Town of Rolesville, NC
Department of Planning

502 Southtown Circle
Rolesville, NC 27571
Phone: (919) 556-3506

Comments on #CID-25-0003 - Planning & Zoning: Construction Infrastructure Drawing

Application Number: #CID-25-0003
Application Type: Construction Infrastructure Drawing
Date: April 1, 2026
Address: 5109 Mitchell Mill Rd

THIS DOCUMENT IS NOT YOUR PERMIT.

The Rolesville Planning Department has reviewed your application for a Construction Infrastructure Drawing Application and has responded with a set of comments that require your attention. These comments must be addressed in full before an approval will be issued.

Reviewing this document on GovWell, our online portal, will allow you to view interactive markups on the document. If you are viewing this as a PDF or offline, a list of all comments will be provided below in this cover sheet. These comments must be acknowledged before a permit is issued.

After you have addressed all comments, please upload corrected versions of the plans by clicking here or by visiting https://app.govwell.com/record/ad8982f5-fcb0-4bb1-a775-2eb2d8e21466.

Contacts

Austin Bain City of Raleigh Engineer	(919) 996-3468 austin.bain@raleighnc.gov	Updates Requested
Eddie Henderson Parks & Recreation	ehenderson@rolesvillenc.gov	Updates Requested
Jacqueline Thompson On-Call Civil Engineer	jacqueline.thompson@bolton-menk.com	Updates Requested
Lorna Withrow Wake County Watershed Mgmt	lorna.withrow@wake.gov	Updates Requested
Meredith Gruber Senior Planner	mgruber@rolesvillenc.gov	Updates Requested

Michael Elabarger Assistant Planning Director	melabarger@rolesvillenc.gov	Updates Requested
Michele Raby Planner II	mraby@rolesvillenc.gov	Updates Requested
Scott Miles Town Engineer PE	smiles@rolesvillenc.gov	Updates Requested
Stephen Wolf Wake County Deputy Fire Marshal	stephen.wolf@wake.gov	Updates Requested
Tanner Hayslette Planner I	thayslette@rolesvillenc.gov	Approved
Thomas DeAveiro NCDOT Reviewer	tddeaveiro@ncdot.gov	Updates Requested
Tim Beasley City of Raleigh - Public Utilities	timothy.beasley@raleighnc.gov	Updates Requested
Stephen Wensman Planning Director	swensman@rolesvillenc.gov	No Comment

Comments on Plan

1 ME Michael Elabarger
Assistant Planning Director

BIG PICTURE - what is the purpose and intent of this PLan Set? It has been submitted as a CID - subdivision infrastructure plans. Yet the Site Development Plan (SDP) checklist is included. Are these plans for infrastructure, or Site improvements for end-users, including the architectural elevations (LDO 6.8 standards) ? Please confer with all Planning Staff on the intended scope. Staff has experienced that in some instances, a combined plan set of some CID aspects and all the SDP aspects makes the most sense - this was utilized for the Publix building at Wallbrook for instance. Apologies if some of this has been previously broached and addressed - Version 2 was in October, Version 1 in August. TY.

Page 1 • March 31, 2026, 4:42pm

2 ME Michael Elabarger
Assistant Planning Director

Please rephrase this plan set at Construction Infrastructure Drawings; town does not have a 'site construction plan' application type.

Page 1 • March 31, 2026, 4:24pm

3 ME Michael Elabarger
Assistant Planning Director

I don't see a response to V2 Comments - was one submitted?

Page 1 • March 31, 2026, 5:04pm

4 AB Austin Bain
City of Raleigh Engineer

Please see Energov comments for COR feedback.

Page 1 • March 26, 2026, 3:36pm

5 ME Michael Elabarger
Assistant Planning Director

You can remove SDP-26-xx, SDP's will come after this CID.

Page 1 • March 31, 2026, 4:22pm

6 MR Michele Raby
Planner II

Repeat comment-- CID cannot be approved until addresses assigned by WC. Please ensure correct address of market before requesting CID approval signatures. Thank you for contacting WC E-911

Page 1 • March 10, 2026, 8:19am

7 ME Michael Elabarger
Assistant Planning Director

Do these setback dimensions apply to Commercial lots? IF these are actually for residential, they should be deleted. Bc NC is a district that allows both res and non-res, please connotate these specifically as Non-residential Building Setbacks. TY.

Page 1 • March 31, 2026, 4:31pm

8 ME Michael Elabarger
Assistant Planning Director

The 'commercial' site area is 8.48 acres, right? Is this meant to express that the zoning entitlement commits to a minimum of 50,000 SF of commercial building space? calling it 'commercial area' is confusing - please revise to something like above that is crystal clear what this note is expressing. TY.

Page 1 • March 31, 2026, 4:33pm

9 ME Michael Elabarger
Assistant Planning Director

Should this not be per MA 22-06? A PSP is just a preliminary layout of lots, ROW, easements, not developable building square footage. Being a CID for infrastructure, are parking calculations even applicable now on this plan set? This whole table seems more appropriate and applicable on a SDP plan set for ultimate build-out.

Page 1 • March 31, 2026, 4:36pm

10 TD Thomas DeAveiro
NCDOT Reviewer

NCDOT Driveway Permit/Encroachment Approvals Needed.

Page 1 • March 27, 2026, 9:02am

11 MR Michele Raby
Planner II

Retaining walls will require WC permits

Page 5 • March 10, 2026, 8:21am

12 MR Michele Raby
Planner II

Repeat comment- Please add building addresses when obtained from WC E 911.

Page 5 • March 10, 2026, 8:21am

13 MR Michele Raby
Planner II

Dumpsters will require WC permit.

Page 5 • March 10, 2026, 8:21am

14 JT Jacqueline Thompson
On-Call Civil Engineer

Please confirm the intent is for pedestrians to walk within the road from the inner parking areas.

Page 5 • March 23, 2026, 3:38pm

15 MR Michele Raby
Planner II

Please show sign easement and addresses when obtained from E911. Signs will require WC permit.

Page 5 • March 10, 2026, 8:23am

16 JT Jacqueline Thompson
On-Call Civil Engineer

Show sewer and water to ensure no conflicts. Any crossings will need to define elevations.

Page 8 • March 23, 2026, 3:35pm

17 JT Jacqueline Thompson
On-Call Civil Engineer

Review all grading - Curbline has low points in the corners with nowhere for water to drain in multiple spots.

Page 9 • March 23, 2026, 3:28pm

18 JT Jacqueline Thompson
On-Call Civil Engineer

Due to the business of the plans it is highly encouraged (not required) to create additional sheets with an increase in scale.
Keeping the hatch in the sidewalk is also recommended since the linework is getting lost between islands/medians and walk.

Page 9 • March 23, 2026, 3:42pm

19 JT Jacqueline Thompson
On-Call Civil Engineer

Water appears to be draining away from this curbline - this CB doesn't seem effective. Please review drainage plan.

Page 9 • March 23, 2026, 3:30pm

20 JT Jacqueline Thompson
On-Call Civil Engineer

Please include spot elevations for pedestrian ramps to ensure ADA compliance.

Page 9 • March 23, 2026, 3:32pm

21 JT Jacqueline Thompson
On-Call Civil Engineer

Low point in curbline with no CB

Page 9 • March 23, 2026, 3:29pm

22 JT Jacqueline Thompson
On-Call Civil Engineer

ADA compliant paths must be less than 2% cross-slope.

Page 9 • March 23, 2026, 3:37pm

23 JT Jacqueline Thompson
On-Call Civil Engineer

ADA Compliance must be met for parking spaces - Less than 2% in any direction for a "landing"

Page 9 • March 23, 2026, 3:34pm

24 JT Jacqueline Thompson
On-Call Civil Engineer

Appears to be a low point with no CB

Page 10 • March 23, 2026, 3:40pm

25 JT Jacqueline Thompson
On-Call Civil Engineer

Appears to be a low point with no CB

Page 10 • March 23, 2026, 3:40pm

26 JT Jacqueline Thompson
On-Call Civil Engineer

Confirm grade

Page 11 • March 23, 2026, 3:50pm

27 JT Jacqueline Thompson
On-Call Civil Engineer

Confirm grade

Page 11 • March 23, 2026, 3:50pm

28 JT Jacqueline Thompson
On-Call Civil Engineer

Confirm no drainage intended for solid pipe.

Page 11 • March 23, 2026, 3:48pm

29 JT Jacqueline Thompson
On-Call Civil Engineer

Confirm slope is intended - Sediment will build with this flat grade.

Page 11 • March 23, 2026, 3:49pm

30 SW Stephen Wolf
Wake County Deputy Fire Marshal

** Previous comments not addressed. Buildings D, C, B, A and possibly E do not meet the fire apparatus access requirements of the 2018 NC Fire Code.
503.1.1 - "Approved fire apparatus access roads shall be provided for every facility, building or portion of a building hereafter constructed or moved into or within the jurisdiction. The fire apparatus access road shall comply with the requirements of this section and shall extend to within 150 feet (45 720 mm) of all portions of the facility and all portions of the exterior walls of the first story of the building as measured by an approved route around the exterior of the building or facility.
503.2.1 – Fire apparatus access roads shall have an unobstructed width of not less than 20 feet, exclusive of shoulders, except for approved security gates in accordance with Section 503.6, and an unobstructed vertical clearance of not less than 13 feet 6 inches.
503.2.2 – The fire code official shall have the authority to require or permit modifications to the required access widths where they are inadequate for fire or rescue operations or where necessary to meet the public safety objectives of the jurisdiction.

Page 18 • March 24, 2026, 11:10am

31 EH Eddie Henderson
Parks & Recreation

Revise to show a better balance of native vs non native shrubs. Only one native is shown here. Ideas for native shrubs could be a native viburnum, Callicarpa americana, etc

Page 21 • March 18, 2026, 3:28pm

32 SM Scott Miles
Town Engineer PE

please provide angled parking detail

Page 24 • March 24, 2026, 10:48am

33

TB

Tim Beasley
City of Raleigh - Public Utilities

lumin levels are unreadable

Page 25 • March 10, 2026, 12:35pm

34

MG

Meredith Gruber
Senior Planner

Please correct me if I'm wrong--I don't recall seeing the architectural elevations before. See LDO Section 6.8.2.D. to confirm compliance with nonresidential building design standards.

Page 49 • March 27, 2026, 9:05am

MITCHELL MILL MARKET

SITE CONSTRUCTION PLANS

CID-25-06; SDP-26-XX; MRCP-0031-2025
5109 MITCHELL MILL ROAD
TOWN OF ROLESVILLE, WAKE COUNTY, NORTH CAROLINA

SITE INFORMATION:

LOCATION:	5109 MITCHELL MILL ROAD
COUNTY:	WAKE COUNTY
PARENT PIN:	1757571035
DB/PG:	DB 8659, PG 954
ZONING:	NC-CZ
ZONING AND ANNEXATION:	MA 22-06 &ANX22-03
PRELIMINARY SITE PLAN:	PSP 23-03 APPROVED 12-09-2024
RIVER BASIN:	NEUSE RIVER BASIN
WATERSHED:	HARRIS CREEK

BUILDING SETBACKS (MIN) NC-CZ

FRONT:	15'
SIDE:	10'
REAR:	10'

OVERALL & PERIMETER STANDARDS:
THOROUGHFARE BUFFER (JONESVILLE & MITCHELL MILL)

LOT ACREAGE:
SITE ACREAGE (FROM APPROVED PSP 23-03) = 369,542 SF (8.48 AC)
NET DEVELOPABLE AREA (INCLUDES OLD SCM FROM PSP 23-03) = 426,432.25 SF (9.79 AC)
SCOPE OF WORK AREA = 467,119 SF (10.74 AC)

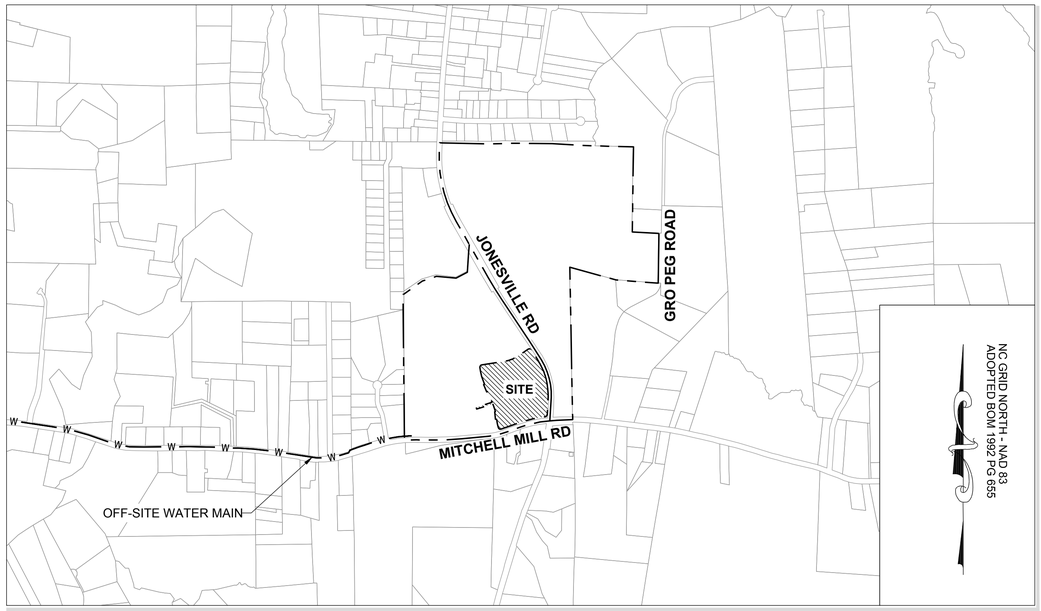
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IMPERVIOUS AREAS:
NC ZONING DISTRICT

BUILDINGS	88,776 SF (2.04 AC)
ROADWAYS & SIDEWALKS:	229,646 SF (5.27 AC)
PATIO:	330 SF (0.01 AC)
CONCRETE SLAB:	650 SF (0.01 AC)
TOTAL ON-SITE IMPERVIOUS AREA:	319,401 SF (7.33 AC)
TOTAL ON-SITE IMPERVIOUS PERCENT:	68.27%

RALEIGH WATER INSPECTIONS QUANTITIES (SUBDIVISIONS AND SITE PLANS)	PHASE 1
PHASE NUMBER(S)	N/A
NUMBER OF LOT(S)	1
NUMBER OF UNITS	23
PUBLIC WATER (LF)	0
PUBLIC SEWER (LF)	71
PUBLIC FORCE MAIN (LF)	0
PRIVATE SEWER* (LF)	1,926
CORPUD GANG METER ASSEMBLY	3
SEWER SERVICE STUBS (QUANTITY)	0
AVERAGE DAILY FLOW PER PHASE (GPD)	51,040

BUILDING AND PARKING		
REQUIRED SF AS PER PSP 23-03		50,000
PROPOSED SF		58,000
PARKING REQUIRED	(TABLE 6.4.3.G)	(2.5/1000 SF) MIN = 145 SPACES
		(7.5/1000 SF) MAX = 436 SPACES
PARKING PROPOSED		289 SPACES
		(INCLUDING 13 ADA COMPLIANT SPACES)
BICYCLE PARKING	(6.4.8)	(1.0/5000 SF)
PROPOSED SF		58,000 (11.6 SPACES)
PROPOSED PARKING		12 BIKE RACK SPACES



VICINITY MAP
1" = 800'

FRIS MAP # 3720175700K
PANEL # 1757
EFFECTIVE DATE: 07/19/2022

OWNER:

HOPPER COMMUNITIES
CONTACT: BILL HARRELL
BHARRELL@HOPPERCOMMUNITIES.COM

SURVEYOR:

THE TIMMONS GROUP
5410 TRINITY ROAD, Suite 102 | RALEIGH, NC 27607
TEL 919.866.4951

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STRONGROCK ENGINEERING GROUP
305 CHURCH AT NORTH HILLS ST, SUITE 1110
RALEIGH, NC 27609
INFORMATION@STRONGROCKGROUP.COM

ARCHITECT:

LISLE ARCHITECTURE & DESIGN INC.
RALEIGH, NC 27613
ASHLEYH@LISLEARCHITECTURE.COM

STORMWATER CONSULTANT DESIGNER:

BARRETT L. KAYS, PH.D., NC LICENSED SOIL SCIENTIST NCLSS #1005
SENIOR SOIL, HYDROLOGIC, GROUNDWATER AND ENVIRONMENTAL SCIENTIST
BARRETTKAYS@GMAIL.COM
1200 CARLOS DRIVE, APT. 541 RALEIGH, NC 27609
PHONE: 919-696-6930

ATTENTION CONTRACTORS

THE CONTRACTOR RESPONSIBLE FOR THE EXTENSION OF WATER, SEWER, AND/OR REUSE, AS APPROVED IN THESE PLANS, IS RESPONSIBLE FOR CONTACTING THE INFRASTRUCTURE INSPECTIONS DIVISION AND SCHEDULE A PRE-CONSTRUCTION MEETING ON THE DEVELOPMENT PORTAL PRIOR TO BEGINNING ANY CONSTRUCTION. RALEIGH WATER MUST BE CONTACTED AT (919) 996-4540 AT LEAST TWENTY-FOUR HOURS PRIOR TO BEGINNING ANY WORK ACTIVITY AROUND CRITICAL WATER AND SEWER INFRASTRUCTURE.

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45	D-5.4	EROSION CONTROL PLAN DETAILS
46	D-5.5	EROSION CONTROL PLAN DETAILS
47	A-1.0	ARCHITECTURE PLANS

THIS PLANSET AND ANY ASSOCIATED DOCUMENTS ARE PRELIMINARY AND NOT AUTHORIZED FOR CONSTRUCTION UNTIL SIGNED, DATED, AND OFFICIALLY RELEASED FOR CONSTRUCTION BY THE ENGINEER OF RECORD.

No.	REVISIONS	DATE	BY
0	CD SUBMITTAL #1	08/01/2025	SREG
1	CID-25-06 V2	10/01/2025	SREG
2	CID-25-06 V3	03/02/2026	SREG

SEAL:

STRONGROCK
ENGINEERING GROUP
STRONG ROCK ENGINEERING GROUP, PLLC | COMPANY LICENSE # P-2166
305 CHURCH AT NORTH HILLS STREET, SUITE 1110 RALEIGH, NC 27609 | INFORMATION@STRONGROCKGROUP.COM

STRONG ROCK PROJECT	CID-25-06
	NOT FOR CONSTRUCTION
SCALE	AS SHOWN
DESIGNED BY	SRG
DRAWN BY	SRG
CHECKED BY	SRG

MITCHELL MILL MARKET
TOWN OF ROLESVILLE, WAKE COUNTY, NORTH CAROLINA
CONSTRUCTION PLANS
COVER SHEET

DRAWING SHEET
C-1.0

01 OF 47

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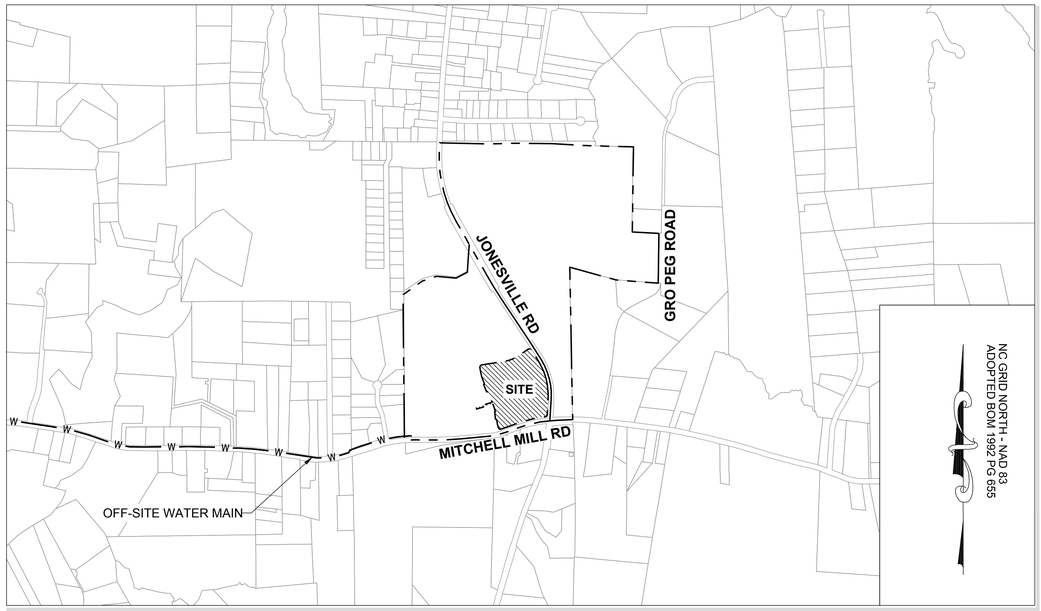
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39	D-4.3	STORM DRAINAGE DETAILS
40	D-4.4	STORM DRAINAGE DETAILS
41	D-5.0	EROSION CONTROL PLAN DETAILS
42	D-5.1	EROSION CONTROL PLAN DETAILS
43	D-5.2	EROSION CONTROL PLAN DETAILS
44	D-5.3	EROSION CONTROL PLAN DETAILS
45	D-5.4	EROSION CONTROL PLAN DETAILS
46	D-5.5	EROSION CONTROL PLAN DETAILS
47	A-1.0	ARCHITECTURE PLANS

THIS PLANSET AND ANY ASSOCIATED DOCUMENTS ARE PRELIMINARY AND NOT AUTHORIZED FOR CONSTRUCTION UNTIL SIGNED, DATED, AND OFFICIALLY RELEASED FOR CONSTRUCTION BY THE ENGINEER OF RECORD.

No.	REVISIONS	DATE	BY
0	CD SUBMITTAL #1	08/01/2025	SREG
1	CID-25-06 V2	10/01/2025	SREG
2	CID-25-06 V3	03/02/2026	SREG

SEAL:

STRONGROCK
ENGINEERING GROUP
STRONG ROCK ENGINEERING GROUP, PLLC | COMPANY LICENSE # P-2166
305 CHURCH AT NORTH HILLS STREET, SUITE 1110 RALEIGH, NC 27609 | INFORMATION@STRONGROCKGROUP.COM

STRONG ROCK PROJECT	CID-25-06
NOT FOR CONSTRUCTION	
SCALE	AS SHOWN
DESIGNED BY	SRG
DRAWN BY	SRG
CHECKED BY	SRG

MITCHELL MILL MARKET
TOWN OF ROLESVILLE, WAKE COUNTY, NORTH CAROLINA
CONSTRUCTION PLANS
COVER SHEET

DRAWING SHEET
C-1.0

01 OF 47

EXHIBIT D

MIXED-USE NEIGHBORHOOD CENTER CONDITIONAL ZONING
DISTRICT (NC-CZ) AND RESIDENTIAL MEDIUM DENSITY CONDITIONAL ZONING DISTRICT (RM-CZ)
ZONING CONDITIONS

Conditions Applicable to the entire property:

1. The subject property shall be developed generally in accordance with the sketch plan attached hereto as Exhibit 1 and incorporated herein as if fully set out. The approximately 55± acre portion of the subject property located west of Jonesville Road and further described as Parcel 1 on the attached Exhibit 2 attached hereto shall be zoned NC-CZ and the approximately 85± acre portion of the property located east of Jonesville Road and further described as Parcel 2 on Exhibit 2 attached hereto shall be zoned RM-CZ. The improvements described herein may be developed in phase in accordance with a phasing plan approved by the Town of Rolesville.
2. The total number of dwellings on the subject property shall not exceed 395 dwelling units and no more than 134 of these dwelling units shall be permitted to be Dwellings, Single Family, Attached (Townhouse.)
3. Mixture of Uses: At least 50,000 square feet of non-residential building area shall be permitted (issuance of a building permit) prior to permitting (issuance of a building permit) more than 197 dwelling units.
4. Affordable Housing:
   a. Prior to the issuance of the first building permit for a dwelling unit, the property owner shall donate Sixty Thousand Dollars and No Cents ($60,000.00) to Homes for Heroes.
   b. Prior to the issuance of the 200th building permit, the property owner shall donate one (1) Dwelling, Single Family, Attached (townhome) to Passage Homes, CASA, Habitat for Humanity of Wake County or other similar organization providing homes to low-income people.
5. Pollinator Plantings:

At least twenty percent (20%) of the landscaping planted in common areas on the subject property shall utilize plant materials that are listed as Native Pollinator Plants on North Carolina Wildlife Federation ("NCWF") or other resources for native plants recommended by the NCWF on their website, currently found at https://ncwf.org/habitat/native-pollinator-plants/ Where evergreen plantings or street trees are required by the Rolesville Land Development Ordinance as the same may be amended from time to time, pollinator plantings shall not be required. Nothing herein shall be construed to limit the plant materials permitted on individual residential lots. Compliance with this condition shall be demonstrated at construction infrastructure drawings for each phase.

6. Recreational Amenities:

The following recreational amenities shall be provided generally as shown on the attached Exhibit 1 as a part of the development of the subject property and dedicated to the Homeowner's Association except for those areas offered to and accepted by the Town of Rolesville:

   a. A swimming pool and cabana, including changing rooms and restrooms shall be constructed prior to the issuance of the 150th building permit for a dwelling unit;
   b. At least one fenced playground shall be constructed prior to the issuance of the 150th building permit for a dwelling unit;
   c. At least one fenced dog park shall be constructed prior to the issuance of the 150th building permit for a dwelling unit;
   d. Public greenway on a greenway easement dedicated to the Town of Rolesville with paved trails at least ten feet wide (10') shall be constructed generally as shown on the attached Exhibit 1;
   e. A greenway trail head with at least four (4) parking spaces shall be constructed generally as shown on Exhibit 1 and offered to the Town of Rolesville for use as a greenway trail head prior to the issuance of the 200th building permit for a dwelling unit. The Town of Rolesville may accept or reject the offer of dedication in its sole discretion prior to the issuance of the 250th building permit. If the Town of Rolesville accepts dedication of this trailhead, the area dedicated to the Town of Rolesville shall be credited to this project as active open space. If the Town of Rolesville does not accept or reject the dedication of this area in writing prior to issuance of the 250th building permit, it shall be dedicated to the homeowner's association.
   f. At least one (1) community garden shall be provided prior to issuance of the 336th building permit for a dwelling unit; and
   g. At least one (1) acre of undeveloped land in the area located at the northeast quadrant of the intersection of Jonesville Road and Mitchell Mill Road shall be offered to the Town of Rolesville generally as shown on the attached Exhibit 1 for recreational uses prior to the issuance of the 150th building permit for a dwelling unit. The Town of Rolesville may accept or reject the offer of dedication in its sole discretion prior to the issuance of the 200th building permit. If the Town of Rolesville shall be credited to this project as active open space. If the Town of Rolesville does not accept or reject the dedication of this area in writing prior to the issuance of the 200th building permit, it shall be dedicated to the homeowner's association.

7. Additional Driveway Access and Crosswalk to Commercial Area:

Prior to the issuance of the first building permit, the property owner shall apply to NCDOT to allow the installation of an additional driveway access and cross-walk across Jonesville Road from the property zoned RM-CZ to the commercial area located in the northwest quadrant of the intersection of Mitchell Mill and Jonesville Road, both as generally shown as "Potential Additional Driveway and Cross Walk Connection Per Condition #7 of Zoning Conditions" on Exhibit 1. The application to NCDOT shall include a plan for the driveway connection and crosswalk drawn by an engineer and an update to the existing traffic impact analysis prepared by a traffic engineer. If NCDOT approves such a crosswalk and/or driveway access, the property owner shall install them in accordance with the requirements of NCDOT.

8. Transportation Improvements:

To address transportation impacts reasonably expected to be generated by the development, the following road improvements shall be installed in accordance with future phasing plans approved by the Town:

   a. Jonesville Road:
      i. Widen Jonesville Road along the site frontage between Site Access 1 and Mitchell Mill to the roadways ultimate cross section per Rolesville Community Transportation Plan, 2 lanes with two-way left turn lanes.
   b. Mitchell Mill Road:
      i. Widen one-half section along the site frontage to this roadway's ultimate cross section per the Rolesville Community Transportation Plan, 4-lane median divided.
   c. Mitchell Mill Road and Jonesville Road/Peebles Road:
      i. Provide a southbound (Jonesville Road) left turn lane with at least 100 feet of storage and appropriate decel and taper; and
      ii. Construct an eastbound (Mitchell Mill Road) left-turn lane with at least 100 feet of storage and appropriate decel and taper.
   d. Jonesville Road and Site Access 1:
      i. Construct the westbound approach (Site Access 1) with one ingress lane and one egress lane;
      ii. Provide stop-control for westbound approach (Site Access 1); and
      iii. Construct a southbound (Jonesville Road) left-turn lane with at least 100 feet of storage and appropriate decel and taper.
   e. Jonesville Road and Site Access 2:
      i. Construct the westbound approach (Site Access 2) with one ingress lane and one egress lane;
      ii. Provide stop-control for westbound approach (Site Access 2); and
      iii. Construct a southbound (Jonesville Road) left-turn lane with at least 100 feet of storage and appropriate decel and taper.
   f. Jonesville Road and Site Access 3:
      i. Construct the eastbound and westbound approaches (Site Access 3) with one ingress lane and one egress lane;
      ii. Provide stop-control for eastbound and westbound approach (Site Access 3);
      iii. Construct northbound (Jonesville Road) left-turn lane with at least 100 feet of storage and appropriate decel and taper;
      iv. Construct northbound (Jonesville Road) right-turn lane with at least 100 feet of storage and appropriate decel and taper;
      v. Construct a southbound (Jonesville Road) left-turn lane with at least 100 feet of storage and appropriate decel and taper; and
      vi. Construct a southbound (Jonesville Road) right-turn lane with at least 100 feet of storage and appropriate decel and taper.
   g. Jonesville Road and Site Access 4:
      i. Construct the eastbound approach (Site Access 4) with one ingress lane and one egress lane;
      ii. Provide stop-control for eastbound approach (Site Access 4);
      iii. Provide a northbound (Jonesville Road) left-turn lane with at least 100 feet of storage and appropriate decel and taper; and
      iv. Provide a southbound (Jonesville Road) right-turn lane with at least 100 feet of storage and appropriate decel and taper.
   h. Mitchell Mill and Site Access 5:
      i. Construct the southbound approach (Site Access 5) with one ingress lane and one egress lane;
      ii. Provide stop-control for southbound approach (Site Access 5) restricted to right in, right-out operations unless left-turn access is approved by NCDOT; and
      iii. Construct an exclusive westbound (Mitchell Mill Road) right-turn lane with at least 100 feet of storage and appropriate decel and taper.
   i. Mitchell Mill and Site Access 6:
      i. Construct the southbound approach (Site Access 6) with one ingress lane and one egress lane striped as an exclusive right-turn lane; and
      ii. Provide stop-control for southbound approach (Site Access 6) restricted to right in, right-out operations.
   j. Mitchell Mill and Site Access 7:
      i. Construct the southbound approach (Site Access 7) with one ingress lane and one egress lane;
      ii. Provide stop-control for southbound approach (Site Access 7); and
      iii. Construct an exclusive eastbound (Mitchell Mill Road) left-turn lane with at least 100 feet of storage and appropriate decel and taper.
   k. Mitchell Mill Road and Site Access 8:
      i. Construct the southbound approach (Site Access 8) with one ingress lane and one egress lane striped as an exclusive right-turn lane;
      ii. Provide stop-control for southbound approach (Site Access 8). This proposed intersection will be restricted to right-in/right-out operations; and
      iii. Construct an exclusive westbound (Mitchell Mill Road) right-turn lane with at least 100 feet of storage and appropriate decel and taper.
   l. Signal Analysis and Funding:
      i. US 401 Bypass and Jonesville Road: Conduct a full signal warrant analysis prior to full build-out of the proposed development and install a traffic signal if warranted and approved by the Town and NCDOT. Nothing herein shall prohibit the property owner or developer from entering into cost-sharing agreements with others who may also benefit from a signal at this location.
      ii. US 401Bypass and Eastern U-turn Location: Conduct a full signal warrant analysis prior to full build-out of the proposed development and install a traffic signal if warranted and approved by the Town and NCDOT. Nothing herein shall prohibit the property owner or developer from entering into cost-sharing agreements with others who may also benefit from a signal at this location.
      iii. Jonesville and Mitchell Mill Road: Conduct a full signal warrant analysis prior to full build-out of the proposed development and install a traffic signal if warranted and approved by the Town and NCDOT. Nothing herein shall prohibit the property owner or developer from entering into cost-sharing agreements with others who may also benefit from a signal at this location.
      iv. If no traffic signal has been warranted and approved by the Town and NCDOT at any of the locations identified in Condition 8(1)(i)-(iii) at full build-out of the proposed development (issuance of certificate of occupancy for the 380th dwelling unit and 50,000 square feet of non-residential uses), the property owner shall contribute Fifty Thousand Dollars ($50,000.00) to the Town of Rolesville to be used by the Town of Rolesville to install a traffic light at any one of the locations identified in Condition 8(1)(i)-(iii) above when warranted and approved by NCDOT.

Conditions Applicable to Dwelling, Single Family, Detached only:

9. All homes shall include either crawl space foundations or stem wall foundations. Any stem wall foundations shall be at least eighteen inches (18") in height across the front facade of the home and shall have brick or stone veneer on all sides facing a public street.
10. The minimum building square footage shall be 2,000 square feet.

Conditions Applicable to Dwellings, Single Family, Attached (Townhouse) only:

11. No Dwelling, Single Family, Attached (Townhouse) building shall exceed six (6) dwellings.
12. The minimum building square footage for townhomes shall be 1,200 square feet.

Conditions Applicable to the NC-CZ District only:

13. All uses permitted in the Neighborhood Center Mixed-Use district shall be permitted within the NC-CZ except Dwellings, Multiple Family (apartments) shall only be permitted in buildings with commercial uses located on the ground floor.

These zoning conditions have been voluntarily offered by the property owner. All property owners must sign each condition page. This page may be photocopied if additional space is needed.

Signature: Print Name: Dana Bright — Dana Bright — 3-7-2024

Date:

Signature: Print Name: Randy Bright — Randy Bright — 3-7-2024

Date:

Signature: Print Name: Giny Wheeler — Giny Wheeler — 3-7-24

Date:

Signature: Print Name: Stephen Wheeler — Stephen Wheeler — 3/7/2024

Date:

Signature: Print Name: Leigh Fowler — Leigh Fowler — 3/7/2024

Date:

Signature: Print Name: James Robert Fowler, III — James Robert Fowler III — 3-7-24

Date:

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SEAL:

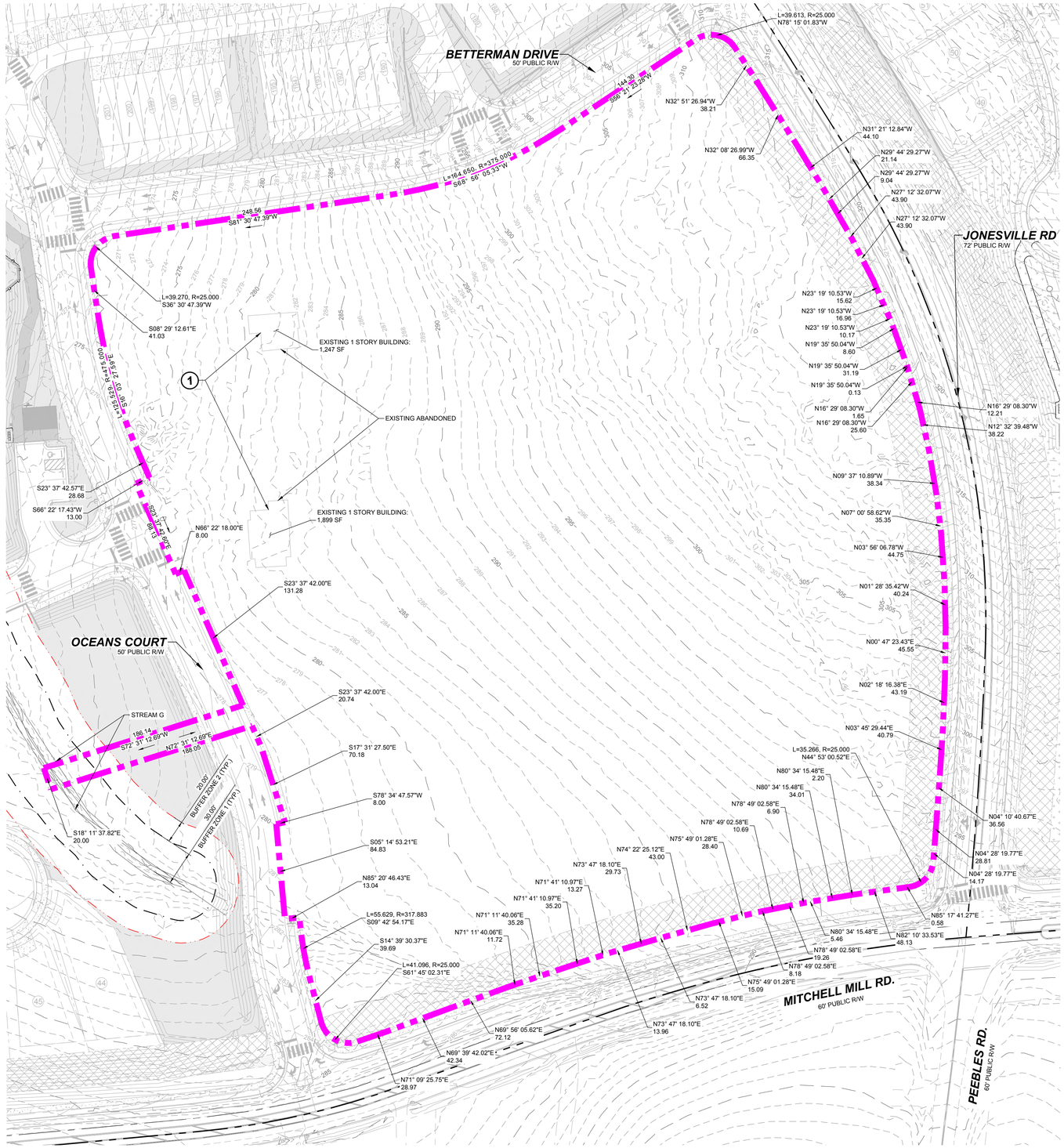
STRONGROCK
ENGINEERING GROUP
STRONG ROCK ENGINEERING GROUP, PLLC | COMPANY LICENSE # P-2165
305 CHURCH AT NORTH HILLS STREET, SUITE 1110 RALEIGH, NC 27609 | INFORMATION@STRONGROCKGROUP.COM

STRONG ROCK PROJECT	CID-25-06
	NOT FOR CONSTRUCTION
SCALE	AS SHOWN
DESIGNED BY	SRG
DRAWN BY	SRG
CHECKED BY	SRG

MITCHELL MILL MARKET
TOWN OF ROLESVILLE, WAKE COUNTY, NORTH CAROLINA
CONSTRUCTION PLANS
ZONING CONDITION

DRAWING SHEET
C-1.1

02 OF 47



DEMOLITION KEYNOTES:

1. EXISTING ABANDONED TO BE REMOVED

LEGEND:

- MASTER PLAN BOUNDARY
- EXISTING ADJOINER PROPERTY LINE
- 5' CONTOUR
- 1' CONTOUR
- EXISTING INTERMITTENT STREAM
- EXISTING PERENNIAL STREAM
- EXISTING BUFFER ZONE 1
- EXISTING BUFFER ZONE 2

NC GRID NORTH - NAD 83
ADOPTED BOM 1992 PG 655

GRAPHIC SCALE

50 0 25 50 100 200

(IN FEET)
1 inch = 50 ft.

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SEAL:

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ENGINEERING GROUP
STRONG ROCK ENGINEERING GROUP, PLLC | COMPANY LICENSE # P-2166
305 CHURCH AT NORTH HILLS STREET, SUITE 1110 RALEIGH, NC 27609 | INFORMATION@STRONGROCKGROUP.COM

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NOT FOR CONSTRUCTION	
SCALE	AS SHOWN
DESIGNED BY	SRG
DRAWN BY	SRG
CHECKED BY	SRG

MITCHELL MILL MARKET

TOWN OF ROLESVILLE, WAKE COUNTY, NORTH CAROLINA

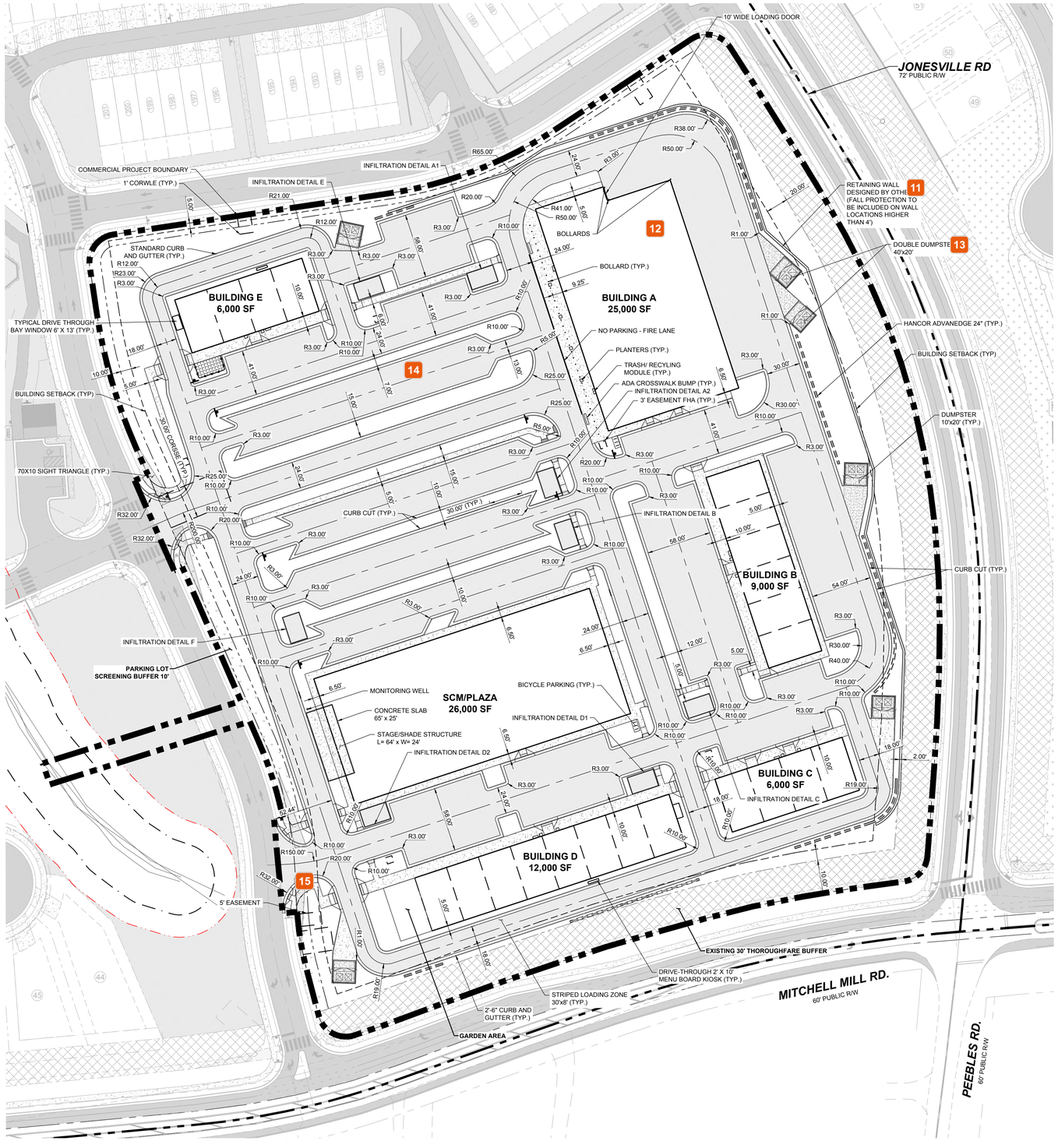
CONSTRUCTION PLANS

EXISTING CONDITIONS & DEMOLITION PLAN

DRAWING SHEET

C-2.0

03 OF 47



PARKING CALCULATIONS		
PARKING RATIO	1:200 SF	
BUILDINGS SQUARE FOOTAGE		
A	25,000	
B	9,000	
C	6,000	
D	12,000	
E	6,000	
TOTAL SQUARE FOOTAGE	58,000	
CODE MIN SPACES*	2.5/1000	
MIN REQUIRED	145	
PROPOSED SPACES	286	
	(PROPOSED INCLUDES ADA)	
ADA PARKING	Accessible Parking Spaces | ADA.gov	
REQUIRED ADA SPACES	7	
PROPOSED ADA SPACES	12	6 CAR
		6 VAN
BICYCLE PARKING	CODE 6.4.7.A.6 - 1 PER 5000 SF	
REQUIRED SPACES	11.6	
PROPOSED SPACES	12	
*TABLE 6.4.3.G. ROLESVILLE OFF-STREET PARKING REQUIREMENTS		

GENERAL NOTES:

1. ALL CONSTRUCTION SHALL CONFORM TO TOWN OF ROLESVILLE AND CITY OF RALEIGH STANDARDS AND SPECIFICATIONS.
2. ROADS AND DRIVEWAYS SHALL COMPLY WITH NCDOT AND TOWN OF ROLESVILLE STANDARDS.
3. SIGN PERMITS SHALL BE REQUIRED FOR ANY ENTRANCE SIGNAGE. PERMITS SHALL BE REQUIRED PRIOR TO FABRICATION OR INSTALLATION OF SIGNS. SIGNAGE SHALL BE RESTRICTED TO AN ON-SITE LOCATION.
4. THE WATER AND SEWER SYSTEMS SHALL COMPLY WITH CITY OF RALEIGH STANDARDS.
5. ALL DESIGN AND CONSTRUCTION METHODS SHALL COMPLY WITH WAKE COUNTY'S SEDIMENTATION AND EROSION CONTROL REGULATIONS. AN EROSION CONTROL PLAN SHALL BE APPROVED BY TOWN OF ROLESVILLE PRIOR TO ANY GRADING.
6. CONSTRUCTION DRAWINGS SHALL BE SUBMITTED AND APPROVED BY TOWN OF ROLESVILLE AND CITY OF RALEIGH PRIOR TO CONSTRUCTION.
7. RESTRICTIVE COVENANTS SHALL BE APPROVED AND RECORDED PRIOR TO RECORDING OF FINAL PLAT.
8. SUBDIVISION LOTS MUST BE LOTS OF RECORD PRIOR TO RECEIVING A BUILDING PERMIT.
9. ALL RETAINING WALLS TO BE DESIGNED BY OTHERS.

LEGEND:

- EXISTING PROPERTY LINE
- SIGN
- ROADWAY CENTER LINE
- PROPOSED PROPERTY LINE
- STANDARD CURB & GUTTER
- CONCRETE SIDEWALK
- ASPHALT PAVEMENT

NC GRID NORTH - NAD 83
ADOPTED BOM 1992 PG 655

GRAPHIC SCALE

50 0 25 50 100 200

(IN FEET)
1 inch = 50 ft.

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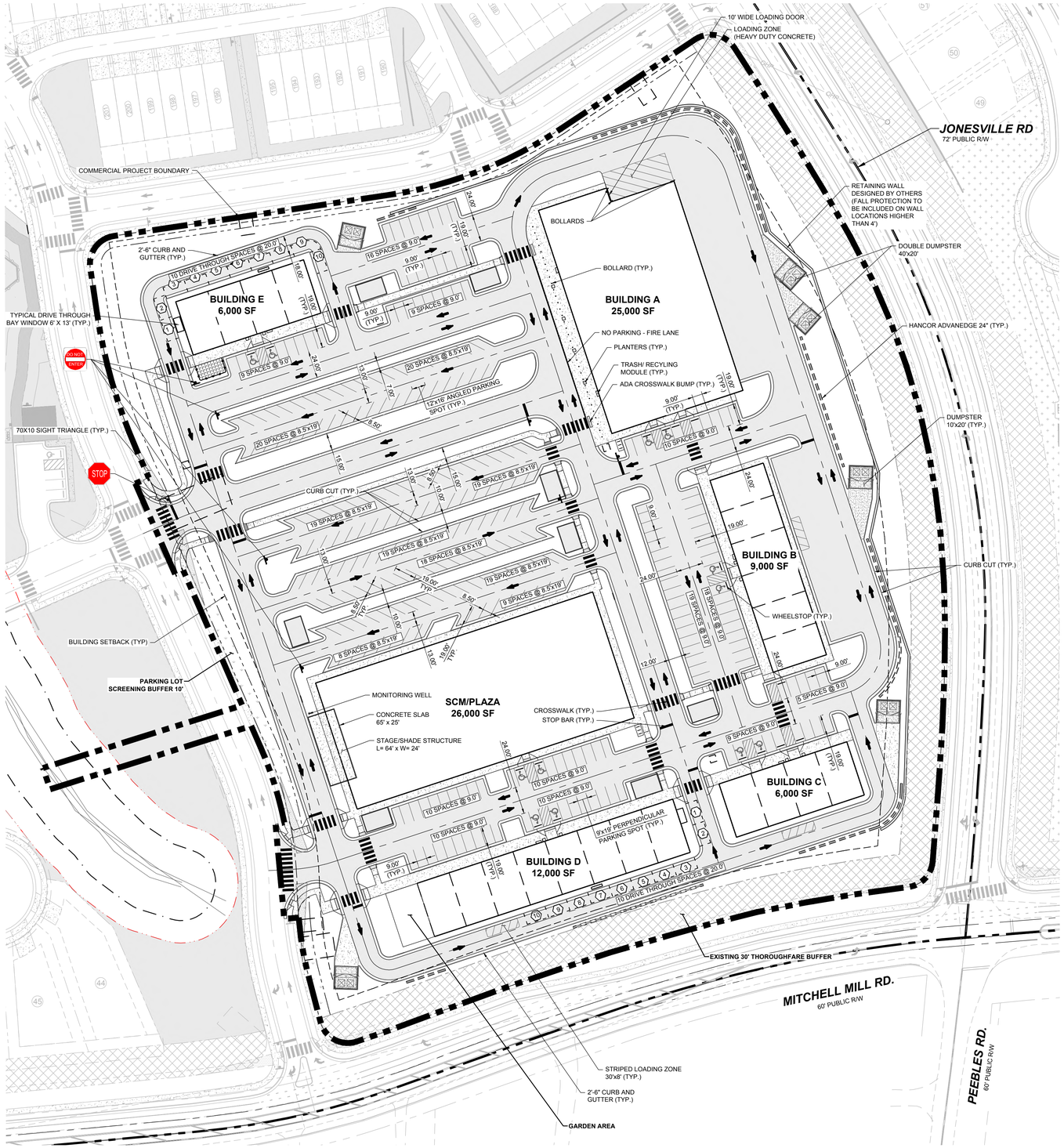
STRONG ROCK PROJECT CID-25-06	
NOT FOR CONSTRUCTION	
SCALE	AS SHOWN
DESIGNED BY	SRG
DRAWN BY	SRG
CHECKED BY	SRG

MITCHELL MILL MARKET
TOWN OF ROLESVILLE, WAKE COUNTY, NORTH CAROLINA
CONSTRUCTION PLANS
SITE PLAN

DRAWING SHEET
C-3.0

04 OF 47

PROGRESS PLOT DATE: 02/25/2026



LEGEND:

- EXISTING PROPERTY LINE
- SIGN
- STOP BAR
- ROADWAY CENTER LINE
- PROPOSED PROPERTY LINE
- STANDARD CURB & GUTTER
- CONCRETE SIDEWALK
- ASPHALT PAVEMENT

NC GRID NORTH - NAD 83
ADOPTED BOM 1992 PG 655

GRAPHIC SCALE

50 0 25 50 100 200

(IN FEET)
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SCALE	AS SHOWN
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DRAWN BY	SRG
CHECKED BY	SRG

MITCHELL MILL MARKET

TOWN OF ROLESVILLE, WAKE COUNTY, NORTH CAROLINA

CONSTRUCTION PLANS

SIGNAGE AND STRIPING PLAN

DRAWING SHEET

C-4.0

05 OF 47

SSMH TABLE					
SSMH NO	SIZE	TOP	INV. IN	INV. OUT	DEPTH
SSMH #1	4'	278.86	272.28 N	272.08 SW	6.78
SSMH #2	4'	282.15	272.93 E	272.73 S	9.43
SSMH #3	4'	283.94	273.85 E 274.05 N	273.65 W	10.28
SSMH #4	5'	288.92	274.99 S	274.79 W	14.13
SSMH #5	5'	288.06	276.09 E	275.89 N	12.17
SSMH #6	4'	288.13	276.58 S	276.38 W	11.75
SSMH #7	4'	287.52	276.92 S 276.92 E	276.72 N	10.80
SSMH #8	4'	287.00	278.28 W	278.08 N	8.93
SSMH #9	4'	286.85	278.69 S 278.69 W	278.49 E	8.36
SSMH #10	4'	285.03	279.08 S	278.88 E	6.15

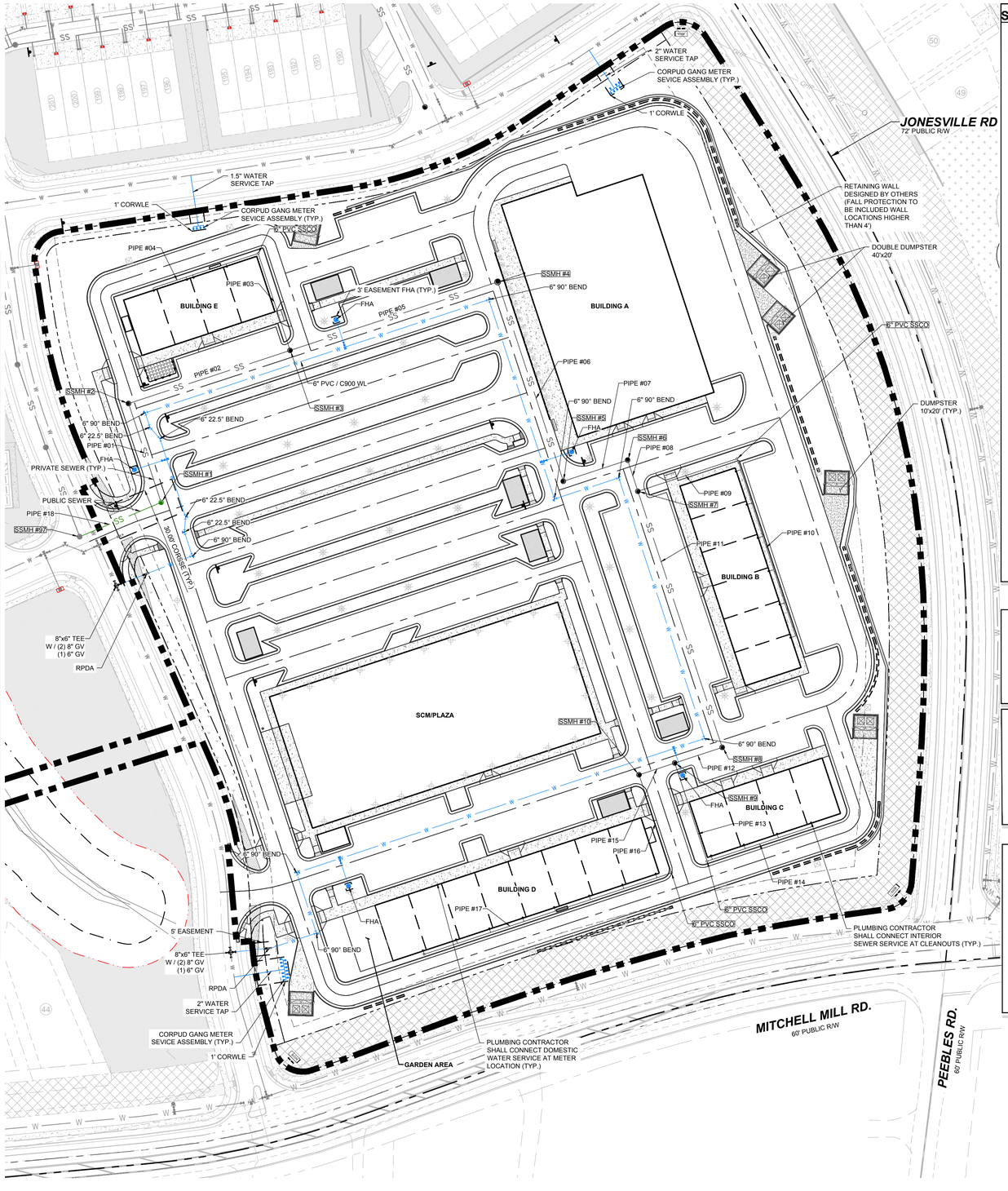
PIPE TABLE						
PIPE NO	TYPE	SIZE	LF	INV. IN	INV. OUT	GRADE
PIPE #01 BEGIN: SSMH #2 END: SSMH #1	PVC - SDR 26	8"	89	274.10	273.19	1.02%
PIPE #02 BEGIN: SSMH #3 END: SSMH #2	PVC - SDR 26	8"	146	275.03	274.30	0.50%
PIPE #03 BEGIN: SSCO #04 END:	PVC - SDR 26	8"	87	274.49	274.05	0.50%
PIPE #04 BEGIN: END: SSCO #04	PVC - SDR 26	8"	95	274.96	274.49	0.50%
PIPE #05 BEGIN: SSMH #4 END: SSMH #3	PVC - SDR 26	8"	187	276.16	275.23	0.50%
PIPE #06 BEGIN: SSMH #5 END: SSMH #4	PVC - SDR 26	8"	180	277.26	276.36	0.50%
PIPE #07 BEGIN: SSMH #6 END: SSMH #5	PVC - SDR 26	8"	58	277.75	277.46	0.50%
PIPE #08 BEGIN: SSMH #7 END: SSMH #6	PVC - SDR 26	8"	28	278.09	277.95	0.50%
PIPE #09 BEGIN: SSCO #03 END:	PVC - SDR 26	8"	89	277.37	276.92	0.50%
PIPE #10 BEGIN: END: SSCO #03	PVC - SDR 26	8"	160	278.17	277.37	0.50%
PIPE #11 BEGIN: SSMH #8 END: SSMH #7	PVC - SDR 26	8"	231	279.45	278.29	0.50%
PIPE #12 BEGIN: SSMH #9 END: SSMH #8	PVC - SDR 26	8"	43	279.86	279.65	0.50%
PIPE #13 BEGIN: SSCO #02 END:	PVC - SDR 26	8"	89	279.13	278.69	0.50%
PIPE #14 BEGIN: END: SSCO #02	PVC - SDR 26	8"	95	279.61	279.13	0.50%
PIPE #15 BEGIN: SSMH #10 END: SSMH #9	PVC - SDR 26	8"	32	280.22	280.06	0.50%
PIPE #16 BEGIN: SSCO #01 END:	PVC - SDR 26	8"	88	279.52	279.08	0.50%
PIPE #17 BEGIN: Structure - (189) END: SSCO #01	PVC - SDR 26	8"	223	280.64	279.52	0.50%
PIPE #18 BEGIN: SSMH #1 END:	PVC - SDR 26	8"	76	272.99	271.50	1.97%

ATTENTION CONTRACTORS

THE CONTRACTOR RESPONSIBLE FOR THE EXTENSION OF WATER, SEWER, AND/OR REUSE, AS APPROVED IN THESE PLANS, IS RESPONSIBLE FOR CONTACTING THE INFRASTRUCTURE INSPECTIONS DIVISION AND SCHEDULE A PRE-CONSTRUCTION MEETING ON THE DEVELOPMENT PORTAL PRIOR TO BEGINNING ANY CONSTRUCTION. RALEIGH WATER MUST BE CONTACTED AT (919) 996-4540 AT LEAST TWENTY-FOUR HOURS PRIOR TO BEGINNING ANY WORK ACTIVITY AROUND CRITICAL WATER AND SEWER INFRASTRUCTURE.

FAILURE TO NOTIFY CITY DEPARTMENTS IN ADVANCE OF BEGINNING CONSTRUCTION, WILL RESULT IN THE ISSUANCE OF MONETARY FINES, AND REQUIRE REINSTALLATION OF ANY WATER OR SEWER FACILITIES NOT INSPECTED AS A RESULT OF THIS NOTIFICATION FAILURE.

FAILURE TO CALL FOR INSPECTION, INSTALL A DOWNSTREAM PLUG, HAVE PERMITTED PLANS ON THE JOBSITE, OR ANY OTHER VIOLATION OF CITY OF RALEIGH STANDARDS WILL RESULT IN A FINE AND POSSIBLE EXCLUSION FROM FUTURE WORK IN THE CITY OF RALEIGH.



STANDARD UTILITY NOTES:

- **UTILITY PLAN(S) FOR CITY OF RALEIGH AND MERGER TOWNS**

STANDARD UTILITY NOTES :

1. ALL MATERIALS & CONSTRUCTION METHODS SHALL BE IN ACCORDANCE WITH CITY OF RALEIGH DESIGN STANDARDS, DETAILS & SPECIFICATIONS (REFERENCE: CORPUD HANDBOOK, CURRENT EDITION)
2. UTILITY SEPARATION REQUIREMENTS:
   a. A DISTANCE OF 100' SHALL BE MAINTAINED BETWEEN SANITARY SEWER & ANY PRIVATE OR PUBLIC WATER SUPPLY SOURCE SUCH AS AN IMPOUNDED RESERVOIR USED AS A SOURCE OF DRINKING WATER. IF ADEQUATE LATERAL SEPARATION CANNOT BE ACHIEVED, FERROUS SANITARY SEWER PIPE SHALL BE SPECIFIED & INSTALLED TO WATERLINE SPECIFICATIONS. HOWEVER, THE MINIMUM SEPARATION SHALL NOT BE LESS THAN 25' FROM A PRIVATE WELL OR 50' FROM A PUBLIC WELL.
   b. WHEN INSTALLING WATER &/OR SEWER MAINS, THE HORIZONTAL SEPARATION BETWEEN UTILITIES SHALL BE 10'. IF THIS SEPARATION CANNOT BE MAINTAINED DUE TO EXISTING CONDITIONS, THE VARIATION ALLOWED IS THE WATER MAIN IN A SEPARATE TRENCH WITH THE ELEVATION OF THE WATER MAIN AT LEAST 18" ABOVE THE TOP OF THE SEWER & MUST BE APPROVED BY THE PUBLIC UTILITIES DIRECTOR. ALL DISTANCES ARE MEASURED FROM OUTSIDE DIAMETER TO OUTSIDE DIAMETER.
   c. WHERE IT IS IMPOSSIBLE TO OBTAIN PROPER SEPARATION, OR ANYTIME A SANITARY SEWER PASSES OVER A WATERMAIN, DIP MATERIALS OR STEEL ENCASEMENT EXTENDED 10' ON EACH SIDE OF CROSSING MUST BE SPECIFIED & INSTALLED TO WATERLINE SPECIFICATIONS.
   d. 5.0' MINIMUM HORIZONTAL SEPARATION IS REQUIRED BETWEEN ALL SANITARY SEWER & STORM SEWER FACILITIES, UNLESS DIP MATERIAL IS SPECIFIED FOR SANITARY SEWER
   e. MAINTAIN 18" MIN. VERTICAL SEPARATION AT ALL WATERMAIN & RCP STORM DRAIN CROSSINGS; MAINTAIN 18" MIN. VERTICAL SEPARATION AT ALL SANITARY SEWER & RCP STORMDRAIN CROSSINGS. WHERE ADEQUATE SEPARATIONS CANNOT BE ACHIEVED, SPECIFY DIP MATERIALS & A CONCRETE CRADLE HAVING 6" MIN. CLEARANCE (PER CORPUD DETAILS W- 41 & S-49).
   f. ALL OTHER UNDERGROUND UTILITIES SHALL CROSS WATER & SEWER FACILITIES WITH 18" MIN. VERTICAL SEPARATION REQUIRED.
3. ANY NECESSARY FIELD REVISIONS ARE SUBJECT TO REVIEW & APPROVAL OF AN AMENDED PLAN &/OR PROFILE BY THE CITY OF RALEIGH PUBLIC UTILITIES DEPARTMENT PRIOR TO CONSTRUCTION.
4. DEVELOPER SHALL PROVIDE 30 DAYS ADVANCE WRITTEN NOTICE TO OWNER FOR ANY WORK REQUIRED WITHIN AN EXISTING CITY OF RALEIGH UTILITY EASEMENT TRAVERSING PRIVATE PROPERTY.
5. CONTRACTOR SHALL MAINTAIN CONTINUOUS WATER & SEWER SERVICE TO EXISTING RESIDENCES & BUSINESSES THROUGHOUT CONSTRUCTION OF PROJECT. ANY NECESSARY SERVICE INTERRUPTIONS SHALL BE PRECEDED BY A 24-HOUR ADVANCE NOTICE TO THE CITY OF RALEIGH PUBLIC UTILITIES DEPARTMENT.
6. SEWER BYPASS PUMPING – A BYPASS PLAN SEALED BY AN NC PROFESSIONAL ENGINEER SHALL BE PROVIDED TO RALEIGH WATER PRIOR TO PUMPING OPERATIONS FOR APPROVAL. THE OPERATIONS AND EQUIPMENT SHALL COMPLY WITH THE PUBLIC UTILITIES HANDBOOK.
7. 3.0' MINIMUM COVER IS REQUIRED ON ALL WATER MAINS & SEWER FORCE MAINS. 4.0' MINIMUM COVER IS REQUIRED ON ALL REUSE MAINS.
8. IT IS THE DEVELOPER'S RESPONSIBILITY TO ABANDON OR REMOVE EXISTING WATER & SEWER SERVICES NOT BEING USED IN REDEVELOPMENT OF A SITE UNLESS OTHERWISE DIRECTED BY THE CITY OF RALEIGH PUBLIC UTILITIES DEPARTMENT. THIS INCLUDES ABANDONING TAP AT MAIN & REMOVAL OF SERVICE FROM ROW OR EASEMENT PER CORPUD HANDBOOK PROCEDURE.
9. INSTALL WATER SERVICES WITH METERS LOCATED AT ROW OR WITHIN A 2'X2' WATERLINE EASEMENT IMMEDIATELY ADJACENT.
   NOTE: IT IS THE APPLICANT'S RESPONSIBILITY TO PROPERLY SIZE THE WATER SERVICE FOR EACH CONNECTION TO PROVIDE ADEQUATE FLOW & PRESSURE.
10. INSPECTIONS OF 4" AND LARGER WATER MAINS OF THE PRIVATE DISTRIBUTION SYSTEM WILL BE INSPECTED AS PART OF THE INFRASTRUCTURE PERMIT.
11. PRIVATE SEWER MAINS AS PART OF A COLLECTION SYSTEM ARE PERMITTED AND INSPECTED UNDER THE PRIVATE INFRASTRUCTURE PERMIT FOR SEWER.
12. ANY WATER OR SEWER SERVICES ON PRIVATE PROPERTY THAT WILL BE INSTALLED UNDER CONSTRUCTION DRAWINGS MAY REQUIRE A PLUMBING UTILITY PERMIT IN THE CITY OF RALEIGH. CONSULT WITH THE ENGINEERING INSPECTION COORDINATOR DURING THE PRE-CONSTRUCTION MEETING ON THE NECESSARY PERMITS.
13. INSTALL SEWER SERVICES WITH CLEANOUTS LOCATED AT ROW OR EASEMENT LINE & SPACED PER THE CURRENT NC PLUMBING CODE.
14. PRESSURE REDUCING VALVES ARE REQUIRED ON ALL WATER SERVICES EXCEEDING 80 PSI; BACKWATER VALVES ARE REQUIRED ON ALL SANITARY SEWER SERVICES HAVING BUILDING DRAINS LOWER THAN 1.0' ABOVE THE NEXT UPSTREAMMANHOLE.
15. ALL ENVIRONMENTAL PERMITS APPLICABLE TO THE PROJECT MUST BE OBTAINED FROM NCDWQ, USACE &/OR FEMA FOR ANY RIPARIAN BUFFER, WETLAND &/OR FLOODPLAIN IMPACTS (RESPECTIVELY) PRIOR TO CONSTRUCTION.
16. NCDOT / RAILROAD ENCROACHMENT AGREEMENTS ARE REQUIRED FOR ANY UTILITY WORK (INCLUDING MAIN EXTENSIONS & SERVICE TAPS) WITHIN STATE OR RAILROAD ROW PRIOR TO CONSTRUCTION.
17. GREASE INTERCEPTOR / OIL WATER SEPARATOR SIZING CALCULATIONS & INSTALLATION SPECIFICATIONS SHALL BE APPROVED BY THE RW FOG PROGRAM COORDINATOR PRIOR TO ISSUANCE OF A UC AND/OR BUILDING PERMIT. CONTACT (919) 996-4516 OR fog@raleighnc.gov FOR MORE INFORMATION.
18. CROSS-CONNECTION CONTROL PROTECTION DEVICES ARE REQUIRED BASED ON THE DEGREE OF HEALTH HAZARD INVOLVED AS LISTED IN APPENDIX M OF THE RULES GOVERNING PUBLIC WATER SYSTEMS IN NORTH CAROLINA.
19. THE DEVICES SHALL MEET THE AMERICAN SOCIETY OF SANITARY ENGINEERING (ASSE) STANDARDS AND BE ON THE UNIVERSITY OF SOUTHERN CALIFORNIA APPROVAL LIST.
20. THE DEVICE AND INSTALLATION SHALL MEET THE GUIDELINES OF APPENDIX A – GUIDELINES AND REQUIREMENTS FOR THE CROSS CONNECTION PROGRAM IN RALEIGH'S SERVICE AREA.
21. THE DEVICES SHALL BE INSTALLED AND TESTED (BOTH, INITIAL AND PERIODIC TESTING THEREAFTER) IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS OR THE LOCAL CROSS CONNECTION CONTROL PROGRAM, WHICHEVER IS MORE STRINGENT.
    CONTACT Cross.connection@raleighnc.gov FOR MORE INFORMATION.
22. NOTICE FOR PROJECTS THAT INVOLVE AN OVERSIZED MAIN OR URBAN MAIN REPLACEMENT. ANY CITY REIMBURSEMENT GREATER THAN $250,000.00 MUST UNDERGO THE PUBLIC BIDDING PROCESS.
23. PRIVATE SUB-METERING - NO RESALE OF WATER SHALL OCCUR WITHOUT APPROVAL OF THE NORTH CAROLINA UTILITY COMMISSION.
    SUB-METERING SHALL BE IN ACCORDANCE WITH SECTION 1400 OF THE "SAFE DRINKING WATER ACT".

PUBLIC
WATER DISTRIBUTION / EXTENSION SYSTEM

THE CITY OF RALEIGH CONSENTS TO THE CONNECTION AND EXTENSION OF THE CITY'S PUBLIC WATER SYSTEM AS SHOWN ON THIS PLAN. THE MATERIAL AND CONSTRUCTION METHODS USED FOR THIS PROJECT SHALL CONFORM TO THE STANDARDS AND SPECIFICATIONS OF THE CITY'S PUBLIC UTILITIES HANDBOOK.
CITY OF RALEIGH
PUBLIC UTILITIES DEPARTMENT PERMIT # _____

PRIVATE
SEWER COLLECTION / EXTENSION SYSTEM

THE CITY OF RALEIGH CONSENTS TO THE CONNECTION TO ITS PUBLIC SEWER SYSTEM AND EXTENSION OF THE PRIVATE SEWER COLLECTION SYSTEM AS SHOWN ON THIS PLAN. THE MATERIAL AND CONSTRUCTIONS METHODS USED FOR THIS PROJECT SHALL CONFORM TO THE STANDARDS AND SPECIFICATIONS OF THE CITY'S PUBLIC UTILITIES HANDBOOK.

CITY OF RALEIGH
PUBLIC UTILITIES DEPARTMENT PERMIT # _____

LEGEND:

W	WATER LINE
SS	PRIVATE SANITARY SEWER LINE
SS	PUBLIC SANITARY SEWER LINE
	CORPUD GANG METER SEVICE ASSEMBLY
	SANITARY CLEANOUT / SERVICE
FH	FIRE HYDRANT ASSEMBLY
	GATE VALVE
	TEE
	BLOW OFF VALVE
	PUBLIC SANITARY MANHOLE
	SANITARY MANHOLE PRIVATE

NC GRID NORTH - NAD 83
ADOPTED BOM 1992 PG 655

GRAPHIC SCALE
50 0 25 50 100 200
(IN FEET)
1 inch = 50 ft.

THIS PLANSET AND ANY ASSOCIATED DOCUMENTS ARE PRELIMINARY AND NOT AUTHORIZED FOR CONSTRUCTION UNTIL SIGNED, DATED, AND OFFICIALLY RELEASED FOR CONSTRUCTION BY THE ENGINEER OF RECORD.

