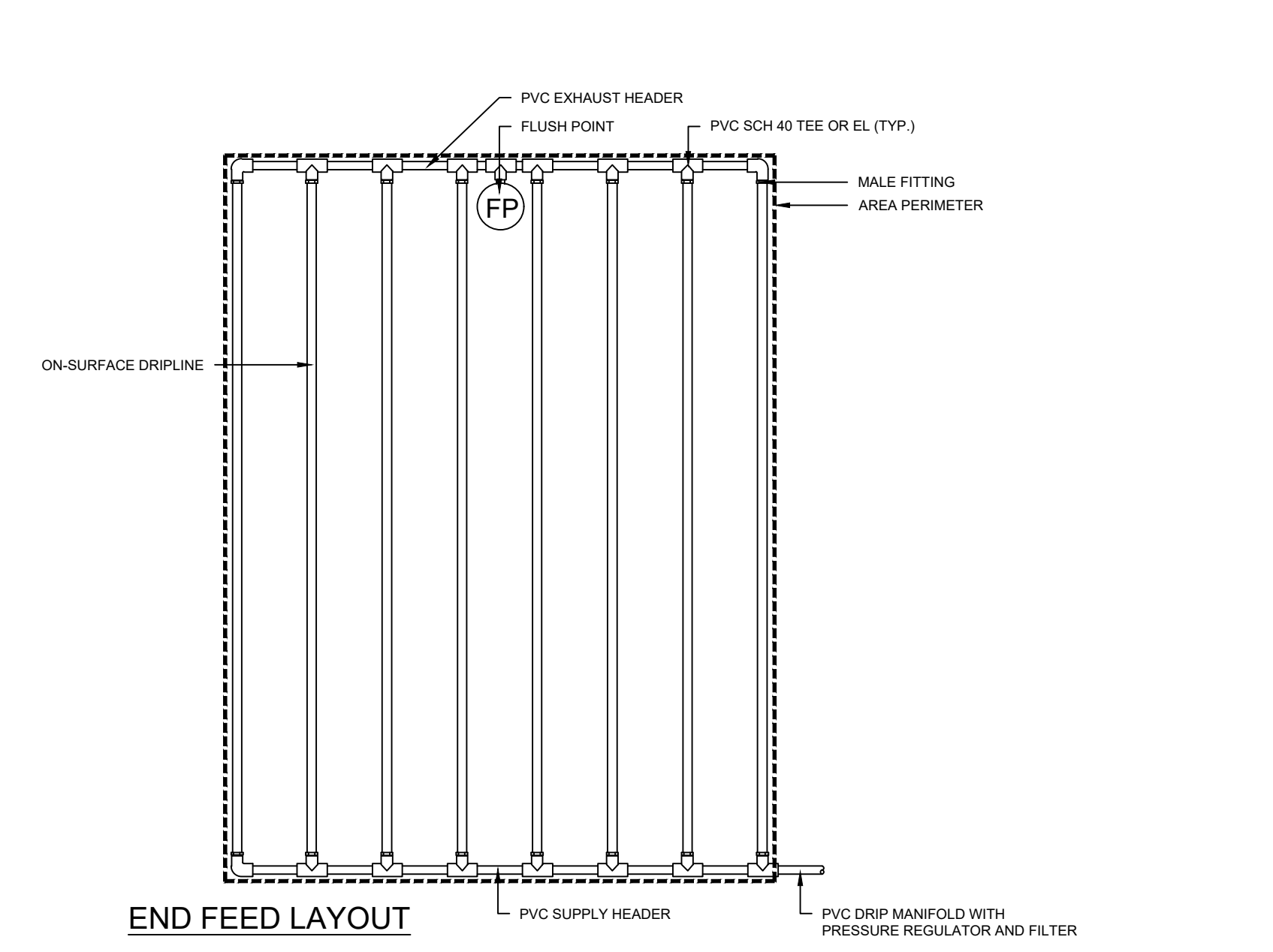


**5 TYPICAL CONTROLLER**  
NTS



**8 SLEEVE BUNDLE**  
NTS

**3 TYPICAL VALVE (DRIP)**  
NTS



**6 TYPICAL DRIPLINE LAYOUT**  
NTS

**PIPE SIZE TABLE**

IRRIGATION ZONE DEMAND GALLONS PER MINUTE (GPM)	MINIMUM PIPE SIZE
5-10	3/4"
11-15	1"
16-25	1-1/4"
26-32	1-1/2"
33-52	2"
53-75	2-1/2"
76-110	3"

REFER TO EACH IRRIGATION ZONE ON PLAN DRAWINGS FOR ZONE GPM  
ALL PIPE SHALL BE SIZED SO AS NOT TO EXCEED 5 FPS

**8 PIPE SIZE TABLE**  
NTS

POCKET PARKS  
CITY OF MADEIRA BEACH  
MADEIRA BEACH, FL.



REVISION NO.	DATE	DESCRIPTION

**PRELIMINARY**  
FOR INTERIM REVIEW ONLY

THESE DOCUMENTS ARE FOR INTERIM REVIEW AND NOT INTENDED FOR REGULATORY APPROVAL, PERMIT BIDDING OR CONSTRUCTION PURPOSES. THEY WERE PREPARED BY OR UNDER THE SUPERVISION OF:

MARTIN STEFFEN, FLA 6667386  
NAME LICENSE NO.

7/3/2024  
DATE

2600036 FL  
FIRM / BUSINESS NO. STATE

PROJECT NO.:	38545.001
ISSUED:	OCTOBER 2023
DRAWN BY:	IG
CHECKED BY:	LMD
SCALE:	1" = 10'
SHEET TITLE	IRRIGATION DETAILS

IR-501





**BOUNDARY/TOPOGRAPHIC SURVEY**

THE MAP AND REPORT ARE NOT FULL AND COMPLETE WITHOUT THE OTHER.

**SURVEYOR'S REPORT**

**ACCURACY:**

- ALL MEASUREMENTS, DISTANCES, ELEVATIONS (IF SHOWN) AND FEATURES WERE PERFORMED IN STRICT ACCORDANCE WITH THE MINIMUM STANDARDS OF PRACTICE SET FORTH IN CHAPTER 5J-17 FLORIDA ADMINISTRATIVE CODE (5J-17FAC).
- METHODS FOR ALL CONTROL MEASUREMENTS WERE MADE WITH A TRANSIT AND STEEL TAPE, OR DEVICES WITH EQUIVALENT OR HIGHER DEGREES OF ACCURACY.
- THE ACCURACY STANDARD USED FOR THIS SURVEY, AS CLASSIFIED IN THE MINIMUM STANDARDS OF PRACTICE (5J-17 FAC), IS "COMMERCIAL/HIGH RISK". THE MINIMUM RELATIVE DISTANCE ACCURACY FOR THIS TYPE OF SURVEY IS 1 FOOT IN 10,000 FEET. THE ACCURACY OBTAINED BY MEASUREMENT AND CALCULATION OF A CLOSED GEOMETRIC FIGURE MET THIS REQUIREMENT.

**DATA SOURCES:**

- BASIS OF BEARINGS IS THE FLORIDA STATE PLANE COORDINATE SYSTEM, WEST ZONE, NORTH AMERICAN DATUM, 1983 ADJUSTMENT.
- PLAT OF PAGE'S REPLAT OF MITCHELL'S BEACH SUBDIVISION, RECORDED IN PLAT BOOK 69, PAGE 20, OF THE PUBLIC RECORDS OF PINELLAS COUNTY, FLORIDA.

