



CERTIFICATE OF APPROPRIATENESS PLACARD

for Raleigh Historic Resources

Project Description:

Install bioretention/rain garden; install educational sign

121 Hillsborough St.

Address

Historic District

Historic Property

COA-0103-2019

Certificate Number

9/23/2019

Date of Issue

3/23/2020

Expiration Date

This card must be kept posted in a location within public view until all phases of the described project are complete. The work must conform with the code of the City of Raleigh and laws of the state of North Carolina. When your project is complete, you are required to ask for a final zoning inspection in a historic district area. Telephone the RHDC office at 832-7238 and commission staff will coordinate the inspection with the inspections Department. If you do not call for this final inspection, your Certificate of Appropriateness is null and void.

Signature, _____

A handwritten signature in black ink, appearing to read "Melissa Robb", is written over a horizontal line.

Raleigh Historic Development Commission

Pending the resolution of appeals, commencement of work is at your own risk.

Certificate of Appropriateness | Application

Development Services Customer Service Center • One Exchange Plaza, Suite 400 | Raleigh, NC 27601 | 919-996-2495



This form can be submitted in person or via USPS at the above address.

Type or print the following:	
Applicant name: Church of the Good Shepherd	
Mailing address: 121 Hillsborough St.	
City: Raleigh	State: NC Zip code: 27603
Date: 8/27/19	Daytime phone #: 919-831-2000
Email address: nancy.daly73@gmail.com	
Applicant signature:	
<div><input checked="" type="checkbox"/> Minor work (staff review) – one copy Major work (COA committee review) – one copy (10 copies will be required after initial staff review) <input type="checkbox"/> Additions > 25% of building sq. footage <input type="checkbox"/> New buildings <input type="checkbox"/> Demolition of building or structure <input type="checkbox"/> All other <input type="checkbox"/> Post approval re-review of conditions of approval</div>	<div>Office Use Only Transaction #: _____ File #: COA-0103-2019 Fee: _____ Amount paid: \$ 30 Received date: 8/27/19 Received by: _____</div>
Property street address: 125 Hillsborough St.	
Historic district: General Historic District Overlay-Capital Square	
Historic property/Landmark name (if applicable):	
Owner name: Church of the Good Shepherd	
Owner mailing address: 121 Hillsborough St., Raleigh, NC 27603	

For applications that require review by the COA Committee (major work), provide addressed and stamped envelopes for owners for all properties with 100 feet on all sides of the property, as well as the property owner.

Property Owner Name & Address	Property Owner Name & Address

I understand that all major work applications that require review by the Raleigh Historic Development Commission’s COA Committee must be submitted by 4 p.m. on the date of the application deadline; otherwise, consideration will be delayed until the following committee meeting. An incomplete application will not be accepted.

Will you be applying for rehabilitation tax credits for this project? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Office Use Only Type of work: <u>356, 64</u>
Did you consult with staff prior to filing the application? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	

Design Guidelines: please cite the applicable sections of the design guidelines (www.rhdc.org).		
Section/Page	Topic	Brief description of work (attach additional sheets as needed).
		See Attached.

Minor Work Approval (office use only)	
Upon being signed and dated below by the Planning Director or designee, this application becomes the Minor Work Certificate of Appropriateness. It is valid until <u>3/23/2020</u> .	
Please post the enclosed placard form of the certificate as indicated at the bottom of the card. Issuance of a Minor Work Certificate shall not relieve the applicant, contractor, tenant, or property owner from obtaining any other permit required by City Code or any law. Minor Works are subject to an appeals period of 30 days from the date of approval.	
Signature (City of Raleigh) <u>Melissa Robb</u>	Date <u>9/23/19</u>

To be completed by applicant			Office Use Only		
	Yes	N/A	Yes	No	N/A
Attach 8-1/2"x11" or 11"x17" sheets with written descriptions and drawings, photographs, and other graphic information necessary to completely describe the project. Use the checklist below to be sure your application is complete. Minor Work (staff review) – 1 copy Major Work (COA Committee review) – 1 copy (10 copies will be required after initial staff review).	<input checked="" type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1. Written description. Describe clearly and in detail the nature of your project. Include exact dimensions for materials to be used (e.g. width of siding, window trim, tree species, etc.)	<input checked="" type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. Description of materials (Provide samples, if appropriate)	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. Color Photographs of existing conditions are required. Minimum image size 4" x 6" as printed. Maximum 2 images per page. Photos should be of each side of the house, fully show the yards, and include streetscapes.	<input checked="" type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. Paint Schedule (if applicable)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. Site Drawings. Required for projects that include any addition, demolition, fences, walls, or other landscape work. <ul style="list-style-type: none">Plot plan showing relationship of buildings, additions, sidewalks, drives, trees, property lines, etc.Tree survey include size, species, and critical root zone for each tree over 8" diameter when measured 4' above ground levelTree protection plan include material staging area, construction access, limits of disturbance, location of tree protection fencingGrading planDimensions shown on drawings and/or graphic scale (required)11"x17" or 8-1/2"x11" reductions of full-size drawings	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. Architectural Drawings showing existing and proposed work (if applicable) <ul style="list-style-type: none">Plan drawingsElevation drawings showing the façade(s). For additions, deck, and porches, include the grade.Dimensions shown on drawings and/or graphic scale (required)11" x 17" or 8-1/2" x 11" reductions of full-size drawings. If reduced size is so small as to be illegible, make 11" x 17" or 8-1/2" x 11" snap shots of individual drawings from the big sheet.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7. Stamped envelopes addressed to all property owners within 100 feet of property, on all sides of the property, as well as the property owner (required for Major Work). Use the Label Creator to determine the addresses.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8. Fee (See Development Fee Schedule)	<input checked="" type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Church of the Good Shepherd Bioretention Project Description

The proposed project is located behind 125 Hillsborough St. at the corner of Morgan St. and McDowell St. between the Church of the Good Shepherd parking area and sidewalk. To capture stormwater flowing off the small parking lot at the rear of the Church, the existing vegetation, trees, and soil will be excavated from the landscaping area. A perforated underdrain pipe will be added and routed to the existing stormwater drop inlet adjacent to the parking lot. Curbs will be cut to the grade of the parking surface to allow stormwater to enter the bioretention and an engineered soil will be added, replacing the existing clay soil which will allow for increased drainage and treatment. The curb will be cut such that pedestrian and vehicular safety is not impeded. Details are included in the attached design plans.

The existing stone pillars and metal fence will not be impacted by project. Cherry trees located within the existing landscape are in poor health as documented by the attached tree assessment performed by the NC Forest Service (**see page 2**). Existing trees are also less than 8 in diameter at 4.5 ft above ground level. The concrete barrier along existing sidewalk will be increased to 1.0 ft to accommodate bioretention media and plantings.

An educational sign will be installed at the corner of Morgan St. and McDowell St. The sign will be CHPL graphic, 18x24 in, located on a single post black powder coated aluminum pedestal.

Collaborators on the project include: Church of the Good Shepherd, NCSU Department of Biological and Agricultural Engineering, NC Cooperative Extension, Wake County, and City of Raleigh. This project will provide an opportunity to connect upstream and downstream neighbors on a collaborative project to improve water resources within the watershed.

From: [Frey, Chris](#)
To: [Nancy Daly](#)
Subject: church tree assessment
Date: Wednesday, July 10, 2019 12:22:27 PM

CAUTION: This email originated from outside of the Wake County network. Do not click links or open attachments unless you recognize the sender and know the content is safe.

Ms. Nancy Daily,

Thank you for giving me a chance to examine six of the cherry trees located on the property of The Church of The Good Shepard. These trees were planted in a bed, between the sidewalk and the church parking lot, along the southern property line. It is my understanding that all the cherry trees in question fall solely on the Church's property. These trees varied in diameter, measured at or below DBH, from three to six inches. The remaining live crowns measured from six to ten feet tall.

In my opinion, all of these trees should be removed. I found them to be in very poor health (to dying) with large portions of dead and missing crowns. Severe dieback, broken tops, split bark, cankers, exposed heartwood, internal decay, and oozing sap could be found on all the trees. Fine sawdust and the small boring holes of wood boring beetles were noticed on at least two of the trees while several other showed signs of previous insect attack. Root sprouts and sucker growth made up most of the live crown on two of them. Poor structure in the form of tight angle "V" bifurcations would lead to future splitting. These trees are not likely to ever recover.

Removing these trees should not have any negative effect on the growth of nearby Raleigh owned trees. Given their size, removal should be very simple and relatively cheap. If you need any assistance in finding someone that could remove them please let me know. If you need any help selecting plants to replace these cherries, let me know. If I can be of any further assistance please feel free to reply this email or give me another call. Good luck with getting these trees removed.

I am sorry for all the bad news but it is probably best to let these trees go.

Thanks again,

Chris Frey
NCFS, Wake County Ranger & Certified Arborist

Robb, Melissa

From: Nancy Daly <nancy.daly73@gmail.com>
Sent: Sunday, September 22, 2019 6:49 PM
To: Robb, Melissa; Kinane, Collette; Tully, Tania; Jan Harris
Subject: Fwd: Payment Confirmation - Raleigh, NC

CAUTION: This email originated from outside of the organization. Do not click links or open attachments unless you verify that the attachment and content are safe. If you believe this email is suspicious, please click the 'Phish Alert' link in the banner to report this message.

Melissa,
I received payment confirmation as noted below when we submitted all application materials on 8/27.

THanks,
Nancy
----- Forwarded message -----
From: <noreply@mygovpay.com>
Date: Tue, Aug 27, 2019 at 6:42 PM
Subject: Payment Confirmation - Raleigh, NC
To: <nancy.daly73@gmail.com>