No.	REVISIONS	DATE	BY
0	CD SUBMITTAL #1	08/01/2025	SREG
1	CID-25-06 V2	10/01/2025	SREG
2	CID-25-06 V3	03/02/2026	SREG

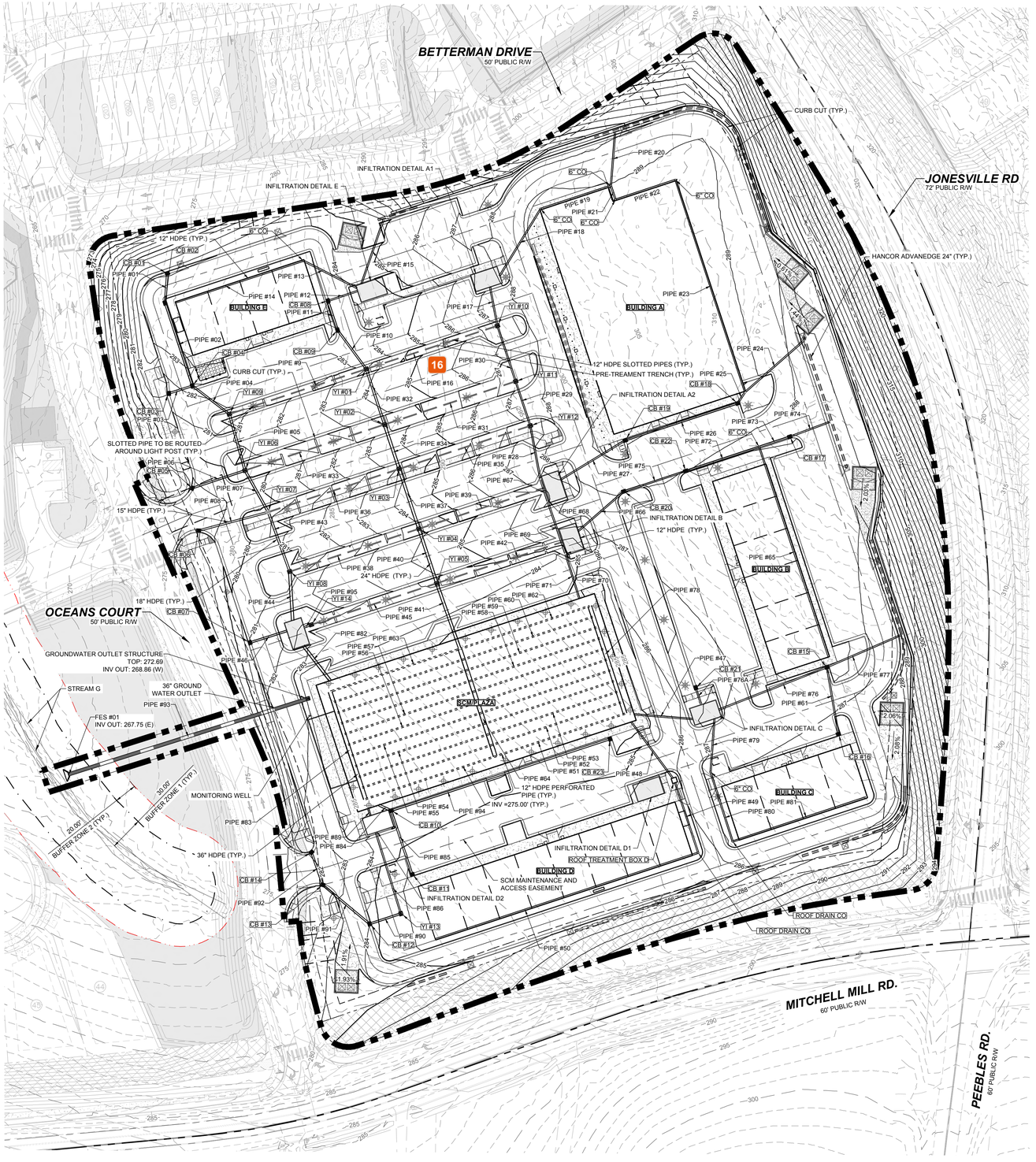
SEAL:

STRONGROCK
ENGINEERING GROUP
STRONG ROCK ENGINEERING GROUP, PLLC | COMPANY LICENSE # P-2166
305 CHURCH AT NORTH HILLS STREET, SUITE 1110 RALEIGH, NC 27609 | INFORMATION@STRONGROCKGROUP.COM

STRONG ROCK PROJECT	CID-25-06
NOT FOR CONSTRUCTION	
SCALE	AS SHOWN
DESIGNED BY	SRG
DRAWN BY	SRG
CHECKED BY	SRG

MITCHELL MILL MARKET
TOWN OF ROLESVILLE, WAKE COUNTY, NORTH CAROLINA
CONSTRUCTION PLANS
UTILITY PLAN

DRAWING SHEET
C-5.0



LEGEND:

- EXISTING PROPERTY LINE
- EX. MAJOR CONTOURS
- EX. MINOR CONTOURS
- PROP. MAJOR CONTOURS
- PROP. MINOR CONTOURS
- PROPOSED HDPE SOLID PIPE
- PROPOSED HDPE PERFORATED PIPE
- PROPOSED HDPE SLOTTED PIPE
- PROPOSED RCP STORM OUTLET PIPE

NC GRID NORTH - NAD 83
ADOPTED BOM 1992 PG 655

GRAPHIC SCALE

50 0 25 50 100 200

(IN FEET)
1 inch = 50 ft.

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No.	REVISIONS	DATE	BY
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1	CID-25-06 V2	10/01/2025	SREG
2	CID-25-06 V3	03/02/2026	SREG

SEAL:

STRONGROCK
ENGINEERING GROUP
STRONG ROCK ENGINEERING GROUP, PLLC | COMPANY LICENSE # P-2165
305 CHURCH AT NORTH HILLS STREET, SUITE 1110 RALEIGH, NC 27609 | INFORMATION@STRONGROCKGROUP.COM

STRONG ROCK PROJECT CID-25-06	
NOT FOR CONSTRUCTION	
SCALE	AS SHOWN
DESIGNED BY	SRG
DRAWN BY	SRG
CHECKED BY	SRG

MITCHELL MILL MARKET

TOWN OF ROLESVILLE, WAKE COUNTY, NORTH CAROLINA

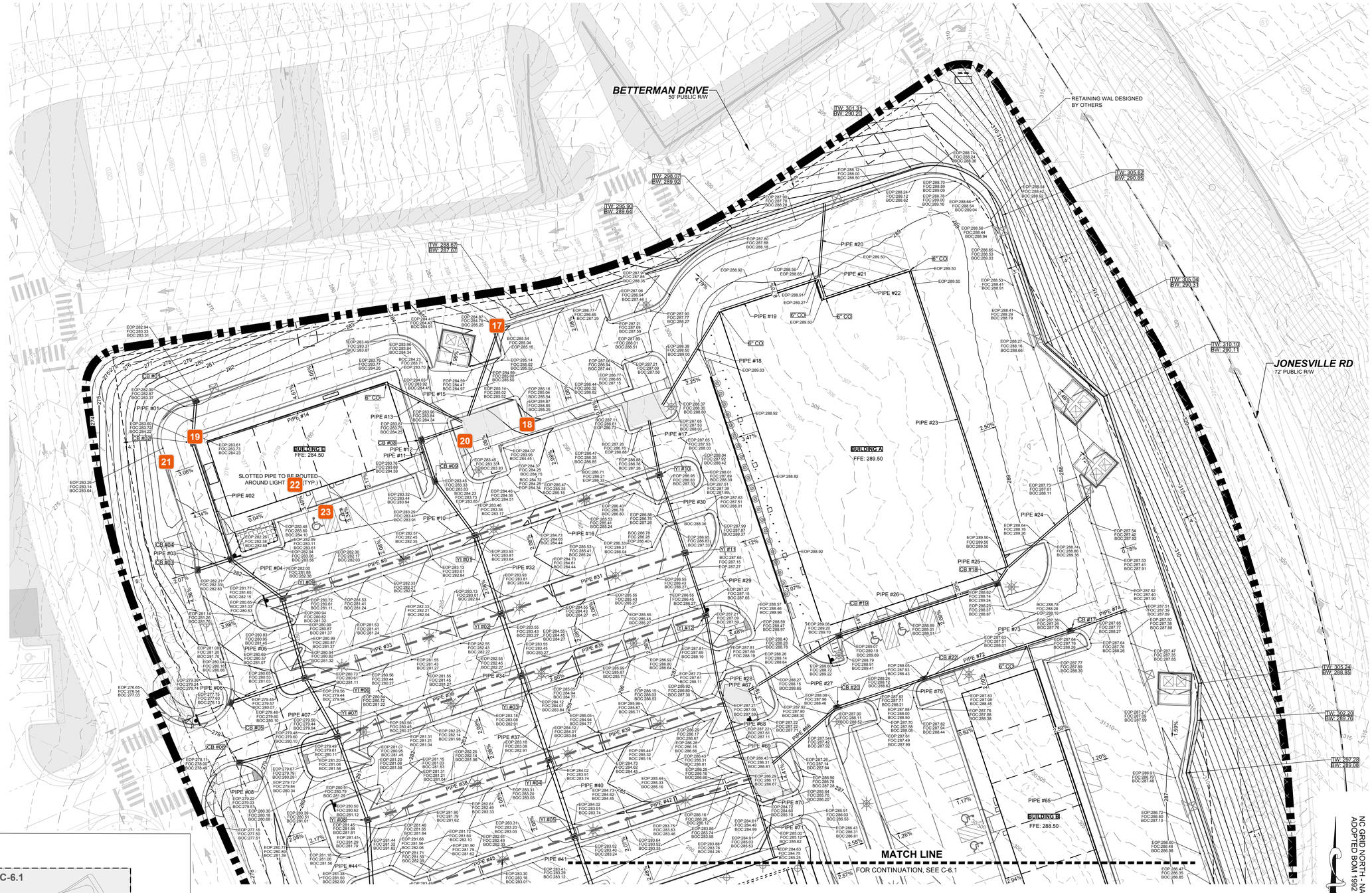
CONSTRUCTION PLANS

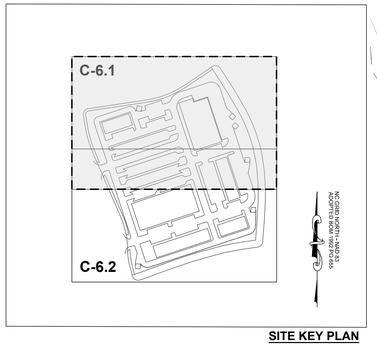
OVERALL GRADING & DRAINAGE PLAN

DRAWING SHEET

C-6.0

07 OF 47





SITE KEY PLAN

LEGEND:

- EXISTING PROPERTY LINE
- EX. MAJOR CONTOURS
- EX. MINOR CONTOURS
- PROP. MAJOR CONTOURS
- PROP. MINOR CONTOURS
- PROPOSED HDPE SOLID PIPE
- PROPOSED HDPE PERFORATED PIPE
- PROPOSED HDPE SLOTTED PIPE
- PROPOSED RCP STORM OUTLET PIPE

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2	CID-25-06 V3	03/02/2026	SREG

SEAL:

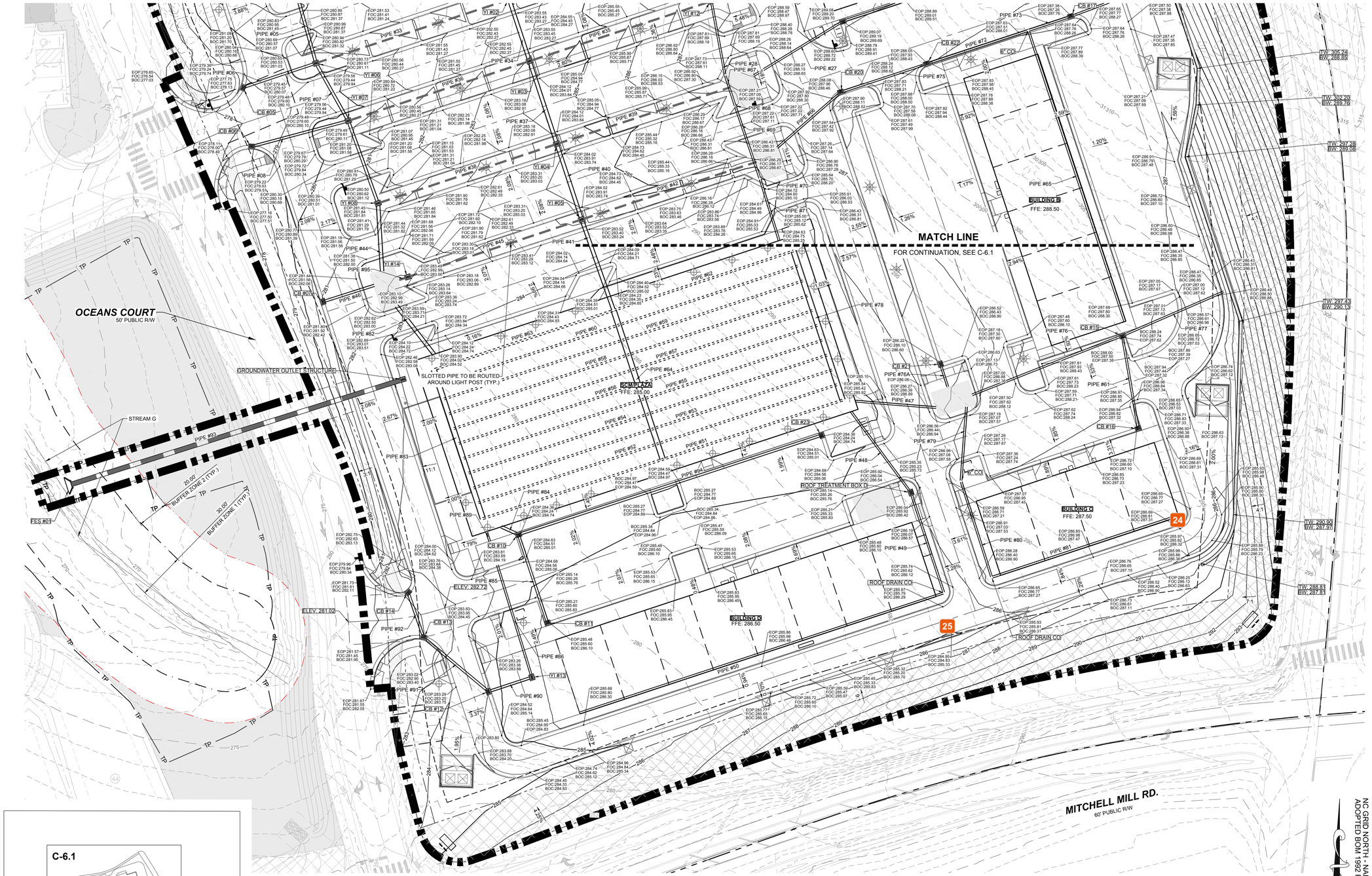
STRONGROCK
ENGINEERING GROUP
STRONG ROCK ENGINEERING GROUP, PLLC | COMPANY LICENSE # P-2165
SUITE 1110 RALEIGH, NC 27609 | INFORMATION@STRONGROCKGROUP.COM
305 CHURCH AT NORTH HILLS STREET, SUITE 1110 RALEIGH, NC 27609

STRONG ROCK PROJECT CID-25-06	NOT FOR CONSTRUCTION
SCALE	AS SHOWN
DESIGNED BY	SRG
DRAWN BY	SRG
CHECKED BY	SRG

MITCHELL MILL MARKET
TOWN OF ROLESVILLE, WAKE COUNTY, NORTH CAROLINA
CONSTRUCTION PLANS
PARTIAL GRADING & DRAINAGE PLAN

DRAWING SHEET
C-6.1

08 OF 47



C-6.1

C-6.2

NC GRID NORTH - NAD 83
ADOPTED BOM 1992 PG 655

SITE KEY PLAN

LEGEND:

- EXISTING PROPERTY LINE
- EX. MAJOR CONTOURS
- EX. MINOR CONTOURS
- PROP. MAJOR CONTOURS
- PROP. MINOR CONTOURS
- PROPOSED HDPE SOLID PIPE
- PROPOSED HDPE PERFORATED PIPE
- PROPOSED HDPE SLOTTED PIPE
- PROPOSED RCP STORM OUTLET PIPE

GRAPHIC SCALE

30 0 15 30 60 120

(IN FEET)
1 inch = 30 ft.

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2	CID-25-06 V3	03/02/2026	SREG

SEAL:

STRONGROCK
ENGINEERING GROUP
STRONG ROCK ENGINEERING GROUP, PLLC | COMPANY LICENSE # P-2166
305 CHURCH AT NORTH HILLS STREET, SUITE 1110 RALEIGH, NC 27609 | INFORMATION@STRONGROCKGROUP.COM

STRONG ROCK PROJECT	CID-25-06
	NOT FOR CONSTRUCTION
SCALE	AS SHOWN
DESIGNED BY	SRG
DRAWN BY	SRG
CHECKED BY	SRG

MITCHELL MILL MARKET

TOWN OF ROLESVILLE, WAKE COUNTY, NORTH CAROLINA

CONSTRUCTION PLANS

PARTIAL GRADING & DRAINAGE PLAN

DRAWING SHEET

C-6.2

09 OF 47

STORM STRUCTURE TABLE			
#	TOP	INV. IN	INV. OUT
CB #01	282.90		278.52 S
CB #02	283.65	278.39 N	278.14 S
CB #03	281.59		278.17 E
CB #04	282.35	276.95 N 278.06 W	276.75 SE
CB #05	278.74		275.30 E
CB #06	278.54		275.10 E
CB #07	281.02		273.15 E
CB #08	283.46	278.09 E	277.89 S
CB #09	283.39	277.76 N	277.56 SE
CB #10	284.31	275.45 E 276.47 S	275.25 NW
CB #11	285.53		276.77 N
CB #12	284.02	277.41 NW	277.21 E
CB #13	281.93	277.89 N	277.69 SE
CB #14	282.09		278.18 S
CB #15	287.67	281.48 NE 281.48 S	281.28 W
CB #16	286.67		281.78 N
CB #17	287.33	284.00 E	283.80 W
CB #18	288.67	279.27 NE	279.07 W
CB #19	289.12	277.71 E	277.51 SW
CB #20	288.03	279.27 E	279.07 SW
CB #21	286.13		282.95 S
CB #22	288.00	281.50 E	281.30 W
CB #23	284.31		277.49 W
FES #01	271.42	267.75 E	
GROUNDWATER OUTLET STRUCTURE	272.69		268.86 W

STORM STRUCTURE TABLE			
#	TOP	INV. IN	INV. OUT
ROOF TREATMENT BOX D	286.43	277.45 S	277.25 NW
YI #01	284.00	276.21 NW 276.21 E	276.01 S 276.01 W
YI #02	284.04	275.75 N 275.45 E	275.25 S 275.25 W
YI #03	284.09	275.04 N 275.04 E	274.84 S 274.84 W
YI #04	284.39	274.53 N 274.53 E	274.33 S 274.33 W
YI #05	284.11	274.08 N 274.08 E	273.88 W 273.88 S
YI #06	280.50	274.89 N 275.05 W 274.60 E	274.40 SE
YI #07	280.52	274.14 NW 274.78 W 273.54 E	273.34 S
YI #08	281.50	273.06 N 273.06 E	272.86 S
YI #09	281.75	276.15 NW 275.35 E	275.15 S
YI #10	287.51	277.41 N	277.21 S 277.21 W
YI #11	287.56	276.26 N	276.06 W 276.06 S
YI #12	287.64	275.85 N	275.65 W 275.65 S
YI #13	285.77	277.07 W	276.87 N
YI #14	283.10	272.74 E	272.54 W

PIPE TABLE						
PIPE NO	TYPE	SIZE	LF	INV. IN	INV. OUT	GRADE
PIPE #01	HDPE SOLID	15"	26	278.52	278.39	0.50%
PIPE #02	HDPE SOLID	15"	77	278.14	276.95	1.53%
PIPE #03	HDPE SOLID	15"	22	278.17	278.06	0.50%
PIPE #04	HDPE SOLID	15"	41	276.75	276.15	1.46%
PIPE #05	HDPE SOLID	18"	52	275.15	274.89	0.50%
PIPE #06	HDPE SOLID	15"	49	275.30	275.05	0.50%
PIPE #07	HDPE SOLID	18"	42	274.40	274.14	0.61%
PIPE #08	HDPE	15"	64	275.10	274.78	0.50%
PIPE #9	SLOTTED PIPE	15"	128	276.01	275.35	0.51%
PIPE #10	HDPE SOLID	15"	43	277.56	276.21	3.15%
PIPE #11	HDPE SOLID	15"	27	277.89	277.76	0.50%
PIPE #12	HDPE SOLID	12"	28	278.44	278.09	1.24%
PIPE #13	HDPE SOLID	12"	53	278.72	278.44	0.52%
PIPE #14	HDPE	12"	119	279.32	278.72	0.50%
PIPE #15	HDPE SOLID	12"	61	279.73	278.44	2.11%
PIPE #16	SLOTTED PIPE	15"	123	277.21	276.21	0.82%
PIPE #17	HDPE SOLID	12"	35	277.59	277.41	0.50%
PIPE #18	HDPE SOLID	12"	70	277.79	277.44	0.50%
PIPE #19	HDPE SOLID	12"	66	278.11	277.79	0.50%
PIPE #20	HDPE SOLID	12"	48	278.35	278.11	0.50%
PIPE #21	HDPE SOLID	12"	13	278.18	278.11	0.50%
PIPE #22	HDPE SOLID	12"	56	278.46	278.18	0.50%
PIPE #23	HDPE SOLID	12"	198	279.45	278.46	0.50%
PIPE #24	HDPE SOLID	12"	69	279.67	279.33	0.50%
PIPE #25	HDPE SOLID	12"	12	279.33	279.27	0.50%

PIPE TABLE						
PIPE NO	TYPE	SIZE	LF	INV. IN	INV. OUT	GRADE
PIPE #26	HDPE SOLID	12"	105	279.07	277.71	1.29%
PIPE #27	HDPE SOLID	12"	67	277.51	275.67	2.73%
PIPE #28	HDPE SOLID	12"	48	275.65	275.44	0.45%
PIPE #29	HDPE SOLID	12"	41	276.06	275.85	0.50%
PIPE #30	HDPE SOLID	12"	52	277.21	276.26	1.83%
PIPE #31	SLOTTED PIPE	15"	123	276.06	275.45	0.50%
PIPE #32	HDPE SOLID	18"	52	276.01	275.75	0.50%
PIPE #33	SLOTTED PIPE	15"	130	275.25	274.60	0.50%
PIPE #34	HDPE SOLID	24"	42	275.25	275.04	0.50%
PIPE #35	SLOTTED PIPE	15"	123	275.65	275.04	0.50%
PIPE #36	SLOTTED PIPE	15"	122	274.84	273.54	1.06%
PIPE #37	HDPE SOLID	24"	56	274.84	274.53	0.56%
PIPE #38	SLOTTED PIPE	15"	121	274.33	273.06	1.06%
PIPE #39	SLOTTED PIPE	15"	118	275.47	274.53	0.80%
PIPE #40	HDPE SOLID	24"	51	274.33	274.08	0.50%
PIPE #41	HDPE SOLID	24"	62	273.88	273.57	0.50%
PIPE #42	SLOTTED PIPE	15"	118	275.02	274.08	0.80%
PIPE #43	HDPE	18"	56	273.34	273.06	0.50%
PIPE #44	HDPE SOLID	24"	44	272.86	272.20	1.52%
PIPE #45	SLOTTED PIPE	15"	117	273.88	272.74	0.97%
PIPE #46	HDPE SOLID	15"	35	273.15	272.20	2.74%
PIPE #47	HDPE SOLID	12"	52	279.65	279.39	0.50%
PIPE #48	HDPE SOLID	12"	64	277.25	276.93	0.50%
PIPE #49	HDPE SOLID	12"	68	277.79	277.45	0.50%
PIPE #50	HDPE SOLID	12"	245	279.02	277.79	0.50%

PIPE TABLE						
PIPE NO	TYPE	SIZE	LF	INV. IN	INV. OUT	GRADE
PIPE #51	HDPE PERFORATED	12"	243	275.00	275.00	0.00%
PIPE #52	HDPE PERFORATED	12"	242	275.00	275.00	0.00%
PIPE #53	HDPE PERFORATED	12"	243	275.00	275.00	0.00%
PIPE #54	HDPE PERFORATED	12"	243	275.00	275.00	0.00%
PIPE #55	HDPE PERFORATED	12"	243	275.00	275.00	0.00%
PIPE #56	HDPE PERFORATED	12"	243	275.00	275.00	0.00%
PIPE #57	HDPE PERFORATED	12"	243	275.00	275.00	0.00%
PIPE #58	HDPE PERFORATED	12"	243	275.00	275.00	0.00%
PIPE #59	HDPE PERFORATED	12"	243	275.00	275.00	0.00%
PIPE #60	HDPE PERFORATED	12"	243	275.00	275.00	0.00%
PIPE #61	HDPE SOLID	12"	60	281.78	281.48	0.50%
PIPE #62	HDPE PERFORATED	12"	121	275.00	275.00	0.00%
PIPE #63	HDPE PERFORATED	12"	121	275.00	275.00	0.00%
PIPE #64	HDPE SOLID	36"	100	268.50	268.50	0.00%
PIPE #65	HDPE SOLID	12"	196	285.26	284.06	0.61%
PIPE #66	HDPE SOLID	12"	54	279.07	276.91	4.00%
PIPE #67	HDPE SOLID	12"	21	275.44	275.31	0.61%
PIPE #68	HDPE SOLID	12"	2	275.22	275.21	0.50%
PIPE #69	HDPE SOLID	12"	49	275.21	274.96	0.50%
PIPE #70	HDPE SOLID	12"	2	275.31	275.30	0.69%
PIPE #71	HDPE SOLID	12"	42	274.96	274.75	0.50%
PIPE #72	HDPE SOLID	12"	68	283.55	281.50	3.00%
PIPE #73	HDPE SOLID	12"	29	283.80	283.75	0.17%
PIPE #74	HDPE SOLID	12"	39	284.29	284.00	0.75%
PIPE #75	HDPE SOLID	12"	58	281.30	279.27	3.50%

PIPE TABLE						
PIPE NO	TYPE	SIZE	LF	INV. IN	INV. OUT	GRADE
PIPE #76	HDPE SOLID	12"	103	281.28	280.11	1.14%
PIPE #76A	HDPE SOLID	12"	16	282.95	282.88	0.50%
PIPE #77	HDPE SOLID	12"	71	281.84	281.48	0.50%
PIPE #78	HDPE SOLID	36"	101	271.50	271.50	0.00%
PIPE #79	HDPE SOLID	12"	48	280.55	280.32	0.50%
PIPE #80	HDPE SOLID	12"	65	280.88	280.55	0.50%
PIPE #81	HDPE SOLID	12"	125	281.50	280.88	0.50%
PIPE #82	HDPE SOLID	24"	39	272.20	270.00	5.62%
PIPE #83	HDPE	36"	100	271.50	271.50	0.00%
PIPE #84	HDPE SOLID	18"	12	275.25	275.01	2.00%
PIPE #85	HDPE SOLID	15"	60	276.77	276.47	0.50%
PIPE #86	HDPE SOLID	12"	76	276.87	275.00	2.47%
PIPE #89	HDPE SOLID	12"	7	275.00	275.00	-0.00%
PIPE #90	HDPE SOLID	15"	29	277.21	277.07	0.50%
PIPE #91	HDPE SOLID	15"	54	277.69	277.41	0.51%
PIPE #92	HDPE SOLID	15"	31	278.18	277.89	0.96%
PIPE #93	RCP	36"	222	268.86	267.75	0.50%
PIPE #94	HDPE SOLID	15"	204	277.49	275.45	1.00%
PIPE #95	SLOTTED PIPE	15"	7	272.54	272.20	5.34%

No.	REVISIONS	DATE	BY
0	CD SUBMITTAL #1	08/01/2025	SREG
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SEAL:

STRONGROCK
ENGINEERING GROUP
STRONG ROCK ENGINEERING GROUP, PLLC | COMPANY LICENSE # P-2166
305 CHURCH AT NORTH HILLS STREET, SUITE 1110 RALEIGH, NC 27609 | INFORMATION@STRONGROCKGROUP.COM

STRONG ROCK PROJECT CID-25-06	NOT FOR CONSTRUCTION	SCALE	AS SHOWN	DESIGNED BY	SRG	DRAWN BY	SRG	CHECKED BY	SRG

MITCHELL MILL MARKET
TOWN OF ROLESVILLE, WAKE COUNTY, NORTH CAROLINA
CONSTRUCTION PLANS

STORM DRAINAGE TABLES

DRAWING SHEET
C-6.3

10 OF 47

THIS PLANSET AND ANY ASSOCIATED DOCUMENTS ARE PRELIMINARY AND NOT AUTHORIZED FOR CONSTRUCTION UNTIL SIGNED, DATED, AND OFFICIALLY RELEASED FOR CONSTRUCTION BY THE ENGINEER OF RECORD.

OFFSITE SPOIL NOTE:

1. IF AN OFFSITE SOIL SPOIL OR BORROW SITE IS UTILIZED, THEN THE DISTURBED AREA FOR THE SPOIL/BORROW SITE MUST BE INCLUDED IN THE LAND-DISTURBANCE PLAN AND PERMIT UNLESS THE SPOIL/BORROW SITE ALREADY HAS A SEPARATE LAND-DISTURBANCE PERMIT.

STAGE 1 SPECIFIC SEQUENCE:

1. SCHEDULE AND HOLD A PRE-CONSTRUCTION CONFERENCE PRIOR TO BEGINNING ANY LAND-DISTURBING ACTIVITIES. THIS CONFERENCE SHOULD BE ATTENDED BY A REPRESENTATIVE OF THE FINANCIALLY RESPONSIBLE PARTY AND/OR THE GENERAL CONTRACTOR, GRADING SUB-CONTRACTOR, EROSION CONTROL SUB-CONTRACTOR AND THE WAKE COUNTY S&E OFFICE.
2. OBTAIN LAND DISTURBING PERMIT AND PLACARD, AND POST THE PLACARD ON SITE.
3. OBTAIN AN APPROVED (STAMPED) S&E CONTROL PLAN AND KEEP IT ON SITE, EITHER IN THE INSPECTION BOX, CONSTRUCTION OFFICE OR WITH THE CONTRACTOR.
4. OBTAIN THE 401/404 PERMIT (IF APPLICABLE) AND KEEP IT ON-SITE. ENSURE ALL REQUIREMENTS OF THE PERMIT ARE MET.
5. INSTALL CONSTRUTION EGRESS/EXITS, SILT FENCING, ADD ROLLED EROSION CONTROL PRODUCT. JACK AND BORE SEWER CONNECTION SHOULD ALSO BEGIN OPERATION. ENSURE SAFE SHOWRING AND MAINTAIN CLEAR ZONES AROUND THE PITS.
6. THE INSTALLATION OF SEDIMENT TRAPS/BASINS, DIVERSION DITCHES, TEMPORARY PIES, CLEAR WATER DIVERSION, CHECK DAMS, AND OTHER INITIAL EROSION CONTROL MEASURES SHOULD COMMENCE AFTER THE JACK AND BORE OPERATION AS SPECIFIED IN THE PLAN. REMOVE ONLY TREES AND GROUND COVER NECESSRY TO INSTALL THESE DEVICES, SEE "STREAM CROSSING SEQUENCE."
7. IF A STOCKPILE IS NECESSARY DUE TO EXCAVATION OF THE SEDIMENT TRAP/BASIN, PLACE A DOUBLE ROW OF SILT FENCE 10 FEET APART. TREES AND GROUNDCOVER MAY BE REMOVED ONLY AS NECESSARY FOR THIS STOCKPILE. IF MATERIAL IS GOING TO BE HAULED OFF-SITE, A SEPARATE EROSION CONTROL PERMIT MUST BE OBTAINED FOR THE DESTINATION OF THE MATERIAL. SEE 'STOCKPILE NOTES.'
8. NOTIFY THE WAKE COUNTY S&E SITE INSPECTOR AFTER MEASURES HAVE BEEN INSTALLED AND PROJECT HAS STARTED
9. PROVIDE TEMPORARY GROUNDCOVER FOR DIVERSION DITCHES AND SEDIMENT TRAPS/BASINS WITHIN 3 DAYS OF COMPLETION.
10. CALL ENVIRONMENTAL CONSULTANT FOR AN ONSITE INSPECTION BY THE ENVIRONMENTAL CONSULTANT TO OBTAIN A CERTIFICATE OF COMPLIANCE.
11. BEGIN CLEARING, GRUBBING AND GRADING OF SITE IN ACCORDANCE WITH THE APPROVED S&E CONTROL PLAN.

STAGE 2 SPECIFIC SEQUENCE:

1. AFTER CONTRACTOR HAS COMPLETED ROUGH GRADING OPERATIONS:
   A. TEMPORARY GROUND COVER SUFFICIENT TO RESTRAIN EROSION SHALL BE PROVIDED AS SOON AS PRACTICAL BUT IN NO CASE LATER THAN SEVEN (7) DAYS AFTER COMPLETING THE WORK.
   B. PERMANENTLY STABILIZE ALL SLOPES AND/OR OTHER AREAS THAT ARE AT FINAL GRADE. REFER TO SEEDING DETAILS.
2. INSTALL UTILITIES, INCLUDING STORM NETWORK. CONTRACTOR SHALL ONLY EXCAVATE THE AMOUNT OF TRENCH TO ALLOW FOR ONE DAY OF PIPE INSTALLATION. STABILIZE GROUND COVER AS WORK IS COMPLETED.
   A. USE BERMS, DIVERSIONS, AND PIPE INLET PROTECTION TO PREVENT SEDIMENT RUNOFF FROM ENTERING THE STORM SYSTEM.
   B. INSTALL INLET PROTECTION ON ALL COMPLETED STORM STRUCTURES.
3. COMPLETE OUTSTANDING CONSTRUCTION; RETAINING WALLS (STABILIZE UPSLOPE), PAVING, FINE GRADING, ETC. STABILIZE GROUND COVER AS WORK IS COMPLETED.
4. PERMANENTLY STABILIZE SITE AS AREAS ARE BROUGHT UP TO FINISH GRADE WITH VEGETATION, PAVING, DITCH LININGS, ETC. SEED AND MULCH DENUDED AREAS PER GROUND STABILIZATION TIME FRAMES.

STAGE 3 SPECIFIC SEQUENCE:

1. WHEN CONSTRUCTION IS COMPLETE AND ALL AREAS ARE STABILIZED COMPLETELY, CALL ENVIRONMENTAL CONSULTANT FOR AN INSPECTION.
2. IF SITE IS APPROVED, REMOVE TEMPORARY DIVERSIONS, SILT FENCE, SEDIMENT BASINS, ETC., AND SEED OUT OR STABILIZE ANY RESULTING BARE AREAS. ALL REMAINING PERMANENT EROSION CONTROL DEVICES, SUCH AS VELOCITY DISSIPATORS, SHOULD NOW BE INSTALLED.
3. WHEN VEGETATION HAS BECOME ESTABLISHED, CALL FOR A FINAL SITE INSPECTION BY THE ENVIRONMENTAL CONSULTANT. OBTAIN A CERTIFICATE OF COMPLETION.
4. WAKE COUNTY MUST GRANT PERMISSION TO CONVERT THE SEDIMENT BASIN OVER TO STORMWATER USE PRIOR TO COMPLETING ANY RELATED WORK. SEE "BASIN REMOVAL SEQUENCE."
5. ADHERE TO ALL REQUIREMENTS OF THE 401/404 PERMIT (IF APPLICABLE).

BASIN REMOVAL SEQUENCE :

1. SCHEDULE A SITE MEETING WITH THE ENVIRONMENTAL CONSULTANT TO DETERMINE IF A BASIN CAN BE REMOVED. INSTALL SILT FENCING OR OTHER TEMPORARY EROSION CONTROL MEASURES AS NEEDED PRIOR TO REMOVAL OF THE BASIN.
2. CONTACT NCDEQ – RALEIGH REGIONAL OFFICE (919) 791-4200 TO DETERMINE THE DIVISION OF ENERGY, MINERAL AND LAND RESOURCES CONTACT PERSON TO RECEIVE DEWATERING NOTIFICATIONS, AT LEAST 10 DAYS PRIOR TO BEGINNING DEWATERING ACTIVITY, SEND EMAIL TO NCDEQ-DEMLR CONTACT PERSON AND COPY ENVIRONMENTAL CONSULTANT THAT MET YOU ONSITE. THE EMAIL SHOULD INCLUDE: E&SC JURISDICTION: WAKE COUNTY, WAKE COUNTY PROJECT: NAME, NUMBER, AND LOCATION (CITY/TOWN), ENVIRONMENTAL CONSULTANT NAME, AND ADDRESS THE FOLLOWING: A)REASON FOR CONVERSION, B)BASIN #, C)DEWATERING METHOD, AND D) ALL OTHER NECESSARY INFO FROM PART II, SECTION G, ITEM 4 OF THE NCG01. (KEEP EMAIL FOR YOUR NPDES MONITORING DOCUMENTATION)
3. AFTER RECEIVING POSITIVE CONFIRMATION FROM NCDEQ-DEMLR THAT YOU MAY REMOVE THE BASIN OR ON > DAY 11, WHICHEVER IS SOONER, REMOVE BASIN(S) AND ASSOCIATED TEMPORARY DIVERSION DITCHES. IF PIPES NEED TO BE EXTENDED, PERFORM THIS OPERATION AT THIS TIME. FINE GRADE AREA IN PREPARATION FOR SEEDING.
4. PERFORM SEEDBED PREPARATION, SEED, MULCH AND ANCHOR ANY RESULTING BARE AREAS IMMEDIATELY.
5. INSTALL VELOCITY DISSIPATORS AND/OR LEVEL SPREADERS AS REQUIRED ON THE EROSION CONTROL PLAN.
6. WHEN SITE IS FULLY STABILIZED, CALL ENVIRONMENTAL CONSULTANT FOR APPROVAL OF REMOVING REMAINING TEMPORARY EROSION CONTROL MEASURES AND ADVICE ON WHEN SITE CAN BE ISSUED A CERTIFICATE OF COMPLETION. NOTE: A MEETING SHOULD ALSO BE SCHEDULED WITH THE ENVIRONMENTAL CONSULTANT TO DETERMINE WHEN A BASIN MAY BE CONVERTED FOR STORMWATER USE. SOME MUNICIPALITIES MAY ALSO REQUIRE THIS.

EROSION CONTROL NARRATIVE:

1. THE PURPOSE OF THIS PLAN IS TO DEVELOP 1 COMMERCIAL LOT. LAND DISTURBANCE WILL BE KEPT TO THE MINIMUM AMOUNT NEEDED TO INSTALL THE INFRUSTRAUTRE, STORMWATER DEVICES AND ROUGH GRADED LOT SHOWN ON THE PLANS.
2. EROSION SHALL BE CONTROLLED BY USING A COMBINATION OF TEMPORARY AND PERMANENT STABILIZATION MEASURES THROUGHOUT THE SITE. IN GENERAL STRIPPING OF VEGETATION, REGRADING OR OTHER DEVELOPMENT IS TO BE DONE IN SUCH A WAY THAT WILL MINIMIZE EROSION. EROSION AND SEDIMENT WILL BE CONTROLLED BY SILT FENCE, DIVERSION DITCHES, DAMS, SEDIMENT/SKIMMER BASINS, INLET AND OUTLET PROTECTION, SLOPE DRAINS AND EROSION CONTROLMATTING. CONSTRUCTION ENTRANCES WILL PROVIDE ACCESS TO THE SITE. THE AMOUNT OF DISTURBED AREA AND THE DURATION OF EXPOSURE WILL BE KEPT TO A PRACTICAL MINIMUM AND PERMANENT VEGETATION AND SCM'S WILL BE INSTALLED AS SOON AS POSSIBLE TO PREVENT EROSION.

STREAM CROSSING SEQUENCE:

1. INSTALL CROSSINGS PRIOR TO ANY OTHER ACTIVITIES. PLACE CROSSINGS IN TEMPORARY CONSTRUCTION EASEMENTS ONLY.
2. MINIMIZE STREAMBANK CLEARING. DO NOT EXCAVATE ROCK BOTTOM STREAMBEDS TO INSTALL THE CROSSING. LAY THE CULVERT PIPES ON THE STREAMBED "AS IS" WHEN APPLICABLE. PLACE AS MANY PIPES AS POSSIBLE WITHIN THE LOW AREA OF THE STREAM. PLACE REMAINING PIPES REQUIRED TO CROSS THE STREAM ON THE EXISTING STREAM BOTTOM.
3. INSTALL PIPES WITH A MAXIMUM SPACING OF 12-INCHES BETWEEN PIPES. THE MINIMUM SIZED PIPE CULVERT THAT MAY BE USED IS 24-INCHES.
4. INSTALL CULVERTS WITH A LENGTH THAT EXTEND THE FULL WIDTH OF THE CROSSING, INCLUDING SIDE SLOPES.
5. TEMPORARY STREAM CROSSING:
   * USE COARSE AGGREGATE OF CLEAN LIMESTONE RIPRAP WITH A 6-INCH D50 OR GREATER TO FORM THE CROSSING. INSTALL THE STONE COVER OVER THE CULVERT EQUAL TO ½ THE DIAMETER OF THE CULVERT OR 12-INCHES, WHICHEVER IS GREATER, BUT NO GREATER THAN 18-INCHES.
   * LIMIT ALL FILL MATERIALS ASSOCIATED WITH THE ROADWAY APPROACH TO A MAXIMUM HEIGHT OF 2-FEET ABOVE THE EXISTING FLOOD PLAIN ELEVATION.

EROSION CONTROL NOTES:

1. ALL CONSTRUCTION SHALL CONFORM TO THE LATEST TOWN OF ROLESVILLE STANDARDS, SPECIFICATIONS AND DETAILS.
2. GRADING AND EROSION CONTROL METHODS SHALL ADHERE TO THE TOWN OF ROLESVILLE SOIL AND EROSION CONTROL STANDARDS AND SPECIFICATIONS.
3. GRADING AND EROSION CONTROL METHODS SHALL ADHERE TO THE NORTH CAROLINA DEPARTMENT OF NATURAL RESOURCES DIVISION OF WATER QUALITY (DWQ) STANDARDS AND SPECIFICATIONS. WHERE DIFFERENT FROM WAKE COUNTY STANDARDS, THE MORE STRINGENT METHOD SHALL BE APPLIED.
4. FAILURE TO FOLLOW THE APPROVED PLAN SEQUENCE AND DETAILS COULD SUBJECT THE FINANCIALLY RESPONSIBLE PARTY TO FINES AND PENALTIES ISSUED BY EITHER THE WAKE COUNTY EROSION CONTROL DEPARTMENT OR THE DWQ.
5. CONTRACTOR SHALL SEED AND STABILIZE ALL STEEP SLOPES (GREATER THAN 2H:1V) WITHIN 7 DAYS, 10 DAYS FOR MODERATE SLOPES (3H:1V OR GREATER) AND WITHIN 14 CALENDAR DAYS EVERYWHERE ELSE (STATE LAW 2009-486).
6. FOR ANY LAND-DISTURBING ACTIVITY WHERE GRADING ACTIVITIES HAVE BEEN COMPLETED, TEMPORARY OR PERMANENT GROUND COVER SUFFICIENT TO RESTRAIN EROSION SHALL BE PROVIDED AS SOON AS PRACTICAL, BUT IN NO CASE LATER THAN SEVEN (7) DAYS AFTER COMPLETING THE WORK. STABILIZATION IS THE BEST FORM OF EROSION CONTROL. TEMPORARY SEEDING IS NECESSARY TO ACHIEVE EROSION CONTROL ON LARGE DENUDED AREAS AND WHEN SPECIFICALLY REQUIRED AS PART OF THE CONSTRUCTION SEQUENCE ON THE PLAN.
7. NO DEBRIS SHALL BE TRACKED ONTO PUBLIC RIGHT OF WAY. IF THE SITUATION OCCURS WHERE MUD, ROCK AND DEBRIS IS TRACKED ONTO PAVEMENT, THE CONTRACTOR SHALL CLEAN THE PAVEMENT AND INSTALL ADDITIONAL MEASURES TO PREVENT THE FUTURE OCCURRENCE.
8. THE EROSION CONTROL INSPECTOR MAY REQUIRE ADDITIONAL FIELD MEASURES AS NECESSARY TO PROVIDE ADEQUATE PROTECTION FROM RECEIVING WATER COURSES.
9. EROSION AND SEDIMENT CONTROL DEVICES MUST BE INSTALLED AND INSPECTED PRIOR TO ANY GRADING ON SITE. THE CONTRACTOR SHALL CALL FOR AN INSPECTION BY NCDEQ ONCE INITIAL MEASURES ARE IN PLACE. (SEE CONSTRUCTION SEQUENCES)
10. CONTRACTOR SHALL INSPECT ALL SEDIMENT /EROSION CONTROL DEVICES AFTER EACH STORM EVENT. EACH DEVICE IS TO BE MAINTAINED OR REPLACED IF SEDIMENT ACCUMULATION HAS REACHED ONE HALF THE CAPACITY OF THE DEVICE.
11. A COPY OF THE APPROVED EROSION CONTROL PLAN MUST BE ON FILE AT THE JOB SITE AT ALL TIMES.
12. CONSTRUCTION, MAINTENANCE, AND REMOVAL OF ALL EROSION CONTROL DEVICES ARE THE RESPONSIBILITY OF THE GRADING CONTRACTOR UNLESS OTHERWISE NOTED.
13. ANY GRADING BEYOND THE DENUDED LIMITS SHOWN ON THE PLAN IS A VIOLATION OF THE CITY/COUNTY EROSION CONTROL ORDINANCE AND IS SUBJECT TO A FINE.
14. ADDITIONAL MEASURES TO CONTROL EROSION AND SEDIMENT MAY BE REQUIRED BY A REPRESENTATIVE OF THE CITY/COUNTY ENGINEERING DEPARTMENT AND ARE THE RESPONSIBILITY OF THE CONTRACTOR.
15. PROTECTION OF EXISTING VEGETATION: AT THE START OF GRADING INVOLVING THE STRIPPING OF TOPSOIL OR LOWERING OF EXISTING GRADE AROUND A TREE, A CLEAN, SHARP, VERTICAL CUT SHALL BE MADE AT THE EDGE OF THE TREE SAVE AREA AT THE SAME TIME AS OTHER EROSION CONTROL MEASURES ARE INSTALLED. THE TREE PROTECTION FENCING SHALL BE INSTALLED ON THE SIDE OF THE CUT FARTHEST AWAY FROM THE TREE TRUNK AND SHALL REMAIN IN PLACE UNTIL ALL CONSTRUCTION IN THE VICINITY OF THE TREES IS COMPLETE. NO STORAGE OF MATERIALS, FILL, OR EQUIPMENT AND NO TRESPASSING SHALL BE ALLOWED WITHIN THE BOUNDARY OF THE PROTECTED AREA AND SHALL BE POSTED ON THE PROTECTION FENCE. A PROTECTION FENCE CONSTRUCTED OF MATERIAL RESISTANT TO DEGRADATION BY SUN, WIND, AND MOISTURE FOR THE DURATION OF THE CONSTRUCTION, SHALL BE INSTALLED AT THE SAME TIME AS THE EROSION CONTROL MEASURES AND SHALL BE IN PLACE UNTIL ALL CONSTRUCTION IN THE VICINITY OF THE TREES IS COMPLETE.
16. A CONSTRUCTION SEQUENCE HAS BEEN PROVIDED. INSTALLATION OF ALL PROPOSED SEDIMENTATION & EROSION CONTROL MEASURES IN THE SEQUENCE(S) PROVIDED AND MAINTENANCE OF THOSE DEVICES IS REQUIRED. THE CONTRACTOR MAY BE ALLOWED, WITH PRIOR APPROVAL FROM THE OWNER, TO COORDINATE CHANGES TO THE PLAN WITH THE ON-SITE SEDIMENTATION & EROSION CONTROL INSPECTOR AND THE ENGINEER.
17. PROVIDE INLET PROTECTION AROUND ALL SITE STORM INLETS. PROTECT OPEN PIPES UNDER CONSTRUCTION WITH EITHER PLYWOOD OR WITH MESH AND GRAVEL WEIRS. RUNOFF SHALL NOT BE ALLOWED IN ANY OPEN TRENCH.
18. CONTRACTOR WILL FIELD LOCATE SILT FENCE OUTLETS AT LOW POINTS IN SILT FENCE AS REQUIRED TO PROVIDE RELIEF FROM CONCENTRATED FLOWS AND PONDING.
19. TEMPORARY DIVERSIONS SHALL BE MAINTAINED DAILY BY CONTRACTOR SO THAT THEY ARE FUNCTIONAL AT THE END OF EACH WORKDAY AND WHEN STOPPING WORK FOR RAIN.
20. ALL DIMENSIONS AND GRADES SHOWN ON THE PLANS SHALL BE FIELD VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION. CONTRACTOR SHALL NOTIFY THE OWNER AND ENGINEER IF ANY DISCREPANCIES EXIST PRIOR TO PROCEEDING WITH CONSTRUCTION FOR NECESSARY PLAN OR GRADE CHANGES. NO EXTRA COMPENSATION SHALL BE PAID TO THE CONTRACTOR FOR ANY WORK DONE DUE TO DIMENSIONS OR GRADES SHOWN INCORRECTLY ON THESE PLANS IF SUCH NOTIFICATION HAS NOT BEEN GIVEN.
21. DISTURBANCE OUTSIDE OF THE SITE PROPERTY LIMITS OR PUBLIC RIGHT-OF-WAY SHALL ONLY BE AS ALLOWED BY SIGNED GRADING AGREEMENTS AND/OR EASEMENTS BETWEEN THE DEVELOPER AND THE OFFSITE PROPERTY OWNER.
22. THE CONTRACTOR IS RESPONSIBLE TO MAINTAIN SAFE OPEN ACCESS TO ALL PROPERTIES ALONG ADJACENT PROPERTIES DURING CONSTRUCTION PERIOD FOR IMPROVEMENTS.
23. SLOPES GREATER THAN 3:1 AND/OR GREATER THAN 10' IN VERTICAL DIFFERENCE SHALL BE INSTALLED WITH ROLLED EROSION CONTROL PRODUCT IMMEDIATELY UPON INSTALLATION.

LIMITS OF DISTURBANCE: 429,192 SF (9.85 AC)

LIMITS OF DISTURBANCE: 429,192 SF (9.85 AC)

GENERAL SEQUENCE:

ENFORCEMENT NOTE 1. FAILURE TO FOLLOW THIS CONSTRUCTION SEQUENCE MAY RESULT IN LOCAL ENFORCEMENT ACTIONS, INCLUDING BUT NOT LIMITED TO CIVIL PENALTIES TO $5000 PER VIOLATION PER DAY. INJUNCTIVE RELIEF, CRIMINAL PENALTIES, AND PERMIT REVOCATION. ADDITIONALLY, OFF-SITE SEDIMENTATION MAY RESULT IN RESTORATION REQUIREMENTS.

ENFORCEMENT NOTE 2. IF THE WAKE COUNTY S&E STAFF DETERMINES THAT EXCESSIVE SEDIMENT IS LEAVING THE SITE, A REVISED SEDIMENTATION AND EROSION CONTROL PLAN MAY BE REQUIRED, WITH ASSOCIATED REQUIREMENTS FOR ADDITIONAL S&E MEASURES.

REQUIRED WAKE COUNTY CONSTRUCTION SEQUENCE

1. SCHEDULE A PRECONSTRUCTION CONFERENCE WITH THE ENVIRONMENTAL CONSULTANT. OBTAIN A LAND-DISTURBING PERMIT.
2. INSTALL GRAVEL CONSTRUCTION PAD, TEMPORARY DIVERSIONS, SILT FENCE, AND PREPARE JACK AND BORE LOCATIONS. INSTALL SEDIMENT BASINS AND OTHER MEASURES AS SHOWN ON THE APPROVED PLAN. CLEAR ONLY AS NECESSARY TO INSTALL THESE DEVICES. SEED TEMPORARY DIVERSIONS, BERMS AND BASINS IMMEDIATELY AFTER CONSTRUCTION.
3. CALL ENVIRONMENTAL CONSULTANT FOR AN ONSITE INSPECTION BY THE ENVIRONMENTAL CONSULTANT TO OBTAIN A CERTIFICATE OF COMPLIANCE.
4. BEGIN CLEARING AND GRUBBING. MAINTAIN DEVICES AS NEEDED. ROUGH GRADE SITE.
5. INSTALL STORM SEWER, IF SHOWN, AND PROTECT INLETS WITH BLOCK AND GRAVEL INLET CONTROLS, SEDIMENT TRAPS OR OTHER APPROVED MEASURES AS SHOWN ON THE PLAN. BEGIN CONSTRUCTION, BUILDING, ETC.
6. STABILIZE SITE AS AREAS ARE BROUGHT UP TO FINISH GRADE WITH VEGETATION, PAVING, DITCH LININGS, ETC. SEED AND MULCH DENUDED AREAS PER GROUND STABILIZATION TIME FRAMES.
7. WHEN CONSTRUCTION IS COMPLETE AND ALL AREAS ARE STABILIZED COMPLETELY, CALL ENVIRONMENTAL CONSULTANT FOR AN INSPECTION.
8. IF SITE IS APPROVED, REMOVE TEMPORARY DIVERSIONS, SILT FENCE, SEDIMENT BASINS, ETC., AND SEED OUT OR STABILIZE ANY RESULTING BARE AREAS. ALL REMAINING PERMANENT EROSION CONTROL DEVICES, SUCH AS VELOCITY DISSIPATORS, SHOULD NOW BE INSTALLED.
9. WHEN VEGETATION HAS BECOME ESTABLISHED, CALL FOR A FINAL SITE INSPECTION BY THE ENVIRONMENTAL CONSULTANT. OBTAIN A CERTIFICATE OF COMPLETION.

STOCK PILE NOTES:

1. STOCKPILE FOOTPRINTS SHALL BE SETBACK A MINIMUM OF 25' FROM ADJACENT PROPERTY LINES
2. STOCKPILE HEIGHT SHALL NOT EXCEED 35 FEET.
3. STOCKPILE SLOPES SHALL BE 2:1 OR FLATTER
4. STOCKPILING MATERIALS ADJACENT TO A DITCH, DRAINAGEWAY, WATERCOURSE, WETLAND, STREAM BUFFER, OR OTHER BODY OF WATER SHALL BE AVOIDED UNLESS AN ALTERNATIVE LOCATION IS DEMONSTRATED TO BE UNAVAILABLE.
5. ANY CONCENTRATED FLOW LIKELY TO AFFECT THE STOCKPILE SHALL BE DIVERTED TO AN APPROVED BMP
6. OFF-SITE SPOIL OR BORROW AREAS MUST BE IN COMPLIANCE WITH WAKE COUNTY UDO AND STATE REGULATIONS. ALL SPOIL AREAS OVER AN ACRE ARE REQUIRED TO HAVE AN APPROVED SEDIMENT CONTROL PLAN. DEVELOPER/CONTRACTOR SHALL NOTIFY WAKE COUNTY OF ANY OFFSITE DISPOSAL OF SOIL, PRIOR TO DISPOSAL. FILL OF FEMA FLOODWAYS AND NON-ENCROACHMENT AREAS ARE PROHIBITED EXCEPT AS OTHERWISE PROVIDED BY SUBSECTION 14-19-2 OF THE WAKE COUNTY UNIFIED DEVELOPMENT ORDINANCE (CERTIFICATIONS AND PERMITS REQUIRED).

MAINTENANCE REQUIREMENTS:

A. SEEDING OR COVERING STOCKPILES WITH TARPS OR MULCH IS REQUIRED AND WILL REDUCE EROSION PROBLEMS. TARPS SHOULD BE KEYED IN AT THE TOP OF THE SLOPE TO KEEP WATER FROM RUNNING UNDERNEATH THE PLASTIC.
B. IF A STOCKPILE IS TO REMAIN FOR FUTURE USE AFTER THE PROJECT IS COMPLETE (BUILDERS, ETC.), THE FINANCIAL RESPONSIBLE PARTY MUST NOTIFY WAKE COUNTY OF A NEW RESPONSIBLE PARTY FOR THAT STOCKPILE.
D. ESTABLISH AND MAINTAIN A VEGETATIVE BUFFER AT THE TOE OF THE SLOPE (WHERE PRACTICAL).

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No.	REVISIONS	DATE	BY
0	CD SUBMITTAL #1	08/01/2025	SREG
1	CID-25-06 V2	10/01/2025	SREG
2	CID-25-06 V3	03/02/2026	SREG

SEAL:

STRONGROCK
ENGINEERING GROUP
STRONG ROCK ENGINEERING GROUP, PLLC | COMPANY LICENSE # P-2166
305 CHURCH AT NORTH HILLS STREET, SUITE 1110 RALEIGH, NC 27609 | INFORMATION@STRONGROCKGROUP.COM

STRONG ROCK PROJECT	CID-25-06
	NOT FOR CONSTRUCTION
SCALE	AS SHOWN
DESIGNED BY	SRG
DRAWN BY	SRG
CHECKED BY	SRG

MITCHELL MILL MARKET
TOWN OF ROLESVILLE, WAKE COUNTY, NORTH CAROLINA
CONSTRUCTION PLANS

EROSION CONTROL NOTE

DRAWING SHEET

C-7.0

PROGRESS PLOT DATE: 02/25/2026



LEGEND:

- EXISTING ADJOINER PROPERTY LINE
- EXISTING EDGE OF PAVEMENT
- EX. MAJOR CONTOURS
- EX. MINOR CONTOURS
- SILT FENCE/ LIMITS OF DISTURBANCE
- LIMITS OF DISTURBANCE
- SILT FENCE
- TREE PROTECTION LINE
- TEMPORARY DITCH
- BAFFLES
- TEMPORARY SLOPE DRAIN
- TEMPORARY SKIMMER
- SILT FENCE OUTLET
- CHECK DAM
- DISSIPATOR PAD
- CONSTRUCTION ENTRANCE
- INLET PROTECTION
- EXISTING WETLAND
- ROLLED EROSION CONTROL
- ENVIRONMENTAL SENSITIVE AREA
- FIELD SLOPE-EROSION CONTROL BLANKET

NOTE:

1. COMMERCIAL SITE BOUNDARY, ACREAGE: 429,192 SF (9.85 AC)
2. EROSION CONTROL NOTES: SEE SHEET C-7.0
3. ALL LAND-DISTURBING ACTIVITIES MUST BE PLANNED AND CONDUCTED TO LIMIT THE EXPOSED AREA TO 50 ROLLING ACRES.
4. STOCKPILE HEIGHT SHALL NOT EXCEED 35 FEET.

NC GRID NORTH - NAD 83
ADOPTED BOM 1992 PG 635

GRAPHIC SCALE

50 0 25 50 100 200

(IN FEET)
1 inch = 50 ft.

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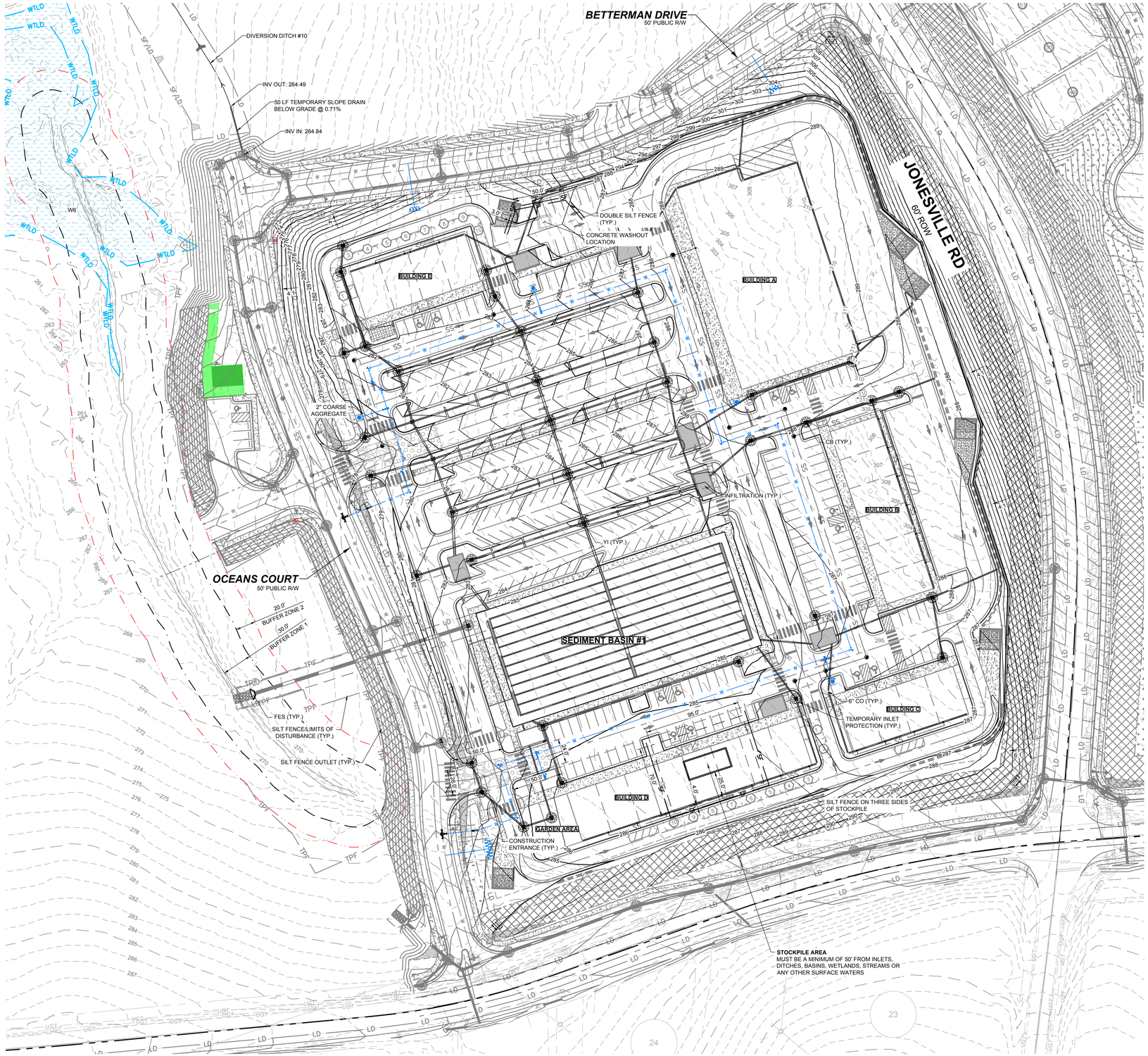
STRONG ROCK PROJECT	CID-25-06
NOT FOR CONSTRUCTION	
SCALE	AS SHOWN
DESIGNED BY	SRG
DRAWN BY	SRG
CHECKED BY	SRG

MITCHELL MILL MARKET
TOWN OF ROLESVILLE, WAKE COUNTY, NORTH CAROLINA
CONSTRUCTION PLANS
EROSION CONTROL PLAN - STAGE 1

DRAWING SHEET
C-7.1

12 OF 47

PROGRESS PLOT DATE: 02/25/2026



LEGEND:

- EXISTING ADJOINER PROPERTY LINE
- EXISTING EDGE OF PAVEMENT
- EX. MAJOR CONTOURS
- EX. MINOR CONTOURS
- SILT FENCE/ LIMITS OF DISTURBANCE
- LIMITS OF DISTURBANCE
- SILT FENCE
- TREE PROTECTION LINE
- TEMPORARY DITCH
- BAFFLES
- TEMPORARY SLOPE DRAIN
- TEMPORARY SKIMMER
- SILT FENCE OUTLET
- CHECK DAM
- DISSIPATOR PAD
- WATTLE
- INLET PROTECTION
- CONSTRUCTION ENTRANCE
- EXISTING WETLAND
- ROLLED EROSION CONTROL
- ENVIRONMENTAL SENSITIVE AREA
- FIELD SLOPE-EROSION CONTROL BLANKET

NOTE:

1. COMMERCIAL SITE BOUNDARY, ACREAGE: 429,192 SF (9.85 AC)
2. EROSION CONTROL NOTES: SEE SHEET C-7.0
3. ALL LAND-DISTURBING ACTIVITIES MUST BE PLANNED AND CONDUCTED TO LIMIT THE EXPOSED AREA TO 50 ROLLING ACRES.
4. STOCKPILE HEIGHT SHALL NOT EXCEED 35 FEET.

NC GRID NORTH - NAD 83
ADOPTED BOM 1992 PG 655

GRAPHIC SCALE

50 0 25 50 100 200

(IN FEET)
1 inch = 50 ft.

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2	CID-25-06 V3	03/02/2026	SREG

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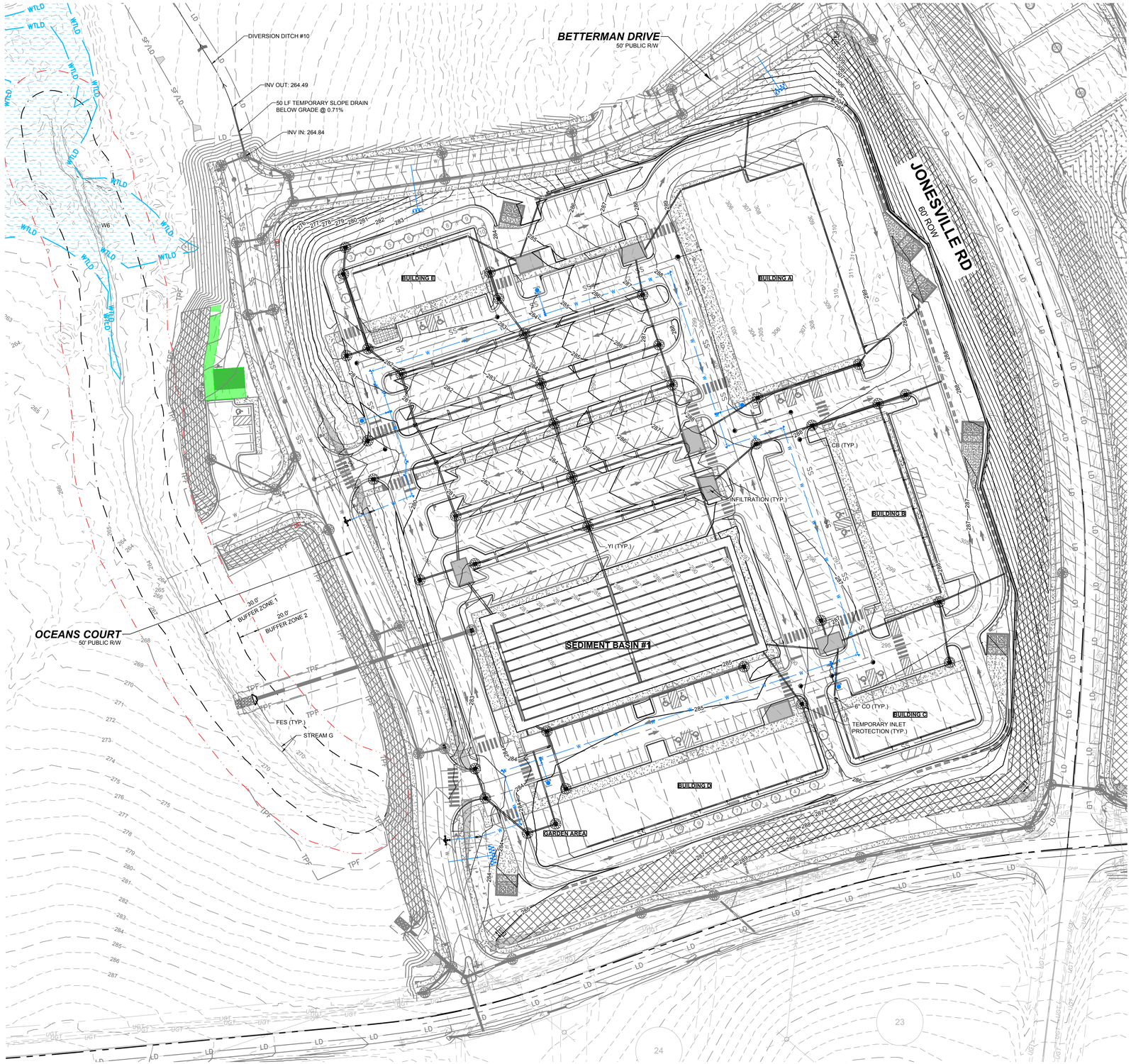
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MITCHELL MILL MARKET
TOWN OF ROLESVILLE, WAKE COUNTY, NORTH CAROLINA
CONSTRUCTION PLANS

EROSION CONTROL PLAN - STAGE 2

DRAWING SHEET
C-7.2

PROGRESS PLOT DATE: 02/25/2026



LEGEND:

- EXISTING ADJOINER PROPERTY LINE
- EXISTING EDGE OF PAVEMENT
- EX. MAJOR CONTOURS
- EX. MINOR CONTOURS
- PROP. MAJOR CONTOURS
- PROP. MINOR CONTOURS
- STANDARD CURB & GUTTER
- PROPOSED STORM DRAIN LINE
- PROPOSED LOT LINE
- SILT FENCE/ LIMITS OF DISTURBANCE
- LIMITS OF DISTURBANCE
- SILT FENCE
- TREE PROTECTION LINE
- SANITARY SEWER LINE
- SANITARY MANHOLE
- INLET PROTECTION
- SILT FENCE OUTLET
- DISSIPATOR PAD
- EXISTING WETLAND
- ENVIRONMENTAL SENSITIVE AREA
- FIELD SLOPE-EROSION CONTROL BLANKET

NOTE:

1. COMMERCIAL SITE BOUNDARY, ACREAGE: 429,192 SF (9.85 AC)
2. EROSION CONTROL NOTES: SEE SHEET C-7.0
3. ALL LAND-DISTURBING ACTIVITIES MUST BE PLANNED AND CONDUCTED TO LIMIT THE EXPOSED AREA TO 50 ROLLING ACRES.
4. STOCKPILE HEIGHT SHALL NOT EXCEED 35 FEET.

NC GRID NORTH - NAD 83
ADOPTED BOM 1992 PG 655

GRAPHIC SCALE

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(IN FEET)
1 inch = 50 ft.

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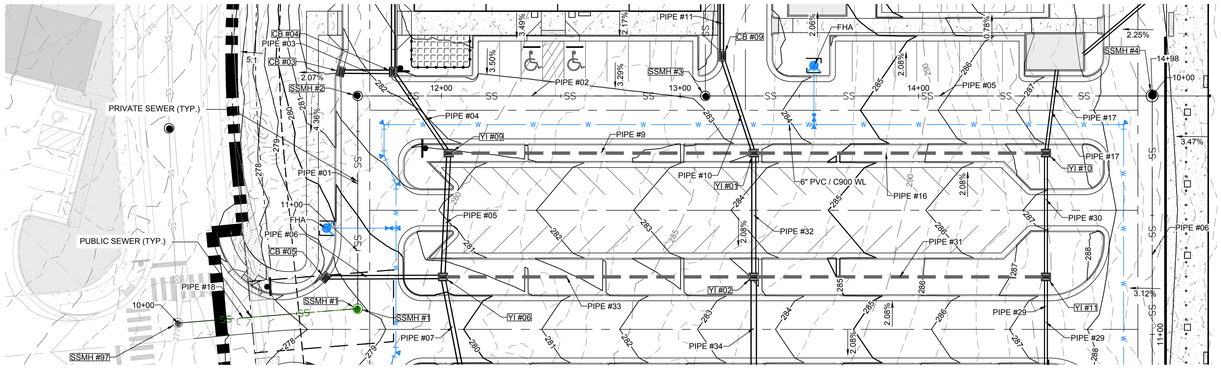
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MITCHELL MILL MARKET
TOWN OF ROLESVILLE, WAKE COUNTY, NORTH CAROLINA
CONSTRUCTION PLANS

EROSION CONTROL PLAN - STAGE 3

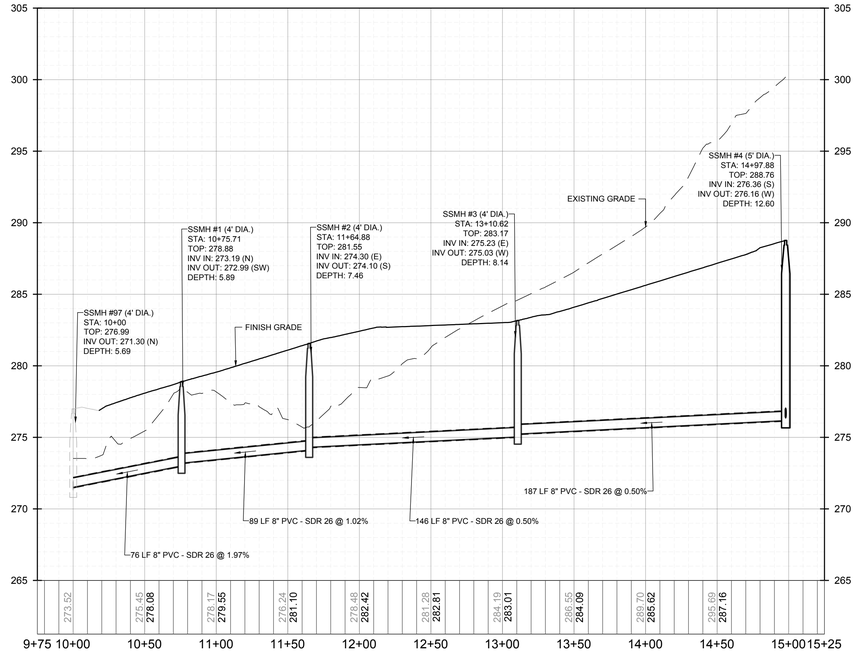
DRAWING SHEET

C-7.3



PROPOSED ON-SITE SANITARY SEWER - PLAN

HORIZONTAL: 1" = 30'



PROPOSED ON-SITE SANITARY SEWER - PROFILE

VERTICAL: 1" = 3'
HORIZONTAL: 1" = 30'



GRAPHIC SCALE

30 0 15 30 60 120

(IN FEET)
1 inch = 30 ft.

