



Mayor and City Council Regular Meeting

Thursday, July 07, 2022 at 7:00 PM

Dacula City Hall, Council Chambers

442 Harbins Rd. | P.O. Box 400 | Dacula, Georgia 30019 | (770) 963-7451

Agenda

CALL TO ORDER AND ROLL CALL OF MEMBERS:

INVOCATION:

PLEDGE OF ALLEGIANCE:

CONSENT AGENDA:

1. Approval of the Minutes from the Regular Council Meeting on June 2, 2022
2. Approval of the Minutes from the First Millage Rate Public Hearing on June 20, 2022 at 10:00 a.m.
3. Approval of the Minutes from the Second Millage Rate Public Hearing on June 20, 2022 at 5:00 p.m.
4. Maple Creek Park Light Updates
5. Official Acceptance of Annexation Application: 2022-CD-AA-02
6. Bid package for Maple Creek Park improvements
7. Bid package for McMillan Road stormwater improvement project
8. SPLOST IGA
9. Sanitation Residential Rate
10. Resolution regarding the abandonment and sale of certain vehicles, equipment, and other personal property

OLD BUSINESS:

NEW BUSINESS:

11. Adoption of the 2022 Millage Rate
12. PUBLIC HEARING: 2022-CD-VAR-03, Applicant: Gina Givens, Owner: Claude Givens Builders Inc. requests a variance to reduce the minimum lot size. The property is located in Land Lot 309, Parcel 209 of the 5th District and contains 0.62 acres more or less.
13. Variance Application: 2022-CD-VAR-03, Applicant: Gina Givens, Owner: Claude Givens Builders Inc. requests a variance to reduce the minimum lot size. The property is located in Land Lot 309, Parcel 209 of the 5th District and contains 0.62 acres more or less.

STAFF COMMENTS:

MAYOR AND COUNCIL COMMENT(S):

PUBLIC COMMENTS:

ADJOURNMENT:

CITY OF DACULA
442 Harbins Rd
P. O. Box 400
Dacula, GA, 30019

COUNCIL MEETING
MINUTES
June 2, 2022

I. CALL TO ORDER AND ROLL CALL OF MEMBERS:

Mayor Trey King called the June 2, 2022 Council Meeting to order at 7:00 p.m. and roll of the members was taken. A quorum was present. He welcomed everyone to the meeting.

City Council Present:

Trey King, Mayor
Sean Williams, Council
Daniel Spain, Council
Denis W. Haynes, Jr., Council

Absent – Ann Mitchell, Council

City Staff Present

Heather Coggins, Acting City Administrator
Jack Wilson, City Attorney
Brittini Nix, Director of Planning & Economic Development
Courtney Mahady, Administrative Clerk
Chris Parks, Public Works Supervisor
Dana Stump, Administrative Assistant for Planning & Zoning
Amy Morris, Accounts Payable
Amy White, City Marshal

II. INVOCATION:

Invocation was given by Pastor Mark Chandler.

III. PLEDGE OF ALLEGIANCE:

Mayor King led the Pledge of Allegiance

IV. CONSENT AGENDA:

1. Approval of the Minutes from the Regular Council Meeting on May 5, 2022
2. Juneteenth Holiday Request
3. Official Acceptance of Annexation Application: 2022-CD-AA-01
4. Bid results for 2nd Avenue & Broad Street drainage improvements
5. Ordinance to amend the Buffer, Landscape, & Tree Ordinance

City of Dacula
Meeting Minutes
June 2, 2022
Page Two

6. Purchasing Policy for City of Dacula
7. Ordinance to amend Chapter 20 - Purchasing Ordinance

Councilman Williams motioned to approve the Consent Agenda items. Councilman Haynes, Jr. seconded. Motion passed unanimously.

V. OLD BUSINESS:

None

VI. NEW BUSINESS:

None

VII. STAFF COMMENTS:

Acting City Administrator, Heather Coggins, announced the first day of Millage Rate Public Hearings to be held on June 20, 2022 at 10:00 a.m. and 5:00 p.m. Ms. Coggins stated that the dates of the Public Hearings would be advertised in the paper and anyone is welcome to attend.

Marshal Amy White announced that the Memorial Day Parade was successful and thanked the Gwinnett County Police department for their help. Marshal White stated that after meeting with the parade coordinator, Marvin Atherton, next year the parade route will be different. This change will prevent continual exiting issues.

VIII. MAYOR AND COUNCIL COMMENT(S):

Councilman Haynes, Jr. agreed that the parade went really well and enjoys going every year.

IX. PUBLIC COMMENTS:

None

X. ADJOURNMENT:

Councilman Haynes, Jr. motioned to adjourn. Councilman Spain seconded. Motion passed unanimously. Meeting adjourned at 7:12 p.m.

Minutes approved

Date

Signature

CITY OF DACULA
First Public Hearing – 2022 Dacula Millage Rate
Minutes
June 20, 2022
10:00 a.m.

442 Harbins Rd
P.O. Box 400
Dacula, GA 30019

I. CALL TO ORDER AND ROLL CALL OF MEMBERS:

Mayor Trey King called the first public hearing of the 2022 proposed millage rate to order on June 20, 2022 at 10:01 a.m. A roll of the members was taken. A quorum was present. Mayor King welcomed everyone to the meeting.

City Council Present:

Trey King, Mayor
 Sean Williams, Council
 Daniel Spain, Council
 Ann Mitchell, Council
 Denis W. Haynes, Jr., Council

City Staff Present:

Heather Coggins, Acting City Administrator
 Courtney Mahady, Administrative Clerk
 Dana Stump, Administrative Assistant for Planning & Zoning
 Lisa Hyman, City Tax Clerk
 Greg Chapel, City Marshal

II. NEW BUSINESS:

1. Presentation of Proposed 2022 Millage Rate

Acting City Administrator, Heather Coggins, presented a PowerPoint to the Mayor and Council regarding the creation of the PT32.1 form. Ms. Coggins also advised the millage rate will remain the same at 4.806 mills.

2. Public Hearing on Proposed 2022 Millage Rate

Mayor King called for a motion to open the public hearing.

Councilwoman Mitchell motioned to open the public hearing. Councilman Haynes, Jr. seconded. Motion passed unanimously.

No public comments

City of Dacula
Meeting Minutes
June 20, 2022
Page Two

Mayor King called for a motion to close the public hearing.

Councilman Williams motioned to close the public hearing. Councilman Spain seconded. Motion passed unanimously.

III. ADJOURNMENT:

Councilman Haynes, Jr. motioned to adjourn. Councilwoman Mitchel seconded. Motion passed unanimously. Meeting adjourned at 10:21 a.m.

Minutes approved _____
Date

Signature

CITY OF DACULA
Second Public Hearing – 2022 Dacula Millage Rate
Minutes
June 20, 2022
5:00 p.m.

442 Harbins Rd
P.O. Box 400
Dacula, GA 30019

I. CALL TO ORDER AND ROLL CALL OF MEMBERS:

Mayor Trey King called the second public hearing of the 2022 proposed millage rate to order on June 20, 2022 at 5:01 p.m. A roll of the members was taken. A quorum was present. Mayor King welcomed everyone to the meeting.

Council Members Present:

Trey King, Mayor
Sean Williams, Council
Daniel Spain, Council
Ann Mitchell, Council
Denis W. Haynes, Jr., Council

City Staff Present:

Heather Coggins, Acting City Administrator
Courtney Mahady, Administrative Assistant
Dana Stump, Administrative Assistant for Planning & Zoning
Lisa Hyman, City Tax Clerk
Greg Chapel, City Marshal

II. NEW BUSINESS:

1. Presentation of Proposed 2022 Millage Rate

Acting City Administrator, Heather Coggins, presented a PowerPoint to the Mayor and Council regarding the creation of the 5-year history of levy, real property digest and appeals process.

2. Public Hearing on Proposed 2022 Millage Rate

Mayor King called for a motion to open the public hearing.

Councilman Spain motioned to open the public hearing. Councilwoman Mitchell seconded. Motion passed unanimously.

No public comments

City of Dacula
Meeting Minutes
June 20, 2022
Page Two

Mayor King called for a motion to close the public hearing.

Councilman Williams motioned to close the public hearing. Councilman Haynes, Jr. seconded. Motion passed unanimously.

ADJOURNMENT:

Councilman Haynes, Jr. motioned to adjourn. Councilman Williams seconded. Motion passed unanimously. Meeting adjourned at 5:33 p.m.

Minutes approved _____
Date

Signature

CITY OF DACULA AGENDA REQUEST

Item 4.

Department:	Maintenance	Date Submitted:	6/27/2022
Worksession:	7/7/2022	Regular Meeting:	7/7/2022
Submitted by:	Chris Parks	Public Hearing:	
Agenda Type	Approval	Multiple Depts?	
Item of Business:			
to replace and fix the street lights in Maple Creek Park. The premium option is to install LED lighting that would last up to 4-5 years. The standard option is to keep everything the same, yet it would require more maintenance.			
Attachments	Quote		
Authorization: Mayor's Signature No			
Staff Recommendation	Approval		
Action:			
Department Head			
Attorney:			
Agenda Purpose Only			

Financial Action

Budgeted	Fund Name	Current Balance	Requested Allocation	Director's Initials
Finance Comments				FinDir's Initials

City Clerk Use Only

Worksession	<input type="text"/>	Vote	<div style="border: 1px solid black; height: 100px; width: 100%;"></div>
Action	<input type="text"/>		
Tabled	<input type="text"/>		
Motion	<input type="text"/>		
2 nd by	<input type="text"/>		



Electrical Pros

6562 GA-53 Suite A, Braselton, Ga 30517
7708222150 | info@electricalpros.com | http://www.electricalpros.com

Item 4.

Quote #403

RECIPIENT:

City of Dacula

Maple Creek Park, 425 McMilian Road
, Dacula, GA 30019

Sent on

Jun 23, 2022

PRODUCT / SERVICE	DESCRIPTION	UNIT PRICE
System Observations	Old style Parking Lot Lighting fixtures. The parts to repair the fixtures are becoming harder and harder to purchase. The older style 250 watt design is being phased out. This type ballast and bulb have quite a bit shorter life span than LED fixtures. Ballast cost if we can find them is \$125.00 each. Bulb cost is 25.00ea. Due to covid and inflation lighting fixture and parts have gone up in price.	\$0.00
Premium Option	Replace 11 Parking Lot lighting fixtures, with new LED Parking Lot Lighting fixtures. Rework the wiring at each Pole to accomodate new LED Lighting Fixtures.	\$10,155.80
Standard Option	Replace 11 ballasts and bulbs to each Pole. Rework wiring in each fixture.	\$7,210.00

thank you! We appreciate your business!

This quote is valid for the next 30 days, after which values may be subject to change.

TO: Mayor and City Council of the City of Dacula
FROM: Brittni Nix, Director of Planning and Economic Development
DATE: June 7, 2022
SUBJECT: Official Acceptance of Annexation Application
ANNEXATION: 2022-CD-AA-02

The Department of Planning & Development is in receipt of a complete application for property annexation into the City of Dacula. Article 36, Section 36 of the Official Code of Georgia requires that the annexation be officially accepted by the Mayor and City Council before any further action can be taken on said application. City staff recommends that the subject application be accepted.

Please Note: Only acceptance of the application is being considered. No part of the proposed annexation is/can be approved with the recommended motion.

Best Regards,

Brittni Nix, Director of Planning and Economic Development

Page 1
APPLICATION FOR ANNEXATION
CITY OF DACULA
P. O. BOX 400
DACULA, GEORGIA 30019-0007

Ordinance No.: _____ Date: 5/26/2022

Final Approval Date: _____ Application No.: 2022-CD-AA-02

I Hereby Request That The Property Described In This Application Be Annexed Into The Dacula City Limits With a Zoning Classification of C2

Address of Property to Be Annexed: NWC of Harbins Road & W. Drowning Creek Road, Dacula, GA 30019

Area: 4.52 Acres, or 196,796 Square Feet _____ Tax Map Number R5277 077

Owner of Property James Roy Greeson *Other owners included on attached sheet.

Telephone Number 706-342-1650

Address 109 Idlewood Acres, Hartwell, GA 30643

Applicant Retail Planning Corporation

Telephone Number 770-956-8383

Address 35 Johnson Ferry Road, Marietta, Georgia 30068

If the Owner and Applicant Are Not the Same, Please Complete Attachment 1.

Resident Population 0 Housing Units 0 Other Buildings 1

Race Population n/a White n/a Black n/a Other _____

A. Reasons For Requesting Annexation: *Give a brief summary of the reasons for requesting annexation:* _____
To rezone property to a commercial use in the City of Dacula

B. Site Plan - All site plans shall draw the location of existing buildings and other improvements to the property.

C. Property Description - A written legal description and recent plat of the property to be submitted.

D. Meeting Dates and Processing of Applications - See Attachment 2.

E. Fee - \$2,250.00

F. Authorization To Inspect Premises - I hereby authorize the Dacula City Council to inspect the premises which are the subject of this annexation application.

G. Petition Requesting Annexation - *Attachment 3 must be completed by owners.*

H. Annexation Questionnaire - *Attachment 4 must be completed.*



Signature of Applicant

PETITION REQUESTING ANNEXATION
CITY OF DACULA, GEORGIA

Date: 5/26/2022

TO THE HONORABLE CITY COUNCIL OF THE CITY OF DACULA, GEORGIA

1. The undersigned, as owner of all real property of the territory described herein, respectfully requests that the City Council annex this territory to the City of Dacula, Georgia, and extend the City boundaries to include the same.
2. The territory to be annexed abuts the existing boundary of Dacula, Georgia, and the description of such territory area is as follows:

Address/Location of Property: _____

NWC of Harbins Road and West Drowning Creek Road, Dacula, Georgia 30019

Tax Map Number R5277 077

See Attached Description.

3. It is requested that this territory to be annexed shall be zoned C2 for the following reasons: Development of a retail use.

WHEREFORE, the Petitioners pray that the City Council of the City of Dacula, Georgia, pursuant to the provisions of the Acts of the General Assembly of the State of Georgia, Georgia Laws, do by proper ordinance annex said property to the City Limits of the City of Dacula, Georgia.

Respectfully Submitted,

Owners Address: James Roy Greeson

109 Idlewood Acres, Hartwell, Georgia 30643

*Additional Owners attached.

*Annexation Property Owners – Continued

Pervie Venable Greeson, Jr.

335 Lipscomb Spur

Social Circle, GA 30025

706-342-1650

The Estate of Marion Laverne Rogers c/o Ronnie Wayne Dutton, Jr., Executor

6412 Cutcane Road

Mineral Bluff, GA 30559

706-342-1650

PROPERTY OWNER AUTHORIZATION

City of Dacula

Application for Annexation

I Swear That I Am The Owner Of The Property Which Is The Subject Matter Of the Attached Application, As Is Shown In The Records Of Gwinnett County, Georgia.

I Authorize The Person Named Below To Act As Applicant In The Pursuit Of An Annexation Request Of This Property.

Name Of Applicant: Retail Planning Corporation, c/o Charlie Heard

Address: 35 Johnson Ferry Road

City: Marietta State: GA Zip Code: 30068

Telephone Number: 770-956-8383



Signature of Owner

PROPERTY OWNER AUTHORIZATION

City of Dacula

Application for Annexation

I Swear That I Am The Owner Of The Property Which Is The Subject Matter Of the Attached Application, As Is Shown In The Records Of Gwinnett County, Georgia.

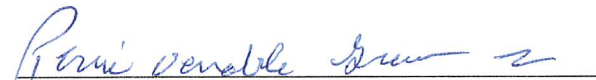
I Authorize The Person Named Below To Act As Applicant In The Pursuit Of An Annexation Request Of This Property.

Name Of Applicant: Retail Planning Corporation, c/o Charlie Heard

Address: 35 Johnson Ferry Road

City: Marietta State: GA Zip Code: 30068

Telephone Number: 770-956-8383



Signature of Owner

PROPERTY OWNER AUTHORIZATION

City of Dacula

Application for Annexation

I Swear That I Am The Owner Of The Property Which Is The Subject Matter Of the Attached Application, As Is Shown In The Records Of Gwinnett County, Georgia.

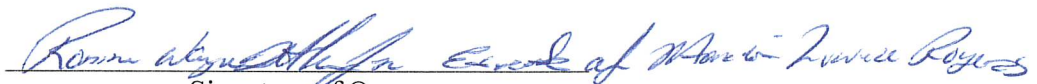
I Authorize The Person Named Below To Act As Applicant In The Pursuit Of An Annexation Request Of This Property.

Name Of Applicant: Retail Planning Corporation, c/o Charlie Heard

Address: 35 Johnson Ferry Road

City: Marietta State: GA Zip Code: 30068

Telephone Number: 770-956-8383


Signature of Owner

City of Dacula
Annexation Questionnaire
Please Type or Print

Property Owner

Name: James Roy Greeson

Address: 109 Idlewood Acres, Hartwell, GA 30643

*Additional Owners attached.

Business Phone: 706-324-1650

Home Phone:

Address of Property to be Annexed: NWC of Harbins Road and West Drowning Creek Road, Dacula, GA 30019

Petitioner (if different)

Retail Planning Corporation

35 Johnson Ferry Road

Marietta, GA 30068

770-956-8383

Gwinnett County Zoning RA200

Property Annexed as C2

Description: General Business District

District: 5 Land Lot: 277 Parcel: R5277 077

Assessed Value: \$53,040.00 Acreage: +/- 4.52

List each adult living on site:

n/a

List number of Individuals by race:

n/a

Describe any other structure(s) on site:

Dilapidated wood barn, 828 square feet footprint

Petitioner(s) Retail Planning Corporation, c/o Charles F. Heard, Jr.

CITY OF DACULA

MEETING DATES AND PROCESSING OF APPLICATIONS

If your application is found to be valid, the City will notify you. The City will place a legal advertisement in the Official News Organ (Gwinnett Daily Post) advertising the Public Hearing, not less than 15 days not more than 45 days from the time of the validity determination.

The Mayor and City Council meet on the first Thursday of each month at 7:00 P. M.

The City will notify you of the date and time of the Public Hearing.

Legal Description – Harbins Road @ West Drowning Creek Road

All that tract or parcel of land lying or being in Land Lot 277, 5th District, Gwinnett County, Georgia, and being more particularly described as follows:

Beginning at a 5/8-inch rebar set at the southwest corner of the right-of-way intersection mitre of Harbins Road (Variable Right-of-Way) and West Drowning Creek Road (60-foot Right-of-Way) and the TRUE POINT OF BEGINNING; thence along the right-of-way of West Drowning Creek Road (60-foot R/W) South 66 degrees 47 minutes 03 seconds West for a distance of 118.35 feet to a 5/8-inch rebar set; thence continuing along said right-of-way South 68 degrees 57 minutes 03 seconds West for a distance of 105.52 feet to a 5/8-inch rebar set; thence continuing along said right-of-way South 71 degrees 06 minutes 03 seconds West for a distance of 205.29 feet to a 1/2-inch rebar found; thence leaving said right-of-way of West Drowning Creek Road North 30 degrees 11 minutes 12 seconds West for a distance of 429.60 feet to a 38" Hickory Tree; thence North 66 degrees 53 minutes 48 seconds East for a distance of 445.30 feet to a 5/8-inch rebar set on the right-of-way of Harbins Road (Variable R/W); thence continuing along said right-of-way South 31 degrees 02 minutes 49 seconds East for a distance of 415.52 feet to a 5/8-inch rebar set; thence along the right-of-way South 09 degrees 19 minutes 17 seconds West for a distance of 39.55 feet to a 5/8-inch rebar set and the TRUE POINT OF BEGINNING.

Said tract of land contains 4.518 Acres.

R5277 077



- Selection(s)
- Property Parcels
 - County Boundary

N 
5/16/2022

This map is a graphical representation of data obtained from aerial photography, recorded deeds, plats, engineering drawings and other public records and data. Gwinnett County does not warrant the accuracy or completeness of the data for any purpose, nor does it guarantee the suitability of the data for any purpose, expressed or implied. ALL DATA IS PROVIDED AS IS, WITH ALL FAULTS, WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESSED OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. This map is the proprietary product of Gwinnett County and in no event will Gwinnett County be liable for damages, including any loss of profits, lost savings, or other incidental or consequential damages arising out of the use of or inability to use this map.



ADJOINING PROPERTY OWNER(S)
RECORD NOTIFICATION

DATE: _____

TO: Billy Joe & Gail Ann Knight
(Sent by First Class Mail and Certified Mail - Return Receipt Requested)

FROM: Retail Planning Corporation, c/o Charlie Heard

RE: Proposed Change of Conditions Case #: _____

Proposed Rezoning / SUP Case #: _____

Property Location: 5th District, Land Lot 277 Parcel R5277 077

LOCATION/ADDRESS: NWC of Harbins Road and W. Drowning Creek Road
Dacula, GA 30019

You are hereby notified that an application a zoning change from RA200
to C2 has been submitted to the City of Dacula.

The proposed rezoning is contiguous to your property.

The PLANNING COMMISSION Public Hearing/Meeting will be held at the Dacula City Hall,
442 Harbins Rd., Dacula, Georgia on 7/25/2022 at 6:30 P. M. in the Council Chambers.
(date)

The CITY COUNCIL Public Hearing/Meeting will be held at the Dacula City Hall, 442 Harbins Rd.,
Dacula, Georgia on 8/4/2022 at 7:00 P. M. in the Council Chambers.
(date)

If you have any comments or concerns concerning this matter, please plan to attend the public
hearings.

Thank you.

ADJOINING PROPERTY OWNER(S)
RECORD NOTIFICATION

DATE: _____

TO: Johnny Walter Chatham & Wai Kwong Chan
(Sent by First Class Mail and Certified Mail - Return Receipt Requested)

FROM: Retail Planning Corporation, c/o Charlie Heard

RE: Proposed Change of Conditions Case #: _____

Proposed Rezoning / SUP Case #: _____

Property Location: 5th District, Land Lot 277 Parcel R5277 077

LOCATION/ADDRESS: NWC of Harbins Road and W. Drowning Creek Road
Dacula, GA 30019

You are hereby notified that an application a zoning change from RA200

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(date)

The CITY COUNCIL Public Hearing/Meeting will be held at the Dacula City Hall, 442 Harbins Rd.,
Dacula, Georgia on 8/4/2022 at 7:00 P. M. in the Council Chambers.
(date)

If you have any comments or concerns concerning this matter, please plan to attend the public
hearings.

Thank you.

ADJOINING PROPERTY OWNER(S)
RECORD NOTIFICATION

DATE: _____

TO: Riley Mangum
(Sent by First Class Mail and Certified Mail - Return Receipt Requested)

FROM: Retail Planning Corporation, c/o Charlie Heard

RE: Proposed Change of Conditions Case #: _____

Proposed Rezoning / SUP Case #: _____

Property Location: 5th District, Land Lot 277 Parcel R5277 077

LOCATION/ADDRESS: NWC of Harbins Road and W. Drowning Creek Road
Dacula, GA 30019

You are hereby notified that an application a zoning change from RA200

to C2 has been submitted to the City of Dacula.

The proposed rezoning is contiguous to your property.

The PLANNING COMMISSION Public Hearing/Meeting will be held at the Dacula City Hall,
442 Harbins Rd., Dacula, Georgia on 7/25/2022 at 6:30 P. M. in the Council Chambers.
(date)

The CITY COUNCIL Public Hearing/Meeting will be held at the Dacula City Hall, 442 Harbins Rd.,
Dacula, Georgia on 8/4/2022 at 7:00 P. M. in the Council Chambers.
(date)

If you have any comments or concerns concerning this matter, please plan to attend the public
hearings.

Thank you.

Adjoining Property Owners

1. R5277 037
Johnny Walter Chatham & Wai Kwong Chan
2348 W. Drowning Creek Road
Dacula, Georgia 30019

2. R5277 003A
Billy Joe & Gail Ann Knight
801 Harbins Road
Dacula, Georgia 30019

3. R5277 043
Riley Mangum
548 Ardery Road
Paris, Kentucky 40361

TO: Mayor and City Council of the City of Dacula
FROM: Brittni Nix, Director of Planning & Economic Development
DATE: June 13, 2022
SUBJECT: Bid package for Maple Creek Park improvements

The Maple Creek Park improvements bid documents have been finalized and provided for your review. Improvements include a new shaded playground for school-aged children, shaded toddler playground, shaded swing set, and fitness station. Accessory items include concrete tiered steps with handrails, benches, picnic table, trash receptacle, and stormwater improvements.

The proposed improvements have an estimated OPCC (Opinion of Probable Construction Cost) of \$672,297.51. This project is fully funded by the City's beautification, parks and recreation endowment fund.

Staff requests the Mayor and City Council approve the bid package as provided and grant authorization to solicit for public bids.

Best Regards,

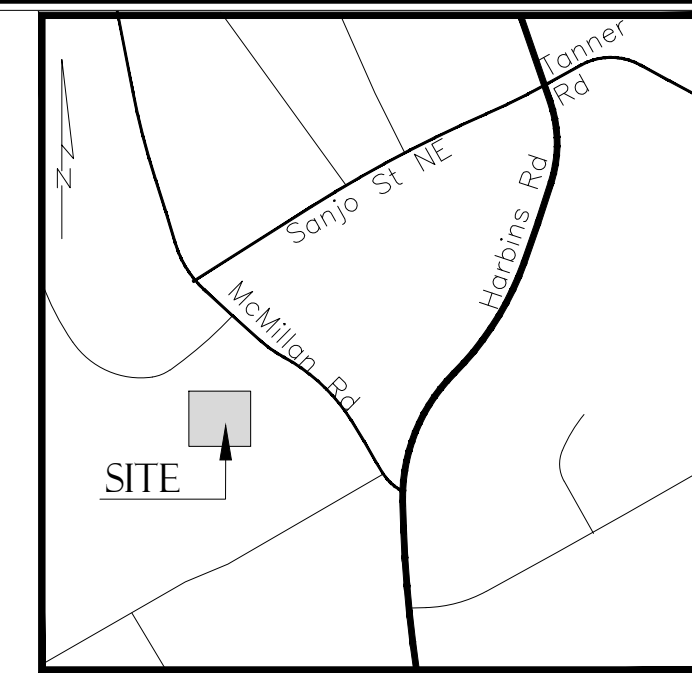
Brittni Nix, Director of Planning & Economic Development

APPROVAL STAMPS

CONSTRUCTION DOCUMENTS

MAPLE CREEK PARK NEW PLAYGROUND ADDITION

5TH DISTRICT, LAND LOT 276
PARCEL 5276 004
CITY OF DACULA
GWINNETT COUNTY, GEORGIA



VICINITY MAP
NOT TO SCALE



BOWMAN

4174 SILVER PEAK PARKWAY
SUWANEE, GEORGIA 30024
PHONE (770) 932-6550
FAX (770) 932-6551

CITY OF DACULA

OWNER:

PROJECT:
MAPLE CREEK PARK
NEW PLAYGROUND
ADDITION

425 McMILLAN ROAD,
CITY OF DACULA,
GWINNETT COUNTY, GA

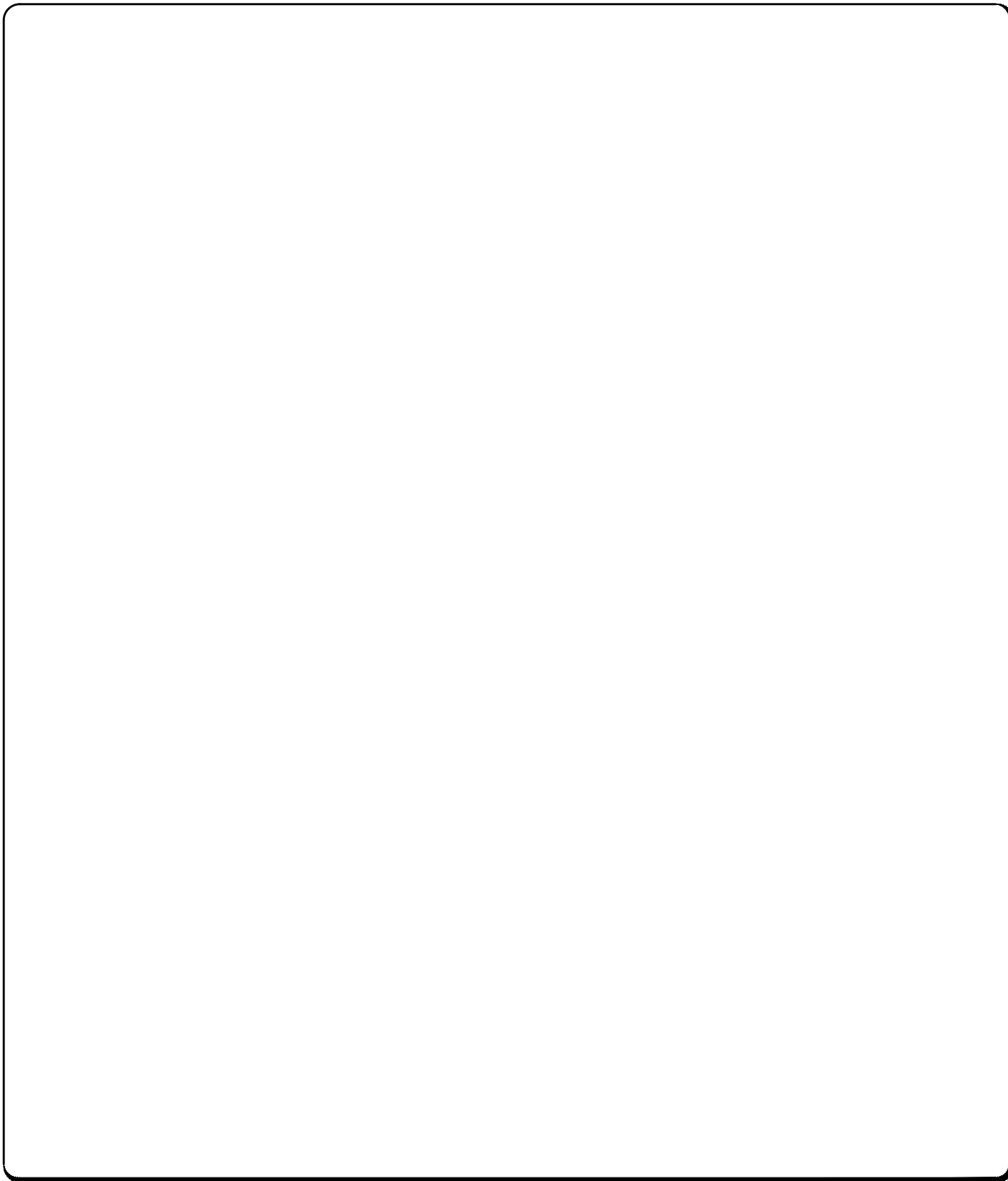
DATE	DESCRIPTION
06/07/2022	PLAN SET

JOB NO: 22-0306
DRAWN BY: YW
CHECKED BY: DP

COPYRIGHT 2022
MDA, A BOWMAN
COMPANY

COVER
SHEET

C-0.0



PROJECT DESCRIPTION:
THE PROJECT CONSISTS OF THE DEMOLITION OF EXISTING PLAYGROUND AND THE CONSTRUCTION OF NEW PLAYGROUND EQUIPMENT, SIDEWALK & DRAINAGE IMPROVEMENTS.

PROPERTY DESCRIPTION:
EXISTING MAPLE CREEK PARK, CITY OF DACULA, GEORGIA.

STATE WATERS & WETLANDS
THERE ARE NO STATE WATERS ON THIS SITE REQUIRING A 25' STATE UNDISTURBED BUFFER, 50' COUNTY UNDISTURBED BUFFER AND 75' INFERRIOUS SETBACK MEASURED FROM THE TOP OF BANK.
ACCORDING TO THE NATIONAL WETLANDS INVENTORY, THE SITE DOES NOT CONTAIN WETLANDS.

FLOODPLAIN:
PART OF THIS PROPERTY DOES NOT LIE WITHIN A SPECIAL FLOOD HAZARD AREA (SFHA) PER FEMA FIRM PANEL 13135C0076F DATED 9/29/2006.

SURVEY:
THE BOUNDARY AND TOPOGRAPHIC INFORMATION SHOWN IS FROM A SURVEY PERFORMED BY BOWMAN DATED 08/19/2021.

UTILITIES:
WATER AND SEWER WILL BE PROVIDED BY GWINNETT COUNTY FROM EXISTING INFRASTRUCTURE LOCATED ON OR ADJACENT TO THE SITE.

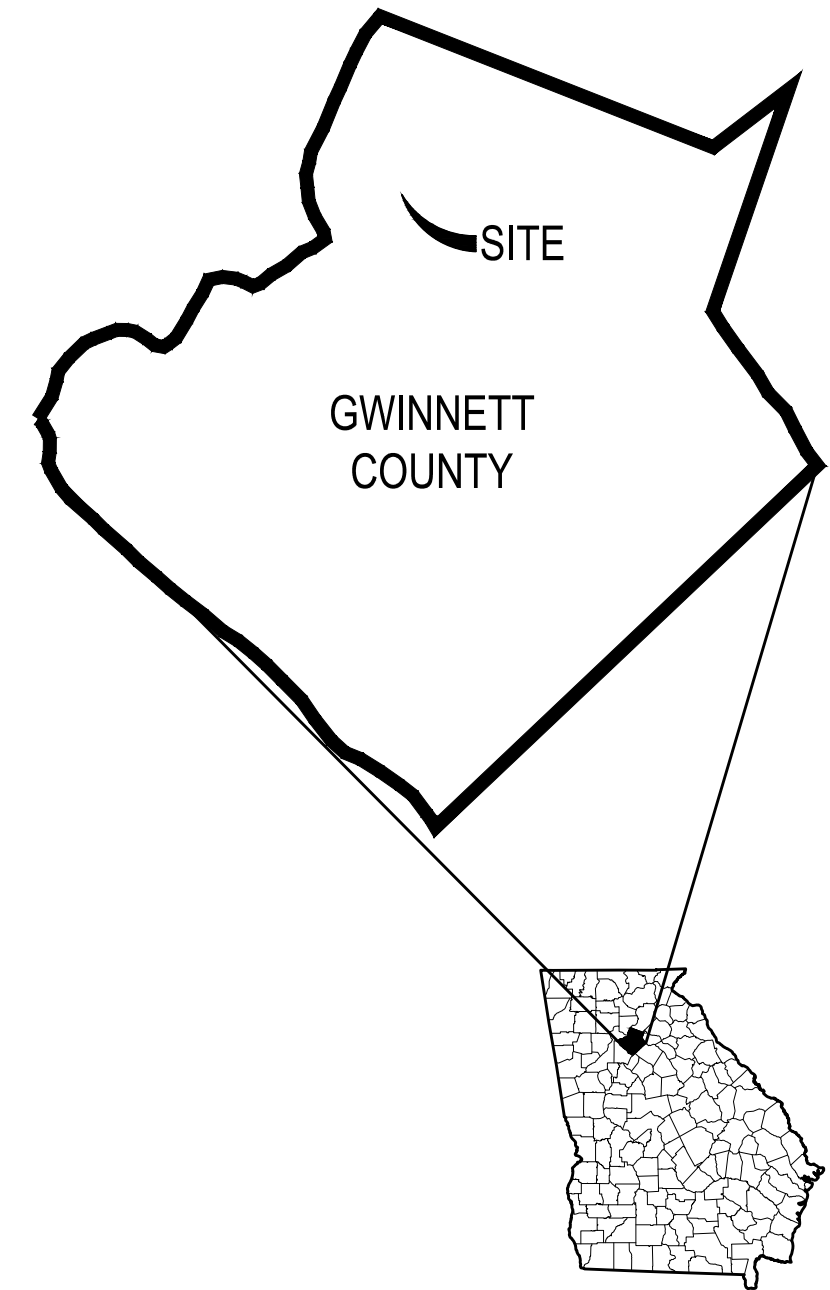
AREAS:
SITE = 16.39 ACRES
TOTAL DISTURBED AREA = 0.32 ACRES

CERTIFICATE OF DEPARTMENT OF PLANNING AND COMMUNITY DEVELOPMENT:
PURSUANT TO THE UNIFIED DEVELOPMENT CODE OF CITY OF DACULA, GEORGIA, AND ALL REQUIREMENTS OF APPROVAL HAVING BEEN FULFILLED, THESE CONSTRUCTION PLANS HAVE BEEN GIVEN APPROVAL BY ALL REVIEWING DEPARTMENTS, WITH FINAL APPROVAL BY THE DIRECTOR, OR A DESIGNEE OF THE PLANNING AND COMMUNITY DEVELOPMENT DEPARTMENT, THE ISSUING AUTHORITY FOR CITY OF DACULA. CONSTRUCTION PLAN APPROVAL DOES NOT CONSTITUTE APPROVAL OF A FINAL PLAT, IF REQUIRED, AND DOES NOT ENTITLE THIS PLAT AND PLANS TO RECORDATION IN THE CLERK'S OFFICE, GWINNETT COUNTY SUPERIOR COURT. THE CERTIFICATE OF CONSTRUCTION PLAN APPROVAL SHALL EXPIRE AND BE NULL AND VOID TWO YEARS FROM THE DATE OF THE PLANNING & COMMUNITY DEVELOPMENT DEPARTMENT APPROVAL STAMP AS FOUND ON THE COVER SHEET OF THESE PLANS.

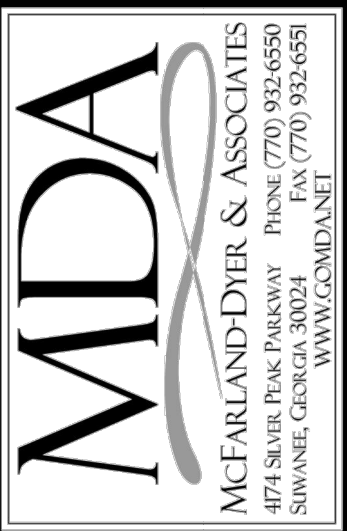
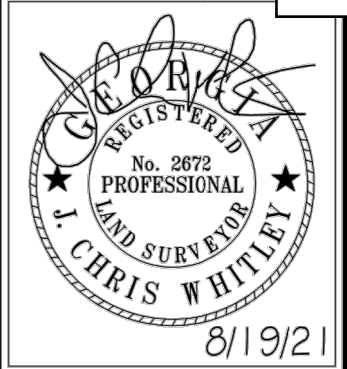
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ZONING: PARK
OVERLAY DISTRICT - NONE

SHEET NO.	SHEET DESCRIPTION
CIVIL & LANDSCAPE ARCHITECTURE PLANS	
C0.0	COVER SHEET
REF - 1	EXISTING CONDITIONS / TOPOGRAPHIC SURVEY
C-1.0	DEMOLITION PLAN
C-2.0	SITE PLAN
C-3.0	GRADING & DRAINAGE PLAN
C-3.1	STORM PROFILES
C-4.0	LANDSCAPE PLAN
C-5.0	EROSION, SEDIMENTATION, POLLUTION CONTROL PLAN - NOTES
C-5.1	EROSION, SEDIMENTATION, POLLUTION CONTROL PLAN - PHASE I
C-5.2	EROSION, SEDIMENTATION, POLLUTION CONTROL PLAN - PHASE II
C-5.3	EROSION, SEDIMENTATION, POLLUTION CONTROL PLAN - PHASE III
C-5.4	EROSION, SEDIMENTATION, POLLUTION CONTROL PLAN - DETAILS
C-5.5	EROSION, SEDIMENTATION, POLLUTION CONTROL PLAN - DETAILS
C-5.6	EROSION, SEDIMENTATION, POLLUTION CONTROL PLAN - DETAILS
C-6.0	CONSTRUCTION DETAILS
C-6.1	PLAYGROUND PLAN & DETAILS



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A TRIMBLE SCIENTIFIC TOTAL STATION WAS USED TO OBTAIN THE ANGULAR MEASUREMENTS USED IN THE PREPARATION OF THIS PLAN.
FIELD DATA WAS OBTAINED ON 08/16/2021.

DATE	DESCRIPTION
08/19/2021	TOPOGRAPHIC SURVEY

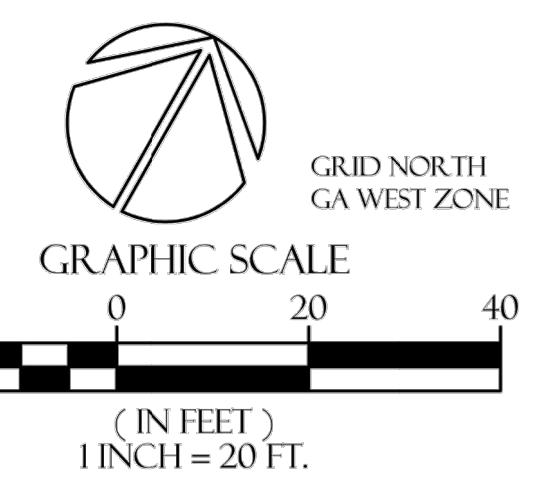
JOB NO. 20-081
DRAWN BY: CD
CHECKED BY: MP
SURVEILED BY: KB

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SURVEY FOR:
CITY OF DACULA
(MAPLE CREEK PARK)
LL 276 & 301, 5TH DISTRICT
CITY OF DACULA
WINNIE COUNTY, GEORGIA

EXISTING/CONDITION/ TOPOGRAPHIC SURVEY
REF-1
SHEET 1 OF 2

SUBDIVIDED AS BROOKTON S/D
PB 68 ~ PG 240 UNIT 1
PB 70 ~ PG 154 UNIT 2



GENERAL NOTES:

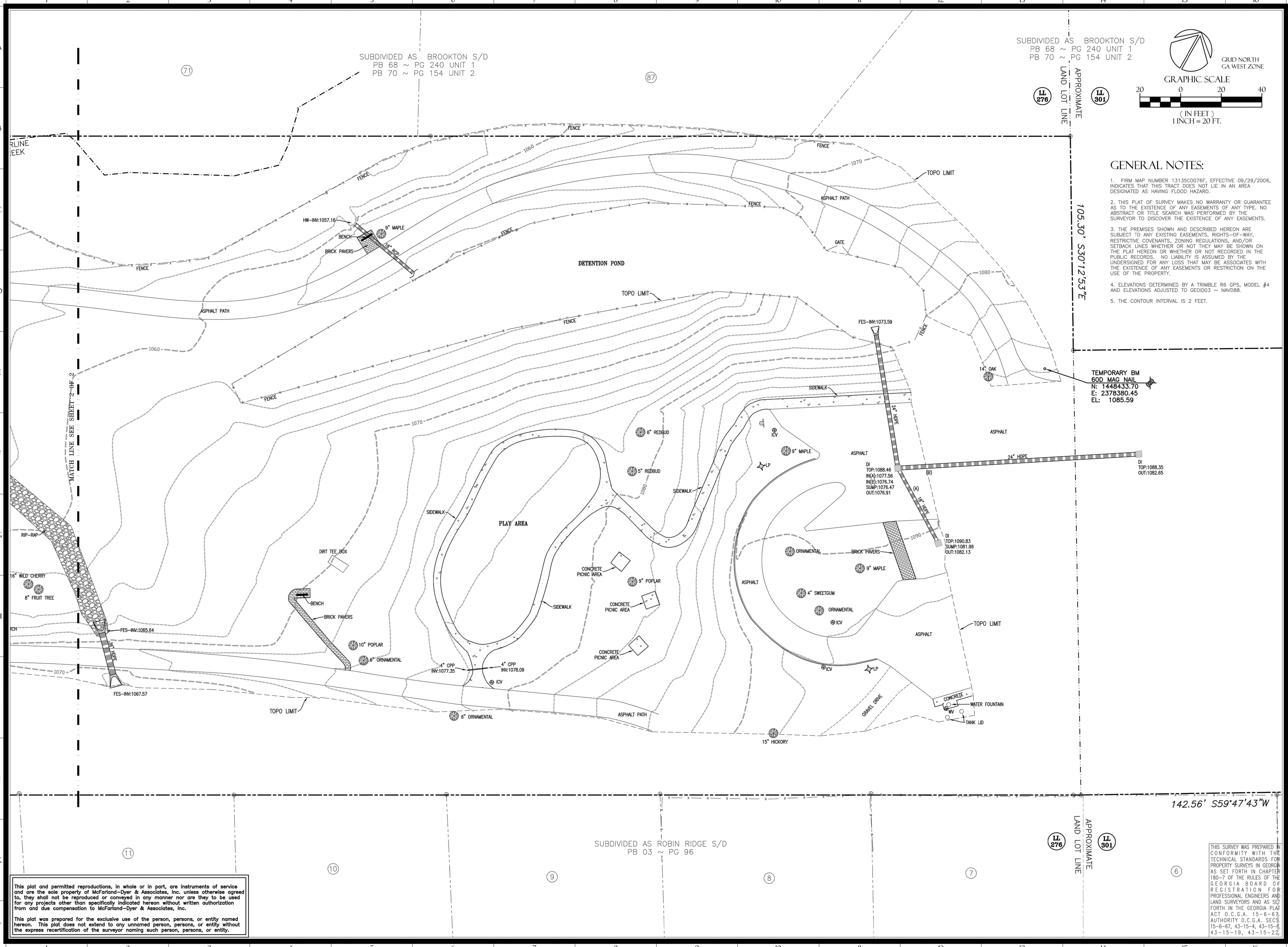
1. FIRM MAP NUMBER 131350076F, EFFECTIVE 09/29/2006, INDICATES THAT THIS TRACT DOES NOT LIE IN AN AREA DESIGNATED AS HAVING FLOOD HAZARD.
2. THIS PLAN OF SURVEY MAKES NO WARRANTY OR GUARANTEE AS TO THE EXISTENCE OF ANY EASEMENTS OF ANY TYPE. NO ABSTRACT OR TITLE SEARCH WAS PERFORMED BY THE SURVEYOR TO DISCOVER THE EXISTENCE OF ANY EASEMENTS.
3. THE PREMISES SHOWN AND DESCRIBED HEREON ARE SUBJECT TO ANY EXISTING EASEMENTS, RIGHTS-OF-WAY, RESTRICTIVE COVENANTS, ZONING REGULATIONS, AND/OR SETBACK LINES WHETHER OR NOT THEY MAY BE SHOWN ON THE PLAN HEREON OR WHETHER OR NOT RECORDED IN THE PUBLIC RECORDS. NO LIABILITY IS ASSUMED BY THE UNDERSIGNED FOR ANY LOSS THAT MAY BE ASSOCIATED WITH THE EXISTENCE OF ANY EASEMENTS OR RESTRICTION ON THE USE OF THE PROPERTY.
4. ELEVATIONS DETERMINED BY A TRIMBLE R6 GPS, MODEL #4 AND ELEVATIONS ADJUSTED TO GEOID03 ~ NAVD83.
5. THE CONTOUR INTERVAL IS 2 FEET.

APPROXIMATE LAND LOT LINE
105.30' S01°12'53"E

TEMPORARY BM
60D MAG NAIL
N: 1448433.70
E: 2378380.45
EL: 1085.59

APPROXIMATE LAND LOT LINE
LL 276 LL 301

THIS SURVEY WAS PREPARED IN CONFORMITY WITH THE TECHNICAL STANDARDS FOR PROPERTY SURVEYS IN GEORGIA AS SET FORTH IN CHAPTER 180-7 OF THE RULES OF THE GEORGIA BOARD OF REGISTRATION FOR PROFESSIONAL ENGINEERS AND LAND SURVEYORS AND AS SET FORTH IN THE GEORGIA PLAT ACT O.C.G.A. 15-6-67, AUTHORITY O.C.G.A. SECS. 15-6-67, 43-15-4, 43-15-6, 43-15-19, 43-15-22.



SUBDIVIDED AS BROOKTON S/D
PB 68 ~ PG 240 UNIT 1
PB 70 ~ PG 154 UNIT 2

SUBDIVIDED AS ROBIN RIDGE S/D
PB 03 ~ PG 96

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BOWMAN

4174 SILVER PEAK PARKWAY
SUWANEE, GEORGIA 30024
PHONE (770) 932-6550
FAX (770) 932-6551

CITY OF DACULA

OWNER:

**MAPLE CREEK PARK
NEW PLAYGROUND
ADDITION**

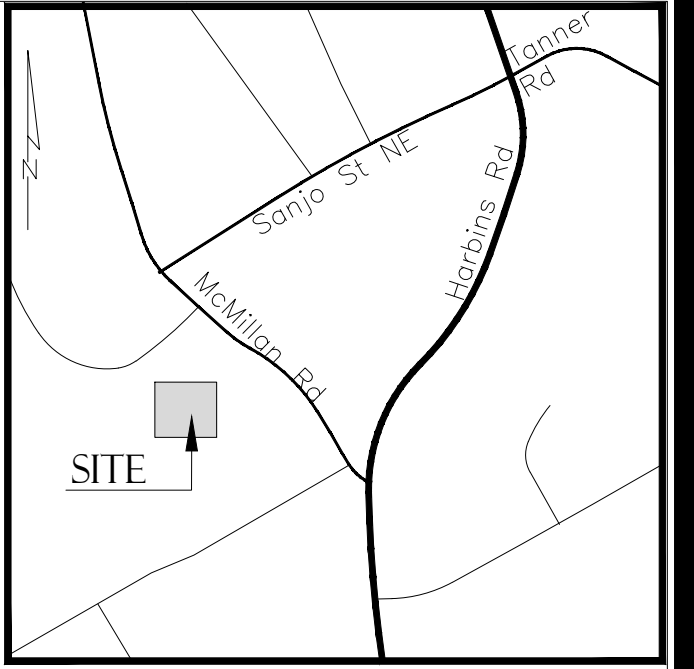
PROJECT:
425 MC MILLAN ROAD,
CITY OF DACULA,
GWINNETT COUNTY, GA

DATE	DESCRIPTION
06/07/2022	PLAN SET

JOB NO: 22-0306
DRAWN BY: YW
CHECKED BY: DP

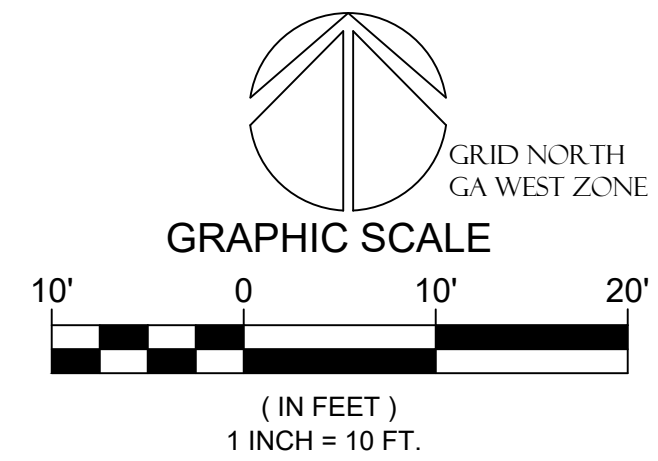
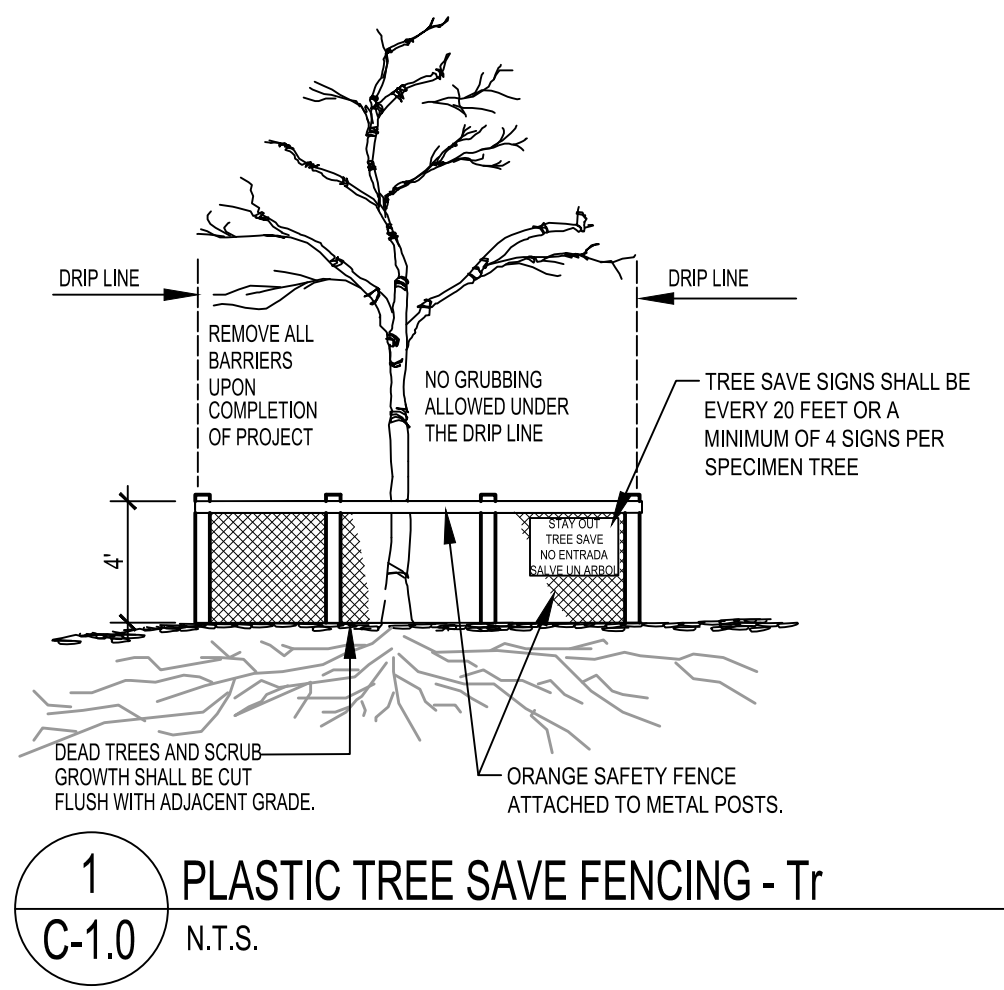
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EXISTING
CONDITIONS
DEMOLITION
PLAN
C-1.0

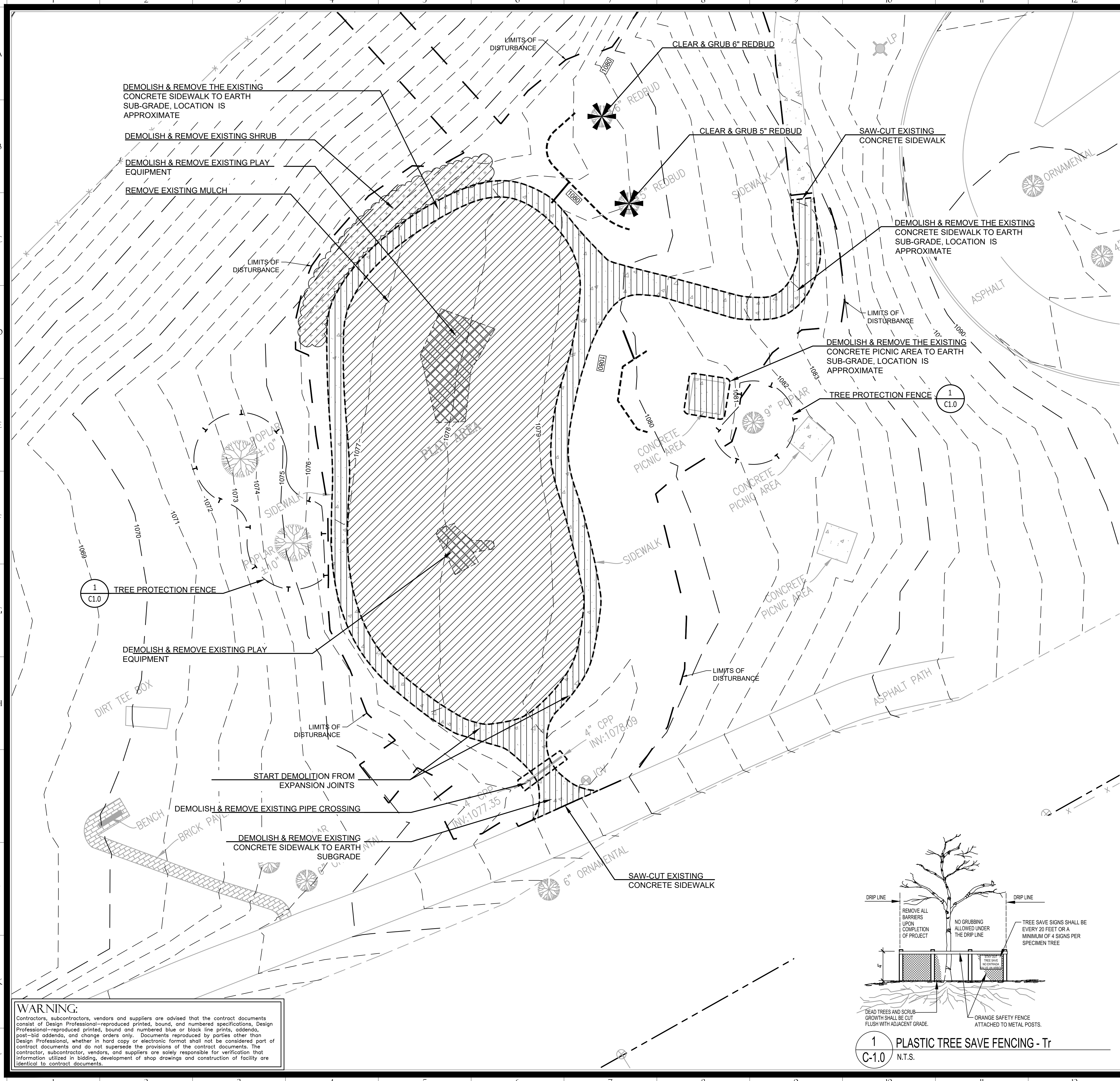


VICINITY MAP
NOT TO SCALE

- DEMOLITION NOTES:**
- BECOME THOROUGHLY FAMILIAR WITH ALL EXISTING CONDITIONS AT THE PROJECT SITE BY ON-SITE VISITATION AND INSPECTION. REVIEW ALL DRAWINGS, SPECIFICATIONS, FEDERAL, STATE AND COUNTY REGULATIONS AND ORDINANCES TO FULLY ASCERTAIN THE SCOPE OF THE WORK ILLUSTRATED AND/OR IMPLIED WITHIN THESE DRAWINGS. REPORT DISCREPANCIES WITH THE DRAWINGS AND/OR SPECIFICATIONS PRIOR TO COMMENCEMENT OF DEMOLITION.
 - COMPLY WITH ALL UTILITIES PROTECTION CENTER REQUIREMENTS.
 - SURVEY AND ESTABLISH ALL TOPOGRAPHIC BENCHMARKS, BOUNDARY MONUMENTS, BUILT ITEMS AND EXISTING UTILITIES PERTAINING TO THE WORK ILLUSTRATED OR IMPLIED WITHIN THESE DRAWINGS AND MAINTAIN SAID LOCATIONS THROUGHOUT THE DURATION OF THE PROJECT. REPORT ANY AND ALL DISCREPANCIES OF SURVEY DATA THAT IS AT VARIANCE WITH THE DRAWINGS TO THE OWNER'S REPRESENTATIVE AND THE DESIGN PROFESSIONAL BEFORE PROCEEDING WITH CONSTRUCTION OPERATIONS.
 - THE UTILITIES ILLUSTRATED HERE HAVE BEEN LOCATED IN AN APPROXIMATE WAY.
 - CONTACT THE UTILITY PROTECTION CENTER AT (1-800-282-7411) AND HAVE ALL UTILITIES MARKED;
 - VERIFY THE HORIZONTAL AND VERTICAL LOCATION OF ALL UTILITIES;
 - PROTECT ALL UTILITIES FROM DAMAGE OR INTERRUPTION;
 - THE CONTRACTOR IS BE SOLELY RESPONSIBLE FOR ANY AND ALL DAMAGES OCCASIONED DUE HIS FAILURE TO VERIFY THE LOCATION OR PROTECT UTILITIES.
 - NOTIFY OWNER OF LOCATION DISCREPANCIES.
 - THE DESIGN PROFESSIONAL AND THE OWNER DO NOT GUARANTEE THAT ALL EXISTING UTILITIES ARE ILLUSTRATED ON THESE DRAWINGS. THE CONTRACTOR SHALL LOCATE AND VERIFY ALL HORIZONTAL AND VERTICAL LOCATIONS OF EXISTING UTILITIES.
 - PROTECT ALL UTILITIES FROM DAMAGE THROUGHOUT THE DURATION OF THE PROJECT; AND REPAIR ANY AND ALL DAMAGE TO EXISTING UTILITIES CAUSED BY CONSTRUCTION OPERATIONS. REROUTE, RELOCATE AND / OR MODIFY ANY EXISTING UTILITIES THAT APPEAR ON THE REFERENCE SURVEY (ROADS, ACCESS WAYS, DRAINAGE WAYS, ETC.) IN ORDER TO MAINTAIN THE FUNCTION OF SAID FACILITIES.
 - DEMOLISH, REMOVE, RELOCATE, STORE, STOCKPILE THE EXISTING BUILT ITEMS AS ILLUSTRATED ON THE DRAWINGS AND PERFORM ANY INCIDENTAL DEMOLITION WHICH MAY BE REQUIRED TO ACCOMPLISH THE IMPROVEMENTS ILLUSTRATED OR IMPLIED WITHIN THE DRAWINGS.
 - MATERIAL, EQUIPMENT AND FIXTURES TO BE REMOVED, WHICH ARE NOT NOTED FOR REUSE OR WHICH HAVE NOT BEEN DESIGNATED BY THE OWNER FOR RETAINAGE OR DELIVERY TO HIS WAREHOUSE OR HOLDING AREA(S), BECOME THE PROPERTY OF THE CONTRACTOR, PROMPTLY REMOVE FROM THE SITE. ANY DISPOSAL OF SAID MATERIALS SHALL BE DONE SO LEGALLY.
 - RENDER THE ENTIRE CLEARED SITE FREE OF DEMOLISHED REMNANTS, DEBRIS AND OTHER ITEMS OR CONDITIONS HAVING
 - A DELETERIOUS EFFECT ON THE CONTINUED CONSTRUCTION OF THE PROJECT.
 - PROVIDE ALL TEMPORARY TRAFFIC SAFETY DEVICES INCLUDING BUT NOT LIMITED TO BARRICADES, SIGNAGE, SIGNAL LIGHTS OR FLAG-MEN TO PROTECT THE PUBLIC AT LARGE, AND CONSTRUCTION PERSONNEL WHILE OPERATING WITHIN PUBLIC STREETS AND / OR RIGHTS-OF-WAY.
 - DEMOLISH AND REMOVE ALL EXISTING ASPHALT PAVING TO EARTH SUBGRADE WHERE ILLUSTRATED ON DRAWINGS.
 - ALL EXISTING ASPHALT PAVEMENT THAT IS TO BE DEMOLISHED WILL BE DEMOLISHED AND REMOVED TO EARTH SUB-GRADE. MATERIAL IS TO BE DISPOSED OF LEGALLY OFF-SITE.
 - ALL BUFFERS AND TREE SAVE AREAS ARE TO BE CLEARLY IDENTIFIED WITH FLAGGING AND / OR FENCING PRIOR TO COMMENCEMENT OF ANY LAND DISTURBANCE.
 - FIRE HYDRANTS AND WATER MAINS ARE TO BE INSTALLED, FLUSHED AND UNDER PRESSURE BEFORE ANY COMBUSTIBLE CONSTRUCTION IS STARTED.
 - DURING CONSTRUCTION ACCESS ROADWAYS CONSTRUCTED OF AN ALL WEATHER SURFACE CAPABLE OF SUPPORTING 75,000 POUNDS GROSS WEIGHT SHALL BE PROVIDED PER INTERNATIONAL FIRE PREVENTION CODE 2003 EDITION, CH. 5, SECTION 503.2.3 AS REQUIRED.
 - SEE UTILITY PLAN FOR UTILITIES TO REMAIN ACTIVE AND / OR TO BE REMOVED.
 - REMOVE ALL MISCELLANEOUS DEBRIS WITHIN LIMIT OF DISTURBANCE FROM THE SITE, INCLUDING:
 - SHEDS
 - STRUCTURES
 - WOOD PILES
 - UNDERGROUND STORM SHELTER
 - DUMPED CONSTRUCTION DEBRIS
 - BARRELS
 - ETC.
 - SAW-CUT SMOOTH LINE BETWEEN PORTIONS OF CURB AND GUTTER TO BE DEMOLISHED AND REMOVED AND REMAINING PORTIONS.
 - DO NOT PUT ANY EQUIPMENT, MATERIALS, OR DEBRIS ON ANY ADJACENT PROPERTY, EXCEPT AS SPECIFICALLY ILLUSTRATED ON DRAWINGS.
 - ERADICATE EXISTING PAVEMENT MARKINGS WITHIN THE LIMITS OF WORK AND PROVIDE NEW PAVEMENT MARKINGS AS ILLUSTRATED. PAVEMENT STRIPING AND DIRECTIONAL ARROWS SHALL BE CONSISTENT WITH THE LATEST EDITION OF THE MANUAL OF UNIFIED TRAFFIC CONTROL DEVICES AND THE LOCAL ISSUING AUTHORITY REGULATIONS.
 - CLEAR AND GRUB EXISTING VEGETATION WITHIN THE LIMITS OF DISTURBANCE EXCEPT THE AREAS WITHIN A DESIGNATED TREE SAVE AREA. ALSO REFERENCE SHEET C601 TREE PROTECTION PLAN.
 - DO NOT BURY ANY CLEARING AND GRUBBING DEBRIS AND / OR DEMOLITION DEBRIS ON-SITE.
 - NO BURNING ON-SITE IS PERMITTED.



24 HOUR CONTACT
CITY OF DACULA
BRITNI NIX
770-963-7451



DEMOLISH & REMOVE THE EXISTING CONCRETE SIDEWALK TO EARTH SUB-GRADE, LOCATION IS APPROXIMATE

DEMOLISH & REMOVE EXISTING SHRUB

DEMOLISH & REMOVE EXISTING PLAY EQUIPMENT

REMOVE EXISTING MULCH

CLEAR & GRUB 6" REDBUD

CLEAR & GRUB 5" REDBUD

SAW-CUT EXISTING CONCRETE SIDEWALK

DEMOLISH & REMOVE THE EXISTING CONCRETE SIDEWALK TO EARTH SUB-GRADE, LOCATION IS APPROXIMATE

DEMOLISH & REMOVE THE EXISTING CONCRETE PICNIC AREA TO EARTH SUB-GRADE, LOCATION IS APPROXIMATE

TREE PROTECTION FENCE

TREE PROTECTION FENCE

DEMOLISH & REMOVE EXISTING PLAY EQUIPMENT

DIRT TEE BOX

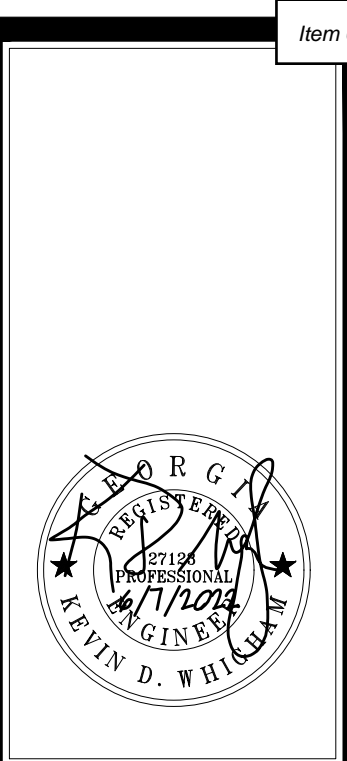
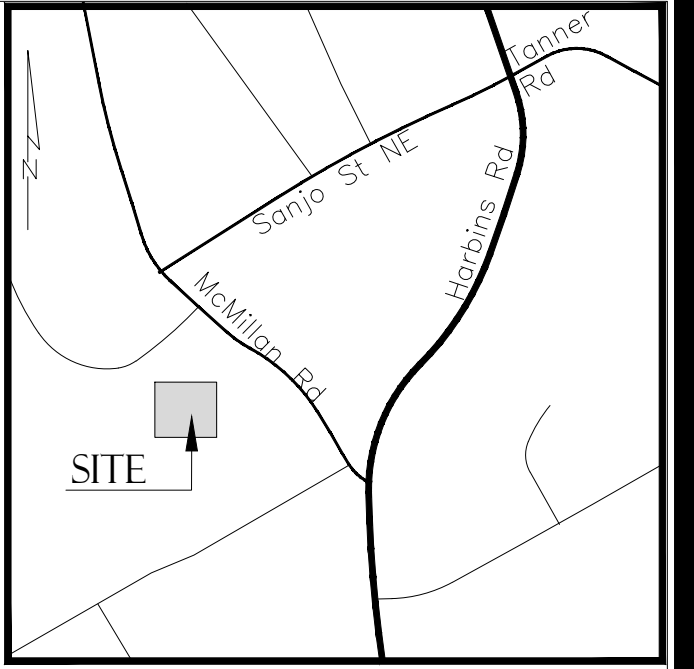
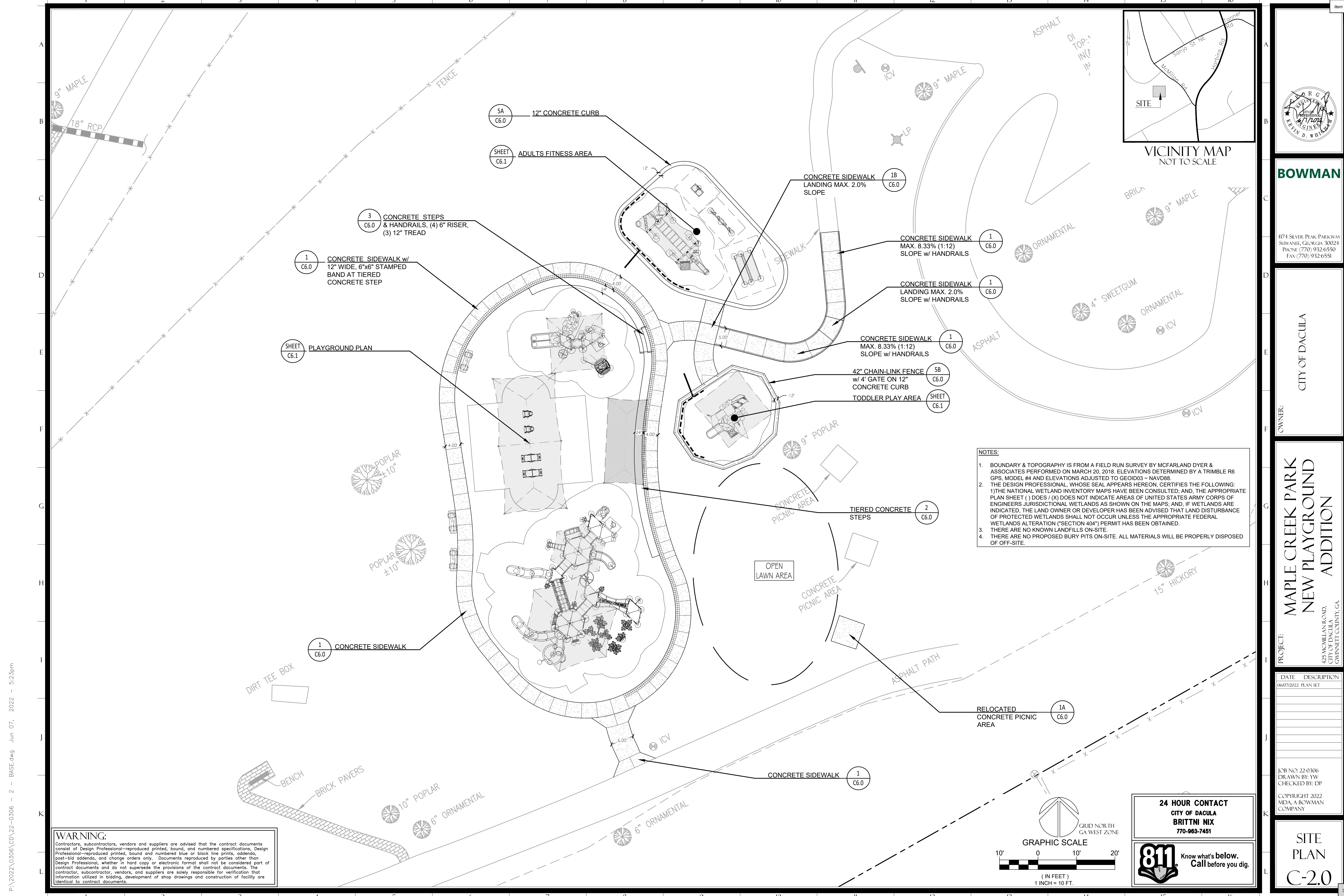
START DEMOLITION FROM EXPANSION JOINTS

DEMOLISH & REMOVE EXISTING PIPE CROSSING

DEMOLISH & REMOVE EXISTING CONCRETE SIDEWALK TO EARTH SUBGRADE

SAW-CUT EXISTING CONCRETE SIDEWALK

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BOWMAN

4174 SILVER PEAK PARKWAY
 SUWANEE, GEORGIA 30024
 PHONE (770) 932-6550
 FAX (770) 932-6551

CITY OF DACULA

OWNER:

**MAPLE CREEK PARK
 NEW PLAYGROUND
 ADDITION**

PROJECT:
 425 McMILLAN ROAD,
 CITY OF DACULA,
 GWINNETT COUNTY, GA

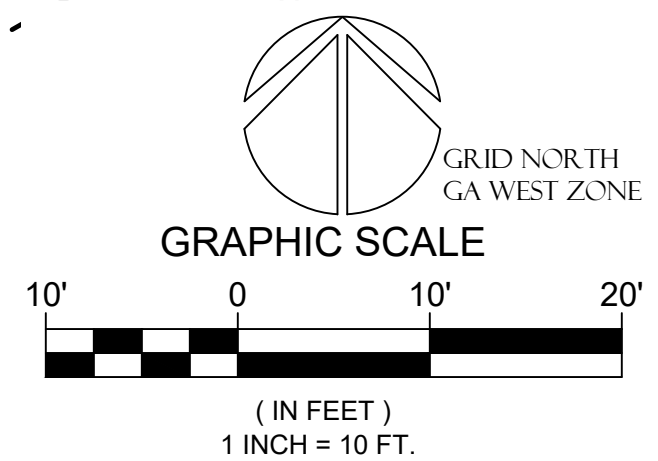
DATE	DESCRIPTION
06/07/2022	PLAN SET

JOB NO: 22-0306
 DRAWN BY: YW
 CHECKED BY: DP

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 COMPANY

**SITE
 PLAN
 C-2.0**

- NOTES:**
- BOUNDARY & TOPOGRAPHY IS FROM A FIELD RUN SURVEY BY MCFARLAND DYER & ASSOCIATES PERFORMED ON MARCH 20, 2018. ELEVATIONS DETERMINED BY A TRIMBLE R6 GPS, MODEL #4 AND ELEVATIONS ADJUSTED TO GEOID03 - NAVD88.
 - THE DESIGN PROFESSIONAL, WHOSE SEAL APPEARS HEREON, CERTIFIES THE FOLLOWING: 1) THE NATIONAL WETLAND INVENTORY MAPS HAVE BEEN CONSULTED; AND, THE APPROPRIATE PLAN SHEET () DOES / (X) DOES NOT INDICATE AREAS OF UNITED STATES ARMY CORPS OF ENGINEERS JURISDICTIONAL WETLANDS AS SHOWN ON THE MAPS; AND, IF WETLANDS ARE INDICATED, THE LAND OWNER OR DEVELOPER HAS BEEN ADVISED THAT LAND DISTURBANCE OF PROTECTED WETLANDS SHALL NOT OCCUR UNLESS THE APPROPRIATE FEDERAL WETLANDS ALTERATION ("SECTION 404") PERMIT HAS BEEN OBTAINED.
 - THERE ARE NO KNOWN LANDFILLS ON-SITE.
 - THERE ARE NO PROPOSED BURY PITS ON-SITE. ALL MATERIALS WILL BE PROPERLY DISPOSED OF OFF-SITE.



**24 HOUR CONTACT
 CITY OF DACULA
 BRITNI NIX
 770-963-7451**



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CITY OF DACULA

OWNER:

PROJECT: **MAPLE CREEK PARK
NEW PLAYGROUND
ADDITION**

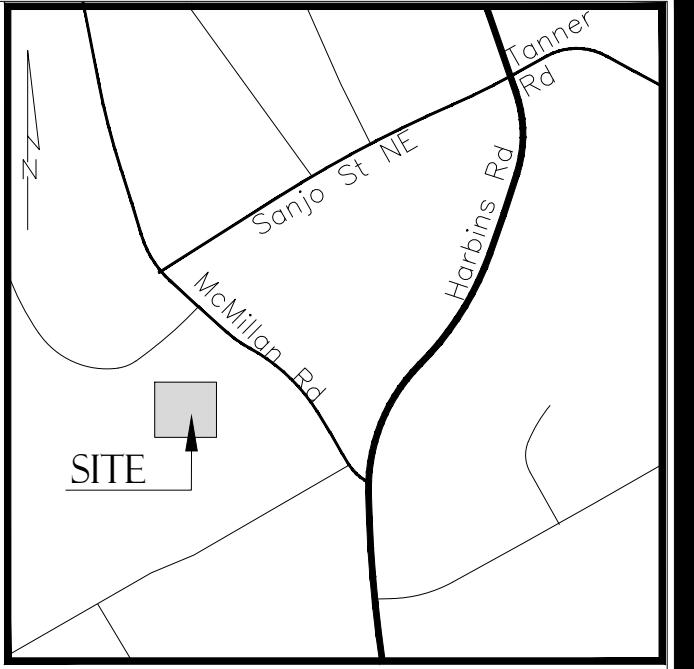
425 MC MILLAN ROAD,
CITY OF DACULA,
GWINNETT COUNTY, GA

DATE	DESCRIPTION
06/07/2022	PLAN SET

JOB NO: 22-0306
DRAWN BY: YW
CHECKED BY: DP

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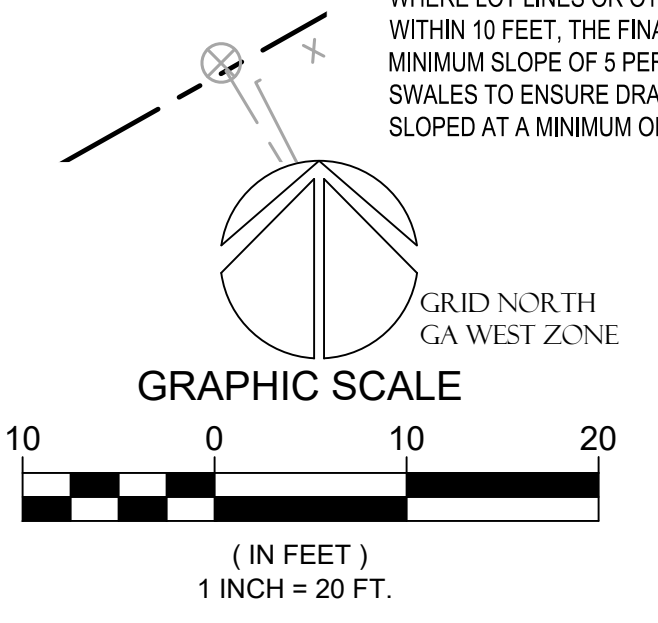
GRADING
& DRAINAGE
PLAN
C-3.0



VICINITY MAP
NOT TO SCALE

GRADING & DRAINAGE NOTES:

1. THE CONTRACTOR SHALL THOROUGHLY FAMILIARIZE HIMSELF WITH ALL EXISTING SITE CONDITIONS BY SITE VISITATION, DETAILED REVIEW OF ALL CURRENT SITE PLANS, PREVIOUS INFORMATION OF SURROUNDING LAND USES AND ZONING CONDITIONS OR OTHER MATERIALS TO FULLY ASCERTAIN THE SCOPE OF THE WORK IMPLIED WITHIN THE PLANS.
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE ESTABLISHMENT AND MAINTENANCE OF HORIZONTAL AND VERTICAL BENCHMARKS THROUGHOUT THE DURATION OF THE PROJECT.
3. A QUALIFIED GEOTECHNICAL ENGINEER, EMPLOYED BY THE OWNER SHALL MONITOR ALL EARTHWORK OPERATIONS AND SHALL PROVIDE TESTING AS TO THE STANDARDS AND QUALITY OF BEARING SURFACES AND THE MINIMUM QUALITY STANDARDS OF MATERIALS. THE GEOTECHNICAL ENGINEER SHALL MAKE THE SOLE INTERPRETATION OF ROCK AND UNSUITABLE SOILS AND SHALL MAKE RECOMMENDATIONS AS TO ITS REMOVAL OR FINAL DISPOSITION.
4. THE CONTRACTOR SHALL LIMIT CONSTRUCTION OPERATIONS TO THE PROJECT SITE AND SHALL PROTECT ADJACENT PROPERTIES AND PROPERTY OWNERS FROM ENCROACHMENT BY SOIL EROSION.
5. MAXIMUM CUT OR FILL SLOPES = 2H:1V.
6. THE SCOPE OF WORK IMPLIED WITHIN THIS PLAN INCLUDES ALL GRADING OPERATIONS FOR FINAL GRADE ELEVATIONS AS SHOWN. THE CONTRACTOR IS RESPONSIBLE FOR ALL EARTH QUANTITIES, GRADING OPERATIONS AND MISCELLANEOUS HAULING AND/OR DISPOSAL OPERATIONS TO RENDER THE SITE TO THE FINAL CONTOUR AND GRADE ELEVATIONS SHOWN ON THE PLAN. FILL REQUIRED SHALL BE FURNISHED, INSTALLED AND COMPACTED AS PART OF CONTRACTOR'S BASE BID. DEPOSIT "EXCESS" CUT ON SITE, AT THE DIRECTION OF THE OWNER, AS PART OF THE BASE BID.
7. CITY OF DACULA ASSUMES NO RESPONSIBILITY FOR OVERFLOW OR EROSION OF NATURAL OR ARTIFICIAL DRAINS BEYOND THE EXTENT OF THE STREET RIGHT-OF-WAY, OR FOR THE EXTENSION OF CULVERTS BEYOND THE POINT SHOWN ON THE APPROVED AND RECORDED PLAN. CITY OF DACULA DOES NOT ASSUME THE RESPONSIBILITY FOR THE MAINTENANCE OF PIPES IN DRAINAGE EASEMENTS BEYOND THE COUNTY RIGHT-OF-WAY.
8. CLEAN OUT AND FLUSH ALL EXISTING PIPING, EXISTING DROP INLETS, CATCH BASINS, ROOF DRAINAGE AND CLEAN OUTS OF ALL DEBRIS, SEDIMENT OR ANY MATERIALS OF ANY KIND SO THAT EXISTING AND PROPOSED DRAINAGE SYSTEM FUNCTION AS DESIGNED.
9. THE CONTRACTOR IS RESPONSIBLE FOR ALL MATERIAL QUANTITIES INCLUDING ALL STORM DRAINAGE STRUCTURES, BEDDING, PIPING AND DETAILS SUFFICIENT TO RENDER COMPLETED AND FUNCTIONING DRAINAGE SYSTEMS AS ILLUSTRATED ON THE PLANS.
10. CERTIFICATE OF OCCUPANCY WILL NOT BE ISSUED UNTIL FINAL INSPECTION IS COMPLETED BY CITY OF DACULA WATER & SEWER DEPARTMENT IF REQUIRED.
11. NO POOL DRAINS, DUMPSTER PADS OR ROOF DRAIN DISCHARGE WILL BE ALLOWED IN SANITARY SEWER LINES.
12. NO STRUCTURES, FENCES OR OTHER OBSTRUCTIONS SHALL BE LOCATED WITHIN A DRAINAGE OR ACCESS EASEMENT WITHOUT PRIOR APPROVAL OF THE CHEROKEE COUNTY WATER AND SEWAGE AUTHORITY.
13. ALL DRAINAGE STRUCTURES SHALL BE BUILT ACCORDING TO DOT STANDARDS.
14. ANY FILL MATERIAL SUPPORTING STRUCTURAL LOADS SHALL BE ENGINEERED WITH PROPER DOCUMENTATION INCLUDING GEORGIA REGISTERED P.E. STAMP. SUBMIT DOCUMENTATION TO THE CITY OF DACULA BUILDING DEPARTMENT PRIOR TO FOUNDATION INSPECTION.
15. PER SECTIONS R401.3 OF THE 2012 INTERNATIONAL RESIDENTIAL CODE, THE ENTIRE LOT SHALL BE GRADED TO DRAIN SURFACE WATER AWAY FROM ALL FOUNDATION WALLS. THE GRADE SHALL FALL A MINIMUM OF 6 INCHES WITHIN THE FIRST 10 FEET, WHERE LOT LINES OR OTHER PHYSICAL BARRIERS PROHIBIT 6 INCHES OF FALL WITHIN 10 FEET. THE FINAL GRADE SHALL SLOPE AWAY FROM THE FOUNDATION AT A MINIMUM SLOPE OF 5 PERCENT AND THE WATER SHALL BE DIRECTED TO DRAINS OR SWALES TO ENSURE DRAINAGE AWAY FROM THE STRUCTURE. SWALES SHALL BE SLOPED AT A MINIMUM OF 2 PERCENT.

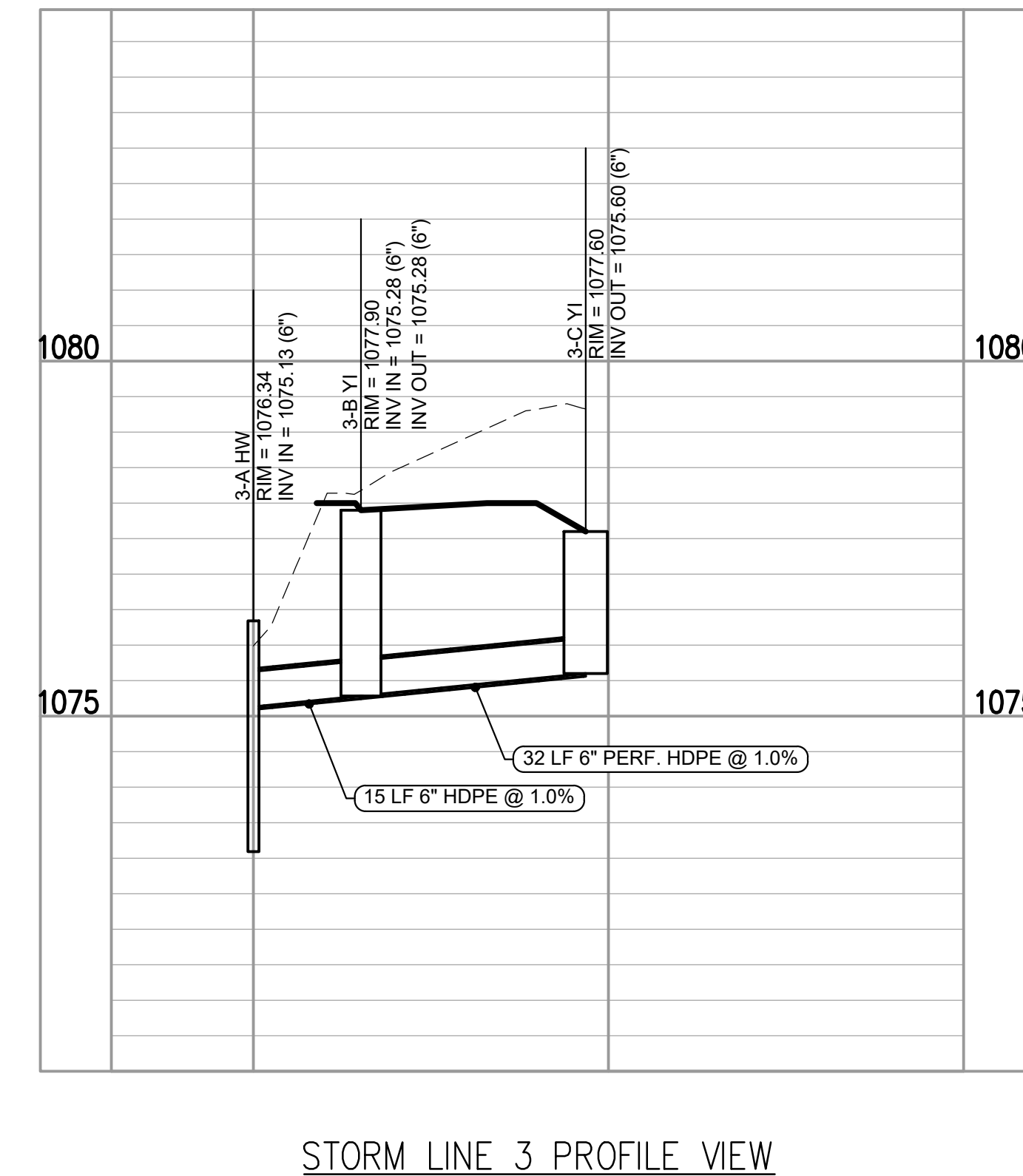
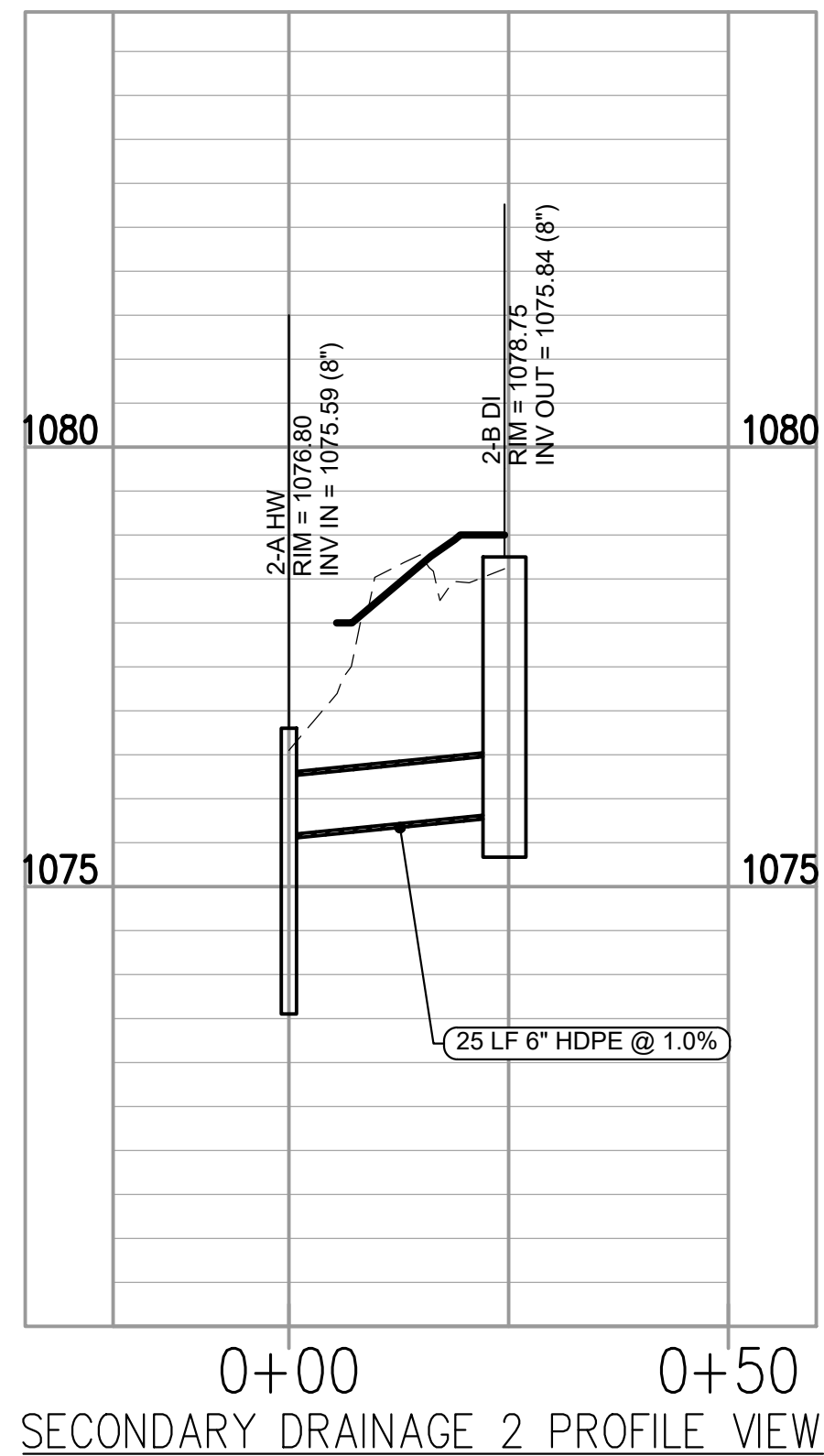
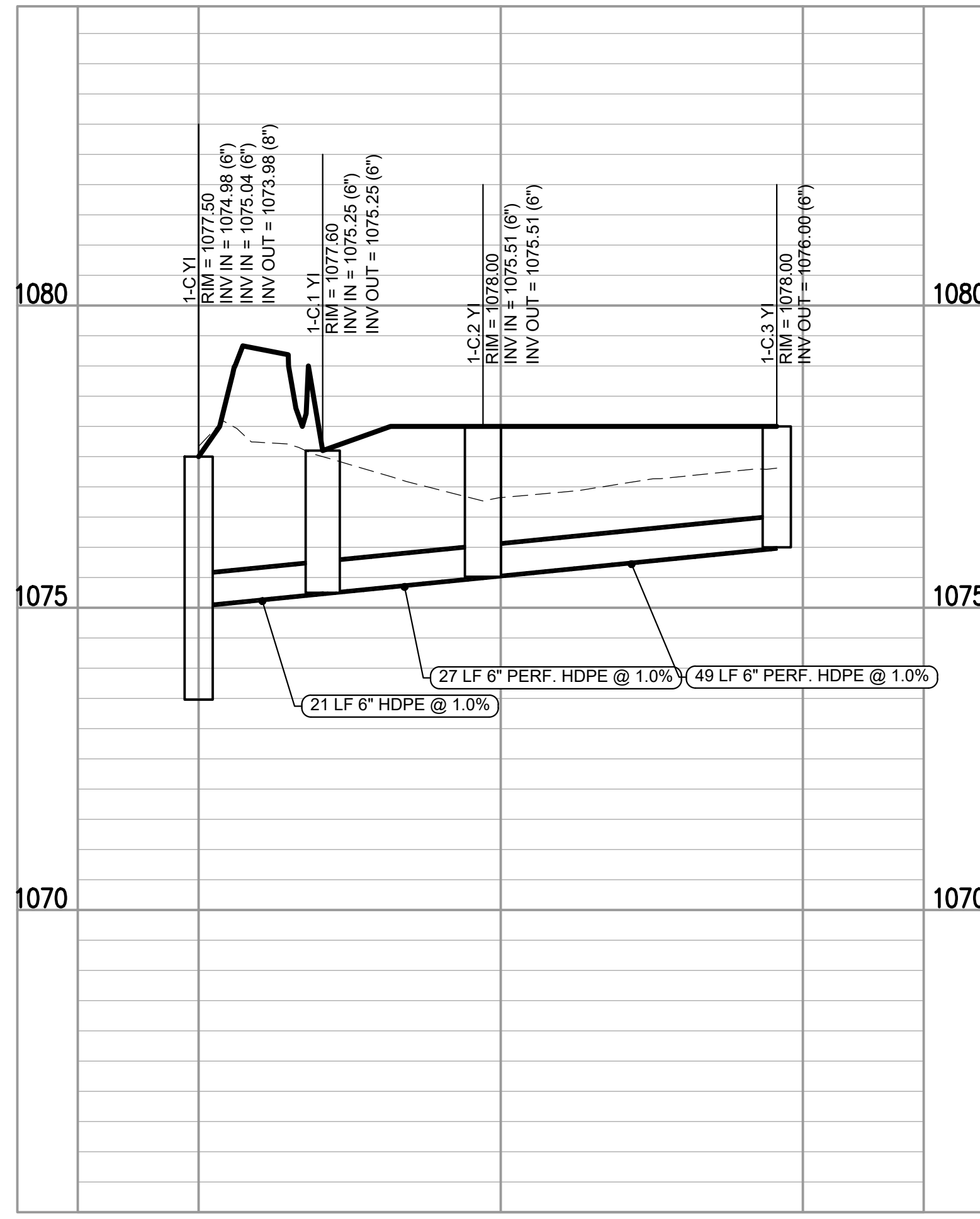
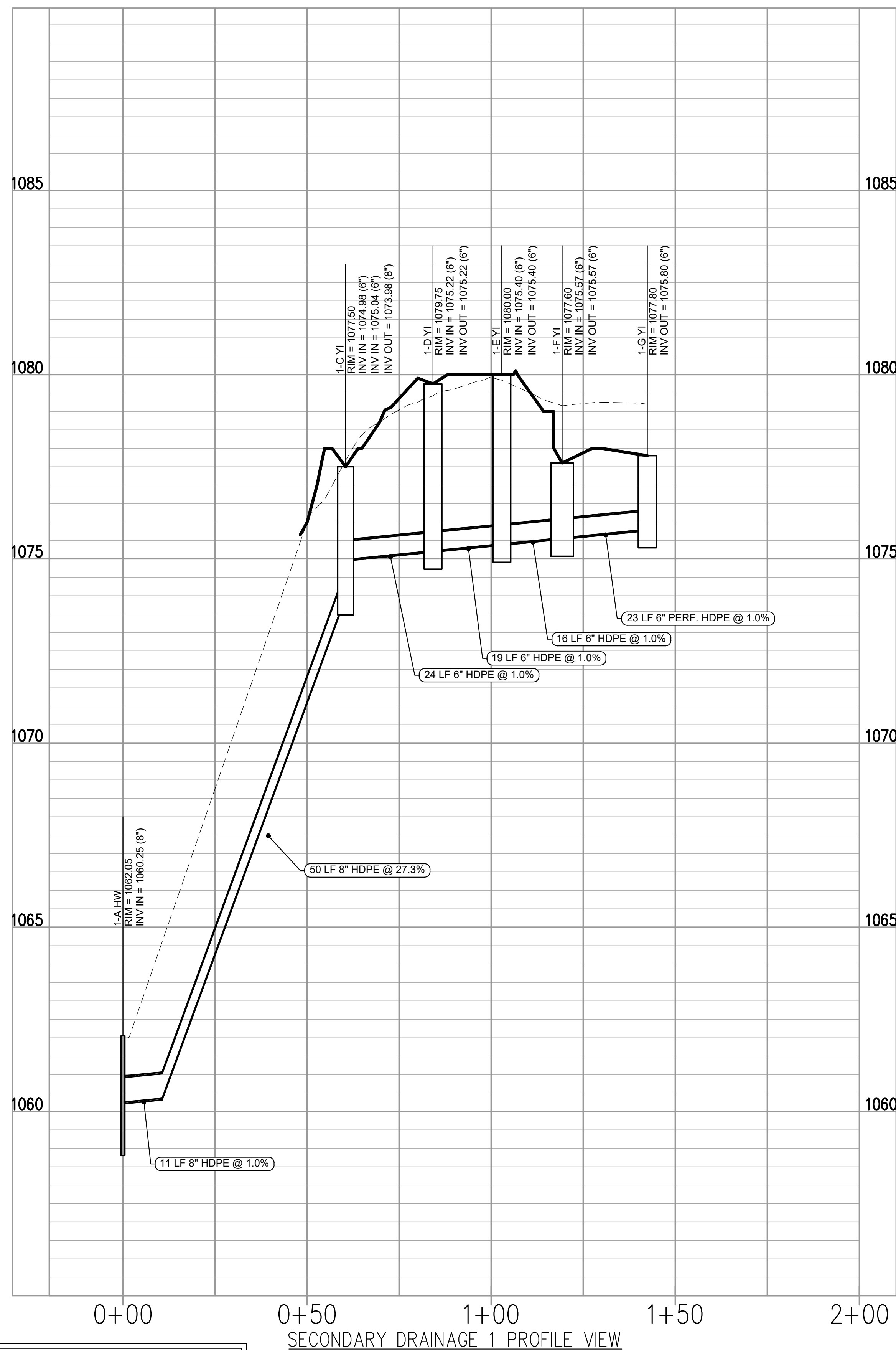


24 HOUR CONTACT
CITY OF DACULA
BRITNI NIX
770-963-7451



**GRASSING REQUIRED
EVERY SEVEN (7) DAYS.**

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WARNING:
 Designer, administrator, reviewer and engineer are advised that the contract documents consist of design professional-provided plans, notes, and technical specifications. Design professional-provided plans, notes and technical specifications shall be read in conjunction with the contract documents, and design errors only. Design errors shall not be considered part of the contract documents and do not constitute the province of the contract documents. The contractor, subcontractors, vendors, and suppliers are solely responsible for verifying that information shown in all drawings, development of shop drawings and construction of facility are limited to contract documents.

24 HOUR CONTACT
 CITY OF DACULA
 BRITNI NIX
 770-963-7451

Know what's below.
 Call before you dig.



BOWMAN

4174 SILVER PEAK PARKWAY
 SUWANEE, GEORGIA 30024
 PHONE (770) 932-6550
 FAX (770) 932-6551

CITY OF DACULA

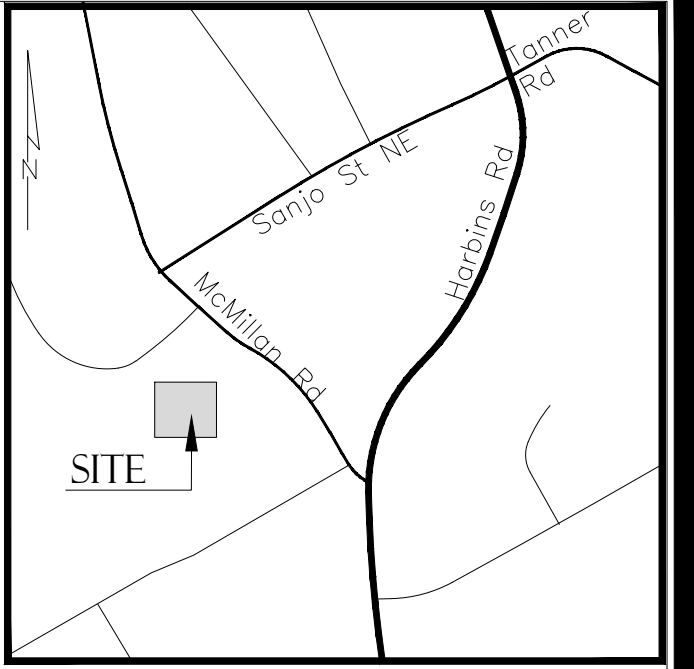
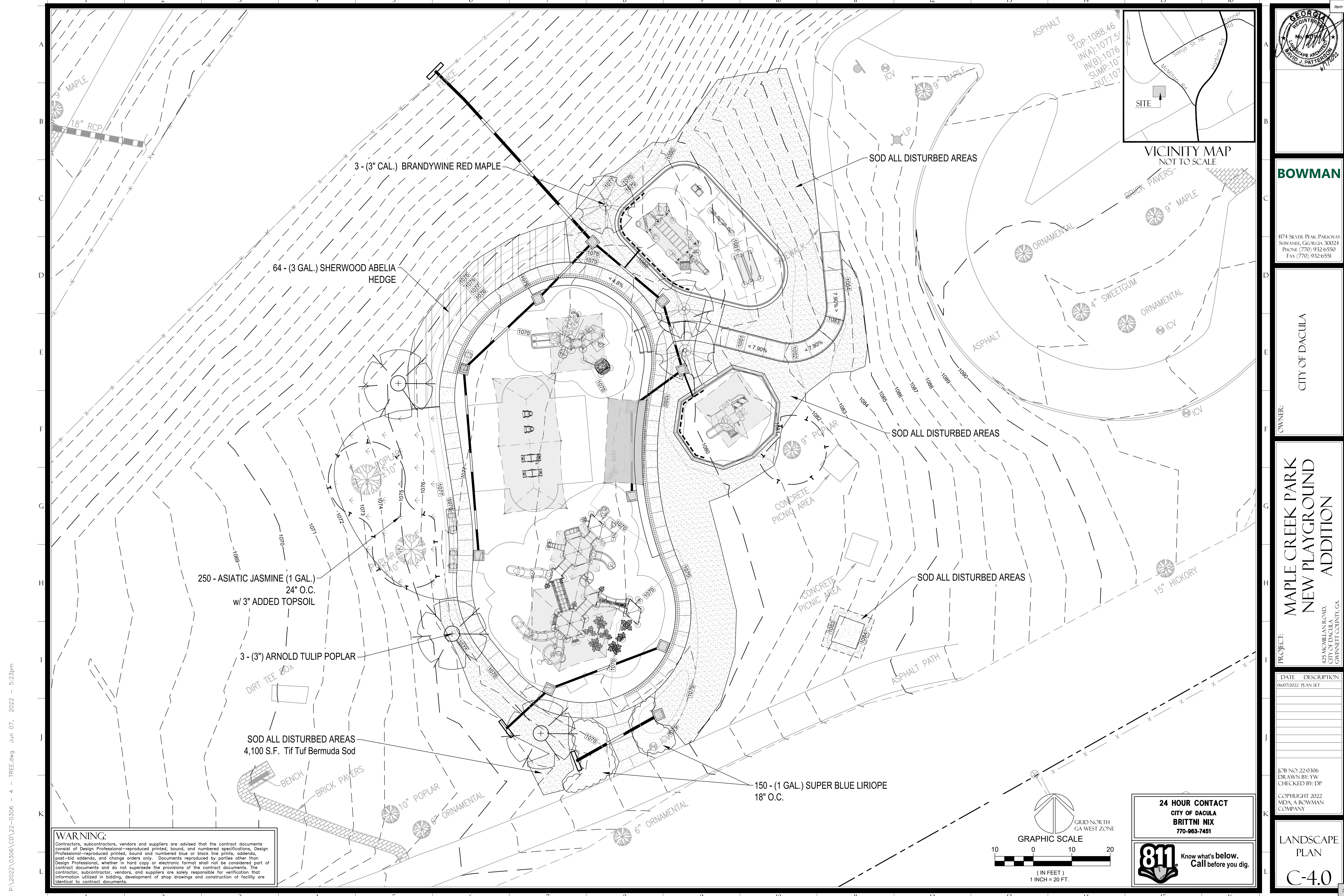
PROJECT: **MAPLE CREEK PARK
 NEW PLAYGROUND
 ADDITION**
 425 MCILLAN ROAD,
 CITY OF DACULA,
 GWINNETT COUNTY, GA

DATE	DESCRIPTION
06/07/2022	PLAN SET

JOB NO: 22-0306
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OWNER:
 CITY OF DACULA

PROJECT:
**MAPLE CREEK PARK
 NEW PLAYGROUND
 ADDITION**

425 McMILLAN ROAD,
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DATE	DESCRIPTION
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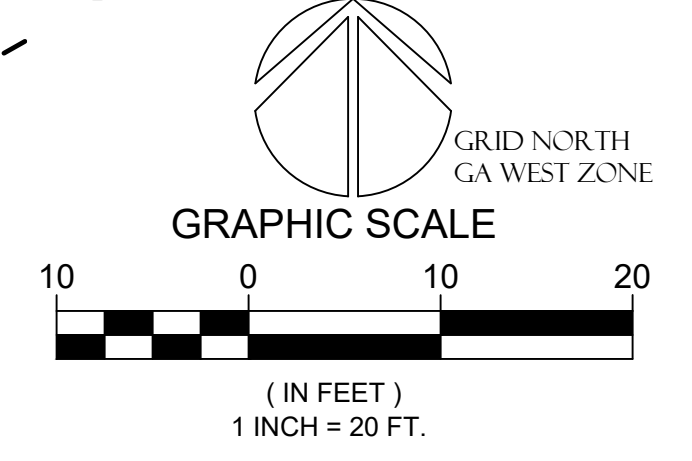
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LANDSCAPE
 PLAN

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24 HOUR CONTACT
 CITY OF DACULA
 BRITNI NIX
 770-963-7451



EROSION, SEDIMENTATION AND POLLUTION CONTROL PLAN (ES&PC) NOTES:

- 1. EXISTING LAND USE: PARK
2. SITE LOCATION: SAWNEE ROAD
3. PROPOSED USE AND DESCRIPTION OF CONSTRUCTION ACTIVITY: PARK WITH PLAYGROUND IMPROVEMENTS
4. TOTAL SITE AREA: 16.39 ACRES
5. TOTAL DISTURBED AREA: 0.32 ACRES
6. OWNER/DEVELOPER/PRIMARY PERMITTEE:
7. SECONDARY PERMITTEES:

NAME: COMPANY: ADDRESS: PHONE NO: FAX NO: SIGNATURE: DATE:

- 8. 24 HOUR LOCAL CONTACT FOR EROSION, SEDIMENTATION AND POLLUTION CONTROL: BRITINI NIX (770) 963-7451
9. THERE ARE STATE WATERS LOCATED ON-SITE.
10. THE WETLAND INVENTORY MAP HAS BEEN CONSULTED AND SHOWN THAT WETLANDS ARE NOT LOCATED ON THE SITE, HOWEVER THE SITE WAS EXAMINED BY A WETLAND SPECIALIST AND THERE ARE WETLANDS LOCATED ON THE SITE WITHIN THE BUFFERS OF THE STATE WATERS.

11. RECEIVING WATER(S) IS/ARE: UNNAMED TRIBUTARY OF HOPKINS CREEK.
12. SOIL SERIES FOR THE PROJECT SITE INCLUDE: Pd2 & Am2
13. DESCRIPTION OF THE MEASURES TO BE INSTALLED DURING CONSTRUCTION PROCESS TO CONTROL POLLUTANTS IN STORMWATER THAT WILL OCCUR AFTER CONSTRUCTION OPERATIONS HAVE BEEN COMPLETED:

PRODUCT SPECIFIC PRACTICES
PETROLEUM BASED PRODUCTS - CONTAINERS FOR PRODUCTS SUCH AS FUELS, LUBRICANTS, AND TARS WILL BE INSPECTED DAILY FOR LEAKS AND SPILLS. THIS INCLUDES ONSITE VEHICLES AND MACHINERY DAILY INSPECTIONS AND REGULAR PREVENTATIVE MAINTENANCE OF SUCH EQUIPMENT. EQUIPMENT MAINTENANCE AREAS WILL BE LOCATED AWAY FROM STATE WATERS, NATURAL DRAINS, AND STORM WATER DRAINAGE INLETS. IN ADDITION, TEMPORARY FUELING TANKS SHALL HAVE A SECONDARY CONTAINMENT LINER TO PREVENT/MINIMIZE SITE CONTAMINATION. DISCHARGE OF OILS, FUELS, AND LUBRICANTS IS PROHIBITED. PROPER DISPOSAL METHODS WILL INCLUDE COLLECTION IN A SUITABLE CONTAINER AND DISPOSAL AS REQUIRED BY LOCAL AND STATE REGULATIONS.

- 14. INITIAL PERIMETER BEST MANAGEMENT PRACTICES (BMP'S): Co, Sd1, Sd4, Du, Dd1, Dd2, & Tr.
15. INTERMEDIATE GRADING AND DRAINAGE BMP'S: Sd1, Dd1, Dd2, Du, Co, Sd2-FP, & Tr.
16. FINAL BMP'S: Dd4, Sd2-FP.

- 17. THIS SITE DOES NOT LIE WITHIN A 100 YEAR FLOOD HAZARD AREA PER FIRM MAP 13135C00076F, DATED 9/29/2006.
18. ESTIMATE OF PRE-CONSTRUCTION 25 YEAR PEAK DISCHARGE FLOW AT : CFS
19. ESTIMATE OF POST-CONSTRUCTION 25 YEAR PEAK DISCHARGE FLOW AT : CFS
20. CRITICAL AREAS LOCATED ON-SITE ARE IDENTIFIED AS: Ss. AT THE END OF EACH WORK DAY ALL SLOPES 2:1 OR STEEPER AND HIGHER THAN 5 FEET SHALL RECEIVE SURFACE ROUGHENING, POLYMERS, AND EROSION CONTROL MATTING. ADDITIONALLY, ALL FILL SLOPES SHALL RECEIVE A DIVERSION DIKE AND TEMPORARY DOWN DRAINS ALONG THE TOP OF THE SLOPE PREVENTING DRAINAGE SPILLING OVER THE EDGE AND DOWN THE FACE OF THE SLOPE. THE TEMPORARY DOWN DRAINS SHALL BE CONSTRUCTED WITH PERFORATED STAND PIPES AT THE TOP OF THE SLOPE AND RECONSTRUCTED EACH DAY AS THE SLOPE INCREASED IN HEIGHT.

- 21. "THE ESCAPE OF SEDIMENT FROM THE SITE SHALL BE PREVENTED BY THE INSTALLATION OF EROSION AND SEDIMENT CONTROL MEASURES AND PRACTICES PRIOR TO LAND DISTURBING ACTIVITIES."
22. "EROSION CONTROL MEASURES WILL BE MAINTAINED AT ALL TIMES. IF FULL IMPLEMENTATION OF THE APPROVED PLAN DOES NOT PROVIDE FOR EFFECTIVE EROSION CONTROL, ADDITIONAL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE IMPLEMENTED TO CONTROL OR TREAT THE SEDIMENT SOURCE."
23. "ANY DISTURBED AREA LEFT EXPOSED FOR A PERIOD GREATER THAN 14 DAYS SHALL BE STABILIZED WITH MULCH OR TEMPORARY SEEDING."

- 24. "STABILIZATION MEASURES SHALL BE INITIATED AS SOON AS PRACTICABLE IN PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITIES HAVE TEMPORARILY OR PERMANENTLY CEASED, BUT IN NO CASE MORE THAN 14 DAYS AFTER THE CONSTRUCTION ACTIVITY IN THAT PORTION OF THE SITE HAS TEMPORARILY CEASED. WHERE THE INITIATION OF STABILIZATION MEASURES BY THE 14TH DAY AFTER CONSTRUCTION ACTIVITY TEMPORARILY OR PERMANENTLY CEASES IS PRECLUDED BY SNOW COVERS OR OTHER ADVERSE WEATHER CONDITIONS, STABILIZATION MEASURES SHALL BE INITIATED AS SOON AS PRACTICABLE. WHERE CONSTRUCTION ACTIVITY WILL RESUME ON A PORTION OF THE SITE WITHIN 21 DAYS FROM WHEN ACTIVITIES CEASE, (E.G. THE TOTAL TIME PERIOD THAT CONSTRUCTION ACTIVITY IS TEMPORARILY CEASED IS LESS THAN 21 DAYS) THE STABILIZATION MEASURES DO NOT HAVE TO BE INITIATED ON THAT PORTION OF THE SITE BY THE 14TH DAY AFTER CONSTRUCTION ACTIVITY HAS TEMPORARILY CEASED."
25. "TEMPORARY SEDIMENT BASIN, RETROFITTED DETENTION POND, AND/OR EXCAVATED INLET SEDIMENT TRAPS FOR EACH COMMON DRAINAGE LOCATION PROVIDING A MINIMUM 67 CUBIC YARDS OF SEDIMENT STORAGE PER ACRE DRAINED MUST BE IN PLACE PRIOR TO AND DURING ALL LAND DISTURBING ACTIVITIES UNTIL FINAL STABILIZATION OF THE SITE HAS BEEN ACHIEVED."

- 26. "SEDIMENT STORAGE MAINTENANCE INDICATORS MUST BE INSTALLED IN SEDIMENT STORAGE STRUCTURES, INDICATING THE 1/3 FULL VOLUME."
27. "CONTRACTOR TO CLEAN OUT ACCUMULATED SILT IN DETENTION POND AT THE END OF CONSTRUCTION ACTIVITIES WHEN THE DISTURBED AREAS HAVE BEEN STABILIZED."
28. "CONTRACTOR TO PROVIDE DETENTION POND AS-BUILT AND RECORD DRAWINGS THAT SHALL INCLUDE TOPO OF POND TO CALCULATE POND VOLUMES AND OUTLET CONTROL STRUCTURE DETAILS AND INFORMATION TO COMPLETE AN AS-BUILT HYDROLOGY STUDY TO VERIFY THAT THE DETENTION POND WILL FUNCTION AS IT WAS DESIGNED."

- 29. "MAINTENANCE OF ALL SOIL EROSION AND SEDIMENTATION CONTROL MEASURES AND PRACTICES, WHETHER TEMPORARY OR PERMANENT, SHALL BE AT ALL TIMES THE RESPONSIBILITY OF THE PROPERTY OWNER."
30. "ADDITIONAL SOIL EROSION CONTROL MEASURES WILL BE ADDED IF DETERMINED TO BE NEEDED BY ON-SITE INSPECTIONS."
31. "STANDARDS AND SPECIFICATIONS: ALL DESIGN SHALL CONFORM TO AND ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE STANDARDS AND SPECIFICATIONS OF THE PUBLICATION ENTITLED "MANUAL FOR EROSION AND SEDIMENT CONTROL" BY THE GA. SOIL & WATER CONSERVATION COMMISSION."

- 32. "NON-EXEMPT ACTIVITIES SHALL NOT BE CONDUCTED WITHIN THE 25 OR 50-FOOT UNDISTURBED STREAM BUFFERS AS MEASURED FROM THE POINT OF WRESTED VEGETATION OR WITHIN 25-FEET OF THE COASTAL MARSHLAND BUFFER AS MEASURED FROM THE JURISDICTIONAL DETERMINATION LINE WITHOUT FIRST ACQUIRING THE NECESSARY VARIANCES AND PERMITS."
33. "CONCENTRATED FLOW AREAS AND ALL SLOPES STEEPER THAN 2.5:1 WITH A HEIGHT OF TEN FEET OR GREATER SHALL BE STABILIZED WITH THE APPROPRIATE EROSION CONTROL MATTING OR BLANKET."
34. "ALL CUT AND FILL SLOPES MUST BE SURFACED ROUGHENED AND VEGETATED WITHIN SEVEN (7) DAYS OF THEIR CONSTRUCTION. CUT AND FILL OPERATIONS SHALL BE KEPT TO A MINIMUM."

- 35. "ADEQUATE PROVISIONS SHALL BE PROVIDED TO MINIMIZE DAMAGE FROM SURFACE WATER TO THE CUT FACE OF EXCAVATIONS OR THE SLOPING SURFACES OF FILLS."
36. "GRADING OPERATIONS SHALL NOT ENDANGER ADJOINING PROPERTIES."
37. "STRIPPING OF VEGETATION, REGRADING, AND OTHER DEVELOPMENT ACTIVITIES SHALL BE CONDUCTED IN SUCH A MANNER SO AS TO MINIMIZE EROSION."
38. FILLS SHALL NOT ENCROACH UPON NATURAL COURSES OR CONSTRUCTED CHANNELS IN A MANNER SO AS TO ADVERSELY AFFECT OTHER PROPERTY OWNERS."

- 39. "ALL FILL SLOPES SHALL HAVE SILT FENCE PLACED AT THE SLOPE'S TOE."
40. "CONTRACTOR SHALL REMOVE ALL SILT FENCE AND ALL OTHER TEMPORARY EROSION SEDIMENTATION AND POLLUTION CONTROL MEASURES ONCE SITE IS FINAL STABILIZED AND AFTER ALL GRASSING REQUIREMENTS HAVE BEEN COMPLETED BY THE CONTRACTOR TO THE OWNER'S AND CODE SATISFACTION AND BEFORE THE CONTRACTOR LEAVES THE SITE."
41. "ALL WASTE DISPOSAL SHALL BE HAULED OFF TO A STATE AUTHORIZED LANDFILL. NO WASTE/DEBRIS MATERIAL WILL BE BURIED ON-SITE WITHOUT COUNTY/STATE PERMIT. SOLID MATERIALS, INCLUDING BUILDING MATERIALS, SHALL NOT BE DISCHARGED TO WATERS OF THE STATE, EXCEPT AS AUTHORIZED BY A SECTION 404 PERMIT FROM THE U.S. ARMY CORPS OF ENGINEERS (NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) IV D.2.C.(1))."

- 42. "ALL PERMITTEES SHALL ENSURE AND DEMONSTRATE THAT THE SITE IS IN COMPLIANCE WITH THE ES&PC PLAN WITH RESPECT TO ALL APPLICABLE STATE AND LOCAL WASTE WATER DISPOSAL, SANITARY SEWER OR SEPTIC SYSTEM REGULATIONS, (NPDES IV D.2.C.(3))."
43. "CONTRACTOR SHALL MAINTAIN CONSTRUCTION EXITS TO PREVENT TRACKING OF MUD INTO PUBLIC RIGHT-OF-WAY."
44. "OFF-SITE VEHICLE TRACKING OF DIRT, SOILS, AND SEDIMENTS AND THE GENERATION OF DUST SHALL BE MINIMIZED OR ELIMINATED TO THE MAXIMUM EXTENT PRACTICAL (NPDES IV D.2.C.(2)). CONTRACTOR SHALL USE PM-POLYACRYLAMIDE (PAM) FOR DUST CONTROL, ETC. AT CONSTRUCTION EXITS, VEHICLE WASHING AREAS AND ANY OTHER AREAS WHERE SEDIMENT CAN BE CAPTURED."
45. "CONTRACTOR TO FURNISH AND INSTALL 400 SERIES SILT STOP AS MANUFACTURED BY APPLIED POLYMER SYSTEMS, NORCOROSS GA OR EQUAL AT A RATE OF 1.5 GALLONS/ACRE IN A HYDROSEEDER MIX OF APPROPRIATE SEED, FERTILIZER, LIME AND MULCH FOR THE SAME ACRE ON ALL DISTURBED OR EXPOSED SOIL SURFACES. FOLLOW ALL MANUFACTURER'S INSTRUCTIONS AND RECOMMENDATIONS. DO NOT MECHANICALLY DISTURB TREATED AREAS AFTER APPLICATION."

- 46. "CONTRACTOR SHALL INSPECT ALL VEHICLES AND PETROLEUM STORAGE CONTAINERS REGULARLY, MAKING REPAIRS TO MINIMIZE ALL PETROLEUM SPILLS AND LEAKS AND SHALL KEEP ON HAND DRY, POROUS PETROLEUM ABSORBENT MATERIALS SUCH AS VERMICULITE, SAND AND LEAN SOIL, AND SHALL CLEAN UP ALL SAID SPILLS AND DISPOSE OF SAID MATERIALS IN ACCORDANCE WITH ALL STATE AND FEDERAL REGULATIONS (NPDES IV D.2.C.(4))."
47. "NO CONSTRUCTION ACTIVITIES SHALL BE CONDUCTED WITHIN A STREAM BUFFER AND THE STREAM BUFFER SHALL REMAIN IN ITS NATURAL, UNDISTURBED, STATE OF VEGETATION UNTIL ALL LAND-DISTURBING ACTIVITIES ON THE CONSTRUCTION SITE ARE COMPLETED."
48. "THE DESIGN PROFESSIONAL WHO PREPARED THE ES&PC PLAN IS TO INSPECT THE INSTALLATION OF THE INITIAL SEDIMENT STORAGE REQUIREMENTS AND PERIMETER CONTROLS BMP'S WITHIN 7 DAYS AFTER INSTALLATION. PROOF OF SITE VISIT SHALL BE KEPT ON-SITE."
49. "NON-STORM WATER DISCHARGES SUCH AS FIRE HYDRANT FLUSHING, POTABLE WATER SOURCES INCLUDING WATER LINE FLUSHING, IRRIGATION DRAINAGE, AIR CONDENSATE, SPRINGS, UNCONTAMINATED GROUNDWATER, AND FOUNDATION OR FOOTING DRAINS ARE TO BE TREATED IN THE SAME MANNER AS STORM WATER DISCHARGES."
50. "CONTRACTOR SHALL MONITOR, REPORT REQUIREMENTS, AND RETAIN RECORDS PER THE GENERAL NPDES PERMIT NO. GAR 100003. CONTRACTOR SHALL COMPLY WITH ALL REQUIREMENTS AS SET FORTH IN THE GENERAL NPDES PERMIT NO. GAR 100003."
51. "A 25 FOOT BUFFER ADJACENT TO ALL STREAMS, CREEKS, LAKES, PONDS, ETC. IS REQUIRED TO BE MAINTAINED BY THE SOIL EROSION CONTROL AND SEDIMENT CONTROL ORDINANCE (ARTICLE 4 SECTION 4.3 PARAGRAPH 15). AN EXEMPTION IS GRANTED TO HOMEOWNERS WHO PERFORM MINOR LANDSCAPING ACTIVITIES SUCH AS HOME LANDSCAPING, HOME GARDENS, REPAIRS AND MAINTENANCE WORK. (ARTICLE 3 SECTION 3.1 PARAGRAPH 3)."

- 54. "THE PRIMARY PERMITTEE MUST SAMPLE ALL RECEIVING WATER(S), AND/OR ALL OUTFALLS, OR A COMBINATION OF RECEIVING WATERS AND OUTFALLS. RECEIVING WATERS MUST HAVE AN UPSTREAM AND DOWNSTREAM SAMPLE LOCATION, (NPDES IV D.5.C.(1)). "NPDES SAMPLING FOR ALL MONITORING POINTS ON THIS SITE WILL BE BY GRAB SAMPLE METHOD. SAMPLES WILL BE PERFORMED BY THE PRIMARY PERMITTEE OR ITS AGENT TAKEN AND ANALYZED NO LATER THAN 48 HOURS AFTER A GRAB. SAMPLES SHALL BE COLLECTED WHERE THE STREAM IS WELL MIXED FROM HORIZONTAL AND VERTICAL CENTER OF FLOW. WHEN COLLECTING THE SAMPLE, FACE SAMPLING CONTAINER UPSTREAM AND DO NOT STIR SEDIMENT AT BOTTOM OF STREAM. LIFT SAMPLE OUT OF STREAM KEEPING SAMPLES FREE OF FLOATING DEBRIS. AFTER SAMPLES HAVE BEEN COLLECTED IT SHALL BE ANALYZED USING A DIRECT READ, PROPERLY CALIBRATED TURBIDIMETER WITHIN 48 HOURS. (NPDES IV D.5.A.(2))."
* FOR THIS SITE THE GRAB METHOD WILL BE USED FOR UPSTREAM MONITORING POINTS 'MP-1' AND DOWNSTREAM MONITORING POINTS 'MP-2'.

- * SEE ADDITIONAL PERMIT COVERAGE NOTES THIS SHEET FOR AUTHORIZED COVERAGE, LIMITATIONS OF COVERAGE, WATER QUALITY COMPLIANCE, SAMPLING METHODOLOGY AND FREQUENCY.
55. "THE PRIMARY PERMITTEE MAY USE AN ALTERNATE DESIGN PROFESSIONAL TO CONDUCT THE SEVEN (7) DAY BMP INSPECTION, PROVIDED THAT THE PRIMARY MAKES A WRITTEN REQUEST TO EPD TO CHANGE FROM THE DESIGN PROFESSIONAL WHO DEVELOPED THE PLAN AND THE E.P.D. HAS AGREED."
56. "PRIMARY PERMITTEE IS TO PROVIDE EACH SECONDARY PERMITTEE WITH THE APPLICABLE PORTION OF THE ES&PC THAT PERTAINS TO THEIR CONSTRUCTION ACTIVITY AND EACH SECONDARY PERMITTEE SHALL SIGN THE PLAN OR PORTION OF THE PLAN APPLICABLE TO THEIR SITE. NOT APPLICABLE FOR STAND ALONE AND INFRASTRUCTURE PROJECTS." SECONDARY PERMITTEE UNKNOWN AT THE TIME OF NPDES PERMITTING.

- 57. "AMENDMENTS/REVISIONS TO THE ES&PC PLAN WHICH HAVE A SIGNIFICANT EFFECT ON BMP'S WITH A HYDRAULIC COMPONENT MUST BE CERTIFIED BY THE DESIGN PROFESSIONAL."
58. "CONTRACTOR TO PROVIDE BMP'S FOR CONCRETE WASHDOWN OF TOOLS, CONCRETE MIXER CHUTES, HOPPERS AND THE REAR OF THE VEHICLES. WASHOUT OF THE DRUM AT THE CONSTRUCTION SITE IS PROHIBITED."
59. "WASTE MATERIALS SHALL NOT BE DISCHARGED TO WATERS OF THE STATE, EXCEPT AS AUTHORIZED BY A SECTION 404 PERMIT."

- 61. APPROVED PLANS AND NPDES DAILY LOG MUST BE ON SITE AT ALL TIMES.
62. SEDIMENT STORAGE VOLUME MUST BE IN PLACE PRIOR TO AND DURING ALL LAND DISTURBING ACTIVITIES UNTIL FINAL STABILIZATION OF THE SITE HAS BEEN ACHIEVED.

- a. ALL PETROLEUM STORAGE CONTAINERS SHALL BE COVERED WITH PLASTIC SHEETING OR BE LOCATED UNDER A TEMPORARY ROOF.
b. ALL PETROLEUM STORAGE CONTAINERS SHALL BE LOCATED IN A SECONDARY CONTAINMENT AREA.

EROSION, SEDIMENTATION AND POLLUTION CONTROL PLAN CERTIFICATION:

I CERTIFY THAT THE PERMITTEES EROSION, SEDIMENTATION AND POLLUTION CONTROL PLAN PROVIDES FOR AN APPROPRIATE AND COMPREHENSIVE SYSTEM OF BEST MANAGEMENT PRACTICES REQUIRED BY THE GEORGIA WATER QUALITY CONTROL ACT AND THE DOCUMENT "MANUAL FOR EROSION AND SEDIMENT CONTROL IN GEORGIA" (MANUAL) PUBLISHED BY THE STATE SOIL AND WATER CONSERVATION COMMISSION AS OF JANUARY 1 OF THE YEAR IN WHICH THE LAND-DISTURBING ACTIVITY WAS PERMITTED, PROVIDES FOR THE SAMPLING OF THE RECEIVING WATER(S) OR THE SAMPLING OF THE STORM WATER OUTFALLS AND THAT THE DESIGNED SYSTEM OF BEST MANAGEMENT PRACTICES AND SAMPLING METHODS IS EXPECTED TO MEET THE REQUIREMENTS CONTAINED IN THE GENERAL NPDES PERMIT NO. GAR 100003.

REGISTERED PROFESSIONAL: KEVIN WHIGHAM, P.E. DATE: 6/01/2022
GSWCC LEVEL II DESIGN CERTIFICATION #945 EXP: 09/27/2023

SITE VISIT CERTIFICATION:

I CERTIFY UNDER PENALTY OF LAW THAT THIS PLAN WAS PREPARED AFTER A SITE VISIT TO THE LOCATIONS DESCRIBED HEREIN BY MYSELF OR MY AUTHORIZED AGENT, UNDER MY DIRECT SUPERVISION.

