

PRELIMINARY SITE DEVELOPMENT PLAN

0 E HIGH STREET

TAX MAP 50 PARCEL 144
 PORTION OF TAX MAP 50 PARCEL 17,
 TAX MAP 50 PARCEL 18,
 & TAX MAP PARCEL 50 PARCEL 143
 CITY OF CHARLOTTEVILLE, VIRGINIA

LEGEND

EXISTING NEW DESCRIPTION

| | | |
|--|--|--|
| | | BOUNDARIES |
| | | BENCHMARK |
| | | SITE PROPERTY OR ROW LINE |
| | | ADJACENT PROPERTY OR ROW LINE |
| | | BUILDING SETBACK |
| | | PARKING SETBACK |
| | | TOPOGRAPHY |
| | | INDEX CONTOUR |
| | | INTERVAL CONTOUR |
| | | SPOT ELEVATION |
| | | TOP OF CURB ELEVATION |
| | | TOP OF WALL ELEVATION |
| | | BOTTOM OF WALL ELEVATION |
| | | STREAM |
| | | STREAM BUFFER |
| | | 100 YEAR FLOODPLAIN |
| | | BUILDING |
| | | BUILDING |
| | | RETAINING WALL |
| | | STAIRS |
| | | EDGE OF PAVEMENT |
| | | ROAD CENTERLINE |
| | | FRONT OF CURB |
| | | BACK OF CURB |
| | | CG-12 TRUNCATED DOME |
| | | SIDEWALK |
| | | BIKE PARKING |
| | | HANDICAP ACCESSIBLE AISLE |
| | | HANDICAP PARKING |
| | | MATERIAL |
| | | CONCRETE |
| | | RIPRAP |
| | | ASPHALT |
| | | EC-2 MATTING |
| | | EC-3 MATTING |
| | | WETLAND |
| | | TREELINE |
| | | FENCE |
| | | UTILITY |
| | | UTILITY POLE |
| | | GUY WIRE |
| | | OVERHEAD UTILITY |
| | | UNDERGroud UTILITY |
| | | UNDERGroud TELEPHONE |
| | | UNDERGroud ELECTRIC |
| | | STORM |
| | | STORM MANHOLE |
| | | DROP INLET |
| | | STORM SEWER |
| | | ROOF DRAIN |
| | | SANITARY |
| | | SANITARY MANHOLE |
| | | SANITARY SEWER MAIN |
| | | SANITARY SEWER LATERAL |
| | | WATER |
| | | WATER LINE |
| | | WATER SERVICE LINE |
| | | WATER METER |
| | | WATER METER VAULT |
| | | FIRE HYDRANT |
| | | FIRE DEPARTMENT CONNECTION |
| | | GAS LINE |
| | | EASEMENTS |
| | | CONSTRUCTION |
| | | GRADING |
| | | ACCESS |
| | | SIGHT DISTANCE |
| | | UTILITY |
| | | STORMWATER FACILITY MAINTENANCE |
| | | STORMWATER ACCESS |
| | | DRAINAGE |
| | | SANITARY |
| | | WATERLINE |
| | | GASLINE |

OWNER

50-144: Southern Ventures Inc 410 Ednam Drive Charlottesville, VA 22901
 50-17: Southern Vector, Inc. P.O. Box 5548 Charlottesville, VA 22905
 50-17 & 50-18: 1522 East High, LLC 1940 Blue Ridge Road Charlottesville, VA 22903

DEVELOPER

Seven Development
 310 Old Ivy Way, Suite 204
 Charlottesville, VA 22903

PLAN PREPARATION

Shimp Engineering, P.C.
 912 E High Street
 Charlottesville, VA 22902
 (434)227-5140

PROPERTY ADDRESS

0 E High Street
 Charlottesville, VA 22901

ZONING

The zoning for TMP 50-144 are as follows, per a determination by City Zoning:
 50-143: R-1S
 Portion of 50-144 (4.7 AC): R-1S
 Portion of 50-144 (12.8 AC): B-1
 Portion of 50-144 (4.4 AC): B-3
 Portion of 50-144 (0.04 AC): CC Central City Corridor

SOURCE OF TITLE

DB 426 PG 282

BENCHMARK

NAVD 88

SOURCE OF BOUNDARY AND TOPOGRAPHY

ALTA survey provided by Lotts & Associates, P.C., July 7, 2022
 ALTA survey for TMP 50-17 & 50-18 provided by Foresight Survey, P.C., February 14, 2023
 Two (2)-ft interval contours provided by LIDAR, Virginia Geographic Information Network, 2016

FLOODZONE

- FEMA flood insurance rate map (community panel 51003C0287D & 51003C0289D), effective date February 4, 2005 shows this property is within Zone AE Regulatory Floodplain, FEMA letter of map revision (LOMR 21-03-031P), effective date March 16, 2022, established floodway as shown in this site plan.
- Field stakeout of floodway limits shall be completed prior to the start of construction for city inspection.

WATER & SANITARY SERVICES

- All materials used for water and sanitary sewer service lines are to comply with requirements as outlined in both the BOCA Code and the regulations used by the Department of Utilities for the City of Charlottesville.
- All waterline shut downs must be coordinated with and performed by the City. Developer must hand out notices to affected customers at least 48 hours in advance.
- Per the Virginia Department of Health Waterworks Regulations (Part II, Article 3, Section 12 VAC 5-590 through 630), all buildings that have the possibility of contaminating the potable water distribution system (hospitals, industrial sites, breweries, etc.) shall have a backflow prevention device installed within the facility. This device shall meet specifications of the Virginia Uniform Statewide Building Code, shall be tested in regular intervals as required, and test results shall be submitted to the Regulatory Compliance Administrator in the Department of Utilities.
- All buildings that may produce wastes containing more than one hundred (100) parts per million of fats, oil, or grease shall install a grease trap. The grease trap shall meet specifications of the Virginia Uniform Statewide Building Code, maintain records of cleaning and maintenance, and be inspected on regular intervals by the Regulatory Compliance Administrator in the Department of Utilities.
- Please contact the Regulatory Compliance Administrator at 970-3032 with any questions regarding the grease trap or backflow prevention devices.

Demands:

Water:
 245 residential units, Max = 29,400 gph, Peak = 44,100 gph
Sewer:
 245 residential units = 62,700 gal/day

CRITICAL SLOPES

There are critical slopes within the project area. No disturbance proposed.

GENERAL NOTES

- The information and data shown or indicated with respect to the existing underground utilities at or contiguous to the site are based on information and data furnished to the owner and engineer by the owners of such underground facilities or others. The owner or engineer shall not be responsible for the accuracy or completeness of such information or data. The contractor shall have full responsibility for confirming the accuracy of the data, for locating all underground utilities, for coordination of the work with owners of such underground utilities during construction, for the safety and protection thereof and repairing any damage thereto resulting from the work. All of these conditions shall be met at no additional cost to the owner. The contractor shall contact "Miss Utilities" of Virginia at 1-800-552-7001 prior to the start of work.
- When working adjacent to existing structures, poles, etc., the contractor shall use whatever methods that are necessary to protect structures from damage. Replacement of damaged structures shall be at the contractor's expense.
- The contractor shall be responsible for protecting all existing site structures from damage and coordinating work so that the owner can make necessary arrangements to modify/protect existing structures from damages.
- The contractor shall be responsible for notifying all utility owners, adjacent land owners whose property may be impacted and the Virginia Department of Transportation prior to completing any off-site work.
- Contractor shall notify and coordinate all work involving existing utilities with utility owners, at least 72 hours prior to the start of construction.
- Contractor shall immediately report any discrepancies between existing conditions and contract documents to the owner and engineer.
- Contractor shall submit for the approval of the owner submittals of all specified materials listed in the plans, to include shop drawings, manufacturer's specifications and laboratory reports, the owner's approval of submittals will be general and will not relieve the contractor from the responsibility of adherence to the contract and for any error that may exist.
- All bare areas shall be scarified, limed, fertilized, seeded and mulched.
- All trees, saplings, brush, etc. shall be removed from within the right of way and the drainage easements.
- Retaining walls require separate building permits.

UTILITY MARKINGS

Miss Utility Ticket Number B026501443 - September 24, 2020

SIGNS

All signs and pavement markings shall conform with the latest edition of the MUTCD Guidelines.

DESIGN STANDARDS

Buildings to comply with most current Virginia Construction Code
 Construction Type: Type 5A
 Occupancy: R-2

RIVANNA WATER & SEWER AUTHORITY NOTES

- All materials and methods of construction shall comply with the latest version of the General Water and Sewer Design and Construction Standards - Version 1.0, adopted in December 2015, except as modified below or modified in special notes.
- RWSA shall approve all construction materials and methods of construction. A preconstruction conference shall be held with RWSA prior to the start of any work.
- The contractor shall be responsible for notifying Miss Utility (1-800-552-7001).
- RWSA Engineer (Victoria Fort at (434) 977-2970 ext. 205) shall be notified three business days prior to the start of construction.
- All work is subject to inspection by RWSA staff. No tie-ins to the existing system shall be made without coordination with and the presence of RWSA staff. No work shall be conducted on RWSA facilities on weekends or holidays without special written permission from RWSA.
- For sanitary sewer line construction: RWSA may require bypass pumping for tie-ins to the existing system. All doghouse manholes must be pressure-tested before a connection is made to the system.
- The location of existing utilities as shown on the plans is from data available at the time of design and is not necessarily complete or accurate. The Contractor shall be responsible for the verification of the location, size and depth of all existing utilities, both surface and subsurface. The Contractor shall immediately notify the Engineer of any discrepancies between the plans and field conditions. The Contractor shall use due diligence to protect all utilities and structures from damage at all times, whether shown on the plans or not. Damage to any existing utilities shall be repaired by the Contractor to the original condition at no additional cost to the Owner.
- Erosion and sediment control facilities shall not be permitted in the RWSA easement without special written permission from RWSA. No grading shall be permitted in the RWSA easement unless permitted otherwise by RWSA in writing.
- No blasting shall be permitted within 100 feet of RWSA facilities without written permission and RWSA approval of the blasting plan. Ground monitoring during blasting and a pre-blast survey may be required. For blasting within 100 feet of any operative RWSA sewerlines, bypass pumping and/or pre- and post-CCTV may be required. RWSA may also require certification from a licensed professional engineer stating that the proposed blasting will not damage any RWSA facilities. Damage to any utilities due to blasting shall be repaired by the Contractor to the original condition at no additional cost to the Owner.
- The contractor shall observe minimum separation requirements for utility crossings. When a crossing is made under an existing facility, adequate structural support shall be provided for the existing pipe. The area of the crossing shall be backfilled with compacted 57 stone to the springline of the existing pipe.
- New water main installations shall be pressure tested, chlorinated, flushed and have water samples approved prior to making any permanent connection to the public water system. Approved methods of filling and flushing new water mains will be required to prevent any contamination of the public water system.
- All easements for new RWSA facilities shall be recorded prior to placing the new facilities into service.
- No permanent structural facilities will be permitted in the RWSA easement. This includes building overhangs, retaining walls, footers for any structure, drainage structures, etc.
- Trees are not permitted in the RWSA easement.

BUILDING HEIGHT

Per Sec. 34-457, building height shall be a maximum of 45' in the B-1 zone.
 Proposed building height: 45', 4 stories
 Building GSF = 322,000 SF

BUILDING SETBACKS

FRONT & REAR: 20'
 SIDE: 22.5' for a 45' building height as on the side of a lot adjoining a residential district or use, there shall be a side yard of 1' for every 2' of building height of the tallest building on the lot, minimum of 10'

EXISTING USE

Open space, amusement & recreation (note: Rivanna River Company to be removed)

PROPOSED USE

Proposed 245 multifamily residential units: (25) efficiencies, (135) 1-bedroom, (85) 2-bedroom units
 20 DUAs of B-1 zone

LAND USE SCHEDULE

| TMP 50-144 | | | TMP 50-143 [Proposed BLA] | | | TMP 50-17 [Proposed BLA] | | | TMP 50-18 [Proposed BLA] | | |
|------------|-----------------------|-------|---------------------------|-----------------------|------|--------------------------|----------------------|-------|--------------------------|----------------------|-------|
| EXISTING | Area | % | EXISTING | Area | % | EXISTING | Area | % | EXISTING | Area | % |
| Building | 974 SF | 0.1% | Building | 0 SF | 0% | Building | 2,585 SF | 26.8% | Building | 0 SF | 0% |
| Pavement | 30,593 SF | 3.2% | Pavement | 0 SF | 0% | Pavement | 3,403 SF | 35.2% | Pavement | 3,901 SF | 86.3% |
| Sidewalk | 0 SF | 0.05% | Sidewalk | 0 SF | 0% | Sidewalk | 244 SF | 2.5% | Sidewalk | 0 SF | 0% |
| Open Space | 921,898 SF | 96.6% | Open Space | 12,800 SF | 100% | Open Space | 3,426 SF | 35.5% | Open Space | 618 SF | 13.7% |
| Total= | 953,964 SF (21.9 ac.) | | Total= | 12,800 SF (0.249 ac.) | | Total= | 9,658 SF (0.221 ac.) | | Total= | 4,519 SF (0.104 ac.) | |
| PROPOSED | Area | % | PROPOSED | Area | % | PROPOSED | Area | % | PROPOSED | Area | % |
| Building | 80,514 SF | 8.5% | Building | 0 SF | 0% | Building | 0 SF | 0% | Building | 0 SF | 0% |
| Pavement | 107,035 SF | 11.2% | Pavement | 0 SF | 0% | Pavement | 263 SF | 6.3% | Pavement | 4,989 SF | 75.0% |
| Sidewalk | 24,250 SF | 2.5% | Sidewalk | 0 SF | 0% | Sidewalk | 0 SF | 0% | Sidewalk | 0 SF | 0% |
| Open Space | 742,165 SF | 77.8% | Open Space | 13,000 SF | 100% | Open Space | 3,937 SF | 93.7% | Open Space | 1,661 SF | 25.0% |
| Total= | 953,964 SF (21.9 ac.) | | Total= | 13,000 SF (0.3 ac.) | | Total= | 4,200 SF (0.096 ac.) | | Total= | 6,650 SF (0.15 ac.) | |

LAND DISTURBANCE

7.4 AC land disturbed with this site plan proposal

PARKING SCHEDULE

Required:
 Sec. 34-984 - Off-street Parking Requirements
 Multifamily Dwellings - 1 parking space per each efficiency, 1- or 2-bedroom unit
 (25) efficiencies, (135) 1-bedroom, and (85) 2-bedroom units proposed
 Total Parking Required = 245 spaces
 Sec. 34-877 - Parking Space Dimensions
 Up to 30% of the required off-street parking spaces may be designed as compact car spaces
 Total Parking Required = 245 spaces
 30% of 245 spaces = 74 compact spaces
 Provided:
 320 parking spaces (includes 16 compact spaces & 10 HC spaces)

Required Bicycle Parking:

Sec. 34-881 - Bicycle Storage Facilities
 Multifamily dwellings: 1 space for every 2 units
 (245 units * 245 units) = 122.5 = 123 spaces
 Total bicycle parking spaces required: 123 bicycle spaces
 Provided:
 123 indoor bicycle parking spaces

FIRE MARSHAL'S NOTES

- SITE PLAN:**
- VSFPC 503.3 - Marking Fire Lanes. The location and method of marking fire lanes shall be clearly indicated on the submitted site plan. Fire lanes shall be a minimum of 20 feet in width. Signs and markings to delineate fire lanes as designated by the fire official shall be provided and installed by the owner or his/her agent of the property involved. Fire apparatus roads 20 to 26 feet in width shall be posted or marked on both sides "No Parking - Fire Lane".
 - VSFPC 505.1 - The building street number to be plainly visible from the street for emergency responders.
 - VSFPC 506.1 - An approved key box shall be mounted to the side of the front or main entrance.
 - VSFPC 506.1.2 - An elevator key box will be required if the building has an elevator.
 - VSFPC 507.5.4 - Fire hydrants, fire pump test header, fire department connections or fire suppression system control valves shall remain clear and unobstructed by landscaping, parking or other objects.
 - VSFPC 503.2.1 - Overhead wiring or other obstructions shall be higher than 13 feet 6 inches.
 - VSFPC 507.5.1.1 - Hydrant for standpipe system - Buildings equipped with a standpipe system installed in accordance with Section 905 shall have a fire hydrant within 100 feet of the fire department connections. The distance shall be permitted to exceed 100 feet where approved by the fire code official.
 - VSFPC 905.3.1 - If the floor level of the highest story is more than 30 feet above the lowest level of fire department vehicle access, then a Class I standpipe system must be installed in addition to the sprinkler system.
 - VSFPC 912.2.1 - The fire department connection shall be located on the street side of the structure unless otherwise approved by the fire code official.
 - VSFPC 3312.1 - An approved water supply for fire protection shall be made available as soon as combustible material arrives on the site. Fire hydrants shall be installed and useable prior to the start of any building construction.
 - All pavement shall be capable of supporting fire apparatus weighing 85,000 lbs.
 - Required vehicle access for fire fighting shall be provided to all construction or demolition sites. Vehicle access shall be provided to within 100 feet of temporary or permanent fire department connections. Vehicle access shall be provided by either temporary or permanent roads, capable of supporting vehicle loading under all weather conditions. Vehicle access shall be maintained until permanent fire apparatus access roads are available.
 - Buildings four or more stories in height shall be provided with not less than one standpipe for use during construction. Such standpipes shall be installed when the progress of construction is not more than 40 feet in height above the lowest level of fire department access. Such standpipe shall be provided with fire department hose connections at accessible locations adjacent to usable stairs. Such standpipes shall be extended as construction progresses to within one floor of the highest point of construction having secured decking or flooring. Installation of the standpipe shall begin once construction begins on the second (2nd) floor.