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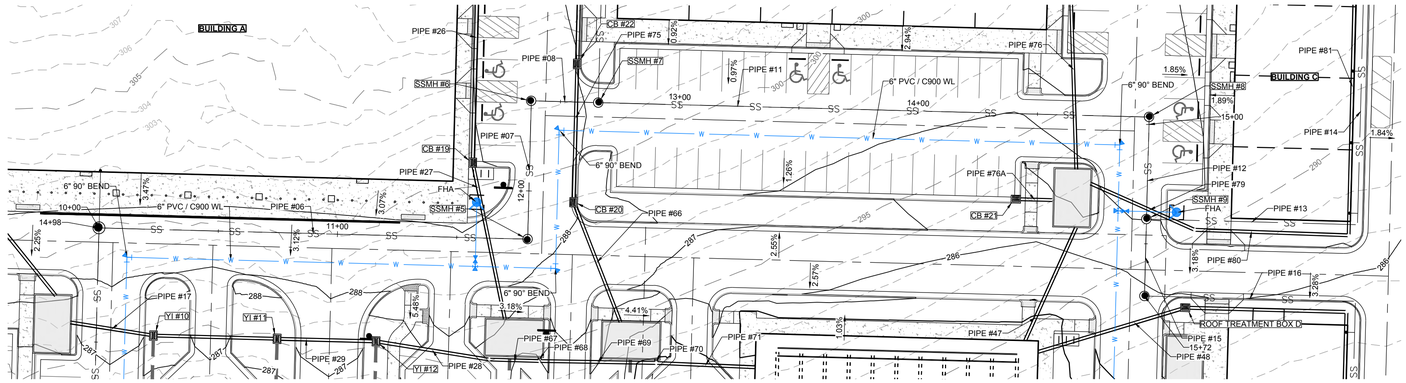
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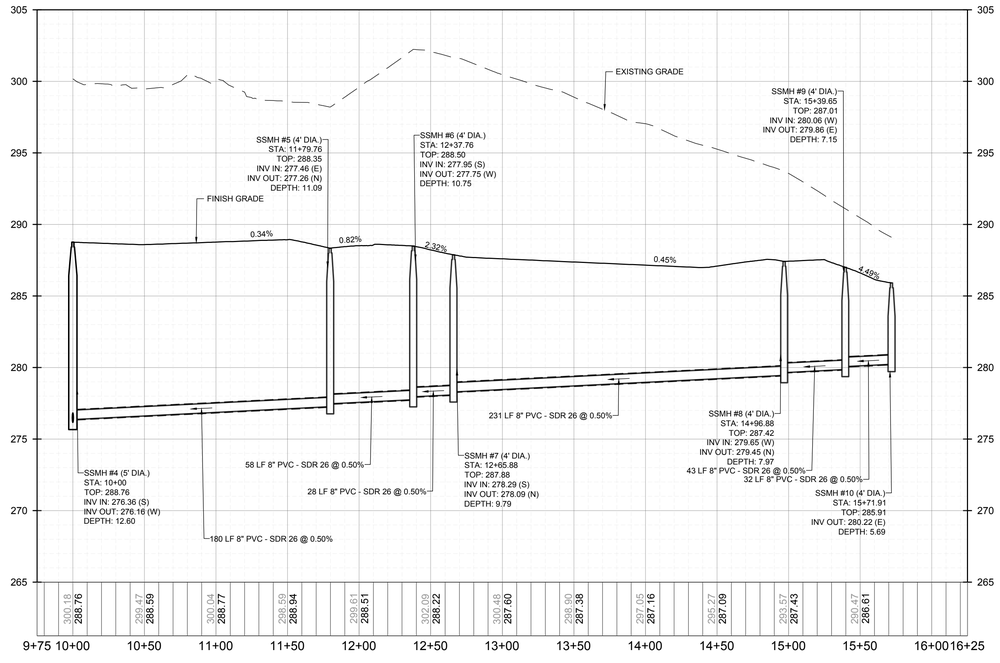
MITCHELL MILL MARKET
TOWN OF ROLESVILLE, WAKE COUNTY, NORTH CAROLINA
CONSTRUCTION PLANS
ON-SITE SANITARY SEWER - PLAN & PROFILE

DRAWING SHEET
C-8.0



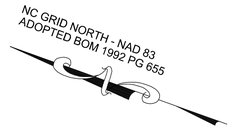
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HORIZONTAL: 1" = 30'



PROPOSED ON-SITE SANITARY SEWER - PROFILE

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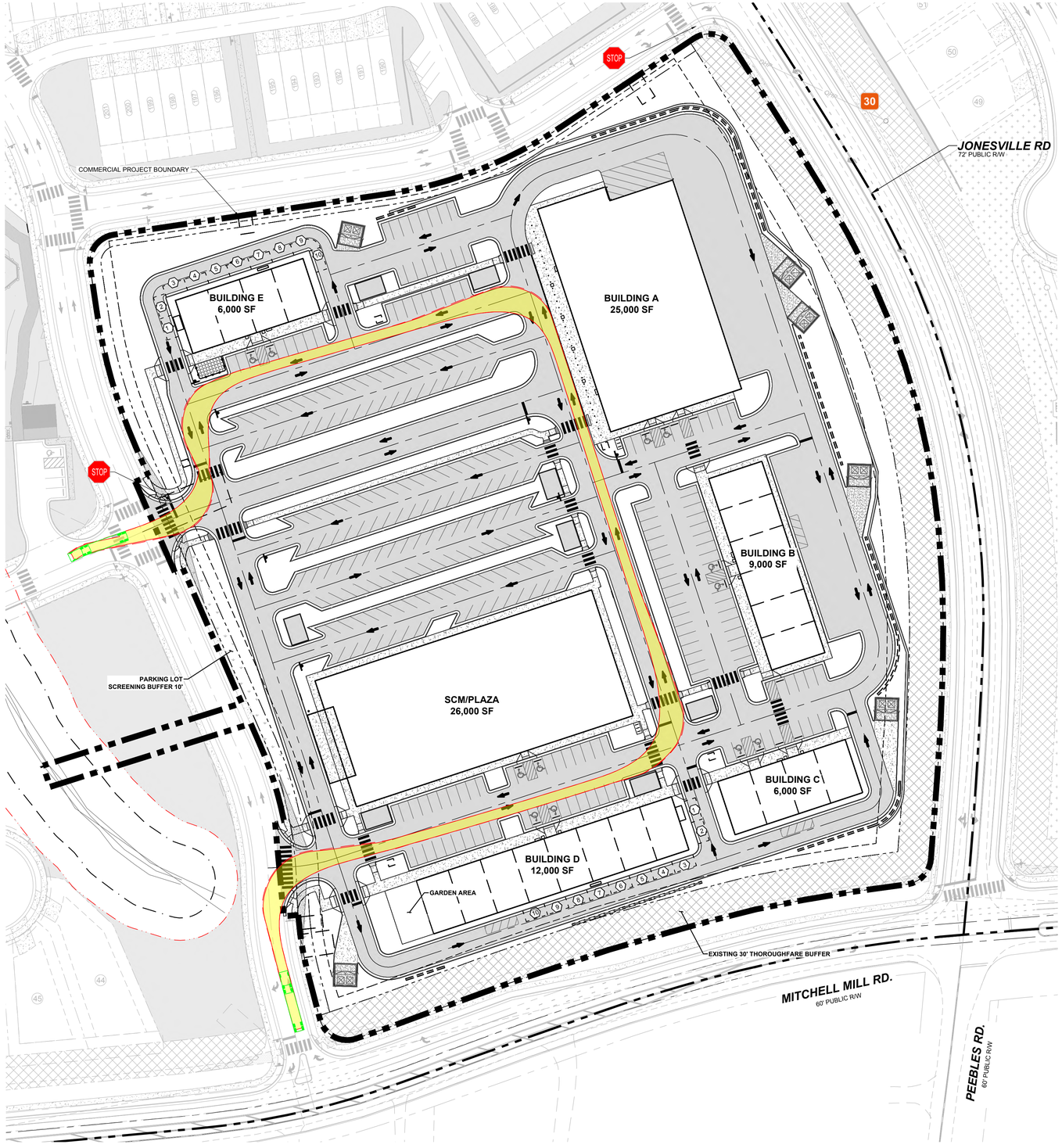
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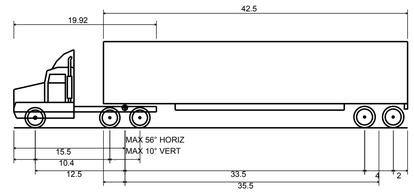
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CONSTRUCTION PLANS
ON-SITE SANITARY SEWER - PLAN & PROFILE

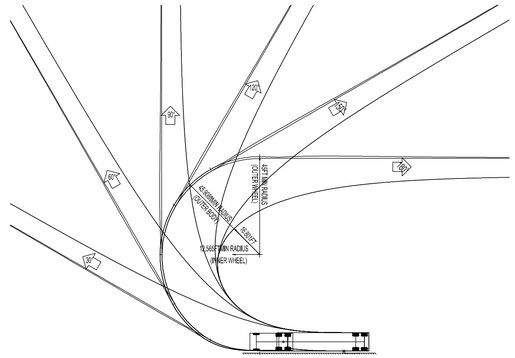
DRAWING SHEET
C-8.1





WB-50 - INTERSTATE SEMI-TRAILER

OVERALL LENGTH	55.000FT
OVERALL WIDTH	8.500FT
OVERAL BODY HEIGHT	12.052FT
MIN BODY GROUND CLEARANCE	1.334FT
MAX TRACK WIDTH	8.500FT
LOCK-TO-LOCK TIME	6.00S
CURB TO CURB TURNING RADIUS	45.000FT





GRAPHIC SCALE

50 0 25 50 100 200

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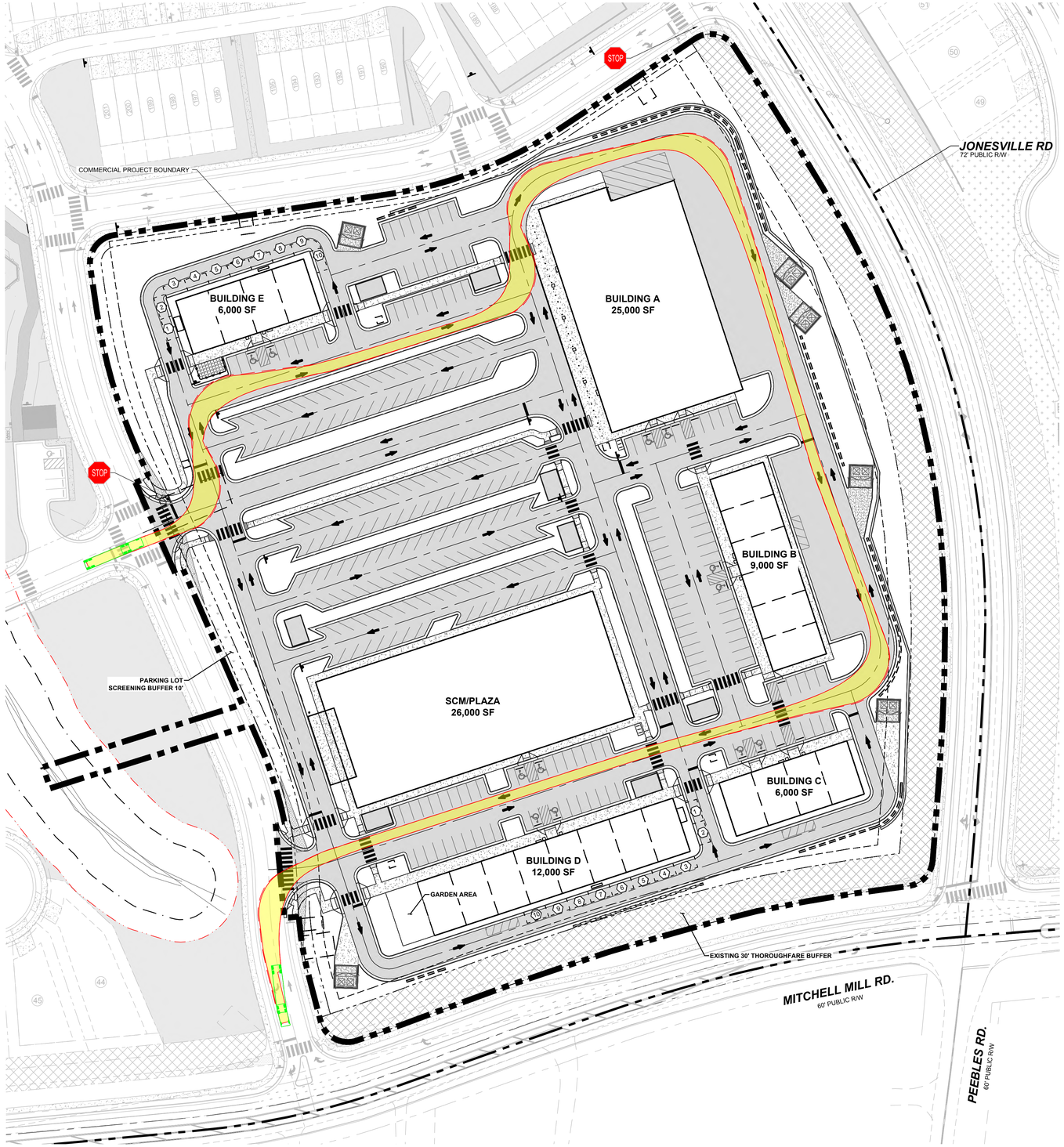
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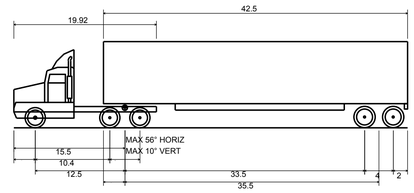
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MITCHELL MILL MARKET
TOWN OF ROLESVILLE, WAKE COUNTY, NORTH CAROLINA
CONSTRUCTION PLANS
FIRE TRUCK TURNING PLAN

DRAWING SHEET
C-9.0

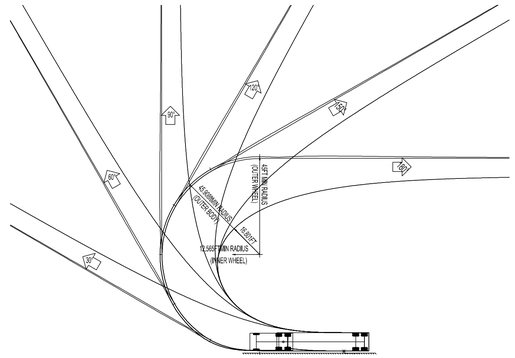
17 OF 47





WB-50 - INTERSTATE SEMI-TRAILER

OVERALL LENGTH	55.000FT
OVERALL WIDTH	8.500FT
OVERAL BODY HEIGHT	12.052FT
MIN BODY GROUND CLEARANCE	1.334FT
MAX TRACK WIDTH	8.500FT
LOCK-TO-LOCK TIME	6.00S
CURB TO CURB TURNING RADIUS	45.000FT





GRAPHIC SCALE

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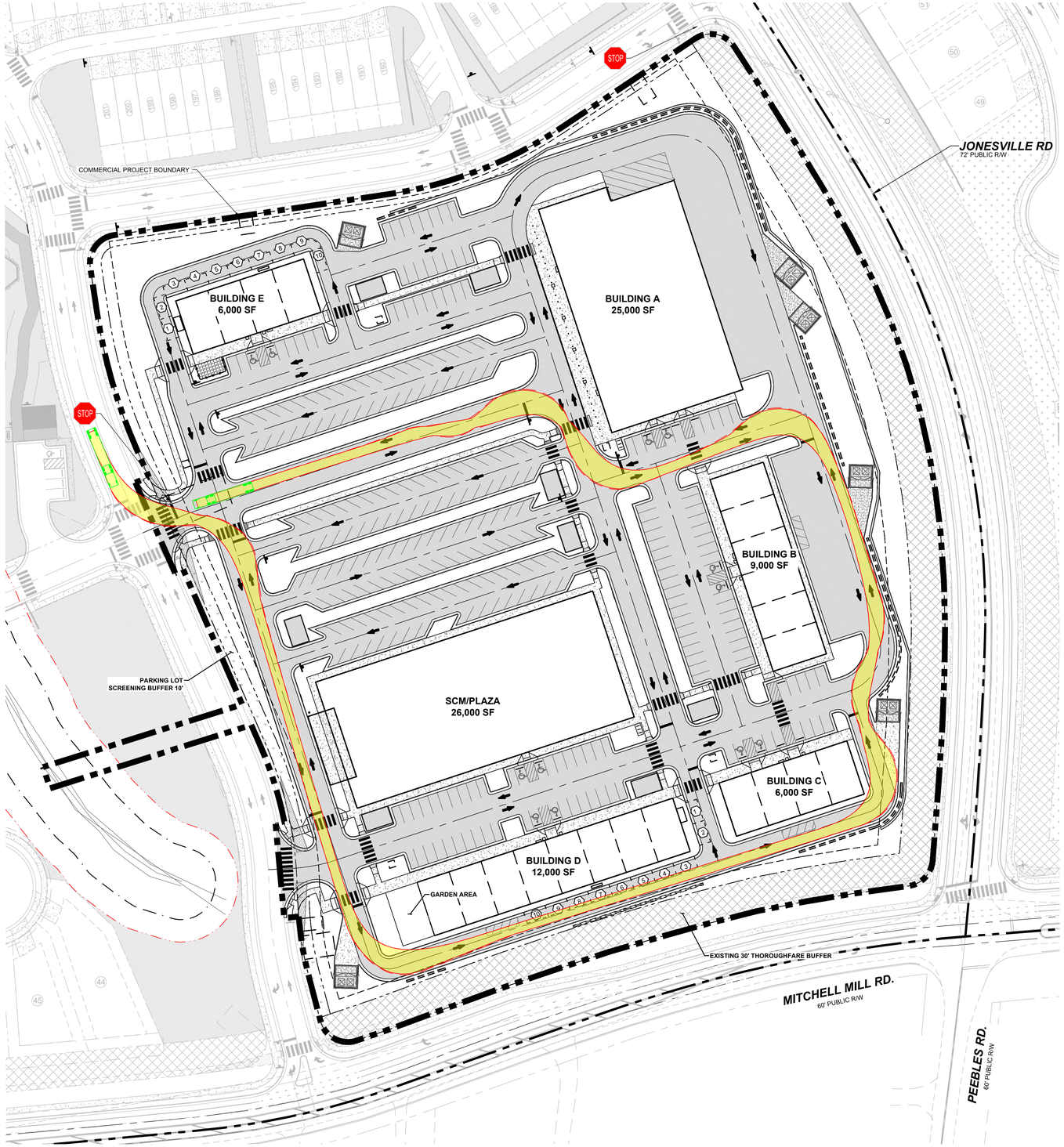
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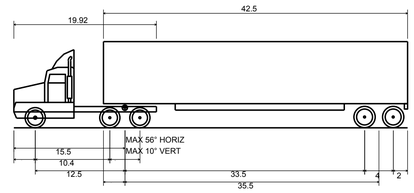
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CONSTRUCTION PLANS
FIRE TRUCK TURNING PLAN

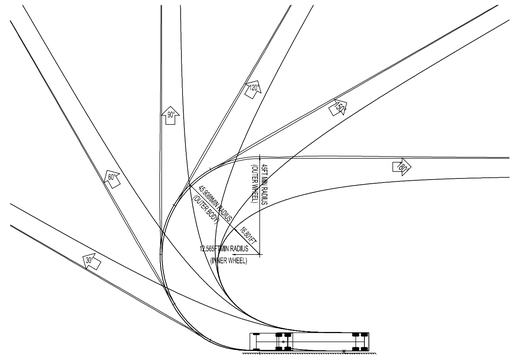
DRAWING SHEET
C-9.1





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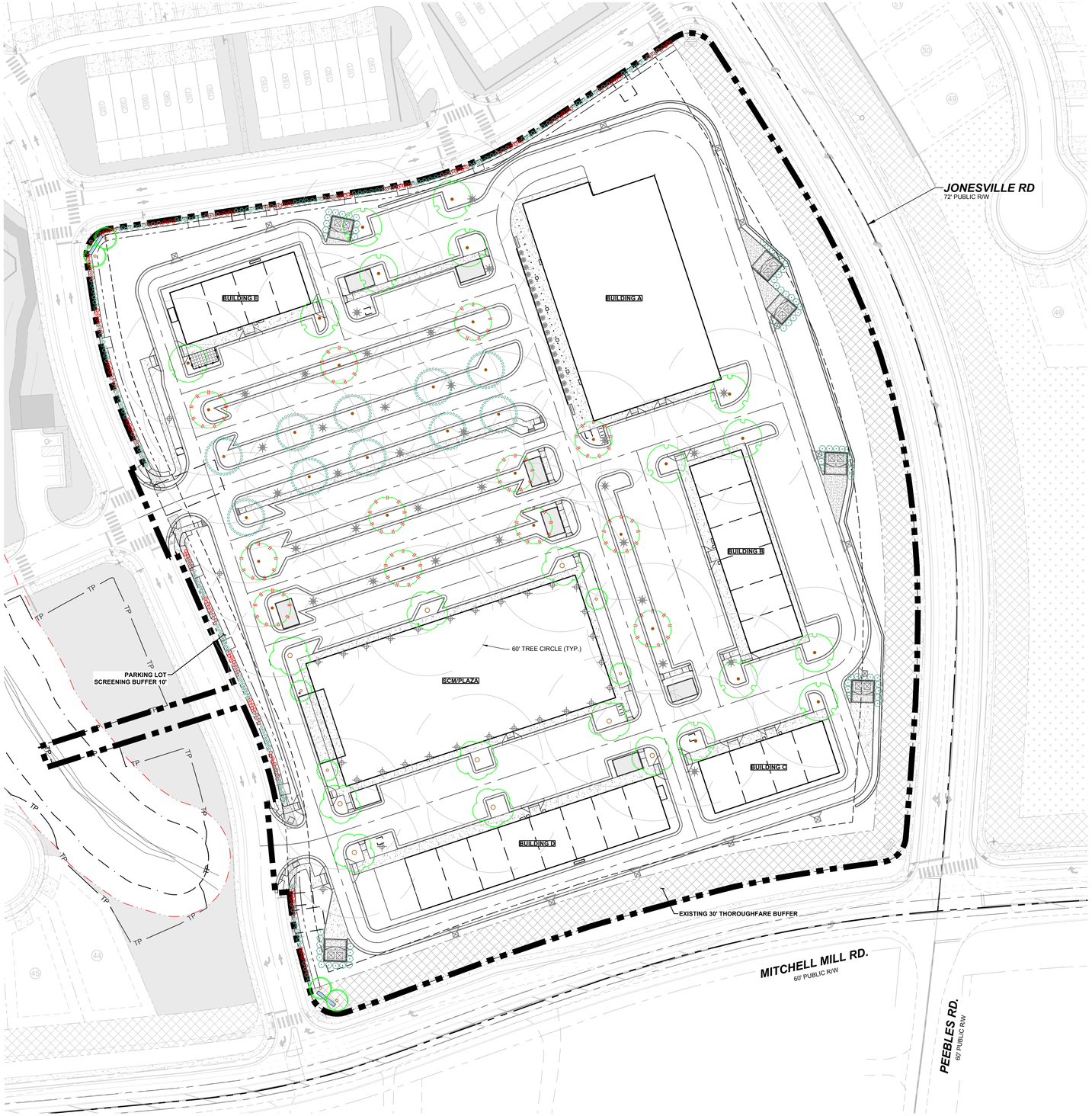
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MITCHELL MILL MARKET
TOWN OF ROLESVILLE, WAKE COUNTY, NORTH CAROLINA
CONSTRUCTION PLANS
FIRE TRUCK TURNING PLAN

DRAWING SHEET
C-9.2



PLAN SCHEDULE

SYMBOL	CODE	QTY	BOTANICAL NAME	COMMON NAME	HEIGHT	CONTAINER	CALIPER	REMARKS
CANOPY TREE								
	GIN BIL	9	GINKGO BILOBA	MAIDENHAIR TREE	8` HT.	B&B	2.0"	ONLY MALES
	KOE PAN	13	KOELREUTERIA PANICULATA	GOLDEN RAIN TREE	8` HT.	B&B	2.0"	
	MAG SWE	10	MAGNOLIA VIRGINIANA	SWEETBAY MAGNOLIA	8` HT.	B&B	2.0"	
	TAX DIS	12	TAXODIUM DISTICHUM	BALD CYPRESS	8` HT.	B&B		
		44	SUBTOTAL:					
UNDERSTORY								
	CAR AME	4	CARPINUS CAROLINIANA	AMERICAN HORNBEAM	6` HT.	B&B	1.5"	
	ILE AME	4	ILEX OPACA	AMERICAN HOLLY	6` HT.	B&B	1.5"	
		12	SUBTOTAL:					
SYMBOL	CODE	QTY	BOTANICAL NAME	COMMON NAME	SIZE	CONTAINER		REMARKS
DUMPSTER SCREENING								
	ILE NEL	70	ILEX X 'NELLIE R. STEVENS'	NELLIE R. STEVENS HOLLY	6` HT.	B&B		
		70	SUBTOTAL:					
PERIMETER SHRUBS								
	CAL PR2	108	CALLICARPA DICHOTOMA	PURPLE BEAUTYBERRY	3 GAL.	POT		
	ITE VI3	110	ITEA VIRGINICA	VIRGINIA SWEETSPIRE	3 GAL.	POT		
	RHA IN2	104	RHAPHIOLEPIS INDICA	INDIAN HAWTHORN	3 GAL.	POT		
	VIB DA2	98	VIBURNUM DAVIDII	DAVID VIBURNUM	3 GAL.	POT		
		420	SUBTOTAL:					

NC GRID NORTH - NAD 83
ADOPTED BOM 1992 PG 655

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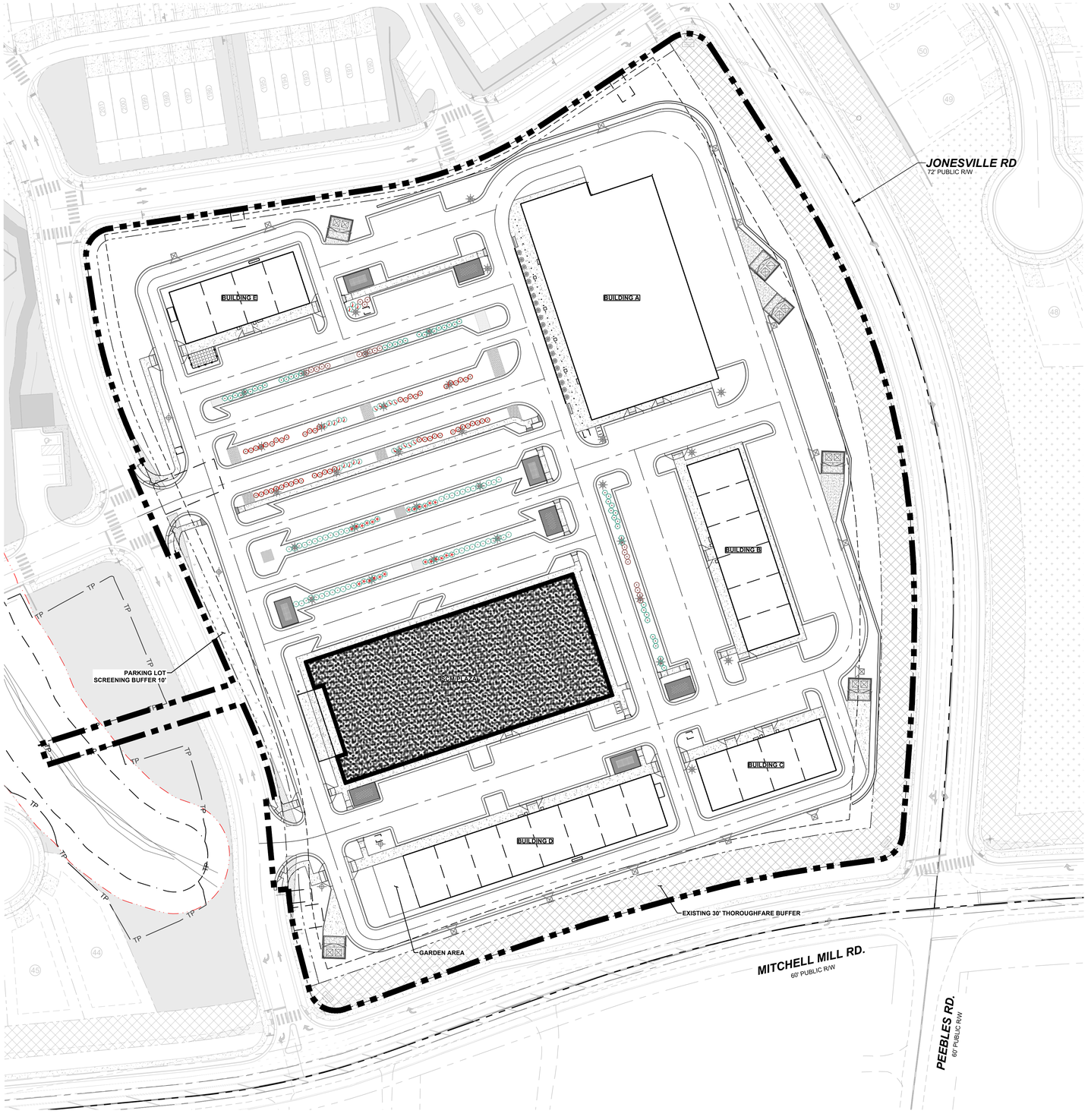
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TOWN OF ROLESVILLE, WAKE COUNTY, NORTH CAROLINA
CONSTRUCTION PLANS
PARKING LOT TREES AND PERIMETER BUFFER

DRAWING SHEET
L-1.0

20 OF 47



PLAN SCHEDULE

SYMBOL	CODE	QTY	BOTANICAL NAME	COMMON NAME	SIZE	CONTAINER		REMARKS
			SCM SHRUBS					
	ILE GLA	47	ILEX GLABRA	INKBERRY HOLLY	3 GAL.	POT		
	ILE WI3	52	ILEX VERTICILLATA	WINTERBERRY	3 GAL.	POT		
	ILE VOM	49	ILEX VOMITORIA	YAUPON HOLLY	3 GAL.	POT		
	PHY NI2	24	PHYSOCARPUS OPULIFOLIUS	NINEBARK	3 GAL.	POT		
	STY AME	23	STYRAX AMERICANUS	AMERICAN SNOWBELL	3 GAL.	POT		
	VIB BLA	21	VIBURNUM PRUNIFOLIUM	BLACKHAW VIBURNUM	3 GAL.	POT		
		216	SUBTOTAL:					
SYMBOL	CODE	QTY	BOTANICAL NAME	COMMON NAME	SIZE	CONTAINER	SPACING	REMARKS
			SCM GROUNDCOVER					
	BAP AUS	1,300	BAPTISIA AUSTRALIS	BLUE WILD INDIGO	#SP3	POT	6" o.c.	
	CAR CHE	2,341	CAREX CHEROKEENSIS	CHEROKEE SEDGE	#SP3	POT	6" o.c.	
	CAR GRA	1,349	CAREX GRAYI	GRAY'S SEDGE	#SP3	POT	6" o.c.	
	LOB CAR	832	LOBELIA CARDINALIS	CARDINAL FLOWER	#SP3	POT	6" o.c.	
	RUD MAG	416	RUDBECKIA PURPUREA	PURPLE CONEFLOWER	#SP3	POT	6" o.c.	
		6,238	SUBTOTAL:					
			SOD/SEED					
	CYN TI3	30,222 SF	CYNODON DACTYLON 'TIF 419'	TIF 419 BERMUDAGRASS	SOD	SOD		SOD FOR PLAZA
		30,222 SF	SUBTOTAL:					

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2	CID-25-06 V3	03/02/2026	SREG

SEAL:

STRONGROCK
ENGINEERING GROUP
STRONG ROCK ENGINEERING GROUP, PLLC | COMPANY LICENSE # P-2166
305 CHURCH AT NORTH HILLS STREET, SUITE 1110 RALEIGH, NC 27609 | INFORMATION@STRONGROCKGROUP.COM

STRONG ROCK PROJECT	CID-25-06
	NOT FOR CONSTRUCTION
SCALE	AS SHOWN
DESIGNED BY	SRG
DRAWN BY	SRG
CHECKED BY	SRG

MITCHELL MILL MARKET
TOWN OF ROLESVILLE, WAKE COUNTY, NORTH CAROLINA
CONSTRUCTION PLANS
SCM PLANTINGS

DRAWING SHEET
L-2.0

Product sheet

CODE square planter

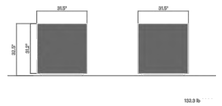
2646

Designed by
Hong Ngo-Aandal, Johan Verde

Code square planter consists of rectangular boxes that can be assembled horizontally and vertically to different furniture formations and landscapes.



Anchoring/assembly



Primary material

Hot-dip galvanised steel

All steel components are hot-dip galvanised, which produces a matt grey surface after a while. We offer a lifetime anti-rust warranty. Corrosion class C4

0.12"

Sustainability

Indicators	Global warming	Total energy used	Recycled materials
Unit	kg CO2	MJ	%
Cradle to Gate A1-A3	285.37	3975	2.69

Certifications

Warranty

- Lifetime warranty against rust
- 15 year warranty on powder coating
- 15 year warranty on wood
- Spare parts always available

Visit www.vestre.com for more information.
Specifications are subject to change without notice.
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www.vestre.com

Product sheet

ACCEPTOR 110

2192

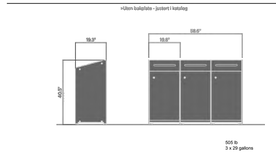
Designed by
Artur Wozniak

Acceptor 110 is our smart modular waste-sorting system that can easily be adapted for an increased number of sorting options. The different openings come in optional colours to encourage and facilitate waste sorting, and the receptacles are easily emptied by opening the door and removing the bin bag. We have now redesigned the smallest unit Acceptor 110. The design has been optimised based off customer feedback and is now more in line with the larger Acceptor 160 version. The system is top-loading for easy access and is available with both rectangular and round openings and with an inner metal receptacle for glass.



Anchoring/assembly

Free-standing/mounted to the ground



Primary material

Hot-dip galvanised steel

All steel components are hot-dip galvanised, which produces a matt grey surface after a while. We offer a lifetime anti-rust warranty. Corrosion class C4

0.12"

Sustainability

Indicators	Global warming	Total energy used	Recycled materials
Unit	kg CO2	MJ	%
Cradle to Gate A1-A3	274.93	3837.77	2.73

Certifications

Warranty

- Lifetime warranty against rust
- 15 year warranty on powder coating
- 15 year warranty on wood
- Spare parts always available

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Product sheet

FORUM bicycle rack

2586A

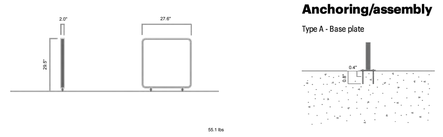
Designed by
Tore Borgersen, Michael Olofsson, Espen Voll

Forum bicycle rack is available in narrow and wide versions. It is sturdily built and provides good support for up to two bicycles.



Anchoring/assembly

Type A - Base plate



Primary material

Hot-dip galvanised steel

All steel components are hot-dip galvanised, which produces a matt grey surface after a while. We offer a lifetime anti-rust warranty. Corrosion class C4

0.6"

Sustainability

Indicators	Global warming	Total energy used	Recycled materials
Unit	kg CO2	MJ	%
Cradle to Gate A1-A3	2163	46431	70.56

Certifications

Warranty

- Lifetime warranty against rust
- 15 year warranty on powder coating
- 15 year warranty on wood
- Spare parts always available

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www.vestre.com

Product sheet

VROOM modules

620

Designed by
Tore Borgersen, Michael Olofsson, Espen Voll

Vroom modules is a modular furniture system that can be extended in endless combinations. The bench comes in two widths, with or without a backrest and armrests. Straight, angled and curved connection elements mean that the seats can be joined to create long benches, formations, large and small circles, and letters.



AWARD FOR DESIGN EXCELLENCE

Anchoring/assembly



Primary material

Hot-dip galvanised steel

All steel components are hot-dip galvanised, which produces a matt grey surface after a while. We offer a lifetime anti-rust warranty. Corrosion class C4

0.2"

Sustainability

Indicators	Global warming	Total energy used	Recycled materials
Unit	kg CO2	MJ	%
Cradle to Gate A1-A3	54.42	993.62	1.68

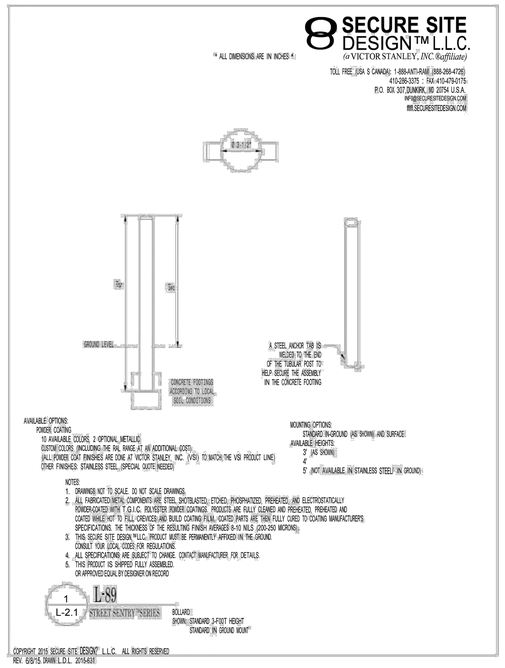
Certifications

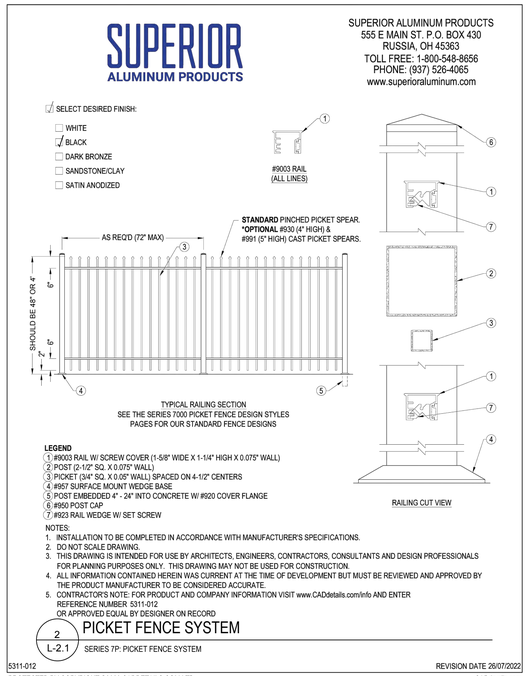
Warranty

- Lifetime warranty against rust
- 15 year warranty on powder coating
- 15 year warranty on wood
- Spare parts always available

Visit www.vestre.com for more information.
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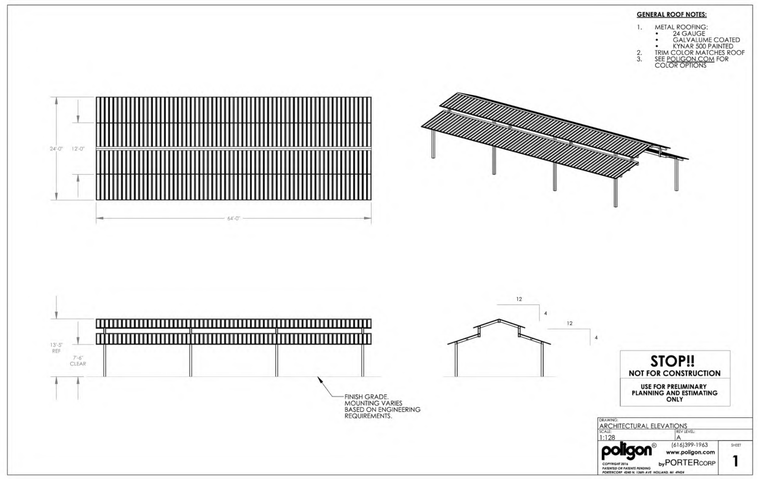
STRONG ROCK PROJECT	CID-25-06
NOT FOR CONSTRUCTION	
SCALE	AS SHOWN
DESIGNED BY	SRG
DRAWN BY	SRG
CHECKED BY	SRG

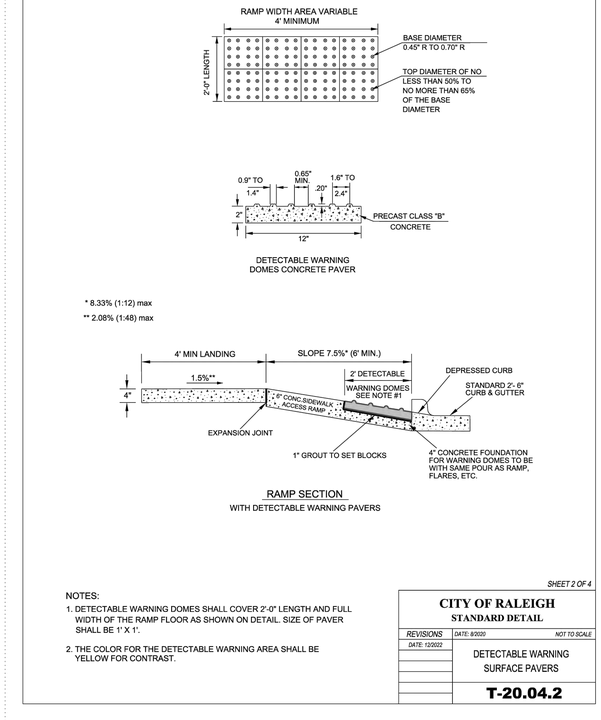
MITCHELL MILL MARKET
TOWN OF ROLESVILLE, WAKE COUNTY, NORTH CAROLINA
CONSTRUCTION PLANS
LANDSCAPE DETAILS

DRAWING SHEET
L-2.1

22 OF 47

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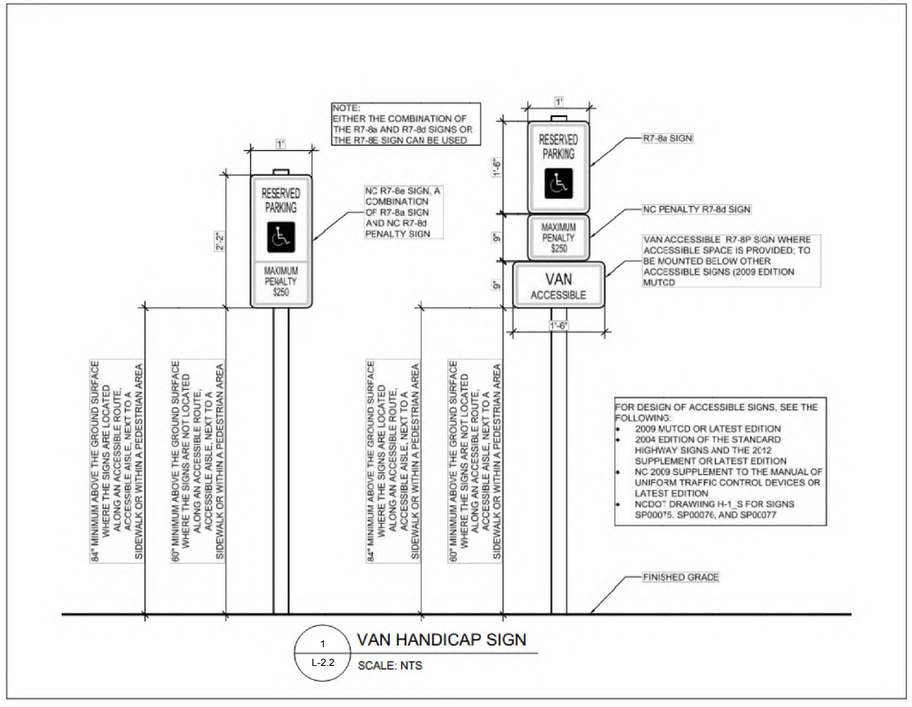


NOTES:
1. DETECTABLE WARNING DOMES SHALL COVER 2'-0" LENGTH AND FULL WIDTH OF THE RAMP FLOOR AS SHOWN ON DETAIL. SIZE OF PAVER SHALL BE 1' X 1'.
2. THE COLOR FOR THE DETECTABLE WARNING AREA SHALL BE YELLOW FOR CONTRAST.

SHEET 2 OF 4

CITY OF RALEIGH
STANDARD DETAIL

REVISIONS	DATE: 9/2020	NOT TO SCALE
DATE: 12/2022	DETECTABLE WARNING SURFACE PAVERS	
	T-20.04.2	



1 / L-2.2 VAN HANDICAP SIGN
SCALE: NTS

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SEAL:

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305 CHURCH AT NORTH HILLS STREET, SUITE 1110 RALEIGH, NC 27609 | INFORMATION@STRONGROCKGROUP.COM

STRONG ROCK PROJECT	CID-25-06
	NOT FOR CONSTRUCTION
SCALE	AS SHOWN
DESIGNED BY	SRG
DRAWN BY	SRG
CHECKED BY	SRG

MITCHELL MILL MARKET
TOWN OF ROLESVILLE, WAKE COUNTY, NORTH CAROLINA
CONSTRUCTION PLANS
LANDSCAPE DETAILS

DRAWING SHEET
L-2.2

23 OF 47

LIGHTING LEGEND			
SYMBOL	**STYLE**	**DESCRIPTION**	**NOTES**
	TOWN AND COUNTRY (4L)	EVOLVE EPTT TOWN & COUNTRY LED POST TOP EPTT02_04ANS0_____-120-277V	15' MOUNTING HEIGHT
	TOWN AND COUNTRY (7L)	EVOLVE EPTT TOWN & COUNTRY LED POST TOP EPTT02_07AAS0_____-120-277V	12' MOUNTING HEIGHT
	COPPERHEAD	EVOLVE EACL SERIES LED AREA LIGHT / COMPACT LOW WATTAGE EACL01_D4AF750	15' MOUNTING HEIGHT
	BOLLARD	US ARCHITECTURAL LIGHTING BDA BOLLARD SERIES - LED BDA6-PR-12LED-350mA-50K	42" HEIGHT
	SIGN LIGHT	SUPERIOR LIGHTING OUTDOOR SIGN LIGHTS - LED LOSL-2FT-50W-50K-BL	GROUND MOUNT POINTING UP @ 45°



GRAPHIC SCALE

50 0 25 50 100 200

(IN FEET)

1 inch = 50 ft

Engineer

QUANTECH ENGINEERING

INNOVATIVE SOLUTIONS | ENGINEERING THE FUTURE

Firm # F-1517

275 CARPENTER HILL LANE

Cary, N.C. 27519

(919) 996-9455

NORTH CAROLINA PROFESSIONAL SEAL 53676 ENGINEER BRYAN A. HARRIS

Evolve®

CUSTOMER NAME
PROJECT NAME
DATE TYPE
CATALOG NUMBER



The Evolve® LED Post Top Town & Country (EPTT) offers energy efficiency and quality of light in a classic look and style. The advanced LED optical system provides improved horizontal and vertical uniformity, reduced glare and improved lighting control.

Construction

Housing:	Die-cast aluminum housing with traditional lantern design. Cupola compatible with C136.41-2010 PE's, Shorting Caps and LightGrid Nodes
Refractors:	Acrylic, Polycarbonate, None/Open
Lens:	Impact resistant UV resistant polymer
Paint:	Corrosion resistant polyester powder paint, mininum 2.0 mil thickness Standard = Black, Dark Bronze RAL & custom colors available
Weight:	14 - 18 lbs (6.2 - 8 kg)

Optical System

Lumens:	2,070-7,970
Distribution:	Symmetric Asymmetric
Efficacy:	72-130
CCT:	2700K, 3000K, 4000K, 5000K
CRI (Min):	≥70

Electrical

Input Voltage:	120-277V
Input Frequency:	50/60Hz
Power Factor:	≥ 90% at rated watts
Total Harmonic Distortion:	≤ 20% at rated watts

Surge Protection*

STANDARD	OPTIONAL
☐ 10kV/5kA	☐ Secondary 10kV/5kA (R Option)

*Per ANSI C136.2-2015

Lumen Maintenance

Projected Lxx per IES TM-21-11 at 25°C

DISTRIBUTION	LXX(10K) @ HOURS		
	25,000 HR	50,000 HR	60,000 HR
02, 03	L99	L99	L98
04, 05, 06, 07	L96	L91	L89

Note: Projected Lxx based on LM80 (≥ 10,000 hour testing). Accepted industry tolerances apply to initial luminous flux and lumen maintenance measurements.

Ambient Temperature Factor

AMBIENT TEMP (°C)	INITIAL FLUX FACTOR	AMBIENT TEMP (°C)	INITIAL FLUX FACTOR
10	1.02	30	0.99
20	1.01	40	0.98
25	1.00	50	0.97

Ratings

Operating Temperature:	-40°C to 50°C (Optical Code 02-06) -40°C to 40°C (Optical Code 07)
Vibration:	3G per ANSI C136.31-2010
LM-79:	Testing in accordance with IES Standards

Controls

Dimming:	Standard = 0-10V ☐ Optional = DALI (Option U) ☐
Sensors:	Photo Electric Sensors (PE) available LightGrid+™ Compatible

Warranty

☐ 5 Year (Standard) ☐ 10 Year (Optional)

Not all product variations listed on this page are DLC qualified. Visit www.designrights.org/search to confirm qualifications.

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Evolve®

EPTT Town & Country
LED Post Top

CUSTOMER NAME
PROJECT NAME
DATE TYPE
CATALOG NUMBER

Ordering Information

EPTT 02

_ _ _ _ _ _ – _ _ – _ – _ _ – _ _ – _ _ _ _ – _ _ _

PROD. ID	GEN	VOLTAGE	LUMENS	DISTRIBUTION	REFRACTOR	CCT	CONTROLS PER ANSI C136.41	MOUNTING	COLOR	OPTIONS
E = Evolv	02	0 - 120-277V	02 = 2000 lm	A = Symmetric	A = Acrylic	27 = 2700K[1]	A = ANSI C136.41 7-Pin PE Receptacle[3]	P = Pole Mounted	BLCK = Black	L = Tool-Less Entry
P = Post Top			03 = 3000 lm	B = Asymmetric	P = Polycarbonate	30 = 3000K[1]	D = ANSI C136.41 7-Pin PE Receptacle w/ Shorting Cap		DKBZ = Dark Bronze	POE = Prewire with 6 ft of 14/3 Cable
TT = Town & Country Traditional			04 = 4000 lm		N = None[2]	40 = 4000K	E = ANSI C136.41 7-Pin PE Receptacle w/ non Dimming PE			R = Secondary 10kV/5kA
			05 = 5000 lm			50 = 5000K				U = DALI Programmable[3]
			06 = 6000 lm							Y = Coastal Finish[3]
			07 = 7000 lm							XXX = Special Options

[1] Select for IDA Approved Units
[2] Compatible with LightGrid+™ Nodes
[3] Recommended for installations within 750 feet of coast. Lead time varies, check with factory.

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Evolve®

EPTT Town & Country
LED Post Top

CUSTOMER NAME
PROJECT NAME
DATE TYPE
CATALOG NUMBER

LUMEN OUTPUT	DIST. CODE	DESCRIPTION	REFRACTOR CODE	TYPICAL INITIAL LUMENS			WATTAGE	BUG RATINGS		
				2700K	3000K	4000K/5000K	120-277V	2700K	3000K	4000K/5000K
02	A	Symmetric	A	2600	2810	2930	25	B1-U3-G2	B1-U3-G2	B1-U3-G2
03	A	Symmetric	A	3070	3310	3450	29	B2-U3-G2	B2-U3-G2	B2-U3-G2
04	A	Symmetric	A	4230	4560	4760	41	B3-U3-G2	B2-U3-G2	B2-U3-G2
05	A	Symmetric	A	5150	5560	5790	50	B2-U3-G3	B2-U3-G3	B2-U4-G3
06	A	Symmetric	A	5710	6160	6410	56	B3-U4-G3	B2-U4-G3	B3-U4-G3
07	A	Symmetric	A	6960	7500	7820	72	B3-U4-G3	B3-U4-G3	B3-U4-G3
02	B	Asymmetric	A	2430	2630	2730	25	B1-U3-G2	B1-U3-G2	B1-U3-G2
03	B	Asymmetric	A	2870	3100	3220	29	B1-U3-G2	B1-U3-G2	B1-U3-G2
04	B	Asymmetric	A	3950	4270	4440	41	B1-U3-G3	B1-U3-G3	B1-U3-G3
05	B	Asymmetric	A	4810	5190	5410	50	B1-U4-G3	B2-U4-G3	B2-U4-G3
06	B	Asymmetric	A	5330	5750	5990	56	B2-U4-G3	B2-U4-G3	B2-U4-G3
07	B	Asymmetric	A	6500	7010	7300	72	B2-U4-G3	B2-U4-G3	B2-U4-G3
02	A	Symmetric	P	2070	2230	2320	25	B1-U3-G1	B1-U3-G1	B1-U3-G1
03	A	Symmetric	P	2440	2630	2740	29	B1-U3-G1	B1-U3-G2	B1-U3-G2
04	A	Symmetric	P	3370	3630	3780	41	B2-U3-G2	B2-U3-G2	B2-U3-G2
05	A	Symmetric	P	4100	4420	4600	50	B2-U3-G2	B2-U4-G2	B2-U4-G2
06	A	Symmetric	P	4540	4900	5100	56	B2-U4-G2	B2-U4-G2	B2-U4-G2
07	A	Symmetric	P	5530	5970	6220	72	B2-U4-G3	B2-U4-G3	B3-U4-G3
02	B	Asymmetric	P	1930	2090	2170	25	B1-U3-G2	B1-U3-G1	B1-U3-G2
03	B	Asymmetric	P	2280	2460	2560	29	B1-U3-G2	B1-U3-G2	B1-U3-G2
04	B	Asymmetric	P	3140	3390	3530	41	B1-U3-G2	B1-U3-G2	B1-U3-G2
05	B	Asymmetric	P	3830	4130	4300	50	B1-U3-G2	B1-U4-G3	B1-U4-G3
06	B	Asymmetric	P	4240	4580	4770	56	B1-U4-G3	B1-U4-G3	B2-U4-G3
07	B	Asymmetric	P	5170	5580	5810	72	B2-U4-G3	B2-U4-G3	B2-U4-G3
02	A	Symmetric	N	2840	3070	3190	25	B2-U0-G1	B2-U0-G1	B2-U0-G1
03	A	Symmetric	N	3350	3620	3770	29	B2-U0-G1	B2-U0-G1	B2-U0-G1
04	A	Symmetric	N	4620	4980	5190	41	B2-U0-G1	B3-U0-G1	B3-U0-G1
05	A	Symmetric	N	5620	6070	6320	50	B3-U0-G1	B3-U0-G1	B3-U0-G1
06	A	Symmetric	N	6230	6720	7000	56	B3-U0-G1	B3-U0-G1	B3-U0-G1
07	A	Symmetric	N	7590	8190	8530	72	B3-U0-G1	B3-U0-G1	B3-U0-G1
02	B	Asymmetric	N	2650	2870	2980	25	B1-U0-G1	B1-U0-G1	B1-U0-G1
03	B	Asymmetric	N	3130	3380	3520	29	B1-U0-G1	B1-U0-G1	B1-U0-G1
04	B	Asymmetric	N	4320	4660	4850	41	B1-U0-G1	B1-U0-G1	B1-U0-G2
05	B	Asymmetric	N	5250	5670	5900	50	B1-U0-G2	B1-U0-G2	B1-U0-G2
06	B	Asymmetric	N	5820	6280	6540	56	B1-U0-G2	B1-U0-G2	B2-U0-G2
07	B	Asymmetric	N	7090	7650	7970	72	B2-U0-G2	B2-U0-G2	B2-U0-G2

For additional information on EPTT IES files, please refer to LED.com

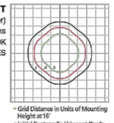
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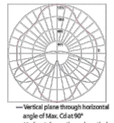
EPTT Town & Country
LED Post Top

CUSTOMER NAME
PROJECT NAME
DATE TYPE
CATALOG NUMBER

EPTT
Symmetric (Acrylic Refractor)
7,820 Lumens
5,000K
EPTT02 _07AA50_-120-277V.IES

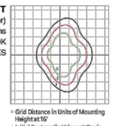


* Grid Distance in Units of Mounting Height at 16'
* Initial Footcandle Values at Grade

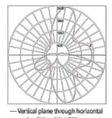


— Vertical plane through horizontal angle of Max. Cd at 90°
— Horizontal cone through vertical angle of Max. Cd at 58°

EPTT
Asymmetric (Acrylic Refractor)
7,300 Lumens
5,000K
EPTT02 _07BA50_-120-277V.IES

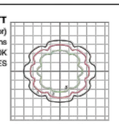


* Grid Distance in Units of Mounting Height at 16'
* Initial Footcandle Values at Grade



— Vertical plane through horizontal angle of Max. Cd at 75°
— Horizontal cone through vertical angle of Max. Cd at 69°

EPTT
Symmetric (No Refractor)
8,530 Lumens
5,000K
EPTT02 _07AN50_-120-277V.IES

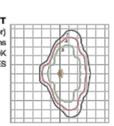


* Grid Distance in Units of Mounting Height at 16'



— Vertical plane through horizontal angle of Max. Cd at 5°
— Horizontal cone through vertical angle of Max. Cd at 62°

EPTT
Asymmetric (No Refractor)
7,970 Lumens
5,000K
EPTT02 _07BN50_-120-277V.IES

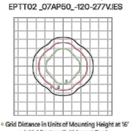


* Grid Distance in Units of Mounting Height at 16'

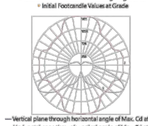


— Vertical plane through horizontal angle of Max. Cd at 76°
— Horizontal cone through vertical angle of Max. Cd at 62°

EPTT
Symmetric (Poly Refractor)
6,220 Lumens
5,000K
EPTT02 _07AP50_-120-277V.IES

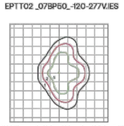


* Grid Distance in Units of Mounting Height at 16'
* Initial Footcandle Values at Grade

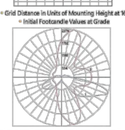


— Vertical plane through horizontal angle of Max. Cd at 80°
— Horizontal cone through vertical angle of Max. Cd at 60°

EPTT
Asymmetric (Poly Refractor)
8,810 Lumens
5,000K
EPTT02 _07BP50_-120-277V.IES



* Grid Distance in Units of Mounting Height at 16'
* Initial Footcandle Values at Grade



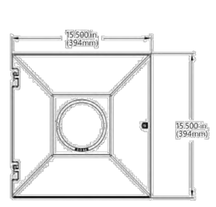
— Vertical plane through horizontal angle of Max. Cd at 75°
— Horizontal cone through vertical angle of Max. Cd at 71°

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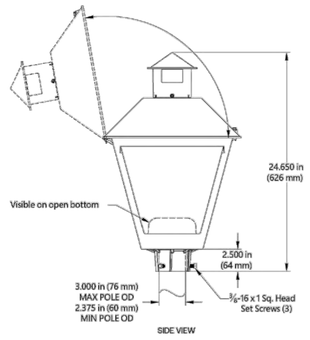
Evolve®

EPTT Town & Country
LED Post Top

CUSTOMER NAME
PROJECT NAME
DATE TYPE
CATALOG NUMBER



TOP VIEW



SIDE VIEW

Mounting

- Mounts to 2-3/8 to 3-inch (60-76mm) OD vertical tenon
- Suggested Mounting Height = 8-18 ft. (2.5 - 5.5M)

Effective Projected Area

- 1.8 sq. ft. max (0.15 sq M max)

Weight

- 14 lbs (6.2 kgs) - 18 lbs (8 kgs)

EPTT House Side Shields

PART NUMBER	DESCRIPTION
LSPX-TT	Perforated Shield for Open Sided or Refractor Designs
LSSX-TT	Solid "Black" Shield for Open Sided or Refractor Designs

Network Lighting Controls



Current's LightGrid+™ Outdoor Lighting Control System is designed for Street and Roadway Applications. It enables remote monitoring, control, and asset management of a single fixture or a group of fixtures through a web enabled Central Management System.

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Engineer
QUANTECH ENGINEERING
INNOVATIVE SOLUTIONS | ENGINEERED
Firm # F-1517
275 CARPENTER HILL LANE
Cary, N.C. 27519
(919) 996-9455

NORTH CAROLINA PROFESSIONAL SEAL 53676 ENGINEER BRYAN A. HARRIS



EACL® Series
LED Area Light/Compact Low Wattage

Current's EAL Series of Area Light Luminaires offer a wide range of optical patterns, color temperatures, lumen packages, and mounting configurations to optimize area light applications, as well as provide versatility in lighting design within the same form factor.

Construction

Housing:	Die-cast aluminum housing with integral heat sink for maximum heat transfer
Paint:	Corrosion resistant polyester powder paint, minimum 2.0 mil thickness Standard = Black, Dark Bronze Gray, White (RAL & custom colors available) Optional coastal finish available.
Weight:	18 lbs (8.16 kg) Max depending on configuration

Optical System

Lumens:	2,900 - 20,400
Distribution:	Asymmetric Forward Type IV Asymmetric Wide Type III Asymmetric Narrow/Auto Type II
Efficacy:	123 - 143 LPW
CCT:	3000K, 4000K, 5000K
CRI:	≥70

Electrical

Input Voltage:	120-277V & 347-480V
Input Frequency:	50/60Hz
Power Factor:	> 90% at rated watts
Total Harmonic Distortion:	< 20% at rated watts

Surge Protection*

TYPICAL (120 STRIKES)	ENHANCED (40 STRIKES)
☐ 6kV/3kA*	☐ 10kV/5kA*

*Per ANSI C136.2-2015

Warranty

☐ 5 Year (Standard)

Lumen Maintenance

Projected Lxx per IES TM-21-11 at 25°C

LUMEN CODES	LXX(10K) @ HOURS		
	25,000 HR	50,000 HR	60,000 HR
A2, A3, A4, B2, B3, B4, C2, C3, C4D2, D3, D4, E2, E3, E4, F2, F3, F4	L94	L90	L88
H2,H3, H4	L97	L96	L96

Note: Projected Lxx based on LM80 (≥ 10,000 hour testing). Accepted industry tolerances apply to initial luminous flux and lumen maintenance measurements.

Luminaire Ambient Temperature Factor

AMBIENT TEMP (°C)	INITIAL FLUX FACTOR	AMBIENT TEMP (°C)	INITIAL FLUX FACTOR
10	1.02	30	0.99
20	1.01	40	0.98
25	1.00	50	0.97

Ratings

Operating Temperature:	-40°C to 50°C
Vibration:	3G vibration per ANSI C136.31-2018
LM-79:	Testing in accordance with IESNA Standards

Controls

Dimming:	Standard - 0-10V ☐ Optional - DALI (Option U) ☐
Sensors:	Photo Electric Sensors (PE) available ☐ LightGrid-™ and Daintree Compatible ☐

Not all product variations listed on this page are DLC qualified. Visit www.designlights.org/search to confirm qualifications.

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Ordering Information

EACL 01 _ 7 _ _ _ _ _ _ _ _ _

PROD. ID	GEN	VOLTAGE	OPTIC CODE	DISTRIBUTION	CRI 80(R)	CCT	DIMMING[2]	CONTROLS	MOUNTING ARM	COLOR	OPTIONS
E = Evolve AC = Compact Area Light L = Low Voltage	01	0 = 120-277V[1] H = 347-480V[1] E = 277-480V[1] 1 = 120V 2 = 208V 3 = 240V 4 = 277V 5 = 480V D = 347V	Ax=3000 lm Bx=5000 lm Cx=7500 lm Dx=10000 lm Ex=12000 lm Fx=15000 lm Hx=20000 lm	AF = Asymmetric Forward AW = Asymmetric Wide AN = Asymmetric Narrow/Auto	7 = 70	30 = 3000K[14] 40 = 4000K 50 = 5000K	N = Dimming thru PE receptacle D = External Dimming 1(L)-2(-)-3(-) cable X = No External Dimming Leads	1 = None A = ANSI 7-pin PE receptacle (no control) D = ANSI 7-pin PE receptacle with shorting cap provided E = ANSI C136.41 7-pin with Non-Dimming PE Control[3]	C1 = Integral Slip-fitter for 1.25"- 2" Pipe (1.66in. OD - 2.37in. in. OD)[4] D1 = Universal Mounting Arm, fitted for round or square pole mounting[5] K1 = Knuckle Slipfitter for 1.9 in - 2.3in OD Tenon[4,5] S1 = Knuckle Slipfitter for 2.3in - .32in OD Tenon[4,5] V1 = Knuckle Wall Mount[4,5]	GRAY = Gray BLCK = Black DKBZ = Dark Bronze WHTE = White	F = Fusing[10] H1 = Motion Sensor w/LightGrid-™[7] H2 = Motion Sensor (Daintree)[7] H4 = Motion Sensor (Wattstopper)[8] J = cULCanada L = Tool-Less Entry R = Enhanced Surge Protection (10kV/5kA) U = DALI dimming[7] V = 3-Position Terminal Block Y = Coastal Finish[9] XXX = Special Options

[1] Not Available with Fusing, Must Choose a Discrete Voltage with "F" Option Code
[2] Note Standard Dimming is 0-10V
[3] PE Control only available for 120-277V, 347V or 480V Discrete Voltage.
[4] Supplied with 3ft leads
[5] Supplied with 15/3 ft Cable
[6] Restricted Aiming Angle of 0-45°
[7] Compatible with LightGrid-™ Wireless Control Nodes, Not Compatible with Motion Sensor Control
[8] H2 Sensor is not available in High Voltage (347V, 480V or 347-480V)
[9] Recommended for installations within 750 feet from coast. Lead time varies, check with factory.
[10] Select 5000K CCT for IDA approved fixtures.
[11] Fusing not available with the following options: optical codes AX, BX; voltage options 347V, 480V
[12] For optical codes AX or BX: only available in 120-277V, not available with fusing, terminal board, or R surge.
[14] Not available in Ax, Bx, or Cx optic codes.

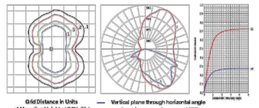
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OPTICAL CODE	DIST CODE	CLASSIFICATION	TYPICAL LUMENS		TYPICAL SYSTEM WATTAGE		BUG RATING	
			3000K	4000K &5000K	120-277V	347-480V	3000K	4000K &5000K
A4	AF	TYPE IV	2900	2900	21	23	B1-U0-G1	B1-U0-G1
B4			4900	4900	36	38	B1-U0-G1	B1-U0-G1
C4			7300	7300	55		B1-U0-G2	B1-U0-G2
D4			9800	9800	73		B2-U0-G2	B2-U0-G2
E4			12200	12200	95		B2-U0-G2	B2-U0-G2
F4			14700	14700	122		B2-U0-G2	B2-U0-G2
H4			19000	19000	153		B3-U0-G3	B3-U0-G3
A3	AW	TYPE III	2900	3000	21	23	B1-U0-G1	B1-U0-G1
B3			4900	5100	36	38	B1-U0-G1	B1-U0-G1
C3			7400	7600	55		B1-U0-G2	B1-U0-G2
D3			9900	10200	73		B2-U0-G2	B2-U0-G2
E3			13400	13700	95		B2-U0-G2	B2-U0-G2
F3			16900	15300	122		B2-U0-G2	B2-U0-G2
H3			19300	20400	153		B3-U0-G2	B3-U0-G2
A2	AN	TYPE II	2900	3000	21	23	B1-U0-G1	B1-U0-G1
B2			4900	5000	36	38	B1-U0-G1	B1-U0-G1
C2			7300	7600	55		B2-U0-G1	B2-U0-G2
D2			9800	10100	73		B2-U0-G2	B2-U0-G2
E2			12300	12600	95		B2-U0-G2	B2-U0-G2
F2			14700	15100	122		B3-U0-G2	B3-U0-G3
H2			19100	20200	153		B3-U0-G3	B3-U0-G3

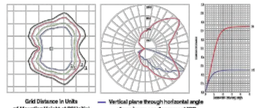
For additional information on Non-Shielded and Shielded EACL IES files, please refer to LED.com

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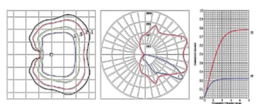
EACL - Type II- Very Short
20,200 lumens
EACL01_H2AN750___.IES



EACL - Type III - Short
20,400 lumens
EACL01_H3AW750___.IES



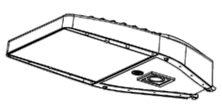
EACL - Type IV - Very Short
20,000 lumens
EACL01_H4AF750___.IES



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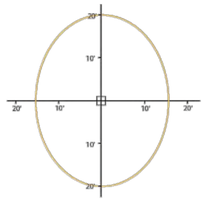
H-Motion Sensing Option

- Recommended Mounting Height: 15-30' (4.6-9.1m
- For mounting heights exceeding 30 ft., pole mounted sensors are recommended
- Coverage Radius: 15-20' (4.6-6.1 m).
- Provides 270 degree of coverage (approx 90 is blocked by the pole)
- Default Settings:
  - Output: Occupied - 100%/Unoccupied - 50%
  - Integral PE Sensor.
  - 5 minute post-occupancy time delay, 5 minute dimming ramp-down.
- Fixture power increase of 1W expected with sensor use.



H1/4 - Motion Sensing Option (WattStopper)

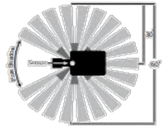
- Recommended Mounting Height: 15-30' (4.6-9.1m
- For mounting heights exceeding 30 ft., pole mounted sensors are recommended
- Coverage Radius: 15-20' (4.6-6.1 m).
- Provides 270 degree of coverage (approx 90 is blocked by the pole)
- Default Settings:
  - Output: Occupied - 100%/Unoccupied - 10%
  - PE Sensor: Disabled
  - Ramp/Fade: Disabled
- Adds < 1W to fixture power rating
- Field programmable using FSIR-100 hand held programmer



H2 - Motion Sensing Option (Daintree)

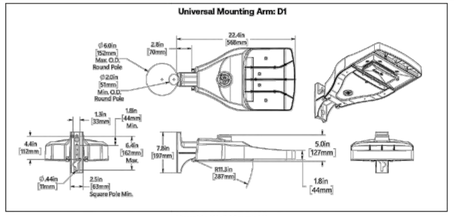
- Recommended Mounting Height: 15-30' (4.6-9.1m
- For mounting heights exceeding 30 ft., pole mounted sensors are recommended
- Provides a coverage area radius for walking motion of 15-20 ft. (4.57-6.10m)
- Provides 270 degree of coverage (approx 90 is blocked by the pole)
- Default Settings:
  - Output: Occupied - 100%/Unoccupied - 50%
  - PE Sensor: None
  - Ramp/Fade: 5 Minutes/5 Minutes
- Adds < 1W to fixture power rating
- Requires Daintree Enterprise and wide area control (WAC)

Sensing Pattern Fixture
Up to 30 ft. Mounting Height

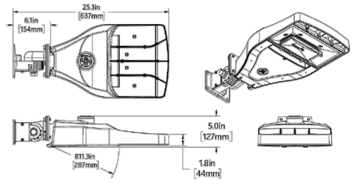


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Universal Mounting Arm: D1



Knuckle Wall Mount: V1



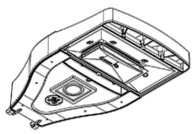
Weight

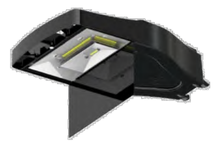
- 18 lbs (8.16 kg) Max depending on configuration

Effective Projected Area

- Integral Slipfitter C1, EPA = 0.31 Min/0.37 Max
- Universal Arm Mount D1, EPA = 0.31 Min / 0.62 Max
- Knuckle Slipfitter S1, K1 downward aim, EPA = 0.45 Min / 0.56 Ma
- Knuckle Slipfitter S1, K1 45° aim, EPA = 0.56 Min / 1.03 Max

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PE Accessories (To Be Order Separately)

SAP NUMBER	PART NUMBER	DESCRIPTION
93031562	WANSI - 277	ANSI C136.41 Dimming PE Daintree Enable, 105-305V
93031553	WANSI - 480	ANSI C136.41 Dimming PE Daintree Enable, 310-530V
93029237	PED-MV-LED-7	ANSI C136.41 Dimming PE, 120-277V
93029238	PED-347-LED-7	ANSI C136.41 Dimming PE, 347V
93029239	PED-480-LED-7	ANSI C136.41 Dimming PE, 480V

SAP NUMBER	PART NUMBER	DESCRIPTION
28299	PECOTL	STANDARD 120-277V
28294	PECSTL	STANDARD 480V
80436	PECOTL	STANDARD 347V
73251	SCCL-PECTL	Shorting cap

Back Light Shied

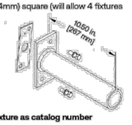
SHIELD ORIENTATIONS	CUTOFF DISTANCE	SHIELD ORDER LOGIC
Back	Long	ELS-EACL-RBL-BLCK

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Mounting Arms for Slipfitter Order separately with Mounting Option C1 (Slipfitter)

Square pole mounting arm

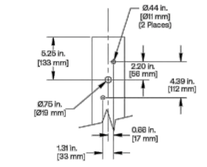
- 3.5 to 4.5-inch (89 to 114mm) square (will allow 4 fixtures per pole @ 90 degrees.)



Order separately from fixture as catalog number

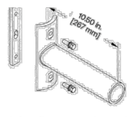
- SPA-EAMT10BLCK "Black"
- SPA-EAMT10DKBZ "Dark Bronze"
- SPA-EAMT10WHTE "White"
- SPA-EAMT10GRAY "Gray"

Square pole mounting drilling template



Round Pole Mounting Arm

- 3.5 to 4.5-inch (89 to 114mm) od (will allow 4 fixtures per pole @ 90 degrees.)



Order separately from fixture as catalog number

- RPA-EAMT10BLCK "Black"
- RPA-EAMT10DKBZ "Dark Bronze"
- RPA-EAMT10WHTE "White"
- RPA-EAMT10GRAY "Gray"

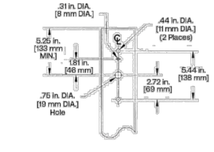
Wall Mounting Bracket Adapter Plate
Order separately from fixture as catalog number
WMB-EAMT06

*NOTE: For Wall Mounting, order luminaire with mounting arm: C1 = Slipfitter 2" Pipe (2.378 in. OD) supplied with leads.

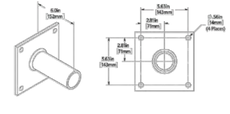
Other mounting patterns are available for retrofit installations. Contact manufacturing for other available mounting patterns.

Round Pole Mounting Drilling Template

- 3.5 TO 4.5-inch (89 to 114mm) OD round pole mounting arm



Wall MOUNTING Bracket Hole Pattern



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Engineer
QUANTECH ENGINEERING
Firm # F-1517
275 CARPENTER HILL LANE
Cary, N.C. 27519
(919) 996-9455

NORTH CAROLINA PROFESSIONAL SEAL 53676 ENGINEER BRYAN A. HARRIS

EVOLVE

Haight-Ashbury™ Decorative Poles

Round Tapered, Smooth or Fluted Aluminum
(HGTA) 10' to 18' (3m to 6m)

Catalog Logic

CUSTOMER NAME
Project Name
Date ____ Type ____
Catalog Number

Haight-Ashbury™

Haight-Ashbury reminiscent of the vintage poles, compliments any decorative post top or pendant mount luminaire. Haight-Ashbury's fluted base curves gracefully upward, providing beauty and elegance to any landscape.





