

MAJEED DISCOVERY GARDEN AGREEMENT

This Majeed Discovery Garden Agreement (this “**Agreement**”) is entered into as of _____, 2021 (the “**Effective Date**”) between Majeed Foundation Inc., a Florida nonprofit corporation (the “**Majeed Foundation**”), and Pinellas County, a political subdivision of the State of Florida (the “**County**”), with respect to the Majeed Discovery Garden at the Florida Botanical Gardens (the “**Majeed Discovery Garden**”). The Majeed Foundation and the County shall together be referred to herein as the “**Parties**” and individually as a “**Party.**”

WHEREAS, the Florida Botanical Gardens are developed and maintained by the Parks and Conservation Resources Department of Pinellas County, Florida;

WHEREAS, Florida Botanical Gardens Foundation, Inc. (the “**FBG Foundation**”) is a nonprofit corporation that supports the Florida Botanical Gardens financially and through the work of FBG Foundation volunteers;

WHEREAS, the Majeed Foundation is committed to improving the lives of residents in the Tampa Bay area and beyond, among other things by providing resources for public parks and gardens;

WHEREAS, the Majeed Foundation desires to make a gift of Six Hundred Thousand and 00/100 Dollars (the “**Gift**”) to the FBG Foundation for the construction, maintenance and operation of the Majeed Discovery Garden at the Florida Botanical Gardens (the “**Majeed Discovery Garden**” or “**Garden**”);

WHEREAS, contemporaneously with the execution of this Agreement, the FBG Foundation and the County are entering into an agreement (the “**FBG Foundation/County Agreement**”) pursuant to which the FBG Foundation will construct the Majeed Discovery Garden and the FBG Foundation and the County will jointly maintain and operate the Majeed Discovery Garden; and

WHEREAS, in consideration of the Majeed Foundation Gift, the County agrees to maintain and operate the Majeed Discovery Garden in accordance with the terms of the FBG Foundation/County Agreement, and to name the Garden the “Majeed Discovery Garden”, pursuant to the terms of this Agreement.

NOW, THEREFORE, in consideration of the mutual undertakings of the Parties, and other valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the Parties agree as follows:

1. Term. The term of this Agreement (the “**Agreement Term**”) will begin on the Effective Date, and, unless earlier terminated pursuant to Section 6 or 7: (a) will continue for twenty-five (25) years from the time of the Majeed Discovery Garden opening and installation of the Majeed Discovery Garden signage pursuant to this Agreement; and (b) thereafter will automatically renew for any renewal period of the FBG Foundation/County Agreement. Thereafter, the Parties may extend the term of this Agreement in a signed writing by both Parties for an additional fifteen-year term. The Parties will endeavor to extend this Agreement for the additional fifteen-year term upon the

expiration of this Agreement if neither Party has breached this Agreement without cure. The County will not have the right to terminate this Agreement during the twenty-five-year term, except as provided under Section 7 below. The County does not object to the Majeed Foundation using the construction of the Majeed Discovery Garden for tax purposes, to the maximum extent allowed by law.

2. Garden Boundaries, Plans. The boundaries of the Majeed Discovery Garden (the “**Garden Boundaries**”) will include the area in the Florida Botanical Gardens in Pinellas County (the “**Botanical Gardens**”) as specified in the Garden Plans. “**Garden Plans**” means the plans for the Majeed Discovery Garden attached hereto as Exhibit A.

3. Maintenance; FBG Agreement Obligations. The County will: (a) perform its maintenance obligations with respect to the Majeed Discovery Garden as required by the FBG Foundation/County Agreement; and (b) will otherwise comply with its obligations under the FBG Foundation/County Agreement. If the FBG Foundation Agreement terminates for any reason, or if the FBG Foundation fails to comply with its obligations under the FBG Foundation/County Agreement, then the County will comply with the FBG Foundation’s maintenance obligations under the FBG Foundation/County Agreement. If the County fails to comply with its obligations under this Section II.C, then the Majeed Foundation’s sole remedies against the County for such failure shall be: (i) termination of this Agreement pursuant to Section (ii) termination of the Majeed Foundation grant of naming rights pursuant to Section 9; and/or (iii) specific performance.

4. Name; Signage. The County will ensure that the name of the Garden is prominently displayed as the “Majeed Discovery Garden”. During the Agreement Term, the County will comply with the Name/Signage Plan attached as Exhibit B. The County hereby grants the Majeed Foundation exclusive naming rights to the Majeed Discovery Garden during the Agreement Term; provided, however, that the FBG Foundation may provide third-party naming rights within the Majeed Discovery Garden as set forth in the FBG Foundation/County Agreement.

5. Gift. The Majeed Foundation will make the Gift in accordance with the timetable set forth at Exhibit C.

6. Termination of Agreement by Majeed Foundation. The Majeed Foundation may terminate this Agreement upon the occurrence of any of the following circumstances (each referred to herein as a “**County Default**”), if the County fails to cure such circumstance within sixty (60) days after receiving written notice thereof:

- (a) the County’s material breach of this Agreement;
- (b) the County materially breaches its obligations under the FBG Foundation/County Agreement following the expiration of any applicable notice and cure provision;
- (c) the FBG Foundation/County Agreement terminates for any reason; or
- (d) the Majeed Discovery Garden is not substantially maintained and operated in a manner contemplated by the FBG Foundation/County Agreement.

Notwithstanding the foregoing, if a circumstance is reasonably susceptible of cure, but not curable within sixty (60) days, then the cure period shall extend for an additional period reasonably necessary for the County to cure such circumstance, not to exceed one hundred eighty (180) days.

7. Termination of Agreement by County. The County may terminate this Agreement, without penalty to the Majeed Foundation, upon the occurrence of any of the following circumstances:

(a) the Majeed Foundation fails to make the Gift as required by Section 5, if such failure continues for sixty (60) days after the Majeed Foundation receives written of such failure; or

(b) after the Majeed Discovery Garden is named, an officer the Majeed Foundation is found by a court of competent jurisdiction to have violated a local, state, or federal criminal law, and such violation:

(i) is a felony;

(ii) results in a monetary fine that exceeds five-hundred thousand dollars (\$500,000.00);

(iii) causes an ongoing material and adverse effect on the reputation, image, or customer goodwill of the County or the Florida Botanical Gardens; and

(iv) brings the Majeed Foundation or the applicable officer into public disrepute, contempt, scandal, or ridicule.

8. Governing Law. This Agreement shall be governed by and construed in accordance with the laws of the State of Florida (without regard to principles of conflicts of laws). The Parties agree that all actions or proceedings arising in connection with this Agreement must be tried and litigated exclusively in the State of Florida or federal (if permitted by law and either the County or the FBG Foundation elects to file an action in federal court) courts located in, nearest to, or for Pinellas County, Florida. This choice of venue is intended by the Parties to be mandatory and not permissive in nature, and to preclude the possibility of litigation between the Parties with respect to, or arising out of, this Agreement in any jurisdiction other than that specified in this Section 8. Each Party waives any right it may have to assert the doctrine of *forum non conveniens* or similar doctrine or to object to venue with respect to any proceeding brought in accordance with this Section 8.

9. Termination of Name Rights. In addition to other remedies the Majeed Foundation may have, the Majeed Foundation may terminate the County's right to use the name "Majeed Discovery Garden" or any other name including "Majeed" (the "**Majeed Name**") with or without cause at any time, by written notice to the County. If the Majeed Foundation terminates the right to use the Majeed Name, then the County will, within ninety (90) days, remove the Majeed Name from all signage and materials related to the Majeed Discovery Garden. If the Majeed Foundation terminates the right to use the Majeed Name due to a County Default, then the County will bear

all expenses of such removal. If the Majeed Foundation terminates the right to use the Majeed Name for any reason other than a County Default, then the County may condition its removal on the Majeed Foundation's agreement to reimburse the County for the reasonable costs of such removal, provided that the County gives the Majeed Foundation prior notice of the condition and the amount of such costs.

10. Severability. The terms and conditions of this Agreement shall be deemed to be severable. Consequently, if any clause, term, or condition hereof shall be held to be illegal or void by a court, that determination will not affect the validity or legality of the remaining terms and conditions, and notwithstanding any such determination, this Agreement shall continue in full force and effect, unless the omission of the particular clause, term, or condition held to be illegal or void: (a) renders the balance of this Agreement impossible to perform; or (b) deprives a Party of its consideration for entering into this Agreement.

11. Taxes. The Majeed Foundation acknowledges that the County is not subject to any state or federal sales, use, transportation, and certain excise taxes. The County acknowledges that, due to its not-for-profit status, the Majeed Foundation is a tax-exempt entity. The Majeed Foundation will alert the County in writing within thirty (30) days if its tax-exempt status changes.

12. Assignment. This Agreement, and any rights or obligations thereunder, shall not be assigned, transferred or delegated to any other person or entity without the approval of both Parties. Any purported assignment in violation of this section shall be null and void. Any purported or attempted assignment in violation of this section constitutes grounds for termination of this Agreement, at the election of the non-assigning Party. Notwithstanding the foregoing, the Majeed Foundation may assign its rights under this Agreement: (a) to any nonprofit entity that controls, is controlled by, or is under common control with, the Majeed Foundation or its successor, without the consent of the County, but will nonetheless alert the County in writing of any assignment; or (b) to any other nonprofit entity with the County's consent, which will not be unreasonably denied.

13. Public Records. The Majeed Foundation acknowledges that information and data it manages as part of the services may be public records in accordance with Chapter 119, Florida Statutes and the County's public records policies. The Majeed Foundation agrees that prior to providing services under this Agreement, it will implement policies and procedures to maintain, produce, secure, and retain public records in accordance with applicable laws, regulations, and County policies, including but not limited to the Section 119.0701, Florida Statutes. Notwithstanding any other provision of this Agreement relating to compensation, the Majeed Foundation agrees to charge the County, and/or any third parties requesting public records only such fees allowed by Section 119.07, Florida Statutes, and County policy for locating and producing public records during the term of this Agreement.

IF THE MAJEED FOUNDATION HAS QUESTIONS REGARDING THE APPLICATION OF CHAPTER 119, FLORIDA STATUTES, TO THE FOUNDATION'S DUTY TO PROVIDE PUBLIC RECORDS RELATING TO THIS AGREEMENT, CONTACT THE COUNTY'S CUSTODIAN OF PUBLIC RECORDS AT MS. DEANN BAKER, ADMINISTRATIVE SUPPORT SPECIALIST, DBAKER@PINELLASCOUNTY.ORG, (727) 582-2525, PINELLAS

COUNTY PARKS AND CONSERVATION RESOURCES, 12520 ULMERTON RD., LARGO, FL 33774.

14. Majeed Foundation Liability Limitation. The Majeed Foundation will not have any rights with respect to the Majeed Discovery Garden or any other County property except for those explicitly granted by this Agreement, the FBG Foundation/County Agreement, or applicable law, and those rights do not include any right to use, manage, oversee, or direct the County or the FBG Foundation as to how to operate any aspect of the Majeed Discovery Garden or other County property. Notwithstanding any provision in any Agreement to the contrary: (a) the Majeed Foundation will not be liable for any personal injury or property damage that occurs at the Majeed Discovery Garden or on other County property; and (b) without limiting the terms of the foregoing subsection (a), the County shall not hold the Majeed Foundation, its directors, officers, employees, agents, or representatives, liable for any claim, cost, or expense (including any attorneys' or experts' fees at trial or on appeal), to the extent that such claim, cost, or expense arises out of the negligence or misconduct of the County or any of its employees or other Persons acting on the County's behalf.

15. Notice. All notices, forms, and any other written correspondence pertaining to this Agreement shall be in writing and delivered via e-mail, or USPS Certified Mail to the following addresses:

As to the County:

Pinellas County Parks and Conservation Resources Department

Attn: Bureau Director

12520 Ulmerton Road

Largo, FL 33774

pcozzie@pinellascounty.org

As to the Majeed Foundation:

Majeed Foundation Inc.

Attn: Kamal Majeed, Ph. D, its President

2060 Brightwaters Blvd. NE.

St. Petersburg, Fl 33704


majeedfoundation@gmail.com

16. Entire Agreement. This Agreement constitutes the entire agreement between the Parties with respect to its subject matter, and supersedes any oral or written prior agreements or communication between the Parties with respect to its subject matter. This Agreement may not be amended, except by an instrument signed in writing by an authorized representative of each Party hereto. Each Party shall execute such documents and perform such further acts as may be reasonably requested by the other Party to carry out the purposes of this Agreement. No course of dealing between the Parties, nor any omission, failure, or delay by a Party in exercising or enforcing any right under this Agreement, shall be deemed to: (a) be a waiver of any right; (b) limit or prohibit the future exercise or enforcement of any right; or (c) affect the validity of any provision of this Agreement. No waiver of any breach of any term, condition, or obligation by either Party shall be effective unless it is in writing and executed by the Party against which enforcement is sought. The provisions of Section 14 will survive termination of this Agreement for any reason.

17. Construction. For purposes of this Agreement: (a) unless the context otherwise requires, the masculine, feminine, and neuter genders shall include each of the other genders, the singular shall include the plural, and the plural shall include the singular; (b) the headings are for convenience only, and are not intended to limit the scope or intent of this Agreement; (c) the definition of any defined term shall apply equally to both the singular and plural forms of the term, and to other forms of the word; (d) any reference to a number of days shall be deemed to refer to calendar days; (e) if the final date of any period for the taking of any action falls on a day other than a Business Day, then the end of such period shall be extended to 5:00 p.m. Pinellas County, Florida time on the next day that is a Business Day; and (f) any reference to an Section or Exhibit refers to an Section or Exhibit of this Agreement. The rights, remedies, powers, and privileges provided in this Agreement are cumulative and not exclusive of any rights, remedies, powers, and privileges available at law or equity. **“Business Day”** means any day other than a Saturday, Sunday, or Pinellas County government holiday.

18. Execution; Counterparts. Any photocopy, scan, or other reliable reproduction of a signature page hereof showing the signature of an individual will be conclusive evidence of execution hereof by that individual, and may be used in lieu of the original signed signature page for all purposes. This Agreement may be executed in any number of counterparts, and all counterparts will be construed together as one agreement. This Agreement shall be construed without regard to any presumption requiring interpretation against the drafting Party.

IN WITNESS WHEREOF, an authorized officer of each Party has executed this Agreement, effective as of the Effective Date.

<p>Pinellas County, a political subdivision of the State of Florida</p>	<p>Majeed Foundation Inc.</p> 
<p>_____ Dave Eggers, Chair</p>	<p>_____ Kamal Majeed, Ph. D, its President</p>

APPROVED AS TO FORM
By: Matthew Tolnay
Office of the County Attorney

EXHIBIT A

Majeed Discovery Garden Plans

[Attached.]

EXHIBIT B

Name/Signage Plan

[Attached.]