Raleigh, NC

Payment Confirmation

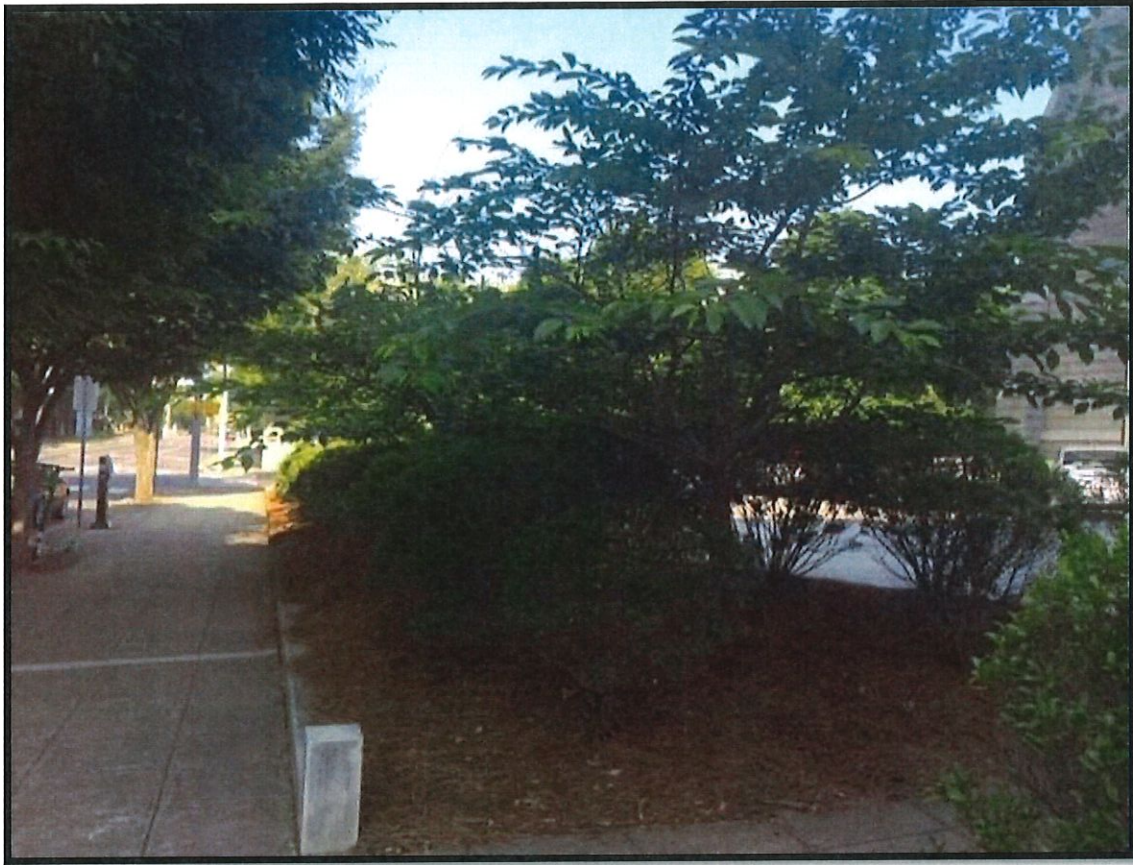
Payment Date		Tuesday, August 27, 2019		
Order Number		4294		
Line Items				
Invoice #	Item Description	Quantity	Unit Price	Total Price
INV-00009373	NONE	1	\$30.00	\$30.00
Item Total				\$30.00
Order Total				\$30.00

Thank you for your payment,

Raleigh, NC



Looking south towards Morgan St.



Looking west towards McDowell St.



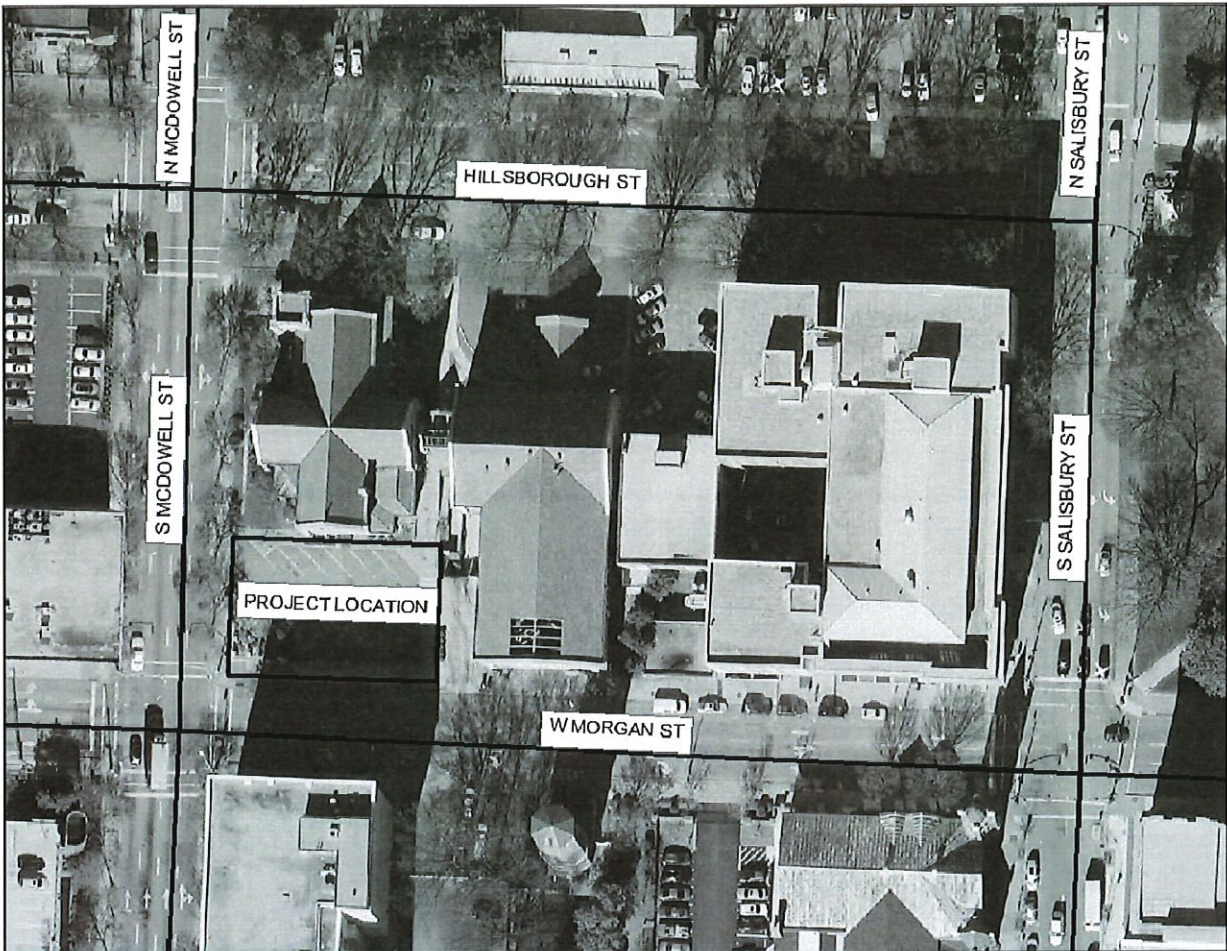
Looking northeast towards church.



Looking East from the corner of Morgan St. and McDowell St.

CHURCH OF THE GOOD SHEPHERD BIORETENTION CELL

121 HILLSBOROUGH STREET RALEIGH, NC 27603



PROJECT LOCATION MAP
(35.779879, -78.641426)

PROJECT CONTACTS

SARAH WAICKOWSKI EXTENSION ENGINEER NCSU BAE	(919) 515-6803 sewaicko@ncsu.edu
MITCH WOODWARD AREA SPECIALIZED AGENT NC COOPERATIVE EXTENSION	(919) 250-1112 mdwoodward@ncsu.edu
NANCY DALY WATER RESOURCES MANAGER WAKE COUNTY GOVERNMENT	(919) 856-2641 Nancy.Daly@wakegov.com
REV. DR. CHERYL MCFADDEN ASSOCIATE RECTOR FOR FAMILY MINISTRY CHURCH OF THE GOOD SHEPHERD	(252) 571-1139 cheryl.mcfadden@cgs-raleigh.org
LEON CROSBY FACILITIES MANAGER CHURCH OF THE GOOD SHEPHERD	(919) 831-2939 leon.crosby@cgs-raleigh.org
JAN HARRIS JUNIOR WARDEN CHURCH OF THE GOOD SHEPHERD	(919) 815-2556 ralrec2@gmail.com



INDEX

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2	EXISTING CONDITIONS
3	SCHEMATIC
4	SECTION VIEWS
5	PLANTING PLAN
6	DETAILS
7	DETAILS
8	QUANTITIES AND NOTES

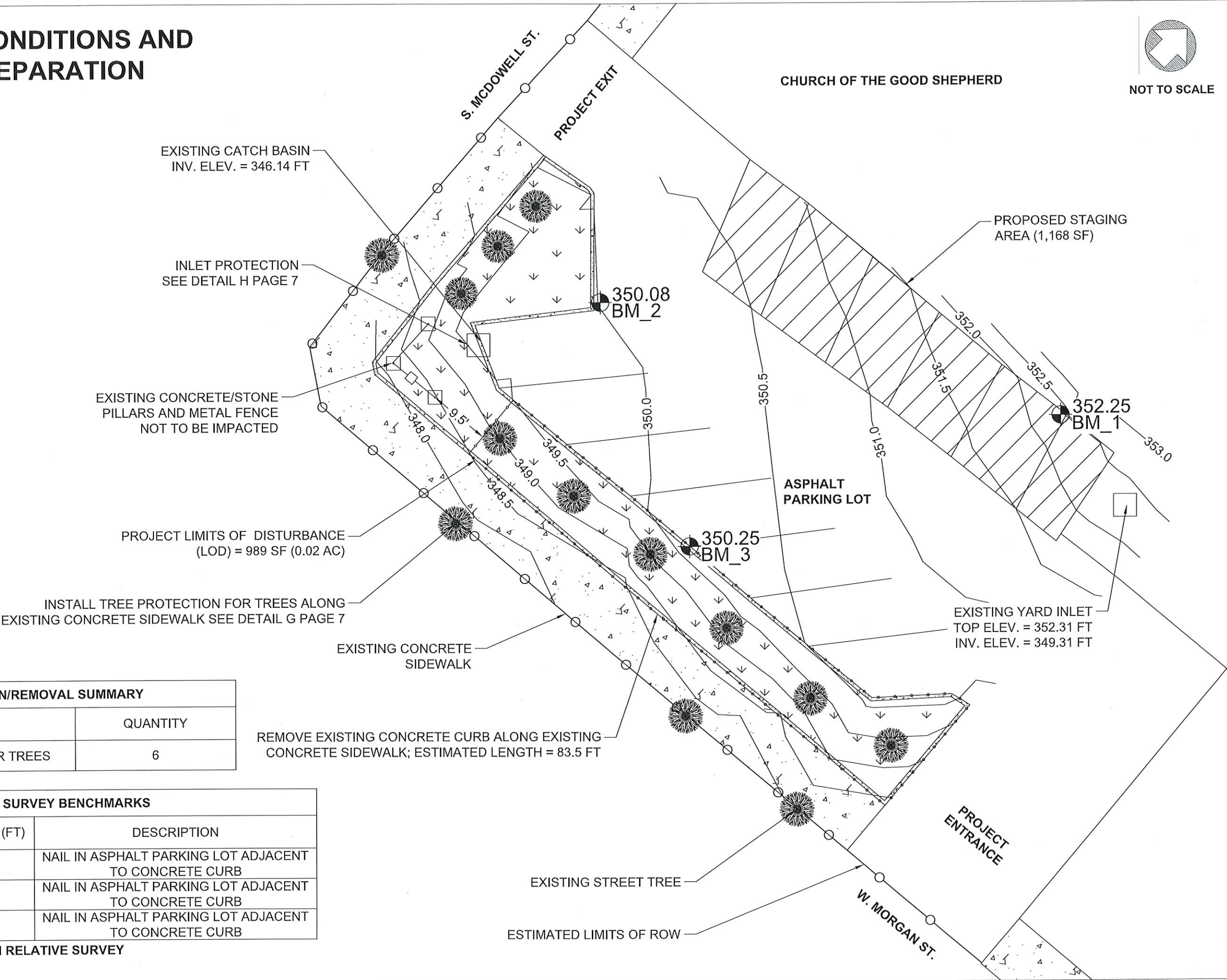
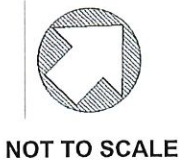
GOOD SHEPHERD BIORETENTION
125 HILLSBOROUGH STREET
RALEIGH, NC 27603
DESIGN PLANS
SHEET NUMBER
1 OF 8