SPECIFICATION FEATURES
• Cast Aluminum Base
• Thermoset powder paint finishes
• Rust and Corrosion Resistant
• Various arms and arm drilling are available
• Tapered, Round, Smooth or Fluted shaft
• Standard Colors: Black and Dark Bronze
• RAL and Other Colors, contact Factory

Ordering Number Logic (See Pole Selection Table for actual Ordering Numbers)

HGTA _ _ _ _ – _ _ – _ _ – _ _ – _ _ – _ _

Pole Type	Nominal Mounting Height (ft - in)	Decorative Pole Shape	Mounting: Top Tenon	Base Type	Finish
HGTA = Haight Ashbury™	**10** = 10' - 0"	**F** = Fluted	**2T** = 2-3/8" (OD) x 3" (L) Top Tenon	**A** = Anchor	**BL**=Black
	12 = 12' - 0"	**S** = Smooth	**3T** = 3" (OD) Top for Single Post Top Luminaire		**DB** = Dark Bronze
	14 = 14' - 0"				**####** = RAL Color Number
	16 = 16' - 0"				
	18 = 18' - 0"				
	* *Consult Factory for Availability of Heights not listed but within shown range*				

Ordering Number	Series	Nominal Mounting Height (ft)	Max Total Fixture Weight (lbs)	Effective Projected Area: sq ft 70 MPH	80 MPH	90 MPH	Shaft Dimensions Bottom OD X Top OD X Length X Thickness (in X in X ft X in)	Approximate Pole Weight (lbs)	Shaft Shape	Tenon Size OD x Length (in x in)	Base Type	Color
HGTA10SFTABL	HAIGHT-ASHBURY	10	100	12.1	8.7	6.4	5.17" x 4.32 x 10 x 0.125	75	Fluted	3 x 3	Anchor	Black
HGTA12SFTABL		12	100	9.1	6.3	4.4	5.40" x 4.32 x 12 x 0.125	79		3 x 3	Anchor	Black
HGTA14SFTABL		14	100	5.4	3.5	2.3	5.81" x 4.20 x 14 x 0.125	84		3 x 3	Anchor	Black
HGTA16SFTABL		16	100	13.9	9.6	6.7	5.81" x 3.92 x 16 x 0.125	89		3 x 3	Anchor	Black
HGTA18SFTABL		18	100	10.9	7.2	4.7	6.00" x 3.87 x 18 x 0.125	93		3 x 3	Anchor	Black
HGTA10SSTABL		10	100	12.1	8.7	6.4	5.17" x 4.32" x 10 x 0.125	75	Smooth	3 x 3	Anchor	Black
HGTA12SSTABL		12	100	9.1	6.3	4.4	5.45" x 4.12" x 12 x 0.125	79		3 x 3	Anchor	Black
HGTA14SSTABL		14	100	5.4	3.5	2.3	5.81" x 4.20" x 14 x 0.125	84		3 x 3	Anchor	Black
HGTA16SSTABL		16	100	13.9	9.6	6.7	5.81" x 3.92 x 16 x 0.125	89		3 x 3	Anchor	Black
HGTA18SSTABL		18	100	10.9	7.2	4.7	6.00" x 3.90" x 18" x 0.125	93		3 x 3	Anchor	Black

EVOLVE

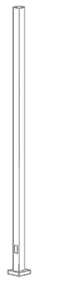
Area Lighting Poles

Square Straight Aluminum (ASSA)
10' to 30' (3m to 9m)

Catalog Logic

CUSTOMER NAME
Project Name
Date ____ Type ____
Catalog Number

Suggested Luminaire Applications



EACL



EALS



SPECIFICATION FEATURES
• Square Straight Aluminum Shaft
• Dark Bronze finish is Standard
• Shaft Lengths from 10 to 30 feet
• Pole comes drilled as specified for single or multiple Luminaires
• Top Tenon is an available option
• Shipped with Pole: Handhole and Cover, Electrical Grounding Kit and Pole is spirally wrapped with rip cord removal system
• Anchor bolts can be shipped either with pole or separately (if separate, please make the request at time or order)

Ordering Number Logic (See Pole Selection Table for actual Ordering Numbers)

A S S A

_ – _ – _ – _ – _ _ – _ _ – _ – _ – _ _

Product Type	Pole Cross Section	Shaft Shape	Pole Material	Nominal Mounting Height (ft)	Mounting	Shaft Dimensions: Width (in X in)	Shaft Dimensions: Wall Thickness (in)	Finish
A = Area	S = Square	S = Straight	A = Aluminum	**10** = 10	**DB** = Drill holes for mounting two luminaires at 90°	4 x 4 x 4	A = 0.125	**DB** = Dark Bronze (Standard)
				12 = 12	**DO** = Drill holes for mounting two luminaires at 180°	5 x 5 x 5	B = 0.188	**SN** = Satin Anodized
				14 = 14	**DQ** = Drill holes for four Luminaires	6 x 6 x 6	D = 0.250	
				15 = 15	**SD** = Drill Holes for single luminaire			
				18 = 18	**TB** = Drill holes for three Luminaires at 90°			
				20 = 20	**TD** = Drill holes for three Luminaires at 120°			
				25 = 25	**2T** = 2-3/8 in. OD top tenon			
				30 = 30	**3T** = 3 in. OD top tenon			
					*NOTE: Substitute required mounting designation for ** in ordering number listed in Selection Table.*			*NOTE: If other than a standard finish is required, substitute SN for DB in Ordering Number listed in Pole Selection Table.*

NOTE 1: All poles with anchor bolts need to be entered as 2 line items:
1. The line item for the Pole ONLY, will be the corresponding pole SKU + "-LAB" (Less Anchor Bolts). Example: ASSA10SSA4DB-LAB
2. The line item for the Anchor Bolts and Anchor Bolt Template ONLY, will be the corresponding pole SKU + "-BOLT" Example: ASSA10SSA4DB-BOLT

AREA LIGHTING POLES: Square Straight Aluminum (ASSA)
10' to 30' feet (3 to 9 meters)

Pole Selection Table

Ordering Number	Nominal Mounting Height (ft)	Total Luminaire Weight (lbs)	Shaft Width (in x in)	Wall Thickness (in)	Effective Projected Area (sq ft): 90 MPH	100 MPH	Bottom OD X Top OD X Length X Thickness (in X in X ft-in x in)
ASSA10**4ADB	10	100	4 x 4	0.125	10.5	8.2	36
ASSA12**4ADB	12	100	4 x 4	0.125	8.2	6.2	41
ASSA14**4ADB	14	85	4 x 4	0.125	6.3	4.7	46
ASSA15**4BDB	15	100	4 x 4	0.188	9.3	7.1	67
ASSA18**4BDB	18	80	4 x 4	0.188	5.8	4.2	78
ASSA18**4DDB	18	100	4 x 4	0.250	8.6	5.8	96
ASSA20**4BDB	20	50	4 x 4	0.188	4.8	3.3	85
ASSA20**4DDB	20	90	4 x 4	0.250	6.9	4.8	105
ASSA20**5BDB	20	100	5 x 5	0.188	8.4	6	103
ASSA20**5DDB	20	100	5 x 5	0.250	12.8	9.1	132
ASSA25**5BDB	25	60	5 x 5	0.188	4.7	2.7	–
ASSA25**5DDB	25	100	5 x 5	0.250	7.8	5.2	160
ASSA25**6DDB	25	100	6 x 6	0.250	13.1	9.3	199
ASSA30**6DDB	30	25	6 x 6	0.250	7.8	4.2	235

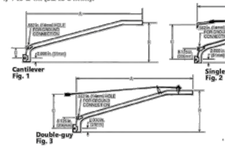
EVOLVE

Accessories

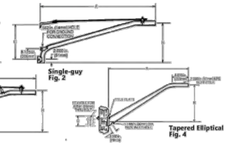
CUSTOMER NAME
Project Name
Date ____ Type ____
Catalog Number

ROADWAY BRACKETS FOR WOOD POLE MOUNTING

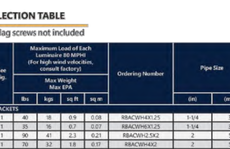
Roadway bracket aluminum or galvanized steel for mounting on wood poles, pipe sizes from 1-1/4 to 2-in. (32 to 51mm).



Cantilever
Fig. 1



Single-guy
Fig. 2



Double-guy
Fig. 3



Tapered Elliptical
Fig. 4

BRACKET SELECTION TABLE

Thru bolts and lag screws not included

Nominal Length (ft)	Nominal Length (m)	See Fig.	Maximum Load of Each Luminaire (If MPH (For high wind velocities, consult factory)) Max Weight: lbs	kgs	Max EPA: sq ft	sq m	Ordering Number	Pipe Size (in)	Pipe Size (mm)	Brackets Dimensions A (in)	A (mm)	B (in)	B (mm)	C (in)	C (mm)	Weight (lbs)	Weight (kgs)
ALUMINUM PIPE BRACKETS																	
4	1.2	1	40	18	0.9	0.08	RBACWH4X1.25	1-1/4	32	45	1143	18-9/16	217	8-1/4	1.6	3.5	1.6
6	1.8	1	35	16	0.7	0.07	RBACWH6X1.25	1-1/4	32	69	1753	24-7/16	611	8-1/4	2.0	4.5	2.0
2.5	0.8	1	90	41	2.3	0.21	RBACWH2.5X2	2	51	30	762	15-1/8	384	8-1/4	1.6	3.5	1.6
4	1.2	1	70	32	1.8	0.17	RBACWH4X2	2	51	45	1143	18-3/8	467	8-1/4	2.0	4.5	2.0
6	1.8	1	50	23	1.4	0.13	RBACWH6X2	2	51	69	1753	24	610	8-1/4	2.7	6.0	2.7
6	1.8	2	80	36	1.4	0.13	RBAGWH6X2	2	51	69	1753	24	610	21	3.4	7.5	3.4
8	2.4	2	60	27	0.7	0.07	RBAGWH8X2	2	51	93	2362	29-5/8	752	23	1.3	9.5	4.3
8	2.4	2	70	32	1.4	0.13	RBADWH8X2	2	51	93	2362	29-5/8	752	23	5.7	12.5	5.7
10	3.0	3	50	23	0.9	0.08	RBADWH10X2	2	51	117	2972	35-1/4	895	25	6.6	14.5	6.6
12	3.7	3	40	18	0.7	0.07	RBADWH12X2	2	51	141	3581	35-1/4	1088	27	7.5	16.5	7.5
GALVANIZED STEEL PIPE BRACKETS																	
2.5	0.8	1	90	41	2.3	0.21	RBSCWH2.5X1.25GV	1-1/4	32	30	762	15-1/4	387	8-1/4	3.4	7.5	3.4
4	1.2	1	70	32	1.8	0.17	RBSCWH4X1.25GV	1-1/4	32	45	1143	18-7/16	468	8-1/4	4.5	10.0	4.5
6	1.8	1	45	21	1.4	0.13	RBSCWH6X1.25GV	1-1/4	32	69	1753	34-1/16	757	8-1/4	6.3	14.0	6.3
2.5	0.8	1	90	41	2.8	0.26	RBSCWH2.5X2GV	2	51	30	762	15-1/8	384	8-1/4	5.0	11.0	5.0
4	1.2	1	90	41	2.3	0.21	RBSCWH4X2GV	2	51	45	1143	18-3/8	467	8-1/4	7.0	15.5	7.0
6	1.8	1	70	32	2.0	0.19	RBSCWH6X2GV	2	51	69	1753	24	610	8-1/4	9.5	21.0	9.5
8	2.4	1	45	20	1.4	0.13	RBSCWH8X2GV	2	51	93	2362	29-5/8	752	8-1/4	12.5	27.5	12.5
10	3.0	2	60	27	1.2	0.11	RBSQWH10X2GV	2	51	117	2972	35-1/4	895	25	17.0	37.5	17.0
12	3.7	2	50	23	0.7	0.07	RBSQWH12X2GV	2	51	141	3581	40-3/8	1026	27	20.4	45.0	20.4
14	4.3	3	40	18	0.7	0.07	RBSDWH14X2GV	2	51	165	4191	46-1/2	1181	30	26.5	58.5	26.5
16	4.9	3	35	16	0.7	0.07	RBSDWH16X2GV	2	51	189	4801	52-1/8	1324	33	29.9	66.0	29.9
4	1.2	NOTE	90	41	2.3	0.21	RBSPWH4X2GV	2	51	45	1143	18-3/8	467	8-1/4	7.3	16.0	7.3
ALUMINUM TAPERED ELLIPTICAL BRACKETS																	
4	1.2	4	55	25	1.6	0.15	RBATWH4X2	2	51	42	1067	16	406	4-5/8	2.7	6.0	2.7
6	1.8	4	53	24	1.6	0.15	RBATWH6X2	2	51	66	1676	24	610	4-3/4	4.5	10.0	4.5
8	2.4	4	53	24	1.2	0.11	RBATWH8X2	2	51	90	2286	30	762	6-1/8	6.3	14.0	6.3
10	3.0	4	44	20	1.2	0.11	RBATWH10X2	2	51	114	2896	30	762	7	7.7	17.0	7.7
4	1.2	NOTE	60	27	1.6	0.15	RBAPWH4X2	2	51	48	1219	30	762	15	4.1	9.0	4.1

NOTE: Bracket has a flat plate for wall mounting. For hole sizes and location of holes in plate, consult factory.

EVOLVE

Post-Top Lighting Poles

Round Tapered Aluminum (ARTA)
10' to 20' (3m to 6m)

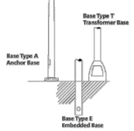
Catalog Logic

CUSTOMER NAME
Project Name
Date ____ Type ____
Catalog Number

Suggested Luminaire Applications

EPTT

EPTC



SPECIFICATION FEATURES
• Round Tapered Aluminum Shaft
• Satin Ground Finish
• Shaft Lengths from 10 to 20 feet
• Three inch top OD for mounting a single Post Top Luminiare
• Black or Dark Bronze Powdercoat finishes available
• Choice of Anchor, Transformer or Embedded Base
• Anchor bolts can be shipped either with pole or separately (if separate, please make the request at time or order)

Ordering Number Logic (See Pole Selection Table for actual Ordering Numbers)

A R T A

_ _ – _ – _ – _ – _ _ – _ _ – _ – _ – _ _

Product Type	Pole Cross Section	Shaft Shape	Pole Material	Nominal Mounting Height (ft)	Mounting	Bottom Shaft OD (in)	Wall Thickness (in)	Finish	Options
A = Area	R = Round	T = Tapered	A = Aluminum	**10** = 10	**3S** = 3-in. OD top for single luminaire	**4.0** = 4.0	A = 0.125	**BL** = Black	A = Anchor
				12 = 12		**5.0** = 5.0	B = 0.188	**DB** = Dark Bronze	E = Embedded
				14 = 14				**SN** = Satin-Ground (Standard)	T = Transformer
				16 = 16					
				18 = 18					
				20 = 20				*NOTE: If black or dark bronze finish is required, substitute BL or DB for SN in ordering number listed in Selection Table*	*NOTE: Substitute A, E, or T for x in ordering number listed in Pole Selection Table*

NOTE: All poles with anchor bolts need to be entered as 2 line items:
1. The line item for the Pole ONLY, will be the corresponding pole SKU + "-LAB" (Less Anchor Bolts). Example: ARTA10XXS54.0ABL-LAB
2. The line item for the Anchor Bolts and Anchor Bolt Template ONLY, will be the corresponding pole SKU + "-BOLT" Example: ARTA10XXS54.0ABL-BOLT

POST-TOP LIGHTING POLES : Round Tapered Aluminum (ARTA)
10' to 20' feet (3 to 6 meters)

Pole Selection Table

Ordering Number	Nominal Mounting Height (ft)	Max Recommended Total Load: Weight (lbs)	Effective Projected Area (sq ft): 80 MPH	90 MPH	100 MPH	Shaft Dimensions Bottom OD X Top OD X Length X Thickness (in X in X ft X in)	Approximate Weight (lbs)
ARTA10354.0ASN*	10	50	4.1	3.2	2.4	4.0 X 3.0 X 10 X 0.125	20
ARTA12354.0ASN*	12	50	3.0	2.2	1.6	4.0 X 3.0 X 12 X 0.125	23
ARTA12355.0ASN*	12	95	6.4	5.0	4.0	5.0 X 3.0 X 12 X 0.125	25
ARTA14354.0ASN*	14	50	2.0	1.4	0.9	4.0 X 3.0 X 14 X 0.125	25
ARTA14355.0ASN*	14	95	5.2	3.9	3.2	5.0 X 3.0 X 14 X 0.125	29
ARTA14355.0BSN*	14	110	7.9	6.2	4.9	5.0 X 3.0 X 14 X 0.188	41
ARTA16354.0ASN*	16	50	1.1	0.8	0.5	4.0 X 3.0 X 16 X 0.125	29
ARTA16355.0ASN*	16	95	4.1	3.2	2.5	5.0 X 3.0 X 16 X 0.125	33
ARTA16355.0BSN*	16	110	6.5	5.1	4.0	5.0 X 3.0 X 16 X 0.188	46
ARTA18355.0ASN*	18	60	3.4	2.6	2.0	5.0 X 3.0 X 18 X 0.125	36
ARTA18355.0BSN*	18	116	5.5	4.2	3.3	5.0 X 3.0 X 18 X 0.188	52
ARTA20355.0ASN*	20	50	2.5	1.9	1.5	5.0 X 3.0 X 20 X 0.125	40
ARTA20355.0BSN*	20	95	4.5	3.4	2.7	5.0 X 3.0 X 20 X 0.188	57

NOTE: With Embedded (Type E), shaft length is 2ft greater.

Pole Selection Guidelines

GENERAL

A lighting pole must support the weight of the equipment you will mount on it and withstand the effect of the maximum velocity winds to which it will be subjected. Therefore, the basis for selecting poles from this catalog is the weight and Effective Projected Area (EPA) data shown in Pole Selection Tables under the heading "Recommended Total Load." Before choosing a pole, determine the maximum total EPA and the total weight of all luminaires, brackets, signs, decorations, and other equipment that you plan to mount on it. EPA and weight data are given on product and accessory pages.

EFFECTIVE PROJECTED AREA (EPA)

The formula to calculate the force of wind acting on an object is: projected area of the object X coefficient of drag X velocity pressure of the wind. Effective projected area or EPA is the product of the first two. For example, one luminaire has an projected area of 2.62 square feet and a drag coefficient of 0.57. Its EPA is 2.62X0.57 = 1.5 square feet. When mounting a luminaire, the centroid of the effective projected area (approximate center of the luminaire projected area) should be no higher than 18 inches (457mm) above the top of the luminaire mounting tenons.

Maximum Expected Wind Velocities

Recommended Total Load figures given in Pole Selection Tables are based on specific wind conditions--i.e., certain MPHI or miles per hour isotach. The map on the next page gives maximum expected wind velocities in the contiguous United States, based on a 50-year mean recurrence interval. Refer to the map to find the maximum expected wind condition for the area where you will be installing the lighting equipment.

Velocities recorded on the map are expected isotach values, not gust values. Poles are actually designed for maximum gust velocities considerably greater than the MPHI given. Design gust velocities include a gust factor of 1.3 and appropriate height factors.

There are some locations where unusual local wind conditions exist. In these areas, wind speeds could be considerably higher than those in the surrounding areas. These may necessitate the use of a greater isotach value than is shown on the map.

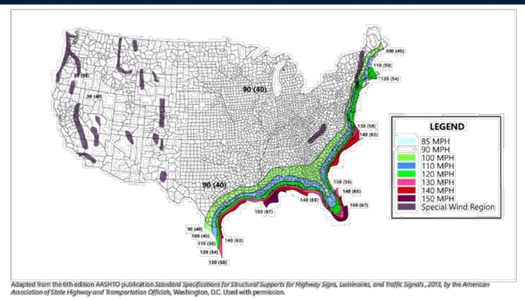
STEP-BY-STEP PROCECURE FOR SELECTING POLES

1. Choose the luminaire you plan to use and decide how many will be mounted per pole.
2. Pick an appropriate mounting method, such as:
   a. A single decorative post top luminaire on a 10 to 20 foot (3 to 6 meter) pole having a 3-inch (76mm) OD top;
   b. Single or multiple decorative luminaires on arms supplied with the luminaire;
   c. One or more floodlights on 20 to 60 foot (6 to 18 meter) poles, either singly on a top tenon, or in groups on brackets;
   d. Roadway luminaires on arms attached to the side of a pole. Pick the correct length and number of arms per pole (one per luminaire).
3. From data on the selected luminaire page, find the weight and EPA of each luminaire. Multiply these numbers by the number of luminaires per pole to determine the total weight and EPA.
4. Scan the pole pages to find a picture of the luminaire you plan to use. These are given at the top of the page under the heading "Applications." Choose an appropriate pole.
5. If brackets are needed, study the pole and accessory pages. Read the weight and EPA for the appropriate bracket.
6. Look up the weight and EPA for any other accessories.
7. Total the weight and EPA of all equipment.
8. Check the wind velocity map to find the MPHI of the geographic location where the poles will be installed.
9. Study the Ordering Number Logic so you'll be familiar with the way we've devised our ordering numbers. DO NOT use the logic for ordering: Suggested Ordering Numbers are given in the Selection Tables.
10. Refer to the Selection Table of the pole you've decided to use. Start at the top, because the most economical system will be the first in the tabulation that is appropriate for your application:
    a. Find the desired nominal mounting height in the first column.
    b. For roadway poles, pick the desired arm length and number of arms (next two columns).
    c. In the Recommended Total Loads section, make sure the total weight of the lighting equipment does not exceed the maximum listed.
    d. Under Effective Projected Area, find the MPHI for the mounting location geographic zone. Read the EPA value in the appropriate column and check that the equipment you're using will not exceed this value.
    e. Read the appropriate Ordering Number from the Selection Table.
11. Refer to the Ordering Number Logic to see if there are any substitutions or options required. Follow the instructions for substitutions. If you wish to include one or more options, add the indicated letter(s) to the end of the listed Ordering Number.
12. If brackets or other accessories are required, refer to appropriate pages and find the correct Ordering Numbers.

⚠ Warning

Consult qualified professionals for verification of your pole, luminaire, accessory, base, and foundation selection. These design methods are guidelines only. Current takes no responsibility for system design.

WIND SPEED GUIDELINES



Adapted from the 6th edition AASHTO publication *Standard Specifications for Structural Supports for Highway Signs, Luminaires, and Traffic Signals*, 2013, by the American Association of State Highway and Transportation Officials, Washington, D.C. Used with permission.

This wind map is a general guide for selection of design wind speeds based on the installation location. Always consult the local Authority Having Jurisdiction (AHJ) to determine the correct design wind speed requirements specific to your region and installation site.

The wind speed map shown above is adapted from AASHTO LTS Edition 6 2013 showing 50 yr mean recurrence interval values for nominal designs with 3-second gust wind speeds (MPH) at or below 10m (33 ft) above ground for the Exposure C category (i.e. open terrain with scattered obstructions). The wind map can be used to determine the approximate wind speed for your installation location. If your site is located between two different wind speed isotach lines, the higher speed should be used.

This wind map is provided or basic reference only. GE Current, a Daintree company will not be responsible for unusual circumstances where normal wind loads may exceed expectations. Specifier must select appropriate product based on site-specific knowledge of design wind speed requirements.

⚠ Warning

Local geography and conditions, as well as the installation configuration, may impact wind loading and therefore must be considered when selecting a pole. Do not attach banners or other appendages to poles unless designed or approved by Current.

- LIGHT POLES WILL BE FLUTED LIGHT POLES
- THE LIGHT POLES FOR THE TOWN AND COUNTY LIGHTS WILL HAVE TWO (2) BANNER BRACKETS 180 DEGREES APART WHERE
- THE TOP BRACKET WILL BE AS HIGH AS CAN BE PLACED AND BELOW THE BASE OF THE LIGHT FIXTURE.
- EACL LIGHTS WILL USE EXTENSION RODS AND THE TOWN AND COUNTRY LIGHTS WILL NOT USE EXTENSION RODS
- ALL LIGHTS WILL BE 5K

Engineer
QUANTECH ENGINEERING
Firm # F-1517
275 CARPENTER HILL LANE
Cary, N.C. 27519
(919) 996-9455

NORTH CAROLINA PROFESSIONAL SEAL 53676 ENGINEER BRYAN A. HARRIS

U.S. ARCHITECTURAL LIGHTING

PROJECT NAME:

PROJECT TYPE:

SOLID AREA LIGHTING

BDA SERIES - LED



Bollard
Durable corrosion resistant extruded and cast aluminum construction. 1/4" wall thickness.

LED Power Array™
Three-dimensional array consisting of 6 individual LED tubes for the BDA8 model and 4 individual LED tubes for the BDA6 model, which are fastened to a retaining plate equally spaced to provide 360° of even illumination output. Each LED tube consists of a circuit board populated with a multiple of LED's which is fastened to a radial aluminum heat sink. A white Acrylic Lens and end caps protect each LED tube's internal components and provides diffusion to prevent shadowing and striations.

Internal Louver (IL) - A specular louver stack conceals the inner LED Power Array Module and provides uplight and glare control through the external clear Acrylic Lens.

Cast Louver (CL) - External cast aluminum louver stack protects the internal LED Power Array Module and provides uplight and glare control. An internal clear Acrylic Lens is integrated with the LED Power Array Module.

OPAL LENS (WA) - Exterior white Acrylic Lens protects the internal LED Power Array Module and provides a uniform white glow.

Radial LED Module
LED'S are mounted to a circular heatsink in a radial array. The radial LED module is concealed in the cap of the bollard. LED's are not directly visible from angles above 90°.

PARABOLIC REFLECTOR (PR) - A specular Parabolic Reflector reflects a portion of the distribution from the radial LED module and provides a uniform wide angle throw through the outer clear Acrylic Lens.

LED Emitters
High Output LED's are driven at 350mA for nominal 1 Watt output each. 70CRI Minimum. LED's are available in standard Neutral White (4000K), or optional Cool White (5000K) or Warm White (3000K). Consult Factory for other LED options.

LED Driver
UL and CUL recognized Constant Current LED drivers operate on input voltages from 120-277VAC, 50/60Hz. Consult Factory for (347-480VAC). Driver is mechanically fastened to a retaining bracket. Driver has a minimum 4KV of internal surge protection, 10KV & 20KV Surge Protector optional. Dimmable and High-Low Driver options available.

Finish
Electrostatically applied TGIC Polyester Powder Coat on substrate prepared with 20 PSI power wash at 140°F. Four step media blast and iron phosphate pretreatment for protection and paint adhesion. 400°F bake for maximum hardness and durability.

BDA
(BDA8 Shown with -PR Optics)



BOLLARD	A	B	C	D
BDA8	42" 1067mm	8" 203mm	6" 152mm	8" 203mm
BDA6	42" 1067mm	6" 152mm	6" 152mm	6" 152mm

BABA compliant. UL Listed for Wet Location

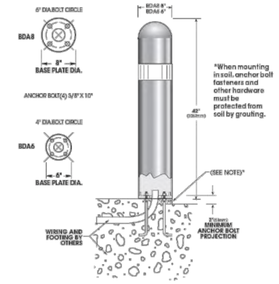
2023320

U.S. ARCHITECTURAL LIGHTING

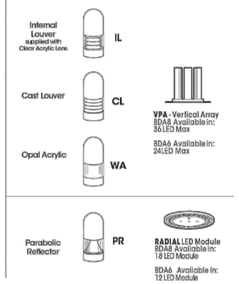
BDA BOLLARD SERIES - LED

SPECIFICATIONS

INSTALLATION



OPTICS



ORDERING INFORMATION

Spec/Order Example: BDA6-A_24LED277NW-WM/RAL-7004-T/DUP

Model	Optics	# of LEDs / Color Temp - CCT / Voltage	Mounting	Finish	Options
Model	**Optics**	**LED**	**Mounting**	**Finish**	**Options**
☐ BDA8-LED	Vertical Power Array	# of LEDs: ☐ 36LED[1] ☐ 24LED	Color: ☐ NW (4000K) Standard ☐ CW (5000K) ☐ WW (3000K) Consult Factory for Other LED Color, CCT, & CRI Options	☐ Ground Installation (Standard) ☐ Wall Mount WM	Standard Textured Finish: ☐ Black RAL-9005-T ☐ White RAL-9003-T ☐ Grey RAL-7004-T ☐ Dark Bronze RAL-8019-T ☐ Green RAL-6005-T
☐ BDA6-LED	☐ Internal Louver IL ☐ Cast Louver CL ☐ Opal Acrylic WA				Premium Finishes: ☐ Rust ☐ Patina Copper PC
	Radial LED Module: ☐ Parabolic Reflector PR	☐ 18LED[1] ☐ 12LED[2]	Voltage: ☐ UNV (120-277) ☐ 347 ☐ 480		For smooth finish, replace suffix "T" with suffix "S" (Example: RAL-6005S) Consult factory for custom colors

Options: ☐ Dimmable driver(s) (0-10V) DIM ☐ High/low Dimming for Hardwired Switching or Non-Integrated Motion Sensor HLSW ☐ Internal House Side Shield HS ☐ Duplex Receptacle (Consult factory) DUP ☐ Ground Fault Receptacle (Consult factory) GFI ☐ 10KV Surge Protector 10SP ☐ 20KV Surge Protector (277V & 480V only) 20SP

Optional Heights: ☐ 30" ☐ 36"

NOTES:
1- AVAILABLE IN BDA8 ONLY
2- AVAILABLE IN BDA6 ONLY

OUTDOOR SIGN LIGHTS

SEARCH CODE: SC43933

SUPERIOR LIGHTING



☐ 4FT availabe in a white finish

FEATURES:

- **Durable Construction:** Die-cast aluminum with a black powder coat finish for enhanced durability and corrosion resistance.
- **Flexible Installation:** Includes removable 1/2" NPT threaded knuckles and a detachable half shroud for versatile mounting options.
- **Beam Angle:** 90° for focused, uniform illumination.
- **High Output:** Available lumen options of 6700LM and 15300LM.

APPLICATION:

- **Wall Wash Lighting:** Ideal for creating a uniform wash of light across walls, enhancing architectural features and aesthetics.
- **Signage Illumination:** Perfect for highlighting outdoor or indoor signs with crisp, focused lighting.
- **Billboard Lighting:** Suitable for billboard installations to maximize legibility

WARRANTY & LISTINGS:

- 5-Year Warranty
- IP65 rated for wet location use

ELECTRICAL:

- **Power Options:** 50W or 120W wattage for energy-efficient performance.
- **Input Voltage:** Operates on 120 VAC, 50/60Hz.
- **High Efficiency:** Efficacy ratings of 130 LPW and 125 LPW ensure maximum energy savings.
- **Cord Specifications:** 3.2 SJTW 18/3 AWG cable for robust and reliable connectivity.
- **Power Factor:** >0.9 for reduced energy loss.
- **Operating Temperature Range:** Designed to perform in temperatures from 0°F to 104°F.
- **Harmonic Distortion:** HD < 20% for cleaner power usage.
- **Color Accuracy:** CRI ≥ 70 for natural and clear color rendering.
- **Weatherproof Design:** IP65-rated for wet locations, ensuring dependable performance in harsh environments.

ADDITIONAL ANGLES:



SPECIFICATIONS:

Product Code	Wattage	Lumens	Color Temperature	Size	Mount	Finish
LOSL-2FT-50W-30K-BL	50W	6700 Lumens	3000K	2 Feet	Surface Mount	Black
LOSL-2FT-50W-50K-BL	50W	6700 Lumens	5000K	2 Feet	Surface Mount	Black
LOSL-4FT-120W-30K-BL	120W	15300 Lumens	3000K	4 Feet	Surface Mount	Black
LOSL-4FT-120W-50K-BL	120W	15300 Lumens	5000K	4 Feet	Surface Mount	Black
LOSL-4FT-120W-30K-WH	120W	15300 Lumens	3000K	4 Feet	Surface Mount	White
LOSL-4FT-120W-50K-WH	120W	15300 Lumens	5000K	4 Feet	Surface Mount	White

OUTDOOR SIGN LIGHTS

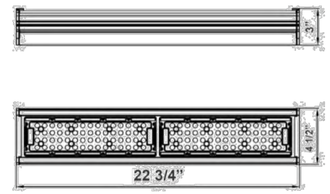
SEARCH CODE: SC43933

SUPERIOR LIGHTING

DIMENSIONS:

LOSL-2FT

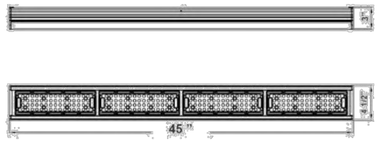
22 3/4"(L) x 3"(H) x 4 1/2"(W)



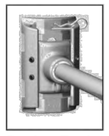
DIMENSIONS:

LOSL-4FT

45"(L) x 3"(H) x 4 1/2"(W)



KBW BannerFlex® Metro™ / D4 Bracket



The new KBW BannerFlex Metro bracket by Consort Display Group was specifically designed with metropolitan areas in mind. In response to requests for a smaller, but adjustable bracket for fluted and ornamental light poles, Consort is pleased to introduce the attractive, streamlines Metro bracket. The sleek hardware is perfect for historical, informational or decorative banners in all downtown settings.

The BannerFlex Metro bracket is comprised of two major components: the main bracket casting and the fiberglass arm with arm casting. The BannerFlex Metro is available in both the standard round and the new premium Airow® arms. The BannerFlex Metro is protected by US patent.

Product Testing Program

KBW by Consort utilizes full-scale wind tunnel and material testing facilities along with computer-aided design programs to develop and affirm our product components, capabilities, features and warranties. For specific engineering data, including our BannerFlex Wind Force Calculator, visit us at www.kalamazoobanner.com or contact your KBW/Consort Sales Representative at (800) 525-6424.

FEATURES AND BENEFITS

KBW BannerFlex Metro Main Casting



FEATURES	BENEFITS
356T6 Heat-Treated Cast Aluminum	• Superior strength and durability • Corrosion resistant • Accepts powder coating
Bolt Holes	• Casting may be easily bolted to poles in lieu of banding application
Integrated Banding Ports	• Provides channel for up to 3/4" wide bands
Arm Slide Flanges	• Banner can be installed or removed without moving or removing main casting • Allows banner-length adjustment at both top and bottom of banner • Arms may be removed when no banners are installed
Dacromet®-Coated Set Screws and Zinc-Plated Hitch Pins	• Corrosion resistant • Allows for easy installation and adjustment • Hitch pin provides added security
Warranty	• 10 Years when properly installed and maintained (see warranty information)

KBW BannerFlex D4 Arm Casting



FEATURES	BENEFITS
356T6 Heat-Treated Cast Aluminum	• Superior strength and durability • Corrosion resistant • Accepts powder coating
Cantilevered Casting • *Top arm is canted up* • *Bottom arm is canted down*	• Wind energy is transferred from banner to fiberglass arm • Keeps banner trim and in tension • Promotes banner longevity
Eyelet Included in Casting	• Allows for wire ties to be utilized through both the banner grommet and casting to secure banner • Added security from loss or theft

KBW BannerFlex Standard 3/4" Round Fiberglass Arm



FEATURES	BENEFITS
Pultruded Fiberglass Arm	• Provides flexibility while maintaining strength • Absorbs wind energy to reduce stress on banner and light pole • Inherent flexibility of the arm allows for return of banner to original taut position once wind subsides • Increases banner longevity

KBW BannerFlex Premium 3/4" Airow Fiberglass Arm



FEATURES	BENEFITS
Eccentrically Milled, Pultruded Fiberglass Arm with UV Coating *-Airow arm available for 24" to 30" banner widths only*	• Specially designed taper of fiberglass rod increases flexibility over standard rods by up to 50% • Dissipates more wind energy to reduce the stress on banner and light pole • Inherent flexibility of the arm allows for return of arm and banner to original taut position once wind subsides • Increases banner longevity • Increases flexibility while maintaining strength • Perfect for high wind areas and when extra wind load reduction is required • Patent applied for

KBW™ HARDWARE BANDING GUIDELINES

BannerFlex®

GUIDE TO TABLE
yes - combination will work successfully in typical wind conditions (60mph)
no - combination will not perform in typical, long-term conditions
n/a - does not apply; size combination impossible
N/R - combination will work, but is not recommended
Max Total - the maximum total sq ft of banner fabric for 2 banners / pole

BANDING OPTIONS
1/2", 9/16" or 5/8" Screw Gear Bands (SGB)
Single wrap of 3/4" tool-applied banding (9 pole/100' box)-secured tightly
Double wrap of 3/4" tool-applied banding (5 pole/100' box)

BOLTING OPTIONS
Brackets may be bolted in lieu of banding
To determine the Max Total Sq Ft, use the 2 wraps 3/4" value

Hardware	Banner Size Inches *Millimeters*	18" x 36" *460 x 915*		24" x 48" *610 x 1220*		30" x 60" *760 x 1525*		30" x 72" *760 x 1830*		30" x 84" *760 x 2135*		30" x 94" *760 x 2400*		*46" x 94" *1170 x 2400* (see below)		*30" x 120" *760 x 3050* (see below)		Maximum Single Banner Size	Maximum Total Sq Ft for 2 Banners Per Pole
	# Banners	1	2	1	2	1	2	1	2	1	2	1	2	1	2	1	2		
KBW-JR	1/2" SGB	yes	yes	no	no	no	no	no	no	no	no	no	no	no	no	no	no	20" x 36"	10
	9/16" SGB	yes	yes	yes	no	no	no	no	no	no	no	no	no	no	no	no	no	30" x 54"	16
	5/8" SGB	yes	yes	yes	yes	yes	no	no	no	no	no	no	no	no	no	no	no	30" x 60"	16
	single wrap 3/4"	yes	yes	yes	yes	yes	yes	yes	no	no	no	no	no	no	no	no	no	30" x 72"	25
	double wrap 3/4"	yes	yes	yes	yes	yes	yes	yes	yes	no	no	no	no	no	no	no	no	30" x 72"	30
KBW-Metro	1/2" SGB	yes	yes	no	no	no	no	no	no	no	no	no	no	no	no	no	no	20" x 36"	10
	9/16" SGB	yes	yes	yes	no	no	no	no	no	no	no	no	no	no	no	no	no	30" x 54"	16
	5/8" SGB	yes	yes	yes	yes	yes	no	yes	no	no	no	no	no	no	no	no	no	30" x 60"	16
	single wrap 3/4"	yes	yes	yes	yes	yes	yes	yes	no	yes	no	no	no	no	no	no	no	30" x 84"	25
	double wrap 3/4"	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	n/a	n/a	n/a	n/a	n/a	n/a	30" x 84"	30
KBW Metro w/ Airow	1/2" SGB	n/a	n/a	yes	no	no	no	no	no	no	no	n/a	n/a	no	no	no	no	30" x 54"	16
	9/16" SGB	n/a	n/a	yes	yes	yes	no	yes	no	no	no	no	no	n/a	n/a	no	no	30" x 60"	18
	5/8" SGB	n/a	n/a	yes	yes	yes	no	yes	no	yes	no	no	no	n/a	n/a	no	no	30" x 84"	20
	single wrap 3/4"	n/a	n/a	yes	yes	yes	yes	yes	yes	yes	yes	N/R	N/R	n/a	n/a	no	no	30" x 94"	35
	double wrap 3/4"	n/a	n/a	yes	yes	yes	yes	yes	yes	yes	yes	N/R	N/R	n/a	n/a	n/a	n/a	30" x 94"	40
KBW-D3	1/2" SGB	N/R	N/R	N/R	N/R	no	no	no	no	no	no	no	no	no	no	no	no	n/a	10
	9/16" SGB	N/R	N/R	N/R	N/R	no	no	no	no	no	no	no	no	no	no	no	no	n/a	16
	5/8" SGB	N/R	N/R	N/R	N/R	yes	no	no	no	no	no	no	no	no	no	no	no	30" x 60"	16
	single wrap 3/4"	N/R	N/R	N/R	N/R	yes	yes	yes	no	yes	no	yes	no	no	no	no	no	30" x 72"	25
	double wrap 3/4"	N/R	N/R	N/R	N/R	yes	yes	yes	yes	yes	yes	yes	yes	yes	N/R	yes	N/R	30" x 120"	40
KBW-D3 w/ Airow	1/2" SGB	n/a	n/a	N/R	N/R	no	no	no	no	no	no	no	no	n/a	n/a	no	no	30" x 54"	16
	9/16" SGB	n/a	n/a	N/R	N/R	yes	no	yes	no	no	no	no	no	n/a	n/a	no	no	30" x 60"	18
	5/8" SGB	n/a	n/a	N/R	N/R	yes	no	yes	no	yes	no	no	no	n/a	n/a	no	no	30" x 94"	20
	single wrap 3/4"	n/a	n/a	N/R	N/R	yes	yes	yes	yes	yes	no	yes	N/R	n/a	n/a	yes	no	30" x 108"	35
	double wrap 3/4"	n/a	n/a	N/R	N/R	yes	yes	yes	yes	yes	yes	yes	yes	n/a	n/a	yes	yes	30" x 120"	50

Our Guidelines and our Warranties are based on over 25 years of experience and testing. However, due to conditions beyond our control such as quality of the actual installation, including proper application of banding and bolts, as well as structural integrity of utility poles and other construction, Consort only offers the information as a guide. When in doubt, bring in professionals for inspection and advice.

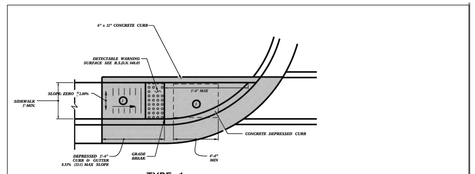
*note: this size is not covered by warranty

© Consort Corporation 09.13

Engineer

QUANTECH ENGINEERING
INNOVATIVE SOLUTIONS | ENGINEERING, INC.
Firm # P-1517
275 CARPENTER HILL LANE
Cary, N.C. 27519
(919) 996-9455

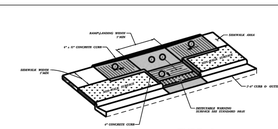
NORTH CAROLINA PROFESSIONAL SEAL 53676 ENGINEER BRYAN A. HARRIS



TYPE 1

REFER TO ROADWAY STANDARD DRAWING NUMBER 848.01 SHEET 1 OF 3 FOR ALL RAMP NOTES

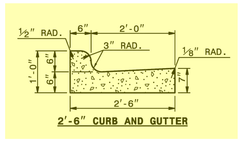
CURB RAMP DETAIL



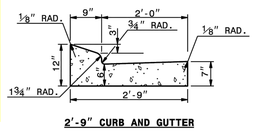
TYPE 3

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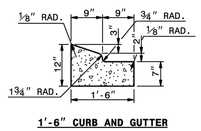
CURB RAMP DETAIL



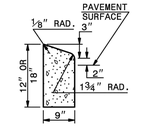
2'-6" CURB AND GUTTER



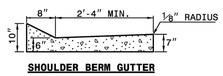
2'-9" CURB AND GUTTER



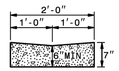
1'-6" CURB AND GUTTER



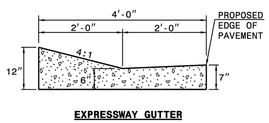
9" X 12" OR 18" CONCRETE CURB



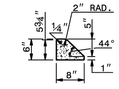
SHOULDER BERM GUTTER



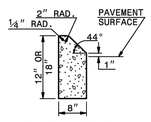
VALLEY GUTTER



EXPRESSWAY GUTTER



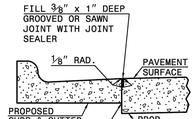
8" X 6" MEDIAN CURB



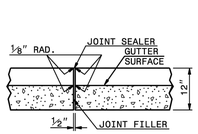
8" X 12" OR 18" CONCRETE CURB

SECTION VIEW OF CURBS OR CURBS AND GUTTERS

GENERAL NOTES:
-PLACE CONTRACTION JOINTS AT 10' INTERVALS, EXCEPT THAT A 15' SPACING MAY BE USED WHEN A MACHINE IS USED OR WHEN SATISFACTORY SUPPORT FOR THE FACE FORM CAN BE OBTAINED WITHOUT THE USE OF TEMPLATES AT 10' INTERVALS.
-JOINT SPACING MAY BE ALTERED IF REQUIRED BY THE ENGINEER.
-CONTRACTION JOINTS MAY BE INSTALLED WITH THE USE OF TEMPLATES OR FORMED BY OTHER APPROVED METHODS. CONSTRUCT NON-TEMPLATE FORMED JOINTS A MIN. OF 1½" DEEP.
-FILL ALL CONSTRUCTION JOINTS, EXCEPT IN 8"x6" MEDIAN CURB, WITH JOINT FILLER AND SEALER.
-SPACE EXPANSION JOINTS AT 90' INTERVALS AND ADJACENT TO ALL RIGID OBJECTS.



LONGITUDINAL JOINT



TRANSVERSE EXPANSION JOINT IN CURB AND GUTTER

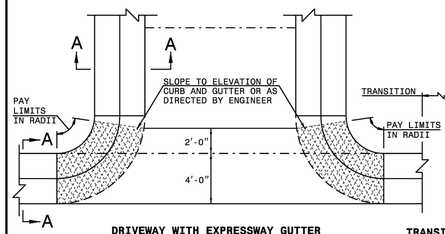
SECTION VIEW OF JOINTS

STATE OF NORTH CAROLINA DEPT. OF TRANSPORTATION DIVISION OF HIGHWAYS RALEIGH, N.C.

1-24

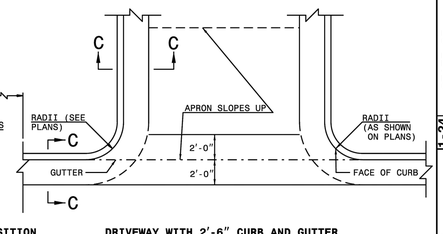
ROADWAY STANDARD DRAWING FOR
CONCRETE CURB, GUTTER AND CURB & GUTTER

SHEET 1 OF 3
846.01



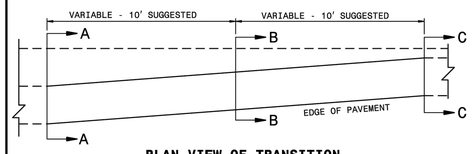
DRIVEWAY WITH EXPRESSWAY GUTTER

TRANSITION

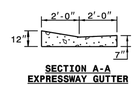


DRIVEWAY WITH 2'-6" CURB AND GUTTER

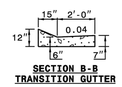
PLAN VIEW OF TYPICAL CURB AND GUTTER OCCURENCES



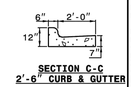
PLAN VIEW OF TRANSITION
EXPRESSWAY GUTTER TO 2'-6" CURB AND GUTTER



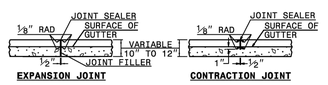
SECTION A-A
EXPRESSWAY GUTTER



SECTION B-B
TRANSITION GUTTER



SECTION C-C
2'-6" CURB & GUTTER



EXPANSION JOINT

CONTRACTION JOINT

NOTES:
-IN THE TRANSITION FROM 4'-0" CONCRETE EXPRESSWAY GUTTER TO 2'-6" CONCRETE CURB AND GUTTER, PLACE ½" EXPANSION JOINTS AT 25' INTERVALS.
-PLACE GROOVE JOINTS 1" DEEP AT 12'-6" INTERVALS BETWEEN EXPANSION JOINTS.
-FILL AND SEAL THE TOP ½" OF THE EXPANSION JOINTS AND 1" OF CONTRACTION JOINTS WITH APPROVED JOINT SEALING COMPOUND.

STATE OF NORTH CAROLINA DEPT. OF TRANSPORTATION DIVISION OF HIGHWAYS RALEIGH, N.C.

1-24

ROADWAY STANDARD DRAWING FOR
CONCRETE CURB, GUTTER AND CURB & GUTTER

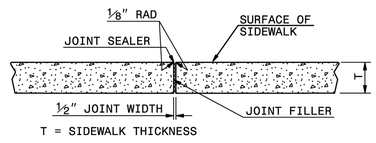
SHEET 3 OF 3
846.01

NOTES:

CONSTRUCT STANDARD SIDEWALK 5' WIDE AND 4" THICK UNLESS OTHERWISE DENOTED ON PLANS.

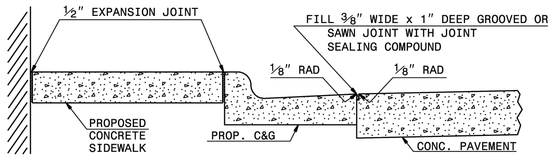
PLACE A GROOVE JOINT 1" DEEP WITH ⅛" RADII IN THE CONCRETE SIDEWALK AT 5' INTERVALS. ONE ½" EXPANSION JOINT WILL BE REQUIRED AT 50' INTERVALS. A ½" EXPANSION JOINT WILL BE REQUIRED WHERE THE SIDEWALK JOINS ANY RIGID STRUCTURE.

SEE STD. DWG. 848.05 FOR CURB RAMP LOCATION REQUIREMENTS AND CONSTRUCTION GUIDELINES.



T = SIDEWALK THICKNESS

TRANSVERSE EXPANSION JOINT IN SIDEWALK



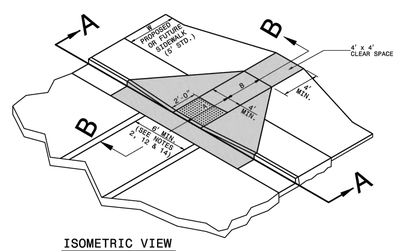
DETAILS SHOWING JOINTS IN CONCRETE SIDEWALK

STATE OF NORTH CAROLINA DEPT. OF TRANSPORTATION DIVISION OF HIGHWAYS RALEIGH, N.C.

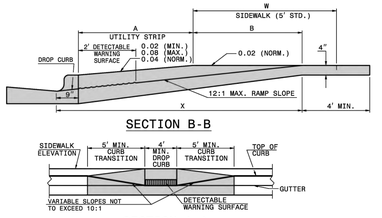
1-24

ROADWAY STANDARD DRAWING FOR
CONCRETE SIDEWALK

SHEET 1 OF 1
848.01



ISOMETRIC VIEW



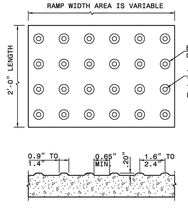
SECTION B-B

SECTION A-A

PAY LIMITS FOR CURB RAMP

NOTES:
DETECTABLE WARNING SURFACE SHALL COVER 2'-0" LENGTH AND FULL WIDTH OF THE RAMP FLOOR AS SHOWN ON THE DETAILS.

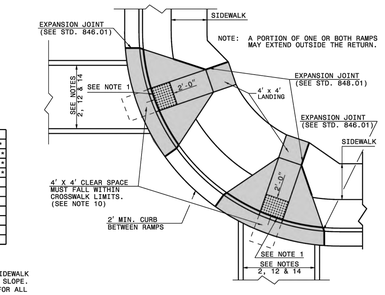
DETECTABLE WARNING SURFACE SHALL CONTRAST VISIBLY WITH ADJOINING SURFACE, EITHER LIGHT-ON-DARK, OR DARK-ON-LIGHT SEQUENCE COVERING THE ENTIRE RAMP.



DETECTABLE WARNING SURFACE

W	A	W+A+9"	X	B
5'	0.0'	5.8'	5.8'	5.0'*
6'	0.0'	6.8'	6.8'	6.0'**
7'	0.0'	7.8'	7.3'	6.5'**
8'	0.0'	8.8'	7.3'	6.5'**
5'	2.0'	7.8'	7.8'	5.0'
5'	2.5'	8.3'	8.1'	4.8'
5'	3.0'	8.8'	8.3'	4.4'
5'	3.5'	9.3'	8.4'	4.1'
5'	4.0'	9.8'	8.6'	3.8'
5'	4.5'	10.3'	8.7'	3.4'
5'	5.0'	10.8'	8.9'	3.1'

B = X-(A+9")
B = DISTANCE FROM FRONT EDGE OF SIDEWALK TO BACK POINT OF 12:1 (8.33%) SLOPE.
* BACK OF SIDEWALK DROP REQUIRED FOR ALL SIDEWALK SLOPES.
** BACK OF SIDEWALK DROP REQUIRED FOR SIDEWALK SLOPES 0.04.



PLAN VIEW
DUAL RAMPS
ANY RADII
(4' MIN. FLOOR WIDTH)

STATE OF NORTH CAROLINA DEPT. OF TRANSPORTATION DIVISION OF HIGHWAYS RALEIGH, N.C.

1-24

ROADWAY STANDARD DRAWING FOR
CURB RAMP
PROPOSED CURB AND GUTTER

SHEET 1 OF13
848.06

No.	REVISIONS	DATE	BY
0	CD SUBMITTAL #1	08/01/2025	SREG
1	CID-25-06 V2	10/01/2025	SREG
2	CID-25-06 V3	03/02/2026	SREG

SEAL:

STRONGROCK ENGINEERING GROUP

STRONG ROCK ENGINEERING GROUP, PLLC | COMPANY LICENSE # P-2165
305 CHURCH AT NORTH HILLS STREET, SUITE 1110 RALEIGH, NC 27609 | INFORMATION@STRONGROCKGROUP.COM

STRONG ROCK PROJECT CID-25-06	
NOT FOR CONSTRUCTION	
SCALE	AS SHOWN
DESIGNED BY	SRG
DRAWN BY	SRG
CHECKED BY	SRG

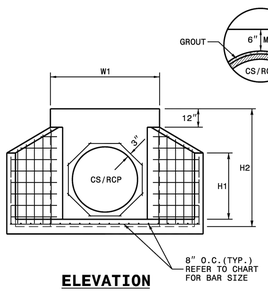
305 CHURCH AT NORTH HILLS STREET, SUITE 1110 RALEIGH, NC 27609

MITCHELL MILL MARKET
TOWN OF ROLESVILLE, WAKE COUNTY, NORTH CAROLINA
CONSTRUCTION PLANS
SITE DETAILS

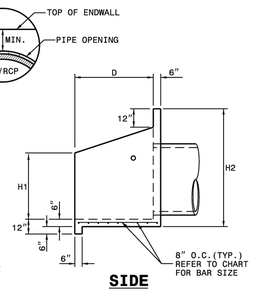
DRAWING SHEET
D-1.0

29 OF 47

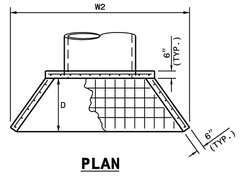
THIS PLANSET AND ANY ASSOCIATED DOCUMENTS ARE PRELIMINARY AND NOT AUTHORIZED FOR CONSTRUCTION UNTIL SIGNED, DATED, AND OFFICIALLY RELEASED FOR CONSTRUCTION BY THE ENGINEER OF RECORD.



ELEVATION



SIDE



PLAN

NOTES:

* THIS PRECAST ENDWALL MAY BE USED FOR THE FOLLOWING STANDARDS: 838.01, 838.11, 838.21, 838.27, 838.33, 838.39, 838.51, 838.57, 838.63 AND 838.69.
* INSTALL PRECAST ENDWALLS WITH WINGS AND PAY FOR IN ACCORDANCE WITH SPECIFICATION SECTION 838.
* USE 4000 PSI CONCRETE.
* PROVIDE ALL REINFORCING STEEL WHICH MEETS ASTM A615 FOR GRADE 60 AND WELDED WIRE FABRIC CONFORMING TO ASTM A185 WITH 2" MIN. CLEARANCE.
* PLACE LIFT HOLES OR PINS IN ACCORDANCE WITH OSHA STANDARD 1926.704.
* PIPE TO BE GROUTED INTO ENDWALL AT JOB SITE BY CONTRACTOR.
* ALL ELEMENTS PRECAST TO MEET ASTM C913.
* WELDED WIRE FABRIC MAY BE SUBSTITUTED FOR REBAR AS LONG AS THE SAME AREA OF STEEL IS PROVIDED.
* CHAMFER ALL CORNERS 1" OR HAVE A RADIUS OF 1".

NOTE: THE MINIMUM BAR SIZE SHALL BE #5 BARS AT 8" CTS.THE CONTRACTOR WILL HAVE THE OPTION TO INCREASE THIS BAR SIZE AS NEEDED.

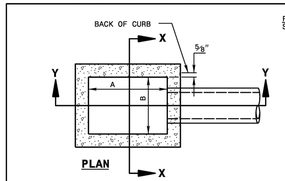
ENDWALL DIMENSIONS

	MINIMUM	MIN./MAX.	MIN./MAX.	MIN./MAX.	MIN./MAX.	MIN./MAX.
PIPE DIA.	BAR SIZE	H1	H2	D	W1	W2
12"	#5 @ 8"	15"/24"	33"/45"	15"/21"	36"/45"	66"/72"
15"	#5 @ 8"	15"/24"	37"/45"	15"/24"	42"/45"	78"/81"
18"	#5 @ 8"	15"/24"	40"/51"	15"/30"	42"/45"	78"/81"
24"	#5 @ 8"	18"/32"	47"/57"	21"/30"	48"/51"	90"/99"
30"	#5 @ 8"	30"/42"	54"/72"	24"/36"	54"/66"	120"/138"
36"	#5 @ 8"	36"/42"	61"/72"	33"/42"	63"/69"	138"/141"
42"	#5 @ 8"	39"/52"	68"/81"	39"/42"	72"/81"	144"/159"
48"	#5 @ 8"	42"/52"	75"/84"	39"/42"	78"/81"	156"/159"
54"	#5 @ 8"	48"/60"	82"/102"	39"/48"	84"/111"	162"/189"
60"	#5 @ 8"	54"/60"	89"/102"	39"/48"	89"/111"	165"/189"
66"	#5 @ 8"	54"/60"	96"/102"	39"/48"	96"/111"	168"/189"
72"	#5 @ 8"	54"/60"	103"/108"	39"/48"	103"/111"	177"/201"

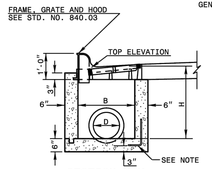
1-24 STATE OF NORTH CAROLINA DEPT. OF TRANSPORTATION DIVISION OF HIGHWAYS RALEIGH, N.C.

ROADWAY STANDARD DRAWING FOR
PRECAST CONCRETE ENDWALL
FOR SINGLE 12" THRU 72" PIPE - 90° SKEW

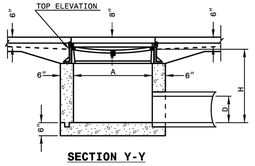
SHEET 1 OF 1
838.80



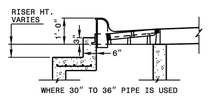
PLAN

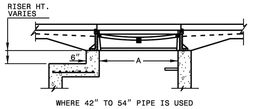


SECTION X-X



SECTION Y-Y





DETAIL SHOWING METHOD OF RISER CONSTRUCTION

GENERAL NOTES:

USE CLASS "B" CONCRETE THROUGHOUT.

PROVIDE ALL CATCH BASINS OVER 3'-6" IN DEPTH WITH STEPS 12" ON CENTER. USE STEPS WHICH COMPLY WITH STD. DRAWING 840.66.

OPTIONAL CONSTRUCTION - MONOLITHIC POUR, 2" KEYWAY, OR #4 BAR DOWELS AT 12" CENTERS AS DIRECTED BY THE ENGINEER.

USE FORMS FOR THE CONSTRUCTION OF THE BOTTOM SLAB.

IF REINFORCED CONCRETE PIPE IS SET IN BOTTOM SLAB OF BOX, ADD TO SLAB AS SHOWN ON STD. NO. 840.00.

USE TYPE "E", "F" AND "G" GRATES UNLESS OTHERWISE INDICATED.

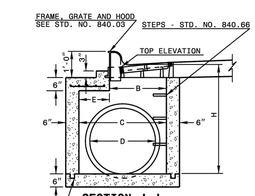
FOR 8'-0" IN HEIGHT OR LESS USE 6" WALLS AND BOTTOM SLAB. OVER 8'-0" TO 16'-0" IN HEIGHT USE 8" WALLS AND BOTTOM SLAB. ADJUST QUANTITIES ACCORDINGLY.

MAXIMUM DEPTH OF THIS STRUCTURE FROM TOP OF BOTTOM SLAB TO TOP ELEVATION IS 16'-0". STD. NO. 840.45 CONTROLS MAXIMUM DEPTH IF PRECAST BOX IS USED.

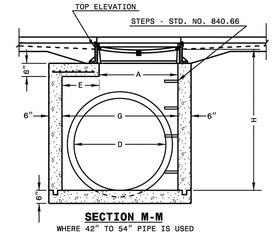
CONSTRUCT WITH PIPE CROWNS MATCHING.

CHAMFER ALL EXPOSED CORNERS 1".

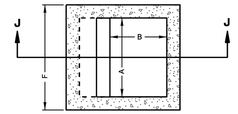
DRAWING NOT TO SCALE.



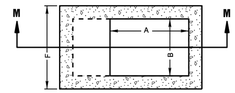
SECTION J-J
WHERE 30" TO 36" PIPE IS USED



SECTION M-M
WHERE 42" TO 54" PIPE IS USED



PLAN

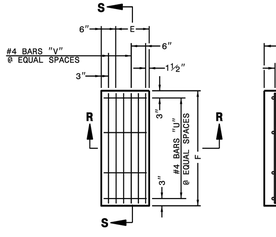


PLAN

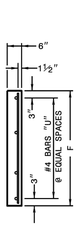
1-24 STATE OF NORTH CAROLINA DEPT. OF TRANSPORTATION DIVISION OF HIGHWAYS RALEIGH, N.C.

ROADWAY STANDARD DRAWING FOR
CONCRETE CATCH BASIN
12" THRU 54" PIPE

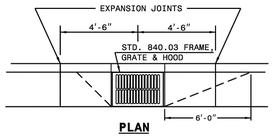
SHEET 2 OF 2
840.02



PLAN OF TOP SLAB

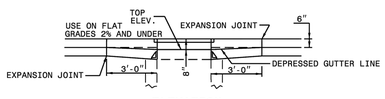


SECTION S-S



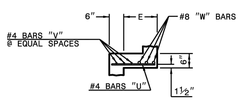
PLAN

CURB AND GUTTER WITH CATCH BASIN ON STEEP GRADES

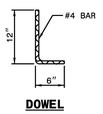


ELEVATION

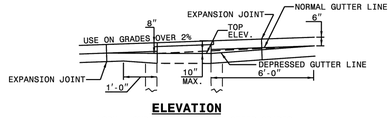
NORMAL CURB AND GUTTER ON LIGHT GRADES



SECTION R-R



DOWEL



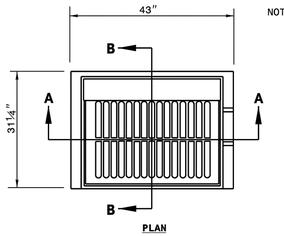
ELEVATION

NORMAL CURB AND GUTTER ON STEEP GRADES

MINIMUM DIMENSIONS AND QUANTITIES FOR CONCRETE CATCH BASIN(BASED ON MIN. HEIGHT, H, WITH NO RISER) *

DIMENSIONS OF BOX AND PIPE						COVER DIMENSION		BARS-U		BARS-V		BARS-W		TOTAL LBS.	CU.YDS. CONC. IN BOX (DIST. CONC. FOR MINIMUM HEIGHT, H)		DEDUCTIONS ONE PIPE	
PIPE	SPAN	WIDTH	WIDTH	SPAN	MIN. HEIGHT			NO.	LENGTH	NO.	LENGTH	NO.	LENGTH		TOP SLAB	BOTTOM SLAB	C.M.	R.C.
D	A	B	C	G	H	E	F											
12"	3'-0"	2'-2"	--	--	2'-9"	--	--	--	--	--	--	--	--	--	--	0.235	0.772	0.015	0.026
15"	3'-0"	2'-2"			3'-0"											0.235	0.829	0.023	0.036
18"	3'-0"	2'-2"			3'-3"											0.235	0.887	0.033	0.049
24"	3'-0"	2'-2"			3'-9"											0.235	1.001	0.059	0.085
30"	3'-0"	2'-2"	3'-4"		4'-3"	1'-2"	4'-0"	4	1'-5"	2	3'-9"	3	3'-9"	39	0.123	0.321	1.433	0.092	0.127
36"	3'-0"	2'-2"	3'-10"		4'-9"	1'-8"	4'-0"	4	1'-11"	3	3'-9"	3	3'-9"	43	0.161	0.358	1.714	0.132	0.178
42"	3'-0"	2'-2"		4'-5"	5'-3"	1'-5"	3'-2"	4	1'-8"	2	2'-11"	3	2'-11"	32	0.112	0.318	1.738	0.180	0.243
48"	3'-0"	2'-2"		5'-0"	5'-9"	2'-0"	3'-2"	4	2'-3"	3	2'-11"	3	2'-11"	35	0.145	0.352	2.052	0.235	0.317
54"	3'-0"	2'-2"		5'-7"	6'-3"	2'-7"	3'-2"	4	2'-10"	5	2'-11"	3	2'-11"	41	0.180	0.386	2.387	0.297	0.401

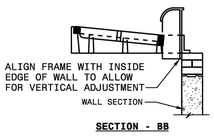
* RISER HAS .228 CUBIC YARDS OF CONCRETE PER FOOT HEIGHT



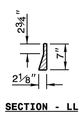
PLAN

FRAME,GRATE, & HOOD ASS'Y

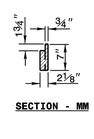
NOTE: USE TYPE "E", "F" AND "G" GRATE UNLESS OTHERWISE NOTED.



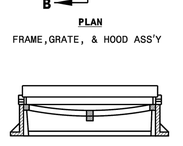
SECTION - BB

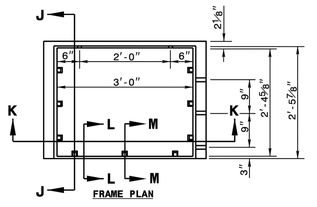


SECTION - LL

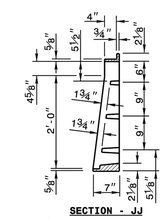


SECTION - MM

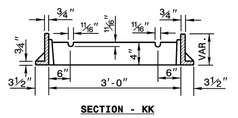




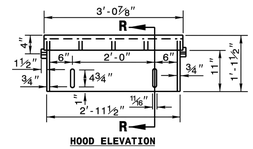
FRAME PLAN



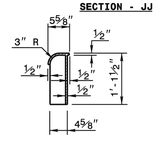
SECTION - JJ



SECTION - KK



HOOD ELEVATION



SECTION - RR

1-24 STATE OF NORTH CAROLINA DEPT. OF TRANSPORTATION DIVISION OF HIGHWAYS RALEIGH, N.C.

ROADWAY STANDARD DRAWING FOR
FRAME, GRATES, AND HOOD
FOR USE ON STANDARD CATCH BASIN

SHEET 1 OF 2
840.03

No.	REVISIONS	DATE	BY
0	CD SUBMITTAL #1	08/01/2025	SREG
1	CID: 25-06 V2	10/01/2025	SREG
2	CID: 25-06 V3	03/02/2026	SREG

SEAL:

STRONGROCK
ENGINEERING GROUP
STRONG ROCK ENGINEERING GROUP, PLLC | COMPANY LICENSE # P-2165
305 CHURCH AT NORTH HILLS STREET, SUITE 1110 RALEIGH, NC 27609 | INFORMATION@STRONGROCKGROUP.COM

STRONG ROCK PROJECT CID-25-06	
NOT FOR CONSTRUCTION	
SCALE	AS SHOWN
DESIGNED BY	SRG
DRAWN BY	SRG
CHECKED BY	SRG

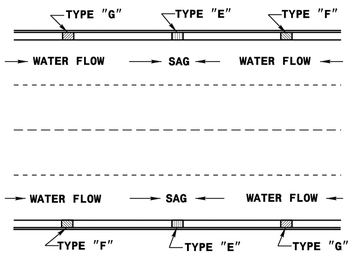
MITCHELL MILL MARKET
TOWN OF ROLESVILLE, WAKE COUNTY, NORTH CAROLINA
CONSTRUCTION PLANS
SITE DETAILS

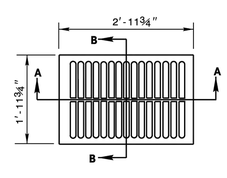
DRAWING / SHEET
D-1.1

30 OF 47

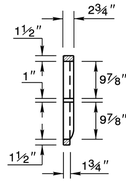
THIS PLANSET AND ANY ASSOCIATED DOCUMENTS ARE PRELIMINARY AND NOT AUTHORIZED FOR CONSTRUCTION UNTIL SIGNED, DATED, AND OFFICIALLY RELEASED FOR CONSTRUCTION BY THE ENGINEER OF RECORD.

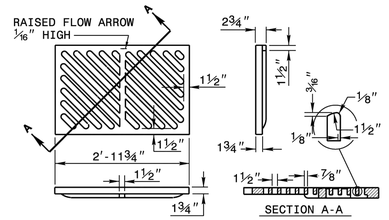
DETAIL SHOWING TYPES OF GRATES
USE ACCORDING TO WATER FLOW.



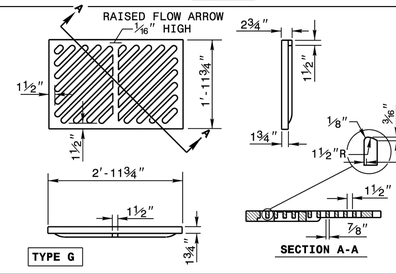


TYPE - E





TYPE - F

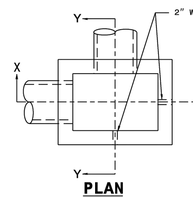


ROADWAY STANDARD DRAWING FOR
FRAME, GRATES, AND HOOD
FOR USE ON STANDARD CATCH BASIN

STATE OF NORTH CAROLINA
DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.

1-24

SHEET 2 OF 2
840.03



PLAN
WITH GRATE & FRAME REMOVED

GENERAL NOTES:

USE CLASS "B" CONCRETE THROUGHOUT.

PROVIDE ALL DROP INLETS OVER 3'-6" IN DEPTH WITH STEPS 12" ON CENTER. USE STEPS WHICH COMPLY WITH STD. DRAWING 840.66.

OPTIONAL CONSTRUCTION - MONOLITHIC POUR 2" KEYWAY OR #4 BAR DOWELS AT 12" CENTERS AS DIRECTED BY THE ENGINEER.

USE FORMS FOR THE CONSTRUCTION OF THE BOTTOM SLAB.

IF REINFORCED CONCRETE PIPE IS SET IN BOTTOM SLAB OF BOX, ADD TO SLAB AS SHOWN ON STD. NO. 840.OO.

MAX.DEPTH OF THIS STRUCTURE FROM TOP OF BOTTOM SLAB TO TOP ELEVATION IS 12'-0". STD. DWG. 840.45 OR 840.46 CONTROLS MAXIMUM DEPTH IF PRECAST BOX IS USED.

CONSTRUCT WITH PIPE CROWNS MATCHING.

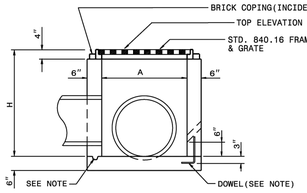
SEE STANDARD DRAWING 840.25 FOR ATTACHMENT OF FRAMES AND GRATES NOT SHOWN.

INSTALL 2" WEEPHOLES AS DIRECTED BY THE ENGINEER.

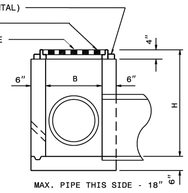
INSTALL STONE DRAINS, OF A MINIMUM OF 1 CUBIC FOOT OF NO. 78M STONE IN A POROUS FABRIC BAG OR WRAP, AT EACH WEEP HOLE OR AS DIRECTED BY THE ENGINEER.

CHAMFER ALL EXPOSED CORNERS 1".

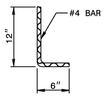
DRAWING NOT TO SCALE.



SECTION X-X



SECTION Y-Y



DOWEL

DIMENSIONS AND QUANTITIES FOR DROP INLET(BASED ON MIN. HEIGHT, H)

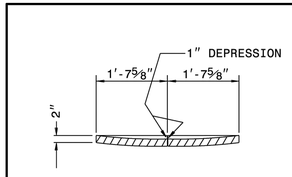
DIMENSIONS OF BOX & PIPE				CUBIC YARDS CONC. IN BOX			DEDUCTIONS FOR ONE PIPE	
PIPE	SPAN	WIDTH	MIN. HEIGHT	BOTTOM SLAB	WALL PER FT. HT.	TOTAL CONCRETE FOR MINIMUM HEIGHT, H	C.M.	R.C.
D	A	B	H					
12"	3'-0"	2'-0"	2'-0"	0.222	0.222	0.592	0.015	0.026
15"	〃	〃	2'-3"	〃	〃	0.648	0.023	0.036
18"	〃	〃	2'-6"	〃	〃	0.703	0.033	0.049
24"	〃	〃	3'-0"	〃	〃	0.814	0.059	0.085
30"	3'-0"	2'-0"	3'-6"	0.222	0.222	0.925	0.092	0.127

ROADWAY STANDARD DRAWING FOR
CONCRETE DROP INLET
12" THRU 30" PIPE

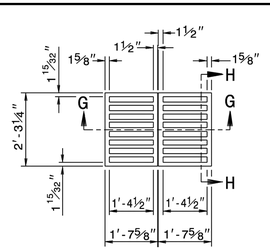
STATE OF NORTH CAROLINA
DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.

1-24

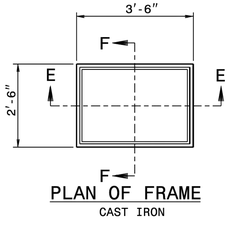
SHEET 1 OF 1
840.14



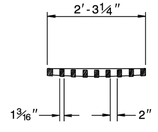
SECTION G-G



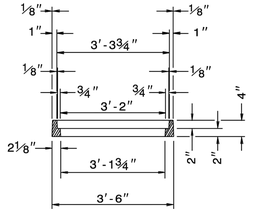
PLAN OF GRATING
CAST IRON



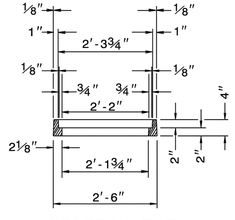
PLAN OF FRAME
CAST IRON



SECTION H-H



SECTION E-E



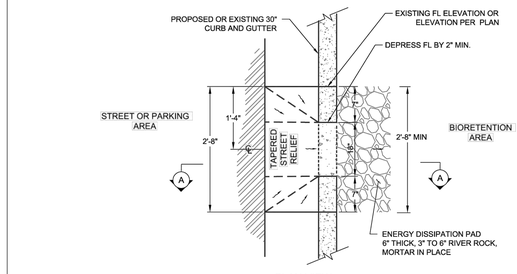
SECTION F-F

ROADWAY STANDARD DRAWING FOR
DROP INLET FRAME AND GRATES
FOR USE WITH STD. DWG.S 840.14 AND 840.15

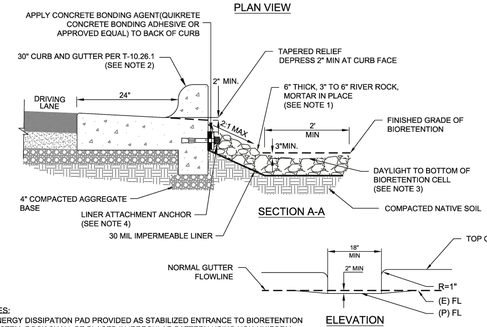
STATE OF NORTH CAROLINA
DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.

1-24

SHEET 1 OF 1
840.16



PLAN VIEW



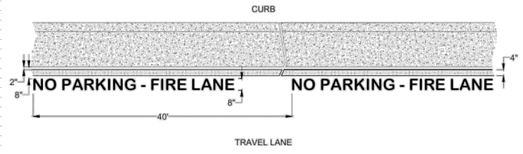
SECTION A-A

ELEVATION

NOTES:
1. ENERGY DISSIPATION PAD PROVIDED AS STABILIZED ENTRANCE TO BIORETENTION SYSTEM. ROCK SHALL BE PLACED IN IRREGULAR PATTERN USING NON-UNIFORM SIZES TO PREVENT PREFERENTIAL FLOW PATHS, INCREASE ENERGY DISSIPATION, AND TO LIMIT THE SURFACE AREA OF EXPOSED MORTAR. ALTERNATIVE PRE-TREATMENT SOLUTIONS WILL BE CONSIDERED.
2. WHERE NECESSARY, EXTEND GUTTER TO 2.5' WIDTH TO ACCOMMODATE TRASH CONTAINER PLACEMENT.
3. ROCK AND MORTAR INLET PROTECTION SHALL EXTEND ACROSS BOTTOM OF BIORETENTION TO OPPOSITE TOE OF SLOPE, OR 2' MINIMUM. FINISH GRADE OF MORTARED BOTTOM SHALL BE AT LEAST 3" BELOW ADJACENT BIORETENTION BOTTOM ELEVATION TO PROVIDE SEDIMENT STORAGE.
4. ATTACHMENT OF 30 MIL IMPERMEABLE LINER TO CONCRETE CURBS (USING CONCRETE ANCHORS SPACED AT MAXIMUM 18" O. C. AND BATTEN STRIPS) SHALL BE DONE IN ACCORDANCE WITH ASTM 6497.

CITY OF RALEIGH
STANDARD DETAIL

REVISIONS	DATE: 9/2024	NOT TO SCALE
	CURB-CUT INLET (TAPERED STREET RELIEF)	
	SW-30.03.1	



NOTES:

1. "NO PARKING-FIRE LANE" LETTER MARKINGS SHALL BE YELLOW.
2. LETTERS SHALL BE A MINIMUM OF 8" HIGH AND SPACED 8" FROM THE EDGE OF PAVEMENT.
3. LETTER MARKING SHALL BE PLACED EVERY 40' AND AT EVERY FIRE HYDRANT.
4. SOLID 4" WIDE YELLOW LINE SHALL BE PLACED 2" FROM THE EDGE OF PAVEMENT.

