



FLUVANNA COUNTY PLANNING COMMISSION
WORK SESSION AND REGULAR MEETING AGENDA
Circuit Courtroom, Fluvanna Courts Building
November 14, 2016
6:00 PM (Courthouse)
7:00 PM (Courthouse)

TAB AGENDA ITEMS

WORK SESSION

A – CALL TO ORDER, PLEDGE OF ALLEGIANCE, MOMENT OF SILENCE

B – PLANNING DIRECTOR COMMENTS

C – PUBLIC COMMENTS (Limited to 3 minutes per speaker)

D – WORK SESSION

Sign Ordinance Discussion

E – ADJOURN

REGULAR MEETING

1 – CALL TO ORDER, PLEDGE OF ALLEGIANCE

2 – DIRECTOR'S REPORT

3 – PUBLIC COMMENTS #1 (3 minutes each)

4 – MINUTES

Minutes of October 28, 2016

5 – PUBLIC HEARING

SUP 16:11 Gardenkeepers of VA - James Newman, Planner

6 – PRESENTATIONS

None

7 – SITE DEVELOPMENT PLANS

SDP 16:03 Fork Union Military Academy - James Newman, Planner

8 – SUBDIVISIONS

None

9 – UNFINISHED BUSINESS

ZMP 16:02 Rivanna Heights – James Newman, Planner

CIP FY18 – FY22 Discussion and Ratings – Brad Robinson, Senior Planner

10 – NEW BUSINESS

None

11 – PUBLIC COMMENTS #2 (3 minutes each)

12 – ADJOURN

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*For the Hearing-Impaired – Listening device available in the Board of Supervisors Room upon request. TTY access number is 711 to make arrangements.
For Persons with Disabilities – if you have special needs, please contact the County Administrator's Office at 591-1910.*



Planning/Zoning Administrator Review

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PLEDGE OF ALLEGIANCE

I pledge allegiance to the flag
of the United States of America
and to the Republic for which it stands,
one nation, under God, indivisible,
with liberty and justice for all.

ORDER

1. It shall be the duty of the Chairman to maintain order and decorum at meetings. The Chairman shall speak to points of order in preference to all other members.
2. In maintaining decorum and propriety of conduct, the Chairman shall not be challenged and no debate shall be allowed until after the Chairman declares that order has been restored. In the event the Commission wishes to debate the matter of the disorder or the bringing of order; the regular business may be suspended by vote of the Commission to discuss the matter.
3. No member or citizen shall be allowed to use abusive language, excessive noise, or in any way incite persons to use such tactics. The Chairman shall be the judge of such breaches, however, the Commission may vote to overrule both.
4. When a person engages in such breaches, the Chairman shall order the person's removal from the building, or may order the person to stand silent, or may, if necessary, order the person removed from the County property.

PUBLIC HEARING RULES OF PROCEDURE

1. PURPOSE
 - The purpose of a public hearing is to receive testimony from the public on certain resolutions, ordinances or amendments prior to taking action.
 - A hearing is not a dialogue or debate. Its express purpose is to receive additional facts, comments and opinion on subject items.
2. SPEAKERS
 - Speakers should approach the lectern so they may be visible and audible to the Commission.
 - Each speaker should clearly state his/her name and address.
 - All comments should be directed to the Commission.
 - All questions should be directed to the Chairman. Members of the Commission are not expected to respond to questions, and response to questions shall be made at the Chairman's discretion.
 - Speakers are encouraged to contact staff regarding unresolved concerns or to receive additional information.
 - Speakers with questions are encouraged to call County staff prior to the public hearing.
 - Speakers should be brief and avoid repetition of previously presented comments.
3. ACTION
 - At the conclusion of the public hearing on each item, the Chairman will close the public hearing.
 - The Commission will proceed with its deliberation and will act on or formally postpone action on such item prior to proceeding to other agenda items.
 - Further public comment after the public hearing has been closed generally will not be permitted.

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COUNTY OF FLUVANNA

"Responsive & Responsible Government"

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Palmyra, VA 22963
(434) 591-1910
Fax (434) 591-1911
www.fluvannacounty.org

To: Fluvanna County Planning Commission
From: Jason Stewart, AICP
Date: November 14, 2016
Re: Planning Director's Report

Board of Supervisors Actions:

November 2, 2016

None

November 16, 2016

None

Board of Zoning Appeals Actions:

None

Technical Review Committee for November 10, 2016:

- I. **SDP 16:16 Fluvanna Self Storage** - A site development plan request to construct two self-storage buildings, site entrance and travelways on Tax Map 9, Section A, Parcel 9. The property is located on the south side of Lake Monticello Road (State Route 618), approximately ½ mile northwest of its intersection with Ashlawn Boulevard (The Main Gate to Lake Monticello). The property is zoned B-1 Business, General and located within the Palmyra Election District and the Rivanna Community Planning Area. *(Previous submittal in April has been withdrawn).*

- II. **SDP 16:17 Colonial Circle Phase 1** - A site development plan request to construct a 32,500 shopping center on a portion of Tax Map 8, Section A, Parcel A14A. The property is located on the north side of the intersection of Thomas Jefferson Parkway (State Route 53) and Lake Monticello Road (State Route 618). The property is zoned B-1 Business, General and A-1 Agricultural, General and is located within the Palmyra Election District and the Rivanna Community Planning Area.

FLUVANNA COUNTY PLANNING COMMISSION
WORK SESSION MEETING MINUTES
Circuit Court Room--Fluvanna County Courts Building
October 26, 2016
6:00 p.m.

MEMBERS PRESENT: Barry Bibb, Chairman
Lewis Johnson, Vice Chairman
Howard Lagomarsino
Donald Gaines (late 6:21)

ALSO PRESENT: Jason Stewart, Director Planning and Zoning
Brad Robinson, Senior Planner
James Newman, Planner

Absent: Fred Payne, County Attorney
Ed Zimmer
Tony O'Brien, Board of Supervisors Representative
Stephanie Keuther, Senior Support Assistant

CALL TO ORDER/PLEDGE OF ALLEGIANCE

Chairman Bibb called the meeting to order at 6:00 p.m., followed by the Pledge of Allegiance and a Moment of Silence

PLANNING DIRECTOR'S REPORT (Mr. Stewart)

None

Public Comment

None

Discussion of CIP 2018-2022

Mr. Stewart: We ask the Planning Commission to look at the staff CIP Proposal and make recommendations to the Board of Supervisors. This process will be similar to the previous year our department heads are here for presentation's and to answer any questions. If we can rank the projects for the November meeting we would then hold the public hearing in December.

Chuck Winkler: Assistant Super Attendant for Fluvanna County Public Schools described in general, the reasons for each item listed in the CIP. Items to include were new projects, existing projects, education, historic preservation, and infrastructures.

Eric Dahl: Director of Finance described in general, the reasons for each item listed in the CIP. energy performance contract for upgrades to various buildings. Some CIP items are included within this energy performance project.

Mr. Winkler: School Representative spoke again. Described, in general, the reasons for each item listed in the CIP.

Mr. Bibb: Talked about his concerns for 'Computer Instructional Technology and Infrastructure Replacement'. Winkler responded that the price listed in the CIP is half of what was listed last year. The School Board requests that item to be in the CIP. Chairman Bibb agrees with idea, but wants it to be paid for in a different manner.

School Representative Chuck Winkler continued to speak. Described, in general, the reasons for each item listed in the CIP.

Mr. Lagomarsino: We know and do understand that a lot of schools are challenged with other outlets and technology sources.

Mr. Bibb: Asked about electronic payment systems for school offices.

Mr. Winkler: We have from a cafeteria stand point. There's currently an app that parents can use to add money to their kids lunch cards.

Donald Gaines arrived at 6:21pm.

Mr. John Lye: President of Fire and Rescue Association described in general, the reasons for each item listed in the CIP. Items to include were existing projects concerning public safety and new projects concerning Vehicles and, public safety.

Mr. Wayne Stephens: Director of Public Works described in general, the reasons for each item listed in the CIP. Items to include are existing projects for public safety, land use and community design, economic development, infrastructure, education, and financial sustainability. The new projects are to include public safety, infrastructure, parks and rec and historical preservation.

Mr. Bibb: In-depth discussion of Combined Administrative Services/School Board building.

Mr. Bibb: Had comments about funding for Sherriff's Office renovations and moving money to earlier fiscal years.

Lt. Thomas Rensch: talked about the need for space and new facility upgrades.

Mr. Wayne Stephens: Spoke more about need for space and other facility upgrades.

Adjourn

Chairman Bibb adjourned the Planning Commission Work Session meeting of October 26, 2016 at 7 p.m.

Barry A. Bibb, Chairman
Fluvanna County Planning Commission

Approved

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Tony O'Brien, Board of Supervisors Representative (late)

ALSO PRESENT: Jason Stewart, Director Planning and Zoning
Brad Robinson, Senior Planner
James Newman, Planner

Absent: Fred Payne, County Attorney
Ed Zimmer
Stephanie Keuther, Planning Department Senior Support Assistant

CALL TO ORDER/PLEDGE OF ALLEGIANCE

Chairman Bibb called the meeting to order at 6:00 p.m., followed by the Pledge of Allegiance and a Moment of Silence.

PLANNING DIRECTOR'S REPORT (Mr. Stewart)

Board of Supervisors Actions:

SUP 16:10 - VFW Telecom Tower motion to approve 5-0
SUP 16:09 - Coronal Development Solar Farm motion to approve 4-1
ZMP 16:05 Fluvanna Self Storage Rezoning motion was denied 3-2

Board of Zoning Appeals Actions:

BZA 16:02 – James O. Toms motion was denied 4-0-1

Approval of Minutes

Motion

Mr. Johnson made a motion to approve the minutes of September 28, 2016 Seconded by Mr. Gaines. The motion carried a vote of 4-0-1 Absent

Public Hearing

None

Unfinished Business: Discussion of CIP cont'd.

Mr. Wayne Stephens: Resumed speaking from the Planning Commission work session to the regular meeting session.

Mr. Tony O'Brien arrived at 7:04.

Mr. Wayne Stephens: Specified the need for potable water wells at Pleasant Grove.

Mr. Stewart: Specified that the Planning Commission does not have to rate Major Repair and Replacement (MRR) items.

Mr. Wayne Stephens: Discussed the items on the Major Repair Replacement items.

Mr. O'Brien: Approximately \$400,000 in MRR budget. Is that amount sufficient in a forward-planning manner?

Mr. Nichols: Some funds are only intended to be used in emergency or unforeseen instances.

Mr. O'Brien: When looking at the CIP list and MMR List, did anything stand out as needing to be taken out of the purview of the Planning Commission?

Mr. Bibb: Yes, many of these MRR items should not even have to be mentioned in the CIP.

Mr. Nichols: It would be great if most of these items were just part of regular departmental budgets.

Mr. Wayne Stephens: The Capital Reserve Maintenance fund is for unexpected items; MMR is for regularly scheduled maintenance or planned for maintenance.

Mr. O'Brien: The Capital Reserve Maintenance should be over \$20,000 limit; MMR should not be part of CIP review

Mr. Wayne Stephens: CIP and MRR items should be separate budgets.

Mr. O'Brien: Is MRR budgeted amount sufficient?

Mr. Nichols: No, but this is not the official submittal for county budget. The Board could move MRR items to the regular departmental budgets.

O'Brien: The Planning Commission should recommend that MRR items are not part of CIP review.

Mr. Wayne Stephens: Function instead of cost, within reason, should determine if an item is CIP or MRR worthy.

Mr. Bibb: Mr. Nichols, could you type up a document stating the possibility of differing CIP and MMR budget differences.

Mr. Nichols: Yes, Jason Stewart can give that to the PC.

Mr. Wayne Stephens: I am willing at any time to speak with planning commission members and answer any question you may have with the upcoming jobs.

Mr. Bibb: I commend Wayne Stephens and Public Works Dept. on his focus on maintenance before major issues arise.

Aaron Spitzer: Director of Parks and Recreation, Described, in general, the reasons for each item listed in the CIP. Items to include are existing projects for parks and recreation, and new projects to include Land use and community design, and parks and recreations.

Mr. Bibb: Is the electronic message board going into the existing brick frame? Will it be the same as the High School?

Aaron Spitzer: Yes. It will be similar. The sign has been pre wired.

Mr. Nichols: That sign will also be able to be rented out by groups for \$5 a day.

Mr. Bibb: Multi-generational center is always on the CIP.

Mr. Nichols: Item is part of Pleasant Grove Master Plan, but that plan has been ignored and we are awaiting direction from the BOS.

Aaron Spitzer: Continued to talk, in general, about items on the CIP budget.

Lt. Rensch: To discuss Courthouse Security Electronics Upgrade. Nichols believes this item shouldn't be a CIP item but should be a regular budget item.

Lt. Rensch: Fingerprinting ability needs to be at the Courthouse were currently having to transport and taking more risk in doing so.

Mr. Gaines: Possibility of streaming to Sheriff's office?

Lt. Rensch: Yes, but there are technical issues that come with that when streaming.

Mr. Bibb: All items have been covered.

Mr. Stewart: Holiday schedule for upcoming PC meeting will be Monday November 14, 2016

Mr. Nichols: In February, a joint budget work session for BOS and PC would be helpful.

Adjourn

Chairman Bibb adjourned the Planning Commission Work Session meeting of October 26, 2016 at 7:59p.m.

Barry A. Bibb, Chairman
Fluvanna County Planning Commission

Approved

Transmittal Report October 2016

<i>Line Number</i>	<i>Code</i>	<i>Name</i>	<i>ID#</i>	<i>Amount Received</i>
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SUBDIV *Subdivision & Plat Review*

BSP16009 \$50.00

Sum: \$50.00

10000013-318319

SIGNPT *Sign Permit*

SUP16011 \$90.00

Sum: \$90.00

10000013-318337

SITEPL *Site Plan Review*

SDP16013 \$1,100.00

SDP16015 \$150.00

Sum: \$1,250.00

10000013-318341

SUBDIV *Subdivision & Plat Review*

SUB16025 \$100.00

SUB16026 \$100.00

SUB16028 \$100.00

SUB16030 \$100.00

SUB16027 \$50.00

SUB16027 \$50.00

Sum: \$500.00

10000013-318342

SPUSEP *Special Use Permits*

SUP16011 \$850.00

Sum: \$850.00

Total: \$2,740.00

BUILDING INSPECTIONS MONTHLY REPORT

County of Fluvanna

Building Official:	Period:
Florin Moldovan	Oct-2016

Category	Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	TOTAL
BUILDING PERMITS ISSUED														
NEW - Single Family Detached	2014	7	1	4	6	9	16	5	12	6	8	4	9	87
	2015	4	5	10	9	12	12	14	13	2	4	7	3	95
	2016	11	11	8	15	9	18	6	5	9	2			94
NEW - Single Family Attached	2014	0	0	6	0	0	0	0	0	0	0	2	0	8
	2015	2	0	0	0	0	0	0	2	0	0	0	0	4
	2016	0	0	0	0	0	0	0	0	0	0	0	0	0
NEW - Mobil Homes	2014	0	1	1	0	0	1	1	0	1	0	0	0	5
	2015	0	0	0	0	1	1	0	2	0	0	0	0	4
	2016	0	1	0	0	0	0	0	1	0	0			2
Additions and Alterations	2014	22	12	17	29	31	28	18	28	31	36	25	25	302
	2015	21	30	38	28	21	30	22	25	23	27	35	18	318
	2016	13	10	31	27	29	29	15	32	31	28			245
Accessory Buildings	2014	2	0	2	0	4	1	3	5	1	2	2	1	23
	2015	4	4	3	4	1	0	0	2	6	0	0	3	27
	2016	3	4	4	6	2	2	1	2	1	3			28
Swimming Pools	2014	0	0	0	1	0	0	0	0	0	0	0	1	2
	2015	0	0	0	0	0	0	0	1	1	0	0	0	2
	2016	0	0	0	0	0	1	1	0	0	1			3
Commercial/Industrial Bldgs	2014	0	0	0	0	0	2	1	0	0	0	0	1	4
	2015	1	0	0	0	0	0	2	0	0	1	1	1	6
	2016	0	0	2	2	0	0	1	0	1	1			7
Land Disturbing Permits	2014	8	1	10	4	8	16	3	10	5	9	6	10	90
	2015	6	5	9	10	10	12	15	16	3	5	10	5	106
	2016	12	11	8	14	10	17	7	6	11	3			99
TOTAL PERMITS	2014	39	14	30	36	44	48	28	45	39	46	33	37	431
	2015	32	39	51	41	35	43	38	45	32	32	43	25	456
	2016	27	26	45	50	40	50	24	40	42	35	0	0	379
BUILDING VALUES FOR PERMITS ISSUED														
TOTAL BUILDING VALUES	2014	1,902,399	453,326	1,783,992	2,540,111	2,570,600	3,119,333	1,724,192	2,586,705	1,353,471	1,922,260	1,461,680	2,563,409	\$ 23,981,478
	2015	1,384,631	1,560,716	2,916,520	3,567,237	2,999,918	4,280,357	5,272,378	3,107,731	2,625,563	2,203,913	1,931,893	6,252,403	\$ 38,103,260
	2016	1,817,981	2,555,455	5,552,458	3,711,821	2,447,891	5,181,921	3,611,179	1,817,783	3,089,971	1,889,279	0	0	\$ 31,675,739
INSPECTIONS COMPLETED														
TOTAL INSPECTIONS	2014	135	149	103	180	113	168	173	148	155	167	112	162	1765
	2015	105	137	146	214	113	232	193	181	208	206	149	149	2033
	2016	116	91	153	157	155	214	249	230	197	181			1743
FEES COLLECTED														
Building Permits	2014	\$9,160	\$2,655	\$10,041	\$11,601	\$11,808	\$18,950	\$6,913	\$12,848	\$8,080	\$11,602	\$9,740	\$11,568	\$ 124,965
	2015	\$6,731	\$8,351	\$13,711	\$16,037	\$13,508	\$16,628	\$14,931	\$18,895	\$10,411	\$8,558	\$10,381	\$9,575	\$ 147,717
	2016	\$11,850	\$11,954	\$11,576	\$14,889	\$8,447	\$18,588	\$12,947	\$7,537	\$11,285	\$12,548			\$ 121,620
Land Disturbing Permits	2014	\$2,125	\$1,225	\$2,400	\$2,300	\$1,310	\$8,500	\$2,739	\$2,850	\$625	\$2,839	\$2,450	\$2,850	\$ 32,213
	2015	\$1,775	\$875	\$1,425	\$3,425	\$1,750	\$1,850	\$2,325	\$3,338	\$1,085	\$2,819	\$10,450	\$2,298	\$ 33,414
	2016	\$3,200	\$2,575	\$1,700	\$1,950	\$2,250	\$2,200	\$4,020	\$875	\$28,074	\$2,000			\$ 48,844
Zoning Permits/Proffers	2014	\$1,000	\$250	\$1,800	\$1,100	\$14,200	\$2,400	\$1,050	\$19,900	\$1,400	\$1,350	\$950	\$1,700	\$ 47,100
	2015	\$1,200	\$1,000	\$1,650	\$2,600	\$1,500	\$1,850	\$1,850	\$2,400	\$1,650	\$1,050	\$900	\$850	\$ 18,500
	2016	\$1,150	\$1,250	\$1,800	\$2,450	\$1,650	\$2,700	\$1,150	\$1,150	\$1,900	\$800			\$ 16,000
TOTAL FEES	2014	\$ 12,285	\$ 4,130	\$ 14,241	\$ 15,001	\$ 27,318	\$ 29,850	\$ 10,702	\$ 35,598	\$ 10,105	\$ 15,790	\$ 13,140	\$ 16,118	\$ 204,278
	2015	\$ 9,706	\$ 10,226	\$ 16,786	\$ 22,062	\$ 16,758	\$ 20,328	\$ 19,106	\$ 24,632	\$ 13,146	\$ 12,427	\$ 21,731	\$ 12,722	\$ 199,631
	2016	\$ 16,200	\$ 15,779	\$ 15,076	\$ 19,289	\$ 12,347	\$ 23,488	\$ 18,117	\$ 9,562	\$ 41,258	\$ 15,348	\$ -	\$ -	\$ 186,464



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STAFF REPORT

To: Fluvanna County Planning Commission
Case Number: SUP 16:11
Tax Map: Tax Map 10, Section A, Parcel 33

From: James Newman
District: Columbia
Date: November 14, 2016

- General Information:** This request is to be heard by the Planning Commission on Monday November 14, 2016 at 7:00 pm in the Circuit Court Room in the Courts Building.
- Owner/Applicant:** Owner and Applicant is Catherine Edwards Grey.
- Representative:** Ronald Edwards II
- Requested Action:** A request for a Special Use Permit to authorize a Landscaping Materials Supply use with respect to 4.0 acres of Tax Map 10, Section A, Parcel 33. (Attachment A)
- Location:** The property is located on James Madison Highway (State Route 15), approximately 400 ft south of the intersection of Union Mills Road (State Road 616) and James Madison Highway. The parcel is zoned A-1 Agricultural, General. The parcel is within the Rural Residential Community Planning Area and the Columbia Election District.
- Existing Zoning:** A-1, Agricultural General (Attachment B)
- Existing Land Use:** Landscaping Materials Supply business currently operates on site without special use permit. Applicant is attempting to comply with the law by applying for this Special Use Permit, hence the use of the word '*authorize*' in the Requested Action stated above.
- Planning Area:** Rural Residential Planning Area
- Adjacent Land Use:** Adjacent properties are all zoned A-1
- Zoning History:** None.

Neighborhood Meeting:

Neighborhood meeting was held October 12, 2016. There were no attendees. Though there were no attendees at the neighborhood meeting, the applicant has received 59 letters of support for their project. (Attachment F)

Analysis:

There currently exists a Landscaping Material Supply business at the property, operating without a Special Use Permit. The business is 'Gardenkeepers of Virginia, LLC.' The applicant is attempting to comply with the law by applying for this Special Use Permit, hence the use of the word 'authorize' in the Requested Action stated above.

The applicant informed Staff at the Technical Review Committee meeting (TRC) on October 13, 2016 that they currently employ four (4) full-time workers, and wish to eventually employ up to 10 people, perhaps reaching that point three years from now.

There exists on site a house, several storage sheds, and piles of landscaping supplies. The proposed layout of the site as submitted by the applicant will largely conform to existing conditions. (Attachment C)

In the front of the property, the applicant proposes to have bulk storage for mulch, stone, and other supplies. There are existing sheds which are used for storing equipment, storing tools, and office space. The applicant plans to demolish the existing house and replace it with an office building less than 2,000 sq ft in size. Parking areas for employees and customers will be located in the front of the property. These are all to be screened by shrubbery in the front of the property near the roadway; the applicant believes that due to existing power lines, trees should not be planted for screening but that shrubbery would be acceptable. In the rear of the property, the applicant proposes to have dedicated planting area for trees, shrubs, flowers, and other plants.

Pictures of the property (taken on Nov. 7 2016) can be found as Attachment D.

Comprehensive Plan:

The subject property is located in a Rural Residential Community Planning Area .According to the 2015 Comprehensive plan, the purpose of the Rural Residential Community Planning Area

“Rural residential areas are linked to the rural cluster community element and generally surround the six community planning areas. Rural residential areas conserve open space by clustering development or developing on larger lots. Projects should achieve the goal of preserving as much open space, and thus rural character, as possible. The open space should be strategically located to preserve viewsheds from roads and existing developments, and to be used by the residents of the planned community. Open spaces in subdivisions should be available to the community for rural uses such as farming, wildlife, and recreation.

Streets are neighborhood streets within developments, or rural roads. Commercial and multifamily developments are limited, neighborhood-oriented, and smaller in scale. Multiuse trails should connect rural cluster developments wherever possible. Provisions should be made for future connections.

Some mixed-use development may be possible at a very small, rural neighborhood scale, but most development is single-family or two-family residential projects with limited commercial uses. Structures do not exceed two stories, and residential density is up to one unit every two acres gross (i.e., counting the acreage for the whole parcel), or six units per acre net (i.e., just the developable area, not including the permanent open space), whichever is most restrictive. There are no density incentives outside of the cluster development concept in the rural residential areas. Larger subdivisions should be located within identified community planning areas and discouraged in the rural residential areas.” (page 61)

Technical Review Committee:

The following comments are the result of the Technical Review Committee meeting that was held on Thursday, October 13, 2016:

1. Planning: Wanted to know how many employees would be working on-site. Applicant stated there are four full-time employees and three-part time employees currently, but could increase to 10 employees within three years.
2. Fire Chief: Asked that applicant have a defensible fire safety zone around every mulch pile, preferably 25ft in radius from the ‘yard blocks’ used to contain the mulch pile. Fire Chief found the use of ‘yard blocks’ to be acceptable for storage of mulch.
3. VDOT made a site visit and the existing entrance proposed for access to the development and it meet Stopping Sight Distance requirements.

The existing entrance needs to be upgraded to a Low Volume Commercial Entrance. This will require a 20 ft. wide gravel entrance with 35 ft. radii and a minimum of 8” of compacted VDOT 21A and an entrance culvert (Note: this will be a Low Volume Entrance and does not have to be paved).

The existing “Courtesy Entrance for Janice’s Field” at the southwest corner of the property (sketch dated 9/30/2016) does not have a good angle of intersection with Rte. 15 and it has limited sight distance. VDOT recommends removing the southwestern entrance and sharing the Low Volume Commercial Entrance for Garden Keeps of Virginia.

4. Health Department (via email, Oct. 13, 2016): The existing septic system must be evaluated by a licensed AOSE (soil evaluator) and a suitable 100% reserve site located if they plan to use it for the sales office. A new drainfield site and reserve must be found for the new house. If existing water supply is to be used, a negative coliform sample will be required.

5. Erosion and Sediment Control: Any grade changes when new office and house are to be built? Applicant stated that they have graded the driveway to make it flat, but that they have no other grading or disturbing planned; new structures will conform to existing grade. E&S also wanted to know how high the yard blocks would be, and recommended that the Applicant contact the Building Dept. E&S also wanted to know if any new parking would be created. Applicant stated that all parking which is required currently exists on site.
6. Chamber of Commerce: No comment.

Conclusion:

This Special Use Permit request appears to meet the intent of the Comprehensive Plan in that the proposed rezoning appears to be compatible with the description of the Rural Residential Community Planning Area.

In addition to conformance with the Comprehensive Plan, the Planning Commission may want to consider any potential adverse impacts, such as traffic entering and exiting the property, noise, or potential impacts to adjacent properties that future development may cause as a result of this special use permit.

Conditions

- 1) Prior to proposed development of the site, a site development plan that meets the requirements of the Fluvanna County Zoning Ordinance, must be submitted for review and approval;
- 2) Meeting all VDOT and Health Department requirements;
- 3) Any lighting will not be directed toward adjacent properties and will be limited in nature.
- 4) All screening shall be maintained in a condition acceptable to the County;
- 5) Outside storage of materials and machinery shall be screened from the public rights-of-way with either architectural or vegetative screening as approved by the County;
- 6) Retail business hours of operation shall be limited to: 7AM-6PM, Monday-Sunday. Staff hours of operation may vary beyond this (including setup, cleanup, work on site).
- 7) The Board of Supervisors, or representative, reserves the right to inspect the business for compliance with these conditions at any time.
- 8) The use of a greenhouse for commercial purposes shall not be allowed, except if a Special Use Permit for such use is granted. Non-commercial greenhouses are currently allowed by-right in A-1 Zoning.

Suggested Motion:

I move that the Planning Commission recommend [*approval/denial/deferral*] of SUP 16:11 a request for a Special Use Permit to authorize a Landscaping Materials Supply use with respect to 4.0 acres of Tax Map 10, Section A, Parcel 33, [*if approved*] subject to the eight (8) conditions listed in the staff report.

Attachments:

A – Application and APO Letter

B – Aerial Vicinity Map

C – Site Plan

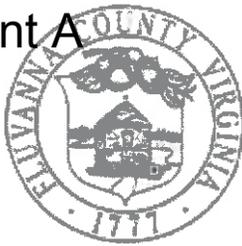
D – Site Pictures from 11-7-2016

E—TRC Comment Letter

F—Letters of Support

Copy: File

Applicant



COMMONWEALTH OF VIRGINIA
COUNTY OF FLUVANNA
Application for Special Use Permit (SUP)

Owner of Record: CATHERINE EDWARDS GREY **Applicant of Record:** CATHERINE GREY
 E911 Address: 17934 JM Highway/PO Box 241 E911 Address: _____
 Phone: 434 981 8968 Fax: N/A Phone: _____ Fax: _____
 Email: N/A Email: _____

Representative: Ronald Edwards II **Note: If applicant is anyone other than the owner of record, written authorization by the owner designating the applicant as the authorized agent for all matters concerning the request shall be filed with this application.**
 E911 Address: 90 Overlook Cir
 Phone: 434 466 6697 Fax: N/A
 Email: N/A

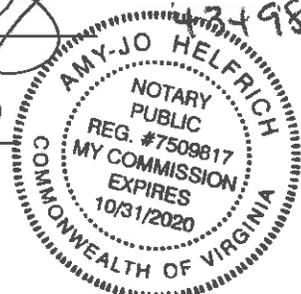
Is property in Agricultural Forestal District? No Yes
 If Yes, what district: N/A

Tax Map and Parcel(s): 10A33 **Deed Book Reference:** 162-149, 151-700
Acreage: 4 **Zoning:** A-1 **Deed Restrictions?** No Yes (Attach copy)

Request for a SUP in order to: add zoning category **Proposed use of Property:** landscaping business
 *Two copies of a plan must be submitted, showing size and location of the lot, dimensions and location of the proposed building, structure or proposed use, and the dimensions and location of the existing structures on the lot.

By signing this application, the undersigned owner/applicant authorizes entry onto the property by County Employees, the Planning Commission, and the board of Supervisors during the normal discharge of their duties in regard to this request and acknowledges that county employees will make regular inspections of the site.

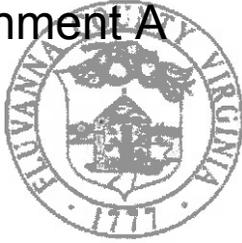
Date: 10/3/16 Signature of Owner/Applicant: [Signature] **PLEASE SCHEDULE SITE VISITS @** 434 981 8968
 Subscribed and sworn to before me this 4th day of October, 2016
 Notary Public: Amy-Jo Helfrich Register # 7509817
 My commission expires: 10/31/2020
 Certification: Date: _____
 Zoning Administrator: _____



All plats must be folded prior to submission to the Planning Department for review. Rolled plats will not be accepted.

OFFICE USE ONLY			
Date Received: <u>10/3/16</u>	Pre-Application Meeting:	PH Sign Deposit Received: <u>10-3-16</u>	Application #: SUP _____
\$800.00 fee plus mailing costs paid: <input checked="" type="checkbox"/>		Mailing Costs: \$20.00 Adjacent Property Owner(APO) after 1st 15, Certified Mail	
Amendment of Condition: \$400.00 fee plus mailing costs paid:			
Telecommunications Tower \$1,500.00 fee plus mailing costs paid:		\$5,500 w/Consultant Review paid:	
Election District: <u>Columbia</u>	Planning Area: <u>Rural Residential</u>		
Public Hearings			
Planning Commission		Board of Supervisors	
Advertisement Dates: <u>Nov 3 + 10, 2016</u>	Advertisement Dates:		
APO Notification: <u>Nov 3, 2016</u>	APO Notification:		
Date of Hearing: <u>Nov 14, 2016</u>	Date of Hearing:		
Decision:	Decision:		

Attachment A



COMMONWEALTH OF VIRGINIA
COUNTY OF FLUVANNA
Public Hearing Sign Deposit

Name: CATHERINE GREY

Address: 17934 JAMES MADISON HIGHWAY / PO BOX 241

City: Palmyra

State: VA Zip Code: 22963

I hereby certify that the sign issued to me is my responsibility while in my possession. Incidents which cause damage, theft, or destruction of these signs will cause a partial or full forfeiture of this deposit.

Catherine Grey
Applicant Signature

10/3/16
Date

*Number of signs depends on number of roadways property adjoins.

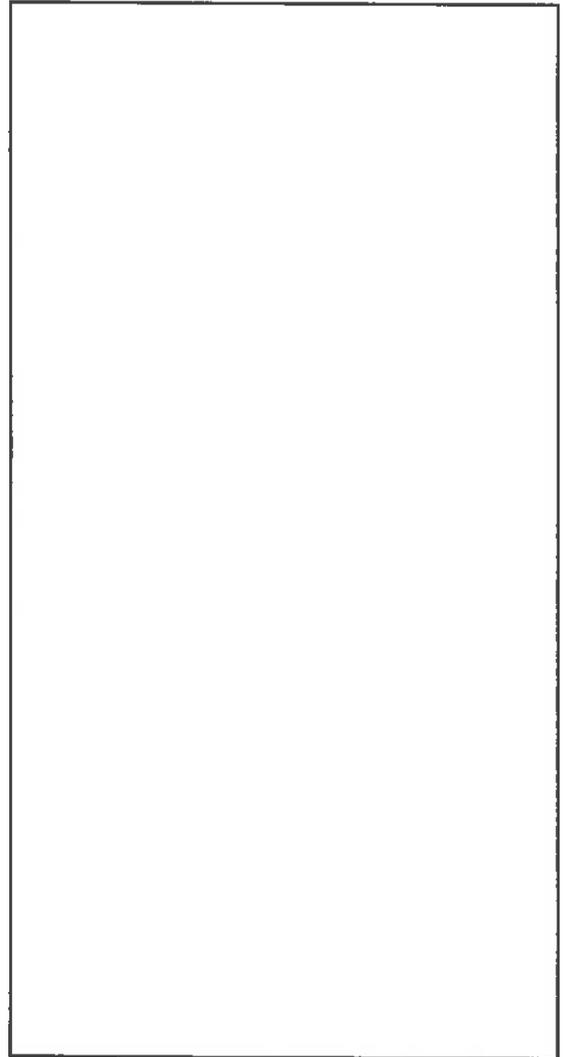
OFFICE USE ONLY	
Application #: BZA _____ : CPA _____ : SUP <u>6</u> : <u>11</u> ZMP _____ : ZTA _____ :	
\$90 deposit paid per sign*: <u>/</u>	Approximate date to be returned: <u>Dec 21, 2016</u>

Meetings for the processing of the application

- 棋 Applicant or a representative must appear at the scheduled hearing. The Planning Commission may recommend to the Board of Supervisors: approval; approval subject to submittal or correction; or denial of the special use permit.
- 棋 Notification to the applicant regarding the Planning Commission's decision.
- 棋 Placed as a Public Hearing on the next available agenda of the Board of Supervisors.
- 棋 Staff Report and Planning Commission recommendation forwarded to the Board.
- 棋 Notification of the scheduled Public Hearing to the following:
 - Applicant
 - All adjacent property owners
 - Local Newspaper advertisement
- 棋 Applicant or a representative must appear at the scheduling hearing. After considering all relevant information from the applicant and the public, the Board will deliberate on points addressed in the Staff Report.
- 棋 The Board may approve; deny; or defer the request pending further consideration; or remand the case back to the Planning Commission for further consideration.

Actions

- 棋 With approval, the development may proceed.
- 棋 If denied, an appeal to the Courts may be prescribed by law
- 棋 No similar request for a special use permit for the same use at the same site may be made within one year after the denial.
- 棋 The Special Use Permit Application fee is made payable to the **County of Fluvanna**.



Attachment A

Describe briefly the **improvements** proposed. State whether new buildings are to be constructed, existing buildings are to be used, or additions made to existing buildings.

See applicant provided sheet

NECESSITY OF USE: Describe the reason for the requested change.

PROTECTION OF ADJOINING PROPERTY: Describe the effects of the proposed use on adjacent property and the surrounding neighborhood. What protection will be offered adjoining property owners?

ENHANCEMENT OF COUNTY: Why does the applicant believe that this requested change would be advantageous to the County of Fluvanna? (Please substantiate with facts.)

PLAN: Furnish plot plan showing boundaries and dimensions of property, width of abutting right-of-ways, location and size of buildings on the site, roadways, walks, off-street parking and loading space, landscaping, etc. Architect's sketches showing elevations of proposed buildings and complete plans are desirable and may be required with the application. **Remarks:**

Attachment A

Note for James Newman Fluvanna County Planner: The information is provided solely for use by Fluvanna County for a Special Use Permit. The information contained in this email/document is property of Gardenkeepers of Virginia, LLC. Photographs and graphics are copyrighted.

Improvements proposed:

Remove existing house and build a new house in the rear 2 acre portion



The new house site indicated by the four metal posts is for a 2 story house with a walk out style basement approximately 2000 sq ft.

Attachment A



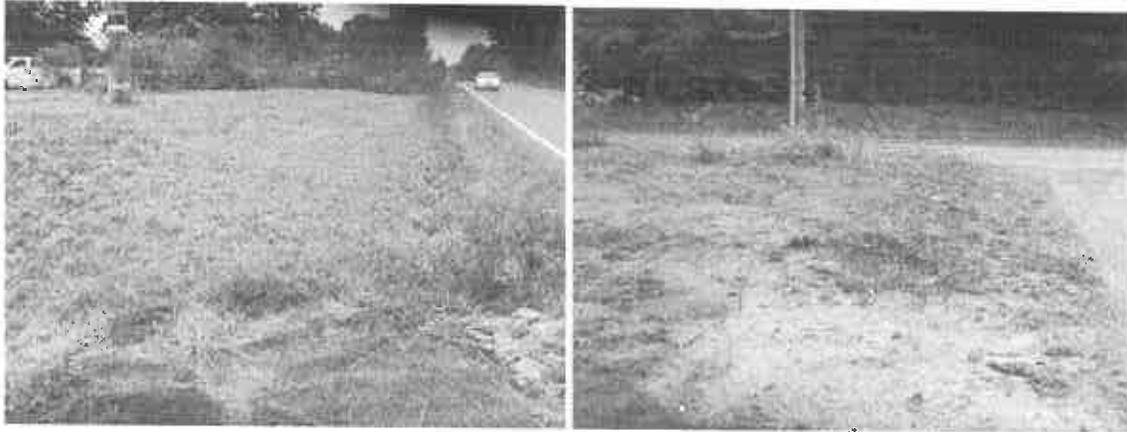
Relocate bulk storage to the north side of the property. These fields would have plant stock grown for sale. Create a mulch storage area near the south entrance using yard blocks (concrete blocks that are large). This allows for more compact storage. The non-combustible storage boundary would limit the quantity of mulch stored on site. Mulch is delivered with a tractor trailer. The best delivery location given site limitations is the south storage spot.

Build a operations office structure on the original house retaining the existing septic system for a restroom and sink/shower. Replace the "tool shed", build an awning over the concrete pad as an equipment work area

Plant shrub and tree screening along the west, north and south property lines

Note for James Newman Fluvanna County Planner: The information is provided solely for use by Fluvanna County for a Special Use Permit. The information contained in this email/document is property of Gardenkeepers of Virginia, LLC. Photographs and graphics are copyrighted.

Attachment A



These photos indicate the location of existing communication and electric line.

Within the VDOT right of way is a fiber optic cable

The pole contains CVEC electric lines with a horizontal right of way currently of 40 feet and a vertical right of way of less than 15 feet

The property contains three telephone cables at (from the pole) 16 feet, 27 feet and 37 feet.

In 2015 a row of large oak trees was removed from the CVEC right of way because of the potential risk the canopy presented to the electric service for the county. CVEC might tolerate shrubs under the line but will seek to have trees removed when they are greater than 10 feet tall.

The screening shrubs selection and placement MUST be arranged around each right of way that exists. Since the soil should not be disturbed on a regular basis either the forward location is best suited to a screened parking area.

Necessity of use

A landscaping business has operated on this site since 1998. In the beginning years the business was a single person. In 2011 the sole proprietor changed to a limited liability company able to hire employees. Bulk storage on the site began as a way to manage job-site deliveries and provide competitive bids for work. The change in business operations has been successful. The business has grown steadily and continues to acquire new customers and employees. For the business to continue to prosper at the current location a change in use permit must be acquired.

Protection of adjoining property.

The land surrounding 17934 is fallow, livestock or hay land. The owner maintains by semi-annual mowing or leasing the fields.

Tree screening as well as existing fences at 17934 will continue to separate the properties.

Attachment A

A courtesy access to the southern hay field is permitted by 17934. It is not a right of way or deed restriction. Preference would be to continue to allow that access unless a tree screening must be installed. The larger community also uses that access for recreational activities.

Bulk storage of stone, stone products, mulch and plants have a limited visual impact on the neighboring property. Mechanical equipment is stored in sheds. Additional garage sheds are planned. Vehicles are parked in assigned areas.

Hours of operation fall within daylight (farming community) hours of operation. Rarely do hours extend into dark - exception would be emergency services - for example snow removal or storm damage mitigation.

Signage for the businesses would total less than 40 square feet (2 signs approximately 3x5 feet) lighted with a maximum 250 wattage (discreet lighting)

Enhancement of county:

Increased tax revenues from a successful business

Increased job opportunities - currently four employees from within Fluvanna County

Increased tax revenues from higher valued structures

Increased visible aesthetic appeal from landscaping

Increased scenic appeal for travelers

Deliveries to the property come from plant nurseries, mulch, assorted landscaping products are delivered by a local hauling company usually by tandem dump truck, Average delivery per month is less than five. A growing business would entail more deliveries. All deliveries are scheduled for 8am - 5pm Monday thru Friday. Emergency deliveries (sand for snow removal etc) might occur outside of those hours.

Long term plans include production of plants for wholesale "to the trade". Retail sales are envisioned as a special feature for example holiday landscape features or botanical calendar sales - "Spring is for planting"! A future retail plant sales aspect when sufficient stock/staff and resources are available to support the expansion. Of course retail sales also produce increased sales, business property and real estate tax revenue for the county.

Memorandum

DATE: P qxgo dgt 3, 2016
RE: Planning Commission APO Letter
TO: Jason Stewart
FROM: Stephanie Keuther

Please be advised the attached letter went out to the attached list of Adjacent Property Owners for the November 14, 2016 Planning Commission Meeting.



COUNTY OF FLUVANNA

"Responsive & Responsible Government"

132 Main Street
P.O. Box 540
Palmyra, VA 22963
(434) 591-1910
Fax (434) 591-1911
www.fluvannacounty.org

NOTICE OF PUBLIC HEARING

October 31, 2016

Re: Public Hearing on SUP 16:11

Dear:

This letter is to notify you that the Fluvanna County Planning Commission will hold a public hearing on the above referenced item as noted below:

Purpose: Planning Commission Public Hearing
Day/Date: Monday, November 14, 2016
Time: 7:00 PM
Location: Fluvanna County Circuit Court Room, Palmyra, VA

The applicant or applicant's representative will be present at the Planning Commission meeting for the special use permit request that is described as follows:

1. **SUP 16:11 – Gardenkeepers of Virginia, LLC**– A request for a Special Use Permit to authorize a Landscape Materials Supply use with respect to 4.0 acres of Tax Map 10, Section A, Parcel 33. The property is located on James Madison Highway (State Route 15), approximately 400 ft south of the intersection of Union Mills Road (State Road 616) and James Madison Highway. The parcel is zoned A-1 Agricultural, General. The parcel is within the Rural Residential Community Planning Area and the Columbia Election District.

You are welcome to attend the Public hearing and you will have an opportunity to comment, if desired. The tentative agenda and staff report for this action is available for public review on the County website at: <http://fluvannacounty.org/government/pc/agendasactionsminutes>. You can also view the report in the Fluvanna County Planning and Zoning Department during working hours (8:00 am – 5:00 pm, Monday through Friday).

If you have any questions regarding this special use permit application or the Public Hearing, please contact me at 434-591-1910.

Sincerely,

Jason Stewart
Planning and Zoning Administrator

Attachment A

Adjacent Propert Owners for SUP 16 :11

<u>TMP</u>	<u>NAME</u>	<u>ADDRESS</u>	<u>CITY, STATE ZIP</u>
10 A 33	Catherin Edwards	PO Box 241	Palmyra, VA 22963
10 A 36	Janice C Farrar	17865 James Madison	Palmyra, VA 22963
10 A 36A	Janice C Farrar	17865 James Madison	Palmyra, VA 22963
10 A 36D	Ty & Erin Denby	31 Acre Ln	Palmyra, VA 22963

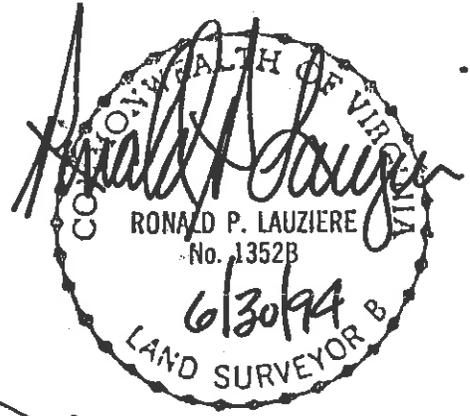
Attachment B



Attachment C

THIS IS TO CERTIFY THAT ON JUNE 7, 1994 I MADE AN ACCURATE SURVEY OF THE PREMISES SHOWN HEREON AND THAT THERE ARE NO EASEMENTS OR ENCROACHMENTS VISIBLE ON THE GROUND OTHER THAN THOSE SHOWN HEREON.

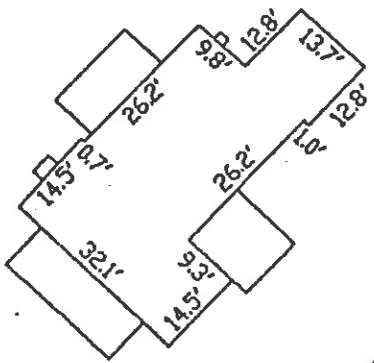
THE PROPERTY SHOWN HEREON FALLS WITHIN ZONE "C" AS SHOWN ON THE DEPARTMENT OF H.U.D. FLOOD HAZARD MAP.



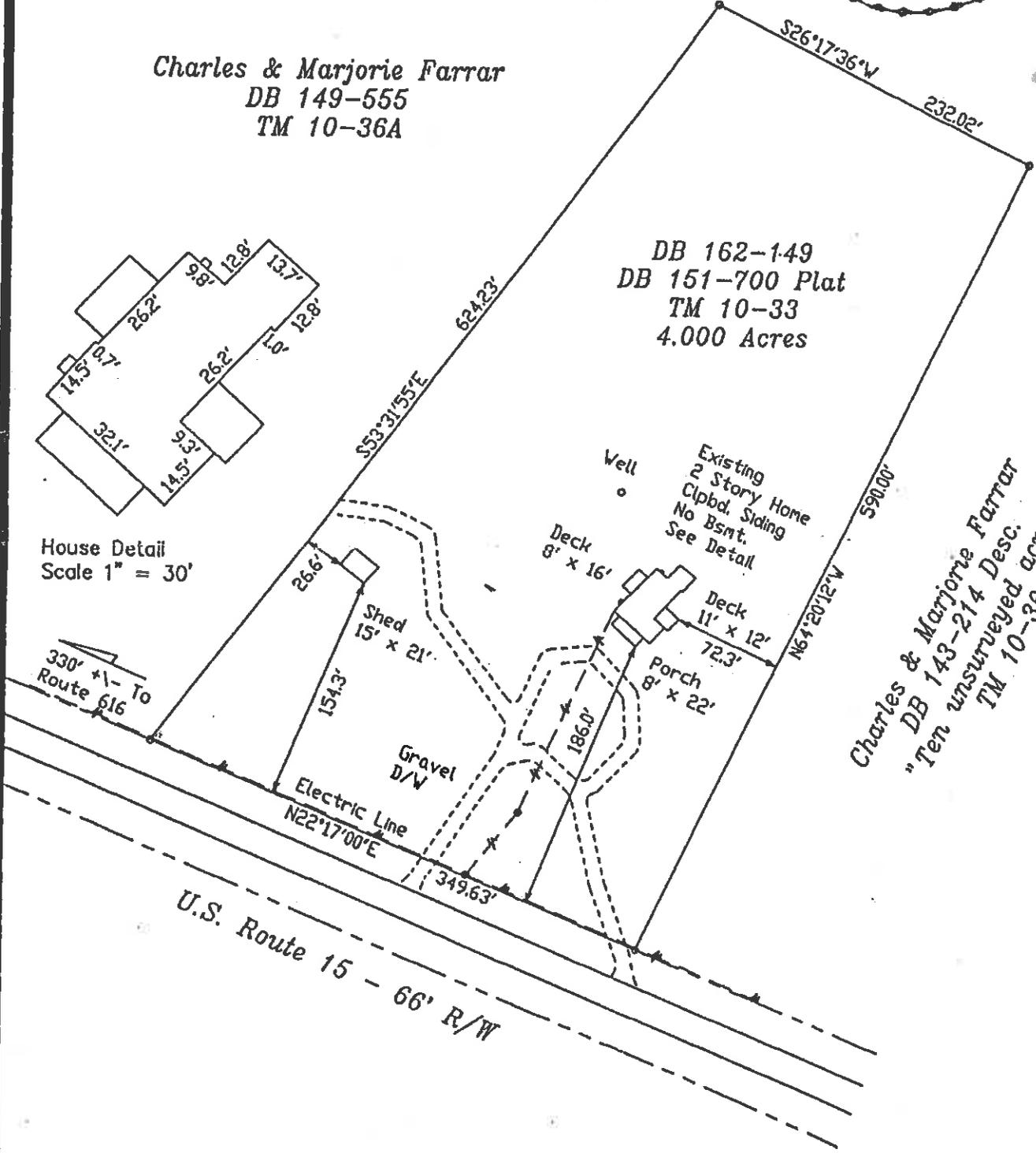
Charles & Marjorie Farrar
DB 149-555
TM 10-36A

DB 162-149
DB 151-700 Plat
TM 10-33
4.000 Acres

Charles & Marjorie Farrar
DB 143-214 Desc.
"Ten unsurveyed acres"
TM 10-36



House Detail
Scale 1" = 30'



PHYSICAL SURVEY SHOWING
TAX MAP 10 PARCEL 33

THE ROGER & BERTHA CLOWATER PROPERTY

PALMYRA DISTRICT, FLUVANNA COUNTY, VIRGINIA
SCALE: 1" = 100' DATE: JUNE 30, 1994

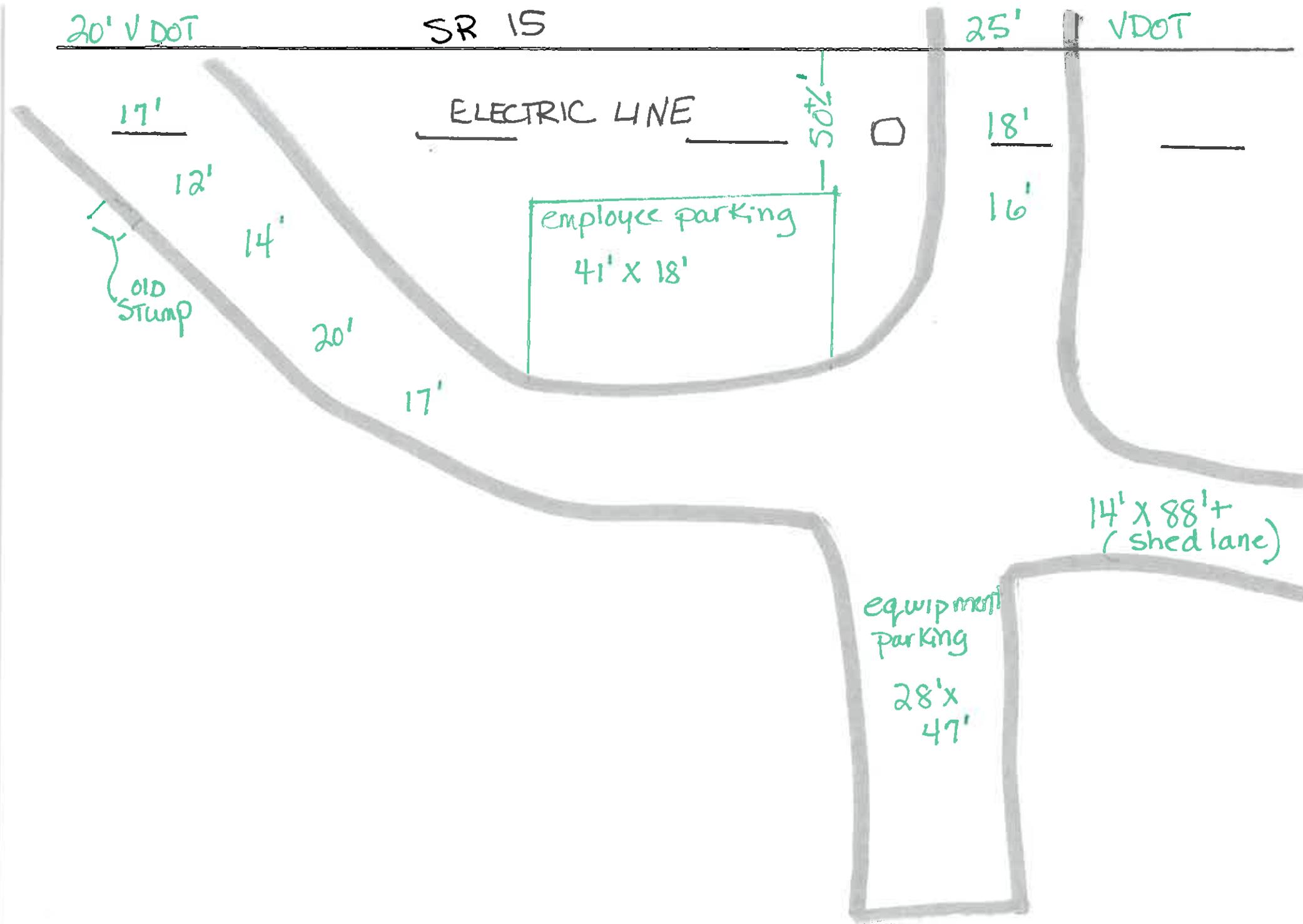
ROBERT L. LUM

LAND PLANNING & SURVEYING

PALMYRA, VIRGINIA 22963-0154



Attachment C



20' VDOT

SR 15

25' VDOT

VDOT

17'

ELECTRIC LINE

50%

18'

12'
14'
old stump

14'

employee parking
41' x 18'

16'

20'

17'

14' x 88'+
(shed lane)

equipment parking

28' x
47'



NOTICE
OF PUBLIC
HEARING
424-591-1910







712LE

97-902

84-





ATTACHMENT D







ATTACHMENT D- Example of Yard Blocks



ATTACHMENT D- Example of Yard Blocks



ATTACHMENT D- Example of Yard Blocks





COUNTY OF FLUVANNA

“Responsive & Responsible Government”

P.O. Box 540 Palmyra, VA 22963 (434) 591-1910 FAX (434) 591-1911 www.co.fluvanna.va.us

November 8, 2016

Catherine Edwards Grey
17934 James Madison Highway
PO Box 241
Palmyra VA 22963

Delivered via email to mail

Ms. Grey,

The following comments are the result of the Technical Review Committee meeting that was held on Thursday, October 13, 2016:

1. Planning: Wanted to know how many employees would be working on-site. Applicant stated there are four full-time employees and three-part time employees currently, but could increase to 10 employees within three years.
2. Fire Chief: Asked that applicant have a defensible fire safety zone around every mulch pile, preferably 25ft in radius from the ‘yard blocks’ used to contain the mulch pile. Fire Chief found the use of ‘yard blocks’ to be acceptable for storage of mulch.
3. VDOT made a site visit and the existing entrance proposed for access to the development and it meet Stopping Sight Distance requirements.

The existing entrance needs to be upgraded to a Low Volume Commercial Entrance. This will require a 20 ft. wide gravel entrance with 35 ft. radii and a minimum of 8” of compacted VDOT 21A and an entrance culvert (Note: this will be a Low Volume Entrance and does not have to be paved).

The existing “Courtesy Entrance for Janice’s Field” at the southwest corner of the property (sketch dated 9/30/2016) does not have a good angle of intersection with Rte. 15 and it has limited sight distance. VDOT recommends removing the southwestern entrance and sharing the Low Volume Commercial Entrance for Garden Keeps of Virginia.

4. Health Department (via email, Oct. 13, 2016): The existing septic system must be evaluated by a licensed AOSE (soil evaluator) and a suitable 100% reserve site located if they plan to use it for the sales office. A new drainfield site and reserve must be found for the new house. If existing water supply is to be used, a negative coliform sample will be required.
5. Erosion and Sediment Control: Any grade changes when new office and house are ot be built? Applicant stated that they have graded the driveway to make it flat, but that they have no other grading ir disturbing planned; new structures will conform to existing

Attachment E

grade. E&S also wanted to know how high the yard blocks would be, and recommended that the Applicant contact the Building Dept. E&S also wanted to know if any new parking would be created. Applicant stated that all parking which is required currently exists on site.

6. Chamber of Commerce: No comment.

The Planning Commission will have a meeting to discuss this item at their Monday, November 14, 2016 meeting. Your attendance is required at this meeting.

If you have any questions or need additional information, please contact me at 434-591-1910, or jnewman@fluvannacounty.org.

Sincerely,
James Newman
Planner
Dept. of Planning & Zoning

cc: File

Fluvanna County Planning Commission

Fluvanna County Board of Supervisors

132 Main Street

PO Box 540

Palmyra, VA 22963

October 2016

I support the Special Use Application by Catherine Grey, property owner at 17934 James Madison Highway, Palmyra, to operate a landscape business and to establish a plant nursery at the same location. This business employs Fluvanna residents and supports local business when purchasing supplies and materials.

Thank you for your approval of this Special Use Application.

Jonathan Wills
signature Video by the Lake

Jonathan Wills (owner)
print name

202 Turkeyssy Trail Suite 3 Palmyra VA 22963
address

434-589-5566 video by the lake@yahoo.com
phone and email address

Fluvanna County Planning Commission

Fluvanna County Board of Supervisors

132 Main Street

PO Box 540

Palmyra, VA 22963

October 2016

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Thank you for your approval of this Special Use Application.

Scott Buzgala

signature

Scott Bazzarre

print name

Budget Electrical & Mechanical, LLC (owner)
13610 James Madison Highway Palmyra, VA 22963

address

434-989-2225 skwzarr@budgetemllc.com

phone and email address

Fluvanna County Planning Commission

Fluvanna County Board of Supervisors

132 Main Street

PO Box 540

Palmyra, VA 22963

October 2016

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Thank you for your approval of this Special Use Application.


signature Jon Wills


print name Jon Wills

202 Turkeysey Trail Suite 3 Palmyra VA 22963
address

434-466-2917 jon-wills@fc.jhwl.com
phone and email address

Fluvanna County Planning Commission

Fluvanna County Board of Supervisors

132 Main Street

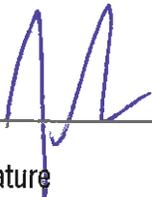
PO Box 540

Palmyra, VA 22963

October 2016

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Thank you for your approval of this Special Use Application.



signature

James R. Moreau

print name

ACE HARDWARE 114 CROFTON PLACE

address

(434) 591-0670

phone and email address

Fluvanna County Planning Commission

Fluvanna County Board of Supervisors

• 132 Main Street

PO Box 540

Palmyra, VA 22963

October 2016

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Thank you for your approval of this Special Use Application.



signature

Asher Bazzarre

print name

414 Taylor Ridge Way Palmyra, VA 22963

address

(434) 906-6258 , abazzarre@budgetemllc.com

phone and email address

RSS

Attachment F

Fluvanna County Planning Commission

Fluvanna County Board of Supervisors

132 Main Street

PO Box 540

Palmyra, VA 22963

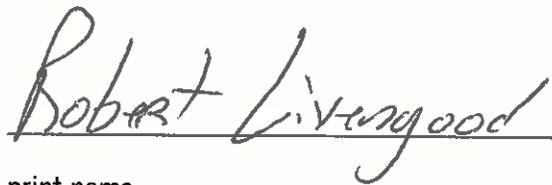
October 2016

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Thank you for your approval of this Special Use Application.



signature



print name

13510 James Madison Highway
address Palmyra Va 22963

804-338-3432 RLivingood@BudgetEMLLC.com

phone and email address

Fluvanna County Planning Commission

Fluvanna County Board of Supervisors

132 Main Street

PO Box 540

Palmyra, VA 22963

October 2016

I support the Special Use Application by Catherine Grey, property owner at 17934 James Madison Highway, Palmyra, to operate a landscape business and to establish a plant nursery at the same location. This business employs Fluvanna residents and supports local business when purchasing supplies and materials.

Thank you for your approval of this Special Use Application.

Marvin F. Moss

signature

Marvin F. Moss

print name

14054 James Madison Hwy

address

Palmyra, VA 22963

434-589-4839 mmoss8@centurylink.net

phone and email address

Fluvanna County Planning Commission

Fluvanna County Board of Supervisors

132 Main Street

PO Box 540

Palmyra, VA 22963

October 2016

I support the Special Use Application by Catherine Grey, property owner at 17934 James Madison Highway, Palmyra, to operate a landscape business and to establish a plant nursery at the same location. This business employs Fluvanna residents and supports local business when purchasing supplies and materials.

Thank you for your approval of this Special Use Application.

Elizabeth C Thomas

signature

Elizabeth C Thomas

print name

PO Box 101 Palmyra VA 22963

address

434 589 8412

phone and email address

Fluvanna County Planning Commission

Fluvanna County Board of Supervisors

132 Main Street

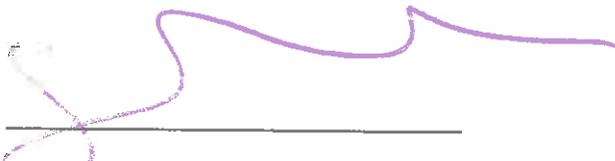
PO Box 540

Palmyra, VA 22963

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Thank you for your approval of this Special Use Application.



signature

Georganna Shaw

print name

4608 Kenable Rd Kents Store VA

address

23084

gmehfoud@gmail.com

phone and email address

804-426-3081

Fluvanna County Planning Commission
Fluvanna County Board of Supervisors
132 Main Street
PO Box 540
Palmyra, VA 22963

October 2016

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Thank you for your approval of this Special Use Application.



signature



print name

address

phone and email address

Attachment F

Fluvanna County Planning Commission

Fluvanna County Board of Supervisors

132 Main Street

PO Box 540

Palmyra, VA 22963

October 2016

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Thank you for your approval of this Special Use Application.

Helen R. Gowen

signature

Helen R. Gowen

print name

17934 James Madison Hwy, Palmyra, Va 22963

address

434 (589-8801

phone and email address

Fluvanna County Planning Commission

Fluvanna County Board of Supervisors

132 Main Street

PO Box 540

Palmyra, VA 22963

October 2016

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Thank you for your approval of this Special Use Application.

Charles E. Gowen

signature

CHARLES E. GOWEN

print name

1718 James Madison Hwy

address

434-589-8801

phone and email address

Fluvanna County Planning Commission

Fluvanna County Board of Supervisors

132 Main Street

PO Box 540

Palmyra, VA 22963

October 2016

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Thank you for your approval of this Special Use Application.

Donna P. Wills

signature

Donna P. Wills

print name

15852 James Madison Hwy Palmyra VA 22963

address

434-589-8332 5687919@gmail.com

phone and email address

Fluvanna County Planning Commission

Fluvanna County Board of Supervisors

132 Main Street

PO Box 540

Palmyra, VA 22963

October 2016

I support the Special Use Application by Catherine Grey, property owner at 17934 James Madison Highway, Palmyra, to operate a landscape business and to establish a plant nursery at the same location. This business employs Fluvanna residents and supports local business when purchasing supplies and materials.

Thank you for your approval of this Special Use Application.



signature

Andrew W. Wills

print name

15858 James Madison Hwy Palmyra VA 22963

address

434-962-0888

kswaww97@gmail.com

phone and email address

Fluvanna County Planning Commission

Fluvanna County Board of Supervisors

• 132 Main Street

PO Box 540

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Thank you for your approval of this Special Use Application.



signature

Jonathan Wills

print name

9 Long Leaf Lane Palmyra VA 22963

address

434-466-2917

videobythelake@yahoo.com

phone and email address

R44

Fluvanna County Planning Commission

Fluvanna County Board of Supervisors

132 Main Street

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Katelin Perkins

signature

Katelin Perkins

print name

5307 Buritan Lake Rd Palmyra VA 22963

address

kep@lyhac.com

phone and email address

Fluvanna County Planning Commission

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Thank you for your approval of this Special Use Application.

Michael Gribbe

signature

Michael Gribbe

print name

5307 Ruritan Lake Rd. Palmyra VA

address

(434) 806-1428

phone and email address

Fluvanna County Planning Commission

Fluvanna County Board of Supervisors

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Thank you for your approval of this Special Use Application.

Martha K. Wills

signature

Martha K. Wills

print name

387 Zion Rd Gordonsville, VA 22942 (Fluvanna County)

address

434-466-5714 martiewills10@gmail.com

phone and email address

Fluvanna County Planning Commission

Fluvanna County Board of Supervisors

• 132 Main Street

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Palmyra, VA 22963

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Thank you for your approval of this Special Use Application.



signature

David Jones

print name

6052 Stage Junction Rd Charlottesville VA 23038

address

434-989-4873

phone and email address

Attachment F

Fluvanna County Planning Commission

Fluvanna County Board of Supervisors

132 Main Street

PO Box 540

Palmyra, VA 22963

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signature

Hannah Thomas

print name

6052 Stage Junction Rd Columbia VA 23038

address

434)989-9874 hrthomas08@gmail.com

phone and email address

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signature

Jennifer Hasher

print name

590 Blue Ridge View Ln, Palmyra VA 22963

address

434-996-1935

jwhasher@gmail.com

phone and email address

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Jeremiah D. Hasher

signature

Jeremiah D Hasher

print name

590 Blue Ridge View Lane Palmyra Va 22963

address

(434) 996-1728

phone and email address

Fluvanna County Planning Commission

Fluvanna County Board of Supervisors

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Thank you for your approval of this Special Use Application.

Otis P Hash

signature

OTIS P HASHEA

print name

589 BLUE Ridge View LANE PALMYRA

address

434-466-4640

phone and email address

Fluvanna County Planning Commission

Fluvanna County Board of Supervisors

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Thank you for your approval of this Special Use Application.



signature

CHRISTIAN BRENDT

print name

3532 JAMES MADISON HWY
FORK UNION VA 23055

address

434 987 1457 TREEGREENY@GMAIL.COM

phone and email address

Fluvanna County Planning Commission

Fluvanna County Board of Supervisors

132 Main Street

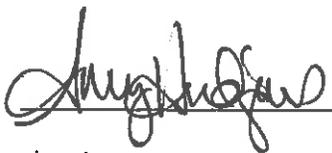
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Thank you for your approval of this Special Use Application.



signature

Amy Hudgins

print name

1365 Chapel Road New Canton Va 23123

address

(434) 808-3073

phone and email address

Fluvanna County Planning Commission

Fluvanna County Board of Supervisors

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Thank you for your approval of this Special Use Application.

Donald C. Wyant

signature

Donald C. Wyant

print name

2452 Hadley Martin Rd Palmyra Va

address

(434)242-8916

wyantfireduckKS@aol.com

phone and email address

Attachment F

Fluvanna County Planning Commission

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Thank you for your approval of this Special Use Application.

Shawn Rigby

signature

Shawn Rigby

print name

23 Antioch Road Scottsville VA 24590

address

434 981-8162 SmRigby9972@gmail.com

phone and email address

Fluvanna County Planning Commission

Fluvanna County Board of Supervisors

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Thank you for your approval of this Special Use Application.


signature

Ross Duffield
print name

53 Wildwood Dr, Palmyra
address

434 272 8377 rossdjunkmail@gmail.com
phone and email address

Fluvanna County Planning Commission
Fluvanna County Board of Supervisors
132 Main Street
PO Box 540
Palmyra, VA 22963

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signature

Stephanie M Marchi
print name

18639 James Madison Hwy Troy VA 22974
address

434-242-5321 Greyvaldesigns@gmail.com
phone and email address

Fluvanna County Planning Commission

Fluvanna County Board of Supervisors

132 Main Street

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Thank you for your approval of this Special Use Application.

Samantha Oliff

signature

Samantha Oliff

print name

3396 Cedar Lane Rd Kents Store, VA 23084

address

434-589-3158

mingo1993@gmail.com

phone and email address

Fluvanna County Planning Commission

Fluvanna County Board of Supervisors

132 Main Street

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Thank you for your approval of this Special Use Application.


signature

John Oliff
print name

3396 Cedar Lane Rd. Kents Store, VA 23084
address

434-996-4581
phone and email address

Attachment F

Fluvanna County Planning Commission

Fluvanna County Board of Supervisors

132 Main Street

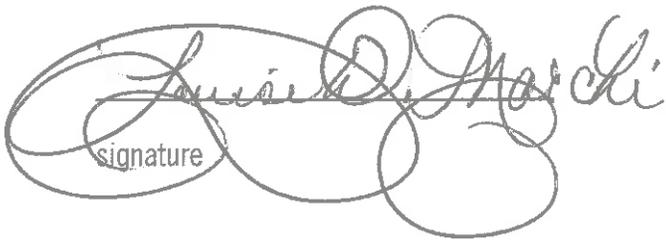
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Thank you for your approval of this Special Use Application.

 signature

Louise D. Marchi
print name

18639 James Madison Hwy. Troy, VA 22979
address

434-589-3121
phone and email address

Fluvanna County Planning Commission

Fluvanna County Board of Supervisors

132 Main Street

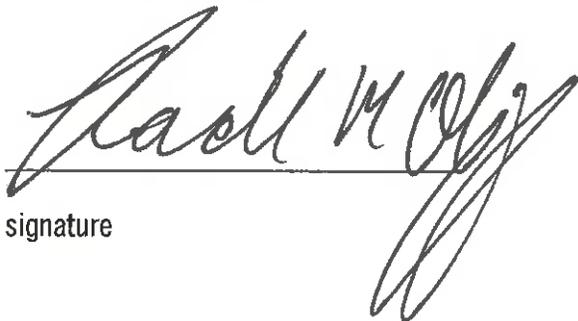
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Thank you for your approval of this Special Use Application.



signature

Rachel M Oliff

print name

19136 Lahore Rd Orange Va 22960

address

434-962-4413 rolloff@gmail.com

phone and email address

Fluvanna County Planning Commission

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Thank you for your approval of this Special Use Application.

Marvin A. Oliff
signature

Marvin A. Oliff, Jr.
print name

141 Wilmington Rd, Palmyra, Va. 22963
address

434. 989-8944
phone and email address

R25

Attachment F

Fluvanna County Planning Commission

Fluvanna County Board of Supervisors

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Joseph L Marchi Jr
signature

Joseph L Marchi Jr
print name

18639 James Madison Hwy Troy VA 22974
address

434 589 3421
phone and email address

Fluvanna County Planning Commission

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Gregory Edwards

signature

Gregory Edwards

print name

36 Overlook Circle Palmyra Va 22963

address

434-249-9986

phone and email address

Fluvanna County Planning Commission

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signature

Ethan Weaver

print name

1201 Slaters Ford Rd Palmyra VA 22963

address

540-470-7658 Ethan.weaver07@gmail.com

phone and email address

Fluvanna County Planning Commission

Fluvanna County Board of Supervisors

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Thank you for your approval of this Special Use Application.

William P. Juli
signature

WILLIAM P. JULI
print name

PO Box 356 Palmyra, VA. 22963
address

hmmelodie@gmail.com
phone and email address

Attachment F

Fluvanna County Planning Commission

Fluvanna County Board of Supervisors

132 Main Street

PO Box 540

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Stephen James Juli

signature

STEPHEN JAMES JULI

print name

14054 James Madison Hwy, Palmyra VA 22963

address

phone and email address

Fluvanna County Planning Commission

Fluvanna County Board of Supervisors

132 Main Street

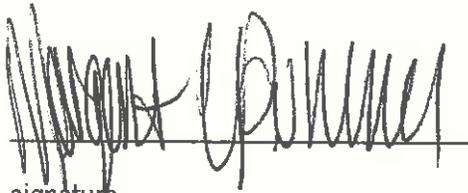
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signature

Margaret L Bohlman

print name

216 Rolling Rd. S. Scottsville Va 24590

address

434-422-0474 mumbug1989@gmail.com

phone and email address

Fluvanna County Planning Commission

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Greg Mowbray
signature

Greg Mowbray
print name

2957 Rolling Rd S. Scottsville VA 24590
address

434-286-4057
phone and email address

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signature


print name

372 EchoBrook Ln Reswick VA 22947
address

434-977-0004
phone and email address

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signature

Larry Pedesini

print name

4651 Dogwood Dr. Palmyra VA.

address

phone and email address

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signature

JUSTIN R. RUHMAN

print name

216 Rolling Rd. South, Scottsville VA 24590

address

434-422-0474

phone and email address

Attachment F

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Janice C Farrar
signature

Janice C Farrar
print name

17865 James Madison Hwy, Palmyra Va 22963
address

434-589-3795 26jesawford@comcast.net
phone and email address

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signature

LESTER FIELD

print name

P.O. Box 212 Palmyra, VA 22963

address

434-760-1958

phone and email address

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signature

KEVIN ANDERSON

print name

498 Helen Martin Rd Palmyra Va 22963

address

(804) 338-3720

phone and email address

Attachment F

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Thank you for your approval of this Special Use Application.

Hannah Anderson

signature

Hannah Anderson

print name

498 Haden Martin Road Palmyra, Virginia 22963

address

(804) 316-7063

phone and email address

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Brandi Henney

signature

Brandi Kennedy

print name

5394 Ruritan Lake Road Palmyra VA 22963

address

phone and email address

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CBK Kennedy

signature

Brad Kennedy

print name

5394 Riverton Lake Rd. Palmyra VA 22963

address

(434) 531-4008

phone and email address

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Jason Powell

signature

Jason Powell

print name

5394 Ruritan Lake Rd Palmyra VA ~~22963~~ 22963

address

phone and email address

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Ay Bird
signature

Ay Bird
print name

5506 Union Mills Rd. Troy, Va
address 22974

434-589-8848
phone and email address

Fluvanna County Planning Commission

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Thank you for your approval of this Special Use Application.

Kalli R. Mayton

signature

Kalli R. Mayton

print name

1201 Sclaters Ford Rd. Palmyra, VA 22963

address

804-837-8894 krm4cf@virginia.edu

phone and email address

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signature

Edward D. Mayo
print name

5296 Bybees Church Rd. Troy VA 22974
address

434 981 6209 mpelectr@ yahoo.com
phone and email address

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signature

Trevonne Q Bradley

print name

127 Allen Lane Palmyra VA 22963

address

☺

phone and email address

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Thank you for your approval of this Special Use Application.

Gary Morris

Gary Morris

signature

print name

568 Zion Gordonsville VA. 22942

address

434-953-6167 HOT_Rodddd22@yahoo.com

phone and email address

RZ



gardenkeepers of virginia (gardenkeepers2007@gmail.com)

Re: Planning Commission Item

2 messages

willfishaw@juno.com <willfishaw@juno.com>
To: gardenkeepers2007@gmail.com

Tue, Oct 11, 2016 at 10:44 AM

Hi Will (or Louise M), Zimera because I'd met with

----- Forwarded Message -----

From: "willfishaw@juno.com" <willfishaw@juno.com>
To: gardenkeepers2007@gmail.com
Subject: Planning Commission Item
Date: Tue, 11 Oct 2016 14:25:55 GMT

Hi Will (or Louise M), Zimera. There's an item coming before the Planning Commission, on which you advise

Ms. Catherine Grey of Gardenkeepers is pursuing a special use permit for her home at 1754 Junda Jackson Highway, Palmyra, VA 22965. I don't know the exact details, but I suppose it's to continue using her yard for her landscape business purposes.

I have just Ms. Grey's address on US 15 twice daily, and there's a just fine. I hope you all make the decision and a zoning, which is supposed to be business. We need to support businesses in Palmyra.

Will Show
Zoo Crittercasts

gardenkeepers of virginia (gardenkeepers2007@gmail.com) <
To: willfishaw@juno.com <willfishaw@juno.com>

Tue, Oct 11, 2016 at 7:02 AM

Thank you Will! Very nice job!
(Catherine Grey)

Gardenkeepers of Virginia, LLC
Catherine Grey
PO Box 241
Palmyra VA 22962
434-381-0940
gardenkeepers2007@gmail.com

Fluvanna County Planning Commission

Fluvanna County Board of Supervisors

• 132 Main Street

PO Box 540

Palmyra, VA 22963

October 2016

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Thank you for your approval of this Special Use Application.



signature

Matthew F Searcy

print name

267 Main Street Apt B Palmyra VA
22963

address

434 996 7910 house_ogrc287@yahoo.com

phone and email address



COUNTY OF FLUVANNA

"Responsive & Responsible Government"

132 Main Street
P.O. Box 540
Palmyra, VA 22963
(434) 591-1910
Fax (434) 591-1911
www.fluvannacounty.org

STAFF REPORT

To: Fluvanna County Planning Commission

Case Number: SDP 16:03

Tax Map: Tax Map 51 , Section A, Parcels 121 and 117

From: James Newman

District: Fork Union

Date: November 14 2016

General Information: This item is scheduled to be heard by the Planning Commission on Monday, November 14, 2016 at 7:00 p.m. in the Circuit Courtroom in the Courts Building.

Owner: Fork Union Military Academy

Applicant/Representative: Draper Aden Associates

Requested Action: Approval of a sketch plan for parking, sidewalk, and roadway improvements and additions with respect to 56.42 acres of Tax Map 51, Section A, Parcels 121 and 117 (Attachment A).

Location: The subject property is located on the east side of James Madison Highway (Route 15), at the terminus of Cedar Bend Drive, approximately 700 feet southeast of the intersection of Richmond Road (Route 250) and James Madison Highway. (Attachment B)

Existing Zoning: Parcel 121 is A-1, Agricultural, General and B-1 Business, General. Parcel 117 is zoned A-1 Agricultural, General.

Existing Land Use: Fork Union Military Academy.

Adjacent Land Uses: Adjacent properties are zoned A-1, B-1, and R-1

Comprehensive Plan: Fork Union Community Planning Area

Zoning History: Approval of a SDP 09:11. Approval of a sketch plan to construct a 90,000 square foot dormitory. Approved January 27, 2010.

Analysis:

The applicant is requesting sketch plan approval of a site development plan of an A-1, B-1 property, approximately 56.42 acres in size. According to the submitted plan, the applicant is proposing to construct two (2) asphalt parking lots, several concrete walkways, and the removal

of some existing curbs and asphalt. A new roundabout would be installed, connecting Fraley Lane to Fraley Circle as well as to one of the new parking lots. A new road is proposed east of Jacobson Hall, to connect Academy Road to Pettit-Foster Lane. A parking lot will be constructed next to this road. According to the engineering plan dated October 24, 2016, this project includes the construction of 1,000 linear feet of paved roadway, parking, and sidewalk improvements.

(Attachment C)

Parking/Roads

This entire site development plan is based on modifying existing roads and sidewalks, and creating new roads, sidewalks, and parking lots. A total of 71 parking spots are proposed for the new parking lots being constructed.

Landscaping/Screening

All landscaping should be in compliance with the Fluvanna County Zoning Ordinance. All parking lots of five (5) or more spaces must be screened from view of public roads, rights-of-way, and adjacent properties. Shade trees are required in the parking islands and at the ends of all parking bays. This requirement will be evaluated based on current site conditions, and number of proposed parking spaces.

Signage & Outdoor Lighting

Traffic circulation will be controlled by appropriate signage at the entrance/exit points into the site. Approximate locations of any proposed outdoor lighting must be shown, and a lighting plan will be required as part of the final site plan approval. This plan must show that any proposed outdoor lighting is fully shielded and uses full cut-off lighting fixtures.

Stormwater Management

As part of the final site development plan process, an erosion and sediment control plan will be required for review and approval.

Septic and Water Usage

This project does not require and water or wastewater connections

Technical Review Committee:

Results of the TRC meeting held on March 10, 2016:

1. VDOT: The functional classification of Rte. 652 (Academy Road) is a Rural Local Road and the road is unposted and therefore the statutory speed limit of 55 mph applies. The proposed new commercial entrance is located on Rte. 652 (Academy Road) between Rte.

15 and Rte. 654 and it has an AADT of 220. The proposed entrance will be 24 ft. wide, have entrance radii onto Rte. 652 and will be paved. Draper Aden advises that 610 ft. of Intersection Sight Distance (ISD) is available. VDOT requests that the master plan/site plan clearly show the sight triangles to the northwest and southeast of the proposed commercial entrance and designate that the entire area 5 ft. beyond and parallel to the sight triangles and the Rte. 652 Right of Way be mowed and maintained so that no obstructions (signs, buildings, monuments, etc.) or landscaping (trees, bushes, vegetation, etc.) be planted that would obstruct or impair the required 610 ft. of Intersection Sight Distance (low growing flowers and vegetation that does not block sight distance is acceptable). The proposed project will separate delivery truck traffic from passenger vehicles, improve internal traffic flows and provide access to FUMA off of a low volume secondary road. VDOT does not have any objections to the proposed commercial entrance.

2. Fire Chief Mike Brent had concerns about access for Fire Dept. vehicles. The traffic circle in map section C1.1 of the site plan is 80ft in diameter, though Chief Brent would prefer 100ft as it would give more operating space for fire trucks to maneuver in. He is also concerned about access to Jacobson Hall from Academy Rd. As the street next to Jacobson Hall will be converted into a sidewalk (according to the site plan), it would be good if the sidewalks were engineered to support the weight of a ladder truck. Access to a Jacobson Hall with a ladder truck is necessary. Chief Brent is willing to engage in further conversations with Draper Aden and FUMA.
3. Planning Staff stated they have no comments.
4. Health Dept. stated they have no comments.
5. Roger Black of Erosion and Sediment Control wanted to know how this project would impact the stormwater basin currently being used for a project on Johnson Hall. Mr. King responded that this project (SDP 16:03) would use best management practices and will attempt to lead stormwater towards its own basins.

UPDATE

This item was postponed several times at the request of the applicant. Due to subsequent changes, this item was again brought before the TRC on October 13, 2016. These are the comments from that meeting:

1. Planning Dept: No comments.
2. Chamber of Commerce: No comments.
3. Env. Health Dept: No comments.
4. Erosion and Sediment Control: No comments at this time.
5. Fire Chief: Will bollards shown on the plan be removable, especially around the basketball court and the roundabout/Fraley? Applicant answered 'yes'. Chief was satisfied with that and with the use of honeycomb style pavers.

6. VDOT: VDOT has previously reviewed the proposed entrance on Rte. 652 and our entrance and sight line comments dated 3/33/2016 have been addressed. VDOT has no further comments at this time

Conclusion:

The submitted sketch plan appears to meet the sketch plan requirements of Section 22-23-8.A of the Fluvanna County Zoning Ordinance. Prior to final approval, a site development plan that meets the requirements of Sections 22-23, 24, 25 and 26 of the Fluvanna County Zoning Ordinance must be submitted for staff review and approval.

Recommended Conditions:

1. Meeting all final site plan requirements which include, but are not limited to, providing parking and handicap requirements, landscaping, tree protection, and outdoor lighting plans;
2. Meeting all applicable erosion and sedimentation control requirements;
3. Meeting all VDOT requirements.

Suggested Motion:

I move to approve SDP 16:03 sketch plan for parking, sidewalk, and roadway improvements and additions with respect to 56.42 acres of Tax Map 51, Section A, Parcels 121 and 117, subject to the three (3) conditions listed in the staff report.

Attachments:

- A – Application
- B – Aerial Vicinity Map
- C – Sketch Site Plan
- D - TRC Comment Letter

Copy:
Representative: Draper Aden Associates, at cking@daa.com
File



COMMONWEALTH OF VIRGINIA
 COUNTY OF FLUVANNA
 Site Development Application

Received
 MAR 01 2016
 Planning Dept.

Owner of Record: FORK UNION MILITARY ACADEMY Applicant of Record: FORK UNION MILITARY ACADEMY

E911 Address: 4744 JAMES MADISON HWY.

E911 Address: 4744 JAMES MADISON HWY.

Phone: 434-842-3212 Fax: _____

Phone: 434-842-3212 Fax: _____

Email: BURHOEJS@FUMA.ORG

Email: BURHOEJS@FUMA.ORG

Representative: DRAPER ADEN ASSOCIATES

Note: If applicant is anyone other than the owner of record, written authorization by the owner designating the applicant as the authorized agent for all matters concerning the request shall be filed with this application.

E911 Address: 4744 JAMES MADISON HWY.

Phone: 804-264-2228 Fax: 804-264-8773

Is property in Agricultural Forestal District? No Yes

Email: CKING@DAA.COM

If Yes, what district: _____

Tax Map and Parcel(s): 51-A-12 & 51-A-117

Deed Book Reference: DB. 9 PG. 399 & DB. 698 PG. 664

Acreage: _____ Zoning: A-1

Deed Restrictions? No Yes (Attach copy)

Location: 4744 JAMES MADISON HWY., FORK UNION, va. 23055

Description of Property: PRIVATE SCHOOL

Proposed Structure: N/A

Dimensions of Building: N/A

Lighting Standards on Site: No Yes

of Employees: 175

of Parking Spaces: 64 PROPOSED

Noise Limitations: N/A

I declare that the statements made and information given on this application are true, full and correct to the best of my knowledge and belief. I agree to conform fully to all terms of any certificate or permit which may be issued on account of this application.

Sharon H. Higginbotham - CFO
 Applicant Name (Please Print)

Sharon H. Higginbotham - CFO
 Applicant Signature and Date 03/02/16

OFFICE USE ONLY		
Date Received: <u>03/01/16</u>	Fee Paid: <u>✓ #11013</u>	Application #: <u>SDP 16:063</u>
Election District: <u>Fork Union</u>	Planning Area: <u>Fork Union CEA</u>	Number of Lots: _____
Total Fees Due at Time of Submittal		
Sketch Plan: \$150.00	Minor Plan: \$550.00	Major Plan: \$1,100.00
Additional Fees Due at Time of Review		
Health Department Subdivision Review:	\$250.00 + \$25.00 per lot	Existing System Review \$50.00
Street Sign Installation:	\$200.00 Per Intersection	
Amendment of Plan	\$150.00	
Outdoor Lighting Plan Review*	\$ 50.00	
Landscape Plan Review*	\$ 50.00	
Tree Protection Plan Review*	\$ 50.00	
* If not part of a Site Plan Review		

Steven Tugwell

From: Charlie King <CKing@daa.com>
Sent: Thursday, March 03, 2016 10:35 AM
To: Steven Tugwell
Subject: RE: FUMA app / fee

tax maps:
51-A-121
51-A-117

From: Steven Tugwell [<mailto:stugwell@fluvannacounty.org>]
Sent: Thursday, March 03, 2016 8:59 AM
To: Charlie King <CKing@daa.com>
Subject: RE: FUMA app / fee

Thanks for getting the fee and application to us. One question- there appears to be a discrepancy between the tax map numbers listed on the application and the checklist (see attached). Can you clarify the correct tax map numbers that are applicable to this project?

Thanks,
Steve

From: Charlie King [<mailto:CKing@daa.com>]
Sent: Wednesday, March 02, 2016 4:29 PM
To: Steven Tugwell
Subject: FUMA app / fee

Steve,

I sent the application to FUMA for signature. They will either email it directly to you or I'll pick it up in the morning. I'll also be at your office first thing with the submittal fee.

Charles H. King
Project Manager

Draper Aden Associates

Engineering • Surveying • Environmental Services

Lasting Positive Impact

office 804.264.2228 • fax 804.264.8773
direct 804.237.1819 • mobile 804.869.2256

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Richmond, Virginia 23223
T 804 649 9303 F 804 343 3378
W www.glaveandholmes.com

PROJECT TITLE
FORK UNION MILITARY ACADEMY

4744 James Madison Hwy
Fork Union, VA 23055

CONSULTANTS
Draper Aden & Associates
Draper Aden & Associates
8090 Villa Park D
Richmond, VA 23228
T 804.264.2228

SEAL

95% CONSTRUCTION DOCUMENTS

PROJECT NUMBER
15103

DATE
24 OCTOBER 2016

DRAWN BY: CHECKED BY:

REVISIONS
NO. DATE DESCRIPTION

SHEET TITLE

PROJECT INFORMATION

SHEET NUMBER
T1.0

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LOCATION MAP



4744 JAMES MADISON HIGHWAY
FORK UNION, VIRGINIA 23055

PROJECT INFORMATION

APPLICABLE CODES:
1. 2012 VIRGINIA CONSTRUCTION CODE
2. 2012 VIRGINIA FIRE CODE
3. ICC/ANSI A117.1 - 2009 ACCESSIBLE AND USEABLE BUILDINGS AND FACILITIES

VICINITY MAP



FORK UNION, VA

PROJECT TITLE

FORK UNION MILITARY ACADEMY PEDESTRIAN IMPROVEMENTS

95% CONSTRUCTION DOCUMENTS

SYMBOLS
REFER TO RESPECTIVE DRAWINGS FOR SYMBOLS NOT INDICATED BELOW.

DRAWING TITLE

TITLE LINE 2
TITLE LINE 1

SCALE: 1" = 1'-0"

DRAWING No./LETTER
DRAWING LOCATION
REFERENCE LOCATION

DRAWING DESCRIPTION
GRAPHIC BAR SCALE
DRAWING SCALE

DIMENSIONS

DIMENSION TO WORK POINT
DIMENSION TO EXISTING WALL
DIMENSION TO GRIDLINE
DIMENSION TO COMPONENT

WALL SECTION

SECTION NUMBER
SECTION LOCATION
REFERENCE LOCATION

EXTERIOR ELEVATION

ELEVATION LETTER
ELEVATION LOCATION
REFERENCE LOCATION

DETAIL KEYS

DETAIL LETTER
DETAIL LOCATION
REFERENCE LOCATION

MATCHLINE
ELEVATION DATUM
PLAN DATUM

REVISION
KEYNOTE
WORK POINT DATUM

MATERIAL HATCHES

EARTH 	GRAVEL 	CONCRETE/PRECAST
BRICK 	CONCRETE MASONRY 	STONE
SAND/MORTAR/GYP 	STEEL 	ALUMINUM
CONTINUOUS BLOCKING 	BLOCKING 	PLYWOOD
WOOD 	RIGID INSULATION 	BATT INSULATION
GLASS (LARGE SCALE) 	CERAMIC TILE 	ACOUSTICAL TILE

ABBREVIATION LIST

A AC AIR CONDITIONING	CU FT CUBIC FEET
ADJ ADJACENT, ADJUSTABLE	DD DECK DRAIN
AFP ABOVE FINISH FLOOR	DIA DIAMETER
ALT ALTERNATE	DIAG DIAGONAL
ALUM ALUMINUM	DM DIMENSION
APC ACOUSTICAL PANEL CEILING	DIST DISTANCE
APPROX APPROXIMATE	DN DOWN
AR AREA OF REFUGE	DS DOWN SPOUT
ARCH ARCHITECTURAL	DWG(S) DRAWING(S)
ATC ACOUSTICAL TILE CEILING	
AWC ACOUSTICAL WALL COVERING	
AWP ACOUSTICAL WALL PANEL	
B BBT BIOBASED TILE	E E EAST
BD BOARD	EA EACH
BEJ BUILDING EXPANSION JOINT	EJ EXPANSION JOINT
BLDG BUILDING	EL ELEVATION
BLKG BLOCKING	ELEC ELECTRIC(AL)
BOT BOTTOM	EMER EMERGENCY
BRK BRICK	EPDM ETHYLENE PROPYLENE
	DIENE MONOMER
	EPX RESINOUS POURED EPOXY
	FLOORING
C CAB CABINET	EQ EQUAL
CEM CEMENT	EQUIP EQUIPMENT
CIP CAST IN PLACE	EYTR ELEVATOR
CJ CONTRL JOINT	EXIST EXISTING
CL CENTERLINE	EXP EXPOSED
CLG CEILING	EXT EXTENSION
CLO CLOSET	
CMU CONCRETE MASONRY UNIT	F FA FIRE ALARM
CO CASED OPENING	FAB FABRIC
COL COLUMN	FD FLOOR DRAIN, FIRE DAMPER
CONC CONCRETE	FE FIRE EXTINGUISHER
CORR CORRDR, CORRUGATED	FEC FIRE EXTINGUISHER CABINET
CPT BROADLOOM CARPET	FHC FIRE HOSE CABINET
CPT-T CARPET TILE	FN FINISH
CT CERAMIC TILE	FLR FLOOR

ABBREVIATION LIST

FP FIRE PROTECTION	LND LINOLEUM
FR FIRE RESISTANT	LT LIGHT
FRT FIRE RETARDANT TREATED	
FT FOOT, FEET	M MAS MASONRY
FTG FOOTING	MATL MATERIAL
	MAX MAXIMUM
G GA GAUGE	MECH MECHANICAL
GALV GALVANIZED	MED MEDIUM
GC GENERAL CONTRACTOR	MEP MECHANICAL, ELECTRICAL,
GWB GYPSUM WALL BOARD	PLUMBING
GYP GYPSUM	MFR MANUFACTURER
	MIN MINIMUM, MINUTE(S)
H HC HOLLOW CORE	MIR MIRROR
HDW HARDWARE	MISC MISCELLANEOUS
HOWD HARDWOOD	MLDG MOLDING
HEJ HORIZONTAL EXPANSION JOINT	MNT MOUNT
HM HOLLOW METAL	MO MASONRY OPENING
HOR HORIZONTAL	MTL METAL
HT HEIGHT	
HTG HEATING	N N NORTH
HVAC HEATING, VENTILATING, AIR CONDITIONING	NIC NOT IN CONTRACT
	No. # NUMBER
	NOM NOMINAL
	NTS NOT TO SCALE
I ID INSIDE DIAMETER	O OC ON CENTER
INCL INCLUDE(E), (ED), (ING)	OD OUTSIDE DIAMETER,
INSUL INSULATE(E), (ED), (ING), (ION)	OVERFLOW DRAIN
INT INTERIOR	OWNER FURNISHED
	CONTRACTOR INSTALLED
J JAN JANITOR	OPCI OWNER FURNISHED OWNER
JT JOINT	INSTALLED
	OPNG OPENING
K KIT KITCHEN	OPP OPPOSITE
KO KNOCK OUT	
	L L LENGTH
L LAB LABORATORY	LAB LABORATORY
LAM LAMINATE(E), (ED), (ION)	LAV LAVATORY

ABBREVIATION LIST

PLAM PLASTIC LAMINATE	STD STANDARD
PLAS PLASTER	STL STEEL
PLYWD PLYWOOD	STN STAIN(ED)
PNL PANEL	STR STRUCTURAL
PNT(ED) PAINT(ED)	SUSP SUSPEND(ED)
PSF POUNDS PER SQUARE FOOT	
PSI POUNDS PER SQUARE INCH	T T TILE(E), (ING)
PT POINT	T&G TONGUE & GROOVE
PTN PARTITION	TO BE DECIDED
PVC POLYVINYL CHLORIDE	TE TILE EDGING
	TEL TELEPHONE
R RAD RADIUS	TERR TERRAZZO
RB RUBBER BASE	THK THICK(NESS)
RD ROOF DRAIN	TOC TOP OF CONCRETE
RE REFER TO	TOM TOP OF MASONRY
REF REFRIGERA(NT), (TOR)	TOS TOP OF STEEL
REINF REINFORC(E), (ED), (ING)	TOW TOP OF WALL
REQD REQUIRED	TR TRANSITION
RES RESILIENT	TV TELEVISION
REV REVISION	TYP TYPICAL
RL RAIN LEADER	
RM ROOM	U UNO UNLESS NOTED OTHERWISE
RO ROUGH OPENING	
RSN RESILIENT STAIR NOSING	V VCT VINYL COMPOSITION TILE
RT RUBBER TILE	VEJ VERTICAL EXPANSION JOINT
	VERT VERTICAL
	VIF VERIFY IN FIELD
	VIN VINYL
S S SOUTH	W W WEST, WIDE, WIDTH
SC SEALED CONCRETE	WTH WITH
SCF STRUCTURAL CONCRETE FLOOR	WO WITHOUT
SCHED SCHEDULE(E), (ED)	WC WALLCOVERING, WATER- CLOSET
SD STORM DRAIN	WD WOOD
SFRM SPRAY-APPLIED CEMENTITIOUS	WP WORKING POINT
FIRE RESISTIVE MATERIAL	WT WEIGHT
SIM SIMILAR	WWF WELDED WIRE FABRIC
SQ SQUARE	
SS STAINLESS STEEL	
SSM SOLID SURFACE MATERIAL	
ST STONE	

DEMOLITION SYMBOLS

EXISTING WALL TO REMAIN

EXISTING TO BE REMOVED

EXISTING DOOR TO REMAIN

EXISTING DOOR TO BE REMOVED

KEYNOTE W/O ARROWS APPLIES TO ENTIRE ROOM

PORTION OF CONC SLAB OR CEILING TO BE REMOVED

COLUMN TO REMAIN

Received
NOV 07 2016
Fluvanna County

GENERAL NOTES

1. DIMENSIONS AND RADII ARE TO FACE OF CURB AND TO OUTSIDE FACE OF BUILDINGS, WHERE APPLICABLE, UNLESS OTHERWISE INDICATED.
2. THE CONTRACTOR SHALL SECURE ALL NECESSARY PERMITS FOR THIS PROJECT FROM THE LOCAL OR STATE AGENCIES AT HIS EXPENSE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ABIDING BY ALL CONDITIONS AND REQUIREMENTS OF THE PERMITS.
3. THE CONTRACTOR SHALL NOTIFY FLUVANNA COUNTY AT LEAST ONE WEEK PRIOR TO STARTING WORK ON THIS PROJECT.
4. THE CONTRACTOR SHALL HAVE A SET OF APPROVED PLANS AVAILABLE AT THE SITE AT ALL TIMES WHEN WORK IS BEING PERFORMED. A DESIGNATED RESPONSIBLE EMPLOYEE SHALL BE AVAILABLE FOR CONTACT BY FLUVANNA COUNTY INSPECTORS.
5. VERIFY THE PROPOSED LAYOUT WITH ITS RELATIONSHIP TO THE EXISTING SITE SURVEY. ALSO VERIFY ALL DIMENSIONS, SITE CONDITIONS, AND MATERIAL SPECIFICATIONS AND NOTIFY FLUVANNA COUNTY AND THE ENGINEER OF ANY ERRORS, OMISSIONS, OR DISCREPANCIES BEFORE COMMENCING OR PROCEEDING WITH WORK.
6. DEVIATIONS FROM OR CHANGES TO THESE PLANS WILL NOT BE ALLOWED, UNLESS OTHERWISE APPROVED BY THE ENGINEER.
7. PERFORM ALL WORK USING DIMENSIONS SHOWN ON THESE PLANS. DO NOT USE SCALES, RULERS, DIVIDERS, MAP WHEELS OR OTHER MEASURING DEVICES TO DETERMINE SPATIAL RELATIONSHIPS ON THESE DRAWINGS.
8. ALL PAVING MATERIALS AND DRAINAGE STRUCTURES SHALL BE BUILT AND INSTALLED IN ACCORDANCE WITH VIRGINIA DEPARTMENT OF TRANSPORTATION STANDARDS AND SPECIFICATIONS.
9. ALL GROUND COVER AND LANDSCAPING SHALL BE PROPERLY MAINTAINED IN A HEALTHY CONDITION AT ALL TIMES. DEAD PLANT MATERIALS SHALL BE REMOVED IN A REASONABLE TIME AND REPLACED DURING THE NORMAL PLANTING SEASON.
10. ALL TURF AREAS THAT ARE IMPACTED OR DISTURBED BY VEHICLES, EQUIPMENT, OR ACTIVITY SHALL BE REPAIRED, REGRADED, AND RESEED TO THE SATISFACTION OF THE OWNER.
11. FIRE LANE DESIGNATION AND MARKING TO BE DETERMINED BY THE FLUVANNA COUNTY FIRE AND RESCUE ASSOCIATION (FSA).
12. PROPERLY SECURE THE CONSTRUCTION AREA AT ALL TIMES AGAINST UNAUTHORIZED ENTRY AND ADEQUATELY PROTECT EQUIPMENT, MATERIALS, AND COMPLETED WORK FROM THEFT AND VANDALISM. THE OWNER IS NOT RESPONSIBLE FOR THE LOSS OF ANY MATERIAL STORED AT THE SITE.
13. ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THIS PROJECT INCLUDING SAFETY OF ALL PERSONS AND PROPERTY. THIS REQUIREMENT SHALL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS; AND SHALL DEFEND, INDEMNIFY, AND HOLD THE OWNER AND THE ENGINEER HARMLESS FROM ANY AND ALL LIABILITY, REAL AND ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT, EXCEPT FOR LIABILITY ARISING FROM "THE SOLE NEGLIGENCE OF THE OWNER OR THE ENGINEER."
14. LANDSCAPING AND SITE IMPROVEMENTS WILL BE INSTALLED AND MAINTAINED SO AS NOT TO INTERFERE WITH SIGHT DISTANCE NEEDS OF DRIVERS WITHIN THE PARKING AREA AND AT ENTRANCE/EXIT LOCATIONS.
15. THE CONTRACTOR SHALL NOTIFY THE CITY ENGINEER AT LEAST 24 HOURS PRIOR TO STARTING WORK ON THIS PROJECT.
16. THE CONTRACTOR AND/OR THE DEVELOPER IS RESPONSIBLE FOR THE COST OF REPAIR OR REPLACEMENT OF ANY TRAFFIC CONTROL EQUIPMENT THAT EITHER NEEDS TO BE RELOCATED OR THAT IS DAMAGED AS A RESULT OF THIS PROJECT. ANY WORK INVOLVING THE TRAFFIC CONTROL EQUIPMENT SHALL BE COORDINATED THROUGH FLUVANNA COUNTY TRAFFIC ENGINEERING.
17. FIRE LANE DESIGNATION AND MARKING TO BE DETERMINED PRIOR TO ISSUANCE OF THE CERTIFICATE OF OCCUPANCY.
18. UNLESS OTHERWISE NOTED, ALL CONCRETE PIPE SHALL BE REINFORCED CONCRETE PIPE, CLASS III.
19. ALL EXCAVATION FOR UNDERGROUND PIPE INSTALLATION MUST COMPLY WITH OSHA STANDARDS FOR THE CONSTRUCTION INDUSTRY (29 CFR PART 1926).
20. VERIFY THE PROPOSED LAYOUT WITH ITS RELATIONSHIP TO THE EXISTING SITE SURVEY. ALSO VERIFY ALL DIMENSIONS, SITE CONDITIONS, AND MATERIAL SPECIFICATIONS AND NOTIFY THE OWNER AND ENGINEER OF ANY ERRORS, OMISSIONS, OR DISCREPANCIES BEFORE COMMENCING OR PROCEEDING WITH WORK.
21. DEVIATIONS FROM, OR CHANGES TO THESE PLANS WILL NOT BE ALLOWED, UNLESS OTHERWISE APPROVED BY THE ENGINEER.
22. MAKE EXPLORATORY EXCAVATIONS AND LOCATE EXISTING UTILITIES SUFFICIENTLY AHEAD OF CONSTRUCTION TO PERMIT REVISIONS TO THE PLANS IF NECESSARY. THE EXISTENCE AND/OR LOCATION OF UTILITIES SHOWN ON THESE PLANS MAY BE ONLY APPROXIMATELY CORRECT. TAKE PRECAUTIONARY MEASURES TO PROTECT THE UTILITIES SHOWN HEREON AND ANY OTHER EXISTING UTILITIES NOT OF RECORD OR NOT SHOWN ON THESE PLANS. REPAIR AT YOUR OWN EXPENSE. ANY EXISTING UTILITIES DAMAGED DURING CONSTRUCTION. IF A UTILITY IS DAMAGED DURING CONSTRUCTION, STOP WORK IMMEDIATELY AND NOTIFY THE ENGINEER.
23. PROPERLY SECURE THE CONSTRUCTION AREA AT ALL TIMES AGAINST UNAUTHORIZED ENTRY AND ADEQUATELY PROTECT EQUIPMENT, MATERIALS, AND COMPLETED WORK FROM THEFT AND VANDALISM. THE OWNER IS NOT RESPONSIBLE FOR THE LOSS OF ANY MATERIAL STORED AT THE SITE.
24. ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THIS PROJECT INCLUDING SAFETY OF ALL PERSONS AND PROPERTY. THIS REQUIREMENT SHALL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS; AND SHALL DEFEND, INDEMNIFY, AND HOLD THE OWNER AND THE ENGINEER HARMLESS FROM ANY AND ALL LIABILITY, REAL AND ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT, EXCEPT FOR LIABILITY ARISING FROM "THE SOLE NEGLIGENCE OF THE OWNER OR THE ENGINEER."
25. ALL TURF AREAS THAT ARE IMPACTED OR DISTURBED BY VEHICLES, EQUIPMENT, OR ACTIVITY SHALL BE REPAIRED, REGRADED, AND RESEED TO THE SATISFACTION OF THE OWNER.
26. PERFORM ALL WORK USING DIMENSIONS SHOWN ON THESE PLANS. DO NOT USE SCALES, RULERS, DIVIDERS, MAP WHEELS OR OTHER MEASURING DEVICES TO DETERMINE SPATIAL RELATIONSHIPS ON THESE DRAWINGS.
27. ALL UNSUITABLE MATERIAL SHALL BE REMOVED FROM THE CONSTRUCTION LIMITS OF PAVED AREAS.