REGISTERED PROFESSIONAL: KEVIN WHIGHAM, P.E. DATE: 6/01/2022
GSWCC LEVEL II CERTIFICATION #945 EXP: 09/27/2023

EROSION, SEDIMENTATION AND POLLUTION CONTROL PREPARATION CERTIFICATION:

I CERTIFY UNDER PENALTY OF LAW THAT THIS DOCUMENT AND ALL ATTACHMENTS WERE PREPARED UNDER MY DIRECTION OR SUPERVISION IN ACCORDANCE WITH A SYSTEM DESIGNED TO ASSURE THAT QUALIFIED PERSONNEL PROPERLY GATHER AND EVALUATE THE INFORMATION SUBMITTED, BASED ON MY INQUIRY OF THE PERSON OR PERSONS WHO MANAGE THE SITE OR THOSE PERSONS DIRECTLY RESPONSIBLE FOR GATHERING THE INFORMATION, THE INFORMATION SUBMITTED IS, TO THE BEST OF MY KNOWLEDGE AND BELIEF, TRUE, ACCURATE, AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION, INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT FOR KNOWING VIOLATIONS.

OWNER: DATE:

WETLANDS CERTIFICATION:

THE DESIGN PROFESSIONAL, WHOSE SEAL APPEARS HEREON, CERTIFIES THE FOLLOWING: 1) THE NATIONAL WETLAND INVENTORY MAPS HAVE BEEN CONSULTED AND, 2) THE APPROPRIATE PLAN SHEET () DOES (X) DOES NOT INDICATE AREAS OF UNITED STATES ARMY CORPS OF ENGINEERS JURISDICTIONAL WETLANDS AS SHOWN ON THE MAPS, AND, 3) IF WETLANDS ARE INDICATED, THE LAND OWNER OR DEVELOPER HAS BEEN ADVISED THAT LAND DISTURBANCE OF PROTECTED WETLANDS SHALL NOT OCCUR UNLESS THE APPROPRIATE FEDERAL WETLANDS ALTERATION (SECTION 404) PERMIT HAS BEEN OBTAINED.

REGISTERED PROFESSIONAL: KEVIN WHIGHAM, P.E. DATE: 6/01/2022

DESIGN PROFESSIONAL 7 DAY VISIT CERTIFICATION

DATE OF INSPECTION: I CERTIFY THE SITE WAS IN COMPLIANCE WITH THE ES&PC PLAN ON THE DATE OF INSPECTION

REGISTERED PROFESSIONAL: KEVIN WHIGHAM, P.E. DATE:
GSWCC LEVEL II DESIGN CERTIFICATION #945 EXP: 09/27/2023

INSPECTION REVEALED THE FOLLOWING DISCREPANCIES FROM THE ES&PC PLAN:

THESE DISCREPANCIES MUST BE ADDRESSED IMMEDIATELY AND A RE-INSPECTION SCHEDULED. WORK SHALL NOT PROCEED ON THE SITE UNTIL DESIGN PROFESSIONAL CERTIFICATION IS OBTAINED.

24 HOUR CONTACT
CITY OF DACULA
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770-963-7451



BOWMAN

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SUWANEE, GEORGIA 30024
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FAX (770) 932-6551

CITY OF DACULA

OWNER:

PROJECT: MAPLE CREEK PARK NEW PLAYGROUND ADDITION
425 MC MILLAN ROAD, CITY OF DACULA, GEORGIA

Table with 2 columns: DATE, DESCRIPTION. Row 1: 06/07/2022, PLAN SET.

JOB NO: 22-0306
DRAWN BY: YW
CHECKED BY: DP

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EROSION, SEDIMENTATION, POLLUTION CONTROL PLAN NOTES

C-5.0

PHASE I - INITIAL CLEARING PHASE:

- Erosion Control Notes
- PRIOR TO THE LAND DISTURBING CONSTRUCTION, THE CONTRACTOR SHALL SCHEDULE A PRECONSTRUCTION MEETING WITH THE AREA SITE DEVELOPMENT INSPECTOR. THE CONTRACTOR SHALL OBSERVE THE PROJECT SEQUENCE SHOWN ON THE PLANS. THE CONTRACTOR SHALL MAINTAIN CAREFUL SCHEDULING AND PERFORMANCE TO INSURE THAT LAND STRIPPED OF ITS NATURAL COVER IS EXPOSED ONLY IN SMALL QUANTITIES.
 - THE OWNER AGREES TO PROVIDE AND MAINTAIN OFF-STREET PARKING ON THE SUBJECT PROPERTY DURING THE ENTIRE CONSTRUCTION PERIOD.
 - NO STAGING AREAS, MATERIAL STORAGE, CONCRETE WASH OUT AREAS, OR DEBRIS BURN AND BURIAL HOLES SHALL BE LOCATED WITHIN 500 FEET OF DESIGNATED TREE PROTECTION AREAS.
 - A COPY OF THE APPROVED LAND DISTURBANCE PLAN AND PERMIT SHALL BE PRESENT ON THE SITE AT ALL TIMES.
 - THE ESCAPE OF SEDIMENT FROM THE SITE SHALL BE PREVENTED BY THE INSTALLATION OF EROSION AND SEDIMENT CONTROL MEASURES AND PRACTICES PRIOR TO, OR CONCURRENT WITH, LAND-DISTURBING ACTIVITIES.
 - PRIOR TO COMMENCING LAND DISTURBANCE ACTIVITY, THE LIMITS OF LAND DISTURBANCE SHALL BE CLEARLY AND ACCURATELY DEMARCATED WITH STAKES, RIBBONS, OR OTHER APPROPRIATE MEANS. THE LOCATION AND EXTENT OF ALL AUTHORIZED LAND DISTURBANCE ACTIVITY SHALL BE DEMARCATED FOR THE DURATION OF THE CONSTRUCTION ACTIVITY. NO LAND DISTURBANCE SHALL OCCUR OUTSIDE THE APPROVED LIMITS INDICATED ON THE APPROVED PLANS.
 - PRIOR TO ANY OTHER CONSTRUCTION, A STABILIZED CONSTRUCTION ENTRANCE SHALL BE CONSTRUCTED AT EACH POINT OF ENTRY TO OR EXIT FROM THE SITE OR ONTO ANY PUBLIC ROADWAY.
 - THE FOLLOWING INITIAL EROSION CONTROL MEASURES SHALL BE IMPLEMENTED PRIOR TO ANY OTHER CONSTRUCTION ACTIVITY.
 - THE CONSTRUCTION EXITS, CONSISTING OF A MINIMUM PAD SIZE OF 20 FEET BY 50 FEET WITH A MINIMUM OF 6-INCH THICK STONE, SHALL BE PLACED AS SHOWN ON THE PLAN. THE STONE SIZE SHOULD CONSIST OF COURSE AGGREGATE BETWEEN 1-1/2" & 3-1/2" IN DIAMETER AND OVERLAIN ON A GEOTEXTILE UNDERLINE. THE GEOTEXTILE UNDERLINE SHALL MEET THE REQUIREMENTS OF AASHTO M288-96, SECTION 7.3, SEPARATION REQUIREMENTS.
 - IMMEDIATELY AFTER THE ESTABLISHMENT OF CONSTRUCTION ENTRANCE / EXITS, ALL PERIMETER EROSION CONTROL AND STORM WATER MANAGEMENT DEVICES SHALL BE INSTALLED AS SHOWN ON THE CLEARING PHASE EROSION CONTROL PLAN.
 - TYPE "C" SILT FENCE SHOULD BE INSTALLED AT THE PERIMETER OF THE DISTURBED AREA AS SHOWN ON THE PLAN. THE SILT FENCE SHOULD BE PLACED IN ACCORDANCE WITH THE MANUAL FOR EROSION CONTROL IN GEORGIA, TABLE 6-202. THE SILT FENCE SHOULD BE KEPT ERECT AT ALL TIMES AND REPAIRED WHEN REQUESTED BY THE SITE INSPECTOR OR THE PROJECT DESIGN PROFESSIONAL OF RECORD. SILT SHOULD BE REMOVED WHEN ACCUMULATION REACHED 1/2 HEIGHT OF THE BARRIER. THE PERIMETER SILT FENCE SHOULD BE INSPECTED DAILY FOR ANY FAILURES. ANY FAILURES OF SIAD FENCING SHOULD BE REPAIRED IMMEDIATELY.
 - INLET SEDIMENT PROTECTION MEASURES SHALL BE INSTALLED ON ALL EXISTING STORM STRUCTURES AS SHOWN ON THE PLAN. SEE SEPARATE DETAILS FOR SPECIFICS ON TYPE OF INLET PROTECTION SPECIFIED.
 - STONE CHECK DAMS SHALL BE INSTALLED IN AREAS OF CONCENTRATED FLOWS AS SHOWN ON THE PLAN.
 - TREE PROTECTION FENCING SHOULD BE INSTALLED PRIOR TO THE START OF ANY LAND DISTURBANCE ACTIVITY AND MAINTAINED UNTIL FINAL LANDSCAPE IS INSTALLED. THE TREE PROTECTION FENCING SHOULD BE INSPECTED DAILY. ANY FAILURES OF SAID FENCING SHOULD BE REPAIRED IMMEDIATELY.
 - AFTER INSTALLATION OF INITIAL EROSION CONTROL MEASURES THE SITE CONTRACTOR SHALL SCHEDULE AN INSPECTION BY THE PROJECT DESIGN PROFESSIONAL. NO OTHER CONSTRUCTION ACTIVITIES SHALL OCCUR UNTIL THE PROJECT DESIGN PROFESSIONAL APPROVES THE INSTALLATION OF SAID EROSION CONTROL MEASURES. IF UNFORESEEN CONDITIONS EXIST IN THE FIELD THAT WARRANT ADDITIONAL EROSION CONTROL MEASURES, THE CONTRACTOR MUST CONSTRUCT ANY ADDITIONAL EROSION CONTROL DEVICES DEEMED NECESSARY BY THE SITE INSPECTOR. AFTER APPROVAL OF THE INITIAL EROSION CONTROL INSTALLATION, THE CONTRACTOR MAY PROCEED WITH CLEARING AND GRUBBING ACTIVITIES. AS CLEARING PERMITS THE CONTRACTOR SHALL CONSTRUCT TEMPORARY SEDIMENT PONDS AND DIVERSION DIKES AS SHOWN ON THE CLEARING PHASE PLAN TO CONTROL EROSION AND STORM WATER RUN OFF.
 - THE CONTRACTOR CAN UTILIZE CLEARED TREES AS BARRIER BRUSH SEDIMENT CONTROL IN AREAS SHOWN ON PLAN WHERE INITIAL GRADING ACTIVITIES WILL NOT OCCUR.
 - NO BURN OF BURY PITS SHALL BE PERMITTED ON THE CONSTRUCTION SITE.
 - ADDITIONAL SILT BARRIERS MUST BE PLACED AS SHOWN ON THE PLAN AS ACCESS IS OBTAINED DURING CLEARING. NO GRADING SHALL TAKE PLACE UNTIL SILT BARRIER INSTALLATION AND SEDIMENT PONDS ARE CONSTRUCTED AS SHOWN ON THE CLEARING PHASE EROSION CONTROL PLAN.
 - ALL SILT FENCE MUST MEET THE REQUIREMENTS OF SECTION 171-TEMPORARY SILT FENCE FOR THE DEPARTMENT OF TRANSPORTATION, STATE OF GEORGIA, STANDARD SPECIFICATIONS, 1983 EDITION.
 - ALL ITEMS IN THIS SECTION OF THE SPECIFICATION SHALL MEET THE REQUIREMENTS AS SET FORTH IN SECTION 161, 162, 163, AND 164 OF THE GEORGIA D.O.T STANDARD SPECIFICATIONS FOR ROADS AND BRIDGES.
 - MULCH OR TEMPORARY GRASSING SHALL BE APPLIED TO ALL EXPOSED AREAS WITHIN 7 DAYS OF LAND DISTURBANCE.
 - ALL DISTURBED AREAS LEFT MULCHED AFTER 30 DAYS SHALL BE STABILIZED WITH TEMPORARY VEGETATION.
 - SEDIMENT AND EROSION CONTROL MEASURES SHOULD BE CHECKED AFTER EACH RAIN EVENT. EACH DEVICE IS TO BE MAINTAINED OR REPLACED IF SEDIMENT ACCUMULATION HAS REACHED ONE HALF THE CAPACITY OF THE DEVICE. ADDITIONAL DEVICES MUST BE INSTALLED IF NEW CHANNELS HAVE DEVELOPED. THE CONSTRUCTION EXIT SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACK OR FLOW OF MUD ONTO PUBLIC RIGHT-OF-WAY. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH 1" - 3" OF STONE, AS CONDITIONS DEMAND. ALL MATERIALS SPILLED, DROPPED, WASHED, OR TRACKED FROM VEHICLE ONTO PUBLIC ROADWAY OR INTO STORM DRAIN MUST BE REMOVED IMMEDIATELY.
 - CONTRACTOR SHALL INSPECT CONTROL MEASURES AT THE END OF EACH WORKING DAY TO ENSURE MEASURES ARE FUNCTIONING PROPERLY.
 - EROSION AND SEDIMENTATION CONTROL MEASURES AND PRACTICES SHALL BE MAINTAINED AT ALL TIMES. IF FULL IMPLEMENTATION OF THE APPROVED PLAN DOES NOT PROVIDE FOR EFFECTIVE EROSION CONTROL, ADDITIONAL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE IMPLEMENTED TO CONTROL OR TREAT THE SEDIMENT SOURCE. ADDITIONAL EROSION AND SEDIMENTATION CONTROL MEASURES AND PRACTICES SHALL BE INSTALLED IF DEEMED NECESSARY BY ON-SITE INSPECTION.
 - FAILURE TO INSTALL, OPERATE, OR MAINTAIN ALL EROSION CONTROL MEASURES WILL RESULT IN ALL CONSTRUCTION BEING STOPPED ON THE JOB UNTIL SUCH MEASURES ARE CORRECTED BACK TO THE APPROVED EROSION CONTROL PLANS.
 - ALL AD VALOREM TAXES HAVE BEEN PAID.
 - ALL UNDISTURBED BUFFERS SHALL BE IDENTIFIED WITH ORANGE FOUR-FOOT TREE-SAVE FENCE PRIOR TO ANY LAND DISTURBANCE.

PETROLEUM STORAGE SHALL BE DONE IN ACCORDANCE WITH ONE OF THE TWO FOLLOWING METHODS TO PREVENT STORMWATER DISCHARGES ON THE SITE.

- ALL PETROLEUM STORAGE CONTAINERS SHALL BE COVERED WITH PLASTIC SHEETING OR BE LOCATED UNDER A TEMPORARY ROOF.
- ALL PETROLEUM STORAGE CONTAINERS SHALL BE LOCATED IN A SECONDARY CONTAINMENT AREA.

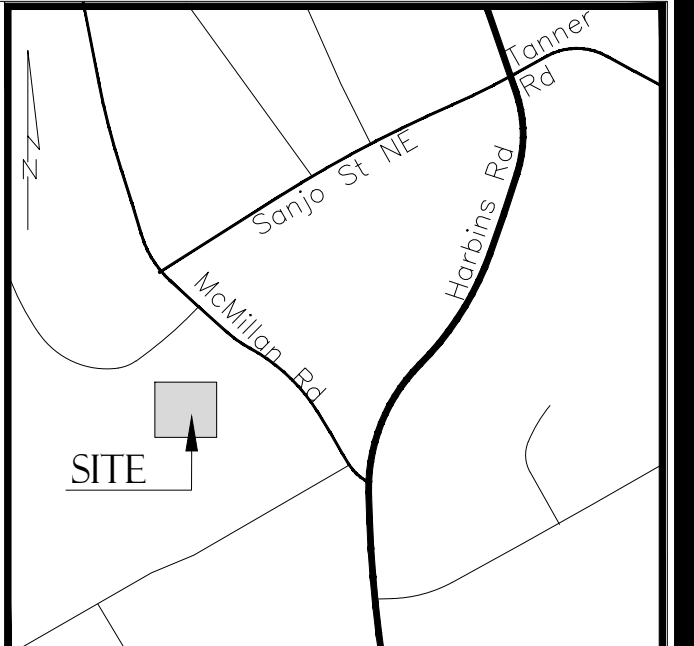
NOTIFY CITY OF DACULA INSPECTOR 24 HOURS BEFORE THE BEGINNING PHASE OF CONSTRUCTION (770) 963-7451.

AREAS:
TOTAL SITE AREA = 13.69 ACRES
DISTURBED AREA ON-SITE = 0.32 ACRES

SOILS INFO:
AmC2 APPLING SANDY LOAM, 6 TO 10 PERCENT SLOPES, MODERATELY ERODED
PgD2 PACOLET SANDY CLAY LOAM, 1- TO 15 PERCENT SLOPES, MODERATELY ERODED

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SEDIMENT STORAGE CALCS:
1. REQUIRED SEDIMENT STORAGE: 0.32 AC
1.1. DISTURBED AREA (DA): 0.32 AC
1.2. 67 CY/AC * DA: 0.37 AC = 21.44 CY
2. PROVIDED SEDIMENT STORAGE: 2287 CY
2.1. SILT FENCE: L: 273 ft. W: 6', D: 0.5' = 819 CF
2.2. TOTAL PROVIDED STORAGE: 30.33 CY
3. REQUIRED: 21.44 CY < PROVIDED 30.33 CY



BOWMAN

4174 SILVER PEAK PARKWAY
SUWANEE, GEORGIA 30024
PHONE (770) 932-6550
FAX (770) 932-6551

CITY OF DACULA

OWNER:

PROJECT:
**MAPLE CREEK PARK
NEW PLAYGROUND
ADDITION**

425 McMILLAN ROAD,
CITY OF DACULA,
GWINNETT COUNTY, GA

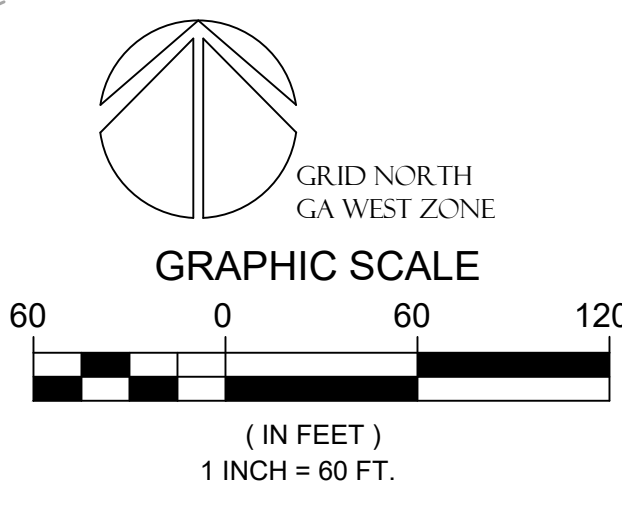
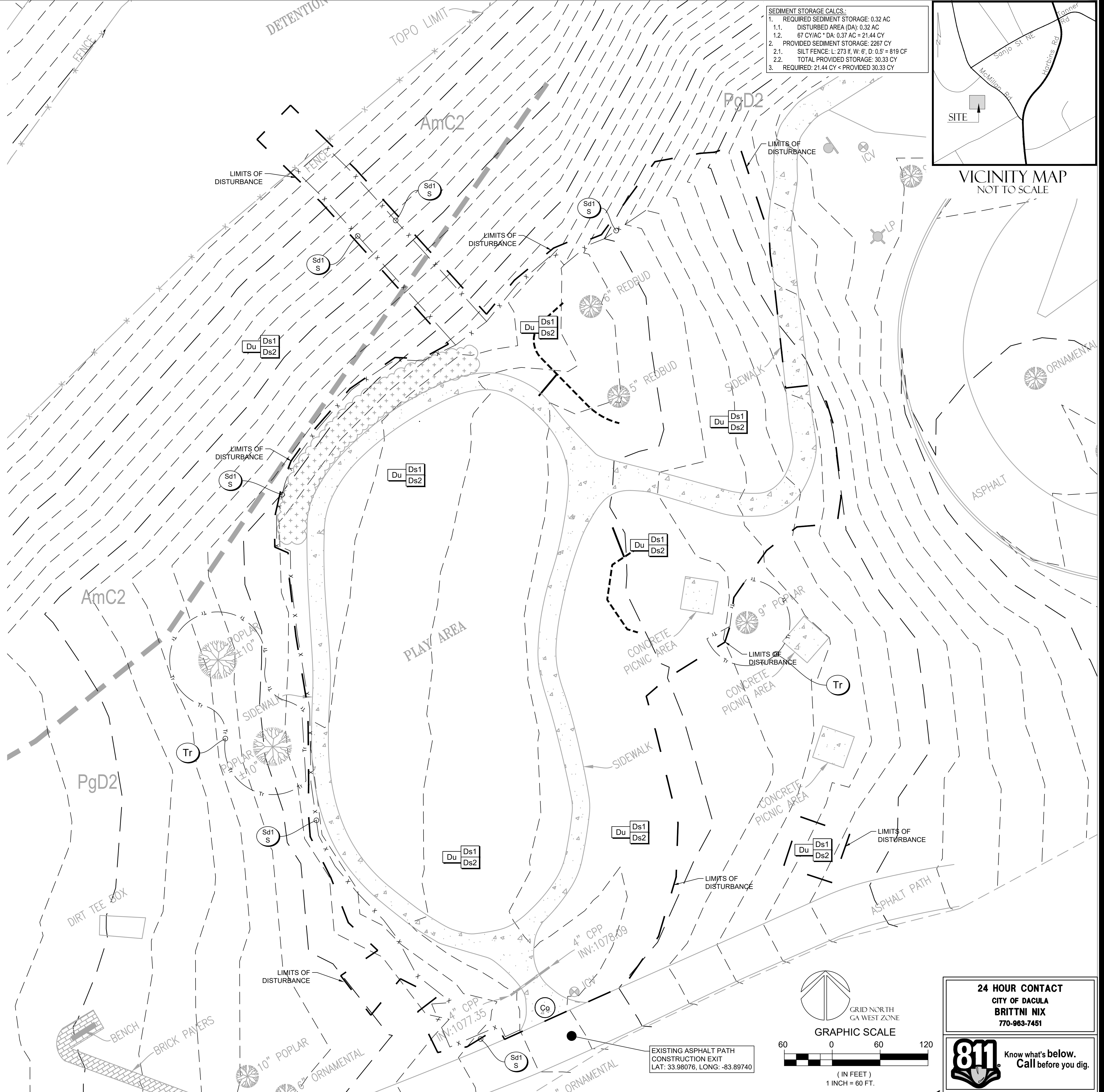
DATE	DESCRIPTION
06/07/2022	PLAN SET

JOB NO: 22-0306
DRAWN BY: YW
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EROSION,
SEDIMENTATION,
POLLUTION
CONTROL PLAN
PHASE I

C-5.1A



24 HOUR CONTACT
CITY OF DACULA
BRITNI NIX
770-963-7451



PHASE II - GRADING PHASE:
Erosion Control Notes

- DURING CONSTRUCTION, THE CONTRACTOR SHALL MAINTAIN CAREFUL SCHEDULING AND PERFORMANCE TO ENSURE THAT LAND STRIPPED OF ITS NATURAL GROUND COVER IS EXPOSED ONLY IN SMALL QUANTITIES AND THEREFORE LIMITED DURATIONS, BEFORE PERMANENT EROSION PROTECTION IS ESTABLISHED. NOTE SUB PHASES SHOWN ON PLANS.
- EARTHWORK OPERATIONS IN THE VICINITY OF STREAM BUFFERS SHALL BE CAREFULLY CONTROLLED TO AVOID DUMPING OR SLOUGHING INTO THE BUFFER AREAS.
- THE FOLLOWING EROSION CONTROL MEASURES SHALL BE IMPLEMENTED DURING PRELIMINARY GRADING PHASE OF CONSTRUCTION.
- SEDIMENT SHALL NOT BE WASHED IN INLETS. IT SHALL BE REMOVED FROM THE SEDIMENT TRAPS AND DISPOSED OF AND STABILIZED SO THAT IT WILL NOT ENTER THE INLETS AGAIN.
- EROSION CONTROL DEVICES SHALL BE INSTALLED IMMEDIATELY AFTER GROUND DISTURBANCE OCCURS. THE LOCATION OF SOME OF THE EROSION CONTROL DEVICES MAY HAVE TO BE ALTERED FROM THAT SHOWN ON THE APPROVED PLANS IF DRAINAGE PATTERNS DURING CONSTRUCTION ARE DIFFERENT FROM THE PROPOSED DRAINAGE PATTERNS. IT IS THE CONTRACTOR'S RESPONSIBILITY TO ACCOMPLISH EROSION CONTROL FOR ALL DRAINAGE PATTERNS CREATED AT VARIOUS STAGES DURING CONSTRUCTION. ANY DIFFICULTY IN CONTROLLING EROSION DURING ANY PHASE OF CONSTRUCTION SHALL BE REPORTED TO THE DESIGN PROFESSIONAL IMMEDIATELY.
- THE CONTRACTOR SHALL FURNISH AND MAINTAIN ALL NECESSARY BARRICADES WHILE ROADWAY FRONTAGE IMPROVEMENTS ARE BEING MADE.
- TYPE "C" SILT FENCE SHOULD BE INSTALLED AT THE TOE OF ALL FILL SLOPES 10 FEET, OR GREATER, IN HEIGHT. THE SILT FENCE SHOULD BE PLACED IN ACCORDANCE WITH THE MANUAL FOR EROSION CONTROL IN GEORGIA, TABLE 6-20.2.
- THE SILT FENCE SHALL BE MAINTAINED UNTIL PERMANENT GROUND COVER IS ESTABLISHED ON THE SLOPE. SILT SHALL BE REMOVED WHEN ACCUMULATION REACHES 1/2 HEIGHT OF THE BARRIER. ADDITIONALLY, DIVERSION DIKES SHALL BE CONSTRUCTED ALONG THE TOP OF ALL SAID FILL SLOPES WITH THE USE OF TEMPORARY DOWN DRAINS TO CONTROL STORM WATER RUN OFF AS SHOWN ON THE PLANS. SEE SEPARATE DETAILS FOR ADDITIONAL INFORMATION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ESTABLISHING BARRIERS AT THE TOE OF SLOPES UNDER CONSTRUCTION. THESE BARRIERS SHALL BE AS SHOWN IN THE PLANS. THESE BARRIERS MAY BE RELOCATED AND REUSED AFTER PERMANENT SLOPE STABILIZATION BECOMES FULLY ESTABLISHED. AS THEY ARE RELOCATED, ANY DEFECTIVE MATERIALS IN THE BARRIER SHALL BE REPLACED. IN ADDITION, ALL DEBRIS AND SILT AT THE PREVIOUS LOCATION SHALL BE REMOVED.
- CUT AND FILL SLOPES ARE NOT TO EXCEED "2H:1V".
- ALL SLOPES STEEPER THAN 2.5:1 AND WITH A HEIGHT OF 10 FEET OR GREATER, AND CUTS AND FILLS WITHIN STREAM BUFFERS, SHALL BE STABILIZED WITH APPROPRIATE EROSION CONTROL MATING OR BLANKETS. SEE SEPARATE DETAILS FOR ADDITIONAL INFORMATION.
- TYPE "C" SILT FENCE SHALL BE PLACED AT THE TOE OF ALL DIRT STOCK PILE AREAS. SEE SEPARATE DETAILS FOR ADDITIONAL INFORMATION.
- INLET SEDIMENT PROTECTION MEASURES SHALL BE INSTALLED ON ALL STORM STRUCTURES AS THEY ARE CONSTRUCTED. SEE PLAN VIEW FOR SPECIFIC TYPE AND SEPARATE DETAILS FOR ADDITIONAL INFORMATION ON TYPE OF INLET PROTECTION SPECIFIED.
- STORM DRAIN OUTLET PROTECTION SHALL BE PLACED AT ALL OUTLET HEADWALLS AS SOON AS THE HEADWALL IS CONSTRUCTED. SEE SEPARATE DETAILS FOR ADDITIONAL INFORMATION.
- STONE CHECK DAMS SHALL BE INSTALLED IN AREAS OF CONCENTRATED FLOWS AS SHOWN ON THE PLAN. SEE SEPARATE DETAIL FOR ADDITIONAL INFORMATION. ALL GRADED AREAS SHALL BE APPLIED WITH VEGETATIVE COVER AS SOON AS FINAL GRADE IS ACHIEVED.
- MULCH OR TEMPORARY GRASSING SHALL BE APPLIED TO ALL EXPOSED AREAS WITHIN 7 DAYS OF LAND DISTURBANCE.
- ALL DISTURBED AREAS LEFT MULCHED AFTER 30 DAYS SHALL BE STABILIZED WITH TEMPORARY GRASSING.
- AFTER PRELIMINARY GRADING ACTIVITIES, THE CONTRACTOR SHALL CONSTRUCT TEMPORARY SEDIMENT BASINS AND DIVERSION DIKES AS SHOWN ON PLAN. THE CONTRACTOR SHALL MAINTAIN THE SEDIMENT BASINS UNTIL PERMANENT GROUND COVER IS ESTABLISHED. SEDIMENT SHALL BE CLEANED OUT OF THE BASINS WHEN IT REACHES THE 1/3 VOLUME OF BASIN. SEE SEPARATE DETAILS FOR ADDITIONAL INFORMATION.
- SEDIMENT AND EROSION CONTROL MEASURES SHOULD BE CHECKED AFTER EACH RAIN EVENT. EACH DEVICE IS TO BE MAINTAINED OR REPLACED IF SEDIMENT ACCUMULATION HAS REACHED ONE HALF THE CAPACITY OF THE DEVICE. ADDITIONAL DEVICES MUST BE INSTALLED IF NEW CHANNELS HAVE DEVELOPED. THE CONSTRUCTION EXIT SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOW OF MUD ONTO PUBLIC RIGHT-OF-WAY. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH 1" - 3" OF STONE, AS CONDITIONS DEMAND. ALL MATERIALS SPILLED, DROPPED, WASHED, OR TRACKED FROM VEHICLE ONTO PUBLIC ROADWAY OR INTO STORM DRAIN MUST BE REMOVED IMMEDIATELY. THE CONTRACTOR SHALL INSPECT CONTROL MEASURES AT THE END OF EACH WORKING DAY TO ENSURE MEASURES ARE FUNCTIONING PROPERLY.
- EROSION CONTROL MEASURES WILL BE MAINTAINED AT ALL TIMES. IF FULL IMPLEMENTATION OF THE APPROVED PLAN DOES NOT PROVIDE FOR EFFECTIVE EROSION CONTROL, ADDITIONAL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE IMPLEMENTED TO CONTROL OR TREAT THE SEDIMENT SOURCE AS DIRECTED BY THE ON SITE INSPECTOR OR THE CIVIL ENGINEER.
- FAILURE TO INSTALL, OPERATE OR MAINTAIN ALL EROSION CONTROL MEASURES WILL RESULT IN ALL CONSTRUCTION BEING STOPPED ON THE JOB UNTIL SUCH MEASURES ARE CORRECTED BACK TO THE APPROVED EROSION CONTROL PLANS.

Critical AREAS:
Erosion Control Notes

- CRITICAL AREAS SHOWN ON GRADING PHASE EROSION CONTROL PLANS SHALL BE MAINTAINED DAILY, AT THE END OF EACH WORK DAY ALL SLOPES 2:1 OR STEEPER, AND HIGHER THAN 5 FEET SHALL RECEIVE SURFACE ROUGHENING, POLYMERS, AND EROSION CONTROL MATTING. ADDITIONALLY, ALL FILL SLOPES SHALL RECEIVE A DIVERSION DIKE AND TEMPORARY DOWN DRAINS ALONG THE TOP OF THE SLOPE PREVENTING DRAINAGE SPILLING OVER THE EDGE AND DOWN THE FACE OF THE SLOPE. THE TEMPORARY DOWN DRAINS SHALL BE CONSTRUCTED WITH PERFORATED STAND PIPES AT THE TOP OF THE SLOPE AND RECONSTRUCTED EACH DAY AS THE SLOPE INCREASES IN HEIGHT.

INLETS SHOWN ON THE PLAN AS Sd2-F/P SHALL BE CONVERTED FROM AN Sd2-F TO AN Sd2-P AS THE PAVEMENT IS INSTALLED.

PETROLEUM STORAGE SHALL BE DONE IN ACCORDANCE WITH ONE OF THE TWO FOLLOWING METHODS TO PREVENT STORMWATER DISCHARGES ON THE SITE.

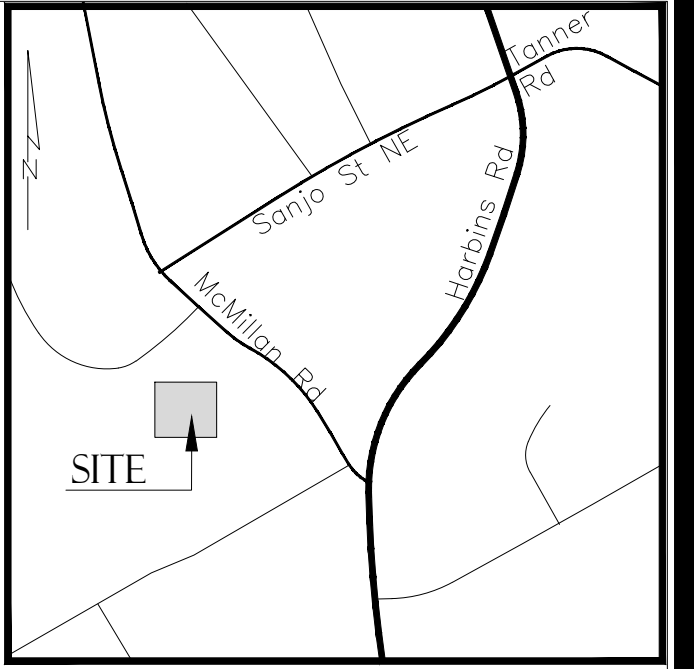
- ALL PETROLEUM STORAGE CONTAINERS SHALL BE COVERED WITH PLASTIC SHEETING OR BE LOCATED UNDER A TEMPORARY ROOF.
- ALL PETROLEUM STORAGE CONTAINERS SHALL BE LOCATED IN A SECONDARY CONTAINMENT AREA.

NOTIFY CITY OF DACULA INSPECTOR 24 HOURS BEFORE THE BEGINNING PHASE OF CONSTRUCTION (770) 963-7451.

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SEDIMENT STORAGE CALCS:

- REQUIRED SEDIMENT STORAGE: 0.32 AC
- DISTURBED AREA (DA): 0.32 AC
- 67 CY/AC * DA: 0.37 AC = 21.44 CY
- PROVIDED SEDIMENT STORAGE: 2267 CY
- SILT FENCE: L: 273 IF, W: 6', D: 0.5' = 819 CF
- TOTAL PROVIDED STORAGE: 30.33 CY
- REQUIRED: 21.44 CY < PROVIDED 30.33 CY



BOWMAN

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FAX (770) 932-6551

CITY OF DACULA

**MAPLE CREEK PARK
NEW PLAYGROUND
ADDITION**

PROJECT:
425 McMILLAN ROAD,
CITY OF DACULA,
GWINNETT COUNTY, GA

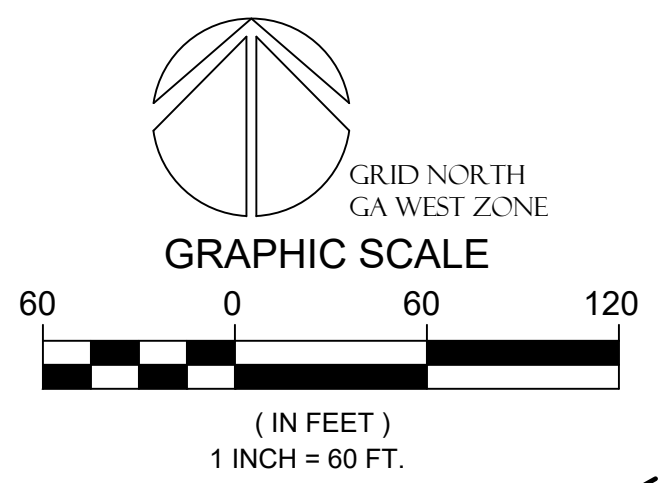
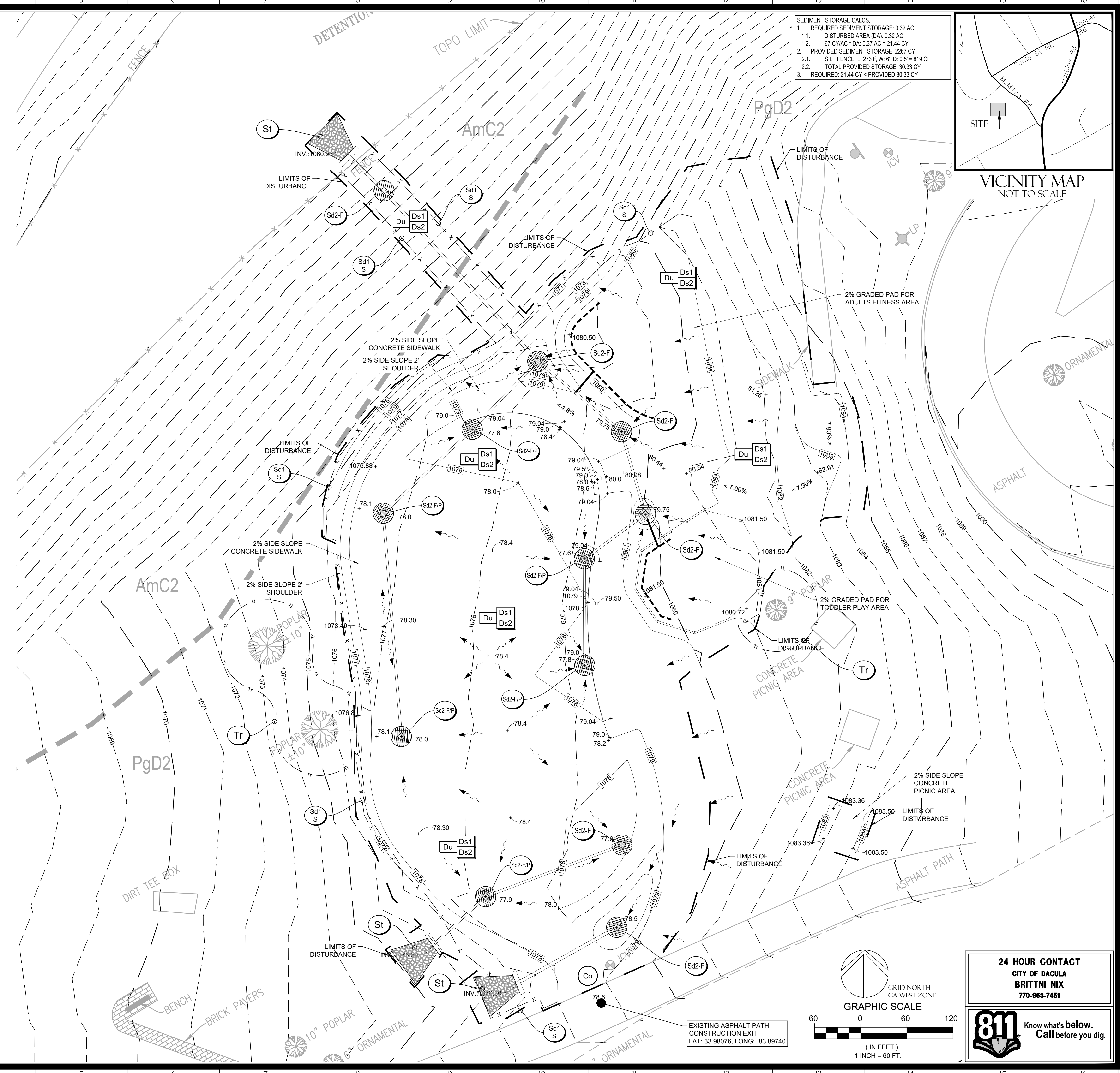
DATE	DESCRIPTION
06/07/2022	PLAN SET

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EROSION,
SEDIMENTATION,
POLLUTION
CONTROL PLAN
PHASE II

C-5.2A



24 HOUR CONTACT
CITY OF DACULA
BRITNI NIX
770-963-7451



EXISTING ASPHALT PATH
CONSTRUCTION EXIT
LAT: 33.98076, LONG: -83.89740

PHASE III - FINAL STABILIZATION PHASE
Erosion Control Notes

1. THE FOLLOWING EROSION CONTROL MEASURES SHALL BE IMPLEMENTED DURING THE FINAL EROSION CONTROL PHASE OF CONSTRUCTION. SEDIMENT SHALL NOT BE WASHED INTO INLETS. IT SHALL BE REMOVED FROM THE SEDIMENT TRAPS AND DISPOSED OF AND STABILIZED SO THAT IT WILL NOT ENTER THE INLETS AGAIN. MULCH OR TEMPORARY GRASSING SHALL BE APPLIED TO ALL EXPOSED AREAS WITHIN 7 DAYS OF LAND DISTURBANCE. ALL DISTURBED AREAS LEFT MULCHED AFTER 30 DAYS SHALL BE STABILIZED WITH PERMANENT GRASSING.
2. THE CONTRACTOR SHALL MAINTAIN ALL SEDIMENT BASINS AND EROSION CONTROL MEASURES UNTIL PERMANENT GROUND COVER IS ESTABLISHED. SEDIMENT SHALL BE CLEANED OUT OF THE BASINS WHEN IT BECOMES 1/3 FULL.
3. AFTER CURBING, GRADED AGGREGATE BASE AND PAVEMENT HAS BEEN INSTALLED, ALL INLET SEDIMENT TRAPS ON SINGLE AND DOUBLE WING CATCH BASINS ALONG WITH ANY CURB INLETS SHALL BE REMOVED AND REPLACED WITH CURB FILTER INLET PROTECTION. SEE SEPARATE DETAIL FOR ADDITIONAL INFORMATION. ALL ROADWAY AND PARKING SHOULDERS SHOULD BE APPLIED WITH VEGETATIVE COVER AS SOON AS FINAL GRADE IS ACHIEVED BEHIND CURBS.
4. SEDIMENT AND EROSION CONTROL MEASURES SHOULD BE CHECKED AFTER EACH RAIN EVENT. EACH DEVICE IS TO BE MAINTAINED OR REPLACED IF SEDIMENT ACCUMULATION HAS REACHED ONE HALF THE CAPACITY OF THE DEVICE.
5. ADDITIONAL DEVICES MUST BE INSTALLED IF NEW CHANNELS HAVE DEVELOPED. THE CONSTRUCTION EXIT SHALL BE REMOVED IN A CONDITION WHICH WILL PREVENT TRACK OR FLOW OF MUD ONTO PUBLIC RIGHT-OF-WAY. ALL MATERIALS SPILLED, DROPPED, WASHED, OR TRACKED FROM VEHICLE ONTO PUBLIC ROADWAY OR INTO STORM DRAIN MUST BE REMOVED IMMEDIATELY.
6. THE CONTRACTOR SHALL INSPECT CONTROL MEASURES AT THE END OF EACH WORKING DAY TO ENSURE MEASURES ARE FUNCTIONING PROPERLY.
7. EROSION CONTROL MEASURES WILL BE MAINTAINED AT ALL TIMES. IF ALL IMPLEMENTATION OF THE APPROVED PLAN DOES NOT PROVIDE FOR EFFECTIVE EROSION CONTROL, ADDITIONAL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE IMPLEMENTED TO CONTROL OR TREAT THE SEDIMENT SOURCE AS DIRECTED BY THE ON SITE INSPECTOR OR THE CIVIL ENGINEER.
8. FAILURE TO INSTALL, OPERATE, OR MAINTAIN ALL EROSION CONTROL MEASURES WILL RESULT IN ALL CONSTRUCTION BEING STOPPED ON THE JOB UNTIL SUCH MEASURES ARE CORRECTED BACK TO THE APPROVED EROSION CONTROL PLANS.
9. UPON COMPLETION OF THE PROJECT AND RECEIPT OF CERTIFICATE OF OCCUPANCY, THE CONTRACTOR SHALL REMOVE ALL TEMPORARY EROSION CONTROL MEASURES AND DISPOSE OF THEM UNLESS NOTED ON PLANS.

Critical AREAS:
Erosion Control Notes

1. CRITICAL AREAS SHOWN ON FINAL PHASE EROSION CONTROL PLANS SHALL BE MAINTAINED DAILY. AT THE END OF EACH WORK DAY ALL SLOPES 2:1 OR STEEPER, AND HIGHER THAN 5 FEET SHALL RECEIVE SURFACE ROUGHENING, POLYMERS, AND EROSION CONTROL MATTING. ADDITIONALLY, ALL FILL SLOPES SHALL RECEIVE A DIVERSION DIKE AND TEMPORARY DOWN DRAINS ALONG THE TOP OF THE SLOPE PREVENTING DRAINAGE SPILLING OVER THE EDGE AND DOWN THE FACE OF THE SLOPE. THE TEMPORARY DOWN DRAINS SHALL BE CONSTRUCTED WITH PERFORATED STAND PIPES AT THE TOP OF THE SLOPE AND RECONSTRUCTED EACH DAY AS THE SLOPE INCREASES IN HEIGHT. ONCE FINAL STABILIZATION OF THE SITE IS COMPLETE, ALL TEMPORARY EROSION CONTROL MEASURES SHALL BE REMOVED BEFORE THE CONTRACTOR PERMANENTLY LEAVES THE SITE.
2. ALL INLET POINTS MUST RECEIVE INLET PROTECTION ON ALL PHASES, INCLUDING FINAL PHASE, UNTIL FINAL STABILIZATION IS ACHIEVED.

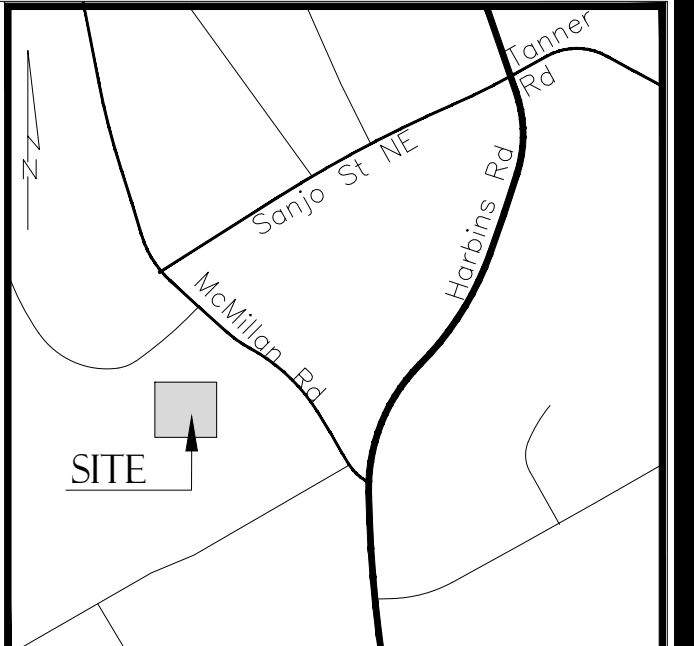
PETROLEUM STORAGE SHALL BE DONE IN ACCORDANCE WITH ONE OF THE TWO FOLLOWING METHODS TO PREVENT STORMWATER DISCHARGES ON THE SITE.

- a. ALL PETROLEUM STORAGE CONTAINERS SHALL BE COVERED WITH PLASTIC SHEETING OR BE LOCATED UNDER A TEMPORARY ROOF.
- b. ALL PETROLEUM STORAGE CONTAINERS SHALL BE LOCATED IN A SECONDARY CONTAINMENT AREA.

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SEDIMENT STORAGE CALCS.

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- 1.1. DISTURBED AREA (DA): 0.32 AC
- 1.2. 67 CY/AC * DA: 0.37 AC = 21.44 CY
2. PROVIDED SEDIMENT STORAGE: 2267 CY
- 2.1. SILT FENCE: L: 273 ft, W: 6', D: 0.5' = 819 CF
- 2.2. TOTAL PROVIDED STORAGE: 30.33 CY
3. REQUIRED: 21.44 CY < PROVIDED 30.33 CY



BOWMAN

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SUWANEE, GEORGIA 30024
PHONE (770) 932-6550
FAX (770) 932-6551

OWNER:
CITY OF DACULA

PROJECT:
**MAPLE CREEK PARK
NEW PLAYGROUND
ADDITION**

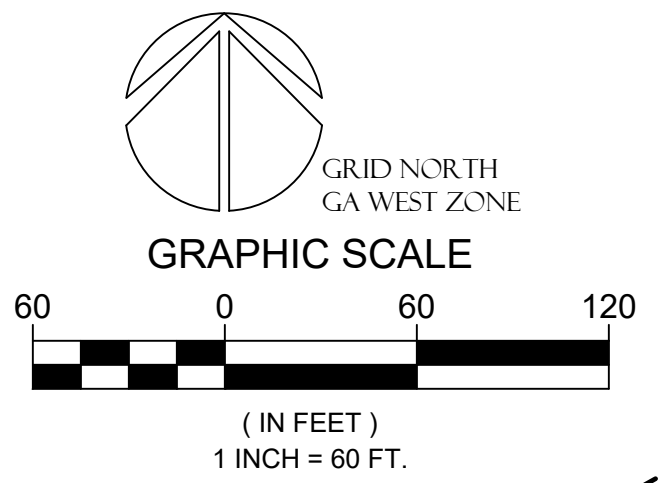
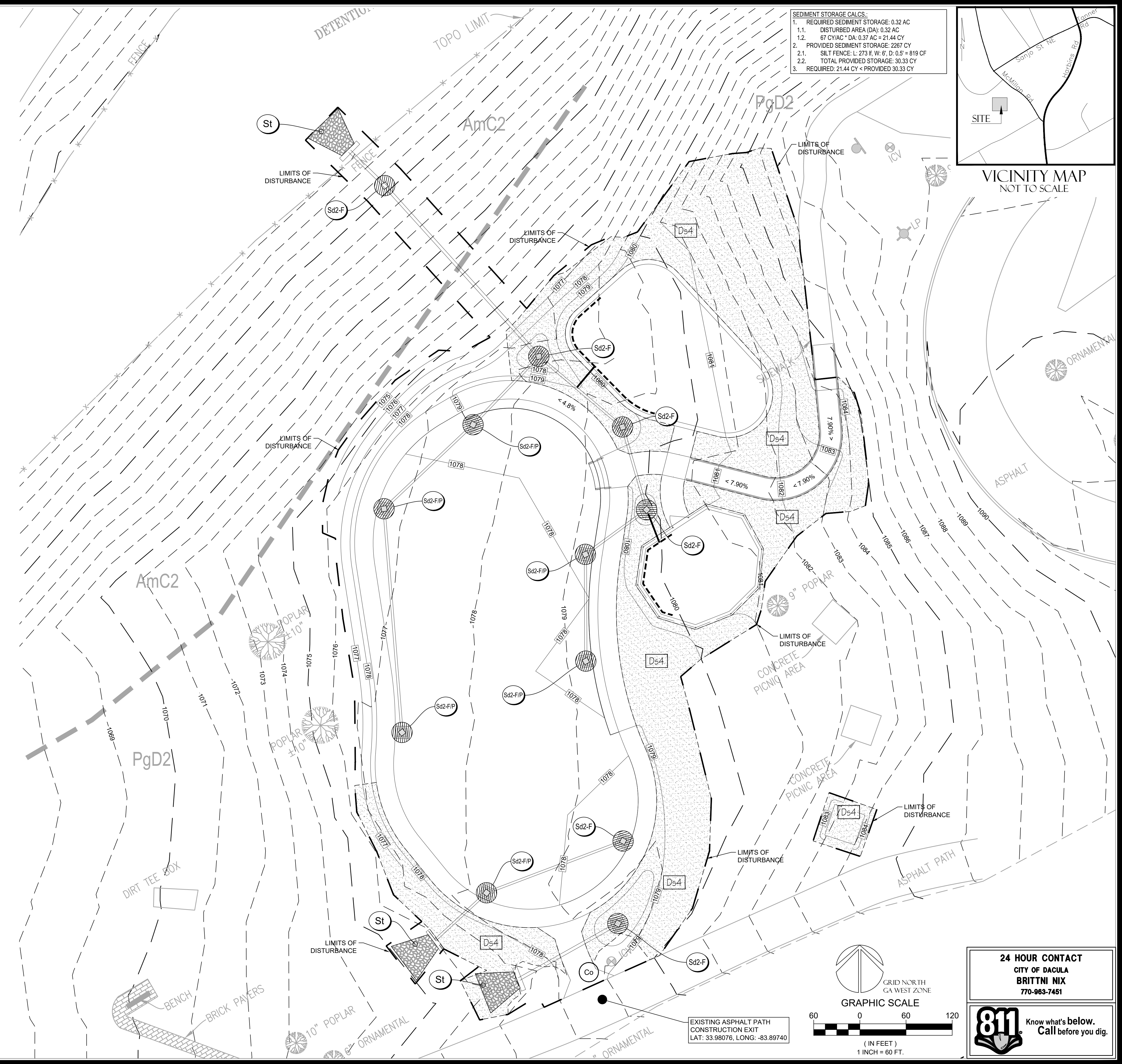
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DATE	DESCRIPTION
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EROSION,
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PHASE III
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24 HOUR CONTACT
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BRITNI NIX
770-963-7451



EXISTING ASPHALT PATH
CONSTRUCTION EXIT
LAT: 33.98076, LONG: -83.89740

GEORGIA UNIFORM CODING SYSTEM FOR SOIL EROSION AND SEDIMENT CONTROL PRACTICES

GEORGIA SOIL AND WATER CONSERVATION COMMISSION

STRUCTURAL PRACTICES

CODE	PRACTICE	DETAIL	MAP SYMBOL	DESCRIPTION
Cd	CHECKDAM			A small temporary barrier or dam constructed across a swale, drainage ditch or area of concentrated flow.
Ch	CHANNEL STABILIZATION			Improving, constructing or stabilizing an open channel, existing stream, or ditch.
Co	CONSTRUCTION EXIT			A crushed stone pad located at the construction site exit to provide a place for removing mud from tires thereby protecting public streets.
Cr	CONSTRUCTION ROAD STABILIZATION			A travelway constructed as part of a construction plan including access roads, subdivision roads, parking areas and other on-site vehicle transportation routes.
Dc	STREAM DIVERSION CHANNEL			A temporary channel constructed to convey flow around a construction site while a permanent structure is being constructed.
Di	DIVERSION			An earth channel or dike located above, below or across a slope to divert runoff. This may be a temporary or permanent structure.
Dn1	TEMPORARY DOWNDRAIN STRUCTURE			A flexible conduit of heavy-duty fabric or other material designed to safely conduct surface runoff down a slope. This is temporary and inexpensive.
Dn2	PERMANENT DOWNDRAIN STRUCTURE			A paved chute, pipe, sectional conduit or similar material designed to safely conduct surface runoff down a slope.
Fr	FILTER RING			A temporary stone barrier constructed at storm drain inlets and pond outlets.
Ga	GABION			Rock filter baskets which are hand-placed into position forming soil stabilizing structures.
Gr	GRADE STABILIZATION STRUCTURE			Permanent structures installed to protect channels or waterways where otherwise the slope would be sufficient for the running water to form gullies.
Lv	LEVEL SPREADER			A structure to convert concentrated flow of water into less erosive sheet flow. This should be constructed only on undisturbed soils.
Rd	ROCK FILTER DAM			A permanent or temporary stone filter dam installed across small streams or drainageways.
Re	RETAINING WALL			A wall installed to stabilize cut and fill slopes where maximum permissible slopes are not obtainable. Each situation will require special design.
Rt	RETRO FITTING			A device or structure placed in front of a permanent stormwater detention pond outlet structure to serve as a temporary sediment filter.
Sd1	SEDIMENT BARRIER			A barrier to prevent sediment from leaving the construction site. It may be sandbags, bales of straw or hay, brush, logs and poles, gravel, or a silt fence.
Sd2	INLET SEDIMENT TRAP			An impounding area created by excavating around a storm drain drop inlet. The excavated area will be filled and stabilized on completion of construction activities.
Sd3	TEMPORARY SEDIMENT BASIN			A basin created by excavation or a dam across a waterway. The surface water runoff is temporarily stored allowing the bulk of the sediment to drop out.
Sd4	TEMPORARY SEDIMENT TRAP			A small temporary pond that drains a disturbed area so that sediment can settle out. The principle feature distinguishing a temporary sediment trap from a temporary sediment basin is the lack of a pipe or riser.
Sk	FLOATING SURFACE SOMMER			A buoyant device that releases/draws water from the surface of sediment ponds, traps, or basins at a controlled rate of flow.
Spb	SEEP BERM			Liner control device constructed as a diversion perpendicular to the direction of runoff to enhance dispersion and infiltration, while creating multiple sedimentation chambers with the employment of intermediate dikes.

STRUCTURAL PRACTICES

CODE	PRACTICE	DETAIL	MAP SYMBOL	DESCRIPTION
Sr	TEMPORARY STREAM CROSSING			A temporary bridge or culvert-type structure protecting a stream or watercourse from damage by crossing construction equipment.
St	STORMDRAIN OUTLET PROTECTION			A paved or short section of riprap channel at the outlet of a storm drain system preventing erosion from the concentrated runoff.
Su	SURFACE ROUGHENING			A rough soil surface with horizontal depressions on a contour or slopes left in a roughened condition after grading.
Tc	TURBIDITY CURTAIN			A floating or staked barrier installed within the water (it may also be referred to as a floating boom, silt barrier, or silt curtain).
Tp	TOPSOILING			The practice of stripping off the more fertile soil, storing it, then spreading it over the disturbed area after completion of construction activities.
Tr	TREE PROTECTION			To protect desirable trees from injury during construction activity.
Wt	VEGETATED WATERWAY OR SURFACE WATER CONVEYANCE CHANNEL			Paved or vegetative water outlets for diversions, terraces, berms, dikes or similar structures.

VEGETATIVE PRACTICES

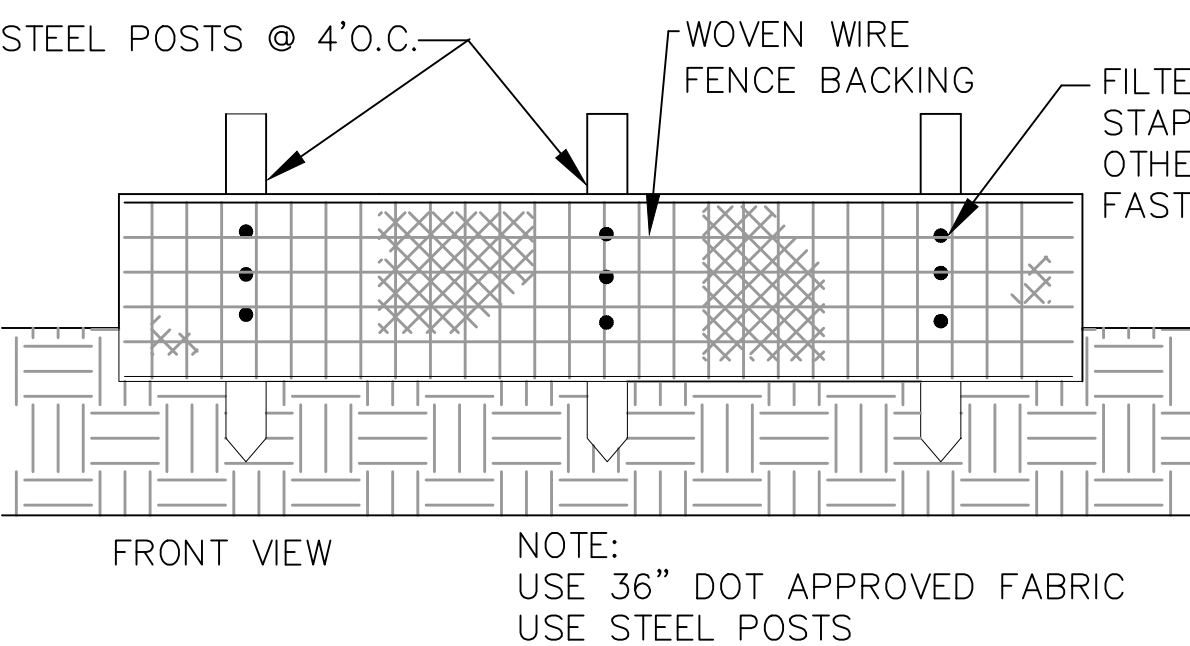
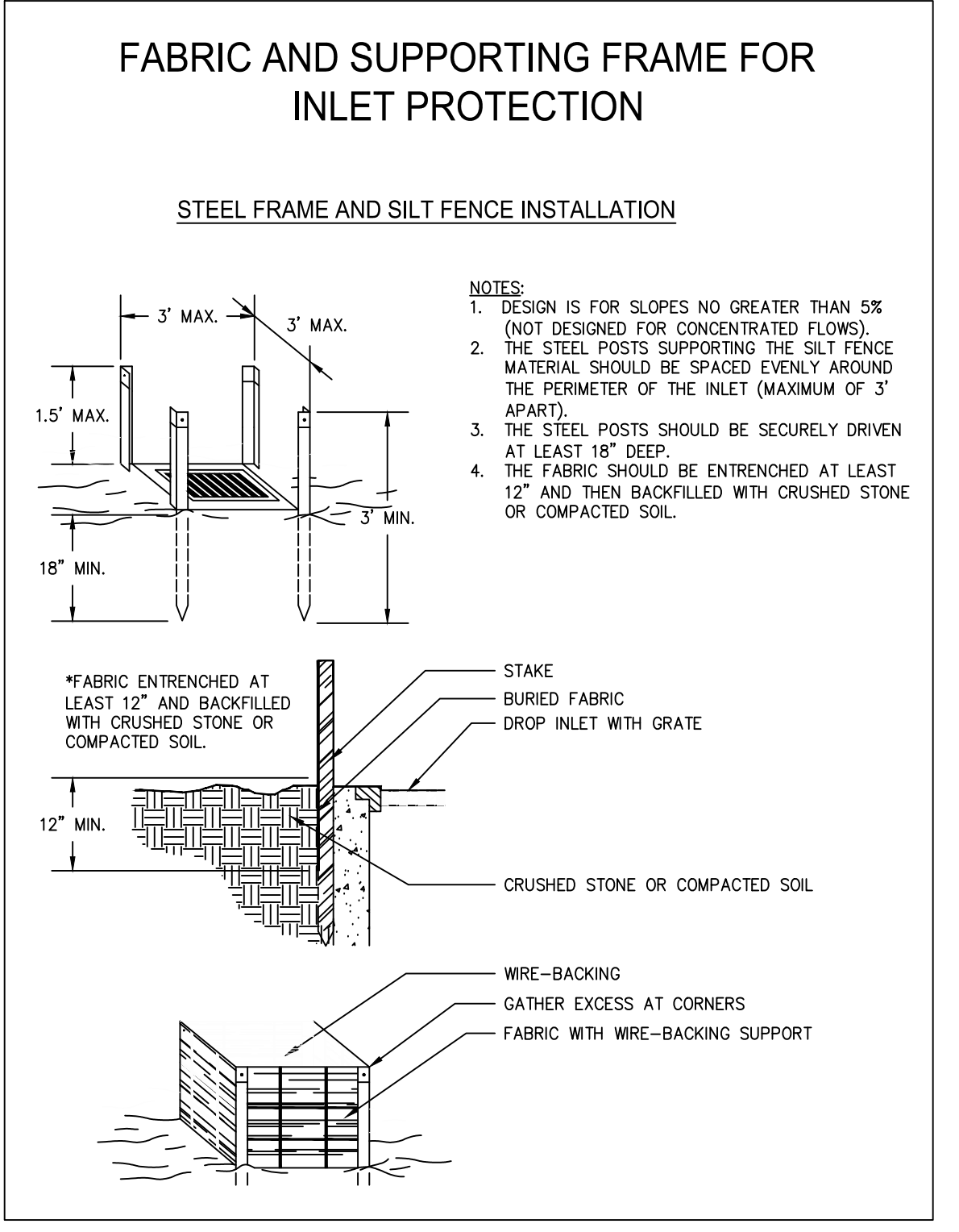
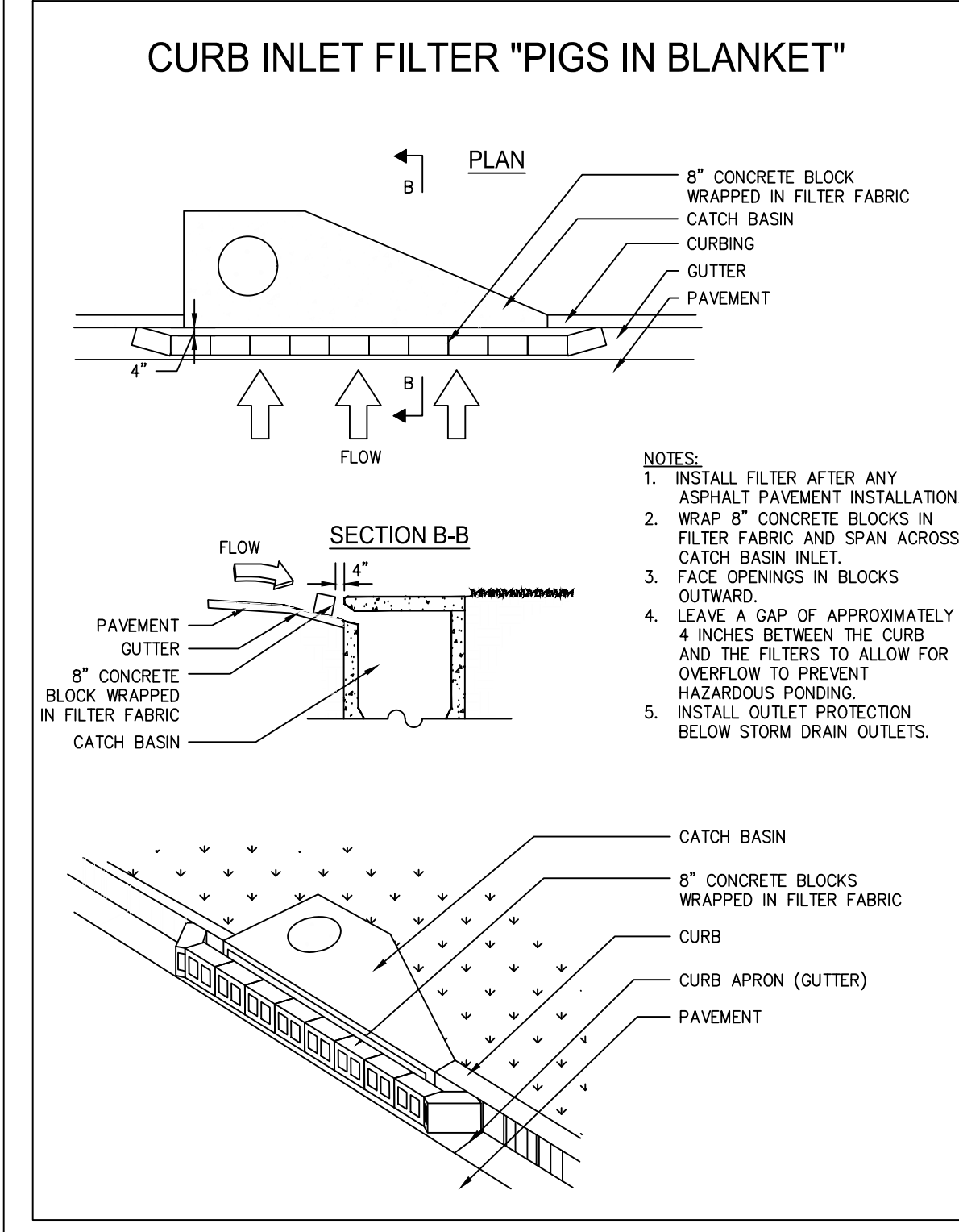
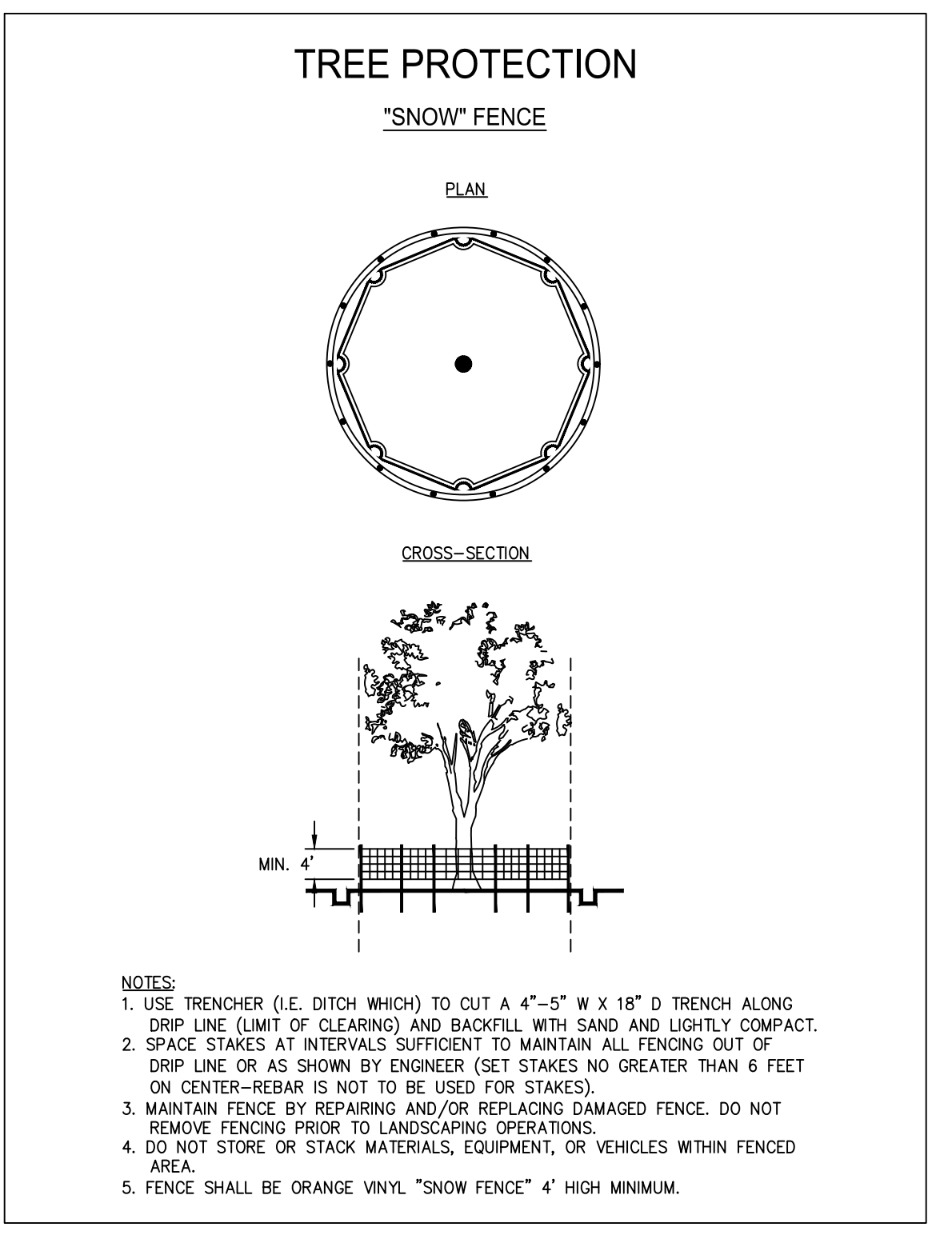
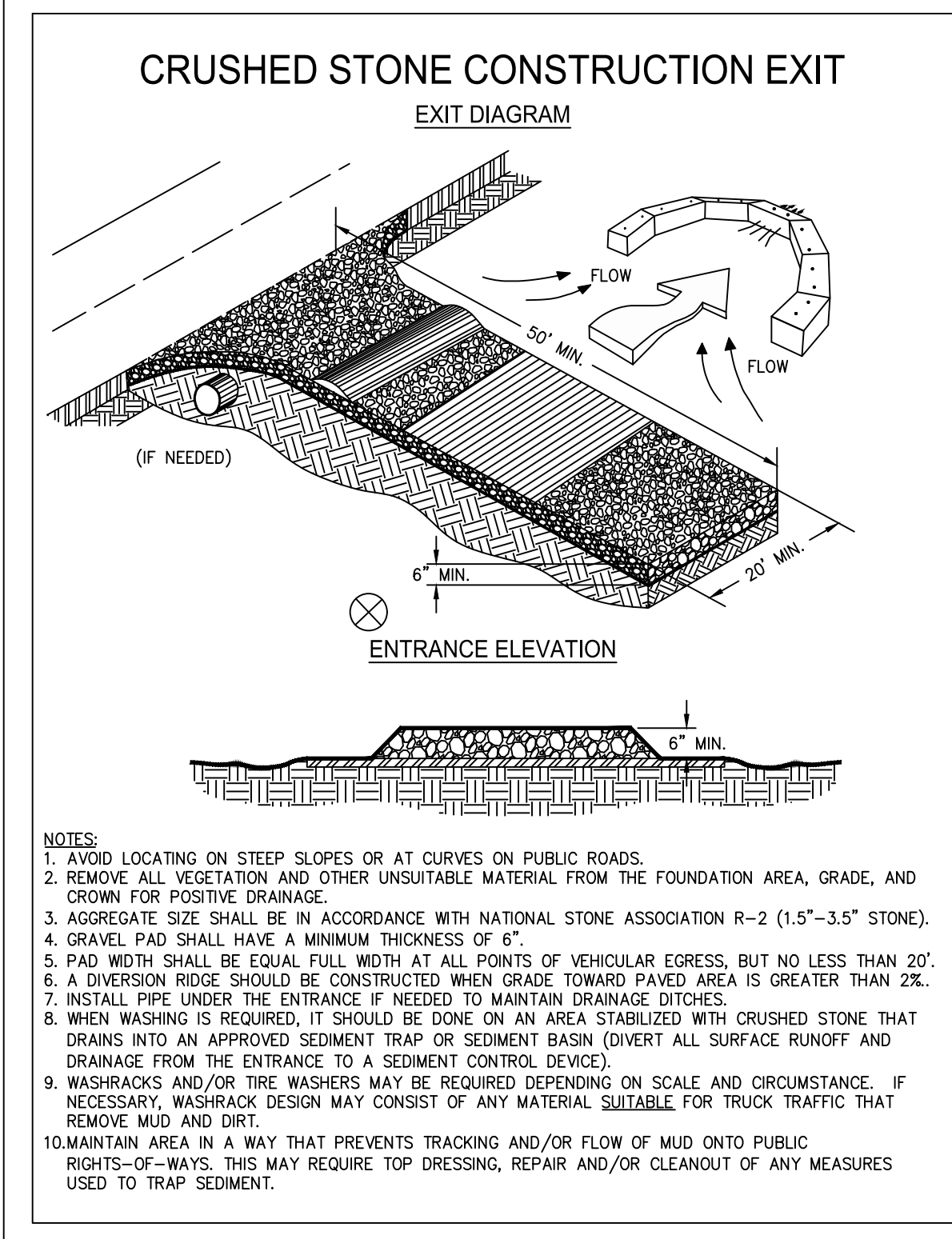
CODE	PRACTICE	DETAIL	MAP SYMBOL	DESCRIPTION
Bf	BUFFER ZONE			Strip of undisturbed original vegetation, enhanced or restored existing vegetation or the reestablishment of vegetation surrounding an area of disturbance or bordering streams.
Cs	CONSTANT DUNE STABILIZATION (WITH VEGETATION)			Planting vegetation on dunes that are denuded artificially constructed, or re-nourished.
Ds1	DISTURBED AREA STABILIZATION (WITH MULCHING ONLY)			Establishing temporary protection for disturbed areas where seedlings may not have a suitable growing season to produce an erosion retarding cover.
Ds2	DISTURBED AREA STABILIZATION (WITH TEMP SEEDING)			Establishing a temporary vegetative cover with fast growing seedlings on disturbed areas.
Ds3	DISTURBED AREA STABILIZATION (WITH PERM SEEDING)			Establishing a permanent vegetative cover such as trees, shrubs, vines, grasses, or legumes on disturbed areas.
Ds4	DISTURBED AREA STABILIZATION (SOODING)			A permanent vegetative cover using sods on highly erodible or critically eroded lands.
Du	DUST CONTROL ON DISTURBED AREAS			Controlling surface and air movement of dust on construction sites, roadways and similar sites.
Fi-Co	FLOCCULANTS AND COAGULANTS			Substance formulated to assist in the solids/liquid separation of suspended particles in solution.
Sb	STREAMBANK STABILIZATION (USING PERM VEGETATION)			The use of readily available native plant materials to maintain and enhance streambanks, or to prevent, or restore and repair small streambank erosion problems.
Ss	SLOPE STABILIZATION			A protective covering used to prevent erosion and establish temporary or permanent vegetation on steep slopes, shore lines, or channels.
Tac	TACKERS AND BINDERS			Substance used to anchor straw or hay mulch by causing the organic material to bind together.

EROSION CONTROL CONSTRUCTION SCHEDULE

ACTIVITY	MONTH 1	MONTH 2	MONTH 3	MONTH 4	MONTH 5	MONTH 6	MONTH 7	MONTH 8	MONTH 9	MONTH 10	MONTH 11	MONTH 12
START CONSTRUCTION 8/1/2016												
INSTALLATION OF SILT FENCE & CONSTRUCTION EXITS												
CLEARING & GRUBBING												
GRADING												
STORM WATER SYSTEM INSTALLATION												
INSTALLATION OF SEDIMENT TRAPS												
INSTALLATION OF UTILITIES												
TEMPORARY GRASSING												
PAVING/GRASS												
PAVING/GRASS												
PERMANENT VEGETATION												
MAINTENANCE OF EROSION CONTROL MEASURES												
REMOVE TEMPORARY STRUCTURES												
END OF CONSTRUCTION												

THIS SCHEDULE IS FOR EROSION CONTROL ONLY, AND IS NOT A PROJECT CONSTRUCTION SCHEDULE.

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811 Know what's below.
Call before you dig.



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4174 SILVER PEAK PARKWAY
SUWANEE, GEORGIA 30024
PHONE (770) 932-6550
FAX (770) 932-6551

CITY OF DACULA

PROJECT:
**MAPLE CREEK PARK
NEW PLAYGROUND
ADDITION**

425 MCWILLAN ROAD,
CITY OF DACULA,
GWINNETT COUNTY, GA

DATE	DESCRIPTION
06/07/2022	PLAN SET

JOB NO: 22-0306
DRAWN BY: YW
CHECKED BY: DP

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EROSION,
SEDIMENTATION,
POLLUTION
CONTROL PLAN
DETAILS

C-5.4

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CITY OF DACULA

OWNER:

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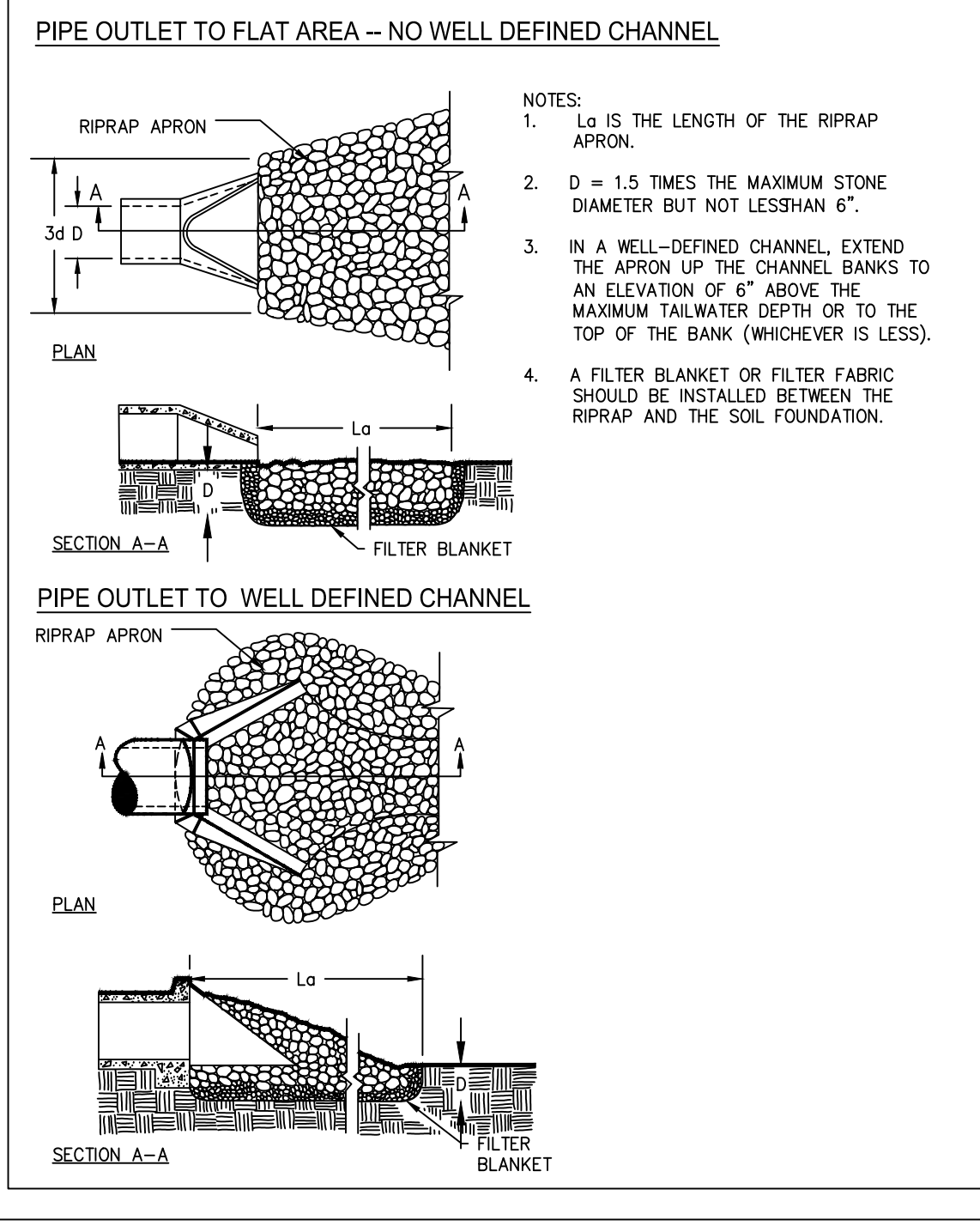
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DETAILS

C-5.6

RIPRAP OUTLET PROTECTION



- NOTES:
1. L_a IS THE LENGTH OF THE RIPRAP APRON.
 2. $D = 1.5$ TIMES THE MAXIMUM STONE DIAMETER BUT NOT LESS THAN 6".
 3. IN A WELL-DEFINED CHANNEL, EXTEND THE APRON UP THE CHANNEL BANKS TO AN ELEVATION OF 6" ABOVE THE MAXIMUM TAILWATER DEPTH OR TO THE TOP OF THE BANK (WHICHEVER IS LESS).
 4. A FILTER BLANKET OR FILTER FABRIC SHOULD BE INSTALLED BETWEEN THE RIPRAP AND THE SOIL FOUNDATION.

RIP-RAP SIZE CHART

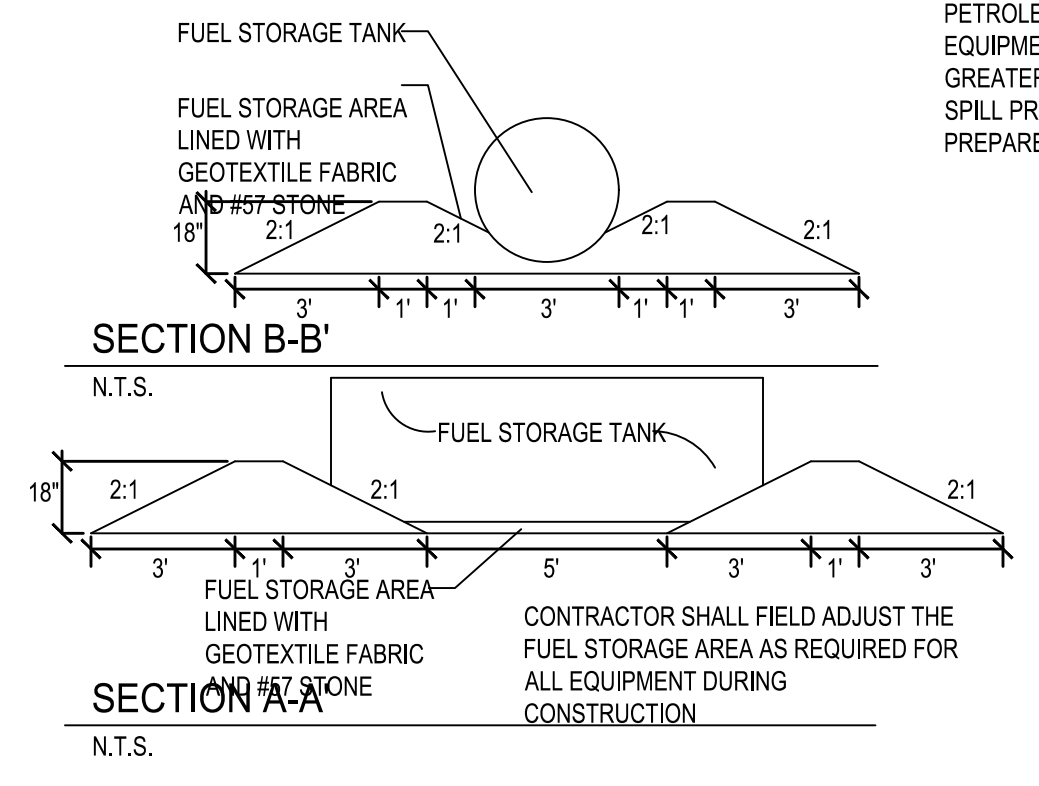
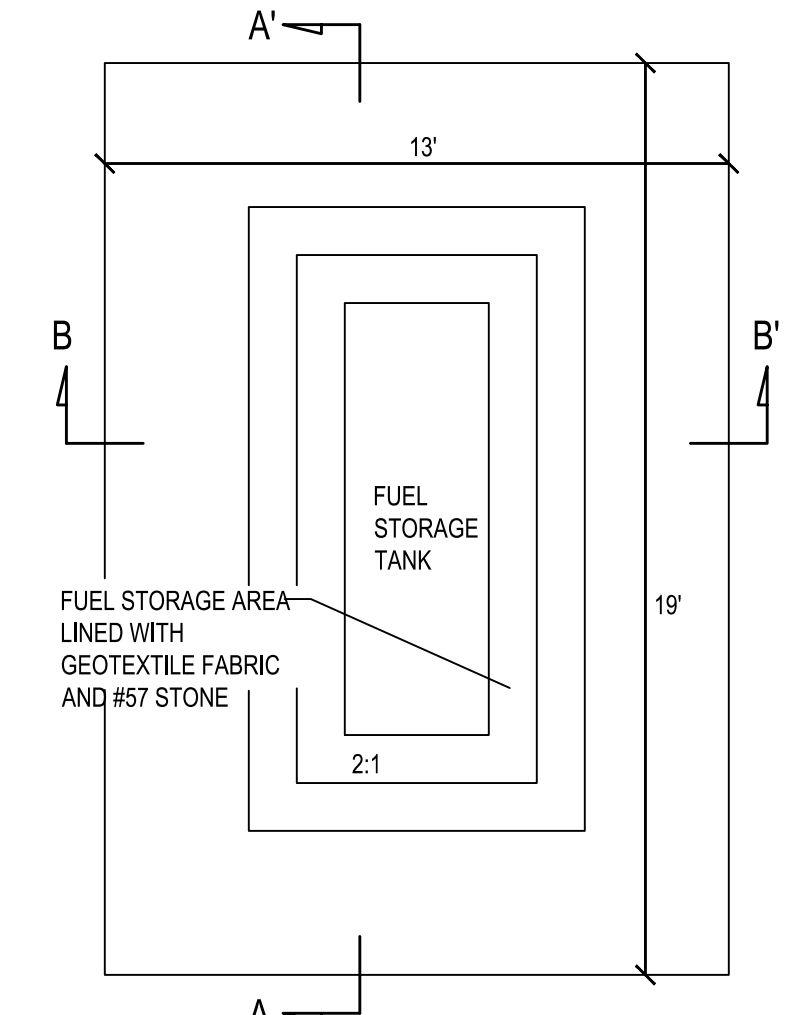
STRUCTURES	Do	FLOW RATE (CFS)	VELOCITY (FPS)	TAIL WATER	La	W ₁	W ₂	d ₅₀	d _{max}	D APRON THICKNESS
PROPOSED HW 1-A	12"	.	.	MAX	9.5'	4.5'	11'	0.30'	0.45'	0.68'
PROPOSED HW 2-A	8"	.	.	MAX	9.5'	4.5'	11'	0.30'	0.45'	0.68'
PROPOSED HW 2-A	8"	.	.	MAX	9.5'	4.5'	11'	0.30'	0.45'	0.68'

St **OUTLET PROTECTION**

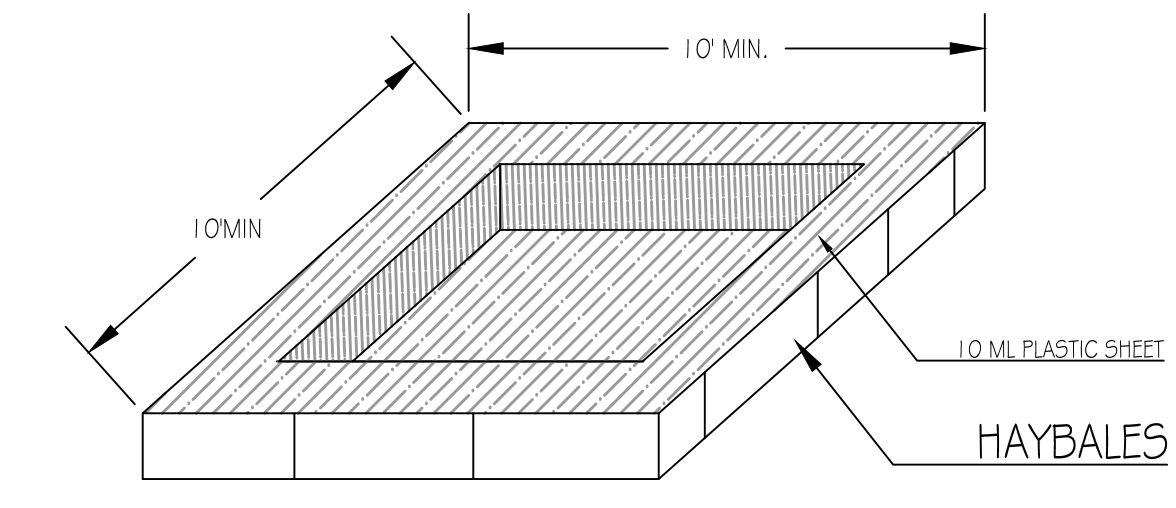
SOIL CLEANUP AND CONTROL PRACTICES

- LOCAL, STATE, AND MANUFACTURER'S RECOMMENDED METHODS FOR SPILL CLEANUP WILL BE CLEARLY POSTED AND PROCEDURES WILL BE MADE AVAILABLE TO SITE PERSONNEL.
- MATERIAL AND EQUIPMENT NECESSARY FOR SPILL CLEANUP WILL BE KEPT IN THE MATERIAL STORAGE AREAS. TYPICAL MATERIALS AND EQUIPMENT INCLUDES, BUT IS NOT LIMITED TO, BROOMS, DUSTPANS, MOPS, RAGS, GLOVES, GOGGLES, CAT LITER, SAND, SAWDUST AND PROPERLY LABELED PLASTIC AND METAL WASTE CONTAINERS.
- SPILL PREVENTION PRACTICES AND PROCEDURES WILL BE REVIEWED AFTER A SPILL AND ADJUSTED AS NECESSARY TO PREVENT FUTURE SPILLS.
- ALL SPILLS WILL BE CLEANED UP IMMEDIATELY UPON DISCOVERY. ALL SPILLS WILL BE REPORTED AS REQUIRED BY LOCAL, STATE AND FEDERAL REGULATIONS.
- SPILL PREVENTION PRACTICES AND PROCEDURES WILL BE REVIEWED AFTER A SPILL AND ADJUSTED AS NECESSARY TO PREVENT FUTURE SPILLS.
- FOR SPILLS THAT IMPACT SURFACE WATER (LEAVE A SHEEN ON SURFACE WATER), THE NATIONAL RESPONSE CENTER (NRC) WILL BE CONTACTED WITHIN 24 HOURS AT 1-800-426-2675.
- FOR SPILLS ON AN UNKNOWN AMOUNT, THE NATIONAL CENTER (NRC) WILL BE CONTACTED WITHIN 24 HOURS AT 1-800-426-2675.
- FOR SPILLS GREATER THAN 25 GALLONS AND NO SURFACE WATER IMPACTS, THE GEORGIA EPD WILL BE CONTACTED WITHIN 24 HOURS.
- FOR SPILLS LESS THAN 25 GALLONS AND NO SURFACE WATER IMPACTS, THE SPILL WILL BE CLEANED UP AND LOCAL AGENCIES WILL BE CONTACTED AS REQUIRED.

THE CONTRACTOR SHALL NOTIFY THE LICENSED PROFESSIONAL WHO PREPARED THIS PLAN IF MORE THAN 1320 GALLONS OF PETROLEUM IS STORED ONSITE (THIS INCLUDES CAPACITIES OF EQUIPMENT) OR IF ANY ONE PIECE OF EQUIPMENT HAS A CAPACITY GREATER THAN 600 GALLONS. THE CONTRACTOR WILL NEED A SPILL PREVENTION CONTAINMENT AND COUNTERMEASURES PLAN PREPARED BY THAT LICENSED PROFESSIONAL.



FUEL STORAGE AREA



OPERATION
INSPECTION: CHECK ALL CONCRETE WASHOUT FACILITIES DAILY TO DETERMINE IF THEY HAVE BEEN FILLED TO 75% CAPACITY. THE FACILITY NEEDS TO BE CLEANED OR CHANGED WHEN 75% FULL. INSPECT WASHOUTS DAILY TO ENSURE THAT PLASTIC LININGS ARE INTACT AND SIDEWALLS HAVE NOT BEEN DAMAGED BY CONSTRUCTION ACTIVITIES.
MATERIAL REMOVAL: IF THE WASHOUT IS NEARLY FULL, VACUUM AND DISPOSE OF THE WASTE MATERIAL IN AN APPROVED MANNER. DO NOT DISCHARGE LIQUIDS TO WATERWAYS. STORM DRAINS OR DIRECTLY ONTO GROUND. DO NOT USE SANITARY SEWER WITHOUT LOCAL APPROVAL. REMOVE LIQUIDS OR COVER THE STRUCTURES BEFORE PREDICTED STORMS TO PREVENT OVERTOWNS.
YOU CAN REMOVE HARDENED CONCRETE WHOLE OR YOU CAN BREAK IT UP FIRST, DEPENDING ON THE TYPE OF EQUIPMENT AVAILABLE AT YOUR SITE. HAUL IT AWAY FOR DISPOSAL OR RECYCLING.
WHEN YOU REMOVE MATERIALS FROM THE CONCRETE WASHOUT, INSPECT FOR SIGNS OF WEAKENING OR DAMAGE, AND REBUILD STRUCTURE OR MAKE NECESSARY REPAIRS. INSTALL A NEW PLASTIC LINER AFTER EVERY CLEANING.

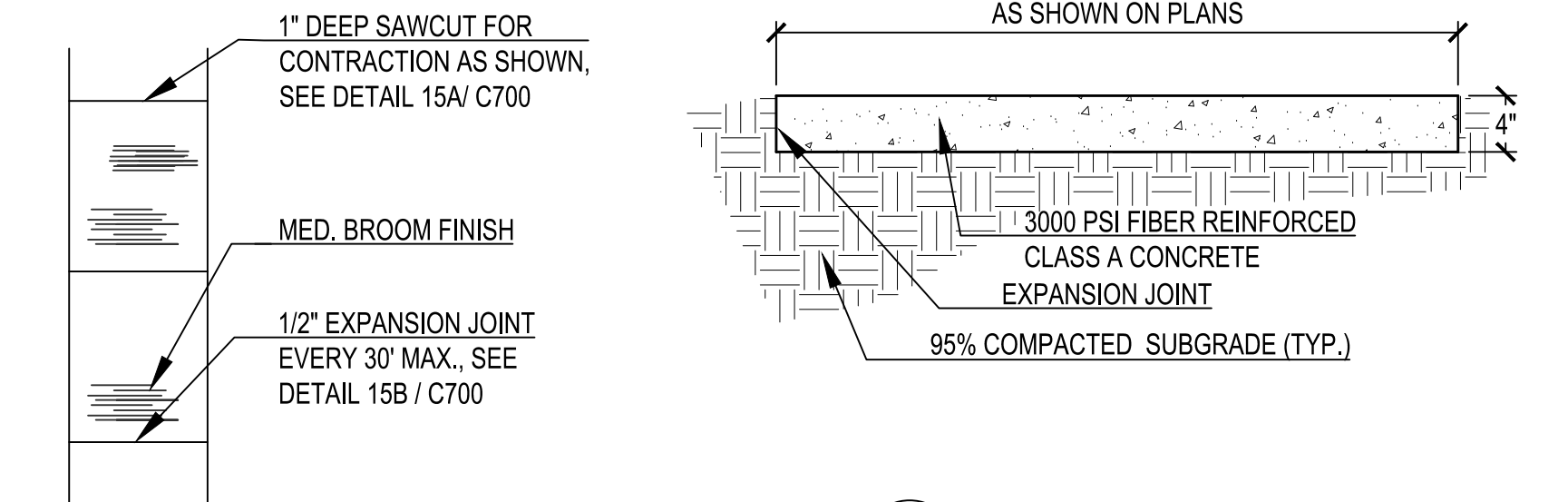
CONCRETE WASHOUT AREA DETAIL

N.T.S.

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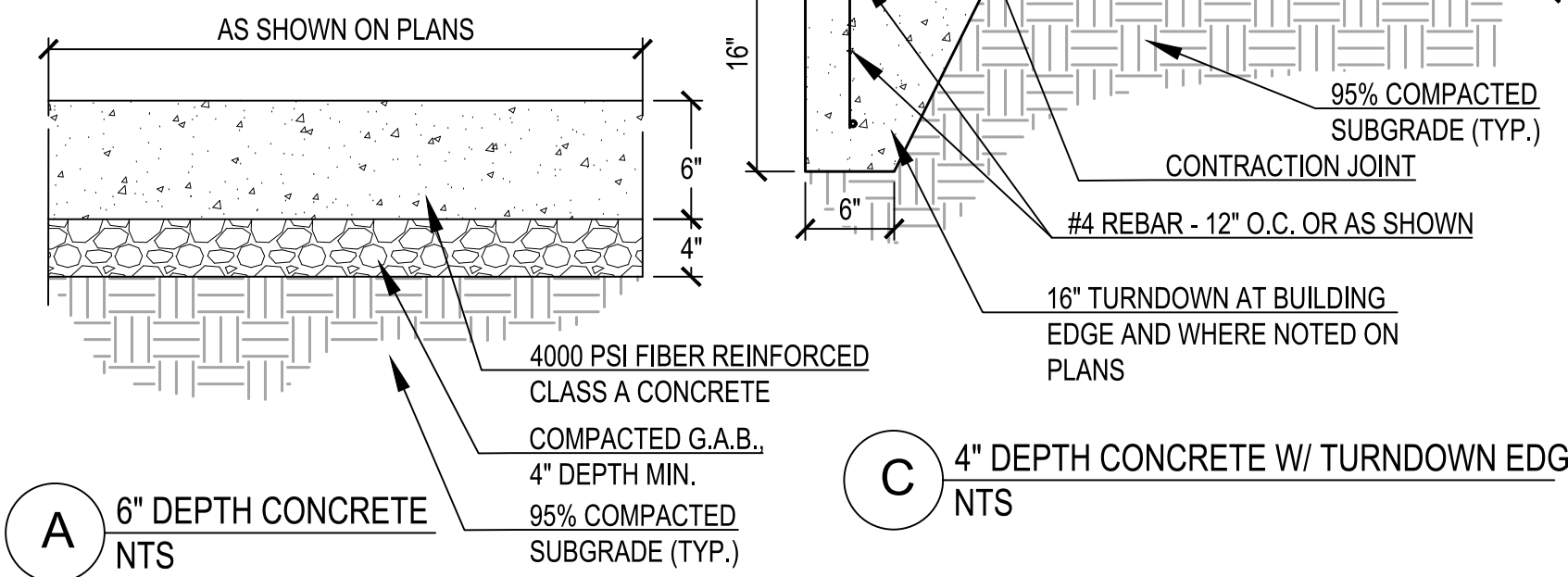
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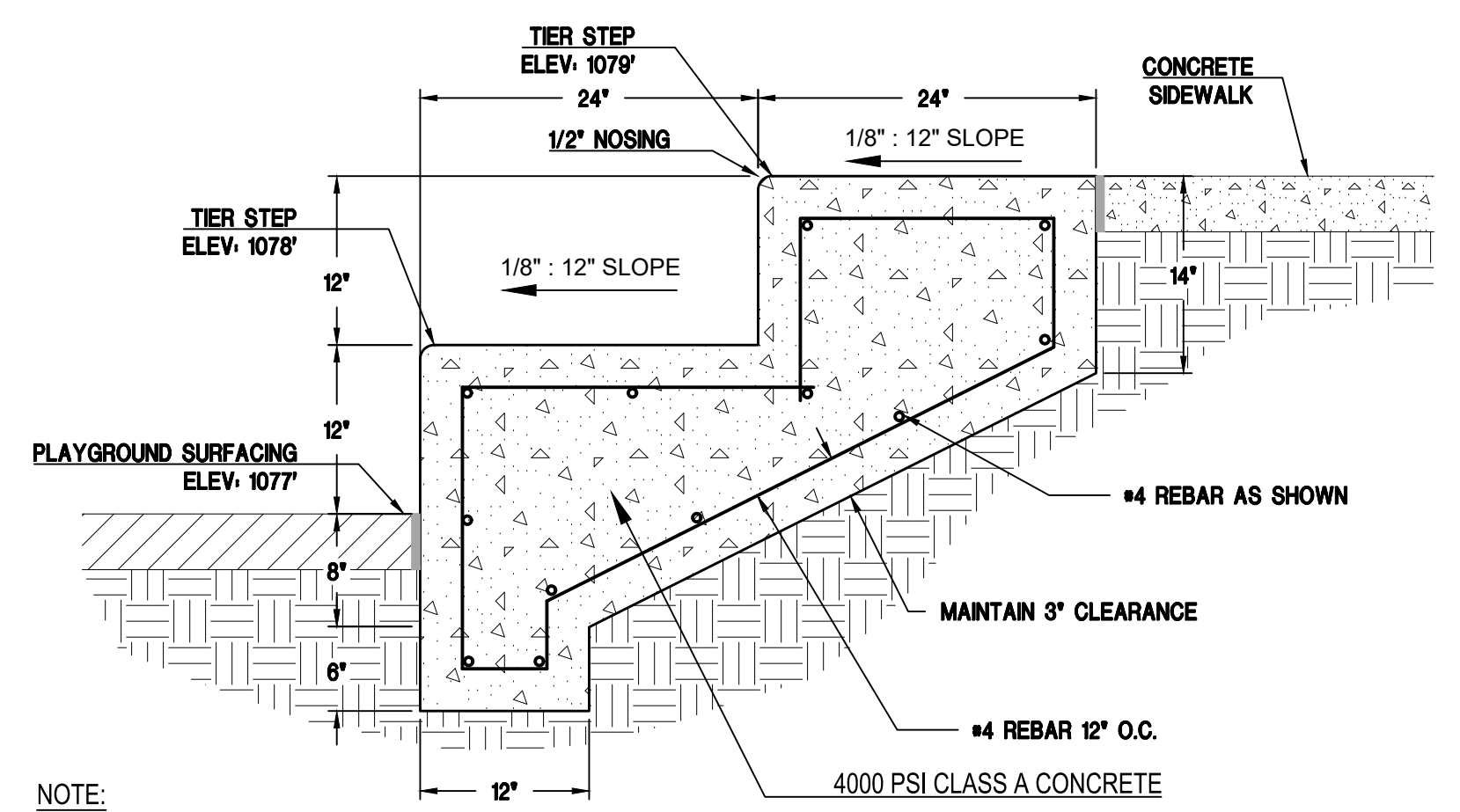
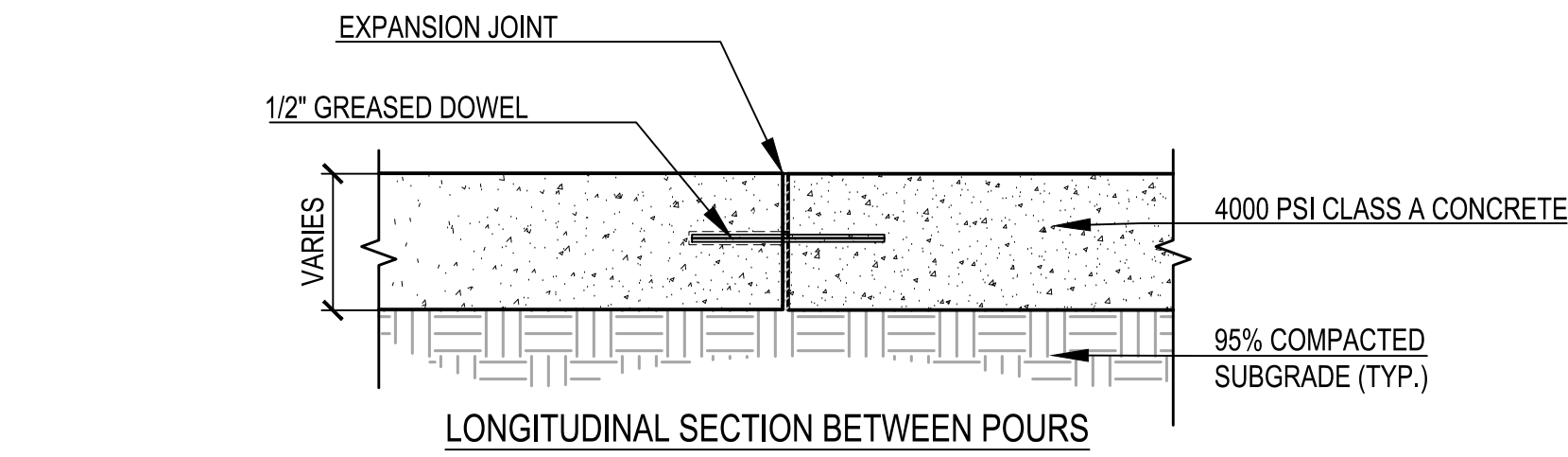


NOTE:
1. INSTALL 100% VIRGIN POLYPROPYLENE FIBERS PER MANUFACTURER'S RECOMMENDATIONS IN ALL HORIZONTAL SITE CONCRETE.

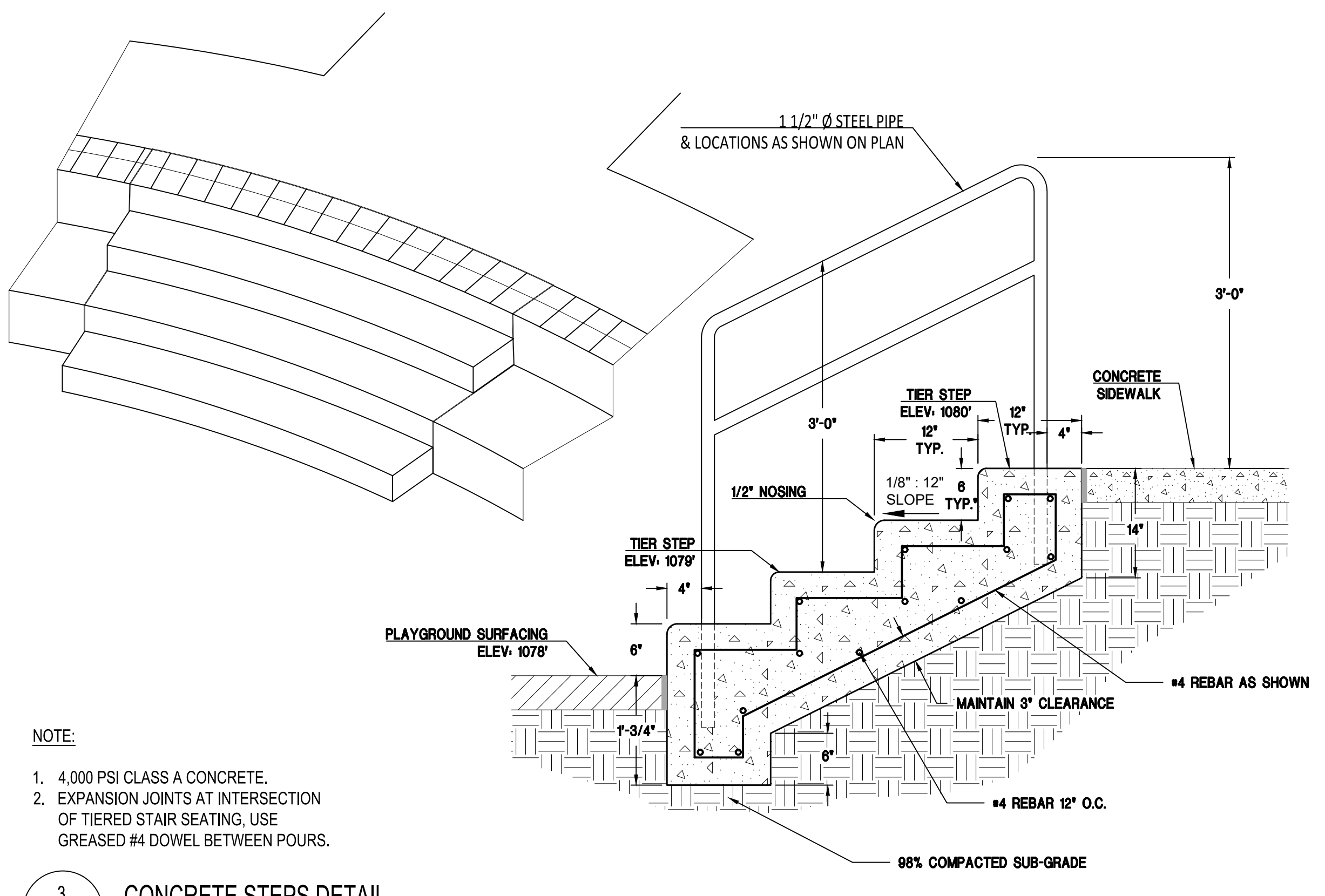
TYPICAL SIDEWALK JOINT LAYOUT



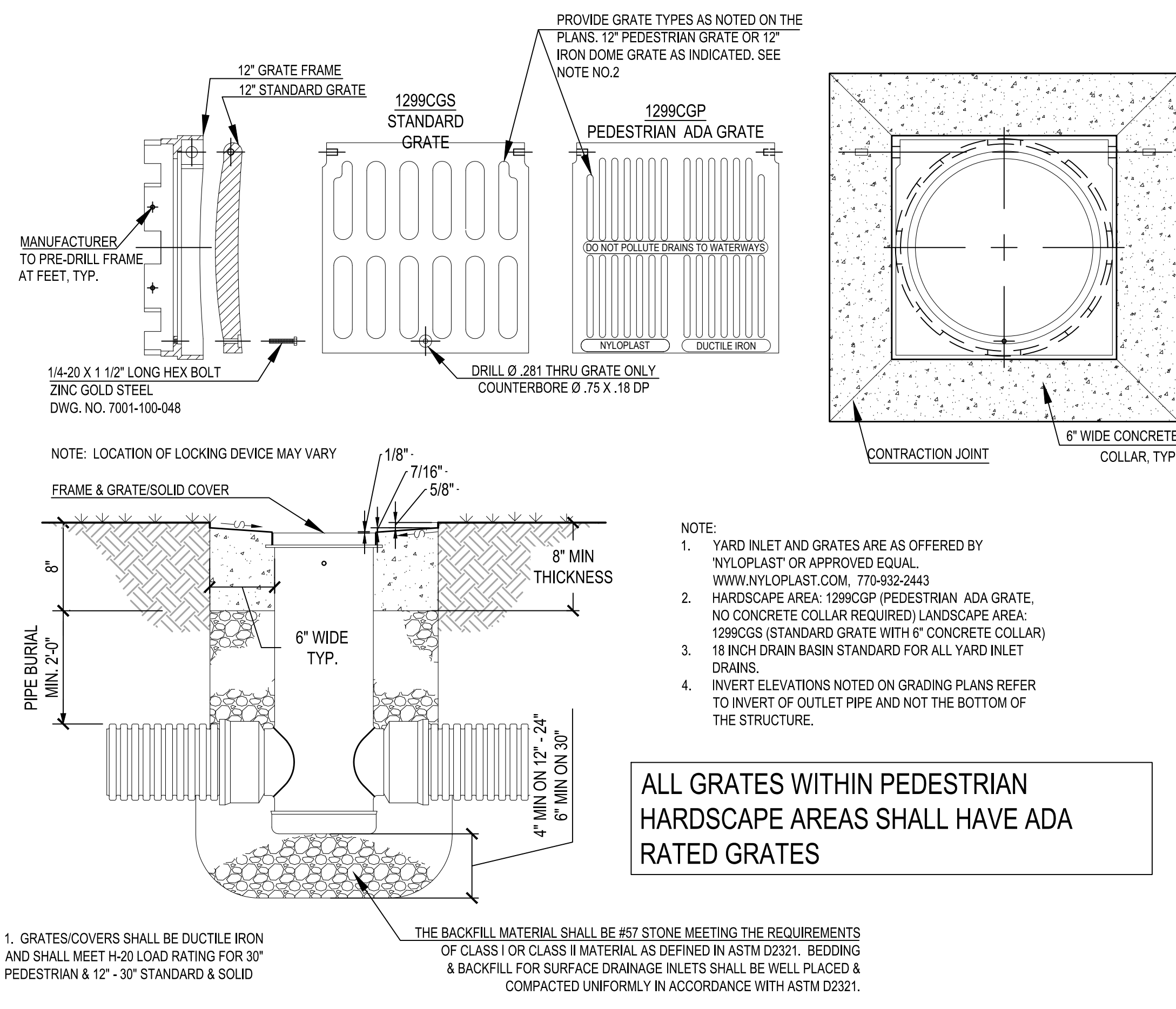
1
C6.0 CONCRETE SIDEWALK DETAIL
N.T.S.



2
C6.0 CONCRETE TIER STEPS DETAIL
N.T.S.

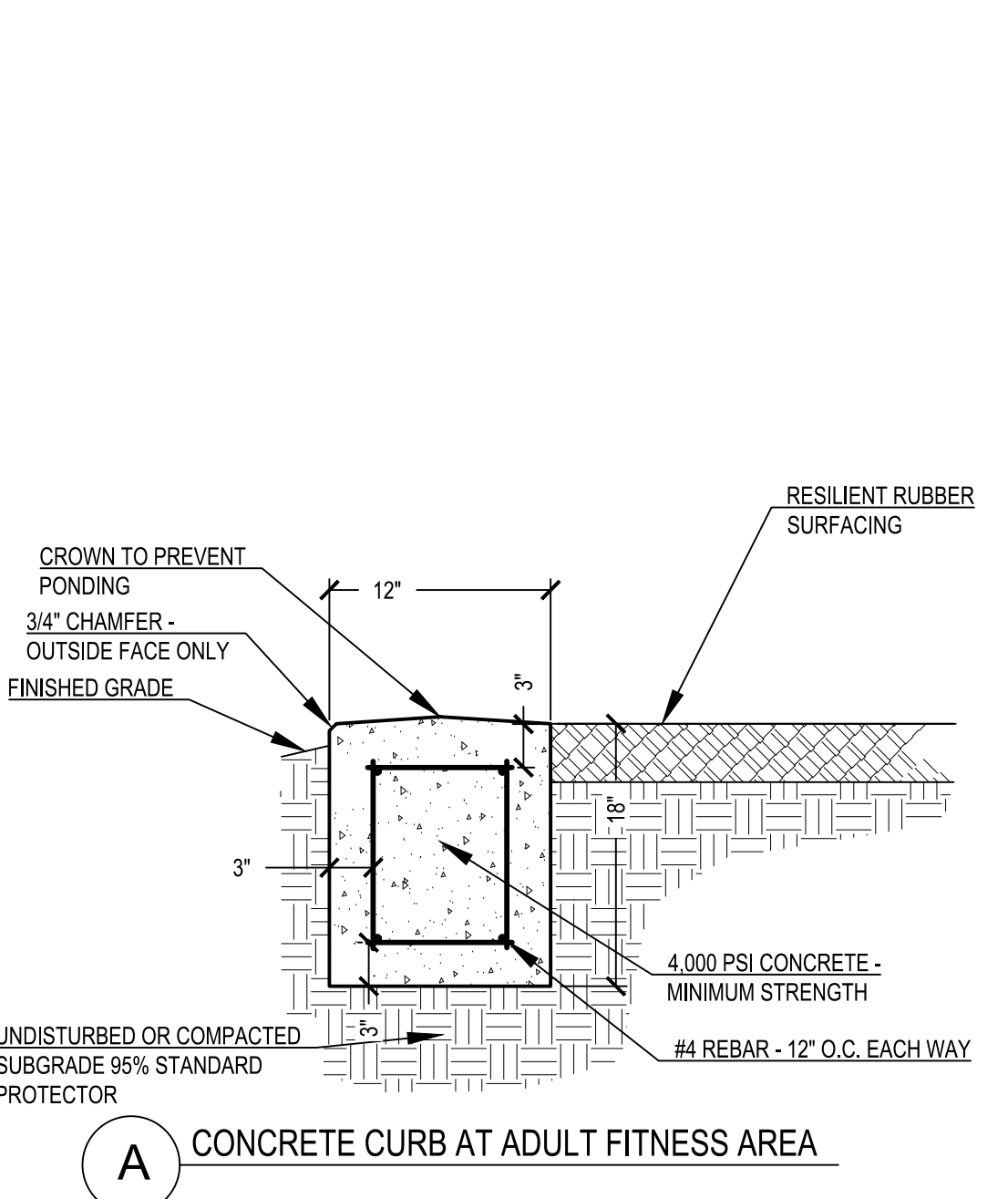


3
C6.0 CONCRETE STEPS DETAIL
N.T.S.

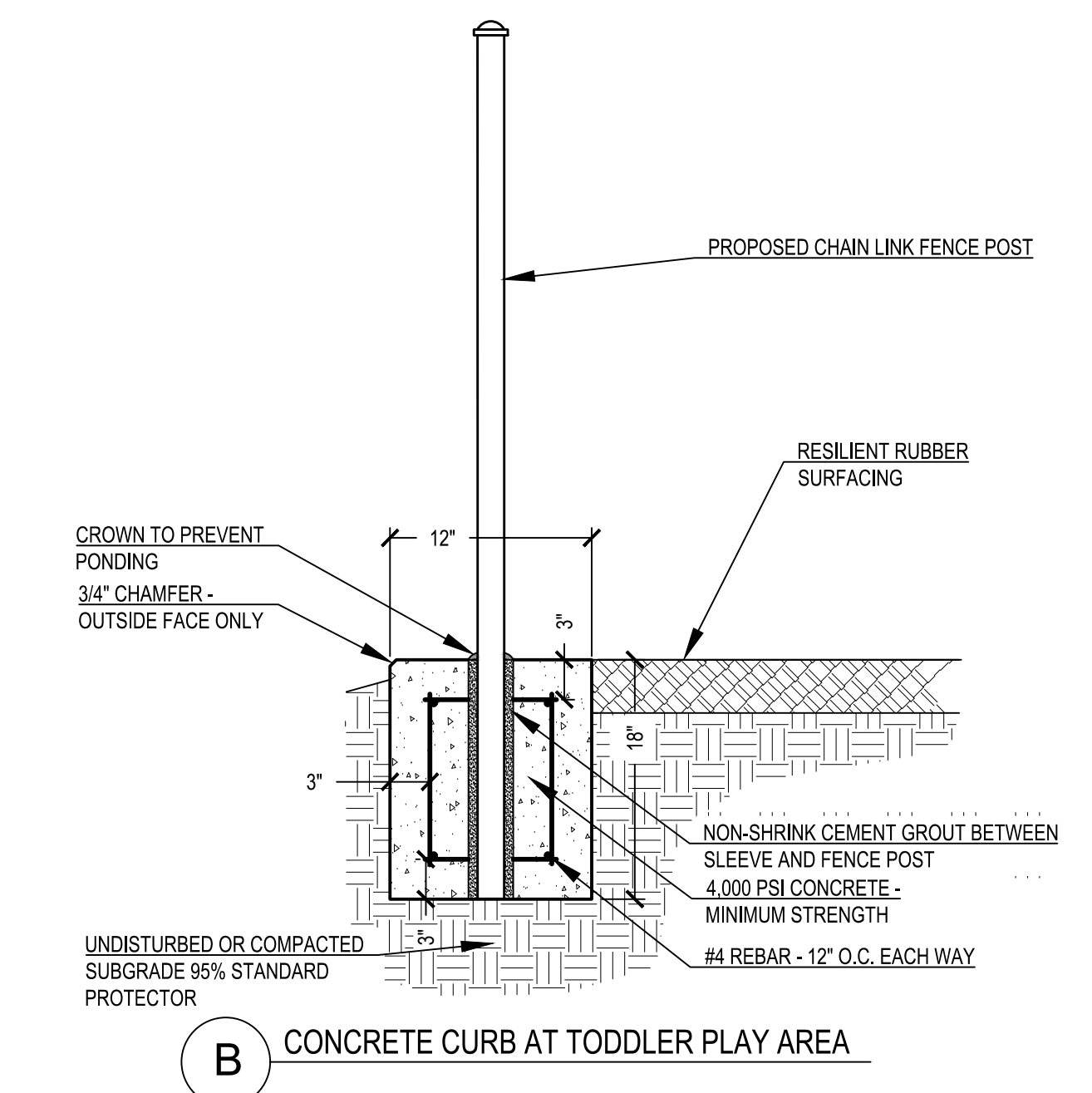


ALL GRATES WITHIN PEDESTRIAN HARDSCAPE AREAS SHALL HAVE ADA RATED GRATES

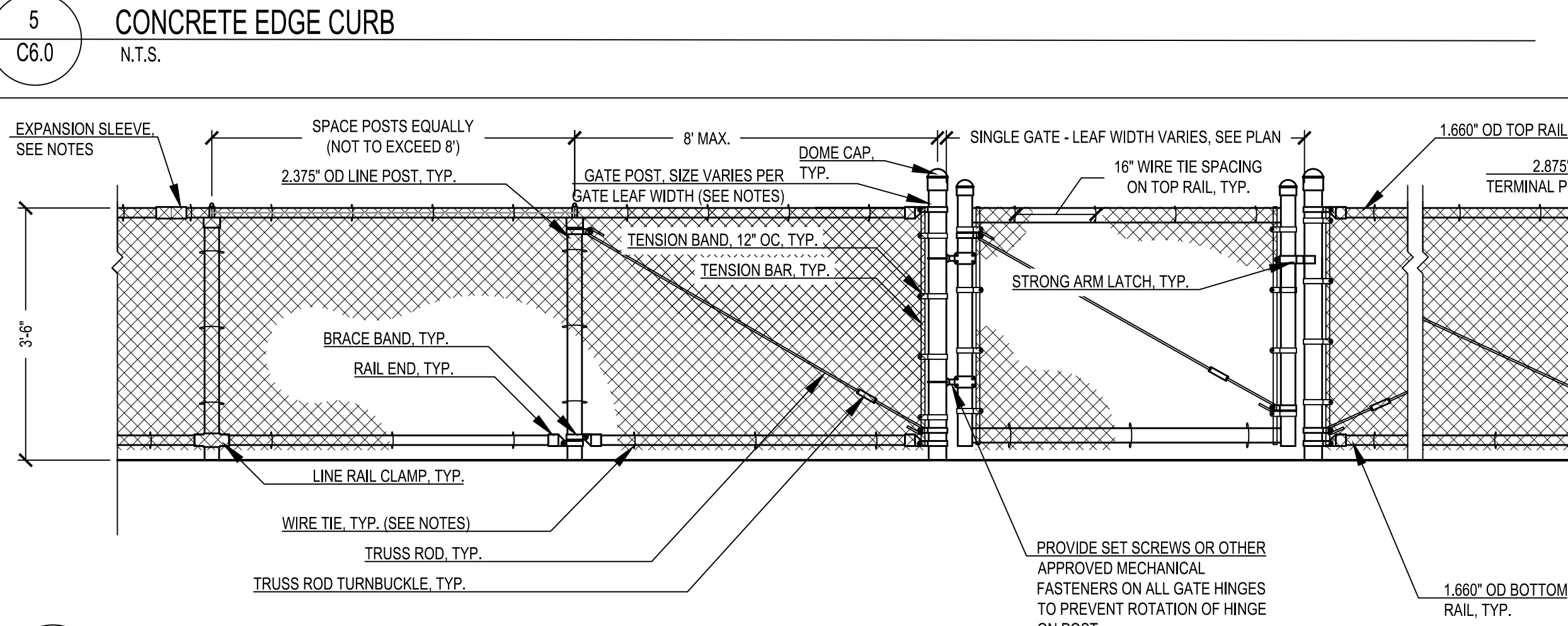
4
C6.0 YARD INLET (YI)
N.T.S.



5
C6.0 CONCRETE EDGE CURB
N.T.S.



B
CONCRETE CURB AT TODDLER PLAY AREA



6
C6.0 CHAIN-LINK FENCE
N.T.S.

- NOTES:**
1. ALL FENCE COMPONENTS INCLUDING POSTS SHALL HAVE THERMALLY FUSED BLACK VINYL COATING PER SPECIFICATIONS.
 2. TERMINAL (END, CORNER, OR PULL) POSTS SHALL BE INSTALLED AT EVERY POINT THE FENCE CHANGES GRADE OR TURNS A CORNER. TRUSS ROD AND TIGHTENER TO BE LOCATED AT ALL END / GATE POSTS.
 3. ALL POST FOOTINGS SHALL BE 3000 PSI CONCRETE. NO CONCRETE TO BE VISIBLE AT SURFACE.
 4. ALL FENCE FABRIC SHALL BE THERMALLY FUSED BLACK PVC COATED CONTINUOUS GALVANIZED CHAIN LINK #9 GAUGE (BEFORE COATING) WOVEN WIRE LOCATED ON THE OUTSIDE OF ALL POSTS. KNUCKLED AT TOP AND BOTTOM.
 5. ALL WIRE TIRES TO BE STEEL. ALUMINUM TIES WILL NOT BE ACCEPTED. WIRE TIE SPACING NOT TO EXCEED 15" O.C. AT LINE POSTS AND 24" O.C. AT CENTER AND BOTTOM RAILS. 16" O.C. AT TOP RAILS.
 6. TOP RAIL TO HAVE EXPANSION SLEEVES +/-30" O.C.
 7. ALL GATE FRAME CONNECTIONS TO BE FULL SEAM WELDED GROUND SMOOTH. GATE FRAME MEMBERS ARE TO BE SPACED NO GREATER THAN 8' APART HORIZONTALLY OR VERTICALLY. EXTERIOR MEMBERS TO BE 1.900" OD PIPE, INTERIOR MEMBERS WHEN REQUIRED SHALL BE 1.660" OD PIPE.
 8. ALL GATE HINGES TO BE OFFSET TYPE AND SHALL SWING 180°.
 9. ALL GATES TO HAVE TRUSS ROD AND TIGHTENER.
 10. GATE DROP FORK LATCHES TO BE LOCKABLE. CONTRACTOR TO PROVIDE #21B772L PADLOCK BY BEST ACCESS SYSTEMS.
 11. GATE POST SIZE: LEAF WIDTH 4" UP TO 10' = 3.500" OD; LEAF WIDTH 10' TO 18' = 4.000" OD.
 12. GATE LATCH TO BE STRONG ARM LATCH BY DAC INDUSTRIES, 1-800-888-9768, WWW.DACINDUSTRIES.COM, OR APPROVE EQUAL. SEE DETAIL 6/C6.0
 13. INSTALL DOUBLE-GATES WITH 180 DEGREE HINGES AS SHOWN ON C201. 180 DEGREE HINGES TO BE "INDUSTRIAL 180 DEGREE ARM HINGES" AS OFFERED BY HOOVER FENCE CO. OR APPROVE EQUAL. INSTALL HINGES AND GATES SO GATES CANNOT SWING INTO FIELD AREA AND DROP BARS CANNOT DAMAGE THE FIELD.
 14. CONTRACTOR TO CONNECT ALL GATE HINGES TO ROUND POSTS IN A MANNER THAT PREVENTS ROTATION OF HINGES. DRILLING THROUGH BACK OF HINGE AND GATE POST, AND INSTALLING A CORROSION RESISTANT SCREW THROUGH BOTH IS AN ACCEPTABLE METHOD.