No.	REVISIONS	DATE	BY
0	CD SUBMITTAL #1	08/01/2025	SREG
1	CID-25-06 V2	10/01/2025	SREG
2	CID-25-06 V3	03/02/2026	SREG

SEAL:

STRONGROCK
ENGINEERING GROUP
STRONG ROCK ENGINEERING GROUP, PLLC | COMPANY LICENSE # P-2165
305 CHURCH AT NORTH HILLS STREET, SUITE 1110 RALEIGH, NC 27609 | INFORMATION@STRONGROCKGROUP.COM

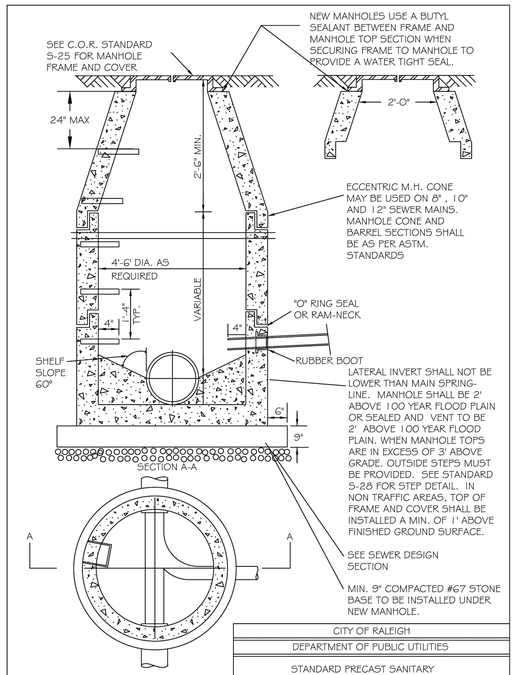
STRONG ROCK PROJECT CID-25-06	NOT FOR CONSTRUCTION	SCALE	AS SHOWN
		DESIGNED BY	SRG
		DRAWN BY	SRG
		CHECKED BY	SRG

MITCHELL MILL MARKET
TOWN OF ROLESVILLE, WAKE COUNTY, NORTH CAROLINA
CONSTRUCTION PLANS
SITE DETAILS

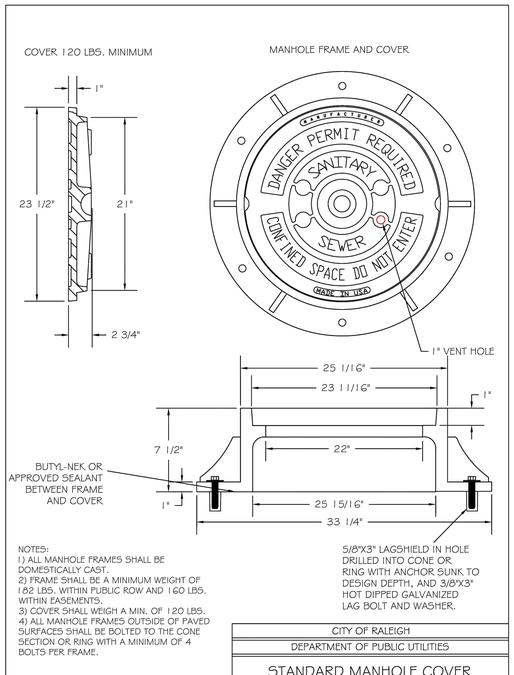
DRAWING
SHEET
D-1.2

31 OF 47

THIS PLANSET AND ANY ASSOCIATED DOCUMENTS ARE PRELIMINARY AND NOT AUTHORIZED FOR CONSTRUCTION UNTIL SIGNED, DATED, AND OFFICIALLY RELEASED FOR CONSTRUCTION BY THE ENGINEER OF RECORD.

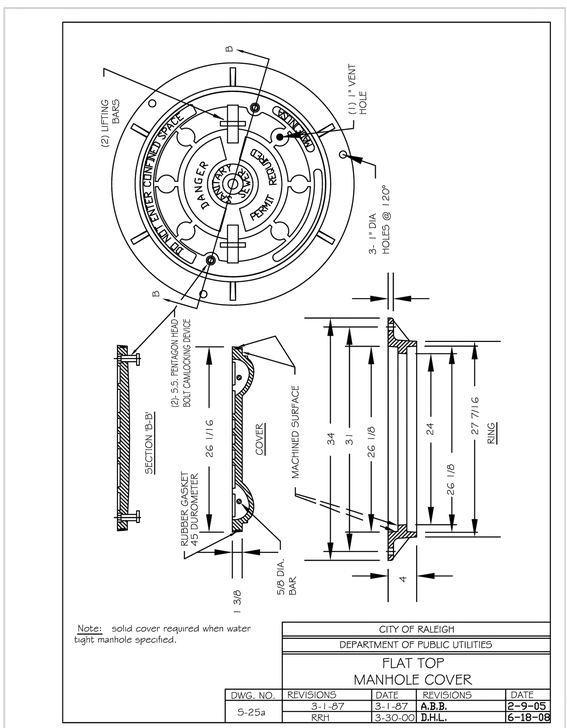


CITY OF RALEIGH				
DEPARTMENT OF PUBLIC UTILITIES				
STANDARD PRECAST SANITARY SEWER MANHOLE				
DWG. NO.	REVISIONS	DATE	REVISIONS	DATE
S-20	Y.C.A.	12-31-92	ABB	2-21-05
	RRH	3-30-00	D.H.L.	6-16-08



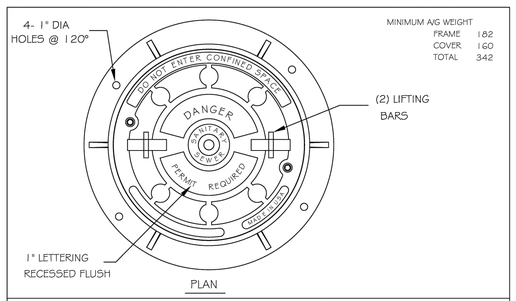
NOTES:
1) ALL MANHOLE FRAMES SHALL BE DOMESTICALLY CAST.
2) FRAME SHALL BE A MINIMUM WEIGHT OF 182 LBS. WITHIN PUBLIC ROW AND 160 LBS. WITHIN EASEMENTS.
3) COVER SHALL WEIGH A MIN. OF 120 LBS.
4) ALL MANHOLE FRAMES OUTSIDE OF PAVED SURFACES SHALL BE BOLTED TO THE CONE SECTION OR RING WITH A MINIMUM OF 4 BOLTS PER FRAME.

CITY OF RALEIGH				
DEPARTMENT OF PUBLIC UTILITIES				
STANDARD MANHOLE COVER				
DWG. NO.	REVISIONS	DATE	REVISIONS	DATE
S-25	3-1-87	3-1-87	A.B.B.	2-9-05
	RRH	3-30-00	D.H.L.	6-18-08



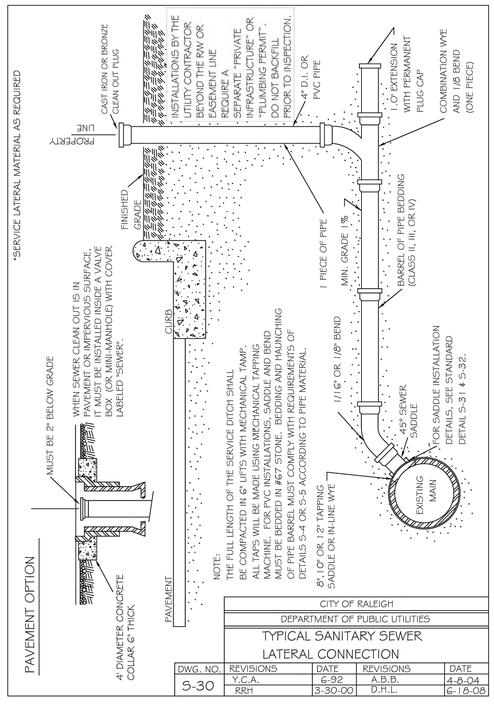
Note: solid cover required when water tight manhole specified.

CITY OF RALEIGH				
DEPARTMENT OF PUBLIC UTILITIES				
FLAT TOP MANHOLE COVER				
DWG. NO.	REVISIONS	DATE	REVISIONS	DATE
S-25a	3-1-87	3-1-87	A.B.B.	2-9-05
	RRH	3-30-00	D.H.L.	6-18-08



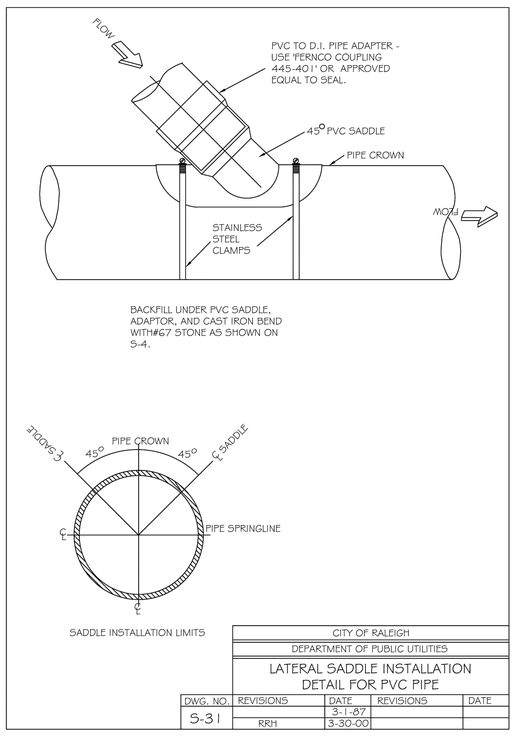
TYPICAL LIFTING DEVICE

CITY OF RALEIGH				
DEPARTMENT OF PUBLIC UTILITIES				
MANHOLE FRAME AND WATERTIGHT COVER				
DWG. NO.	REVISIONS	DATE	REVISIONS	DATE
S-26	3-1-87	3-1-87	ABB	8-29-05
	RRH	3-30-00	D.H.L.	6/18/08



NOTE:
THE FULL LENGTH OF THE SERVICE DITCH SHALL BE COMPACTED IN 6" LIFTS WITH MECHANICAL TAMP. ALL TYPES OF MATERIAL MUST BE USED. ALL PIPE MUST BE INSTALLED ON SADDLE AND MUST BE BEDDED IN #67 STONE. BEDDING AND HAUNCHING OF PIPE BARREL MUST COMPLY WITH REQUIREMENTS OF DETAILS S-4 OR S-5 ACCORDING TO PIPE MATERIAL.

CITY OF RALEIGH				
DEPARTMENT OF PUBLIC UTILITIES				
TYPICAL SANITARY SEWER LATERAL CONNECTION				
DWG. NO.	REVISIONS	DATE	REVISIONS	DATE
S-30	Y.C.A.	6-92	A.B.B.	4-8-04
	RRH	3-30-00	D.H.L.	6-18-08



CITY OF RALEIGH				
DEPARTMENT OF PUBLIC UTILITIES				
LATERAL SADDLE INSTALLATION DETAIL FOR PVC PIPE				
DWG. NO.	REVISIONS	DATE	REVISIONS	DATE
S-31		3-1-87		
	RRH	3-30-00		

No.	REVISIONS	DATE	BY
0	CD SUBMITTAL #1	08/01/2025	SREG
1	CID-25-06 V2	10/01/2025	SREG
2	CID-25-06 V3	03/02/2026	SREG

SEAL:

STRONGROCK
ENGINEERING GROUP
STRONG ROCK ENGINEERING GROUP, PLLC | COMPANY LICENSE # P-2166
305 CHURCH AT NORTH HILLS STREET, SUITE 1110 RALEIGH, NC 27609 | INFORMATION@STRONGROCKGROUP.COM

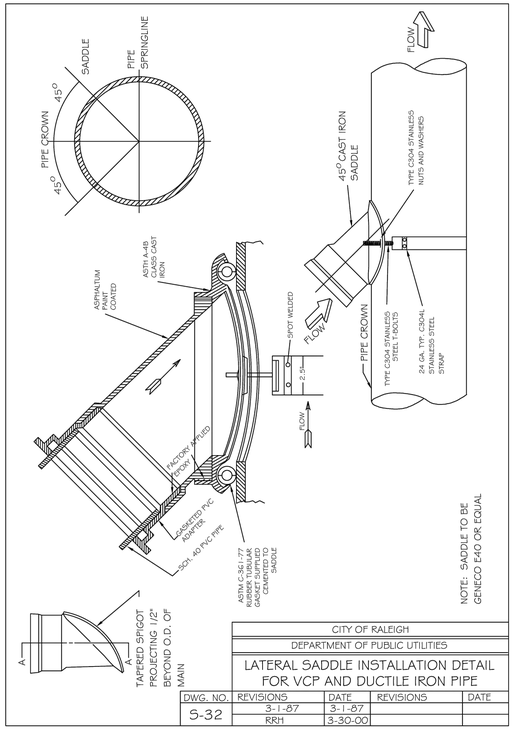
STRONG ROCK PROJECT CID-25-06	
NOT FOR CONSTRUCTION	
SCALE	AS SHOWN
DESIGNED BY	SRG
DRAWN BY	SRG
CHECKED BY	SRG

MITCHELL MILL MARKET
TOWN OF ROLESVILLE, WAKE COUNTY, NORTH CAROLINA
CONSTRUCTION PLANS
SANITARY SEWER DETAILS

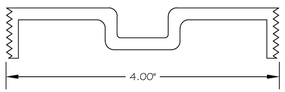
DRAWING SHEET
D-2.0

32 OF 47

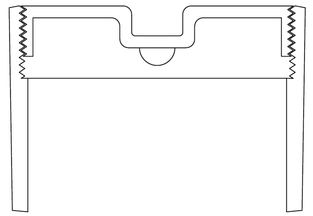
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CITY OF RALEIGH				
DEPARTMENT OF PUBLIC UTILITIES				
LATERAL SADDLE INSTALLATION DETAIL FOR VCP AND DUCTILE IRON PIPE				
DWG. NO.	REVISIONS	DATE	REVISIONS	DATE
S-32	3-1-87	3-1-87		
	RRH	3-30-00		



STANDARD 4" BRONZE CLEANOUT PLUG

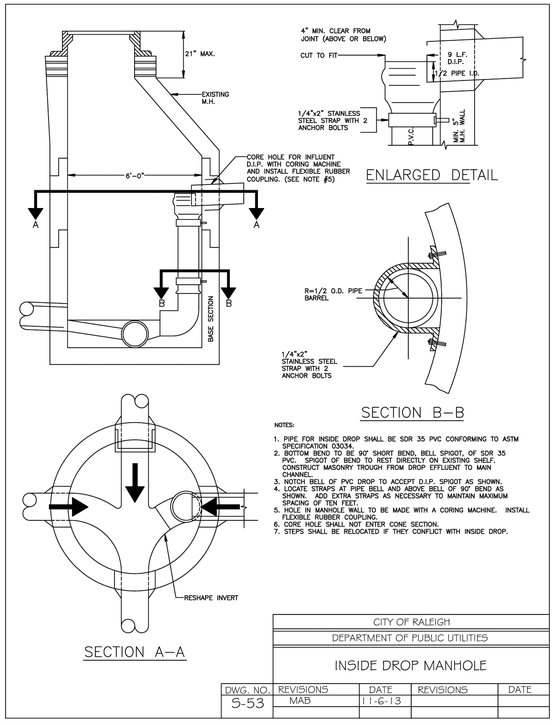


CLEANOUT FERRULE WITH PLUG

STYLES ACCEPTED:

INVERTED NUT
RAISED NUT

CITY OF RALEIGH				
DEPARTMENT OF PUBLIC UTILITIES				
4" CLEANOUT PLUG				
DWG. NO.	REVISIONS	DATE	REVISIONS	DATE
S-34		3-1-87	RRH	3-30-00
	D.W.C.	3-27-98		



NOTES:

1. PIPE FOR INSIDE DROP SHALL BE SDR 35 PVC CONFORMING TO ASTM SPECIFICATION D3034.
2. BOTTOM BEND TO BE 90° SHORT BEND, BELL SPIGOT, OF SDR 35 PVC. SPIGOT OF BEND TO REST DIRECTLY ON EXISTING SHELF. CONSTRUCT MASONRY TROUGH FROM DROP EFFLUENT TO MAIN CHANNEL.
3. NOTCH BELL OF PVC DROP TO ACCEPT D.I.P. SPIGOT AS SHOWN.
4. LOCATE STRAPS AT PIPE BELL AND ABOVE BELL OF 90° BEND AS SHOWN. ADD EXTRA STRAPS AS NECESSARY TO MAINTAIN MAXIMUM SPACING OF TEN FEET.
5. HOLE IN MANHOLE WALL TO BE MADE WITH A CORING MACHINE. INSTALL FLEXIBLE RUBBER COUPLING.
6. CORE HOLE SHALL NOT ENTER CONE SECTION.
7. STEPS SHALL BE RELOCATED IF THEY CONFLICT WITH INSIDE DROP.

CITY OF RALEIGH				
DEPARTMENT OF PUBLIC UTILITIES				
INSIDE DROP MANHOLE				
DWG. NO.	REVISIONS	DATE	REVISIONS	DATE
S-53	MAB	11-6-13		

No.	REVISIONS	DATE	BY
0	CD SUBMITTAL #1	08/01/2025	SREG
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STRONG ROCK PROJECT CID-25-06	NOT FOR CONSTRUCTION	SCALE	AS SHOWN
		DESIGNED BY	SRG
		DRAWN BY	SRG
		CHECKED BY	SRG

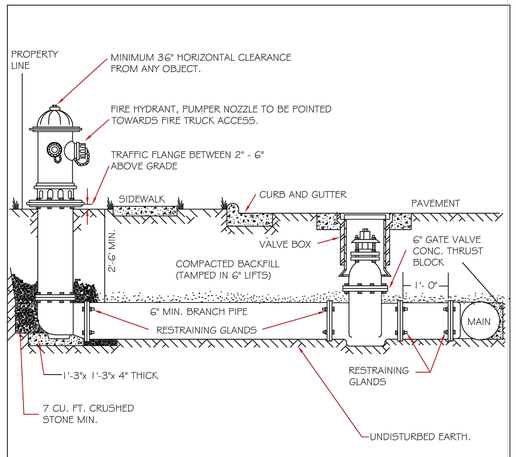
MITCHELL MILL MARKET
TOWN OF ROLESVILLE, WAKE COUNTY, NORTH CAROLINA
CONSTRUCTION PLANS
SANITARY SEWER DETAILS

DRAWING SHEET

D-2.1

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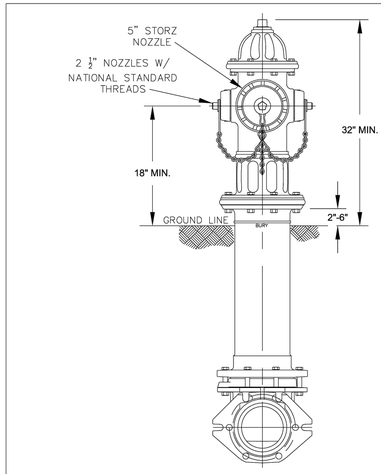


NOTES:
1. FIRE HYDRANT SHALL BE AS MANUFACTURED: MUELLER, AMERICAN DARLING, KENNEDY, M&H, WATEROUS, CLOW, EAST JORDAN IRON WORKS, OR U5 PIPE.
2. BRANCH PIPE SHALL BE DUCTILE IRON AWWA C150-96
3. 6" GATE VALVE SHALL BE AWWA C500-96 OPEN LEFT
4. STEEL RODS AND BOLTS SHALL BE ¾" HOT DIPPED GALVANIZED
5. FIRE HYDRANTS WILL BE INSTALLED IN TRUE VERTICAL POSITION
   RODS SHALL NOT BE COUPLED MORE THAN ONCE. IF THE LENGTH FROM THE VALVE TO THE HYDRANT EXCEEDS 20' THEN A MECHANICAL RESTRAINING GLAND WITH A REBAR CAGE SHALL BE INSTALLED NO MORE THAN 10' FROM HYDRANT AND POURED IN CONCRETE.
   FIRE HYDRANTS TO BE LOCATED IN ROW OR 2 FOOT EASEMENT ADJACENT TO ROW

ANYTIME SITE WORK, CONSTRUCTION, ROAD WORK, OR ANY OTHER WORK CHANGES THE GRADE OF THE FIRE HYDRANT, THE PERSON RESPONSIBLE FOR THE WORK IS RESPONSIBLE FOR ADJUSTING THE FIRE HYDRANT TO STAY WITHIN COMPLIANCE.

CITY OF RALEIGH
DEPARTMENT OF PUBLIC UTILITIES
STANDARD FIRE HYDRANT INSTALLATION DETAIL

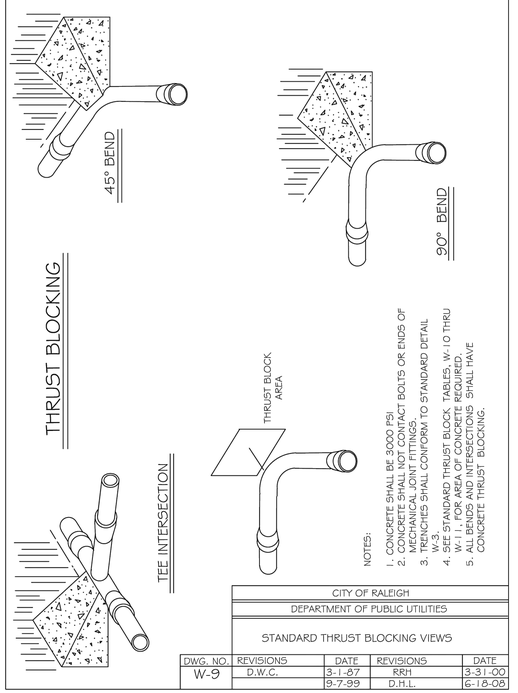
DWG. NO.	REVISIONS	DATE	REVISIONS	DATE
W-4	ABB	4-6-04	PAP	2/17/09
	DHL	2/14/06		



NOTES:
1. ALL PUBLIC FIRE HYDRANTS IN THE CITY OF RALEIGH AND THE MERGER TOWNS OF GARNER, ROLESVILLE, WAKE FOREST, KNIGHTDALE, WENDELL AND ZEBULON SHALL BE PAINTED CHROME YELLOW WITH HIGH REFLECTIVE ALUMINUM SILVER CAPS, BONNETS AND OPERATING NUTS.
2. ALL PRIVATE FIRE HYDRANTS SHALL BE RED.

CITY OF RALEIGH
DEPARTMENT OF PUBLIC UTILITIES
RALEIGH, GARNER, KNIGHTDALE, ROLESVILLE, WAKE FOREST, WENDELL & ZEBULON
STANDARD FIRE HYDRANT WITH 5" STORZ PUMPER NOZZLE

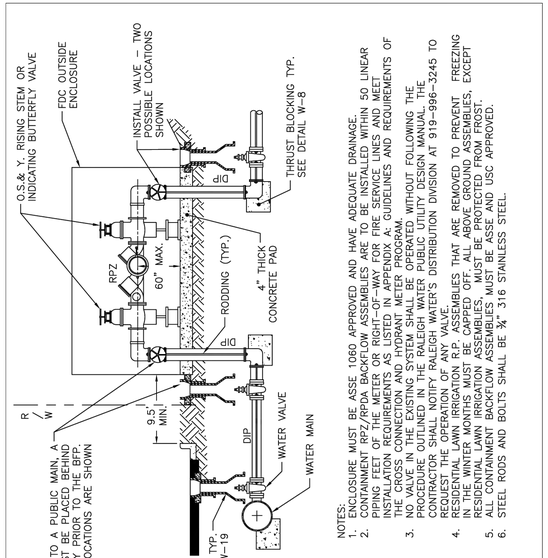
DWG. NO.	REVISIONS	DATE	REVISIONS	DATE
W-5	MAB	6-30-16		
	KAT	9-15-17		



NOTES:
1. CONCRETE SHALL BE 3000 PSI
2. CONCRETE SHALL NOT CONTACT BOLTS OR ENDS OF MECHANICAL JOINT FITTINGS.
3. TRENCHES SHALL CONFORM TO STANDARD DETAIL W-3.
4. SEE STANDARD THRUST BLOCK TABLES, W-10 THRU W-11, FOR AREA OF CONCRETE REQUIRED.
5. ALL VERTICAL BENDS SHALL HAVE CONCRETE THRUST BLOCKING.

CITY OF RALEIGH
DEPARTMENT OF PUBLIC UTILITIES
STANDARD THRUST BLOCKING VIEWS

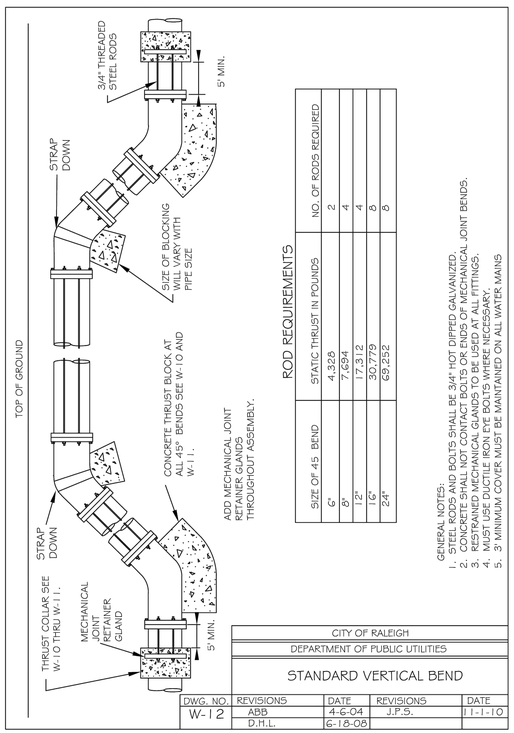
DWG. NO.	REVISIONS	DATE	REVISIONS	DATE
W-9	D.W.C.	3-1-87	RRH	3-31-00
		9-7-99	D.H.L.	6-18-08



NOTES:
1. ENCLOSURE MUST BE ASSE 1060 APPROVED AND HAVE ADEQUATE DRAINAGE.
2. CONSULTANT MUST BE INSTALLED AND ARE TO BE INSTALLED WITHIN 50 LINEAR PIPING FEET OF THE METER OR RIGHT-OF-WAY FOR FIRE SERVICE LINES AND MEET INSTALLATION REQUIREMENTS AS LISTED IN APPENDIX A: GUIDELINES AND REQUIREMENTS OF THE CROSS CONNECTION AND HYDRANT METER PROGRAM.
3. NO VALVE IN THE EXISTING SYSTEM SHALL BE OPERATED WITHOUT FOLLOWING THE PROCEDURES OUTLINED BY RALEIGH WATER'S DISTRIBUTION DIVISION AT 919-996-3245 TO REQUEST THE OPERATION OF ANY VALVE.
4. RESIDENTIAL LAWN IRRIGATION R.P. ASSEMBLIES THAT ARE REMOVED TO PREVENT FREEZING IN THE WINTER MONTHS MUST BE CAPPED OFF, ALL ABOVE GROUND ASSEMBLIES, EXCEPT RESIDENTIAL LAWN IRRIGATION ASSEMBLIES, MUST BE PROTECTED FROM FROST.
5. ALL BOLTED CONNECTIONS ABOVE GROUND MUST BE ASSEMBLED WITH LOCK WASHERS.
6. STEEL RODS AND BOLTS SHALL BE ¾" 316 STAINLESS STEEL.

CITY OF RALEIGH
STANDARD DETAIL

REVISIONS	DATE: 01/19/2025	NOT TO SCALE
	REDUCED PRESSURE ZONE AND REDUCED PRESSURE DETECTOR ASSEMBLY	
	W-36	



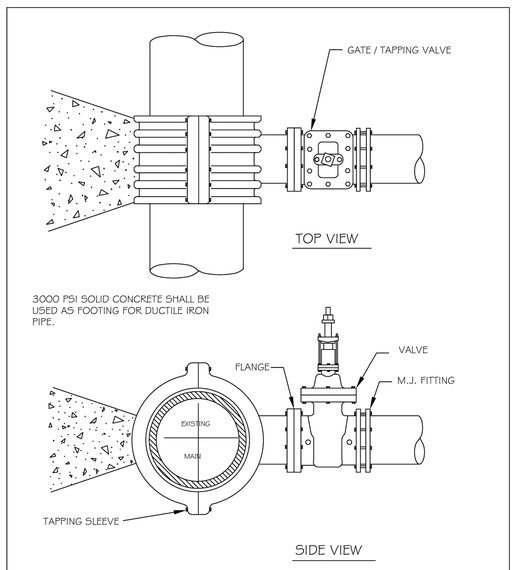
ROD REQUIREMENTS

SIZE OF 45 BEND	STATIC THRUST IN POUNDS	NO. OF RODS REQUIRED
6"	4,328	2
8"	7,694	4
12"	17,312	4
16"	30,779	6
24"	69,252	8

GENERAL NOTES:
1. ALL RODS AND BOLTS SHALL BE 3/4" HOT DIPPED GALVANIZED.
2. CONCRETE SHALL NOT CONTACT BOLTS OR ENDS OF MECHANICAL JOINT BENDS.
3. RESTRAINED MECHANICAL GLANDS TO BE USED AT ALL FITTINGS.
4. MUST USE DUCTILE IRON EYE BOLTS WHERE NECESSARY.
5. 3' MINIMUM COVER MUST BE MAINTAINED ON ALL WATER MAINS

CITY OF RALEIGH
DEPARTMENT OF PUBLIC UTILITIES
STANDARD VERTICAL BEND

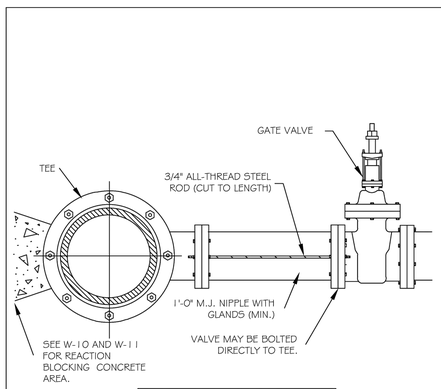
DWG. NO.	REVISIONS	DATE	REVISIONS	DATE
W-12	ABB	4-6-04	J.P.S.	11-1-10
	D.H.L.	6-18-08		



NOTES:
1. CONCRETE SHALL NOT CONTACT BOLTS OR ENDS OF MECHANICAL JOINT FITTINGS.
2. SEE STANDARD REACTION BLOCK TABLES, W-10 AND W-11 FOR AREA OF CONCRETE REQUIRED.

CITY OF RALEIGH
DEPARTMENT OF PUBLIC UTILITIES
4" - 24" STANDARD TAPPING SLEEVE AND VALVE ASSEMBLY

DWG. NO.	REVISIONS	DATE	REVISIONS	DATE
W-14	Y.C.A.	12-31-91	RRH	3-31-00
	D.W.C.	9-7-99	J.P.S.	11-1-10



ROD REQUIREMENTS

NO. OF RODS	BRANCH SIZE
4"	2
6"	2
8"	4
12"	4
16"	6
24"	6
30"	8
36"	8

NOTES:
1. STEEL RODS AND BOLTS SHALL BE 3/4" HOT DIPPED GALVANIZED.
2. SEE STANDARD THRUST BLOCK. TABLES W-10 AND W-11 FOR CONCRETE.
3. CONCRETE SHALL NOT CONTACT BOLTS OR ENDS OF MECHANICAL FITTINGS.
4. THIS RODDING REQUIREMENT DOES NOT APPLY TO FIRE HYDRANTS.

CITY OF RALEIGH
DEPARTMENT OF PUBLIC UTILITIES
VALVE RESTRAINT AT TEES AND CROSSES FOR LINES (4"-24")

DWG. NO.	REVISIONS	DATE	REVISIONS	DATE
W-15	RRH	3-31-00	D.H.L.	6-16-08
	A.B.B.	4-19-04	J.P.S.	11-1-10

NO.	REVISIONS	DATE	BY
0	CD SUBMITTAL #1	08/01/2025	SREG
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2	CID-25-06 V3	03/02/2026	SREG

SEAL:

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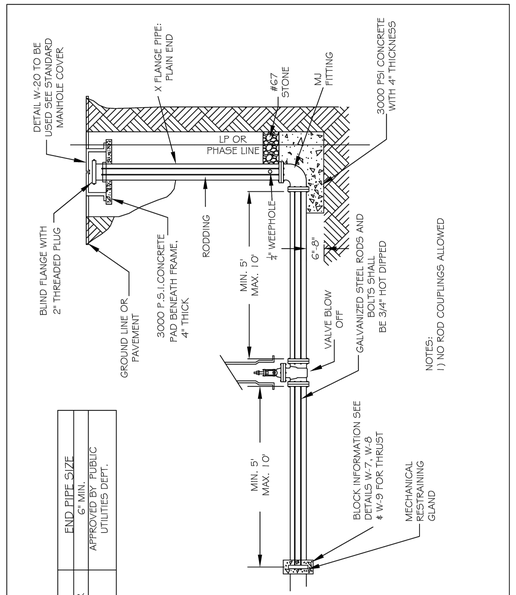
STRONG ROCK PROJECT CID-25-06	
NOT FOR CONSTRUCTION	
SCALE	AS SHOWN
DESIGNED BY	SRG
DRAWN BY	SRG
CHECKED BY	SRG

MITCHELL MILL MARKET
TOWN OF ROLESVILLE, WAKE COUNTY, NORTH CAROLINA
CONSTRUCTION PLANS
WATER DETAILS

DRAWING SHEET
D-3.0

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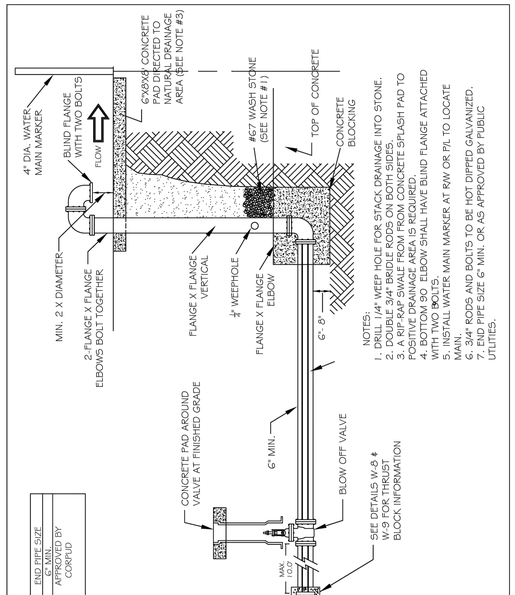


MAIN SIZE	END PIPE SIZE
1 ½" & GREATER	6" MIN. APPROVED BY PUBLIC UTILITIES DEPT.
6" - 12"	

CITY OF RALEIGH
DEPARTMENT OF PUBLIC UTILITIES

TEMPORARY WATER MAIN
BLOW OFF ASSEMBLY

DWG. NO.	REVISIONS	DATE	REVISIONS	DATE
W-21	D.W.C.	12-28-99	A.B.B.	4-12-04
	RRH	3-31-00	DHL	8-16-07

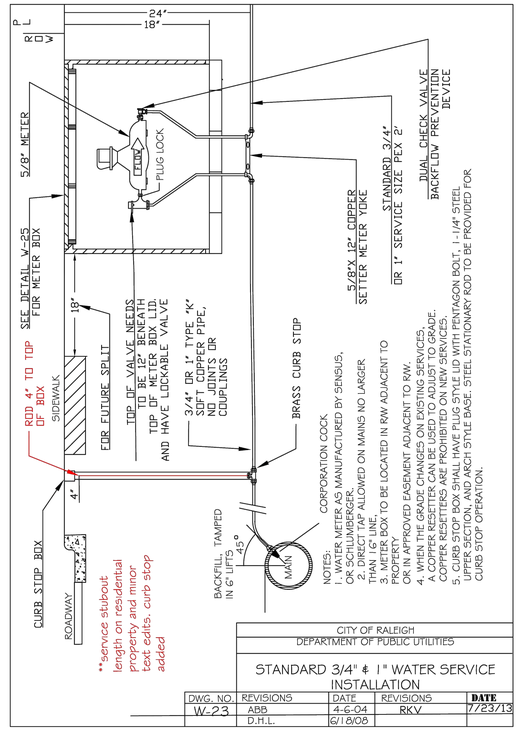


MAIN SIZE	END PIPE SIZE
12" & LESS	6" MIN. APPROVED BY COMPUD
16"+	

CITY OF RALEIGH
DEPARTMENT OF PUBLIC UTILITIES

PERMANENT WATER MAIN
BLOW OFF ASSEMBLY

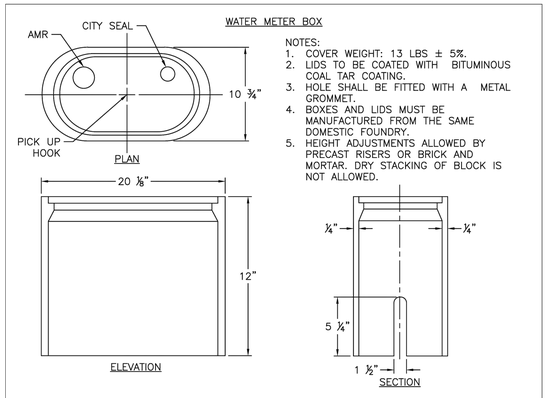
DWG. NO.	REVISIONS	DATE	REVISIONS	DATE
W-22	D.W.C.	12-28-99	DHL	8-16-07
	A.B.B.	4-13-04		



CITY OF RALEIGH
DEPARTMENT OF PUBLIC UTILITIES

STANDARD 3/4" & 1" WATER SERVICE INSTALLATION

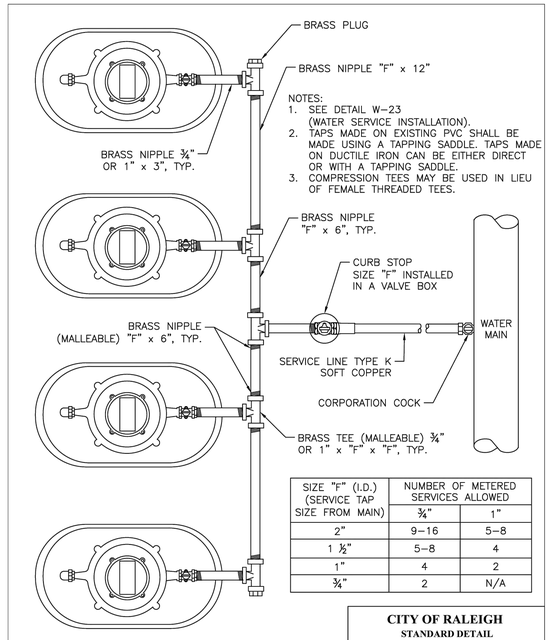
DWG. NO.	REVISIONS	DATE	REVISIONS	DATE
W-23	ABB	4-6-04	RKV	7/23/13
	D.H.L.	6/16/08		



NOTES:
1. COVER WEIGHT: 13 LBS ± 5%.
2. LIDS TO BE COATED WITH BITUMINOUS COAL TAR COATING.
3. HOLE SHALL BE FITTED WITH A METAL GROMMET.
4. BOXES AND LIDS MUST BE MANUFACTURED FROM THE SAME DOMESTIC FOUNDRY.
5. HEIGHT ADJUSTMENTS ALLOWED BY PRECAST RISERS OR BRICK AND MORTAR. DRY STACKING OF BLOCK IS NOT ALLOWED.

CITY OF RALEIGH
STANDARD DETAIL

REVISIONS	DATE: 01/19/2025	NOT TO SCALE
	WATER METER BOX	
	W-25	

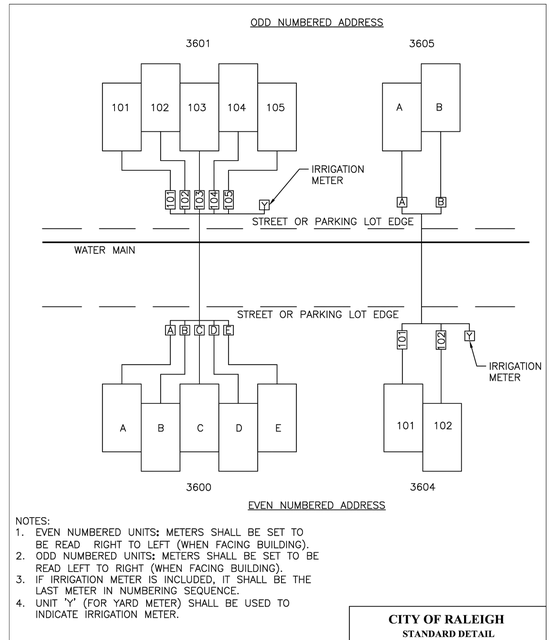


NOTES:
1. SEE DETAIL W-23 (WATER SERVICE INSTALLATION).
2. TAPS MADE ON EXISTING PVC SHALL BE MADE USING A TAPPING SADDLE. TAPS MADE ON DUCTILE IRON CAN BE EITHER DIRECT OR WITH A TAPPING SADDLE.
3. COMPRESSION TEES MAY BE USED IN LIEU OF FEMALE THREADED TEES.

SIZE "F" (I.D.) (SERVICE TAP SIZE FROM MAIN)	NUMBER OF METERED SERVICES ALLOWED	
	¾"	1"
2"	9-16	5-8
1 ½"	5-8	4
1"	4	2
¾"	2	N/A

CITY OF RALEIGH
STANDARD DETAIL

REVISIONS	DATE: 01/19/2025	NOT TO SCALE
	STANDARD GANG METER ASSEMBLY	
	W-26	

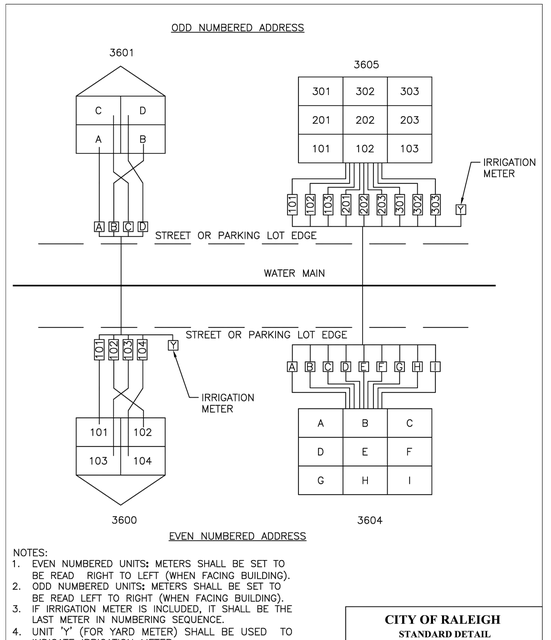


EVEN NUMBERED ADDRESS

NOTES:
1. EVEN NUMBERED UNITS: METERS SHALL BE SET TO BE READ RIGHT TO LEFT (WHEN FACING BUILDING).
2. ODD NUMBERED UNITS: METERS SHALL BE SET TO BE READ LEFT TO RIGHT (WHEN FACING BUILDING).
3. IF IRRIGATION METER IS INCLUDED, IT SHALL BE THE LAST METER IN NUMBERING SEQUENCE.
4. UNIT 'Y' (FOR YARD METER) SHALL BE USED TO INDICATE IRRIGATION METER.

CITY OF RALEIGH
STANDARD DETAIL

REVISIONS	DATE: 01/19/2025	NOT TO SCALE
	GANG METER ADDRESSING SINGLE STORY BUILDING	
	W-27	



EVEN NUMBERED ADDRESS

NOTES:
1. EVEN NUMBERED UNITS: METERS SHALL BE SET TO BE READ RIGHT TO LEFT (WHEN FACING BUILDING).
2. ODD NUMBERED UNITS: METERS SHALL BE SET TO BE READ LEFT TO RIGHT (WHEN FACING BUILDING).
3. IF IRRIGATION METER IS INCLUDED, IT SHALL BE THE LAST METER IN NUMBERING SEQUENCE.
4. UNIT 'Y' (FOR YARD METER) SHALL BE USED TO INDICATE IRRIGATION METER.

CITY OF RALEIGH
STANDARD DETAIL

REVISIONS	DATE: 01/19/2025	NOT TO SCALE
	GANG METER ADDRESSING MULTI-STORY BUILDING	
	W-28	

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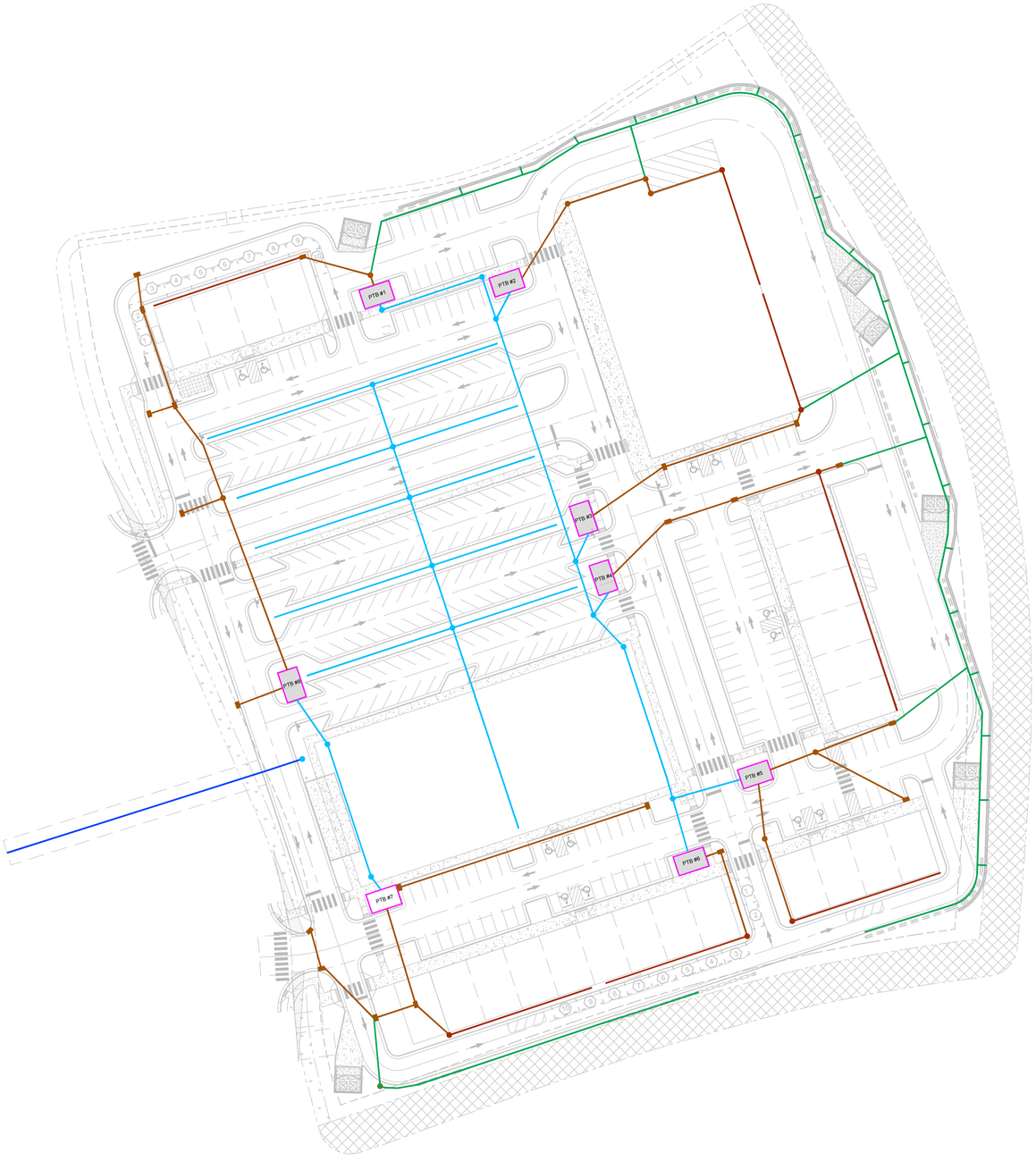
No.	REVISIONS	DATE	BY
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STRONG ROCK PROJECT	CID-25-06
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SCALE	AS SHOWN
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DRAWN BY	SRG
CHECKED BY	SRG

MITCHELL MILL MARKET
TOWN OF ROLESVILLE, WAKE COUNTY, NORTH CAROLINA
CONSTRUCTION PLANS
WATER DETAILS

DRAWING SHEET
D-3.1



1
D-5.0

CATCH BASIN

CLEAN OUT

UNTREATED STORMWATER

UNTREATED STORMWATER ROOF DRAIN

TREATED STORMWATER

TREATED OUTFLOW

WALL DRAIN

NOTE: FUNCTIONAL DIAGRAM OF STORMWATER SYSTEMS

NOTE: REMOVE AND DISCARD FILTER SOCKS FROM THE LISTED PIPES:
- 12" HDPE SLOTTED PIPES
- 12" HDPE PERFORATED PIPES
- 18" HANCOR ADVANEDGE DRAINAGE MATS
- 6" HDPE DRAINAGE PIPE

NOTE: EXTERIOR WALL PIPE HAS TIE INS TO THE WALL 50' OC. COORDINATED WITH WALL CONSTRUCTION

No.	REVISIONS	DATE	BY
0	CD SUBMITTAL #1	08/01/2025	SREG
1	CID-25-06 V2	10/01/2025	SREG
2	CID-25-06 V3	03/02/2026	SREG

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STRONG ROCK ENGINEERING GROUP, PLLC | COMPANY LICENSE # P-2166
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SCALE	AS SHOWN
DESIGNED BY	SRG
DRAWN BY	SRG
CHECKED BY	SRG

MITCHELL MILL MARKET
TOWN OF ROLESVILLE, WAKE COUNTY, NORTH CAROLINA
CONSTRUCTION PLANS
STORM DRAINAGE DETAILS

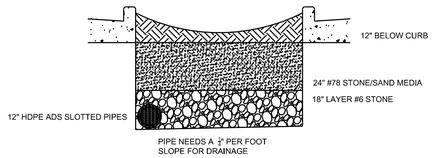
DRAWING SHEET
D-4.0

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1 / D-5.1

STORMWATER PRETREATMENT IN PARKING LOT MEDIANS

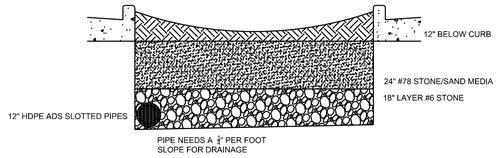
7' MEDIAN WITH NO SIDEWALK CROSS SECTION



2 / D-5.1

STORMWATER PRETREATMENT IN PARKING LOT MEDIANS

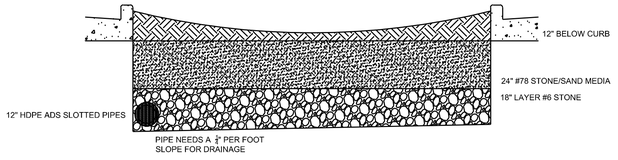
10' MEDIAN WITH NO SIDEWALK CROSS SECTION



3 / D-5.1

STORMWATER PRETREATMENT IN PARKING LOT MEDIANS

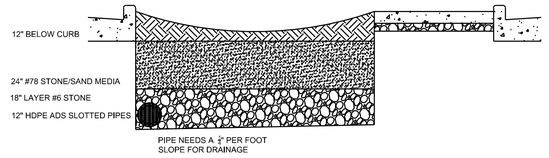
15' MEDIAN WITH NO SIDEWALK CROSS SECTION



4 / D-5.1

STORMWATER PRETREATMENT IN PARKING LOT MEDIANS

10' MEDIAN WITH NO SIDEWALK CROSS SECTION

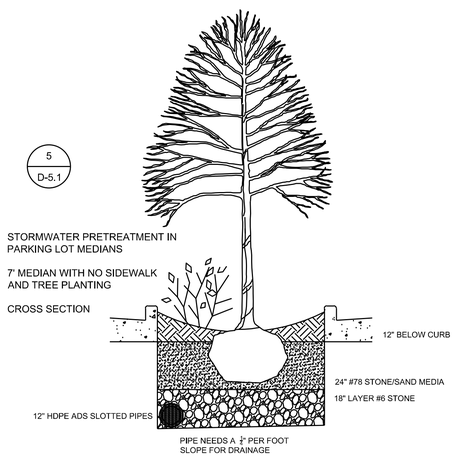


5 / D-5.1

STORMWATER PRETREATMENT IN PARKING LOT MEDIANS

7' MEDIAN WITH NO SIDEWALK AND TREE PLANTING

CROSS SECTION

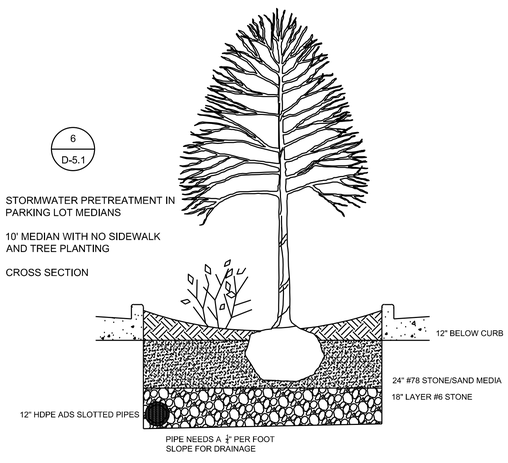


6 / D-5.1

STORMWATER PRETREATMENT IN PARKING LOT MEDIANS

10' MEDIAN WITH NO SIDEWALK AND TREE PLANTING

CROSS SECTION

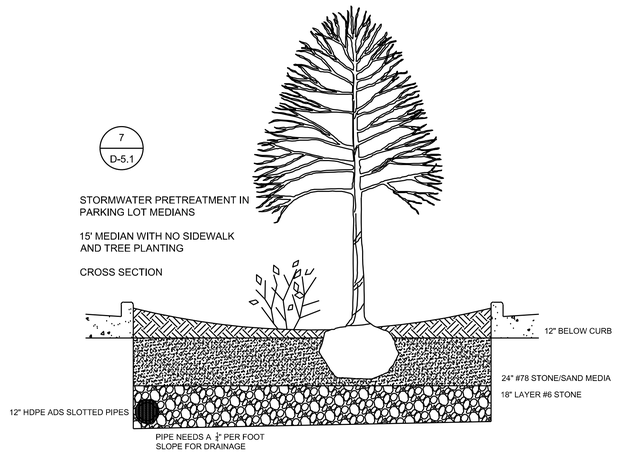


7 / D-5.1

STORMWATER PRETREATMENT IN PARKING LOT MEDIANS

15' MEDIAN WITH NO SIDEWALK AND TREE PLANTING

CROSS SECTION

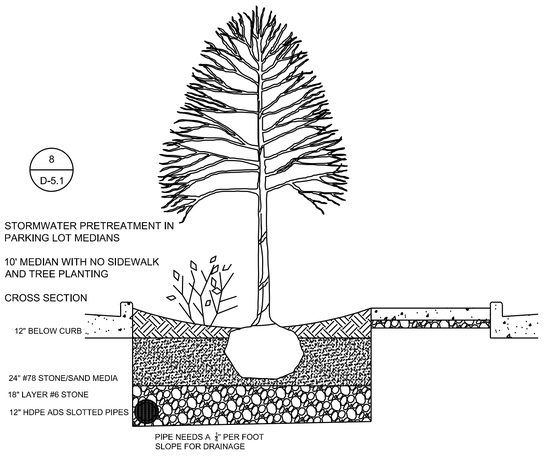


8 / D-5.1

STORMWATER PRETREATMENT IN PARKING LOT MEDIANS

10' MEDIAN WITH NO SIDEWALK AND TREE PLANTING

CROSS SECTION



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DRAWN BY	SRG
CHECKED BY	SRG

MITCHELL MILL MARKET
TOWN OF ROLESVILLE, WAKE COUNTY, NORTH CAROLINA
CONSTRUCTION PLANS
STORM DRAINAGE DETAILS

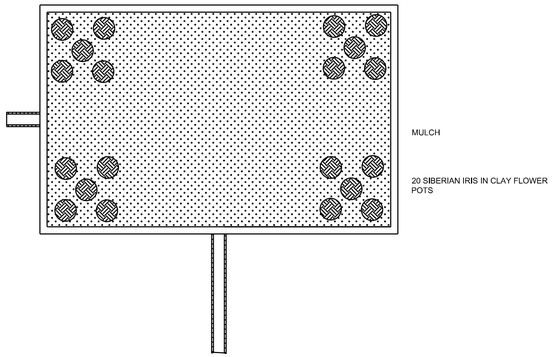
DRAWING SHEET

D-4.1

1
D-5.2

PRE-TREATMENT BOX（PTB）TYPICAL

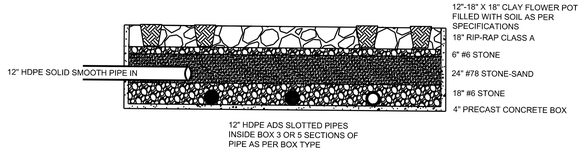
PLANTING PLAN



2
D-5.2

PRE-TREATMENT BOX（PTB）TYPICAL

CROSS SECTION NTS.



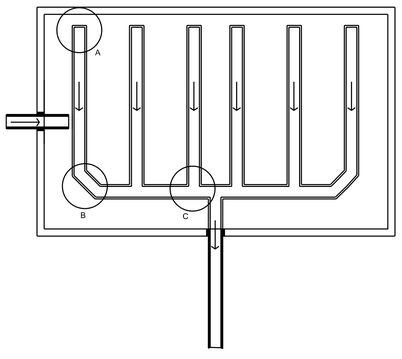
NOTE:
1. SEE SPECIFICATIONS FOR INSTALLATIONS AND MATERIAL SELECTION
2. PRE-FABRICATED CONCRETE BOXES BY OTHERS

5
D-5.2

PRE-TREATMENT BOX（PTB）

16 x 25 x 9 TYPE "A"

ADS CALLOUTS

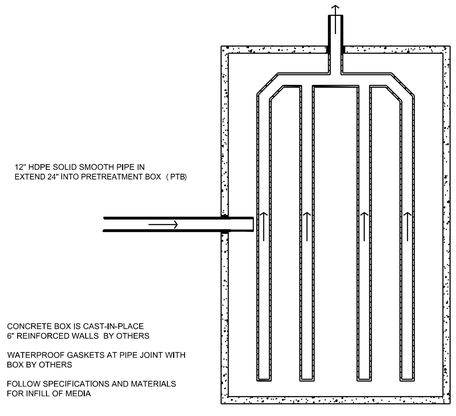


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D-5.2

PRE-TREATMENT BOX（PTB）

16 x 25 x 9 TYPE "A"

PLAN VIEW

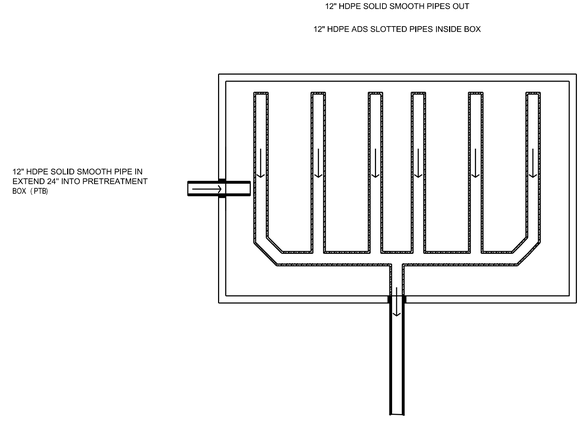


4
D-5.2

PRE-TREATEMENT BOX（PTB）

16 x 25 x 9 TYPE "B"

PLAN VIEW



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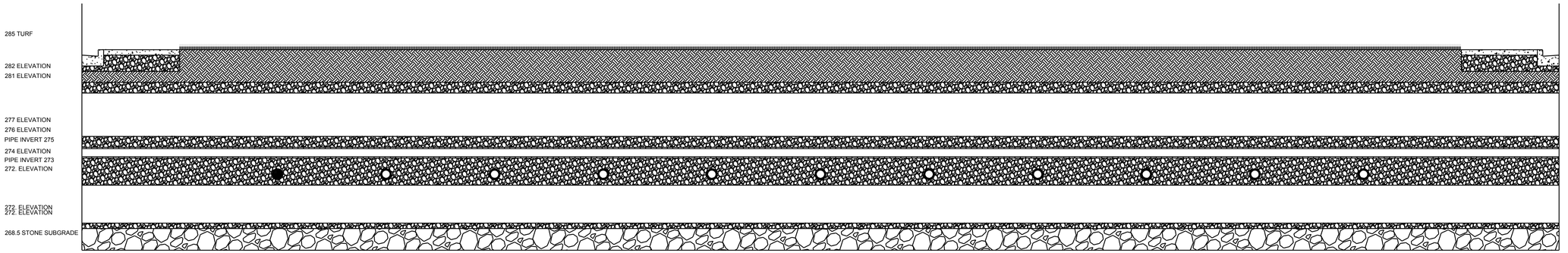
MITCHELL MILL MARKET
TOWN OF ROLESVILLE, WAKE COUNTY, NORTH CAROLINA
CONSTRUCTION PLANS
STORM DRAINAGE DETAILS

DRAWING SHEET

D-4.2

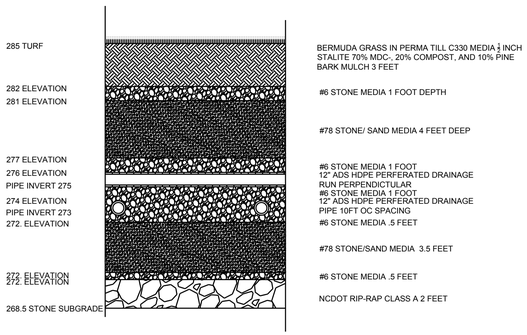
1
D-5.3

INFILTRATION SCM PLAZA
CROSS SECTION FULL WIDTH AND SIDEWALKS



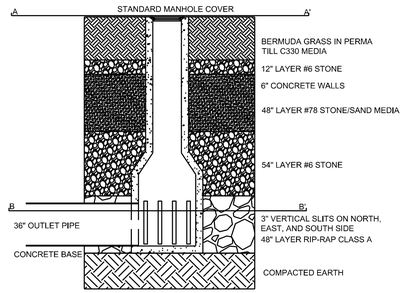
2
D-5.3

INFILTRATION SCM BED
TYPICAL CROSS SECTION SHOWING TWO DRAINAGE PIPES



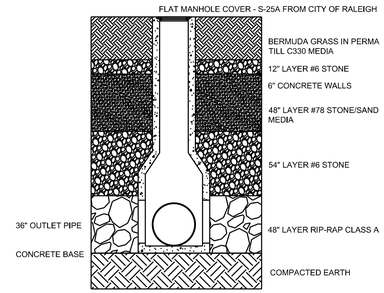
3
D-5.3

GROUNDWATER OUTLET STRUCTURE
CROSS SECTION



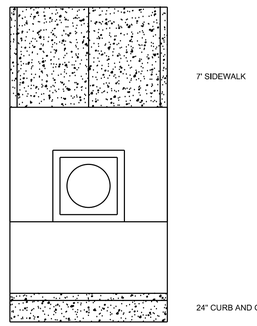
4
D-5.3

GROUNDWATER OUTLET STRUCTURE
CROSS SECTION



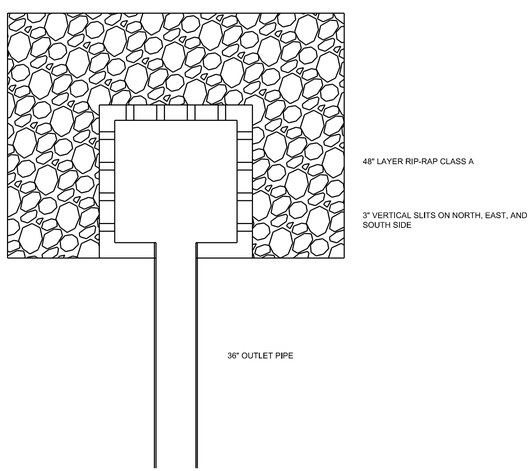
5
D-5.3

GROUNDWATER OUTLET STRUCTURE
A-A' VIEW



6
D-5.3

GROUNDWATER OUTLET STRUCTURE
B-B' VIEW



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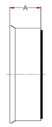
DRAWING SHEET
D-4.3

39 OF 47

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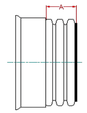
WT END CAPS
12" - 60" DIAMETER

PART #	PIPE SIZE	A
1201AN65B	12 in (300 mm)	6.5 in (5 mm)
1501AN65B	15 in (375 mm)	7.8 in (197 mm)
1801AN65B	18 in (450 mm)	8.9 in (7 mm)
2101AN65B	21 in (525 mm)	10.9 in (7 mm)
2401AN65B	24 in (600 mm)	7.5 in (191 mm)
3001AN65B	30 in (750 mm)	11.8 in (298 mm)



12"-30"
GASKET INCLUDED

PART #	PIPE SIZE	A
3601AN65B	36 in (900 mm)	15.5 in (394 mm)
4201AN65B	42 in (1050 mm)	15.6 in (12 mm)
4801AN65B	48 in (1200 mm)	15.8 in (401 mm)
6001AN65B	60 in (1500 mm)	18.0 in (457 mm)



36"-60"
GASKET INCLUDED

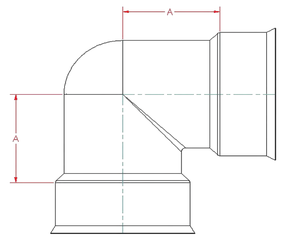
NOTE: ALL FITTINGS DIMENSIONS ARE FOR REFERENCE ONLY

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DRAWING #:	2105	
DRAWN BY:	NJP	07.30.06
APPROVED BY:	JCB	08.25.07
REVISIONS:	TJR	4/20/2016

INJECTION MOLDED 90° BEND
4" - 12" DIAMETER

PART #	PIPE SIZE	A	JOINT
1299ST	12 in (300 mm)	11.3 in (286 mm)	ST
1299WT	12 in (300 mm)	11.3 in (286 mm)	WT



NOTE:
FITTINGS WHOSE PART NUMBERS END WITH "WT" HAVE WATER TIGHT BELL CONNECTIONS. WATER TIGHT BELLS ARE SHOWN HERE IN THIS DRAWING AND REQUIRE GASKETS TO BE FITTED TO DUAL WALL PIPE TO FORM A WATER TIGHT JOINT. (GASKETS INCLUDED)

FITTINGS WHOSE PART NUMBERS END WITH "ST" HAVE SOIL TIGHT BELL CONNECTIONS. SOIL TIGHT BELLS HAVE MOLDED CLEATS AND REQUIRE NO GASKET TO MAKE CONNECTION TO DUAL WALL PIPE.

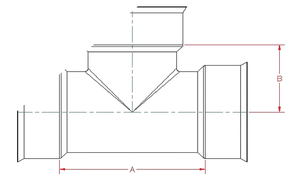
NOTE: ALL FITTINGS DIMENSIONS ARE FOR REFERENCE ONLY

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DRAWING #:	3300	
DRAWN BY:	JCB	07.31.06
APPROVED BY:		
REVISIONS:	NJP	06.15.07

PART #	PIPE SIZE	A	JOINT
0460ST	12 in (300 mm)	22.5 in (572 mm)	ST
0460WT	12 in (300 mm)	22.5 in (572 mm)	WT
0661ST	6 in (150 mm)	10.5 in (266 mm)	ST
0661WT	6 in (150 mm)	10.5 in (266 mm)	WT
0862ST	8 in (200 mm)	13.8 in (350 mm)	ST
0862WT	8 in (200 mm)	13.8 in (350 mm)	WT
1063ST	10 in (250 mm)	17.9 in (454 mm)	ST
1063WT	10 in (250 mm)	17.9 in (454 mm)	WT
1264ST	12 in (300 mm)	22.5 in (572 mm)	ST
1264WT	12 in (300 mm)	22.5 in (572 mm)	WT

PART #	B
0460ST	13.3 in (338 mm)
0460WT	13.3 in (338 mm)
0661ST	5.2 in (133 mm)
0661WT	5.2 in (133 mm)
0862ST	6.9 in (175 mm)
0862WT	6.9 in (175 mm)
1063ST	8.9 in (227 mm)
1063WT	8.9 in (227 mm)
1264ST	11.3 in (286 mm)
1264WT	11.3 in (286 mm)



NOTE:
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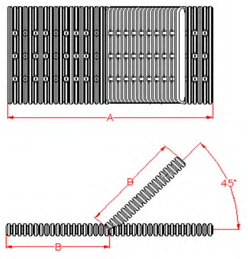
NOTE: ALL FITTINGS DIMENSIONS ARE FOR REFERENCE ONLY

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DRAWING #:	3000	
DRAWN BY:	JCB	07.28.06
APPROVED BY:	JCB	08.26.07
REVISIONS:	NJP	06.15.07

AdvanEDGE$_{TM}$ FABRICATED WYES

PART #	PIPE SIZE	A	B
1480AN	12 in (300 mm)	26.0 in (660 mm)	13.0 in (330 mm)

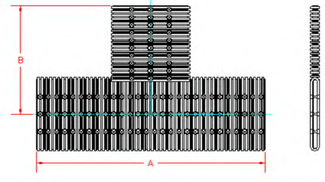


NOTE: ALL FITTINGS DIMENSIONS ARE FOR REFERENCE ONLY

DRAWING #:	1115A	
DRAWN BY:	JCB	04.06.06
APPROVED BY:	JCB	06.25.07
REVISIONS:	NJP	06.12.07
	AJD	01.25.23

AdvanEDGE$_{TM}$ FABRICATED TEES

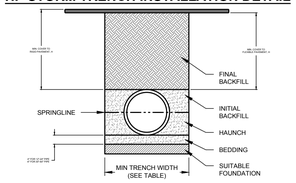
PART #	PIPE SIZE	A	B
1460ANH	12 in (300 mm)	28.9 in (733 mm)	14.4 in (367 mm)



NOTE: ALL FITTINGS DIMENSIONS ARE FOR REFERENCE ONLY

DRAWING #:	1120	
DRAWN BY:	JCB	04.06.06
APPROVED BY:	JCB	06.25.07
REVISIONS:	NJP	06.12.07
	AJD	01.25.23

HP STORM TRENCH INSTALLATION DETAIL



NOTES:

1. ALL PIPE SYSTEMS SHALL BE INSTALLED IN ACCORDANCE WITH ASTM D2321, "STANDARD PRACTICE FOR UNDERGROUND INSTALLATION OF THERMOPLASTIC PIPE FOR SEWERS AND OTHER GRAVITY FLOW APPLICATIONS". LATEST ADDITION, WITH THE EXCEPTION THAT THE INITIAL BACKFILL MAY EXTEND TO THE CROWN OF THE PIPE. SOIL CLASSIFICATIONS ARE PER THE LATEST VERSION OF ASTM D2321. CLASS IVB MATERIALS (MH, CH) AS DEFINED IN PREVIOUS VERSIONS OF ASTM D2321 ARE NOT APPROPRIATE BACKFILL MATERIALS.
2. MEASURES SHOULD BE TAKEN TO PREVENT MIGRATION OF NATIVE FINES INTO BACKFILL MATERIAL, WHEN REQUIRED.
3. FOUNDATION: WHERE THE TRENCH BOTTOM IS UNSTABLE, THE CONTRACTOR SHALL EXCAVATE TO A DEPTH REQUIRED BY THE ENGINEER AND REPLACE WITH SUITABLE MATERIAL AS SPECIFIED BY THE ENGINEER, AS AN ALTERNATIVE AND AT THE DISCRETION OF THE DESIGN ENGINEER, THE TRENCH BOTTOM MAY BE STABILIZED USING A GEOTEXTILE MATERIAL.
4. BEDDING: SUITABLE MATERIAL SHALL BE CLASS I, II, III, OR IV. THE CONTRACTOR SHALL PROVIDE DOCUMENTATION FOR MATERIAL SPECIFICATION TO ENGINEER. COMPACTION SHALL BE SPECIFIED BY THE ENGINEER IN ACCORDANCE WITH TABLE 3 FOR THE APPLICABLE FILL HEIGHTS LISTED. UNLESS OTHERWISE NOTED BY THE ENGINEER, MINIMUM BEDDING THICKNESS SHALL BE 4" (100mm) FOR 12"-24" (300mm-600mm) DIAMETER PIPE; 6" (150mm) FOR 30"-60" (750mm-1500mm) DIAMETER PIPE. THE MIDDLE 1/3 BENEATH THE PIPE INVERT SHALL BE LOOSELY PLACED. PLEASE NOTE, CLASS IV MATERIAL HAS LIMITED APPLICATION AND CAN BE DIFFICULT TO PLACE AND COMPACT; USE ONLY WITH THE APPROVAL OF A SOIL EXPERT.
5. INITIAL BACKFILL: SUITABLE MATERIAL SHALL BE CLASS I, II, III, OR IV IN THE PIPE ZONE EXTENDING TO THE CROWN OF THE PIPE. THE CONTRACTOR SHALL PROVIDE DOCUMENTATION FOR MATERIAL SPECIFICATION TO ENGINEER. MATERIAL SHALL BE INSTALLED AS REQUIRED IN ASTM D2321, LATEST EDITION. COMPACTION SHALL BE SPECIFIED BY THE ENGINEER IN ACCORDANCE WITH TABLE 3 FOR THE APPLICABLE FILL HEIGHTS LISTED. PLEASE NOTE, CLASS IV MATERIAL HAS LIMITED APPLICATION AND CAN BE DIFFICULT TO PLACE AND COMPACT; USE ONLY WITH THE APPROVAL OF A SOIL EXPERT.
6. MINIMUM COVER: MINIMUM COVER, H, IN NON-TRAFFIC APPLICATIONS (GRASS OR LANDSCAPE AREAS) IS 12" (300mm) FROM THE TOP OF PIPE TO GROUND SURFACE. ADDITIONAL COVER MAY BE REQUIRED TO PREVENT FLOTATION. FOR TRAFFIC APPLICATIONS; CLASS I OR II MATERIAL COMPACTED TO 90% SPD AND CLASS III COMPACTED TO 95% SPD IS REQUIRED. FOR TRAFFIC APPLICATIONS, MINIMUM COVER, H, IS 12" (300mm) UP TO 48" (1200mm) DIAMETER PIPE AND 24" (600mm) OF COVER FOR 60" (1500mm) DIAMETER PIPE, MEASURED FROM TOP OF PIPE TO BOTTOM OF FLEXIBLE PAVEMENT OR TO TOP OF RIGID PAVEMENT.
7. FOR ADDITIONAL INFORMATION SEE TECHNICAL NOTE 2.04.