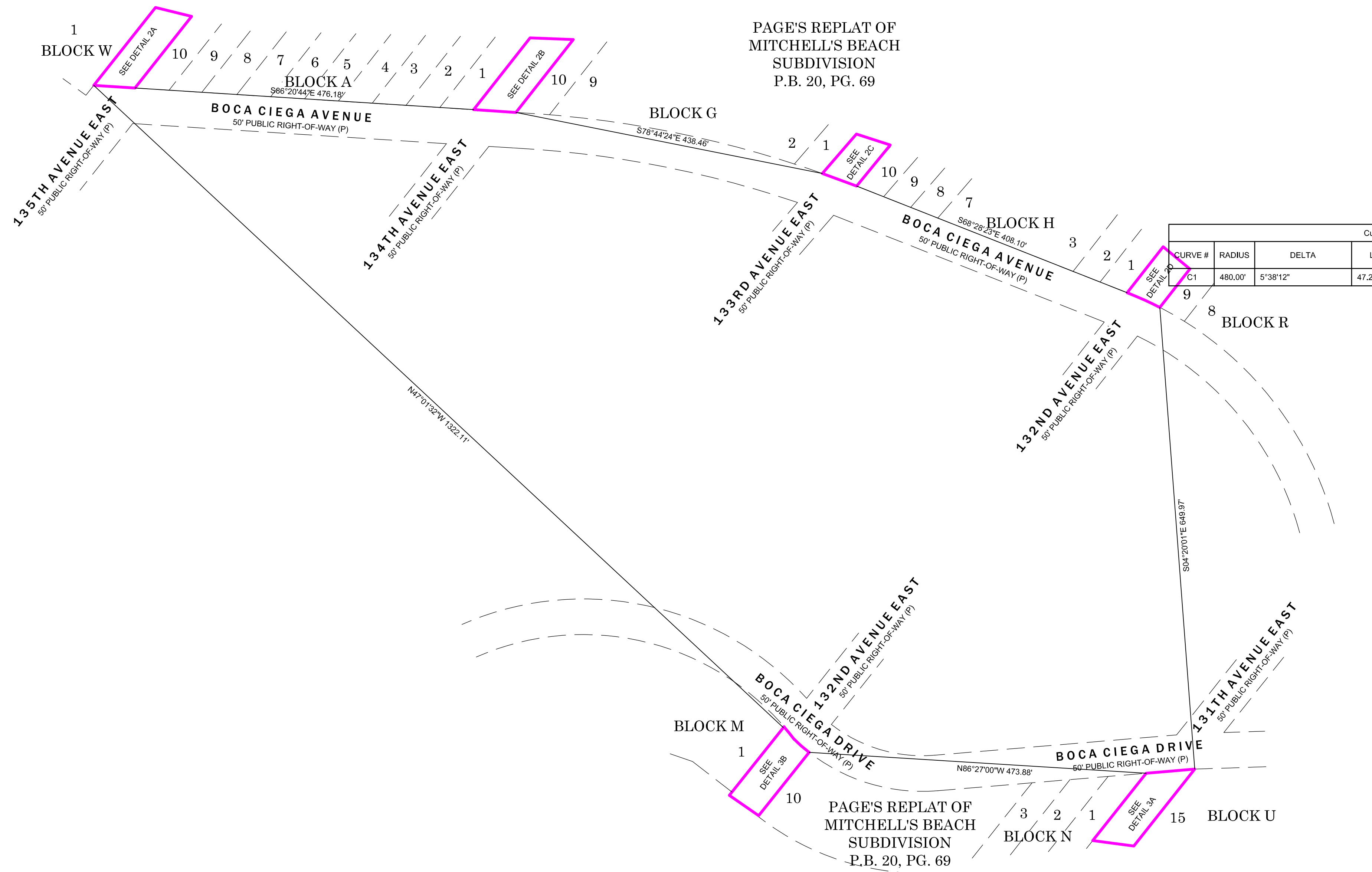
**LIMITATIONS:**

- PURPOSE OF SURVEY:
- USE OF THIS SURVEY BY ANYONE OTHER THAN THOSE PREPARED FOR / CERTIFIED TO, WILL BE THE RE-USERS SOLE RISK WITHOUT LIABILITY TO THE SURVEYOR.
- ADDITIONS OR DELETIONS TO SURVEY MAPS OR REPORTS BY OTHER THAN THE SIGNING PARTY OR PARTIES IS PROHIBITED WITHOUT WRITTEN CONSENT OF THE SIGNING PARTY OR PARTIES.
- THERE MAY BE ITEMS DRAWN OUT OF SCALE AND / OR MOVED ON THE MAP OF SURVEY TO GRAPHICALLY SHOW THEIR LOCATION. PRINTED DIMENSIONS SHOWN ON THE SURVEY SUPERSEDE SCALED DIMENSIONS.
- UNDERGROUND FOUNDATIONS AND THEIR LOCATIONS HAVE NOT BEEN DETERMINED.
- IRRIGATION EQUIPMENT AND / OR THEIR APPURTENANCES HAVE NOT BEEN MAPPED.
- THIS SURVEY WAS PERFORMED WITHOUT THE BENEFIT OF A COMMITMENT FOR TITLE INSURANCE. THERE MAY EXIST ADDITIONAL EASEMENTS AND/OR RESTRICTIONS THAT CAN BE FOUND IN THE PUBLIC RECORDS OF THIS COUNTY.
- ONLY THE UNDERGROUND UTILITIES AND / OR THEIR APPURTENANCES WHICH WERE READILY APPARENT FROM GROUND LEVEL TO THE SURVEYOR ON THE ACTUAL DAY OF THE FIELD SURVEY WERE LOCATED. NO EXCAVATIONS OR SUBSURFACE WORK EFFORTS OF ANY KIND WERE PERFORMED BY THE SURVEYOR TO VERIFY THE EXISTENCE OF ANY UNDERGROUND UTILITIES AND / OR THEIR APPURTENANCES. THE SURVEYOR MAKES NO GUARANTEE THAT THE UNDERGROUND UTILITIES AND / OR THEIR APPURTENANCES SHOWN, COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN SERVICE OR ABANDONED.
- THERE MAY BE ADDITIONAL UTILITY STRUCTURES (DRAINAGE, SANITARY, ELECTRIC, COMMUNICATIONS, ETC.) THAT WERE NOT READILY APPARENT AT THE TIME OF THE SURVEY.

**BOUNDARY INCONSISTENCIES:**

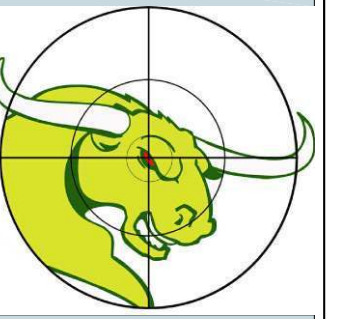
- ANY ANGULAR AND/OR DIMENSIONAL DISCREPANCIES BETWEEN THE DESCRIPTION AND THE FIELD LOCATED OCCUPATION BOUNDARY CORNERS, AND BOUNDARY CORNERS WITH MULTIPLE BOUNDARY MONUMENTS ALONG WITH THEIR CORRESPONDING QUADRANT DIRECTIONAL MISSES, ARE SHOWN ON THE MAP OF SURVEY. ALL PERIMETER BEARINGS AND DISTANCES ARE BY FIELD MEASURED UNLESS SO NOTED.

PAGE'S REPLAT OF MITCHELL'S BEACH SUBDIVISION P.B. 20, PG. 69



**BULLSEYE SURVEYING, INC.**

LB 7818  
4590 ULMERTON RD,  
SUITE 115  
CLEARWATER, FL 33762  
PHONE: 727-475-8088  
FAX: 727-264-0457



**PARCEL INFORMATION:**  
SECTION 15, TOWNSHIP 31 SOUTH, RANGE 15 EAST  
HILLSBOROUGH COUNTY, FLORIDA

**ABBREVIATIONS**

- DENOTES**
- FIR=FOUND IRON REBAR (SIZE AS NOTED)
  - FDH=FOUND DRILL HOLE
  - FN=FOUND NAIL
  - FN&D=FOUND NAIL & DISK
  - FOP=FOUND OPEN PIPE
  - LB=LICENSED BUSINESS
  - OR=OFFICIAL RECORDS BOOK
  - PB=PLAT BOOK
  - PG=PAGE
  - PLS=PROFESSIONAL LICENSED SURVEYOR
  - PLS=PROFESSIONAL LICENSED SURVEYOR
  - PSM=PROFESSIONAL SURVEYOR AND MAPPER
  - PVC=POLYVINYL CHLORIDE
  - RCP=REINFORCED CONCRETE PIPE
  - RLS=REGISTERED LICENSED SURVEYOR
  - SIR=SET 1/2" REBAR AND CAP BULLSEYE CONTROL POINT
  - SND=SET NAIL AND DISK LB 7818
  - TBM=TEMPORARY BENCHMARK

**SYMBOL LEGEND**

- DENOTES**
- BOLLARD
  - DRAINAGE MANHOLE
  - ELECTRIC EQUIPMENT
  - FIRE HYDRANT
  - FLAG POLE
  - GRATE INLET
  - GUY ANCHOR
  - LIGHT POLE(WOOD)
  - MAIL BOX
  - RECLAIMED WATER METER
  - SANITARY VALVE
  - SIGN
  - TREE(OTHER)
  - TREE(PALM)
  - TELEPHONE EQUIPMENT
  - WATER METER
  - WATER VALVE
  - WOOD UTILITY POLE

THIS SURVEY AND THE COPIES THEREOF, EXCEPT THOSE WITH ELECTRONIC SIGNATURE AND ELECTRONIC SEAL, THE SURVEY OR THE COPIES THEREOF ARE NOT VALID WITHOUT THE ORIGINAL SIGNATURE AND SEAL OF A FLORIDA LICENSED SURVEYOR AND MAPPER.

ADDITIONS OR DELETIONS TO SURVEY REPORTS OR MAPS BY ANYONE OTHER THAN THE SIGNING PARTY OR PARTIES IS PROHIBITED

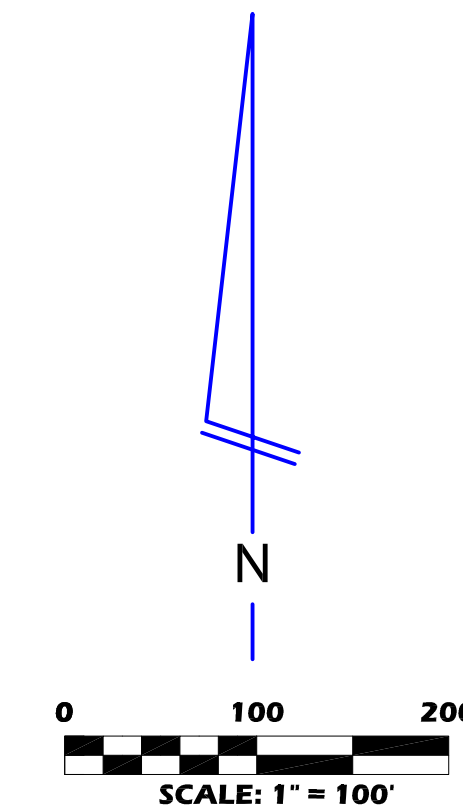
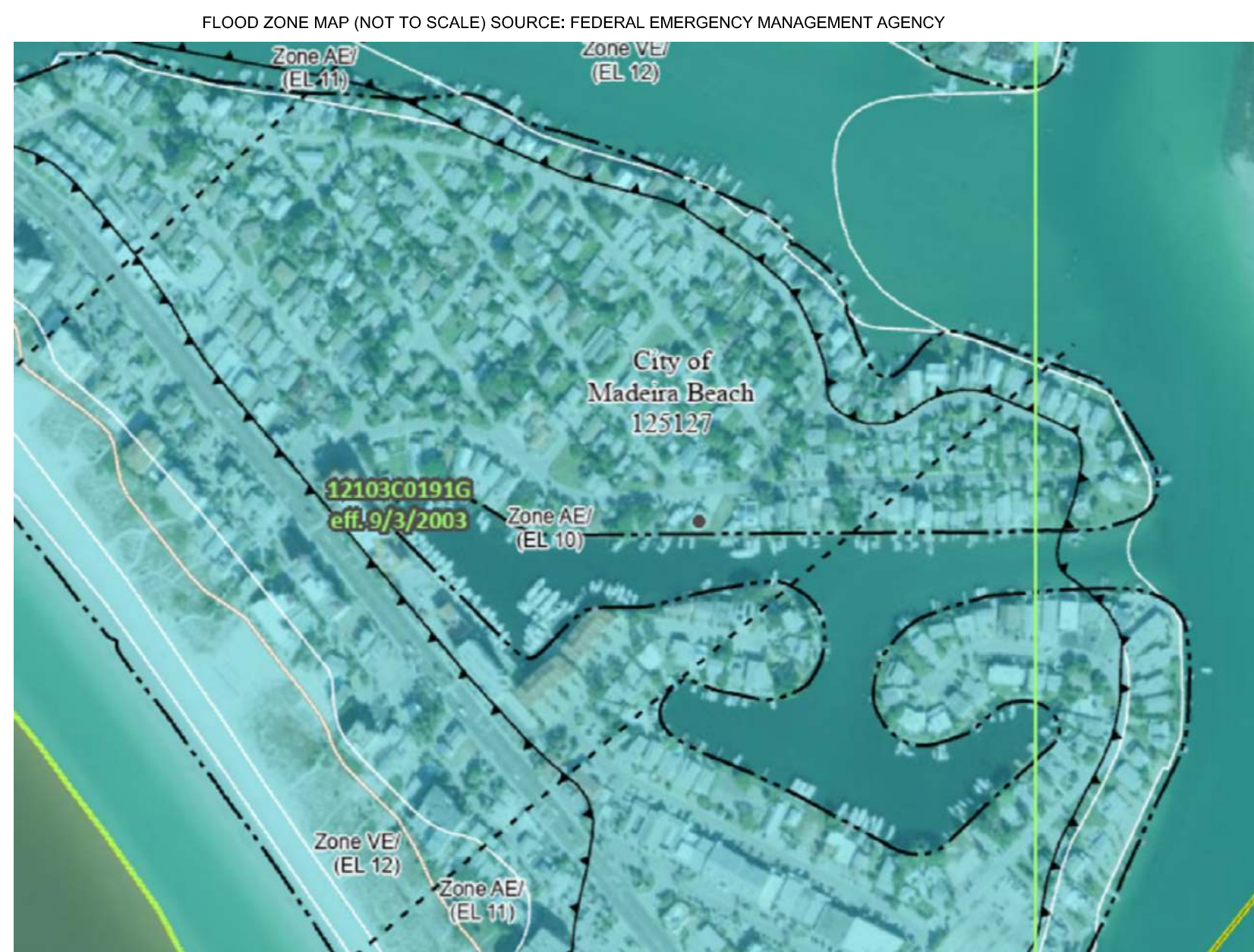
CERTIFIED TO:

•

GEORGE R. MARTIN  
PROFESSIONAL SURVEYOR & MAPPER  
LICENSE NUMBER LS 6019  
STATE OF FLORIDA

FIELD BOOK / PAGE	SCALE	SHEET NUMBER
32/10-17	1" = 100'	1 of 3
DRAFTED BY	SURVEY FIELD DATE	
VPL	07/03/2023	
PROJECT NUMBER	FILE NAME	
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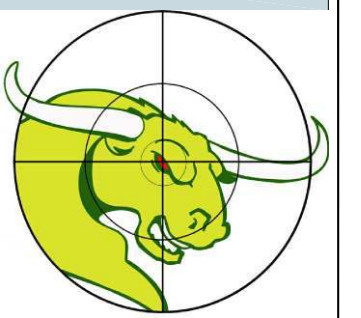
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#	DATE	DETAILS
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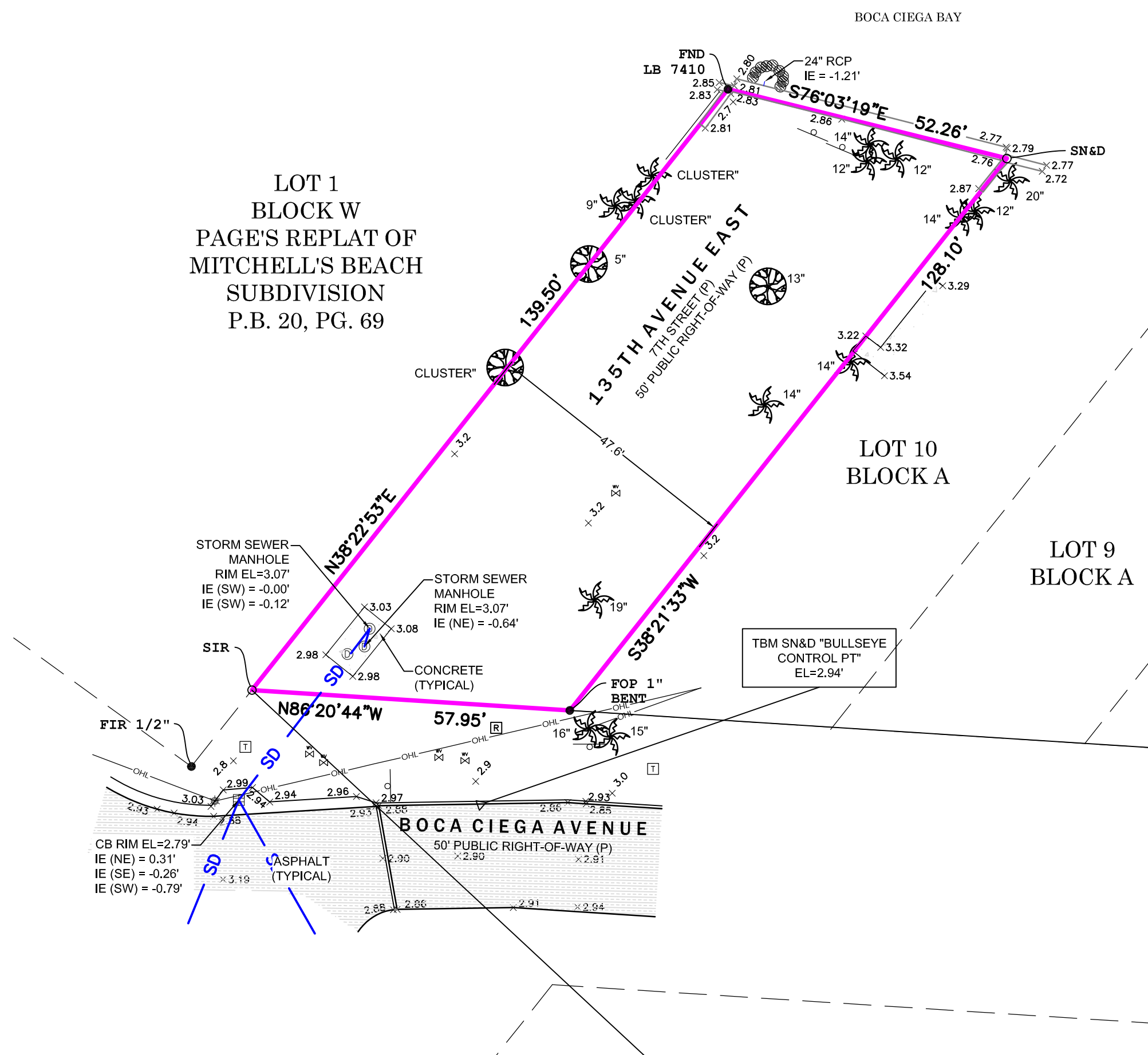
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 THE MAP AND REPORT ARE NOT  
 FULL AND COMPLETE WITHOUT  
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**BULLSEYE SURVEYING, INC.**

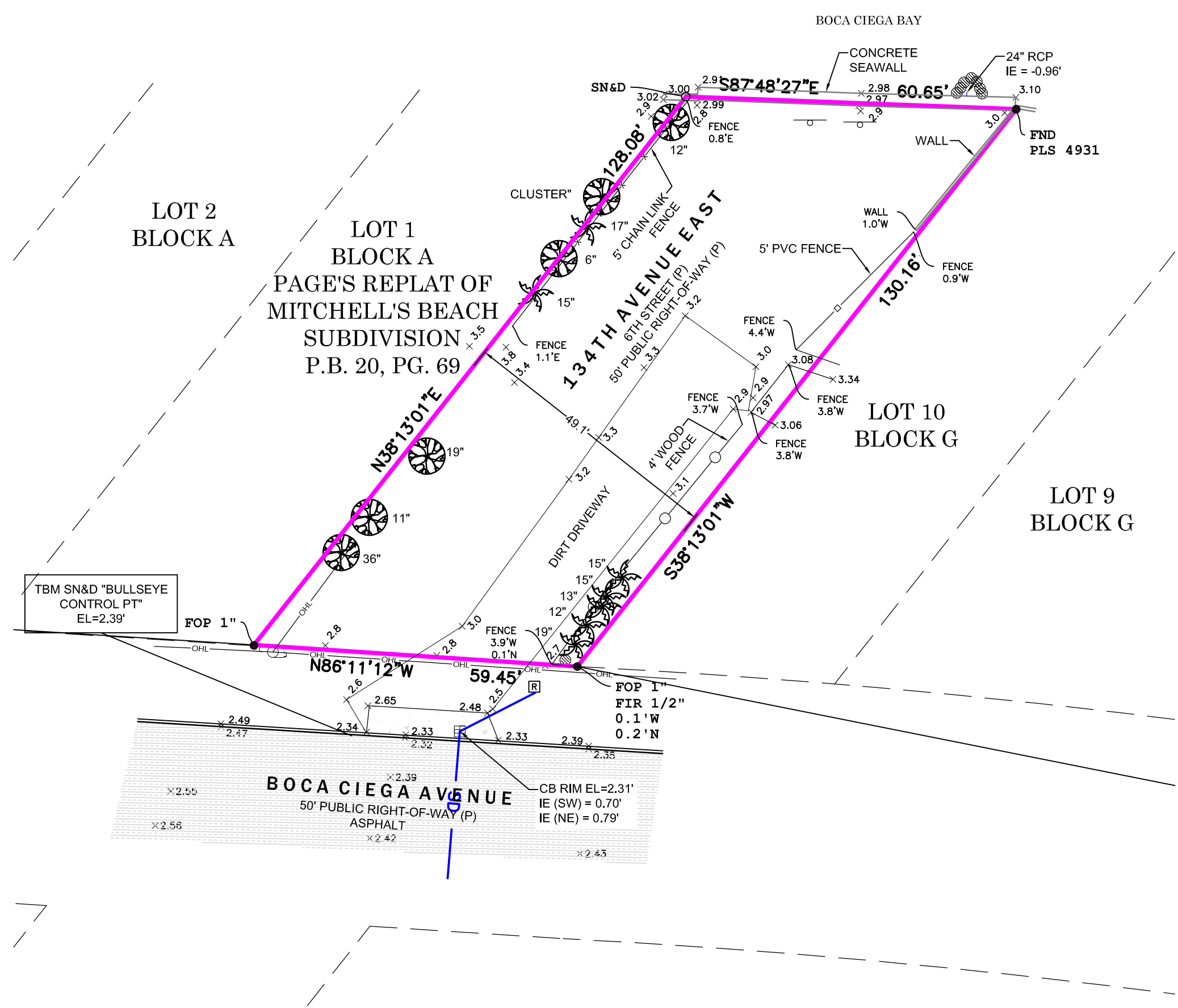
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 4590 ULMERTON RD,  
 SUITE 115  
 CLEARWATER, FL 33762  
 PHONE: 727-475-8088  
 FAX: 727-264-0457