NCSU BAE
WEAVER ADMIN. BLD.
3100 FAUCETTE DRIVE
RALEIGH, NC 27695
919-515-6803



PROJECT NAME : S. WAICKOWSKI	GOOD SHEPHERD
DESIGN : S. WAICKOWSKI	AS NOTED
CHECK : S. WAICKOWSKI	DATE : 08/29/2019
APPROVED : S. WAICKOWSKI	
PROJECT #	
PHASE #	

EXISTING CONDITIONS AND
SITE PREPARATION



DEMOLITION/REMOVAL SUMMARY	
ITEM	QUANTITY
4 TO 6 INCH DIAMETER TREES	6

SURVEY BENCHMARKS		
POINT	ELEVATION (FT)	DESCRIPTION
BM_1	352.25	NAIL IN ASPHALT PARKING LOT ADJACENT TO CONCRETE CURB
BM_2	350.08	NAIL IN ASPHALT PARKING LOT ADJACENT TO CONCRETE CURB
BM_3	350.25	NAIL IN ASPHALT PARKING LOT ADJACENT TO CONCRETE CURB

NOTE: ELEVATIONS FROM RELATIVE SURVEY

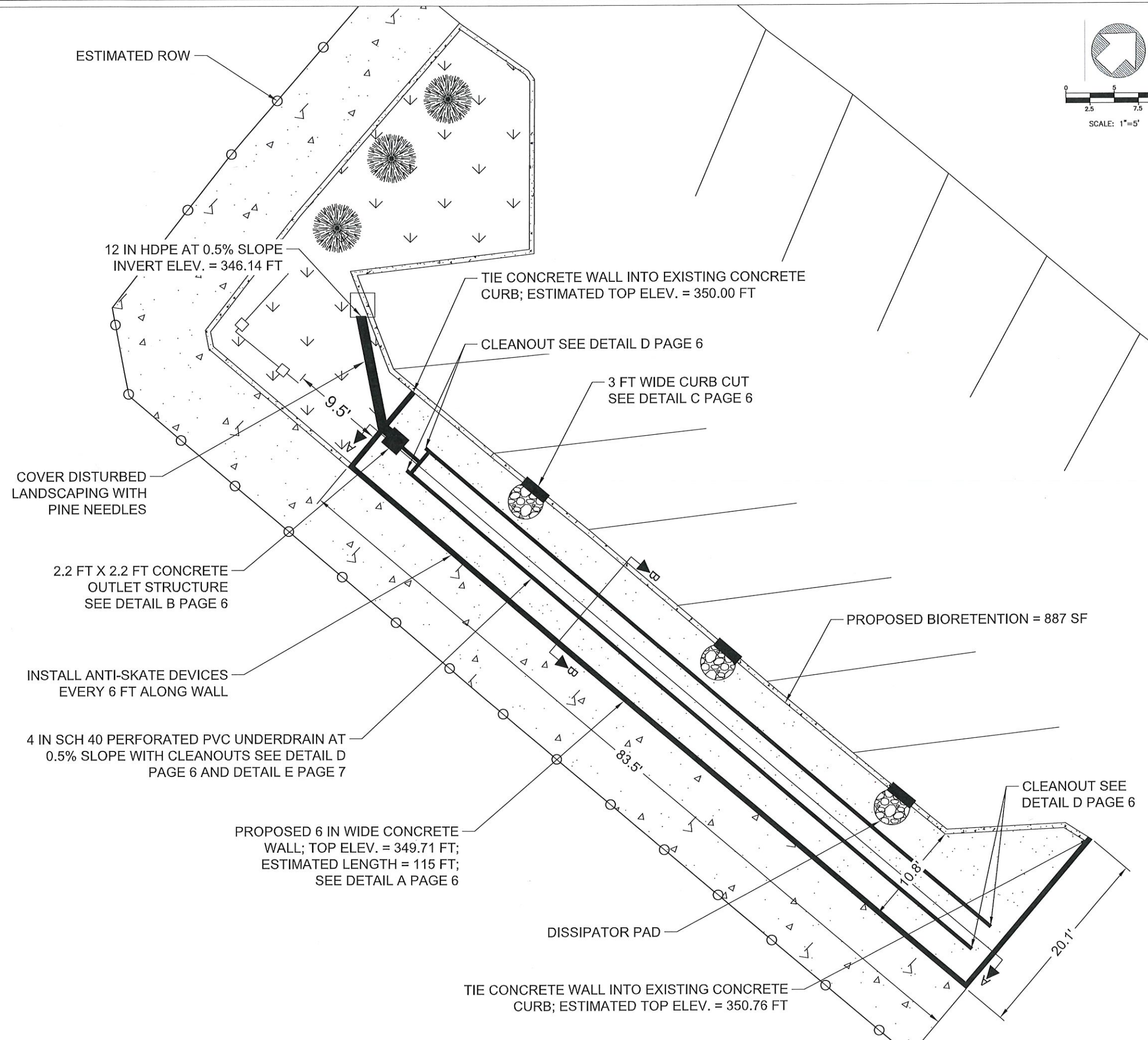
SCHEMATIC

PROJECT DESCRIPTION:

THE CHURCH OF THE GOOD SHEPHERD, CITY OF RALEIGH, NC COOPERATIVE EXTENSION, WAKE COUNTY, AND NORTH CAROLINA STATE UNIVERSITY (NCSU) ARE PARTNERING TO INSTALL A BIORETENTION CELL AT THE CHURCH OF THE GOOD SHEPHERD. THIS PROJECT WILL BE MAINTAINED BY THE CHURCH OF THE GOOD SHEPHERD AND SERVE AS A LOCAL EXAMPLE OF LOW IMPACT DEVELOPMENT (LID).

PROJECT NOTES AND QUANTITIES:

FOR MORE DETAILS SEE PAGE 8
QUANTITIES AND NOTES.



GOOD SHEPHERD BIORETENTION
125 HILLSBOROUGH STREET
RALEIGH, NC 27603
DESIGN PLANS

NCSU BAE
WEAVER ADMIN. BLD.
3100 FAUCETTE DRIVE
RALEIGH, NC 27695
919-515-5803

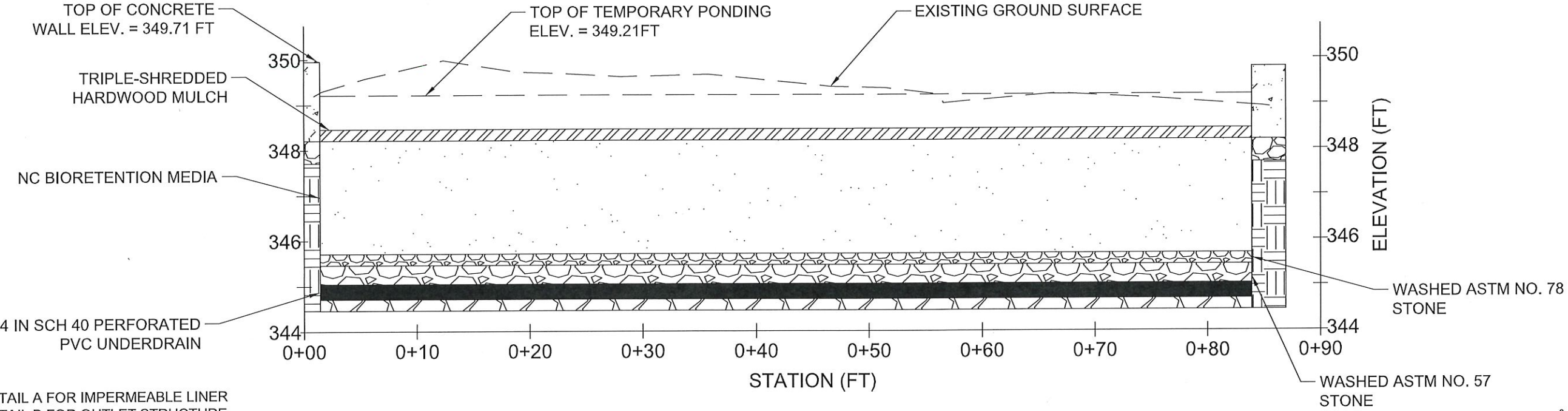
NC STATE
UNIVERSITY



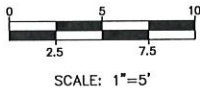
DRAWN:	S. WACOWSKI	PROJECT:	GOOD SHEPHERD
DESIGN:	S. WACOWSKI	NAME:	AS NOTED
CHECK:		SCALE:	AS NOTED
APPROVED:		DATE:	08/23/2019
PROJECT #		PHASE #	

SHEET NUMBER
SCHEMATIC
3 OF 8

SECTION VIEW A-A

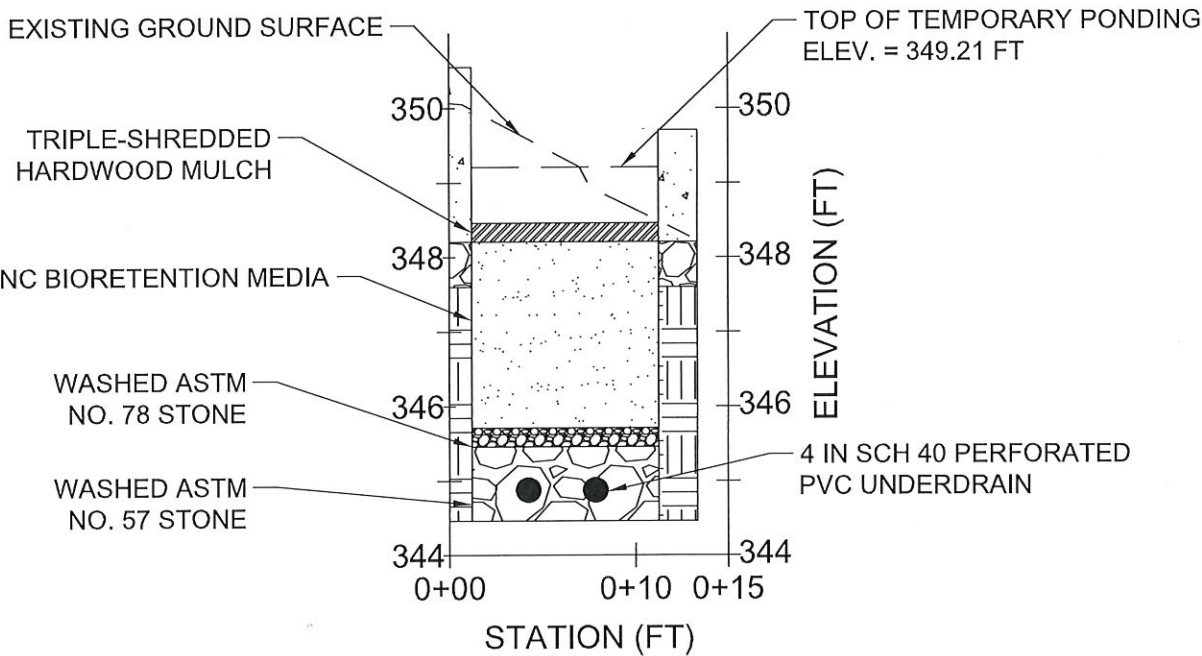


- SEE:
1. DETAIL A FOR IMPERMEABLE LINER
 2. DETAIL B FOR OUTLET STRUCTURE
 3. DETAIL C FOR CURB CUTS
 4. DETAIL D FOR CLEANOUTS
 5. DETAIL E FOR PERFORATIONS
 6. DETAIL F FOR INTERNAL WATER STORAGE (IWS)
 7. SHEET 5 FOR PLANTING PLAN