24 HOUR CONTACT
CITY OF DACULA
BRITTI NIX
770-963-7451



BOWMAN

4174 SILVER PEAK PARKWAY
SUWANEE, GEORGIA 30024
PHONE (770) 932-6550
FAX (770) 932-6551

CITY OF DACULA

OWNER:

**MAPLE CREEK PARK
NEW PLAYGROUND
ADDITION**

425 MC MILLAN ROAD,
CITY OF DACULA,
GWINNETT COUNTY, GA

PROJECT:

DATE	DESCRIPTION
06/07/2022	PLAN SET

JOB NO: 22-0306
DRAWN BY: YW
CHECKED BY: DP

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CONSTRUCTION
DETAILS

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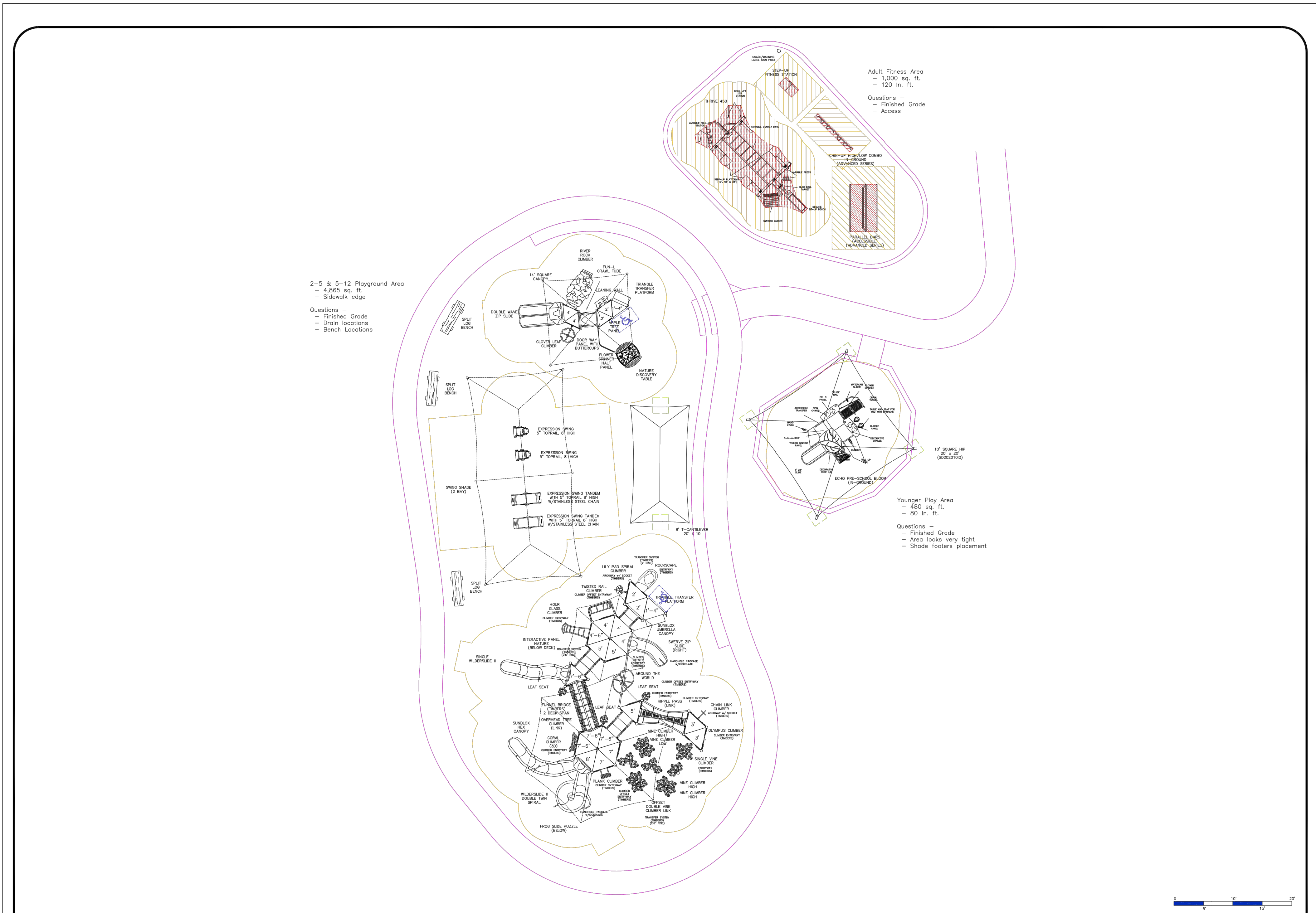
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PLAYGROUND
PLAN & DETAILS

C6.1

MAPLE CREEK PARK PLAYGROUND EQUIPMENT		
QTY	PART #	DESCRIPTION
MAIN PLAYGROUND		
1	178749	GameTime - Owner's Kit
1	RDU	GameTime - 2-5 & 5-12 Main Playground Area
1	5192	GT-Shade - Double Bay Swing Shade
1	T-CANT	GT-Shade - T-Cantilever Shade - 20'x10'x8' entry
ADULT FITNESS AREA		
1	14912	GameTime - Thrive 450
1	135851	GameTime - Chin Up Hi Lo Combo In Ground
1	13589	GameTime - Step-up Fitness Station
1	15504	GameTime - Parallel Bar (Accessible)
1	13585	GameTime - Fitness Sign Post For Sticker
YOUNGER PLAY AREA		
1	EKB021	GameTime - Echo PreSchool Bloom Inground
1	QR017	GT-Shade - GTSD202010IG 20X20X10 SQ HP W/GLD IG
OTHER SERVICES		
1	INSTALL	5-Star Plus Playground Installation Services - Performed by a Certified Installer, includes Meeting and unloading delivery truck, signed completion forms, site walk through, 90 day site revisit by installation foreman, and 3-year labor warranty! (includes two Shades)
6345	Crush	GT-Impax - Crushed & Compacted Stone Sub Base (sq. ft.)
6345	Poured-8	GT-Impax - Poured Rubber Surfacing - 8' fall height-50% Standard Color - Aromatic Binder - 3.5" Thick with 1/2" epdm wear course cap - 5-year warranty
1	Design	GT-Impax - Design and Multi-Color River Design in Poured Rubber

- NOTES:
1. PLAYGROUND EQUIPMENT BY GAMETIME c/o DOMINICA RECREATION PRODUCTS, INC., P.O. BOX 520700, LONGWOOD, FL 32750-0700, 1-800-432-0162, 407-331-0101, FAX 407-337-4720, www.playdrp.com OR APPROVED EQUAL.
 2. PROVIDE PLAYGROUND EQUIPMENT CUT SHEETS FOR REVIEW AND APPROVAL BY THE OWNER & LANDSCAPE ARCHITECT.



<p>150 PlayCore Drive SE Fort Payne, AL 35967 www.gametime.com</p>	<p>Maple Creek Park City of Dacula</p> <p>Representative Dominica Recreation Products</p>	<p>This play equipment is recommended for children ages 2-5 & 5-12</p>	<p>Minimum Area Required: Scale: This drawing can be scaled only when in an 30" x 48" format</p>	<p>IMPORTANT: Soft resilient surfacing should be placed in the use zones of all equipment, as specified for each type of equipment, and at depths to meet the critical fall heights as specified by the U.S. Consumer Product Safety Commission, ASTM standard F 1487 and Canadian Standard CANCSA-Z-614</p>	<p>Drawn By: Rob Date: 9-28-21 Drawing Name:</p>

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Activity	Quantity	Unit	Labor \$ or Lump Sum	Subtotal	Total	Misc. Notes
Demolition					\$ 5,976.62	
Demo and Remove Existing Concrete Sidewalk	1,610	SF	\$ 0.75	\$ 1,207.62		
Demo and Remove Existing 4" CPP	10	LF	\$ 1.00	\$ 10.00		
Cut & Fills	279	CY	\$ 6.00	\$ 1,674.00		
Cut & Fills Haul off	84	CY	\$ 15.00	\$ 1,260.00		
Tree Save Fencing	165	LF	\$ 5.00	\$ 825.00		
Removal of 3 Trees	1	LS	\$ 1,000.00	\$ 1,000.00		
Site Features					\$ 545,705.91	
Playground equipment	1	LS	\$ 178,544.86	\$ 178,544.86		
Adult Fitness area Equipment	1	LS	\$ 23,762.40	\$ 23,762.40		
Todler play equipment	1	LS	\$22,293	\$ 22,292.53		
12" Concrete Curb Edge	211	LF	\$10	\$ 2,110.00		
Playground paving	4,670	SF	\$ 25.00	\$ 116,750.00		
4' Playawn Fence	83	LF	\$ 50.00	\$ 4,150.00		
Misc. (Material Surcharge, Freight, Tax)	1	LS	\$76,764	\$ 76,764.36		
Playground Installation Service (includes 2 shade structures)	1	LS	\$92,600	\$ 92,600.00		
Concrete Sidewalk w/ stamped edge	1,720	SF	\$ 8.00	\$ 13,756.95		
Concrete Teir with Steps w/ Handrails	27	CY	\$ 560.00	\$ 14,974.81		
Concrete picnic area	48	SF	\$ 10.00	\$ 480.00		
Site Furnitures					\$ 7,100.00	
Bench	4	EA	\$ 1,200.00	\$ 4,800.00		
Trash recepticle	1	EA	\$ 800.00	\$ 800.00		
Picnic table	1	EA	\$ 1,500.00	\$ 1,500.00		
Storm Water					\$ 13,756.00	
8" HDPE	86	LF	\$ 30.00	\$ 2,580.00		
6" HDPE	90	LF	\$ 22.00	\$ 1,980.00		
6" PERF. HDPE with filter sock	135	LF	\$ 24.00	\$ 3,240.00		
4" HDPE	14	LF	\$ 14.00	\$ 196.00		
4" PERF. HDPE with filter sock	60	LF	\$ 16.00	\$ 960.00		
(YI) YARD INLET	10	EA	\$ 300.00	\$ 3,000.00		
(HW) Headwall	3	EA	\$ 600.00	\$ 1,800.00		
Erosion Control					\$ 9,668.00	
Silt Fence	362	Lf	4.00	\$ 1,448.00		
(Co) Construction Entrance	1	EA	3,000.00	\$ 3,000.00		
Temporary Grassing (Ds1,Ds2,Ds3) (N/A - all grassing to be sod)				\$ -		
(Sd2-F) Sediment Trap/ Inlets	11	Ea	400.00	\$ 4,400.00		
Surge Stone Rip-Rap	7	Tn	40.00	\$ 280.00		
(Ss) Erosion Control Matting	60	SY	9.00	\$ 540.00		
Misc. Items					\$ 2,400.00	
Sod	4,220	SF	\$ 0.70	\$ 2,954.00		
Ground Cover (slope and soil stabilization)	500	SF	\$ 10.00	\$ 5,000.00		
Shrub	64	EA	\$ 20.00	\$ 1,280.00		
Tree	6	EA	\$ 400.00	\$ 2,400.00		
Sub Total					\$ 584,606.53	
15% Construction Contingency					\$ 87,690.98	
GRAND TOTAL COST:					\$ 672,297.51	

BOWMAN makes no guarantee as to the accuracy or inaccuracy of this Opinion of Probable Construction Costs (OPCC). All quantities and cost figures are subject to change; and may increase or decrease. The purpose of this OPCC is for preliminary/conceptual budgetary purposes only.

Project Manual

for

Maple Creek Park New Playground Addition

for

City of Dacula

G e o r g i a

Dated

June 7, 2022

Prepared By:



4174 Silver Peak Parkway
Suwanee, Georgia 30024

Maple Creek Park New Playground Addition
for
City of Dacula, Georgia

SECTION TITLE

DIVISION 0 - BIDDING/CONTRACT REQUIREMENTS

00 002	Table of Contents
00 020	Advertisement for Bids
00 100	Instructions to Bidders
00 300	Bid Form
00 500	“DRAFT” Contract
00 600	Bonds & Certificates
00 700	General Conditions
00 801	Supplementary Conditions
00 802	Notice of Commencement
00 900	Addenda and Clarifications

DIVISION 1 - GENERAL REQUIREMENTS

01 000	Project Scope of Work & Performance Specifications
01 370	Application for Payment
01 400	Quality Control
01 500	Construction Facilities and Temporary Controls
01 630	Substitutions
01 700	Contract Close-Out
01 740	General Contractor Warranty
01 741	Sub-Contractor Warranty
01 742	Certificate of Contractor / Statutory Affidavit
01 743	Georgia Security and Immigration Contractor/Subcontractor Affidavit

DIVISION 2 – SITE

02 050	Demolition
02 200	Earthwork
02 270	Slope Protection and Erosion Control
02 514	Site Concrete
02 720	Site Drainage
02 930	Lawns and Grasses
11 6813	Playground Equipment
31 1100	Clearing and Grubbing
31 2200	Grading
31 2200	Fine Grading
31 2500	Erosion Sediment and Pollution Controls
31 2514	Stabilization Measures for Erosion and Sediment Control
32 1816.13	Playground Protective Surfacing
32 3113	Chain Link Fences and Gates
32 9300	Plants

APPENDIX

- Project Location Map

ADVERTISEMENT FOR BIDS

Sealed bids for the Maple Creek Park New Playground Addition Project for the City of Dacula will be received by the City of Dacula at Dacula City Hall – 442 Harbins Road, Dacula, Ga. 30019, until **3:00 PM** local time on _____, **2022**.

Any bid received after said time and date will not be accepted by the City. The Contract Documents, consisting of Advertisement for Bids, Information for Bidders, Bid Proposal Form, Form of Agreement, Drawings, Specifications, Bid forms, Bid Bond, Performance Bond, Payment Bond, Bidders Qualifications Forms, and other Contract Documents may be examined at the following locations: McFarland-Dyer and Associates, a Bowman Engineering and Consulting, 4174 Silver Peak Parkway, Suwanee, Georgia 30024. Contact: David J. Patterson, PLA (770) 932-6550 email: dpatterson@bowman.com.

All Bidders must be registered with Bowman to assure that Bidders receive all addenda and/or clarifications to the Bid Documents in a timely manner, it is highly recommended that all bidders obtain at least one complete set of Bid Documents directly from Bowman. Entities that do not obtain Bid Documents from this source will not receive addenda and/or clarifications directly from Bowman. Bidders relying on plan rooms or other services to obtain Bid Documents, rather than obtaining them directly from the source are doing so at their own risk. Copies of the Documents and specifications will be provided in Electronic Format and can be obtained by contacting Bowman to be placed on the Bidder’s List. Electronic Copies will be made available on Bowman’s FTP website or sent by email at no charge. If hard copies are required, there is a non-refundable cost for each set of plans and specifications of \$150.00 (cash or check).

A. BASE BID –

The Work to be completed for this Project consists of furnishing all labor, materials, earthwork, construction operations, details, supervision and coordination of all trades, utility suppliers, governmental inspections and approvals to complete the construction, installation, and coordination for the Maple Creek New Playground Addition Project for the City of Dacula as follows:

The City of Dacula is currently making improvements to the Maple Creek Park Playground. The project consists of demolition of the existing playground and equipment and construction of new playground equipment, sidewalk improvements and all associated work, including clearing and grubbing, grading, sidewalks, sediment and erosion control, drainage and landscape installation. All improvements are to be performed within the limits of the playground area unless otherwise stated on the Drawings. Clear and grub existing vegetation within the limits of disturbance except the areas within designated tree save area(s). All buffers and tree save areas are to be clearly identified with flagging and/or fencing prior to commencement of any land disturbance activity.

Demolish, remove, relocate store, stockpile the existing built items as illustrated on the Drawings, and perform any incidental demolition which may be required to accomplish the improvements illustrated or implied within the Drawings. Materials, equipment, and fixtures to be removed, which are not noted for reuse, or which have not been designated by the Owner for retainage or delivery to his warehouse or holding area(s) become the property of the Contractor, and shall be promptly removed from the site. Any disposal of said material shall be done so legally.

Render the entire cleared site free of demolished remnants, debris, and other items or conditions having a deleterious effect on the continued construction of the project. All existing concrete paving that is to be

demolished shall be demolished and removed to earth sub-grade. Demolished material to be disposed of legally, off site.

New 4' wide concrete sidewalk will be installed around the entire playground area in order to provide pedestrian connectivity from the existing onsite sidewalk to the existing asphalt path immediately south of the playground area. Contractor is responsible for all construction and materials needed to complete sidewalk installation as illustrated on the Drawings. Sawcut smooth line between portions of sidewalk, curb and gutter or pavement to be demolished and removed and the remaining portions. All disturbed areas outside of limits of pavement, curb and gutter, and sidewalks shall be stabilized with permanent Sod grassing.

Contractor shall be an approved Gwinnett County Utility Contractor. All coordination with Gwinnett County Water and Sewer Department is the responsibility of the Contractor.

Provide all temporary traffic safety devices including but not limited to barricades, signage, lights, or flagmen to protect the public at large.

Do not put any equipment, materials, or debris on any adjacent property, except as specifically illustrated on the drawings. Do not bury any clearing and grubbing debris or demolition debris on site.

No burning permitted on site.

The Contractor will have Ninety (90) consecutive calendar days from the "Notice to Proceed" to finish and complete the project.

All materials and appurtenances required to complete this Scope of Work is the responsibility of the Contractor and shall be provided in his overall Bid. The Contractor must be an approved Contractor with the City of Dacula and/or Gwinnett County. A complete list of materials should be included in the Contractor's overall Bid and the Contractor will be required to submit a schedule of values with his Bid.

There will be a Pre-Bid Conference at Dacula City Hall, 442 Harbins Road, Dacula, GA 30019 at **3:00 PM** local time on _____, **2022**. All bidders are strongly encouraged to attend this conference. Owner reserves the right to waive any informalities and any technicalities, and to reject any or all bids. All questions concerning this project shall be submitted in writing by fax or email to Bowman, (Owner's Representative – David J. Patterson) 4174 Silver Peak Parkway, Suwanee, Georgia 30024, phone number 770-932-6550, fax number 770-932-6551 or email dpatterson@bowman.com no later than _____, **2022 by 5:00 PM**.

Contractor is responsible for all earthwork quantities to complete the scope of work for the project. All costs associated with haul off or haul in of earthwork materials shall be included in the Contractor's overall Bid at no additional cost to the Owner.

By: Honorable Trey King, Mayor
City of Dacula, Georgia

SECTION 00 100

INSTRUCTIONS TO BIDDERS

Each Bidder by making his bid represents that he has read and understands the bidding documents and has visited the site and familiarized himself with the local conditions under which the work is to be performed.

All bids must be prepared on the forms provided by the Owner's Representative and submitted in accordance with the Instructions to Bidders. A bid is invalid if it has not been deposited at the designated location prior to the time and date for receipt of bids set forth in the advertisement or invitation to bid, or prior to any extension thereof issued to the bidders.

Work under the contract consists of furnishing all labor and materials required to complete the project entitled: Maple Creek Park New Playground Addition Project for the City of Dacula.

In accordance with Contract Documents prepared by: Bowman, 4174 Silver Peak Parkway, Suwanee, Georgia 30024. Phone: (770) 932-6550 / Fax: (770) 932-6551.

Dated: _____, 2022.

The following provisions shall be applicable to all Bidders:

- A. During grading and excavation phases, if required, should the following conditions be encountered: mass rock, trench rock, trench earth excavation, earth excavation, earth fill and unsuitable soils, Contractor shall immediately notify the Owner's Representative who may observe and will determine the appropriate action necessary for the work to proceed. If, in the opinion of the Owner's Representative, work in addition to the original contract requirements is required, that portion pertaining to any of the foregoing conditions will be performed on a time and material basis and the contract shall be equitably adjusted by change order in accordance with the guidelines set forth in Section 00 801 of these Contract Documents. Contractor shall submit unit prices as required herein that are used to formulate his bid. Unit and/or lump sum prices shall include cost of material, sales tax, delivery, labor, labor burden, supervision, taxes, insurance and all other costs including profit and overhead. Owner's Representative and Owner reserve the right to accept or reject these prices or request the work to be performed on a time and material basis with complete daily breakdowns and logs submitted by General Contractor.

Contractor may draw his own conclusions and no responsibility is assumed by the Owner's Representative or Owner for subsurface conditions or quality of same. No claims for extra compensation or for additional contract time will be allowed due to subsurface conditions.

- B. Time is of the essence. Construction of the Maple Creek Park New Playground Addition Project must be substantially complete within Ninety (90) consecutive days from date of Notice to Proceed.
- C. A bid bond in the amount of 5% of the base bid shall accompany the bid. The Attorney-in-Fact who signs the bid bond must file with the bid bond a certified copy of his Power of Attorney to sign such bond.
- D. Neither Contractor, nor his material suppliers, nor his Subcontractors shall install or otherwise incorporate any materials containing asbestos, PCB or other hazardous materials within the boundaries of the Project. No soil found on site, or transported to the site from remote locations which is contaminated with material containing asbestos, PCB, radon, gasoline, fuel oil, diesel fuel or other similar fossil fuels shall be used for fill, backfill or landscape topsoil.

- E. Each bidder represents that his bid is based upon the work described in the Bid Documents, Drawings, and Specifications.
- F. When references are made in the specifications to trade names, or to the names of manufacturers, such references are made solely to designate and identify the quality of the equipment or material to be furnished, and are not intended to restrict competitive bidding. In case the Contractor wishes to use material and equipment other than those specified, PRIOR WRITTEN REVIEW by Owner's Representative must be obtained.
- G. If it is desired to use equipment or materials of different manufacturer or trade names from those specified, application for review of such equipment or materials must reach the hands of the Owner's Representative at least ten (10) days prior to the date set for the opening of bids. Application for review must be accompanied by supporting data clearly proving equality of the proposed substitute to that specified. To be acceptable, a substitute must be equal, or exceed, all requirements of the base specifications, including space limitations. A comparative data schedule shall accompany the submittal. Any changes in the work which might be required to accommodate the proposed substitute shall be clearly shown and described. Should the proposed substitute be accepted, any such changes required in other work due to the use of the substitute shall be coordinated and accomplished by Contractor as part of the Contract at no additional cost to Owner.
- H. No substitutes allowed.
- I. No consideration can be given to requests for review received later than ten (10) days prior to the day set for the opening of bids.
- J. METHOD OF AWARD
1. A lump sum, fixed price bid proposal is requested with specific Schedule of Values to be provided by the Contractor by which they based their bid upon as part of the Contract Documents and as outlined in the Bid Proposal Form, Section 00 300. Award will be made to the lowest responsive, responsible, qualified bidder.
 2. The lump sum bid for the construction of the work as outlined in the Contract Documents and set forth in detail in the proposal, includes the furnishing of all equipment, materials, labor, insurance, overhead and profit for the completion of the work as per the Contract Documents.

K. RIGHT TO REJECT BIDS

Owner reserves the right to reject any or all bids and to waive informalities. It is distinctly understood, and all bids are made subject to this Agreement, that Owner reserves the right to decide which bid he deems lowest and best. In arriving at this decision, due consideration will be given to the reputation of the bidder, his financial responsibility, work of this type successfully completed, and the character of materials and equipment offered. No bids received after the time set for opening proposals will be considered. Any unauthorized conditions, limitations or provisions attached to the proposal, or the omission of a bid on any item in the proposal for the section bid upon, will render it informal and may cause its rejection. No bids will be allowed to be withdrawn after time set for receiving bids.

L. CONTRACT DOCUMENTS

1. The Contract Documents are intended to agree and be mutually explanatory, and they shall be accepted and used as a whole and not separately. Should any items be omitted from the Project Scope of Work and/or the Drawings, or vice versa, it shall be executed the same as if shown and

- combined in both. Should any item be omitted, or should any item be described in the Scope and/or Drawings, but not duplicated on other, it shall be executed the same as if shown and combined in both. Should contradiction be found, notify Owner's Representative prior to receipt of bids so that contradictions can be clarified by addendum (a).
2. Large scale details will be furnished by the Owner's Representative for all work which in the opinion of Owner's Representative requires same. Details shall be accurately followed, deviation therefrom being cause for rejection of work.
 3. Explanatory note shall be preferred to conflicting drawn out indications. Large scale details shall be preferred to scale measurements. In all cases the details shall be checked with existing conditions. Should any variation be found, it shall be immediately referred to Owner's Representative for clarification and adjustment.
 4. Owner's Representative will be, in the first instance, the interpreter of the requirements of the Contract Documents and judge the performance thereunder by Contractor. Owner's Representative will within a reasonable time, render such interpretations as he may deem necessary for the proper execution or progress of the work.
 5. Contractor shall field verify items as outlined in the Project Scope of Work and/or the Drawings.
 6. A site visit must be made by Contractor and subcontractors to determine the exact nature and scope of the work to be done.
 7. Any quantities called out in the Scope of Work, Bid Documents, Drawings, Specifications, and/or Details are approximate. Contractor shall calculate and verify his own quantities used to formulate his bid. Contractor shall verify and determine his own quantities for all materials, lengths of roadway, and other items required to complete the repaving and drainage improvement work for the project as described in the Scope of Work, Bid Documents, Drawings, and/or Specifications.
 8. Contractor is responsible for hauling off all demolition materials (soil, base, concrete, etc.) to a State approved disposal facility at no additional cost to the Owner.
 9. Contractor shall coordinate with Owner to locate a suitable staging area near each street in the project. If necessary, the Contractor is responsible for the coordination and payment of fees or leasing agreements needed for the storage and/or staging of equipment on private property.
 10. The Contractor is responsible for any, and all utility locates needed before commencing work on the project. The Contractor shall contact the affected utility, not the City, should utility damage occur. Emergency contact numbers will be provided to the successful bidder.
 11. Contractor is not responsible for acquiring any permits.
 12. Contractor is responsible for all erosion control required to complete the scope of work such as Rip Rap, Erosion Control Matting, temporary and permanent grassing (Sod), and other measures as outlined in the Scope of Work, Bid Documents, and/or Performance Specification.
 13. No partial sets of the Contract Documents will be issued by Owner or Owner's Representative.

End of Section

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SECTION 00 300

BID PROPOSAL FORM

TO: CITY OF DACULA
P.O. Box 400
Dacula, Georgia 30019

Date: _____

Gentlemen:

Having carefully examined the Contract Documents entitled Maple Creek Park New Playground Addition Project, dated May 23, 2022 and Addendum (a) No. (s) _____, and having examined the site and conditions affecting the work, including availability of materials and labor, the undersigned hereby proposes to furnish all materials, labor, tools, equipment, machinery, transportation, supervision, administration and services necessary and incidental to construct and substantially complete the site improvements called for in the Contract Documents for said project, and in accordance with said documents, shall be substantially complete by the time set forth therein.

A. BASE BID –

The Work to be completed for this Project consists of furnishing all labor, materials, earthwork, construction operations, details, supervision and coordination of all trades, utility suppliers, governmental inspections and approvals to complete the construction, installation, and coordination for the Maple Creek Park New Playground Addition Project for the City of Dacula as follows:

The City of Dacula is currently making improvements to the aging and deteriorated Playground equipment at Maple Creek Park. The site improvements will include removing the existing playground equipment and associated sidewalks and replacing with new playground equipment and a new 4’ concrete sidewalk. The proposed playground improvements are supplemented with an additional Tot Lot and Physical Fitness areas.

The existing ADA accessible walkway requires partial repair / improvements. Improvements to the ADA accessible walkway must maintain compliance with ADA standards. The conformance of the new ADA walkway is the responsibility of the contractor. Relocation of an existing shade structure, installation of new landscaping and improvements to the existing drainage infrastructure are also included in the scope of work.

All disturbed areas outside of the limits of sidewalks shall be stabilized with permanent Sod grassing.

Pedestrian Safety devices such as signage, barricades, etc., and the protection of the public-at-large, and the Contractor's personnel is part of this contract and is the Contractor's sole responsibility. The Contractor will have Ninety (90) consecutive calendar days from the “Notice to Proceed” to finish and complete the project.

All materials and appurtenances required to complete this Scope of Work is the responsibility of the Contractor and shall be provided in his overall Bid. The Contractor must be an approved Contractor with the City of Dacula and/or Gwinnett County. A complete list of materials should be included in the Contractor's overall Bid and the Contractor will be required to submit a schedule of values with his Bid.

Owner reserves the right to waive any informalities and any technicalities, and to reject any or all bids. There will be a Pre-Bid Conference at Dacula City Hall, 442 Harbins Road, Dacula, GA 30019 at **3:00 PM** local time on _____, **2022**. All bidders are strongly encouraged to attend this conference. Owner reserves the right to waive any informalities and any technicalities, and to reject any or all bids. All questions concerning this project shall be submitted in writing by fax or email to Bowman (Owner’s Representative – David J. Patterson) 4174 Silver Peak Parkway, Suwanee, Georgia 30024, phone number 770-932-6550, fax number 770-932-6551 or email dpatterson@bowman.com no later than _____, **2022 by 5:00 PM.**

All quantities and measurements are approximate. Contractor shall visit the project site and determine his own quantities for bidding this project. Existing grades shall be maintained except as otherwise indicated in the Bid Documents, Drawings, and Specifications to direct stormwater towards the existing ditch or proposed storm inlets as illustrated on the Drawings.

Contractor is responsible for all earthwork quantities to complete the scope of work for the project. All costs associated with haul off or haul in of earthwork materials shall be included in the Contractor’s overall Bid at no additional cost to the Owner.

A. BASE BID – ITEM #1 Maple Creek Park New Playground Addition Project for the City of Dacula – LUMP SUM AMOUNT

**Bidder agrees to perform all of the Improvements described in the specifications and represented by the project drawings for the SUM OF : _____ (\$_____)

(Amounts shall be shown in both * words and figures).

* In case of discrepancy, the amounts shown in words will govern.

**Please note that successful Bidder will be required to submit a Unit Price Breakdown of items used in determining the Lump Sum Bid Proposal Price for this work.

** The **Base Bid** amount shall consist of Work Items more particularly described in Section 01 000, Project Scope & Performance Specification. The Contractor shall be responsible for all labor, equipment, materials, operations, details, insurance, supervision, coordination, administration, overhead and profit, plus all necessary incidental costs associated with the complete function of the Work Scope in context of the project.

Notice to Proceed will be issued after the Pre-Construction meeting as soon as all required paper work such as Contracts, Bonds, Insurance, etc. are in order. Contractor shall mobilize within ten (10) days of Notice to Proceed issued by the City of Dacula and to commit adequate forces on site to substantially complete all Work including punch list items and clean-up for the Base Bid within Ninety (90) consecutive calendar days. The City of Dacula will charge the Contractor One-Hundred Dollars and no cents (\$100.00) per day for liquidated damages for every day past the completion of the Contract.

The undersigned agrees that this proposal may not be revoked or withdrawn after the time set for the opening of bids but shall remain open for acceptance for a period of 60 days following such time. The undersigned, upon receipt of written notice of the acceptance of this bid, agrees to execute within ten (10) days a Contract for the work for the above stated compensation, and to furnish and deliver to Owner at the same time as the Contract, the required Performance Bonds, and a Labor and Materials Payment Bond, for General Contractor in amount to equal 100% of the Contract Sum. These bonds shall be written on forms provided by a company acceptable to the Owner and licensed to do business in the State of Georgia at the time the bonds are written, and that is listed on “Department of the Treasury Circular 570.”

If this proposal is accepted within 60 days after the date set for the opening of bids and the undersigned fails to execute the Contract within ten (10) days after written notice of such acceptance or if he fails to furnish the Performance Bonds and the Labor and Material Payment Bond, the obligation of the Bid Bond will remain in full force and effect and the money payable thereon shall be paid into the funds of the Owner as liquidated damages for such failure; otherwise, said Bid Bond shall be returned to the undersigned upon completion of such obligations.

The undersigned has checked carefully all the foregoing figures and understands that the Owner will not be responsible for any errors or omissions on the part of the undersigned in making this bid. The undersigned also acknowledges receipt of the following Addenda, listed by number and date as issued appearing on each:

<u>Addendum No.</u>	<u>Date</u>
_____	_____
_____	_____
_____	_____

IN COMPLIANCE WITH THE ATTACHED SPECIFICATIONS, THE UNDERSIGNED OFFERS AND AGREES, IF THIS BID IS ACCEPTED BY THE CITY OF DACULA, GA WITHIN SIXTY (60) DAYS OF THE DATE OF BID OPENING, TO FURNISH ANY OR ALL OF THE ITEMS UPON WHICH PRICES ARE QUOTED, AT THE PRICE SET OPPOSITE EACH ITEM, DELIVERED TO THE DESIGNATED POINT(S) WITHIN THE TIME SPECIFIED IN THE BID SCHEDULE. THE SUCCESSFUL CONTRACTOR SHALL PROVIDE A SCHEDULE OF VALUES WITH UNIT PRICES FOR A BREAKDOWN OF THEIR LUMP SUM BID.

COMPANY: _____

COMPLETE PHYSICAL ADDRESS: _____

REPRESENTATIVE'S SIGNATURE: _____

DATE: _____

TELEPHONE NO.: _____ FAX NO.: _____

EMAIL: _____

PRINT AUTHORIZED REPRESENTATIVE'S NAME: _____

IF REMITTANCE ADDRESS IS DIFFERENT, INDICATE HERE:

SECTION 00 500

CONTRACT

THIS AGREEMENT, made this _____, day of _____, 2022, by and between the City of Dacula, Georgia, herein called "Owner", acting herein through its Mayor, Hon. Trey King, and _____, County of _____, and State of Georgia, herein called "Contractor".

WITNESSETH: That for and in consideration of the payments and agreements hereinafter mentioned, to be made and performed by the OWNER, the CONTRACTOR hereby agrees with the OWNER to commence and complete the construction of the Maple Creek Park New Playground Addition Project for the City of Dacula described as follows:

A. BASE BID –

The Work to be completed for this Project consists of furnishing all labor, materials, earthwork, construction operations, details, supervision and coordination of all trades, utility suppliers, governmental inspections and approvals to complete the construction, installation, and coordination for the Maple Creek Park New Playground Addition Project for the City of Dacula as follows:

The City of Dacula is currently making improvements to the aging and deteriorated Playground equipment at Maple Creek Park. The site improvements will include removing the existing playground equipment and associated sidewalks and replacing with new playground equipment and a new 4' concrete sidewalk. The proposed playground improvements are supplemented with an additional Tot Lot and Physical Fitness equipment area.

The existing ADA accessible walkway requires partial repair / improvements. Improvements to the ADA accessible walkway must maintain compliance with ADA standards. The conformance of the new ADA walkway is the responsibility of the contractor. Relocation of an existing shade structure, installation of new landscaping and improvements to the existing drainage infrastructure are also included in the scope of work.

All disturbed areas outside of the limits of sidewalks shall be stabilized with permanent Sod grassing.

Pedestrian Safety devices such as signage, barricades, etc., and the protection of the public-at-large, and the Contractor's personnel is part of this contract and is the Contractor's sole responsibility. The Contractor will have Ninety (90) consecutive calendar days from the "Notice to Proceed" to finish and complete the project.

All materials and appurtenances required to complete this Scope of Work is the responsibility of the Contractor and shall be provided in his overall Bid. The Contractor must be an approved Contractor with the City of Dacula and/or Gwinnett County. A complete list of materials should be included in the Contractor's overall Bid and the Contractor will be required to submit a schedule of values with his Bid.

A. BASE BID – ITEM #1 Maple Creek Park New Playground Addition Project for the City of Dacula – LUMP SUM AMOUNT

**Bidder agrees to perform all of the Improvements described in the specifications and represented by the project drawings for the SUM OF : _____ (\$ _____)

(Amounts shall be shown in both * words and figures).

* In case of discrepancy, the amounts shown in words will govern.

**Please note that successful Bidder will be required to submit a Unit Price Breakdown of items used in determining the Lump Sum Bid Proposal Price for this work.

** The **Base Bid** amount shall consist of Work Items more particularly described in Section 01 000, Project Scope & Performance Specification. The Contractor shall be responsible for all labor, equipment, materials, operations, details, insurance, supervision, coordination, administration, overhead and profit, plus all necessary incidental costs associated with the complete function of the Work Scope in context of the project.

Notice to Proceed will be issued after the Pre-Construction meeting as soon as all required paper work such as Contracts, Bonds, Insurance, etc. are in order. Contractor shall mobilize within ten (10) days of Notice to Proceed issued by the City of Dacula and to commit adequate forces on site to substantially complete all Work including punch list items and clean-up for the Base Bid within Ninety (90) consecutive calendar days. The City of Dacula will charge the Contractor One-Hundred Dollars and no cents (\$100.00) per day for liquidated damages for every day past the completion of the Contract.

The undersigned agrees that this proposal may not be revoked or withdrawn after the time set for the opening of bids but shall remain open for acceptance for a period of 60 days following such time. The undersigned, upon receipt of written notice of the acceptance of this bid, agrees to execute within ten (10) days a Contract for the work for the above stated compensation, and to furnish and deliver to Owner at the same time as the Contract, the required Performance Bonds, and a Labor and Materials Payment Bond, for General Contractor in amount to equal 100% of the Contract Sum. These bonds shall be written on forms provided by a company acceptable to the Owner and licensed to do business in the State of Georgia at the time the bonds are written, and that is listed on “Department of the Treasury Circular 570.”

The undersigned agrees that this proposal may not be revoked or withdrawn after the time set for the opening of bids but shall remain open for acceptance for a period of 60 days following such time. The undersigned, upon receipt of written notice of the acceptance of this bid, agrees to execute within ten (10) days a Contract for the work for the above stated compensation, and to furnish and deliver to Owner at the same time as the Contract, the required Performance Bonds, and a Labor and Materials Payment Bond, for General Contractor in amount to equal 100% of the Contract Sum. These bonds shall be written on forms provided by a company acceptable to the Owner and licensed to do business in the State of Georgia at the time the bonds are written, and that is listed on “Department of the Treasury Circular 570.”

If this proposal is accepted within 60 days after the date set for the opening of bids and the undersigned fails to execute the Contract within ten (10) days after written notice of such acceptance or if he fails to furnish the Performance Bonds and the Labor and Material Payment Bond, the obligation of the Bid Bond will remain in full force and effect and the money payable thereon shall be paid into the funds of the Owner as liquidated damages for such failure; otherwise, said Bid Bond shall be returned to the undersigned upon completion of such obligations.

Any dispute arising under this Contract shall be heard in the Superior Court of Gwinnett County, Georgia, and the parties consent to jurisdiction and venue in that Court. The parties waive any defense that may have to lack of jurisdiction or improper venue and agree to have all disputes resolved in the Superior Court of Gwinnett County.

CONTRACTOR hereby agrees to commence work under this Contract on or before a date to be specified in a written "Notice to Proceed" of OWNER and to a fully complete the Project within Ninety (90) consecutive calendar days thereafter.

The Owner agrees to pay the Contractor in current funds for the performance of the Contract, subject to additions and deductions, on completion of the project and final inspection of the Owner.

Termination for Cause: The City may terminate this Contract for cause upon ten (10) days prior written notice to the Consultant of the Consultant's default in the performance of any term of this Contract. Such termination shall be without prejudice to any of the City's rights or remedies provided by law.

Termination for Convenience: The City may terminate this Contract for its convenience upon 30 days written notice to the Consultant. In the event of the City's termination of this Contract for convenience, the Consultant will be paid for those services actually performed. Partially completed performance of the Contract will be compensated based upon a signed statement of completion to be submitted by the Consultant, which shall itemize each element of performance.

IN WITNESS WHEREOF, the parties to these presents have executed this Contract in two (2) counterparts, each of which shall be deemed an original, in the year and day first above mentioned.
(Seal)

ATTEST:

CITY OF DACULA

By: _____

(Mayor)

ATTEST:

_____ (Seal)

(Contractor)

By: _____

(Witness)

SECTION 00 600

BONDS AND CERTIFICATES

PART 1 - GENERAL

1. **BID BOND:** A bid bond in the amount of 5% of the base bid shall accompany the bid. The Attorney in-fact who signs the bid bond must file with the bid bond a certified copy of his Power of Attorney to sign such bond.
2. **PAYMENT & PERFORMANCE BOND:** Contractor shall furnish both a Performance Bond and Payment Bond, each in the amount of 100% of the Contract Sum, unless otherwise directed by the Owner. The surety must be one which is authorized to do business in the State of Georgia and is listed on "Department of the Treasury Circular 570". Bonds must be accompanied by letter stating company's current rating for verification prior to acceptance by the Owner and execution of the formal Owner/Contractor agreement. It shall be specifically understood that the performance Bond fully protects the Owner and guarantees the completion of the project in accordance with all Bid Documents. After award of contract, submit a properly executed "Performance Bond" and "Labor and Material Payment Bond".
3. **CERTIFICATE OF INSURANCE:** After award of contract, Contractor shall submit a properly executed "Certificate of Insurance" to Owner.
4. **LIST OF SUBCONTRACTORS:** After award of contract, but prior to Pre-Construction Conference, submit a properly executed "List of Subcontractors".

End of Section

SECTION 00 700

GENERAL CONDITIONS

PART 1 - GENERAL

1. "The General Conditions for the Contract for Construction", 1997 Edition, with modifications as called out in Section 00 801 - Supplementary Conditions, is hereby made a part of these documents to the same extent as if herein written out in full.

End of Section

SECTION 00 801

SUPPLEMENTARY CONDITIONS (1997)

The following supplements modify, delete or add to the "General Conditions of the Contract for Construction, 1997 Edition". Where any article, paragraph or sub-paragraph in the General Conditions is supplemented by one of the following paragraphs, the provisions of such article, paragraph, or sub-paragraph shall remain in effect and the supplemental provisions shall be considered added thereto. Where any article, paragraph or sub-paragraph, in the General Conditions is amended, voided, or superseded by any of the following paragraphs, the provisions of such article, paragraph or sub-paragraph not so amended, voided, or superseded shall remain in effect.

I. ARTICLE 1 - GENERAL PROVISIONS

- A. Add to paragraph 1.1.1: The Drawings and Specifications shall include the Instructions to Bidders, Invitation to Bid, Sample Forms, Contractor's Bid, and all Addenda items relating to Bidding.
- B. Add to paragraph 1.1.7: The term "Project Manual" as used in these conditions is the volume which includes the Bidding Drawings and Specifications, the Agreement Between Owner and Contractor, the Conditions of the Contract, the Specifications, and all Addenda issued prior to and all Modifications issued after execution of Contract.

II. ARTICLE 2 - OWNER

- A. Add paragraph 2.1.4: The Owner is the City of Dacula, Georgia. All contact with the Owner shall be made to and through the Landscape Architect, David Patterson, PLA, Bowman, 770-932-6550 or dpatterson@bowman.com. The only other directions the Contractor may respond to and the Owner shall be responsible for are those issued by the City of Dacula Council, Mayor, or City Manager.
- B. Add to paragraph 2.2.5:
 - 1. Sets of Construction Documents may be obtained as provided for in Advertisement to Bid, which need not be returned by the successful bidder.
 - 2. For construction purposes, the Owner will furnish free of charge to the successful bidding Contractor a maximum of Five (5) printed sets of complete Construction Documents consisting of the Drawings, the Specifications, and all Addenda.
 - 3. Any additional sets of complete Construction Documents or additional copies of selected sheets of Contract Drawings, or sections or pages of Specifications requested by the Contractor will be supplied and billed to the Contractor.
- C. Add paragraph 2.4.2: "If, in the opinion of the Engineer, it is evident that the Contractor has not completed or will not be able to substantially complete the work in accordance with Drawings and Specifications due to default, negligence, or failure on the part of the Contractor, or their subcontractors, the Owner may, at his option, without prejudice, after the expiration of the two seven-day written notices to the Contractor, complete certain portions of the work as may be necessary, or augment the forces of the Contractor with additional manpower as may be required to complete the work by the contracted completion date. In such case, an appropriate deductive change order shall be written, deducting from the contract price the actual costs incurred by the Owner to complete or augment the work. Amount

charged to the Contractor will be subject to the approval of the Engineer. Such action, if taken by the Owner, shall not be interpreted by the Contractor as a termination of the contract as per Paragraph 14.2, and the Contractor is to continue to carry out the work or portions of the work as may be required by the contract during this time frame.

III. ARTICLE 3 - CONTRACTOR

A. Add paragraph 3.2.4:

3.2.4 In case of discrepancies or conflicts in the Drawings and Specifications, the documents to hold precedence over others shall be in the following order:

- 3.2.4.1 The Owner-Contractor Agreement (including modifications thereto).
- 3.2.4.2 Change Orders - Those of a later date shall take precedence over those of an earlier date.
- 3.2.4.3 Written Amendments to the Contract Signed by Both Parties - Those of a later date shall take precedence over those of an earlier date.
- 3.2.4.4 Addenda - Those of a later date shall take precedence over those of an earlier date.
- 3.2.4.5 Clarifications.
- 3.2.4.6 Supplementary Conditions.
- 3.2.4.7 General Conditions.
- 3.2.4.8 Specifications.
- 3.2.4.9 Schedules.
- 3.2.4.10 Details - Large scale details shall control over small scale drawings.
- 3.2.4.11 Other drawings.
- 3.2.4.12 Drawings dimensioned.
- 3.2.4.13 Drawings not dimensioned.

B. Add paragraph 3.2.5:

3.2.5 Items of work not illustrated in the drawings or specifications or the mis-description of details of work which are manifestly necessary to carry out the intent of the drawings and specifications, or which are customarily performed, shall not relieve the Contractor from performing such omitted or mis-described details of the work, but they shall be performed as if fully and correctly set forth and described in the drawings and specifications.

C. Add paragraph 3.2.6 as follows:

3.2.6 MEASUREMENTS AND DIMENSIONS

- 3.2.6.1 The Contractor shall check and be responsible for correctness of all dimensions by taking measurements at the project site before ordering material or doing work dependent for proper size of installation upon coordination with job conditions.
- 3.2.6.2 The Contractor shall refer discrepancies between Drawings, Specifications, and Project Conditions to Engineer for adjustment before work affected thereby is begun.

- 3.2.6.3 No consideration shall be given any claim based on difference between actual dimensions and those illustrated on the drawings without first complying with 3.2.6.2 above.
- D. Add paragraph 3.3.8: All grades, lines, levels and benchmarks for the work under this Contract shall be established and maintained by the Contractor, who shall verify all grades, lines, levels and dimensions indicated on the Drawings, and shall report all discrepancies before commencing work. The Contractor shall provide and maintain well-built batter boards at corners. He shall establish and safeguard benchmarks in at least two widely separated places. As work progresses, he shall establish and safeguard benchmarks at each level and shall establish exact locations of partitions on rough floors as a guide to trades. Any costs of corrective measure necessitated by erroneous establishment of grades, lines, levels and benchmarks shall be paid for by the Contractor.
- E. Replace paragraph 3.7.1 with the following:
3.7.1 The Owner shall pay for any Permit and/or other jurisdictional fees. The Contractor shall secure and pay for all other governmental permits, fees, licenses and inspections necessary for the proper execution and completion of the work, which are customarily secured after execution of the contract and which are legally required at the time the construction begins.
- F. Add paragraph 3.7.6 Required permits, licenses, inspections and certificates shall be carefully preserved and prominently posted during the construction period at the project for the easy, convenient access by the various inspecting authorities.
- G. Add paragraph 3.19 as follows:

3.19 PRE-CONSTRUCTION CONFERENCE

- 3.19.1 A Pre-Construction Conference shall be held prior to commencement of work. The purpose of this conference is to introduce all members of the construction team, which include the Engineer, the Contractor's Project Manager, and the Contractor's Superintendent, to review and ensure all Drawings and Specifications and Submittals are completed and in compliance with all Agreements. In addition, the Contractor shall submit 2 copies of all Post-Bid Information, as described below, for the Owner and Owners' Representative's review.
- 3.19.2 A schedule of values for each major item of work included in the Contract shall be submitted on schedule of values cost index sheets contract and shall define both labor and materials costs for each. Provide breakdown per divisions and sections per table of contents of these specs. See sample form included in Bid For Lump Sum Contracts.
- 3.19.3 A statement designating all work to be performed by the Contractor's own forces shall be submitted.
- 3.19.4 A list of the name of all Sub-Contractors and names of other organizations proposed for each portion of the Work shall be properly executed on "List of Subcontractor's" - and shall be submitted for Owner's and Engineers' review with 24-hour phone numbers.

- 3.19.5 The Performance Bond shall be properly executed on acceptable forms and submitted in duplicate, as described in Section 00 600 - Bonds and Certificates. Bond rating letter shall be included.
- 3.19.6 The Labor and Materials Bond shall be properly executed on acceptable forms and submitted in duplicate.
- 3.19.7 The Certificate for Insurance shall be properly executed on acceptable forms and submitted in duplicate.
- 3.19.8 A list of the names of all suppliers of principal materials and equipment shall be submitted for Owner's and Engineer's review.
- 3.19.9 Construction Schedule submitted to Owner within two weeks of award of contract.
- 3.19.10 A schedule of submittals including certifications, shop drawings, product data, samples, manuals, as built drawings and guarantees with dates of proposed submittals shall be submitted.
- 3.19.11 In addition to submittal of the previous items, the following topics will be discussed. The General Contractor is encouraged to have all subcontractors represented at the conference:
- 3.19.11.1 Introduction of all attending parties
 - 3.19.11.2 Channels and procedures for communication shall be discussed.
 - 3.19.11.3 Requests for substitution shall be issued in accordance with the requirements of Section 01 630.
 - 3.19.11.4 Issuance of RFP's (Requests for Proposals) by the Engineer shall be addressed by the General Contractor within 7 calendar days of receipt thereof in accordance with Supplementary Conditions, Article 7.
 - 3.19.11.5 Change Order compensation shall be based on figures indicated in Supplementary Conditions, Article 7.
 - 3.19.11.6 Pre-construction submittals shall be issued as indicated in Supplementary Conditions, sub-paragraph 3.19.
 - 3.19.11.7 Any requested shop drawings, samples and other project submittals shall be approved by Owner and Engineer.
 - 3.19.11.8 Job Progress Meetings shall be held on an as needed basis to review the Contractor's Application(s) for Payment.
 - 3.19.11.9 Applications for Payment shall be issued in accordance with the requirements of Article 9 of the General Conditions of the Contract for Construction and all applicable Supplementary Conditions. All Applications for Payment shall be received by the Engineer no later than the first day of each month and paid by the first Friday following the 15th day of the month. Retainage shall be as described in Supplementary Conditions, paragraphs 9.3.4, 9.6 and 9.6.6. (Retainage shall be 10 percent of the amount earned for the work in place, plus the value of stored materials up to and including 50 percent completion, then 0 percent until final completion, thereby reducing retainage at final completion to 5 percent of the contract amount (including change orders), subject to the approval of the Owner and the Landscape Architect. In other words, at 50 percent project completion, retainage will be 5 percent of the contract amount, plus approved change orders,

- until final completion is achieved. Retainage for individual subcontractors shall not be released separately as the subcontractors complete their work. Nor shall the retainage for individual subcontractors be reduced when payments beyond 50% of the individual contracts are released. Retainage shall only be reduced based on payments released in excess of 50% of the overall contract sum.
- 3.19.11.10 Safety precautions and programs shall be as directed by the General Contractor in accordance with the General Conditions in Section 00 700.
 - 3.19.11.11 Requests for time extension shall be issued in accordance with the requirements of the General and Supplementary Conditions, Article 8.
 - 3.19.11.12 Discrepancies and conflicts in the Drawings and Specifications shall be resolved using the order of precedence indicated in the Supplementary Conditions, paragraph 3.2.4.
 - 3.19.11.13 The Date of Substantial Completion shall not be achieved and the Certificate of Substantial Completion shall not be issued prior to receipt of the official Certificate of Occupancy by the General Contractor. This requirement is indicated in Specification Section 01 700, Part 1.1.A. In addition, the Certificate of Substantial Completion shall only be issued in accordance with the requirements of Section 9.8 of the General Conditions of the Contract for Construction.
 - 3.19.11.14 Contract closeout/final payment requirements are indicated in Section 01 700. Piecemeal delivery of final closeout documents and materials is unacceptable.
 - 3.19.11.15 Materials testing (if required) shall be conducted under a separate contract by the Owner. Contractor shall acquire a Geotechnical Engineer to perform all testing to be approved by and paid for by Owner. The General Contractor shall note that he is responsible for payment of additional testing services, if initial testing services fail.
 - 3.19.11.16 Immediately prior to Substantial Completion, the General Contractor shall prepare a comprehensive list of items to be corrected or completed (a punch list) for the Landscape Architect's review, in accordance with paragraph 9.8.2 of the General Conditions. The Landscape Architect shall then add to or delete items from the list during a Substantial Completion Inspection.
 - 3.19.11.17 Permits, fees, licenses, etc. shall be addressed in accordance with the requirements of General Conditions, paragraph 3.7.1, all applicable Supplementary Conditions, and as follows:
 - A. All work and material shall be in accordance with the National Electrical Code, the Plumbing Code, and other applicable Federal, State, County, and municipal laws, ordinances, rules and regulations pertaining to construction, and nothing in these plans or specifications shall be construed to permit work not conforming thereto. The Contractor shall consult the Engineer on all deviations regarding possible noncompliance and provide all labor and materials to complete the work as required by laws, ordinances, rules and regulations as directed by the Owner at no increase in cost to the Owner. He shall first confer with the Engineer before making any determinations as to changes in quality, scope and/or increases in cost.
 - 3.19.11.18 Compensation for stored materials shall be as defined in parts 6.2.1, 9.3.2, and 10.2.1.2 of the General Conditions, and as follows:
- H. Material delivered for the Contractor to locations other than the site may be taken into consideration in the preparation of pay requests at the discretion of the Landscape Architect, provided the Contractor furnishes satisfactory evidence that he has acquired title to such material that it will be utilized on the project covered by this contract in the form of an

affidavit stating such. Contractor must provide proof of acceptable insurance coverage on material stored off-site prior to payment for same as well as invoices for such stored materials indicating transfer of the property to the Owner.

IV. ARTICLE 4 - ADMINISTRATION OF THE CONTRACT

- A. Add to paragraph 4.1.1: The Architect referred to in the Contract, the General Conditions, Supplementary Conditions or other documents of the Contract shall mean the "Landscape Architect", Bowman Consulting Group, 4174 Silver Peak Parkway, Suwanee, GA 30024.
- B. Delete Paragraph 4.5 (Arbitration) in its entirety.

V. ARTICLE 7 - CHANGES IN THE WORK

- A. Add to paragraph 7.1.1

No extra work is to be done without a written change order. Payment will not be authorized for any extra or changed work for which the Contractor has failed to secure such written change order. All change orders must be signed by the Landscape Architect and Owner.

- B. Delete paragraph 7.3 "Construction Change Directives" in its entirety.

VI. ARTICLE 8 - TIME

- A. Add sub-paragraph 8.1.5:

8.1.5 A working day is a day for which no premium pay is required of the Contractor for labor.

- B. Add paragraph 8.2.4

8.2.4 Upon the determination that the construction progress is two (2) weeks behind the original construction schedule as required by the General Conditions as submitted at the start of the project the Owner will require that the Contractor increase his work effort to a six (6) day ten (10) hour per day work week.

- C. Add sub-paragraph 8.2.5

8.2.5 When requested by the Landscape Architect, the Contractor shall furnish reports as are reasonably desirable as to the progress, condition of the job and anticipated schedule of completing the various phases of the work.

- D. Add paragraph 8.4 - Rain Days

8.4 Requests for extension shall be issued in writing by the Contractor to the Landscape Architect within 21 calendar days of the event which causes the delay. This requirement shall be strictly enforced. Completion time will not be extended for normal bad weather. The time for completion as stated in the Drawings and Specifications includes due allowance for days on which work cannot be performed out-of-doors. Any days lost due to the weather shall be documented and verified with the National Weather Service.

These days shall be reported by the Contractor at the monthly job site progress meeting.

For the purpose of this contract, the Contractor agrees that he may expect to lose working days to weather in accordance with the following table:

January - 14 days	May - 6 days	September - 2 days
February - 14 days	June - 3 days	October - 3 days
March - 10 days	July - 4 days	November - 5 days
April - 7 days	August - 2 days	December - 9 days

If the total accumulated number of working week days (Monday thru Friday) lost to the weather from the start of work until the building is enclosed, as defined by the Landscape Architect, exceeds the total accumulated number to be expected for the same period from the table above, the contractual completion date shall be extended by the number of calendar days needed to include the excess number of days lost. No extension shall be made for days of bad weather occurring after the building is enclosed. No extension shall be allowed for days on which total precipitation volume is less than 1/10" as recorded by the National Oceanic and Atmospheric Administration, the National Weather Service, the U.S. Army Corps of Engineers, or any other source chosen to be recognized by the Engineer. No extension will be allowed for precipitation occurring on any Saturday or Sunday or nationally recognized holidays during the project life. Furthermore, should a project fall behind the Contractor's original construction schedule, no extensions will be given for inclement weather days beyond the originally scheduled dry-in date plus any additional days due Contractor during such originally scheduled period. No changes in the contract sum shall be authorized because of adjustment of contract time due to inclement weather.

VII. ARTICLE 9 - PAYMENTS AND COMPLETION

A. Add paragraph 9.2.2:

9.2.2 First Payment Application Actions and Submittals which must precede submittal of Contractor's first payment application are as follows:

B. Add paragraph 9.2.3:

9.2.3 The schedule of values shall be prepared in the line item format on Application and Certification for Payment and on Document G703 Continuation Sheet provided in Section 01 370, providing labor and material costs for each line item. Stored materials shall be summarized on the Continuation Sheet provided in Section 01 370.

C. Delete paragraph 9.3.1 entirely and add paragraph 9.3.1:

9.3.1 The Contractor shall submit to the Landscape Architect, on or before the first day of each month, an itemized Application for Payment, notarized by a duly registered Notary Public, supported by data substantiating the Contractor's right to payment as the Owner or the Landscape Architect may require, and reflecting retainage, as provided elsewhere in the Drawings and Specifications. The Form of Application for Payment shall be the Certificate for Payment in Section 01 370. Supporting data shall include Schedule of Values from

each Subcontractor requesting payment, broken down by labor and materials as the Landscape Architect requires. Copies of requisitions from subcontractors and material suppliers may be required.

D. Add to the end of subparagraph 9.3.2:

9.3.2. Values related to General Contractor's and Subcontractor's overhead and profit for stored materials shall not be paid until the products are incorporated into the project. Materials stored or installed shall not be paid for if required submittals have not been completely reviewed.

E. Add new sub-paragraph 9.3.4 as follows:

9.3.4 Each Application for Payment up to and including the Application for Payment issued at or following 50% project completion (including approved change orders) shall include a ten percent (10%) retainage of all completed and stored to date items (including approved change orders).

F. In paragraph 9.4.1, in the first sentence delete "within seven days" and add "by the eighth day of the same month".

G. Add paragraph 9.5.1.9:

9.5.1.9 It shall be understood that if the Contractor's actual progress becomes more than 10% behind Contractor's anticipated progress, the Owner may direct the withholding of payments to Contractor in amounts equal to the percent behind Contractor's anticipated progress, in addition to the normal 10% withheld.

H. At paragraph 9.6.1, delete the phrase, "In the manner and within the time provided in the Drawings and Specifications", and in its place use, "On the first Friday following the fifteenth of the same month."

I. Add new sub-paragraph 9.6.6 as follows:

9.6.6.1 It shall be understood that the Owner shall make progress payments on account of the contract prices, including Owner approved and signed change orders, of labor and materials incorporated in the work and of materials suitably stored at the site thereof, as estimated by the Landscape Architect, less the aggregate of previous payments, until one-half (50%) of the overall contract sum is due (including all Owner approved and signed change orders) and provided that:

- a. The work is not behind schedule as determined, by the Landscape Architect only, from the Landscape Architect accepted, time scaled CPM schedule with monthly anticipated progress payment amounts submitted at, or before, the Pre-construction meeting;
- b. The work is being performed in a satisfactory manner in compliance with the Drawings and Specifications as determined by the Landscape Architect;
- c. There are no outstanding claims or liens on the property;

9.6.6.2 Further payments beyond 50 percent of the overall contract sum as referenced in 9.6.6.1, with total compliance of Items a, b, and c. shall be made in the amount of

100% of the value of the labor and/or materials incorporated in the work and of materials suitably stored at the site thereof unless;

- a. The percentage of work complete falls behind the percentage required by the Engineer accepted, time scaled construction progress schedule, as described in Item 9.6.6.1.a. by as much as 10%; or
- b. The work is being performed in an unsatisfactory manner and/or non-compliant with the Drawings and Specifications as determined by the Landscape Architect; or
- c. There are outstanding claims or liens on the property.

9.6.6.3 In which event or events, the Owner shall reinstate the 10% retainage on all periodical payments to be paid while one or more of the events continue to exist. The Contractor shall be given written notice, by the Landscape Architect, of the reinstatement of the retainage. If the Contractor's actual progress becomes more than 10% behind the Contractor's anticipated progress, as described in Item 9.6.6.1.a., the Landscape Architect may direct the withholding of payments to the Contractor in amounts equal to the percentage behind the Contractor's anticipated progress, in addition to the 10% described in all Items of Article 9.

9.6.6.4 If the Contractor recovers all lost time and puts the work back on schedule (0% behind schedule) per schedule described in 9.6.6.1.a and remedies all breaches of 9.6.6.2.b. and 9.6.6.2.c. further payments shall be as described in 9.6.6.2; unless Items 9.6.6.1.a. or 9.6.6.2.b. and 9.6.6.2.c. recur in which event or events the Owner shall reinstate Item 9.6.6.3.

J. In paragraph 9.7.1, in the first delete "within seven days" and add "by the eighth day of the month"; in the fourth line delete "within seven days after the date established in the Drawings and Specifications" and add "as described in paragraph 9-6-1".

K. Add paragraph 9.9.4:

9.9.4 Should the Project, or any portion thereof, be incomplete for Substantial Completion or final completion at the scheduled date or dates, the Owner shall have the right to occupy any portion of the Project. In such an event, the Contractor shall not be entitled to any extra compensation on account of said occupancy or by the Owner's normal full use of the project, nor shall the Contractor interfere in any way with said normal full use of the project. Further, the Contractor shall not be relieved of any responsibilities of the Contractor, including the required times of completion. Such occupancy by the Owner does not, in itself, constitute Substantial Completion nor Final Completion.

L. Add paragraph 9.10.6:

9.10.6 Reduction in retainage shall not be made automatically. Any reduction in retainage shall only be considered based on the condition of the project at the time of issuance of the Certificate of Substantial Completion.

M. Add paragraph 9.10.7:

9.10.7 In the event that Final Completion is not achieved within 60 days of the contracted date of Substantial Completion through no fault of the Owner or Landscape

Architect, the Contractor shall pay Owner amounts equal to the actual Owner's costs of continuing to provide administrative services on this Contract, until Final Completion.

N. Add paragraph 9.10.8:

9.10.8 Final Payment Application - Actions and submittals which must precede or coincide with submittal of contractor's final payment application are listed in Section 01 700.

O. Add paragraph 9.11

9.11 Article 1 of Chapter 10 of Title 13 of the Official Code of Georgia Annotated, relating to general provisions affecting contracts for public works, is amended by adding at the end of said article a new Code section to be designated as Code Section 13-10-2, which is hereby made a part of this Contract, to read as follows:

A. As used in this Code section, the term:

1. "Contractor" means a person having a direct contract with the Owner.
2. "Lower tier subcontractor" means a person other than a contractor having a direct contract with a subcontractor.
3. "Owner" means the state, any county, municipal corporation, authority, board of education, or other public board, public body, department, agency, instrumentality, or political subdivision of the state.
4. "Landscape Architect" means the Architect or Engineer in charge of the project as authorized by the Owner or such other contract representative or officer as designated in the Drawings and Specifications as the party representing the Owner's interest regarding administration and oversight of the project.
5. "Subcontractor" means a person other than an owner having a direct contract with the Contractor.

B. In any contract for the performance of any construction project entered into on or after July 1, 1985, with an owner, as defined in paragraph (3) of subsection (a) of this Code section, such contract shall provide for the following:

After work has commenced at the construction site, progress payments to be made on some periodic basis, and at least monthly, based on the value of work completed as may be provided in the Drawings and Specifications, plus the value of materials and equipment suitably stored, insured, and protected at the construction site, and at the Owner's discretion such materials and equipment suitably stored, insured and protected off-site at a location approved by the Landscape Architect when allowed by the Drawings and Specifications, less retainage; and

1. Retainage to a maximum of 10 percent of each progress payment; provided, however, that when 50 percent of the contract value, including change orders and other additions to the contract value provided for by the Drawings and Specifications is due and the manner of completion of the contract work and its progress are reasonably satisfactory to the Landscape Architect, the Owner shall withhold no more retainage. At the discretion of the owner and with the approval of the Contractor, the retainage of each

- subcontractor may be released separately as the subcontractor completes his work.
2. If, after discontinuing the retention, the owner's authorized contract representative determines that the work is unsatisfactory or has fallen behind schedule, retention may be resumed at the previous level. If retention is resumed by an owner, the Contractor and subcontractors shall be entitled to resume withholding retainage accordingly.
 3. At substantial completion of the work or such other standard of completion as may be provided in the Drawings and Specifications and as the Owner's Representative determines the work to be reasonably satisfactory, the Owner shall within 30 days after invoice and other appropriate documentation as may be required by the Drawings and Specifications are provided pay the retainage to the Contractor. If at that time there are any remaining incomplete minor items, an amount equal to 200 percent of the value of each item as determined by the Landscape Architect shall be withheld until such item or items are completed. The reduced retainage shall be shared by the Contractor and subcontractors as their interests may appear.
 4. The Contractor shall, within ten days from the contractor's receipt of retainage from the Owner, pass through payments to subcontractors and shall reduce each subcontractor's retainage in the same manner as the Contractor's retainage is reduced by the Owner, provided that the value of each subcontractor's work complete and in place equals 50 percent of his subcontract value, including approved change orders and other additions to the subcontract value and provided, further, that the work of the subcontractor is proceeding satisfactorily and the subcontractor has provided or provides such satisfactory reasonable assurances of continued performance and financial responsibility to complete his work including any warranty work as the Contractor in his reasonable discretion may require, including, but not limited to, a payment and performance bond.
 5. The subcontractor shall, within ten days from the subcontractor's receipt of retainage from the contractor, pass through payments to lower tier subcontractors and shall reduce each lower tier subcontractor's retainage in the same manner as the subcontractor's retainage is reduced by the contractor, provided that the value of each lower tier subcontractor's work complete and in place equals 50 percent of his subcontract value, including approved change orders and other additions to the subcontract value and provided, further, that the work of the lower tier subcontractor is proceeding satisfactorily and the lower tier subcontractor has provided or provides such satisfactory reasonable assurances of continued performance and financial responsibility to complete his work including any warranty work as the subcontractor in his reasonable discretion may require, including, but not limited to, a payment and performance bond.
- C. This Code section shall not apply to:
1. Any contracts let by the Department of Transportation of this state for the construction, improvement, or maintenance of roads or highways in this state or purposes incidental thereto; or
 2. Any contracts whose value or duration at the time of the award does not exceed \$150,000.00 or 45 days in duration.

- D. Contract and subcontract provisions inconsistent with the benefits extended to contractors, subcontractors, and lower tier subcontractors by this Code section shall be unenforceable; provided, however, that nothing in this Code section shall render unenforceable any contract or subcontract provisions allowing greater benefits to be extended to such contractors, subcontractors, or lower tier subcontractors, the provisions and benefits of this Code section being minimal only.
- E. Nothing shall preclude a payor under this Code section, prior to making a payment, from requiring the payee to submit satisfactory evidence including any or all invoices that all payrolls, material bills, and other indebtedness connected with the work have been paid.

In addition to the foregoing, before the Owner can implement the above amendment to the contract, a letter of consent from the Surety Company must be provided to the Owner ten (10) days prior to the Contractor's request to the Owner to withhold no more retainage under the terms of 13-10-2.

- F. Add to paragraph above, paragraph B.,1.,a): Conditions for the reduction of retainage from 10 percent to no retainage are:
1. The work is not behind schedule as determined by the Engineer only, from the Architect approved, time scaled CPM schedule with monthly anticipated progress payment amounts submitted at or before the Pre-construction meeting;
 2. The work is being performed in a satisfactory manner in compliance with the Drawings and Specifications as determined by the Landscape Architect;
 3. There are no outstanding claims or liens on the property. Contractor shall submit, with pay request, a lien release form for each subcontractor requesting payments these lien release forms shall be properly notarized.
 4. Further payments, with total compliance of B.1, B.2 and B.3 shall be made in the amount of 100% of the value of the labor and/or materials incorporated in the work and of materials suitably stored at the site thereof unless:
 - a. The percentage of work complete falls behind the percentage required by the construction progress schedule, as described in B.1 by as much as 10%; or
 - b. The work is being performed in an unsatisfactory manner and/or non-compliant with the Drawings and Specifications as determined by the Landscape Architect; or
 - c. There are outstanding claims or liens on the property.
 - d. In which event or events, the Owner shall reinstate the 10% retainage on all periodical payments to be paid while one or more of the events continue to exist. The Contractor shall be given written notice, by the Engineer, of the reinstatement of the retainage. If the Contractor's actual progress becomes more than 10% behind the Contractor's anticipated progress, as described in Item 9.6.6.1.a. the Engineer may direct the withholding of payments to the Contractor in amounts equal to the percentage behind the Contractor's anticipated progress, in addition to the 10% described in all Items of Article 9.
 5. If the Contractor recovers all lost time and puts the work back on schedule (0% behind schedule) per schedule described in 9.6.6.1.a. and remedies all

breaches of 9.6.6.2.b and 9.6.6.2.c further payments shall be as described in 9.6.6.2; unless Items 9.6.6.1.a or 9.6.6.2.b and 9.6.6.2.c recur in which event or events the Owner shall reinstate Item 9.6.6.3.

VIII. ARTICLE 11 - INSURANCE AND BONDS

A. Delete paragraph 11.1.2 in its entirety and substitute the following:

- 11.1.2. The insurance required by paragraph 11.1.1 shall be written for not less than any limits of liability listed below or required by law, whichever is greater, and shall include contractual liability insurance as applicable to the Contractor's obligations under paragraph 3.18. The Contractor agrees that, prior to the beginning of any work by the Contractor or any Subcontractor, as the case may be, he (the Contractor) will furnish the following to the Owner for himself, and will obtain, and retain in his files for the duration of the construction period, like certificates for each Subcontractor. Certificate from insurance company showing coverage of Workmen's Compensation Insurance for the State of Georgia or a certificate from Georgia Workmen's Compensation Board showing proof of ability to pay compensation directly. Certificate from insurance company showing coverage for the Contractor for the following:
1. Contractor's Protective and Public Liability Insurance: Taken out in the name of the Contractor.
 2. Personal Injury, including death - minimum limits of \$500,000 for each person and \$1,000,000 for each accident.
 3. Property Damage, minimum limits of \$300,000 for each accident and \$500,000 for aggregated of operations.
 4. Disposition: Certificate of Insurance must be sent to the Landscape Architect prior to commencement of work. See following for endorsement required on this certificate.

B. Delete paragraph 11.1.3 in its entirety and substitute the following:

- 11.1.3 Certificates of insurance acceptable to the Owner shall be filed with the Owner prior to commencement of the work. These certificates shall contain a statement on every policy or certificate, as the case may be, that "The insurance company agrees that Policy No. _____ shall not be canceled, changed, or allowed to lapse until ten (10) days after the Owner and Landscape Architect have received written notice as evidenced by return receipt of registered letter".

C. Add paragraph 11.1.1.8:

- 11.1.1.8 Liability insurance shall include all major divisions of coverage and shall be on a comprehensive form including:
1. Premises - Operations
 2. Independent Contractor's Protective, for Owner and Contractor
 3. Products and Completed Operations (in force for one year beginning at Date of Substantial Completion)
 4. Contractual - including specified provisions for the Contractor's obligations under Paragraph 3.18.
 5. Owned, non-owned, and hired motor vehicles
 6. Broad form coverage for property damage

7. Explosion and collapse hazard
8. Underground hazard

D. Delete paragraph 11.2 in its entirety.

E. Delete paragraph 11.3 in its entirety and substitute the following:

11.3 The Contractor shall purchase and maintain property insurance upon the entire work at the site, to the full (100%) insurable value thereof. This insurance shall include the interest of the Owner and the Contractor in the work and shall insure against the perils of fire, extended coverage, and shall include "all risk" insurance for physical loss or damage including, without duplication of coverage, theft, vandalism and malicious mischief.

F. Delete Paragraph 11.4.1 in its entirety and substitute the following:

11.4.1 Contractor shall furnish both a Performance Bond and a Payment Bond, each in the amount of 100% of the Contract Sum, unless otherwise directed by the Landscape Architect. Contractor shall also provide both Performance Bond and Payment Bond for his major subcontractors, including Playground Equipment installation, concrete flatwork, grading and drainage and landscape installation. The sureties must be authorized to do business in the State of Georgia and listed on "Department of the Treasury Circular 570". In addition, companies furnishing bonds shall have an A.M. Best Company rating of at least a Class "A" with a financial size of VI or better. Bonds must be accompanied by letter stating company's current rating for verification prior to acceptance by the Owner and execution of the formal Owner/Contractor agreement.

IX ARTICLE 13 - MISCELLANEOUS PROVISIONS

A. Delete paragraph 13.5.3 entirely and replace as follows:

13.5.3

1. When initial tests indicate non-compliance with the Drawings and Specifications, all subsequent retesting caused by the non-compliance shall be performed by the same testing laboratory and the costs thereof will be deducted by the Owner from the contract sum.
2. Inspection or testing performed exclusively for the Contractor's convenience shall be the sole responsibility of the Contractor.
3. All specimens and samples for testing, unless otherwise provided in these Drawings and Specifications, will be taken by the testing laboratory. All sampling equipment and personnel will be provided by the testing laboratory and all deliveries of specimens and samples to the testing laboratory will be performed by the testing laboratory.

End of Section

SECTION 00 802

NOTICE OF COMMENCEMENT

Public Works

To: Clerk of Superior Court of Gwinnett County, Georgia

Pursuant to O.C.G.A. 36-82-104(f), not later than 15 days after physically commencing work, the undersigned gives Notice of Commencement of a public work including the following information:

- 1. _____
- 2. Maple Creek Park New Playground Addition Project in the City Limits of Dacula, Georgia.
- 3. Name and address of the state, country, municipal corporation, or public board or body thereof which is doing the public work:

City of Dacula
P.O. Box 400
Dacula, Georgia 30019

- 4. Name and address of the surety for the performance and payment bonds, if any:

- 5. Name and address of the holder of the security deposit provided pursuant to O.C.G.A. 13-10(b)(2)(B), if any: N/A

Contractor

Date

These documents must be filed with the Clerk of the Superior Court for the county in which the public work is located and a copy of this document must be posted at the public work site not later that 15 days after the Contractor physically commences work on the public work.

Within ten (10) calendar days of receipt of a written request, give a copy of this Notice of Commencement to any subcontractor, materialman, or person making the request.

End of Section

SECTION 00 900

ADDENDA AND CLARIFICATIONS

PART 1 - GENERAL

1.1 The following changes have been incorporated in the Construction Documents dated _____ (Released for Construction).

- a. Addendum No. 1, dated _____, 2021.
- b. Addendum No. 2, dated _____, 2021.
- c. Addendum No. 3, dated _____, 2021.

Copies of these documents are included herein.

PART 2 - N/APART 3 - N/A

End of Section

PROJECT SCOPE OF WORK
& PERFORMANCE SPECIFICATIONS

FOR

Maple Creek Park New Playground Addition Project
for the City of Dacula

PART 1 - GENERAL

1.1 SCOPE OF WORK

The Work to be completed for this Project consists of furnishing all labor, materials, earthwork, construction operations, details, supervision and coordination of all trades, utility suppliers, governmental inspections and approvals to complete the construction, installation, and coordination for the Maple Creek Park New Playground Addition Project for the City of Dacula as follows:

A. BASE BID –

The City of Dacula is currently making improvements to the Maple Creek Park Playground. The project consists of demolition of the existing playground and equipment and construction of new playground equipment, sidewalk improvements and all associated work, including clearing and grubbing, grading, sidewalks, sediment and erosion control, drainage and landscape installation. All improvements are to be performed within the limits of the playground area unless otherwise stated on the Drawings. Clear and grub existing vegetation within the limits of disturbance except the areas within designated tree save area(s). All buffers and tree save areas are to be clearly identified with flagging and/or fencing prior to commencement of any land disturbance activity.

Demolish, remove, relocate store, stockpile the existing built items as illustrated on the Drawings, and perform any incidental demolition which may be required to accomplish the improvements illustrated or implied within the Drawings. Materials, equipment, and fixtures to be removed, which are not noted for reuse, or which have not been designated by the Owner for retainage or delivery to his warehouse or holding area(s) become the property of the Contractor, and shall be promptly removed from the site. Any disposal of said material shall be done so legally.

Render the entire cleared site free of demolished remnants, debris, and other items or conditions having a deleterious effect on the continued construction of the project. All existing concrete paving that is to be demolished shall be demolished and removed to earth sub-grade. Demolished material to be disposed of legally, off site.

New 4' wide concrete sidewalk will be installed around the entire playground area in order to provide pedestrian connectivity from the existing onsite sidewalk to the existing asphalt path immediately south of the playground area. Contractor is responsible for all construction and materials needed to complete sidewalk installation as illustrated on the Drawings. Sawcut smooth line between portions of sidewalk, curb and gutter or pavement to be demolished and removed and the remaining portions. All disturbed areas outside of limits of pavement, curb and gutter, and sidewalks shall be stabilized with permanent Sod grassing.

1.2 MEASUREMENT AND PAYMENT

- A. Furnish unit prices with quantity breakdowns of all items of construction per Section 00 100, Instruction for Bidders and Section 00 300, Bid Proposal Form.

- B. Furnish unit prices with quantity breakdowns of all items for the Erosion Control Maintenance of the project site.
- C. Contractor will note that any quantities called out in the Scope of Work, Bid Documents, and/or Performance Specification are approximate. Contractor shall calculate and verify his own quantities used to formulate his bid. Contractor shall verify all lengths of roadways and determine all quantities required to complete the asphalt repaving work.

PART 2 - PRODUCTS – N/A

PART 3 – EXECUTION – N/A

3.1 PAVING

- A. Finished paving smoothness tolerance:
 - 1. No depressions which will retain standing water. Contractor will ensure that stormwater will not pond in playground areas, sidewalks or on adjacent shoulders or landscape areas.
 - 2. No deviations greater than 1/8 inch in six feet.

3.2 MAINTAINING TRAFFIC

- A. Sections of newly finished pavement and areas shall be protected from vehicular and pedestrian traffic until the traffic will not mar the surfaces or alter the surface textures.
- B. Maintain pedestrian and vehicular access to all parking areas, other site amenities such as paths and the disc golf course. Contractor shall not perform any work that will impact pedestrian and maintenance vehicle access without approval of Owner's Representative.
- E. Contractor shall take necessary precautions to secure the construction sites to maintain a safe environment for the public.
- F. Contractor, vendors and all sub-contractors shall observe speed limits at all times.

3.3 EROSION CONTROL

- A. Install and maintain a comprehensive system of Soil Erosion Control measures throughout the duration of the projects in conformity with the “Manual for Erosion and Sediment Control in Georgia”, 6th Edition, 2014 by the Georgia Soil and Water Conservation Commission and any supplements thereto.
- B. Contractor shall contain all soil erosion from the proposed construction areas. Erosion control measures are required for any disturbed areas outside of edge-of-pavement limits such as regraded ditch work, culvert replacement, and storm sewer system installation.
- C. Erosion control includes, but is not limited to Rip Rap, Erosion Control Matting, Temporary and Permanent Grassing. Other BMP’s may include Temporary Sediment Traps “F” (w/ filter fabric) and “P” (pigs-in-blanket), and Haybale & Rock Check dams. Temporary Grassing and Permanent Grassing is required where Contractor disturbs any area outside limits of repaving. Sod shall be used exclusively for grassing purposes.

3.4 CLEAN-UP

- A. Contractor shall remove all debris, rubbish, and excess material from the work sites.
- B. Areas along sidewalks and paths will be dressed, grassed and mulched.
- C. All excess material from demolition and/or construction activities will be hauled off and legally disposed of.

3.5 GUARANTEE

- A. Contractor shall guarantee all improvements from material and/or craftsmanship defects for a period of one (1) year from date of final acceptance of Work.

End of Section

SECTION 01 370

APPLICATION FOR PAYMENT

PART 1 - GENERAL

- 1.1 Contractor shall submit Application and Certification for Payment in format *similar* to that of the AIA Document G702 and the AIA Document G703, Continuation Sheet. (Example formats are hereby made a part of these documents. (Exhibits follow)

PART 2 - PRODUCTS – N/APART 3 - EXECUTION – N/A

End of Section

SECTION 01 400

QUALITY CONTROL

PART 1 - GENERAL

1.1 ON SITE OBSERVATIONS

- A. All work and materials shall be subject to review by Owner's Representative and Owner.
- B. Contractor shall fully cooperate and shall furnish all reasonable facilities for the inspections of all parts of the work during the entire construction period.

1.2 TESTING SERVICES

- A. All materials upon which the strength and durability of the work may depend, shall be subject to inspection and testing to establish conformance with City of Dacula, Gwinnett County D.O.T. and Georgia D.O. T. Standards. Contractor shall submit Asphalt Pavement Job Mix Formulas to Owner's Representative for review prior to installation of paving courses.
- B. A Geotechnical Engineer will be selected by the Contractor and approved by the Owner and paid by the Owner, to perform geotechnical and materials testing services for the project. The Contractor will retain the services of the Geotechnical Engineer, only if required. Subgrade operations are not intended to be part of the scope of this project.
- C. It is the responsibility of the Contractor to implement the services of the testing company by ordering those services at the appropriate time in the work, as described below, if required. The Contractor must provide at least 24 hours notice to the testing company for required testing work. Failure to provide adequate notification may result in the requirement for more complex after-the-fact testing, for which the Contractor will be liable.
- D. Testing required under Paragraphs 1.3 A and 1.3 B are to be coordinated by and paid for by the Owner, to be witnessed by the appropriate local inspection agencies as well as by Owner's Representative. The Contractor will secure and maintain evidence of having completed and obtained successful results for those tests, to be transmitted to the Owner and Owner's Representative no later than twenty-four (24) hours by hand written draft, faxed or emailed; and fifteen (15) days for each report following testing.

1.3 SUMMARY OF REQUIRED NOTIFICATIONS

- A. Contractor's Geotechnical Engineer shall monitor subgrade demolition/preparation and shall observe all compaction, specialty paving operations, and concrete pouring for concrete flatwork, only if required. Contractor shall notify Owner and Owner's Representative at least 24 hours in advance of any proof rolling, paving and/or concrete pouring operations.

1.4 CODE COMPLIANCE TESTING

- A. Inspections and tests required by codes or legal ordinances, or by plan approval authority, shall be the responsibility of the Contractor, unless otherwise provided in the Contract Documents.

1.5 CONTRACTOR'S CONVENIENCE TESTING

- A. Inspection or testing performed exclusively for the Contractor's convenience shall be the sole responsibility of the Contractor.

End of Section

SECTION 01 500

CONSTRUCTION FACILITIES AND TEMPORARY CONTROLS

PART 1 - GENERAL

1. SCOPE

A. Construction facilities and temporary controls required for this work to be provided by Contractor, include, but are not necessarily limited to:

1. Traffic control signs, barrels, barricades where needed.
2. Parking of construction equipment and storage of materials.
3. Parking of construction personnel vehicles.

2. PROTECTION

A. Use all means necessary to maintain construction facilities and temporary controls in proper and safe conditions throughout progress of work.

3. REPLACEMENTS

A. In event of loss or damage, Contractor shall immediately make all repairs and replacements necessary to construction facilities and temporary controls to Engineer's satisfaction at no additional cost to Owner.

4. UTILITY HOOKUP

A. All fees for temporary utility tie-ins, if required will be Contractor's responsibility.

PART 2 - PRODUCTS

1. CONTRACTOR'S STAGING AREA

A. The location of construction equipment and materials storage shall be determined at the pre-construction conference. Contractor shall confine his storage therein and take necessary precautions to protect materials from all forms of damage and theft as a part of this work.

2. TEMPORARY UTILITIES

A. Contractor shall furnish water, gas, electricity and telephone service as required during construction and extend temporary service lines to construction areas for use of all subcontractors and Owner's forces, if required.

B. Temporary Water

1. Provide ample supply of potable water for all purposes of construction at access points convenient to personnel, if required.
2. Provide sufficient heavy duty hose or PVC pipe to carry water to every required part of construction and allow use of water facilities to subcontractors engaged on work.

- C. Temporary Electricity (*For Construction Trailer - if required*)
1. All temporary electrical facilities shall be constructed and maintained in accordance with the Division of Industrial Safety "Electrical Safety Orders" (ESO), the Public Utilities Commission "Rules for Overhead Line Construction" (G.O. 95). Materials, devices, and equipment used for these facilities shall be in good and safe condition but need not be new.
 2. Installation of lighting and safety lights shall be in accordance with local, State and Federal applicable codes.
 3. Run a copper ground wire, sized in accordance with NEC, in conduit run, and bond to all steel parts, using clamps acceptable to the NEC.
 4. Any attachment of conduit to wood structure shall be by means of bolts or lag screws in shear. All supports shall be capable of supporting four times actual load.
 5. Contractor is required to make application for temporary electric service and pay for costs for electric energy used during the course of construction and until final acceptance of work by Owner.
- D. Telephone (*For Construction Trailer - if required*)
1. Contractor shall maintain telephone in field office for use of Engineer and Owner. All expenses shall be paid for by Contractor.
 2. Contractor shall provide and pay for the telephone installation and service in the field office. Service shall be maintained for duration of project operations under this contract. Contractor shall provide 110 dB outside gongs or horns so that telephones may be heard throughout construction site, or contractor shall provide and install an electronic telephone answering machine.
 3. Contractor shall provide and install an electric fax machine with a dedicated line for 24-Hour service within the temporary field office.

3. SANITARY FACILITIES

- A. Provide proper, adequate, sanitary facilities for use of all workers employed on project, in accordance with State and Local Health Departments.

4. TEMPORARY CONSTRUCTION, EQUIPMENT, AND PROTECTION

- A. Provide, maintain, and remove upon completion of work, all temporary equipment, barricades, lights, and all other protective structures or devices necessary for safety of workers and public property as required to complete all work of this contract.
- B. Provide all necessary protection and all barricades conforming to the standards of O.S.H.A. and requirements of Gwinnett County and City of Dacula.
- C. Contractor shall provide all measures necessary to protect equipment and materials at his own expense.
- D. Protect all workers and equipment from power lines and maintain safe distances and protective devices as required by Industrial Safety Commission.
- E. All temporary construction and equipment shall conform to all regulations, ordinances, laws and other requirements of City, County, State and other authorities having jurisdiction, including owner's and contractor's insurance companies, with regards to safety precautions, operation, and fire hazard.

- F. Protect work and materials to be used on project including materials which have had their title transferred to the Owner, from damage or loss due to elements, theft, vandalism, malicious mischief or other causes. Contractor shall be held responsible for such damages or losses which he shall remedy at his expense.

5. PARKING OF VEHICLES

- A. Contractor shall assume all responsibility for parking of his equipment, vehicles and his subcontractor's vehicles. "Job site parking" means an area or areas within the bounds of the property or other authorized areas to be used for parking for vehicles associated with this project. Such areas shall be designated at the preconstruction meeting.

PART 3 - EXECUTION

1. MAINTENANCE AND REMOVAL OF FACILITIES

- A. Maintain all construction facilities and temporary controls as long as needed for safe and proper completion of work.
- B. Remove all such temporary facilities and controls as rapidly as progress of work will permit or as directed by Owner, but prior to final completion.

End of Section

SECTION 01 630

PRIOR APPROVALS AND SUBSTITUTIONS

I. PART 1 - GENERAL

1. PRODUCTS

- A. Products are specified by ASTM and/or other reference standard, and/or by manufacturer's name and model number or trade name. When specified only by reference standard, Contractor may select any product meeting this standard by any manufacturer. When several products or manufacturers are specified as being equally acceptable, Contractor shall have the option of choosing among those names. When one manufacturer's specific product is specified and other manufacturers are listed as being acceptable suppliers, the other manufacturer's products must have the same basic properties as the specific product mentioned. When specifications indicate "Similar products shall be subject to Landscape Architect's review", this refers to review during bidding only. Otherwise, the following substitution provisions must be observed in order to use any manufacturer not listed.

2. REQUESTS FOR PRIOR APPROVAL

- A. During bidding, the Landscape Architect shall consider written requests for prior approval received at least ten (10) calendar days prior to bid date. Requests received after that time shall not be considered. If proposed prior approval is accepted by Landscape Architect and approved by Owner, such acceptance shall be set forth in an addendum. Bidders shall not rely upon accepted prior approvals made in any other manner.

3. SUBSTITUTIONS

- A. After receipt of Bids and prior to award of Contract, substitutions may be negotiated. However, Contractor shall be required to provide a substitution form for any change to the original bid documents before it will be incorporated into the contract documents.
- B. After the date of the Contract, Landscape Architect may consider formal requests from Contractor for substitution of products in lieu of those specified. Requests shall be submitted in accordance with the preceding requirements. One or more of the following conditions must also be documented as reason for substitution.
1. The substitution is required for compliance with code requirements.
 2. The substitution is required because of the unavailability of the specified product.
 3. The substitution is required since new information discloses the specified products will not perform properly or fit into the designated space.
 4. The substitution is required since the manufacturer or fabricator refuses to certify or guarantee performance of the specified product as required.
 5. The substitution is required since it is clear, in the judgment of the Landscape Architect, that a substitution would be substantially in Owner's best interests in terms of cost, time and/or other considerations.
- C. With each request for substitution Contractor shall include the following:
1. Complete data substantiating compliance of proposed substitution with contract documents including:
 - a. Product identification, including manufacturer's name and address.

- b. Manufacturer's literature, including product description, performance and test data, and reference standards.
 - c. Name and address of similar projects on which product was used and date of installation.
 2. Itemized comparison of proposed substitution with product or method specified, noting any variance from the specified product which may result in inferior appearance, performance or installation complication.
 3. Information relating to changes in construction schedule.
 4. For requests submitted after bids are received, accurate cost data on proposed substitution in comparison with product or method specified, including any adjustment to the contract sum that will be provided if the substitution is accepted.
- D. In submitting requests for substitution, Contractor shall make the following personal representations:
 1. Contractor has investigated proposed product and has determined that it is equal or superior in all respects to the specified product.
 2. Contractor will provide an equal or better guarantee for proposed substitution as compared to the product specified.
 3. Contractor will coordinate installation of accepted proposed substitution into the project, making any such changes as may be required for the project to be completed in accordance with the Contract Documents.
 4. Contractor waives all claims for additional costs related to proposed substitution which became apparent during or following substitution submittal process.
 5. Cost comparison data is complete and includes all related costs under the contract, but does not include:
 - a. Cost under separate contracts.
 - b. Landscape Architect's / Consultant's redesign fee.
 6. The proposed substitution satisfies Code Official's interpretations of all applicable codes.
- E. Substitutions shall not be considered if:
 1. They are indicated or implied on shop drawings or product data submittals without a formal request submitted in accordance with this Article.
 2. Acceptance will require substantial revision of contract documents.

REQUEST FOR PRIOR APPROVAL

PROJECT: _____ DATE SUBMITTED: _____

CONTRACTOR: _____ BID DATE: _____

SUB CONTRACTOR: _____ SUPPLIER: _____

SPEC SECTION: _____ PARAGRAPH: _____ TITLE: _____

<u>PRODUCT SPECIFIED</u>	<u>PAGE NO.</u>	<u>PRIOR APPROVAL PRODUCT</u>
1. _____	_____	_____
2. _____	_____	_____
3. _____	_____	_____
4. _____	_____	_____
5. _____	_____	_____
6. _____	_____	_____
7. _____	_____	_____
8. _____	_____	_____
9. _____	_____	_____
10. _____	_____	_____

1. The following required information is attached:
 - A. Product identification manufacturer's name, address, telephone number.
 - B. Manufacturer's literature, performance/test data, reference standard.
 - C. Name/address of similar projects where product has been used and Date of Application.

2. Comparison of proposed substitute product with specified product:
 - A. Differences: _____
 - B. Effect on dimensions or other trades: _____

3. Comments: _____

BY : _____

REQUEST FOR SUBSTITUTION AFTER BID

PROJECT: _____ DATE SUBMITTED: _____

CONTRACTOR: _____ BID DATE: _____

SUB CONTRACTOR: _____ SUPPLIER: _____

SPEC SECTION: _____ PARAGRAPH: _____ TITLE: _____

- 1. The following required information is attached:
 - A. Product identification, manufacturer's name, address, telephone number
 - B. Manufacturer's literature, performance/test data, reference standard
 - C. Name/address of similar projects where product has been used and Date of Application

- 2. Comparison of proposed substitute product with specified product:
 - A. Differences: _____
 - B. Effect on dimensions and trades: _____

3. Data related to changes in construction schedule:

4. Accurate cost data on proposed substitution in comparison with product specified:

5. Reason for request for substitution: (Check One)
- 1) Specified product will not meet code.
 - 2) Specified product unavailable for purchase.
 - 3) Specified product will not perform or fit as required.
 - 4) Manufacturer will not provide required certification or guarantee for specified product.
 - 5) Substitution is clearly in Owner's best interest in terms of cost or schedule.
 - 6) Substitution is proposed as a convenience to the Contractor, and the Contractor agrees to compensate the Landscape Architect for time involved in reviewing and processing the proposed substitution.

End of Section

SECTION 01 700

CONTRACT CLOSE-OUT

PART 1 - GENERAL

1. CLOSE-OUT TIMING

- A. Owner's Representative shall issue the Certificate of Substantial Completion when he has determined that the work or a designated portion thereof is substantially complete. Contractor shall then prepare, assemble and transmit the items as listed in Section 1.2 below to Owner's Representative for review and transmittal to Owner. Unless additional quantities are specified elsewhere, submit all items in duplicate.
- B. As-built documents and other close-out requirements shall be submitted (or performed) and accepted by Owner's Representative prior to date of final completion. All close-out documents shall be submitted to Owner's Representative simultaneously. Piece meal delivery of separate elements of the documents will not be acceptable and will be returned to Contractor.
- C. All close out requirements must be complete before submittal of final Application for Payment, including completion of unfinished work.

2. PUNCH LIST

- A. When the project is substantially complete Contractor shall notify Owner's Representative in writing at least five (5) days before the date of request for punch list inspection. Contractor shall arrange for the presence of all subcontractors whose work is involved, if required by Owner's Representative.
 - 1. Owner and/or Owner's Representative shall prepare a "Punch List" as a convenience to Contractor for items not completed and work not meeting the requirements of the Contract Documents. The "Punch List" is not to be construed to be a final or complete listing of project requirements, but is intended only to assist in the completion of the project. Contractor shall make a diligent effort to complete all work in conformance with the requirements of the Contract Documents before requesting a "Punch List".
 - 2. Correction of items noted on the "Punch List" does not relieve Contractor from conforming to all requirements of the Contract Documents.
- B. Contractor shall furnish three copies of the following:
 - 1. Consent of Surety for final payment.
 - 2. Final application for payment.
 - 3. Contractor's Statutory Affidavit ensuring no liens.
 - 4. Subcontractor Statutory Affidavits ensuring no liens.
- C. Warranties
 - 1. Contractor shall warrant all work executed by his forces and his subcontractors under this contract, and any additional modifications and change orders, to be absolutely free of all defects of workmanship and materials for a period of one year beginning on date of Substantial Completion. Contractor shall repair all such defects, resulting damages, and repair any damage to other work caused by subsequent repair work to

Owner's and Owner's Representatives' satisfaction no later than 30 days following written notification by Owner that remedial repairs are required.

2. At the end of the one (1) year warranty period, Contractor shall inspect the project with Owner for deficiencies. At that time, a correction list shall be prepared by Owner and Contractor shall make the necessary repairs and corrections immediately and as directed by Owner.
3. Contractor shall provide additional guarantees (in excess of one year) where specifically required by pertinent specification sections.

3. FINAL CLEANING

- A. Prior to the Date of Substantial Completion, remove all debris, excess dirt, etc., for all portions of job site.
- B. Final Inspection
 1. When the work is completed in accordance with the Contract Documents and the requirements of Paragraph A above and General and Supplemental Conditions have been satisfied, Contractor shall notify Owner's Representative, in writing, that the work shall be ready for final inspection on a definite date which shall be stated in such notice. The notice shall be forwarded to Owner through Owner's Representative, who will attach his endorsement as to whether or not he concurs in Contractor's statement that the work will be ready for final inspection on the established date. Such endorsement shall not relieve Contractor of his responsibility in this matter.
 2. Final inspection will be made by Owner and/or Owner's Representative when Contractor deems that the work has been completed in accordance with the Contract Documents and when he has requested a final inspection be made as outlined above.

End of Section

PROJECT: Maple Creek Park New Playground Addition Project for the City of Dacula, Georgia

LOCATION: 425 McMillan Road, City of Dacula, Gwinnett County, Georgia.

OWNER: City of Dacula, Georgia

We _____, Contractor
(Company name)

for the above referenced project, do hereby warrant that all labor and materials furnished and work performed by this company are in accordance with the Contract Documents and authorized modifications thereto, and will be free from defects due to defective materials or workmanship for a period of one (1) year from Date of Substantial Completion. This warranty commences at 12:00 noon on

and will expire at 12:00 noon on _____. Should any defect develop during the warranty period commencement date due to improper materials, workmanship or arrangement, the same shall, upon written notice by Owner, be made good by the undersigned at no expense to Owner.

Nothing in the above shall be deemed to apply to work which has been abused or neglected by the Owner.

DATE: _____

FOR: _____
(Company Name)

BY: _____

TITLE: _____

PROJECT: Maple Creek Park New Playground Addition Project for the City of Dacula

LOCATION: 425 McMillan Road, City of Dacula, Gwinnett County, GA

OWNER: City of Dacula, Georgia

We _____, Contractor
(Company name)
for _____, as described in Specification Section (s) _____
(List Trade)

do hereby warrant that all labor and materials furnished and work performed in conjunction with the above referenced project are in accordance with the Contract Documents and authorized modifications thereto, and will be free from defects due to defective materials or workmanship for a period of one year from Date of Substantial Completion.

This warranty commences at 12:00 noon on _____ and will expire at 12:00 noon on _____. Should any defect develop during the warranty period commencement date due to improper materials, workmanship or arrangement, the same shall, upon written notice by Owner, be made good by the undersigned at no expense to Owner.

Nothing in the above shall be deemed to apply to work which has been abused or neglected by the Owner.

DATE: _____

FOR: _____
(Company Name)

BY: _____

TITLE: _____

STATUTORY AFFIDAVIT

TO: CITY OF DACULA
Dacula, Georgia

Contract entered into the _____ day of _____, 2022 between the above mentioned parties for the Maple Creek Park New Playground Addition Project in the City of Dacula, Georgia as represented by the Contract Documents for this project dated _____, 2022.

KNOW ALL MEN BY THESE PRESENTS:

- 1. The undersigned hereby certifies that all work required under the above contract has been performed in accordance with the terms thereof, that all material men, subcontractor, mechanics, and laborers have been paid and satisfied in full, and that there are no outstanding claims of any character (including disputed claims or any claims which Contractor has or will assert and defend) arising out of the performance of the Contract which have not been paid and satisfied in full except as listed herein below: _____

- 2. The undersigned further certifies that to the best of his knowledge and belief there are no unsatisfied claims for damages resulting from injury or death to any employees, subcontractors, or the public at large arising out of the performance of the contract, or any suits or claims for any other damage of any kind, nature, or description which might constitute a lien upon the property of Owner.
- 3. The undersigned makes this affidavit for the purpose of receiving final payment in full settlement of all claims against Owner arising under or by virtue of the Contract, an acceptance of such payment is acknowledged as a release of Owner from any and all claims arising under or by virtue of the Contract.

Signed this _____ day of _____, 2022.

(Signature)

(Title)

(Firm)

COUNTY OF _____ STATE OF _____ Personally before me, the undersigned authority, appeared _____ who is known to me to be an official of the firm of _____. Who, after being duly sworn, stated on his oath that he had read the above statement and that the same is true and correct.

(Notary Public)

My commission expires _____

SECTION 01 743

GEORGIA SECURITY AND IMMIGRATION AFFIDAVIT

PART 1- GENERAL

- 1.1 The Contractor Affidavit and Agreement example is attached. The Contractor is required to state affirmatively that the individual, firm or corporation which is contracting with the City of Dacula has registered with and is participating in a federal work authorization program. Place this form on Company Letterhead before verifying compliance with federal work authorization program. Upon execution the completed forms shall be returned to the Owner's Representative before entering into a Contract.
- 1.2 The Subcontractor Affidavit and Agreement example is attached. The Contractor is required to obtain affirmations from the individuals, firms or corporations which are participating as subcontractors in this Contract with the City of Dacula. These Subcontractors must verify that they are registered with and are participating in a federal work authorization program. Place this form on Company Letterhead before verifying compliance with federal work authorization program. Upon execution the completed forms shall be returned along with the Contractor's Affidavit referenced in 1.1 above to the Owner's Representative before entering into a Contract.

End of Section

GEORGIA SECURITY AND IMMIGRATION CONTRACTOR AFFIDAVIT

STATE OF GEORGIA
CITY OF DACULA

CONTRACTOR AFFIDAVIT AND AGREEMENT

By executing this affidavit, the undersigned contractor verifies its compliance with O.C.G.A. 13-10-91, stating affirmatively that the individual, firm, or corporation which is contracting with The City of Dacula, Georgia has registered with and is participating in a federal work authorization program* (i.e., any of the electronic verification of work authorization programs operated by the United States Department of Homeland Security or any equivalent federal work authorization program operated by the United States Department of Homeland Security to verify information of newly hired employees, pursuant to the Immigration Reform and Control Act of 1986 (IRCA), P.L. 99-603), in accordance with the applicability provisions and deadlines established in O.C.G.A. § 13-10-91.

The undersigned further agrees that, should it employ or contract with any subcontractor(s) in connection with the physical performance of services pursuant to this contract with The City of Dacula, Georgia, contractor shall secure from such subcontractor(s) similar verification of compliance with O.C.G.A. § 13-10-91 on the Subcontractor Affidavit provided in Rule 300-10-01-.08 or a substantially similar form. Contractor further agrees to maintain records of such compliance and provide a copy of each such verification to The City of Dacula, Georgia at the time the subcontractor(s) is retained to perform such service.

EEV/Basic Pilot Program* User Identification Number

BY: Authorized Officer or Agent
(Contractor Name)

Date

Title of Authorized Officer or Agent of Contractor

Printed Name of Authorized Officer or Agent

**SUBSCRIBED AND SWORN
BEFORE ME ON THIS THE**

DAY OF _____, 2022.

Notary Public

My Commission Expires:

*As of July 1, 2007, the applicable federal work authorization program is the “EEV/Basic Pilot Program” operated by the U.S. Citizenship and Immigration Services Bureau of the U.S. Department of Homeland Security, in conjunction with the Social Security Administration (SSA).

GEORGIA SECURITY AND IMMIGRATION SUB-CONTRACTOR AFFIDAVIT

STATE OF GEORGIA -
CITY OF DACULA

SUBCONTRACTOR AFFIDAVIT

By executing this affidavit, the undersigned subcontractor verifies its compliance with O.C.G.A. § 13-10-91, stating affirmatively that the individual, firm or corporation which is engaged in the physical performance of services under a contract with _____ (name of contractor) on behalf of The City of Dacula, Georgia has registered with and is participating in a federal work authorization program* (i.e., any of the electronic verification of work authorization programs operated by the United States Department of Homeland Security or any equivalent federal work authorization program operated by the United States of Homeland Security to verify information of newly hired employees, pursuant to the Immigration Reform and Control Act of 1986 (IRCA), P.L. 99-603), in accordance with the applicability provisions and deadlines established in O.C.G.A. § 13-10-91.

EEV/Basic Pilot Program* User Identification Number

BY: Authorized Officer or Agent
(Subcontractor Name)

Date

Title of Authorized Officer or Agent of Subcontractor

Printed Name of Authorized Officer or Agent

SUBSCRIBED AND SWORN
BEFORE ME ON THIS THE
DAY OF _____, 2022

Notary Public
My Commission Expires:

*As of July 1, 2007 O.C.G.A. § 13-10-91, the applicable federal work authorization program is the "EEV/Basic Pilot Program" operated by the U.S. Citizenship and Immigration Services Bureau of the U.S. Department of Homeland Security, in conjunction with the Social Security Administration (SSA)

SECTION 02 050

DEMOLITION

PART 1 - GENERAL

1.1 SCOPE

- A. Work described in this section includes demolition of existing storm pipe, sidewalks, playground equipment, brush, etc. as indicated in Section 01 000, Project Scope & Performance Specification and on Construction Drawings.

1.2 PROJECT CONDITIONS

- A. Traffic
 - 1. Conduct demolition operations and removal of debris to ensure minimum interference with roads, driveways, walks and other adjacent occupied or used facilities.
 - 2. Do not close or obstruct streets, walks or other occupied or used facilities without permission from the governing authorities and Owner.
- B. Use of explosives will not be permitted.
- C. Promptly repair damages caused to items to remain by demolition operations at no additional cost to Owner (i.e. curb & gutter, utilities, etc.).

1.3 POLLUTION CONTROLS

- A. Use water sprinkling, temporary enclosures and other suitable methods as necessary to limit the amount of dust and dirt rising and scattering in the air, to the lowest level of air pollution practical for the condition of work. Comply with the governing regulations.

PART 2 - PRODUCTS

2.1 MATERIALS TO BE REUSED

- A. Materials to be disassembled and reused shall be handled and stored in a manner and placed so as to prevent damage.
- B. Damaged materials shall be repaired or replaced at no cost to Owner.

2.2 MATERIALS TO BE REMOVED

- A. Materials to be removed and not reused shall be treated as “waste” and legally disposed of by Contractor. In addition:
 - 1. Burning of waste on site shall not be permitted.
 - 2. Waste materials shall become the property of the Contractor and shall be promptly removed from site.
 - 3. Storage or sale of salvageable items on site shall not be permitted.

4. Do not store waste in planted areas or any area that can be damaged by storage operations.

PART 3 - EXECUTION

3.1 EXTERIOR DEMOLITION

- A. Coordinate interruption of utility service with utility companies. Obtain required approvals; comply with utility company regulations and building code requirements.
- B. Owner assumes no responsibility for actual condition of existing structures.
- C. Demolish and/or remove concrete pavement and any below-grade construction interfering with new construction.
- D. Fill all voids below grade caused by demolition of structures, or below-grade construction.
- E. Do not interrupt utility service to existing adjacent occupied facilities except as required and approved by the Public Utility Company and Owner.

3.3 PROTECTION

- A. Protect and prevent damage to existing structures not included as part of demolition per the Project Scope and Performance Specification.

End of Section

SECTION 02 200

EARTHWORK

PART 1 - GENERAL

1.1 SCOPE

- A. Earthwork and fill operations required for any sidewalk installation, minor grading yard for positive drainage, and playground equipment and concrete pavement subgrade issues that may arise or as indicated in Section 01 000, Project Scope & Performance Specification and on Construction Drawings. All other earthwork and fill operations underneath pavement are only required if other subgrade issues arise during construction. This Earthwork Specification shall be utilized by the Contractor. Furnish all labor, materials, equipment and incidentals required to perform all excavation, backfill, fill and grading if required for completion of the work.
- B. Notify free underground utility locator service at 1-800-282-7411 prior to any excavations.
- C. Work may include but is not limited to (only if an unforeseen issue arises):
 - 1. Clearing and Grubbing:
 - a) Clearing and Earthwork equipment operations if required are limited to areas described in the scope of work and/or Performance Specification.
 - b) Do not disturb the existing terrain or existing vegetation outside the designated work area(s).
 - c) All debris from clearing and/or grading operations (cleared vegetative matter, trees, root systems, remnant chipped material, stumps, etc.) shall be removed from the site, unless specifically directed otherwise by the Owner.
 - 2. Cutting, filling and backfilling.
 - 3. Rough and Finish grading to complete the playground equipment installation and repaving operations.
 - 4. Furnish, place and compact any additional material necessary to maintain existing grades and drainage patterns of existing park.
 - 5. Excavation, removal and replacement of unsuitable soil materials as described herein.
 - 6. Rock removal as described herein.
- D. By submittal of his bid, Contractor certifies that all means, methods, labor, equipment and materials to complete the satisfactory construction of the Project is included in the contract sum of his bid.

1.2 PROJECT CONDITIONS

- A. Contractor shall visit the site and thoroughly familiarize himself with all existing condition prior to formulating his Bid.
- B. Contractor may, at his own expense and prior to bidding, make any soils or other geotechnical investigations he may deem necessary. Obtain authorization of Owner, prior to commencement of boring or subsurface investigations.
- C. Survey existing grades and lay out grade stakes for if necessary to replace and repave roadway and maintain existing grades and drainage patterns. Utilize a Registered Land Surveyor currently registered to practice land surveying in the State of Georgia.

- D. Upon becoming aware of suspected unsuitable subsurface conditions, promptly notify the Owner and the Owner's Representative to permit verification of the conditions by an Contractor engaged Testing Agency or Contractor's Geotechnical Engineer, and follow immediately in writing outlining the nature and extent of the differing conditions. No claim by the Contractor for any additional cost or time for any Earthwork operations of any nature will be allowed, unless the Contractor has so notified the Owner, verbally and in writing, as required above, of such conditions.
- E. Unsuitable materials, including all forms of rock, debris, organic materials and poor soils, encountered may be redistributed to other areas of the site not to be used in a structural capacity rather than being hauled off site if and only if approved in writing prior to any on-site distribution at the Owner's sole discretion.
- F. Contractor is solely responsible for all earth quantities to render the finished grade elevations of playground and fitness areas similar to existing condition with changes to drainage patterns as indicated on the plans. Any exportation (*i.e.* "haul-off") of "excess" earth; or importation (*i.e.*, "haul-in") of suitable soil materials or GAB shall be included in the Contract Sum unless provided for otherwise in this Specification or as otherwise directed by the Owner or Owner's Representative.
- G. Contractor is solely responsible to:
1. Survey, establish and protect bench marks and monuments. If any are disturbed or destroyed, Contractor shall replace in original position using a Georgia Registered Land Surveyor at no additional cost to Owner.
 2. Protect areas outside limits of construction from encroachment by construction personnel or equipment regardless of property ownership. Contractor shall erect wooden post and orange safety fencing warning signs and other protective measures and warn the public of ongoing construction activities at limits of and a reasonable distance from the construction if necessary.
 3. No Clearing or any form of construction or other disturbance (*including materials storage*), shall be conducted outside the approximate limits of construction.
 4. All utilities are to be located and marked. Horizontal and vertical location of all utilities shall be verified by Contractor and marked on "as-built" drawings if they are to remain. Contact the Utility Protection Center at 1-800-282-7411 not less than three (3) working days prior to grading operations. Protect existing facilities, utilities and adjacent property. Prevent ponding or washing of water on site and over adjacent property. Erect erosion control measures (e.g. silt fences) as required to prevent runoff of soil erosion.
 5. Provide all necessary shoring, sheeting and bracing for the protection of work and safety of personnel if necessary. Contractor shall engage a Georgia Registered Engineer highly skilled in the design of such shoring and bracing systems to perform the design engineering for said shoring and bracing. Backfill loads shall not be imposed on walls and structural systems until those systems are completely developed and at design capacity.
 6. Protect adjacent and downstream properties from soil erosion. Comply with all erosion and sediment control measures specified elsewhere and required by applicable codes and ordinances.
 7. Protect finished paved areas from construction debris and dirt.
 8. Provide traffic protection by means of suitable signs, barricades and lights in accordance with the latest edition of the Manual of Traffic Control Devices (MUTCD).
 9. Burning of debris on the Project site will not be permitted.

- H. Provide dewatering and drainage as needed to accomplish the work required in this section. No excavation may proceed until suitable dewatering has been provided and approved by Owner and/or Owner's Representative. Do not allow areas of ponding water. In the event ponding of water occurs, take the necessary measures to eliminate said ponding. Submit dewatering procedures to Owner and/or Owner's Representative for review.
- I. Comply with rules and regulations governing respective utilities.
- J. Contractor is solely responsible for protection of downstream properties from encroachment or damage from increased or concentrated storm water flows, erosion, sediment or pollutants.
- K. Claims for "lost revenue" from any unsuitable materials or lack of marketability of any unsuitable soil materials or rock shall not be considered for additional payment or compensation by Owner to Contractor.

1.3 QUALITY CRITERIA

- A. All work shall be performed in accordance with applicable codes and ordinances and with requirements of authorities having jurisdiction. All work under this Section:
 - 1. Shall conform fully to applicable OSHA rules and regulations.
 - 2. Shall conform to the latest edition of the City of Dacula Development Regulations.
 - 3. For excavation, trenching and related sheeting, bracing, etc. shall comply with the requirements of OSHA excavation safety standards (29 CFR Part 1926.650 Subpart P) and to the State of Georgia and City of Dacula requirements. Where conflict between OSHA, the State regulations and the County/City regulations exists, the more stringent requirements shall apply.
- B. Employ a Georgia Registered Engineer or Georgia Registered Land Surveyor experienced in reading Architectural and Engineering drawings, using measuring devices and tape, and skilled in the use of surveying equipment necessary to perform layout, survey, establish benchmarks and monumentation of all work required.
- C. Earthwork monitoring and testing shall be performed by a Georgia Registered Geotechnical Engineer, selected by the Contractor and paid for and approved by Owner.
- D. Excavation, backfilling and compaction shall comply with the following Reference Standard Designations by the American Society for Testing Materials (ASTM), or as otherwise noted on Drawings.
 - 1. ASTM C136-76 - Sieve or Screen Analysis of Fine and Coarse Aggregates
 - 2. ASTM D1556-64 (1974) - Density of Soil in Place by the Sand-Cone Method
 - 3. ASTM D698 - Standard Proctor Compaction Test
 - 4. ASTM D2167 (1972) Density of Soil in Place by the Rubber Balloon method
 - 5. ASTM D2487-69 (1975) - Classification of Soils for Engineering Purposes
 - 6. ASTM D2922-78 - Density of Soil and Soil Aggregate in Place by Nuclear Methods
 - 7. ASTM D2937-71 - Density of the Soil in Place by the Drive- Cylinder Method

1.4 NOTIFICATION

- A. Contractor shall notify Landscape Architect and/or Owner's Representative 24 hours prior to commencing any grading, excavation, land clearing and removal operations.

- B. Contractor shall notify all Utilities Companies in ample time for necessary measures to be taken to prevent interruption of service when utility lines which are to be removed, relocated and/or disconnected are encountered.
- C. Contact the Utility Protection Center at 1-800-282-7411 not less than three (3) working days prior to any grading operations.

1.5 SUBMITTALS

- A. Submit detailed Shop Drawings and schematic diagrams as necessary to graphically describe all Shoring and Bracing procedures, if any. Include calculations and schedules. Illustrate sequencing of all Shoring and Bracing.
- B. Contractor shall submit a detailed time schedule of all Earthwork operations to the Owner's Representative for review prior to commencing work, if any.
- C. In the event that the Contractor contemplates deviation(s) from the earthwork design concept for any reason, the deviation(s) shall be represented by submittal of detailed shop drawings which clearly illustrates the intent and scope of said deviation(s) for review and approval prior to proceeding with same.

PART 2 - PRODUCTS

2.1 TOPSOIL

- A. Topsoil either found on the site or imported to the site, shall consist of local, fertile, friable, natural soil of loamy character, free of clay lumps, stones in excess of one inch (1") in greatest dimension, typical of Project locality, and containing no chemicals harmful to plant growth, if needed.

2.2 UNSUITABLE SOIL

- A. Unsuitable soil materials consists of soil materials not capable of being compacted to density required; rock material, as defined in Paragraph 2.09 of this Section, larger than three inch (3"), debris and organic material including muck, which is a wet organic material which cannot support a light crawler tractor type of equipment and requires removal by power shovels or draglines; or material otherwise identified and designated as unsuitable by Contractor's Geotechnical Engineer.
- B. Non-organic materials are considered as unsuitable and include non-organic debris not capable of being compacted to density required, including but not limited to, metal objects such as appliances, metal fencing, tires, etc. Contractor shall remove and legally dispose of such items offsite.
- C. Soil material which is too wet to permit the specified compaction but is still suitable to be used in a structural capacity (once dried) based on the recommendations of Contractor's Geotechnical Engineer, shall be spread and permitted to dry in an area to be designated by Owner. Contractor shall assist drying by discing, harrowing or pulverizing until the soil moisture content is reduced to the specified value.

- D. Only excavation of soils, which is wet due to concealed condition, including, but not limited to underground springs, high water table and leaking pipes, shall be addressed as a potential additive change order. Suitable materials which are wet due to precipitation as determined by Contractor's Geotechnical Engineer shall be dried and reused at no additional cost to Owner.
- E. In the event that a claim by Contractor has been made as to the existence of "Rock", "Unsuitable Soils" or otherwise "Unsuitable Materials", the Contractor's Geotechnical Engineer shall specify the means by which the "Rock" or otherwise "Unsuitable Soils" or "Unsuitable Materials" shall be quantified.

2.3 FILL

- A. Satisfactory fill material shall consist of local, clean, non-active, organic free subsoil, free from debris, roots, topsoil and frozen material and capable of being compacted to the density required.
- B. Maximum size of rock fragments shall be equal to or less than three inches (3") in the greatest dimension.
- C. In areas of massive fills or disposal pits, Geotechnical Engineer shall determine the maximum size of rock.
- D. Materials classified as SM, SP, ML, SC or CL are suitable for structural fill. Generally, residual soils in the local area are suitable for reuse as structural fill provided that they meet the following criteria and shall be well graded within the following limits:
 - 1. Common fill shall consist of mineral soil substantially free from organic materials, loam, wood, trash and other objectionable materials which may be compressible or which cannot be properly compacted. Common fill shall not contain stones larger than three inches (3") in the largest diameter and shall have a maximum of 75% passing the No. 40 sieve and a maximum of 20% passing No. 200 sieve. Common fill shall not contain granite blocks, broken concrete, masonry rubble or other similar materials. Fill shall have physical properties such that it can be readily spread and compacted during filling. Soil excavated from the structural areas and which meets the above requirements may be used in embankments.
 - 2. Screened gravel shall meet the requirements of Section 806.02 of the State of Georgia Department of Transportation Standard Specifications for Construction of Roads and Bridges, 1993 or latest Edition.
 - 3. Partially weathered rock or rock no larger than three inches (3") in any dimension, may be used as fill as provided for in the Geotechnical Report.
 - 4. Soil should exhibit a plasticity index of less than 30 and a dry unit weight of at least 90 pcf unless more stringent requirements are given in the Geotechnical Report, in which case they will govern.
- E. Residual material to be used as fill material shall be tested and approved by Contractor's Geotechnical Engineer for degree of compaction specified for its intended use prior to importation or placement.
- F. For fill soils to be imported from off-site, provide samples of same for laboratory testing by Contractor's Geotechnical Engineer to determine their Standard Proctor.

- G. Contractor shall identify the location of any "borrow pits" so that Contractor's Geotechnical Engineer may inspect same to determine suitability of the general soils which Contractor intends to import to the Project site.

2.4 GRAVEL

- A. All stone for Gravel Fill shall meet the quality requirements of Section 800 of the State of Georgia Department of Transportation Standard Specifications for Construction of Roads and Bridges, 1993 or latest Edition.
- B. Gravel fill shall consist of sound, durable rock, free from injurious amounts of coatings of any kind and shall be graded so 100% passes the 1-1/2" sieve, 95-100% passes the 1" sieve, 25-60% passes the 1/2" sieve, 0-10% passes the No.4 sieve and 0-5% passes the No.8 sieve.

2.5 CRUSHED STONE (CRUSHER RUN)

- A. All stone for Crushed Stone shall meet the quality requirements of Section 800 of the State of Georgia Department of Transportation Standard Specifications for Construction of Roads and Bridges, 1993 or latest Edition.
- B. Crushed stone shall consist of sound durable particles of crusher run rock, 100% passing a two inch sieve, 97-100% passing a 1 inch sieve, 60-95% passing a 1/2 inch sieve, 25-50% passing a No. 10 sieve, 10-35% passing a No. 60 sieve, and not more than 7-15% passing a No. 200 sieve and free from unsuitable materials.

2.6 GRANULAR BEDDING

- A. All stone for Granular Bedding shall meet the quality requirements of Section 800 of the State of Georgia Department of Transportation Standard Specifications for Construction of Roads and Bridges, 1993 or latest Edition.
- B. Granular bedding and backfill material shall consist of a granular soil, sand, chert, crushed stone or mixture of these, all of which passes a 3/4 inch sieve, 80% passing a 3/8 inch sieve, 40% passing a No.4 sieve, 10% passing a No. 8 sieve, and not more than 5% passing a No. 16 sieve. Material shall be free of organic matter and debris.

2.7 RIP RAP

- A. Stone for Rip Rap shall meet the quality requirements of Section 805 Rip Rap of the State of Georgia Department of Transportation Standard Specifications for Construction of Roads and Bridges, 1993 or latest Edition.
- B. Stone Dumped Rip Rap shall be processed in such a manner as to produce a quarry run material including rock fines which meet the gradation for the following two types:
1. Type 1: For severe drainage conditions the largest piece of material shall have a maximum approximate value of two cubic feet. At least 35% of the mass shall be comprised of pieces which weigh 125 pounds or more.
 2. Type 3: For general use normal drainage conditions the largest pieces of material shall have a maximum approximate value of one cubic foot. At least 35% of the mass shall be comprised of pieces which weigh 15 pounds or more.

3. The remainder of Types 1 or 3 shall be well-graded down to the finest sizes. Rock fines shall comprise a maximum of 10% of the total mass. Rock fines are defined as material passing a No. 4 sieve.
- C. Stone for Plain Rip Rap shall be sound, durable pieces and shall be resistant to the action of air and water. Flat, slabby and shaley pieces are not acceptable. It shall be clean and essentially free of rock dust and fines. The material shall be processed such that the largest pieces have a volume of not more than 2 cubic feet and not more than 10% of the total weight of rip rap shall consist of spalls passing a 5-inch sieve.

2.8 GRADED AGGREGATE BASE

- A. All stone for Graded Aggregate Base shall meet the quality requirements of Section 815 of the State of Georgia Department of Transportation Standard Specifications for Construction of Roads and Bridges, 1993 or latest Edition.
- B. Graded Aggregate Base material shall conform to the following: 100% passing a two inch sieve, 97-100% passing a 1 inch sieve, 60-95% passing a 1/2 inch sieve, 25-50% passing a No. 10 sieve, 10-35% passing a No. 60 sieve, and not more than 7-15% passing a No. 200 sieve and free from unsuitable materials.

2.9 ROCK

- B. Rock consists of three types: Rippable Weathered Rock, Mass Rock and Trench Rock. Rippable Weathered Rock is considered part of the work, and shall be included in the Contract Sum. Payment for Mass Rock and Trench Rock removal shall be in accordance with change order procedures based on the schedule of values with unit costs provided with the lump sum bid as specified by the Bid Proposal Form or a time and material basis as agreed to prior to commencing work. Rock quantities shall be qualified and quantified by Contractor's Geotechnical Engineer and verified by Owner's Representative.
- C. In the event that a claim by Contractor has been made to the existence of "Rock", "Unsuitable Soils" or otherwise "Unsuitable Materials", the Geotechnical Engineer shall specify the means by which the "Rock" or otherwise "Unsuitable Soils" or "Unsuitable Materials" shall be quantified.
 1. Rippable Weathered Rock is defined as residual material having a volume greater than one (1) cubic yard that, in the opinion of Contractor's Geotechnical Engineer, can be effectively plowed, spaded, or removed with power driven excavating equipment having been first loosened with a track-mounted bulldozer equipped with a single-tooth ripper shank, having a minimum draw bar pull rated at not less than 56,000 pounds.
 2. Mass Rock and Trench Rock are defined as residual material having a volume greater than one (1) cubic yard or more for mass excavation or one-half (1/2) cubic yard for trench or pit excavation that cannot be removed by rock excavating equipment equivalent to the following in size and performance ratings, without systematic drilling, ram hammering, or blasting.
 - a) Mass Rock - Mass Excavation: Late-model, track-mounted bulldozer equipped with a single-tooth ripper shank; rated at not less than 230-hp flywheel power and developing a minimum of 56,000-lbf pryout force; measured according to SAEJ-732 (Caterpillar D-8K, Caterpillar 977 front-end loader or equivalent).
 - b) Trench Rock - Excavation of Trenches and Pits: Late-model, track-mounted hydraulic excavator; equipped with a 42-inch-wide, short-tip-radius rock bucket;

rated at not less than 120-hp flywheel power with a bucket-curling force of not less than 25,700-lpf and stick-crown force of not less than 18,700 lbf; measured according to SAEJ-1179 (Caterpillar Model 225 or equivalent).

- C. Provide ground vibration monitoring and existing condition/crack survey (video and/or digital) of all nearby structures and/or adjacent properties prior to any blasting operations. Contractor must notify Owner's insurance company of rock removal intent and must obtain all necessary insurance certificates and permissions to expedite this work.

PART 3 - EXECUTION

3.1 CLEARING

- A. Clearing is the removal of all obstructions which interfere with the construction. These items include minor structures above and below existing grades and below finished grades identified on the drawings, trees and their complete root systems, brush, other vegetative material in any condition (i.e. chipped, cut, wrenched, etc.) rubbish, fences and other such items except items indicated to be preserved on Drawings.
- B. Set and maintain any Active or Passive Tree, Wetland, Spring, Buffer, Limits of Disturbance or Vegetation Protection Fencing prior to Clearing operations in accordance with Drawings.
- C. Contractor shall clear only those areas in which construction or grading operations are required and includes all excavated, graded and filled areas. Contractor shall protect all other areas from any damage as a result of clearing operations.
- D. Burning on site shall not be permitted under any circumstances.
- E. Contractor shall remove all cleared material from the Project site and legally dispose of.

3.2 GRUBBING

- A. Grubbing is the removal of all roots and stumps from the ground larger than 3/4 in. diameter.
- B. Unless otherwise directed, Contractor shall grub all cleared areas;
1. In fill areas where design grade levels for building, roads or paved areas are to be placed, grub to minimum depth of twelve inches (12") below the finished design grade level as indicated on Drawings.
 2. In all areas of excavation for structures, grub to the depth of the proposed excavation or to the depth that allows the area to be free of debris, rock, organic and inorganic materials, and unsuitable soils that would otherwise prevent the soil from being compacted to the density as indicated on Drawings and stated in the Specifications herein.
 3. In areas outside of design level grades or building footprint or roads and parking lots where fill is to be placed grub to the existing grade unless the area adjacent requires soils compacted to a density to support the structures, roads, or parking areas.
 4. Contractor shall be responsible for excavating to an appropriate depth and removing and replacing with suitable soils that will allow soil to achieve requisite compacted density.
 5. In areas to be grassed and/or landscaped without fill, grub to a minimum of six inches (6") below the final grade.

- C. Remove all grubbed material from the Project site and legally dispose of.

3.3 CLEAN UP

- A. Burning of debris or grubbed material onsite shall not be permitted under any circumstances.
- B. Remove all debris resulting from Clearing and Grubbing operations from the site and dispose of in compliance with all applicable laws and regulations.
- C. Do not place such debris on private property without written consent of Owner and Owner of such property.
- D. Do not place debris or grubbed material around perimeter of site.
- E. Remove all non-organic debris, trash, etc. from the site and dispose of in compliance with all applicable laws and regulations.

3.4 TOPSOIL STOCKPILING

- A. Strip topsoil to full depth encountered in areas indicated to be graded on the drawings. Stockpiling may occur as required to complete all construction operations. Intermittent movement of Topsoil from one location of the Project site to another shall be included in the Contract Sum. No claim shall be considered by Owner for the movement of Topsoil.
- B. Prior to stockpiling topsoil, remove tree limbs, tree roots, rocks larger than one inch (1") and other deleterious materials from the topsoil. Removed materials shall become the property of the Contractor and hauled off the site and legally disposed.
- C. Stockpile topsoil in manner to drain without ponding, and to avoid loss of material through erosion by wind or water.
- D. Do not export any topsoil off-site unless approved in writing by the Owner.
- E. Re-distribute a minimum of four inch (4") deep layer of topsoil fine graded to finish contour elevations illustrated in non-paved or building areas.

3.5 EXCESS, UNSUITABLE AND INSUFFICIENT MATERIALS

- A. Remove and legally dispose of excess and unsuitable materials from Project site unless directed otherwise in writing by Owner. Unsuitable material may be placed on Owner's property if and only if approved in writing by Owner prior to any on-site distribution as a deductive change order and then shall only be placed in non-structural fill areas of the Project site as designated by Owner and/or Owner's Representative.
- B. Provide satisfactory fill material in areas where existing materials are insufficient or unsuitable for earthwork operations.
- C. If, in the opinion of the Engineer/Geotechnical Engineer, the material in its undisturbed natural condition at or below final design grade as indicated on the Drawings, the excavation is unsuitable for its intended use; it shall be removed to such depth and width as directed and be replaced with suitable material by Contractor as directed by the Engineer/Geotechnical Engineer. Contractor, unless otherwise directed by the Landscape

Architect or Owner, shall remove and replace unsuitable materials based on the schedule of values with unit costs provided with the lump sum as specified by the Bid Proposal Form. Owner may elect, in accordance with the provision of the agreement, to direct Contractor to remove and replace the unsuitable materials on a lump sum or time and materials basis should applicable unit rates not exist or not covered for unsuitable material being removed. Contractor shall receive written notice from the Landscape Architect of means and methods to employ i.e. lump sum, unit rates or time and materials, prior to executing any work deemed in excess of the amount indicated in the Contract Sum.

3.6 EXCAVATION

- A. Excavation shall be made to the design lines and levels illustrated on the drawings or to such depths, whichever is greater, as further described elsewhere in this section and to such widths as will give suitable room for construction of the structures, for bracing and supporting, pumping and draining and inspection. The bottom of the excavations shall be rendered clean, firm, level and dry and in all respects acceptable to Contractor's Geotechnical Engineer and Owner's Representative. Where changes in levels occur, provide vertical steps in horizontal runs.
- B. Excavation and dewatering shall be accomplished by means and methods which preserve the undisturbed state of subsurface soils. Exposed subsurface shall be proof-rolled with at least two (2) coverages of the specified equipment. Subsurface soils which become soft, loose, "quick", or otherwise unsatisfactory for support of structures as a result of inadequate excavation, dewatering, proof-rolling, or other construction methods shall be removed and replaced by structural fill as required by Contractor's Geotechnical Engineer and Owner's Representative at Contractor's expense.
- D. Contractor shall prepare subsurface areas for all structures unless otherwise illustrated on Drawings or otherwise specified elsewhere in this Section:
 - 1. Roughly level and proof roll these areas with a 25-ton roller, (or the equivalent) making at least four passes (two passes being perpendicular to the others).
 - 2. Compact the top twelve inches (12") of fill below subsurface to a minimum of 100 percent Standard Proctor (ASTM D698).
 - 3. Where structures are supported by piles, compact the top twelve inches (12") of subsurface to a minimum of 95 percent Standard Proctor (ASTM D698).
- E. Excavation equipment shall be satisfactory for carrying out the work in accordance with requirements specified. In no case shall the earth be ploughed, scraped, or dug with machinery so near to the finished design limits indicated on Drawings as to result in excavation of, or disturbance of material below design limits. The last of material loosened by mass excavation shall be removed with pick and shovel immediately prior to placement of concrete or working mat.
- F. When excavation for foundations has reached prescribed depths, Contractor's Geotechnical Engineer and Owner's Representative shall be notified and will inspect conditions. If materials and conditions are not satisfactory to Contractor's Geotechnical

Engineer and Owner's Representative, Contractor's Geotechnical Engineer and Owner's Representative will issue instructions as to the procedures to resolve the issue(s) in question.

- G. During final excavation to design limits as indicated on Drawings, take whatever precautions are required to prevent disturbance and remodeling. Material which has become softened and mixed with water shall be removed. Hand excavation of the final three to six inches (3"- 6") will be required as necessary to obtain a satisfactory undisturbed bottom. Contractor's Geotechnical Engineer and Owner's Representative will be the sole judge as to whether the work has been accomplished satisfactorily.
- H. Over-excavation by Contractor beyond the design limits and depths required or indicated on the drawings shall be replaced with lean concrete, compacted structural fill, crushed stone, or other materials as directed by Contractor's Geotechnical Engineer and Owner's Representative at no change in Contract Sum or Time.
- I. If soil conditions permit, cut footing trenches to exact size of footing and omit forms. Notify Contractor's Geotechnical Engineer and Owner's Representative if earth of doubtful bearing is encountered. If adequate bearing is not encountered within eight inches (8") of depth illustrated on Drawings, excavations shall be carried deeper upon written authorization and paid for as additional work in accordance with Contract Conditions.
- J. If excavations are carried deeper than required by Drawings or Specifications in error, the additional depth shall be filled with materials specified for road subgrade and compaction at no additional cost to Owner.
- K. Protect excavations against cave-ins, ponding and freezing. When freezing can be anticipated prior to placing of concrete, protect excavations or delay carrying excavations to full depth until concrete can be placed.
- L. Maintain excavations free of surface water. Provide pumps if required to drain excavations. Provide and maintain temporary drainage ditches as required.
- M. Notify Contractor's Geotechnical Engineer and Owner's Representative when footing excavations are complete. Geotechnical Engineer will perform appropriate density testing of the excavations prior to placing formwork, reinforcement steel, anchor bolts and concrete.
- N. Contractor shall be fully responsible for all damage to any part of the site, building structures or other installations, caused by water.
- O. Concrete should be placed the same day earth excavation is made. If it is necessary for excavations to remain open overnight, provisions should be made to prevent collection of surface run-off in the excavation.