PAVEMENT AND DRAINAGE STANDARD NOTES

1. ALL CONSTRUCTION AND MATERIALS SHALL CONFORM WITH THE STANDARDS AND SPECIFICATIONS OF THE VIRGINIA DEPARTMENT OF TRANSPORTATION'S, LATEST EDITION, EXCEPT WHERE FLUVANNA COUNTY STANDARDS ARE APPLICABLE.
2. ALL STORM SEWER SHALL BE DUAL WALL HDPE PIPE WITH SMOOTH INTERIOR AND CORRUGATED EXTERIOR WALLS, EXCEPT AS NOTED.
3. CONCRETE DRAINAGE STRUCTURES MAY BE EITHER PRECAST OR CAST-IN-PLACE. ALL SHALL BE VDOT STANDARD (PER SECTION 100 OF THE VDOT ROAD AND BRIDGE STANDARDS).
4. DRAIN BASINS AND INLINE DRAINS SHALL BE NYLOPLAST OR APPROVED EQUAL.
5. ALL STORM SEWER SHALL HAVE A MINIMUM OF 6" AGGREGATE BEDDING MATERIAL.
6. THE CONTRACTOR IS REQUIRED TO MAINTAIN ALL DITCHES, PIPES, AND OTHER DRAINAGE STRUCTURES FREE FROM OBSTRUCTION UNTIL WORK IS ACCEPTED BY THE OWNER. THE CONTRACTOR IS RESPONSIBLE FOR ANY DAMAGES CAUSED BY FAILURE TO MAINTAIN DRAINAGE STRUCTURE IN OPERABLE CONDITION.
7. ALL CURB AND GUTTER SHALL BE VDOT STANDARD, EXCEPT AS NOTED.
8. THE PAVEMENT DESIGN IS SUBJECT TO CHANGE DUE TO SOIL CONDITIONS AT THE TIME OF CONSTRUCTION, AS DETERMINED BY THE CONSTRUCTION MATERIALS TESTING ENGINEER FOR THE OWNER OR THE FLUVANNA COUNTY INSPECTOR.

9. ALL UNSUITABLE MATERIAL SHALL BE REMOVED FROM THE CONSTRUCTION LIMITS OF PAVED AREAS.
10. ANY NECESSARY PAVEMENT WIDENING BETWEEN THE EXISTING PAVEMENT AND PROPOSED IMPROVEMENTS IS THE RESPONSIBILITY OF THE CONTRACTOR.
11. WHERE PAVEMENT IS BEING REMOVED, THE CONTRACTOR SHALL REMOVE AGGREGATE BASE MATERIAL TO SUB-GRADE.
12. EXISTING PAVEMENT AND OTHER SURFACES DISTURBED BY CONTRACTOR (WHICH ARE NOT TO BE REMOVED) SHALL BE REPAIRED TO LIKE-NEW CONDITION.
13. IN ACCORDANCE WITH HANDICAP ACCESSIBILITY REQUIREMENTS, ALL APPLICABLE CODES AND REQUIREMENTS FOR ACCESSIBILITY FOR DISABLED PERSONS SHALL BE STRICTLY COMPLIED WITH.

UTILITY NOTES

1. THE LOCATION OF EXISTING UTILITY LINES, CONDUITS OR OTHER STRUCTURES ACROSS, UNDERNEATH, OR OTHERWISE ALONG THE LINE OF PROPOSED WORK ARE NOT NECESSARILY SHOWN ON THE PLANS, AND IF SHOWN MAY ONLY BE APPROXIMATE. CONTRACTOR SHALL VERIFY LOCATION AND ELEVATION OF ALL UNDERGROUND UTILITIES SHOWN ON THE PLANS IN AREAS OF CONSTRUCTION PRIOR TO STARTING WORK. CONTACT ENGINEER IMMEDIATELY IF LOCATION OR ELEVATION IS DIFFERENT FROM THAT SHOWN ON THE PLANS, IF THERE APPEARS TO BE A CONFLICT, OR UPON DISCOVERY OF ANY UTILITY NOT SHOWN ON THE PLANS TO PERMIT REVISIONS IF NECESSARY. FOR ASSISTANCE IN LOCATING EXISTING UTILITIES CALL "MISS UTILITY", DIAL 811.
2. TAKE PRECAUTIONARY MEASURES TO PROTECT THE UTILITIES SHOWN HEREON AND ANY OTHER EXISTING UTILITIES NOT SHOWN ON THESE PLANS. IF A UTILITY IS DAMAGED DURING CONSTRUCTION, STOP WORK IMMEDIATELY AND NOTIFY THE ENGINEER. DAMAGE TO UTILITIES (INCLUDING UNDERGROUND) OR PROPERTY OF OTHERS BY CONTRACTOR DURING CONSTRUCTION SHALL BE REPAIRED TO PRE-CONSTRUCTION CONDITIONS BY CONTRACTOR AT NO COST TO OWNER.
3. ALL PROPOSED UTILITIES ARE TO BE INSTALLED UNDERGROUND. ALL OF THESE UTILITIES (WATER, SANITARY SEWER, ELECTRICITY, ETC.) SHALL BE INSTALLED AND TESTED SATISFACTORILY PRIOR TO COMMENCING ANY PAVING OPERATIONS WHERE SUCH UTILITIES ARE WITHIN THE LIMITS OF PAVEMENT.
4. ALL EXCAVATION FOR UNDERGROUND PIPE INSTALLATION MUST COMPLY WITH OSHA STANDARDS FOR THE CONSTRUCTION INDUSTRY (29 CFR PART 1926).
5. THE CONTRACTOR SHALL COORDINATE WITH THE UTILITY COMPANIES AND THE MEP ENGINEERS ON THE REQUIREMENTS FOR AND LIMITS OF UNDERGROUND ELECTRICAL SERVICES, GAS SERVICES, COMMUNICATION SERVICES AND OTHERS UTILITIES NOT DETAILED ON THE CIVIL PLANS.

EROSION AND SEDIMENT CONTROL, STORMWATER AND SWPPP NOTES:

1. THE FULL EROSION AND SEDIMENT CONTROL NARRATIVE AND STORMWATER MANAGEMENT REPORT, ALONG WITH THE SUPPORTING APPENDICES, SHALL BE KEPT ON-SITE AT ALL TIMES DURING CONSTRUCTION. IT IS THE CONTRACTORS RESPONSIBILITY TO OBTAIN THE APPROVED VERSION OF THIS DOCUMENT FROM THE OWNER OR ENGINEER PRIOR TO BEGINNING CONSTRUCTION.
2. RETAIN A COPY OF THE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK, LATEST EDITION ON SITE AND ADHERE TO THE STANDARDS LISTED AT ALL TIMES.
3. PRIOR TO ANY LAND DISTURBING ACTIVITY, THE CONSTRUCTION ACTIVITIES OPERATOR MUST OBTAIN A VIRGINIA STORMWATER MANAGEMENT PROGRAM (VSMF) CONSTRUCTION GENERAL PERMIT. THIS INCLUDES THE DEVELOPMENT AND IMPLEMENTATION OF A STORMWATER POLLUTION PREVENTION PLAN (SWPPP).
4. PRIOR TO ANY LAND DISTURBING ACTIVITY, CONTRACTOR SHALL PROVIDE THE NAME, CERTIFICATION INFORMATION, AND CONTACT INFORMATION OF THE DESIGNATED RESPONSIBLE LAND DISTURBER (RLD) TO THE APPROPRIATE AUTHORITY.
5. PROVISIONS AND SCHEDULE FOR APPROVAL OF ADEQUATE EROSION AND SEDIMENTATION SHALL BE IN ACCORDANCE WITH FLUVANNA COUNTY EROSION AND SEDIMENTATION CONTROL PROGRAM.

EROSION CONTROL NOTES

1. THE CONTRACTOR SHALL INSTALL ALL EROSION AND SEDIMENT CONTROL DEVICES AS REQUIRED DURING CONSTRUCTION IN ACCORDANCE WITH THE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK, 1992, 3rd EDITION. ALL DEVICES REFERRED TO IN THESE PLANS CAN BE FOUND IN THE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK.
2. ALL DISTURBED AREAS SHALL BE PERMANENTLY SEEDED AND MULCHED WITHIN 7 DAYS OF REACHING FINAL GRADE. AREAS WHICH HAVE BEEN DISTURBED AND HAVE NOT REACHED FINAL GRADE, BUT WHICH ARE TO REMAIN UNDISTURBED FOR LONGER THAN 14 DAYS ARE TO BE TEMPORARILY SEEDED AND MULCHED WITHIN 7 DAYS. AS UPSTREAM AREAS ARE STABILIZED, DOWNSTREAM TEMPORARY DEVICES ARE TO BE REMOVED.
3. IT IS THE CONTRACTOR'S RESPONSIBILITY TO PERIODICALLY INSPECT ALL SEDIMENT AND EROSION CONTROL DEVICES AND INSURE THAT THEY ARE IN GOOD WORKING ORDER. AT A MINIMUM, ALL DEVICES SHALL BE INSPECTED DAILY AND AFTER MAJOR RAINFALL EVENTS. ANY DEVICE NEEDING REPAIRS SHALL BE REPAIRED WITHIN 24 HOURS.
4. THE CONTRACTOR SHALL INSTALL ADDITIONAL EROSION AND SEDIMENT CONTROL DEVICES IF DURING THE COURSE OF CONSTRUCTION THE EROSION CONTROL INSPECTOR DETERMINES THAT THEY ARE REQUIRED.
5. SILT SHALL BE REMOVED FROM SILT FENCES WHEN THE SILT REACHES APPROXIMATELY ONE-HALF THE HEIGHT OF THE BARRIER.
6. THE CONTRACTOR SHALL PERIODICALLY TOP DRESS THE CONSTRUCTION ENTRANCE WITH CLEAN STONE. IF THE CONSTRUCTION ENTRANCE FAILS TO REMOVE DIRT FROM THE TIRES OF VEHICLES ENTERING A PUBLIC RIGHT-OF-WAY A WASH RACK SHALL BE INSTALLED AND THE TIRES WASHED. THE CONTRACTOR SHALL BE REQUIRED TO PROVIDE ANY REQUIRED WATER FOR THE WASHING OF TIRES. DIRT TRACKED ONTO THE PUBLIC RIGHT-OF-WAYS SHALL BE REMOVED IMMEDIATELY BY THE CONTRACTOR.
7. ALL EROSION AND SILTATION MEASURES ARE TO BE PLACED PRIOR TO OR AS THE FIRST STEP IN GRADING.
8. ALL STORM AND SANITARY SEWER LINES NOT IN STREETS ARE TO BE MULCHED AND SEEDED WITHIN SEVEN DAYS AFTER BACKFILL. NO MORE THAN FIVE HUNDRED FEET ARE TO BE OPEN AT ONE TIME.
9. ALL TEMPORARY EARTH BERMS, DIVERSIONS, AND SILT DAMS ARE TO BE MULCHED AND SEEDED FOR VEGETATIVE COVER IMMEDIATELY AFTER GRADING. STRAW OR HAY MULCH IS REQUIRED. THE SAME APPLIES TO STOCKPILES ON SITE AS WELL AS SOIL (INTENTIONALLY) TRANSPORTED FROM THE PROJECT SITE.
10. ELECTRIC POWER, TELEPHONE, AND GAS SUPPLY TRENCHES ARE TO BE COMPACTED, SEEDED AND MULCHED WITHIN FIFTEEN DAYS AFTER BACKFILL.
11. DURING CONSTRUCTION, ALL STORM SEWER INLETS WILL BE PROTECTED BY SILT TRAPS, MAINTAINED AND MODIFIED AS REQUIRED BY CONSTRUCTION PROGRESS.
12. ANY DISTURBED AREA NOT PAVED, SODDED, OR BUILT UPON BY NOVEMBER FIRST, IS TO BE SEEDED ON THAT DATE WITH DATS, ABRUZZI, RYE, OR EQUIVALENT AND MULCHED WITH HAY OR STRAW MULCH. MODIFY AS APPLICABLE DEPENDING ON PROPOSED TIME OF CONSTRUCTION.
13. THE CONTRACTOR IS RESPONSIBLE FOR APPOINTING DESIGNATED "RESPONSIBLE LAND DISTURBER" (RLD) WHO SHALL BE RESPONSIBLE FOR INSPECTING AND MAINTAINING ALL EROSION CONTROL MEASURES. THE RLD SHALL BE CERTIFIED IN VIRGINIA.
14. ALL DISTURBED AREAS ARE TO DRAIN TO APPROVED SEDIMENT CONTROL MEASURES AT ALL TIMES DURING LAND DISTURBING ACTIVITIES AND DURING SITE DEVELOPMENT UNTIL FINAL STABILIZATION IS ACHIEVED.
15. ALL VEGETATIVE AND STRUCTURAL EROSION AND SEDIMENT CONTROL PRACTICES WILL BE CONSTRUCTED AND MAINTAINED ACCORDING TO MINIMUM STANDARDS AND SPECIFICATIONS OF THE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK AND VIRGINIA REGULATION 9VAC25-840.
16. A PRE-CONSTRUCTION MEETING IS REQUIRED PRIOR TO ISSUANCE OF A LAND DISTURBANCE PERMIT. THE CONTRACTOR SHALL SCHEDULE THE MEETING WITH THE CITY OF RICHMOND EROSION CONTROL INSPECTOR ASSIGNED TO THE PROJECT.

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STATE MINIMUM STANDARDS FOR EROSION CONTROL

GENERAL EROSION AND SEDIMENT CONTROL NOTES

- ES-1: UNLESS OTHERWISE INDICATED, ALL VEGETATIVE AND STRUCTURAL EROSION AND SEDIMENT CONTROL PRACTICES WILL BE CONSTRUCTED AND MAINTAINED ACCORDING TO MINIMUM STANDARDS AND SPECIFICATIONS OF THE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK AND THE VIRGINIA EROSION AND SEDIMENT CONTROL REGULATIONS 9VAC25-840.
- ES-2: THE PLAN APPROVING AUTHORITY MUST BE NOTIFIED ONE WEEK PRIOR TO THE PRE-CONSTRUCTION CONFERENCE, ONE WEEK PRIOR TO THE COMMENCEMENT OF LAND DISTURBING ACTIVITY, AND ONE WEEK PRIOR TO THE FINAL INSPECTION.
- ES-3: ALL EROSION AND SEDIMENT CONTROL MEASURES ARE TO BE PLACED PRIOR TO OR AS THE FIRST STEP IN CLEARING.
- ES-4: A COPY OF THE APPROVED EROSION AND SEDIMENT CONTROL PLAN SHALL BE MAINTAINED ON THE SITE AT ALL TIMES.
- ES-5: PRIOR TO COMMENCING LAND DISTURBING ACTIVITIES IN AREAS OTHER THAN INDICATED ON THESE PLANS (INCLUDING, BUT NOT LIMITED TO, OFF-SITE BORROW OR WASTE AREAS), THE CONTRACTOR SHALL SUBMIT A SUPPLEMENTARY EROSION CONTROL PLAN TO THE OWNER FOR REVIEW AND APPROVAL BY THE PLAN APPROVING AUTHORITY.
- ES-6: THE CONTRACTOR IS RESPONSIBLE FOR INSTALLATION OF ANY ADDITIONAL EROSION CONTROL MEASURES NECESSARY TO PREVENT EROSION AND SEDIMENTATION AS DETERMINED BY THE PLAN APPROVING AUTHORITY.
- ES-7: ALL DISTURBED AREAS ARE TO DRAIN TO APPROVED SEDIMENT CONTROL MEASURES AT ALL TIMES DURING LAND DISTURBING ACTIVITIES AND DURING SITE DEVELOPMENT UNTIL FINAL STABILIZATION IS ACHIEVED.
- ES-8: DURING DEWATERING OPERATIONS, WATER WILL BE PUMPED INTO AN APPROVED FILTERING DEVICE.
- ES-9: THE CONTRACTOR SHALL INSPECT ALL EROSION CONTROL MEASURES PERIODICALLY AND AFTER EACH RUNOFF-PRODUCING RAINFALL EVENT. ANY NECESSARY REPAIRS OR CLEANUP TO MAINTAIN THE EFFECTIVENESS OF THE EROSION CONTROL DEVICES SHALL BE MADE IMMEDIATELY.

MINIMUM STANDARDS

A VESCP MUST BE CONSISTENT WITH THE FOLLOWING CRITERIA, TECHNIQUES AND METHODS:

- MS-1 PERMANENT OR TEMPORARY SOIL STABILIZATION SHALL BE APPLIED TO DENUDED AREAS WITHIN SEVEN DAYS AFTER FINAL GRADE IS REACHED ON ANY PORTION OF THE SITE. TEMPORARY SOIL STABILIZATION SHALL BE APPLIED WITHIN SEVEN DAYS TO DENUDED AREAS THAT MAY NOT BE AT FINAL GRADE BUT WILL REMAIN DORMANT FOR LONGER THAN 14 DAYS. PERMANENT STABILIZATION SHALL BE APPLIED TO AREAS THAT ARE TO BE LEFT DORMANT FOR MORE THAN ONE YEAR.
- MS-2 DURING CONSTRUCTION OF THE PROJECT, SOIL STOCK PILES AND BORROW AREAS SHALL BE STABILIZED OR PROTECTED WITH SEDIMENT TRAPPING MEASURES. THE APPLICANT IS RESPONSIBLE FOR THE TEMPORARY PROTECTION AND PERMANENT STABILIZATION OF ALL SOIL STOCKPILES ON SITE AS WELL AS BORROW AREAS AND SOIL INTENTIONALLY TRANSPORTED FROM THE PROJECT SITE.
- MS-3 A PERMANENT VEGETATIVE COVER SHALL BE ESTABLISHED ON DENUDED AREAS NOT OTHERWISE PERMANENTLY STABILIZED. PERMANENT VEGETATION SHALL NOT BE CONSIDERED ESTABLISHED UNTIL A GROUND COVER IS ACHIEVED THAT IS UNIFORM, MATURE ENOUGH TO SURVIVE AND WILL INHIBIT EROSION.
- MS-4 SEDIMENT BASINS AND TRAPS, PERIMETER DIKES, SEDIMENT BARRIERS AND OTHER MEASURES INTENDED TO TRAP SEDIMENT SHALL BE CONSTRUCTED AS A FIRST STEP IN ANY LAND-DISTURBING ACTIVITY AND SHALL BE MADE FUNCTIONAL BEFORE UPSLOPE LAND DISTURBANCE TAKES PLACE.
- MS-5 STABILIZATION MEASURES SHALL BE APPLIED TO EARTHEN STRUCTURES SUCH AS DAMS, DIKES AND DIVERSIONS IMMEDIATELY AFTER INSTALLATION.
- MS-6 SEDIMENT TRAPS AND SEDIMENT BASINS SHALL BE DESIGNED AND CONSTRUCTED BASED UPON THE TOTAL DRAINAGE AREA TO BE SERVED BY THE TRAP OR BASIN.
 - A. THE MINIMUM STORAGE CAPACITY OF A SEDIMENT TRAP SHALL BE 134 CUBIC YARDS PER ACRE OF DRAINAGE AREA AND THE TRAP SHALL ONLY CONTROL DRAINAGE AREAS LESS THAN THREE ACRES.
 - B. SURFACE RUNOFF FROM DISTURBED AREAS THAT IS COMPRISED OF FLOW FROM DRAINAGE AREAS GREATER THAN OR EQUAL TO THREE ACRES SHALL BE CONTROLLED BY A SEDIMENT BASIN. THE MINIMUM STORAGE CAPACITY OF A SEDIMENT BASIN SHALL BE 134 CUBIC YARDS PER ACRE OF DRAINAGE AREA. THE OUTFALL SYSTEM SHALL, AT A MINIMUM, MAINTAIN THE STRUCTURAL INTEGRITY OF THE BASIN DURING A 25-YEAR STORM OF 24-HOUR DURATION. RUNOFF COEFFICIENTS USED IN RUNOFF CALCULATIONS SHALL CORRESPOND TO A BARE EARTH CONDITION OR THOSE CONDITIONS EXPECTED TO EXIST WHILE THE SEDIMENT BASIN IS UTILIZED.
- MS-7 CUT AND FILL SLOPES SHALL BE DESIGNED AND CONSTRUCTED IN A MANNER THAT WILL MINIMIZE EROSION. SLOPES THAT ARE FOUND TO BE ERODING EXCESSIVELY WITHIN ONE YEAR OF PERMANENT STABILIZATION SHALL BE PROVIDED WITH ADDITIONAL SLOPE STABILIZING MEASURES UNTIL THE PROBLEM IS CORRECTED.
- MS-8 CONCENTRATED RUNOFF SHALL NOT FLOW DOWN CUT OR FILL SLOPES UNLESS CONTAINED WITHIN AN ADEQUATE TEMPORARY OR PERMANENT CHANNEL, FLUME OR SLOPE DRAIN STRUCTURE.
- MS-9 WHENEVER WATER SEEPS FROM A SLOPE FACE, ADEQUATE DRAINAGE OR OTHER PROTECTION SHALL BE PROVIDED.
- MS-10 ALL STORM SEWER INLETS THAT ARE MADE OPERABLE DURING CONSTRUCTION SHALL BE PROTECTED SO THAT SEDIMENT-LADEN WATER CANNOT ENTER THE CONVEYANCE SYSTEM WITHOUT FIRST BEING FILTERED OR OTHERWISE TREATED TO REMOVE SEDIMENT.
- MS-11 BEFORE NEWLY CONSTRUCTED STORMWATER CONVEYANCE CHANNELS OR PIPES ARE MADE OPERATIONAL, ADEQUATE OUTLET PROTECTION AND ANY REQUIRED TEMPORARY OR PERMANENT CHANNEL LINING SHALL BE INSTALLED IN BOTH THE CONVEYANCE CHANNEL AND RECEIVING CHANNEL.
- MS-12 WHEN WORK IN A LIVE WATERCOURSE IS PERFORMED, PRECAUTIONS SHALL BE TAKEN TO MINIMIZE ENCROACHMENT, CONTROL SEDIMENT TRANSPORT AND STABILIZE THE WORK AREA TO THE GREATEST EXTENT POSSIBLE DURING CONSTRUCTION. NONERODIBLE MATERIAL SHALL BE USED FOR THE CONSTRUCTION OF CAUSEWAYS AND COFFERDAMS. EARTHEN FILL MAY BE USED FOR THESE STRUCTURES IF ARMORED WITH NONERODIBLE COVER MATERIALS.
- MS-13 WHEN A LIVE WATERCOURSE MUST BE CROSSED BY CONSTRUCTION VEHICLES MORE THAN TWICE IN ANY SIX-MONTH PERIOD, A TEMPORARY VEHICULAR STREAM CROSSING CONSTRUCTED OF NONERODIBLE MATERIAL SHALL BE PROVIDED.
- MS-14 ALL APPLICABLE FEDERAL, STATE AND LOCAL REQUIREMENTS PERTAINING TO WORKING IN OR CROSSING LIVE WATERCOURSES SHALL BE MET.
- MS-15 THE BED AND BANKS OF A WATERCOURSE SHALL BE STABILIZED IMMEDIATELY AFTER WORK IN THE WATERCOURSE IS COMPLETED.
- MS-16 UNDERGROUND UTILITY LINES SHALL BE INSTALLED IN ACCORDANCE WITH THE FOLLOWING STANDARDS IN ADDITION TO OTHER APPLICABLE CRITERIA:
 - A. NO MORE THAN 500 LINEAR FEET OF TRENCH MAY BE OPENED AT ONE TIME.
 - B. EXCAVATED MATERIAL SHALL BE PLACED ON THE UPHILL SIDE OF TRENCHES.
 - C. EFFLUENT FROM DEWATERING OPERATIONS SHALL BE FILTERED OR PASSED THROUGH AN APPROVED SEDIMENT TRAPPING DEVICE, OR BOTH, AND DISCHARGED IN A MANNER THAT DOES NOT ADVERSELY AFFECT FLOWING STREAMS OR OFF-SITE PROPERTY.
 - D. MATERIAL USED FOR BACKFILLING TRENCHES SHALL BE PROPERLY COMPACTED IN ORDER TO MINIMIZE EROSION AND PROMOTE STABILIZATION.
 - E. RESTABILIZATION SHALL BE ACCOMPLISHED IN ACCORDANCE WITH THIS CHAPTER.
 - F. APPLICABLE SAFETY REQUIREMENTS SHALL BE COMPLIED WITH.
- MS-17 WHERE CONSTRUCTION VEHICLE ACCESS ROUTES INTERSECT PAVED OR PUBLIC ROADS, PROVISIONS SHALL BE MADE TO MINIMIZE THE TRANSPORT OF SEDIMENT BY VEHICULAR TRACKING ONTO THE PAVED SURFACE.

WHERE SEDIMENT IS TRANSPORTED ONTO A PAVED OR PUBLIC ROAD SURFACE, THE ROAD SURFACE SHALL BE CLEANED THOROUGHLY AT THE END OF EACH DAY. SEDIMENT SHALL BE REMOVED FROM THE ROADS BY SHOVELING OR SWEEPING AND TRANSPORTED TO A SEDIMENT CONTROL DISPOSAL AREA. STREET WASHING SHALL BE ALLOWED ONLY AFTER SEDIMENT IS REMOVED IN THIS MANNER. THIS PROVISION SHALL APPLY TO INDIVIDUAL DEVELOPMENT LOTS AS WELL AS TO LARGER LAND-DISTURBING ACTIVITIES.

MS-18 ALL TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES SHALL BE REMOVED WITHIN 30 DAYS AFTER FINAL SITE STABILIZATION OR AFTER THE TEMPORARY MEASURES ARE NO LONGER NEEDED, UNLESS OTHERWISE AUTHORIZED BY THE VESCP AUTHORITY. TRAPPED SEDIMENT AND THE DISTURBED SOIL AREAS RESULTING FROM THE DISPOSITION OF TEMPORARY MEASURES SHALL BE PERMANENTLY STABILIZED TO PREVENT FURTHER EROSION AND SEDIMENTATION.

MS-19 PROPERTIES AND WATERWAYS DOWNSTREAM FROM DEVELOPMENT SITES SHALL BE PROTECTED FROM SEDIMENT DEPOSITION, EROSION AND DAMAGE DUE TO INCREASES IN VOLUME, VELOCITY AND PEAK FLOW RATE OF STORMWATER RUNOFF FOR THE STATED FREQUENCY STORM OF 24-HOUR DURATION IN ACCORDANCE WITH THE FOLLOWING STANDARDS AND CRITERIA. STREAM RESTORATION AND RELOCATION PROJECTS THAT INCORPORATE NATURAL CHANNEL DESIGN CONCEPTS ARE NOT MAN-MADE CHANNELS AND SHALL BE EXEMPT FROM ANY FLOW RATE CAPACITY AND VELOCITY REQUIREMENTS FOR NATURAL OR MAN-MADE CHANNELS:

- A. CONCENTRATED STORMWATER RUNOFF LEAVING A DEVELOPMENT SITE SHALL BE DISCHARGED DIRECTLY INTO AN ADEQUATE NATURAL OR MAN-MADE RECEIVING CHANNEL, PIPE OR STORM SEWER SYSTEM. FOR THOSE SITES WHERE RUNOFF IS DISCHARGED INTO A PIPE OR PIPE SYSTEM, DOWNSTREAM STABILITY ANALYSES AT THE OUTFALL OF THE PIPE OR PIPE SYSTEM SHALL BE PERFORMED.
- B. ADEQUACY OF ALL CHANNELS AND PIPES SHALL BE VERIFIED IN THE FOLLOWING MANNER:

- (1) THE APPLICANT SHALL DEMONSTRATE THAT THE TOTAL DRAINAGE AREA TO THE POINT OF ANALYSIS WITHIN THE CHANNEL IS ONE HUNDRED TIMES GREATER THAN THE CONTRIBUTING DRAINAGE AREA OF THE PROJECT IN QUESTION; OR
 - (2)(A) NATURAL CHANNELS SHALL BE ANALYZED BY THE USE OF A TWO-YEAR STORM TO VERIFY THAT STORMWATER WILL NOT OVERTOP CHANNEL BANKS NOR CAUSE EROSION OF CHANNEL BED OR BANKS.
 - (2)(B) ALL PREVIOUSLY CONSTRUCTED MAN-MADE CHANNELS SHALL BE ANALYZED BY THE USE OF A 10-YEAR STORM TO VERIFY THAT STORMWATER WILL NOT OVERTOP ITS BANKS AND BY THE USE OF A TWO-YEAR STORM TO DEMONSTRATE THAT STORMWATER WILL NOT CAUSE EROSION OF CHANNEL BED OR BANKS; AND
 - (2)(C) PIPES AND STORM SEWER SYSTEMS SHALL BE ANALYZED BY THE USE OF A 10-YEAR STORM TO VERIFY THAT STORMWATER WILL BE CONTAINED WITHIN THE PIPE OR SYSTEM.
- C. IF EXISTING NATURAL RECEIVING CHANNELS OR PREVIOUSLY CONSTRUCTED MAN-MADE CHANNELS OR PIPES ARE NOT ADEQUATE, THE APPLICANT SHALL:
- (1) IMPROVE THE CHANNELS TO A CONDITION WHERE A 10-YEAR STORM WILL NOT OVERTOP THE BANKS AND A TWO-YEAR STORM WILL NOT CAUSE EROSION TO THE CHANNEL, THE BED, OR THE BANKS; OR
 - (2) IMPROVE THE PIPE OR PIPE SYSTEM TO A CONDITION WHERE THE 10-YEAR STORM IS CONTAINED WITHIN THE APPURTENANCES;
 - (3) DEVELOP A SITE DESIGN THAT WILL NOT CAUSE THE PRE-DEVELOPMENT PEAK RUNOFF RATE FROM A TWO-YEAR STORM TO INCREASE WHEN RUNOFF OUTFALLS INTO A NATURAL CHANNEL OR WILL NOT CAUSE THE PRE-DEVELOPMENT PEAK RUNOFF RATE FROM A 10-YEAR STORM TO INCREASE WHEN RUNOFF OUTFALLS INTO A MAN-MADE CHANNEL; OR
 - (4) PROVIDE A COMBINATION OF CHANNEL IMPROVEMENT, STORMWATER DETENTION OR OTHER MEASURES WHICH IS SATISFACTORY TO THE VESCP AUTHORITY TO PREVENT DOWNSTREAM EROSION.

- D. THE APPLICANT SHALL PROVIDE EVIDENCE OF PERMISSION TO MAKE THE IMPROVEMENTS.
- E. ALL HYDROLOGIC ANALYSES SHALL BE BASED ON THE EXISTING WATERSHED CHARACTERISTICS AND THE ULTIMATE DEVELOPMENT CONDITION OF THE SUBJECT PROJECT.
- F. IF THE APPLICANT CHOOSES AN OPTION THAT INCLUDES STORMWATER DETENTION, HE SHALL OBTAIN APPROVAL FROM THE VESCP OF A PLAN FOR MAINTENANCE OF THE DETENTION FACILITIES. THE PLAN SHALL SET FORTH THE MAINTENANCE REQUIREMENTS OF THE FACILITY AND THE PERSON RESPONSIBLE FOR PERFORMING THE MAINTENANCE.

- G. OUTFALL FROM A DETENTION FACILITY SHALL BE DISCHARGED TO A RECEIVING CHANNEL, AND ENERGY DISSIPATORS SHALL BE PLACED AT THE OUTFALL OF ALL DETENTION FACILITIES AS NECESSARY TO PROVIDE A STABILIZED TRANSITION FROM THE FACILITY TO THE RECEIVING CHANNEL.
- H. ALL ON-SITE CHANNELS MUST BE VERIFIED TO BE ADEQUATE.

- I. INCREASED VOLUMES OF SHEET FLOWS THAT MAY CAUSE EROSION OR SEDIMENTATION ON ADJACENT PROPERTY SHALL BE DIVERTED TO A STABLE OUTFALL, ADEQUATE CHANNEL, PIPE OR PIPE SYSTEM, OR TO A DETENTION FACILITY.

- J. IN APPLYING THESE STORMWATER MANAGEMENT CRITERIA, INDIVIDUAL LOTS OR PARCELS IN A RESIDENTIAL, COMMERCIAL OR INDUSTRIAL DEVELOPMENT SHALL NOT BE CONSIDERED TO BE SEPARATE DEVELOPMENT PROJECTS. INSTEAD, THE DEVELOPMENT, AS A WHOLE, SHALL BE CONSIDERED TO BE A SINGLE DEVELOPMENT PROJECT. HYDROLOGIC PARAMETERS THAT REFLECT THE ULTIMATE DEVELOPMENT CONDITION SHALL BE USED IN ALL ENGINEERING CALCULATIONS.

- K. ALL MEASURES USED TO PROTECT PROPERTIES AND WATERWAYS SHALL BE EMPLOYED IN A MANNER WHICH MINIMIZES IMPACTS ON THE PHYSICAL, CHEMICAL AND BIOLOGICAL INTEGRITY OF RIVERS, STREAMS AND OTHER WATERS OF THE STATE.
- L. ANY PLAN APPROVED PRIOR TO JULY 1, 2014, THAT PROVIDES FOR STORMWATER MANAGEMENT THAT ADDRESSES ANY FLOW RATE CAPACITY AND VELOCITY REQUIREMENTS FOR NATURAL OR MAN-MADE CHANNELS SHALL SATISFY THE FLOW RATE CAPACITY AND VELOCITY REQUIREMENTS FOR NATURAL OR MAN-MADE CHANNELS IF THE PRACTICES ARE DESIGNED TO (I) DETAIN THE WATER QUALITY VOLUME AND TO RELEASE IT OVER 48 HOURS; (II) DETAIN AND RELEASE OVER A 24-HOUR PERIOD THE EXPECTED RAINFALL RESULTING FROM THE ONE YEAR, 24-HOUR STORM; AND (III) REDUCE THE ALLOWABLE PEAK FLOW RATE RESULTING FROM THE 1.5, 2, AND 10-YEAR, 24-HOUR STORMS TO A LEVEL THAT IS LESS THAN OR EQUAL TO THE PEAK FLOW RATE FROM THE SITE ASSUMING IT WAS IN A GOOD FORESTED CONDITION, ACHIEVED THROUGH MULTIPLICATION OF THE FORESTED PEAK FLOW RATE BY A REDUCTION FACTOR THAT IS EQUAL TO THE RUNOFF VOLUME FROM THE SITE WHEN IT WAS IN A GOOD FORESTED CONDITION DIVIDED BY THE RUNOFF VOLUME FROM THE SITE IN ITS PROPOSED CONDITION, AND SHALL BE EXEMPT FROM ANY FLOW RATE CAPACITY AND VELOCITY REQUIREMENTS FOR NATURAL OR MAN-MADE CHANNELS AS DEFINED IN ANY REGULATIONS PROMULGATED PURSUANT TO § 82.1-44.15:54 OR 82.1-44.15:65 OF THE ACT.

- M. FOR PLANS APPROVED ON AND AFTER JULY 1, 2014, THE FLOW RATE CAPACITY AND VELOCITY REQUIREMENTS OF § 82.1-44.15:52 A OF THE ACT AND THIS SUBSECTION SHALL BE SATISFIED BY COMPLIANCE WITH WATER QUANTITY REQUIREMENTS IN THE STORMWATER MANAGEMENT ACT (§ 82.1-44.15:24 ET SEQ. OF THE CODE OF VIRGINIA) AND ATTENDANT REGULATIONS, UNLESS SUCH LAND-DISTURBING ACTIVITIES ARE IN ACCORDANCE WITH 9VAC25-870-48 OF THE VIRGINIA STORMWATER MANAGEMENT PROGRAM (VSMPT) REGULATION OR ARE EXEMPT PURSUANT TO SUBDIVISION C 7 OF § 82.1-44.15:34 OF THE ACT.

- N. COMPLIANCE WITH THE WATER QUANTITY MINIMUM STANDARDS SET OUT IN 9VAC25-870-66 OF THE VIRGINIA STORMWATER MANAGEMENT PROGRAM (VSMPT) REGULATION SHALL BE DEEMED TO SATISFY THE REQUIREMENTS OF THIS SUBDIVISION 18.

STATUTORY AUTHORITY
82.1-44.15:52 OF THE CODE OF VIRGINIA.

EROSION CONTROL NARRATIVE

PROJECT DESCRIPTION
THE PURPOSE OF THIS PROJECT IS TO CONSTRUCT NEW ROADWAYS, PARKING, AND SIDEWALKS FOR IMPROVED PEDESTRIAN ACCESS WITHIN THE FORK UNION MILITARY ACADEMY CAMPUS. A TOTAL OF 15.1 ACRES ACRES WILL BE DISTURBED DURING CONSTRUCTION.

EXISTING SITE CONDITIONS
THE PROPOSED SITE IS LOCATED AT THE FORK UNION MILITARY ACADEMY WITHIN FLUVANNA COUNTY. THE SITE WAS PREVIOUSLY DEVELOPED AND INCLUDES SEVERAL BUILDINGS, HARDSCAPE FEATURES, ROADS, AND OPEN SPACE. THE AREA TO BE DISTURBED AS PART OF THIS PROJECT INCLUDES BUILDINGS, HARDSCAPE, ROADS, AND OPEN SPACE.

EROSION CONTROL NARRATIVE (CONTINUED)

ADJACENT PROPERTY
THE PROJECT SITE IS SURROUNDED BY FORK UNION MILITARY ACADEMY PROPERTY ON ALL SIDES.

OFF-SITE AREAS
NO OFFSITE STOCKPILE AREAS OR BORROW AREAS ARE PROPOSED.

SOILS
(REFER TO SHEETS C4.2, C4.3, AND C4.4 FOR SOILS MAPPING FROM USDA NATURAL RESOURCES CONSERVATION SERVICE)

MAP UNIT SYMBOL	NAME
Ac	APPLING FINE SANDY LOAM, ROLLING PHASE
Ag	APPLING FINE SANDY LOAM, UNDULATING PHASE
Aq	APPLING SANDY LOAM, ERODED ROLLING PHASE
Ak	APPLING SANDY LOAM, UNDULATING PHASE
Cb	CECIL CLAY LOAM, ERODED UNDULATING PHASE
Cg	COLFAX SANDY LOAM
Da	DURHAM FINE SANDY LOAM, UNDULATING PHASE
Lk	LOUISBURG SANDY LOAM, ERODED ROLLING AND HILLY PHASES
Lm	LOUISBURG SANDY LOAM, ROLLING AND HILLY PHASES
M	MADE LAND
Mm	MIXED ALLUVIAL LAND, WELL DRAINED
So	SENECA FINE SANDY LOAM
We	WORSHAM SANDY LOAM
Wf	WORSHAM SILT LOAM

CRITICAL EROSION AREAS
SEDIMENTATION OF THE EXISTING STORM SEWER SYSTEMS, ADJACENT DEVELOPED AREAS, AND THE ADJACENT ROADS MUST BE PREVENTED.

STOCKPILING
SOIL STOCKPILES ARE NOT PROPOSED.

EROSION AND SEDIMENT CONTROL MEASURES
UNLESS OTHERWISE INDICATED, ALL VEGETATIVE AND STRUCTURAL EROSION AND SEDIMENT CONTROL PRACTICES SHALL BE CONSTRUCTED AND MAINTAINED ACCORDING TO THE MINIMUM STANDARDS AND SPECIFICATIONS OF THE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK.

STRUCTURAL PRACTICES	VESCP STD. #	SPEC. NUMBER
CONSTRUCTION ENTRANCE	#3.02	
SILT FENCE	#3.05	
STORM DRAIN INLET PROTECTION	#3.07	
CULVERT INLET PROTECTION	#3.08	
DIVERSION DIKE	#3.09	
SEDIMENT TRAP	#3.13	
SEDIMENT BASIN	#3.14	
OUTLET PROTECTION	#3.18	
TREE PROTECTION	#3.38	

VEGETATIVE PRACTICES	VESCP STD. #	SPEC. NUMBER
TEMPORARY SEEDING	#3.31	
PERMANENT SEEDING	#3.32	
MULCHING	#3.35	
DUST CONTROL	#3.39	

- MANAGEMENT STRATEGIES**
- CONSTRUCTION WILL BE SEQUENCED SO THAT GRADING OPERATIONS CAN BEGIN AND END AS QUICKLY AS POSSIBLE.
 - SEDIMENT TRAPPING MEASURES WILL BE INSTALLED AS A FIRST STEP IN GRADING.
 - TEMPORARY SEEDING OR OTHER STABILIZATION WILL FOLLOW IMMEDIATELY AFTER GRADING.
 - AREAS WHICH ARE NOT TO BE DISTURBED WILL BE CLEARLY MARKED.
 - THE JOB SUPERINTENDENT SHALL BE RESPONSIBLE FOR THE INSTALLATION AND MAINTENANCE OF ALL EROSION AND SEDIMENT CONTROL PRACTICES.
 - AFTER ACHIEVING ADEQUATE STABILIZATION, THE TEMPORARY EROSION AND SEDIMENT CONTROLS WILL BE CLEANED UP AND REMOVED.

EROSION CONTROL SEQUENCE OF CONSTRUCTION

- (PHASE 1)
- NOTIFY THE FLUVANNA COUNTY EROSION CONTROL INSPECTOR 48 HOURS PRIOR TO SCHEDULE AN ON-SITE PRE-CONSTRUCTION MEETING. THE CERTIFIED RESPONSIBLE LAND DISTURBER (RLD) MUST ATTEND THE MEETING. DO NOT BEGIN LAND DISTURBANCE WITHOUT INSPECTOR'S APPROVAL.
 - INSTALL PHASE 1 EROSION CONTROL DEVICES.
 - PERFORM DEMOLITION AS SHOWN AND BEGIN ROUGH GRADING.
 - FULLY INSTALL THE SEDIMENT BASIN INCLUDING CONTROL STRUCTURE, DEWATERING DEVICE, OUTFALL, AND OUTFALL PROTECTION. REFER TO DETAIL 1 ON SHEET C8.4 FOR SEDIMENT BASIN CONTROL STRUCTURE DETAIL. SEED AND MULCH SEDIMENT BASIN IMMEDIATELY UPON CONSTRUCTION.
 - ADJUST ALL EROSION CONTROL DEVICES AS NECESSARY IN ORDER TO MAINTAIN PROPER FUNCTION.
- (PHASE 2)
- BEGIN SITE FEATURE CONSTRUCTION, INSTALLING INLET PROTECTION AS NEW INLETS ARE INSTALLED.
 - ADJUST ALL EROSION CONTROL DEVICES AS NECESSARY IN ORDER TO MAINTAIN PROPER FUNCTION.
 - STABILIZE THE SITE DURING AND AT THE CONCLUSION OF CONSTRUCTION PER VESCP STANDARDS.
 - ALL STORM DRAINAGE MUST CONTINUE TO DISCHARGE TO THE SEDIMENT BASIN UNTIL THE SITE IS STABILIZED.
 - AFTER ALL UPSLOPE AREAS HAVE BEEN STABILIZED AND ONLY WITH THE APPROVAL OF THE FLUVANNA COUNTY EROSION CONTROL INSPECTOR, REMOVE ALL REMAINING EROSION CONTROL DEVICES.

- MAINTENANCE**
- THE CONSTRUCTION ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOW OF MUD ONTO PUBLIC RIGHTS-OF-WAY. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE OR THE WASHING AND REWORKING OF EXISTING STONE AS CONDITIONS DEMAND AND REPAIR AND/OR CLEANOUT OF ANY STRUCTURES USED TO TRAP SEDIMENT. ALL MATERIALS SPILLED, DROPPED WASHED, OR TRACKED FROM VEHICLES ONTO ROADWAYS OR INTO STORM DRAINS MUST BE REMOVED IMMEDIATELY. THE USE OF WATER TRUCKS TO REMOVE MATERIALS DROPPED, WASHED, OR TRACKED ONTO ROADWAYS WILL NOT BE PERMITTED UNDER ANY CIRCUMSTANCES.
 - SILT FENCE SHALL BE INSPECTED IMMEDIATELY AFTER EACH RAINFALL AND AT LEAST DAILY DURING PROLONGED RAINFALL. ANY REQUIRED REPAIRS SHALL BE MADE IMMEDIATELY. CLOSE ATTENTION SHALL BE PAID TO THE REPAIR OF DAMAGED SILT FENCE RESULTING FROM END RUNS AND UNDERCUTTING. SHOULD THE FABRIC ON A SILT FENCE DECOMPOSE OR BECOME INEFFECTIVE PRIOR TO THE END OF THE EXPECTED USABLE LIFE AND THE BARRIER STILL BE NECESSARY, THE FABRIC SHALL BE REPLACED PROMPTLY. SEDIMENT DEPOSITS SHOULD BE REMOVED AFTER EACH STORM EVENT. THEY MUST BE REMOVED WHEN DEPOSITS REACH APPROXIMATELY ONE-HALF THE HEIGHT OF THE BARRIER. ANY SEDIMENT DEPOSITS REMAINING IN PLACE AFTER THE SILT FENCE IS NO LONGER REQUIRED SHALL BE DRESSED TO CONFORM WITH THE EXISTING GRADE, PREPARED AND SEEDED.
 - THE INLET PROTECTION STRUCTURES SHALL BE INSPECTED AFTER EACH RAIN AND REPAIRS MADE AS NEEDED. SEDIMENT SHALL BE REMOVED AND THE TRAP RESTORED TO ITS ORIGINAL DIMENSIONS WHEN THE SEDIMENT HAS ACCUMULATED TO ONE HALF THE DESIGN DEPTH OF THE TRAP. REMOVED SEDIMENT SHALL BE DEPOSITED IN A SUITABLE AREA AND IN SUCH A MANNER THAT IT WILL NOT ERODE. STRUCTURES SHALL BE REMOVED AND THE AREA STABILIZED WHEN THE REMAINING DRAINAGE AREA HAS BEEN PROPERLY STABILIZED.
 - THE DIVERSION DIKE SHALL BE INSPECTED AFTER EVERY STORM AND REPAIRS MADE AS NECESSARY.
 - THE SEDIMENT BASIN EMBANKMENT SHALL BE CHECKED REGULARLY TO ENSURE THAT IT IS STRUCTURALLY SOUND AND HAS NOT BEEN DAMAGED BY EROSION OR CONSTRUCTION EQUIPMENT. THE BASIN SHOULD BE CHECKED AFTER EACH RUNOFF-PRODUCING RAINFALL FOR SEDIMENT OUTFLOW. WHEN THE BASIN REACHES THE OUTFLOW (L/F), IT SHALL BE REMOVED AND PROPERLY DISPOSED OF.
 - THE SEEDED AREAS WILL BE CHECKED REGULARLY TO ENSURE THAT A GOOD STAND IS MAINTAINED. AREAS SHOULD BE FERTILIZED AND RE-SEEDED AS NEEDED.

PERMANENT STABILIZATION
ALL AREAS DISTURBED BY CONSTRUCTION SHALL BE STABILIZED WITH PERMANENT SEEDING OR HARDSCAPE IMMEDIATELY FOLLOWING FINISHED GRADING. SEEDING SHALL BE DONE IN ACCORDANCE WITH THE SEEDING SPECIFICATION ON SHEET C8.0. MULCH WILL BE USED IN CONJUNCTION WITH PERMANENT SEEDING. IN ALL SEEDING OPERATIONS, SEED, FERTILIZER, AND LIME WILL BE APPLIED PRIOR TO MULCHING.

IMPACTS OF PROPOSED DEVELOPMENT
THE IMPACTS OF THE PROPOSED DEVELOPMENT TO TOPOGRAPHY, SOILS, HYDROLOGY, AND GEOLOGY OF THE SITE WILL BE MINIMAL. THE SITE IS BEING REDEVELOPED AND NO PREVIOUSLY UNDISTURBED AREAS WILL BE DISTURBED AS PART OF THE PROJECT. GRADING WILL NOT VARY SIGNIFICANTLY FROM EXISTING GRADING. THE MINIMAL IMPACTS SHOULD NOT NEGATIVELY IMPACT WATER QUALITY.

STORM WATER MANAGEMENT
REFER TO SHEET C13.0 FOR STORM WATER MANAGEMENT NARRATIVE.

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NOV 07 2016
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SEAL
95% CONSTRUCTION DOCUMENTS

PROJECT NUMBER
15103

DATE
OCTOBER 24, 2016

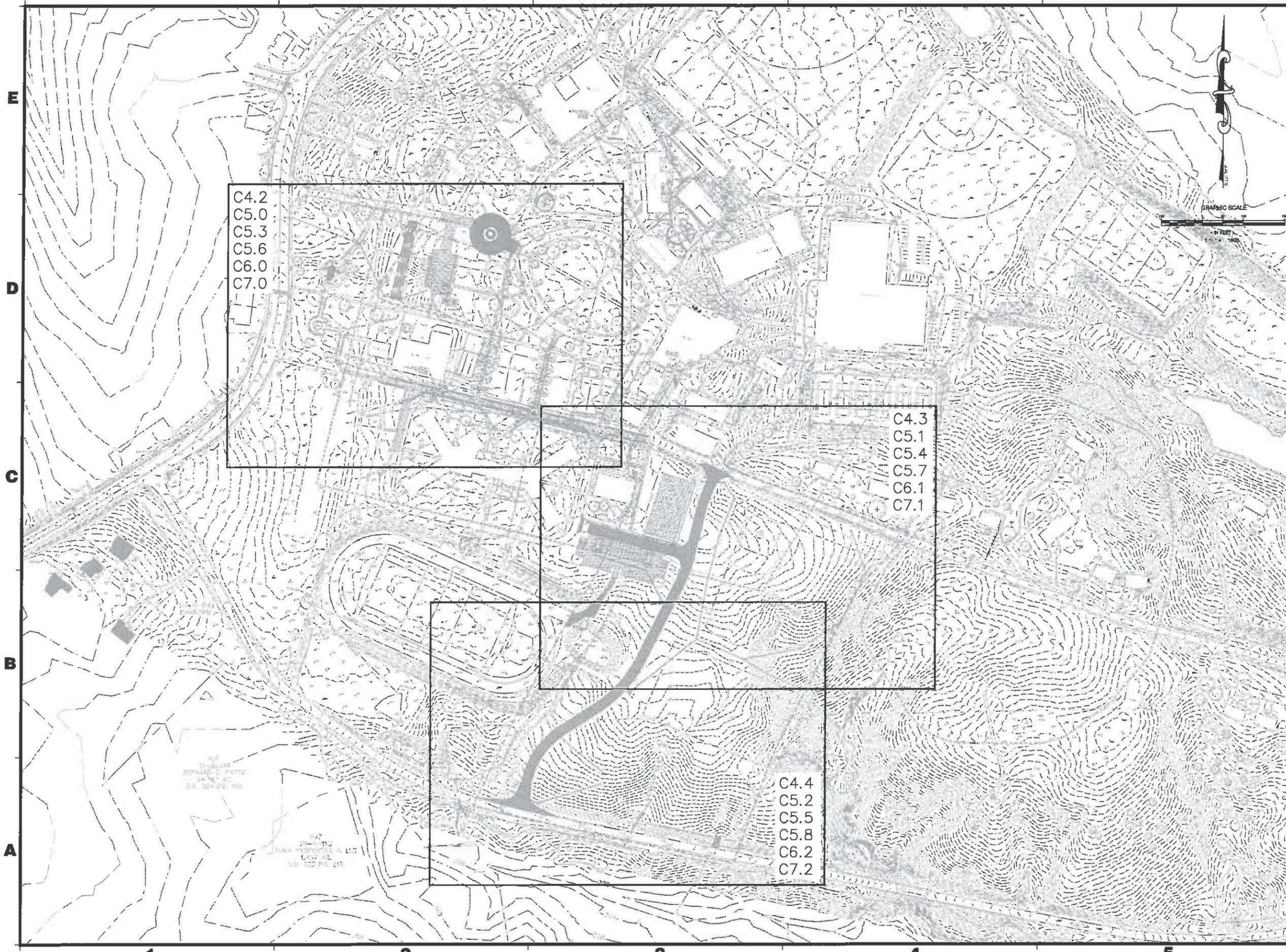
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NO.	DATE	DESCRIPTION

SHEET TITLE
EROSION CONTROL NOTES

SHEET NUMBER
C2.1

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REVISIONS

NO.	DATE	DESCRIPTION

SHEET TITLE
SHEET LAYOUT

SHEET NUMBER
C3.0

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NOV 07 2016

Storm Sewer Table

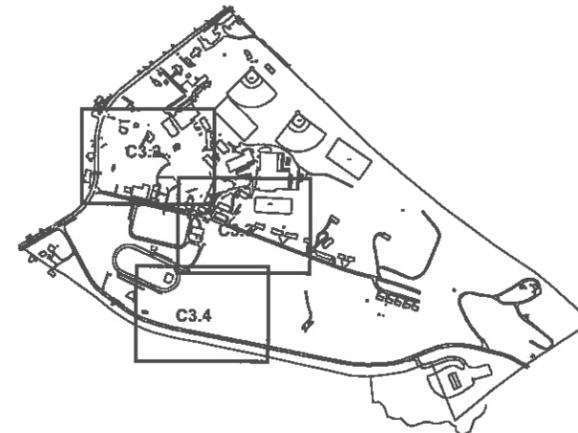
1 Drop Inlet 1744 Top=365.67 Inv In=358.65 Inv out=359.37	11 Storm MH 1739 Top=375.13 Inv In=366.76 (NW) Inv In=370.35 (N) Inv out=366.23	21 Drop Inlet 2133 Top=358.00 Inv In=355.74 (SW) Inv In=356.16 (NW) Inv out=355.68	32 Drop Inlet 1846 Top=355.22 Inv out=364.29	42 Drop Inlet 2517 Top=374.92 Inv In=373.79 Inv out=373.79	53 Drop Inlet 2680 Top=376.43 Inv out=375.97	66 Storm Manhole 2942 Top=343.21 Inv In=336.11 (SSW) Inv In=340.14 (SW) Inv In=340.34 (WNW) Inv In=338.37 (W) Inv In=340.78 (NW) Inv out=338.33
2 Drop Inlet 1889 Top=374.06 Inv In=370.55 Inv out=363.14	12 Storm MH 1194 Top=382.97 Inv In=381.14 Inv out=381.11	22 Drop Inlet 1975 Top=382.82 Inv out=382.28	33 Drop Inlet 2195 Top=370.15 Inv In=360.89 Inv out=365.75 (invert out is higher than invert in)	43 Drop Inlet 2920 Top=368.25 Inv In=358.73 Inv out=356.09	54 Drop Inlet 2681 Top=375.14 Inv In=374.31 NE Inv In=373.97 SW (from #55) Inv out=372.67 (at of structure)	67 Storm Manhole 3039 Top=343.02 Inv In=335.6 (SSW) Inv In=357.67 (SW) Inv In=339.87 (NW) Inv In=333.73 (N) Inv In=335.59
3 Drop Inlet 1889 Top=373.84 Inv In=373.47 Inv out=371.63	13 Drop Inlet 1776 Top=378.071 Inv In=377.15 (NE) Inv In=376.66 (E)	23 Drop Inlet 1972 Top=382.83 Inv In=381.60 Inv out=382.28	34 Drop Inlet 2195 Top=370.38 Inv In=365.88 Inv out=363.59	44 Drop Inlet 2920 Top=368.25 Inv In=358.73 Inv out=355.07	55 Drop Inlet 2680 Top=376.04 Inv In=376.81 Inv out=376.81	68 Drop Inlet 3009 Top=342.50 Inv In=333.27 Inv out=333.27
4 Drop Inlet 1106 Top=374.43 Inv In=363.32 (W) Inv In=371.72 (N) Inv out=363.57	14 Drop Inlet 1770 Top=371.51 Inv In=370.53 Inv out=370.53	24 Drop Inlet 1888 Top=377.23 Inv out=375.99	35 Drop Inlet 2204 Top=368.04 Inv In=366.40 (S) Inv In=363.97 (SE) Inv out=365.97	45 Drop Inlet 2931 Top=344.37 Inv In=342.46 Inv out=342.39	56 Drop Inlet 2700 Top=363.52 Inv In=360.42 (W) Inv In=360.43 (NW) Inv out=360.39	69 Storm Manhole 3030 Top=342.29 Inv In=332.71 (S) Inv In=338.40 (SSW) Inv In=335.03 (plugged) (SW) Inv In=334.70 (W) Inv In=335.80 (NW) Inv In=340.22 (NNW) Inv In=331.56 (N) Inv out=331.54
5 Drop Inlet 1111 Top=374.69 Inv In=366.60 Inv out=366.59	15 Drop Inlet 1775 Top=365.15 Inv out=363.38	25 Drop Inlet 1978 Top=378.27 Pipe Invert=377.00 6" Tall/4" Wide opening, no pipes visible	36 Drop Inlet 2204 Top=368.04 Inv In=366.36 (SE) Inv In=366.39 (SW) Inv out=366.24	46 Drop Inlet 2203 Top=354.75 Inv In=352.13 (NE) Inv In=346.84 (S) Inv In=343.00 (W) Inv out=342.95	57 Drop Inlet 2922 Top=350.68 Inv In=348.11 Inv out=348.11	70 Drop Inlet 2875 Top=344.61 Inv In=338.59 (W) Inv In=340.44 (NNW) Inv out=337.74
6 Storm MH 1070 Top=377.03 Inv In=368.46 Inv out=368.44	16 Drop Inlet 2124 Top=352.69 Inv In=351.44 (SW) Inv In=351.42 (SW) Inv In=350.48 (NW) Inv out=350.20	26 Drop Inlet 1792 Top=384.54 Inv out=383.31	37 Drop Inlet 2199 Top=368.02 Inv In=364.94 Inv out=364.82	47 Drop Inlet 2698 Top=363.80 Inv In=361.7 Inv out=361.65	58 Drop Inlet 2127 Top=349.84 Inv In=348.74 Inv out=348.6	71 Storm Vault 3005 Standing water noted Top=376.78 Inv In=372.43 Inv out=372.50
7 Drop Inlet 1112 Top=374.79 Top 6" pipe=373.79 Inv In=370.18 (at of struc.) No pipes visible	17 Drop Inlet 2123 Top=352.72 Inv out=351.14	27 Storm MH 1788 Conflict sign pipe Top=385.10 Inv In=383.20 Inv out=383.16	38 Drop Inlet 2202 Top=370.32 Inv In=368.25 (NE) Inv In=363.51 (6" SE) Inv In=363.33 (4" SE) Inv out=365.13	48 Drop Inlet 2698 Top=363.80 Inv In=361.7 Inv out=361.65	59 Drop Inlet 2128 Top=346.71 Inv In=348.11 Inv out=348.11	72 Drop Inlet 2518 Top=374.68 Inv In=374.00 Inv out=374.00
8 Drop Inlet 1113 Top=374.80 Inv In=348.06 Inv out=370.35	18 Drop Inlet 2125 Top=348.68 Inv In=348.06 Inv out=348.03	28 Drop Inlet 2001 Top=372.89 Inv In=370.87 Inv out=370.74	39 Drop Inlet 2921 Top=359.88 Inv In=357.96 (SW) Inv In=358.05 (NW) Inv out=357.89	49 Drop Inlet 2932 Top=350.69 Inv out=349.82	60 Drop Inlet 2938 Top=350.68 Inv In=349.21 Inv out=349.21	73 Drop Inlet 2520 Top=373.29 Inv In=372.26 (NE) Inv In=371.84 (S) Inv In=371.57 (W) Inv In=372.45 (NW) Inv out=371.78
9 Drop Inlet 1045 Top=377.80 Inv out=372.26	19 Drop Inlet 2131 Top=376.14 Inv out=374.79	29 Drop Inlet 1896 Top=377.22 Inv In=373.74 Inv out=373.74	40 Drop Inlet 2919 Top=375.37 Inv In=373.67 (SW) Inv In=373.96 (NW) Inv In=371.85 (NE) Inv out=370.02	50 Drop Inlet 2073 Top=356.88 Inv In=355.52 Inv out=355.52	61 Drop Inlet 2937 Top=354.68 Inv In=341.61 Inv out=341.53	74 Storm Vault 2515 Top=374.68 Inv In=370.89 Inv out=370.61
10 Drop Inlet 1311 Top=374.62 Inv In=368.53 Inv out=368.53	20 Drop Inlet 2130 Top=368.24 Inv In=368.37 Inv out=368.37	30 Drop Inlet 1898 Top=377.28 Inv In=373.58 (SW) Inv In=373.28 (NE) Inv out=373.50	41 Drop Inlet 2518 Top=375.22 Inv In=373.54 Inv out=373.01	51 Drop Inlet 2980 Top=348.99 Inv In=342.74 (W) Inv In=343.89 (NW) Inv In=346.52 (NE) Inv out=342.70	62 Drop Inlet 2839 Top=357.44 Inv In=350.54 Inv out is a hole in the centerline of the MH	

Sanitary Sewer Table

1 San. MH 1091 Top=376.93 Inv In=371.12 Inv out=371.08	12 San. MH 1846 Top=382.99 Inv In=375.34 (SW) Inv In=375.44 (NW) Inv out=375.32
2 San. MH 1728 Top=383.38 Inv In=377.03 (SW) Inv In=370.69 (W) Inv out=370.52	13 San. MH 2193 Top=374.07 Inv In=368.23 Inv out=368.16
3 San. MH 1191 Top=382.97 Inv In=380.15 (SW) Inv In=378.07 (W) Inv out=375.07	14 San. MH 2194 Top=370.56 Inv In=367.87 Inv out=367.40
4 San. MH 1152 Top=384.12 Inv In=374.01 (W) Inv out=373.81	15 San. MH 1155 Top=368.04 Inv In=377.08 Inv out=377.04
5 San. MH 2085 Top=378.28 Inv In=372.67 (SSW) Inv In=370.69 (SW) Inv In=N.A. 4" (NW) Inv In=375.65 (N) Inv out=370.64	16 San. MH 2296 Top=372.08 Inv In=369.82 (SW) Inv In=370.14 (WNW) Inv In=388.10 (NW) Inv In=375.54 (N) Inv out=367.54
6 San. MH 2085 Top=378.01 Inv In=368.83 (SSW) Inv In=369.97 (SW) Inv out=368.78	17 San. MH 2878 Top=349.46 Inv In=341.80 (WNW) Inv In=346.47 (NW) Inv out=341.82
7 San. MH 2079 Top=368.92 Inv In=367.74 (W) Inv In=368.25 (NW) Inv out=367.74	18 San. MH 2878 Top=348.80 Inv In=337.53 (W) Inv In=337.9 (N) Inv out=336.94
8 San. MH 2122 Top=353.52 Inv out=353.17	19 San. MH 2833 Top=364.49 Inv In=361.63 (NW) Inv In=362.00 (NE) Inv out=361.82
9 San. MH 2132 Top=359.51 Inv In=356.16 (SW) Inv In=354.98 (NW) Inv out=354.91	20 San. MH 2834 Top=370.86 Inv In=365.30 (W) Inv In=365.26 (NW) Inv out=365.23
10 San. MH 1849 Top=382.553 Inv out=377.74 (SE) (No longer in use)	21 San. MH 3036 Top=340.69 Inv In=334.16 (W) Inv In=337.27 (NW) Inv out=334.13
11 San. MH 1156 Top=362.34 Inv In=378.30 (SW) Inv In=378.88 (NW) Inv In=375.79 (N) Inv out=375.79	22 San. MH 3046 Top=378.69 Inv In=373.83 (ESE) Inv In=369.82 (SE) Inv In=368.08 (SW) Inv out=368.92

NOTES:

- 1.) Source of Meridian: NAD83 (GORS2011) based upon: GPS observation (Oct 21, 2015).
- 2.) Vertical datum: NAVD83 based upon: GPS observation (Oct 21, 2015).
- 3.) This survey was prepared without the benefit of a title commitment or title report and all easements and encumbrances that might be disclosed in a title search may not be shown.
- 4.) Utilities shown are based upon:
 - ___ SUE Quality Level D, ASCE 38-02 - compiled records only
 - ___ SUE Quality Level C, ASCE 38-02 - visible evidence in conjunction with compiled records.
 - ___ SUE Quality Level B, ASCE 38-02 - field designation of underground utilities performed by Draper Aden Associates and visible evidence in conjunction with compiled records within area shown.
 - ___ SUE Quality Level A, ASCE 38-02 - test pits at locations shown hereon performed by (DAA; Other) in conjunction with field designation of underground utilities performed by (DAA; Miss Utility, Ticket # _____; Other), visible evidence and compiled records.
 - ___ No SUE was performed or requested for this survey. Utilities shown hereon are based on field observation only.
- 5.) This topographic survey was completed under the direct and responsible charge of Cheryl Stockton from an actual Ground survey made under my supervision; that the imagery and/or original data was obtained on February 3, 2016 and that this plot and/or map meets minimum accuracy standards unless otherwise noted.
- 6.) Contour Interval: 1'.
- 7.) This survey was prepared for Fork Union Military Academy. Draper Aden Associates assumes no liability for reuse or modification of this document.
- 8.) Property lines not shown.
- 9.) Draper Aden Associates provides benchmarks for the construction of the improvements shown on these plans. All other existing elevations are for reference to existing conditions only. Do not use spot elevations, finish floor elevations, elevations on manholes, elevations on survey nails, survey hubs, control points (horizontal points provided) or any other points for construction other than the provided benchmarks. Failure to utilize and verify the provided benchmarks could result in damages and additional cost that are the contractor's responsibility.



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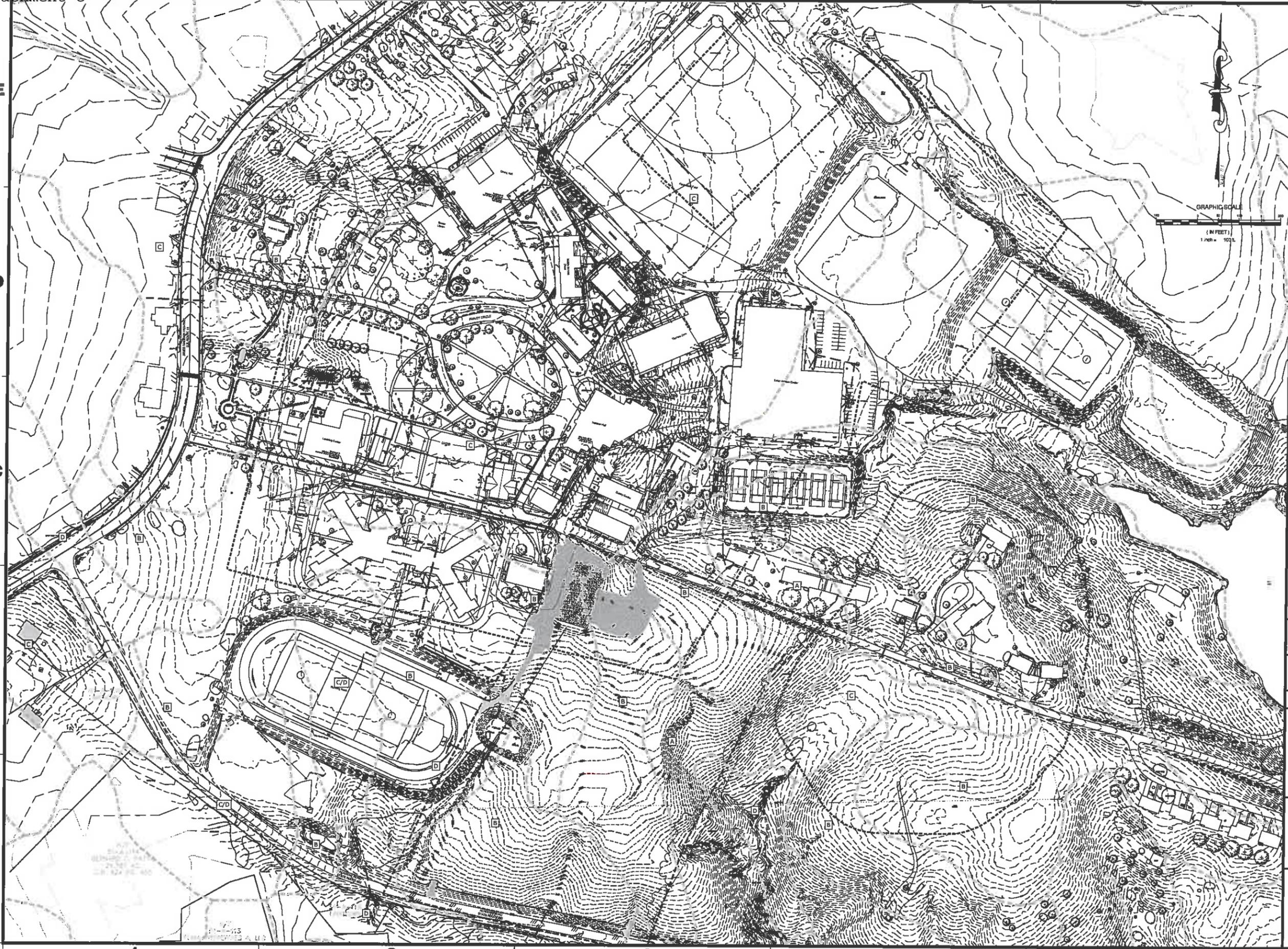
SHEET TITLE
SURVEY NOTES

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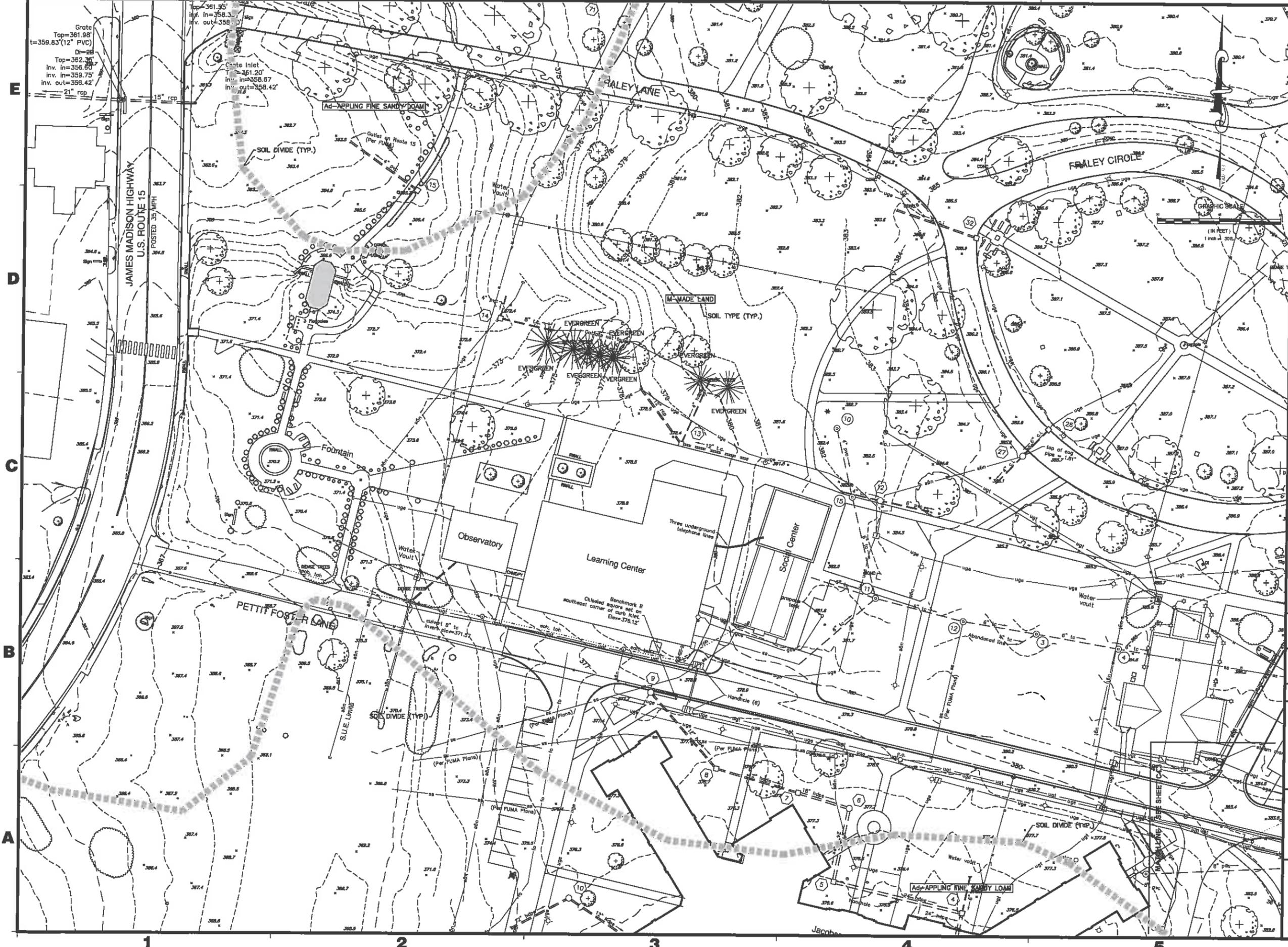
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**OVERALL EXISTING
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EROSION & SEDIMENT CONTROL QUANTITIES (PHASE 1)

CONTROL	SYMBOL	QUANTITY	EA	LF	AC
CONSTRUCTION ENTRANCE	CE	2	EA		
SILT FENCE	SF	4875	LF		
INLET PROTECTION	IP	5	EA		
TREE PROTECTION	TP	340	LF		
TEMPORARY SEEDING	TS	AS NEEDED	AC		
MULCHING	MU	AS NEEDED	AC		
DUST CONTROL	DC	AS NEEDED	AC		

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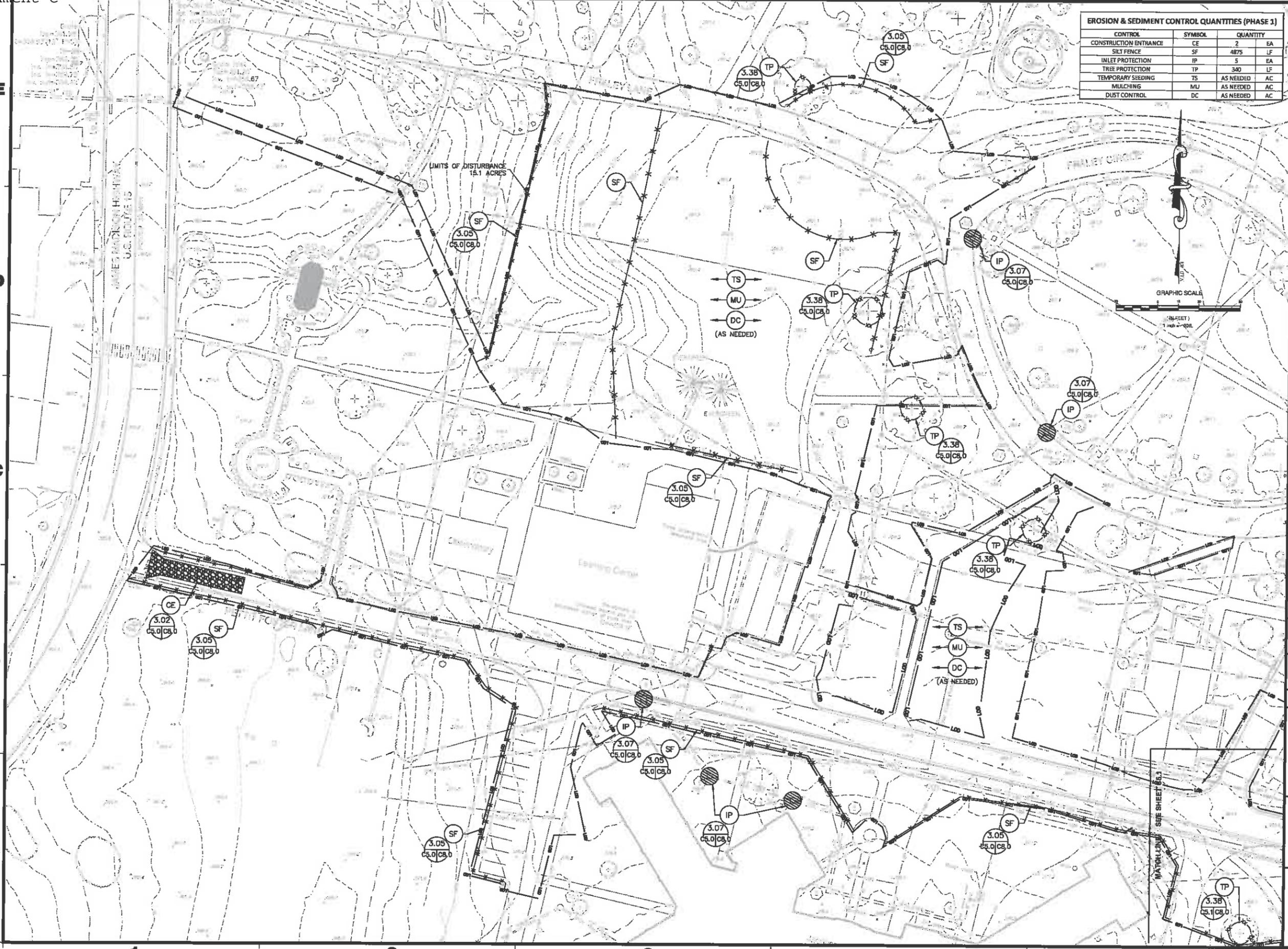
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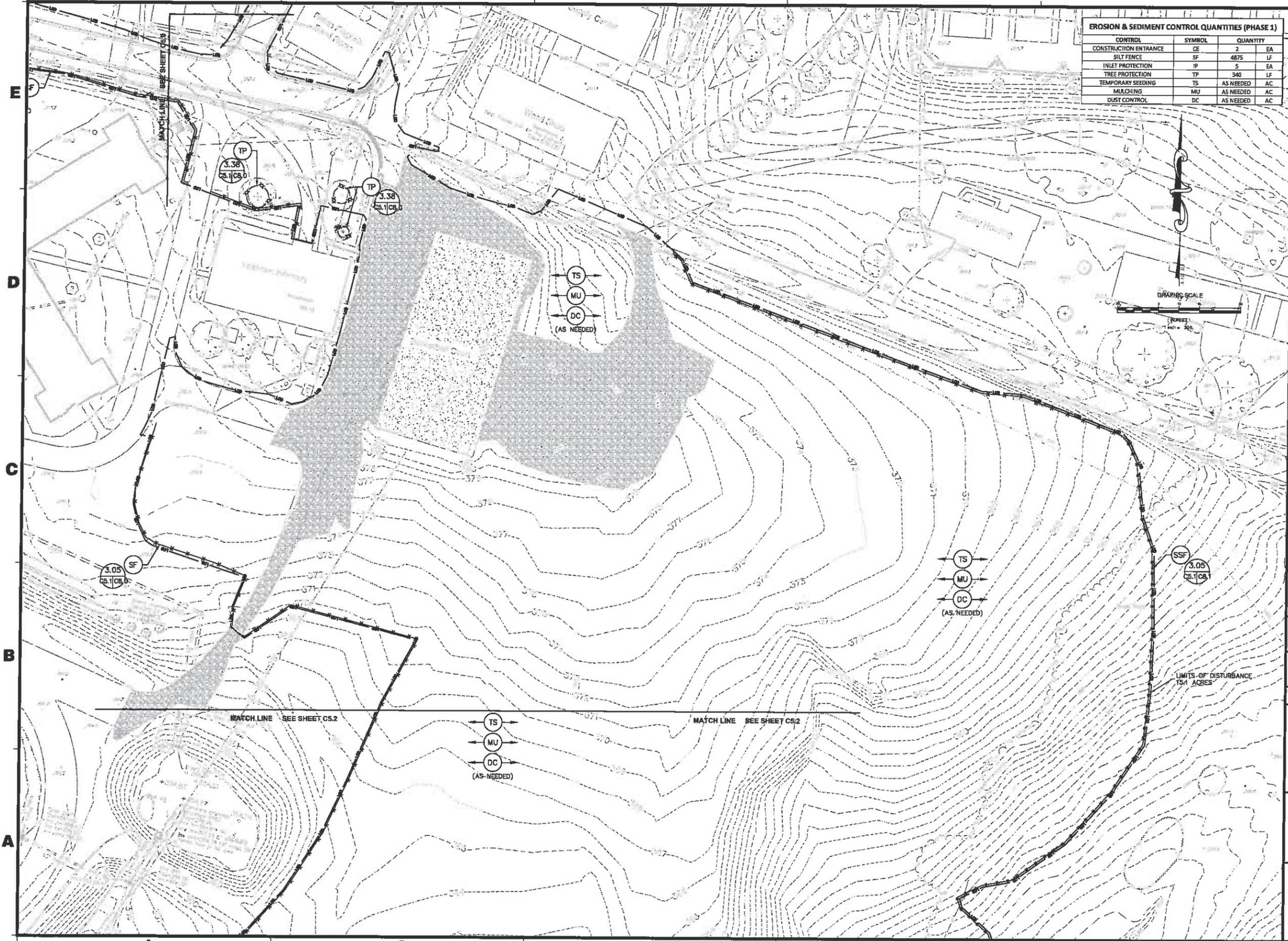
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CONTROL	SYMBOL	QUANTITY	
CONSTRUCTION ENTRANCE	CE	2	EA
SILT FENCE	SF	4875	LF
INLET PROTECTION	IP	5	EA
TREE PROTECTION	TP	340	LF
TEMPORARY SEEDING	TS	AS NEEDED	AC
MULCHING	MU	AS NEEDED	AC
DUST CONTROL	DC	AS NEEDED	AC

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CONTROL	SYMBOL	QUANTITY	
CONSTRUCTION ENTRANCE	CE	2	EA
SILT FENCE	SF	4875	LF
INLET PROTECTION	IP	5	EA
TREE PROTECTION	TP	340	LF
TEMPORARY SEEDING	TS	AS NEEDED	AC
MULCHING	MU	AS NEEDED	AC
DUST CONTROL	DC	AS NEEDED	AC

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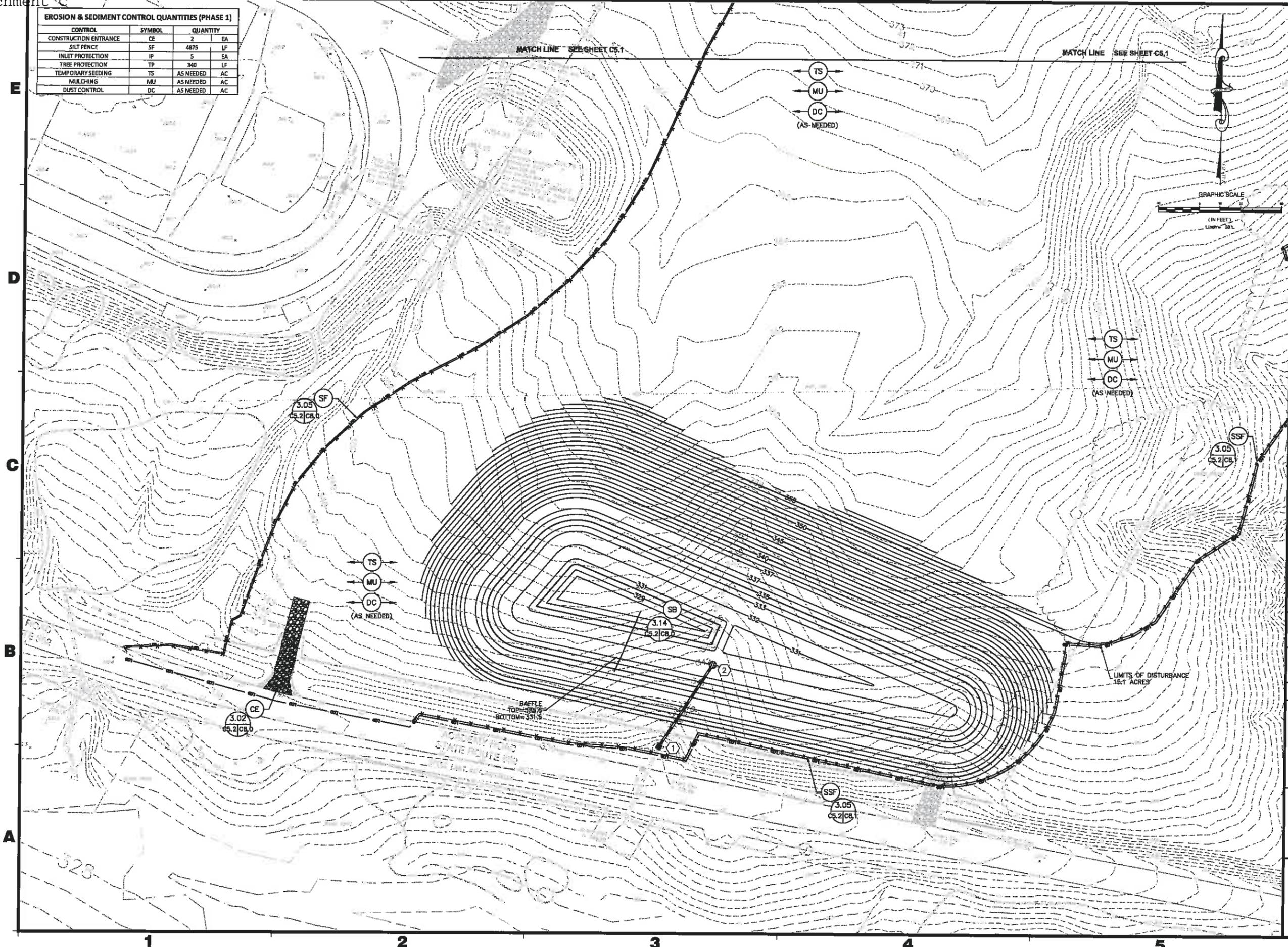
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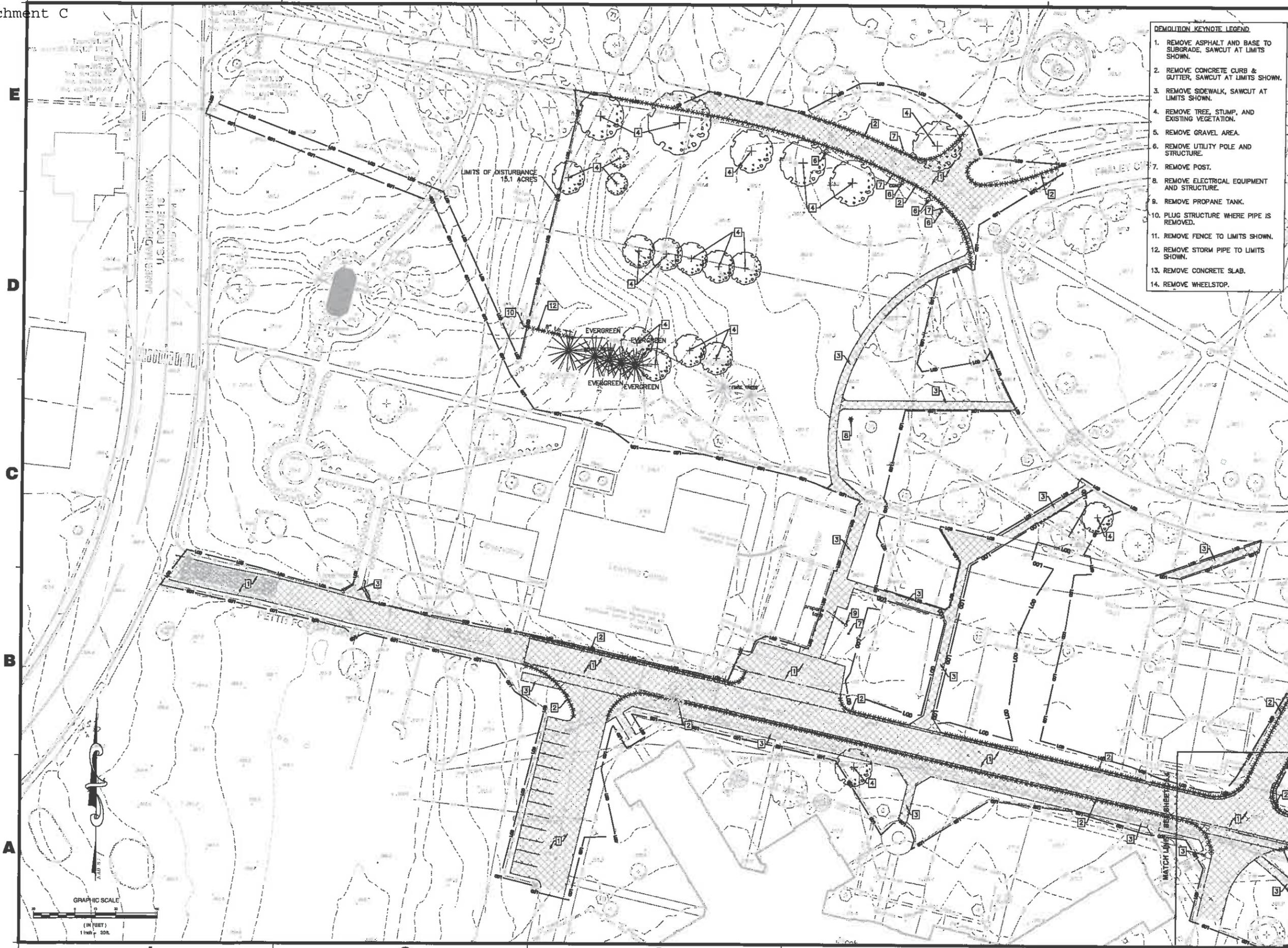
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Hilvarina Gunn



- DEMOLITION KEYNOTE LEGEND**
1. REMOVE ASPHALT AND BASE TO SUBGRADE. SAWCUT AT LIMITS SHOWN.
 2. REMOVE CONCRETE CURB & GUTTER, SAWCUT AT LIMITS SHOWN.
 3. REMOVE SIDEWALK, SAWCUT AT LIMITS SHOWN.
 4. REMOVE TREE, STUMP, AND EXISTING VEGETATION.
 5. REMOVE GRAVEL AREA.
 6. REMOVE UTILITY POLE AND STRUCTURE.
 7. REMOVE POST.
 8. REMOVE ELECTRICAL EQUIPMENT AND STRUCTURE.
 9. REMOVE PROPANE TANK.
 10. PLUG STRUCTURE WHERE PIPE IS REMOVED.
 11. REMOVE FENCE TO LIMITS SHOWN.
 12. REMOVE STORM PIPE TO LIMITS SHOWN.
 13. REMOVE CONCRETE SLAB.
 14. REMOVE WHEELSTOP.