TABLE 1, RECOMMENDED MINIMUM TRENCH WIDTHS

PIPE DIAM.	MIN. TRENCH WIDTH
12" (300mm)	30" (762mm)
15" (375mm)	34" (864mm)
18" (450mm)	39" (991mm)
24" (600mm)	50" (1219mm)
30" (750mm)	56" (1422mm)
36" (900mm)	64" (1626mm)
42" (1050mm)	72" (1829mm)
48" (1200mm)	80" (2032mm)
60" (1500mm)	96" (2438mm)

TABLE 2, MINIMUM RECOMMENDED COVER BASED ON VEHICLE LOADING CONDITIONS

PIPE DIAM.	SURFACE LIVE LOADING CONDITION	
	H-25	HEAVY CONSTRUCTION (75T AXLE LOAD) *
12" - 48" (300mm - 1200mm)	12" (305mm)	48" (1219mm)
60" (1500mm)	24" (610mm)	60" (1524mm)

* VEHICLES IN EXCESS OF 75T MAY REQUIRE ADDITIONAL COVER

TABLE 3, MAXIMUM COVER FOR ADS HP STORM PIPE, ft

	CLASS I	CLASS II		CLASS III		CLASS IV
PIPE DIA	COMPACTED	95%	90%	85%	95%	90%	95%
12" (300mm)	41 (12.5m)	29 (8.9m)	21 (6.4m)	16 (4.9m)	20 (6.1m)	16 (4.9m)	16 (4.9m)
15" (375mm)	42 (12.8m)	29 (8.8m)	21 (6.4m)	16 (4.9m)	21 (6.4m)	16 (4.9m)	16 (4.9m)
18" (450mm)	44 (13.4m)	30 (9.1m)	21 (6.4m)	16 (4.9m)	22 (6.7m)	17 (5.2m)	16 (4.9m)
24" (600mm)	30 (9.1m)	21 (6.4m)	15 (4.6m)	11 (3.4m)	16 (4.9m)	11 (3.4m)	11 (3.4m)
30" (750mm)	39 (11.9m)	27 (8.2m)	19 (5.8m)	14 (4.3m)	19 (5.8m)	15 (4.6m)	14 (4.3m)
36" (900mm)	28 (8.5m)	20 (6.1m)	14 (4.3m)	10 (3.0m)	14 (4.3m)	11 (3.4m)	10 (3.0m)
42" (1050mm)	30 (9.1m)	21 (6.4m)	14 (4.3m)	10 (3.0m)	15 (4.6m)	11 (3.4m)	10 (3.0m)
48" (1200mm)	29 (8.8m)	20 (6.1m)	14 (4.3m)	9 (2.7m)	14 (4.3m)	10 (3.0m)	10 (3.0m)
60" (1500mm)	29 (8.8m)	20 (6.1m)	14 (4.3m)	9 (2.7m)	14 (4.3m)	10 (3.0m)	9 (2.7m)

FILL HEIGHT TABLE GENERATED USING AASHTO SECTION 12, LOAD RESISTANCE FACTOR DESIGN (LRFD) PROCEDURE WITH THE FOLLOWING ASSUMPTIONS:
NO HYDROSTATIC PRESSURE
UNIT WEIGHT OF SOIL (γ_s) = 120 PCF

#	REV. MAXIMUM COVER HEIGHTS	RWD	01/11/17	
REV.	DESCRIPTION	BY	MM/DD/YY	CHK'D

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ADVANCED DRAINAGE SYSTEMS, INC. ("ADS") HAS PREPARED THIS DETAIL BASED ON INFORMATION PROVIDED TO ADS. THIS DRAWING IS ADVISED TO SUPPLY THE COMPONENTS AS REQUESTED. ADS HAS NOT PERFORMED ANY ENGINEERING OF DESIGN SERVICES FOR THIS PROJECT, NOR HAS ADS INDEPENDENTLY VERIFIED THE INFORMATION SUPPLIED. THE INSTALLATION DETAILS PROVIDED HEREIN ARE GENERAL RECOMMENDATIONS AND ARE NOT SPECIFIC FOR THIS PROJECT. THE DESIGN ENGINEER SHALL REVIEW THESE DETAILS PRIOR TO CONSTRUCTION. IT IS THE DESIGN ENGINEERS RESPONSIBILITY TO ENSURE THE DETAILS PROVIDED HEREIN MEETS OR EXCEEDS THE APPLICABLE NATIONAL, STATE, OR LOCAL REQUIREMENTS AND TO ENSURE THAT THE DETAILS PROVIDED HEREIN ARE ACCEPTABLE FOR THIS PROJECT.

TRENCH INSTALLATION DETAIL (HP STORM)	4640 TRUEMAN BLVD HILLIARD, OHIO 43026	JAG	
		01/29/09	
DRAWING NUMBER: STD-1010	ADVANCED DRAINAGE SYSTEMS, INC.	NTS	
		1 OF 1	

THIS PLANSET AND ANY ASSOCIATED DOCUMENTS ARE PRELIMINARY AND NOT AUTHORIZED FOR CONSTRUCTION UNTIL SIGNED, DATED, AND OFFICIALLY RELEASED FOR CONSTRUCTION BY THE ENGINEER OF RECORD.

No.	REVISIONS	DATE	BY
0	CD SUBMITTAL #1	08/01/2025	SREG
1	CID-25-06 V2	10/01/2025	SREG
2	CID-25-06 V3	03/02/2026	SREG

SEAL:

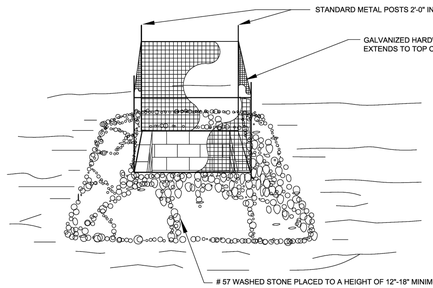
STRONGROCK
ENGINEERING GROUP
STRONG ROCK ENGINEERING GROUP, PLLC | COMPANY LICENSE # P-2165
305 CHURCH AT NORTH HILLS STREET, SUITE 1110 RALEIGH, NC 27609 | INFORMATION@STRONGROCKGROUP.COM

STRONG ROCK PROJECT CID-25-06		DESIGNED BY	SRG
	NOT FOR CONSTRUCTION	DRAWN BY	SRG
	SCALE AS SHOWN	CHECKED BY	SRG

MITCHELL MILL MARKET
TOWN OF ROLESVILLE, WAKE COUNTY, NORTH CAROLINA
CONSTRUCTION PLANS
STORM DRAINAGE DETAILS

DRAWING SHEET
D-4.4

40 OF 47

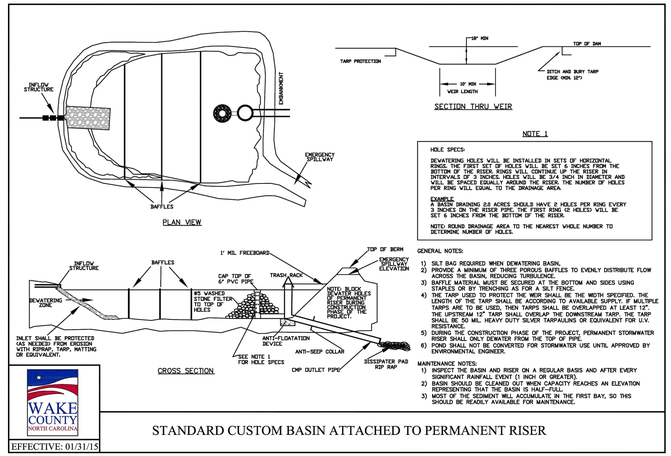


MAINTENANCE NOTES:

1. REMOVE SEDIMENT WHEN HALF HEIGHT OF STONE AND CLEAR HARDWARE OF DEBRIS TO PROVIDE ADEQUATE FLOW FOR SUBSEQUENT RAINS, TAKING CARE NOT TO DAMAGE OR UNDERCUT HARDWARE DURING SEDIMENT REMOVAL.
2. REPLACE STONE AS NEEDED.

EFFECTIVE: 01/31/08

STANDARD GRAVEL YARD INLET PROTECTION



NOTE 1

HOLE SPECS:

DEWATERING HOLES WILL BE INSTALLED IN SETS OF HORIZONTAL RINGS. THE FIRST SET OF HOLES WILL BE SET 3 INCHES FROM THE BOTTOM OF THE RISER SINCE 0 GALL CONTINUE UP THE RISER IN INTERVALS OF 3 INCHES. HOLES WILL BE 3/4 INCH IN DIAMETER AND WILL BE SPACED EQUALLY AROUND THE RISER. THE NUMBER OF HOLES PER RING WILL EQUAL TO THE DRAINAGE AREA

EXAMPLE
A BASIN DRAINING 2.0 ACRES SHOULD HAVE 2 HOLES PER RING EVERY 3 INCHES ON THE RISER PIPE. THE FIRST RING OF HOLES WILL BE SET 6 INCHES FROM THE BOTTOM OF THE RISER.

NOTE: ROUND DRAINAGE AREA TO THE NEAREST WHOLE NUMBER TO DETERMINE NUMBER OF HOLES.

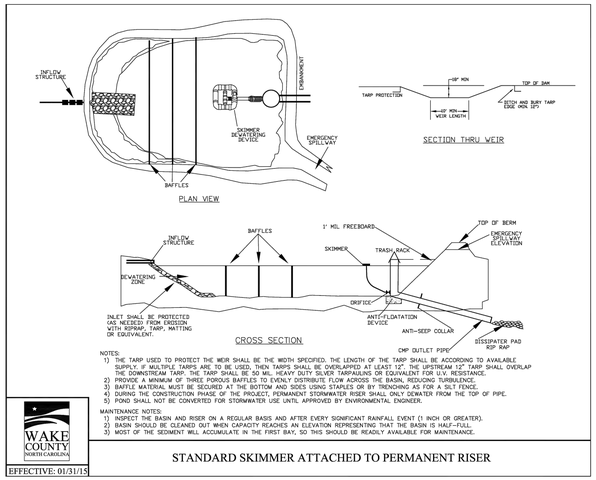
GENERAL NOTES:

1) SILT SAG REQUIRED WHEN DEWATERING BASIN.
2) PROVIDE A MINIMUM OF THREE POROUS BAFFLES TO EVENLY DISTRIBUTE FLOW ACROSS THE BASIN, REDUCING TURBULENCE.
3) BAFFLE MATERIAL MUST BE SECURED AT THE BOTTOM AND SIDES USING STAPLES OR BY TRENCHING AS FOR A SILT FENCE.
4) THE TARP USED TO PROTECT THE WEIR SHALL BE THE WIDTH SPECIFIED. THE LENGTH OF THE TARP SHALL BE ACCORDING TO AVAILABLE SUPPLY. IF MULTIPLE TARPS ARE TO BE USED, THEN TARPS SHALL BE OVERLAPPED AT LEAST 12". THE UPSTREAM 12" TARP SHALL OVERLAP THE DOWNSTREAM TARP. THE TARP SHALL BE 50 MIL. HEAVY DUTY SILVER TARPAULINS OR EQUIVALENT FOR U.V. RESISTANCE.
5) DURING THE CONSTRUCTION PHASE OF THE PROJECT, PERMANENT STORMWATER RISER SHALL ONLY DEWATER FROM THE TOP OF PIPE.
6) POND SHALL NOT BE CONVERTED FOR STORMWATER USE UNTIL APPROVED BY ENVIRONMENTAL ENGINEER.

MAINTENANCE NOTES:
1) INSPECT THE BASIN AND RISER ON A REGULAR BASIS AND AFTER EVERY SIGNIFICANT RAINFALL EVENT (1 INCH OR GREATER).
2) BASIN SHOULD BE CLEANED OUT WHEN CAPACITY REACHES AN ELEVATION REPRESENTING THAT THE BASIN IS HALF-FULL.
3) MOST OF THE SEDIMENT WILL ACCUMULATE IN THE FIRST BAY, SO THIS SHOULD BE READILY AVAILABLE FOR MAINTENANCE.

EFFECTIVE: 01/31/15

STANDARD CUSTOM BASIN ATTACHED TO PERMANENT RISER

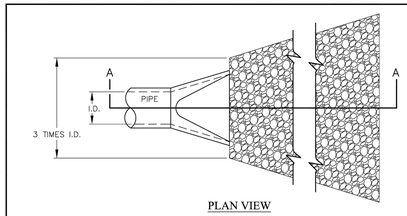


NOTES:
1) THE TARP USED TO PROTECT THE WEIR SHALL BE THE WIDTH SPECIFIED. THE LENGTH OF THE TARP SHALL BE ACCORDING TO AVAILABLE SUPPLY. IF MULTIPLE TARPS ARE TO BE USED, THEN TARPS SHALL BE OVERLAPPED AT LEAST 12". THE UPSTREAM 12" TARP SHALL OVERLAP THE DOWNSTREAM TARP. THE TARP SHALL BE 50 MIL. HEAVY DUTY SILVER TARPAULINS OR EQUIVALENT FOR U.V. RESISTANCE.
2) PROVIDE A MINIMUM OF THREE POROUS BAFFLES TO EVENLY DISTRIBUTE FLOW ACROSS THE BASIN, REDUCING TURBULENCE.
3) BAFFLE MATERIAL MUST BE SECURED AT THE BOTTOM AND SIDES USING STAPLES OR BY TRENCHING AS FOR A SILT FENCE.
4) DURING THE CONSTRUCTION PHASE OF THE PROJECT, PERMANENT STORMWATER RISER SHALL ONLY DEWATER FROM THE TOP OF PIPE.
5) POND SHALL NOT BE CONVERTED FOR STORMWATER USE UNTIL APPROVED BY ENVIRONMENTAL ENGINEER.

MAINTENANCE NOTES:
1) INSPECT THE BASIN AND RISER ON A REGULAR BASIS AND AFTER EVERY SIGNIFICANT RAINFALL EVENT (1 INCH OR GREATER).
2) BASIN SHOULD BE CLEANED OUT WHEN CAPACITY REACHES AN ELEVATION REPRESENTING THAT THE BASIN IS HALF-FULL.
3) MOST OF THE SEDIMENT WILL ACCUMULATE IN THE FIRST BAY, SO THIS SHOULD BE READILY AVAILABLE FOR MAINTENANCE.

EFFECTIVE: 01/31/15

STANDARD SKIMMER ATTACHED TO PERMANENT RISER

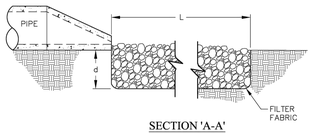


NOTES:

1. L = THE LENGTH OF THE RIPRAP APRON.
2. d = 1.5 TIMES THE MAXIMUM STONE DIAMETER BUT NOT LESS THAN 6" (INCHES).
3. A FILTER BLANKET OR FILTER FABRIC SHOULD BE INSTALLED BETWEEN THE RIPRAP AND SOIL FOUNDATION.

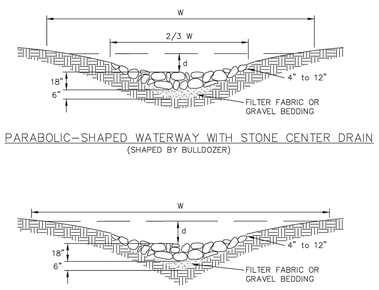
MAINTENANCE NOTES:

1. INSPECT RIPRAP OUTLET STRUCTURES WEEKLY AND AFTER SIGNIFICANT (1 INCH OR GREATER) RAINFALL EVENTS TO SEE IF ANY EROSION AROUND OR BELOW THE RIPRAP HAS TAKEN PLACE, OR IF STONES HAVE BEEN DISLODGED. IMMEDIATELY MAKE ALL NEEDED REPAIRS TO PREVENT FURTHER DAMAGE.



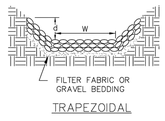
EFFECTIVE: 01/31/08

STANDARD PIPE OUTLET TO FLAT AREA NO WELL-DEFINED CHANNEL



NOTES:

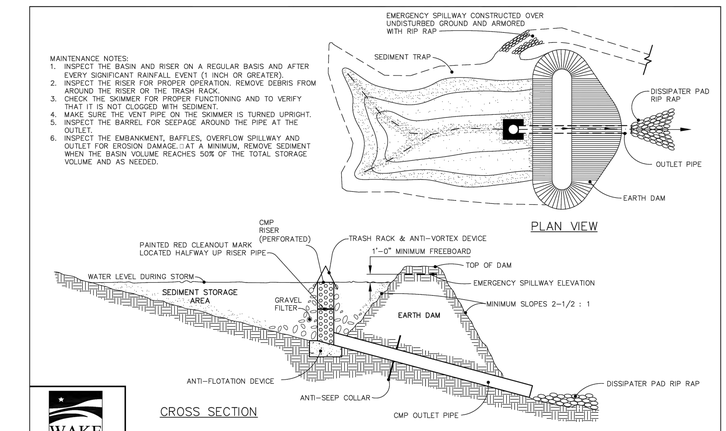
- TO BE USED WHERE EXCESSIVE STORMWATER VELOCITIES PROHIBIT VEGETATIVE LININGS.
- SIZE OF STONE MUST BE DETERMINED BY APPROPRIATE DESIGN PROCEDURE.
- DIMENSIONS FOR d & W VARIES ACCORDING TO DESIGN.



MAINTENANCE NOTES:
-INSPECT RIPRAP DITCH WEEKLY AND AFTER SIGNIFICANT RAIN EVENTS TO SEE IF ANY EROSION AROUND OR BELOW THE RIP RAP HAS TAKEN PLACE, IMMEDIATELY MAKE ALL NEEDED REPAIRS TO PREVENT FURTHER DAMAGE.
-IF EROSION IS EVIDENT PAST END OF RIPRAP DITCH DUE TO RUNOFF DISCHARGING FROM DITCH, INCREASE DIMENSIONS OF RIPRAP PAD PROVIDED SPACE IS AVAILABLE WITHIN THE APPROVED LIMITS OF DISTURBANCE.
-MAINTAIN ALL VEGETATION ADJACENT TO CHANNEL IN A HEALTHY, VIGOROUS CONDITION TO PROTECT DITCH FROM EROSION AND SCOUR DURING OUT-OF-BANK FLOW.

EFFECTIVE: 01/31/08

STANDARD RIP-RAP LINED CHANNELS

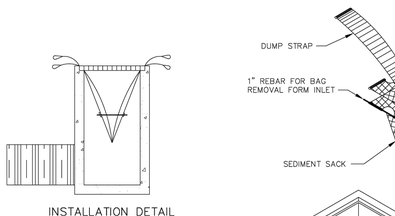


MAINTENANCE NOTES:

1. INSPECT THE BASIN AND RISER ON A REGULAR BASIS AND AFTER EVERY SIGNIFICANT RAINFALL EVENT (1 INCH OR GREATER).
2. INSPECT THE BASIN FOR PROPER OPERATION. REMOVE DEBRIS FROM AROUND THE RISER OR THE TRASH RACK.
3. CHECK THE SKIMMER FOR PROPER FUNCTIONING AND TO VERIFY THAT IT IS NOT CLOGGED WITH SEDIMENT.
4. MAKE SURE THE VENT PIPE ON THE SKIMMER IS TURNED UPRIGHT.
5. INSPECT THE BARREL FOR SEEPAGE AROUND THE PIPE AT THE OUTLET.
6. INSPECT THE EMBANKMENT, BAFFLES, OVERFLOW SPILLWAY AND OUTLET FOR EROSION DAMAGE. AT A MINIMUM, REMOVE SEDIMENT WHEN THE BASIN VOLUME REACHES 50% OF THE TOTAL STORAGE VOLUME AND AS NEEDED.

EFFECTIVE: 01/31/08

STANDARD RISER-BARREL SEDIMENT BASIN

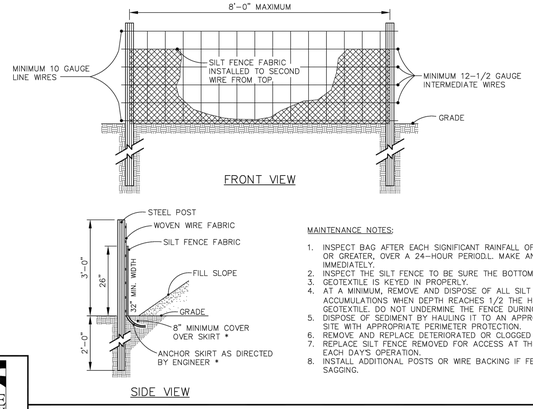


MAINTENANCE NOTES:

1. INSPECT BAG AFTER EACH SIGNIFICANT RAINFALL OF 1 INCHES OR GREATER, OVER A 24-HOUR PERIOD.
2. FOLLOW ROAD SAFETY WHILE PERFORMING MAINTENANCE.
3. REPLACE BAG WHEN THEY BECOME CONTAMINATED WITH SEDIMENT AND CONSTRUCTION DEBRIS.
4. WHEN MAINTAINING AND REMOVING INLET PROTECTION DEVICES, EXERCISE CARE TO MINIMIZE SEDIMENT FALLING INTO THE INLET. IMMEDIATELY REMOVE ALL MATERIAL THAT HAS FALLEN INTO INLETS. DEPOSIT SEDIMENT REMOVED FROM THE DEVICE IN A SUITABLE AREA AND STABILIZE.

EFFECTIVE: 01/31/08

STANDARD SILT BAG - INLET SEDIMENT CONTROL DEVICE

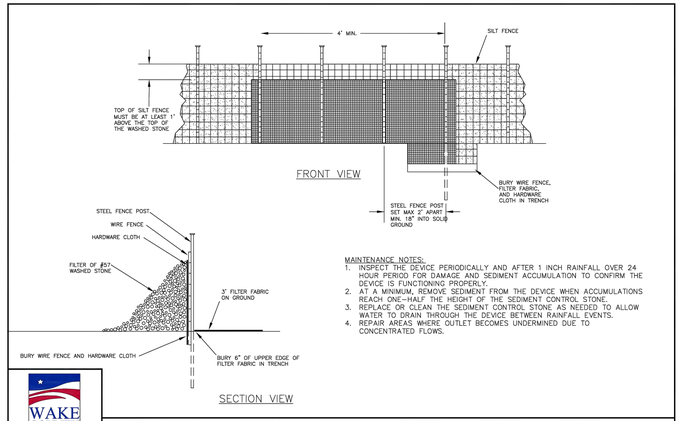


MAINTENANCE NOTES:

1. INSPECT BAG AFTER EACH SIGNIFICANT RAINFALL OF 1 INCHES OR GREATER, OVER A 24-HOUR PERIOD. MAKE ANY REPAIRS IMMEDIATELY.
2. INSPECT THE SILT FENCE TO BE SURE THE BOTTOM OF THE GEOTEXTILE IS KEYED IN PROPERLY.
3. GEOTEXTILE IS KEYED IN PROPERLY.
4. AT A MINIMUM, REMOVE AND DISPOSE OF ALL SILT ACCUMULATIONS WHEN DEPTH REACHES 1/2 THE HEIGHT OF THE GEOTEXTILE. DO NOT UNDERMINE THE FENCE DURING CLEANOUT.
5. DISPOSE OF SEDIMENT BY HAULING IT TO AN APPROVED WASTE SITE WITH APPROPRIATE PERIMETER PROTECTION.
6. REMOVE AND REPLACE DETERIORATED OR CLOGGED SILT FENCE.
7. REPLACE SILT FENCE REMOVED FOR ACCESS AT THE END OF EACH DAY'S OPERATION.
8. INSTALL ADDITIONAL POSTS OR WIRE BACKING IF FENCE IS SAGGING.

EFFECTIVE: 01/31/08

STANDARD TEMPORARY SILT FENCE



MAINTENANCE NOTES:

1. INSPECT THE DEVICE PERIODICALLY AND AFTER 1 INCH RAINFALL OVER 24 HOUR PERIOD FOR DAMAGE AND SEDIMENT ACCUMULATION TO CONFIRM THE DEVICE IS FUNCTIONING PROPERLY.
2. AT A MINIMUM, REMOVE SEDIMENT FROM THE DEVICE WHEN ACCUMULATIONS REACH ONE-HALF THE HEIGHT OF THE SEDIMENT CONTROL STONE.
3. REPLACE OR CLEAN THE SEDIMENT CONTROL STONE AS NEEDED TO ALLOW WATER TO DRAIN THROUGH THE DEVICE BETWEEN RAINFALL EVENTS.
4. REPAIR AREAS WHERE OUTLET BECOMES UNDERMINED DUE TO CONCENTRATED FLOWS.

EFFECTIVE: 01/31/08

STANDARD SILT FENCE OUTLET

No.	REVISIONS	DATE	BY
0	CD SUBMITTAL #1	08/01/2025	SREG
1	CID-25-06 V2	10/01/2025	SREG
2	CID-25-06 V3	03/02/2026	SREG

SEAL:

STRONGROCK
ENGINEERING GROUP
STRONG ROCK ENGINEERING GROUP, PLLC | COMPANY LICENSE # P-2165
SUITE 1110 RALEIGH, NC 27609 | INFORMATION@STRONGROCKGROUP.COM
305 CHURCH AT NORTH HILLS STREET, SUITE 1110

STRONG ROCK PROJECT	CID-25-06
	NOT FOR CONSTRUCTION
SCALE	AS SHOWN
DESIGNED BY	SRG
DRAWN BY	SRG
CHECKED BY	SRG

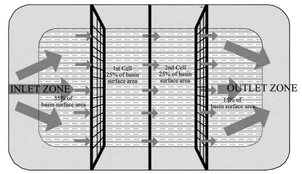
MITCHELL MILL MARKET
TOWN OF ROLESVILLE, WAKE COUNTY, NORTH CAROLINA
CONSTRUCTION PLANS

EROSION CONTROL PLAN DETAILS

DRAWING SHEET

D-5.0

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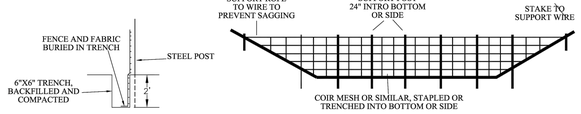


PLAN VIEW

NOTES:
1. BAFFLE MATERIAL SHOULD BE SECURED AT THE BOTTOM AND SIDES USING STAPLES OR BY TRENCHING AS FOR SILT FENCE.
2. MOST OF THE SEDIMENT WILL ACCUMULATE IN THE 1ST BAY, WHICH SHOULD BE READILY ACCESSIBLE FOR MAINTENANCE.
3. PROVIDE 3 BAFFLES (USE TWO IF LESS THAN 20 FEET IN LENGTH). PROVIDE 5 BAFFLES FOR DRAINAGE AREAS GREATER THAN 10 ACRES.
4. BAFFLE SHALL BE 700 GM/2 COIR EROSION BLANKET.
5. TOPS OF BAFFLES SHOULD BE 2 INCHES LOWER THAN THE TOP OF THE BERMS.

MAINTENANCE NOTES:
1. INSPECT BAFFLES FOR REPAIR ONCE A WEEK AND AFTER EACH 1" RAINFALL.
2. MAINTAIN ACCESS TO BAFFLES AND MAKE ANY REPAIRS IMMEDIATELY.
3. REMOVE SEDIMENT DEPOSITS WHEN IT REACHES HALF FULL.
4. AVOID DAMAGING BAFFLES DURING CLEANOUT AND REPLACE IF DAMAGED.
5. REMOVE BAFFLES AND SEDIMENT DEPOSITS AFTER CONTRIBUTING DRAINAGE AREA HAS BEEN PERMANENTLY STABILIZED.

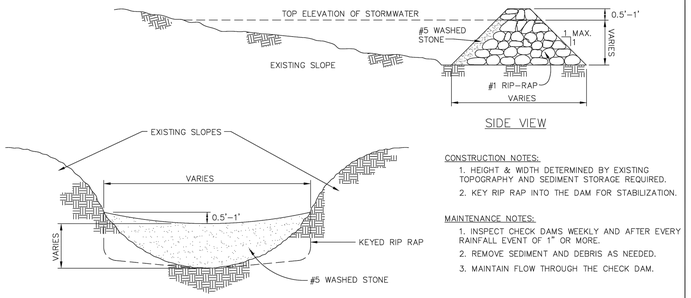
CROSS SECTION



SECTION VIEW AT OPENING

EFFECTIVE: 01/31/08

STANDARD BAFFLES DETAIL



CONSTRUCTION NOTES:
1. HEIGHT & WIDTH DETERMINED BY EXISTING TOPOGRAPHY AND SEDIMENT STORAGE REQUIRED.
2. KEY RIP RAP INTO THE DAM FOR STABILIZATION.

MAINTENANCE NOTES:
1. INSPECT CHECK DAMS WEEKLY AND AFTER EVERY RAINFALL EVENT OF 1" OR MORE.
2. REMOVE SEDIMENT AND DEBRIS AS NEEDED.
3. MAINTAIN FLOW THROUGH THE CHECK DAM.

NOTE: REMOVE SEDIMENT ACCUMULATION FROM BEHIND CHECK DAMS TO PREVENT DAMAGE TO CHANNEL VEGETATION. FLOW SHOULD BE MAINTAINED THROUGH THE DAM.

EFFECTIVE: 01/31/08

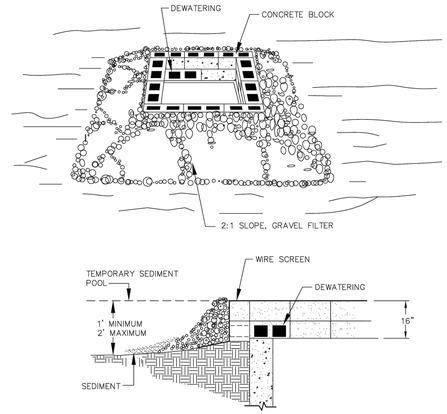
STANDARD CHECK DAM

CONSTRUCTION SPECIFICATIONS

1. LAY ONE BLOCK ON EACH SIDE OF THE STRUCTURE ON ITS SIDE IN THE BOTTOM ROW TO ALLOW POOL DRAINAGE. THE FOUNDATION SHOULD BE EXCAVATED AT LEAST 2 INCHES BELOW THE CREST OF THE STORM DRAIN. PLACE THE BOTTOM ROW OF BLOCKS AGAINST THE EDGE OF THE STORM DRAIN FOR LATERAL SUPPORT AND TO AVOID WASHOUTS WHEN OVERFLOW OCCURS. IF NEEDED, GIVE LATERAL SUPPORT TO SUBSEQUENT ROWS BY PLACING 2x4 WOOD STUDS THROUGH BLOCK OPENINGS.
2. CAREFULLY FIT HARDWARE CLOTH OR COMPARABLE WIRE MESH WITH 1/2 INCH OPENINGS OVER ALL BLOCK OPENINGS TO HOLD GRAVEL IN PLACE.
3. USE CLEAN GRAVEL, 3/4 TO 1/2 INCH IN DIAMETER, PLACED 2 INCHES BELOW THE TOP OF THE BLOCK ON A 2:1 SLOPE OR FLATTER AND SMOOTH IT TO AN EVEN GRADE. DOT #57 WASHED STONE IS RECOMMENDED.

MAINTENANCE NOTES:

1. INSPECT INLET PROTECTION AND REMOVE SEDIMENT AFTER EACH 1" RAIN EVENT.
2. REMOVE SEDIMENT WHEN VOLUME OF THE BASIN IS REDUCED BY ONE-HALF.
3. GRAVEL SHOULD BE REPLACED AND REPAIRS MADE AS NEEDED.



EFFECTIVE: 01/31/08

STANDARD BLOCK & GRAVEL DROP INLET PROTECTION

NOTES:

1. DIVERSION TO BE USED UPSLOPE OF A CONSTRUCTION SITE TO PREVENT STORM RUNOFF FROM ENTERING THE DISTURBED AREA.
2. IMMEDIATELY LINE AND STABILIZE BEFORE ANY DOWNSLOPE GRADING BEGINS (STABILIZATION MUST OCCUR BEFORE ISSUANCE OF A CERTIFICATE OF COMPLIANCE). STABILIZATION METHOD IS BASED ON VELOCITY OF OFFSITE DRAINAGE.
3. DIVERSIONS SHOULD ONLY BE USED FOR DRAINAGES 5 ACRES OR LESS.
4. ANY SEDIMENT LADEN WATER PRIOR TO STABILIZATION OF THE DIVERSION MUST BE DIVERTED INTO AN APPROVED EROSION AND SEDIMENT CONTROL BMP. CLEAN WATER SHOULD EMPTY INTO AN APPROVED OUTLET DEVICE.

MAINTENANCE NOTES:

1. INSPECT AFTER EVERY RAINFALL DURING THE CONSTRUCTION OPERATION.
2. IMMEDIATELY REMOVE ANY OBSTRUCTIONS FROM THE FLOW AREA, AND REPAIR DIVERSION RIDGE.
3. CHECK OUTLETS AND MAKE TIMELY REPAIRS AS NEEDED.
4. MAINTAIN THE VEGETATION IN A VIGOROUS, HEALTHY CONDITION AT ALL TIMES.

CROSS SECTIONAL VIEW

EFFECTIVE: 01/31/08

STANDARD CLEAN WATER DIVERSION

NOTES:
1. INSTALL SILT FENCE OR TREE PROTECTION FENCE TO ENSURE CONSTRUCTION ENTRANCE IS USED BY VEHICLES.
2. IF MUD IS NOT REMOVED FROM TIRES AFTER VEHICLE TRAVELS OVER STONE, THE TIRES OF THE VEHICLE MUST BE WASHED BEFORE ENTERING PUBLIC ROADS.I

MAINTENANCE NOTES:
1. THE GRAVEL CONSTRUCTION ENTRANCE MUST BE MAINTAINED IN A CONDITION TO PREVENT TRACKING OR DIRECT FLOW OF MUD ONTO ADJACENT ROADWAYS.
2. REPLACEMENT OF STONE MAY BE NECESSARY TO ENSURE THE GRAVEL ENTRANCE FUNCTIONS PROPERLY.
3. REPLENISHMENT OF STONE MAY BE NECESSARY.
4. FREQUENT CHECKS OF THE DEVICE AND TIMELY MAINTENANCE SHOULD BE COMPLETED.
5. ANY MATERIAL TRACKED ONTO THE ROADWAY SHALL BE CLEANED UP IMMEDIATELY.

EFFECTIVE: 01/31/08

STANDARD CONSTRUCTION ENTRANCE

GENERAL NOTES
1. DRAW DOWN RISER & BARREL SHALL BE 6" SCH. 40 PVC WITH CLEAN-OUT CAP AND 3/4" HOLES. SEE NOTE 1 FOR NUMBER AND SPACING OF HOLES.
2. THE TARP USED TO PROTECT THE WEIR SHALL BE THE WIDTH SPECIFIED, LENGTH OF THE TARP SHALL BE ACCORDINGLY TO ENSURE SUFFICIENT MATERIAL IS AVAILABLE TO BE USED. THEN TARPS SHALL BE OVERLAPPED AT LEAST 12". THE UPSTREAM 12" TARP SHALL OVERLAP THE DOWNSTREAM TARP. THE TARP SHALL BE 50 MIL. HEAVY DUTY SILVER TARPAULINS OR EQUIVALENT FOR U.V. RESISTANCE.

MAINTENANCE NOTES
1. INSPECT WEEKLY AND AFTER EVERY 1" OR GREATER RAINFALL.
2. REMOVE SEDIMENT AND PROPERLY DISPOSED OF WHEN BASIN IS HALF FULL.
3. WIRE SCREEN AND GRAVEL AROUND RISER SHOULD BE REPLACED AS NEEDED TO ENSURE DEWATERING.
4. CHECK THE STRUCTURE FOR DAMAGE FROM EROSION OR PIPING.
5. ANY RIP RAP DISPLACED FROM DISSIPATER PAD MUST BE REPLACED IMMEDIATELY.

NOTE 1

HOLE SPECS:
DEWATERING HOLES WILL BE INSTALLED IN SETS OF HORIZONTAL RINGS. THE FIRST SET OF HOLES WILL BE SET 6 INCHES FROM THE BOTTOM OF THE RISER. RINGS WILL CONTINUE UP THE RISER IN INTERVALS OF 3 INCHES. HOLES WILL BE 3/4 INCH IN DIAMETER AND WILL BE SPACED EQUALLY AROUND THE RISER. THE NUMBER OF HOLES PER RING WILL EQUAL TO THE DRAINAGE AREA.

EXAMPLE
A BASIN DRAINING 2.0 ACRES SHOULD HAVE 2 HOLES PER RING EVERY 3 INCHES ON THE RISER PIPE. THE FIRST RING (2 HOLES) WILL BE SET 6 INCHES FROM THE BOTTOM OF THE RISER.

NOTE: ROUND DRAINAGE AREA TO THE NEAREST WHOLE NUMBER TO DETERMINE NUMBER OF HOLES.

EFFECTIVE: 01/31/08

STANDARD CUSTOM BASIN

NOTES:

1. TEMPORARY DIVERSION DITCH TO BE USED TO INTERCEPT FLOW AND/OR DIVERT TO A SEDIMENT CONTROL MEASURE OR BMP.
2. STABILIZE DIVERSION DITCH BERM WITH TEMPORARY SEEDING, MULCH WITH TAC, AND/OR EROSION CONTROL NETTING.

MAINTENANCE NOTES:

1. INSPECT ONCE A WEEK AND AFTER EVERY 1" RAINFALL.
2. SILT SHALL BE REMOVED WHEN DITCH IS ONE-HALF FULL.
3. DITCH SHALL BE RECONSTRUCTED WHEN DAMAGED BY EQUIPMENT OR COVERED BY FILL.
4. CHECK OUTLETS AND MAKE TIMELY REPAIRS AS NEEDED.
5. AFTER DRAINAGE AREA IS PERMANENTLY STABILIZED, PLACE WASTE MATERIAL IN DITCH TO BLEND WITH NATURAL GROUND AND STABILIZE.

CROSS SECTIONAL VIEW

EFFECTIVE: 01/31/08

STANDARD TEMPORARY DIVERSION DITCH

NOTES
1. PROVIDE STABILIZED OUTLET TO STREAM BANK.
2. WOOD PALLETS MAY BE USED IN LIEU OF STONE AND GEOTEXTILE AS DIRECTED. A SUFFICIENT NUMBER OF PALLETS MUST BE PROVIDED TO ELEVATE THE ENTIRE FILTER BAG FOR DEWATERING ABOVE NATURAL GROUND.

MAINTENANCE NOTES

1. REPLACE AND DISPOSE OF FILTER BAG(S) WHEN IT IS ¾ FULL OF SEDIMENT OR WHEN IT IS IMPRCTICAL FOR BAG TO FILTER SEDIMENT.
2. PROVIDE A SUFFICEINT QUANTITY OF FILTER BAGS TO CONTAIN SILT FROM PUMPED EFFLUENT.

NOT TO SCALE

EFFECTIVE: 01/31/08

STANDARD FILTER BAG FOR DEWATERING ACTIVITIES

NOTES:
1. PLACE GRAVEL BAG BARRIER ON GENTLY SLOPING STREET, WHERE WATER CAN POND AND ALLOW SEDIMENT TO SEPARATE FROM RUNNOFF.
2. USE SAND BAGS OF WOVEN GEOTEXTILE FABRIC (NOT BURLAP) AND FILL WITH ¾ INCH (OR SMALLER) GRAVEL. BAGS MUST BE LAYERED SUCH THAT NO GAPS ARE EVIDENT.
3. WHEN INSTALLING CURB INLET PROTECTION DEVICES, **NEVER** BLOCK THE CURB INLET.

MAINTENANCE NOTES:
1. INSPECT BARRIERS AND REMOVE SEDIMENT AFTER EACH STORM EVENT (1 INCH OR GREATER). SEDIMENT AND GRAVEL MUST BE REMOVED FROM THE TRAVELED WAY IMMEDIATELY.

EFFECTIVE: 01/31/08

STANDARD GRAVEL BAG CURB INLET PROTECTION

THIS PLANSET AND ANY ASSOCIATED DOCUMENTS ARE PRELIMINARY AND NOT AUTHORIZED FOR CONSTRUCTION UNTIL SIGNED, DATED, AND OFFICIALLY RELEASED FOR CONSTRUCTION BY THE ENGINEER OF RECORD.

No.	REVISIONS	DATE	BY
0	CD SUBMITTAL #1	08/01/2025	SREG
1	CID-25-06 V2	10/01/2025	SREG
2	CID-25-06 V3	03/02/2026	SREG

SEAL:

STRONGROCK
ENGINEERING GROUP
STRONG ROCK ENGINEERING GROUP, PLLC | COMPANY LICENSE # P-2166
305 CHURCH AT NORTH HILLS STREET, SUITE 1110 RALEIGH, NC 27609 | INFORMATION@STRONGROCKGROUP.COM

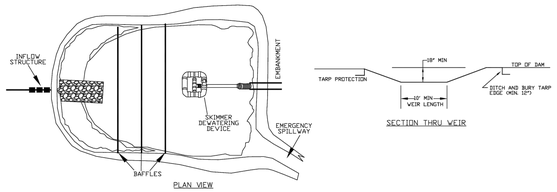
STRONG ROCK PROJECT	CID-25-06
NOT FOR CONSTRUCTION	
SCALE	AS SHOWN
DESIGNED BY	SRG
DRAWN BY	SRG
CHECKED BY	SRG

MITCHELL MILL MARKET
TOWN OF ROLESVILLE, WAKE COUNTY, NORTH CAROLINA
CONSTRUCTION PLANS

EROSION CONTROL PLAN DETAILS

DRAWING SHEET

D-5.1

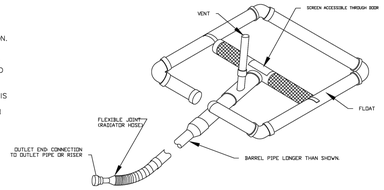


MAINTENANCE NOTES:
1. INSPECT THE BASIN ON A REGULAR BASIS AND AFTER EVERY SIGNIFICANT RAINFALL EVENT (1 INCH OR GREATER).
2. CLEAN OUT THE BASINS WHEN SEDIMENT ACCUMULATIONS REACH APPROXIMATELY ONE-HALF THE HEIGHT OF THE FIRST BAFFLE.
3. CHECK THE SKIMMER TO MAKE SURE THAT IT IS NOT CLOGGED WITH SEDIMENT.
4. CHECK THE FABRIC LINED SPILLWAY FOR DAMAGE.
5. CHECK THE COIR FIBER MAT AT THE OUTLET OF THE SKIMMER TO DETERMINE IF A REPLACEMENT IS NEEDED.
6. CHECK THE SKIMMER ORIFICE FOR AN ANGLE SUCH THAT WATER DOES NOT STAND INSIDE THE BARREL. THIS COULD RESULT IN THE WATER FREEZING AND CLOGGING THE SKIMMER.
7. REPAIR SEED AND REPLACE MATTING ON THE SIDE SLOPE AREAS THAT HAVE ERODED OR HAVE BECOME DAMAGED BY EQUIPMENT FROM SILT CLEANOUT.
8. REMOVE SEDIMENT THAT MAY ACCUMULATE ON THE STONE PAD UNDERNEATH THE SKIMMER DEVICE.
9. INSPECT THE BAFFLES AFTER EACH RAIN EVENT FOR EROSION DAMAGE AND SEDIMENT ACCUMULATIONS.

WAKE COUNTY NORTH CAROLINA
EFFECTIVE: 01/31/08

STANDARD SKIMMER BASIN

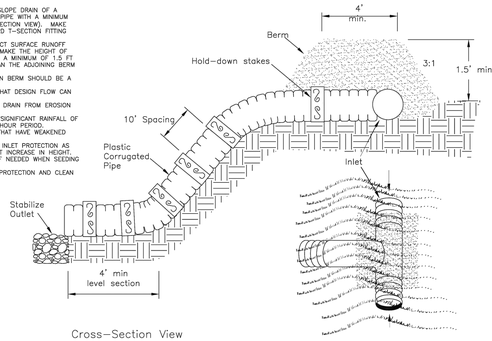
MAINTENANCE NOTES:
1. INSTALL A PAD FOR SKIMMER TO REST ON STONE OR WOOD PALLETS OR H-BEAM SECTION.
2. INSTALL SKIMMER AND PAD AWAY FROM BAFFLES.
3. ATTACH ROPE TO SKIMMER FOR MAINTENANCE.
4. INSPECT THE BASIN ON A REGULAR BASIS AND AFTER EVERY SIGNIFICANT RAINFALL EVENT (1 INCH OR GREATER).
5. CHECK THE SKIMMER TO MAKE SURE THAT IT IS NOT CLOGGED WITH SEDIMENT.
6. REMOVE SEDIMENT THAT MAY ACCUMULATE ON THE STONE PAD UNDERNEATH THE SKIMMER DEVICE.



WAKE COUNTY NORTH CAROLINA
EFFECTIVE: 01/31/08

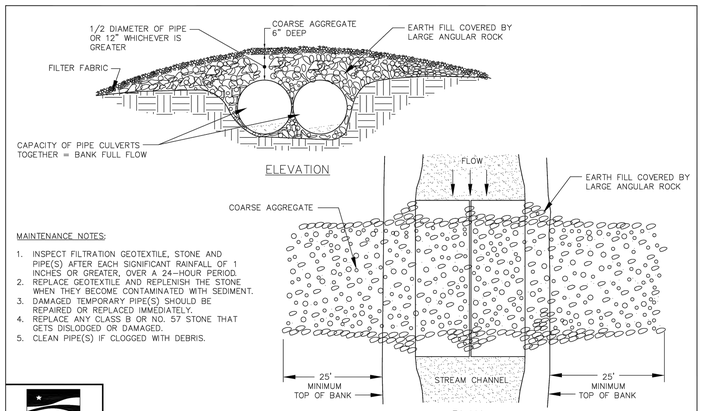
STANDARD SKIMMER DETAIL

MAINTENANCE NOTES:
1. CONSTRUCT THE ENTRANCE TO THE SLOPE DRAIN OF A STANDARD FLARED-END SECTION OF PIPE WITH A MINIMUM 6-INCH METAL TOE PLATE (CROSS-SECTION VIEW). MAKE ALL FITTINGS WATERTIGHT. A STANDARD T-SECTION FITTING MAY ALSO BE USED AT THE INLET.
2. USE AN EARTHEN DIVERSION TO DIRECT SURFACE RUNOFF INTO THE TEMPORARY SLOPE DRAIN. MAKE THE HEIGHT OF THE BERM OVER THE DRAIN CONDUIT A MINIMUM OF 1.5 FT AND AT LEAST 6 INCHES HIGHER THAN THE ADJOINING BERM ON EITHER SIDE.
3. THE LOWEST POINT OF THE DIVERSION BERM SHOULD BE A MINIMUM OF 1 FT.
4. ABOVE THE TOP OF THE DRAIN SO THAT DESIGN FLOW CAN FREELY ENTER THE PIPE.
5. PROTECT THE OUTLET OF THE SLOPE DRAIN FROM EROSION WITH RIPRAP DISSIPATOR.
6. INSPECT SLOPE DRAINS AFTER EACH SIGNIFICANT RAINFALL OF 1 INCHES OR GREATER, OVER A 24-HOUR PERIOD.
7. REBUILD EARTH BERMS AND INLETS THAT HAVE WEAKENED TO SOOTHING.
8. EXTEND SLOPE DRAINS AND REBUILD INLET PROTECTION AS SLOPE IS BUILT, AFTER EACH 2-FOOT INCREASE IN HEIGHT.
9. REBUILD OR REPAIR SLOPE DRAINS IF NEEDED WHEN SEEDING AND MULCHING IS PERFORMED.
10. REFURBISH CLASS B STONE OUTLET PROTECTION AND CLEAN AS NEEDED.



WAKE COUNTY NORTH CAROLINA
EFFECTIVE: 01/31/08

STANDARD TEMPORARY SLOPE DRAIN

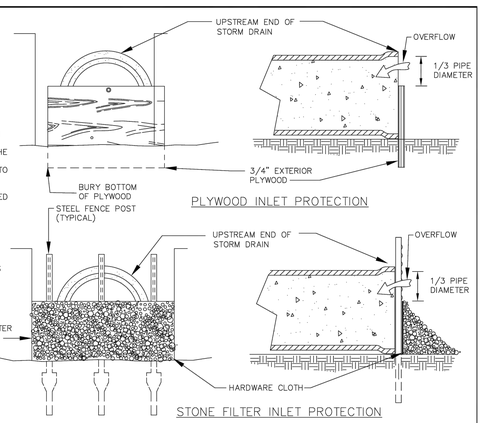


MAINTENANCE NOTES:
1. INSPECT FILTRATION GEOTEXTILE, STONE AND PIPE(S) AFTER EACH SIGNIFICANT RAINFALL OF 1 INCHES OR GREATER, OVER A 24-HOUR PERIOD.
2. REPLACE GEOTEXTILE AND REPLENISH THE STONE WHEN THEY BECOME CONTAMINATED WITH SEDIMENT.
3. DAMAGED TEMPORARY PIPE(S) SHOULD BE REPAIRED OR REPLACED IMMEDIATELY.
4. REPLACE ANY CLASS B OR NO. 57 STONE THAT GETS DISLODGED OR DAMAGED.
5. CLEAN PIPE(S) IF CLOGGED WITH DEBRIS.

WAKE COUNTY NORTH CAROLINA
EFFECTIVE: 01/31/08

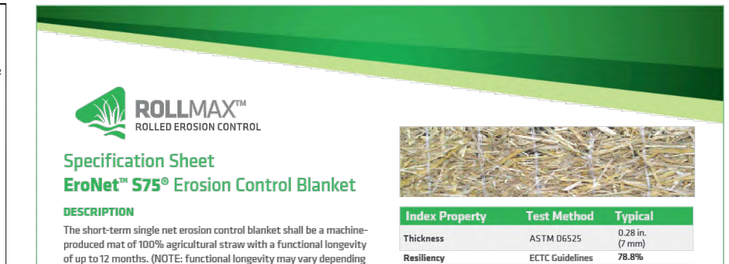
STANDARD TEMPORARY STREAM CROSSING

MAINTENANCE NOTES:
1. INSPECT THE DEVICE AFTER1 INCHES OR GREATER, OVER A 24-HOUR PERIOD FOR DAMAGE, SEDIMENT ACCUMULATION AND PROPER FUNCTION.
2. REMOVE SEDIMENT FROM THE DEVICE WHEN ACCUMULATIONS REACH ONE-HALF THE HEIGHT OF THE BASIN AREA FORMED BY THE DEVICE.
3. REPLACE THE WASHED STONE AS NEEDED TO ALLOW WATER TO DRAIN THROUGH THE DEVICE BETWEEN RAINFALL EVENTS.
4. CLEAN OUT THE DEVICE WHEN IT IS CLOGGED WITH DEBRIS.
5. CHECK PLYWOOD IF DAMAGED. REPLACE IF NEEDED.
6. IF THE DEVICE IS TO REMAIN ON THE PROJECT AT THE COMPLETION OF CONSTRUCTION ACTIVITIES, THE DEVICE SHOULD BE CLEAN AND IN PROPER SHAPE AT THE TIME OF FINAL INSPECTION. IF IT IS REMOVED, ALL ACCUMULATED SILT SHOULD BE REMOVED AND THE AREA SEEDED.



WAKE COUNTY NORTH CAROLINA
EFFECTIVE: 01/31/08

STANDARD PIPE INLET PROTECTION (PLYWOOD & STONE)



Specification Sheet
EroNet™ S75® Erosion Control Blanket



DESCRIPTION

The short-term single net erosion control blanket shall be a machine-produced mat of 100% agricultural straw with a functional longevity of up to 12 months. (NOTE: functional longevity may vary depending upon climatic conditions, soil, geographical location, and elevation). The blanket shall be of consistent thickness with the straw evenly distributed over the entire area of the mat. The blanket shall be covered on the top side with a lightweight photodegradable polypropylene netting having an approximate 0.50 x 0.50 in. (1.27 x 1.27 cm) mesh. The blanket shall be sewn together on 1.50 inch (3.81 cm) centers with degradable thread. The blanket shall be manufactured with a colored thread stitched along both outer edges (approximately 2-5 inches [5-12.5 cm] from the edge) as an overlap guide for adjacent mats.

The S75 shall meet Type 2.C specification requirements established by the Erosion Control Technology Council (ECTC) and Federal Highway Administration's (FHWA) FP-03 Section 713.17

Material Content		
Matrix	100% Straw Fiber	0.5 lbs/sq yd (0.27 kg/sm)
Netting	Top side only, lightweight photodegradable	1.5 lb/1000 sq ft (0.73 kg/100 sm)
Thread	Degradable	

Standard Roll Sizes			
Width	6.67 ft (2.03 m)	8.0 ft (2.4 m)	16 ft (4.87 m)
Length	108 ft (32.92 m)	112 ft (34.14 m)	112 ft (34.14 m)
Weight ± 10%	40 lbs (18.14 kg)	50 lbs (22.68 kg)	100 lbs (45.36 kg)
Area	80 sq yd (66.9 sm)	100 sq yd (83.61 sm)	200 sq yd (167.22 sm)

Index Property	Test Method	Typical
Thickness	ASTM D6525	0.28 in. (7 mm)
Resiliency	ECTC Guidelines	78.8%
Water Absorbency	ASTM D1117	301%
Mass/Unit Area	ASTM D6475	9.76 oz/sy (332 g/sm)
Swell	ECTC Guidelines	15%
Smolder Resistance	ECTC Guidelines	Yes
Stiffness	ASTM D1388	6.31 oz-in
Light Penetration	ASTM D6567	6.0%
Tensile Strength - MD	ASTM D6818	122.4 lbs/ft (1.81 kN/m)
Elongation - MD	ASTM D6818	36.1%
Tensile Strength - TD	ASTM D6818	79.2 lbs/ft (1.17 kN/m)
Elongation - TD	ASTM D6818	26.8%
Biomass Improvement	ASTM D7322	301%

Design Permissible Shear Stress	
Unvegetated Shear Stress	1.55 psf (74 Pa)
Unvegetated Velocity	5.00 fps (1.52 m/s)

Slope Design Data: C Factors			
Slope Gradients (S)			
Slope Length (L)	≤ 3:1	3:1 – 2:1	≥ 2:1
≤ 20 ft (6 m)	0.029	N/A	N/A
20-50 ft	0.11	N/A	N/A
≥ 50 ft (15.2 m)	0.19	N/A	N/A

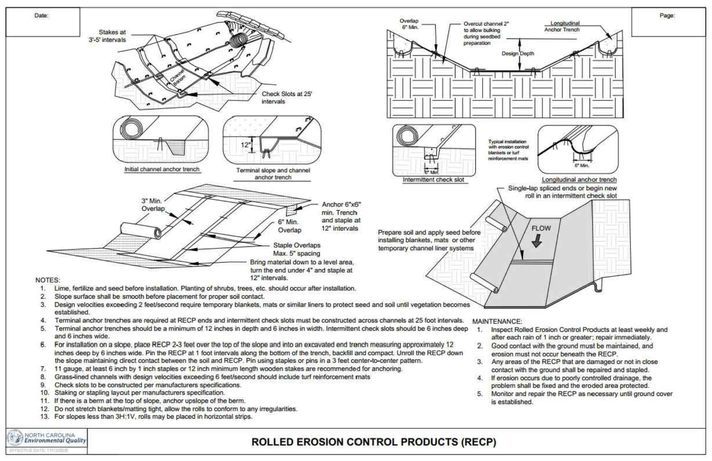
NTPEP Large-Scale Slope Testing
ASTM D6459 - C-factor = 0.012

Roughness Coefficients – Unveg.	
Flow Depth	Manning's n
≤ 0.50 ft (0.15 m)	0.055
0.50 – 2.0 ft	0.055-0.021
≥ 2.0 ft (0.60 m)	0.021

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Evansville, IN 47725
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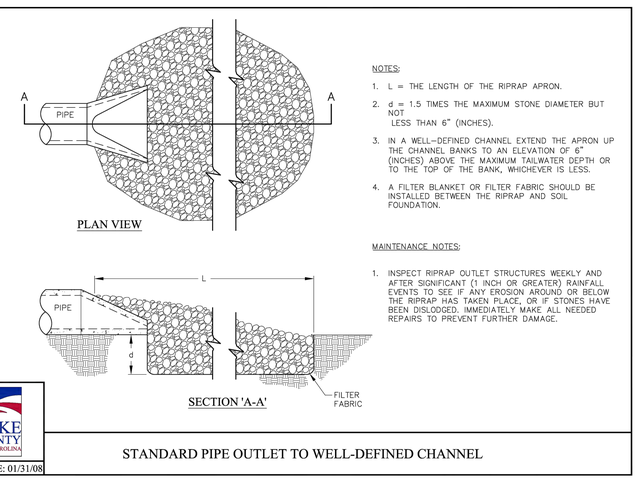


NOTES:
1. Lime, fertilize and seed before installation. Planting of shrubs, trees, etc. should occur after installation.
2. Slope surface shall be smooth before placement for proper soil contact.
3. Design velocities exceeding 2 feet/second require temporary blankets, mats or similar liners to protect seed and soil until vegetation becomes established.
4. Terminal anchor trenches are required at RECP ends and intermittent check slots must be constructed across channels at 25 foot intervals.
5. Terminal anchor trenches should be a minimum of 12 inches in depth and 6 inches in width. Intermittent check slots should be 6 inches deep and 6 inches wide.
6. For installation on a slope, place RECP 2-3 feet over the top of the slope and into an excavated end trench measuring approximately 12 inches deep by 6 inches wide. Pin the RECP at 1 foot intervals along the bottom of the trench, backfill and compact. Unroll the RECP down the slope maintaining direct contact between the soil and RECP. Pin using staples or pins in a 3 feet center-to-center pattern.
7. 11 gauge, at least 6 inch by 1 inch staples or 12 inch minimum length wooden stakes are recommended for anchoring.
8. Grass-lined channels with design velocities exceeding 6 feet/second should include turf reinforcement mats
9. Check slots to be constructed per manufacturers specifications.
10. Staking or stapling layout per manufacturers specification.
11. If there is a berm at the top of slope, anchor upslope of the berm.
12. Do not stretch blankets/matting tight, allow the rolls to conform to any irregularities.
13. For slopes less than 3H:1V, rolls may be placed in horizontal strips.

MAINTENANCE:
1. Inspect Rolled Erosion Control Products at least weekly and after each rain of 1 inch or greater; repair immediately.
2. Good contact with the ground must be maintained, and erosion must not occur beneath the RECP.
3. Any areas of the RECP that are damaged or not in close contact with the ground shall be repaired and stapled.
4. If erosion occurs due to poorly controlled drainage, the problem shall be fixed and the eroded area protected.
5. Monitor and repair the RECP as necessary until ground cover is established.

NORTH CAROLINA Environmental Quality

ROLLED EROSION CONTROL PRODUCTS (RECP)



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

MAINTENANCE NOTES:
1. INSPECT RIPRAP OUTLET STRUCTURES WEEKLY AND AFTER SIGNIFICANT (1 INCH OR GREATER) RAINFALL EVENTS TO SEE IF ANY EROSION AROUND OR BELOW THE RIPRAP HAS TAKEN PLACE, OR IF STONES HAVE BEEN DISLODGED. IMMEDIATELY MAKE ALL NEEDED REPAIRS TO PREVENT FURTHER DAMAGE.

WAKE COUNTY NORTH CAROLINA
EFFECTIVE: 01/31/08

STANDARD PIPE OUTLET TO WELL-DEFINED CHANNEL

No.	REVISIONS	DATE	BY
0	CD SUBMITTAL #1	08/01/2025	SRKG
1	CID-25-06 V2	10/01/2025	SRKG
2	CID-25-06 V3	03/02/2026	SRKG

SEAL:

STRONGROCK
ENGINEERING GROUP
STRONG ROCK ENGINEERING GROUP, PLLC | COMPANY LICENSE # P-2166
305 CHURCH AT NORTH HILLS STREET, SUITE 1110 RALEIGH, NC 27609 | INFORMATION@STRONGROCKGROUP.COM

STRONG ROCK PROJECT	CID-25-06
	NOT FOR CONSTRUCTION
SCALE	AS SHOWN
DESIGNED BY	SRG
DRAWN BY	SRG
CHECKED BY	SRG

MITCHELL MILL MARKET
TOWN OF ROLESVILLE, WAKE COUNTY, NORTH CAROLINA
CONSTRUCTION PLANS

EROSION CONTROL PLAN DETAILS

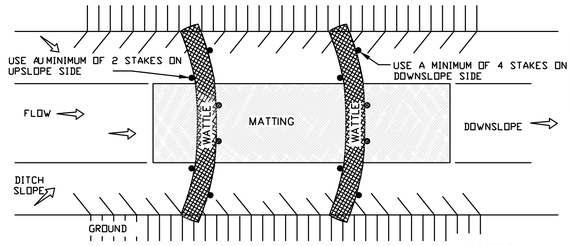
DRAWING SHEET
D-5.2

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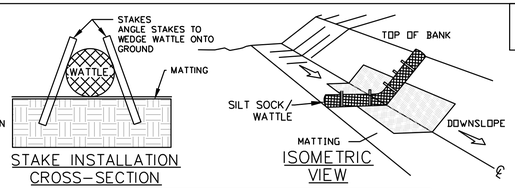
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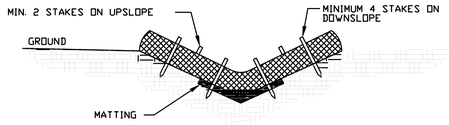
PLAN VIEW



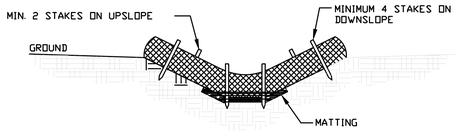
STAKE INSTALLATION CROSS-SECTION

ISOMETRIC VIEW

Ditch Spacing For 12 Inch Silt Sock/Wattle	
Channel Slope (%)	Space Between Silt Socks/ Wattles (Feet)
1	100
2	50
3	33
4	25
5	20



V-DITCH SECTION VIEW

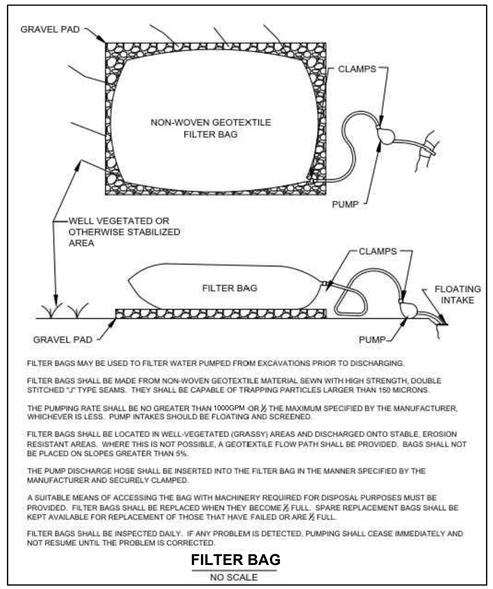


TRAPEZOIDAL DITCH SECTION VIEW

NOTES:
1. Other materials providing equivalent protection against erosive velocities may be substituted for use in silt socks or wattles.
2. Use a minimum 12 inch diameter silt sock/wattle.
3. Fill silt sock/wattle netting uniformly to the desired length such that logs do not deform.
4. Use 24 inch long wooden stakes with a 2 inch x 2 inch nominal cross section.
5. Install silt sock/wattle(s) to a height on slope so flow will not wash around silt sock/wattle and scour slopes, or as directed.
6. Install a minimum of two upslope stakes and four downslope stakes at an angle to wedge silt sock/wattle to ground at bottom ditch.
7. The use of Polyacrylamide (PAM) is recommended. Apply 2-3 ounces of anionic PAM on top of sock/wattle. Apply 1-2 ounces to matting on either side of sock/wattle. Reapply after each 1.0 inch rainfall.

MAINTENANCE:
1. Inspect silt sock/wattle(s) weekly and after each rain of 1 inch or greater. Remove accumulated sediment and any debris.
2. Silt sock/Wattle(s) must be replaced if clogged or torn.
3. If ponding becomes excessive, the silt sock/wattle may need to be replaced with a larger diameter or a different measure.
4. Reinstall if damaged or dislodged.
5. Silt socks/Wattles shall be inspected until land disturbance is compete and the area above the measure is permanently stabilized.

SILT SOCK / WATTLE FOR CHECK DAM



FILTER BAGS MAY BE USED TO FILTER WATER PUMPED FROM EXCAVATIONS PRIOR TO DISCHARGING.

FILTER BAGS SHALL BE MADE FROM NON-WOVEN GEOTEXTILE MATERIAL SEWN WITH HIGH STRENGTH, DOUBLE STITCHED "J" TYPE SEAMS. THEY SHALL BE CAPABLE OF TRAPPING PARTICLES LARGER THAN 150 MICRONS.

THE PUMPING RATE SHALL BE NO GREATER THAN 1000GPM OR ½ THE MAXIMUM SPECIFIED BY THE MANUFACTURER, WHICHEVER IS LESS. PUMP INTAKES SHOULD BE FLOATING AND SCREENED.

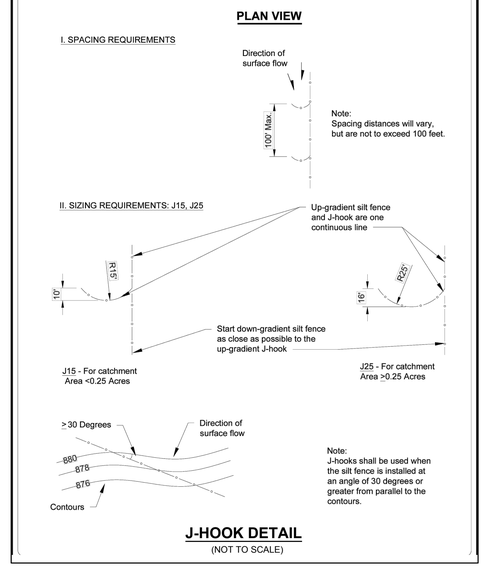
FILTER BAGS SHALL BE LOCATED IN WELL-VEGETATED (GRASSY) AREAS AND DISCHARGED ONTO STABLE, EROSION RESISTANT AREAS. WHERE THIS IS NOT POSSIBLE, A GEOTEXTILE FLOW PATH SHALL BE PROVIDED. BAGS SHALL NOT BE PLACED ON SLOPES GREATER THAN 5%.

THE PUMP DISCHARGE HOSE SHALL BE INSERTED INTO THE FILTER BAG IN THE MANNER SPECIFIED BY THE MANUFACTURER AND SECURELY CLAMPED.

A SUITABLE MEANS OF ACCESSING THE BAG WITH MACHINERY REQUIRED FOR DISPOSAL PURPOSES MUST BE PROVIDED. FILTER BAGS SHALL BE REPLACED WHEN THEY BECOME ½ FULL. SPARE REPLACEMENT BAGS SHALL BE KEPT AVAILABLE FOR REPLACEMENT OF THOSE THAT HAVE FAILED OR ARE ½ FULL.

FILTER BAGS SHALL BE INSPECTED DAILY. IF ANY PROBLEM IS DETECTED, PUMPING SHALL CEASE IMMEDIATELY AND NOT RESUME UNTIL THE PROBLEM IS CORRECTED.

FILTER BAG
NO SCALE



J-HOOK DETAIL
(NOT TO SCALE)

J-HOOK MAINTENANCE:

1. INSPECT J-HOOK INSTALLATION AT REGULAR INTERVALS PER NPDES MONITORING REQUIREMENTS.
2. REPLACE TORN SILT FENCE FABRIC WITH NEW FENCE MATERIAL.
3. BENT OR BROKEN WIRES AND T-POLES SHALL BE REPLACED IMMEDIATELY.
4. SEDIMENT ACCUMULATION HIGHER THAN 1/3 OF INSTALLED HEIGHT OF FABRIC SHALL BE PROMPTLY REMOVED.

DATE:

PAGE:

GROUND STABILIZATION AND MATERIALS HANDLING PRACTICES FOR COMPLIANCE WITH THE NCG01 CONSTRUCTION GENERAL PERMIT
Implementing the details and specifications on this plan sheet will result in the construction activity being considered compliant with the Ground Stabilization and Materials Handling sections of the NCG01 Construction General Permit (Sections E and F, respectively). The permittee shall comply with the Erosion and Sediment Control plan approved by the delegated authority having jurisdiction. All details and specifications shown on this sheet may not apply depending on site conditions and the delegated authority having jurisdiction.

SECTION E: GROUND STABILIZATION

Required Ground Stabilization Timeframes		
Site Area Description	Stabilize within this many calendar days after ceasing land disturbance	Timeframe variations
(a) Perimeter dikes, swales, ditches, and perimeter slopes	7	None
(b) High Quality Water (HQW) Zones	7	None
(c) Slopes steeper than 3:1	7	If slopes are 10 feet or less in length and are not steeper than 2:1, 14 days are allowed
(d) Slopes 3:1 to 4:1	14	-7 days for slopes greater than 50' in length and with slopes steeper than 4:1 -7 days for perimeter dikes, swales, ditches, perimeter slopes and HQW Zones -10 days for Falls Lake Watershed
(e) Areas with slopes flatter than 4:1	14	-7 days for perimeter dikes, swales, ditches, perimeter slopes and HQW Zones -10 days for Falls Lake Watershed unless there is zero slope

Note: After the permanent cessation of construction activities, any areas with temporary ground stabilization shall be converted to permanent ground stabilization as soon as practicable but in no case longer than 90 calendar days after the last land disturbing activity. Temporary ground stabilization shall be maintained in a manner to render the surface stable against accelerated erosion until permanent ground stabilization is achieved.

GROUND STABILIZATION SPECIFICATION
Stabilize the ground sufficiently so that rain will not dislodge the soil. Use one of the techniques in the table below:

Temporary Stabilization	Permanent Stabilization
• Temporary grass seed covered with straw or other mulches and tackifiers. • Hydroseeding • Rolled erosion control products with or without temporary grass seed • Appropriately applied straw or other mulch • Plastic sheeting	• Permanent grass seed covered with straw or other mulches and tackifiers • Geotextile fabrics such as permanent soil reinforcement matting • Hydroseeding • Shrubs or other permanent plantings covered with mulch • Uniform and evenly distributed ground cover sufficient to restrain erosion • Structural methods such as concrete, asphalt or retaining walls • Rolled erosion control products with grass seed

POLYACRYLAMIDES (PAMS) AND FLOCCULANTS
1. Select flocculants that are appropriate for the soils being exposed during construction, selecting from the *NC DWR List of Approved PAMS/Flocculants.*
2. Apply flocculants at or before the inlets to Erosion and Sediment Control Measures.
3. Apply flocculants at the concentrations specified in the *NC DWR List of Approved PAMS/Flocculants* and in accordance with the manufacturer's instructions.
4. Provide ponding area for containment of treated Stormwater before discharging offsite.
5. Store flocculants in leak-proof containers that are kept under storm-resistant cover or surrounded by secondary containment structures.

EQUIPMENT AND VEHICLE MAINTENANCE
1. Maintain vehicles and equipment to prevent discharge of fluids.
2. Provide drip pans under any stored equipment.
3. Identify leaks and repair as soon as feasible, or remove leaking equipment from the project.
4. Collect all spent fluids, store in separate containers and properly dispose as hazardous waste (recycle when possible).
5. Remove leaking vehicles and construction equipment from service until the problem has been corrected.
6. Bring used fuels, lubricants, coolants, hydraulic fluids and other petroleum products to a recycling or disposal center that handles these materials.

LITTER, BUILDING MATERIAL AND LAND CLEARING WASTE
1. Never bury or burn waste. Place litter and debris in approved waste containers.
2. Provide a sufficient number and size of waste containers (e.g dumpster, trash receptacle) on site to contain construction and domestic wastes.
3. Locate waste containers at least 50 feet away from storm drain inlets and surface waters unless no other alternatives are reasonably available.
4. Locate waste containers on areas that do not receive substantial amounts of runoff from upland areas and does not drain directly to a storm drain, stream or wetland.
5. Cover waste containers at the end of each workday and before storm events or provide secondary containment. Repair or replace damaged waste containers.
6. Anchor all lightweight items in waste containers during times of high winds.
7. Empty waste containers as needed to prevent overflow. Clean up immediately if containers overflow.
8. Dispose waste off-site at an approved disposal facility.
9. On business days, clean up and dispose of waste in designated waste containers.

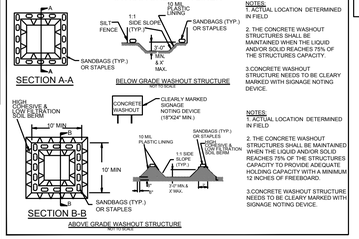
PAINT AND OTHER LIQUID WASTE
1. Do not dump paint and other liquid waste into storm drains, streams or wetlands.
2. Locate paint washouts at least 50 feet away from storm drain inlets and surface waters unless no other alternatives are reasonably available.
3. Contain liquid wastes in a controlled area.
4. Containment must be labeled, sized and placed appropriately for the needs of site.
5. Prevent the discharge of soaps, solvents, detergents and other liquid wastes from construction sites.

PORTABLE TOILETS
1. Install portable toilets on level ground, at least 50 feet away from storm drains, streams or wetlands unless there is no alternative reasonably available. If 50 foot offset is not attainable, provide relocation of portable toilet behind silt fence or place on a gravel pad and surround with sand bags.
2. Provide staking or anchoring of portable toilets during periods of high winds or in high foot traffic areas.
3. Monitor portable toilets for leaking and properly dispose of any leaked material. Utilize a licensed sanitary waste hauler to remove leaking portable toilets and replace with properly operating unit.

EARTHEN STOCKPILE MANAGEMENT
1. Show stockpile locations on plans. Locate earthen-material stockpile areas at least 50 feet away from storm drain inlets, sediment basins, perimeter sediment controls and surface waters unless it can be shown no other alternatives are reasonably available.
2. Protect stockpile with silt fence installed along toe of slope with a minimum offset of five feet from the toe of stockpile.
3. Provide stable stone access point when feasible.
4. Stabilize stockpile within the timeframes provided on this sheet and in accordance with the approved plan and any additional requirements. Soil stabilization is defined as vegetative, physical or chemical coverage techniques that will restrain accelerated erosion on disturbed soils for temporary or permanent control needs.

HAZARDOUS AND TOXIC WASTE
1. Create designated hazardous waste collection areas on-site.
2. Place hazardous waste containers under cover or in secondary containment.
3. Do not store hazardous chemicals, drums or bagged materials directly on the ground.

ONSITE CONCRETE WASHOUT STRUCTURE WITH LINER



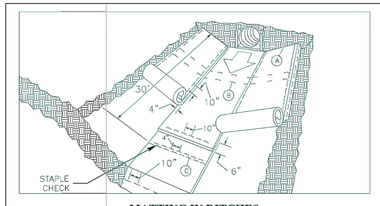
NOTES:
1. ACTUAL LOCATION DETERMINED IN FIELD
2. THE CONCRETE WASHOUT STRUCTURES SHALL BE MAINTAINED WHEN THE LIQUID AND/OR SOLID REACHES 75% OF THE STRUCTURES CAPACITY.
3. CONCRETE WASHOUT STRUCTURE NEEDS TO BE CLEARLY MARKED WITH SIGNAGE NOTING DEVICE.

NOTES:
1. ACTUAL LOCATION DETERMINED IN FIELD
2. THE CONCRETE WASHOUT STRUCTURES SHALL BE MAINTAINED WHEN THE LIQUID AND/OR SOLID REACHES 75% OF THE STRUCTURES CAPACITY TO PROVIDE ADEQUATE HOLDING CAPACITY WITH A MINIMUM 12 INCHES OF FREEBOARD.
3. CONCRETE WASHOUT STRUCTURE NEEDS TO BE CLEARLY MARKED WITH SIGNAGE NOTING DEVICE.

CONCRETE WASHOUTS
1. Do not discharge concrete or cement slurry from the site.
2. Dispose of, or recycle settled, hardened concrete residue in accordance with local and state solid waste regulations and at an approved facility.
3. Manage washout from mortar mixers in accordance with the above item and in addition place the mixer and associated materials on impervious barrier and within lot perimeter silt fence.
4. Install temporary concrete washouts per local requirements, where applicable. If an alternate method or product is to be used, contact your approval authority for review and approval. If local standard details are not available, use one of the two types of temporary concrete washouts provided on this detail.
5. Do not use concrete washouts for dewatering or storing defective curb or sidewalk sections. Stormwater accumulated within the washout may not be pumped into or discharged to the storm drain system or receiving surface waters. Liquid waste must be pumped out and removed from project.
6. Locate washouts at least 50 feet from storm drain inlets and surface waters unless it can be shown that no other alternatives are reasonably available. At a minimum, install protection of storm drain inlet(s) closest to the washout which could receive spills or overflow.
7. Locate washouts in an easily accessible area, on level ground and install a stone entrance pad in front of the washout. Additional controls may be required by the approving authority.
8. Install at least one sign directing concrete trucks to the washout within the project limits. Post signage on the washout itself to identify this location.
9. Remove leavings from the washout when at approximately 75% capacity to limit overflow events. Replace the tarp, sand bags or other temporary structural components when no longer functional. When utilizing alternative or proprietary products, follow manufacturer's instructions.
10. At the completion of the concrete work, remove remaining leavings and dispose of in an approved disposal facility. Fill pit, if applicable, and stabilize any disturbance caused by removal of washout.