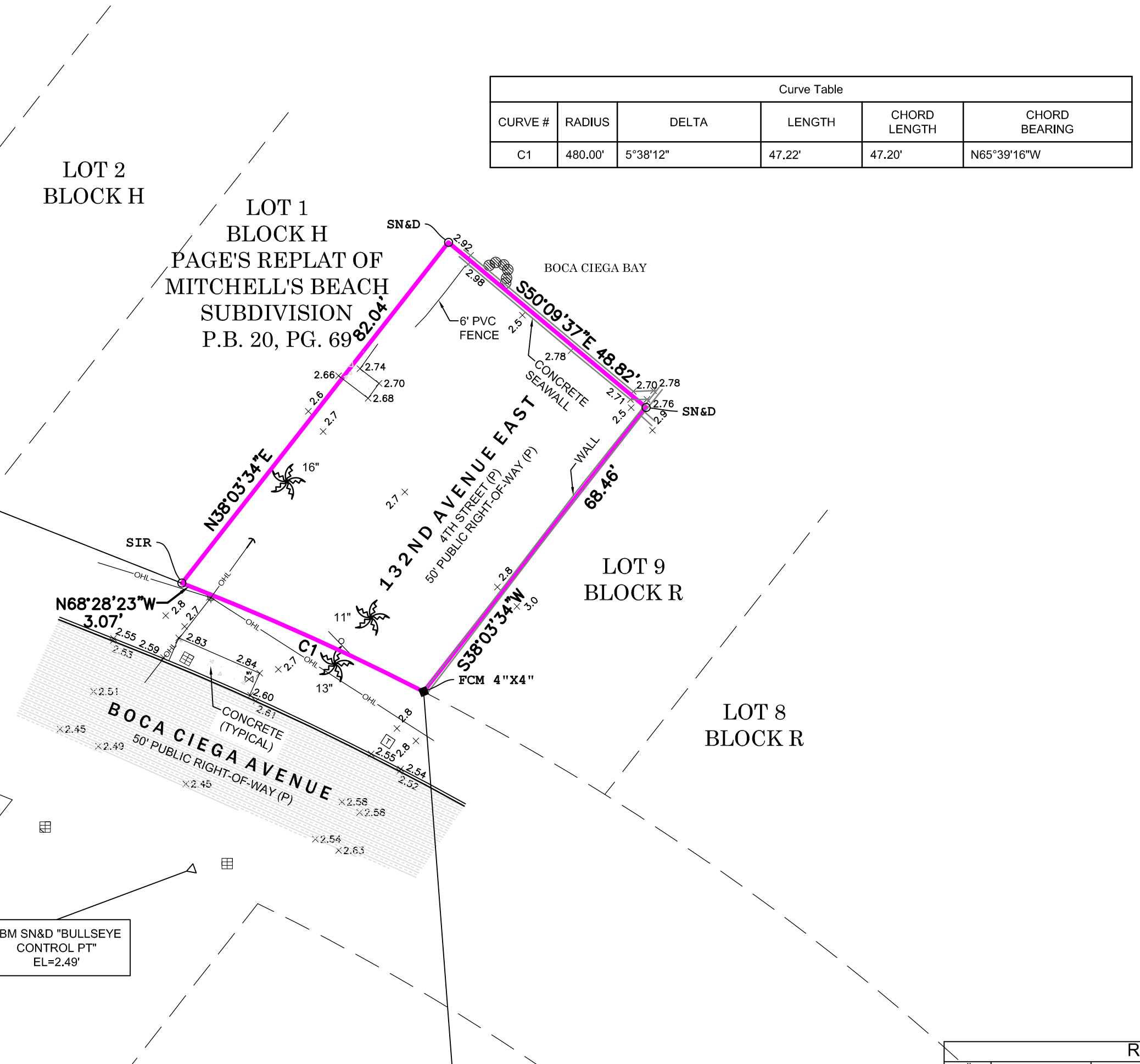
DETAIL 2A



DETAIL 2B

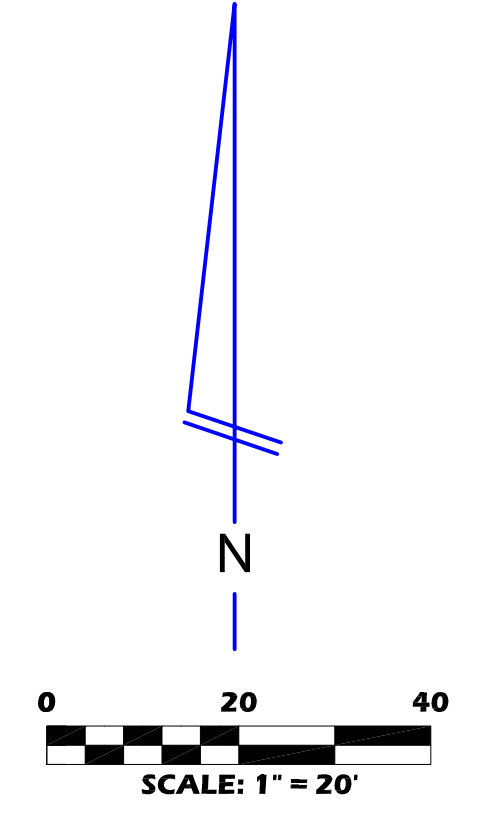
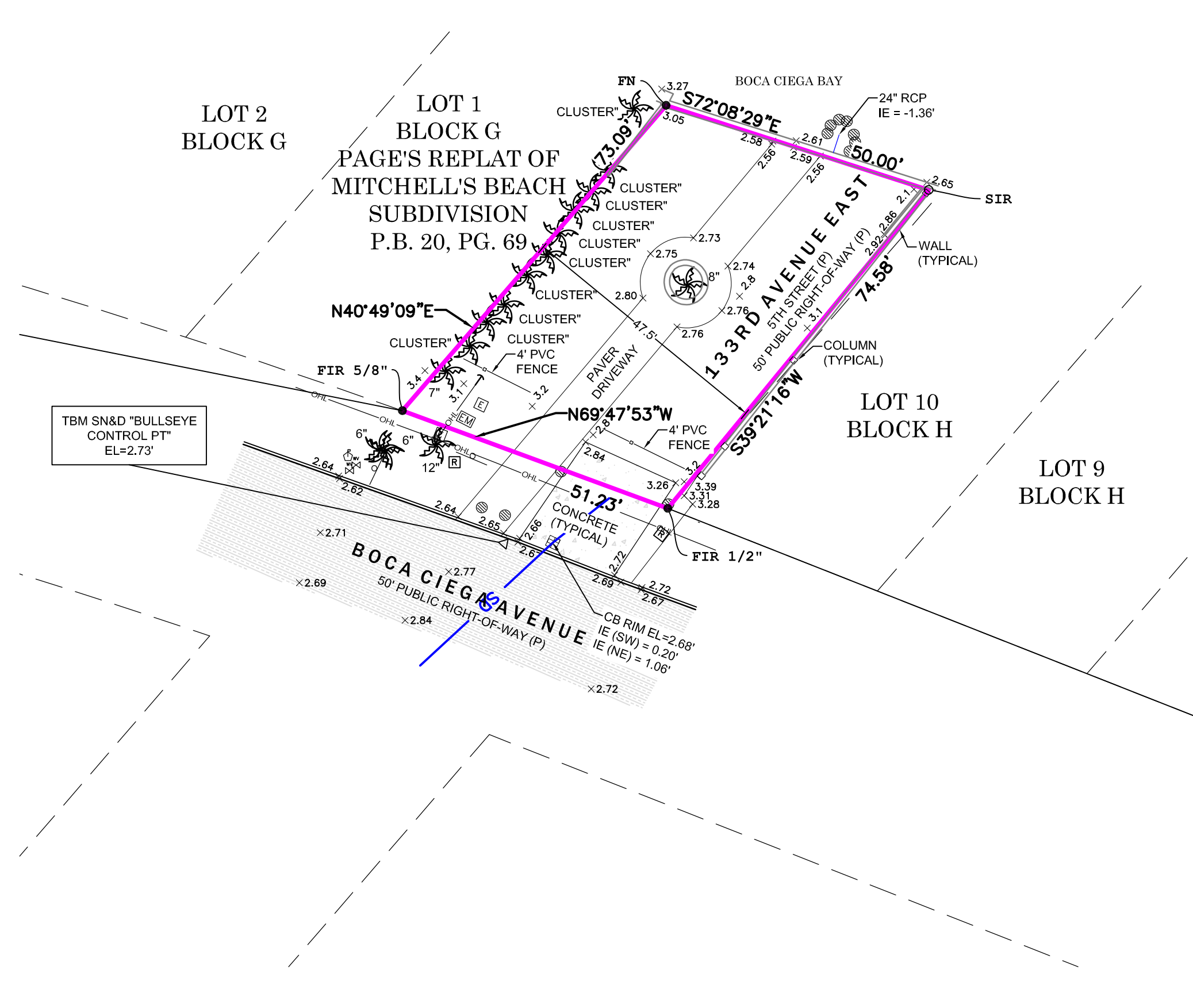


DETAIL 2D



Curve Table					
CURVE #	RADIUS	DELTA	LENGTH	CHORD LENGTH	CHORD BEARING
C1	480.00'	5°38'12"	47.22'	47.20'	N65°39'16"W

DETAIL 3B



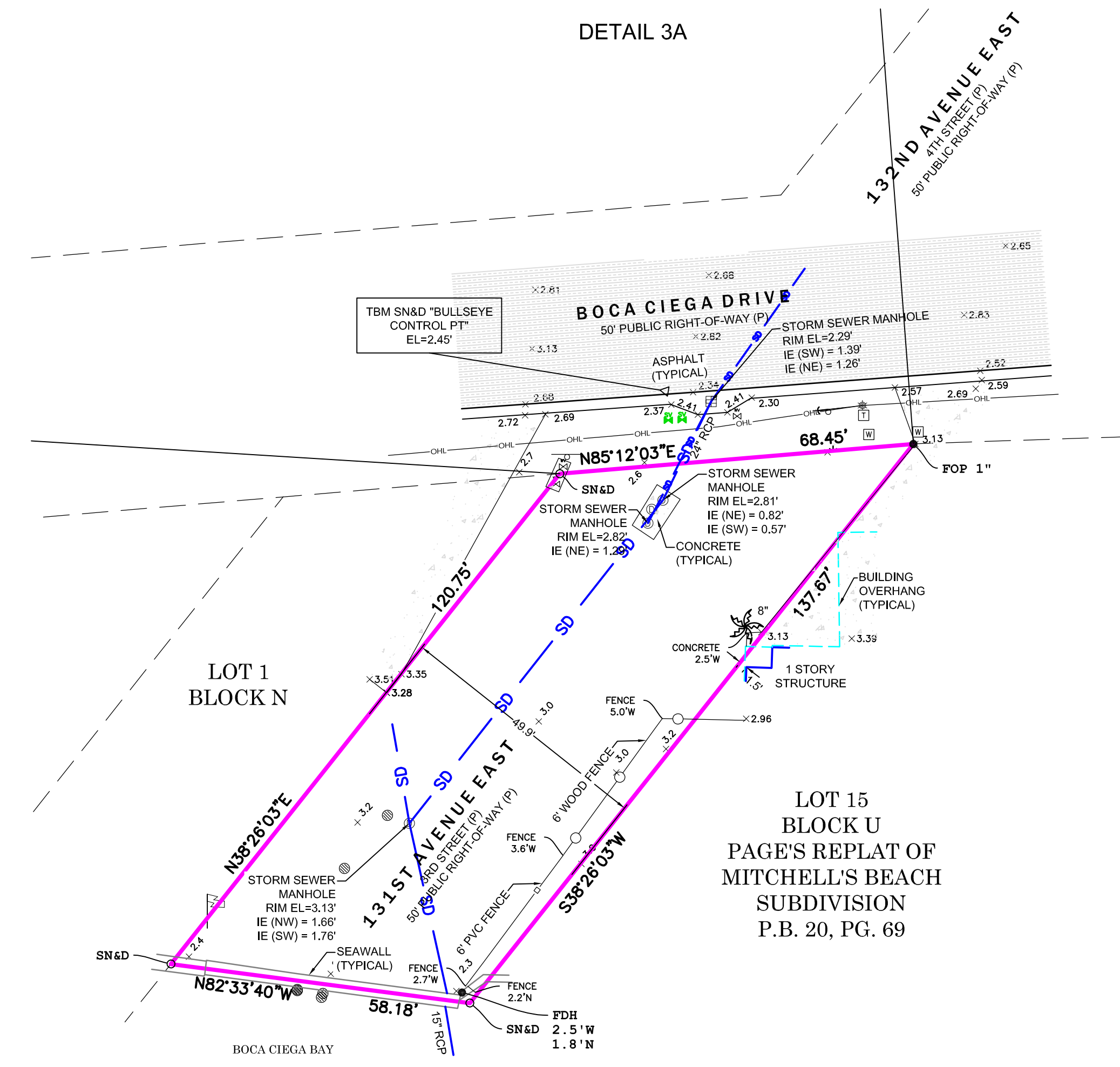
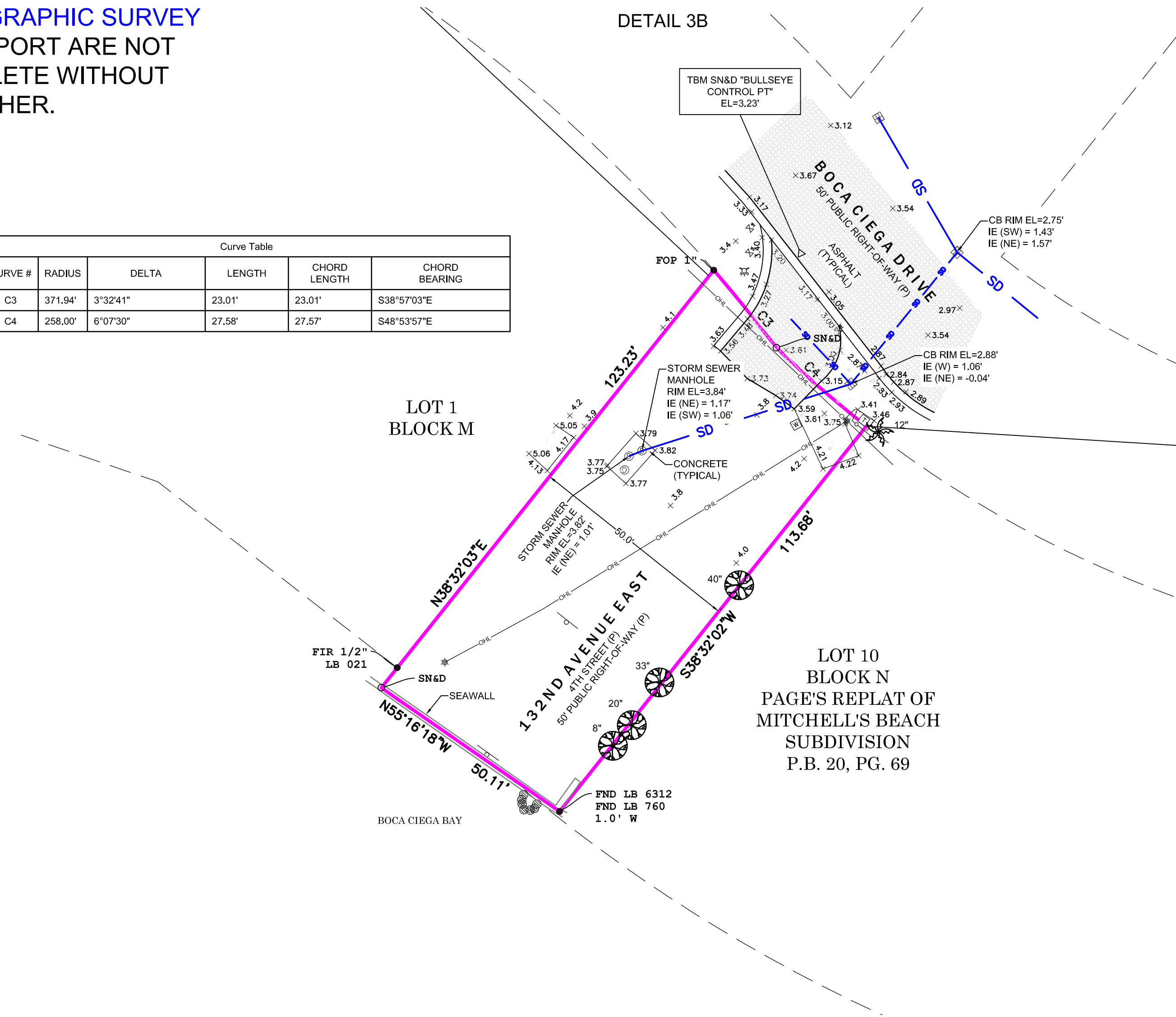
REVISIONS		
#	DATE	DETAILS
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FIELD BOOK / PAGE	SCALE	SHEET NUMBER
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DRAFTED BY	SURVEY FIELD DATE	
VPL	07/03/2023	
PROJECT NUMBER	FILE NAME	
23-033	23-033-1.dwg	