CONSTRUCTION & DEMOLITION:

- VSFPC 310.3: 310.5 - No smoking or vaping within the construction safety fence. No smoking signs shall be posted throughout each building under construction as well as outside the building. Should anyone from the Fire Marshal's office witness smoking/vaping within the construction site, he or she may request a 24 hour Stop Work Order from the City Building Official.
- VSFPC 3304.2 - Waste disposal of combustible debris shall be removed from the building at the end of each workday.
- IFC 1410.1 - Access to the building during demolition and construction shall be maintained.
- VSFPC 3304.6 - Operations involving the use of cutting and welding shall be done in accordance with Chapter 35, of the Virginia Statewide Fire Prevention Code, addressing welding and hotwork operations.
- VSFPC 3315.1 - Fire extinguishers shall be provided with not less than one approved portable fire extinguisher at each stairway on all floor levels where combustible materials have accumulated.
- VSFPC 3310.1 - Required vehicle access for fire fighting shall be provided to all construction or demolition sites. Vehicle access shall be provided to within 100 feet of temporary or permanent fire department connections, if any. Vehicle access shall be maintained until permanent fire apparatus access roads are available.
- VSFPC 3311.1 - Where a building has been constructed to a height greater than 50 feet or four (4) stories, at least one temporary lighted stairway shall be provided unless one or more of the permanent stairways are erected as the construction progresses.
- No vehicles or machinery of any type, construction materials or construction debris are to be parked, placed, or stored either in front of and within 15 feet of a fire hydrant.
- VSFPC 3315.1 - Fire extinguishers shall be provided with not less than one approved portable fire extinguisher at each stairway on all floor levels where combustible materials have accumulated.

CITY PERMITS

- The contractor shall be responsible for obtaining a street cut permit from the City.
- A Temporary Street Closure Permit is required for closure of sidewalks, parking spaces and roadways and is subject to approval by the City Traffic Engineer. The contractor contact information will be provided with the final plans.

ELECTRIC/ TELEPHONE/ CABLE TV

If feasible, all new service lines for electricity, telephone and cable TV are to be installed underground. Care is to be taken to assure their location does not conflict with any other aspects of the proposed site plan.

FIRE FLOW

Minimum fire flow is 1,938 gpm. See sheet C16.

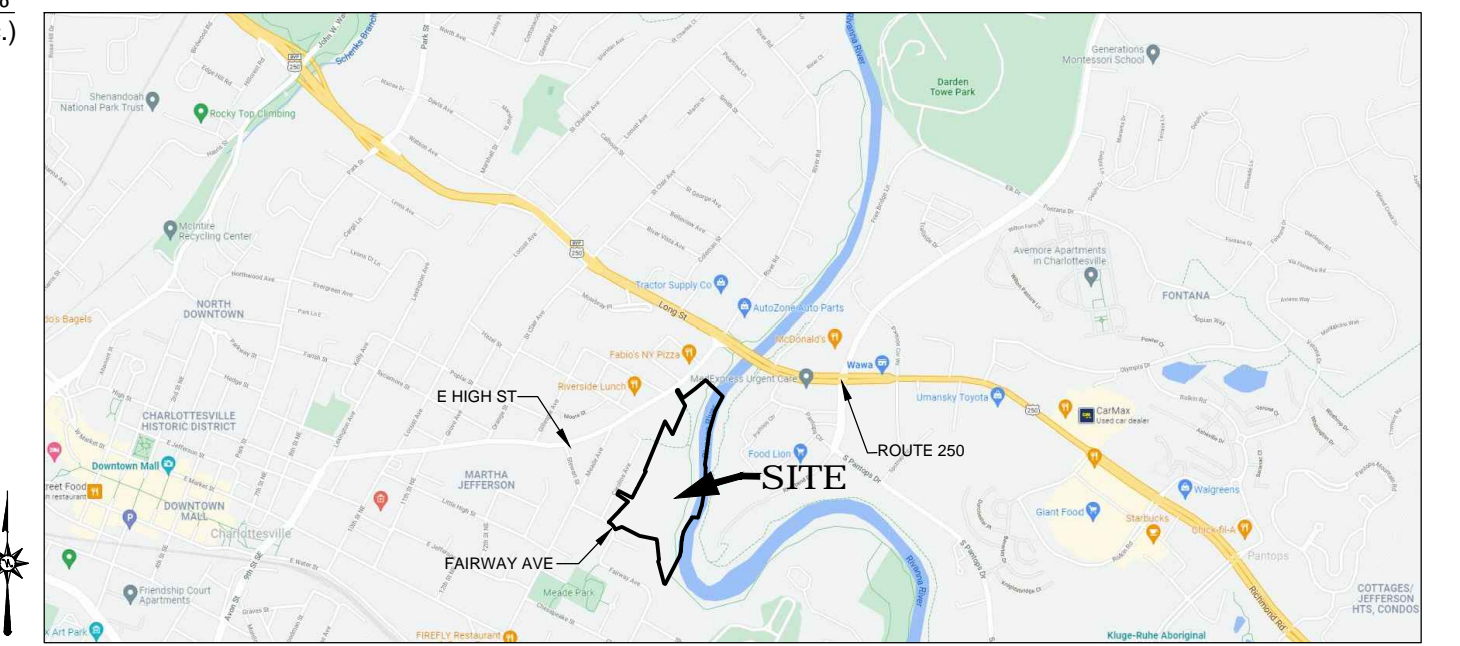
ITE TRIP GENERATION

| Use | ITE Code | IV | AM | | | PM | | | Daily Total |
|--------------------------------|----------|-----------|----|-----|-------|----|-----|-------|-------------|
| | | | In | Out | Total | In | Out | Total | |
| Multifamily Housing (Mid-Rise) | 221 | 245 Units | 23 | 65 | 88 | 66 | 42 | 108 | 1334 |

Trip generation reflects AM and PM peak hour traffic as well as weekday traffic.

VICINITY MAP

SCALE : 1"=2000'



| CURVE | RADIUS | ARC LENGTH | CHORD LENGTH | CHORD BEARING | DELTA ANGLE |
|-------|---------|------------|--------------|---------------|-------------|
| C-1 | 144.64' | 104.54' | 102.28' | N 43°21'13" W | 41°24'34" |

| LINE | BEARING | DISTANCE |
|------|---------------|----------|
| L-1 | S 19°42'29" W | 18.31' |
| L-2 | S 09°48'07" W | 30.78' |
| L-3 | S 01°57'41" W | 20.45' |
| L-4 | S 15°27'54" W | 40.87' |
| L-5 | N 62°58'29" W | 15.00' |
| L-6 | N 24°13'32" E | 25.45' |
| L-7 | N 63°46'24" W | 10.98' |
| L-8 | S 30°39'29" E | 100.03' |

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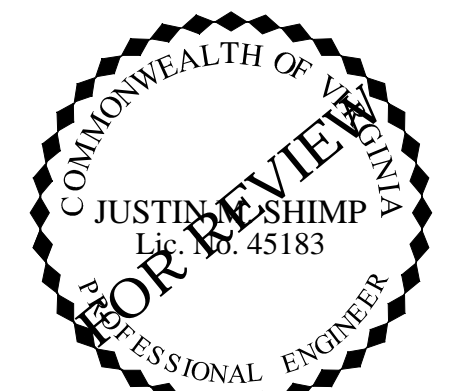
LEGEND

 CRITICAL SLOPES LOT REGULATIONS GENERAL

SHIMP ENGINEERING & ARCHITECTURE
 LAND PLANNING • PROJECT MANAGEMENT

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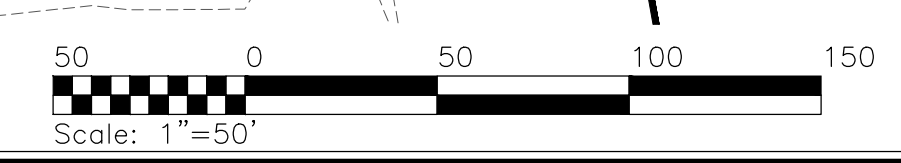


PRELIMINARY SITE DEVELOPMENT PLAN
0 EAST HIGH STREET

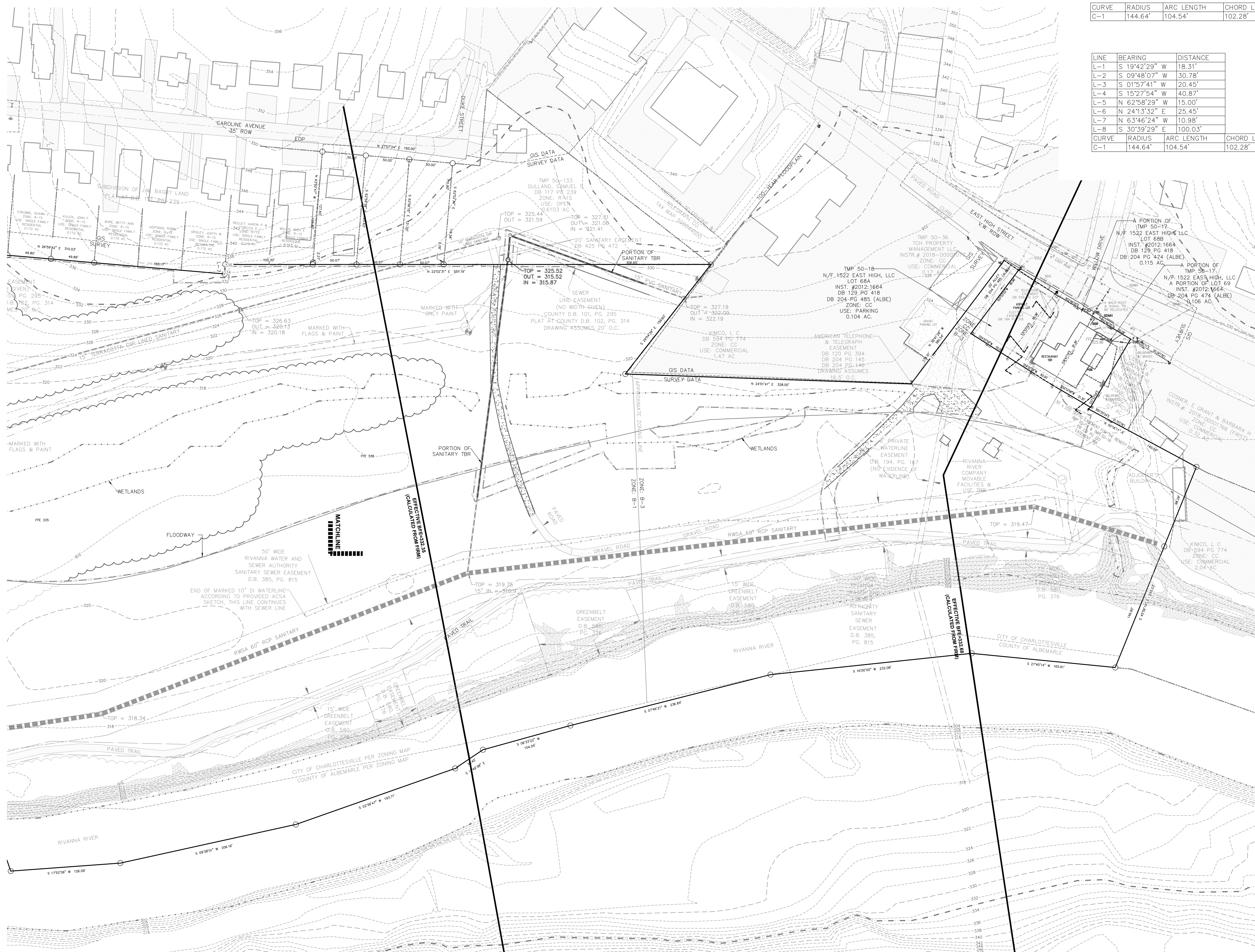
CITY OF CHARLOTTEVILLE, VIRGINIA
SUBMISSION:
 2022.08.05
REVISION:
 2022.12.07
 2023.02.17

FILE NO. 20.017

EXISTING CONDITIONS & DEMOLITION



C2

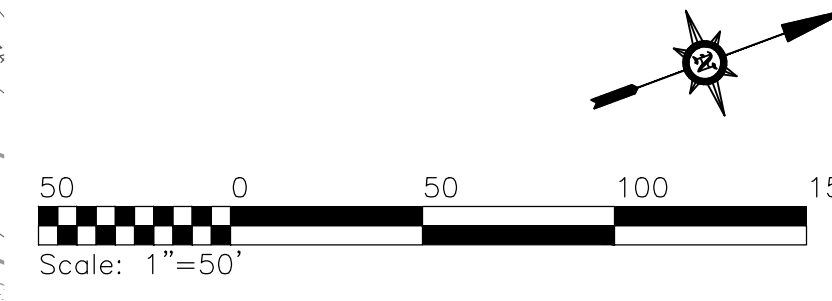


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|-------|---------|------------|--------------|---------------|-------------|
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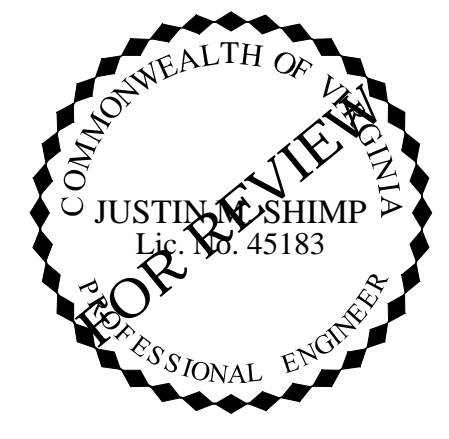
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| BOUNDARY CURVE TABLE: 50-17 & 50-18 | | | | | | |
|-------------------------------------|--------|----------|----------|---------|--------|---------------|
| Curve | Length | Radius | Delta | Tangent | Chord | Chord Bearing |
| C1 | 49.96' | 1456.40' | 1°57'56" | 24.98' | 49.96' | N 55°00'43" E |
| C2 | 6.63' | 1456.40' | 0°15'39" | 3.31' | 6.63' | N 53°53'56" E |



LEGEND
 CRITICAL SLOPES LOT REGULATIONS GENERAL

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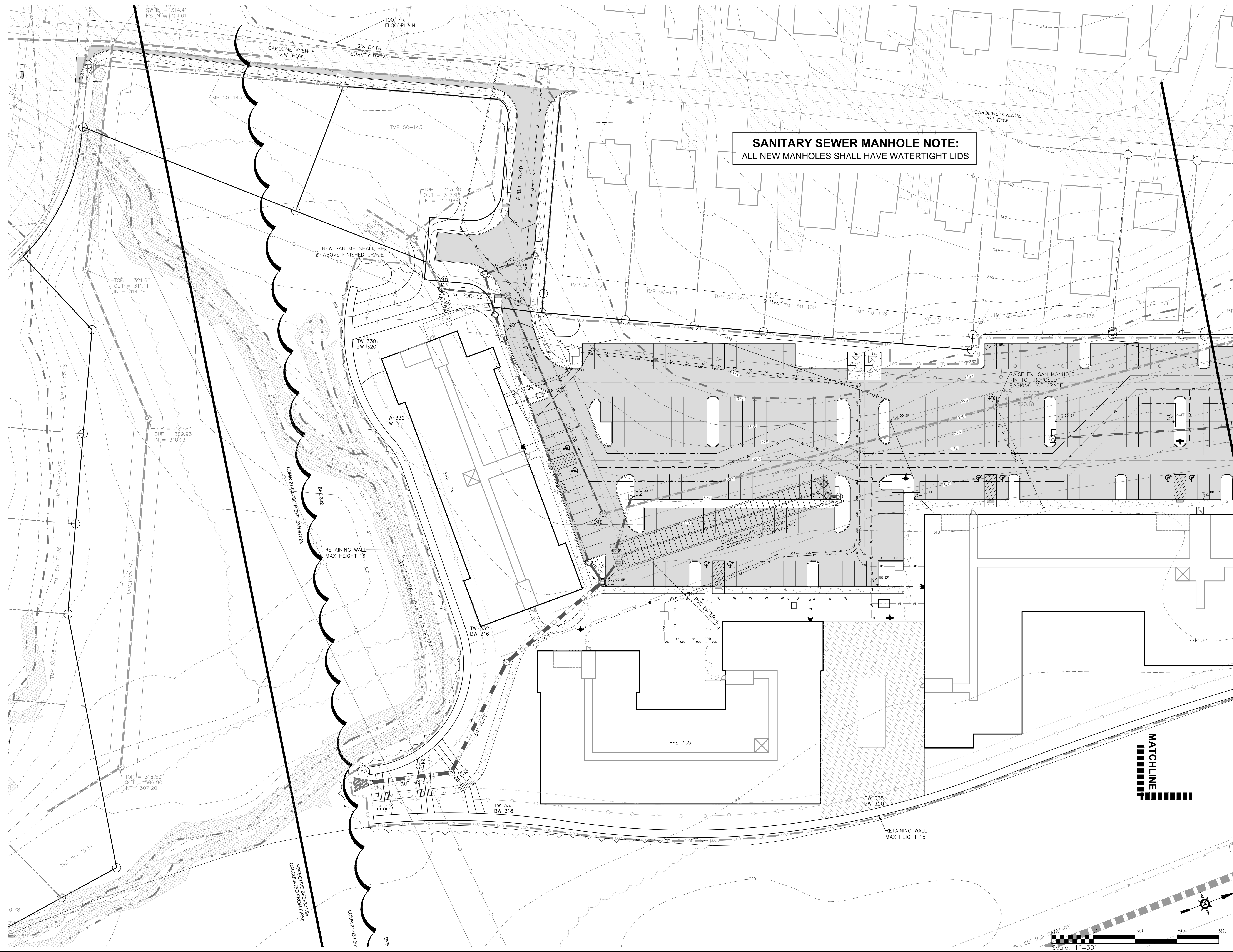
PRELIMINARY SITE DEVELOPMENT PLAN
0 EAST HIGH STREET
STREET

CITY OF CHARLOTTEVILLE, VIRGINIA
SUBMISSION: 2022.08.05
REVISION: 2022.12.07
 2023.02.17

FILE NO. 20.017

EXISTING CONDITIONS & DEMOLITION

C3



SANITARY SEWER MANHOLE NOTE:
ALL NEW MANHOLES SHALL HAVE WATERTIGHT LIDS

LEGEND
CRITICAL SLOPES LOT REGULATIONS GENERAL



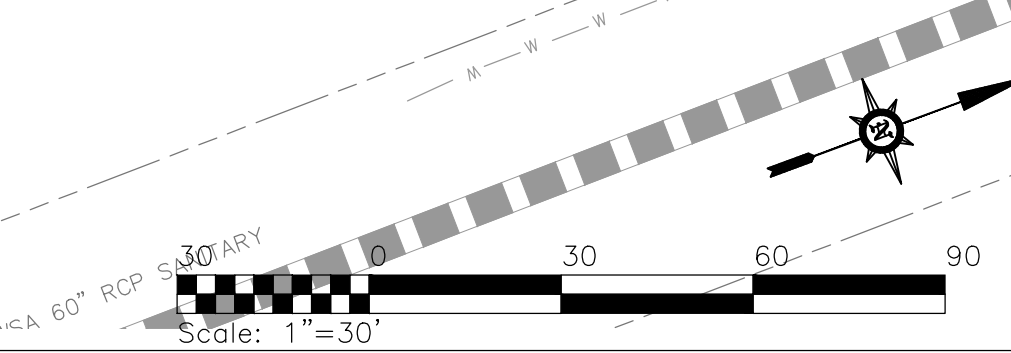
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0 EAST HIGH STREET