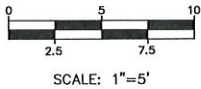


NOTE 4:1 VERTICAL EXAGGERATION

SECTION VIEW B-B

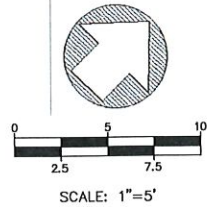


- SEE:
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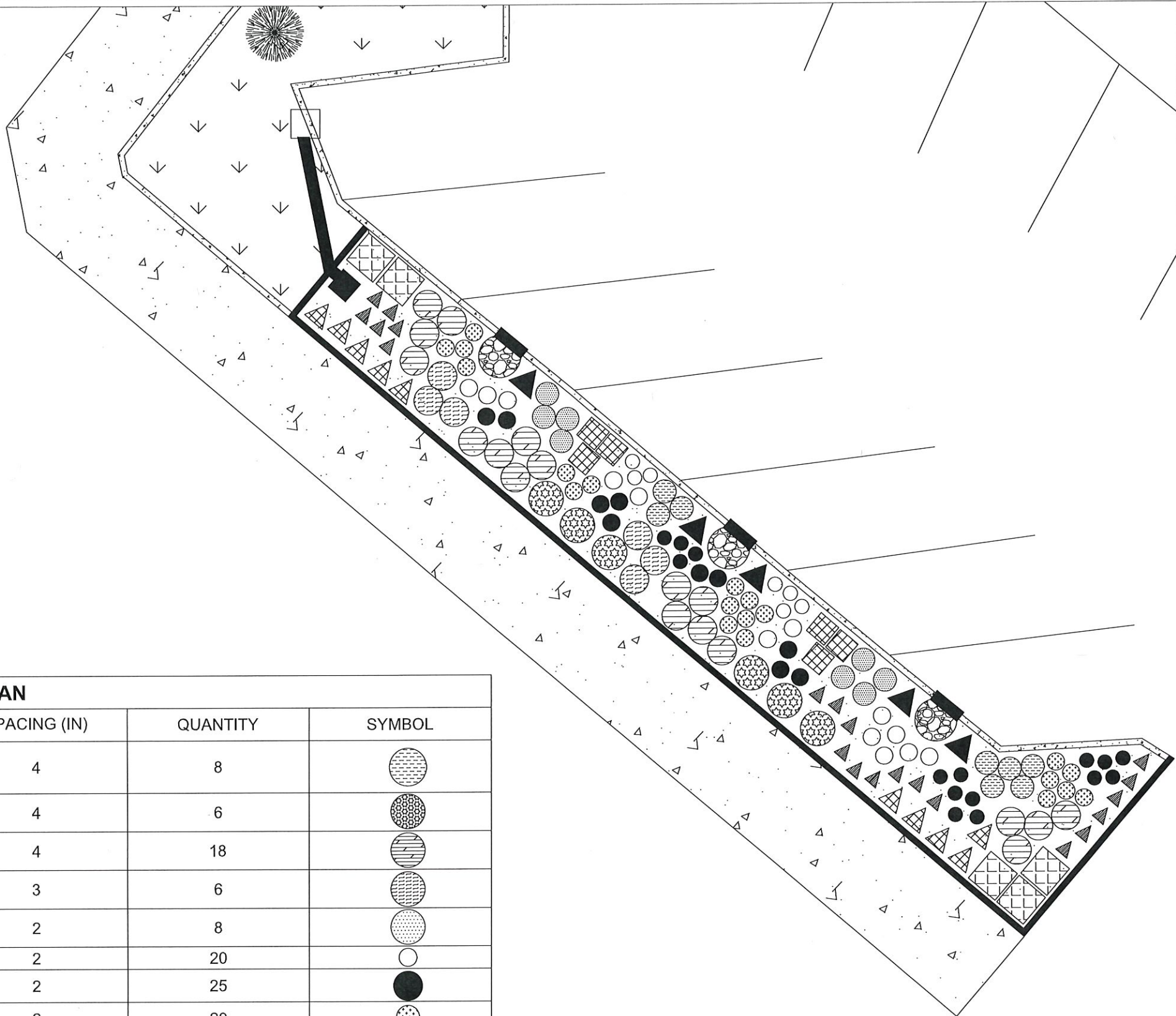


NOTE 4:1 VERTICAL EXAGGERATION

BIORETENTION ELEVATIONS AND DEPTHS		
FEATURE	ELEVATION (FT)	DEPTH (FT)
TOP OF CONCRETE WALL	349.71	-
TOP OF TEMPORARY PONDING	349.21	0.75
TOP OF TRIPLE-SHREDDED HARDWOOD MULCH	348.46	0.25
TOP OF NC BIORETENTION MEDIA	348.21	2.50
TOP OF SATURATED ZONE	346.88	2.50
TOP OF WASHED ASTM NO. 78 STONE	345.71	0.25
TOP OF WASHED ASTM NO. 57 STONE	345.46	1.00
4 IN SCH 40 PVC UNDERDRAIN INVERT	345.13	-
BIORETENTION BASE	344.46	-