3.7 EXCAVATION OF ROCK

- A. If rock is encountered, clear away earth and expose materials. Notify Contractor's Geotechnical Engineer and Owner's Representative and receive written instructions prior to excavations. Measure and estimate extent of rock to be excavated. Contractor's Geotechnical Engineer shall identify, qualify and verify in writing whether the material shall be classified as rock and shall confirm the extent and quantity of rock to be excavated.

- B. Only rock excavation done in accordance with Contractor's Geotechnical Engineer and Owner's Representative instructions will be paid for by Owner as additional work in accordance with Contract Conditions.
- C. Contractor shall remove rock in accordance with the following:
 - 1. Remove rock to a depth of six inches (6") below proposed playground surfacing required subgrade.
 - 2. Twelve inches (12") below finished grade in areas to receive landscaping, sodding and seeding.
- D. No blasting is allowed. Use of explosives will not be permitted.

3.8 EXCAVATION EMBANKMENT AND BRACING

- A. Contractor shall accept full responsibility for all excavations and shall protect all excavation embankments against collapse.
- B. Where possible, embankments over 5'-0" high shall be made at a slope not greater than 1 horizontal to 1 vertical; or where the soil is very sandy or wet, the slope should not be greater than 2 horizontal to 1 vertical.
- C. Steeper slopes than those suggested herein may be employed when the work is under the supervision of a Registered Professional Engineer responsible for the design engineering of all shoring and bracing techniques required to accomplish the work and shall be employed by Contractor.
- D. Where it is not possible to provide a safe embankment slope, all banks shall be temporarily supported and maintained secure until permanent support has been provided.
- E. Where ditches or trenches are over 5'-0" deep; cross bracing and shoring shall be provided to prevent collapse.
- F. Contractor shall provide bracing systems designed by a Registered Engineer in the State of Georgia, experienced in such designs and acceptable to Owner.
- G. Drawings shall show the work and sequence in its entirety and be submitted to Owner for approval prior to commencing work.
- H. To prevent caving, or settlement of earth adjacent to excavations, and for the protection of persons as well as property, shoring, bracing and other similar work shall be provided and installed to meet the conditions in each particular case and shall be left in place until construction has reached a point where backfills behind walls or in ditches have been made and the need for shoring and bracing eliminated.

3.10 BEDDING

- A. Bedding shall conform to the following Specifications unless illustrated otherwise elsewhere in these documents:
 - 1. For ductile iron, cast iron or plastic (SDR) pipe for water main or sanitary sewer system refer to City of Dacula Standards.
 - 2. For corrugated metal pipe (CMP), concrete pipe (RCP) or plastic (PVC) pipe for storm water drainage systems or roof leaders grade trench bottom to uniform slope to provide a

- firm, unyielding bearing surface along the entire length of the barrel of the pipe.
3. Bed pipe in trenches on continuous soil foundation shaped to lowest one-fourth of pipe profile, unless illustrated otherwise in these documents.
 4. Continue backfilling with suitable soil in 6" layers by hand, tamping material by hand operated tampers to a level 18" above top of pipe.
 5. Form depressions for hubs and similar joints only in size as required for making joint.
 6. In areas of rock excavation, and where needed in other areas, provide crushed stone bedding for all pipes.
 7. Provide this bedding over the full width of the excavation to a minimum depth of 6" under the pipe.
 8. Whenever the sub-grade is unstable or too soft to provide a satisfactory pipe foundation for any pipe, undercut the trench as necessary and backfill with crushed stone.
 9. Compact and bring the material to proper grade to create a firm, unyielding foundation.

3.11 TRENCH BACKFILLING

- A. Do not backfill over utility lines which have not passed required testing or inspections including:
 1. Contractor's Geotechnical Engineer inspection of subgrade.
 2. Inspections, testing and regrading locations of subgrade utilities.
- B. Backfill all trenches and excavations immediately after the pipe is laid using suitable soils:
 1. If sufficient suitable excavated material is not available on site, provide sufficient and suitable borrow material for backfill. See Paragraph 2.3 of this Section.
 2. Backfill from 18 inches above the pipe to grade shall be as follows:
 - a) Trenches in areas not to be paved may be backfilled and compacted by methods of Contractor's choice. Compact backfill to 90% Standard Proctor Density. Refill trench as often as required to maintain the design elevation at the proper grade.
 - b) Trenches in areas to be paved and in areas beneath proposed structures shall be backfilled with granular material. Compact backfill to 95% Standard Proctor Density with the top 12" compacted to 98% Standard Proctor Density or as specified by the Geotechnical Report. Compact backfill further, if necessary, either by leaving the backfilled trench open to traffic while maintaining the surface or by the use of compaction equipment as required. Refill settlement in trenches with material acceptable to the Contractor's Geotechnical Engineer and continue such maintenance until pavement placement is authorized by the Owner's Representative.

3.12 FILLING

- A. Preparation of Surface to Receive Fill (Reference and follow the Contractor's Geotechnical Engineer's recommendations in his report)
 1. Remove vegetation, top soil, debris, unsuitable soil materials, obstructions and deleterious materials from ground surface prior to placement of fill. Break up (and periodically cut benches into) sloped surfaces steeper than one vertical to four horizontal so that fill material will bond with existing surface.
 2. Surfaces to receive fill material shall be inspected and approved by Contractor's Geotechnical Engineer.
 3. When existing ground surface has density less than that specified for particular area classification, break up the ground surface, pulverize, moisturize soil to optimum moisture content, and compact to required depth and percentage of maximum density.
 4. Subgrade shall be proof-rolled with a heavily loaded 18-20 ton dual tandem dump truck, scraper or similar rubber tired equipment in the presence of the Owner and/or Owner's representative. Contractor's Geotechnical Engineer will be called in if a problem is

encountered.

5. Proof-rolling shall be performed in two mutually perpendicular directions, with at least two passes in each direction.
 6. Areas which exhibit signs of instability that cannot be stabilized with further compaction shall be undercut to a suitable grade and backfilled with structural fill.
- B. Benching should be made periodically; create an eight foot to ten foot (8'-10') wide bench for each two vertical foot (2 VF) of fill placed. Insure stable interface between old fill and newly placed fill.
 - C. Place fill materials in layers not more than six inch (6") loose depth. Before compaction, moisten or aerate each layer to provide the optimum moisture content plus or minus 2%, or as specified in soils report. See paragraph 3.11 below for compaction requirements of fill. Do not place backfill or fill material on muddy, frozen surfaces or surfaces containing any frost or ice. Compaction shall be inspected by Contractor's Geotechnical Engineer.
 - D. No soil found on the site or transported to the site which is contaminated with material containing asbestos, PCB's, radon, gasoline, fuel oil or other fossil fuels shall be used for fill, backfill, or planting topsoil. Any contaminated soil found on the site shall be removed and disposed of in a manner approved by the appropriate regulatory agencies.

3.13 GRADING AND FILLING AROUND TREES

- A. Obtain a copy of City of Dacula Tree Preservation Standards which are hereby made a part of these Specifications; and follow all pertinent guidelines regarding Grading and Filling operations at or near Tree Save Areas as illustrated on Drawings.
- B. Maintain existing grade within Critical Root Zone (CRZ) of trees unless otherwise indicated.
- C. Where existing grade is above new finish grade illustrated around trees, hand excavate within drip line to new grade. Cut exposed roots approximately 3" below elevation of new finish grade. Employ a tree surgeon to recommend procedures such as pruning of branches and stimulation of root growth. Provide subsequent maintenance during the contract period as recommended and long range maintenance procedures to be followed after completion of construction operations.
- D. Raising Grades
 1. Where existing grade is 4" or less below elevation of finish grade illustrated, provide fill using stockpiled topsoil. Use topsoil as specified. Place topsoil in single layer and do not compact.
 2. Where existing grade is more than 4" but less than 8" below elevation of finish grade illustrated, place a layer of drainage fill on existing grade prior to placing topsoil. Place fill against trunks of trees to an elevation of approximately 2" above finish grade and extending not less than 18" from tree trunk on all sides. For balance of area within drip line perimeter, place drainage fill to an elevation 4" below finish grade and complete fill with a 4" layer of topsoil. Do not compact stone or topsoil layers.

3.14 COMPACTION

- A. Perform compaction of soil materials for fills using mechanical soil compaction equipment for type and size materials to be compacted. Hand compact materials in areas inaccessible to machinery.

- B. Provide the percentages of specified compaction at the specified moisture content in the specified lifts as outlined in the Geotechnical Report. If no specification is given in said report, use the following as a minimum at 3% plus or minus of optimum moisture content placed in 8" lifts:
1. Provide 95% maximum dry density with top 12" to 98% maximum dry density for fill under building slabs, extending beyond the building outlines a distance equal to twice the height of the fill beneath any edge of building. Fill should then slope not steeper than one vertical to two horizontal (2H:1V);
 2. Provide 95% maximum dry density with the top 12" to 98% maximum dry density for fill under asphaltic pavements;
 3. Provide 95% maximum dry density Standard Proctor and top 12" to 98% maximum dry density for fill under concrete footings, concrete sidewalks, concrete steps and concrete ramps and trench backfill.
 4. Provide 90% maximum dry density for all other non-paved fill material unless otherwise indicated.
- C. Where subgrade or soil layer must be moisture conditioned before compacting, apply water to surface of subgrade or soil layer. Scarify and air dry soil material that is too wet to permit compaction to specified density.
- D. Soil material that has been removed because it is too wet to permit compaction may be stockpiled or spread where directed by Owner's Representative and permitted to dry. Assist drying by discing, harrowing or pulverizing, until moisture content is reduced to satisfactory value, as determined by moisture density relation tests. When accepted by the Contractor's Geotechnical Engineer, soil material may be used in compacted backfill or fill.
- E. Remove unsuitable material at the site for the proposed structures and paved areas from the existing grade. No water shall be allowed to accumulate in the excavation, or on the subgrade soils during construction. Soils which will be exposed during construction are very sensitive to disturbances and strength degradation in the presence of excess moisture. They are also frost susceptible. The amount of time natural subgrades are exposed to the elements must be minimized in order to prevent possible subgrade degradation. Work must be completed such that excavation, inspection, undercutting, backfill and/or concrete mud matting can be accomplished expeditiously in a given area.

Foundations have been designed for bearing capacity of 3000 psf bearing. Contractor shall verify the bearing capacity prior to placing footings. If tests indicate less than assumed capacity, receive instructions from Owner.

3.15 FINISH GRADING

- A. Finish grade disturbed areas, with a minimum 4" depth of topsoil, in smooth, uniformly leveled, crowned, or contoured slopes between all new elevation surface points to existing, undisturbed grade elevations.
- B. Grade areas adjacent to buildings for positive drainage to storm drainage structures and prevent ponding. Finish grades shall be within one tenth of a foot (0.1') of indicated elevations.
- C. Drawings indicate the levels, slopes and contours of finished grade elevations for the entire site. Slight modifications as determined by Owner's Representative may be required, Contractor shall make these modifications without extra cost to Owner.

- D. Where compacted areas are disturbed by construction operations, scarify surface, reshape and compact to required density.
- E. Redistribute stockpiled topsoil to uniform depth over graded areas and other areas to receive landscaping or grassing, in a 4" minimum depth. In the event that stripped topsoil is not sufficient to render a 4" minimum depth, import clean topsoil sufficient to render a minimum 4" depth as part of the Contract Sum at no additional cost to the Owner.
- F. Redistribute excess topsoil, subsoil from footing excavations, other soil matter and debris on approved areas of the Owner's property at no additional cost to the Owner.
- G. At completion of finish grading operation, entire site shall be ready for planting or grassing.
- H. Where finish grading meets or abuts curbs, walks or similar pavements, upstream grades shall be slightly higher than pavements to permit drainage and prevent ponding behind curbs or walks.
- I. Protect newly graded surfaces from traffic and erosion and keep free of debris. Where graded or compacted surfaces are damaged by subsequent operations, return to proper grade and state of compaction.

3.16 GRADE MAINTENANCE

- A. Contractor shall provide additional fill material, remove excess material, or redistribute materials as required, should grades be changed by erosion or other causes during course of construction, without additional cost to Owner.

3.17 FIELD QUALITY CONTROL

- A. Contractor's Geotechnical Engineer shall be notified by Contractor of the progress of work under this section on a continuing basis so that necessary field soil engineering and testing services may be provided during site preparation, excavation, fill placement and foundation phases of the Project, if required by Owner. Do not proceed with additional portions of work until results of previous phases have been verified.
- B. Contractor's Geotechnical Engineer will verify that all existing fill, topsoil, soils containing organic matter and all other undesirable materials are removed and only engineered fill is placed over suitable subgrade soils.
- C. If, during progress of work, tests indicate that compacted materials do not meet specified requirements, remove defective work, replace and retest at no cost to Owner.
- D. Ensure compacted fills are tested before proceeding with placement of surface materials.
- E. Contractor's Geotechnical Engineer will observe all "benching" operations as fill placement progresses to the existing slopes.
- F. Contractor's Geotechnical Engineer will observe the foundation construction as directed by Owner, and determine the adequacy of bearing surfaces prior to construction of foundations.
- G. Contractor's Geotechnical Engineer will make all tests of backfill materials to determine their suitability for compaction, and will observe the placing of backfill as directed by Owner.

- H. Contractor's Geotechnical Engineer and the Owner's Representative shall have the power of rejection of materials, equipment or operating procedures of the backfilling operation. Contractor shall replace, rework or correct work which does not meet the Specifications as directed by Contractor's Geotechnical Engineer and/or Owner's Representative at no cost to Owner.
- I. Contractor shall be responsible for notifying the Contractor's Geotechnical Engineer at least 24 hours prior to the time when testing will be required.
- J. Additional tests on completed fill may be authorized by Owner. If such tests indicate failure to meet the Specifications, the costs of these tests and subsequent retests will be paid by the Contractor. Otherwise, the costs of these tests will be paid by Owner.
- K. In-place density tests shall be performed by the Contractor's Geotechnical Engineer according to the following requirements:
1. In the general building area, conduct one test for every 2,500 square feet for each two feet of depth.
 2. At wall and trench backfill areas, conduct one test for every 50 lineal feet for each two feet depth.
 3. In all cases, a test is required within the top foot of fill.
 4. Sidewalks - One test for each two foot lift of each 3,000 sq. ft. of area.
 5. General area of fill - One test for each two foot lift of each 10,000 sq. ft. of area.

End of Section

SECTION 02 270

SLOPE PROTECTION AND EROSION CONTROL

PART 1 - GENERAL

1.1 SCOPE

- A. Slope protection and erosion control shall be performed on all disturbed areas of shoulder backfilling, sidewalk installation, yard regrading, and for any areas that Contractor disturbs outside of edge of pavement where repaving operations occur. Contractor shall stabilize disturbed areas outside of concrete areas with permanent grassing (Sod), erosion control matting, and riprap at end of any proposed concrete flumes.
- B. Work described in this section includes the containment of sediment transport, containment and control of all soil erosion and containment and treatment of all pollutants including dust, prior to, during and throughout all construction operations; establishment of permanent vegetative cover on all disturbed areas and continued maintenance of said measures in accordance with sub-paragraph 4 of Part III, paragraph. 3.4 this Section. Work includes removal of all devices at the completion of the project as further described in Part 3.5 of this Section.
- C. Contractor is solely responsible for protection of all adjacent properties and affected downstream properties from encroachment or damage from soil erosion and/or the discharge of pollutants by water, air, or dust to any areas off the project site.
- D. Best Management Practices which are more fully described in the latest edition of the "Manual for Erosion and Sediment Control in Georgia- Vegetative and Structural Best Management Practices (BMPs) for Land Disturbing Activities" as published by the Georgia Soil and Water Conservation Commission shall be employed to stabilize all disturbed areas. The Engineer may require additional measures at no cost to Owner if Contractor is not preventing erosion from leaving the limits of work.

1.2 SUBMITTALS

- A. None required unless additional measures are required by Owner and/or Engineer.

1.3 PROJECT CONDITIONS

- A. Furnish and install all control measures prior to or concurrent with any land disturbance activity. The Contractor is responsible for the initial provision and installation all control measures and then the continued provision and installation of all measures throughout all construction operations and all sequences of construction operations.
- B. Schedule grading operations to allow permanent erosion control to take place in the same construction season. Avoid or minimize exposure of soils to winter weather. Maintain all controls until vegetative cover has been established.
- C. Construct and maintain temporary control measures until such time as permanent measures are effective in control of erosion, sediment and pollution from the site. Extent of measures shall be responsibility of Contractor.

- D. Stop all erosion, sediment, dust or other pollution from leaving the site and encroaching on downstream or surrounding properties.
- E. Temporary grassing shall be applied to all disturbed areas left idle for 72 hours.
- F. Contractor is responsible for all quantities of all BMPs regardless if shown on the ESPC. The extent of soil erosion control measures shown on the ESPC should be considered minimum.

1.4 QUALITY CRITERIA

- A. Procedures shall comply with the "Manual for Erosion and Sediment Control in Georgia", latest edition published by the Georgia Soil and Water Conservation Committee." Acquire and keep on-site throughout construction a copy of the latest edition of the "Field Manual for Erosion and Sediment Control in Georgia- Vegetative and Structural Best Management Practices (BMP's) for Land Disturbing Activities" as published by the Georgia Soil and Water Conservation Commission sometimes referred to as the "little green book". The Contractor is required to keep a log book on site documenting his inspection of all BMP's (minimum once/week and within 24 hrs of any storm event) and noting any corrections or modifications. General Contractor must also file a "Notice of Termination" when the site is finally stabilized and all stormwater management systems have been constructed and have been proven to be functioning in accordance with the Design Concept(s).
- B. Reference the ESPC for any other procedural manuals, publications, permits or other field guidelines required for the Contractor to obtain, understand and utilize in the performance of his work. By reference of same, said materials are made a part of these Specifications.

PART 2 - PRODUCTS

2.1 FILTER FABRIC

- A. Filter fabric for silt fences shall be a 36" Georgia DOT approved pervious sheet of synthetic polymer filaments non-woven from continuous filaments with wire fence backing. Filter fabric shall be of type recommended by its manufacturer for the intended application. The filter fabric shall meet the following requirements:
 - 1. Minimum average thickness: 30 mil (by ASTM D1777).
 - 2. Air permeability: 250 to 550 C.F.M./Sq. Ft.
 - 3. Minimum grab strength: 110 lbs. (by ASTM D1682).

2.2 FILTER STONE

- A. Aggregate filter shall conform to following gradations:

<u>Sieve Size</u>	<u>% by weight passing Square mesh sieve</u>
3"	100
3/4"	20 - 90
No. 4	0 - 20

2.3 STONE FOR EXIT/ENTRANCE PAD

- A. Stone shall comply with ASTM D448 size #1 (1 1/2" to 3 1/2").

2.4 EROSION CONTROL MATTING

- A. All areas of disturbance (slopes greater than 2:1 or as specified): Refer to latest edition of "Manual for Erosion and Sediment Control in Georgia" for changes to the BMP's listed below.
 - 1. Biodegradable netting impregnated with excelsior wood fiber such as manufactured by "Curlex";
 - 2. "Ero-Mat" by Verdyol;
 - 3. "Bon Terra CS2".

2.5 SYNTHETIC POLYMERS

- A. For all newly disturbed, graded or exposed soil surfaces, apply 1.5 gals/acre of approved erosion control polymer. Erosion control polymer is a water soluble synthetic polyacrylamide polymer suitable to be applied to disturbed soil surfaces where the polymer will chemically bind to fine clay particles and prevent clay from going into solution, such as:
 - 1. APS 600 Series Silt Stop, as manufactured by Applied Polymer Systems, Norcross, Georgia, Contact Steve Iwinski (678)461-9352.
 - 2. Or approved equal.
- B. Polymer shall be applied utilizing a hydro seeder mix of appropriate seed, fertilizer, lime and mulch for the same acre or without seed/fertilizer/lime/mulch mix.
- C. Follow all manufacturer's instructions and recommendations. Do not mechanically disturb treated areas after application. (*This does not include foot traffic as necessary to install erosion control blanket.*)
- E. Contractor shall furnish and install as necessary a minimum 200 lbs. of erosion control polymer for incidental "touch-up" or point source erosion areas."
- E. Furnish two (2) forms of synthetic polymer:
 - 1. Emulsion polymer for hydro seeder application with an active strength of 30%.
 - 2. Powder polymer for hand spreading with an active strength of 95%.

2.6 RIP RAP

- A. Rip Rap shall be granite stone with a minimum weight of one hundred fifty pounds (150 lbs.) per piece.
- B. Place rip rap at both ends of proposed concrete culvert and safety end sections.

PART 3 - EXECUTION

3.1 TEMPORARY EROSION CONTROL DEVICES

- A. Construct temporary sediment barriers of silt fence at all points where surface water flows from construction area bypassing temporary sediment traps if the area is subject to soil erosion; or as otherwise indicated on ESPC or as deemed necessary by inspectors.
- B. Install temporary sediment traps and temporary sediment basins in accordance with the location and details shown on the ESPC. Remove accumulated sediment when they are one-third full of silt continually until permanent vegetative cover is established.
- C. Install construction exit as indicated on ESPC with geotextile fabric underlayment. Maintain to prevent tracking and flow of mud onto public roads.
- D. Construct diversion berms, dikes (2'-0" wide x 1'-6" tall) or ditches at the tops of all slopes or as otherwise indicated on the ESPC. Machine compact these elements and plant temporary seed until permanent vegetative cover can be established.
- E. Maintain temporary barriers until permanent erosion control measures are established. Repair and replace barriers damaged or displaced by construction activity.
- F. Contractor shall clean out and/or adjust temporary sediment basin(s)/facility elevations to specified depth throughout duration of project after stabilization of all disturbed areas. Compact dam of sedimentation basin to minimum 95% Standard Proctor to the grade elevations shown on the ESPC.

3.2 SEDIMENTATION FACILITIES

- A. Construct temporary sedimentation facility prior to or concurrent with rough grading of site. Permanent sedimentation control measures shall be constructed concurrently with fine grading or partial fine grading of site and vegetative stabilization. Direct surface water into completed portions of sedimentation facility.
- B. Maintain temporary sediment traps around at all drainage structures (both on-site and/or off-site) until permanent vegetative cover has been established to prevent washing of sediment into public storm drainage system. Utilize "pigs-in-a-blanket" temporary sediment traps at all completed or partially completed single wing or double wing catch basins, drop inlets and yard inlets.
- C. Flush drainage lines between manholes and drainage structures as required during construction and after establishment of permanent erosion control measures to remove collected debris.
- D. Install rip rap at all locations indicated on the ESPC or other drawings as soon as feasible. It shall be reasonably well-graded granite stone sized from smallest to maximum size specified. Stones smaller than smallest size specified is not permitted. Control gradation of rip rap by visual inspection to assure thickness of rip rap conforms with the contract document requirements. Provide geotextile filter fabric under rip rap.

- E. After land disturbance operations of any kind, survey the sediment facility and determine that sediment volume that is available. If specified volume is not available, disassemble control measures, excavate sediment from facility and install control measures. Dispose of excavated sediment from facility, spread over slopes in accordance with contours shown on the Grading and Drainage Plan and stabilize facility with permanent vegetation. Prepare and submit a certified statement of correct sediment facility volume. Do not dispose of any excavated sediment into any drainage way which might lead said material off-site onto adjacent downstream properties.
- F. The existing creeks and ponds shall not be used in any manner for Erosion, Sediment or Pollution Control measures. Protect same from all erosion, sediment or pollutants of any kind.

3.3 GROUND COVER

- A. Protect all exposed soils with mulching (temporary measure) and vegetative ground cover (permanent measure).
- B. Install "Curlex", "Bon Terra CS2" or "Ero-Mat" by Verdyol blanket on all slopes greater than 3:1 along with vegetative cover unless otherwise indicated on the ESPC.
- C. Temporary Seeding consists of ground cover of temporary plant material on all graded areas which will not receive final grading or permanent planting within three (3) days.
- D. All grassing or planting operations shall include mulching as stabilization until ground cover by planting is effective.
- E. Reseed as required until full vegetative coverage is established.

3.4 MAINTENANCE

- A. Inspect all control elements after each rainfall event and a minimum of every two (2) weeks when no rainfall event(s) occur. Clear all debris and accumulated sediment from behind barriers when half full so their functional capacity is not reduced. Repair and replace any and all damaged measures of any kind.
- B. Maintain all erosion, sedimentation, pollution control measures for delivery of correct pond volume for a period of thirty (30) calendar days.

3.5 REMOVAL OF TEMPORARY EROSION CONTROL DEVICES

- A. As soon as permanent vegetative cover is established, Contractor shall remove temporary devices, including sediment barriers, berms, silt traps and similar devices. Contractor to remove retrofit structure and clean out all accumulated silt and debris in detention ponds to restore finished grades indicated on the ESPC.
- B. Contractor shall remove all excess silt from behind all silt fences and other filter devices and utilize it to repair erosion features if necessary. If silt is not needed for repairs, it shall be removed from the site by the contractor.

- C. Contractor shall remove silt fence in such a manner as to minimize damage to surrounding vegetative cover. All fence fabric, wire and posts shall be removed completely, and removed from the site.
- D. All disturbed areas created by removal of silt fence shall be immediately fine graded, stabilized and seeded with permanent grass to match surrounding areas. All rocks and debris shall be removed from the site. Stabilization of disturbed areas may require the use of a “geo-jute” fabric to prevent erosion and allow for mowing of same area. Erosion control fabrics with netting that will be entangled in mowers may not be acceptable in areas where mowing will occur. In the event seasonal considerations prevent establishment of permanent grass, Contractor shall establish temporary grass and return the following season to establish permanent grass.
- E. Remove all debris resulting from temporary erosion control from project site.
- F. Control dust from disturbed areas by means of mulching, irrigation, calcium chloride or other method subject to the Landscape Architect’s review.
- G. Should site conditions dictate that it is not prudent to remove all temporary erosion control devices at the time of Contractor demobilization; the Contractor must remobilize personnel and equipment to complete removal as soon as conditions allow. The Contractor will be responsible for the complete and timely removal of all temporary erosion control devices as soon as adequate permanent vegetative cover is established.

End of Section

SECTION 02 514

SITE CONCRETE

PART 1 - GENERAL

1.1 SCOPE

- A. The work covered by this section consists of furnishing and installing Portland cement concrete for site improvements which include concrete curbing, storm catch basin tops, concrete sidewalk, and any other concrete as indicated in Section 01 000, Project Scope & Performance Specification and on Construction Drawings.

1.2 SUBMITTALS

- A. Submit design mix certified by the testing laboratory to be approved by Owner's Representative and paid for by Owner, for the mix design based on cylinder check tests verifying the design mix.
- B. Submit mill certification certifying that cement, sand, aggregate, reinforcing steel and joint materials comply with the requirements of this Specification.
- C. Submit shop drawings for review prior to placement showing bending and placing details for steel reinforcing including bar sizes, spacings, bending and tagging identification.
- D. Submit complete manufacturer's catalog description of all joint materials and curing/sealing materials.

1.3 PROJECT CONDITIONS

- A. Installation shall comply with all state and local laws, ordinances, rules and regulations.
- B. Contractor shall obtain all required permits prior to start of construction.
- C. Survey and maintain all bench marks, monuments and other reference points, and if disturbed or destroyed, replace by registered Georgia land surveyor at no cost to Owner.
- D. Provide proper drainage during construction in a manner to prevent damage to the work, adjoining structures and adjoining and downstream property.
- E. Patching parts of a section of work between joints shall not be permitted. Remove and replace entire damaged sections when matching existing work.

1.4 QUALITY CRITERIA

- A. All work shall be performed in accordance with ACI 301.

1.5 GUARANTEE

- A. Site Concrete Contractor to provide Owner's Representative a written guarantee that all work is of good quality, free from faults and defects and in conformance with these Specifications; and that if, within one year after completion and acceptance of the Work,

any Work or materials are found to be defective, Contractor will promptly, without cost to Owner, correct such defective Work or materials.

PART 2 - PRODUCTS

2.1 BASE COURSE MATERIALS

- A. Base course shall be constructed of structural fill.

2.2 CONCRETE

- A. Concrete shall be 3,000 psi concrete shall be in compliance with ASTM C94.
- B. Cement shall comply with ASTM C150 normal Type I specifications.
- C. Aggregates shall comply with ASTM C33.
- D. Water shall be potable.
- E. No additives shall be used without prior review of Owner's Representative.

2.3 REINFORCING STEEL (if required)

- A. Reinforcing bars and dowels shall conform to ASTM A615, Grade 60, deformed bars with an uncoated finish.
- B. Welded wire fabric shall consist of deformed bars, furnished in flat sheets or coiled rolls with an uncoated finish, and shall conform to ASTM A-185.
- C. Tie wire shall be 16 gauge annealed steel.

2.4 FIBRILLATED FIBERS

- A. All sidewalk is to be constructed of Class "A", 3000 PSI Concrete with 100% Virgin Polypropylene Fibrillated Fibers added at the rate of 1.5 lbs. per cubic yard.

2.4 JOINT MATERIALS

- A. Expansion joint filler shall be non-extruding and resilient types conforming to AASHTO M-213 or M153.
- B. Poured joint sealer shall be a hot poured elastic type sealer intended for sealing joints in concrete pavements and shall conform to AASHTO M-173.

2.5 CURING AND SEALING MATERIALS

- A. Curing/sealing compound shall be "CS-309" as manufactured by W. R. Meadows or approved equal.

2.6 FORM MATERIALS

- A. Form materials shall comply with the requirements of ACI 301.

PART 3 - EXECUTION

3.1 INSPECTION

- A. Prior to placement of base material, installer shall inspect the site grading and ensure that the sub-grade has been properly placed and compacted, and is ready to receive the base material. He shall also determine that all site drainage, piped site utilities, underground electrical and communications conduits have been installed, tested and accepted by Owner's Representative.

3.2 PREPARATION

- A. Contractor shall submit to Owner's Representative for review all materials to be used in the base and pavements.
- B. Contractor shall repair subgrade as necessary to provide uniform surfaces.
- C. Spread base material and compact to 95% Maximum Theoretical Density and within 1/8 inch of required grade.
- D. Check field density with nuclear density device or other method acceptable to Owner's Representative.
- E. Set forms on firm foundation, true to grade and securely fastened in place. No settlement or springing of forms under the finishing machine will be allowed. Top face shall not vary from a true plane by more than 1/8 inch in 10 feet. Vertical sides shall not vary from a true plane by more than 1/4 inch.
- F. Clean and oil all forms prior to use.
- G. Provide work bridges where necessary for finishing, straight edging, making corrections, etc. to surface after concrete has been screeded. Bridges shall be rigidly constructed and easily moveable so that they will not come into contact with the concrete.
- H. Check alignment and grade elevations of forms and obtain approval of preparation and form work from Owner's Representative prior to placement of concrete.

3.3 CLEANING

- A. Concrete Driveway Aprons shall be acid washed and/or pressure washed at substantial completion by Contractor if required by Owner's Representative to achieve the desired appearance.

End of Section

SECTION 02 720

SITE DRAINAGE

PART 1 - GENERAL

1.1 DESCRIPTION

- A. Work described in this section includes, but is not limited to, construction of curb, storm structure top replacement, as indicated in Section 01 000, Project Scope & Performance Specification and on Construction Drawings.

1.2 SUBMITTAL

- A. Product data: Submit for each type of piping material, prefabricated structure, and casting. Indicate product descriptions and installation procedures.
- B. See Section 02 720, 3.3 for As-Built Record Drawings submittals.

1.3 QUALITY ASSURANCE

- A. Industry standards: Standards for the following, as referenced hereinafter.
 - 1. American Society for Testing and Materials (ASTM).
 - 2. American Concrete Institute (ACI).
 - 3. Georgia Department of Transportation, "Standard Specifications for the Construction of Roads and Bridges", 1983 edition, hereinafter referred to as Georgia D.O.T. Specifications.
 - 4. City of Dacula Development Regulations, Latest Revision.
 - 5. Gwinnett County Development Regulations, Latest Edition.

1.4 GUARANTEE

- A. Contractor shall guarantee the construction of all storm drainage for a period of one (1) year from date of Substantial Completion.

PART 2 - PRODUCTS

2.1 PIPING

- A. Storm drain pipe is to be of the type, size, class or gauge, and material illustrated in the Project Scope and Performance Specification and as indicated on the Drawings, if required.
- B. Reinforced concrete pipe, concrete headwalls, concrete storm structures, and safety flared end sections, if indicated on Drawings, shall conform to Georgia D.O.T. Standard Specifications.

2.2 CONCRETE, MASONRY AND ACCESSORY MATERIALS

- A. Concrete: 4000 psi compressive strength including form work, reinforcement and finish.
- B. Manhole brick: Meeting ASTM C32-73, Grade MM.

- C. Mortar: Meeting ASTM C270-80, Type M.
- D. Construction castings: Meeting ASTM A48-76, grey cast iron.
- E. Manhole steps: Meeting ASTM A48-76, Class 30B, integrally cast into manhole sidewalls.
- F. Gravel Fill: Meeting Ga.D.O.T. Specifications, Section 800, size #57 stone.
- G. Precast concrete manholes: Meeting ASTM C478-79, concentric cone type.

2.3 REINFORCING STEEL

- A. Reinforcing bars and dowels shall conform to ASTM A615, Grade 60, deformed bars with an uncoated finish.
- B. Welded wire fabric shall consist of deformed bars, furnished in flat sheets or coiled rolls with an uncoated finish, and shall conform to ASTM A-185.
- C. Tie wire shall be 16 gauge annealed steel.

PART 3 - EXECUTION

3.1 CONSTRUCTION OF DRAINAGE SYSTEM

- A. Excavation, filling and compaction for construction of drainage system shall be in accordance with Earthwork Section 02 200.
- B. Inspect piping prior to placing in trenches. Install no defective or damaged piping.
- C. Lay piping beginning at low point of the drainage system with joints lapped upgrade. Lay in proper alignment and to slopes indicated, fully supported on firm subgrade.
- D. Clean interior of piping of dirt and debris as work progresses. Place plugs in the ends of uncompleted piping at the end of each work period. Continue to flush lines between manholes and drainage structures as required to remove collected debris until permanent vegetative cover has been established.
- E. Lengths of storm drain pipe illustrated in the Project Scope and Performance Specification are approximate distances center to center of structures. Contractor is responsible for all pipe quantities to convey storm drainage to points indicated in accordance with the design concept illustrated.

3.2 DRAINAGE STRUCTURES

- A. Construct catch basins, drop inlets, headwalls and similar structures of reinforced concrete unless otherwise indicated; manholes of masonry, concrete or precast units at Contractor's option.
 - 1. Provide concrete foundations for manholes and other structures as indicated. All drainage structures shall have paved (mortar) inverts.
 - 2. Concrete structures shall be reinforced as indicated in the Project Scope and Performance Specification.
 - 3. All concrete construction shall receive a smooth formed finish in accordance with ACI-301-72 on all surfaces exposed to exterior or interior of structure; rough formed for all unexposed construction.
 - 4. Moist cure concrete for a minimum of seven days after placing.
- B. Mix mortar with only enough water for workability. Re-tempering of mortar will not be permitted. Keep mortar mixing and conveying equipment clean. Do not deposit mortar upon or permit contact with ground.
- C. Lay masonry in full mortar bed with ends and with full vertical joints, not more than 5/8" wide. Protect fresh masonry from freezing and from too rapid drying.
- D. Apply a 2" thickness mortar parge coating on interior and exterior of masonry walls surfaces.
- E. Set tops of frames and covers of manholes flush with finished surface.
- F. Set drainage gratings to elevations indicated in the Project Scope and Performance Specification.

3.3 AS-BUILT RECORD DRAWINGS

- A. Furnish two (2) sets of reproducible As-built Drawings of all portions of the storm sewer system(s) including the horizontal and vertical locations of all pipe structures, clean out connections and the relationship of storm sewer to all other built items in plan and profile. As-built shall be prepared and sealed by a Georgia Registered Land Surveyor and shall be considered an accurate representation of the built storm sewer system.

End of Section

SECTION 02 930

LAWNS AND GRASSES

PART 1 - GENERAL

- 1.1 DESCRIPTION: Work described in this section consists of the establishment of grassing of 100% of all areas disturbed by paving operations, driveway apron replacement, sidewalk installation, yard regrading, storage of equipment, except the area covered by paving or those areas designated for other plant materials as indicated in Section 01 000, Project Scope & Performance Specification and on Construction Drawings. Jogs on either side of driveways will be filled in with permanent grassing (Sod).

PART 2 - PRODUCT

- 2.1 FERTILIZER: Fertilizer shall be 19-19-19 grade, uniform in composition, free-flowing for application with spreading equipment, delivered to the site in bags or other containers, each fully labeled, conforming to the State fertilizer laws, and bearing the name, trade name, or trade-mark, and warranty of the producer. Engineer shall be furnished with duplicate copies of invoices for all fertilizer used on the project.
- 2.2 LIME: Ground limestone containing not less than 85% carbonates; 50% passing 100 mesh sieve and 90% passing 20 mesh sieve.
- 2.3 GRASS SEED: Shall be labeled in accordance with U.S. Department of Agriculture Rules and Regulations under the Federal Seed Act in effect on the date of Invitation of Bids. Seed shall be furnished in sealed standard containers, unless exception is granted in writing by Engineer. Seed which has become wet, moldy, or otherwise damaged in transit or in storage will not be acceptable. Seed shall be guaranteed 92% germination.
- A. Kentucky 31 Fescue (*Fescuta Elatior*). Seed: Fresh, clean, new seed testing 98% for purity and 85% for germination. September 15 - May 15.
- B. Common Bermuda (*Cynolon Dactylon*) Seed: Fresh, hulled, clean, new seed testing 98% for purity and 85% for germination. May 15 - September 15.
- 2.4 SOD: Sod replacement is required in all property owner's yards where disturbed by grading or other construction operations. Contractor shall replace Sod in kind and match existing condition.
- 2.5 WATER: Water used in this work shall be suitable for irrigation and free from ingredients harmful to plant life. Furnish hose and other watering equipment required for the work.
- 2.6 HYDROMULCH: Wood cellulose fiber containing no germination inhibiting or growth inhibiting agents. Characteristics shall be as follows:
- A. Percent moisture content: 9.0% ($\pm 3, 0\%$).
- B. Percent organic mater: 99.2% ($\pm 0.8\%$).

- C. Percent ash content: 0.8% (\pm 0.2%).
- D. pH: 4.8 (\pm 0.5).
- E. Water holding capacity: 150 grams water/100 grams fiber, minimum.

PART 3 - EXECUTION

- 3.1 **FERTILIZER:** Fertilizer shall be distributed uniformly at a rate of 800 pounds per acre, plus 1 ton agricultural lime per acre two (2) days prior to seeding, over the areas to be grassed, and shall be incorporated into the soil to a depth of at least 3 inches by disking or harrowing. The incorporation of fertilizer may be part of the tillage operation specified above. Undulations in the surface as a result of tillage or fertilizing shall be smoothed.
- 3.2 Approximately 4 weeks after seeding and when grass coverage has been established, apply 1 to 1 ½ pounds of ammonium nitrate per 1,000 square ft. to all seeded areas and immediately water using a fine spray. At the end of the maintenance period and prior to final inspection, apply 10 lbs. of specified fertilizer per 1,000 sq. ft. and water immediately.
- 3.3 **SEED:** Seed shall be Fescue or Bermuda. Method of seeding shall be hydro seeding or broadcast at Contractor's option; however, the method selected shall be a part of his erosion control plan.
- 3.4 **BROADCAST SEEDING:**
 - A. If conditions are such, by reason of drought, high winds, excessive moisture, or other factors, that satisfactory results are not likely to be obtained, Contractor shall stop the work, and work shall be resumed only when conditions are favorable again or when approved alternate or corrective measures and procedures have been put into effect. If inspection during seeding operations or after there is a show of green indicates that strips have been left, or skipped, Contractor shall sow additional seed on these areas.
 - B. Seeding shall be at the rate of 10 pounds per 1,000 sq. ft. for Fescue or 5 pounds per 1,000 sq. ft. for Bermuda.
 - C. Seed shall be broadcast either by hand or approved sowing equipment. The seed shall be uniformly distributed with the sower moving in one direction, and the remainder shall be sown with the sower moving at right angles to the first sowing. The seed shall be covered to an average depth of 1/4 inch by means of a brush harrow, spike-tooth harrow, chain harrow, cultipacker, or other approved device.
- 3.5 **HYDROSEEDING:** Apply seed/fertilizer/hydro mulch mixture in water slurry. Dispense using hydraulic mulching equipment in following minimum quantities:
 - A. Fertilizer: 130 lbs./acre.
 - B. Fescue Seed: 300 lbs./acre/Bermuda seed 150 pound/acre.
 - C. Hydromulch: 1500 lbs./acre.

- 3.6 **COMPACTION:** Immediately after the seeding operations specified above have been completed, the entire area shall be compacted by means of a cultipacker, roller, or other approved equipment weighing 60 to 90 pounds per linear foot of roller. If the soil is of such type that a smooth or corrugated roller cannot be operated satisfactorily, a pneumatic roller shall have tires of sufficient size so that complete coverage of the soil surface is obtained. When a cultipacker or similar equipment is used, the final rolling shall be at right angles to the prevailing winds to prevent dust.
- 3.7 **CLEAN-UP:** Remove from the site and dispose of all debris and foreign material. During the grassing operations, debris shall not be dumped on any part of the property or on any unauthorized placed.
- 3.8 **MAINTENANCE:**
- A. Contractor shall be responsible for establishment and proper care of the grassed areas during the period when the grass is becoming established and until final acceptance by Owner.
 - B. Maintenance shall consist of watering, weeding, repair of any erosion and reseeding as necessary to establish a 100% uniform stand of grass, and shall continue until acceptance.
 - C. All seeded areas that do not show satisfactory growth within 18 days after seeding shall be re-seeded and re-fertilized as directed until a satisfactory lawn is established. Full coverage is required in 60 days.
 - D. All lawn areas shall be protected until acceptance. All eroded and damaged areas, regardless of cause, shall be immediately repaired and reseeded. Protect all lawn areas from pedestrian or vehicular traffic.
- 3.9 **GUARANTEE AND ACCEPTANCE:**
- A. All disturbed areas must be 100% covered and final stabilized with 80% grassing established.

End of Section

SECTION 11 6813

PLAYGROUND EQUIPMENT

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Playground layout (staking).
- B. Concrete footings for playground equipment.
- C. Playground equipment.
- D. Location of each item of playground equipment is indicated on drawings.

1.2 RELATED REQUIREMENTS

- A. Section 03 3000 - Cast-in-Place Concrete: Footings for playground equipment.
- B. Section 03 4500 - Precast Architectural Concrete.
- C. Section 09 9113 - Exterior Painting.
- D. Section 31 2200 - Grading: Shaping subgrade to specified grade levels; removal of excess soil and rocks.
- E. Section 32 1313 - Concrete Paving: Footings for playground equipment.
- F. Section 32 1816.13 - Playground Protective Surfacing: Protective surfacing in playground area.

1.3 REFERENCE STANDARDS

- A. ASTM F1292 - Standard Specification for Impact Attenuation of Surfacing Materials Within the Use Zone of Playground Equipment 2018.
- B. ASTM F1487 - Standard Consumer Safety Performance Specification for Playground Equipment for Public Use 2017.
- C. CPSC Pub. No. 325 - Public Playground Safety Handbook 2010.

1.4 ADMINISTRATIVE REQUIREMENTS

- A. Preinstallation Meetings: Convene a meeting one week before starting earthwork for playground to discuss coordination between various installers.
- B. Require attendance by personnel responsible for grading and installers of playground equipment, protective surfacing, footings, and adjacent work.
- C. Include representatives of Contractor.
- D. Notify Landscape Architect at least 2 weeks prior to meeting.

1.5 SUBMITTALS

- A. See Section 01 3000 - Administrative Requirements, for submittal procedures.
- B. Proposals for Substitutions: Substitutions that will increase fall height, platform height, or maximum equipment height will not be considered; submit shop drawings with proposed modifications clearly identified and sufficient information to determine compliance with specified criteria.
- C. Product Data: For manufactured equipment, provide manufacturer's product data showing materials of construction, compliance with specified standards, installation procedures, safety limitations, and the number of users permitted.
 - 1. Certifications: Provide International Play Equipment Manufacturers Association (IPEMA) certification that product complies with ASTM F1487, excluding section 10 and 12.6.1.
- D. Product Data: For fabricated items, provide the following:
- E. Shop Drawings: Detailed scale drawings showing play event layout, Use Zone perimeters, and fall height for each play event.
 - 1. Show locations and dimensions of footings and anchorage points.
 - 2. Clearly identify mounting elevations in relation to a fixed survey point on site and to subgrade elevation and depth of protective surfacing.
 - 3. Show locations of underground utilities, storm drainage system and irrigation system.
 - 4. Show locations of related construction such as walkways and roadways, fences, site furnishings, and plantings.
- F. Samples: For each item that a color must be selected, provide color chart showing full range of colors and finishes.
- G. Maintenance Data: Provide manufacturer's recommended maintenance instructions and list of replaceable parts for each equipment item, with address and phone number of source of supply.
- H. Manufacturer's Field Report.
- I. Warranty: Submit manufacturer warranty and ensure that forms have been completed in Owner's name and registered with manufacturer.

1.6 QUALITY ASSURANCE

- A. Maintain one copy of the latest edition of ASTM F1487 and CPSC Pub. No. 325 at project site.
- B. Manufacturer Qualifications: Company regularly engaged in manufacturing materials and products specified in this section, with not less than three years of experience.
 - 1. Provide documentation showing that playground equipment similar to that specified has been installed in at least ten sites and in successful service for at least five years; provide addresses.
 - 2. Provide certificate of Insurance AA rated for minimum 1,000,000 dollars covering both product and general liability.
 - 3. Manufacturer's Representative: Provide product rep's name, company name and address, and playground safety training certificate.

- C. Installer Qualifications: Company certified by manufacturer for training and experience installing play events and equipment.

1.7 DELIVERY, STORAGE, AND HANDLING

- A. Deliver, handle, and store equipment to project site in accordance with manufacturer's recommendations.
- B. Store materials in a dry, covered area, elevated above grade.

1.8 WARRANTY

- A. See Section 01 7800 - Closeout Submittals, for additional warranty requirements.
- B. Provide per the minimum warranty period(s) specified by the playground and fitness equipment manufacturer shown/chosen for design of this project.

PART 2 PRODUCTS

2.1 MANUFACTURERS

- A. Playground Equipment:
 - 1. Game Time, Inc; [800] 235-2440: www.gametime.com/#sle or approved equal.

2.2 PLAYGROUND EQUIPMENT - GENERAL

- A. Design Assumptions: Because the safety of the playground depends on strict compliance with design criteria, this information is provided for Contractor's information.
 - 1. Playground has been designed for children ages 2 through 12.
 - 2. If deviations from specified dimensions, especially fall heights, is required, obtain approval prior to proceeding; follow approval request procedure as specified for substitutions.
- B. Mount equipment on concrete footings, unless otherwise indicated.
 - 1. Playground protective surfacing constitutes a resilient layer installed over subgrade; locate top of footings and anchorage devices below surface of subgrade.
 - 2. Protective Surfacing Depth: As indicated on drawings.
 - 3. Provide supports as required to mount equipment at proper height above finish and sub-grades to allow installation of sufficient depth of protective surfacing; portion of support below top of surfacing must comply with specified requirements for equipment.
 - 4. Paint portion of support that is intended to be installed below top surface of protective surfacing a different color, or mark in other permanent way, so that installers and maintainers of protective surfacing can easily determine whether sufficient depth has been installed.
- C. Provide permanent label for each equipment item stating age group that equipment was designed for, manufacturer identification, and warning labels in accordance with ASTM F1487.

2.3 PLAYGROUND EQUIPMENT

- A. Comply with ASTM F1487 and CPSC Pub. No. 325; provide equipment complying with specified requirements for relevant age group(s).
 - 1. Provide components having factory-drilled holes; do not use components with extra holes that will not be filled by hardware or covered by other components.

2.4 CUSTOM PLAY STRUCTURES

- A. Materials, Configuration, and Dimensions: As indicated on drawings.
- B. Fabricate in accordance with ASTM F1487, unless otherwise indicated; in particular, requirements for sharp points and edges, protrusions, entanglement hazards, crush and shear points, and head and neck entrapment.

2.5 MATERIALS

- A. Hardware: Provide without hazardous protrusions, corners, or finishes, and that require tools for removal after installation; countersunk fasteners are preferred.
- B. Anchors: In accordance with manufacturer's recommendations.
- C. Boards and Timbers: Free of holes, cracks, and loose knots; do not use wood or wood coatings that contain pesticides; do not utilize used lumber.

PART 3 EXECUTION

3.1 VERIFICATION OF CONDITIONS

- A. Verify that playground area has been graded to subgrade elevations required and that excess soil, rocks, and debris have been removed.
- B. Verify that playground equipment footings have been installed in proper locations and at proper elevations.
- C. Verify location of underground utilities and facilities in playground area; damage to underground utilities and facilities will be repaired at Contractor's expense.

3.2 PREPARATION

- A. Stake location of playground elements, including Use Zone perimeters, perimeter of protective surfacing, access and egress points, hard surfaces, walls, fences, and structures, and planting locations.
- B. Stake layout of entire Use Zone perimeter before starting any work and before subbase under resilient surfacing is laid.
 - 1. Verify that Use Zone perimeters do not overlap hard surfaces, whether currently installed or not.
 - 2. Verify that Use Zones are free of obstructions that would extend into resilient portion of protective surfacing.
 - 3. If conflicts or obstructions exist, notify Architect.
 - 4. Do not proceed until revised drawings have been provided, showing corrected layout, and obstructions have been removed.

3.3 INSTALLATION

- A. Coordinate work with preparation for and installation of protective surfacing specified in Section 32 1816.13; install protective surfacing after playground equipment installation.
- B. Install in accordance with CPSC Pub. No. 325, ASTM F1487, manufacturer's instructions, and requirements of authorities having jurisdiction (AHJ).
- C. Anchor equipment securely below bottom elevation of resilient surfacing layer.
- D. Install without sharp points, edges or protrusions, entanglement hazards, pinch, crush, or shear points.
- E. Do not modify play events on site without written approval of manufacturer.
- F. Install required signage if not factory installed.

3.4 FIELD QUALITY CONTROL

- A. Obtain the services of the equipment manufacturer's field representative to review the finished installation for compliance with specified requirements and with design criteria to the extent known to the Contractor; submit report of field review.
- B. Owner or Owner's representative will inspect playground equipment after installation to verify that playground meets specified design safety and accessibility requirements.
- C. Repair or replace rejected work until compliance is achieved.

3.5 CLEANING

- A. Restore adjacent existing areas that have been damaged from the construction.
- B. Clean playground equipment of construction materials, dirt, stains, filings, and blemishes due to shipment or installation; clean in accordance with manufacturer's instructions, using cleaning agents as recommended by manufacturer.
- C. Clean playground area of excess construction materials, debris, and waste.
- D. Remove excess and waste material and dispose of off-site in accordance with requirements of authorities having jurisdiction (AHJ).

3.6 PROTECTION

- A. Protect installed products until Date of Substantial Completion.
- B. Replace damaged products before Date of Substantial Completion.

End of Section

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SECTION 31 1100

CLEARING AND GRUBBING

PART 1 - GENERAL

1.1 DEFINITIONS

- A. Clearing is the removal of all vegetative obstructions which interfere with the construction. These items may include minor structures above and below existing grades and below finished grades identified on the Drawings, trees and their complete root systems, brush, other vegetative material in any condition (i.e., chipped, cut, wrenched, etc.) debris, fences and other such items except items indicated to be preserved on the Drawings.
- B. Grubbing is the incidental removal of all roots and stumps from the ground larger than 3/4 inch in diameter.

1.2 PROTECTION

- A. Avoid encroachment upon any areas outside the proposed grading limits.
 - 1. Minimize disruption to tree root systems.
 - 2. Equipment shall not twist, turn or backup into spaces outside the limits of disturbance unless approved in writing by the Owner's Representative and/or Project Landscape Architect.
 - 3. Avoid unnecessary removal of trees or cutting of roots.
 - 4. Do not park vehicles, store, or stage any materials or equipment under the overhanging branches or the drip line of trees to be saved.
 - B. Refer to Section 31 2500 Erosion Sediment and Pollution Controls, prior to site clearing and grubbing.
 - 1. Set and maintain any Erosion, Sediment and Pollution Control measures.
 - 2. Protect adjacent and downstream properties from soil erosion. Comply with all Erosion, Sediment and Pollution Control measures specified elsewhere and required by applicable codes and ordinances.
 - 3. Locate and mark all utilities, power poles and utility appliances or structures. Verify the horizontal and vertical locations. Protect existing facilities, utilities, and adjacent property.
 - 4. Erect Erosion, Sedimentation and Pollution Control Measures illustrated on the Drawings.
- 1.3 Set and maintain any Active or Passive Tree, Limits of Disturbance or Vegetation Protection Fencing prior to clearing operations in accordance with the Drawings.
- A. Protect areas outside limits of construction from encroachment by construction personnel or equipment regardless of property ownership. Set wooden post and orange safety fencing warning signs and other protective measures and warn the public of ongoing construction activities at limits of and a reasonable distance from the construction. Access shall be by specific written permission or easement only.
 - B. Construct 4'-0" high wooden post and perforated orange vinyl fencing around individual, or groups of trees and shrubs designated to be preserved on the Drawings. Barricades shall be located at the dripline of trees. Protect tree root systems from damage due to construction materials, construction operations, compaction, and erosion.

- C. Do not perform any clearing or any other construction operations, including material lay down beyond the approximate limits of construction or inside the limits of Tree Save Areas illustrated on the Drawings without express written consent of the Architect. Do not disturb existing trees or terrain unless illustrated on the Drawings.
- D. Protect finished paved, grassed, or planted areas from construction operations and debris.
- E. Clear only those areas in which construction or grading operations are required and includes all excavated, graded and filled areas.
- F. Protect all other areas from any damage resulting from clearing operations.
- G. Remove all cleared material from Project site and legally dispose of off-site.
- H. Unless otherwise directed, grub all cleared areas:
 1. In fill areas where design grade levels for building, roads or paved areas are to be placed, grub to minimum depth of twelve (12") inches below the finished design grade level as indicated on the Drawings.
 2. In all areas of excavation for structures, grub to the depth of the proposed excavation or to the depth that allows the area to be free of debris, rock, organic and inorganic materials, and unsuitable soils that would otherwise prevent the soil from being compacted to the density as indicated on the Drawings and stated in the specifications herein.

1.4 WORK INCLUDES, but is not limited to

- A. Clearing and Earthwork equipment movement shall be limited to areas designated on the Drawings.
- B. Do not disturb the existing terrain or existing vegetation outside the designated work area(s).
- C. Debris from clearing and/or grading operations (cleared vegetative matter, trees, root systems, remnant chipped material, stumps, etc.) shall be removed from the site, unless specifically directed otherwise by the Owner.
- D. At the Owner's sole discretion finely, chipped vegetative matter may be utilized as mulch for slope protection.

PART 2 – PRODUCTS

N/A

PART 3 – EXECUTION

N/A

End of Section

SECTION 31 2200

GRADING

PART 1 - GENERAL

- 1.1 Contractor to furnish all labor, materials, equipment, and incidentals required to perform all excavation, backfill, fill and grading required to complete the work as illustrated on the Drawings and as specified herein.
- 1.2 Provide all necessary shoring, sheeting, and bracing for the protection of work and safety of personnel. Engage a Georgia Registered Professional Engineer highly experienced in the design of such shoring and bracing systems to perform the design engineering for said shoring and bracing. Do not backfill or load walls and structural systems until said walls or systems are completely developed and structurally sound.
- 1.3 Contact the Utility Protection Center at 1-800-282-7411 not less than three (3) working days prior to earthwork operations.
- 1.4 Burning of debris on the Project site will not be permitted.
- 1.5 Provide Dewatering and Drainage procedures as needed to accomplish the work required in this section. Do not proceed with excavation until suitable dewatering has been provided and approved by the Landscape Architect/Engineer. Do not allow areas for water to pond. Execute necessary measures to eliminate water ponding. Submit Dewatering procedures for review to the Architect.
- 1.6 Rough Grading work includes but is not limited to:
 - A. Cutting, filling, and backfilling.
 - B. Rough Grade the site to create surfaces on the Project site within 0.2'-0.4' of the grade elevations illustrated on the Drawings.
 - C. Furnish, place, and compact any additional material necessary to bring existing grades.
 - D. Engineering and execution of shoring and bracing of any closely adjacent buildings and structures.
 - E. Engineering and Shop Drawings for alternate Grading schemes of any nature.
 - F. Excavation, removal, and replacement of unsuitable soil materials as described herein.
 - G. Rock removal as described herein.
 - H. Furnish and provide all means, methods, labor, equipment, and materials to complete the satisfactory construction of the Project.
 - I. Incidental topsoil stockpiling, excavation, redistribution and/or importation for re-spread.

1.7 EXCESS, UNSUITABLE, AND INSUFFICIENT MATERIALS

- A. Remove and legally dispose of excess and unsuitable materials from Project site unless otherwise directed by the Landscape Architect/Engineer. Unsuitable material may be placed on-site if, and only if, approved in writing by the Landscape Architect/Engineer or Owner prior to any on-site distribution as a deductive change order and then shall only be placed in non-structural fill areas of the Project site designated by the Owner's Representative.
- B. Provide satisfactory fill material in areas where existing materials are insufficient or unsuitable for earthwork operations.
- C. If, in the opinion of the Geotechnical Engineer, the material in its undisturbed natural condition at or below the final design grade indicated on the Drawings is unsuitable for its intended use; it shall be removed and replaced with suitable material.
- D. Contractor shall remove and replace unsuitable materials at the unit rates in accordance with the Bid Form. In accordance with the provision of the Agreement, the Contractor may be directed by the Owner's Representative to remove and replace unsuitable materials on a lump sum or time and materials basis should applicable unit rates not exist or not apply to the nature of unsuitable material encountered to be removed.

1.8 GRADING AND FILLING AROUND TREES

- A. Obtain a copy of Gwinnett County Buffer, Landscape, and Tree Ordinance(s); which is hereby made a part of these Specifications; and follow all pertinent guidelines regarding Grading and Filling operations at or near Tree Save Areas as illustrated on the Drawings.
- B. Maintain existing grade within Critical Root Zone (CRZ) of trees unless otherwise indicated.
- C. Where existing grade is above new finish grade illustrated around trees, hand excavate within drip line to new grade. Cut exposed roots approximately three (3") inches below elevation of new finish grade. Employ a tree surgeon to recommend procedures such as pruning of branches and stimulation of root growth. Provide subsequent maintenance during the contract period as recommended and long-range maintenance procedures to be followed, after completion of construction operations.
- D. Raising Grades (Where not supporting structures or pavements.)
 - 1. Clear plant materials to be removed and lightly grub areas to be filled. Light grubbing includes removal of stems, leaves and forest duff, while limiting damage to subsurface roots to the greatest extent practical.
 - 2. Where existing grade is four (4") inches or less below elevation of finish grade shown, provide fill using stockpiled topsoil. Use topsoil as specified. Place topsoil in single layer and do not compact.
 - 3. Where existing grade is more than four (4") but less than eight (8") inches below elevation of finish grade shown, place a layer of drainage fill on existing grade prior to placing topsoil. Place fill against trunks of trees to an elevation of approximately two (2") inches above finish grade and extending not less than eighteen (18") inches from tree trunk on all sides. For balance of area within drip line perimeter, place drainage fill to an elevation four (4") inches below finish grade and complete fill with a four (4") inch layer of topsoil. Do not compact stone or topsoil layers.
 - 4. Where finished grade is to be raised more than 8" within the drip line of trees to be preserved, place a 6" minimum layer of drainage fill (graded aggregate) on existing grade prior to placing fill material. Do not compact drainage layer. Place compacted fill over

drainage fill to 4" from finished grade. Place 4" topsoil over compacted fill to achieve finished grade. Do not compact topsoil.

1.9 FINE GRADING WORK INCLUDES BUT IS NOT LIMITED TO

- A. Finish Grading of site to create surfaces on the Project site within 0.1' of grade elevations illustrated on the Drawings.
- B. Final placement of topsoil and fine grading of same.
- C. Fine grading of all areas to provide a smooth contoured surface with positive drainage away from all structures and other use areas such that there are no areas of ponding. All areas to drain as illustrated on the Drawings.

1.10 QUALITY CRITERIA

- A. Perform work in a manner consistent with applicable codes and ordinances and with requirements of authorities having jurisdiction. Make work under this Section consistent with:
 - 1. Applicable OSHA rules and regulations.
 - 2. Latest edition of the Gwinnett County Development Regulations.
 - 3. Goals, criteria, and standards are conformed to the NPDES-GAR Permit 100001 as administered by the Georgia Environmental Protection Division.
- B. Employ a Georgia Registered Professional Engineer or Georgia Registered Land Surveyor experienced in reading architectural and engineering drawings, using measuring devices and tape, and skilled in the use of surveying equipment necessary to perform construction layout surveying and establishing benchmarks and monuments required for all the work illustrated on the Drawings.
- C. Earthwork monitoring and testing shall be performed by a Georgia Registered Geotechnical Engineer, selected, and paid for by the Owner.
- D. Make all excavation, backfilling, and compaction consistent with the following Reference Standard Designations by the American Society for Testing Materials (ASTM), or as otherwise noted on the Drawings:
 - 1. ASTM C136-76 - Sieve or Screen Analysis of Fine and Coarse Aggregates.
 - 2. ASTM D1556-64 (1974)-Density of Soil in Place by Sand-Cone Method.
 - 3. ASTM D698- Standard Proctor Compaction Test.
 - 4. ASTM D2167 (1972)-Density of Soil in Place by Rubber Balloon Method.
 - 5. ASTM D2487-69 (1975)-Classification of Soils for Engineering Purposes.
 - 6. ASTM D2922-78 - Density of Soil and Soil Aggregate in Place by Nuclear Methods.
 - 7. ASTM D2937-71-Density of the Soil in Place by Drive-Cylinder Method.

1.11 NOTIFICATION

- A. Notify Landscape Architect 24 hours prior to commencing any earthwork operations such as clearing, grubbing, cutting (excavation), filling (backfilling or embankment).
- B. Notify all utility providers prior to commencement of Earthwork operations.
- C. Prevent interruption of utility service possible when utility lines which are to be removed, relocated and or severed are encountered.

1.12 SUBMITTALS

- A. Submit detailed Shop Drawings and schematic diagrams as necessary to graphically describe all Shoring and Bracing procedures. Include calculations and schedules. Illustrate sequencing of all Shoring and Bracing.
- B. Submit detailed time schedule of all Earthwork operations to the Landscape Architect/Engineer for review prior to commencing work.

PART 2 – PRODUCTS

N/A

PART 3 – EXECUTION

N/A

End of Section

SECTION 31 2216

FINE GRADING

PART 1 - GENERAL

- 1.1 Finish grade disturbed areas, with a minimum four (4") inch depth of topsoil, in smooth, uniformly leveled, crowned, or contoured slopes between all new elevation surface points to existing, undisturbed grade elevations.
- 1.2 Grade areas adjacent to buildings for positive drainage to storm drainage structures and prevent ponding. Finish grades shall be within one tenth of a foot (0.1') of indicated elevations.
- 1.3 The Drawings indicate the levels, slopes, and contours of finished grade elevations for the entire site. Slight modifications as determined by the Architect may be required. Contractor shall make these modifications without extra cost to Owner.
- 1.4 Where compacted areas are disturbed by construction operations, scarify surface, reshape, and compact to required density.
- 1.5 Redistribute stockpiled topsoil to uniform depth over graded areas and other areas to receive landscaping or grassing, in a four (4") inch minimum depth. In the event the stripped topsoil is not sufficient to render a four (4") inch minimum depth, import clean topsoil sufficient to render a minimum four (4") inch depth as part of the at no additional cost.
- 1.6 Redistribute excess topsoil, subsoil from footing excavations, other soil matter and debris onto approved areas of the Owner's property at no additional cost to the Owner.
- 1.7 At completion of finish grading operation, entire site shall be ready for planting or grassing.
- 1.8 Where finish grading meets or abuts curbs, walks or similar pavements, upstream grades shall be slightly higher than pavements to permit drainage and prevent ponding behind curbs or walks.
- 1.9 Protect newly graded surfaces from traffic and erosion and keep free of debris. Where graded or compacted surfaces are damaged by subsequent operations, return to proper grade and state of compaction.
- 1.10 CLEAN-UP
 - A. Do not place such debris on private property without written consent of the Landscape Architect/Engineer and the Owner of such property.
 - B. Do not place debris or grubbed material around perimeter of site.
 - C. Remove all non-organic debris, trash, etc. from the site and dispose of in compliance with all applicable laws and regulations.

PART 2 – PRODUCTS

N/A

PART 3 – EXECUTION

N/A

End of Section

SECTION 31 2500

EROSION, SEDIMENTATION AND POLLUTION CONTROL

PART 1 – GENERAL

1.1 COMPLIANCE WITH FEDERAL CLEAN WATER ACT

- A. To maintain compliance with Federal Clean Water Act, the requirements of Georgia’s NPDES GAR100000 General Permit (*The Permit*) for construction are to be met in the following manner:
1. Contractor will be the “Operator” and will, together with the owner, be the “Primary Permittee” as defined in the most current edition of Georgia EPD NPDES, GAR 100001 Permit (The Permit). The Owner is responsible for filing the required Notice of Intent (N.O.I.); for initial notification for the new facility construction site (the Park) and all Erosion, Sedimentation and Pollution Control (ES&PC) measures throughout construction and the filing of a Notice of Termination (N.O.T.). A copy of the NOI and letter to EPD will be mailed to the Landscape Architect/Engineer, the Geotechnical Consultant, the NPDES Testing Agency, and Contractor for their records.
 2. A certification statement will be signed by the General Contractor and the grading subcontractor, stating that they agree to comply with the requirements of the Erosion, Sedimentation and Pollution Control Plan.
 3. INSPECTIONS - Each site is required to be inspected once every twenty-four (24) hours and after the end of a storm that has 0.5 inches of rainfall or greater as mandated by the NPDES Permit. The inspector must identify needed changes and revise the drawing accordingly or certify that the site is in compliance. Once a site is stabilized, inspections are required daily, weekly, and monthly until a Notice of Termination (NOT) is filed with EPD staff may have access to records at any time. Inspections are to be done by “qualified personnel” (*as defined in the GAR Permit*) employed by and paid by the General Contractor.
 4. A logbook will be furnished by Owner to the General Contractor for use in logging in each inspection required in Item 3. The logbook is to be available to Landscape Architect / Engineer and the Owner’s Representative for review at any time.
 5. A copy of the Erosion, Sediment and Pollution Control plan (ESPC) is to be updated by the General Contractor depicting any corrections or modifications to the ESPC plan as may occur during the course of the Work. This drawing is to be turned over to the Owner at Project close-out.
 6. At the close-out of the Project and when all site-work has been signed-off on by the Owner, the Owner will then issue a Notice of Termination with the Georgia EPD.
- B. Failure of the General Contractor to properly maintain the prescribed erosion, sediment, and pollution control requirements and after a twenty-four (24-hour) hour written notice from the Owner, may result in the Owner performing any necessary repairs or shutting down all work on the Project except work associated with compliance with the ESPC Plan until the site is considered in compliance with the Permit. A back charge to the Contract price will be done to compensate the Owner for all expenses incurred through a change order.

1.2 SCOPE

- A. Work described in this section includes the containment of sediment transport, control of erosion and treatment of pollutants prior to, during and throughout all Phases of the project, all construction operations; establishment of permanent vegetative cover and continued maintenance of said measures in accordance with Part 3.0 - Execution, Paragraph. 3.4 -

Maintenance of this section for the Project site. Erosion Sediment and Pollution Control may be referred to as “ES&PC” hereinafter.

- B. Contractor is solely responsible for protection of downstream properties from encroachment, damage, and removal of any, and all from soil erosion and/or the discharge of pollutants by water or air to any areas off the Project site.
- C. All ES&PC measures illustrated on the Drawings are to be considered the minimum required; additional control measures will be added if determined to be needed by any on-site inspections. Provide same as required.
- D. Comply with all applicable criteria of the Gwinnett County, State of Georgia, DNR, and EPD Permits, which are hereby made a part of these Specifications by reference. All such criteria are hereby made a part of Contractor’s work and should be included in his Contract Sum.
- E. By submittal of his Bid, the Contractor certifies all means, methods, labor, equipment, and materials, to furnish, install and maintain ES&PC Measures throughout the duration of the Project until the Owner is satisfied with construction of the Project, is included within the Contract Sum of his Bid.
- F. Contractor will be the “Operator” and will, together with the owner, the “Primary Permittee” as defined in the most current edition of Georgia EPD NPDES, GAR 100001 Permit (the Permit). The Contractor is responsible for filing the required Notice of Intent (NOI); for initial notification for the new facility construction site (the Park) and all ES&PC measures throughout construction and the filing of a Notice of Termination (NOT). Once one hundred percent (100%) permanent vegetative cover is established on all disturbed areas of the site. After the NOT is filed the Owner will take over responsibility of the Park.
- G. Contractor shall obtain required Gwinnett County permits and this work should be included in his Contract Sum.
- H. All discharge monitoring shall be the responsibility of the Owner.
- I. The State of Georgia, DNR, EPD, NPDES GAR 100001 Permit (the Permit) is hereby made a part of these Specifications by reference. As such Permit criteria are hereby made a part of Contractor’s work.
- J. The Contractor shall furnish, and supply all means, methods, labor, equipment, and materials necessary to complete satisfactory ES&PC for the project.

1.3 SUBMITTALS

- A. Schedule of operations:
 - 1. Submit schedule of exact dates operations including program for erosion, sediment and pollution control measures, maintenance of all said measures including control facilities, structures and devices and vegetative practices. The Contractor shall interpret and incorporate all Project Phases illustrated and described on the Drawings into his ES&PC Schedules.
 - 2. Show anticipated starting and completion dates for land-disturbing activities The Contractor shall interpret and incorporate all measures illustrated and described on the Drawings into his ES&PC Schedules.

- B. Submit a sample of the synthetic polymer such as "Silt Stop" by Applied Polymer Systems or Approved Equal.
- C. Submit a sample of Type C silt fence fabric such as "Terra Tex GASF-C" or Approved Equal.

1.4 PROJECT CONDITIONS

- A. Contractor should note that he is solely responsible for furnishing and installing all ES&PC measures prior to or concurrent with any land disturbance activity.
- B. Contractor is responsible for the initial provision and installation all ES&PC measures and then the continued provision and installation of all further measures throughout all construction operations and all sequences of construction operations until the issuance of a Notice of Termination (NOT) has been delivered, received, and accepted by the State of Georgia, DNR, EPD.
- C. Schedule grading operations to allow permanent erosion control to take place in the same construction season.
- D. Avoid or minimize exposure of soils to winter weather.
- E. Maintain all controls until vegetative cover has been established.
- F. Construct and maintain temporary control measures until such time as permanent measures are effective in control of erosion, sediment, and pollution from the site.
- G. Extent of measures shall be responsibility of Contractor.
- H. Stop all erosion, sediment, or pollution from leaving the site and encroaching on downstream or surrounding properties.
- I. Temporary grassing shall be applied to all disturbed areas left idle for seventy-two hours (72) per "Manual for Erosion and Sediment Control in Georgia", latest edition published by the "Georgia Soil and Water Conservation Committee".
- J. Contractor is responsible for all quantities of all control measures regardless as illustrated on the Drawings.
- K. Extent of ES&PC measures illustrated on the Drawings should be considered minimum.
- L. Expenses related to the removal, relocation, replacement and/or rerouting of any, and all existing utilities or other built, stored, stockpiled items of any kind, surface or subsurface is the responsibility of the Contractor and will be included in the Contract Sum.
- M. Project Phasing: The Contractor work includes the performance and maintenance of all ES&PC Measures through all Phases of the project until the issuance of a Notice of Termination (NOT) has been delivered, received, and accepted by the State of Georgia, DNR, EPD.

1.5 QUALITY CRITERIA

- A. Comply with "Manual for Erosion and Sediment Control in Georgia", latest edition published by the Georgia Soil and Water Conservation Committee." Contractor to always keep a copy of the Manual on site.

- B. Owner, in conjunction with the Operator, must file a “Notice of Intent” (NOI) in accordance with the Permit a minimum of seven (7) days prior to any land disturbing activities.
- C. Contractor is required to keep a logbook on site documenting his inspection of all control devices (minimum once/week and within 24 hrs. of any storm event) and noting any corrections or modifications.
- D. The Owner must also file a “Notice of Termination” (NOT) in accordance with the Permit upon final vegetative stabilization of the site and all storm water management systems have been constructed and have been proven to be functioning in accordance with the Design Concept(s). The delivery, receipt, and acceptance of the NOT by the State of Georgia, DNR, EPD is part of the Contractor’s Work.
- E. Reference the Drawings for any other procedural manuals, publications, permits or other field guidelines required for the Contractor to obtain, understand, and utilize in the performance of his work. By reference of same, said materials are made a part of these Specifications. Keep a legible copy of said manuals, publications, permits, or other guidelines onsite at all times.
- F. Reference the State of Georgia DNR, EPD, NPDES - GAR 100001 Permit (the Permit) and comply with all Quality Control criteria therein as it applies to the “Operator” of the Primary Permittee.

PART 2 – PRODUCTS

2.1 APPROVED EQUAL

- A. All specified products are to be provided as specified or “Approved Equal.”
 - 1. All references to vendors and ‘approved manufacturers’ are included for description of quality and control of the designated equipment/materials as basis of design. Equivalent items may be accepted if they meet all standards of quality and purpose for the intended use, as determined by the County.
 - 2. Proposed substitution of products shall be evaluated based on product construction, appearance, and performance. The Contractor will be responsible for submitting all documentation supporting proposed products a minimum of 15 days prior to the intended procurement date of the product. The acceptance or rejection of products offered as Equal, or substitution shall be at the sole discretion of the Owner.

2.2 FILTER FABRIC

- A. Filter fabric for silt fences shall be a 36" high Georgia DOT approved pervious sheet of strong rot-proof synthetic polymer filaments non-calendared woven fabric constructed with monofilament yarns only with wire fence backing. Filter fabric shall be of type recommended by its manufacturer for the intended application. The filter fabric shall meet the requirements for Type “C” Fencing as per Section 171.02 of the Georgia DOT Standard Specifications 2013, or latest edition.

2.3 FILTER STONE

A. Aggregate filter shall conform to following gradations:

% by weight passing

Sieve Size	Square mesh sieve
1. 3"	100
2. 3/4"	20 - 90
3. No. 4	0 – 20

2.4 STONE FOR EXIT/ENTRANCE PAD

A. Stone shall comply with ASTM D448 size #1 (1½" to 3½").

2.5 EROSION CONTROL BLANKET

A. Slopes 2.5:1 and steeper: Submit a sample, proposed installation methods and manufacturer's cut sheet for erosion control blanket material such as:

1. "Curlex II" with biodegradable FibreNet on both sides.
2. BioD-StrawCoco with 30% coconut fiber matrix and natural biodegradable netting on both sides by Rolanka.
3. "Tensar, North American Green BioNet SC150BN" erosion control blanket with biodegradable thread and 30% coconut fiber matrix.
4. Or Approved Equal.

B. Slopes 2.5:1 and flatter: Submit a sample, proposed installation methods and manufacturer's cut sheet for erosion control blanket material such as:

1. "Curlex NetFree" 100% biodegradable erosion control blanket.
2. "Tensar, North American Green BioNet S150BN" erosion control blanket with biodegradable thread.
3. "Jute Mat" with a minimum weight of 14.7 oz. per sy by Rolanka
4. Or Approved Equal.
5. Products with plastic/polypropylene netting are not to be used on potentially mowable slopes.

2.6 SYNTHETIC POLYMERS

A. Erosion control polymer is a water-soluble synthetic polyacrylamide polymer suitable to be applied to disturbed soil surfaces where the polymer will chemically bind to fine clay particles and prevent clay from going into solution, such as:

1. APS 600 Series Silt Stop, as manufactured by Applied Polymer Systems, Woodstock, Georgia, Contact Steve Iwinski (678) 494-5998.
2. GeoPolymer as manufactured by GeoStop.
3. Soil Mulch Polymer as manufactured by SoilMulch.
4. Or Approved Equal.

B. Contractor shall furnish, maintain on site, and apply as necessary on all newly disturbed, graded, or exposed soil surfaces an approved erosion control polymer at a rate as recommended by the manufacturer.

C. Polymer shall be applied utilizing a hydro seeder mix of appropriate seed, fertilizer, lime, and mulch for the same acre or without seed/fertilizer/lime/mulch mix.

- D. Follow all manufacturer's instructions and recommendations. Do not mechanically disturb treated areas after application. (This does not include foot traffic as necessary to install erosion control blanket).
- E. Contractor shall furnish and install as necessary a minimum 200 lbs. of erosion control polymer for incidental "touch-up" or point source erosion areas.
- F. Furnish two (2) forms of synthetic polymer:
 - 1. Emulsion polymer for hydro seeder application with an active strength of 30%.
 - 2. Powder polymer for hand spreading with an active strength of 95%.

PART 3 - EXECUTION

3.1 TEMPORARY EROSION CONTROL DEVICE

- A. Construct temporary sediment barriers of silt fence at all points where surface water flows from construction area bypassing a temporary sediment trap if the area is subject to soil erosion; or as otherwise illustrated on Drawings or as deemed necessary by the Engineer and County Inspectors.
- B. Install temporary sediment traps and temporary sediment basins in accordance with the location and details illustrated on the Drawings.
 - 1. Continually remove accumulated sediment when the BMP reaches one-third full of silt until permanent vegetative cover is established.
 - 2. Clean out and / or adjust temporary sediment basins / traps elevations to specified depth throughout duration of Project as drainage patterns dictate until stabilization of all upstream disturbed areas is achieved.
- C. Install construction exit as illustrated on Drawings. Maintain to prevent tracking and flow of mud onto public roads.
- D. Machine compact these elements and plant temporary seed until permanent vegetative cover can be established.
- E. Maintain temporary barriers until permanent erosion control measures are established. Repair and replace barriers damaged or displaced by construction activity.
- F. Compact embankment of sedimentation basin to minimum 95% Standard Proctor to the grade elevations illustrated on the Drawings.

3.2 SEDIMENTATION FACILITIES

- A. Construct temporary sedimentation facility prior to or concurrent with site construction.
- B. Install permanent sedimentation ES&PC measures concurrently with fine grading or partial fine grading of site and vegetative stabilization.
- C. Direct surface water into completed portions of sedimentation facility.
- D. Maintain temporary sediment traps around and at all drainage structures (both on-site and/or off-site) until permanent vegetative cover has been established to prevent washing of sediment into public storm sewer system.

- E. Utilize “pigs-in-a-blanket” as temporary sediment traps at all completed or partially completed single wing, double wing catch basins, drop inlets and yard inlets on the site and at any existing basins and inlets adjoining the site that can be affected by sediment washing off the site.
- F. Flush drainage lines between manholes and drainage structures as required during construction and after establishment of permanent erosion control measures to remove collected debris.
- G. Do not dispose of any excavated sediment into any drainage way which might lead said material off-site onto adjacent downstream properties.

3.3 GROUND COVER

- A. Protect all exposed soils with mulching (temporary measure) and vegetative ground cover (permanent measure).
- B. Ground cover consists of temporary seeding on all graded areas which will not receive final grading or permanent planting within three (3) days.
- C. All grassing or planting operations shall include mulching as stabilization until ground cover by planting is effective.
- D. Reseed as required until full vegetative coverage is established.

3.4 MAINTENANCE

- A. Inspect all control elements after each rainfall event and a minimum of every two (2) weeks when no rainfall event(s) occur.
- B. Clear all debris and accumulated sediment from behind barriers when half full so their functional capacity is not reduced during the construction period.
- C. Repair and replace any, and all damaged erosion and sedimentation control measures of any kind.
- D. Maintain all erosion, sedimentation, pollution control measures for delivery of correct pond volume for a period of forty-five (45) calendar days.

3.5 REMOVAL OF TEMPORARY EROSION CONTROL DEVICES

- A. As soon as permanent vegetative cover is established, Contractor shall remove temporary devices, including sediment barriers, berms, silt traps and similar devices.
- B. Contractor to remove retrofit structure and clean out all accumulated silt and debris in detention ponds to restore finished grades illustrated on the Drawings.
- C. Remove all debris resulting from temporary erosion control from Project site.
- D. Control dust from disturbed areas by means of mulching, irrigation, calcium chloride or other method subject to the Architect's review.

END OF SECTION

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SECTION 31 2514

STABILIZATION MEASURES FOR EROSION AND SEDIMENT CONTROL

PART 1 - GENERAL

1.1 PRODUCTS

- A. Submit proposed substitutions of products not less than 30 days prior to the anticipated installation date. Proposed substitutions shall be evaluated based on product construction, appearance, and performance. The Contractor will be responsible for submitting all documentation supporting proposed products not less than 30 days prior to the intended installation date of the product. The acceptance or rejection of products offered as Equal, or Substitution shall be at the sole discretion of the Owner.
- B. Filter fabric for silt fences shall be a 36" high Georgia DOT approved pervious sheet of strong rot-proof synthetic polymer filaments non-calendered woven fabric constructed with monofilament yarns only with wire fence backing. Filter fabric shall be of type recommended by its manufacturer for the intended application. The filter fabric shall meet the requirements for Type "C" Fencing as per Section 171.02 of the Georgia DOT Standard Specifications 1993, or latest edition.
- C. Filter Stone: Aggregate filter shall conform to following gradations:

% by Weight Passing	
<u>Sieve Size</u>	<u>Square Mesh Sieve</u>
(1)	3"
(2)	3/4 "
(3)	No. 4 0 – 20

- 1. Stone for Entrance Pad shall comply with ASTM D448 size #1 (1 1/2" to 3 1/2")
- D. Slopes 2.9:1 and steeper.
 - 1. "Curlex II" with biodegradable FibreNet on both sides.
 - 2. BioD-StrawCoco with 30% coconut fiber matrix and natural biodegradable netting on both sides.
 - 3. "Tensar, North American Green BioNet SC150BN" erosion control blanket with biodegradable thread and 30% coconut fiber matrix.
 - 4. Other approved equal.
- E. Slopes 3:1 and flatter:
 - 1. "Curlex NetFree" 100% biodegradable erosion control blanket.
 - 2. "Tensar, North American Green BioNet S150BN" erosion control blanket with biodegradable thread.
 - 3. "Jute Mat" with a minimum weight of 14.7 oz. per sq. yd.
 - 4. Other approved equal. Products with plastic/polypropylene netting are not to be used on potentially mowable slopes.
- F. "Profile Flexterra (FGM)" or approved equivalent may be utilized in lieu of Erosion Control Blankets. Application rates to be determined based on conditions in area(s) where it's to be utilized. Approval is required.

G. Synthetic Polymers

1. Contractor shall furnish, store on site, and apply APS 600 Series Silt Stop, as manufactured by Applied Polymer Systems, Woodstock, Georgia (678) 494-5998 or approved equivalent on all disturbed, graded, or exposed soil surfaces.
2. Polymer shall be applied utilizing a hydro seeder mix of appropriate seed, fertilizer, lime, and mulch for the same acre or without seed/fertilizer/lime/mulch mix.
3. Follow all manufacturers' instructions and recommendations. Do not mechanically disturb treated areas after application. (This does not include foot traffic to install erosion control blanket).
4. Contractor shall furnish, store, and install a minimum 200 lbs. of APS 700 Series Silt Stop or approved equivalent erosion control polymer "dry" for incidental "touch-up" or point source erosion areas.
5. Follow all manufacturers' instructions and recommendations for "dry" application. Do not mechanically disturb treated areas after application.

End of Section

SECTION 32 1816.13

PLAYGROUND PROTECTIVE SURFACING

PART 1 - GENERAL

1.1 SECTION INCLUDES

- A. Removal of exiting surfacing and correction of grades as necessary.
- B. Protective surfacing for playground area.
- C. Subbase under resilient surfacing.
- D. Containment curbs.
- E. Provide as specified on the Drawings.
 - 1. Safety is of the utmost importance; therefore, the playground surface shall form play-friendly surface that will allow access for persons using wheelchairs, crutches, walkers, or other devices to assist with mobility.

1.2 RELATED REQUIREMENTS

- A. Section 32 3213 – Cast in Place Concrete
- B. Section 32 0516 - Aggregates for Exterior Improvements
- C. Section 32 0519 – Geo-synthetics for Exterior Improvements

1.3 SUBMITTALS

- A. The submittals as detailed in this section are each individually a requirement to be considered as a responsive Contractor/Subcontractor for the project. All Items Listed in this section must be within 30 calendar days after receiving Notice to Proceed.
- B. Proposed substitutions of products shall be evaluated based on product construction, appearance, and performance. The Contractor will be responsible for submitting all documentation supporting proposed products not less than 90 days prior to the intended installation date of the product. The acceptance or rejection of products offered as Equal, or Substitution shall be at the sole discretion of the Owner.

1.4 INSURANCE REQUIREMENTS

- A. Sample Warranty Certificate.
- B. Sample Insured Warranty Accord.
- C. Sample Insurance Accord – General Liability, Auto, and Workmen’s Compensation.

PART 2 – PRODUCTS

2.1 APPROVED EQUAL

- A. All specified products are to be provided as specified or “Approved Equal”.
 - 1. All references to vendors and “approved manufacturers” are included for description of quality and content of the designated equipment/materials as basis of design. Equivalent items may be accepted if they meet all standards of quality and purpose for the intended use, as determined by the County.
 - 2. Proposed substitutions of products shall be evaluated based on product construction, appearance, and performance. The Contractor will be responsible for submitting all documentation supporting proposed products at a minimum of 15 days prior to the intended procurement date of the product. The acceptance or rejection of products offered as Equal, or Substitution shall be at the sole discretion of the Owner.
- B. Material must meet current NPSI, STC, IPEMA and ASTM standards for playground surfacing.
- C. The contractor shall be responsible for ensuring that the Playground Protective Surfacing meets all current ADA standards and passes Gwinnett County regulatory review. County review authorities will be in the Office of the Fire Marshall, 678-518-6100. Provide all samples and information necessary to County review authorities to confirm acceptability of surface material not less than 60 days prior to the anticipated installation date.

2.2 Submittals:

- A. Comply with Contract Documents sections.
 - 1. Provide cut sheets and test results for product that verify compliance with all referenced ASTM, ADA Standards.
 - 2. Operation Maintenance Manual: Submit manufacturer's operation and maintenance manual; including operation, maintenance, adjustment, and cleaning instructions; trouble shooting guide; parts list.
 - 3. All shop drawings and installation instructions.
- B. Warranty: Provide 1-year warranty against defects in workmanship and 5-year warranty against defects in materials, unless otherwise specified.

PART 3 – EXECUTION

- 3.1 Install so, as to provide full depth as illustrated on the Drawings and/or Details.

End of Section

SECTION 32 3113

CHAIN LINK FENCES AND GATES

PART 1 - GENERAL

1.1 Work described in this section includes, but is not limited to; all labor, materials, equipment, and services necessary for and reasonably incidental to the proper construction of chain link fences and gates as indicated on the drawings in various locations.

A. 42" high chain link fence with 4' gate, Toddler Play Area.

1.2 DELIVERY, STORAGE AND HANDLING

A. Store materials off the ground.

B. Handle materials in a way which prevents dents, bends, and scars. Replace materials which are damaged prior to Substantial Completion.

1.3 QUALITY CRITERIA

A. Work shall be performed by skilled mechanics experienced in fencing installation. Fence shall be set plumb, online, properly tensioned, and securely fastened. Locate temporary fencing as required to completely surround and enclose areas of construction activity, construction parking and material or tool storage areas to protect the public safety health and welfare. Permanent fencing is shown on the drawings.

PART 2 - PRODUCTS

2.1 Furnish and install fence types at locations as illustrated on the Drawings.

A. Description of Fence Types

1. 42" Fence is forty-two inches overall height with top and bottom rails. All fencing components including posts shall have fused black vinyl coating per ASTM-F668 Class 2B. Gates are included as per the drawings.

B. Fabric

1. All fabric shall be thermally fused black PVC (7 mil minimum) coated continuous galvanized chain link nine (9) gauge (core wire before coating) woven wire with selvage knuckled at top and bottom.

C. Steel Pipe

1. All posts used in the construction of this fence shall be hot-dipped galvanized schedule 40 pipe with a minimum yield strength of 30,000 psi; sizes as indicated.
2. Hot-dipped galvanized with minimum average 1.8 oz. /sq. ft. of coated surface area.
3. All posts to have fused black vinyl coating.

D. Terminal and Gate Posts

1. 42" Fence
 - a. Terminal, corner and pull posts shall be 2.875" O.D. Typical.
 - b. Gate posts shall be 3.5" O.D. Typical.
2. General

- a. Terminal posts shall be installed at every point that fence changes grade or turns a corner. All posts to have fused black vinyl coating.

E. Line Posts

1. All Line Posts shall be 2.375" O.D. pipe, typical.
2. All line posts to be evenly spaced as indicated on plans.
3. All posts to have fused black vinyl coating.

F. Top Rail

1. Top rails shall be 1.66" O.D. typical.
2. All joints to be swedge type.
3. Top rails shall pass through line post tops and be fastened to terminal posts by pressed steel connectors.
4. Top rails shall have an expansion sleeve every 30' O.C.
5. Top rail shall be kept parallel to ground - uneven top rail will not be accepted.
6. All rails to have fused black vinyl coating.

G. Bottom Rail

1. Bottom rail shall be 1.66" O.D. typical.
2. All joints to be swedge type.
3. Bottom rail to be installed between posts with fittings and accessories of matching finish.
4. Top rail shall be kept parallel to ground - uneven top rail will not be accepted.
5. All rails to have fused black vinyl coating.

H. Braces

1. Braces shall be same as top rail and installed midway between top rail and bottom of fabric.
2. Braces shall be fastened to posts with pressed steel connectors.
3. Truss with 3/8" rod with turnbuckle.
4. Braces to be installed between each terminal post and to adjacent line post each way.
5. All braces to have fused black vinyl coating.

I. Fabric Connections

1. Fabric shall be fastened to terminal posts with 3/16" x 3/4" tension bars with 11-gauge 7/8" wide steel bands fastened at a maximum of 12" O.C.
2. Fabric shall be fastened to line posts and top rails with steel tie wires. Aluminum wire ties are not acceptable for use in any locations.
3. Steel wire ties to be at intervals not exceeding 15" O.C. at line posts, not exceeding 24" at bottom rails and 16" O.C. at top rails.
4. All connections to have fused black vinyl coating.

2.2 All terminal, corner, and pull post to be of sufficient length to extend 36" minimum or one third post above ground height (whichever is greater) into a concrete footing that is a minimum diameter of 12" or four times the post diameter (whichever is greater) and all line posts shall be set in concrete footings with a depth of 36" and diameter of 10" or four times the post diameter (whichever is greater).

2.3 Miscellaneous fittings and hardware shall be furnished as needed and shall be galvanized. All items are to have fused black vinyl coating.

2.4 Gate Latch

- A. Gate Latch to be "Strong Arm Latch". Product is available from DAC Industries, Inc., (800) 888-9768. Website: www.dacindustries.com. Or approved equal.

- B. All products to be provided as specified or "Approved Equal".
- C. Model #4000 Strong Arm Gate Latch or approved equal.
- D. Furnish and install gate latch types at locations as illustrated on the Drawings.

2.5 TEMPORARY CONSTRUCTION FENCE:

- A. This section provides minimum guide specifications for the installation of a temporary site construction fence as specified below. The Contractor has the option to install a fence that provides greater security for the construction site.
- B. "Temporary Fence" of 12.5-gauge wire, 6 inches spacing between stays (vertical wires), minimum of 72 inches in height and Type 1 galvanized coating.
- C. Studded "T" posts of high strength steel and a minimum of 6' in height and a maximum spacing of 8' on center.

PART 3 - EXECUTION

3.1 INSTALLATION

- A. Brace end, corner and pull posts with horizontal intermediate brace and truss braces.
- B. Install top rail continuous with couplings not less than 6" long.
- C. Install fabric on exterior of enclosed space.
 - 1. Stretch fabric taut, allowing approximately 2" clearance at grade.
 - 2. Fasten to line posts and to rail with ties, all other areas with stretcher bars.
 - 3. Tie fabric to line posts at 15" O. C. and to all horizontal rails at 24" O. C. as per drawings.
 - 4. Fabric shall not bypass end, gate, and corner or pull posts.
 - 5. Stretcher bars shall be threaded through fabric and secured to posts by bands or other mechanical devices.
- D. Install bottom rail between posts with fittings and accessories.
- E. Install gates complete with specified hardware at locations indicated on the Drawings or as may be acceptable to the Owner. Adjust and lubricate all hardware.

End of Section

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SECTION 32 9300

PLANTS

PART 1 - GENERAL

1.1 SCOPE

- A. Contractor shall furnish all labor, materials, and equipment required by or indicated by the Drawings and Specifications to complete the work of this Section.
- B. Contractor's attention is directed to the fact that there are active utilities located within the limits of the work. Before commencing any work required under this section, the Contractor shall locate all utilities, subsurface drainage, and underground construction so that proper precautions may be taken not to disturb or damage any subsurface improvements. Contractor shall be held responsible for making, at his own expense, all repairs to damaged utilities resulting from the work covered by this section.
- C. Approval and Selection of Materials and Work
1. Selection of all materials and the execution of all operations required under the Specifications and Drawings shall be subject to the approval of the Landscape Architect, who shall have the right to reject any, and all materials and any, and all work which, in their opinion, does not meet the requirements of the Drawings and Specifications at any stage of the operations.
 2. Any deviation from the Drawings and Specifications must be submitted in writing by Contractor to Landscape Architect for approval prior to any work taking place.
 3. All rejected materials shall be removed from the site by Contractor at no cost to the Owner.
- D. Protection of Materials/Installation
1. Contractor is responsible for the protection and security of materials delivered to the construction site and the installed plant materials until the end of the maintenance period outlined herein.
- E. Project Conditions
1. Maintain access, at all times to any/all existing adjacent private drives.
 2. Do not unload or store materials in private drives.
 3. Do not park in private drives or public right-of-ways.
 4. Contractor is responsible for watering of plantings at all times and watering rates.
 5. Contractor's watering responsibility will cease only after final acceptance of the Work.
- F. Design Premise
1. Design of park landscape incorporates the following criteria:
 - a. Low Maintenance.
 - b. Plant material hardiness and survivability.
 - c. Nature of People.
 - d. Pedestrian traffic patterns.
 - e. Plant material availability, cost, and replacement.
 - f. Native plant material.
 2. If Contractor elects to submit for a material change to trees, plants, or ground cover then the above criteria must be taken into consideration during the material selection process.

- G. Contractor shall provide all means, methods, labor, equipment, and materials to satisfactorily complete the construction of the Project.

1.2 SUBMITTALS

- A. Landscape Subcontractor shall submit photographs of representative sampling not less than ninety (90) calendar days in advance of anticipated start date of planting of proposed plant material for the Landscape Architect's review.
- B. Submitted photographs shall clearly demonstrate the height, vigor, and size of material (with a recognizable scaling device in the picture), prior to ordering material.
- C. Materials which have not been photographed and reviewed by the Landscape Architect are subject to rejection and replacement at no cost to the Owner.

1.3 REFERENCES

- A. Standardized Plant Names (most recent edition), American Joint Committee on Horticultural Nomenclature.
- B. American Standard for Nursery Stock - (most recent edition).
- C. Technical Glossary of Horticultural and Landscape Research Institute, Inc.
- D. All Planting shall conform to the Gwinnet County Standards which are hereby made a part of these Specifications.

1.4 PLANT GUARANTEE AND REPLACEMENT

- A. Plants shall be guaranteed for one (1) year from the date of Final Payment and shall be alive and have achieved satisfactory growth at the end of the guarantee period.
- B. This guarantee does not apply to existing vegetation that has been transplanted on site.
- C. At the end of the guarantee period, inspection of new planting will be made by the landscape Architect upon receiving written notice requesting such inspection from the Contractor at least five (5) days before the anticipated date.
- D. Any plant required under this Contract that is dead, unhealthy, and unsightly or in a badly impaired condition, as determined by the Landscape Architect, shall be removed from the site.
- E. These and any plants missing due to the Contractor's negligence shall be replaced as soon as conditions permit during the normal planting season at no additional cost to the Owner.
- F. All replacement shall be, in compliance with the Drawings and Specifications.

1.5 MAINTENANCE

- A. Contractor shall be responsible for establishment and proper care of the landscaped areas during the period when the plants are becoming established and until final acceptance by Owner.

- B. Maintenance of trees, plants and ground covers shall be accomplished as necessary to promote plant health and vigor until Final Completion of the project.
- C. Landscaped areas and trees shall be protected from damage or disturbance until Final Completion of the project.
- D. Eroded and damaged areas, regardless of cause, shall be immediately repaired and re-mulched.
- E. Protect all plantings from pedestrian or vehicular traffic.
- F. Maintenance shall include trimming, pruning, fertilizing, watering, weeding, cultivating, mulching, tightening, and repairing guys, removal of dead vegetation, resetting plants to proper grades or upright position and restoration of the planting saucer, and any other necessary operations.
- G. Watering of trees shall include placing twenty-five (25) gallon "ooze tubes" at each tree with a caliper of 2" or greater and filling as needed to maintain tree health for the duration of the warranty period. Contractor will provide "ooze tubes" and water.

1.6 CLEAN-UP OF SITE

- A. At the end of each day's work, the Contractor shall remove all trash and other debris resulting from his work on the site.
- B. At all times rubbish and trash generated from the Contractor shall be kept clear of vehicular and pedestrian circulation throughout the site.
- C. Prior to date of final completion, all paved areas adjacent to planting areas shall be cleaned thoroughly by sweeping and/or pressure washing.
- D. Any defacement or stains on pavement or building caused by plant operations shall be removed at no additional cost to the Owner.
- E. All construction equipment, excess materials, tools, rubbish, or debris shall be removed from the site at no additional cost to the Owner.
- F. Drains on the site that has accumulated soil, mulch, or any other material due to the planting operation, shall be cleaned prior to review by the Landscape Architect at no additional cost to the Owner.
- G. Plantings shall be free of paint, grease or other damage caused by any or all Sub-Contractors. Contractor shall be responsible for the resolution of any such damage.

1.7 SAMPLES, TESTS, AND INSPECTIONS

- A. Sixty (60) days prior to the purchase of plant materials, the Landscape Architect shall be notified in writing of the proposed sources of the required plant materials.
- B. Any specified or desired sampling or testing by the Landscape Architect shall be performed by a commercial testing laboratory, approved by the Association of Official Agricultural Chemists of any State Agricultural Experiment Station.

- C. Tests shall be performed in sufficient number to ensure that all required materials for the planting operation are in accordance with the Drawings and Specifications.
- D. Copies of the test results shall be furnished to the Landscape Architect for this review.
- E. All testing shall be performed at no additional cost to the Owner.
- F. Landscape Architect reserves the right to inspect and tag all materials required to complete the planting operation.
- G. If for any reason the Landscape Architect believes that the required material or materials are not in accordance with the Drawings and Specifications, they shall be replaced with acceptable materials at no additional cost to the Owner.
- H. Landscape Architect shall have the option to inspect topsoil for trees, shrubs, and ground cover areas to determine whether it is in accordance with the Drawings and Specifications.
- I. Contractor shall be responsible for all certificates of inspection of plant materials that may be required by Federal, State, or other authorities to accompany shipments of plants at no cost to the Owner.

PART 2 - PRODUCTS

2.1 MATERIALS OTHER THAN PLANTS

- A. Contractor shall furnish at his expense, sufficient topsoil to properly install all work as required by the Drawings and Specifications.
- B. "Mulch" shall be as designated on the Planting Plans.
 - 1. Contractor shall use double-ground, screened hardwood mulch which shall be free of limbs, sticks and other deleterious materials.
- C. Water
 - 1. Water shall be free from oil, acid, alkali, salt, and other substances harmful to plant growth.
 - 2. Contractor shall provide an adequate supply of water to meet the requirements of the Drawings and Specifications at no cost to the Owner.
 - 3. Contractor shall also furnish all necessary hose equipment, attachments, and accessories for the adequate irrigation of planted areas as may be required to complete the work as specified.
- D. Lime
 - 1. Lime shall be dolomitic agricultural ground limestone containing a least 85% of total carbonates and ground to such fineness that at least 50% will pass 100 mesh sieves and at least 90% will pass 30 mesh sieves.
- E. Commercial Fertilizer
 - 1. Shall be 13-13-13 formula for ground cover and 14-14-14-time release fertilizer for trees and shrubs and shall conform to the applicable state fertilizer laws.
 - 2. It shall be uniform in composition, dry and shall be delivered to the site in original, unopened containers, each bearing the manufacturer's guaranteed analysis.
 - 3. Any fertilizer which becomes caked or otherwise damaged making it unsuitable for use will not be accepted.

- F. Prepared Soil Mixture
 - 1. Soil mixture for use where specified for backfilling plant pits, beds and planter walls shall be mixed on the Project site.
 - 2. Topsoil shall be thoroughly mixed with organic compost, or equivalent approved by Landscape Architect, in the proportions by volume of three (3) parts of topsoil to one (1) part of organic compost.
 - 3. Mixing shall be done in a manner to ensure uniform distribution of materials throughout the mixture.

- G. Burlap shall be made of jute and shall weight not less than 7.2 ounces per square yard.

- H. For fill and topsoiling of areas to be repaired, soil shall be of at least equal quality to that which exists in areas adjacent to the area to be repaired. Soil shall be used that is free from roots, stones, and other materials that hinder grading, planting, and maintenance operations and that is free from objectionable weed seeds and toxic substances.

- I. Materials for Staking and Guying
 - 1. Stakes for supporting trees shall be six (6') foot long "T" posts and painted flat black.
 - 2. Wire for guys or for fastening trees to stakes shall be No. 12 gauge pliable, galvanized iron.
 - 3. Hose to encase guy wires or wires used for fastening trees to stakes shall be new 2-ply reinforced black rubber garden hose.
 - 4. Twine for tying shall be lightly tarred medium or coarse sisal yarn.
 - 5. Hardware used in staking and guying operations shall be hot dipped galvanized steel.
 - 6. Anchors used in guying shall be rough sawn, pressure treated wood.

2.2 PLANT MATERIALS

- A. A list of plants is illustrated on the accompanying drawing under "Plant Schedule".
- B. Contractor shall verify all plant quantities prior to submitting bids and in all cases the keyed plans shall govern.
- C. Any variation between the keyed plans and the quantities illustrated on the "Plant Schedule" shall not constitute grounds for cost adjustments.
- D. Contractor is responsible for his plant quantities to reflect the landscape design at the specified plant spacing.
- E. Names of plants required under this contract conform to those given in Standardized Plant Names, (most recent edition) prepared by the American Joint Committee on Horticultural Nomenclature. Names of varieties not included therein conform generally with names accepted in the nursery trade.
- F. All plant materials shall be "Specimen Plants" as defined in the Technical Glossary of Horticulture and Landscape Terminology (most recent edition) prepared by the Horticultural Research Institute, Inc.
- G. Plants shall be typical of their species and variety, have normal growth habits, well-developed branches, densely foliated and vigorous fibrous root systems.
- H. No trees will be accepted unless they show healthy growth and satisfactory foliage conditions.

- I. Landscape Architect reserves the right to refuse any plants at any time during construction or the guarantee period, if such plants do not meet the standards set.
1. Plants shall be free from defects, injuries, plant diseases and insect infestations.
 2. No infested plants shall be used at any time. Such plants found during construction shall be removed that day and replaced immediately with healthy specimens.
 3. Plant heights in relationship to caliper; plant heights in relationship to minimum width of foliage; spread of root systems; size of root balls and any other standards shall be in accordance with American Standard for Nursery Stock (most recent edition) prepared by the American Association of Nurserymen, Inc.
 4. All plants of each particular variety shall be reasonably uniform in size and configuration.
 5. Plants shall be freshly dug, and nursery grown.
 6. Nursery grown plants shall have been transplanted or root pruned at least once in the past two (2) years.
 7. Plants shall have been grown under climatic conditions similar to those in the Project locality or have been acclimated for at least two (2) years to conditions similar to those in the Project locality.
 8. All new trees shall have straight trunks with a single leader intact unless multi-stem is specified.
 9. Bark shall be free of abrasions and all fresh cuts over 1¼ inches shall be calloused over. Trees will not be accepted which have had their leaders cut or which have had their leaders damaged so that cutting is necessary.
 10. Unless otherwise specified, all deciduous shade trees, 2-1/2" caliper or larger, shall be free of branches up to five feet from the top of the root ball and 6'-8" from the top of the root ball when tree is in or adjacent to walkways/plazas or other pedestrian areas. Trees shall be well branched and have straight stems.
 11. All plants shall equal or exceed the measurements specified in the "Plant Schedule", which are minimum acceptable sizes.
 12. Any necessary pruning shall be done at the time of planting and all plants shall be measured after pruning with branches in their normal position.
 13. Seed shall be furnished in sealed standard containers.
 14. Seed that is wet or moldy or that has been otherwise damaged in transit or storage will not be acceptable.
- J. Plants shall be dug and prepared for shipment in a manner that will not cause any damage to the branches, shape, and future development of the plants after planting.
1. Root balls of balled and burlapped plants which cannot be planted immediately on delivery shall be covered with moist soil or mulch or other protection from drying winds.
 2. Bare-rooted plants if specified shall be planted or healed-in immediately upon delivery.
 3. All plants shall be watered upon delivery.
- K. All plants shall be balled and burlapped unless otherwise specified.
1. They shall be dug with firm, natural balls of earth of sufficient diameter and depth to encompass the fibrous and feeding root system necessary for full recovery for the plant.
 2. Balls shall be firmly wrapped with burlap and bound with twine or cord.
 3. Where necessary to prevent breaking or cracking of the ball during the process of planting, the ball may be secured to a platform.
- L. All plants shall have nursery tags clearly indicating common and botanical names at time of delivery to the site. Tags for all landscape materials, not including reforestation plants, shall be removed prior to substantial completion.

PART 3 - EXECUTION

3.1 PLANTING OPERATIONS

- A. Planting operations shall be conducted under favorable weather conditions during seasons which are normal for such work as determined by accepted practice in the locality of the Project.
- B. Planting operations may be conducted under unseasonable conditions at the option and on the full responsibility of the Contractor and with the review of the Landscape Architect. If losses occur for which replacements are required, there shall be no additional costs to the Owner.

3.2 PROTECTION OF PLANT MATERIALS

- A. Trees and shrubs or other vegetation on the site that are to be moved to new locations as indicated shall be handled as specified herein for collected plants.
- B. Replanting shall conform to the requirements specified herein for planting new material.
- C. Contractor shall be responsible for the protection of tops, trunks and roots of existing trees and shrubs that are to remain.
- D. Those subject to construction damage shall be provided with chain link barricades as detailed on the Drawings placed continuously beneath the drip line of the tree.
- E. There shall be no standing water, stockpiles of topsoil or other materials permitted within the branch spread of trees.
- F. Where existing trees are located close to proposed structures, they shall have their branches or limbs cut back to clear the structure by a distance of three (3') feet.
- G. Any trees or shrubs damaged by operations under this contract shall be repaired to the satisfaction of the Landscape Architect.
- H. Any trees or shrubs damaged beyond repair shall be grubbed and removed from the site and replaced by a tree equal to the existing plant's caliper with similar shape and growth habit at the Contractor's expense.
- I. Notify the Landscape Architect before executing any of the above work.
- J. Tree-Root Protection
 1. Area for tree-root protection shall encompass an area from the dripline of the tree to the trunk.
 2. Objective of tree-root protection is to maintain the normal air and water content and fertility of the soil about the tree.
 3. Except as specified, the grade within the tree root area shall not be raised or lowered more than six (6") inches.
 4. Apply 14-14-14 fertilizer within the tree root area at a rate of three (3) pounds per inch of tree caliber.
 5. Distribute fertilizer evenly within the tree root area in 4" deep x 1-1/2" diameter holes and water thoroughly.
 6. Where the elevation at the base of the tree is above the proposed elevation, the grade shall be made smoothly from the limits of construction to the base of the tree or to the drip line whichever is more immediate.

7. Such grade shall be accomplished with a minimum of disturbance and/or compaction to the surface roots.
 8. Fertilize tree(s) upon completion of operation.
 9. Where the elevation at the base of the tree is below the proposed elevation, the soil within the affected area shall be prepared by removing all organic matter and loosening the surface soil to a depth of 4". Apply fertilizer at this time.
 10. Place topsoil and lightly compact so that grade is smooth from the limits of construction to the base of the tree or to the drip line, whichever is the more immediate.
- K. Before any construction begins, precautionary measures shall be taken to protect all existing lawn areas that are to be trucked over and upon which soil is to be temporarily stocked. Any existing lawn areas on or off the construction site that have been damaged shall be repaired to the satisfaction of the Landscape Architect with no additional cost to the Owner.

3.3 PRUNING

- A. Upon completion of work under this Contract, all existing branches of trees injured or branches requiring removal due to construction or planting shall be pruned and repaired.
- B. Prior to commencement of any pruning to existing trees or shrubs, the Landscape Architect shall be notified.
- C. Amount of pruning shall be limited to the minimum necessary to remove dead or injured twigs and branches and to compensate for the loss of roots as a result of construction operations.
- D. Pruning shall be done in such a manner as not to change the natural habit or shape of the plant.
- E. All cuts over ¾" in diameter and bruises or scars on the bark shall be traced back to living tissue and the injured cambium removed.
- F. Wounds shall be smoothed and shaped so as not to retain water and the treated area shall be coated with acceptable tree wound paint.

3.4 OBSTRUCTIONS

- A. Any rock or other underground obstruction shall be removed to the depth necessary to permit proper planting, according to Drawings and Specifications.
- B. If underground construction and obstructions, overhead wires or other site appurtenances are hindering the specified planting operation, the Landscape Architect shall be contacted immediately.
- C. When the location of utility lines is illustrated on the Drawings, or has otherwise been made known to the Contractor, any damage to these lines during plant operations will be repaired by the Contractor in an acceptable manner at no additional cost to the Owner.

3.5 PLANTING OF TREES AND SHRUBS

- A. New planting shall be located where illustrated on the Drawings except where changes by the Landscape Architect have been made in construction.

- B. Reasonable care shall be exercised to have pits dug and soil prepared prior to moving plants to their respective locations for planting to ensure that they will not be unnecessarily exposed to drying or to physical damage.
- C. Circular pits with vertical sides shall be excavated for all trees. Shrubs and other small plants to be planted in prepared beds.
- D. Diameter of pits for trees and shrubs shall be as indicated on the Drawings.
- E. The depth of pits for trees and shrubs, shall be enough to accommodate the ball or roots when the plant is set to finished grade allowing not more than six (6") inches of prepared/loosened soil in the bottom of the pit as illustrated by the by "Planting Details" on the Drawings.
- F. Prepared/loosened soil mixture as specified shall be used for backfilling planting pits and beds to a depth as illustrated by "Planting Details" on the Drawings.
- G. Mixing shall be done in a thorough manner to ensure uniform distribution of materials throughout the mixture.
- H. Excess excavated soil shall be disposed of as specified.
- I. Specified fertilizer for trees, shrubs and ground cover shall be thoroughly incorporated into the prepared soil mixture.
- J. Rate of fertilizer application shall be in accordance with the manufacturer's recommendations.
- K. Unless otherwise specified, all trees shall be planted in pits, centered, and set on six (6") inches of compacted prepared soil mixture to such a depth that the finished grade level of the tree after settlement will be the same as that at which the tree was grown.
- L. Trees shall be planted upright and faced to give the best appearance or relationship to the predominant viewing angle.
- M. Burlap shall be pulled back from the stem and top of the root ball of the plant as shown on the planting details.
- N. Prepared soil mixture as specified shall be placed and compacted carefully to avoid injury to roots and to fill all voids.
 - 1. Backfill in 6" lifts and "water in" backfill material before adding additional backfill material.
 - 2. Fill the hole to finished grade and form a shallow saucer around each plant by placing a ridge of topsoil around the edge of each pit.
 - 3. Add backfill material where settlement occurs to the level of the finished grade.

3.6 STAKING AND GUYING OF TREES

- A. All trees shall be supported immediately after planting as designated under "Planting Details" on the Drawings.
- B. Stakes shall be equally spaced about each tree and driven vertically into the ground to a depth of two (2') feet in such a manner as not to damage the root ball.

- C. Trees shall be fastened to each stake at a height of four (4') feet from finished grade by means of two (2) strands of wire or use black or dark green woven polypropylene rope.
- D. Stakes shall be set to one third height of tree above ground and placed as designated on the Drawings.
- E. Wires shall be encased in hose to prevent direct contact with bark of the tree and shall be placed around the trunk in a single loop or use black or dark green woven polypropylene rope.
- F. Wire shall be tightened and kept taut by twisting the strands together.
- G. See "Planting Methods" drawing for placement and location of guys.
- H. Alternative tree staking systems such as "Arbortie" will be considered for use. Contractor must submit product samples and/or information for Landscape Architect's approval prior to use of such systems.
- I. Contractor is responsible for removal of all staking material at the time of expiration of the one-year warranty period.

End of Section

TO: Mayor and City Council of the City of Dacula
FROM: Brittni Nix, Director of Planning & Economic Development
DATE: June 27, 2022
SUBJECT: Bid package for McMillan Road stormwater improvements

The McMillan Road stormwater improvements bid documents have been finalized and provided for your review. In order to alleviate the current flooding issue along McMillan Road, sections of the existing storm sewer system located through the City's property will be demolished. A new storm sewer system will be installed along McMillan Road and extended westward along the stream until discharged. Existing storm pipe crossing under McMillan Road will be replaced with a new RCP culvert and junction box adjacent to Falcons Plaza.

Additional improvements to McMillan Road include regrading, installing curb and gutter along the west side, and repaving. The City property will be used as the construction area for the project. All existing pavement within the fence limits will be removed and the property fine graded prior to project completion.

The proposed improvements have an estimated OPCC (Opinion of Probable Construction Cost) of \$576,043.05, which includes a 20% contingency. This project is fully funded by the American Rescue Plan Act (ARPA) federal funds.

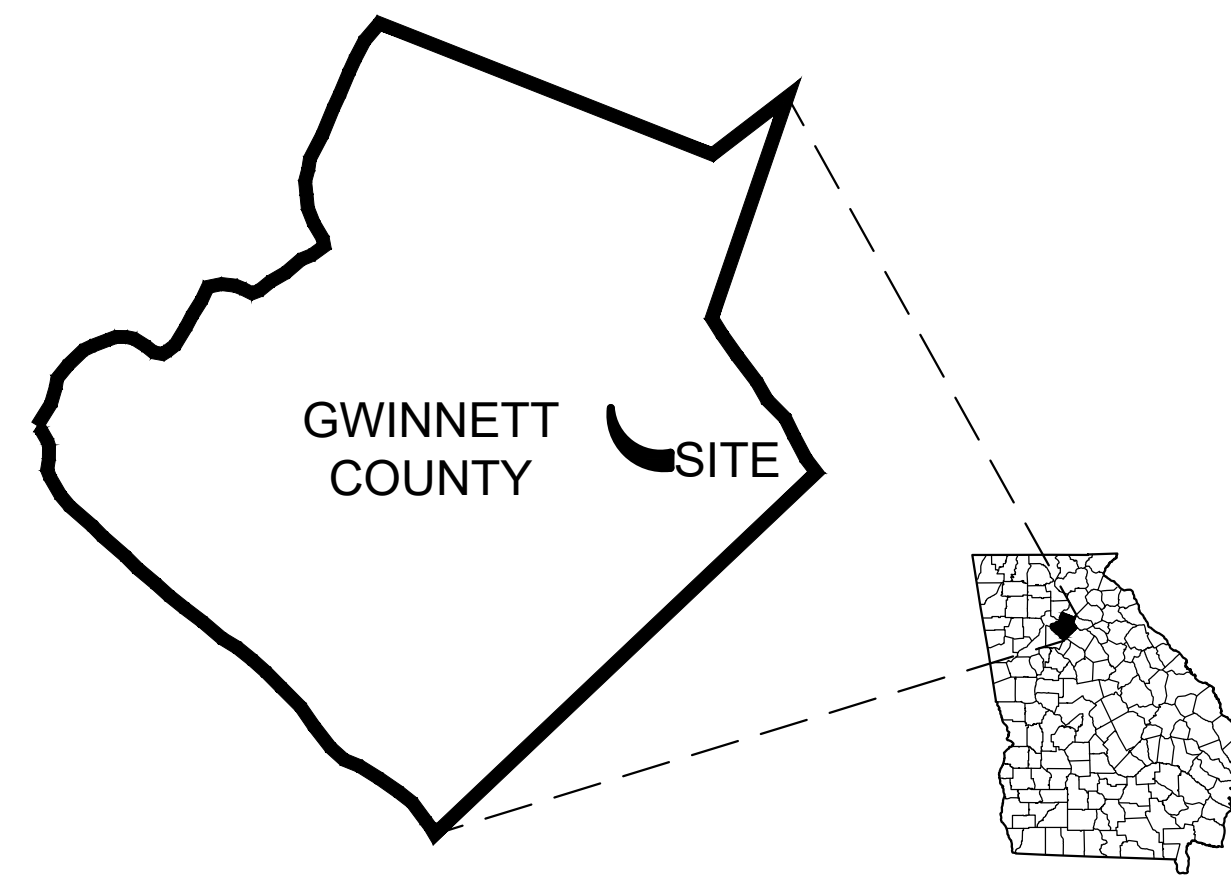
Staff requests the Mayor and City Council approve the bid package as provided and grant authorization to solicit for public bids.

Best Regards,

Brittni Nix, Director of Planning & Economic Development

CONSTRUCTION DRAWINGS FOR MCMILLAN ROAD STORMWATER IMPROVEMENTS PROJECT

DACULA, GEORGIA
GWINNETT COUNTY
LAND LOT 302
5TH DISTRICT



DRAWING INDEX				
SH. NO.	SHEET NAME	SUBMITTALS		
		1	2	3
C000	COVER SHEET			
C100	DEMOLITION PLAN			
C101	DEMOLITION PLAN			
C200	SITE LAYOUT PLAN			
C201	SITE LAYOUT PLAN			
C300	GRADING & DRAINAGE PLAN			
C301	GRADING & DRAINAGE PLAN			
C302	STORM WATER PROFILES			
C303	PROFILES			
C500	EROSION, SEDIMENTATION & POLLUTION CONTROL NOTES			
C510	EROSION, SEDIMENTATION & POLLUTION CONTROL PHASE I			
C520	EROSION, SEDIMENTATION & POLLUTION CONTROL PHASE II			
C530	EROSION, SEDIMENTATION & POLLUTION CONTROL PHASE III			
C540	EROSION, SEDIMENTATION & POLLUTION CONTROL DETAILS			
C700	DETAILS			
C701	DETAILS			
C702	DETAILS			

WETLANDS
THE DESIGN PROFESSIONAL, WHOSE SEAL APPEARS HEREON, CERTIFIES THE FOLLOWING: 1) THE NATIONAL WETLAND INVENTORY MAPS HAVE BEEN CONSULTED; AND, 2) THE APPROPRIATE PLAN SHEET (1) DOES / (X) DOES NOT INDICATE AREAS OF UNITED STATES ARMY CORPS OF ENGINEERS JURISDICTIONAL WETLANDS AS SHOWN ON THE MAPS; AND, 3) IF WETLANDS ARE INDICATED, THE LAND OWNER OR DEVELOPER HAS BEEN ADVISED THAT LAND DISTURBANCE OF PROTECTED WETLANDS SHALL NOT OCCUR UNLESS THE APPROPRIATE FEDERAL WETLANDS ALTERATION ("SECTION 404") PERMIT HAS BEEN OBTAINED.

PROJECT DESCRIPTION:
THE PROJECT CONSISTS OF IMPROVING THE STORM DRAINAGE SYSTEM & ROADWAY ALONG MCMILLAN ROAD BETWEEN WINDER HIGHWAY & STANLEY RD

ENGINEER/SURVEYOR:
BOWMAN
4174 SILVER PEAK PARKWAY
SUWANEE, GEORGIA 30024
PH: 770-932-6550 FX: 770-932-6551
ENGINEER CONTACT: KEVIN D WHIGHAM, P.E. EMAIL: KWhigham@bowman.com
SURVEY CONTACT: J. CHRIS WHITLEY, P.L.S. EMAIL: CWhitley@bowman.com

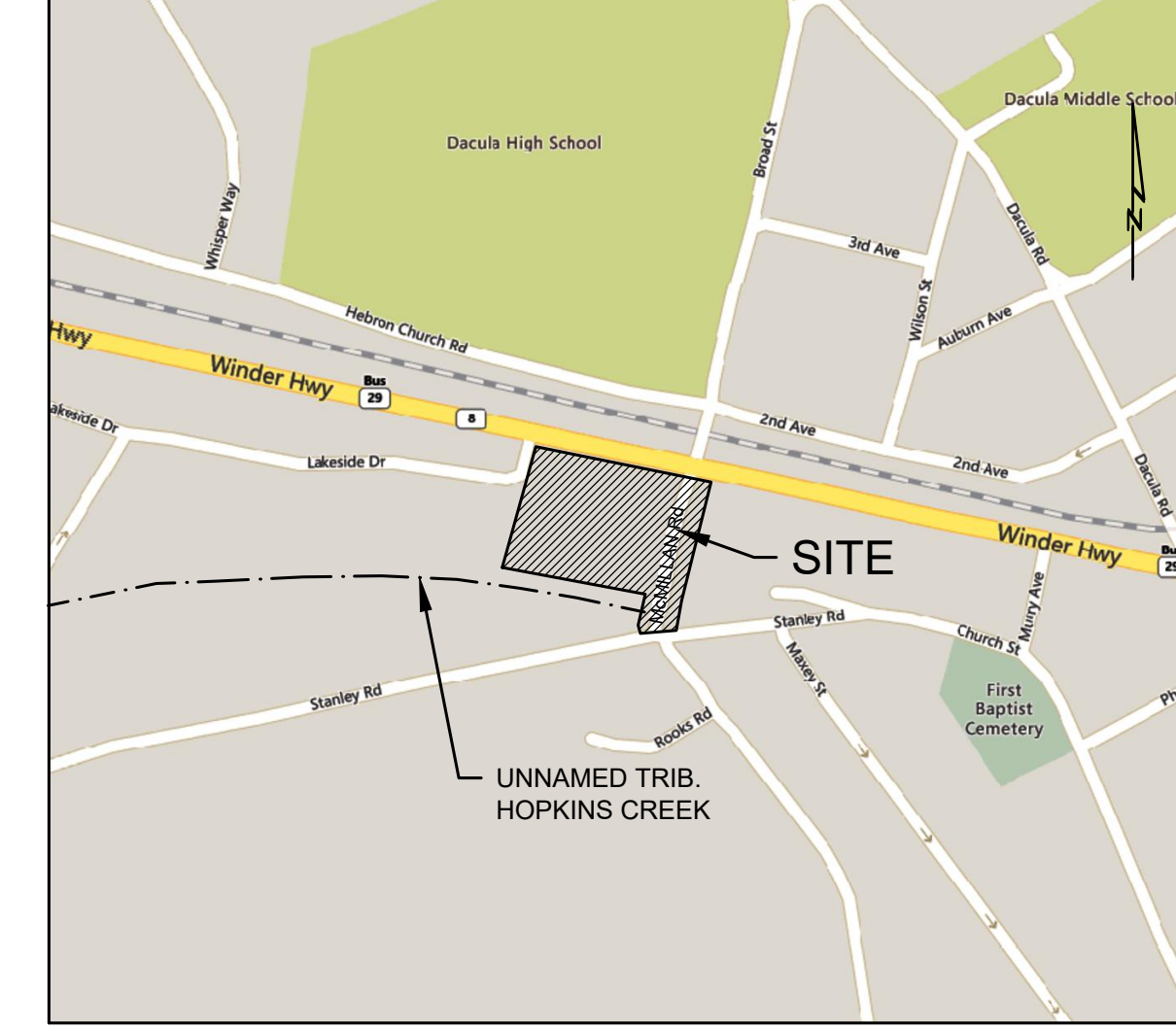
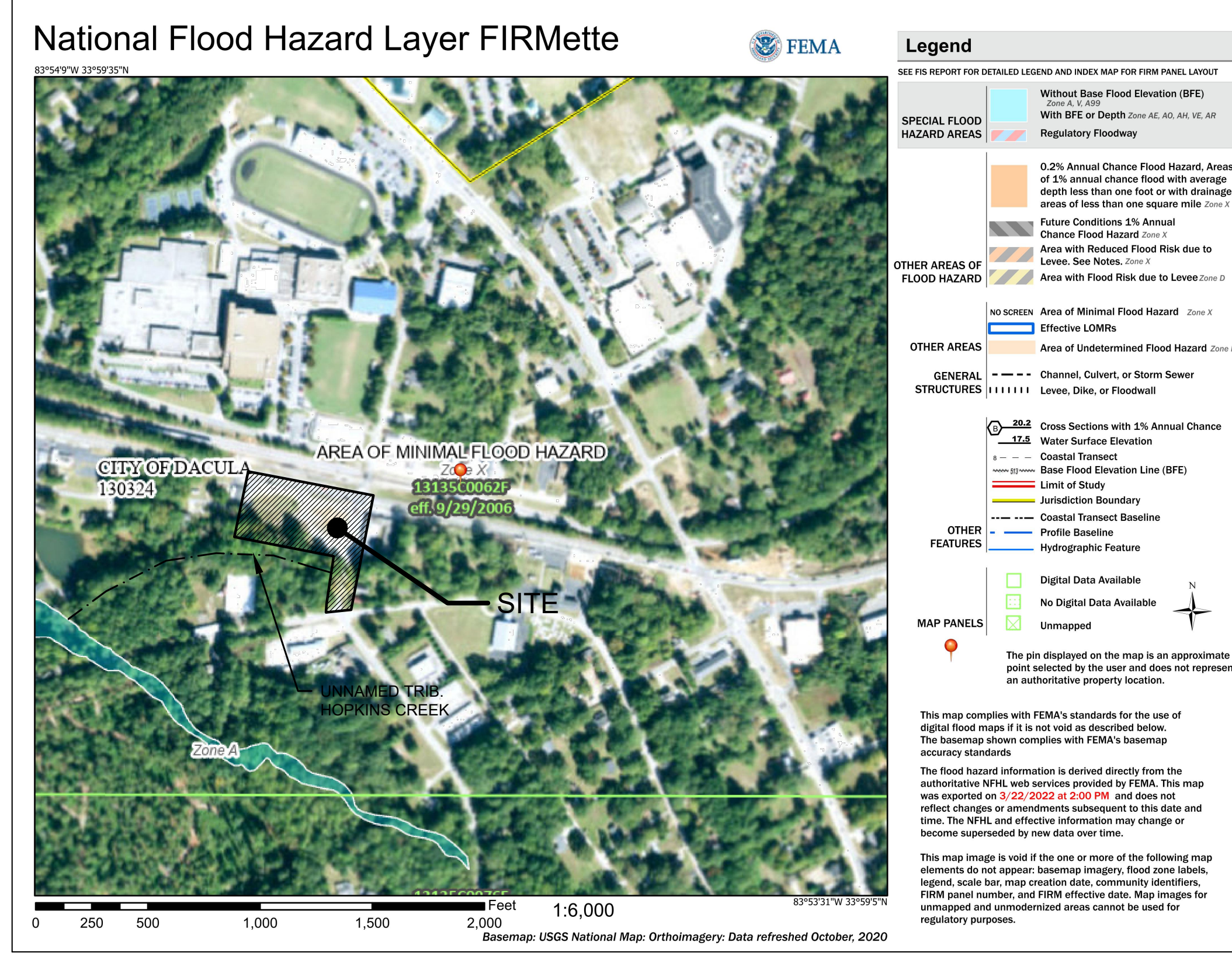
SITE VISIT CERTIFICATION:
I CERTIFY UNDER PENALTY OF LAW THAT THIS PLAN WAS PREPARED AFTER A SITE VISIT TO THE LOCATIONS DESCRIBED HEREIN BY MYSELF OR MY AUTHORIZED AGENT, UNDER MY SUPERVISION.
[Signature]
KEVIN D WHIGHAM, P.E. - ES/WCC LEVEL II CERTIFICATION #945 EXP: 9/27/2023 DATE: 6/19/2022

FLOODPLAIN:
PART OF THIS PROPERTY DOES NOT LIE WITHIN A SPECIAL FLOOD HAZARD AREA (SFHA) PER FEMA FIRM PANEL 13135C0062F DATED 9/29/2006.