EXHIBIT C

Majeed Gift Timetable

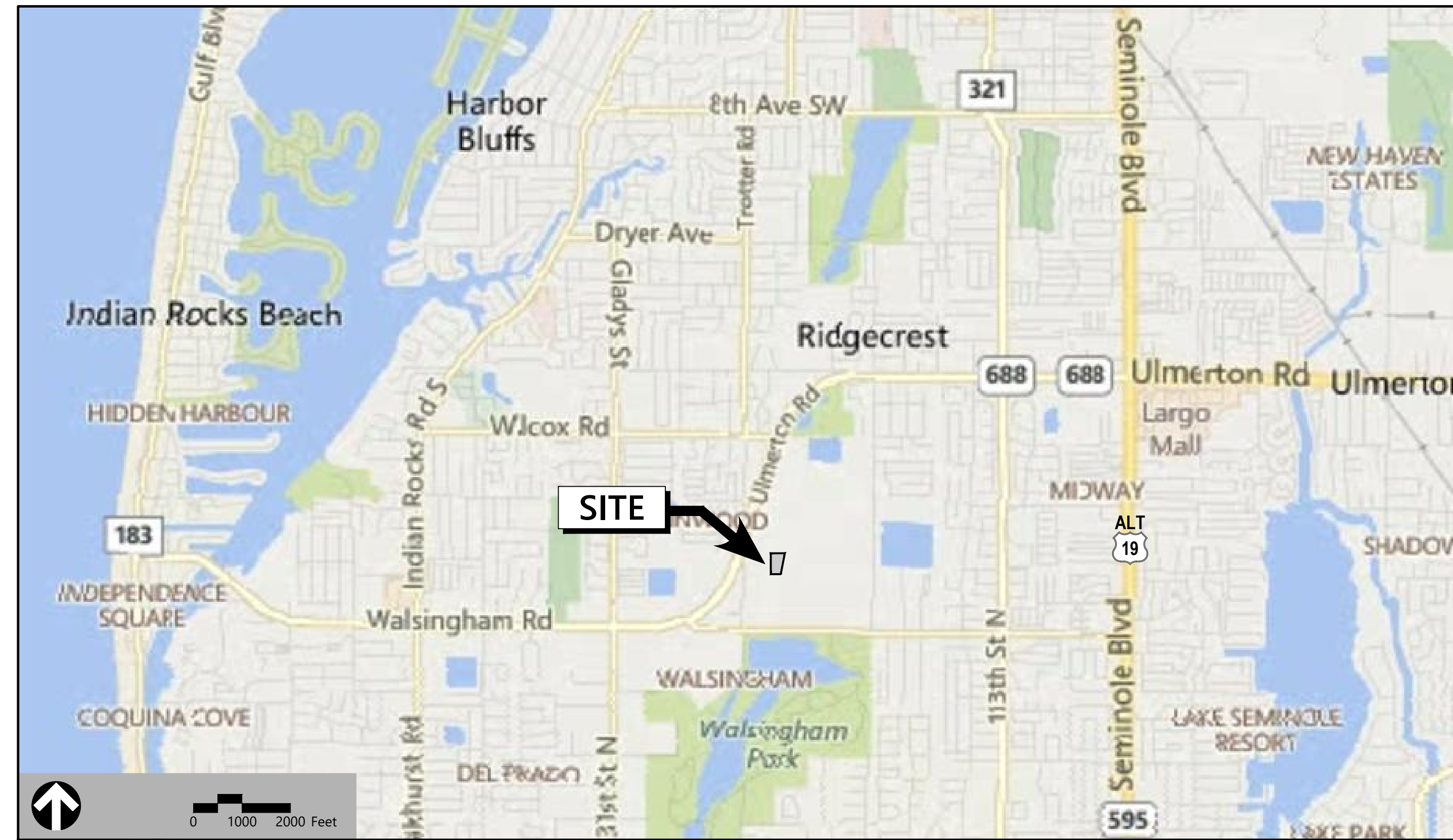
Contribution	Milestone
\$150,000	Completion of the Garden Plans, receipt of any required County approvals, and execution of the three definitive Agreements
\$100,000	Start of construction
\$150,000	75% completion of construction
\$100,000.00	Completion of construction of Majeed Discovery Garden other than the pond
\$100,000.00	Later of pond completion or Majeed Discovery Garden opening

Construction Plans

Issued for	Permitting
Date Issued	December 14, 2020
Latest Issue	December 14, 2020

Children's Discovery Garden

12520 Ulmerton Road
Largo, Florida



vhb.com

501 E Kennedy Boulevard
Suite 1010
Tampa, FL 33602
813.327.5450
Certificate of Authorization
Number FL #3932

Civil Engineer

VHB
501 E. Kennedy Blvd.
Suite 1010
Tampa, FL 33602
P 813.327.5450
F 813.209.2365

Owner

Pinellas County
315 Court Street
Clearwater, FL 33756

Survey

VHB
225 E. Robinson St.
Suite 300
Orlando, FL 32801
P 407.839.4006

Architect

Wannemacher Jensen
Architects, Inc.
St. Petersburg, FL

Structural Engineer

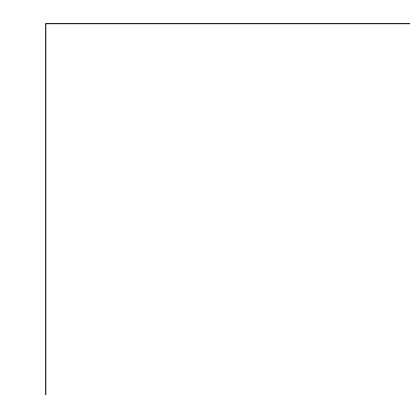
Master Consulting
Engineers, Inc.
Tampa, FL

Landscape Architect

Coyle & Caron, Inc.
Orlando, FL

Geotechnical Engineer

Driggers Engineering
Services, Inc.
Clearwater, FL



KEVIN M. BYNUM, P.E.
PE 62392

VHB Project : 62897.03
Issued for : Permitting

\\VHB\G\PROJ\TAMPA\62897.03_COVLE-FBG-CHILDRENS GARDN\CADD\PLANS\SET\62897.03_COV 14 December 2020

Civil Sheet Index

No.	Drawing Title	Latest Issue
	Cover	December 14, 2020
C1.0	General Notes & Legend	December 14, 2020
C1.1	General Notes	December 14, 2020
C2.0	Demolition & Erosion Control Plan	December 14, 2020
C2.1	Erosion Control Details	December 14, 2020
C3.0	Site Plan	December 14, 2020
C3.1	Horizontal Geometry Plan	December 14, 2020
C3.2	Horizontal Geometry Plan	December 14, 2020
C3.3	Horizontal Geometry Plan	December 14, 2020
C4.0	Grading & Drainage Plan	December 14, 2020
C4.1	Grading Details	December 14, 2020

Survey Sheet Index

No.	Drawing Title	Latest Issue
Sv-1	Topographic Survey Areas 1 & 2	November 26, 2018
Sv-2	Topographic & Wetland Survey Area 3	May 4, 2019
Sv-3	Topographic & Wetland Survey Area 3	May 5, 2019
Sv-4	Topographic & Wetland Survey Area 4	May 6, 2019
Sv-5	Topographic Survey Discovery Garden	September 22, 2020

Landscape & Irrigation Sheet Index

No.	Drawing Title	Latest Issue
L0.00	General Notes	December 14, 2020
L0.01	Site Key	December 14, 2020
L0.02	Tree Removal and Protection Plan	December 14, 2020
L0.03	Site Plumbing Schematic	December 14, 2020
L1.10	West Materials Plans	December 14, 2020
L1.11	South Materials Plans	December 14, 2020
L1.12	North Materials Plans	December 14, 2020
L3.10	West Fine Grading Plan	December 14, 2020
L3.11	South Fine Grading Plan	December 14, 2020
L3.12	North Fine Grading Plan	December 14, 2020
L4.10	West Planting Plan - Trees	December 14, 2020
L4.11	South Planting Plan - Trees	December 14, 2020
L4.12	North Planting Plan - Trees	December 14, 2020
L4.20	West Planting Plan - Shrubs and G.C.	December 14, 2020
L4.21	South Planting Plan - Shrubs and G.C.	December 14, 2020
L4.21A	South Planting Plan - Pond	December 14, 2020
L4.22	North Planting Plan - Shrubs and G.C.	December 14, 2020
L4.90	Planting Schedule - Site	December 14, 2020
L4.91	Planting Schedule - Site	December 14, 2020
L4.92	Planting Schedule - Site	December 14, 2020
L4.93	Planting Schedule - Pond	December 14, 2020
L4.94	Planting Details	December 14, 2020

Landscape & Irrigation Sheet Index

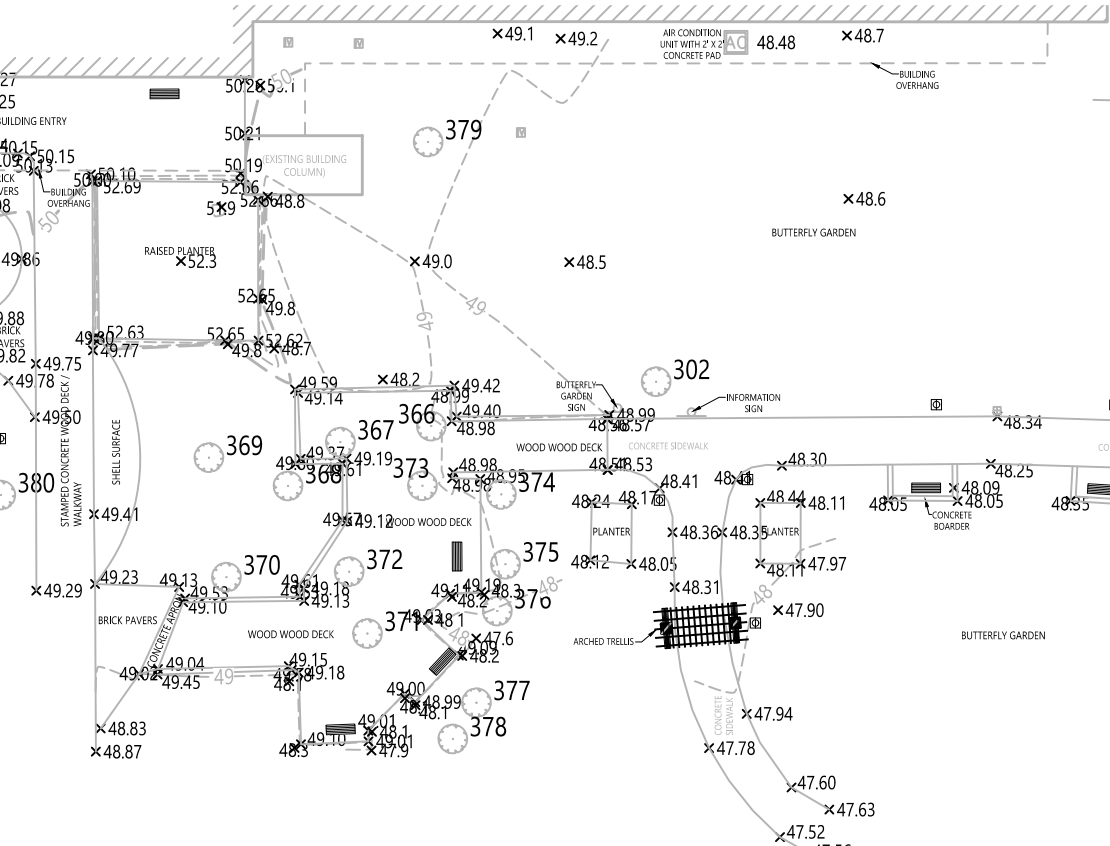
No.	Drawing Title	Latest Issue
L8.00	Paving Details	December 14, 2020
L8.03	Site Electrical Details	December 14, 2020
L8.12	Metal Details - Entrance Signage	December 14, 2020
R1.10	West Irrigation Plan	December 14, 2020
R1.11	South Irrigation Plan	December 14, 2020
R1.12	North Irrigation Plan	December 14, 2020
R1.90	Irrigation Notes and Schedule	December 14, 2020
R1.91	Irrigation Details	December 14, 2020
R1.92	Drip Irrigation Details	December 14, 2020

Electrical Sheet Index

No.	Drawing Title	Latest Issue
E0.01	Electrical Legend and Specifications	December 14, 2020
E1.00	Electrical Site Key	December 14, 2020
E1.10	West Electrical Plan	December 14, 2020
E1.11	South Electrical Plan	December 14, 2020
E1.12	North Electrical Plan	December 14, 2020
E2.00	Classroom & Shed Bldgs Electrical Plan	December 14, 2020
E3.00	Power One-Line Diagram and Schedules	December 14, 2020

Demolition Notes

- REFER TO COYLE & CARON PLANS SHEET L0.02 FOR TREE REMOVAL AND PROTECTION PLAN.
- DEMOLITION WORK SHALL NOT BE LIMITED TO THESE DOCUMENTS. CONTRACTOR TO VERIFY ALL EXISTING CONDITIONS AND EXTENT OF REMOVAL OF ITEMS SHOWN PRIOR TO USING THIS INFORMATION FOR BID PURPOSES.
- ANY STRUCTURE NOT SHOWN TO BE REMOVED ARE TO REMAIN UNLESS OTHERWISE INSTRUCTED BY THE OWNER OR ARCHITECT, OR REQUIRED BY FIELD CONDITIONS.
- LOCAL CODES APPLY FOR ANY DEMOLITION SHOWN HEREON.
- CONTRACTOR SHALL VERIFY LOCATION AND DEPTH OF ALL UTILITIES PRIOR TO CONSTRUCTION.
- CONTRACTOR TO FIELD COORDINATE ALL DEMOLITION TO AVOID INTERRUPTION OF TRAFFIC FLOW AND DAILY OPERATIONS.
- CONTACT ENGINEER OF RECORD (EOR) IMMEDIATELY IF ANY UNDERGROUND STRUCTURES, FOUND DURING EXCAVATION, IMPEDE THE COMPLETION OF CONSTRUCTION AS SHOWN. SOME ITEMS SHOWN TO BE REMOVED MAY NEED TO BE RELOCATED TO OTHER AREAS ON SITE AT THE REQUEST OF THE OWNER. CONTRACTOR TO FIELD COORDINATE.
- CONTRACTOR TO FIELD VERIFY THE EXTENT OF DRAINAGE WORK TO BE PERFORMED PRIOR TO BID. CONTRACTOR TO COORDINATE RELOCATION AND ADDITIONS TO THE EXISTING SYSTEMS WITH THE EOR PRIOR TO CONSTRUCTION.
- REGRADE SHALL MAINTAIN EXISTING DRAINAGE FLOWS.
- THE EXISTING WELLS SHALL BE ABANDONED BY A FLORIDA LICENSED WELL CONTRACTOR IN ACCORDANCE WITH RULE 40D-3.531(2), F.A.C.



NPDES Notification

(NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM)
 ATTENTION: THE EROSION/SEDIMENTATION LOCATIONS AND DETAILS SET FORTH IN THIS SITE PLAN HAVE BEEN DEVISED BY THE PROJECT ENGINEER TO MEET THE REQUIREMENTS OF THE FEDERAL NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) PROGRAM. FAILURE TO MAINTAIN THESE CONTROLS, OR AN ILLICIT DISCHARGE RESULTING FROM THEIR FAILURE WILL LIKELY RESULT IN FINE CITATIONS. SEC. 58-239 OF THE PINELLAS COUNTY CODE AUTHORIZES PENALTIES OF UP TO \$10,000.00 FOR EACH OFFENSE.

Concrete Slurry

IT IS RECOMMENDED THAT THE GENERAL CONTRACTOR FOR THIS PROJECT PROVIDE A SUITABLE ON SITE WASH DOWN AND CONCRETE DISPOSAL AREA. DISPOSAL OF CONCRETE SLURRY DIRECTLY OR INDIRECTLY INTO THE COUNTY SEPARATE STORM SEWER SYSTEM OR ONTO A COUNTY RIGHT-OF-WAY IS A VIOLATION OF SECTION 58-244 OF THE PINELLAS COUNTY LAND DEVELOPMENT CODE. SEC. 58-239 OF THE PINELLAS COUNTY CODE AUTHORIZED PENALTIES OF UP TO \$10,000.00 FOR EACH OFFENSE.



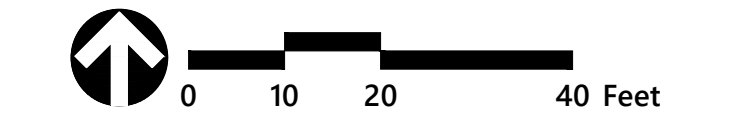
501 E Kennedy Boulevard
 Suite 1010
 Tampa, FL 33602
 813.327.5450
 Certificate of Authorization
 Number FL #3932

Legend

	SILT FENCE
	WETLAND LIMITS
	INLET PROTECTION

Survey Legend

	BENCH
	CATCH BASIN
	E.O. ELECTRICAL OUTLET
	IRRIGATION VALVE
	LIGHT POLE
	SPRINKLER HEAD
	WATER GATE
	YARD DRAIN



Florida Botanical Gardens Children's Discovery Garden

12520 Ulmerton Road
 Largo, Florida

No.	Revision	Date	Apprd.