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SUBMISSION: 2022.08.05
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FILE NO. 20.017
GRADING & UTILITY PLAN



C7



LEGEND
 CRITICAL SLOPES LOT REGULATIONS GENERAL

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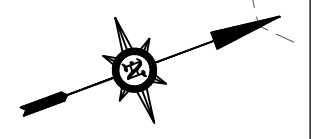
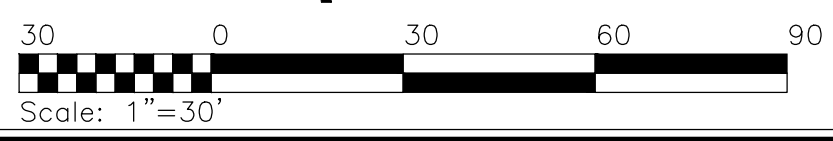
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FILE NO. 20.017
GRADING & UTILITY PLAN

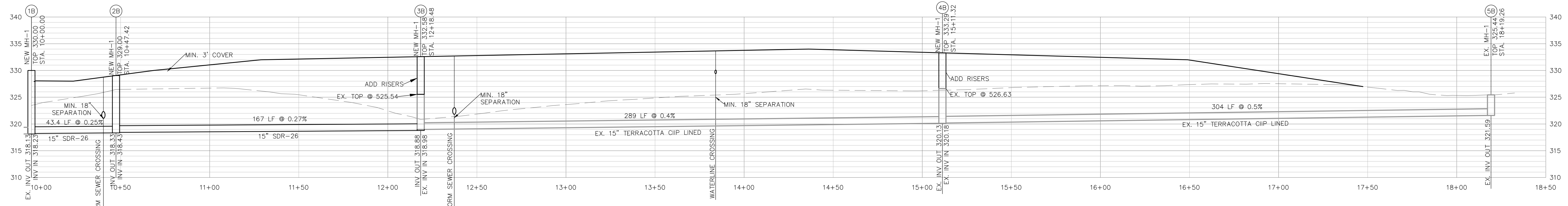
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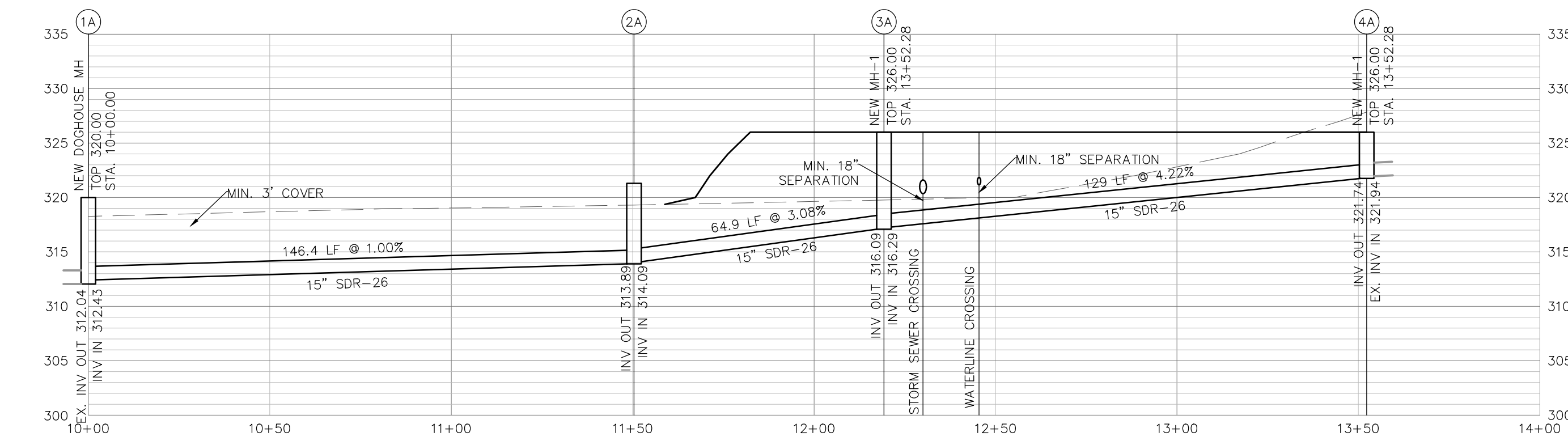
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 (CALCULATED FROM FIN)



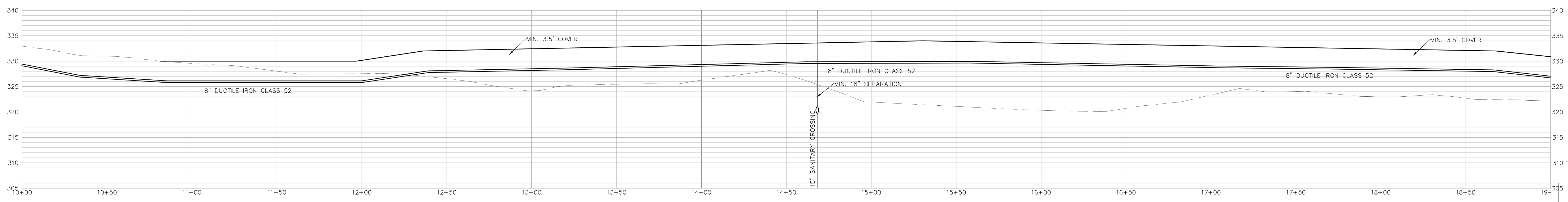
C8



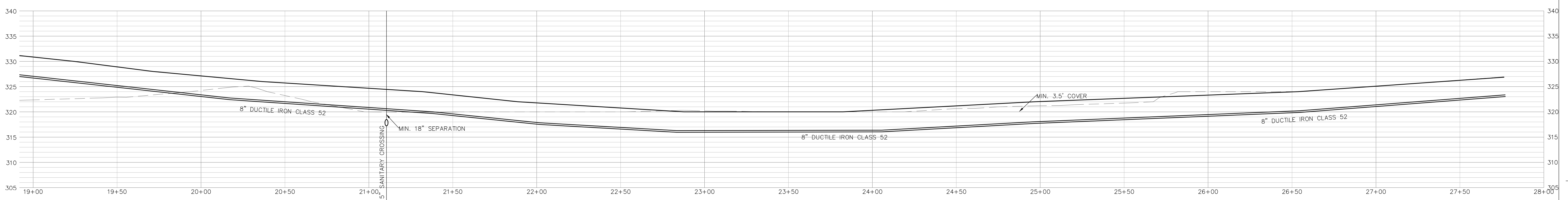
1 SANITARY SEWER PROFILE 1B-4B
 C9 HORIZ. SCALE: 1"=30', VERT. SCALE: 1"=10'



2 SANITARY SEWER PROFILE 1A-4A
 C9 HORIZ. SCALE: 1"=30', VERT. SCALE: 1"=10'

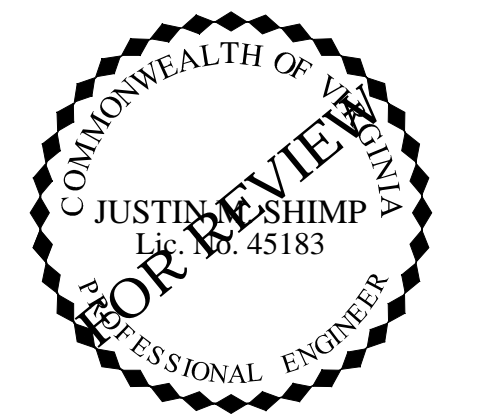


3 WATER MAIN PROFILE - 1
 C9 HORIZ. SCALE: 1"=30', VERT. SCALE: 1"=10'



4 WATER MAIN PROFILE - 2
 C9 HORIZ. SCALE: 1"=30', VERT. SCALE: 1"=10'

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PRELIMINARY SITE DEVELOPMENT PLAN
0 EAST HIGH STREET

CITY OF CHARLOTTEVILLE, VIRGINIA
 SUBMISSION: 2022.08.05
 REVISION: 2022.12.07
 2023.02.17

FILE NO. 20.017

PRELIMINARY UTILITY PROFILES

C9

Preliminary Quality Calculations

Preliminary site development plan shows conceptual stormwater management plans. Final site plan shall include all required calculations to demonstrate compliance with the outlined methodologies per each outfall.

Drainage Areas

Refer to sheet C11 for water quality analysis. Final plans shall include all drawings and calculations as applicable per the requirements of each outfall.

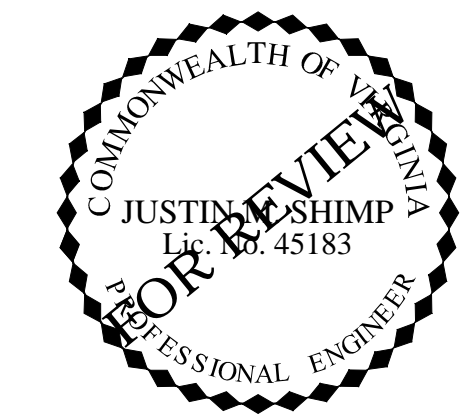
Overall SWM Quality Strategy

The existing site is a mixture of woods and managed turf. The VRRM new development spreadsheet will compute the required nutrient credits required based upon the proposed development and those credits will be purchased from an approved nutrient credit bank.

LEGEND
CRITICAL SLOPES LOT REGULATIONS GENERAL



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STORMWATER MANAGEMENT CONCEPT

C10

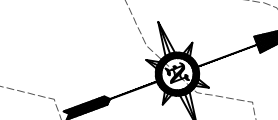
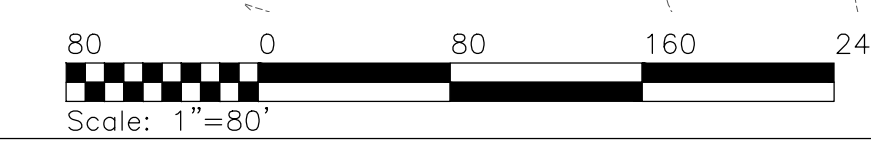
Proposed Site Outfall #2

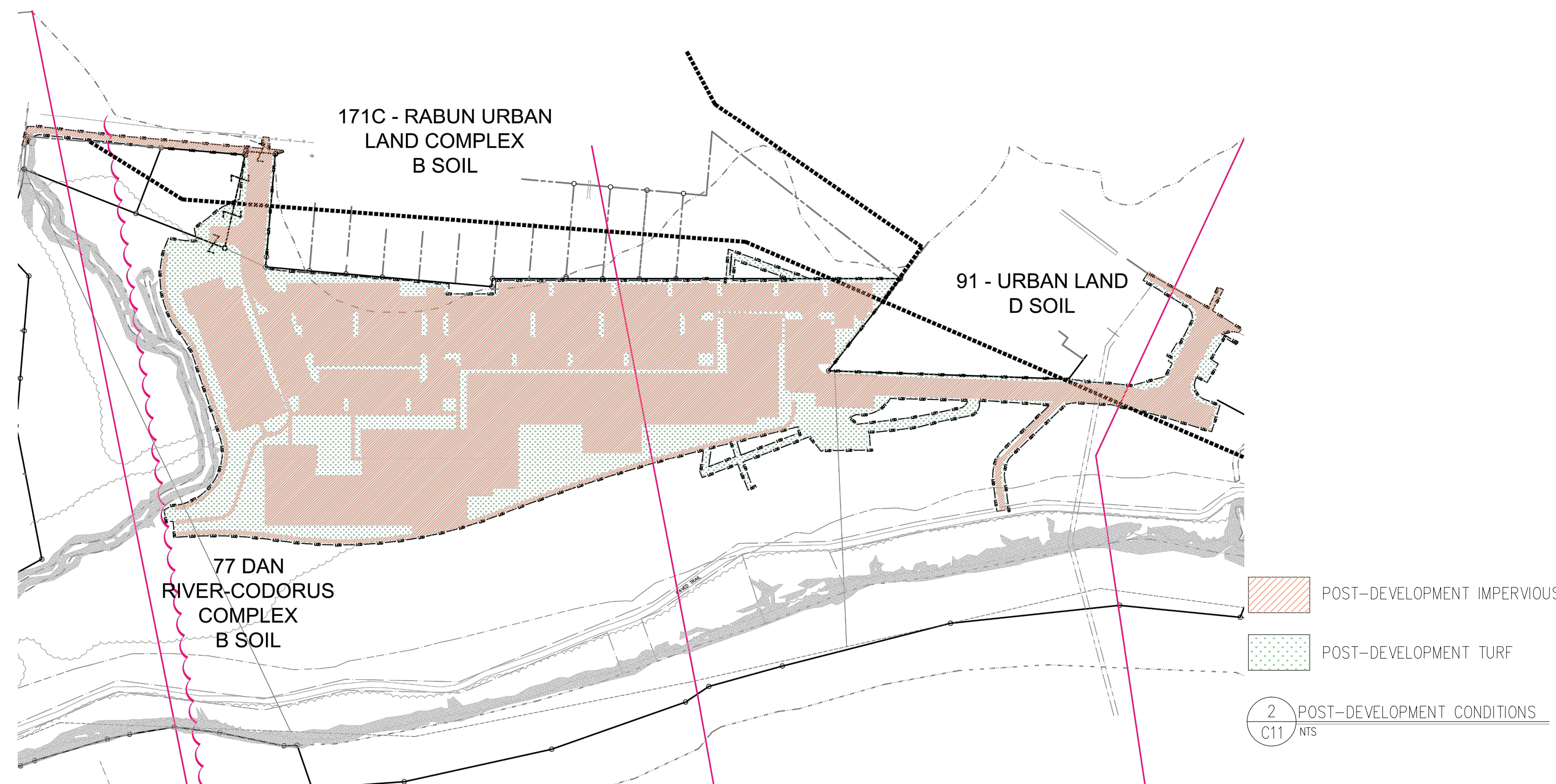
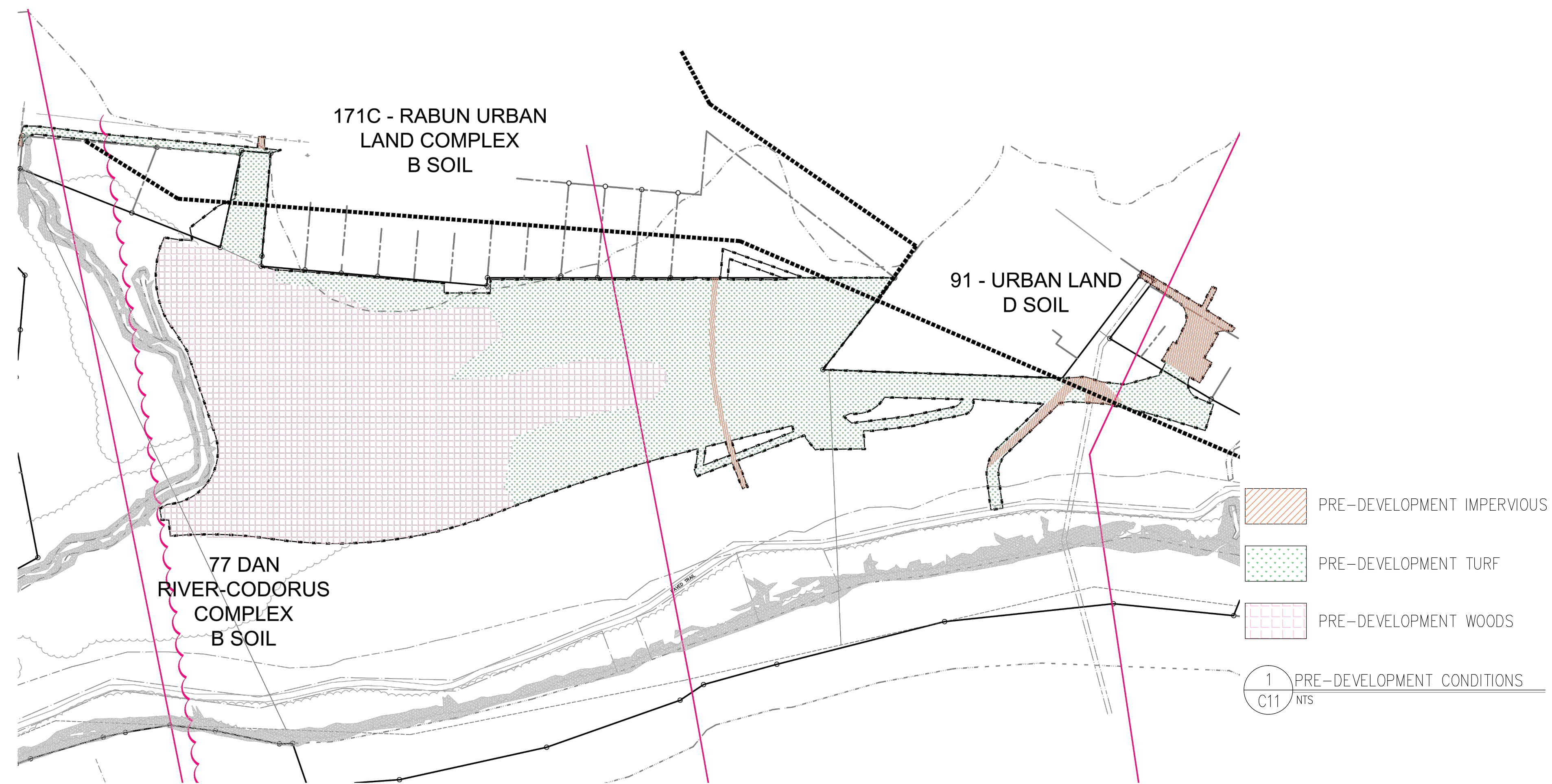
Discharge to sheet flow to open space using engineered level spreader, BMP spec. 2. Flood protection criteria met by providing adequate stormwater conveyance to point of outfall within 100-yr floodplain.