STATE WATERS
STATE WATERS ARE ON / ADJACENT THIS SITE REQUIRING A 25' STATE UNDISTURBED BUFFER, 50' COUNTY UNDISTURBED BUFFER AND 75' IMPERVIOUS SETBACK MEASURED FROM THE TOP OF BANK.
RECEIVING WATERS HOPKINS CREEK

SURVEY:
THE BOUNDARY AND TOPOGRAPHIC INFORMATION SHOWN IS FROM A SURVEY PERFORMED BY BOWMAN DATED MARCH 11, 2022. DATUM, MEAN SEA LEVEL, NAD83 GA WEST FOOT

24 HOUR CONTACT
CITY OF DACULA
BRITNI NIX
BRITNI.NIX@DACULAGA.GOV
770-963-7451



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BOWMAN

4174 SILVER PEAK PARKWAY
SUWANEE, GEORGIA 30024
PHONE: (770) 932-6550
FAX: (770) 932-6551
WWW.BOWMANCCM

OWNER:
CITY OF DACULA

PROJECT:
MCMILLAN ROAD STORMWATER
IMPROVEMENTS PROJECT

DATE	DESCRIPTION
06/24/2022	BID

JOB NO: 22-030
DRAWN BY: RWJ
CHECKED BY: KDW

COVER SHEET

C000



BOWMAN

4174 SILVER PEAK PARKWAY
SUWANEE, GEORGIA 30024
PHONE: (770) 932-6550
FAX: (770) 932-6551
WWW.BOWMANCCM.COM

CITY OF DACULA

OWNER:
P.O. BOX 400
DACULA, GEORGIA 30019

PROJECT:
MCMILLAN ROAD STORMWATER
IMPROVEMENTS PROJECT

DETECT: 5
LANDSCAPE: 302
GWINNETT COUNTY, GEORGIA

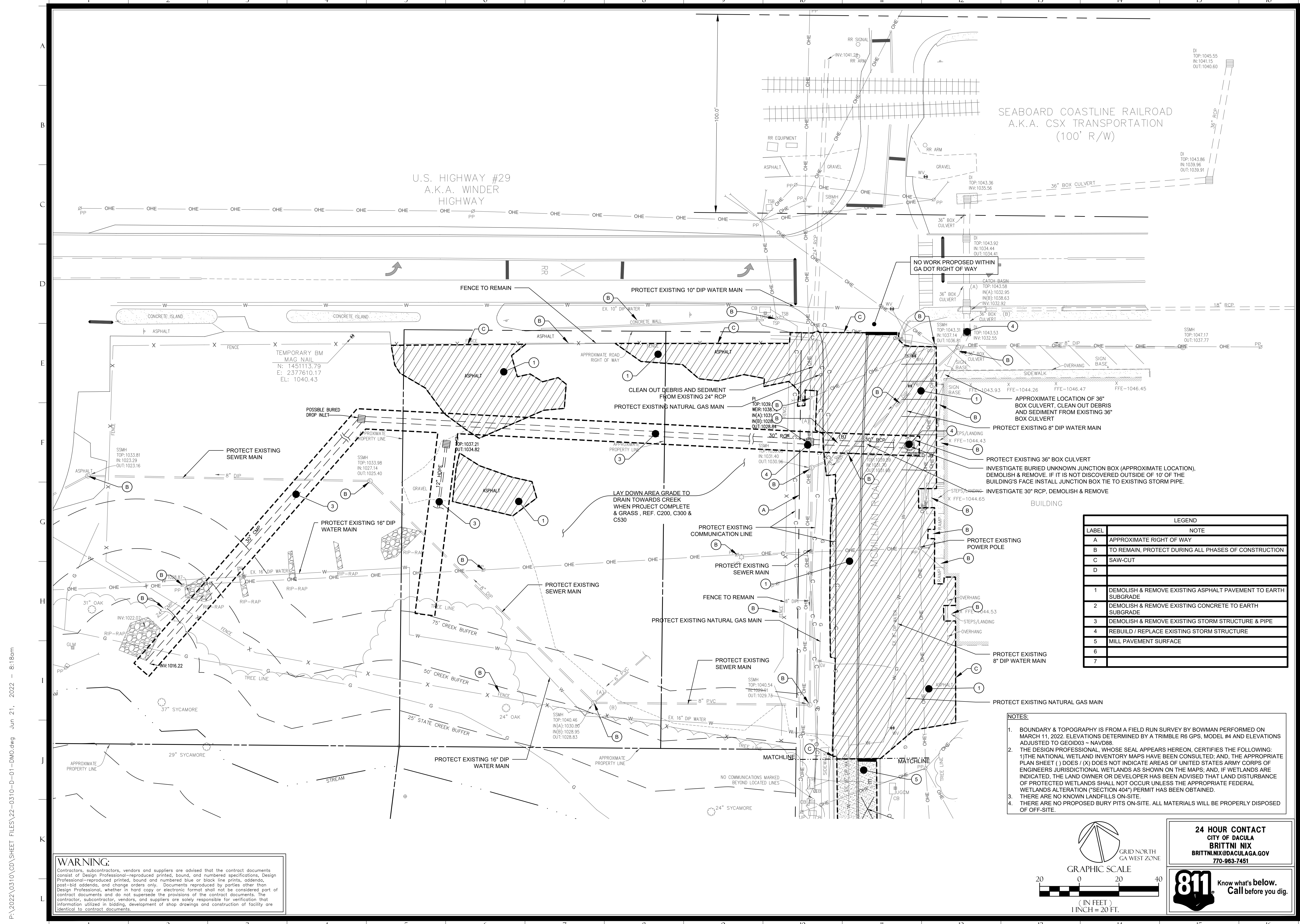
DATE	DESCRIPTION
06/24/2022	BID

JOB NO: 22-0310
DRAWN BY: RWH
CHECKED BY: KDW

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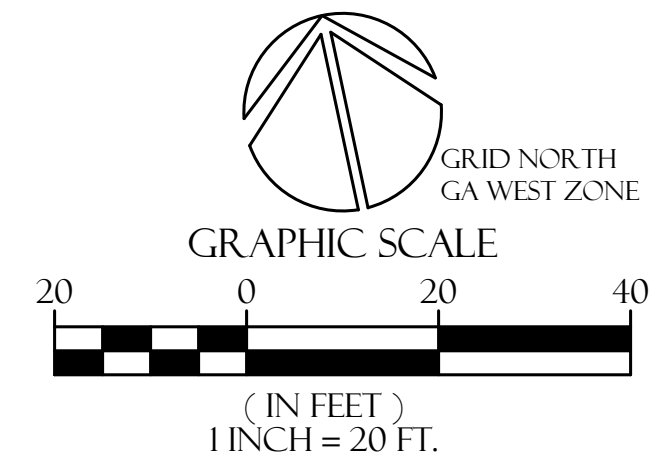
DEMOLITION
PLAN

C100



LEGEND	
LABEL	NOTE
A	APPROXIMATE RIGHT OF WAY
B	TO REMAIN, PROTECT DURING ALL PHASES OF CONSTRUCTION
C	SAW-CUT
D	
1	DEMOLISH & REMOVE EXISTING ASPHALT PAVEMENT TO EARTH SUBGRADE
2	DEMOLISH & REMOVE EXISTING CONCRETE TO EARTH SUBGRADE
3	DEMOLISH & REMOVE EXISTING STORM STRUCTURE & PIPE
4	REBUILD / REPLACE EXISTING STORM STRUCTURE
5	MILL PAVEMENT SURFACE
6	
7	

- NOTES:**
- BOUNDARY & TOPOGRAPHY IS FROM A FIELD RUN SURVEY BY BOWMAN PERFORMED ON MARCH 11, 2022. ELEVATIONS DETERMINED BY A TRIMBLE R6 GPS, MODEL #4 AND ELEVATIONS ADJUSTED TO GEOID03 ~ NAVD88.
 - THE DESIGN PROFESSIONAL, WHOSE SEAL APPEARS HEREON, CERTIFIES THE FOLLOWING:
1) THE NATIONAL WETLAND INVENTORY MAPS HAVE BEEN CONSULTED; AND, THE APPROPRIATE PLAN SHEET () DOES / (X) DOES NOT INDICATE AREAS OF UNITED STATES ARMY CORPS OF ENGINEERS JURISDICTIONAL WETLANDS AS SHOWN ON THE MAPS; AND, IF WETLANDS ARE INDICATED, THE LAND OWNER OR DEVELOPER HAS BEEN ADVISED THAT LAND DISTURBANCE OF PROTECTED WETLANDS SHALL NOT OCCUR UNLESS THE APPROPRIATE FEDERAL WETLANDS ALTERATION (SECTION 404) PERMIT HAS BEEN OBTAINED.
 - THERE ARE NO KNOWN LANDFILLS ON-SITE.
 - THERE ARE NO PROPOSED BURY PITS ON-SITE. ALL MATERIALS WILL BE PROPERLY DISPOSED OF OFF-SITE.



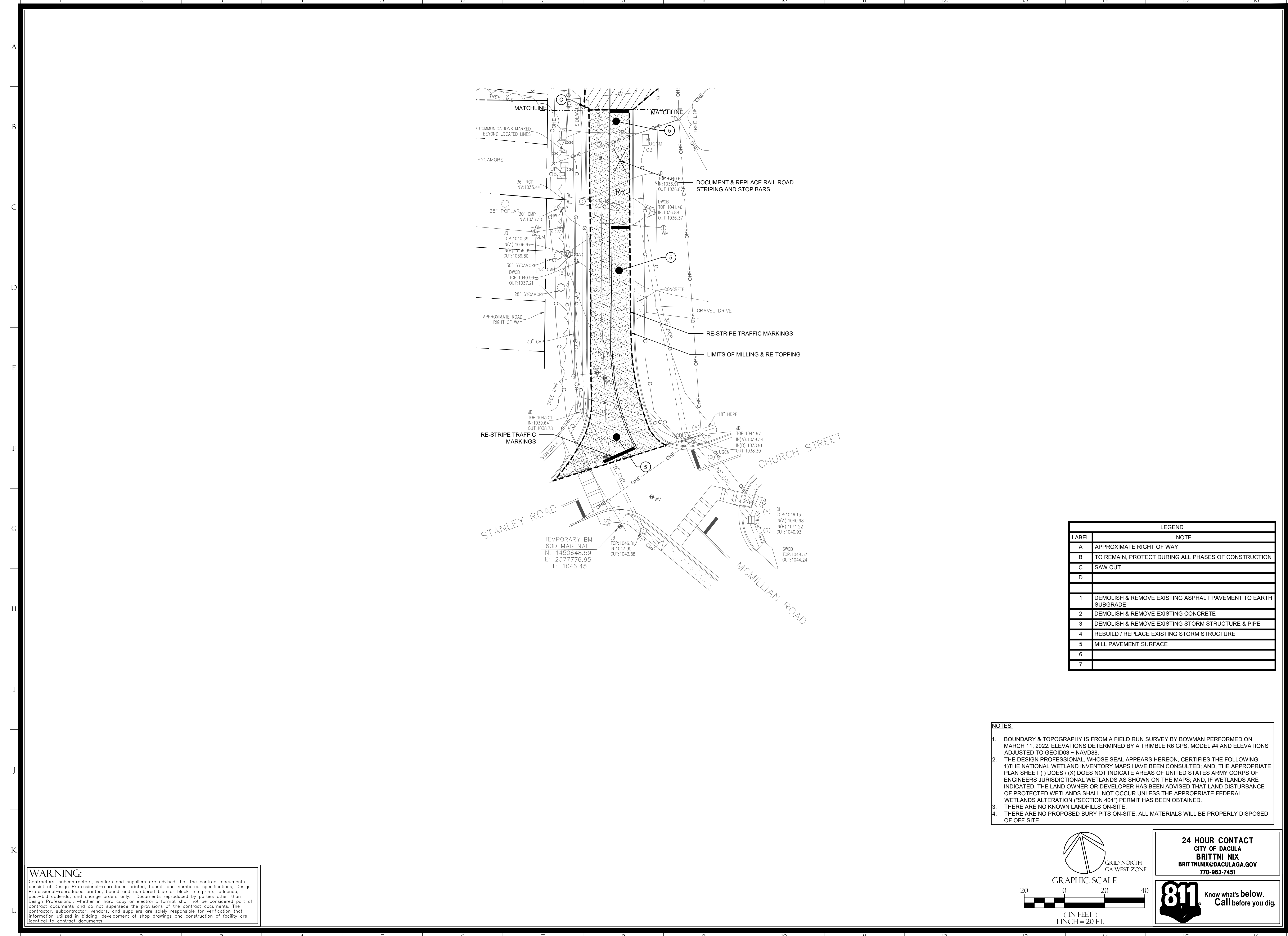
24 HOUR CONTACT
CITY OF DACULA
BRITTNI NIX
BRITTN.NIX@DACULAGA.GOV
770-963-7451



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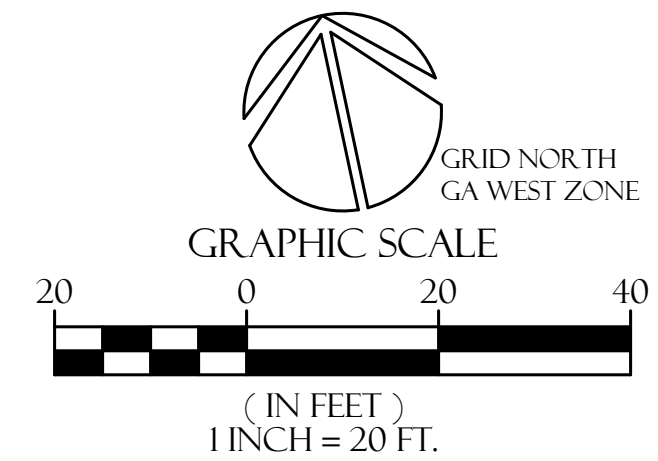
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A
B
C
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LEGEND	
LABEL	NOTE
A	APPROXIMATE RIGHT OF WAY
B	TO REMAIN, PROTECT DURING ALL PHASES OF CONSTRUCTION
C	SAW-CUT
D	
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7	

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Item 7

BOWMAN

4174 SILVER PEAK PARKWAY
SUWANEE, GEORGIA 30024
PHONE: (770) 932-6550
FAX: (770) 932-6551
WWW.BOWMANCCOM

OWNER: CITY OF DACULA

PROJECT: MCMILLAN ROAD STORMWATER IMPROVEMENTS PROJECT

DEFLECT: 5
LANDSCOT: 302
GWINNETT COUNTY, GEORGIA

DATE	DESCRIPTION
06/24/2022	BID

JOB NO: 22-0310
DRAWN BY: RWJH
CHECKED BY: KDW

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BOWMAN

DEMOLITION PLAN

C101

176

SEABOARD COASTLINE RAILROAD
A.K.A. CSX TRANSPORTATION
(100' R/W)

U.S. HIGHWAY #29
A.K.A. WINDER
HIGHWAY

GENERAL NOTES:

1. ALL CONSTRUCTION SHALL CONFORM TO ALL CITY OF DACULA AND ALSO GWINNETT COUNTY DEVELOPMENT REGULATIONS, STATE AND FEDERAL CODES, STANDARDS & REGULATIONS.
2. ERECT ALL EROSION, SEDIMENT & POLLUTION CONTROL MEASURES PRIOR TO ANY LAND DISTURBANCE ACTIVITY AND MAINTAIN THROUGHOUT THE DURATION OF THE PROJECT CONSTRUCTION UNTIL PERMANENT VEGETATIVE COVER HAS BEEN ESTABLISHED.
3. MAINTAIN THE EROSION, SEDIMENT & POLLUTION CONTROL DEVICES DURING ALL PHASES OF CONSTRUCTION. CLEAN OUT AND REMOVE ALL ACCUMULATED SILT AND SEDIMENT WHENEVER SAID DEVICES ARE HALF FULL.
4. BARRIER FREE ACCESSIBLE ROUTE SHALL START AT HANDICAP PARKING AND GO INTO ALL ENTRANCES OF NEW OR RENOVATED BUILDINGS OR TENANT SPACES. IT IS ALSO REQUIRED THAT THE PARKING SPACE AND ITS ADJACENT AISLE BE RELATIVELY LEVEL, THAT IS, HAVING LESS THAN A 1:50 SLOPE, LESS THAN 2%.
5. RAMPS SHALL BE PROVIDED WHEREVER AN ACCESSIBLE ROUTE CROSSES A CURB OR IS PART OF AN ACCESSIBLE ROUTE ACCESSIBILITY CODE. A MAXIMUM SLOPE OF 1:12. ALL PRIMARY ENTRANCES USUALLY CONSIDERED AS MAJOR POINTS OF PEDESTRIAN FLOW MUST BE ACCESSIBLE TO MEET THE REQUIREMENTS OF H.B. #797.
6. NOTIFY CITY OF DACULA AND GWINNETT COUNTY INSPECTIONS 24 HOURS BEFORE BEGINNING OF EVERY PHASE OF CONSTRUCTION.
7. ALL CONSTRUCTION SURVEYING (INCLUDING LAYOUT) SHALL BE PERFORMED BY A LAND SURVEYOR HOLDING CURRENT REGISTRATION AND LICENSE IN THE STATE OF GEORGIA. SUBMIT PROOF OF REGISTRATION TO THE ARCHITECT SEVEN DAYS PRIOR TO LAND DISTURBANCE.
8. ALL DIMENSIONS ARE TO FACE OF CURB UNLESS OTHERWISE NOTED ON PLANS.
9. THERE ARE ROOF OVERHANGS. REFERENCE ARCHITECTURAL DRAWINGS. AT LEAST ONE (ACCESSIBLE ROUTE) COMPLYING WITH RULE 120-3-20-.14 SHALL BE PROVIDED WITHIN THE BOUNDARY OF THE SITE FROM PUBLIC TRANSPORTATION STOPS, ACCESSIBLE PARKING SPACES, PASSENGER LOADING ZONES IF PROVIDED, AND PUBLIC STREETS OR SIDEWALKS, TO AN ACCESSIBLE BUILDING ENTRANCES. RULE 120-3-20-07(A) GEORGIA ACCESSIBILITY CODE.
10. DURING CONSTRUCTION AND FOR PERMANENT ACCESS, ROADWAYS CONSTRUCTED OF AN ALL WEATHER SURFACE CAPABLE OF SUPPORTING 75,000 POUNDS GROSS WEIGHT SHALL BE PROVIDED PER INTERNATIONAL FIRE CODE, CHAPTER 5, SECTION 503.2.3, APPENDIX D, D102.1.2018 EDITION.



BOWMAN

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FAX: (770) 932-6551
WWW.BOWMANCCM.COM

CITY OF DACULA

OWNER:
CITY OF DACULA, GEORGIA 30019

PROJECT:
MCMILLAN ROAD STORMWATER
IMPROVEMENTS PROJECT

DATE: 06/24/2022
DESCRIPTION: BID

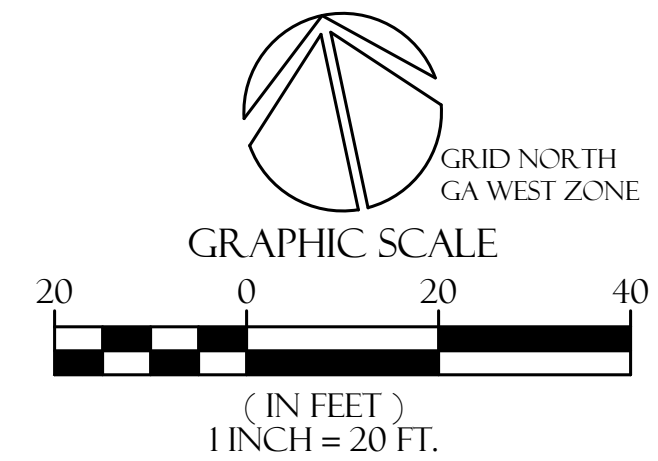
JOB NO: 22-0310
DRAWN BY: RW/H
CHECKED BY: KDW

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SITE LAYOUT
PLAN

C200

LEGEND		
LABEL	NOTE	DETAIL / SHEET
A	APPROXIMATE RIGHT OF WAY	
B	MAINTAIN EXISTING CONCRETE SIDEWALK ALONG	
C	TIE TO EXISTING CURB AND PAVEMENT	
D	TO REMAIN	
E	DISASSEMBLE AND REINSTALL EXISTING CHAIN LINK FENCE & GATE	
1	24" CONCRETE CURB & GUTTER	1 / C700
2	HEAVY DUTY ASPHALT PAVEMENT (ROADWAY)	2C / C700
3	PROPOSED PARKING STRIPING	5 / C700
4	DOUBLE YELLOW THERMOPLASTIC TRAFFIC STRIPING	4 / C700
5	24" THICK GADOT STD. 'STOP BAR'	4 / C700
6	MILL 2-1/2" AND RE-TOPE PAVEMENT	2A / C700
7	STANDARD DUTY ASPHALT PAVEMENT (PARKING)	2D / C700



24 HOUR CONTACT
CITY OF DACULA
BRITNI NIX
BRITTNIX@DACULAGA.GOV
770-963-7451

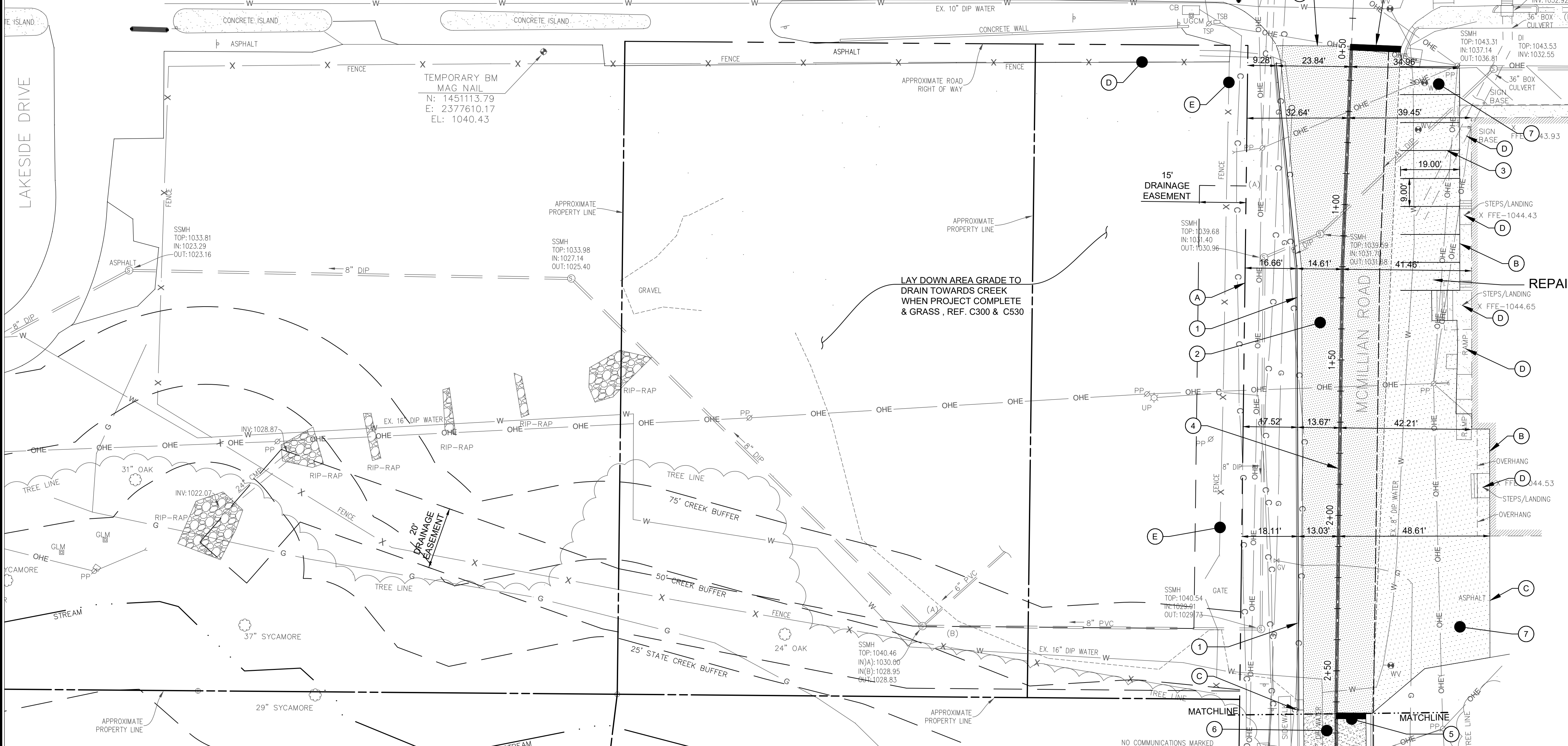


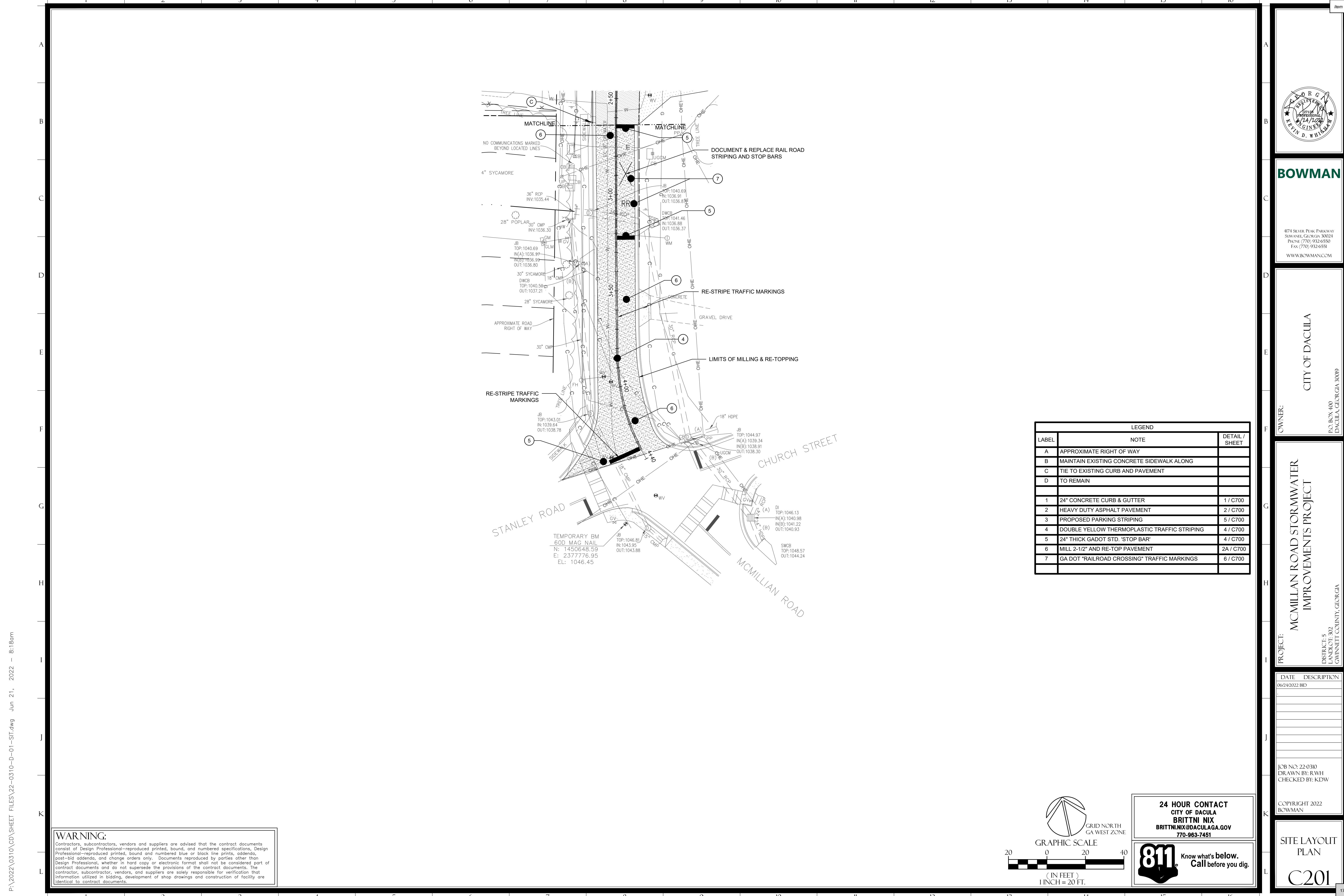
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LAY DOWN AREA GRADE TO DRAIN TOWARDS CREEK WHEN PROJECT COMPLETE & GRASS, REF. C300 & C530

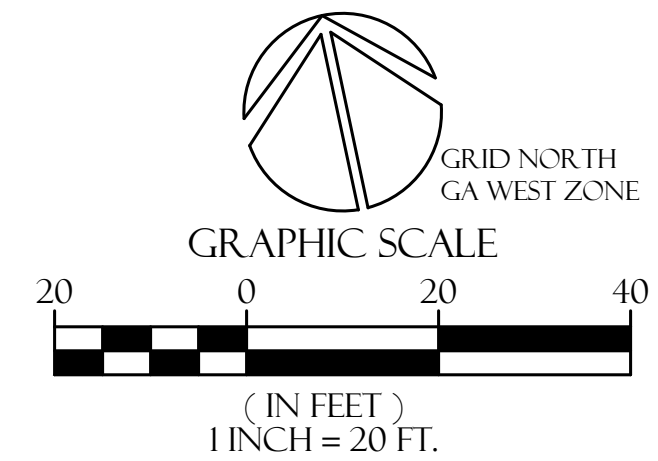
REPAINT EXISTING (8) PARKING SPACES

BUILDING





LEGEND		
LABEL	NOTE	DETAIL / SHEET
A	APPROXIMATE RIGHT OF WAY	
B	MAINTAIN EXISTING CONCRETE SIDEWALK ALONG	
C	TIE TO EXISTING CURB AND PAVEMENT	
D	TO REMAIN	
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2	HEAVY DUTY ASPHALT PAVEMENT	2 / C700
3	PROPOSED PARKING STRIPING	5 / C700
4	DOUBLE YELLOW THERMOPLASTIC TRAFFIC STRIPING	4 / C700
5	24" THICK GADOT STD. 'STOP BAR'	4 / C700
6	MILL 2-1/2" AND RE-TO PAVEMENT	2A / C700
7	GA DOT "RAILROAD CROSSING" TRAFFIC MARKINGS	6 / C700



24 HOUR CONTACT
CITY OF DACULA
BRITNI NIX
BRITNI.NIX@DACULAGA.GOV
770-963-7451

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 PHONE: (770) 932-6550
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OWNER:
 CITY OF DACULA

P.O. BOX 400
 DACULA, GEORGIA 30019

PROJECT:
 MCMILLAN ROAD STORMWATER
 IMPROVEMENTS PROJECT

DISTRICT: 5
 LANDSCAPE: 302
 GWINNETT COUNTY, GEORGIA

DATE	DESCRIPTION
06/24/2022	BID

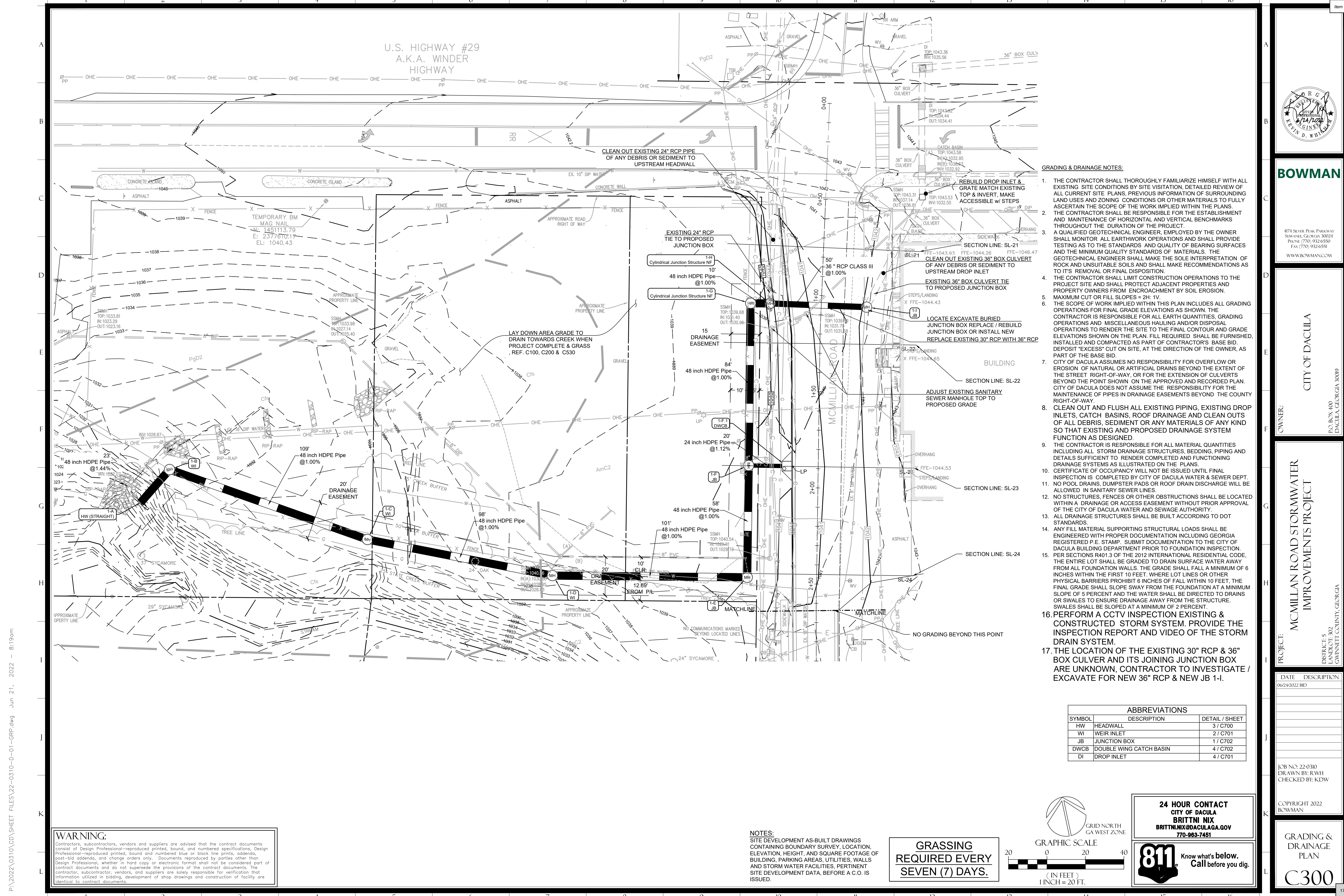
JOB NO: 22-0310
 DRAWN BY: RWJH
 CHECKED BY: KDW

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 BOWMAN

SITE LAYOUT
 PLAN

C201

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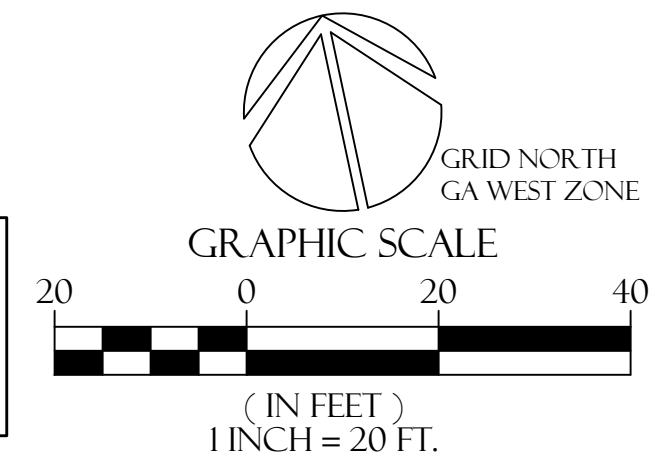
- GRADING & DRAINAGE NOTES:**
1. THE CONTRACTOR SHALL THOROUGHLY FAMILIARIZE HIMSELF WITH ALL EXISTING SITE CONDITIONS BY SITE VISITATION. DETAILED REVIEW OF ALL CURRENT SITE PLANS, PREVIOUS INFORMATION OF SURROUNDING LAND USES AND ZONING CONDITIONS OR OTHER MATERIALS TO FULLY ASCERTAIN THE SCOPE OF THE WORK IMPLIED WITHIN THE PLANS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE ESTABLISHMENT AND MAINTENANCE OF HORIZONTAL AND VERTICAL BENCHMARKS THROUGHOUT THE DURATION OF THE PROJECT.
 2. A QUALIFIED GEOTECHNICAL ENGINEER, EMPLOYED BY THE OWNER SHALL MONITOR ALL EARTHWORK OPERATIONS AND SHALL PROVIDE TESTING AS TO THE STANDARDS, AND QUALITY OF BEARING SURFACES AND THE MINIMUM QUALITY STANDARDS OF MATERIALS. THE GEOTECHNICAL ENGINEER SHALL MAKE THE SOLE INTERPRETATION OF ROCK AND UNSUITABLE SOILS AND SHALL MAKE RECOMMENDATIONS AS TO ITS REMOVAL OR FINAL DISPOSITION.
 3. THE CONTRACTOR SHALL LIMIT CONSTRUCTION OPERATIONS TO THE PROJECT SITE AND SHALL PROTECT ADJACENT PROPERTIES AND PROPERTY OWNERS FROM ENCRoACHMENT BY SOIL EROSION.
 4. THE SCOPE OF WORK IMPLIED WITHIN THIS PLAN INCLUDES ALL GRADING OPERATIONS FOR FINAL GRADE ELEVATIONS AS SHOWN. THE CONTRACTOR IS RESPONSIBLE FOR ALL EARTH QUANTITIES, GRADING OPERATIONS AND MISCELLANEOUS HAULING AND/OR DISPOSAL OPERATIONS TO RENDER THE SITE TO THE FINAL CONTOUR AND GRADE ELEVATIONS SHOWN ON THE PLAN. FILL REQUIRED SHALL BE FURNISHED, INSTALLED AND COMPACTED AS PART OF CONTRACTOR'S BASE BID. DEPOSIT "EXCESS" CUT ON SITE, AT THE DIRECTION OF THE OWNER, AS PART OF THE BASE BID.
 5. CITY OF DACULA ASSUMES NO RESPONSIBILITY FOR OVERFLOW OR EROSION OF NATURAL OR ARTIFICIAL DRAINS BEYOND THE EXTENT OF THE STREET RIGHT-OF-WAY, OR FOR THE EXTENSION OF CULVERTS BEYOND THE POINT SHOWN ON THE APPROVED AND RECORDED PLAN. CITY OF DACULA DOES NOT ASSUME THE RESPONSIBILITY FOR THE MAINTENANCE OF PIPES IN DRAINAGE EASEMENTS BEYOND THE COUNTY RIGHT-OF-WAY.
 6. CLEAN OUT AND FLUSH ALL EXISTING PIPING, EXISTING DROP INLETS, CATCH BASINS, ROOF DRAINAGE AND CLEAN OUTS OF ALL DEBRIS, SEDIMENT OR ANY MATERIALS OF ANY KIND SO THAT EXISTING AND PROPOSED DRAINAGE SYSTEM FUNCTION AS DESIGNED.
 7. THE CONTRACTOR IS RESPONSIBLE FOR ALL MATERIAL QUANTITIES INCLUDING ALL STORM DRAINAGE STRUCTURES, BEDDING, PIPING AND DETAILS SUFFICIENT TO RENDER COMPLETED AND FUNCTIONING DRAINAGE SYSTEMS AS ILLUSTRATED ON THE PLANS.
 8. CERTIFICATE OF OCCUPANCY WILL NOT BE ISSUED UNTIL FINAL INSPECTION IS COMPLETED BY CITY OF DACULA WATER & SEWER DEPT. NO POOL DRAINS, DUMPSTER PADS OR ROOF DRAIN DISCHARGE WILL BE ALLOWED IN SANITARY SEWER LINES.
 9. NO STRUCTURES, FENCES OR OTHER OBSTRUCTIONS SHALL BE LOCATED WITHIN A DRAINAGE OR ACCESS EASEMENT WITHOUT PRIOR APPROVAL OF THE CITY OF DACULA WATER AND SEWAGE AUTHORITY.
 10. ALL DRAINAGE STRUCTURES SHALL BE BUILT ACCORDING TO DOT STANDARDS.
 11. ANY FILL MATERIAL SUPPORTING STRUCTURAL LOADS SHALL BE ENGINEERED WITH PROPER DOCUMENTATION INCLUDING GEORGIA REGISTERED P.E. STAMP. SUBMIT DOCUMENTATION TO THE CITY OF DACULA BUILDING DEPARTMENT PRIOR TO FOUNDATION INSPECTION.
 12. PER SECTIONS R401.3 OF THE 2012 INTERNATIONAL RESIDENTIAL CODE, THE ENTIRE LOT SHALL BE GRADED TO DRAIN SURFACE WATER AWAY FROM ALL FOUNDATION WALLS. THE GRADE SHALL FALL A MINIMUM OF 6 INCHES WITHIN THE FIRST 10 FEET, WHERE LOT LINES OR OTHER PHYSICAL BARRIERS PROHIBIT 6 INCHES OF FALL WITHIN 10 FEET, THE FINAL GRADE SHALL SLOPE AWAY FROM THE FOUNDATION AT A MINIMUM SLOPE OF 5 PERCENT AND THE WATER SHALL BE DIRECTED TO DRAINS OR SWALES TO ENSURE DRAINAGE AWAY FROM THE STRUCTURE. SWALES SHALL BE SLOPED AT A MINIMUM OF 2 PERCENT.
 13. PERFORM A CCTV INSPECTION EXISTING & CONSTRUCTED STORM SYSTEM. PROVIDE THE INSPECTION REPORT AND VIDEO OF THE STORM DRAIN SYSTEM.
 14. THE LOCATION OF THE EXISTING 30" RCP & 36" BOX CULVERT AND ITS JOINING JUNCTION BOX ARE UNKNOWN, CONTRACTOR TO INVESTIGATE / EXCAVATE FOR NEW 36" RCP & NEW JB 1-I.

ABBREVIATIONS

SYMBOL	DESCRIPTION	DETAIL / SHEET
HW	HEADWALL	3 / C700
WI	WEIR INLET	2 / C701
JB	JUNCTION BOX	1 / C702
DWCB	DOUBLE WING CATCH BASIN	4 / C702
DI	DROP INLET	4 / C701

NOTES:
 SITE DEVELOPMENT AS-BUILT DRAWINGS CONTAINING BOUNDARY SURVEY, LOCATION, ELEVATION, HEIGHT, AND SQUARE FOOTAGE OF BUILDING, PARKING AREAS, UTILITIES, WALLS AND STORM WATER FACILITIES, PERTINENT SITE DEVELOPMENT DATA, BEFORE A C.O. IS ISSUED.

**GRASSING
 REQUIRED EVERY
 SEVEN (7) DAYS.**



**24 HOUR CONTACT
 CITY OF DACULA
 BRITNI NIX
 BRITNINIX@DACULAGA.GOV
 770-963-7451**

811 Know what's below. Call before you dig.

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CITY OF DACULA

P.O. BOX 400
 DACULA, GEORGIA 30019

**MCMILLAN ROAD STORMWATER
 IMPROVEMENTS PROJECT**

PROJECT: MCMILLAN ROAD STORMWATER IMPROVEMENTS PROJECT
 DRAWN BY: RWH
 CHECKED BY: KDW

DATE	DESCRIPTION
06/24/2022	BID

JOB NO: 22-030
 DRAWN BY: RWH
 CHECKED BY: KDW

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**GRADING &
 DRAINAGE
 PLAN**

C300



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OWNER:
CITY OF DACULA

P.O. BOX 400
DACULA, GEORGIA 30019

PROJECT:
**MCMILLAN ROAD STORMWATER
IMPROVEMENTS PROJECT**

DISTRICT: 5
LANDACOT: 302
GWINNETT COUNTY, GEORGIA

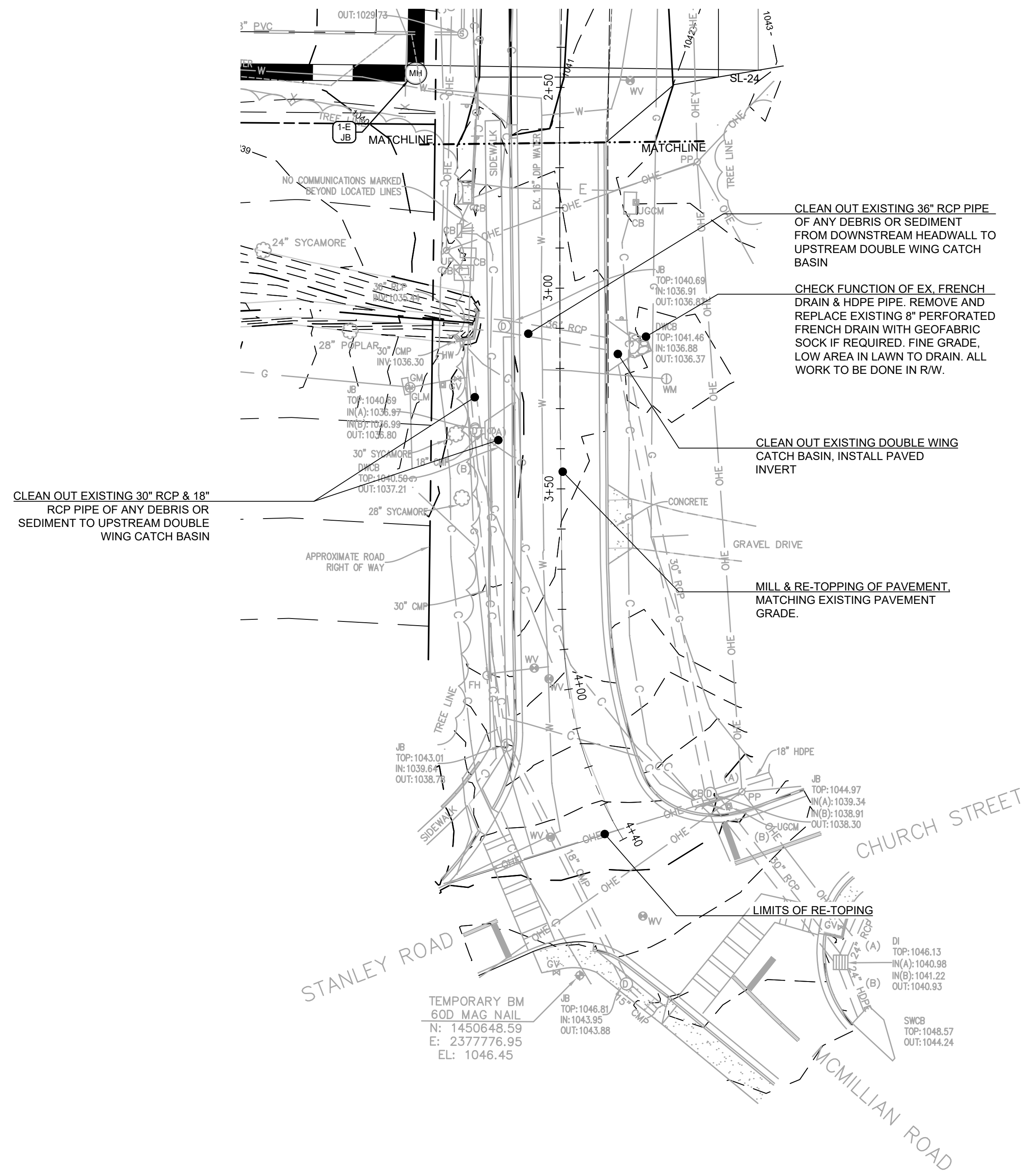
DATE	DESCRIPTION
06/24/2022	BID

JOB NO: 22-0310
DRAWN BY: RWJH
CHECKED BY: KDW

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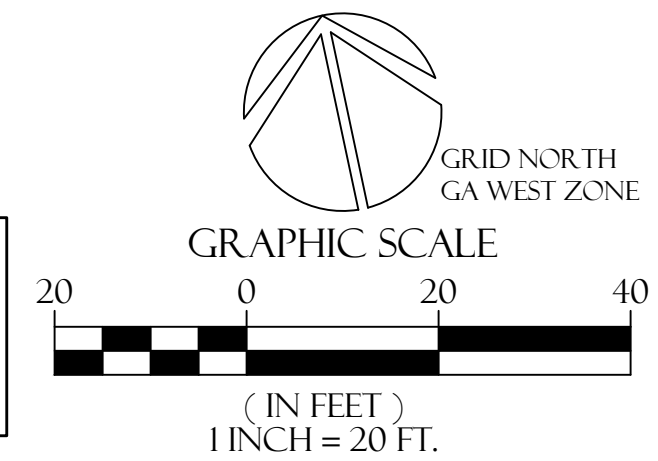
GRADING &
DRAINAGE
PLAN

C301



ABBREVIATIONS

SYMBOL	DESCRIPTION	DETAIL / SHEET
HW	HEADWALL	3 / C700
WI	WEIR INLET	2 / C701
JB	JUNCTION BOX	1 / C702
DWCB	DOUBLE WING CATCH BASIN	4 / C702
DI	DROP INLET	4 / C701



**GRASSING
REQUIRED EVERY
SEVEN (7) DAYS.**

**24 HOUR CONTACT
CITY OF DACULA
BRITNI NIX
BRITNI.NIX@DACULAGA.GOV
770-963-7451**



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 DACULA, GEORGIA 30019

PROJECT:
 MCMILLAN ROAD STORMWATER
 IMPROVEMENTS PROJECT

DISTRICT: 5
 LANDACOT: 302
 GWINNETT COUNTY, GEORGIA

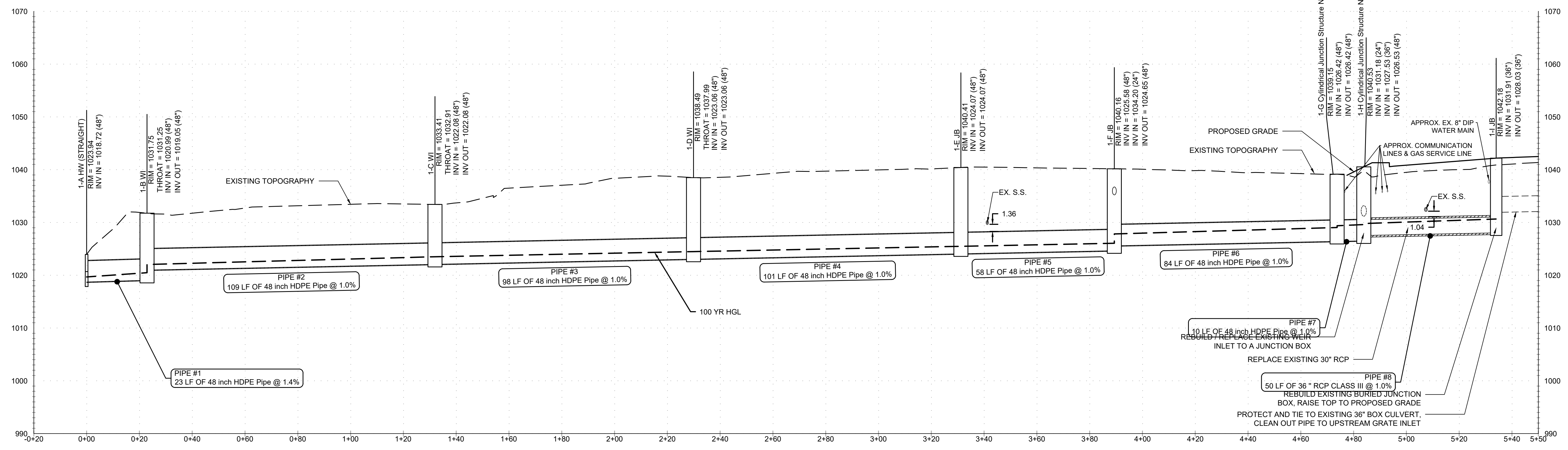
DATE	DESCRIPTION
06/24/2022	BID

JOB NO: 22-0310
 DRAWN BY: RW/H
 CHECKED BY: KD/W

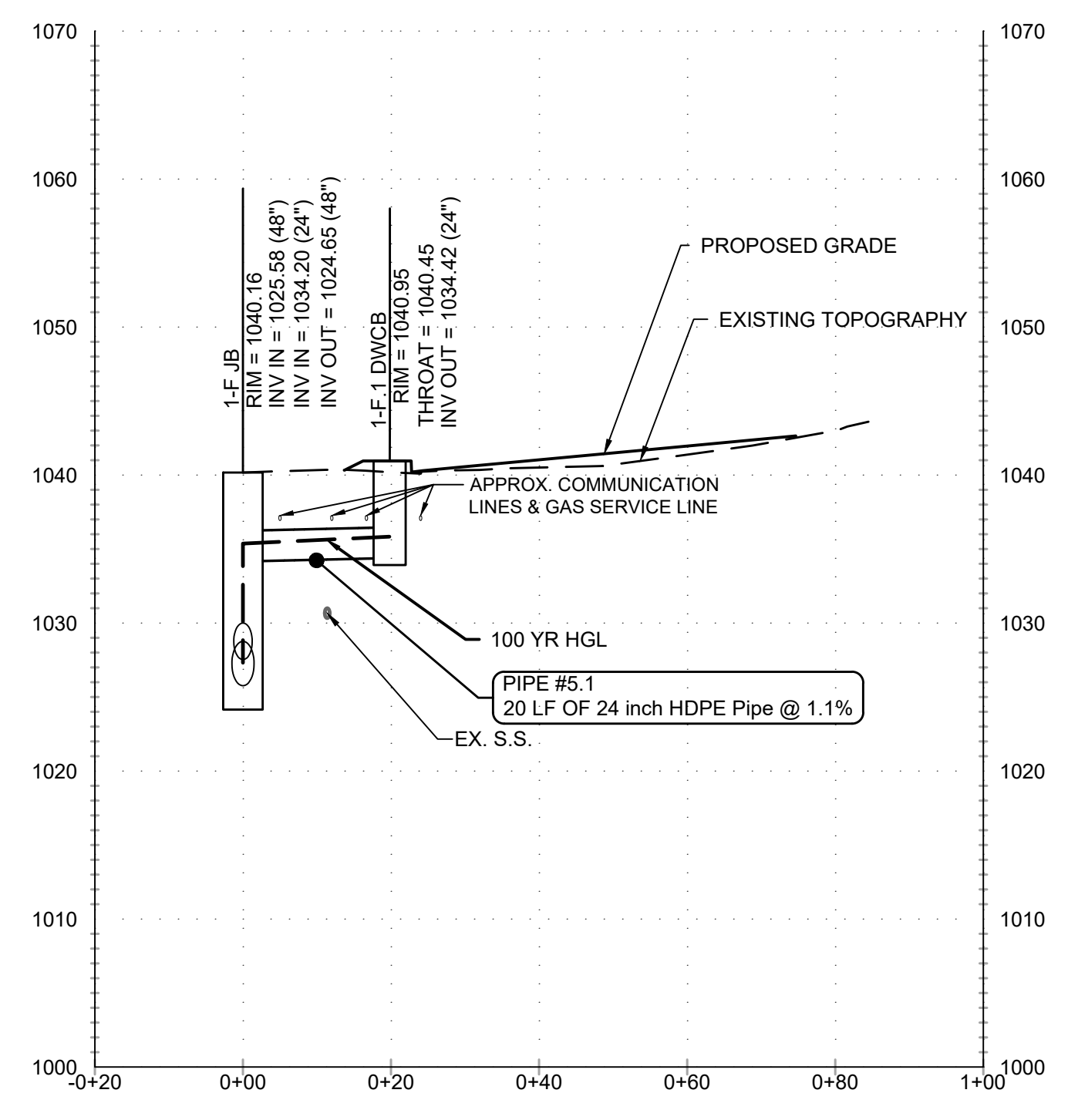
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STORM
 WATER
 PROFILES

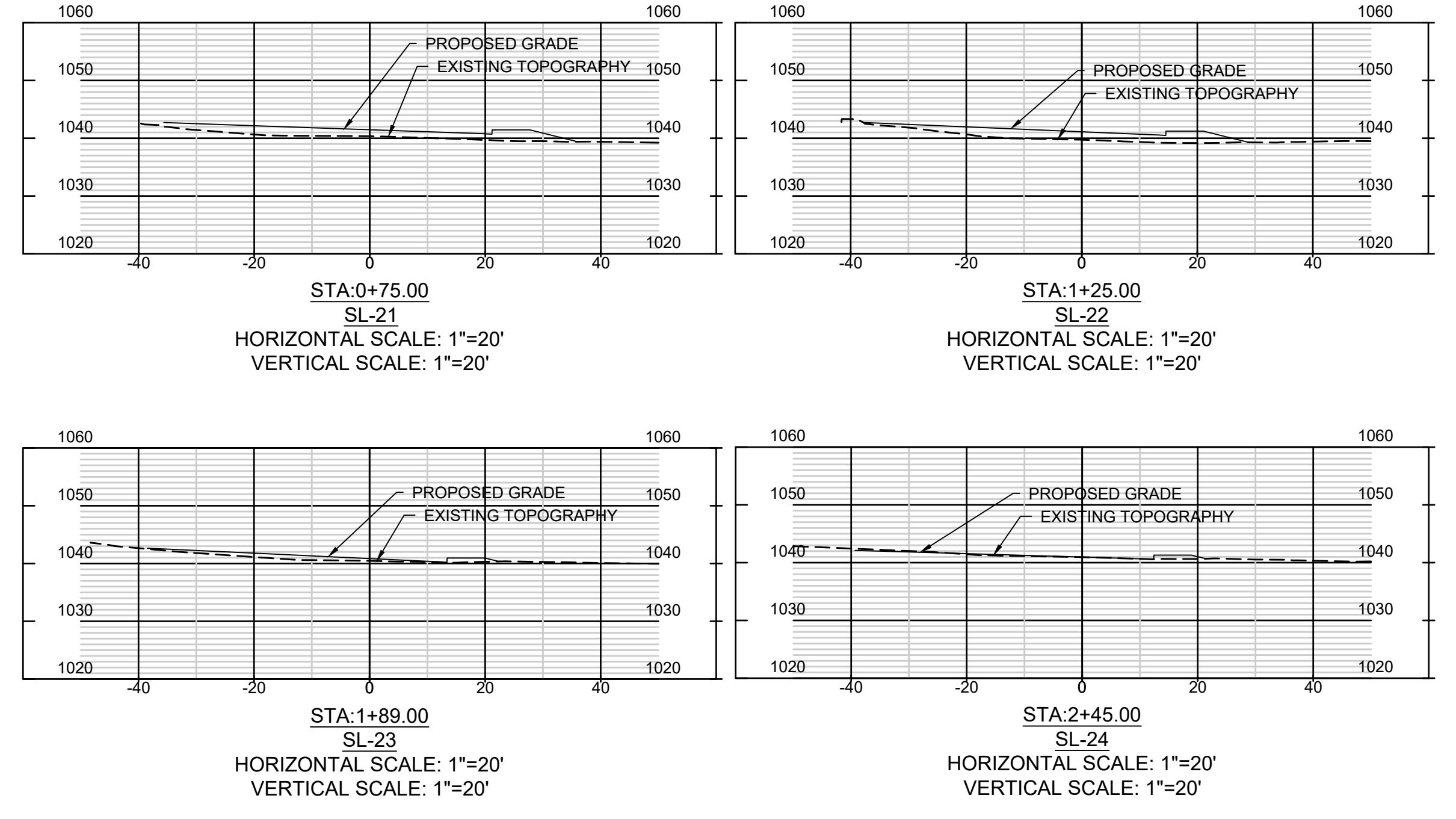
C302



STORMLINE 1
 Horizontal : 1" = 20'
 Vertical : 1" = 10'



STORMLINE 1-F
 Horizontal : 1" = 20'
 Vertical : 1" = 10'

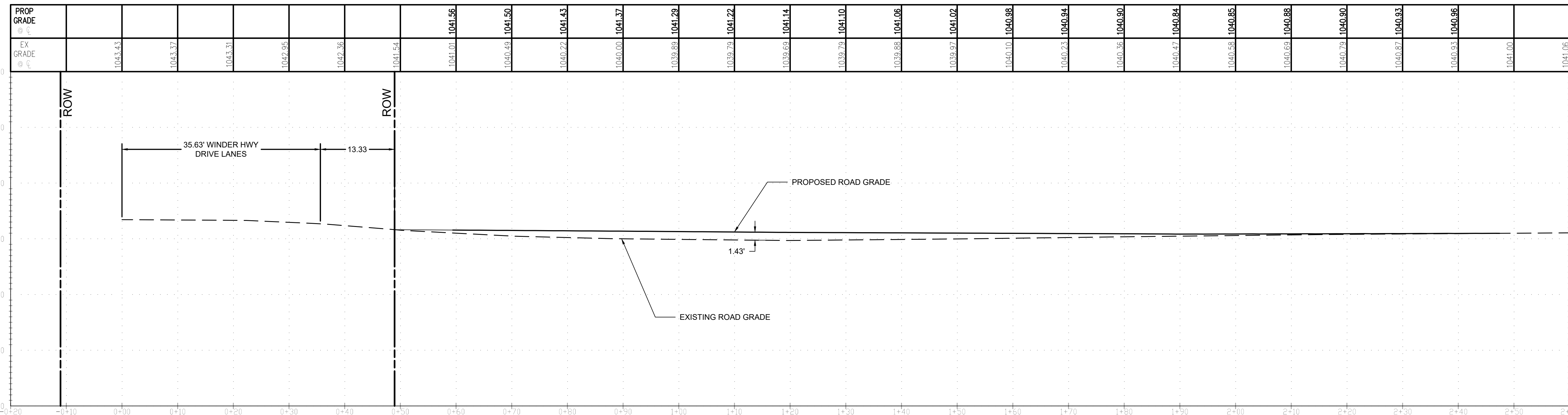


Pipe		PIPE CHART																				
Pipe #	Mat.	Location	Inlet Type	D.A. (Acres)	D.A. (Sum)	C	Tc (Min)	I25 (In/Hr)	Q25 (cfs)	Q25 (Sum)	I100 (In/Hr)	Q100 (cfs)	Q100 (Sum)	Slope %	Lgth. +/- (ft.)	Size (In)	Vel. (fps)	I10 (In/Hr)	Q10 (cfs)	Gutter Slope	Gutter Spread	
EX. 3	BOX	X3-X2	DI	33.92	33.92	0.51	296.8	9.29	160.71	160.71	11.40	197.21	197.21	1.00	64	36	7.59					
EX. 2	RCB	X2-A7	JB	0.00	33.92	0.51	5	9.29	0.00	160.71	11.40	0.00	197.21	1.00	50	36	7.59					
EX. 1-1	RCB	X1-A7	HW	2.40	2.40	0.56	141.4	9.29	12.49	12.49	11.40	15.32	15.32	0.60	193	24	6.41					
5.1	HDPE	1F-1-1F	DWCB	2.27	4.67	0.59	12.1	9.29	12.44	24.93	11.40	15.27	30.59	1.10	20	24	7.19	7.30	9.78	2.0	6.7	
8	RCP	1I-1H	JB	0.00	33.92	0.59	5.00	9.29	0.00	160.71	11.40	0.00	197.21	1.00	50	36	6.59					
7	HDPE	1H-1G	JB	0.00	36.32	0.59	5.00	9.29	0.00	173.20	11.40	0.00	212.53	1.00	10	48	6.59					
6	HDPE	1G-1F	JB	0.00	36.32	0.95	5.00	9.29	0.00	173.20	11.40	0.00	212.53	1.00	84	48	7.78					
5	HDPE	1F-1E	JB	0.00	40.99	0.95	5.00	9.29	0.00	173.20	11.40	0.00	212.53	1.00	58	48	6.27					
4	HDPE	1E-1D	JB	0.00	40.99	0.95	5.00	9.29	0.00	173.20	11.40	0.00	212.53	1.00	101	48	6.24					
3	HDPE	1D-1C	WI	0.57	41.56	0.41	8.90	9.29	2.17	175.37	11.40	2.66	215.20	1.00	98	48	6.27					
2	HDPE	1C-1B	WI	0.44	42.00	0.46	8.70	9.29	1.88	177.25	11.40	2.31	217.50	1.00	109	48	7.70					
1	HDPE	1B-1A	WI	0.56	42.56	0.41	6.00	9.29	2.13	179.38	11.40	2.62	220.12	1.40	23	48	8.38					

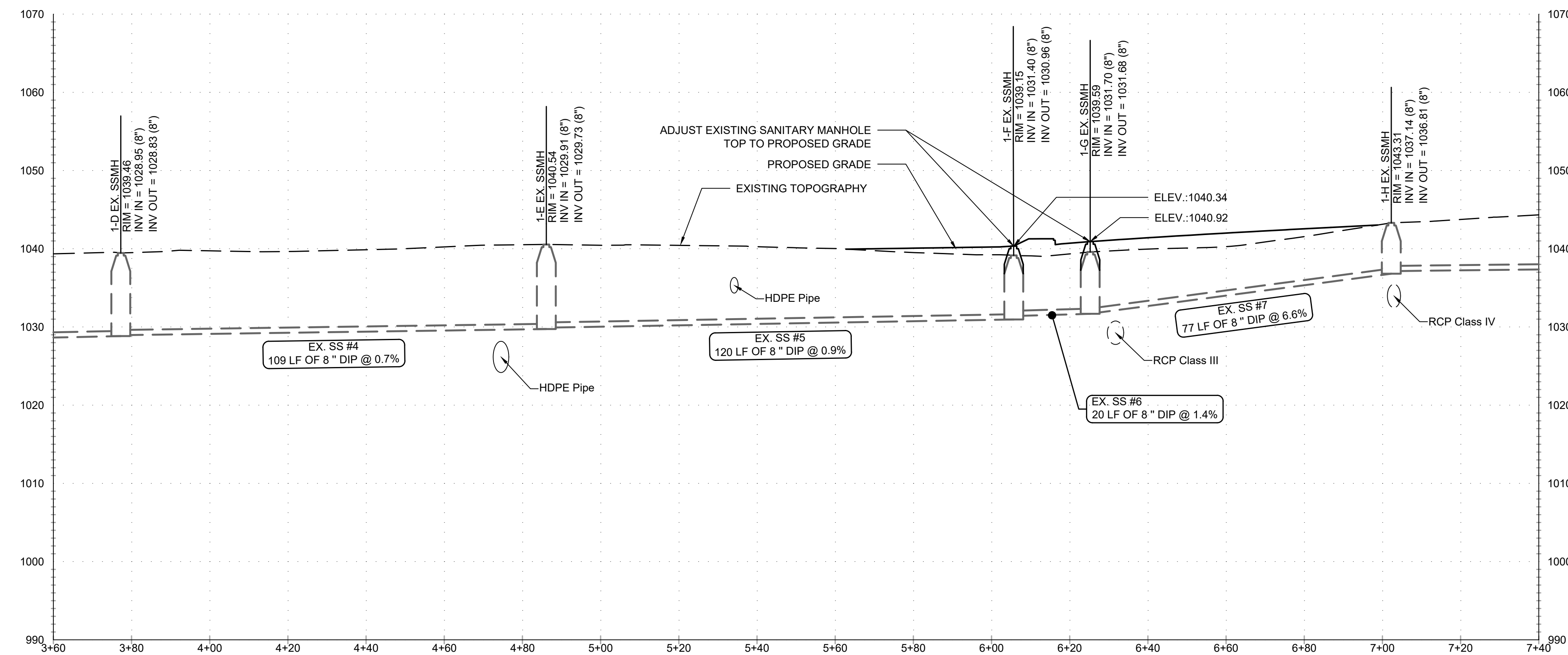
24 HOUR CONTACT
 CITY OF DACULA
 BRITTNI NIX
 BRITTNI.NIX@DACULAGA.GOV
 770-963-7451



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McMILLAN ROAD
 Horizontal : 1" = 20'
 Vertical : 1" = 20'



Alignment-EX-SS
 Horizontal : 1" = 20'
 Vertical : 1" = 10'

PROP GRADE	EX GRADE
1041.56	1041.56
1041.50	1041.50
1041.43	1041.43
1041.37	1041.37
1041.29	1041.29
1041.22	1041.22
1041.14	1041.14
1041.10	1041.10
1041.06	1041.06
1041.02	1041.02
1040.98	1040.98
1040.94	1040.94
1040.90	1040.90
1040.84	1040.84
1040.85	1040.85
1040.88	1040.88
1040.90	1040.90
1040.93	1040.93
1040.96	1040.96
1041.00	1041.00
1041.06	1041.06



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OWNER:
CITY OF DACULA

P.O. BOX 400
 DACULA, GEORGIA 30019

PROJECT:
McMILLAN ROAD STORMWATER IMPROVEMENTS PROJECT

DISTRICT: 5
 LANDSCAPE: 302
 GWINNETT COUNTY, GEORGIA

DATE	DESCRIPTION
06/24/2022	BID

JOB NO: 22-0310
 DRAWN BY: RWJH
 CHECKED BY: KDW

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PROFILES

C303

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 BRITTON NIX
 BRITTON.NIX@DACULAGA.GOV
 770-963-7451



EROSION, SEDIMENTATION AND POLLUTION CONTROL PLAN (ES&PC) NOTES:

- 1. EXISTING LAND USE: RIGHT OF WAY
2. SITE LOCATION: MCMILLAN ROAD, WINDER HWY & BROAD STREET
3. PROPOSED USE AND DESCRIPTION OF CONSTRUCTION ACTIVITY: RIGHT OF WAY WITH STORM WATER IMPROVEMENTS.
4. TOTAL SITE AREA: ±0.83 ACRES
5. TOTAL DISTURBED AREA: ±0.83 ACRES, STREAM BUFFER: ±0.53 ACRES.
6. OWNER/DEVELOPER/PRIMARY PERMITTEE: CITY OF DACULA
7. SECONDARY PERMITTEES:
8. 24 HOUR LOCAL CONTACT FOR EROSION, SEDIMENTATION AND POLLUTION CONTROL: BRITNI NIX
9. STATE WATERS ARE LOCATED ON-SITE.
10. THE WETLAND INVENTORY MAP HAS BEEN CONSULTED AND SHOW THAT WETLANDS ARE NOT LOCATED ON THE SITE.
11. RECEIVING WATER(S) IS: UNNAMED TRIBUTARY OF HOPKINS CREEK
12. SOIL SERIES FOR THE PROJECT SITE INCLUDE: AmC2, PgD2.
13. DESCRIPTION OF THE MEASURES TO BE INSTALLED DURING CONSTRUCTION PROCESS TO CONTROL POLLUTANTS IN STORM WATER THAT WILL OCCUR AFTER CONSTRUCTION OPERATIONS HAVE BEEN COMPLETED.
14. PRODUCT SPECIFIC PRACTICES
15. PETROLEUM BASED PRODUCTS - CONTAINERS FOR PRODUCTS SUCH AS FUELS, LUBRICANTS, AND TARS WILL BE INSPECTED DAILY FOR LEAKS AND SPILLS.
16. PAINTS/FINISHES/SOLVENTS - ALL PRODUCTS WILL BE STORED IN TIGHTLY SEALED ORIGINAL CONTAINERS WHEN NOT IN USE.
17. THIS SITE DOES LIE WITHIN A 100 YEAR FLOOD HAZARD AREA PER FIRM MAP 13135C0062F, DATED 9/29/2006.
18. ESTIMATE OF PRE-CONSTRUCTION 25 YEAR PEAK DISCHARGE FLOW AT X.XX CFS PRE-DEVELOPED CN = XXX
19. ESTIMATE OF POST-CONSTRUCTION 25 YEAR PEAK DISCHARGE FLOW AT X.XX CFS POST-DEVELOPED CN = XXX
20. CRITICAL AREAS LOCATED ON-SITE ARE IDENTIFIED AS: Ss. AT THE END OF EACH WORK DAY ALL SLOPES 2:1 OR STEEPER AND HIGHER THAN 5 FEET SHALL RECEIVE SURFACE ROUGHENING, POLYMERS, AND EROSION CONTROL MATTING.
21. THE ESCAPE OF SEDIMENT FROM THE SITE SHALL BE PREVENTED BY THE INSTALLATION OF EROSION AND SEDIMENT CONTROL MEASURES AND PRACTICES PRIOR TO LAND DISTURBING ACTIVITIES.
22. EROSION CONTROL MEASURES WILL BE MAINTAINED AT ALL TIMES.
23. ANY DISTURBED AREA LEFT EXPOSED FOR A PERIOD GREATER THAN 14 DAYS SHALL BE STABILIZED WITH MULCH OR TEMPORARY SEEDING.
24. STABILIZATION MEASURES SHALL BE INITIATED AS SOON AS PRACTICABLE IN PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITIES HAVE TEMPORARILY OR PERMANENTLY CEASED.
25. TEMPORARY SEDIMENT BASIN, RETROFITTED DETENTION POND, AND/OR EXCAVATED INLET SEDIMENT TRAPS FOR EACH COMMON DRAINAGE LOCATION PROVIDING A MINIMUM 67 CUBIC YARDS OF SEDIMENT STORAGE PER ACRE DRAINED MUST BE IN PLACE PRIOR TO AND DURING ALL LAND DISTURBING ACTIVITIES UNTIL FINAL STABILIZATION OF THE SITE HAS BEEN ACHIEVED.
26. SEDIMENT STORAGE MAINTENANCE INDICATORS MUST BE INSTALLED IN SEDIMENT STORAGE STRUCTURES, INDICATING THE 1/3 FULL VOLUME.
27. CONTRACTOR TO CLEAN OUT ACCUMULATED SILT IN DETENTION POND AT THE END OF CONSTRUCTION ACTIVITIES WHEN THE DISTURBED AREAS HAVE BEEN STABILIZED.
28. CONTRACTOR TO PROVIDE DETENTION POND AS-BUILTS AND RECORD DRAWINGS THAT SHALL INCLUDE TOPO OF POND TO CALCULATE POND VOLUMES AND OUTLET CONTROL STRUCTURE DETAILS AND INFORMATION TO COMPLETE AN AS-BUILT HYDROLOGY STUDY TO VERIFY THAT THE DETENTION POND WILL FUNCTION AS IT WAS DESIGNED.
29. MAINTENANCE OF ALL SOIL EROSION AND SEDIMENTATION CONTROL MEASURES AND PRACTICES, WHETHER TEMPORARY OR PERMANENT, SHALL BE AT ALL TIMES THE RESPONSIBILITY OF THE PROPERTY OWNER.
30. ADDITIONAL SOIL EROSION CONTROL MEASURES WILL BE ADDED IF DETERMINED TO BE NEEDED BY ON-SITE INSPECTIONS.
31. STANDARDS AND SPECIFICATIONS: ALL DESIGN SHALL CONFORM TO AND ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE STANDARDS AND SPECIFICATIONS OF THE PUBLICATION ENTITLED "MANUAL FOR EROSION AND SEDIMENT CONTROL" BY THE GA. SOIL & WATER CONSERVATION COMMISSION.
32. NON-EXEMPT ACTIVITIES SHALL NOT BE CONDUCTED WITHIN THE 25 OR 50-FOOT UNDISTURBED STREAM BUFFERS AS MEASURED FROM THE POINT OF WRESTED VEGETATION OR WITHIN 25-FEET OF THE COASTAL MARSHLAND BUFFER AS MEASURED FROM THE JURISDICTIONAL DETERMINATION LINE WITHOUT FIRST ACQUIRING THE NECESSARY VARIANCES AND PERMITS.
33. CONCENTRATED FLOW AREAS AND ALL SLOPES STEEPER THAN 2:5:1 WITH A HEIGHT OF TEN FEET OR GREATER SHALL BE STABILIZED WITH THE APPROPRIATE EROSION CONTROL MATTING OR BLANKET.
34. ALL CUT AND FILL SLOPES MUST BE SURFACED ROUGHENED AND VEGETATED WITHIN SEVEN (7) DAYS OF THEIR CONSTRUCTION. CUT AND FILL OPERATIONS SHALL BE KEPT TO A MINIMUM.
35. ADEQUATE PROVISIONS SHALL BE PROVIDED TO MINIMIZE DAMAGE FROM SURFACE WATER TO THE CUT FACE OF EXCAVATIONS OR THE SLOPING SURFACES OF FILLS.
36. GRADING OPERATIONS SHALL NOT ENDANGER ADJOINING PROPERTIES.
37. STRIPPING OF VEGETATION, REGRADING, AND OTHER DEVELOPMENT ACTIVITIES SHALL BE CONDUCTED IN SUCH A MANNER SO AS TO MINIMIZE EROSION.
38. FILLS SHALL NOT ENCRoACH UPON NATURAL COURSES OR CONSTRUCTED CHANNELS IN A MANNER SO AS TO ADVERSELY AFFECT OTHER PROPERTY OWNERS.
39. ALL FILL SLOPES SHALL HAVE SILT FENCE PLACED AT THE SLOPE'S TOE.
40. CONTRACTOR SHALL REMOVE ALL SILT FENCE AND ALL OTHER TEMPORARY EROSION SEDIMENTATION AND POLLUTION CONTROL MEASURES ONCE SITE IS FINAL STABILIZED AND AFTER ALL GRASSING REQUIREMENTS HAVE BEEN COMPLETED BY THE CONTRACTOR TO THE OWNERS AND CODE SATISFACTION AND BEFORE THE CONTRACTOR LEAVES THE SITE.
41. CONTRACTOR SHALL MAINTAIN CONSTRUCTION EXITS TO PREVENT TRACKING OF MUD INTO PUBLIC RIGHT-OF-WAY.

- 2. "OFF-SITE VEHICLE TRACKING OF DIRT, SOILS, AND SEDIMENTS AND THE GENERATION OF DUST SHALL BE MINIMIZED OR ELIMINATED TO THE MAXIMUM EXTENT PRACTICAL.
3. "CONTRACTOR TO FURNISH AND INSTALL APS 600 SERIES 'SILT STOP' AS MANUFACTURED BY APPLIED POLYMER SYSTEMS, NORCORSS GA. OR EQUAL AT A RATE OF 1.5 GALLONS/ACRE IN A HYDROSEEDER MIX OF APPROPRIATE SEED, FERTILIZER, LIME AND MULCH FOR THE SAME ACRE ON ALL DISTURBED OR EXPOSED SOIL SURFACES.
4. "CONTRACTOR SHALL INSPECT ALL VEHICLES AND PETROLEUM STORAGE CONTAINERS REGULARLY, MAKING REPAIRS TO MINIMIZE ALL PETROLEUM SPILLS AND LEAKS AND SHALL KEEP ON HAND DRY, POROUS PETROLEUM ABSORBENT MATERIALS SUCH AS VERMICULITE, SAND AND LEAN SOIL, AND SHALL CLEAN UP ALL SAID SPILLS AND DISPOSE OF SAID MATERIALS IN ACCORDANCE WITH ALL STATE AND FEDERAL REGULATIONS.
5. "NO CONSTRUCTION ACTIVITIES SHALL BE CONDUCTED WITHIN A STREAM BUFFER AND THE STREAM BUFFER SHALL REMAIN IN ITS NATURAL, UNDISTURBED, STATE OF VEGETATION UNTIL ALL LAND-DISTURBING ACTIVITIES ON THE CONSTRUCTION SITE ARE COMPLETED.
6. THE DESIGN PROFESSIONAL WHO PREPARED THE ES&PC PLAN IS TO INSPECT THE INSTALLATION OF THE INITIAL SEDIMENT STORAGE REQUIREMENTS AND PERIMETER CONTROLS Bmps WITHIN 7 DAYS AFTER INSTALLATION.
7. NON-STORM WATER DISCHARGES SUCH AS FIRE HYDRANT FLUSHING, POTABLE WATER SOURCES INCLUDING WATER LINE FLUSHING, IRRIGATION DRAINAGE, AIR CONDITIONING CONDENSATE, SPRINGS, UNCONTAMINATED GROUNDWATER, AND FOUNDATION OR FOOTING DRAINS ARE TO BE TREATED IN THE SAME MANNER AS STORM WATER DISCHARGES.
8. "A 25 FOOT BUFFER ADJACENT TO ALL STREAMS, CREEKS, LAKES, PONDS, ETC. IS REQUIRED TO BE MAINTAINED BY THE SOIL EROSION CONTROL AND SEDIMENT CONTROL ORDINANCE.
9. "CONTRACTOR SHALL ACQUIRE A COPY OF 'FIELD MANUAL FOR EROSION AND SEDIMENT CONTROL IN GEORGIA, VEGETATION AND STRUCTURAL BEST MANAGEMENT PRACTICES (Bmps) FOR LAND DISTURBING ACTIVITIES, AS PUBLISHED BY THE GEORGIA SOIL AND WATER CONSERVATION COMMISSION, LATEST EDITION.
10. THE PRIMARY PERMITTEE MUST KEEP AN APPROVED ES&PC PLAN ON-SITE.
11. "THE PRIMARY PERMITTEE MUST SAMPLE ALL RECEIVING WATER(S), AND/OR ALL OUTFALLS, OR A COMBINATION OF RECEIVING WATERS AND OUTFALLS.
12. "THE PRIMARY PERMITTEE MAY USE AN ALTERNATE DESIGN PROFESSIONAL TO CONDUCT THE SEVEN (7) DAY Bmp INSPECTION.
13. "PRIMARY PERMITTEE IS TO PROVIDE EACH SECONDARY PERMITTEE WITH THE APPLICABLE PORTION OF THE ES&PC THAT PERTAINS TO THEIR CONSTRUCTION ACTIVITY AND EACH SECONDARY PERMITTEE SHALL SIGN THE PLAN OR PORTION OF THE PLAN APPLICABLE TO THEIR SITE.
14. "AMENDMENTS/REVISIONS TO THE ES&PC PLAN WHICH HAVE A SIGNIFICANT EFFECT ON Bmps WITH A HYDRAULIC COMPONENT MUST BE CERTIFIED BY THE DESIGN PROFESSIONAL.
15. "WASTE MATERIALS SHALL NOT BE DISCHARGED TO WATERS OF THE STATE, EXCEPT AS AUTHORIZED BY A SECTION 404 PERMIT.
16. APPROVED PLANS AND NPDES DAILY LOG MUST BE ON SITE AT ALL TIMES.
17. SEDIMENT STORAGE VOLUME MUST BE IN PLACE PRIOR TO AND DURING ALL LAND DISTURBING ACTIVITIES UNTIL FINAL STABILIZATION OF THE SITE HAS BEEN ACHIEVED.
18. PETROLEUM STORAGE SHALL BE DONE IN ACCORDANCE WITH ONE OF THE FOLLOWING METHODS TO PREVENT STORM WATER DISCHARGES ON THE SITE.
19. ALL PETROLEUM STORAGE CONTAINERS SHALL BE LOCATED IN A SECONDARY CONTAINMENT AREA.
20. NRC PHONE # 1-800-424-8802.

WARNING: Contractors, subcontractors, vendors and suppliers are advised that the contract documents consist of Design Professional-reproduced printed, bound, and numbered specifications, Design Professional-reproduced printed, bound and numbered blue or black line prints, addenda, post-bid addenda, and change orders only. Documents reproduced by parties other than Design Professional, whether in hard copy or electronic format shall not be considered part of contract documents and do not supersede the provisions of the contract documents. The contractor, subcontractor, vendors, and suppliers are solely responsible for verification that information utilized in bidding, development of shop drawings and construction of facility are identical to contract documents.

EROSION, SEDIMENTATION AND POLLUTION CONTROL PREPARATION CERTIFICATION: I CERTIFY UNDER PENALTY OF LAW THAT THIS DOCUMENT AND ALL ATTACHMENTS WERE PREPARED UNDER MY DIRECTION OR SUPERVISION IN ACCORDANCE WITH A SYSTEM DESIGNED TO ASSURE THAT QUALIFIED PERSONNEL PROPERLY GATHER AND EVALUATE THE INFORMATION SUBMITTED. BASED ON MY INQUIRY OF THE PERSON OR PERSONS WHO MANAGE THE SYSTEM, OR THOSE PERSONS DIRECTLY RESPONSIBLE FOR GATHERING THE INFORMATION, THE INFORMATION SUBMITTED IS, TO THE BEST OF MY KNOWLEDGE AND BELIEF, TRUE, ACCURATE, AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION, INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT FOR KNOWING VIOLATIONS.

OWNER: DATE:

EROSION, SEDIMENTATION AND POLLUTION CONTROL PLAN CERTIFICATION: I CERTIFY THAT THE PERMITTEE'S EROSION, SEDIMENTATION AND POLLUTION CONTROL PLAN PROVIDES FOR AN APPROPRIATE AND COMPREHENSIVE SYSTEM OF BEST MANAGEMENT PRACTICES REQUIRED BY THE GEORGIA WATER QUALITY CONTROL ACT AND THE DOCUMENT "MANUAL FOR EROSION AND SEDIMENT CONTROL IN GEORGIA" (MANUAL) PUBLISHED BY THE STATE SOIL AND WATER CONSERVATION COMMISSION AS OF JANUARY 1 OF THE YEAR IN WHICH THE LAND-DISTURBING ACTIVITY WAS PERMITTED, PROVIDES FOR THE SAMPLING OF THE RECEIVING WATER(S) OR THE SAMPLING OF THE STORM WATER OUTFALLS AND THAT THE DESIGNED SYSTEM OF BEST MANAGEMENT PRACTICES AND SAMPLING METHODS IS EXPECTED TO MEET THE REQUIREMENTS CONTAINED IN THE GENERAL NPDES PERMIT NO. GAR 100001."

REGISTERED PROFESSIONAL: KEVIN D WHIGHAM, P.E. DATE: 6/16/2022
GSWCC LEVEL II DESIGN CERTIFICATION # 945 EXP: 9-27-2023

SITE VISIT CERTIFICATION: I CERTIFY UNDER PENALTY OF LAW THAT THIS PLAN WAS PREPARED AFTER A SITE VISIT TO THE LOCATIONS DESCRIBED HEREIN BY MYSELF OR MY AUTHORIZED AGENT, UNDER MY DIRECT SUPERVISION.
REGISTERED PROFESSIONAL: KEVIN D WHIGHAM, P.E. DATE: 6/16/2022
GSWCC LEVEL II DESIGN CERTIFICATION # 945 EXP: 9-27-2023

WETLANDS CERTIFICATION: THE DESIGN PROFESSIONAL, WHOSE SEAL APPEARS HEREON, CERTIFIES THE FOLLOWING: 1)THE NATIONAL WETLAND INVENTORY MAPS HAVE BEEN CONSULTED; AND, 2) THE APPROPRIATE PLAN SHEET () DOES / (X) DOES NOT INDICATE AREAS OF UNITED STATES ARMY CORPS OF ENGINEERS JURISDICTIONAL WETLANDS AS SHOWN ON THE MAPS; AND, 3) IF WETLANDS ARE INDICATED, THE LAND OWNER OR DEVELOPER HAS BEEN ADVISED THAT LAND DISTURBANCE OF PROTECTED WETLANDS SHALL NOT OCCUR UNLESS THE APPROPRIATE FEDERAL WETLANDS ALTERATION ("SECTION 404") PERMIT HAS BEEN OBTAINED.

REGISTERED PROFESSIONAL: KEVIN D WHIGHAM, P.E. DATE: 6/16/2022

DESIGN PROFESSIONAL 7 DAY VISIT CERTIFICATION: I CERTIFY THE SITE WAS IN COMPLIANCE WITH THE ES&PC PLAN ON THE DATE OF INSPECTION

REGISTERED PROFESSIONAL: KEVIN D WHIGHAM, P.E. DATE: 6/16/2022
GSWCC LEVEL II DESIGN CERTIFICATION # 945 EXP: 9-27-2023

INSPECTION REVEALED THE FOLLOWING DISCREPANCIES FROM THE ES&PC PLAN: THESE DISCREPANCIES MUST BE ADDRESSED IMMEDIATELY AND A RE-INSPECTION SCHEDULED. WORK SHALL NOT PROCEED ON THE SITE UNTIL DESIGN PROFESSIONAL CERTIFICATION IS OBTAINED.

24 HOUR CONTACT
CITY OF DACULA
BRITNI NIX
BRITNI.NIX@DACULAGA.GOV
770-963-7451



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FAX: (770) 932-6551
WWW.BOWMAN.COM

CITY OF DACULA

P.O. BOX 400
DACULA, GEORGIA 30019

PROJECT: MCMILLAN ROAD STORMWATER IMPROVEMENTS PROJECT

DETECT: 5
LANDACCT: 302
GWINNETT COUNTY, GEORGIA

Table with 2 columns: DATE, DESCRIPTION. Row 1: 06/24/2022 BID

JOB NO: 22-030
DRAWN BY: RAWH
CHECKED BY: KDW

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EROSION, SEDIMENT & POLLUTION CONTROL PLAN NOTE C500

PHASE-I EROSION NOTES:
 1. DISTURBED AREA TO INSTALL INITIAL PHASE BMPs: 0.83 AC
 2. SEDIMENT STORAGE REQUIRED FOR PHASE I: 0.83 AC * 67 CY/AC = 55.61 CY.
 3. TOTAL SEDIMENT STORAGE REQUIRED BY PHASE-I BMPs: 55.61 CY

PHASE-I SEDIMENT STORAGE: SILT FENCE
 LENGTH OF SILT FENCE: 435 LF
 LENGTH X (4) = SEDIMENT STORAGE
 PROVIDED SEDIMENT STORAGE: 145 CY
 55.61 CY REQUIRED < 58.29 CY PROPOSED SEDIMENT STORAGE

PHASE I - INITIAL CLEARING PHASE:
 Erosion Control Notes
 1. PRIOR TO THE LAND DISTURBING CONSTRUCTION, THE CONTRACTOR SHALL SCHEDULE A PRECONSTRUCTION MEETING WITH THE AREA SITE DEVELOPMENT INSPECTOR. THE CONTRACTOR SHALL OBSERVE THE PROJECT SEQUENCE SHOWN ON THE PLANS. THE CONTRACTOR SHALL MAINTAIN CAREFUL SCHEDULING AND PERFORMANCE TO INSURE THAT LAND STRIPPED OF ITS NATURAL COVER IS EXPOSED ONLY IN SMALL QUANTITIES.
 2. THE OWNER AGREES TO PROVIDE AND MAINTAIN OFF-STREET PARKING ON THE SUBJECT PROPERTY DURING THE ENTIRE CONSTRUCTION PERIOD.
 3. NO STAGING AREAS, MATERIAL STORAGE, CONCRETE WASH OUT AREAS, OR DEBRIS BURN AND BURIAL HOLES SHALL BE LOCATED WITHIN 500 FEET OF DESIGNATED TREE PROTECTION AREAS.
 4. A COPY OF THE APPROVED LAND DISTURBANCE PLAN AND PERMIT SHALL BE PRESENT ON THE SITE AT ALL TIMES.
 5. THE ESCAPE OF SEDIMENT FROM THE SITE SHALL BE PREVENTED BY THE INSTALLATION OF EROSION AND SEDIMENT CONTROL MEASURES AND PRACTICES PRIOR TO, OR CONCURRENT WITH, LAND-DISTURBING ACTIVITIES.
 6. PRIOR TO COMMENCING LAND DISTURBANCE ACTIVITY, THE LIMITS OF LAND DISTURBANCE SHALL BE CLEARLY AND ACCURATELY DEMARCATED WITH STAKES, RIBBONS, OR OTHER APPROPRIATE MEANS. THE LOCATION AND EXTENT OF ALL AUTHORIZED LAND DISTURBANCE ACTIVITY SHALL BE DEMARCATED FOR THE DURATION OF THE CONSTRUCTION ACTIVITY. NO LAND DISTURBANCE SHALL OCCUR OUTSIDE THE APPROVED LIMITS INDICATED ON THE APPROVED PLANS.
 7. PRIOR TO ANY OTHER CONSTRUCTION, A STABILIZED CONSTRUCTION ENTRANCE SHALL BE CONSTRUCTED AT EACH POINT OF ENTRY TO OR EXIT FROM THE SITE OR ONTO ANY PUBLIC ROADWAY.
 8. THE FOLLOWING INITIAL EROSION CONTROL MEASURES SHALL BE IMPLEMENTED PRIOR TO ANY OTHER CONSTRUCTION ACTIVITY.
 9. THE CONSTRUCTION EXITS, CONSISTING OF A MINIMUM PAD SIZE OF 20 FEET BY 50 FEET WITH A MINIMUM OF 6-INCH THICK STONE, SHALL BE PLACED AS SHOWN ON THE PLAN. THE STONE SIZE SHOULD CONSIST OF COURSE AGGREGATE BETWEEN 1-1/2" & 3-1/2" IN DIAMETER AND OVERLAIN ON A GEOTEXTILE UNDERLINE. THE GEOTEXTILE UNDERLINE SHALL MEET THE REQUIREMENTS OF AASHTO M288-96, SECTION 7.3, SEPARATION REQUIREMENTS.
 10. IMMEDIATELY AFTER THE ESTABLISHMENT OF CONSTRUCTION ENTRANCE / EXITS, ALL PERIMETER EROSION CONTROL AND STORM WATER MANAGEMENT DEVICES SHALL BE INSTALLED AS SHOWN ON THE CLEARING PHASE EROSION CONTROL PLAN.
 11. TYPE "C" SILT FENCE SHOULD BE INSTALLED AT THE PERIMETER OF THE DISTURBED AREA AS SHOWN ON THE PLAN. THE SILT FENCE SHOULD BE PLACED IN ACCORDANCE WITH THE MANUAL FOR EROSION CONTROL IN GEORGIA, TABLE 6-202. THE SILT FENCE SHOULD BE KEPT ERECT AT ALL TIMES AND REPAIRED WHEN REQUESTED BY THE SITE INSPECTOR OR THE PROJECT DESIGN PROFESSIONAL OF RECORD. SILT SHOULD BE REMOVED WHEN ACCUMULATION REACHED 1/2 HEIGHT OF THE BARRIER. THE PERIMETER SILT FENCE SHOULD BE INSPECTED DAILY FOR ANY FAILURES. ANY FAILURES OF SIAD FENCING SHOULD BE REPAIRED IMMEDIATELY.
 12. INLET SEDIMENT PROTECTION MEASURES SHALL BE INSTALLED ON ALL EXISTING STORM STRUCTURES AS SHOWN ON THE PLAN. SEE SEPARATE DETAILS FOR SPECIFICS ON TYPE OF INLET PROTECTION SPECIFIED.
 13. STONE CHECK DAMS SHALL BE INSTALLED IN AREAS OF CONCENTRATED FLOWS AS SHOWN ON THE PLAN.
 14. TREE PROTECTION FENCING SHOULD BE INSTALLED PRIOR TO THE START OF ANY LAND DISTURBANCE ACTIVITY AND MAINTAINED UNTIL FINAL LANDSCAPE IS INSTALLED. THE TREE PROTECTION FENCING SHOULD BE INSPECTED DAILY. ANY FAILURES OF SAID FENCING SHOULD BE REPAIRED IMMEDIATELY.
 15. AFTER INSTALLATION OF INITIAL EROSION CONTROL MEASURES THE SITE CONTRACTOR SHALL SCHEDULE AN INSPECTION BY THE PROJECT DESIGN PROFESSIONAL. NO OTHER CONSTRUCTION ACTIVITIES SHALL OCCUR UNTIL THE PROJECT DESIGN PROFESSIONAL APPROVES THE INSTALLATION OF SAID EROSION CONTROL MEASURES. IF UNFORESEEN CONDITIONS EXIST IN THE FIELD THAT WARRANT ADDITIONAL EROSION CONTROL MEASURES, THE CONTRACTOR MUST CONSTRUCT ADDITIONAL EROSION CONTROL DEVICES DEEMED NECESSARY BY THE SITE INSPECTOR. AFTER APPROVAL OF THE INITIAL EROSION CONTROL INSTALLATION, THE CONTRACTOR MAY PROCEED WITH CLEARING AND GRUBBING ACTIVITIES. AS CLEARING PERMITS THE CONTRACTOR SHALL CONSTRUCT TEMPORARY SEDIMENT PONDS AND DIVERSION DIKES AS SHOWN ON THE CLEARING PHASE PLAN TO CONTROL EROSION AND STORM WATER RUN OFF.
 16. THE CONTRACTOR CAN UTILIZE CLEARED TREES AS BARRIER BRUSH SEDIMENT CONTROL IN AREAS SHOWN ON PLAN WHERE INITIAL GRADING ACTIVITIES WILL NOT OCCUR.
 17. NO BURN OF BURY PITS SHALL BE PERMITTED ON THE CONSTRUCTION SITE.
 18. ADDITIONAL SILT BARRIERS MUST BE PLACED AS SHOWN ON THE PLAN AS ACCESS IS OBTAINED DURING CLEARING. NO GRADING SHALL TAKE PLACE UNTIL SILT BARRIER INSTALLATION AND SEDIMENT PONDS ARE CONSTRUCTED AS SHOWN ON THE CLEARING PHASE EROSION CONTROL PLAN.
 19. ALL SILT FENCE MUST MEET THE REQUIREMENTS OF SECTION 171-TEMPORARY SILT FENCE FOR THE DEPARTMENT OF TRANSPORTATION, STATE OF GEORGIA, STANDARD SPECIFICATIONS, 1983 EDITION.
 20. ALL ITEMS IN THIS SECTION OF THE SPECIFICATION SHALL MEET THE REQUIREMENTS AS SET FORTH IN SECTION 161, 162, 163, AND 164 OF THE GEORGIA D.O.T STANDARD SPECIFICATIONS FOR ROADS AND BRIDGES.
 21. MULCH OR TEMPORARY GRASSING SHALL BE APPLIED TO ALL EXPOSED AREAS WITHIN 7 DAYS OF LAND DISTURBANCE.
 22. ALL DISTURBED AREAS LEFT MULCHED AFTER 30 DAYS SHALL BE STABILIZED WITH TEMPORARY VEGETATION.
 23. SEDIMENT AND EROSION CONTROL MEASURES SHOULD BE CHECKED AFTER EACH RAIN EVENT. EACH DEVICE IS TO BE MAINTAINED OR REPLACED IF SEDIMENT ACCUMULATION HAS REACHED ONE HALF THE CAPACITY OF THE DEVICE. ADDITIONAL DEVICES MUST BE INSTALLED IF NEW CHANNELS HAVE DEVELOPED. THE CONSTRUCTION EXIT SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACK OR FLOW OF MUD ONTO PUBLIC RIGHT-OF-WAY. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH 1" - 3" OF STONE. AS CONDITIONS DEMAND, ALL MATERIALS SPILLED, DROPPED, WASHED, OR TRACKED FROM VEHICLES ONTO PUBLIC ROADWAY OR INTO STORM DRAIN MUST BE REMOVED IMMEDIATELY.
 24. CONTRACTOR SHALL INSPECT CONTROL MEASURES AT THE END OF EACH WORKING DAY TO ENSURE MEASURES ARE FUNCTIONING PROPERLY.
 25. EROSION AND SEDIMENTATION CONTROL MEASURES AND PRACTICES SHALL BE MAINTAINED AT ALL TIMES. IF FULL IMPLEMENTATION OF THE APPROVED PLAN DOES NOT PROVIDE FOR EFFECTIVE EROSION CONTROL, ADDITIONAL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE IMPLEMENTED TO CONTROL OR TREAT THE SEDIMENT SOURCE. ADDITIONAL EROSION AND SEDIMENTATION CONTROL MEASURES AND PRACTICES SHALL BE INSTALLED IF DEEMED NECESSARY BY ON-SITE INSPECTION.
 26. FAILURE TO INSTALL, OPERATE, OR MAINTAIN ALL EROSION CONTROL MEASURES WILL RESULT IN ALL CONSTRUCTION BEING STOPPED ON THE JOB UNTIL SUCH MEASURES ARE CORRECTED BACK TO THE APPROVED EROSION CONTROL PLANS.
 27. ALL AD VALOREM TAXES HAVE BEEN PAID.
 28. ALL UNDISTURBED BUFFERS SHALL BE IDENTIFIED WITH ORANGE FOUR-FOOT TREE-SAVE FENCE PRIOR TO ANY LAND DISTURBANCE.



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OWNER: CITY OF DACULA
 P.O. BOX 400
 DACULA, GEORGIA 30019

PROJECT: MCMILLAN ROAD STORMWATER IMPROVEMENTS PROJECT
 DISTRIC: 5
 LANDACOT: 302
 GWINNETT COUNTY, GEORGIA

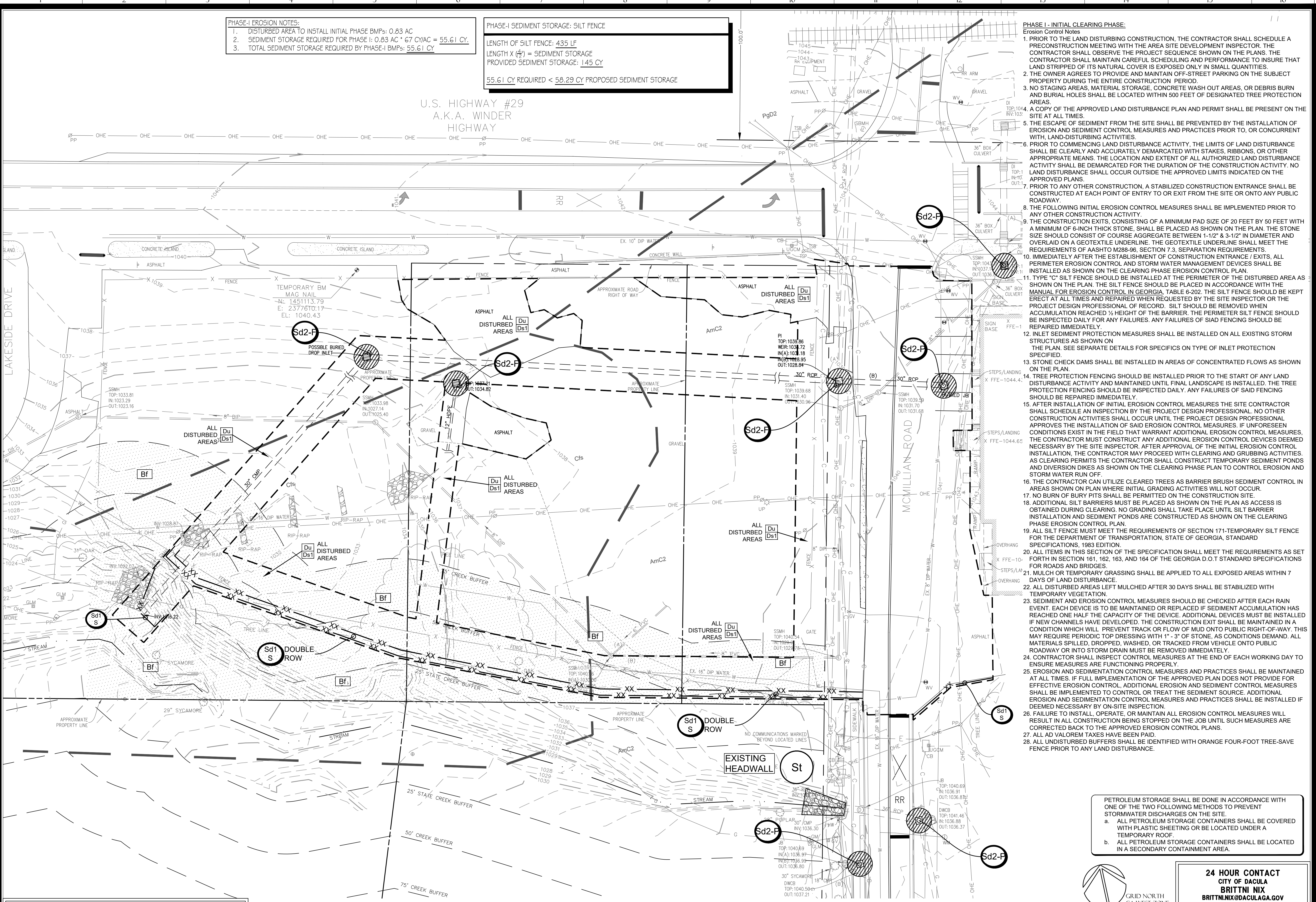
DATE	DESCRIPTION
06/24/2022	BID

JOB NO: 22-030
 DRAWN BY: RW/H
 CHECKED BY: KD/W

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EROSION, SEDIMENT & POLLUTION CONTROL PLAN
 PHASE - I
C510

U.S. HIGHWAY #29
 A.K.A. WINDER
 HIGHWAY



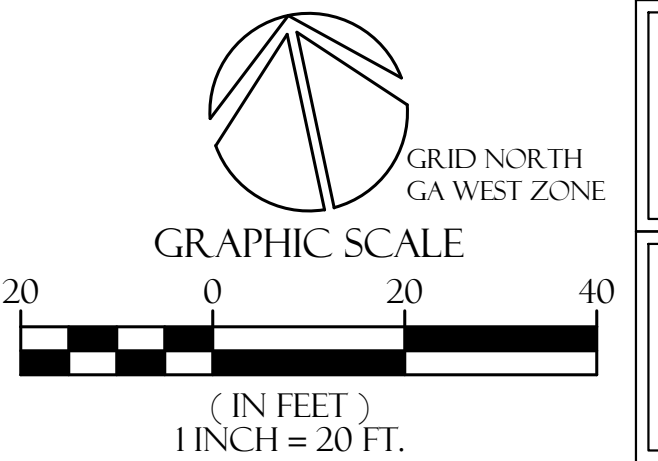
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AREAS:
 TOTAL SITE AREA = ±0.83 ACRES
 DISTURBED AREA = ±0.83 ACRES

NOTIFY CITY OF DACULA INSPECTOR 24 HOURS BEFORE THE BEGINNING PHASE OF CONSTRUCTION (770) 963-7451

SOILS INFO:
 AmC2 APPLING SANDY LOAM, 6 TO 10 PERCENT SLOPES, MODERATELY ERODED.
 Cts CHEWACLA SILT LOAM, 0 TO 2 PERCENT SLOPES, FREQUENTLY FLOODED.
 PgD2 PACOLET SANDY CLAY LOAM, 10 TO 15 PERCENT SLOPES, MODERATELY ERODED.

PETROLEUM STORAGE SHALL BE DONE IN ACCORDANCE WITH ONE OF THE TWO FOLLOWING METHODS TO PREVENT STORMWATER DISCHARGES ON THE SITE.
 a. ALL PETROLEUM STORAGE CONTAINERS SHALL BE COVERED WITH PLASTIC SHEETING OR BE LOCATED UNDER A TEMPORARY ROOF.
 b. ALL PETROLEUM STORAGE CONTAINERS SHALL BE LOCATED IN A SECONDARY CONTAINMENT AREA.



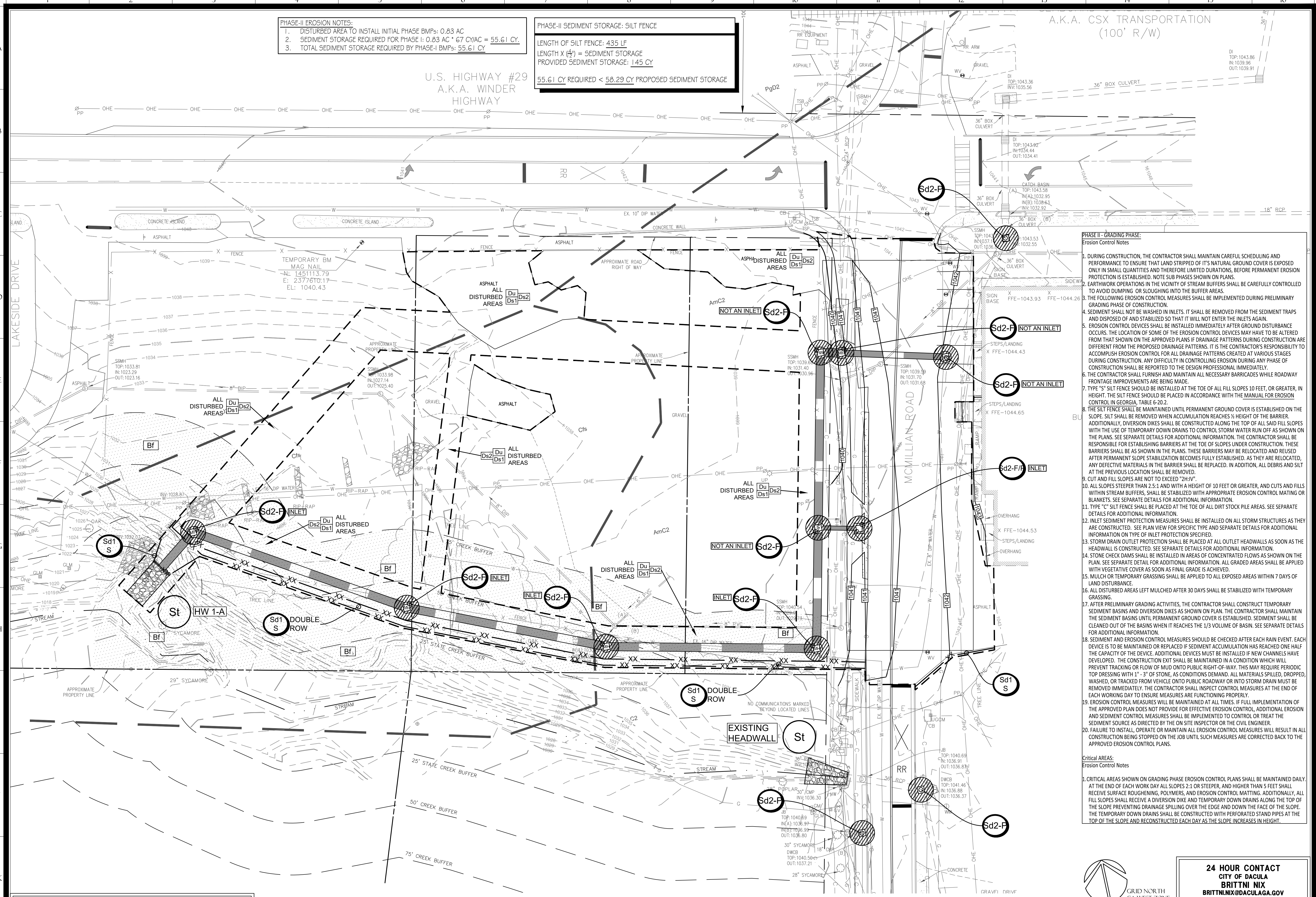
24 HOUR CONTACT
 CITY OF DACULA
BRITNI NIX
 BRITTNIX@DACULAGA.GOV
 770-963-7451

PHASE-II EROSION NOTES:
 1. DISTURBED AREA TO INSTALL INITIAL PHASE BMPs: 0.83 AC
 2. SEDIMENT STORAGE REQUIRED FOR PHASE I: 0.83 AC * 67 CY/AC = 55.61 CY
 3. TOTAL SEDIMENT STORAGE REQUIRED BY PHASE-I BMPs: 55.61 CY

PHASE-II SEDIMENT STORAGE: SILT FENCE
 LENGTH OF SILT FENCE: 435 LF
 LENGTH X (1/4") = SEDIMENT STORAGE
 PROVIDED SEDIMENT STORAGE: 145 CY
 55.61 CY REQUIRED < 58.29 CY PROPOSED SEDIMENT STORAGE

A.K.A. CSX TRANSPORTATION
 (100' R/W)

U.S. HIGHWAY #29
 A.K.A. WINDER
 HIGHWAY



PHASE II - GRADING PHASE:
 Erosion Control Notes

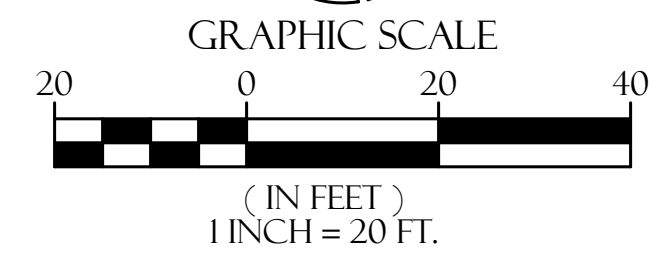
- DURING CONSTRUCTION, THE CONTRACTOR SHALL MAINTAIN CAREFUL SCHEDULING AND PERFORMANCE TO ENSURE THAT LAND STRIPPED OF ITS NATURAL GROUND COVER IS EXPOSED ONLY IN SMALL QUANTITIES AND THEREFORE LIMITED DURATIONS, BEFORE PERMANENT EROSION PROTECTION IS ESTABLISHED. NOTE SUB PHASES SHOWN ON PLANS.
- EARTHWORK OPERATIONS IN THE VICINITY OF STREAM BUFFERS SHALL BE CAREFULLY CONTROLLED TO AVOID DUMPING OR SLOUGHING INTO THE BUFFER AREAS.
- THE FOLLOWING EROSION CONTROL MEASURES SHALL BE IMPLEMENTED DURING PRELIMINARY GRADING PHASE OF CONSTRUCTION.
- SEDIMENT SHALL NOT BE WASHED IN INLETS. IT SHALL BE REMOVED FROM THE SEDIMENT TRAPS AND DISPOSED OF AND STABILIZED SO THAT IT WILL NOT ENTER THE INLETS AGAIN.
- EROSION CONTROL DEVICES SHALL BE INSTALLED IMMEDIATELY AFTER GROUND DISTURBANCE OCCURS. THE LOCATION OF SOME OF THE EROSION CONTROL DEVICES MAY HAVE TO BE ALTERED FROM THAT SHOWN ON THE APPROVED PLANS IF DRAINAGE PATTERNS DURING CONSTRUCTION ARE DIFFERENT FROM THE PROPOSED DRAINAGE PATTERNS. IT IS THE CONTRACTOR'S RESPONSIBILITY TO ACCOMPLISH EROSION CONTROL FOR ALL DRAINAGE PATTERNS CREATED AT VARIOUS STAGES DURING CONSTRUCTION. ANY DIFFICULTY IN CONTROLLING EROSION DURING ANY PHASE OF CONSTRUCTION SHALL BE REPORTED TO THE DESIGN PROFESSIONAL IMMEDIATELY.
- THE CONTRACTOR SHALL FURNISH AND MAINTAIN ALL NECESSARY BARRICADES WHILE ROADWAY FRONTAGE IMPROVEMENTS ARE BEING MADE.
- TYPE "S" SILT FENCE SHOULD BE INSTALLED AT THE TOE OF ALL FILL SLOPES 10 FEET, OR GREATER, IN HEIGHT. THE SILT FENCE SHOULD BE PLACED IN ACCORDANCE WITH THE MANUAL FOR EROSION CONTROL IN GEORGIA, TABLE 6-20.2.
- THE SILT FENCE SHALL BE MAINTAINED UNTIL PERMANENT GROUND COVER IS ESTABLISHED ON THE SLOPE. SILT SHALL BE REMOVED WHEN ACCUMULATION REACHES 1/2 HEIGHT OF THE BARRIER. ADDITIONALLY, DIVERSION DIKES SHALL BE CONSTRUCTED ALONG THE TOP OF ALL SAID FILL SLOPES WITH THE USE OF TEMPORARY DOWN DRAINS TO CONTROL STORM WATER RUN OFF AS SHOWN ON THE PLANS. SEE SEPARATE DETAILS FOR ADDITIONAL INFORMATION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ESTABLISHING BARRIERS AT THE TOE OF SLOPES UNDER CONSTRUCTION. THESE BARRIERS SHALL BE AS SHOWN IN THE PLANS. THESE BARRIERS MAY BE RELOCATED AND REUSED AFTER PERMANENT SLOPE STABILIZATION BECOMES FULLY ESTABLISHED. AS THEY ARE RELOCATED, ANY DEFECTIVE MATERIALS IN THE BARRIER SHALL BE REPLACED. IN ADDITION, ALL DEBRIS AND SILT AT THE PREVIOUS LOCATION SHALL BE REMOVED.
- CUT AND FILL SLOPES ARE NOT TO EXCEED "2H:1V".
- ALL SLOPES STEEPER THAN 2.5:1 AND WITH A HEIGHT OF 10 FEET OR GREATER, AND CUTS AND FILLS WITHIN STREAM BUFFERS, SHALL BE STABILIZED WITH APPROPRIATE EROSION CONTROL MATING OR BLANKETS. SEE SEPARATE DETAILS FOR ADDITIONAL INFORMATION.
- TYPE "C" SILT FENCE SHALL BE PLACED AT THE TOE OF ALL DIRT STOCK PILE AREAS. SEE SEPARATE DETAILS FOR ADDITIONAL INFORMATION.
- INLET SEDIMENT PROTECTION MEASURES SHALL BE INSTALLED ON ALL STORM STRUCTURES AS THEY ARE CONSTRUCTED. SEE PLAN VIEW FOR SPECIFIC TYPE AND SEPARATE DETAILS FOR ADDITIONAL INFORMATION ON TYPE OF INLET PROTECTION SPECIFIED.
- STORM DRAIN OUTLET PROTECTION SHALL BE PLACED AT ALL OUTLET HEADWALLS AS SOON AS THE HEADWALL IS CONSTRUCTED. SEE SEPARATE DETAILS FOR ADDITIONAL INFORMATION.
- STONE CHECK DAMS SHALL BE INSTALLED IN AREAS OF CONCENTRATED FLOWS AS SHOWN ON THE PLAN. SEE SEPARATE DETAIL FOR ADDITIONAL INFORMATION. ALL GRADDED AREAS SHALL BE APPLIED WITH VEGETATIVE COVER AS SOON AS FINAL GRADE IS ACHIEVED.
- MULCH OR TEMPORARY GRASSING SHALL BE APPLIED TO ALL EXPOSED AREAS WITHIN 7 DAYS OF LAND DISTURBANCE.
- ALL DISTURBED AREAS LEFT MULCHED AFTER 30 DAYS SHALL BE STABILIZED WITH TEMPORARY GRASSING.
- AFTER PRELIMINARY GRADING ACTIVITIES, THE CONTRACTOR SHALL CONSTRUCT TEMPORARY SEDIMENT BASINS AND DIVERSION DIKES AS SHOWN ON PLAN. THE CONTRACTOR SHALL MAINTAIN THE SEDIMENT BASINS UNTIL PERMANENT GROUND COVER IS ESTABLISHED. SEDIMENT SHALL BE CLEANED OUT OF THE BASINS WHEN IT REACHES THE 1/3 VOLUME OF BASIN. SEE SEPARATE DETAILS FOR ADDITIONAL INFORMATION.
- SEDIMENT AND EROSION CONTROL MEASURES SHOULD BE CHECKED AFTER EACH RAIN EVENT. EACH DEVICE IS TO BE MAINTAINED OR REPLACED IF SEDIMENT ACCUMULATION HAS REACHED ONE HALF THE CAPACITY OF THE DEVICE. ADDITIONAL DEVICES MUST BE INSTALLED IF NEW CHANNELS HAVE DEVELOPED. THE CONSTRUCTION EXIT SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOW OF MUD ONTO PUBLIC RIGHT-OF-WAY. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH 1" - 3" OF STONE, AS CONDITIONS DEMAND. ALL MATERIALS SPILLED, DROPPED, WASHED, OR TRACKED FROM VEHICLE ONTO PUBLIC ROADWAY OR INTO STORM DRAIN MUST BE REMOVED IMMEDIATELY. THE CONTRACTOR SHALL INSPECT CONTROL MEASURES AT THE END OF EACH WORKING DAY TO ENSURE MEASURES ARE FUNCTIONING PROPERLY.
- EROSION CONTROL MEASURES WILL BE MAINTAINED AT ALL TIMES. IF FULL IMPLEMENTATION OF THE APPROVED PLAN DOES NOT PROVIDE FOR EFFECTIVE EROSION CONTROL, ADDITIONAL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE IMPLEMENTED TO CONTROL OR TREAT THE SEDIMENT SOURCE AS DIRECTED BY THE ON SITE INSPECTOR OR THE CIVIL ENGINEER.
- FAILURE TO INSTALL, OPERATE OR MAINTAIN ALL EROSION CONTROL MEASURES WILL RESULT IN ALL CONSTRUCTION BEING STOPPED ON THE JOB UNTIL SUCH MEASURES ARE CORRECTED BACK TO THE APPROVED EROSION CONTROL PLANS.

Critical Areas:
 Erosion Control Notes

- CRITICAL AREAS SHOWN ON GRADING PHASE EROSION CONTROL PLANS SHALL BE MAINTAINED DAILY. AT THE END OF EACH WORK DAY ALL SLOPES 2:1 OR STEEPER, AND HIGHER THAN 5 FEET SHALL RECEIVE SURFACE ROUGHENING, POLYMERS, AND EROSION CONTROL MATTING. ADDITIONALLY, ALL FILL SLOPES SHALL RECEIVE A DIVERSION DIKE AND TEMPORARY DOWN DRAINS ALONG THE TOP OF THE SLOPE PREVENTING DRAINAGE SPILLING OVER THE EDGE AND DOWN THE FACE OF THE SLOPE. THE TEMPORARY DOWN DRAINS SHALL BE CONSTRUCTED WITH PERFORATED STAND PIPES AT THE TOP OF THE SLOPE AND RECONSTRUCTED EACH DAY AS THE SLOPE INCREASES IN HEIGHT.

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PETROLEUM STORAGE SHALL BE DONE IN ACCORDANCE WITH ONE OF THE TWO FOLLOWING METHODS TO PREVENT STORMWATER DISCHARGES ON THE SITE.
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 b. ALL PETROLEUM STORAGE CONTAINERS SHALL BE LOCATED IN A SECONDARY CONTAINMENT AREA.



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 BRITNI NIX
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 WWW.BOWMAN.COM

OWNER:
 CITY OF DACULA
 P.O. BOX 400
 DACULA, GEORGIA 30019

PROJECT:
 MCMILLAN ROAD STORMWATER
 IMPROVEMENTS PROJECT
 DISTRICT: 5
 LANDACCT: 302
 GWINNETT COUNTY, GEORGIA

DATE	DESCRIPTION
10/24/2022	BID

JOB NO: 22-030
 DRAWN BY: RWB
 CHECKED BY: KDW

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EROSION &
 POLLUTION
 CONTROL PLAN
 PHASE - II
C520

PHASE I-II EROSION NOTES:
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 PROVIDED SEDIMENT STORAGE: 145 CY
 55.61 CY REQUIRED < 58.29 CY PROPOSED SEDIMENT STORAGE

U.S. HIGHWAY #29
 A.K.A. WINDER
 HIGHWAY

SEABOARD COASTLINE RAILROAD
 A.K.A. CSX TRANSPORTATION
 (100' R/W)



BOWMAN

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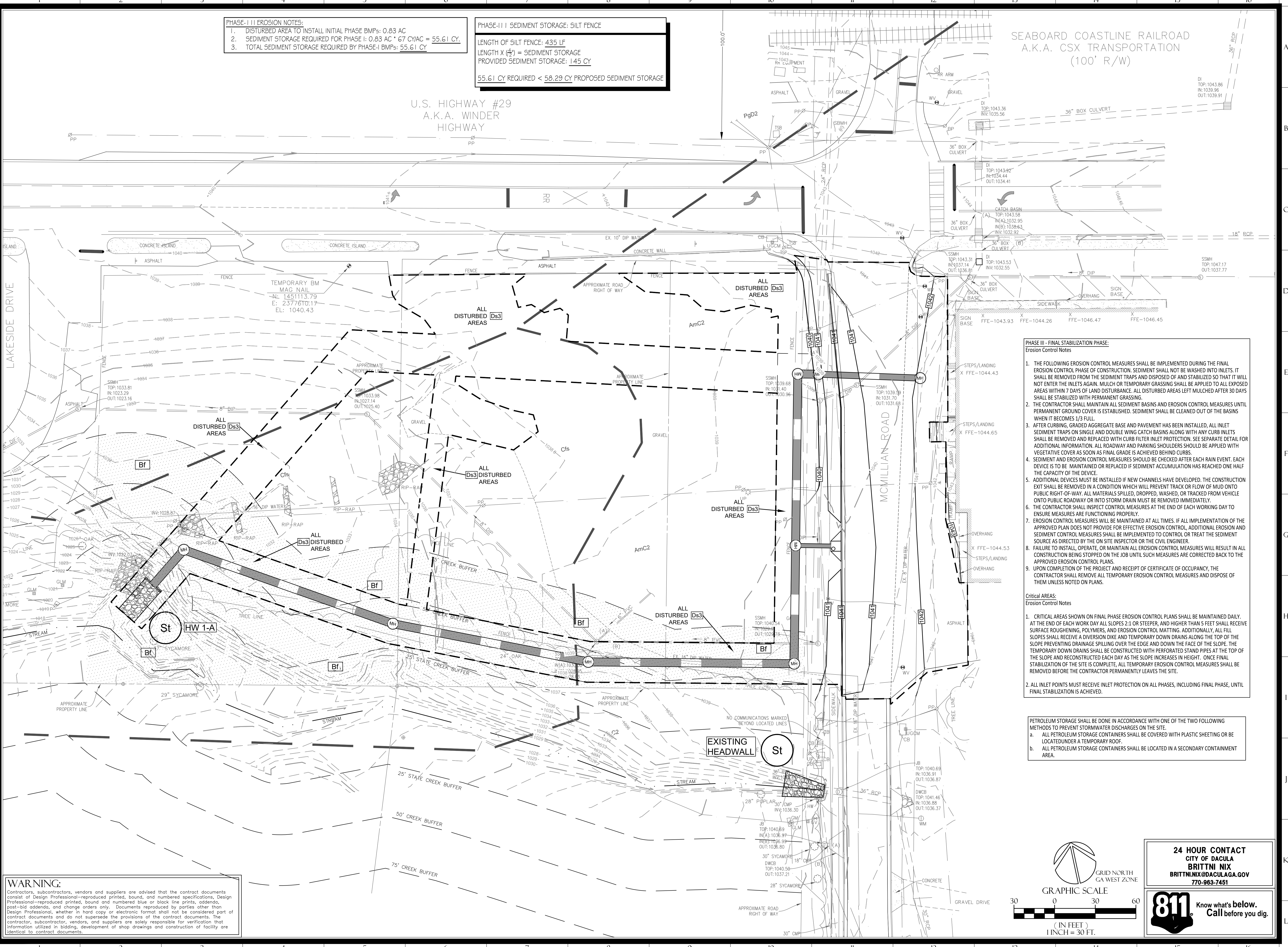
PROJECT:
 MCMILLAN ROAD STORMWATER
 IMPROVEMENTS PROJECT
 DRAFT: 5
 LANDSCOT: 302
 GWINNETT COUNTY, GEORGIA

DATE	DESCRIPTION
06/24/2022	BID

JOB NO: 22-030
 DRAWN BY: RWJ
 CHECKED BY: KDW

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EROSION &
 POLLUTION
 CONTROL PLAN
 PHASE - III
C530



PHASE III - FINAL STABILIZATION PHASE:
 Erosion Control Notes

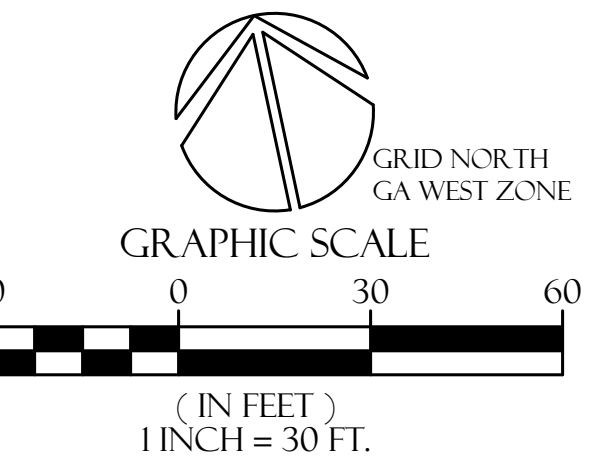
1. THE FOLLOWING EROSION CONTROL MEASURES SHALL BE IMPLEMENTED DURING THE FINAL EROSION CONTROL PHASE OF CONSTRUCTION. SEDIMENT SHALL NOT BE WASHED INTO INLETS. IT SHALL BE REMOVED FROM THE SEDIMENT TRAPS AND DISPOSED OF AND STABILIZED SO THAT IT WILL NOT ENTER THE INLETS AGAIN. MULCH OR TEMPORARY GRASSING SHALL BE APPLIED TO ALL EXPOSED AREAS WITHIN 7 DAYS OF LAND DISTURBANCE. ALL DISTURBED AREAS LEFT MULCHED AFTER 30 DAYS SHALL BE STABILIZED WITH PERMANENT GRASSING.
2. THE CONTRACTOR SHALL MAINTAIN ALL SEDIMENT BASINS AND EROSION CONTROL MEASURES UNTIL PERMANENT GROUND COVER IS ESTABLISHED. SEDIMENT SHALL BE CLEANED OUT OF THE BASINS WHEN IT BECOMES 1/3 FULL.
3. AFTER CURBING, GRADED AGGREGATE BASE AND PAVEMENT HAS BEEN INSTALLED, ALL INLET SEDIMENT TRAPS ON SINGLE AND DOUBLE WING CATCH BASINS ALONG WITH ANY CURB INLETS SHALL BE REMOVED AND REPLACED WITH CURB FILTER INLET PROTECTION. SEE SEPARATE DETAIL FOR ADDITIONAL INFORMATION. ALL ROADWAY AND PARKING SHOULDERS SHOULD BE APPLIED WITH VEGETATIVE COVER AS SOON AS FINAL GRADE IS ACHIEVED BEHIND CURBS.
4. SEDIMENT AND EROSION CONTROL MEASURES SHOULD BE CHECKED AFTER EACH RAIN EVENT. EACH DEVICE IS TO BE MAINTAINED OR REPLACED IF SEDIMENT ACCUMULATION HAS REACHED ONE HALF THE CAPACITY OF THE DEVICE.
5. ADDITIONAL DEVICES MUST BE INSTALLED IF NEW CHANNELS HAVE DEVELOPED. THE CONSTRUCTION EXIT SHALL BE REMOVED IN A CONDITION WHICH WILL PREVENT TRACK OR FLOW OF MUD ONTO PUBLIC RIGHT-OF-WAY. ALL MATERIALS SPILLED, DROPPED, WASHED, OR TRACKED FROM VEHICLE ONTO PUBLIC ROADWAY OR INTO STORM DRAIN MUST BE REMOVED IMMEDIATELY.
6. THE CONTRACTOR SHALL INSPECT CONTROL MEASURES AT THE END OF EACH WORKING DAY TO ENSURE MEASURES ARE FUNCTIONING PROPERLY.
7. EROSION CONTROL MEASURES WILL BE MAINTAINED AT ALL TIMES. IF ALL IMPLEMENTATION OF THE APPROVED PLAN DOES NOT PROVIDE FOR EFFECTIVE EROSION CONTROL, ADDITIONAL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE IMPLEMENTED TO CONTROL OR TREAT THE SEDIMENT SOURCE AS DIRECTED BY THE ON SITE INSPECTOR OR THE CIVIL ENGINEER.
8. FAILURE TO INSTALL, OPERATE, OR MAINTAIN ALL EROSION CONTROL MEASURES WILL RESULT IN ALL CONSTRUCTION BEING STOPPED ON THE JOB UNTIL SUCH MEASURES ARE CORRECTED BACK TO THE APPROVED EROSION CONTROL PLANS.
9. UPON COMPLETION OF THE PROJECT AND RECEIPT OF CERTIFICATE OF OCCUPANCY, THE CONTRACTOR SHALL REMOVE ALL TEMPORARY EROSION CONTROL MEASURES AND DISPOSE OF THEM UNLESS NOTED ON PLANS.

Critical Areas:
 Erosion Control Notes

1. CRITICAL AREAS SHOWN ON FINAL PHASE EROSION CONTROL PLANS SHALL BE MAINTAINED DAILY. AT THE END OF EACH WORK DAY ALL SLOPES 2:1 OR STEEPER, AND HIGHER THAN 5 FEET SHALL RECEIVE SURFACE ROUGHENING, POLYMERS, AND EROSION CONTROL MATTING. ADDITIONALLY, ALL FILL SLOPES SHALL RECEIVE A DIVERSION DIKE AND TEMPORARY DOWN DRAINS ALONG THE TOP OF THE SLOPE PREVENTING DRAINAGE SPILLING OVER THE EDGE AND DOWN THE FACE OF THE SLOPE. THE TEMPORARY DOWN DRAINS SHALL BE CONSTRUCTED WITH PERFORATED STAND PIPES AT THE TOP OF THE SLOPE AND RECONSTRUCTED EACH DAY AS THE SLOPE INCREASES IN HEIGHT. ONCE FINAL STABILIZATION OF THE SITE IS COMPLETE, ALL TEMPORARY EROSION CONTROL MEASURES SHALL BE REMOVED BEFORE THE CONTRACTOR PERMANENTLY LEAVES THE SITE.
2. ALL INLET POINTS MUST RECEIVE INLET PROTECTION ON ALL PHASES, INCLUDING FINAL PHASE, UNTIL FINAL STABILIZATION IS ACHIEVED.