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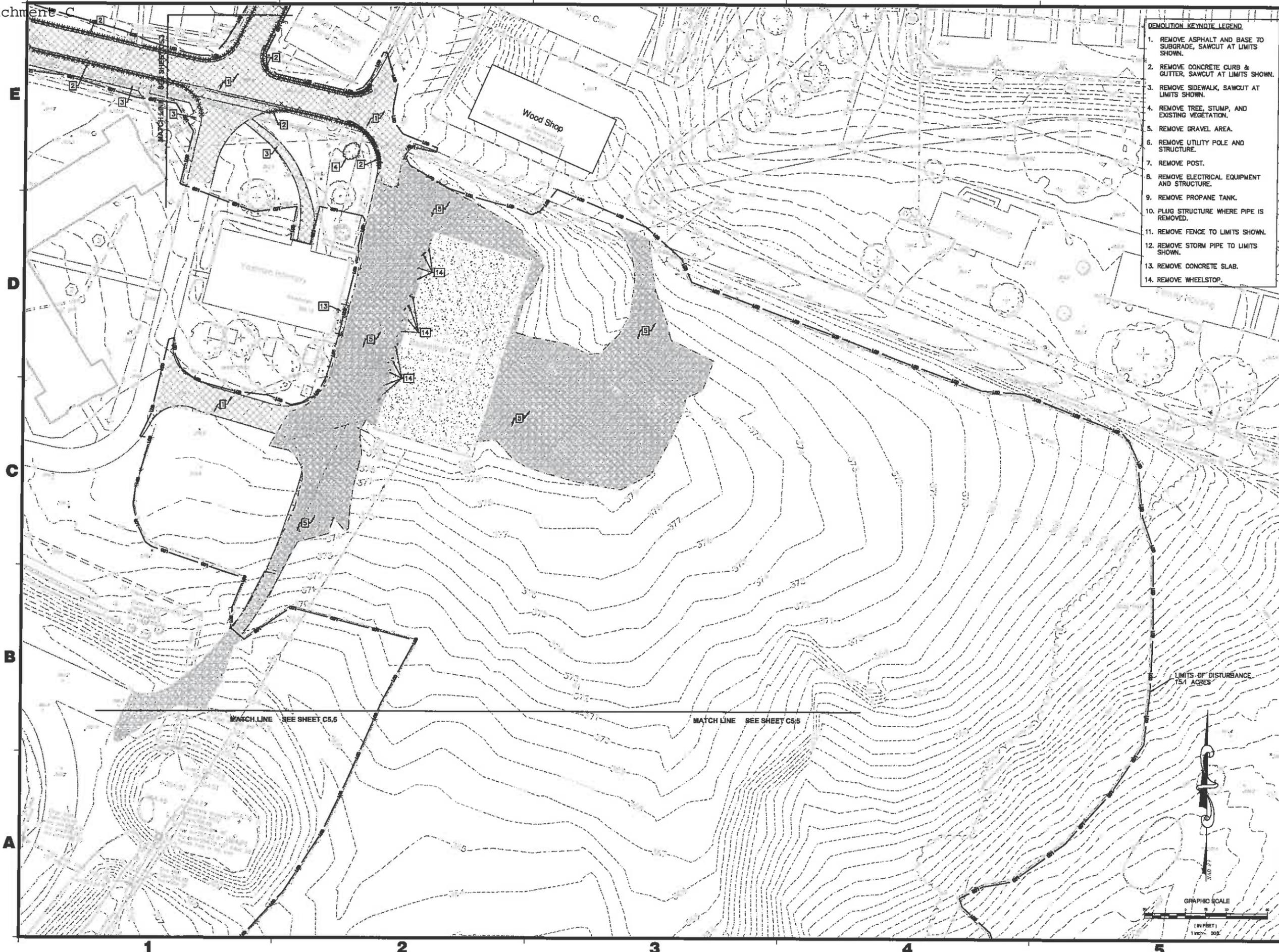
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 2. REMOVE CONCRETE CURB & GUTTER, SAWCUT AT LIMITS SHOWN.
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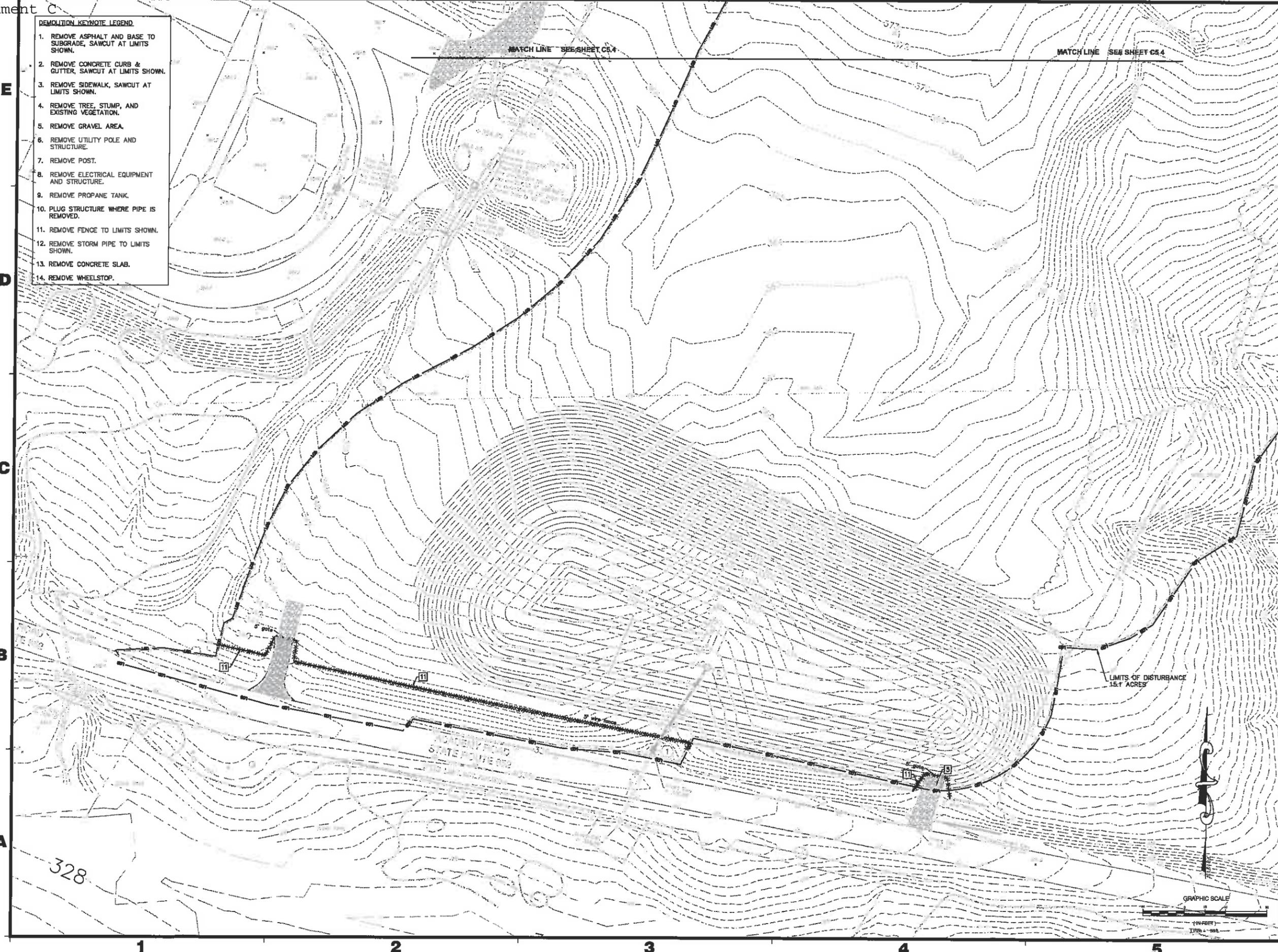
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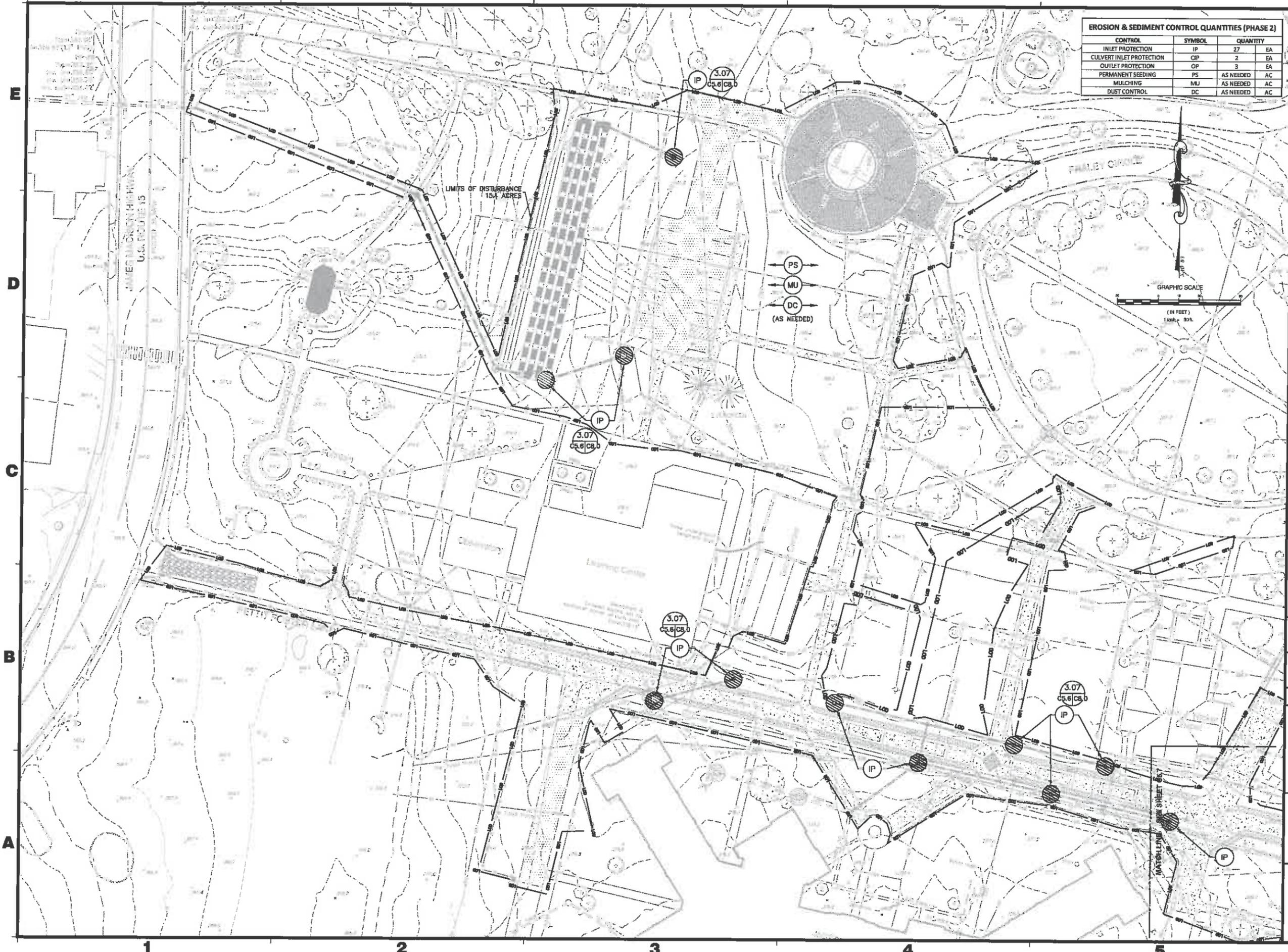
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EROSION & SEDIMENT CONTROL QUANTITIES (PHASE 2)

CONTROL	SYMBOL	QUANTITY	
INLET PROTECTION	IP	27	EA
CULVERT INLET PROTECTION	CIP	2	EA
OUTLET PROTECTION	OP	3	EA
PERMANENT SEEDING	PS	AS NEEDED	AC
MULCHING	MU	AS NEEDED	AC
DUST CONTROL	DC	AS NEEDED	AC

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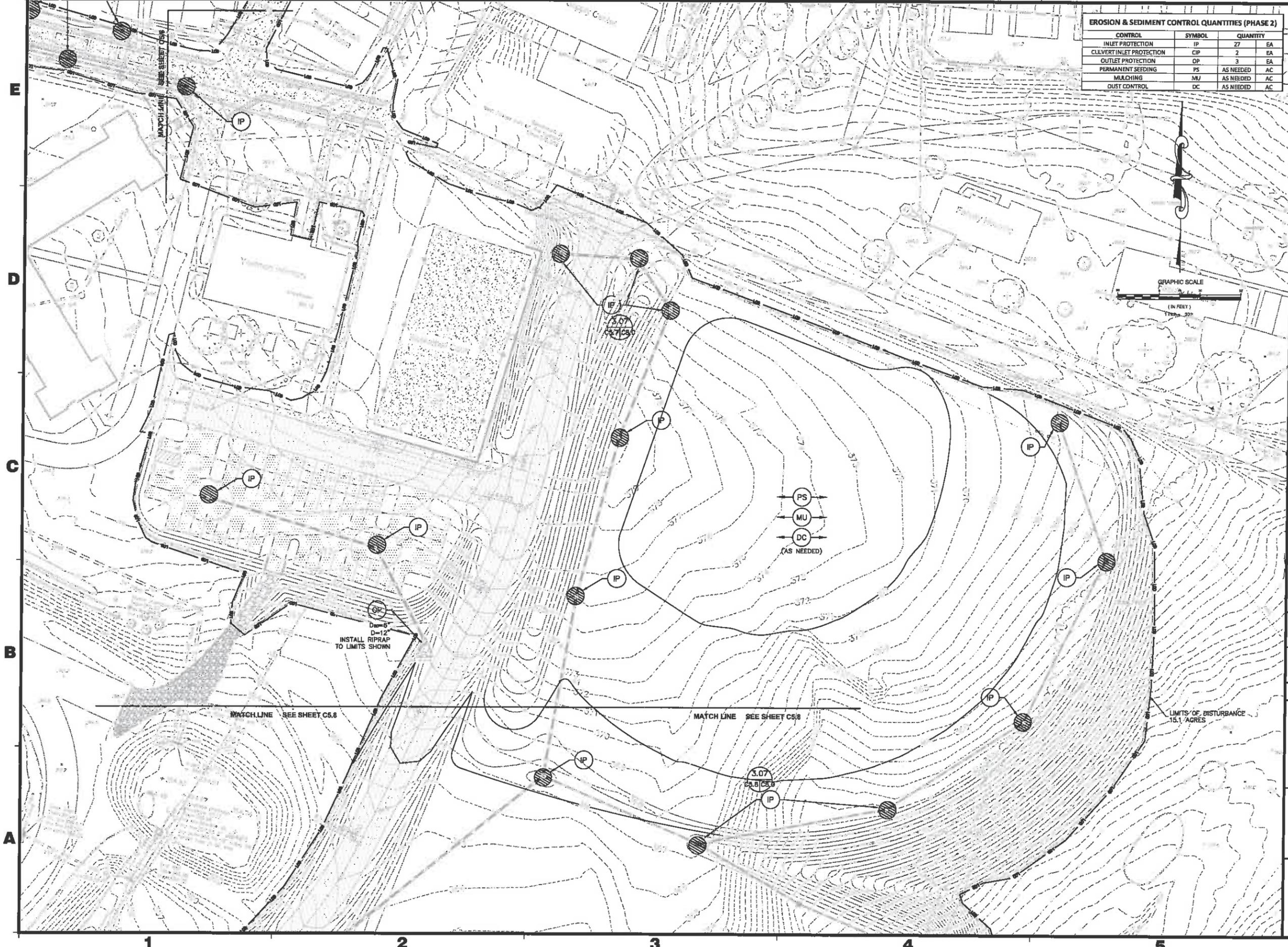
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CONTROL	SYMBOL	QUANTITY	
INLET PROTECTION	IP	27	EA
CULVERT INLET PROTECTION	CIP	2	EA
OUTLET PROTECTION	OP	3	EA
PERMANENT SEEDING	PS	AS NEEDED	AC
MULCHING	MU	AS NEEDED	AC
DUST CONTROL	DC	AS NEEDED	AC

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CONTROL	SYMBOL	QUANTITY	
INLET PROTECTION	IP	27	EA
CULVERT INLET PROTECTION	CIP	2	EA
OUTLET PROTECTION	OP	3	EA
PERMANENT SEEDING	PS	AS NEEDED	AC
MULCHING	MU	AS NEEDED	AC
DUST CONTROL	DC	AS NEEDED	AC

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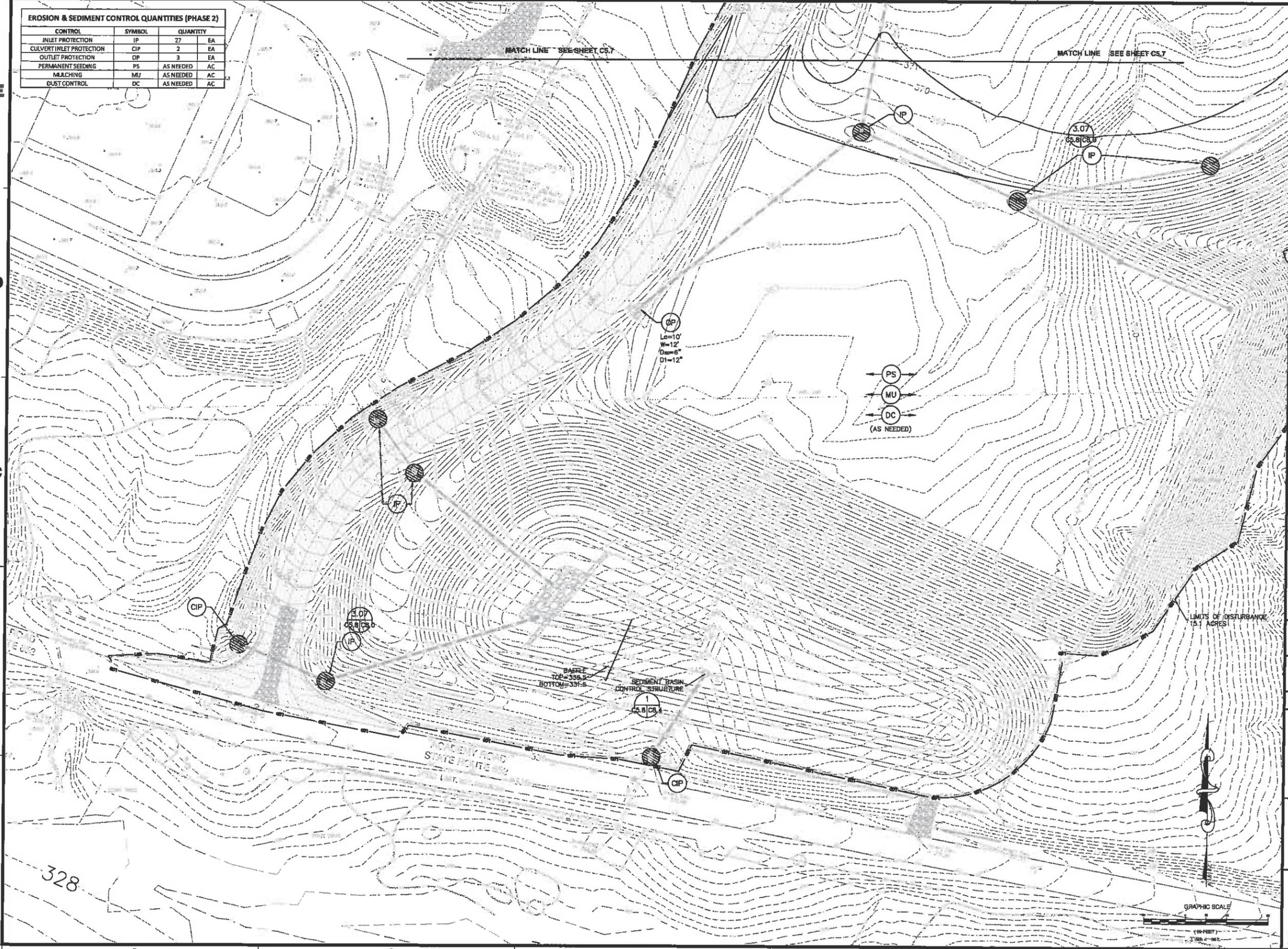
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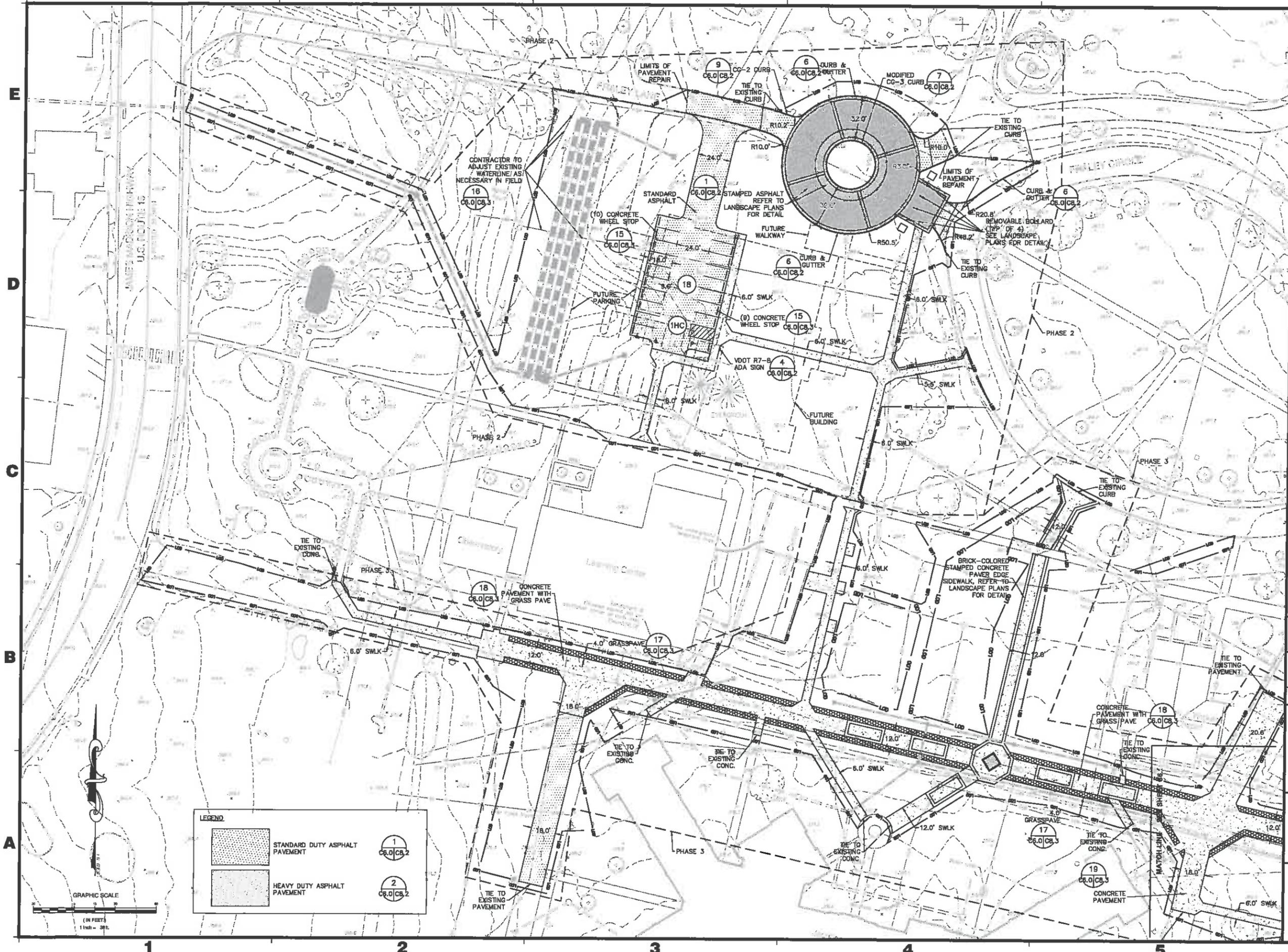
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SHEET TITLE
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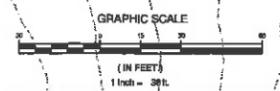
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LEGEND

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	HEAVY DUTY ASPHALT PAVEMENT	2 C6.0/C6.2



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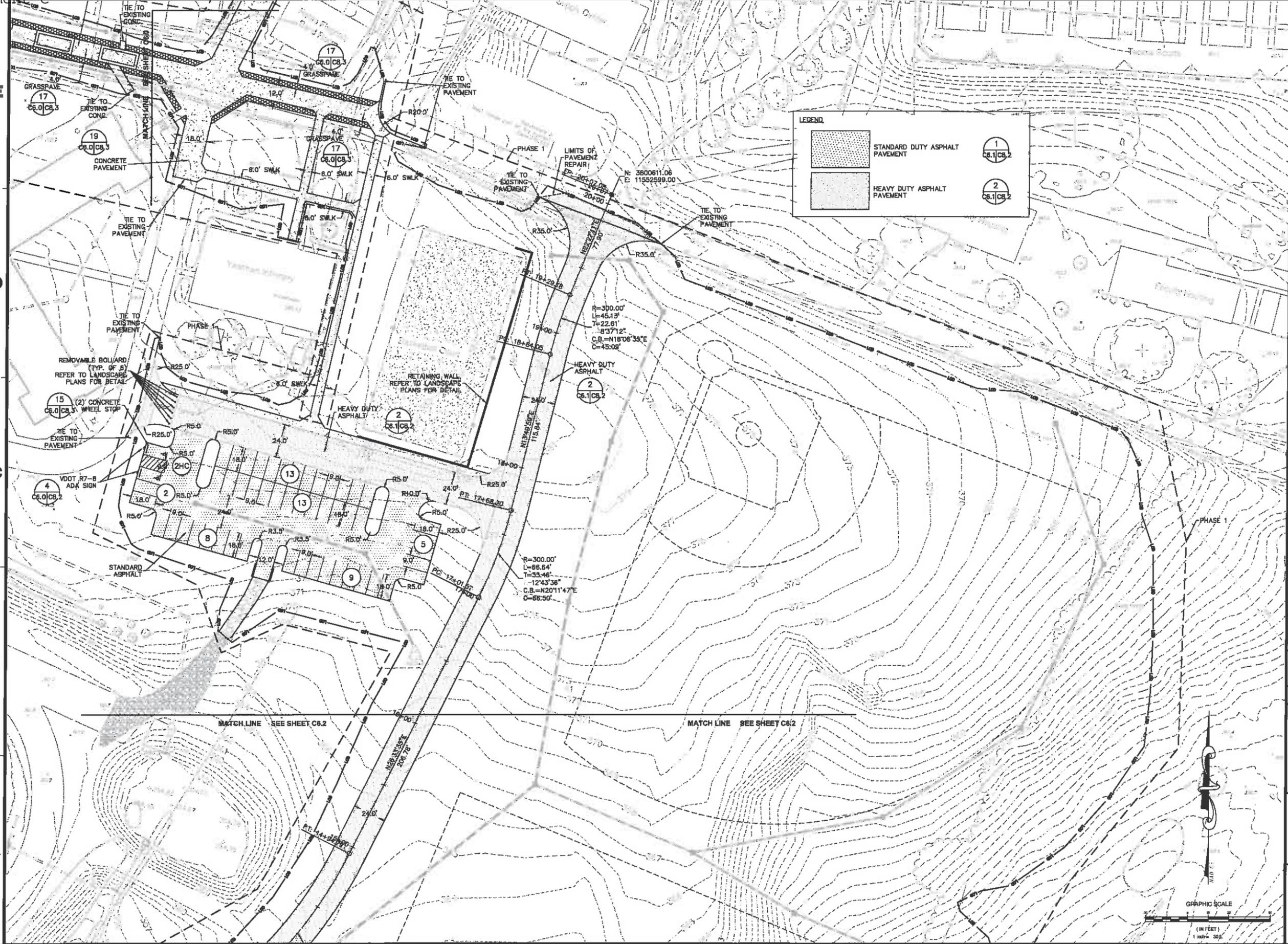
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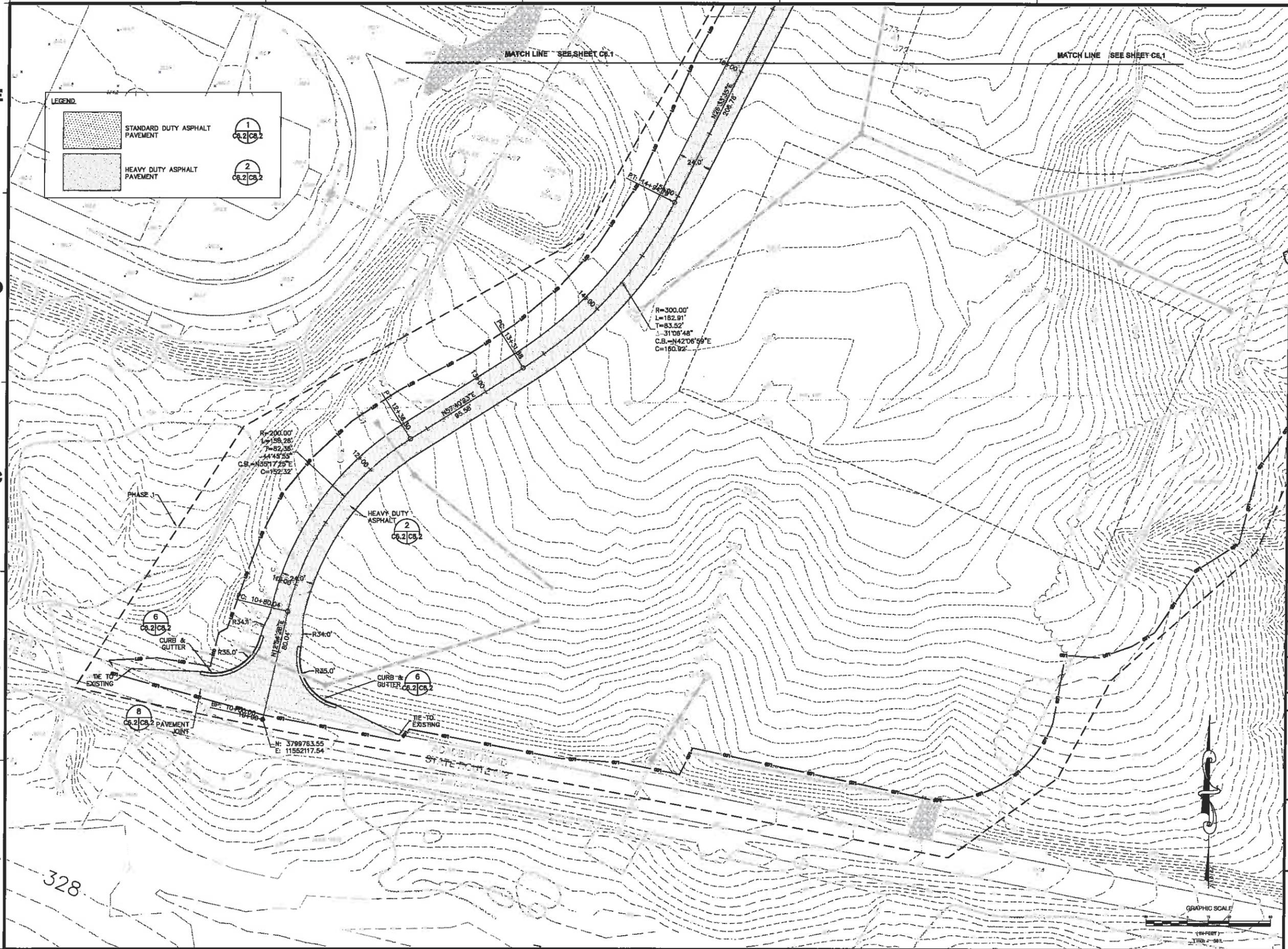
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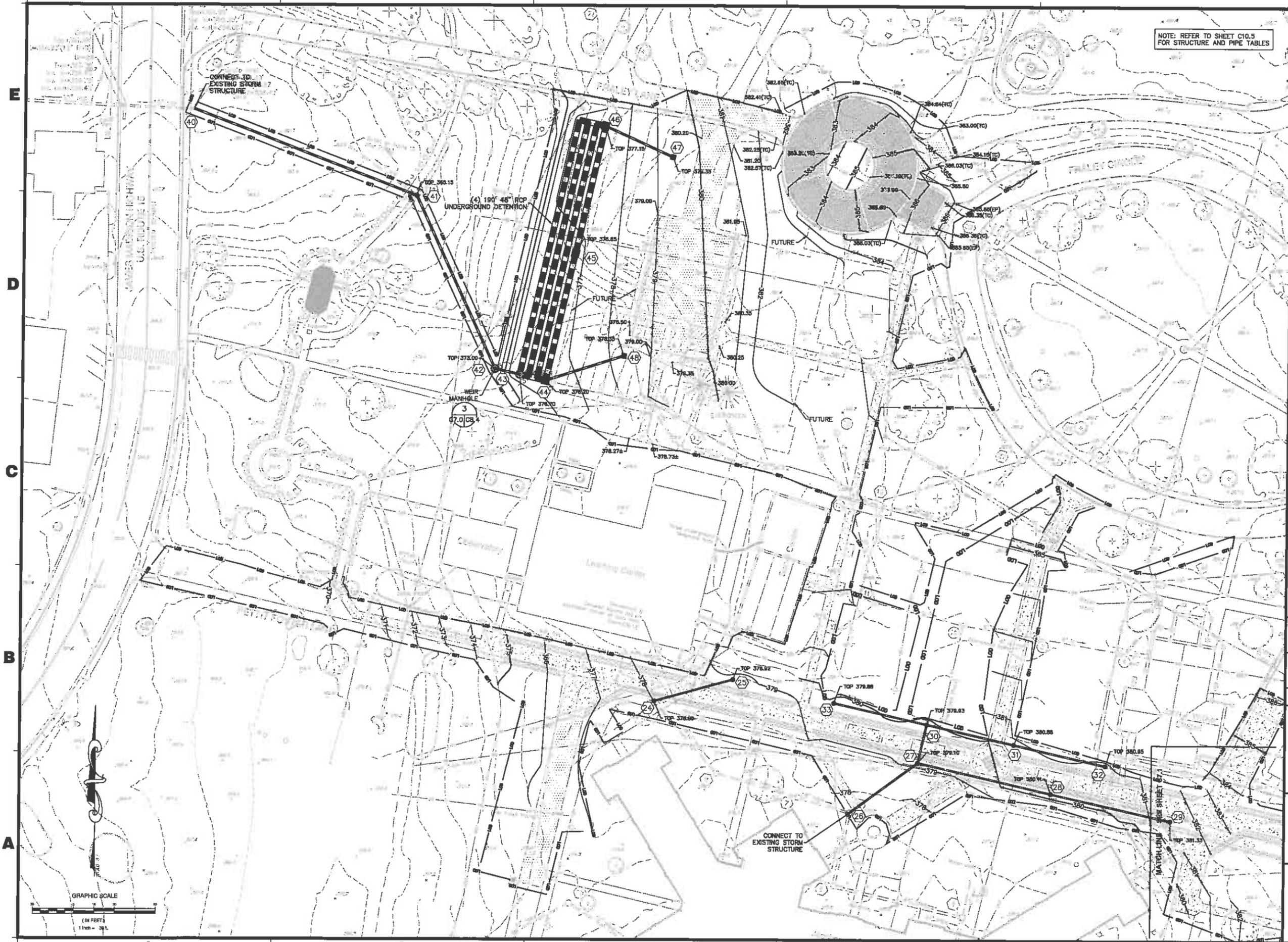


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NOTE: REFER TO SHEET C10.5 FOR STRUCTURE AND PIPE TABLES

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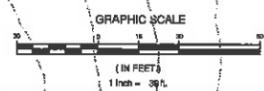
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NOTE: REFER TO SHEET C10.5 FOR STRUCTURE AND PIPE TABLES

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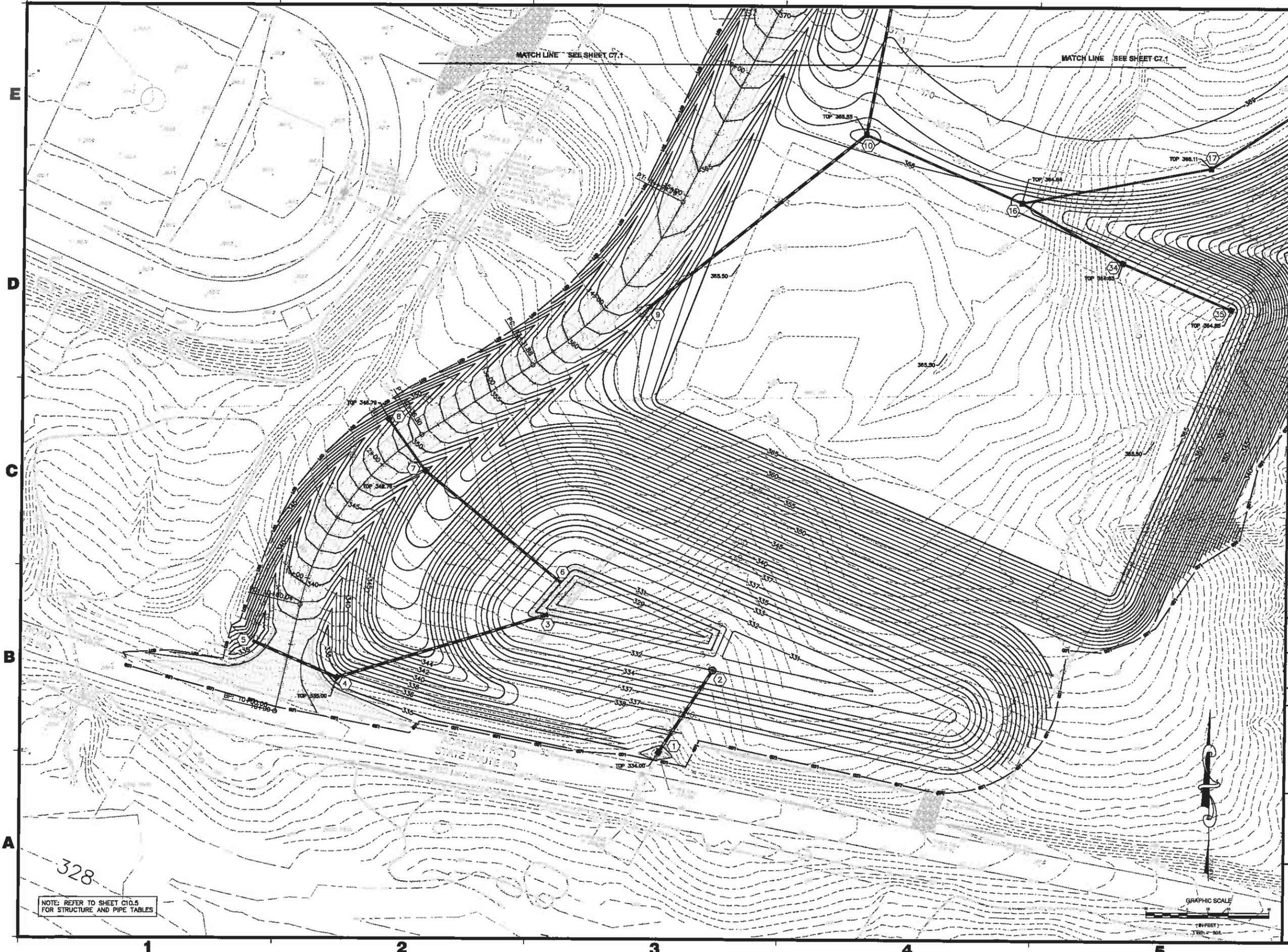
SHEET TITLE
GRADING AND DRAINAGE PLAN

SHEET NUMBER
C7.1

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SHEET TITLE
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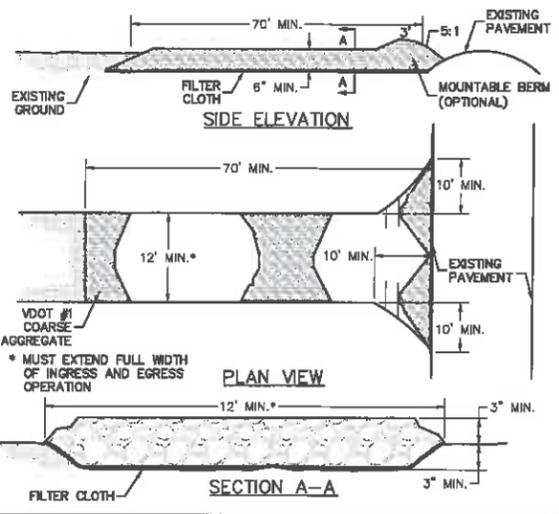
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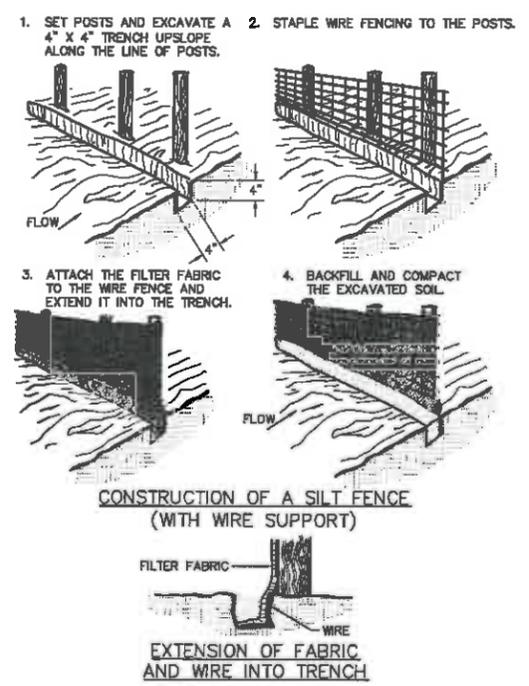
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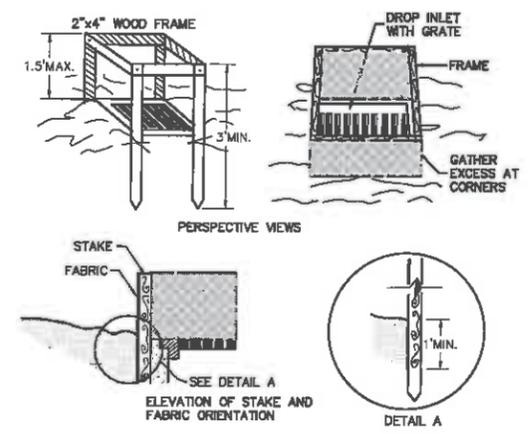
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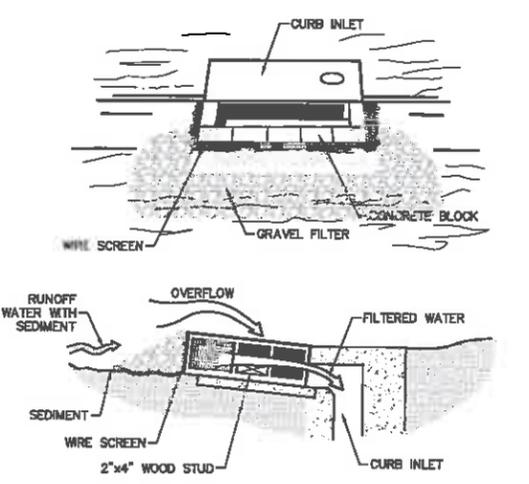
3.02 CONSTRUCTION ENTRANCE WITHOUT OPTIONAL WASHRACK
C5.0/C8.0 NOT TO SCALE



3.05 SILT FENCE INSTALLATION DETAILS WITH WIRE BACKING
C5.0/C8.0 NOT TO SCALE



3.07 SILT FENCE DROP INLET PROTECTION DETAIL
C5.0/C8.0 NOT TO SCALE



3.07 BLOCK AND GRAVEL CURB INLET SEDIMENT FILTER
C5.0/C8.0 NOT TO SCALE

TABLE 3.35-A
ORGANIC MULCH MATERIALS AND APPLICATION RATES

MULCHES:	RATES:		NOTES:
	Per Acre	Per 1000 sq. ft.	
Straw or Hay (Minimum 2 tons for winter cover)	1 1/2 - 2 tons	70 - 90 lbs.	Free from weeds and coarse matter. Must be anchored. Spread with mulch blower or by hand.
Fiber Mulch	Minimum 1500 lbs.	35 lbs.	Do not use as mulch for winter cover or during hot, dry periods.* Apply as slurry.
Corn Stalks	4 - 6 tons	185 - 275 lbs.	Cut or shredded in 4-6" lengths. Air-dried. Do not use in fine turf areas. Apply with mulch blower or by hand.
Wood Chips	4 - 6 tons	185 - 275 lbs.	Free of coarse matter. Air-dried. Treat with 12 lbs nitrogen per ton. Do not use in fine turf areas. Apply with mulch blower, chip handler, or by hand.
Bark Chips or Shredded Bark	50 - 70 cu. yds.	1-2 cu. yds.	Free of coarse matter. Air-dried. Do not use in fine turf areas. Apply with mulch blower, chip handler, or by hand.

* When fiber mulch is the only available mulch during periods when straw should be used, apply at a minimum rate of 2000 lbs./ac. or 45 lbs./1,000 sq. ft.

TABLE 3.32-D
(Revised June 2003)
PERMANENT SEEDING SPECIFICATIONS FOR PIEDMONT AREA

LAND USE	SPECIES	APPLICATION PER ACRE
Minimum Care Lawn (Commercial or Residential)	Tall Fescue ¹	95-100%
	Perennial Ryegrass	0-5%
	Kentucky Bluegrass ¹	0-5%
TOTAL: 175-200 lbs.		
High-Maintenance Lawn	Tall Fescue ¹	128 lbs.
	Red Top Grass or Creeping Red Fescue	2 lbs.
	Seasonal Nurex Crop ²	20 lbs.
TOTAL: 150 lbs.		
General Slope (3:1 or less)	Tall Fescue ¹	105 lbs.
	Red Top Grass or Creeping Red Fescue	2 lbs.
	Seasonal Nurex Crop ²	20 lbs.
	Crownvetch ³	20 lbs.
TOTAL: 150 lbs.		
Low-Maintenance Slope (Steeper than 3:1)	Tall Fescue ¹	105 lbs.
	Red Top Grass or Creeping Red Fescue	2 lbs.
	Seasonal Nurex Crop ²	20 lbs.
	Crownvetch ³	20 lbs.
TOTAL: 150 lbs.		

1 - When selecting varieties of turfgrass, use the Virginia Crop Improvement Association (VCIA) recommended turfgrass variety list. Quality seed will bear a label indicating that they are approved by VCIA. A current turfgrass variety list is available at the local County Extension office or through VCIA at 804-746-4884 or at http://suden.ces.vt.edu/html/Turf/turf.html#seasonal_nurex_plantations2.html

2 - Use seasonal nurex crop in accordance with seeding dates as stated below:

February 16 th - April	Annual Rye
May 1 st - August 15 th	Fodder Millet
August 16 th - October	Annual Rye
November - February 15 th	Winter Rye

3 - Substitute Sericea lespedeza for Crownvetch east of Farmville, VA (May through September use hulled seed, all other periods, use unhulled Sericea). If Fescue is used, increase rate to 30 lbs./acre. If Winter Ryegrass is used, include in any slope or low maintenance mixture during warmer seeding periods, increase to 30-40.

FERTILIZER & LIME

- Apply 10-20-10 fertilizer at a rate of 600 lbs./acre (or 12 lbs./1,000 sq. ft.)
- Apply Pulverized Agricultural Limestone at a rate of 2 tons/acre (or 90 lbs./1,000 sq. ft.)

NOTE:
- A soil test is necessary to determine the actual amount of lime required to adjust the soil pH of site.
- Incorporate the lime and fertilizer into the top 4 - 6 inches of the soil by disking or by other means.
- When applying Slowly Available Nitrogen, use rates available in Erosion & Sediment Control Technical Bulletin # 4, 2003 Nutrient Management for Development Sites at <http://www.dcr.state.va.us/water/html/04b>

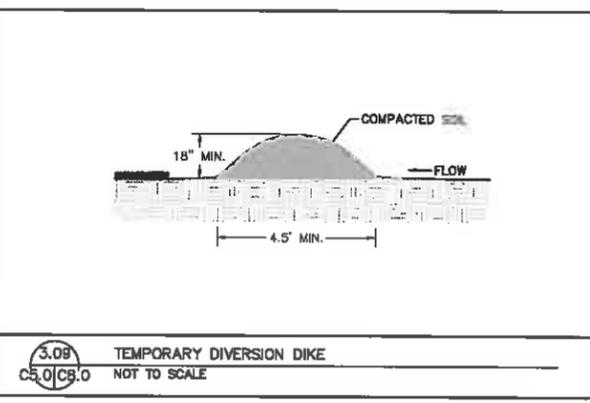
TABLE 3.31-B
(Revised June 2008)
TEMPORARY SEEDING SPECIFICATIONS QUICK REFERENCE FOR ALL REGIONS

APPLICATION DATES	SPECIES	APPLICATION RATES
Sept. 1 - Feb. 15	50/50 Mix of Annual Ryegrass (lolium multi-florum) & Cereal (Winter) Rye (Secale cereale)	50 - 100 (lb/acre)
Feb. 16 - Apr. 20	Annual Ryegrass (lolium multi-florum)	60 - 100 (lb/acre)
May 1 - Aug. 31	German Millet	50 (lb/acre)

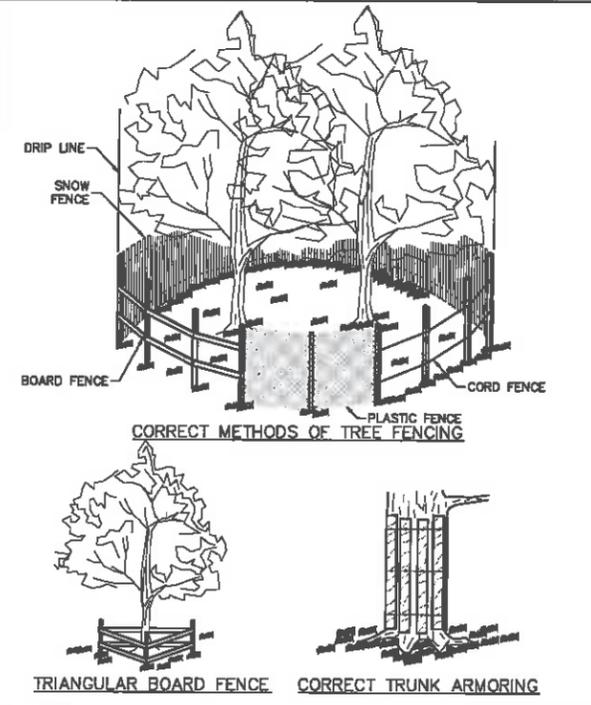
FERTILIZER & LIME

- Apply 10-10-10 fertilizer at a rate of 450 lbs./acre (or 10 lbs./1,000 sq. ft.)
- Apply Pulverized Agricultural Limestone at a rate of 2 tons/acre (or 90 lbs./1,000 sq. ft.)

NOTE:
1 - A soil test is necessary to determine the actual amount of lime required to adjust the soil pH of site.
2 - Incorporate the lime and fertilizer into the top 4 - 6 inches of the soil by disking or by other means.
3 - When applying Slowly Available Nitrogen, use rates available in Erosion & Sediment Control Technical Bulletin # 4, 2003 Nutrient Management for Development Sites at <http://www.dcr.state.va.us/water/html/04b>



3.08 TEMPORARY DIVERSION DIKE
C5.0/C8.0 NOT TO SCALE



3.38 TREE PROTECTION - FENCING AND ARMORING
C5.0/C8.0 NOT TO SCALE

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SHEET TITLE
EROSION CONTROL DETAILS

SHEET NUMBER
C8.0

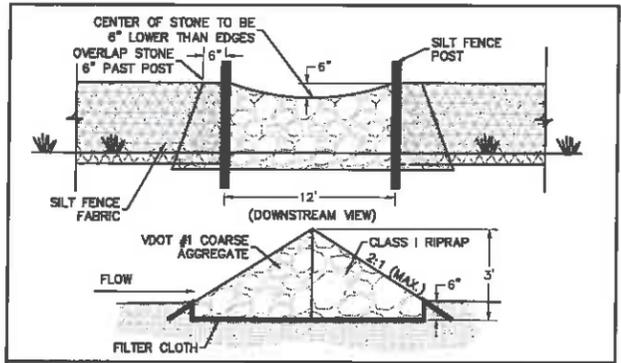
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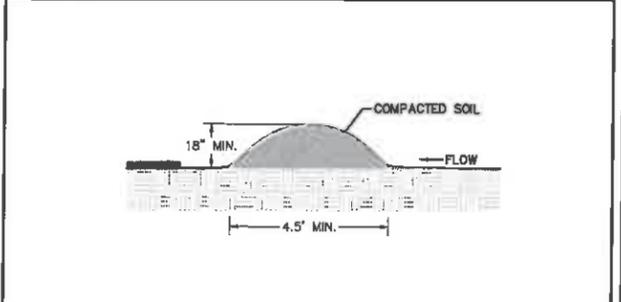
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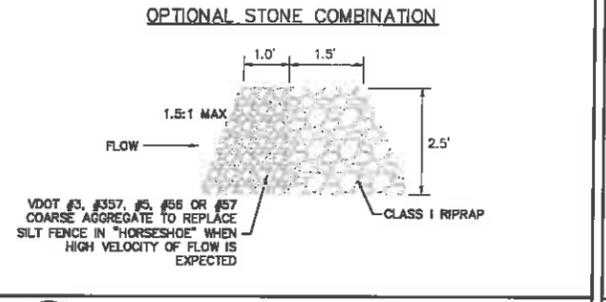
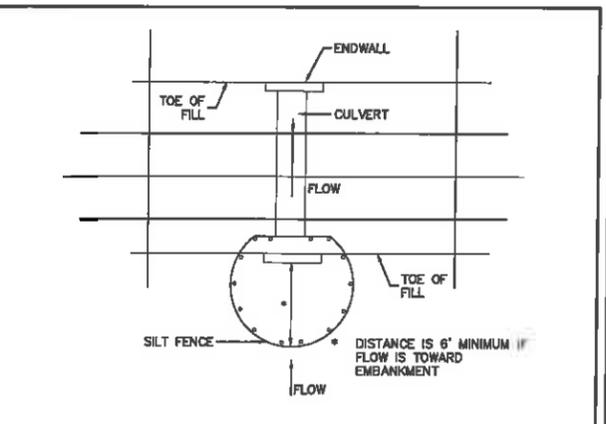
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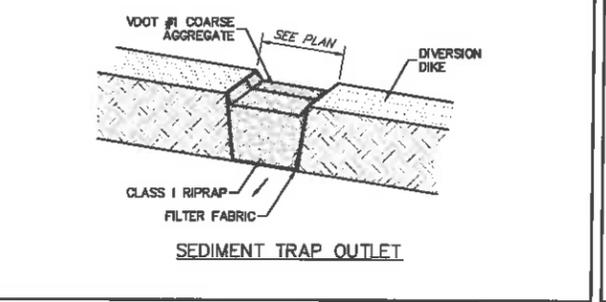
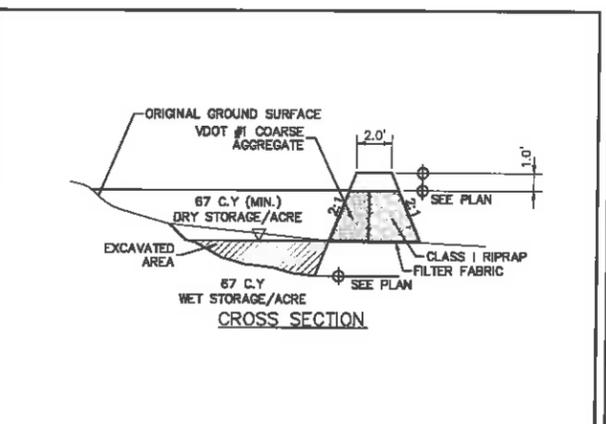
3.1B STONE SILT FENCE OUTLET DETAIL
C5.0/C8.1 NOT TO SCALE



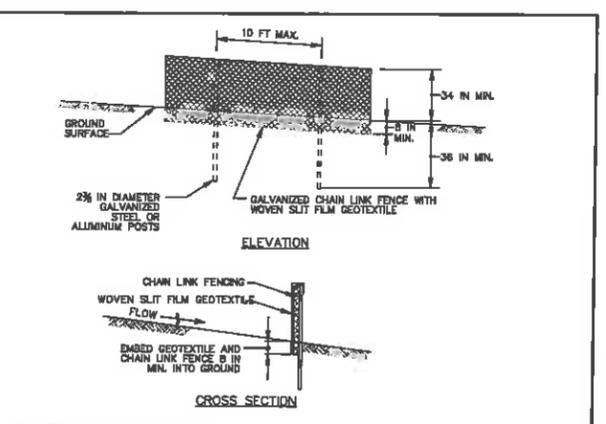
3.09 TEMPORARY DIVERSION DIKE
C5.0/C8.1 NOT TO SCALE



3.08 SILT FENCE CULVERT INLET PROTECTION
C5.0/C8.1 NOT TO SCALE

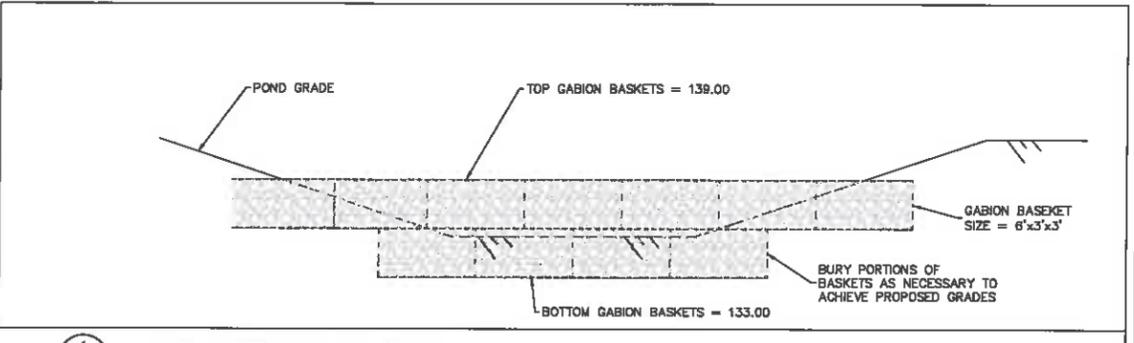


3.13 TEMPORARY SEDIMENT TRAP
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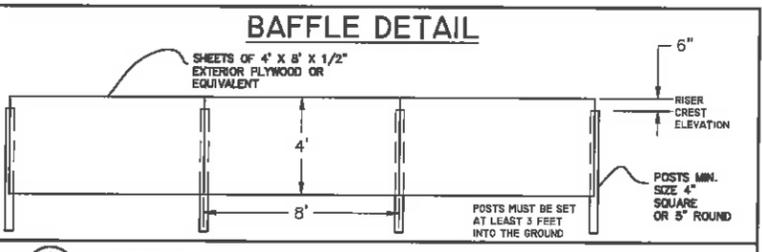


- CONSTRUCTION SPECIFICATIONS
- INSTALL 2 1/2 INCH DIAMETER GALVANIZED STEEL POSTS OF 0.005 INCH WALL THICKNESS AND SIX FOOT LENGTH SPACED NO FURTHER THAN 10 FEET APART. DRIVE THE POSTS A MINIMUM OF 36 INCHES INTO THE GROUND.
 - FASTEN 8 GAUGE OR HEAVIER GALVANIZED CHAIN LINK FENCE (2 1/2 INCH MAXIMUM OPENING) 42 INCHES IN HEIGHT SECURELY TO THE FENCE POSTS WITH WIRE TIES OR HUG RINGS.
 - FASTEN WOVEN SLIT FILM GEOTEXTILE AS SPECIFIED IN SECTION H-1 MATERIALS, SECURELY TO THE UPSLOPE SIDE OF CHAIN LINK FENCE WITH TIES SPACED EVERY 24 INCHES AT THE TOP AND MID SECTION. ENDS GEOTEXTILE AND CHAIN LINK FENCE A MINIMUM OF 8 INCHES TO THE GROUND.
 - WHERE ENDS OF THE GEOTEXTILE COME TOGETHER, THE ENDS SHALL BE OVERLAPPED BY 8 INCHES, FOLDED, AND STAPLED TO PREVENT SEDIMENT BY PASS.
 - EXTEND BOTH ENDS OF THE SUPER SILT FENCE A MINIMUM OF FIVE HORIZONTAL FEET UPSLOPE AT 45 DEGREES TO THE MAIN FENCE ALIGNMENT TO PREVENT RUNOFF FROM GOING AROUND THE ENDS OF THE SUPER SILT FENCE.
 - PROVIDE MANUFACTURER CERTIFICATION TO THE INSPECTION/ENFORCEMENT AUTHORITY SHOWING THAT GEOTEXTILE MEETS THE REQUIREMENTS IN SECTION H-1 MATERIALS.
 - REMOVE ACCUMULATED SEDIMENT AND DEBRIS WHEN BULGES DEVELOP IN FENCE OR WHEN SEDIMENT REACHES 25% OF FENCE HEIGHT. REPLACE GEOTEXTILE IF TORN IF UNDERMINING OCCURS, REINSTALL CHAIN LINK FENCING AND GEOTEXTILE.

3.05 SUPER SILT FENCE
C5.1/C8.1 NOT TO SCALE



1 GABION BASKET INSTALLATION SECTION
C5.8/C8.1 NOT TO SCALE



2 BAFFLE DETAIL
C5.2/C8.1 NOT TO SCALE

Basin #	Drainage Area (acres)	Wet Storage		Dry Storage		Bottom Elevation	Riser Crest Elevation	Riser Diameter (in)	Dewatering Device Elevation	Dewatering Device Diameter (in)	25 - Yr. Storm Elevation	Emergency Spillway Elevation	Anti-Vortex Device Diameter (in)	Top of Dam Elevation	Top of Dam Width (ft)	Baffle		Barrel				
		Volume Required (Cu. Yd.)	Volume Provided (Cu. Yd.)	Volume Required (Cu. Yd.)	Volume Provided (Cu. Yd.)											Flowlength to width ratio	Baffle Length (ft)	Top of Baffle	Pipe Length (ft)	Pipe Diameter (in)	Invert In	Invert Out
1	10.6	710.2	739	710.2	2290	328	335	5'x5'	332.1	6	333.7	N/A	N/A	337	8	1.2	48	335.5	72	18	331.2	330.88

NOTE: RISER AND BARREL DIAMETERS WERE SET BASED ON POND ROUTING CALCULATIONS



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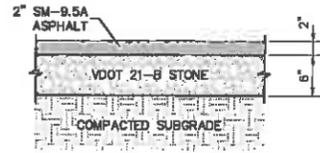
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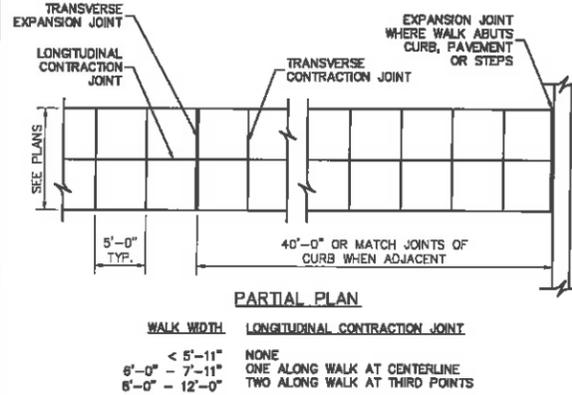
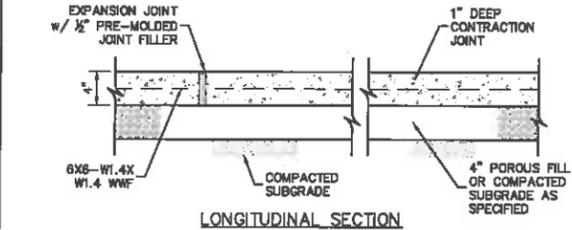
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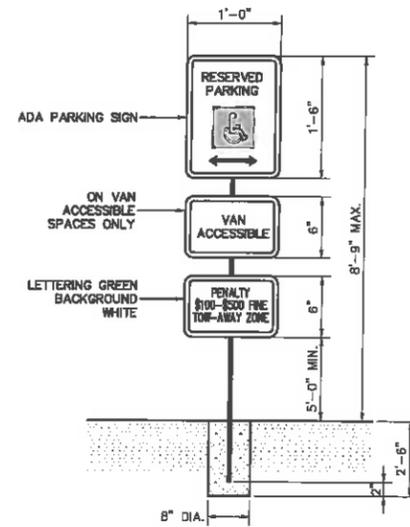
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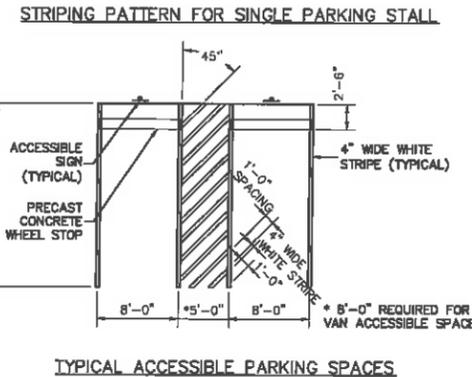
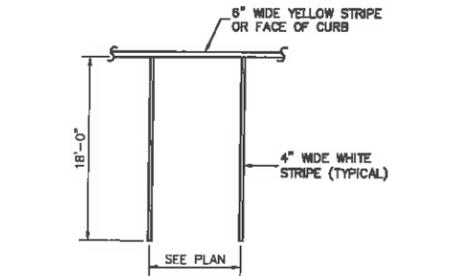
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3 TYPICAL SIDEWALK DETAIL
C8.0/C8.2 NOT TO SCALE

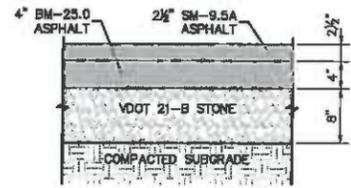


4 VDOT R7-8 ADA VAN ACCESSIBLE SIGN
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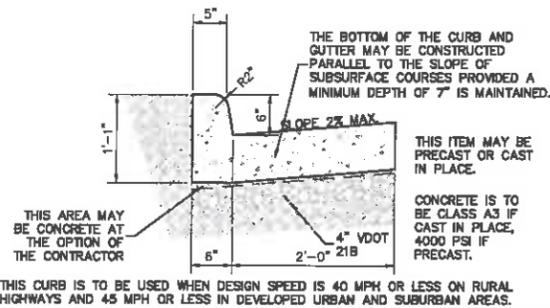
5 PAVEMENT MARKING DETAILS
C8.0/C8.2 NOT TO SCALE

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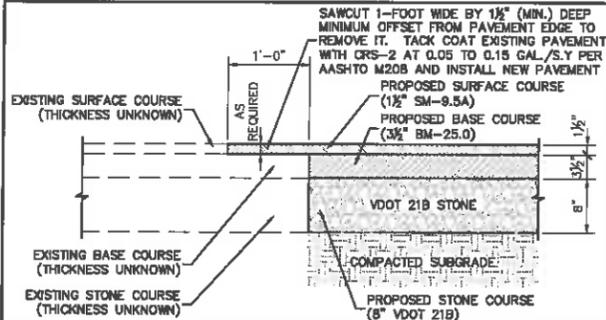


2 HEAVY DUTY ASPHALT PAVEMENT DETAIL
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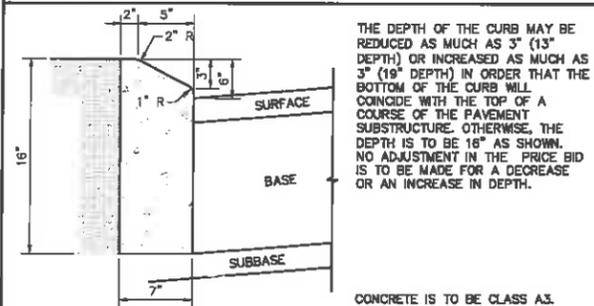


6 STANDARD CG-5 CURB AND GUTTER
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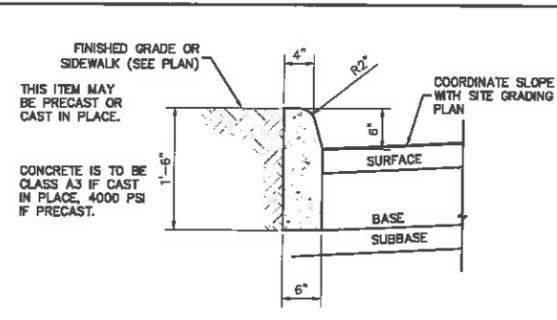
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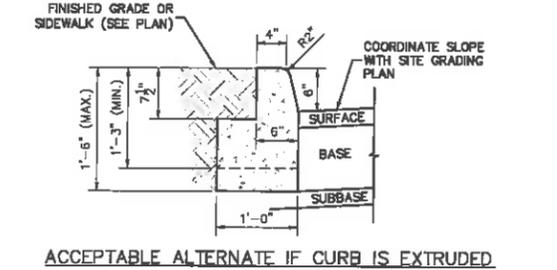


7 MODIFIED CG-3 CURB DETAIL
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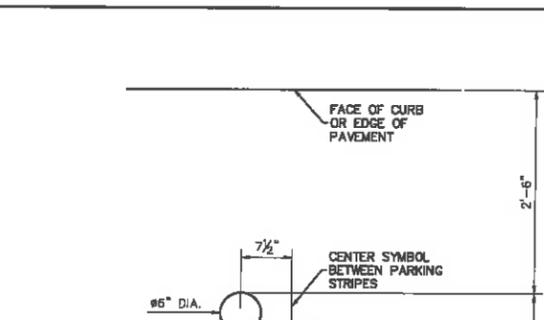
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9 STANDARD CG-2 CURB
C8.0/C8.2 NOT TO SCALE



9 STANDARD CG-2 CURB
C8.0/C8.2 NOT TO SCALE



10 TYPICAL HANDICAPPED PARKING SYMBOL DETAIL
C8.0/C8.2 NOT TO SCALE

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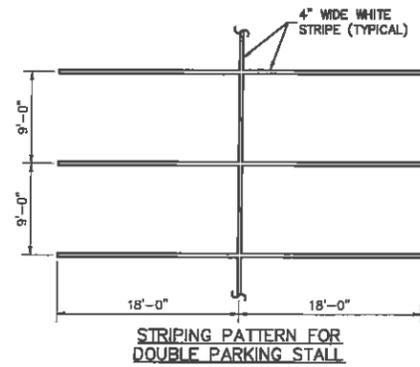
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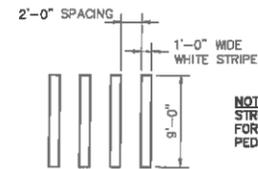
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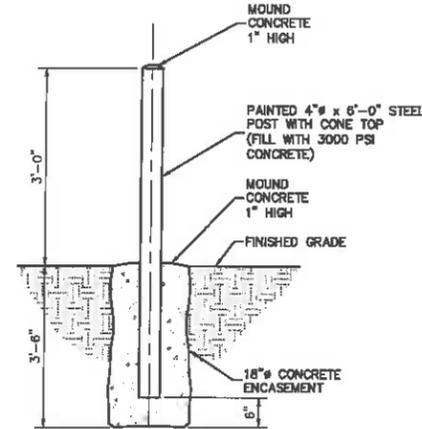
STRIPING PATTERN FOR DOUBLE PARKING STALL



STRIPING PATTERN FOR PEDESTRIAN WALKWAY

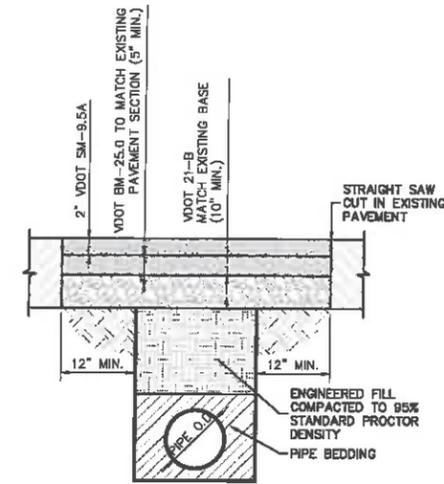
11 PAVEMENT MARKING DETAILS
C8.0/C8.3 NOT TO SCALE

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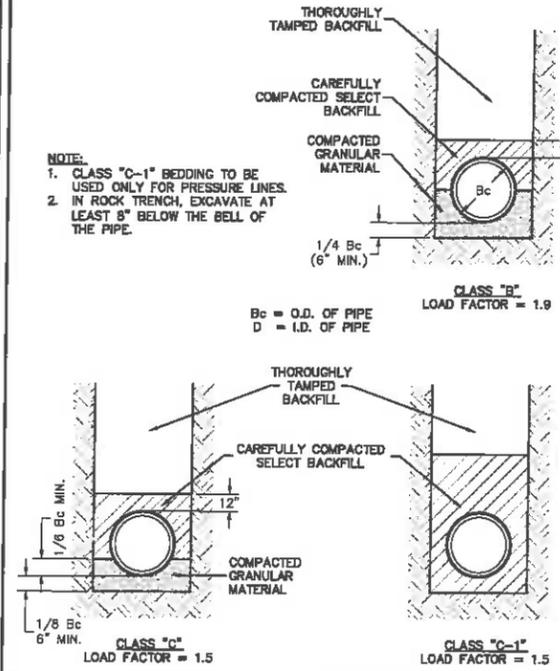
12 CONCRETE BOLLARD DETAIL
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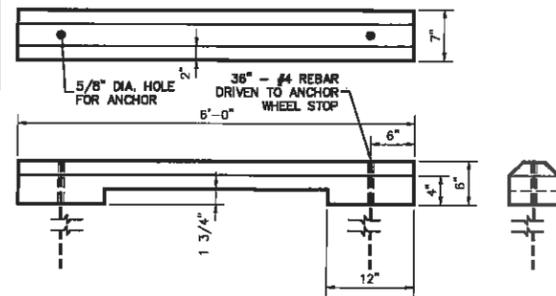
13 TYPICAL PAVEMENT REPAIR DETAIL
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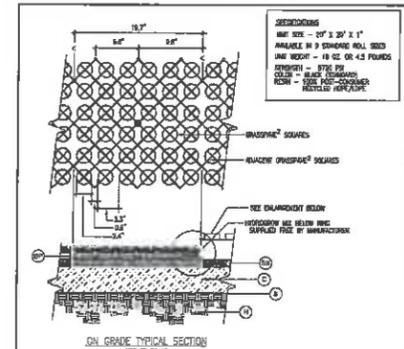


14 TYPICAL PIPE BEDDING DETAILS
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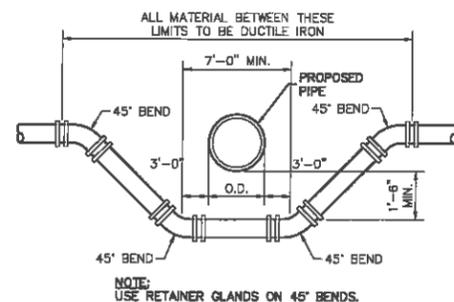


15 PRECAST CONCRETE WHEEL STOP DETAIL
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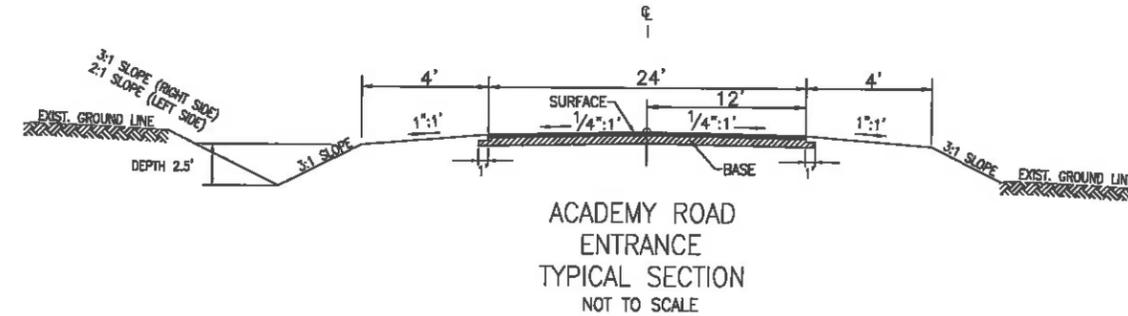
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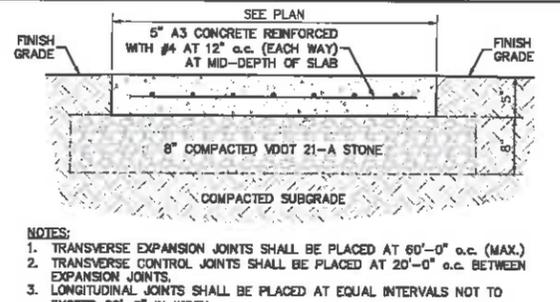


16 TYPICAL METHOD OF ADJUSTING WATERLINES
C8.0/C8.3 NOT TO SCALE

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18 ACADEMY ROAD ENTRANCE TYPICAL SECTION
C8.0/C8.3 NOT TO SCALE



19 TYPICAL CONCRETE PAVEMENT DETAIL
C8.0/C8.3 NOT TO SCALE

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SITE DETAILS

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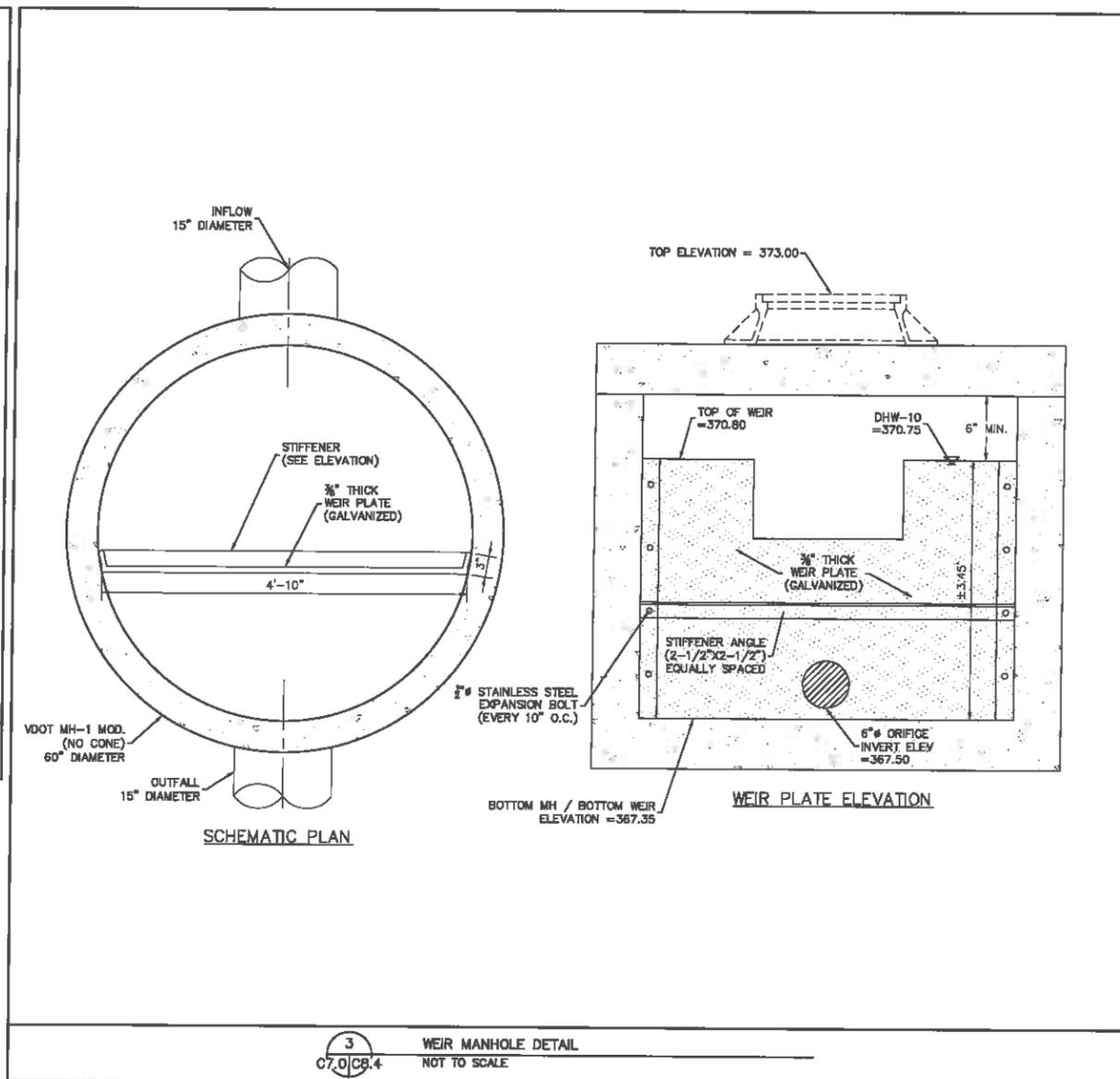
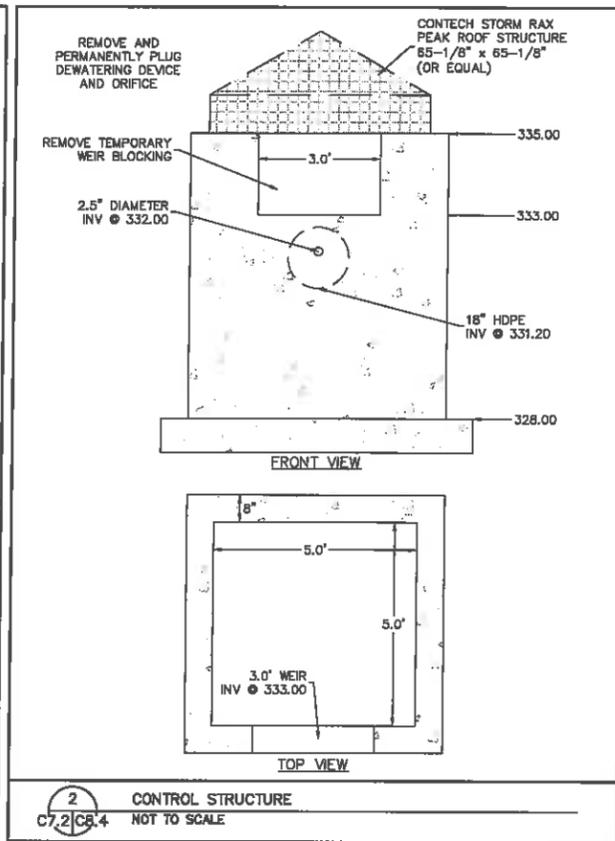
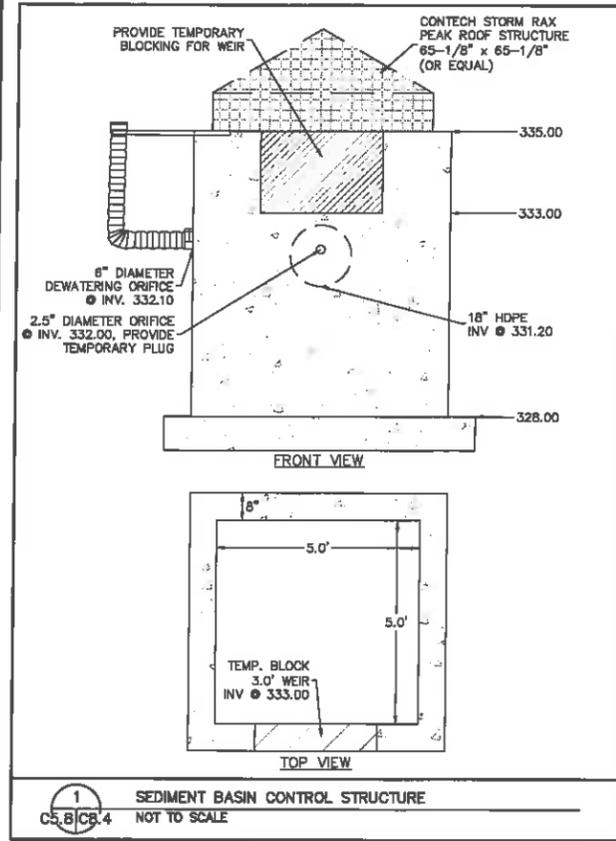
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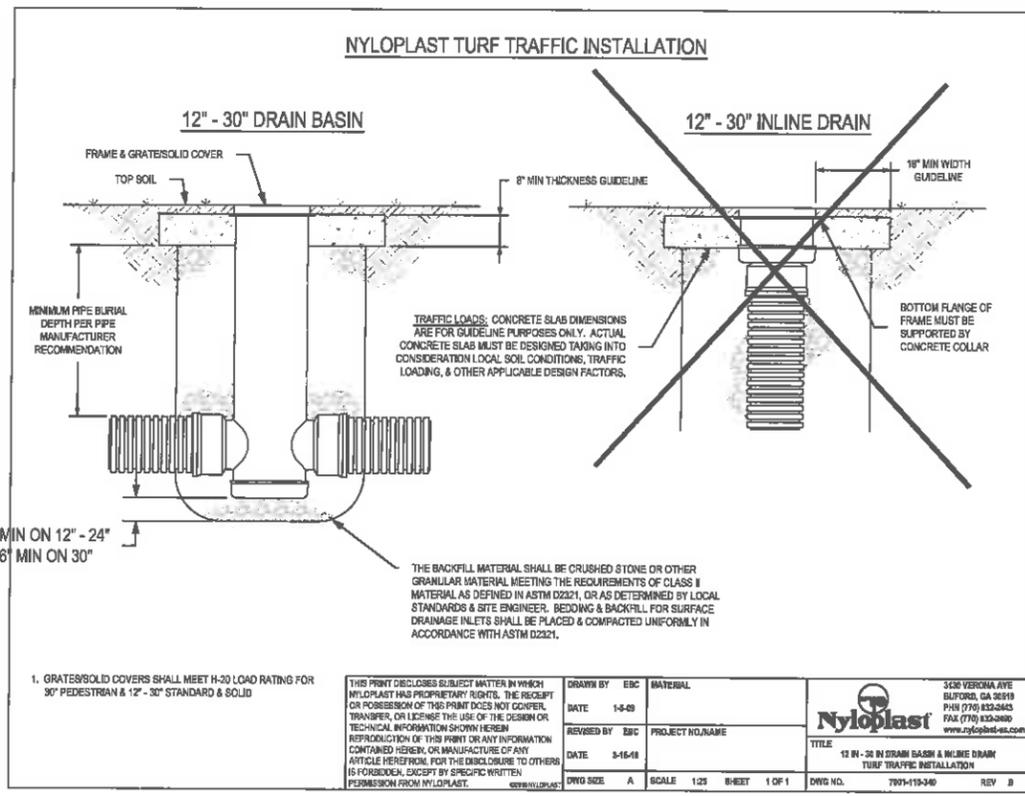
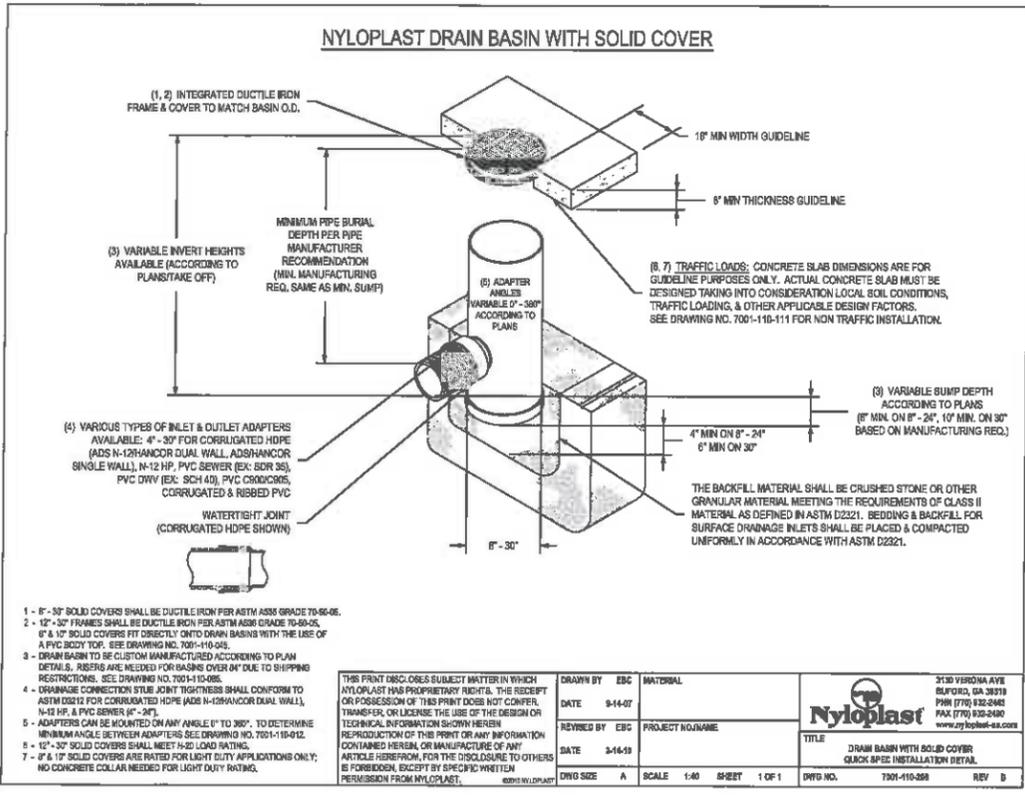
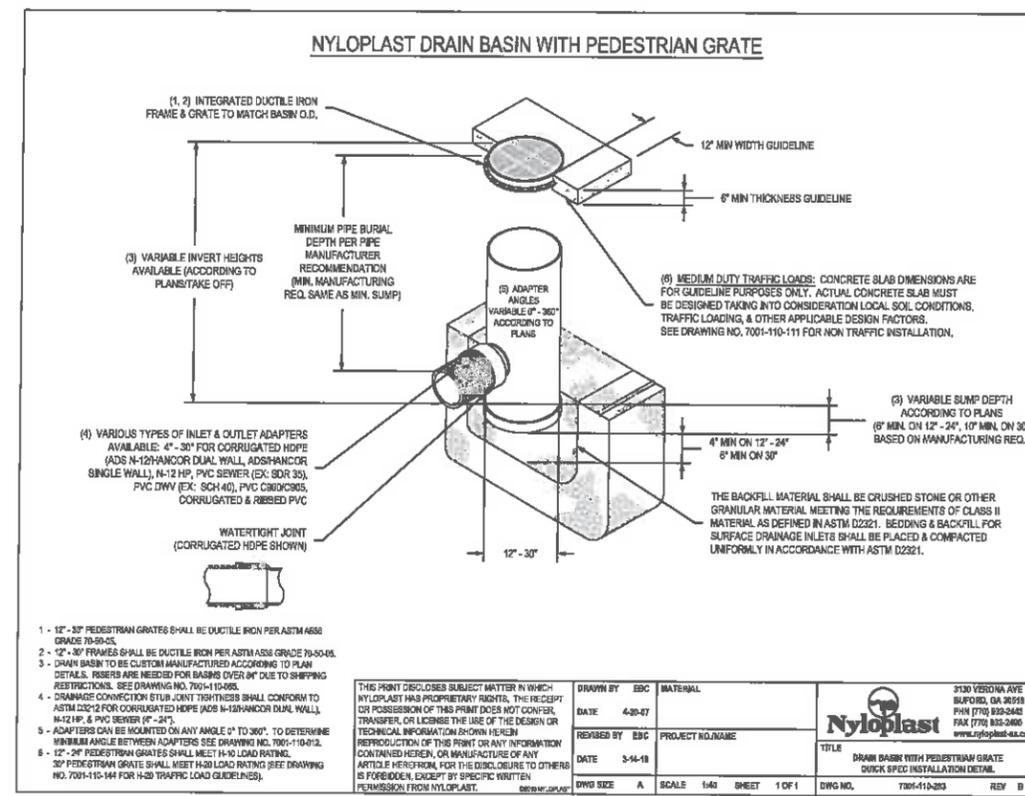
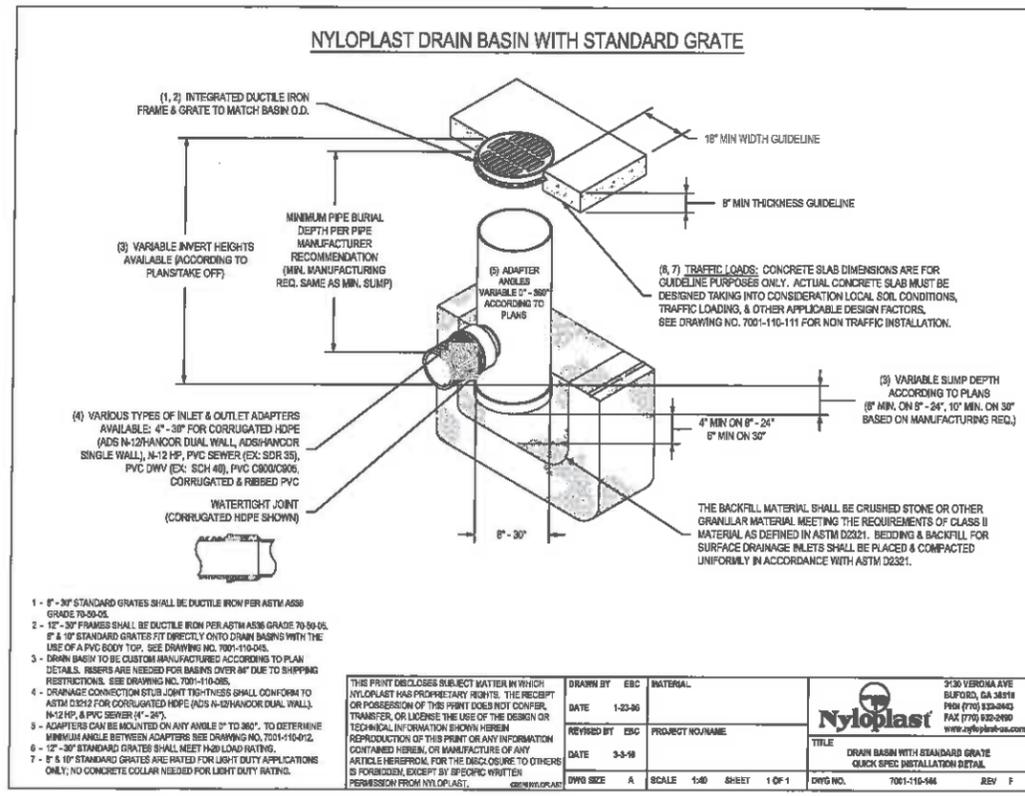
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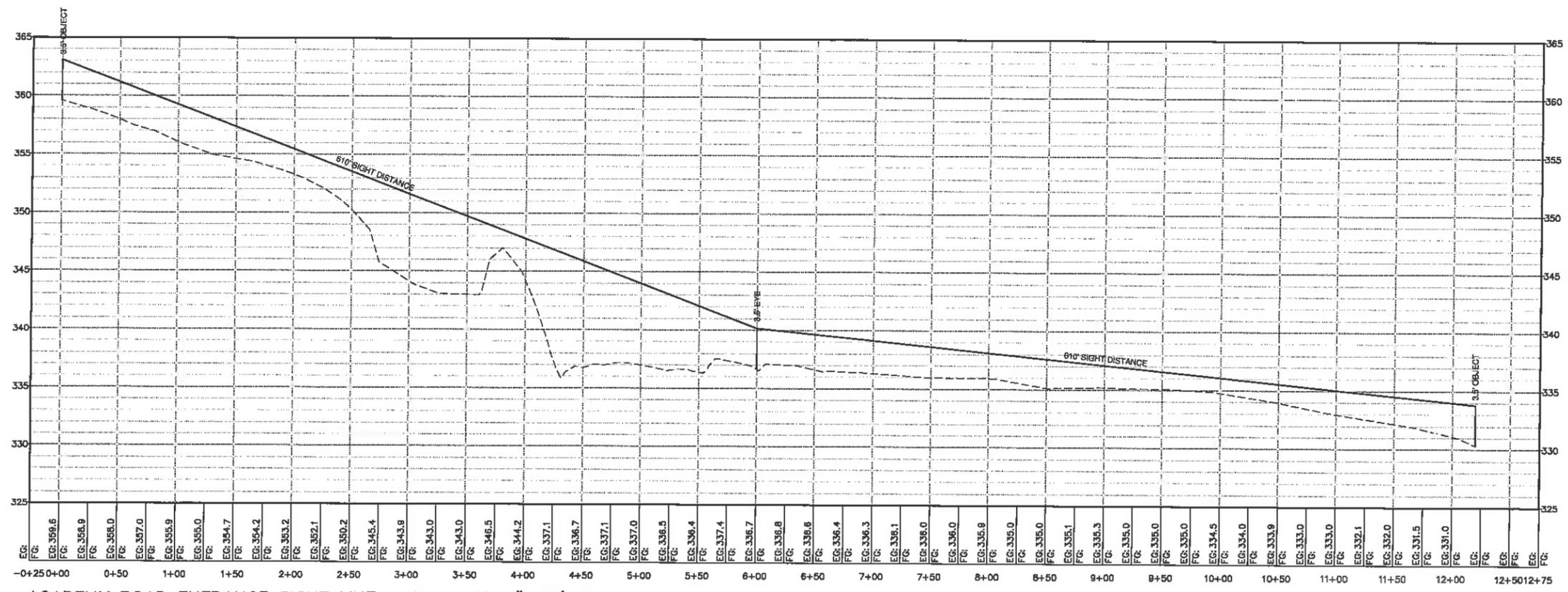
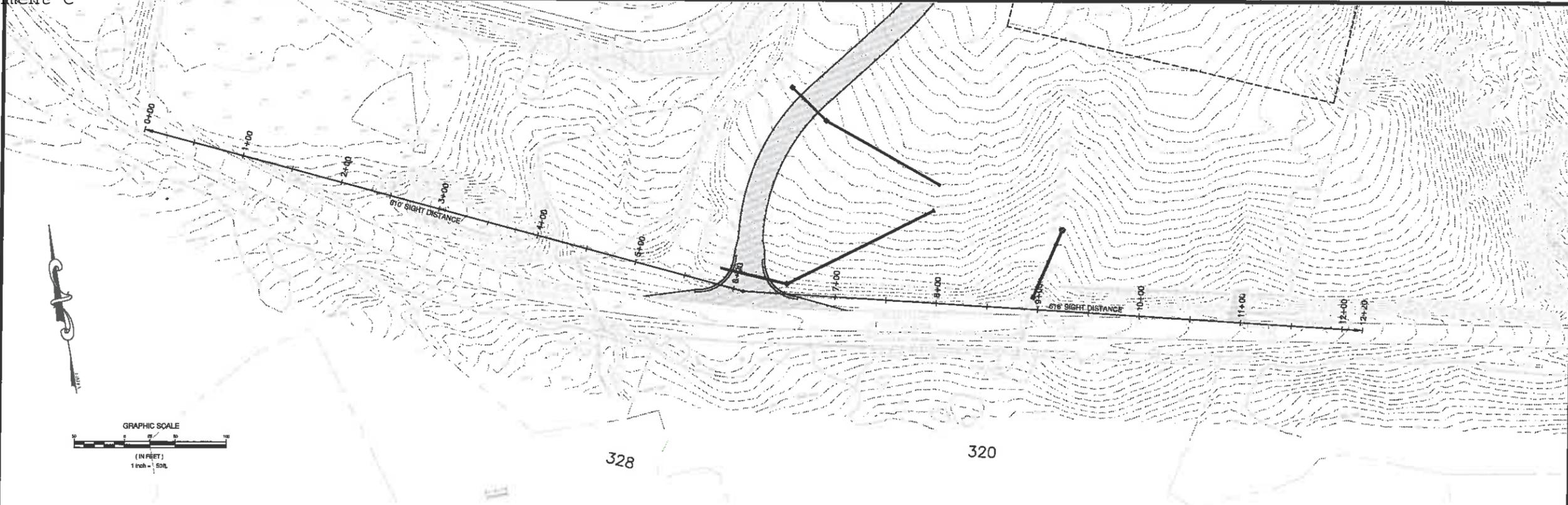
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SHEET TITLE
**ACADEMY ROAD
ENTRANCE SIGHT
LINE PLAN**