Proposed Site Outfall #1

Onsite development runoff to be routed to underground detention facility. Runoff from site is directed to existing receiving channel. Energy Balance showing compliance with 1 yr flow rate to be provided with final site plan. Site outfall point is within a mapped floodplain, therefore 10 yr capacity requirements for outfall channel are not required. Post Development 10 yr storm capacity for new storm sewer will be provided.

EFFECTIVE
BFE=331.65 FW=332.06





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) | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | OK |
| IMPERVIOUS COVER TREATED (ac) | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | OK |
| MANAGED TURF AREA (ac) | 0.00 | 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 | |
| Site Treatment Volume (ft³) | 18,621 | | | | | |
| 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 |
| NITROGEN LOAD REDUCTION ACHIEVED (lb/yr) | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Total Phosphorus | | | | | | |
| FINAL POST-DEVELOPMENT TP LOAD (lb/yr) | 11.70 | | | | | |
| TP LOAD REDUCTION REQUIRED (lb/yr) | 8.67 | | | | | |
| TP LOAD REDUCTION ACHIEVED (lb/yr) | 0.00 | | | | | |
| TP LOAD REMAINING (lb/yr) | 11.70 | | | | | |
| REMAINING TP LOAD REDUCTION REQUIRED (lb/yr) | 8.67 | | | | | |
| Total Nitrogen (For Information Purposes) | | | | | | |
| POST-DEVELOPMENT NITROGEN LOAD (lb/yr) | 83.70 | | | | | |
| NITROGEN LOAD REDUCTION ACHIEVED (lb/yr) | 0.00 | | | | | |
| REMAINING POST-DEVELOPMENT NITROGEN LOAD (lb/yr) | 83.70 | | | | | |

Project Name: **0 E High Street**

Date: **8/2/2022**

BMP Design Specifications List: **CLEAR ALL (C11+SH1+R)**

data input cells (C11+SH1+R)

constant values

calculation cells

final results

Site Information

Post-Development Project (Treatment Volume and Loads)

Land Cover (acres)

| | A Soils | B Soils | C Soils | D Soils | Totals |
|---|---------|---------|---------|---------|--------|
| Forest/Open Space (acres) - undisturbed, protected for forest/open space or reforested land | | | | | 0.00 |
| Managed Turf (acres) - disturbed, graded for yards or other turf to be mowed/managed | | 2.49 | | 0.04 | 2.53 |
| Impervious Cover (acres) | 4.59 | | | 0.28 | 4.87 |
| | | | | | 7.40 |

Constants

| | |
|----------------------------------|------|
| Annual Rainfall (inches) | 43 |
| Target Rainfall Event (inches) | 1.00 |
| Total Phosphorus (TP) EMC (mg/L) | 0.26 |
| Total Nitrogen (TN) EMC (mg/L) | 1.86 |
| Target TP Load (lb/acre/yr) | 0.41 |
| g (unitless correction factor) | 0.90 |

Runoff Coefficients (Rv)

| | A Soils | B Soils | C Soils | D Soils |
|-------------------|---------|---------|---------|---------|
| Forest/Open Space | 0.02 | 0.03 | 0.04 | 0.05 |
| Managed Turf | 0.15 | 0.20 | 0.22 | 0.25 |
| Impervious Cover | 0.95 | 0.95 | 0.95 | 0.95 |

Post-Development Requirement for Site Area

| | |
|------------------------------------|------|
| TP Load Reduction Required (lb/yr) | 8.67 |
|------------------------------------|------|

LAND COVER SUMMARY -- POST DEVELOPMENT

| Land Cover Summary | | Treatment Volume and Nutrient Loads | |
|---------------------------------|------|-------------------------------------|--------|
| Forest/Open Space Cover (acres) | 0.00 | Treatment Volume (acre-ft) | 0.4275 |
| Weighted Rv (forest) | 0.00 | Treatment Volume (cubic feet) | 18,621 |
| % Forest | 0% | TP Load (lb/yr) | 11.70 |
| Managed Turf Cover (acres) | 2.53 | TN Load (lb/yr) | 83.70 |
| Weighted Rv (turf) | 0.20 | | |
| % Managed Turf | 34% | | |
| Impervious Cover (acres) | 4.87 | | |
| Rv (impervious) | 0.95 | | |
| % Impervious | 66% | | |
| Site Area (acres) | 7.40 | | |
| Site Rv | 0.69 | | |

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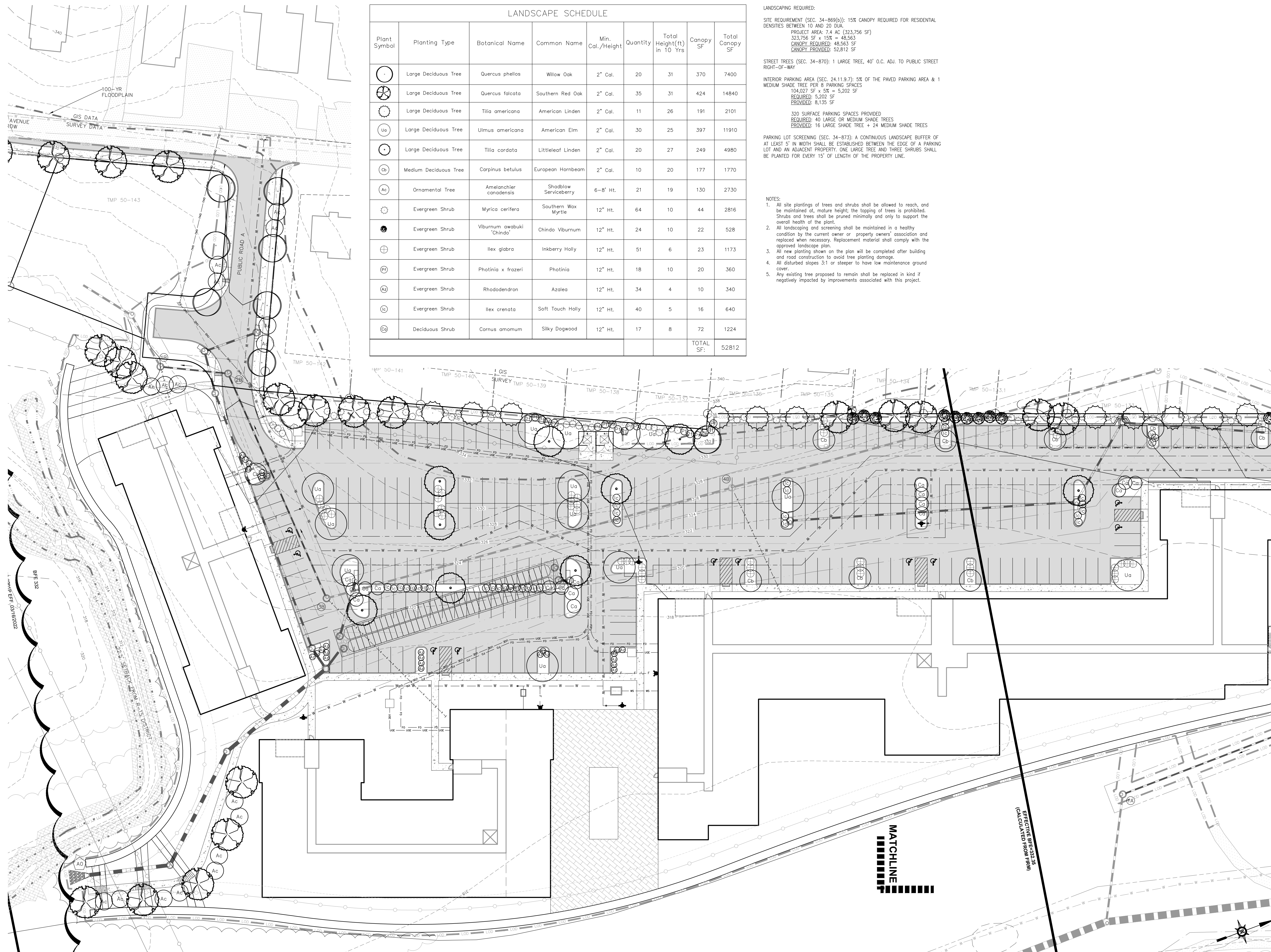
PRELIMINARY SITE DEVELOPMENT PLAN
0 EAST HIGH STREET

CITY OF CHARLOTTESVILLE, VIRGINIA
SUBMISSION: 2022.08.05
REVISION: 2022.12.07
 2023.02.17

FILE NO. 20.017

VRRM MAPS & CALCULATIONS

C11



| LANDSCAPE SCHEDULE | | | | | | | | | |
|--------------------|-----------------------|----------------------------------|-----------------------|------------------|----------|----------------------------|-----------|-----------------|-------|
| Plant Symbol | Planting Type | Botanical Name | Common Name | Min. Cal./Height | Quantity | Total Height(ft) in 10 Yrs | Canopy SF | Total Canopy SF | |
| ⊙ | Large Deciduous Tree | <i>Quercus phellos</i> | Willow Oak | 2" Cal. | 20 | 31 | 370 | 7400 | |
| ⊗ | Large Deciduous Tree | <i>Quercus falcata</i> | Southern Red Oak | 2" Cal. | 35 | 31 | 424 | 14840 | |
| ⊖ | Large Deciduous Tree | <i>Tilia americana</i> | American Linden | 2" Cal. | 11 | 26 | 191 | 2101 | |
| ⊙ | Large Deciduous Tree | <i>Ulmus americana</i> | American Elm | 2" Cal. | 30 | 25 | 397 | 11910 | |
| ⊙ | Large Deciduous Tree | <i>Tilia cordata</i> | Littleleaf Linden | 2" Cal. | 20 | 27 | 249 | 4980 | |
| ⊖ | Medium Deciduous Tree | <i>Carpinus betulus</i> | European Hornbeam | 2" Cal. | 10 | 20 | 177 | 1770 | |
| ⊙ | Ornamental Tree | <i>Amelanchier canadensis</i> | Shadblow Serviceberry | 6-8' Ht. | 21 | 19 | 130 | 2730 | |
| ⊖ | Evergreen Shrub | <i>Myrica cerifera</i> | Southern Wax Myrtle | 12" Ht. | 64 | 10 | 44 | 2816 | |
| ⊖ | Evergreen Shrub | <i>Viburnum awabuki</i> "Chindo" | Chindo Viburnum | 12" Ht. | 24 | 10 | 22 | 528 | |
| ⊖ | Evergreen Shrub | <i>Ilex glabra</i> | Inkberry Holly | 12" Ht. | 51 | 6 | 23 | 1173 | |
| ⊖ | Evergreen Shrub | <i>Photinia x fraseri</i> | Photinia | 12" Ht. | 18 | 10 | 20 | 360 | |
| ⊖ | Evergreen Shrub | <i>Rhododendron</i> | Azalea | 12" Ht. | 34 | 4 | 10 | 340 | |
| ⊖ | Evergreen Shrub | <i>Ilex crenata</i> | Soft Touch Holly | 12" Ht. | 40 | 5 | 16 | 640 | |
| ⊖ | Deciduous Shrub | <i>Cornus amomum</i> | Silky Dogwood | 12" Ht. | 17 | 8 | 72 | 1224 | |
| | | | | | | | | TOTAL SF: | 52812 |

LANDSCAPING REQUIRED:

SITE REQUIREMENT (SEC. 34-869(b)): 15% CANOPY REQUIRED FOR RESIDENTIAL DENSITIES BETWEEN 10 AND 20 DUA.
 PROJECT AREA: 7.4 AC (323,756 SF)
 323,756 SF x 15% = 48,563 SF
 CANOPY REQUIRED: 48,563 SF
 CANOPY PROVIDED: 52,812 SF

STREET TREES (SEC. 34-870): 1 LARGE TREE, 40' O.C. ADJ. TO PUBLIC STREET RIGHT-OF-WAY

INTERIOR PARKING AREA (SEC. 24.11.9.7): 5% OF THE PAVED PARKING AREA & 1 MEDIUM SHADE TREE PER 8 PARKING SPACES
 104,027 SF x 5% = 5,202 SF
 REQUIRED: 5,202 SF
 PROVIDED: 8,135 SF

320 SURFACE PARKING SPACES PROVIDED
 REQUIRED: 40 LARGE OR MEDIUM SHADE TREES
 PROVIDED: 16 LARGE SHADE TREE + 24 MEDIUM SHADE TREES

PARKING LOT SCREENING (SEC. 34-873): A CONTINUOUS LANDSCAPE BUFFER OF AT LEAST 5' IN WIDTH SHALL BE ESTABLISHED BETWEEN THE EDGE OF A PARKING LOT AND AN ADJACENT PROPERTY. ONE LARGE TREE AND THREE SHRUBS SHALL BE PLANTED FOR EVERY 15' OF LENGTH OF THE PROPERTY LINE.

- NOTES:
- All site plantings of trees and shrubs shall be allowed to reach, and be maintained at, mature height; the topping of trees is prohibited. Shrubs and trees shall be pruned minimally and only to support the overall health of the plant.
 - All landscaping and screening shall be maintained in a healthy condition by the current owner or property owners' association and replaced when necessary. Replacement material shall comply with the approved landscape plan.
 - All new planting shown on the plan will be completed after building and road construction to avoid tree planting damage.
 - All disturbed slopes 3:1 or steeper to have low maintenance ground cover.
 - Any existing tree proposed to remain shall be replaced in kind if negatively impacted by improvements associated with this project.

LEGEND
 CRITICAL SLOPES LOT REGULATIONS GENERAL

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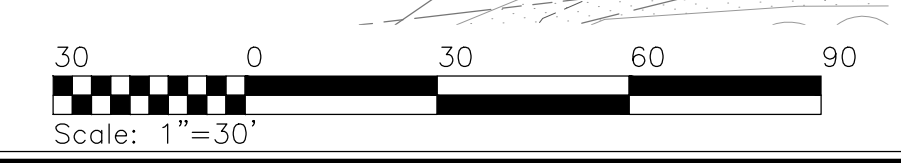
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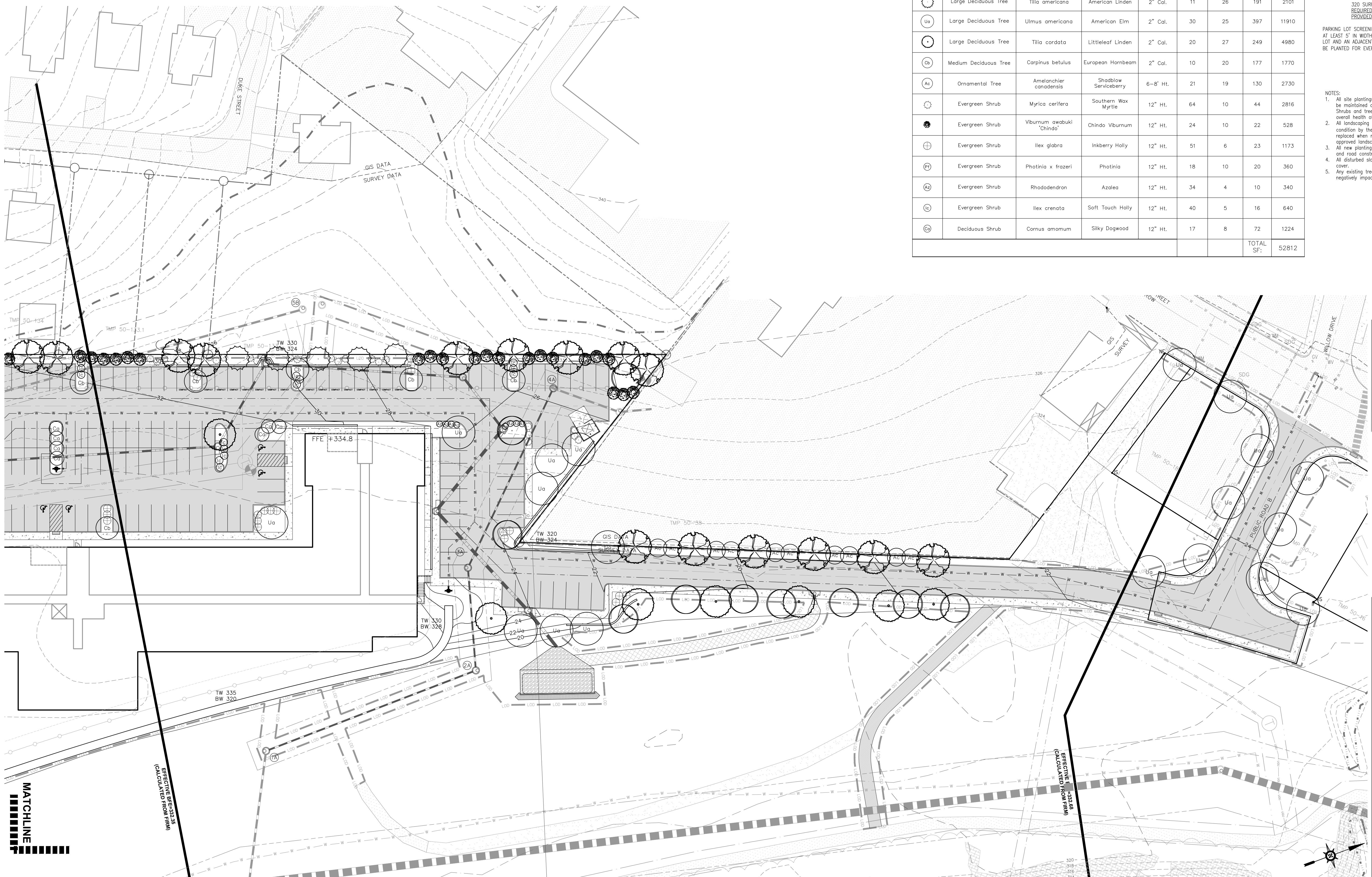
PRELIMINARY SITE DEVELOPMENT PLAN
0 EAST HIGH STREET