PETROLEUM STORAGE SHALL BE DONE IN ACCORDANCE WITH ONE OF THE TWO FOLLOWING METHODS TO PREVENT STORMWATER DISCHARGES ON THE SITE.

- a. ALL PETROLEUM STORAGE CONTAINERS SHALL BE COVERED WITH PLASTIC SHEETING OR BE LOCATED UNDER A TEMPORARY ROOF.
- b. ALL PETROLEUM STORAGE CONTAINERS SHALL BE LOCATED IN A SECONDARY CONTAINMENT AREA.



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 BRITNI NIX
 BRITNI.NIX@DACULAGA.GOV
 770-963-7451



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MULCHING APPLICATION REQUIREMENTS

MATERIAL	RATE	DEPTH
STRAW OR HAY	2 1/2 TON/ACRE	2" TO 4"
WOOD WASTE, CHIPS, SAWDUST, BARK	6 TO 9 TON/ACRE	2" TO 3"
POLYETHYLENE FILM	SECURE WITH SOIL, ANCHORS, WEIGHTS	---
CUTBACK ASPHALT	SEE MANUFACTURER'S RECOMMENDATIONS	---
GEOTEXTILES, JUTE MATTING, NETTING, ETC.	SEE MANUFACTURER'S RECOMMENDATIONS	---

Ds1 DISTURBED AREA STABILIZATION (WITH MULCHING ONLY)
N.T.S.

SPECIES	BROADCAST RATES 2" - PLS 3" PER 1000 SQ. FT.	RESOURCE AREA	PLANTING DATES BY RESOURCE AREA	REMARKS
LINDSEY MEADOW (Elymus caput-medusae)	4 ba 0.1 b	M-L, C	J F M A M J J A S O N D	130,000 SEED PER POUND MAY LAST FOR SEVERAL YEARS WITH SEEDBANK PERSISTENCE
IN MIXTURES	2 ba 0.05 b			
PIE (Scheda ornata)	3 ba 3.9 b	M-L, P, C	J F M A M J J A S O N D	18,000 SEED PER POUND QUICK COVER, DROUGHT TOLERANT AND WINTER HARD.
ALONE	1/2 ba 0.8 b			
IN MIXTURES	20 ba			
HYDRIC, ANNUAL (Lolium temutum)	40 ba 0.9 b	M-L, P, C	J F M A M J J A S O N D	272,000 SEED PER POUND DENSE COVER VERY COMPETITIVE AND IS NOT TO BE USED IN MIXTURES.
ALONE				

Ds2 PLANTS, PLANTING RATES, AND PLANTING DATES FOR TEMPORARY COVER CROPS PER GREEN BOOK TABLE 6-4.1

SPECIES	BROADCAST RATES 2" - PLS 3" PER 1000 SQ. FT.	RESOURCE AREA	PLANTING DATES BY RESOURCE AREA	REMARKS
BENEDICA, COMMON (Garden nasturtium)	10 ba 0.2 b	P, C	J F M A M J J A S O N D	1,700,000 SEED PER POUND QUICK COVER, LOW GROWING AND SOIL FORMING. USE SOIL GOOD FOR ATHLETIC FIELDS.
WITH OTHER PERENNIALS	6 ba 0.7 b			
BENEDICA SPREAD (Poppy seedling)	40 CUIT. @ 8" CUIT. OR 500 PLUS 3" x 3"	M-L, P, C	J F M A M J J A S O N D	A CLUMB FOOT CONTAINS APPROX. 400 SPINDLE BUSHES, CONTAINS 1.25 CUIT. OF APPROX. 800 SPINDLE.
COASTAL GRAMIN (Meadow or TT #4)		P, C		SAME AS ABOVE
COASTAL COMMON (See TT #4)		P, C		SAME AS ABOVE
TFT 78		P, C		SOUTHERN COASTAL PLAIN ONLY
FESCUE, TALL (Festuca arvensis)	50 ba 1.1 b	M-L, P, C	J F M A M J J A S O N D	227,000 SEED PER POUND USE AS SOIL IN BETTER SITES BY PERENNIAL PERSISTENCE OF COMBINATION WITH OTHERS IN SPRING FOLLOWING FALL PLANTING NOT FOR SOFT USE AREAS OR ATHLETIC FIELDS.
ALONE	30 ba 0.7 b			
WITH OTHER PERENNIALS				

Ds3 PLANTS, PLANTING RATES, AND PLANTING DATES FOR PERMANENT COVER PER GREEN BOOK TABLE 6-5.2

LIME AND FERTILIZER - RATES AND ANALYSIS

A. WHERE PERMANENT VEGETATION IS TO BE ESTABLISHED, AGRICULTURAL LIME SHALL BE APPLIED AS INDICATED BY SOIL TEST OR AT THE RATE OF 1 TO 2 TONS PER ACRE. AGRICULTURAL LIME SHALL BE WITHIN THE SPECIFICATIONS OF THE GEORGIA DEPARTMENT OF AGRICULTURE. LIME SPREAD BY CONVENTIONAL EQUIPMENT CALCITIC OR DOLOMITIC LIMESTONE GROUND SO THAT 90 PERCENT OF THE MATERIAL WILL PASS THROUGH A 10-MESH SIEVE, NOT LESS THAN 25 PERCENT WILL PASS THROUGH A 20-MESH SIEVE. AGRICULTURAL LIME SPREAD BY HYDRAULIC SEEDING EQUIPMENT LIMESTONE. FINELY GROUND LIMESTONE IS CALCITIC OR DOLOMITIC LIMESTONE GROUND SO THAT 98 PERCENT OF THE MATERIAL WILL PASS THROUGH A 20-MESH SIEVE AND NOT LESS THAN 70 PERCENT WILL PASS THROUGH 100-MESH SIEVE. IT IS DESIRABLE TO USE DOLOMITIC LIMESTONE IN THE SAND HILLS, SOUTHERN COASTAL PLAIN AND ATLANTIC COAST FLATWOOD AREAS.

B. NO AGRICULTURAL LIME IS REQUIRED WHERE ONLY TEMPORARY SEEDING IS TO BE DONE OR WHERE ONLY TREES ARE PLANTED.

C. INITIAL FERTILIZATION REQUIREMENTS FOR EACH SPECIES OR COMBINATION OF SPECIES ARE LISTED IN TABLE 6-25.1, P 6-144. APPLY FERTILIZER: 5-10-15 @ 1500LBS/ACRE. (TYPICAL)

LIME FERTILIZER - APPLICATION
A. WHEN HYDRAULIC SEEDING EQUIPMENT IS USED:

1. THE INITIAL FERTILIZER WILL BE MIXED WITH SEED, INOCULANT (IF NEEDED) AND WOOD CELLULOSE OR WOOD PULP FIBER MULCH AND APPLIED IN A SLURRY. THE SLURRY MIXTURE WILL BE AGITATED DURING APPLICATION TO KEEP THE INGREDIENTS THOROUGHLY MIXED. THE MIXTURE WILL BE SPREAD UNIFORMLY OVER THE AREA WITHIN ONE HOUR AFTER BEING PLACED IN THE HYDROSEEDER.

2. FINELY GROUND LIMESTONE WILL BE MIXED WITH WATER AND APPLIED IMMEDIATELY AFTER MULCHING IS COMPLETED OR IN COMBINATION WITH THE TOP DRESSING.

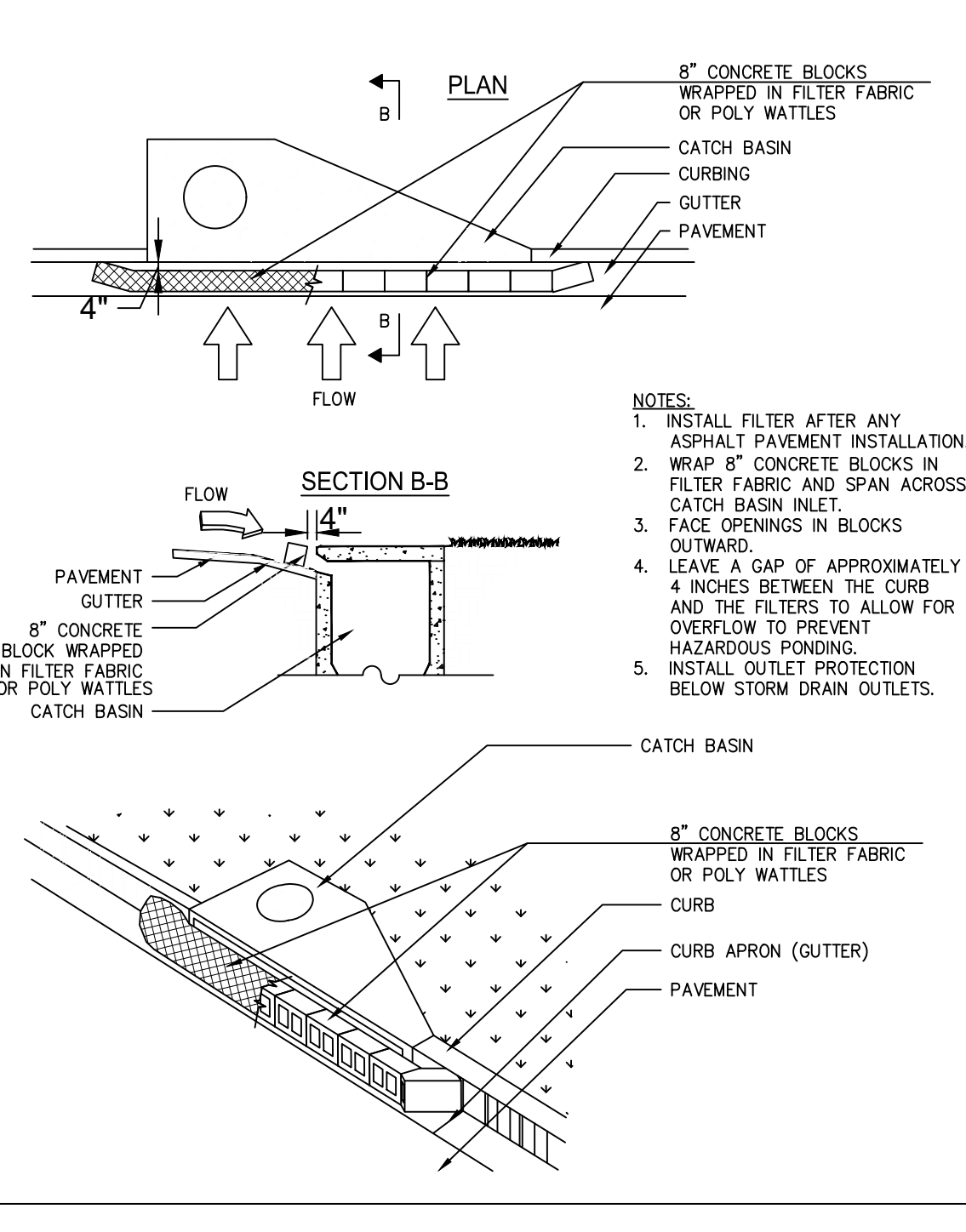
B. WHEN CONVENTIONAL PLANTING IS TO BE DONE, LIME AND FERTILIZER WILL BE APPLIED UNIFORMLY IN ONE OF THE FOLLOWING WAYS:

1. APPLY BEFORE LAND PREPARATION SO THAT IT WILL BE MIXED THE SOIL DURING SEEDBED PREPARATION OR;
2. MIX WITH THE SOIL USED TO FILL THE HOLES, DISTRIBUTE IN FURROWS, OR
3. BROADCAST AFTER STEEP SURFACES ARE SCARIFIED, PITTED OR TRENCHED.
4. 'JA' FERTILIZER PELLET WILL BE PLACED AT ROOT DEPTH BESIDE EACH PINE TREE SEEDLING.

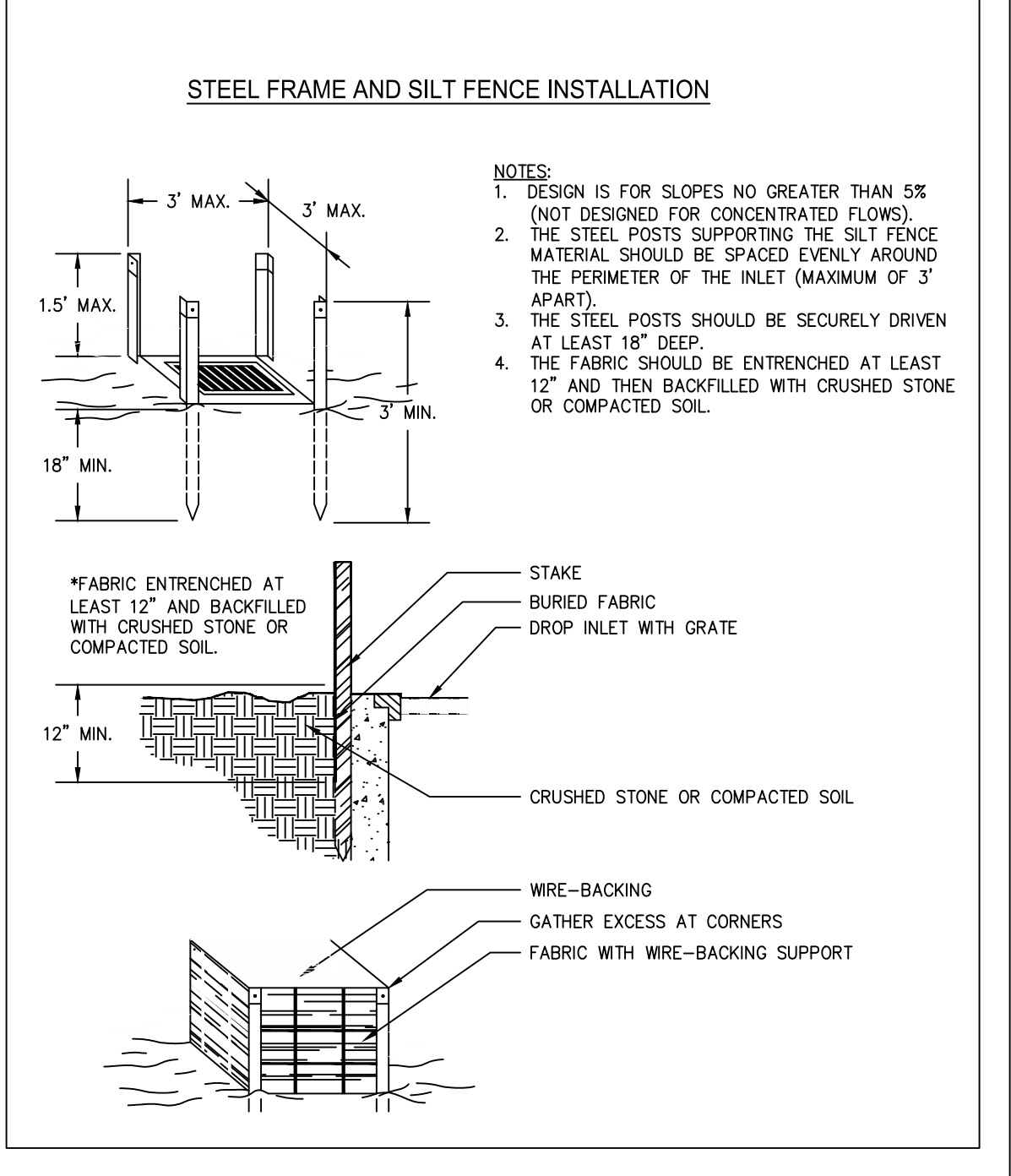
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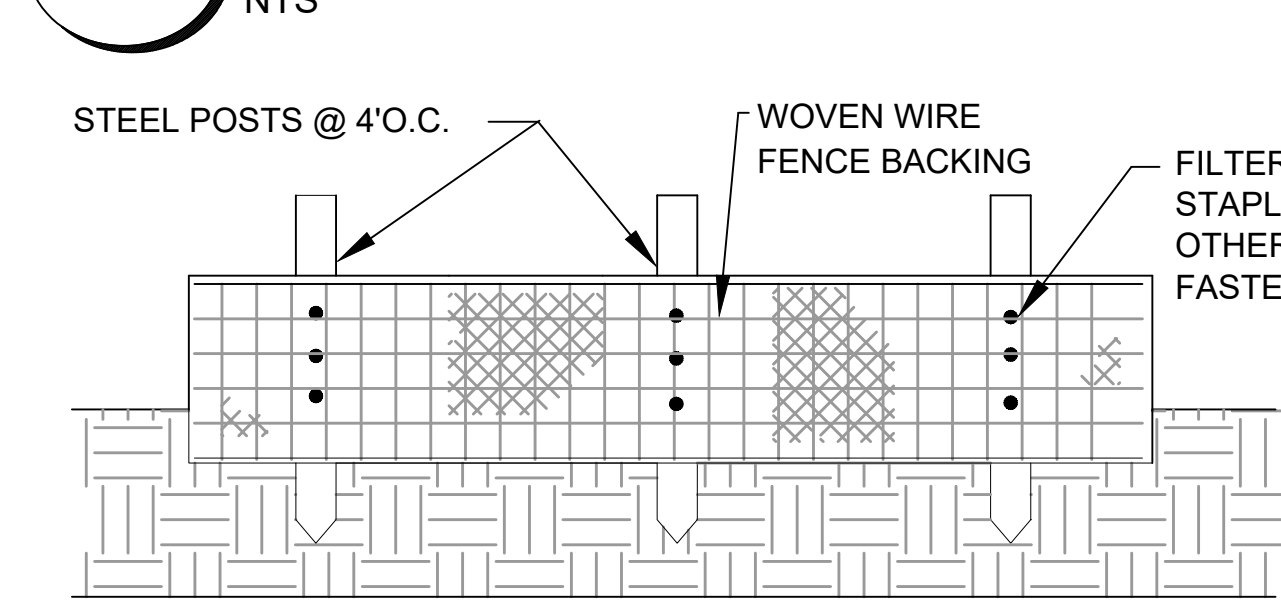
CURB INLET FILTER "PIGS IN BLANKET"



FABRIC AND SUPPORTING FRAME FOR INLET PROTECTION



Sd2-P TEMP INLET SEDIMENT TRAP
N.T.S.



Sd2-F TEMP INLET SEDIMENT TRAP
N.T.S.

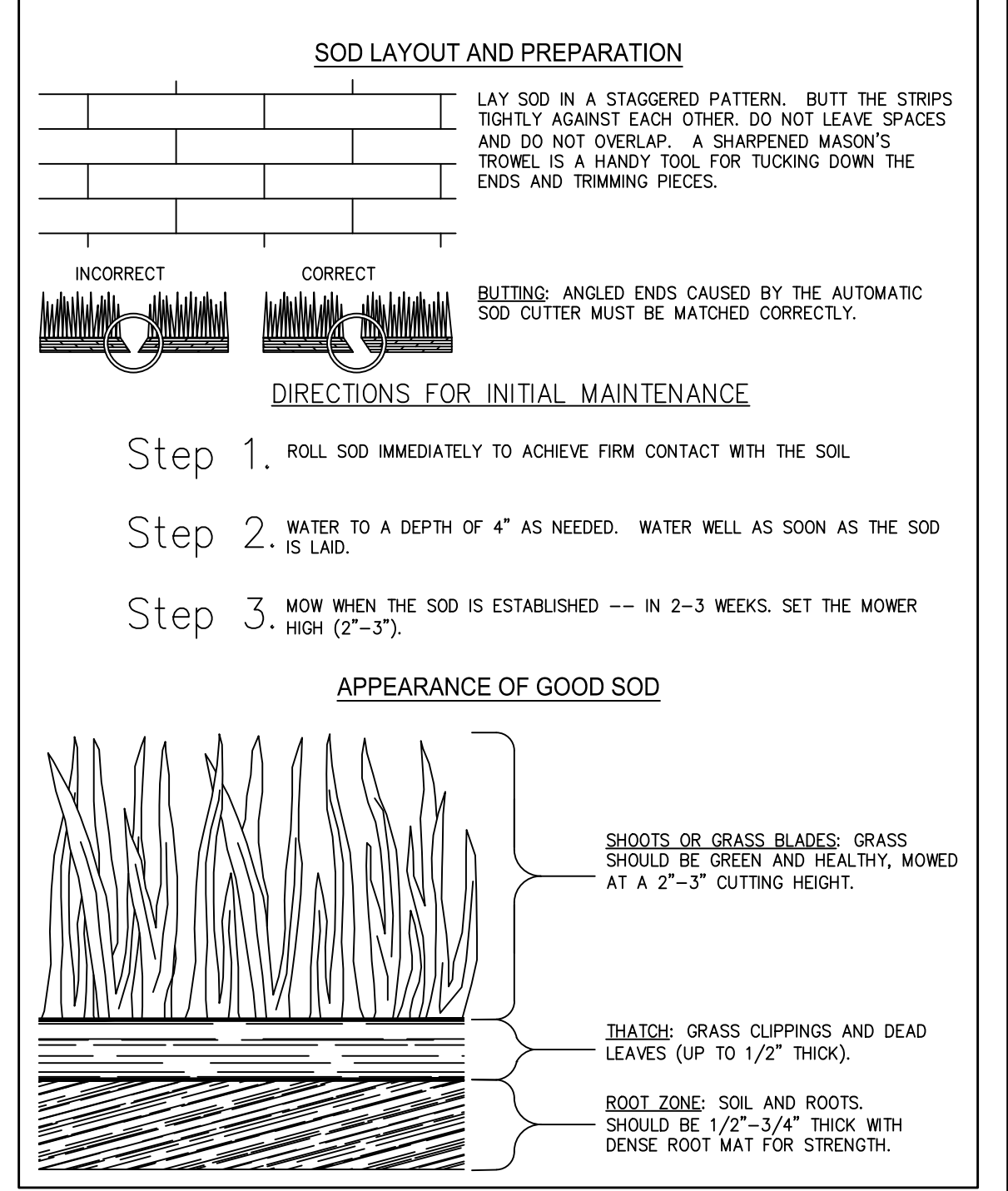
Sd1 EROSION CONTROL FENCING TYPE "S"
N.T.S.

SOD PLANTING REQUIREMENTS

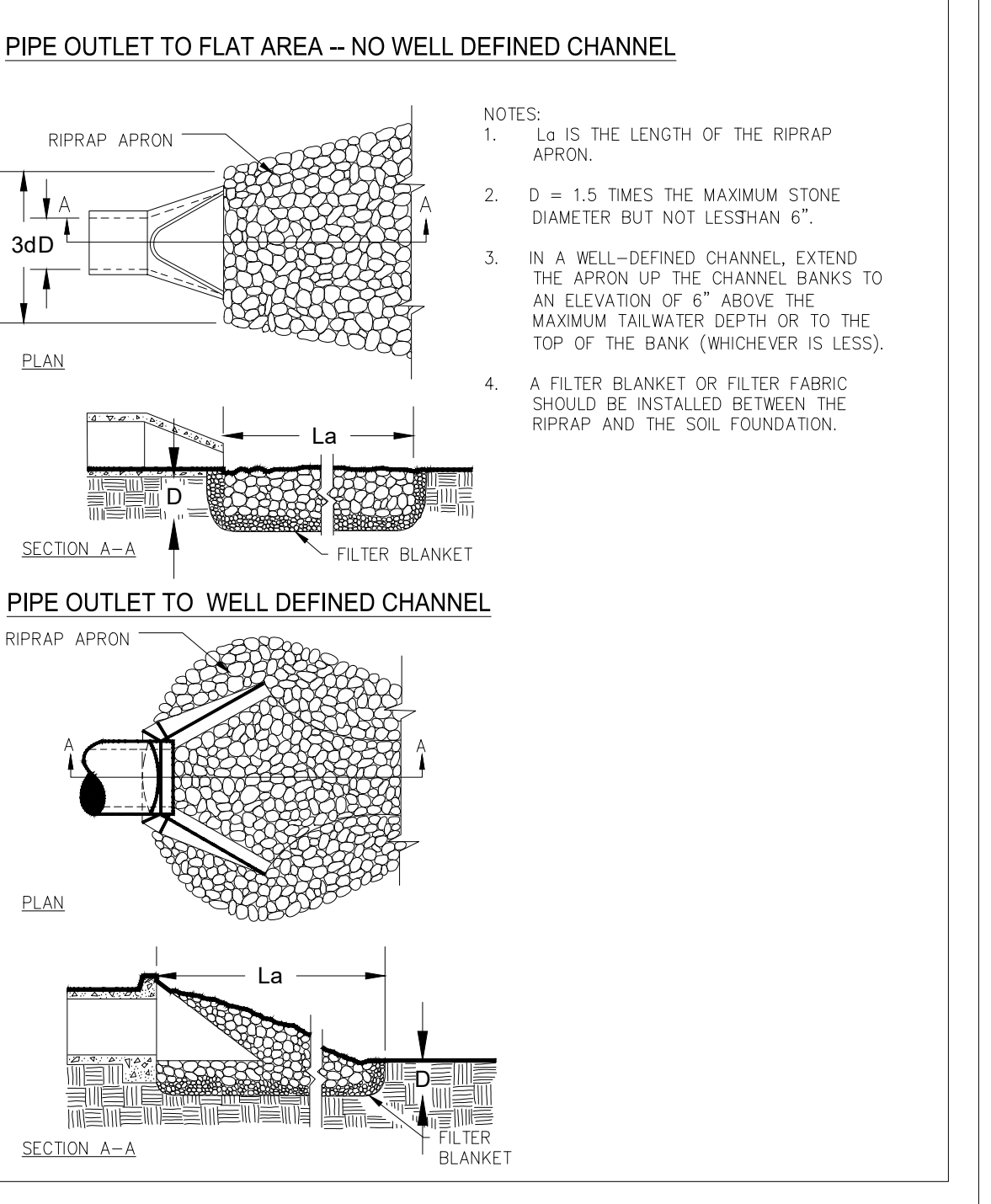
GRASS	VARIETIES	RESOURCE AREA	GROWING SEASON
BERMUDAGRASS	COMMON TIFWAY, TIFGREEN, TIFLAWN	M-L, P, C, P, C, P, C	WARM WEATHER
BABBIAGRASS	PENSACOLA	P, C	WARM WEATHER
CENTPEDE	---	P, C	WARM WEATHER
ST. AUGUSTINE	COMMON BITTERBLUE, RALEIGH	C	WARM WEATHER
ZOYSIA	EMERALD, MYER	P, C	WARM WEATHER
TALL FESCUE	KENTUCKY 31	M-L, P	COOL WEATHER

Ds4 DISTURBED AREA STABILIZATION (WITH SODDING)

SOD MAINTENANCE AND INSTALLATION



RIPRAP OUTLET PROTECTION



RIP-RAP SIZE CHART

STRUCTURES	Do	FLOW RATE (CF5)	VELOCITY (FPS)	TAIL WATER	La	W1	W2	d50	dmax	D APRON THICKNESS
EXISTING HEADWALL	36"	.	.	MAX	20'	9.0'	23'	0.60'	0.90'	1.35'
PROPOSED HW 1-A	48"	.	.	MAX	30'	12'	36'	1.0	1.50	2.25

St OUTLET PROTECTION



ETRS-1 SINGLE SIDED STRAW BLANKET

Description: ETRS1 is a single sided erosion control blanket. It is manufactured from 100% Agricultural Wheat Straw mechanically bonded (stitched) onto one layer of medium-weight synthetic poly-propylene netting.

Specifications	8' wide	112.5' Long	100 syd
Roll Dimensions			
Netting	3/8"X3/8"	photodegradable synthetic medium weight	
Stitching	2" Centers		
Fiber Density	50lb/syd		
Product Code			MT-4

VERIFIED VALUES		
DESCRIPTION	TEST METHOD	RESULT
TENSILE STRENGTH(lbin)	ASTM 6818	MD 9lb/in TD 3.3lb/in
GROUNDCOVER/LIGHT PENETRATION	ASTM D6567	80.6% / 19.4%
MASS	ASTM D6475	9.24 oz/syd
THICKNESS	ASTM 6525	382 mils
WATER ABSORPTION	ASTM D1117	432%

Netting Properties	
Medium Weight Green Netting	
3/8"X3/8" Mesh Size (Nominal)	
1.5+/-0.2PMSF Weight	
MD=14.6+/-4lb/5strands/3"	
TD=14.6+/-4lb/5strands/3"	



For more information, contact:
105 Plant Camellia Road Juliette, GA 31046 478.994.6009
314-C Industrial Park Drive Waynesville, NC 28786 Phone: 828.452.6900
www.erosiontechusa.com



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OWNER:
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PROJECT: MCMILLAN ROAD STORMWATER IMPROVEMENTS PROJECT
DRAWN BY: RAWH
CHECKED BY: KDW
GWINNETT COUNTY, GEORGIA

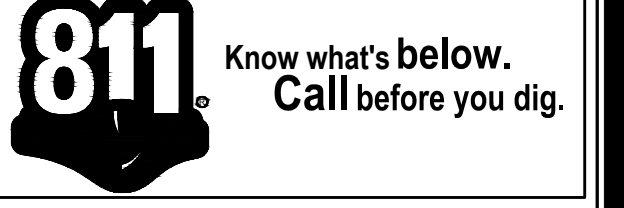
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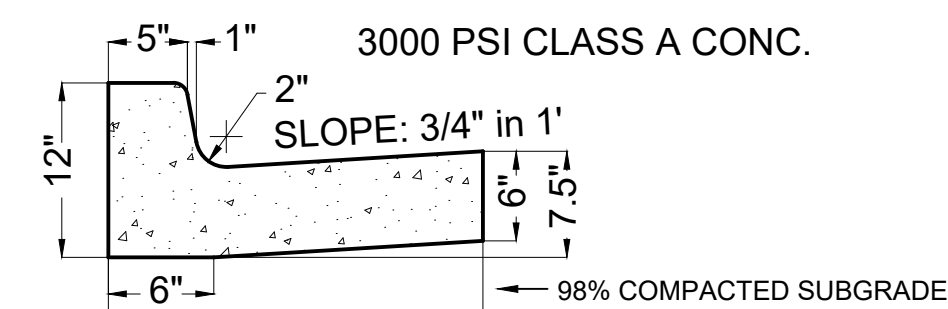
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EROSION, SEDIMENT & POLLUTION CONTROL PLAN DETAILS
C540

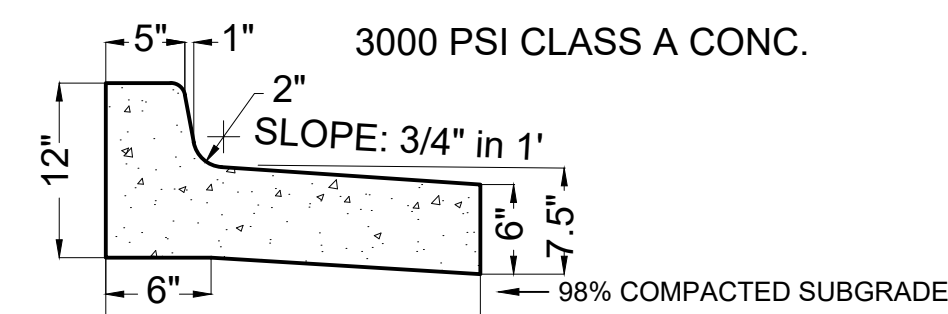
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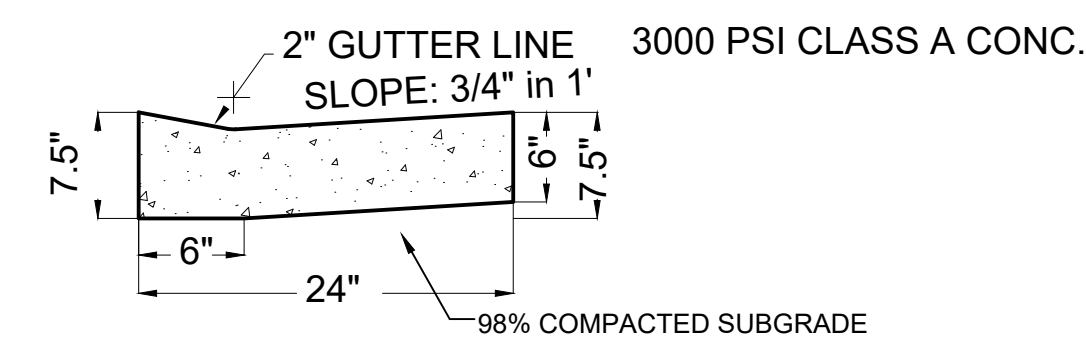
- NOTE:**
- MINIMUM OF 4" G.A.B. BASE UNDER CURB & GUTTER TYPICAL.
 - COMPACTED SUBGRADE A MINIMUM OF 98% MODIFIED PROCTOR.



A STANDARD 6" x 12" x 24" CONCRETE CURB AND GUTTER (C&G)

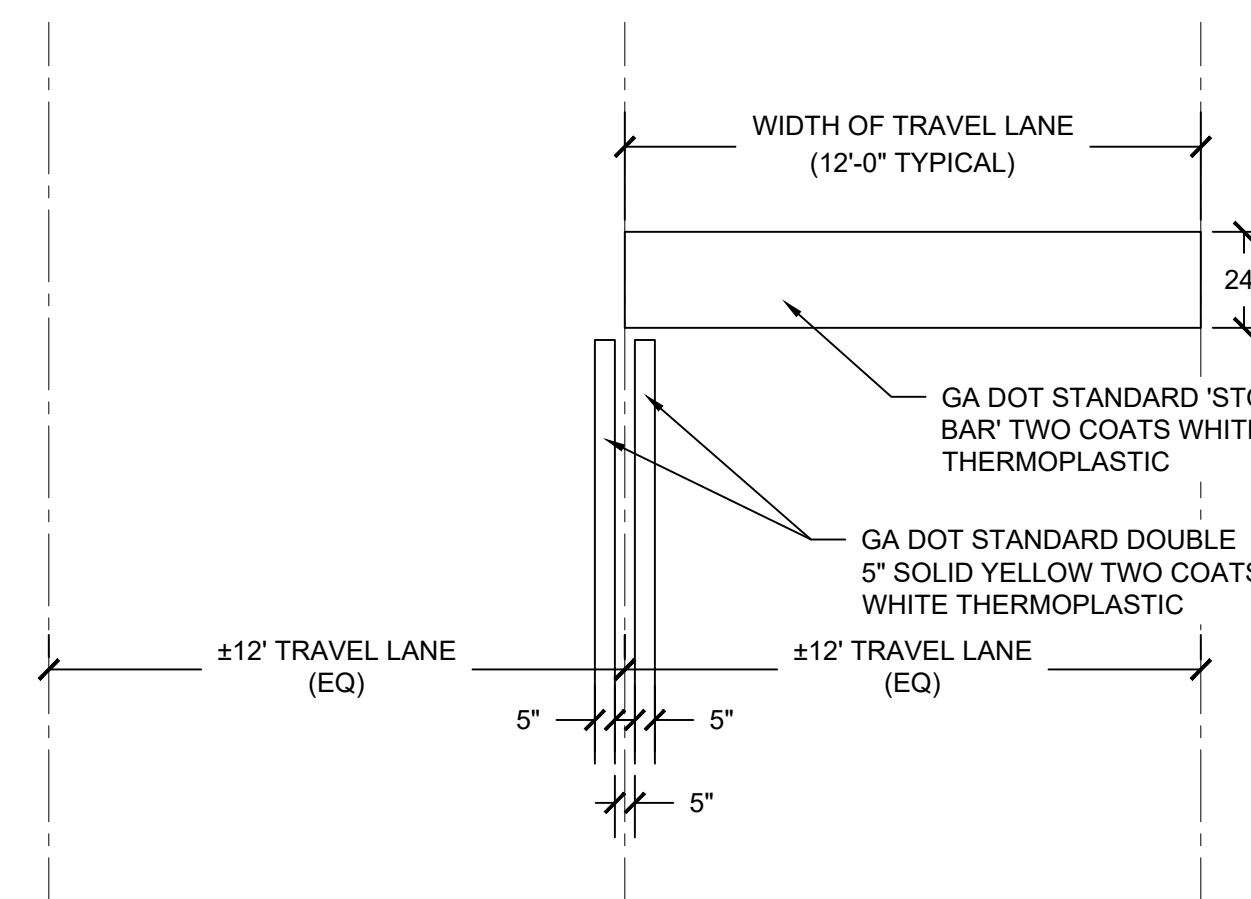


B STANDARD 6" x 12" x 24" SPILL CONCRETE CURB AND GUTTER (C&G)



C STANDARD 6" x 6" x 24" ZERO HEIGHT CONCRETE CURB

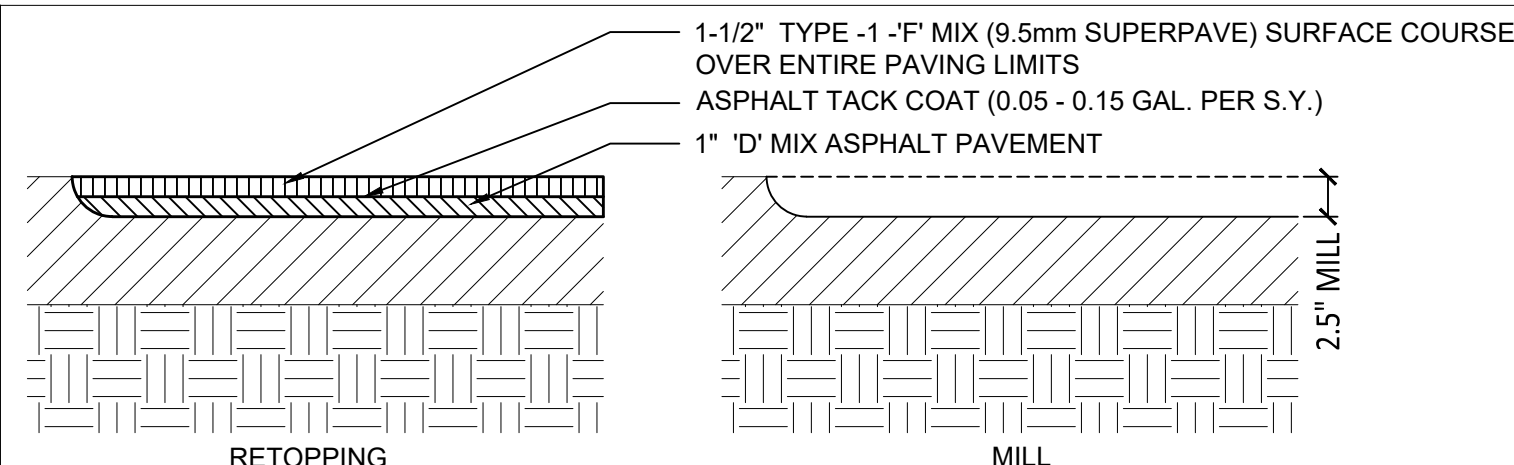
1 24" CONCRETE CURB & GUTTER C700 NTS



- NOTES:**
- ALL TRAFFIC TO BE INSTALLED PER GEORGIA DOT STANDARDS.
 - REFER TO GA DOT STANDARD 'T-11A'.
 - ALL STRIPING SHALL CONFORM TO LATEST EDITION OF MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (M.U.T.C.D.) AND ANY SUPPLEMENTS THERETO.

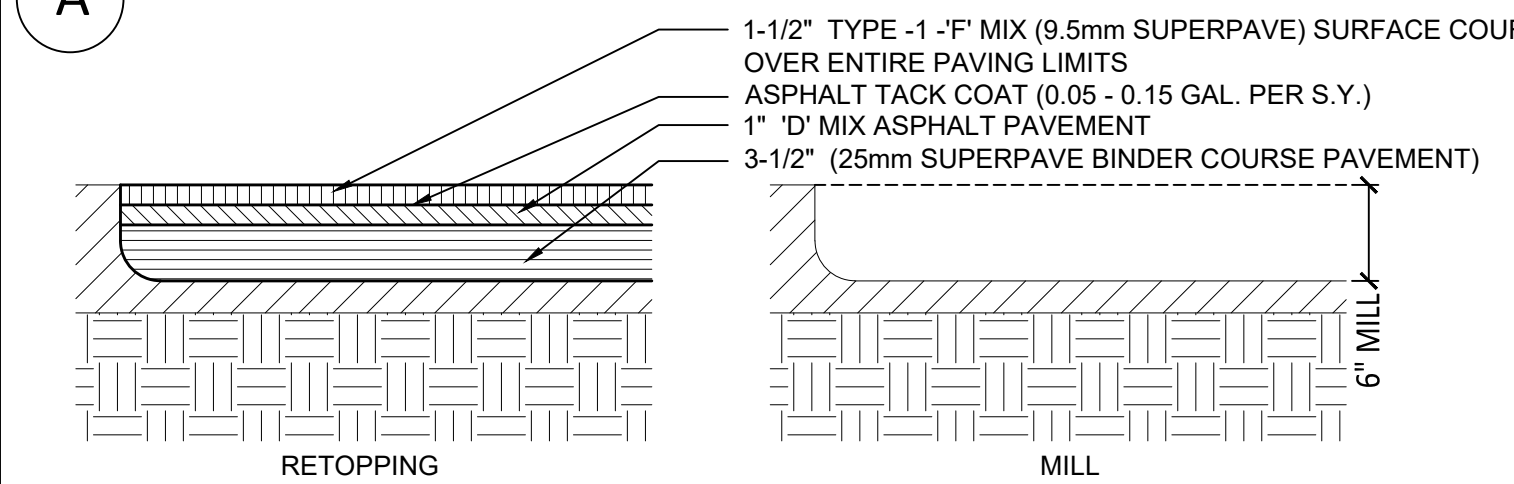
4 TRAFFIC MARKINGS C700 NTS

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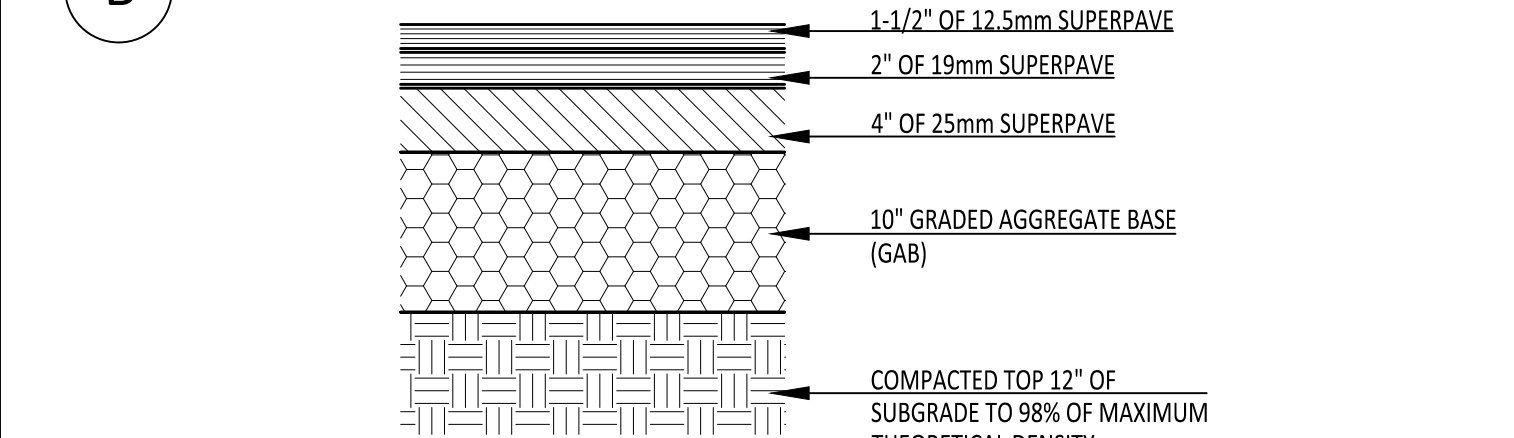
- NOTES:**
- 2.5" MILL EXISTING ASPHALT.
 - INSTALL 1" 'D' MIX OVER ENTIRE PAVING LIMITS.
 - INSTALL TACK COAT.
 - INSTALL 1-1/2" 'F' MIX (9.5mm SUPERPAVE) SURFACE COURSE OVER ENTIRE PAVING LIMITS.
 - RE-STRIP PAVEMENT AND PARKING MARKINGS TO MATCH EXISTING CONDITIONS.
 - REFER TO SHEET C100 FOR MILLING LIMITS AND C200 FOR PAVEMENT LIMITS.

A MILL & RE-TOPPING

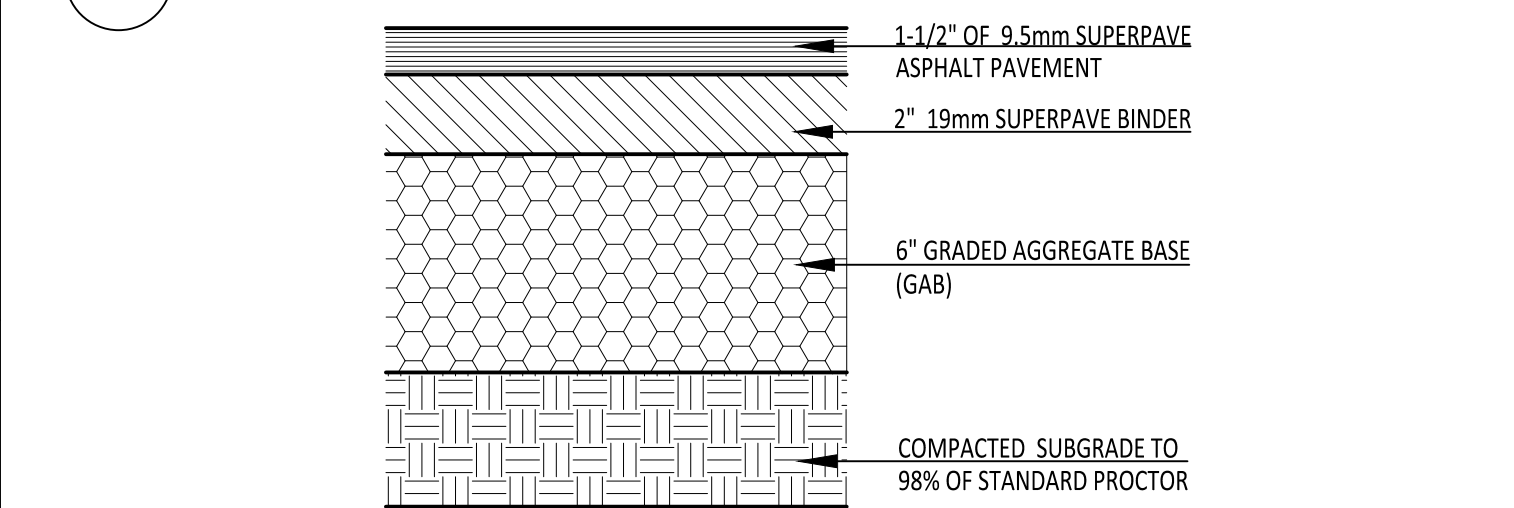


- NOTES:**
- 6" MILL EXISTING ASPHALT.
 - INSTALL 3-1/2" (25mm SUPERPAVE).
 - INSTALL 1" 'D' MIX OVER ENTIRE PAVING LIMITS.
 - INSTALL TACK COAT.
 - INSTALL 1-1/2" 'F' MIX (9.5mm SUPERPAVE) SURFACE COURSE.
 - RE-STRIP PAVEMENT AND PARKING MARKINGS TO MATCH EXISTING CONDITIONS.
 - REFER TO SHEET C100 FOR MILLING LIMITS AND C200 FOR PAVEMENT LIMITS.

B DEEP PATCH MILL & RE-TOPPING

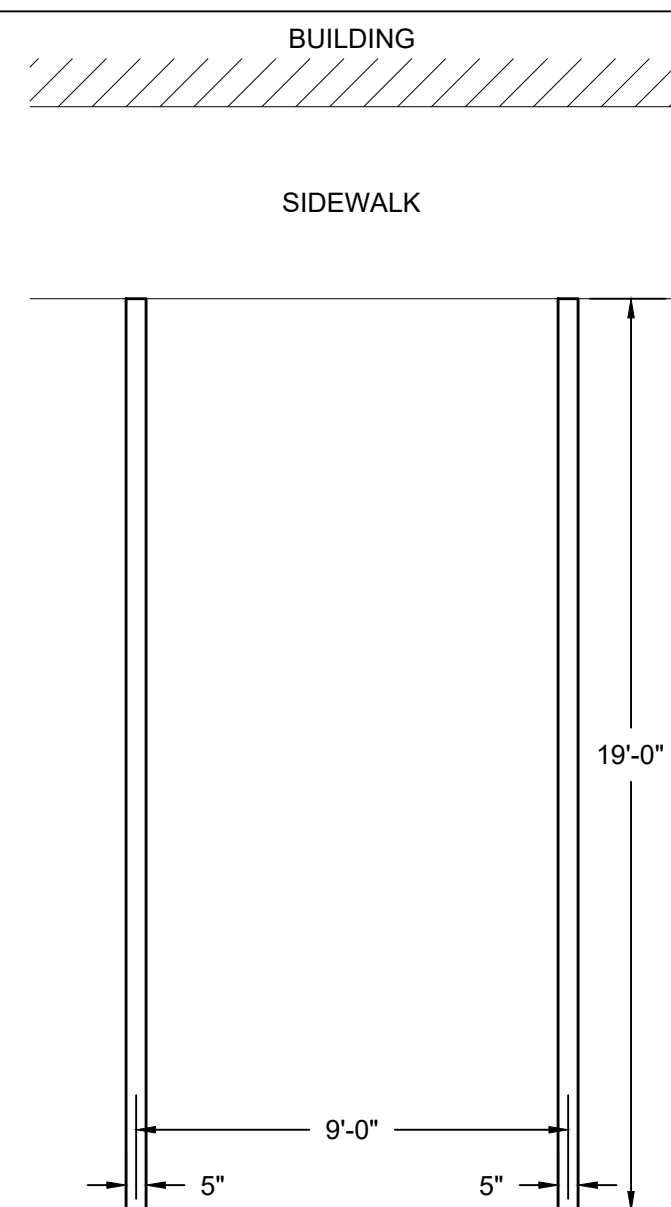


C HEAVY DUTY ASPHALT PAVEMENT



D STANDARD DUTY ASPHALT PAVEMENT

2 PAVEMENT DETAILS C700 N.T.S.



5 PARKING MARKINGS C700 NTS

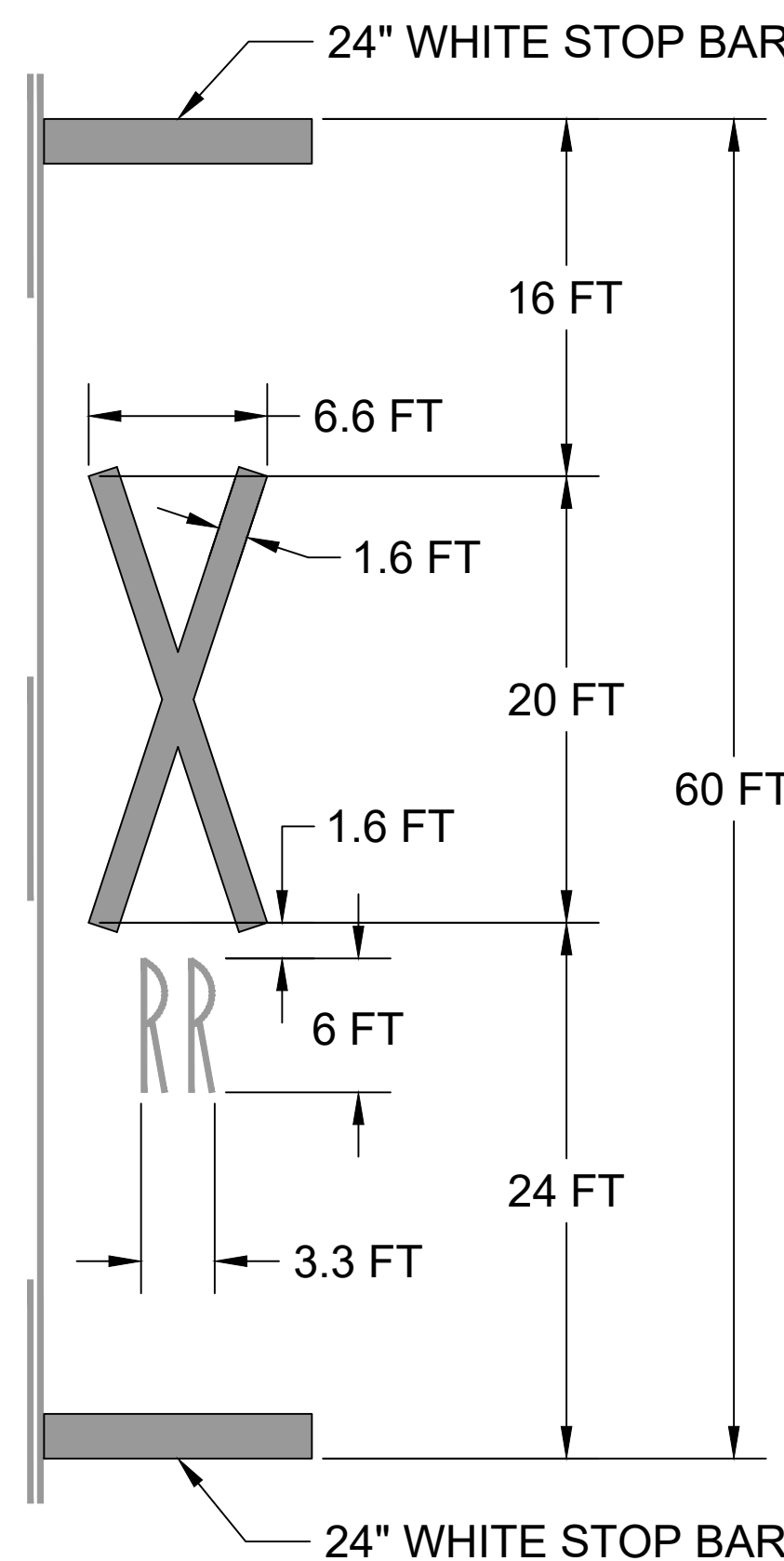
NOTES:

- REFER TO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (CURRENT EDITION), RAILROAD GRADE CROSSING PAVEMENT MARKINGS PER MUTCD FIGURE 9B-7 (B).
- TWO COATS OF WHITE THERMOPLASTIC.

DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA
STANDARD PIPE CULVERT CONCRETE HEADWALL

NO SCALE
DESIGNED BY: [Signature]
CHECKED BY: [Signature]
SUBMITTED BY: [Signature]
APPROVED BY: [Signature]
REV. & CORR. BY: [Signature]
DATE: 10/01/18
PROJECT NUMBER: 1001-B

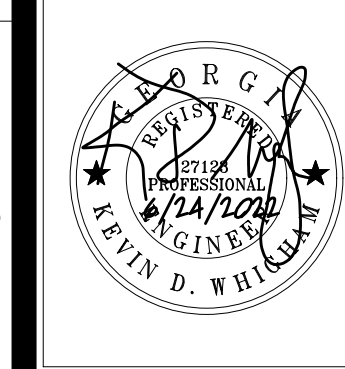
3 HEADWALL (HW) GADOT STD. 1001-B C700 N.T.S.



6 RAILROAD GRADE CROSSING PAVEMENT MARKINGS C700 NTS

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PROJECT:
MC MILLAN ROAD STORMWATER IMPROVEMENTS PROJECT

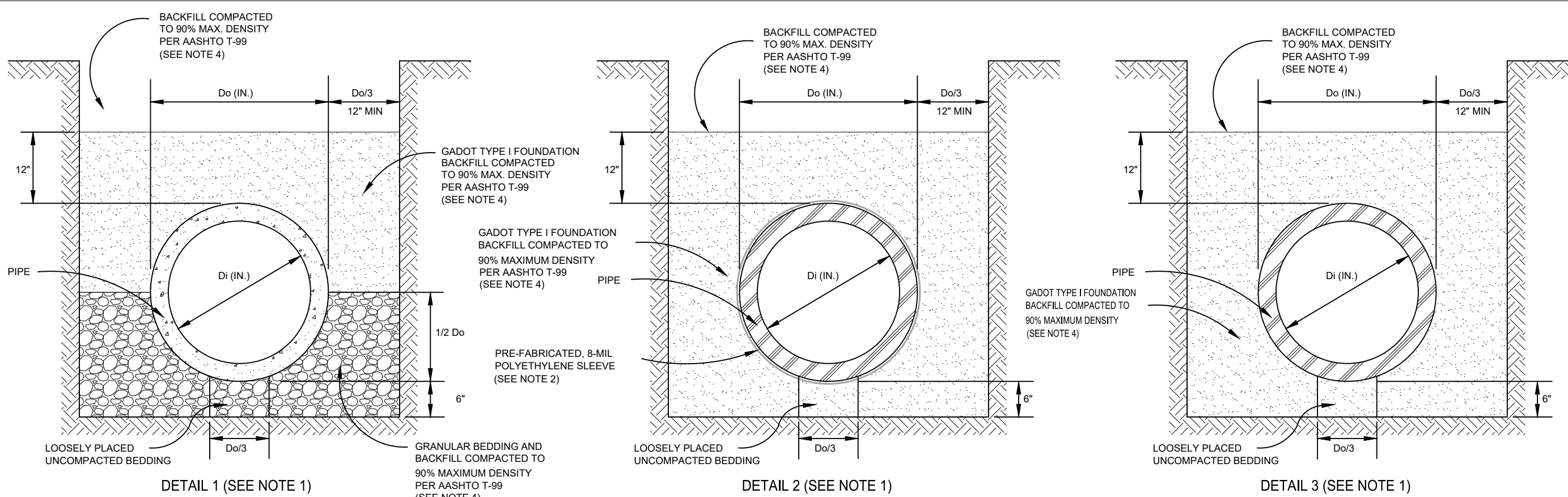
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DETAILS

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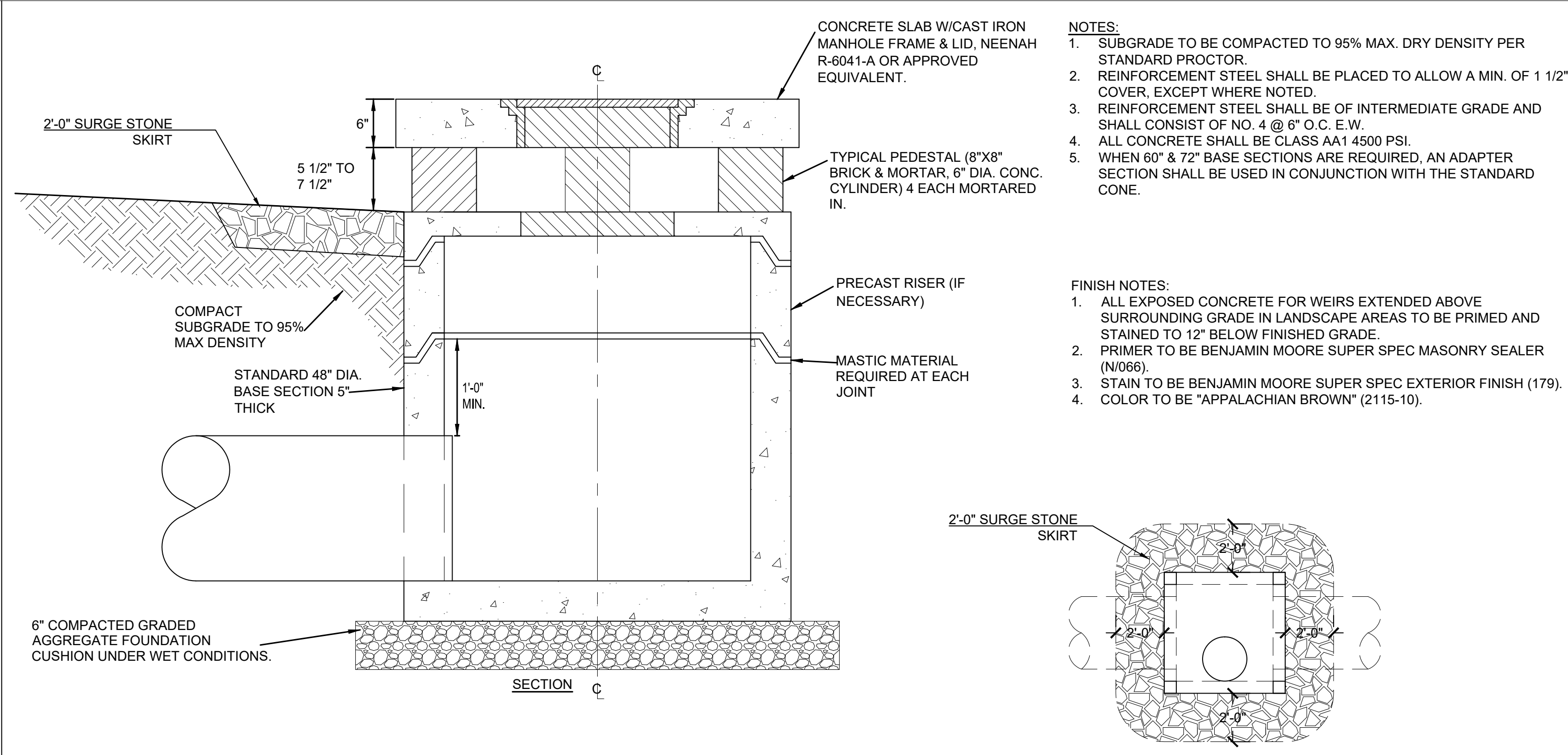


- NOTES**
1. REPRESENTATIVE SOIL pH RESULTS SHALL BE PROVIDED FOR ALUMINIZED TYPE 2 STEEL OR REINFORCED CONCRETE PIPE WHERE THE SOIL TYPE, AS INDICATED IN THE GWINNETT COUNTY SOIL SURVEY, HAS A pH RANGE WITH pH VALUES LESS THAN 5. DETAIL 1 OR DETAIL 2 SHALL BE USED WHEN THE SOIL pH < 5. DETAIL 1 OR DETAIL 2 MAY BE USED IN LIEU OF SOIL pH TESTING FOR ALUMINIZED TYPE 2 STEEL OR REINFORCED CONCRETE PIPE. NO pH TESTING SHALL BE REQUIRED FOR HDPE, ALUMINUM PIPE, OR POLYMER PRECOAT CSP.
 2. PRE-FABRICATED, 8-MIL POLYETHYLENE SLEEVE SHALL BE SLIPPED OVER THE PIPE DURING INSTALLATION, OVERLAPPED WHERE NECESSARY, AND SECURED WITH POLYETHYLENE TAPE TO COMPLETELY PREVENT THE ENTRANCE OF SOILS.
 3. ALLOWABLE GRANULAR MATERIALS SHALL BE GRADED AGGREGATE BASE, CRUSHER RUN, GADOT FOUNDATION BACKFILL MATERIAL TYPE II, OR GADOT MECHANICALLY STABILIZED EMBANKMENT BACKFILL.
 4. BACKFILL SHALL BE COMPACTED TO 95% MAX DENSITY PER AASHTO T-99 WITHIN STREET RIGHT-OF-WAY.

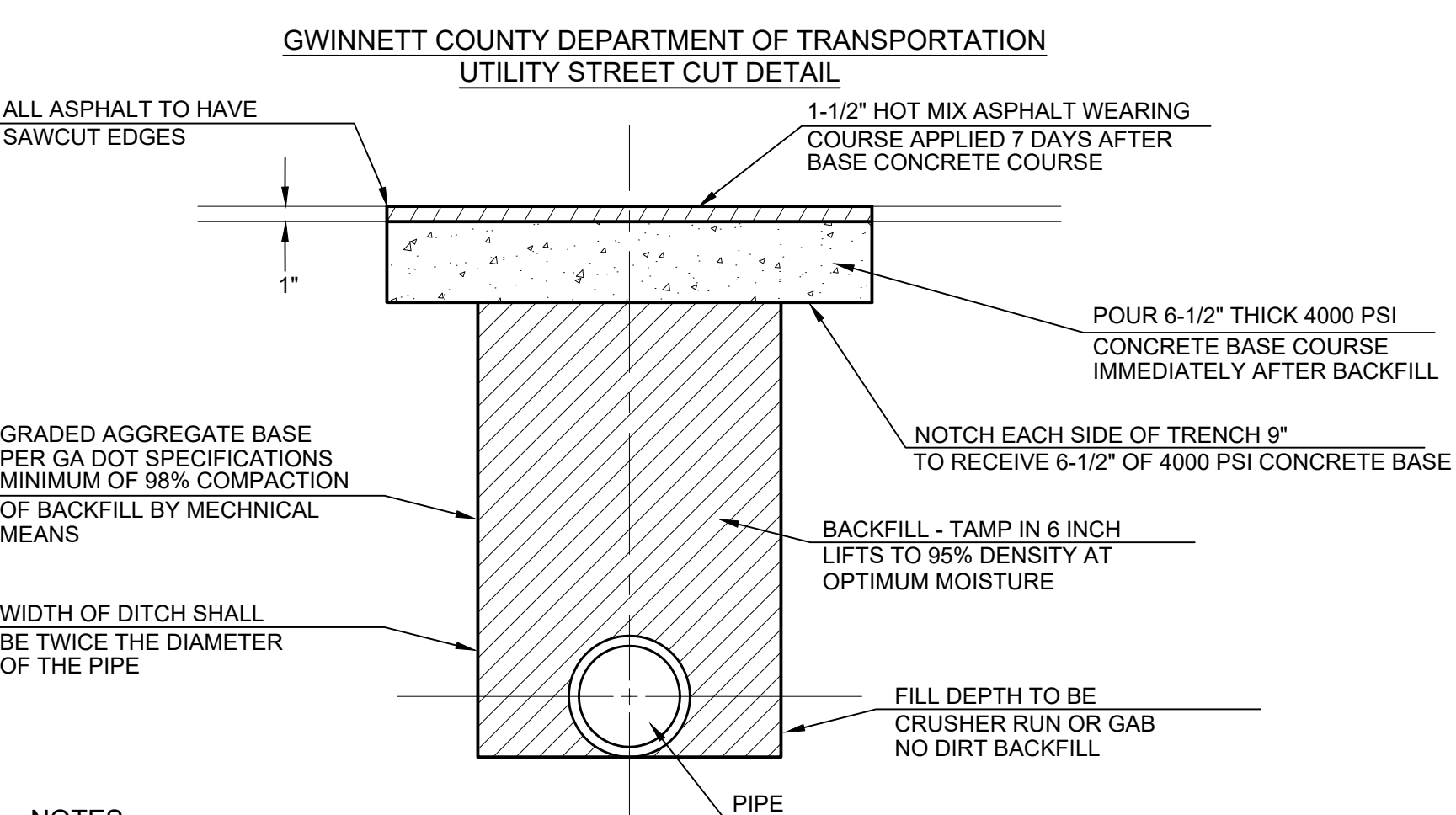
PIPE TYPE	BEDDING DETAIL			
	DETAIL 1 ALL pH RANGES	DETAIL 2 ALL pH RANGES	DETAIL 3 ALL pH RANGES	pH > 5
AL TYPE 2 CSP	X	X		X
POLYMER PRECOAT CSP	X	X	X	
ALUMINUM	X	X	X	
RCP	X	X		X
HDPE	X			

1 PIPE BEDDING
C701 N.T.S.

2 WEIR INLET (WI)
C701 N.T.S.

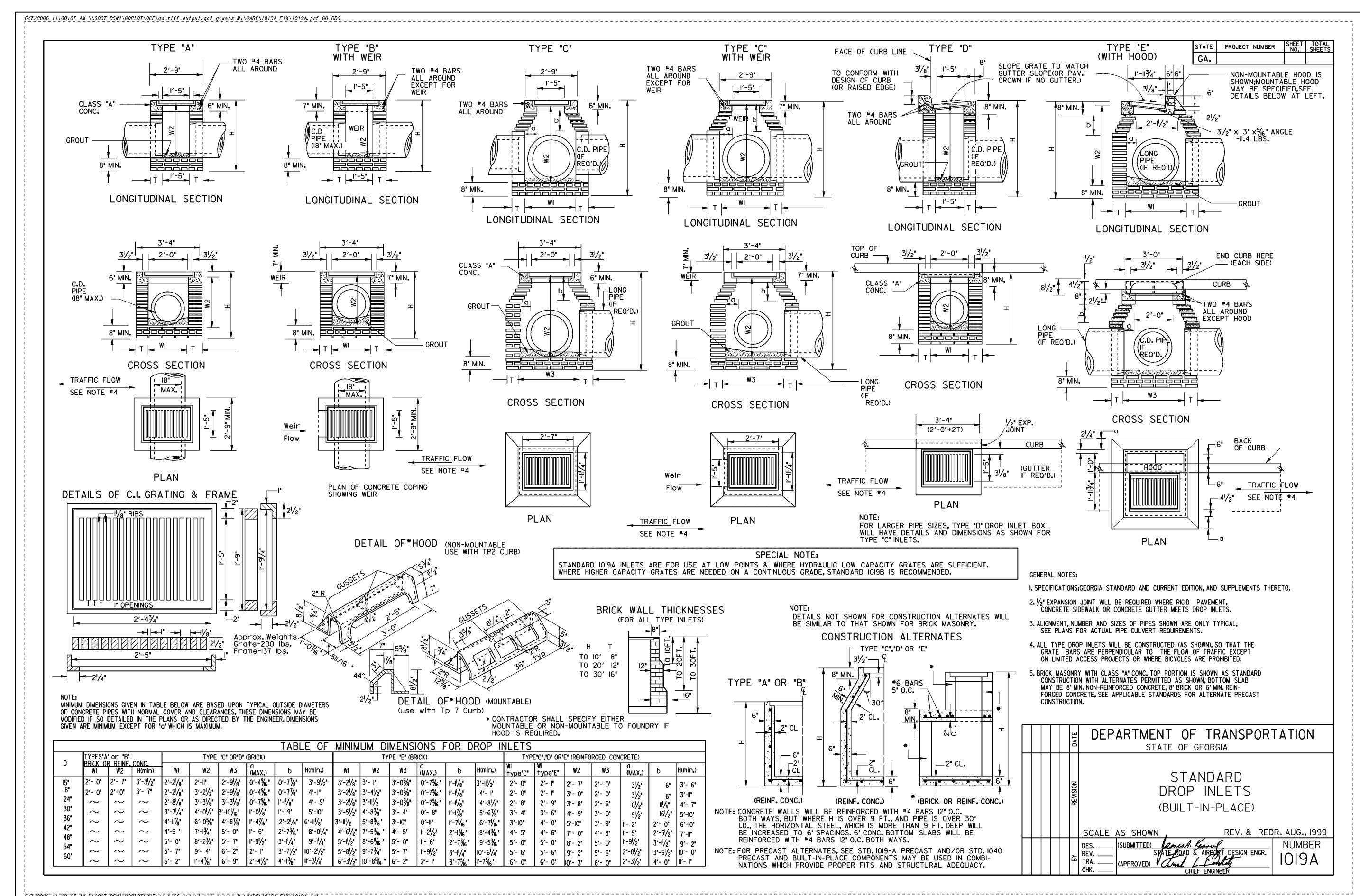


- NOTES:**
1. SUBGRADE TO BE COMPACTED TO 95% MAX. DRY DENSITY PER STANDARD PROCTOR.
 2. REINFORCEMENT STEEL SHALL BE PLACED TO ALLOW A MIN. OF 1 1/2" COVER, EXCEPT WHERE NOTED.
 3. REINFORCEMENT STEEL SHALL BE OF INTERMEDIATE GRADE AND SHALL CONSIST OF NO. 4 @ 8" O.C. E-W.
 4. ALL CONCRETE SHALL BE CLASS AA 1 4500 PSI.
 5. WHEN 60" & 72" BASE SECTIONS ARE REQUIRED, AN ADAPTER SECTION SHALL BE USED IN CONJUNCTION WITH THE STANDARD CONE.
- FINISH NOTES:**
1. ALL EXPOSED CONCRETE FOR WEIRS EXTENDED ABOVE SURROUNDING GRADE IN LANDSCAPE AREAS TO BE PRIMED AND STAINED TO 12" BELOW FINISHED GRADE.
 2. PRIMER TO BE BENJAMIN MOORE SUPER SPEC MASONRY SEALER (N066).
 3. STAIN TO BE BENJAMIN MOORE SUPER SPEC EXTERIOR FINISH (179).
 4. COLOR TO BE "APPALACHIAN BROWN" (2115-10).



- NOTES:**
1. BEFORE ANY CONTRACTOR OR AGENCY CAN CUT A ROAD FOR ANY PURPOSE, AN ESCROW AGREEMENT BETWEEN THE COUNTY AND THAT CONTRACTOR OR AGENCY MUST BE SIGNED.
 2. AN OPEN CUT PERMIT MUST BE OBTAINED BY THE CONTRACTOR OR AGENCY PRIOR TO THE START OF ANY DEMOLITION OR CONSTRUCTION.
 3. STREET CUTS MUST BE REPAIRED IN ACCORDANCE WITH THE SPECIFICATIONS ABOVE. THE BOND WILL BE RELEASED 30 DAYS AFTER COMPLETION AND INSPECTION OF THE CONSTRUCTION. THE CONSTRUCTION MUST OCCUR UNDER THE PROTECTION OF TRAFFIC CONTROL SIGNING REQUIREMENTS OUTLINED IN THE MANUAL ON TRAFFIC CONTROL DEVICES. THE TRANSPORTATION DEPARTMENT WILL BE NOTIFIED 48 HOURS PRIOR TO CONSTRUCTION. ANY CUT LEFT OVERNIGHT WILL BE COVERED WITH STEEL PLATES SECURED TO THE PAVEMENT.
 4. PERMIT HOLDER MUST CONTACT GWINNETT COUNTY ROAD MAINTENANCE AT 770-822-7414 FOR AN INSPECTION OF THE TRENCH PRIOR TO POURING THE CONCRETE BASE OR WILL FORFEIT YOUR BOND.

3 PAVEMENT PATCH FOR OPEN CUT
C701 N.T.S.



4 DROP INLET (DI) GADOT STD. 1019A
C701 N.T.S.

WARNING:
Contractors, subcontractors, vendors and suppliers are advised that the contract documents consist of Design Professional-reproduced printed, bound, and numbered specifications, Design Professional-reproduced printed, bound and numbered blue or black line prints, addenda, post-bid addenda, and change orders only. Documents reproduced by parties other than Design Professional, whether in hard copy or electronic format shall not be considered part of contract documents and do not supersede the provisions of the contract documents. The contractor, subcontractor, vendors, and suppliers are solely responsible for verification that information utilized in bidding, development of shop drawings and construction of facility are identical to contract documents.

24 HOUR CONTACT
CITY OF DACULA
BRITTNI NIX
BRITTNIX@DACULAGA.GOV
770-963-7451



BOWMAN

4174 SILVER PEAK PARKWAY
SUWANEE, GEORGIA 30024
PHONE: (770) 932-6550
FAX: (770) 932-6551
WWW.BOWMANCCM.COM

CITY OF DACULA

P.O. BOX 400
DACULA, GEORGIA 30019

PROJECT: MCMILLAN ROAD STORMWATER IMPROVEMENTS PROJECT

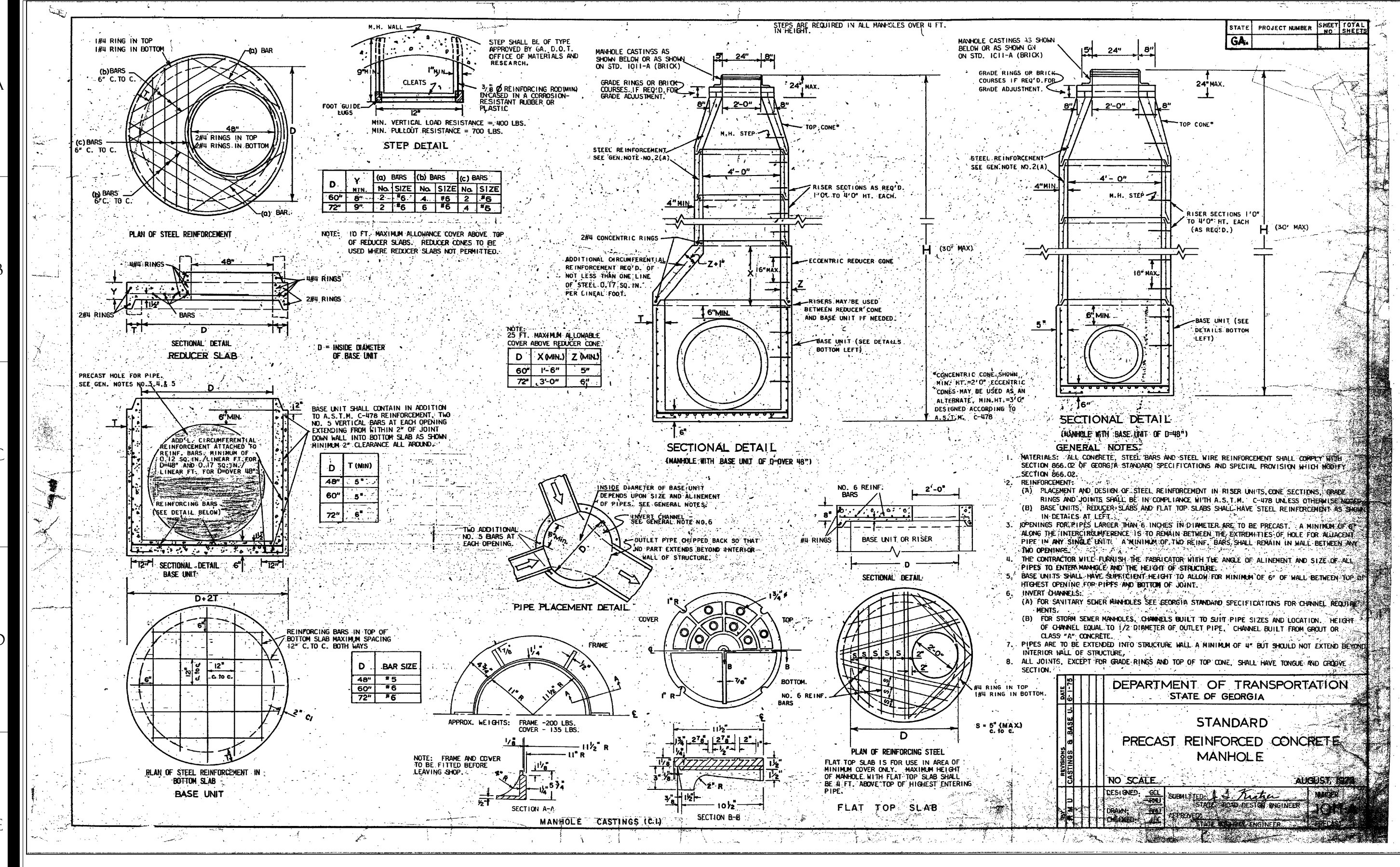
DATE: 06/24/2022
DESCRIPTION: BID

JOB NO.: 22-0310
DRAWN BY: RAWH
CHECKED BY: KDW

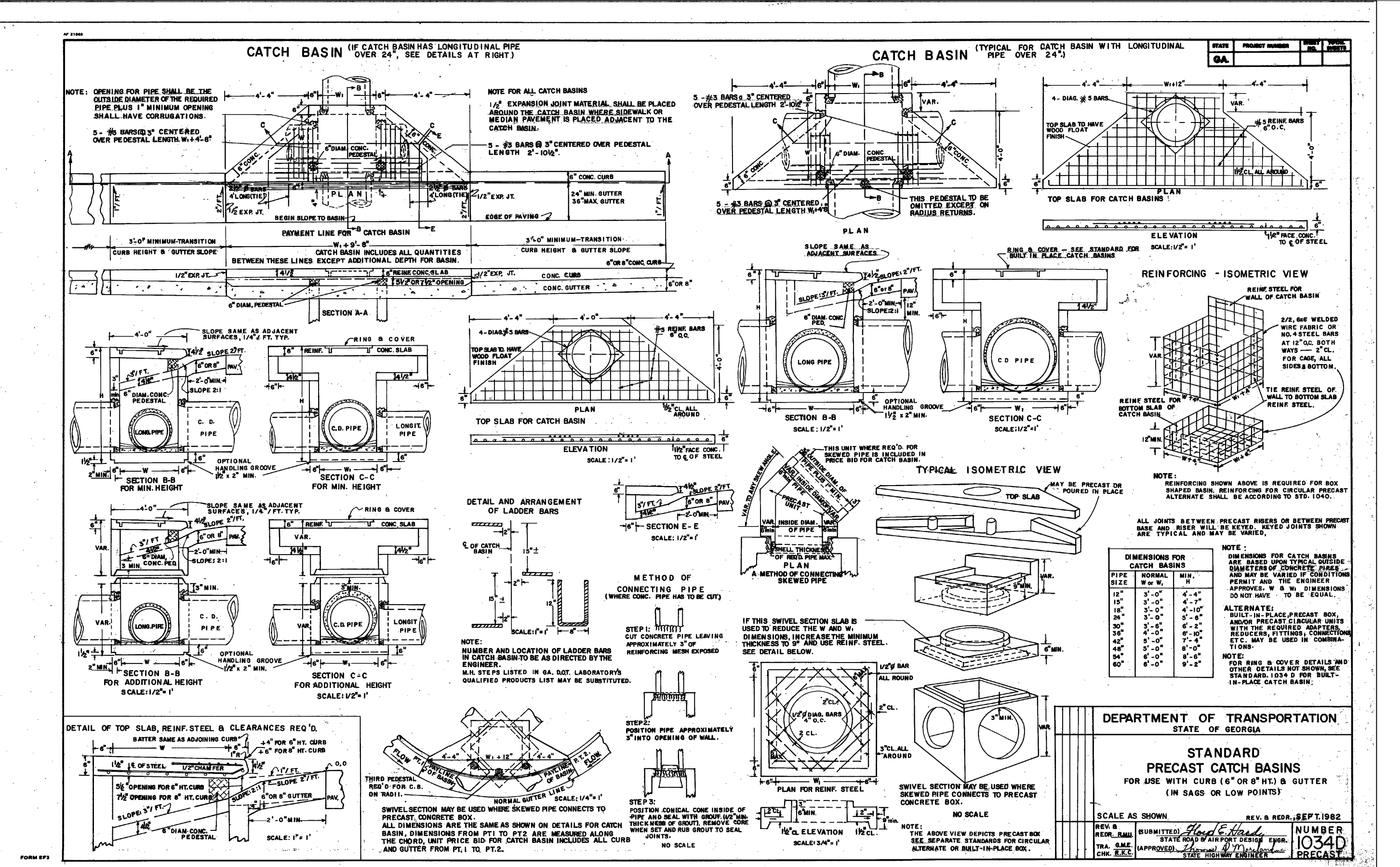
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DETAILS

C701



1 JUNCTION BOX (JB) GADOT STD. 1011A
C702 N.T.S.



2 DOUBLE WING CATCH BASIN DETAIL (GADOT STD. 1034D)
C702 N.T.S.

WARNING:
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**24 HOUR CONTACT
CITY OF DACULA
BRITTNI NIX
BRITTN.NIX@DACULAGA.GOV
770-963-7451**

811 Know what's below.
Call before you dig.



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SUWANEE, GEORGIA 30024
PHONE (770) 932-6550
FAX (770) 932-6551
WWW.BOWMAN.COM

CITY OF DACULA

OWNER:
PROJECT:
MCMILLAN ROAD STORMWATER
IMPROVEMENTS PROJECT

DATE DESCRIPTION
06/24/2022 BID

JOB NO: 22-0310
DRAWN BY: RWH
CHECKED BY: KDW

DEFLECT: 5
LANDSCAP: 302
GAINESVILLE COUNTY, GEORGIA

DATE DESCRIPTION
06/24/2022 BID

JOB NO: 22-0310
DRAWN BY: RWH
CHECKED BY: KDW

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DETAILS
C702

McMILLAN ROAD STORMWATER IMPROVEMENTS PROJECT					Date: <i>June 22, 2022</i>		
Opinion of Probable Construction Cost							
(22-0310)							
Activity	Quantity	Unit	Labor \$ or Lump Sum	Subtotal	Total	Misc. Notes	
General Demolition					\$	36,905.00	
Demolish and remove existing asphalt pavement	1,900	SY	\$ 10.00	\$ 19,000.00			
Mill 2-1/2" existing asphalt pavement	500	SY	\$ 10.00	\$ 5,000.00			
Demolish and remove existing storm structures	5	EA	\$ 1,000.00	\$ 5,000.00			
Demolish and remove existing storm pipe	527	LF	\$ 15.00	\$ 7,905.00			
Site Work					\$	170,400.00	
Heavy Duty Asphalt Pavement (roadway)	1,200	SY	\$ 95.00	\$ 114,000.00			
Standard Duty Asphalt Pavement (Drive aisle & parking bays)	700	SY	\$ 45.00	\$ 31,500.00			
Overlay and Topping Milled Areas	500	SY	\$ 25.00	\$ 12,500.00			
Dissassemble and reinstall existing chainlink fence	204	LF	\$ 20.00	\$ 4,080.00			
24" Curb & Gutter	208	LF	\$ 40.00	\$ 8,320.00			
Earthwork					\$	10,000.00	
Fine Grade Laydown Area to Drain	2,000	CY	\$ 8.00	\$ 16,000.00			
Earthwork-Grading on-site for road and parking	400	CY	\$ 25.00	\$ 10,000.00			
Storm and Drainage					\$	151,080.00	
48" HDPE	390	LF	\$ 215.00	\$ 83,850.00			
36" HDPE	95	LF	\$ 150.00	\$ 14,250.00			
36" RCP	50	LF	\$ 100.00	\$ 5,000.00			
24" RCP	20	LF	\$ 75.00	\$ 1,500.00			
Clean out existing storm drainage pipes	323	LF	\$ 10.00	\$ 3,230.00			
Drop Inlet / Weir Inlet	4	EA	\$ 4,500.00	\$ 18,000.00			
Headwall	1	EA	\$ 2,000.00	\$ 2,000.00			
Junction Box	5	EA	\$ 3,500.00	\$ 17,500.00			
Double Wing Catch Basin	1	EA	\$ 5,750.00	\$ 5,750.00			

McMILLAN ROAD STORMWATER IMPROVEMENTS PROJECT					Date: <i>June 22, 2022</i>	
Opinion of Probable Construction Cost (22-0310)						
Activity	Quantity	Unit	Labor \$ or Lump Sum	Subtotal	Total	Misc. Notes
Utilities					\$ 3,000.00	
Sanitary Sewer Manhole Raise Top, DOT traffic rated	2	EA	\$ 1,500.00	\$ 3,000.00		
Erosion Control					\$ 19,413.00	
Inlet Protection (Sd2-F)	12	EA	\$ 500.00	\$ 6,000.00		
Rip Rap	25	TN	\$ 40.00	\$ 1,000.00		
Temporary Grassing / Mulching Ds1 / Ds2	0.83	AC	\$ 2,500.00	\$ 2,075.00		
Sd2-P Inlet Protection (Pigs in Blanket)	3	EA	\$ 350.00	\$ 1,050.00		
Silt Fence	774	LF	\$ 12.00	\$ 9,288.00		
Landscape					\$ 45,598.25	
Seed / Lawn	53,645	SF	\$ 0.85	\$ 45,598.25		
Sub Total					\$ 436,396.25	
10% Mobilization, Fees, Bonds, etc.					\$ 43,639.63	
20% Construction Contingency					\$ 96,007.18	
Total					\$ 576,043.05	

Project Manual

for

City of Dacula

McMillan Road Stormwater Improvements Project

Work to be Performed

for

City of Dacula

G e o r g i a

June 24th, 2022

Prepared By:

BOWMAN

4174 Silver Peak Parkway
Suwanee, Georgia 30024

McMillan Road Stormwater Improvements Project
for
City of Dacula, Georgia

SECTION TITLE

DIVISION 0 - BIDDING/CONTRACT REQUIREMENTS

00 002	Table of Contents
00 020	Advertisement for Bids
00 100	Instructions to Bidders
00 300	Bid Proposal Form
00 500	"DRAFT" Contract
00 600	Bonds & Certificates
00 700	General Conditions
00 801	Supplementary Conditions
00 802	Notice of Commencement
00 900	Addenda and Clarifications

DIVISION 1 - GENERAL REQUIREMENTS

01 000	Project Scope of Work & Performance Specifications
01 370	Application for Payment
01 400	Quality Control
01 500	Construction Facilities and Temporary Controls
01 630	Prior Approvals & Substitutions
01 700	Contract Close-Out
01 740	General Contractor Warranty
01 741	Sub-Contractor Warranty
01 742	Certificate of Contractor / Statutory Affidavit
01 743	Georgia Security and Immigration Contractor/Subcontractor Affidavit

DIVISION 2 – SITE

02 050	Demolition
02 200	Earthwork
02 270	Slope Protection and Erosion Control
02 514	Site Concrete
02 547	Bituminous Surfacing
02 720	Site Drainage
02 930	Lawns and Grasses
02 933	Temporary Seeding

APPENDIX

- Location Map
- Referenced "McMillan Road Stormwater Improvements Project" Drawings.

ADVERTISEMENT FOR BIDS

Sealed bids for the “McMillan Road Stormwater Improvements Project” will be received by the City of Dacula at Dacula City Hall – 442 Harbins Road, Dacula, Ga. 30019, until **3:00 PM** local time on **Thursday, August 18, 2022**. Any bid received after said time and date will not be accepted by the City.

The Contract Documents, consisting of Advertisement for Bids, Information for Bidders, Bid Proposal Form, Form of Agreement, Drawings, Specifications, Bid forms, Bid Bond, Performance Bond, Payment Bond, Bidders Qualifications Forms, and other Contract Documents may be examined at: **Bowman Consulting Group, LLC (Bowman)**, 4174 Silver Peak Parkway, Suwanee, Georgia 30024. Contact: Kevin D. Whigham, P.E. (770) 932-6550; email: kwhigham@bowman.com.

All Bidders must be registered with Bowman to assure that Bidders receive all addenda and/or clarifications to the Bid Documents in a timely manner, it is highly recommended that all bidders obtain at least one complete set of Bid Documents directly from Bowman. Entities that do not obtain Bid Documents from this source will not receive addenda and/or clarifications. Bidders relying on plan rooms or other services to obtain Bid Documents, rather than obtaining them directly from the source are doing so at their own risk. Copies of the Documents and specifications will be provided in Electronic Format and can be obtained by contacting Bowman to be placed on the Bidder’s List. Electronic Copies will be made available on Bowman FTP website or sent by email at no charge. If hard copies are required, there is a non-refundable cost for each set of plans and specifications of \$150.00 (cash or check).

A. BASE BID –

The Work to be completed for this Project consists of furnishing all labor, materials, earthwork, construction operations, details, supervision and coordination of all trades, utility suppliers, governmental inspections and approvals to complete the construction, installation, and coordination for the City of Dacula “McMillan Road Stormwater Improvements Project” as follows:

The City is having issues with the existing storm pipe and structures holding stormwater and ponding out into McMillan Road near proposed JB 1-H. In order to alleviate this issue, the Scope of Work will include demolishing the existing storm sewer system from proposed JB 1-I downstream to the creek through the City’s adjacent property. An entire new Storm Sewer Outfall System will be installed in its place. The existing pipes have been TV inspected with varying results. The storm line upstream of JB 1-H is holding stormwater up to the existing grate inlet at the northwest corner of Winder Hwy. and McMillan Road. The Contractor shall excavate and replace the existing pipe crossing underneath McMillan Road and replace with new RCP culvert and junction box adjacent to building or where buried junction box is located. Contractor will then investigate and cleanout the existing

22-0310

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00 020-2

36" RCP Box Culvert which appears to cross underneath the corner of the existing building. The existing grate inlet at northeast corner of Winder Hwy. and McMillan Road will need to be reconstructed and top made accessible with steps for access and clean out of downstream pipe. Contractor will also cleanout existing 24" RCP storm sewer line extending north from proposed JB 1-H underneath Winder Hwy. and Railroad to upstream headwall adjacent to Hebron Church Road.

The Demolition scope also includes removing all asphalt pavement along McMillan Road from right-of-way of Winder Hwy. south to limits of removal as illustrated on the Drawings. The remainder of McMillan Road from the removal limits to the 4-Way Stop at Church Street will be milled and repaved. A deep patch milling detail is included if any pavement areas need additional repair. The City's adjacent lot which is currently fenced can be used as a laydown area for construction. At end of construction, Contractor shall remove all existing pavement within the fenced limits and fine grade area to drain to new storm sewer weir inlets and stream buffer. Fence will need to be disassembled and stored until construction is complete and then reinstalled by the Contractor.

A new storm sewer outfall line and structures will be installed along McMillan Road and extend west down along the outside of the stream buffer until it can be discharged into the stream buffer as illustrated on the Drawings. A new junction box (JB) will be installed on the east side of McMillan Road adjacent to the existing building where the existing 36" RCP Box Culvert ties into the 30" RCP culvert running underneath McMillan Road. This new JB will be installed where the Contractor uncovers the buried existing junction box or as illustrated on the Drawings to provide access to cleaning out the existing 36" RCP Box Culvert.

A new 36" RCP culvert will be installed underneath McMillan Road from JB 1-I to JB 1-H; then a 48" HDPE storm line and structures will be installed behind the existing utilities running along the west side of McMillan Road. McMillan Road will be regraded from Winder Hwy. right-of-way limits south to a new low which is created farther away from Winder Hwy. Curb & Gutter will be installed along the west side of newly regraded McMillan Road. A new Double Wing Catch Basin (DWCB 1-F.1) will be installed to drain stormwater from this low point with a 24" HDPE pipe installed to drain stormwater to outfall storm sewer at JB 1-F.

The remaining 48" HDPE storm outfall sewer will extend south to the stream buffer and turn west at JB 1-E and then continuing draining till it discharges into stream buffer at Headwall (HW 1-A). Contractor shall minimize disturbance within stream buffer and limit grading and disturbance operations to pipe, headwall, riprap installation only.

In addition, McMillan Road at limits of regrading near existing low point at stream crossing shall be milled and repaved as illustrated on the Drawings up to the 4-Way Stop at Church Street. Contractor shall document all existing striping and replace in-kind including but not limited to "Railroad Ahead" striping, stop bars, double centerline striping, and parking lot lines. Install eight (8) new concrete curb stop blocks at parking spaces to prevent

22-0310

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00 020-3

damage to building. Existing DWCB's and storm pipe at low point near stream crossing shall be cleaned out and paved inverts installed to drain. Existing HDPE pipe and French Drain draining into existing DWCB on west side of McMillan Road near Station 3+10 needs to be cleaned out and/or replaced to drain low point area behind DWCB and existing house.

McMillan Road shall be repaved with Heavy Duty Pavement Section. Parking area adjacent to McMillan Road and Building shall be repaved with Standard Duty Pavement Section. Milled areas shall be milled 2.5" unless a deep patch section is needed (to be approved by Owner prior to additional milling and paving) and then repaved with tack coat, 1" of 'D' Mix Asphalt Binder Course, and 1-1/2" Type 1 - 'F' Mix (9.5 mm) Asphalt Surface Course. All new pavement repair shall have smooth transition with adjacent existing asphalt.

Erosion, Sedimentation, and Pollution Control Measures are part of the Contractor's Scope of Work. BMP's shall be installed on all existing and new storm inlets as well as Double Row Type 'C' Silt Fence along Stream Buffer. See Drawings for all BMP's to be installed.

All disturbed areas will be permanently grassed with Erosion Control Matting and permanent Bermuda Seed. Any disturbance adjacent to or within a homeowner's front yard shall be permanently stabilized with Bermuda Sod. Removal of all vegetation and trees within limits of work shall be included in Contractor's overall Bid unless otherwise illustrated on the drawings. Traffic access to streets and private driveways shall remain open at all times unless approved by the Owner. If road closure is granted, then Contractor shall provide Traffic Control Plan and all detour signage required in his overall Bid.

All earthwork quantities for grading, pipe bedding, and backfill whether haul-in and/or haul-off are the responsibility of the Contractor to include in their Lump Sum Bid in order to complete the Scope of Work at no additional cost to the Owner. All quantities and measurements are approximate. Contractor shall visit the Site and determine his own quantities for bidding this project.

Contractor shall include in their Base Bid all costs for adjusting and relocating any water and gas services lines, meters, or valves impacted by new storm line installation in order to complete the scope of work as described by the Contract Documents and Drawings. Contractor shall coordinate with utility companies and relocate utilities as required to install new improvements. Contractor must be qualified with Gwinnett County in order to perform water line installation, relocation and repairs.

One lane of traffic and access to residential/commercial driveways must be maintained at all times unless road closure is granted by the City as stated above. Traffic Safety devices such as signage, barricades, etc., and the protection of the public-at-large, and the Contractor's personnel is part of this contract and is the Contractor's sole responsibility. The Contractor will have Ninety (90) consecutive calendar days from the "Notice to Proceed" to finish and complete the project.

22-0310

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All materials and appurtenances required to complete this Scope of Work is the responsibility of the Contractor and shall be provided in his overall Bid. The Contractor must be an approved Contractor with the City of Dacula and/or Gwinnett County. A complete list of materials should be included in the Contractor's overall Bid.

Bidder will prepare Asphalt prices for bid based on the current GDOT Asphalt Cement Price Index listed at the time of bid opening. The successful Contractor's pay request will list the current GDOT Asphalt Cement Price Index at the time of purchase. The difference in price between the GDOT Asphalt Cement Price Index at bid and at purchase will either be a change order to the Contractor or a Credit to the Owner. The GDOT Asphalt Cement Price Index is in accordance with Special Provision 109 (dated 2008), Section 400.5.01 Adjustments, the asphalt price index for the month of the Letting posted on the Georgia Department of Transportation Website.

Additional items within Scope of Work

- A. A site visit must be made by Contractor and subcontractors to determine the exact nature and scope of the work to be done. Contractor is responsible for hauling off all demolition materials (existing pipe, concrete, asphalt, etc.) to a State approved disposal facility at no additional cost to the Owner. Contractor shall tie in and feather new asphalt into existing asphalt so that there is a smooth transition.
- B. If any unforeseen sub-grade conditions arise the Contractor shall immediately notify the Owner and/or Owner's representative before proceeding with any work to determine the course of action. The Contractor shall have a Geotechnical Engineer (who will be selected by the Contractor and approved and paid for by the Owner) qualify and quantify the areas and determine the method of sub-grade repair in coordination with the Owner and/or Owner's Representative on a case-by-case basis.
- C. The limits of work for this project are limited to that area within the right-of-way of City of Dacula and City owned property in order to perform the paving and storm sewer drainage pipe and structure installation as described by scope of work in the Contract Documents.
- D. Contractor is responsible to locate horizontally and vertically all existing utilities within limits of disturbance and protect throughout duration of project. Utilities which are present include water, gas, electrical, CATV, AT&T, etc., but may not be limited to these within the limits of disturbance. All existing utilities shall be located and protected from damage by the Contractor.
- E. Contractor shall have a Site Superintendent on-site at all times while work is in progress to monitor, direct, and control construction activities. Superintendent

22-0310

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00 020-5

in-charge shall be available to City, Engineer, and adjacent property owners to answer or direct questions concerning the project.

Owner reserves the right to waive any informalities and any technicalities, and to reject any or all bids. There will be a Pre-Bid Conference at Dacula City Hall, 442 Harbins Road, Dacula, GA 30019 at **3:00 PM** local time on **Tuesday, August 2, 2022**. All bidders are strongly encouraged to attend this conference. Owner reserves the right to waive any informalities and any technicalities, and to reject any or all bids. All questions concerning this project shall be submitted in writing by email to Bowman (Owner's Representative – Kevin D. Whigham, P.E.) 4174 Silver Peak Parkway, Suwanee, Georgia 30024, phone number 770-932-6550; email kwhigham@bowman.com no later than **Thursday, August 11, 2022 by 5:00 PM**.

By: Honorable Trey King, Mayor
City of Dacula, Georgia

SECTION 00 100

INSTRUCTIONS TO BIDDERS

Each Bidder by making his bid represents that he has read and understands the bidding documents and has visited the site and familiarized himself with the local conditions under which the work is to be performed.

All bids must be prepared on the forms provided by the Owner's Representative and submitted in accordance with the Instructions to Bidders. A bid is invalid if it has not been deposited at the designated location prior to the time and date for receipt of bids set forth in the advertisement or invitation to bid, or prior to any extension thereof issued to the bidders.

Work under the contract consists of furnishing all labor and materials required to complete the project entitled:

"McMillan Road Stormwater Improvements Project".

In accordance with Contract Documents prepared by: The Bowman Consulting Group, LTD. (Bowman), 4174 Silver Peak Parkway, Suwanee, Georgia 30024. Phone: (770) 932-6550, Dated: June 24th, 2022.

The following provisions shall be applicable to all Bidders:

- A. During grading and excavation phases, if required, should the following conditions be encountered: mass rock, trench rock, trench earth excavation, earth excavation, earth fill and unsuitable soils, Contractor shall immediately notify the Owner's Representative who may observe and will determine the appropriate action necessary for the work to proceed. If, in the opinion of the Owner's Representative, work in addition to the original contract requirements is required, that portion pertaining to any of the foregoing conditions will be performed on a time and material basis and the contract shall be equitably adjusted by change order in accordance with the guidelines set forth in Section 00 801 of these Contract Documents. Successful Contractor shall submit unit prices as required herein that are used to formulate his bid. Unit and/or lump sum prices shall include cost of material, sales tax, delivery, labor, labor burden, supervision, taxes, insurance and all other costs including profit and overhead. Owner's Representative and Owner reserve the right to accept or reject these prices or request the work to be performed on a time and material basis with complete daily breakdowns and logs submitted by General Contractor.

Contractor may draw his own conclusions and no responsibility is assumed by the Owner's Representative or Owner for subsurface conditions or quality of same. No claims for extra compensation or for additional contract time will be allowed due to subsurface conditions.

22-0310

INSTRUCTIONS TO BIDDERS

00 100-2

- B. Time is of the essence. Construction of the "McMillan Road Stormwater Improvements Project" must be substantially complete within Ninety (90) consecutive days from date of Notice to Proceed.
- C. A bid bond in the amount of 5% of the base bid shall accompany the bid. The Attorney-in-Fact who signs the bid bond must file with the bid bond a certified copy of his Power of Attorney to sign such bond.
- D. Neither Contractor, nor his material suppliers, nor his Subcontractors shall install or otherwise incorporate any materials containing asbestos, PCB or other hazardous materials within the boundaries of the Project. No soil found on Site or transported to the site from remote locations which is contaminated with material containing asbestos, PCB, radon, gasoline, fuel oil, diesel fuel or other similar fossil fuels shall be used for fill, backfill or landscape topsoil.
- E. Each bidder represents that his bid is based upon the work described in the Bid Documents, Drawings, and Specifications.
- F. When references are made in the specifications to trade names, or to the names of manufacturers, such references are made solely to designate and identify the quality of the equipment or material to be furnished and are not intended to restrict competitive bidding. In case the Contractor wishes to use material and equipment other than those specified, PRIOR WRITTEN REVIEW by Owner's Representative must be obtained.
- G. If it is desired to use equipment or materials of different manufacturer or trade names from those specified, application for review of such equipment or materials must reach the hands of the Owner's Representative at least ten (10) days prior to the date set for the opening of bids. Application for review must be accompanied by supporting data clearly proving equality of the proposed substitute to that specified. To be acceptable, a substitute must be equal, or exceed, all requirements of the base specifications, including space limitations. A comparative data schedule shall accompany the submittal. Any changes in the work which might be required to accommodate the proposed substitute shall be clearly shown and described. Should the proposed substitute be accepted, any such changes required in other work due to the use of the substitute shall be coordinated and accomplished by Contractor as part of the Contract at no additional cost to Owner.
- H. No substitutes allowed.
- I. No consideration can be given to requests for review received later than ten (10) days prior to the day set for the opening of bids.
- J. METHOD OF AWARD
1. A lump sum, fixed price bid proposal is requested with specific Schedule of Values to be provided by the Contractor by which they based their bid upon as part of the Contract

22-0310

INSTRUCTIONS TO BIDDERS

00 100-3

Documents and as outlined in the Bid Proposal Form, Section 00 300. Award will be made to the lowest responsive, responsible, qualified bidder.

2. The lump sum bid for the construction of the work as outlined in the Contract Documents and set forth in detail in the proposal, includes the furnishing of all equipment, materials, labor, insurance, overhead and profit for the completion of the work as per the Contract Documents.

K. RIGHT TO REJECT BIDS

Owner reserves the right to reject any or all bids and to waive informalities. It is distinctly understood, and all bids are made subject to this Agreement, that Owner reserves the right to decide which bid he deems lowest and best. In arriving at this decision, due consideration will be given to the reputation of the bidder, his financial responsibility, work of this type successfully completed, and the character of materials and equipment offered. No bids received after the time set for opening proposals will be considered. Any unauthorized conditions, limitations or provisions attached to the proposal, or the omission of a bid on any item in the proposal for the section bid upon, will render it informal and may cause its rejection. No bids will be allowed to be withdrawn after time set for receiving bids.

L. CONTRACT DOCUMENTS

1. The Contract Documents are intended to agree and be mutually explanatory, and they shall be accepted and used as a whole and not separately. Should any items be omitted from the Project Scope of Work and/or the Drawings, or vice versa, it shall be executed the same as if shown and combined in both. Should any item be omitted, or should any item be described in the Scope and/or Drawings, but not duplicated on other, it shall be executed the same as if shown and combined in both. Should contradiction be found, notify Owner's Representative prior to receipt of bids so that contradictions can be clarified by addendum (a).
2. Large scale details will be furnished by the Owner's Representative for all work which in the opinion of Owner's Representative requires same.
3. Details shall be accurately followed, deviation therefrom being cause for rejection of work.
4. Explanatory note shall be preferred to conflicting drawn out indications. Large scale details shall be preferred to scale measurements. In all cases the details shall be checked with existing conditions. Should any variation be found, it shall be immediately referred to Owner's Representative for clarification and adjustment.
5. Owner's Representative will be, in the first instance, the interpreter of the requirements of the Contract Documents and judge the performance thereunder by Contractor.

- Owner's Representative will within a reasonable time, render such interpretations as he may deem necessary for the proper execution or progress of the work.
6. Contractor shall field verify items as outlined in the Project Scope of Work and/or the Drawings.
 7. A site visit must be made by Contractor and subcontractors to determine the exact nature and scope of the work to be done.
 8. Any quantities called out in the Scope of Work, Bid Documents, Drawings, Specifications, and/or Details are approximate. Contractor shall calculate and verify his own quantities used to formulate his bid. Contractor shall verify and determine his own quantities for all materials, lengths of roadway, and other items required to complete the repaving and drainage improvement work for the project as described in the Scope of Work, Bid Documents, Drawings, and/or Specifications.
 9. Contractor is responsible for hauling off all demolition materials (soil, base, existing asphalt, etc.) to a State approved disposal facility at no additional cost to the Owner.
 10. Contractor shall use the Georgia DOT asphalt index when forming his bid for any asphalt repair and adjust prices during construction. Use the latest version of the Georgia DOT index for calculations. Bidder will prepare Asphalt prices for bid based on the current GDOT Asphalt Cement Price Index listed at the time of bid opening. The successful Contractor's pay request will list the current GDOT Asphalt Cement Price Index at the time of purchase. The difference in price between the GDOT Asphalt Cement Price Index at bid and at purchase will either be a change order to the Contractor or a Credit to the Owner. The GDOT Asphalt Cement Price Index is in accordance with Special Provision 109 (dated 2009, or latest version), Section 400.5.01 Adjustments, the asphalt price index for the month of the Letting posted on the Georgia Department of Transportation Website.
 11. Contractor shall coordinate with Owner to locate a suitable staging area near the project. If necessary, the Contractor is responsible for the coordination and payment of fees or leasing agreements needed for the storage and/or staging of equipment on private property.
 12. The Contractor is responsible for any and all utility locates needed before commencing work on the project. The Contractor shall contact the affected utility, not the City, should utility damage occur. Emergency contact numbers will be provided to the successful bidder.
 13. Contractor is not responsible for acquiring any permits.
 14. No other testing requirements are required by the Contractor unless an unforeseen circumstance arises with subgrade issue on a case-by-case basis. If this occurs the

22-0310

INSTRUCTIONS TO BIDDERS

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repaired area shall be proof rolled for subgrade and base material in the presence of the Owner or Owners' Representative prior to placing base and binder material over graded aggregate base material. If any areas fail, then the Contractor will be required to provide a Geotechnical Engineer to qualify and quantify bad materials. Geotechnical Engineer shall be selected by the Contractor, approved by the owner, and paid through an approved change order by the Owner.

15. Access to residential and commercial driveways, as well as maintaining one lane (12' wide minimum for school bus access) open for traffic at all times is the Contractor's responsibility. The Contractor's means, methods and scheduling for completion of the contract work is his responsibility.
16. Limits of work for this project occur in residential areas so work is restricted to between the hours of 8 a.m. to 6 p.m. Monday through Saturday. No work on Sunday.
17. Contractor is responsible for all erosion control required to complete the scope of work such as Rip Rap, Erosion Control Matting, temporary and permanent grassing (Sod), and other measures as outlined in the Scope of Work, Bid Documents, and/or Performance Specification.
18. No partial sets of the Contract Documents will be issued by Owner or Owner's Representative.

End of Section

SECTION 00 300

BID PROPOSAL FORM

TO: CITY OF DACULA

P.O. Box 400
Dacula, Georgia 30019

Date: _____

Gentlemen:

Having carefully examined the Contract Documents entitled "McMillan Road Stormwater Improvements Project", dated June 24th, 2022 and Addendum (a) No. (s) _____, and having examined the Site and conditions affecting the work, including availability of materials and labor, the undersigned hereby proposes to furnish all materials, labor, tools, equipment, machinery, transportation, supervision, administration and services necessary and incidental to construct and substantially complete the drainage and paving improvements called for in the Contract Documents for said project, and in accordance with said documents, shall be substantially complete by the time set forth therein.

A. BASE BID –

The Work to be completed for this Project consists of furnishing all labor, materials, earthwork, construction operations, details, supervision and coordination of all trades, utility suppliers, governmental inspections and approvals to complete the construction, installation, and coordination for the City of Dacula "McMillan Road Stormwater Improvements Project" as follows:

The City is having issues with the existing storm pipe and structures holding stormwater and ponding out into McMillan Road near proposed JB 1-H. In order to alleviate this issue, the Scope of Work will include demolishing the existing storm sewer system from proposed JB 1-I downstream to the creek through the City's adjacent property. An entire new Storm Sewer Outfall System will be installed in its place. The existing pipes have been TV inspected with varying results. The storm line upstream of JB 1-H is holding stormwater up to the existing grate inlet at the northwest corner of Winder Hwy. and McMillan Road. The Contractor shall excavate and replace the existing pipe crossing underneath McMillan Road and replace with new RCP culvert and junction box adjacent to building or where buried junction box is located. Contractor will then investigate and cleanout the existing 36" RCP Box Culvert which appears to cross underneath the corner of the existing building. The existing grate inlet at northeast corner of Winder Hwy. and McMillan Road will need to be reconstructed and top made accessible with steps for access and clean out of downstream pipe. Contractor will also cleanout existing 24" RCP storm sewer line extending north from proposed JB 1-H underneath Winder Hwy. and Railroad to upstream headwall adjacent to Hebron Church Road.

The Demolition scope also includes removing all asphalt pavement along McMillan Road from right-of-way of Winder Hwy. south to limits of removal as illustrated on the Drawings. The remainder of McMillan Road from the removal limits to the 4-Way Stop at Church Street will be milled and repaved. A deep patch milling detail is included if any pavement areas need additional repair. The City's adjacent lot which is currently fenced can be used as a laydown area for construction. At end of construction, Contractor shall remove all existing pavement within the fenced limits and fine grade area to drain to new storm sewer weir inlets and stream buffer. Fence will need to be disassembled and stored until construction is complete and then reinstalled by the Contractor.

A new storm sewer outfall line and structures will be installed along McMillan Road and extend west down along the outside of the stream buffer until it can be discharged into the stream buffer as illustrated on the Drawings. A new junction box (JB) will be installed on the east side of McMillan Road adjacent to the existing building where the existing 36" RCP Box Culvert ties into the 30" RCP culvert running underneath McMillan Road. This new JB will be installed where the Contractor uncovers the buried existing junction box or as illustrated on the Drawings to provide access to cleaning out the existing 36" RCP Box Culvert.

A new 36" RCP culvert will be installed underneath McMillan Road from JB 1-I to JB 1-H; then a 48" HDPE storm line and structures will be installed behind the existing utilities running along the west side of McMillan Road. McMillan Road will be regraded from Winder Hwy. right-of-way limits south to a new low which is created farther away from Winder Hwy. Curb & Gutter will be installed along the west side of newly regraded McMillan Road. A new Double Wing Catch Basin (DWCB 1-F.1) will be installed to drain stormwater from this low point with a 24" HDPE pipe installed to drain stormwater to outfall storm sewer at JB 1-F.

The remaining 48" HDPE storm outfall sewer will extend south to the stream buffer and turn west at JB 1-E and then continuing draining till it discharges into stream buffer at Headwall (HW 1-A). Contractor shall minimize disturbance within stream buffer and limit grading and disturbance operations to pipe, headwall, riprap installation only.

In addition, McMillan Road at limits of regrading near existing low point at stream crossing shall be milled and repaved as illustrated on the Drawings up to the 4-Way Stop at Church Street. Contractor shall document all existing striping and replace in-kind including but not limited to "Railroad Ahead" striping, stop bars, double centerline striping, and parking lot lines. Install eight (8) new concrete curb stop blocks at parking spaces to prevent damage to building. Existing DWCB's and storm pipe at low point near stream crossing shall be cleaned out and paved inverts installed to drain. Existing HDPE pipe and French Drain draining into existing DWCB on west side of McMillan Road near Station 3+10 needs to be cleaned out and/or replaced to drain low point area behind DWCB and existing house.

McMillan Road shall be repaved with Heavy Duty Pavement Section. Parking area adjacent to McMillan Road and Building shall be repaved with Standard Duty Pavement Section. Milled areas

shall be milled 2.5" unless a deep patch section is needed (to be approved by Owner prior to additional milling and paving) and then repaved with tack coat, 1" of 'D' Mix Asphalt Binder Course, and 1-1/2" Type 1 - 'F' Mix (9.5 mm) Asphalt Surface Course. All new pavement repair shall have smooth transition with adjacent existing asphalt.

Erosion, Sedimentation, and Pollution Control Measures are part of the Contractor's Scope of Work. BMP's shall be installed on all existing and new storm inlets as well as Double Row Type 'C' Silt Fence along Stream Buffer. See Drawings for all BMP's to be installed.

All disturbed areas will be permanently grassed with Erosion Control Matting and permanent Bermuda Seed. Any disturbance adjacent to or within a homeowner's front yard shall be permanently stabilized with Bermuda Sod. Removal of all vegetation and trees within limits of work shall be included in Contractor's overall Bid unless otherwise illustrated on the drawings. Traffic access to streets and private driveways shall remain open at all times unless approved by the Owner. If road closure is granted, then Contractor shall provide Traffic Control Plan and all detour signage required in his overall Bid.

All earthwork quantities for grading, pipe bedding, and backfill whether haul-in and/or haul-off are the responsibility of the Contractor to include in their Lump Sum Bid in order to complete the Scope of Work at no additional cost to the Owner. All quantities and measurements are approximate. Contractor shall visit the Site and determine his own quantities for bidding this project.

Contractor shall include in their Base Bid all costs for adjusting and relocating any water and gas services lines, meters, or valves impacted by new storm line installation in order to complete the scope of work as described by the Contract Documents and Drawings. Contractor shall coordinate with utility companies and relocate utilities as required to install new improvements. Contractor must be qualified with Gwinnett County in order to perform water line installation, relocation and repairs.

One lane of traffic and access to residential/commercial driveways must be maintained at all times unless road closure is granted by the City as stated above. Traffic Safety devices such as signage, barricades, etc., and the protection of the public-at-large, and the Contractor's personnel is part of this contract and is the Contractor's sole responsibility. The Contractor will have Ninety (90) consecutive calendar days from the "Notice to Proceed" to finish and complete the project.

All materials and appurtenances required to complete this Scope of Work is the responsibility of the Contractor and shall be provided in his overall Bid. The Contractor must be an approved Contractor with the City of Dacula and/or Gwinnett County. A complete list of materials should be included in the Contractor's overall Bid.

Bidder will prepare Asphalt prices for bid based on the current GDOT Asphalt Cement Price Index listed at the time of bid opening. The successful Contractor's pay request will list the current GDOT Asphalt Cement Price Index at the time of purchase. The difference in price between the GDOT

Asphalt Cement Price Index at bid and at purchase will either be a change order to the Contractor or a Credit to the Owner. The GDOT Asphalt Cement Price Index is in accordance with Special Provision 109 (dated 2008), Section 400.5.01 Adjustments, the asphalt price index for the month of the Letting posted on the Georgia Department of Transportation Website.

Additional items within Scope of Work

- A. A site visit must be made by Contractor and subcontractors to determine the exact nature and scope of the work to be done. Contractor is responsible for hauling off all demolition materials (existing pipe, concrete, asphalt, etc.) to a State approved disposal facility at no additional cost to the Owner. Contractor shall tie in and feather new asphalt into existing asphalt so that there is a smooth transition.
- B. If any unforeseen sub-grade conditions arise the Contractor shall immediately notify the Owner and/or Owner's representative before proceeding with any work to determine the course of action. The Contractor shall have a Geotechnical Engineer (who will be selected by the Contractor and approved and paid for by the Owner) qualify and quantify the areas and determine the method of sub-grade repair in coordination with the Owner and/or Owner's Representative on a case-by-case basis.
- C. The limits of work for this project are limited to that area within the right-of-way of City of Dacula and City owned property in order to perform the paving and storm sewer drainage pipe and structure installation as described by scope of work in the Contract Documents.
- D. Contractor is responsible to locate horizontally and vertically all existing utilities within limits of disturbance and protect throughout duration of project. Utilities which are present include water, gas, electrical, CATV, AT&T, etc., but may not be limited to these within the limits of disturbance. All existing utilities shall be located and protected from damage by the Contractor.
- E. Contractor shall have a Site Superintendent on-site at all times while work is in progress to monitor, direct, and control construction activities. Superintendent in-charge shall be available to City, Engineer, and adjacent property owners to answer or direct questions concerning the project.

Owner reserves the right to waive any informalities and any technicalities, and to reject any or all bids. There will be a Pre-Bid Conference at Dacula City Hall, 442 Harbins Road, Dacula, GA 30019 at **3:00 PM** local time on **Tuesday, August 2, 2022**. All bidders are strongly encouraged to attend this conference. Owner reserves the right to waive any informalities and any technicalities, and to reject any or all bids. All questions concerning this project shall be submitted in writing by fax or email to The Bowman Consulting Group, LLC (Bowman). (Owner's Representative – Kevin D. Whigham, P.E.) 4174 Silver Peak Parkway, Suwanee, Georgia 30024, phone number 770-932-6550 or email kwhigham@bowman.com no later than **Thursday, August 11, 2022 by 5:00 PM**.

If any unforeseen sub-grade conditions arise the Contractor shall immediately notify the Owner and/or Owner's representative before proceeding with any work to determine the course of action. The Contractor shall have a Geotechnical Engineer who will be selected by the Contractor and approved by the Owner qualify and quantify the areas and determine the method of sub-grade repair in coordination with the Owner and/or Owner's Representative on a case-by-case basis.

A. BASE BID – “McMillan Road Stormwater Improvements Project” – LUMP SUM AMOUNT

**Bidder agrees to perform all of the Improvements described in the specifications and represented by the project drawings for the SUM OF :

_____ (\$_____)

(Amounts shall be shown in both * words and figures).

* In case of discrepancy, the amounts shown in words will govern.

**Please note that successful Bidder will be required to submit a Unit Price Breakdown of items used in determining the Lump Sum Bid Proposal Price for this work.

** The **Base Bid** amount shall consist of Work Items more particularly described in Section 01 000, Project Scope & Performance Specification. The Contractor shall be responsible for all labor, equipment, materials, operations, details, insurance, supervision, coordination, administration, overhead and profit, plus all necessary incidental costs associated with the complete function of the Work Scope in context of the project.

“Notice to Proceed” will be issued after the Pre-Construction meeting as soon as all required paperwork such as Contracts, Bonds, Insurance, etc. are in order. Contractor shall mobilize within ten (10) days of Notice to Proceed issued by the City of Dacula and to commit adequate forces on site to substantially complete all Work including punch list items and clean-up for the Base Bid within Ninety (90) consecutive calendar days. The City of Dacula will charge the Contractor Five-Hundred Dollars and no cents (\$500.00) per day for liquidated damages for every day past the completion of the Contract.

The undersigned agrees that this proposal may not be revoked or withdrawn after the time set for the opening of bids but shall remain open for acceptance for a period of 60 days following such time. The undersigned, upon receipt of written notice of the acceptance of this bid, agrees to execute within ten (10) days a Contract for the work for the above stated compensation, and to furnish and deliver to Owner at the same time as the Contract, the required Performance Bonds, and a Labor and Materials Payment Bond, for General Contractor in amount to equal 100% of the Contract Sum. These bonds shall be written on forms provided by a company acceptable to the Owner and licensed to do business in the State of Georgia at the time the bonds are written, and that are listed on “Department of the Treasury Circular 570.”

If this proposal is accepted within 60 days after the date set for the opening of bids and the undersigned fails to execute the Contract within ten (10) days after written notice of such acceptance or if he fails to furnish the Performance Bonds and the Labor and Material Payment Bond, the obligation of the Bid Bond will remain in full force and effect and the money payable thereon shall be paid into the funds of the Owner as liquidated damages for such failure; otherwise, said Bid Bond shall be returned to the undersigned upon completion of such obligations.

The undersigned has checked carefully all the foregoing figures and understands that the Owner will not be responsible for any errors or omissions on the part of the undersigned in making this bid. The undersigned also acknowledges receipt of the following Addenda, listed by number and date as issued appearing on each:

<u>Addendum No.</u>	<u>Date</u>
_____	_____
_____	_____

IN COMPLIANCE WITH THE ATTACHED SPECIFICATIONS, THE UNDERSIGNED OFFERS AND AGREES, IF THIS BID IS ACCEPTED BY THE CITY OF DACULA, GA WITHIN SIXTY (60) DAYS OF THE DATE OF BID OPENING, TO FURNISH ANY OR ALL OF THE ITEMS UPON WHICH PRICES ARE QUOTED, AT THE PRICE SET OPPOSITE EACH ITEM, DELIVERED TO THE DESIGNATED POINT(S) WITHIN THE TIME SPECIFIED IN THE BID SCHEDULE. THE SUCCESSFUL CONTRACTOR SHALL PROVIDE A SCHEDULE OF VALUES WITH UNIT PRICES FOR A BREAKDOWN OF THEIR LUMP SUM BID.

COMPANY: _____

COMPLETE PHYSICAL ADDRESS: _____

REPRESENTATIVE'S SIGNATURE: _____

DATE: _____

TELEPHONE NO.: _____ FAX NO.: _____

EMAIL: _____

PRINT AUTHORIZED REPRESENTATIVE'S NAME: _____

IF REMITTANCE ADDRESS IS DIFFERENT, INDICATE HERE:

SECTION 00 500

CONTRACT

THIS AGREEMENT, made this _____, day of _____, 2022, by and between the City of Dacula, Georgia, herein called "Owner", acting herein through its Mayor, Hon. Trey King, and _____, County of _____, and State of Georgia, herein called "Contractor".

WITNESSETH: That for and in consideration of the payments and agreements hereinafter mentioned, to be made and performed by the OWNER, the CONTRACTOR hereby agrees with the OWNER to commence and complete the construction of the "McMillan Road Stormwater Improvements" Project described as follows:

A. BASE BID –

The Work to be completed for this Project consists of furnishing all labor, materials, earthwork, construction operations, details, supervision and coordination of all trades, utility suppliers, governmental inspections and approvals to complete the construction, installation, and coordination for the City of Dacula "McMillan Road Stormwater Improvements Project" as follows:

The City is having issues with the existing storm pipe and structures holding stormwater and ponding out into McMillan Road near proposed JB 1-H. In order to alleviate this issue, the Scope of Work will include demolishing the existing storm sewer system from proposed JB 1-I downstream to the creek through the City's adjacent property. An entire new Storm Sewer Outfall System will be installed in its place. The existing pipes have been TV inspected with varying results. The storm line upstream of JB 1-H is holding stormwater up to the existing grate inlet at the northwest corner of Winder Hwy. and McMillan Road. The Contractor shall excavate and replace the existing pipe crossing underneath McMillan Road and replace with new RCP culvert and junction box adjacent to building or where buried junction box is located. Contractor will then investigate and cleanout the existing 36" RCP Box Culvert which appears to cross underneath the corner of the existing building. The existing grate inlet at northeast corner of Winder Hwy. and McMillan Road will need to be reconstructed and top made accessible with steps for access and clean out of downstream pipe. Contractor will also cleanout existing 24" RCP storm sewer line extending north from proposed JB 1-H underneath Winder Hwy. and Railroad to upstream headwall adjacent to Hebron Church Road.

The Demolition scope also includes removing all asphalt pavement along McMillan Road from right-of-way of Winder Hwy. south to limits of removal as illustrated on the Drawings. The remainder of McMillan Road from the removal limits to the 4-Way Stop at Church Street will be milled and repaved. A deep patch milling detail is included if any pavement areas need additional repair. The City's adjacent lot which is currently fenced can be used as a laydown area for construction. At end of construction, Contractor shall remove all existing pavement within the fenced limits and fine grade area to drain to new storm sewer weir inlets and stream buffer. Fence

22-0310

CONTRACT

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will need to be disassembled and stored until construction is complete and then reinstalled by the Contractor.

A new storm sewer outfall line and structures will be installed along McMillan Road and extend west down along the outside of the stream buffer until it can be discharged into the stream buffer as illustrated on the Drawings. A new junction box (JB) will be installed on the east side of McMillan Road adjacent to the existing building where the existing 36" RCP Box Culvert ties into the 30" RCP culvert running underneath McMillan Road. This new JB will be installed where the Contractor uncovers the buried existing junction box or as illustrated on the Drawings to provide access to cleaning out the existing 36" RCP Box Culvert.

A new 36" RCP culvert will be installed underneath McMillan Road from JB 1-I to JB 1-H; then a 48" HDPE storm line and structures will be installed behind the existing utilities running along the west side of McMillan Road. McMillan Road will be regraded from Winder Hwy. right-of-way limits south to a new low which is created farther away from Winder Hwy. Curb & Gutter will be installed along the west side of newly regraded McMillan Road. A new Double Wing Catch Basin (DWCB 1-F.1) will be installed to drain stormwater from this low point with a 24" HDPE pipe installed to drain stormwater to outfall storm sewer at JB 1-F.

The remaining 48" HDPE storm outfall sewer will extend south to the stream buffer and turn west at JB 1-E and then continuing draining till it discharges into stream buffer at Headwall (HW 1-A). Contractor shall minimize disturbance within stream buffer and limit grading and disturbance operations to pipe, headwall, riprap installation only.

In addition, McMillan Road at limits of regrading near existing low point at stream crossing shall be milled and repaved as illustrated on the Drawings up to the 4-Way Stop at Church Street. Contractor shall document all existing striping and replace in-kind including but not limited to "Railroad Ahead" striping, stop bars, double centerline striping, and parking lot lines. Install eight (8) new concrete curb stop blocks at parking spaces to prevent damage to building. Existing DWCB's and storm pipe at low point near stream crossing shall be cleaned out and paved inverts installed to drain. Existing HDPE pipe and French Drain draining into existing DWCB on west side of McMillan Road near Station 3+10 needs to be cleaned out and/or replaced to drain low point area behind DWCB and existing house.

McMillan Road shall be repaved with Heavy Duty Pavement Section. Parking area adjacent to McMillan Road and Building shall be repaved with Standard Duty Pavement Section. Milled areas shall be milled 2.5" unless a deep patch section is needed (to be approved by Owner prior to additional milling and paving) and then repaved with tack coat, 1" of 'D' Mix Asphalt Binder Course, and 1-1/2" Type 1 - 'F' Mix (9.5 mm) Asphalt Surface Course. All new pavement repair shall have smooth transition with adjacent existing asphalt.

Erosion, Sedimentation, and Pollution Control Measures are part of the Contractor's Scope of Work. BMP's shall be installed on all existing and new storm inlets as well as Double Row Type 'C' Silt Fence along Stream Buffer. See Drawings for all BMP's to be installed.

22-0310

CONTRACT

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All disturbed areas will be permanently grassed with Erosion Control Matting and permanent Bermuda Seed. Any disturbance adjacent to or within a homeowner's front yard shall be permanently stabilized with Bermuda Sod. Removal of all vegetation and trees within limits of work shall be included in Contractor's overall Bid unless otherwise illustrated on the drawings. Traffic access to streets and private driveways shall remain open at all times unless approved by the Owner. If road closure is granted, then Contractor shall provide Traffic Control Plan and all detour signage required in his overall Bid.

All earthwork quantities for grading, pipe bedding, and backfill whether haul-in and/or haul-off are the responsibility of the Contractor to include in their Lump Sum Bid in order to complete the Scope of Work at no additional cost to the Owner. All quantities and measurements are approximate. Contractor shall visit the Site and determine his own quantities for bidding this project.

Contractor shall include in their Base Bid all costs for adjusting and relocating any water and gas services lines, meters, or valves impacted by new storm line installation in order to complete the scope of work as described by the Contract Documents and Drawings. Contractor shall coordinate with utility companies and relocate utilities as required to install new improvements. Contractor must be qualified with Gwinnett County in order to perform water line installation, relocation and repairs.

One lane of traffic and access to residential/commercial driveways must be maintained at all times unless road closure is granted by the City as stated above. Traffic Safety devices such as signage, barricades, etc., and the protection of the public-at-large, and the Contractor's personnel is part of this contract and is the Contractor's sole responsibility. The Contractor will have Ninety (90) consecutive calendar days from the "Notice to Proceed" to finish and complete the project.

All materials and appurtenances required to complete this Scope of Work is the responsibility of the Contractor and shall be provided in his overall Bid. The Contractor must be an approved Contractor with the City of Dacula and/or Gwinnett County. A complete list of materials should be included in the Contractor's overall Bid.

Bidder will prepare Asphalt prices for bid based on the current GDOT Asphalt Cement Price Index listed at the time of bid opening. The successful Contractor's pay request will list the current GDOT Asphalt Cement Price Index at the time of purchase. The difference in price between the GDOT Asphalt Cement Price Index at bid and at purchase will either be a change order to the Contractor or a Credit to the Owner. The GDOT Asphalt Cement Price Index is in accordance with Special Provision 109 (dated 2008), Section 400.5.01 Adjustments, the asphalt price index for the month of the Letting posted on the Georgia Department of Transportation Website.

