

# SPECIAL USE PERMIT APPLICATION



**TOWN OF CHAPEL HILL**  
**Planning Department**  
405 Martin Luther King Jr. Blvd.  
Chapel Hill, NC 27514  
phone (919) 969-5066 fax (919) 969-2014  
www.townofchapelhill.org

Parcel Identifier Number (PIN): 9799-39-9116 and 9799-49-0235 Date February 5th, 2020

## Section A: Project Information

Project Name: Christ Community Church  
Property Address: 141 Erwin Road Zip Code: 27514  
Use Groups (A, B, and/or C): B Existing Zoning District: R-2  
Project Description: Demolish existing residence and existing day care and build one worship building of 11,420 sf with 117 parking spaces and associated stormwater controls and public improvements.

## Section B: Applicant, Owner, and/or Contract Purchaser Information

### Applicant Information (to whom correspondence will be mailed):

Name: Christ Community Church  
Address: 1526 E. Franklin Street  
City: Chapel Hill State: NC Zip Code: 27514  
Phone: (919) 636-5258 Email: byron@cccpc.org

The undersigned applicant hereby certifies that, to the best of their knowledge and belief, all information supplied with this application and accurate.

Signature: *Byron J. Peterson* Date: 2/4/2020

### Owner/Contract Purchaser Information:

Owner  Contract Purchaser

Name: Christ Community Church  
Address: 1526 E. Franklin Street  
City: Chapel Hill State: NC Zip Code: 27514  
Phone: 919-636-5258 Email: byron@cccpc.org

The undersigned applicant hereby certifies that, to the best of their knowledge and belief, all information supplied with this application and accurate.

Signature: *Byron J. Peterson* Date: 2/4/2020

Click [here](#) for application submittal instructions.



# PROJECT FACT SHEET

TOWN OF CHAPEL HILL  
Planning Department

## Section A: Project Information

**Use Type:** (check/list all that apply)

Office/Institutional     Residential     Mixed-Use     Other: PLACE OF WORSHIP

**Overlay District:** (check all that apply)

Historic District     Neighborhood Conservation District     Airport Hazard Zone

## Section B: Land Area

Net Land Area (NLA): Area within zoning lot boundaries		NLA=	111,645	sq. ft.
Choose one, or both, of the following (a or b), not to exceed 10% of NLA	a) Credited Street Area (total adjacent frontage) x 1/2 width of public right-of-way	CSA=	11,165	sq. ft.
	b) Credited Permanent Open Space (total adjacent frontage) x 1/2 public or dedicated open space	COS=		sq. ft.
TOTAL: NLA + CSA and/or COS = Gross Land Area (not to exceed NLA + 10%)		GLA=	122,810	sq. ft.

## Section C: Special Protection Areas, Land Disturbance, and Impervious Area

**Special Protection Areas:** (check all those that apply)

Jordan Buffer     Resource Conservation District     100 Year Floodplain     Watershed Protection District

Land Disturbance	Total (sq. ft.)
Area of Land Disturbance (Includes: Footprint of proposed activity plus work area envelope, staging area for materials, access/equipment paths, and all grading, including off-site clearing)	92,400
Area of Land Disturbance within RCD	None
Area of Land Disturbance within Jordan Buffer	None

Impervious Areas	Existing (sq. ft.)	Demolition (sq. ft.)	Proposed (sq. ft.)	Total (sq. ft.)
Impervious Surface Area (ISA)	9,690	9,666	51,949	51,973
Impervious Surface Ratio: Percent Impervious Surface Area of Gross Land Area (ISA/GLA)%	7.89	7.87	42.30	42.32
If located in Watershed Protection District, % of impervious surface on 7/1/1993	NA	NA	NA	NA



**Section D: Dimensions**

Dimensional Unit (sq. ft.)	Existing (sq. ft.)	Demolition (sq. ft.)	Proposed (sq. ft.)	Total (sq. ft.)
Number of Buildings	Seven ; 7,725 sf	Six ; 7,646 sf	One : 11,420 sf	Two ; 11,420 sf
Number of Floors	One and Two	One and Two	Two	One and Two
Recreational Space	None	None	None	None

**Residential Space**

Dimensional Unit (sq. ft.)	Existing (sq.ft.)	Demolition (sq. ft.)	Proposed (sq. ft.)	Total (sq. ft.)
Floor Area (all floors – heated and unheated)	<b>4,551</b>	<b>4,551</b>	NONE	NONE
Total Square Footage of All Units				
Total Square Footage of Affordable Units				
Total Residential Density				
Number of Dwelling Units				
Number of Affordable Dwelling Units				
Number of Single Bedroom Units				
Number of Two Bedroom Units				
Number of Three Bedroom Units				

**Non-Residential Space (Gross Floor Area in Square Feet)**

Use Type	Existing	Proposed	Uses	Existing	Proposed
Commercial	3,095 sf	0 sf			
Restaurant			# of Seats		
Government					
Institutional					
Medical					
Office					
Hotel			# of Rooms		
Industrial					
Place of Worship	0 sf	11,420 sf	# of Seats	None	250
Other					

Dimensional Requirements		Required by Ordinance	Existing	Proposed
<b>Setbacks (minimum)</b>	Street	26	39	30 ( from new R/W)
	Interior (neighboring property lines)	11	25	25
	Solar (northern property line)	13	66	74
<b>Height (maximum)</b>	Primary	29	NA	16
	Secondary	50	31 (Approx)	50
<b>Streets</b>	Frontages	52	145	<b>239</b>
	Widths	65	131	252



**Section F: Adjoining or Connecting Streets and Sidewalks**

*Note: For approval of proposed street names, contact the Engineering Department.*

Street Name	Right-of-Way Width	Pavement Width	Number of Lanes	Existing Sidewalk*	Existing Curb/Gutter
Old Oxford Road	60	24	Two	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes
Erwin Road	60	30	2/3	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes

**List Proposed Points of Access** (Ex: Number, Street Name):

\*If existing sidewalks do not exist and the applicant is adding sidewalks, please provide the following information:

Sidewalk Information			
Street Names	Dimensions	Surface	Handicapped Ramps
Old Oxford Road	5 ft	Conc	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A
Erwin Road	5 ft	Conc	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A

**Section G: Parking Information**

Parking Spaces	Minimum	Maximum	Proposed
Regular Spaces	50	125	112
Handicap Spaces	2	3	5
Total Spaces	52	128	117
Loading Spaces	NA	NA	NA
Bicycle Spaces	5	5	8
Surface Type	Asphalt		

**Section H: Landscape Buffers**

Location (North, South, Street, Etc.)	Minimum Width	Proposed Width	Alternate Buffer	Modify Buffer
North	20	40	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes
South	10 (SHARED)	10 (SHARED)	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> Yes
East	30	30	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes
West	20	30/26	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> Yes



**Section I: Land Use Intensity**

Existing Zoning District: R-2  
 Proposed Zoning Change (if any):

Zoning – Area – Ratio			Impervious Surface Thresholds			Minimum and Maximum Limitations	
Zoning District(s)	Floor Area Ratio (FAR)	Recreation Space Ratio (RSR)	Low Density Residential (0.24)	High Density Residential (0.50)	Non-Residential (0.70)	Maximum Floor Area (MFA) = FAR x GLA	Minimum Recreation Space (MSR) = RSR x GLA
R-2	.093						
<b>TOTAL</b>	.093			NA	85,967	11,421	NA
RCD Streamside		0.01					
RCD Managed		0.019					
RCD Upland							

**Section J: Utility Service**

Check all that apply:

<b>Water</b>	<input checked="" type="checkbox"/> OWASA	<input type="checkbox"/> Individual Well	<input type="checkbox"/> Community Well	<input type="checkbox"/> Other
<b>Sewer</b>	<input checked="" type="checkbox"/> OWASA	<input type="checkbox"/> Individual Septic Tank	<input type="checkbox"/> Community Package Plant	<input type="checkbox"/> Other
<b>Electrical</b>	<input checked="" type="checkbox"/> Underground	<input type="checkbox"/> Above Ground		
<b>Telephone</b>	<input checked="" type="checkbox"/> Underground	<input type="checkbox"/> Above Ground		
<b>Solid Waste</b>	<input checked="" type="checkbox"/> Town	<input type="checkbox"/> Private		



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SUBMITTAL REQUIREMENTS  
TOWN OF CHAPEL HILL  
Planning Department**

The following must accompany your application. Failure to do so will result in your application being considered incomplete. For assistance with this application, please contact the Chapel Hill Planning Department (Planning) at (919) 969-5066 or at [planning@townofchapelhill.org](mailto:planning@townofchapelhill.org).

X	<b>Application fee</b> ( <a href="#">including Engineering Review fee</a> ) ( <a href="#">refer to fee schedule</a> )	Amount Paid \$	<input type="text" value="8,924.40"/>
X	<b>Pre-application meeting</b> –with appropriate staff		
X	<b>Digital Files</b> – provide digital files of all plans and documents		
X	<b>Recorded Plat or Deed of Property</b>		
X	<b>Project Fact Sheet</b>		
X	<b>Traffic Impact Statement</b> – completed by Town’s consultant (or exemption)		
X	<b>Description of Public Art Proposal</b>		
X	<b>Statement of Justification</b>		
X	<b>Response to Community Design Commission and Town Council Concept Plan comments</b>		
NA	<b>Affordable Housing Proposal, if applicable</b>		
NA	<b>Provide existing Special Use Permit, if Modification</b>		
X	<b>Mailing list of owners of property within 1,000 feet perimeter of subject property</b> ( <a href="#">see GIS notification tool</a> )		
X	<b>Mailing fee for above mailing list (mailing fee is double due to 2 mailings)</b>	Amount Paid \$	<input type="text"/>
X	<b>Written Narrative describing the proposal</b>		
X	<b>Resource Conservation District, Floodplain, &amp; Jordan Buffers Determination</b> – necessary for all submittals		
NA	<b>Jurisdictional Wetland Determination</b> – if applicable		
NA	<b>Resource Conservation District Encroachment Exemption or Variance (determined by Planning)</b>		
NA	<b>Jordan Buffer Authorization Certificate or Mitigation Plan Approval (determined by Planning)</b>		
X	<b>Reduced Site Plan Set (reduced to 8.5" x 11")</b>		

**Stormwater Impact Statement (1 copy to be submitted)**

- Written narrative describing existing & proposed conditions, anticipated stormwater impacts and management structures and strategies to mitigate impacts
- Description of land uses and area (In square footage)
- Existing and proposed impervious surface area in square feet for all subareas and project area
- Ground cover and uses information
- Soil information (classification, infiltration rates, depth to groundwater and bedrock)
- Time of concentration calculations and assumptions
- Topography (2-foot contours)
- Pertinent on-site and off-site drainage conditions
- Upstream and/or downstream volumes
- Discharges and velocities
- Backwater elevations and effects on existing drainage conveyance facilities
- Location of jurisdictional wetlands and regulatory FEMA Special Flood Hazard Areas
- Water quality volume calculations
- Drainage areas and sub-areas delineated
- Peak discharge calculations and rates (1, 2, and 25-year storms)
- Hydrographs for pre- & post-development without mitigation, post-development with mitigation
- Volume calculations and documentation of retention for 2-year storm



**SPECIAL USE PERMIT APPLICATION  
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- r) 85% TSS removal for post-development stormwater runoff
- s) Nutrient loading calculations
- t) BMP sizing calculations
- u) Pipe sizing calculations and schedule (include HGL & EGL calculations and profiles)

**Plan Sets (10 copies to be submitted no larger than 24" x 36")**

Plans should be legible and clearly drawn. All plan set sheets should include the following:

- Project Name
- Legend
- Labels
- North Arrow (North oriented toward top of page)
- Property boundaries with bearing and distances
- Scale (Engineering), denoted graphically and numerically
- Setbacks
- Streams, RCD Boundary, Jordan Riparian Buffer Boundary, Floodplain, and Wetlands Boundary, where applicable
- Revision dates and professional seals and signatures, as applicable

**Cover Sheet**

- a) Include Project Name, Project fact information, PIN, and Design Team

**Area Map**

- a) Project name, applicant, contact information, location, PIN, & legend
- b) Dedicated open space, parks, greenways
- c) Overlay Districts, if applicable
- d) Property lines, zoning district boundaries, land uses, project names of site and surrounding properties, significant buildings, corporate limit lines
- e) Existing roads (public & private), rights-of-way, sidewalks, driveways, vehicular parking areas, bicycle parking, handicapped parking, street names
- f) 1,000' notification boundary

**Existing Conditions Plan**

- a) Slopes, soils, environmental constraints, existing vegetation, and any existing land features
- b) Location of all existing structures and uses
- c) Existing property line and right-of-way lines
- d) Existing utilities & easements including location & sizes of water, sewer, electrical, & drainage lines
- e) Nearest fire hydrants
- f) Nearest bus shelters and transit facilities
- g) Existing topography at minimum 2-foot intervals and finished grade
- h) Natural drainage features & water bodies, floodways, floodplain, RCD, Jordan Buffers & Watershed boundaries



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SUBMITTAL REQUIREMENTS  
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Planning Department**

**Detailed Site Plan**

- a) Existing and proposed building locations
- b) Description & analysis of adjacent land uses, roads, topography, soils, drainage patterns, environmental constraints, features, existing vegetation, vistas (on and off-site)
- c) Location, arrangement, & dimension of vehicular parking, width of aisles and bays, angle of parking, number of spaces, handicapped parking, bicycle parking, Typical pavement sections & surface type.
- d) Location of existing and proposed fire hydrants
- e) Location and dimension of all vehicle entrances, exits, and drives
- f) Dimensioned street cross-sections and rights-of-way widths
- g) Pavement and curb & gutter construction details
- h) Dimensioned sidewalk and tree lawn cross sections
- i) Proposed transit improvements including bus pull-off and/or bus shelter
- j) Required landscape buffers (or proposed alternate/modified buffers)
- k) Required recreation area/space (including written statement of recreation plans)
- l) Refuse collection facilities (existing and proposed) or shared dumpster agreement
- m) Construction parking, staging, storage area, and construction trailer location
- n) Sight distance triangles at intersections
- o) Proposed location of street lights and underground utility lines and/or conduit lines to be installed
- p) Easements
- q) Clearing and construction limits
- r) Traffic Calming Plan – detailed construction designs of devices proposed & associated sign & marking plan

**Stormwater Management Plan**

- a) Topography (2-foot contours)
- b) Existing drainage conditions
- c) RCD and Jordan Riparian Buffer delineation and boundary (perennial & intermittent streams; note ephemeral streams on site)
- d) Proposed drainage and stormwater conditions
- e) Drainage conveyance system (piping)
- f) Roof drains
- g) Easements
- h) BMP plans, dimensions, details, and cross-sections
- i) Planting and stabilization plans and specifications

**Landscape Protection Plan**

- a) Rare, specimen, and significant tree survey within 50 feet of construction area
- b) Rare and specimen tree critical root zones
- c) Rare and specimen trees proposed to be removed
- d) Certified arborist tree evaluation, if applicable
- e) Significant tree stand survey
- f) Clearing limit line
- g) Proposed tree protection/silt fence location
- h) Pre-construction/demolition conference note
- i) Landscape protection supervisor note
- j) Existing and proposed tree canopy calculations, if applicable





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**Planting Plan**

- a) Dimensioned and labeled perimeter buffers
- b) Off-site buffer easement, if applicable
- c) Landscape buffer and parking lot planting plan (including planting strip between parking and building, entryway planting, and 35% shading requirement)

**Steep Slope Plan**

- a) Classify and quantify slopes 0-10%, 10-15%, 15-25%, and 25% and greater
- b) Show and quantify areas of disturbance in each slope category
- c) Provide/show specialized site design and construction techniques

**Grading and Erosion Control Plan**

- a) Topography (2-foot contours)
- b) Limits of Disturbance
- c) Pertinent off-site drainage features
- d) Existing and proposed impervious surface tallies

**Streetscape Plan, if applicable**

- a) Public right-of-way existing conditions plan
- b) Streetscape demolition plan
- c) Streetscape proposed improvement plan
- d) Streetscape proposed utility plan and details
- e) Streetscape proposed pavement/sidewalk details
- f) Streetscape proposed furnishing details
- g) Streetscape proposed lighting detail

**Solid Waste Plan**

- a) Preliminary Solid Waste Management Plan
- b) Existing and proposed dumpster pads
- c) Proposed dumpster pad layout design
- d) Proposed heavy duty pavement locations and pavement construction detail
- e) Preliminary shared dumpster agreement, if applicable



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**Construction Management Plan**

- a) Construction trailer location
- b) Location of construction personnel parking and construction equipment parking
- c) Location and size of staging and materials storage area
- d) Description of emergency vehicle access to and around project site during construction
- e) Delivery truck routes shown or noted on plan sheets

**Energy Management Plan**

- a) Description of how project will be 20% more energy efficient than ASHRAE standards
- b) Description of utilization of sustainable forms of energy (Solar, Wind, Hydroelectric, and Biofuels)
- c) Participation in NC GreenPower program
- d) Description of how project will ensure indoor air quality, adequate access to natural lighting, and allow for proposed utilization of sustainable energy
- e) Description of how project will maintain commitment to energy efficiency and reduced carbon footprint over time
- f) Description of how the project's Transportation Management Plan will support efforts to reduce energy consumption as it affects the community

**Exterior Elevations**

- a) An outline of each elevation of the building, including the finished grade line along the foundation (height of building measured from mean natural grade)



December 12th, 2019  
Revised March 5<sup>th</sup>, 2020

### **Findings of Fact and Requests by the Applicant to Town Council**

- A. **Project:** Christ Community Church
- B. **Location:** 141 Erwin Road (Corner of Old Oxford and Erwin Roads)
- C. **Type of Application:** Special Use Permit
- D. **Summary of Project:** On the 2.56-acre parcel, the existing residential buildings and outbuildings will be removed and recycled to the extent practicable. A new 11,420 Church, consisting of a worship area, fellowship area, classrooms, and Church office is proposed. The site will include on-site parking, extensive stormwater controls, existing buffer trees and new plantings and fencing, and widening, curb and sidewalk along both Old Oxford and Erwin Road frontages. There will be no use on the site other than a worship facility.

E. **Findings of Fact:**

1. ***That the use or development is located, designed and proposed to be operated so as to maintain or promote the public health, safety and general welfare.***

This application is for a worship facility with Sunday services; there will be a very small office staff of 1 to 3 persons during weekdays. There will be no daycare or school use.

The Traffic Study shows there will be no change in level of service due to Christ Community Church. The Traffic Study recommends two (2) entrances, widening of Erwin Road with bike lane, and widening of Old Oxford along with public sidewalks along both streets. The SUP plans for the Church incorporate all these recommendations.

An extensive underground Stormwater treatment and detention system, located under the parking lot, will control runoff rate and treat runoff to meet and exceed Town standards.

When Concept Plans were submitted for this project, several neighbors predicted that Christ Community Church would be a “good neighbor”. The Church is fully committed to realizing this expectation.

2. ***That the use or development complies with all required regulations and standards of this chapter, including all applicable provisions of Articles 3 and 5, the applicable specific standards contained in the supplemental use regulations (Article 6), and with all other applicable regulations.***

This project will comply with all TOCH regulations and standards. As discussed later in this statement, the Church requests Council permission to retain the 50-year-old, small outdoor storage shed with dirt floor in the southwest portion of the site to store yard equipment, so as to be able to maintain its 2.8-acre campus. Along its southern boundary with the proposed Summit Hospitality Group project, Town Council asked Christ Community Church to “work with” the adjoining project during the concept design process. This cooperation has resulted in requests by the Applicant to Town Council for a modified shared buffer, for the adjustment of the property line between the two projects, and for a fire lane connection between the two properties.

**Connecting the Riches of Christ to the Realities of Life**

P.O. Box 2314 • Chapel Hill, NC 27515 • [www.cccpca.org](http://www.cccpca.org)



December 12th, 2019  
Revised March 5<sup>th</sup>, 2020

**3. That the use or development is located, designed and proposed to be operated so as to maintain or enhance the value of contiguous property, or that the use or development is a public necessity:**

At the Concept stage, neighbors expressed concern about stormwater runoff, traffic and building height and buffering. The submitted SUP plans and details for Christ Community Church address each of those concerns:

- Larger areas of existing hardwoods and existing tree areas will be left undisturbed on the site as compared to the Concept Plan.
- Treed buffers, planted buffers and fencing have been increased since the Concept Pan.
- Impervious surface has been reduced by about 10% since the Concept Plan.
- Extensive stormwater controls and curbing will be installed to address any offsite stormwater impacts.
- The Traffic Study shows no traffic impact.
- Building height has been reduced. This, along with the extensive existing trees to be saved, will result in the Church being well-screened from neighbors.

**4. That the use or development conforms with the general plans for the physical development of the town as embodied in this appendix and in the Comprehensive Plan.**

This project will comply with all zoning standards for the existing R2 Zoning.

With regard to Town Strategic Goals for 2020-2022, the SUP plans for Christ Community Church fully support the three (3) Council objectives for Environmental Stewardship:

- The 7,646 SF of existing buildings to be removed will be recycled to the maximum extent possible.
- Extensive stands of existing hardwoods and red cedars on site will be permanently preserved.
- EV stations will be built as part of initial construction, with provisions made for an additional 20 EV stations which could be connected when circumstances warrant.
- Extensive stormwater controls will protect neighbors, waterways, and preserve ecosystems.
- Absolutely no stream buffer, RCD, wetland or any other environmentally sensitive areas will be impacted by this development.

The Council Goal of increased connectivity will be achieved because of the extensive proposed public and private sidewalk system, the proposed bike lane on Erwin Road and the proposed covered bike spaces on site.

Although meeting the spiritual needs of Chapel Hill residents may not be a “stated” Council Goal, Christ Community Church has held services for over a dozen years at a couple different locations in Chapel Hill. The Church is excited about the possibility of maintaining and enhancing its spiritual presence in the local community with its own, permanent worship building, and respectfully asks for the support and confidence of the Chapel Hill Town Council to approve this SUP application.



December 12th, 2019  
Revised March 5<sup>th</sup>, 2020

**F. Requests by the Applicant to Town Council for Modifications:**

1. **Modified Buffer:** The existing 50-year-old outdoor storage shed, buffered by an existing 8' opaque wood fence and existing large pine and hardwood trees, is 26 feet from the property line and encroaches 4.8 feet into the required buffer. The Church respectfully asks that the existing 26-foot buffer, the existing mature trees and the existing fence be the approved by Council as an Alternate, Modified Buffer so that this shed can remain.
2. **Summit Hospitality Group Project:** The Church has met extensively with representatives of the Summit project over the past 16 months. Christ Community Church and Summit have agreed to cooperate and coordinate in the areas of the street widening for Erwin Road, stormwater, fire lane, and tree save areas along the southern boundary. The plans show a proposed adjustment to the property line between the two projects, providing a fire lane connection for Summit and, in particular, to provide a full-width shared Modified landscape buffer between Christ Community Church and the Summit project. The Church asks that Town Council recognize and support the extensive cooperation between the two projects by approving an SUP stipulation which modifies regulations to allow the Town Manager to approve all documents related to (a) adjusting the existing property line (LUMO article 4.5.5(b)(1), and (b) providing a Modified, shared landscape buffer (LUMO article 5.6.5), where the other half of the shared buffer will be provided at the time the adjacent property is developed.
3. **Cupola Height:** The overall height of the building and roof cupola have each been reduced in order to conform with LUMO article 3.8.3(b)(1). While the maximum height of the cupola as designed is within the limits defined by LUMO (15% maximum above core building height at vertical intersection of roof element and building envelope), the leading edge of the shortened cupola (facing Erwin Road) is now 9- $\frac{3}{4}$ " above the maximum height allowed. Since the cupola cannot be further shortened without eliminating windows on (2) of the 4 sides, and the cupola as designed is an important element of an architectural expression that has been generally well-received by neighbors, CDC, and the Town Council, we respectfully request that Town Council approve an SUP stipulation which modifies regulations to allow the height of the cupola to be approved as designed.
4. **Timetable:** Christ Community Church is very hopeful that an SUP for this important project will gain approval from the Town Council in the first quarter of 2020. Immediately after obtaining an SUP, the church will close on the property and have full title to the land, and will be able to alter the property line as described above. After purchase and closing, the Church must embark on a second fund raising campaign in order to acquire the money to design and build the 11,420 SF structure, the private improvements, and the proposed extensive public improvements.

Because of the need for fundraising, the Church respectfully asks Council to approve an SUP Stipulation that will allow the Town Manager to approve a detailed Phasing Plan so that construction must begin within five (5) years after SUP approval and construction must be complete within eight (8) years after SUP approval, subject to all other provisions of LUMO with respect to time limits and time extensions.

FIRM: C-347

A) Comments from Community Design Commission on January 22, 2019

<u>Comment</u>	<u>Response</u>
<u>Susanna Dancy</u>	
1) Traffic concerns are outside our preview.....	We Agree
2) Building at the corner? .....	Building moved closer to corner
3) Not concerned about the height of the building, ..... because churches are landmark/civic structures	Acknowledge
4) I like the parking in the back, and the layout for connections.....	We Agree
5) RI/RO – may need full intersection.....	RI/RO eliminated; full intersection now proposed

Lucy Carol Davis

1) I like it .....	We Agree
2) Don't see the height of the building as an issue.....	Acknowledge
3) I like the landscape along the road .....	We Agree
4) I like the parking in the back; like porches – break up height .....	We Agree
5) I don't see rush hour traffic as a factor .....	Acknowledge
6) So far, I like what I see .....	Acknowledge

Chris Berndt

1) Clarification: Is the height 56 feet at the rear, ..... and 40-something at the front?	Yes 56ft rear; about 43ft at front
2) I like the design; it fits with the topography and ..... the neighborhood	We Agree

Chris Berndt (continued)

- 3) Biggest concern is storm water..... Acknowledge
- 4) Have you considered pervious parking? ..... Poorly drained soils on site will not allow pervious paving to work
- 5) Need details of second building ..... Second building has been eliminated
- 6) Access points: Will main access be from Erwin Road? ..... Yes  
Prevent being a "cut-thru" to Marriott..... Traffic Study allows only emergency Connection

Megan Patnaik

- 1) I like the proposed use of the property ..... We Agree
- 2) I like the pedestrian-friendly rear of the building. .... We Agree
- 3) Can better pedestrian access be added to the front? ..... Good pedestrian access has been added from Erwin sidewalk to the Church

Ted Hoskins

- 1) I like the design ..... We Agree
- 2) I'm not troubled by the height of the building; ..... Acknowledge  
it's consistent with a civic use
- 3) I am intrigued by Chris' comment about access ..... See response to Chris Berndt
- 4) Might you improve drainage beyond the ..... We have designed the storm detention to  
minimum requirement as a trade for R3 rezoning? Exceed Town Standards

Polly Van De Velde

- 1) I like the design ..... We Agree
- 2) Many trees removed ..... We have increased trees to be saved along all four sides of the site
- 3) Can you implement "rain gardens"? ..... We tried, but rain gardens will not Provide enough storage to reduce Runoff to below pre-development levels

- 4) Can you use cross- parking ? ..... Town Traffic Study prohibits cross-parking
- 5) Regarding Phase 2: I have a little problem ..... Phase 2 has been eliminated  
approving something without seeing it
- 6) Right In/Right Out a concern ..... RI/RO eliminated

Susan Lyons

- 1) I really like appearance of the building; a really good fit..... We Agree
- 2) I'm concerned about the storm water ..... We have designed the storm detention  
To exceed Town Standards
- 3) Trees in the buffer area ..... We have increased trees to be saved  
Along all four sides of the site

Voulker (Chairman)

- 1) I really like the building ..... Acknowledge
- 2) I'm concerned about the parking – the runoff from ..... The storm system will mitigate storm  
Stormwater – so I'd like to see that improved with flows to a greater extent than Town  
Measures beyond the minimum Standards
- 3) If Phase 2 is harmonized with this present design, ..... Phase 2 has been eliminated  
then I can foresee a great project
- 4) As for future use, I think we need to take what ..... Thank you  
has been presented on good faith
- 5) Want to see buffer replanted..... We have saved many existing trees  
in the bufferyards.



FIRM: C-347

B) Comments from Town Council on March 20, 2019

Comment

Response

Michael Parker

- |   |  |
|---|--|
| 1) Not enough parking, but too much Impervious.....       | We have increased the parking and reduced the impervious surface area    |
| 2) Move building? .....                                   | We moved the building north  |
| 3) When will second building be built? .....              | We have dropped the second building                                      |
| 4) Study entrance off Erwin .....                         | The Traffic Study recommends a full intersection off Erwin and we agree. |
| 5) Is this project eligible for Conditional Zoning? ..... | No, it is not eligible   |

Hongbin Gu

- |  |  |
|--|--|
| 1) For rezoning, must make the case .....                      | There is no rezoning involved  |
| 2) Can building fit into R2? .....                             | Yes, that is exactly what we have done.  |
| 3) Take building one step at a time; wait until R3 needed..... | Yes, we will wait until additional room is needed.   |
| 4) Parking and flood issues .....                              | We have improved parking based on Council suggestions and we propose a stormwater solution which will go above and beyond Town Standards |

Alan Baunsi

- |   |  |
|---|--|
| 1) Like design of building .....              | We Agree   |
| 2) Do simple first .....                      | We Agree   |
| 3) How many attend services? .....            | Currently about 165; the worship area in the proposed building will seat 250 |
| 4) What will second building look like? ..... | Second building has been dropped.  |

Karen Stegman

- 1) Parking, need tree preservation..... We have increased parking, saved trees on all four (4) sides and have reduced impervious surface.
- 2) Check impervious ..... See answer to #1
- 3) Large buffer to neighborhood ..... We have saved trees and increased the buffer to the neighborhood
- 4) Need Traffic Study for volumes ..... Traffic Study shows no traffic impact from this project
- 5) Like idea of neighborhood access to the playground ..... We Agree.

Nancy Oates

- 1) This may be the best project for the neighborhood..... We Agree.
- 2) Curve on Erwin ..... Erwin Road will be widened; the curve is completely off our site
- 3) Can hotel be overflow? ..... The Traffic Study prohibits any shared parking
- 4) Like the design ..... We Agree
- 5) Build Phase 2 when it's needed. Build what you can now..... We Agree.

Pam Heminger

- 1) Continue dealing with neighbors ..... We agree and are doing so.
- 2) Church will be a good neighbor ..... We Agree.
- 3) Traffic Study needed ..... We Agree.
- 4) Impervious needs to be looked at ..... Impervious surface has been reduced.
- 5) Concerned about second building ..... Second building has been dropped

Pam Heminger (Continued)

- 6) Two entrances ..... The Traffic Study recommends two (2) full entrances and we agree
- 7) Work with Marriott about parking ..... We are cooperating about emergency Access, but the Traffic Study prohibits Cross-parking



September 6, 2019

### **Special Use Permit Narrative: Energy Management Plan**

This project will reduce energy consumption in a number of important ways:

Solar orientation: there is a balcony and large roof overhang along the SW side of the structure that will serve to minimize heat gain in the summer months, while allowing for solar penetration/ heat gain in the winter months, thus reducing energy use year round.

Building siting: locating the ground floor below the finished grade for entire NE edge of the building will serve to provide significant insulation value, reducing energy required for heating and cooling.

Daylighting: large windows with insulating glazing combined with proper shading will be used to provide access to natural light while reducing solar heat gain, thus reducing costs associated with artificial lighting.

Construction- transportation: to the greatest extent feasible, the church will seek to use locally-sourced construction materials for this project in order to reduce energy consumption required for transport.

Construction- materials: to the greatest extent feasible, the church will seek to use sustainably-sourced and recycled building and finish materials, thus reducing latent energy costs.

HVAC and Lighting: mechanical and electrical systems will be designed to provide a minimum of 10% energy savings in excess of the standards required by ASHRAE 90.1 (2010). Strategies will include high-efficiency mechanical systems, generous building insulation, and maximum use of LED lighting fixtures.