CITY OF CHARLOTTEVILLE, VIRGINIA
SUBMISSION: 2022.08.05
REVISION: 2022.12.07
 2023.02.17

FILE NO. 20.017
LANDSCAPE PLAN



C12



| LANDSCAPE SCHEDULE | | | | | | | | |
|--------------------|-----------------------|---------------------------|-----------------------|------------------|----------|----------------------------|-----------|-----------------|
| Plant Symbol | Planting Type | Botanical Name | Common Name | Min. Cal./Height | Quantity | Total Height(ft) in 10 Yrs | Canopy SF | Total Canopy SF |
| ○ | Large Deciduous Tree | Quercus phellos | Willow Oak | 2" Cal. | 20 | 31 | 370 | 7400 |
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| TOTAL SF: | | | | | | | | 52812 |

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PRELIMINARY SITE DEVELOPMENT PLAN
0 EAST HIGH STREET
STREET

CITY OF CHARLOTTEVILLE, VIRGINIA
SUBMISSION:
 2022.08.05
REVISION:
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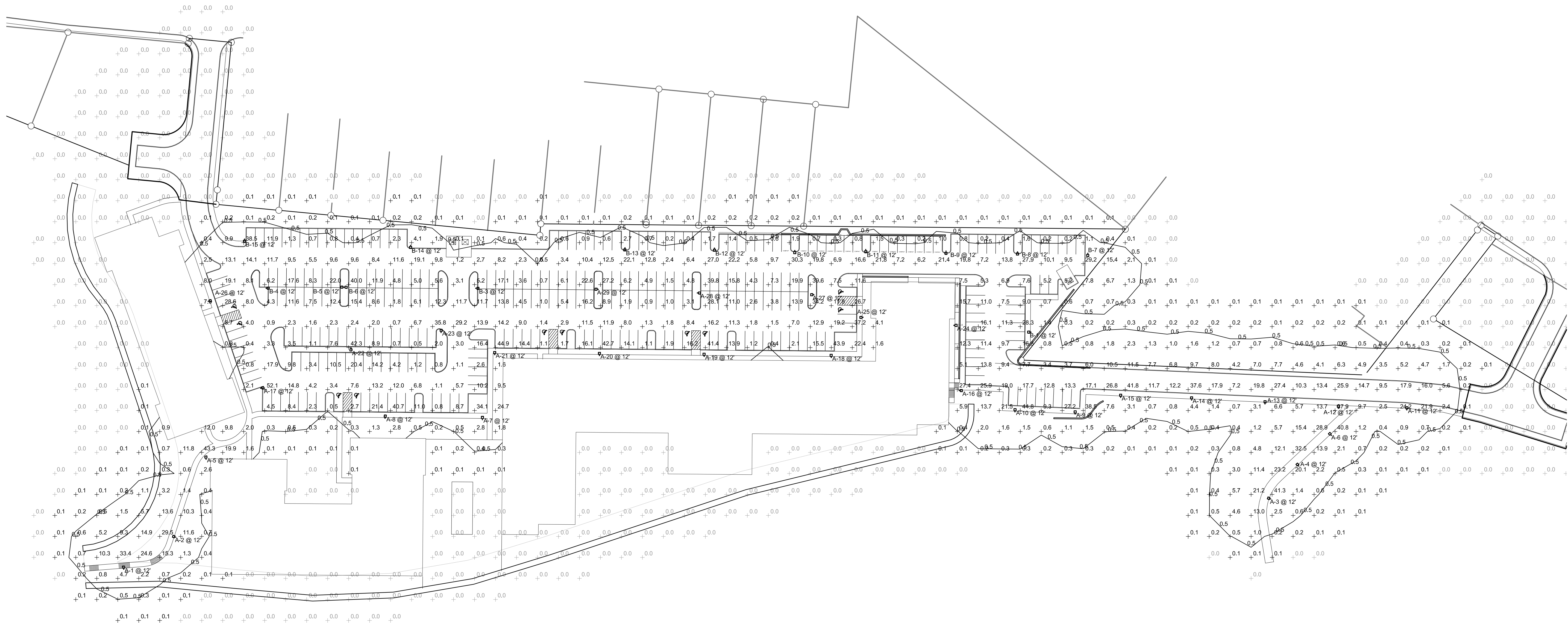
FILE NO. 20.017
LANDSCAPE PLAN

Schedule

| Symbol | Label | Quantity | Manufacturer | Catalog Number | Description | Number of Lamps | Filename | Wattage | Light Loss Factor |
|--------|-------|----------|----------------|--------------------------|--|---|------------------------------|---------|-------------------|
| | A | 29 | SIGNIFY GARDCO | ECF-L-96L-1.4A-WW-G2-4 | EcoForm Area LED ECF - Large, 96 LED's, 3000K CCT, TYPE 4 OPTIC, No Shield | (6) LEDGINE SLD LIGHT ARRAY(S) DRIVEN AT 1370mA | ecf-l-96l-1-4a-ww-g2-4.ies | 422.0 | 1.00 |
| | B | 15 | SIGNIFY GARDCO | ECF-L-96L-1A-WW-G2-4-HIS | EcoForm Area LED ECF - Large, 96 LED's, 3000K CCT, TYPE 4-HIS OPTIC, House-side Internal Shielding | (6) LEDGINE SLD LIGHT ARRAY(S) DRIVEN AT 1050mA | ecf-l-96l-1a-ww-g2-4-his.ies | 316.4 | 1.00 |

Lighting Notes:

1. Per Sec. 34-1003(c) of the Charlottesville Zoning Ordinance, pole mounted fixtures shall be mounted at a height of 12' from the finished grade which includes the pole base, outside of the public ROW and immediately adjacent to low-density residential districts.
2. Each outdoor luminaire equipped with a lamp that emits 3,000 or more initial lumens shall be a full cutoff luminaire and shall be arranged or shielded to reflect light away from adjoining residential districts and away from adjacent roads. The spillover of lighting from luminaires onto public roads and property in residential or rural areas zoning districts shall not exceed one half footcandle.



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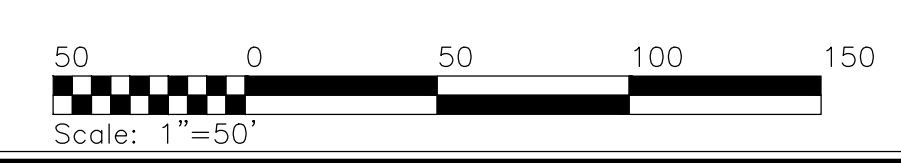
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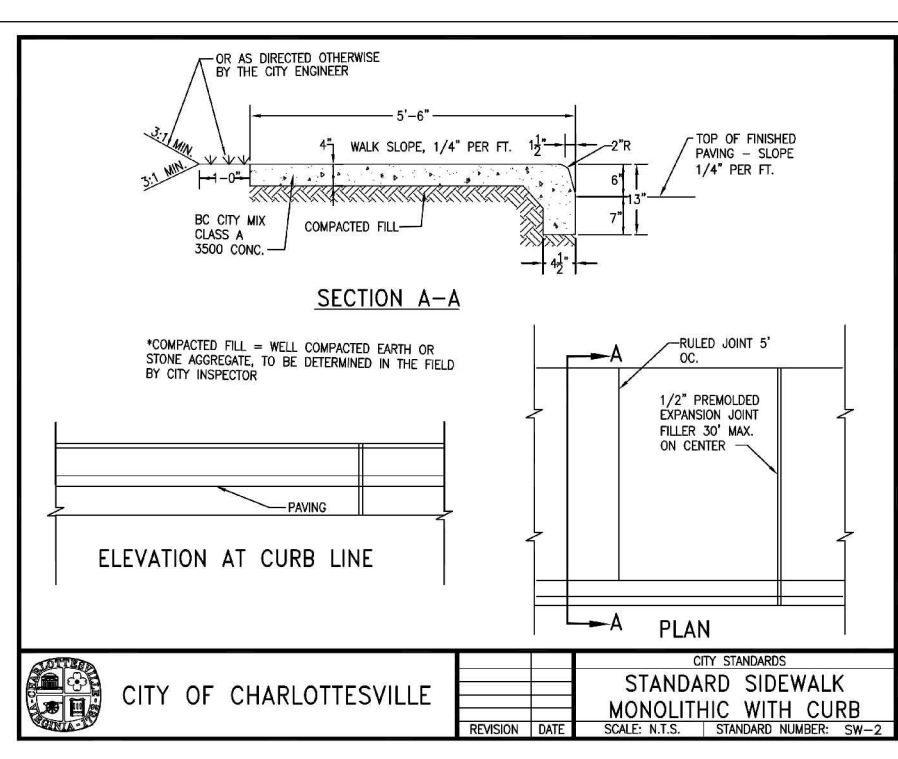
PRELIMINARY SITE DEVELOPMENT PLAN
0 EAST HIGH STREET

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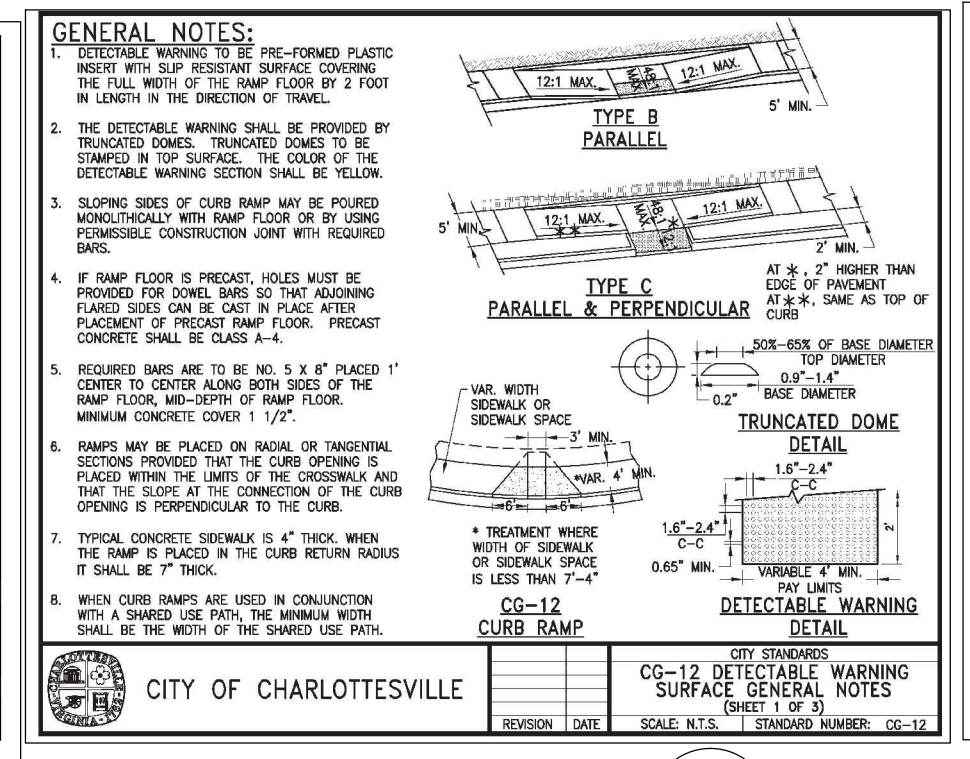
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LIGHTING PLAN



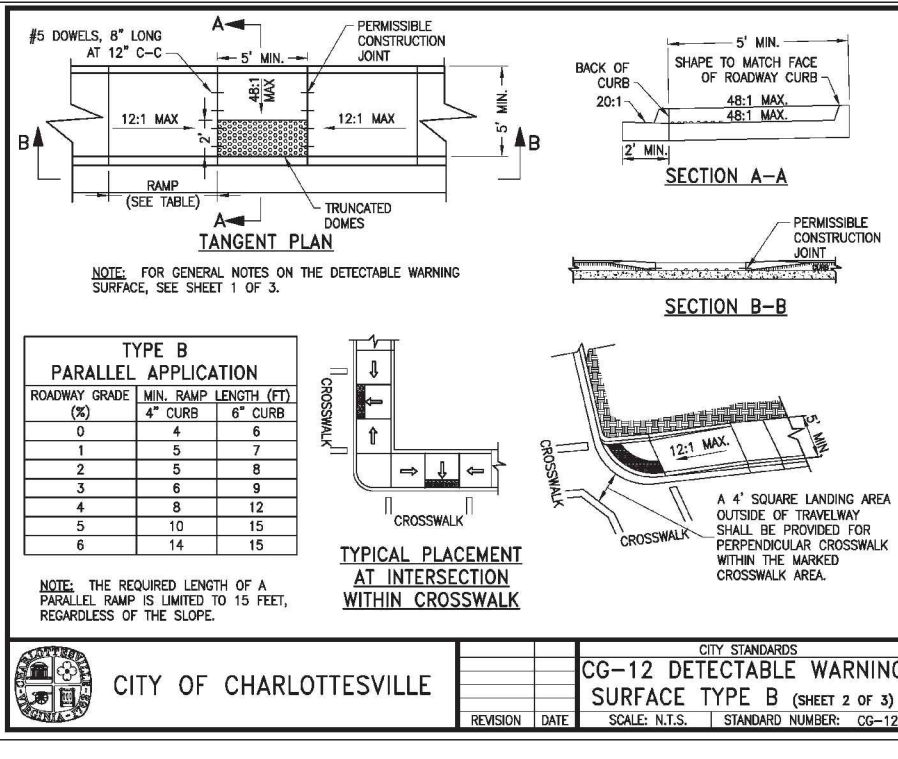
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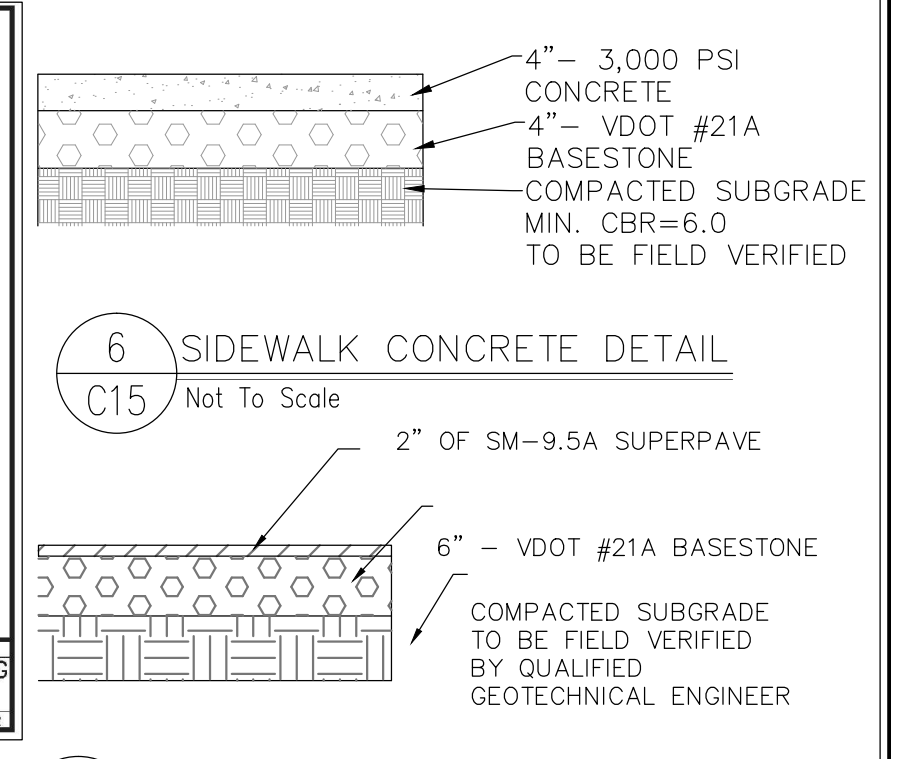
CITY OF CHARLOTTESVILLE
 4 STANDARD SIDEWALK MONOLITHIC W/ CURB
 C15 NOT TO SCALE



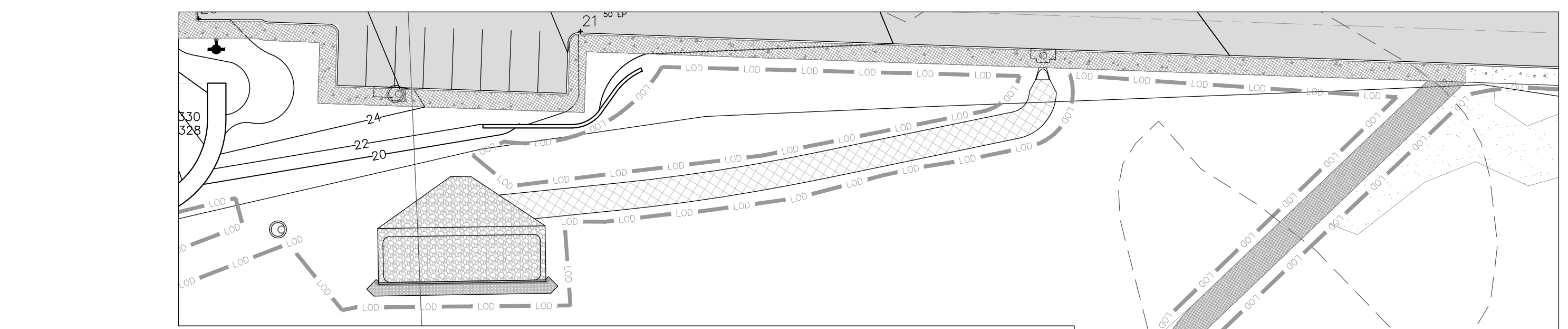
CITY OF CHARLOTTESVILLE
 5 CITY OF CHARLOTTESVILLE
 C15 CG-12 DETAIL NOT TO SCALE