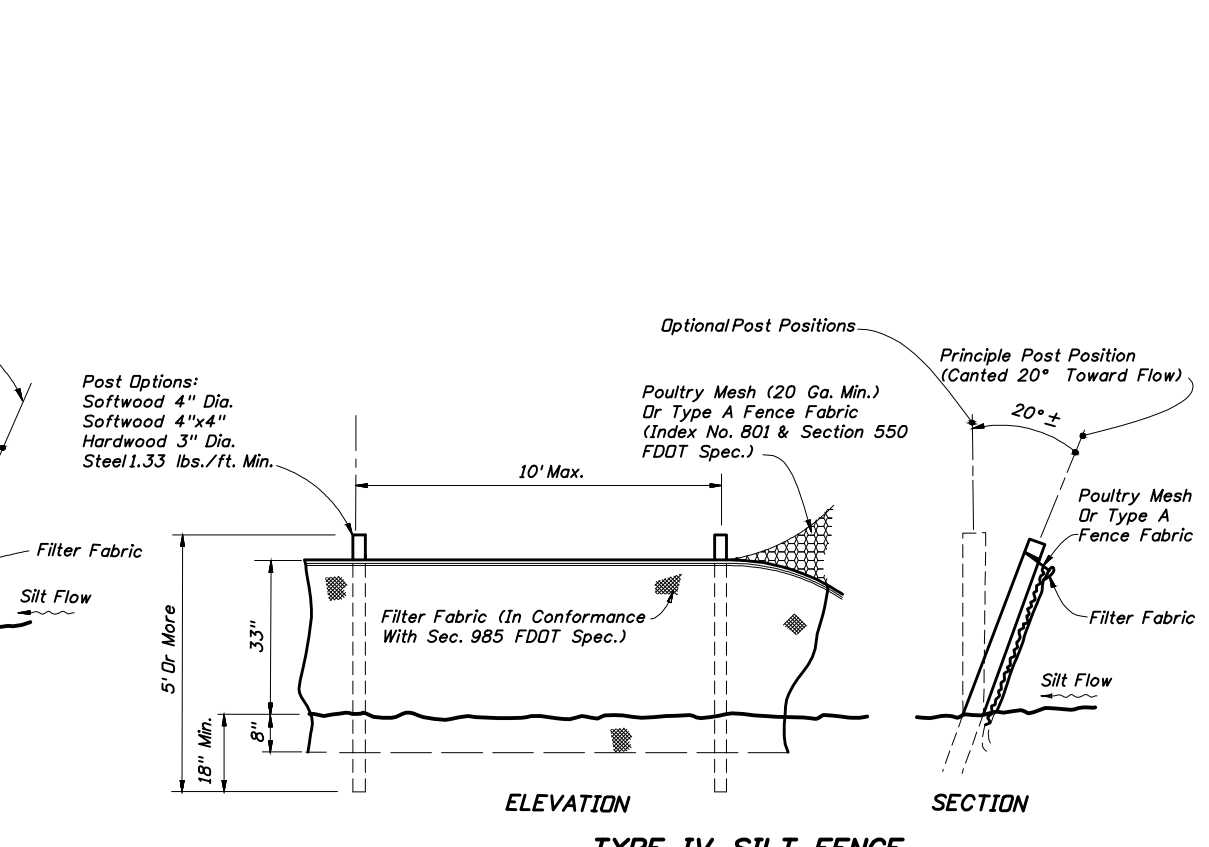
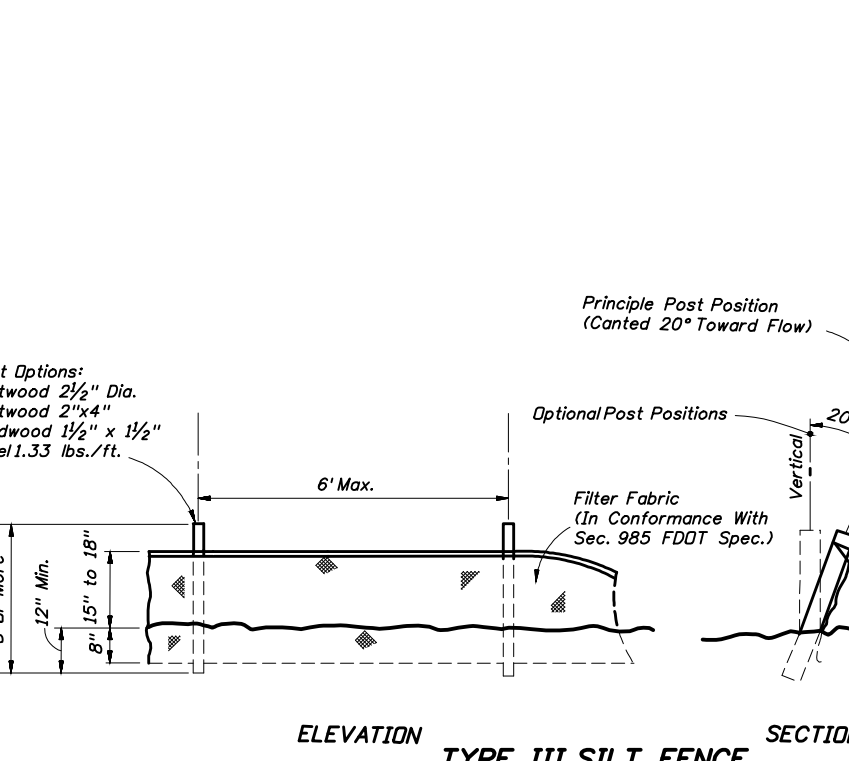
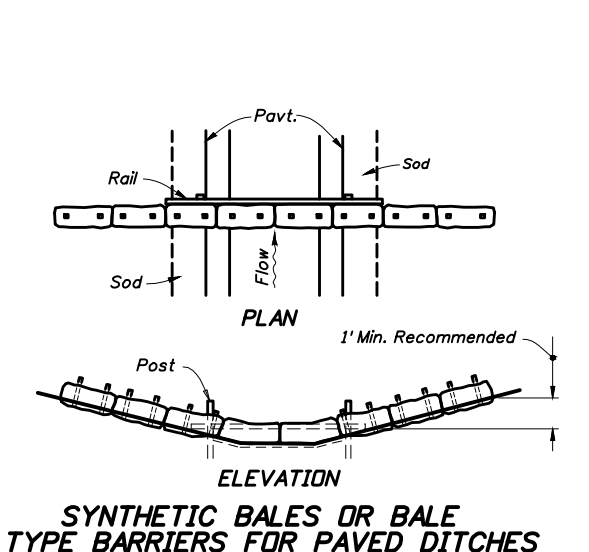
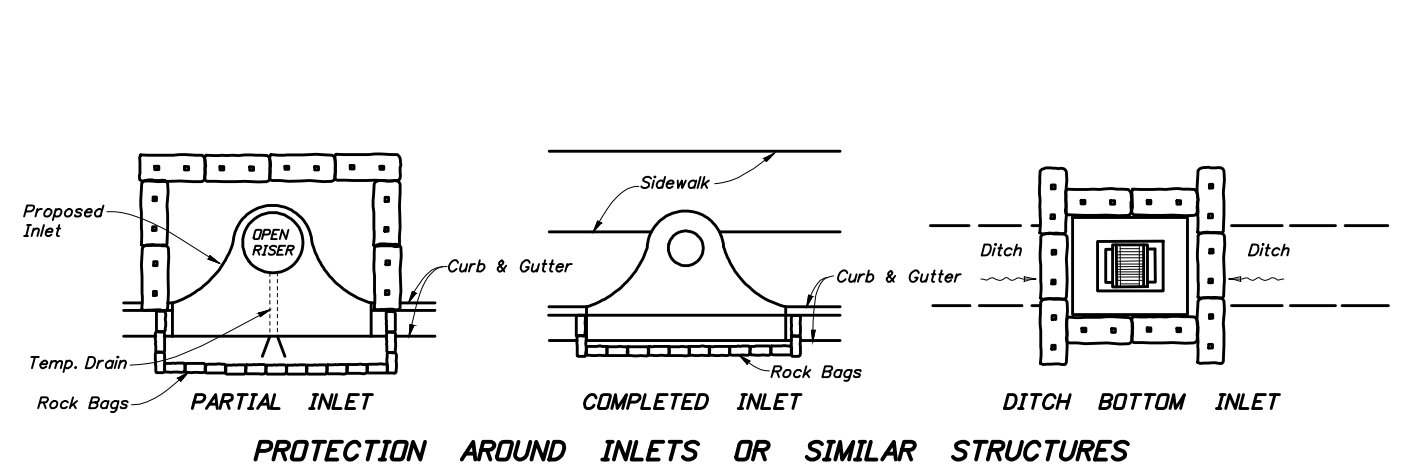
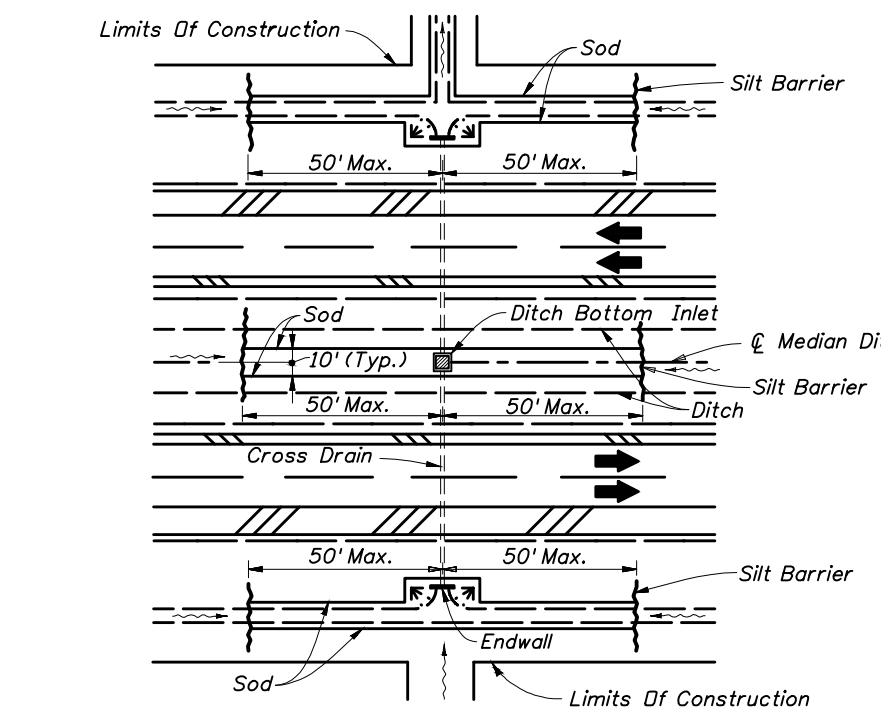
Designed by MAB	Checked by KMB
Issued for	Date

Permitting Dec. 14, 2020

Not Approved for Construction

Demolition & Erosion Control Plan

Drawing Number
C2.0
 Sheet of



DITCH INSTALLATIONS AT DRAINAGE STRUCTURES

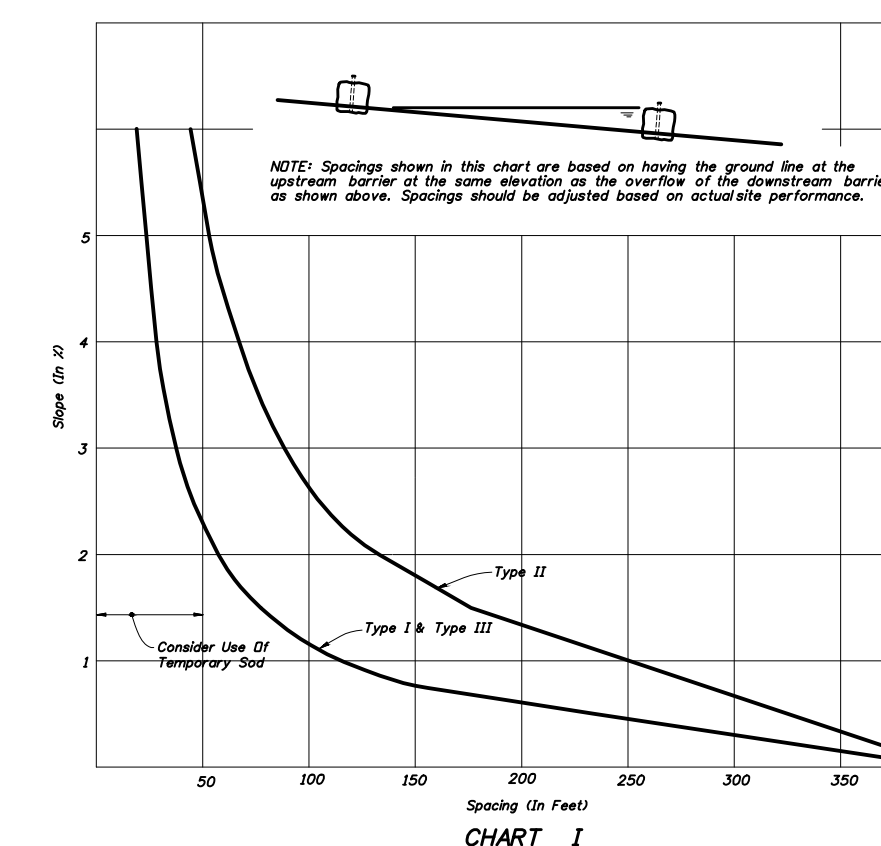
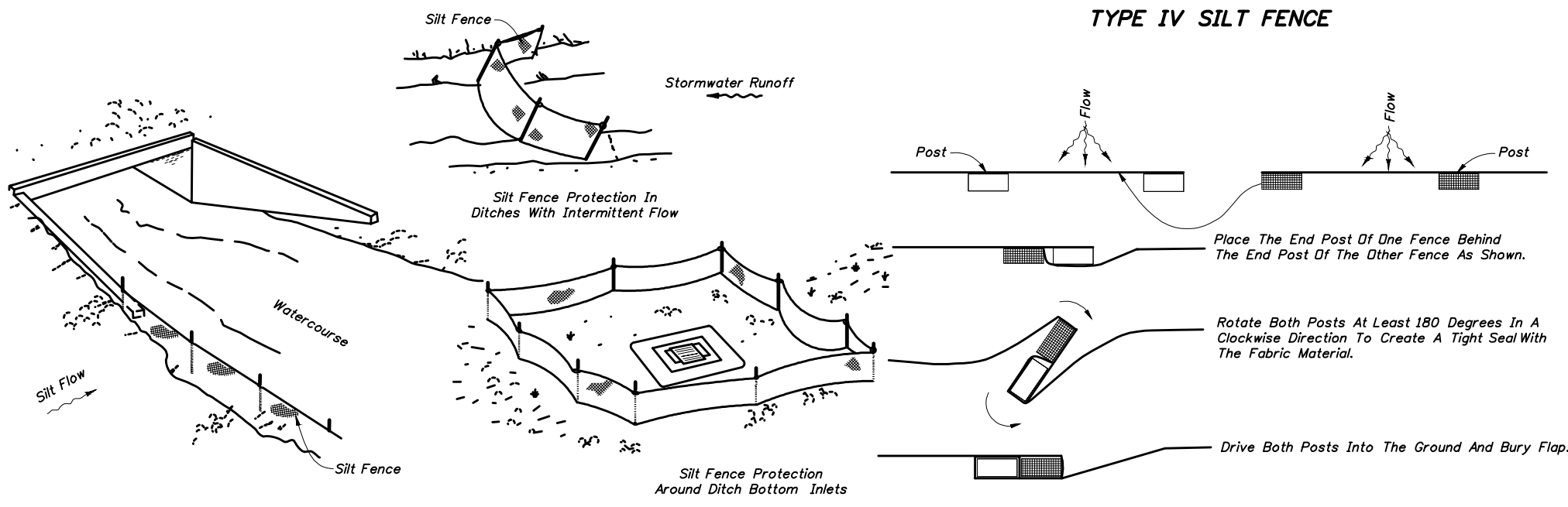
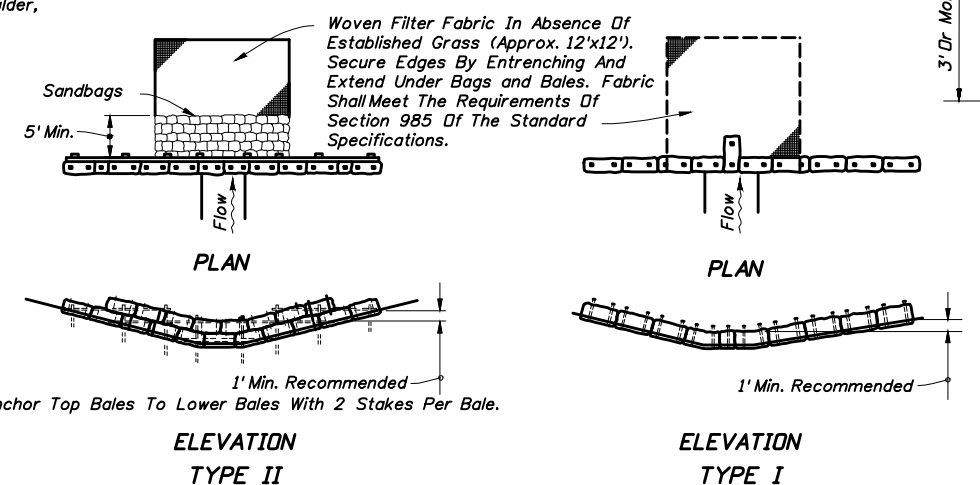
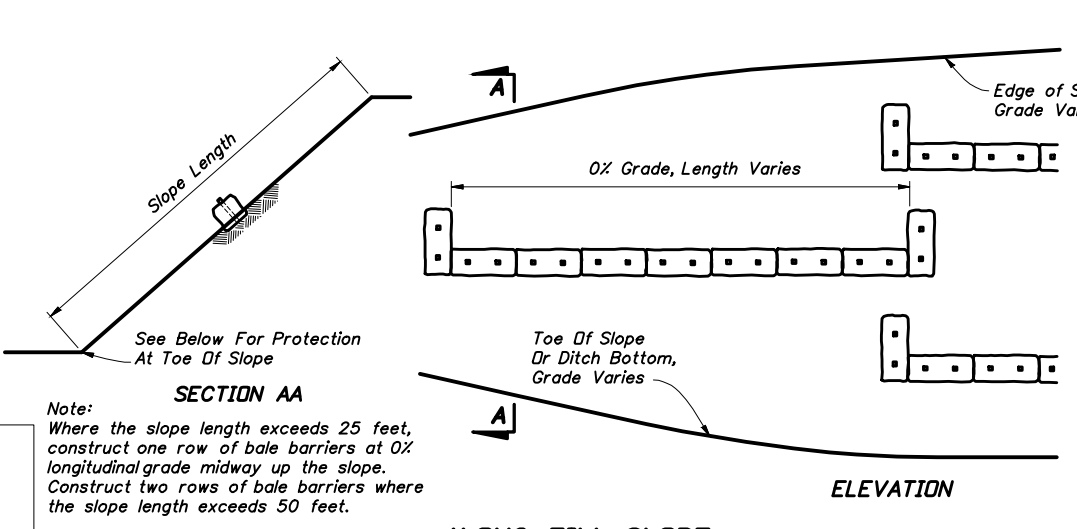
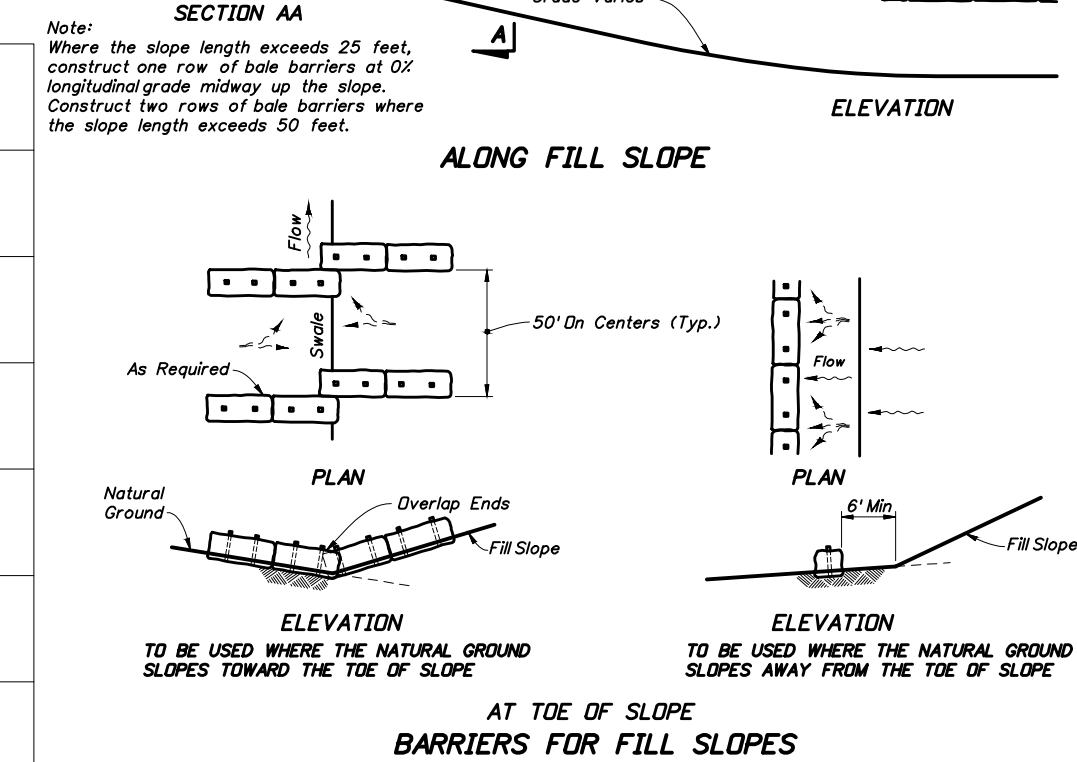