**Connecting the Riches of Christ to the Realities of Life**

P.O. Box 2314 • Chapel Hill, NC 27515 • [www.cccpca.org](http://www.cccpca.org)

**CHRIST COMMUNITY CHURCH**

**TRAFFIC IMPACT STUDY**

**EXECUTIVE SUMMARY**



**Prepared for:**

The Town of Chapel Hill  
Public Works Department - Engineering

**Prepared by:**

***HNTB North Carolina, PC***

*343 East Six Forks Road  
Suite 200  
Raleigh, NC 27609*

*NCBELS License #: C-1554*

June 2019



# CHRIST COMMUNITY CHURCH

## TRAFFIC IMPACT STUDY

### EXECUTIVE SUMMARY



#### Prepared for:

The Town of Chapel Hill  
Public Works Department - Engineering

#### Prepared by:

***HNTB North Carolina, PC***

*343 East Six Forks Road  
Suite 200  
Raleigh, NC 27609*

*NCBELS License #: C-1554*

May 2019





## EXECUTIVE SUMMARY

### Project Overview

Christ Community Church of Chapel Hill is proposing the construction of a new church building on a parcel located along Erwin Road and Old Oxford Road in Chapel Hill. The project proposes to construct a 11,420 square foot building with 270 sanctuary seats and supporting facilities and 102 on-site parking spaces. **Figure ES-1** shows the general location of the site. The project is anticipated to be fully complete over the next four to six years. This report analyzes the transportation impacts for the build-out scenario for the year 2025 when church attendance at the Sunday AM service is expected to be approximately 220, the no-build scenario for 2025, as well as 2019 existing year traffic conditions.

The proposed site concept plan shows a full movement access connection with Old Oxford Road across from Kirkwood Drive and a right-turn in/right-turn out only (RIRO) access along Erwin Road across from McGregor Drive. This study also examines the impacts of allowing full access at the proposed RIRO driveway. Potential internal vehicular cross-access connections to the parcel to the south are also shown. No other transportation system changes are proposed on the site plan. **Figure ES-2** displays the preliminary concept plan of the Christ Community Church and nearby land uses and roadways.

This report analyzes and presents the transportation impacts that the Christ Community Church will have on the following existing and future intersections in the project study area:

- Old Oxford Road and Kirkwood Drive / Proposed Full Access Site Driveway
- Erwin Road and Old Oxford Road / Windhover Drive
- Erwin Road and McGregor Drive / Proposed Right-Turn In/Right-Turn Out Only Driveway
- Erwin Road and Dobbins Drive
- Erwin Road / Europa Drive and US 15-501 (Fordham Boulevard)

The impacts of the proposed site at the study area intersections were evaluated during a typical Sunday AM peak hour when church services would occur. The site is expected to only generate a nominal number of trips during the week.

### Existing Conditions

#### **Study Area**

The site is located in northern Chapel Hill along Erwin Road and Old Oxford Road just to the north of the US 15-501 (Fordham Boulevard) corridor. The study area contains four signalized intersections and several unsignalized intersections. It also includes the two future driveway connections from the site to Erwin Road and Old Oxford Road. US 15-501 is a major arterial facility providing connectivity between Chapel Hill, Durham and the I-40 corridor. Remaining study area network roadways are either minor arterial/collector facilities or local neighborhood access streets.

#### **Site Traffic Generation**

With the addition of new vehicular trips during the Sunday AM peak hour, there are potential site traffic impacts to the study area intersections. **Table ES-1** shows the site trip generation details, with generation rates and methodologies taken from a May 2018 trip generation study of the existing church site at the Extraordinary Ventures building located along Elliott Road in Chapel Hill. Information from the study was compared to data from the *Institute of Transportation Engineers (ITE) Trip Generation Manual, Version 10*. The existing church generation rates were based on number of attendees compared to observed vehicle trips entering and exiting the site and the highest peak hour data was selected for extrapolation for anticipated church attendance growth by 2025. The highest peak hour occurs at the conclusion of the church service. Church related traffic entering the site is spread out over a longer duration, as some



members arrive early for Sunday school activities and then others arrive for the primary service. This pattern is expected to continue for the proposed new church site.

**Table ES-1. Sunday AM Peak Hour Trip Generation Summary**

Land Use	Units	Sunday Daily			Sunday AM Peak Hour		
		Enter	Exit	Total	Enter	Exit	Total
Church	220 Attendees	103	103	206	4	98	102
<b>TOTALS</b>		<b>103</b>	<b>103</b>	<b>206</b>	<b>4</b>	<b>98</b>	<b>102</b>

**Background Traffic**

Background traffic growth for the 2025 analysis year is expected to come from two sources - ambient regional traffic growth and specific development-related traffic growth. Based on existing information, several currently proposed or Town-approved development projects in and near the project study area may be expected to contribute to specific background traffic growth by the 2025 analysis year. Two projects – the Wegmans Supermarket and the Marriott Residence Inn redevelopment were included as specific background traffic generators. To account for region-wide growth, an ambient area-wide traffic growth percentage of 1.0 percent per year was applied to existing traffic volumes, based on conservative growth projections based on historic daily traffic growth patterns in the project study area (NCDOT and Town of Chapel Hill daily traffic information).

**Impact Analysis**

**Peak Hour Intersection Level-of-Service (LOS)**

Study results indicate existing traffic operations at all study area intersections are acceptable during the Sunday AM peak hour. Even with the addition of peak hour site-generated trips to the projected 2025 background traffic volumes, none of the study area intersections are projected to experience deficient traffic operations in the Sunday AM peak hour in the 2025 analysis year. A summary of the traffic operations for each intersection, related to vehicular delays (intersection average as a whole if signalized, critical movement if stop-controlled) and the corresponding LOS is shown in **Table ES-2**.

**Table ES-2. Sunday AM Peak Hour LOS and Delay (Seconds/Vehicle) Summary**

Intersections	2019 Existing		2025 No-Build		2025 Build		2025 Build – Full Access on Erwin	
	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay
Old Oxford Road and Kirkwood Drive / Proposed Full Access Site Driveway <sup>#</sup>	A	9.0	A	9.0	A	9.5	A	9.3
Erwin Road and Old Oxford Road / Windhover Drive <sup>#</sup>	C	16.4	C	17.7	C	20.8	C	19.7
Erwin Road and McGregor Drive / Proposed Site RIRO Driveway <sup>#</sup>	C	11.2	C	11.6	C	15.7	C	16.2
Erwin Road and Dobbins Drive <sup>#</sup>	C	16.1	C	18.4	C	21.7	<b>Results are Same as 2025 Build Scenario</b>	
US 15-501 Northbound and Southbound U-Turn / Thru to 15-501 Service Road	A	7.9	A	9.0	A	11.2		
US 15-501 Northbound and Europa Drive	B	10.3	B	10.1	B	10.1		
US 15-501 Southbound and Northbound U-Turn	B	15.5	B	16.2	B	16.3		
US 15-501 Southbound and Erwin Road	C	26.2	C	28.3	D	41.0		

<sup>#</sup> - Worst-Case LOS/Delay for Unsignalized/Stop-Controlled Critical Movement





**Access Analysis**

Vehicular site access is to be accommodated by two proposed access driveways connecting to Old Oxford Road to the north (full access) and Erwin Road (RIRO only access) to the east of the site. Design details related to driveway throat lengths are shown on the concept plan and provide approximately 75 foot and 25 foot driveway throat lengths for the north and east access points, respectively. The driveway throat stem for the RIRO driveway along Erwin Road is shorter than recommended NCDOT standards (100 feet) and should be revised to include additional length, particularly if the driveway would serve as a full access point. Driveway separation distances along Erwin Road and Old Oxford Road are acceptable, based on recommendations of 100 foot minimum corner clearance as set forth in the 2003 *NCDOT Policy on Street and Driveway Access to North Carolina Highways* and the 100 foot minimum spacing between driveways and adjacent intersections along collector streets specified in the 2017 *Town of Chapel Hill Design Manual*.

Access for pedestrians and bicyclists is adequate in the project study area. Sidewalk is present on the eastern side of Erwin Road opposite the site between Windhover Drive and US 15-501. Crosswalk and pedestrian signals exist across US 15-501 superstreet intersection with Erwin Road/Europa Drive and unsignalized crosswalks are present at two quadrants of the Erwin Road/Dobbins Drive intersection. There is a short striped bicycle lane painted on the western side of Erwin Road south of the site to Dobbins Drive. Paved shoulders for bicycling exist along Dobbins Drive east of Erwin Road and along US 15-501 in the project study area. The site concept plan shows sidewalk provided along the north and east frontage of the site parcel.

**Signal Warrant Analysis**

Based on projected 2025 traffic volumes, operational LOS/delay results, and current/proposed access plans, no study area intersection would warrant the installation of a traffic signal, based on the methodology found in the *2009 Manual on Uniform Traffic Control Devices (MUTCD)*.

**Other Transportation-Related Analyses**

Other transportation-related analyses relevant to the 2001 Town of Chapel Hill Guidelines for the preparation of Traffic Impact Studies were completed as appropriate. The following topics listed in **Table ES-3** are germane to the scope of this study.

**Table ES-3. Other Transportation-Related Analyses**

<b>Analysis</b>	<b>Comment</b>
Long-Range Daily V/C Analysis	Due to the fact that the proposed site will add approximately 200 daily trips (on a Sunday) to the study area network, no long-range daily v/c analysis was conducted for this study.
Turn Lane Storage Requirements	Storage bay lengths at study area intersections were analyzed using Synchro and HCM 95 <sup>th</sup> percentile (max) queue length estimates for the 2025 Build Scenario. No unsignalized intersection is expected to have excessive peak hour queues or conditions that exceed existing turn lane storage. The US 15-501 superstreet intersection has estimated queues that may exceed the distance between US 15-501 and Dobbins Drive along southbound Erwin Road. These issues are not necessarily due to site-related traffic impacts and could be corrected by adjusting the green time for the Erwin Road approach to clear out the queue upstream of the intersection.
Appropriateness of Acceleration / Deceleration Lanes	The site concept plan shows no specifics related to acceleration/deceleration lanes along Erwin Road. Based on the existing 35 mph speed limit on Erwin Road, the fact that it functions as a higher volume collector facility, and capacity analysis results in this study, a separate northbound left-turn deceleration lane is recommended at the proposed site access driveway – if full access is allowed at this location. This would also allow the current roadway cross-section to match the upstream three-lane undivided cross-section. No other specific acceleration/deceleration lane issues were analyzed in the project study area.



<b>Analysis</b>	<b>Comment</b>
Pedestrian and Bicycle Analysis	Existing pedestrian and bicycle access and connectivity is adequate in the project study area. Sidewalk exists along on the east side of the Erwin Road corridor, and the proposed site plan will add sidewalk on the west side of the corridor. Pedestrian crossings and signals are present at the US 15-501 superstreet intersection and Dobbins Drive. Delineated bike lanes and wide paved shoulders are present in the study area in a few locations.
Public Transportation Analysis	Public transportation service to the study area is adequate with multiple bus stops and multiple local routes on Old Oxford Road and Dobbins Drive proximate to the site. However, no Sunday service is provided when the site would be producing the highest number of trips.

**Mitigation Measures/Recommendations**

**Planned Improvements**

There are no Town of Chapel Hill or North Carolina Department of Transportation improvement projects for study area roadway facilities within the analysis year time frame of 2019-2025.

**Background Committed Improvements**

There are no specific geometric or operational improvements to study area roadway intersections or facilities related to background private development projects that are expected to be completed between 2019 and 2025. The adjacent Marriott Residence Inn development is currently planning an expansion and provision of multi-family housing on that site parcel, with changes to existing access along Erwin Road. No specific recommendations from the current TIS for that project are assumed to be complete for this study’s 2025 analysis year. Projected site-related traffic from the redevelopment (known at Erwin Road Mixed-Use Redevelopment) were assumed to occur and were included in the analysis of background traffic volumes for this report. The recommended access improvements contained in **Section D** below should not interfere with any access plans being proposed for the Erwin Road Mixed-Use Redevelopment.

**Applicant Committed Improvements**

Based on the preliminary site concept plans and supporting development information provided, there are no specific external transportation-related improvements proposed adjacent to the Christ Community Church, other than the provision of the external local street access connections and sidewalk along Old Oxford Road and Erwin Road along the site frontage and the preliminary design to provide a limited access (RIRO) driveway along Erwin Road.

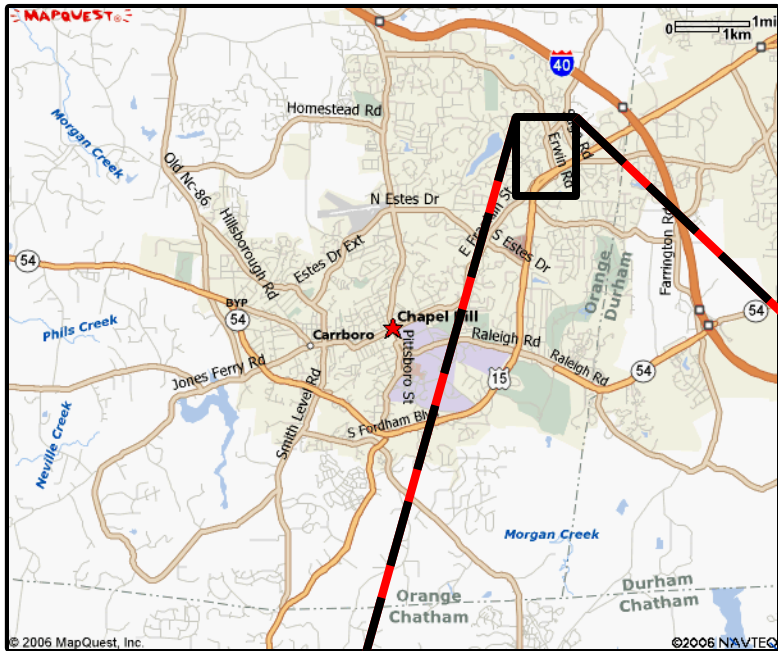
**Necessary Improvements**

Based on traffic capacity analyses for the 2025 design year, and analyses of existing study area turning bay storage lengths and site access, the following improvements are recommended as being necessary for adequate transportation network operations (see **Figure ES-3**).

- 1) A full access driveway connection with Erwin Road is operationally feasible, with the construction of northbound left-turn lane with 150 feet of vehicle storage at this connection with Erwin Road. The full access connection would reduce the traffic impact to local streets (Old Oxford Road) and should not interfere with proposed access connections or improvements that may stem from the adjacent Erwin Road Mixed-Use Redevelopment to the south.
- 2) Regardless of whether or not full access is allowed at the Erwin Road site driveway, the driveway design should include additional throat/stem length to provide 75 feet or more storage prior to the 1<sup>st</sup> parking lot stalls.



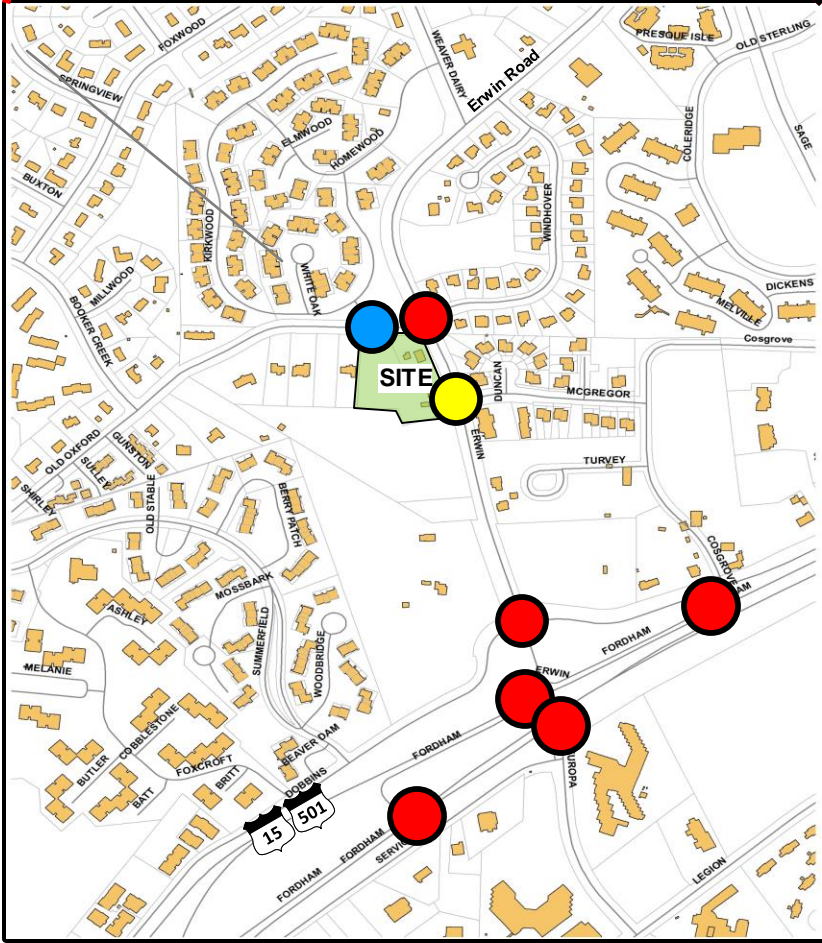
- 3) The site frontage along Erwin Road should include a widening of Erwin Road for a bicycle lane that would be consistent with the Town of Chapel Hill Mobility Plan.
- 4) Monitor the Erwin Road and US 15-501 superstreet intersection for potential retiming during the Sunday AM peak period to reduce potential queue spillback from Erwin Road past the Dobbins Drive intersection.
- 5) Potential internal cross-access connections with the adjacent Erwin Road Mixed-Use Redevelopment project should continue to be coordinated with both projects, though the focus should be limited to emergency access only and is not necessary from a traffic capacity perspective. No church-related trips or parking should be allowed on the Erwin Road Mixed-Use Redevelopment site or on local streets in the vicinity of the site. Additional on-site parking areas may need to be investigated if parking demand in the future exceeds the current designated supply of 102 spaces. Trip generation estimates of 98 peak hour vehicles in the 2025 analysis year exiting the site following church services indicate that parking demand may be close to capacity.



### LEGEND

- = Existing Study Area Intersection
- = Existing Study Area Intersection / Proposed Full Access Site Driveway
- = Existing Study Area Intersection / Proposed RIRO Site Driveway
- = Existing Building Footprint
- = Proposed Site Parcel

**NOT  
TO  
SCALE**

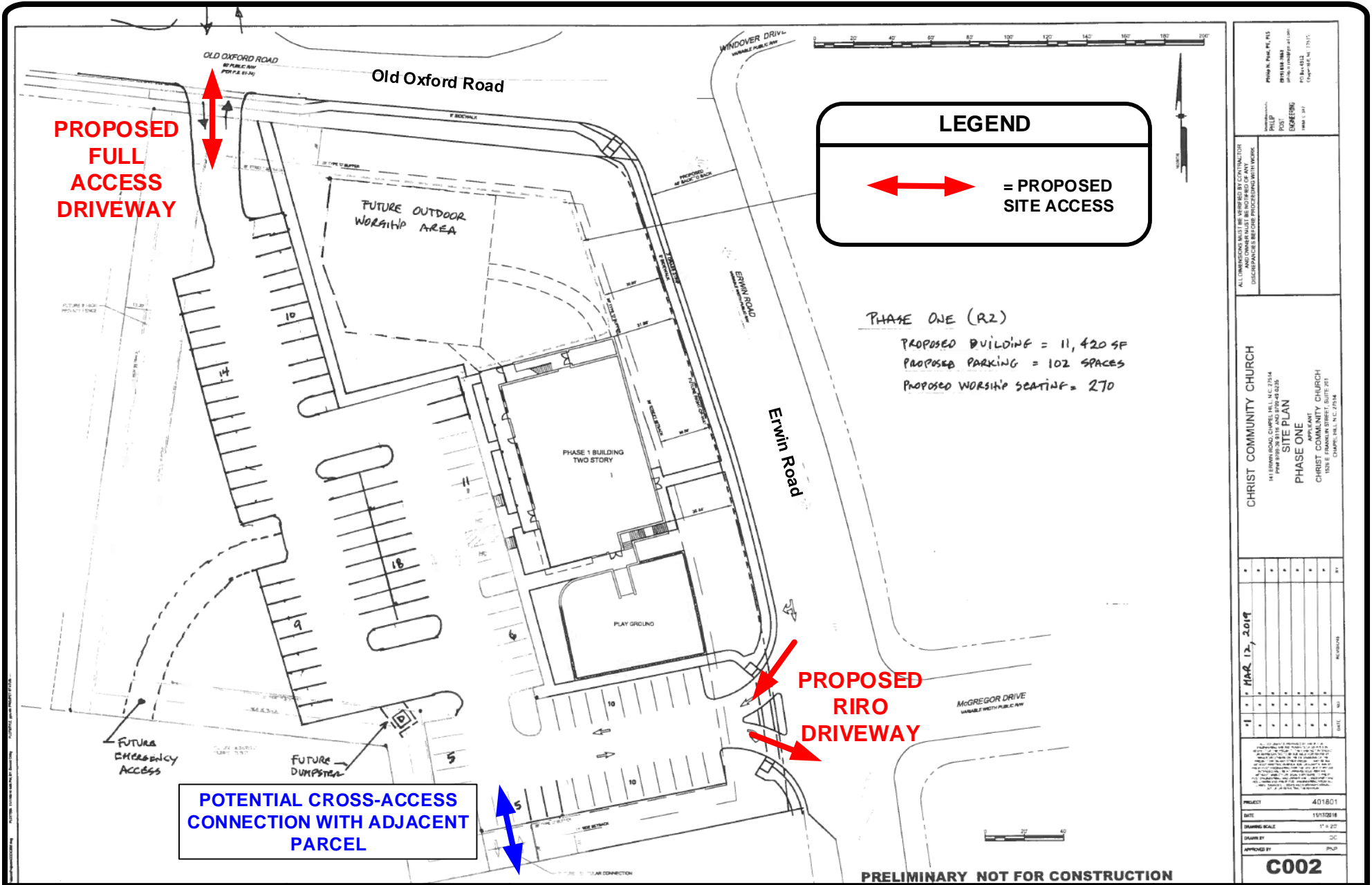


## Christ Community Church Traffic Impact Study

### PROJECT STUDY AREA MAP

DATE: June 2019

**FIGURE ES-1**



**NOT TO SCALE**

**Christ Community Church  
 Traffic Impact Study**

**SITE CONCEPT PLAN**

**DATE: June 2019**

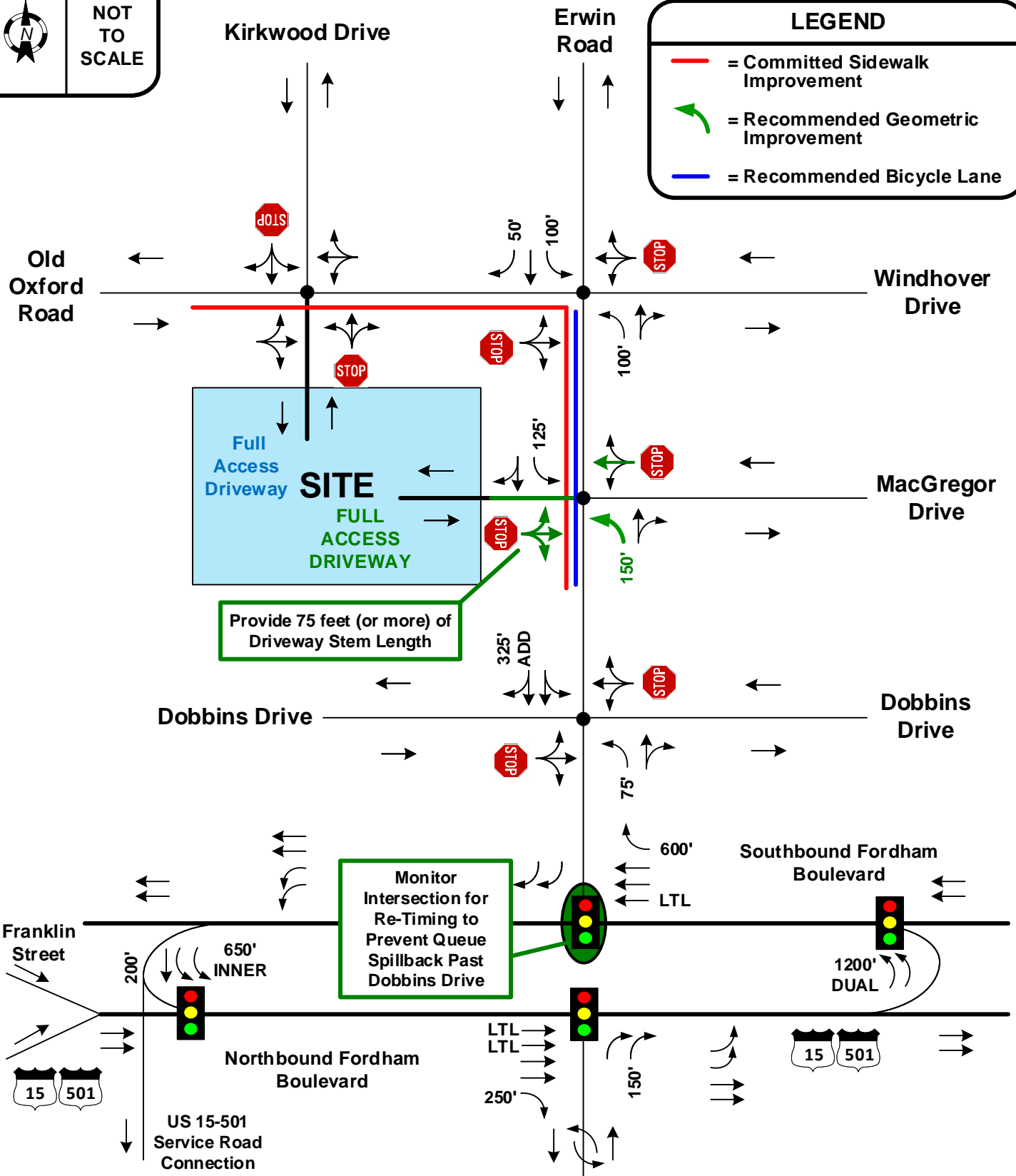
**FIGURE ES-2**



NOT TO SCALE

### LEGEND

- = Committed Sidewalk Improvement
- ↪ = Recommended Geometric Improvement
- = Recommended Bicycle Lane



## Christ Community Church Traffic Impact Study

DATE: June 2019

COMMITTED & RECOMMENDED IMPROVEMENTS

FIGURE ES-3



September 6, 2019

### **Special Use Permit Narrative: Public Art Program**

The applicant seeks to provide a worship facility that will be attractive, sensitive to existing landforms and neighboring structures, and welcoming to visitors by car, bike, or foot. No additional public art is currently proposed for the project, but we do believe that the massing and detailing of the building itself will project an iconography that is aesthetically pleasing and appropriate to its location along the Erwin Road corridor.



NW VIEW (OLD OXFORD AERIAL)



NE VIEW (ERWIN & OLD OXFORD)



SE VIEW (ERWIN ROAD)



SW VIEW (PARKING)

**BUILDING PERSPECTIVES**

**CHRIST COMMUNITY CHURCH  
SPECIAL USE PERMIT**

**CHAPEL HILL, ORANGE COUNTY, NORTH CAROLINA**

**JULY 15, 2019**

141 ERWIN ROAD, CHAPEL HILL, N.C.  
PIN# 9799-39-9116 AND 9799-49-0235

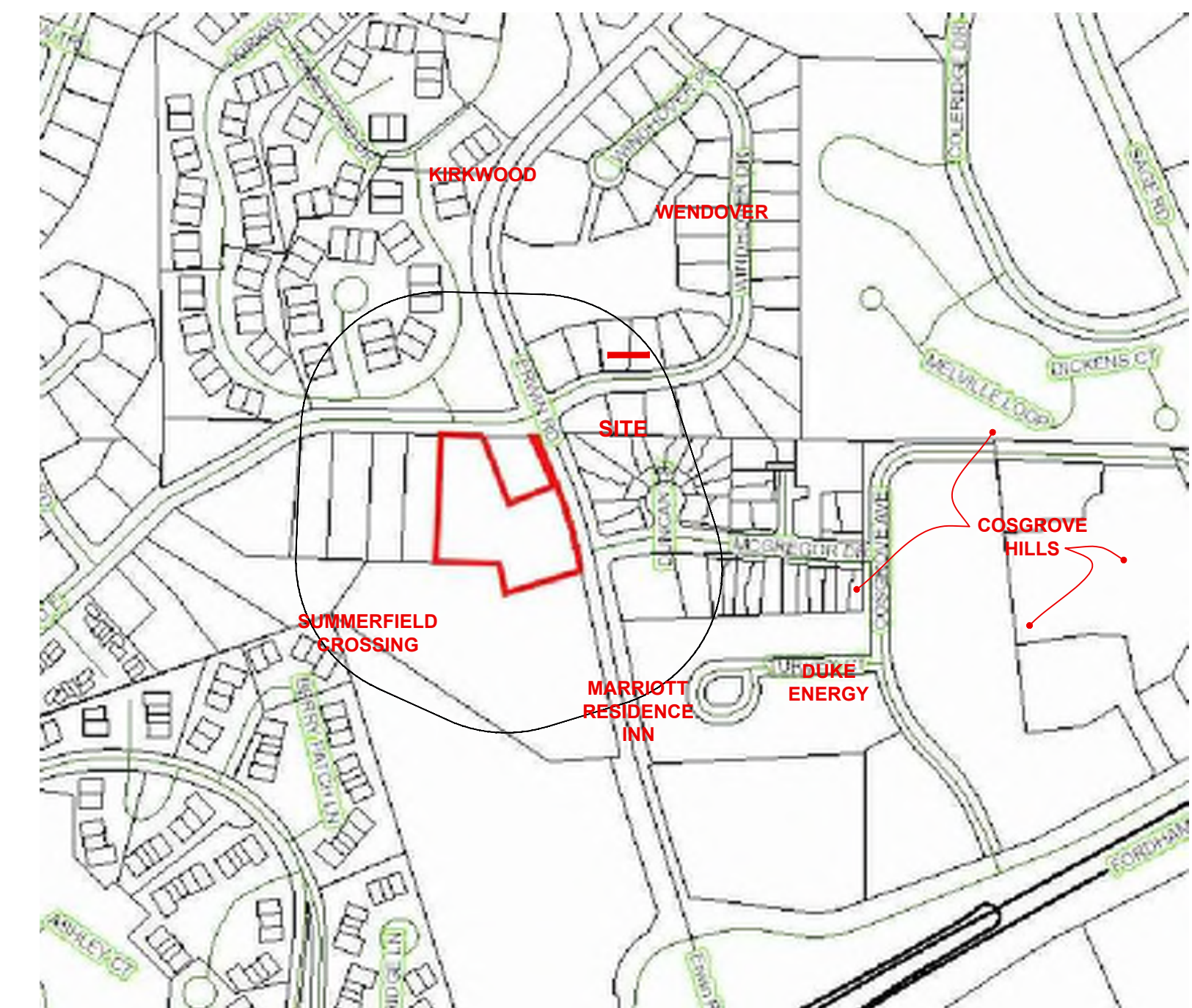
SUBMITTAL #1: AUGUST 28, 2019  
SUBMITTAL #2: NOVEMBER 17, 2019  
SUBMITTAL #3: JANUARY 17, 2020  
REVISION #4 JANUARY 27, 2020  
REVISION #5 FEBRUARY 9, 2020  
REVISION #6 FEBRUARY 26, 2020

PREPARED FOR:

**CHRIST COMMUNITY CHURCH**

1526 E. FRANKLIN STREET, SUITE 201  
CHAPEL HILL, N.C. 27514  
TEL. (919) 636-5258  
EMAIL: byron@cccpc.org

SHEET LIST TABLE	
SHT. #	SHEET TITLE
C001A	COVER SHEET AND AREA MAP
C001B	NOTES
C002	EXISTING CONDITIONS PLAN
C003	DEMOLITION & LANDSCAPE PROTECTION PLAN
C004	SITE PLAN
C005	SITE GRADING & DRAINAGE PLAN
C006	CONSTRUCTION MANAGEMENT & LAND SWAP PLAN
C007	SITE DETAILS
C008	STORMWATER FILTERA DETAILS
C009	EROSION CONTROL PLAN
C010	EROSION CONTROL DETAILS
C011	UTILITY PLAN & FIRE DEPT. FDC
C012	UTILITY AND DRIVEWAY ENTRANCE DETAILS
C013	SLOPE ANALYSIS PLAN
C014	ERWIN ROAD - NCDOT PLAN & FIRE LANE PLAN
L001	LANDSCAPE PLAN & DETAILS
A003	BUILDING ELEVATIONS



**AREA MAP**

**ARCHITECT**

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PO BOX 4912  
CHAPEL HILL, N.C. 27515  
TEL (919) 818-7862  
philip.n.post@gmail.com

**LANDSCAPE ARCHITECT**

DAVID SWANSON, RLA  
SWANSON + ASSOCIATES, PA  
100 EASET CARR STREET  
CARRBORO, N.C. 27510  
(919) 929-9000  
david@swansonlandscapearchitecture.com

**PROJECT DATA**

GROSS LAND AREA: 122,810 SF  
EXISTING ZONING: R2  
EXISTING GROUP B; DAYCARE & RESIDENTIAL  
PROPOSED USE GROUP B; PLACE OF WORSHIP  
PROPOSED PARKING: 117 SPACES  
PROPOSED BICYCLE SPACES: 8 SPACES  
EXISTING IMPERVIOUS: 9,690 SF  
PROPOSED IMPERVIOUS: 51,949 SF  
EXISTING FLOOR AREA TO BE DEMOLISHED; 7,646 SF  
PROPOSED FLOOR AREA: 11,420 SF  
PROPOSED WORSHIP SEATING: 250 PERSONS  
TOTAL DISTURBED AREA ON SITE = 76,445 SF (1.755 AC.)  
TOTAL DISTURBED AREA IN R/W = 10,158 SF (0.233 AC)

**PRELIMINARY NOT FOR CONSTRUCTION**

**CHRIST COMMUNITY CHURCH**  
COVER SHEET AND AREA MAP

APPLICANT:  
**CHRIST COMMUNITY CHURCH**  
1526 E. FRANKLIN STREET, SUITE 201  
CHAPEL HILL, N.C. 27514

#	NO.	DATE	REVISIONS	BY
1	1	11-17-2019		DC
2	2	12-27-2019		DC
3	3	1-17-2020		DC
4	4	1-27-2020		DC
5	5	2-9-2020		DC
6	6	2/26/2020		DC

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PROJECT	401801
DATE	8/28/2019
DRAWING SCALE	-
DRAWN BY	DC
APPROVED BY	PP

**C001A**  
SHEET 1 OF 16

ALL DIMENSIONS MUST BE VERIFIED BY CONTRACTOR AND OWNER MUST BE NOTIFIED OF ANY DISCREPANCIES BEFORE PROCEEDING WITH WORK

**PHILIP N. POST, PE, PLS**  
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philip.n.post@gmail.com  
PO Box 4912  
Chapel Hill, NC 27515

**PHILIP POST ENGINEERING**  
FIRM: C-347

C:\ACAD\Projects\190725\190725.dwg PLOTTED: 2/26/2020 4:58 PM By: David Chay PLOTSTYLE: acad.ctb PROJECT: STA19-



OCSW Construction Waste Requirements:

- All existing structures 500 square feet and larger shall be assessed prior to the issuance of a demolition permit to ensure compliance with the County's Regulated Recyclable Materials Ordinance (RRMO) and to assess the potential for deconstruction and/or the reuse of salvageable materials. Contact the Orange County SW Enforcement Officer at 919-968-2788 to arrange for the assessment.
- Pursuant to the County's RRMO, clean wood waste, scrap metal, and corrugated cardboard present in construction or demolition waste must be recycled.
- Pursuant to the County's RRMO, all haulers of mixed construction and demolition waste which includes any regulated recyclable materials shall be licensed by Orange County.
- Prior to any demolition or construction activity on the site, the applicant shall hold a pre-demolition/pre-construction conference with Solid Waste staff. This may be the same preconstruction meeting held with other development/enforcement officials.
- The presence if any asbestos containing materials (ACM) and/or other hazardous materials shall be handled in accordance with any and all local, state, and federal regulations and guidelines.