HERBICIDES, PESTICIDES AND RODENTICIDES
1. Store and apply herbicides, pesticides and rodenticides in accordance with label restrictions.
2. Store herbicides, pesticides and rodenticides in their original containers with the label, which lists directions for use, ingredients and first aid steps in case of accidental poisoning.
3. Do not store herbicides, pesticides and rodenticides in areas where flooding is possible or where they may spill or leak into wells, stormwater drains, ground water or surface water. If a spill occurs, clean area immediately.
4. Do not stockpile these materials onsite.

NCG-01 GROUND COVER & MATERIALS HANDLING



MATTING IN DITCHES

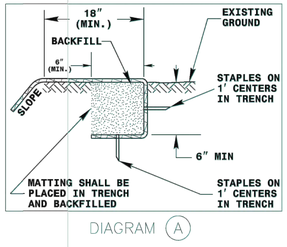
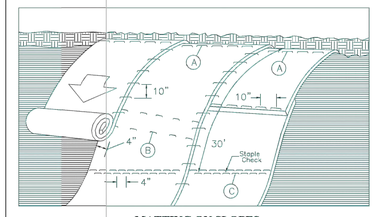


DIAGRAM (A)



MATTING ON SLOPES

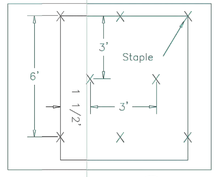


DIAGRAM (B)

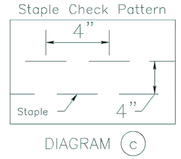


DIAGRAM (c)

WAKE COUNTY NORTH CAROLINA

REVISED: 1/2/2020

ROLLED EROSION CONTROL PRODUCT INSTALLATION DETAIL | A-10

No.	REVISIONS	DATE	BY
0	CD SUBMITTAL #1	08/01/2025	SREG
1	CID-25-06 V2	10/01/2025	SREG
2	CID-25-06 V3	03/02/2026	SREG

SEAL:

STRONGROCK ENGINEERING GROUP, PLLC | COMPANY LICENSE # P-2166
STRONG ROCK ENGINEERING GROUP, PLLC | SUITE 1110 RALEIGH, NC 27609 | INFORMATION@STRONGROCKGROUP.COM
305 CHURCH AT NORTH HILLS STREET, SUITE 1110 RALEIGH, NC 27609

STRONG ROCK PROJECT CID-25-06	
NOT FOR CONSTRUCTION	
SCALE	AS SHOWN
DESIGNED BY	SRG
DRAWN BY	SRG
CHECKED BY	SRG

MITCHELL MILL MARKET
TOWN OF ROLESVILLE, WAKE COUNTY, NORTH CAROLINA
CONSTRUCTION PLANS

EROSION CONTROL PLAN DETAILS

DRAWING SHEET
D-5.3

44 OF 47

THIS PLANSET AND ANY ASSOCIATED DOCUMENTS ARE PRELIMINARY AND NOT AUTHORIZED FOR CONSTRUCTION UNTIL SIGNED, DATED, AND OFFICIALLY RELEASED FOR CONSTRUCTION BY THE ENGINEER OF RECORD.

SEEDING SPECIFICATIONS:

SEEDBED PREPARATION:

1. CHISEL COMPACTED AREAS AND SPREAD TOPSOIL THREE INCHES DEEP OVER ADVERSESOIL CONDITIONS, IF AVAILABLE.
2. RIP THE ENTIRE AREA TO SIX INCHES DEEP.
3. REMOVE ALL LOOSE ROCK, ROOTS AND OTHER OBSTRUCTIONS, LEAVING SURFACE REASONABLY SMOOTH AND UNIFORM.
4. APPLY AGRICULTURAL LIME, FERTILIZER AND SUPERPHOSPHATE UNIFORMLY AND MIX WITH SOIL (SEE MIXTURE BELOW).
5. CONTINUE TILLAGE UNTIL A WELL-PULVERIZED, FIRM, REASONABLY UNIFORM SEEDBED IS PREPARED FOUR TO SIX INCHES DEEP.
6. SEED ON A FRESHLY PREPARED SEEDBED AND COVER SEED LIGHTLY WITH SEEDING EQUIPMENT OR CULTIPACK AFTER SEEDING.
7. MULCH IMMEDIATELY AFTER SEEDING AND ANCHOR MULCH.
8. INSPECT ALL SEEDED AREAS AND MAKE NECESSARY REPAIRS OR RESEEDINGS WITHIN THE PLANTING SEASON, IF POSSIBLE. IF STAND SHOULD BE MORE THAN 60% DAMAGED, REESTABLISH FOLLOWING THE ORIGINAL LIME, FERTILIZER AND SEEDING RATES.
9. CONSULT WAKE COUNTY SOIL & WATER OR NC STATE COOPERATIVE EXTENSION ON MAINTENANCE TREATMENT AND FERTILIZATION AFTER PERMANENT COVER IS ESTABLISHED.

MIXTURE:

AGRICULTURAL LIMESTONE	2 TONS/ACRE (3 TONS/ACRE IN CLAY SOILS)
FERTILIZER	1,000 LBS/ACRE - 10-10-10
SUPERPHOSPHATE	500 LBS/ACRE - 20% ANALYSIS
MULCH	2 TONS/ACRE - SMALL GRAIN STRAW
ANCHOR	ASPHALT EMULSION AT 400 GALS/ACRE

SEEDING SCHEDULE:

FOR SHOULDERS, SIDE DITCHES. SLOPES (MAX 3:1):

DATE	TYPE	PLANTING RATE
AUG 15-NOV 1	TALL FESCUE	300 LBS/ACRE
NOV 1-MAR 1	TALL FESCUE & ABRUZZI RYE	300 LBS/ACRE
MAR 1-APR 15	TALL FESCUE	300 LBS/ACRE
APR 15-JUN 30	HULLED COMMON BERMUDAGRASS	25 LBS/ACRE
JUL 1-AUG 15	TALL FESCUE AND BROWNTOP MILLET OR SORGHUM-SUDAN HYBRIDS***	125 LBS/ACRE (TALL FESCUE); 35 LBS/ACRE (BROWNTOP MILLET); 30 LBS/ACRE (SORGHUM-SUDAN HYBRIDS)

FOR SHOULDERS, SIDE DITCHES. SLOPES (MAX 3:1 TO 2:1):

DATE	TYPE	PLANTING RATE
MAR 1-JUN 1	SERICEA LESPEDEZA (SCARIFIED) AND USE THE FOLLOWING COMBINATIONS:	50 LBS/ACRE (SERICEA LESPEDEZA);
MAR 1-APR 15	ADD TALL FESCUE	120 LBS/ACRE
MAR 1-JUN 30	OR ADD WEEPING LOVE GRASS	10 LBS/ACRE
MAR 1-JUN 30	OR ADD HULLED COMMON BERMUDAGRASS	25 LBS/ACRE
JUL 1-SEPT 1	TALL FESCUE AND BROWNTOP MULLET OR SORGHUM-SUDAN HYBRIDS***	120 LBS/ACRE (TALL FESCUE); 35 LBS/ACRE (BROWNTOP MULLET); 30 LBS/ACRE (SORGHUM-SUDAN HYBRIDS)
SEPT 1-MAR 1	SERICEA LESPEDEZA (UNHULLED -UNSCARIFIED) AND TALL FESCUE	70 LBS/ACRE (SERICEA LESPEDEZA); 120 LBS/ACRE (TALL FESCUE)
NOV 1-MAR 1	AND ABRUZZI RYE	25 IBS/ACRE

CONSULT WAKE COUNTY SOIL & WATER CONSERVATION DISTRICT OR NC STATE COOPERATIVE EXTENSION FOR ADDITIONAL INFORMATION CONCERNING OTHER ALTERNATIVES FOR VEGETATION OF DENUDED AREAS. THE ABOVE VEGETATION RATES ARE THOSE THAT DO WELL UNDER LOCAL CONDITIONS; OTHER SEEDING RATE COMBINATIONS ARE POSSIBLE.

*** TEMPORARY:
RESEED ACCORDING TO OPTIMUM SEASON FOR DESIRED PERMANENT VEGETATION. DO NOT ALLOW TEMPORARY COVER TO GROW MORE THAN 12" IN HEIGHT BEFORE MOWING; OTHERWISE, FESCUE MAY BE SHADED OUT.

PART II, SECTION G, ITEM (4)
DRAW DOWN OF SEDIMENT BASINS FOR MAINTENANCE OR CLOSE OUT

Sediment basins and traps that receive runoff from drainage areas of one acre or more shall use outlet structures that withdraw water from the surface when these devices need to be drawn down for maintenance or close out unless this is infeasible. The circumstances in which it is not feasible to withdraw water from the surface shall be rare (for example, times with extended cold weather). Non-surface withdrawals from sediment basins shall be allowed only when all of the following criteria have been met:

(a) The E&SC plan authority has been provided with documentation of the non-surface withdrawal and the specific time periods or conditions in which it will occur. The non-surface withdrawal shall not commence until the E&SC plan authority has approved these items,
(b) The non-surface withdrawal has been reported as an anticipated bypass in accordance with Part III, Section C, Item (2)(c) and (d) of this permit,
(c) Dewatering discharges are treated with controls to minimize discharges of pollutants from stormwater that is removed from the sediment basin. Examples of appropriate controls include properly sited, designed and maintained dewatering tanks, weir tanks, and filtration systems,
(d) Vegetated, upland areas of the sites or a properly designed stone pad is used to the extent feasible at the outlet of the dewatering treatment devices described in Item (c) above,
(e) Velocity dissipation devices such as check dams, sediment traps, and riprap are provided at the discharge points of all dewatering devices, and
(f) Sediment removed from the dewatering treatment devices described in Item (c) above is disposed of in a manner that does not cause deposition of sediment into waters of the United States.

WAKE COUNTY NORTH CAROLINA
Environmental Services
TEL 919 856 7400
FAX 919 743 4772
Sedimentation & Erosion Control
336 Fayetteville St. • P.O. Box 550 • Raleigh, NC 27602

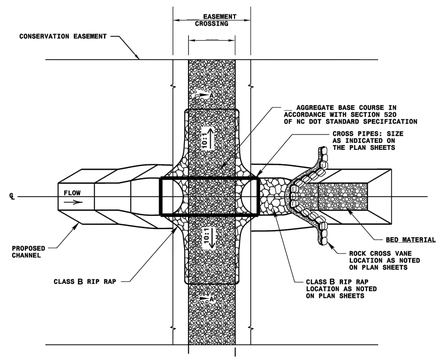
Effective September 1, 2008
Soil stockpiles shall be located on the approved plan and shall adhere to the following requirements:

Design Criteria

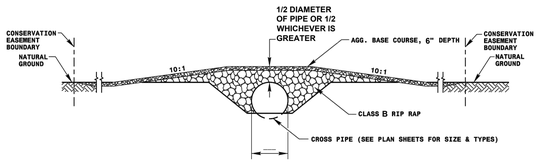
a. A 25-foot temporary maintenance and access easement shall be shown around all proposed stockpiles (erosion control measures surrounding the stockpile shall be shown at the outer limit of this easement).
b. Stockpile footprints shall be setback a minimum of 25' from adjacent property lines.
c. A note shall be provided on the approved plan that stockpile height shall not exceed 35 feet.
d. Stockpile slopes shall be 2:1 or flatter.
e. Approved BMPs shall be shown on a plan to control any potential sediment loss from a stockpile.
f. Stockpiling materials adjacent to a ditch, drainageway, watercourse, wetland, stream buffer, or other body of water shall be avoided unless an alternative location is demonstrated to be unavailable.
g. Any concentrated flow likely to affect the stockpile shall be diverted to an approved BMP.
h. Off-site soil or borrow areas must be in compliance with Wake County UDO and State Regulations. All spoil areas over an acre are required to have an approved sediment control plan. Developer/Contractor shall notify Wake County of any offsite disposal of soil, prior to disposal. Fill of FEMA Floodways and Non-encroachment Areas are prohibited except as otherwise provided by subsection 14-19-2 of the Wake County Unified Development Ordinance (certifications and permits required).

Maintenance Requirements to be Noted on the Plan

i. Seeding or covering stockpiles with tarps or mulch is required and will reduce erosion problems. Tarps should be keyed in at the top of the slope to keep water from running underneath the plastic.
j. If a stockpile is to remain for future use after the project is complete (builders, etc.), the financial responsible party must notify Wake County of a new responsible party for that stockpile.
k. The approved plan shall provide for the use of staged seeding and mulching on a continual basis while the stockpile is in use.
l. Establish and maintain a vegetative buffer at the toe of the slope (where practical).



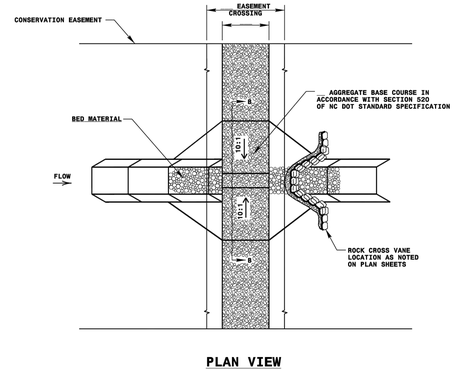
PLAN VIEW



SECTION A-A

STREAM CROSSING DETAIL - TYPE I
NOT TO SCALE

PERMANENT STREAM CROSSING



PLAN VIEW

STREAM CROSSING SEQUENCE - TYPE I

TYPE I CROSSINGS ARE CONSTRUCTED USING PIPE CULVERTS AS SPECIFIED ON THE PLANS. CULVERTS SHOULD BE INSTALLED IN ACCORDANCE WITH NCDOT SPECIFICATIONS. FOR CULVERTS UP TO 48" (1219 MM) DIAMETER, 20 PERCENT OF THE PIPE SHOULD BE BURIED BENEATH THE STREAMBED. STREAM CROSSINGS SHOULD BE INSTALLED TO PROVIDE POSITIVE DRAINAGE IN ALL DIRECTIONS. FOR GRADE CONTROL PURPOSES, A ROCK CROSS VANE SHALL BE INSTALLED JUST DOWNSTREAM OF EACH STREAM CROSSING AS SHOWN ON THE PLANS OR AS DIRECTED. THE STREAMBED BETWEEN THE OUTLET OF THE CULVERT AND THE HEAD OF THE CROSS VANE SHOULD BE PLATED WITH CLASS B RIPRAP AS SHOWN ON THE PLANS OR AS DIRECTED. CLASS B RIPRAP SHOULD ALSO BE INSTALLED ON THE CROSSING ROAD SIDESLOPES AS SHOWN ON THE PLANS.

NOTE:
1. BURY 20% OF PIPE DIAMETER UP TO 48" PIPE, AND BURY 1' OF PIPE FOR DIAMETERS ABOVE 48".

THIS PLANSET AND ANY ASSOCIATED DOCUMENTS ARE PRELIMINARY AND NOT AUTHORIZED FOR CONSTRUCTION UNTIL SIGNED, DATED, AND OFFICIALLY RELEASED FOR CONSTRUCTION BY THE ENGINEER OF RECORD.

No.	REVISIONS	DATE	BY
0	CD SUBMITTAL #1	08/01/2025	SREG
1	CID-25-06 V2	10/01/2025	SREG
2	CID-25-06 V3	03/02/2026	SREG

SEAL:

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STRONG ROCK PROJECT CID-25-06	
NOT FOR CONSTRUCTION	
SCALE	AS SHOWN
DESIGNED BY	SRG
DRAWN BY	SRG
CHECKED BY	SRG

MITCHELL MILL MARKET
TOWN OF ROLESVILLE, WAKE COUNTY, NORTH CAROLINA
CONSTRUCTION PLANS

EROSION CONTROL PLAN DETAILS

DRAWING SHEET
D-5.4

GROUND STABILIZATION AND MATERIALS HANDLING PRACTICES FOR COMPLIANCE WITH THE NCG01 CONSTRUCTION GENERAL PERMIT

Implementing the details and specifications on this plan sheet will result in the construction activity being considered compliant with the Ground Stabilization and Materials Handling sections of the NCG01 Construction General Permit (Sections E and F, respectively). The permittee shall comply with the Erosion and Sediment Control plan approved by the delegated authority having jurisdiction. All details and specifications shown on this sheet may not apply depending on site conditions and the delegated authority having jurisdiction.

SECTION E: GROUND STABILIZATION

Required Ground Stabilization Timeframes		
Site Area Description	**Stabilize within this many calendar days after ceasing land disturbance**	**Timeframe variations**
(a) Perimeter dikes, swales, ditches, and perimeter slopes	7	None
(b) High Quality Water (HQW) Zones	7	None
(c) Slopes steeper than 3:1	7	If slopes are 10' or less in length and are not steeper than 2:1, 14 days are allowed
(d) Slopes 3:1 to 4:1	14	-7 days for slopes greater than 50' in length and with slopes steeper than 4:1 -7 days for perimeter dikes, swales, ditches, perimeter slopes and HQW Zones -10 days for Falls Lake Watershed
(e) Areas with slopes flatter than 4:1	14	-7 days for perimeter dikes, swales, ditches, perimeter slopes and HQW Zones -10 days for Falls Lake Watershed unless there is zero slope

Note: After the permanent cessation of construction activities, any areas with temporary ground stabilization shall be converted to permanent ground stabilization as soon as practicable but in no case longer than 90 calendar days after the last land disturbing activity. Temporary ground stabilization shall be maintained in a manner to render the surface stable against accelerated erosion until permanent ground stabilization is achieved.

GROUND STABILIZATION SPECIFICATION

Stabilize the ground sufficiently so that rain will not dislodge the soil. Use one of the techniques in the table below:

Temporary Stabilization	Permanent Stabilization
• Temporary grass seed covered with straw or other mulches and tackifiers • Hydroseeding • Rolled erosion control products with or without temporary grass seed • Appropriately applied straw or other mulch • Plastic sheeting	• Permanent grass seed covered with straw or other mulches and tackifiers • Geotextile fabrics such as permanent soil reinforcement matting • Hydroseeding • Shrubs or other permanent plantings covered with mulch • Uniform and evenly distributed ground cover sufficient to restrain erosion • Structural methods such as concrete, asphalt or retaining walls • Rolled erosion control products with grass seed

POLYACRYLAMIDES (PAMS) AND FLOCCULANTS

1. Select flocculants that are appropriate for the soils being exposed during construction, selecting from the *NC DWR List of Approved PAMS/Flocculants*.
2. Apply flocculants at or before the inlets to Erosion and Sediment Control Measures.
3. Apply flocculants at the concentrations specified in the *NC DWR List of Approved PAMS/Flocculants* and in accordance with the manufacturer's instructions.
4. Provide ponding area for containment of treated Stormwater before discharging offsite.
5. Store flocculants in leak-proof containers that are kept under storm-resistant cover or surrounded by secondary containment structures.

EQUIPMENT AND VEHICLE MAINTENANCE

1. Maintain vehicles and equipment to prevent discharge of fluids.
2. Provide drip pans under any stored equipment.
3. Identify leaks and repair as soon as feasible, or remove leaking equipment from the project.
4. Collect all spent fluids, store in separate containers and properly dispose as hazardous waste (recycle when possible).
5. Remove leaking vehicles and construction equipment from service until the problem has been corrected.
6. Bring used fuels, lubricants, coolants, hydraulic fluids and other petroleum products to a recycling or disposal center that handles these materials.

LITTER, BUILDING MATERIAL AND LAND CLEARING WASTE

1. Never bury or burn waste. Place litter and debris in approved waste containers.
2. Provide a sufficient number and size of waste containers (e.g dumpster, trash receptacle) on site to contain construction and domestic wastes.
3. Locate waste containers at least 50 feet away from storm drain inlets and surface waters unless no other alternatives are reasonably available.
4. Locate waste containers on areas that do not receive substantial amounts of runoff from upland areas and does not drain directly to a storm drain, stream or wetland.
5. Cover waste containers at the end of each workday and before storm events or provide secondary containment. Repair or replace damaged waste containers.
6. Anchor all lightweight items in waste containers during times of high winds.
7. Empty waste containers as needed to prevent overflow. Clean up immediately if containers overflow.
8. Dispose waste off-site at an approved disposal facility.
9. On business days, clean up and dispose of waste in designated waste containers.

PAINT AND OTHER LIQUID WASTE

1. Do not dump paint and other liquid waste into storm drains, streams or wetlands.
2. Locate paint washouts at least 50 feet away from storm drain inlets and surface waters unless no other alternatives are reasonably available.
3. Contain liquid wastes in a controlled area.
4. Containment must be labeled, sized and placed appropriately for the needs of site.
5. Prevent the discharge of soaps, solvents, detergents and other liquid wastes from construction sites.

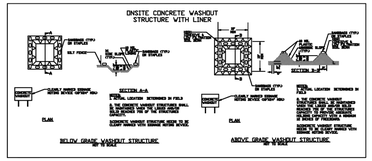
PORTABLE TOILETS

1. Install portable toilets on level ground, at least 50 feet away from storm drains, streams or wetlands unless there is no alternative reasonably available. If 50 foot offset is not attainable, provide relocation of portable toilet behind silt fence or place on a gravel pad and surround with sand bags.
2. Provide staking or anchoring of portable toilets during periods of high winds or in high foot traffic areas.
3. Monitor portable toilets for leaking and properly dispose of any leaked material. Utilize a licensed sanitary waste hauler to remove leaking portable toilets and replace with properly operating unit.

EARTHEN STOCKPILE MANAGEMENT

1. Show stockpile locations on plans. Locate earthen-material stockpile areas at least 50 feet away from storm drain inlets, sediment basins, perimeter sediment controls and surface waters unless it can be shown no other alternatives are reasonably available.
2. Protect stockpile with silt fence installed along toe of slope with a minimum offset of five feet from the toe of stockpile.
3. Provide stable stone access point when feasible.
4. Stabilize stockpile within the timeframes provided on this sheet and in accordance with the approved plan and any additional requirements. Soil stabilization is defined as vegetative, physical or chemical coverage techniques that will restrain accelerated erosion on disturbed soils for temporary or permanent control needs.

NORTH CAROLINA Environmental Quality



CONCRETE WASHOUTS

1. Do not discharge concrete or cement slurry from the site.
2. Dispose of, or recycle settled, hardened concrete residue in accordance with local and state solid waste regulations and at an approved facility.
3. Manage washout from mortar mixers in accordance with the above item and in addition place the mixer and associated materials on impervious barrier and within lot perimeter silt fence.
4. Install temporary concrete washouts per local requirements, where applicable. If an alternate method or product is to be used, contact your approval authority for review and approval. If local standard details are not available, use one of the two types of temporary concrete washouts provided on this detail.
5. Do not use concrete washouts for dewatering or storing defective curb or sidewalk sections. Stormwater accumulated within the washout may not be pumped into or discharged to the storm drain system or receiving surface waters. Liquid waste must be pumped out and removed from project.
6. Locate washouts at least 50 feet from storm drain inlets and surface waters unless it can be shown that no other alternatives are reasonably available. At a minimum, install protection of storm drain inlet(s) closest to the washout which could receive spills or overflow.
7. Locate washouts in an easily accessible area, on level ground and install a stone entrance pad in front of the washout. Additional controls may be required by the approving authority.
8. Install at least one sign directing concrete trucks to the washout within the project limits. Post signage on the washout itself to identify this location.
9. Remove leavings from the washout when at approximately 75% capacity to limit overflow events. Replace the tarp, sand bags or other temporary structural components when no longer functional. When utilizing alternative or proprietary products, follow manufacturer's instructions.
10. At the completion of the concrete work, remove remaining leavings and dispose of in an approved disposal facility. Fill pit, if applicable, and stabilize any disturbance caused by removal of washout.

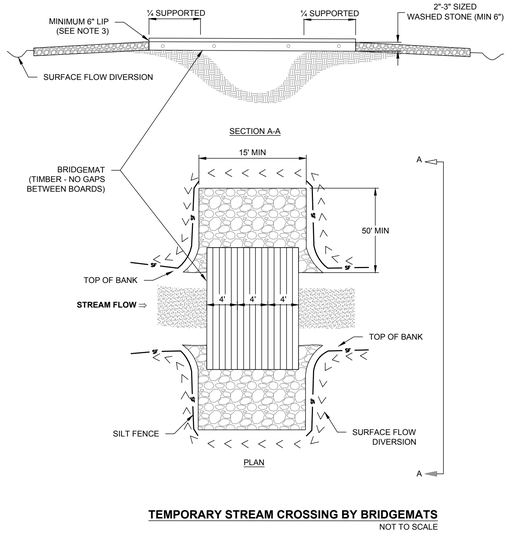
HERBICIDES, PESTICIDES AND RODENTICIDES

1. Store and apply herbicides, pesticides and rodenticides in accordance with label restrictions.
2. Store herbicides, pesticides and rodenticides in their original containers with the label, which lists directions for use, ingredients and first aid steps in case of accidental poisoning.
3. Do not store herbicides, pesticides and rodenticides in areas where flooding is possible or where they may spill or leak into wells, stormwater drains, ground water or surface water. If a spill occurs, clean area immediately.
4. Do not stockpile these materials onsite.

HAZARDOUS AND TOXIC WASTE

1. Create designated hazardous waste collection areas on-site.
2. Place hazardous waste containers under cover or in secondary containment.
3. Do not store hazardous chemicals, drums or bagged materials directly on the ground.

NCG01 GROUND STABILIZATION AND MATERIALS HANDLING | EFFECTIVE: 04/01/19



TEMPORARY STREAM CROSSING BY BRIDGEMATS
NOT TO SCALE

PART III
SELF-INSPECTION, RECORDKEEPING AND REPORTING

SECTION A: SELF-INSPECTION

Self-inspections are required during normal business hours in accordance with the table below. When adverse weather or site conditions would cause the safety of the inspection personnel to be in jeopardy, the inspection may be delayed until the next business day on which it is safe to perform the inspection. In addition, when a storm event of equal to or greater than 1.0 inch occurs outside of normal business hours, the self-inspection shall be performed upon the commencement of the next business day. Any time when inspections were delayed shall be noted in the Inspection Record.

Inspect	Frequency (during normal business hours)	Inspection records must include:
(1) Rain gauge maintained in good working order	Daily	Daily rainfall amounts. If no daily rain gauge observations are made during weekend or holiday periods, and no individual-day rainfall information is available, record the cumulative rain measurement for those un-attended days (and this will determine if a site inspection is needed). Days on which no rainfall occurred shall be recorded as "zero." The permittee may use another rain-monitoring device approved by the Division.
(2) E&SC Measures	At least once per 7 calendar days and within 24 hours of a rain event ≥ 1.0 inch in 24 hours	1. Identification of the measures inspected, 2. Date and time of the inspection, 3. Name of the person performing the inspection, 4. Indication of whether the measures were operating properly, 5. Description of maintenance needs for the measure, 6. Description, evidence, and date of corrective actions taken.
(3) Stormwater discharge outfalls (SDCs)	At least once per 7 calendar days and within 24 hours of a rain event ≥ 1.0 inch in 24 hours	1. Identification of the discharge outfalls inspected, 2. Date and time of the inspection, 3. Name of the person performing the inspection, 4. Evidence of indicators of stormwater pollution such as oil sheen, floating or suspended solids or discoloration, 5. Indication of visible sediment leaving the site, 6. Description, evidence, and date of corrective actions taken.
(4) Perimeter of site	At least once per 7 calendar days and within 24 hours of a rain event ≥ 1.0 inch in 24 hours	If visible sedimentation is found outside site limits, then a record of the following shall be made: 1. Actions taken to clean up or stabilize the sediment that has left the site limits, 2. Description, evidence, and date of corrective actions taken, and 3. An explanation as to the actions taken to control future releases.
(5) Streams or wetlands onsite or offsite (where accessible)	At least once per 7 calendar days and within 24 hours of a rain event ≥ 1.0 inch in 24 hours	If the stream or wetbnd has increased visible sedimentation or a stream has visible increased turbidity from the construction activity, then a record of the following shall be made: 1. Description, evidence and date of corrective actions taken, and 2. Records of the required reports to the appropriate Division Regional Office per Part III, Section C, Item (2)(a) of this permit.
(6) Ground stabilization measures	After each phase of grading	1. The phase of grading (installation of perimeter E&SC measures, clearing and grubbing, installation of storm drainage facilities, completion of all land-disturbing activity, construction or redevelopment, permanent ground cover). 2. Documentation that the required ground stabilization measures have been provided within the required timeframe or an assurance that they will be provided as soon as possible.

NOTE: The rain inspection resets the required 7 calendar day inspection requirement.

PART III
SELF-INSPECTION, RECORDKEEPING AND REPORTING

SECTION B: RECORDKEEPING

1. E&SC Plan Documentation

The approved E&SC plan as well as any approved deviation shall be kept on the site. The approved E&SC plan must be kept up-to-date throughout the coverage under this permit. The following items pertaining to the E&SC plan shall be kept on site and available for inspection at all times during normal business hours.

Item to Document	Documentation Requirements
(a) Each E&SC measure has been installed and does not significantly deviate from the locations, dimensions and relative elevations shown on the approved E&SC plan.	Initial and date each E&SC measure on a copy of the approved E&SC plan or complete, date and sign an inspection report that lists each E&SC measure shown on the approved E&SC plan. This documentation is required upon the initial installation of the E&SC measures or if the E&SC measures are modified after initial installation.
(b) A phase of grading has been completed.	Initial and date a copy of the approved E&SC plan or complete, date and sign an inspection report to indicate completion of the construction phase.
(c) Ground cover is located and installed in accordance with the approved E&SC plan.	Initial and date a copy of the approved E&SC plan or complete, date and sign an inspection report to indicate compliance with approved ground cover specifications.
(d) The maintenance and repair requirements for all E&SC measures have been performed.	Complete, date and sign an inspection report.
(e) Corrective actions have been taken to E&SC measures.	Initial and date a copy of the approved E&SC plan or complete, date and sign an inspection report to indicate the completion of the corrective action.

2. Additional Documentation to be Kept on Site

In addition to the E&SC plan documents above, the following items shall be kept on the site and available for inspectors at all times during normal business hours, unless the Division provides a site-specific exemption based on unique site conditions that make this requirement not practical:

(a) This General Permit as well as the Certificate of Coverage, after it is received.

(b) Records of inspections made during the previous twelve months. The permittee shall record the required observations on the Inspection Record Form provided by the Division or a similar inspection form that includes all the required elements. Use of electronically-available records in lieu of the required paper copies will be allowed if shown to provide equal access and utility as the hard-copy records.

3. Documentation to be Retained for Three Years

All data used to complete the e-NOI and all inspection records shall be maintained for a period of three years after project completion and made available upon request. [40 CFR 122.41]

PART III
SELF-INSPECTION, RECORDKEEPING AND REPORTING

SECTION C: REPORTING

1. Occurrences that Must be Reported

Permittees shall report the following occurrences:

(a) Visible sediment deposition in a stream or wetland.

(b) Oil spills if:
- They are 25 gallons or more,
- They are less than 25 gallons but cannot be cleaned up within 24 hours,
- They cause sheen on surface waters (regardless of volume), or
- They are within 100 feet of surface waters (regardless of volume).

(c) Releases of hazardous substances in excess of reportable quantities under Section 311 of the Clean Water Act (Ref: 40 CFR 110.3 and 40 CFR 117.3) or Section 102 of CERCLA (Ref: 40 CFR 302.4) or G.S. 143-215.85.

(d) Anticipated bypasses and unanticipated bypasses.

(e) Noncompliance with the conditions of this permit that may endanger health or the environment.

2. Reporting Timeframes and Other Requirements

After a permittee becomes aware of an occurrence that must be reported, he shall contact the appropriate Division regional office within the timeframes and in accordance with the other requirements listed below. Occurrences outside normal business hours may also be reported to the Department's Environmental Emergency Center personnel at (800) 858-0368.

Occurrence	Reporting Timeframes (After Discovery) and Other Requirements
(a) Visible sediment deposition in a stream or wetland	• ***Within 24 hours***, an oral or electronic notification. • ***Within 7 calendar days***, a report that contains a description of the sediment and actions taken to address the cause of the deposition. Division staff may waive the requirement for a written report on a case-by-case basis. • If the stream is named on the NC 303(d) list as impaired for sediment-related causes, the permittee may be required to perform additional monitoring, inspections or apply more stringent practices if staff determine that additional requirements are needed to assure compliance with the federal or state impaired-waters conditions.
(b) Oil spills and release of hazardous substances per Item 1(b)-(c) above	• ***Within 24 hours***, an oral or electronic notification. The notification shall include information about the date, time, nature, volume and location of the spill or release.
(c) Anticipated bypasses [40 CFR 122.41(m)(3)]	• ***A report at least ten days before the date of the bypass, if possible***. The report shall include an evaluation of the anticipated quality and effect of the bypass.
(d) Unanticipated bypasses [40 CFR 122.41(m)(3)]	• ***Within 24 hours***, an oral or electronic notification. • ***Within 7 calendar days***, a report that includes an evaluation of the quality and effect of the bypass.
(e) Noncompliance with the conditions of this permit that may endanger health or the environment(40 CFR 122.41(l)(7)]	• ***Within 24 hours***, an oral or electronic notification. • ***Within 7 calendar days***, a report that contains a description of the noncompliance, and its causes; the period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected, the anticipated time noncompliance is expected to continue; and steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance. [40 CFR 122.41(l)(6). • Division staff may waive the requirement for a written report on a case-by-case basis.

PART II, SECTION G, ITEM (4)
DRAW DOWN OF SEDIMENT BASINS FOR MAINTENANCE OR CLOSE OUT

Sediment basins and traps that receive runoff from drainage areas of one acre or more shall use outlet structures that withdraw water from the surface when these devices need to be drawn down for maintenance or close out unless this is infeasible. The circumstances in which it is not feasible to withdraw water from the surface shall be rare (for example, times with extended cold weather). Non-surface withdrawals from sediment basins shall be allowed only when all of the following criteria have been met:

(a) The E&SC plan authority has been provided with documentation of the non-surface withdrawal and the specific time periods or conditions in which it will occur. The non-surface withdrawal shall not commence until the E&SC plan authority has approved these items,
(b) The non-surface withdrawal has been reported as an anticipated bypass in accordance with Part III, Section C, Item (2)(c) and (d) of this permit,
(c) Dewatering discharges are treated with controls to minimize discharges of pollutants from stormwater that is removed from the sediment basin. Examples of appropriate controls include properly sited, designed and maintained dewatering tanks, weir tanks, and filtration systems,
(d) Vegetated, upland areas of the sites or a properly designed stone pad is used to the extent feasible at the outlet of the dewatering treatment devices described in Item (c) above,
(e) Velocity dissipation devices such as check dams, sediment traps, and riprap are provided at the discharge points of all dewatering devices, and
(f) Sediment removed from the dewatering treatment devices described in Item (c) above is disposed of in a manner that does not cause deposition of sediment into waters of the United States.

NORTH CAROLINA Environmental Quality

NCG01 SELF-INSPECTION, RECORDKEEPING AND REPORTING | EFFECTIVE: 04/01/19

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MITCHELL MILL MARKET
TOWN OF ROLESVILLE, WAKE COUNTY, NORTH CAROLINA
CONSTRUCTION PLANS

EROSION CONTROL PLAN DETAILS

DRAWING SHEET
D-5.5

Mitchell Mills Market

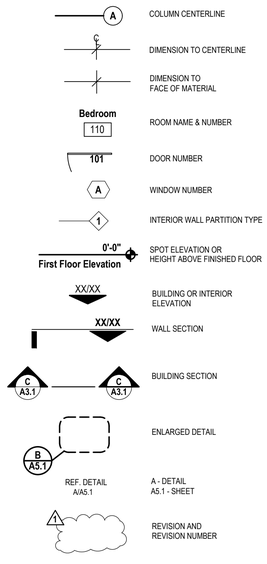
Rolesville, NC 27571
Wake County

Lisle Architecture & Design, Inc.
614 Market Street
Wilmington, North Carolina 28401
(910) 763-6053

Abbreviations

A.C.T.	ACOUSTICAL CEILING TILE	INSUL.	INSULATION
ADJ.	ADJUSTABLE	JST.BRG.	JOIST BEARING
A.F.F.	ABOVE FINISHED FLOOR	LAV.	LAVATORY
ALUM.	ALUMINUM	MAX.	MAXIMUM
ALT.	ALTERNATE	M.B.S.	METAL BUILDING SUPPLIER
ANOD.	ANODIZED	MECH.	MECHANICAL
BD.	BOARD	MIN.	MINIMUM
BLDG.	BUILDING	MISC.	MISCELLANEOUS
BM.	BEAM	M.O.	MASONRY OPENING
BOT.	BOTTOM	MTD.	MOUNTED
BRG. HT.	BEARING HEIGHT	MTL.	METAL
CL	CENTER LINE	O.C.	ON CENTER
CLG.	CEILING	O.H.	OPPOSITE HAND
CLR.	CLEAR	PLYWD.	PLYWOOD
C.J.	CONTROL JOINT	P.T.	PRESSURE TREATED
C.M.U.	CONCRETE MASONRY UNIT	PT (D)	PAINT (ED)
COL.	COLUMN	REF.	REFER, REFERENCE
CONC.	CONCRETE	REINF.	REINFORCING
CONT.	CONTINUOUS	RM.	ROOM
DBL.	DOUBLE	ROT.	ROTATED
DET.	DETAIL	S.C.	SOLID CORE
DR.	DOOR	SCHED.	SCHEDULE (ED)
D.S.	DOWNSPOUT	SHT.	SHEET
DWG.	DRAWING	SIM.	SIMILAR
E.J.	EXPANSION JOINT	SPEC.	SPECIFICATION (S)
ELEV.	ELEVATION	STD.	STANDARD
ELEC.	ELECTRICAL	STL.	STEEL
EQ.	EQUAL	STRUCT.	STRUCTURE (AL)
E.W.C.	ELECTRIC WATER COOLER	TEMP.	TEMPERED
EXP.	EXPANSION	T.O.M.	TOP OF MASONRY
EXT.	EXTERIOR	T.O.P.	TOP OF PARAPET
F.F.	FINISH FLOOR	T.O.S.	TOP OF STEEL
FIN.	FINISH (ED)	T.O.W.	TOP OF WALL
FLR.	FLOOR	T.S.	TUBULAR STEEL
F.O.C.	FACE OF CONCRETE	TYP.	TYPICAL
F.O.G.B.	FACE OF GRADE BEAM	U.N.O	UNLESS NOTED OTHERWISE
F.O.M.	FACE OF MASONRY	V.C.T.	VINYL COMPOSITION TILE
F.O.S.	FACE OF STUD	VERT.	VERTICAL
F.R.P.	FIBERGLASS REINFORCED PANEL	W.C.	WATER CLOSET
GA.	GAUGE, OR GAGE	WD.	WOOD
GL.	GLASS	W.H.	WATER HEATER
GYP. BD.	GYPSUM BOARD	W/	WITH
H.B.	HOSE BIB		
H.C.	HOLLOW CORE		
HDWR.	HARDWARE		
HT.	HEIGHT		
H.V.A.C.	HEATING/VENTILATING/ AIR CONDITIONING		

Legend



Vicinity Map

Index of Drawings

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A2.1 Exterior Elevations
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R1.1 Schematic Exterior Renderings
R1.2 Schematic Exterior Renderings

BUILDING B

CR Cover Sheet
A1.1 Floor Plan
A2.1 Exterior Elevations
A2.2 Exterior Elevations
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BUILDING C

CR Cover Sheet
A1.1 Floor Plan
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BUILDING D

CR Cover Sheet
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BUILDING E

CR Cover Sheet
A1.1 Floor Plan
A2.1 Exterior Elevations
A2.2 Exterior Elevations
R1.1 Schematic Exterior Renderings

PROJECT NO: 24063
RELEASE: 03.01.26

NO.	REV./SUB.	DATE

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SHEET TITLE - NUMBER

Cover Sheet

CR

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Mitchell Mills Market Building A

34

Rolesville, NC 27571
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Abbreviations

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BOT.	BOTTOM	MTD.	MOUNTED
BRG. HT.	BEARING HEIGHT	MTL.	METAL
CL	CENTER LINE	O.C.	ON CENTER
CLG.	CEILING	O.H.	OPPOSITE HAND
CLR.	CLEAR	PLYWD.	PLYWOOD
C.J.	CONTROL JOINT	P.T.	PRESSURE TREATED
C.M.U.	CONCRETE MASONRY UNIT	PT (D)	PAINT (ED)
COL.	COLUMN	REF.	REFER, REFERENCE
CONC.	CONCRETE	REINF.	REINFORCING
CONT.	CONTINUOUS	RM.	ROOM
DBL.	DOUBLE	ROT.	ROTATED
DET.	DETAIL	S.C.	SOLID CORE
DR.	DOOR	SCHED.	SCHEDULE (ED)
D.S.	DOWNSPOUT	SHT.	SHEET
DWG.	DRAWING	SIM.	SIMILAR
E.J.	EXPANSION JOINT	SPEC.	SPECIFICATION (S)
ELEV.	ELEVATION	STD.	STANDARD
ELEC.	ELECTRICAL	STL.	STEEL
EQ.	EQUAL	STRUCT.	STRUCTURE (AL)
E.W.C.	ELECTRIC WATER COOLER	TEMP.	TEMPERED
EXP.	EXPANSION	T.O.M.	TOP OF MASONRY
EXT.	EXTERIOR	T.O.P.	TOP OF PARAPET
F.F.	FINISH FLOOR	T.O.S.	TOP OF STEEL
FIN.	FINISH (ED)	T.O.W.	TOP OF WALL
FLR.	FLOOR	T.S.	TUBULAR STEEL
F.O.C.	FACE OF CONCRETE	TYP.	TYPICAL
F.O.G.B.	FACE OF GRADE BEAM	U.N.O	UNLESS NOTED OTHERWISE
F.O.M.	FACE OF MASONRY	V.C.T.	VINYL COMPOSITION TILE
F.O.S.	FACE OF STUD	VERT.	VERTICAL
F.R.P.	FIBERGLASS REINFORCED PANEL	W.C.	WATER CLOSET
GA.	GAUGE, OR GAGE	WD.	WOOD
GL.	GLASS	W.H.	WATER HEATER
GYP. BD.	GYPSUM BOARD	W/	WITH
H.B.	HOSE BIB		
H.C.	HOLLOW CORE		
HDWR.	HARDWARE		
HT.	HEIGHT		
H.V.A.C.	HEATING/VENTILATING/ AIR CONDITIONING		

Legend

- A — COLUMN CENTERLINE
- C — DIMENSION TO CENTERLINE
- DIMENSION TO FACE OF MATERIAL
- Bedroom / 110 — ROOM NAME & NUMBER
- 101 — DOOR NUMBER
- A — WINDOW NUMBER
- 1 — INTERIOR WALL PARTITION TYPE
- 0'-0" / First Floor Elevation — SPOT ELEVATION OR HEIGHT ABOVE FINISHED FLOOR
- XX/XX — BUILDING OR INTERIOR ELEVATION
- XX/XX — WALL SECTION
- C A3.1 / C A3.1 — BUILDING SECTION
- B A5.1 — ENLARGED DETAIL
- REF. DETAIL A/A5.1 — A - DETAIL A5.1 - SHEET
- 1 — REVISION AND REVISION NUMBER

Vicinity Map

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ARCHITECTURAL

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A2.1 Exterior Elevations
A2.2 Exterior Elevations
R1.1 Schematic Exterior Renderings
R1.2 Schematic Exterior Renderings

PROJECT NO: 24063
RELEASE: 03.01.26

NO.	REV./SUB.	DATE

Site Submission

MITCHELL MILLS MARKET
Building A - 25,000 SF
Rolesville, NC 27571

Lisle Architecture & Design, Inc.
614 Market Street
Wilmington, NC 28401
(910) 763.6053
Raleigh, NC (919) 980.0283
www.LisleArchitecture.com

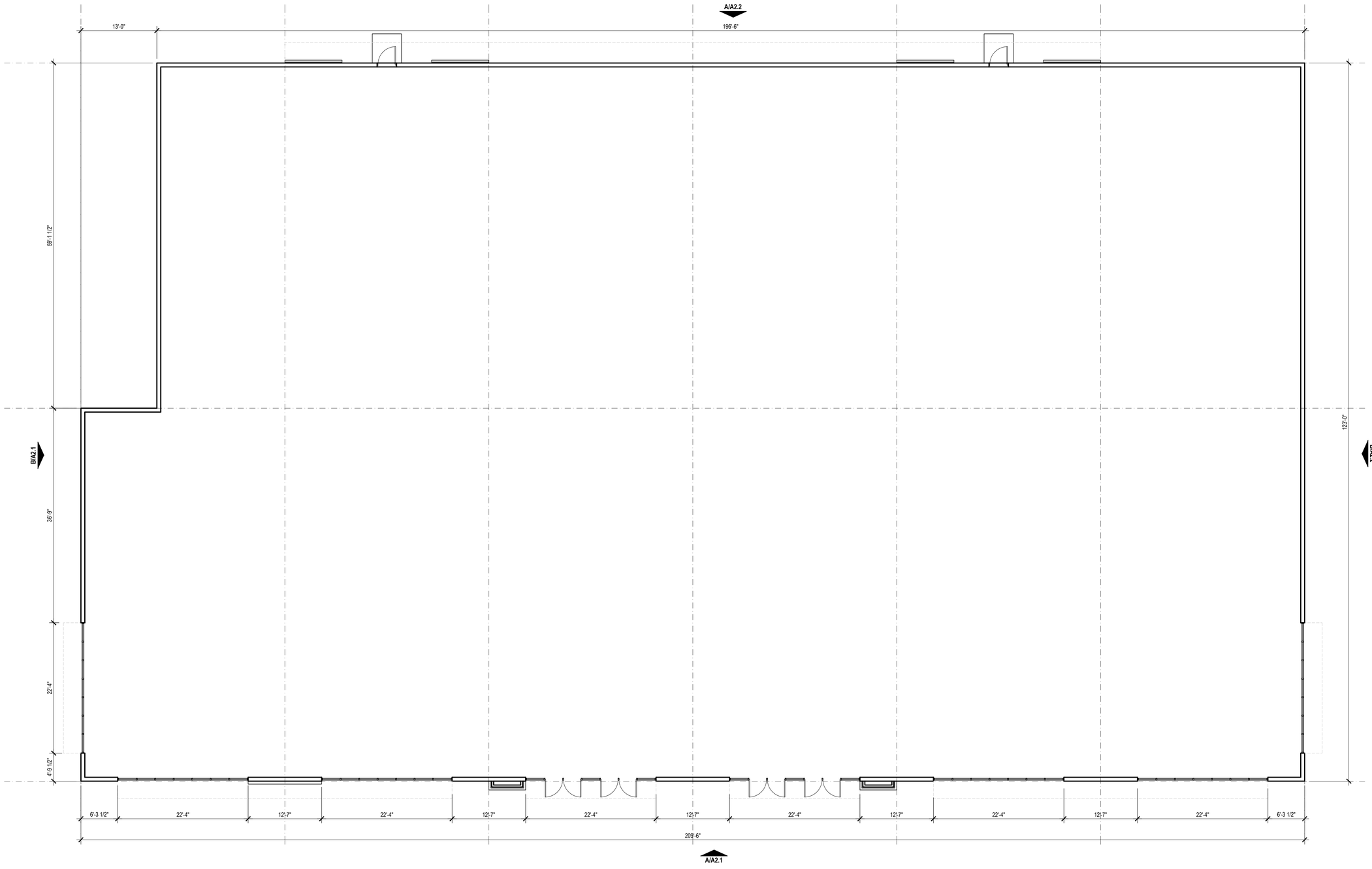


SHEET TITLE - NUMBER

Cover Sheet

CR

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Floor Plan

A
3/16"

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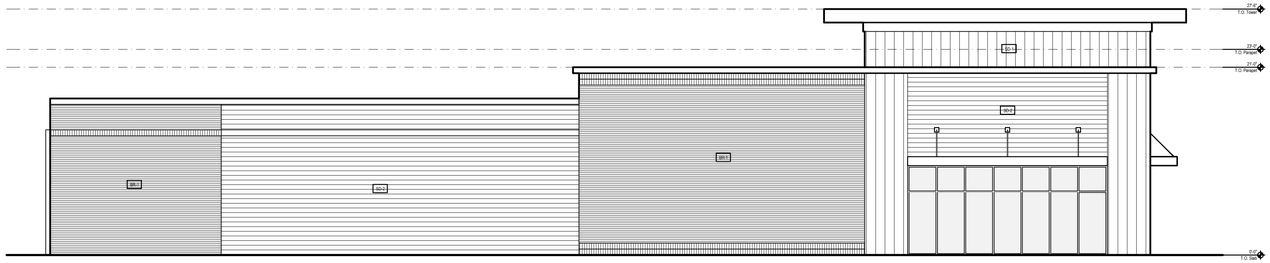
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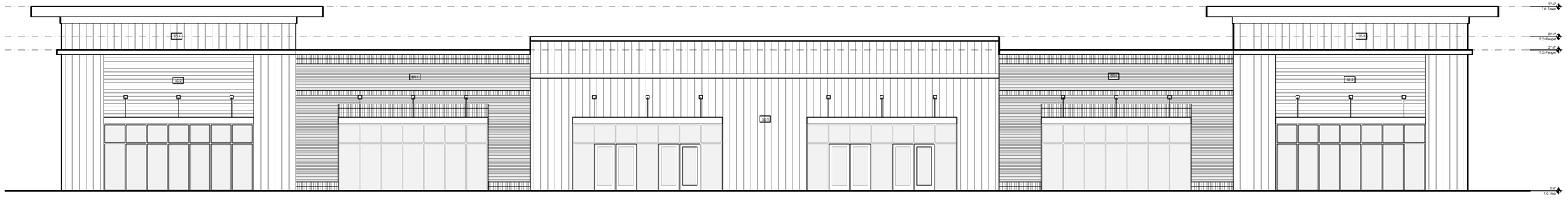
Floor Plan

A1.1



Side Elevation (North Elevation)

B
1/8"



Front Elevation (West Elevation)

A
1/8"

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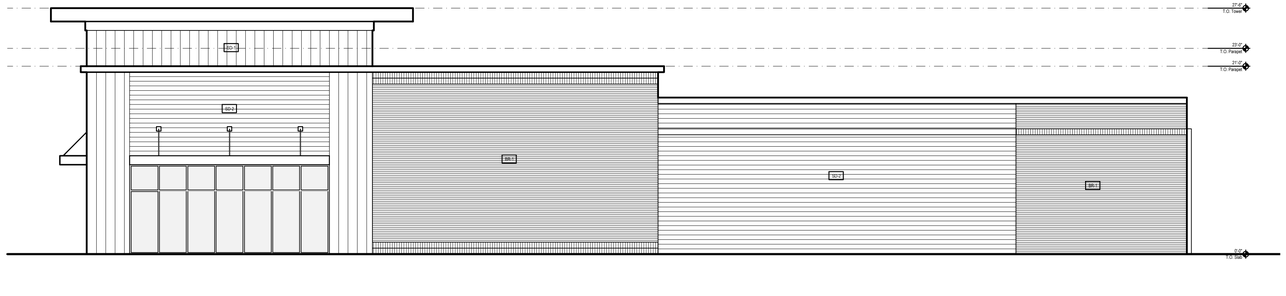
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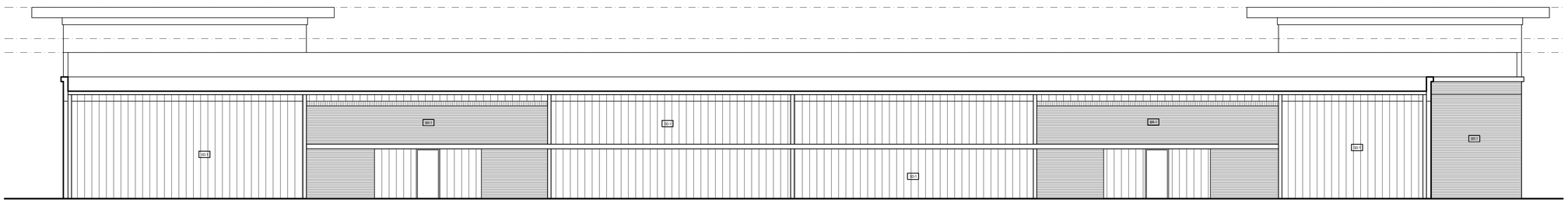
Exterior Elevations

A2.1



Side Elevation (South Elevation)

B
1/8"



Rear Elevation (East Elevation)

A
1/8"

PROJECT NO: 24063
RELEASE: 03.01.26

NO.	REV./SUB.	DATE

Site Submission

BRIAN LISLE REGISTERED ARCHITECT 29902 NORTH CAROLINA WILMINGTON

LISLE ARCHITECTURE & DESIGN, INC. NORTH CAROLINA WILMINGTON

MITCHELL MILLS MARKET
Building A - 25,000 SF
Rolesville, NC 27571

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Raleigh, NC (919) 980.0283
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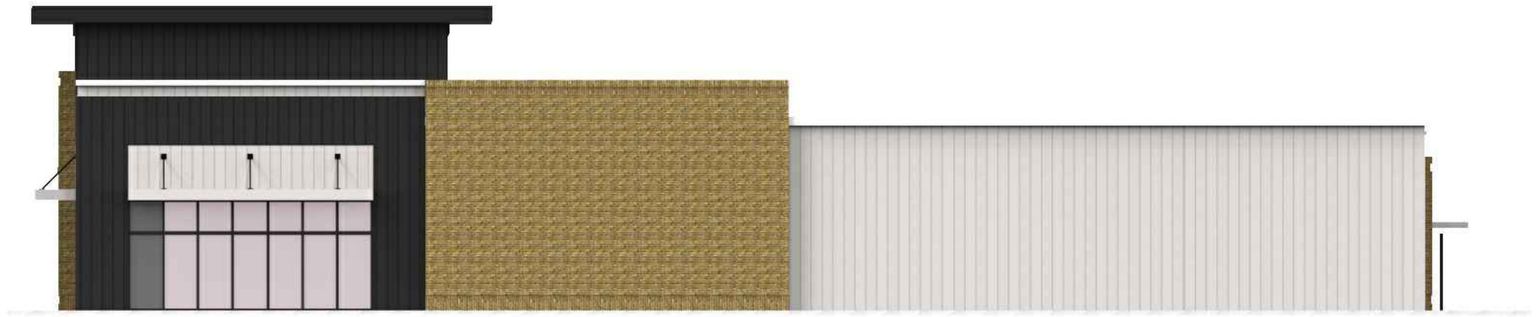


SHEET TITLE - NUMBER

Exterior Elevations

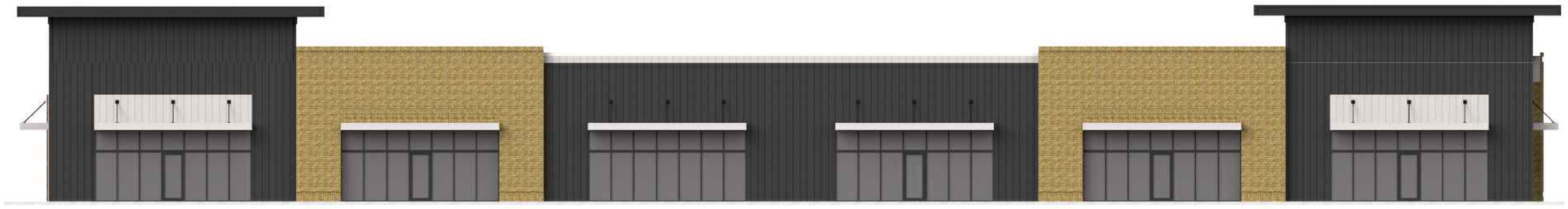
A2.2

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Side Elevation (South Elevation)

B
NTS



Front Elevation (West Elevation)

A
NTS

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NO.	REV./SUB.	DATE

Site Submission

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Raleigh, NC (919) 980.0283
www.LisleArchitecture.com



SHEET TITLE - NUMBER
Schematic
Exterior
Renderings

R1.1



Side Elevation (North Elevation)

B
NTS



Rear Elevation (East Elevation)

A
NTS

PROJECT NO: 24063
RELEASE: 03.01.26

NO.	REV./SUB.	DATE

Site Submission

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Rolesville, NC 27571

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www.ListeArchitecture.com

SHEET TITLE - NUMBER
Schematic
Exterior
Renderings

R1.2

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Mitchell Mills Market
Building B

Rolesville, NC 27571
Wake County

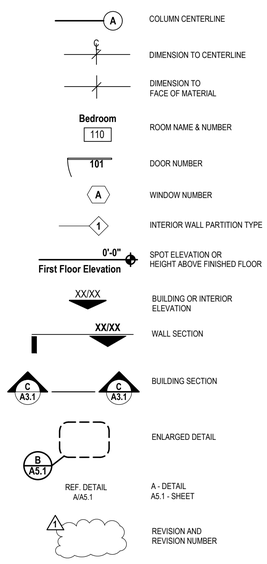
Lisle Architecture & Design, Inc.
614 Market Street
Wilmington, North Carolina 28401
(910) 763-6053



Abbreviations

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ADJ.	ADJUSTABLE
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ALUM.	ALUMINUM
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JST.BRG.	JOIST BEARING
LAV.	LAVATORY
MAX.	MAXIMUM
M.B.S.	METAL BUILDING SUPPLIER
MECH.	MECHANICAL
MIN.	MINIMUM
MISC.	MISCELLANEOUS
M.O.	MASONRY OPENING
MTD.	MOUNTED
MTL.	METAL
O.C.	ON CENTER
O.H.	OPPOSITE HAND
PLYWD.	PLYWOOD
P.T.	PRESSURE TREATED
PT (D)	PAINT (ED)
REF.	REFER, REFERENCE
REINF.	REINFORCING
RM.	ROOM
ROT.	ROTATED
S.C.	SOLID CORE
SCHED.	SCHEDULE (ED)
SHT.	SHEET
SIM.	SIMILAR
SPEC.	SPECIFICATION (S)
STD.	STANDARD
STL.	STEEL
STRUCT.	STRUCTURE (AL)
TEMP.	TEMPERED
T.O.M.	TOP OF MASONRY
T.O.P.	TOP OF PARAPET
T.O.S.	TOP OF STEEL
T.O.W.	TOP OF WALL
T.S.	TUBULAR STEEL
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U.N.O	UNLESS NOTED OTHERWISE
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VERT.	VERTICAL
W.C.	WATER CLOSET
WD.	WOOD
W.H.	WATER HEATER
W/	WITH

Legend



Vicinity Map

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ARCHITECTURAL

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A2.1 Exterior Elevations
A2.2 Exterior Elevations
R1.1 Schematic Exterior Renderings

PROJECT NO: 24063
RELEASE: 03.01.26

NO.	REV./SUB.	DATE

Site Submission

MITCHELL MILLS MARKET
Building B - 9000 SF
Rolesville, NC 27571

Lisle Architecture & Design, Inc.
614 Market Street
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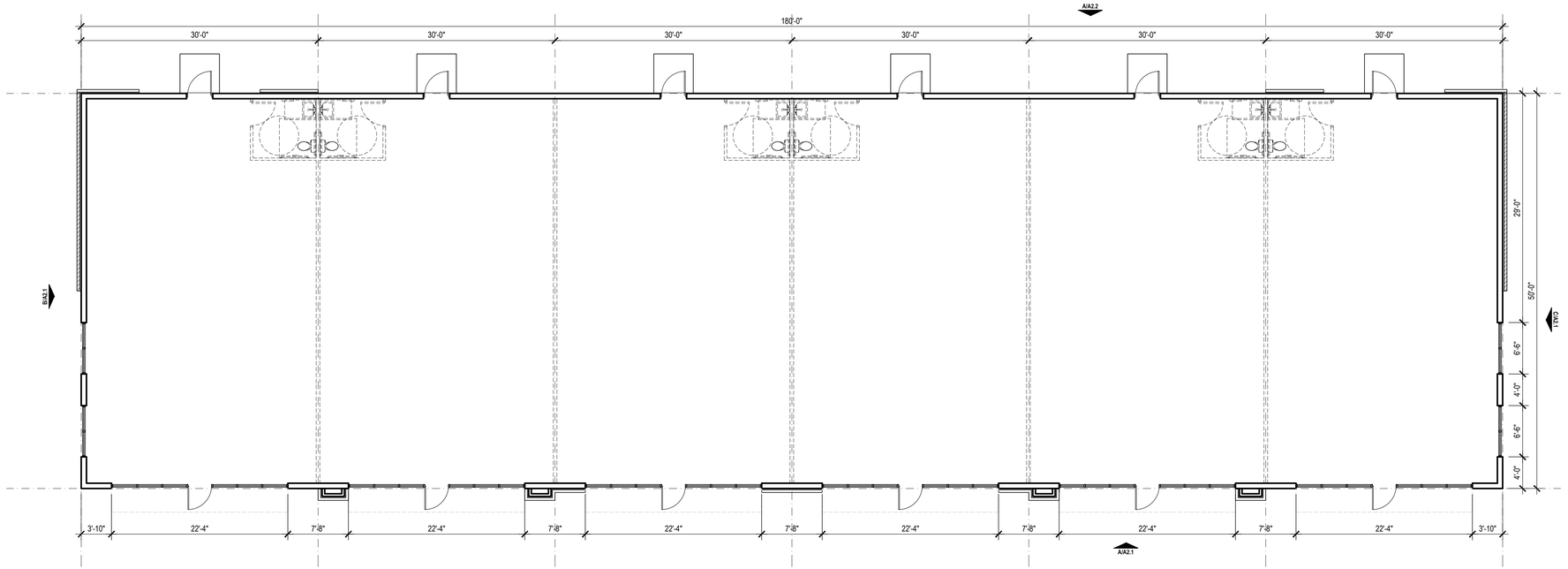


SHEET TITLE - NUMBER

Cover Sheet

CR

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Floor Plan

A
3/16"

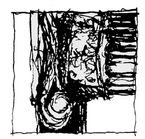
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Rolesville, NC 27571

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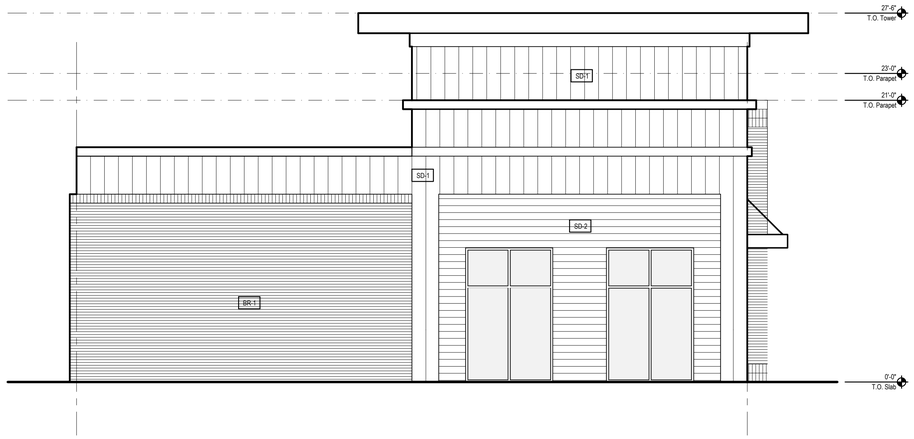
Floor Plan

A1.1

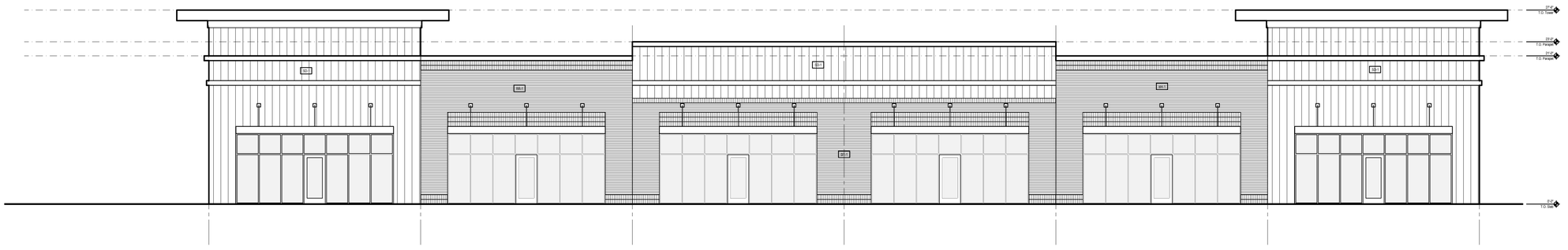
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Side Elevation (South Elevation) C 1/4"



Side Elevation (North Elevation) B 1/4"

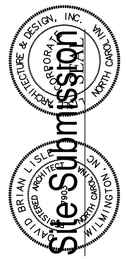


Front Elevation (West Elevation) A 1/8"

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MITCHELL MILLS MARKET
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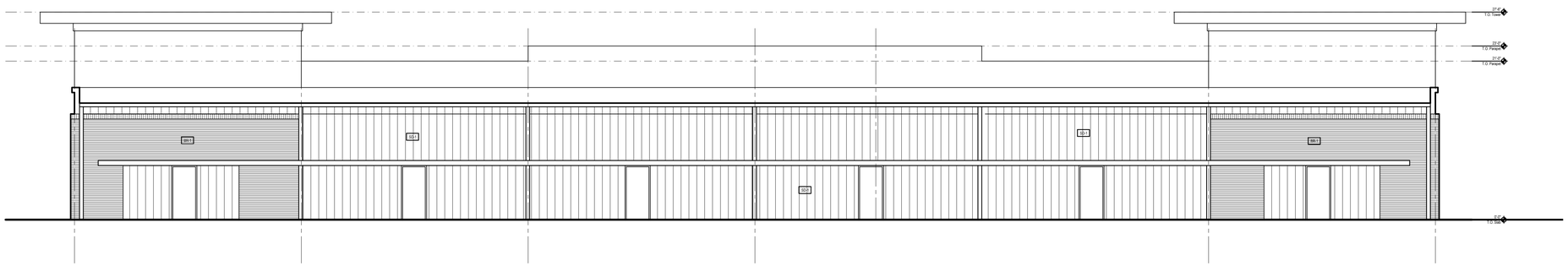
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SHEET TITLE - NUMBER

Exterior Elevations

A2.1



Rear Elevation (East Elevation)

A
3/16"

PROJECT NO: 24063
RELEASE: 03.01.26

NO.	REV./SUB.	DATE

Site Submission

MITCHELL MILLS MARKET
Building B - 9000 SF
Rolesville, NC 27571

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SHEET TITLE - NUMBER

Exterior
Elevations

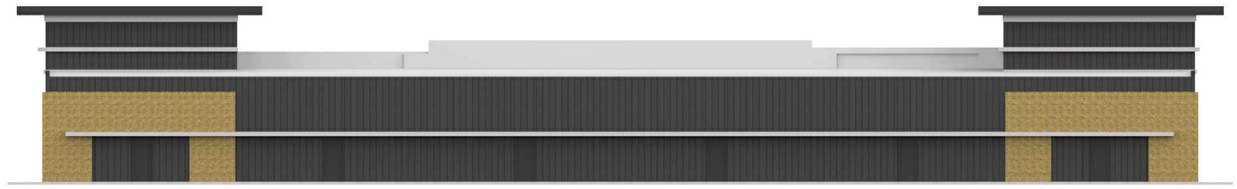
A2.2

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Side Elevation (North Elevation)

D
NTS



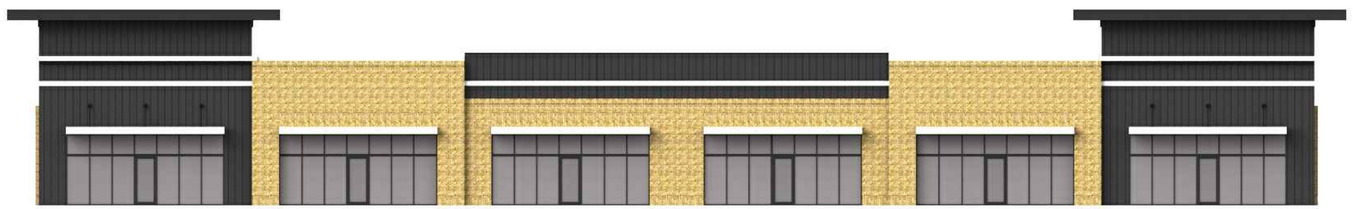
Rear Elevation (East Elevation)

C
NTS



Side Elevation (South Elevation)

B
NTS



North Elevation (West Elevation)

A
NTS

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SHEET TITLE - NUMBER
Schematic
Exterior
Renderings

R1.1

Mitchell Mills Market
Building C

Rolesville, NC 27571
Wake County

Lisle Architecture & Design, Inc.
614 Market Street
Wilmington, North Carolina 28401
(910) 763-6053



Abbreviations

A.C.T.	ACOUSTICAL CEILING TILE
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- XX/XX — BUILDING OR INTERIOR ELEVATION
- XX/XX — WALL SECTION
- C A3.1 / C A3.1 — BUILDING SECTION
- B A5.1 — REF. DETAIL A/A5.1 — ENLARGED DETAIL; A - DETAIL A5.1 - SHEET
- 1 — REVISION AND REVISION NUMBER

Vicinity Map

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ARCHITECTURAL

A1.1 Floor Plan
A2.1 Exterior Elevations
A2.2 Exterior Elevations
R1.1 Schematic Exterior Renderings

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PROJECT NO: 24063
RELEASE: 03.01.26

NO.	REV./SUB.	DATE

Site Submission

MITCHELL MILLS MARKET
Building C - 6000 SF
Rolesville, NC 27571

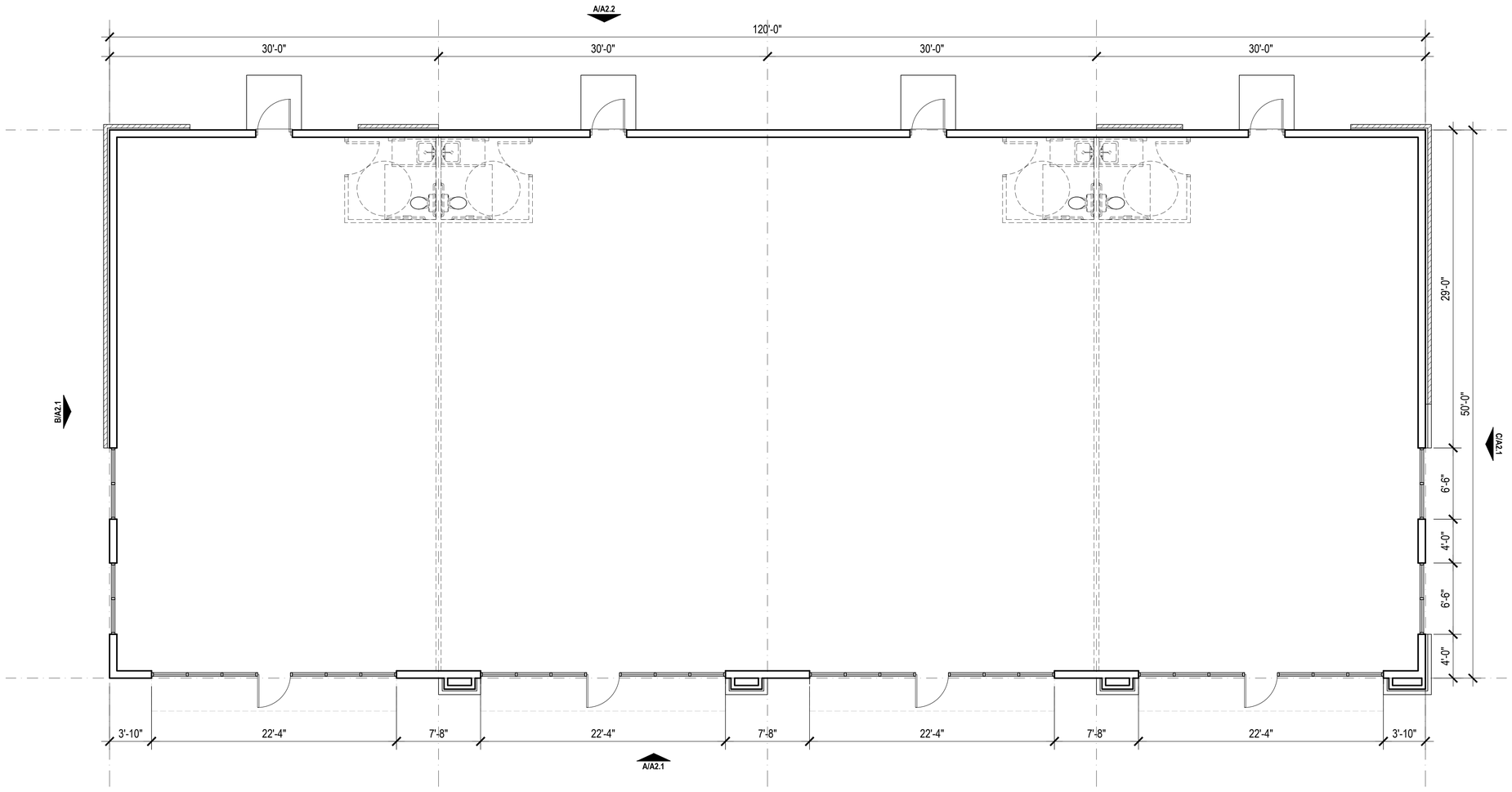
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SHEET TITLE - NUMBER

Cover Sheet

CR



Floor Plan

A
3/16"

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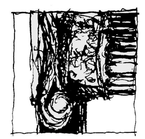
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Rolesville, NC 27571