CHART I
RECOMMENDED SPACING FOR SYNTHETIC BALES OR BALE TYPE BARRIERS AND TYPE III SILT FENCE



- NOTES FOR SYNTHETIC BALES OR BALE TYPE BARRIERS**
- Type I and II Synthetic Barrier should be spaced in accordance with Chart I, Sheet I.
 - Bales shall be trenched 3" to 4" and anchored with 2-1" x 2" (or 1" dia.) x 4" wood stakes. Stakes of other material or shape providing equivalent strength may be used if approved by the Engineer. Stakes other than wood shall be removed upon completion of the project.
 - Rails and posts shall be 2" x 4" wood. Other materials providing equivalent strength may be used if approved by the Engineer.
 - Adjacent bales shall be butted firmly together.
 - Where used in conjunction with silt fence, bales shall be placed on the upstream side of the fence.
 - Bales to be paid for under the contract unit price for Synthetic Bales, LF. The unit price shall include the cost of filter fabric for Type I and II barriers. Sandbags shall be paid for under the unit price for Sandbagging, CY. Rock bags to be paid for under the contract unit price for Rock Bags, EA.

- NOTES FOR SILT FENCES**
- Type III Silt Fence to be used at most locations. Where used in ditches, the spacing for Type III Silt Fence shall be in accordance with Chart I, Sheet I.
 - Type IV Silt Fence to be used where large sediment loads are anticipated. Suggested use is where fill slope is 1:2 or steeper and length of slope exceeds 25 feet. Avoid use where the detained water may back into travel lanes or off the right of way.
 - Do not construct silt fences across permanent flowing watercourses. Silt fences are to be at upland locations and turbidity barriers used at permanent bodies of water.
 - Where used as slope protection, Silt Fence is to be constructed on 0% longitudinal grade to avoid channeling runoff along the length of the fence.
 - Silt Fence to be paid for under the contract unit price for Staked Silt Fence, LF.

Temporary Erosion and Sediment Control

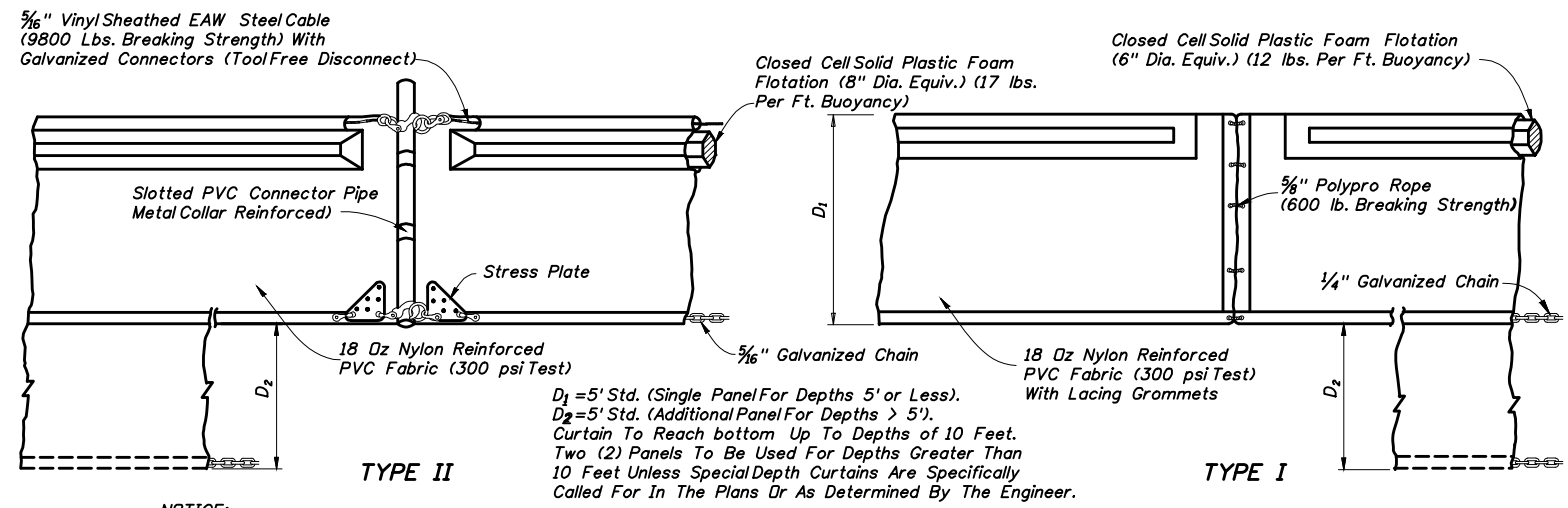
N.T.S.

Source: 2008 FDOT Index No. 102

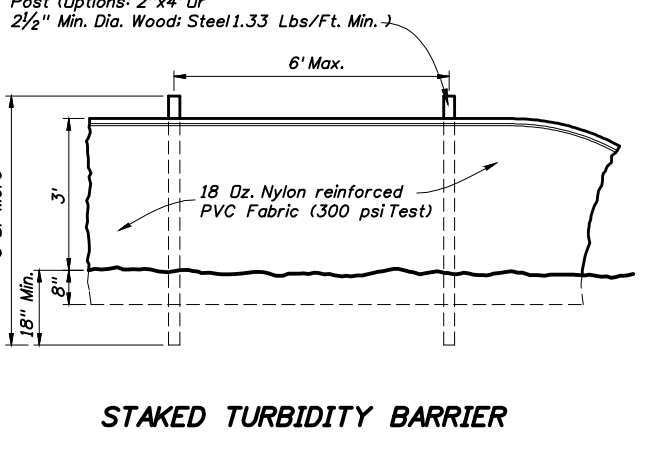
Silt Fence

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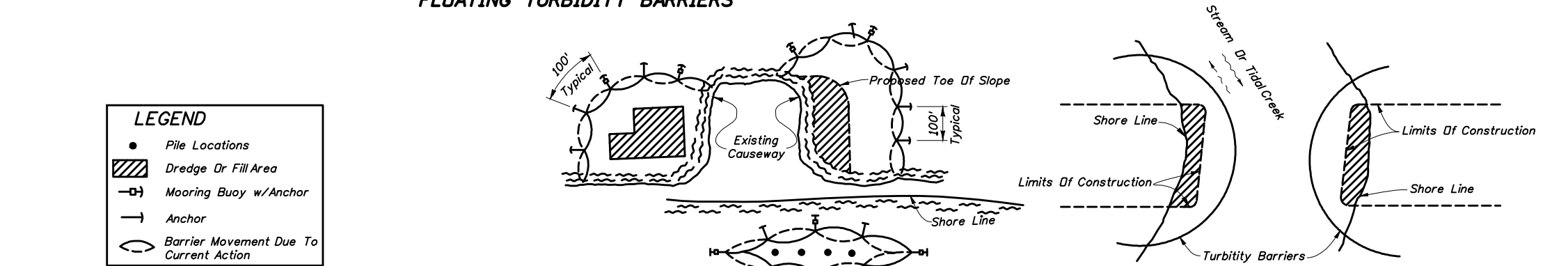
Source: 2008 FDOT Index No. 103



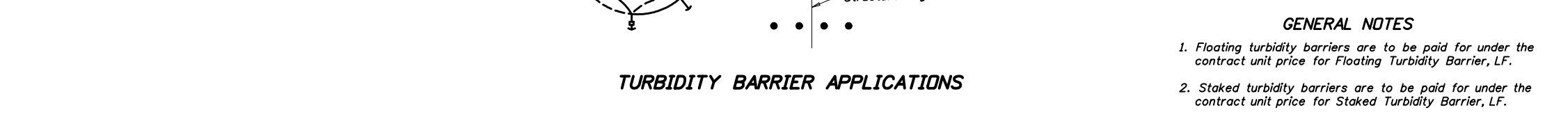
FLOATING TURBIDITY BARRIERS



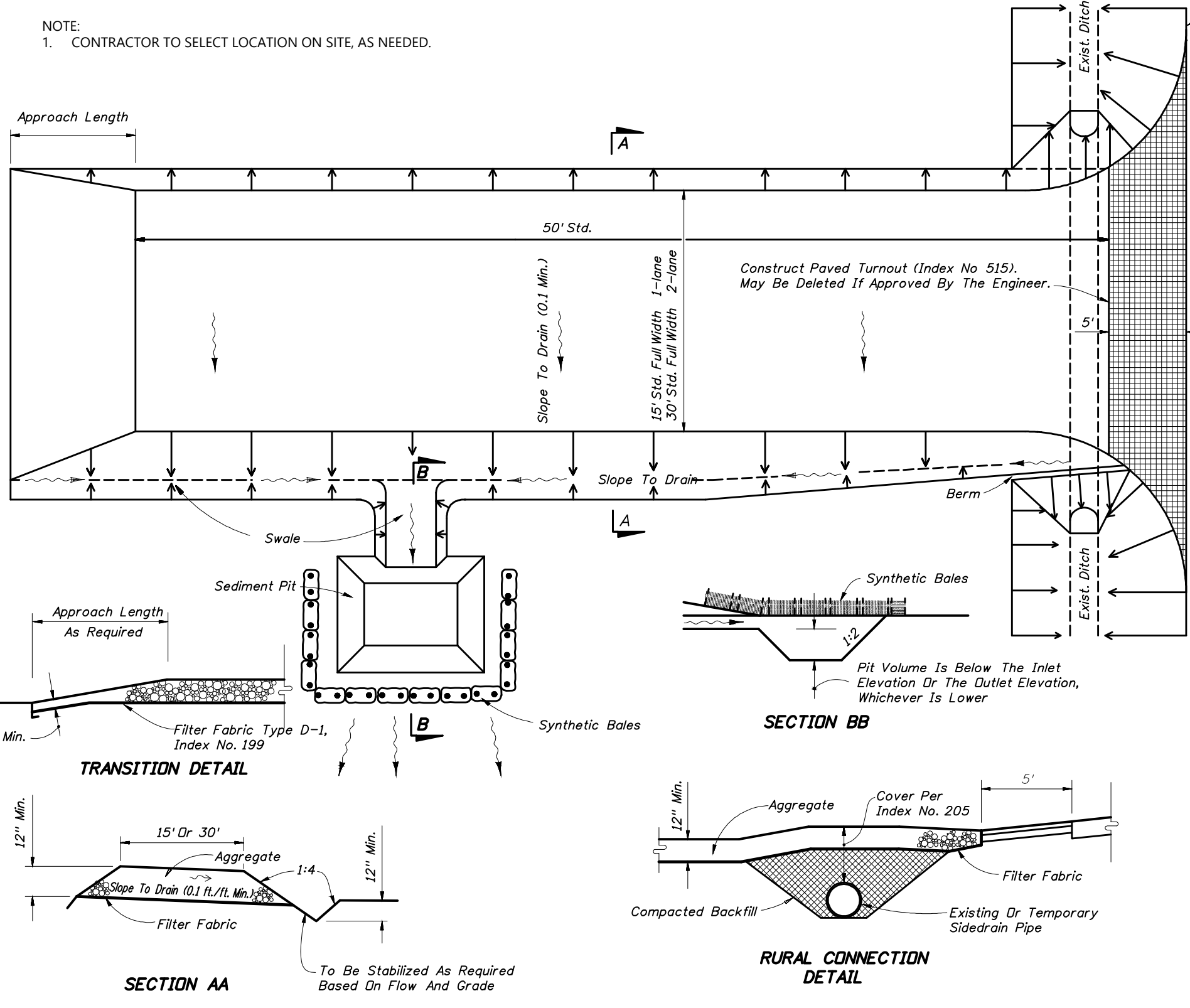
STAKED TURBIDITY BARRIER



- GENERAL NOTES**
- Floating turbidity barriers are to be used in permanent bodies of water regardless of water depth.
 - Number and spacing of anchors dependent on current velocities.
 - Deployment of barrier around pile locations may vary to accommodate construction operations.
 - Navigation may require segmenting barrier during construction operations.
 - For additional information see Section 104 of the Standard Specifications.