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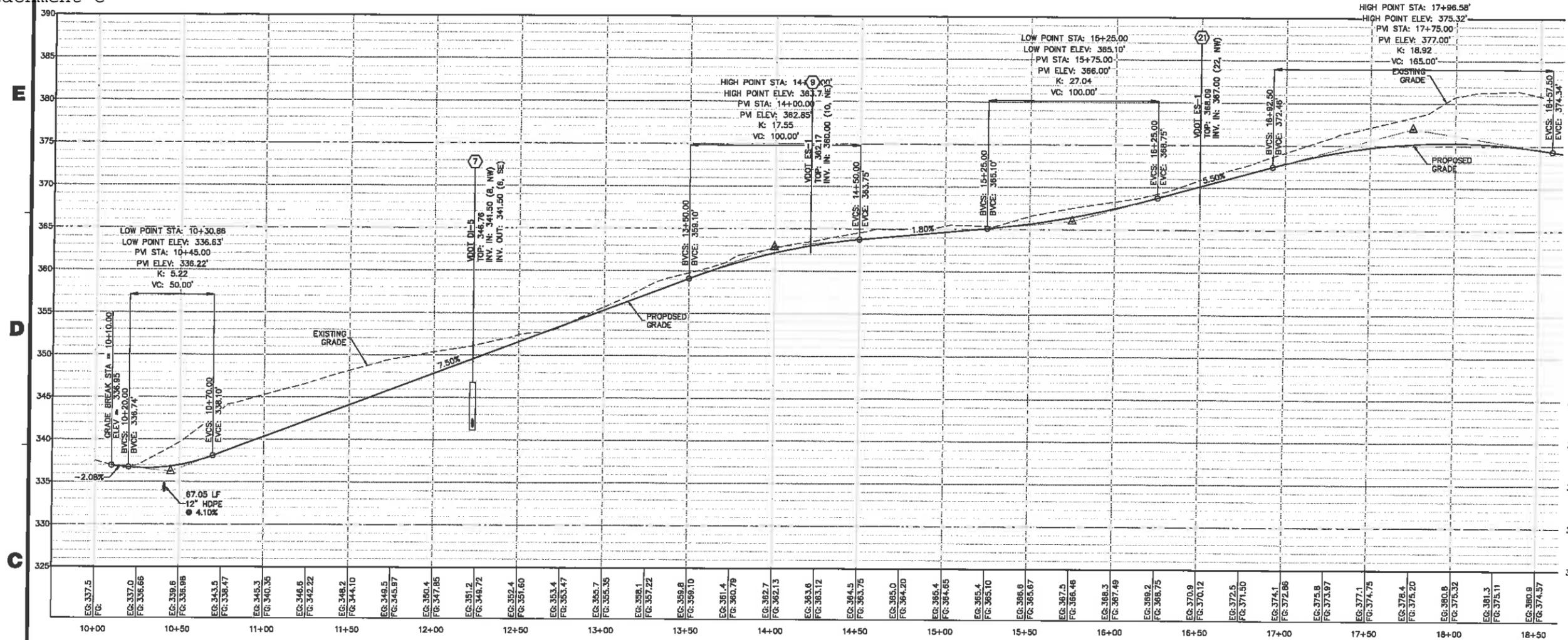


ACADEMY ROAD ENTRANCE SIGHT LINE — Scale: H: 1"=50', V: 10.00:1

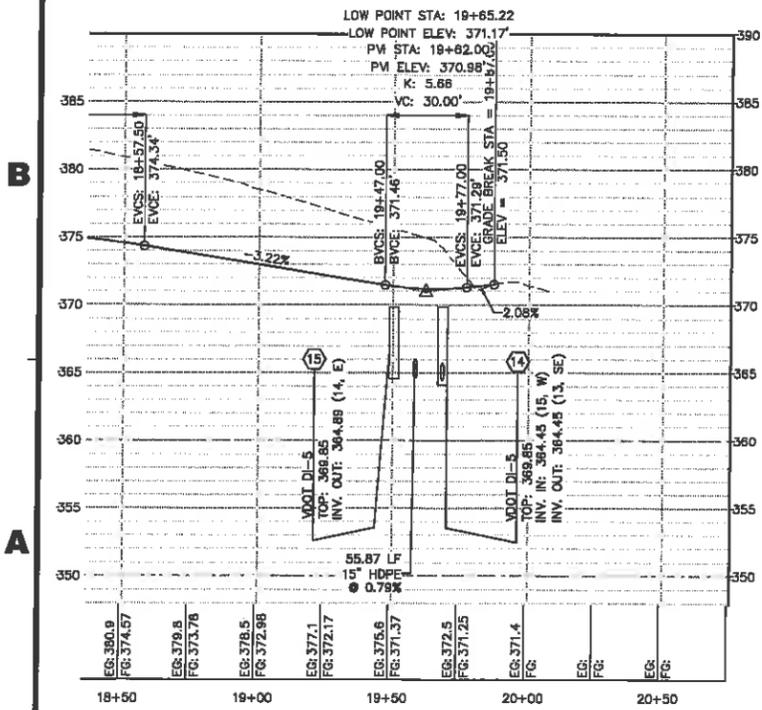
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1 2 3 4 5



ACADEMY ROAD ENTRANCE-2 - Scale: H: 1"=30', V: 1"= 6'



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2

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5

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SHEET TITLE
STORM SEWER PROFILES

SHEET NUMBER
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SHEET TITLE
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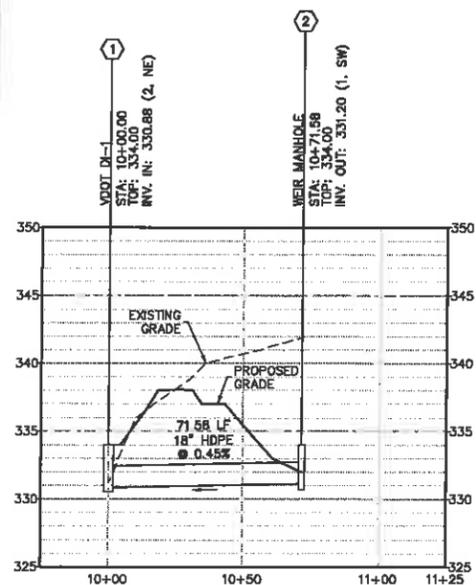
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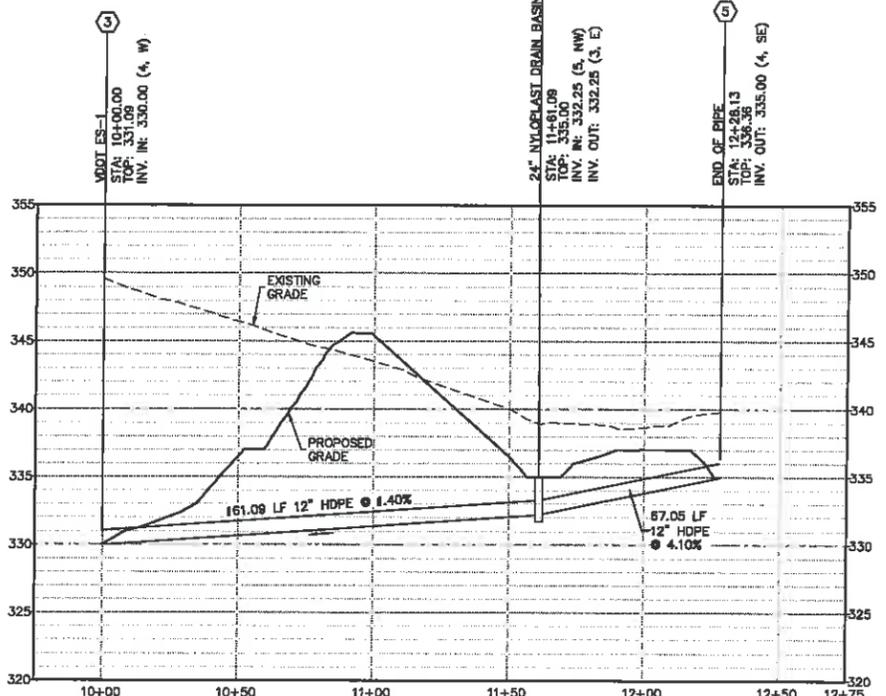
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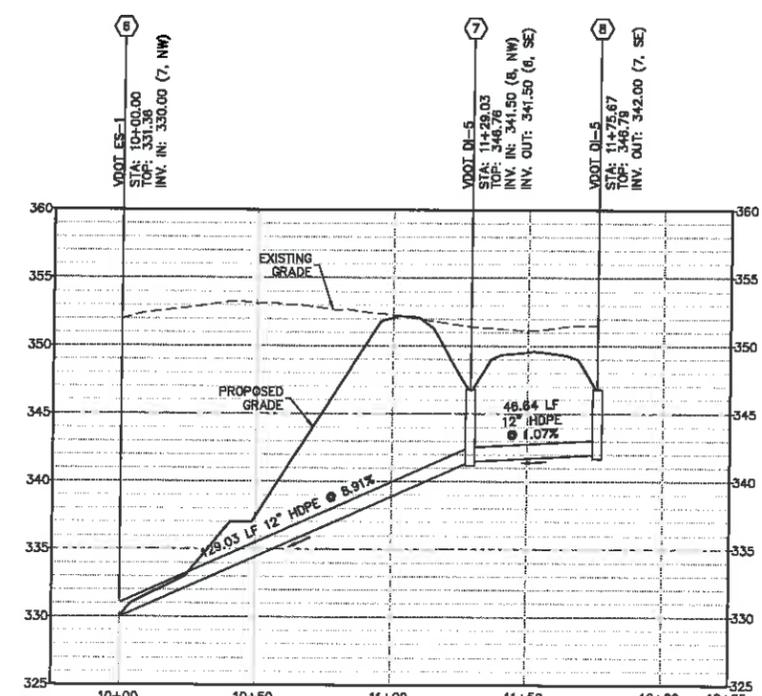
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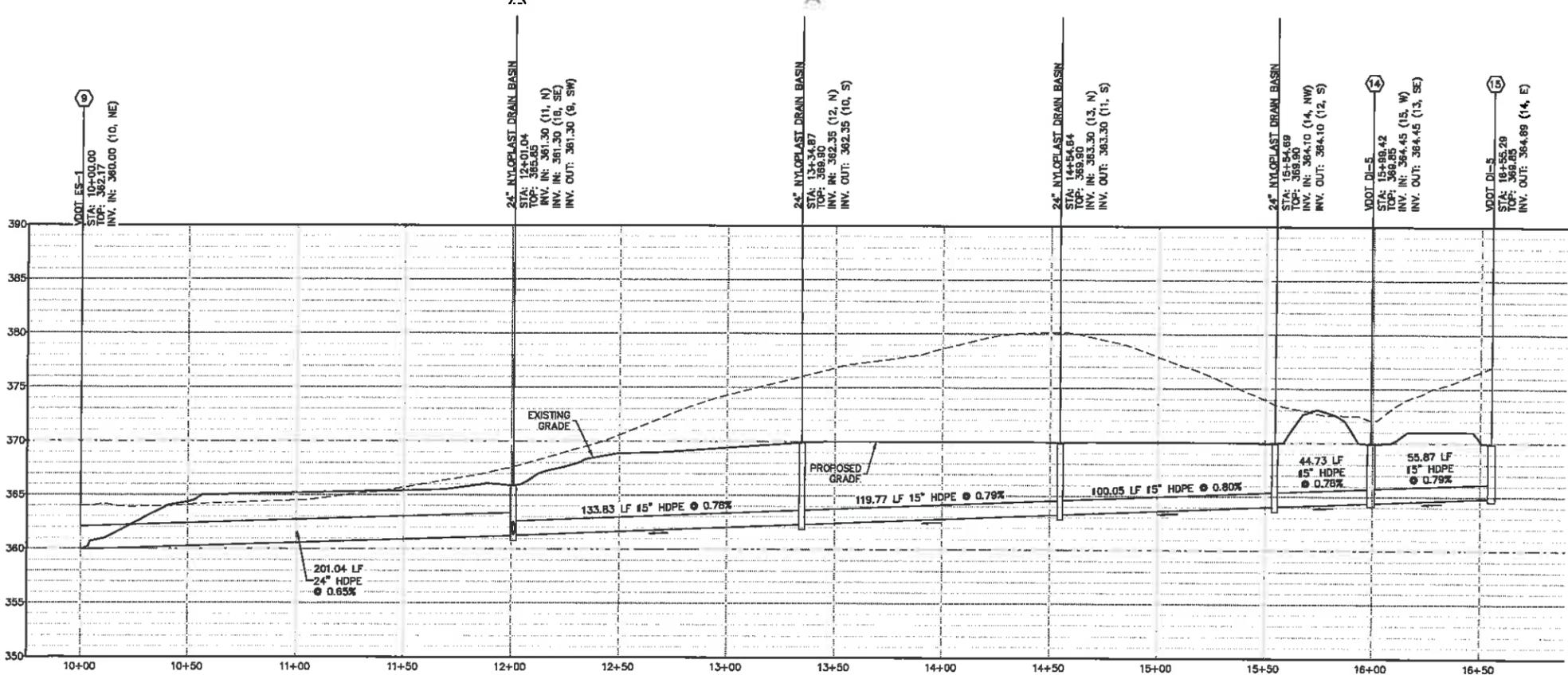
STORM - STR. 1 TO 2 - Scale: H: 1"=30', V: 5.00:1



STORM - STR. 3 TO 5 - Scale: H: 1"=30', V: 5.00:1



STORM - STR. 6 TO 8 - Scale: H: 1"=30', V: 5.00:1



STORM - STR. 9 TO 15 - Scale: H: 1"=30', V: 5.00:1

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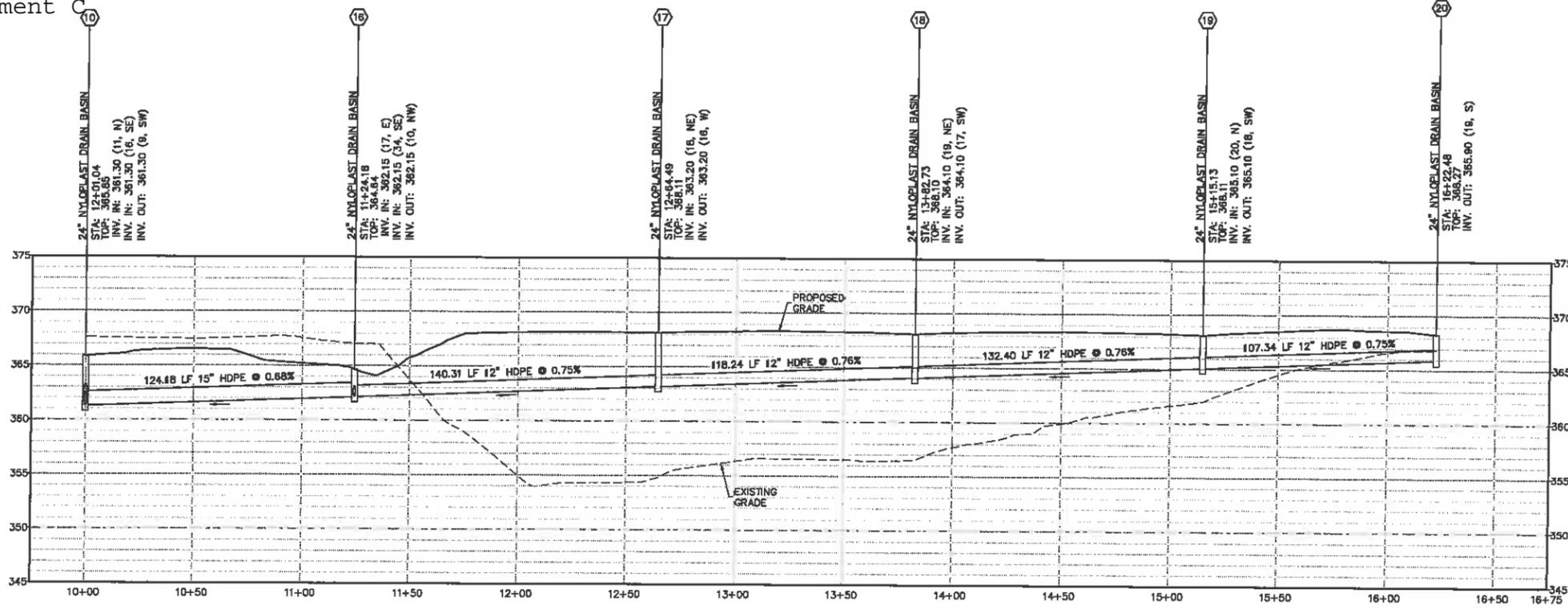
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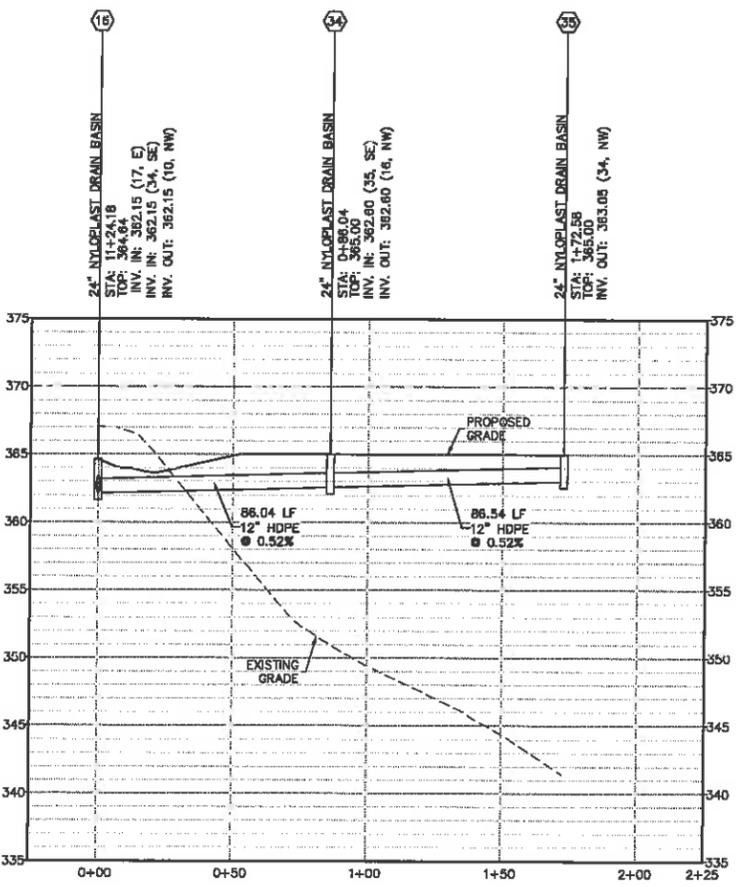
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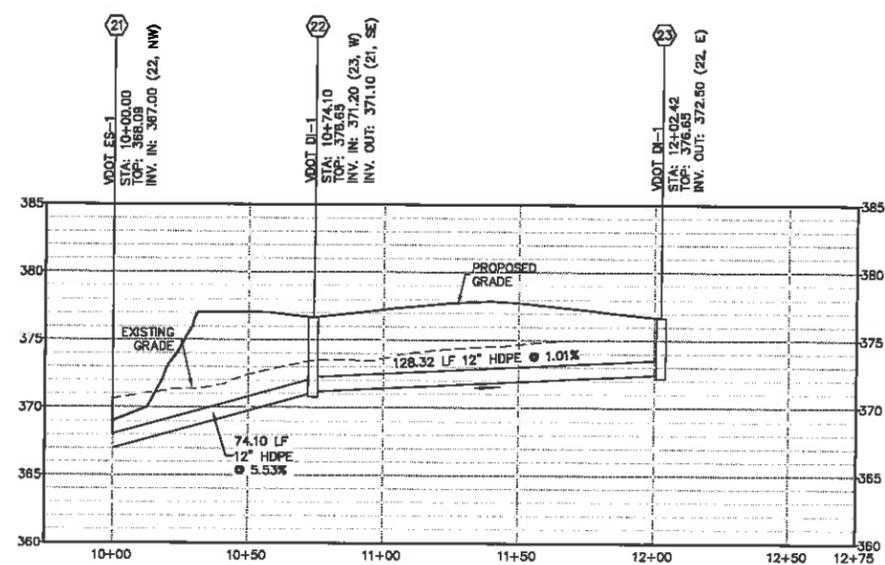
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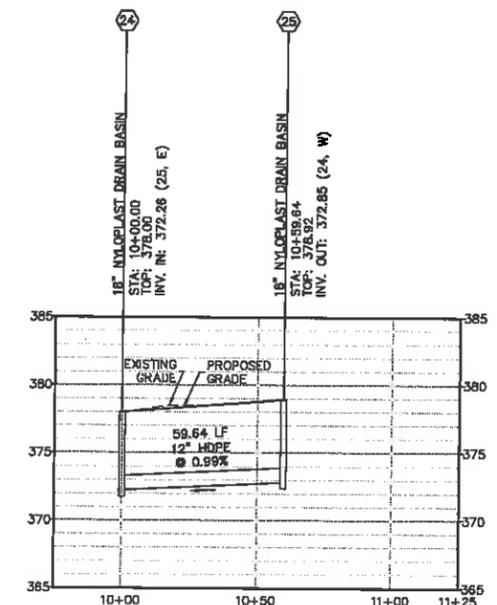
STORM - STR. 10 TO 20 - Scale: H: 1"=30', V: 5.00:1



STORM - STR. 16 TO 35 - Scale: H: 1"=30', V: 5.00:1



STORM - STR. 21 TO 23 - Scale: H: 1"=30', V: 5.00:1



STORM - STR. 24 TO 25 - Scale: H: 1"=30', V: 5.00:1

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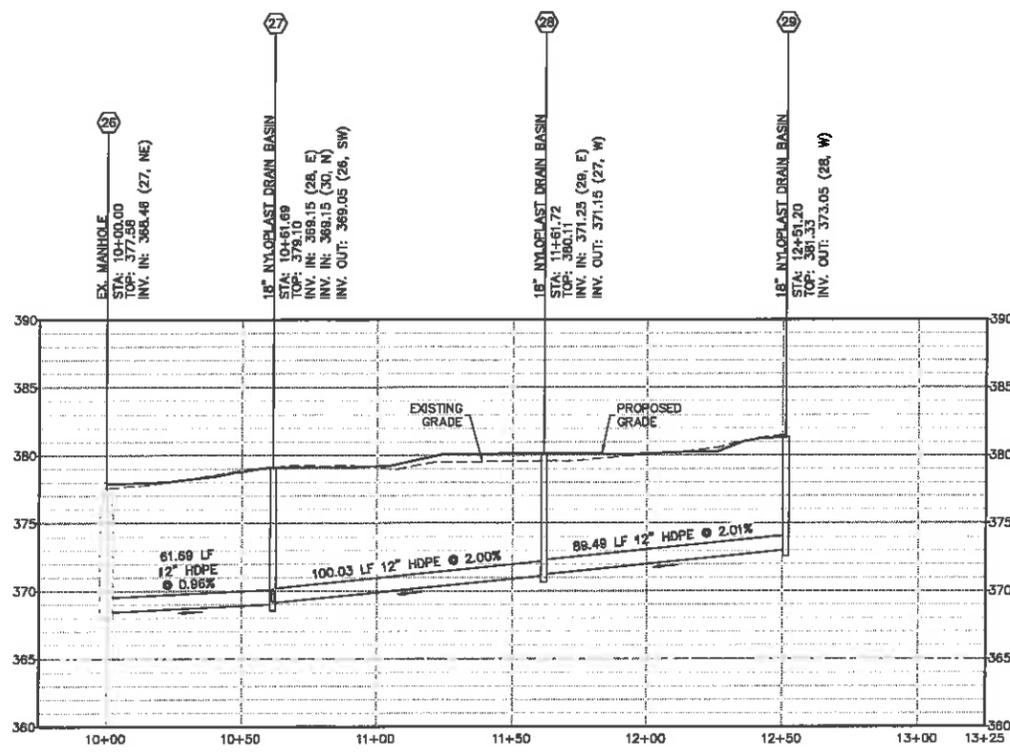
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SHEET TITLE
STORM SEWER PROFILES

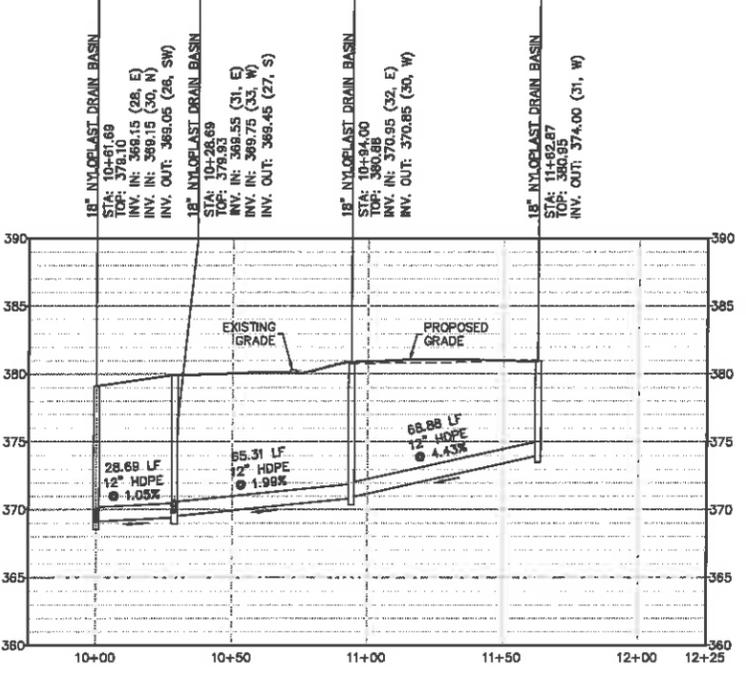
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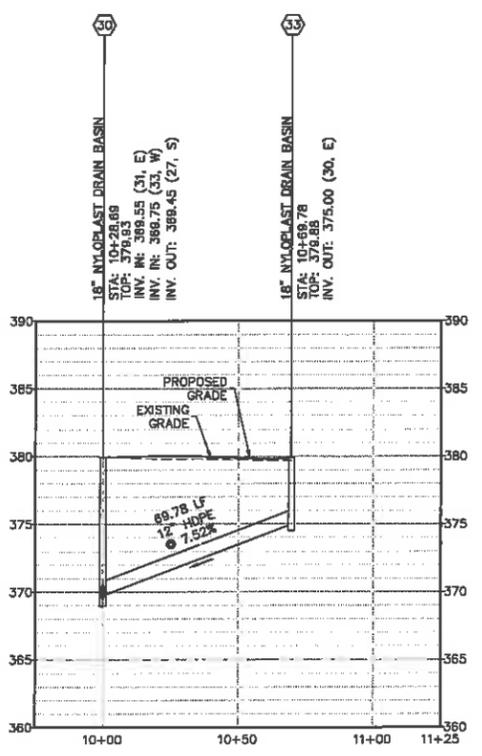


STORM - STR. 26 TO 29 - Scale: H: 1"=30', V: 5.00:1



STORM - STR. 27 TO 32 - Scale: H: 1"=30', V: 5.00:1

C



STORM - STR. 30 TO 33 - Scale: H: 1"=30', V: 5.00:1

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**STORM SEWER
PROFILES**

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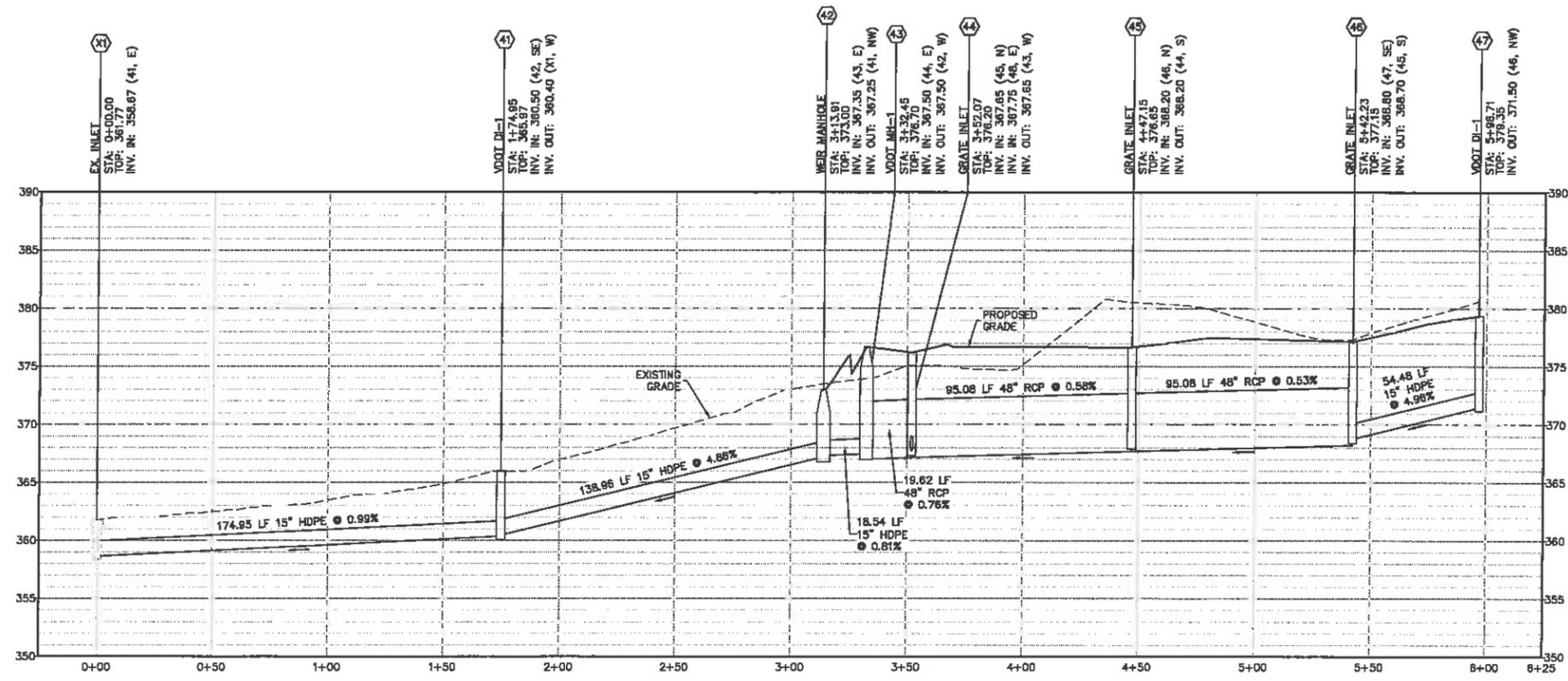
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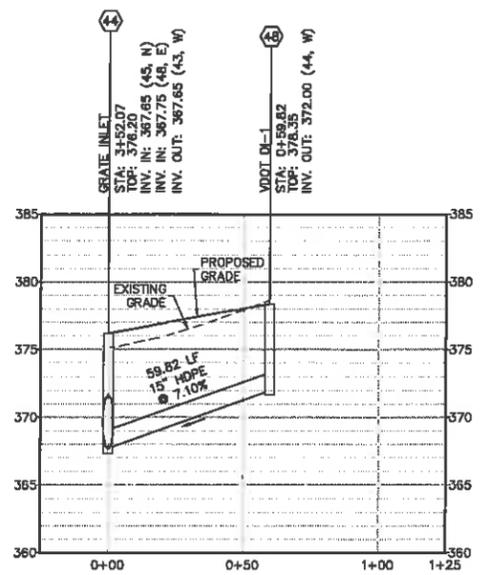
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STORM - STR. 40 TO 47 - Scale: H: 1"=30', V: 5.00:1



STORM - STR. 44 TO 48 - Scale: H: 1"=30', V: 5.00:1

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STRUCTURE DATA	
STRC. NUMBER	STRC. DATA
1	VDOT DI-1 TOP: 334.00 INV. IN: 330.88 (2, NE)
2	WEIR MANHOLE TOP: 334.00 INV. OUT: 331.20 (1, SW)
3	VDOT ES-1 TOP: 331.09 INV. IN: 330.00 (4, W)
4	24" NYLOPLAST DRAIN BASIN TOP: 335.00 INV. IN: 332.25 (5, NW) INV. OUT: 332.25 (3, E)
5	END OF PIPE TOP: 336.36 INV. OUT: 335.00 (4, SE)
6	VDOT ES-1 TOP: 331.36 INV. IN: 330.00 (7, NW)
7	VDOT DI-5 TOP: 346.76 INV. IN: 341.50 (8, NW) INV. OUT: 341.50 (6, SE)
8	VDOT DI-5 TOP: 346.79 INV. OUT: 342.00 (7, SE)

STRUCTURE DATA	
STRC. NUMBER	STRC. DATA
9	VDOT ES-1 TOP: 362.17 INV. IN: 360.00 (10, NE)
10	24" NYLOPLAST DRAIN BASIN TOP: 365.85 INV. IN: 361.30 (11, N) INV. IN: 361.30 (18, SE) INV. OUT: 361.30 (9, SW)
11	24" NYLOPLAST DRAIN BASIN TOP: 369.90 INV. IN: 362.35 (12, N) INV. OUT: 362.35 (10, S)
12	24" NYLOPLAST DRAIN BASIN TOP: 369.90 INV. IN: 363.30 (13, N) INV. OUT: 363.30 (11, S)
13	24" NYLOPLAST DRAIN BASIN TOP: 369.90 INV. IN: 364.10 (14, NW) INV. OUT: 364.10 (12, S)
14	VDOT DI-5 TOP: 369.85 INV. IN: 364.45 (15, W) INV. OUT: 364.45 (13, SE)
15	VDOT DI-5 TOP: 369.85 INV. OUT: 364.89 (14, E)
16	24" NYLOPLAST DRAIN BASIN TOP: 364.84 INV. IN: 362.15 (17, E) INV. IN: 362.15 (34, SE) INV. OUT: 362.15 (10, NW)
17	24" NYLOPLAST DRAIN BASIN TOP: 368.11 INV. IN: 363.20 (18, NE) INV. OUT: 363.20 (18, W)
18	24" NYLOPLAST DRAIN BASIN TOP: 368.10 INV. IN: 364.10 (19, NE) INV. OUT: 364.10 (17, SW)
19	24" NYLOPLAST DRAIN BASIN TOP: 368.11 INV. IN: 365.10 (20, N) INV. OUT: 365.10 (18, SW)
20	24" NYLOPLAST DRAIN BASIN TOP: 368.27 INV. OUT: 365.90 (19, S)
21	VDOT ES-1 TOP: 368.09 INV. IN: 367.00 (22, NW)

STRUCTURE DATA	
STRC. NUMBER	STRC. DATA
22	VDOT DI-1 TOP: 376.85 INV. IN: 371.20 (23, W) INV. OUT: 371.10 (21, SE)
23	VDOT DI-1 TOP: 376.65 INV. OUT: 372.50 (22, E)
34	24" NYLOPLAST DRAIN BASIN TOP: 365.00 INV. IN: 362.60 (35, SE) INV. OUT: 362.60 (16, NW)
35	24" NYLOPLAST DRAIN BASIN TOP: 365.00 INV. OUT: 363.05 (34, NW)
41	VDOT DI-1 TOP: 365.97 INV. IN: 360.50 (42, SE) INV. OUT: 360.40 (X1, W)
42	WEIR MANHOLE TOP: 373.00 INV. IN: 367.35 (43, E) INV. OUT: 367.25 (41, NW)
43	VDOT MH-1 TOP: 378.70 INV. IN: 367.50 (44, E) INV. OUT: 367.50 (42, W)
44	GRATE INLET TOP: 376.20 INV. IN: 367.85 (45, N) INV. IN: 367.75 (48, E) INV. OUT: 367.65 (43, W)
45	GRATE INLET TOP: 376.65 INV. IN: 368.20 (46, N) INV. OUT: 368.20 (44, S)
46	GRATE INLET TOP: 377.15 INV. IN: 368.80 (47, SE) INV. OUT: 368.70 (45, S)
47	VDOT DI-1 TOP: 379.35 INV. OUT: 371.50 (46, NW)
48	VDOT DI-1 TOP: 378.35 INV. OUT: 372.00 (44, W)
X1	EX. INLET TOP: 381.77 INV. IN: 358.67 (41, E)

STRUCTURE DATA	
STRC. NUMBER	STRC. DATA
24	18" NYLOPLAST DRAIN BASIN TOP: 376.00 INV. IN: 372.26 (25, E)
25	18" NYLOPLAST DRAIN BASIN TOP: 378.92 INV. OUT: 372.85 (24, W)
26	EX. MANHOLE TOP: 377.58 INV. IN: 368.46 (27, NE)
27	18" NYLOPLAST DRAIN BASIN TOP: 379.10 INV. IN: 369.15 (28, E) INV. IN: 369.15 (30, N) INV. OUT: 369.05 (26, SW)
28	18" NYLOPLAST DRAIN BASIN TOP: 380.11 INV. IN: 371.25 (28, E) INV. OUT: 371.15 (27, W)
29	18" NYLOPLAST DRAIN BASIN TOP: 381.33 INV. OUT: 373.05 (28, W)
30	18" NYLOPLAST DRAIN BASIN TOP: 379.93 INV. IN: 369.55 (31, E) INV. IN: 369.75 (33, W) INV. OUT: 369.45 (27, S)
31	18" NYLOPLAST DRAIN BASIN TOP: 380.88 INV. IN: 370.95 (32, E) INV. OUT: 370.85 (30, W)
32	18" NYLOPLAST DRAIN BASIN TOP: 380.95 INV. OUT: 374.00 (31, W)
33	18" NYLOPLAST DRAIN BASIN TOP: 379.88 INV. OUT: 375.00 (30, E)

PIPE				
PIPE	SIZE	LENGTH	SLOPE	MATERIAL
2-1	18"	71.68 LF	0.45%	HDPE
4-3	12"	161.09 LF	1.40%	HDPE
5-4	12"	67.05 LF	4.10%	HDPE
7-6	12"	129.03 LF	8.91%	HDPE
8-7	12"	46.64 LF	1.07%	HDPE

PIPE				
PIPE	SIZE	LENGTH	SLOPE	MATERIAL
10-9	24"	201.04 LF	0.65%	HDPE
11-10	15"	133.83 LF	0.78%	HDPE
12-11	15"	119.77 LF	0.79%	HDPE
13-12	15"	100.05 LF	0.80%	HDPE
14-13	15"	44.73 LF	0.78%	HDPE
15-14	15"	55.87 LF	0.79%	HDPE
16-10	15"	124.18 LF	0.68%	HDPE
16-34	12"	86.04 LF	0.52%	HDPE
17-16	12"	140.31 LF	0.75%	HDPE
18-17	12"	118.24 LF	0.78%	HDPE
19-18	12"	132.40 LF	0.76%	HDPE
20-19	12"	107.34 LF	0.75%	HDPE

PIPE				
PIPE	SIZE	LENGTH	SLOPE	MATERIAL
22-21	12"	74.10 LF	5.53%	HDPE
23-22	12"	128.32 LF	1.01%	HDPE
34-35	12"	86.54 LF	0.52%	HDPE
41-42	15"	138.98 LF	4.86%	HDPE
42-43	15"	18.54 LF	0.81%	HDPE
43-44	48"	19.62 LF	0.76%	RCP
44-45	48"	95.08 LF	0.58%	RCP
44-48	15"	59.82 LF	7.10%	HDPE
45-46	48"	95.08 LF	0.53%	RCP
46-47	15"	54.48 LF	4.96%	HDPE
X1-41	15"	174.85 LF	0.99%	HDPE

PIPE				
PIPE	SIZE	LENGTH	SLOPE	MATERIAL
25-24	12"	59.64 LF	0.99%	HDPE
27-26	12"	61.69 LF	0.96%	HDPE
28-27	12"	100.03 LF	2.00%	HDPE
29-28	12"	89.48 LF	2.01%	HDPE
30-27	12"	28.69 LF	1.05%	HDPE
31-30	12"	65.31 LF	1.99%	HDPE
32-31	12"	68.88 LF	4.43%	HDPE
33-30	12"	69.78 LF	7.52%	HDPE



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**STRUCTURE AND PIPE
TABLES**

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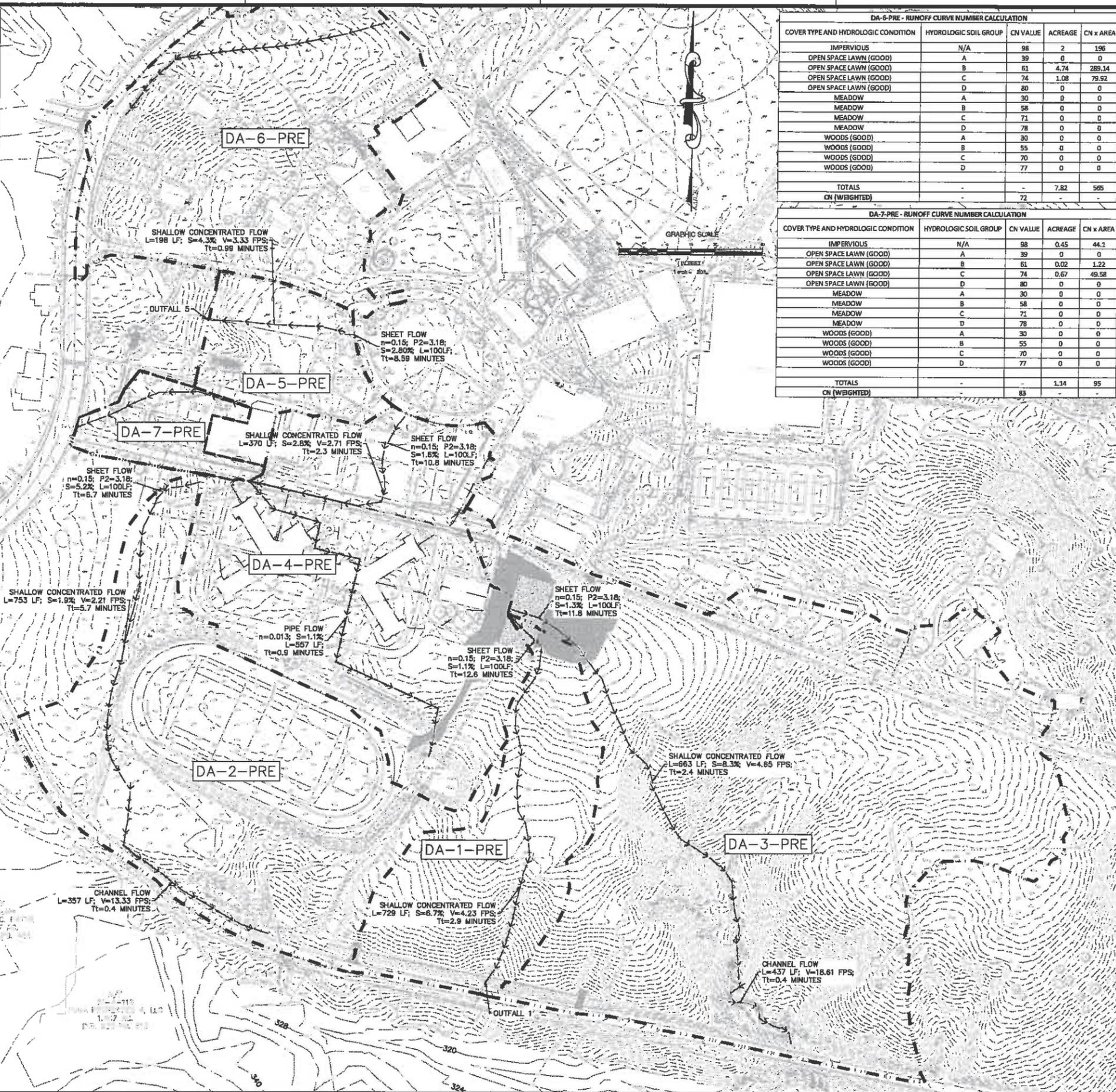
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COVER TYPE AND HYDROLOGIC CONDITION	HYDROLOGIC SOIL GROUP	CN VALUE	ACREAGE	CN x AREA
IMPERVIOUS	N/A	98	0.2	19.6
OPEN SPACE LAWN (GOOD)	A	39	0	0
OPEN SPACE LAWN (GOOD)	B	61	0.02	1.22
OPEN SPACE LAWN (GOOD)	C	74	0	0
OPEN SPACE LAWN (GOOD)	D	80	0	0
MEADOW	A	30	0.01	0.3
MEADOW	B	58	4.23	245.34
MEADOW	C	71	0	0
MEADOW	D	78	0	0
WOODS (GOOD)	A	30	0	0
WOODS (GOOD)	B	55	0	0
WOODS (GOOD)	C	70	0	0
WOODS (GOOD)	D	77	0	0
TOTALS	-	-	4.46	286
CN (WEIGHTED)	-	80	-	-

DA-2-PRE - RUNOFF CURVE NUMBER CALCULATION				
COVER TYPE AND HYDROLOGIC CONDITION	HYDROLOGIC SOIL GROUP	CN VALUE	ACREAGE	CN x AREA
IMPERVIOUS	N/A	98	1.36	133.28
OPEN SPACE LAWN (GOOD)	A	39	0	0
OPEN SPACE LAWN (GOOD)	B	61	3.45	210.45
OPEN SPACE LAWN (GOOD)	C	74	0.04	2.96
OPEN SPACE LAWN (GOOD)	D	80	2.69	215.2
MEADOW	A	30	0	0
MEADOW	B	58	0.8	46.4
MEADOW	C	71	0	0
MEADOW	D	78	1.35	106.08
WOODS (GOOD)	A	30	0	0
WOODS (GOOD)	B	55	0	0
WOODS (GOOD)	C	70	0	0
WOODS (GOOD)	D	77	0	0
TOTALS	-	-	9.7	714
CN (WEIGHTED)	-	74	-	-

DA-3-PRE - RUNOFF CURVE NUMBER CALCULATION				
COVER TYPE AND HYDROLOGIC CONDITION	HYDROLOGIC SOIL GROUP	CN VALUE	ACREAGE	CN x AREA
IMPERVIOUS	N/A	98	1.86	182.28
OPEN SPACE LAWN (GOOD)	A	39	1.25	48.75
OPEN SPACE LAWN (GOOD)	B	61	5.87	358.07
OPEN SPACE LAWN (GOOD)	C	74	1.59	117.66
OPEN SPACE LAWN (GOOD)	D	80	0.05	2.4
MEADOW	A	30	1.16	34.8
MEADOW	B	58	1.84	106.72
MEADOW	C	71	0	0
MEADOW	D	78	0.15	11.7
WOODS (GOOD)	A	30	3.04	91.2
WOODS (GOOD)	B	55	1.11	61.05
WOODS (GOOD)	C	70	0.26	18.2
WOODS (GOOD)	D	77	0.97	74.69
TOTALS	-	-	19.13	1108
CN (WEIGHTED)	-	58	-	-

DA-4-PRE - RUNOFF CURVE NUMBER CALCULATION				
COVER TYPE AND HYDROLOGIC CONDITION	HYDROLOGIC SOIL GROUP	CN VALUE	ACREAGE	CN x AREA
IMPERVIOUS	N/A	98	2.96	290.08
OPEN SPACE LAWN (GOOD)	A	39	0	0
OPEN SPACE LAWN (GOOD)	B	61	2.55	155.55
OPEN SPACE LAWN (GOOD)	C	74	1.93	135.42
OPEN SPACE LAWN (GOOD)	D	80	0.53	42.4
MEADOW	A	30	0	0
MEADOW	B	58	0.77	44.66
MEADOW	C	71	0	0
MEADOW	D	78	0.19	14.82
WOODS (GOOD)	A	30	0	0
WOODS (GOOD)	B	55	0	0
WOODS (GOOD)	C	70	0	0
WOODS (GOOD)	D	77	0	0
TOTALS	-	-	8.83	683
CN (WEIGHTED)	-	77	-	-

DA-5-PRE - RUNOFF CURVE NUMBER CALCULATION				
COVER TYPE AND HYDROLOGIC CONDITION	HYDROLOGIC SOIL GROUP	CN VALUE	ACREAGE	CN x AREA
IMPERVIOUS	N/A	98	0.77	75.46
OPEN SPACE LAWN (GOOD)	A	39	0	0
OPEN SPACE LAWN (GOOD)	B	61	0.63	38.43
OPEN SPACE LAWN (GOOD)	C	74	3.05	225.7
OPEN SPACE LAWN (GOOD)	D	80	0	0
MEADOW	A	30	0	0
MEADOW	B	58	0	0
MEADOW	C	71	0	0
MEADOW	D	78	0	0
WOODS (GOOD)	A	30	0	0
WOODS (GOOD)	B	55	0	0
WOODS (GOOD)	C	70	0	0
WOODS (GOOD)	D	77	0	0
TOTALS	-	-	4.45	340
CN (WEIGHTED)	-	76	-	-



DA-6-PRE - RUNOFF CURVE NUMBER CALCULATION				
COVER TYPE AND HYDROLOGIC CONDITION	HYDROLOGIC SOIL GROUP	CN VALUE	ACREAGE	CN x AREA
IMPERVIOUS	N/A	98	2	196
OPEN SPACE LAWN (GOOD)	A	39	0	0
OPEN SPACE LAWN (GOOD)	B	61	4.74	289.14
OPEN SPACE LAWN (GOOD)	C	74	1.08	79.52
OPEN SPACE LAWN (GOOD)	D	80	0	0
MEADOW	A	30	0	0
MEADOW	B	58	0	0
MEADOW	C	71	0	0
MEADOW	D	78	0	0
WOODS (GOOD)	A	30	0	0
WOODS (GOOD)	B	55	0	0
WOODS (GOOD)	C	70	0	0
WOODS (GOOD)	D	77	0	0
TOTALS	-	-	7.82	565
CN (WEIGHTED)	-	72	-	-

DA-7-PRE - RUNOFF CURVE NUMBER CALCULATION				
COVER TYPE AND HYDROLOGIC CONDITION	HYDROLOGIC SOIL GROUP	CN VALUE	ACREAGE	CN x AREA
IMPERVIOUS	N/A	98	0.45	44.1
OPEN SPACE LAWN (GOOD)	A	39	0	0
OPEN SPACE LAWN (GOOD)	B	61	0.02	1.22
OPEN SPACE LAWN (GOOD)	C	74	0.67	49.58
OPEN SPACE LAWN (GOOD)	D	80	0	0
MEADOW	A	30	0	0
MEADOW	B	58	0	0
MEADOW	C	71	0	0
MEADOW	D	78	0	0
WOODS (GOOD)	A	30	0	0
WOODS (GOOD)	B	55	0	0
WOODS (GOOD)	C	70	0	0
WOODS (GOOD)	D	77	0	0
TOTALS	-	-	1.14	95
CN (WEIGHTED)	-	83	-	-



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DATE
OCTOBER 24, 2016

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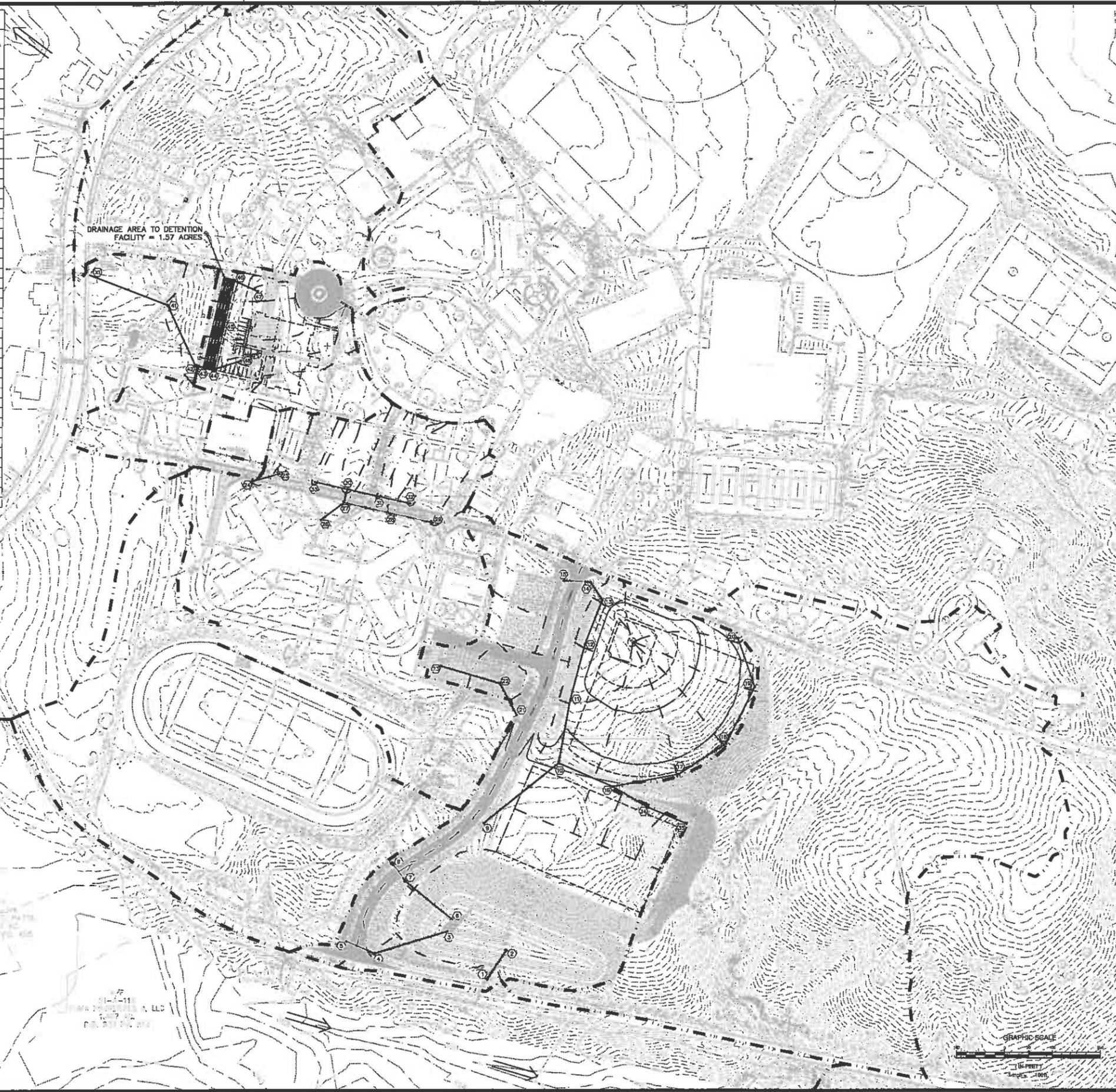
SHEET TITLE
PRE DEVELOPMENT DRAINAGE AREAS

SHEET NUMBER
C11.0

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POST-DEVELOPMENT WEIGHTED "C" CALCULATION					
DRAINAGE AREA WEIGHTED "C" CALCULATION	TOTAL DRAINAGE AREA (SF)	IMPERVIOUS AREA (SF) C=0.90	PERVIOUS AREA (SF) C=0.30	WEIGHTED C	TOTAL AREA (AC)
1	19770	5616	11154	0.50	0.38
2	132543	0	132543	0.30	3.04
3	0	0	0	0.90	0.00
4	9581	2024	7557	0.43	0.22
5	11173	5684	5489	0.51	0.26
6	0	0	0	0.90	0.00
7	28654	6746	22108	0.44	0.66
8	20683	9112	11551	0.58	0.47
9	0	0	0	0.90	0.00
10	34392	0	34392	0.30	0.79
11	12109	0	12109	0.30	0.28
12	9835	0	9835	0.30	0.23
13	3889	260	3609	0.34	0.09
14	8466	2919	5549	0.51	0.19
15	31848	12447	19201	0.54	0.73
16	34787	0	34787	0.30	0.80
17	17052	0	17052	0.30	0.39
18	17116	0	17116	0.30	0.39
19	16824	0	16824	0.30	0.39
20	11210	0	11210	0.30	0.26
21	0	0	0	0.90	0.00
22	9230	8267	943	0.84	0.21
23	16370	14423	3947	0.77	0.42
24	4723	2048	2675	0.56	0.11
25	4972	4350	622	0.82	0.11
26	0	0	0	0.90	0.00
27	889	127	762	0.39	0.02
28	6206	391	5817	0.34	0.14
29	5816	3297	2519	0.84	0.13
30	6882	263	6619	0.32	0.16
31	4186	153	4013	0.32	0.10
32	3083	109	2974	0.32	0.07
33	1809	0	1809	0.30	0.04
34	9658	0	9658	0.30	0.22
35	6735	0	6735	0.30	0.15
X1	59719	18780	40939	0.49	1.37
41	15310	124	15186	0.30	0.35
42	0	0	0	0.90	0.00
43	0	0	0	0.90	0.00
44	21698	14737	6961	0.71	0.50
45	16182	4234	11948	0.46	0.37
46	17069	6768	8301	0.61	0.39
47	2769	942	1817	0.50	0.06
48	10775	3010	7765	0.47	0.25



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SHEET TITLE
POST DRAINAGE AREAS - STORM SEWER

SHEET NUMBER
C12.1

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2021 BMP Standards and Specifications | 2013 Draft BMP Standards and Specifications

Project Name: **Fork Union Military Academy**
 Date: **15-Sep-16**

Linear Development Project?

CLEAR All | Date input path constant values

Site Information

Post-Development Project (Treatment Volume and Loads)

Enter Total Disturbed Area (acres) → **13.37**

Maximum reduction required: **75%**
 The site is not covered by impervious areas or forested areas (Development TP Load Reduction per site (lb/yr): **3.23**)

Check: 2013 Draft Stds & Specs
 Linear project?
 Land cover areas entered correctly?
 Total disturbed area entered?

Pre-Development Land Cover (acres)

	A Soils	B Soils	C Soils	D Soils	Totals
Forest/Open Space (acres) - undisturbed, protected forest/open space or reforested	0.00	1.00	0.00	0.00	1.00
Managed Turf (acres) - disturbed, graded for yards or other turf to be	2.11	3.07	1.84	0.38	7.40
Impervious Cover (acres)	0.00	0.80	0.71	0.00	1.51
Totals	2.11	4.87	2.55	0.38	10.31

Post-Development Land Cover (acres)

	A Soils	B Soils	C Soils	D Soils	Totals
Forest/Open Space (acres) - undisturbed, protected forest/open space or reforested	1.70	1.26	0.00	1.00	4.00
Managed Turf (acres) - disturbed, graded for yards or other turf to be	2.11	3.07	1.80	0.38	7.40
Impervious Cover (acres)	0.00	0.80	1.00	0.14	1.94
Totals	3.81	5.13	2.80	1.52	13.26

Constants

Annual Rainfall (inches)	43
Target Rainfall Excess (inches)	1.20
Total Phosphorus (TP) EMC (mg/L)	0.15
Total Nitrogen (TN) EMC (mg/L)	1.95
Target TP Load (lb/acre/yr)	0.41
TP (unitless correction factor)	0.90

Runoff Coefficients (Rv)

	A Soils	B Soils	C Soils	D Soils
Forest/Open Space	0.01	0.23	0.04	0.05
Managed Turf	0.33	0.20	0.22	0.25
Impervious Cover	0.85	0.93	0.35	0.85

LAND COVER SUMMARY - PRE-REDEVELOPMENT

Land Cover Summary-Pre	Label	Adj Factor ¹
Forest/Open Space (acres)	0.00	1.00
Weighted Rv (Forest)	0.00	0.00
Managed Turf Cover (acres)	7.40	1.00
Weighted Rv (Turf)	2.47	0.33
Impervious Cover (acres)	1.51	1.00
Weighted Rv (Impervious)	1.28	0.85
Total Site Area (acres)	10.31	1.00
Site Rv	0.27	0.28

LAND COVER SUMMARY - POST DEVELOPMENT

Land Cover Summary-Post	Label	Adj Factor ¹
Forest/Open Space (acres)	4.00	1.00
Weighted Rv (Forest)	0.16	0.01
Managed Turf Cover (acres)	7.40	1.00
Weighted Rv (Turf)	2.47	0.33
Impervious Cover (acres)	1.94	1.00
Weighted Rv (Impervious)	1.65	0.85
Total Site Area (acres)	13.34	1.00
Site Rv	0.27	0.28

Final Post-Development Treatment Volume (acre-ft)

Final Post-Development Treatment Volume (acre-ft)	0.225
Final Post-Development Treatment Volume (cubic feet)	1,610
Final Post-Development TP Load (lb/yr)	10.14
Final Post-Development TN Load (lb/yr)	17.1

Final Post-Development Treatment Volume (acre-ft)

Final Post-Development Treatment Volume (acre-ft)	0.225
Final Post-Development Treatment Volume (cubic feet)	1,610
Final Post-Development TP Load (lb/yr)	10.14
Final Post-Development TN Load (lb/yr)	17.1

TP Load Reduction Required for New Impervious Area (lb/yr)

TP Load Reduction Required for New Impervious Area (lb/yr)	1.62
TP Load Reduction Required for New Impervious Area (lb/yr)	1.67

Post-Development Requirement for Site Area

TP Load Reduction Required (lb/yr): **4.25**

Nitrogen Loads (Informational Purposes Only)

Pre-Development TN Load (lb/yr)	61.08
Final Post-Development TN Load (Pre-Development & New Impervious) (lb/yr)	71.57

Site Results (Water Quality Compliance)

Area Checks

	D.A. A	D.A. B	D.A. C	D.A. D	D.A. E	AREA CHECK
FOREST/OPEN SPACE (ac)	0.00	0.00	0.00	0.00	0.00	OK
IMPERVIOUS COVER (ac)	2.11	0.80	0.71	0.00	0.00	OK
IMPERVIOUS COVER TREATED (ac)	1.11	0.00	0.00	0.00	0.00	OK
MANAGED TURF AREA (ac)	7.40	0.00	0.00	0.00	0.00	OK
MANAGED TURF AREA TREATED (ac)	0.00	0.00	0.00	0.00	0.00	OK
AREA CHECK	OK	OK	OK	OK	OK	OK

Site Treatment Volume (ft³): **1.62**

Runoff Reduction Volume and TP By Drainage Area

	D.A. A	D.A. B	D.A. C	D.A. D	D.A. E	TOTAL
RUNOFF REDUCTION VOLUME ACHIEVED (ft ³)	0	0	0	0	0	0
TP LOAD AVAILABLE FOR REMOVAL (lb/yr)	0.00	0.00	0.00	0.00	0.00	0.00
TP LOAD REDUCTION ACHIEVED (lb/yr)	0.00	0.00	0.00	0.00	0.00	0.00
TP LOAD REMAINING (lb/yr)	0.00	0.00	0.00	0.00	0.00	0.00

Total Phosphorus

FINAL POST-DEVELOPMENT TP LOAD (lb/yr)	10.14
TP LOAD REDUCTION REQUIRED (lb/yr)	2.26
TP LOAD REDUCTION ACHIEVED (lb/yr)	0.00
TP LOAD REMAINING (lb/yr)	10.14
REMAINING TP LOAD REDUCTION REQUIRED (lb/yr)	0.00

Total Nitrogen (For Informational Purposes)

POST-DEVELOPMENT LOAD (lb/yr)	71.57
NITROGEN LOAD REDUCTION ACHIEVED (lb/yr)	0.00
REMAINING POST-DEVELOPMENT NITROGEN LOAD (lb/yr)	71.57

ENERGY BALANCE COMPLIANCE TABLE

1-YEAR STORM EVENT

OUTFALL	VOLUME (AC-FT)		PEAK (CFS)		Q ALLOW (CFS)	FORESTED CONDITION			COMPLIANCE?
	PRE	POST	PRE	POST		VOL (AC-FT)	PEAK (CFS)	Q ALLOW (CFS)	
1	0.078	0.052	0.48	0.11	0.33	0.04	0.08	0.03	YES
5	0.17	0.28	2.77	1.27	1.85	0.10	1.35	0.46	YES

NOTE: UNDER NO CONDITION SHALL Q DEVELOPED BE GREATER THAN Q PRE-DEVELOPED NOR SHALL Q DEVELOPED BE REQUIRED TO BE LESS THAN THAT CALCULATED AS Q ALLOW IN THE FORESTED CONDITION SECTION ABOVE.

PRE-DEVELOPED RUNOFF CALCULATIONS

DRAINAGE AREA WEIGHTED "C" CALCULATION	TOTAL DRAINAGE AREA (SF)	IMPERVIOUS AREA (SF) C=0.90	PERVIOUS AREA (SF) C=0.30	WEIGHTED C	TOTAL AREA (AC)	TC (MIN.)	12YR (IN/HR)	10YR (IN/HR)	Q2 (CFS)	Q10 (CFS)
DA-1-PRE	194260	9003	185257	0.33	4.46	15.50	3.22	4.33	4.71	6.33
DA-2-PRE	422460	59068	363422	0.38	9.70	12.80	3.52	4.70	19.11	17.51
DA-3-PRE	832243	81175	752068	0.36	19.13	14.60	3.32	4.44	22.74	30.48
DA-4-PRE	384833	127909	256724	0.50	8.83	14.00	3.38	4.53	14.92	19.97
DA-5-PRE	98409	18958	79451	0.42	2.25	9.60	3.95	5.26	3.72	4.94
DA-6-PRE	340861	87155	253706	0.45	7.82	8.50	4.14	5.49	14.69	19.47
DA-7-PRE	49809	18426	30377	0.53	1.14	9.60	3.95	5.26	2.42	3.21

POST-DEVELOPED RUNOFF CALCULATIONS

DRAINAGE AREA WEIGHTED "C" CALCULATION	TOTAL DRAINAGE AREA (SF)	IMPERVIOUS AREA (SF) C=0.90	PERVIOUS AREA (SF) C=0.30	WEIGHTED C	TOTAL AREA (AC)	TC (MIN.)	12YR (IN/HR)	10YR (IN/HR)	Q2 (CFS)	Q10 (CFS)
DA-1-POST	441739	83043	378696	0.39	10.14	28.10	2.38	3.22	9.11	12.98
DA-2-POST	404216	57520	346696	0.39	9.28	13.80	3.40	4.55	12.17	16.29
DA-3-POST	622173	50789	571404	0.36	14.28	10.10	3.68	5.16	19.36	25.79
DA-4-POST	381107	107289	273818	0.46	8.29	14.00	3.38	4.53	13.41	17.95
DA-5-POST	200855	50867	149988	0.47	4.61	21.30	2.73	3.72	5.93	8.06
DA-6-POST	333782	78150	255632	0.44	7.66	8.50	4.14	5.49	13.98	18.52
DA-7-POST	48474	13653	34820	0.47	1.11	9.60	3.95	5.26	2.07	2.74

WATER QUANTITY COMPLIANCE:

OUTFALL 1: QUALITY - WATER QUALITY COMPLIANCE WAS ANALYZED USING THE VIRGINIA RUNOFF REDUCTION METHOD SPREADSHEET FOR REDEVELOPMENT. A TYPE II WET POND WITH A 75% PHOSPHOROUS REMOVAL RATE WILL BE UTILIZED TO ACHIEVE THE PHOSPHOROUS REMOVAL ONSITE. REFER TO THIS SHEET FOR THE RUNOFF REDUCTION SPREADSHEET.

CHANNEL PROTECTION - THE SITE DISCHARGES TO A NATURAL CHANNEL; THEREFORE, THE ENERGY BALANCE EQUATION WAS UTILIZED TO DETERMINE THE MAXIMUM ALLOWABLE PEAK FLOW RATE FROM THE ONE-YEAR 24-HOUR STORM EVENT EXITING THE POND (SEE ENERGY BALANCE TABLE ON THIS SHEET). THE POND ORIFICE WAS SIZED TO LIMIT THE ONE-YEAR 24-HOUR STORM DISCHARGE RATE TO LESS THAN THE MAXIMUM ALLOWABLE PEAK FLOW RATE AS DETERMINED BY THE ENERGY BALANCE EQUATION. UTILIZING THE ENERGY BALANCE EQUATION LIMITS THE ANALYSIS TO THE POND OUTFALL.

FLOOD PROTECTION - STORMWATER RUNOFF WILL BE CONFINED WITHIN THE SITE STORMWATER CONVEYANCE SYSTEM FOR THE 10-YEAR STORM EVENT. THE STORMWATER POND WILL BE UTILIZED TO DETAIN RUNOFF AND RELEASE A POST-DEVELOPMENT PEAK RUNOFF RATE FOR THE 10-YEAR 24-HOUR STORM EVENT THAT IS LESS THAN THE PRE-DEVELOPMENT PEAK RUNOFF RATE FOR THE SAME STORM EVENT. SINCE 10-10 MANAGEMENT IS PROVIDED BY THE POND, THE LIMITS OF ANALYSIS DO NOT EXTEND BEYOND THE POND OUTFALL.

OUTFALL 5: CHANNEL PROTECTION - THE SITE EVENTUALLY DISCHARGES TO A NATURAL CHANNEL BEYOND OUTFALL 5; THEREFORE, THE ENERGY BALANCE EQUATION WAS UTILIZED TO DETERMINE THE MAXIMUM ALLOWABLE PEAK FLOW RATE FROM THE ONE-YEAR 24-HOUR STORM EVENT EXITING THE UNDERGROUND DETENTION PIPE (SEE ENERGY BALANCE TABLE ON THIS SHEET). THE UNDERGROUND DETENTION PIPE ORIFICE WAS SIZED TO LIMIT THE ONE-YEAR 24-HOUR STORM DISCHARGE RATE TO LESS THAN THE MAXIMUM ALLOWABLE PEAK FLOW RATE AS DETERMINED BY THE ENERGY BALANCE EQUATION. UTILIZING THE ENERGY BALANCE EQUATION LIMITS THE ANALYSIS TO THE UNDERGROUND DETENTION PIPE OUTFALL.

FLOOD PROTECTION - THE REQUIREMENT IS MET BY CONFINING THE POST-DEVELOPMENT PEAK FLOW RATE FROM THE 10-YEAR 24-HOUR STORM EVENT WITHIN THE STORMWATER CONVEYANCE SYSTEM. THE UNDERGROUND DETENTION PIPE AND ORIFICE WERE SIZED TO DETAIN RUNOFF AND RELEASE A POST-DEVELOPMENT PEAK FLOW RATE FOR THE 10-YEAR 24-HOUR STORM EVENT THAT IS LESS THAN THE PRE-DEVELOPMENT PEAK FLOW RATE FOR THE SAME STORM EVENT. SINCE 10-10 MANAGEMENT IS PROVIDED BY THE DETENTION SYSTEM, THE LIMITS OF ANALYSIS DO NOT EXTEND BEYOND THE PIPE OUTFALL.

DRAINAGE AREA 2: THE OVERALL DRAINAGE AREA AND IMPERVIOUS AREA HAVE BEEN REDUCED, THUS THE Q10-POST IS NOW LESS THAN THE Q10-PRE. THERE IS NO INCREASE TO THE STORMWATER RUNOFF TO THIS AREA OR PROPOSED WORK WITHIN THE REMAINING DRAINAGE AREA.

DRAINAGE AREA 3: THE OVERALL DRAINAGE AREA AND IMPERVIOUS AREA HAVE BEEN REDUCED, THUS THE Q10-POST IS NOW LESS THAN THE Q10-PRE. THERE IS NO INCREASE TO THE STORMWATER RUNOFF TO THIS AREA OR PROPOSED WORK WITHIN THE REMAINING DRAINAGE AREA.

DRAINAGE AREA 4: THE OVERALL DRAINAGE AREA AND IMPERVIOUS AREA THE EXISTING STORMWATER BMP HAS BEEN REDUCED. THEREFORE, THE EXISTING BMP IS ASSUMED TO BE ADEQUATE FOR THE AREA DRAINING TO IT AND NO FURTHER ANALYSIS IS REQUIRED.

DRAINAGE AREA 6: THE OVERALL DRAINAGE AREA AND IMPERVIOUS AREA HAVE BEEN REDUCED, THUS THE Q10-POST IS NOW LESS THAN THE Q10-PRE. THERE IS NO INCREASE TO THE STORMWATER RUNOFF TO THIS AREA OR PROPOSED WORK WITHIN THE REMAINING DRAINAGE AREA.

DRAINAGE AREA 7: THE OVERALL DRAINAGE AREA AND IMPERVIOUS AREA HAVE BEEN REDUCED, THUS THE Q10-POST IS NOW LESS THAN THE Q10-PRE. THERE IS NO INCREASE TO THE STORMWATER RUNOFF TO THIS AREA OR PROPOSED WORK WITHIN THE REMAINING DRAINAGE AREA.



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 NO. DATE DESCRIPTION

SHEET TITLE
CALCULATIONS

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E

D

C

B

A

Site Summary

Total Rainfall (in):	43
Total Disturbed Acreage:	13.67

Print Preview Print

Site Land Cover Summary

Pre-ReDevelopment Land Cover (acres)

	A soils	B Soils	C Soils	D Soils	Totals	% of Total
Forest/Open (acres)	0.00	0.00	0.00	0.00	0.00	0
Managed Turf (acres)	2.11	8.03	1.83	0.28	12.25	90
Impervious Cover (acres)	0.00	0.80	0.61	0.01	1.42	10
					13.67	100

Post-ReDevelopment Land Cover (acres)

	A soils	B Soils	C Soils	D Soils	Totals	% of Total
Forest/Open (acres)	0.00	0.00	0.00	0.00	0.00	0
Managed Turf (acres)	2.11	7.52	1.39	0.28	11.30	83
Impervious Cover (acres)	0.00	1.31	1.05	0.01	2.37	17
					13.67	100

Site Turf and Land Cover Nutrient Loads

	Final Post-Development (Post-ReDevelopment & New Impervious)	Post-ReDevelopment	Post-Development (New Impervious)	Adjusted Pre-ReDevelopment
Site Rv	0.33	0.28	0.95	0.28
Treatment Volume (ft ³)	16,146	12,869	3,276	12,869
TP Load (lb/yr)	10.14	8.09	2.06	8.09

Pre-ReDevelopment TP Load per acre (lb/acre/yr)	Final Post-Development TP Load per acre (lb/acre/yr)	Post-ReDevelopment TP Load per acre (lb/acre/yr)
0.64	0.74	0.64

Total TP Load Reduction Required (lb/yr)	3.29	1.62	1.67
--	------	------	------

	Final Post-Development Load (Post-ReDevelopment & New Impervious)	Pre-ReDevelopment
TN Load (lb/yr)	72.57	61.09

Site Compliance Summary

Maximum % Reduction Required Below Pre-ReDevelopment Load	20%
---	-----

Total Runoff Volume Reduction (ft ³)	0
Total TP Load Reduction Achieved (lb/yr)	5.64
Total TN Load Reduction Achieved (lb/yr)	21.53
Remaining Post Development TP Load (lb/yr)	4.50
Remaining TP Load Reduction (lb/yr) Required	0.00

** TARGET TP REDUCTION EXCEEDED BY 2.36 LB/YEAR **

Drainage Area Summary

	D.A. A	D.A. B	D.A. C	D.A. D	D.A. E	Total
Forest/Open (acres)	0.00	0.00	0.00	0.00	0.00	0.00
Managed Turf (acres)	11.30	0.00	0.00	0.00	0.00	11.30
Impervious Cover (acres)	2.37	0.00	0.00	0.00	0.00	2.37
Total Area (acres)	13.67	0.00	0.00	0.00	0.00	13.67

Drainage Area Compliance Summary

	D.A. A	D.A. B	D.A. C	D.A. D	D.A. E	Total
TP Load Reduced (lb/yr)	5.64	0.00	0.00	0.00	0.00	5.64
TN Load Reduced (lb/yr)	21.53	0.00	0.00	0.00	0.00	21.53

Drainage Area A Summary

Land Cover Summary

	A Soils	B Soils	C Soils	D Soils	Total	% of Total
Forest/Open (acres)	0.00	0.00	0.00	0.00	0.00	0
Managed Turf (acres)	2.11	7.52	1.39	0.28	11.30	83
Impervious Cover (acres)	0.00	1.31	1.05	0.01	2.37	17
					13.67	

BMP Selections

Practice	Managed Turf Credit Area (acres)	Impervious Cover Credit Area (acres)	BMP Treatment Volume (ft ³)	TP Load from Upstream Practices (lbs)	Untreated TP Load to Practice (lbs)	TP Removed (lb/yr)	TP Remaining (lb/yr)	Downstream Treatment to be Employed
13-c. Wet Pond #2 (Spec #14)	10.1	1.41	11,988.31	0.00	7.52	5.64	1.88	None

Total Impervious Cover Treated (acres)	1.41
Total Turf Area Treated (acres)	10.10
Total TP Load Reduction Achieved in D.A. (lb/yr)	5.64
Total TN Load Reduction Achieved in D.A. (lb/yr)	21.53

Runoff Volume and CN Calculations

Target Rainfall Event (in)	1-year storm	2-year storm	10-year storm
	2.63	3.18	4.81

Drainage Areas	RV & CN	Drainage Area A	Drainage Area B	Drainage Area C	Drainage Area D	Drainage Area E
CN		66	0	0	0	0
RR (ft ³)		0	0	0	0	0
1-year return period	RV w/ RR (w/ln)	0.38	0.00	0.00	0.00	0.00
	RV w/ RR (w/ln)	0.38	0.00	0.00	0.00	0.00
	CN adjusted	66	0	0	0	0
2-year return period	RV w/ RR (w/ln)	0.63	0.00	0.00	0.00	0.00
	RV w/ RR (w/ln)	0.63	0.00	0.00	0.00	0.00
	CN adjusted	66	0	0	0	0
10-year return period	RV w/ RR (w/ln)	1.60	0.00	0.00	0.00	0.00
	RV w/ RR (w/ln)	1.60	0.00	0.00	0.00	0.00
	CN adjusted	66	0	0	0	0



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STORM DRAIN DESIGN COMPUTATIONS																			
FROM POINT (UPSTREAM)	TO POINT (DOWNSTREAM)	AREA DRAIN % (ACRES)	RUNOFF COEFF. C	CA		INLET TIME MINUTES	RAINFALL IN / HR	RUNOFF Q CFS	INVERT ELEVATIONS		LENGTH FT	SLOPE FT/FT	DIAMETER IN	CAPACITY CFS	VELOCITY FULL FPS	VELOCITY PARTIAL FPS	FLOW MINUTES	Manning's n value	REMARKS
				INCREMENT	ADJUM				UPPER	LOWER									
4	3	0.22	0.43	0.08	0.25	5.17	6.36	1.56	332.25	330.00	166.4	0.0133	12	4.45	5.95	5.24	0.54	0.012	
6	4	0.26	0.81	0.16	0.16	5.00	8.41	1.00	336.00	332.25	67.1	0.0410	12	7.81	8.89	6.76	0.17	0.012	
7	6	0.08	0.44	0.29	0.56	5.18	6.36	3.58	341.50	330.00	129.0	0.0891	12	11.52	14.67	13.00	0.17	0.012	
8	7	0.47	0.58	0.27	0.27	5.00	8.41	1.72	342.00	341.50	46.6	0.0107	12	3.98	5.05	4.88	0.16	0.012	
10	9	0.79	0.30	0.24	1.59	6.75	5.91	9.96	362.51	361.75	150.3	0.0051	24	17.42	5.55	5.72	0.44	0.012	
11	10	0.29	0.39	0.08	0.87	6.25	6.04	4.04	363.28	362.50	139.8	0.0051	15	4.99	4.06	4.48	0.50	0.012	
12	11	0.23	0.30	0.07	0.99	5.78	6.17	3.61	363.88	363.28	119.8	0.0050	15	4.95	4.03	4.35	0.48	0.012	
13	12	0.06	0.34	0.03	0.52	5.40	6.29	3.28	364.38	363.88	100.1	0.0050	15	4.95	4.03	4.28	0.39	0.012	
14	13	0.19	0.51	0.10	0.49	6.23	6.34	3.09	364.61	364.38	44.7	0.0051	15	5.02	4.09	4.27	0.17	0.012	
18	14	0.73	0.54	0.39	0.39	5.00	8.41	2.50	364.89	364.61	55.9	0.0050	15	4.95	4.04	4.08	0.23	0.012	
16	10	0.80	0.30	0.24	0.78	7.58	5.75	4.49	363.30	362.80	124.2	0.0056	15	5.28	4.28	4.77	0.43	0.012	
17	16	0.39	0.30	0.12	0.43	6.80	5.89	2.52	364.05	363.30	140.3	0.0053	12	2.82	3.59	4.05	0.56	0.012	
19	17	0.59	0.30	0.12	0.31	6.28	6.58	1.88	364.79	364.05	118.2	0.0055	12	2.86	3.84	3.84	0.51	0.012	
18	18	0.39	0.30	0.12	0.18	5.65	6.21	1.20	365.40	364.79	192.4	0.0053	12	2.81	3.57	3.49	0.65	0.012	
20	19	0.28	0.30	0.08	0.08	5.00	8.41	0.49	366.00	365.40	107.3	0.0056	12	2.89	3.67	2.73	0.86	0.012	
22	21	0.21	0.84	0.18	0.50	5.42	6.26	3.16	371.10	367.00	74.1	0.0058	12	8.08	11.56	10.82	0.12	0.012	
23	22	0.42	0.77	0.33	0.33	5.00	8.41	2.58	372.50	371.20	126.3	0.0101	12	3.68	4.94	5.04	0.42	0.012	
25	24	0.11	0.82	0.09	0.09	5.00	8.41	0.50	372.85	372.28	59.6	0.0099	12	3.84	4.89	3.54	0.28	0.012	
27	25	0.02	0.39	0.01	0.26	5.67	6.21	1.50	369.05	368.46	81.7	0.0096	12	3.77	4.80	4.89	0.22	0.012	
28	27	0.14	0.34	0.05	0.13	5.34	6.50	0.94	371.15	369.15	100.0	0.0200	12	5.46	6.85	5.00	0.33	0.012	
28	28	0.15	0.64	0.09	0.09	5.00	8.41	0.58	373.05	371.25	85.5	0.0201	12	5.47	6.97	4.40	0.34	0.012	
30	27	0.18	0.32	0.05	0.12	5.56	6.23	0.73	369.45	368.15	28.7	0.0103	12	3.95	5.02	3.82	0.13	0.012	
31	30	0.10	0.32	0.03	0.05	5.28	6.32	0.34	370.95	369.55	65.3	0.0199	12	5.44	6.93	3.76	0.29	0.012	
32	31	0.07	0.32	0.02	0.02	5.00	8.41	0.15	374.00	370.85	66.9	0.0443	12	8.12	10.34	3.90	0.29	0.012	
33	30	0.04	0.30	0.01	0.01	5.00	8.41	0.08	375.00	369.75	68.8	0.0752	12	10.58	13.47	3.82	0.30	0.012	
34	16	0.22	0.30	0.07	0.11	5.69	6.22	0.70	362.80	362.15	86.0	0.0052	12	2.79	3.55	2.98	0.48	0.012	
36	34	0.15	0.30	0.05	0.05	5.00	8.41	0.30	383.05	362.80	88.5	0.0052	12	2.78	3.54	2.28	0.63	0.012	
47	46	0.08	0.30	0.03	0.03	5.00	8.41	0.20	384.89	364.81	54.6	0.0051	12	2.77	3.52	2.03	0.45	0.012	
48	44	0.25	0.47	0.12	0.12	5.00	8.41	0.74	375.00	369.75	69.8	0.0752	12	10.58	13.47	7.85	0.15	0.012	

HYDRAULIC GRADE LINE COMPUTATIONS																					
Structure Number	Outlet Water Surface Elev.	D _o	C _p	L _o	S _b (%)	H _f	Junction Loss												Inlet Water Surface Elev.	Ret. Elev.	
							V _o	H _o	Q _o	V _i	Q _i	V _{2g}	H _i	Angle	K ₁	H ₁	1.34H ₁	0.54H ₁			
4	330.00	12	1.6	188.44	0.17%	0.29	5.34	0.11	1.0	6.76	6.72	0.71	0.25	40	0.27	0.82	0.81	0.31	1.10	381.90	334.75
5	333.05	12	1.0	67.05	0.07%	0.04	8.76	0.18	0.0	0.00	0.00	0.00	0.00	0	0.00	0.18	0.23	0.09	0.28	353.33	339.36
7	330.60	12	3.8	129.03	0.85%	1.10	13.00	0.68	1.7	4.98	6.55	0.39	0.15	15	0.04	0.83	1.08	0.41	2.16	332.58	346.00
8	342.30	12	1.7	46.64	0.20%	0.09	4.98	0.10	0.0	0.00	0.00	0.00	0.00	0	0.00	0.10	0.13	0.05	0.22	342.52	346.00
10	393.35	24	10.0	180.3	0.17%	0.25	5.72	0.13	3.6	4.35	13.72	0.29	0.10	78	0.19	0.42	0.54	0.21	0.46	353.81	388.00
11	369.81	15	4.0	133.83	0.33%	0.45	4.48	0.06	3.3	4.26	13.87	0.28	0.10	5	0.00	0.18	0.23	0.08	0.62	364.43	388.91
12	364.43	15	3.6	119.77	0.27%	0.32	4.35	0.07	3.1	4.27	18.20	0.26	0.10	5	0.00	0.17	0.22	0.09	0.49	364.82	370.00
13	364.82	15	3.3	100.05	0.22%	0.22	4.28	0.07	2.5	4.08	10.18	0.26	0.09	55	0.13	0.29	0.38	0.15	0.51	365.43	370.00
14	365.43	15	3.1	44.73	0.20%	0.09	4.27	0.07	0.0	0.00	0.00	0.00	0.00	0	0.00	0.07	0.08	0.04	0.18	365.81	370.00
15	365.81	15	2.5	55.97	0.13%	0.07	4.08	0.06	4.6	4.77	21.41	0.35	0.12	0	0.00	0.19	0.24	0.09	0.32	365.93	370.00
16	383.81	15	4.5	124.18	0.41%	0.51	4.77	0.08	1.9	3.84	7.21	0.23	0.08	35	0.08	0.24	0.32	0.12	0.83	384.54	384.64
17	384.64	12	2.5	140.31	0.43%	0.80	4.05	0.06	1.2	3.48	4.19	0.18	0.07	20	0.03	0.16	0.21	0.08	0.81	385.44	388.11
18	385.44	12	1.9	118.24	0.24%	0.28	3.84	0.06	0.5	2.73	1.35	0.12	0.04	30	0.03	0.15	0.17	0.07	0.45	385.88	388.10
18	365.89	12	1.2	132.4	0.10%	0.13	3.49	0.05	0.0	0.00	0.00	0.00	0.00	45	0.00	0.05	0.06	0.02	0.19	365.88	388.11
20	366.20	12	0.5	107.34	0.02%	0.02	2.79	0.03	3.2	10.82	33.52	1.75	0.61	0	0.00	0.64	0.83	0.32	0.85	367.05	368.27
22	367.80	12	3.2	74.1	0.67%	0.85	10.82	0.44	0.0	0.00	0.09	0.00	0.00	45	0.00	0.44	0.57	0.22	1.06	368.86	378.65
23	372.00	12	2.1	128.32	0.29%	0.37	5.04	0.10	0.6	3.54	2.13	0.19	0.07	9	0.00	0.17	0.22	0.08	0.59	372.59	376.66
25	373.06	12	0.8	59.64	0.02%	0.01	3.54	0.05	1.8	4.89	7.52	0.34	0.12	0	0.00	0.17	0.22	0.08	0.23	373.28	378.92
27	389.26	12	1.8	81.68	0.17%	0.11	4.89	0.06	0.5	4.40	2.41	0.30	0.11	90	0.21	0.40	0.52	0.20	0.51	389.77	379.10
28	389.95	12	0.8	100.03	0.05%	0.05	5.00	0.10	0.0	0.00	0.00	0.00	0.00	0	0.00	0.16	0.13	0.05	0.17	370.12	380.11
29	372.05	12	0.5	89.48	0.02%	0.02	4.40	0.08	0.7	3.82	2.78	0.23	0.08	0	0.00	0.15	0.20	0.06	0.22	372.27	381.33
30	389.95	12	0.7	28.69	0.04%	0.01	3.82	0.06	0.1	3.80	0.57	0.24	0.06	50	0.17	0.30	0.40	0.15	0.41	370.36	378.93
31	370.36	12	0.3	65.31	0.01%	0.01	3.79	0.05	0.0	0.00	0.00	0.00	0.00	0	0.00	0.08	0.07	0.03	0.08	370.43	380.88
32	371.75	12	0.1	88.88	0.00%	0.00	3.80	0.06	0.1	3.82	0.31	0.24	0.06	0	0.00	0.14	0.18	0.07	0.19	371.84	380.85
33	370.35	12	0.1	89.76	0.00%	0.00	3.92	0.06	0.7	2.96	2.09	0.14	0.03	0	0.00	0.11	0.14	0.05	0.14	370.89	378.88
34	384.64	12	0.7	85.04	0.03%	0.03	2.98	0.03	0.0	0.00	0.00	0.00	0.00	0	0.00	0.03	0.04	0.02	0.07	384.71	385.00
35	383.40	12	0.3	86.54	0.01%	0.01	2.28	0.02	0.0	0.00	0.00	0.00	0.00	0	0.00	0.02	0.03	0.01	0.03	383.43	385.00
47	385.41	12	0.2	54.48	0.00%	0.00	2.03	0.02	0.7	7.85	5.67	0.91	0.32	0	0.00	0.33	0.43	0.17	0.44	385.65	378.35
48	370.55	12	0.7	69.76	0.04%	0.03	7.85	0.23	0.0	0.00	0.00	0.00	0.00	0	0.00	0.29	0.30	0.11	0.32	370.87	378.35

E
D
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A



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Subsection: Master Network Summary
Label: CH-1

Catchments Summary

Sub	Storm	Area (Ac)	Hydrograph (CFS)	Time to Peak (Min)	Peak Flow (CFS)
CH-1	1 year	1	0.076	228.000	0.48
CH-1	2 year	2	0.149	228.000	1.40
CH-1	10 year	10	0.441	228.000	5.23

Node Summary

Node	Storm	Area (Ac)	Hydrograph (CFS)	Time to Peak (Min)	Peak Flow (CFS)
CH-1	1 year	1	0.076	228.000	0.48
CH-1	2 year	2	0.149	228.000	1.40
CH-1	10 year	10	0.441	228.000	5.23

Subsection: Unit Hydrograph Summary
Label: CH-1

Return Event: 1 year
Storm Event: 1 year

Storm Event

Return Event	1 year
Duration	1,440.000 min
Depth	2.6 in
Time of Concentration (Empirical)	15.451 min
Area (User Defined)	4,460 acres

Computational Time

Increment	2.000 min
Time to Peak (Computed)	727.239 min
Flow (Peak, Computed)	5.48 (17) cfs
Outlet Elevation	3,200 msl
Time to Flow (Peak, Interpolated Output)	228.000 min
Flow (Peak, Interpolated Output)	6.48 (17) cfs

Drainage Area

SCS CN (Composite)	60.000
Area (User Defined)	4,460 acres
Maximum Retention (Previous)	6.7 in
Maximum Retention (Previous, 20 percent)	1.3 in

Cumulative Runoff

Cumulative Runoff Depth (Previous)	6.2 in
Runoff Volume (Previous)	0.679 ac-ft

Hydrograph Volume (Area under Hydrograph curve)

Volume	0.676 ac-ft
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SCS Unit Hydrograph Parameters

Time of Concentration (Empirical)	15.451 min
Computational Time Increment	2.000 min
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Routing/Scaling, Tc/Tp	1.870
Unit peak, Qp	19.82 (17) cfs
Unit peak time, Tp	16.361 min

Subsection: Unit Hydrograph Summary
Label: CH-1

Return Event: 1 years
Storm Event: 1 year

SCS Unit Hydrograph Parameters

Unit routing Area, Tc	41,203 min
Total unit time, Tt	51,933 min

Subsection: Unit Hydrograph Summary
Label: CH-1

Return Event: 2 years
Storm Event: 2 year

Storm Event

Return Event	2 years
Duration	1,440.000 min
Depth	3.2 in
Time of Concentration (Empirical)	15.451 min
Area (User Defined)	4,460 acres

Computational Time

Increment	2.000 min
Time to Peak (Computed)	727.239 min
Flow (Peak, Computed)	1.40 (17) cfs
Outlet Elevation	3,200 msl
Time to Flow (Peak, Interpolated Output)	228.000 min
Flow (Peak, Interpolated Output)	1.48 (17) cfs

Drainage Area

SCS CN (Composite)	60.000
Area (User Defined)	4,460 acres
Maximum Retention (Previous)	6.7 in
Maximum Retention (Previous, 20 percent)	1.3 in

Cumulative Runoff

Cumulative Runoff Depth (Previous)	6.4 in
Runoff Volume (Previous)	0.449 ac-ft

Hydrograph Volume (Area under Hydrograph curve)

Volume	0.448 ac-ft
--------	-------------

SCS Unit Hydrograph Parameters

Time of Concentration (Empirical)	15.451 min
Computational Time Increment	2.000 min
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Routing/Scaling, Tc/Tp	1.870
Unit peak, Qp	19.82 (17) cfs
Unit peak time, Tp	16.361 min

Subsection: Unit Hydrograph Summary
Label: CH-1

Return Event: 2 years
Storm Event: 2 year

SCS Unit Hydrograph Parameters

Unit routing Area, Tc	41,203 min
Total unit time, Tt	51,933 min

Subsection: Unit Hydrograph Summary
Label: CH-1

Return Event: 10 years
Storm Event: 10 year

Storm Event

Return Event	10 year
Duration	1,440.000 min
Depth	4.8 in
Time of Concentration (Empirical)	15.451 min
Area (User Defined)	4,460 acres

Computational Time

Increment	2.000 min
Time to Peak (Computed)	727.239 min
Flow (Peak, Computed)	5.78 (17) cfs
Outlet Elevation	3,200 msl
Time to Flow (Peak, Interpolated Output)	228.000 min
Flow (Peak, Interpolated Output)	5.78 (17) cfs

Drainage Area

SCS CN (Composite)	60.000
Area (User Defined)	4,460 acres
Maximum Retention (Previous)	6.7 in
Maximum Retention (Previous, 20 percent)	1.3 in

Cumulative Runoff

Cumulative Runoff Depth (Previous)	1.2 in
Runoff Volume (Previous)	0.441 ac-ft

Hydrograph Volume (Area under Hydrograph curve)

Volume	0.441 ac-ft
--------	-------------

SCS Unit Hydrograph Parameters

Time of Concentration (Empirical)	15.451 min
Computational Time Increment	2.000 min
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Routing/Scaling, Tc/Tp	1.870
Unit peak, Qp	19.82 (17) cfs
Unit peak time, Tp	16.361 min

Subsection: Unit Hydrograph Summary
Label: CH-1

Return Event: 10 years
Storm Event: 10 year

SCS Unit Hydrograph Parameters

Unit routing Area, Tc	41,203 min
Total unit time, Tt	51,933 min



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SHEET NUMBER
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Unit Hydrograph Summary, 1 year	4
Unit Hydrograph Summary, 2 years	4
Unit Hydrograph Summary, 10 years	4

Subsection: Master Network Summary

Label: CH-1

Catchments Summary

Area	Return Event	Return Period	Peak Flow (cfs)	Peak Time (hr)	Peak Flow (ft ³ /s)
CH-1	1 year	1	0.090	747.000	0.09
CH-1	2 year	2	0.090	729.000	0.09
CH-1	10 year	10	0.278	726.000	0.28

Node Summary

Node	Return Event	Return Period	Peak Flow (cfs)	Peak Time (hr)	Peak Flow (ft ³ /s)
CH-1	1 year	1	0.090	747.000	0.09
CH-1	2 year	2	0.090	729.000	0.09
CH-1	10 year	10	0.278	726.000	0.28

Subsection: Unit Hydrograph Summary

Label: CH-1

Return Event: 1 year
Storm Event: 1

Storm Event

Storm Event	1
Return Event	1 year
Duration	1,440.000 min
Depth	2.6 in
Time of Concentration (Composite)	15.453 min
Area (User Defined)	4,480 acres

Computational Time Increment

Computational Time Increment	2.000 min
Time to Peak (Composite)	757.000 min
Flow (Peak, Composite)	0.03 ft ³ /s
Output Increment	3,000 min
Time to Flow (Peak Interpolated Output)	747.000 min
Flow (Peak Interpolated Output)	0.03 ft ³ /s

Drainage Area

SCS CA (Composite)	35.000
Area (User Defined)	4,480 acres
Maximum Retention (Permeable)	0.2 in
Maximum Retention (Permeable, 20 percent)	1.6 in

Cumulative Runoff

Cumulative Runoff Depth (Permeable)	0.1 in
Runoff Volume (Permeable)	0.000 ac-ft

Hydrograph Volume (Area under Hydrograph curve)

Volume	0.040 ac-ft
--------	-------------

SCS Unit Hydrograph Parameters

Time of Concentration (Composite)	15.453 min
Computational Time Increment	2.000 min
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Routing/Retard, T/Tp	1.070
Unit peak, cfs	75.82 cfs
Unit peak time, Tp	10.381 min

Subsection: Unit Hydrograph Summary

Label: CH-1

Return Event: 1 year
Storm Event: 1

SCS Unit Hydrograph Parameters

Time of Concentration (Composite)	15.453 min
Computational Time Increment	2.000 min
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Routing/Retard, T/Tp	1.070
Unit peak, cfs	75.82 cfs
Unit peak time, Tp	10.381 min

Subsection: Unit Hydrograph Summary

Label: CH-1

Return Event: 2 years
Storm Event: 2 year

Storm Event

Storm Event	2 year
Return Event	2 years
Duration	2,880.000 min
Depth	2.2 in
Time of Concentration (Composite)	15.453 min
Area (User Defined)	4,480 acres

Computational Time Increment

Computational Time Increment	2.000 min
Time to Peak (Composite)	757.000 min
Flow (Peak, Composite)	0.03 ft ³ /s
Output Increment	3,000 min
Time to Flow (Peak Interpolated Output)	729.000 min
Flow (Peak Interpolated Output)	0.03 ft ³ /s

Drainage Area

SCS CA (Composite)	35.000
Area (User Defined)	4,480 acres
Maximum Retention (Permeable)	0.2 in
Maximum Retention (Permeable, 20 percent)	1.6 in

Cumulative Runoff

Cumulative Runoff Depth (Permeable)	0.2 in
Runoff Volume (Permeable)	0.001 ac-ft

Hydrograph Volume (Area under Hydrograph curve)

Volume	0.090 ac-ft
--------	-------------

SCS Unit Hydrograph Parameters

Time of Concentration (Composite)	15.453 min
Computational Time Increment	2.000 min
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Routing/Retard, T/Tp	1.070
Unit peak, cfs	154.63 cfs
Unit peak time, Tp	10.381 min

Subsection: Unit Hydrograph Summary

Label: CH-1

Return Event: 2 years
Storm Event: 2 year

SCS Unit Hydrograph Parameters

Time of Concentration (Composite)	15.453 min
Computational Time Increment	2.000 min
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Routing/Retard, T/Tp	1.070
Unit peak, cfs	154.63 cfs
Unit peak time, Tp	10.381 min

Subsection: Unit Hydrograph Summary

Label: CH-1

Return Event: 10 years
Storm Event: 10 year

Storm Event

Storm Event	10 year
Return Event	10 years
Duration	2,880.000 min
Depth	4.3 in
Time of Concentration (Composite)	15.453 min
Area (User Defined)	4,480 acres

Computational Time Increment

Computational Time Increment	2.000 min
Time to Peak (Composite)	726.149 min
Flow (Peak, Composite)	3.50 ft ³ /s
Output Increment	3,000 min
Time to Flow (Peak Interpolated Output)	725.000 min
Flow (Peak Interpolated Output)	3.51 ft ³ /s

Drainage Area

SCS CA (Composite)	35.000
Area (User Defined)	4,480 acres
Maximum Retention (Permeable)	0.2 in
Maximum Retention (Permeable, 20 percent)	1.6 in

Cumulative Runoff

Cumulative Runoff Depth (Permeable)	0.9 in
Runoff Volume (Permeable)	0.030 ac-ft

Hydrograph Volume (Area under Hydrograph curve)