**BOUNDARY/TOPOGRAPHIC SURVEY**

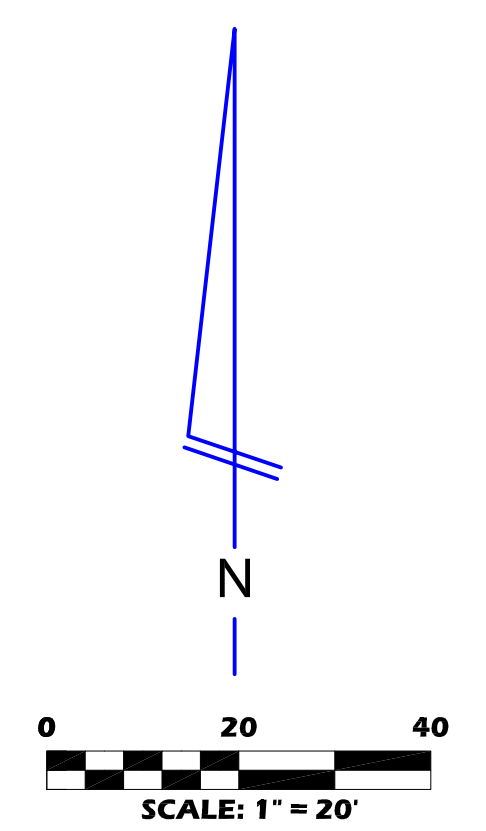
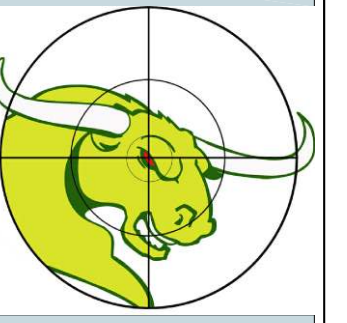
THE MAP AND REPORT ARE NOT FULL AND COMPLETE WITHOUT THE OTHER.

Curve Table				
CURVE #	RADIUS	DELTA	LENGTH	CHORD LENGTH
C3	371.94'	3°32'41"	23.01'	23.01'
C4	258.00'	6°07'30"	27.58'	27.57'



**BULLSEYE SURVEYING, INC.**

LB 7818  
4590 ULMERTON RD,  
SUITE 115  
CLEARWATER, FL 33762  
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VPL	07/03/2023	
PROJECT NUMBER	FILE NAME	
23-033	23-033-1.dwg	

REVISIONS		
#	DATE	DETAILS
1		



## REPORT OF GEOTECHNICAL EXPLORATION

---

### MADEIRA BEACH PARKING IMPROVEMENTS MADEIRA BEACH, FLORIDA 33708

AREHNA PROJECT NO. B-23-071

AUGUST 25, 2023

Prepared For:

**Half Associates**

1000 N. Ashley Drive, Suite 900

Tampa, FL 33602

---

Prepared By:

**AREHNA Engineering, Inc.**

5012 West Lemon Street

Tampa, Florida 33609

August 25, 2023

Mr. Martin Steffen, PLA  
**Halff Associates**  
1000 N. Ashley Drive, Suite 900  
Tampa, FL 33602

Subject: **Report of Geotechnical Exploration**  
Madeira Beach Parking Improvements  
Madeira Beach, Florida 33708  
AREHNA Project B-23-071

AREHNA Engineering, Inc. (AREHNA) is pleased to submit this report of our geotechnical exploration for the proposed project. Services were conducted in general accordance with AREHNA Revised Proposal B.Prop-23-134.REV, submitted June 7, 2023. The purpose of our geotechnical study was to obtain information on the general subsurface conditions for the project site. The project consists of conversion from gravel/grass to pavers for the parking area.

This report presents our understanding of the project, outlines our exploratory procedures, documents the field data obtained and includes our recommendations for the proposed constructions.

AREHNA appreciates the opportunity to have assisted you on this project. Should you have any questions with regards to this report, or if we can be of any further assistance, please contact this office.

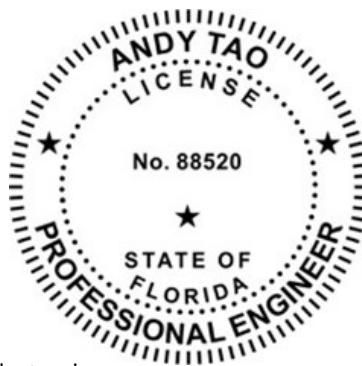
Best Regards,  
**AREHNA ENGINEERING, INC.**

**FLORIDA BOARD OF PROFESSIONAL ENGINEERS CERTIFICATE OF AUTHORIZATION No. 28410**

This item has been digitally signed and sealed by:



Andrew Sway, PhD, P.G., E.I.  
Project Manager  
Florida Registration PG-2508



Andy Tao, P.E.  
Geotechnical Engineer  
Florida Registration 88520

On the date adjacent to the seal.  
Printed copies of this document are not considered signed and sealed and the signature must be verified on any electronic copies

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## LIST OF APPENDICES

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### APPENDIX A

USDA & USGS Vicinity Maps – Sheet 1  
Boring Location Plan – Sheet 2A and 2B  
Soil Boring Profiles – Sheet 3

### APPENDIX B

Summary of USDA Soil Survey – Table 1  
Summary of Laboratory Results – Table 2  
Field & Laboratory Procedures



## 1.0 PROJECT INFORMATION AND SCOPE OF WORK

---

### 1.1 SITE DESCRIPTION AND PROJECT CHARACTERISTICS

The project sites are located south of the intersection of 132nd Avenue East and Boca Ciega Drive and north of the intersection of 134th Avenue East and Boca Ciega Drive in Madeira Beach Florida. The project consists of new paved parking areas. The parking areas will consist of new pavers. Some subgrade improvements may be required beneath the pavers prior to installation, but no significant grade changes are anticipated.

### 1.2 SCOPE OF WORK

The purpose of our geotechnical study was to obtain information on the general subsurface conditions at the proposed project site. The subsurface materials encountered were evaluated with respect to the available project characteristics. In this regard, engineering assessments for the following items were formulated:

- Identification of the existing groundwater levels and estimated normal seasonal high groundwater fluctuations.
- General location and description of potentially deleterious materials encountered in the borings which may have an impact on the proposed construction.
- General geotechnical recommendations for the proposed construction and pavement design.

The following services were performed to achieve the above-outlined objectives:

- Performed site reconnaissance and stake boring locations.
- Requested utility location services from Sunshine811.
- Performed four (4) Standard Penetration Test (SPT) boring at the project site to a depth of 10 feet (2 at each project site). Locations were provided by the client. Samples were collected, and Standard Penetration Test resistances measured continuously for the top ten feet.
- Visually classified, lab tested and stratified soil samples in the laboratory using the Unified Soil Classification System (USCS).
- Reported the results of the field exploration and engineering analysis. The results of the subsurface exploration are presented in this report, signed and sealed by a professional engineer specializing in geotechnical engineering.





## 2.0 FIELD EXPLORATION AND LABORATORY TESTING

---

### 2.1 FIELD EXPLORATION

Four SPT borings (SPT-01 through SPT-04), extending to a depth of 10 feet, were completed at the project locations. Borings SPT-01 and SPT-02 were performed at the proposed parking area south of the intersection of 132<sup>nd</sup> Avenue East and Boca Ciega Drive, and borings SPT-03 and SPT-04 were performed at the proposed parking area north of the intersection of 134<sup>th</sup> Avenue East and Boca Ciega Drive. The borings were located in the field using hand-held Global Positioning System (GPS) equipment. The **Boring Location Plan (Sheet 2A and 2B in Appendix A)** provides a site plan showing the approximate relationship of existing features to the test locations.

The SPT boring was performed with the use of a Power Drill Rig using Bentonite "Mud" drilling procedures. Samples were collected and Standard Penetration Test resistances were measured continuously to depths of ten feet. The soil sampling was performed in general accordance with ASTM Test Designation D-1586, entitled "Penetration Test and Split-Barrel Sampling of Soils."

Representative portions of the samples collected were sealed in glass jars, labeled, and transferred for appropriate classification. Please note that samples will be retained for 90 days after the date of this report and then disposed, unless other arrangements have been made.

### 2.2 LABORATORY TESTING

Laboratory testing, consisting of natural moisture content, percent organic test, and single sieve (#200) gradation testing, was performed on a representative soil sample. The results of the laboratory testing are presented on the **Soil Boring Profile Sheets (Sheet 3 in Appendix A)** and are summarized on **Table 2 in Appendix B**.