TURBIDITY BARRIER APPLICATIONS



Soil Tracking Prevention Device Type A

- GENERAL NOTES**
- A Soil Tracking Prevention Device (STPD) shall be constructed at locations designated by the engineer for points of egress from unstabilized areas of the project to public roads where off-site tracking of mud could occur. Traffic from unstabilized areas of the construction project shall be directed thru a STPD. Barriers, flagging, or other positive means shall be used as required to limit and direct vehicular egress across the STPD.
 - The Contractor may propose an alternative technique to minimize off-site tracking of sediment. The alternative must be reviewed and approved by the Engineer prior to its use.
 - All materials spilled, dropped, or tracked onto public roads (including the STPD aggregate and construction mud) shall be removed daily, or more frequently if so directed by the Engineer.
 - Aggregates shall be as described in Section 901 excluding 901-2.3. Aggregates shall be FDOT size #1. If this size is not available, the next available smaller size aggregate may be substituted with the approval of the Engineer. Sizes containing excessive small aggregate will track off the project and are unsuitable.
 - The sediment pit should provide a retention volume of 3600 cubic feet/acre of surface area draining to the pit. When the STPD is isolated from other drainage areas, the following pit volumes will satisfy this requirement:
15' x 50' = 100 ft.³
30' x 50' = 200 ft.³
As an option to the sediment pit, the width of the swale bottom can be increased to obtain the volume. When the sediment pit or swale volume has been reduced to one half, it shall be cleaned. When a swale is used, synthetic bales or silt fence shall be placed along the entire length.
 - The swale ditch draining the STPD shall have a 0.02% minimum and a 1.0% maximum grade along the STPD and to the sediment pit.
 - Mitered end sections are not required when the sidedrain pipe satisfies the clear zone requirements.
 - The STPD shall be maintained in a condition that will allow it to perform its function. To prevent off-site tracking, the STPD shall be raised daily when in use to move accumulated mud downward thru the stone. Additional stabilization of the vehicular route leading to the STPD may be required to limit the mud tracked.
 - A STPD shall be paid for under the contract unit price for Soil Tracking Prevention Device, EA. The unit price shall constitute full compensation for construction, maintenance, replacement of materials, removal, and restoration of the area utilized for the STPD including but not limited to excavation, grading, temporary pipe (including MCS when required), filter fabric, aggregate, paved turnout (including asphalt and base construction), ditch stabilization, approach route stabilization, sediment removal and disposal water, raising and cleaning of the STPD and cleaning of public roads, grassing and sod. Synthetic Bale or Bale Type Barrier shall be paid for under the contract unit price for Synthetic Bales, LF. Silt Fence shall be paid for under the contract unit price for Staked Silt Fence, LF.
 - The nominal size of a standard STPD is 15' x 50' unless otherwise shown in the plans. If the volume of entering and existing vehicles warrant, a 30' width STPD may be used if approved by the Engineer. When a double width (30') STPD is used, the pay quantity shall be 2 for each location.

Turbidity Barriers

N.T.S.

Source: 2008 FDOT Index No. 103

Soil Tracking Prevention Device Type A

N.T.S.

Source: 2008 FDOT Index No. 106

**Florida Botanical Gardens
Children's Discovery
Garden**

12520 Ulmerton Road
Largo, Florida

No.	Revision	Date	Apprd.

Designed by **MAB** Issued for **MAB** Checked by **KMB** Date **Dec. 14, 2020**

Permitting

Not Approved for Construction

Drawing Title

Erosion Control Details

Drawing Number

C2.1

Sheet of



501 E Kennedy Boulevard
Suite 1010
Tampa, FL 33602
813.327.5450
Certificate of Authorization
Number FL #3932

Site Notes

- REFER TO COYLE & CARON PLANS FOR PAVING MATERIALS & DETAILS.

Site Data Table

PROJECT AREA	1.17 AC
ZONING	GENERAL INSTITUTIONAL DISTRICT & PRESERVATION/CONSERVATION DISTRICT
LAND USE	UNDEVELOPED
IMPERVIOUS SURFACE RATIO	0.39
OPEN SPACE	0.71 AC
CLASSROOM AREA	1010 SF
SHED AREA	360 SF
CONSTRUCTION DATES	JANUARY 2021 TO APRIL 2021

FLOODPLAIN ELEVATION 45.6 PER PINELLAS COUNTY FLOODPLAIN ADMINISTRATOR

Legend

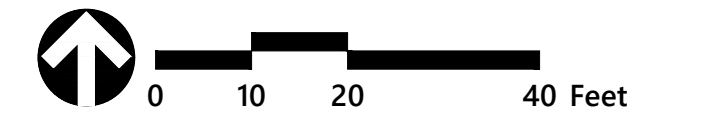
- WETLAND LIMITS
- WETLAND BUFFER
- PROPOSED STORMWATER POND
- PAVEMENT

Subgrade Preparation

- SLAB-ON-GRADE CONSTRUCTION: SUBGRADE PREPARATION FOR THE SHED SLAB-ON-GRADE AND CONCRETE WALK AND PAVEMENT AREAS WILL NECESSITATE UNDERCUTTING AND REMOVAL OF ALL OF THE HIGHLY ORGANIC SOILS FOLLOWED BY BACKFILL AND COMPACTING SUITABLE STRUCTURAL FILL TO REESTABLISH THE PROPOSED FINISH SUBGRADE ELEVATION.
- THE ENTIRE BUILDING AND SLAB ON GRADE AREAS AND FOR A DISTANCE OF AT LEAST 3 FEET BEYOND THE OUTSIDE FOOTING PERIMETER SHOULD BE STRIPPED OF ALL SURFACE VEGETATION AND SOILS WITH AN EXCESSIVE ORGANIC CONTENT AND OTHER OBJECTIONABLE MATERIAL. EXACT DEPTH OF STRIPPING SHOULD BE DETERMINED BY A REPRESENTATIVE OF THE SOIL ENGINEER IN THE FIELD. FOUNDATION AREAS SHALL BE CAREFULLY INSPECTED PROBED AS DISCUSSED IN THE REPORT TEXT. UNSUITABLE MATERIALS SHALL BE REMOVED THROUGHOUT THE FOOTINGS ISOLATED COLUMN THROUGHOUT THE FOOTING AREA PLUS A MARGIN OF NOT LESS THAN 2 FEET. BACKFILL SOILS SHALL BE PLACED AND COMPACTED AS SUBSEQUENTLY SPECIFIED.
- THE EXPOSED SUBGRADE SHOULD BE UNIFORMLY COMPACTED USING A HAND-OPERATED, VIBRATORY ROLLER HAVING A MINIMUM DRUM WIDTH OF 36 INCHES. A QUALIFIED ENGINEER OR TECHNICIAN SHOULD BE PRESENT DURING INITIAL COMPACTION OPERATIONS TO CHECK PROPER COMPACTOR PERFORMANCE AND COMPACTION PROCEDURES. THE COMPACTION SHOULD BE PERFORMED AT A SPEED EQUIVALENT TO A SLOW WALKING PACE.
- SUBGRADE COMPACTION SHOULD CONSIST OF NO LESS THAN TEN (10) COMPLETE COVERAGES IN A CRISS-CROSSED PATTERN. IN ADDITION, COMPACTION SHOULD ACHIEVE A MINIMUM DENSITY OF NO LESS THAN 95% OF THE MODIFIED PROCTOR MAXIMUM DRY DENSITY ESTABLISHED IN ASTM D-1557.
- THE BOTTOM OF FOOTING EXCAVATIONS SHALL BE COMPACTED USING A HAND-GUIDED VIBRATORY OR IMPACT COMPACTOR WITH A MINIMUM WIDTH OF 16 INCHES OR THE LEAST FOOTING DIMENSION. COMPACTION SHOULD CONSIST OF NO LESS THAN TEN (10) COMPLETE COVERAGES TO EFFECT A DENSITY OF AT LEAST 95% OF THE MODIFIED PROCTOR MAXIMUM DRY DENSITY.
- DENSITY TESTS SHOULD BE USED TO CONTROL COMPACTION. AT LEAST ONE (1) DENSITY TEST SHOULD BE PERFORMED FOR EVERY 2,000 SQ FT AT A DEPTH OF 6 INCHES BELOW THE STRIPPED, COMPACTED GRADE ELEVATIONS. NO FEWER THAN TWO (2) TESTS SHOULD BE PLANNED. DENSITY TESTS SHOULD ALSO BE PERFORMED IN THE BOTTOM OF SELECTED REPRESENTATIVE FOOTINGS.

Fill or Backfill Placement and Compaction

- FILL REQUIRED TO DEVELOP PROPOSED GRADE SHOULD BE INORGANIC, CLEAN TO SLIGHTLY SILTY FINE SANDS, FREE OF UNSUITABLE DEBRIS. FOR EXAMPLE, SOILS WITH A UNIFIED SOIL CLASSIFICATION OF SP TO SP-SM WOULD CERTAINLY BE CONSIDERED SUITABLE.
- THE FILL SHOULD BE PLACED IN LIFT THICKNESSES NOT EXCEEDING 9 INCHES WITH EACH LIFT COMPACTED TO A DENSITY OF NO LESS THAN 95% OF THE MODIFIED PROCTOR MAXIMUM DRY DENSITY. THINNER LIFTS MAY BE REQUIRED DEPENDING UPON COMPACTOR SIZE AND PERFORMANCE. MOISTURE CONTENT WITHIN THE FILL SOIL SHOULD BE CONTROLLED TO WITHIN ±2% OF OPTIMUM AS ESTABLISHED IN ASTM D-1557 TO HELP ENSURE DEVELOPMENT OF BOTH DENSITY AND STABILITY DURING COMPACTION OPERATIONS. NO FEWER THAN SIX (6) TO EIGHT (8) COVERAGES SHOULD BE MADE ON EACH LIFT USING THE ABOVE SPECIFIED SMALL, VIBRATORY ROLLER.
- DENSITY TESTS SHOULD ALSO BE USED TO CONTROL FILL PLACEMENT. AT LEAST ONE (1) DENSITY TEST SHOULD BE PERFORMED FOR EACH 2,500 SQ FT PER FILL LIFT. NO FEWER THAN TWO (2) TESTS SHOULD BE PLANNED PER FILL LIFT.



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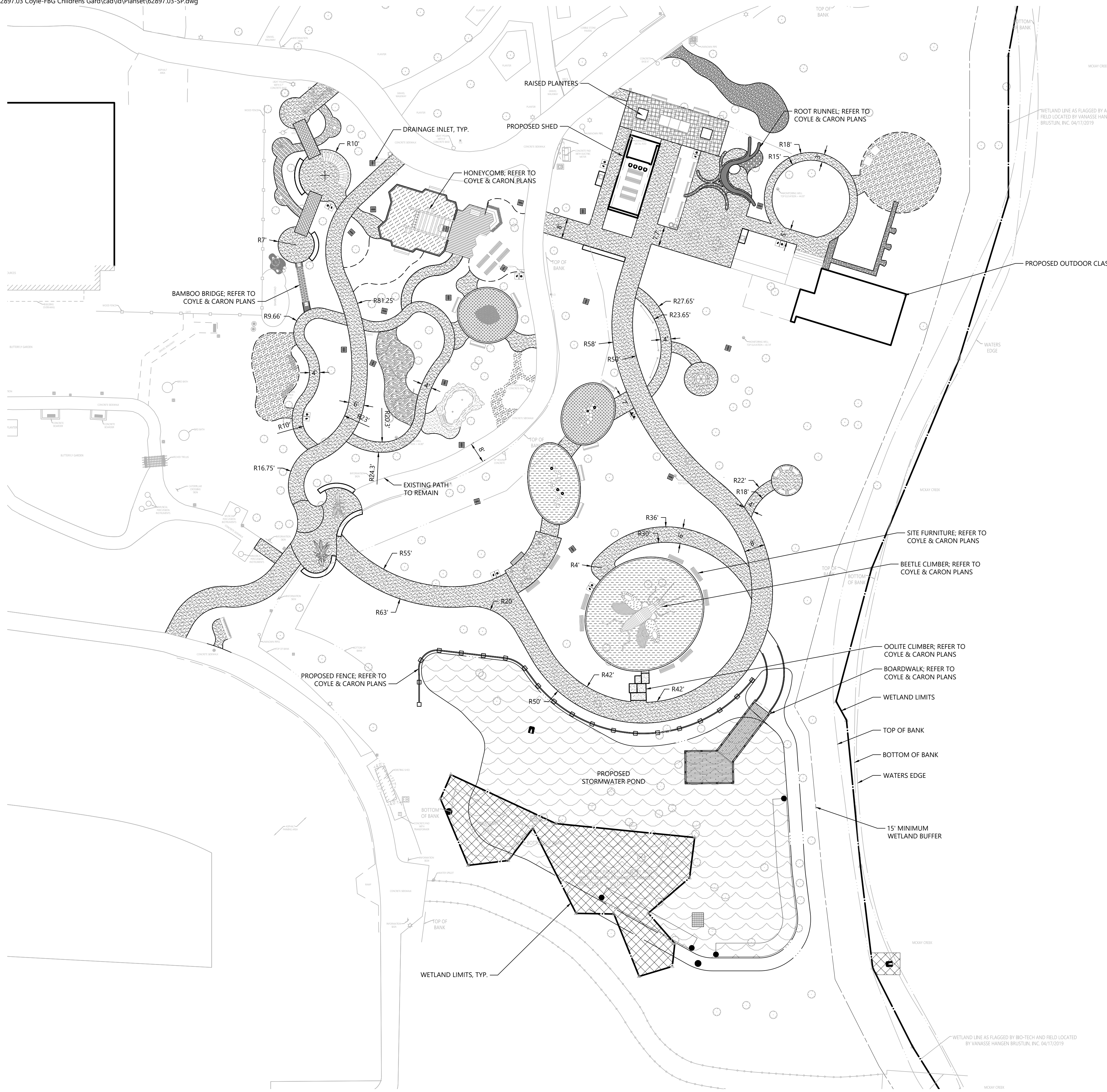
Not Approved for Construction

Drawing Title
Site Plan

Drawing Number
C3.0
Sheet of

KEVIN M. BYNUM, P.E.
PE 62392
12/14/2020

Project Number
62897.03

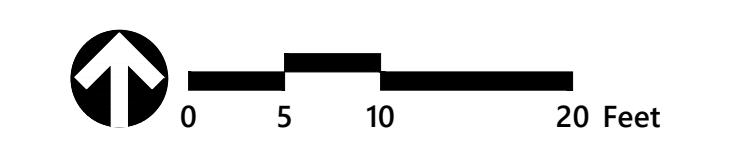




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Legend

- WETLAND LIMITS
- WETLAND BUFFER
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12520 Ulmerton Road
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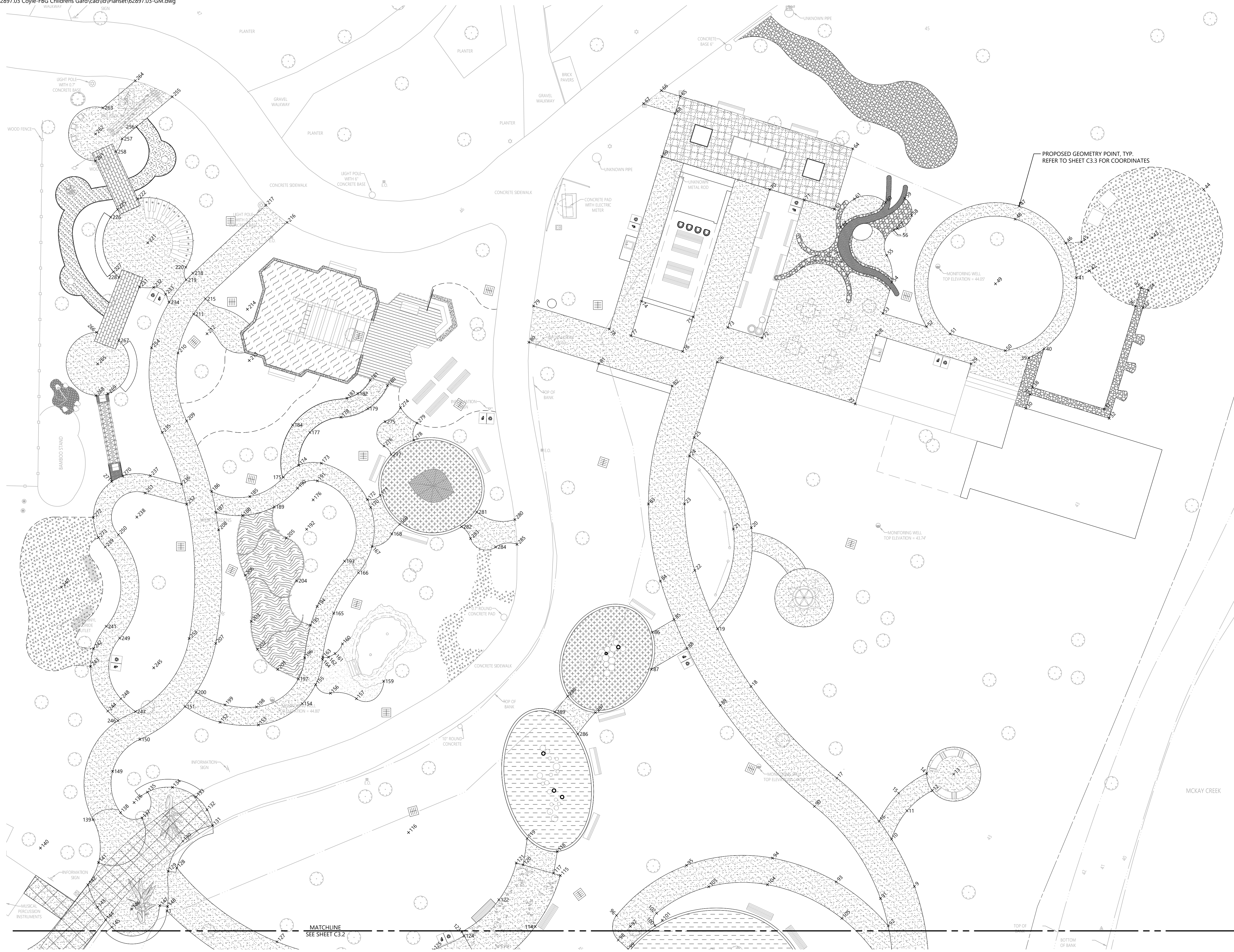
Designed by **MAB** Checked by **KMB**
Issued for _____ Date _____
Permitting Dec. 14, 2020