Volume	0.508 ac-ft
--------	-------------

SCS Unit Hydrograph Parameters

Time of Concentration (Composite)	15.453 min
Computational Time Increment	2.000 min
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Routing/Retard, T/Tp	1.070
Unit peak, cfs	154.63 ft ³ /s
Unit peak time, Tp	10.380 min

Subsection: Unit Hydrograph Summary

Label: CH-1

Return Event: 10 years
Storm Event: 10 year

SCS Unit Hydrograph Parameters

Time of Concentration (Composite)	15.453 min
Computational Time Increment	2.000 min
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Routing/Retard, T/Tp	1.070
Unit peak, cfs	154.63 ft ³ /s
Unit peak time, Tp	10.380 min

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Virginia County

Subsection: Link Hydrograph Summary
Label: CH-1

Return Event: 100 years
Storm Event: 100 year

Storm Event	100 year
Return Period	100 years
Duration	1,400.00 min
Depth	7.3 in
Time of Concentration (Distributed)	26.185 min
Area (Peak Discharge)	492,661.450 SF

Computational Time	3.740 min
Time to Peak (Computed)	287.725 min
Peak (Peak, Computed)	94.18 cfs
Outlet Elevation	8.890 Ldft
Time to Base (Peak, Interpolated Output)	728.000 min
Peak (Peak, Interpolated Output)	23.64 cfs

Drainage Area

ACS CH (Composite)	61,000
Area (Peak Discharge)	492,661.450 SF
Hydraulic Retention (Permitted)	2.6 ft
Hydraulic Retention (Provision, 24 persons)	1.1 ft

Cumulative Runoff

Cumulative Runoff Depth (ft/min)	3.7 ft
Runoff Volume (cfs-min)	2,343 ac-ft

Hydrograph Volume (Area under Hydrograph curve)

Volume	2,222 ac-ft
--------	-------------

SGD Link Hydrograph Parameters

Time of Concentration (Computed)	26.185 min
Computational Time	3,740 min
Area (Peak Discharge)	492,661.450 SF
Peak (Peak, Computed)	94.18 cfs
Time to Peak (Computed)	287.725 min
Time to Base (Peak, Interpolated Output)	728.000 min
Peak (Peak, Interpolated Output)	23.64 cfs

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Subsection: Link Hydrograph Summary
Label: CH-1

Return Event: 100 years
Storm Event: 100 year

Link receiving limit, T1	74,567 cfs
Total link time, T2	32.89 min

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Subsection: Shutoff-Area Volume Curve
Label: PD-1

Return Event: 1 years
Storm Event: 1 year

Flow (cfs)	Retention (ft)	Area (sq-ft)	Volume (cu-ft)	Retention (ft)	Area (sq-ft)	Volume (cu-ft)
236.00	0.00	1,154,862	0.000	0.000	0.000	0.000
329.00	0.25	2,143,248	4,753,588	0.027	8,029	8,029
356.00	0.50	2,376,082	8,152,284	0.042	16,058	16,058
377.00	0.75	2,625,260	12,798,993	0.105	32,116	32,116
392.00	1.00	28,709,200	32,311,750	0.210	64,232	64,232
395.00	1.25	29,214,879	49,059,499	0.315	96,348	96,348
396.00	1.50	29,476,750	65,479,465	0.420	128,464	128,464
397.00	1.75	29,498,300	75,435,224	0.525	160,580	160,580
398.00	2.00	29,326,140	85,769,888	0.630	192,696	192,696
397.00	2.25	29,409,822	95,503,529	0.735	224,812	224,812

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Subsection: Outlet Input Data
Label: Composite Outlet Structure - 1

Return Event: 1 year
Storm Event: 1 year

Required Peak Water Surface Elevation	8.89 ft
Invert Elevation	6.89 ft
Headwater (Headwater)	937.85 ft

Structure Type	Orifice	Flow	Area	Flow	Area
Rectangular Weir	Flow - 1	Flow	Orifice - 1	233.00	337.39
Round Pipe	Flow - 1	Flow	Orifice - 1	235.00	337.39
Orifice-Weir	Orifice - 1	Flow	Orifice - 1	232.00	337.39
Column-Weir	Orifice - 1	Flow	Orifice - 1	231.30	337.00
Velocity Weir	Flow - 1	Flow	Orifice - 1	230.00	337.00

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Subsection: Outlet Input Data
Label: Composite Outlet Structure - 1

Return Event: 1 year
Storm Event: 1 year

Structure ID: Outlet - 1	1
Structure Type: Orifice-Weir	
Number of Openings	1
Orifice Diameter	335.00 ft
Orifice Coefficient	0.600

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Subsection: Outlet Input Data
Label: Composite Outlet Structure - 1

Return Event: 1 year
Storm Event: 1 year

Structure ID: Outlet - 1	1
Structure Type: Orifice-Weir	
Number of Openings	1
Orifice Diameter	335.00 ft
Orifice Coefficient	0.600

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Subsection: Outlet Input Data
Label: Composite Outlet Structure - 1

Return Event: 1 year
Storm Event: 1 year

Structure ID: Weir - 1	1
Structure Type: Rectangular Weir	
Number of Openings	1
Orifice Diameter	335.00 ft
Orifice Coefficient	0.600

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Subsection: Level Pool Routing Summary
Label: PD-1 (1)

Return Event: 2 years
Storm Event: 1 year

Flow (Peak In)	0.79 cfs	Time to Peak (Flow, In)	735.000 min
Flow (Peak Out)	0.11 cfs	Time to Peak (Flow, Out)	1,440.000 min

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E
D
C
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E

D

C

B

A

Substation Level Pond Routing Summary
Label: PD-1 (D)

Return Event: 1 year
Storm Event: 1 year

Information			
Inflow/Outflow Method (Component)	No Inflow/Outflow		
Initial Conditions			
Reservoir (Water Surface, Depth)	332.00 ft		
Volume (Depth)	0.413 ac-ft		
Flow (Peak Outlet)	3.20 cfs		
Flow (Peak Inlet)	0.00 cfs		
Flow (Peak Total)	0.00 cfs		
Time Increment	3.000 min		
Inflow/Outflow Hydrograph Summary			
Flow (Peak In)	3.20 cfs	Time to Peak (Flow, In)	736.000 min
Flow (Peak Out)	0.11 cfs	Time to Peak (Flow, Out)	1,440.000 min
Reservoir (Water Surface, Peak)			
Volume (Peak)	0.290 ac-ft		
Mass Balance (ac-ft)			
Volume (Initial)	0.413 ac-ft		
Volume (Final)	0.479 ac-ft		
Volume (Total Inflow)	0.000 ac-ft		
Volume (Total Outflow)	0.211 ac-ft		
Volume (Retained)	0.268 ac-ft		
Volume (Storage)	-0.000 ac-ft		
Error (Mass Balance)	0.2 %		

PGP: 11/20/16
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Substation Level Pond Routing Summary
Label: PD-1 (D)

Return Event: 10 years
Storm Event: 10 year

Information			
Inflow/Outflow Method (Component)	No Inflow/Outflow		
Initial Conditions			
Reservoir (Water Surface, Depth)	332.00 ft		
Volume (Depth)	0.413 ac-ft		
Flow (Peak Outlet)	0.20 cfs		
Flow (Peak Inlet)	0.00 cfs		
Flow (Peak Total)	0.00 cfs		
Time Increment	3.000 min		
Inflow/Outflow Hydrograph Summary			
Flow (Peak In)	22.40 cfs	Time to Peak (Flow, In)	720.000 min
Flow (Peak Out)	2.54 cfs	Time to Peak (Flow, Out)	136.000 min
Reservoir (Water Surface, Peak)			
Volume (Peak)	0.838 ac-ft		
Mass Balance (ac-ft)			
Volume (Initial)	0.413 ac-ft		
Volume (Final)	1.375 ac-ft		
Volume (Total Inflow)	0.000 ac-ft		
Volume (Total Outflow)	0.000 ac-ft		
Volume (Retained)	0.862 ac-ft		
Volume (Storage)	-0.000 ac-ft		
Error (Mass Balance)	0.3 %		

PGP: 11/20/16
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Substation Level Pond Routing Summary
Label: PD-1 (D)

Return Event: 100 years
Storm Event: 100 year

Information			
Inflow/Outflow Method (Component)	No Inflow/Outflow		
Initial Conditions			
Reservoir (Water Surface, Depth)	332.00 ft		
Volume (Depth)	0.413 ac-ft		
Flow (Peak Outlet)	0.00 cfs		
Flow (Peak Inlet)	0.00 cfs		
Flow (Peak Total)	0.00 cfs		
Time Increment	3.000 min		
Inflow/Outflow Hydrograph Summary			
Flow (Peak In)	23.40 cfs	Time to Peak (Flow, In)	720.000 min
Flow (Peak Out)	2.11 cfs	Time to Peak (Flow, Out)	250.000 min
Reservoir (Water Surface, Peak)			
Volume (Peak)	0.898 ac-ft		
Mass Balance (ac-ft)			
Volume (Initial)	0.413 ac-ft		
Volume (Final)	2.200 ac-ft		
Volume (Total Inflow)	0.000 ac-ft		
Volume (Total Outflow)	0.000 ac-ft		
Volume (Retained)	0.898 ac-ft		
Volume (Storage)	-0.000 ac-ft		
Error (Mass Balance)	0.2 %		

PGP: 11/20/16
11/20/16

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Master Network Summary

DA-S-PRE
Unit Hydrograph Summary, 1 year
Unit Hydrograph Summary, 2 years
Unit Hydrograph Summary, 10 years

Substation: Master Network Summary
Return Event: 1 year
Storm Event: 1 year 24 hour

Calculations Summary

Label	Storm	Flow Rate (MGD)	Hydrograph Peak (MGD)	Total In Peak (MGD)	Peak Flow (MGD)
DA-S-PRE	1 year 24 hour	1	6.170	720.000	2.37
DA-S-PRE	2 year 24 hour	2	6.264	720.000	4.34
DA-S-PRE	10 year 24 hour	10	6.461	720.000	8.21

Node Summary

Label	Storm	Inflow (MGD)	Flow Rate (MGD)	Hydrograph Peak (MGD)	Total In Peak (MGD)	Peak Flow (MGD)
O-1	1 year 24 hour	1	6.170	720.000	2.37	
O-1	2 year 24 hour	2	6.264	720.000	4.34	
O-1	10 year 24 hour	10	6.461	720.000	8.21	

Substation: Unit Hydrograph Summary
Return Event: 1 year
Storm Event: 1 year 24 hour

Label: DA-S-PRE

Storm Event	1 year 24 hour
Return Event	1 year
Duration	1,440.000 min
Depth	2.6 in
Time of Concentration (Computed)	6.600 min
Area (Over Outlet)	2,389 acres

Computational Time

Increment	1.200 min
Time to Peak (Computed)	720.000 min
Flow Peak (Computed)	2.38 cfs
Output Increment	2.000 min
Time to Flow Peak (Interpolated Output)	720.000 min
Flow Peak (Interpolated Output)	1.77 cfs

Drainage Area

SCS CR (Composite)	76.000
Area (Over Outlet)	2,389 acres
Maximum Retention (Permitted)	3.7 in
Maximum Retention (Permitted, 20 percent)	0.5 in

Cumulative Runoff

Cumulative Runoff Depth (Permitted)	0.9 in
Runoff Volume (Permitted)	0.170 ac-ft

Hydrograph Volume (Area under Hydrograph curve)

Volume	0.170 ac-ft
--------	-------------

SCS Unit Hydrograph Parameters

Time of Concentration (Computed)	6.600 min
Computational Time Increment	1.200 min
Time to Peak (Computed)	720.000 min
Flow Peak (Computed)	2.38 cfs
Output Increment	2.000 min
Time to Flow Peak (Interpolated Output)	720.000 min
Flow Peak (Interpolated Output)	1.77 cfs

Substation: Unit Hydrograph Summary
Return Event: 1 year
Storm Event: 1 year 24 hour

Label: DA-S-PRE

Storm Event	1 year 24 hour
Return Event	1 year
Duration	1,440.000 min
Depth	2.6 in
Time of Concentration (Computed)	6.600 min
Area (Over Outlet)	2,389 acres

Computational Time

Increment	1.200 min
Time to Peak (Computed)	720.000 min
Flow Peak (Computed)	2.38 cfs
Output Increment	2.000 min
Time to Flow Peak (Interpolated Output)	720.000 min
Flow Peak (Interpolated Output)	1.77 cfs

Drainage Area

SCS CR (Composite)	76.000
Area (Over Outlet)	2,389 acres
Maximum Retention (Permitted)	3.7 in
Maximum Retention (Permitted, 20 percent)	0.5 in

Cumulative Runoff

Cumulative Runoff Depth (Permitted)	0.9 in
Runoff Volume (Permitted)	0.170 ac-ft

Hydrograph Volume (Area under Hydrograph curve)

Volume	0.170 ac-ft
--------	-------------

SCS Unit Hydrograph Parameters

Time of Concentration (Computed)	6.600 min
Computational Time Increment	1.200 min
Time to Peak (Computed)	720.000 min
Flow Peak (Computed)	2.38 cfs
Output Increment	2.000 min
Time to Flow Peak (Interpolated Output)	720.000 min
Flow Peak (Interpolated Output)	1.77 cfs

Substation: Unit Hydrograph Summary
Return Event: 2 years
Storm Event: 2 year 24 hour

Label: DA-S-PRE

Storm Event	2 year 24 hour
Return Event	2 years
Duration	1,440.000 min
Depth	3.7 in
Time of Concentration (Computed)	6.600 min
Area (Over Outlet)	2,389 acres

Computational Time

Increment	1.200 min
Time to Peak (Computed)	720.000 min
Flow Peak (Computed)	4.34 cfs
Output Increment	2.000 min
Time to Flow Peak (Interpolated Output)	720.000 min
Flow Peak (Interpolated Output)	4.34 cfs

Drainage Area

SCS CR (Composite)	76.000
Area (Over Outlet)	2,389 acres
Maximum Retention (Permitted)	3.7 in
Maximum Retention (Permitted, 20 percent)	0.5 in

Cumulative Runoff

Cumulative Runoff Depth (Permitted)	1.3 in
Runoff Volume (Permitted)	0.252 ac-ft

Hydrograph Volume (Area under Hydrograph curve)

Volume	0.252 ac-ft
--------	-------------

SCS Unit Hydrograph Parameters

Time of Concentration (Computed)	6.600 min
Computational Time Increment	1.200 min
Time to Peak (Computed)	720.000 min
Flow Peak (Computed)	4.34 cfs
Output Increment	2.000 min
Time to Flow Peak (Interpolated Output)	720.000 min
Flow Peak (Interpolated Output)	4.34 cfs

Substation: Unit Hydrograph Summary
Return Event: 2 years
Storm Event: 2 year 24 hour

Label: DA-S-PRE

Storm Event	2 year 24 hour
Return Event	2 years
Duration	1,440.000 min
Depth	3.7 in
Time of Concentration (Computed)	6.600 min
Area (Over Outlet)	2,389 acres

Computational Time

Increment	1.200 min
Time to Peak (Computed)	720.000 min
Flow Peak (Computed)	4.34 cfs
Output Increment	2.000 min
Time to Flow Peak (Interpolated Output)	720.000 min
Flow Peak (Interpolated Output)	4.34 cfs

Drainage Area

SCS CR (Composite)	76.000
Area (Over Outlet)	2,389 acres
Maximum Retention (Permitted)	3.7 in
Maximum Retention (Permitted, 20 percent)	0.5 in

Cumulative Runoff

Cumulative Runoff Depth (Permitted)	1.3 in
Runoff Volume (Permitted)	0.252 ac-ft

Hydrograph Volume (Area under Hydrograph curve)

Volume	0.252 ac-ft
--------	-------------

SCS Unit Hydrograph Parameters

Time of Concentration (Computed)	6.600 min
Computational Time Increment	1.200 min
Time to Peak (Computed)	720.000 min
Flow Peak (Computed)	4.34 cfs
Output Increment	2.000 min
Time to Flow Peak (Interpolated Output)	720.000 min
Flow Peak (Interpolated Output)	4.34 cfs

Substation: Unit Hydrograph Summary
Return Event: 10 years
Storm Event: 10 year 24 hour

Label: DA-S-PRE

Storm Event	10 year 24 hour
Return Event	10 years
Duration	1,440.000 min
Depth	4.8 in
Time of Concentration (Computed)	6.600 min
Area (Over Outlet)	2,389 acres

Computational Time

Increment	1.200 min
Time to Peak (Computed)	720.000 min
Flow Peak (Computed)	8.21 cfs
Output Increment	2.000 min
Time to Flow Peak (Interpolated Output)	720.000 min
Flow Peak (Interpolated Output)	6.24 cfs

Drainage Area

SCS CR (Composite)	76.000
Area (Over Outlet)	2,389 acres
Maximum Retention (Permitted)	3.7 in
Maximum Retention (Permitted, 20 percent)	0.5 in

Cumulative Runoff

Cumulative Runoff Depth (Permitted)	0.8 in
Runoff Volume (Permitted)	0.099 ac-ft

Hydrograph Volume (Area under Hydrograph curve)

Volume	0.099 ac-ft
--------	-------------

SCS Unit Hydrograph Parameters

Time of Concentration (Computed)	6.600 min
Computational Time Increment	1.200 min
Time to Peak (Computed)	720.000 min
Flow Peak (Computed)	8.21 cfs
Output Increment	2.000 min
Time to Flow Peak (Interpolated Output)	720.000 min
Flow Peak (Interpolated Output)	6.24 cfs

Substation: Unit Hydrograph Summary
Return Event: 10 years
Storm Event: 10 year 24 hour

Label: DA-S-PRE

Storm Event	10 year 24 hour
Return Event	10 years
Duration	1,440.000 min
Depth	4.8 in
Time of Concentration (Computed)	6.600 min
Area (Over Outlet)	2,389 acres

Computational Time

Increment	1.200 min
Time to Peak (Computed)	720.000 min
Flow Peak (Computed)	8.21 cfs
Output Increment	2.000 min
Time to Flow Peak (Interpolated Output)	720.000 min
Flow Peak (Interpolated Output)	6.24 cfs

Drainage Area

SCS CR (Composite)	76.000
Area (Over Outlet)	2,389 acres
Maximum Retention (Permitted)	3.7 in
Maximum Retention (Permitted, 20 percent)	0.5 in

Cumulative Runoff

Cumulative Runoff Depth (Permitted)	0.8 in
Runoff Volume (Permitted)	0.099 ac-ft

Hydrograph Volume (Area under Hydrograph curve)

Volume	0.099 ac-ft
--------	-------------

SCS Unit Hydrograph Parameters

Time of Concentration (Computed)	6.600 min
Computational Time Increment	1.200 min
Time to Peak (Computed)	720.000 min
Flow Peak (Computed)	8.21 cfs
Output Increment	2.000 min
Time to Flow Peak (Interpolated Output)	720.000 min
Flow Peak (Interpolated Output)	6.24 cfs

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Master Network Summary

DA-5-PRD-FORST

Unit Hydrograph Summary, 1 year
Unit Hydrograph Summary, 2 year
Unit Hydrograph Summary, 10 year

Subsection: Master Network Summary

Catchments Summary

Label	Collection	Peak Flow (cfs)	Time to Peak (hr)	Time to Base (hr)	Peak Flow (cfs)
DA-5-PRD-FORST	1 year 24 hour	1	0.395	725.000	1.36
DA-5-PRD-FORST	2 year 24 hour	2	0.315	725.000	2.49
DA-5-PRD-FORST	10 year 24 hour	10	0.262	725.000	5.84

Node Summary

Node	Time to Peak (hr)	Peak Flow (cfs)	Time to Base (hr)	Peak Flow (cfs)	
D-2	1 year 24 hour	1	0.395	725.000	1.20
D-2	2 year 24 hour	2	0.315	725.000	2.49
D-2	10 year 24 hour	10	0.262	725.000	5.84

Subsection: Unit Hydrograph Summary
Label: DA-5-PRD-FORST

Return Event: 1 year
Storm Event: 1 year 24 hour

Storm Event	1 year 24 hour
Storm Event	1 year
Duration	1,440.000 min
Depth	2.2 in
Time of Concentration (Composite)	0.800 min
Area (User Defined)	2,300 acres
Computational Time (Composite)	1.280 min
Time to Peak (Composite)	725.000 min
Peak Flow (Composite)	1.20 cfs
Outlet Increment	2.49 min
Time to Flow (Peak Interpolated Output)	725.000 min
Flow (Peak Interpolated Output)	1.35 cfs

Drainage Area

ACS CA (Composite)	70.000
Area (User Defined)	2,300 acres
Maximum Retention (Previous)	4.3 in
Minimum Retention (Previous, 20 percent)	0.9 in

Cumulative Runoff

Cumulative Runoff Depth (Previous)	0.3 in
Runoff Volume (Previous)	0.895 ac-ft

Hydrograph Volume (Area under Hydrograph curve)

Volume	0.895 ac-ft
--------	-------------

SCS Unit Hydrograph Parameters

Time of Concentration (Composite)	0.800 min
Computational Time (Composite)	1.280 min
Time to Peak (Composite)	725.000 min
Peak Flow (Composite)	1.20 cfs
Outlet Increment	2.49 min
Time to Flow (Peak Interpolated Output)	725.000 min
Flow (Peak Interpolated Output)	1.35 cfs

Subsection: Unit Hydrograph Summary
Label: DA-5-PRD-FORST

Return Event: 1 year
Storm Event: 1 year 24 hour

SCS Unit Hydrograph Parameters	Value
Time of Concentration (Composite)	0.800 min
Computational Time (Composite)	1.280 min
Time to Peak (Composite)	725.000 min
Peak Flow (Composite)	1.20 cfs
Outlet Increment	2.49 min
Time to Flow (Peak Interpolated Output)	725.000 min
Flow (Peak Interpolated Output)	1.35 cfs

Subsection: Unit Hydrograph Summary
Label: DA-5-PRD-FORST

Return Event: 2 years
Storm Event: 2 year 24 hour

Storm Event	2 year 24 hour
Storm Event	2 year
Duration	1,440.000 min
Depth	2.2 in
Time of Concentration (Composite)	0.800 min
Area (User Defined)	2,300 acres
Computational Time (Composite)	1.280 min
Time to Peak (Composite)	725.000 min
Peak Flow (Composite)	2.49 cfs
Outlet Increment	3.00 min
Time to Flow (Peak Interpolated Output)	725.000 min
Flow (Peak Interpolated Output)	2.41 cfs

Drainage Area

ACS CA (Composite)	70.000
Area (User Defined)	2,300 acres
Maximum Retention (Previous)	4.3 in
Minimum Retention (Previous, 20 percent)	0.9 in

Cumulative Runoff

Cumulative Runoff Depth (Previous)	0.6 in
Runoff Volume (Previous)	0.355 ac-ft

Hydrograph Volume (Area under Hydrograph curve)

Volume	0.355 ac-ft
--------	-------------

SCS Unit Hydrograph Parameters

Time of Concentration (Composite)	0.800 min
Computational Time (Composite)	1.280 min
Time to Peak (Composite)	725.000 min
Peak Flow (Composite)	2.49 cfs
Outlet Increment	3.00 min
Time to Flow (Peak Interpolated Output)	725.000 min
Flow (Peak Interpolated Output)	2.41 cfs

Subsection: Unit Hydrograph Summary
Label: DA-5-PRD-FORST

Return Event: 2 years
Storm Event: 2 year 24 hour

SCS Unit Hydrograph Parameters	Value
Time of Concentration (Composite)	0.800 min
Computational Time (Composite)	1.280 min
Time to Peak (Composite)	725.000 min
Peak Flow (Composite)	2.49 cfs
Outlet Increment	3.00 min
Time to Flow (Peak Interpolated Output)	725.000 min
Flow (Peak Interpolated Output)	2.41 cfs

Subsection: Unit Hydrograph Summary
Label: DA-5-PRD-FORST

Return Event: 10 years
Storm Event: 10 year 24 hour

Storm Event	10 year 24 hour
Storm Event	10 year
Duration	1,440.000 min
Depth	4.4 in
Time of Concentration (Composite)	0.800 min
Area (User Defined)	2,300 acres
Computational Time (Composite)	1.280 min
Time to Peak (Composite)	725.000 min
Peak Flow (Composite)	5.84 cfs
Outlet Increment	3.00 min
Time to Flow (Peak Interpolated Output)	725.000 min
Flow (Peak Interpolated Output)	5.84 cfs

Drainage Area

ACS CA (Composite)	70.000
Area (User Defined)	2,300 acres
Maximum Retention (Previous)	4.3 in
Minimum Retention (Previous, 20 percent)	0.9 in

Cumulative Runoff

Cumulative Runoff Depth (Previous)	1.9 in
Runoff Volume (Previous)	0.355 ac-ft

Hydrograph Volume (Area under Hydrograph curve)

Volume	0.355 ac-ft
--------	-------------

SCS Unit Hydrograph Parameters

Time of Concentration (Composite)	0.800 min
Computational Time (Composite)	1.280 min
Time to Peak (Composite)	725.000 min
Peak Flow (Composite)	5.84 cfs
Outlet Increment	3.00 min
Time to Flow (Peak Interpolated Output)	725.000 min
Flow (Peak Interpolated Output)	5.84 cfs

Subsection: Unit Hydrograph Summary
Label: DA-5-PRD-FORST

Return Event: 10 years
Storm Event: 10 year 24 hour

SCS Unit Hydrograph Parameters	Value
Time of Concentration (Composite)	0.800 min
Computational Time (Composite)	1.280 min
Time to Peak (Composite)	725.000 min
Peak Flow (Composite)	5.84 cfs
Outlet Increment	3.00 min
Time to Flow (Peak Interpolated Output)	725.000 min
Flow (Peak Interpolated Output)	5.84 cfs



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SEAL
**95%
CONSTRUCTION
DOCUMENTS**

PROJECT NUMBER
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DATE
OCTOBER 24, 2016

DRAWN BY: CHECKED BY:

REVISIONS

NO.	DATE	DESCRIPTION

SHEET TITLE
CALCULATIONS

SHEET NUMBER
C13.10

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 Planning Center

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	Level Pool Roadway Summary, 2 years	13
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Subcatchment: Master Network Summary

Catchments Summary

LINE	Catchment	Area (ac)	W-Depth (ft)	W-Depth (ft)	W-Depth (ft)
DA-5-POST	1 year 24 hour	1	0.290	726.000	1.27
DA-5-POST	2 year 24 hour	2	0.295	726.000	1.29
DA-5-POST	10 year 24 hour	10	0.300	726.000	1.31

Node Summary

LINE	Node	W-Depth (ft)	W-Depth (ft)	W-Depth (ft)	W-Depth (ft)
D-5	1 year 24 hour	1	0.290	726.000	1.27
D-5	2 year 24 hour	2	0.295	726.000	1.29
D-5	10 year 24 hour	10	0.300	726.000	1.31

Point Summary

LINE	Point	W-Depth (ft)	W-Depth (ft)	W-Depth (ft)	W-Depth (ft)
PO-1 (D)	1 year 24 hour	1	0.290	726.000	1.27
PO-1 (D)	2 year 24 hour	2	0.295	726.000	1.29
PO-1 (D)	10 year 24 hour	10	0.300	726.000	1.31

Subcatchment: Unit Hydrograph Summary

Label: DA-5-POST

Return Event: 1 year
Storm Event: 1 year 24 hour

Storm Event	1 year 24 hour
Duration	1,440.000 min
Depth	2.8 in
Time of Concentration (Compas)	13.200 min
Area (Acir Defect)	2,430 acir

Computational Time

Time to Peak (Compas)	726.000 min
Flow Peak (Compas)	4.28 cfs
Outlet Inflow	3,800 cfs
Time to Flow (Peak Interpolated Outlet)	726.000 min
Flow Peak Interpolated Outlet	4.28 cfs

Drainage Area

SCS CR (Compas)	87.000
Area (Acir Defect)	2,430 acir
Retention Retention (Perme)	1.5 in
Retention Retention (Perme)	0.3 in

Computational Runoff

Cumulative Runoff Depth (Perme)	1.4 in
Runoff Volume (Perme)	0.381 ac-ft

Hydrograph Volume (Area under Hydrograph curve)

Volume	0.381 ac-ft
--------	-------------

SCS Unit Hydrograph Parameters

Time of Concentration (Compas)	13.200 min
Computational Time Increment	1.627 min
Unit Hydrograph Shape Factor	483.432
K Factor	0.798
Routing/Time, T/Tp	1.678
Unit peak, up	13.49 ft/s
Unit peak time, Tp	6.133 min

Subcatchment: Unit Hydrograph Summary

Label: DA-5-POST

Return Event: 1 year
Storm Event: 1 year 24 hour

Storm Event	1 year 24 hour
Duration	1,440.000 min
Depth	2.8 in
Time of Concentration (Compas)	13.200 min
Area (Acir Defect)	2,430 acir

Computational Time

Time to Peak (Compas)	726.000 min
Flow Peak (Compas)	4.28 cfs
Outlet Inflow	3,800 cfs
Time to Flow (Peak Interpolated Outlet)	726.000 min
Flow Peak Interpolated Outlet	4.28 cfs

Drainage Area

SCS CR (Compas)	87.000
Area (Acir Defect)	2,430 acir
Retention Retention (Perme)	1.5 in
Retention Retention (Perme)	0.3 in

Computational Runoff

Cumulative Runoff Depth (Perme)	1.4 in
Runoff Volume (Perme)	0.381 ac-ft

Hydrograph Volume (Area under Hydrograph curve)

Volume	0.381 ac-ft
--------	-------------

SCS Unit Hydrograph Parameters

Time of Concentration (Compas)	13.200 min
Computational Time Increment	1.627 min
Unit Hydrograph Shape Factor	483.432
K Factor	0.798
Routing/Time, T/Tp	1.678
Unit peak, up	13.49 ft/s
Unit peak time, Tp	6.133 min

Subcatchment: Unit Hydrograph Summary

Label: DA-5-POST

Return Event: 2 years
Storm Event: 2 year 24 hour

Storm Event	2 year 24 hour
Duration	1,440.000 min
Depth	3.2 in
Time of Concentration (Compas)	13.200 min
Area (Acir Defect)	2,430 acir

Computational Time

Time to Peak (Compas)	726.000 min
Flow Peak (Compas)	4.83 cfs
Outlet Inflow	3,800 cfs
Time to Flow (Peak Interpolated Outlet)	726.000 min
Flow Peak Interpolated Outlet	4.83 cfs

Drainage Area

SCS CR (Compas)	87.000
Area (Acir Defect)	2,430 acir
Retention Retention (Perme)	1.5 in
Retention Retention (Perme)	0.3 in

Computational Runoff

Cumulative Runoff Depth (Perme)	1.6 in
Runoff Volume (Perme)	0.381 ac-ft

Hydrograph Volume (Area under Hydrograph curve)

Volume	0.381 ac-ft
--------	-------------

SCS Unit Hydrograph Parameters

Time of Concentration (Compas)	13.200 min
Computational Time Increment	1.627 min
Unit Hydrograph Shape Factor	483.432
K Factor	0.798
Routing/Time, T/Tp	1.678
Unit peak, up	13.49 ft/s
Unit peak time, Tp	6.133 min

Subcatchment: Unit Hydrograph Summary

Label: DA-5-POST

Return Event: 2 years
Storm Event: 2 year 24 hour

Storm Event	2 year 24 hour
Duration	1,440.000 min
Depth	3.2 in
Time of Concentration (Compas)	13.200 min
Area (Acir Defect)	2,430 acir

Computational Time

Time to Peak (Compas)	726.000 min
Flow Peak (Compas)	4.83 cfs
Outlet Inflow	3,800 cfs
Time to Flow (Peak Interpolated Outlet)	726.000 min
Flow Peak Interpolated Outlet	4.83 cfs

Drainage Area

SCS CR (Compas)	87.000
Area (Acir Defect)	2,430 acir
Retention Retention (Perme)	1.5 in
Retention Retention (Perme)	0.3 in

Computational Runoff

Cumulative Runoff Depth (Perme)	1.6 in
Runoff Volume (Perme)	0.381 ac-ft

Hydrograph Volume (Area under Hydrograph curve)

Volume	0.381 ac-ft
--------	-------------

SCS Unit Hydrograph Parameters

Time of Concentration (Compas)	13.200 min
Computational Time Increment	1.627 min
Unit Hydrograph Shape Factor	483.432
K Factor	0.798
Routing/Time, T/Tp	1.678
Unit peak, up	13.49 ft/s
Unit peak time, Tp	6.133 min

Subcatchment: Unit Hydrograph Summary

Label: DA-5-POST

Return Event: 10 years
Storm Event: 10 year 24 hour

Storm Event	10 year 24 hour
Duration	1,440.000 min
Depth	4.8 in
Time of Concentration (Compas)	13.200 min
Area (Acir Defect)	2,430 acir

Computational Time

Time to Peak (Compas)	726.000 min
Flow Peak (Compas)	10.48 ft/s
Outlet Inflow	3,800 cfs
Time to Flow (Peak Interpolated Outlet)	726.000 min
Flow Peak Interpolated Outlet	10.48 ft/s

Drainage Area

SCS CR (Compas)	87.000
Area (Acir Defect)	2,430 acir
Retention Retention (Perme)	1.5 in
Retention Retention (Perme)	0.3 in

Computational Runoff

Cumulative Runoff Depth (Perme)	3.4 in
Runoff Volume (Perme)	0.862 ac-ft

Hydrograph Volume (Area under Hydrograph curve)

Volume	0.862 ac-ft
--------	-------------

SCS Unit Hydrograph Parameters

Time of Concentration (Compas)	13.200 min
Computational Time Increment	1.627 min
Unit Hydrograph Shape Factor	483.432
K Factor	0.798
Routing/Time, T/Tp	1.678
Unit peak, up	13.49 ft/s
Unit peak time, Tp	6.133 min

Subcatchment: Unit Hydrograph Summary

Label: DA-5-POST

Return Event: 10 years
Storm Event: 10 year 24 hour

Storm Event	10 year 24 hour
Duration	1,440.000 min
Depth	4.8 in
Time of Concentration (Compas)	13.200 min
Area (Acir Defect)	2,430 acir

Computational Time

Time to Peak (Compas)	726.000 min
Flow Peak (Compas)	10.48 ft/s
Outlet Inflow	3,800 cfs
Time to Flow (Peak Interpolated Outlet)	726.000 min
Flow Peak Interpolated Outlet	10.48 ft/s

Drainage Area

SCS CR (Compas)	87.000
Area (Acir Defect)	2,430 acir
Retention Retention (Perme)	1.5 in
Retention Retention (Perme)	0.3 in

Computational Runoff

Cumulative Runoff Depth (Perme)	3.4 in
Runoff Volume (Perme)	0.862 ac-ft

Hydrograph Volume (Area under Hydrograph curve)

Volume	0.862 ac-ft
--------	-------------

SCS Unit Hydrograph Parameters

Time of Concentration (Compas)	13.200 min
Computational Time Increment	1.627 min
Unit Hydrograph Shape Factor	483.432
K Factor	0.798
Routing/Time, T/Tp	1.678
Unit peak, up	13.49 ft/s
Unit peak time, Tp	6.133 min

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Subsection: Outlet Input Data
Label: Composite Outlet Structure - 1
Return Event: 1 years
Storm Event: 1 year 24 hour

Rectangular Pipe Water Surface Elevations

Minimum (Downstream)	367.50 ft
Invert (Downstream)	0.00 ft
Maximum (Upstream)	373.50 ft

Outlet Connectivity

Structure Type	Outlet ID	Structure Type	Outlet ID	Flow (cfs)	Flow (cfs)
Circular	1	Rectangular	1	367.50	373.50
Rectangular	1	Rectangular	1	367.50	373.50
Circular	1	Rectangular	1	367.50	373.50
Rectangular	1	Rectangular	1	367.50	373.50

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Subsection: Outlet Input Data
Label: Composite Outlet Structure - 1
Return Event: 1 years
Storm Event: 1 year 24 hour

Structure ID: Outlet - 1
Structure Type: Circular-Circular

Number of Corners	1
Diameter	307.50 ft
Outlet Diameter	6.0 ft
Outlet Offset	0.00 ft

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Subsection: Outlet Input Data
Label: Composite Outlet Structure - 1
Return Event: 1 years
Storm Event: 1 year 24 hour

Structure ID: Outlet - 1
Structure Type: Circular-Circular

Number of Corners	1
Diameter	18.0 ft
Length	213.61 ft
Length (Corrected Base)	394.23 ft
Base (Corrected)	3.027 ft

Outlet Control Data

Manholes	0.013
W	0.000
H	0.023
Y	0.000
Clearance Tolerance	0.00 ft

Inlet Control Data

Basin Form	Form 1
K	0.000
H	2.000
C	0.020
Y	0.000
T1 ratio (HAW)	1.500
T2 ratio (HAW)	1.500
Shape Coefficient Factor	-0.800

The unretarded inlet control equation below T1
indicates that submerged inlet control is applicable.
Use submerged inlet control equation below T2
indicates that submerged inlet control is applicable.
Inlet control is between unretarded and submerged
inlet control.
Interpolate between rows at T1 & T2.

T1 Inlet	18.00 ft	T1 Flow	4.90 cfs
T2 Inlet	18.00 ft	T2 Flow	4.90 cfs

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Subsection: Outlet Input Data
Label: Composite Outlet Structure - 1
Return Event: 1 years
Storm Event: 1 year 24 hour

Structure ID: Inlet - 1
Structure Type: Rectangular Weir

Number of Corners	1
Outlet	367.50 ft
Weir Length	2.00 ft
Weir Coefficient	3.30 ft ^{3/2} /s

Structure ID: TW
Structure Type: TW Backup, DG Channel

Tolerance Type	Not Output
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Convergence Tolerances

Minimum Tolerance	30
Maximum Tolerance	0.01 ft
Minimum Tolerance (Minimum)	0.00 ft
Maximum Tolerance (Maximum)	0.00 ft
Flow Tolerance (Minimum)	0.00 cfs
Flow Tolerance (Maximum)	10.000 cfs

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Subsection: Level Pool Routing Summary
Label: PO-1 (10)
Return Event: 1 years
Storm Event: 1 year 24 hour

Inflow

Inflow Method (Consistent)	No Inflow
----------------------------	-----------

Initial Conditions

Elevation (Water Surface, Peak)	367.50 ft
Volume (Initial)	0.000 ac-ft
Flow (Peak Outlet)	0.00 cfs
Flow (Peak Inlet)	0.00 cfs
Flow (Peak, Total)	0.00 cfs
Time (Peak)	3.00 min

Inflow/Outflow Hydrograph Summary

Flow (Peak In)	4.90 cfs	Time to Peak (Flow, In)	720.00 min
Flow (Peak Out)	1.27 cfs	Time to Peak (Flow, Outlet)	71.000 min

Reservoir (Water Surface, Peak)

Elevation (Peak)	369.50 ft
Volume (Peak)	0.027 ac-ft

Mass Balance (ac-ft)

Volume (Initial)	0.000 ac-ft
Volume (Final)	0.380 ac-ft
Volume (Total Inflow)	0.000 ac-ft
Volume (Total Outflow)	0.380 ac-ft
Volume (Initial Outflow)	0.000 ac-ft
Volume (Final Inflow)	0.000 ac-ft
Error (Mass Balance)	0.1 %

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Subsection: Level Pool Routing Summary
Label: PO-1 (10)
Return Event: 2 years
Storm Event: 2 year 24 hour

Inflow

Inflow Method (Consistent)	No Inflow
----------------------------	-----------

Initial Conditions

Elevation (Water Surface, Peak)	367.50 ft
Volume (Initial)	0.000 ac-ft
Flow (Peak Outlet)	0.00 cfs
Flow (Peak Inlet)	0.00 cfs
Flow (Peak, Total)	0.00 cfs
Time (Peak)	3.00 min

Inflow/Outflow Hydrograph Summary

Flow (Peak In)	5.90 cfs	Time to Peak (Flow, In)	720.00 min
Flow (Peak Out)	2.80 cfs	Time to Peak (Flow, Outlet)	720.000 min

Reservoir (Water Surface, Peak)

Elevation (Peak)	370.00 ft
Volume (Peak)	0.100 ac-ft

Mass Balance (ac-ft)

Volume (Initial)	0.000 ac-ft
Volume (Final)	0.200 ac-ft
Volume (Total Inflow)	0.000 ac-ft
Volume (Total Outflow)	0.200 ac-ft
Volume (Initial Outflow)	0.000 ac-ft
Volume (Final Inflow)	0.000 ac-ft
Error (Mass Balance)	0.1 %

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Page 11 of 11

Subsection: Level Pool Routing Summary
Label: PO-1 (10)
Return Event: 10 years
Storm Event: 10 year 24 hour

Inflow

Inflow Method (Consistent)	No Inflow
----------------------------	-----------

Initial Conditions

Elevation (Water Surface, Peak)	367.50 ft
Volume (Initial)	0.000 ac-ft
Flow (Peak Outlet)	0.00 cfs
Flow (Peak Inlet)	0.00 cfs
Flow (Peak, Total)	0.00 cfs
Time (Peak)	3.00 min

Inflow/Outflow Hydrograph Summary

Flow (Peak In)	10.00 cfs	Time to Peak (Flow, In)	720.00 min
Flow (Peak Out)	2.61 cfs	Time to Peak (Flow, Outlet)	726.000 min

Reservoir (Water Surface, Peak)

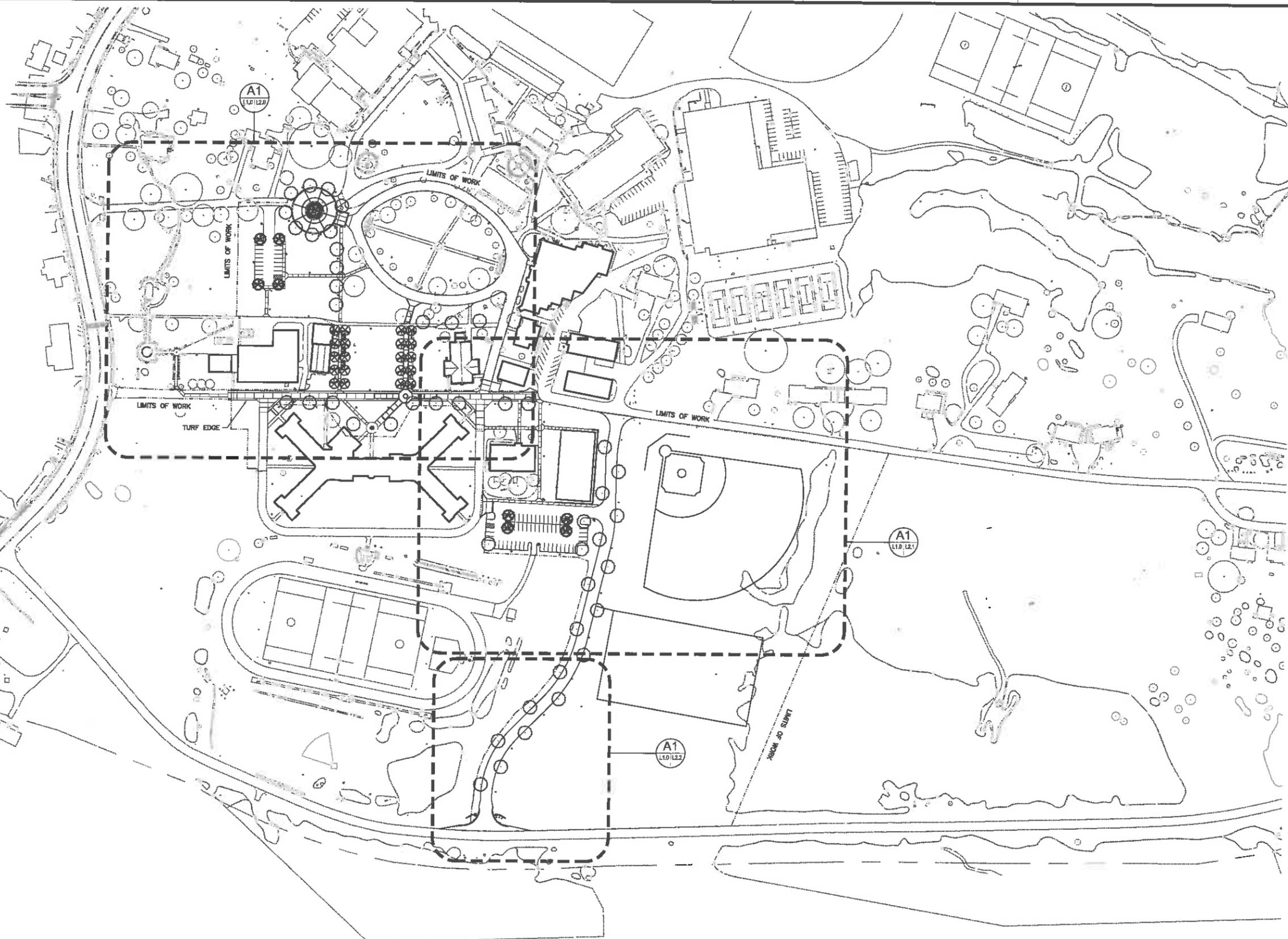
Elevation (Peak)	376.75 ft
Volume (Peak)	0.430 ac-ft

Mass Balance (ac-ft)

Volume (Initial)	0.000 ac-ft
Volume (Final)	0.400 ac-ft
Volume (Total Inflow)	0.000 ac-ft
Volume (Total Outflow)	0.400 ac-ft
Volume (Initial Outflow)	0.000 ac-ft
Volume (Final Inflow)	0.000 ac-ft
Error (Mass Balance)	0.1 %

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Page 11 of 11

E
D
C
B
A



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PROJECT NUMBER
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DATE
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DRAWN BY: JDW CHECKED BY:

REVISIONS
NO. DATE DESCRIPTION

SHEET TITLE
OVERALL SITE PLAN

SHEET NUMBER
L1.0

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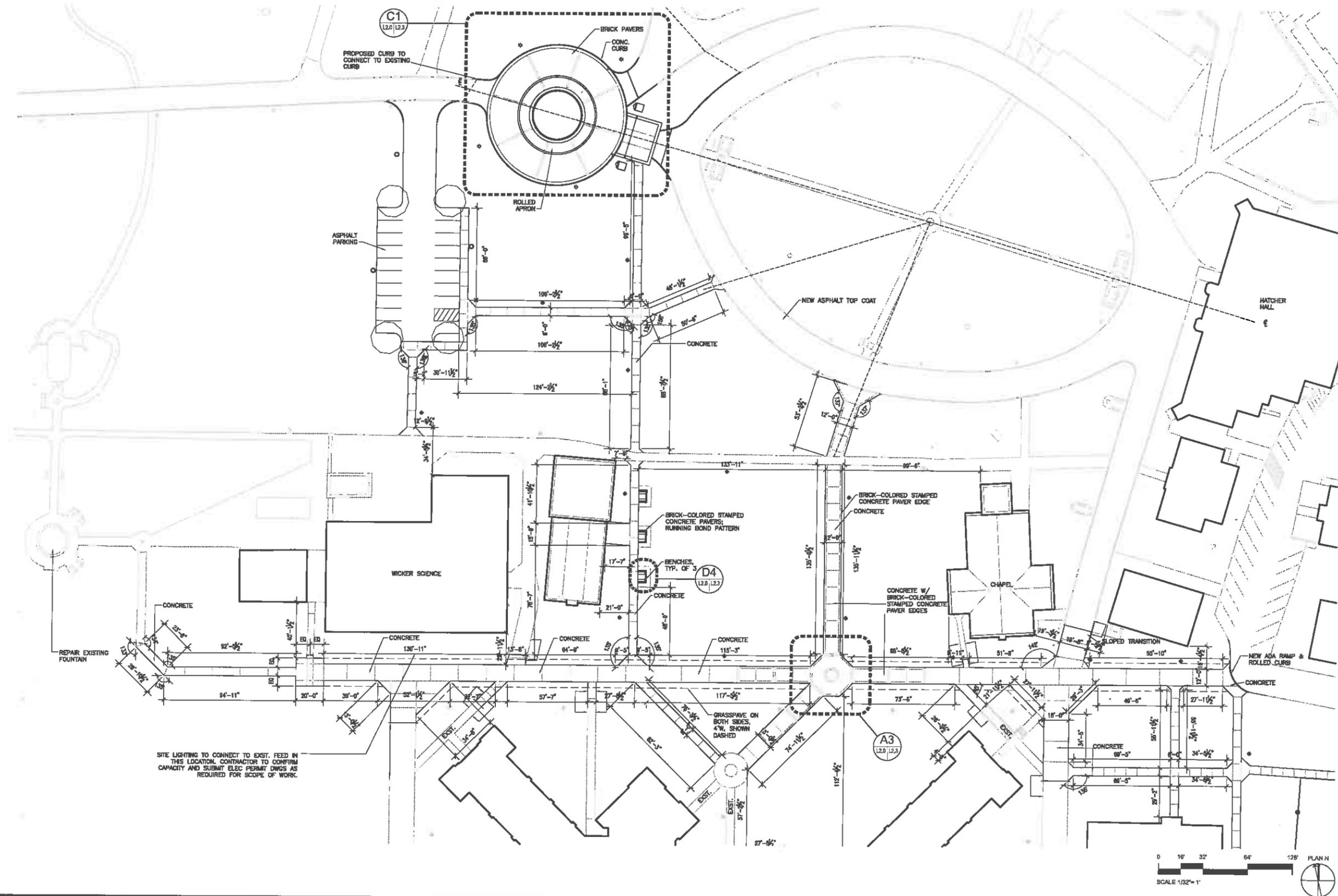
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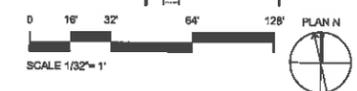
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☉	1	Type 2-4	SINGLE	3170	0.950	ARCHITECTURAL AREA LIGHTING	PROV-T4-3LED-4K-450
☉	13	FP3	SINGLE	3181	0.950	ARCHITECTURAL AREA LIGHTING	PROV-TS-3LED-4K-700
☉	3	FP4 2L	2 @ 20 DEGREE	4063	0.850	ARCHITECTURAL AREA LIGHTING	PROV-T4-3LED-4K-700
☉	2	FP4 2B	BACK-BACK	4063	0.850	ARCHITECTURAL AREA LIGHTING	PROV-T4-3LED-4K-700
☉	3	COLT-M	SINGLE	1663	0.950	HUBBELL OUTDOOR	BUL-1L4KJ (M&M)
☉	4	COLT-W	SINGLE	1665	0.950	HUBBELL OUTDOOR	BUL-1L4KJ (W&W)
☉	24	SPORTING	SINGLE	1085	0.950	HUBBELL OUTDOOR	BUL-1L4KJ (W&W)

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NOTES:
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SITE LIGHTING TO CONNECT TO EXIST. FEED IN THIS LOCATION. CONTRACTOR TO CONFIRM CAPACITY AND SUBMIT ELEC PERMIT DWGS AS REQUIRED FOR SCOPE OF WORK.



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NO.	DATE	DESCRIPTION

SHEET TITLE

HARDSCAPE PLAN LIGHTING LAYOUT

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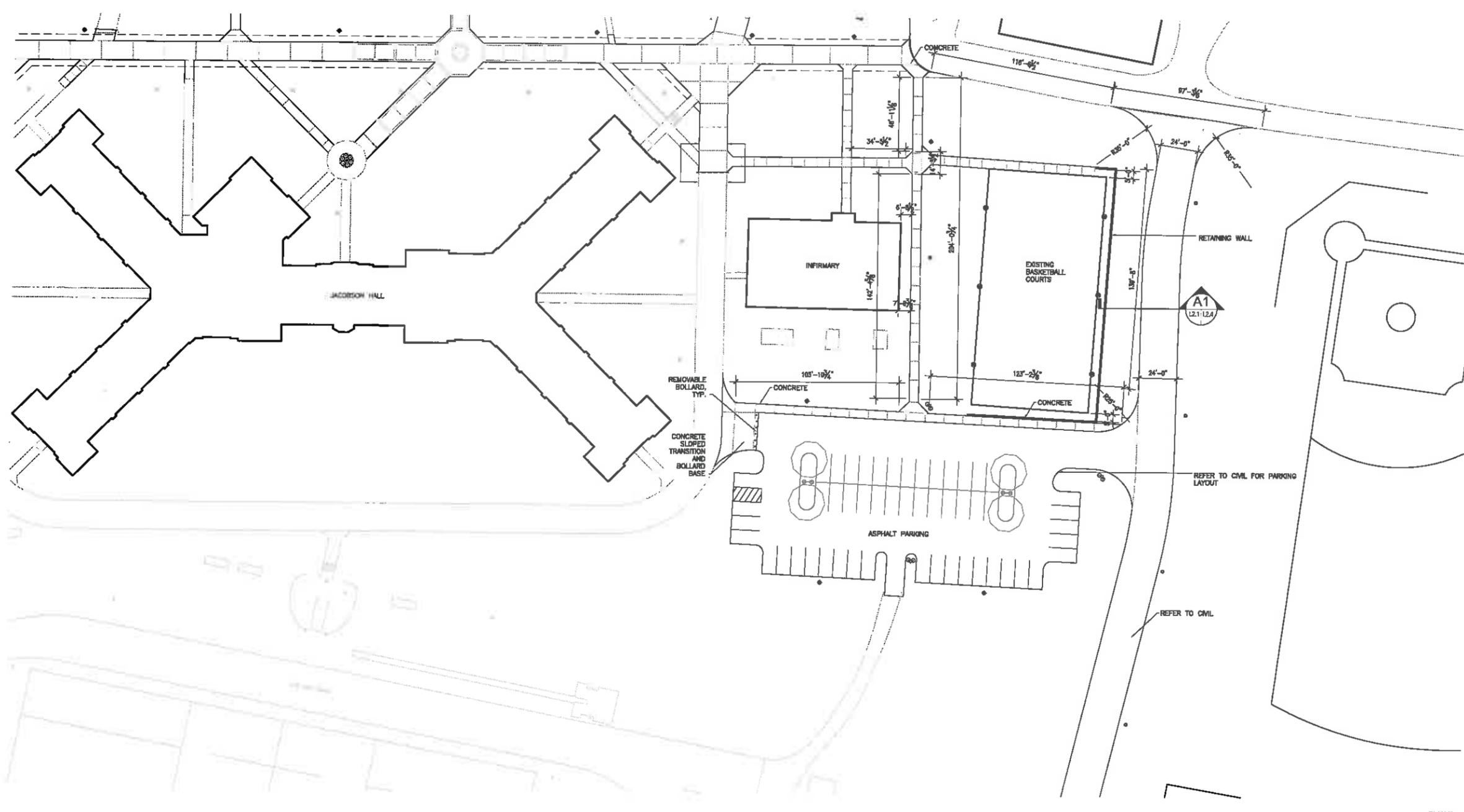
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Symbol	Qty	Label	Attachment	Unit	Quantity	Material	Remarks
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3	1	1/2" DIA. LIGHT	1000	1.000	1.000	1/2" DIA. LIGHT	1.000
4	1	1/2" DIA. LIGHT	1000	1.000	1.000	1/2" DIA. LIGHT	1.000
5	1	1/2" DIA. LIGHT	1000	1.000	1.000	1/2" DIA. LIGHT	1.000
6	1	1/2" DIA. LIGHT	1000	1.000	1.000	1/2" DIA. LIGHT	1.000
7	1	1/2" DIA. LIGHT	1000	1.000	1.000	1/2" DIA. LIGHT	1.000
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23	1	1/2" DIA. LIGHT	1000	1.000	1.000	1/2" DIA. LIGHT	1.000
24	1	1/2" DIA. LIGHT	1000	1.000	1.000	1/2" DIA. LIGHT	1.000

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24 OCTOBER 2016

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SHEET TITLE
**HARDSCAPE PLAN
 LIGHTING LAYOUT**

SHEET NUMBER
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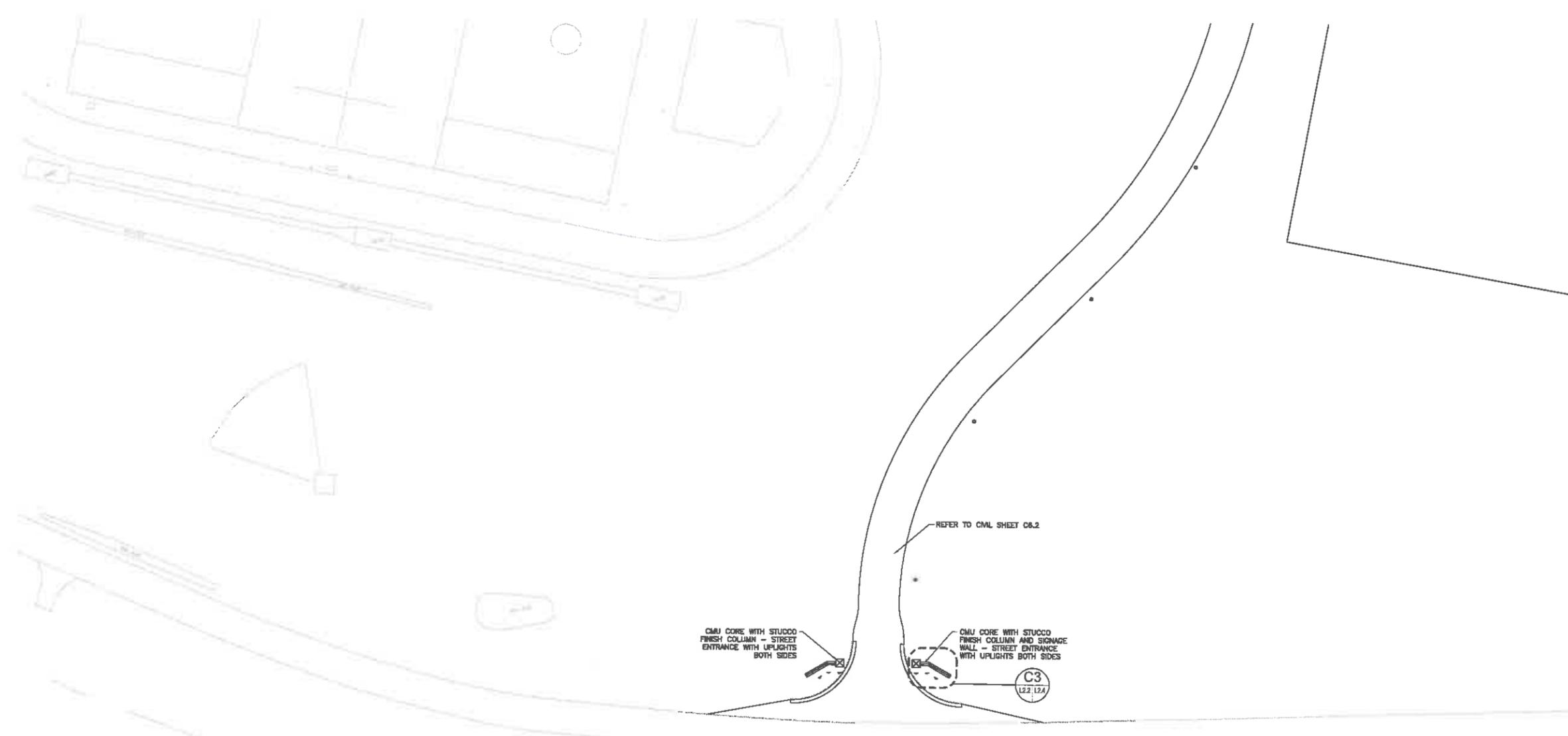
Henrico County

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☉	19	Type 2-3	SINGLE	3317	0.990	ARCHITECTURAL AREA LIGHTING	PROV-TS-32LED-4K-450
☉	1	Type 3-4	SINGLE	3170	0.990	ARCHITECTURAL AREA LIGHTING	PROV-T4-32LED-4K-450
☉	12	PHS	SINGLE	5183	0.990	ARCHITECTURAL AREA LIGHTING	PROV-T3-32LED-4K-700
☉	3	PHS	2 @ 90 DEGREE	4959	0.990	ARCHITECTURAL AREA LIGHTING	PROV-T4-32LED-4K-700
☉	2	PHS 25	BACK-2-2	4959	0.990	ARCHITECTURAL AREA LIGHTING	PROV-T4-32LED-4K-700
☉	3	COLT-4"	SINGLE	1995	0.990	HUBBELL OUTDOOR	BUL-1L4K-U (Medium)
☉	4	COLT-4"	SINGLE	1995	0.990	HUBBELL OUTDOOR	BUL-1L4K-U (Medium)
☉	24	EXISTING					

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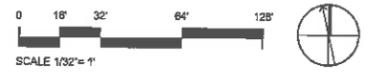
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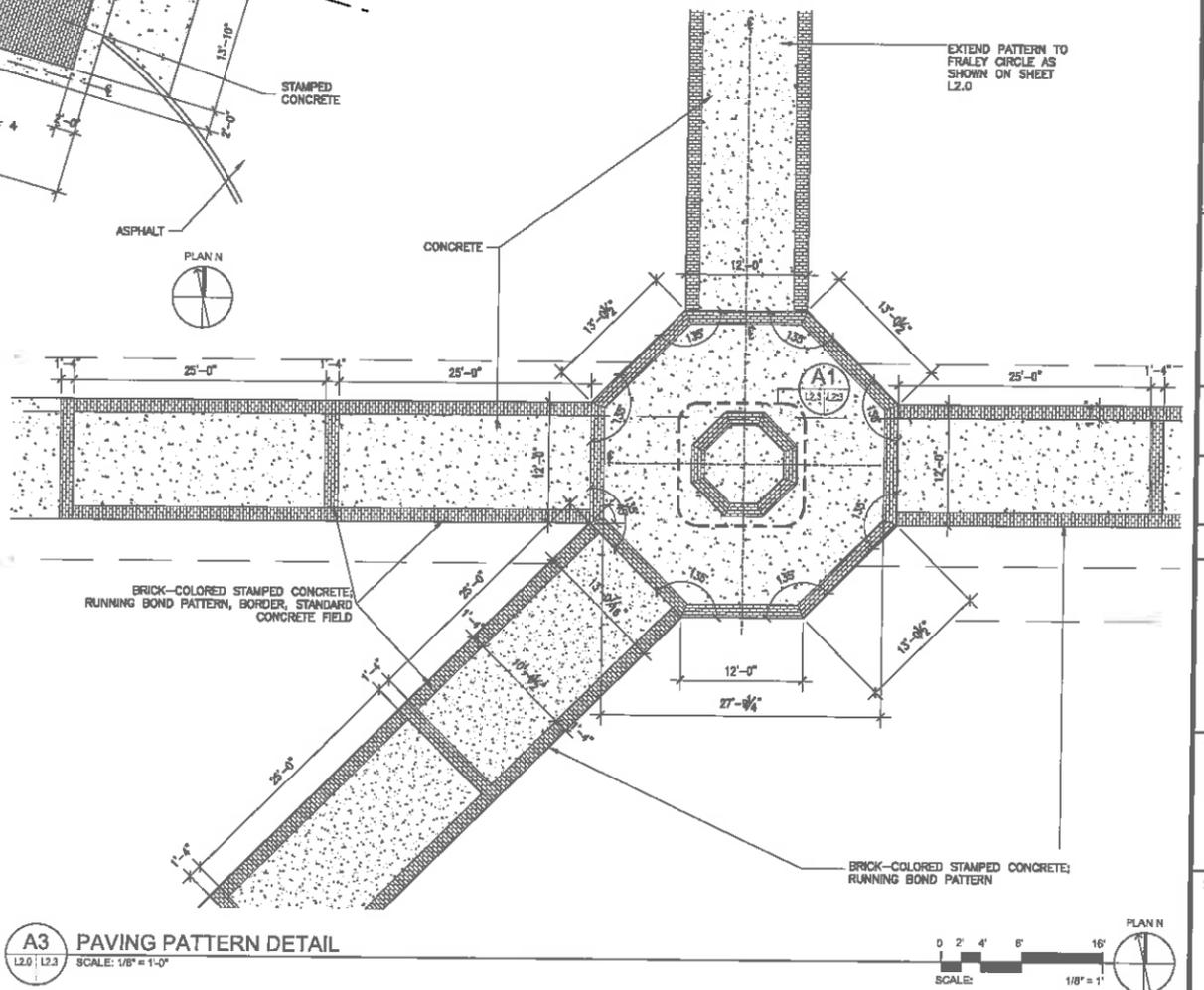
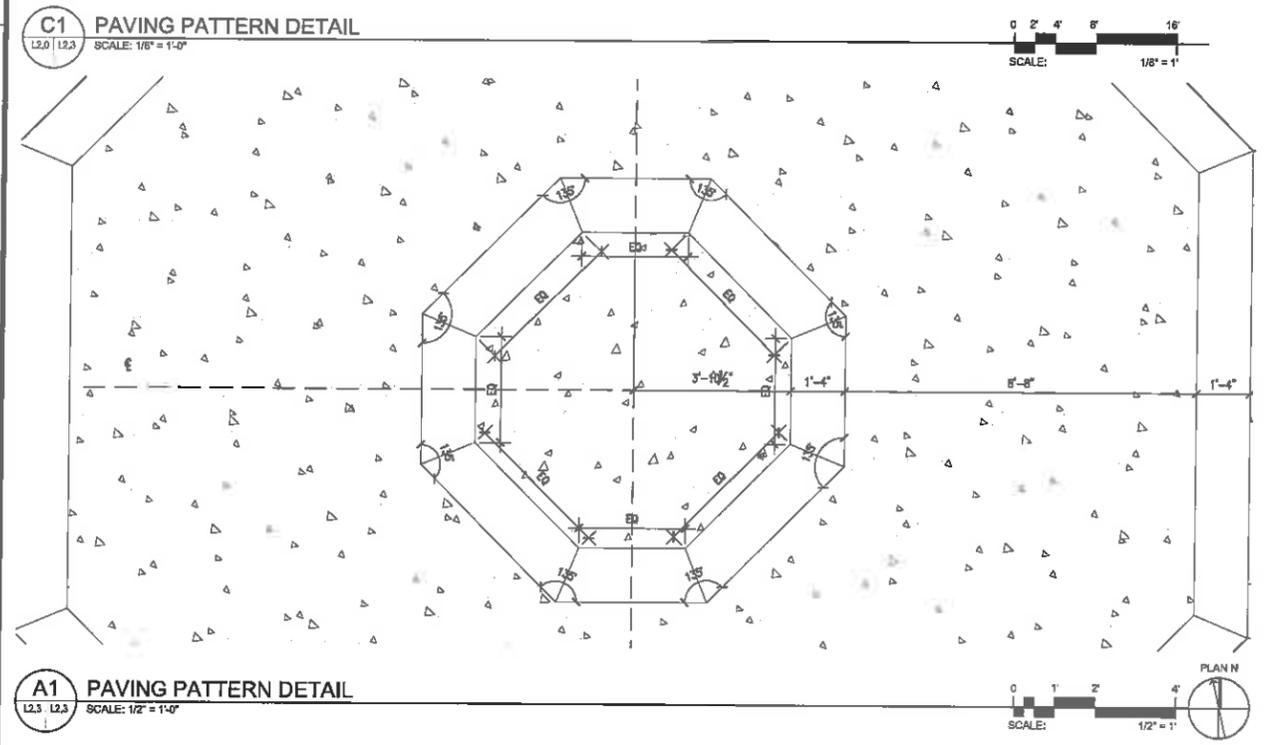
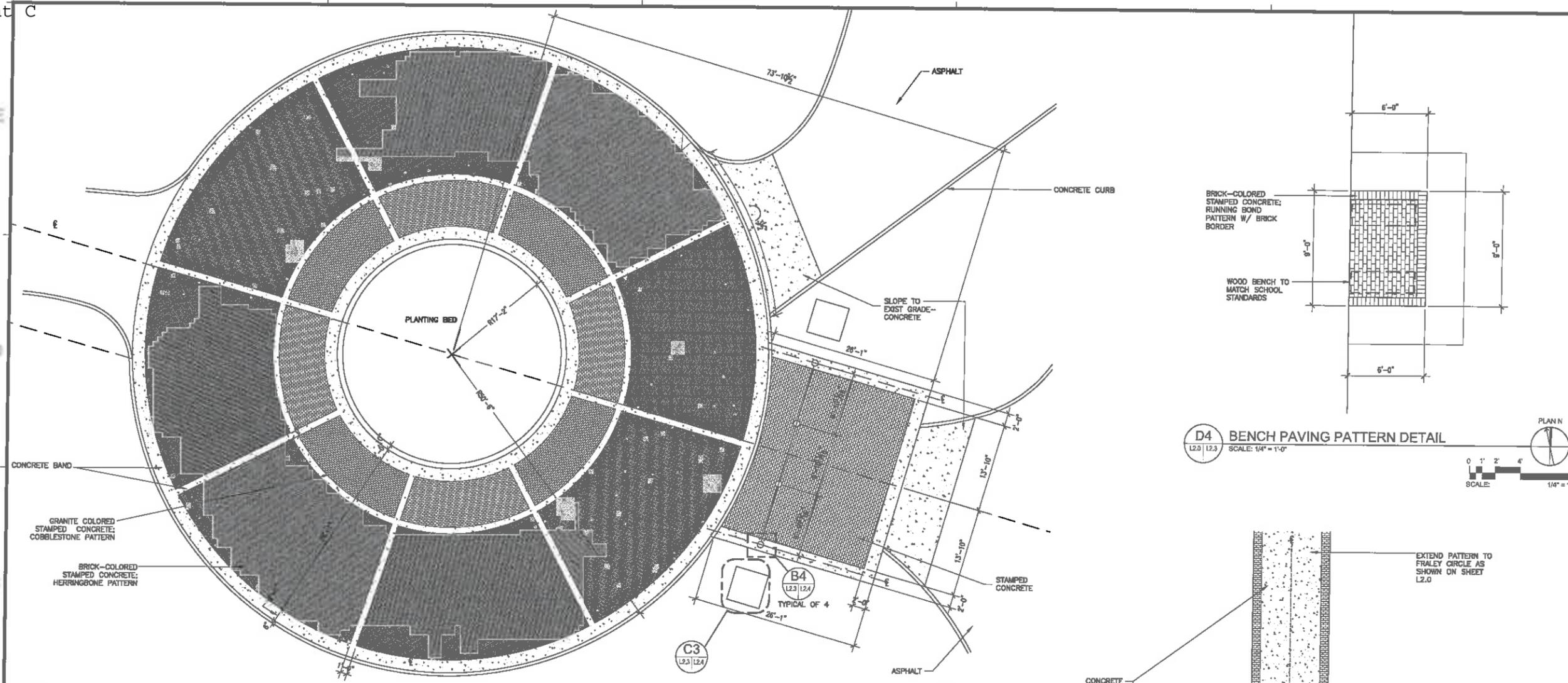
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ENLARGED PLANS

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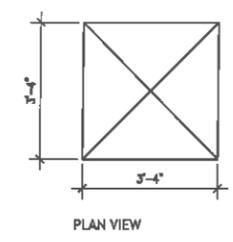
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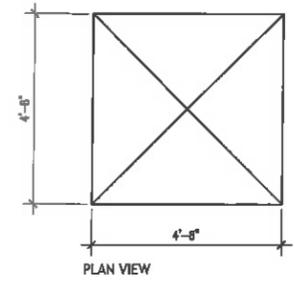
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SITE DETAILS

SHEET NUMBER
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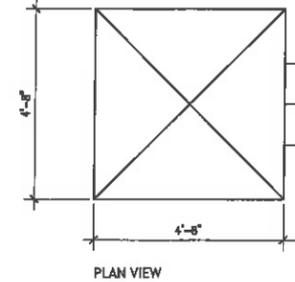
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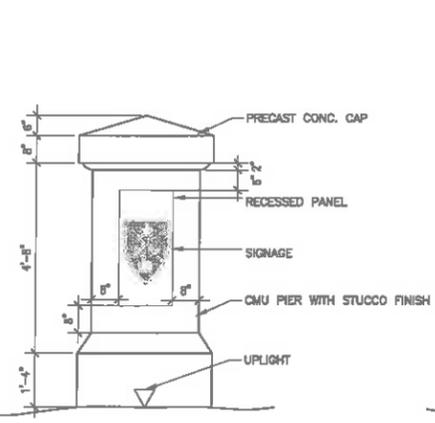
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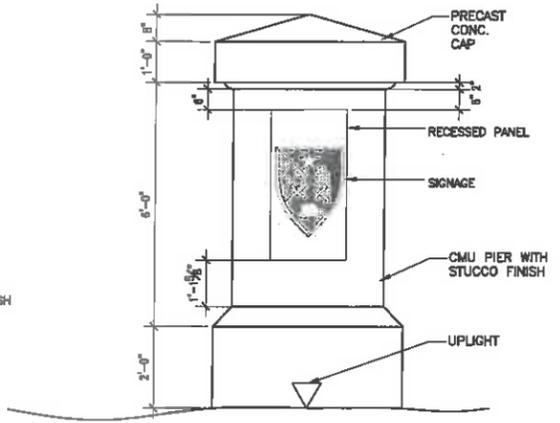
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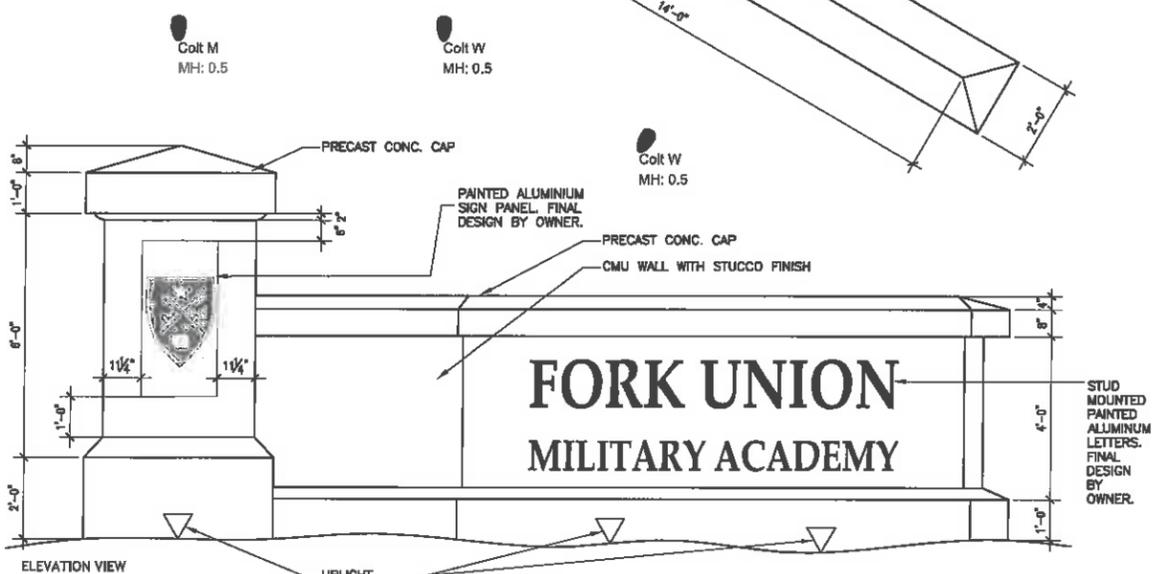
PLAN VIEW



ELEVATION VIEW



ELEVATION VIEW

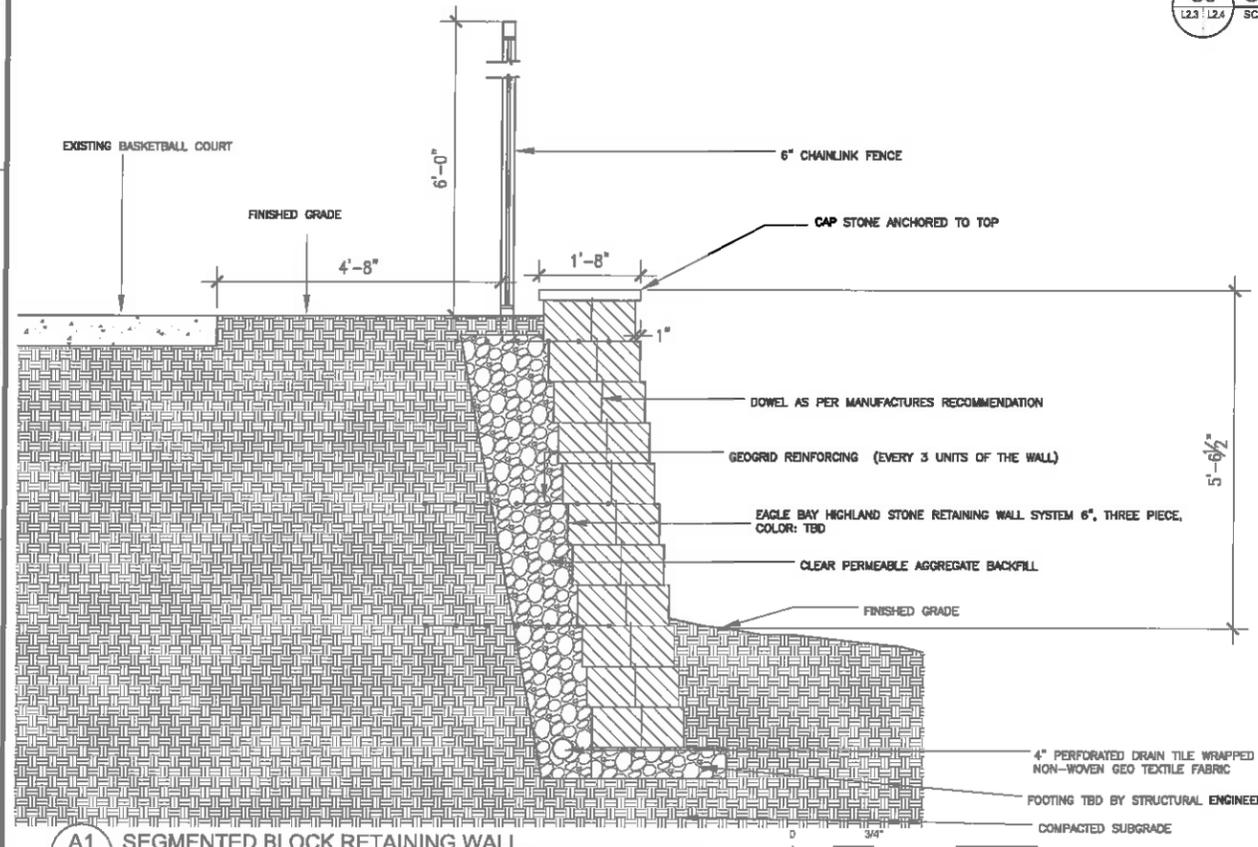


ELEVATION VIEW

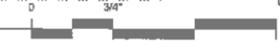
C1 CMU PIER WITH STUCCO FINISH (TOTAL OF 2)
L2.3 | L2.4 SCALE: 1/2" = 1'-0"



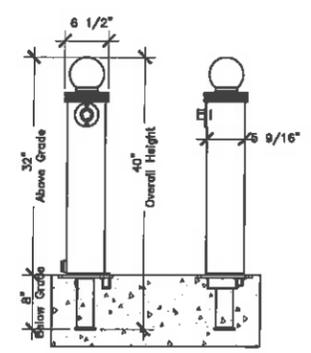
C3 CMU PIER WITH STUCCO FINISH AND SIGNAGE WALL (TOTAL OF 2)
L2.3 | L2.4 SCALE: 1/2" = 1'-0"



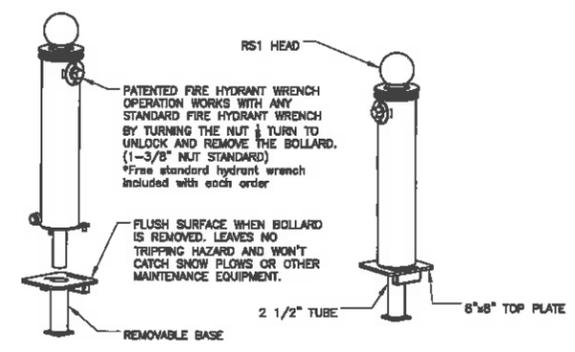
A1 SEGMENTED BLOCK RETAINING WALL
L2.1 | L2.4 SCALE: 3/4" = 1'-0"



WALL NOTE:
DETAIL SHOWN FOR COORDINATION PURPOSES ONLY. ALL WALLS, STEPS, DRAINAGE FEATURES & FENCES SHOULD BE BUILT IN THE ACCORDANCE w/ THE MANUFACTURERS SPECIFICATIONS & STANDARDS.



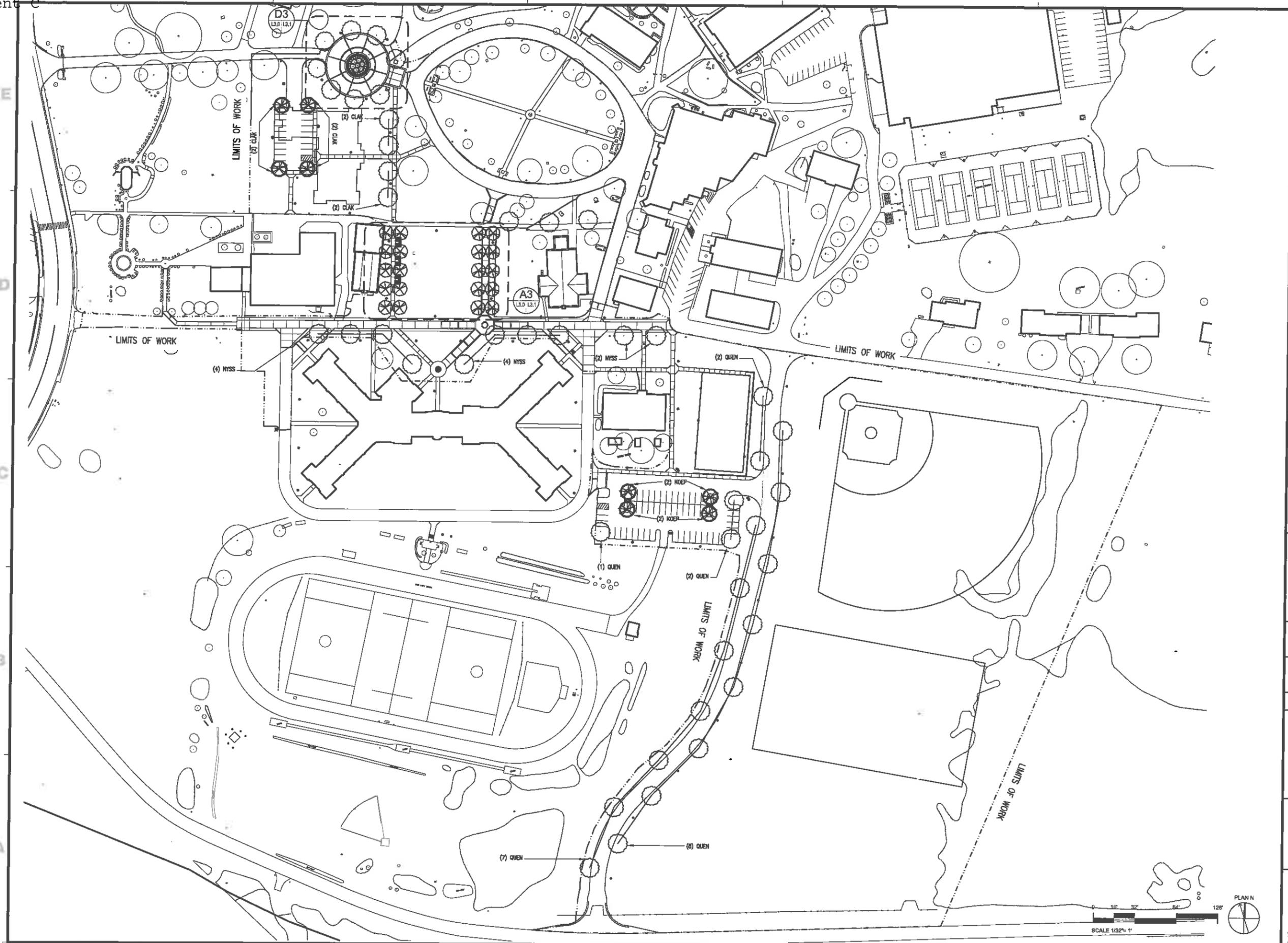
BOLLARD NOTE:
CONFIRM COLOR WITH OWNER. ALIGN WRENCH OPERATION AWAY FROM VEHICULAR APPROACH.



B4 REMOVABLE BOLLARD MAXIFORCE MRRW-RSI-R
L2.3 | L2.4 SCALE: 1/2" = 1'-0"



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DATE
24 OCTOBER 2016

DRAWN BY: EJ CHECKED BY:

REVISIONS

NO.	DATE	DESCRIPTION

SHEET TITLE
PLANTING PLAN

SHEET NUMBER
L3.0

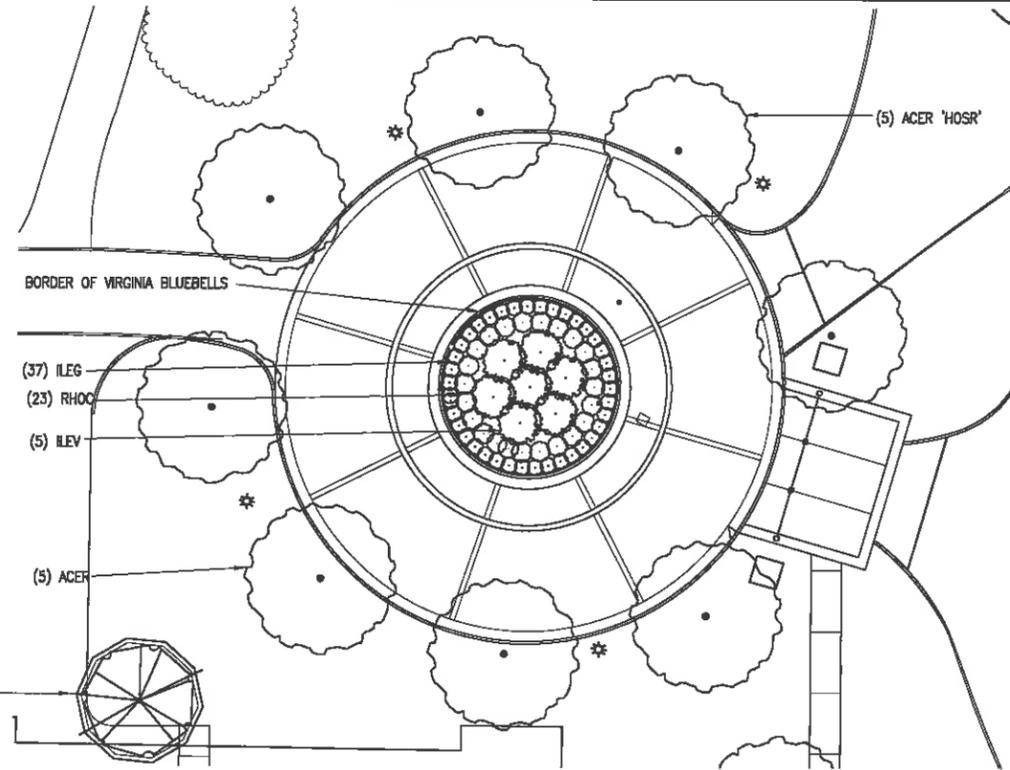
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Fluvanna County

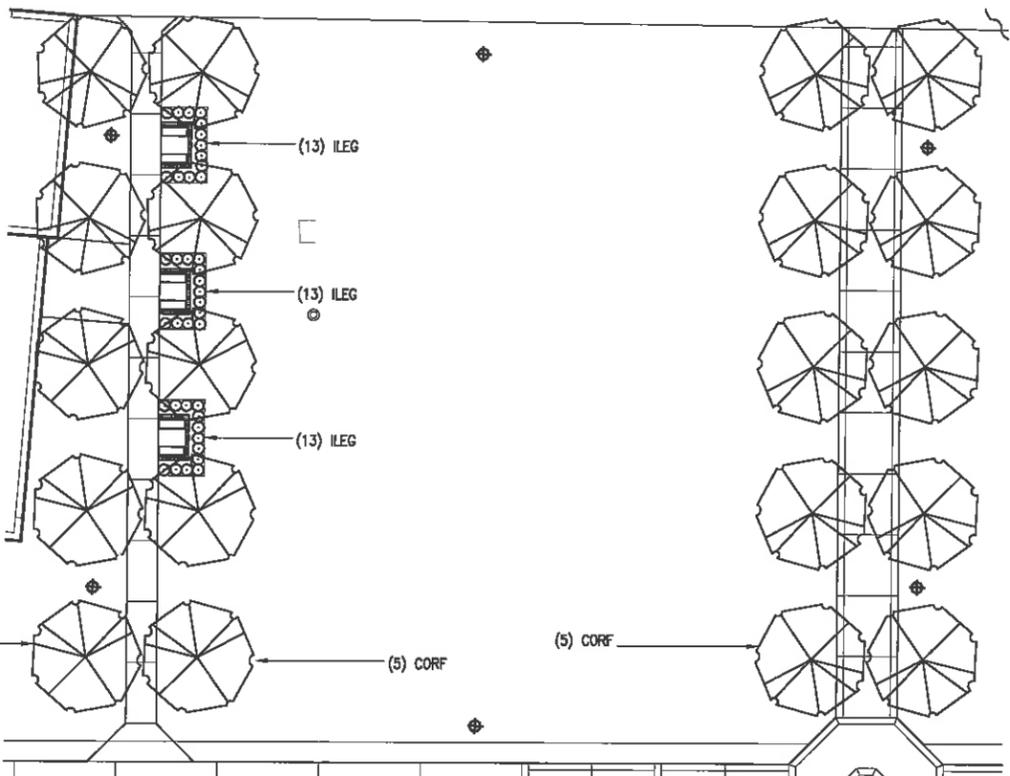
Received
NOV 07 2016

PLANT SCHEDULE:

QTY	SYMBOL	BOTANICAL NAME	COMMON NAME	SIZE	ROOT TYPE	COMMENTS
TREES						
20	QUEN	<i>Quercus nuttallii</i>	Nuttall Oak	2" cal.	B&B	
8	KOEP	<i>Koeleruteria paniculata</i>	Goldenrain Tree	1.5" cal.	CONT.	6'-8'
8	CLAK	<i>Cladrastis kentukea</i>	American Yellowwood	1.5" cal.	B&B	
10	NYSS	<i>Nyssa sylvatica</i>	Black tupelo	2" cal.	B&B	
20	CORF	<i>Cornus florida 'Cherokee Princess'</i>	Flowering dogwood	1.5" cal.	B&B	
8	ACER	<i>Acer rubrum 'October Glory'</i>	Red Maple	2" cal.	B&B	Specimen
SHRUBS						
23	RHOC	<i>Rhododendron chionoides</i>	Chionoides Rhododendron	3G	CONT.	18"
76	ILEG	<i>Ilex glabra 'compacta'</i>	Compact Inkberry holly	3G	CONT.	18"
16	ILEV	<i>Ilex verticillata</i> TBD.	Winterberry	3G	CONT.	Provide pollinator.
GROUNDCOVERS, GRASSES & PERENNIALS						
193	MERV	<i>Mertensia virginica</i>	Virginia bluebell	1G	CONT.	



C4 PLANTING PLAN
L3.0, L3.1 SCALE: 1/16" = 1'-0"



A4 PLANTING PLAN
L3.0, L3.1 SCALE: 1/16" = 1'-0"

GLAVÉ & HOLMES ARCHITECTURE

2101 East Main Street
Richmond, Virginia 23223
T 804 649 9303 F 804 343 3378
W www.glaveandholmes.com

PROJECT TITLE
FORK UNION MILITARY ACADEMY
4744 James Madison Hwy
Fork Union, VA 23055

CONSULTANTS
Draper Aden & Associates
Draper Aden & Associates
8090 Villa Park D
Richmond, VA 23228
T 804.264.2228

SEAL
95% CONSTRUCTION DOCUMENTS

PROJECT NUMBER
15103

DATE
24 OCTOBER 2016

DRAWN BY: EJ CHECKED BY:

NO.	DATE	DESCRIPTION

SHEET TITLE
PLANTING PLAN & SCHEDULE

SHEET NUMBER
L3.1

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Fauquier County

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FORK UNION MILITARY ACADEMY

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SEAL
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PROJECT NUMBER
15103

DATE
24 OCTOBER 2016

DRAWN BY: EJ CHECKED BY:

NO.	DATE	DESCRIPTION
1	7/27/16	Update

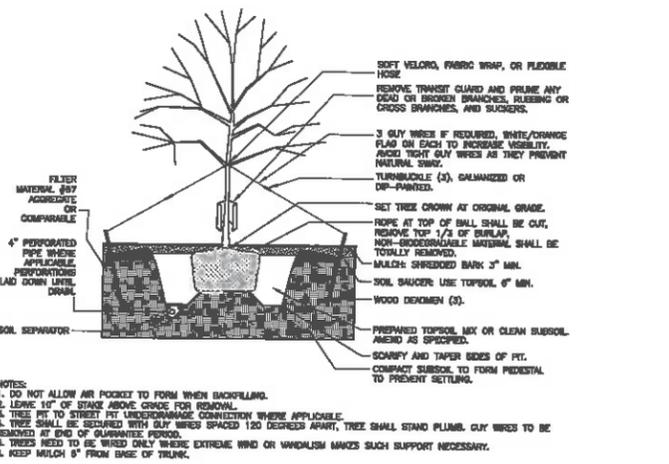
SHEET TITLE
PLANT NOTES & DETAILS

SHEET NUMBER
L3.2

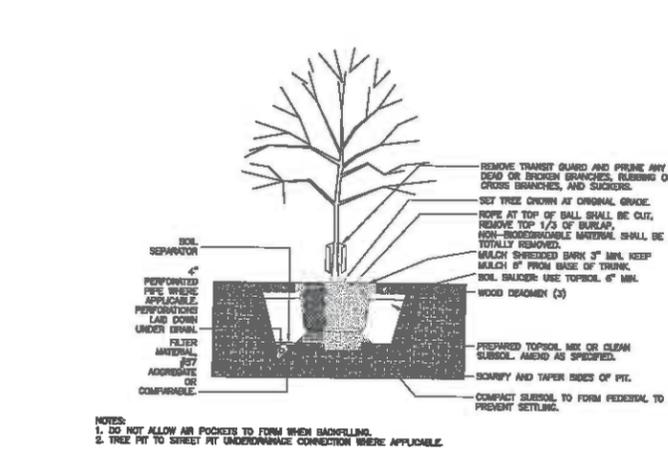
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Fluvanna County

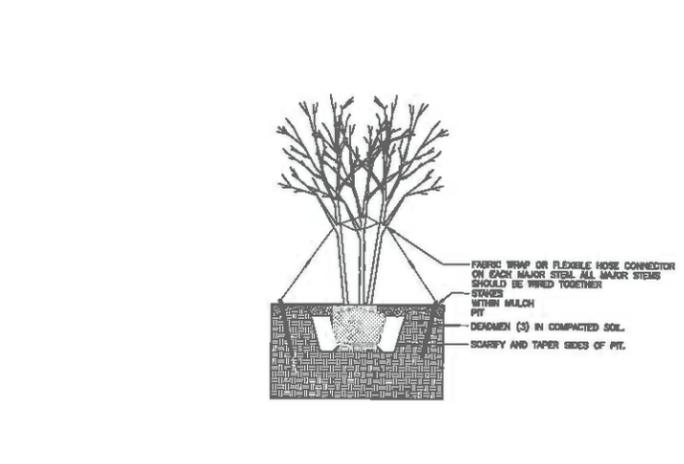
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NOV 07 2016



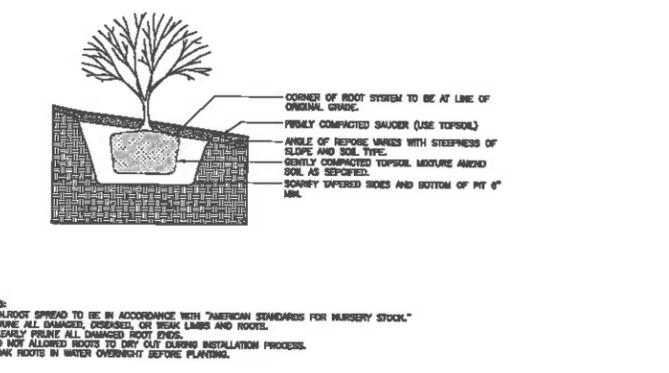
D1 DECIDUOUS TREE PLANTING WITH GUYWIRE DETAIL
SCALE: 3/4" = 1'-0"



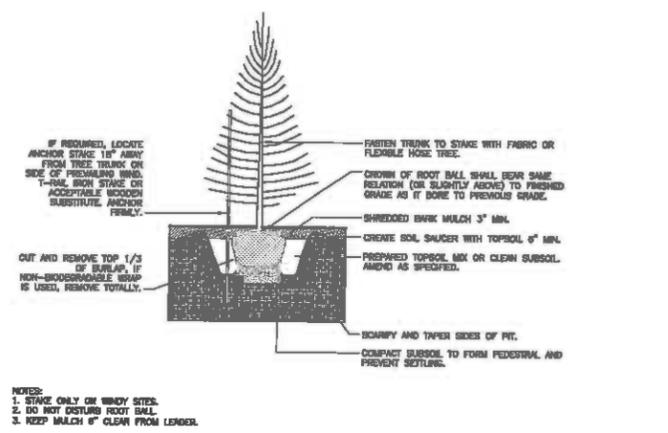
D2 DECIDUOUS TREE PLANTING DETAIL
SCALE: 3/4" = 1'-0"



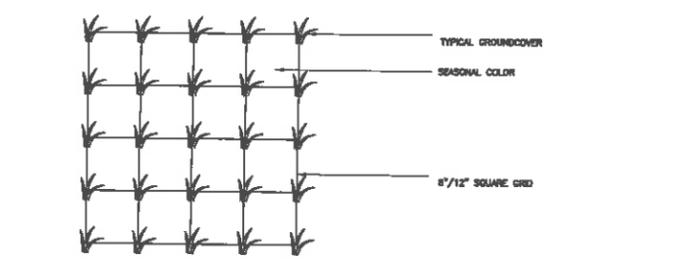
D4 MULTI-STEMMED/LOW BRANCHING TREE DETAIL
SCALE: 3/4" = 1'-0"



C1 SHRUB PLANTING DETAIL
SCALE: 3/4" = 1'-0"



C2 SHRUB PLANTING DETAIL
SCALE: 3/4" = 1'-0"



C4 GROUNDCOVER PLANTING DETAIL
SCALE: 3/4" = 1'-0"

- GENERAL LANDSCAPE NOTES:**
- REFER TO THE "STANDARDIZED LANDSCAPE SPECIFICATIONS MANUAL FOR THE STATE OF VA" FOR ADDITIONAL INFORMATION. ABIDE BY ITS CONTENTS, HOWEVER ANY NOTES OR SPECIFICATIONS ON THESE PLANS SHALL SUPERCEDE THOSE OUTLINED IN THE MANUAL.
 - CONTACT MISS UTILITY PRIOR TO THE BEGINNING OF ANY CONSTRUCTION FOR LOCATION OF ALL UTILITY LINES. TREES SHALL BE LOCATED A MINIMUM OF 5' FROM SEWER/ WATER CONNECTIONS. NOTIFY LANDSCAPE ARCHITECT IF CONFLICTS OCCUR.
 - NOTIFY APPROPRIATE REGULATORY AGENCIES AND SECURE ANY REQUIRED PERMITS PRIOR TO ANY CONSTRUCTION.
 - WORK SHALL BE COORDINATED WITH OTHER TRADES AND PERFORMED IN A WORKMANLIKE MANNER AT ALL TIMES AND UNDER THE SUPERVISION OF AN EXPERIENCED PLANTSPERSON.
 - FINE GRADING SHALL BE THE RESPONSIBILITY OF THE LANDSCAPE CONTRACTOR.
 - VERIFY PLANT MATERIAL QUANTITIES SHOWN ON PLAN WITH TOTALS IN PLANT SCHEDULE. NOTIFY LANDSCAPE ARCHITECT OF ANY DISCREPANCIES PRIOR TO FINAL BIDDING. UNIT PRICES SHALL BE SUBMITTED TO LANDSCAPE ARCHITECT WITH BID.
 - FIELD ADJUSTMENTS MAY BE NECESSARY DUE TO SITE CONDITIONS (EX: ROOT BALL AND UTILITY CONFLICT). MAJOR ADJUSTMENTS MUST BE APPROVED BY LANDSCAPE ARCHITECT.
 - THE LANDSCAPE ARCHITECT IS THE OWNER'S REPRESENTATIVE AND SHALL BE THE APPROVING AUTHORITY FOR INFORMATION PROVIDED IN THESE PLANS AND SPECIFICATIONS.
 - LAYOUT AND MARK LOCATIONS FOR PLANT MATERIAL AND IMPROVEMENTS SHOWN AND REQUEST IN FIELD APPROVAL FROM LANDSCAPE ARCHITECT.
 - PLANT MATERIAL, TOPSOIL, MULCH, FERTILIZERS, SOIL AMENITIES, PLANTING SUPPLIES AND METHODS SHALL BE SUBJECT TO LANDSCAPE ARCHITECT'S APPROVAL. REJECTED MATERIALS SHALL BE REMOVED FROM THE SITE WITHOUT DELAY.
 - BEDS TO CONTAIN SHRUBS AND/OR GROUNDCOVER SHALL BE TILLED TO A DEPTH OF 6" AND THE SOIL CONDITIONED BY ADDING CLEAN, WELL ROTTED MANURE. BEDS SHALL BE TREATED TO ELIMINATE WEEDS AND SEEDS.
 - PLANTED BEDS SHALL BE MULCHED A MINIMUM OF 3" WITH SHREDDED HARDWOOD MULCH AND EDGED WHERE ADJACENT TO ANY LAWN.
 - EXISTING TREES TO BE MULCHED TO A DIAMETER AS NEAR AS POSSIBLE TO THE EXTENTS OF THEIR DRIFLINES.
 - PLANT MATERIAL AND WORKMANSHIP SHALL BE GUARANTEED FOR A PERIOD OF NOT LESS THAN ONE YEAR FROM DATE OF OWNER'S APPROVAL AND ACCEPTANCE OF THE PLANTING INSTALLATION. CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR ALL WATERING AND MAINTENANCE DURING CONSTRUCTION UNTIL ACCEPTANCE BY OWNER, AND ASSUMES ALL RESPONSIBILITY FOR REPLACEMENT OF ANY DEAD OR DAMAGED PLANT MATERIAL.
 - LANDSCAPE ARCHITECT RESERVES THE RIGHT TO REJECT ANY PLANTS THAT ARE IN AN UNHEALTHY OR UNSIGHTLY CONDITION AS WELL AS PLANTS THAT DO NOT CONFORM TO THE AMERICAN ASSOCIATION OF NURSERYMEN STANDARDS.