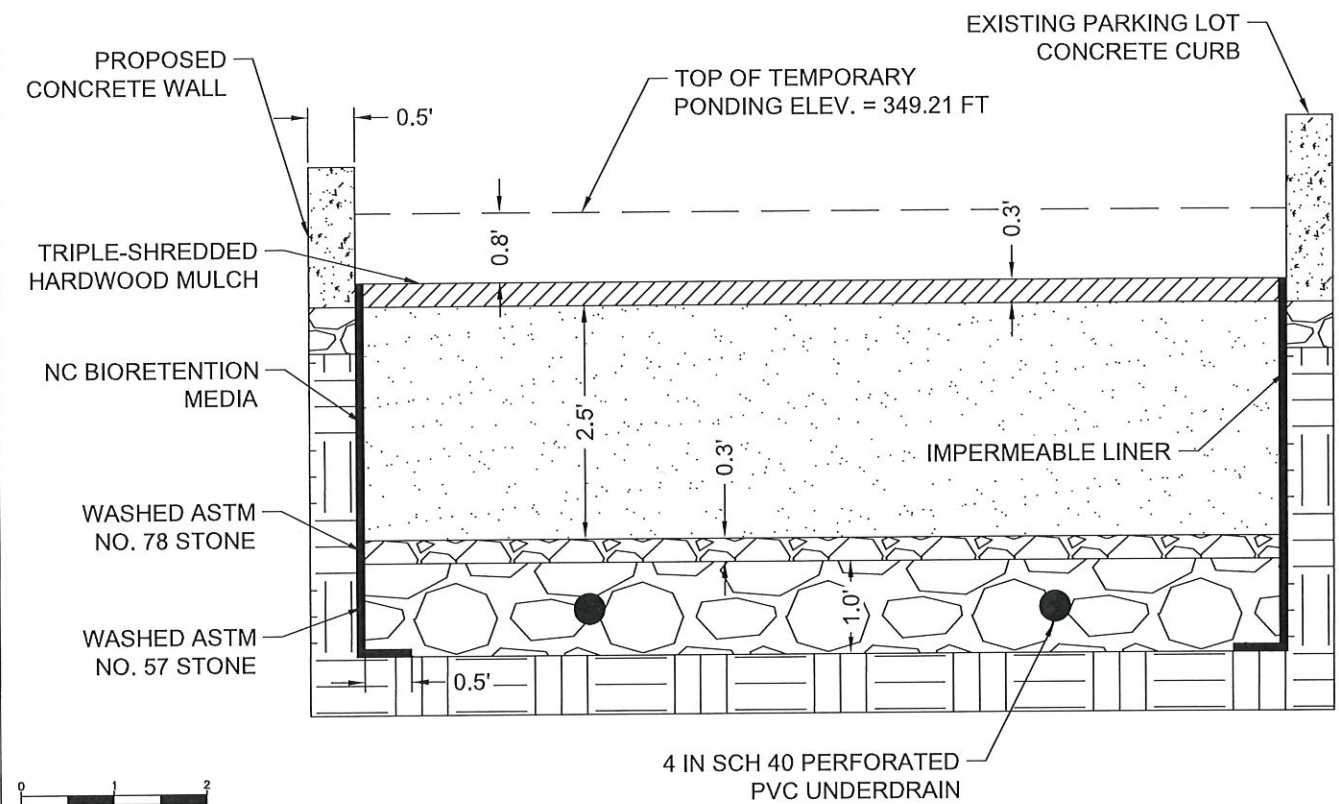
PLANTING PLAN



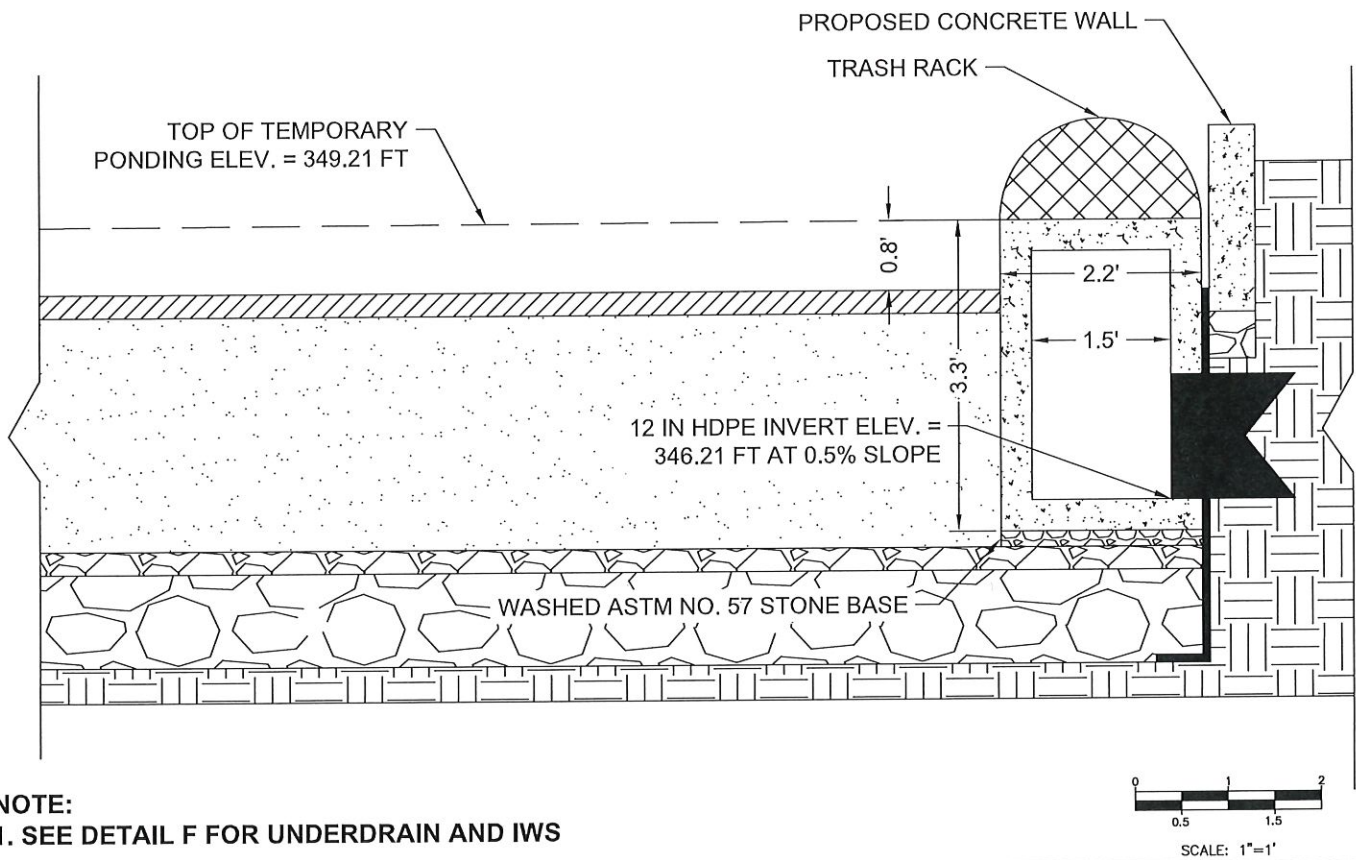
PLANTING PLAN					
SCIENTIFIC NAME	COMMON NAME	TYPE	SPACING (IN)	QUANTITY	SYMBOL
AMSONIA TABERNAEMONTANA	EASTERN BLUE STAR	PLUG	4	8	
EUTROCHIUM FISTULOSUM	JOE PYE WEED	PLUG	4	6	
HELIOPSIS HELIANTHOIDES	FALSE SUNFLOWER	PLUG	4	18	
HIBISCUS COCCINEUS	SCARLET ROSE MALLOW	PLUG	3	6	
IRIS VIRGINICA	SOUTHERN BLUE FLAG	PLUG	2	8	
LIATRIS SPICATA	BLAZING STAR	PLUG	2	20	
LOBELIA CARDINALIS	CARDINAL FLOWER	PLUG	2	25	
SAURURUS CERNUUS	LIZARD'S TAIL	PLUG	2	20	
ANDROPOGON GLOMERATUS	BUSHY BLUESTEM	PLUG	3	10	
JUNCUS EFFSUS	SOFT RUSH	PLUG	3	5	
SORGHASTRUM NUTANS	INDIAN GRASS	PLUG	2	21	
CAREX CRINITA	FRINGED SEDGE	PLUG	4	6	
CAREX MUSKINGUMENSIS	PALM SEDGE	PLUG	4	5	