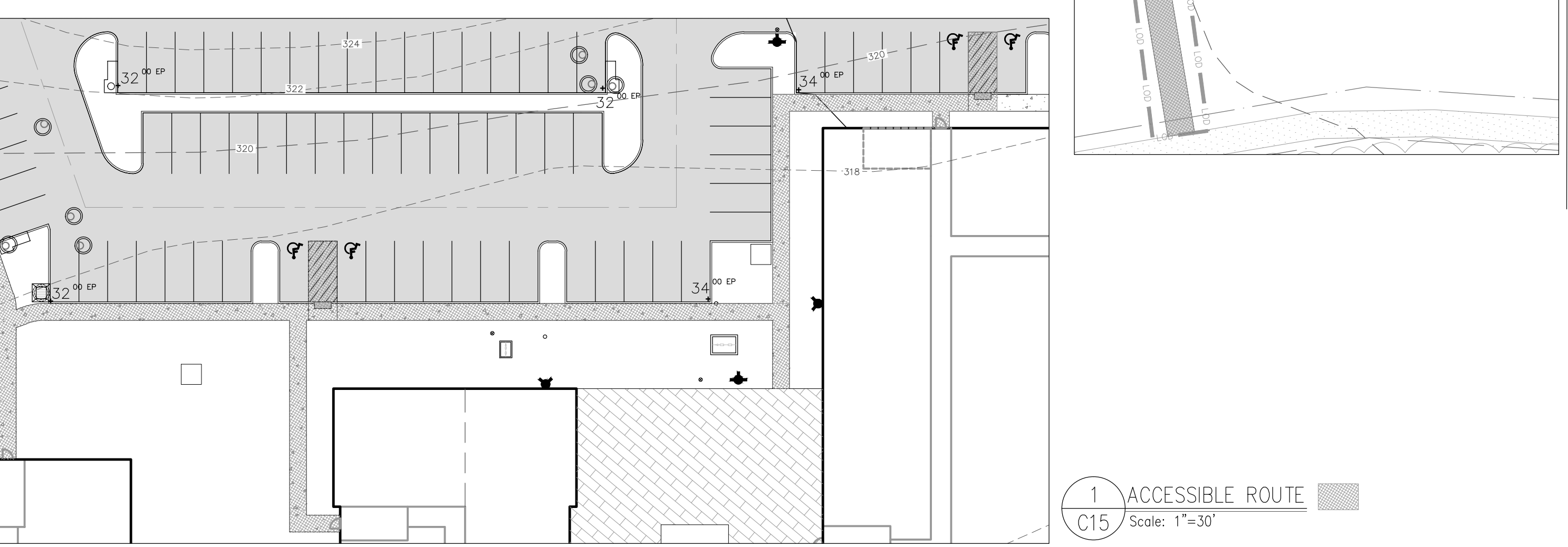
CITY OF CHARLOTTESVILLE
 6 SIDEWALK CONCRETE DETAIL
 C15 Not To Scale



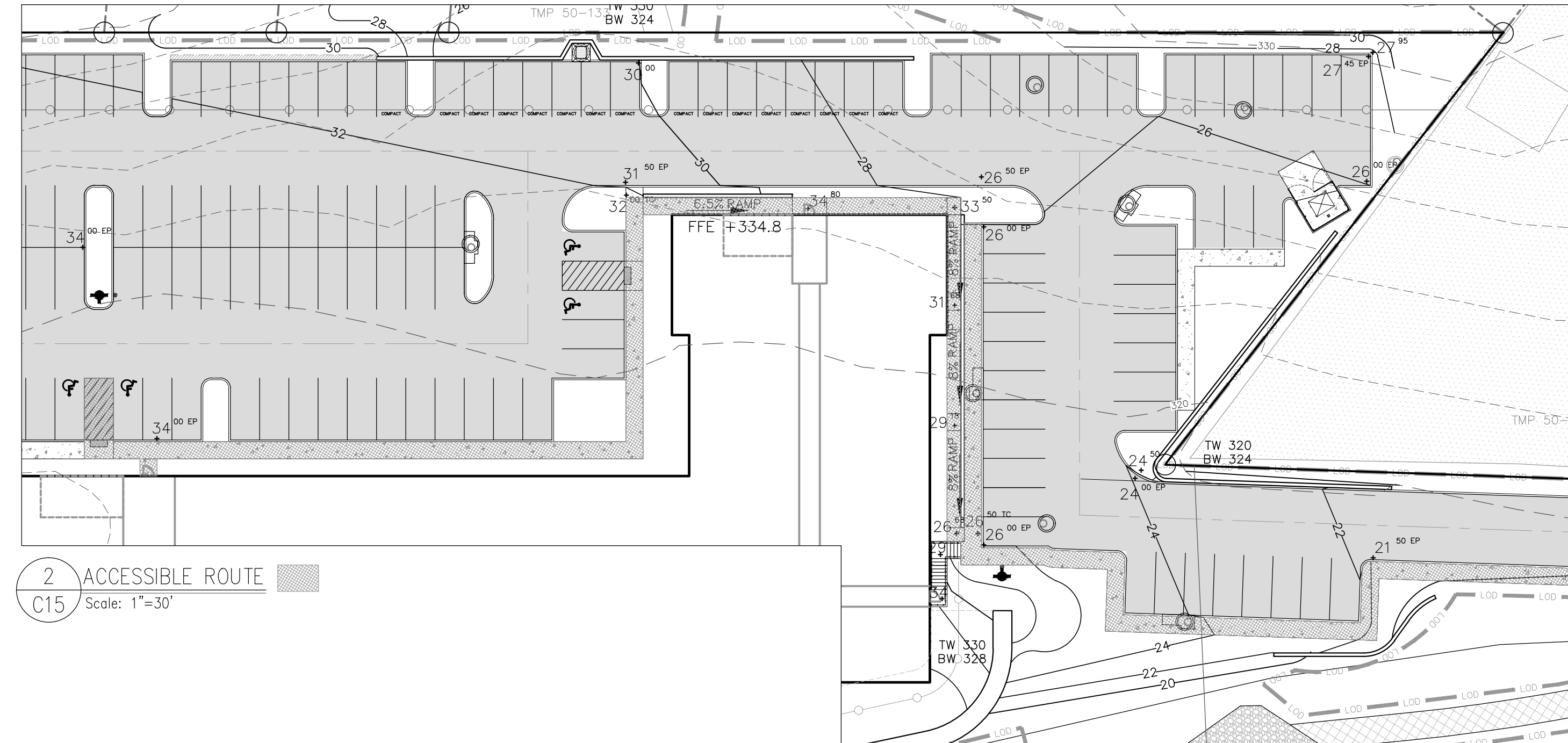
CITY OF CHARLOTTESVILLE
 7 PAVEMENT SECTION DETAIL
 C15 Not To Scale



3 ACCESSIBLE ROUTE
 C15 Scale: 1"=30'



1 ACCESSIBLE ROUTE
 C15 Scale: 1"=30'



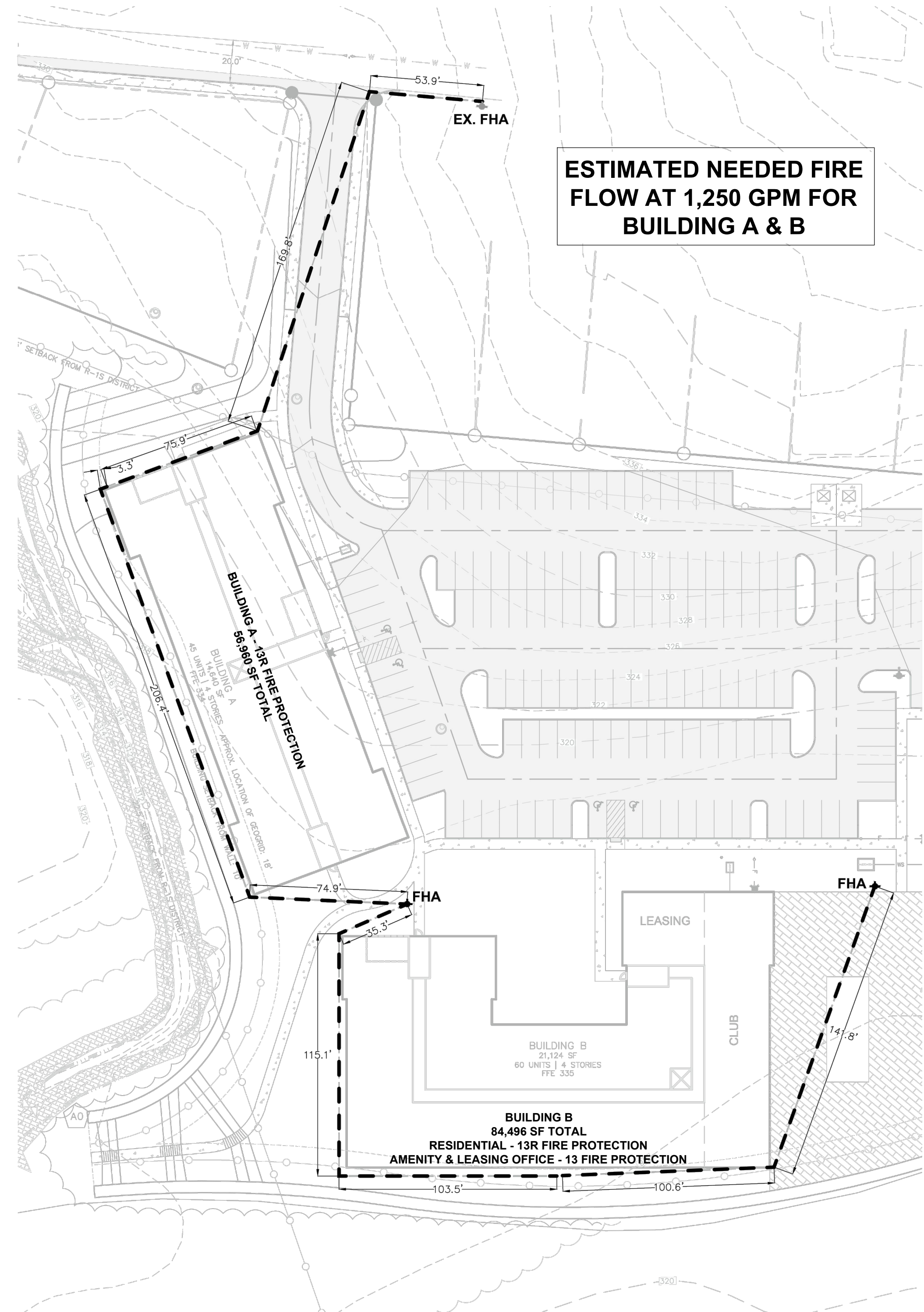
2 ACCESSIBLE ROUTE
 C15 Scale: 1"=30'

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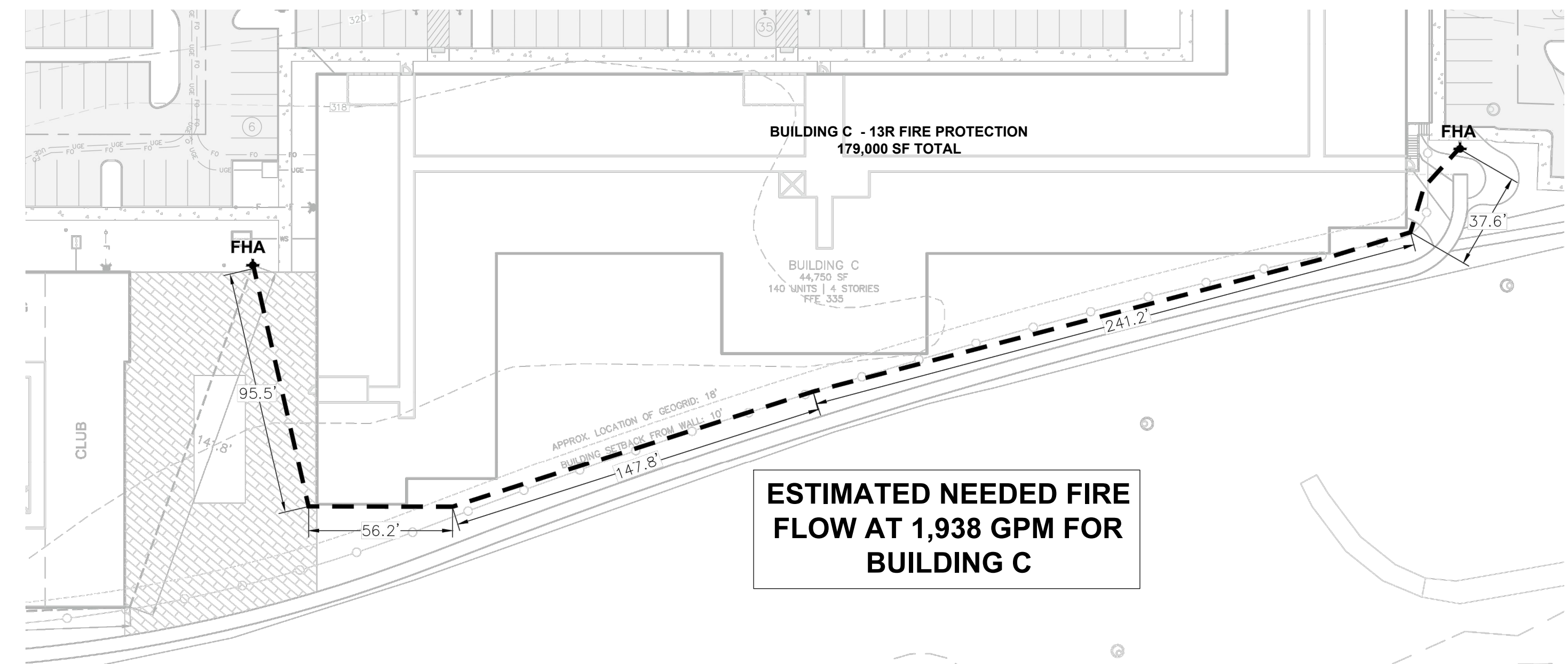
PRELIMINARY SITE DEVELOPMENT PLAN
0 EAST HIGH STREET
 CITY OF CHARLOTTESVILLE, VIRGINIA
 SUBMISSION: 2022.08.05
 REVISION: 2022.12.07
 2023.02.17

FILE NO. 20.017
 SITE DETAILS



ESTIMATED NEEDED FIRE FLOW AT 1,250 GPM FOR BUILDING A & B

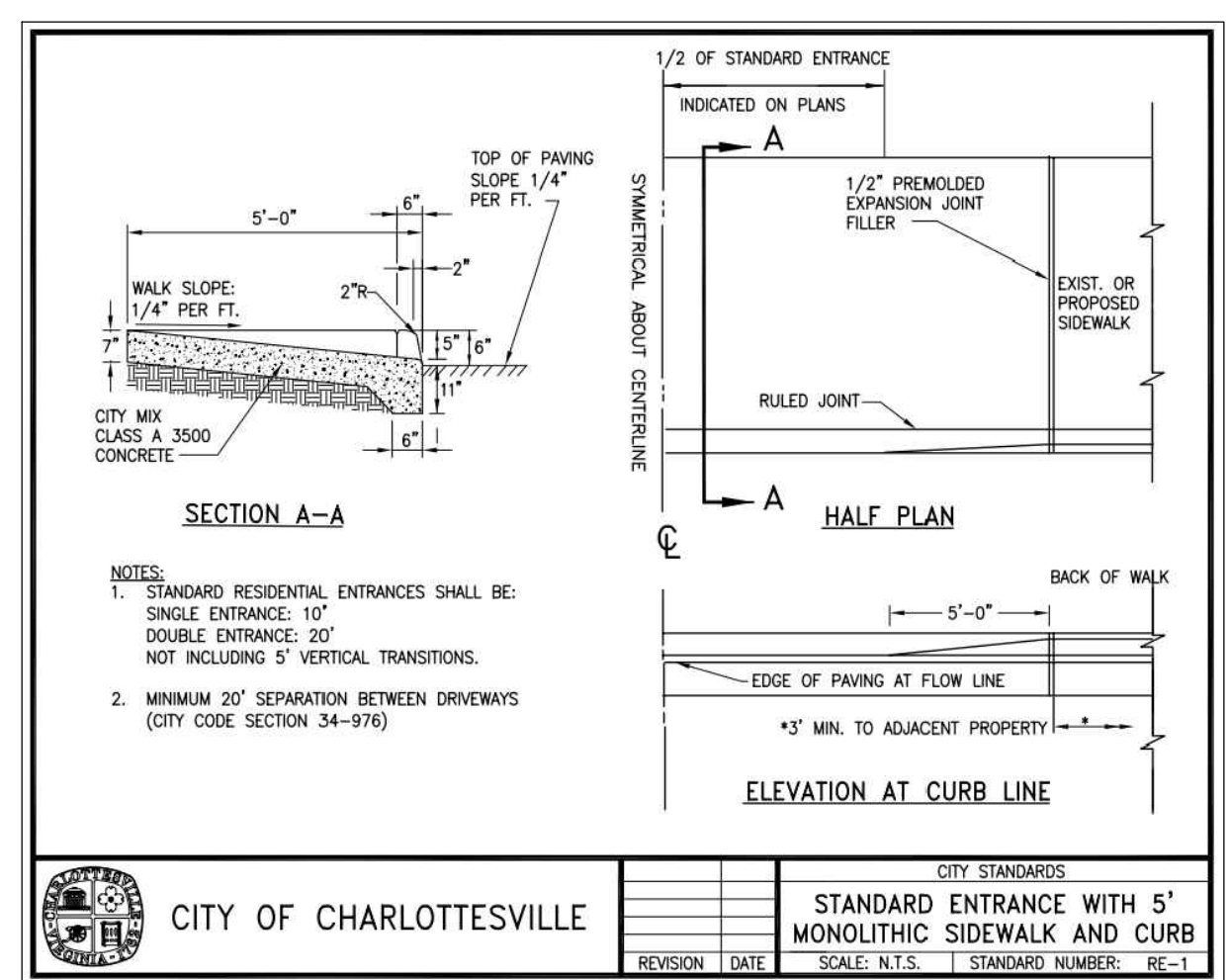
1 PROPOSED SIDEWALK ON CAROLINE AVENUE
C16 SCALE: 1"=10'