STANDARD TOWN NOTES:

- Buildings to be demolished must be inspected by a NC accredited asbestos professional. Submit report with demo permit application.
- Asbestos abatement must be performed by a NC accredited asbestos professional.
- Separate demo permit is required.
- Written OWASA approval is required for any installations of: backflow preventers, grease traps, oil/water separators, water meters, elevator sump pumps
- Confirm the address of your project with Chapel Hill GIS. Once you have written confirmation, then those address numbers must be a minimum of 6 inches high and of contrasting color to their background. Reflective numbers are preferred and required on front and rear doors of strip shopping centers. When the distance from the street or fire department access lane to the front or address side of the building exceeds 25 feet, larger numbers are required. 26 feet to 50 feet shall have 8 inch numbers, 51-75 feet shall have 12 inch numbers and over 75 feet shall have 18 inch numbers. Where access is by private means of a private road and the building cannot be viewed from the public way, a monument, pole or other sign or means shall be used to identify the structure.
- Any retaining walls over five (5) feet high shall be permitted separately from the building(s) and must be signed by a design professional.
- Provide onsite parking for inspectors at each building for the duration of the construction project.
- Provide a tire wash for trucks onsite before they hit the main roads. Curb & gutter and first lift of asphalt for access roads must be down ahead of construction.
- A single electrical service shall be provided to serve the structure with the exception of the fire pump. Article 230.2 (A) 2017 edition of North Carolina Electric Code.
- Accessibility Requirements: That prior to issuance of a Certificate of Occupancy, the applicant shall provide the minimum required handicapped parking spaces and design all handicapped parking spaces, ramps, and crosswalks, and associated infrastructure according to Americans with Disabilities Act standards, North Carolina Building Code, American National Standards Institute (ANSI) Code, and Town standard.
  - Parking - number of spaces to comply with NCBC 2018 section 1106.1, 1 per 6 compliant spaces or portion thereof must be van accessible, No slope to exceed 2% in any direction. Signage per NC requirements, MUT-CD and ICC A 117.1.
  - Curb cuts and accessible routes Per ICC A117.1 2009 Ed. Cross slope limited to 2%, call for inspection before placement of concrete.
  - Slope greater than 5% requires construction as a ramp.
- Cross slope on accessible routes cannot exceed 2%. Slope in excess of 5% constitutes a ramp, requiring hand rails, guards and edge protection per code. Cross slope on accessible parking and loading areas not to exceed 2%, call for inspection before placement of any concrete. All public access site features must meet ICC/ANSI A117.1.
- Parking - Accessible parking per NCBC sect 1106.1; 1 per 6 compliant spaces must be van accessible, no slope exceeding 2% in any direction. Signage per NC requirements and ICC A 117.1.
- A separate submittal and permit will be required for the construction trailer.
- A fire sprinkler system will be required for this project per town ordinance 7-56.
- A fire hydrant will be required within 100 feet of the fire department connection (FDC).
- A door from the exterior will be required to immediately access the fire sprinkler riser room.
- A separate submittal and permit will be required for any signage on the building or ground mounted signs
- FIRE DEPARTMENT ACCESS: All turns, radii, bridges, and depressions within roadways shall be designed and constructed to be accessible by the largest fire apparatus operated by the Town of Chapel Hill. Technical information on this equipment is available from the Towns Fire Marshal. 2018 NCFC Section 503, Appendix D.
- FIRE DEPARTMENT ACCESS/CONSTRUCTION: Fencing around projects shall include access gates with a 20 foot swing or slide motion. Any areas which will be inaccessible for firefighting or rescue operations shall be noted. Emergency access designation for apparatus shall be provided. 2018 NCFC Section 503, Appendix D.
- FIRE DEPARTMENT ACCESS/CONSTRUCTION: During construction, vehicle access for firefighting shall be provided. Temporary street signs shall be installed at each street intersection when construction allows the passage of vehicles. Signs shall be of an approved size, weather resistant, and maintained until replaced by permanent signs. 2018 NCFC Section 505.2
- OBSTRUCTION OF FIRE APPARATUS ACCESS ROADS. Fire apparatus access roads shall not be obstructed in any manner, including the parking of vehicles. The minimum widths and clearances established in Sections 503.2.1 and 503.2.2 shall be maintained at all times. 2018 NCFC 503.4
- TRAFFIC CALMING DEVICES. Traffic calming devices shall be prohibited unless approved by the fire code official. 2018 NCFC 503.4.1
- WATER SUPPLY FOR FIRE PROTECTION: When required. An approved water supply for fire protection, either temporary or permanent, shall be made available as soon as combustible material arrives on the site. 2018 NCFC 3312
- FIRE APPARATUS ACCESS ROADS; 503.1 Where required. Fire apparatus access roads shall be provided and maintained in accordance with Sections 503.1.1 through 503.1.3
  - Buildings and facilities. 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 (45720 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.
    - The fire code official is authorized to increase the dimension of 150 feet (45720 mm) where any of the following conditions occur:
      - When the building is equipped throughout with an approved automatic sprinkler system installed in accordance with Section 903.3.1.1 or 903.3.1.2 the dimension shall increase to a minimum of 200 feet (60960 mm).
      - Fire apparatus access roads cannot be installed because of location on property, topography, waterways, nonnegotiable grades, or other similar conditions, and an approved alternative means of fire protection is provided.
      - There are not more than two Group R-3 or Group U occupancies.
    - The fire code official is authorized to modify or exempt fire apparatus access roads for solar photovoltaic power generation facilities. 2018 NCFC Section 503
  - GRADE AND APPROACH; 503.2.7 Grade. The grade of the fire apparatus access road shall be within the limits established by the fire code official based on the fire department's apparatus.
    - Angles of approach and departure. The angles of approach and departure for fire apparatus access roads shall be within the limits established by the fire code official based on the fire department's apparatus.
    - Grade. Fire apparatus access roads shall not exceed 10 percent in grade.
      - Exception: Grades steeper than 10 percent as approved by the fire chief. 2018 NCFC Section 503 and Appendix D.
- FIRE APPARATUS ACCESS ROADS AUTHORITY; 503.2. Authority. 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. 2018 NCFC Section 503
- GATES AND BARRICADES; 03.5 Required gates or barricades. The fire code official is authorized to require the installation and maintenance of gates or other approved barricades across fire apparatus access roads, trails, or other accessways; not including public streets, alleys, or highways. Electric gate operators, where provided, shall be listed in accordance with UL 325. Gates intended for automatic operation shall be designed, constructed, and installed to comply with the requirements of ASTM F2200. 2018 NCFC Section 503 and Appendix D103
- FIRE LANES; Where required by the fire code official, approved signs or other approved notices or markings that include the words NO PARKING-FIRE LANE shall be provided for fire apparatus access roads to identify such roads or prohibit the obstruction thereof. The means by which fire lanes are designated shall be maintained in a clean and legible condition at all times and be replaced or repaired when necessary to provide adequate visibility. 2018 NCFC Section 503.3 and Appendix D D 103.6, D 103.6.1, D 103.6.2
- DEVELOPMENTS; D104. Buildings exceeding three stories or 30 feet in height. Buildings or facilities exceeding 30 feet (9144 mm) or three stories in height shall have at least two means of fire apparatus access for each structure.
  - Buildings exceeding 62,000 square feet in area. Buildings or facilities having a gross building area of more than 62,000 square feet (5760 m<sup>2</sup>) shall be provided with two separate and approved fire apparatus access roads.
  - Projects having a gross building area of up to 124,000 square feet (11520 m<sup>2</sup>) that have a single approved fire apparatus access road when all buildings are equipped throughout with approved automatic sprinkler systems.
  - Remoteness. Where two fire apparatus access roads are required, they shall be placed a distance apart equal to not less than one half of the length of the maximum overall diagonal dimension of the lot or area to be served, measured in a straight line between accesses. 2018 NCFC Appendix D104
- AERIAL FIRE APPARATUS ACCESS ROADS; D105. 1 Where required. Where the vertical distance between the grade plane and the highest roof surface exceeds 30 feet (9144 mm), approved aerial fire apparatus access roads shall be provided. For purposes of this section, the highest roof surface shall be determined by measurement to the eave of a pitched roof, the intersection of the roof to the exterior wall, or the top of parapet walls, whichever is greater.
  - Width. Aerial fire apparatus access roads a minimum unobstructed width of 26 feet (7925 mm), exclusive of shoulders, in the immediate vicinity of the building or portion thereof.
  - Proximity to building. At least one of the required access routes meeting this condition shall be located within a minimum of 15 ft (4572 mm) and a maximum of 30 feet (9144) from the building, and shall be positioned parallel to one entire side of the building. The side of the building on which the aerial fire apparatus access road is positioned or shall be approved by the fire code official.
  - Obstructions. Overhead utility and power lines shall not be located over the aerial fire apparatus access road or between the aerial fire apparatus road and the building. Other obstructions shall be permitted to be placed with the approval of the fire code official. 2018 NCFC Appendix D105
- ADDRESS IDENTIFICATION; 505.1 Address identification. New and existing buildings shall be provided with approved address identification. The address identification shall be legible and placed in a position that is visible from the street or road from the property. Address identification characters shall contrast with their background. Address numbers shall be Arabic numbers or alphabetical letters. Numbers shall not be spelled out. Each character shall be not less than 6 inches (153 mm) high with a minimum stroke width of 3/4 inch (20 mm). Where required by the fire code official, address identification shall be provided in additional approved locations to facilitate emergency response. Where access is by means of a private road and the building cannot be viewed from the public way, a monument, pole, or other sign or means shall be used to identify the structure. Address identification shall be maintained. 2018 NCFC 505.1
- KEY BOXES; 506.1 Where required. Where access to or within a structure or an area is restricted because of secured openings or where immediate access is necessary for life-saving or fire-fighting purposes, the fire code official is authorized to require a key box to be installed in an approved location. The key box shall be of an approved type listed in accordance with UL 1037, and shall contain keys to gain necessary access as required by the fire code official. 2018 NCFC 506.1
- SPRINKLERS: Any building with more than 6000 sf of floor space is required to have a sprinkler system. Town Ordinance 7-56.
- FIRE PROTECTION AND UTILITY PLAN; shall include the fire flow report: for a hydrant within 500' of each building, provide the calculated gallons per minute of with a residual pressure of 20 pounds per square inch. The calculations should be sealed by a professional engineer licensed in the State of NC and accompanied by a water supply flow test conducted within one year of the submittal. Reference Town Design Manual for required gallons per minute. (Fire)
- FIRE DEPARTMENT CONNECTIONS, LOCATIONS; Any required FDCs for any buildings shall meet the design and installation requirements for the current, approved edition of NFPA 13, 13D, 13R, or 14 of the NCFC and Town Ordinances; 7-38 for location. FDCs shall be installed on the street/address side of the building and within 100' of a hydrant or unless otherwise approved by the fire code official and shall not be obstructed or hindered by parking or landscaping.
- FIRE DEPARTMENT CONNECTIONS, INSTALLATION; A working space of not less than 36" in width and depth and a working space of 78" in height shall be provided on all sides with the exception of wall mounted FDCs unless otherwise approved by the fire code official. The FDCs where required must be physically protected by an approved barrier from impacts. 2018 NCFC Section 912
- CONSTRUCTION/DEMOLITION; All Construction and demolition conducted shall be in compliance of the current edition of the NC Fire Code. 2018 NCFC Chapter 33
- NCFC Section 510. Emergency responder radio coverage in new buildings. All new buildings shall have approved radio coverage for emergency responders within the building based upon the existing coverage levels of the public safety communication systems of the jurisdiction at the exterior of the building. This section shall not require improvement of the existing public safety communication systems.
- A travel management plan (TMP) will be submitted as part of ZCP Construction plans.
- CDC Review of Elevations, Lighting plan and Alternative buffers is required.
- FIRE DEPARTMENT CONNECTIONS, LOCATIONS; Any required FDCs for any buildings shall meet the design and installation requirements for the current, approved edition of NFPA 13, 13D, 13R, or 14 of the NCFC and Town Ordinances; 7-38 for location. FDCs shall be installed on the street/address side of the building and within 100' of a hydrant or unless otherwise approved by the fire code official and shall not be obstructed or hindered by parking or landscaping.
- FIRE DEPARTMENT CONNECTIONS, INSTALLATION; A working space of not less than 36" in width and depth and a working space of 78" in height shall be provided on all sides with the exception of wall mounted FDCs unless otherwise approved by the fire code official. The FDCs where required must be physically protected by an approved barrier from impacts. 2018 NCFC Section 912
- Address numbers must be a minimum of 6 inches high and of contrasting color to their background. Reflective numbers are preferred and required on front and rear doors of strip shopping centers. When the distance from the street or fire department access lane to the front or address side of the building exceeds 25 feet, larger numbers are required. 26 feet to 50 feet shall have 8 inch numbers, 51-75 feet shall have 12 inch numbers and over 75 feet shall have 18 inch numbers. Where access is by private means of a private road and the building cannot be viewed from the public way, a monument, pole or other sign or means shall be used to identify the structure.

# CHRIST COMMUNITY CHURCH

141 ERWIN ROAD, CHAPEL HILL, N.C. 27614  
 P/N# 9799-39-9116 AND 9799-49-0235

## NOTES

APPLICANT:  
 CHRIST COMMUNITY CHURCH  
 1528 E. FRANKLIN STREET, SUITE 201  
 CHAPEL HILL, N.C. 27614

ALL DIMENSIONS MUST BE VERIFIED BY CONTRACTOR AND OWNER MUST BE NOTIFIED OF ANY DISCREPANCIES BEFORE PROCEEDING WITH WORK

**PHILIP POST ENGINEERING**  
 P/ENR# C-347

**Philip N. Post, PE, PLS**  
 (919) 818-7862  
 philip.n.post@gmail.com  
 PO Box 4912  
 Chapel Hill, NC 27515

#	DC	#DC	DC	DC	DC	DC	DC	BY
1	NC DOT AND TOWN COMMENTS							
2	TOWN COMMENTS							
3	PROPERTY LINE SWAP							
4	SUBMITTAL #2 COMMENTS							
5	OWASA 11/13/2019 COMMENTS							
6	SUBMITTAL #1 COMMENTS							
7	REVISIONS							
#	DATE	NO.	NO.	NO.	NO.	NO.	NO.	DATE

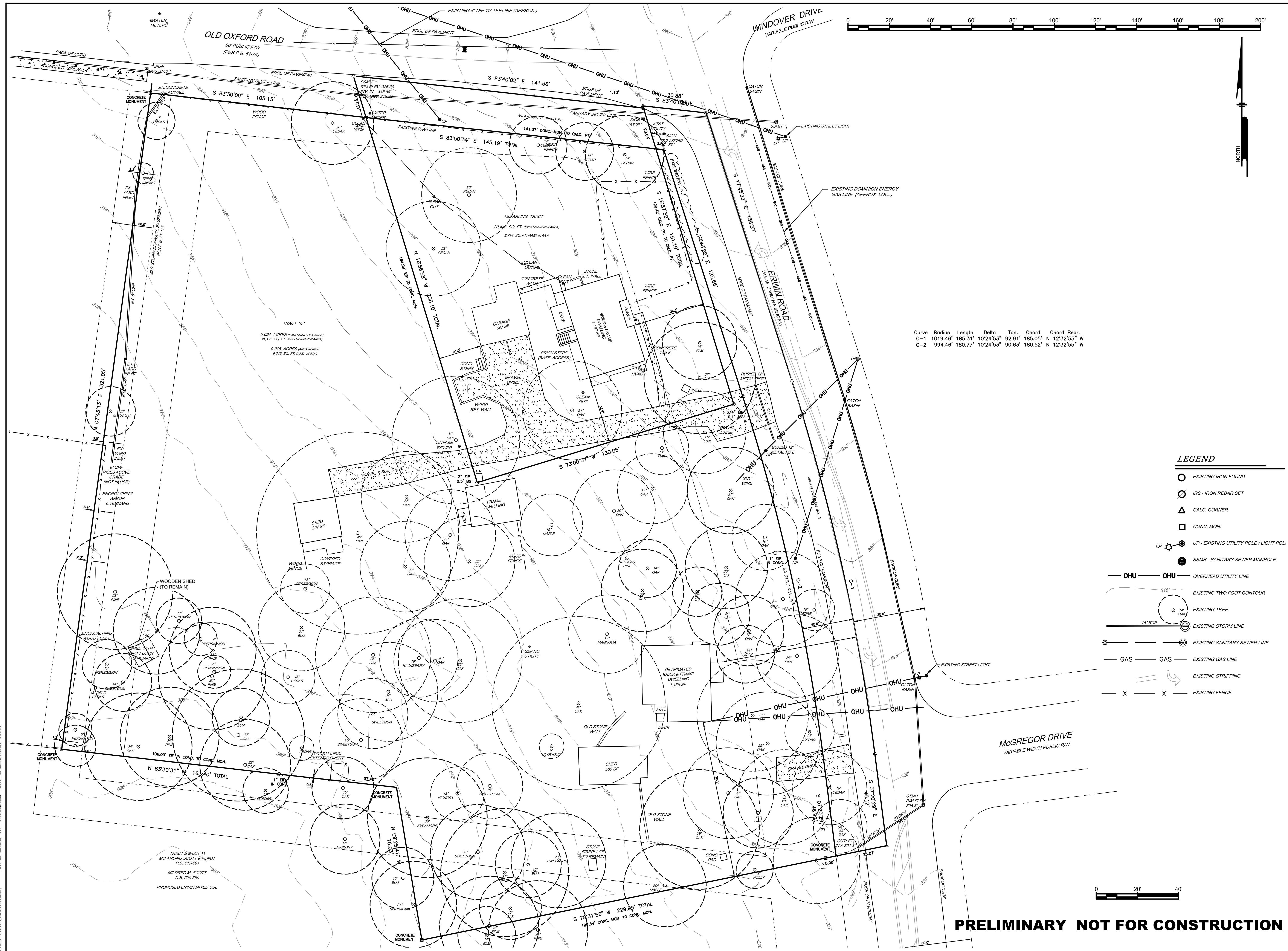
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PROJECT	401801
DATE	8/28/2019
DRAWING SCALE	-
DRAWN BY	DC
APPROVED BY	PP

# C001B

SHEET 1 OF 16

**PRELIMINARY NOT FOR CONSTRUCTION**



Curve	Radius	Length	Delta	Tan. Chord	Chord Bear.
C-1	1019.46'	185.31'	10°24'53"	92.91'	185.05' N 12°32'55" W
C-2	994.46'	180.77'	10°24'53"	90.63'	180.52' N 12°32'55" W

**LEGEND**

- EXISTING IRON FOUND
- ⊗ IRS - IRON REBAR SET
- △ CALC. CORNER
- CONC. MON.
- LP ○ UP - EXISTING UTILITY POLE / LIGHT POL.
- SSMH - SANITARY SEWER MANHOLE
- OHU — OHU — OVERHEAD UTILITY LINE
- 3'16" --- EXISTING TWO FOOT CONTOUR
- 14" OAK ○ EXISTING TREE
- 15" RCP --- EXISTING STORM LINE
- --- EXISTING SANITARY SEWER LINE
- GAS --- EXISTING GAS LINE
- ⇄ EXISTING STRIPPING
- X — X — EXISTING FENCE

ALL DIMENSIONS MUST BE VERIFIED BY CONTRACTOR AND OWNER MUST BE NOTIFIED OF ANY DISCREPANCIES BEFORE PROCEEDING WITH WORK

**CHRIST COMMUNITY CHURCH**

141 ERWIN ROAD, CHAPEL HILL, N.C. 27514  
 P/N# 9799-39-9116 AND 9799-49-0235

**EXISTING CONDITIONS PLAN**

APPLICANT:  
**CHRIST COMMUNITY CHURCH**  
 1528 E. FRANKLIN STREET, SUITE 201  
 CHAPEL HILL, N.C. 27514

#	#	#	#	#	#	#	DATE	REVISIONS	BY
2/26/2020	6	NCDDOT AND TOWN COMMENTS							
2-9-2020	5	TOWN COMMENTS							
1-27-2020	4	PROPERTY LINE SWAP							
1-17-2020	3	SUBMITTAL #2 COMMENTS							
12-27-2019	2	OWASA 11/13/2019 COMMENTS							
11-17-2019	1	SUBMITTAL #1 COMMENTS							

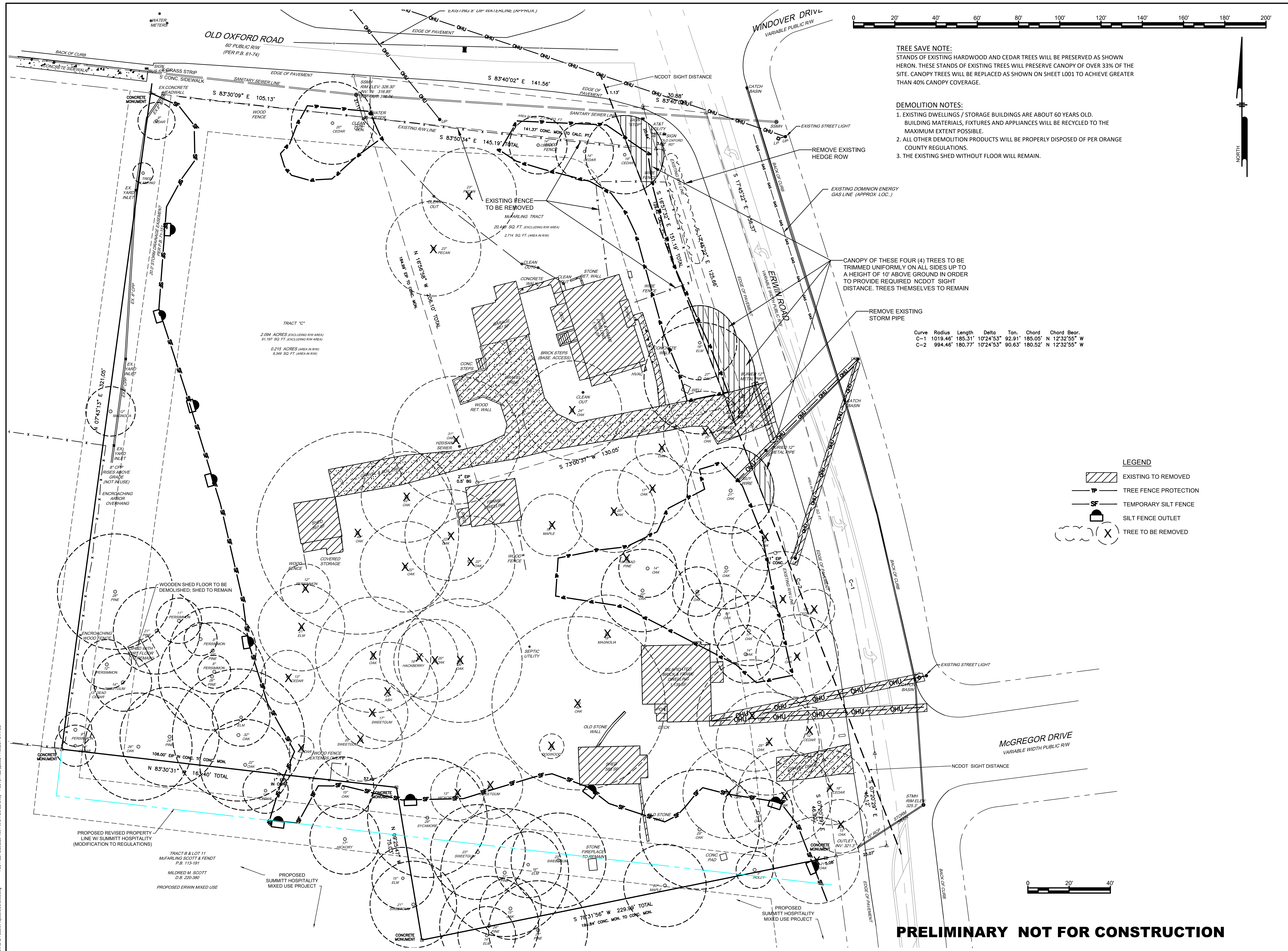
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PROJECT	401801
DATE	8/28/2019
DRAWING SCALE	1" = 20'
DRAWN BY	DC
APPROVED BY	PP

**C002**

**PRELIMINARY NOT FOR CONSTRUCTION**

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**TREE SAVE NOTE:**  
STANDS OF EXISTING HARDWOOD AND CEDAR TREES WILL BE PRESERVED AS SHOWN HERON. THESE STANDS OF EXISTING TREES WILL PRESERVE CANOPY OF OVER 33% OF THE SITE. CANOPY TREES WILL BE REPLACED AS SHOWN ON SHEET L001 TO ACHIEVE GREATER THAN 40% CANOPY COVERAGE.

**DEMOLITION NOTES:**  
1. EXISTING DWELLINGS / STORAGE BUILDINGS ARE ABOUT 60 YEARS OLD. BUILDING MATERIALS, FIXTURES AND APPLIANCES WILL BE RECYCLED TO THE MAXIMUM EXTENT POSSIBLE.  
2. ALL OTHER DEMOLITION PRODUCTS WILL BE PROPERLY DISPOSED OF PER ORANGE COUNTY REGULATIONS.  
3. THE EXISTING SHED WITHOUT FLOOR WILL REMAIN.