DETAIL A: BIORETENTION CROSS-SECTION

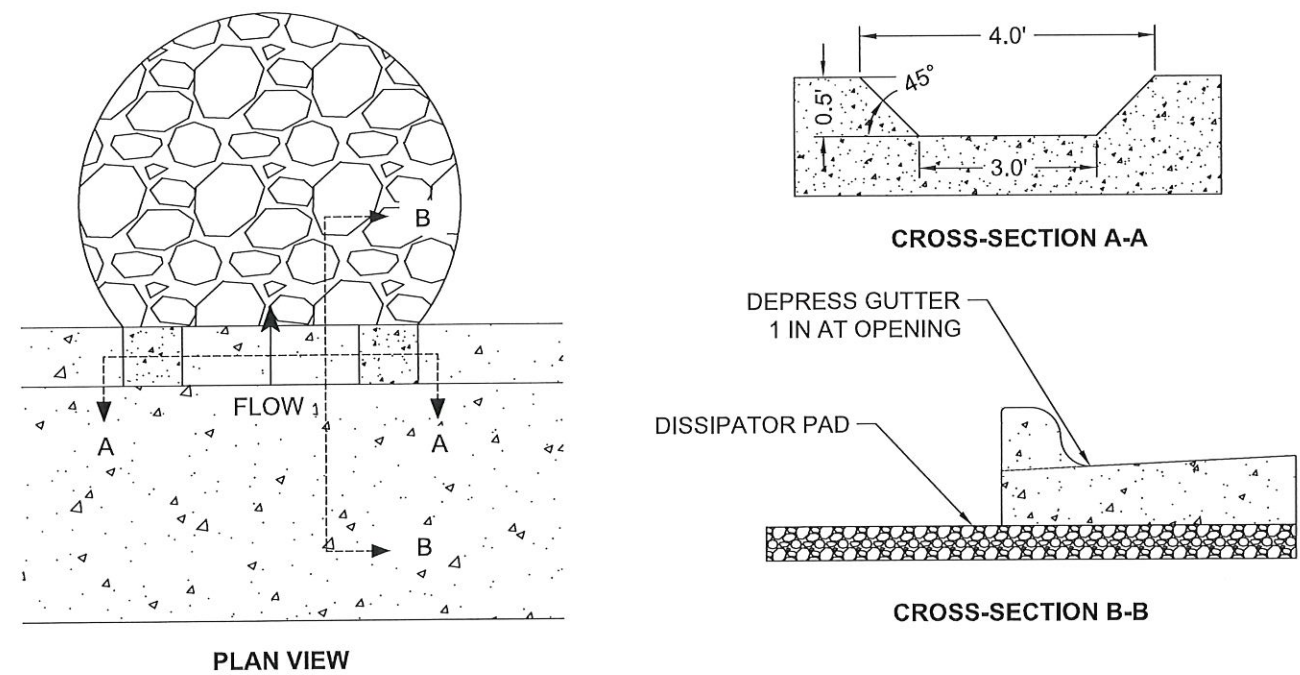


DETAIL B: OUTLET STRUCTURE



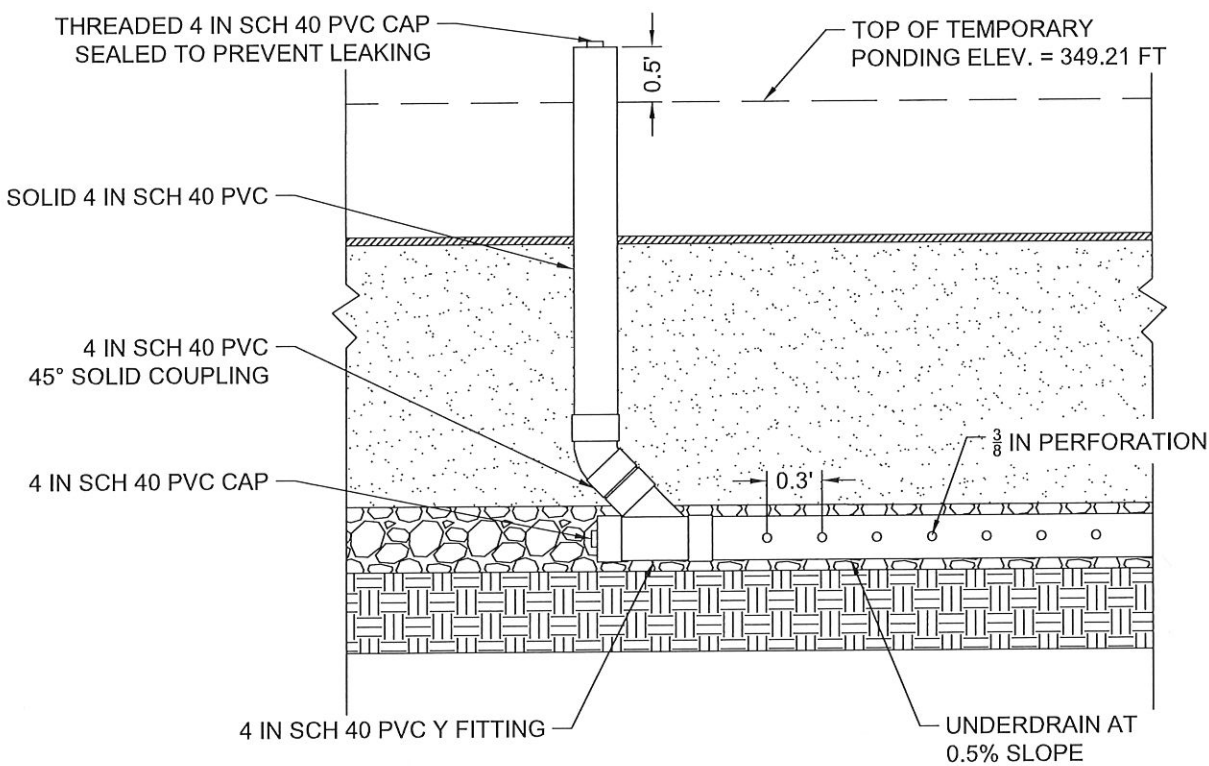
NOTE:
1. SEE DETAIL F FOR UNDERDRAIN AND IWS

DETAIL C: CURB CUT



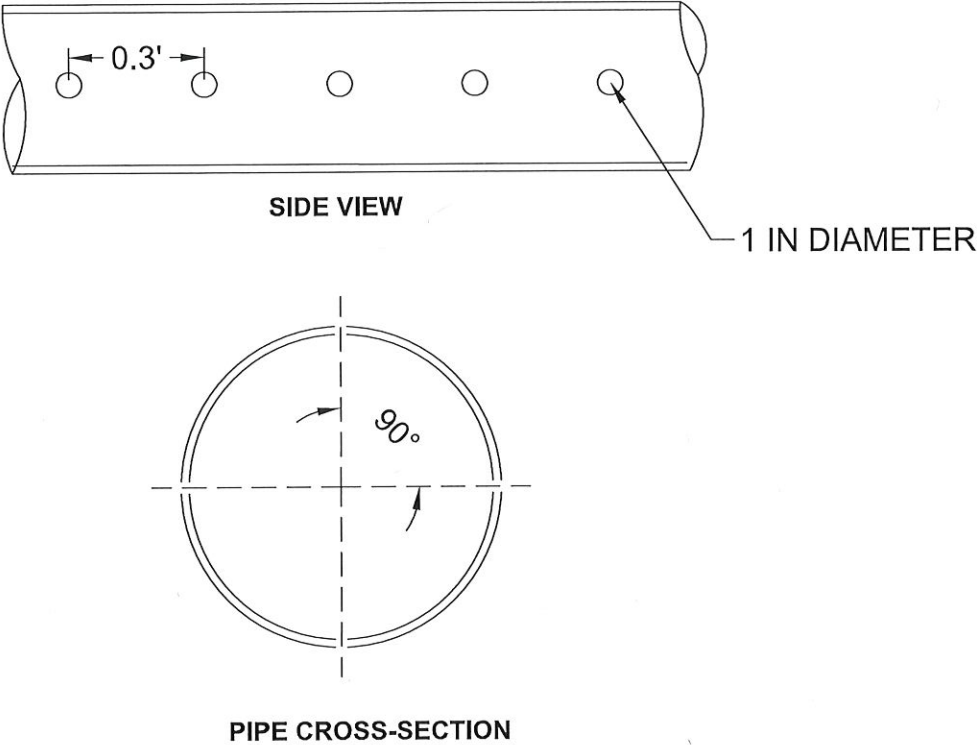
NOT TO SCALE

DETAIL D: UNDERDRAIN CLEANOUT



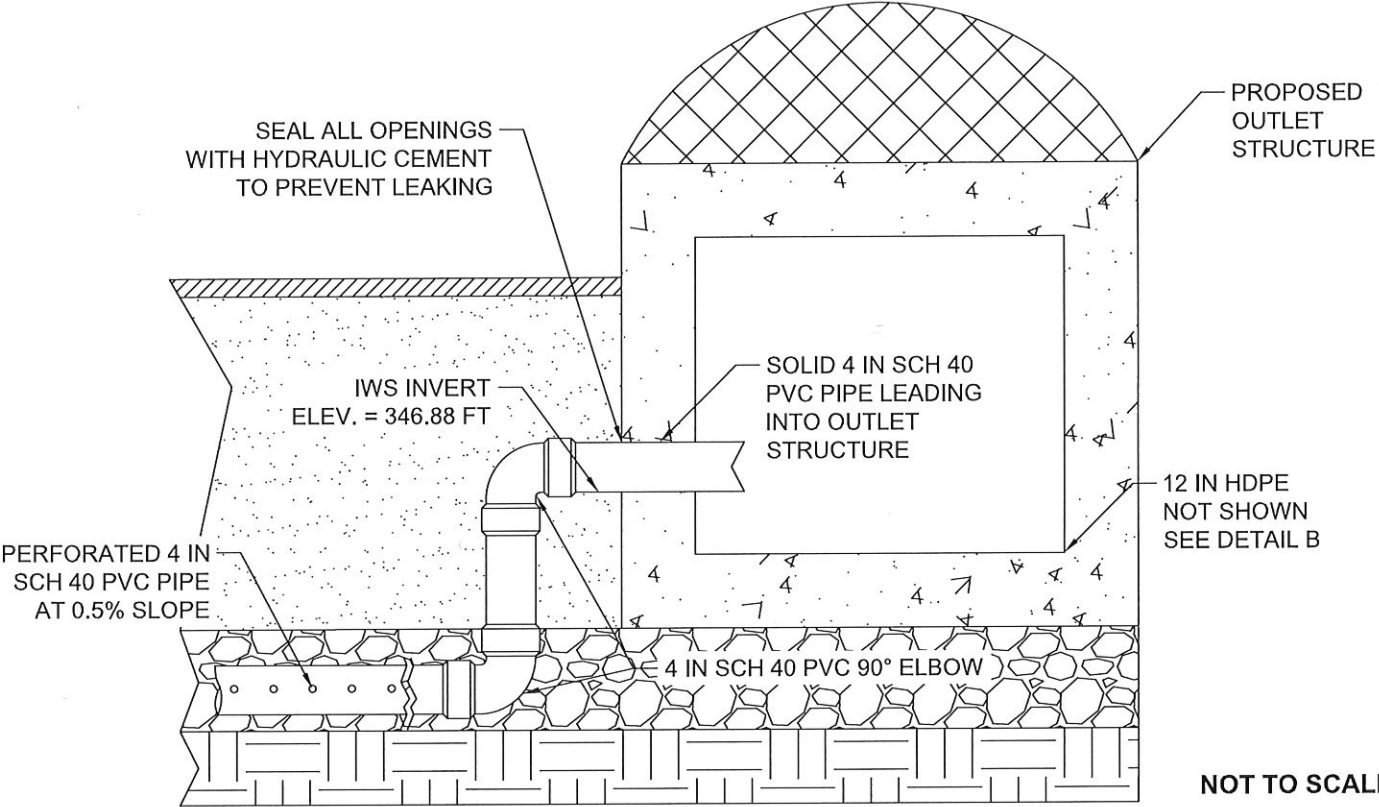
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DETAIL E: UNDERDRAIN PERFORATIONS

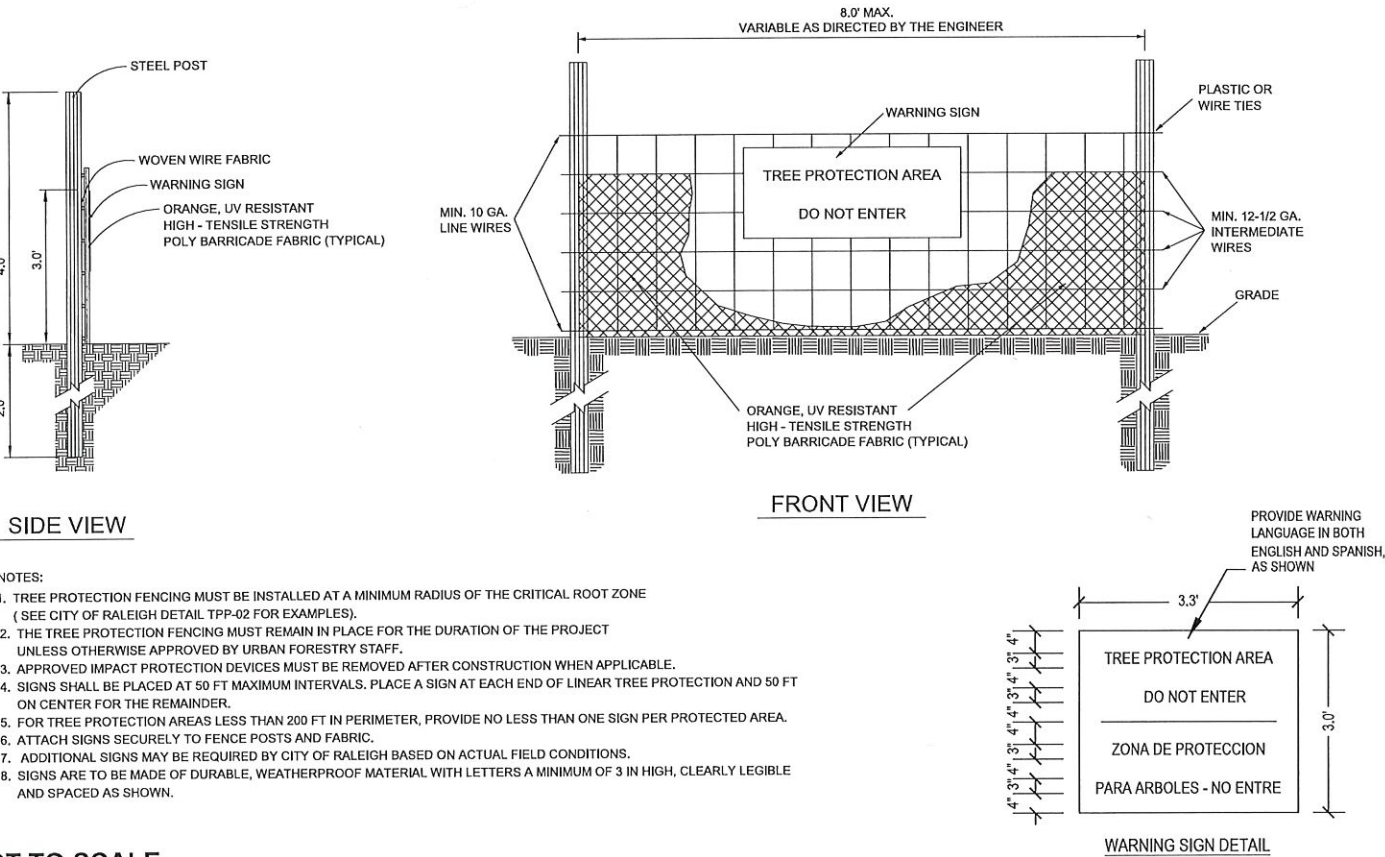


NOT TO SCALE

DETAIL F: INTERNAL WATER STORAGE (IWS)

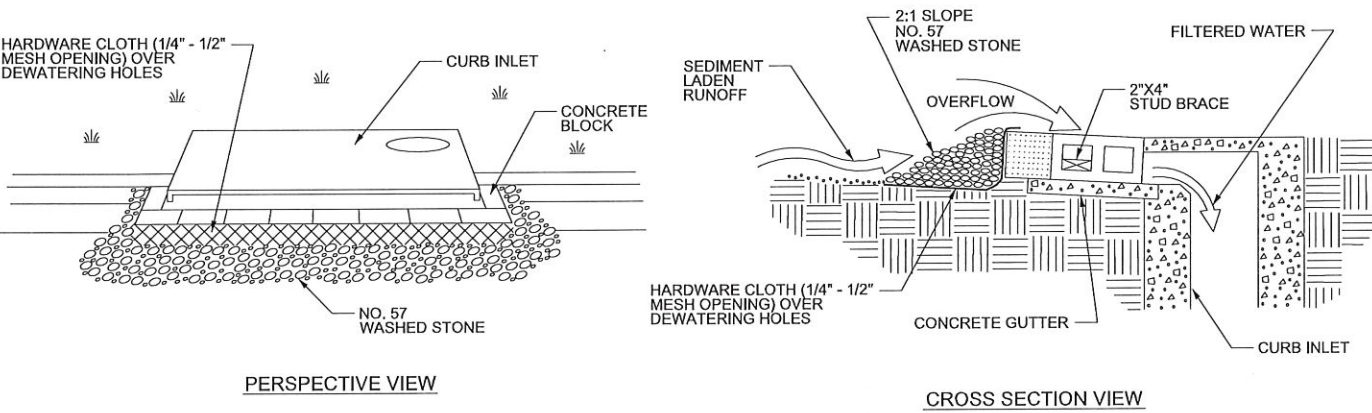


DETAIL G: TREE PROTECTION



NOT TO SCALE

DETAIL H: CURB INLET PROTECTION



- NOTES:**
1. TWO CONCRETE BLOCKS SHALL BE PLACED ON THEIR SIDES ABUTTING THE CURB AT EITHER SIDE OF THE INLET OPENING, A 2" X 4" STUD SHALL BE CUT AND PLACED THROUGH THE OUTER HOLES OF THE SPACER BLOCKS TO BRACE THE FRONT BLOCKS. FRONT BLOCKS ARE PLACED ON THEIR SIDES ACROSS THE INLET AND ABUTTING THE SPACER BLOCKS.
 2. WIRE MESH OR HARDWARE CLOTH WITH 1/4" - 1/2" OPENINGS SHALL BE PLACED OVER THE OUTSIDE VERTICAL FACE (WEBBING) OF THE BLOCKS, TO PREVENT STONE FROM BEING WASHED THROUGH THE HOLES IN THE BLOCKS.
 3. STONE SHALL BE PILED AGAINST THE WIRE TO THE TOP OF THE BLOCK. (NO. 57 WASHED STONE)
 4. CHECK DEVICE AFTER EACH RAIN AND REPLACE WASHED STONE IF IT CLOGS WITH SEDIMENT.