## 3.0 SUBSURFACE CONDITIONS

---

### 3.1 USGS TOPOGRAPHIC DATA

Digital Raster Graphic (scanned topographic map) projection of the Seminole Quadrangle, Florida, provided by the USGS was reviewed to collect topographic information in the vicinity of the project site. The approximate location of this site has been superimposed on a USGS topographic map of the local area and is shown on **Sheet 1** in **Appendix A**. Based on this review, the natural ground surface elevations at the project site are approximately between +0 to +5 feet NGVD29 (National Geodetic Vertical Datum of 1929). Elevations referenced in this report should be considered approximate only. No surveying was performed.

### 3.2 USDA NATURAL RESOURCES CONSERVATION SERVICE DATA

The United States Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS) soil survey for the site area (current online NRCS Web Soil Survey) indicates that the soil at the boring locations consists of *Matlacha and Augustine soils and Urban Land (Map Unit 16)*. The soil survey for the site area is shown on **Sheet 1** in **Appendix A**. The Soil Survey indicated that the depth to the seasonal high water table is about 1.5 feet below the natural ground surface. A summary of this USDA soil type is provided on **Table 1** in **Appendix B**.

### 3.3 SUBSURFACE CONDITIONS

A pictorial representation of the subsurface conditions encountered in the boring is shown on the **Soil Boring Profile** on **Sheet 3** in **Appendix A**. This profile and the following soil conditions highlight the general subsurface stratification. When reviewing the boring record and the subsurface soil profile, it should be understood that soil conditions may vary between, and away from, boring location. The following is a brief description of the soils for the boring based on the proposed feature in this area:

SPT borings generally encounter very loose to medium dense fine sand to silty sand (SP, SP-SM, SM) to termination depth of 10 feet below ground surface (bgs). Note that decayed wood fragments were encountered at depth ranging from approximately 3.5 to 6 feet below existing ground surface. These materials are partially decayed small pieces of wood mixed in a sand layer. The soil layer is mostly sand or slightly silty sand containing these fragments.

Borings SPT-03 and SPT-04 also encountered a very silty (to occasionally clayey) sand layer between about 2 and 3 feet depth in SPT-03 and from about 2 to 4 feet depth in SPT-04.



### **3.4 GROUNDWATER CONDITIONS**

Conditions revealed in the SPT boring indicate that the phreatic surface of the surficial aquifer could be inferred between 2.6 feet and 3.8 feet below the ground surface. Due to the proximity to bay the groundwater will be tidally influenced. In extreme weather events, such as tropical storms, storm surge effects may cause the water table to rise above the ground surface. Fluctuation in groundwater levels should be expected due to tidal changes, seasonal climatic changes, construction activity, rainfall variations, surface water runoff, and other site-specific factors.

### **3.5 ESTIMATED SEASONAL HIGH GROUNDWATER TABLE**

The groundwater table at the boring locations were found to be between 2.6 feet and 3.8 feet below the existing grade. Based on the information reported by the USDA, historical indicators of a seasonal high water table noted in the soils obtained from the site, and our experience in the area, we estimate that the seasonal high water level is at an approximate depth of approximately  $2.0 \pm 0.5$  feet below the existing ground surface at this site. It should be noted that the site may become flooded during tropical storm events due to storm surge.



## 4.0 GENERAL PAVEMENT RECOMMENDATIONS

---

### 4.1 PAVEMENTS

We recommend that, after grading to final grade, the exposed surface should be compacted in accordance with **Section 5.3** prior to installation of the pavers. If any areas of yielding soil during proofrolling are observed, those areas should be excavated to a depth of at least 1-foot (areas of SPT-01 and SPT-02) or to the bottom of the clayey silty sand layer (SPT-03 and SPT-04 area) and replaced with compacted fill in lifts not exceeding 12 inches each. If soil is excavated due to yielding, the base of the excavation should be compacted in accordance with **Section 5.3** prior to adding fill. If no yielding areas are observed, excavations are not required.

Structural fill soils should consist of reasonably clean fine sands (inorganic, non-plastic sands containing less than 12 percent material passing the No. 200 mesh sieve). We recommend that any fill be compacted to at least 98 percent of the Modified Proctor maximum dry density (ASTM D-1557).



## 5.0 GENERAL SITE PREPARATION

---

### 5.1 GENERAL

The following recommendations are based upon our understanding of the project information and the data gathered during this subsurface exploration. If revised project information is developed, we should be notified so that our recommendations can be reviewed. The stratification and consistency of the subsurface materials encountered may vary within even short lateral distances; therefore, any subsurface condition encountered during construction or any additional exploration that deviates from that documented in this exploration should be reported to us so that our recommendations can be reviewed.

### 5.2 ON-SITE SOIL SUITABILITY

The borings indicate that surficial sandy soils classified as SP and SP-SM are present and are suitable for use as backfill material. Soil classified as clayey to silty sand (SM, SC, SC-SM) are not suitable for reuse. Decaying wood fragments were encountered at depths ranging from 3.5 to 6 feet below existing ground surface with an organic content of approximately 3%. Based on the low organic content and depth of this material it may remain in place and does not represent a significant settlement concern.

Soil excavated from below the groundwater level will be above the optimum moisture content required for compaction and will need to be dried before placement. Suitable structural fill materials should consist of fine to medium sand with less than 12 percent passing the No. 200 sieve and be free of rubble, organics, clay, debris and other unsuitable material. Any off-site materials used as fill should be approved by AREHNA prior to acquisition.

### 5.3 EXCAVATION AND BACKFILL

Excavations should be constructed in accordance with the current OSHA guidelines. The contractor is solely responsible for designing and constructing stable excavations and should shore, slope, or bench the sides of the excavations as required to maintain stability of both the excavation sides and bottom. The contractor's responsible person, as defined in 29 CFR, Part 1926, should evaluate the soil exposed in the excavations as part of the contractor's safety procedures. In no case should slope height, slope inclination, or excavation depth, including utility trench excavation depth, exceed those specified in all local, state, and federal safety-regulations.

The soils encountered are consistent with OSHA Class C soils and will not stand vertically in an open excavation below the groundwater level or for more than very short periods above the groundwater level. Soil should not be stockpiled adjacent to excavations unless the stockpile has been included in the analyses of the excavation stability. Excavations may require dewatering.



Any and all excavations should be backfilled with acceptable compacted fill or re-use soils. Fill or re-use soils should generally consist of dry fine sand with less than 12 percent passing the No. 200 sieve and be free of rubble, organics, clay, debris and other unsuitable material. Imported fill should be anticipated and should be tested and approved prior to acquisition. Backfill or existing exposed soils should be compacted in lifts not exceeding 12 inches in thickness and should be compacted to a minimum of 98 percent of the Modified Proctor maximum dry density (ASTM D-1557). If compaction cannot be obtained with 12-inch lifts, thinner lifts may be required. Prior to beginning compaction, soil moisture contents should be adjusted in order to facilitate proper compaction. A moisture content within 2 percentage points of the optimum indicated by the Modified Proctor Test (ASTM D-1557) is recommended prior to compaction of the fill.

#### **5.4 DEWATERING**

The groundwater was encountered at boring locations, generally between about 2.6 and 3.8 feet bgs. Dewatering will not likely be required, but surface water runoff into excavations may also require dewatering. Dewatering, if needed for any excavations, can be accomplished using a sanded wellpoint system supplemented by a gravel bottom layer and pumping from a sump. Actual dewatering means and methods should be the responsibility of the contractor.

Groundwater fluctuations will likely occur due to seasonal variations, runoff and clay/silt materials, and other factors and should be considered when planning excavation and dewatering activities. The impact of runoff from adjacent properties, nearby water bodies, and other site-specific conditions which may affect groundwater recharge are beyond the scope of this exploration and should be considered when planning and designing a dewatering system.

#### **5.5 GENERAL CONSTRUCTION MONITORING AND TESTING GUIDELINES**

Prior to initiating compaction operations, we recommend that representative samples of the structural fill material to be used and acceptable exposed in-place soils be collected and tested to determine their compaction and classification characteristics. The maximum dry density, optimum moisture content, gradation and plasticity characteristics should be determined. These tests are needed for compaction quality control of the structural fill and existing soils and to determine if the fill material is acceptable.

A representative number of in-place field density tests should be performed in the compacted existing soils and in each lift of structural fill or backfill to confirm that the required degree of compaction has been obtained. We recommend that at least one density test be performed for every lift of backfill and similar testing for exposed soil surfaces that are compacted. There are no compaction requirements for No. 57 stone, if used. Testing should be consistent with Pinellas County requirements.



## **6.0 BASIS FOR RECOMMENDATIONS**

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The analysis and recommendations submitted in this report are based upon the data obtained from the soil boring performed at the location indicated. Regardless of the thoroughness of a geotechnical exploration, there is always a possibility that conditions at other locations will be different from those at the specific boring locations and that conditions will not be as anticipated by the designers or contractors. In addition, the construction process itself may alter soil conditions. AREHNA is not responsible for the conclusions, opinions or recommendations made by others based on the data presented in this report.