Additional items within Scope of Work

- A. A site visit must be made by Contractor and subcontractors to determine the exact nature and scope of the work to be done. Contractor is responsible for

22-0310

CONTRACT

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- hauling off all demolition materials (existing pipe, concrete, asphalt, etc.) to a State approved disposal facility at no additional cost to the Owner. Contractor shall tie in and feather new asphalt into existing asphalt so that there is a smooth transition.
- B. If any unforeseen sub-grade conditions arise the Contractor shall immediately notify the Owner and/or Owner's representative before proceeding with any work to determine the course of action. The Contractor shall have a Geotechnical Engineer (who will be selected by the Contractor and approved and paid for by the Owner) qualify and quantify the areas and determine the method of sub-grade repair in coordination with the Owner and/or Owner's Representative on a case-by-case basis.
- C. The limits of work for this project are limited to that area within the right-of-way of City of Dacula and City owned property in order to perform the paving and storm sewer drainage pipe and structure installation as described by scope of work in the Contract Documents.
- D. Contractor is responsible to locate horizontally and vertically all existing utilities within limits of disturbance and protect throughout duration of project. Utilities which are present include water, gas, electrical, CATV, AT&T, etc., but may not be limited to these within the limits of disturbance. All existing utilities shall be located and protected from damage by the Contractor.
- E. Contractor shall have a Site Superintendent on-site at all times while work is in progress to monitor, direct, and control construction activities. Superintendent in-charge shall be available to City, Engineer, and adjacent property owners to answer or direct questions concerning the project.

Owner reserves the right to waive any informalities and any technicalities, and to reject any or all bids. There will be a Pre-Bid Conference at Dacula City Hall, 442 Harbins Road, Dacula, GA 30019 at **3:00 PM** local time on **Tuesday, August 2, 2022**. All bidders are strongly encouraged to attend this conference. Owner reserves the right to waive any informalities and any technicalities, and to reject any or all bids. All questions concerning this project shall be submitted in writing by fax or email to MDA, a Bowman Company, (Bowman). (Owner's Representative – Kevin D. Whigham, P.E.) 4174 Silver Peak Parkway, Suwanee, Georgia 30024, phone number 770-932-6550 or email kwhigham@bowman.com no later than **Thursday, August 11, 2022 by 5:00 PM**.

All quantities and measurements are approximate. Contractor shall visit the Site and determine his own quantities for bidding this project. The limits of work for paving improvements will be repaved to existing widths except as illustrated on the Drawings. Contractor is responsible for verifying all lengths of roadway and quantities required to complete the asphalt repaving work for this project.

Contractor is responsible for hauling off all demolition materials (asphalt, concrete, construction debris) to a State approved disposal facility at no additional cost to the Owner.

Contractor is responsible for all earthwork quantities to complete the scope of work for the project. All costs associated with haul off or haul in of earthwork materials shall be included in the Contractor's overall Bid at no additional cost to the Owner.

If any unforeseen sub-grade conditions arise the Contractor shall immediately notify the Owner and/or Owner's Representative before proceeding with any work to determine the course of action. The Contractor shall have a Geotechnical Engineer who will be selected by the Contractor, approved and paid for by the Owner qualify and quantify the areas and determine the method of sub-grade repair in coordination with the Owner and/or Owner's Representative on a case-by-case basis.

CONTRACTOR shall perform the above scope of work, hereinafter called the "Project", for a lump sum, fixed price of _____ Dollars. (\$ _____); and all extra work in connection therewith, under the terms as stated in the Contract Bid Documents; and at his (its or their) own proper cost and expense to furnish all the materials, supplies, machinery, equipment, tools, superintendence, labor, insurance, and other accessories and services necessary to complete the said project in accordance with the conditions and prices stated in the Bid Proposal.

CONTRACTOR shall provide OWNER with Certificate of Insurance and Performance and Payment Bonds as required by these Contract Documents.

This is a lump sum, fixed price Contract. Notwithstanding any other provision of this Contract, the amount to be paid to Contractor by the City shall not exceed _____ Dollars (\$ _____) without the prior written approval of the Mayor and Council of the City of Dacula. Any change order which increases the Contract price by more than \$5,000.00 must be approved in advance by a formal vote of the Mayor and City Council of the City of Dacula at a duly called meeting.

A. BASE BID - "McMillan Road Stormwater Improvements Project" - LUMP SUM AMOUNT

**Bidder agrees to perform all of the Improvements described in the specifications and represented by the project drawings for the SUM OF :
_____(\$ _____)
(Amounts shall be shown in both * words and figures).

* In case of discrepancy, the amounts shown in words will govern.

**Please note that successful Bidder will be required to submit a Unit Price Breakdown of items used in determining the Lump Sum Bid Proposal Price for this work.

22-0310

CONTRACT

00 500-6

** The **Base Bid** amount shall consist of Work Items more particularly described in Section 01 000, Project Scope & Performance Specification. The Contractor shall be responsible for all labor, equipment, materials, operations, details, insurance, supervision, coordination, administration, overhead and profit, plus all necessary incidental costs associated with the complete function of the Work Scope in context of the project.

The OWNER is subject to the requirements of the Georgia Security and Immigration Compliance Act. Accordingly, the requirements of O.C.G.A. '13-10-91 and Georgia Department of Labor Rule 300-10-1-.02 are conditions of this Contract. Compliance with these requirements shall be attested by the execution of the Contractor Affidavit attached hereto, which shall become a part of the awarded contract. In the event the Contractor employs or contracts with any subcontractor(s) in connection with the awarded contract, the Contractor shall secure from such subcontractor(s) attestation of the subcontractor's execution of the Subcontractor Affidavit attached hereto, which shall also become a part of the awarded contract and also a part of the contractor/subcontractor agreement. Contractor shall maintain records of such attestation for inspection by The City of Dacula at any time. Contractor shall be required to provide copies to the City of Dacula upon request. Failure to comply with these rules will result in the rejection of the bid proposal and/or termination of any awarded contract where it is subsequently determined that there has been a violation of any provision of the Act or implementing rules and regulations.

Any dispute arising under this Contract shall be heard in the Superior Court of Gwinnett County, Georgia, and the parties consent to jurisdiction and venue in that Court. The parties waive any defense that may have to lack of jurisdiction or improper venue and agree to have all disputes resolved in the Superior Court of Gwinnett County.

CONTRACTOR hereby agrees to commence work under this Contract on or before a date to be specified in a written "Notice to Proceed" of OWNER and to a fully complete the Project within Ninety (90) consecutive calendar days thereafter.

The Owner agrees to pay the Contractor in current funds for the performance of the Contract, subject to additions and deductions, on completion of the project and final inspection of the Owner.

Termination for Cause: The City may terminate this Contract for cause upon ten (10) days prior written notice to the Consultant of the Consultant's default in the performance of any term of this Contract. Such termination shall be without prejudice to any of the City's rights or remedies provided by law.

Termination for Convenience: The City may terminate this Contract for its convenience upon 30 days written notice to the Consultant. In the event of the City's termination of this Contract for convenience, the Consultant will be paid for those services actually performed. Partially completed performance of the Contract will be compensated based upon a signed statement of completion to be submitted by the Consultant, which shall itemize each element of performance.

22-0310

CONTRACT

00 500-7

IN WITNESS WHEREOF, the parties to these presents have executed this Contract in two (2) counterparts, each of which shall be deemed an original, in the year and day first above mentioned.

(Seal)

ATTEST:

CITY OF DACULA

By: _____

(Mayor)

ATTEST:

(Seal)

(Contractor)

By: _____

(Witness)

SECTION 00 600

BONDS AND CERTIFICATES

PART 1 - GENERAL

1. BID BOND: A bid bond in the amount of 5% of the base bid shall accompany the bid. The Attorney in-fact who signs the bid bond must file with the bid bond a certified copy of his Power of Attorney to sign such bond.
2. PAYMENT & PERFORMANCE BOND: Contractor shall furnish both a Performance Bond and Payment Bond, each in the amount of 100% of the Contract Sum, unless otherwise directed by the Owner. The surety must be one which is authorized to do business in the State of Georgia and is listed on "Department of the Treasury Circular 570". Bonds must be accompanied by letter stating company's current rating for verification prior to acceptance by the Owner and execution of the formal Owner/Contractor agreement. It shall be specifically understood that the performance Bond fully protects the Owner and guarantees the completion of the project in accordance with all Bid Documents. After award of contract, submit a properly executed "Performance Bond" and "Labor and Material Payment Bond".
3. CERTIFICATE OF INSURANCE: After award of contract, Contractor shall submit a properly executed "Certificate of Insurance" to Owner.
4. LIST OF SUBCONTRACTORS: After award of contract, but prior to Pre-Construction Conference, submit a properly executed "List of Subcontractors".

End of Section

22-0310

GENERAL CONDITIONS

00 700-1

SECTION 00 700

GENERAL CONDITIONS

PART 1 - GENERAL

1. "The General Conditions for the Contract for Construction", 1997 Edition, with modifications as called out in Section 00 801 - Supplementary Conditions, is hereby made a part of these documents to the same extent as if herein written out in full.

End of Section

SECTION 00 801

SUPPLEMENTARY CONDITIONS (1997)

The following supplements modify, delete, or add to the "General Conditions of the Contract for Construction, 1997 Edition". Where any article, paragraph or sub-paragraph in the General Conditions is supplemented by one of the following paragraphs, the provisions of such article, paragraph, or sub-paragraph shall remain in effect and the supplemental provisions shall be considered added thereto. Where any article, paragraph, or sub-paragraph, in the General Conditions is amended, voided, or superseded by any of the following paragraphs, the provisions of such article, paragraph or sub-paragraph not so amended, voided, or superseded shall remain in effect.

I. ARTICLE 1 - GENERAL PROVISIONS

- A. 1.1.1: The Drawings and Specifications shall include the Instructions to Bidders, Invitation to Bid, Sample Forms, Contractor's Bid, and all Addenda items relating to Bidding.
- B. 1.1.7: The term "Project Manual" as used in these conditions is the volume which includes the Bidding Drawings and Specifications, the Agreement Between Owner and Contractor, the Conditions of the Contract, the Specifications, and all Addenda issued prior to, and all Modifications issued after execution of Contract.

II. ARTICLE 2 - OWNER

- A. 2.1.4: The Owner is the City of Dacula, Georgia. All contact with the Owner shall be made to and through the Engineer, Kevin D. Whigham, P.E., Bowman Consulting Group, Ltd. (Bowman), 770-932-6550 or kwhigham@bowman.com. The only other directions the Contractor may respond to are those issued by the City of Dacula Council, Mayor, or City Administrator.
- B. 2.2.5: Sets of Construction Documents may be obtained as provided for in Advertisement to Bid, which need not be returned by the successful bidder.
 - 1. For construction purposes, the Owner will furnish free of charge to the successful bidding Contractor a maximum of Five (5) printed sets of complete Construction Documents consisting of the Drawings, the Specifications, and all Addenda.
 - 2. Any additional sets of complete Construction Documents or additional copies of selected sheets of Contract Drawings, or sections or pages of Specifications requested by the Contractor will be supplied and billed to the Contractor.
- C. 2.4.2: "If, in the opinion of the Engineer, it is evident that the Contractor has not completed or will not be able to substantially complete the work in accordance with

Drawings and Specifications due to default, negligence, or failure on the part of the Contractor, or their subcontractors, the Owner may, at his option, without prejudice, after the expiration of the two seven-day written notices to the Contractor, complete certain portions of the work as may be necessary, or augment the forces of the Contractor with additional manpower as may be required to complete the work by the contracted completion date. In such case, an appropriate deductive change order shall be written, deducting from the contract price the actual costs incurred by the Owner to complete or augment the work. Amount charged to the Contractor will be subject to the approval of the Engineer. Such action, if taken by the Owner, shall not be interpreted by the Contractor as a termination of the contract as per Paragraph 14.2, and the Contractor is to continue to carry out the work or portions of the work as may be required by the contract during this time frame.

III. ARTICLE 3 - CONTRACTOR

- A. 3.2.4: In case of discrepancies or conflicts in the Drawings and Specifications, the documents to hold precedence over others shall be in the following order:
- 3.2.4.1 The Owner-Contractor Agreement (including modifications thereto).
 - 3.2.4.2 Change Orders - Those of a later date shall take precedence over those of an earlier date.
 - 3.2.4.3 Written Amendments to the Contract Signed by Both Parties - Those of a later date shall take precedence over those of an earlier date.
 - 3.2.4.4 Addenda - Those of a later date shall take precedence over those of an earlier date.
 - 3.2.4.5 Clarifications.
 - 3.2.4.6 Supplementary Conditions.
 - 3.2.4.7 General Conditions.
 - 3.2.4.8 Specifications.
 - 3.2.4.9 Schedules.
 - 3.2.4.10 Details - Large scale details shall control over small scale drawings.
 - 3.2.4.11 Other drawings.
 - 3.2.4.12 Drawings dimensioned.
 - 3.2.4.13 Drawings not dimensioned.
- B. 3.2.5: Items of work not illustrated in the drawings or specifications or the mis-description of details of work which are manifestly necessary to carry out the intent of the drawings and specifications, or which are customarily performed, shall not relieve the Contractor from performing such omitted or mis-described details of the work, but they shall be performed as if fully and correctly set forth and described in the drawings and specifications.

C. 3.2.6 MEASUREMENTS AND DIMENSIONS

3.2.6.1 The Contractor shall check and be responsible for correctness of all dimensions by taking measurements at the project site before ordering material or doing work dependent for proper size of installation upon coordination with job conditions.

3.2.6.2 The Contractor shall refer discrepancies between Drawings, Specifications, and Project Conditions to Engineer for adjustment before work affected thereby is begun.

3.2.6.3 No consideration shall be given any claim based on difference between actual dimensions and those illustrated on the drawings without first complying with 3.2.6.2 above.

D. 3.3.8: All grades, lines, levels, and benchmarks for the work under this Contract shall be established and maintained by the Contractor, who shall verify all grades, lines, levels and dimensions indicated on the Drawings, and shall report all discrepancies before commencing work. The Contractor shall provide and maintain well-built batter boards at corners. He shall establish and safeguard benchmarks in at least two widely separated places. As work progresses, he shall establish and safeguard benchmarks at each level and shall establish exact locations of partitions on rough floors as a guide to trades. Any costs of corrective measure necessitated by erroneous establishment of grades, lines, levels and benchmarks shall be paid for by the Contractor.

E. 3.7.1: The Owner shall pay for any Permit and/or other jurisdictional fees. The Contractor shall secure and pay for all other governmental permits, fees, licenses and inspections necessary for the proper execution and completion of the work, which are customarily secured after execution of the contract, and which are legally required at the time the construction begins.

F. 3.7.6: Required permits, licenses, inspections, and certificates shall be carefully preserved and prominently posted during the construction period at the project for the easy, convenient access by the various inspecting authorities.

G. Add paragraph 3.19 as follows:

3.19 PRE-CONSTRUCTION CONFERENCE

3.19.1 A Pre-Construction Conference shall be held prior to commencement of work. The purpose of this conference is to introduce all members of the construction team, which include the Engineer, the Contractor's Project Manager, and the Contractor's Superintendent, to review and ensure all Drawings and

Specifications and Submittals are completed and in compliance with all Agreements. In addition, the Contractor shall submit 2 copies of all Post-Bid Information, as described below, for the Owner and Owners' Representative's review.

- 3.19.2 A schedule of values for each major item of work included in the Contract shall be submitted on schedule of values cost index sheets contract and shall define both labor and materials costs for each. Provide breakdown per divisions and sections per table of contents of these specs. See sample form included in Bid for Lump Sum Contracts.
- 3.19.3 A statement designating all work to be performed by the Contractor's own forces shall be submitted.
- 3.19.4 A list of the name of all Sub-Contractors and names of other organizations proposed for each portion of the Work shall be properly executed on "List of Subcontractor's" - and shall be submitted for Owner's and Engineers' review with 24-hour phone numbers.
- 3.19.5 The Performance Bond shall be properly executed on acceptable forms and submitted in duplicate, as described in Section 00 600 - Bonds and Certificates. Bond rating letter shall be included.
- 3.19.6 The Labor and Materials Bond shall be properly executed on acceptable forms and submitted in duplicate.
- 3.19.7 The Certificate for Insurance shall be properly executed on acceptable forms and submitted in duplicate.
- 3.19.8 A list of the names of all suppliers of principal materials and equipment shall be submitted for Owner's and Engineer's review.
- 3.19.9 Construction Schedule submitted to Owner within two weeks of award of contract.
- 3.19.10 A schedule of submittals including certifications, shop drawings, product data, samples, manuals, as built drawings and guarantees with dates of proposed submittals shall be submitted.
- 3.19.11 In addition to submittal of the previous items, the following topics will be discussed. The General Contractor is encouraged to have all subcontractors represented at the conference:

- 3.19.11.1 Introduction of all attending parties.
- 3.19.11.2 Channels and procedures for communication shall be discussed.
- 3.19.11.3 Requests for substitution shall be issued in accordance with the requirements of Section 01 630.
- 3.19.11.4 Issuance of RFP's (Requests for Proposals) by the Engineer shall be addressed by the General Contractor within 7 calendar days of receipt thereof in accordance with Supplementary Conditions, Article 7.
- 3.19.11.5 Change Order compensation shall be based on figures indicated in Supplementary Conditions, Article 7.
- 3.19.11.6 Pre-construction submittals shall be issued as indicated in Supplementary Conditions, sub-paragraph 3.19.
- 3.19.11.7 Any requested shop drawings, samples and other project submittals shall be approved by Owner and Engineer.
- 3.19.11.8 Job Progress Meetings shall be held on an as needed basis to review the Contractor's Application(s) for Payment.
- 3.19.11.9 Applications for Payment shall be issued in accordance with the requirements of Article 9 of the General Conditions of the Contract for Construction and all applicable Supplementary Conditions. All Applications for Payment shall be received by the Engineer no later than the first day of each month and paid by the first Friday following the 15th day of the month. Retainage shall be as described in Supplementary Conditions, paragraphs 9.3.4, 9.6 and 9.6.6. (Retainage shall be 10 percent of the amount earned for the work in place, plus the value of stored materials up to and including 50 percent completion, then 0 percent until final completion, thereby reducing retainage at final completion to 5 percent of the contract amount (including change orders), subject to the approval of the Owner and the Engineer. In other words, at 50 percent project completion, retainage will be 5 percent of the contract amount, plus approved change orders, until final completion is achieved. Retainage for individual subcontractors shall not be released separately as the subcontractors complete their work. Nor shall the retainage for individual subcontractors be reduced when payments beyond 50% of the individual contracts are released. Retainage shall only be reduced based on payments released in excess of 50% of the overall contract sum.

- 3.19.11.10 Safety precautions and programs shall be as directed by the General Contractor in accordance with the General Conditions in Section 00 700.
- 3.19.11.11 Requests for time extension shall be issued in accordance with the requirements of the General and Supplementary Conditions, Article 8.
- 3.19.11.12 Discrepancies and conflicts in the Drawings and Specifications shall be resolved using the order of precedence indicated in the Supplementary Conditions, paragraph 3.2.4.
- 3.19.11.13 The Date of Substantial Completion shall not be achieved, and the Certificate of Substantial Completion shall not be issued prior to receipt of the official Certificate of Occupancy by the General Contractor. This requirement is indicated in Specification Section 01 700, Part 1.1.A. In addition, the Certificate of Substantial Completion shall only be issued in accordance with the requirements of Section 9.8 of the General Conditions of the Contract for Construction.
- 3.19.11.14 Contract closeout/final payment requirements are indicated in Section 01 700. Piecemeal delivery of final closeout documents and materials is unacceptable.
- 3.19.11.15 Materials testing (if required) shall be conducted under a separate contract by the Owner. Contractor shall acquire a Geotechnical Engineer to perform all testing to be approved by and paid for by Owner. The General Contractor shall note that he is responsible for payment of additional testing services, if initial testing services fail.
- 3.19.11.16 Immediately prior to Substantial Completion, the General Contractor shall prepare a comprehensive list of items to be corrected or completed (a punch list) for the Engineer's review, in accordance with paragraph 9.8.2 of the General Conditions. The Engineer shall then add to or delete items from the list during a Substantial Completion Inspection.
- 3.19.11.17 Permits, fees, licenses, etc. shall be addressed in accordance with the requirements of General Conditions, paragraph 3.7.1, all applicable Supplementary Conditions, and as follows:
- A. All work and material shall be in accordance with the National Electrical Code, the Plumbing Code, and other applicable Federal, State, County, and municipal laws, ordinances, rules and regulations pertaining to construction, and nothing in these plans or specifications shall be construed to permit work not conforming thereto. The Contractor shall

consult the Engineer on all deviations regarding possible noncompliance and provide all labor and materials to complete the work as required by laws, ordinances, rules and regulations as directed by the Owner at no increase in cost to the Owner. He shall first confer with the Engineer before making any determinations as to changes in quality, scope and/or increases in cost.

3.19.11.18 Compensation for stored materials shall be as defined in parts 6.2.1, 9.3.2, and 10.2.1.2 of the General Conditions, and as follows:

- H. Material delivered for the Contractor to locations other than the site may be taken into consideration in the preparation of pay requests at the discretion of Engineer, provided the Contractor furnishes satisfactory evidence that he has acquired title to such material that it will be utilized on the project covered by this contract in the form of an affidavit stating such. Contractor must provide proof of acceptable insurance coverage on material stored off-site prior to payment for same as well as invoices for such stored materials indicating transfer of the property to the Owner.

IV. ARTICLE 4 - ADMINISTRATION OF THE CONTRACT

- A. 4.1.1: The Architect referred to in the Contract, the General Conditions, Supplementary Conditions or other documents of the Contract shall mean the "Engineer", MDA, a Bowman Company, (Bowman), 4174 Silver Peak Parkway, Suwanee, GA 30024.

V. ARTICLE 7 - CHANGES IN THE WORK

- A. 7.1.1: No extra work is to be done without a written change order. Payment will not be authorized for any extra or changed work for which the Contractor has failed to secure such written change order. All change orders must be signed by the Engineer and Owner.

VI. ARTICLE 8 - TIME

- A. 8.1.5: A working day is a day for which no premium pay is required of the Contractor for labor.
- B. 8.2.4: Upon the determination that the construction progress is two (2) weeks behind the original construction schedule as required by the General Conditions as submitted at the start of the project the Owner will require that the Contractor increase his work effort to a six (6) day ten (10) hour per day work week.

8.2.5: When requested by the Engineer, the Contractor shall furnish reports as are reasonably desirable as to the progress, condition of the job and anticipated schedule of completing the various phases of the work.

C. 8.4 - Rain Days

Requests for extension shall be issued in writing by the Contractor to the Engineer within 21 calendar days of the event which causes the delay. This requirement shall be strictly enforced. Completion time will not be extended for normal bad weather. The time for completion as stated in the Drawings and Specifications includes due allowance for days on which work cannot be performed out-of-doors. Any days lost due to the weather shall be documented and verified with the National Weather Service. These days shall be reported by the Contractor at the monthly job site progress meeting.

For the purpose of this contract, the Contractor agrees that he may expect to lose working days to weather in accordance with the following table:

January - 14 days	May - 6 days	September - 2 days
February - 14 days	June - 3 days	October - 3 days
March - 10 days	July - 4 days	November - 5 days
April - 7 days	August - 2 days	December - 9 days

If the total accumulated number of working week days (Monday thru Friday) lost to the weather from the start of work until the building is enclosed, as defined by the Engineer, exceeds the total accumulated number to be expected for the same period from the table above, the contractual completion date shall be extended by the number of calendar days needed to include the excess number of days lost. No extension shall be made for days of bad weather occurring after the building is enclosed. No extension shall be allowed for days on which total precipitation volume is less than 1/10" as recorded by the National Oceanic and Atmospheric Administration, the National Weather Service, the U.S. Army Corps of Engineers, or any other source chosen to be recognized by the Engineer. No extension will be allowed for precipitation occurring on any Saturday or Sunday or nationally recognized holidays during the project life. Furthermore, should a project fall behind the Contractor's original construction schedule, no extensions will be given for inclement weather days beyond the originally scheduled dry-in date plus any additional days due Contractor during such originally scheduled period. No changes in the contract sum shall be authorized because of adjustment of contract time due to inclement weather.

VII. ARTICLE 9 - PAYMENTS AND COMPLETION

- A. 9.2.2: First Payment Application Actions and Submittals which must precede submittal of Contractor's first payment application are as follows:
- B. 9.2.3: The schedule of values shall be prepared in the line item format on Application and Certification for Payment and on Document G703 Continuation Sheet provided in Section 01 370, providing labor and material costs for each line item. Stored materials shall be summarized on the Continuation Sheet provided in Section 01 370.
- C. 9.3.1: The Contractor shall submit to the Engineer, on or before the first day of each month, an itemized Application for Payment, notarized by a duly registered Notary Public, supported by data substantiating the Contractor's right to payment as the Owner or the Engineer may require, and reflecting retainage, as provided elsewhere in the Drawings and Specifications. The Form of Application for Payment shall be the Certificate for Payment in Section 01 370. Supporting data shall include Schedule of Values from each Subcontractor requesting payment, broken down by labor and materials as the Engineer requires. Copies of requisitions from subcontractors and material suppliers may be required.
- D. 9.3.2: Values related to General Contractor's and Subcontractor's overhead and profit for stored materials shall not be paid until the products are incorporated into the project. Materials stored or installed shall not be paid for if required submittals have not been completely reviewed.
- E. 9.3.4: Each Application for Payment up to and including the Application for Payment issued at or following 50% project completion (including approved change orders) shall include a ten percent (10%) retainage of all completed and stored to date items (including approved change orders).
- F. 9.5.1.9: It shall be understood that if the Contractor's actual progress becomes more than 10% behind Contractor's anticipated progress, the Owner may direct the withholding of payments to Contractor in amounts equal to the percent behind Contractor's anticipated progress, in addition to the normal 10% withheld.
- G. 9.6.6.1: It shall be understood that the Owner shall make progress payments on account of the contract prices, including Owner approved and signed change orders, of labor and materials incorporated in the work and of materials suitably stored at the site thereof, as estimated by the Engineer, less the aggregate of previous payments, until one-half (50%) of the overall contract sum is due (including all Owner approved and signed change orders) and provided that:
- a. The work is not behind schedule as determined, by the Engineer only, from the Engineer accepted, time scaled CPM schedule with monthly anticipated

- progress payment amounts submitted at, or before, the Pre-construction meeting;
- b. The work is being performed in a satisfactory manner in compliance with the Drawings and Specifications as determined by the Engineer;
 - c. There are no outstanding claims or liens on the property;
- H. 9.6.6.2: Further payments beyond 50 percent of the overall contract sum as referenced in 9.6.6.1, with total compliance of Items a, b, and c. shall be made in the amount of 100% of the value of the labor and/or materials incorporated in the work and of materials suitably stored at the site thereof unless;
- a. The percentage of work complete falls behind the percentage required by the Engineer accepted, time scaled construction progress schedule, as described in Item 9.6.6.1.a. by as much as 10%; or
 - b. The work is being performed in an unsatisfactory manner and/or non-compliant with the Drawings and Specifications as determined by the Engineer; or
 - c. There are outstanding claims or liens on the property.
- I. 9.6.6.3: In which event or events, the Owner shall reinstate the 10% retainage on all periodical payments to be paid while one or more of the events continue to exist. The Contractor shall be given written notice, by the Engineer, of the reinstatement of the retainage. If the Contractor's actual progress becomes more than 10% behind the Contractor's anticipated progress, as described in Item 9.6.6.1.a., the Engineer may direct the withholding of payments to the Contractor in amounts equal to the percentage behind the Contractor's anticipated progress, in addition to the 10% described in all Items of Article 9.
- J. 9.6.6.4: If the Contractor recovers all lost time and puts the work back on schedule (0% behind schedule) per schedule described in 9.6.6.1.a and remedies all breaches of 9.6.6.2.b. and 9.6.6.2.c. further payments shall be as described in 9.6.6.2; unless Items 9.6.6.1.a. or 9.6.6.2.b. and 9.6.6.2.c. recur in which event or events the Owner shall reinstate Item 9.6.6.3.
- K. 9.9.4: Should the Project, or any portion thereof, be incomplete for Substantial Completion or final completion at the scheduled date or dates, the Owner shall have the right to occupy any portion of the Project. In such an event, the Contractor shall not be entitled to any extra compensation on account of said occupancy or by the Owner's normal full use of the project, nor shall the Contractor interfere in any way with said normal full use of the project. Further, the Contractor shall not be relieved of any responsibilities of the Contractor, including the required times of completion. Such occupancy by the Owner does not, in itself, constitute Substantial Completion nor Final Completion.

- L. 9.10.6: Reduction in retainage shall not be made automatically. Any reduction in retainage shall only be considered based on the condition of the project at the time of issuance of the Certificate of Substantial Completion.
- M. 9.10.7: In the event that Final Completion is not achieved within 60 days of the contracted date of Substantial Completion through no fault of the Owner or Engineer, the Contractor shall pay Owner amounts equal to the actual Owner's costs of continuing to provide administrative services on this Contract, until Final Completion.
- N. 9.10.8: Final Payment Application - Actions and submittals which must precede or coincide with submittal of contractor's final payment application are listed in Section 01 700.
- O. 9.11: Article 1 of Chapter 10 of Title 13 of the Official Code of Georgia Annotated, relating to general provisions affecting contracts for public works, is amended by adding at the end of said article a new Code section to be designated as Code Section 13-10-2, which is hereby made a part of this Contract, to read as follows:
- a) As used in this Code section, the term:
1. "Contractor" means a person having a direct contract with the Owner.
 2. "Lower tier subcontractor" means a person other than a contractor having a direct contract with a subcontractor.
 3. "Owner" means the state, any county, municipal corporation, authority, board of education, or other public board, public body, department, agency, instrumentality, or political subdivision of the state.
 4. "Engineer" means the Architect or Engineer in charge of the project as authorized by the Owner or such other contract representative or officer as designated in the Drawings and Specifications as the party representing the Owner's interest regarding administration and oversight of the project.
 5. "Subcontractor" means a person other than an owner having a direct contract with the Contractor.
- b) In any contract for the performance of any construction project entered into on or after July 1, 1985, with an owner, as defined in paragraph (3) of subsection (a) of this Code section, such contract shall provide for the following:
1. After work has commenced at the construction site, progress payments to be made on some periodic basis, and at least monthly, based on the value of work completed as may be provided in the Drawings and Specifications, plus the value of materials and equipment suitably stored, insured, and protected at the construction site, and at the Owner's discretion such materials and equipment suitably stored, insured and protected off-site at a location approved by the Engineer when allowed by the Drawings and Specifications, less retainage; and

2. Retainage to a maximum of 10 percent of each progress payment; provided, however, that when 50 percent of the contract value, including change orders and other additions to the contract value provided for by the Drawings and Specifications is due and the manner of completion of the contract work and its progress are reasonably satisfactory to the Engineer, the Owner shall withhold no more retainage. At the discretion of the owner and with the approval of the Contractor, the retainage of each subcontractor may be released separately as the subcontractor completes his work.
3. If, after discontinuing the retention, the owner's authorized contract representative determines that the work is unsatisfactory or has fallen behind schedule, retention may be resumed at the previous level. If retention is resumed by an owner, the Contractor and subcontractors shall be entitled to resume withholding retainage accordingly.
4. At substantial completion of the work or such other standard of completion as may be provided in the Drawings and Specifications and as the Owner's Representative determines the work to be reasonably satisfactory, the Owner shall within 30 days after invoice and other appropriate documentation as may be required by the Drawings and Specifications are provided pay the retainage to the Contractor. If at that time there are any remaining incomplete minor items, an amount equal to 200 percent of the value of each item as determined by the Engineer shall be withheld until such item or items are completed. The reduced retainage shall be shared by the Contractor and subcontractors as their interests may appear.
5. The Contractor shall, within ten days from the contractor's receipt of retainage from the Owner, pass through payments to subcontractors and shall reduce each subcontractor's retainage in the same manner as the Contractor's retainage is reduced by the Owner, provided that the value of each subcontractor's work complete and in place equals 50 percent of his subcontract value, including approved change orders and other additions to the subcontract value and provided, further, that the work of the subcontractor is proceeding satisfactorily and the subcontractor has provided or provides such satisfactory reasonable assurances of continued performance and financial responsibility to complete his work including any warranty work as the Contractor in his reasonable discretion may require, including, but not limited to, a payment and performance bond.
6. The subcontractor shall, within ten days from the subcontractor's receipt of retainage from the contractor, pass through payments to lower tier subcontractors and shall reduce each lower tier subcontractor's retainage in the same manner as the subcontractor's retainage is reduced by the contractor, provided that the value of each lower tier subcontractor's work complete and in place equals 50 percent of his subcontract value, including approved change orders and other additions to the subcontract value and provided, further, that the work of the lower tier subcontractor is proceeding satisfactorily and the

lower tier subcontractor has provided or provides such satisfactory reasonable assurances of continued performance and financial responsibility to complete his work including any warranty work as the subcontractor in his reasonable discretion may require, including, but not limited to, a payment and performance bond.

- c) This Code section shall not apply to:
1. Any contracts let by the Department of Transportation of this state for the construction, improvement, or maintenance of roads or highways in this state or purposes incidental thereto; or
 2. Any contracts whose value or duration at the time of the award does not exceed \$150,000.00 or 45 days in duration.
- d) Contract and subcontract provisions inconsistent with the benefits extended to contractors, subcontractors, and lower tier subcontractors by this Code section shall be unenforceable; provided, however, that nothing in this Code section shall render unenforceable any contract or subcontract provisions allowing greater benefits to be extended to such contractors, subcontractors, or lower tier subcontractors, the provisions and benefits of this Code section being minimal only.
- e) Nothing shall preclude a payor under this Code section, prior to making a payment, from requiring the payee to submit satisfactory evidence including any or all invoices that all payrolls, material bills, and other indebtedness connected with the work have been paid.
1. In addition to the foregoing, before the Owner can implement the above amendment to the contract, a letter of consent from the Surety Company must be provided to the Owner ten (10) days prior to the Contractor's request to the Owner to withhold no more retainage under the terms of 13-10-2.
- f) Conditions for the reduction of retainage from 10 percent to no retainage are:
1. The work is not behind schedule as determined by the Engineer only, from the Architect approved, time scaled CPM schedule with monthly anticipated progress payment amounts submitted at or before the Pre-construction meeting.
 2. The work is being performed in a satisfactory manner in compliance with the Drawings and Specifications as determined by the Engineer.
 3. There are no outstanding claims or liens on the property. Contractor shall submit, with pay request, a lien release form for each subcontractor requesting payments these lien release forms shall be properly notarized.
 4. Further payments, with total compliance of B.1, B.2 and B.3 shall be made in the amount of 100% of the value of the labor and/or materials incorporated in the work and of materials suitably stored at the site thereof unless:

- a. The percentage of work complete falls behind the percentage required by the construction progress schedule, as described in B.1 by as much as 10%; or
 - b. The work is being performed in an unsatisfactory manner and/or non-compliant with the Drawings and Specifications as determined by the Engineer; or
 - c. There are outstanding claims or liens on the property.
 - d. In which event or events, the Owner shall reinstate the 10% retainage on all periodical payments to be paid while one or more of the events continue to exist. The Contractor shall be given written notice, by the Engineer, of the reinstatement of the retainage. If the Contractor's actual progress becomes more than 10% behind the Contractor's anticipated progress, as described in Item 9.6.6.1.a. the Engineer may direct the withholding of payments to the Contractor in amounts equal to the percentage behind the Contractor's anticipated progress, in addition to the 10% described in all Items of Article 9.
5. If the Contractor recovers all lost time and puts the work back on schedule (0% behind schedule) per schedule described in 9.6.6.1.a. and remedies all breaches of 9.6.6.2.b and 9.6.6.2.c further payments shall be as described in 9.6.6.2; unless Items 9.6.6.1.a or 9.6.6.2.b and 9.6.6.2.c recur in which event or events the Owner shall reinstate Item 9.6.6.3.

VIII. ARTICLE 11 - INSURANCE AND BONDS

- A. 11.1.2: The insurance required by shall be written for not less than any limits of liability listed below or required by law, whichever is greater, and shall include contractual liability insurance as applicable to the Contractor's obligations under paragraph 3.18. The Contractor agrees that, prior to the beginning of any work by the Contractor or any Subcontractor, as the case may be, he (the Contractor) will furnish the following to the Owner for himself, and will obtain, and retain in his files for the duration of the construction period, like certificates for each Subcontractor. Certificate from insurance company showing coverage of Workmen's Compensation Insurance for the State of Georgia or a certificate from Georgia Workmen's Compensation Board showing proof of ability to pay compensation directly. Certificate from insurance company showing coverage for the Contractor for the following:
1. Contractor's Protective and Public Liability Insurance: Taken out in the name of the Contractor.
 2. Personal Injury, including death - minimum limits of \$500,000 for each person and \$1,000,000 for each accident.
 3. Property Damage, minimum limits of \$300,000 for each accident and \$500,000 for aggregated of operations.
 4. Disposition: Certificate of Insurance must be sent to Engineer prior to commencement of work. See following for endorsement required on this certificate.

- B. 11.1.3: Certificates of insurance acceptable to the Owner shall be filed with the Owner prior to commencement of the work. These certificates shall contain a statement on every policy or certificate, as the case may be, that "The insurance company agrees that Policy No. _____ shall not be canceled, changed, or allowed to lapse until ten (10) days after the Owner and Engineer have received written notice as evidenced by return receipt of registered letter".
- C. 11.1.1.8: Liability insurance shall include all major divisions of coverage and shall be on a comprehensive form including:
1. Premises - Operations
 2. Independent Contractor's Protective, for Owner and Contractor
 3. Products and Completed Operations (in force for one year beginning at Date of Substantial Completion)
 4. Contractual - including specified provisions for the Contractor's obligations under Paragraph 3.18.
 5. Owned, non-owned, and hired motor vehicles
 6. Broad form coverage for property damage
 7. Explosion and collapse hazard
 8. Underground hazard
- D. 11.3: The Contractor shall purchase and maintain property insurance upon the entire work at the site, to the full (100%) insurable value thereof. This insurance shall include the interest of the Owner and the Contractor in the work and shall insure against the perils of fire, extended coverage, and shall include "all risk" insurance for physical loss or damage including, without duplication of coverage, theft, vandalism, and malicious mischief.
- E. 11.4.1: Contractor shall furnish both a Performance Bond and a Payment Bond, each in the amount of 100% of the Contract Sum, unless otherwise directed by the Engineer. Contractor shall also provide both Performance Bond and Payment Bond for his major subcontractors, including HVAC, electrical, plumbing, roofing, and sprinkler. The sureties must be authorized to do business in the State of Georgia and listed on "Department of the Treasury Circular 570". In addition, companies furnishing bonds shall have an A.M. Best Company rating of at least a Class "A" with a financial size of VI or better. Bonds must be accompanied by letter stating company's current rating for verification prior to acceptance by the Owner and execution of the formal Owner/Contractor agreement.

IX ARTICLE 13 - MISCELLANEOUS PROVISIONS

- A. 13.5.3: When initial tests indicate non-compliance with the Drawings and Specifications, all subsequent retesting caused by the non-compliance shall be performed by the same testing laboratory and the costs thereof will be deducted by the Owner from the contract sum.

1. Inspection or testing performed exclusively for the Contractor's convenience shall be the sole responsibility of the Contractor.
2. All specimens and samples for testing, unless otherwise provided in these Drawings and Specifications, will be taken by the testing laboratory. All sampling equipment and personnel will be provided by the testing laboratory and all deliveries of specimens and samples to the testing laboratory will be performed by the testing laboratory.

End of Section

SECTION 00 802

NOTICE OF COMMENCEMENT

Public Works

To: Clerk of Superior Court of Gwinnett County, Georgia

Pursuant to O.C.G.A. 36-82-104(f), not later than 15 days after physically commencing work, the undersigned gives Notice of Commencement of a public work including the following information:

- 1. "McMillan Road Stormwater Improvements Project" in the City Limits of Dacula, Georgia.
- 2. Name and address of the state, country, municipal corporation, or public board or body thereof which is doing the public work:

City of Dacula
 P.O. Box 400
 Dacula, Georgia 30019

- 3. Name and address of the surety for the performance and payment bonds, if any:
-

- 4. Name and address of the holder of the security deposit provided pursuant to O.C.G.A. 13-10(b)(2)(B), if any: N/A

Contractor

Date

These documents must be filed with the Clerk of the Superior Court for the County in which the public work is located, and a copy of this document must be posted at the public work site not later than 15 days after the Contractor physically commences work on the public work.

Within ten (10) calendar days of receipt of a written request, give a copy of this Notice of Commencement to any subcontractor, materialman, or person making the request.

End of Section

SECTION 00 900

ADDENDA AND CLARIFICATIONS

PART 1 - GENERAL

1.1 The following changes have been incorporated in the Construction Documents dated

_____ (Released for Construction).

a. Addendum No. 1, dated _____, 2022.

b. Addendum No. 2, dated _____, 2022.

c. Addendum No. 3, dated _____, 2022.

Copies of these documents are included herein.

PART 2 - N/A

PART 3 - N/A

End of Section

**PROJECT SCOPE OF WORK
& PERFORMANCE SPECIFICATIONS
FOR
"McMillan Road Stormwater Improvements Project"**

PART 1 - GENERAL

1.1 SCOPE OF WORK

The Work to be completed for this Project consists of the following:

A. BASE BID –

The Work to be completed for this Project consists of furnishing all labor, materials, earthwork, construction operations, details, supervision and coordination of all trades, utility suppliers, governmental inspections, and approvals to complete the construction, installation, and coordination for the City of Dacula "McMillan Road Stormwater Improvements Project" as follows:

The City is having issues with the existing storm pipe and structures holding stormwater and ponding out into McMillan Road near proposed JB 1-H. In order to alleviate this issue, the Scope of Work will include demolishing the existing storm sewer system from proposed JB 1-I downstream to the creek through the City's adjacent property. An entire new Storm Sewer Outfall System will be installed in its place. The existing pipes have been TV inspected with varying results. The storm line upstream of JB 1-H is holding stormwater up to the existing grate inlet at the northwest corner of Winder Hwy. and McMillan Road. The Contractor shall excavate and replace the existing pipe crossing underneath McMillan Road and replace with new RCP culvert and junction box adjacent to building or where buried junction box is located. Contractor will then investigate and cleanout the existing 36" RCP Box Culvert which appears to cross underneath the corner of the existing building. The existing grate inlet at northeast corner of Winder Hwy. and McMillan Road will need to be reconstructed and top made accessible with steps for access and clean out of downstream pipe. Contractor will also cleanout existing 24" RCP storm sewer line extending north from proposed JB 1-H underneath Winder Hwy. and Railroad to upstream headwall adjacent to Hebron Church Road.

The Demolition scope also includes removing all asphalt pavement along McMillan Road from right-of-way of Winder Hwy. south to limits of removal as illustrated on the Drawings. The remainder of McMillan Road from the removal limits to the 4-Way Stop at Church Street will be milled and repaved. A deep patch milling detail is included if any pavement areas need additional repair. The City's adjacent lot which is currently fenced can be used as a laydown area for construction. At end of construction, Contractor shall remove all existing pavement within the fenced limits and fine grade area to drain to new storm sewer weir inlets and stream buffer. Fence will need to be disassembled and stored until construction is complete and then reinstalled by the Contractor.

A new storm sewer outfall line and structures will be installed along McMillan Road and extend west down along the outside of the stream buffer until it can be discharged into the stream buffer as illustrated on the Drawings. A new junction box (JB) will be installed on the east side of McMillan Road adjacent to the existing building where the existing 36" RCP Box Culvert ties into the 30" RCP culvert running underneath McMillan Road. This new JB will be installed where the Contractor uncovers the buried existing junction box or as illustrated on the Drawings to provide access to cleaning out the existing 36" RCP Box Culvert.

A new 36" RCP culvert will be installed underneath McMillan Road from JB 1-I to JB 1-H; then a 48" HDPE storm line and structures will be installed behind the existing utilities running along the west side of McMillan Road. McMillan Road will be regraded from Winder Hwy. right-of-way limits south to a new low which is created farther away from Winder Hwy. Curb & Gutter will be installed along the west side of newly regraded McMillan Road. A new Double Wing Catch Basin (DWCB 1-F.1) will be installed to drain stormwater from this low point with a 24" HDPE pipe installed to drain stormwater to outfall storm sewer at JB 1-F.

The remaining 48" HDPE storm outfall sewer will extend south to the stream buffer and turn west at JB 1-E and then continuing draining till it discharges into stream buffer at Headwall (HW 1-A). Contractor shall minimize disturbance within stream buffer and limit grading and disturbance operations to pipe, headwall, riprap installation only.

In addition, McMillan Road at limits of regrading near existing low point at stream crossing shall be milled and repaved as illustrated on the Drawings up to the 4-Way Stop at Church Street. Contractor shall document all existing striping and replace in-kind including but not limited to "Railroad Ahead" striping, stop bars, double centerline striping, and parking lot lines. Install eight (8) new concrete curb stop blocks at parking spaces to prevent damage to building. Existing DWCB's and storm pipe at low point near stream crossing shall be cleaned out and paved inverts installed to drain. Existing HDPE pipe and French Drain draining into existing DWCB on west side of McMillan Road near Station 3+10 needs to be cleaned out and/or replaced to drain low point area behind DWCB and existing house.

McMillan Road shall be repaved with Heavy Duty Pavement Section. Parking area adjacent to McMillan Road and Building shall be repaved with Standard Duty Pavement Section. Milled areas shall be milled 2.5" unless a deep patch section is needed (to be approved by Owner prior to additional milling and paving) and then repaved with tack coat, 1" of 'D' Mix Asphalt Binder Course, and 1-1/2" Type 1 - 'F' Mix (9.5 mm) Asphalt Surface Course. All new pavement repair shall have smooth transition with adjacent existing asphalt.

Erosion, Sedimentation, and Pollution Control Measures are part of the Contractor's Scope of Work. BMP's shall be installed on all existing and new storm inlets as well as Double Row Type 'C' Silt Fence along Stream Buffer. See Drawings for all BMP's to be installed.

All disturbed areas will be permanently grassed with Erosion Control Matting and permanent Bermuda Seed. Any disturbance adjacent to or within a homeowner's front yard shall be

permanently stabilized with Bermuda Sod. Removal of all vegetation and trees within limits of work shall be included in Contractor's overall Bid unless otherwise illustrated on the drawings. Traffic access to streets and private driveways shall remain open at all times unless approved by the Owner. If road closure is granted, then Contractor shall provide Traffic Control Plan and all detour signage required in his overall Bid.

All earthwork quantities for grading, pipe bedding, and backfill whether haul-in and/or haul-off are the responsibility of the Contractor to include in their Lump Sum Bid in order to complete the Scope of Work at no additional cost to the Owner. All quantities and measurements are approximate. Contractor shall visit the Site and determine his own quantities for bidding this project.

Contractor shall include in their Base Bid all costs for adjusting and relocating any water and gas services lines, meters, or valves impacted by new storm line installation in order to complete the scope of work as described by the Contract Documents and Drawings. Contractor shall coordinate with utility companies and relocate utilities as required to install new improvements. Contractor must be qualified with Gwinnett County in order to perform water line installation, relocation and repairs.

One lane of traffic and access to residential/commercial driveways must be maintained at all times unless road closure is granted by the City as stated above. Traffic Safety devices such as signage, barricades, etc., and the protection of the public-at-large, and the Contractor's personnel is part of this contract and is the Contractor's sole responsibility. The Contractor will have Ninety (90) consecutive calendar days from the "Notice to Proceed" to finish and complete the project.

All materials and appurtenances required to complete this Scope of Work is the responsibility of the Contractor and shall be provided in his overall Bid. The Contractor must be an approved Contractor with the City of Dacula and/or Gwinnett County. A complete list of materials should be included in the Contractor's overall Bid.

Bidder will prepare Asphalt prices for bid based on the current GDOT Asphalt Cement Price Index listed at the time of bid opening. The successful Contractor's pay request will list the current GDOT Asphalt Cement Price Index at the time of purchase. The difference in price between the GDOT Asphalt Cement Price Index at bid and at purchase will either be a change order to the Contractor or a Credit to the Owner. The GDOT Asphalt Cement Price Index is in accordance with Special Provision 109 (dated 2008), Section 400.5.01 Adjustments, the asphalt price index for the month of the Letting posted on the Georgia Department of Transportation Website.

Additional items within Scope of Work

- A. Contractor and subcontractors must make a site visit to determine the exact nature and scope of the work to be done. Contractor is responsible for hauling off all demolition materials (existing pipe, concrete, asphalt, etc.) to a State approved disposal facility at

- no additional cost to the Owner. Contractor shall tie in and feather new asphalt into existing asphalt so that there is a smooth transition.
- B. If any unforeseen sub-grade conditions arise the Contractor shall immediately notify the Owner and/or Owner's representative before proceeding with any work to determine the course of action. The Contractor shall have a Geotechnical Engineer (who will be selected by the Contractor and approved and paid for by the Owner) qualify and quantify the areas and determine the method of sub-grade repair in coordination with the Owner and/or Owner's Representative on a case-by-case basis.
 - C. The limits of work for this project are limited to that area within the right-of-way of City of Dacula and City owned property in order to perform the paving and storm sewer drainage pipe and structure installation as described by scope of work in the Contract Documents.
 - D. Contractor is responsible to locate horizontally and vertically all existing utilities within limits of disturbance and protect throughout duration of project. Utilities which are present include water, gas, electrical, CATV, AT&T, etc., but may not be limited to these within the limits of disturbance. All existing utilities shall be located and protected from damage by the Contractor.
 - E. Contractor shall have a Site Superintendent on-site at all times while work is in progress to monitor, direct, and control construction activities. Superintendent in-charge shall be available to City, Engineer, and adjacent property owners to answer or direct questions concerning the project.

1.3 MEASUREMENT AND PAYMENT

- A. Furnish unit prices with quantity breakdowns of all items of construction per Section 00 100, Instruction for Bidders and Section 00 300, Bid Proposal Form.
- B. Furnish unit prices with quantity breakdowns of all items for the Erosion Control Maintenance of the project site.
- C. Contractor will note that any quantities called out in the Scope of Work, Bid Documents, and/or Drawings are approximate. Contractor shall calculate and verify his own quantities used to formulate his bid. Contractor shall verify all measurements and lengths to all quantities required to complete the scope of work and asphalt repaving work.

PART 2 - PRODUCTS – N/A

PART 3 – EXECUTION – N/A

3.1 PAVING

- A. The City of Dacula's Engineer or designated representative shall have access at all times to all parts of the material producing plants for checking the mixing operations and materials and the adequacy of the equipment in use.
- B. The Contractor is responsible for maintaining the existing pavement alignments, grades, elevations and cross sections as represented by existing roadway conditions.
- C. Submittals shall be in accordance with the Georgia Department of Transportation, Standard Specifications for Construction of Transportation Systems 2021 and shall include aggregate source, gradation, soundness loss, percentage of wear, and other tests required by the DOT.
- D. Contractor shall submit a Job-Mix Formula per the requirements of the Georgia Department of Transportation, Standard Specifications for Construction of Transportation Systems 2021. Paving specifications as described below in Part 3.1 item J shall be used.
- E. Paving equipment, weather limitations, Job-Mix Formula, mixing, construction methods, compaction, finishing, tolerances, and protection shall conform to the requirements of the appropriate sections of the Georgia Department of Transportation, Standard Specifications for Construction of Transportation Systems 2021 for the type of materials specified.
- F. Contractor to ensure that stormwater will not pond in roadway, driveways, or on adjacent shoulders or landscaped areas.
- G. After demolition and removal of the existing pavement and base materials, if required, the earth sub-grade shall be proof-rolled in the presence of the Owner and/or Owner's representative to determine the stability and adequacy of the earth base before proceeding with any repaving operations. The earth sub-grade and the GAB base are to be proof-rolled separately. Sections of earth sub-grade and/or GAB base failing to pass the respective proof-roll test shall be replaced and/or re-compacted and may require testing by a Geotechnical Engineer if requested by the Owner or the Owner's Representative, only if required.

Proof-rolling (if required):

1. After demolition operations, the Project area shall be proof-rolled in the presence of the Owner's Representative. A Geotechnical Engineer will be selected by the Contractor and approved by the Owner for this project and paid by Owner to perform geotechnical and materials testing services for the project if required.

2. Proof-rolling shall consist of a minimum of four (4) complete overlapping passes in each of two perpendicular directions with a heavily loaded 18-20 ton dual tandem dump truck.
 3. Proof-rolling shall be performed in the presence of the Owner's Representative.
 4. Any soft or unstable sub-grade soil conditions observed shall be identified for qualification and quantification by the Geotechnical Engineer.
 5. Any soft or yielding areas shall be thoroughly undercut and replaced with well-compacted structural fill. Areas shall be compacted 95% Standard Proctor with the top twelve (12") inches compacted to 98% Standard Proctor Density or as specified by the Geotechnical Report.
- H. Contractor shall be responsible for providing all equipment necessary to perform proof rolling operations of earth sub-grade, GAB base, and/or existing asphalt, if required.
- I. Transition between new and existing sections of asphalt shall be flush and smooth. Any elevation difference shall be made up with additional asphalt surface course material.
- J. Placement of Asphaltic Paving Materials shall be as follows:
1. Spread material in a manner which requires the least handling.
 2. Where thickness of finished paving will be 3 inches or less, spread in one layer.
 3. After material has been spread to proper depth, roll until the surface is hard, smooth, unyielding, and true to the thickness and elevations as determined by Owner's Representative.
 4. Roll in at least two (2) directions until no roller marks are visible.
- K. Finished paving smoothness tolerance:
1. No depressions which will retain standing water. Contractor will ensure that stormwater will not pond in roadway, driveways or on adjacent shoulders or landscape areas.
 2. No deviations greater than 1/8 inch in six feet.
- L. All existing utility structures will be adjusted to fit flush with street surface 24 hours after resurfacing is completed in accordance with the City of Dacula Standards.

3.2 MAINTAINING TRAFFIC

- A. Sections of newly finished pavement and patching areas shall be protected from traffic until the traffic will not mar the surfaces or alter the surface textures.
- B. All traffic control and detouring equipment, methods and techniques shall conform to the latest edition of the M.U.T.C.D. and all supplements thereto.
- C. Maintain one (1) lane (12' wide minimum for school bus access) open at all times.
- D. Maintain local traffic access to all streets, intersections and private driveways during construction period and at all times. Contractor shall not perform any work that will impact the flow of traffic without approval of Owner's Representative.
- E. Contractor shall take necessary precautions to secure the construction sites to maintain a safe environment for the public.
- F. Contractor, vendors and all sub-contractors shall observe speed limits at all times.

3.3 EROSION CONTROL

- A. Install and maintain a comprehensive system of Soil Erosion Control measures throughout the duration of the projects in conformity with the "Manual for Erosion and Sediment Control in Georgia", 6th Edition, 2014 by the Georgia Soil and Water Conservation Commission and any supplements thereto.
- B. Contractor shall contain all soil erosion from the construction areas. Erosion control measures are required for any disturbed areas not covered by pavement or sidewalk areas.
- C. Erosion control includes, but is not limited to Rip Rap, Temporary and Permanent Grassing. Other BMP's may include Temporary Sediment Traps "F" (w/ filter fabric) and "P" (pigs-in-blanket). Temporary Grassing and Permanent Grassing is required where Contractor disturbs any area outside limits of sidewalk and pavement. Bermuda Sod shall be replaced for all disturbed areas.

3.4 CLEAN-UP

- A. Contractor shall remove all debris, rubbish, and excess material from the work sites.
- B. Areas along roadways will be dressed, grassed, and mulched.
- C. All excess material from demolition and/or construction activities will be hauled off and legally disposed of.

3.5 GUARANTEE

- A. Contractor shall guarantee all improvements from material and/or craftsmanship defects for a period of one (1) year from date of final acceptance of Work.

End of Section

22-0310

APPLICATION FOR PAYMENT

01 370-1

SECTION 01 370

APPLICATION FOR PAYMENT

PART 1 - GENERAL

- 1.1 Contractor shall submit Application and Certification for Payment in format **similar** to that of the AIA Document G702 and the AIA Document G703, Continuation Sheet. (Example formats are hereby made a part of these documents. (Exhibits follow)
- 1.2 Once contractor has submitted weekly payrolls and Section 3 reports in accordance with Davis-Bacon requirements and any other paperwork required by CDBG and received approval of same, and submitted the Application for Payment, then the City will remit payment to Contractor within thirty (30) days.

PART 2 - PRODUCTS – N/APART 3 - EXECUTION – N/A

End of Section

APPLICATION AND CERTIFICATE FOR PAYMENT

TO OWNER:

PROJECT:

APPLICATION NO.:

Distribution to:

PERIOD TO:

OWNER

PROJECT NOS.:

ARCHITECT

FROM CONTRACTOR:

VIA ENGINEER:

CONTRACT DATE:

CONTRACTOR

ENGINEER

CONTRACT FOR:

CONTRACTOR'S APPLICATION FOR PAYMENT

Application is made for payment, as shown below, in connection with the Contract.

1. ORIGINAL CONTRACT SUM \$ _____
2. Net change by Change Orders \$ _____
3. CONTRACT SUM TO DATE (Line 1 ± 2) \$ _____
4. TOTAL COMPLETED & STORED TO DATE \$ _____
(Column G on G703)
5. RETAINAGE:
 - a. _____% of Completed Work \$ _____
(Columns D + E on G703)
 - b. _____% of Stored Material \$ _____
(Column F on G703)
 Total Retainage (Line 5a + 5b or
Total in Column I of G703) \$ _____
6. TOTAL EARNED LESS RETAINAGE \$ _____
(Line 4 less Line 5 Total)
7. LESS PREVIOUS CERTIFICATES FOR PAYMENT
(Line 6 from prior Certificate) \$ _____
8. CURRENT PAYMENT DUE \$
9. BALANCE TO FINISH, INCLUDING RETAINAGE
(Line 3 less Line 6) \$ _____

CHANGE ORDER SUMMARY	ADDITIONS	DEDUCTIONS
Total changes approved in previous months by Owner		
Total approved this Month		
TOTALS		
NET CHANGES by Change Order		

The undersigned Contractor certifies that to the best of the Contractor's knowledge, information and belief the Work covered by this Application for Payment has been completed in accordance with the Contract Documents, that all amounts have been paid by the Contractor for Work for which previous Certificates for Payment were issued and payments received from the Owner, and that current payment shown herein is now due.

CONTRACTOR:

By: _____ Date: _____

State of:

County of:

Subscribed and sworn to before
me this _____ day of _____

Notary Public:

My Commission expires: _____

ENGINEER'S CERTIFICATE FOR PAYMENT

In accordance with the Contract Documents, based on on-site observations and the data comprising this application, the Engineer certifies to the Owner that to the best of the Engineer's knowledge, information and belief the Work has progressed as indicated, the quality of the Work is in accordance with the Contract Documents, and the Contractor is entitled to payment of the AMOUNT CERTIFIED.

AMOUNT CERTIFIED \$ _____

(Attach explanation if amount certified differs from the amount applied for. Initial all figures on this Application and on the Continuation Sheet that are changed to conform to the amount certified.)

ENGINEER:

By: _____ Date: _____

This Certificate is not negotiable. The AMOUNT CERTIFIED is payable only to the Contractor named herein. Issuance, payment and acceptance of payment are without prejudice to any rights of the Owner or Contractor under this Contract.

CONTINUATION SHEET

(Instructions on reverse side)

PAGE OF PAGES

APPLICATION AND CERTIFICATE FOR PAYMENT,

containing Contractor's signed Certification, is attached.

In tabulations below, amounts are stated to the nearest dollar.

Use Column I on Contracts where variable retainage for line items may apply.

APPLICATION NO.:

APPLICATION DATE:

PERIOD TO:

ENGINEER' PROJECT NO.:

A ITEM NO.	B DESCRIPTION OF WORK	C SCHEDULED VALUE	D E WORK COMPLETED		F MATERIALS PRESENTLY STORED (NOT IN D OR E)	G TOTAL COMPLETED AND STORED TO DATE (D+E+F)		H BALANCE TO FINISH (C - G)	I RETAINAGE (IF VARIABLE) RATE
			FROM PREVIOUS APPLICATION (D + E)	THIS PERIOD		% (G ÷ C)			

22-0310

QUALITY CONTROL

01 400-1

SECTION 01 400

QUALITY CONTROL

PART 1 - GENERAL

1.1 ON SITE OBSERVATIONS

- A. All work and materials shall be subject to review by Owner's Representative and Owner.
- B. Contractor shall fully cooperate and shall furnish all reasonable facilities for the inspections of all parts of the work during the entire construction period.

1.2 TESTING SERVICES

- A. All materials upon which the strength and durability of the work may depend, shall be subject to inspection and testing to establish conformance with City of Dacula and Georgia D.O.T. Standards. Contractor shall submit Asphalt Pavement Job Mix Formulas to Owner's Representative for review prior to installation of paving courses.
- B. A Geotechnical Engineer will be selected by the Contractor and approved by the Owner and paid by the Owner, to perform geotechnical and materials testing services for the project. The Contractor will retain the services of the Geotechnical Engineer, only if required. Subgrade operations are not intended to be part of the scope of this project.
- C. It is the responsibility of the Contractor to implement the services of the testing company by ordering those services at the appropriate time in the work, as described below, if required. The Contractor must provide at least 24 hours notice to the testing company for required testing work. Failure to provide adequate notification may result in the requirement for more complex after-the-fact testing, for which the Contractor will be liable.
- D. Testing required under Paragraphs 1.3 A and 1.3 B are to be coordinated by and paid for by the Owner, to be witnessed by the appropriate local inspection agencies as well as by Owner's Representative. The Contractor will secure and maintain evidence of having completed and obtained successful results for those tests, to be transmitted to the Owner and Owner's Representative no later than twenty-four (24) hours by hand written draft, faxed or emailed; and fifteen (15) days for each report following testing.

1.3 SUMMARY OF REQUIRED NOTIFICATIONS

- A. Contractor's Geotechnical Engineer shall monitor subgrade demolition/preparation and shall observe all compaction, proof rolling, paving operations, and concrete

- pouring for curb & gutter, only if required. Contractor shall notify Owner and Owner's Representative at least 24 hours in advance of any proof rolling, paving and/or concrete pouring operations.
- B. Proof rolling, if required by Owner:
1. After milling operations, a portion of the Project area shall be proof rolled as directed by the Owner. This shall be done for portions indicated by the Owner and for all other subgrade issues if they arise. If problems are encountered it will be the Contractor's responsibility to call in the Contractor's Geotechnical Engineer.
 2. Proof rolling shall consist of a minimum of four (4) complete overlapping passes in each of two perpendicular directions with a heavily loaded 18-20 ton dual tandem dump truck.
 3. Proofrolling shall be performed in the presence of the Owner and Owner's Representative.
 4. Any soft or unstable sub-grade soil conditions observed shall be identified for qualification and quantification by the Geotechnical Engineer.
 5. Any soft or yielding areas shall be thoroughly undercut and replaced with well-compacted structural fill. Areas shall be compacted 95% Standard Proctor with the top twelve (12") inches compacted to 98% Standard Proctor Density or as specified by the Geotechnical Report.
- C. Material to be placed in a qualified manner as defined by the Contract Documents shall be tested to confirm that the required conditions are met. The testing shall also indicate the type of material observed, the location of the test, the material moisture content and the current weather. Delivery and compaction of material shall be made during the presence of the testing company's representative and shall be subject to his approval. The inspection by no means absolves the Contractor from responsibility of compaction as specified.
- D. Unless material is covered with finish surfaces (paving) immediately following procedures described in B2 and B3 above, the material shall be observed by Owner's Representative again prior to the placement of those finished surfaces. The purpose of this final review is to preclude deterioration of the required conditions from continuing construction, water, or similar causes.

1.4 CODE COMPLIANCE TESTING

- A. Inspections and tests required by codes or legal ordinances, or by plan approval authority, shall be the responsibility of the Contractor, unless otherwise provided in the Contract Documents.

22-0310

QUALITY CONTROL

01 400-3

1.5 CONTRACTOR'S CONVENIENCE TESTING

- A. Inspection or testing performed exclusively for the Contractor's convenience shall be the sole responsibility of the Contractor.

End of Section

SECTION 01 500

CONSTRUCTION FACILITIES AND TEMPORARY CONTROLS

PART 1 - GENERAL

1. SCOPE
 - A. Construction facilities and temporary controls required for this work to be provided by Contractor, include, but are not necessarily limited to:
 1. Traffic control signs, barrels, barricades where needed.
 2. Parking of construction equipment and storage of materials.
 3. Parking of construction personnel vehicles.
2. PROTECTION
 - A. Use all means necessary to maintain construction facilities and temporary controls in proper and safe conditions throughout progress of work.
3. REPLACEMENTS
 - A. In event of loss or damage, Contractor shall immediately make all repairs and replacements necessary to construction facilities and temporary controls to Engineer's satisfaction at no additional cost to Owner.
4. UTILITY HOOKUP
 - A. All fees for temporary utility tie-ins, if required will be Contractor's responsibility.

PART 2 - PRODUCTS

1. CONTRACTOR'S STAGING AREA
 - A. The location of construction equipment and materials storage shall be determined at the pre-construction conference. Contractor shall confine his storage therein and take necessary precautions to protect materials from all forms of damage and theft as a part of this work.
2. TEMPORARY UTILITIES
 - A. Contractor shall furnish water, gas, electricity and telephone service as required during construction and extend temporary service lines to construction areas for use of all subcontractors and Owner's forces, if required.

- B. Temporary Water
 - 1. Provide ample supply of potable water for all purposes of construction at access points convenient to personnel, if required.
 - 2. Provide sufficient heavy duty hose or PVC pipe to carry water to every required part of construction and allow use of water facilities to subcontractors engaged on work.

- C. Temporary Electricity (*For Construction Trailer - if required*)
 - 1. All temporary electrical facilities shall be constructed and maintained in accordance with the Division of Industrial Safety "Electrical Safety Orders" (ESO), the Public Utilities Commission "Rules for Overhead Line Construction" (G.O. 95). Materials, devices, and equipment used for these facilities shall be in good and safe condition but need not be new.
 - 2. Installation of lighting and safety lights shall be in accordance with local, State and Federal applicable codes.
 - 3. Run a copper ground wire, sized in accordance with NEC, in conduit run, and bond to all steel parts, using clamps acceptable to the NEC.
 - 4. Any attachment of conduit to wood structure shall be by means of bolts or lag screws in shear. All supports shall be capable of supporting four times actual load.
 - 5. Contractor is required to make application for temporary electric service and pay for costs for electric energy used during the course of construction and until final acceptance of work by Owner.

- D. Telephone (*For Construction Trailer - if required*)
 - 1. Contractor shall maintain telephone in field office for use of Engineer and Owner. All expenses shall be paid for by Contractor.
 - 2. Contractor shall provide and pay for the telephone installation and service in the field office. Service shall be maintained for duration of project operations under this contract. Contractor shall provide 110 dB outside gongs or horns so that telephones may be heard throughout construction site, or contractor shall provide and install an electronic telephone answering machine.
 - 3. Contractor shall provide and install an electric fax machine with a dedicated line for 24-Hour service within the temporary field office.

3. SANITARY FACILITIES

- A. Provide proper, adequate, sanitary facilities for use of all workers employed on project, in accordance with State and Local Health Departments.

4. TEMPORARY CONSTRUCTION, EQUIPMENT, AND PROTECTION

- A. Provide, maintain, and remove upon completion of work, all temporary equipment, barricades, lights, and all other protective structures or devices necessary for safety of workers and public property as required to complete all work of this contract.
- B. Provide all necessary protection and all barricades conforming to the standards of O.S.H.A. and requirements of Gwinnett County and City of Dacula.
- C. Contractor shall provide all measures necessary to protect equipment and materials at his own expense.
- D. Protect all workers and equipment from power lines and maintain safe distances and protective devices as required by Industrial Safety Commission.
- E. All temporary construction and equipment shall conform to all regulations, ordinances, laws and other requirements of City, County, State and other authorities having jurisdiction, including owner's and contractor's insurance companies, with regards to safety precautions, operation, and fire hazard.
- F. Protect work and materials to be used on project including materials which have had their title transferred to the Owner, from damage or loss due to elements, theft, vandalism, malicious mischief, or other causes. Contractor shall be held responsible for such damages or losses which he shall remedy at his expense.

5. PARKING OF VEHICLES

- A. Contractor shall assume all responsibility for parking of his equipment, vehicles and his subcontractor's vehicles. "Job site parking" means an area or areas within the bounds of the property or other authorized areas to be used for parking for vehicles associated with this project. Such areas shall be designated at the preconstruction meeting.

PART 3 - EXECUTION

1. MAINTENANCE AND REMOVAL OF FACILITIES

- A. Maintain all construction facilities and temporary controls as long as needed for safe and proper completion of work.
- B. Remove all such temporary facilities and controls as rapidly as progress of work will permit or as directed by Owner, but prior to final completion.

End of Section

SECTION 01 630

PRIOR APPROVALS AND SUBSTITUTIONS

PART 1 - GENERAL

1. PRODUCTS

- A. Products are specified by ASTM and/or other reference standard, and/or by manufacturer's name and model number or trade name. When specified only by reference standard, Contractor may select any product meeting this standard by any manufacturer. When several products or manufacturers are specified as being equally acceptable, Contractor shall have the option of choosing among those names. When one manufacturer's specific product is specified and other manufacturers are listed as being acceptable suppliers, the other manufacturer's products must have the same basic properties as the specific product mentioned. When specifications indicate "Similar products shall be subject to Engineer's review", this refers to review during bidding only. Otherwise, the following substitution provisions must be observed in order to use any manufacturer not listed.

2. REQUESTS FOR PRIOR APPROVAL

- A. During bidding, the Engineer shall consider written requests for prior approval received at least ten (10) calendar days prior to bid date. Requests received after that time shall not be considered. If proposed prior approval is accepted by Engineer and approved by Owner, such acceptance shall be set forth in an addendum. Bidders shall not rely upon accepted prior approvals made in any other manner.

3. SUBSTITUTIONS

- A. After receipt of Bids and prior to award of Contract, substitutions may be negotiated. However, Contractor shall be required to provide a substitution form for any change to the original bid documents before it will be incorporated into the contract documents.
- B. After the date of the Contract, Engineer may consider formal requests from Contractor for substitution of products in lieu of those specified. Requests shall be submitted in accordance with the preceding requirements. One or more of the following conditions must also be documented as reason for substitution.
1. The substitution is required for compliance with code requirements.
 2. The substitution is required because of the unavailability of the specified product.

22-0310

PRIOR APPROVALS AND SUBSTITUTIONS

01 630-2

3. The substitution is required since new information discloses the specified products will not perform properly or fit into the designated space.
 4. The substitution is required since the manufacturer or fabricator refuses to certify or guarantee performance of the specified product as required.
 5. The substitution is required since it is clear, in the judgment of the Engineer, that a substitution would be substantially in Owner's best interests in terms of cost, time and/or other considerations.
- C. With each request for substitution Contractor shall include the following:
1. Complete data substantiating compliance of proposed substitution with contract documents including:
 - a. Product identification, including manufacturer's name and address.
 - b. Manufacturer's literature, including product description, performance and test data, and reference standards.
 - c. Name and address of similar projects on which product was used and date of installation.
 2. Itemized comparison of proposed substitution with product or method specified, noting any variance from the specified product which may result in inferior appearance, performance or installation complication.
 3. Information relating to changes in construction schedule.
 4. For requests submitted after bids are received, accurate cost data on proposed substitution in comparison with product or method specified, including any adjustment to the contract sum that will be provided if the substitution is accepted.
- D. In submitting requests for substitution, Contractor shall make the following personal representations:
1. Contractor has investigated proposed product and has determined that it is equal or superior in all respects to the specified product.
 2. Contractor will provide an equal or better guarantee for proposed substitution as compared to the product specified.
 3. Contractor will coordinate installation of accepted proposed substitution into the project, making any such changes as may be required for the project to be completed in accordance with the Contract Documents.
 4. Contractor waives all claims for additional costs related to proposed substitution which became apparent during or following substitution submittal process.
 5. Cost comparison data is complete and includes all related costs under the contract, but does not include:
 - a. Cost under separate contracts.
 - b. Engineer's/Consultant's redesign fee.
 6. The proposed substitution satisfies Code Official's interpretations of all applicable codes.

22-0310

PRIOR APPROVALS AND SUBSTITUTIONS

01 630-3

- E. Substitutions shall not be considered if:
 - 1. They are indicated or implied on shop drawings or product data submittals without a formal request submitted in accordance with this Article.
 - 2. Acceptance will require substantial revision of contract documents.

End of Section

22-0310 PRIOR APPROVALS AND SUBSTITUTIONS 01 630-4
REQUEST FOR PRIOR APPROVAL

PROJECT: _____ DATE SUBMITTED: _____

CONTRACTOR: _____ BID DATE: _____

SUB CONTRACTOR: _____ SUPPLIER: _____

SPEC SECTION: _____ PARAGRAPH: _____ TITLE: _____

<u>PRODUCT SPECIFIED</u>	<u>PAGE NO.</u>	<u>PRIOR APPROVAL PRODUCT</u>
1. _____	_____	_____
2. _____	_____	_____
3. _____	_____	_____
4. _____	_____	_____
5. _____	_____	_____
6. _____	_____	_____
7. _____	_____	_____
8. _____	_____	_____
9. _____	_____	_____
10. _____	_____	_____

1. The following required information is attached:
 - A. Product identification manufacturer's name, address, telephone number.
 - B. Manufacturer's literature, performance/test data, reference standard.
 - C. Name/address of similar projects where product has been used and Date of Application.

2. Comparison of proposed substitute product with specified product:
 - A. Differences: _____
 - B. Effect on dimensions or other trades: _____

3. Comments: _____

BY : _____

22-0310 PRIOR APPROVALS AND SUBSTITUTIONS 01 630-5
REQUEST FOR SUBSTITUTION AFTER BID

PROJECT: _____ DATE SUBMITTED: _____

CONTRACTOR: _____ BID DATE: _____

SUB CONTRACTOR: _____ SUPPLIER: _____

SPEC SECTION: _____ PARAGRAPH: _____ TITLE: _____

1. The following required information is attached:
 - A. Product identification, manufacturer's name, address, telephone number
 - B. Manufacturer's literature, performance/test data, reference standard
 - C. Name/address of similar projects where product has been used and Date of Application

2. Comparison of proposed substitute product with specified product:
 - A. Differences: _____
 - B. Effect on dimensions and trades: _____

3. Data related to changes in construction schedule:

4. Accurate cost data on proposed substitution in comparison with product specified:

5. Reason for request for substitution: (Check One)
 - 1) Specified product will not meet code.
 - 2) Specified product unavailable for purchase.
 - 3) Specified product will not perform or fit as required.
 - 4) Manufacturer will not provide required certification or guarantee for specified product.
 - 5) Substitution is clearly in Owner's best interest in terms of cost or schedule.
 - 6) Substitution is proposed as a convenience to the Contractor, and the Contractor agrees to compensate the Architect for time involved in reviewing and processing the proposed substitution.

End of Section

SECTION 01 700

CONTRACT CLOSE-OUT

PART 1 - GENERAL

1. CLOSE-OUT TIMING

- A. Owner's Representative shall issue the Certificate of Substantial Completion when he has determined that the work or a designated portion thereof is substantially complete. Contractor shall then prepare, assemble, and transmit the items as listed in Section 1.2 below to Owner's Representative for review and transmittal to Owner. Unless additional quantities are specified elsewhere, submit all items in duplicate.
- B. As-built documents and other close-out requirements shall be submitted (or performed) and accepted by Owner's Representative prior to date of final completion. All close-out documents shall be submitted to Owner's Representative simultaneously. Piece meal delivery of separate elements of the documents will not be acceptable and will be returned to Contractor.
- C. All close out requirements must be complete before submittal of final Application for Payment, including completion of unfinished work.

2. PUNCH LIST

- A. When the project is substantially complete, Contractor shall notify Owner's Representative in writing at least five (5) days before the date of request for punch list inspection. Contractor shall arrange for the presence of all subcontractors whose work is involved, if required by Owner's Representative.
 1. Owner and/or Owner's Representative shall prepare a "Punch List" as a convenience to Contractor for items not completed and work not meeting the requirements of the Contract Documents. The "Punch List" is not to be construed to be a final or complete listing of project requirements, but is intended only to assist in the completion of the project. Contractor shall make a diligent effort to complete all work in conformance with the requirements of the Contract Documents before requesting a "Punch List".
 2. Correction of items noted on the "Punch List" does not relieve Contractor from conforming to all requirements of the Contract Documents.
- B. Contractor shall furnish three copies of the following:
 1. Consent of Surety for final payment.
 2. Final application for payment.
 3. Contractor's Statutory Affidavit ensuring no liens.
 4. Subcontractor Statutory Affidavits ensuring no liens.

C. Warranties

1. Contractor shall warrant all work executed by his forces and his subcontractors under this contract, and any additional modifications and change orders, to be absolutely free of all defects of workmanship and materials for a period of one year beginning on date of Substantial Completion. Contractor shall repair all such defects, resulting damages and repair any damage to other work caused by subsequent repair work to Owner's and Owner's Representatives' satisfaction no later than 30 days following written notification by Owner that remedial repairs are required.
2. At the end of the one (1) year warranty period, Contractor shall inspect the project with Owner for deficiencies. At that time, a correction list shall be prepared by Owner and Contractor shall make the necessary repairs and corrections immediately and as directed by Owner.
3. Contractor shall provide additional guarantees (in excess of one year) where specifically required by pertinent specification sections.

3. FINAL CLEANING

- A. Prior to the Date of Substantial Completion, remove all debris, excess dirt, etc., for all portions of job site.
- B. Final Inspection
 1. When the work is completed in accordance with the Contract Documents and the requirements of Paragraph A above and General and Supplemental Conditions have been satisfied, Contractor shall notify Owner's Representative, in writing, that the work shall be ready for final inspection on a definite date which shall be stated in such notice. The notice shall be forwarded to Owner through Owner's Representative, who will attach his endorsement as to whether or not he concurs in Contractor's statement that the work will be ready for final inspection on the established date. Such endorsement shall not relieve Contractor of his responsibility in this matter.
 2. Final inspection will be made by Owner and/or Owner's Representative when Contractor deems that the work has been completed in accordance with the Contract Documents and when he has requested a final inspection be made as outlined above.

End of Section

22-0310

CONTRACTOR WARRANTY FORM

01 740-1

PROJECT: "McMillan Road Stormwater Improvements Project"

LOCATION: McMillan Road at Winder Hwy. in Dacula, GA

OWNER: City of Dacula, Georgia

We _____, Contractor
(Company name)

for the above referenced project, do hereby warrant that all labor and materials furnished and/or work performed by this company are in accordance with the Contract Documents and authorized modifications thereto, and will be free from defects due to defective materials or workmanship for a period of one (1) year from Date of Substantial Completion. This warranty commences at 12:00 noon on _____ and will expire at 12:00 noon on _____. Should any defect develop during the warranty period commencement date due to improper materials, workmanship, or arrangement, the same shall, upon written notice by Owner, be made good by the undersigned at no expense to Owner.

Nothing in the above shall be deemed to apply to work which has been abused or neglected by the Owner.

DATE: _____ FOR: _____
(Company Name)

BY:

TITLE:

22-0310

SUBCONTRACTOR WARRANTY FORM

01 741-1

PROJECT: "McMillan Road Stormwater Improvements Project"

LOCATION: McMillan Road at Winder Hwy. in Dacula, GA

OWNER: City of Dacula, Georgia

We _____, Contractor
(Company name)
for _____, as described in Specification Section (s) _____
(List Trade)

do hereby warrant that all labor and materials furnished and work performed in conjunction with the above referenced project are in accordance with the Contract Documents and authorized modifications thereto, and will be free from defects due to defective materials or workmanship for a period of one year from Date of Substantial Completion.

This warranty commences at 12:00 noon on _____ and will expire at 12:00 noon on _____. Should any defect develop during the warranty period commencement date due to improper materials, workmanship or arrangement, the same shall, upon written notice by Owner, be made good by the undersigned at no expense to Owner.

Nothing in the above shall be deemed to apply to work which has been abused or neglected by the Owner.

DATE: _____ FOR: _____
(Company Name)

BY:

TITLE:

STATUTORY AFFIDAVIT

TO: CITY OF DACULA
Dacula, Georgia

Contract entered into the _____ day of _____, 2022 between the above mentioned parties for the "McMillan Road Stormwater Improvements Project" in the City of Dacula, Georgia as represented by the Contract Documents for this project dated June 24, 2022.

KNOW ALL MEN BY THESE PRESENTS:

1. The undersigned hereby certifies that all work required under the above contract has been performed in accordance with the terms thereof, that all material men, subcontractor, mechanics, and laborers have been paid and satisfied in full, and that there are no outstanding claims of any character (including disputed claims or any claims which Contractor has or will assert and defend) arising out of the performance of the Contract which have not been paid and satisfied in full except as listed herein below: _____

2. The undersigned further certifies that to the best of his knowledge and belief there are no unsatisfied claims for damages resulting from injury or death to any employees, subcontractors, or the public at large arising out of the performance of the contract, or any suits or claims for any other damage of any kind, nature, or description which might constitute a lien upon the property of Owner.
3. The undersigned makes this affidavit for the purpose of receiving final payment in full settlement of all claims against Owner arising under or by virtue of the Contract, an acceptance of such payment is acknowledged as a release of Owner from any and all claims arising under or by virtue of the Contract.

Signed this _____ day of _____, 2022.

(Signature)

(Title)

(Firm)

COUNTY OF _____ STATE OF _____ Personally before me, the undersigned authority, appeared _____ who is known to me to be an official of the firm of _____. Who, after being duly

22-0310 _____ CERTIFICATE OF THE CONTRACTOR / _____ 01 742 -2

sworn, stated on his oath that he had read the above statement and that the same is true and correct.

(Notary Public)

My commission expires

SECTION 01 743

GEORGIA SECURITY AND IMMIGRATION AFFIDAVIT

PART 1- GENERAL

- 1.1 The Contractor Affidavit and Agreement example is attached. The Contractor is required to state affirmatively that the individual, firm or corporation which is contracting with the City of Dacula has registered with and is participating in a federal work authorization program. Place this form on Company Letterhead before verifying compliance with federal work authorization program. Upon execution the completed forms shall be returned to the Owner's Representative before entering into a Contract.

- 1.2 The Subcontractor Affidavit and Agreement example is attached. The Contractor is required to obtain affirmations from the individuals, firms or corporations which are participating as subcontractors in this Contract with the City of Dacula. These Subcontractors must verify that they are registered with and are participating in a federal work authorization program. Place this form on Company Letterhead before verifying compliance with federal work authorization program. Upon execution the completed forms shall be returned along with the Contractor's Affidavit referenced in 1.1 above to the Owner's Representative before entering into a Contract.

GEORGIA SECURITY AND IMMIGRATION CONTRACTOR AFFIDAVIT

STATE OF GEORGIA
CITY OF DACULA

CONTRACTOR AFFIDAVIT AND AGREEMENT

By executing this affidavit, the undersigned contractor verifies its compliance with O.C.G.A. 13-10-91, stating affirmatively that the individual, firm, or corporation which is contracting with The City of Dacula, Georgia has registered with and is participating in a federal work authorization program* (i.e., any of the electronic verification of work authorization programs operated by the United States Department of Homeland Security or any equivalent federal work authorization program operated by the United States Department of Homeland Security to verify information of newly hired employees, pursuant to the Immigration Reform and Control Act of 1986 (IRCA), P.L. 99-603), in accordance with the applicability provisions and deadlines established in O.C.G.A. § 13-10-91.

The undersigned further agrees that, should it employ or contract with any subcontractor(s) in connection with the physical performance of services pursuant to this contract with The City of Dacula, Georgia, contractor shall secure from such subcontractor(s) similar verification of compliance with O.C.G.A. § 13-10-91 on the Subcontractor Affidavit provided in Rule 300-10-01-.08 or a substantially similar form. Contractor further agrees to maintain records of such compliance and provide a copy of each such verification to The City of Dacula, Georgia at the time the subcontractor(s) is retained to perform such service.

EEV/Basic Pilot Program* User Identification Number

BY: Authorized Officer or Agent (Contractor Name)

Date

Title of Authorized Officer or Agent of Contractor

Printed Name of Authorized Officer or Agent

SUBSCRIBED AND SWORN
BEFORE ME ON THIS THE
DAY OF _____, 2022.

Notary Public
My Commission Expires:

*As of July 1, 2007, the applicable federal work authorization program is the "EEV/Basic Pilot Program" operated by the U.S. Citizenship and Immigration Services Bureau of the U.S. Department of Homeland Security, in conjunction with the Social Security Administration (SSA).

GEORGIA SECURITY AND IMMIGRATION SUB-CONTRACTOR AFFIDAVIT

STATE OF GEORGIA -
CITY OF DACULA

SUBCONTRACTOR AFFIDAVIT

By executing this affidavit, the undersigned subcontractor verifies its compliance with O.C.G.A. § 13-10-91, stating affirmatively that the individual, firm or corporation which is engaged in the physical performance of services under a contract with _____(name of contractor) on behalf of The City of Dacula, Georgia has registered with and is participating in a federal work authorization program* (i.e., any of the electronic verification of work authorization programs operated by the United States Department of Homeland Security or any equivalent federal work authorization program operated by the United States of Homeland Security to verify information of newly hired employees, pursuant to the Immigration Reform and Control Act of 1986 (IRCA), P.L. 99-603), in accordance with the applicability provisions and deadlines established in O.C.G.A. § 13-10-91.

EEV/Basic Pilot Program* User Identification Number

BY: Authorized Officer or Agent (Subcontractor Name)

Date

Title of Authorized Officer or Agent of Subcontractor

Printed Name of Authorized Officer or Agent

SUBSCRIBED AND SWORN
BEFORE ME ON THIS THE
DAY OF _____, 2022.

Notary Public
My Commission Expires:

*As of July 1, 2007 O.C.G.A. § 13-10-91, the applicable federal work authorization program is the "EEV/Basic Pilot Program" operated by the U.S. Citizenship and Immigration Services Bureau of the U.S. Department of Homeland Security, in conjunction with the Social Security Administration (SSA)

End of Section

SECTION 02 050

DEMOLITION

PART 1 - GENERAL

1.1 SCOPE

- A. Work described in this section includes demolition of existing storm pipe, storm structures, asphalt paving, concrete pavements, landscaping, etc. as indicated in Section 01 000, Project Scope & Performance Specification and on Construction Drawings.

1.2 PROJECT CONDITIONS

- A. Traffic
 1. Conduct demolition operations and removal of debris to ensure minimum interference with roads, driveways, walks and other adjacent occupied or used facilities.
 2. Do not close or obstruct streets, walks or other occupied or used facilities without permission from the governing authorities and Owner.
 3. One (1) lane of traffic on all streets indicated for asphalt repaving must stay open at all times as required by Owner. If road closure is considered by the Contractor, then the Contractor shall have prior approval from the Owner before closure of road is allowed. Contractor shall also provide a Traffic Control Plan, Detour routes, all temporary road closure and detour signs, as well as traffic control personnel.
- B. Use of explosives will not be permitted.
- C. Promptly repair damages caused to items to remain by demolition operations at no additional cost to Owner (i.e. curb & gutter, utilities, etc.).
- D. Coordinate with property owners prior to accessing properties to inform them of project timeline and to identify existing landscape items that are to remain undisturbed; be relocated for owner; or demolished and removed from the Site.

1.2 POLLUTION CONTROLS

- A. Use water sprinkling, temporary enclosures and other suitable methods as necessary to limit the amount of dust and dirt rising and scattering in the air, to the lowest level

of air pollution practical for the condition of work. Comply with the governing regulations.

PART 2 - PRODUCTS

2.1 MATERIALS TO BE REUSED

- A. Materials to be disassembled and reused shall be handled and stored in a manner and placed so as to prevent damage. Coordinate with property owners for what demolished items are to be saved, turned over to property owners, and/or reinstalled. Existing fencing is the only item that may be disassembled, stored, and reinstalled by the Contractor.
- B. Damaged materials shall be repaired or replaced at no cost to Owner.

2.2 MATERIALS TO BE REMOVED

- A. Materials to be removed and not reused shall be treated as "waste" and legally disposed of by Contractor. In addition:
 - 1. Burning of waste on site shall not be permitted.
 - 2. Waste materials shall become the property of the Contractor and shall be promptly removed from site.
 - 3. Landscaping materials to be removed within property owner's yards shall be kept to the minimum amount required to complete the scope of work. Contractor shall coordinate with property owner to determine if any materials are to be saved and turned over to the property owner.
 - 4. Storage or sale of salvageable items on site shall not be permitted.
 - 5. Do not store waste in planted areas or any area that can be damaged by storage operations.

PART 3 - EXECUTION

3.1 EXTERIOR DEMOLITION

- A. Coordinate interruption of utility service with utility companies. Obtain required approvals; comply with utility company regulations and building code requirements.
- B. Owner assumes no responsibility for actual condition of existing structures.

22-0310

DEMOLITION

02 050-3

- C. Demolish and/or remove asphalt pavement and any below-grade construction interfering with new construction.
- D. Fill all voids below grade caused by demolition of structures, or below-grade construction.
- E. Do not interrupt utility service to existing adjacent occupied facilities except as required and approved by the Public Utility Company and Owner.

3.3 PROTECTION

- A. Protect and prevent damage to existing structures not included as part of demolition per the Project Scope and Performance Specification.

End of Section

SECTION 02 200

EARTHWORK

PART 1 - GENERAL

1.1 SCOPE

- A. Earthwork and fill operations required for any storm sewer pipe installation, pipe backfill, and asphalt pavement regrading and/or repair that may arise or as indicated in Section 01 000, Project Scope & Performance Specification and on Construction Drawings. All other earthwork and fill operations are only required if other subgrade issues arise during construction. This Earthwork Specification shall be utilized by the Contractor. Furnish all labor, materials, equipment and incidentals required to perform all excavation, backfill, fill and grading if required for completion of the work.
- B. Notify free underground utility locator service at 1-800-282-7411 prior to any excavations.
- C. Work may include but is not limited to (only if an unforeseen issue arises):
 - 1. Clearing and Grubbing:
 - a. Clearing and Earthwork equipment operations if required are limited to areas described in the scope of work and/or Performance Specification.
 - b. Do not disturb the existing terrain or existing vegetation outside the designated work area(s).
 - c. All debris from clearing and/or grading operations (cleared vegetative matter, trees, root systems, remnant chipped material, stumps, etc.) shall be removed from the site, unless specifically directed otherwise by the Owner.
 - 2. Cutting, filling and backfilling.
 - 3. Rough and Finish grading to complete the asphalt replacement and repaving operations.
 - 4. Furnish, place and compact any additional material necessary to maintain existing grades and drainage patterns of existing roadway.
 - 5. Excavation, removal and replacement of unsuitable soil materials as described herein.
 - 6. Rock removal as described herein.
- D. By submittal of his bid, Contractor certifies that all means, methods, labor, equipment and materials to complete the satisfactory construction of the Project is included in the contract sum of his bid.

1.2 PROJECT CONDITIONS

- A. Contractor shall visit the site and thoroughly familiarize himself with all existing condition prior to formulating his Bid.
- B. Contractor may, at his own expense and prior to bidding, make any soils or other geotechnical investigations he may deem necessary. Obtain authorization of Owner, prior to commencement of boring or subsurface investigations.
- C. Survey existing grades and lay out grade stakes for if necessary to complete scope of work for storm drainage pipe and structure installation. Utilize a Registered Land Surveyor currently registered to practice land surveying in the State of Georgia.
- D. Upon becoming aware of suspected unsuitable subsurface conditions, promptly notify the Owner and the Owner's Representative to permit verification of the conditions by a Contractor engaged Testing Agency or Contractor's Geotechnical Engineer and follow immediately in writing outlining the nature and extent of the differing conditions. No claim by the Contractor for any additional cost or time for any Earthwork operations of any nature will be allowed, unless the Contractor has so notified the Owner, verbally and in writing, as required above, of such conditions.
- E. Unsuitable materials, including all forms of rock, debris, organic materials and poor soils, encountered may be redistributed to other areas of the site not to be used in a structural capacity rather than being hauled off site if and only if approved in writing prior to any on-site distribution at the Owner's sole discretion.
- F. Contractor is solely responsible for all earth quantities to render the finished grade elevations of the repaved roadway similar to existing condition with no change in drainage patterns. Any exportation (*i.e.*, "haul-off") of "excess" earth; or importation (*i.e.*, "haul-in") of suitable soil materials or GAB shall be included in the Contract Sum unless provided for otherwise in this Specification or as otherwise directed by the Owner or Owner's Representative.
- G. Contractor is solely responsible to:
 - 1. Survey, establish and protect benchmarks and monuments. If any are disturbed or destroyed, Contractor shall replace in original position using a Georgia Registered Land Surveyor at no additional cost to Owner.
 - 2. Protect areas outside limits of construction from encroachment by construction personnel or equipment regardless of property ownership. Contractor shall erect wooden post and orange safety fencing warning signs and other protective measures and warn the public of ongoing construction activities at limits of and a reasonable distance from the construction if necessary.

3. No Clearing or any form of construction or other disturbance (*including materials storage*), shall be conducted outside the approximate limits of construction.
 4. All utilities are to be located and marked. Horizontal and vertical location of all utilities shall be verified by Contractor and marked on "as-built" drawings if they are to remain. Contact the Utility Protection Center at 1-800-282-7411 not less than three (3) working days prior to grading operations. Protect existing facilities, utilities and adjacent property. Prevent ponding or washing of water on site and over adjacent property. Erect erosion control measures (e.g., silt fences) as required to prevent runoff of soil erosion.
 5. Provide all necessary shoring, sheeting and bracing for the protection of work and safety of personnel if necessary. Contractor shall engage a Georgia Registered Engineer highly skilled in the design of such shoring and bracing systems to perform the design engineering for said shoring and bracing. Backfill loads shall not be imposed on walls and structural systems until those systems are completely developed and at design capacity.
 6. Protect adjacent and downstream properties from soil erosion. Comply with all erosion and sediment control measures specified elsewhere and required by applicable codes and ordinances.
 7. Protect finished paved areas from construction debris and dirt.
 8. Provide traffic protection by means of suitable signs, barricades and lights in accordance with the latest edition of the Manual of Traffic Control Devices (MUTCD).
 9. Burning of debris on the Project site will not be permitted.
- H. Provide dewatering and drainage as needed to accomplish the work required in this section. No excavation may proceed until suitable dewatering has been provided and approved by Owner and/or Owner's Representative. Do not allow areas of ponding water. In the event ponding of water occurs, take the necessary measures to eliminate said ponding. Submit dewatering procedures to Owner and/or Owner's Representative for review.
- I. Comply with rules and regulations governing respective utilities.
- J. Contractor is solely responsible for protection of downstream properties from Encroachment or damage from increased or concentrated storm water flows, erosion, sediment or pollutants.
- K. Claims for "lost revenue" from any unsuitable materials or lack of marketability of any unsuitable soil materials or rock shall not be considered for additional payment or compensation by Owner to Contractor.

1.3 QUALITY CRITERIA

- A. All work shall be performed in accordance with applicable codes and ordinances and with requirements of authorities having jurisdiction. All work under this Section:
 - 1. Shall conform fully to applicable OSHA rules and regulations.
 - 2. Shall conform to the latest edition of the City of Dacula Development Regulations.
 - 3. For excavation, trenching and related sheeting, bracing, etc. shall comply with the requirements of OSHA excavation safety standards (29 CFR Part 1926.650 Subpart P) and to the State of Georgia and City of Dacula requirements. Where conflict between OSHA, the State regulations and the County/City regulations exists, the more stringent requirements shall apply.

- B. Employ a Georgia Registered Engineer or Georgia Registered Land Surveyor experienced in reading Architectural and Engineering drawings, using measuring devices and tape, and skilled in the use of surveying equipment necessary to perform layout, survey, establish benchmarks and monumentation of all work required.

- C. Earthwork monitoring and testing shall be performed by a Georgia Registered Geotechnical Engineer, selected by the Contractor and paid for and approved by Owner.

- D. Excavation, backfilling and compaction shall comply with the following Reference Standard Designations by the American Society for Testing Materials (ASTM), or as otherwise noted on Drawings.
 - 1. ASTM C136-76 - Sieve or Screen Analysis of Fine and Coarse Aggregates
 - 2. ASTM D1556-64 (1974) - Density of Soil in Place by the Sand-Cone Method
 - 3. ASTM D698 - Standard Proctor Compaction Test
 - 4. ASTM D2167 (1972) - Density of Soil in Place by the Rubber Balloon method
 - 5. ASTM D2487-69 (1975) - Classification of Soils for Engineering Purposes
 - 6. ASTM D2922-78 - Density of Soil and Soil Aggregate in Place by Nuclear Methods
 - 7. ASTM D2937-71 - Density of the Soil in Place by the Drive- Cylinder Method

1.4 NOTIFICATION

- A. Contractor shall notify Engineer and/or Owner's Representative 24 hours prior to commencing any grading, excavation, land clearing and removal operations.

- B. Contractor shall notify all Utilities Companies in ample time for necessary measures to be taken to prevent interruption of service when utility lines which are to be removed, relocated and/or disconnected are encountered.

- C. Contact the Utility Protection Center at 1-800-282-7411 not less than three (3) working days prior to any grading operations.

1.5 SUBMITTALS

- A. Submit detailed Shop Drawings and schematic diagrams as necessary to graphically describe all Shoring and Bracing procedures, if any. Include calculations and schedules. Illustrate sequencing of all Shoring and Bracing.
- B. Contractor shall submit a detailed time schedule of all Earthwork operations to the Owner's Representative for review prior to commencing work, if any.
- C. In the event that the Contractor contemplates deviation(s) from the earthwork design concept for any reason, the deviation(s) shall be represented by submittal of detailed shop drawings which clearly illustrates the intent and scope of said deviation(s) for review and approval prior to proceeding with same.

PART 2 - PRODUCTS

2.1 TOPSOIL

- A. Topsoil either found on the site or imported to the site, shall consist of local, fertile, friable, natural soil of loamy character, free of clay lumps, stones in excess of one inch (1") in greatest dimension, typical of Project locality, and containing no chemicals harmful to plant growth, if needed.

2.2 UNSUITABLE SOIL

- A. Unsuitable soil materials consist of soil materials not capable of being compacted to density required; rock material, as defined in Paragraph 2.09 of this Section, larger than three inch (3"), debris and organic material including muck, which is a wet organic material which cannot support a light crawler tractor type of equipment and requires removal by power shovels or draglines; or material otherwise identified and designated as unsuitable by Contractor's Geotechnical Engineer.
- B. Non-organic materials are considered as unsuitable and include non-organic debris not capable of being compacted to density required, including but not limited to, metal objects such as appliances, metal fencing, tires, etc. Contractor shall remove and legally dispose of such items offsite.
- C. Soil material which is too wet to permit the specified compaction but is still suitable to be used in a structural capacity (once dried) based on the recommendations of

Contractor's Geotechnical Engineer, shall be spread and permitted to dry in an area to be designated by Owner. Contractor shall assist drying by discing, harrowing or pulverizing until the soil moisture content is reduced to the specified value.

- D. Only excavation of soils, which is wet due to concealed condition, including, but not limited to underground springs, high water table and leaking pipes, shall be addressed as a potential additive change order. Suitable materials which are wet due to precipitation as determined by Contractor's Geotechnical Engineer shall be dried and reused at no additional cost to Owner.
- E. In the event that a claim by Contractor has been made as to the existence of "Rock", "Unsuitable Soils" or otherwise "Unsuitable Materials", the Contractor's Geotechnical Engineer shall specify the means by which the "Rock" or otherwise "Unsuitable Soils" or "Unsuitable Materials" shall be quantified.

2.3 FILL

- A. Satisfactory fill material shall consist of local, clean, non-active, organic free subsoil, free from debris, roots, topsoil and frozen material and capable of being compacted to the density required.
- B. Maximum size of rock fragments shall be equal to or less than three inches (3") in the greatest dimension.
- C. In areas of massive fills or disposal pits, Geotechnical Engineer shall determine the maximum size of rock.
- D. Materials classified as SM, SP, ML, SC or CL are suitable for structural fill. Generally, residual soils in the local area are suitable for reuse as structural fill provided that they meet the following criteria and shall be well graded within the following limits:
 1. Common fill shall consist of mineral soil substantially free from organic materials, loam, wood, trash and other objectionable materials which may be compressible or which cannot be properly compacted. Common fill shall not contain stones larger than three inches (3") in the largest diameter and shall have a maximum of 75% passing the No. 40 sieve and a maximum of 20% passing No. 200 sieve. Common fill shall not contain granite blocks, broken concrete, masonry rubble or other similar materials. Fill shall have physical properties such that it can be readily spread and compacted during filling. Soil excavated from the structural areas and which meets the above requirements may be used in embankments.
 2. Screened gravel shall meet the requirements of Section 806.02 of the State of Georgia Department of Transportation Standard Specifications for Construction of Transportation Systems, 2021 or latest Edition.
 3. Partially weathered rock or rock no larger than three inches (3") in any

- dimension, may be used as fill as provided for in the Geotechnical Report.
4. Soil should exhibit a plasticity index of less than 30 and a dry unit weight of at least 90 pcf unless more stringent requirements are given in the Geotechnical Report, in which case they will govern.
 - E. Residual material to be used as fill material shall be tested and approved by Contractor's Geotechnical Engineer for degree of compaction specified for its intended use prior to importation or placement.
 - F. For fill soils to be imported from off-site, provide samples of same for laboratory testing by Contractor's Geotechnical Engineer to determine their Standard Proctor.
 - G. Contractor shall identify the location of any "borrow pits" so that Contractor's Geotechnical Engineer may inspect same to determine suitability of the general soils which Contractor intends to import to the Project site.

2.4 GRAVEL

- A. All stone for Gravel Fill shall meet the quality requirements of Section 800 of the State of Georgia Department of Transportation Standard Specifications for Construction of Transportation Systems, 2021 or latest Edition.
- B. Gravel fill shall consist of sound, durable rock, free from injurious amounts of coatings of any kind and shall be graded so 100% passes the 1-1/2" sieve, 95-100% passes the 1" sieve, 25-60% passes the 1/2" sieve, 0-10% passes the No.4 sieve and 0-5% passes the No.8 sieve.

2.5 CRUSHED STONE (CRUSHER RUN)

- A. All stone for Crushed Stone shall meet the quality requirements of Section 800 of the State of Georgia Department of Transportation Standard Specifications for Construction of Transportation Systems, 2021 or latest Edition.
- B. Crushed stone shall consist of sound durable particles of crusher run rock, 100% passing a 2-inch sieve, 97-100% passing a 1-inch sieve, 60-95% passing a 1/2-inch sieve, 25-50% passing a No. 10 sieve, 10-35% passing a No. 60 sieve, and not more than 7-15% passing a No. 200 sieve and free from unsuitable materials.

2.6 GRANULAR BEDDING

- A. All stone for Granular Bedding shall meet the quality requirements of Section 800 of the State of Georgia Department of Transportation Standard Specifications for Construction of Transportation Systems, 2021 or latest Edition.

- B. Granular bedding and backfill material shall consist of a granular soil, sand, chert, crushed stone or mixture of these, all of which passes a 3/4-inch sieve, 80% passing a 3/8-inch sieve, 40% passing a No.4 sieve, 10% passing a No. 8 sieve, and not more than 5% passing a No. 16 sieve. Material shall be free of organic matter and debris.

2.7 RIP RAP

- A. Stone for Rip Rap shall meet the quality requirements of Section 805 Rip Rap of the State of Georgia Department of Transportation Standard Specifications for Construction of Transportation Systems, 2021 or latest Edition.
- B. Stone Dumped Rip Rap shall be processed in such a manner as to produce a quarry Run material including rock fines which meet the gradation for the following two types:
 - Type 1: For severe drainage conditions the largest piece of material shall have a maximum approximate value of two cubic feet. At least 35% of the mass shall be comprised of pieces which weigh 125 pounds or more.
 - Type 3: For general use normal drainage conditions the largest pieces of material shall have a maximum approximate value of one cubic foot. At least 35% of the mass shall be comprised of pieces which weigh 15 pounds or more.The remainder of Types 1 or 3 shall be well-graded down to the finest sizes. Rock fines shall comprise a maximum of 10% of the total mass. Rock fines are defined as material passing a No. 4 sieve.
- C. Stone for Plain Rip Rap shall be sound, durable pieces and shall be resistant to the action of air and water. Flat, slabby and shaley pieces are not acceptable. It shall be clean and essentially free of rock dust and fines. The material shall be processed such that the largest pieces have a volume of not more than 2 cubic feet and not more than 10% of the total weight of rip rap shall consist of spalls passing a 5-inch sieve.

2.8 GRADED AGGREGATE BASE

- A. All stone for Graded Aggregate Base shall meet the quality requirements of Section 815 of the State of Georgia Department of Transportation Standard Specifications for Construction of Transportation Systems, 2021 or latest Edition.
- B. Graded Aggregate Base material shall conform to the following: 100% passing a 2-inch sieve, 97-100% passing a 1-inch sieve, 60-95% passing a 1/2-inch sieve, 25-50% passing a No. 10 sieve, 10-35% passing a No. 60 sieve, and not more than 7-15% passing a No. 200 sieve and free from unsuitable materials.

2.9 ROCK

- A. Rock consists of three types: Rippable Weathered Rock, Mass Rock and Trench Rock. Rippable Weathered Rock is considered part of the work and shall be included in the Contract Sum. Payment for Mass Rock and Trench Rock removal shall be in accordance with change order procedures based on the schedule of values with unit costs provided with the lump sum bid as specified by the Bid Proposal Form or a time and material basis as agreed to prior to commencing work. Rock quantities shall be qualified and quantified by Contractor's Geotechnical Engineer and verified by Owner's Representative.
- B. In the event that a claim by Contractor has been made to the existence of "Rock", "Unsuitable Soils" or otherwise "Unsuitable Materials", the Geotechnical Engineer shall specify the means by which the "Rock" or otherwise "Unsuitable Soils" or "Unsuitable Materials" shall be quantified.
1. Rippable Weathered Rock is defined as residual material having a volume greater than one (1) cubic yard that, in the opinion of Contractor's Geotechnical Engineer, can be effectively plowed, spaded, or removed with power driven excavating equipment having been first loosened with a track-mounted bulldozer equipped with a single-tooth ripper shank, having a minimum draw bar pull rated at not less than 56,000 pounds.
 2. Mass Rock and Trench Rock are defined as residual material having a volume greater than one (1) cubic yard or more for mass excavation or one-half (1/2) cubic yard for trench or pit excavation that cannot be removed by rock excavating equipment equivalent to the following in size and performance ratings, without systematic drilling, ram hammering, or blasting.
 - a. Mass Rock - Mass Excavation: Late-model, track-mounted bulldozer equipped with a single-tooth ripper shank; rated at not less than 230-hp flywheel power and developing a minimum of 56,000-lbf pryout force; measured according to SAEJ-732 (Caterpillar D-8K, Caterpillar 977 front-end loader or equivalent).
 - b. Trench Rock - Excavation of Trenches and Pits: Late-model, track-mounted hydraulic excavator; equipped with a 42-inch-wide, short-tip-radius rock bucket; rated at not less than 120-hp flywheel power with a bucket-curling force of not less than 25,700-lpf and stick-crown force of not less than 18,700 lbf; measured according to SAEJ-1179 (Caterpillar Model 225 or equivalent).
- C. Provide ground vibration monitoring and existing condition/crack survey (video and/or digital) of all nearby structures and/or adjacent properties prior to any blasting operations. Contractor must notify Owner's insurance company of rock removal intent and must obtain all necessary insurance certificates and permissions to expedite this work.

PART 3 - EXECUTION

3.1 CLEARING

- A. Clearing is the removal of all obstructions which interfere with the construction. These items include minor structures above and below existing grades and below finished grades identified on the drawings, trees and their complete root systems, brush, other vegetative material in any condition (i.e., chipped, cut, wrenched, etc.) rubbish, fences and other such items except items indicated to be preserved on Drawings.
- B. Set and maintain any Active or Passive Tree, Wetland, Spring, Buffer, Limits of Disturbance or Vegetation Protection Fencing prior to Clearing operations in accordance with Drawings.
- C. Contractor shall clear only those areas in which construction or grading operations are required and includes all excavated, graded and filled areas. Contractor shall protect all other areas from any damage as a result of clearing operations.
- D. Burning on site shall not be permitted under any circumstances.
- E. Contractor shall remove all cleared material from the Project site and legally dispose of.

3.2 GRUBBING

- A. Grubbing is the removal of all roots and stumps from the ground larger than $\frac{3}{4}$ inch diameter.
- B. Unless otherwise directed, Contractor shall grub all cleared areas;
 - 1. In fill areas where design grade levels for building, roads or paved areas are to be placed, grub to minimum depth of twelve inches (12") below the finished design grade level as indicated on Drawings.
 - 2. In all areas of excavation for structures, grub to the depth of the proposed excavation or to the depth that allows the area to be free of debris, rock, organic and inorganic materials, and unsuitable soils that would otherwise prevent the soil from being compacted to the density as indicated on Drawings and stated in the Specifications herein.
 - 3. In areas outside of design level grades or building footprint or roads and parking lots where fill is to be placed grub to the existing grade unless the area adjacent requires soils compacted to a density to support the structures, roads, or parking areas.
 - 4. Contractor shall be responsible for excavating to an appropriate depth and removing and replacing with suitable soils that will allow soil to achieve requisite compacted density.

5. In areas to be grassed and/or landscaped without fill, grub to a minimum of six inches (6") below the final grade.

C. Remove all grubbed material from the Project site and legally dispose of.

3.3 CLEAN UP

A. Burning of debris or grubbed material onsite shall not be permitted under any circumstances.

B. Remove all debris resulting from Clearing and Grubbing operations from the site and dispose of in compliance with all applicable laws and regulations.

C. Do not place such debris on private property without written consent of Owner and Owner of such property.

D. Do not place debris or grubbed material around perimeter of site.

E. Remove all non-organic debris, trash, etc. from the site and dispose of in compliance with all applicable laws and regulations.

3.4 TOPSOIL STOCKPILING

A. Strip topsoil to full depth encountered in areas indicated to be graded on the drawings. Stockpiling may occur as required to complete all construction operations. Intermittent movement of Topsoil from one location of the Project site to another shall be included in the Contract Sum. No claim shall be considered by Owner for the movement of Topsoil.

B. Prior to stockpiling topsoil, remove tree limbs, tree roots, rocks larger than one inch (1") and other deleterious materials from the topsoil. Removed materials shall become the property of the Contractor and hauled off the site and legally disposed.

C. Stockpile topsoil in manner to drain without ponding, and to avoid loss of material through erosion by wind or water.

D. Do not export any topsoil off-site unless approved in writing by the Owner.

E. Re-distribute a minimum of four inch (4") deep layer of topsoil fine graded to finish contour elevations illustrated in non-paved or building areas.

3.5 EXCESS, UNSUITABLE AND INSUFFICIENT MATERIALS

- A. Remove and legally dispose of excess and unsuitable materials from Project site unless directed otherwise in writing by Owner. Unsuitable material may be placed on Owner's property if and only if approved in writing by Owner prior to any on-site distribution as a deductive change order and then shall only be placed in non-structural fill areas of the Project site as designated by Owner and/or Owner's Representative.
- B. Provide satisfactory fill material in areas where existing materials are insufficient or unsuitable for earthwork operations.
- C. If, in the opinion of the Engineer/Geotechnical Engineer, the material in its undisturbed natural condition at or below final design grade as indicated on the Drawings, the excavation is unsuitable for its intended use; it shall be removed to such depth and width as directed and be replaced with suitable material by Contractor as directed by the Engineer/Geotechnical Engineer. Contractor, unless otherwise directed by the Engineer or Owner, shall remove and replace unsuitable materials based on the schedule of values with unit costs provided with the lump sum as specified by the Bid Proposal Form. Owner may elect, in accordance with the provision of the agreement, to direct Contractor to remove and replace the unsuitable materials on a lump sum or time and materials basis should applicable unit rates not exist or not covered for unsuitable material being removed. Contractor shall receive written notice from the Engineer of means and methods to employ i.e., lump sum, unit rates or time and materials, prior to executing any work deemed in excess of the amount indicated in the Contract Sum.

3.6 EXCAVATION

- A. Excavation shall be made to the design lines and levels illustrated on the drawings or to such depths, whichever is greater, as further described elsewhere in this section and to such widths as will give suitable room for construction of the structures, for bracing and supporting, pumping and draining and inspection. The bottom of the excavations shall be rendered clean, firm, level and dry and in all respects acceptable to Contractor's Geotechnical Engineer and Owner's Representative. Where changes in levels occur, provide vertical steps in horizontal runs.
- B. Excavation and dewatering shall be accomplished by means and methods which preserve the undisturbed state of subsurface soils. Exposed subsurface shall be proof rolled with at least two (2) coverages of the specified equipment. Contractor's Geotechnical Engineer and Owner's Representative shall waive this requirement if, in his/her opinion, the subsurface will be rendered unsuitable by such compaction. Subsurface soils which become soft, loose, "quick", or otherwise unsatisfactory for support of structures as a result of inadequate excavation, dewatering, proof-rolling,

- or other construction methods shall be removed and replaced by structural fill as required by Contractor's Geotechnical Engineer and Owner's Representative at Contractor's expense.
- C. Dewatering shall be such as to prevent boiling or detrimental under-seepage at the base of the excavation as specified herein.
- D. Contractor shall prepare subsurface areas for all structures unless otherwise illustrated on Drawings or otherwise specified elsewhere in this Section:
1. Roughly level and proof roll these areas with a 25-ton roller, (or the equivalent) making at least four passes (two passes being perpendicular to the others).
 2. Compact the top twelve inches (12") of fill below subsurface to a minimum of 100 percent Standard Proctor (ASTM D698).
 3. Where structures are supported by piles, compact the top twelve inches (12") of subsurface to a minimum of 95 percent Standard Proctor (ASTM D698).
- E. Excavation equipment shall be satisfactory for carrying out the work in accordance with requirements specified. In no case shall the earth be ploughed, scraped, or dug with machinery so near to the finished design limits indicated on Drawings as to result in excavation of, or disturbance of material below design limits. The last of material loosened by mass excavation shall be removed with pick and shovel immediately prior to placement of concrete or working mat.
- F. When excavation for foundations has reached prescribed depths, Contractor's Geotechnical Engineer and Owner's Representative shall be notified and will inspect conditions. If materials and conditions are not satisfactory to Contractor's Geotechnical Engineer and Owner's Representative, Contractor's Geotechnical Engineer and Owner's Representative will issue instructions as to the procedures to resolve the issue(s) in question.
- F. During final excavation to design limits as indicated on Drawings, take whatever precautions are required to prevent disturbance and remolding. Material which has become softened and mixed with water shall be removed. Hand excavation of the final three to six inches (3"- 6") will be required as necessary to obtain a satisfactory undisturbed bottom. Contractor's Geotechnical Engineer and Owner's Representative will be the sole judge as to whether the work has been accomplished satisfactorily.
- G. Over-excavation by Contractor beyond the design limits and depths required or indicated on the drawings shall be replaced with lean concrete, compacted structural fill, crushed stone, or other materials as directed by Contractor's Geotechnical Engineer and Owner's Representative at no change in Contract Sum or Time.
- H. If soil conditions permit, cut footing trenches to exact size of footing and omit

forms. Notify Contractor's Geotechnical Engineer and Owner's Representative if earth of doubtful bearing is encountered. If adequate bearing is not encountered within eight inches (8") of depth illustrated on Drawings, excavations shall be carried deeper upon written authorization and paid for as additional work in accordance with Contract Conditions.

- J. If excavations are carried deeper than required by Drawings or Specifications in error, the additional depth shall be filled with materials specified for road subgrade and compaction at no additional cost to Owner.
- K. Protect excavations against cave-ins, ponding and freezing. When freezing can be anticipated prior to placing of concrete, protect excavations or delay carrying excavations to full depth until concrete can be placed.
- L. Maintain excavations free of surface water. Provide pumps if required to drain excavations. Provide and maintain temporary drainage ditches as required.
- M. Notify Contractor's Geotechnical Engineer and Owner's Representative when footing excavations are complete. Geotechnical Engineer will perform appropriate density testing of the excavations prior to placing formwork, reinforcement steel, anchor bolts and concrete.
- N. Contractor shall be fully responsible for all damage to any part of the site, building structures or other installations, caused by water.
- O. Concrete should be placed the same day earth excavation is made. If it is necessary for excavations to remain open overnight, provisions should be made to prevent collection of surface run-off in the excavation.

3.7 EXCAVATION OF ROCK

- A. If rock is encountered, clear away earth and expose materials. Notify Contractor's Geotechnical Engineer and Owner's Representative and receive written instructions prior to excavations. Measure and estimate extent of rock to be excavated. Contractor's Geotechnical Engineer shall identify, qualify and verify in writing whether the material shall be classified as rock and shall confirm the extent and quantity of rock to be excavated.
- B. Only rock excavation done in accordance with Contractor's Geotechnical Engineer and Owner's Representative instructions will be paid for by Owner as additional work in accordance with Contract Conditions.
- C. Contractor shall remove rock in accordance with the following:

1. Remove rock to a depth of six inches (6") below proposed slabs and pavement.
2. Twenty-four inches (24)" on each side of and below footings of the proposed building walls.
3. Six inches (6") below and eight inches (8") to each side of conduits, ducts and pipes installed in utility trenches, with minimum width of thirty-six inches (36").
4. Twelve inches (12") below finished grade in areas to receive landscaping, sodding and seeding.

D. No blasting is allowed. Use of explosives will not be permitted.

3.8 EXCAVATION AND BACKFILL OF UTILITY TRENCHES

- A. Excavation for all trenches required for the installation of pipes and ducts shall be made to the design levels indicated on the drawings and in such a manner and to such widths as will give suitable room for laying the pipe or installing the ducts within the trenches, for bracing and supporting, and for pumping and drainage facilities. Bottoms of excavations shall be rendered firm and dry and, in all respects, acceptable to the Contractor's Geotechnical Engineer and Owner's Representative. Bituminous pavement, when encountered, shall be cut with pneumatic chisels along smooth and straight lines before excavating. Saw-cutting is required on all asphaltic concrete.
- B. Rock shall be removed in accordance with Section 3.7.
- C. Where pipe or ducts are to be laid in gravel or sand bedding or encased in concrete, The trench may be excavated by machinery to, or just below design level indicated on Drawings provided that the material remaining in the bottom of the trench is no more than slightly disturbed.
- D. Where pipe or ducts are to be laid directly on the trench bottom, the lower part of the trenches shall not be excavated to the design level by machinery, the last of the material being excavated manually in such a manner that will give a flat bottom true to grade so that pipe or duct can be evenly supported on undisturbed material. Bell holes shall be made as required.
- E. When excavation methods include the use of a steel trench box, comply with the following requirements:
1. When installing rigid pipe Reinforced Concrete Pipe (RCP), Ductile Iron Pipe (DIP), etc., any portion of the box extending below mid diameter of the pipe shall be raised above this point prior to moving the box ahead to install the next pipe. This is to prevent the separation of installed pipe joints due to movement of the box.
 2. When installing flexible pipe (PVC, ABS solid wall, ABS truss, etc.), the bottom of the box shall not extend below mid diameter of the pipe. This is to prevent loss of soil between the box and the pipe bedding which could result in excessive deflection of the installed pipe.

- F. Backfilling over ducts, pipes, conduits, etc. shall begin not less than three days after Placing concrete encasement or until the test sample achieves prescribed strength of tested sample.
- G. Where pipe is to be installed in fill of any type, fill shall be placed and compacted to the total depth required and then re-excavated for pipe installation.
- H. As soon as practicable after the pipe has been laid and jointed, backfilling shall begin and thereafter be completed expeditiously. If required, as illustrated on Drawings, screened gravel shall be placed around the pipe to its mid-diameter. As the screened gravel is placed, it shall be compacted by suitable tools. Compaction shall meet a minimum criterion of 98% Standard Proctor at or near its optimum moisture content (minus 2 to plus 3 percent).
- I. Use Reinforced Concrete Pipe for culverts within right-of-way and under pavement refer to City of Dacula Standards.
- I. For Plastic (PVC) pipe for drainage systems or roof leaders grade trench bottom to Uniform slope to provide a firm, unyielding bearing surface along the entire length of the barrel of the pipe.
- J. Continue backfilling with suitable soil in six-inch (6") layers by hand, tamping material by hand operated tampers to a level eighteen inches (18") above top of pipe.
- L. Form depressions for hubs and similar joints only in size as required for making joint.
- M. In areas of rock excavation, and where needed in other areas, provide crushed stone Bedding for all pipes.
- N. Provide bedding over the full width of excavation to a minimum depth of six inches (6") Under pipe.
- O. Whenever the subsurface is unstable or too soft to provide a satisfactory pipe foundation for any pipe, undercut the trench as necessary and backfill with crushed stone. Compact and bring the material to proper grade to create a firm, unyielding foundation.
- P. After the bedding, if required, has been placed to the mid-diameter of the pipe, select common fill shall be placed to a depth of twelve inches (12") over the top of the pipe. Material shall be thoroughly compacted by hand-tamping as placed with at least one man tamping for each man shoveling material into the trench. Compaction shall result in achieving a 95% Standard Proctor test at or near its optimum moisture content (minus 2 to plus 3%).

- Q. Where the pipes are laid in unpaved areas, the remainder of the trench shall be filled with common fill in layers not to exceed twelve inches (12") and thoroughly compacted by rolling, ramming, or puddling sufficiently to prevent subsequent settling to 95% Standard Proctor at or near its optimum moisture content (minus 2 to plus 3%). The backfill shall be mounded 3 inches (minimum) above the finish or existing grade or as directed by the Contractor's Geotechnical Engineer. Wherever a loam or gravel surface exists prior to excavations, it shall be removed, conserved and replaced to the full original depth as part of the work under the pipe items. In some areas it may be necessary to remove excess material during the clean-up process, so that the ground may be restored to its original level and condition. If Contractor prefers not to store loam, gravel, or topsoil he/she shall replace it with material of equal quality and in equal quantity.
- R. Where the pipes are laid in streets, or other paved areas, the remainder of the trench above the bedding and up to a depth of twelve inches (12") below the bottom of the specified paving shall be backfilled with common fill in 6-inch (max.) layers thoroughly compacted by rolling or ramming to 98% Standard Proctor. The twelve-inch (12 ") layer below the bottom of the specified paving shall be of Class A or B stone, compacted in six-inch (6") layers to 98% modified Proctor.
- S. Along the length of all pipeline and duct trenches, impervious dams or bulkheads of clay thirty-six (36") in thicknesses or concrete twelve-inch (12") in thickness shall be constructed in the trench bottom at three-hundred-foot (300') intervals or at manholes and structures, whichever is less, to obstruct the free flow of groundwater after construction is completed. Provide impervious dams at all points where a pipe trench enters an excavated area where a permanent underdrain system is installed.
- T. Do not over-excavate. If specified trench widths are exceeded, Contractor shall adhere to Section 3.6 H. Contractor's Geotechnical Engineer and Owner's Representative may require installation of stronger pipe or special installation procedures at no additional cost to Owner.
- U. Water line trenches shall be excavated to avoid high points requiring the installation of vacuum and relief valves below the frost line.
- V. Cutting and removing existing pavements where required shall be done in neat lines and in accordance with 3.8 A of this Section.
- W. Do not backfill over utility lines which have not passed required testing or inspections including the Contractor's Geotechnical Engineer's inspection of the subsurface has not been done and or other Inspections, testing and regrading locations of subsurface utilities is not accomplished.

- X. Contractor is to continue to backfill all trenches with suitable fill material in 6-inch lifts immediately after the pipe is laid or bedded as described in items 3.6 I, J and K above using suitable soils and adhering to the backfilled requirements of paved or unpaved areas. Compact trench backfill with portable compaction equipment.
- Y. If sufficient suitable excavated material is not available on site, provide sufficient and suitable borrow material for backfill (See Paragraph 2.3 of this Section).
- Z. Backfill from twelve inches (12") above the pipe to finish grade shall be as follows:
1. Trenches in areas not to be paved may be backfilled and compacted by methods of Contractor's choice. Compact backfill to 95% Standard Proctor Density. Refill the trench as often as required to maintain the design elevation at proper grade.
 2. Trenches in areas to be paved and in areas beneath proposed structures shall be backfilled with granular material.
 3. Compact backfill to 98% Standard Proctor Density with top 12 inches compacted to 100% Standard Proctor Density or as specified by Geotechnical Report.
 4. Compact backfill further, if necessary, either by leaving the backfilled trench open to traffic while maintaining the surface or by the use of compaction equipment as required.
 5. Refill settlement in trenches with material acceptable to Contractor's Geotechnical Engineer and continue such maintenance until pavement placement is authorized by Contractor's Geotechnical Engineer and Owner's Representative.
- AA. Fill and backfill materials shall not be placed on frozen surfaces, or surfaces covered by snow or ice. Fill and backfill material shall be free of snow, ice and frozen earth.
- BB. Utility Trenches:
1. Excavate trenches to a maximum width equal to pipe diameter plus 2'-0" for pipes 30" diameter and smaller; 2'-6" plus pipe diameter for pipe exceeding 30" diameter. Minimum excavation width shall be 3'-0". Do not over-excavate. If specified trench widths are exceeded, Engineer may require installation of stronger pipe or special installation procedures at no additional cost to Owner.
 2. The bottom of trenches, when in rock, shall be excavated a minimum of 6" below required bottom of pipe, refilled with fill material free of rock larger than 3" in any dimension, and compacted to bedding level to provide uniform bearing and support along the length of each pipe section.
 3. Pipe shall be carefully bedded in soil foundation. See paragraph 3.10.
 4. Water line trenches shall be excavated to avoid high points requiring the installation of vacuum and relief valves below the frost line.
 5. Cutting and removing existing pavements where required shall be done in neat lines.

CC. Proof-rolling:

1. After the site has been properly drained, and all organic surface soils have been removed, the site shall be inspected by Owner and Owner's Representative and proof-rolled at that time.
2. Proof-rolling shall consist of several overlapping passes of heavily loaded 18-20 ton dual tandem dump truck.
3. The purposes of the proof-rolling will be to detect any areas where soft or unstable soils are present, as well as to improve the density of the loose near surface soils.
4. Proof-rolling shall be performed in the presence of the Owner and Owner's Representative who can observe any areas where remedial action may be required. Contractor's Geotechnical Engineer will be used if there is a problem encountered.
5. Any soft or yielding areas shall be thoroughly undercut and replaced with well-compacted structural fill 95% Standard Proctor with the top 12" compacted to 98% Standard Proctor Density or as specified by the Geotechnical Report.
6. Groundwater level should be maintained at a depth of at least two (2') feet below the depth of vibratory rolling operations.
7. A minimum of four (4) complete overlapping passes shall be made in each of two perpendicular directions.

3.9 EXCAVATION EMBANKMENT AND BRACING

- A. Contractor shall accept full responsibility for all excavations and shall protect all excavation embankments against collapse.
- B. Where possible, embankments over 5'-0" high shall be made at a slope not greater than 1 horizontal to 1 vertical; or where the soil is very sandy or wet, the slope should not be greater than 2 horizontal to 1 vertical.
- C. Steeper slopes than those suggested herein may be employed when the work is under the supervision of a Registered Professional Engineer responsible for the design engineering of all shoring and bracing techniques required to accomplish the work and shall be employed by Contractor.
- D. Where it is not possible to provide a safe embankment slope, all banks shall be temporarily supported and maintained secure until permanent support has been provided.
- E. Where ditches or trenches are over 5'-0" deep; cross bracing and shoring shall be provided to prevent collapse.
- F. Contractor shall provide bracing systems designed by a Registered Engineer in the State of Georgia, experienced in such designs and acceptable to Owner.

- G. Drawings shall show the work and sequence in its entirety and be submitted to Owner for approval prior to commencing work.
- H. To prevent caving, or settlement of earth adjacent to excavations, and for the protection of persons as well as property, shoring, bracing and other similar work shall be provided and installed to meet the conditions in each particular case and shall be left in place until construction has reached a point where backfills behind walls or in ditches have been made and the need for shoring and bracing eliminated.

3.10 BEDDING

- A. Bedding shall conform to the following Specifications unless illustrated otherwise elsewhere in these documents:
 - 1. For ductile iron, cast iron or plastic (SDR) pipe for water main or sanitary sewer system refer to City of Dacula Standards.
 - 2. For corrugated metal pipe (CMP), concrete pipe (RCP) or plastic (PVC) pipe for storm water drainage systems or roof leaders grade trench bottom to uniform slope to provide a firm, unyielding bearing surface along the entire length of the barrel of the pipe.
 - 3. Bed pipe in trenches on continuous soil foundation shaped to lowest one-fourth of pipe profile, unless illustrated otherwise in these documents.
 - 4. Continue backfilling with suitable soil in 6" layers by hand, tamping material by hand operated tampers to a level 18" above top of pipe.
 - 5. Form depressions for hubs and similar joints only in size as required for making joint.
 - 6. In areas of rock excavation, and where needed in other areas, provide crushed stone bedding for all pipes.
 - 7. Provide this bedding over the full width of the excavation to a minimum depth of 6" under the pipe.
 - 8. Whenever the sub-grade is unstable or too soft to provide a satisfactory pipe foundation for any pipe, undercut the trench as necessary and backfill with crushed stone.
 - 9. Compact and bring the material to proper grade to create a firm, unyielding foundation.

3.11 TRENCH BACKFILLING

- A. Do not backfill over utility lines which have not passed required testing or inspections including:
 - 1. Contractor's Geotechnical Engineer inspection of subgrade.
 - 2. Inspections, testing and regrading locations of subgrade utilities.

- B. Backfill all trenches and excavations immediately after the pipe is laid using suitable soils:
1. If sufficient suitable excavated material is not available on site, provide sufficient and suitable borrow material for backfill. See Paragraph 2.3 of this Section.
 2. Backfill from 18 inches above the pipe to grade shall be as follows:
 - a) Trenches in areas not to be paved may be backfilled and compacted by methods of Contractor's choice. Compact backfill to 90% Standard Proctor Density. Refill trench as often as required to maintain the design elevation at the proper grade.
 - b) Trenches in areas to be paved and in areas beneath proposed structures shall be backfilled with granular material. Compact backfill to 95% Standard Proctor Density with the top 12" compacted to 98% Standard Proctor Density or as specified by the Geotechnical Report. Compact backfill further, if necessary, either by leaving the backfilled trench open to traffic while maintaining the surface or by the use of compaction equipment as required. Refill settlement in trenches with material acceptable to the Contractor's Geotechnical Engineer and continue such maintenance until pavement placement is authorized by the Owner's Representative.