Curve	Radius	Length	Delta	Tan. Chord	Chord Bear.
C-1	1019.46'	185.31'	10°24'53"	92.91'	185.05' N 12°32'55" W
C-2	994.46'	180.77'	10°24'53"	90.63'	180.52' N 12°32'55" W

**LEGEND**

- EXISTING TO BE REMOVED
- TREE FENCE PROTECTION
- TEMPORARY SILT FENCE
- SILT FENCE OUTLET
- TREE TO BE REMOVED

**CHRIST COMMUNITY CHURCH**  
141 ERWIN ROAD, CHAPEL HILL, N.C. 27514  
PHONE 979-99-9116 AND 979-99-0235

**DEMOLITION & LANDSCAPE PROTECTION PLAN**

APPLICANT:  
**CHRIST COMMUNITY CHURCH**  
1528 E. FRANKLIN STREET, SUITE 201  
CHAPEL HILL, N.C. 27514

**Philip N. Post, PE, PLS**  
(919) 818-7862  
philip.n.post@gmail.com  
PO Box 4912  
Chapel Hill, NC 27515

**PHILIP POST ENGINEERING FIRM, C-347**

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ALL DIMENSIONS MUST BE VERIFIED BY CONTRACTOR AND OWNER MUST BE NOTIFIED OF ANY DISCREPANCIES BEFORE PROCEEDING WITH WORK

#	DATE	NO.	REVISIONS	BY
1	11-17-2019	1	SUBMITTAL #1 COMMENTS	
2	11-17-2019	2	OWASA 11/13/2019 COMMENTS	
3	1-17-2020	3	SUBMITTAL #2 COMMENTS	
4	1-27-2020	4	PROPERTY LINE SWAP	
5	2-9-2020	5	TOWN COMMENTS	
6	2/26/2020	6	NCDOT AND TOWN COMMENTS	

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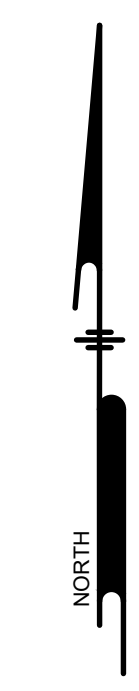
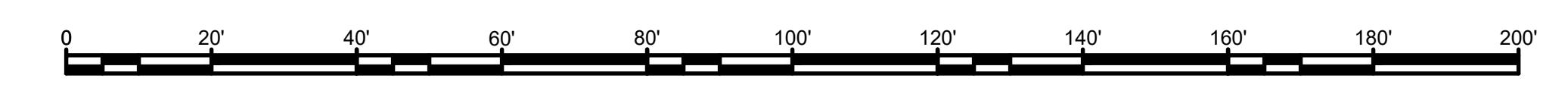
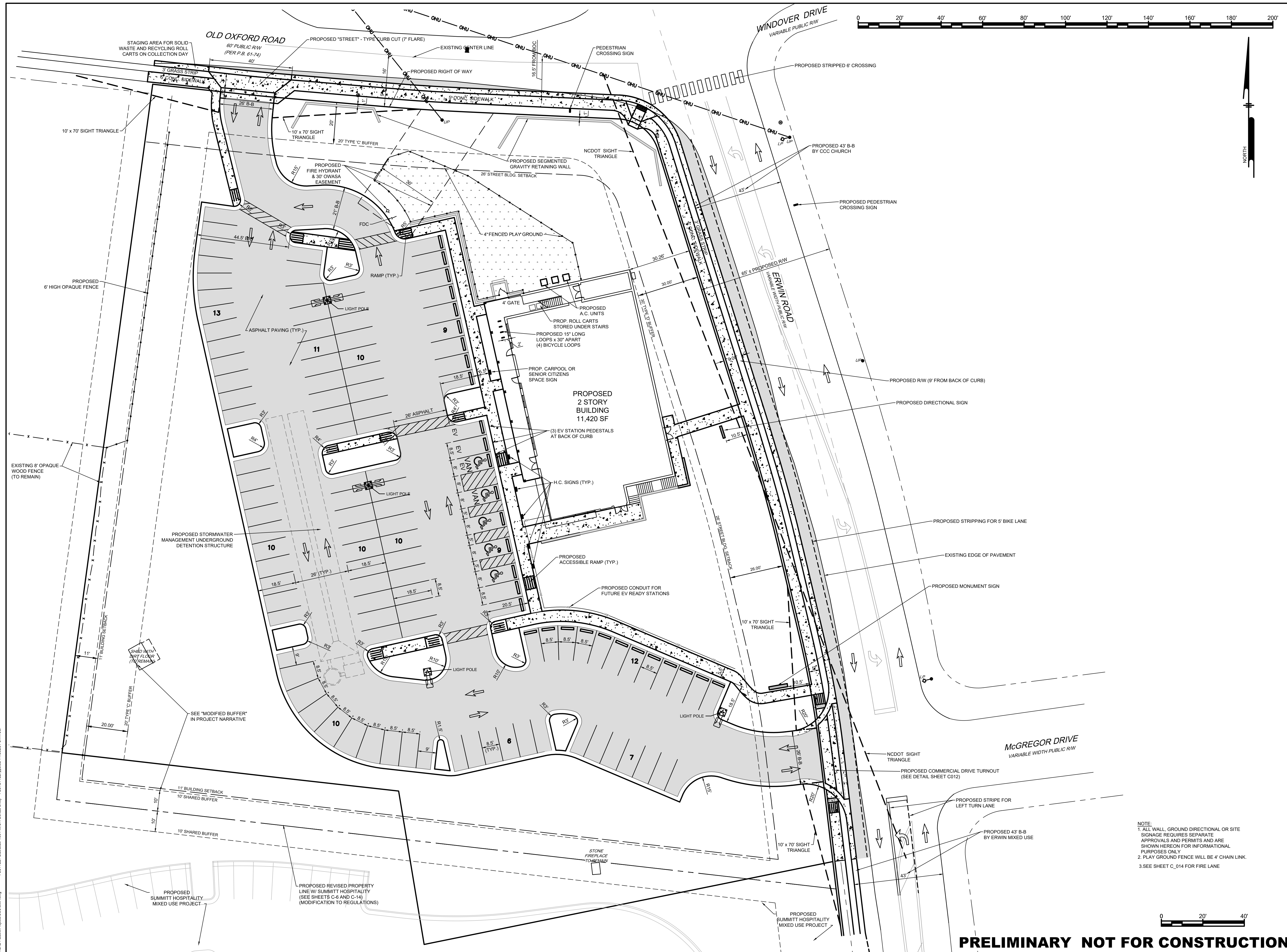
PROJECT	401801
DATE	8/28/2019
DRAWING SCALE	1" = 20'
DRAWN BY	DC
APPROVED BY	PNP

C003

SHEET 4 OF 16

PRELIMINARY NOT FOR CONSTRUCTION

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ALL DIMENSIONS MUST BE VERIFIED BY CONTRACTOR AND OWNER MUST BE NOTIFIED OF ANY DISCREPANCIES BEFORE PROCEEDING WITH WORK

**CHRIST COMMUNITY CHURCH**  
 141 ERWIN ROAD, CHAPEL HILL, N.C. 27514  
 P/N# 9799-99-9116 AND 9799-49-0235

**SITE PLAN**

APPLICANT:  
**CHRIST COMMUNITY CHURCH**  
 1528 E. FRANKLIN STREET, SUITE 201  
 CHAPEL HILL, N.C. 27514

**PHILIP POST ENGINEERING**  
 PHILIP N. POST, PE, PLS  
 (919) 818-7862  
 philip.n.post@gmail.com  
 PO Box 4912  
 Chapel Hill, NC 27515  
 FIRM: C-347

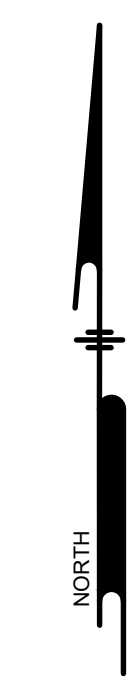
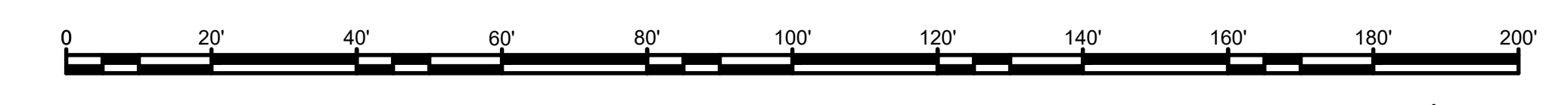
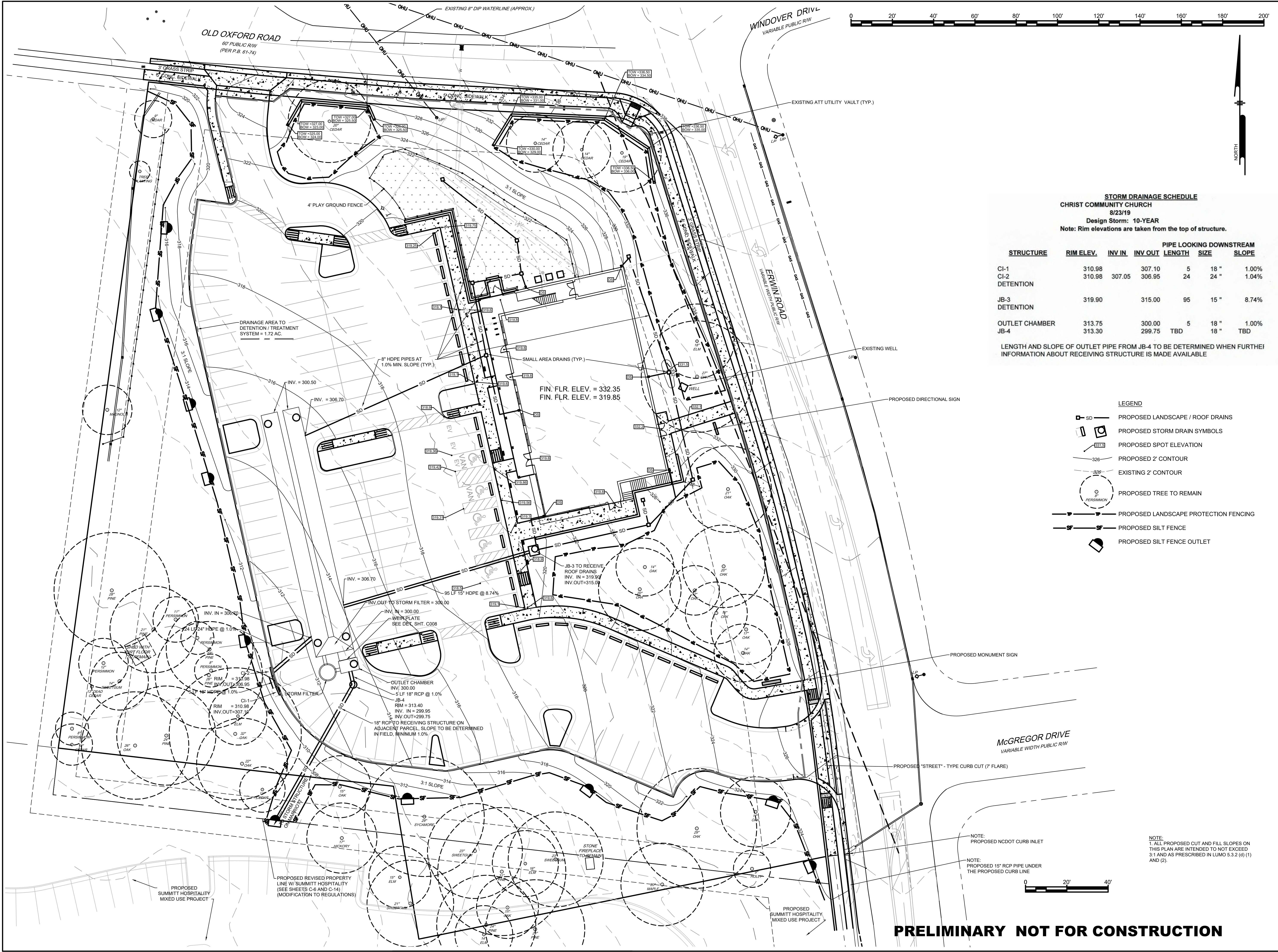
#	#	#	#	#	#	#	#	NO.	DATE	REVISIONS	BY
2/26/2020	6	DC	DC	DC	DC	DC	DC				
2-9-2020	5	TOWN COMMENTS									
1-27-2020	4	PROPERTY LINE SWAP									
1-17-2020	3	SUBMITTAL #2 COMMENTS									
12-27-2019	2	OWASA 11/13/2019 COMMENTS									
11-17-2019	1	SUBMITTAL #1 COMMENTS									

NOTE:  
 1. ALL WALL, GROUND DIRECTIONAL OR SITE APPROVALS AND PERMITS ARE SHOWN HEREON FOR INFORMATIONAL PURPOSES ONLY.  
 2. PLAY GROUND FENCE WILL BE 4' CHAIN LINK.  
 3. SEE SHEET C\_014 FOR FIRE LANE.

PROJECT: 401801  
 DATE: 8/28/2019  
 DRAWING SCALE: 1" = 20'  
 DRAWN BY: DC  
 APPROVED BY: PNP

**PRELIMINARY NOT FOR CONSTRUCTION**

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**STORM DRAINAGE SCHEDULE**  
**CHRIST COMMUNITY CHURCH**  
 8/23/19  
 Design Storm: 10-YEAR  
 Note: Rim elevations are taken from the top of structure.

STRUCTURE	RIM ELEV.	INV IN	INV OUT	LENGTH	PIPE LOOKING DOWNSTREAM SIZE	SLOPE
CI-1	310.98		307.10	5	18"	1.00%
CI-2	310.98	307.05	306.95	24	24"	1.04%
DETENTION						
JB-3	319.90		315.00	95	15"	8.74%
DETENTION						
OUTLET CHAMBER	313.75	300.00	300.00	5	18"	1.00%
JB-4	313.30	299.75	TBD	18"	TBD	TBD

LENGTH AND SLOPE OF OUTLET PIPE FROM JB-4 TO BE DETERMINED WHEN FURTHER INFORMATION ABOUT RECEIVING STRUCTURE IS MADE AVAILABLE

- LEGEND**
- PROPOSED LANDSCAPE / ROOF DRAINS
  - PROPOSED STORM DRAIN SYMBOLS
  - PROPOSED SPOT ELEVATION
  - PROPOSED 2' CONTOUR
  - EXISTING 2' CONTOUR
  - PROPOSED TREE TO REMAIN
  - PROPOSED LANDSCAPE PROTECTION FENCING
  - PROPOSED SILT FENCE
  - PROPOSED SILT FENCE OUTLET

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**CHRIST COMMUNITY CHURCH**  
 141 ERWIN ROAD, CHAPEL HILL, N.C. 27514  
 P/N# 9799-39-9116 AND 9799-49-0235  
**GRADING & DRAINAGE PLAN**  
 APPLICANT:  
**CHRIST COMMUNITY CHURCH**  
 1528 E. FRANKLIN STREET, SUITE 201  
 CHAPEL HILL, N.C. 27514

#	DATE	NO.	REVISIONS	BY
1	11-17-2019	1	SUBMITTAL #1 COMMENTS	
2	11-17-2019	2	OWASA 11/13/2019 COMMENTS	
3	1-17-2020	3	SUBMITTAL #2 COMMENTS	
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5	2-9-2020	5	TOWN COMMENTS	
6	2/26/2020	6	NCDDOT AND TOWN COMMENTS	

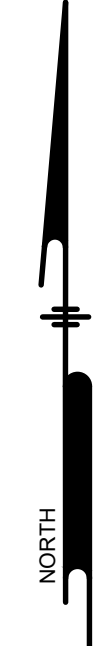
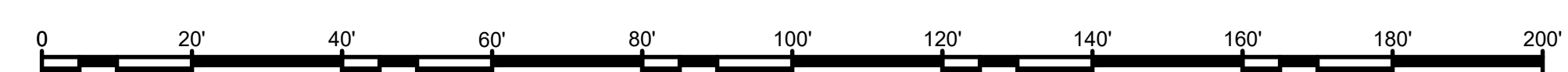
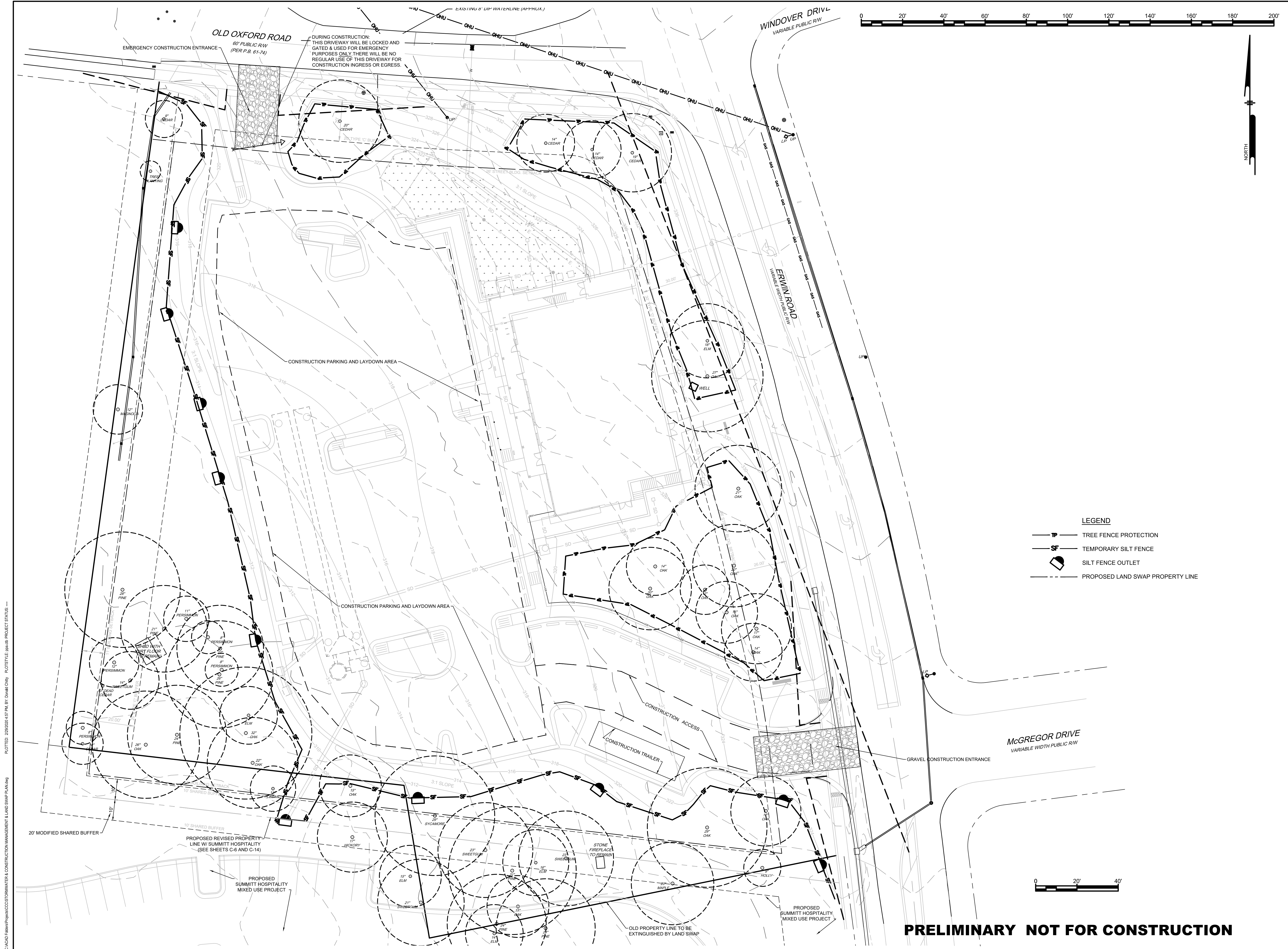
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PROJECT	401801
DATE	8/28/2019
DRAWING SCALE	1" = 20'
DRAWN BY	DC
APPROVED BY	PNP

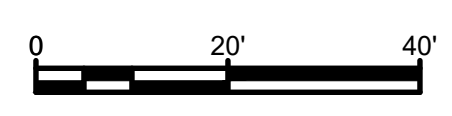
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**PRELIMINARY NOT FOR CONSTRUCTION**

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- LEGEND**
- TREE FENCE PROTECTION
  - TEMPORARY SILT FENCE
  - SILT FENCE OUTLET
  - PROPOSED LAND SWAP PROPERTY LINE



**PRELIMINARY NOT FOR CONSTRUCTION**

ALL DIMENSIONS MUST BE VERIFIED BY CONTRACTOR AND OWNER MUST BE NOTIFIED OF ANY DISCREPANCIES BEFORE PROCEEDING WITH WORK

**CHRIST COMMUNITY CHURCH**  
 141 ERWIN ROAD, CHAPEL HILL, N.C. 27514  
 P/N# 9799-39-9116 AND 9799-49-0235  
**CONSTRUCTION MANAGEMENT PLAN**  
**BOUNDARY SWAP AND BUFFERS**  
 APPLICANT:  
**CHRIST COMMUNITY CHURCH**  
 1526 E. FRANKLIN STREET, SUITE 201  
 CHAPEL HILL, N.C. 27514

**PHILIP POST ENGINEERING FIRM, C-347**  
 Philip N. Post, PE, PLS  
 (919) 818-7862  
 philip.n.post@gmail.com  
 PO Box 4912  
 Chapel Hill, NC 27515