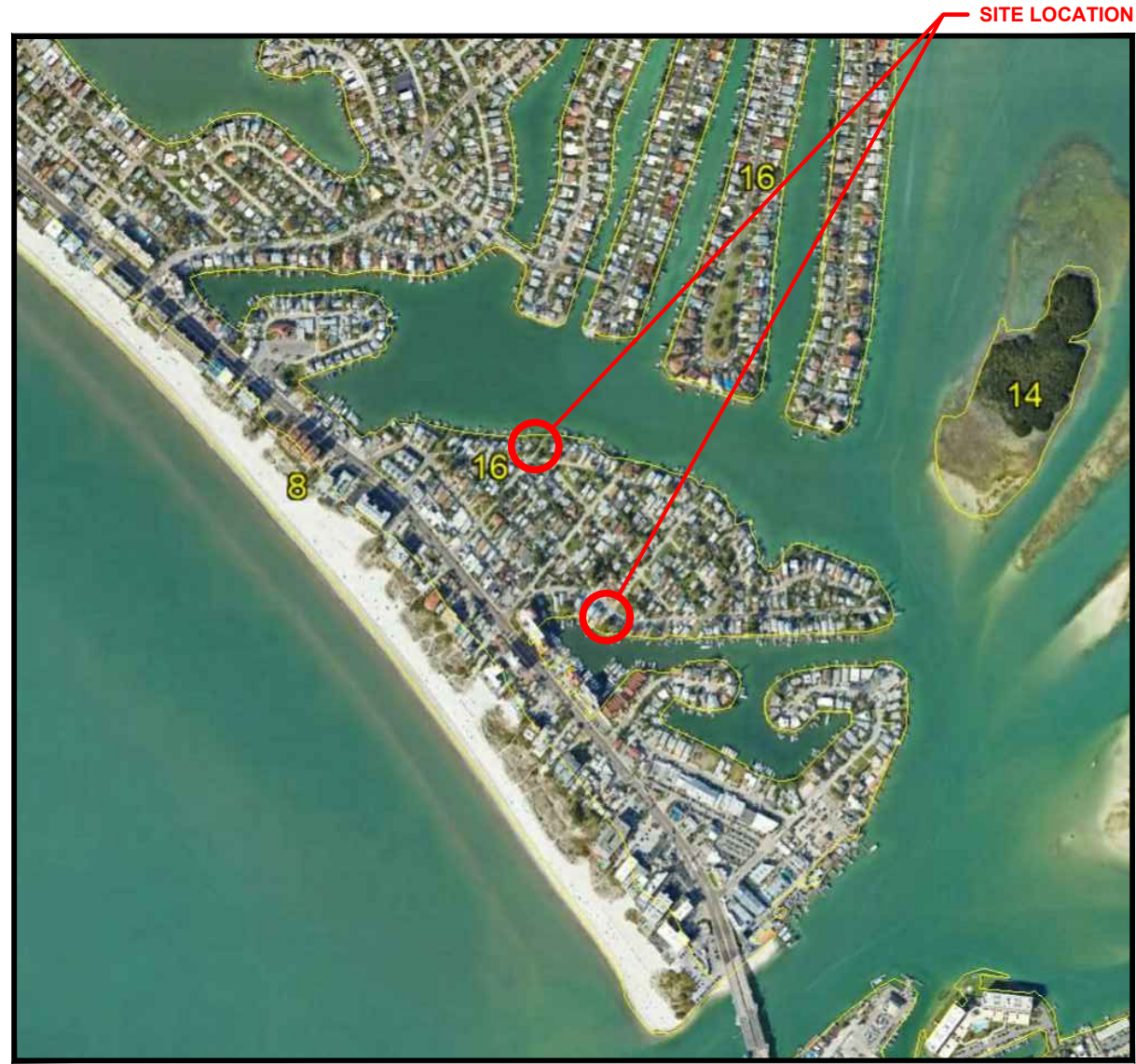
## **APPENDIX A**

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USDA & USGS Vicinity Maps – Sheet 1  
Boring Location Plan – Sheet 2A and 2B  
Soil Boring Profiles – Sheet 3



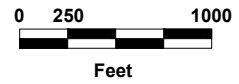
**USDA SOIL SURVEY MAP**



SITE LOCATION

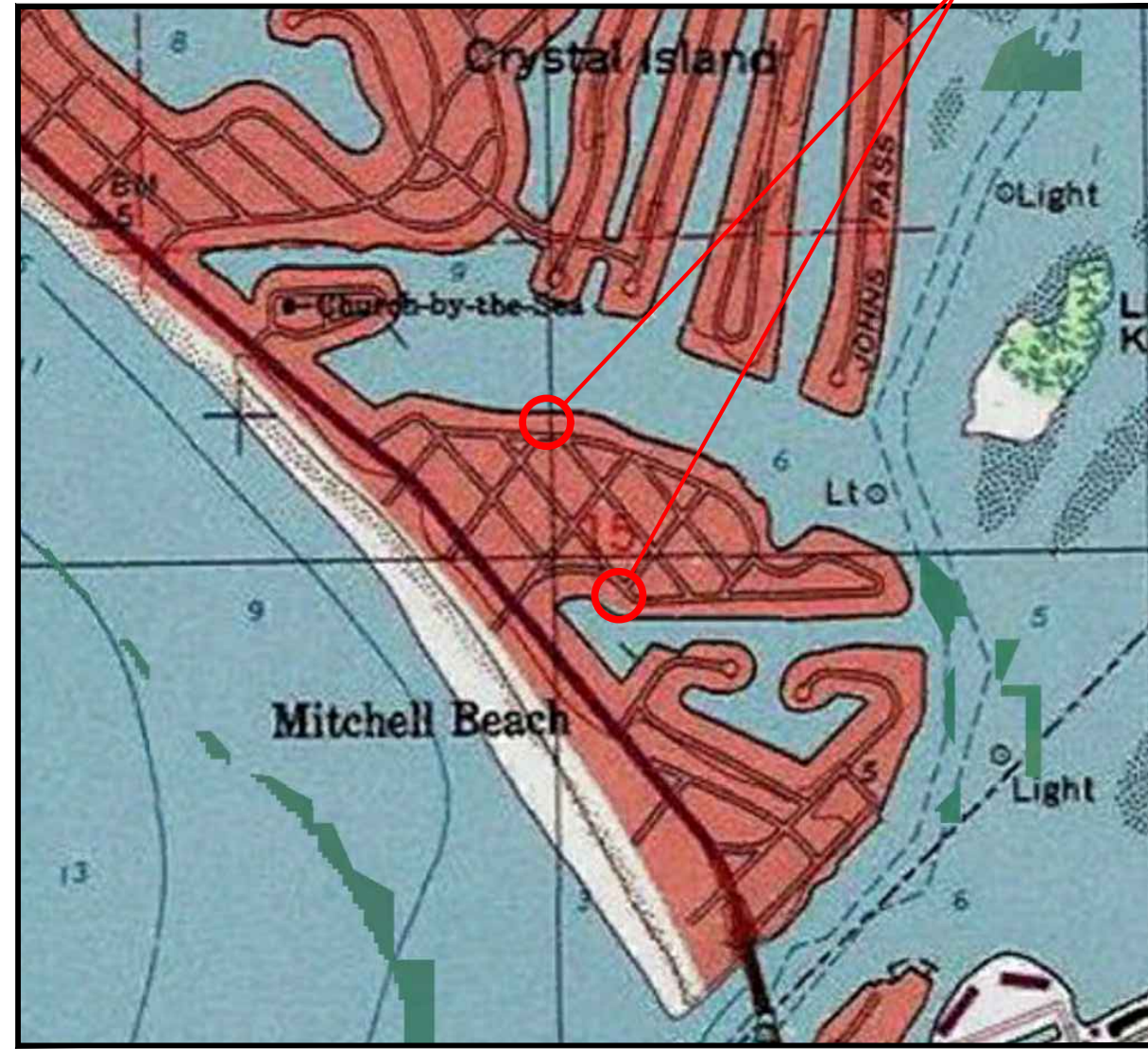


REFERENCE: USDA SOIL SURVEY OF PINELLAS COUNTY, FLORIDA



TOWNSHIP: 31 S  
 RANGE: 15 E  
 SECTION: 15

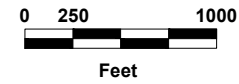
**USGS TOPOGRAPHIC MAP**



SITE LOCATION



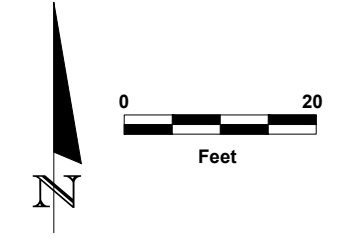
REFERENCE: "SEMINOLE, FLORIDA" USGS QUADRANGLE MAP



TOWNSHIP: 31 S  
 RANGE: 15 E  
 SECTION: 15

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REVISIONS			PREPARED BY:	NAME	DATE	PROJECT NAME	PROJECT NO.	SHEET NO.
NO.	DATE	DESCRIPTIONS						
				DESIGNED BY:	AS	8/2023	MADEIRA BEACH PARKING MADEIRA BEACH, FLORIDA	B-23-071
				DRAWN BY:	DG	8/2023		
				CHECKED BY:	AT	8/2023		
				SUPERVISED BY:	Andy Tao, P.E.			
				USDA & USGS VICINITY MAPS				1



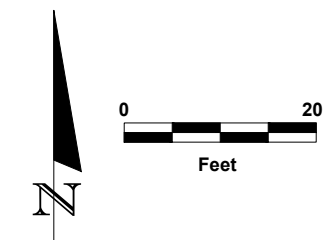
**LEGEND**

APPROXIMATE LOCATION OF SPT BORING

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REVISIONS			PREPARED BY:	BORING LOCATION PLAN	NAME		PROJECT NAME	PROJECT NO.	SHEET NO.	
NO.	DATE	DESCRIPTIONS			APPROVED	DESIGNED BY:				DATE
						AS	8/2023	MADEIRA BEACH PARKING MADEIRA BEACH, FLORIDA	B-23-071	2A
						DG	8/2023			
						AT	8/2023			
						SUPERVISED BY: Andy Tao, P.E.				

PREPARED BY:  
  
 AREHNA Engineering, Inc.  
 5012 West Lemon Street, Tampa, FL 33609  
 Phone 813.944.3464 | Fax 813.944.4959  
 Certificate of Authorization No. 28410



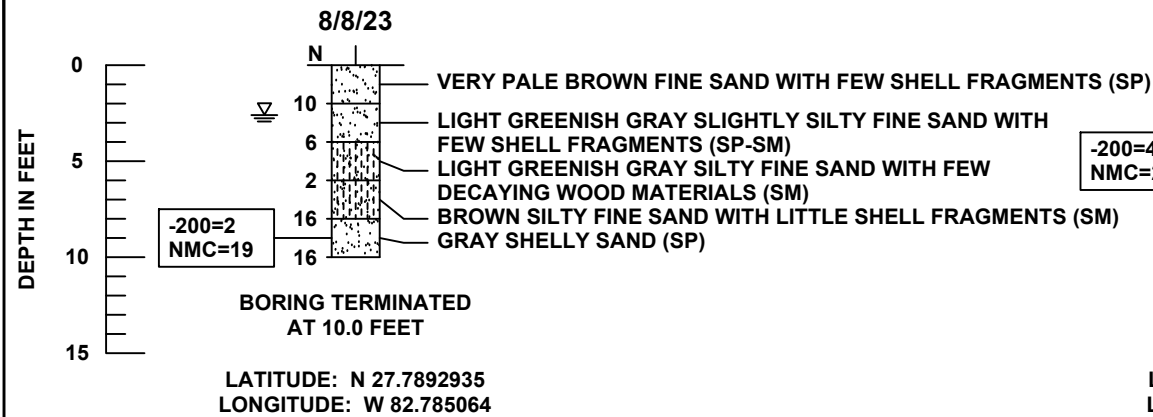
**LEGEND**

 APPROXIMATE LOCATION OF SPT BORING

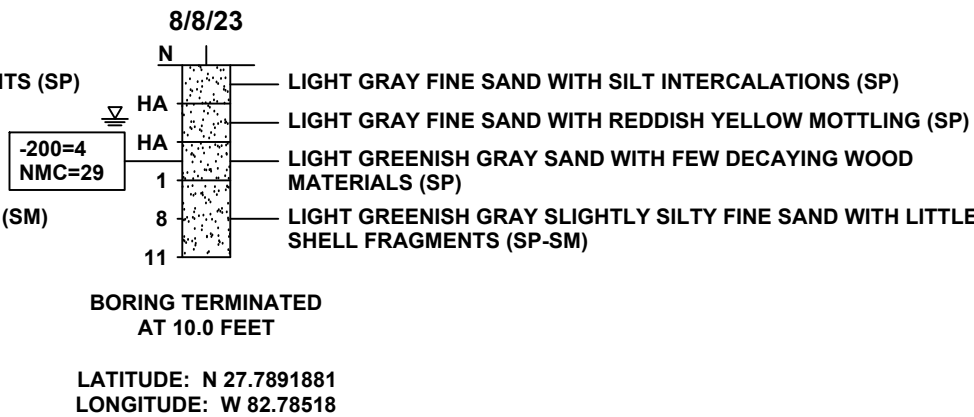
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REVISIONS			PREPARED BY:	BORING LOCATION PLAN	NAME		PROJECT NAME	PROJECT NO.	SHEET NO.	
NO.	DATE	DESCRIPTIONS			APPROVED	DESIGNED BY:				DATE
						AS	8/2023	MADEIRA BEACH PARKING MADEIRA BEACH, FLORIDA	B-23-071	2B
						DG	8/2023			
						AT	8/2023			
						SUPERVISED BY: Andy Tao, P.E.				
			 <b>AREHNA Engineering, Inc.</b> 5012 West Lemon Street, Tampa, FL 33609 Phone 813.944.3464   Fax 813.944.4959 Certificate of Authorization No. 28410							