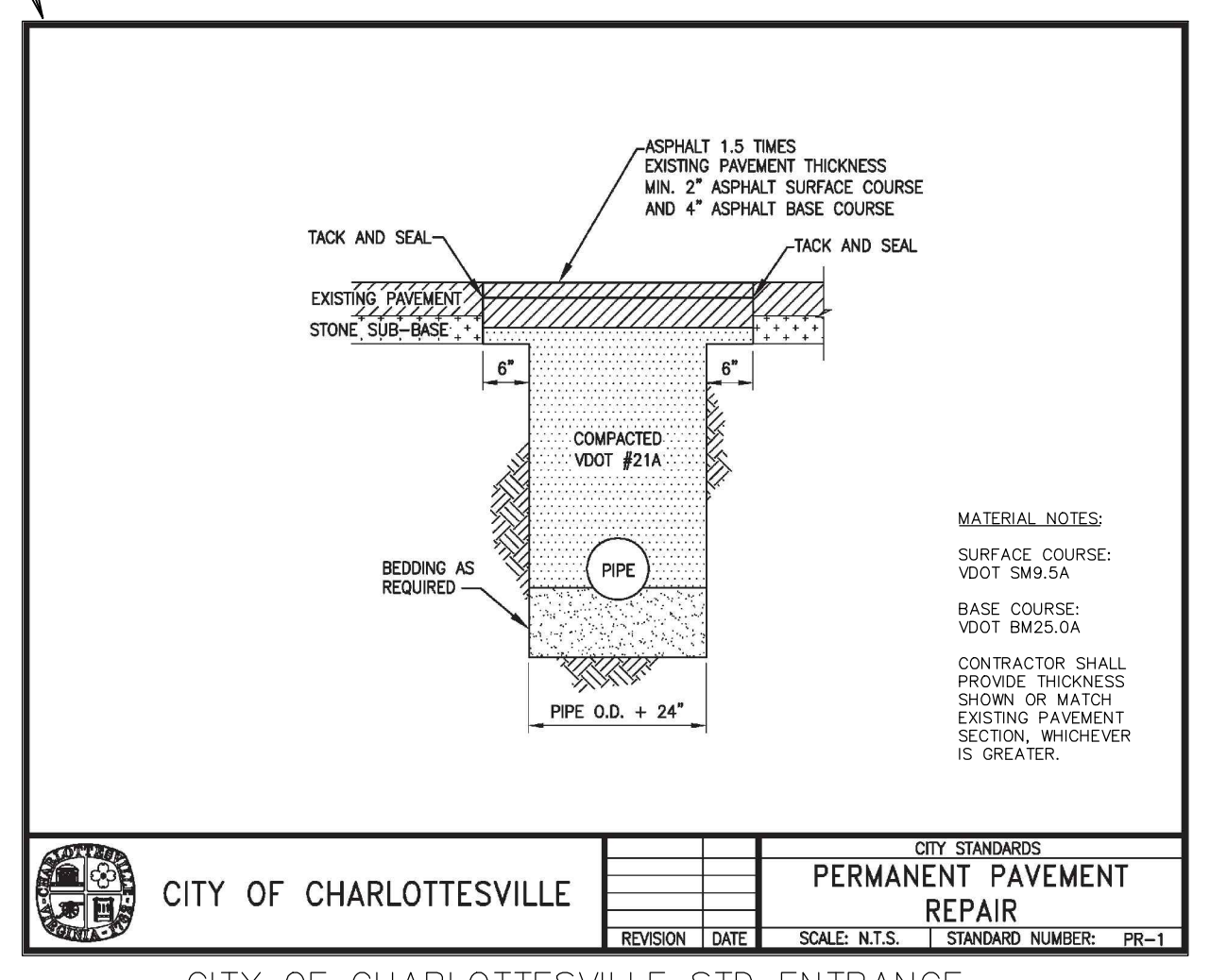
ESTIMATED NEEDED FIRE FLOW AT 1,938 GPM FOR BUILDING C

3 DISTANCE BETWEEN FHA & BUILDINGS (MAX 300')
C16 SCALE: 1"=40'

2 DISTANCE BETWEEN FHA & BUILDINGS (MAX 300')
C16 SCALE: 1"=40'



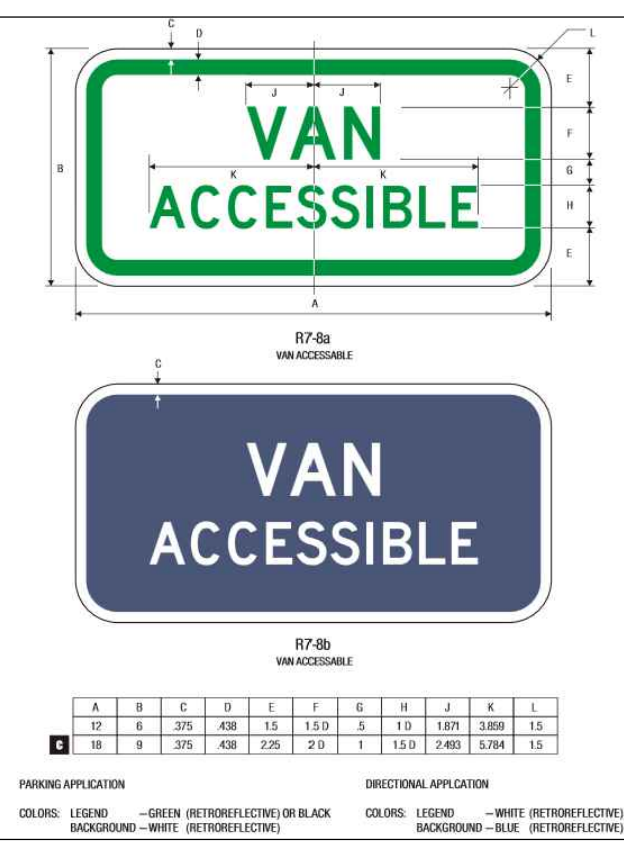
6 CITY OF CHARLOTTEVILLE STD ENTRANCE
C16 NOT TO SCALE



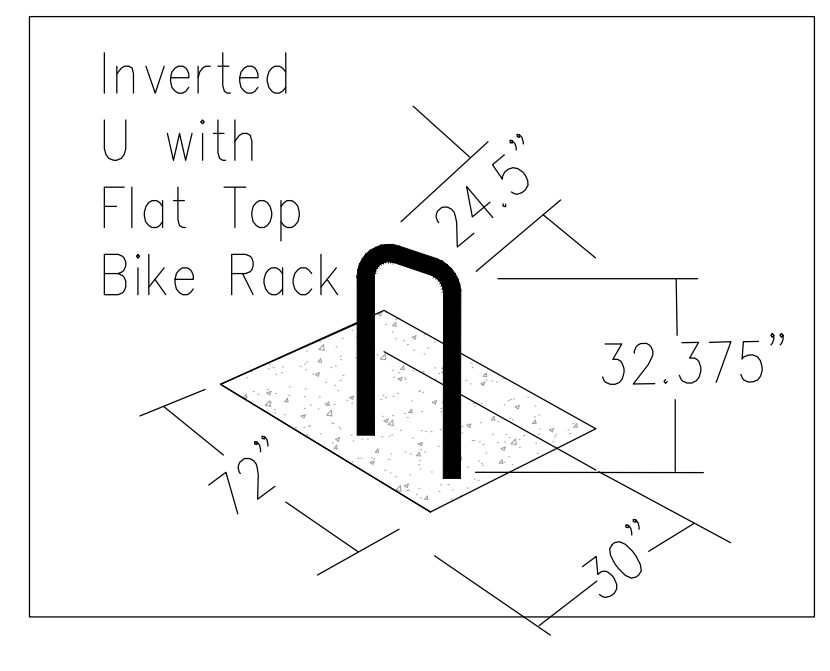
7 CITY OF CHARLOTTEVILLE STD ENTRANCE PERMANENT PAVEMENT REPAIR
C16 Not To Scale



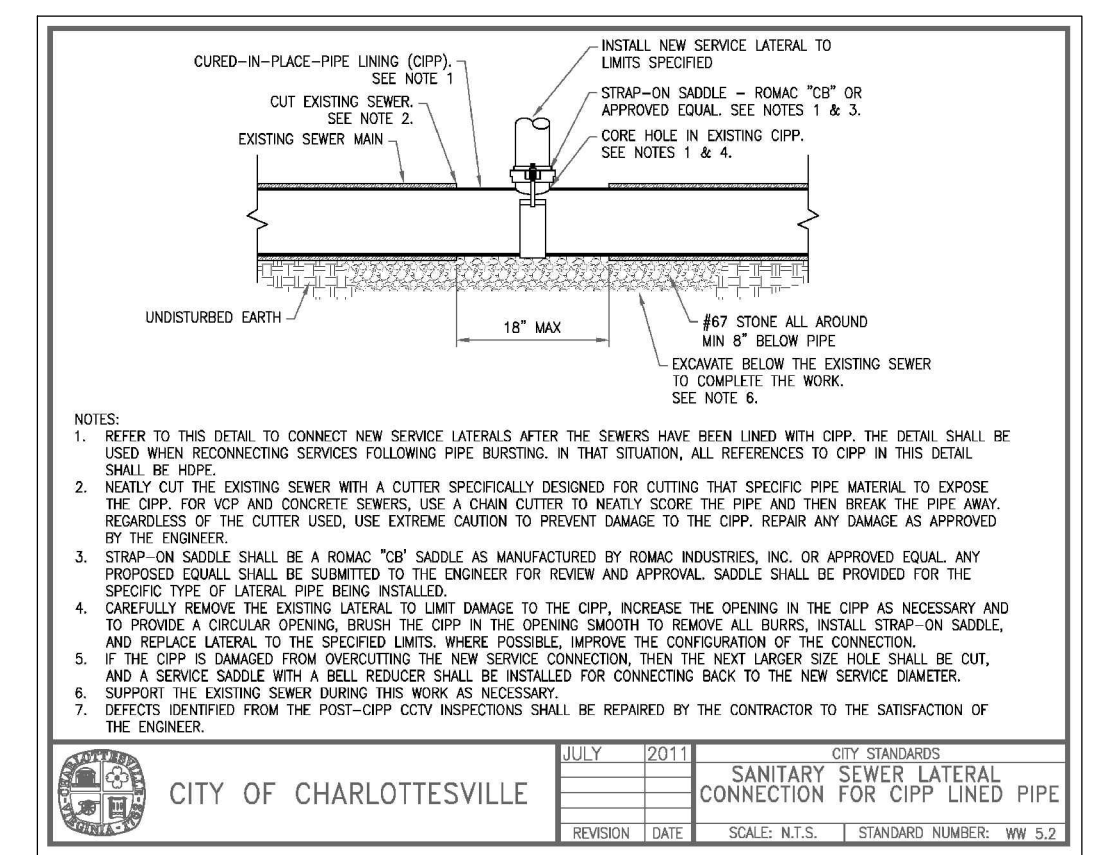
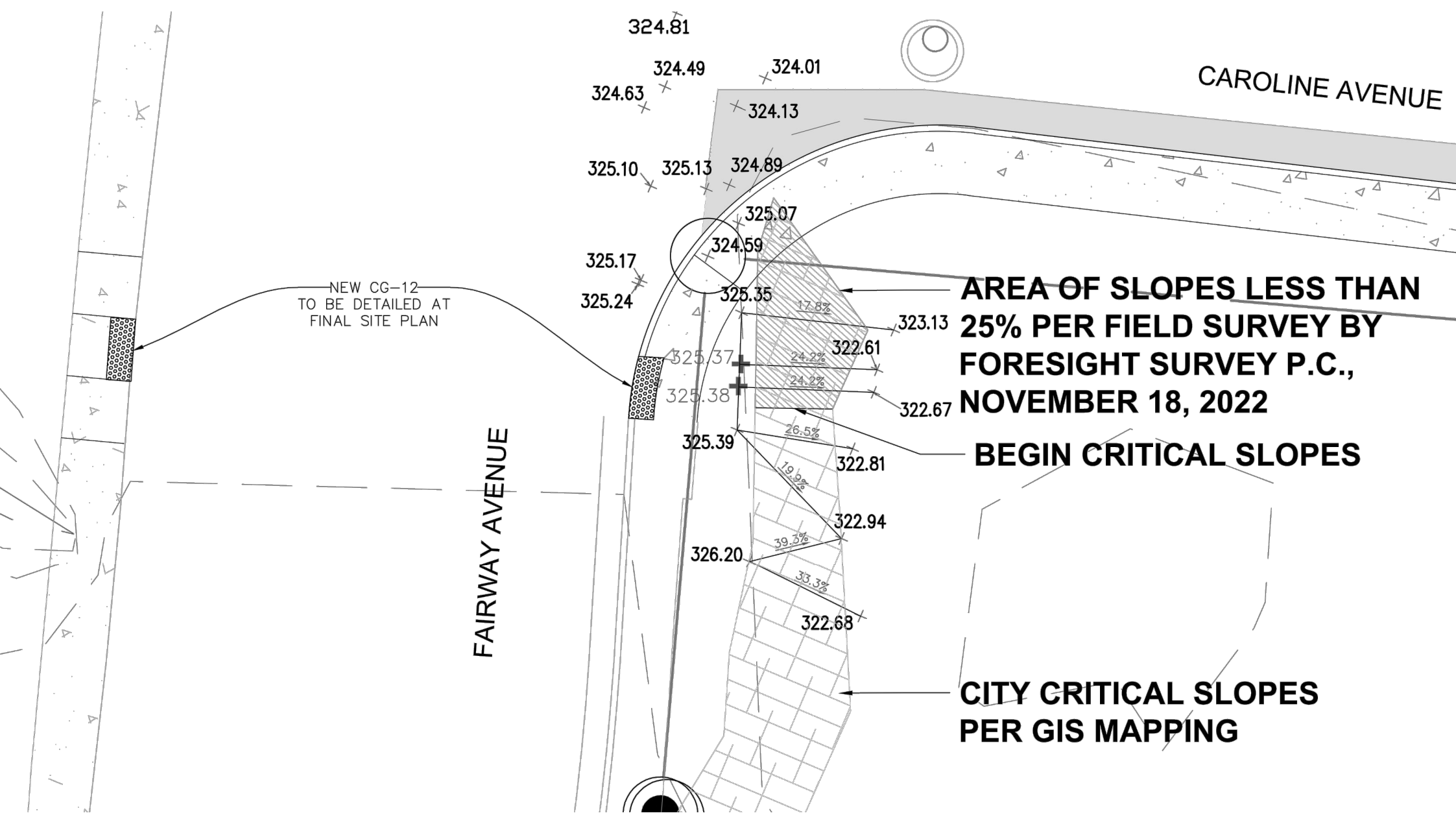
8 HANDICAP PARKING SIGN
C16 NOT TO SCALE



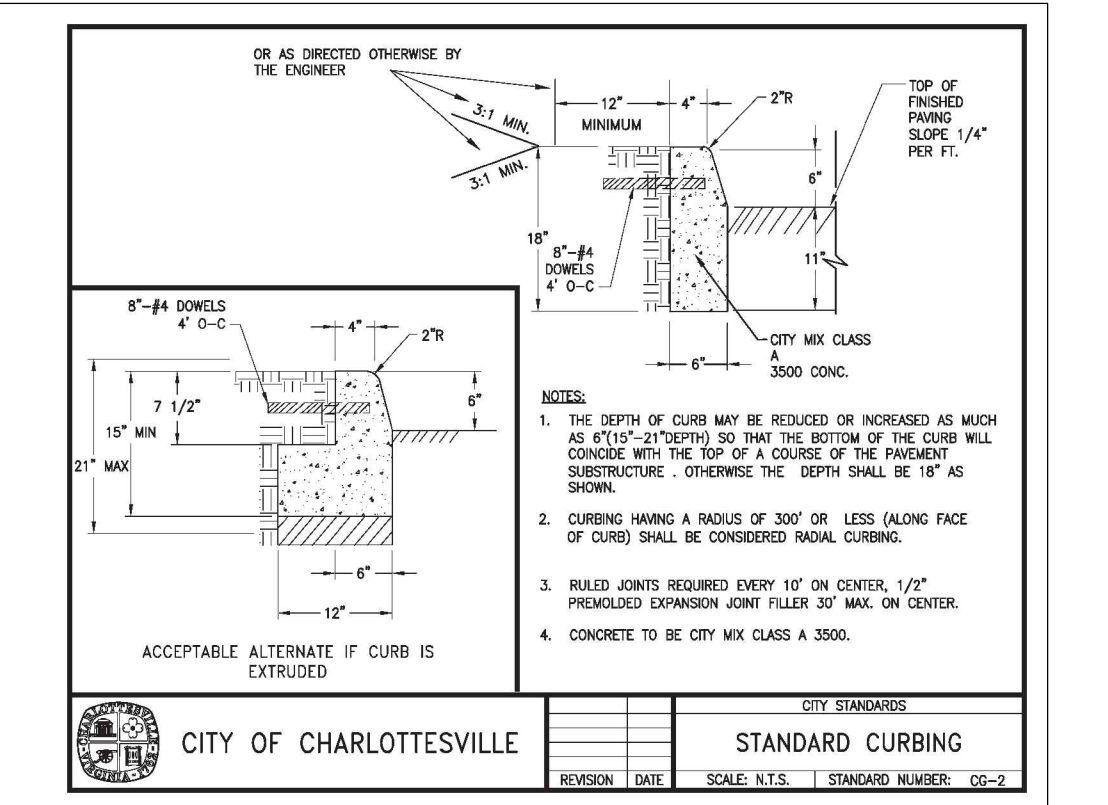
9 PENALTY SIGN DETAIL
C16 NOT TO SCALE



10 INVERTED U BIKE RACK DETAIL
C16 Not To Scale

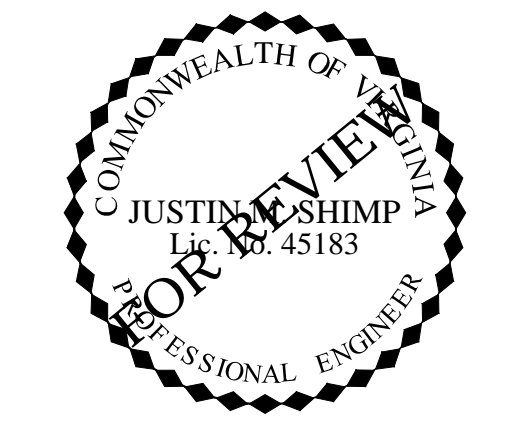


4 CITY OF CHARLOTTEVILLE SANITARY SEWER CONNECTION FOR CIPP LINED PIPE
C15 Not To Scale



5 CITY OF CHARLOTTEVILLE C15 STD CURBING NOT TO SCALE

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PRELIMINARY SITE DEVELOPMENT PLAN
0 EAST HIGH STREET

CITY OF CHARLOTTEVILLE, VIRGINIA
SUBMISSION: 2022.08.05
REVISION: 2022.12.07
2023.02.17

FILE NO. 20.017
SITE EXHIBITS & DETAILS

C16

| 0 E High Street Sewer Demand Calculation | | | | | |
|--|-----------|-----------------|---------------------|--------------------------|--|
| Use | Bedrooms | Number of Users | Flow Per User (gpd) | Total Sewer Demand (gpd) | |
| Bedroom Units * 1.9 persons | 330 Units | 627 Persons | 100 | 62700 | |
| | Units | Persons | 100 | 0 | |
| | SF | Persons | 100 | 0 | |
| Total Estimated Sewer Demand: | | | | 62700 | |

| Water Demand Calculations | | | | | |
|---------------------------------|--------------|--------------|-------------|-------------------------|---------------------|
| Residential 245 units | | | | | |
| Max Hour Demand | | | | | |
| Residential: | | | | | |
| 2 gpm/unit | = | 490 gpm | = | 29400 gph | |
| or | | | | | |
| Q=11.4*N*0.544 | = | 227.306 gpm | = | 13638.37 gph (not used) | |
| Commercial: | | | | | |
| Office Space | = | 200/1,000 sf | = | Average Daily Flows | |
| | | | | 0.00 gpd | = 0.00 gph |
| Max Hour | = | 11.84 x 300% | = | 0.00 gph | |
| Total = | 29400 | + | 0.00 | = | 29400.00 gph |
| Peak Hour Demand | | | | | |
| Residential: | | | | | |
| 3 gmp Per | = | 735 gpm | = | 44100 gph | |
| Commercial: | | | | | |
| 1.5' Max Hour Demand Commercial | = | | = | 0.00 gph | |
| Total = | 44100 | + | 0 | = | 44100.00 gph |