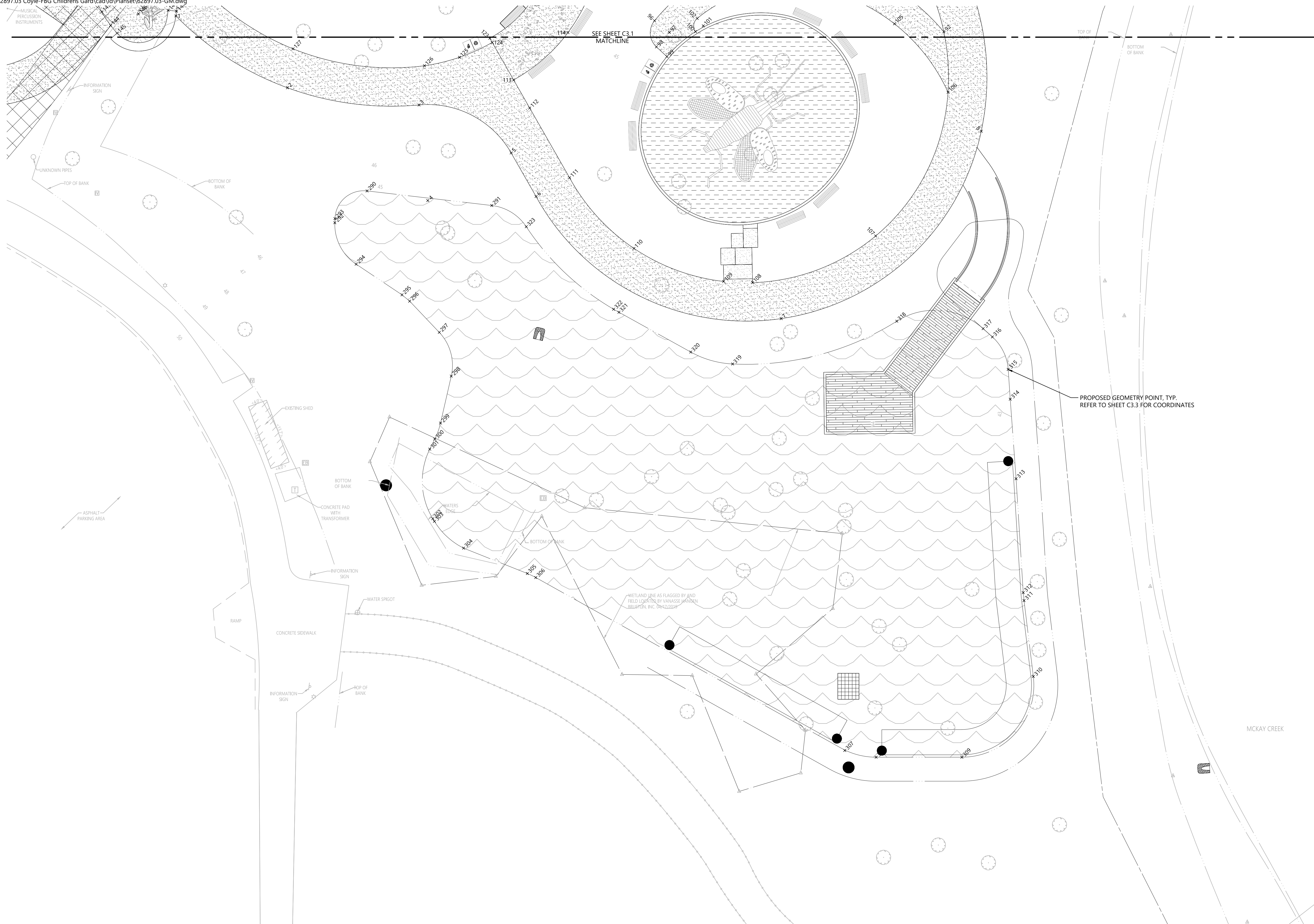
Not Approved for Construction

Horizontal Geometry Plan

Drawing Number
C3.1
Sheet of _____

KEVIN M. BYNUM, P.E.
PE 62392
12/14/2020
Project Number
62897.03

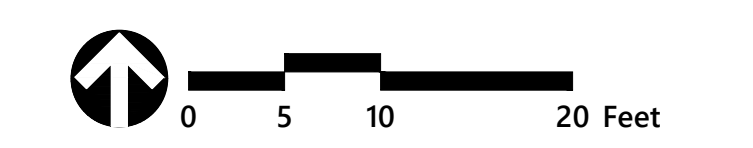




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Legend

	WETLAND LIMITS
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Issued for	Date

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Drawing Title
Horizontal Geometry Plan

Drawing Number
C3.2
Sheet of

Grading Notes

- REFER TO COYLE & CARON PLANS FOR HARDSCAPE GRADING.
- EXISTING TOPOGRAPHY BASED ON SURVEY PROVIDED BY VHB.
- ELEVATIONS SHOWN HEREON ARE IN FEET AND DECIMALS REFERENCED TO NAVD 88.
- ALL EXTERIOR SLOPES, NEW CONSTRUCTION, SHALL BE VERIFIED TO BE IN COMPLIANCE WITH LOCALLY ADOPTED REGULATIONS AND SHALL BE MEASURED WITH A 24 INCH SMART LEVEL. CROSS SLOPES IN ALL CONDITIONS SHALL BE 2% MAXIMUM.
- CONTRACTOR TO INSTALL SILT FENCE AND TEMPORARY INLET PROTECTION (ON ALL PROPOSED AND EXISTING INLETS IN OR NEAR THE PROJECT AREA). EROSION CONTROL TO REMAIN THROUGHOUT CONSTRUCTION.

Pinellas County Notes - Wet Ponds

DETENTION POND CONSTRUCTION

- THE LOCATION AND DIMENSIONS OF THE DETENTION POND SHALL BE VERIFIED ON SITE PRIOR TO ITS CONSTRUCTION. ALL DESIGN REQUIREMENTS INCLUDING DETENTION POND DIMENSIONS AND DISTANCES TO FOUNDATIONS, SEPTIC SYSTEMS, AND WELLS NEED TO BE VERIFIED.
- ONCE EXCAVATION OF THE WET DETENTION POND BEGINS, THE SOIL TYPES NEED TO BE VERIFIED TO ENSURE THAT THEY ARE SUITABLE FOR THE POND.
- IF THE WET DETENTION POND IS BEING CREATED BY CONSTRUCTION OF AN EMBANKMENT, RATHER THAN SOLELY THROUGH EXCAVATION, SPECIAL ATTENTION DURING CONSTRUCTION MUST BE FOCUSED ON THE EMBANKMENT'S CONSTRUCTION, ESPECIALLY OF ANY PIPES THAT ARE PART OF THE DISCHARGE STRUCTURE THAT ARE BUILT THROUGH THE EMBANKMENT. TO MINIMIZE THE POTENTIAL THAT AN EMBANKMENT WILL FAIL, INSPECTION OF THE STRUCTURE THROUGHOUT ITS CONSTRUCTION ARE NEEDED TO ASSURE THAT COMPONENTS SUCH AS ANTI-SEEP COLLARS OR DIAPHRAGMS AND SOIL COMPACTION ARE DONE PROPERLY.
- ALL ELEVATIONS NEED TO BE VERIFIED IN THE FIELD AS CONSTRUCTION OCCURS TO ASSURE THAT THEY ARE CONSISTENT WITH PERMITTED PLAN SPECIFICATIONS.
- ALL INLETS AND OUTLETS SHALL BE STABILIZED AS SET FORTH IN THE PERMITTED PLANS TO PREVENT EROSION, SCOUR, AND SEDIMENTATION.

INSPECTIONS, OPERATION AND MAINTENANCE

MAINTENANCE ISSUES ASSOCIATED WITH WET DETENTION PONDS INCLUDE ASSURING THAT SEDIMENTS ARE NOT ACCUMULATING TO SUCH A DEGREE THAT THEY ARE DECREASING THE REQUIRED STORAGE VOLUME AND ASSURING THAT ALL INLETS, OUTLETS, AND DISCHARGE STRUCTURES ARE NOT CLOGGED OR DAMAGED STRUCTURALLY.

1. INSPECTION ITEMS:

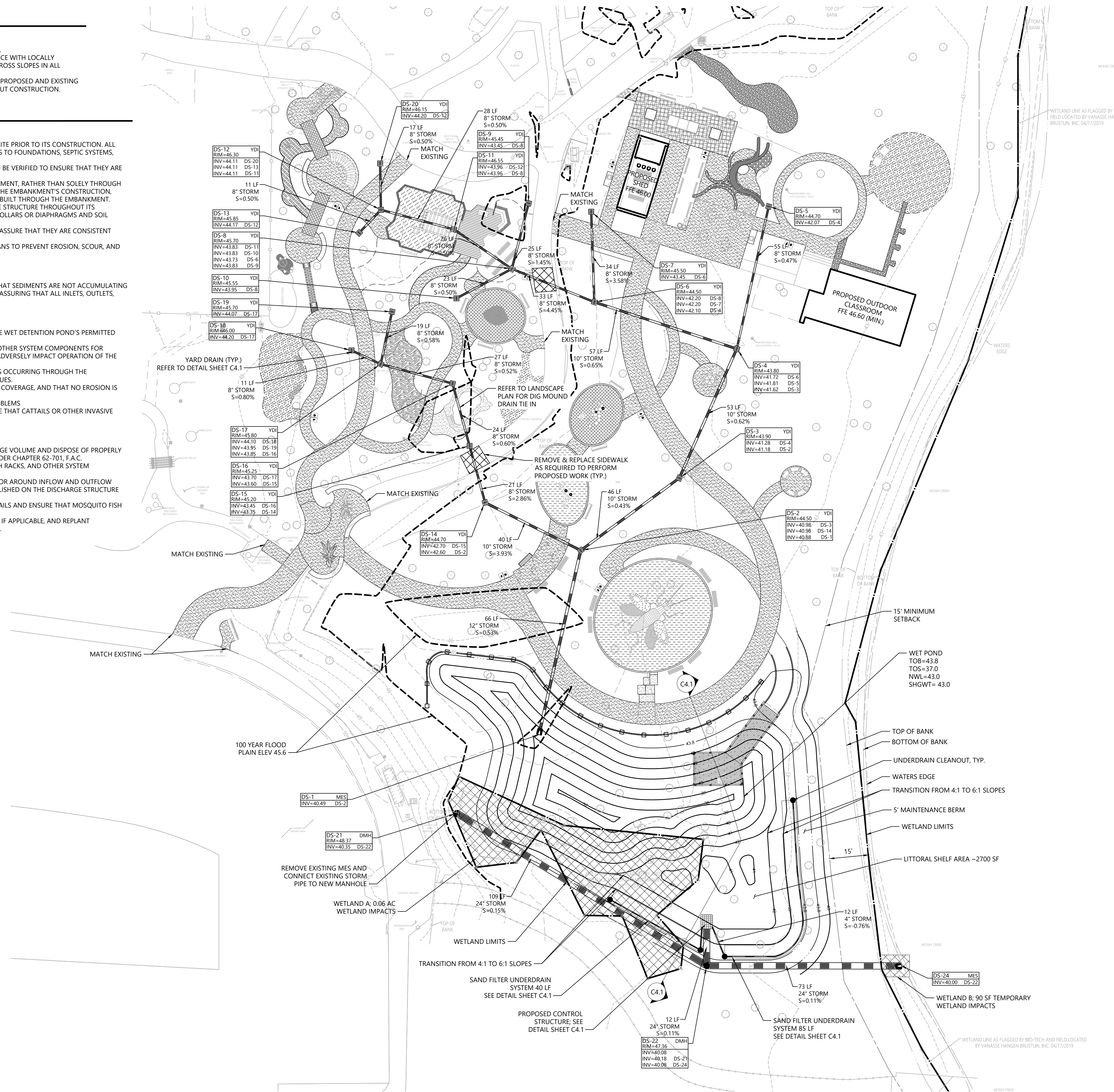
- INSPECT BASIN FOR EXCESSIVE SEDIMENT ACCUMULATIONS THAT DECREASE THE WET DETENTION POND'S PERMITTED STORAGE VOLUME.
- INSPECT INFLOW AND OUTFLOW STRUCTURES, TRASH RACKS, SKIMMERS, AND OTHER SYSTEM COMPONENTS FOR ACCUMULATION OF DEBRIS AND TRASH THAT WOULD CAUSE CLOGGING AND ADVERSELY IMPACT OPERATION OF THE WET DETENTION POND.
- IF AN EMBANKMENT IS USED, INSPECT TO ENSURE THAT NO PIPING OF WATER IS OCCURRING THROUGH THE EMBANKMENT AND THAT THERE IS NO DAMAGE OR STRUCTURAL INTEGRITY ISSUES.
- INSPECT VEGETATION ON SIDE SLOPES TO ASSURE IT IS HEALTHY, MAINTAINING COVERAGE, AND THAT NO EROSION IS OCCURRING.
- INSPECT THE WET DETENTION POND FOR POTENTIAL MOSQUITO BREEDING PROBLEMS
- INSPECT WET DETENTION POND AND, IF APPLICABLE, LITTORAL ZONE TO ASSURE THAT CATTAILS OR OTHER INVASIVE VEGETATION ARE NOT BECOMING ESTABLISHED.

2. MAINTENANCE ACTIVITIES AS-NEEDED TO PROLONG SERVICE:

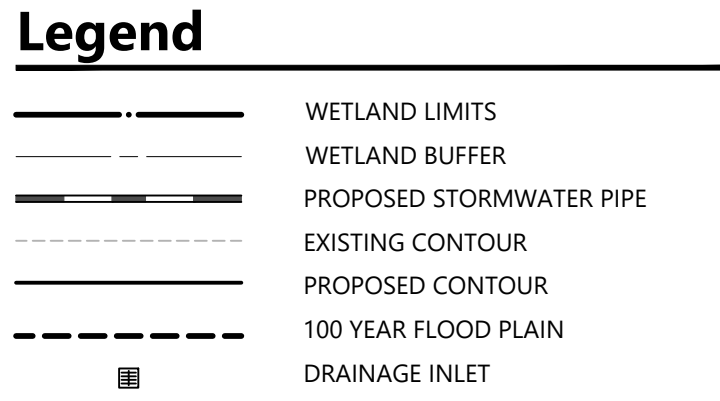
- IF NEEDED, REMOVE ACCUMULATED SEDIMENTS TO RESTORE PERMITTED STORAGE VOLUME AND DISPOSE OF PROPERLY. PLEASE NOTE THAT STORMWATER SEDIMENT DISPOSAL MAY BE REGULATED UNDER CHAPTER 62-701, F.A.C.
- REMOVE TRASH AND DEBRIS FROM INFLOW AND OUTFLOW STRUCTURES, TRASH RACKS, AND OTHER SYSTEM COMPONENTS TO PREVENT CLOGGING OR IMPEDING FLOW.
- MAINTAIN HEALTHY VEGETATIVE COVER TO PREVENT EROSION OF SIDE SLOPES OR AROUND INFLOW AND OUTFLOW STRUCTURES. REMOVE ANY TREES OR SHRUBS THAT MAY HAVE BECOME ESTABLISHED ON THE DISCHARGE STRUCTURE EMBANKMENT, IF APPLICABLE.
- ELIMINATE MOSQUITO BREEDING HABITATS SUCH AS THICK GROWTHS OF CATTAILS AND ENSURE THAT MOSQUITO FISH ARE PRESENT IN THE WET DETENTION POND.
- REMOVE CATTAILS AND OTHER EXOTIC VEGETATION FROM THE LITTORAL ZONE, IF APPLICABLE, AND REPLANT APPROPRIATE VEGETATION IF NEEDED TO MEET LITTORAL ZONE REQUIREMENTS.