3.12 FILLING

- A. Preparation of Surface to Receive Fill (Reference and follow the Contractor's Geotechnical Engineer's recommendations in his report)
1. Remove vegetation, topsoil, debris, unsuitable soil materials, obstructions and deleterious materials from ground surface prior to placement of fill. Break up (and periodically cut benches into) sloped surfaces steeper than one vertical to four horizontal so that fill material will bond with existing surface.
 2. Surfaces to receive fill material shall be inspected and approved by Contractor's Geotechnical Engineer.
 3. When existing ground surface has density less than that specified for particular area classification, break up the ground surface, pulverize, moisturize soil to optimum moisture content, and compact to required depth and percentage of maximum density.
 4. Subgrade shall be proof rolled with a heavily loaded 18-20 ton dual tandem dump truck, scraper or similar rubber-tired equipment in the presence of the Owner and/or Owner's representative. Contractor's Geotechnical Engineer will be called in if a problem is encountered.
 5. Proof-rolling shall be performed in two mutually perpendicular directions, with at least two passes in each direction.
 6. Areas which exhibit signs of instability that cannot be stabilized with further compaction shall be undercut to a suitable grade and backfilled with structural fill.

- B. Benching should be made periodically; create an eight foot to ten foot (8'-10') wide bench for each two vertical foot (2 VF) of fill placed. Insure stable interface between old fill and newly placed fill.
- C. Place fill materials in layers not more than six inch (6") loose depth. Before compaction, moisten or aerate each layer to provide the optimum moisture content plus or minus 2%, or as specified in soils report. See paragraph 3.11 below for compaction requirements of fill. Do not place backfill or fill material on muddy, frozen surfaces or surfaces containing any frost or ice. Compaction shall be inspected by Contractor's Geotechnical Engineer.
- D. No soil found on the site or transported to the site, which is contaminated with material containing asbestos, PCB's, radon, gasoline, fuel oil or other fossil fuels shall be used for fill, backfill, or planting topsoil. Any contaminated soil found on the site shall be removed and disposed of in a manner approved by the appropriate regulatory agencies.

3.13 GRADING AND FILLING AROUND TREES

- A. Obtain a copy of City of Dacula Tree Preservation Standards which are hereby made a part of these Specifications; and follow all pertinent guidelines regarding Grading and Filling operations at or near Tree Save Areas as illustrated on Drawings.
- B. Maintain existing grade within Critical Root Zone (CRZ) of trees unless otherwise indicated.
- C. Where existing grade is above new finish grade illustrated around trees, hand excavate within drip line to new grade. Cut exposed roots approximately 3" below elevation of new finish grade. Employ a tree surgeon to recommend procedures such as pruning of branches and stimulation of root growth. Provide subsequent maintenance during the contract period as recommended and long-range maintenance procedures to be followed after completion of construction operations.
- D. Raising Grades
 1. Where existing grade is 4" or less below elevation of finish grade illustrated, provide fill using stockpiled topsoil. Use topsoil as specified. Place topsoil in single layer and do not compact.
 2. Where existing grade is more than 4" but less than 8" below elevation of finish grade illustrated, place a layer of drainage fill on existing grade prior to placing topsoil. Place fill against trunks of trees to an elevation of approximately 2" above finish grade and extending not less than 18" from tree trunk on all sides. For balance of area within drip line perimeter, place drainage fill to an elevation 4" below finish grade and complete fill with a 4" layer of topsoil. Do not compact stone or topsoil layers.

3.14 COMPACTION

- A. Perform compaction of soil materials for fills using mechanical soil compaction equipment for type and size materials to be compacted. Hand compact materials in areas inaccessible to machinery.
- B. Provide the percentages of specified compaction at the specified moisture content in the specified lifts as outlined in the Geotechnical Report. If no specification is given in said report, use the following as a minimum at 3% plus or minus of optimum moisture content placed in 8" lifts:
 - 1. Provide 95% maximum dry density with top 12" to 98% maximum dry density for fill under building slabs, extending beyond the building outlines a distance equal to twice the height of the fill beneath any edge of building. Fill should then slope not steeper than one vertical to two horizontal (2H:1V);
 - 2. Provide 95% maximum dry density with the top 12" to 98% maximum dry density for fill under asphaltic pavements;
 - 3. Provide 95% maximum dry density Standard Proctor and top 12" to 98% maximum dry density for fill under concrete footings, concrete sidewalks, concrete steps and concrete ramps and trench backfill.
 - 4. Provide 90% maximum dry density for all other non-paved fill material unless otherwise indicated.
- C. Where subgrade or soil layer must be moisture conditioned before compacting, apply water to surface of subgrade or soil layer. Scarify and air-dry soil material that is too wet to permit compaction to specified density.
- D. Soil material that has been removed because it is too wet to permit compaction may be stockpiled or spread where directed by Owner's Representative and permitted to dry. Assist drying by discing, harrowing or pulverizing, until moisture content is reduced to satisfactory value, as determined by moisture density relation tests. When accepted by the Contractor's Geotechnical Engineer, soil material may be used in compacted backfill or fill.
- E. Remove unsuitable material at the site for the proposed structures and paved areas from the existing grade. No water shall be allowed to accumulate in the excavation, or on the subgrade soils during construction. Soils which will be exposed during construction are very sensitive to disturbances and strength degradation in the presence of excess moisture. They are also frost susceptible. The amount of time natural subgrades are exposed to the elements must be minimized in order to prevent possible subgrade degradation. Work must be completed such that excavation, inspection, undercutting, backfill and/or concrete mud matting can be accomplished expeditiously in a given area.

Foundations have been designed for bearing capacity of 3000 post bearing. Contractor shall verify the bearing capacity prior to placing footings. If tests indicate less than assumed capacity, receive instructions from Owner.

3.15 FINISH GRADING

- A. Finish grade disturbed areas, with a minimum 4" depth of topsoil, in smooth, uniformly leveled, crowned, or contoured slopes between all new elevation surface points to existing, undisturbed grade elevations.
- B. Grade areas adjacent to buildings for positive drainage to storm drainage structures and prevent ponding. Finish grades shall be within one tenth of a foot (0.1') of indicated elevations.
- C. Drawings indicate the levels, slopes and contours of finished grade elevations for the entire site. Slight modifications as determined by Owner's Representative may be required, Contractor shall make these modifications without extra cost to Owner.
- D. Where compacted areas are disturbed by construction operations, scarify surface, reshape and compact to required density.
- E. Redistribute stockpiled topsoil to uniform depth over graded areas and other areas to receive landscaping or grassing, in a 4" minimum depth. In the event that stripped topsoil is not sufficient to render a 4" minimum depth, import clean topsoil sufficient to render a minimum 4" depth as part of the Contract Sum at no additional cost to the Owner.
- F. Redistribute excess topsoil, subsoil from footing excavations, other soil matter and debris on approved areas of the Owner's property at no additional cost to the Owner.
- G. At completion of finish grading operation, entire site shall be ready for planting or grassing.
- H. Where finish grading meets or abuts curbs, walks or similar pavements, upstream grades shall be slightly higher than pavements to permit drainage and prevent ponding behind curbs or walks.
- I. Protect newly graded surfaces from traffic and erosion and keep free of debris. Where graded or compacted surfaces are damaged by subsequent operations, return to proper grade and state of compaction.

3.16 GRADE MAINTENANCE

- A. Contractor shall provide additional fill material, remove excess material, or redistribute materials as required, should grades be changed by erosion or other causes during course of construction, without additional cost to Owner.

3.17 FIELD QUALITY CONTROL

- A. Contractor's Geotechnical Engineer shall be notified by Contractor of the progress of work under this section on a continuing basis so that necessary field soil engineering and testing services may be provided during site preparation, excavation, fill placement and foundation phases of the Project, if required by Owner. Do not proceed with additional portions of work until results of previous phases have been verified.
- B. Contractor's Geotechnical Engineer will verify that all existing fill, topsoil, soils containing organic matter and all other undesirable materials are removed and only engineered fill is placed over suitable subgrade soils.
- C. If, during progress of work, tests indicate that compacted materials do not meet specified requirements, remove defective work, replace and retest at no cost to Owner.
- D. Ensure compacted fills are tested before proceeding with placement of surface materials.
- E. Contractor's Geotechnical Engineer will observe all "benching" operations as fill placement progresses to the existing slopes.
- F. Contractor's Geotechnical Engineer will observe the foundation construction as directed by Owner and determine the adequacy of bearing surfaces prior to construction of foundations.
- G. Contractor's Geotechnical Engineer will make all tests of backfill materials to determine their suitability for compaction and will observe the placing of backfill as directed by Owner.
- H. Contractor's Geotechnical Engineer and the Owner's Representative shall have the power of rejection of materials, equipment or operating procedures of the backfilling operation. Contractor shall replace, rework or correct work which does not meet the Specifications as directed by Contractor's Geotechnical Engineer and/or Owner's Representative at no cost to Owner.
- I. Contractor shall be responsible for notifying the Contractor's Geotechnical Engineer at least 24 hours prior to the time when testing will be required.

- J. Additional tests on completed fill may be authorized by Owner. If such tests indicate failure to meet the Specifications, the costs of these tests and subsequent retests will be paid by the Contractor. Otherwise, the costs of these tests will be paid by Owner.
- K. In-place density tests shall be performed by the Contractor's Geotechnical Engineer according to the following requirements:
1. In the general building area, conduct one test for every 2,500 square feet for each two feet of depth.
 2. At wall and trench backfill areas, conduct one test for every 50 lineal feet for each two feet depth.
 3. In all cases, a test is required within the top foot of fill.
 4. Sidewalks - One test for each two-foot lift of each 5,000 sq. ft. of area.
 5. General area of fill - One test for each two-foot lift of each 10,000 sq. ft. of area.

End of Section

SECTION 02 270

SLOPE PROTECTION AND EROSION CONTROL

PART 1 - GENERAL

1.1 SCOPE

- A. Slope protection and erosion control shall be performed on all disturbed areas that the Contractor disturbs outside of concrete or paved areas. Contractor shall stabilize all disturbed areas with permanent grassing (Bermuda Sod or match Sod in-kind to existing condition in homeowner's yards; all other areas need permanent grassing with Bermuda Seed), erosion control matting, and riprap at ends of headwalls. Contractor shall fine grade laydown area at end of project to provide positive drainage to weir inlets and stream buffer as illustrated on the Drawings.
- B. Work described in this section includes the containment of sediment transport, containment and control of all soil erosion and containment and treatment of all pollutants including dust, prior to, during and throughout all construction operations; establishment of permanent vegetative cover on all disturbed areas and continued maintenance of said measures in accordance with sub-paragraph 4 of Part III, paragraph. 3.4 this Section. Work includes removal of all devices at the completion of the project as further described in Part 3.5 of this Section.
- C. Contractor is solely responsible for protection of all adjacent properties and affected downstream properties from encroachment or damage from soil erosion and/or the discharge of pollutants by water, air, or dust to any areas off the project site.
- D. Best Management Practices which are more fully described in the latest edition of the "Manual for Erosion and Sediment Control in Georgia- Vegetative and Structural Best Management Practices (BMPs) for Land Disturbing Activities" as published by the Georgia Soil and Water Conservation Commission shall be employed to stabilize all disturbed areas. The Engineer may require additional measures at no cost to Owner if Contractor is not preventing erosion from leaving the limits of work.

1.2 SUBMITTALS

- A. None required unless additional measures are required by Owner and/or Engineer.

1.3 PROJECT CONDITIONS

- A. Furnish and install all control measures prior to or concurrent with any land disturbance activity. The Contractor is responsible for the initial provision and installation all control

measures and then the continued provision and installation of all measures throughout all construction operations and all sequences of construction operations.

- B. Schedule grading operations to allow permanent erosion control to take place in the same construction season. Avoid or minimize exposure of soils to winter weather. Maintain all controls until vegetative cover has been established.
- C. Construct and maintain temporary control measures until such time as permanent measures are effective in control of erosion, sediment and pollution from the site. Extent of measures shall be responsibility of Contractor.
- D. Stop all erosion, sediment, dust or other pollution from leaving the site and encroaching on downstream or surrounding properties.
- E. Temporary grassing shall be applied to all disturbed areas left idle for 72 hours.
- F. Contractor is responsible for all quantities of all BMPs regardless of if shown on the ESPC. The extent of soil erosion control measures shown on the ESPC should be considered minimum.

1.4 QUALITY CRITERIA

- A. Procedures shall comply with the "Manual for Erosion and Sediment Control in Georgia", latest edition published by the Georgia Soil and Water Conservation Committee." Acquire and keep on-site throughout construction a copy of the latest edition of the "Field Manual for Erosion and Sediment Control in Georgia- Vegetative and Structural Best Management Practices (BMP's) for Land Disturbing Activities" as published by the Georgia Soil and Water Conservation Commission sometimes referred to as the "little green book". The Contractor is required to keep a log book on site documenting his inspection of all BMP's (minimum once/week and within 24 hrs of any storm event) and noting any corrections or modifications. General Contractor must also file a "Notice of Termination" when the site is finally stabilized, and all stormwater management systems have been constructed and have been proven to be functioning in accordance with the Design Concept(s).
- B. Reference the ESPC for any other procedural manuals, publications, permits or other field guidelines required for the Contractor to obtain, understand and utilize in the performance of his work. By reference of same, said materials are made a part of these Specifications.

PART 2 - PRODUCTS

2.1 FILTER FABRIC

- A. Filter fabric for silt fences shall be a 36" Georgia DOT approved pervious sheet of synthetic polymer filaments non-woven from continuous filaments with wire fence backing. Filter fabric shall be of type recommended by its manufacturer for the intended application. The filter fabric shall meet the following requirements:
 1. Minimum average thickness: 30 mil (by ASTM D1777).
 2. Air permeability: 250 to 550 C.F.M./Sq. Ft.
 3. Minimum grab strength: 110 lbs. (by ASTM D1682).

2.2 FILTER STONE

- A. Aggregate filter shall conform to following gradations:

<u>Sieve Size</u>	<u>% by weight passing Square mesh sieve</u>
3"	100
3/4"	20 - 90
No. 4	0 - 20

2.3 STONE FOR EXIT/ENTRANCE PAD

- A. Stone shall comply with ASTM D448 size #1 (1 1/2" to 3 1/2").

2.4 EROSION CONTROL MATTING

- A. All areas of disturbance (slopes greater than 2:1 or as specified): Refer to latest edition of "Manual for Erosion and Sediment Control in Georgia" for changes to the BMP's listed below.
 1. Biodegradable netting impregnated with excelsior wood fiber such as manufactured by "Curlex";
 2. "Ero-Mat" by Verdyol;
 3. "Bon Terra CS2".

2.5 SYNTHETIC POLYMERS

- A. For all newly disturbed, graded or exposed soil surfaces, apply 1.5 gals/acre of approved erosion control polymer. Erosion control polymer is a water-soluble synthetic polyacrylamide polymer suitable to be applied to disturbed soil surfaces where the polymer will chemically bind to fine clay particles and prevent clay from going into solution, such as:
 1. APS 600 Series Silt Stop, as manufactured by Applied Polymer Systems, Norcross, Georgia, Contact Steve Iwinski (678)461-9352.

2. Or approved equal.
- B. Polymer shall be applied utilizing a hydro seeder mix of appropriate seed, fertilizer, lime and mulch for the same acre or without seed/fertilizer/lime/mulch mix.
- C. Follow all manufacturer's instructions and recommendations. Do not mechanically disturb treated areas after application. *(This does not include foot traffic as necessary to install erosion control blanket.)*
- D. Contractor shall furnish and install as necessary a minimum 200 lbs. of erosion control polymer for incidental "touch-up" or point source erosion areas."
- E. Furnish two (2) forms of synthetic polymer:
 1. Emulsion polymer for hydro seeder application with an active strength of 30%.
 2. Powder polymer for hand spreading with an active strength of 95%.

2.6 RIP RAP

- A. Rip Rap shall be granite stone with a minimum weight of one hundred fifty pounds (150 lbs.) per piece.
- B. Place rip rap at both ends of proposed concrete culvert and safety end sections.

PART 3 - EXECUTION

3.1 TEMPORARY EROSION CONTROL DEVICES

- A. Construct temporary sediment barriers of silt fence at all points where surface water flows from construction area bypassing temporary sediment traps if the area is subject to soil erosion; or as otherwise indicated on ESPC or as deemed necessary by inspectors.
- B. Install temporary sediment traps and temporary sediment basins in accordance with the location and details shown on the ESPC. Remove accumulated sediment when they are one-third full of silt continually until permanent vegetative cover is established.
- C. Install construction exit as indicated on ESPC with geotextile fabric underlayment. Maintain to prevent tracking and flow of mud onto public roads.
- D. Construct diversion berms, dikes (2'-0" wide x 1'-6" tall) or ditches at the tops of all slopes or as otherwise indicated on the ESPC. Machine compact these elements and plant temporary seed until permanent vegetative cover can be established.

- E. Maintain temporary barriers until permanent erosion control measures are established. Repair and replace barriers damaged or displaced by construction activity.
- F. Contractor shall clean out and/or adjust temporary sediment basin(s)/facility elevations to specified depth throughout duration of project after stabilization of all disturbed areas. Compact dam of sedimentation basin to minimum 95% Standard Proctor to the grade elevations shown on the ESPC.

3.2 SEDIMENTATION FACILITIES

- A. Construct temporary sedimentation facility prior to or concurrent with rough grading of site. Permanent sedimentation control measures shall be constructed concurrently with fine grading or partial fine grading of site and vegetative stabilization. Direct surface water into completed portions of sedimentation facility.
- B. Maintain temporary sediment traps around at all drainage structures (both on-site and/or off-site) until permanent vegetative cover has been established to prevent washing of sediment into public storm drainage system. Utilize "pigs-in-a-blanket" temporary sediment traps at all completed or partially completed single wing or double wing catch basins, drop inlets and yard inlets.
- C. Flush drainage lines between manholes and drainage structures as required during construction and after establishment of permanent erosion control measures to remove collected debris.
- D. Install rip rap at all locations indicated on the ESPC or other drawings as soon as feasible. It shall be reasonably well-graded granite stone sized from smallest to maximum size specified. Stones smaller than smallest size specified is not permitted. Control gradation of rip rap by visual inspection to assure thickness of rip rap conforms with the contract document requirements. Provide geotextile filter fabric under rip rap.
- E. After land disturbance operations of any kind, survey the sediment facility and determine that sediment volume that is available. If specified volume is not available, disassemble control measures, excavate sediment from facility and install control measures. Dispose of excavated sediment from facility, spread over slopes in accordance with contours shown on the Grading and Drainage Plan and stabilize facility with permanent vegetation. Prepare and submit a certified statement of correct sediment facility volume. Do not dispose of any excavated sediment into any drainage way which might lead said material off-site onto adjacent downstream properties.
- F. The existing creeks and ponds shall not be used in any manner for Erosion, Sediment or Pollution Control measures. Protect same from all erosion, sediment or pollutants of any kind.

3.3 GROUND COVER

- A. Protect all exposed soils with mulching (temporary measure) and vegetative ground cover (permanent measure).
- B. Install "Curlex", "Bon Terra CS2" or "Ero-Mat" by Verdyol blanket on all slopes greater than 3:1 along with vegetative cover unless otherwise indicated on the ESPC.
- C. Temporary Seeding consists of ground cover of temporary plant material on all graded areas which will not receive final grading or permanent planting within three (3) days.
- D. All grassing or planting operations shall include mulching as stabilization until ground cover by planting is effective.
- E. Reseed as required until full vegetative coverage is established.

3.4 MAINTENANCE

- A. Inspect all control elements after each rainfall event and a minimum of every two (2) weeks when no rainfall event(s) occur. Clear all debris and accumulated sediment from behind barriers when half full so their functional capacity is not reduced. Repair and replace any and all damaged measures of any kind.
- B. Maintain all erosion, sedimentation, pollution control measures for delivery of correct pond volume for a period of thirty (30) calendar days.

3.5 REMOVAL OF TEMPORARY EROSION CONTROL DEVICES

- A. As soon as permanent vegetative cover is established, Contractor shall remove temporary devices, including sediment barriers, berms, silt traps and similar devices. Contractor to remove retrofit structure and clean out all accumulated silt and debris in detention ponds to restore finished grades indicated on the ESPC.
- B. Contractor shall remove all excess silt from behind all silt fences and other filter devices and utilize it to repair erosion features if necessary. If silt is not needed for repairs, it shall be removed from the site by the contractor.
- C. Contractor shall remove silt fence in such a manner as to minimize damage to surrounding vegetative cover. All fence fabric, wire and posts shall be removed completely, and removed from the site.
- D. All disturbed areas created by removal of silt fence shall be immediately fine graded, stabilized and seeded with permanent grass to match surrounding areas. All rocks and debris shall be removed from the site. Stabilization of disturbed areas may require the use of a "geo-jute" fabric to prevent erosion and allow for mowing of same area.

Erosion control fabrics with netting that will be entangled in mowers may not be acceptable in areas where mowing will occur. In the event seasonal considerations prevent establishment of permanent grass, Contractor shall establish temporary grass and return the following season to establish permanent grass.

- E. Remove all debris resulting from temporary erosion control from project site.
- F. Control dust from disturbed areas by means of mulching, irrigation, calcium chloride or other method subject to the Civil Engineer's review.
- G. Should site conditions dictate that it is not prudent to remove all temporary erosion control devices at the time of Contractor demobilization; the Contractor must remobilize personnel and equipment to complete removal as soon as conditions allow. The Contractor will be responsible for the complete and timely removal of all temporary erosion control devices as soon as adequate permanent vegetative cover is established.

End of Section

SECTION 02 514

SITE CONCRETE

PART 1 - GENERAL

1.1 SCOPE

- A. The work covered by this section consists of furnishing and installing Portland cement concrete for site improvements which may include concrete storm sewer pipe, concrete storm structures, concrete pavement patches, and any other concrete as indicated in Section 01 000, Project Scope & Performance Specification and on Construction Drawings.

1.2 SUBMITTALS

- A. Submit design mix certified by the testing laboratory to be approved by Owner's Representative and paid for by Owner, for the mix design based on cylinder check tests verifying the design mix.
- B. Submit mill certification certifying that cement, sand, aggregate, reinforcing steel and joint materials comply with the requirements of this Specification.
- C. Submit shop drawings for review prior to placement showing bending and placing details for steel reinforcing including bar sizes, spacings, bending and tagging identification.
- D. Submit complete manufacturer's catalog description of all joint materials and curing/sealing materials.

1.3 PROJECT CONDITIONS

- A. Installation shall comply with all state and local laws, ordinances, rules and regulations.
- B. Contractor shall obtain all required permits prior to start of construction.
- C. Survey and maintain all benchmarks, monuments and other reference points, and if disturbed or destroyed, replace by registered Georgia land surveyor at no cost to Owner.
- D. Provide proper drainage during construction in a manner to prevent damage to the work, adjoining structures and adjoining and downstream property.

- E. Patching parts of a section of work between joints shall not be permitted. Remove and replace entire damaged sections when matching existing work.

1.4 QUALITY CRITERIA

- A. All work and materials shall conform to the applicable standard specifications for roadway construction of the Georgia State Department of Transportation where the construction occurs.
- B. All work shall be performed in accordance with ACI 301.

1.5 GUARANTEE

- A. Site Concrete Contractor to provide Owner's Representative a written guarantee that all work is of good quality, free from faults and defects and in conformance with these Specifications; and that if, within one year after completion and acceptance of the Work, any Work or materials are found to be defective, Contractor will promptly, without cost to Owner, correct such defective Work or materials.

PART 2 - PRODUCTS

2.1 BASE COURSE MATERIALS

- A. Base course shall be constructed of structural fill.

2.2 CONCRETE

- A. Concrete shall be 3,000 psi concrete shall be in compliance with ASTM C94.
- B. Cement shall comply with ASTM C150 normal Type I specifications.
- C. Aggregates shall comply with ASTM C33.
- D. Water shall be potable.
- E. No additives shall be used without prior review of Owner's Representative.

2.3 REINFORCING STEEL

- A. Reinforcing bars and dowels shall conform to ASTM A615, Grade 60, deformed bars with an uncoated finish.

- B. Welded wire fabric shall consist of deformed bars, furnished in flat sheets or coiled rolls with an uncoated finish, and shall conform to ASTM A-185.
- C. Tie wire shall be 16-gauge annealed steel.

2.4 JOINT MATERIALS

- A. Expansion joint filler shall be non-extruding and resilient types conforming to AASHTO M-213 or M153.
- B. Poured joint sealer shall be a hot poured elastic type sealer intended for sealing joints in concrete pavements and shall conform to AASHTO M-173.

2.5 CURING AND SEALING MATERIALS

- A. Curing/sealing compound shall be "CS-309" as manufactured by W. R. Meadows.

2.6 FORM MATERIALS

- A. Form materials shall comply with the requirements of ACI 301.

PART 3 - EXECUTION

3.1 INSPECTION

- A. Prior to placement of base material, installer shall inspect the site grading and ensure that the sub-grade has been properly placed, compacted, and is ready to receive the base material. He shall also determine that all site drainage, piped site utilities, underground electrical and communications conduits have been installed, tested and accepted by Owner's Representative.

3.2 PREPARATION

- A. Contractor shall submit to Owner's Representative for review all materials to be used in the base and pavements.
- B. Contractor shall repair subgrade as necessary to provide uniform surfaces.
- C. Spread base material and compact to 95% Maximum Theoretical Density and within 1/8 inch of required grade.
- D. Check field density with nuclear density device or other method acceptable to Owner's Representative.

- E. Set forms on firm foundation, true to grade and securely fastened in place. No settlement or springing of forms under the finishing machine will be allowed. Top face shall not vary from a true plane by more than 1/8 inch in 10 feet. Vertical sides shall not vary from a true plane by more than 1/4 inch.
- F. Clean and oil all forms prior to use.
- G. Provide work bridges where necessary for finishing, straight edging, making corrections, etc. to surface after concrete has been screeded. Bridges shall be rigidly constructed and easily moveable so that they will not come into contact with the concrete.
- H. Check alignment and grade elevations of forms and obtain approval of preparation and form work from Owner's Representative prior to placement of concrete.

3.3 INSTALLATION OF CONCRETE CULVERT AND DRIVEWAY APRONS

- A. Place reinforcement in accordance with Performance Specification and secure by means of chairs, clips, etc. as necessary.
- B. Excavate drain pockets for all weep holes, if any and fill with coarse aggregate. Provide pipes, sleeves, or formed openings as indicated in Performance Specification.
- C. Place concrete in a manner to avoid segregation. Spread to the full width and depth of forms and bring to grade by screeding and straight edging.
- D. Give aprons a heavy broom finish with smooth trowel edges as shown on the drawings. Final surface shall not vary from a true plane by more than 1/4 inch in 10 ft. Provide sealer for all sidewalks and apply in accordance with manufacturer's recommendations.
- E. Workmanship and appearance shall be of the highest quality.
- F. Provide joints as shown on the Drawings.
- G. Provide proper curing for the sidewalks using liquid curing/sealing compound.
- H. Thoroughly clean all joints immediately prior to sealing and acid and/or pressure wash concrete prior to sealing as directed by Owner's Representative. Apply sealant as soon as possible after required curing period of concrete. Prohibit traffic on sealed surfaces until sealer has cured.

22-0310

SITE CONCRETE

02 514-5

3.4 CLEANING

- A. All concrete shall be acid washed and/or pressure washed at substantial completion by Contractor if required by Owner's Representative to achieve the desired appearance.

End of Section

SECTION 02 547

BITUMINOUS SURFACING

PART 1 - GENERAL

1.1 DESCRIPTION: Work described in this section includes but is not limited to providing full depth asphalt pavement replacement, milling, deep patch asphalt replacement, asphalt tack coats, and asphalt binder course, and surface course as indicated on the Drawings.

1.2 QUALITY ASSURANCE

- A. Reference Specifications: "Georgia Department of Transportation, Standard Specifications for Construction of Transportation Systems" 2021 or latest edition, hereafter referred to as GDOT Standard Specifications.
- B. Requirements of Regulatory Agencies: Comply with applicable codes, ordinances, rules, regulations, and laws of local, municipal, state, or federal authorities having jurisdiction, the Georgia DOT and City of Dacula Development Regulations.
- C. Pavement area shall be inspected by Owner and Owner's Representative. Contractor shall correct any deficiencies in material makeup, strength, or quantities revealed.
- D. Recycled asphaltic concrete must be approved by City of Dacula before it is allowed to be used on any projects for either binder or top course.

1.3 SUBMITTALS

- A. Submit manufacturer's data, reports, and material certifications as required to certify compliance with the specifications.

1.4 JOB CONDITIONS

- A. Grade Control: Establish and maintain required lines and elevations. Minimum slopes leading to catch basins on curb inlets shall not be less than 1" in 8' (1.04%).
- B. Contractor shall build up centerline of road with new asphalt pavement to create new crown in road sloping from centerline to curb & gutter.
- C. Utility Installations: No paving work shall be started until all utility installations which will be covered by pavement have been completed.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. Paving Base Course: Crusher run grade aggregate consistent with the Reference Specifications, Paragraph 3.2 A, compacted to 95 % Proctor. Aggregate shall be crushed stone consisting of hard durable rock fragments free from clay and reasonably free from flat, elongated, or soft pieces of organic matter. It shall be graded 2" and down, if required.
- B. Materials for hot mix asphaltic concrete construction to be as given in Reference Specifications, Paragraph 400.02 of the Georgia D.O.T. Standard Specifications.

1. Materials: Bituminous concrete materials shall meet the following gradation specifications:

<u>SEIVE SIZE</u>	<u>PERCENT Intermediate or Leveling Course (Type "B")</u>	<u>PASSING Surface Course (Top) (Type "F")</u>
1"	100	
3/4"	90 - 100	
1/2"		100
3/8"	40 - 70	90 - 100
No. 4		50 - 85
No. 8	25 - 40	40 - 55
No. 16		
No. 50		
No. 200	0 - 10	0 - 10
Percent Bitumen	4.2 - 7	5.2 - 9.0
Penetration Grade	85 - 100	85 - 100

- C. Asphalt Tack Coat shall be installed between milled section and asphalt binder course and between asphalt binder course and asphalt surface course (0.05 – 0.15 GAL per SY).

PART 3 - EXECUTION

3.1 SUB-GRADE PREPARATION

- A. Contractor shall proof-roll sub-grade in the presence of the Owner prior to installing base course material. The sub-grade if required due to unsuitable materials being present shall be cleared of all rocks, loam, debris, vegetation, roots, and foreign matter, to a depth of 12 inches below its finish grade.

- B. Contractor shall protect the sub-grade from damage and maintain it in a smooth, compact, and rut-free condition until the base course has been placed.

3.2 PAVING BASE COURSE

- A. Paving Base Course shall be constructed of grade aggregate and construction shall be done in accordance with Sections 310.01, 310.03, 310.04 of the Georgia D.O.T. Standard Specifications except that the use of automatically controlled screed equipment will be at Contractor's option.

3.3 BITUMINOUS PAVING

- A. Bituminous paving shall be hot mix asphaltic concrete construction conforming to Sections 400.01, 400.03, 400.04, 400.05, 400.07, 400.08, of the Georgia D.O.T. Standard Specifications except that Section 400.04 shall be modified as follows: The job mix formula shall be submitted by Contractor to Owner's Representative for his approval, and such approval does not relieve Contractor of his responsibilities for adequacy and warranty of the paving.

3.4 BITUMINOUS PRIME

- A. Bituminous prime shall conform to Georgia D.O.T. Standard Sections 412.01, 412.02, 412.03, 412.04 of the Standard Specifications.

3.5 PAVING THICKNESSES SHALL BE AS FOLLOWS

- A. All areas of Asphalt Milling and Repaving for McMillan Road shall receive:

Minimum Thickness

- 1. Asphalt Milling..... 2-1/2"
- 2. Asphalt Tack Coat..... (0.05 – 0.15 gallons per S.Y.)
- 3 'D' Mix (Metro-Flex or equivalent 'D' Mix) Asphalt Course 1"
- 4. Asphalt Tack Coat..... (0.05 – 0.15 gallons per S.Y.)
- 5. Type 1 – 'F' Mix (9.5 mm) Asphalt Surface Course 1-1/2"

- B. All areas of Asphalt Deep Patch Milling and Repaving (only if subgrade or deteriorated pavement warrant additional repair and shall be approved by Engineer and City prior to milling) shall receive:

Minimum Thickness

- 1. Asphalt/Subgrade Deep Patch Milling (in addition to 2-1/2" milling above; 6" milling total)) 3-1/2"

- 2. 25 mm Asphalt Binder Course 3-1/2"
- 3. Asphalt Tack Coat..... (0.05 – 0.15 gallons per S.Y.)
- 4. 'D' Mix (Metro-Flex or equivalent 'D' Mix) Asphalt Course 1"
- 5. Asphalt Tack Coat..... (0.05 – 0.15 gallons per S.Y.)
- 6. Type 1 – 'F' Mix (9.5 mm) Asphalt Surface Course 1-1/2"

C. All areas of Heavy Duty Asphalt Paving for McMillan Road shall receive:

Minimum Thickness

- 1. Graded Aggregate Base..... 10"
- 2. 25 mm Superpave Binder..... 4"
- 3. Asphalt Tack Coat..... (0.05 – 0.15 gallons per S.Y.)
- 4. 19 mm Superpave..... 2"
- 5. Asphalt Tack Coat..... (0.05 – 0.15 gallons per S.Y.)
- 6. Type 1 – 'F' Mix (12.5 mm) Asphalt Surface Course 1-1/2"

D. All areas of Standard Duty Asphalt Paving for McMillan Road shall receive:

Minimum Thickness

- 1. Graded Aggregate Base..... 10"
- 2. 25 mm Superpave Binder..... 4"
- 3. Asphalt Tack Coat..... (0.05 – 0.15 gallons per S.Y.)
- 4. 19 mm Superpave..... 2"
- 5. Asphalt Tack Coat..... (0.05 – 0.15 gallons per S.Y.)
- 6. Type 1 – 'F' Mix (12.5 mm) Asphalt Surface Course 1-1/2"

E. 'D' Mix (Metro-Flex) Asphalt Course or equivalent 'D' Mix is required. Contractor to submit Job Mix Formula to Engineer for review.

F. All asphalt pavement shall have a minimum slope of 1/8" for each 1'. Maintain existing cross slope of all roads. See asphalt details as illustrated on the Drawings.

3.6 ASPHALT PAVEMENT PATCHING, if required:

- A. Asphalt pavement patching shall be performed for those sections of roadway as indicated in the Scope of Work and Performance Specification.
- B. Work includes removing, transporting, and disposing of the removed asphalt pavement material; and cleaning the remaining pavement surface.
- C. All demolished material shall be taken to a State Approved Facility at no additional cost to Owner.

3.7 BITUMINOUS TACK COAT, if required.

- A. Apply asphalt tack coat over concrete base course only if required immediately prior to spreading Asphalt Surface Course materials.
- B. Quantity:
 - 1. Apply from 0.05 to 0.15 gallons per square yard of surface to be covered as directed by Engineer.
 - 2. Emulsified asphalt shall be diluted with an equal part of water.
- C. Application:
 - 1. Apply tack coat by means of a bituminous distributor so that a uniform distribution is obtained at all points.
 - 2. Apply tack coat on each layer of the binder course and allow tack coat to cure before placing the succeeding course.
 - 3. Apply tack coat only as much pavement as can be covered with asphalt aggregate mixture in the same day.

3.8 MAINTENANCE

- A. Contractor shall maintain the wearing surface until approved by Owner.
- B. Contractor shall warrant the paving free of construction defects for a period of one Year after acceptance by Owner.

End of Section

SECTION 02 720

SITE DRAINAGE

PART 1 - GENERAL

1.1 DESCRIPTION

- A. Work described in this section includes, but is not limited to, construction of primary and secondary storm sewer pipe, storm structures, and drainage appurtenances, as indicated in Section 01 000, Project Scope & Performance Specification and on Construction Drawings.

1.2 SUBMITTAL

- A. Product data: Submit for each type of piping material, prefabricated structure, and casting. Indicate product descriptions and installation procedures.
- B. As-Builts: Contractor shall provide Owner with two (2) copies of an "as-built" plan of all storm sewer pipe and structure improvements and any changes to underground utilities (water or gas meter service relocations) illustrating the location of each with dimensions illustrated to the houses, property lines, and/or curb line from each underground utility after construction is complete.
- C. In the event that site drainage structures are not maintained during the construction process to the satisfaction of City of Dacula, an interim as built may be required to establish the extent of deficiencies.
- D. See Section 02 720, 3.3A for As-Built Record Drawings submittals.

1.3 QUALITY ASSURANCE

- A. Industry standards: Standards for the following, as referenced hereinafter.
 - 1. American Society for Testing and Materials (ASTM).
 - 2. American Concrete Institute (ACI).
 - 3. Georgia Department of Transportation, "Standard Specifications for Construction of Transportation Systems" 2021 or latest edition, hereinafter referred to as Georgia D.O.T. Specifications.
 - 4. City of Dacula Development Regulations, Latest Revision.
 - 5. Gwinnett County Development Regulations, Latest Edition.

1.4 GUARANTEE

- A. Contractor shall guarantee the construction of all storm drainage for a period of one (1) year from date of Substantial Completion.

PART 2 - PRODUCTS

2.1 PIPING

- A. Storm drainage pipe is to be of the type, size, class or gauge, and material illustrated in the Project Scope and Performance Specification and as indicated on the Drawings.
- B. High Density Polyethylene Pipe (HDPE) and Reinforced Concrete Pipe (RCP) are to be used for this project as illustrated on the Drawings.
- C. Reinforced concrete pipe, concrete headwalls, concrete storm structures, and safety flared end sections, as illustrated on the Drawings, shall conform to Georgia D.O.T. Standard Specifications.

2.2 CONCRETE, MASONRY AND ACCESSORY MATERIALS

- A. Concrete: 4000 psi compressive strength including form work, reinforcement and finish.
- B. Manhole brick: Meeting ASTM C32-73, Grade MM.
- C. Mortar: Meeting ASTM C270-80, Type M.
- D. Construction castings: Meeting ASTM A48-76, grey cast iron.
- E. Manhole steps: Meeting ASTM A48-76, Class 30B, integrally cast into manhole sidewalls.
- F. Gravel Fill: Meeting Ga. D.O.T. Specifications, Section 800, size #57 stone.
- G. Precast concrete manholes: Meeting ASTM C478-79, concentric cone type.

2.3 REINFORCING STEEL

- A. Reinforcing bars and dowels shall conform to ASTM A615, Grade 60, deformed bars with an uncoated finish.
- B. Welded wire fabric shall consist of deformed bars, furnished in flat sheets or coiled rolls with an uncoated finish, and shall conform to ASTM A-185.
- C. Tie wire shall be 16 gauge annealed steel.

PART 3 - EXECUTION

3.1 CONSTRUCTION OF DRAINAGE SYSTEM

- A. Excavation, filling and compaction for construction of drainage system shall be in accordance with Earthwork Section 02 200.
- B. Inspect piping prior to placing in trenches. Install no defective or damaged piping.
- C. Lay piping beginning at low point of the drainage system with joints lapped upgrade. Lay in proper alignment and to slopes indicated, fully supported on firm subgrade.
- D. Clean interior of piping of dirt and debris as work progresses. Place plugs in the ends of uncompleted piping at the end of each work period. Continue to flush lines between manholes and drainage structures as required to remove collected debris until permanent vegetative cover has been established.
- E. Lengths of storm drainage pipe illustrated in the Project Scope and Performance Specification are approximate distances center to center of structures. Contractor is responsible for all pipe quantities to convey storm drainage to points indicated in accordance with the design concept illustrated.

3.2 DRAINAGE STRUCTURES

- A. Construct catch basins, drop inlets, headwalls and similar structures of reinforced concrete unless otherwise indicated, manholes of masonry, concrete or precast units at Contractor's option.
- B. Provide concrete foundations for manholes and other structures as indicated. All drainage structures shall have paved (mortar) inverts.
- C. Concrete structures shall be reinforced as indicated in the Project Scope and Performance Specification.
- D. All concrete construction shall receive a smooth formed finish in accordance with ACI-301-72 on all surfaces exposed to exterior or interior of structure; rough formed for all unexposed construction.
- E. Moist cure concrete for a minimum of seven days after placing.
- F. Mix mortar with only enough water for workability. Re-tempering of mortar will not be permitted. Keep mortar mixing and conveying equipment clean. Do not deposit mortar upon or permit contact with ground.

- G. Lay masonry in full mortar bed with ends and with full vertical joints, not more than 5/8" wide. Protect fresh masonry from freezing and from too rapid drying.
- H. Apply a 2" thickness mortar parge coating on interior and exterior of masonry walls surfaces.
- I. Set tops of frames and covers of manholes flush with finished surface.
- J. Set drainage gratings to elevations indicated in the Project Scope and Performance Specification.

3.3 AS-BUILT RECORD DRAWINGS

- A. Furnish two (2) sets of reproducible As-built Drawings of all portions of the storm sewer system(s) including the horizontal and vertical locations of all pipe structures, clean out connections and the relationship of storm sewer to all other built items in plan and profile. As-builts shall be prepared and sealed by a Georgia Registered Land Surveyor and shall be considered an accurate representation of the built storm sewer system.

End of Section

SECTION 02 930

LAWNS AND GRASSES

PART 1 - GENERAL

- 1 DESCRIPTION: Work described in this section consists of the establishment of grassing of 100% of all areas disturbed by driveway apron replacement, ditch regrading, storm sewer pipe installation, yard regrading, storage of equipment, except the area covered by paving or those areas designated for other plant materials as indicated in Section 01 000, Project Scope & Performance Specification and on Construction Drawings.

PART 2 - PRODUCT

- 2.1 FERTILIZER: Fertilizer shall be 19-19-19 grade, uniform in composition, free-flowing for application with spreading equipment, delivered to the site in bags or other containers, each fully labeled, conforming to the State fertilizer laws, and bearing the name, trade name, or trade-mark, and warranty of the producer. Engineer shall be furnished with duplicate copies of invoices for all fertilizer used on the project.
- 2.2 LIME: Ground limestone containing not less than 85% carbonates; 50% passing 100 mesh sieve and 90% passing 20 mesh sieves.
- 2.3 GRASS SEED: Shall be labeled in accordance with U.S. Department of Agriculture Rules and Regulations under the Federal Seed Act in effect on the date of Invitation of Bids. Seed shall be furnished in sealed standard containers, unless exception is granted in writing by Engineer. Seed which has become wet, moldy, or otherwise damaged in transit or in storage will not be acceptable. Seed shall be guaranteed 92% germination.
 - A. Kentucky 31 Fescue (*Fescuta Elatior*). Seed: Fresh, clean, new seed testing 98% for purity and 85% for germination. September 15 - May 15.
 - B. Common Bermuda (*Cynolon Dactylon*) Seed: Fresh, hulled, clean, new seed testing 98% for purity and 85% for germination. May 15 - September 15.
- 2.4 SOD: Sod replacement is required in all yards, ditches, and swales that are regraded for storm sewer pipe installation and other fine graded areas within Property Owners yards. Contractor shall replace Sod with Bermuda or match in-kind with and match existing condition. All other permanent grassing shall be Bermuda Seed.
- 2.5 WATER: Water used in this work shall be suitable for irrigation and free from ingredients harmful to plant life. Furnish hose and other watering equipment required for the work.

- 2.6 HYDROMULCH: Wood cellulose fiber containing no germination inhibiting or growth inhibiting agents. Characteristics shall be as follows:
- A. Percent moisture content: 9.0% ($\pm 3, 0\%$).
 - B. Percent organic mater: 99.2% ($\pm 0.8\%$).
 - C. Percent ash content: 0.8% ($\pm 0.2\%$).
 - D. pH: 4.8 (± 0.5).
 - E. Water holding capacity: 150 grams water/100 grams fiber, minimum.

PART 3 - EXECUTION

- 3.1 FERTILIZER: Fertilizer shall be distributed uniformly at a rate of 800 pounds per acre, plus 1 ton agricultural lime per acre two (2) days prior to seeding, over the areas to be grassed, and shall be incorporated into the soil to a depth of at least 3 inches by disking or harrowing. The incorporation of fertilizer may be part of the tillage operation specified above. Undulations in the surface as a result of tillage or fertilizing shall be smoothed.
- 3.2 Approximately 4 weeks after seeding and when grass coverage has been established, apply 1 to 1 ½ pounds of ammonium nitrate per 1,000 square ft. to all seeded areas and immediately water using a fine spray. At the end of the maintenance period and prior to final inspection, apply 10 lbs. of specified fertilizer per 1,000 sq. ft. and water immediately.
- 3.3 SEED: Seed shall be Fescue or Bermuda. Method of seeding shall be hydro seeding or broadcast at Contractor's option; however, the method selected shall be a part of his erosion control plan.
- 3.4 BROADCAST SEEDING:
- A. If conditions are such, by reason of drought, high winds, excessive moisture, or other factors, that satisfactory results are not likely to be obtained, Contractor shall stop the work, and work shall be resumed only when conditions are favorable again or when approved alternate or corrective measures and procedures have been put into effect. If inspection during seeding operations or after there is a show of green indicates that strips have been left, or skipped, Contractor shall sow additional seed on these areas.

- B. Seeding shall be at the rate of 10 pounds per 1,000 sq. ft. for Fescue or 5 pounds per 1,000 sq. ft. for Bermuda.
 - C. Seed shall be broadcast either by hand or approved sowing equipment. The seed shall be uniformly distributed with the sower moving in one direction, and the remainder shall be sown with the sower moving at right angles to the first sowing. The seed shall be covered to an average depth of 1/4 inch by means of a brush harrow, spike-tooth harrow, chain harrow, cultipacker, or other approved device.
- 3.5 HYDROSEEDING: Apply seed/fertilizer/hydro mulch mixture in water slurry. Dispense using hydraulic mulching equipment in following minimum quantities:
- A. Fertilizer: 130 lbs./acre.
 - B. Fescue Seed: 300 lbs./acre/Bermuda seed 150 pound/acre.
 - C. Hydromulch: 1500 lbs./acre.
- 3.6 SOD: All disturbed areas for this project shall be permanent stabilized with Bermuda Sod or Sod which matches in-kind to the existing condition. Areas shall be fine graded smooth with surrounding existing condition and prepped for Sod installation per sod manufacturer's recommendation. All disturbed areas shall be raked free of rocks and debris over 1/2" in diameter.
- 3.6 COMPACTION: Immediately after the seeding operations specified above have been completed, the entire area shall be compacted by means of a cultipacker, roller, or other approved equipment weighing 60 to 90 pounds per linear foot of roller. If the soil is of such type that a smooth or corrugated roller cannot be operated satisfactorily, a pneumatic roller shall have tires of sufficient size so that complete coverage of the soil surface is obtained. When a cultipacker or similar equipment is used, the final rolling shall be at right angles to the prevailing winds to prevent dust.
- 3.7 CLEAN-UP: Remove from the site and dispose of all debris and foreign material. During the grassing operations, debris shall not be dumped on any part of the property or on any unauthorized placed.
- 3.8 MAINTENANCE:
- A. Contractor shall be responsible for establishment and proper care of the grassed areas during the period when the grass is becoming established and until final acceptance by Owner.
 - B. Maintenance shall consist of watering, weeding, repair of any erosion and reseeded as necessary to establish a 100% uniform stand of grass and shall continue until acceptance.

- C. All seeded areas that do not show satisfactory growth within 18 days after seeding shall be re-seeded and re-fertilized as directed until a satisfactory lawn is established. Full coverage is required in 60 days.
 - D. All lawn areas shall be protected until acceptance. All eroded and damaged areas, regardless of cause, shall be immediately repaired and reseeded. Protect all lawn areas from pedestrian or vehicular traffic.
- 3.9 GUARANTEE AND ACCEPTANCE:
- A. All disturbed areas must be 100% covered and final stabilized with 80% grassing established.

End of Section

SECTION 02 933

TEMPORARY SEEDING

PART 1 – GENERAL

1.1 SCOPE

- A. The work covered by this section consists of the establishment of a temporary vegetative cover on all disturbed areas caused by driveway apron replacement, culvert replacement, storm sewer pipe installation, regrading for ditch and yards, or storage of equipment by seeding with appropriate rapidly growing grass seed. Temporary seeding shall be provided for all exposed soil surfaces that are not to be fine graded or landscaped within 30 days after fine grading.

1.2 PROJECT CONDITIONS

- A. Protect all adjacent public and private property from siltation and other damage due to construction activities with silt dams or fences as indicated on the drawings.
- B. Temporary seeding shall be applied to any, and all disturbed areas left idle for two weeks and shall be applied no later than the 15th calendar day from last land disturbance activity. (ie. clearing, grubbing, or grading).

1.3 QUALITY CRITERIA

- A. Installation shall be in strict compliance with the rules and regulations of the local seed laws.
- B. Installation shall comply with all applicable codes, rules, regulations, and ordinances related to erosion control and temporary seeding.

PART 2 – PRODUCTS

2.1 TEMPORARY SEED

- A. Select temporary grass seed appropriate to the season and site conditions. Temporary grass shall be a quick growing species such as millet, rye grass, Italian rye grass or cereal grasses suitable to the area providing a temporary cover which will not later compete with grasses sown for permanent cover. Seed shall meet the requirements of the rules and regulations of the Georgia Seed Law.

2.2 LIME

- A. Provide agricultural grade ground or pulverized limestone. Lime shall contain not less than 85% carbonates with 50% passing a 100 mesh sieve. Lime shall have tested values of 90% minimum germination and 1% maximum weed content.

2.3 FERTILIZER

- A. Provide standard commercial grade fertilizer, either 4-12-12, 6-12-12 or 5-10-15 as required for conditions.

PART 3 – EXECUTION

3.1 SEED-BED PREPARATION

- A. Where soils are known to be highly acid (pH 5.5 and lower), apply lime at the rate of two (2T) tons per acre (1#/10 s.f.).
- B. Apply fertilizer at a rate of 450 lbs./acre (10 #/1,000 s.f.). Lime and fertilizer shall be incorporated into the top two (2") to four (4") inches of the soil by tilling.
- C. Loosen ground surface by discing, raking or harrowing. If the area has been recently loosened or disturbed, no further roughening shall be required. Remove all large clods, boulders and debris which will interfere with the work. Remove all stones two (2") inches and larger in any given dimension.

3.2 SEEDING

- A. Apply seed evenly with a cyclone seeder, drill, cultipacker seeder or hydroseeder. Small grains shall be planted no more than one inch deep. Grasses and legumes shall be planted no more than 1/4 inch deep. Distribution by hand shall not be permitted.

3.3 ROLLING

- A. Roll all seeded areas before applying mulch. On steep slopes cover seeds by dragging spiked chains or similar methods.

3.4 MULCHING

- A. All seeding in fall for winter cover shall be mulched. Seedings on slopes 4:1 or greater, on adverse soil conditions and in excessively hot or dry weather shall also be mulched.
- B. Mulch shall be straw or hay spread at the rate of approximately two tons/acre, wood cellulose fiber applied at the rate of approximately 1500 lbs./acre. Bituminous treated mulch shall be used on all slopes steeper than 2:1.
- C. Seedings made during optimum spring and summer seeding dates, with favorable soil and site conditions shall not require mulch if written permission is received by Engineer.

3.5 WATERING

- A. Provide watering as required to establish and maintain healthy vegetative cover.

3.6 RESEEDING

- A. Reseed and provide straw cover for bare areas 1 s.f. and larger to establish and maintain vegetative cover and to prevent sheet and rill erosion. Repair erosion damage as required and reseed.

End of Section

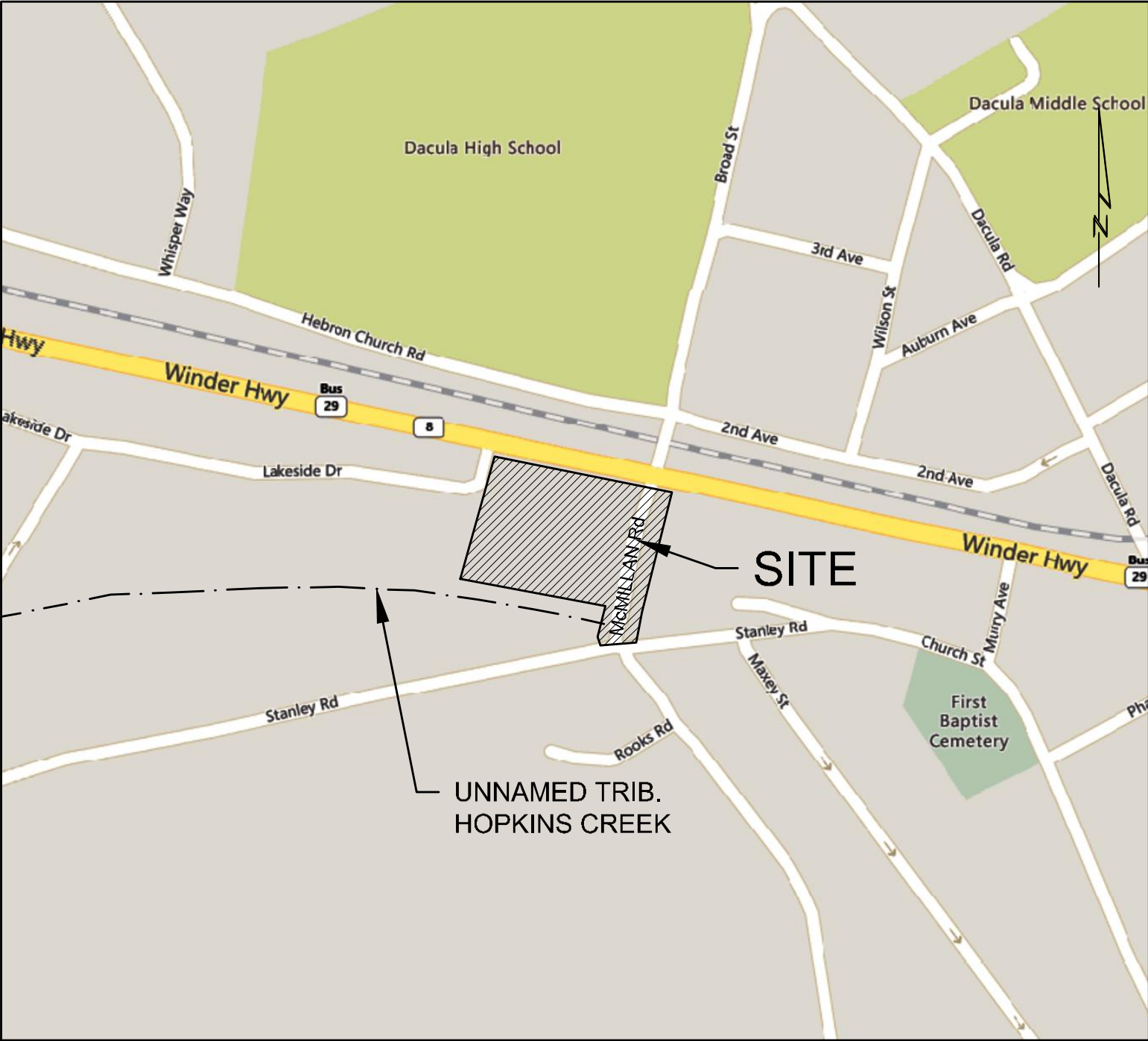
APPENDIX

for

City of Dacula

“McMillan Road Stormwater Project” Project

- Location Map
- Reference **“McMillan Road Stormwater Project”** Drawings dated 06-24-2022



VICINITY MAP

NOT TO SCALE

STATE OF GEORGIA

COUNTY OF GWINNETT

**INTERGOVERNMENTAL AGREEMENT FOR USE AND DISTRIBUTION OF
PROCEEDS GENERATED BY THE 2022 SPECIAL PURPOSE LOCAL OPTION
SALES TAX REFERENDUM**

THIS AGREEMENT is made and entered into this _____ day of July, 2022 by and between **GWINNETT COUNTY, GEORGIA**, a political subdivision of the State of Georgia headquartered at 75 Langley Drive, Lawrenceville, Georgia 30046 (hereinafter referred to as “**County**”); the **CITY of AUBURN**, a municipal corporation chartered by the State of Georgia and headquartered at 1369 Fourth Avenue, Auburn, Georgia (hereinafter referred to as “**Auburn**”); the **CITY OF BERKELEY LAKE**, a municipal corporation chartered by the State of Georgia and headquartered at 4040 S. Berkeley Lake Road NW, Berkeley Lake, Georgia (hereinafter referred to as “**Berkeley Lake**”); the **TOWN OF BRASELTON**, a municipal corporation chartered by the State of Georgia and headquartered at 4982 Highway 53, Braselton, Georgia (hereinafter referred to as “**Braselton**”); the **CITY OF BUFORD**, a municipal corporation chartered by the State of Georgia and headquartered at 2300 Buford Highway, Buford, Georgia (hereinafter referred to as “**Buford**”); the **CITY OF DACULA**, a municipal corporation chartered by the State of Georgia and headquartered at 442 Harbins Road, Dacula, Georgia (hereinafter referred to as “**Dacula**”); the **CITY OF DULUTH**, a municipal corporation chartered by the State of Georgia and headquartered at 3167 Main Street, Duluth, Georgia (hereinafter referred to as “**Duluth**”); the **CITY OF GRAYSON**, a municipal corporation chartered by the State of Georgia and headquartered at 475 Grayson Parkway, Grayson, Georgia (hereinafter referred to as “**Grayson**”); the **CITY OF LAWRENCEVILLE**, a municipal corporation chartered by the State

of Georgia and headquartered at 70 South Clayton Street, Lawrenceville, Georgia (hereinafter referred to as “**Lawrenceville**”); the **CITY OF LILBURN**, a municipal corporation chartered by the State of Georgia and headquartered at 340 Main Street, Lilburn, Georgia (hereinafter referred to as “**Lilburn**”); the **CITY OF LOGANVILLE**, a municipal corporation chartered by the State of Georgia and headquartered at 4385 Pecan Street, Loganville, Georgia (hereinafter referred to as “**Loganville**”); the **CITY OF NORCROSS**, a municipal corporation chartered by the State of Georgia and headquartered at 65 Lawrenceville Street, Norcross, Georgia (hereinafter referred to as “**Norcross**”); the **CITY OF PEACHTREE CORNERS**, a municipal corporation chartered by the State of Georgia and headquartered at 147 Technology Parkway, Suite 200, Peachtree Corners, Georgia (hereinafter referred to as “**Peachtree Corners**”); the **CITY OF REST HAVEN**, a municipal corporation chartered by the State of Georgia and headquartered at 428 Thunder Road, Buford, Georgia (hereinafter referred to as “**Rest Haven**”); the **CITY OF SNELLVILLE**, a municipal corporation chartered by the State of Georgia and headquartered at 2342 Oak Road, Snellville, Georgia (hereinafter referred to as “**Snellville**”); the **CITY OF SUGAR HILL**, a municipal corporation chartered by the State of Georgia and headquartered at 5039 West Broad Street, Sugar Hill, Georgia (hereinafter referred to as “**Sugar Hill**”); and the **CITY OF SUWANEE**, a municipal corporation chartered by the State of Georgia and headquartered at 330 Town Center Avenue, Suwanee, Georgia (hereinafter referred to as “**Suwanee**”); each of which has been duly authorized to enter into this Agreement.

WITNESSETH

WHEREAS, the parties to this Agreement consist of Gwinnett County and all Municipalities (hereinafter referred to as “Cities,”) located wholly or partially within Gwinnett County, Georgia; and

WHEREAS, the parties anticipate that Gwinnett County will approve and sign a Resolution authorizing the Gwinnett County Board of Registrations and Elections to call a Referendum on the issue of the imposition of a Special Purpose Local Option Sales Tax for a period of six (6) years commencing on April 1, 2023, immediately following the expiration of the Special Purpose Local Option Sales Tax presently in effect in Gwinnett County; and

WHEREAS, the law authorizing the call of a Referendum on the issue of the imposition of a Special Purpose Local Option Sales Tax was amended during the 2004 Legislative Session of the Georgia General Assembly; and

WHEREAS, Official Code of Georgia Annotated Section 48-8-115 now authorizes the execution of an Intergovernmental Agreement controlling the distribution and use of Special Purpose Local Option Sales Tax proceeds by the County and one or more qualified municipalities located within the Special District containing a combined total of not less than fifty percent of the aggregate municipal population located within the Special District; and

WHEREAS, for the purposes of this Intergovernmental Agreement and the distribution of proceeds for the period from April 1, 2023 through March 31, 2029 Special Purpose Local Option Sales Tax, the Special District shall be known as the boundaries of Gwinnett County; and

WHEREAS, the sixteen Cities located wholly or partially within Gwinnett County have certified they are qualified municipalities based upon the Official Code of Georgia Annotated and are eligible to receive distributions of Special Purpose Local Option Sales Tax Proceeds; and

WHEREAS, the County and all Cities located wholly or partially within Gwinnett County have determined that it is in their best interest to enter into an Intergovernmental Agreement authorized by Official Code of Georgia Annotated Sections 48-8-110 et seq.; and

WHEREAS, the parties hereto are interested in serving the needs of the residents of Gwinnett County by planning and performing capital outlay projects within the County and Cities which are parties to this Agreement; and

WHEREAS, the parties intend that the capital outlay projects which are the subject of this Agreement shall benefit residents of Gwinnett County and all of its Cities; and

WHEREAS, capital outlay projects funded from past Special Purpose Local Option Sales Tax proceeds have benefited residents of Gwinnett County and all of its Cities, and

WHEREAS, past Special Purpose Local Option Sales Tax proceeds have allowed Gwinnett County to purchase an unprecedented number of acres of land for parks and greenspace; and

WHEREAS, past Special Purpose Local Option Sales Tax proceeds have funded new libraries, public safety facilities, and road improvements to serve the needs of the County's residents and businesses; and

WHEREAS, the County and all Cities located within Gwinnett County have worked together to improve the County's infrastructure as a result of the collection of past Special Purpose Local Option Sales Tax proceeds; and

WHEREAS, the County and all its Cities have identified capital needs that are important to the current and future well-being of their residents and have determined that proceeds from the Special Purpose Local Option Sales Tax should be used to address a portion of these needs;

NOW, THEREFORE, in consideration of the mutual promises and understandings herein made and for other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the parties hereto do consent and agree as follows:

1.

This Intergovernmental Agreement is approved prior to the issuance of the call of the Referendum and prior to the vote of the Gwinnett County Board of Commissioners to reimpose a Special Purpose Local Option Sales Tax which Tax will commence on April 1, 2023, and continue through and including March 31, 2029, pursuant to Official Code of Georgia Annotated Sections 48-8-110 et seq.

2.

Pursuant to Official Code of Georgia Annotated § 48-8-115, one percent (1.0%) of the amount of Special Purpose Local Option Sales Tax proceeds collected beginning April 1, 2023, shall be paid into the General Fund of the State of Georgia Treasury in order to defray the costs of administration.

3.

The remaining ninety-nine percent (99.0%) of the amount collected from the Special Purpose Local Option Sales Tax proceeds (hereinafter known as the “net proceeds”) collected beginning April 1, 2023 and ending March 31, 2029, shall be distributed by the State of Georgia to the Gwinnett County Board of Commissioners for distribution as provided herein.

(A) To facilitate the distribution of net proceeds, the parties agree that the sum of One Billion, Three Hundred Fifty Million Dollars (\$1,350,000,000.00) shall represent an estimate of the proceeds to be derived from the subject Special Purpose Local Option Sales Tax during its six-year term.

(B) The parties agree that the County shall receive proceeds in the estimated amount of Twelve Million Five Hundred Thousand Dollars (\$12,500,000.00) for the construction of a Level I County-Wide Project (the “Level I Project”) consisting of courthouse facility renovations. The parties further agree the Level I Project shall be fully funded, based on the actual cost of construction, prior to the calculation of distributions to the Cities and County for all other projects funded pursuant to this Agreement. Until the Level I Project has been fully funded, the County shall receive an amount equal to 5.612% of the net proceeds on a monthly basis for the Level I Project. The County agrees that it will notify each of the Cities in writing promptly after the Level I Project has been fully funded.

(C) The parties agree that the aggregated total distribution received by the Cities shall be calculated after the Level I Project has been fully funded and shall be based on the ratio that the population of all incorporated areas within Gwinnett County (241,547) bears to the total population of Gwinnett County (964,540). The parties further agree the aggregated total distribution received by the Cities shall amount to twenty-five and four hundred-twenty nine ten thousandths percent (25.0429%) of the net proceeds distributed by the State less the cost to fully fund the Level I Project, with the remaining seventy-four and nine thousand five hundred seventy-one ten thousandths percent (74.9571%) of the net proceeds, less the cost to fully fund the Level I Project, to be received by the County.

(D) The Cities agree that their portion of the aggregated total distribution to the Cities shall be allocated on the basis of the ratio that the population each City bears to the total population of all incorporated areas within Gwinnett County. For purposes of calculating the distribution share for each City, population figures from the Population Table below shall be utilized.

POPULATION TABLE

City	Population in Gwinnett County
Auburn	238
Berkeley Lake	2,051
Braselton	4,161
Buford	14,894
Dacula	7,008
Duluth	31,864
Grayson	4,679
Lawrenceville	30,516
Lilburn	15,168
Loganville	3,267
Norcross	17,642
Peachtree Corners	42,108
Rest Haven	21
Snellville	20,753
Sugar Hill	25,259
Suwanee	21,918
Total	241,547

(E) Based upon above provisions, the net proceeds of the Special Purpose Local Option Sales Tax which the County receives on a monthly basis from the State shall be distributed to the Cities and the County in such a way that each jurisdiction receives an amount equal to the percentage shown for it in the table below:

(TABLE ON FOLLOWING PAGE)

DISTRIBUTION OF NET PROCEEDS TO CITIES TABLE

Jurisdiction	Percentage of Net Proceeds- Before Level One Project Fully Funded	Percentage of Net Proceeds- After Level One Project Fully Funded
Gwinnett County- Level One Project	5.6120%	0.0000%
Auburn	0.0233%	0.0247%
Berkeley Lake	0.2007%	0.2126%
Braselton	0.4072%	0.4314%
Buford	1.4575%	1.5442%
Dacula	0.6858%	0.7266%
Duluth	3.1181%	3.3035%
Grayson	0.4579%	0.4851%
Lawrenceville	2.9862%	3.1638%
Lilburn	1.4843%	1.5726%
Loganville	0.3197%	0.3387%
Norcross	1.7265%	1.8291%
Peachtree Corners	4.1206%	4.3656%
Rest Haven	0.0021%	0.0022%
Snellville	2.0309%	2.1516%
Sugar Hill	2.4718%	2.6188%
Suwanee	2.1449%	2.2724%
Gwinnett County (Unincorporated)	70.7505%	74.9571%

(F) Except to the extent necessary to fully fund the Level I Project, no projects will be given preference in the funding and distribution process in such a way that the monthly distribution formula is affected.

(G) Should any City cease to exist as a legal entity prior to all funds being distributed under this Agreement, such City's share of the funds subsequent to dissolution shall be paid to the County as part of the County's share unless an act of the Georgia Legislature makes all of the defunct City part of another successor City. If such an act is passed, the defunct City's remaining share shall be paid in addition to all other funds to which such successor City would otherwise be entitled.

(H) The County will pay the funds described herein to each City, based upon the actual net proceeds received and the percentages outlined above, within thirty (30) days after funds have been received from the State.

4.

The capital outlay projects to be funded from the proceeds of the Special Purpose Local Option Sales Tax pursuant to this Agreement and the estimated dollar amounts allocated for each project category are as follows:

<u>Gwinnett County</u>	Estimated Total		\$1,004,932,004
Level I Project (Courthouse Facility Renovation)		\$ 12,500,000	
Animal Welfare Facility Renovation		\$ 5,170,000	
Fleet Management Facility Expansion		\$ 4,360,000	
Public Safety Facilities & Equipment		\$ 133,930,000	
Recreational Facilities & Equipment		\$ 108,000,000	
Senior Service Facilities		\$ 4,700,000	
Transportation (roads, streets, bridges, and related facilities & equipment)		\$ 736,272,004	
<u>City of Auburn</u>	Estimated Total		\$327,028
Recreational Facilities and Equipment		\$ 191,970	
Transportation Roads, Streets, and Sidewalks		\$ 63,990	
Storm Water		\$ 63,990	
<u>City of Berkeley Lake</u>	Estimated Total		\$2,814,824
Administrative Facilities		\$ 70,371	
Public Safety Facilities & Equipment		\$ 168,889	
Recreational Facilities & Equipment		\$ 70,371	
Transportation (roads, streets, bridges, and related facilities & equipment)		\$ 2,505,193	

<u>Town of Braselton</u>	Estimated Total		\$5,711,736
Transportation (roads, streets, bridges, sidewalks, storm water and related facilities & equipment)	\$	3,826,863	
Parks, Trails & Recreational Facilities & Equipment	\$	1,884,873	
<u>City of Buford</u>	Estimated Total		\$20,445,208
Transportation (roads, streets, bridges, and related facilities & equipment)	\$	20,445,208	
<u>City of Dacula</u>	Estimated Total		\$9,620,184
Administrative Facilities	\$	4,617,688	
Public Safety Facilities & Equipment	\$	288,606	
Recreational Facilities & Equipment	\$	192,224	
Transportation (roads, streets, bridges, drainage sidewalks, storm water and related facilities & equipment)	\$	3,078,458	
Water & Sewer Capital Improvements	\$	1,443,208	
<u>City of Duluth</u>	Estimated Total		\$43,738,340
Transportation (roads, streets, bridges, and related facilities & equipment)	\$	20,195,302	
Parking Facilities	\$	1,111,097	
Public Safety Facilities & Equipment	\$	6,111,034	
Sewer	\$	4,444,389	
Recreational Facilities & Equipment	\$	7,999,900	
Administrative Facilities	\$	3,343,291	
Cultural Facilities	\$	533,327	
<u>City of Grayson</u>	Estimated Total		\$6,422,724
Recreational Facilities & Equipment	\$	1,605,681	
Transportation (roads, streets, bridges, and related facilities & equipment)	\$	4,817,043	
<u>City of Lawrenceville</u>	Estimated Total		\$41,888,712
Cultural/Civic Facilities	\$	2,500,000	
Parking Facilities	\$	8,500,000	
Recreational Facilities	\$	2,500,000	
Roads, Streets & Bridges	\$	20,500,000	
Utility Infrastructure	\$	3,700,000	

<u>City of Lilburn</u>	Estimated Total		\$20,821,224
Public Safety Facilities & Equipment		\$ 1,873,910	
Recreational Facilities & Equipment		\$ 4,372,457	
Transportation (roads, streets, bridges, and related facilities & equipment)		\$ 14,574,857	
<u>City of Loganville</u>	Estimated Total		\$4,484,388
Public Safety Facilities and Equipment		\$ 600,000	
Recreational Facilities & Equipment		\$ 750,000	
Transportation (roads, streets, bridges, and related facilities & equipment)		\$ 2,559,746	
Water & Sewer Capital Improvements		\$ 500,000	
<u>City of Norcross</u>	Estimated Total		\$24,217,284
Administrative Facilities and Equipment		\$ 7,265,185	
Recreational Facilities & Equipment		\$ 3,632,593	
Transportation (roads, streets, bridges, Parking and related facilities & equipment)		\$ 13,319,506	
<u>City of Peachtree Corners</u>	Estimated Total		\$57,800,544
Transportation (roads, streets, bridges, and related facilities and equipment)		\$ 42,800,544	
Administrative Facilities		\$ 5,000,000	
Capital Outlay		\$ 10,000,000	
<u>City of Rest Haven</u>	Estimated Total		\$29,128
Transportation (roads, streets, bridges, and related facilities & equipment)		\$ 29,128	
<u>City of Snellville</u>	Estimated Total		\$28,487,184
Transportation (Roads, Streets, Bridges, Sidewalks, Etc.)		\$ 7,000,000	
General Obligation Debt Retirement		\$ 10,000,000	
Capital Projects – Recreation		\$ 10,000,000	
Capital Projects – Water and Sewer		\$ 1,528,840	
<u>City of Sugar Hill</u>	Estimated Total		\$34,672,912
Cultural Facilities		\$ 5,000,000	
Recreational Facilities & Equipment		\$ 7,000,000	
Transportation (roads, streets, bridges, and related facilities & equipment)		\$ 12,570,000	

Administrative Facilities	\$ 3,000,000
Public Safety Facilities and Equipment	\$ 2,000,000
Parking Facilities	\$ 5,100,000

<u>City of Suwanee</u>	Estimated Total	\$30,086,576
Public Safety Facilities & Equipment	\$ 15,000,000	
Recreational Facilities & Equipment	\$ 2,500,000	
Transportation	\$ 8,500,000	
Capital Outlay	\$ 4,086,576	

5.

The priority and order in which Special Purpose Local Option Sales Tax projects will be fully or partially funded is as follows: The Level I Project shall receive first priority in the overall allocation of Special Purpose Local Option Sale Tax proceeds, and all other projects shall be funded concurrently.

6.

The Special Purpose Local Option Sales Tax which is the subject of the November 8, 2022 Referendum shall continue for a period of six years from April 1, 2023 until March 31, 2029.

7.

All capital outlay projects included in this Intergovernmental Agreement shall be funded in whole or in part from proceeds from the Special Purpose Local Option Sales Tax authorized by Official Code of Georgia Annotated Sections 48-8-110 et seq. except as otherwise agreed.

8.

The parties acknowledge that the County may issue general obligation debt in conjunction with the imposition of the Special Purpose Local Option Sales Tax (hereinafter referred to as the “debt”). To authorize the issuance of the debt, the Resolution authorizing the call of a Referendum on the issue of the imposition of a Special Purpose Local Option Sale Tax and the Referendum

ballot shall contain the information and language required by state law. The Cities are not issuing any bonds or other indebtedness associated with this Agreement.

The debt may be issued by the County in whole or in part and in one or more series for the purposes of funding a portion of the County projects specified in paragraph 4 of this Agreement, paying any capitalized interest, and paying all or a portion of the costs of issuing the debt. The County acknowledges that it is solely responsible for all facets of the debt issuance and payment of the debt, including any and all costs, interest, and fees associated therewith. The debt shall be paid first from the County's portion of the net proceeds. In the event that there are insufficient Special Purpose Local Option Sales Tax collections to pay the debt from the County's portion of the net proceeds, the County shall pay any shortfall attributable to the debt from the general funds of the County, will exercise its power of taxation to the extent necessary to timely pay the debt, and will make available and use for such payments all taxes levied and collected for that purpose together with funds received from any other source. The obligation of the County to make any payments with respect to the debt that may be required to be made from its general funds shall constitute a general obligation of the County and a pledge of the full faith and credit of the County to provide the funds required to timely fulfill any such obligation.

9.

The net proceeds from the Special Purpose Local Option Sales Tax shall be maintained in the parties' separate accounts and utilized exclusively for the purposes specified in this Agreement. Proceeds over and above the amount estimated in the Referendum question shall be allocated in accordance with the percentages set forth in this Agreement and shall be used solely for the purposes listed herein. Each jurisdiction shall expend its portion of excess proceeds from the 2023

Special Purpose Local Option Sales Tax Program on the categories of projects outlined in paragraph 4 of this Agreement.

10.

The parties acknowledge that Special Purpose Local Option Sales Tax funds are not guaranteed. Proceeds under the amount estimated in the Referendum question shall be allocated in accordance with the percentages set forth in this Agreement and shall be used solely for the purposes listed herein.

11.

At the end of each party’s fiscal year wherein proceeds from the Special Purpose Local Option Sales Tax are distributed, each party shall cause an audit of the distribution and use of its portion of the net proceeds from the Special Purpose Local Option Sales Tax to be completed. Each party to this Agreement shall pay the cost of each such annual audit that it conducts. Each party shall publish each of its annual audits as required by law.

12.

In addition to the audit required by paragraph 11 of this Agreement, at the end of each calendar year wherein proceeds from the Special Purpose Local Option Sales Tax are distributed, all parties to this Agreement shall participate in a joint annual audit of the entire Special Purpose Local Option Sales Tax program approved by the voters during the November 8, 2022 Referendum. The purpose of this joint annual audit is to ensure compliance with the Resolution that resulted in the call of the Special Purpose Local Option Sales Tax Referendum. The County, as the governmental entity that will receive the largest share of Special Local Option Sales Tax proceeds, shall choose the auditor to conduct the annual audit, and each party to this Agreement

shall pay the cost of such audit based upon such party's percentage of Special Local Option Sales Tax proceeds allocated pursuant to this Agreement.

13.

Each party to this Agreement shall maintain thorough and accurate records concerning receipt of Special Purpose Local Option Sales Tax proceeds and expenditures for each project to be undertaken by the respective City or County as described herein.

14.

Not later than 180 days following the close of a party's fiscal year, that party shall publish annually, in a newspaper of general circulation in the boundaries of such party and in a prominent location on such party's website, a simple nontechnical report which shows the following for each project or purpose outlined in this Agreement:

- A. Current estimated cost if it is not the original estimated cost.
- B. Amounts expended in prior years.
- C. Amounts expended in the current year.
- D. Any excess proceeds which have not been expended for a project or purpose.
- E. Estimated completion date, and the actual completion cost of a project completed during the current year.
- F. For road, street, and bridge purposes, such information shall be in the form of a consolidated schedule of the total original estimated cost, the total current estimated cost if it is not the original estimated cost, and the total amounts expended in prior years and the current year for all such projects and not a separate enumeration with respect to each individual road, street, or bridge project.

G. A statement of what corrective action the City or County intends to implement with respect to each project which is underfunded or behind schedule.

15.

The parties shall establish a Citizen Review Committee within ninety (90) days of the November 8, 2022 Referendum, if such Referendum is approved by the electors of Gwinnett County. The Citizen Review Committee shall receive and review periodic status reports concerning all projects to be funded from the net proceeds of the 2023 Special Purpose Local Option Sales Tax Program. The County Administrator and City Managers or City Administrators, as applicable, of the parties to this Agreement shall determine the appropriate number of members and shall establish procedures by which the Committee shall operate. The County Administrator and City Managers or City Administrators shall also determine the length of time during which the Committee shall continue to operate.

16.

This Agreement constitutes all of the understandings and agreements of whatsoever nature or kind existing between the parties with respect to distribution and use of the proceeds from the Special Purpose Local Option Sales Tax.

17.

This Agreement shall not be changed or modified except by agreement in writing executed by all parties hereto.

18.

This Agreement shall be deemed to have been made and shall be construed and interpreted in accordance with the laws of the State of Georgia.

19.

It is agreed that the illegality or invalidity of any term or clause of this Agreement shall not affect the validity of the remainder of the Agreement, and the Agreement shall remain in full force and effect as if such illegal or invalid term or clause were not contained herein.

20.

Each party to this Agreement shall comply with all applicable local, State, and Federal statutes, ordinances, rules and regulations.

21.

No consent or waiver, express or implied, by any party to this Agreement to any breach of any covenant, condition or duty of another party shall be construed as a consent to or waiver of any future breach of the same.

22.

All notices, consents, waivers, directions, requests or other instruments or communications provided for under this Agreement shall be deemed properly given if, and only if, delivered personally or sent by registered or certified United States mail, postage prepaid, as follows:

a. If to the City of Auburn:

Mayor
City of Auburn
1369 Fourth Avenue
Auburn, Georgia 30011

b. If to the City of Berkeley Lake:

Mayor
City of Berkeley Lake
4040 S. Berkeley Lake Road
Berkeley Lake, Georgia 30096

c. If to the Town of Braselton:

Mayor
Town of Braselton
4982 Highway 53
Braselton, Georgia 30517

d. If to the City of Buford:

Chairman
City of Buford
2300 Buford Highway
Buford, Georgia 30518

e. If to the City of Dacula:

Mayor
City of Dacula
P.O. Box 400
Dacula, Georgia 30019

f. If to the City of Duluth:

Mayor
City of Duluth
3167 Main Street
Duluth, Georgia 30096

g. If to the City of Grayson:

Mayor
City of Grayson
475 Grayson Parkway
Grayson, Georgia 30017

h. If to the City of Lawrenceville:

Mayor
City of Lawrenceville
P.O. Box 2200
Lawrenceville, Georgia 30046

i. If to the City of Lilburn:

Mayor
City of Lilburn
340 Main Street
Lilburn, Georgia 30047

j. If to the City of Loganville:

Mayor
City of Loganville
4385 Pecan Street
Loganville, Georgia 30052

k. If to the City of Norcross:

Mayor
City of Norcross
65 Lawrenceville Street
Norcross, Georgia 30071

l. If to the City of Peachtree Corners

Mayor
City of Peachtree Corners
147 Technology Parkway, Suite 200
Peachtree Corners, Georgia 30092

m. If to the City of Rest Haven:

Mayor
City of Rest Haven
428 Thunder Road
Buford, Georgia 30518

n. If to the City of Snellville:

Mayor
City of Snellville
2342 Oak Road
Snellville, Georgia 30078

o. If to the City of Sugar Hill:

Mayor
City of Sugar Hill
5039 West Broad Street
Sugar Hill, Georgia 30518

p. If to the City of Suwanee:

Mayor
City of Suwanee
330 Town Center Avenue
Suwanee, Georgia 30024

q. If to Gwinnett County:

County Administrator
Gwinnett Justice & Administration Ctr.
75 Langley Drive
Lawrenceville, Georgia 30046

Any party may at any time change the address where notices are to be sent or the person to whom such notices should be directed by the delivery or mailing to the above persons a notice stating the change.

23.

This Agreement shall become effective on September 1, 2022. If the November 8, 2022 Referendum concerning the imposition of the Special Purpose Local Option Sales Tax is not approved by a majority of the voters of Gwinnett County, this Agreement shall be of no force and effect after November 8, 2022.

24.

Notwithstanding the parameters of paragraph 23, this Agreement shall continue in full force and effect until July 1st of the year following completion of the last project funded from the net proceeds from the 2023 Special Purpose Local Option Sales Tax Program.

25.

The parties agree that all appropriate public facilities and buildings constructed from the 2023 Special Purpose Local Option Sales Tax Program net proceeds shall be available at no fee to the County as polling places, if needed.

26.

This Agreement may be executed in several counterparts, each of which shall be an original and all of which shall constitute but one and the same instrument.

IN WITNESS WHEREOF, the parties hereto acting through their duly authorized agents have caused this Agreement to be signed, sealed and delivered for final execution by the County on the date indicated herein.

(SIGNATURE PAGES FOLLOW) (Executed in Counterparts)

ATTEST:

THE CITY OF AUBURN

BY: _____
JOYCE BROWN
CITY CLERK

BY: _____
LINDA BLECHINGER, MAYOR

[SEAL]

DATE: _____

APPROVED AS TO FORM:

BY: _____
ROBERT JACKSON WILSON
ROBERT JACKSON WILSON, P.C.
10 LUMPKIN STREET
LAWRENCEVILLE, GEORGIA 30046

**INTERGOVERNMENTAL AGREEMENT FOR USE AND DISTRIBUTION OF
PROCEEDS GENERATED BY THE 2022 SPECIAL PURPOSE LOCAL OPTION
SALES TAX REFERENDUM**

(Executed in Counterparts)

ATTEST:

THE CITY OF BERKELEY LAKE

BY: _____
LEIGH THREADGILL
CITY ADMINISTRATOR/CLERK

BY: _____
LOIS SALTER, MAYOR

[SEAL]

DATE: _____

APPROVED AS TO FORM:

BY: _____
RICHARD A. CAROTHERS
CAROTHERS & MITCHELL, LLC
1809 BUFORD HIGHWAY
BUFORD, GEORGIA 30518

**INTERGOVERNMENTAL AGREEMENT FOR USE AND DISTRIBUTION OF
PROCEEDS GENERATED BY THE 2022 SPECIAL PURPOSE LOCAL OPTION
SALES TAX REFERENDUM**

(Executed in Counterparts)

ATTEST:

THE TOWN OF BRASELTON

BY: _____
JENNIFER SCOTT
TOWN MANAGER/
CLERK

BY: _____
KURT WARD, MAYOR

[SEAL]

DATE: _____

APPROVED AS TO FORM:

BY: _____
GREGORY DAVID JAY
CHANDLER, BRITT & JAY, LLC
P. O. BOX 1749
BUFORD, GEORGIA 30515-1749

**INTERGOVERNMENTAL AGREEMENT FOR USE AND DISTRIBUTION OF
PROCEEDS GENERATED BY THE 2022 SPECIAL PURPOSE LOCAL OPTION
SALES TAX REFERENDUM**

(Executed in Counterparts)

ATTEST:

THE CITY OF BUFORD

BY: _____
KIM WOLFE
CITY CLERK

BY: _____
PHILLIP BEARD
COMMISSION CHAIRMAN

[SEAL]

DATE: _____

APPROVED AS TO FORM:

BY: _____
GREGORY DAVID JAY
CHANDLER, BRITT & JAY, LLC
P. O. BOX 1749
BUFORD, GEORGIA 30515-1749

**INTERGOVERNMENTAL AGREEMENT FOR USE AND DISTRIBUTION OF
PROCEEDS GENERATED BY THE 2022 SPECIAL PURPOSE LOCAL OPTION
SALES TAX REFERENDUM**

(Executed in Counterparts)

ATTEST:

THE CITY OF DACULA

BY: _____
HEATHER COGGINS
ACTING CITY ADMINISTRATOR

BY: _____
HUGH D. KING, III, MAYOR

[SEAL]

DATE: _____

APPROVED AS TO FORM:

BY: _____
ROBERT JACKSON WILSON
ROBERT JACKSON WILSON, P.C.
10 LUMPKIN STREET
LAWRENCEVILLE, GEORGIA 30046

**INTERGOVERNMENTAL AGREEMENT FOR USE AND DISTRIBUTION OF
PROCEEDS GENERATED BY THE 2022 SPECIAL PURPOSE LOCAL OPTION
SALES TAX REFERENDUM**

(Executed in Counterparts)

ATTEST:

THE CITY OF DULUTH

BY: _____
TERESA LYNN
CITY CLERK

BY: _____
NANCY HARRIS, MAYOR

[SEAL]

DATE: _____

APPROVED AS TO FORM:

BY: _____
STEPHEN PEREIRA
THOMPSON, SWEENEY, KINSINGER & PEREIRA PC
P.O. BOX 1250
LAWRENCEVILLE, GA 30046-1250

**INTERGOVERNMENTAL AGREEMENT FOR USE AND DISTRIBUTION OF
PROCEEDS GENERATED BY THE 2022 SPECIAL PURPOSE LOCAL OPTION
SALES TAX REFERENDUM**

(Executed in Counterparts)

ATTEST:

THE CITY OF GRAYSON

BY: _____
DAN PRUEHS
CITY ADMINISTRATOR/
CITY CLERK

BY: _____
ALLISON WILKERSON, MAYOR

[SEAL]

DATE: _____

APPROVED AS TO FORM:

BY: _____
V. LEE THOMPSON, JR.
THOMPSON, SWEENEY, KINSINGER & PEREIRA PC
P.O. BOX 1250
LAWRENCEVILLE, GA 30046-1250

**INTERGOVERNMENTAL AGREEMENT FOR USE AND DISTRIBUTION OF
PROCEEDS GENERATED BY THE 2022 SPECIAL PURPOSE LOCAL OPTION
SALES TAX REFERENDUM**

(Executed in Counterparts)

ATTEST:

THE CITY OF LAWRENCEVILLE

BY: _____
KAREN PIERCE
CITY CLERK

BY: _____
DAVID R. STILL, MAYOR

[SEAL]

DATE: _____

APPROVED AS TO FORM:

BY: _____
V. LEE THOMPSON, JR.
THOMPSON, SWEENY, KINSINGER & PEREIRA PC
P.O. BOX 1250
LAWRENCEVILLE, GA 30046-1250

**INTERGOVERNMENTAL AGREEMENT FOR USE AND DISTRIBUTION OF
PROCEEDS GENERATED BY THE 2022 SPECIAL PURPOSE LOCAL OPTION
SALES TAX REFERENDUM**

(Executed in Counterparts)

ATTEST:

THE CITY OF LILBURN

BY: _____
MELISSA L. PENATE
CITY CLERK

BY: _____
TIM DUNN, MAYOR

[SEAL]

DATE: _____

APPROVED AS TO FORM:

BY: _____
RICHARD A. CAROTHERS
CAROTHERS & MITCHELL, LLC
1809 BUFORD HIGHWAY
BUFORD, GEORGIA 30518

**INTERGOVERNMENTAL AGREEMENT FOR USE AND DISTRIBUTION OF
PROCEEDS GENERATED BY THE 2022 SPECIAL PURPOSE LOCAL OPTION
SALES TAX REFERENDUM**

(Executed in Counterparts)

ATTEST:

THE CITY OF LOGANVILLE

BY: _____
DANNY ROBERTS
CITY MANAGER

BY: _____
SKIP BALILES, MAYOR

[SEAL]

DATE: _____

APPROVED AS TO FORM:

BY: _____
ROBYN WEBB
HOFFER & WEBB
3190 NORTHEAST EXPRESSWAY
SUITE 430
CHAMBLEE, GEORGIA 30341

**INTERGOVERNMENTAL AGREEMENT FOR USE AND DISTRIBUTION OF
PROCEEDS GENERATED BY THE 2022 SPECIAL PURPOSE LOCAL OPTION
SALES TAX REFERENDUM**

(Executed in Counterparts)

ATTEST:

THE CITY OF NORCROSS

BY: _____
MONIQUE LANG
CITY CLERK

BY: _____
CRAIG NEWTON, MAYOR

[SEAL]

DATE: _____

APPROVED AS TO FORM:

BY: _____
J. PATRICK O'BRIEN
THOMPSON, O'BRIEN, KEMP & NASUTI, P.C.
40 TECHNOLOGY PARKWAY SOUTH, SUITE 300
NORCROSS, GEORGIA 30092

**INTERGOVERNMENTAL AGREEMENT FOR USE AND DISTRIBUTION OF
PROCEEDS GENERATED BY THE 2022 SPECIAL PURPOSE LOCAL OPTION
SALES TAX REFERENDUM**

(Executed in Counterparts)

ATTEST:

THE CITY OF PEACHTREE CORNERS

BY: _____
KYM CHERECK
CITY CLERK

BY: _____
MIKE MASON, MAYOR

[SEAL]

DATE: _____

APPROVED AS TO FORM:

BY: _____
DAVID RHODES
310 TECHNOLOGY PARKWAY
PEACHTREE CORNERS, GA 30092

**INTERGOVERNMENTAL AGREEMENT FOR USE AND DISTRIBUTION OF
PROCEEDS GENERATED BY THE 2022 SPECIAL PURPOSE LOCAL OPTION
SALES TAX REFERENDUM**

(Executed in Counterparts)

ATTEST:

THE CITY OF REST HAVEN

BY: _____
MONICA MONTGOMERY
CITY CLERK

BY: _____
KENNETH WAYCASTER, MAYOR

[SEAL]

DATE: _____

APPROVED AS TO FORM:

BY: _____
GREGORY DAVID JAY
CHANDLER, BRITT & JAY, LLC
P. O. BOX 1749
BUFORD, GEORGIA 30515-1749

**INTERGOVERNMENTAL AGREEMENT FOR USE AND DISTRIBUTION OF
PROCEEDS GENERATED BY THE 2022 SPECIAL PURPOSE LOCAL OPTION
SALES TAX REFERENDUM**

(Executed in Counterparts)

ATTEST:

THE CITY OF SNELLVILLE

BY: _____
MELISA ARNOLD
CITY CLERK

BY: _____
BARBARA BENDER, MAYOR

[SEAL]

DATE: _____

APPROVED AS TO FORM:

BY: _____
ANTHONY O.L. POWELL
POWELL & EDWARDS
P.O. BOX 1390
LAWRENCEVILLE, GEORGIA 30046

**INTERGOVERNMENTAL AGREEMENT FOR USE AND DISTRIBUTION OF
PROCEEDS GENERATED BY THE 2022 SPECIAL PURPOSE LOCAL OPTION
SALES TAX REFERENDUM**

(Executed in Counterparts)

ATTEST:

THE CITY OF SUGAR HILL

BY: _____
JANE WHITTINGTON
CITY CLERK

BY: _____
BRANDON HEMBREE, MAYOR

[SEAL]

DATE: _____

APPROVED AS TO FORM:

BY: _____
FRANK HARTLEY
THOMPSON, SWEENY, KINSINGER & PEREIRA PC
P.O. BOX 1250
LAWRENCEVILLE, GA 30046-1250

**INTERGOVERNMENTAL AGREEMENT FOR USE AND DISTRIBUTION OF
PROCEEDS GENERATED BY THE 2022 SPECIAL PURPOSE LOCAL OPTION
SALES TAX REFERENDUM**

(Executed in Counterparts)

ATTEST:

THE CITY OF SUWANEE

BY: _____
ROBYN O'DONNELL
CITY CLERK

BY: _____
JAMES BURNETTE, JR. MAYOR

[SEAL]

DATE: _____

APPROVED AS TO FORM:

BY: _____
GREGORY DAVID JAY
CHANDLER, BRITT & JAY, LLC
P. O. BOX 1749
BUFORD, GEORGIA 30515-1749

**INTERGOVERNMENTAL AGREEMENT FOR USE AND DISTRIBUTION OF
PROCEEDS GENERATED BY THE 2022 SPECIAL PURPOSE LOCAL OPTION
SALES TAX REFERENDUM**

(Executed in Counterparts)

ATTEST:

GWINNETT COUNTY, GEORGIA

BY: _____

TINA KING
COUNTY CLERK

BY: _____

NICOLE L. HENDRICKSON
CHAIRWOMAN
GWINNETT COUNTY BOARD OF
COMMISSIONERS
75 LANGLEY DRIVE
LAWRENCEVILLE, GEORGIA 30046

[SEAL]

DATE: _____

APPROVED AS TO FORM:

BY: _____

COUNTY ATTORNEY
GWINNETT COUNTY DEPARTMENT OF LAW
75 LANGLEY DRIVE
LAWRENCEVILLE, GEORGIA 30046

**INTERGOVERNMENTAL AGREEMENT FOR USE AND DISTRIBUTION OF
PROCEEDS GENERATED BY THE 2022 SPECIAL PURPOSE LOCAL OPTION
SALES TAX REFERENDUM**

(Executed in Counterparts)

CITY OF DACULA AGENDA REQUEST

Department:	Finance	Date Submitted:	06/27/2022
Worksession:	Yes	Regular Meeting:	Yes
Submitted by:	Heather Coggins	Public Hearing:	No
Agenda Type	Consent Agenda		
Item of Business:	<p>Due to increasing transfer station fees, fuel costs, labor, and equipment, it is necessary to revisit the sanitation fees for tax year 2022. The last sanitation cost increase was passed in 2018. At that time, the rate was raised from \$192/year to \$228/year.</p> <p>In order to prevent further deficiencies in the sanitation budget, a rate of \$24/month or \$288/year is proposed. This new price proposal will equal a \$5 change in cost for each household in the City.</p> <p>The change in cost would be consistent with previous increases that occurred every 4 years. If approved, this new rate would be in affect on October 1, 2022 to coincide with the tax billing statements.</p>		
Attachments	Updated Fee Schedule		
Authorization: Mayor's Signature	No		
Staff Recommendation	Approval		
Action:	Approval of rate change, revised fee schedule with an effective date of October 1, 2022		
Department Head	Heather Coggins		
Attorney:			
Agenda Purpose Only			

Financial Action

Budgeted	Fund Name	Current Balance	Requested Allocation	Director's Initials
Finance Comments				FinDir's Initials

City Clerk Use Only

Worksession	<input type="text"/>	Vote	<div style="border: 1px solid black; height: 100px; width: 100%;"></div>
Action	<input type="text"/>		
Tabled	<input type="text"/>		
Motion	<input type="text"/>		
2 nd by	<input type="text"/>		

	A	B	C	D
1	CITY OF DACULA - SCHEDULE OF FEES (PROPOSED)			
2				
3				
4				
5	ADMINISTRATIVE FEES			
6	Re-Issue of Placard	\$	10.00	
7	Re-Inspection Fees			
8	1st Reinspection	\$	100.00	
9	2nd Reinspection	\$	50.00	
10	Annexation Fee	\$	2,250.00	
11	Deannexation Fee	\$	2,250.00	
12	Council Variance	\$	375.00	
13	Special Exception	\$	375.00	
14	Administrative Variance	\$225.00 + \$25.00 each additional on the same property		
15	Special Use Permit	*same as rezoning fees (See Page Five (5))		
16	Temporary Use Permit		\$50.00	
17	Canvasser and Solicitor Permit	\$	25 per day	
18	Mobile Food Unit Permit	\$	50.00	
19	Production Permit	\$	100 per day	
20	Vending Machine Permit	\$	150 per year	
21	Transfer of Occupational Tax Certificate	\$	20.00	
22	Zoning Certification Letter	\$	50.00	
23	Zoning Map	\$	25.00	
24	All Copies	\$	0.10 per page	
25	Credit Card Fee		0.05%	
26	Bounced Check Fee	\$	10.00	
27				
28				
29				
30	Page 2			
31	BUILDING PERMIT FEES			
32	<u>Permit Fees (Plus any Review Fees)</u>			
33				
34	One & Two-Family Residential & Additions	\$7.00/1,000 + \$125.00 Administrative fee		
35				
36	"Commercial" Structure			
37	(defined as any principal building which is not			
38	either a single-family or duplex dwelling	\$7.00/1,000 + \$125.00 Administrative fee		
39				
40	Interior Finish	\$7.00/1,000 + \$125.00 Administrative fee		
41				

	A	B	C	D
42	Shell	\$7.00/1,000 + \$125.00 Administrative fee		
43				
44	ALL OTHER STRUCTURES			
45	Fence Permit	\$	25.00	
46	Temporary Trailer (Construction / Classroom)	\$	450.00	
47	Temporary Pole Permit	\$	50.00	
48	Retaining Wall	\$7.00/1,000 + \$125.00 Administrative fee		
49	Portable Building (Residential)	\$	150.00	
50	Temporary Tents	\$	75.00	
51	Towers and Antenna	\$7.00/1,000 + \$125 Administrative fee		
52	Mobile Home Permits	\$	750.00	
53	Swimming Pool Permit (In Ground) (Residential)	\$	125.00	
54	Satellite Dish System (AC Powered)	\$	110.00	
55	Demolition Permit	\$	200.00	
56	Housing Relocation Permit	\$200.00 + \$200.00 Bond		
57	Temporary Gas/Power Connection	\$	75.00	
58	Vacant Structure Permit	\$	200.00	
59	Utility Accommodation Permit	\$	500.00	
60				
61	Permit Fee after work has begun	Double Required Fee		
62	Page 3			
63	SIGN PERMITS			
64	(1 to 32 sq ft)	\$	107.00	
65	(33 to 64 sq ft)	\$	139.00	
66	(65 to 100 sq ft)	\$	175.00	
67	(101 to 128 sq ft)	\$	353.00	
68	Temporary permit (30 days)	\$	30.00	
69	Off-Premise Sign	\$	55.00	
70				
71	AFFIDAVITS			
72	HVAC, Electrical, Plumbing Only Permits	\$ 50.00 (Residential Only)		
73	HVAC, Electrical, Plumbing Affidavits	\$ 75.00 (Commercial)		
74	Georgia State Energy Code Affidavits	\$ 75.00 (Commercial)		
75				
76	RE-PERMITTING FEES (After Expiration Date)			
77	Single Family	Full Charge		
78	Non-Residential/Multi-Family	Full Charge		
79	All others	Full Charge		
80	After Revocation	Full Charge		
81				
82	CERTIFICATE OF OCCUPANCY FEES			

	A	B	C	D
83	Single Family	\$ 100.00		
84	Duplex	\$ 100.00		
85	Multi-Family/Apartments	\$ 100.00		
86	Townhome/Condominium	\$ 100.00		
87	Commercial	\$ 300.00		
88	Temporary/Conditional C.O.	\$ 100.00		
89	Certificate of Completion	\$ 100.00		
90	Swimming Pool	\$ 100.00		
91	Compliance Inspection - Structure	\$ 100.00		
92	Compliance Inspection - Trade	\$ 100.00		
93				
94				
95				
96	Page 4			
97	PLAN REVIEW FEES			
98	Tree Protection Plan	\$ 1,000.00		
99	Buffer & Landscape Plan	\$ 1,000.00		
100	Exemption Plats/Lot Splits	\$ 1,000.00		
101	Clearing & Grubbing Plan	\$ 1,000.00		
102	Grading Plan	\$ 1,000.00		
103	Grading - Earth Borrow Sites	\$ 525.00		
104	Concept Plan (Residential)	\$ 525.00		
105	Concept Plan (Commercial)	\$ 525.00		
106	Preliminary Plat (Residential Subdivision)	\$ 2,500.00 or \$15.00 per lot, whichever is greater		
107	Site Plan (Commercial)	0-5 acres = \$1,500.00, 5-10 acres = \$2,500.00,		
108		10-20 acres = \$3,500.00, 20 acres or greater = \$4,500.00		
109				
110	Final Plat	\$ 2,000.00 or \$15.00 a lot, whichever is greater		
111	Final Plat Filing Fee	Residential - \$10.00 (per lot)		
112		Commercial - \$50.00 (per lot)		
113				
114	Re-review of any plan after 2nd resubmittal	25% of original fee		
115	Revision of Plan/Plat (After initial approval)	25% of original fee		
116	Convenience Fee (3rd party plan review)	Same as subject plan review fee		
117				
118	Interior Finish Review Fee	\$ 1,000.00		
119				
120	BUILDING PLAN REVIEW FEES	<i>(2 COPIES OF PLANS)(16 COPIES OF RECORDED PLAT)</i>		
121	Multi-Family and Non-Residential	(5,000sf or less) = \$1,500.00, (5,000 - 10,000sf) = \$2,500.00,		
122		(10,000 - 30,000sf) = \$3,500.00, (Greater than 30,000sf) = \$5,000.00		
123	Residential (Required for 3,000 Sq. Ft. or Greater)	\$ 525.00		

	A	B	C	D
124	Structural Wall Review Fee	City's Cost + \$125 Administrative Fee		
125	Specialized Review Fee	City's Cost + \$125 Administrative Fee		
126	Maximum Review Fee	\$	5,000.00	
127				
128	LAND DISTURBANCE PERMIT FEES			
129	Clearing Permit - no land disturbances	Residential \$15.00/acre or \$300.00 whichever is greater		
130		Commercial \$15.00/acre or \$300.00 whichever is greater		
131				
132	Clearing & Grubbing Permit	Residential \$15.00/acre or \$300.00 whichever is greater		
133		Commercial \$15.00/acre or \$300.00 whichever is greater		
134				
135	Grading Permit	Residential \$75.00/acre or \$2,000.00 whichever is greater		
136		Commercial \$75.00/acre or \$2,000.00 whichever is greater		
137				
138	Development Permit	Residential S/D \$25.00/lot or \$2,000.00 whichever is greater		
139		Multi-Family Residential \$10.00/unit or \$2,000.00 whichever is greater		
140		Non-Residential S/D \$50.00/acre or \$3,000.00 whichever is greater		
141				
142				
143	Page 5			
144				
145	REZONING			
146	AG, R-1100, R-1200, R-1400, R-1600, TRD			
147				
148	<u>Base Fee</u>			
149	0-5 acres	\$	500.00	
150	5-10 acres	\$	750.00	
151	10-20 acres	\$	1,000.00	
152	20-50 acres	\$	1,500.00	
153	50 plus acres	\$ 2,000.00 plus \$30.00 per each acre over 50		
154	Maximum fee	\$	3,000.00	
155				
156	R-TH, R-SR, R-MD, MH			
157				
158	<u>Base Fee</u>			
159	0-5 acres	\$	1,000.00	
160	5-10 acres	\$	1,500.00	
161	10-20 acres	\$	2,000.00	
162	20-50 acres	\$	3,000.00	
163	50 plus acres	\$ 4,000.00 plus \$40.00 per each acre over 50		
164	Maximum fee	\$	5,000.00	

	A	B	C	D
165				
166	C-1, C-2, C-3, O-I, M-1, M-2, PMUD			
167				
168	Base Fee			
169	0-5 acres	\$ 1,000.00		
170	5-10 acres	\$ 1,500.00		
171	10-20 acres	\$ 2,000.00		
172	20-50 acres	\$ 3,000.00		
173	50 plus acres	\$ 4,000.00 plus \$50.00 per each acre over 50		
174	Maximum fee	\$ 5,000.00		
175				
176	Page 6			
177	SANITATION FEES			
178				
179	Residential Sanitation	\$ 288.00/year for 1-2 cans		
180	Commercial Sanitation	\$ 445.00/year for 1-2 cans		
181		\$ 645.00/year for 3-4 cans		
182		\$ 845.00/year for 5-6 cans		
183	Recycling	Included w/ Sanitation Services		
184	Removing Appliances	\$ 25.00 per appliance		
185	Leaf Removal	Free to City Residents		
186	Limb Chipping	\$ 30.00 per 1/2 hour		
187	Mattress / Box Spring	\$ 25.00 per item		
188	Bulk Item	Call for Pricing		
189	Trash Can	\$ 55.00 per 95 Gallon can		
190				
191	Park Reservations	Free to City Residents		
192		\$ 35.00 for 4 hours for nonresidents		

A RESOLUTION OF THE MAYOR AND COUNCIL OF THE CITY OF DACULA REGARDING THE ABANDONMENT AND SALE OF CERTAIN VEHICLES, EQUIPMENT AND OTHER PERSONAL PROPERTY

WHEREAS, the City Employees have gathered certain vehicles, equipment and other personal property described on Exhibit "A" attached hereto which are no longer regularly used by the City and no longer needed for any public purpose; and

WHEREAS, the City Staff has recommended that those vehicles, equipment and other personal property be abandoned, sold at auction, or discarded if there is no sales value realized; and

WHEREAS, it is in the best interest of the City of Dacula and its citizens for those vehicles, equipment, and other personal property to be abandoned, sold at auction or discarded if there is no sales value realized;

NOW THEREFORE, THE MAYOR AND COUNCIL OF THE CITY OF DACULA hereby formally ordains and resolves that the vehicles, equipment, and other personal property described on Exhibit "A" are abandoned and declared surplus property. The vehicles, equipment, or other personal property shall be advertised, sold at auction or discarded in accordance with O.C.G.A. §36-37-6.

SO RESOLVED, this 7th day of July, 2022 by the Governing Authority of the City of Dacula.

AYES: ____

NAYES: ____

Hugh D. King, III, Mayor
City of Dacula

Heather Coggins
Acting City Administrator

EXHIBIT “A”

Excess Inventory List						
Dated: June 28, 2022						
Item		Description	Condition	Functional	Qty Available	Disposition
Office Furniture	Table	Rolling table (square)	Used	Yes	1	
Electronics	HP Z1	HP Z1 2UA62527RV Desktop Computer	Used	Yes	1	
	Fax modem	External V.92 56K USB Fax Modem	Used	Yes	1	
Equipment and Vehicles	Lawnmower	Scag Power Equipment	Used	No	3	
	Playground Equipment	Maple Creek Playground	Used	No	3	
	Truck	2005 Chevrolet Pickup Truck - 115,943 miles	Used	No	1	

RESOLUTION

WHEREAS, the Mayor and City Council of the City of Dacula, has projected a budget for 2022 to provide for reasonable and necessary services to the Citizens of the City of Dacula;

WHEREAS, the Gwinnett County Tax Assessors Office has completed or will complete the 2022 Tax Digest for property within the City of Dacula;

WHEREAS, the City of Dacula's millage rate for 2022 tax should be **4.806** mills in order to provide for services to the citizens of Dacula as proposed to be budgeted;

WHEREAS, the proposed **4.806** mills does exceed the rollback rate as defined in O.C.G.A. § 48-5-32.1;

WHEREAS, a public notice of the five year tax levy and proposed tax increase was published and three public hearings were held on **June 20, 2022** and **July 7, 2022** as required by O.C.G.A. § 48-5-32 and O.C.G.A. § 48-5-32.1;

WHEREAS, the Mayor and City Council of the City of Dacula is the governing authority of said City; and

WHEREAS, the Mayor and City Council of the City of Dacula authorized City staff to perform direct billing and collection of Ad Valorem Property Taxes and Solid Waste Fees effective **November 4, 2021**;

NOW, THEREFORE be it resolved that the Mayor and City Council of the City of Dacula adopt a 2022 ad valorem tax millage rate of 4.806 mills on all subject property; and

IT IS FURTHER RESOLVED by the Mayor and City Council that the the billing date for Ad Valorem Property Taxes and Solid Waste Fees is **October 1, 2022** and that the collection of said bill is due to the City of Dacula **December 1, 2022**. City staff is hereby authorized and instructed to prepare and issue tax bills no later than October 1, 2022.

SO RESOLVED, this **7th day of July 2022**.

GEORGIA, GWINNETT COUNTY

I, Heather Coggins, Acting City Administrator, City of Dacula, do hereby certify that the foregoing resolution was duly passed at a public meeting of the Mayor and City Council on the **7th day of July 2022.**

I do further certify that the foregoing is a true exact copy of the minutes of said meeting.

This, the **7th day of July 2022.**

Hugh D. King, III, Mayor

Heather Coggins,
Acting City Administrator

CITY OF DACULA

**NOTICE
CITY OF DACULA**

The Mayor and Council of the City of Dacula, Georgia do announce that the millage rate will be set at a meeting to be held at **Dacula City Hall on July 7, 2022 at 7:00PM** and pursuant to the requirements of O.C.G.A. §48-5-32 does hereby publish the following presentation of the current year's tax digest and levy, along with the history of the tax digest and levy for the past five years.

CURRENT 2022 PROPERTY TAX DIGEST AND 5 YEAR HISTORY OF LEVY

	2017	2018	2019	2020	2021	2022 PROPOSED
Real & Personal	190,487,050	211,665,140	227,635,610	258,516,240	270,248,950	292,456,440
Motor Vehicles	3,608,640	2,923,510	2,391,360	2,050,080	1,619,930	1,495,220
Mobile Homes	54,240	50,440	47,080	46,320	46,320	46,320
Timber - 100%	93,700	0	0	0	0	0
Heavy Duty Equipment	7,010	2,524	0	18,520	8,310	0
Gross Digest	194,252,657	214,641,614	230,074,050	260,631,160	271,923,510	293,997,980
Less Exemptions	11,191,088	12,440,930	13,488,295	13,909,358	15,423,988	16,000,000
NET DIGEST VALUE	183,061,569	202,200,684	216,585,755	246,721,802	256,499,522	277,997,980
Gross Maintenance & Operation Millage	4.8060	4.8060	4.8060	4.8060	4.8060	4.8060
Less Rollback (Local Option Sales Tax)						
NET M&O MILLAGE RATE	4.8060	4.8060	4.8060	4.8060	4.8060	4.8060
TOTAL M&O TAXES LEVIED	\$879,794	\$971,776	\$1,040,911	\$1,185,745	\$1,232,737	\$1,336,058
Net Tax \$ Increase	\$37,449	\$91,983	\$69,135	\$144,834	\$46,992	\$103,322
Net Tax % Increase	4.90%	10.46%	7.11%	13.91%	3.96%	8.38%

The figures for FY2017 thru FY2021 are based on State Certified digests updated through additions and reductions made throughout the year.

The figures for FY2022 are estimates and are subject to change; the estimates do, however, include projected changes due to pending appeals, as well as new growth.

PUBLIC NOTICE – TAX INCREASE

Every few years, the Gwinnett County Tax Assessor is required to review the assessed value of property in the county. When the trend prices of properties that have recently sold in the county indicate there has been a change in the fair market value of such property, the Tax Assessor may adjust the value of the real property located in Gwinnett County. This process is known as property reassessment.

The Dacula Mayor and Council has carried out a deliberate strategy over the last several years to keep City taxes low without negatively impacting the quality of the City services provided to its citizens. By adopting a millage rate of 4.806, which is the same as last year, the City of Dacula must advertise a tax increase.

The **Mayor and Council of the City of Dacula, Georgia** has tentatively adopted a 2022 millage rate which will require an increase in property taxes by **3.35** percent. All concerned citizens are invited to the public hearing on this tax increase to be held at Dacula City Hall, 442 Harbins Road, Dacula, GA on **June 20, 2022 at 10 a.m. and 5:00 p.m.** Times and places of additional public hearings on this tax increase are at Dacula City Hall, 442 Harbins Road, Dacula, GA on **July 7, 2022 at 6:30 p.m.** This tentative increase will result in a millage rate of **4.806 mills**, an increase of **.156 mills**. Without this tentative increase, the millage rate will be no more than **4.650 mills**. The proposed tax increase for a home with a fair market value of **\$250,000** is approximately **\$14.51** and the proposed tax increase for non-homestead property with a fair market value of **\$275,000** is approximately **\$17.16**.

PT-32.1 - Computation of MILLAGE RATE ROLLBACK AND PERCENTAGE INCREASE IN PROPERTY TAXES - 2022

COUNTY: **GWINNETT** TAXING JURISDICTION: **DACULA**

ENTER VALUES AND MILLAGE RATES FOR THE APPLICABLE TAX YEARS IN YELLOW HIGHLIGHTED BOXES BELOW

DESCRIPTION	2021 DIGEST	REASSESSMENT OF EXISTING REAL PROP	OTHER CHANGES TO TAXABLE DIGEST	2022 DIGEST
REAL	258,604,680	9,000,000	12,000,000	281,456,440
PERSONAL	11,644,270		(644,270)	11,000,000
MOTOR VEHICLES	1,619,930		(124,710)	1,495,220
MOBILE HOMES	46,320		0	46,320
TIMBER -100%			0	
HEAVY DUTY EQUIP	8,310		(8,310)	
GROSS DIGEST	271,923,510	9,000,000	13,074,470	293,997,980
EXEMPTIONS	15,423,988		576,012	16,000,000
NET DIGEST	256,499,522	9,000,000	12,498,458	277,997,980
	(PYD)	(RVA)	(NAG)	(CYD)
2021 MILLAGE RATE:	4.806		2022 MILLAGE RATE:	4.806

CALCULATION OF ROLLBACK RATE

DESCRIPTION	ABBREVIATION	AMOUNT	FORMULA
2021 Net Digest	PYD	256,499,522	
Net Value Added-Reassessment of Existing Real Property	RVA	9,000,000	
Other Net Changes to Taxable Digest	NAG	12,498,458	
2022 Net Digest	CYD	277,997,980	
2021 Millage Rate	PYM	4.806	PYM
Millage Equivalent of Reassessed Value Added	ME	0.156	(RVA/CYD) * PYM
Rollback Millage Rate for 2022	RR - ROLLBACK RATE	4.650	PYM - ME

CALCULATION OF PERCENTAGE INCREASE IN PROPERTY TAXES

If the 2022 Proposed Millage Rate for this Taxing Jurisdiction exceeds Rollback Millage Rate computed above, this section will automatically calculate the amount of increase in property taxes that is part of the notice required in O.C.G.A. § 48-5-32.1(c) (2)	Rollback Millage Rate	4.650
	2022 Millage Rate	4.806
	Percentage Tax Increase	3.35%

CERTIFICATIONS

I hereby certify that the amount indicated above is an accurate accounting of the total net assessed value added by the reassessment of existing real property for the tax year for which this rollback millage rate is being computed.

Chairman, Board of Tax Assessors Date

I hereby certify that the values shown above are an accurate representation of the digest values and exemption amounts for the applicable tax years.

Tax Collector or Tax Commissioner Date

I hereby certify that the above is a true and correct computation of the rollback millage rate in accordance with O.C.G.A. § 48-5-32.1 for the taxing jurisdiction for tax year 2022 and that the final millage rate set by the authority of this taxing jurisdiction for tax year 2022 is _____

CHECK THE APPROPRIATE PARAGRAPH BELOW THAT APPLIES TO THIS TAXING JURISDICTION

If the final millage rate set by the authority of the taxing jurisdiction for tax year 2022 exceeds the rollback rate, I certify that the required advertisements, notices, and public hearings have been conducted in accordance with O.C.G.A. §§ 48-5-32 and 48-5-32.1 as evidenced by the attached copies of the published "five year history and current digest" advertisement and the "Notice of Intent to Increase Taxes" showing the times and places when and where the required public hearings were held, and a copy of the press release provided to the local media.

If the final millage rate set by the authority of the taxing jurisdiction for tax year 2022 does not exceed the rollback rate, I certify that the required "five year history and current digest" advertisement has been published in accordance with O.C.G.A. § 48-5-32 as evidenced by the attached copy of such advertised report.

Responsible Party Title Date

CITY AND INDEPENDENT SCHOOL MILLAGE RATE CERTIFICATION FOR TAX YEAR 2022

<http://www.dor.ga.gov>



Complete this form once the levy is determined, and if zero, report this information in Column 1. Mail a copy to the address below or fax to (404)724-7011 and distribute a copy to your County Tax Commissioner and Clerk of Court. This form also provides the Local Government Services Division with the millage rates for the distribution of Railroad Equipment Tax and Alternative Ad Valorem Tax.

Georgia Department of Revenue
Local Government Services Division
4125 Welcome All Road
Atlanta, Georgia 30349
Phone: (404) 724-7003

CITY NAME City of Dacula		ADDRESS PO Box 400, 442 Harbins Road, Dacula			CITY, STATE, ZIP Dacula, GA, 30019	
FEI #	CITY CLERK Heather Coggins, Acting	PHONE NO. 770.963.7451	FAX 770.513.2187	EMAIL daculacityhall@daculaga.gov		
OFFICE DAYS / HOURS M-F 8:30 a.m. - 5 p.m.	ARE TAXES BILLED AND COLLECTED BY THE (X) CITY OR () COUNTY TAX COMMISSIONER? LIST VENDOR, CONTACT PERSON AND PHONE NO. Heather Coggins 770.963.7451					
List below the amount & qualifications for each <u>LOCAL</u> homestead exemption granted by the City and Independent School System.						
CITY		INDEPENDENT SCHOOL				
Exemption Amount	Qualifications	Exemption Amount	Qualifications			
7,000	Homestead					
If City and School assessment is other than 40%, enter percentage millage is based on _____%. List below the millage rate in terms of mills. EXAMPLE: 7 mills (or .007) is shown as 7.000. PLEASE SHOW MILLAGE FOR EACH TAXING JURISDICTION EVEN IF THERE IS NO LEVY.						
CITY DISTRICTS	DISTRICT NO.	COLUMN 1	COLUMN 2	COLUMN 3	COLUMN 4	COLUMN 5
List Special Districts if different from City District below such as CID's, BID's, or DA's	List District Numbers	Gross Millage for Maintenance & Operations	**Less Rollback for Local Option Sales Tax	Net Millage for Maintenance & Operation Purposes (Column 1 less Column 2)	Bond Millage (If Applicable)	Total Millage Column 3 + Column 4
City Millage Rate		4.806		4.806		4.806
Independent School System						
Special Districts						
**Local Option Sales Tax Proceeds must be shown as a mill rate rollback if applicable to Independent School.						

Name of County(s) in which your city is located: Gwinnett

I hereby certify that the rates listed above are the official rates for the Districts indicated for Tax Year 2022

Date Mayor or City Clerk

Memorandum

To: City of Dacula Mayor and City Council

From: Brittini Nix, Director of Planning and Economic Development

Date: June 10, 2022

Subject: Variance Case: 2022-CD-VAR-03

Existing Zoning: R-1400 (Single Family Residential District)

Applicant: Gina Givens
3126 Fannie Thompson Rd
Monroe, Georgia 30656
678-758-6300

Owner: Claude Givens Builders Inc.
3126 Fannie Thompson Rd
Monroe, Georgia 30656
770-527-4451

Location: 5th District, Land Lot 309, Parcel 209

Existing Land Use and Zoning:

The subject property is located at 650 Hill Meadow Drive (Lot 20) of the Hill's Meadow subdivision. The site is approximately 0.62 acres more or less and zoned R-1400 (Single Family Residential District). The subject site is currently vacant and is adjacent to single-family residential properties on all sides.

Variance Request and Summary:

Residential properties on septic systems require a minimum of 30,000 square feet (Section 901 of the Zoning Resolution) of property for a single-family dwelling. The subject property totals 27,007 square feet. Considering the previous, a Council variance is needed to build a single-family residence utilizing a septic system on the subject site. Staff notes the size of the subject lot is consistent with adjacent lots in Hill's Meadow and no additional variances are required for building permit issuance.

Considering the above, staff supports the request as the proposed residence would be within an existing single-family residential subdivision and is not expected to introduce any adverse impacts. As such, the Department recommends that the requested variance be approved with conditions.

Recommendation:

Based upon the variance application, the request to reduce the minimum lot size requirement for a residential structure on a septic system is recommended for approval with the following conditions.

1. The proposed elevation, building materials, and colors shall be approved by the City prior to building permit issuance. The façades of the dwelling unit shall resemble the surrounding dwellings within the Hill's Meadow subdivision with the front façade constructed of brick, stone, or stucco with accents of fiber shake, board and batten, or fiber cement siding. The sides and rear shall be constructed of brick, stone, stucco, concrete fiber, or similar material.
2. The minimum heated floor area shall be 1,600 square feet for a one-story unit and 1,800 square feet for a two-story unit.
3. All yards (front, side, rear) shall be sodded.
4. A Gwinnett County Environmental Health septic permit shall be required prior to building permit issuance.
5. The residential dwelling shall not exceed the maximum number of bedrooms permitted by the Gwinnett County Environmental Health septic permit.



P. O. Box 400
Dacula, GA 30019
(770) 962-0055 / Fax (770) 513-2187

APPLICATION

City Council	
<input type="checkbox"/> Waivers	
<input checked="" type="checkbox"/> Variance	

Staff Approval Only

Modifications

(Please Type or Print using BLACK INK)

APPLICANT *	PROPERTY OWNER *
NAME <u>Gina Givens</u>	NAME <u>Claude Givens Bldr. Inc</u>
ADDRESS <u>3126 Fannie Thompson Rd</u>	ADDRESS <u>3126 Fannie Thompson Rd</u>
CITY <u>Monroe</u>	CITY <u>Monroe</u>
STATE <u>GA</u> ZIP <u>30656</u>	STATE <u>GA</u> ZIP <u>30656</u>
PHONE <u>678-758-6300</u> FAX _____	PHONE <u>770-527-4451</u> FAX _____

APPLICANT IS THE:

- OWNER'S AGENT
- PROPERTY OWNER

* Include any person having a property interest and/or a financial interest in any business entity having property interest (use additional sheets if necessary).

CONTACT PERSON Gina Givens Sec.
 COMPANY NAME Claude Givens Bldr. Inc.
 ADDRESS 3126 Fannie Thompson Rd
Monroe, GA 30656
 PHONE 678-758-6300 FAX _____

PRESENT ZONING DISTRICT(S) R-1400 LAND LOT(S) 309 DISTRICT(S) 5+h
 ADDRESS OF PROPERTY 650 Hills Meadow Dr. Lot 20 ACREAGE 0.62

Describe your request in detail and state justification/hardship: _____

(Attach additional sheets if necessary)

HAS THE APPLICANT FILED ANY OTHER APPLICATIONS FOR THIS PROPERTY WITHIN THE PAST 12 MONTHS ? Yes No

If Yes, please describe: _____

(Attach additional sheets if necessary)

LETTER OF INTENT & LEGAL DESCRIPTION OF PROPERTY

*** PLEASE ATTACH A "LETTER OF INTENT" EXPLAINING REQUEST and TYPED "LEGAL DESCRIPTION" OF PROPERTY TO BE AFFECTED ***

CASE NUMBER: 2022-CD-VAR-03

Planning and Development
City of Dacula
P.O. Box 400
Dacula, GA 30019

Subject:
Lot 20 Hills Meadow
660 Hills Meadow Drive
Dacula, GA 30019

L.L. 309 5th District

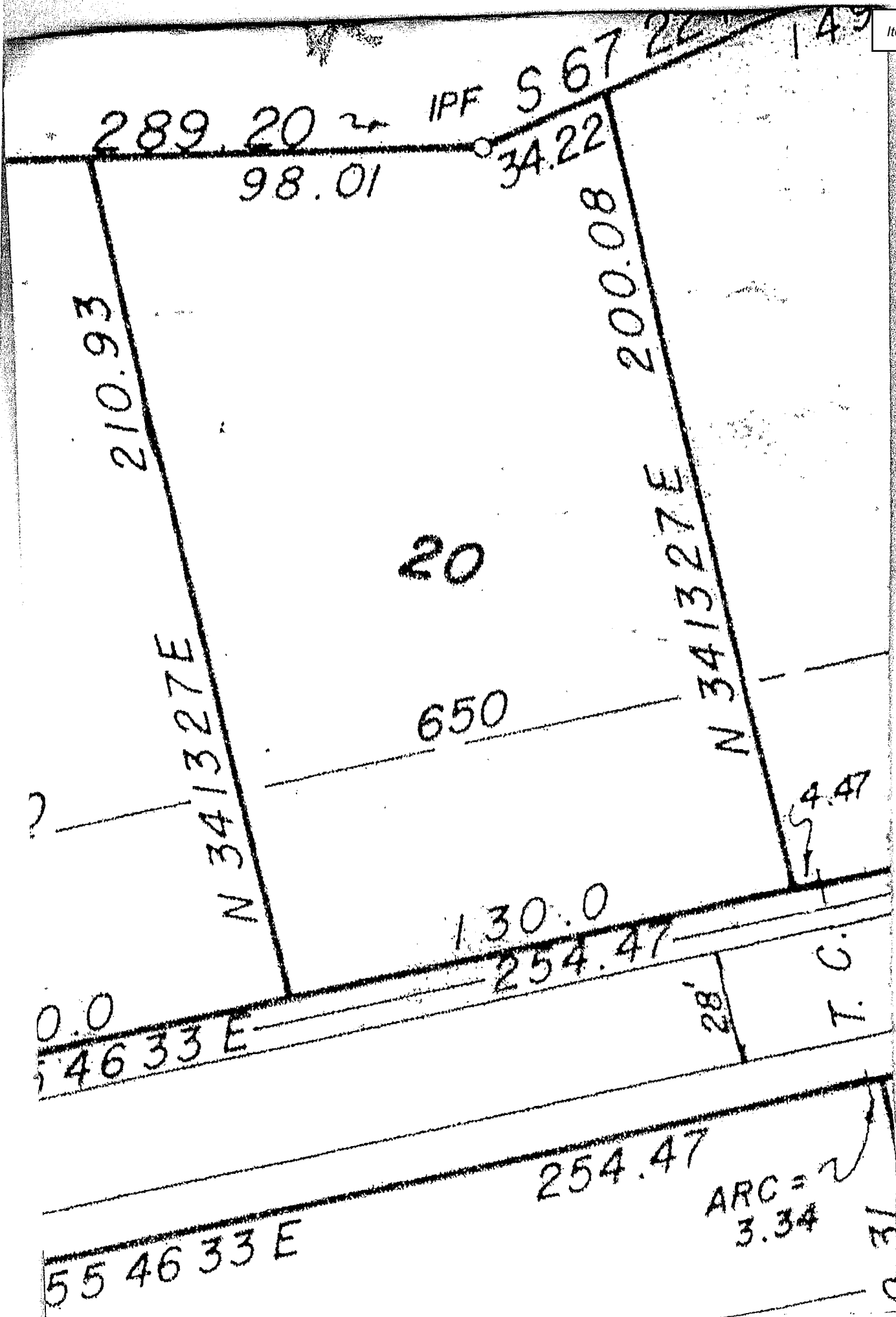
I am asking for a lot size reduction of 0.07. Lot 20, Hills Meadow Drive. At the time of the development, the lot was approved for building along with all the lots on Hills Meadow Drive.

Please consider this small size reduction as previously approved.

Sincerely,

Claude Givens Sec.

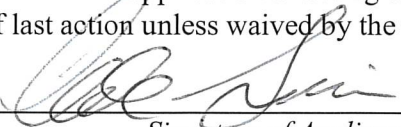
Claude Givens
Claude Givens Builder, Inc.



APPLICANT CERTIFICATION

Item 12.

The undersigned is authorized to make this application and is aware that if an application is denied, no application or re-application affecting the same property shall be acted upon within twelve (12) months from the date of last action unless waived by the City.

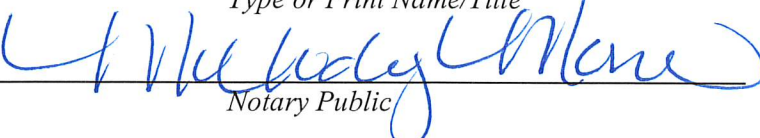


 Signature of Applicant

 Date

 Type or Print Name/Title

 Date



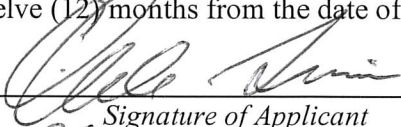
 Notary Public

 Date

MELODY MOON
 Notary Public - State of Georgia
 Walton County
 My Commission Expires May 5, 2025

PROPERTY OWNER CERTIFICATION

The undersigned, or as attached, is the record owner of the property considered in this application and is aware that if an application is denied, no application or re-application affecting the same land shall be acted upon within twelve (12) months from the date of last action unless waived by the City.

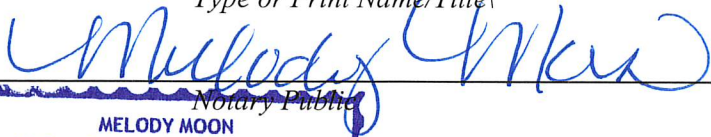


 Signature of Applicant

 Date

 Type or Print Name/Title

 Date



 Notary Public

 Date

MELODY MOON
 Notary Public - State of Georgia
 Walton County
 My Commission Expires May 5, 2025

FOR ADMINISTRATIVE USE ONLY

DATE RECEIVED 6-7-22 RECEIVED BY Brittini Nix FEE 375 RECEIPT # _____
 LAND LOT 309 DISTRICT 5 PARCEL # 209 HEARING DATE 7-7-22

FOR ADMINISTRATIVE USE ONLY

ACTION TAKEN _____
 SIGNATURE _____ DATE _____
 STIPULATIONS _____



P. O. Box 400
Dacula, GA 30019
(770) 962-0055 / Fax (770) 513-2187

DISCLOSURE OF CAMPAIGN CONTRIBUTIONS

Have you, within the two years immediately preceding the filing of this application, made campaign contributions aggregating \$250.00 or more to the Mayor and/or a member of the City Council.

Yes No

If the answer is *Yes*, please complete the following section:

Name of Government Official	Contributions <i>(All which aggregate to \$250.00+)</i>	Contribution Date <i>(within last 2 years)</i>

Have you, within the two years immediately preceding the filing of this application, made gifts having in the aggregate a value of \$250.00 or more to the Mayor and/or a member of the City Council or a member of the Dacula Planning Commission or Zoning Board of Appeals.

Yes No

If the answer is *Yes*, please complete the following section:

Name of Government Official	Description of Gifts <i>(Valued aggregate \$250.00+)</i>	Date Gift was Given <i>(within last 2 years)</i>

(Attach additional sheets if necessary to disclose or describe all contributions/gifts)