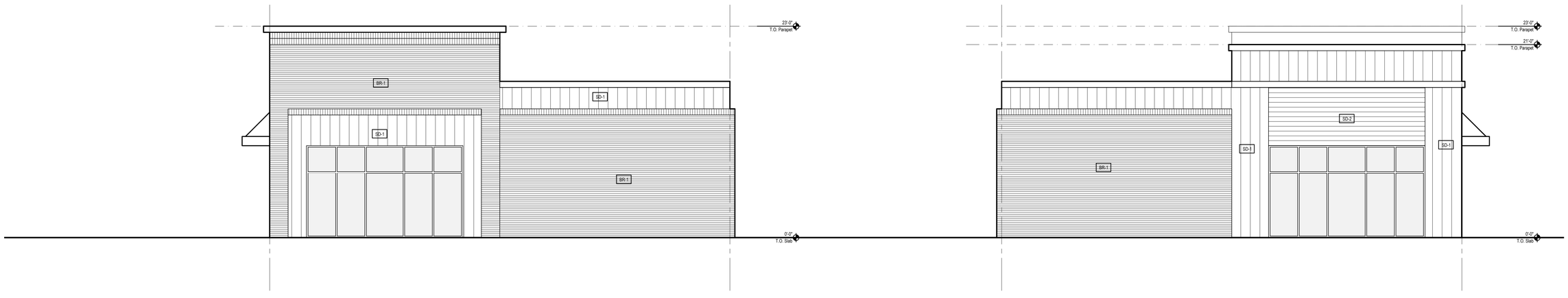
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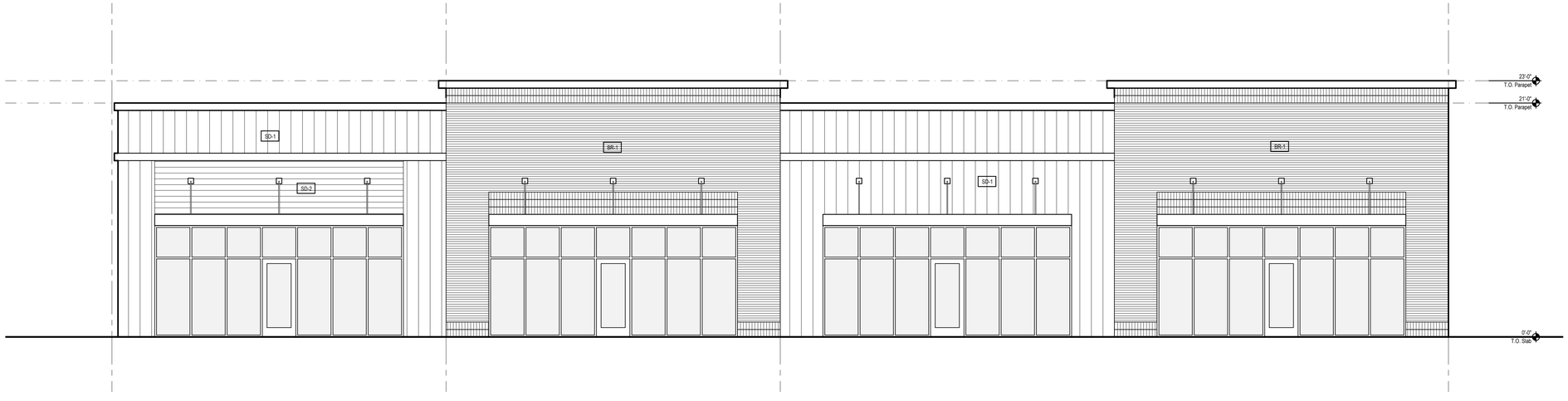
Floor Plan

A1.1



Side Elevation (West Elevation) C 3/16"

Side Elevation (East Elevation) B 3/16"



Front Elevation (North Elevation) A 1/8"

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RELEASE: 03.01.26

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DAVID BRIAN LISLE REGISTERED ARCHITECT LISLE ARCHITECTURE & DESIGN, INC. NORTH CAROLINA WILMINGTON

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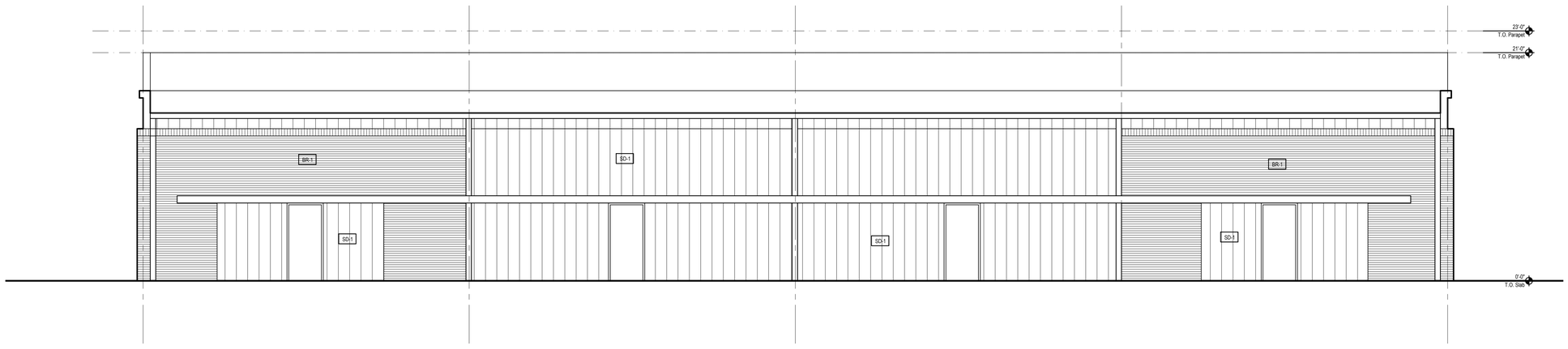
SHEET TITLE - NUMBER

Exterior Elevations

A2.1

EXTERIOR MATERIAL SCHEDULE				
LABEL	LOCATION	MANUFACTURER	MATERIAL	COLOR
PAINT				
PT-1	SEE ELEVATIONS (TRIM)	SHERWIN WILLIAMS		TBD
PT-2	SEE ELEVATIONS (SD-2)	SHERWIN WILLIAMS		TBD
ROOFING				
TPO	SEE ELEVATIONS and ROOF PLANS	GAF	TPO	GRAY
WALLS				
SD-1	SEE ELEVATIONS	METAL PANEL		TBS
SD-2	SEE ELEVATIONS	JAMES HARDIE	LAPPED SIDING	TBS
BR-1	SEE ELEVATIONS	TBS		TBS
FLOORS				
CONC	PATIOS		CONCRETE-FINISH TO BE SELECTED	TO BE SELECTED
NOTES				

GENERAL FINISH NOTES:
1. COORDINATE AND CONFRIM ALL PAINT COLORS AND FINISHES WITH OWNER AND ARCHITECT.
2. CONFIRM ALL FINISHES AND SELECTIONS WITH OWNER AND ARCHITECT PRIOR TO ORDERING.
3. PROVIDE SAMPLES IN SPECIFIED COLOR AND FINISH FOR APPROVAL BY OWNER AND ARCHITECT PRIOR TO ORDERING.
4. PAINT PRIMER AS SPECIFIED BY MANUFACTURER.
5. EXTERIOR SIDING: SATIN SHEEN
6. EXTERIOR TRIMWORK: SEMI-GLOSS SHEEN

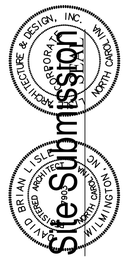


Rear Elevation (South Elevation)

A
3/16"

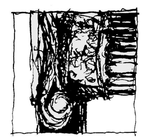
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NO.	REV./SUB.	DATE



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SHEET TITLE - NUMBER

Exterior
Elevations

A2.2

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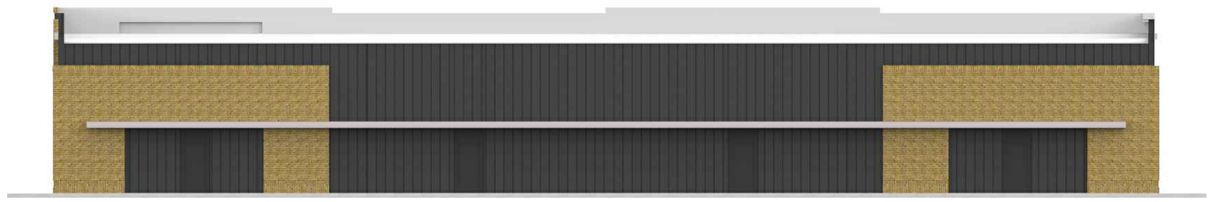
Side Elevation (East Elevation) — D — NTS



Front Elevation (North Elevation) — C — NTS



Side Elevation (West Elevation) — B — NTS



Rear Elevation (South Elevation) — A — NTS

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RELEASE: 03.01.26

NO.	REV./SUB.	DATE

Site Submission

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SHEET TITLE - NUMBER

Schematic
Exterior
Renderings

R1.1

Mitchell Mills Market
Building D

Rolesville, NC 27571
Wake County

Lisle Architecture & Design, Inc.
614 Market Street
Wilmington, North Carolina 28401
(910) 763-6053



Abbreviations

A.C.T.	ACOUSTICAL CEILING TILE
ADJ.	ADJUSTABLE
A.F.F.	ABOVE FINISHED FLOOR
ALUM.	ALUMINUM
ALT.	ALTERNATE
ANOD.	ANODIZED
BD.	BOARD
BLDG.	BUILDING
BM.	BEAM
BOT.	BOTTOM
BRG. HT.	BEARING HEIGHT
CL	CENTER LINE
CLG.	CEILING
CLR.	CLEAR
C.J.	CONTROL JOINT
C.M.U.	CONCRETE MASONRY UNIT
COL.	COLUMN
CONC.	CONCRETE
CONT.	CONTINUOUS
DBL.	DOUBLE
DET.	DETAIL
DR.	DOOR
D.S.	DOWNSPOUT
DWG.	DRAWING
E.J.	EXPANSION JOINT
ELEV.	ELEVATION
ELEC.	ELECTRICAL
EQ.	EQUAL
E.W.C.	ELECTRIC WATER COOLER
EXP.	EXPANSION
EXT.	EXTERIOR
F.F.	FINISH FLOOR
FIN.	FINISH (ED)
FLR.	FLOOR
F.O.C.	FACE OF CONCRETE
F.O.G.B.	FACE OF GRADE BEAM
F.O.M.	FACE OF MASONRY
F.O.S.	FACE OF STUD
F.R.P.	FIBERGLASS REINFORCED PANEL
GA.	GAUGE, OR GAGE
GL.	GLASS
GYP. BD.	GYPSUM BOARD
H.B.	HOSE BIB
H.C.	HOLLOW CORE
HDWR.	HARDWARE
HT.	HEIGHT
H.V.A.C.	HEATING/VENTILATING/ AIR CONDITIONING
INSUL.	INSULATION
JST.BRG.	JOIST BEARING
LAV.	LAVATORY
MAX.	MAXIMUM
M.B.S.	METAL BUILDING SUPPLIER
MECH.	MECHANICAL
MIN.	MINIMUM
MISC.	MISCELLANEOUS
M.O.	MASONRY OPENING
MTD.	MOUNTED
MTL.	METAL
O.C.	ON CENTER
O.H.	OPPOSITE HAND
PLYWD.	PLYWOOD
P.T.	PRESSURE TREATED
PT (D)	PAINT (ED)
REF.	REFER, REFERENCE
REINF.	REINFORCING
RM.	ROOM
ROT.	ROTATED
S.C.	SOLID CORE
SCHED.	SCHEDULE (ED)
SHT.	SHEET
SIM.	SIMILAR
SPEC.	SPECIFICATION (S)
STD.	STANDARD
STL.	STEEL
STRUCT.	STRUCTURE (AL)
TEMP.	TEMPERED
T.O.M.	TOP OF MASONRY
T.O.P.	TOP OF PARAPET
T.O.S.	TOP OF STEEL
T.O.W.	TOP OF WALL
T.S.	TUBULAR STEEL
TYP.	TYPICAL
U.N.O	UNLESS NOTED OTHERWISE
V.C.T.	VINYL COMPOSITION TILE
VERT.	VERTICAL
W.C.	WATER CLOSET
WD.	WOOD
W.H.	WATER HEATER
W/	WITH

Legend

- A — COLUMN CENTERLINE
- C — DIMENSION TO CENTERLINE
- DIMENSION TO FACE OF MATERIAL
- Bedroom / 110 — ROOM NAME & NUMBER
- 101 — DOOR NUMBER
- A — WINDOW NUMBER
- 1 — INTERIOR WALL PARTITION TYPE
- 0'-0" / First Floor Elevation — SPOT ELEVATION OR HEIGHT ABOVE FINISHED FLOOR
- XX/XX — BUILDING OR INTERIOR ELEVATION
- XX/XX — WALL SECTION
- C A3.1 / C A3.1 — BUILDING SECTION
- B A5.1 — ENLARGED DETAIL
- REF. DETAIL A/A5.1 — A - DETAIL A5.1 - SHEET
- 1 — REVISION AND REVISION NUMBER

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A2.1 Exterior Elevations
A2.2 Exterior Elevations
R1.1 Schematic Exterior Renderings
R1.2 Schematic Exterior Renderings

PROJECT NO: 24063
RELEASE: 03.01.26

NO	REV./SUB.	DATE

Site Submission

MITCHELL MILLS MARKET
Building D - 12,000 SF
Rolesville, NC 27571

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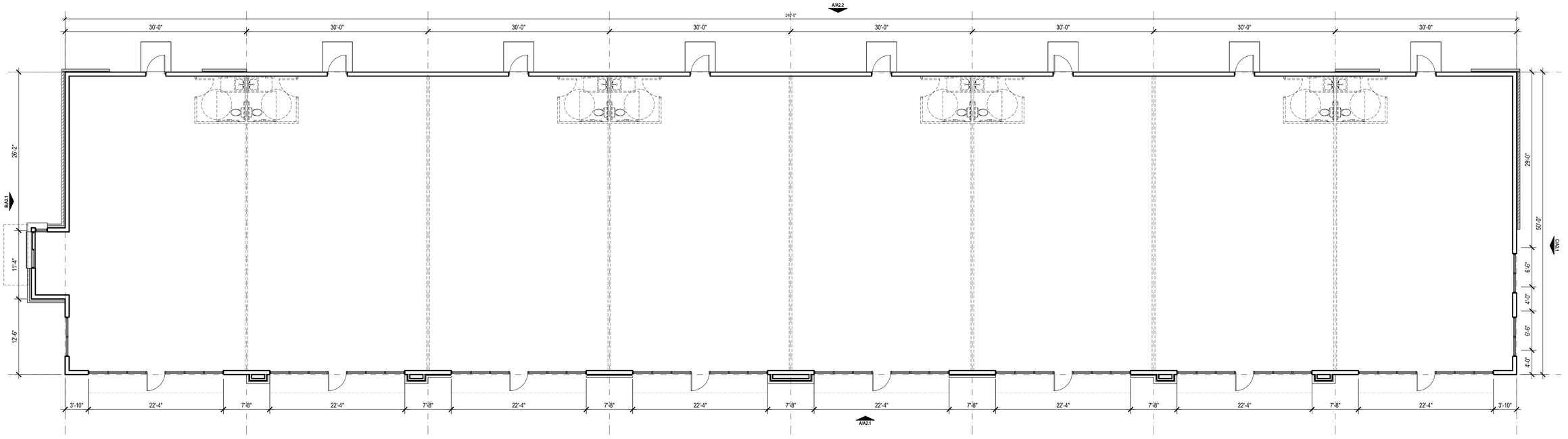


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Cover Sheet

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Floor Plan

A
3/16"

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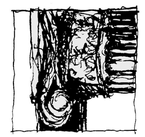
PROJECT NO: 24063
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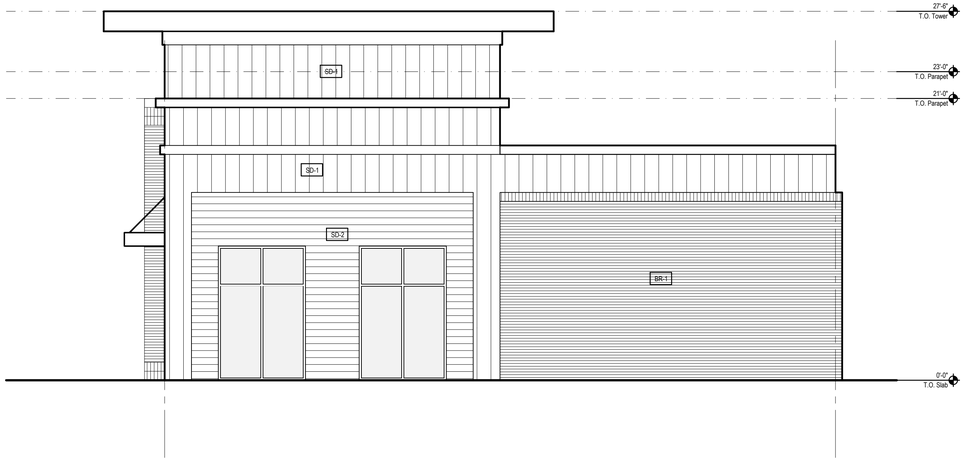
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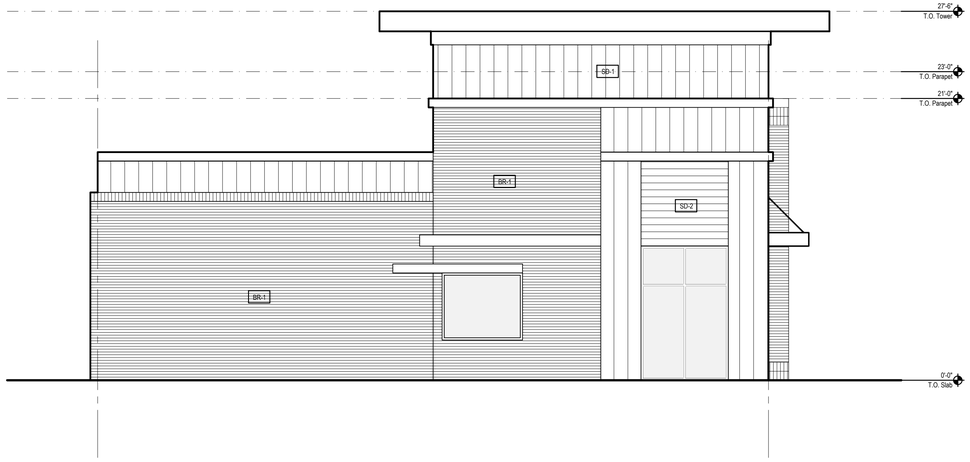
SHEET TITLE - NUMBER

Floor Plan

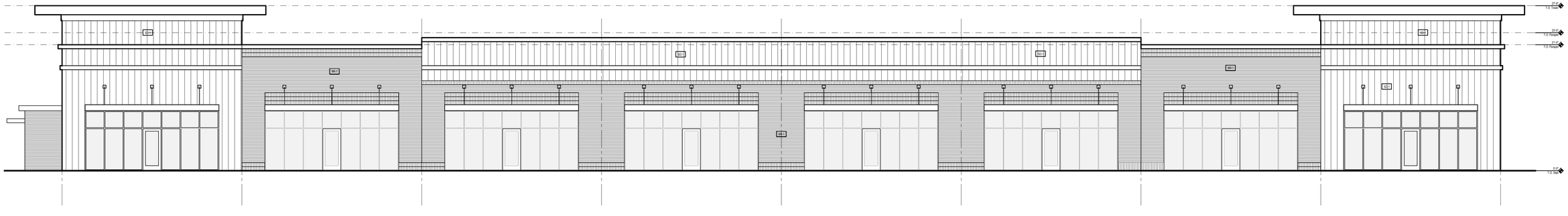
A1.1



Side Elevation (West Elevation) C 3/16"

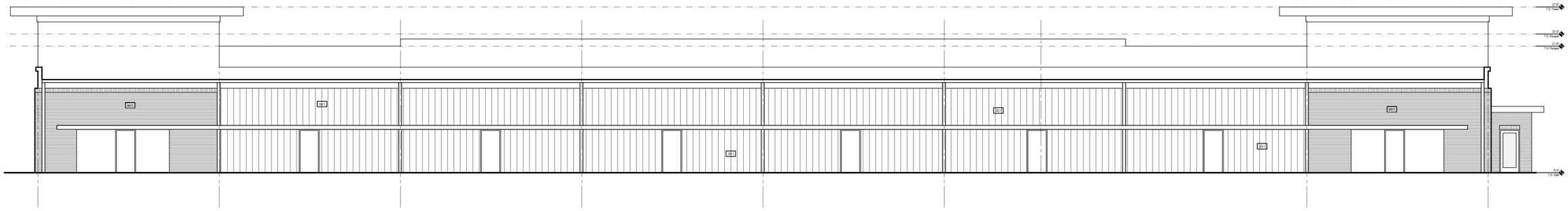


Side Elevation (East Elevation) B 3/16"


SD-1
SD-1
SD-1

EXTERIOR MATERIAL SCHEDULE				
LABEL	LOCATION	MANUFACTURER	MATERIAL	COLOR
PAINT				
PT-1	SEE ELEVATIONS (TRIM)	SHERWIN WILLIAMS		TBD
PT-2	SEE ELEVATIONS (SD-2)	SHERWIN WILLIAMS		TBD
ROOFING				
TPO	SEE ELEVATIONS and ROOF PLANS	GAF	TPO	GRAY
WALLS				
SD-1	SEE ELEVATIONS	METAL PANEL		TBS
SD-2	SEE ELEVATIONS	JAMES HARDIE	LAPPED SIDING	TBS
BR-1	SEE ELEVATIONS	TBS		TBS
FLOORS				
CONC	PATIOS		CONCRETE-FINISH TO BE SELECTED	TO BE SELECTED
NOTES				

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4. PAINT PRIMER AS SPECIFIED BY MANUFACTURER.
5. EXTERIOR SIDING: SATIN SHEEN
6. EXTERIOR TRIMWORK: SEMI-GLOSS SHEEN



Rear Elevation (South Elevation)

A
3/16"

PROJECT NO: 24063
RELEASE: 03.01.26

NO.	REV./SUB.	DATE

Site Submission

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SHEET TITLE - NUMBER

Exterior Elevations

A2.2

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Side Elevation (East Elevation)

B
NTS



Front Elevation (North Elevation)

A
NTS

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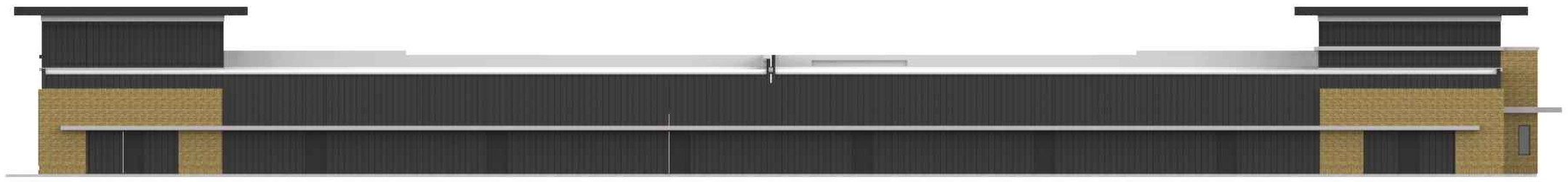
SHEET TITLE - NUMBER
Schematic
Exterior
Elevations

R1.1



Side Elevation (West Elevation)

B
NTS



Front Elevation (North Elevation)

A
NTS

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SHEET TITLE - NUMBER
Schematic
Exterior
Elevations

R1.2

Mitchell Mills Market
Building E

Rolesville, NC 27571
Wake County

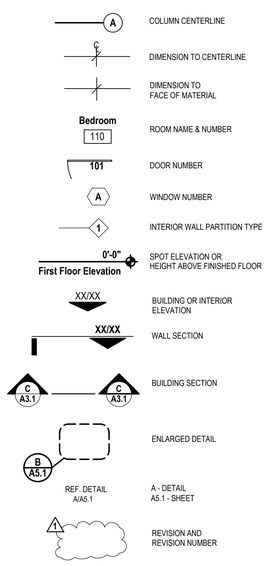
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Wilmington, North Carolina 28401
(910) 763-6053



Abbreviations

A.C.T.	ACOUSTICAL CEILING TILE
ADJ.	ADJUSTABLE
A.F.F.	ABOVE FINISHED FLOOR
ALUM.	ALUMINUM
ALT.	ALTERNATE
ANOD.	ANODIZED
BD.	BOARD
BLDG.	BUILDING
BM.	BEAM
BOT.	BOTTOM
BRG. HT.	BEARING HEIGHT
CL	CENTER LINE
CLG.	CEILING
CLR.	CLEAR
C.J.	CONTROL JOINT
C.M.U.	CONCRETE MASONRY UNIT
COL.	COLUMN
CONC.	CONCRETE
CONT.	CONTINUOUS
DBL.	DOUBLE
DET.	DETAIL
DR.	DOOR
D.S.	DOWNSPOUT
DWG.	DRAWING
E.J.	EXPANSION JOINT
ELEV.	ELEVATION
ELEC.	ELECTRICAL
EQ.	EQUAL
E.W.C.	ELECTRIC WATER COOLER
EXP.	EXPANSION
EXT.	EXTERIOR
F.F.	FINISH FLOOR
FIN.	FINISH (ED)
FLR.	FLOOR
F.O.C.	FACE OF CONCRETE
F.O.G.B.	FACE OF GRADE BEAM
F.O.M.	FACE OF MASONRY
F.O.S.	FACE OF STUD
F.R.P.	FIBERGLASS REINFORCED PANEL
GA.	GAUGE, OR GAGE
GL.	GLASS
GYP. BD.	GYPSUM BOARD
H.B.	HOSE BIB
H.C.	HOLLOW CORE
HDWR.	HARDWARE
HT.	HEIGHT
H.V.A.C.	HEATING/VENTILATING/ AIR CONDITIONING
INSUL.	INSULATION
JST.BRG.	JOIST BEARING
LAV.	LAVATORY
MAX.	MAXIMUM
M.B.S.	METAL BUILDING SUPPLIER
MECH.	MECHANICAL
MIN.	MINIMUM
MISC.	MISCELLANEOUS
M.O.	MASONRY OPENING
MTD.	MOUNTED
MTL.	METAL
O.C.	ON CENTER
O.H.	OPPOSITE HAND
PLYWD.	PLYWOOD
P.T.	PRESSURE TREATED
PT (D)	PAINT (ED)
REF.	REFER, REFERENCE
REINF.	REINFORCING
RM.	ROOM
ROT.	ROTATED
S.C.	SOLID CORE
SCHED.	SCHEDULE (ED)
SHT.	SHEET
SIM.	SIMILAR
SPEC.	SPECIFICATION (S)
STD.	STANDARD
STL.	STEEL
STRUCT.	STRUCTURE (AL)
TEMP.	TEMPERED
T.O.M.	TOP OF MASONRY
T.O.P.	TOP OF PARAPET
T.O.S.	TOP OF STEEL
T.O.W.	TOP OF WALL
T.S.	TUBULAR STEEL
TYP.	TYPICAL
U.N.O	UNLESS NOTED OTHERWISE
V.C.T.	VINYL COMPOSITION TILE
VERT.	VERTICAL
W.C.	WATER CLOSET
WD.	WOOD
W.H.	WATER HEATER
W/	WITH

Legend



Vicinity Map

Index of Drawings

CR Cover Sheet

ARCHITECTURAL

A1.1 Floor Plan
A2.1 Exterior Elevations
A2.2 Exterior Elevations
R1.1 Schematic Exterior Renderings

PROJECT NO: 24063
RELEASE: 03.01.26

NO.	REV./SUB.	DATE

Site Submission

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Raleigh, NC (919) 980.0283
www.LisleArchitecture.com

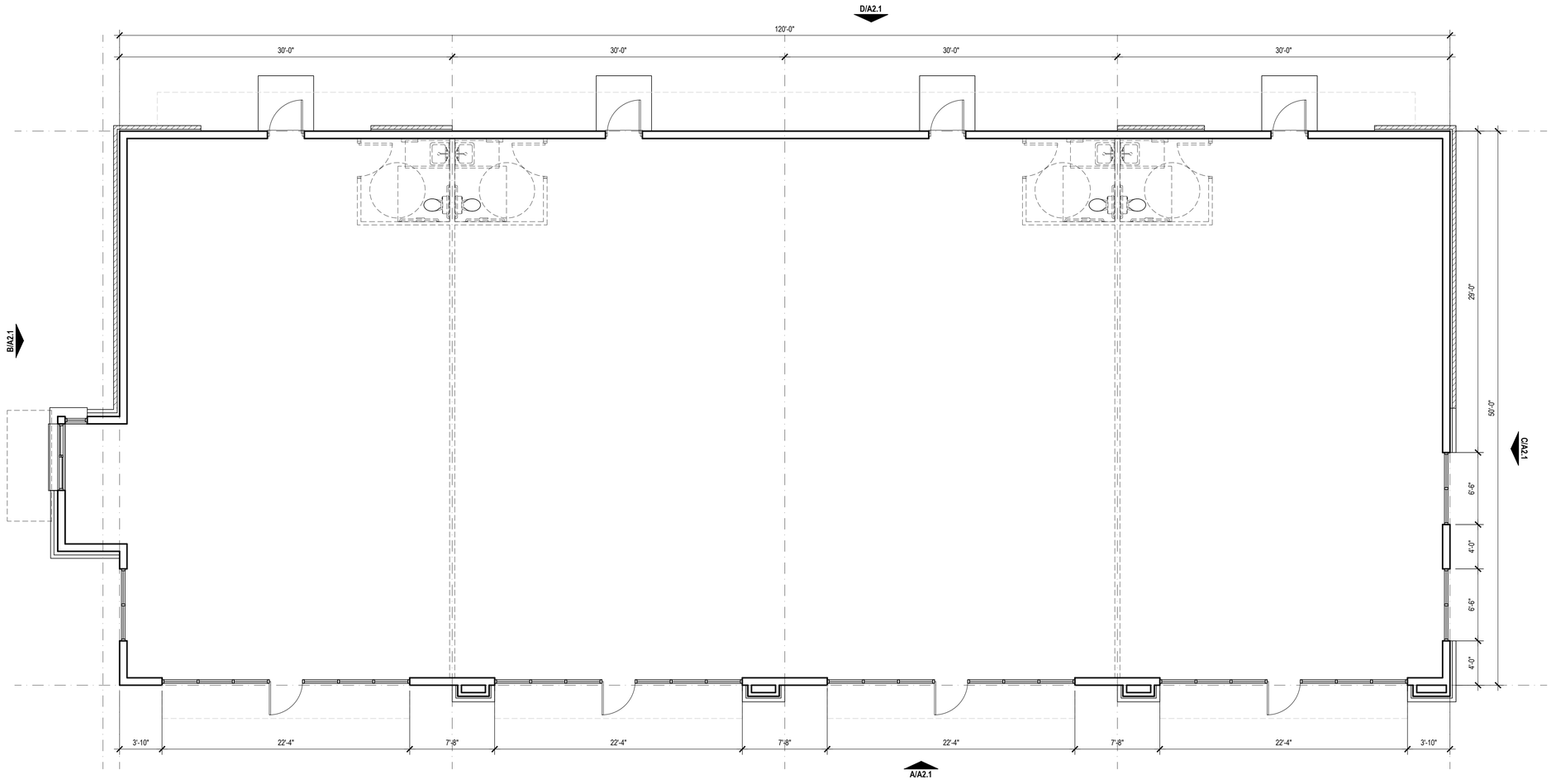


SHEET TITLE - NUMBER

Cover Sheet

CR

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Floor Plan

A
3/16"

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PROJECT NO: 24063
RELEASE: 03.01.26

NO	REV./SUB.	DATE

Site Submission

MITCHELL MILLS MARKET
Building E - 6000 SF
Rolesville, NC 27571

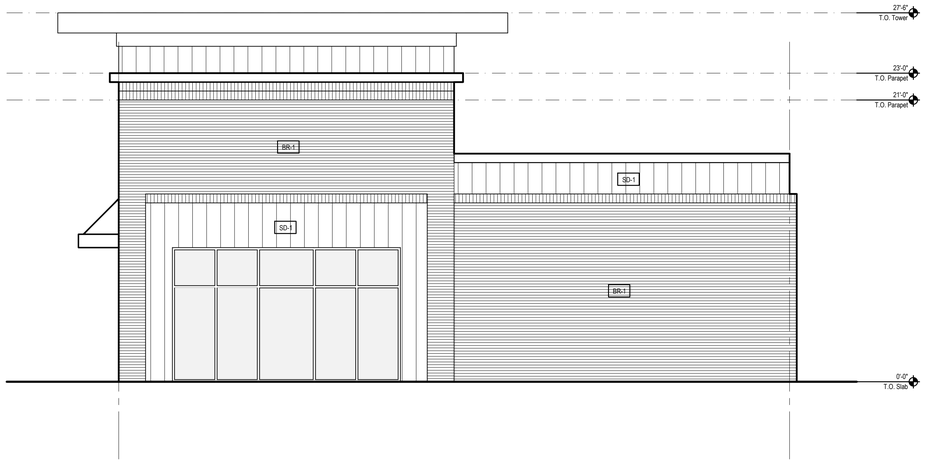
Lisle Architecture & Design, Inc.
614 Market Street
Wilmington, NC 28401
(910) 763.6053
Raleigh, NC (919) 980.0283
www.LisleArchitecture.com

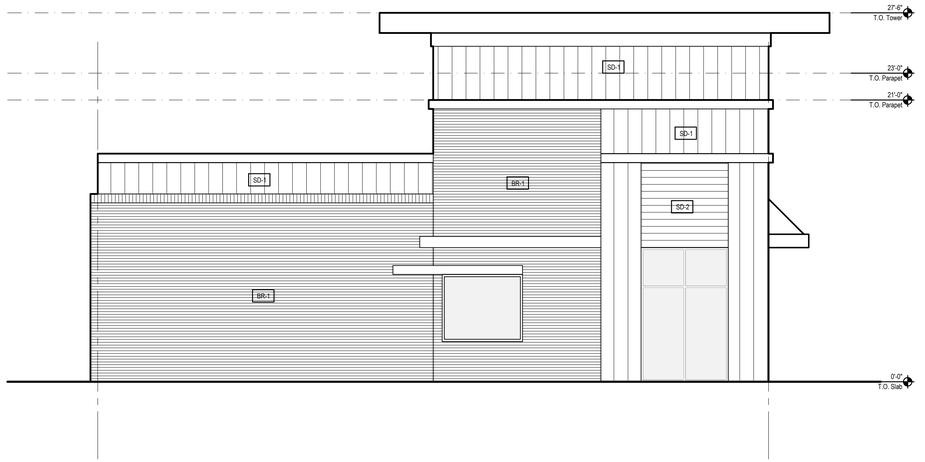


SHEET TITLE - NUMBER

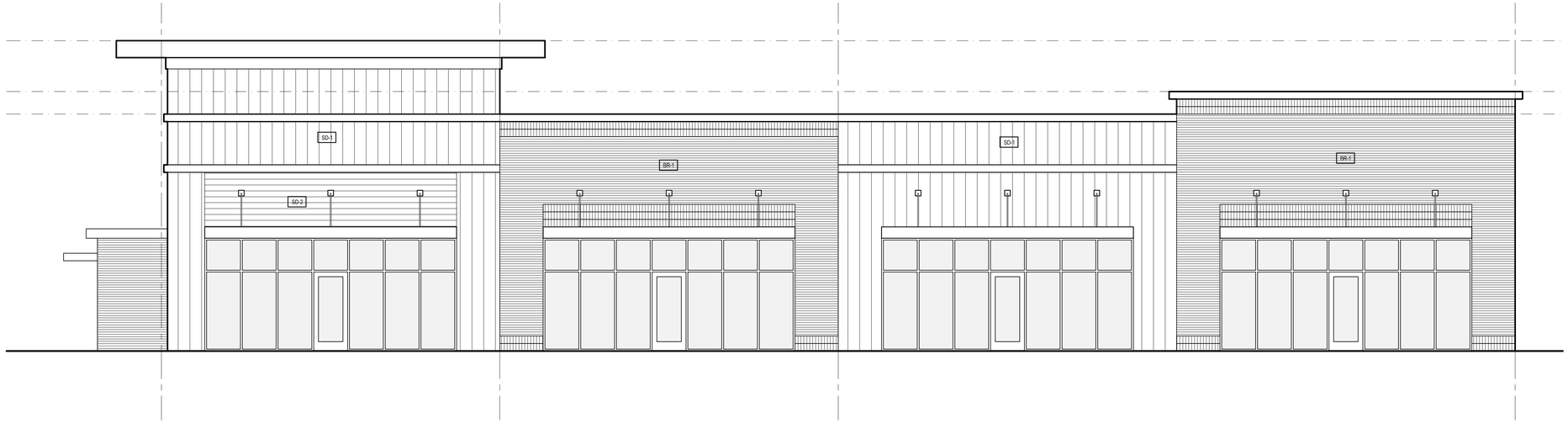
Floor Plan

A1.1





Side Elevation (East Elevation) C 3/16"



Side Elevation (West Elevation) B 3/16"

Front Elevation (South Elevation) A 3/16"

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PROJECT NO: 24063
RELEASE: 03.01.26

NO.	REV./SUB.	DATE

Site Submission

MITCHELL MILLS MARKET
Building E - 6000 SF
Rolesville, NC 27571

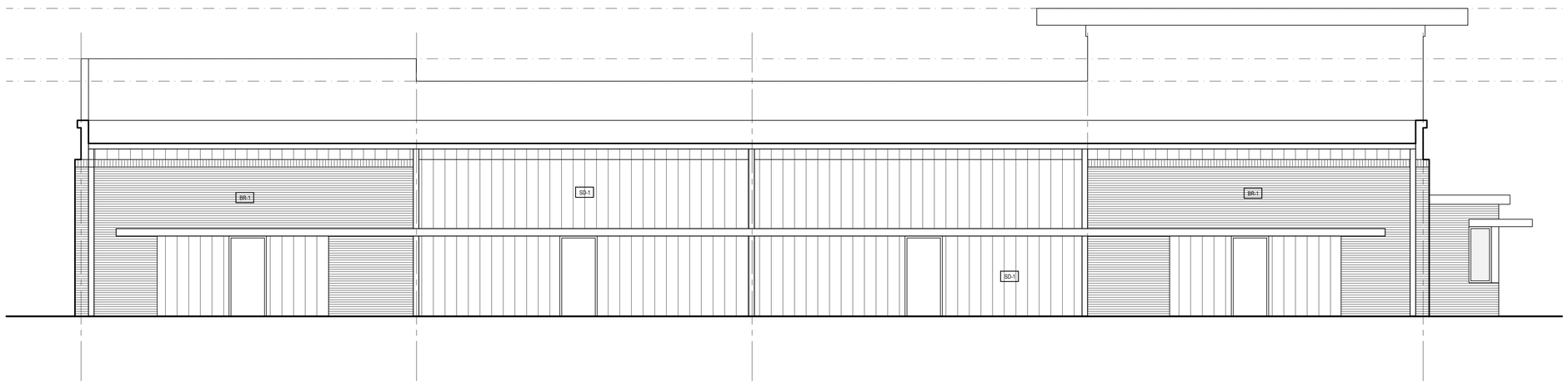
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614 Market Street
Wilmington, NC 28401
(910) 763.6053
Raleigh, NC (919) 980.0283
www.LisleArchitecture.com



SHEET TITLE - NUMBER

Exterior Elevations

A2.1



Rear Elevation (North Elevation)

A
3/16"

PROJECT NO: 24063
RELEASE: 03.01.26

Site Submission

NO	REV./SUB.	DATE

MITCHELL MILLS MARKET
Building E - 6000 SF
Rolesville, NC 27571

Lisle Architecture & Design, Inc.
614 Market Street
Wilmington, NC 28401
(910) 763.6053
Raleigh, NC (919) 980.0283
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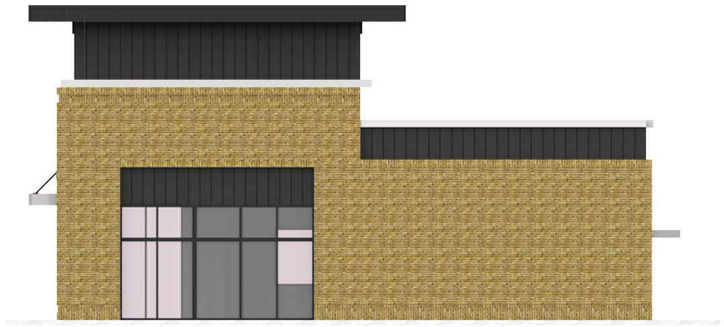


SHEET TITLE - NUMBER

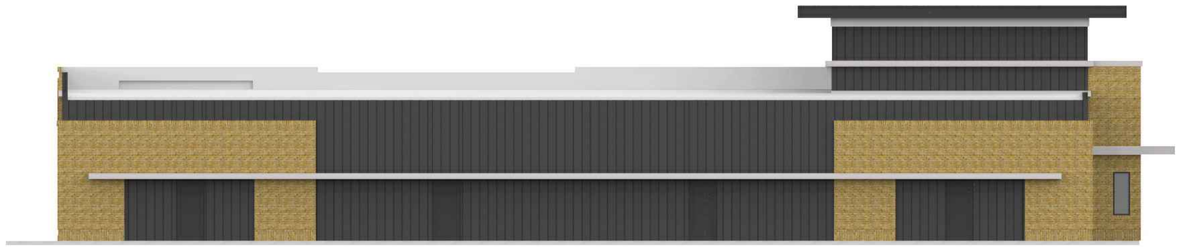
Exterior Elevations

A2.2

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Side Elevation (East Elevation) D NTS



Rear Elevation (north Elevation) C NTS



Side Elevation (West Elevation) B NTS



Front Elevation (South Elevation) A NTS

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PROJECT NO: 24063
RELEASE: 03.01.26

NO.	REV./SUB.	DATE

Site Submission

MITCHELL MILLS MARKET
Building E - 6000 SF
Rolesville, NC 27571

Lisle Architecture & Design, Inc.
614 Market Street
Wilmington, NC 28401
(910) 763.6053
Raleigh, NC (919) 980.0283
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SHEET TITLE - NUMBER
Schematic
Exterior
Renderings

R1.1

EXHIBIT D

MIXED-USE NEIGHBORHOOD CENTER CONDITIONAL ZONING
DISTRICT (NC-CZ) AND RESIDENTIAL MEDIUM DENSITY CONDITIONAL ZONING DISTRICT (RM-CZ)
ZONING CONDITIONS

Conditions Applicable to the entire property:

1. The subject property shall be developed generally in accordance with the sketch plan attached hereto as Exhibit 1 and incorporated herein as if fully set out. The approximately 55± acre portion of the subject property located west of Jonesville Road and further described as Parcel 1 on the attached Exhibit 2 attached hereto shall be zoned NC-CZ and the approximately 85± acre portion of the property located east of Jonesville Road and further described as Parcel 2 on Exhibit 2 attached hereto shall be zoned RM-CZ. The improvements described herein may be developed in phase in accordance with a phasing plan approved by the Town of Rolesville.
2. The total number of dwellings on the subject property shall not exceed 395 dwelling units and no more than 134 of these dwelling units shall be permitted to be Dwellings, Single Family, Attached (Townhouse.)
3. Mixture of Uses: At least 50,000 square feet of non-residential building area shall be permitted (issuance of a building permit) prior to permitting (issuance of a building permit) more than 197 dwelling units.
4. Affordable Housing:
   a. Prior to the issuance of the first building permit for a dwelling unit, the property owner shall donate Sixty Thousand Dollars and No Cents ($60,000.00) to Homes for Heroes.
   b. Prior to the issuance of the 200th building permit, the property owner shall donate one (1) Dwelling, Single Family, Attached (townhome) to Passage Homes, CASA, Habitat for Humanity of Wake County or other similar organization providing homes to low-income people.
5. Pollinator Plantings:

At least twenty percent (20%) of the landscaping planted in common areas on the subject property shall utilize plant materials that are listed as Native Pollinator Plants on North Carolina Wildlife Federation ("NCWF") or other resources for native plants recommended by the NCWF on their website, currently found at https://ncwf.org/habitat/native-pollinator-plants/ Where evergreen plantings or street trees are required by the Rolesville Land Development Ordinance as the same may be amended from time to time, pollinator plantings shall not be required. Nothing herein shall be construed to limit the plant materials permitted on individual residential lots. Compliance with this condition shall be demonstrated at construction infrastructure drawings for each phase.

6. Recreational Amenities:

The following recreational amenities shall be provided generally as shown on the attached Exhibit 1 as a part of the development of the subject property and dedicated to the Homeowner's Association except for those areas offered to and accepted by the Town of Rolesville:

   a. A swimming pool and cabana, including changing rooms and restrooms shall be constructed prior to the issuance of the 150th building permit for a dwelling unit;
   b. At least one fenced playground shall be constructed prior to the issuance of the 150th building permit for a dwelling unit;
   c. At least one fenced dog park shall be constructed prior to the issuance of the 150th building permit for a dwelling unit;
   d. Public greenway on a greenway easement dedicated to the Town of Rolesville with paved trails at least ten feet wide (10') shall be constructed generally as shown on the attached Exhibit 1;
   e. A greenway trail head with at least four (4) parking spaces shall be constructed generally as shown on Exhibit 1 and offered to the Town of Rolesville for use as a greenway trail head prior to the issuance of the 200th building permit for a dwelling unit. The Town of Rolesville may accept or reject the offer of dedication in its sole discretion prior to the issuance of the 250th building permit. If the Town of Rolesville accepts dedication of this trailhead, the area dedicated to the Town of Rolesville shall be credited to this project as active open space. If the Town of Rolesville does not accept or reject the dedication of this area in writing prior to issuance of the 250th building permit, it shall be dedicated to the homeowner's association.
   f. At least one (1) community garden shall be provided prior to issuance of the 336th building permit for a dwelling unit; and
   g. At least one (1) acre of undeveloped land in the area located at the northeast quadrant of the intersection of Jonesville Road and Mitchell Mill Road shall be offered to the Town of Rolesville generally as shown on the attached Exhibit 1 for recreational uses prior to the issuance of the 150th building permit for a dwelling unit. The Town of Rolesville may accept or reject the offer of dedication in its sole discretion prior to the issuance of the 200th building permit. If the Town of Rolesville shall be credited to this project as active open space. If the Town of Rolesville does not accept or reject the dedication of this area in writing prior to the issuance of the 200th building permit, it shall be dedicated to the homeowner's association.

7. Additional Driveway Access and Crosswalk to Commercial Area:

Prior to the issuance of the first building permit, the property owner shall apply to NCDOT to allow the installation of an additional driveway access and cross-walk across Jonesville Road from the property zoned RM-CZ to the commercial area located in the northwest quadrant of the intersection of Mitchell Mill and Jonesville Road, both as generally shown as "Potential Additional Driveway and Cross Walk Connection Per Condition #7 of Zoning Conditions" on Exhibit 1. The application to NCDOT shall include a plan for the driveway connection and crosswalk drawn by an engineer and an update to the existing traffic impact analysis prepared by a traffic engineer. If NCDOT approves such a crosswalk and/or driveway access, the property owner shall install them in accordance with the requirements of NCDOT.

8. Transportation Improvements:

To address transportation impacts reasonably expected to be generated by the development, the following road improvements shall be installed in accordance with future phasing plans approved by the Town:

   a. Jonesville Road:
      i. Widen Jonesville Road along the site frontage between Site Access 1 and Mitchell Mill to the roadways ultimate cross section per Rolesville Community Transportation Plan, 2 lanes with two-way left turn lanes.
   b. Mitchell Mill Road:
      i. Widen one-half section along the site frontage to this roadway's ultimate cross section per the Rolesville Community Transportation Plan, 4-lane median divided.
   c. Mitchell Mill Road and Jonesville Road/Peebles Road:
      i. Provide a southbound (Jonesville Road) left turn lane with at least 100 feet of storage and appropriate decel and taper; and
      ii. Construct an eastbound (Mitchell Mill Road) left-turn lane with at least 100 feet of storage and appropriate decel and taper.
   d. Jonesville Road and Site Access 1:
      i. Construct the westbound approach (Site Access 1) with one ingress lane and one egress lane;
      ii. Provide stop-control for westbound approach (Site Access 1); and
      iii. Construct a southbound (Jonesville Road) left-turn lane with at least 100 feet of storage and appropriate decel and taper.
   e. Jonesville Road and Site Access 2:
      i. Construct the westbound approach (Site Access 2) with one ingress lane and one egress lane;
      ii. Provide stop-control for westbound approach (Site Access 2); and
      iii. Construct a southbound (Jonesville Road) left-turn lane with at least 100 feet of storage and appropriate decel and taper.
   f. Jonesville Road and Site Access 3:
      i. Construct the eastbound and westbound approaches (Site Access 3) with one ingress lane and one egress lane;
      ii. Provide stop-control for eastbound and westbound approach (Site Access 3);
      iii. Construct northbound (Jonesville Road) left-turn lane with at least 100 feet of storage and appropriate decel and taper;
      iv. Construct northbound (Jonesville Road) right-turn lane with at least 100 feet of storage and appropriate decel and taper;
      v. Construct a southbound (Jonesville Road) left-turn lane with at least 100 feet of storage and appropriate decel and taper; and
      vi. Construct a southbound (Jonesville Road) right-turn lane with at least 100 feet of storage and appropriate decel and taper.
   g. Jonesville Road and Site Access 4:
      i. Construct the eastbound approach (Site Access 4) with one ingress lane and one egress lane;
      ii. Provide stop-control for eastbound approach (Site Access 4);
      iii. Provide a northbound (Jonesville Road) left-turn lane with at least 100 feet of storage and appropriate decel and taper; and
      iv. Provide a southbound (Jonesville Road) right-turn lane with at least 100 feet of storage and appropriate decel and taper.
   h. Mitchell Mill and Site Access 5:
      i. Construct the southbound approach (Site Access 5) with one ingress lane and one egress lane;
      ii. Provide stop-control for southbound approach (Site Access 5) restricted to right in, right-out operations unless left-turn access is approved by NCDOT; and
      iii. Construct an exclusive westbound (Mitchell Mill Road) right-turn lane with at least 100 feet of storage and appropriate decel and taper.
   i. Mitchell Mill and Site Access 6:
      i. Construct the southbound approach (Site Access 6) with one ingress lane and one egress lane striped as an exclusive right-turn lane; and
      ii. Provide stop-control for southbound approach (Site Access 6) restricted to right in, right-out operations.
   j. Mitchell Mill and Site Access 7:
      i. Construct the southbound approach (Site Access 7) with one ingress lane and one egress lane;
      ii. Provide stop-control for southbound approach (Site Access 7); and
      iii. Construct an exclusive eastbound (Mitchell Mill Road) left-turn lane with at least 100 feet of storage and appropriate decel and taper.
   k. Mitchell Mill Road and Site Access 8:
      i. Construct the southbound approach (Site Access 8) with one ingress lane and one egress lane striped as an exclusive right-turn lane;
      ii. Provide stop-control for southbound approach (Site Access 8). This proposed intersection will be restricted to right-in/right-out operations; and
      iii. Construct an exclusive westbound (Mitchell Mill Road) right-turn lane with at least 100 feet of storage and appropriate decel and taper.
   l. Signal Analysis and Funding:
      i. US 401 Bypass and Jonesville Road: Conduct a full signal warrant analysis prior to full build-out of the proposed development and install a traffic signal if warranted and approved by the Town and NCDOT. Nothing herein shall prohibit the property owner or developer from entering into cost-sharing agreements with others who may also benefit from a signal at this location.
      ii. US 401Bypass and Eastern U-turn Location: Conduct a full signal warrant analysis prior to full build-out of the proposed development and install a traffic signal if warranted and approved by the Town and NCDOT. Nothing herein shall prohibit the property owner or developer from entering into cost-sharing agreements with others who may also benefit from a signal at this location.
      iii. Jonesville and Mitchell Mill Road: Conduct a full signal warrant analysis prior to full build-out of the proposed development and install a traffic signal if warranted and approved by the Town and NCDOT. Nothing herein shall prohibit the property owner or developer from entering into cost-sharing agreements with others who may also benefit from a signal at this location.
      iv. If no traffic signal has been warranted and approved by the Town and NCDOT at any of the locations identified in Condition 8(1)(i)-(iii) at full build-out of the proposed development (issuance of certificate of occupancy for the 380th dwelling unit and 50,000 square feet of non-residential uses), the property owner shall contribute Fifty Thousand Dollars ($50,000.00) to the Town of Rolesville to be used by the Town of Rolesville to install a traffic light at any one of the locations identified in Condition 8(1)(i)-(iii) above when warranted and approved by NCDOT.

Conditions Applicable to Dwelling, Single Family, Detached only:

9. All homes shall include either crawl space foundations or stem wall foundations. Any stem wall foundations shall be at least eighteen inches (18") in height across the front facade of the home and shall have brick or stone veneer on all sides facing a public street.
10. The minimum building square footage shall be 2,000 square feet.

Conditions Applicable to Dwellings, Single Family, Attached (Townhouse) only:

11. No Dwelling, Single Family, Attached (Townhouse) building shall exceed six (6) dwellings.
12. The minimum building square footage for townhomes shall be 1,200 square feet.

Conditions Applicable to the NC-CZ District only:

13. All uses permitted in the Neighborhood Center Mixed-Use district shall be permitted within the NC-CZ except Dwellings, Multiple Family (apartments) shall only be permitted in buildings with commercial uses located on the ground floor.

These zoning conditions have been voluntarily offered by the property owner. All property owners must sign each condition page. This page may be photocopied if additional space is needed.

Signature: Print Name: Dana Bright — Dana Bright — 3-7-2024

Date:

Signature: Print Name: Randy Bright — Randy Bright — 3-7-2024

Date:

Signature: Print Name: Giny Wheeler — Giny Wheeler — 3-7-24

Date:

Signature: Print Name: Stephen Wheeler — Stephen Wheeler — 3/7/2024

Date:

Signature: Print Name: Leigh Fowler — Leigh Fowler — 3/7/2024

Date:

Signature: Print Name: James Robert Fowler, III — James Robert Fowler III — 3-7-24

Date:

THIS PLANSET AND ANY ASSOCIATED DOCUMENTS ARE PRELIMINARY AND NOT AUTHORIZED FOR CONSTRUCTION UNTIL SIGNED, DATED, AND OFFICIALLY RELEASED FOR CONSTRUCTION BY THE ENGINEER OF RECORD.

No.	REVISIONS	DATE	BY
0	CD SUBMITTAL #1	08/01/2025	SREG
1	CID-25-06 V2	10/01/2025	SREG
2	CID-25-06 V3	03/02/2026	SREG

SEAL:

STRONGROCK
ENGINEERING GROUP
STRONG ROCK ENGINEERING GROUP, PLLC | COMPANY LICENSE # P-2165
305 CHURCH AT NORTH HILLS STREET, SUITE 1110 RALEIGH, NC 27609 | INFORMATION@STRONGROCKGROUP.COM

STRONG ROCK PROJECT	CID-25-06
	NOT FOR CONSTRUCTION
SCALE	AS SHOWN
DESIGNED BY	SRG
DRAWN BY	SRG
CHECKED BY	SRG

MITCHELL MILL MARKET
TOWN OF ROLESVILLE, WAKE COUNTY, NORTH CAROLINA
CONSTRUCTION PLANS
ZONING CONDITION

DRAWING SHEET
C-1.1

02 OF 47

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

ROY COOPER
GOVERNOR

J. ERIC BOYETTE
SECRETARY

March 24, 2022

5109 Mitchell Mill Road

Traffic Impact Analysis Review Report
Congestion Management Section

TIA Project: SC-2022-086
Division: 5
County: Wake



Doumit Y. Ishak, Regional Engineer
Clarence B. Bunting, IV, P.E. Project Engineer
Braden M. Walker, P.E. Project Design Engineer

Mailing Address:
NC DEPARTMENT OF TRANSPORTATION
TRANSPORTATION MOBILITY & SAFETY DIVISION
1561 MAIL SERVICE CENTER
RALEIGH, NC 27699-1561

Telephone: (919) 814-5000
Fax: (919) 771-2745
Customer Service: 1-877-368-4968

Website: www.ncdot.gov

Location:
750 N. GREENFIELD PARKWAY
GARNER, NC 27529

5109 Mitchell Mill Road

SC-2022-086	Rolesville	Wake County

Per your request, the Congestion Management Section (CMS) of the Transportation Mobility and Safety Division has completed a review of the subject site. The comments and recommendations contained in this review are based on data for background conditions presented in the Traffic Impact Analysis (TIA) and are subject to the approval of the local District Engineer's Office and appropriate local authorities.

Date Initially Received by CMS	02/24/22	Date of Site Plan	07/02/21
Date of Complete Information	02/24/22	Date of Sealed TIA	02/24/22

Proposed Development

The TIA assumes the development is to be completed by 2028 and consist of the following:

Land Use	Land Use Code	Size
Single-Family Detached Housing	210	264 d.u.
Multi-Family Housing (Low-Rise)	220	129 d.u.
Shopping Center	820	57,890 sq.ft.

Trip Generation - Unadjusted Volumes During a Typical Weekday

	IN	OUT	TOTAL
AM Peak Hour	174	260	434
PM Peak Hour	384	311	695
Daily Trips			7,620

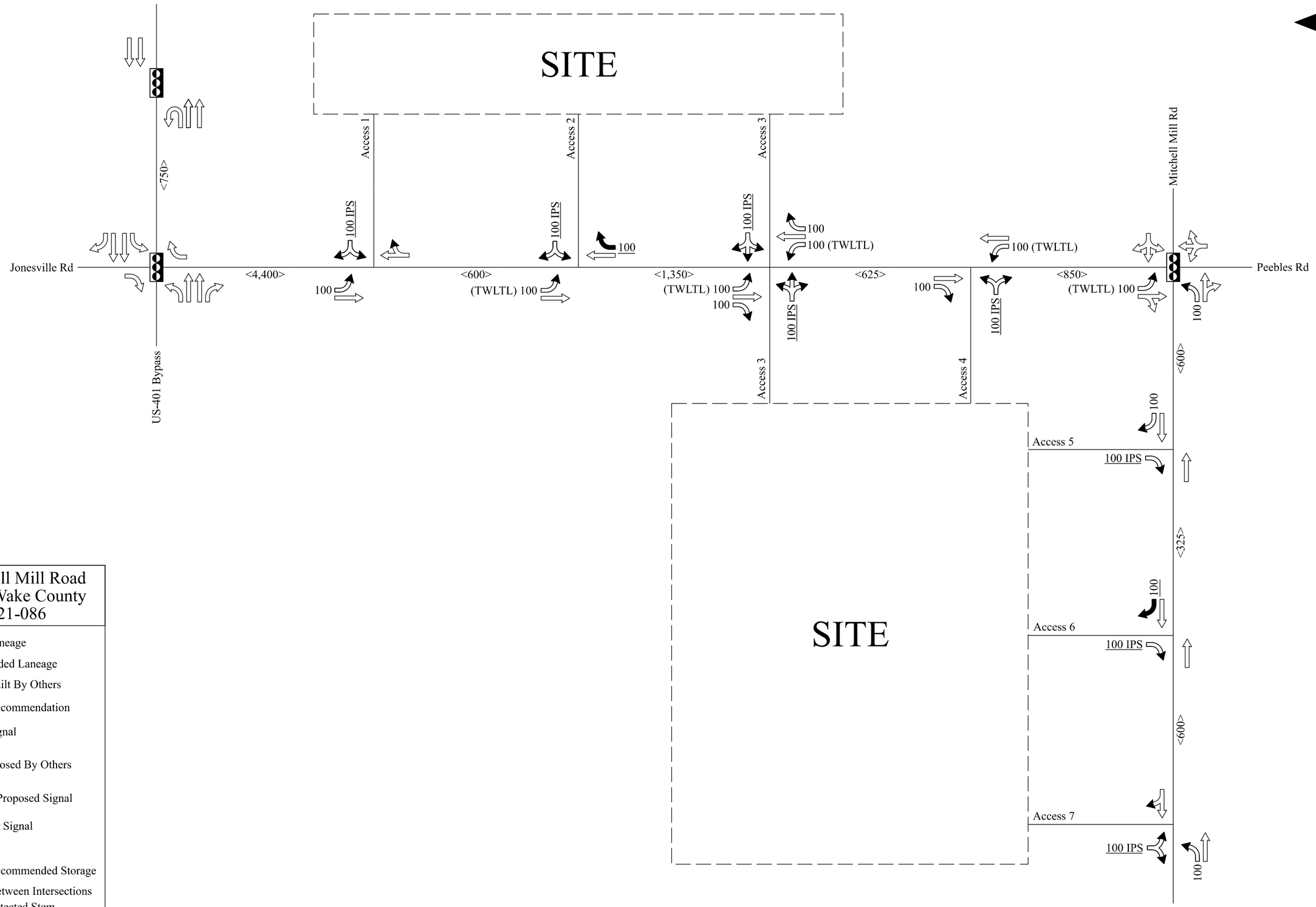
General Reference

For reference to various documents applicable to this review please reference the following link: *https://connect.ncdot.gov/resources/safety/Pages/Congestion-Management.aspx*

Once the driveway permit has been approved and issued, a copy of the final driveway permit requirements should be forwarded to this office. If we can provide further assistance, please contact the Congestion Management Section.

Signalization

We defer to the District Engineer, the Division Traffic Engineer, and the Regional Traffic Engineer for final decisions regarding signalization.



5109 Mitchell Mill Road
Rolesville, Wake County
SC-2021-086

- Existing Laneage
- Recommended Laneage
- Laneage Built By Others
- NCDOT Recommendation
- Existing Signal
- Signal Proposed By Others
- Developer Proposed Signal
- Monitor for Signal
- XXX Storage
- XXX NCDOT Recommended Storage
- <XXX> Distance Between Intersections
- IPS Internal Protected Stem
- All Distances in Feet
- Drawing Not to Scale

Site Development Plan Checklist

Town of Rolesville Planning Department | PO Box 250 | Rolesville, NC 27571 | 919-554-6517 | planning@rolesvillenc.gov

Disclaimer: This checklist does not cover all codified requirements, but is intended to provide guidance based on best practices. Where applicable, requirements are referenced within the Town of Rolesville Land Development Ordinance and/or other State Ordinances.

For items marked "YES", instead of a "Check", please place the sheet number where the requirement is shown.

TO BE COMPLETED BY APPLICANT	YES	N/A
COVER SHEET		
1. Please confirm that you have the required items as shown on the corresponding example cover sheet.		
1. Project name (shall not duplicate an existing name)	X	
2. Application reference number (request Pre-submittal or add placeholder SDP-YR-XX) on all sheets.	X	
3. Date (original submittal and all revisions located in a table)	X	
4. Address + Location (distinguish if within Town limits, Town ETJ, or Wake County)	X	
5. Vicinity map with north arrow.	X	
6. Sheet index, preferably with 1-X numbering along with typical Sheet identifiers (ie, C-5.00)	X	
7. Overall development map (if part of larger project) with project area clearly identified	X	
8. Site Data Table including: Property Identification Numbers (PIN) for all properties, Zoning District (inc. REZ#/approval date), Watershed, River Basin, Current Use(s), Proposed Use(s), Current Impervious, Proposed Impervious, Parking Data per use, Tree Coverage Data, Building Height, and Building Square Footage(s) and/or Multifamily residential unit #/density.	X	
9. If located in the floodplain, provide the correct Flood Insurance Rate Map (FIRM) panel number and date	X	
10. Contact information for the Property owner, applicant/representatives, and all consultants	X	
11. Professional seal		X
12. Application reference numbers of previous approvals, including Rezoning, Final Plat, etc. Existing and Proposed Conditions related to the development (Special use permits, conditional zonings, etc.)	X	
13. List any Conditions of Approval or Development Agreement stipulations that apply to property or project (ie, Conditional Rezoning, Special Use Permit, etc.)	X	
EXISTING CONDITIONS AND/OR DEMOLITION PLAN SHEET(S) **RECENT SURVEY RECOMMENDED**		
1. Dimensions, scale, and north arrow	X	
2. Professional seal		
3. Site size, metes and bounds of property boundary, with north arrow, scale (in graphic and list format), and measurable graphic of larger site showing context of area of proposed change		
4. Property lines and Property Identification Number (PIN) of the site and adjacent properties		
5. Zoning districts (of site and Adjacent properties to confirm buffer yard requirements)		
6. Register of Deeds Book of Maps or Deed Book/Page reference for site and Adjacent properties		
7. Adjacent property owner information		
8. Owner information for the parcel of the project location		
9. Adjacent streets (name, right-of-way width, clarify if NCDOT or Town)		
10. Existing Land use (of site and adjacent properties)		
11. Any existing features located within the right-of-way		
12. Setbacks – LDO Section 3 per Zoning District		
13. Existing building footprint(s) with square footage and number of stories		

14. Existing infrastructure: loading areas, parking, driveways, alleys, streets, sidewalks, dumpsters, lighting, septic tanks, drain fields, wells, hydrants (within 500 feet of site), water meters, culverts (other subsurface features), utility or other easements (type, size, and whether public or private), railroads, cemeteries, etc.	X	
15. Existing recorded open space or common areas (including easements)		
16. Topographic contours shall extend 100' past property limits		
18. Water features (name/location), stream buffers, drainage ways, wetlands, other environmental features		
19. Existing vegetation (with general description and location)		
20. Demolition proposed (on this sheet or separate if existing conditions under demolition are illegible)		
21. Dimensions, scale, and north arrow		
SITE PLAN SHEET(S)		
1. Scale and north arrow	X	
2. Base information to remain (clearly distinguish between existing and proposed conditions)		
3. Address Plan approved by Wake Co. GIS/911 – if multiple non-residential suites / multifamily		
4. Building Setback lines per the zoning district – LDO Section 3		
5. Flood protection zones (if applicable)		
6. Building footprint(s) with square footage per floor and per use(s), height, number of stories, and entries		
7. Distances between buildings, as applicable per zoning district – LDO Section 3		
8. Parking calculations (vehicle, handicapped, guests, and bicycle) – LDO Section 6.4		
9. Driveways, stacking spaces, and parking areas (with number of spaces per bay, space size, and pavement type labeled) – LDO Section 6.4.4		
10. Handicap aisles, spaces, signage, and accessible routes to the main entrance are labeled & dimensioned		
11. Bicycle parking location (with rack details) – LDO Section 6.4.7		
12. Sight distance triangles – LDO Section 9.2 (10 ' x70' on all Collector roads and NCDOT required driveway permits)		
13. Sidewalks, walkways, and trails dimensioned, and material noted – LDO Section 9.2		
14. ADA ramps are shown; directional crossings shall be provided at intersections		
15. Trash handling and recycling facilities (with required screening and details) – LDO Section 6.2.4		
16. Show all fire lanes and access routes, as applicable		
17. Utilities (existing and proposed) (above ground utilities to be screened, with details) – LDO Section 6.2.4 & 6.8.8		
18. ROW and streets are labeled and dimensioned; Public vs. Private should be clearly defined – LDO Section 9.2		
19. Easements are labeled & dimensioned; Public vs. Private should be clearly defined – LDO Sec. 9.2.4		
20. Radii labeled for all intersections, or a typical label included		
22. Tree protection fencing location with details and standard notes – LDO Section 6.2.4 & 6.2.5		
22. Stream buffers, drainage ways, wetlands, wetland buffers with/ necessary setbacks – LDO Section 4.2.9		
23. Open space and Greenways (dedicated or reserved) and any proposed improvements within them – LDO Section 6.2.1		
24. Landscape buffer locations and widths – LDO Section 6.2.2		
25. Location of grass strip – LDO Section 6.2.2.2.D. D		
26. Location of any proposed monument or ground signs – LDO Section 6.1.2		
27. If a multi-tenant complex, clarify if a Master Sign Plan is intended – LDO Section 6.1.2.J		
28. Other site features unique to the proposed use		
EROSION CONTROL PLAN SHEET(S)		
1. Scale and north arrow	X	
2. Limits of land disturbance		
3. Grading (contours at 2-foot intervals within 100 feet of developed area). Clearly distinguish between existing and proposed contours; Contours should be labeled regularly enough to follow drainage patterns.		
4. Impervious surfaces (label and provide calculations)		
5. Existing vegetation (types and locations) – LDO Section 6.2.4.5		

6. Retaining walls labeled with top/bottom of wall elevations (wall detail required for construction drawings)	X	
7. Stormwater ponds, bioretention facilities, and other similar facilities.		
8. Preliminary storm drainage features and easements		
9. Erosion control features defined by notes and/or a legend		
10. Tree protection fencing location (reference detail location if on separate sheet)		
11. Label critical root zones – LDO Section 6.2.4		
12. The erosion control design shall meet Wake County standards. Please reference the Wake County Sediment and Erosion Control Construction Checklist		
GRADING AND DRAINAGE PLAN SHEET(S)		
1. Scale and north arrow	X	
2. Grading (contours at 2-foot intervals); Clearly distinguish between existing and proposed contours; Contours should be labeled regularly enough to follow drainage patterns		
3. Proposed infrastructure including streets, sidewalks, greenways, retaining walls (labeled with top and bottom elevations), ponds, storm sewer, and utilities		
4. Utility or other easements (type, size, and whether public or private); 20' PDE shall be required around the outfall from the ROW		
5. Existing vegetation (types and locations) – LDO Section 6.2.4.5		
UTILITY PLAN SHEET(S)		
1. All utilities (shown underground); Storm sewer should be clearly depicted separately from sewer and water – LDO Section 4.1.2	X	
2. Dimensions, scale, and north arrow		
3. Above-ground utilities and equipment (screened and with details) – LDO Section 6.2.4 and 9.2.6		
4. Tree protection fencing location (reference detail location if on separate sheet)		
5. Sewer and water design are to meet the City of Raleigh Public Utility standards		
LIGHTING PLAN SHEET(S)		
A lighting plan is required per LDO Section 6.6.F. It shall be prepared, signed, and sealed by a licensed engineer. It shall be of an engineered scale that is easily legible and include the following:	X	
1. Title of project		
2. Professional seal		
3. Dimensions, scale, and north arrow		
4. All proposed and existing buildings on the site		
5. Pedestrian and vehicular areas		
6. Other above-ground improvements		
7. The horizontal location of all proposed and existing outdoor lighting fixtures, including pole and wall-mounted fixtures		
8. Mounting heights of each fixture		
9. Overall height of each pole above grade		
10. Location of externally illuminated signs and associated fixtures		
11. The location of all architectural and landscape lighting fixtures		
12. Lighting plans shall be specified and calculated in maintained footcandles (FC). Measurements of light levels shall be taken at finished grade with an accurate and calibrated light meter – LDO 6.6.F.3		
13. The plan must include a footcandle plan that provides typical footcandle contours and a point photometric grid that indicates footcandle levels measured at grade across the site. Maximum, average, and minimum site foot-candles, uniformity ratio (both average and minimum), and depreciation factors are also required. The plan must show initial horizontal illuminance values in foot-candles for the illuminated area. These values must be calculated at the grade level and include contributions from all on-site fixtures.		
14. The plan must plot foot-candles of illumination at ground level to the nearest tenth of a foot-candle, and at horizontal grid intervals of no more than ten feet.		
15. The plan shall show illumination level at the lot line (or perimeter of a development, if applicable) to ensure maximum illumination levels are not exceeded.		
16. The manufacturer's cut sheets (specifications) for each proposed fixture must be submitted.		
17. A lighting fixture schedule that presents the following information: Fixture type, including the manufacturer's product identification catalog number and fixture mounting height.		
18. Any other information required to ensure compliance with LDO Section 6.6 lighting design standards		

LANDSCAPE PLAN SHEET(S)		
Preservation plan (LDO 6.2.4.5) – This can also be on the landscape plan sheet, but Staff would suggest this be its own plan sheet as it must include all the following:	X	
a. A tree and/or vegetative survey **preferred to be prepared by a Certified Arborist** (LDO Section 6.2.4.5B)		
b. Demonstration of no disturbance within a Tree critical root zone (CRZ), as defined in LDO.		
c. Protect critical root zones (CRZ) from encroachment and damage; restrict access by installing a barrier to keep materials, people, or equipment out of the critical root zone (CRZ).		
d. Barriers shall be accompanied by temporary signs labeling the critical root zone (CRZ).		
e. Graphically identify a location plan and boundary line survey of the property.		
f. Graphically identify the size, location, and species of trees.		
g. Graphically identify areas where trees, vegetation, and soils are to be protected and preserved and areas where trees, vegetation, and soil are to be removed or modified.		
h. Graphically identify each tree to be saved or removed.		
i. Demonstration of compliance with all Vegetation Preservation standards (LDO Sec. 6.8.4.5C.		
j. Tree protection fencing location (reference detail location if on separate sheet)		
A licensed Landscape Architect shall prepare a landscape plan. Refer to LDO Section 6.2.4.2 for a complete list of the Landscape Plan review requirements. The plan shall include the following:		
1. Title of project		
2. Dimensions, scale, and north arrow		
3. Professional seal		
4. All required open space, including the size of each area and which open space type - LDO 6.2		
5. Indigenous or native vegetation to remain		
6. Identify all LDO required landscaping		
7. Vehicle use areas, including parking, aisles, and driveways		
8. Roadways and access points		
9. Plant spacing and native status		
10. Overhead and underground utilities		
11. Tree coverage calculations and areas, with samples, if applicable to the changes proposed		
12. Existing vegetation to remain (with critical root zones shown) – LDO Article 6.2.4.5		
13. Tree protection fencing location (reference detail location if on separate sheet)		
14. Proposed landscaping (meeting minimum size and species mixing requirements		
15. Detailed Plant list (keyed to plan and showing what requirement each plant will fulfill, caliper size and height of plants, condition of root ball, common name and botanical name, number of each plant)		
16. Landscape buffers (labeled with slope, required width, required plantings, and required fencing, walls, or berms) - LDO Article 6.2.2		
17. Stream buffers		
18. Samples of existing vegetation in required buffers (with critical root zones) – LDO Article 6.2.4.5		
19. Street trees (with calculations) per LDO Section 6.2.2.2		
20. Screening (with height, details, cross-sections, etc.) – LDO Article 6.8.8		
21. Lighting, water, sewer, storm drainage systems, and easements (half-toned) to check for conflicts		
22. Planting details (for trees, shrubs, and groundcover)		
23. Fences, walls, and/or berms (with height and details) – LDO Article 6.5		

ARCHITECTURAL DRAWINGS		
1. Compliance with Applicable Standards: Please refer to the specific standards that may apply to your project. Applicants are required to demonstrate compliance with the applicable standards as follows. Compliance means that all dimensions are measured and specified, and all materials are identified.	X	
a. Nonresidential building design standards – LDO Article 6.8.2		
b. Multifamily design standards – LDO Article 6.8.6		
c. Industrial design standards – LDO Article 6.8.7		
2. Drawings must be to scale and have a graphic scale		
3. Building elevations with total building height and finish floor elevations labeled		

4. All building materials must be labeled	X	
5. Building façade width and width of materials on the façade shall be labeled	X	
WAKE COUNTY FIRE ADDITIONAL REQUIREMENTS (AS APPLICABLE)		
1. Fire Lanes are dimensioned and shown as being painted or striped per the Fire Code.	X	
2. Any entrance gate shall have a means for emergency vehicle access and shall not decrease roadway width to below the required widths or height for emergency vehicles		X
NCDOT REQUIREMENTS (AS APPLICABLE if Property fronts on/connects to DOT road)		
1. Driveway and/or Encroachment Permit submitted; include Permit # if submitted: _____	X	
2. Interior Stem is protected (100' minimum)		
3. Driveway radius ties into the tangent in front of the project's property		
4. Driveway turnout grades meet NCDOT standards		
5. Driveway is not in the Functional Area of the Intersection		
6. Above-ground utility appurtenances are placed as close to the ROW as possible		
7. All storm drainage crosses 90 degrees to the roadway		
8. All drainage structures are not under the pavement unnecessarily		
9. Catch basins shall be provided at the end of the curb and gutter; 5' is provided after a catch basin, before the end of the curb		
10. All hazards are outside of the clear recovery area or outside the proposed ROW Landscaping		
11. Turn lanes are required if AADT is over 4,000, and at the NCDOT District Engineer's discretion		
12. Turn lanes are required by the TIA; a copy of the TIA shall be provided		
13. Plans shall be approved by the Division Roadside Engineer, 919-816-8290		
14. Traffic Signal Plans shall be approved by the Division Traffic Engineer, 919-536-4000		
15. Wedging detail is provided when applicable		
16. All details for work with the ROW along DOT roadways are NCDOT details.		

Last Revised: June 13, 2025