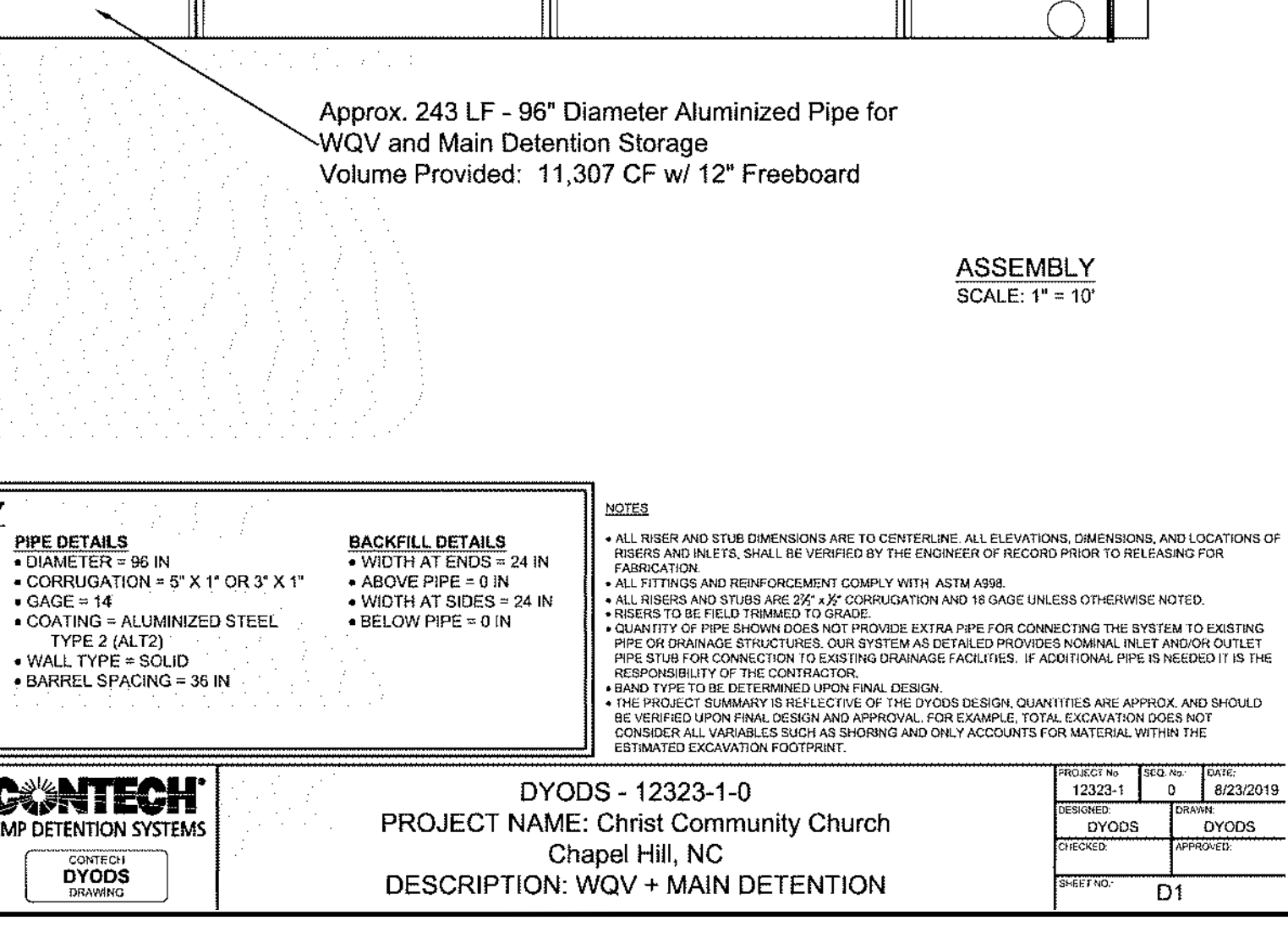
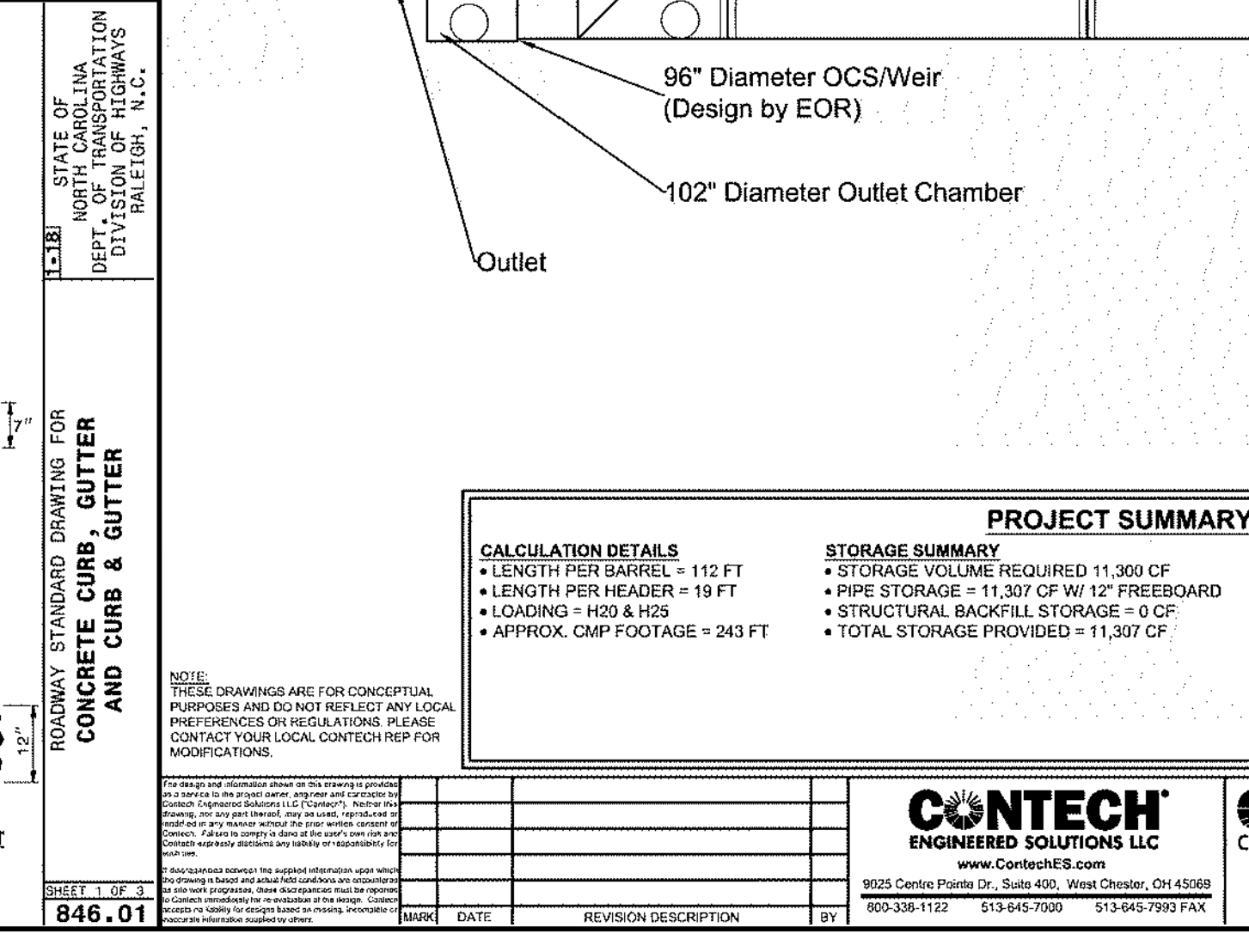
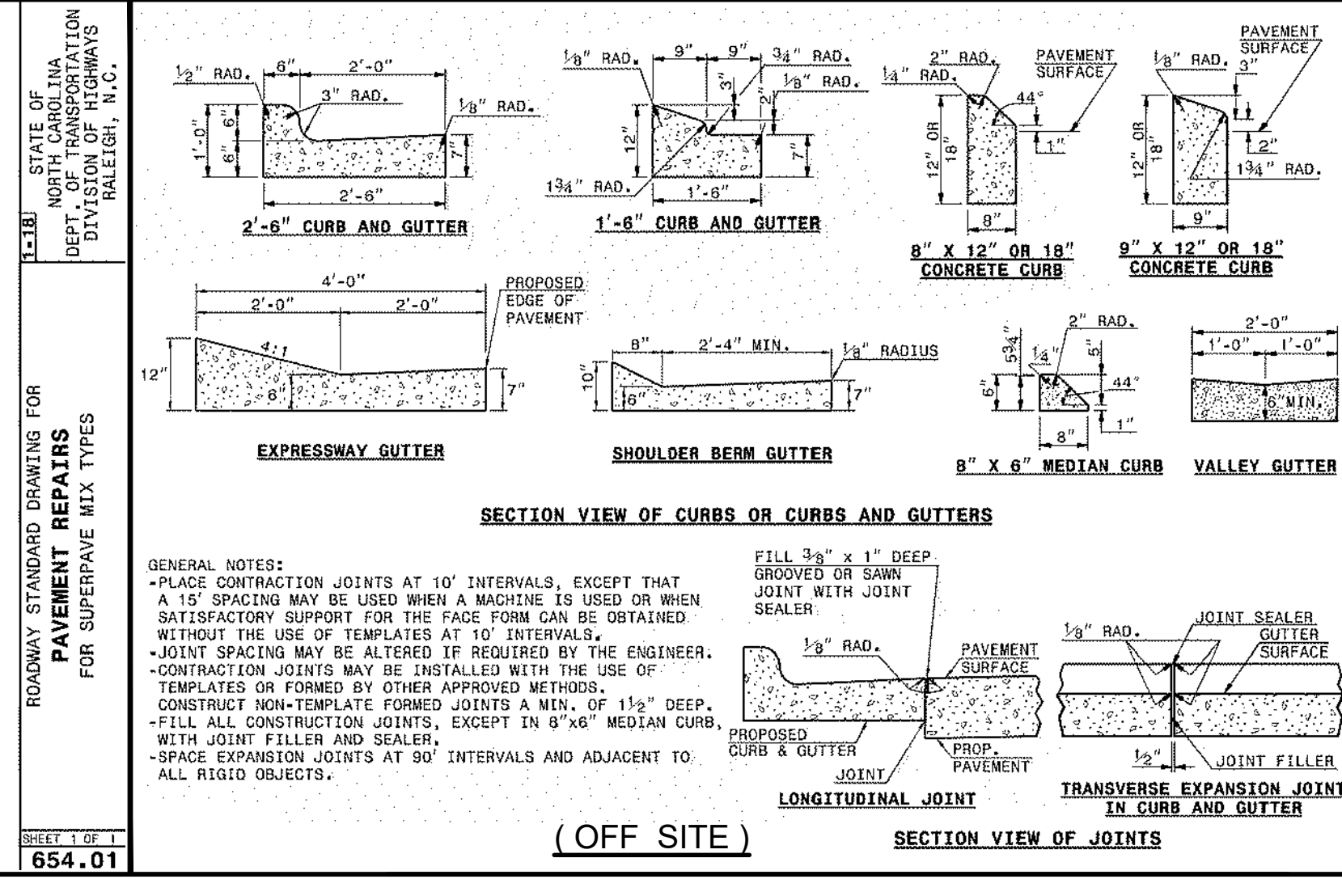
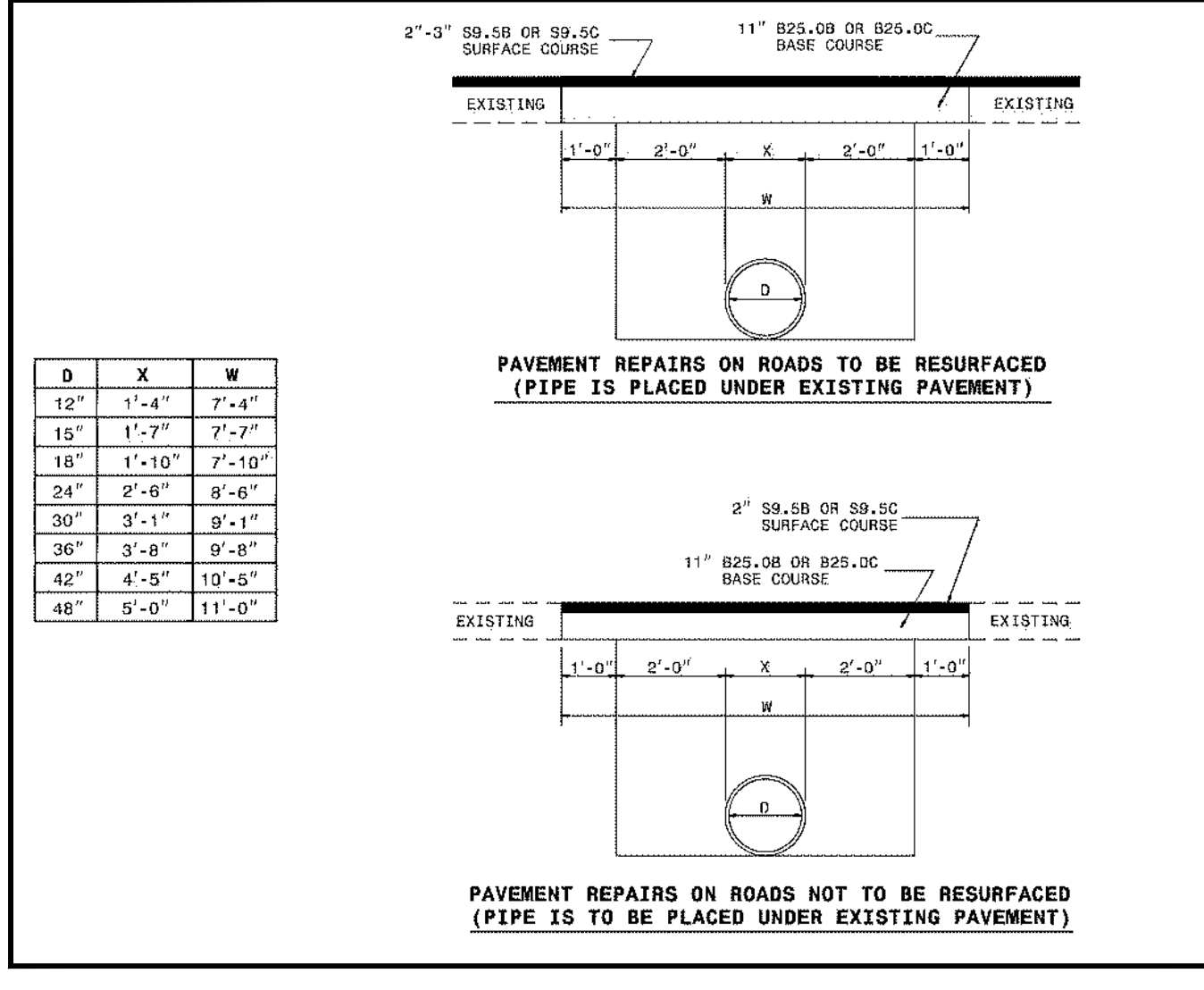
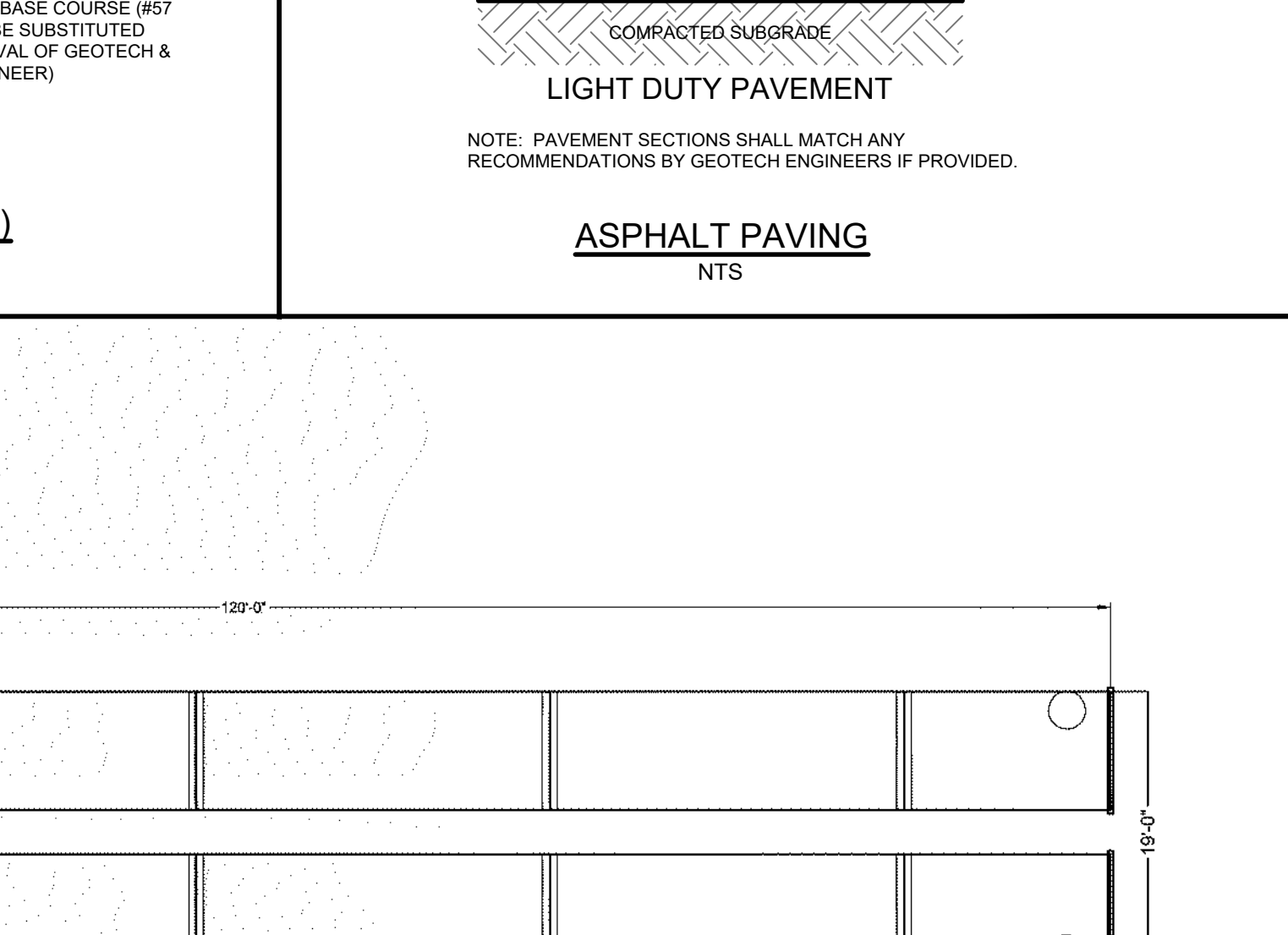
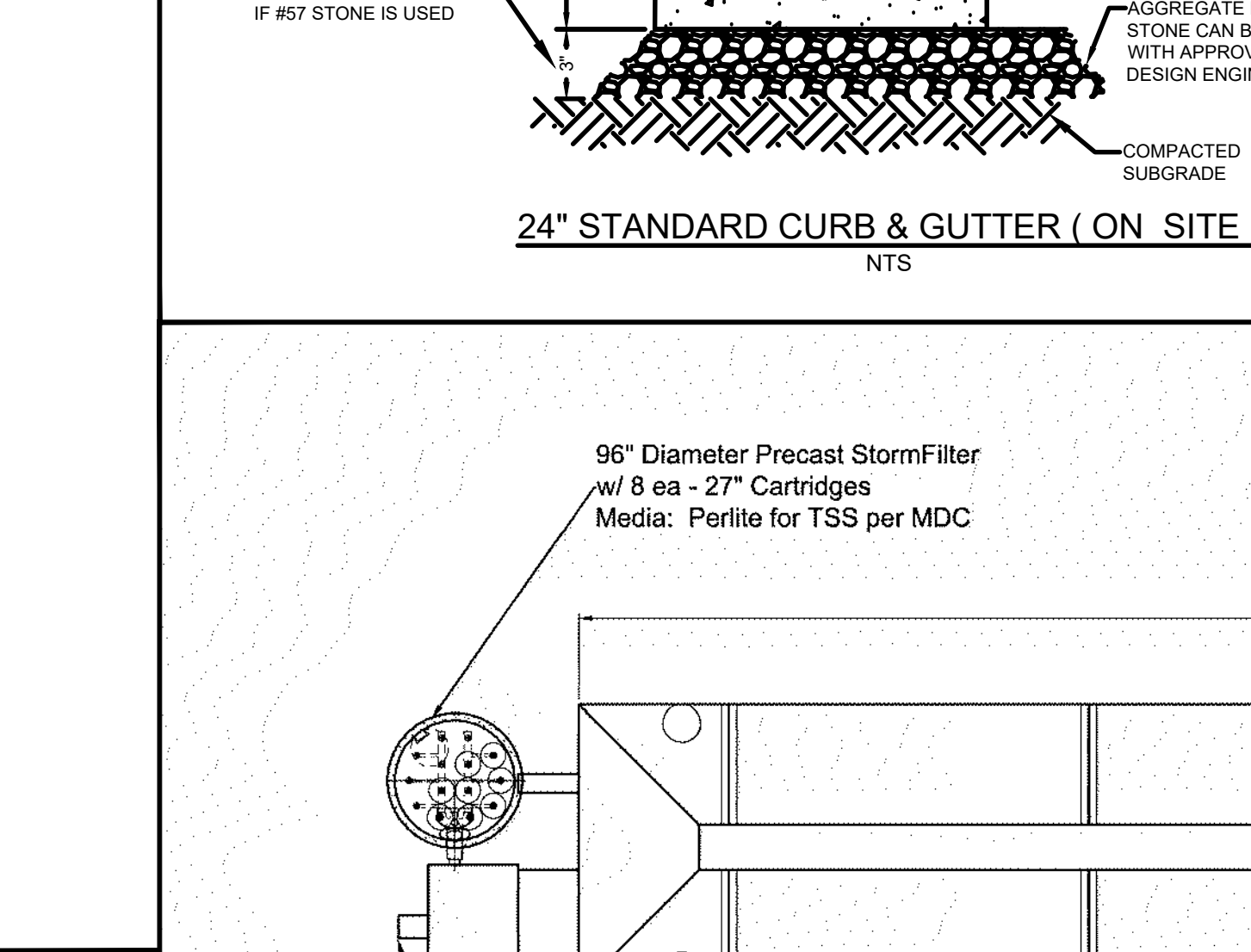
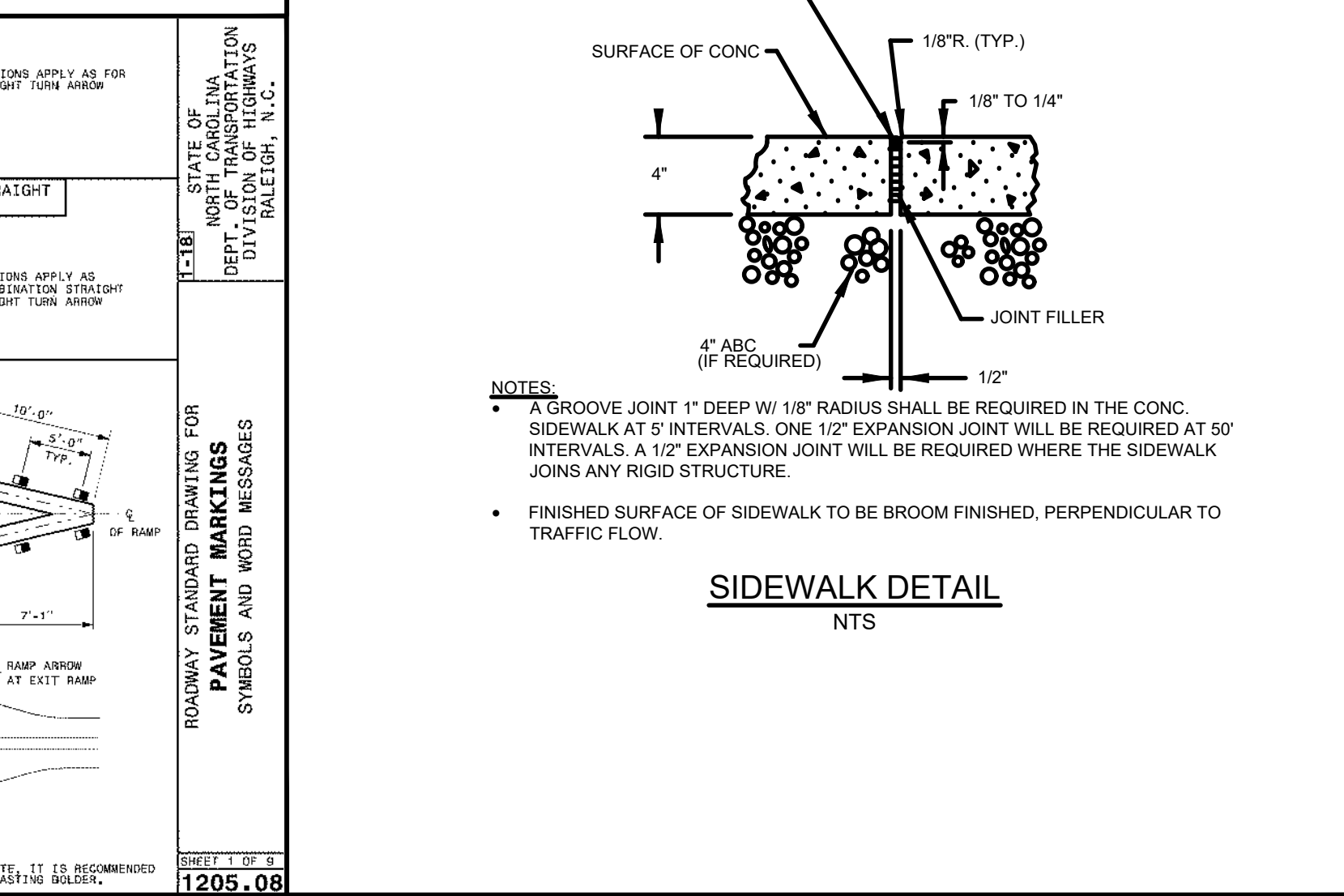
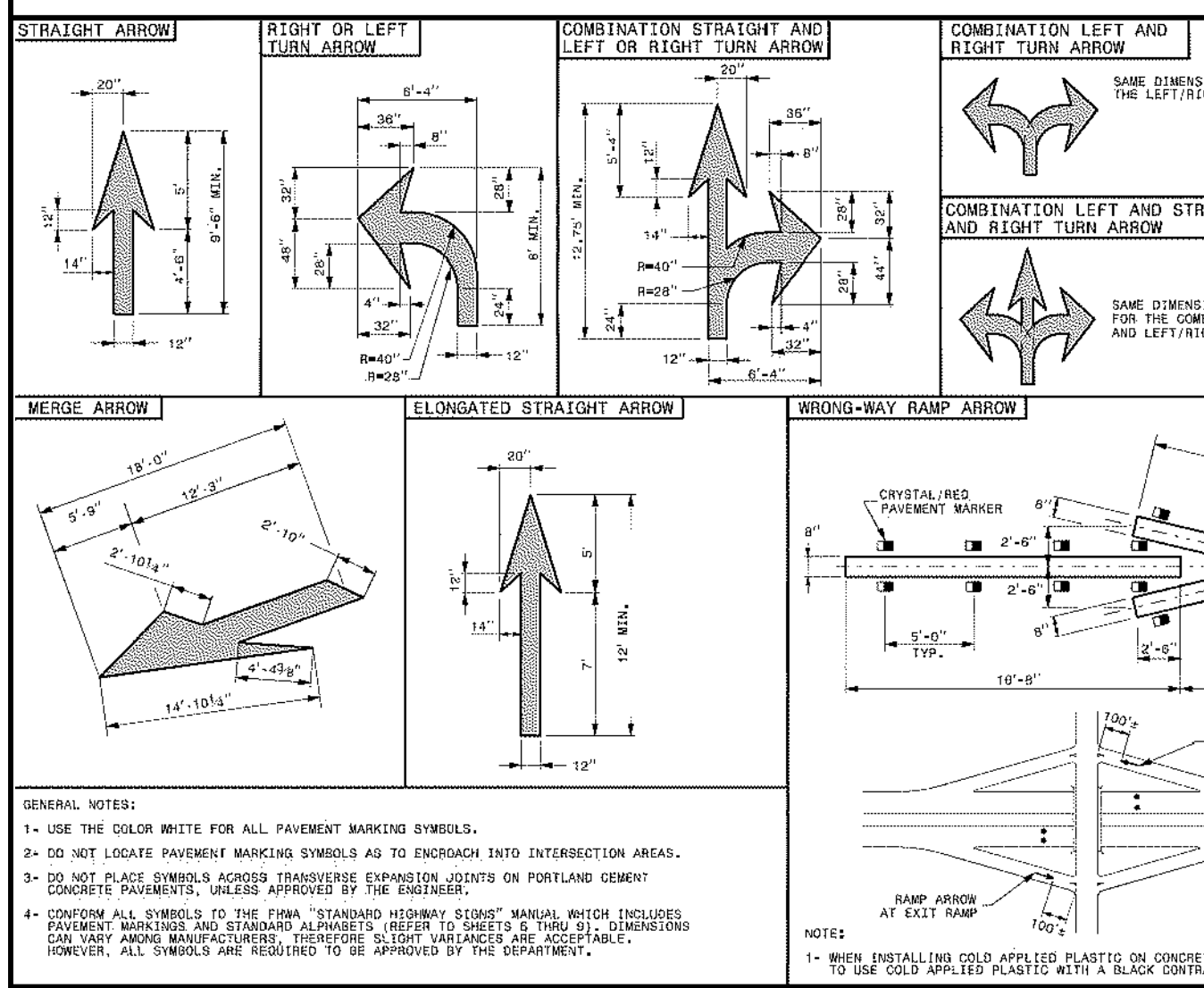
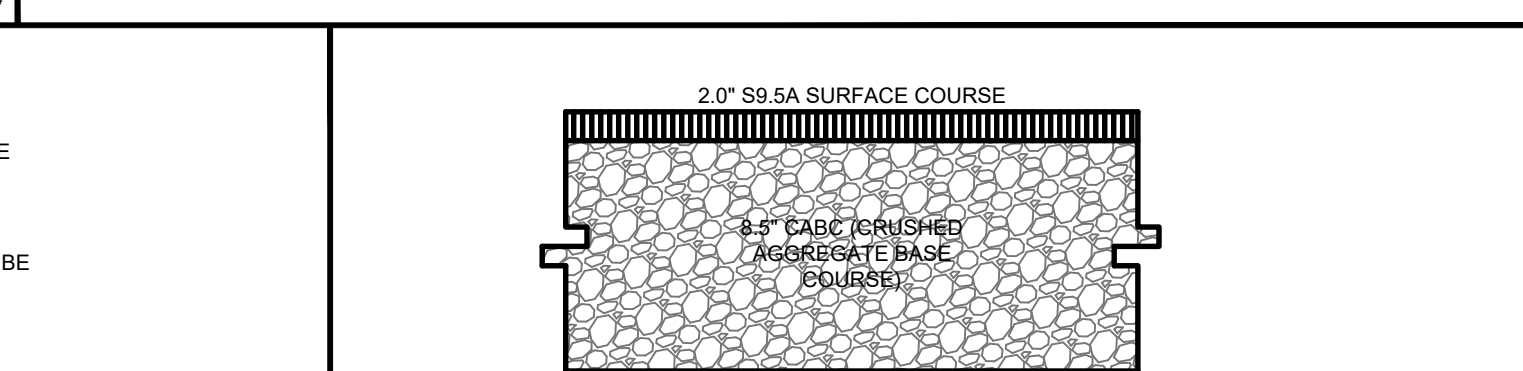
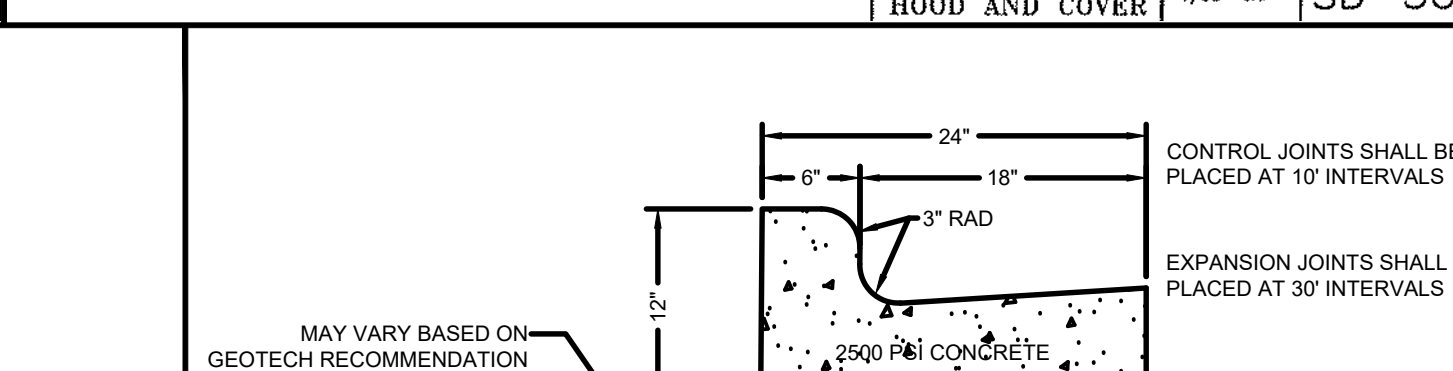
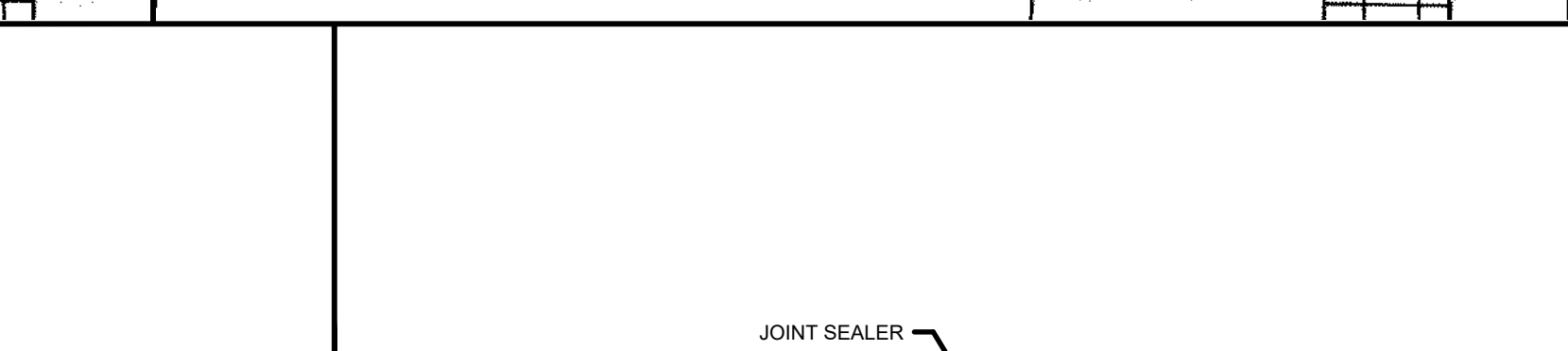
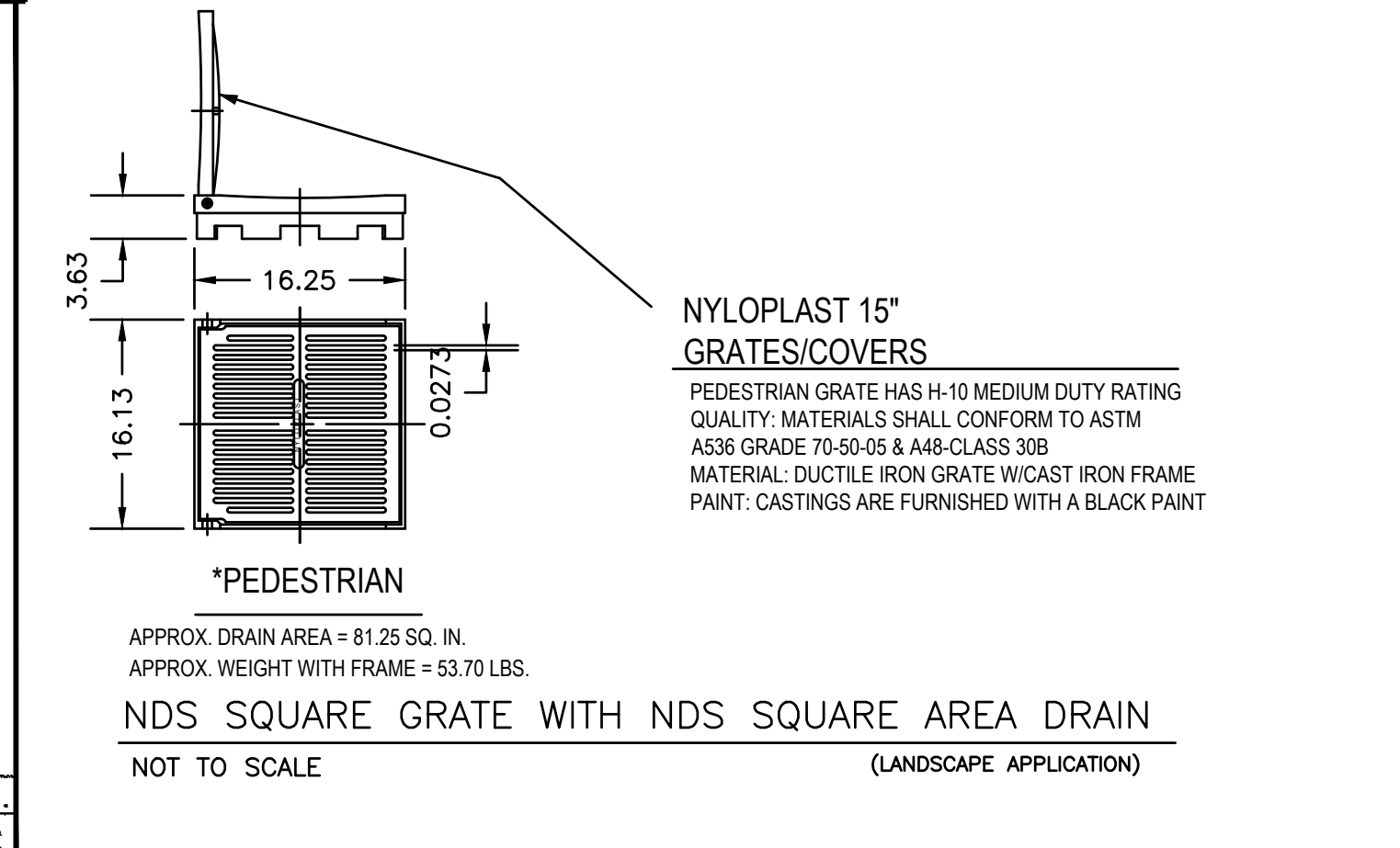
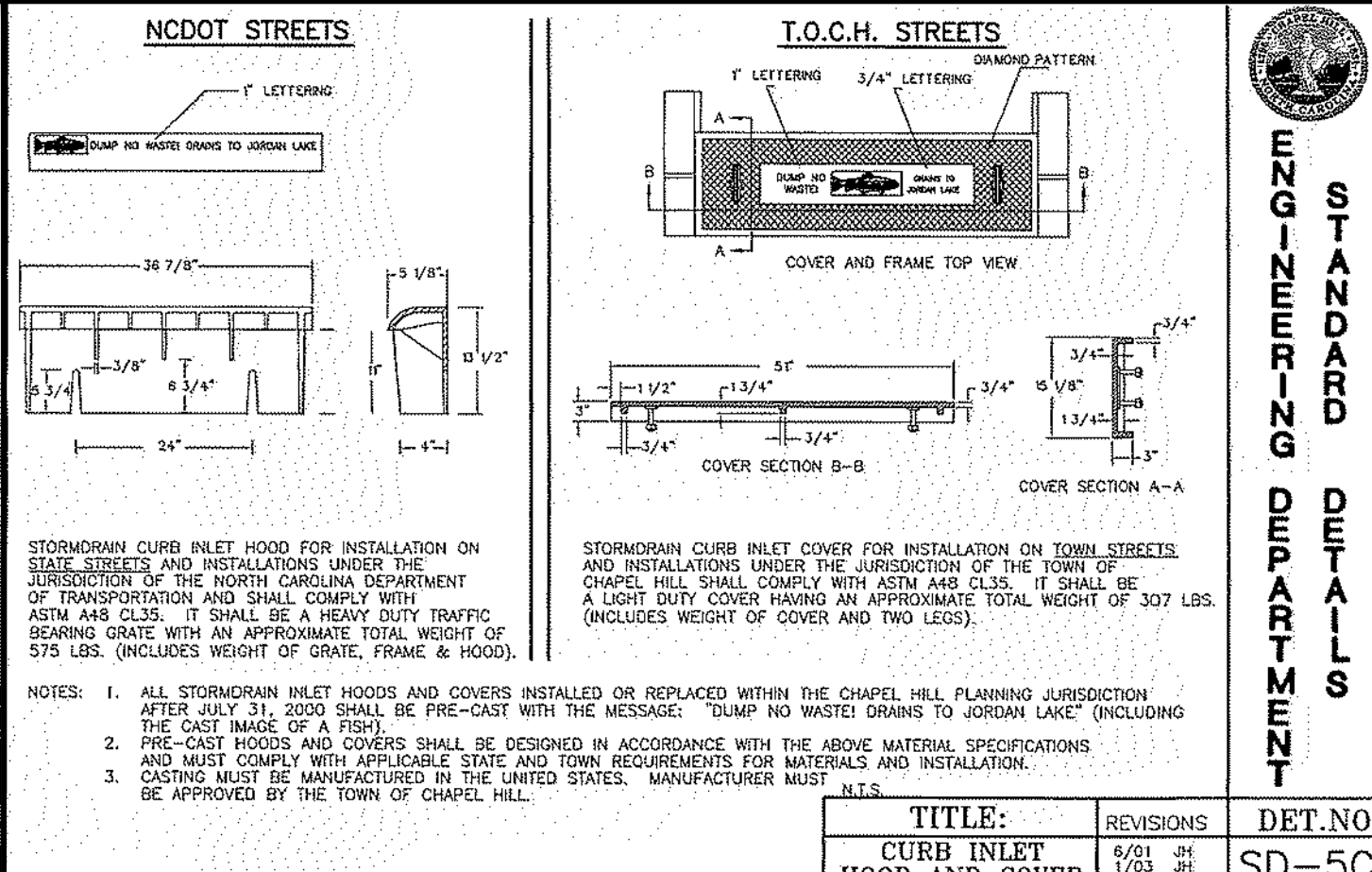
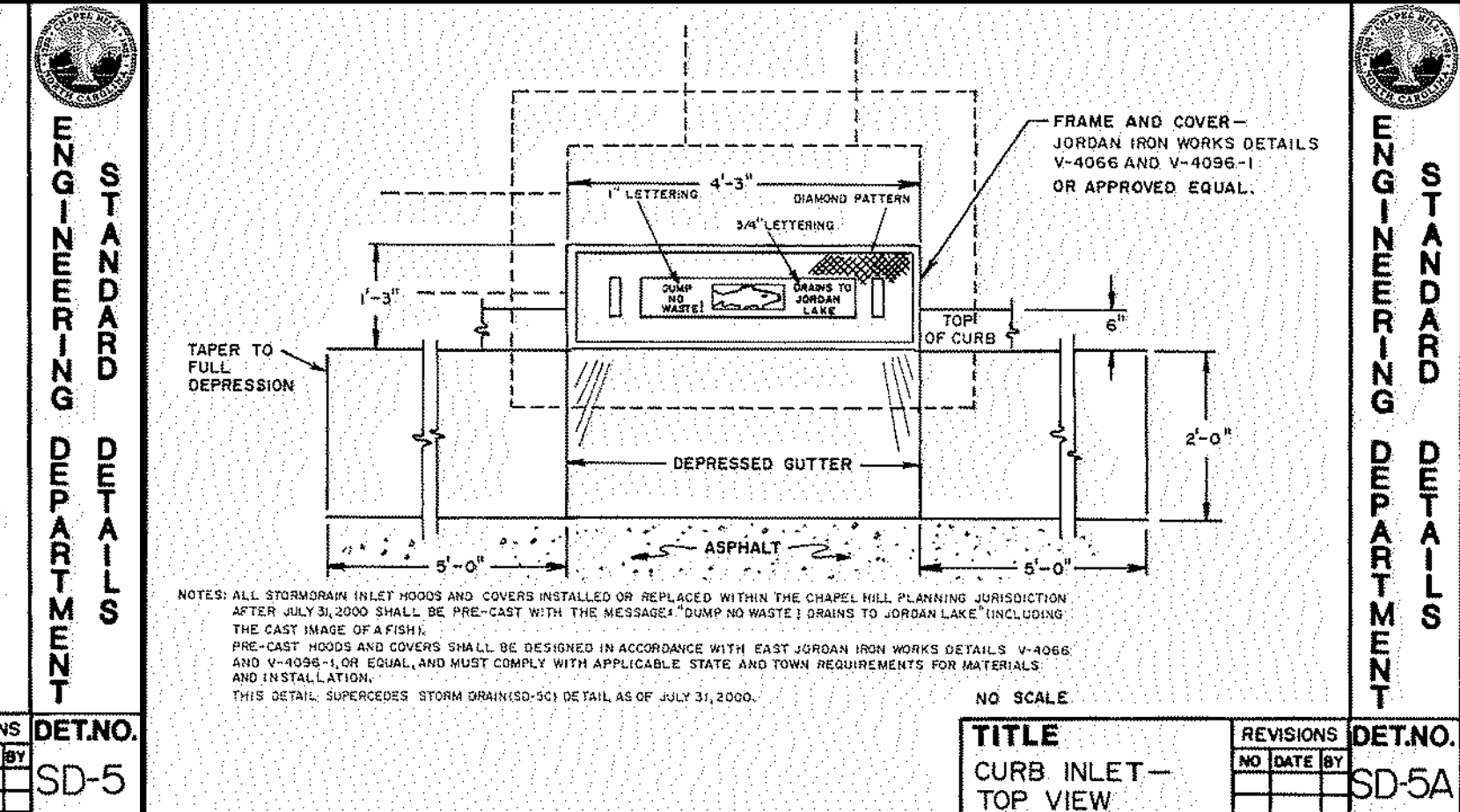
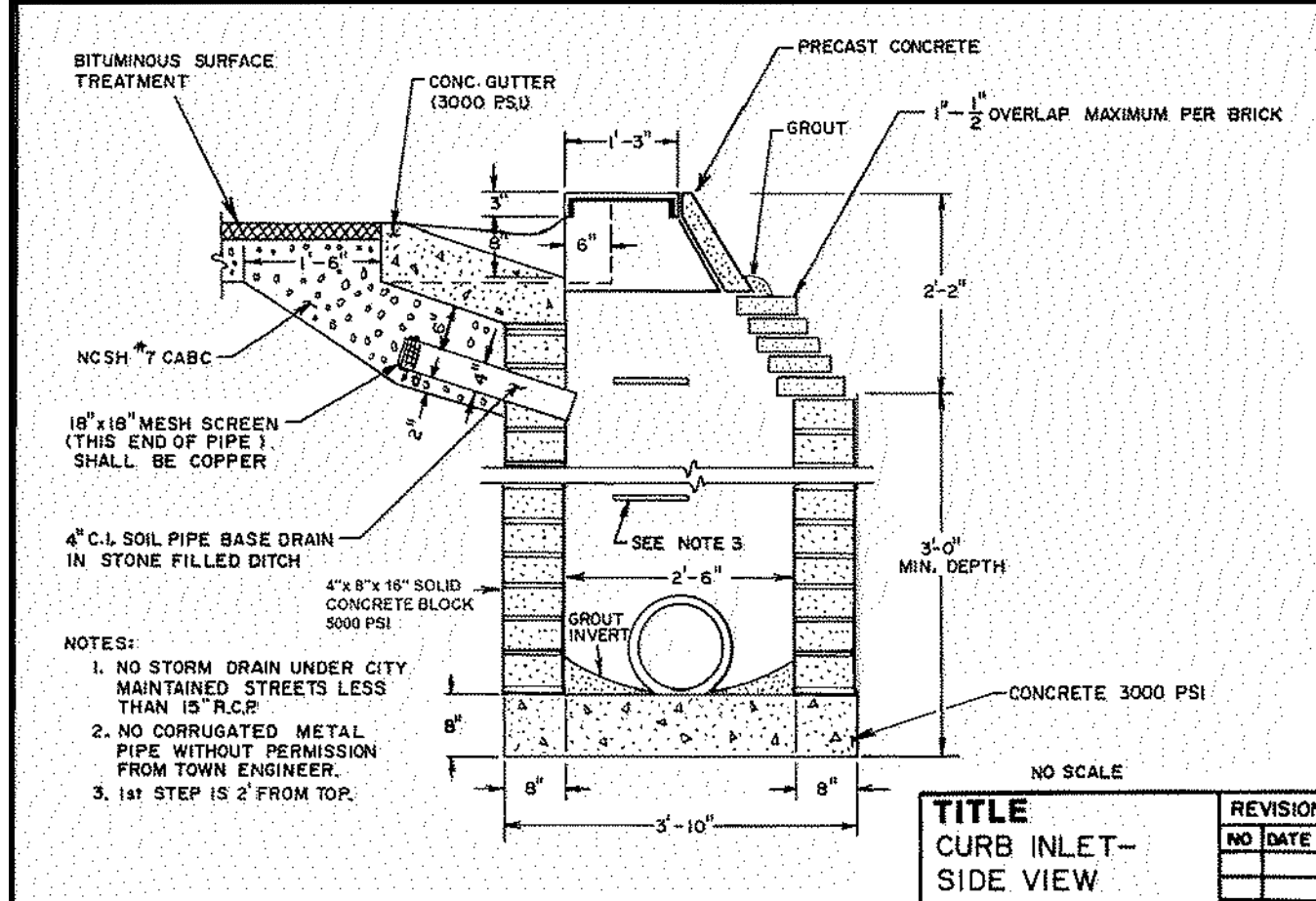
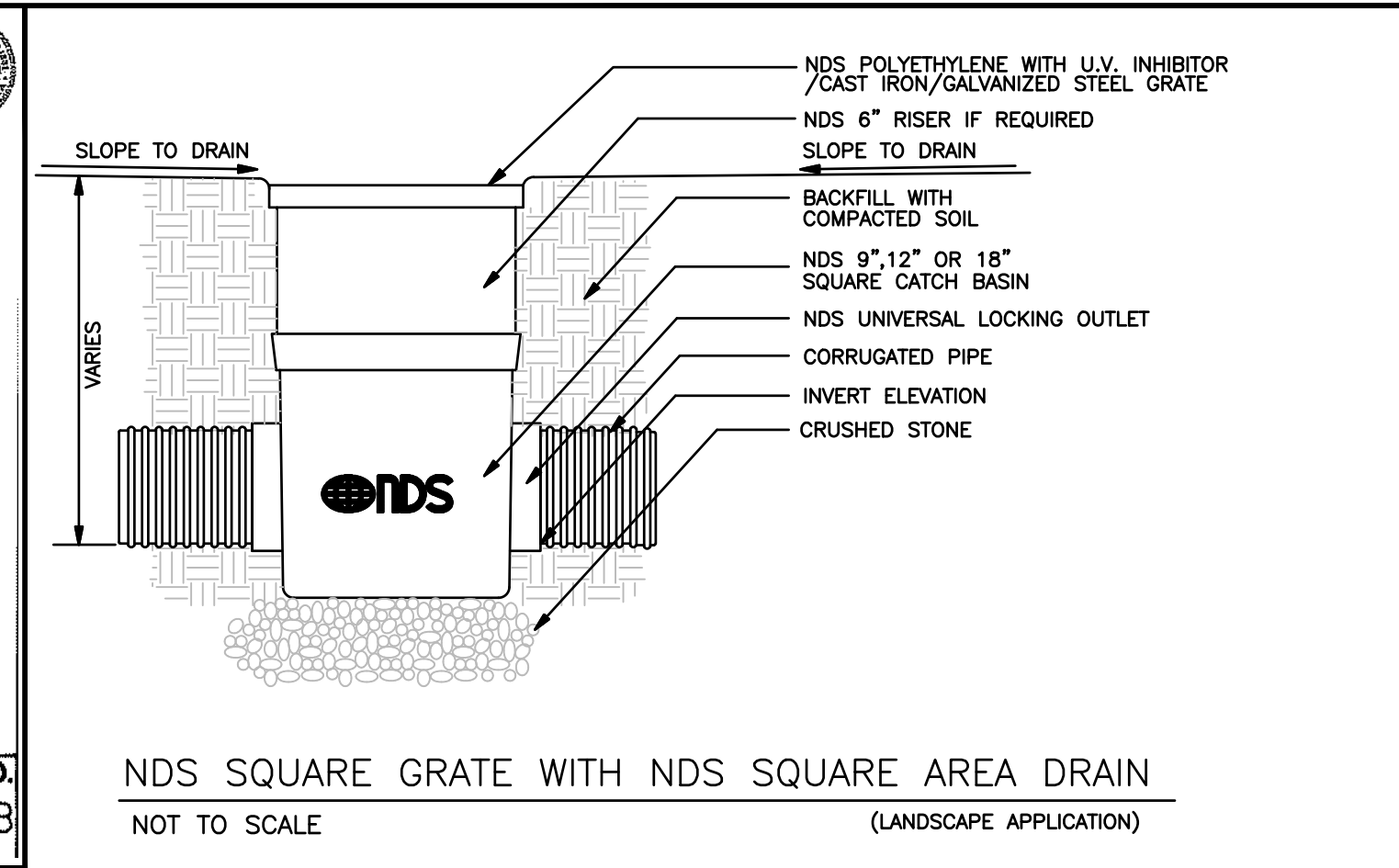
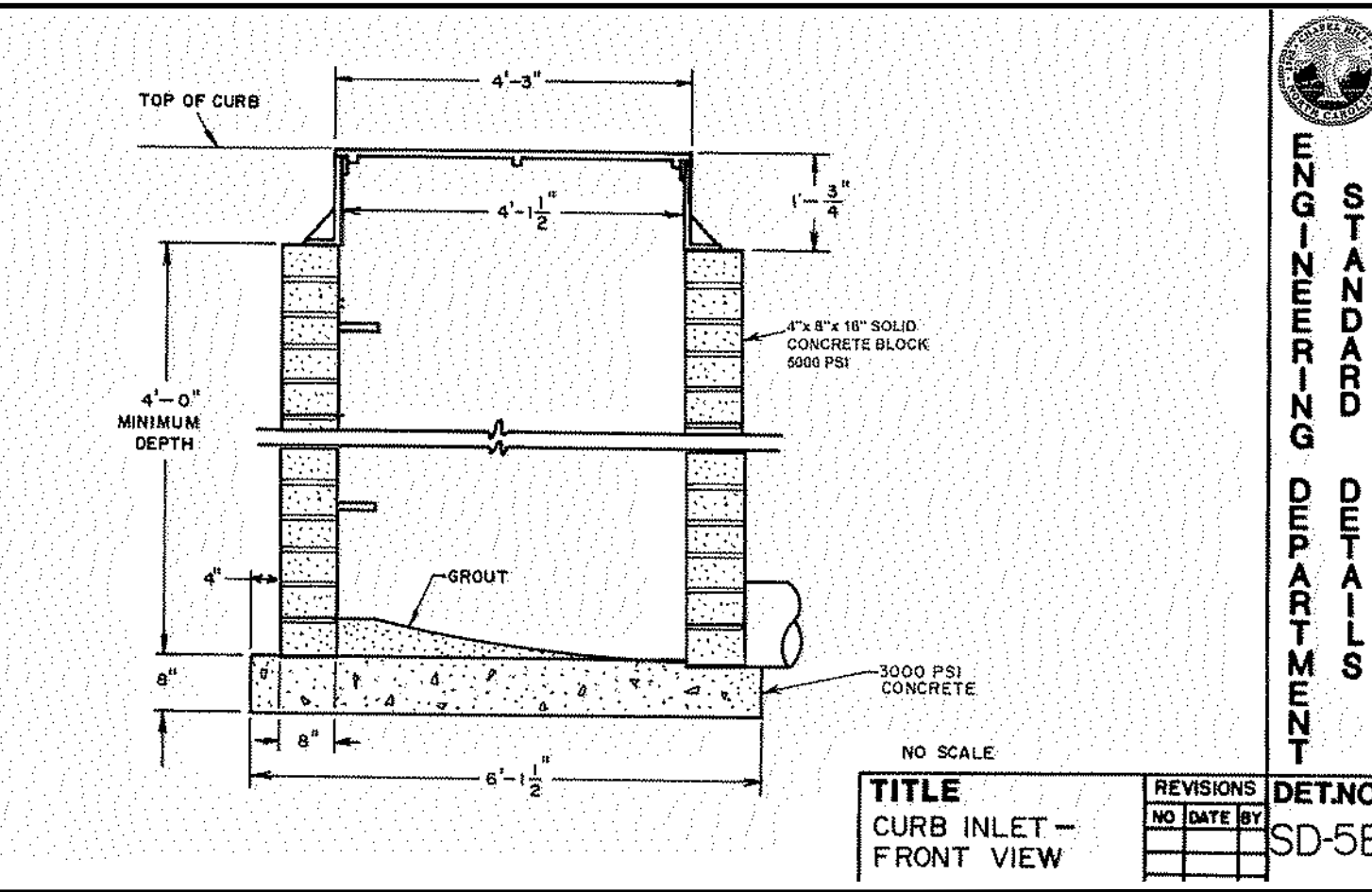
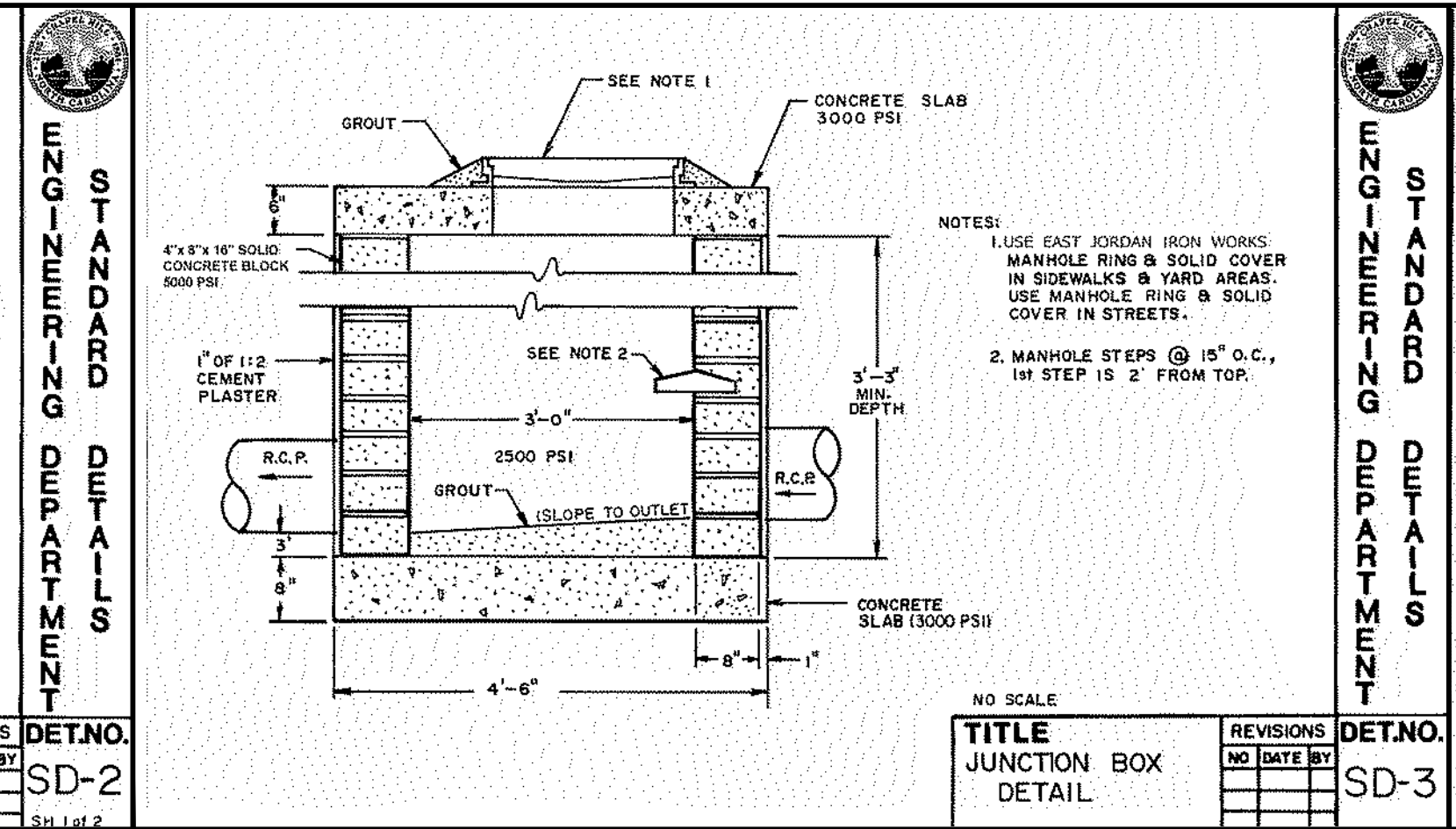
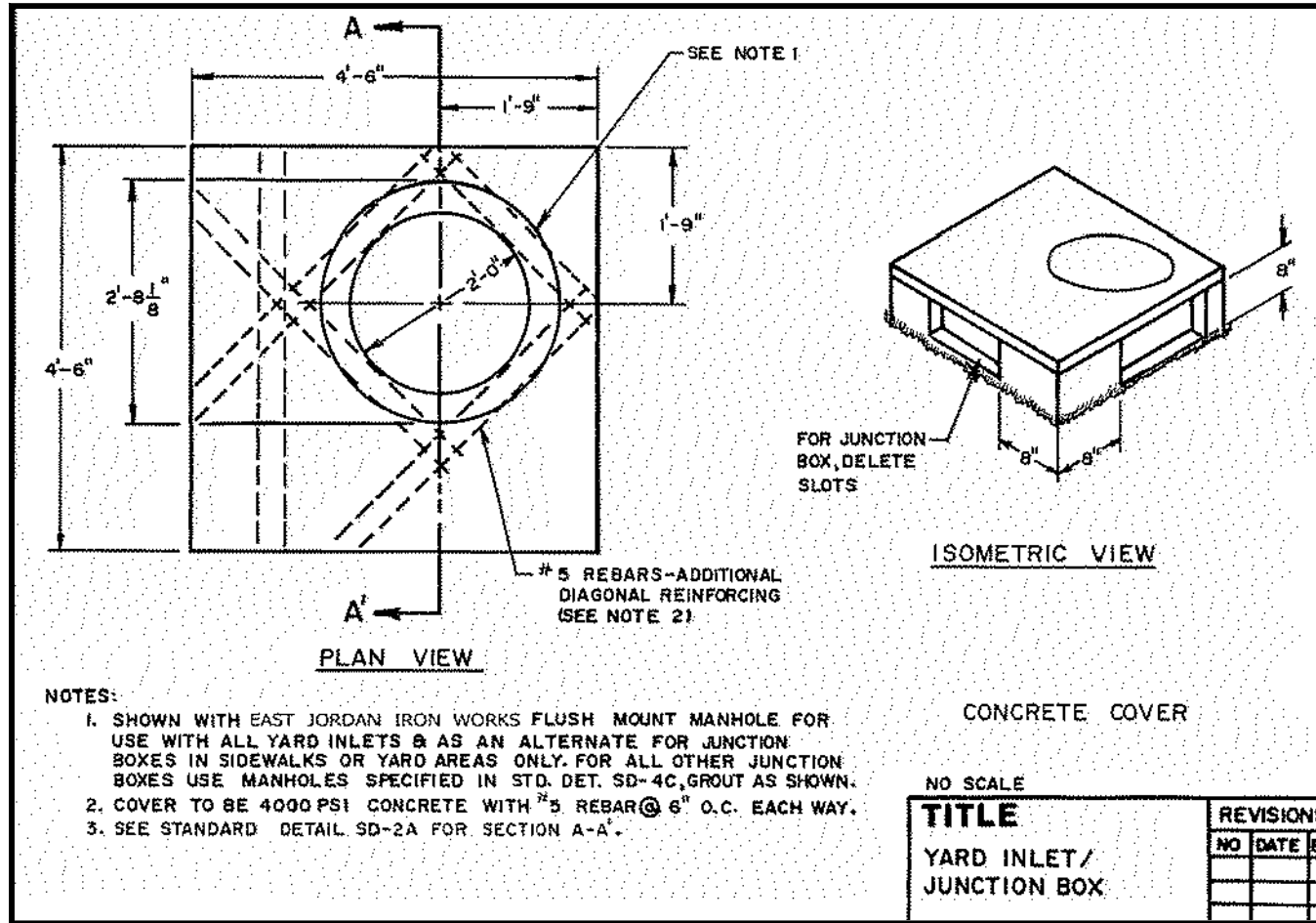
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2	12-27-2019	2	OWASA 11/13/2019 COMMENTS	
3	1-17-2020	3	SUBMITTAL #2 COMMENTS	
4	1-27-2020	4	PROPERTY LINE SWAP	
5	2-9-2020	5	TOWN COMMENTS	
6	2/26/2020	6	NCDOT AND TOWN COMMENTS	