COUNTY OF FLUVANNA

"Responsive & Responsible Government"

P.O. Box 540 Palmyra, VA 22963 (434) 591-1910 FAX (434) 591-1911 www.co.fluvanna.va.us

November 8, 2016

Charles King
8090 Villa Park Drive
Richmond VA, 23228

Delivered via email

Re: SDP 16:03 FUMA
Tax Map: 51, Section A, Parcels 121 and 117

Dear Mr. King:

The following comments are the result of the Technical Review Committee meeting that was held on Thursday, October 13, 2016.

1. Planning Dept: No comments.
2. Chamber of Commerce: No comments.
3. Env. Health Dept: No comments.
4. Erosion and Sediment Control: No comments at this time.
5. Fire Chief: Will bollards shown on the plan be removable, especially around the basketball court and the roundabout/Fraley? Applicant answered 'yes'. Chief was satisfied with that and with the use of honeycomb style pavers.
6. VDOT: VDOT has previously reviewed the proposed entrance on Rte. 652 and our entrance and sight line comments dated 3/33/2016 have been addressed. VDOT has no further comments at this time

The Planning Commission will have a meeting to discuss this item at their Monday, November 14, 2016 meeting. Your attendance is required at this meeting.

If you have any questions or need additional information, please contact me at 434-591-1910.

Sincerely,
James Newman
Planner
Dept. of Planning & Zoning

cc: File



COUNTY OF FLUVANNA

"Responsive & Responsible Government"

132 Main Street
P.O. Box 540
Palmyra, VA 22963
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STAFF REPORT

To: Fluvanna County Planning Commission
Case Number: ZMP 16:02
Tax Map: Tax Map 18, Section A, Parcel 10

From: James Newman
District: Palmyra
Date: November 14, 2016

General Information: This request is to be heard by the Planning Commission on Monday November 14, 2016 at 7:00 pm in the Circuit Court Room in the Courts Building.

Owner/Applicant: Owner is Bevley and Carolyn Butler. Applicant is William Bailey.

Representative: Bryan Chambers.

Requested Action: A request to rezone from A-1, Agricultural General, to R-3, Residential Planned Community, with respect to 13.81 acres of Tax Map 18, Section A, Parcel 10. (Attachment A)

Location: The property is located on South Boston Road, roughly 1,000 feet south of the intersection of South Boston Road (State Route 600) and Lake Monticello Road (State Route 618). The parcel is within the Rivanna Community Planning Area and the Palmyra Election District.

Existing Zoning: A-1, Agricultural General (Attachment B)

Proposed Zoning: R-3, Residential Planned Community

Existing Land Use: Forested/vacant

Planning Area: Rivanna Community Planning Area

Adjacent Land Use: Adjacent properties are zoned A-1, R-4

Zoning History: This item was heard at the Planning Commission work session on June 22, 2016.
This item was heard at the Planning Commission regular session on August 24, 2016. The item was deferred, on a vote of 5-0-0.

This item was heard at the Planning Commission work session on September 28, 2016.

Neighborhood Meeting:

Neighborhood meeting was held June 8, 2016. There was one (1) attendee specifically for this item (on the Sign In Sheet in the attachment, Mike Brown and Bryan Chambers have written their names, but they were there only to present. The sole attendee is the person listed last on the list). The attendee had several concerns which are explained in detail in Attachment C.

In short, the questions (and answers) boiled down to:

1. *What type of affordable housing will be constructed?* Housing affordable to service workers. This is not intended to be Section 8 or otherwise subsidized housing. Meant to house many different age groups, and create a community.
2. *Will these be rental or owner-occupied units?* While these are intended to be owner-occupied, rentals are possible.
3. *What will happen to the trees on sight?* Buffer zones will be placed.
4. *How many vehicle entrances to the sight will there be?* Just one entering from South Boston Road, unless Riverside Drive is extended into the property.
5. *South Boston Road has heavy and fast moving traffic. What will this project do regarding that?* A de-acceleration lane has been placed for people making a right turn into the development. We have also thought about placing an area aside for a Sheriff's vehicle to stay in and monitor traffic.

A letter of support for this item was received, and is included in Attachment A.

Technical Review Committee:

The following comments are the result of the Technical Review Committee meeting that was held on Thursday, June 9, 2016.

1. Planning Staff: This is a rezoning from A-1 to R-3. The parcel is located within a Community Planning Area and is surrounded by R-4 Residential, Limited District zoned parcels. The sketch plan appears to conform to R-3 zoning requirements. No comments for rezoning application (if rezoning is approved, staff will do another TRC review for site plan). County needs affordable housing for service workers. Applicant does not plan on having rentals in development plan.
2. Fire Chief wanted to know if Aqua would be providing water service for site. Fire Dept. will need at least 2 hydrants with a 6 inch main. Proposed buildings need to have firewalls. Road width must be large enough to allow emergency vehicle access.

3. Erosion and Sediment Control had no comments on the rezoning. The Site Plan is a challenging site for stormwater management. Further comments will be given if Site Development Plan is submitted, pending rezoning approval.
4. VDOT offers the following preliminary comments:
Rte. 600 (South Boston Road) is a Rural Major Collector with a posted speed limit of 45 mph. VDOT's 2015 Traffic Data shows an estimated Annual Average Daily Traffic Volume of 5300 vehicles.

Provide an entrance analysis for the proposed development at full build out (residential and commercial) along with the recommended road improvements to support the proposed the development, VDOT will review the entrance analysis and provide comments if applicable. Base traffic volumes for the study off of VDOT's 2015 Traffic Data (5300 AADT), the additional traffic generated by other proposed developments at full build out (Sycamore Square, Houchens Place, etc.) and the projected traffic volumes from the existing approved developments (Village Oaks, River Oaks, etc.) along Rte. 618 that are under construction or have not yet been built out .

Rte. 600 (South Boston Road) has a posted speed limit of 45 mph which requires a minimum of 500 ft. of Intersection Sight Distance for a standard commercial entrance. Intersection Sight Distance will be measured from 14.5 ft. behind the edge of the right turn lane.

If a left turn lane is not required for the development, ensure that there is a minimum of 425 ft. of Stopping Sight Distance for motorists on Rte. 618 that are approaching stopped vehicles waiting to make a left turn into Lafayette Village.

Graphically demonstrate (horizontally and vertically) that the proposed commercial entrance provides the minimum 500 ft. of Intersection Sight Distance (height of eye = 3.5 ft., height of object = 3.5 ft. and 14.5 ft. off edge of pavement) at all points along the travel lane between the proposed entrance and the approaching travel lanes.

Provide all necessary sight easements (on site and off site) to provide and protect the 500 ft. sight triangles. The sight easement extends 5 ft. outside of and parallel to the sight lines.

The preliminary site plan of "Rivanna Heights" shows approximately 50 ft. of corner clearance from the edge of the right turn lane to the closest edge of Rivanna Heights Lane. VDOT's Access Management Regulations require a minimum of 225 ft. of corner clearance.

Master Plan shows the "Approximate Location of Existing Line of Sight Easement". Show the exact location of the existing sight easement on the site plan as well as the line of sight for the minimum 500 feet of sight distance in relationship to the

existing sight easement. Provide the legal reference (Deed/Plat Book & Page Number) for the existing sight easement.

Provide the distances in feet (center line to center) from the center of the proposed entrance to the closest commercial entrances or state road intersections (north and south of the proposed entrance).

Design of turn lane(s) shall conform to VDOT's Geometric Design for Rural Collector Road System (GS-3) with ADT over 2000, Rolling Terrain (12 ft. min. lane width, 8 ft. graded shoulder, etc.).

Rte. 600 improvements associated with Rivanna Heights shall conform to VDOT's WP-2 detail (mill and overlay to the center of road) along with any and all pavement marking eradication and installation of new pavement markings per VDOT standards and specifications.

A VDOT Land Use Permit and Security Bond will be required.

5. Health Department had no comments.
6. Sheriff: Rezoning would increase traffic on a road that is already dangerous. VDOT needs to modify speed limits. Applicant proposed putting in a spot for police vehicles to lie-in-wait of watching traffic and catching offenders. Sheriff appreciated offer but says VDOT needs to do more to control traffic speeds.
(Attachment D)

UPDATE

This item was heard once again by the TRC on October 13, 2016:

1. Planning Dept. is satisfied with the latest sketch. Applicant stated that they have designed the entrance way and deceleration lane to a standard currently met by the Riverside entrance for Lake Monticello, which serves approx. 370 lots. This subdivision will consist of approx. 40 units.
2. Joe Chesser of the Chamber of Commerce: There has been considerable push back concerning townhouses. Increasing density and impact on services. From a business standpoint we would want increase density to support business that are in place. The increase density in that area will impact traffic on 600 and 618. Especially, at the intersection.

I wonder what impact the increase density will have on Aqua Va's ability to provide. I heard that they may be at their limit from a plant processing capability and may need to expand the current plant. The result would be higher water bills????

3. Fire Chief was satisfied with the improvements, especially with the road width increase and improved roundabout design for fire apparatus mobility. All requirements have been met and satisfied. Any emergency road access needs to have a gravel base or a paved surface.
4. Environmental Health Dept. had no comments.
5. VDOT: Rte. 600 (South Boston Road) is a Rural Major Collector with a posted speed limit of 45 mph. VDOT's 2015 Traffic Data shows an estimated Annual Average Daily Traffic Volume of 5300 vehicles.
 - Provide an entrance analysis for the proposed development at full build out (residential and commercial) along with the recommended road improvements to support the proposed the development, VDOT will review the entrance analysis and provide comments if applicable. Base traffic volumes for the study off of VDOT's 2015 Traffic Data (5300 AADT), the additional traffic generated by other proposed developments at full build out (Sycamore Square, Houchens Place, etc.) and the projected traffic volumes from the existing approved developments (Village Oaks, River Oaks, etc.) along Rte. 618 that are under construction or have not yet been built out .
 - Rte. 600 (South Boston Road) has a posted speed limit of 45 mph which requires a minimum of 500 ft. of Intersection Sight Distance for a standard commercial entrance. Intersection Sight Distance will be measured from 14.5 ft. behind the edge of the right turn lane.
 - If a left turn lane is not required for the development, ensure that there is a minimum of 425 ft. of Stopping Sight Distance for motorists on Rte. 618 that are approaching stopped vehicles waiting to make a left turn into Lafayette Village.
 - Graphically demonstrate (horizontally and vertically) that the proposed commercial entrance provides the minimum 500 ft. of Intersection Sight Distance (height of eye = 3.5 ft., height of object = 3.5 ft. and 14.5 ft. off edge of pavement) at all points along the travel lane between the proposed entrance and the approaching travel lanes.
 - Provide all necessary sight easements (on site and off site) to provide and protect the 500 ft. sight triangles. The sight easement extends 5 ft. outside of and parallel to the sight lines.
 - Master Plan shows the "Approximate Location of Existing Line of Sight Easement". Show the exact location of the existing sight easement on the site plan as well as the line of sight for the minimum 500 feet of sight distance in relationship to the existing sight easement. Provide the legal reference (Deed/Plat Book & Page Number) for the existing sight easement.
 - Provide the distances in feet (center line to center) from the center of the proposed entrance to the closest commercial entrances or state road intersections (north and south of the proposed entrance).
 - Design of turn lane(s) shall conform to VDOT's Geometric Design for Rural Collector Road System (GS-3) with ADT over 2000, Rolling Terrain (12 ft. min. lane width, 8 ft. graded shoulder, etc.).

- Rte. 600 improvements associated with Rivanna Heights shall conform to VDOT's WP-2 detail (mill and overlay to the center of road) along with any and all pavement marking eradication and installation of new pavement markings per VDOT standards and specifications.
- A VDOT Land Use Permit and Security Bond will be required.

Surveys and applicable paperwork can be found in attachment F.

Please see attachment E for Mr. Chambers response to the Updated TRC comment letter.

Analysis:

A request to rezone from A-1, Agricultural General, to R-3, Residential Planned Community, with respect to 13.81 acres of Tax Map 18, Section A, Parcel 10. The property is located on South Boston Road, roughly 1,000 feet south of the intersection of South Boston Road (State Route 600) and Lake Monticello Road (State Route 618). The parcel is within the Rivanna Community Planning Area and the Palmyra Election District.

According to the 2015 Comprehensive plan, the purpose of the Rivanna Community Planning Area is such that:

“While there are a range of opinions on the extent and type of growth desired, most residents agree that it is important to take steps to maintain the rural character of the surrounding area, enhance the “country suburban” character of the community, promote a vibrant quality of life for residents, and plan for the future. The Lake proper is nearing build-out, but there is significant growth outside of the Lake. The desirable form of growth at the “Lake gates” is neighborhood mixed-use. Beyond the gates, growth should be neighborhood residential development.” (pgs.50-51).

R-3 Residential Planned Community is defined in the Zoning Ordinance as:

“This district is intended to permit compact village-style residential development and associated institutional uses, community serving mixed uses, open spaces, and creative design in accordance with a master plan. The development should occur in a manner that will protect and preserve the natural resources, trees, watersheds, contours and topographic features of the land; and to protect and enhance the natural scenic beauty of the area and support. The scale of the housing and the commercial use should be appropriate to support the residential needs at a neighborhood scale.” (pg. 308)

While the property is within a Community Planning Area and is surrounded by residential growth, there are concerns about potential increases in traffic. The Virginia Department of Transportation is in charge of managing the roads; the developer has offered to dedicate an easement to the County (the applicant may choose to officially voluntarily propose such an easement during the Site Development Application, pending approval of this rezoning).

Overall, the Site Plan appears to conform to the requirements of Fluvanna County Code. However, this application is purely in regards to the rezoning, and the Site Development Application will be reviewed separately.

Comprehensive Plan:

Land Use Chapter:

The Comprehensive Plan designates this property as within the Rivanna Community Planning Area. According to this chapter, *“additional services and infrastructure are needed to accommodate more growth”*. Additionally, *“medium and small commercial businesses, along with office, civic, and residential uses, combine to form a series of neo-traditional developments that are interconnected with surrounding development”*. This is a heavily populated area of the county, with a variety of retail establishments designed to support the existing residential community.

Further, *“surrounding growth should be a mixture of uses and residential dwelling types that serve a variety of incomes. Neighborhood mixed-use is needed to help offset the volume of single-family residential development already in this community”*. While this proposed development amendment is not mixed use, it does encourage the building of affordable housing, which is something Fluvanna County needs.

The Rivanna Community Planning Area is the most developed planning area in the county, and represents a good mixture of residential and commercial uses to sustain the citizenry. A variety of retail, food service, and professional service oriented businesses are located in and around the Rivanna CPA.

Revisions:

This proposed rezoning has gone through several revisions to ensure better compliance with Planning Commission and VDOT remarks about the entrance and proposed roadway layout. The latest iteration of the roadway plan calls for a deceleration lane, separate entrance/exit lanes, two roundabouts, internal two-way traffic access, and an emergency access road for emergency vehicles.

Conclusion:

This rezoning amendment request appears to meet the intent of the Comprehensive Plan in that the proposed rezoning may contribute to “*maintain the rural character of the surrounding area, enhance the country suburban character of the community, promote a vibrant quality of life for residents, and plan for the future*” (Comprehensive pg. 50).

In addition to conformance with the Comprehensive Plan, the Planning Commission may want to consider any potential adverse impacts, such as traffic entering and exiting the property, noise, or potential impacts to adjacent properties that future development may cause as a result of this rezoning.

The applicant and surveyor have been responsive to VDOT and Planning Commission critiques, and have revised their plans several times to better conform to their respective requirements.

Suggested Motion:

I move that the Planning Commission recommend [approval/denial/deferral] of ZMP 16:02 a request to rezone from A-1 Agricultural General to R-3 Residential Planned Community, with respect to approximately 13.81 acres of Tax Map 18, Section A, Parcel 10

Attachments:

- A – Application and APO Letter
- B – Aerial Vicinity Map
- C – Neighborhood meeting sign in sheet
- D – TRC comment letter
- E—Surveyor response to TRC letter
- F—Surveys and associated paperwork
- G- Draft Ordinance for BOS

Copy: File

Representative: Bryan Chambers at chamberslandsurveying@yahoo.com

Applicant of Record: billbailey@centurylink.net

Attachment A

Received

MAY 26 2016



Planning Dept.
COMMONWEALTH OF VIRGINIA
COUNTY OF FLUVANNA
Application for Rezoning

Owner of Record: Bevley F. & Carolyn B. Butler

E911 Address: P.O. Box 785, Scottsville VA 24590

Phone: (434) 286-3795 Fax: _____

Email: bevbutler@aol.com

Applicant of Record: William Bailey, Real Estate III

E911 Address: 2271 Seminole Trail, Ch'ville VA 22901

Phone: (434) 760-1900 Fax: _____

Email: billbailey@centurylink.net

Representative: Bryan Chambers

E911 Address: 253 Willow Drive, Keswick VA 22947

Phone: (434) 962-3746 Fax: _____

Email: chamberslandsurveying@yahoo.com

Note: If applicant is anyone other than the owner of record, written authorization by the owner designating the applicant as the authorized agent for all matters concerning the request shall be filed with this application.

Is property in Agricultural Forestal District? No Yes

If Yes, what district: _____

Tax Map and Parcel(s): TM 18 (A) -10

Deed Book Reference: DB 550-41

Acreage: 13.811 Ac. **Zoning:** A-1

Deed Restrictions? No Yes (Attach copy)

Location of Parcel: 0.3 miles south on S. Boston Road from its intersection with Lake Monticello Road

Requested Zoning: R-3

Proposed use of Property: Affordable housing units (40 townhouses - 2.9 DU per acre)

Affidavit to Accompany Petition for Rezoning

By signing this application, the undersigned owner/applicant authorizes entry onto the property by County Employees, the Planning Commission, and the Board of Supervisors during the normal discharge of their duties in regard to this request.

I/We, being duly sworn, depose and say that we are Owner/Contract Owner of the property involved in this application and that we have familiarized ourselves with the rules and regulations of the Zoning Ordinance with respect to preparing and filing the application, and that the foregoing statements and answers herein contained and the information on the attached map to the best of our ability present the argument on behalf of the application herewith requested and that the statements and information above referred to are true and correct to the best of our knowledge.

Date: 06/03/2016 Signature of Owner/Applicant: [Signature]

Subscribed and sworn to before me this 3rd day of June, 2016 Register # 47610135

My commission expires: 03-31-2018 Notary Public: [Signature]



All plats must be folded prior to submission to the Planning Department for review. Rolled plats will not be accepted.

OFFICE USE ONLY

Date Received: <u>5/26/16</u>	Pre-Application Meeting: _____	PH Sign Deposit Received: <u>1776</u>	Application #: <u>ZMP 16 :002</u>
\$1,000 plus \$50 for per acre plus mailing costs fee paid: Mailing Costs: \$20.00 Adjacent Property Owner(APO) after 1st 15, Certified			
Proffer or Master Plan Amendment: \$750.00 plus mailing costs			
Election District: <u>Rivanna</u>	Planning Area: <u>Palmyra CPA</u>		
Public Hearings			
Planning Commission		Board of Supervisors	
Advertisement Dates: <u>July 1st (July 14th & July 21st)</u>	Advertisement Dates: <u>July 25th (Aug 4th & Aug 11th)</u>		
APO Notification: <u>July 1st</u>	APO Notification: <u>Aug 1st</u>		
Date of Hearing: <u>July 27th 2016</u>	Date of Hearing: <u>August 17th 2016</u>		
Decision: _____	Decision: _____		

Attachment A

November 10, 2015

William W. Bailey
Real Estate III
2271 Seminole Trail
Charlottesville, VA 22901

Re: TM 18 A 10

To whom it may concern:

Please be advised William W. Bailey is hereby authorized to act as our duly authorized agent in all transactions involving the rezoning application with Fluvanna County Planning Department regarding the above referenced property containing 13.811 acres – 0.141 acres to Rte. 600.

Sincerely,



Bevely F. Butler



Carolyn B. Butler

cc: Fluvanna County Department of Planning & Zoning, Bryan Chambers, Mike Brown



COUNTY OF FLUVANNA

"Responsive & Responsible Government"

132 Main Street
P.O. Box 540
Palmyra, VA 22963
(434) 591-1910
Fax (434) 591-1911
www.fluvannacounty.org

June 3, 2016

Bryan Chambers
253 Willow Drive
Keswick VA, 22947

Delivered via email to chamberslandsurveying@yahoo.com

Mr. Chambers,

The presence of either yourself or a duly-appointed (in writing) agent as regards your Application for Rezoning, **is required** for the **Neighborhood Meeting** to be held at **4:30pm, Wednesday June 8, 2016** in the **Morris Room** of the Fluvanna County VA, Administrative Building. The purpose of this meeting is for you or the agent to answer any questions adjacent property owners may have about your project.

Also, the presence of either yourself or a duly-appointed (in writing) agent as regards your Special Use Permit, **is required** for the **Technical Review Committee** to be held at **10am, Thursday June 9, 2016** in the **Historic Courthouse** of the in Palmyra, Fluvanna County VA. The purpose of this meeting is for you or the agent to answer any questions the Committee members may have about your project.

If you have any questions or comments, please email me at jnewman@fluvannacounty.org, or call me at 434 591 1910. Thank you.

Sincerely,

James Newman

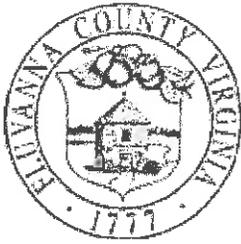
Planner

Dept. Planning and Community Development

Copy: File

Applicant of Record: William Bailey, at billbailey@centurylink.net

Attachment A



COMMONWEALTH OF VIRGINIA
COUNTY OF FLUVANNA
Public Hearing Sign Deposit

Name: William W. Bailey

Address: Better Homes and Gardens Real Estate III, 2271 Seminole Trail

City: Charlottesville

State: VA

Zip Code: 22901

I hereby certify that the sign issued to me is my responsibility while in my possession. Incidents which cause damage, theft, or destruction of these signs will cause a partial or full forfeiture of this deposit.

William W. Bailey
Applicant Signature

5/26/2016
Date

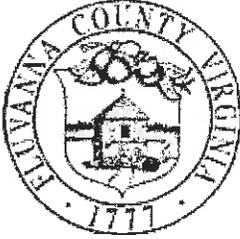
*Number of signs depends on number of roadways property adjoins.

OFFICE USE ONLY	
Application #: BZA _____ : _____ CPA _____ : _____ SUP _____ : _____ ZMP <u>16</u> : <u>002</u> ZTA _____ :	
\$90 deposit paid per sign*: <u>✓ #2478</u>	Approximate date to be returned: <u>08/18/2016</u>

Received

MAY 26 2016

Planning Dept.



COMMONWEALTH OF VIRGINIA
COUNTY OF FLUVANNA
Rezoning Processing Checklist

The following information shall be submitted with the application and is to be provided by the applicant for the processing of the application:

All maps and plans submitted are to be either 8 1/2" x 11" or 11" x 17". One original of any size may be provided to staff for use at the Public Hearing.

COUNTY STAFF USE ONLY

- Completed Rezoning Application signed by the current owner of the property or a separate statement signed by the current owner authorizing the application (Affidavit to accompany Petition for Rezoning.
Copy of plat(s) showing existing and proposed improvements
Copy of Tax Map (preferred)
Copy of deed restrictions (if applicable)
Description of proposed use
Preliminary site plan (10 required, 18 preferred)
Any applicable contracts, easements, etc.
Application fee in full made payable to Fluvanna County.

Review of the Application

- Preliminary review by planning staff for completeness and content.
Copies of application: office, agencies and county attorney
Government agency review and comment (not an inclusive listing)
VDOT, Health Department, Fire Chief, FUSD Manager, Aqua Virginia, School Superintendent, Army Corp of Engineers, County Administer
Any concerns addressed by the governmental agencies shall be discussed in a meeting with the applicant and a representative from the agency.
Placed as a Public Hearing on the next available agenda of the Planning Commission.
Notification of the scheduled Public Hearing to the following:
Applicant, All adjacent property owners
Advertise in accordance with VA Code § 15.1-431
Staff Report to include, but not be limited to:
Is the need for change necessary?
Is the change consistent with good planning practices?
Is the change consistent with the comprehensive plan?
Is the change consistent with the adjacent land uses?
Will the change constitute spot zoning?
Are proffers necessary?
Is there any detriment to the health, safety and welfare of the community?

Blank lined area for staff use.

Handwritten signature in the staff use area.

Handwritten date: July 14, 2016 in the staff use area.

Received

MAY 26 2016

Attachment A

COUNTY STAFF USE ONLY

Meetings for the processing of the application

Applicant for a representative must appear at the scheduled hearing. The Planning Commission may: defer the request pending further consideration or recommend to the Board of Supervisors: Approval; Approval subject to submittal or correction; or denial.

Notification to the applicant regarding the Planning Commission's decision.

Placed as a Public Hearing on the next available agenda of the Board of Supervisors.

Staff Report and Planning Commission recommendation forwarded to the Board of Supervisors.

Notification of the scheduled Public Hearing to the following:

- Applicant All adjacent property owners
- Advertise in accordance with VA Code § 15.1-431

Applicant or a representative must appear at the scheduled hearing. After considering all relevant information from the applicant and the public, the Board of Supervisors will deliberate on points addressed in the Staff Report.

The Board of Supervisors may: Approve; Deny; or defer the request pending further consideration; or remand the case back to the Planning Commission for further consideration.

Actions

- With approval, the development may proceed.
- If denied, an appeal to the Courts may be prescribed by law.
- No similar request for a Rezoning for the same use at the same site may be made within one year after the denial.

Received
MAY 26 2016
Planning Dept.



COMMONWEALTH OF VIRGINIA
COUNTY OF FLUVANNA

Received

MAY 26 2016

Major Site Development Plan - Sketch Plan Checklist

Planning Dept.

Developed from the Zoning Ordinance April 1, 2006

This checklist must be completed and submitted with the completed application. Any applications submitted without the completed checklist will be promptly returned to the applicant.

Project Name: Rivanna Heights

Tax Map(s) and Parcel Number(s): TM 18 (A) Par. 10

Individual and Firm Completing Checklist: Bryan Chambers

Signature of Person Completing Checklist: *Bryan Chambers*

Date: 5/11/16

- Administration:** *provided requested copies. Will provide additional copies if*
- 20 11" x17" and 3 full-size folded clearly legible blue or black line copies [22-23-8.1] *regal*
 - After review by technical Review Committee, revisions may be required. If such revisions are required, 20 11"x17" and 3 full-size clearly legible blue or black line copies of the site plan will be required by the revision deadline indicated by staff (see attached permitting schedule) [22-23-8.A.2]
 - Site Development Plan Application Fee (See attached fee schedule) [22-23-8.3]

The sketch plan will convey the general concept of the proposed site development and shall **only** include the following:

- A general analysis of the site, showing existing slopes, drainageways, tree stands, site features and amenities to be preserved, conservation areas, historic features, & the like [22-23-8.A.5.a]
- Approximate location and size of the buildings [22-23-8.A.5.b]
- General points of access [22-23-8.A.5.c]
- General street, roadway, and parking layouts [22-23-8.A.5.d]
- Any exterior lighting [22-23-8.A.5.e]

Staff: COUNTY STAFF ONLY
Jenny Spwan

Date Received: _____

Date Reviewed: _____

Additional Notes:

Jenny's factory

William W. Bailey
P. O. Box 6700
Charlottesville, Virginia 22906
Telephone: (434) 760-1900

May 25, 2016

Mr. Jason Stewart, Planning & Zoning Administrator
County of Fluvanna
132 Main Street
Palmyra, Virginia 22963

Dear Mr. Stewart;

I am presenting, for your review, the Application for re-zoning of property described as TM 18(A) Parcel 10. I am a Realtor and the Purchaser will be Mr. Michael Brown.

It is our desire to develop this property in accordance with the attached plans and to be called Rivanna Heights containing forty attractive housing units to hopefully meet the needs of affordable attached homes in Fluvanna.

Much consideration has been given in the design plans to create maximum privacy for the owners with a buffer between South Boston Road and the actual homes. From the entrance to the development you will see appealing and inviting community gardens. There will be well thought out home designs with a mixture of one and two level home to accommodate all ages of residents.

The resident parking areas will be well lighted and convenient to the homes. There will be a centrally located playground and around the property will be a proposed picnic area of over five acres and will include a 12 feet by 18 feet shelter. There is an abundance of walking trails and pedestrian paths.

Mr. Brown and I appreciate your consideration of this development. We will look forward to creating a very desirable community that will prove to be a positive and welcomed asset to the already beautiful Fluvanna County.

Sincerely,



William W. Bailey

Received
MAY 26 2016
PLANNING DEPT.

Public Hearing Processing Checklist

(Rezoning, Special Use Permits, Variances, and Text Amendments)

Planning & Zoning Department

Initials	Responsible	Action
		BEFORE PC PUBLIC HEARING
	Applicant	The applicant will contact the Planning Dept., discuss ideas with the Planner, and schedule a pre-application meeting if required.
	Staff	Date of pre-application meeting. _____ *Ideally, at least two (2) planning staff members will meet with the applicant to discuss his or her proposals, and advise them on the application process.
	Applicant	Applicant files the application on the 1 st working day of the month by 5 p.m.
DK	Program Asst	Review application for completeness and process all fees.
DK	Program Asst	Enter project information into the DID
DK	Program Asst	Schedule public hearing advertisement dates.
DK	Program Asst	Schedule Adjoining Property Owner (APO) notification dates.
DK	Program Asst	Schedule Planning Commission public hearing meeting dates.
DL	Program Asst	Schedule date to post Planning Commission public notice sign two (2) weeks meeting.
DL	Program Asst	Schedule Board of Supervisors public hearing meeting dates.
DL	Program Asst	Schedule date to post BOS public notice sign two (2) weeks prior to meeting.
g	Planner	Review the DID for accuracy of all the scheduled dates.
g	Staff	Notify adjacent property owners of the subject property.
g	Staff	Schedule neighborhood meeting on 2 nd Wednesday of the month at 4:30 p.m. in the Morris Room.
g	Staff	Schedule Technical Review Committee meeting on the 2 nd Thursday of the month at 10 a.m. in the Historic Courthouse.
g	Program Asst	Reserve Historic Courthouse and Morris Room (or alternate location, if needed).
g	Staff	Compile all comments from the TRC meeting.
g	Staff	Notify applicant in writing about TRC comments.
g	Applicant	File revised plan based on TRC comments NLT last Friday of the month by 5 p.m.
g	Planner	Prepare legal ad and email to Senior Program Assistant.
g	Program Asst	Email legal ad to Fluvanna Review NLT noon on the Wednesday three (3) weeks before the public hearing is scheduled.

Attachment A

Initials	Responsible	Action
<i>JH</i>	Program Asst	Receive ad "proof" from Fluvanna Review and email proof to Planner for review.
	Planner	Planner approves proof.
<i>AS</i>	Program Asst	Notify newspaper to publish ad for two (2) consecutive weeks prior to the public hearing meeting date. (Save in ad proof folder for future reference.)
<i>JH</i>	Code Enforce. Officer	Place public notice signs on subject property two (2) weeks prior to all public hearing dates.
<i>JH</i>	Planner	Verify sign posting with a site visit and photographs.
<i>JH</i>	Program Asst	Mail APO letters two (2) week prior to Planning Comm. public hearing.
<i>JH</i>	Staff	Planning Commission public hearing scheduled for fourth (4 th) Wednesday of the following month.
		BEFORE BOS PUBLIC HEARING
	Staff	Schedule BOS public hearing for third (3 rd) Wednesday of the following month.
	Program Asst	Mail APO letters two (2) week prior to BOS public hearing.
		AFTER BOS PUBLIC HEARING
	Program Asst	Return \$90.00 sign deposit fee to applicant.



COUNTY OF FLUVANNA

"Responsive & Responsible Government"

P.O. Box 540 Palmyra, VA 22963 (434) 591-1910 FAX (434) 591-1911 www.fluvannacounty.org

MEMORANDUM

TO: Area Property Owners and Residents
FROM: Jason Stewart, AICP, Planning Director
DATE: June 1, 2016
SUBJECT: Neighborhood Meeting –June 8, 2016 – 4:30 p.m.

The following meetings have been scheduled to consider this request:

ZMP 16:02– Rivanna Heights Rezoning- A request to rezone from A-1, Agricultural General, to R-3, Residential Planned Community, with respect to 13.81 acres of Tax Map 18, Section A, Parcel 10. The property is located on South Boston Road, roughly 1,000 feet south of the intersection of South Boston Road (State Route 600) and Lake Monticello Road (State Route 618). The parcel is within the Rivanna Community Planning Area and the Palmyra Election District.

Neighborhood Meeting: The Neighborhood Meeting is scheduled for Wednesday, June 8, 2016 beginning at 4:30 p.m. at the County Administrative Building's Morris Room (former Board Room) – Main Level. This is an informal meeting that will give the applicant the opportunity to present his/her plan, and residents the opportunity to ask questions and express their views regarding the application prior to the Planning Commission and Board of Supervisors public hearings.

Technical Review Committee: This Committee Meeting is scheduled for Thursday, June 9, 2016 from 10:00 a.m. – 12:00 p.m. at the Historic Courthouse).

Fluvanna County Planning Commission Public Hearing: The Planning Commission's Public Hearing is scheduled for Wednesday, July 27, 2016, at 7:00 p.m. in the Circuit Court Room – Main Level of the Fluvanna County Courts Building. The Planning Commission will hold a public hearing, where there will be an opportunity for public comment, and forward a recommendation to the Board of Supervisors. A separate notice will be sent to adjacent property owners.

Fluvanna County Board of Supervisors Public Hearing: The Fluvanna County Board of Supervisors' Public Hearing is scheduled for Wednesday, August 17, 2016, at 7:00 p.m. in the Circuit Court Room – Main Level of the Fluvanna County Courts Building. The Board of Supervisors will hold a public hearing, where there will be an opportunity for public comment. A separate notice will be sent to adjacent property owners.

If you have further questions or need additional information, please contact the Fluvanna County Planning & Community Development Department at (434) 591-1910.

The above is a projected timeline for meetings. Meeting dates may be subject to change. Please contact the Planning Dept. to confirm the meeting dates above.

**YOUR NEIGHBORS MAY NOT HAVE RECEIVED THIS MAILING.
PLEASE SHARE THIS INFORMATION.**

Memorandum

DATE: June 29, 2016
RE: Planning Commission APO Letter
TO: Jason Stewart
FROM: Deidre Creasy

Please be advised the attached letter went out to the attached list of Adjacent Property Owners for the July 27, 2016 Planning Commission Meeting.



COUNTY OF FLUVANNA

"Responsive & Responsible Government"

132 Main Street
P.O. Box 540
Palmyra, VA 22963
(434) 591-1910
Fax (434) 591-1911
www.fluvannacounty.org

NOTICE OF PUBLIC HEARING

June 29, 2016

«Name»
«Address»
«City_State» «ZIP»
TMP#«TMP»

Re: Public Hearing on ZMP 16:02

Dear «Name»:

This letter is to notify you that the Fluvanna County Planning Commission will hold a public hearing on the above referenced item as noted below:

Purpose: Planning Commission Public Hearing
Day/Date: Wednesday, July 27, 2016
Time: 7:00 PM
Location: Fluvanna County Circuit Court Room, Palmyra, VA

The applicant or applicant's representative will be present at the Planning Commission meeting for the special use permit request that is described as follows:

ZMP 16:02- Rivanna Heights Rezoning: A request to rezone from A-1, Agricultural General, to R-3, Residential Planned Community, with respect to 13.81 acres of Tax Map 18, Section A, Parcel 10. The property is located on South Boston Road, roughly 1,000 feet south of the intersection of South Boston Road (State Route 600) and Lake Monticello Road (State Route 618). The parcel is within the Rivanna Community Planning Area and the Palmyra Election District.

You are welcome to attend the Public hearing and you will have an opportunity to comment, if desired. The tentative agenda and staff report for this action is available for public review on the County website at: <http://fluvannacounty.org/government/pc/agendasactionsminutes>. You can also view the report in the Fluvanna County Planning and Zoning Department during working hours (8:00 am – 5:00 pm, Monday through Friday).

If you have any questions regarding this special use permit application or the Public Hearing, please contact me at 434-591-1910.

Sincerely,

Jason Stewart
Planning and Zoning Administrator

Attachment A

Parcel ID	Owner	Owner Address	City/State/Zip
18A 6 237	Ebony & Patrick Montgomery	15 MECHUNK TERR	PALMYRA, VA 22963
18 A 1E	FLUVANNA COUNTY	P O BOX 299	PALMYRA, VA 22963
18A 6 236	Richard Ashdown	1358 CENTENNIAL WAY	ROCKLEDGE, FL 32955
18A 6 245	Stephen & Sandra Thomas	804 SEABORN WAY	CHESAPEAKE, VA 23322
18A 6 238	Barbara Jean Vest	13 MECHUNK TERRACE	PALMYRA, VA 22963
18A 6 246	Matthew & Edelmyra Johnson	1 RIVERSIDE DR	PALMYRA, VA 22963
18A 1 382	Cheryl & Matthew Montgomery	27 Jefferson Dr	PALMYRA, VA 22963
18A 1 381	Adam White	25 Jefferson Dr.	PALMYRA, VA 22963
18A 1 380	Robert & Pamela	23 Jefferson Dr.	PALMYRA, VA 22963
18A 1 379	Cardinal Point LLC	8249 Crown Colony Pkwy	Mechanicsville, Va 23116
18A 1 378	Joshua Green Et. Al	19 Jefferson Dr.	PALMYRA, VA 22963
18A 1 377	Sharlene Ann Cope	17 Jefferson Dr.	PALMYRA, VA 22963
18A 1 375	Gregory & Michelle Truslow	13 Jefferson Dr.	PALMYRA, VA 22963
18A 1 374	John & Nancy Hutcherson	5802 Union Mills Rd	Troy, Va 22974
18A 1 373	William B. Mc Duffie	9 Jefferson Dr.	PALMYRA, VA 22963
18A 1 372	Marchella Lewis	7 Jefferson Dr.	PALMYRA, VA 22963
18A 1 369	Shriley & Terry Callison	3 Hilltop Circle	PALMYRA, VA 22963
18A 1 368	Tony Shorter	5 Hilltop Circle	PALMYRA, VA 22963
18A 1 367	Alexander & Nguyen Tran	6 Hilltop Circle	PALMYRA, VA 22963
18 A 10	Bevely & Carolyn Butler	P.O. Box 785	Scottsville, Va 24590

Attachment A

James Newman

From: County of Fluvanna Website <donotreply@fluvannacounty.org>
Sent: Wednesday, June 08, 2016 3:58 PM
To: James Newman
Subject: Fluvanna County, VA - The Heart of Virginia: NEIGHBORHOOD meeting Rezoning

This is an enquiry email via <http://fluvannacounty.org/> from:
Fitzgerald Barnes <vsuque@hotmail.com>

DEAR planner,

This letter is to voice my support of the one of the Applicants of THE Rivanna Heights Project. Mr. Michael Brown has been a pillar in his community for many years. Mike has an old school characteristic of being a man of his word. He has always supported youth and worked hard in his community. I have known Mike as a Business man and personal friend for years. I have been on the Board of Supervisors in Louisa for 18 years and would love to have a businessman like Mike Brown in Louisa. I will be present to support him at the Planning Commission Meeting and the Board of Supervisors meeting

Attachment B



Attachment B



Green=A1 Zoning

Brown=R4 Zoning

Attachment C

Fluvanna County Neighborhood Meeting June 8, 2016

Sign In Sheet

Items:

1. **SUP 16:06- Silver Linings LLC**-Request for a special use permit for a **commercial greenhouse**. 35.26 Acres of A1 property, tmp 40 19 D, northeast of intersection Haden Martin/Forest Glen
2. **SUP 16:07 Sycamore Square**-Request for a special use permit to operate an **assisted living facility**. 3.36 Acres of R3 property, tmp 9 A 14. Intersection of Ashlawn Blvd/Lake Mont. Rd.
3. **ZMP 16:02 Rivanna Heights Rezoning**- Request to **rezone** parcel 18 A 10 from **A1 to R3**, Residential Planned Community. 13.81 acres, tmp 18 A 10, located on S. Boston Rd.
4. **ZMP 16:03 Columbia Floodplain Adoption**: Bringing Columbia into the Fluvanna County Flood Ordinance. All of former town, allows federal flood plain insurance

Name	Address	Contact info	Item interested in
1 <i>Carroll Morse</i>	<i>Kent Store</i>	<i>434-589-4106</i>	<i>Columbia Floodplain</i>
2 <i>MURRAY BUCKNER</i>	<i>IVY</i>	<i>434-242-3136</i>	<i>SILVER LINING</i>
3 <i>Bryan Chambers</i>	<i>Keswick</i>	<i>434-962-3747</i>	<i>Rivanna Heights</i>
4 <i>Kerry Murphy-Hammond</i>		<i>434-842-1097</i>	<i>Columbia Floodplain</i>
5 <i>Mike Brown</i>	<i>Charlottesville VA</i>	<i>434-531-4724</i>	<i>RIVANNA Hg. (OT)</i>
6 <i>R. T. HARRY</i>	<i>467, marion rd, VA</i>		
7	<i>Ch VA 22902</i>	<i>434-589-4710</i>	<i>Flood Plain</i>
8 <i>Paul Gandy</i>	<i>P.O. Box 109 IVY 22945</i>	<i>434-996-6630</i>	<i>COLUMBIA</i>
9 <i>Terry L.C. Callison</i>	<i>3 Hilltop Cir, Lake Monticello</i>		
10	<i>dixiebd@gmail.com</i>	<i>434/607-2117</i>	<i>Rivanna Hts. Rezoning</i>
11			
12			
13			
14			
15			
16			
17			
18			
19			
20			
21			

ZMP 16:02 - All comments from 1 person

Applicant: Community garden & trail

We know traffic is a concern

- What type of affordable housing?

↳ Housing affordable to service workers Not Sec. 8 or subsidized housing. Mean to house many age groups.
Not the intent

- ~~How~~ ^{rental} or owned units?

↳ Not designed for rental: but is a possibility

- What will happen to trees on site?

↳ Buffer zones will be placed

- How many entrances?

↳ Just 1 unless Riverside is extended

- Why returning to this project? Too much traffic,

↳ Have deal + ~~can~~ can add an acceleration lane

3 Hilltop Circle
Lake Monticello, VA 22963-2011
June 8, 2016

To Whom it May Concern;

As a Lake Monticello resident (Lot 369-Phase I) whose home is directly across Route 600 (South Boston Rd) from the proposed rezoning (Tax Map 18, Sect. A, Parcel 10), I have several concerns.

On June 8, 2016, I attended a Neighborhood Meeting to learn about the proposed rezoning.

Subsequently, I request that this submission be included as part of the official file re: proposed rezoning of this property.

1. What is the purpose of revisiting this project, when a very similar one was fully rejected by Fluvanna Board of Supervisors approximately six years ago?

2. Although the primary change in the current version involves minimal tapering and deceleration lanes, the roadway remains the same. These lanes occur on a curve, at the top of a steep hill, where the single entry (ingress/egress) is placed.

3. Although the applicant stated the anticipation that Lake Monticello's Riverside road could be extended, the Lake Monticello Board of Directors representative gave an emphatic "No" to this idea, which was given in the earlier proposal.

4. Extending the Riverside road would provide a new 40-unit community with

full access to an established — and frequently dangerous — exit to South Boston Road. Lake Monticello is a private community which has built — and fully maintains its own roadways and gated areas; no public access is allowed.

5. No mention was made of estimated ingress/egress for these 40 housing units. I believe the estimate for the former 40-unit proposal was 275-400 daily entries/exits. From a safety standard alone, this would appear to be an unacceptable risk, particularly when every entry and exit must be made on a sight-limiting curve at the top of a hill!

6. Would it not be more prudent to continue the current zoning (A-1, Agricultural General) and use this land as, perhaps, a fruit orchard? Commercial growth of flowers, trees, shrubs, etc., would be appropriate, as would be grape vineyards. How about a cemetery?

7. Of particular concern is the apparent plan to clear-cut the area of abundant mature hardwood trees, except for a short distance on either side of the entrance "to make a buffer for the neighborhood across the road." This project is environmentally unhealthy.

8. The Rivanna Heights survey map calls for "Typical Parking Lot Lights" on either side of the units on the front (west) side of the development. The many serious astronomers and stargazers at Lake Monticello would be extremely negatively impacted by light pollution, which we work diligently to eliminate. Any "typical parking lot lighting" would be considered unwelcome, unfriendly, and environmentally inappropriate.

It is my fervent hope that you address these concerns, since I was the only member of the neighborhood who was able to attend the constructive Neighborhood Meeting; all others are employed and unable to attend a meeting scheduled for 4:30 pm on a weekday.

Sincerely yours,
Terry L. Callison

TERRY L. C. CALLISON



COUNTY OF FLUVANNA

“Responsive & Responsible Government”

P.O. Box 540 Palmyra, VA 22963 (434) 591-1910 FAX (434) 591-1911 www.co.fluvanna.va.us

November 8 2016

Bryan Chambers
253 Willow Drive
Keswick VA, 22947

Delivered via email to chamberslandsurveying@yahoo.com

Re: ZMP 16:02 –Rivanna Heights Rezoning
Tax Map: 18, Section A, Parcel 10

Dear Mr. Chambers:

The following comments are the result of the Technical Review Committee meeting that was held on Thursday, October 13 2016.

1. Planning Dept. is satisfied with the latest sketch. Applicant stated that they have designed the entrance way and deceleration lane to a standard currently met by the Riverside entrance for Lake Monticello, which serves approx. 370 lots. This subdivision will consist of approx. 40 units.
2. Joe Chesser of the Chamber of Commerce (via email): There has been considerable push back concerning townhouses. Increasing density and impact on services. From a business standpoint we would want increase density to support business that are in place. The increase density in that area will impact traffic on 600 and 618. Especially, at the intersection.

I wonder what impact the increase density will have on Aqua Va’s ability to provide. I heard that they may be at their limit from a plant processing capability and may need to expand the current plant. The result would be higher water bills????

3. Fire Chief was satisfied with the improvements, especially with the road width increase and improved roundabout design for fire apparatus mobility. All requirements have been met and satisfied. Any emergency road access needs to have a gravel base or a paved surface.
4. Environmental Health Dept. had no comments.
5. VDOT: Rte. 600 (South Boston Road) is a Rural Major Collector with a posted speed limit of 45 mph. VDOT’s 2015 Traffic Data shows an estimated Annual Average Daily Traffic Volume of 5300 vehicles.
 - Provide an entrance analysis for the proposed development at full build out (residential and commercial) along with the recommended road improvements to support the proposed the development, VDOT will review the entrance analysis and provide comments if applicable. Base traffic volumes for the study off of VDOT’s 2015 Traffic

Attachment D

Data (5300 AADT), the additional traffic generated by other proposed developments at full build out (Sycamore Square, Houchens Place, etc.) and the projected traffic volumes from the existing approved developments (Village Oaks, River Oaks, etc.) along Rte. 618 that are under construction or have not yet been built out .

- Rte. 600 (South Boston Road) has a posted speed limit of 45 mph which requires a minimum of 500 ft. of Intersection Sight Distance for a standard commercial entrance. Intersection Sight Distance will be measured from 14.5 ft. behind the edge of the right turn lane.
- If a left turn lane is not required for the development, ensure that there is a minimum of 425 ft. of Stopping Sight Distance for motorists on Rte. 618 that are approaching stopped vehicles waiting to make a left turn into Lafayette Village.
- Graphically demonstrate (horizontally and vertically) that the proposed commercial entrance provides the minimum 500 ft. of Intersection Sight Distance (height of eye = 3.5 ft., height of object = 3.5 ft. and 14.5 ft. off edge of pavement) at all points along the travel lane between the proposed entrance and the approaching travel lanes.
- Provide all necessary sight easements (on site and off site) to provide and protect the 500 ft. sight triangles. The sight easement extends 5 ft. outside of and parallel to the sight lines.
- Master Plan shows the “Approximate Location of Existing Line of Sight Easement”. Show the exact location of the existing sight easement on the site plan as well as the line of sight for the minimum 500 feet of sight distance in relationship to the existing sight easement. Provide the legal reference (Deed/Plat Book & Page Number) for the existing sight easement.
- Provide the distances in feet (center line to center) from the center of the proposed entrance to the closest commercial entrances or state road intersections (north and south of the proposed entrance).
- Design of turn lane(s) shall conform to VDOT’s Geometric Design for Rural Collector Road System (GS-3) with ADT over 2000, Rolling Terrain (12 ft. min. lane width, 8 ft. graded shoulder, etc.).
- Rte. 600 improvements associated with Rivanna Heights shall conform to VDOT’s WP-2 detail (mill and overlay to the center of road) along with any and all pavement marking eradication and installation of new pavement markings per VDOT standards and specifications.
- A VDOT Land Use Permit and Security Bond will be required.

The Planning Commission will have a meeting to discuss this item at their Wednesday, July 27, 2016 meeting. Your attendance is required at this meeting.

If you have any questions or need additional information, please contact me at 434-591-1910.

Sincerely,
James Newman
Planner
Dept. of Planning & Zoning
cc: File

Attachment E

Chambers Land Surveying
112 Crofton Plaza – Suite K
Lake Monticello, VA 22963
434-589-5139 (o) 434-962-3746 (c)
chamberslandsurveying@yahoo.com

To: Mr. James Newman
Fluvanna Co. Dept. Of Planning & Zoning
P.O. Box 540
Palmyra, VA 22963

Re: "Rivanna Heights" TM 18 (A) Par. 10, Request for Rezoning From A-1 To R-3

11/09/2016

Dear Mr. Newman;

I'd like to address the issues that were mentioned in the update section of the November Staff Report for the Planning Commission Technical Review Session held on 10/13/2016 in the order that they have been listed.

- Planning Dept. is satisfied with the latest sketch. Applicant stated that they have designed the entrance way and deceleration lane to a standard currently met by the Riverside entrance for Lake Monticello, which serves approx. 370 lots. This subdivision will consist of approx. 40 units. **As we mentioned, we are dedicated to making this a safe and attractive community to address the need stated by Fluvanna County for creatively designed affordable housing in the designated Rivanna Community Planning Area. The tapering and deceleration lanes will meet or exceed VDOT requirements for safety.**
- Joe Chesser of the Chamber of Commerce: There has been considerable push back concerning townhouses. Increasing density and impact on services. From a business standpoint we would want increase density to support business that are in place. The increased density in that area will impact traffic on 600 and 618. Especially, at the intersection. **VDOT requested this be addressed from a safety standpoint and required that a minimum of 425' of Stopping Sight Distance be verified for motorists on Rte. 600 that are approaching stopped vehicles waiting to turn into the subdivision. Based on my observations, I believe the proposed entrance would be visible from a distance exceeding 900' as you approach it on Rte. 600 since I've re located the entrance at the crest of the hill.**
- Joe Chesser of the Chamber of Commerce: I wonder what impact the increase density will have on Aqua Va's ability to provide. **We do have the letter from Aqua Virginia stating that they are willing to work with us for water and sewer service. We can, or Fluvanna Planning can, make an inquiry on Aqua Va's ability to provide these services.**
- Fire Chief was satisfied with the improvements, especially with the road width increase and improved roundabout design for fire apparatus mobility. All requirements have been met and satisfied. **Planned fire hydrants are shown per the fire chief's designated locations (with a designation for a**

6" water main). Firewalls will be shown on the architectural plans for the townhouses. County code calls for a minimum of 18' of paved road for emergency vehicles. The current plan designates a 22' paved road width.

- Environmental Health Dept. had no comments. **Erosion & Sediment Control comments will be addressed pending zoning approval & site plan submittal.**
- VDOT comments and my responses involving safety with respect to traffic volume and posted speed are:
 - o VDOT: Rte. 600 (South Boston Road) is a Rural Major Collector with a posted speed limit of 45 mph. VDOT's 2015 Traffic Data shows an estimated Annual Average Daily Traffic Volume of 5300 vehicles. Provide an entrance analysis for the proposed development at full build out (residential and commercial) along with the recommended road improvements to support the proposed the development, VDOT will review the entrance analysis and provide comments if applicable. Base traffic volumes for the study off of VDOT's 2015 Traffic Data (5300 AADT), the additional traffic generated by other proposed developments at full build out (Sycamore Square, Houchens Place, etc.) and the projected traffic volumes from the existing approved developments (Village Oaks, River Oaks, etc.) along Rte. 618 that are under construction or have not yet been built out . **VDOT previously requested an entrance analysis (based on a future traffic study which I assumed was to take place upon preliminary plan submittal upon rezoning) to be able to approve the current design. I spoke with Mr. Mark Wood (the technical review session VDOT representative) to line up a qualified traffic volume analyst for the traffic study. Do you desire that this sort of detailed engineering study take place at this stage of the submittal for rezoning?**
 - o Rte. 600 (South Boston Road) has a posted speed limit of 45 mph which requires a minimum of 500 ft. of Intersection Sight Distance for a standard commercial entrance. Intersection Sight Distance will be measured from 14.5 ft. behind the edge of the right turn lane. **I've shown Sight Distance Easements designed to these specifications on the latest revised plan.**
 - o If a left turn lane is not required for the development, ensure that there is a minimum of 425 ft. of Stopping Sight Distance for motorists on Rte. 618 that are approaching stopped vehicles waiting to make a left turn into(Lafayette Village?). **VDOT previously requested this be addressed from a safety standpoint and required that a minimum of 425' of Stopping Sight Distance be verified for motorists on Rte. 600 that are approaching stopped vehicles waiting to turn into the subdivision. Based on my observations, I believe the proposed entrance would be visible from a distance exceeding 900' as you approach it on Rte. 600 since I've relocated the entrance at the crest of the hill. If detailed engineering needs to take place at this stage of the submittal for rezoning I am up to date on my VDOT permit to survey state roads and can rent signs and regulate traffic to do the required road topography study to satisfy the requirement.**
 - o Graphically demonstrate (horizontally and vertically) that the proposed commercial entrance provides the minimum 500 ft. of Intersection Sight Distance (height of eye = 3.5 ft., height of

object = 3.5 ft. and 14.5 ft. off edge of pavement) at all points along the travel lane between the proposed entrance and the approaching travel lanes. **I've indicated the horizontal components on the latest revised plan.**

- VDOT requested that I provide all necessary sight easements and protect the 500' site triangles. The sight easement extends 5 ft. outside of and parallel to the sight lines. **I've done this (with the 5' offsets) on the latest revised plan for the proposed entrance and for the proposed turn-around for Fluvanna County and Law Enforcement use.**
- VDOT mentioned that an "Approximate Location of Existing Line of Sight Easement" was shown on a Master Plan. **Since it was not shown on my previous plan, and since VDOT referenced "Lafayette Village" in their previous comments, I assume this comment was a mix-up and is not relevant to "Rivanna Heights".**
- VDOT requested that distances in feet be provided from the proposed entrance to the closest commercial entrances or state road intersections to the north and south. **I've included these on the latest revised plan (Refer to the details of the entrance shown on Sheet 1) .**
- VDOT required that the design of the turn shall conform to VDOT's Geometric Design for Rural Collector Road System (GS-3) with ADT over 2000, Rolling Terrain (12 ft. min. lane width, 8 ft. graded shoulder, etc.). **These specifications are listed on the details of the entrance shown on Sheet 1 of the latest revised plan. I've included a note that deceleration lane length is subject to VDOT approval due to my concern to fully cover safety issues.**
- VDOT's last two issues concerned design requirements for Rte. 600 improvements, and permit and security bond requirements. **I listed them in Note 7 on sheet 1 of the latest revised plan.**

We take pride in our design and we welcome creative comments in order to make this county a beautiful, healthy, and affordable place to live.

Sincerely;

Bryan Chambers

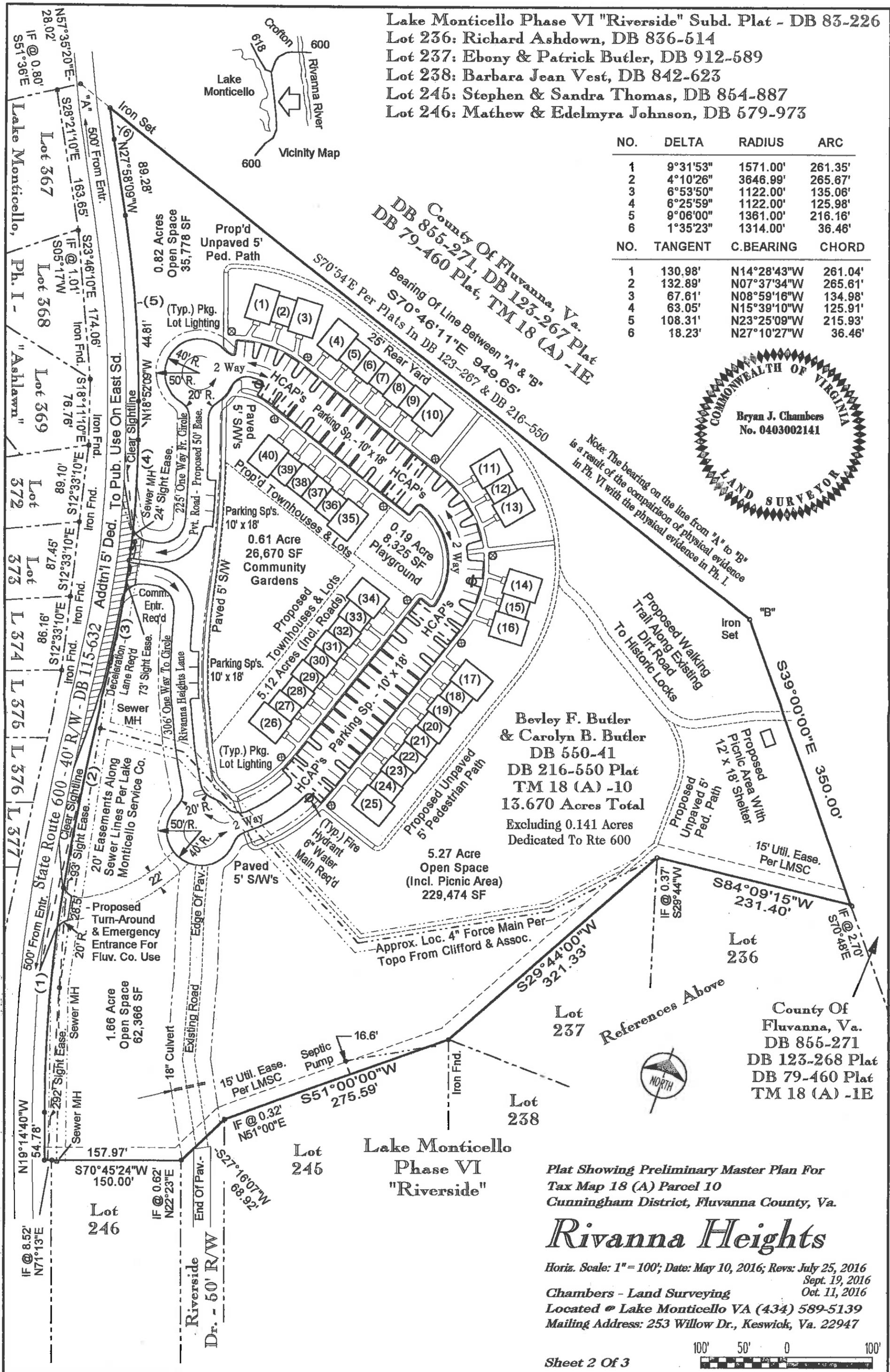
Lake Monticello Phase VI "Riverside" Subd. Plat - DB 83-226
 Lot 236: Richard Ashdown, DB 836-514
 Lot 237: Ebony & Patrick Butler, DB 912-589
 Lot 238: Barbara Jean Vest, DB 842-623
 Lot 245: Stephen & Sandra Thomas, DB 854-887
 Lot 246: Mathew & Edelmyra Johnson, DB 579-973

NO.	DELTA	RADIUS	ARC
1	9°31'53"	1571.00'	261.35'
2	4°10'26"	3646.99'	265.67'
3	6°53'50"	1122.00'	135.06'
4	6°25'59"	1122.00'	125.98'
5	9°06'00"	1361.00'	216.16'
6	1°35'23"	1314.00'	36.46'

NO.	TANGENT	C.BEARING	CHORD
1	130.98'	N14°28'43"W	261.04'
2	132.89'	N07°37'34"W	265.61'
3	67.61'	N08°59'16"W	134.98'
4	63.05'	N15°39'10"W	125.91'
5	108.31'	N23°25'09"W	215.93'
6	18.23'	N27°10'27"W	36.46'



Note: The bearing on the line from "A" to "B" is a result of the comparison of physical evidence in Ph. VI with the physical evidence in Ph. I.



Bevley F. Butler
 & Carolyn B. Butler
 DB 550-41
 DB 216-550 Plat
 TM 18 (A) -10
 13.670 Acres Total
 Excluding 0.141 Acres
 Dedicated To Rte 600

County Of
 Fluvanna, Va.
 DB 855-271
 DB 123-268 Plat
 DB 79-460 Plat
 TM 18 (A) -1E

Plat Showing Preliminary Master Plan For
 Tax Map 18 (A) Parcel 10
 Cunningham District, Fluvanna County, Va.

Rivanna Heights

Horiz. Scale: 1" = 100'; Date: May 10, 2016; Revs: July 25, 2016
 Sept. 19, 2016
 Oct. 11, 2016
 Chambers - Land Surveying
 Located @ Lake Monticello VA (434) 589-5139
 Mailing Address: 253 Willow Dr., Keswick, Va. 22947



Turning Radius: It depends on the area fire apparatus being used.

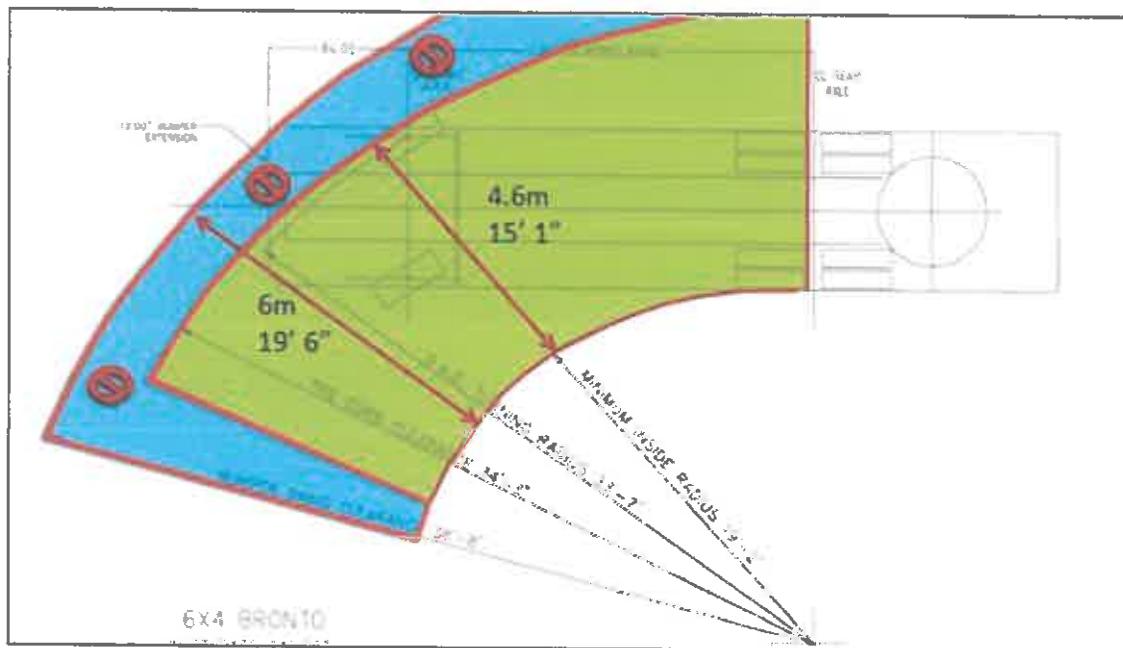


Figure 1: Example of Turning Radius for Ladder Fire Apparatus.

In Figure 1 above, it must be taken into consideration the minimum inside turning radius and the bumper swing clearance. No obstructions such as fire hydrants shall be located on the bumper swing clearance to avoid any collision when turning. It is accepted to design roads within the minimum inside radius limitation given that the bumper swing is clear and the curb height is below the bumper height.

Importance of Road Loading Capacity

- When designing fire trucks, special consideration and calculations must be done on the road and soil.
- This is by comparing Vehicle Cone Index (VCI) to the Soil Index (RCI)
- VCI: Minimum strength of the soil critical layer that permits the vehicle to pass on it.
- Soil Index: usually referred to as Rating Cone Index (RCI).
- If $VCI < RCI$, then the vehicle will plow through.

Attachment F

Chambers Land Surveying
112 Crofton Plaza – Suite K
Lake Monticello, VA 22963
434-589-5139 (o) 434-962-3746 (c)
chamberslandsurveying@yahoo.com

To: Mr. James Newman
Fluvanna Co. Dept. Of Planning & Zoning
P.O. Box 540
Palmyra, VA 22963

Re: "Rivanna Heights" TM 18 (A) Par. 10, Request for Rezoning From A-1 To R-3

7/27/2016

Dear Mr. Newman;

We've proposed a layout for an attractive shielded townhouse development with a decent sized small kid's playground, a community garden surrounded by head high hedges viewed upon entry to the development, walking trails around the perimeter while making use of an existing road to the historic Rivanna Locks, and a picnic area overlooking the Rivanna River in order to meet the needs of Fluvanna County for affordable housing within the Rivanna Community Planning Area while using creative design to protect and enhance the natural scenic beauty of the area and maintain a healthy lifestyle for its residents and provide an alternative for living spaces as Lake Monticello proper approaches build-out.

Per Fluvanna Planning: "This district (the Rivanna Community Planning Area) is intended to permit compact village-style residential development and associated institutional uses, community serving mixed uses, open spaces, and creative design in accordance with a master plan. The development should occur in a manner that will protect and preserve the natural resources, trees, watersheds, contours and topographic features of the land; and to protect and enhance the natural scenic beauty of the area and support. The scale of the housing and the commercial use should be appropriate to support the residential needs at a neighborhood scale."

I'd like to address some of the issues that were mentioned in the staff report for the Planning Commission work session on June 20th, and the July 5th technical review session in the order that they have been listed.

- The Fire Chief provided a sketch showing required fire hydrant placement which has been incorporated into the latest revised plan (with a designation for a 6" water main). Firewalls will be shown on the architectural plans for the townhouses. County code calls for a minimum of 18' of paved road for emergency vehicles. The current plan designates a 20' paved road width.
- Erosion & Sediment Control comments will be addressed pending zoning approval & site plan submittal.

-
- VDOT comments and my responses involving safety with respect to traffic volume and posted speed are:
 - o VDOT requested an entrance analysis (based on a future traffic study) and Sight Distance Easements to be able to approve the current design. I spoke with Mr. Mark Wood (the technical review session VDOT representative) to line up a qualified traffic volume analyst for the traffic study, and I've shown Sight Distance Easements on the latest revised plan.
 - o VDOT required that a minimum of 425' of Stopping Sight Distance be verified for motorists on Rte. 600 that are approaching stopped vehicles waiting to turn into the subdivision. I've listed a distance of 1100' from the intersection of Rte. 618 to the proposed entrance which would be visible as I've re located it at the crest of the hill.
 - o VDOT requested that I graphically demonstrate that the proposed entrance provides the required 500' sight distances. I've re located the proposed entrance at the crest of the hill to accommodate the vertical component (to be shown subsequent to field run topography) and I've indicated the horizontal components on the latest revised plan.
 - o VDOT requested that I provide all necessary sight easements and protect the 500' site triangles which I've done on the latest revised plan for the proposed entrance. The sight easements for the proposed turn-around for Fluvanna County use will be incorporated upon Law Enforcement review and acceptance.
 - o VDOT required that minimum of 225' be established along the previous entrance road to its intersection with the main subdivision road for "corner clearance". I spoke with Mr. Mark Wood (VDOT) to determine that a redesign for one way traffic would eliminate the concern. He assured me that it would, and I've incorporated it into the latest revised plan.
 - o VDOT mentioned that an "Approximate Location of Existing Line of Sight Easement" was shown on a Master Plan. Since it was not shown on my previous plan, and since VDOT referenced "Lafayette Village" in their previous comments, I assume this comment was a mix-up.
 - o VDOT requested that distances in feet be provided from the proposed entrance to the closest commercial entrances or state road intersections to the north and south. I've included these on the latest revised plan.
 - o VDOT required that the design of the turn lane conform to VDOT's GS-3 specification sheet. I pulled the specifications and listed them on my deceleration lane details on sheet 1 of the latest revised plan. I've included a note that deceleration lane length is subject to VDOT approval due to my concern to fully cover safety issues.
 - o VDOT's last two issues concerned design requirements for Rte. 600 improvements, and permit and security bond requirements. I listed them in Note 7 on sheet 1 of the latest revised plan.
 - The Fluvanna Sherriff voiced concerns about the speed limit on Rte. 600 (there was talk at the meeting of plans to identify roads in Fluvanna which would be subject to reduced speed limits) and the unavailability of turn-arounds to monitor motorist speeds. My clients and I are

Attachment F

concerned as well that this subdivision design will do everything possible to meet and exceed road safety requirements. First my clients suggested the dedication of the turn-around. Second, we've noted that the Rte. 618 intersection to the north and the Rivanna Rd., LM Riverside Entrance, and Broken Island commercial entrances to the south do not have deceleration lanes. We intend to eliminate hazards by working closely with VDOT to make this subdivision as safe as we possibly can.

Additionally Mrs. Terry Callison (A Lake Monticello resident across Rte. 600) wrote concerns about revisiting the project, "minimal tapering and deceleration lanes".."on a curve at the top of a steep hill", extension of the subdivision road to Riverside Drive, increased traffic volume, clear cutting trees for an unhealthy environment, and parking lot lights.

In response we desire to make all Lake Monticello residents and future middle-income homeowners aware that we are addressing a need stated by Fluvanna County for creatively designed affordable housing in the designated Rivanna Community Planning Area. The tapering and deceleration lanes will meet or exceed VDOT requirements for safety. The sight and stopping distances will also meet or exceed VDOT requirements. We did not state that it was anticipated to connect the subdivision road to Riverside Drive (although VDOT requires that an easement be shown for connectivity, whether it is used or not). We have no plans to do so. The subdivision road will be subject to a homeowner's maintenance agreement, and its end of pavement has been designated over 250' to the north of the end of pavement for Riverside Drive on the latest revised plat to avoid confusion. Traffic volume drives safe entrance design, and the subdivision will not be approved if we fall short. Trees will be cleared for townhouses and the road & parking. To balance that and create a healthy environment we plan to have a Rte. 600 tree buffer in addition to a community garden surrounded by head high hedges viewed upon entry to the development, a decent sized small kid's playground, walking trails around the perimeter while making use of an existing road to the historic Rivanna Locks, and a picnic area overlooking the Rivanna River. Parking lot lighting will be low level and directed to illuminate the sidewalks for safety and will be buffered by vegetation from adjoining neighbors.

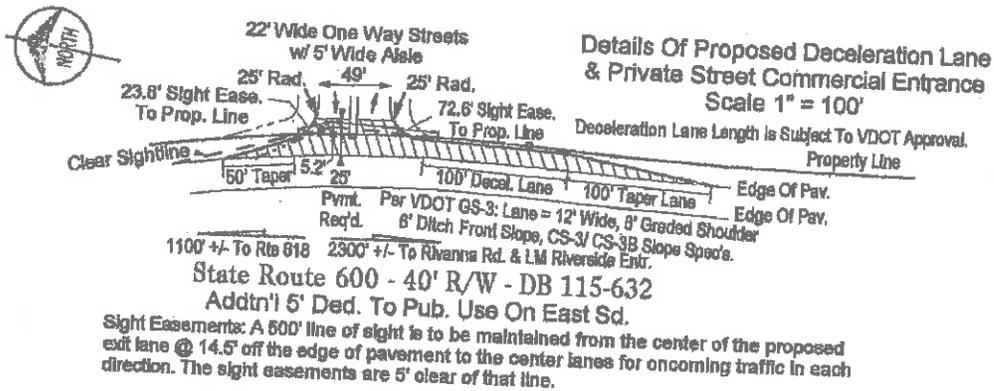
In closing we take pride in our design. We look forward to satisfying this need in Fluvanna County, and we welcome creative comments in order to make this county a beautiful, healthy, and affordable place to live.

Sincerely;

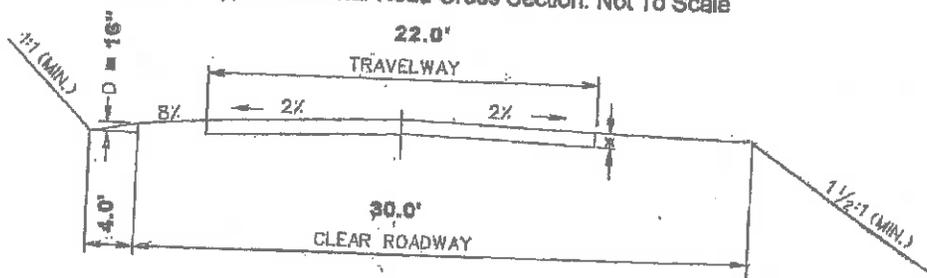
Bryan Chambers

Notes:

- 1) This boundary was based on a field survey by this office dated Dec. 7, 2003 with lines established i.a.w. physical evidence and recorded deeds and plats. Discrepancies are noted i.a.w. Va. State Code.
- 2) The property is currently zoned A-1. The R-3 zone is being applied for. Housing density is 40 units/ 13.811 acres (incl. road ded. acreage) = 2.9 units/ acre. Townhouse dimensions: 14 Townhouses = 30' x 40'; 26 Townhouses = 22' x 32'.
- 3) Topography shown on Sheet 3 was taken from information provided on the Fluv. Co. GIS website.
- 4) The base flood elevation of 272' for Flood Zone "AE" the 1.0% annual chance flood area was taken from the FEMA Flood Ins. Rate Map Number 81068C0066C for Fluv. County Va. dated 5/16/2008. Flood Zone "X" the 0.2% annual chance flood area was proportioned from the above map.
- 5) The entire site is established in mature hardwoods. Drainage, steep slopes (not impacted - mostly off site), and floodplains are shown on Sheet 3. The historic Union Mills Canal Outlet Locks are a short distance off site to the north (as shown on a separate enclosure) and a walking trail is proposed to access them. Wetlands are near the Rivanna River and will not be impacted by the proposed construction.
- 6) Water, sewer, and electric utilities will be designed to connect with existing facilities crossing the site upon review of the Prelim. Master Plan by Aqua Virginia, Lake Monticello Service Co., and CVEC. Water & sewer service will be provided to this parcel per Aqua Virginia letter dated May 17, 2016 subject to all req'd regulatory and governing approvals as well as their contracted terms & conditions.
- 7) A VDOT land use permit and security bond will be required before any construction begins within the right-of-way for State Route 600. Route 600 improvements and pavement markings shall conform to VDOT's WP-2 detail (mill and overlay to the center of the road) and all VDOT standards and spec's. Maintenance of Rivanna Heights Lane will be addressed in The Rivanna Heights Dec'l Of Covenants, Conditions, & Restrictions. VDOT and Fluvanna County will not be responsible for the maintenance of the road until such time as it is incorporated into the state or county road system. Details of the deceleration lane, the private street commercial entrance, & a private road cross section are shown below.



Details Of A Typical Internal Road Cross Section: Not To Scale



Owner/ Developer:
Beverly F. & Carolyn B. Butler
P.O. Box 190, Scottsville, Va. 24590.

Plat Showing Preliminary Master Plan For
Tax Map 18 (A) Parcel 10
Cunningham District, Fluvanna County, Va.

Rivanna Heights

Horiz. Scale: As Noted; Date: May 10, 2016; Rev: July 25, 2016

Chambers - Land Surveying
Sept. 19, 2016
Oct. 11, 2016

Located @ Lake Monticello VA (434) 589-5139

Mailing Address: 353 Willow Dr., Keswick, Va. 22947



Attachment F



May 17, 2016

Mr. Bevley F. Butler
PO Box 785
Scottsville, Virginia 24590
Email: bevbulter@aol.com

SUBJECT: Land Parcel on South Boston Rd, Rt. 600, Tax Map 18-A-10, Deed Book 550 page 41, Ac 13.811, Fluvanna County, Virginia

Dear Mr. Butler:

The purpose of this letter is to indicate Aqua's interest in working with you to provide water and sewer service to the subject parcel, described above and attached hereto as Exhibit A, subject to all required regulatory and governing approvals as well as Aqua's contracts' terms and conditions.

Aqua Virginia, Inc., a Virginia Corporation, (herein "Aqua") is a subsidiary of Aqua America, Inc., and regulated by the Virginia State Corporation Commission as a public service company. Aqua America is one of the nation's largest investor owned utilities serving millions of customers for 130 years. Aqua serves 180 water and sewer systems in Virginia, including the Lake Monticello service area.

Let me know if there are any questions as you prepare your plans for this community expansion. I can be contacted at (804) 749-8868 x54412 (office), (804) 310-0398 (cell), or CLParkerIV@aquaamerica.com.

With Regards,

A handwritten signature in black ink that reads "Clifton L. Parker, IV".

Clifton L. Parker, IV, P.E.,
Director, Corporate Development & Engineering
Aqua Virginia, Inc.

Cc: Engineering file

ATTACHMENT G

Draft Ordinance for the Board of Supervisors to consider:

An Ordinance To Amend The Fluvanna County Zoning Map, With Respect To 13.81 acres of Tax Map 18, Section A, Parcel 10, to rezone the same from A-1, Agricultural, General to R-3, Residential Planned Community

BE IT ORDAINED BY THE FLUVANNA BOARD OF SUPERVISORS, pursuant to Virginia Code Section 15.2-2285, that the Fluvanna County Zoning Map be, and it is hereby, amended, as follows:

That 13.81 acres of Tax Map 18, Section A, Parcel 10, be and is hereby, rezoned from A-1, Agricultural, General to R-3, Residential Planned Community



COUNTY OF FLUVANNA

"Responsive & Responsible Government"

132 Main Street
P.O. Box 540
Palmyra, VA 22963
(434) 591-1910
Fax (434) 591-1911
www.fluvannacounty.org

MEMORANDUM

Date: November 14, 2016
To: Fluvanna County Planning Commission
From: Brad Robinson, Senior Planner
Subject: FY2018 – FY2022 Capital Improvement Plan (CIP)

At October's meeting the Planning Commission began review of the Capital Improvement Plan (CIP) for fiscal years 2018 through 2022 (FY18 – FY22), in accordance with Virginia Code §15.2-2239. The November meeting is intended for ranking of the projects in the CIP document using a rating system of 1, 2 or 3 as described below:

1. Project is important to the current and continuing operations of the County.
2. County operations can continue but some adverse impact could occur if not funded.
3. Project is not imminently necessary but could become a 1 or 2 in the next fiscal year.

The enclosed CIP document has been updated since October's meeting to correct budget numbers in the Major Repair and Replacement Fund; however the projects in this section of the CIP document do not need to be ranked by the Planning Commission.

A public hearing is tentatively planned for the December meeting. A recommendation to the Board of Supervisors will be forwarded thereafter.

Attachment

FY18-22 CIP Request Report

Office/Department/Agency: ALL

of Projects Requested: 61

Total Project Costs:

FY18	FY19	FY20	FY21	FY22	FY18-22
\$ 8,680,880	\$ 9,780,620	\$ 4,093,180	\$ 4,548,680	\$ 17,764,180	\$ 44,867,540

New Annual Operating Costs (avg): \$ 194,663

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FY18-22 CIP Request Report

Office/Department/Agency: **Parks & Recreation**

of Projects Requested: **12**

Total Project Costs:

FY18	FY19	FY20	FY21	FY22	FY18-22
\$ 555,000	\$ 300,000	\$ 355,000	\$ -	\$ 3,869,000	\$ 5,079,000

Total Annual Operating Costs: **\$ 155,200**

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FY2018-2022 CAPITAL IMPROVEMENT PLAN REQUEST

Fluvanna County

Section 1 - PROJECT INFORMATION

Project Title:	Electronic Message Board			Department/Agency Ranking:	1
Department/Agency:	Parks and Recreation	Contact Person:	Aaron Spitzer		
Funding Category:	<input checked="" type="checkbox"/> New Project(FY18-22)	<input type="checkbox"/> Existing Project(FY18-21)	<input type="checkbox"/> FY17 Project (Add'l Funding)		
Applicable Comprehensive Plan Chapter(s):	<input type="checkbox"/> 1. Natural Environment	<input type="checkbox"/> 4. Transportation	<input checked="" type="checkbox"/> 7. Parks and Recreation	<input type="checkbox"/> 10. Education	
	<input type="checkbox"/> 2. Land Use & Community Design	<input type="checkbox"/> 5. Economic Development	<input type="checkbox"/> 8. Housing	<input type="checkbox"/> 11. Public Safety	
	<input type="checkbox"/> 3. Infrastructure	<input type="checkbox"/> 6. Historic Preservation	<input type="checkbox"/> 9. Human Services	<input type="checkbox"/> 12. Financial Sustainability	

Section 2 - PROJECT COSTS

Expenditure Category	Prospective Vendor (if known)	FY2018	FY2019	FY2020	FY2021	FY2022	FY18-22 Total
Engineering & Planning							\$ 0
Construction							\$ 0
Equipment		\$ 25,000					\$ 25,000
Land Acquisition							\$ 0
Other (specify)							\$ 0
Other (specify)							\$ 0
TOTALS		\$ 25,000	\$ 0	\$ 0	\$ 0	\$ 0	\$ 25,000

Section 3 - PROJECTED OPERATIONAL COSTS & REVENUES

Additional Anticipated Operational Expenses	FY2018	FY2019	FY2020	FY2021	FY2022	FY18-22 Total
Additional Staff Salary						\$ 0
Benefits	Calculated at 20% of Staff Salary	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Vehicle						\$ 0
Vehicle Insurance						\$ 0
Utilities	\$ 100	\$ 100	\$ 100	\$ 100	\$ 100	\$ 500
Furniture and Fixtures						\$ 0
Equipment						\$ 0
Contractual costs						\$ 0
Other (specify)						\$ 0
Total Operational Costs	\$ 100	\$ 100	\$ 100	\$ 100	\$ 100	\$ 500
Total Anticipated Operational Revenues						\$ 0

Project Title:

Electronic Message Board

Section 4 - PROJECT DESCRIPTIONS OR SPECIAL EXPLANATIONS

FY 2018:

This CIP is for an electronic message board for the entrance of Pleasant Grove Park. It was planned ahead and there is electricity already at the site where the board would be placed underneath the existing Pleasant Grove Park entrance sign. This board will have a high definition display with the capability to be controlled by Parks and Recreation from the Pleasant Grove House Museum. Having this message board will also allow for advertisements for events happening at the park and would eliminate the banner signs that are placed along Rt. 53 weeks before an event takes place.

FY 2019:

FY 2020:

FY 2021:

FY 2022:

FY2018-2022 CAPITAL IMPROVEMENT PLAN REQUEST

Fluvanna County

Section 1 - PROJECT INFORMATION

Project Title:	Pleasant Grove Athletic Field Lighting (4 Fields)			Department/Agency Ranking:	1
Department/Agency:	Parks and Recreation	Contact Person:	Aaron Spitzer		
Funding Category:	<input type="checkbox"/> New Project(FY18-22)	<input checked="" type="checkbox"/> Existing Project(FY18-21)	<input type="checkbox"/> FY17 Project (Add'l Funding)		
Applicable Comprehensive Plan Chapter(s):	<input type="checkbox"/> 1. Natural Environment	<input type="checkbox"/> 4. Transportation	<input checked="" type="checkbox"/> 7. Parks and Recreation	<input type="checkbox"/> 10. Education	
	<input checked="" type="checkbox"/> 2. Land Use & Community Design	<input type="checkbox"/> 5. Economic Development	<input type="checkbox"/> 8. Housing	<input type="checkbox"/> 11. Public Safety	
	<input type="checkbox"/> 3. Infrastructure	<input type="checkbox"/> 6. Historic Preservation	<input type="checkbox"/> 9. Human Services	<input type="checkbox"/> 12. Financial Sustainability	

Section 2 - PROJECT COSTS

Expenditure Category	Prospective Vendor (if known)	FY2018	FY2019	FY2020	FY2021	FY2022	FY18-22 Total
Engineering & Planning							\$ 0
Construction		\$ 350,000	\$ 300,000				\$ 650,000
Equipment							\$ 0
Land Acquisition							\$ 0
Other (specify)							\$ 0
Other (specify)							\$ 0
TOTALS		\$ 350,000	\$ 300,000	\$ 0	\$ 0	\$ 0	\$ 650,000

Section 3 - PROJECTED OPERATIONAL COSTS & REVENUES

Additional Anticipated Operational Expenses	FY2018	FY2019	FY2020	FY2021	FY2022	FY18-22 Total
Additional Staff Salary						\$ 0
Benefits	Calculated at 20% of Staff Salary	\$ 0				
Vehicle						\$ 0
Vehicle Insurance						\$ 0
Utilities	\$ 2,000	\$ 2,000	\$ 2,000	\$ 2,000	\$ 2,000	\$ 10,000
Furniture and Fixtures						\$ 0
Equipment						\$ 0
Contractual costs						\$ 0
Other (specify)						\$ 0
Total Operational Costs	\$ 2,000	\$ 2,000	\$ 2,000	\$ 2,000	\$ 2,000	\$ 10,000
Total Anticipated Operational Revenues						\$ 0

Project Title:

Pleasant Grove Athletic Field Lighting (4 Fields)

Section 4 - PROJECT DESCRIPTIONS OR SPECIAL EXPLANATIONS

FY 2018:

There is a need to expand on athletic fields in order to accommodate the needs of recreational leagues within the County. The results of a public survey for the Pleasant Grove Active Park Master Plan identified having lights installed on our current athletic fields at Pleasant Grove Park as a high priority to meet the growing needs of the county's youth sports programs. Each year, the Parks and Recreation Department struggles to find space with the shortage of lighted sports fields to operate sports programs in the County. The Carysbrook sports complex is currently the only lighted facility that is available to schedule over 500 youth in three different sports programs each spring and fall seasons. County wide youth sports programs have experienced a steady growth of new participation each year and our County would benefit from having additional lighted fields for use by community youth sports leagues as well as our department. This has become a challenging task to provide the necessary practice times to teach the youth basic fundamentals of their respective sport.

FY 2019:

FY 2020:

FY 2021:

FY 2022:

FY2018-2022 CAPITAL IMPROVEMENT PLAN REQUEST

Fluvanna County

Section 1 - PROJECT INFORMATION

Project Title:	Pleasant Grove Park Picnic Shelter (Replaces Old Pole Barn)		Department/Agency Ranking:	1
Department/Agency:	Parks and Recreation	Contact Person:	Aaron Spitzer	
Funding Category:	<input type="checkbox"/> New Project(FY18-22)	<input checked="" type="checkbox"/> Existing Project(FY18-21)	<input type="checkbox"/> FY17 Project (Add'l Funding)	
Applicable Comprehensive Plan Chapter(s):	<input type="checkbox"/> 1. Natural Environment	<input type="checkbox"/> 4. Transportation	<input checked="" type="checkbox"/> 7. Parks and Recreation	<input type="checkbox"/> 10. Education
	<input checked="" type="checkbox"/> 2. Land Use & Community Design	<input type="checkbox"/> 5. Economic Development	<input type="checkbox"/> 8. Housing	<input type="checkbox"/> 11. Public Safety
	<input type="checkbox"/> 3. Infrastructure	<input type="checkbox"/> 6. Historic Preservation	<input type="checkbox"/> 9. Human Services	<input type="checkbox"/> 12. Financial Sustainability

Section 2 - PROJECT COSTS

Expenditure Category	Prospective Vendor (if known)	FY2018	FY2019	FY2020	FY2021	FY2022	FY18-22 Total
Engineering & Planning							\$ 0
Construction		\$ 30,000					\$ 30,000
Equipment							\$ 0
Land Acquisition							\$ 0
Other (specify)	Water/Electric/Amentities	\$ 10,000					\$ 10,000
Other (specify)							\$ 0
TOTALS		\$ 40,000	\$ 0	\$ 0	\$ 0	\$ 0	\$ 40,000

Section 3 - PROJECTED OPERATIONAL COSTS & REVENUES

Additional Anticipated Operational Expenses	FY2018	FY2019	FY2020	FY2021	FY2022	FY18-22 Total
Additional Staff Salary						\$ 0
Benefits	Calculated at 20% of Staff Salary	\$ 0				
Vehicle						\$ 0
Vehicle Insurance						\$ 0
Utilities						\$ 0
Furniture and Fixtures						\$ 0
Equipment						\$ 0
Contractual costs						\$ 0
Other (specify)						\$ 0
Total Operational Costs	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Total Anticipated Operational Revenues						\$ 0

Project Title:

Pleasant Grove Park Picnic Shelter (Replaces Old Pole Barn)

Section 4 - PROJECT DESCRIPTIONS OR SPECIAL EXPLANATIONS

FY 2018:

The Pleasant Grove Park Active Recreation Master Plan states that multi-purpose structures are an important site amenity needed to fulfill the process of park development. The construction of a 30' x 100' wooden structure designed to serve as a permanent site for picnics, sports gatherings, birthday/family reunion parties, and other rentals. This amenity will increase participation at Pleasant Grove Park in affording community members another place to visit as well as providing an additional shelter for park rentals. This shelter will replace the old pole barn that was removed several years ago.

FY 2019:

FY 2020:

FY 2021:

FY 2022:

FY2018-2022 CAPITAL IMPROVEMENT PLAN REQUEST

Fluvanna County

Section 1 - PROJECT INFORMATION

Project Title:	Pleasant Grove Playground Expansion			Department/Agency Ranking:	1
Department/Agency:	Parks and Recreation	Contact Person:	Aaron Spitzer		
Funding Category:	<input type="checkbox"/> New Project(FY18-22)	<input checked="" type="checkbox"/> Existing Project(FY18-21)	<input type="checkbox"/> FY17 Project (Add'l Funding)		
Applicable Comprehensive Plan Chapter(s):	<input type="checkbox"/> 1. Natural Environment	<input type="checkbox"/> 4. Transportation	<input type="checkbox"/> 7. Parks and Recreation	<input type="checkbox"/> 10. Education	
	<input type="checkbox"/> 2. Land Use & Community Design	<input type="checkbox"/> 5. Economic Development	<input type="checkbox"/> 8. Housing	<input type="checkbox"/> 11. Public Safety	
	<input type="checkbox"/> 3. Infrastructure	<input type="checkbox"/> 6. Historic Preservation	<input type="checkbox"/> 9. Human Services	<input type="checkbox"/> 12. Financial Sustainability	

Section 2 - PROJECT COSTS

Expenditure Category	Prospective Vendor (if known)	FY2018	FY2019	FY2020	FY2021	FY2022	FY18-22 Total
Engineering & Planning							\$ 0
Construction		\$ 40,000					\$ 40,000
Equipment							\$ 0
Land Acquisition							\$ 0
Other (specify)	Rubber Mulch (ADA Certified)	\$ 10,000					\$ 10,000
Other (specify)							\$ 0
TOTALS		\$ 50,000	\$ 0	\$ 0	\$ 0	\$ 0	\$ 50,000

Section 3 - PROJECTED OPERATIONAL COSTS & REVENUES

Additional Anticipated Operational Expenses	FY2018	FY2019	FY2020	FY2021	FY2022	FY18-22 Total
Additional Staff Salary						\$ 0
Benefits	Calculated at 20% of Staff Salary	\$ 0				
Vehicle						\$ 0
Vehicle Insurance						\$ 0
Utilities						\$ 0
Furniture and Fixtures						\$ 0
Equipment						\$ 0
Contractual costs						\$ 0
Other (specify)						\$ 0
Total Operational Costs	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Total Anticipated Operational Revenues						\$ 0

Project Title:

Pleasant Grove Playground Expansion

Section 4 - PROJECT DESCRIPTIONS OR SPECIAL EXPLANATIONS

FY 2018:

Based on guideline standards of the National Playground Safety Institute has identified five areas of safety concerns in a public playground environment. The five critical areas are: Supervision, ADA Accessibility, Age Appropriate Design, Fall Surfacing and Equipment and Surfacing maintenance. A public playground should create a structured environment where children can play on equipment that is designed for their developmental needs and abilities that tap into a child's creativity, foster their social growth, and provide a positive outlet through interactive playtime. The playground structure at Pleasant Grove Park does not meet these objectives for children in the following age groups: pre-school/toddlers, children ages 5-12, and children with special needs that require a social outlet for their socialization and developmental growth. This playground expansion project will address these key elements for public playground equipment.

FY 2019:

FY 2020:

FY 2021:

FY 2022:

FY2018-2022 CAPITAL IMPROVEMENT PLAN REQUEST

Fluvanna County

Section 1 - PROJECT INFORMATION

Project Title:	Athletic Scoreboards (4: 2 baseball, 2 softball)			Department/Agency Ranking:	2
Department/Agency:	Parks and Recreation	Contact Person:	Aaron Spitzer		
Funding Category:	<input checked="" type="checkbox"/> New Project(FY18-22)	<input type="checkbox"/> Existing Project(FY18-21)	<input type="checkbox"/> FY17 Project (Add'l Funding)		
Applicable Comprehensive Plan Chapter(s):	<input type="checkbox"/> 1. Natural Environment	<input type="checkbox"/> 4. Transportation	<input checked="" type="checkbox"/> 7. Parks and Recreation	<input type="checkbox"/> 10. Education	
	<input type="checkbox"/> 2. Land Use & Community Design	<input type="checkbox"/> 5. Economic Development	<input type="checkbox"/> 8. Housing	<input type="checkbox"/> 11. Public Safety	
	<input type="checkbox"/> 3. Infrastructure	<input type="checkbox"/> 6. Historic Preservation	<input type="checkbox"/> 9. Human Services	<input type="checkbox"/> 12. Financial Sustainability	

Section 2 - PROJECT COSTS

Expenditure Category	Prospective Vendor (if known)	FY2018	FY2019	FY2020	FY2021	FY2022	FY18-22 Total
Engineering & Planning							\$ 0
Construction							\$ 0
Equipment		\$ 30,000					\$ 30,000
Land Acquisition							\$ 0
Other (specify)	Electric Lines	\$ 5,000					\$ 5,000
Other (specify)							\$ 0
TOTALS		\$ 35,000	\$ 0	\$ 0	\$ 0	\$ 0	\$ 35,000

Section 3 - PROJECTED OPERATIONAL COSTS & REVENUES

Additional Anticipated Operational Expenses	FY2018	FY2019	FY2020	FY2021	FY2022	FY18-22 Total
Additional Staff Salary						\$ 0
Benefits	Calculated at 20% of Staff Salary	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Vehicle						\$ 0
Vehicle Insurance						\$ 0
Utilities	\$ 300	\$ 300	\$ 300	\$ 300	\$ 300	\$ 1,500
Furniture and Fixtures						\$ 0
Equipment						\$ 0
Contractual costs						\$ 0
Other (specify)						\$ 0
Total Operational Costs	\$ 300	\$ 300	\$ 300	\$ 300	\$ 300	\$ 1,500
Total Anticipated Operational Revenues						\$ 0

Project Title:

Athletic Scoreboards (4: 2 baseball, 2 softball)

Section 4 - PROJECT DESCRIPTIONS OR SPECIAL EXPLANATIONS

FY 2018:

Currently at Parks and Recreation's athletic fields, there is only one field with a scoreboard and it doesn't work half the time. With the installation of scoreboards at each of our fields, each field will be better equipped to handle tournament games. Each of the fields currently has power running close enough where the scoreboards could connect thus saving money on not having to run all new power lines from a main power source.