CONSTRUCTION NOTES

- A. CONTRACTOR SHALL CALL FOR A UTILITY LOCATE BEFORE BEGINNING ANY DIGGING. CONTRACTOR SHALL NOT ASSUME THAT UTILITIES ARE LOCATED WHERE SPECIFIED. CONTRACTOR IS RESPONSIBLE FOR ANY AND ALL DAMAGES THAT OCCUR DUE TO INTERFERENCE WITH UTILITIES. CONTRACTOR TAKES FULL RESPONSIBILITY FOR ALL LEGAL AND SAFETY REQUIREMENTS FOR UTILITIES.
- B. CONTRACTOR IS RESPONSIBLE FOR REMOVAL AND DISPOSAL OF ALL EXCESS EXCAVATED MATERIAL.
- C. CONTRACTOR MUST BE WILLING TO WORK WITH AND ACCEPT OVERSIGHT FROM LISTED PROJECT STAKEHOLDERS.
- D. CONTRACTOR IS RESPONSIBLE FOR ALL DAMAGES TO EXISTING INFRASTRUCTURE.
- E. CONTRACTOR SHALL USE EQUIPMENT WITH RUBBER TRACKS TO PREVENT DAMAGE TO EXISTING INFRASTRUCTURE.
- F. CONTRACTOR IS RESPONSIBLE FOR REMOVAL OF MATERIALS USED DURING CONSTRUCTION.
- G. CONTRACTOR IS RESPONSIBLE FOR REMOVING REFUSE FROM SITE AND RETURNING IT TO PRE-CONSTRUCTION AESTHETICS.
- H. CONTRACTOR IS RESPONSIBLE FOR TRAFFIC CONTROL AND SAFETY AND CLOSING OFF PARKING LOT TO STORE MATERIALS. CONTRACTOR SHALL PROVIDE TRAFFIC CONTROL PLAN TO ACCOMPLISH THIS.
- I. CONTRACTOR SHALL COORDINATE CONSTRUCTION TO ALLOW PEDESTRIAN ACCESS TO THE CHURCH OF THE GOOD SHEPHERD DURING BUSINESS HOURS. CONTRACTOR SHALL NOT PREVENT VEHICULAR AND PEDESTRIAN TRAFFIC ALONG S. MCDOWELL STREET AND W. MORGAN STREET. CONTRACTOR SHALL SUBMIT PLAN TO ACCOMPLISH THIS.
- J. CONTRACTOR SHALL INSTALL IMPERMEABLE LINER (30 MIL PVC ACF ENVIRONMENTAL OR EQUIVALENT) ACCORDING TO MANUFACTURER SPECIFICATIONS AND SUCH THAT SEEPAGE UNDERNEATH THE ROADWAY WILL NOT OCCUR.
- K. IMPERMEABLE LINER SHALL BE SECURED AT TOP OF TRIPLE-SHREDDED MULCH ELEVATION (348.26 FT) AND HAVE A 6 INCH TOE BENEATH THE WASHED ASTM NO. 57 STONE.
- L. CONTRACTOR SHALL REMOVE APPROXIMATELY 83.5 FT OF EXISTING CONCRETE CURB ALONG THE EXISTING CONCRETE SIDEWALK TO INSTALL THE PROPOSED CONCRETE WALL.
- M. CONTRACTOR SHALL USE 3500 PSI CONCRETE. CONTRACTOR SHALL USE WIRE REINFORCEMENT AND FOLLOW ALL APPLICABLE ASTM AND ACI STANDARDS.
- N. CONTRACTOR SHALL FOLLOW DETAIL E TO PERFORATE SCHEDULE 40 PVC UNDERDRAINS AND DRAINAGE PIPES.
- O. CONTRACTOR SHALL USE SOLID SECTIONS OF PIPE AND WATER TIGHT JOINTS WHEREVER THE UNDERDRAIN SYSTEM IS OUTSIDE OF THE BIORETENTION CELL FOOTPRINT.
- P. CONTRACTOR IS RESPONSIBLE FOR SEALING ALL CONCRETE OPENINGS WITH HYDRAULIC CEMENT.
- Q. CONTRACTOR SHALL INCLUDE A UTILITY TRACE WIRE FOR ALL UNDERDRAIN PIPING OUTSIDE OF THE BIORETENTION FOOTPRINT.
- R. CONTRACTOR SHALL INCLUDE FOUR (4) SCHEDULE 40 PVC CLEANOUTS FOR UNDERDRAINS IN BIORETENTION CELL AND CAP ALL UNDERDRAIN CLEANOUTS AND ANY UNDERDRAIN ENDS NOT IN SERVICE. UNDERDRAINS SHALL HAVE A MINIMUM SLOPE OF 0.5% UNLESS OTHERWISE STATED IN DESIGN PLANS.
- S. PIPE FILTER SOCKS SHALL NOT BE USED FOR THE CONSTRUCTION OF THIS PROJECT.
- T. ALL AGGREGATE SHALL BE WASHED BEFORE INSTALLATION AS NOTED ON PLANS. ANY AGGREGATE THAT IS NOT WASHED WHERE NOTED ON PLANS SHALL BE REJECTED BY THE ENGINEER ON SITE DURING INSTALLATION.
- U. CONTRACTOR SHALL SCARIFY IN-SITU SOIL UNDERNEATH BIORETENTION FOOTPRINT.
- V. CONTRACTOR SHALL INCLUDE SUPPLIER BIORETENTION MEDIA SPECIFICATIONS AND P-INDEX ON LOAD TICKET AND WILL PROVIDE LOAD TICKET TO PROJECT STAKEHOLDERS DURING INSTALLATION.
- W. CONTRACTOR IS RESPONSIBLE FOR STORING AND KEEPING BIORETENTION MEDIA AND AGGREGATE FREE OF DEBRIS, FINES, AND SEDIMENT.
- X. BIORETENTION MEDIA SHALL BE INSTALLED IN 8 INCH LIFTS USING SHOVELS OR EXCAVATOR BUCKET. CONTRACTOR SHALL NOT COMPACT MEDIA.
- Y. CONTRACTOR SHALL ENSURE PERMEABILITY OF INSTALLED BIORETENTION MEDIA IS AT LEAST 1 TO 2 INCHES PER HOUR. DOCUMENTATION OF PERMEABILITY SHALL BE PROVIDED TO PROJECT STAKEHOLDERS.
- Z. BIORETENTION MEDIA MUST BE PROTECTED FROM FINE SEDIMENTS ONCE IT HAS BEEN PLACED.
- AA. BIORETENTION MEDIA SHALL FOLLOW STATE OF NORTH CAROLINA BIORETENTION MEDIA SPECIFICATIONS, CONSISTING OF:
- AA.A. 75-85% MEDIUM TO COARSE WASHED SAND (ASTM C33, AASHTO M 6/M 80, ASTM C330, AASHTO M195 OR EQUIVALENT),
- AA.B. 8-15% "FINES" (SILT AND CLAY; CLAY),
- AA.C. 5-10% STABILIZED PINE BARK-BASED ORGANIC MATTER, AND
- AA.D. A PHOSPHORUS INDEX (P-INDEX) RANGING FROM 10-30 (EQUIVALENT TO TOTAL PHOSPHORUS CONTENT OF 10-36 PARTS PER MILLION).

ESTIMATED CONSTRUCTION QUANTITIES

ITEM	QUANTITY	UNITS	NOTES
CONCRETE	115	LF	FOR BIORETENTION CELL SEE PAGE 3
CONCRETE CURB REMOVAL	83.5	LF	REMOVING EXISTING CONCRETE CURB ALONG EXISTING CONCRETE SIDEWALK SEE PAGE 2
EXCAVATION	168	CY	168 CY CUT 0 FILL; SEE PAGE 4
IMPERMEABLE LINER	116	LF	58 SY; 30 MIL PVC ACF ENVIRONMENTAL OR EQUIVALENT; FOR BIORETENTION CELL SEE DETAIL A PAGE 6
TRIPLE-SHREDDED HARDWOOD MULCH	8.3	CY	FOR BIORETENTION CELL SEE DETAIL A PAGE 6
WASHED ASTM NO. 78 STONE	12.2	TN	8.3 CY; FOR BIORETENTION CELL SEE DETAIL A PAGE 6
WASHED ASTM NO. 57 STONE	49	TN	33.2 CY; FOR BIORETENTION CELL SEE DETAIL A PAGE 6
NC BIORETENTION MEDIA	83	CY	FOR BIORETENTION CELL SEE DETAIL A PAGE 6
PERFORATED 4 IN SCH 40 PVC	154	LF	FOR UNDERDRAINS SEE PAGE 3
NON-PERFORATED 4 IN SCH 40 PVC	26	LF	FOR UNDERDRAIN SYSTEMS; SEE PAGE 3, DETAIL D PAGE 6, AND DETAIL F PAGE 7
4 IN SCH 40 PVC THREADED CAP	4	EA	FOR UNDERDRAIN CLEANOUTS; SEE DETAIL D PAGE 6
4 IN SCH 40 PVC CAP	4	EA	FOR UNDERDRAIN CLEANOUTS; SEE DETAIL D PAGE 6
4 IN SCH 40 PVC 45° COUPLING	4	EA	FOR UNDERDRAIN CLEANOUTS; SEE DETAIL D PAGE 6
4 IN SCH 40 PVC 90° ELBOW	2	EA	FOR UNDERDRAIN INTERNAL WATER STORAGE (IWS); SEE DETAIL F PAGE 7
4 IN SCH 40 PVC TEE	3	EA	FOR UNDERDRAIN; SEE PAGE 3
12 IN HDPE	13	LF	FOR OUTLET STRUCTURE; SEE PAGE 3
OLDCASTLE INFRASTRUCTURE 2.2 FT X 2.2 FT JUNCTION BOX (MODEL: JB-1818)	1	EA	40 IN (ITEM #1201660) OR EQUIVALENT
POMONA PIPE SUPPLY TRASH RACK	1	EA	STANDARD ALUM BAR AND ANGLE PEAKED ROOF TRASH RACK WITH ONE QUADRANT HINGED FOR MANWAY ACCESS OR EQUIVALENT
PLANTS	158	PLUGS	SEE PAGE 5; CONTRACTOR IS NOT RESPONSIBLE FOR PLANTS
ANTI-SKATE DEVICE	14	EA	SEE PAGE 3
WASHED RIVER ROCK	0.2	TN	5 CF; PA RIVER JACKS OR EQUIVALENT; 2 IN THICKNESS; FOR CURB CUTS SEE DETAIL C PAGE 7
TREE PROTECTION	4	EA	FOR EXISTING TREES ALONG CONCRETE SIDEWALK; CITY OF RALEIGH STANDARD TPP-01; SEE DETAIL G PAGE 7
CATCH BASIN PROTECTION	1	EA	FOR EXISTING CATCH BASIN IN PARKING LOT; CITY OF RALEIGH STANDARD SW-20.26; SEE DETAIL H PAGE 8

*NOTE THESE QUANTITIES ARE THE ENGINEER'S ESTIMATE. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO DETERMINE AND VERIFY ALL BID QUANTITIES.