BUILDING A

SIZING WATER SERVICE LINES AND METERS

| CITY OF CHARLOTTESVILLE WATER CUSTOMER DATA SHEET | | | | | |
|--|-----------------|----------------|----------|-------|--|
| Customer | 0 E High Street | Address | Zip Code | 22901 | |
| Building Address | 0 E High Street | | | | |
| Subdivision | | Lot No. 50-144 | Blk. No. | | |
| Type of Occupancy | Residential | | | | |

| Fixture | Fixture Value 60 psi | No. of Fixtures | Fixture Value |
|-------------------------------------|----------------------|-----------------|-----------------|
| Bathub | 8 x | 54 | = 432 |
| Bedpan Washers | 10 x | | = 0 |
| Bidet | 2 x | | = 0 |
| Dental Unit | 2 x | | = 0 |
| Drinking Fountain - Public | 2 x | | = 0 |
| Kitchen Sink | 2.2 x | 44 | = 96.8 |
| Lavatory | 1.5 x | 59 | = 88.5 |
| Showerhead (Shower Only) | 2.5 x | 5 | = 12.5 |
| Service Sink | 4 x | | = 0 |
| Toilet - Flush Valve | 35 x | | = 0 |
| - Tank Type | 4 x | 59 | = 236 |
| Urinal - Pedestal Flush Valve | 35 x | | = 0 |
| - Wall Flush Valve | 16 x | | = 0 |
| Wash Sink (Each Set of Faucets) | 4 x | | = 0 |
| Dishwasher | 2 x | 44 | = 88 |
| Washing Machine | 6 x | 44 | = 264 |
| Hose (50 ft Wash Down) - 1/2 in. | 5 x | | = 0 |
| - 5/8 in. | 9 x | | = 0 |
| - 3/4 in. | 12 x | | = 0 |
| Combined Fixture Value Total | | | = 1217.8 |

Pressure Factor from Table 4-1 = 1.34gpm 110 psi
 Customer Peak Demand From Fig. 4-2 or 4-3 x Press. Factor = 87.1 gpm
 Add Irrigation - Sections* x 1.16 or 0.40* = 0 gpm
 Added Fixed Load 1 Hose-Bib x 9 Hose Bibs x Fixture Value x Press. Factor = 12.06 gpm
TOTAL FIXED DEMAND = 99.16 gpm

* 100 ft² area = 1 section
 * Spray Systems- Use 1.16; Rotary systems- Use 0.40

Figure 4-5 Water customer data sheet

Source: AWWA M22 Sizing Water Service Lines and Meters (Jan. 2004)
 Copyright 2004, American Water Works Association

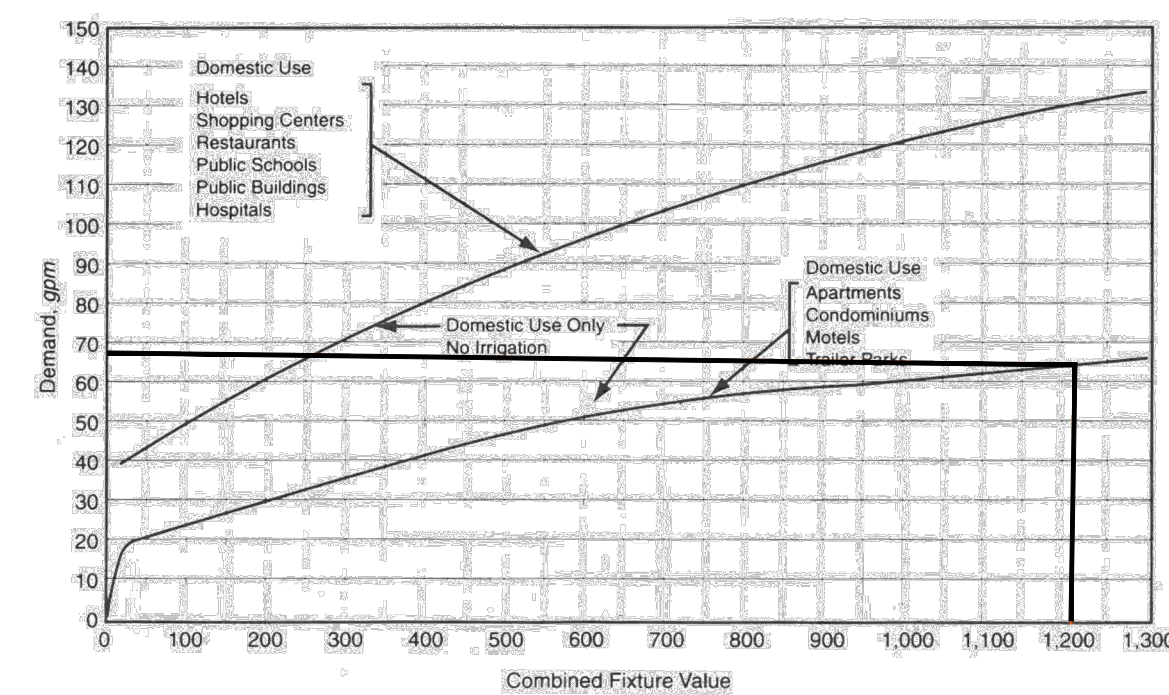


Figure 4-2 Water flow demand per fixture value—low range

BUILDING B

SIZING WATER SERVICE LINES AND METERS

| CITY OF CHARLOTTESVILLE WATER CUSTOMER DATA SHEET | | | | | |
|--|-----------------|----------------|----------|-------|--|
| Customer | 0 E High Street | Address | Zip Code | 22901 | |
| Building Address | 0 E High Street | | | | |
| Subdivision | | Lot No. 50-144 | Blk. No. | | |
| Type of Occupancy | Residential | | | | |

| Fixture | Fixture Value 60 psi | No. of Fixtures | Fixture Value |
|-------------------------------------|----------------------|-----------------|-----------------|
| Bathub | 8 x | 76 | = 608 |
| Bedpan Washers | 10 x | | = 0 |
| Bidet | 2 x | | = 0 |
| Dental Unit | 2 x | | = 0 |
| Drinking Fountain - Public | 2 x | | = 0 |
| Kitchen Sink | 2.2 x | 61 | = 134.2 |
| Lavatory | 1.5 x | 82 | = 123 |
| Showerhead (Shower Only) | 2.5 x | 6 | = 15 |
| Service Sink | 4 x | | = 0 |
| Toilet - Flush Valve | 35 x | | = 0 |
| - Tank Type | 4 x | 82 | = 328 |
| Urinal - Pedestal Flush Valve | 35 x | | = 0 |
| - Wall Flush Valve | 16 x | | = 0 |
| Wash Sink (Each Set of Faucets) | 4 x | | = 0 |
| Dishwasher | 2 x | 61 | = 122 |
| Washing Machine | 6 x | 61 | = 366 |
| Hose (50 ft Wash Down) - 1/2 in. | 5 x | | = 0 |
| - 5/8 in. | 9 x | | = 0 |
| - 3/4 in. | 12 x | | = 0 |
| Combined Fixture Value Total | | | = 1696.2 |

Pressure Factor from Table 4-1 = 1.34gpm 110 psi
 Customer Peak Demand From Fig. 4-2 or 4-3 x Press. Factor = 93.8 gpm
 Add Irrigation - Sections* x 1.16 or 0.40* = 0 gpm
 Added Fixed Load 1 Hose-Bib x 9 Hose Bibs x Fixture Value x Press. Factor = 12.06 gpm
TOTAL FIXED DEMAND = 105.86 gpm

* 100 ft² area = 1 section
 * Spray Systems- Use 1.16; Rotary systems- Use 0.40

Figure 4-5 Water customer data sheet

Source: AWWA M22 Sizing Water Service Lines and Meters (Jan. 2004)
 Copyright 2004, American Water Works Association

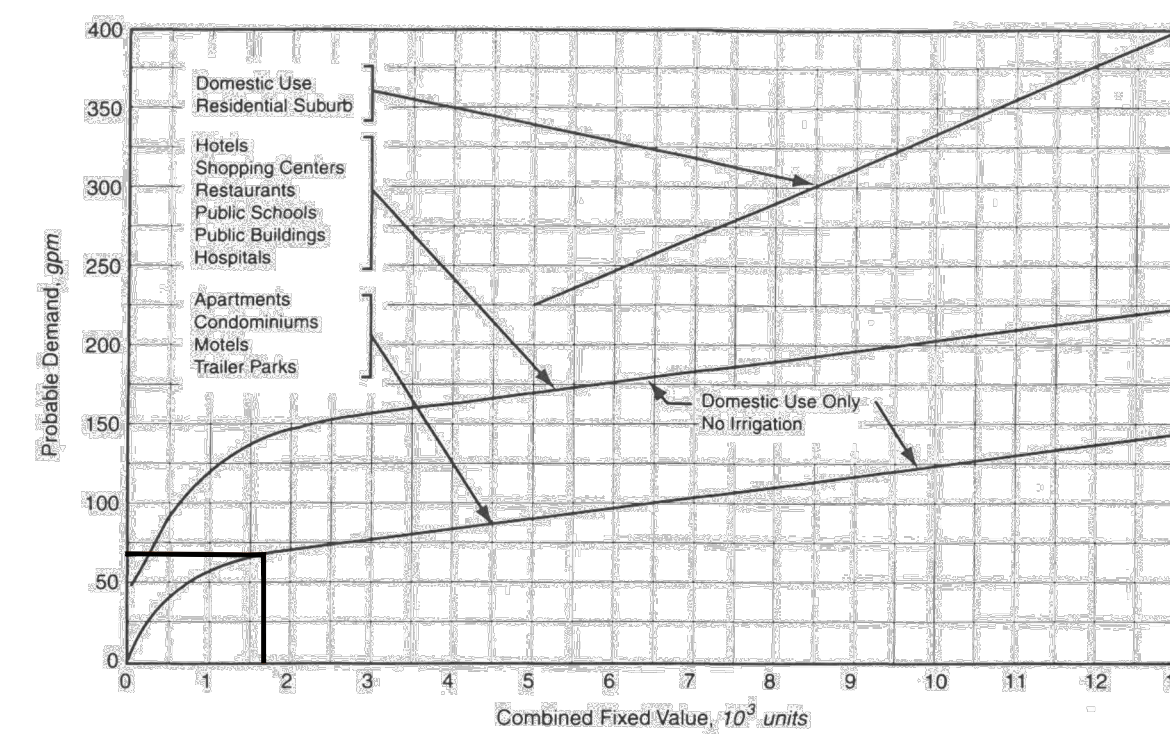


Figure 4-3 Water flow demand per fixture value—high range

BUILDING C

SIZING WATER SERVICE LINES AND METERS

| CITY OF CHARLOTTESVILLE WATER CUSTOMER DATA SHEET | | | | | |
|--|-----------------|----------------|----------|-------|--|
| Customer | 0 E High Street | Address | Zip Code | 22901 | |
| Building Address | 0 E High Street | | | | |
| Subdivision | | Lot No. 50-144 | Blk. No. | | |
| Type of Occupancy | Residential | | | | |

| Fixture | Fixture Value 60 psi | No. of Fixtures | Fixture Value |
|-------------------------------------|----------------------|-----------------|-----------------|
| Bathub | 8 x | 175 | = 1400 |
| Bedpan Washers | 10 x | | = 0 |
| Bidet | 2 x | | = 0 |
| Dental Unit | 2 x | | = 0 |
| Drinking Fountain - Public | 2 x | | = 0 |
| Kitchen Sink | 2.2 x | 140 | = 308 |
| Lavatory | 1.5 x | 175 | = 262.5 |
| Showerhead (Shower Only) | 2.5 x | 14 | = 35 |
| Service Sink | 4 x | | = 0 |
| Toilet - Flush Valve | 35 x | | = 0 |
| - Tank Type | 4 x | 175 | = 700 |
| Urinal - Pedestal Flush Valve | 35 x | | = 0 |
| - Wall Flush Valve | 16 x | | = 0 |
| Wash Sink (Each Set of Faucets) | 4 x | | = 0 |
| Dishwasher | 2 x | 140 | = 280 |
| Washing Machine | 6 x | 140 | = 840 |
| Hose (50 ft Wash Down) - 1/2 in. | 5 x | | = 0 |
| - 5/8 in. | 9 x | | = 0 |
| - 3/4 in. | 12 x | | = 0 |
| Combined Fixture Value Total | | | = 3825.5 |

Pressure Factor from Table 4-1 = 1.34gpm 110 psi
 Customer Peak Demand From Fig. 4-2 or 4-3 x Press. Factor = 117.92 gpm
 Add Irrigation - Sections* x 1.16 or 0.40* = 0 gpm
 Added Fixed Load 2 Hose-Bib x 9 Hose Bibs x Fixture Value x Press. Factor = 24.12 gpm
TOTAL FIXED DEMAND = 142.04 gpm

* 100 ft² area = 1 section
 * Spray Systems- Use 1.16; Rotary systems- Use 0.40

Figure 4-5 Water customer data sheet

Source: AWWA M22 Sizing Water Service Lines and Meters (Jan. 2004)
 Copyright 2004, American Water Works Association

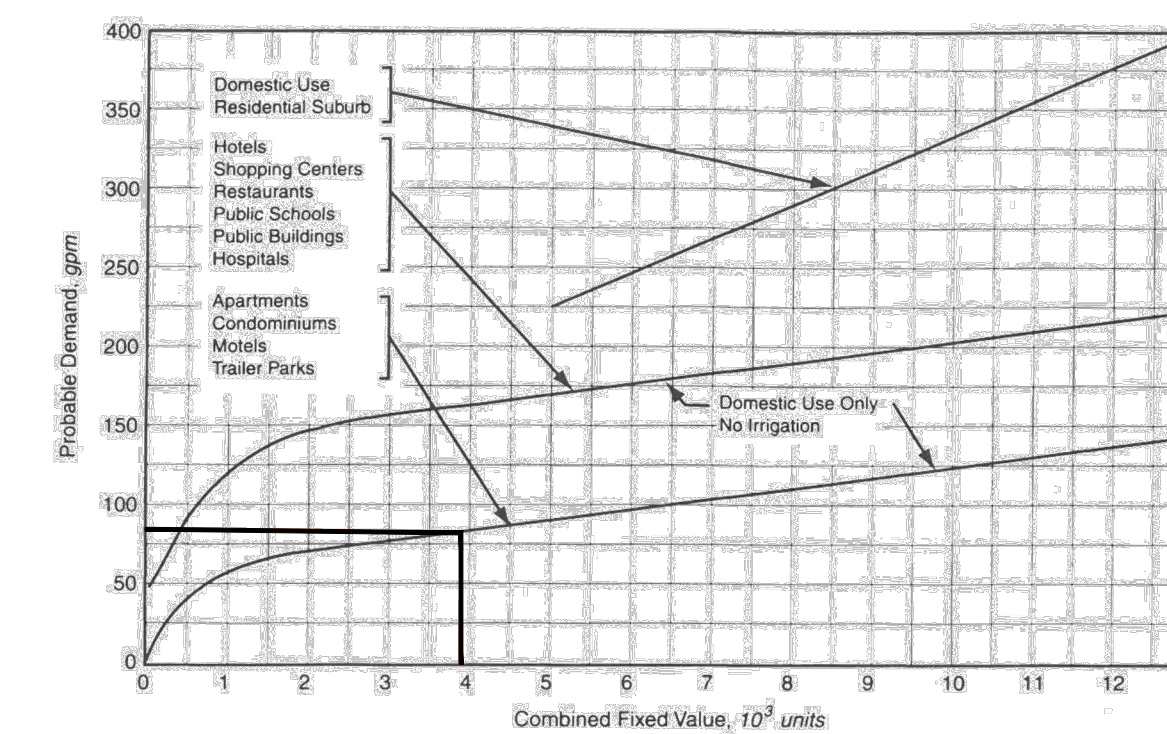
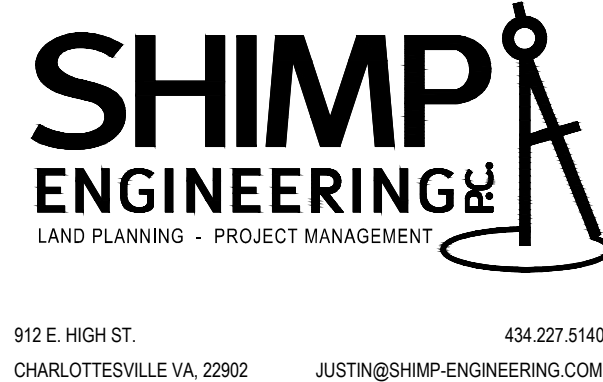


Figure 4-3 Water flow demand per fixture value—high range



PRELIMINARY SITE DEVELOPMENT PLAN

0 EAST HIGH STREET

CITY OF CHARLOTTESVILLE, VIRGINIA

SUBMISSION:

2022.08.05

REVISION:

2022.12.07

2023.02.17

FILE NO.

20.017

**WATER & SANITARY
DEMAND CALCULATIONS**

C17