FY 2019:

FY 2020:

FY 2021:

FY 2022:

FY2018-2022 CAPITAL IMPROVEMENT PLAN REQUEST

Fluvanna County

Section 1 - PROJECT INFORMATION

Project Title:	Pleasant Grove Park Athletic Fields			Department/Agency Ranking:	2
Department/Agency:	Parks and Recreation	Contact Person:	Aaron Spitzer		
Funding Category:	<input type="checkbox"/> New Project(FY18-22)	<input checked="" type="checkbox"/> Existing Project(FY18-21)	<input type="checkbox"/> FY17 Project (Add'l Funding)		
Applicable Comprehensive Plan Chapter(s):	<input type="checkbox"/> 1. Natural Environment	<input type="checkbox"/> 4. Transportation	<input checked="" type="checkbox"/> 7. Parks and Recreation	<input type="checkbox"/> 10. Education	
	<input checked="" type="checkbox"/> 2. Land Use & Community Design	<input type="checkbox"/> 5. Economic Development	<input type="checkbox"/> 8. Housing	<input type="checkbox"/> 11. Public Safety	
	<input type="checkbox"/> 3. Infrastructure	<input type="checkbox"/> 6. Historic Preservation	<input type="checkbox"/> 9. Human Services	<input type="checkbox"/> 12. Financial Sustainability	

Section 2 - PROJECT COSTS

Expenditure Category	Prospective Vendor (if known)	FY2018	FY2019	FY2020	FY2021	FY2022	FY18-22 Total
Engineering & Planning				\$ 22,000			\$ 22,000
Construction							\$ 0
Equipment				\$ 71,000			\$ 71,000
Land Acquisition							\$ 0
Other (specify)	Grading/Seeding/Dugouts/Fencing			\$ 222,000			\$ 222,000
Other (specify)							\$ 0
TOTALS		\$ 0	\$ 0	\$ 315,000	\$ 0	\$ 0	\$ 315,000

Section 3 - PROJECTED OPERATIONAL COSTS & REVENUES

Additional Anticipated Operational Expenses	FY2018	FY2019	FY2020	FY2021	FY2022	FY18-22 Total
Additional Staff Salary						\$ 0
Benefits	Calculated at 20% of Staff Salary	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Vehicle						\$ 0
Vehicle Insurance						\$ 0
Utilities			\$ 500	\$ 500	\$ 500	\$ 1,500
Furniture and Fixtures						\$ 0
Equipment						\$ 0
Contractual costs						\$ 0
Other (specify)						\$ 0
Total Operational Costs	\$ 0	\$ 0	\$ 500	\$ 500	\$ 500	\$ 1,500
Total Anticipated Operational Revenues						\$ 0

Project Title:

Pleasant Grove Park Athletic Fields

Section 4 - PROJECT DESCRIPTIONS OR SPECIAL EXPLANATIONS

FY 2018:

FY 2019:

FY 2020:

There is a need to expand on athletic fields in order to accommodate the needs of recreational leagues within Fluvanna County. This request is to complete the construction of the remaining athletic fields at Pleasant Grove Park, which is another multi use field next to the soccer fields, 1 baseball and 1 softball field as well as installation of irrigation to the multi use field, athletic fencing for the baseball and softball fields along with dugouts. The construction of these new ball fields will address two major objectives in the BOS approved Pleasant Grove Active Park Master Plan: 1) the completion of a four field sports complex and 2) to address the challenges we face with meeting the increased needs of providing appropriate field space for our youth sports program participants.

FY 2021:

FY 2022:

FY2018-2022 CAPITAL IMPROVEMENT PLAN REQUEST

Fluvanna County

Section 1 - PROJECT INFORMATION

Project Title:	Pleasant Grove Park Multi-Purpose Shelter			Department/Agency Ranking:	2
Department/Agency:	Parks and Recreation	Contact Person:	Aaron Spitzer		
Funding Category:	<input type="checkbox"/> New Project(FY18-22)	<input checked="" type="checkbox"/> Existing Project(FY18-21)	<input type="checkbox"/> FY17 Project (Add'l Funding)		
Applicable Comprehensive Plan Chapter(s):	<input type="checkbox"/> 1. Natural Environment	<input type="checkbox"/> 4. Transportation	<input checked="" type="checkbox"/> 7. Parks and Recreation	<input type="checkbox"/> 10. Education	
	<input checked="" type="checkbox"/> 2. Land Use & Community Design	<input type="checkbox"/> 5. Economic Development	<input type="checkbox"/> 8. Housing	<input type="checkbox"/> 11. Public Safety	
	<input type="checkbox"/> 3. Infrastructure	<input type="checkbox"/> 6. Historic Preservation	<input type="checkbox"/> 9. Human Services	<input type="checkbox"/> 12. Financial Sustainability	

Section 2 - PROJECT COSTS

Expenditure Category	Prospective Vendor (if known)	FY2018	FY2019	FY2020	FY2021	FY2022	FY18-22 Total
Engineering & Planning							\$ 0
Construction		\$ 45,000					\$ 45,000
Equipment							\$ 0
Land Acquisition							\$ 0
Other (specify)	Amenities	\$ 10,000					\$ 10,000
Other (specify)							\$ 0
TOTALS		\$ 55,000	\$ 0	\$ 0	\$ 0	\$ 0	\$ 55,000

Section 3 - PROJECTED OPERATIONAL COSTS & REVENUES

Additional Anticipated Operational Expenses	FY2018	FY2019	FY2020	FY2021	FY2022	FY18-22 Total
Additional Staff Salary						\$ 0
Benefits	Calculated at 20% of Staff Salary	\$ 0				
Vehicle						\$ 0
Vehicle Insurance						\$ 0
Utilities		\$ 500	\$ 500	\$ 500	\$ 500	\$ 2,500
Furniture and Fixtures						\$ 0
Equipment						\$ 0
Contractual costs						\$ 0
Other (specify)						\$ 0
Total Operational Costs		\$ 500	\$ 500	\$ 500	\$ 500	\$ 2,500
Total Anticipated Operational Revenues						\$ 0

Project Title:

Pleasant Grove Park Multi-Purpose Shelter

Section 4 - PROJECT DESCRIPTIONS OR SPECIAL EXPLANATIONS

FY 2018:

The Pleasant Grove Park Active Recreation Master Plan states that multi-purpose structures are an important site amenity needed to fulfill the process of park development. The development of a 40' x 100' wooden structure is designed to serve as a permanent site for park picnics, sports team gatherings, birthday/family reunion parties, and other park rentals. This amenity will increase participation at Pleasant Grove Park in affording community members another place to visit as well as providing an additional shade structure. The Master Plan has a total of 5 additional multi use shelters for the park.

FY 2019:

FY 2020:

FY 2021:

FY 2022:

Project Title:

Crofton Park

Section 4 - PROJECT DESCRIPTIONS OR SPECIAL EXPLANATIONS

FY 2018:

FY 2019:

FY 2020:

The Fluvanna County Board of Supervisors voted to authorize the acceptance of parcels 9-A-2, 18-A-1D (portion of) and 18-A-1E into County ownership on December 10, 2010. The park development is in general compliance with the Comprehensive Plan that supports the preservation of natural environments, alternative transportation options, as well as historic preservation. The new land acquisition creates a two-part park classification system as a stand alone greenway park and alternative transportation connectivity to the Heritage Trails at Pleasant Grove Park. This project has the potential to receive funding from a variety of grant sources as well as public/private partnerships. The Fluvanna Heritage Trail Foundation has invested \$5,360 on a Park Plan that was approved by the Board of Supervisors on August 3, 2016. The Park Plan will include recreational hiking and biking trails, panels along the trails discussing the Rivanna River (the navigation system and the locks), The history of abandoned Bernardsburg (the second town in Fluvanna created in 1796), and coverage of the flora and fauna of the park.

FY 2021:

FY 2022:

FY2018-2022 CAPITAL IMPROVEMENT PLAN REQUEST

Fluvanna County

Section 1 - PROJECT INFORMATION

Project Title:	Fluvanna County Multigenerational Center			Department/Agency Ranking:	3
Department/Agency:	Parks and Recreation	Contact Person:	Aaron Spitzer		
Funding Category:	<input type="checkbox"/> New Project(FY18-22)	<input checked="" type="checkbox"/> Existing Project(FY18-21)	<input type="checkbox"/> FY17 Project (Add'l Funding)		
Applicable Comprehensive Plan Chapter(s):	<input type="checkbox"/> 1. Natural Environment	<input type="checkbox"/> 4. Transportation	<input checked="" type="checkbox"/> 7. Parks and Recreation	<input type="checkbox"/> 10. Education	
	<input checked="" type="checkbox"/> 2. Land Use & Community Design	<input type="checkbox"/> 5. Economic Development	<input type="checkbox"/> 8. Housing	<input type="checkbox"/> 11. Public Safety	
	<input type="checkbox"/> 3. Infrastructure	<input type="checkbox"/> 6. Historic Preservation	<input type="checkbox"/> 9. Human Services	<input type="checkbox"/> 12. Financial Sustainability	

Section 2 - PROJECT COSTS

Expenditure Category	Prospective Vendor (if known)	FY2018	FY2019	FY2020	FY2021	FY2022	FY18-22 Total
Engineering & Planning						\$ 262,500	\$ 262,500
Construction						\$ 2,362,500	\$ 2,362,500
Equipment						\$ 20,000	\$ 20,000
Land Acquisition							\$ 0
Other (specify)	Furniture & Fixtures					\$ 15,000	\$ 15,000
Other (specify)							\$ 0
TOTALS		\$ 0	\$ 0	\$ 0	\$ 0	\$ 2,660,000	\$ 2,660,000

Section 3 - PROJECTED OPERATIONAL COSTS & REVENUES

Additional Anticipated Operational Expenses	FY2018	FY2019	FY2020	FY2021	FY2022	FY18-22 Total
Additional Staff Salary					\$ 20,000	\$ 20,000
Benefits	Calculated at 20% of Staff Salary	\$ 0	\$ 0	\$ 0	\$ 4,000	\$ 4,000
Vehicle						\$ 0
Vehicle Insurance						\$ 0
Utilities					\$ 20,000	\$ 20,000
Furniture and Fixtures						\$ 0
Equipment						\$ 0
Contractual costs					\$ 6,000	\$ 6,000
Other (specify)						\$ 0
Total Operational Costs	\$ 0	\$ 0	\$ 0	\$ 0	\$ 50,000	\$ 50,000
Total Anticipated Operational Revenues						\$ 0

Project Title:

Fluvanna County Multigenerational Center

Section 4 - PROJECT DESCRIPTIONS OR SPECIAL EXPLANATIONS

FY 2018:

FY 2019:

FY 2020:

FY 2021:

FY 2022:

A Multigenerational Center in Fluvanna County will create an experience for families and people of all ages to come together in a community setting. The vision is a center which could build on community partnerships, promote families spending more time together, and provide both early intervention and prevention programming. A Multigenerational Center would give the community an option of visiting their local recreation facility rather than attending another facility outside of Fluvanna County. The Center would serve people of all ages and would allow for a wide-array of programs that we currently cannot offer.

FY2018-2022 CAPITAL IMPROVEMENT PLAN REQUEST

Fluvanna County

Section 1 - PROJECT INFORMATION

Project Title:	Pleasant Grove Park Basketball and Tennis Courts			Department/Agency Ranking:	3
Department/Agency:	Parks and Recreation	Contact Person:	Aaron Spitzer		
Funding Category:	<input type="checkbox"/> New Project(FY18-22)	<input checked="" type="checkbox"/> Existing Project(FY18-21)	<input type="checkbox"/> FY17 Project (Add'l Funding)		
Applicable Comprehensive Plan Chapter(s):	<input type="checkbox"/> 1. Natural Environment	<input type="checkbox"/> 4. Transportation	<input checked="" type="checkbox"/> 7. Parks and Recreation	<input type="checkbox"/> 10. Education	
	<input checked="" type="checkbox"/> 2. Land Use & Community Design	<input type="checkbox"/> 5. Economic Development	<input type="checkbox"/> 8. Housing	<input type="checkbox"/> 11. Public Safety	
	<input type="checkbox"/> 3. Infrastructure	<input type="checkbox"/> 6. Historic Preservation	<input type="checkbox"/> 9. Human Services	<input type="checkbox"/> 12. Financial Sustainability	

Section 2 - PROJECT COSTS

Expenditure Category	Prospective Vendor (if known)	FY2018	FY2019	FY2020	FY2021	FY2022	FY18-22 Total
Engineering & Planning						\$ 13,000	\$ 13,000
Construction							\$ 0
Equipment						\$ 8,000	\$ 8,000
Land Acquisition							\$ 0
Other (specify)	Earthwork					\$ 130,000	\$ 130,000
Other (specify)							\$ 0
TOTALS		\$ 0	\$ 0	\$ 0	\$ 0	\$ 151,000	\$ 151,000

Section 3 - PROJECTED OPERATIONAL COSTS & REVENUES

Additional Anticipated Operational Expenses	FY2018	FY2019	FY2020	FY2021	FY2022	FY18-22 Total
Additional Staff Salary						\$ 0
Benefits	Calculated at 20% of Staff Salary	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Vehicle						\$ 0
Vehicle Insurance						\$ 0
Utilities						\$ 0
Furniture and Fixtures						\$ 0
Equipment						\$ 0
Contractual costs						\$ 0
Other (specify)						\$ 0
Total Operational Costs	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Total Anticipated Operational Revenues						\$ 0

Project Title:

Pleasant Grove Park Basketball and Tennis Courts

Section 4 - PROJECT DESCRIPTIONS OR SPECIAL EXPLANATIONS

FY 2018:

FY 2019:

FY 2020:

FY 2021:

FY 2022:

Currently, there are no basketball or tennis courts at Pleasant Grove Park which the Master Plan calls for. The park is utilized by thousands of County residents annually and based off the Master Plan Survey in 2011, these site amenities are needed. This CIP request is for construction of 2 basketball and 2 tennis courts at the Pleasant Grove Sports Park.

FY2018-2022 CAPITAL IMPROVEMENT PLAN REQUEST

Fluvanna County

Section 1 - PROJECT INFORMATION

Project Title:	Pleasant Grove Outdoor Swimming Pool and Pool House		Department/Agency Ranking:	3
Department/Agency:	Parks and Recreation	Contact Person:	Aaron Spitzer	
Funding Category:	<input type="checkbox"/> New Project(FY18-22)	<input checked="" type="checkbox"/> Existing Project(FY18-21)	<input type="checkbox"/> FY17 Project (Add'l Funding)	
Applicable Comprehensive Plan Chapter(s):	<input type="checkbox"/> 1. Natural Environment	<input type="checkbox"/> 4. Transportation	<input checked="" type="checkbox"/> 7. Parks and Recreation	<input type="checkbox"/> 10. Education
	<input checked="" type="checkbox"/> 2. Land Use & Community Design	<input type="checkbox"/> 5. Economic Development	<input type="checkbox"/> 8. Housing	<input type="checkbox"/> 11. Public Safety
	<input type="checkbox"/> 3. Infrastructure	<input type="checkbox"/> 6. Historic Preservation	<input type="checkbox"/> 9. Human Services	<input type="checkbox"/> 12. Financial Sustainability

Section 2 - PROJECT COSTS

Expenditure Category	Prospective Vendor (if known)	FY2018	FY2019	FY2020	FY2021	FY2022	FY18-22 Total
Engineering & Planning						\$ 87,000	\$ 87,000
Construction						\$ 783,000	\$ 783,000
Equipment						\$ 30,000	\$ 30,000
Land Acquisition							\$ 0
Other (specify)	Furniture					\$ 8,000	\$ 8,000
Other (specify)							\$ 0
TOTALS		\$ 0	\$ 0	\$ 0	\$ 0	\$ 908,000	\$ 908,000

Section 3 - PROJECTED OPERATIONAL COSTS & REVENUES

Additional Anticipated Operational Expenses	FY2018	FY2019	FY2020	FY2021	FY2022	FY18-22 Total
Additional Staff Salary					\$ 45,000	\$ 45,000
Benefits	Calculated at 20% of Staff Salary	\$ 0	\$ 0	\$ 0	\$ 9,000	\$ 9,000
Vehicle						\$ 0
Vehicle Insurance						\$ 0
Utilities					\$ 4,000	\$ 4,000
Furniture and Fixtures						\$ 0
Equipment						\$ 0
Contractual costs					\$ 1,000	\$ 1,000
Other (specify)					\$ 10,000	\$ 10,000
Total Operational Costs	\$ 0	\$ 0	\$ 0	\$ 0	\$ 69,000	\$ 69,000
Total Anticipated Operational Revenues						\$ 0

Project Title:

Pleasant Grove Outdoor Swimming Pool and Pool House

Section 4 - PROJECT DESCRIPTIONS OR SPECIAL EXPLANATIONS

FY 2018:

FY 2019:

FY 2020:

FY 2021:

FY 2022:

This project is for the construction of a rectangular shaped 75' x 150' meter pool with a zero depth entry and a 30' x 65' children's pool. Amenities would include a 20' slide, diving blocks for swim meets, lane lines, and deck furniture along with shade structures. Also included is a 2,600 square foot building to support pool operations for patrons. The facility will include a men's, women's, and family restroom/changing stations that will include locker areas. The pool's mechanical/equipment room, staff office space, and the entrance for member/guest check also will be located in this facility. In addition to serving as a pool house, the building will also have a multi-purpose room that can be used year round as an additional revenue opportunity to host birthday parties, sports banquets/meetings, and other rentals as requested.

FY2018-2022 CAPITAL IMPROVEMENT PLAN REQUEST

Fluvanna County

Section 1 - PROJECT INFORMATION

Project Title:	Pleasant Grove Spray Ground			Department/Agency Ranking:	3
Department/Agency:	Parks and Recreation	Contact Person:	Aaron Spitzer		
Funding Category:	<input type="checkbox"/> New Project(FY18-22)	<input checked="" type="checkbox"/> Existing Project(FY18-21)	<input type="checkbox"/> FY17 Project (Add'l Funding)		
Applicable Comprehensive Plan Chapter(s):	<input type="checkbox"/> 1. Natural Environment	<input type="checkbox"/> 4. Transportation	<input checked="" type="checkbox"/> 7. Parks and Recreation	<input type="checkbox"/> 10. Education	
	<input checked="" type="checkbox"/> 2. Land Use & Community Design	<input type="checkbox"/> 5. Economic Development	<input type="checkbox"/> 8. Housing	<input type="checkbox"/> 11. Public Safety	
	<input type="checkbox"/> 3. Infrastructure	<input type="checkbox"/> 6. Historic Preservation	<input type="checkbox"/> 9. Human Services	<input type="checkbox"/> 12. Financial Sustainability	

Section 2 - PROJECT COSTS

Expenditure Category	Prospective Vendor (if known)	FY2018	FY2019	FY2020	FY2021	FY2022	FY18-22 Total
Engineering & Planning						\$ 15,000	\$ 15,000
Construction						\$ 135,000	\$ 135,000
Equipment							\$ 0
Land Acquisition							\$ 0
Other (specify)							\$ 0
Other (specify)							\$ 0
TOTALS		\$ 0	\$ 0	\$ 0	\$ 0	\$ 150,000	\$ 150,000

Section 3 - PROJECTED OPERATIONAL COSTS & REVENUES

Additional Anticipated Operational Expenses	FY2018	FY2019	FY2020	FY2021	FY2022	FY18-22 Total
Additional Staff Salary					\$ 10,000	\$ 10,000
Benefits	Calculated at 20% of Staff Salary	\$ 0	\$ 0	\$ 0	\$ 2,000	\$ 2,000
Vehicle						\$ 0
Vehicle Insurance						\$ 0
Utilities					\$ 2,000	\$ 2,000
Furniture and Fixtures						\$ 0
Equipment						\$ 0
Contractual costs						\$ 0
Other (specify)					\$ 4,000	\$ 4,000
Total Operational Costs	\$ 0	\$ 0	\$ 0	\$ 0	\$ 18,000	\$ 18,000
Total Anticipated Operational Revenues						\$ 0

Project Title:

Pleasant Grove Spray Ground

Section 4 - PROJECT DESCRIPTIONS OR SPECIAL EXPLANATIONS

FY 2018:

FY 2019:

FY 2020:

FY 2021:

FY 2022:

The proposed project consist of the construction of a 2,000 square foot water spray ground with a 1,000 square foot child's play sand area. This area will provide an additional recreational attraction for patrons of the park.

FY18-22 CIP Request Report

Office/Department/Agency:

Public Works

of Projects Requested:

4

Total Project Costs:

FY18	FY19	FY20	FY21	FY22	FY18-22
\$ 100,000	\$ 575,000	\$ 700,000	\$ 695,000	\$ 11,475,000	\$ 13,545,000

Total Annual Operating Costs (avg):

\$ 39,463

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FY2018-2022 CAPITAL IMPROVEMENT PLAN REQUEST

Fluvanna County

Section 1 - PROJECT INFORMATION

Project Title:	Public Safety Building Addition			Department/Agency Ranking:	1
Department/Agency:	Public Works	Contact Person:	Wayne Stephens		
Funding Category:	<input checked="" type="checkbox"/> New Project(FY18-22)	<input type="checkbox"/> Existing Project(FY18-21)	<input type="checkbox"/> FY17 Project (Add'l Funding)		
Applicable Comprehensive Plan Chapter(s):	<input type="checkbox"/> 1. Natural Environment	<input type="checkbox"/> 4. Transportation	<input type="checkbox"/> 7. Parks and Recreation	<input type="checkbox"/> 10. Education	
	<input type="checkbox"/> 2. Land Use & Community Design	<input type="checkbox"/> 5. Economic Development	<input type="checkbox"/> 8. Housing	<input checked="" type="checkbox"/> 11. Public Safety	
	<input checked="" type="checkbox"/> 3. Infrastructure	<input type="checkbox"/> 6. Historic Preservation	<input type="checkbox"/> 9. Human Services	<input type="checkbox"/> 12. Financial Sustainability	

Section 2 - PROJECT COSTS

Expenditure Category	Prospective Vendor (if known)	FY2018	FY2019	FY2020	FY2021	FY2022	FY18-22 Total
Engineering & Planning					\$ 50,000	\$ 50,000	\$ 100,000
Construction					\$ 150,000	\$ 425,000	\$ 575,000
Equipment							\$ 0
Land Acquisition							\$ 0
Other (specify)	Furniture				\$ 20,000		\$ 20,000
Other (specify)							\$ 0
TOTALS		\$ 0	\$ 0	\$ 0	\$ 220,000	\$ 475,000	\$ 695,000

Section 3 - PROJECTED OPERATIONAL COSTS & REVENUES

Additional Anticipated Operational Expenses	FY2018	FY2019	FY2020	FY2021	FY2022	FY18-22 Total
Additional Staff Salary						\$ 0
Benefits	Calculated at 20% of Staff Salary	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Vehicle						\$ 0
Vehicle Insurance						\$ 0
Utilities				\$ 1,225	\$ 1,250	\$ 2,475
Furniture and Fixtures						\$ 0
Equipment						\$ 0
Contractual costs						\$ 0
Other (specify)				\$ 12,250	\$ 12,500	\$ 24,750
Total Operational Costs	\$ 0	\$ 0	\$ 0	\$ 13,475	\$ 13,750	\$ 27,225
Total Anticipated Operational Revenues						\$ 0

Project Title:

Public Safety Building Addition

Section 4 - PROJECT DESCRIPTIONS OR SPECIAL EXPLANATIONS

FY 2018:

FY 2019:

FY 2020:

FY 2021:

This project involves the design and construction of an addition to the existing Public Safety Building. The addition will be designed to provide additional security during prisoner transport & exchange, and will also provide additional office and storage space to meet the Sheriff's Department's projected space needs for the next 15+ years. Conceptual plans for the addition include approximately 3,700 SF (gross) on two levels, including seven (7) new offices for Sheriff's Department personnel, approximately 500 SF of additional storage space, a revised prisoner processing area with office space for a magistrate, and a secure sally-port.

FY2021 funding will be used for architectural & engineering design, project bidding, and start of construction.

FY 2022:

FY2022 funding will be utilized to complete construction.

FY2018-2022 CAPITAL IMPROVEMENT PLAN REQUEST

Fluvanna County

Section 1 - PROJECT INFORMATION

Project Title:	Treasurer's Building - Major Upgrades			Department/Agency Ranking:	1
Department/Agency:	Public Works	Contact Person:	Wayne Stephens		
Funding Category:	<input type="checkbox"/> New Project(FY18-22)	<input checked="" type="checkbox"/> Existing Project(FY18-21)	<input type="checkbox"/> FY17 Project (Add'l Funding)		
Applicable Comprehensive Plan Chapter(s):	<input type="checkbox"/> 1. Natural Environment	<input type="checkbox"/> 4. Transportation	<input type="checkbox"/> 7. Parks and Recreation	<input type="checkbox"/> 10. Education	
	<input type="checkbox"/> 2. Land Use & Community Design	<input type="checkbox"/> 5. Economic Development	<input type="checkbox"/> 8. Housing	<input type="checkbox"/> 11. Public Safety	
	<input checked="" type="checkbox"/> 3. Infrastructure	<input type="checkbox"/> 6. Historic Preservation	<input type="checkbox"/> 9. Human Services	<input type="checkbox"/> 12. Financial Sustainability	

Section 2 - PROJECT COSTS

Expenditure Category	Prospective Vendor (if known)	FY2018	FY2019	FY2020	FY2021	FY2022	FY18-22 Total
Engineering & Planning							\$ 0
Construction			\$ 350,000	\$ 400,000			\$ 750,000
Equipment							\$ 0
Land Acquisition							\$ 0
Other (specify)							\$ 0
Other (specify)							\$ 0
TOTALS		\$ 0	\$ 350,000	\$ 400,000	\$ 0	\$ 0	\$ 750,000

Section 3 - PROJECTED OPERATIONAL COSTS & REVENUES

Additional Anticipated Operational Expenses	FY2018	FY2019	FY2020	FY2021	FY2022	FY18-22 Total
Additional Staff Salary						\$ 0
Benefits	Calculated at 20% of Staff Salary	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Vehicle						\$ 0
Vehicle Insurance						\$ 0
Utilities						\$ 0
Furniture and Fixtures						\$ 0
Equipment						\$ 0
Contractual costs						\$ 0
Other (specify)						\$ 0
Total Operational Costs	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Total Anticipated Operational Revenues						\$ 0

Project Title:

Treasurer's Building - Major Upgrades

Section 4 - PROJECT DESCRIPTIONS OR SPECIAL EXPLANATIONS

FY 2018:

There is no funding programmed for this project in FY2018

FY 2019:

A large portion of the Building is served by a 50 Amp electrical service with fuses and old, obsolete wiring. Additionally, the HVAC systems are antiquated and do not provide adequate climate control for the building. Finally, there have been few interior improvements performed in the building in recent years. The first portion of this project, utilizing \$250,00 in FY2017 funding, included reconfiguring the cashier area in the Treasurer's office & the front counter in the Commissioner's office, as well as the first phase of installation of new flooring, paint, ceiling tiles, and modern LED lighting in areas where they are needed.

FY2019 work will include design and construction of a new main electrical service and installation of modern electrical wiring for those portions of the building which are served by inadequate electrical systems, and additional lighting, flooring and other interior renovations, and renovation of restrooms.

FY 2020:

FY2020 work will include design & installation of new HVAC system(s) for the entire building, completion of lighting, flooring, paint & ceiling tile upgrades, completion of restroom renovations, and replacement of the building's windows (budget permitting).

FY 2021:

FY 2022:

FY2018-2022 CAPITAL IMPROVEMENT PLAN REQUEST

Fluvanna County

Section 1 - PROJECT INFORMATION

Project Title:	Public Water System for Pleasant Grove			Department/Agency Ranking:	2
Department/Agency:	Public Works	Contact Person:	Wayne Stephens		
Funding Category:	<input type="checkbox"/> New Project(FY18-22)	<input checked="" type="checkbox"/> Existing Project(FY18-21)	<input type="checkbox"/> FY17 Project (Add'l Funding)		
Applicable Comprehensive Plan Chapter(s):	<input type="checkbox"/> 1. Natural Environment	<input type="checkbox"/> 4. Transportation	<input checked="" type="checkbox"/> 7. Parks and Recreation	<input type="checkbox"/> 10. Education	
	<input checked="" type="checkbox"/> 2. Land Use & Community Design	<input checked="" type="checkbox"/> 5. Economic Development	<input type="checkbox"/> 8. Housing	<input type="checkbox"/> 11. Public Safety	
	<input checked="" type="checkbox"/> 3. Infrastructure	<input type="checkbox"/> 6. Historic Preservation	<input type="checkbox"/> 9. Human Services	<input type="checkbox"/> 12. Financial Sustainability	

Section 2 - PROJECT COSTS

Expenditure Category	Prospective Vendor (if known)	FY2018	FY2019	FY2020	FY2021	FY2022	FY18-22 Total
Engineering & Planning		\$ 10,000	\$ 100,000	\$ 50,000	\$ 50,000		\$ 210,000
Construction		\$ 90,000	\$ 125,000	\$ 250,000	\$ 425,000		\$ 890,000
Equipment							\$ 0
Land Acquisition							\$ 0
Other (specify)							\$ 0
Other (specify)							\$ 0
TOTALS		\$ 100,000	\$ 225,000	\$ 300,000	\$ 475,000	\$ 0	\$ 1,100,000

Section 3 - PROJECTED OPERATIONAL COSTS & REVENUES

Additional Anticipated Operational Expenses		FY2018	FY2019	FY2020	FY2021	FY2022	FY18-22 Total
Additional Staff Salary	One-quarter of one Utility Operator	\$ 12,500	\$ 12,750	\$ 13,000	\$ 13,250	\$ 13,500	\$ 65,000
Benefits	Calculated at 20% of Staff Salary	\$ 2,500	\$ 2,550	\$ 2,600	\$ 2,650	\$ 2,700	\$ 13,000
Vehicle							\$ 0
Vehicle Insurance							\$ 0
Utilities	Electricity	\$ 2,400	\$ 2,450	\$ 2,500	\$ 2,550	\$ 2,600	\$ 12,500
Furniture and Fixtures							\$ 0
Equipment							\$ 0
Contractual costs	Laboratory Sampling	\$ 1,200	\$ 1,225	\$ 1,250	\$ 1,275	\$ 1,300	\$ 6,250
Other (specify)	Maintenance & Repairs	\$ 1,000	\$ 3,250	\$ 6,250	\$ 11,000	\$ 11,000	\$ 32,500
Total Operational Costs		\$ 19,600	\$ 22,225	\$ 25,600	\$ 30,725	\$ 31,100	\$ 129,250
Total Anticipated Operational Revenues							\$ 0

Project Title:

Public Water System for Pleasant Grove

Section 4 - PROJECT DESCRIPTIONS OR SPECIAL EXPLANATIONS

FY 2018:

This project involves the design and construction, in three phases, of a public water system to serve the existing facilities at Pleasant Grove, as well as provide for water service to those facilities proposed within the Pleasant Grove Master Plan. Implementation of the plan is predicated on the County taking over responsibility for the provision, operation and maintenance, of water and sewer utilities to County Schools. The project is preliminarily phased as follows:

"Phase 0" - Construct a previously drilled and tested public water supply well and connect it to the existing water lines to the pole barn, comfort station and PG House.

FY 2019:

Phase 1 - Design & Construct a water line from the water booster station at High School to a point immediately east of the Pleasant Grove House. Connect the public water supply well, the Pleasant Grove House, the comfort station, the pole barn and all yard hydrants to the system.

FY 2020:

Phase 2 - Extend water line from terminus of Ph 1, eastward to a point south-east of the Public Works yard. Connect concession stands and Public Works facility to the system.

FY 2021:

Phase 3 - Extend water line from terminus of Ph 2, eastward to a point immediately east of Commons Rd. Connect the Sheriff's office and Library to the system.

FY 2022:

FY2018-2022 CAPITAL IMPROVEMENT PLAN REQUEST

Fluvanna County

Section 1 - PROJECT INFORMATION

Project Title:	Combined Administrative Services / School Admin. Building		Department/Agency Ranking:	3
Department/Agency:	Public Works	Contact Person:	Wayne Stephens	
Funding Category:	<input type="checkbox"/> New Project(FY18-22)	<input checked="" type="checkbox"/> Existing Project(FY18-21)	<input type="checkbox"/> FY17 Project (Add'l Funding)	
Applicable Comprehensive Plan Chapter(s):	<input type="checkbox"/> 1. Natural Environment	<input type="checkbox"/> 4. Transportation	<input type="checkbox"/> 7. Parks and Recreation	<input type="checkbox"/> 10. Education
	<input type="checkbox"/> 2. Land Use & Community Design	<input type="checkbox"/> 5. Economic Development	<input type="checkbox"/> 8. Housing	<input type="checkbox"/> 11. Public Safety
	<input type="checkbox"/> 3. Infrastructure	<input type="checkbox"/> 6. Historic Preservation	<input type="checkbox"/> 9. Human Services	<input type="checkbox"/> 12. Financial Sustainability

Section 2 - PROJECT COSTS

Expenditure Category	Prospective Vendor (if known)	FY2018	FY2019	FY2020	FY2021	FY2022	FY18-22 Total
Engineering & Planning							\$ 0
Construction						\$ 11,000,000	\$ 11,000,000
Equipment							\$ 0
Land Acquisition							\$ 0
Other (specify)							\$ 0
Other (specify)							\$ 0
TOTALS		\$ 0	\$ 0	\$ 0	\$ 0	\$ 11,000,000	\$ 11,000,000

Section 3 - PROJECTED OPERATIONAL COSTS & REVENUES

Additional Anticipated Operational Expenses	FY2018	FY2019	FY2020	FY2021	FY2022	FY18-22 Total
Additional Staff Salary						\$ 0
Benefits	Calculated at 20% of Staff Salary	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Vehicle						\$ 0
Vehicle Insurance						\$ 0
Utilities						\$ 0
Furniture and Fixtures						\$ 0
Equipment						\$ 0
Contractual costs						\$ 0
Other (specify)						\$ 0
Total Operational Costs	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Total Anticipated Operational Revenues						\$ 0

Project Title:

Combined Administrative Services / School Admin. Building

Section 4 - PROJECT DESCRIPTIONS OR SPECIAL EXPLANATIONS

FY 2018:

FY 2019:

FY 2020:

FY 2021:

FY 2022:

The county would like to establish a combined Administrative Services/School Administration which would house the majority of Administrative functions for the county and schools. Currently the aging infrastructure of county buildings is a cause for concern. Estimates to renovate/repair current county buildings are very high and ongoing. The combined building would allow the county to sell of older high maintenance properties thus reducing repair and maintenance costs. Several million dollars will be needed over the next five years to maintain and improve current structures.

FY18-22 CIP Request Report

Office/Department/Agency:

Sheriff's Office

of Projects Requested:

1

Total Project Costs:

FY18	FY19	FY20	FY21	FY22	FY18-22
\$ 27,500	\$ -	\$ -	\$ -	\$ -	\$ 27,500

Total Annual Operating Costs (avg):

\$ -

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FY2018-2022 CAPITAL IMPROVEMENT PLAN REQUEST

Fluvanna County

Section 1 - PROJECT INFORMATION

Project Title:	Courthouse Security Electronic Upgrades			Department/Agency Ranking:	1
Department/Agency:	Sheriff's Office	Contact Person:	Captain Von Hill		
Funding Category:	<input checked="" type="checkbox"/> New Project(FY18-22)	<input type="checkbox"/> Existing Project(FY18-21)	<input type="checkbox"/> FY17 Project (Add'l Funding)		
Applicable Comprehensive Plan Chapter(s):	<input type="checkbox"/> 1. Natural Environment	<input type="checkbox"/> 4. Transportation	<input type="checkbox"/> 7. Parks and Recreation	<input type="checkbox"/> 10. Education	
	<input type="checkbox"/> 2. Land Use & Community Design	<input type="checkbox"/> 5. Economic Development	<input type="checkbox"/> 8. Housing	<input checked="" type="checkbox"/> 11. Public Safety	
	<input type="checkbox"/> 3. Infrastructure	<input type="checkbox"/> 6. Historic Preservation	<input type="checkbox"/> 9. Human Services	<input type="checkbox"/> 12. Financial Sustainability	

Section 2 - PROJECT COSTS

Expenditure Category	Prospective Vendor (if known)	FY2018	FY2019	FY2020	FY2021	FY2022	FY18-22 Total
Engineering & Planning							\$ 0
Construction							\$ 0
Equipment	TBD	\$ 27,500					\$ 27,500
Land Acquisition							\$ 0
Other (specify)							\$ 0
Other (specify)							\$ 0
TOTALS		\$ 27,500	\$ 0	\$ 0	\$ 0	\$ 0	\$ 27,500

Section 3 - PROJECTED OPERATIONAL COSTS & REVENUES

Additional Anticipated Operational Expenses	FY2018	FY2019	FY2020	FY2021	FY2022	FY18-22 Total
Additional Staff Salary						\$ 0
Benefits	Calculated at 20% of Staff Salary	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Vehicle						\$ 0
Vehicle Insurance						\$ 0
Utilities						\$ 0
Furniture and Fixtures						\$ 0
Equipment						\$ 0
Contractual costs						\$ 0
Other (specify)						\$ 0
Total Operational Costs	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Total Anticipated Operational Revenues						\$ 0

Project Title:

Courthouse Security Electronic Upgrades

Section 4 - PROJECT DESCRIPTIONS OR SPECIAL EXPLANATIONS

FY 2018:

The functionality of Court Security does not allow for automated fingerprinting of arrestees while at the courthouse. This presents an increase safety risk, and it's a drain on manpower, as the arrestee has to be physically loaded and transferred to the Sheriff's Office to facilitate the process. The current surveillance system has mostly analog cameras and connections that do not maintain recording after power outages, and have poor video quality when functioning. Current quotes indicate that the requested allotment is the funding level we need to have, in order to facilitate the upgrades.

FY 2019:

FY 2020:

FY 2021:

FY 2022:

FY18-22 CIP Request Report

Office/Department/Agency:

E911

of Projects Requested:

1

Total Project Costs:

FY18	FY19	FY20	FY21	FY22	FY18-22
\$ 22,000	\$ 22,000	\$ 22,000	\$ 22,000	\$ 22,000	\$ 110,000

Total Annual Operating Costs:

\$ -

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FY2018-2022 CAPITAL IMPROVEMENT PLAN REQUEST

Fluvanna County

Section 1 - PROJECT INFORMATION

Project Title:	Computer Upgrade			Department/Agency Ranking:	1
Department/Agency:	E911/Sheriff's Office	Contact Person:	Andrea Gaines/Sheriff Eric Hess		
Funding Category:	<input checked="" type="checkbox"/> New Project(FY18-22)	<input type="checkbox"/> Existing Project(FY18-21)	<input type="checkbox"/> FY17 Project (Add'l Funding)		
Applicable Comprehensive Plan Chapter(s):	<input type="checkbox"/> 1. Natural Environment	<input type="checkbox"/> 4. Transportation	<input type="checkbox"/> 7. Parks and Recreation	<input type="checkbox"/> 10. Education	
	<input type="checkbox"/> 2. Land Use & Community Design	<input type="checkbox"/> 5. Economic Development	<input type="checkbox"/> 8. Housing	<input checked="" type="checkbox"/> 11. Public Safety	
	<input type="checkbox"/> 3. Infrastructure	<input type="checkbox"/> 6. Historic Preservation	<input type="checkbox"/> 9. Human Services	<input type="checkbox"/> 12. Financial Sustainability	

Section 2 - PROJECT COSTS

Expenditure Category	Prospective Vendor (if known)	FY2018	FY2019	FY2020	FY2021	FY2022	FY18-22 Total
Engineering & Planning		\$ 22,000	\$ 22,000	\$ 22,000	\$ 22,000	\$ 22,000	\$ 110,000
Construction							\$ 0
Equipment							\$ 0
Land Acquisition							\$ 0
Other (specify)							\$ 0
Other (specify)							\$ 0
TOTALS		\$ 22,000	\$ 110,000				

Section 3 - PROJECTED OPERATIONAL COSTS & REVENUES

Additional Anticipated Operational Expenses	FY2018	FY2019	FY2020	FY2021	FY2022	FY18-22 Total
Additional Staff Salary						\$ 0
Benefits	Calculated at 20% of Staff Salary	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Vehicle						\$ 0
Vehicle Insurance						\$ 0
Utilities						\$ 0
Furniture and Fixtures						\$ 0
Equipment						\$ 0
Contractual costs						\$ 0
Other (specify)						\$ 0
Total Operational Costs	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Total Anticipated Operational Revenues						\$ 0

Project Title:

Computer Upgrade

Section 4 - PROJECT DESCRIPTIONS OR SPECIAL EXPLANATIONS

FY 2018:

In FY 2015, the Fluvanna County Sheriff's Office(FCSO) was approved to purchase mobile computers and PCs, but did not have enough to replace all of the needed equipment. The agency was approved for \$64,500 for FY15. The Fluvanna County Sheriff's Office has a total of 50 workstations that are monitored by our current IT consultants. It is our consultants' recommendation that we replace 25% - 33% our computer equipment each year. They estimate that replacing 18 pieces of equipment which includes 5 tablets and 13 PCs. These costs would also include warranties and accessories. They recommend that we replace this percentage of equipment each year, which will lower our overall purchasing costs over time.

FY 2019:

These recommendations will improve the public safety infrastructure and interoperability in Fluvanna, which in turn, provides excellent service and protection to county residents. It mirrors recommendations/goals within the county's Comprehensive Plan, (eg. "Maintaining E-911 call center equipment and software", Fluvanna Co. Comprehensive Plan, chapter 12, Public Safety Vision, Goal 1 & Implementation strategy #2). The upgrades to some of the audio visual equipment will assist the agency in continuing to perform functions such as training both in house and to many of our external partners.

FY 2020:

FY 2021:

FY 2022:

FY18-22 CIP Request Report

Office/Department/Agency: **Fire & Rescue**

of Projects Requested: **6**

Total Project Costs:

FY18	FY19	FY20	FY21	FY22	FY18-22
\$ 799,200	\$ 1,770,940	\$ 998,000	\$ 583,000	\$ 868,000	\$ 5,019,140

Total Annual Operating Costs: \$ -

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FY2018-2022 CAPITAL IMPROVEMENT PLAN REQUEST

Fluvanna County

Section 1 - PROJECT INFORMATION

Project Title:	CPR Assist Devices - Fluvanna F&R			Department/Agency Ranking:	1
Department/Agency:	Fluvanna Fire & Rescue Association	Contact Person:	R. John Lye		
Funding Category:	<input type="checkbox"/> New Project(FY18-22)	<input checked="" type="checkbox"/> Existing Project(FY18-21)	<input type="checkbox"/> FY17 Project (Add'l Funding)		
Applicable Comprehensive Plan Chapter(s):	<input type="checkbox"/> 1. Natural Environment	<input type="checkbox"/> 4. Transportation	<input type="checkbox"/> 7. Parks and Recreation	<input type="checkbox"/> 10. Education	
	<input type="checkbox"/> 2. Land Use & Community Design	<input type="checkbox"/> 5. Economic Development	<input type="checkbox"/> 8. Housing	<input checked="" type="checkbox"/> 11. Public Safety	
	<input type="checkbox"/> 3. Infrastructure	<input type="checkbox"/> 6. Historic Preservation	<input type="checkbox"/> 9. Human Services	<input type="checkbox"/> 12. Financial Sustainability	

Section 2 - PROJECT COSTS

Expenditure Category	Prospective Vendor (if known)	FY2018	FY2019	FY2020	FY2021	FY2022	FY18-22 Total
Engineering & Planning							\$ 0
Construction							\$ 0
Equipment		\$ 76,480					\$ 76,480
Land Acquisition							\$ 0
Other (specify)							\$ 0
Other (specify)							\$ 0
TOTALS		\$ 76,480	\$ 0	\$ 0	\$ 0	\$ 0	\$ 76,480

Section 3 - PROJECTED OPERATIONAL COSTS & REVENUES

Additional Anticipated Operational Expenses	FY2018	FY2019	FY2020	FY2021	FY2022	FY18-22 Total
Additional Staff Salary						\$ 0
Benefits	Calculated at 20% of Staff Salary	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Vehicle						\$ 0
Vehicle Insurance						\$ 0
Utilities						\$ 0
Furniture and Fixtures						\$ 0
Equipment						\$ 0
Contractual costs						\$ 0
Other (specify)						\$ 0
Total Operational Costs	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Total Anticipated Operational Revenues						\$ 0

Project Title:

CPR Assist Devices - Fluvanna F&R

Section 4 - PROJECT DESCRIPTIONS OR SPECIAL EXPLANATIONS

FY 2018:

5 Lucas CPR Assist units at \$15,296 per unit, spit into two annual purchases = \$76,480

Sudden Cardiac Arrest is a life-threatening emergency, with an out-of-hospital survival rate of approximately 10% (see http://www.heart.org/HEARTORG/General/Cardiac-Arrest-Statistics_UCM_448311_Article.jsp for details). Prompt and effective CPR is an essential component in the treatment of sudden cardiac arrest. However, successful CPR is both labor intensive, requiring two providers for effective CPR and airway management, and is extremely tiring with provider changes every two minutes as suggested. Currently, many Rescue crews in Fluvanna County are two person crews, which does not allow for both effective CPR and a driver for transport. First Responders are, therefore, essential for a successful outcome from these emergencies.

Continued in FY 2019

FY 2019:

Another solution, however, is the CPR Assist Device. These are mechanical devices that provide compressions, allowing the medic to manage the airway and administer medications. Furthermore, being mechanical devices, the CPR Assist Device does not get tired and is able to continue compressions no matter how long the transport takes. The Fluvanna Fire and Rescue Association (FRA) is requesting five such devices in FY18 to equip the ambulances at Lake Monticello Rescue, as well as one unit to be carried in the ALS Response car (Response-5).

FY 2020:

FY 2021:

FY 2022:

FY2018-2022 CAPITAL IMPROVEMENT PLAN REQUEST

Fluvanna County

Section 1 - PROJECT INFORMATION

Project Title:	Incident Data Tablets - Fluvanna F&R			Department/Agency Ranking:	1
Department/Agency:	Fluvanna Fire & Rescue Association	Contact Person:	R. John Lye		
Funding Category:	<input type="checkbox"/> New Project(FY18-22)	<input checked="" type="checkbox"/> Existing Project(FY18-21)	<input type="checkbox"/> FY17 Project (Add'l Funding)		
Applicable Comprehensive Plan Chapter(s):	<input type="checkbox"/> 1. Natural Environment	<input type="checkbox"/> 4. Transportation	<input type="checkbox"/> 7. Parks and Recreation	<input type="checkbox"/> 10. Education	
	<input type="checkbox"/> 2. Land Use & Community Design	<input type="checkbox"/> 5. Economic Development	<input type="checkbox"/> 8. Housing	<input checked="" type="checkbox"/> 11. Public Safety	
	<input type="checkbox"/> 3. Infrastructure	<input type="checkbox"/> 6. Historic Preservation	<input type="checkbox"/> 9. Human Services	<input type="checkbox"/> 12. Financial Sustainability	

Section 2 - PROJECT COSTS

Expenditure Category	Prospective Vendor (if known)	FY2018	FY2019	FY2020	FY2021	FY2022	FY18-22 Total
Engineering & Planning							\$ 0
Construction							\$ 0
Equipment		\$ 20,320					\$ 20,320
Land Acquisition							\$ 0
Other (specify)							\$ 0
Other (specify)							\$ 0
TOTALS		\$ 20,320	\$ 0	\$ 0	\$ 0	\$ 0	\$ 20,320

Section 3 - PROJECTED OPERATIONAL COSTS & REVENUES

Additional Anticipated Operational Expenses	FY2018	FY2019	FY2020	FY2021	FY2022	FY18-22 Total
Additional Staff Salary						\$ 0
Benefits	Calculated at 20% of Staff Salary	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Vehicle						\$ 0
Vehicle Insurance						\$ 0
Utilities						\$ 0
Furniture and Fixtures						\$ 0
Equipment						\$ 0
Contractual costs						\$ 0
Other (specify)						\$ 0
Total Operational Costs	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Total Anticipated Operational Revenues						\$ 0

Project Title:

Incident Data Tablets - Fluvanna F&R

Section 4 - PROJECT DESCRIPTIONS OR SPECIAL EXPLANATIONS

FY 2018:

34 Incident Data Tablets at \$595 per unit = \$20,230

34 units will provide one tablet per apparatus, with two spare units for the times that tablets need service or are broken and need to be replaced immediately.

Providing emergency responders with timely accurate information is a high priority to ensure quick and safe responses to emergency situations. Recently, Lake Monticello Volunteer Fire Department has equipped their fire apparatus with digital tablets. These tablets contain pre-plan information, hydrant locations, and other relevant information. They receive emergency incident information, including call location, directly from the Computer-Aided Dispatch (CAD) System at the Dispatch Call Center. Since the tablets are GPS-enabled, this allows the tablets to provide turn-by-turn directions to respond to the scene of the emergency. *Continued in FY 2019*

FY 2019:

This not only results in quicker responses to the scene of the emergency, but also cuts down on frequent radio traffic whereby responders are asking for directions or clarifications of the incident address, etc, which keeps the radio channels open for pertinent emergency updates. Based on the success of this trial, the Fluvanna Fire and Rescue Association (FRA) has determined that this system should be extended to all emergency apparatus County-wide to provide the same benefits to all emergency responders.

FY 2020:

FY 2021:

FY 2022:

FY2018-2022 CAPITAL IMPROVEMENT PLAN REQUEST

Fluvanna County

Section 1 - PROJECT INFORMATION

Project Title:	Lake Monticello Fire & Rescue Apparatus Replacement			Department/Agency Ranking:	1
Department/Agency:	Lake Monticello Volunteer Fire & Rescue	Contact Person:	R. John Lye		
Funding Category:	<input checked="" type="checkbox"/> New Project(FY18-22)	<input type="checkbox"/> Existing Project(FY18-21)	<input type="checkbox"/> FY17 Project (Add'l Funding)		
Applicable Comprehensive Plan Chapter(s):	<input type="checkbox"/> 1. Natural Environment	<input type="checkbox"/> 4. Transportation	<input type="checkbox"/> 7. Parks and Recreation	<input type="checkbox"/> 10. Education	
	<input type="checkbox"/> 2. Land Use & Community Design	<input type="checkbox"/> 5. Economic Development	<input type="checkbox"/> 8. Housing	<input checked="" type="checkbox"/> 11. Public Safety	
	<input type="checkbox"/> 3. Infrastructure	<input type="checkbox"/> 6. Historic Preservation	<input type="checkbox"/> 9. Human Services	<input type="checkbox"/> 12. Financial Sustainability	

Section 2 - PROJECT COSTS

Expenditure Category	Prospective Vendor (if known)	FY2018	FY2019	FY2020	FY2021	FY2022	FY18-22 Total
Engineering & Planning							\$ 0
Construction							\$ 0
Equipment		\$ 592,000		\$ 268,000		\$ 284,000	\$ 1,144,000
Land Acquisition							\$ 0
Other (specify)							\$ 0
Other (specify)							\$ 0
TOTALS		\$ 592,000	\$ 0	\$ 268,000	\$ 0	\$ 284,000	\$ 1,144,000

Section 3 - PROJECTED OPERATIONAL COSTS & REVENUES

Additional Anticipated Operational Expenses	FY2018	FY2019	FY2020	FY2021	FY2022	FY18-22 Total
Additional Staff Salary						\$ 0
Benefits	Calculated at 20% of Staff Salary	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Vehicle						\$ 0
Vehicle Insurance						\$ 0
Utilities						\$ 0
Furniture and Fixtures						\$ 0
Equipment						\$ 0
Contractual costs						\$ 0
Other (specify)						\$ 0
Total Operational Costs	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Total Anticipated Operational Revenues						\$ 0

Project Title:

Lake Monticello Fire & Rescue Apparatus Replacement

Section 4 - PROJECT DESCRIPTIONS OR SPECIAL EXPLANATIONS

FY 2018:

1. Replacement of Brush-50 (Lake Monticello) built in 1998 (\$175,000)
2. Replacement of Ambulance 552 (Lake Monticello) built in 2007 (\$252,000)
3. Replacement of Support 56 (Lake Monticello) built in 1991 (\$165,000)

The Fluvanna Fire and Rescue Association (FRA) request for FY2018-2022 Capital Improvement Plan incorporates funding for a replacement schedule for fire and rescue emergency vehicles. Currently, since Lake Monticello units are not "County owned," therefore they are included as capital purchases in the operational budget, not the CIP. Therefore, this request only covers units for Fluvanna Fire and Fluvanna Rescue agencies.

The FRA defined the replacement of fire apparatus to be when the unit reaches twenty years of age, which is consistent with NFPA standards. The replacement of the ambulances is also on a set schedule but is different from the fire apparatus schedule. The ambulance replacement schedule is built on an eight year replacement schedule, since they generally see much more daily use than the fire apparatus. The current projected cost of \$252,000 more closely reflects current experience purchasing an ambulance (Ambulance 555 for Lake Monticello, adjusted for 3% increases due to inflation per year), and includes the cost for a Stryker PowerLoad/PowerCot combination (\$40,000). As of July 1, 2015, new Federal standards for ambulance construction were implemented which require improved cot retention systems which will retain the cot in case of an ambulance accident or roll-over. The Stryker PowerLoad/PowerCot combination is one of the few systems currently on the market that meets these standards, and the cost of this system needs to be included in the cost of all future ambulance replacements.

FY 2019:

FY 2020:

1. Replacement of Ambulance 553 (Lake Monticello) (\$268,000)

The ambulance replacement schedule is built on an eight year replacement schedule, since they generally see much more daily use than the fire apparatus. The current projected cost of \$268,000 more closely reflects current experience purchasing an ambulance (Ambulance 555 for Lake Monticello, adjusted for 3% increases due to inflation per year), and includes the cost for a Stryker PowerLoad/PowerCot combination (\$40,000 as of 2016). As of July 1, 2015, new Federal standards for ambulance construction were implemented which require improved cot retention systems which will retain the cot in case of an ambulance accident or roll-over. The Stryker PowerLoad/PowerCot combination is one of the few systems currently on the market that meets these standards, and the cost of this system needs to be included in the cost of all future ambulance replacements.

FY 2021:

FY 2022:

1. Replacement of Ambulance 554 (Lake Monticello) built in 2013 (\$284,000)

The ambulance replacement schedule is built on an eight year replacement schedule, since they generally see much more daily use than the fire apparatus. The current projected cost of \$284,000 more closely reflects current experience purchasing an ambulance (Ambulance 555 for Lake Monticello, adjusted for 3% increases due to inflation per year), and includes the cost for a Stryker PowerLoad/PowerCot combination (\$40,000 as of 2016). As of July 1, 2015, new Federal standards for ambulance construction were implemented which require improved cot retention systems which will retain the cot in case of an ambulance accident or roll-over. The Stryker PowerLoad/PowerCot combination is one of the few systems currently on the market that meets these standards, and the cost of this system needs to be included in the cost of all future ambulance replacements.

FY2018-2022 CAPITAL IMPROVEMENT PLAN REQUEST

Fluvanna County

Section 1 - PROJECT INFORMATION

Project Title:	SCBA Replacement - Fluvanna F&R			Department/Agency Ranking:	1
Department/Agency:	Fluvanna Fire & Rescue Association	Contact Person:	R. John Lye		
Funding Category:	<input type="checkbox"/> New Project(FY18-22)	<input checked="" type="checkbox"/> Existing Project(FY18-21)	<input type="checkbox"/> FY17 Project (Add'l Funding)		
Applicable Comprehensive Plan Chapter(s):	<input type="checkbox"/> 1. Natural Environment	<input type="checkbox"/> 4. Transportation	<input type="checkbox"/> 7. Parks and Recreation	<input type="checkbox"/> 10. Education	
	<input type="checkbox"/> 2. Land Use & Community Design	<input type="checkbox"/> 5. Economic Development	<input type="checkbox"/> 8. Housing	<input checked="" type="checkbox"/> 11. Public Safety	
	<input type="checkbox"/> 3. Infrastructure	<input type="checkbox"/> 6. Historic Preservation	<input type="checkbox"/> 9. Human Services	<input type="checkbox"/> 12. Financial Sustainability	

Section 2 - PROJECT COSTS

Expenditure Category	Prospective Vendor (if known)	FY2018	FY2019	FY2020	FY2021	FY2022	FY18-22 Total
Engineering & Planning							\$ 0
Construction							\$ 0
Equipment			\$ 1,195,940				\$ 1,195,940
Land Acquisition							\$ 0
Other (specify)							\$ 0
Other (specify)							\$ 0
TOTALS		\$ 0	\$ 1,195,940	\$ 0	\$ 0	\$ 0	\$ 1,195,940

Section 3 - PROJECTED OPERATIONAL COSTS & REVENUES

Additional Anticipated Operational Expenses	FY2018	FY2019	FY2020	FY2021	FY2022	FY18-22 Total
Additional Staff Salary						\$ 0
Benefits	Calculated at 20% of Staff Salary	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Vehicle						\$ 0
Vehicle Insurance						\$ 0
Utilities						\$ 0
Furniture and Fixtures						\$ 0
Equipment						\$ 0
Contractual costs						\$ 0
Other (specify)						\$ 0
Total Operational Costs	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Total Anticipated Operational Revenues						\$ 0

Project Title:

SCBA Replacement - Fluvanna F&R

Section 4 - PROJECT DESCRIPTIONS OR SPECIAL EXPLANATIONS

FY 2018:

FY 2019:

Scott Air Pack 4.5 with 4500 psi 45 minute bottles: 102 @ \$7,620.00 each = \$777,240
Spare 4500 psi Cylinders: 190 @ \$1500.00 each = \$285,000
SCBA Mask: 220 @ \$335.00 each = \$73,700
Bauer Cascade System: \$60,000
Total: \$1,195,940

National Fire Protection Agency (NFPA) Standard 1852 specifies the minimum requirements for the selection, care, and maintenance of open-circuit self-contained breathing apparatus (SCBA) and combination SCBA/supplied air respirator (SAR) that are used for respiratory protection during emergency operations in environments where the atmosphere is Immediately Dangerous to Life and Health (IDLH), or could become oxygen deficient or IDLH. **Continued in FY 2020**

FY 2020:

In 2003/2004, the Fire Departments in Fluvanna County were successful in obtaining funding through the Firefighters Assistance Grant (AFG) to obtain replacements for the SCBA units in service in the county at that time. NFPA 1852 states that the end of service life for a SCBA unit is 15 years.

At present, the departments utilize SCBA units operating on two different pressures and two different manufacturers of the units. Efforts shall be made at the end of this end of life period to assure that the SCBA units County-wide are standardized to operate on the same pressure and be built by the same manufacturer to aid in interoperability, ease of operation and maintenance costs. **Continued in FY2021**

FY 2021:

The units currently in operation were purchased under the 2002 edition of the NFPA 1852 Standard; the standard was then updated in 2008 and again in 2013. The 2013 version SCBA's were made available in April of 2014 and there was a significant price increase for those units.

A summarization of the changes made to the standard between 2008 and 2013 are as follows.

1. Low-Pressure Alarm changes from 25% of cylinder pressure to 33% cylinder pressure.
2. The use of EBSS or "Buddy Breathers" is expected to be approved.
3. More rigorous testing of the face piece and face piece lens (new high temp and radiant head tests), see: http://www.nist.gov/el/fire_research/nfpa-072512.cfm
4. Enhanced communication performance requirements

FY 2022:

FY2018-2022 CAPITAL IMPROVEMENT PLAN REQUEST

Fluvanna County

Section 1 - PROJECT INFORMATION

Project Title:	Thermal Imaging Camera Request			Department/Agency Ranking:	1
Department/Agency:	Fluvanna Fire & Rescue Association	Contact Person:	R. John Lye		
Funding Category:	<input type="checkbox"/> New Project(FY18-22)	<input checked="" type="checkbox"/> Existing Project(FY18-21)	<input type="checkbox"/> FY17 Project (Add'l Funding)		
Applicable Comprehensive Plan Chapter(s):	<input type="checkbox"/> 1. Natural Environment	<input type="checkbox"/> 4. Transportation	<input type="checkbox"/> 7. Parks and Recreation	<input type="checkbox"/> 10. Education	
	<input type="checkbox"/> 2. Land Use & Community Design	<input type="checkbox"/> 5. Economic Development	<input type="checkbox"/> 8. Housing	<input checked="" type="checkbox"/> 11. Public Safety	
	<input type="checkbox"/> 3. Infrastructure	<input type="checkbox"/> 6. Historic Preservation	<input type="checkbox"/> 9. Human Services	<input type="checkbox"/> 12. Financial Sustainability	

Section 2 - PROJECT COSTS

Expenditure Category	Prospective Vendor (if known)	FY2018	FY2019	FY2020	FY2021	FY2022	FY18-22 Total
Engineering & Planning							\$ 0
Construction							\$ 0
Equipment		\$ 50,400					\$ 50,400
Land Acquisition							\$ 0
Other (specify)							\$ 0
Other (specify)							\$ 0
TOTALS		\$ 50,400	\$ 0	\$ 0	\$ 0	\$ 0	\$ 50,400

Section 3 - PROJECTED OPERATIONAL COSTS & REVENUES

Additional Anticipated Operational Expenses	FY2018	FY2019	FY2020	FY2021	FY2022	FY18-22 Total
Additional Staff Salary						\$ 0
Benefits	Calculated at 20% of Staff Salary	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Vehicle						\$ 0
Vehicle Insurance						\$ 0
Utilities						\$ 0
Furniture and Fixtures						\$ 0
Equipment						\$ 0
Contractual costs						\$ 0
Other (specify)						\$ 0
Total Operational Costs	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Total Anticipated Operational Revenues						\$ 0

Project Title:

Thermal Imaging Camera Request

Section 4 - PROJECT DESCRIPTIONS OR SPECIAL EXPLANATIONS

FY 2018:

7 Bullard T3x cameras with high resolution option, including truck chargers and 2 batteries each @ \$7200 each
This is the second year of a two part request. The first part was funded in FY17.

The current thermal-imaging cameras utilized by the fire departments were a combination of donations to the county by Tenaska Power and purchases by the individual departments through operational budgets or community fund raising. These units are approaching or are over 10 years old and have fulfilled their useful life. Many of the units are inoperable and non-repairable due to age of the unit, expired technology or cost to repair vs. cost to replace. New thermal imaging technology provides video imaging in full color with an on-screen digital temperature display. This replacement equipment is smaller, lightweight and easier to operate to help locate unconscious or trapped victims or firefighters. In routine situations, these cameras help to locate hot spots behind walls, overheated electrical and HVAC equipment and malfunctioning chimneys and fireplaces. Currently, the departments are operating with several different manufacturer's products and it is the desire of the Fluvanna Fire and Rescue Association (FRA) to standardize and utilize one brand of thermal imaging camera throughout the County.

FY 2019:

FY 2020:

FY 2021:

FY 2022:

FY2018-2022 CAPITAL IMPROVEMENT PLAN REQUEST

Fluvanna County

Section 1 - PROJECT INFORMATION

Project Title:	Apparatus Replacement / Re-chassis - Fluvanna F&R			Department/Agency Ranking:	1
Department/Agency:	Fluvanna Fire & Rescue Association	Contact Person:	R. John Lye		
Funding Category:	<input type="checkbox"/> New Project(FY18-22)	<input checked="" type="checkbox"/> Existing Project(FY18-21)	<input type="checkbox"/> FY17 Project (Add'l Funding)		
Applicable Comprehensive Plan Chapter(s):	<input type="checkbox"/> 1. Natural Environment	<input type="checkbox"/> 4. Transportation	<input type="checkbox"/> 7. Parks and Recreation	<input type="checkbox"/> 10. Education	
	<input type="checkbox"/> 2. Land Use & Community Design	<input type="checkbox"/> 5. Economic Development	<input type="checkbox"/> 8. Housing	<input checked="" type="checkbox"/> 11. Public Safety	
	<input type="checkbox"/> 3. Infrastructure	<input type="checkbox"/> 6. Historic Preservation	<input type="checkbox"/> 9. Human Services	<input type="checkbox"/> 12. Financial Sustainability	

Section 2 - PROJECT COSTS

Expenditure Category	Prospective Vendor (if known)	FY2018	FY2019	FY2020	FY2021	FY2022	FY18-22 Total
Engineering & Planning							\$ 0
Construction							\$ 0
Equipment		\$ 60,000	\$ 575,000	\$ 730,000	\$ 583,000	\$ 584,000	\$ 2,532,000
Land Acquisition							\$ 0
Other (specify)							\$ 0
Other (specify)							\$ 0
TOTALS		\$ 60,000	\$ 575,000	\$ 730,000	\$ 583,000	\$ 584,000	\$ 2,532,000

Section 3 - PROJECTED OPERATIONAL COSTS & REVENUES

Additional Anticipated Operational Expenses	FY2018	FY2019	FY2020	FY2021	FY2022	FY18-22 Total
Additional Staff Salary						\$ 0
Benefits	Calculated at 20% of Staff Salary	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Vehicle						\$ 0
Vehicle Insurance						\$ 0
Utilities						\$ 0
Furniture and Fixtures						\$ 0
Equipment						\$ 0
Contractual costs						\$ 0
Other (specify)						\$ 0
Total Operational Costs	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Total Anticipated Operational Revenues						\$ 0

Project Title:

Apparatus Replacement / Re-chassis - Fluvanna F&R

Section 4 - PROJECT DESCRIPTIONS OR SPECIAL EXPLANATIONS

FY 2018:

1. Replacement of Car-21 (Fork Union) built in 1998 (\$60,000)

The Fluvanna Fire and Rescue Association (FRA) request for FY2018-2022 Capital Improvement Plan incorporates funding for a replacement schedule for fire and rescue emergency vehicles. Currently, since Lake Monticello units are not "County owned," therefore they are included as capital purchases in the operational budget, not the CIP. Therefore, this request only covers units for Fluvanna Fire and Fluvanna Rescue agencies.

The FRA defined the replacement of fire apparatus to be when the unit reaches twenty years of age, which is consistent with NFPA standards.

FY 2019:

1. Replace the HazMat trailer (Palmyra) which was built in 1997 (\$9,000)
2. Replacement of Engine 21 built in 1992 (Fork Union) (\$566,000)

The FRA defined the replacement of fire apparatus to be when the unit reaches twenty years of age, which is consistent with NFPA standards. The replacement of the ambulances is also on a set schedule but is different from the fire apparatus schedule. The ambulance replacement schedule is built on an eight year replacement schedule, since they generally see much more daily use than the fire apparatus. The current projected cost of \$260,000 more closely reflects current experience purchasing an ambulance (Ambulance 555 for Lake Monticello, adjusted for 3% increases due to inflation per year), and includes the cost for a Stryker PowerLoad/PowerCot combination (\$40,000 as of 2016). As of July 1, 2015, new Federal standards for ambulance construction were implemented which require improved cot retention systems which will retain the cot in case of an ambulance accident or roll-over. The Stryker PowerLoad/PowerCot combination is one of the few systems currently on the market that meets these standards, and the cost of this system needs to be included in the cost of all future ambulance replacements.

FY 2020:

1. Replace Tanker 10 (Palmyra) built in 1999 (\$550,000)
2. Replace Attack-20 (Fork Union), built in 2001 (\$180,000)

The FRA defined the replacement of fire apparatus to be when the unit reaches twenty years of age, which is consistent with NFPA standards. In order to avoid peaks and valleys in the CIP Requests, however, Attack-20 and Engine-30 have been reversed in their order. This will help even out the requested funds, and Attack-20 has seen much more use and has received more wear and tear.

FY 2021:

1. Replacement of Engine 30 built in 1993 (Kents Store) (\$583,000)

The FRA defined the replacement of fire apparatus to be when the unit reaches twenty years of age, which is consistent with NFPA standards. The replacement of the ambulances is also on a set schedule but is different from the fire apparatus schedule. The ambulance replacement schedule is built on an eight year replacement schedule, since they generally see much more daily use than the fire apparatus. The current projected cost of \$2576000 more closely reflects current experience purchasing an ambulance (Ambulance 555 for Lake Monticello, adjusted for 3% increases due to inflation per year), and includes the cost for a Stryker PowerLoad/PowerCot combination (\$40,000 as of 2016). As of July 1, 2015, new Federal standards for ambulance construction were implemented which require improved cot retention systems which will retain the cot in case of an ambulance accident or roll-over. The Stryker PowerLoad/PowerCot combination is one of the few systems currently on the market that meets these standards, and the cost of this system needs to be included in the cost of all future ambulance replacements.

FY 2022:

1. Replacement of Tanker-31 (Kents Store) built in 2002 (\$584,000)

The Fluvanna Fire and Rescue Association (FRA) request for FY2018-2022 Capital Improvement Plan incorporates funding for a replacement schedule for fire and rescue emergency vehicles. The FRA defined the replacement of fire apparatus to be when the unit reaches twenty years of age, which is consistent with NFPA standards.

Dept	Date Acquired	Replacement Date	Description	Year/Name	VIN	Notes
Company 1	06/30/95	FY15	95 Ford Brush	1996 FORD F-SUPER DUTY - BRUSH-10	1FDLFF47F2SEA48923	to be replaced soon
Company 1	FY17	FY37		New Brushtruck BRUSH-10		this year's CIP
Company 1	FY16	FY36	2015 Pierce Pumper	Engine 10	4P1BAAFF5GA015922	
Company 1	07/01/07	FY27	2007 Pierce Pumper	2007 PIERCE FIRETRUCK - ENGINE-11	4P1CD01H77A007710	
Company 1	06/30/99	FY20	99 Freightliner Tanker	2000 FREIGHTLINER TANKER - TANKER-10	1FV68HDOYHB47324	
Company 1	09/xx/08	FY29	2008 Ford Expedition	2008 Ford Expedition Command Vehicle - CAR-1		
Company 1	FY16	FY36	2016 Ford	CAR-10	1FT7W2B62GEA72714	
Company 1	FY15	FY35	2015 Ford F250	2015 Ford F250 First Responder/ Command Vehicle - CAR-11	1FT7W2B61FEA88482	
Company 1	02/26/15	FY36	2014 Ford 750 Crash Truck	2014 Ford 750 Crash Truck - SQUAD_10	3FRXW7FNXFV687774	
Company 1	06/30/97	FY19	97 United Trailer	HAZMAT TRAILER	48B500D1XW1029233	
FCSO	6/30/2005	FY25	Mobile Command Trailer	MOBILE COMMAND TRAILER	1R9US20285B295736	FCSO
Company 2	06/30/01	FY20	01 Ford Attack	2001 FORD F-550 - ATTACK-20	1FDAF57F51ED77238	
Company 2	06/30/93	FY19	93 Darley Pumper	1993 SPARTAN PUMPER - ENGINE-20	4S7CT9L00PC007221	reserve - off replacement track
Company 2	06/30/13	FY33	FIRE TRUCK Pierce Pumper-3208	2012 PIERCE IMPEL PUMPER TRUCK - ENGINE-21	4P1CJ01A0CA013208	
Company 2	10/27/03	FY23	2003 Pierce FL112 Freightliner Tanker (Fork Union)	2004 FREIGHTLINER FL112 TANKER - TANKER-20	1FVABGAS24HM33225	
Company 2	FY16	FY36	Ford F250	Ford F250 First Responder vehicle - New CAR-20	1FT7W2B67FEC3215	
Company 2	06/30/98	FY18	98 Ford Crown Victoria (Txfr 7/1/06 Fr:Sheriff)	1999 FORD CROWN VICTORIA - CAR-21	2FAFP71W2XX132521	
Company 3	06/18/09	FY29	2009 Ford F150 XL (8964)	2009 FORD F-150XLT - CAR-30	1FTRW14879FB38964	
Company 3	06/30/98	FY18 (Delay to FY24?)	98 Ford Attack	1998 FORD F-450 BRUSH-30	1FDXF47F6XEB23549	refurbished FY16
Company 3		FY36	2016 Mini Pumper	New Attack 30		coming soon
Company 3	06/30/92	FY21	92 Darley Pumper	1992 SPARTAN FIRE TRUCK - ENGINE-30	4S7PT9S07NC005949	to be replaced FY-19?
Company 3	01/11/10	FY30	2010 Fire Truck - Kents Store - E31	2010 PIERCE FIRE TRUCK - ENGINE-31	4P1CJ01A3AA010512	
Company 3	10/31/02	FY22	2002 Pierce Kenworth Tanker (Kents Store)	2003 KENWORTH TANKER - TANKER-31	2NKMZH28X63M392469	
Company 3	08/01/16		Suburban			Donated
FCRS		FY19	Unit 45 Palmyra	2003 Ford E-450	1FDXE45F33HB48164	
FCRS		FY17	Unit 46 Kents Store	2001 Ford E-350	1FDWE35F4IHA87359	to be sold
FCRS		FY17	Unit 47 Fork Union	2006 Ford	1FDXE45P36HB33712	next to be replaced (FY17 CIP)
FCRS		FY21	Unit 48 Kents Store	2008 Ford E-450	1FDXE45P68DA74424	
FCRS		FY23	Unit 49 Palmyra	2011 Ford F-450	1FDUF4HT6BEB15712	maintenance issues
LMVFD&RS			Support 57	Chevrolet 2500?		
LMVFD		FY34	2014 Chevrolet Suburban	Car-50	1GNSFSE7ER156743	
LMVFD		N/A	2000 Ford Crown Victoria	Car-51	2FAFP71WOYX110602	reserve - off replacement track
LMVFD		FY18	1998 Ford F-450 Brush Truck	Brush-50	1FDXF47F8XEA98170	
LMVFD		FY26	2006 Pierce	Tanker-54	2NKMZH28X76M148673	
LMVFD	2015	FY35	2015 Pierce Impel	Engine-51	4P1BAAFF4FA014758	
LMVFD		FY26	2006 Pierce Dash	Engine-52	4P1CD01E97A006743	
LMVFD	9/22/2015	FY26	1993 Pierce	Tower-Ladder 53	4P1CA02GXRA000123	
LMVRS		FY18	2007 Ford E-450 (AEV)	Ambulance-552	1FDXE45P97DA55929	
LMVRS		FY20	Ford F-450 (PL Custom)	Ambulance-553	1FDAF47RX9EA89568	
LMVRS		FY22	2013 Road Rescue Ultra-Medic	Ambulance-554	1FDUF4HT3DEB78558	
LMVRS		FY24	2015 Road Rescue Ultra-Medic	Ambulance-555	1FDUF4HT9FEA99821	
LMVRS		FY23	2003 Ford Expedition	Response-5	1FMPU16L24LA30269	
LMWRT		FY25	2005 Chevrolet 5500	Dive-5		
LMWRT		FY18	1991 Chevrolet Suburban K2500	Support-56	1GNGV26K1MF141075	
LMWRT		FY32?	2012 Ford F550	WR-58	1FD0W5HTXCEB75630	

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FY18-22 CIP Request Report

Office/Department/Agency:

Schools

of Projects Requested:

11

Total Project Costs:

FY18	FY19	FY20	FY21	FY22	FY18-22
\$ 4,750,000	\$ 5,280,000	\$ 425,000	\$ 2,070,000	\$ 350,000	\$ 12,875,000

Total Annual Operating Costs:

\$ -

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FY2018-2022 CAPITAL IMPROVEMENT PLAN REQUEST

Fluvanna County

Section 1 - PROJECT INFORMATION

Project Title:	Abrams Building Renovation			Department/Agency Ranking:	1
Department/Agency:	Fluvanna County Public Schools	Contact Person:	Chuck Winkler		
Funding Category:	<input type="checkbox"/> New Project(FY18-22)	<input checked="" type="checkbox"/> Existing Project(FY18-21)	<input type="checkbox"/> FY17 Project (Add'l Funding)		
Applicable Comprehensive Plan Chapter(s):	<input type="checkbox"/> 1. Natural Environment	<input type="checkbox"/> 4. Transportation	<input type="checkbox"/> 7. Parks and Recreation	<input checked="" type="checkbox"/> 10. Education	
	<input type="checkbox"/> 2. Land Use & Community Design	<input type="checkbox"/> 5. Economic Development	<input type="checkbox"/> 8. Housing	<input type="checkbox"/> 11. Public Safety	
	<input type="checkbox"/> 3. Infrastructure	<input checked="" type="checkbox"/> 6. Historic Preservation	<input type="checkbox"/> 9. Human Services	<input type="checkbox"/> 12. Financial Sustainability	

Section 2 - PROJECT COSTS

Expenditure Category	Prospective Vendor (if known)	FY2018	FY2019	FY2020	FY2021	FY2022	FY18-22 Total
Engineering & Planning							\$ 0
Construction		\$ 300,000	\$ 2,780,000				\$ 3,080,000
Equipment							\$ 0
Land Acquisition							\$ 0
Other (specify)							\$ 0
Other (specify)							\$ 0
TOTALS		\$ 300,000	\$ 2,780,000	\$ 0	\$ 0	\$ 0	\$ 3,080,000

Section 3 - PROJECTED OPERATIONAL COSTS & REVENUES

Additional Anticipated Operational Expenses	FY2018	FY2019	FY2020	FY2021	FY2022	FY18-22 Total
Additional Staff Salary						\$ 0
Benefits	Calculated at 20% of Staff Salary	\$ 0				
Vehicle						\$ 0
Vehicle Insurance						\$ 0
Utilities						\$ 0
Furniture and Fixtures						\$ 0
Equipment						\$ 0
Contractual costs						\$ 0
Other (specify)						\$ 0
Total Operational Costs	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Total Anticipated Operational Revenues						\$ 0

Project Title:

Abrams Building Renovation

Section 4 - PROJECT DESCRIPTIONS OR SPECIAL EXPLANATIONS

FY 2018:

\$300,000 is requested for much-needed asbestos abatement.

FY 2019:

The building currently houses the Abrams Academy, the school division's alternative education program. This building also houses the majority of the technology infrastructure for the county's internet and data system. The renovation will include the cost of asbestos abatement. The scope of proposed improvements is general in nature with a major focus on complete HVAC and electrical upgrades. The project would include a new roof and replacement flooring in classrooms. The cost would include basic architectural, civil, structural, mechanical, electrical, and plumbing engineering, and allowances for independent inspections. Surveys for boundary, topography, existing underground and concealed elements on the site will be completed.

FY 2020:

FY 2021:

FY 2022:

FY2018-2022 CAPITAL IMPROVEMENT PLAN REQUEST

Fluvanna County

Section 1 - PROJECT INFORMATION

Project Title:	Central Elementary HVAC Upgrade and Renovations			Department/Agency Ranking:	1
Department/Agency:	Fluvanna County Public Schools	Contact Person:	Chuck Winkler		
Funding Category:	<input type="checkbox"/> New Project(FY18-22)	<input checked="" type="checkbox"/> Existing Project(FY18-21)	<input type="checkbox"/> FY17 Project (Add'l Funding)		
Applicable Comprehensive Plan Chapter(s):	<input type="checkbox"/> 1. Natural Environment	<input type="checkbox"/> 4. Transportation	<input type="checkbox"/> 7. Parks and Recreation	<input checked="" type="checkbox"/> 10. Education	
	<input type="checkbox"/> 2. Land Use & Community Design	<input type="checkbox"/> 5. Economic Development	<input type="checkbox"/> 8. Housing	<input type="checkbox"/> 11. Public Safety	
	<input checked="" type="checkbox"/> 3. Infrastructure	<input type="checkbox"/> 6. Historic Preservation	<input type="checkbox"/> 9. Human Services	<input type="checkbox"/> 12. Financial Sustainability	

Section 2 - PROJECT COSTS

Expenditure Category	Prospective Vendor (if known)	FY2018	FY2019	FY2020	FY2021	FY2022	FY18-22 Total
Engineering & Planning							\$ 0
Construction		\$ 3,000,000					\$ 3,000,000
Equipment							\$ 0
Land Acquisition							\$ 0
Other (specify)							\$ 0
Other (specify)							\$ 0
TOTALS		\$ 3,000,000	\$ 0	\$ 0	\$ 0	\$ 0	\$ 3,000,000

Section 3 - PROJECTED OPERATIONAL COSTS & REVENUES

Additional Anticipated Operational Expenses	FY2018	FY2019	FY2020	FY2021	FY2022	FY18-22 Total
Additional Staff Salary						\$ 0
Benefits	Calculated at 20% of Staff Salary	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Vehicle						\$ 0
Vehicle Insurance						\$ 0
Utilities						\$ 0
Furniture and Fixtures						\$ 0
Equipment						\$ 0
Contractual costs						\$ 0
Other (specify)						\$ 0
Total Operational Costs	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Total Anticipated Operational Revenues						\$ 0

Project Title:

Central Elementary HVAC Upgrade and Renovations

Section 4 - PROJECT DESCRIPTIONS OR SPECIAL EXPLANATIONS

FY 2018:

The HVAC system at Central in the original building and the East Wing is obsolete. Replacement parts for the chilling units, installed in 1988, are very difficult to obtain. Work would include replacing the chillers and the individual heating/cooling units of the system. Moving to a central HVAC plant system would also be more cost efficient and easier to maintain into the future. The school will also receive lighting upgrades and some restroom renovations as budget permitted.

FY 2019:

FY 2020:

FY 2021:

FY 2022:

FY2018-2022 CAPITAL IMPROVEMENT PLAN REQUEST

Fluvanna County

Section 1 - PROJECT INFORMATION

Project Title:	Technology Replacement Cycle			Department/Agency Ranking:	1
Department/Agency:	Fluvanna County Public Schools	Contact Person:	Chuck Winkler		
Funding Category:	<input type="checkbox"/> New Project(FY18-22)	<input checked="" type="checkbox"/> Existing Project(FY18-21)	<input type="checkbox"/> FY17 Project (Add'l Funding)		
Applicable Comprehensive Plan Chapter(s):	<input type="checkbox"/> 1. Natural Environment	<input type="checkbox"/> 4. Transportation	<input type="checkbox"/> 7. Parks and Recreation	<input checked="" type="checkbox"/> 10. Education	
	<input type="checkbox"/> 2. Land Use & Community Design	<input type="checkbox"/> 5. Economic Development	<input type="checkbox"/> 8. Housing	<input type="checkbox"/> 11. Public Safety	
	<input type="checkbox"/> 3. Infrastructure	<input type="checkbox"/> 6. Historic Preservation	<input type="checkbox"/> 9. Human Services	<input type="checkbox"/> 12. Financial Sustainability	

Section 2 - PROJECT COSTS

Expenditure Category	Prospective Vendor (if known)	FY2018	FY2019	FY2020	FY2021	FY2022	FY18-22 Total
Engineering & Planning							\$ 0
Construction							\$ 0
Equipment		\$ 300,000	\$ 300,000	\$ 300,000	\$ 300,000	\$ 300,000	\$ 1,500,000
Land Acquisition							\$ 0
Other (specify)							\$ 0
Other (specify)							\$ 0
TOTALS		\$ 300,000	\$ 1,500,000				

Section 3 - PROJECTED OPERATIONAL COSTS & REVENUES

Additional Anticipated Operational Expenses	FY2018	FY2019	FY2020	FY2021	FY2022	FY18-22 Total
Additional Staff Salary						\$ 0
Benefits	Calculated at 20% of Staff Salary	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Vehicle						\$ 0
Vehicle Insurance						\$ 0
Utilities						\$ 0
Furniture and Fixtures						\$ 0
Equipment						\$ 0
Contractual costs						\$ 0
Other (specify)						\$ 0
Total Operational Costs	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Total Anticipated Operational Revenues						\$ 0

Project Title:

Technology Replacement Cycle

Section 4 - PROJECT DESCRIPTIONS OR SPECIAL EXPLANATIONS

FY 2018:

This funding will cover the costs to implement an annually recurring replacement cycle for FCPS's computers and instructional technology.

The school division currently has over 5000 computers with an estimated total value of \$2.6 million dollars. 45% of these computers are used by both students and staff for instruction and support. They are also no longer covered by a warranty and are not part of a replacement cycle. Their antiquated age leads to frequent failures, lower performance, security breaches and reliability problems. All student testing computers are covered under a 5 year replacement cycle that is funded through state VPSA funds. However, testing computers alone do not meet the demand for student and staff computer access for instruction and support. ****Continued in FY 2019****

FY 2019:

The school division does not have a replacement cycle implemented for any instructional technology which is estimated in value at \$930,000. Instructional technology would include items found in a typical classroom across all grade levels such as an LCD projector, interactive whiteboard, document camera, and a television. With over 260 instructional rooms, there is a significant amount of instructional technology being used for instruction. The instructional technology within the High School is now over 4 years old and in all other buildings is over 5 years old. The mass majority of this equipment is out of warranty.

Virginia's Department of Education recommends replacing computers and instructional technology every 4 years which follows the International Society for Technology in Education's recommendations.

FY 2020:

FY 2021:

FY 2022:

Project Title:

FMS Annex Gymnasium Floor

Section 4 - PROJECT DESCRIPTIONS OR SPECIAL EXPLANATIONS

FY 2018:

FY 2019:

FY 2020:

FY 2021:

The floor in the annex gym at FMS is the original. It has been sanded and recoated multiple times over the years. The surface has many non-repairable cracks and other issues that are becoming safety concerns. The surface is used daily for physical education classes.

FY 2022:

FY2018-2022 CAPITAL IMPROVEMENT PLAN REQUEST

Fluvanna County

Section 1 - PROJECT INFORMATION

Project Title:	School Board Office Renovation			Department/Agency Ranking:	1
Department/Agency:	Fluvanna County Public Schools	Contact Person:	Chuck Winkler		
Funding Category:	<input type="checkbox"/> New Project(FY18-22)	<input checked="" type="checkbox"/> Existing Project(FY18-21)	<input type="checkbox"/> FY17 Project (Add'l Funding)		
Applicable Comprehensive Plan Chapter(s):	<input type="checkbox"/> 1. Natural Environment	<input type="checkbox"/> 4. Transportation	<input type="checkbox"/> 7. Parks and Recreation	<input checked="" type="checkbox"/> 10. Education	
	<input type="checkbox"/> 2. Land Use & Community Design	<input type="checkbox"/> 5. Economic Development	<input type="checkbox"/> 8. Housing	<input type="checkbox"/> 11. Public Safety	
	<input type="checkbox"/> 3. Infrastructure	<input checked="" type="checkbox"/> 6. Historic Preservation	<input type="checkbox"/> 9. Human Services	<input type="checkbox"/> 12. Financial Sustainability	

Section 2 - PROJECT COSTS

Expenditure Category	Prospective Vendor (if known)	FY2018	FY2019	FY2020	FY2021	FY2022	FY18-22 Total
Engineering & Planning							\$ 0
Construction		\$ 1,100,000					\$ 1,100,000
Equipment							\$ 0
Land Acquisition							\$ 0
Other (specify)							\$ 0
Other (specify)							\$ 0
TOTALS		\$ 1,100,000	\$ 0	\$ 0	\$ 0	\$ 0	\$ 1,100,000

Section 3 - PROJECTED OPERATIONAL COSTS & REVENUES

Additional Anticipated Operational Expenses	FY2018	FY2019	FY2020	FY2021	FY2022	FY18-22 Total
Additional Staff Salary						\$ 0
Benefits	Calculated at 20% of Staff Salary	\$ 0				
Vehicle						\$ 0
Vehicle Insurance						\$ 0
Utilities						\$ 0
Furniture and Fixtures						\$ 0
Equipment						\$ 0
Contractual costs						\$ 0
Other (specify)						\$ 0
Total Operational Costs	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Total Anticipated Operational Revenues						\$ 0

Project Title:

School Board Office Renovation

Section 4 - PROJECT DESCRIPTIONS OR SPECIAL EXPLANATIONS

FY 2018:

The School Board Office, originally built as an elementary school in 1936, has had no significant improvements in many years. Renovations would include: lighting, HVAC, windows, doors, electrical upgrades, and ensure ADA compliance. The project would also include asbestos abatement.

FY 2019:

FY 2020:

FY 2021:

FY 2022:

FY2018-2022 CAPITAL IMPROVEMENT PLAN REQUEST

Fluvanna County

Section 1 - PROJECT INFORMATION

Project Title:	Painting Cycle			Department/Agency Ranking:	1
Department/Agency:	Fluvanna County Public Schools	Contact Person:	Chuck Winkler		
Funding Category:	<input checked="" type="checkbox"/> New Project(FY18-22)	<input type="checkbox"/> Existing Project(FY18-21)	<input type="checkbox"/> FY17 Project (Add'l Funding)		
Applicable Comprehensive Plan Chapter(s):	<input type="checkbox"/> 1. Natural Environment	<input type="checkbox"/> 4. Transportation	<input type="checkbox"/> 7. Parks and Recreation	<input checked="" type="checkbox"/> 10. Education	
	<input type="checkbox"/> 2. Land Use & Community Design	<input type="checkbox"/> 5. Economic Development	<input type="checkbox"/> 8. Housing	<input type="checkbox"/> 11. Public Safety	
	<input type="checkbox"/> 3. Infrastructure	<input type="checkbox"/> 6. Historic Preservation	<input type="checkbox"/> 9. Human Services	<input type="checkbox"/> 12. Financial Sustainability	

Section 2 - PROJECT COSTS

Expenditure Category	Prospective Vendor (if known)	FY2018	FY2019	FY2020	FY2021	FY2022	FY18-22 Total
Engineering & Planning							\$ 0
Construction		\$ 50,000	\$ 250,000				
Equipment							\$ 0
Land Acquisition							\$ 0
Other (specify)							\$ 0
Other (specify)							\$ 0
TOTALS		\$ 50,000	\$ 250,000				

Section 3 - PROJECTED OPERATIONAL COSTS & REVENUES

Additional Anticipated Operational Expenses	FY2018	FY2019	FY2020	FY2021	FY2022	FY18-22 Total
Additional Staff Salary						\$ 0
Benefits	Calculated at 20% of Staff Salary	\$ 0				
Vehicle						\$ 0
Vehicle Insurance						\$ 0
Utilities						\$ 0
Furniture and Fixtures						\$ 0
Equipment						\$ 0
Contractual costs						\$ 0
Other (specify)						\$ 0
Total Operational Costs	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Total Anticipated Operational Revenues						\$ 0

Project Title:

Painting Cycle

Section 4 - PROJECT DESCRIPTIONS OR SPECIAL EXPLANATIONS

FY 2018:

All buildings require regular maintenance and upkeep. Providing a regular painting cycle for the interior and exterior of the buildings will assist with overall longevity and community value

FY 2019:

FY 2020:

FY 2021:

FY 2022:

FY2018-2022 CAPITAL IMPROVEMENT PLAN REQUEST

Fluvanna County

Section 1 - PROJECT INFORMATION

Project Title:	Fuel Tank Replacement			Department/Agency Ranking:	1
Department/Agency:	Fluvanna County Public Schools	Contact Person:	Chuck Winkler		
Funding Category:	<input type="checkbox"/> New Project(FY18-22)	<input checked="" type="checkbox"/> Existing Project(FY18-21)	<input type="checkbox"/> FY17 Project (Add'l Funding)		
Applicable Comprehensive Plan Chapter(s):	<input type="checkbox"/> 1. Natural Environment	<input type="checkbox"/> 4. Transportation	<input type="checkbox"/> 7. Parks and Recreation	<input type="checkbox"/> 10. Education	
	<input type="checkbox"/> 2. Land Use & Community Design	<input type="checkbox"/> 5. Economic Development	<input type="checkbox"/> 8. Housing	<input type="checkbox"/> 11. Public Safety	
	<input type="checkbox"/> 3. Infrastructure	<input type="checkbox"/> 6. Historic Preservation	<input type="checkbox"/> 9. Human Services	<input type="checkbox"/> 12. Financial Sustainability	

Section 2 - PROJECT COSTS

Expenditure Category	Prospective Vendor (if known)	FY2018	FY2019	FY2020	FY2021	FY2022	FY18-22 Total
Engineering & Planning							\$ 0
Construction							\$ 0
Equipment			\$ 200,000				\$ 200,000
Land Acquisition							\$ 0
Other (specify)							\$ 0
Other (specify)							\$ 0
TOTALS		\$ 0	\$ 200,000	\$ 0	\$ 0	\$ 0	\$ 200,000

Section 3 - PROJECTED OPERATIONAL COSTS & REVENUES

Additional Anticipated Operational Expenses	FY2018	FY2019	FY2020	FY2021	FY2022	FY18-22 Total
Additional Staff Salary						\$ 0
Benefits	Calculated at 20% of Staff Salary	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Vehicle						\$ 0
Vehicle Insurance						\$ 0
Utilities						\$ 0
Furniture and Fixtures						\$ 0
Equipment						\$ 0
Contractual costs						\$ 0
Other (specify)						\$ 0
Total Operational Costs	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Total Anticipated Operational Revenues						\$ 0

Project Title:

Fuel Tank Replacement

Section 4 - PROJECT DESCRIPTIONS OR SPECIAL EXPLANATIONS

FY 2018:

FY 2019:

The Commonwealth of Virginia recommends replacement of underground fuel storage tanks with above ground tanks. We currently have two 10,000 gallon tanks (gasoline and diesel) at Carysbrook Elementary serving all county departments, one 10,000 gallon heating oil tank at Central, and one 20,000 gallon heating oil tank (to be replaced by 10,000 to 15,000 gallon tank) at FMS. The estimate received from James River Petroleum to "swap" a buried 10,000 gallon tank with an above ground is \$30,000. So, we would estimate a total cost of \$200,000 to cover one larger tank and securing all new above ground tanks.

FY 2020:

FY 2021:

FY 2022:

FY2018-2022 CAPITAL IMPROVEMENT PLAN REQUEST

Fluvanna County

Section 1 - PROJECT INFORMATION

Project Title:	Carysbrook Roof and HVAC Repair/Renovation			Department/Agency Ranking:	2
Department/Agency:	Fluvanna County Public Schools	Contact Person:	Chuck Winkler		
Funding Category:	<input type="checkbox"/> New Project(FY18-22)	<input checked="" type="checkbox"/> Existing Project(FY18-21)	<input type="checkbox"/> FY17 Project (Add'l Funding)		
Applicable Comprehensive Plan Chapter(s):	<input type="checkbox"/> 1. Natural Environment	<input type="checkbox"/> 4. Transportation	<input type="checkbox"/> 7. Parks and Recreation	<input checked="" type="checkbox"/> 10. Education	
	<input type="checkbox"/> 2. Land Use & Community Design	<input type="checkbox"/> 5. Economic Development	<input type="checkbox"/> 8. Housing	<input type="checkbox"/> 11. Public Safety	
	<input type="checkbox"/> 3. Infrastructure	<input type="checkbox"/> 6. Historic Preservation	<input type="checkbox"/> 9. Human Services	<input type="checkbox"/> 12. Financial Sustainability	

Section 2 - PROJECT COSTS

Expenditure Category	Prospective Vendor (if known)	FY2018	FY2019	FY2020	FY2021	FY2022	FY18-22 Total
Engineering & Planning							\$ 0
Construction					\$ 1,600,000		\$ 1,600,000
Equipment							\$ 0
Land Acquisition							\$ 0
Other (specify)							\$ 0
Other (specify)							\$ 0
TOTALS		\$ 0	\$ 0	\$ 0	\$ 1,600,000	\$ 0	\$ 1,600,000

Section 3 - PROJECTED OPERATIONAL COSTS & REVENUES

Additional Anticipated Operational Expenses	FY2018	FY2019	FY2020	FY2021	FY2022	FY18-22 Total
Additional Staff Salary						\$ 0
Benefits	Calculated at 20% of Staff Salary	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Vehicle						\$ 0
Vehicle Insurance						\$ 0
Utilities						\$ 0
Furniture and Fixtures						\$ 0
Equipment						\$ 0
Contractual costs						\$ 0
Other (specify)						\$ 0
Total Operational Costs	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Total Anticipated Operational Revenues						\$ 0

Project Title:

Carysbrook Roof and HVAC Repair/Renovation

Section 4 - PROJECT DESCRIPTIONS OR SPECIAL EXPLANATIONS

FY 2018:

FY 2019:

FY 2020:

FY 2021:

Given the life expectancy of HVAC equipment, it is foreseeable that a major overall will be required at Carysbrook Elementary. A new chiller, roof top air handler units and controls would be the most practical design implementation. The roof at Carysbrook Elementary School has also reached the estimated replacement timeline.

FY 2022:

FY2018-2022 CAPITAL IMPROVEMENT PLAN REQUEST

Fluvanna County

Section 1 - PROJECT INFORMATION

Project Title:	Playground Upgrades			Department/Agency Ranking:	2
Department/Agency:	Fluvanna County Public Schools	Contact Person:	Chuck Winkler		
Funding Category:	<input type="checkbox"/> New Project(FY18-22)	<input checked="" type="checkbox"/> Existing Project(FY18-21)	<input type="checkbox"/> FY17 Project (Add'l Funding)		
Applicable Comprehensive Plan Chapter(s):	<input type="checkbox"/> 1. Natural Environment	<input type="checkbox"/> 4. Transportation	<input type="checkbox"/> 7. Parks and Recreation	<input checked="" type="checkbox"/> 10. Education	
	<input type="checkbox"/> 2. Land Use & Community Design	<input type="checkbox"/> 5. Economic Development	<input type="checkbox"/> 8. Housing	<input type="checkbox"/> 11. Public Safety	
	<input type="checkbox"/> 3. Infrastructure	<input type="checkbox"/> 6. Historic Preservation	<input type="checkbox"/> 9. Human Services	<input type="checkbox"/> 12. Financial Sustainability	

Section 2 - PROJECT COSTS

Expenditure Category	Prospective Vendor (if known)	FY2018	FY2019	FY2020	FY2021	FY2022	FY18-22 Total
Engineering & Planning							\$ 0
Construction							\$ 0
Equipment			\$ 75,000	\$ 75,000			\$ 150,000
Land Acquisition							\$ 0
Other (specify)							\$ 0
Other (specify)							\$ 0
TOTALS		\$ 0	\$ 75,000	\$ 75,000	\$ 0	\$ 0	\$ 150,000

Section 3 - PROJECTED OPERATIONAL COSTS & REVENUES

Additional Anticipated Operational Expenses	FY2018	FY2019	FY2020	FY2021	FY2022	FY18-22 Total
Additional Staff Salary						\$ 0
Benefits	Calculated at 20% of Staff Salary	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Vehicle						\$ 0
Vehicle Insurance						\$ 0
Utilities						\$ 0
Furniture and Fixtures						\$ 0
Equipment						\$ 0
Contractual costs						\$ 0
Other (specify)						\$ 0
Total Operational Costs	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Total Anticipated Operational Revenues						\$ 0

Project Title:

Playground Upgrades

Section 4 - PROJECT DESCRIPTIONS OR SPECIAL EXPLANATIONS

FY 2018:

FY 2019:

Elementary school playground upgrades and maintenance have historically been the responsibility of the individual schools through activity funds, PTO contributions, or donations. Ground cover, in the form of mulch, is often replaced annually due to run-off. Building retaining walls and back-filling the areas will reduce the annual replacement costs. In addition, Carysbrook now has some elementary playground equipment, however, additions and improvements are requested.