**SPT-01**



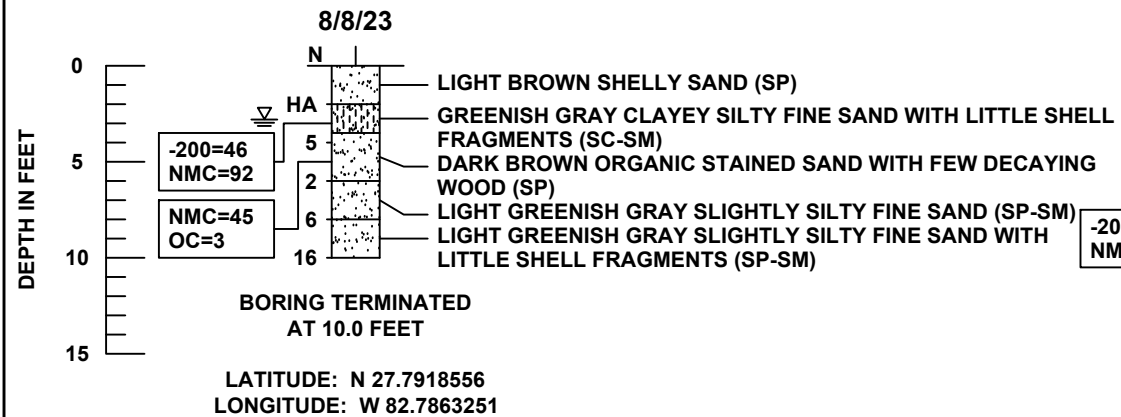
**SPT-02**



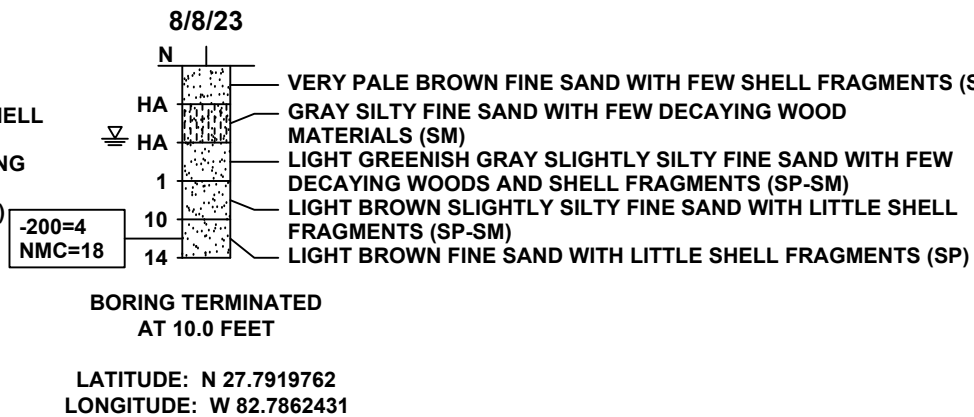
**LEGEND**

- FINE SAND (SP/SP-SM)
- SILTY SAND (SM/SC-SM)
- SP UNIFIED SOIL CLASSIFICATION SYSTEM (ASTM D 2488) GROUP SYMBOL AS DETERMINED BY VISUAL REVIEW AND/OR LABORATORY TESTING
- GROUNDWATER TABLE AT THE TIME OF DRILLING
- N SPT N-VALUE IN BLOWS/FOOT FOR 12 INCHES OF PENETRATION
- HA HAND AUGER
- 200 FINES PASSING THE #200 STANDARD SIEVE (%)
- NMC NATURAL MOISTURE CONTENT (%)
- OC ORGANIC CONTENT (%)

**SPT-03**



**SPT-04**



	SAFETY HAMMER	AUTOMATIC HAMMER
GRANULAR MATERIALS-RELATIVE DENSITY	SPT (BLOWS/FT)	SPT (BLOWS/FT)
VERY LOOSE	LESS THAN 4	LESS THAN 3
LOOSE	4 to 10	3 to 8
MEDIUM	10 to 30	8 to 24
DENSE	30 to 50	24 to 40
VERY DENSE	GREATER THAN 50	GREATER THAN 40
SILTS AND CLAYS CONSISTENCY	SPT (BLOWS/FT)	SPT (BLOWS/FT)
VERY SOFT	LESS THAN 2	LESS THAN 1
SOFT	2 to 4	1 to 3
FIRM	4 to 8	3 to 6
STIFF	8 to 15	6 to 12
VERY STIFF	15 to 30	12 to 24
HARD	GREATER THAN 30	GREATER THAN 24

**Soil Profile Notes:**

1. The profiles depicted are of a generalized nature to highlight the major subsurface stratification features and material characteristics. The soil profiles include soil description, stratifications and penetration resistances. The stratifications shown on the boring profiles represent the conditions only at the actual boring location. Variations may occur and should be expected between boring locations. The stratifications represent the approximate boundary between subsurface materials and the actual transition may be gradual.
2. Groundwater levels generally fluctuate during periods of prolonged drought and extended rainfall and may be affected by man-made influences. In addition, a seasonal effect will also occur in which higher groundwater levels or temporary perched conditions are normally recorded in rainy seasons.
3. The boring locations presented are approximate and based on hand held GPS with an accuracy of +/- 10 feet.
4. SPT borings were performed using an automatic hammer.

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REVISIONS			PREPARED BY:	NAME DATE			PROJECT NAME	PROJECT NO.	SHEET NO.
NO.	DATE	DESCRIPTIONS	APPROVED	DESIGNED BY:	AS	8/2023	MADEIRA BEACH PARKING MADEIRA BEACH, FLORIDA	B-23-071	3
				DRAWN BY:	DG	8/2023			
				CHECKED BY:	AT	8/2023			
				SUPERVISED BY:	Andy Tao, P.E.				

AREHNA Engineering, Inc.  
5012 West Lemon Street, Tampa, FL 33609  
Phone 813.944.3464 | Fax 813.944.4959  
Certificate of Authorization No. 28410

SOIL BORING PROFILES

## **APPENDIX B**

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Summary of USDA Soil Survey – Table 1  
Summary of Laboratory Test Results – Table 2  
Summary of Seasonal High Groundwater Table Estimate – Table 3  
Field and Laboratory Procedures

**TABLE 1  
SUMMARY OF USDA SOIL SURVEY  
MADEIRA BEACH PARKING IMPROVEMENTS  
MADEIRA BEACH, FLORIDA  
AREHNA Project No. B-23-071**

USDA Soil Type	Depth (inches)	USDA Soil Description	AASHTO	USCS	Permeability (ft/day)	Seasonal High Groundwater			Risk of Corrosion	
						Depth (feet)	Duration (months)	Kind	Steel	Concrete
Matlacha and St. Augustine soils and Urban Land*						(16)				
Matlacha	0 - 42	Sand	A-3	SP-SM, SP	4 - 12	2.0	Jun - Oct	Apparent	High	Low
	42 - 80	Sand, fine sand	A-3	SP-SM, SP	12 - 40					
St. augustine	0 - 8	Sand	A-3	SP-SM, SP	12 - 40	1.5	Jun -Oct	Apparent	High	Low
	8 - 33	Loamy fine sand	A-2-4	SP-SM	4 - 12					
	33 - 48	Fine sand, sand	A-3	'SP-SM, SP	12 - 40					
	48 - 63	Sand, fine sand, loamy fine sand, sandy loam	A-2-4	SP-SM, SM	4 - 12					
	63 - 80	Sand	A-3	SP-SM, SP	12 - 40					

\* Urban Land consists of areas where most of the soil surface is covered with impervious materials such as highways, parking lots and industrial areas.

**TABLE 2**  
**SUMMARY OF LABORATORY TEST RESULTS**  
**MADEIRA BEACH PARKING IMPROVEMENTS**  
**MADEIRA BEACH, FLORIDA**  
**AREHNA Project No. B-23-071**

Boring No.	Sample Depth (feet)	Sieve Analysis (% Passing)	Natural Moisture Content (%)	Organic Content (%)	USCS Group
		#200			
SPT - 01	8.0 - 10.0	2	19	-	SP
SPT - 02	4.0 - 6.0	4	29	-	SP
SPT - 03	2.0 - 4.0	46	92	-	SC-SM
SPT - 03	4.0 - 6.0	-	45	3	SP
SPT - 04	8.0 - 10.0	4	18	-	SP

**TABLE 3**  
**SUMMARY OF SEASONAL HIGH GROUNDWATER TABLE ESTIMATE**  
**MADEIRA BEACH PARKING IMPROVEMENTS**  
**MADEIRA BEACH, FLORIDA**  
**AREHNA Project No. B-23-071**

Boring No.	Boring Location		Boring Depth (feet)	Measured Groundwater Table		USDA Soil Survey		Estimated Seasonal High Water Depth (Feet)
	Latitude	Longitude		Date Recorded	Depth <sup>(1)</sup> (feet)	Map Symbol	Estimated SHGWT Depth <sup>(2)</sup> (feet)	
SPT-01	27.7893	-82.7851	10	8/8/2023	2.6	16	1.5	2 ±0.5
SPT-02	27.7892	-82.7852	10	8/8/2023	2.8	16	1.5	2 ±0.5
SPT-03	27.7919	-82.7863	10	8/8/2023	2.8	16	1.5	2 ±0.5
SPT-04	27.7920	-82.7862	10	8/8/2023	3.8	16	1.5	2 ±0.5

(1) Depth below existing grade at time of field work.

(2) Seasonal high water table depth per Pinellas County, Florida USDA Soil Survey information.



## FIELD PROCEDURES

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### **Standard Penetration Test (SPT) Borings**

The SPT borings are performed in general accordance with ASTM D-1586, "Penetration Test and Split-Barrel Sampling of Soils." A rotary drilling process is used and bentonite drilling fluid is circulated in the boreholes to stabilize the sides and flush the cuttings. At regular intervals, the drilling tools are removed and soil samples are obtained with a standard 2-foot long, 2-inch diameter split-tube sampler. The sampler is first seated 6 inches and then driven an additional foot with blows of a 140-pound hammer falling under its own weight a distance of 30 inches. The number of hammer blows required to drive the sampler the final foot is designated the "Penetration Resistance." The penetration resistance, when properly interpreted, is an index to the soil strength and density.

## LABORATORY PROCEDURES

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### **Water Content**

The water content is the ratio, expressed as a percentage, of the weight of water in a given mass of soil to the weight of the solid particles. This test is conducted in general accordance with ASTM D-2974.

### **Percent Organics (Organic Loss on Ignition)**

The amount of organic material in a sample is determined in this test. The sample is first dried and weighed, then ignited and reweighed. The amount of organic material is expressed as a percentage of the total dry weight of the sample prior to ignition. This test is conducted in general accordance with FM 1-T267.

### **Fines Content**

In this test, the sample is dried and then washed over a No. 200 mesh sieve. The percentage of soil by weight passing the sieve is the percentage of fines or portion of the sample in the silt and clay size range. This test is conducted in general accordance with ASTM D-1140.