Storm Sewer Structure Schedule

Number	Type	Northing	Easting
DS-1	MES	1291343.30	394584.21
DS-2	12" ATRIUM YD	1291414.43	394600.32
DS-3	12" ATRIUM YD	1291442.33	394638.35
DS-4	12" ATRIUM YD	1291492.23	394660.55
DS-5	12" ATRIUM YD	1291547.21	394672.87
DS-6	12" ATRIUM YD	1291510.29	394605.60
DS-7	6" ATRIUM YD	1291545.18	394604.38
DS-8	12" ATRIUM YD	1291523.11	394573.76
DS-9	12" ATRIUM YD	1291548.44	394580.24
DS-10	6" ATRIUM YD	1291511.74	394552.37
DS-11	6" CAST IRON YD	1291538.34	394551.39
DS-12	6" ATRIUM YD	1291545.90	394523.22
DS-13	6" ATRIUM YD	1291536.99	394514.81
DS-14	12" ATRIUM YD	1291432.88	394563.43
DS-15	6" ATRIUM YD	1291454.77	394557.45
DS-16	12" ATRIUM YD	1291478.85	394550.86
DS-17	6" ATRIUM YD	1291486.35	394523.14
DS-18	6" ATRIUM YD	1291491.63	394511.89
DS-19	6" ATRIUM YD	1291506.57	394527.52
DS-20	12" ATRIUM YD	1291563.80	394522.93
DS-21	MANHOLE	1291312.93	394552.58
DS-22	MANHOLE	1291254.14	394648.94
DS-23	CLEANOUT	1291317.97	394682.20
DS-24	MES	1291254.01	394724.16



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Drawing Title
Grading & Drainage Plan

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C4.0
Sheet _____ of _____

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PE 62392
12/14/2020

Project Number
62897.03

SIDEDRAIN MAINTENANCE:

A SIDEDRAIN FILTER SYSTEM OF ADEQUATE DESIGN AND PROPER INSTALLATION, USING GOOD MATERIAL, STILL REQUIRES MAINTENANCE TO KEEP IT OPERATING. INSPECTION OF THE DRAINS, ESPECIALLY AFTER HEAVY RAINS, SHOULD BE MADE TO SEE IF THEY ARE WORKING AND IF MAINTENANCE IS REQUIRED. PORE SPACES IN STORMWATER FILTERS CAN BE EXPECTED TO SEAL WITH TIME FOLLOWING THE BEGINNING OF OPERATION. THE DURATION OF A FILTER'S EFFECTIVENESS BEFORE THE HYDRAULIC CAPACITY IS REDUCED TO THE POINT THAT DRAWDOWN REQUIREMENTS CAN NO LONGER BE MET WILL DEPEND ON A NUMBER OF FACTORS INCLUDING THE INITIAL PERMEABILITY OF FILTER MATERIAL USED, THE DEGREE OF PRETREATMENT (SEDIMENTATION) PRIOR TO ENTERING THE FILTRATION FACILITY, AND THE NATURE OF THE POLLUTANTS BEING REMOVED.

PRELIMINARY INDICATION SHOW THAT THESE SYSTEMS CAN FUNCTION FOR UP TO ONE YEAR WITH ONLY MINOR MAINTENANCE. HOWEVER, PERIODIC DISCING OR SCRAPING THE SURFACE LAYERS OF THE SOIL MAY BE REQUIRED FOLLOWING HEAVY EVENTS THAT CARRY HEAVY SEDIMENT LOADS.

COARSE GRAINED SYSTEMS MAY REQUIRE COMPLETE REPLACEMENT OF THE FILTER MEDIA TO RESTORE THEIR FUNCTION FOLLOWING CLOGGING SINCE POLLUTANTS WOULD BE EXPECTED TO FURTHER PENETRATE THESE SYSTEMS THAN THEIR MORE CLOSE-GRAINED COUNTERPARTS. MOST OF THE PARTICULATES WILL BE TRAPPED IN THE FIRST 2 OR 3 INCHES OF THE LATTER WHILE SUSPENDED SUBSTANCES CAN BE EXPECTED TO PENETRATE UP TO A FOOT OR MORE INTO THE COARSE-GRAINED FILTER. SEMI-ANNUAL RESTORATION EFFORTS ARE LIKELY TO INVOLVE COMPLETE REMOVAL AND CLEANING AND OR REPLACEMENT OF THE TOP 12 INCHES OR MORE OF THE FILTER MATERIAL. WHILE MAJOR MAINTENANCE OF THIS TYPE MAY NOT HAVE TO BE DONE AS OFTEN, WHEN IT IS REQUIRED, THE OPERATION WILL INVOLVE A SIGNIFICANT AMOUNT OF LABOR AND MATERIAL. HEAVY MACHINERY MAY BE NEEDED IF THE FACILITY IS LARGE AND CARE WILL BE NEEDED TO PREVENT DAMAGE TO THE SIDEDRAIN OR UNDERDRAIN PIPES. THERE MAY BE SOME PROBLEMS ASSOCIATED WITH THE ABILITY OF THESE MORE COARSE-GRAINED, EVENLY GRADED MATERIALS TO SUPPORT MACHINERY NEEDED TO PERFORM MAINTENANCE ACTIVITIES, SUCH AS SCRAPING WITHOUT GETTING EQUIPMENT STUCK AND/OR DAMAGING THE FILTER BED.

COMMON CAUSES OF SUBSURFACE DRAINAGE SYSTEM FAILURES INCLUDE THE FOLLOWING:

1. DRAINS INSTALLED WITH INSUFFICIENT CAPACITY.
2. DRAINS PLACED TOO SHALLOW AND LACK OF AUXILIARY STRUCTURES NECESSARY FOR THE INSTALLATION.
3. DRAINS OF INSUFFICIENT STRENGTH OR LACKING IN OTHER QUALITIES NECESSARY FOR THE INSTALLATION.
4. LACK OF MAINTENANCE STRUCTURES, SUCH AS CLEANOUTS, INSTALLED AT PROPER LOCATIONS.
5. POOR CONSTRUCTION RESULTING IN SUCH INADEQUACIES AS TOO WIDE OR TOO SMALL A JOINT SPACING, IMPROPER BEDDING, POOR GRADE AND ALIGNMENT AND IMPROPER BACKFILLING.
6. FAILURE DUE TO MINERAL DEPOSITS SUCH AS IRON OXIDE. THESE DEPOSITS DO NOT SERIOUSLY AFFECT THE OPERATION OF THE DRAIN UNLESS THE PERFORATIONS OR JOINTS BECOME SEALED. USUALLY INDICATIONS OF DEPOSITS MAY BE OBSERVED AT THE OUTLETS, JUNCTION BOXES AND CLEANOUTS.

HYDRAULIC CLEANING - HIGH PRESSURE HYDRAULIC NOZZLES HAVE BEEN USED WITH SUCCESS TO CLEAN SIDEDRAIN OR UNDERDRAIN SYSTEMS IN FLORIDA THAT HAVE EVIDENCE OF IRON OXIDE.

SILT AND VEGETATION - ONE OF THE MOST COMMON MAINTENANCE PROBLEMS THAT WE HAVE WITH SIDEDRAIN OR UNDERDRAIN SYSTEMS IN FLORIDA IS TO GET LANDOWNERS TO KEEP THE OUTLETS FREE OF SILT AND VEGETATION WHERE THEY EMPTY INTO OPEN DITCHES OR CONTROL STRUCTURES. THE OUTLET END OF THE SYSTEM MUST BE KEPT CLEAN IF THE MAXIMUM BENEFITS FROM THE SIDEDRAIN OR UNDERDRAIN SYSTEM ARE TO BE OBTAINED. SEDIMENT AND FAST GROWING AQUATIC VEGETATION MIGHT CAUSE THE OUTLETS TO BECOME ENTIRELY PLUGGED WITHIN ONE YEAR AFTER INSTALLATION, CONSEQUENTLY FREQUENT INSPECTIONS MUST BE MADE.

TREES - IF TREES NEAR THE DRAIN ARE NOT REMOVED AT THE TIME OF CONSTRUCTION, THE SIDEDRAIN OR UNDERDRAIN MAY BECOME PLUGGED BY ROOTS. IF IT IS FOUND THAT THE SIDEDRAIN OR UNDERDRAIN LINE IS NOT FUNCTIONING AND THE OUTLET IS OPEN, THE LINES SHOULD BE CHECKED NEAR TREES.

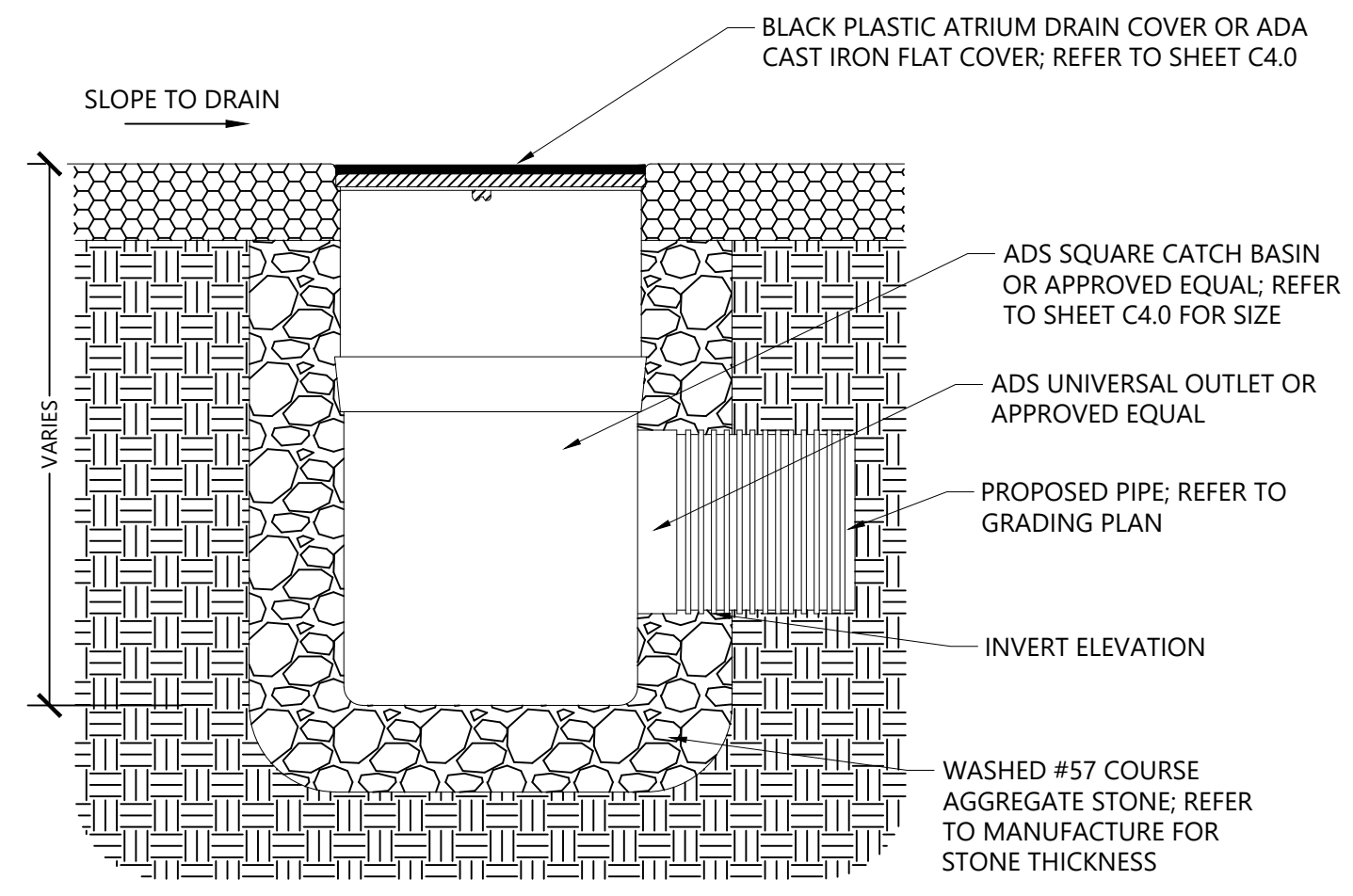
AUXILIARY STRUCTURES - THE LIFE AND VALUE OF A SIDEDRAIN OR UNDERDRAIN SYSTEM MANY TIMES DEPENDS ON THE REPAIR OF AUXILIARY STRUCTURES. THESE STRUCTURES ARE TO PROTECT THE SIDEDRAIN OR UNDERDRAIN SYSTEM AS WELL AS TO AID IN DETERMINING WHEN MAINTENANCE IS NEEDED. IF THEY ARE NOT MAINTAINED, THE VALUE OF THE INSTALLATION WILL DECREASE. REGULAR INSPECTION IS REQUIRED.

AS-BUILT PLANS - UPON COMPLETING A SUBSURFACE DRAINAGE INSTALLATION AND AFTER ALL CHECKS AND INSPECTIONS HAVE BEEN MADE, A SET OF "AS-BUILT" PLANS, SHOWING LOCATION, DEPTHS AND SIZES OF ALL DRAINS SHOULD BE PRESERVED AND MADE AVAILABLE TO THOSE THAT WILL BE MAINTAINING THE SYSTEM.

(REF: DEPARTMENT OF ENVIRONMENTAL REGULATION, STATE OF FLORIDA, "THE FLORIDA DEVELOPMENT MANUAL: A GUIDE TO SOUND LAND AND WATER MANAGEMENT", JUNE, 1988.)

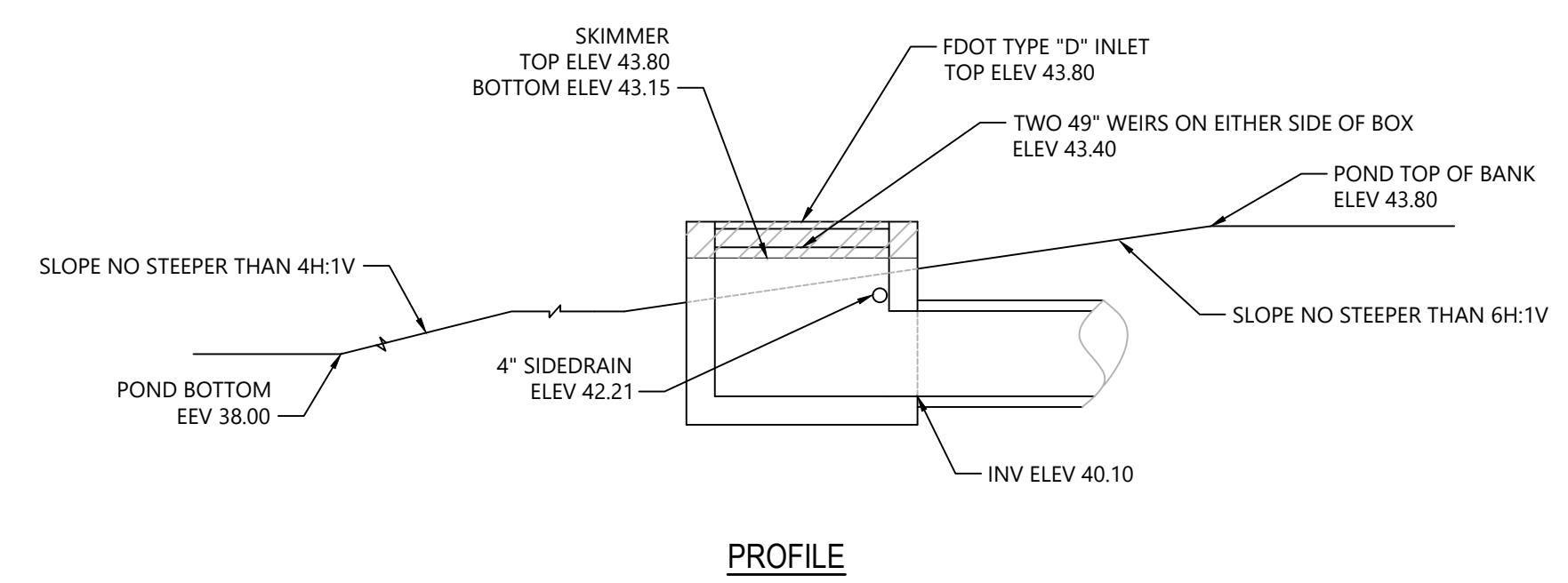
NOTES:

1. 3/4" WASHED ROCK SHALL BE #5 COURSE AGGREGATE PER FDOT SECTION 901.
2. NON-WOVEN ENGINEERING FABRIC SHALL BE AMACO STYLE #4545 OR APPROVED EQUIVALENT.
3. SIDEDRAIN OR UNDERDRAIN PIPING SHALL BE LAID AT GRADES AND SLOPES SHOWN AND COVERED WITH APPROVED FILTER MATERIAL. A MINIMUM THREE (3) INCH THICK GRAVEL ENVELOPE WRAPPED IN FILTER CLOTH IS SUGGESTED TO IMPROVE FLOW INTO THE DRAIN PIPE.
4. SIDEDRAIN OR UNDERDRAIN PIPING MATERIAL SHALL BE FOUR (4) INCH PERFORATED PVC PIPE WITH NO SOCK MATERIAL OR AN APPROVED EQUAL. INSTALLATION SHALL BE ACCORDING THE MANUFACTURER'S RECOMMENDATIONS.
5. GRAVEL ENVELOPE MATERIAL SHALL BE A COARSE MATERIAL, ALL OF WHICH SHALL PASS A 1-1/2 INCH SIEVE. FDOT NO. 57 STONE OR EQUIVALENT IS RECOMMENDED. THE MATERIAL SHOULD BE WASHED AND CONTAIN NO MORE THAN ONE (1) PERCENT SILT, CLAY AND ORGANIC MATTER. THE MATERIAL SHALL BE HARD, DURABLE AND COMPLY WITH THE REQUIREMENTS FOR SOUNDNESS SPECIFIED IN ASTM D-694-62. THE MATERIAL SHALL NOT CONTAIN ANY LIMESTONE, LIMEROCK OR PHOSPHATE.
6. THE SAND FILTER MATERIAL SHALL BE A WASHED MATERIAL MEETING FDOT ROAD AND BRIDGE SPECIFICATIONS FOR SILICA SAND (CONTAINING LESS THAN ONE (1) PERCENT SILT, CLAY AND ORGANIC MATTER). UNLESS FILTER CLOTH IS USED AROUND THE GRAVEL WHICH IS SUITABLE TO RETAIN THE SILT, CLAY AND ORGANIC MATTER WITHIN THE SAND FILTER. CALCIUM CARBONATE (LIMEROCK) AGGREGATE IS NOT AN ACCEPTABLE SUBSTITUTE.
7. THE SAND FILTER MATERIAL SHALL HAVE A UNIFORMITY COEFFICIENT 1.5 OR GREATER AND AN EFFECTIVE GRAIN SIZE OF 0.20 TO 0.55 MILLIMETERS IN DIAMETER.
8. THE SIDEDRAIN OR UNDERDRAIN SYSTEM SHALL BE CONSTRUCTED SUCH THAT DISPLACEMENT OF THE FILTER MEDIA AND DRAIN PIPE WILL NOT OCCUR DURING BACKFILLING.
9. THE UPPER END OF EACH DRAIN PIPE AND ANY BENDS SHALL BE CONNECTED TO A CLEANOUT STRUCTURE WHETHER OR NOT SHOWN HEREON. THE CLEANOUT SCREW CAP SHALL BE WATERTIGHT.
10. PRIOR TO INSTALLATION OF THE FILTER MEDIA (SAND), THE CONTRACTOR SHALL SUBMIT TEST RESULTS, FROM A CERTIFIED INDEPENDENT LABORATORY, OF THE MEDIA MATERIAL THAT WILL BE USED IN CONSTRUCTION OF THE UNDERDRAIN/SIDEDRAIN SYSTEM, TO THE ENGINEER OF RECORD FOR SUBMITTAL TO THE REGULATORY AGENCY. THE TESTS SHALL ADDRESS THE FOLLOWING FILTER MEDIA PARAMETERS: UNIFORMITY COEFFICIENT, EFFECTIVE GRAIN SIZE, SIEVE ANALYSIS, PERCENT SILTS, CLAYS AND ORGANIC MATTER, AND A PERMEABILITY TEST (CONSTANT HEAD).

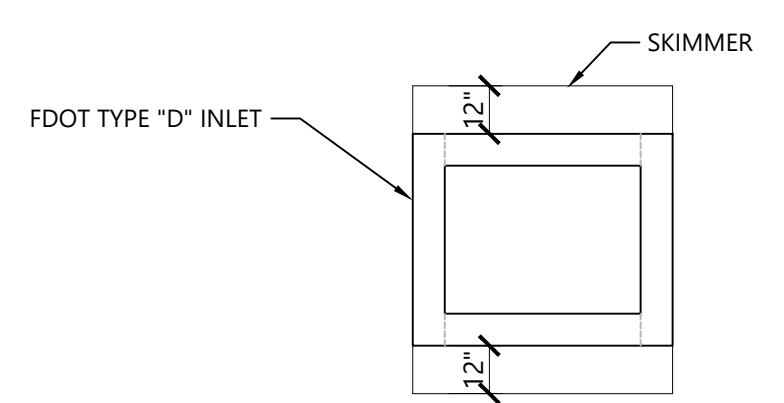


Yard Drain Detail

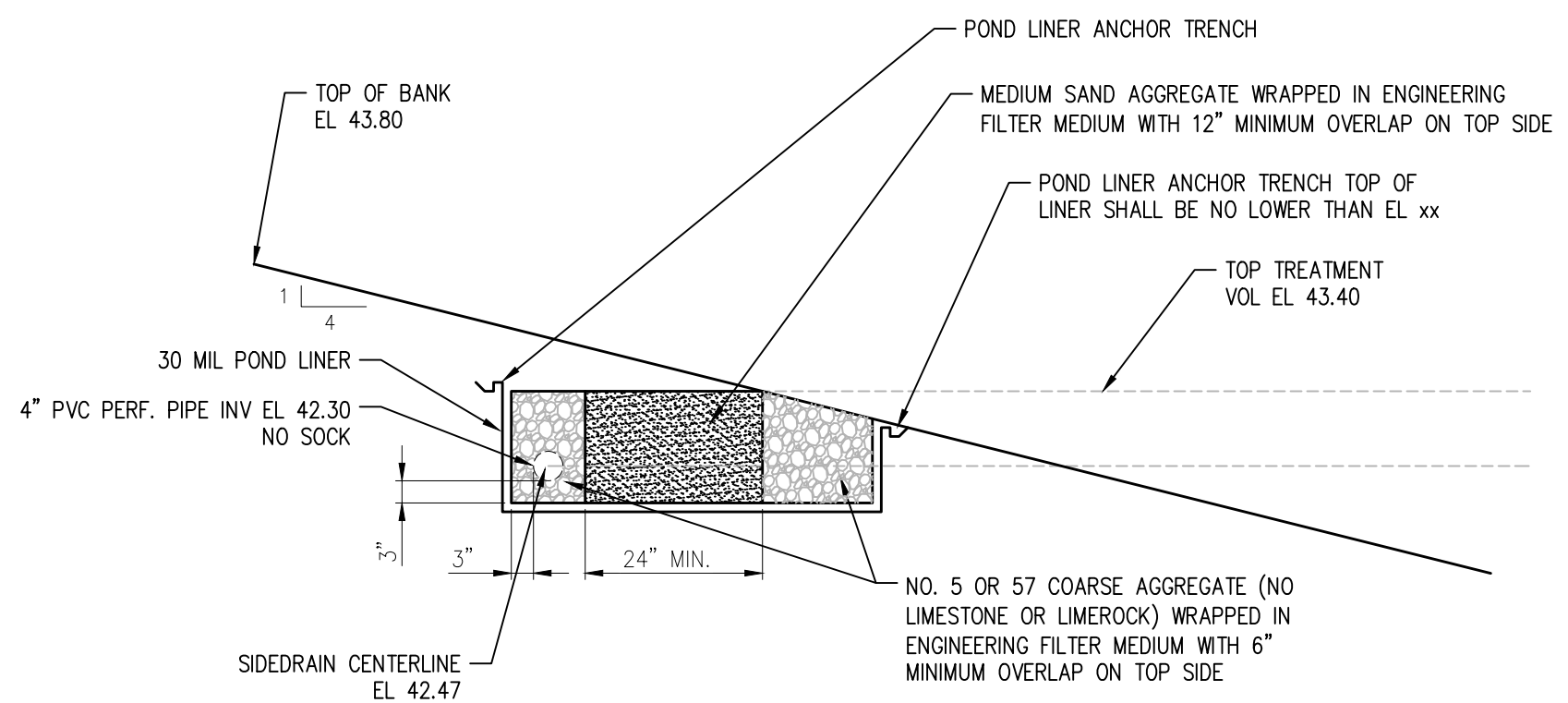
N.T.S. Source: ADS Manufacturer



PROFILE



PLAN

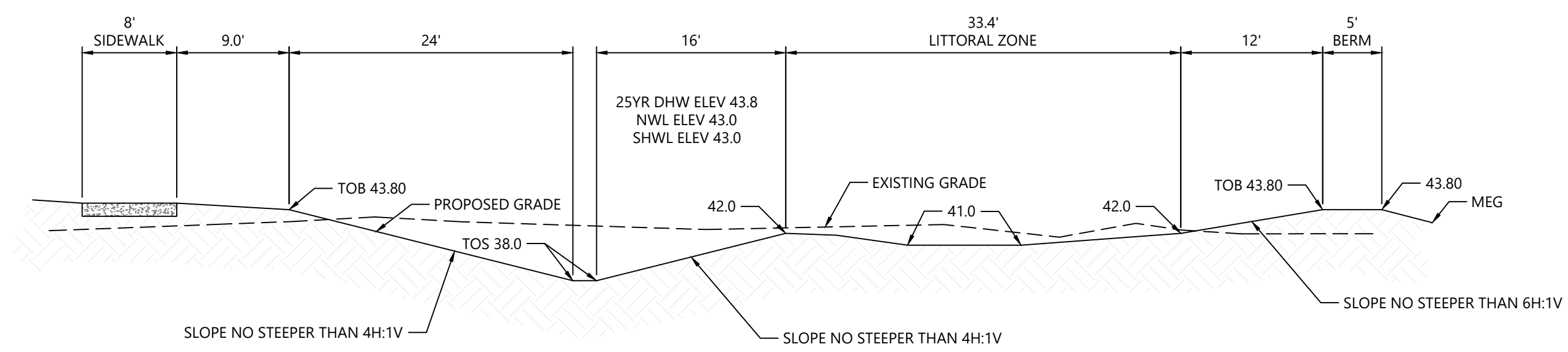


Sand Filter Sidedrain Detail

N.T.S.

Control Structure

N.T.S.



Pond Section

N.T.S.

Florida Botanical Gardens Children's Discovery Garden
12520 Ulmerton Road
Largo, Florida

No.	Revision	Date	Apprd

Designed by MAB	Checked by KMB
Issued for	Date

Permitting Dec. 14, 2020

Not Approved for Construction

Grading Details

Drawing Number

C4.1

Sheet of



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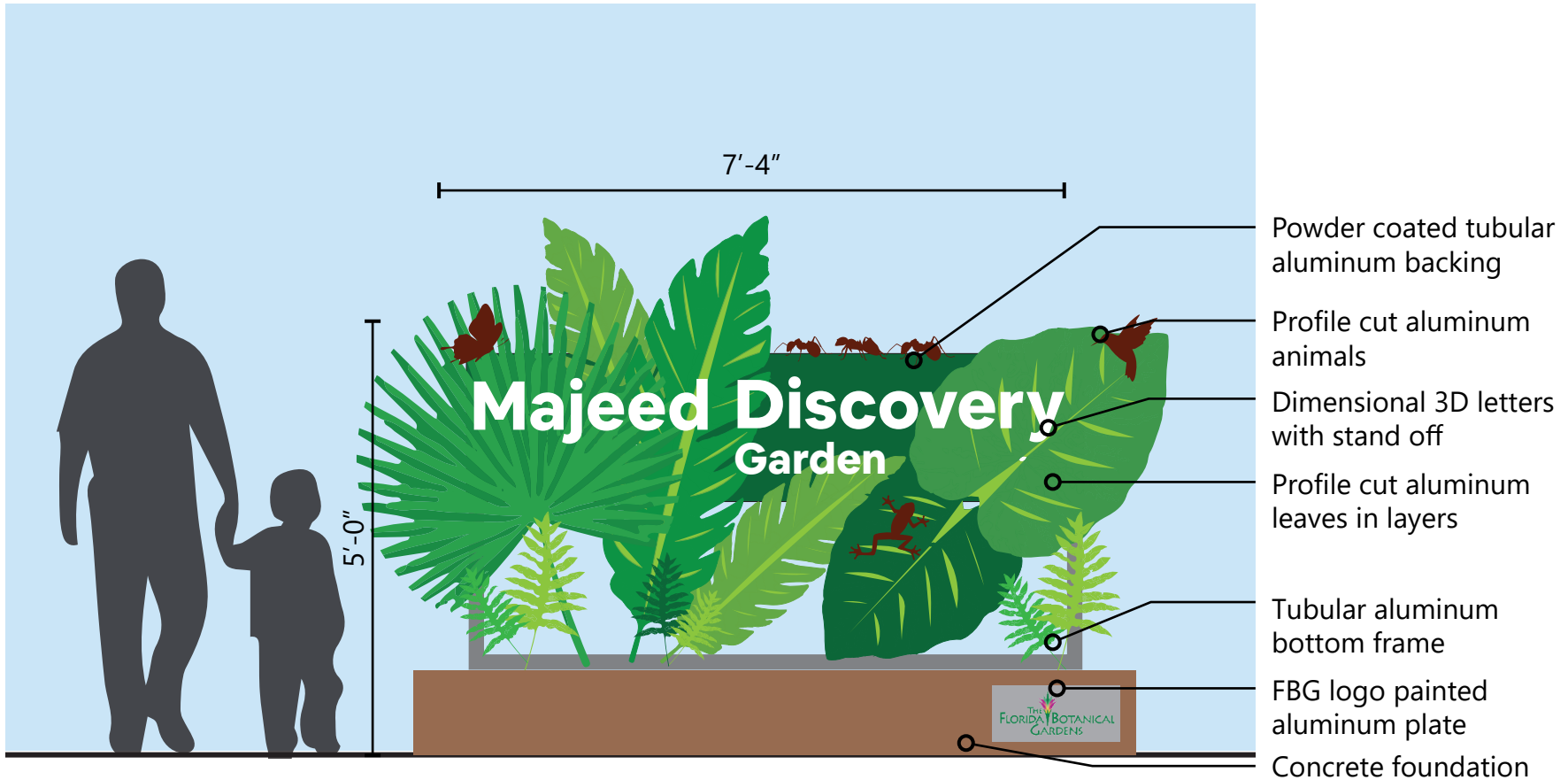
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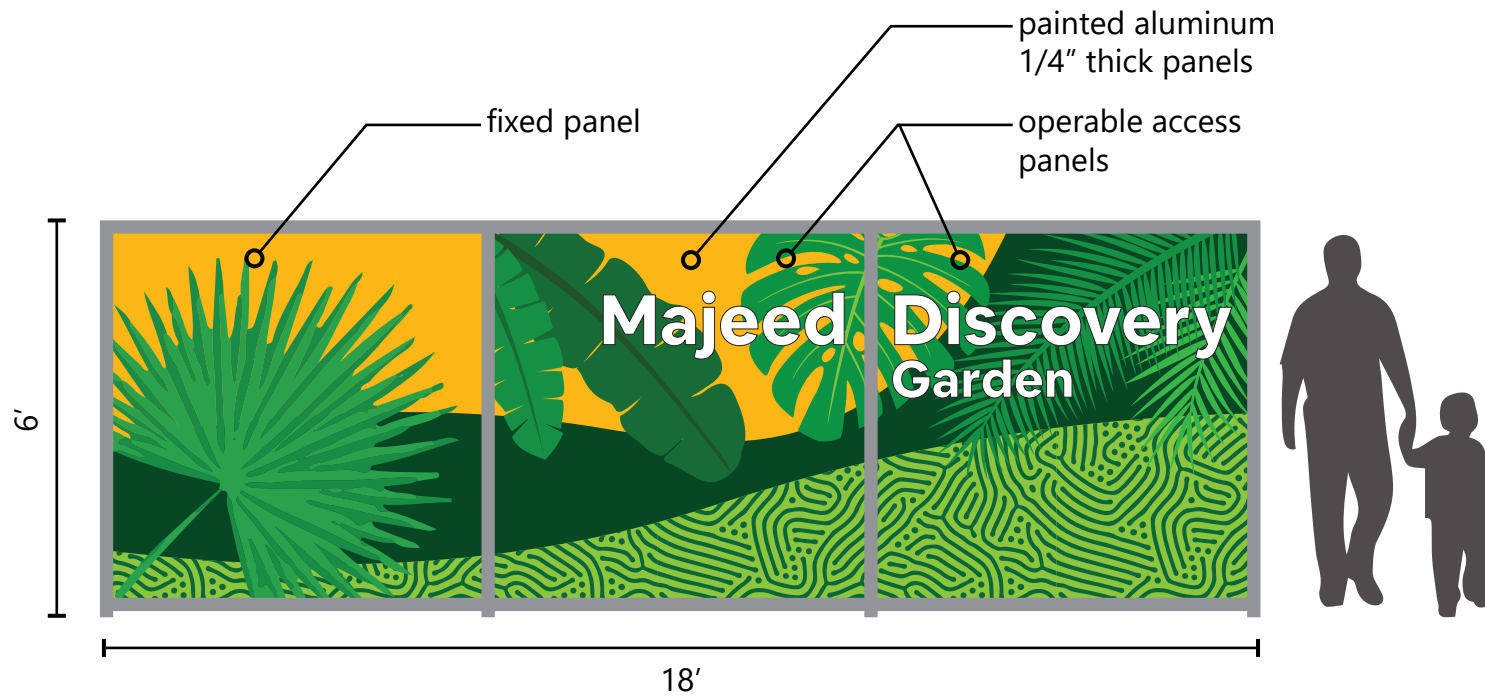
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Main Entrance Sign



North Entrance Sign



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