FY 2020:

FY 2021:

FY 2022:

FY2018-2022 CAPITAL IMPROVEMENT PLAN REQUEST

Fluvanna County

Section 1 - PROJECT INFORMATION

Project Title:	FMS Track and Court Resurfacing			Department/Agency Ranking:	2
Department/Agency:	Fluvanna County Public Schools	Contact Person:	Chuck Winkler		
Funding Category:	<input checked="" type="checkbox"/> New Project(FY18-22)	<input type="checkbox"/> Existing Project(FY18-21)	<input type="checkbox"/> FY17 Project (Add'l Funding)		
Applicable Comprehensive Plan Chapter(s):	<input type="checkbox"/> 1. Natural Environment	<input type="checkbox"/> 4. Transportation	<input type="checkbox"/> 7. Parks and Recreation	<input checked="" type="checkbox"/> 10. Education	
	<input type="checkbox"/> 2. Land Use & Community Design	<input type="checkbox"/> 5. Economic Development	<input type="checkbox"/> 8. Housing	<input type="checkbox"/> 11. Public Safety	
	<input type="checkbox"/> 3. Infrastructure	<input type="checkbox"/> 6. Historic Preservation	<input type="checkbox"/> 9. Human Services	<input type="checkbox"/> 12. Financial Sustainability	

Section 2 - PROJECT COSTS

Expenditure Category	Prospective Vendor (if known)	FY2018	FY2019	FY2020	FY2021	FY2022	FY18-22 Total
Engineering & Planning							\$ 0
Construction			\$ 75,000				\$ 75,000
Equipment							\$ 0
Land Acquisition							\$ 0
Other (specify)							\$ 0
Other (specify)							\$ 0
TOTALS		\$ 0	\$ 75,000	\$ 0	\$ 0	\$ 0	\$ 75,000

Section 3 - PROJECTED OPERATIONAL COSTS & REVENUES

Additional Anticipated Operational Expenses	FY2018	FY2019	FY2020	FY2021	FY2022	FY18-22 Total
Additional Staff Salary						\$ 0
Benefits	Calculated at 20% of Staff Salary	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Vehicle						\$ 0
Vehicle Insurance						\$ 0
Utilities						\$ 0
Furniture and Fixtures						\$ 0
Equipment						\$ 0
Contractual costs						\$ 0
Other (specify)						\$ 0
Total Operational Costs	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Total Anticipated Operational Revenues						\$ 0

Project Title:

FMS Track and Court Resurfacing

Section 4 - PROJECT DESCRIPTIONS OR SPECIAL EXPLANATIONS

FY 2018:

FY 2019:

The tennis courts have not been used in several years and are need of resurfacing for other educational endeavors. The track is still utilized for competition, but hasn't been resurfaced in over 15 years. It was "repaired" 3 years ago, but it was only a temporary fix. The surface is somewhat dangerous as it exists to use as a track and field facility.

FY 2020:

FY 2021:

FY 2022:

FY2018-2022 CAPITAL IMPROVEMENT PLAN REQUEST

Fluvanna County

Section 1 - PROJECT INFORMATION

Project Title:	Technology Fiber Connections			Department/Agency Ranking:	1
Department/Agency:	Fluvanna County Public Schools	Contact Person:	Chuck Winkler		
Funding Category:	<input checked="" type="checkbox"/> New Project(FY18-22)	<input type="checkbox"/> Existing Project(FY18-21)	<input type="checkbox"/> FY17 Project (Add'l Funding)		
Applicable Comprehensive Plan Chapter(s):	<input type="checkbox"/> 1. Natural Environment	<input type="checkbox"/> 4. Transportation	<input type="checkbox"/> 7. Parks and Recreation	<input checked="" type="checkbox"/> 10. Education	
	<input type="checkbox"/> 2. Land Use & Community Design	<input checked="" type="checkbox"/> 5. Economic Development	<input type="checkbox"/> 8. Housing	<input type="checkbox"/> 11. Public Safety	
	<input checked="" type="checkbox"/> 3. Infrastructure	<input type="checkbox"/> 6. Historic Preservation	<input type="checkbox"/> 9. Human Services	<input type="checkbox"/> 12. Financial Sustainability	

Section 2 - PROJECT COSTS

Expenditure Category	Prospective Vendor (if known)	FY2018	FY2019	FY2020	FY2021	FY2022	FY18-22 Total
Engineering & Planning							\$ 0
Construction			\$ 1,800,000				\$ 1,800,000
Equipment							\$ 0
Land Acquisition							\$ 0
Other (specify)							\$ 0
Other (specify)							\$ 0
TOTALS		\$ 0	\$ 1,800,000	\$ 0	\$ 0	\$ 0	\$ 1,800,000

Section 3 - PROJECTED OPERATIONAL COSTS & REVENUES

Additional Anticipated Operational Expenses	FY2018	FY2019	FY2020	FY2021	FY2022	FY18-22 Total
Additional Staff Salary						\$ 0
Benefits	Calculated at 20% of Staff Salary	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Vehicle						\$ 0
Vehicle Insurance						\$ 0
Utilities						\$ 0
Furniture and Fixtures						\$ 0
Equipment						\$ 0
Contractual costs						\$ 0
Other (specify)						\$ 0
Total Operational Costs	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Total Anticipated Operational Revenues						\$ 0

Project Title:

Technology Fiber Connections

Section 4 - PROJECT DESCRIPTIONS OR SPECIAL EXPLANATIONS

FY 2018:

FY 2019:

This funding will cover the expenses required to install a fiber backbone that would connect the school division's main facilities that are currently leasing circuits through third party vendors and tie them to the Abrams datacenter. The connected buildings would include the High School, Carysbrook Elementary, Central Elementary and the School Board Office. FCPS already owns the fiber that connects the Middle School to the Abrams datacenter.

There is 17 miles of fiber that would need to be run through the county to connect these sites. When completed, the school division would annually save the cost of each cancelled leased connection. Each leased connection expires between June 30th, 2019 and October 31, 2019.

Completion of this project will allow FCPS to meet the Federal Communications Commission's (FCC) E-rate Modernization Order's adopted State Education Technology Directors Association's SETDA long-term WAN target of 10 Gbps per 1,000 students for connectivity between schools by 2020. This project would also provide the infrastructure to meet the recommendation for Internet access for schools of at least 1 Gbps Internet access per 1,000 users by 2020.

FY 2020:

FY 2021:

FY 2022:

FY18-22 CIP Request Report

Office/Department/Agency:

County MRR

of Projects Requested:

19

Total Project Costs:

FY18	FY19	FY20	FY21	FY22	FY18-22
\$ 1,124,000	\$ 544,000	\$ 413,000	\$ 225,000	\$ 225,000	\$ 2,531,000

Total Annual Operating Costs:

\$ -

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FY2018-2022 CAPITAL IMPROVEMENT PLAN REQUEST

Fluvanna County

Section 1 - PROJECT INFORMATION

Project Title:	Capital Reserve Maintenance Fund - County			Department/Agency Ranking:	1
Department/Agency:	Public Works	Contact Person:	Wayne Stephens		
Funding Category:	<input type="checkbox"/> New Project(FY18-22)	<input checked="" type="checkbox"/> Existing Project(FY18-21)	<input type="checkbox"/> FY17 Project (Add'l Funding)		
Applicable Comprehensive Plan Chapter(s):	<input type="checkbox"/> 1. Natural Environment	<input type="checkbox"/> 4. Transportation	<input type="checkbox"/> 7. Parks and Recreation	<input type="checkbox"/> 10. Education	
	<input type="checkbox"/> 2. Land Use & Community Design	<input type="checkbox"/> 5. Economic Development	<input type="checkbox"/> 8. Housing	<input checked="" type="checkbox"/> 11. Public Safety	
	<input checked="" type="checkbox"/> 3. Infrastructure	<input type="checkbox"/> 6. Historic Preservation	<input type="checkbox"/> 9. Human Services	<input checked="" type="checkbox"/> 12. Financial Sustainability	

Section 2 - PROJECT COSTS

Expenditure Category	Prospective Vendor (if known)	FY2018	FY2019	FY2020	FY2021	FY2022	FY18-22 Total
Engineering & Planning							\$ 0
Construction							\$ 0
Equipment							\$ 0
Land Acquisition							\$ 0
Other (specify)	CASH	\$ 200,000	\$ 200,000	\$ 200,000	\$ 200,000	\$ 200,000	\$ 1,000,000
Other (specify)							\$ 0
TOTALS		\$ 200,000	\$ 1,000,000				

Section 3 - PROJECTED OPERATIONAL COSTS & REVENUES

Additional Anticipated Operational Expenses	FY2018	FY2019	FY2020	FY2021	FY2022	FY18-22 Total
Additional Staff Salary						\$ 0
Benefits	Calculated at 20% of Staff Salary	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Vehicle						\$ 0
Vehicle Insurance						\$ 0
Utilities						\$ 0
Furniture and Fixtures						\$ 0
Equipment						\$ 0
Contractual costs						\$ 0
Other (specify)						\$ 0
Total Operational Costs	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Total Anticipated Operational Revenues						\$ 0

Project Title:

Capital Reserve Maintenance Fund - County

Section 4 - PROJECT DESCRIPTIONS OR SPECIAL EXPLANATIONS

FY 2018:

Each year the Capital Improvement Plan receives requests for building system replacements, routine building up keep items, replacement of equipment and vehicles that are greater than \$20,000. These items have a service live after their useful life has been met; but systems need to be repaired, replaced or routine up keep needs to be done. At times, these repairs or replacements can end up costing more if they are not addressed during the current fiscal year. At times the useful life is exceeded and funds are not put aside to recognize these replacements and up keeps. The county would like to establish a Capital Reserve based on 20% of the depreciation of the buildings and equipment for when these requests are made in the Capital Improvement Plan. This would allow for funds to be available to draw upon to cover the cost of replacements and up keep, so they are not put off until they become an emergency.

FY 2019:

FY 2020:

FY 2021:

FY 2022:

FY2018-2022 CAPITAL IMPROVEMENT PLAN REQUEST

Fluvanna County

Section 1 - PROJECT INFORMATION

Project Title:	Multiple Buildings - Abatement, HVAC, Demolition (MRR)		Department/Agency Ranking:	1
Department/Agency:	Public Works	Contact Person:	Wayne Stephens	
Funding Category:	<input checked="" type="checkbox"/> New Project(FY18-22)	<input type="checkbox"/> Existing Project(FY18-21)	<input type="checkbox"/> FY17 Project (Add'l Funding)	
Applicable Comprehensive Plan Chapter(s):	<input type="checkbox"/> 1. Natural Environment	<input type="checkbox"/> 4. Transportation	<input type="checkbox"/> 7. Parks and Recreation	<input type="checkbox"/> 10. Education
	<input type="checkbox"/> 2. Land Use & Community Design	<input type="checkbox"/> 5. Economic Development	<input type="checkbox"/> 8. Housing	<input type="checkbox"/> 11. Public Safety
	<input checked="" type="checkbox"/> 3. Infrastructure	<input type="checkbox"/> 6. Historic Preservation	<input type="checkbox"/> 9. Human Services	<input type="checkbox"/> 12. Financial Sustainability

Section 2 - PROJECT COSTS

Expenditure Category	Prospective Vendor (if known)	FY2018	FY2019	FY2020	FY2021	FY2022	FY18-22 Total
Engineering & Planning							\$ 0
Construction		\$ 25,000	\$ 30,000	\$ 60,000			\$ 115,000
Equipment							\$ 0
Land Acquisition							\$ 0
Other (specify)							\$ 0
Other (specify)							\$ 0
TOTALS		\$ 25,000	\$ 30,000	\$ 60,000	\$ 0	\$ 0	\$ 115,000

Section 3 - PROJECTED OPERATIONAL COSTS & REVENUES

Additional Anticipated Operational Expenses	FY2018	FY2019	FY2020	FY2021	FY2022	FY18-22 Total
Additional Staff Salary						\$ 0
Benefits	Calculated at 20% of Staff Salary	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Vehicle						\$ 0
Vehicle Insurance						\$ 0
Utilities						\$ 0
Furniture and Fixtures						\$ 0
Equipment						\$ 0
Contractual costs						\$ 0
Other (specify)						\$ 0
Total Operational Costs	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Total Anticipated Operational Revenues						\$ 0

Project Title:

Multiple Buildings - Abatement, HVAC, Demolition (MRR)

Section 4 - PROJECT DESCRIPTIONS OR SPECIAL EXPLANATIONS

FY 2018:

The former caretaker's cottage at the Carysbrook complex is in poor condition and has been unoccupied for several years. Funding for FY2018 is for asbestos abatement in the cottage, followed by demolition of the structure.

The budget also includes funding for mold abatement in the basement level of the Administration building.

FY 2019:

The former caretaker's cottage at Pleasant Grove (near the Community Garden) is in extremely poor condition. Its floors are collapsing, the roof has failed, and there is rotting wood and trim throughout the building. It has been unoccupied for several years.

FY2019 funding will be used to perform asbestos abatement within the Pleasant Grove caretaker's cottage, to demolish the building and dispose of the construction debris.

FY 2020:

The money budgeted for FY2020 is for asbestos abatement in the 2-Story Brick Building and the Public Works Building in Palmyra, removing the existing oil furnace & window air conditioners in the 2-story building, and the installation of mini-split HVAC systems upstairs and down. Asbestos abatement includes asbestos floor tile, mastic and transite ductwork in the 2-story building, and asbestos tile in the Public Works building. The budget also includes project also includes installation of new floor tile and all necessary environmental inspection, testing, & monitoring to support these jobs.

The FY2020 budget also includes funds to construct a new manufactured storage building on a concrete slab on/near the site of the former PG caretaker's cottage.

FY 2021:

FY 2022:

FY2018-2022 CAPITAL IMPROVEMENT PLAN REQUEST

Fluvanna County

Section 1 - PROJECT INFORMATION

Project Title:	Administration Building Basement Secure Storage			Department/Agency Ranking:	1
Department/Agency:	Public Works	Contact Person:	Wayne Stephens		
Funding Category:	<input type="checkbox"/> New Project(FY18-22)	<input checked="" type="checkbox"/> Existing Project(FY18-21)	<input type="checkbox"/> FY17 Project (Add'l Funding)		
Applicable Comprehensive Plan Chapter(s):	<input type="checkbox"/> 1. Natural Environment	<input type="checkbox"/> 4. Transportation	<input type="checkbox"/> 7. Parks and Recreation	<input type="checkbox"/> 10. Education	
	<input type="checkbox"/> 2. Land Use & Community Design	<input type="checkbox"/> 5. Economic Development	<input type="checkbox"/> 8. Housing	<input type="checkbox"/> 11. Public Safety	
	<input checked="" type="checkbox"/> 3. Infrastructure	<input type="checkbox"/> 6. Historic Preservation	<input type="checkbox"/> 9. Human Services	<input type="checkbox"/> 12. Financial Sustainability	

Section 2 - PROJECT COSTS

Expenditure Category	Prospective Vendor (if known)	FY2018	FY2019	FY2020	FY2021	FY2022	FY18-22 Total
Engineering & Planning							\$ 0
Construction		\$ 30,000	\$ 50,000				\$ 80,000
Equipment							\$ 0
Land Acquisition							\$ 0
Other (specify)							\$ 0
Other (specify)							\$ 0
TOTALS		\$ 30,000	\$ 50,000	\$ 0	\$ 0	\$ 0	\$ 80,000

Section 3 - PROJECTED OPERATIONAL COSTS & REVENUES

Additional Anticipated Operational Expenses	FY2018	FY2019	FY2020	FY2021	FY2022	FY18-22 Total
Additional Staff Salary						\$ 0
Benefits	Calculated at 20% of Staff Salary	\$ 0				
Vehicle						\$ 0
Vehicle Insurance						\$ 0
Utilities						\$ 0
Furniture and Fixtures						\$ 0
Equipment						\$ 0
Contractual costs						\$ 0
Other (specify)						\$ 0
Total Operational Costs	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Total Anticipated Operational Revenues						\$ 0

Project Title:

Administration Building Basement Secure Storage

Section 4 - PROJECT DESCRIPTIONS OR SPECIAL EXPLANATIONS

FY 2018:

Storage space for archived County files and records is in very short supply. The County has no warehouse space, and space within departmental offices is limited.

This project involves the design, layout and construction of compartmentalized storage areas on the existing concrete slab in the basement of this building. When complete, County departments can be assigned on or more lockable storage units in which departmental records, files and other materials may be securely stored.

Components for mold removal & remediation, removal of vestigial HVAC equipment, and installation of new climate control equipment have been added to this project since the original request. Work in FY2018 will focus on mold removal/remediation and demolition.

FY 2019:

Work in FY2019 will focus on installation of new HVAC/climate control system and construction of secure storage compartments.

FY 2020:

FY 2021:

FY 2022:

FY2018-2022 CAPITAL IMPROVEMENT PLAN REQUEST

Fluvanna County

Section 1 - PROJECT INFORMATION

Project Title:	Asphalt Repair & Resurfacing			Department/Agency Ranking:	1
Department/Agency:	Public Works	Contact Person:	Wayne Stephens		
Funding Category:	<input checked="" type="checkbox"/> New Project(FY18-22)	<input type="checkbox"/> Existing Project(FY18-21)	<input type="checkbox"/> FY17 Project (Add'l Funding)		
Applicable Comprehensive Plan Chapter(s):	<input type="checkbox"/> 1. Natural Environment	<input type="checkbox"/> 4. Transportation	<input type="checkbox"/> 7. Parks and Recreation	<input type="checkbox"/> 10. Education	
	<input type="checkbox"/> 2. Land Use & Community Design	<input type="checkbox"/> 5. Economic Development	<input type="checkbox"/> 8. Housing	<input type="checkbox"/> 11. Public Safety	
	<input checked="" type="checkbox"/> 3. Infrastructure	<input type="checkbox"/> 6. Historic Preservation	<input type="checkbox"/> 9. Human Services	<input type="checkbox"/> 12. Financial Sustainability	

Section 2 - PROJECT COSTS

Expenditure Category	Prospective Vendor (if known)	FY2018	FY2019	FY2020	FY2021	FY2022	FY18-22 Total
Engineering & Planning							\$ 0
Construction		\$ 78,000	\$ 50,000				\$ 128,000
Equipment							\$ 0
Land Acquisition							\$ 0
Other (specify)							\$ 0
Other (specify)							\$ 0
TOTALS		\$ 78,000	\$ 50,000	\$ 0	\$ 0	\$ 0	\$ 128,000

Section 3 - PROJECTED OPERATIONAL COSTS & REVENUES

Additional Anticipated Operational Expenses	FY2018	FY2019	FY2020	FY2021	FY2022	FY18-22 Total
Additional Staff Salary						\$ 0
Benefits	Calculated at 20% of Staff Salary	\$ 0				
Vehicle						\$ 0
Vehicle Insurance						\$ 0
Utilities						\$ 0
Furniture and Fixtures						\$ 0
Equipment						\$ 0
Contractual costs						\$ 0
Other (specify)						\$ 0
Total Operational Costs	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Total Anticipated Operational Revenues						\$ 0

Project Title:

Asphalt Repair & Resurfacing

Section 4 - PROJECT DESCRIPTIONS OR SPECIAL EXPLANATIONS

FY 2018:

It has been several years since any of the County's asphalt parking lots, driveways and accessways have had maintenance performed on them, and with the exception of the paving at the most recently constructed facilities, most of the County's pavement is in poor or, at best, fair, condition. This project is intended to establish an ongoing effort, funded year-by-year, to begin properly maintaining, repairing and resurfacing County-owned asphalt surfaces.

FY2018 funding will be used to repair and resurface the asphalt areas at the Carysbrook Complex. Work will include grinding, resurfacing, re-countouring and sealing, as needed. The budget estimate includes installation of geotechnical fabric prior to final overlay.

FY 2019:

FY2019 funding will be used to perform needed repairs and resurfacing in the lower parking lot at the Courts Building. Work will include grinding, resurfacing, re-countouring and sealing, as needed. The budget estimate includes installation of geotechnical fabric prior to final overlay.

FY 2020:

The Public Works Department is currently in the process of assessing and prioritizing the work needed at the other paved parking lots, driveways and accessways owned by the County. During the FY2019 CIP budget process, we intend to present an overall asphalt maintenance/repair/resurfacing plan which will include funding requests for FY2020, 2021, 2022, etc.

FY 2021:

FY 2022:

FY2018-2022 CAPITAL IMPROVEMENT PLAN REQUEST

Fluvanna County

Section 1 - PROJECT INFORMATION

Project Title:	Concrete Walks, Walls, and Steps Repair & Renewal			Department/Agency Ranking:	1
Department/Agency:	Public Works	Contact Person:	Wayne Stephens		
Funding Category:	<input type="checkbox"/> New Project(FY18-22)	<input checked="" type="checkbox"/> Existing Project(FY18-21)	<input type="checkbox"/> FY17 Project (Add'l Funding)		
Applicable Comprehensive Plan Chapter(s):	<input type="checkbox"/> 1. Natural Environment	<input type="checkbox"/> 4. Transportation	<input type="checkbox"/> 7. Parks and Recreation	<input type="checkbox"/> 10. Education	
	<input type="checkbox"/> 2. Land Use & Community Design	<input type="checkbox"/> 5. Economic Development	<input type="checkbox"/> 8. Housing	<input type="checkbox"/> 11. Public Safety	
	<input checked="" type="checkbox"/> 3. Infrastructure	<input type="checkbox"/> 6. Historic Preservation	<input type="checkbox"/> 9. Human Services	<input type="checkbox"/> 12. Financial Sustainability	

Section 2 - PROJECT COSTS

Expenditure Category	Prospective Vendor (if known)	FY2018	FY2019	FY2020	FY2021	FY2022	FY18-22 Total
Engineering & Planning							\$ 0
Construction		\$ 40,000	\$ 30,000	\$ 30,000			\$ 100,000
Equipment							\$ 0
Land Acquisition							\$ 0
Other (specify)							\$ 0
Other (specify)							\$ 0
TOTALS		\$ 40,000	\$ 30,000	\$ 30,000	\$ 0	\$ 0	\$ 100,000

Section 3 - PROJECTED OPERATIONAL COSTS & REVENUES

Additional Anticipated Operational Expenses	FY2018	FY2019	FY2020	FY2021	FY2022	FY18-22 Total
Additional Staff Salary						\$ 0
Benefits	Calculated at 20% of Staff Salary	\$ 0				
Vehicle						\$ 0
Vehicle Insurance						\$ 0
Utilities						\$ 0
Furniture and Fixtures						\$ 0
Equipment						\$ 0
Contractual costs						\$ 0
Other (specify)						\$ 0
Total Operational Costs	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Total Anticipated Operational Revenues						\$ 0

Project Title:

Concrete Walks, Walls, and Steps Repair & Renewal

Section 4 - PROJECT DESCRIPTIONS OR SPECIAL EXPLANATIONS

FY 2018:

This project involves performing repairs to some of the (County-owned) concrete walks, steps and walls in the Village of Palmyra, at the Fork Union Community Center, and at the Carysbrook gymnasium. The scope of the project has expanded since the original request in FY2016, as additional issues with retaining walls, sidewalks and ramps have been discovered.

Repairs in the Village of Palmyra will be the focus in FY2018.

FY 2019:

Repairs at the Fork Union Community Center will be the focus in FY2019.

FY 2020:

Repairs at the Carysbrook Complex will be the focus in FY2020.

FY 2021:

FY 2022:

FY2018-2022 CAPITAL IMPROVEMENT PLAN REQUEST

Fluvanna County

Section 1 - PROJECT INFORMATION

Project Title:	Courts Building Lighting Controls & Fixtures Replacement			Department/Agency Ranking:	1
Department/Agency:	Public Works	Contact Person:	Wayne Stephens		
Funding Category:	<input type="checkbox"/> New Project(FY18-22)	<input checked="" type="checkbox"/> Existing Project(FY18-21)	<input type="checkbox"/> FY17 Project (Add'l Funding)		
Applicable Comprehensive Plan Chapter(s):	<input type="checkbox"/> 1. Natural Environment	<input type="checkbox"/> 4. Transportation	<input type="checkbox"/> 7. Parks and Recreation	<input type="checkbox"/> 10. Education	
	<input type="checkbox"/> 2. Land Use & Community Design	<input type="checkbox"/> 5. Economic Development	<input type="checkbox"/> 8. Housing	<input checked="" type="checkbox"/> 11. Public Safety	
	<input checked="" type="checkbox"/> 3. Infrastructure	<input type="checkbox"/> 6. Historic Preservation	<input type="checkbox"/> 9. Human Services	<input checked="" type="checkbox"/> 12. Financial Sustainability	

Section 2 - PROJECT COSTS

Expenditure Category	Prospective Vendor (if known)	FY2018	FY2019	FY2020	FY2021	FY2022	FY18-22 Total
Engineering & Planning							\$ 0
Construction		\$ 75,000					\$ 75,000
Equipment		\$ 75,000					\$ 75,000
Land Acquisition							\$ 0
Other (specify)							\$ 0
Other (specify)							\$ 0
TOTALS		\$ 150,000	\$ 0	\$ 0	\$ 0	\$ 0	\$ 150,000

Section 3 - PROJECTED OPERATIONAL COSTS & REVENUES

Additional Anticipated Operational Expenses	FY2018	FY2019	FY2020	FY2021	FY2022	FY18-22 Total
Additional Staff Salary						\$ 0
Benefits	Calculated at 20% of Staff Salary	\$ 0				
Vehicle						\$ 0
Vehicle Insurance						\$ 0
Utilities						\$ 0
Furniture and Fixtures						\$ 0
Equipment						\$ 0
Contractual costs						\$ 0
Other (specify)						\$ 0
Total Operational Costs	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Total Anticipated Operational Revenues						\$ 0

Project Title:

Courts Building Lighting Controls & Fixtures Replacement

Section 4 - PROJECT DESCRIPTIONS OR SPECIAL EXPLANATIONS

FY 2018:

This project is a continuation of a project begun in FY2017 with replacement of an outdated and failing lighting controls system. FY2017 funding was \$30,000.

Funding in FY2018 will be used to implement the second portion of the project , which involves replacement of existing flourescent, halogen, and other types of light fixtures throughout the building with equivalent LED light fixtures.

FY 2019:

FY 2020:

FY 2021:

FY 2022:

FY2018-2022 CAPITAL IMPROVEMENT PLAN REQUEST

Fluvanna County

Section 1 - PROJECT INFORMATION

Project Title:	Historic Courthouse Exterior Renovation			Department/Agency Ranking:	1
Department/Agency:	Public Works	Contact Person:	Wayne Stephens		
Funding Category:	<input checked="" type="checkbox"/> New Project(FY18-22)	<input type="checkbox"/> Existing Project(FY18-21)	<input type="checkbox"/> FY17 Project (Add'l Funding)		
Applicable Comprehensive Plan Chapter(s):	<input type="checkbox"/> 1. Natural Environment	<input type="checkbox"/> 4. Transportation	<input type="checkbox"/> 7. Parks and Recreation	<input type="checkbox"/> 10. Education	
	<input type="checkbox"/> 2. Land Use & Community Design	<input type="checkbox"/> 5. Economic Development	<input type="checkbox"/> 8. Housing	<input type="checkbox"/> 11. Public Safety	
	<input checked="" type="checkbox"/> 3. Infrastructure	<input checked="" type="checkbox"/> 6. Historic Preservation	<input type="checkbox"/> 9. Human Services	<input type="checkbox"/> 12. Financial Sustainability	

Section 2 - PROJECT COSTS

Expenditure Category	Prospective Vendor (if known)	FY2018	FY2019	FY2020	FY2021	FY2022	FY18-22 Total
Engineering & Planning		\$ 10,000					\$ 10,000
Construction		\$ 165,000					\$ 165,000
Equipment							\$ 0
Land Acquisition							\$ 0
Other (specify)							\$ 0
Other (specify)							\$ 0
TOTALS		\$ 175,000	\$ 0	\$ 0	\$ 0	\$ 0	\$ 175,000

Section 3 - PROJECTED OPERATIONAL COSTS & REVENUES

Additional Anticipated Operational Expenses	FY2018	FY2019	FY2020	FY2021	FY2022	FY18-22 Total
Additional Staff Salary						\$ 0
Benefits	Calculated at 20% of Staff Salary	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Vehicle						\$ 0
Vehicle Insurance						\$ 0
Utilities						\$ 0
Furniture and Fixtures						\$ 0
Equipment						\$ 0
Contractual costs						\$ 0
Other (specify)						\$ 0
Total Operational Costs	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Total Anticipated Operational Revenues						\$ 0

Project Title:

Historic Courthouse Exterior Renovation

Section 4 - PROJECT DESCRIPTIONS OR SPECIAL EXPLANATIONS

FY 2018:

The existing paint on the columns, pilasters and exterior trim at the Historic Courthouse are in poor condition and continue to deteriorate. The wooden shutters on the building are also deteriorating, with some of them falling apart and at least one missing entirely.

Staff have done considerable research to determine a period-correct coating to be used on the columns and pilasters. After consultation with local historians & Historic Renovation experts, it appears that columns on buildings of the era were most likely not painted, but instead were coated with a sand-based "wash". The columns on the upper mansion at Brevoort Plantation provide an excellent example of the type of coating which would be considered 'correct' for the columns and pilasters on the Historic Courthouse.

This project includes repair/reconstruction of all shutters, restoration of the columns and pilasters with period-correct coatings, and surface preparation & painting of all exterior wood trim.

FY 2019:

FY 2020:

FY 2021:

FY 2022:

FY2018-2022 CAPITAL IMPROVEMENT PLAN REQUEST

Fluvanna County

Section 1 - PROJECT INFORMATION

Project Title:	Palmyra Rescue Building Repairs & Maintenance			Department/Agency Ranking:	1
Department/Agency:	Public Works	Contact Person:	Wayne Stephens		
Funding Category:	<input checked="" type="checkbox"/> New Project(FY18-22)	<input type="checkbox"/> Existing Project(FY18-21)	<input type="checkbox"/> FY17 Project (Add'l Funding)		
Applicable Comprehensive Plan Chapter(s):	<input type="checkbox"/> 1. Natural Environment	<input type="checkbox"/> 4. Transportation	<input type="checkbox"/> 7. Parks and Recreation	<input type="checkbox"/> 10. Education	
	<input type="checkbox"/> 2. Land Use & Community Design	<input type="checkbox"/> 5. Economic Development	<input type="checkbox"/> 8. Housing	<input checked="" type="checkbox"/> 11. Public Safety	
	<input checked="" type="checkbox"/> 3. Infrastructure	<input type="checkbox"/> 6. Historic Preservation	<input type="checkbox"/> 9. Human Services	<input type="checkbox"/> 12. Financial Sustainability	

Section 2 - PROJECT COSTS

Expenditure Category	Prospective Vendor (if known)	FY2018	FY2019	FY2020	FY2021	FY2022	FY18-22 Total
Engineering & Planning							\$ 0
Construction		\$ 35,000	\$ 20,000				\$ 55,000
Equipment							\$ 0
Land Acquisition							\$ 0
Other (specify)							\$ 0
Other (specify)							\$ 0
TOTALS		\$ 35,000	\$ 20,000	\$ 0	\$ 0	\$ 0	\$ 55,000

Section 3 - PROJECTED OPERATIONAL COSTS & REVENUES

Additional Anticipated Operational Expenses	FY2018	FY2019	FY2020	FY2021	FY2022	FY18-22 Total
Additional Staff Salary						\$ 0
Benefits	Calculated at 20% of Staff Salary	\$ 0				
Vehicle						\$ 0
Vehicle Insurance						\$ 0
Utilities						\$ 0
Furniture and Fixtures						\$ 0
Equipment						\$ 0
Contractual costs						\$ 0
Other (specify)						\$ 0
Total Operational Costs	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Total Anticipated Operational Revenues						\$ 0

Project Title:

Palmyra Rescue Building Repairs & Maintenance

Section 4 - PROJECT DESCRIPTIONS OR SPECIAL EXPLANATIONS

FY 2018:

It is expected that the County will be taking ownership of the Palmyra Rescue Squad Building during calendar-year 2017. Certain critical maintenance, repair and upgrade items are being funded separately during FY2017 and will be started as soon as the County owns the building. However, other very important, but less critical, items are needed to bring the facility up to the County's standards for condition and maintenance.

FY2018 funding for this project will include such things as electrical & plumbing work not covered during FY2017; replacement of ceiling tiles, lighting & flooring throughout the living areas of the building; and starting work on exterior drainage and driveway/parking lot surface improvements.

FY 2019:

FY2019 funding will include the completion of driveway/parking lot improvements, including a concrete pad for ambulance parking adjacent to the bay doors and resurfacing remaining asphalt areas; as well as final wall & trim repairs, and prepping/painting throughout the building.

FY 2020:

FY 2021:

FY 2022:

FY2018-2022 CAPITAL IMPROVEMENT PLAN REQUEST

Fluvanna County

Section 1 - PROJECT INFORMATION

Project Title:	Replace Water Lines & Water Services			Department/Agency Ranking:	1
Department/Agency:	Public Works	Contact Person:	Wayne Stephens		
Funding Category:	<input checked="" type="checkbox"/> New Project(FY18-22)	<input type="checkbox"/> Existing Project(FY18-21)	<input type="checkbox"/> FY17 Project (Add'l Funding)		
Applicable Comprehensive Plan Chapter(s):	<input type="checkbox"/> 1. Natural Environment	<input type="checkbox"/> 4. Transportation	<input type="checkbox"/> 7. Parks and Recreation	<input type="checkbox"/> 10. Education	
	<input type="checkbox"/> 2. Land Use & Community Design	<input type="checkbox"/> 5. Economic Development	<input type="checkbox"/> 8. Housing	<input type="checkbox"/> 11. Public Safety	
	<input checked="" type="checkbox"/> 3. Infrastructure	<input type="checkbox"/> 6. Historic Preservation	<input type="checkbox"/> 9. Human Services	<input type="checkbox"/> 12. Financial Sustainability	

Section 2 - PROJECT COSTS

Expenditure Category	Prospective Vendor (if known)	FY2018	FY2019	FY2020	FY2021	FY2022	FY18-22 Total
Engineering & Planning		\$ 3,000	\$ 1,500				\$ 4,500
Construction		\$ 60,000	\$ 25,500				\$ 85,500
Equipment							\$ 0
Land Acquisition							\$ 0
Other (specify)							\$ 0
Other (specify)							\$ 0
TOTALS		\$ 63,000	\$ 27,000	\$ 0	\$ 0	\$ 0	\$ 90,000

Section 3 - PROJECTED OPERATIONAL COSTS & REVENUES

Additional Anticipated Operational Expenses	FY2018	FY2019	FY2020	FY2021	FY2022	FY18-22 Total
Additional Staff Salary						\$ 0
Benefits	Calculated at 20% of Staff Salary	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Vehicle						\$ 0
Vehicle Insurance						\$ 0
Utilities						\$ 0
Furniture and Fixtures						\$ 0
Equipment						\$ 0
Contractual costs						\$ 0
Other (specify)						\$ 0
Total Operational Costs	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Total Anticipated Operational Revenues						\$ 0

Project Title:

Replace Water Lines & Water Services

Section 4 - PROJECT DESCRIPTIONS OR SPECIAL EXPLANATIONS

FY 2018:

Replace Water Service Lines at Carysbrook Complex - The existing water service lines to the buildings and facilities at the Carysbrook Complex are quite old and are deteriorating rapidly. There have been multiple service line breaks (8+) over the last four years. The FY2018 funding for this project includes replacement of all domestic water service lines to the Social Services and Performing Arts Building, the Gymnasium, the Baseball Concession Stand, and Public Works Maintenance Buildings. The project includes installation of a new water meter for each building. It would be preferable to perform this work before commencing the asphalt repair and resurfacing work contained in another CIP request.

FY 2019:

Replace Water Service Lines at Historic Area in Palmyra - The existing water service lines to the buildings and facilities on the Historic Green in the Village of Palmyra are quite old and are in poor condition. There have been 2 major failures in the last 2 years, each requiring costly repairs. The FY2019 funding for this project includes replacement of all existing domestic water service lines to the Treasurer Building, the Public Restroom facility and Historic Courthouse. The project includes installation of a new water meter for each building.

FY 2020:

FY 2021:

FY 2022:

FY2018-2022 CAPITAL IMPROVEMENT PLAN REQUEST

Fluvanna County

Section 1 - PROJECT INFORMATION

Project Title:	Restroom Renovations and Water Line Replacements			Department/Agency Ranking:	1
Department/Agency:	Public Works	Contact Person:	Wayne Stephens		
Funding Category:	<input checked="" type="checkbox"/> New Project(FY18-22)	<input type="checkbox"/> Existing Project(FY18-21)	<input type="checkbox"/> FY17 Project (Add'l Funding)		
Applicable Comprehensive Plan Chapter(s):	<input type="checkbox"/> 1. Natural Environment	<input type="checkbox"/> 4. Transportation	<input type="checkbox"/> 7. Parks and Recreation	<input type="checkbox"/> 10. Education	
	<input type="checkbox"/> 2. Land Use & Community Design	<input type="checkbox"/> 5. Economic Development	<input type="checkbox"/> 8. Housing	<input type="checkbox"/> 11. Public Safety	
	<input checked="" type="checkbox"/> 3. Infrastructure	<input type="checkbox"/> 6. Historic Preservation	<input type="checkbox"/> 9. Human Services	<input type="checkbox"/> 12. Financial Sustainability	

Section 2 - PROJECT COSTS

Expenditure Category	Prospective Vendor (if known)	FY2018	FY2019	FY2020	FY2021	FY2022	FY18-22 Total
Engineering & Planning							\$ 0
Construction		\$ 79,000	\$ 28,000				\$ 107,000
Equipment							\$ 0
Land Acquisition							\$ 0
Other (specify)							\$ 0
Other (specify)							\$ 0
TOTALS		\$ 79,000	\$ 28,000	\$ 0	\$ 0	\$ 0	\$ 107,000

Section 3 - PROJECTED OPERATIONAL COSTS & REVENUES

Additional Anticipated Operational Expenses	FY2018	FY2019	FY2020	FY2021	FY2022	FY18-22 Total
Additional Staff Salary						\$ 0
Benefits	Calculated at 20% of Staff Salary	\$ 0				
Vehicle						\$ 0
Vehicle Insurance						\$ 0
Utilities						\$ 0
Furniture and Fixtures						\$ 0
Equipment						\$ 0
Contractual costs						\$ 0
Other (specify)						\$ 0
Total Operational Costs	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Total Anticipated Operational Revenues						\$ 0

Project Title:

Restroom Renovations and Water Line Replacements

Section 4 - PROJECT DESCRIPTIONS OR SPECIAL EXPLANATIONS

FY 2018:

The restrooms and the domestic water supply lines within the Fork Union Community Center are in poor condition. Although the water is safe to drink, the 76 year-old iron/steel water pipes are deteriorating and causing aesthetic issues with the water.

FY2018 funding will be used to renovate the 3 restrooms & replace all interior domestic water lines within the Fork Union Community Center. Renovation work includes new flooring, ceilings, lighting, partitions, plumbing & fixtures, vanities, mirrors, ventilation, and patch/paint work. The work also includes new ceilings & lighting in the building's corridors, as a new suspended ceiling is needed in order to create piping chase.

FY 2019:

The two restrooms in the free-standing building on the Historic Grounds and the two restrooms in the Carysbrook Gymnasium are also in poor condition.

FY2019 funding will be used to renovate all 4 restrooms, including new flooring, ceilings, lighting, partitions, plumbing & fixtures, vanities, mirrors, ventilation, and patch/paint work.

FY 2020:

FY 2021:

FY 2022:

FY2018-2022 CAPITAL IMPROVEMENT PLAN REQUEST

Fluvanna County

Section 1 - PROJECT INFORMATION

Project Title:	Countywide Facilities Assessments			Department/Agency Ranking:	2
Department/Agency:	Public Works	Contact Person:	Wayne Stephens		
Funding Category:	<input type="checkbox"/> New Project(FY18-22)	<input checked="" type="checkbox"/> Existing Project(FY18-21)	<input type="checkbox"/> FY17 Project (Add'l Funding)		
Applicable Comprehensive Plan Chapter(s):	<input type="checkbox"/> 1. Natural Environment	<input type="checkbox"/> 4. Transportation	<input type="checkbox"/> 7. Parks and Recreation	<input type="checkbox"/> 10. Education	
	<input type="checkbox"/> 2. Land Use & Community Design	<input type="checkbox"/> 5. Economic Development	<input type="checkbox"/> 8. Housing	<input type="checkbox"/> 11. Public Safety	
	<input checked="" type="checkbox"/> 3. Infrastructure	<input type="checkbox"/> 6. Historic Preservation	<input type="checkbox"/> 9. Human Services	<input type="checkbox"/> 12. Financial Sustainability	

Section 2 - PROJECT COSTS

Expenditure Category	Prospective Vendor (if known)	FY2018	FY2019	FY2020	FY2021	FY2022	FY18-22 Total
Engineering & Planning		\$ 50,000	\$ 25,000	\$ 25,000	\$ 25,000	\$ 25,000	\$ 150,000
Construction							\$ 0
Equipment							\$ 0
Land Acquisition							\$ 0
Other (specify)							\$ 0
Other (specify)							\$ 0
TOTALS		\$ 50,000	\$ 25,000	\$ 25,000	\$ 25,000	\$ 25,000	\$ 150,000

Section 3 - PROJECTED OPERATIONAL COSTS & REVENUES

Additional Anticipated Operational Expenses	FY2018	FY2019	FY2020	FY2021	FY2022	FY18-22 Total
Additional Staff Salary						\$ 0
Benefits	Calculated at 20% of Staff Salary	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Vehicle						\$ 0
Vehicle Insurance						\$ 0
Utilities						\$ 0
Furniture and Fixtures						\$ 0
Equipment						\$ 0
Contractual costs						\$ 0
Other (specify)						\$ 0
Total Operational Costs	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Total Anticipated Operational Revenues						\$ 0

Project Title:

Countywide Facilities Assessments

Section 4 - PROJECT DESCRIPTIONS OR SPECIAL EXPLANATIONS

FY 2018:

This project involves contracting with an engineering firm with structural, mechanical, electric and plumbing expertise, as needed, to thoroughly inspect and assess County-owned buildings and provide recommendations on needed repairs, upgrades and/or replacements of building structures & roofs, as well as mechanical, electrical, HVAC and plumbing systems. The County has ongoing services contracts with three engineering firms, and the tasks associated with this ongoing project will be contracted using Task Orders with one or more of those firms.

Multi-year funding is recommended, with assessments being prioritized and then completed as each year's funding permits.

FY 2019:

Continuous, yearly funding of this project is recommended, with assessments being prioritized and then completed as each year's funding permits.

FY 2020:

Continuous, yearly funding of this project is recommended, with assessments being prioritized and then completed as each year's funding permits.

FY 2021:

Continuous, yearly funding of this project is recommended, with assessments being prioritized and then completed as each year's funding permits.

FY 2022:

Continuous, yearly funding of this project is recommended, with assessments being prioritized and then completed as each year's funding permits.

FY2018-2022 CAPITAL IMPROVEMENT PLAN REQUEST

Fluvanna County

Section 1 - PROJECT INFORMATION

Project Title:	Fence Repairs & Replacements			Department/Agency Ranking:	2
Department/Agency:	Public Works	Contact Person:	Wayne Stephens		
Funding Category:	<input type="checkbox"/> New Project(FY18-22)	<input checked="" type="checkbox"/> Existing Project(FY18-21)	<input type="checkbox"/> FY17 Project (Add'l Funding)		
Applicable Comprehensive Plan Chapter(s):	<input type="checkbox"/> 1. Natural Environment	<input type="checkbox"/> 4. Transportation	<input checked="" type="checkbox"/> 7. Parks and Recreation	<input type="checkbox"/> 10. Education	
	<input type="checkbox"/> 2. Land Use & Community Design	<input type="checkbox"/> 5. Economic Development	<input type="checkbox"/> 8. Housing	<input type="checkbox"/> 11. Public Safety	
	<input checked="" type="checkbox"/> 3. Infrastructure	<input type="checkbox"/> 6. Historic Preservation	<input type="checkbox"/> 9. Human Services	<input type="checkbox"/> 12. Financial Sustainability	

Section 2 - PROJECT COSTS

Expenditure Category	Prospective Vendor (if known)	FY2018	FY2019	FY2020	FY2021	FY2022	FY18-22 Total
Engineering & Planning							\$ 0
Construction		\$ 80,000					\$ 80,000
Equipment							\$ 0
Land Acquisition							\$ 0
Other (specify)							\$ 0
Other (specify)							\$ 0
TOTALS		\$ 80,000	\$ 0	\$ 0	\$ 0	\$ 0	\$ 80,000

Section 3 - PROJECTED OPERATIONAL COSTS & REVENUES

Additional Anticipated Operational Expenses	FY2018	FY2019	FY2020	FY2021	FY2022	FY18-22 Total
Additional Staff Salary						\$ 0
Benefits	Calculated at 20% of Staff Salary	\$ 0				
Vehicle						\$ 0
Vehicle Insurance						\$ 0
Utilities						\$ 0
Furniture and Fixtures						\$ 0
Equipment						\$ 0
Contractual costs						\$ 0
Other (specify)						\$ 0
Total Operational Costs	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Total Anticipated Operational Revenues						\$ 0

Project Title:

Fence Repairs & Replacements

Section 4 - PROJECT DESCRIPTIONS OR SPECIAL EXPLANATIONS

FY 2018:

This project involves the complete replacement of the chain link fencing and backstop for the softball field at Carysbrook and the repair and/or replacement of existing fences at several other County owned facilities.

These include: Repair or Replace (as needed) the fencing and backstops for two ballfields at Pleasant Grove Park; Replacement of fencing for one basketball court at Carysbrook.

FY 2019:

FY 2020:

FY 2021:

FY 2022:

FY2018-2022 CAPITAL IMPROVEMENT PLAN REQUEST

Fluvanna County

Section 1 - PROJECT INFORMATION

Project Title:	Floor Repair/Replacement/Refinishing - Multiple Buildings			Department/Agency Ranking:	2
Department/Agency:	Public Works	Contact Person:	Wayne Stephens		
Funding Category:	<input checked="" type="checkbox"/> New Project(FY18-22)	<input type="checkbox"/> Existing Project(FY18-21)	<input type="checkbox"/> FY17 Project (Add'l Funding)		
Applicable Comprehensive Plan Chapter(s):	<input type="checkbox"/> 1. Natural Environment	<input type="checkbox"/> 4. Transportation	<input type="checkbox"/> 7. Parks and Recreation	<input type="checkbox"/> 10. Education	
	<input type="checkbox"/> 2. Land Use & Community Design	<input type="checkbox"/> 5. Economic Development	<input type="checkbox"/> 8. Housing	<input type="checkbox"/> 11. Public Safety	
	<input checked="" type="checkbox"/> 3. Infrastructure	<input type="checkbox"/> 6. Historic Preservation	<input type="checkbox"/> 9. Human Services	<input type="checkbox"/> 12. Financial Sustainability	

Section 2 - PROJECT COSTS

Expenditure Category	Prospective Vendor (if known)	FY2018	FY2019	FY2020	FY2021	FY2022	FY18-22 Total
Engineering & Planning							\$ 0
Construction		\$ 21,500					\$ 21,500
Equipment							\$ 0
Land Acquisition							\$ 0
Other (specify)							\$ 0
Other (specify)							\$ 0
TOTALS		\$ 21,500	\$ 0	\$ 0	\$ 0	\$ 0	\$ 21,500

Section 3 - PROJECTED OPERATIONAL COSTS & REVENUES

Additional Anticipated Operational Expenses	FY2018	FY2019	FY2020	FY2021	FY2022	FY18-22 Total
Additional Staff Salary						\$ 0
Benefits	Calculated at 20% of Staff Salary	\$ 0				
Vehicle						\$ 0
Vehicle Insurance						\$ 0
Utilities						\$ 0
Furniture and Fixtures						\$ 0
Equipment						\$ 0
Contractual costs						\$ 0
Other (specify)						\$ 0
Total Operational Costs	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Total Anticipated Operational Revenues						\$ 0

Project Title:

Floor Repair/Replacement/Refinishing - Multiple Buildings

Section 4 - PROJECT DESCRIPTIONS OR SPECIAL EXPLANATIONS

FY 2018:

The project involves repairing, refinishing and/or replacing worn and/or damaged flooring components in several County-owned facilities. The scope of work includes the following: Repair/replace risers & treads as needed in Courts Building stairways; Refinish the wood flooring in Carysbrook Gymnasium; Refinish the stage and stage steps in the Performing Arts Building; Refinish the stage & stage steps in the Community Center.

FY 2019:

FY 2020:

FY 2021:

FY 2022:

FY2018-2022 CAPITAL IMPROVEMENT PLAN REQUEST

Fluvanna County

Section 1 - PROJECT INFORMATION

Project Title:	Repainting Exterior Surfaces of Buildings			Department/Agency Ranking:	2
Department/Agency:	Public Works	Contact Person:	Wayne Stephens		
Funding Category:	<input checked="" type="checkbox"/> New Project(FY18-22)	<input type="checkbox"/> Existing Project(FY18-21)	<input type="checkbox"/> FY17 Project (Add'l Funding)		
Applicable Comprehensive Plan Chapter(s):	<input type="checkbox"/> 1. Natural Environment	<input type="checkbox"/> 4. Transportation	<input type="checkbox"/> 7. Parks and Recreation	<input type="checkbox"/> 10. Education	
	<input type="checkbox"/> 2. Land Use & Community Design	<input type="checkbox"/> 5. Economic Development	<input type="checkbox"/> 8. Housing	<input type="checkbox"/> 11. Public Safety	
	<input checked="" type="checkbox"/> 3. Infrastructure	<input type="checkbox"/> 6. Historic Preservation	<input type="checkbox"/> 9. Human Services	<input type="checkbox"/> 12. Financial Sustainability	

Section 2 - PROJECT COSTS

Expenditure Category	Prospective Vendor (if known)	FY2018	FY2019	FY2020	FY2021	FY2022	FY18-22 Total
Engineering & Planning							\$ 0
Construction		\$ 30,000	\$ 30,000				\$ 60,000
Equipment							\$ 0
Land Acquisition							\$ 0
Other (specify)							\$ 0
Other (specify)							\$ 0
TOTALS		\$ 30,000	\$ 30,000	\$ 0	\$ 0	\$ 0	\$ 60,000

Section 3 - PROJECTED OPERATIONAL COSTS & REVENUES

Additional Anticipated Operational Expenses	FY2018	FY2019	FY2020	FY2021	FY2022	FY18-22 Total
Additional Staff Salary						\$ 0
Benefits	Calculated at 20% of Staff Salary	\$ 0				
Vehicle						\$ 0
Vehicle Insurance						\$ 0
Utilities						\$ 0
Furniture and Fixtures						\$ 0
Equipment						\$ 0
Contractual costs						\$ 0
Other (specify)						\$ 0
Total Operational Costs	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Total Anticipated Operational Revenues						\$ 0

Project Title:

Repainting Exterior Surfaces of Buildings

Section 4 - PROJECT DESCRIPTIONS OR SPECIAL EXPLANATIONS

FY 2018:

This project involves having the exteriors of multiple buildings repainted.

FY2018 funding will be utilized to hire a contractor to paint the following buildings in Palmyra: Treasurer Building, 2-Story Building, Public Restroom Building, Weaver Building, IT Office Building, Registrar Building, Public Works Building, Old Stone Jail, Palmyra Fire Station.

Work to be performed includes power-washing, scraping/prepping painted surfaces, recaulking, priming and painting.

FY 2019:

FY2019 funding will be utilized to hire a contractor to paint the following buildings in Carysbrook & Fork Union: Social Services & Performing Arts Building, Carysbrook Gymnasium, FUSD Office Building, Fork Union Community Center.

Work to be performed includes power-washing, scraping/prepping painted surfaces, recaulking, priming and painting.

FY 2020:

FY 2021:

FY 2022:

FY2018-2022 CAPITAL IMPROVEMENT PLAN REQUEST

Fluvanna County

Section 1 - PROJECT INFORMATION

Project Title:	Courthouse Grounds - Planting Vegetation on Slopes			Department/Agency Ranking:	3
Department/Agency:	Public Works	Contact Person:	Wayne Stephens		
Funding Category:	<input type="checkbox"/> New Project(FY18-22)	<input type="checkbox"/> Existing Project(FY18-21)	<input type="checkbox"/> FY17 Project (Add'l Funding)		
Applicable Comprehensive Plan Chapter(s):	<input type="checkbox"/> 1. Natural Environment	<input type="checkbox"/> 4. Transportation	<input type="checkbox"/> 7. Parks and Recreation	<input type="checkbox"/> 10. Education	
	<input type="checkbox"/> 2. Land Use & Community Design	<input type="checkbox"/> 5. Economic Development	<input type="checkbox"/> 8. Housing	<input type="checkbox"/> 11. Public Safety	
	<input checked="" type="checkbox"/> 3. Infrastructure	<input type="checkbox"/> 6. Historic Preservation	<input type="checkbox"/> 9. Human Services	<input type="checkbox"/> 12. Financial Sustainability	

Section 2 - PROJECT COSTS

Expenditure Category	Prospective Vendor (if known)	FY2018	FY2019	FY2020	FY2021	FY2022	FY18-22 Total
Engineering & Planning							\$ 0
Construction			\$ 30,000				\$ 30,000
Equipment							\$ 0
Land Acquisition							\$ 0
Other (specify)							\$ 0
Other (specify)							\$ 0
TOTALS		\$ 0	\$ 30,000	\$ 0	\$ 0	\$ 0	\$ 30,000

Section 3 - PROJECTED OPERATIONAL COSTS & REVENUES

Additional Anticipated Operational Expenses	FY2018	FY2019	FY2020	FY2021	FY2022	FY18-22 Total
Additional Staff Salary						\$ 0
Benefits	Calculated at 20% of Staff Salary	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Vehicle						\$ 0
Vehicle Insurance						\$ 0
Utilities						\$ 0
Furniture and Fixtures						\$ 0
Equipment						\$ 0
Contractual costs						\$ 0
Other (specify)						\$ 0
Total Operational Costs	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Total Anticipated Operational Revenues						\$ 0

Project Title:

Courthouse Grounds - Planting Vegetation on Slopes

Section 4 - PROJECT DESCRIPTIONS OR SPECIAL EXPLANATIONS

FY 2018:

FY 2019:

This project involves planting of vegetation on steep slopes on the south and west sides of the Courts Building. The vegetation planted will be of a variety which provides good ground cover, is aesthetically pleasing and does not require mowing.

This is a safety, as well as aesthetic issue, as many of the slopes are steeper than 2:1 (often approaching 1:1) and are therefore not safe for personnel to mow with conventional equipment.

FY 2020:

FY 2021:

FY 2022:

FY2018-2022 CAPITAL IMPROVEMENT PLAN REQUEST

Fluvanna County

Section 1 - PROJECT INFORMATION

Project Title:	Courts Building - Audio System Replacement for Court Rooms		Department/Agency Ranking:	3
Department/Agency:	Public Works	Contact Person:	Wayne Stephens	
Funding Category:	<input checked="" type="checkbox"/> New Project(FY18-22)	<input type="checkbox"/> Existing Project(FY18-21)	<input type="checkbox"/> FY17 Project (Add'l Funding)	
Applicable Comprehensive Plan Chapter(s):	<input type="checkbox"/> 1. Natural Environment	<input type="checkbox"/> 4. Transportation	<input type="checkbox"/> 7. Parks and Recreation	<input type="checkbox"/> 10. Education
	<input type="checkbox"/> 2. Land Use & Community Design	<input type="checkbox"/> 5. Economic Development	<input type="checkbox"/> 8. Housing	<input type="checkbox"/> 11. Public Safety
	<input checked="" type="checkbox"/> 3. Infrastructure	<input type="checkbox"/> 6. Historic Preservation	<input type="checkbox"/> 9. Human Services	<input type="checkbox"/> 12. Financial Sustainability

Section 2 - PROJECT COSTS

Expenditure Category	Prospective Vendor (if known)	FY2018	FY2019	FY2020	FY2021	FY2022	FY18-22 Total
Engineering & Planning							\$ 0
Construction			\$ 24,000				\$ 24,000
Equipment							\$ 0
Land Acquisition							\$ 0
Other (specify)							\$ 0
Other (specify)							\$ 0
TOTALS		\$ 0	\$ 24,000	\$ 0	\$ 0	\$ 0	\$ 24,000

Section 3 - PROJECTED OPERATIONAL COSTS & REVENUES

Additional Anticipated Operational Expenses	FY2018	FY2019	FY2020	FY2021	FY2022	FY18-22 Total
Additional Staff Salary						\$ 0
Benefits	Calculated at 20% of Staff Salary	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Vehicle						\$ 0
Vehicle Insurance						\$ 0
Utilities						\$ 0
Furniture and Fixtures						\$ 0
Equipment						\$ 0
Contractual costs						\$ 0
Other (specify)						\$ 0
Total Operational Costs	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Total Anticipated Operational Revenues						\$ 0

Project Title:

Courts Building - Audio System Replacement for Court Rooms

Section 4 - PROJECT DESCRIPTIONS OR SPECIAL EXPLANATIONS

FY 2018:

FY 2019:

The audio transmission, amplification and recording systems in the Circuit and District Courtrooms are aging. Cables are worn, microphones are failing, electronics systems are aging. Some failures have occurred and additional failures are expected as the systems continue to deteriorate with use and age.

This project replaces the audio systems in two courtrooms in the County Courts Building.

FY 2020:

FY 2021:

FY 2022:

FY2018-2022 CAPITAL IMPROVEMENT PLAN REQUEST

Fluvanna County

Section 1 - PROJECT INFORMATION

Project Title:	Courts Building - Gutters & Downspouts Addition			Department/Agency Ranking:	3
Department/Agency:	Public Works	Contact Person:	Wayne Stephens		
Funding Category:	<input type="checkbox"/> New Project(FY18-22)	<input checked="" type="checkbox"/> Existing Project(FY18-21)	<input type="checkbox"/> FY17 Project (Add'l Funding)		
Applicable Comprehensive Plan Chapter(s):	<input type="checkbox"/> 1. Natural Environment	<input type="checkbox"/> 4. Transportation	<input type="checkbox"/> 7. Parks and Recreation	<input type="checkbox"/> 10. Education	
	<input type="checkbox"/> 2. Land Use & Community Design	<input type="checkbox"/> 5. Economic Development	<input type="checkbox"/> 8. Housing	<input type="checkbox"/> 11. Public Safety	
	<input checked="" type="checkbox"/> 3. Infrastructure	<input type="checkbox"/> 6. Historic Preservation	<input type="checkbox"/> 9. Human Services	<input type="checkbox"/> 12. Financial Sustainability	

Section 2 - PROJECT COSTS

Expenditure Category	Prospective Vendor (if known)	FY2018	FY2019	FY2020	FY2021	FY2022	FY18-22 Total
Engineering & Planning							\$ 0
Construction				\$ 98,000			\$ 98,000
Equipment							\$ 0
Land Acquisition							\$ 0
Other (specify)							\$ 0
Other (specify)							\$ 0
TOTALS		\$ 0	\$ 0	\$ 98,000	\$ 0	\$ 0	\$ 98,000

Section 3 - PROJECTED OPERATIONAL COSTS & REVENUES

Additional Anticipated Operational Expenses	FY2018	FY2019	FY2020	FY2021	FY2022	FY18-22 Total
Additional Staff Salary						\$ 0
Benefits	Calculated at 20% of Staff Salary	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Vehicle						\$ 0
Vehicle Insurance						\$ 0
Utilities						\$ 0
Furniture and Fixtures						\$ 0
Equipment						\$ 0
Contractual costs						\$ 0
Other (specify)						\$ 0
Total Operational Costs	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Total Anticipated Operational Revenues						\$ 0

Project Title:

Courts Building - Gutters & Downspouts Addition

Section 4 - PROJECT DESCRIPTIONS OR SPECIAL EXPLANATIONS

FY 2018:

FY 2019:

FY 2020:

Only the deed/record room wing of the new Courthouse was built with gutters, downspouts & snow guards. Without these items on the building, we risk erosion, water intrusion & snow slides. This project will provide matching copper gutters & downspouts, plus snow guards.

The project is currently programmed for the FY2018 Capital Budget. The estimated cost has been updated since the FY2017 request.

FY 2021:

FY 2022:

FY2018-2022 CAPITAL IMPROVEMENT PLAN REQUEST

Fluvanna County

Section 1 - PROJECT INFORMATION

Project Title:	Demolish Old Maintenance Shop at Carysbrook			Department/Agency Ranking:	3
Department/Agency:	Public Works	Contact Person:	Wayne Stephens		
Funding Category:	<input type="checkbox"/> New Project(FY18-22)	<input checked="" type="checkbox"/> Existing Project(FY18-21)	<input type="checkbox"/> FY17 Project (Add'l Funding)		
Applicable Comprehensive Plan Chapter(s):	<input type="checkbox"/> 1. Natural Environment	<input type="checkbox"/> 4. Transportation	<input type="checkbox"/> 7. Parks and Recreation	<input type="checkbox"/> 10. Education	
	<input type="checkbox"/> 2. Land Use & Community Design	<input type="checkbox"/> 5. Economic Development	<input type="checkbox"/> 8. Housing	<input type="checkbox"/> 11. Public Safety	
	<input checked="" type="checkbox"/> 3. Infrastructure	<input type="checkbox"/> 6. Historic Preservation	<input type="checkbox"/> 9. Human Services	<input type="checkbox"/> 12. Financial Sustainability	

Section 2 - PROJECT COSTS

Expenditure Category	Prospective Vendor (if known)	FY2018	FY2019	FY2020	FY2021	FY2022	FY18-22 Total
Engineering & Planning							\$ 0
Construction		\$ 40,000					\$ 40,000
Equipment							\$ 0
Land Acquisition							\$ 0
Other (specify)							\$ 0
Other (specify)							\$ 0
TOTALS		\$ 40,000	\$ 0	\$ 0	\$ 0	\$ 0	\$ 40,000

Section 3 - PROJECTED OPERATIONAL COSTS & REVENUES

Additional Anticipated Operational Expenses	FY2018	FY2019	FY2020	FY2021	FY2022	FY18-22 Total
Additional Staff Salary						\$ 0
Benefits	Calculated at 20% of Staff Salary	\$ 0				
Vehicle						\$ 0
Vehicle Insurance						\$ 0
Utilities						\$ 0
Furniture and Fixtures						\$ 0
Equipment						\$ 0
Contractual costs						\$ 0
Other (specify)						\$ 0
Total Operational Costs	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Total Anticipated Operational Revenues						\$ 0

Project Title:

Demolish Old Maintenance Shop at Carysbrook

Section 4 - PROJECT DESCRIPTIONS OR SPECIAL EXPLANATIONS

FY 2018:

This 1930s cinder block building was, until 2014, used by the Public Works Department for performing equipment maintenance and repair. However, the building foundation, footings and walls at the south end of the building have been sinking/shifting, and that end of the building is in danger of collapsing. This project will pay for the costs of rendering the site safe by demolishing the building and disposing of the debris, leaving as much of the concrete slab as can be salvaged in place.

Estimated cost has been updated since the FY2017 request.

FY 2019:

FY 2020:

FY 2021:

FY 2022:

FY2018-2022 CAPITAL IMPROVEMENT PLAN REQUEST

Fluvanna County

Section 1 - PROJECT INFORMATION

Project Title:	Pleasant Grove House Foundation Underpinning		Department/Agency Ranking:	3
Department/Agency:	Public Works	Contact Person:	Wayne Stephens	
Funding Category:	<input checked="" type="checkbox"/> New Project(FY18-22)	<input type="checkbox"/> Existing Project(FY18-21)	<input type="checkbox"/> FY17 Project (Add'l Funding)	
Applicable Comprehensive Plan Chapter(s):	<input type="checkbox"/> 1. Natural Environment	<input type="checkbox"/> 4. Transportation	<input checked="" type="checkbox"/> 7. Parks and Recreation	<input type="checkbox"/> 10. Education
	<input type="checkbox"/> 2. Land Use & Community Design	<input type="checkbox"/> 5. Economic Development	<input type="checkbox"/> 8. Housing	<input type="checkbox"/> 11. Public Safety
	<input checked="" type="checkbox"/> 3. Infrastructure	<input type="checkbox"/> 6. Historic Preservation	<input type="checkbox"/> 9. Human Services	<input type="checkbox"/> 12. Financial Sustainability

Section 2 - PROJECT COSTS

Expenditure Category	Prospective Vendor (if known)	FY2018	FY2019	FY2020	FY2021	FY2022	FY18-22 Total
Engineering & Planning		\$ 2,500					\$ 2,500
Construction		\$ 25,000					\$ 25,000
Equipment							\$ 0
Land Acquisition							\$ 0
Other (specify)							\$ 0
Other (specify)							\$ 0
TOTALS		\$ 27,500	\$ 0	\$ 0	\$ 0	\$ 0	\$ 27,500

Section 3 - PROJECTED OPERATIONAL COSTS & REVENUES

Additional Anticipated Operational Expenses	FY2018	FY2019	FY2020	FY2021	FY2022	FY18-22 Total
Additional Staff Salary						\$ 0
Benefits	Calculated at 20% of Staff Salary	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Vehicle						\$ 0
Vehicle Insurance						\$ 0
Utilities						\$ 0
Furniture and Fixtures						\$ 0
Equipment						\$ 0
Contractual costs						\$ 0
Other (specify)						\$ 0
Total Operational Costs	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Total Anticipated Operational Revenues						\$ 0

Project Title:

Pleasant Grove House Foundation Underpinning

Section 4 - PROJECT DESCRIPTIONS OR SPECIAL EXPLANATIONS

FY 2018:

During the restoration of the Pleasant Grove House it was necessary to have foundation underpinning designed and constructed at the rear of the building in order to reduce the potential for differential settling and provide the stability needed to support the addition. At the time, the structural engineer recommended that similar underpinning be performed along the front of the building foundation "in the not too distant future". This project includes design and construction of foundation underpinning along the front of the Pleasant Grove House & Museum.

FY 2019:

FY 2020:

FY 2021:

FY 2022:

FY18-22 CIP Request Report

Office/Department/Agency:

Schools MRR

of Projects Requested:

2

Total Project Costs:

FY18	FY19	FY20	FY21	FY22	FY18-22
\$ 300,000	\$ 300,000	\$ 200,000	\$ 200,000	\$ 200,000	\$ 1,200,000

Total Annual Operating Costs:

\$ -

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FY2018-2022 CAPITAL IMPROVEMENT PLAN REQUEST

Fluvanna County

Section 1 - PROJECT INFORMATION

Project Title:	Schools - Capital Reserve Maintenance Fund			Department/Agency Ranking:	1
Department/Agency:	Fluvanna County Public Schools	Contact Person:	Chuck Winkler		
Funding Category:	<input type="checkbox"/> New Project(FY18-22)	<input checked="" type="checkbox"/> Existing Project(FY18-21)	<input type="checkbox"/> FY17 Project (Add'l Funding)		
Applicable Comprehensive Plan Chapter(s):	<input type="checkbox"/> 1. Natural Environment	<input type="checkbox"/> 4. Transportation	<input type="checkbox"/> 7. Parks and Recreation	<input checked="" type="checkbox"/> 10. Education	
	<input type="checkbox"/> 2. Land Use & Community Design	<input type="checkbox"/> 5. Economic Development	<input type="checkbox"/> 8. Housing	<input checked="" type="checkbox"/> 11. Public Safety	
	<input checked="" type="checkbox"/> 3. Infrastructure	<input type="checkbox"/> 6. Historic Preservation	<input type="checkbox"/> 9. Human Services	<input checked="" type="checkbox"/> 12. Financial Sustainability	

Section 2 - PROJECT COSTS

Expenditure Category	Prospective Vendor (if known)	FY2018	FY2019	FY2020	FY2021	FY2022	FY18-22 Total
Engineering & Planning							\$ 0
Construction							\$ 0
Equipment							\$ 0
Land Acquisition							\$ 0
Other (specify)	CASH	\$ 200,000	\$ 200,000	\$ 200,000	\$ 200,000	\$ 200,000	\$ 1,000,000
Other (specify)							\$ 0
TOTALS		\$ 200,000	\$ 1,000,000				

Section 3 - PROJECTED OPERATIONAL COSTS & REVENUES

Additional Anticipated Operational Expenses	FY2018	FY2019	FY2020	FY2021	FY2022	FY18-22 Total
Additional Staff Salary						\$ 0
Benefits	Calculated at 20% of Staff Salary	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Vehicle						\$ 0
Vehicle Insurance						\$ 0
Utilities						\$ 0
Furniture and Fixtures						\$ 0
Equipment						\$ 0
Contractual costs						\$ 0
Other (specify)						\$ 0
Total Operational Costs	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Total Anticipated Operational Revenues						\$ 0

Project Title:

Schools - Capital Reserve Maintenance Fund

Section 4 - PROJECT DESCRIPTIONS OR SPECIAL EXPLANATIONS

FY 2018:

Each year the Capital Improvement Plan receives requests for building system replacements, routine building up keep items, replacement of equipment and vehicles that are greater than \$20,000. These items have a service live after their useful life has been met; but systems need to be repaired, replaced or routine up keep needs to be done. At times, these repairs or replacements can end up costing more if they are not addressed during the current fiscal year. At times the useful life is exceeded and funds are not put aside to recognize these replacements and up keeps. The county would like to establish a Capital Reserve based on 20% of the depreciation of the buildings and equipment for when these requests are made in the Capital Improvement Plan. This would allow for funds to be available to draw upon to cover the cost of replacements and up keep, so they are not put off until they become an emergency.

FY 2019:

FY 2020:

FY 2021:

FY 2022:

FY2018-2022 CAPITAL IMPROVEMENT PLAN REQUEST

Fluvanna County

Section 1 - PROJECT INFORMATION

Project Title:	Schools Floor Covering Replacement			Department/Agency Ranking:	2
Department/Agency:	Fluvanna County Public Schools	Contact Person:	Chuck Winkler		
Funding Category:	<input type="checkbox"/> New Project(FY18-22)	<input checked="" type="checkbox"/> Existing Project(FY18-21)	<input type="checkbox"/> FY17 Project (Add'l Funding)		
Applicable Comprehensive Plan Chapter(s):	<input type="checkbox"/> 1. Natural Environment	<input type="checkbox"/> 4. Transportation	<input type="checkbox"/> 7. Parks and Recreation	<input type="checkbox"/> 10. Education	
	<input type="checkbox"/> 2. Land Use & Community Design	<input type="checkbox"/> 5. Economic Development	<input type="checkbox"/> 8. Housing	<input type="checkbox"/> 11. Public Safety	
	<input type="checkbox"/> 3. Infrastructure	<input type="checkbox"/> 6. Historic Preservation	<input type="checkbox"/> 9. Human Services	<input type="checkbox"/> 12. Financial Sustainability	

Section 2 - PROJECT COSTS

Expenditure Category	Prospective Vendor (if known)	FY2018	FY2019	FY2020	FY2021	FY2022	FY18-22 Total
Engineering & Planning							\$ 0
Construction		\$ 100,000	\$ 100,000				\$ 200,000
Equipment							\$ 0
Land Acquisition							\$ 0
Other (specify)							\$ 0
Other (specify)							\$ 0
TOTALS		\$ 100,000	\$ 100,000	\$ 0	\$ 0	\$ 0	\$ 200,000

Section 3 - PROJECTED OPERATIONAL COSTS & REVENUES

Additional Anticipated Operational Expenses	FY2018	FY2019	FY2020	FY2021	FY2022	FY18-22 Total
Additional Staff Salary						\$ 0
Benefits	Calculated at 20% of Staff Salary	\$ 0				
Vehicle						\$ 0
Vehicle Insurance						\$ 0
Utilities						\$ 0
Furniture and Fixtures						\$ 0
Equipment						\$ 0
Contractual costs						\$ 0
Other (specify)						\$ 0
Total Operational Costs	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Total Anticipated Operational Revenues						\$ 0

Project Title:

Schools Floor Covering Replacement

Section 4 - PROJECT DESCRIPTIONS OR SPECIAL EXPLANATIONS

FY 2018:

Carpet seams are splitting in many classrooms and carpet tape is currently being used to repair these areas. Evaluation of carpet versus tile or linoleum will continue to be a topic of conversation. The tile, linoleum and carpet in the hallways and classrooms throughout the school system requires attention. Some of the areas in need of repair may also contain asbestos and will require abatement.

FY 2019:

FY 2020:

FY 2021:

FY 2022:

FY18-22 CIP Request Report

Office/Department/Agency:

Vehicles

of Projects Requested:

5

Total Project Costs:

FY18	FY19	FY20	FY21	FY22	FY18-22
\$ 1,003,180	\$ 988,680	\$ 980,180	\$ 753,680	\$ 755,180	\$ 4,480,900

Total Annual Operating Costs:

\$ -

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FY2018-2022 CAPITAL IMPROVEMENT PLAN REQUEST

Fluvanna County

Section 1 - PROJECT INFORMATION

Project Title:	County Vehicles - Programmed Fleet Replacement			Department/Agency Ranking:	1
Department/Agency:	Public Works	Contact Person:	Wayne Stephens		
Funding Category:	<input type="checkbox"/> New Project(FY18-22)	<input checked="" type="checkbox"/> Existing Project(FY18-21)	<input type="checkbox"/> FY17 Project (Add'l Funding)		
Applicable Comprehensive Plan Chapter(s):	<input type="checkbox"/> 1. Natural Environment	<input type="checkbox"/> 4. Transportation	<input type="checkbox"/> 7. Parks and Recreation	<input type="checkbox"/> 10. Education	
	<input type="checkbox"/> 2. Land Use & Community Design	<input type="checkbox"/> 5. Economic Development	<input type="checkbox"/> 8. Housing	<input type="checkbox"/> 11. Public Safety	
	<input checked="" type="checkbox"/> 3. Infrastructure	<input type="checkbox"/> 6. Historic Preservation	<input type="checkbox"/> 9. Human Services	<input type="checkbox"/> 12. Financial Sustainability	

Section 2 - PROJECT COSTS

Expenditure Category	Prospective Vendor (if known)	FY2018	FY2019	FY2020	FY2021	FY2022	FY18-22 Total
Engineering & Planning							\$ 0
Construction							\$ 0
Equipment							\$ 0
Land Acquisition							\$ 0
Other (specify)	Vehicles	\$ 175,000	\$ 150,000	\$ 125,000	\$ 100,000	\$ 100,000	\$ 650,000
Other (specify)							\$ 0
TOTALS		\$ 175,000	\$ 150,000	\$ 125,000	\$ 100,000	\$ 100,000	\$ 650,000

Section 3 - PROJECTED OPERATIONAL COSTS & REVENUES

Additional Anticipated Operational Expenses	FY2018	FY2019	FY2020	FY2021	FY2022	FY18-22 Total
Additional Staff Salary						\$ 0
Benefits	Calculated at 20% of Staff Salary	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Vehicle						\$ 0
Vehicle Insurance						\$ 0
Utilities						\$ 0
Furniture and Fixtures						\$ 0
Equipment						\$ 0
Contractual costs						\$ 0
Other (specify)						\$ 0
Total Operational Costs	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Total Anticipated Operational Revenues						\$ 0

Project Title:

County Vehicles - Programmed Fleet Replacement

Section 4 - PROJECT DESCRIPTIONS OR SPECIAL EXPLANATIONS

FY 2018:

This plan involves the continuation of the fleet replacement plan for vehicles in the County's fleet (exclusive of fire/rescue, police, social services and school vehicles). The replacement criteria used to program this five-year purchase plan are: 10 years or 175,000 miles for sedans, 12 years or 200,000 miles for work trucks and vans, 15 years or 250,000 miles for large trucks. These criteria assume a useful vehicle life that well beyond most industry-recommended fleet replacement ages/mileages.

FY2018 funding anticipates the purchase of 1, SUV or "Crossover"; 2, 1/2 Ton Pickup Trucks; 1, Twelve Passenger Van; 1, Utility Body Truck

FY 2019:

FY2019 budget estimate includes replacement of 3-4 vehicles

FY 2020:

FY2020 budget estimate includes replacement of 3 vehicles

FY 2021:

FY2021 budget estimate includes replacement of 2-3 vehicles

FY 2022:

FY2022 budget estimate includes replacement of 2-3 vehicles

FY2018-2022 CAPITAL IMPROVEMENT PLAN REQUEST

Fluvanna County

Section 1 - PROJECT INFORMATION

Project Title:	School Buses			Department/Agency Ranking:	1
Department/Agency:	Fluvanna County Public Schools	Contact Person:	Chuck Winkler		
Funding Category:	<input type="checkbox"/> New Project(FY18-22)	<input checked="" type="checkbox"/> Existing Project(FY18-21)	<input type="checkbox"/> FY17 Project (Add'l Funding)		
Applicable Comprehensive Plan Chapter(s):	<input type="checkbox"/> 1. Natural Environment	<input checked="" type="checkbox"/> 4. Transportation	<input type="checkbox"/> 7. Parks and Recreation	<input checked="" type="checkbox"/> 10. Education	
	<input type="checkbox"/> 2. Land Use & Community Design	<input type="checkbox"/> 5. Economic Development	<input type="checkbox"/> 8. Housing	<input type="checkbox"/> 11. Public Safety	
	<input type="checkbox"/> 3. Infrastructure	<input type="checkbox"/> 6. Historic Preservation	<input type="checkbox"/> 9. Human Services	<input type="checkbox"/> 12. Financial Sustainability	

Section 2 - PROJECT COSTS

Expenditure Category	Prospective Vendor (if known)	FY2018	FY2019	FY2020	FY2021	FY2022	FY18-22 Total
Engineering & Planning							\$ 0
Construction							\$ 0
Equipment	Sonny Merryman	\$ 570,000	\$ 564,000	\$ 579,000	\$ 386,000	\$ 386,000	\$ 2,485,000
Land Acquisition							\$ 0
Other (specify)							\$ 0
Other (specify)							\$ 0
TOTALS		\$ 570,000	\$ 564,000	\$ 579,000	\$ 386,000	\$ 386,000	\$ 2,485,000

Section 3 - PROJECTED OPERATIONAL COSTS & REVENUES

Additional Anticipated Operational Expenses	FY2018	FY2019	FY2020	FY2021	FY2022	FY18-22 Total
Additional Staff Salary						\$ 0
Benefits	Calculated at 20% of Staff Salary	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Vehicle						\$ 0
Vehicle Insurance						\$ 0
Utilities						\$ 0
Furniture and Fixtures						\$ 0
Equipment						\$ 0
Contractual costs						\$ 0
Other (specify)						\$ 0
Total Operational Costs	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Total Anticipated Operational Revenues						\$ 0

Project Title:

School Buses

Section 4 - PROJECT DESCRIPTIONS OR SPECIAL EXPLANATIONS

FY 2018:

The Governor of Virginia and the Virginia Dept. of Education recommend a 15-year replacement cycle for school buses in the Commonwealth of Virginia. We still have a few buses on the road that are 20 years old or more. We recommend that we continue replacing the oldest of these buses at the rate of six per year for the next couple of years. This will get us caught up within the recommended cycle, then allow us to move to four (4) per year thereafter in the ensuing years. This total price includes one(1) of the six(6) as a special needs bus.

FY 2019:

FY 2020:

FY 2021:

We recommend that we continue replacing the oldest of these buses at the rate of 4 (four) per year.

FY 2022:

FY2018-2022 CAPITAL IMPROVEMENT PLAN REQUEST

Fluvanna County

Section 1 - PROJECT INFORMATION

Project Title:	Sheriff Vehicles			Department/Agency Ranking:	1
Department/Agency:	Sheriff's Office	Contact Person:	Captain Von Hill / Sheriff Eric B. Hess		
Funding Category:	<input type="checkbox"/> New Project(FY18-22)	<input checked="" type="checkbox"/> Existing Project(FY18-21)	<input type="checkbox"/> FY17 Project (Add'l Funding)		
Applicable Comprehensive Plan Chapter(s):	<input type="checkbox"/> 1. Natural Environment	<input type="checkbox"/> 4. Transportation	<input type="checkbox"/> 7. Parks and Recreation	<input type="checkbox"/> 10. Education	
	<input type="checkbox"/> 2. Land Use & Community Design	<input type="checkbox"/> 5. Economic Development	<input type="checkbox"/> 8. Housing	<input checked="" type="checkbox"/> 11. Public Safety	
	<input type="checkbox"/> 3. Infrastructure	<input type="checkbox"/> 6. Historic Preservation	<input type="checkbox"/> 9. Human Services	<input type="checkbox"/> 12. Financial Sustainability	

Section 2 - PROJECT COSTS

Expenditure Category	Prospective Vendor (if known)	FY2018	FY2019	FY2020	FY2021	FY2022	FY18-22 Total
Engineering & Planning							\$ 0
Construction							\$ 0
Equipment	Watch Guard	\$ 21,480	\$ 21,480	\$ 21,480	\$ 21,480	\$ 21,480	\$ 107,400
Land Acquisition							\$ 0
Other (specify)	State Contract (TBD)	\$ 155,000	\$ 185,000	\$ 185,000	\$ 185,000	\$ 185,000	\$ 895,000
Other (specify)							\$ 0
TOTALS		\$ 176,480	\$ 206,480	\$ 206,480	\$ 206,480	\$ 206,480	\$ 1,002,400

Section 3 - PROJECTED OPERATIONAL COSTS & REVENUES

Additional Anticipated Operational Expenses	FY2018	FY2019	FY2020	FY2021	FY2022	FY18-22 Total
Additional Staff Salary						\$ 0
Benefits	Calculated at 20% of Staff Salary	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Vehicle						\$ 0
Vehicle Insurance						\$ 0
Utilities						\$ 0
Furniture and Fixtures						\$ 0
Equipment						\$ 0
Contractual costs						\$ 0
Other (specify)						\$ 0
Total Operational Costs	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Total Anticipated Operational Revenues						\$ 0

Project Title:

Sheriff Vehicles

Section 4 - PROJECT DESCRIPTIONS OR SPECIAL EXPLANATIONS

FY 2018:

Maintaining our patrol vehicles is more challenging than ever, as life of the newer vehicles is not the same as it has been in the past. Our current fleet is failing to function faster than normal, and vehicle repair costs are more expensive. To continue the upcoming years replacement, a \$30,000.00 increase is requested. As communities nationwide have begun to rely heavily on video data from these systems, there is an increasing expectation of the availability of video for incidents related to, and often in the vicinity of, patrol vehicles. The in car video technology that is currently available is far more advanced, and the video product is more readily usable. In addition, access to video has become essential to trust-based policing efforts.

FY 2019:

As our fleet is aging faster, we replace vehicles faster. The annual vehicle allotment increase listed, will help accomplish our anticipated refresh rate for new vehicles.

FY 2020:

FY 2021:

FY 2022:

FY2018-2022 CAPITAL IMPROVEMENT PLAN REQUEST

Fluvanna County

Section 1 - PROJECT INFORMATION

Project Title:	Social Services Vehicles			Department/Agency Ranking:	1
Department/Agency:	Social Services	Contact Person:	Ann May		
Funding Category:	<input type="checkbox"/> New Project(FY18-22)	<input checked="" type="checkbox"/> Existing Project(FY18-21)	<input type="checkbox"/> FY17 Project (Add'l Funding)		
Applicable Comprehensive Plan Chapter(s):	<input type="checkbox"/> 1. Natural Environment	<input checked="" type="checkbox"/> 4. Transportation	<input type="checkbox"/> 7. Parks and Recreation	<input type="checkbox"/> 10. Education	
	<input type="checkbox"/> 2. Land Use & Community Design	<input type="checkbox"/> 5. Economic Development	<input type="checkbox"/> 8. Housing	<input type="checkbox"/> 11. Public Safety	
	<input type="checkbox"/> 3. Infrastructure	<input type="checkbox"/> 6. Historic Preservation	<input type="checkbox"/> 9. Human Services	<input type="checkbox"/> 12. Financial Sustainability	

Section 2 - PROJECT COSTS

Expenditure Category	Prospective Vendor (if known)	FY2018	FY2019	FY2020	FY2021	FY2022	FY18-22 Total
Engineering & Planning							\$ 0
Construction							\$ 0
Equipment							\$ 0
Land Acquisition							\$ 0
Other (specify)	Vehicle - EVA/State Contract	\$ 21,700	\$ 23,200	\$ 24,700	\$ 26,200	\$ 27,700	\$ 123,500
Other (specify)							\$ 0
TOTALS		\$ 21,700	\$ 23,200	\$ 24,700	\$ 26,200	\$ 27,700	\$ 123,500

Section 3 - PROJECTED OPERATIONAL COSTS & REVENUES

Additional Anticipated Operational Expenses	FY2018	FY2019	FY2020	FY2021	FY2022	FY18-22 Total
Additional Staff Salary						\$ 0
Benefits	Calculated at 20% of Staff Salary	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Vehicle						\$ 0
Vehicle Insurance						\$ 0
Utilities						\$ 0
Furniture and Fixtures						\$ 0
Equipment						\$ 0
Contractual costs						\$ 0
Other (specify)						\$ 0
Total Operational Costs	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Total Anticipated Operational Revenues						\$ 0

Project Title:

Social Services Vehicles

Section 4 - PROJECT DESCRIPTIONS OR SPECIAL EXPLANATIONS

FY 2018:

Plan for one vehicle replacement annually over the next 5 years and project in the CIP accordingly. The department currently has 9 vehicles, which consists of 5 older vehicles ranging from 1999-2008. The 5 older vehicles have become unreliable and very costly to maintain. Transportation needs include: mandated staff training (VDSS trainings are mostly in Richmond or Warrenton), federal & state mandated home visits to clients with ongoing cases, mandated home visits to complete NH/CBC pre-screenings with Health Dept., mandated home visits/off-site visits to conduct CPS/APS investigations and 24 hour emergency on-call CPS/APS/Foster Care transportation needs, supportive services for VIEW program which include transportation.

FY 2019:

FY 2020:

FY 2021:

FY 2022:

FY2018-2022 CAPITAL IMPROVEMENT PLAN REQUEST

Fluvanna County

Section 1 - PROJECT INFORMATION

Project Title:	School Vehicle Replacement Cycle			Department/Agency Ranking:	1
Department/Agency:	Fluvanna County Public Schools	Contact Person:	Chuck Winkler		
Funding Category:	<input type="checkbox"/> New Project(FY18-22)	<input checked="" type="checkbox"/> Existing Project(FY18-21)	<input type="checkbox"/> FY17 Project (Add'l Funding)		
Applicable Comprehensive Plan Chapter(s):	<input type="checkbox"/> 1. Natural Environment	<input checked="" type="checkbox"/> 4. Transportation	<input type="checkbox"/> 7. Parks and Recreation	<input checked="" type="checkbox"/> 10. Education	
	<input type="checkbox"/> 2. Land Use & Community Design	<input type="checkbox"/> 5. Economic Development	<input type="checkbox"/> 8. Housing	<input type="checkbox"/> 11. Public Safety	
	<input type="checkbox"/> 3. Infrastructure	<input type="checkbox"/> 6. Historic Preservation	<input type="checkbox"/> 9. Human Services	<input type="checkbox"/> 12. Financial Sustainability	

Section 2 - PROJECT COSTS

Expenditure Category	Prospective Vendor (if known)	FY2018	FY2019	FY2020	FY2021	FY2022	FY18-22 Total
Engineering & Planning							\$ 0
Construction							\$ 0
Equipment	State Contract	\$ 60,000	\$ 45,000	\$ 45,000	\$ 35,000	\$ 35,000	\$ 220,000
Land Acquisition							\$ 0
Other (specify)							\$ 0
Other (specify)							\$ 0
TOTALS		\$ 60,000	\$ 45,000	\$ 45,000	\$ 35,000	\$ 35,000	\$ 220,000

Section 3 - PROJECTED OPERATIONAL COSTS & REVENUES

Additional Anticipated Operational Expenses	FY2018	FY2019	FY2020	FY2021	FY2022	FY18-22 Total
Additional Staff Salary						\$ 0
Benefits	Calculated at 20% of Staff Salary	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Vehicle						\$ 0
Vehicle Insurance						\$ 0
Utilities						\$ 0
Furniture and Fixtures						\$ 0
Equipment						\$ 0
Contractual costs						\$ 0
Other (specify)						\$ 0
Total Operational Costs	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Total Anticipated Operational Revenues						\$ 0

Project Title:

School Vehicle Replacement Cycle

Section 4 - PROJECT DESCRIPTIONS OR SPECIAL EXPLANATIONS

FY 2018:

Students with disabilities who require out-of-county placement are transported by car. We currently utilize 10 vehicles to transport students to out-of-county placements and several other cars for in-county transportation. We also have staff members that require daily transportation via car to the school sites and other educational/professional endeavors. Furthermore, our technology and maintenance departments require reliable and useful vehicles on a daily basis. Funds for newer model vehicles for transport of students and staff are requested.

FY 2019:

FY 2020:

FY 2021:

FY 2022:

Capital Improvements Plan FY17-21

**Capital Improvements Plan FY18-22
(Draft)**

	A	G	H	J	K	L	M	R	S	T	U	V	W	X	Y	Z	AA	AC	AD	AF	
1	CAPITAL IMPROVEMENTS PLAN -- FY 2018-22					Possible Energy Savings Contract Projects	FY2018 PROPOSED		FY2019 Plan		FY2020 Plan		FY2021 Plan		FY2022 Plan		FY2022 Plan		FY18-22 Total		
2	Updated October 26, 2016						\$8,680,880		\$9,780,620		\$4,093,180		\$4,548,680		\$17,764,180		\$44,867,540				
3	TOTAL BY YEAR						CASH OPERATING		CASH		CASH		CASH		CASH		CASH				
4	FUNDING SOURCE						OTHER		OTHER		OTHER		OTHER		OTHER		OTHER				
5	TOTAL BY SOURCE					\$ 8,675,880	\$ 5,000	\$ 9,780,620	\$ -	\$ 4,093,180	\$ -	\$ 4,548,680	\$ -	\$ 6,764,180	\$11,000,000						
5	Proffer Funds Available: ?					FY	Dept Rank	Prior Funds													
75	MAJOR REPAIR & REPLACEMENT (MRR)					TOTALS		\$ 2,427,180	\$ -	\$ 1,832,680	\$ -	\$ 1,593,180	\$ -	\$ 1,178,680	\$ -	\$ 1,180,180	\$ -	\$ 8,211,900			
76	COUNTY MRR WEDGE																				
77	CAPITAL RESERVE MAINTENANCE FUND (CASH)					18-22	1		200,000		200,000		200,000		200,000		200,000		1,000,000		
78	Multiple Buildings - Abatement, HVAC, Demolition					18-20	1		25,000		30,000		60,000						115,000		
79	Admin Bldg - Construct Secure Storage in Basement					18-19	1		30,000		50,000								80,000		
80	Asphalt Repair & Resurfacing					18-19	1		78,000		50,000								128,000		
81	Concrete Walks, Walls & Steps Repair & Renewal					18-20	1		40,000		30,000		30,000						100,000		
82	Courts Building - Replace Lighting Controls and Light Fixtures					18	1	30,000	150,000											150,000	
83	Historic Courthouse Exterior Renovation					18	1		175,000											175,000	
84	Palmyra Rescue Squad - Building Maintenance & Repairs					18-19	1	50,000	35,000		20,000									55,000	
85	Replace Water Lines & Water Services					18-19	1		63,000		27,000									90,000	
86	Restroom Renovations and Water Line Replacements					18-19	1		79,000		28,000									107,000	
87	Countywide Building Assessments					18-22	2	25,000	50,000		25,000		25,000		25,000		25,000		150,000		
88	Fence Repairs & Replacement					18	2		80,000											80,000	
89	Floor Repair/Replacement/Refinishing - Multiple Buildings					18	2		21,500											21,500	
90	Repainting Exterior Surfaces of Buildings					18-19	2	150,000	30,000		30,000									60,000	
91	Courthouse Grounds-Slope Plantings					19	3				30,000									30,000	
92	Courts Building - Audio Systems Replacement - Court Rooms					19	3				24,000									24,000	
93	Courts Building - Gutters & Downspouts Addition					20	3						98,000							98,000	
94	Demolish Maintenance Shop					18	3		40,000	VDOF?										40,000	
95	Pleasant Grove House Foundation Underpinning					18	3		27,500											27,500	
96	SCHOOLS MRR WEDGE																				
97	CAPITAL RESERVE MAINTENANCE FUND (CASH)					18-22	1		200,000		200,000		200,000		200,000		200,000		200,000		1,000,000
98	Floor Covering Replacement-Schools					18-19	2	200,000	100,000		100,000									200,000	
99	VEHICLES																				
100	Programmed Fleet Repl. - County Vehicles					18-22	1	94,000	175,000		150,000		125,000		100,000		100,000		100,000		650,000
101	Programmed Fleet Repl. - School Buses (\$150K Baseline)					18-22	1	421,500	570,000		564,000		579,000		386,000		386,000		386,000		2,485,000
102	Programmed Fleet Repl. - Sheriff Vehicles (\$125K Baseline)					18-22	1	125,000	176,480		206,480		206,480		206,480		206,480		206,480		1,002,400
103	Programmed Fleet Repl. - Social Services Vehicles					18-22	1	20,000	21,700	Move to County?	23,200		24,700		26,200		27,700		27,700		123,500
104	Programmed Fleet Repl. - Student Transport / Facilities Vehicles					18-22	1	28,500	60,000		45,000		45,000		35,000		35,000		35,000		220,000

CAPITAL IMPROVEMENTS PROGRAM (CIP) POLICY

Ver. 5

CURRENT	PROPOSED
PURPOSE	PURPOSE
<ul style="list-style-type: none"> The County's Capital Improvement Program (CIP) is a five-year plan that prioritizes and provides a funding mechanism for large-scale capital infrastructure improvements in the County. These improvements include significant upgrades to existing infrastructure and facilities and/or the addition of new infrastructure and facilities. Fluvanna County's CIP is an integral part of the County's overall budget. 	No Change
QUALIFICATIONS	QUALIFICATIONS
<ul style="list-style-type: none"> Projects must have a useful life of five years or more and cost at least \$20,000. 	<ul style="list-style-type: none"> Projects must have a useful life of five years or more and cost at least \$50,000.

CAPITAL RESERVE MAINTENANCE FUND POLICY

Maintenance, Repair and Renovation (MRR) Projects

CURRENT	PROPOSED
PURPOSE	PURPOSE
<ul style="list-style-type: none"> Unplanned maintenance and repair expenses. 	<ul style="list-style-type: none"> Planned and unplanned maintenance, repair, and renovation expenses.
QUALIFICATIONS	QUALIFICATIONS
<ul style="list-style-type: none"> Any unplanned, emergent expense not funded in the department's current operating budget. A Capital Reserve request must be approved by the Board. 	<ul style="list-style-type: none"> Maintenance, repair and renovation expenses under \$50,000 not funded in the CIP, or in the department's current operating budget. A Capital Reserve request must be approved by the Board.

Project Review and Approval Process

- Each year, departments update all existing CIP projects and submit new CIP projects that are needed over the next five-year period.
- After all new and updated projects are submitted, projects are reviewed by the County Administrator's CIP Technical Review Committee, which consists of staff from County Administration, Finance, Planning, and Public Works, as well as representatives of departments and agencies submitting CIP projects.
- The CIP Technical Review Committee reviews and ranks all projects based on need by using a numeric scoring system. (and categorizes projects as CIP or MRR)
- Recommended projects are then presented to the County's Planning Commission.
- The Planning Commission reviews the CIP (and MRR) projects for compliance with the County's Comprehensive Plan and makes a recommendation to the Board.
- The Board of Supervisors reviews and approves the CIP (and MRR).

Financing of Capital Projects

There are two primary methods of financing the construction costs for capital improvements.

- The first method of financing is debt financing, which is the sale of bonds. The type of bonds sold can be General Obligation Bonds or Revenue Bonds.
- The second method of financing is cash-to-capital financing, which is direct cash contributions for capital projects. Cash-to-capital contributions are one-time funds that are used directly for construction.

Decisions concerning the type of financing are made based on the costs of the project, current and future debt obligations, yearly operating costs and the County's General Fund balance.

Associated Operational Costs

In addition to construction costs, the County must also pay for the operating costs of new capital projects. Operating costs include debt service costs, facility maintenance costs and program costs. Operating costs vary depending on the type of facility and/or infrastructure constructed. These costs are included in the County's operating budget.

Capital Improvement Program Budget Policies

- The County will develop a five-year plan for capital improvements, updated annually.
- The County will coordinate the development of the capital improvement budget with the development of the County's operating budget. Future operating costs associated with new capital improvements will be projected and included in operating budget forecasts.

- The County will identify the estimated costs and potential funding sources for each capital project proposal before it is submitted for approval.
- The County will consider all capital improvements in accordance with an adopted capital improvement program.
- The County will enact an annual budget based on a five-year capital improvement program. Future capital expenditures necessitated by changes in population, changes in real estate development, or changes in economic base will be calculated and included in capital budget projections.
- The County will use intergovernmental assistance to finance only those capital improvements that are consistent with the capital improvement plan and County priorities, and whose operating and maintenance costs have been included in operating budget forecasts.
- The County will maintain all its assets at a level adequate to protect the County's capital investment and to minimize future maintenance and replacement costs.
- The County will project its equipment replacement and maintenance needs for the next several years and update this projection each year. From this projection, a maintenance and replacement schedule will be developed and followed.

Fluvanna County CIP Policy References

October 27, 2016

County Code

None

2015 Comprehensive Plan

Ch 11 – Financial Sustainability

Each year the County develops a Capital Improvement Plan (CIP) that guides major capital expenditures for the County. The annual review process for the CIP utilizes the goals and strategies in the Comprehensive Plan. Decisions to implement the CIP and obligate county taxpayers for major capital projects are made with gravity and respect for public funds. When the County presents financial data about capital improvements, it does not merely state the capital cost and financing of a project, but shows the estimated tax impact of the debt service plus any ongoing costs necessary to maintain and staff the project in the future.

Capital Improvement Program (CIP)

The CIP is a five year plan that tries to anticipate all new or replaceable capital needs. A capital project is defined as a generally non-recurring asset, both tangible (e.g., buildings, vehicles, land, etc.) and intangible (e.g., software, easements, licenses, studies, services, etc), that exceeds an established dollar amount (\geq \$20,000 in Fluvanna County). Projects to be included in the annual budget are identified in the first year of the plan and all other capital projects are planned for later years. An important aspect of the CIP is the projected operational and maintenance costs of a proposed project.

Fluvanna County Financial Policies Manual

Chapter 1 - BUDGET

1-7. Budget Preparation.

d. Not later than December of each year, the Planning Commission shall review the Proposed Five Year Capital Improvements Program (CIP) and provide a recommendation on the subsequent year's CIP to the Board of Supervisors.

The CIP is a five year plan for capital expenditures and a means of funding facilities, equipment and vehicles that have a unit cost greater than \$20,000.