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PROJECT	401801
DATE	8/28/2019
DRAWING SCALE	1" = 20'
DRAWN BY	DC
APPROVED BY	PNP

**C006**  
 SHEET 7 OF 16

C:\ACAD\Projects\190828\190828.dwg PLOT FILE: 190828.dwg PROJECT STATUS: —



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philip.n.post@gmail.com  
PO Box 4912  
Chapel Hill, NC 27515

**PHILIP POST ENGINEERING**  
FIRM: C-347

**CHRIST COMMUNITY CHURCH**  
141 ERWIN ROAD, CHAPEL HILL, N.C. 27514  
PHONE: 919-969-9116 AND 919-969-0235

**CHRIST COMMUNITY CHURCH**  
152B FRANKLIN STREET, SUITE 201  
CHAPEL HILL, N.C. 27514

**APPLICANT:** CHRIST COMMUNITY CHURCH

**PROJECT:** 401801

**DATE:** 8/28/2019

**DRAWING SCALE:** -

**DRAWN BY:** DC

**APPROVED BY:** PP

**PROJECT NAME:** Christ Community Church  
**DESCRIPTION:** WQV + MAIN DETENTION

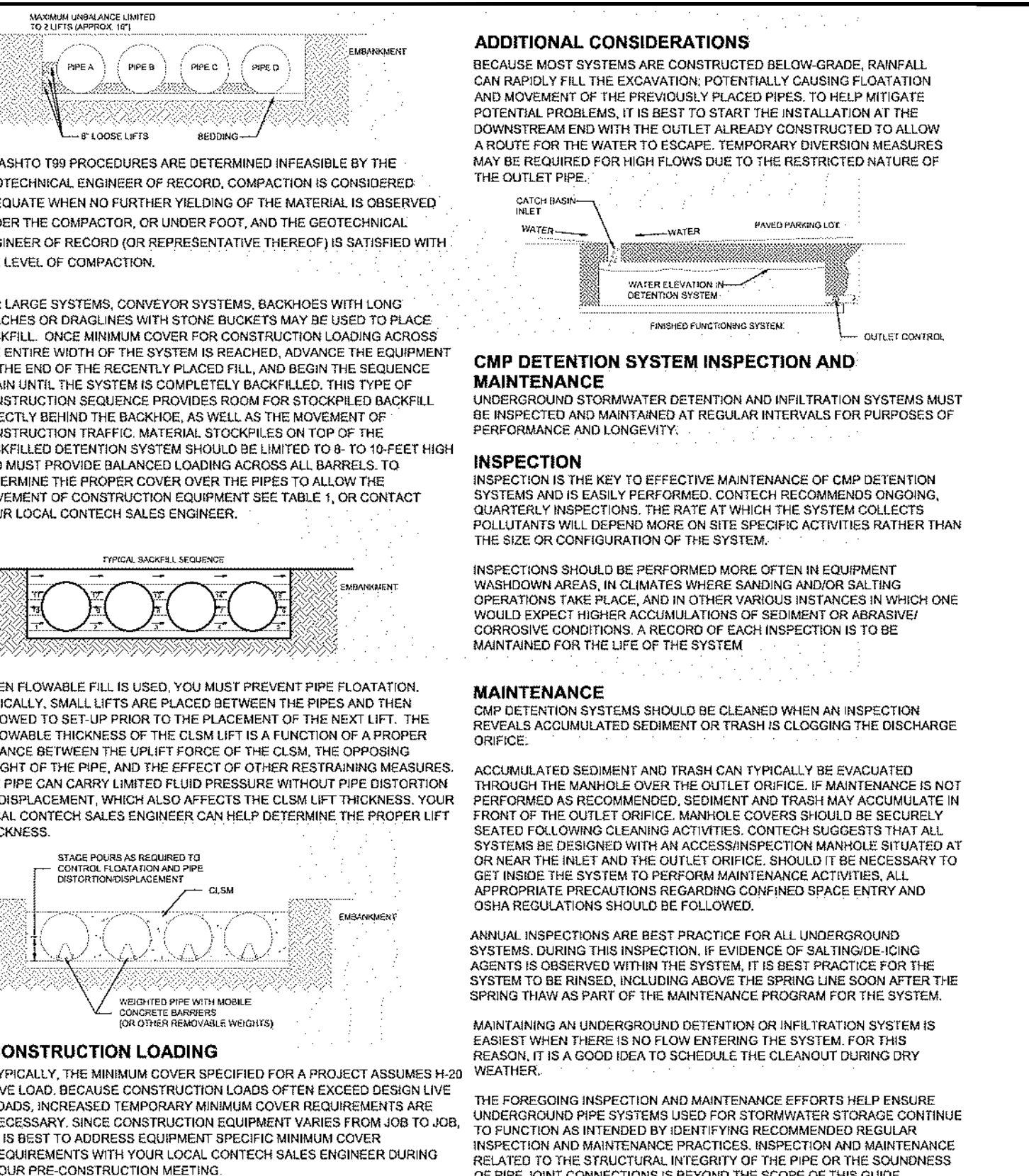
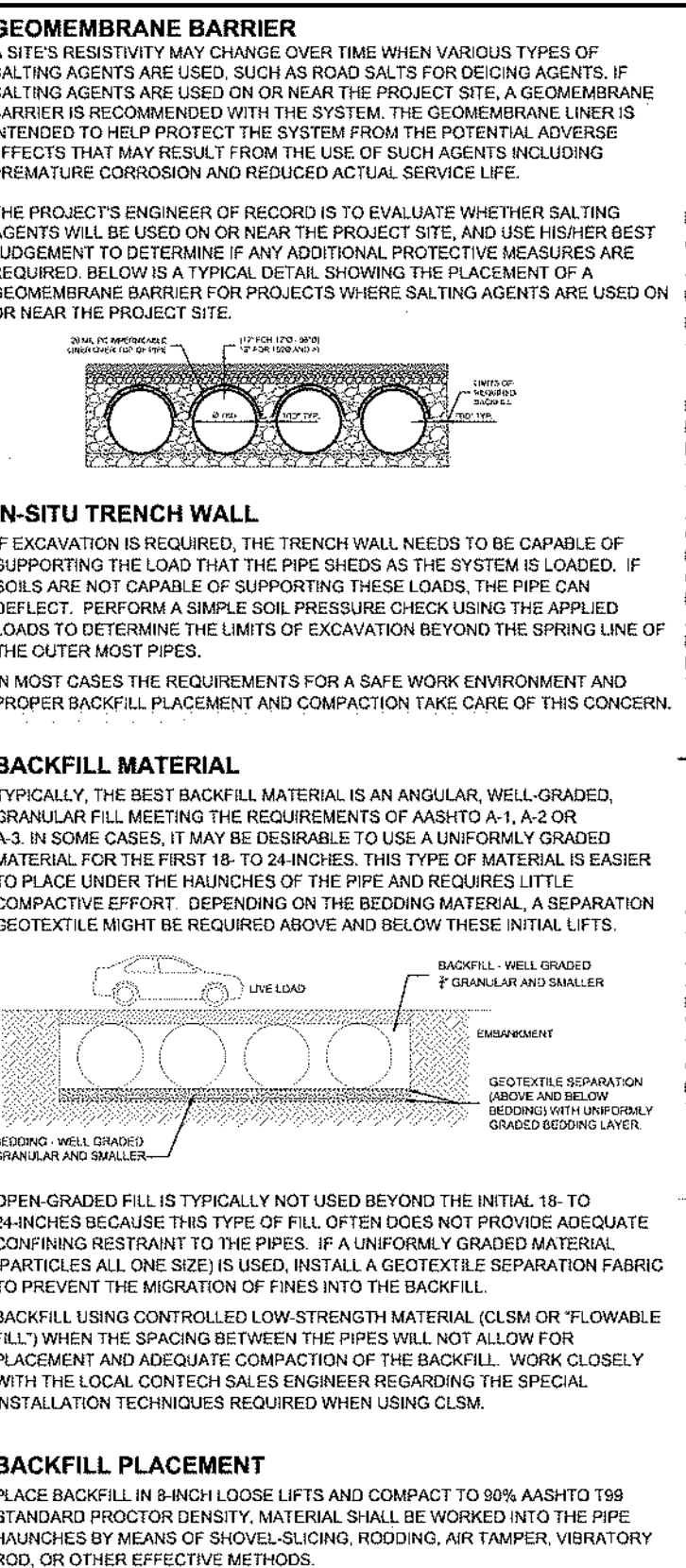
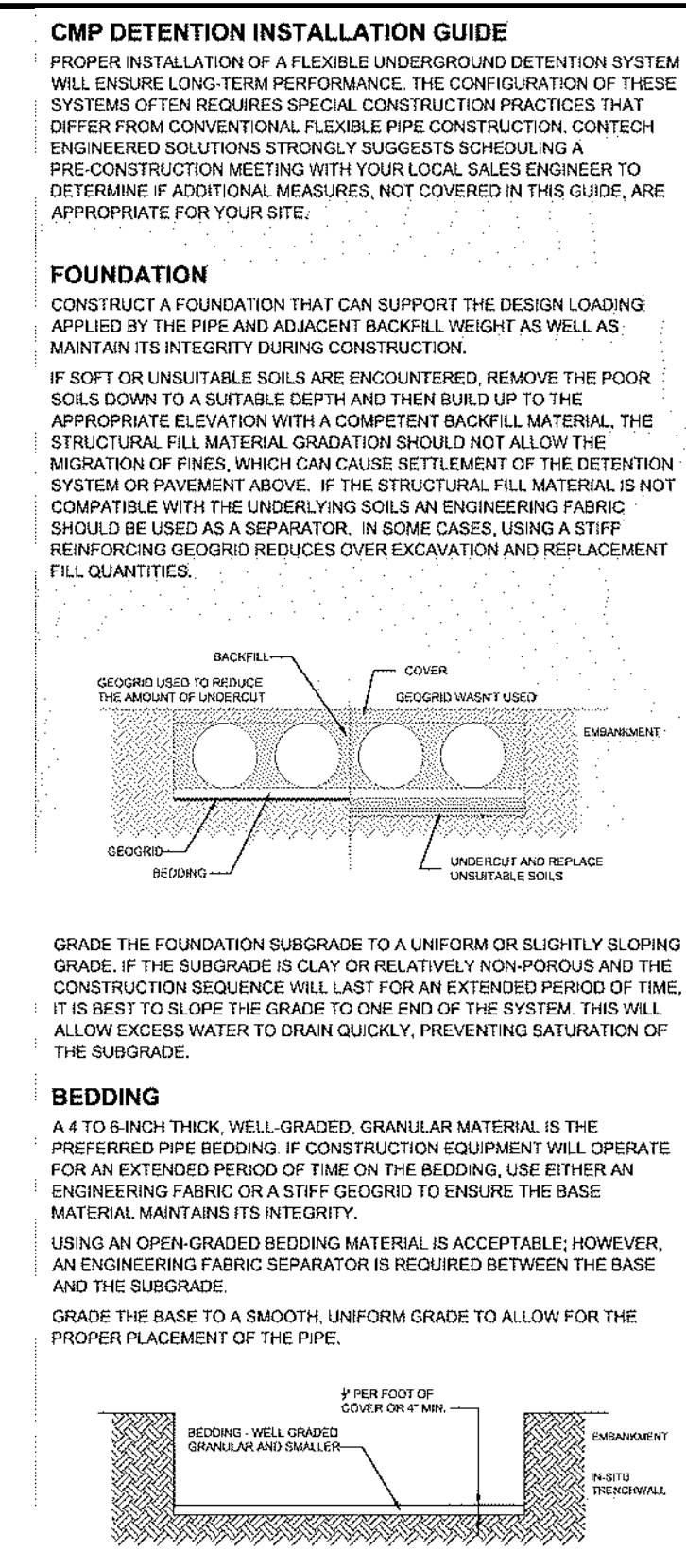
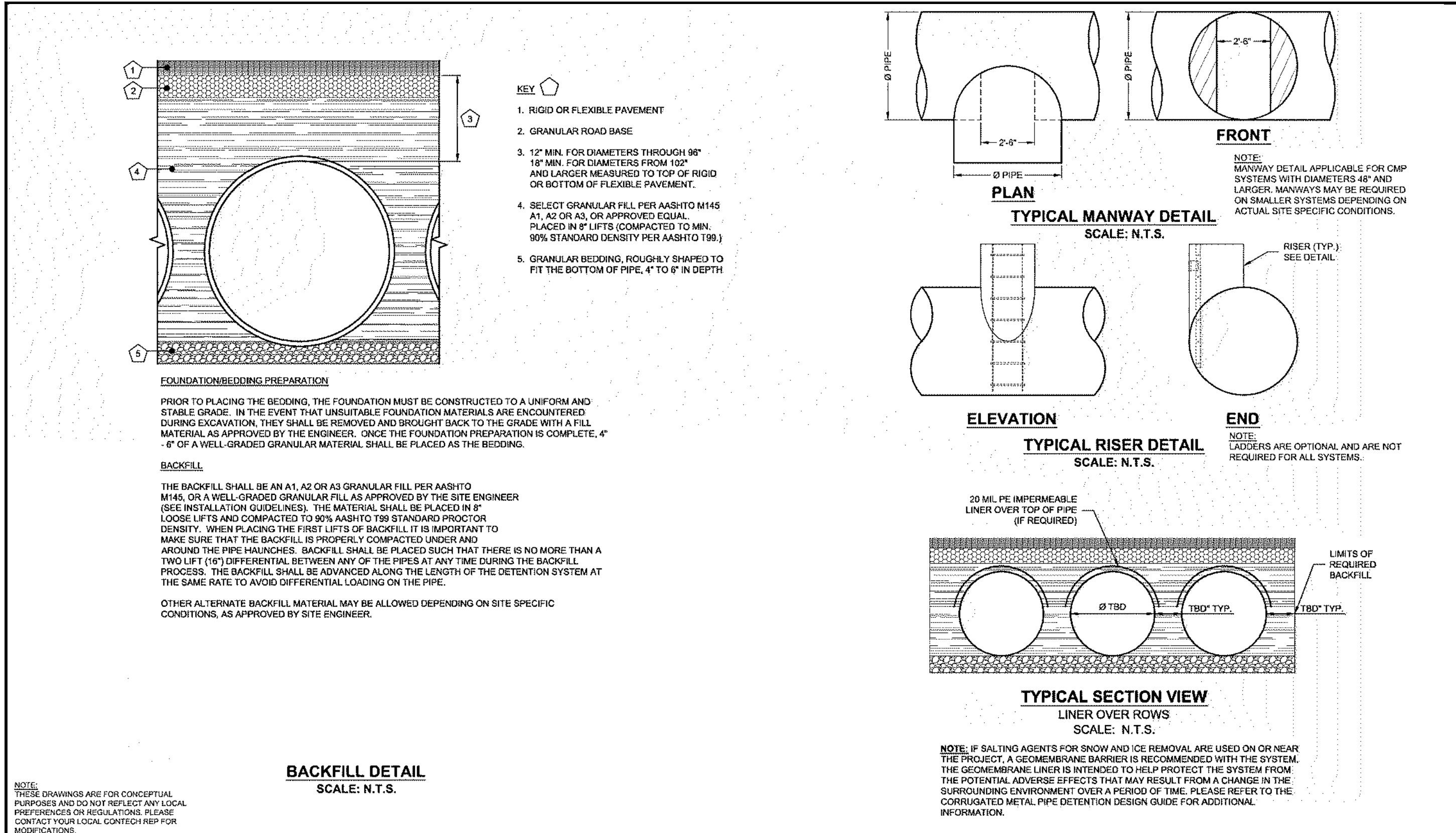
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**DATE:** 8/23/2019