GOOD SHEPHERD BIORETENTION
125 HILLSBOROUGH STREET
RALEIGH, NC 27603

DESIGN PLANS

QTY AND NOTES
8 OF 8

NCSU BAE
WEAVER ADMIN. BLD.
3100 FAUCETT DRIVE
RALEIGH, NC 27695
919-515-8603

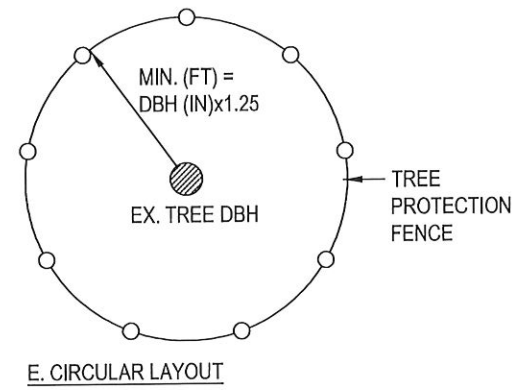
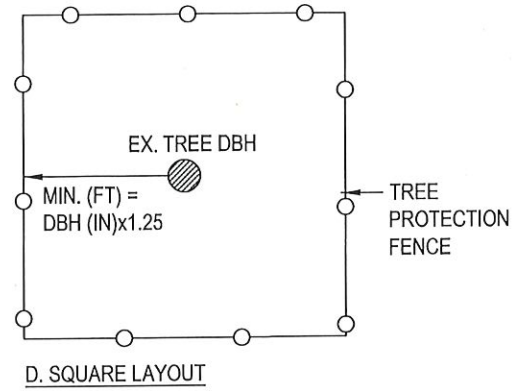
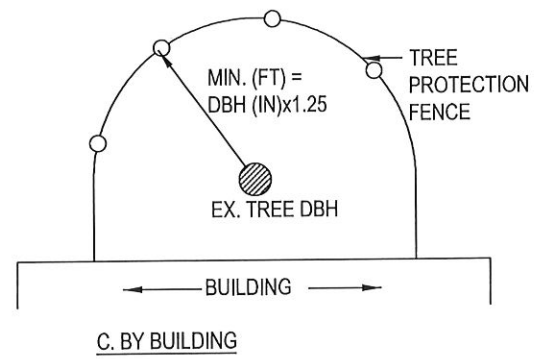
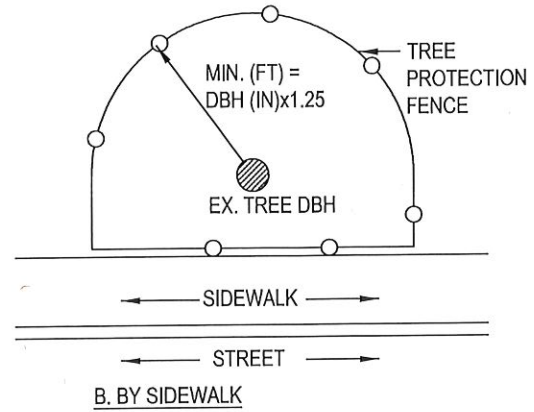
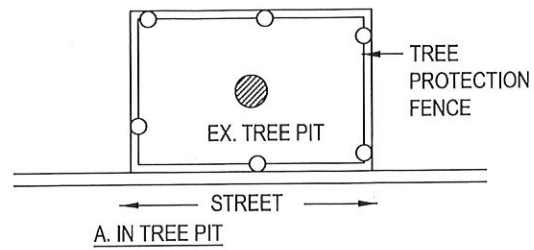
NC STATE
UNIVERSITY



The Church of the
Good Shepherd

PROJECT NAME :	GOOD SHEPHERD
DESIGN :	AS NOTED
CHECK :	SCALE :
APPROVED :	DATE :

PROJECT #
PHASE #



CONTACT INFORMATION:
CITY OF RALEIGH PARKS, RECREATION AND
CULTURAL RESOURCES DEPARTMENT
URBAN FORESTER: TREES@RALEIGHNC.GOV
WWW.RALEIGHNC.GOV

NOTES:

1. CONTRACTOR MUST PROVIDE AND INSTALL TREE PROTECTION SIGNAGE.
2. A TREE IMPACT PERMIT IS REQUIRED PRIOR TO INITIATION OF CONSTRUCTION IF ANY TREES ON CITY PROPERTY ARE TO BE IMPACTED BY PRUNING, TRENCHING, BORING, REMOVAL, PAVING, PLANTING, ETC.

CITY OF RALEIGH STANDARD DETAIL		
REVISIONS	DATE: 8/1/18	NOT TO SCALE
	TREE PROTECTION FENCE LAYOUT	
	TPP-02	

Robb, Melissa

From: Nancy Daly <Nancy.Daly@wakegov.com>
Sent: Sunday, September 22, 2019 6:44 PM
To: Robb, Melissa
Cc: Kinane, Collette; Tully, Tania; Jan Harris
Subject: Signage Examples
Attachments: Oakview Sign_SignframeEx.jpg; 12000RG_EdSignEx_RGMicro2.jpg; CGS RainGarden_EdSignLocation.pdf

CAUTION: This email originated from outside of the organization. Do not click links or open attachments unless you verify that the attachment and content are safe. If you believe this email is suspicious, please click the 'Phish Alert' link in the banner to report this message.

Melissa,
The attachments include the following:

- An example of the Sign frame (Oakview Sign). This will be installed at the corner of Morgan and McDowell St. This was chosen due to its documented success in holding up against various weather conditions and can be easily cleaned.
- A copy of the existing design plan that includes the proposed location for signage.
- The template we anticipate using for the design (12000RG_EdSignEx). This project is intended to provide educational benefit. We will update language with our applicable project partners and waterways.

We are planning for an 18x24 sign.

Let me know if you need additional information.

Thank you,
Nancy

Nancy N. Daly
Water Resources Manager
Wake County Government
Environmental Services- Water Quality Division
Nancy.Daly@wakegov.com
919.856.2641 office | 919.594.4185 mobile | 919.743.4772 fax
336 Fayetteville St., PO Box 550, Raleigh, NC 27602
wakegov.com



Welcome to Our Rain Garden

A NATURAL FILTER

Rain gardens reduce polluted runoff while beautifying your yard. They are simple to install, and feature well-draining soil and easy-to-maintain plants that slow and filter water from roofs or roads. Rain gardens help keep water clean all the way to Puget Sound.

RAIN GARDEN BENEFITS

- ✓ Beautify the neighborhood
- ✓ Prevent flooding
- ✓ Fight pollution



THE ALTERNATIVE

Without a rain garden, runoff picks up oil and other pollutants from streets and sidewalks. It flows into Puget Sound and endangers fish and wildlife.



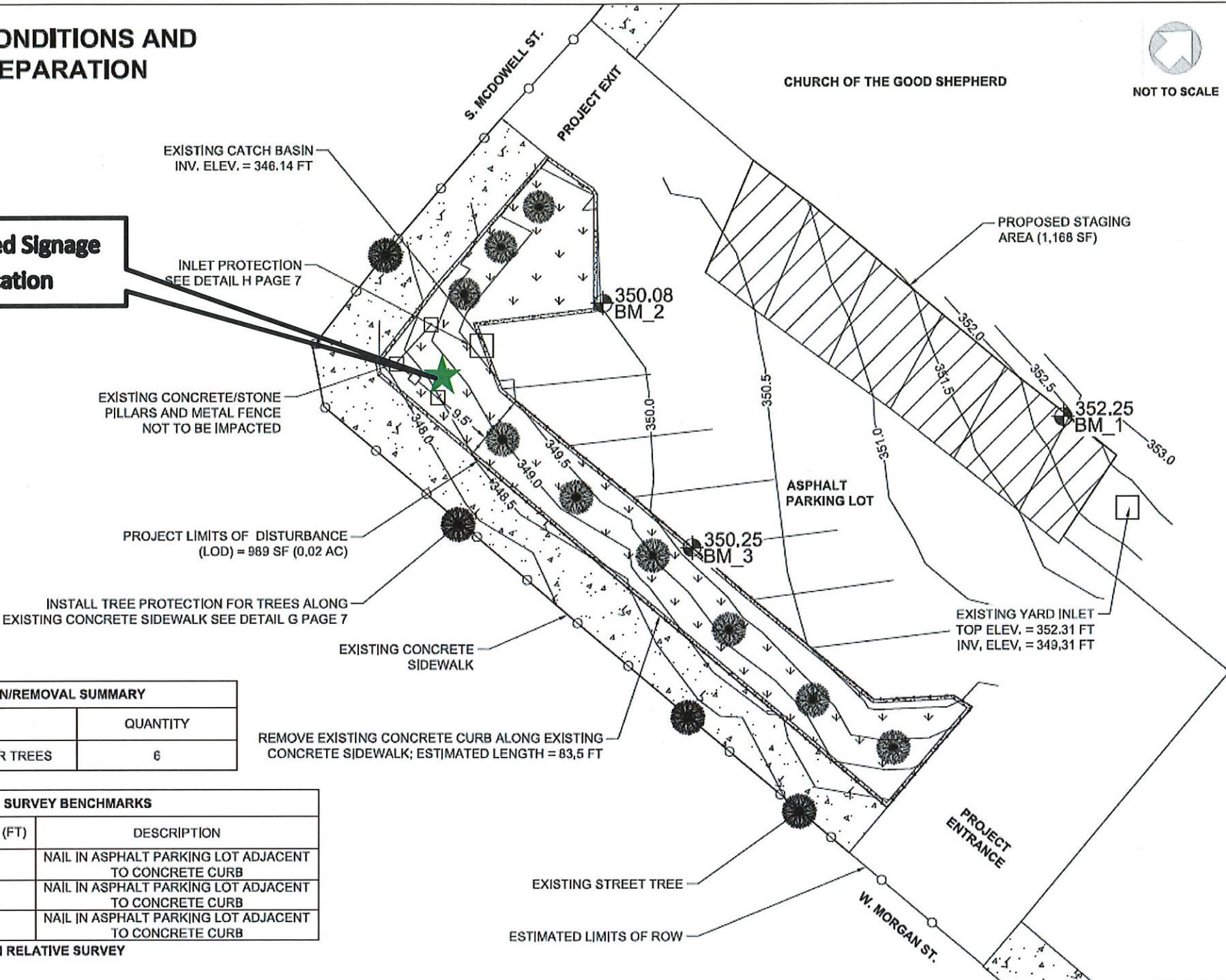
For more information go to: www.12000raingardens.org

Graphics courtesy of Kitsap County and the Washington Department of Ecology

12,000
RAIN GARDENS
in Puget Sound

EXISTING CONDITIONS AND
SITE PREPARATION

Proposed Signage
Location



NOT TO SCALE

DEMOLITION/REMOVAL SUMMARY	
ITEM	QUANTITY
4 TO 6 INCH DIAMETER TREES	6

SURVEY BENCHMARKS		
POINT	ELEVATION (FT)	DESCRIPTION
BM_1	352.25	NAIL IN ASPHALT PARKING LOT ADJACENT TO CONCRETE CURB
BM_2	350.08	NAIL IN ASPHALT PARKING LOT ADJACENT TO CONCRETE CURB
BM_3	350.25	NAIL IN ASPHALT PARKING LOT ADJACENT TO CONCRETE CURB

NOTE: ELEVATIONS FROM RELATIVE SURVEY

GOOD SHEPHERD BAPTIST CHURCH
125 HILLSBOROUGH STREET
RALEIGH, NC 27603
DESIGN PLANS
DATE: 01/15/2024
PAGE: 2 OF 5

NC STATE UNIVERSITY

WAKE COUNTY

Good Shepherd

PROJECT #
PHASE #