**DESIGNED BY:** DYODS  
**APPROVED BY:** DYODS

**PROJECT NO.:** 12323-1-0  
**DATE:** 8/23/2019

**DESIGNED BY:** DYODS  
**APPROVED BY:** DYODS

**SHEET:** 8 OF 16



CONTECH ENGINEERED SOLUTIONS LLC

8025 Carter Pike Dr., Suite 400, West Chester, OH 45380

800-338-1122 513-645-7000 513-645-7993 FAX

www.contechES.com

CONTECH CMP DETENTION SYSTEMS

CONTECH DYODS DRAWING

DYODS - 12323-1-0

PROJECT NAME: Christ Community Church Chapel Hill, NC

DESCRIPTION: WQV + MAIN DETENTION

DATE: 8/23/2019

DESIGNED BY: DYODS

CHECKED BY: DYODS

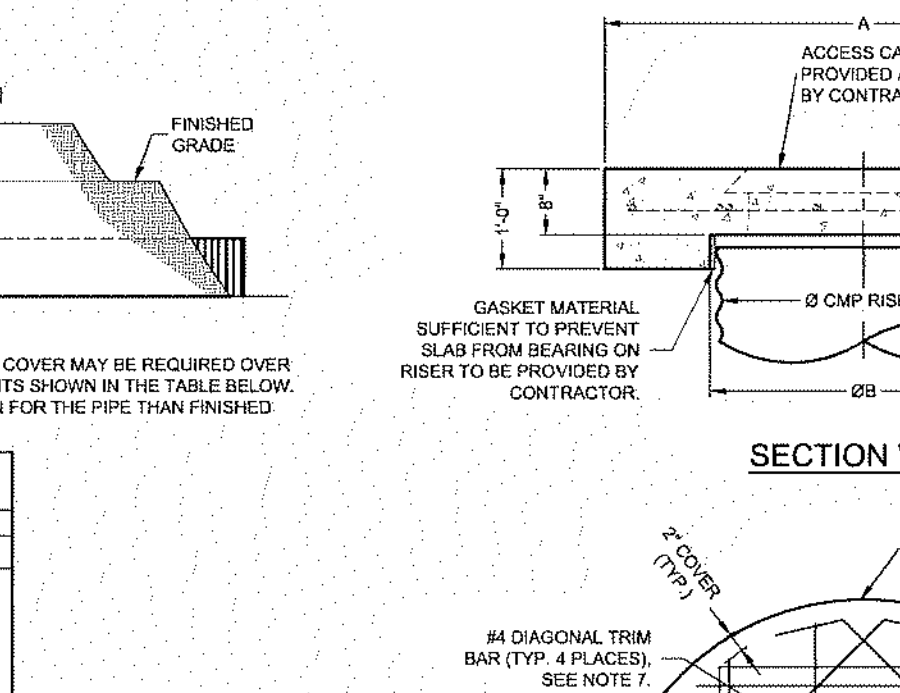
DATE: 8/23/2019

SCALE: D2

CONSTRUCTION LOADING DIAGRAM

SCALE: N.T.S.

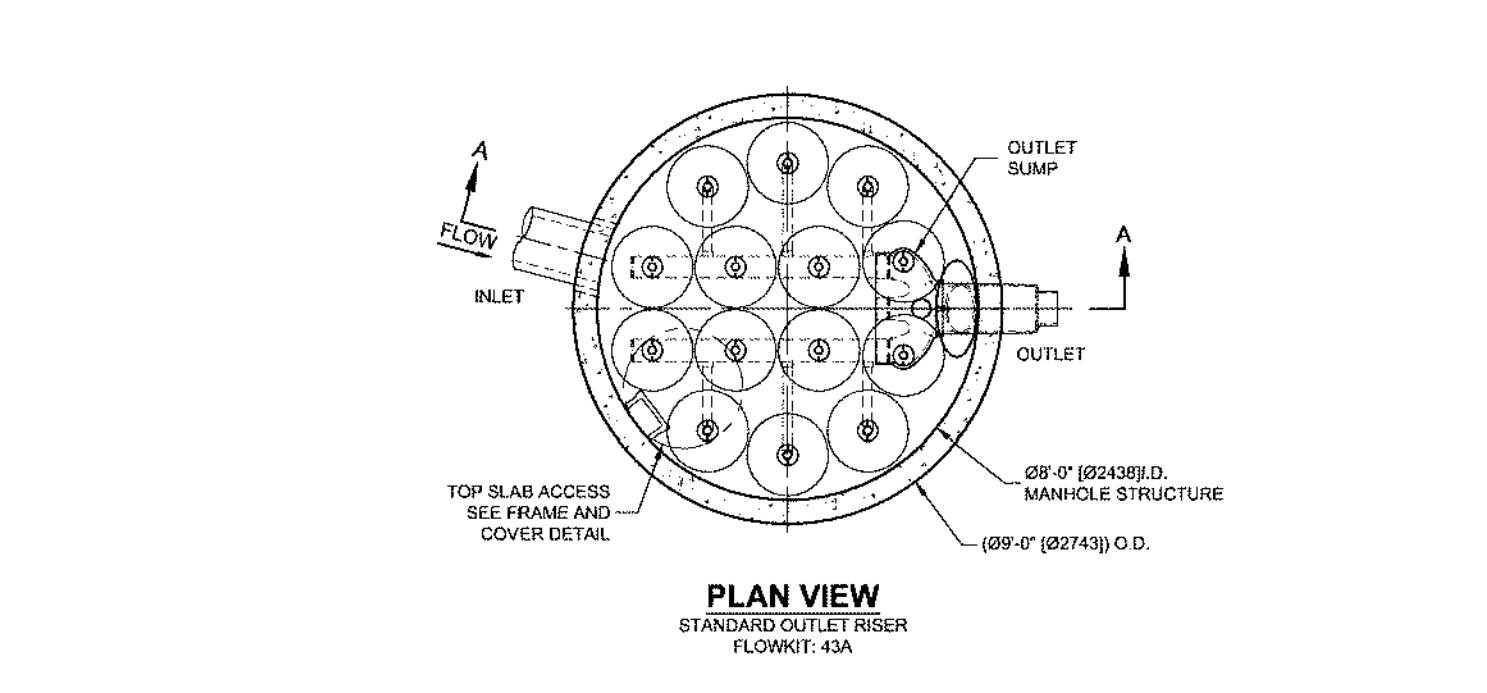
PIPE SPAN INCHES	AXLE LOADS (kips)			
	18-50	50-75	75-110	110-150
12-42	2.0	2.5	3.0	3.0
48-72	3.0	3.0	3.5	4.0
78-120	3.0	3.5	4.0	4.0
126-144	3.5	4.0	4.5	4.5



REINFORCING TABLE

Ø CMP RISER	A	Ø B	REINFORCING	**BEARING PRESSURE (PSF)
24"	Ø 4"	26"	#5 @ 12" OC EW	2,410
	Ø 4"	26"	#5 @ 12" OC EW	1,780
30"	Ø 4.5"	32"	#5 @ 12" OC EW	2,120
	Ø 4.5"	32"	#5 @ 12" OC EW	1,530
36"	Ø 5"	38"	#5 @ 10" OC EW	1,860
	Ø 5"	38"	#5 @ 10" OC EW	1,350
42"	Ø 5.5"	44"	#5 @ 10" OC EW	1,720
	Ø 5.5"	44"	#5 @ 9" OC EW	1,210
48"	Ø 6"	50"	#5 @ 8" OC EW	1,600
	Ø 6"	50"	#5 @ 8" OC EW	1,100

\*\* ASSUMED SOIL BEARING CAPACITY



CONSTRUCTION LOADING DIAGRAM

SCALE: N.T.S.

TEMPORARY COVER FOR CONSTRUCTION LOADS

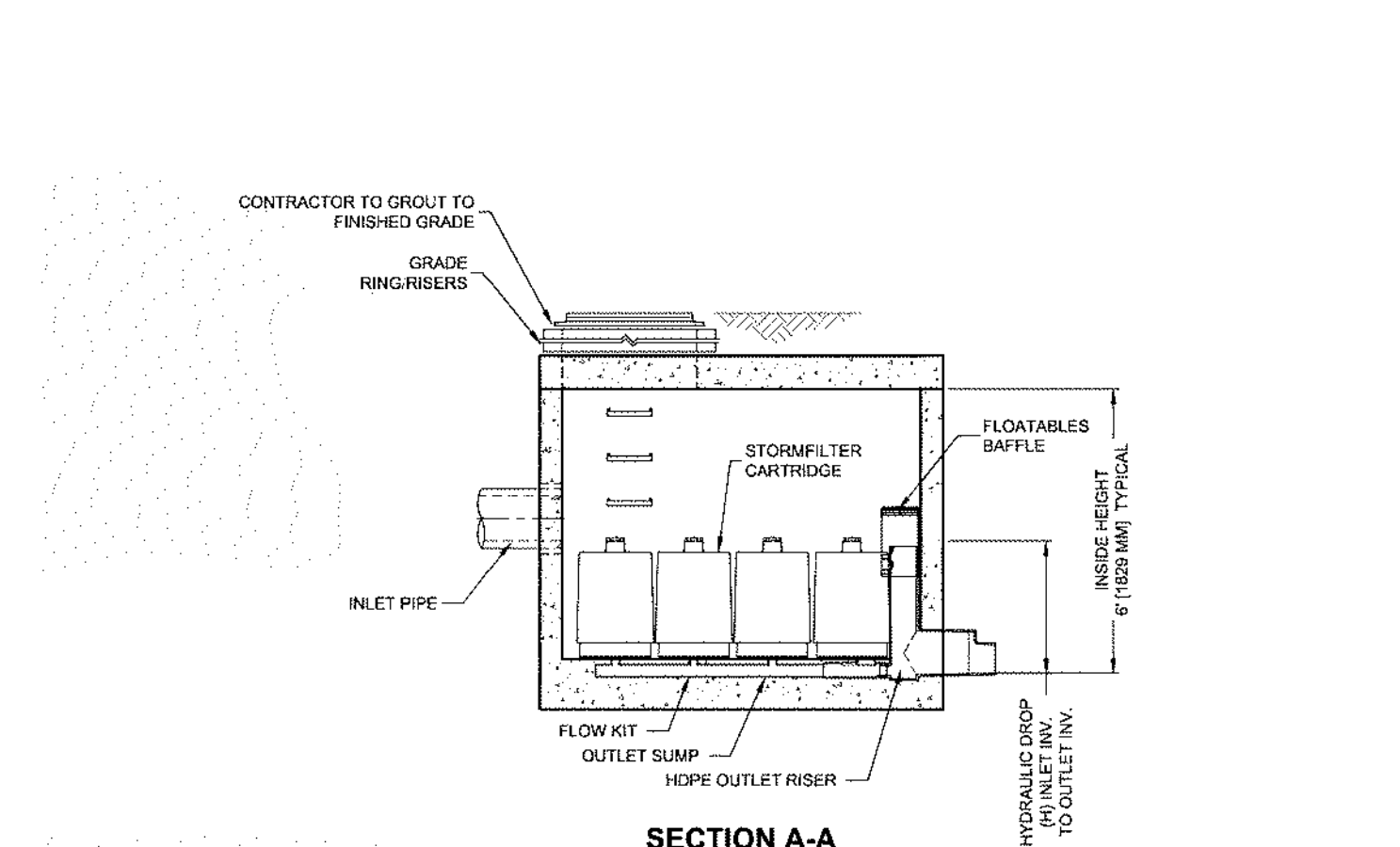
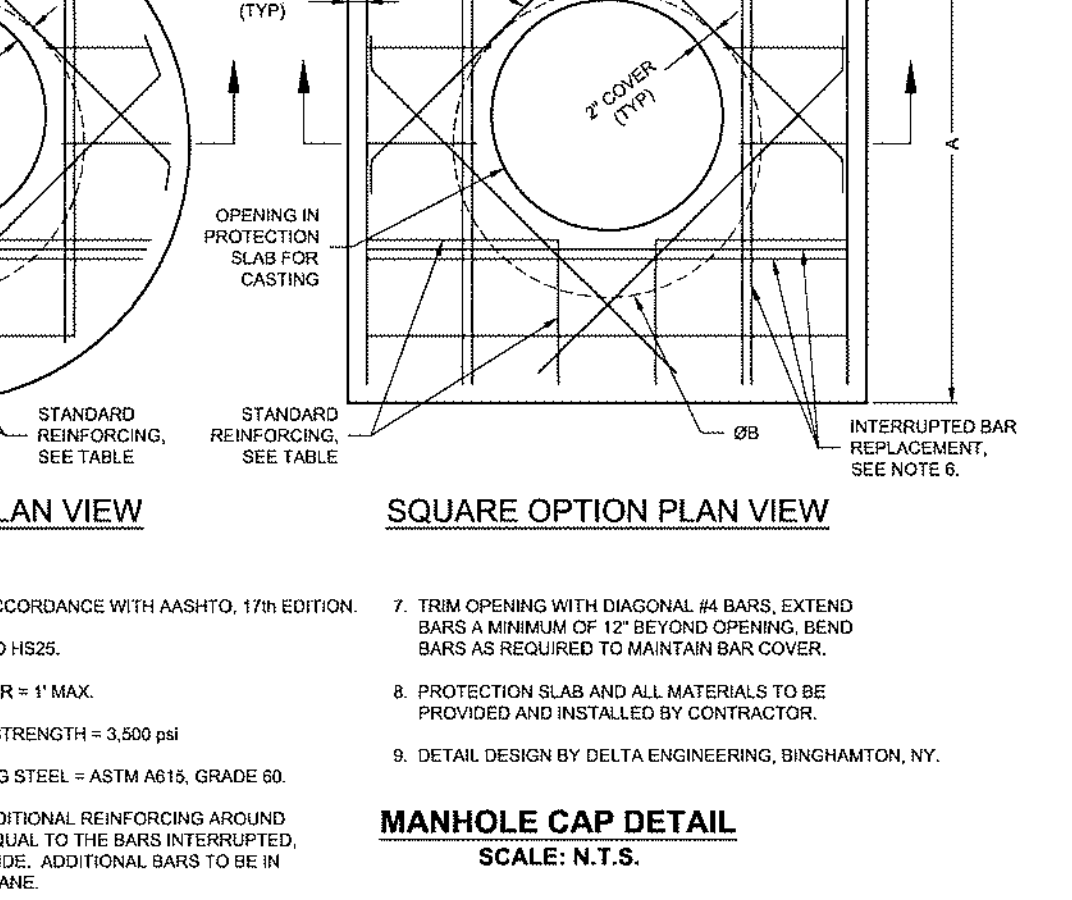
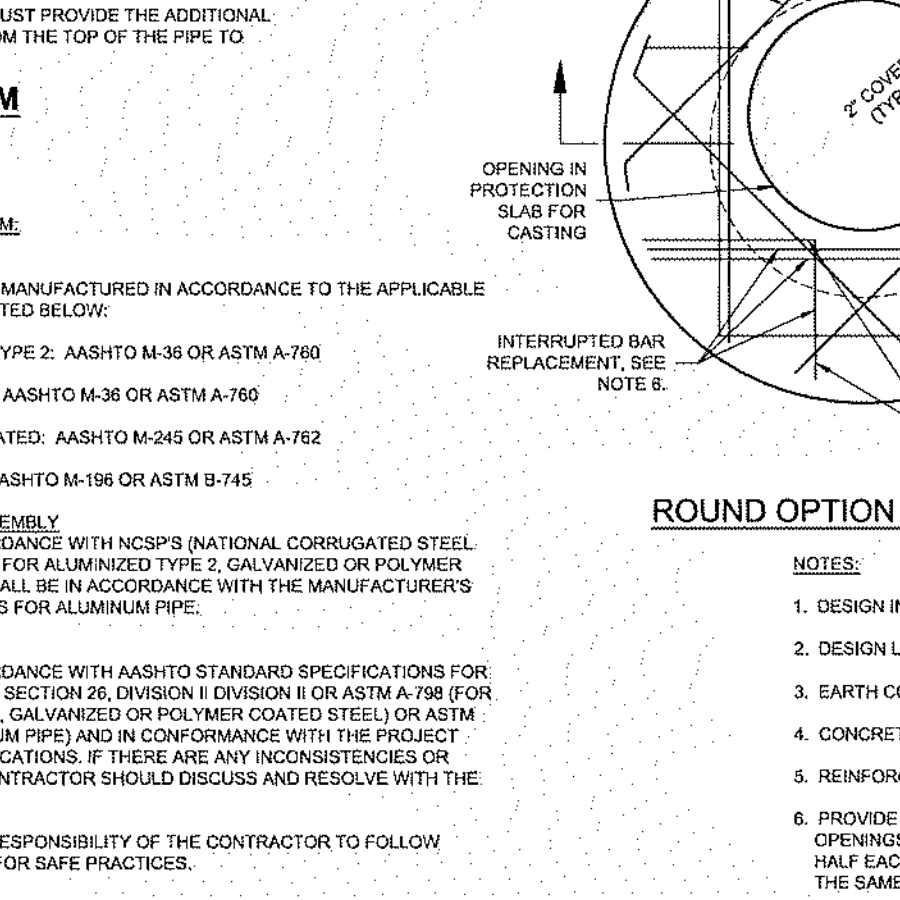
HEIGHT OF COVER SHALL MEET THE MINIMUM REQUIREMENTS SHOWN IN THE TABLE BELOW. THE USE OF HEAVY CONSTRUCTION EQUIPMENT NECESSITATES GREATER PROTECTION FOR THE PIPE THAN FINISHED GRADE COVER MEANS FOR NORMAL HIGHWAY TRAFFIC.

CONSTRUCTION LOADING DIAGRAM

SCALE: N.T.S.

TEMPORARY COVER FOR CONSTRUCTION LOADS

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CONSTRUCTION LOADING DIAGRAM

SCALE: N.T.S.

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CONTECH CMP DETENTION SYSTEMS

CONTECH DYODS DRAWING

DYODS - 12323-1-0

PROJECT NAME: Christ Community Church Chapel Hill, NC

DESCRIPTION: WQV + MAIN DETENTION

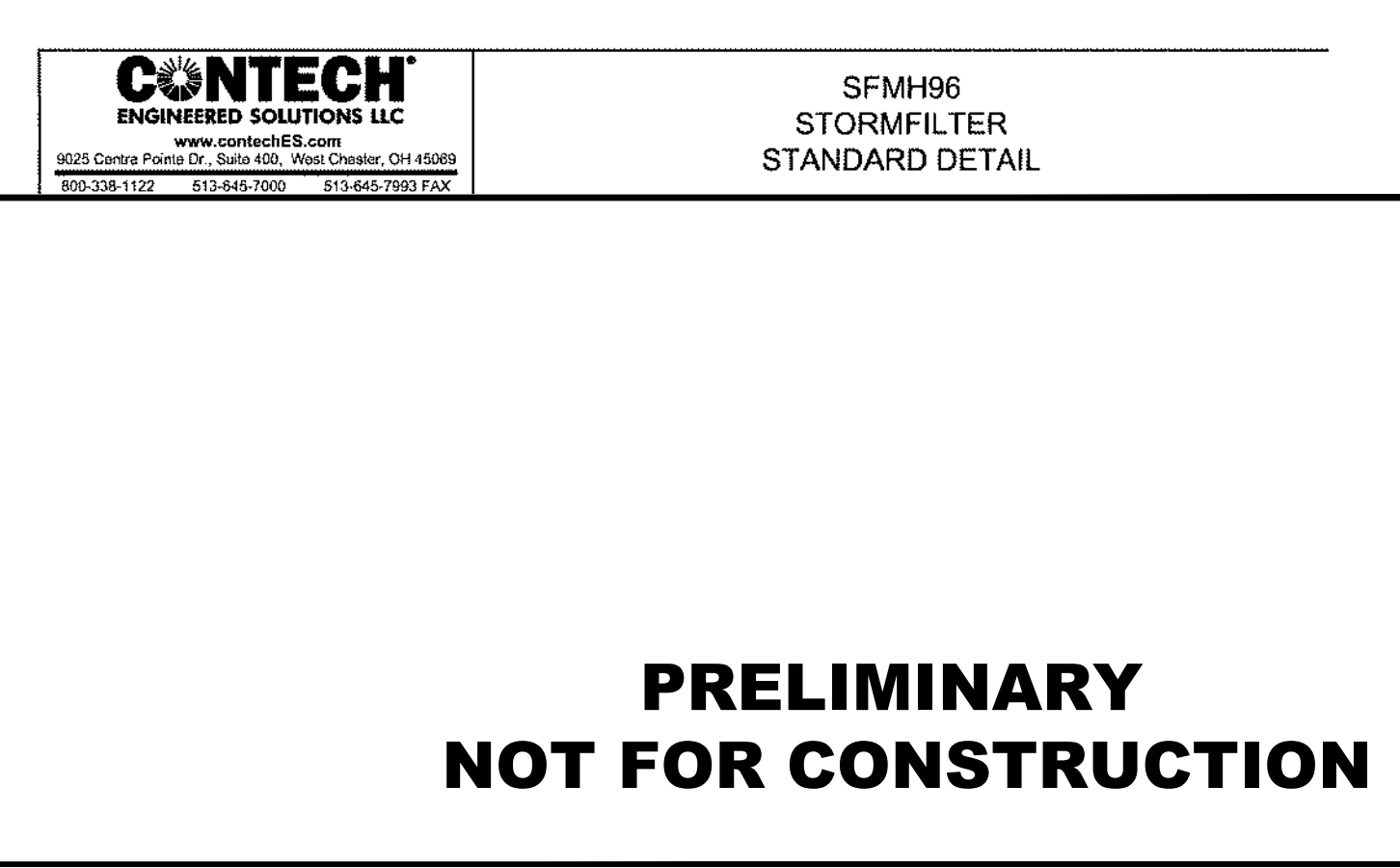
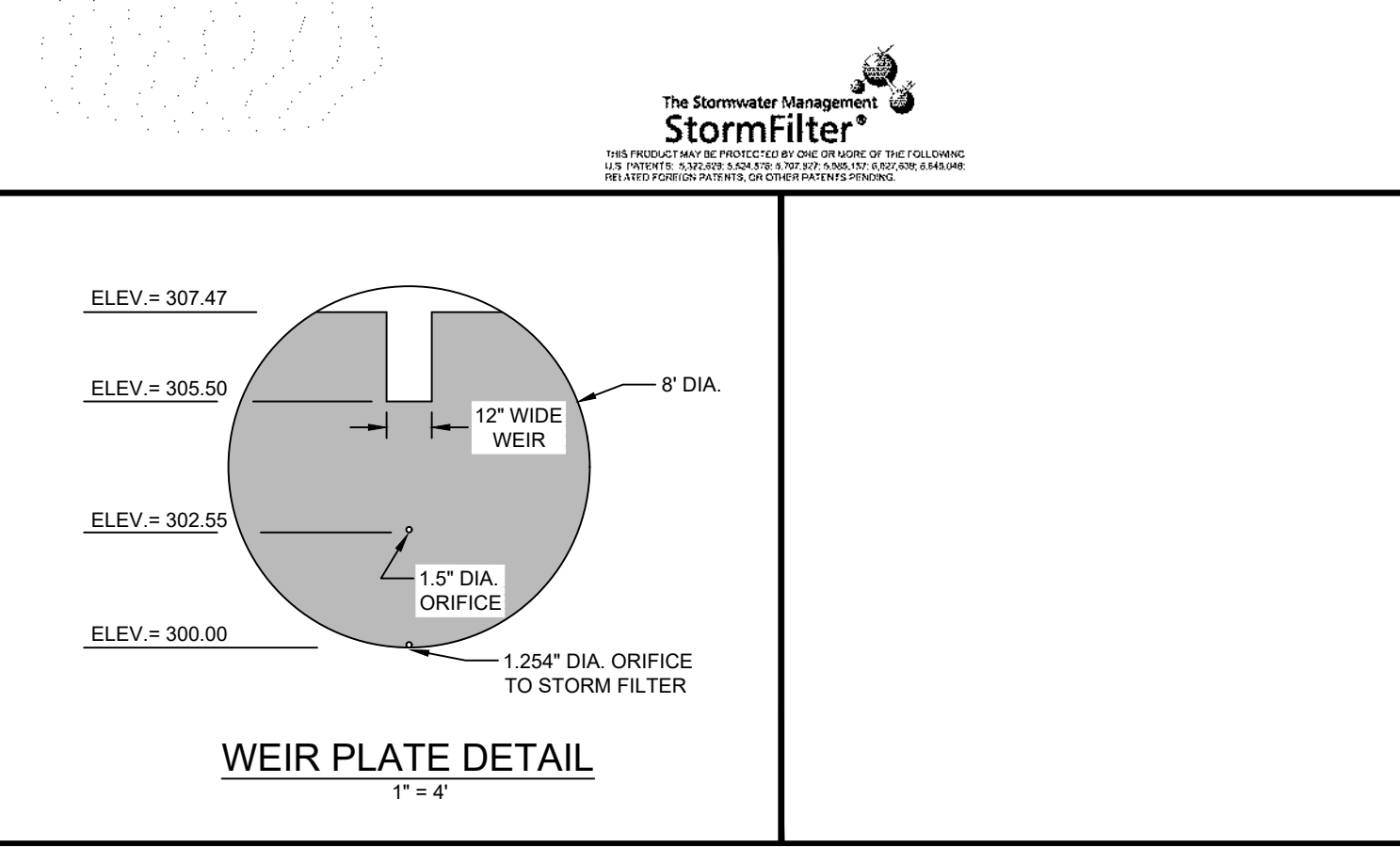
DATE: 8/23/2019

DESIGNED BY: DYODS

CHECKED BY: DYODS

DATE: 8/23/2019

SCALE: D3



**CHRIST COMMUNITY CHURCH**

141 ERWIN ROAD, CHAPEL HILL, N.C. 27514  
PHONE: 919-989-9116 AND 919-989-49-0235

**APPLICANT: CHRIST COMMUNITY CHURCH**  
1526 E FRANKLIN STREET, SUITE 201  
CHAPEL HILL, N.C. 27514

**STORMWATER FILTER DETAILS**

PHILIP POST ENGINEERING FIRM, L347

Philip N. Post, PE, PLS  
919 818-7862  
philip.n.post@gmail.com  
PO Box 4932  
Chapel Hill, NC 27515

#	DATE	NO.	REVISIONS
1	11-17-2019	1	SUBMITTAL #1 COMMENTS
2	11-13-2019	2	QWASA 11/13/2019 COMMENTS
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5	2-9-2020	5	TOWN COMMENTS
6	2/26/2020	6	NCCOT AND TOWN COMMENTS

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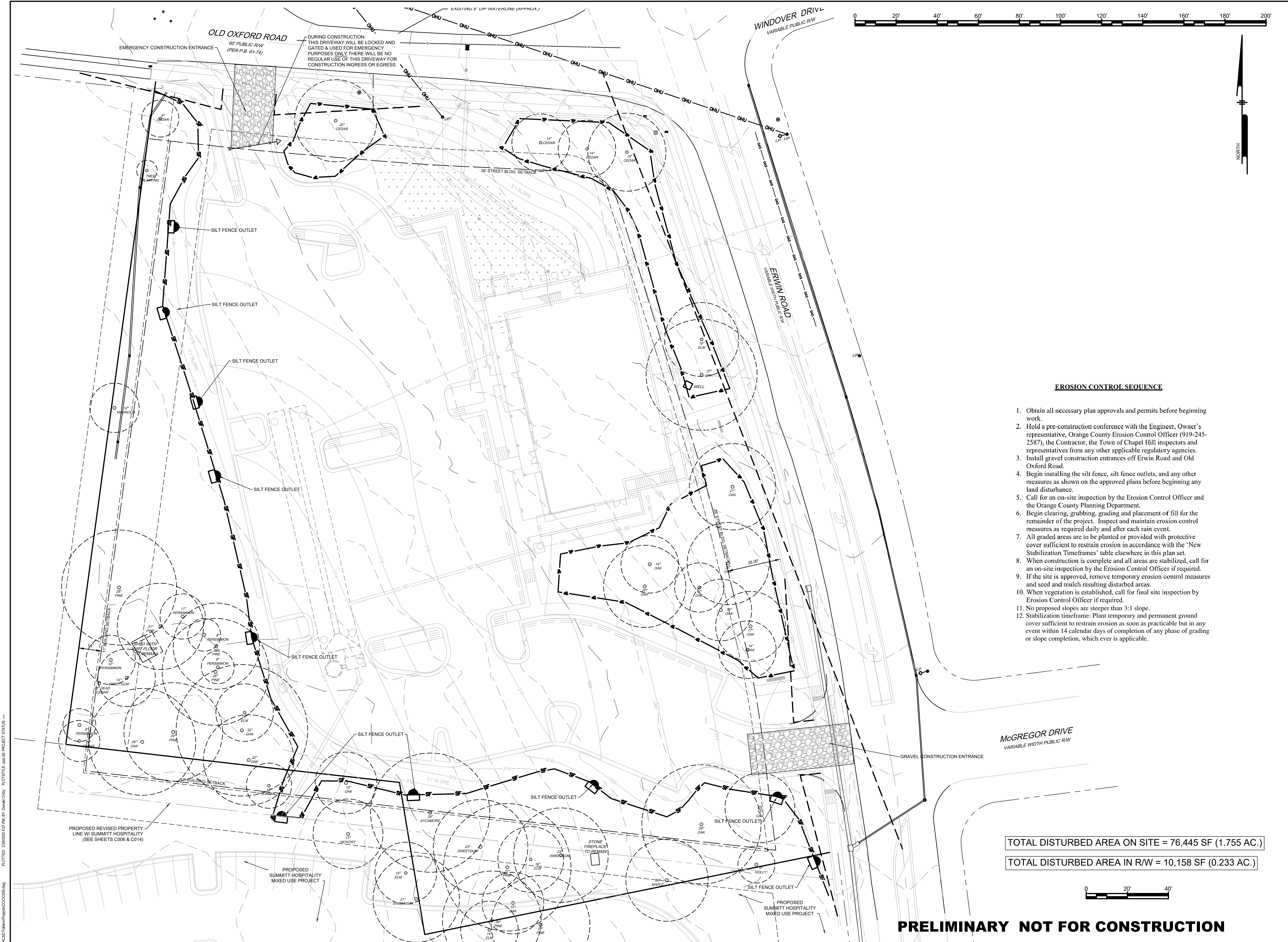
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DATE: 8/28/2019  
DRAWING SCALE: -  
DRAWN BY: DC  
APPROVED BY: PP

**C008**

SHEET 9 OF 16

**PRELIMINARY NOT FOR CONSTRUCTION**





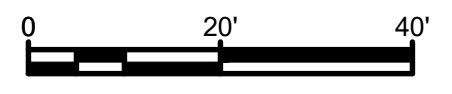
**EROSION CONTROL SEQUENCE**

1. Obtain all necessary plan approvals and permits before beginning work.
2. Hold a pre-construction conference with the Engineer, Owner's representative, Orange County Erosion Control Officer (919-245-2587), the Contractor, the Town of Chapel Hill inspectors and representatives from any other applicable regulatory agencies.
3. Install gravel construction entrances off Erwin Road and Old Oxford Road.
4. Begin installing the silt fence, silt fence outlets, and any other measures as shown on the approved plans before beginning any land disturbance.
5. Call for an on-site inspection by the Erosion Control Officer and the Orange County Planning Department.
6. Begin clearing, grubbing, grading and placement of fill for the remainder of the project. Inspect and maintain erosion control measures as required daily and after each rain event.
7. All graded areas are to be planted or provided with protective cover sufficient to restrain erosion in accordance with the "New Stabilization Timeframes" table elsewhere in this plan set.
8. When construction is complete and all areas are stabilized, call for an on-site inspection by the Erosion Control Officer if required.
9. If the site is approved, remove temporary erosion control measures and seed and mulch resulting disturbed areas.
10. When vegetation is established, call for final site inspection by Erosion Control Officer if required.
11. No proposed slopes are steeper than 3:1 slope.
12. Stabilization timeframe: Plant temporary and permanent ground cover sufficient to restrain erosion as soon as practicable but in any event within 14 calendar days of completion of any phase of grading or slope completion, which ever is applicable.

McGREGOR DRIVE  
VARIABLE WIDTH PUBLIC R/W

TOTAL DISTURBED AREA ON SITE = 76,445 SF (1.755 AC.)

TOTAL DISTURBED AREA IN R/W = 10,158 SF (0.233 AC.)



**PRELIMINARY NOT FOR CONSTRUCTION**

ALL DIMENSIONS MUST BE VERIFIED BY CONTRACTOR AND OWNER MUST BE NOTIFIED OF ANY DISCREPANCIES BEFORE PROCEEDING WITH WORK

**CHRIST COMMUNITY CHURCH**  
141 ERWIN ROAD, CHAPEL HILL, N.C. 27514  
PHONE 9799-39-9116 AND 9799-49-0235

**EROSION CONTROL PLAN**  
APPLICANT:  
**CHRIST COMMUNITY CHURCH**  
1526 E. FRANKLIN STREET, SUITE 201  
CHAPEL HILL, N.C. 27514

#	DATE	NO.	REVISIONS	BY
1	11-17-2019	1	SUBMITTAL #1 COMMENTS	DC
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4	1-27-2020	4	PROPERTY LINE SWAP	DC
5	2-9-2020	5	TOWN COMMENTS	DC
6	2/26/2020	6	NCDOT AND TOWN COMMENTS	DC

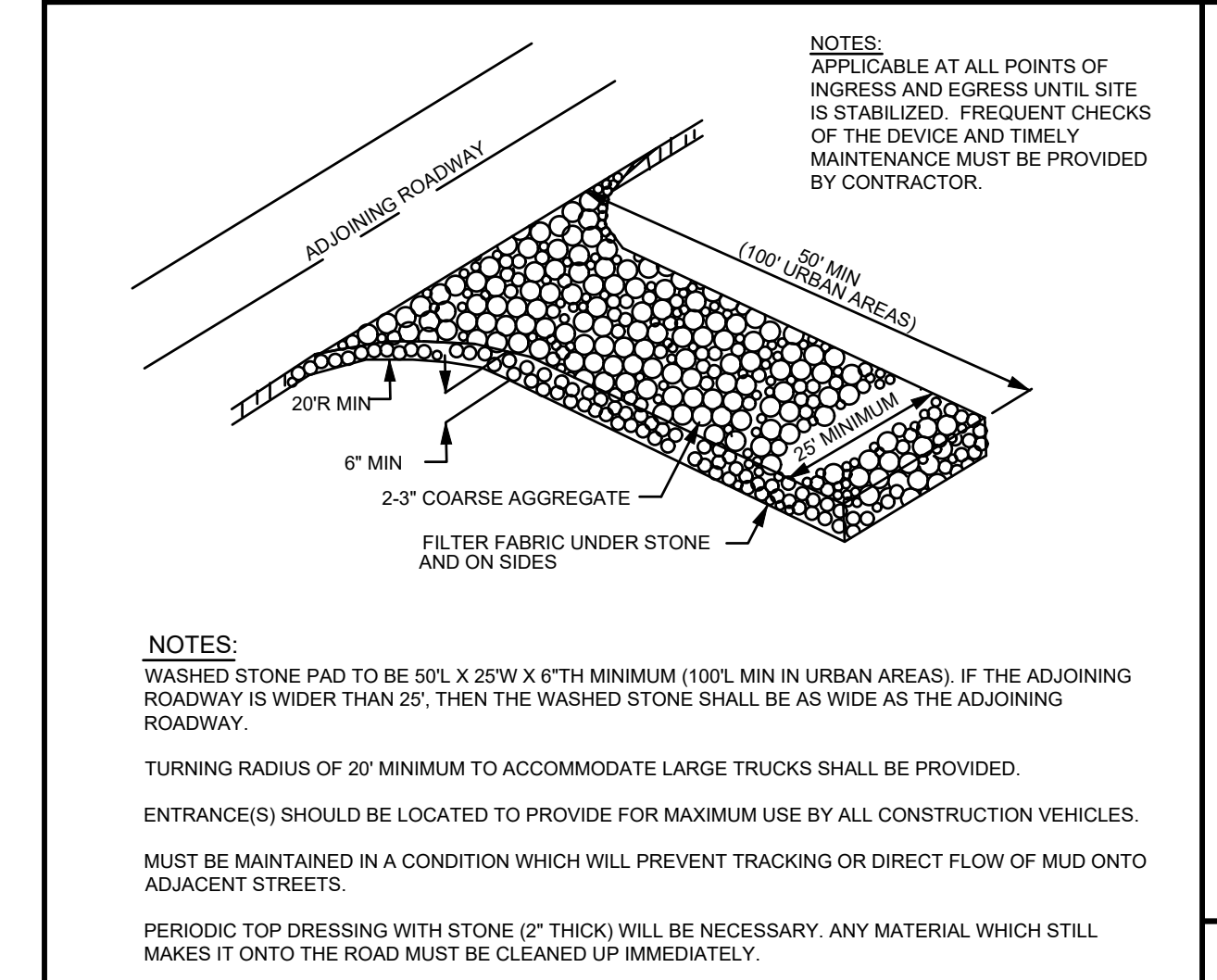
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PROJECT	401801
DATE	8/28/2019
DRAWING SCALE	1" = 20'
DRAWN BY	DC
APPROVED BY	PNP

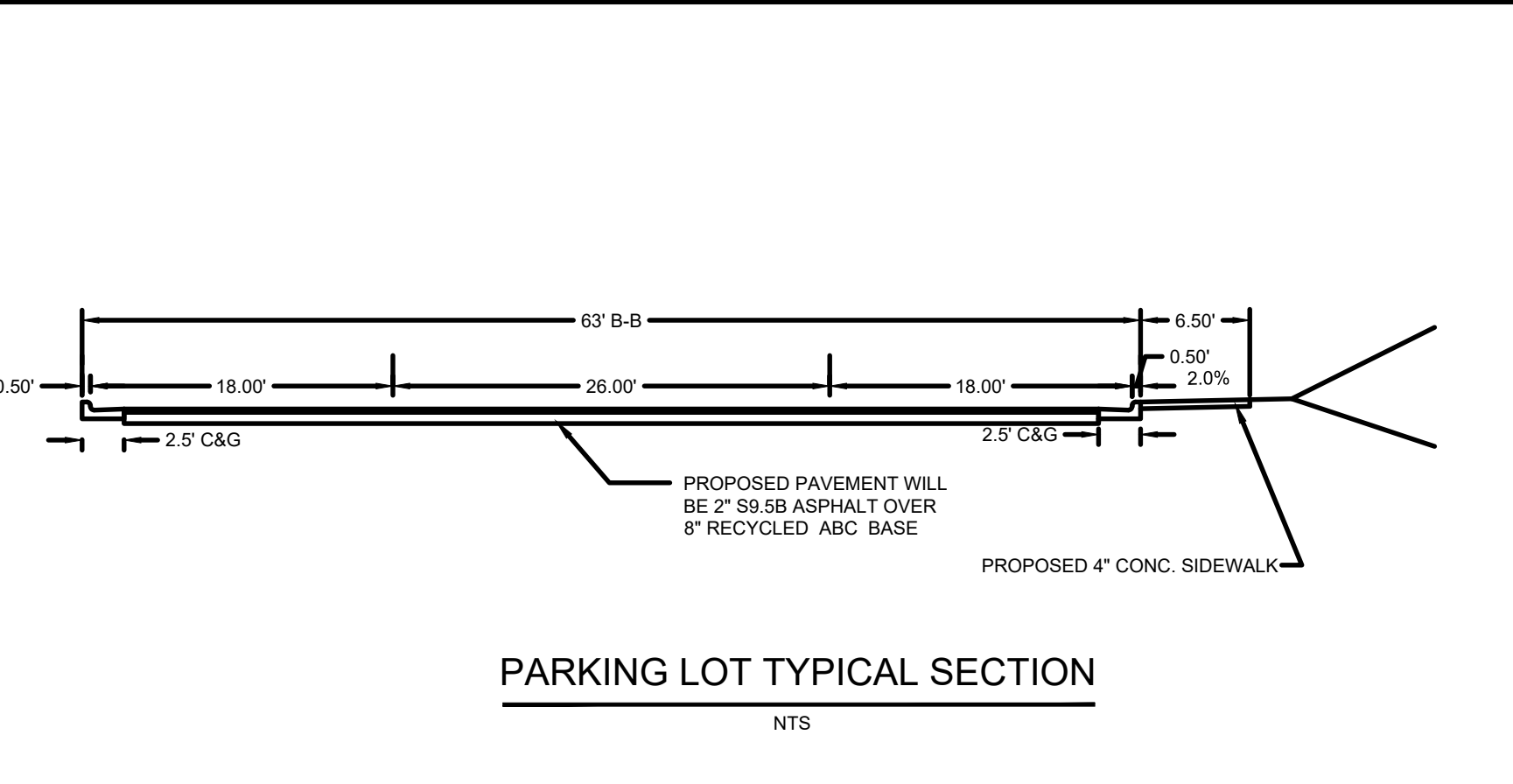
**C009**

**PHILIP POST ENGINEERING**  
FIRM: C-347  
Philip N. Post, PE, PLS  
(919) 818-7862  
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PO Box 4912  
Chapel Hill, NC 27515

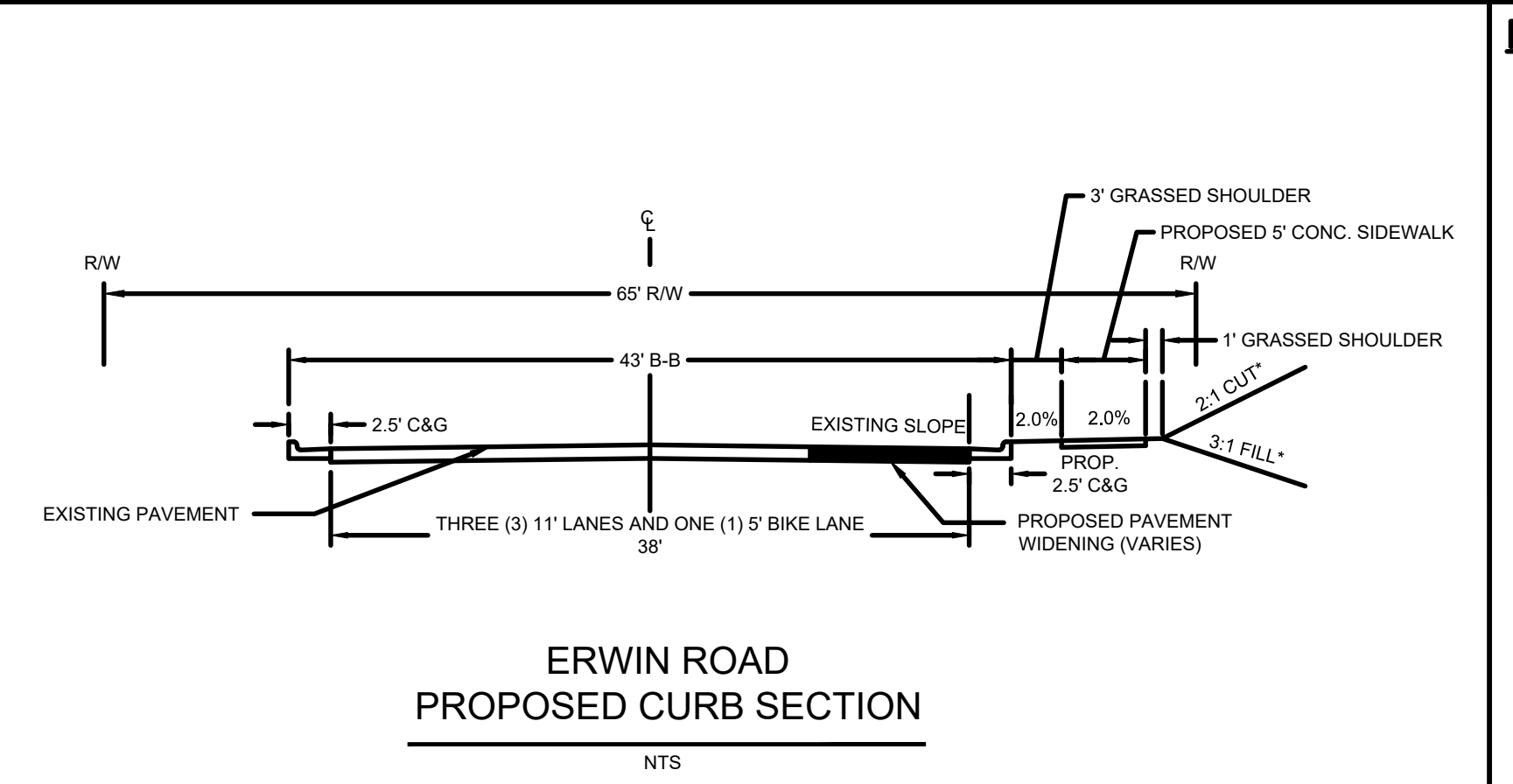
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**TEMPORARY GRAVEL CONSTRUCTION ENTRANCE / EXIT**  
NTS



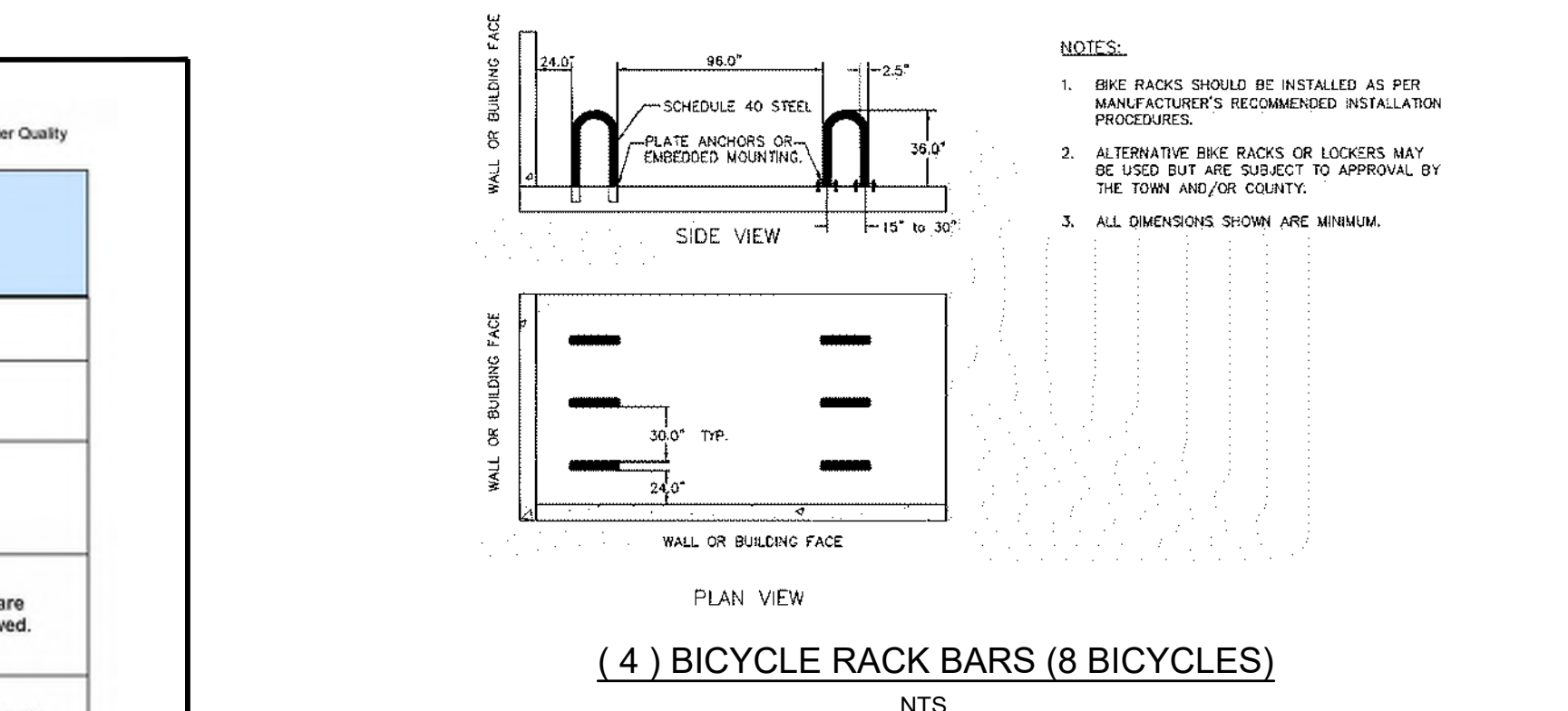
**PARKING LOT TYPICAL SECTION**  
NTS



**ERWIN ROAD PROPOSED CURB SECTION**  
NTS



**(4) BICYCLE RACK BARS (8 BICYCLES)**  
NTS

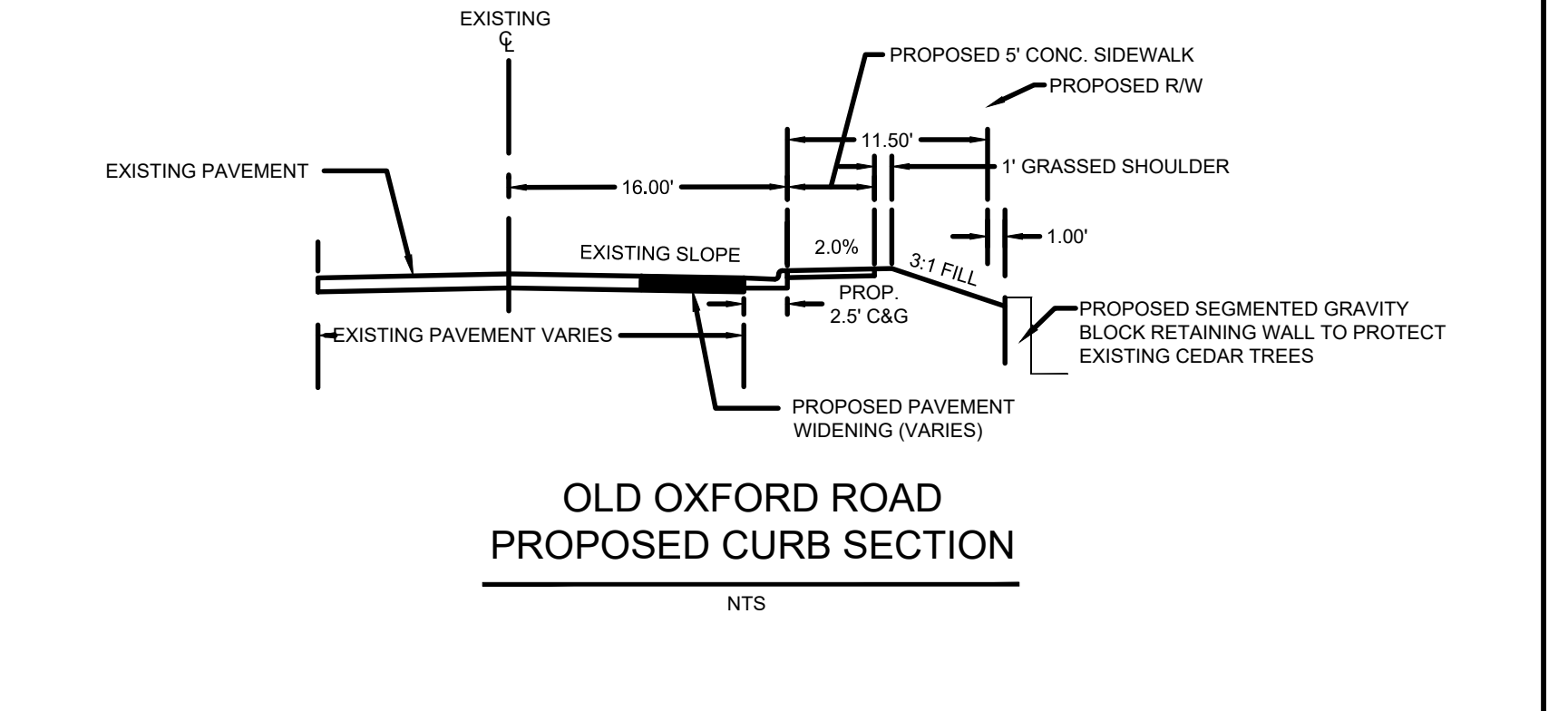


**SILT FENCE**  
NTS

NPDES Stormwater Discharge Permit for Construction Activities (NCGI)

NEW STABILIZATION TIMEFRAMES  
(Effective Aug. 3, 2011)

SITE AREA DESCRIPTION	STABILIZATION	TIMEFRAME EXCEPTIONS
Perimeter dikes, swales, ditches, slopes	7 days	None
High Quality Water (HQW) Zones	7 days	None
Slopes steeper than 3:1	7 days	If slopes are 10' or less in length and are not steeper than 2:1, 14 days are allowed.
Slopes 3:1 or flatter	14 days	7 days for slopes greater than 50' in length.
All other areas with slopes flatter than 4:1	14 days	None, except for perimeters and HQW Zones.



**OLD OXFORD ROAD PROPOSED CURB SECTION**  
NTS

**PERMANENT SEEDING IN NORTH CAROLINA (TABLE 6.11)**

SEEDING MIXTURE SPECIES	RATE (LB/ACRE)
TALL FESCUE	250
SERICEA LESPEDEZA	20
KOBE LESPEDEZA	10
	50

**SEEDING NOTES:**  
1. AFTER AUGUST 15 USE UNSCARIFIED SERICEA SEED.  
2. WHERE PERIODIC MOWING IS PLANNED OR A NEAR APPEARANCE IS DESIRED, OMIT SERICEA AND INCREASE KOBE LESPEDEZA TO 40 LB/ACRE.  
3. TO EXTEND SPRING SEEDING DATES INTO JUNE, ADD 15LB/ACRE HULLED BERMOUDAGRASS. HOWEVER, AFTER MID-APRIL IT IS PREFERABLE TO SEED TEMPORARY COVER.

**NURSE PLANTS:**  
BETWEEN MAY 1 AND AUGUST 15, ADD 10 LB/ACRE GERMAN MILLET OR 15LB/ACRE SUDAGRASS. PRIOR TO MAY 1 OR AFTER AUGUST 15 ADD 40 LB/ACRE RYE (GRAIN).

**SEEDING DATES:**  
FALL: AUGUST 25 - SEPTEMBER 15      AUGUST 20 - OCTOBER 25  
LATE WINTER: FEBRUARY 15 - MARCH 21      FEBRUARY 1 - APRIL 15

**SOIL AMENDMENTS:**  
APPLY LIME AND FERTILIZER ACCORDING TO SOIL TESTS, OR APPLY 4,000 LB/ACRE GROUND AGRICULTURAL LIMESTONE AND 1,000 LB/ACRE 10-10-10 FERTILIZER.

**MULCH:**  
APPLY 4,000 LB/ACRE GRAIN STRAW OR EQUIVALENT COVER OF ANOTHER SUITABLE MULCH. ANCHOR STRAW BY TACKING WITH ASPHALT, NETTING OR ROVING OR BY CRIMPING WITH A MULCH ANCHORING TOOL. A DISK WITH BLADES SET NEARLY STRAIGHT CAN BE USED AS A MULCH ANCHORING TOOL.

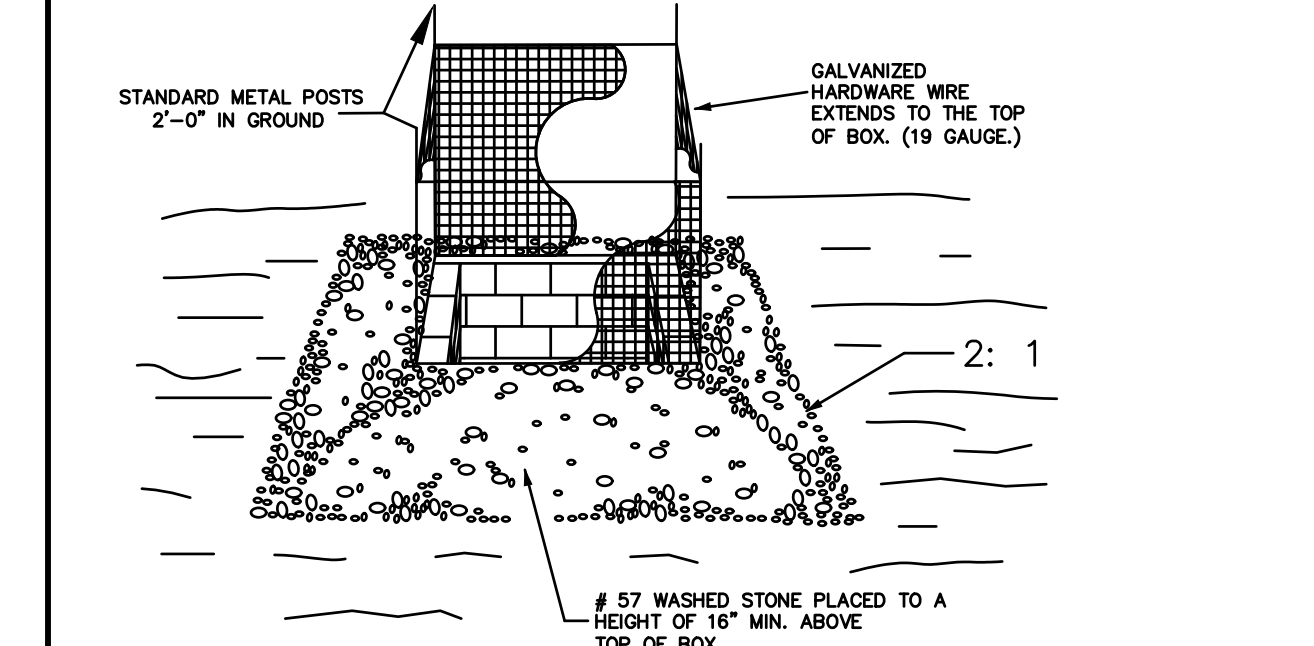
**MAINTENANCE:**  
REFERTILIZE IN THE SECOND YEAR UNLESS GROWTH IS FULLY ADEQUATE. MAY BE MOWED ONCE OR TWICE A YEAR, BUT MOWING IS NOT NECESSARY. RESEED, FERTILIZE AND MULCH DAMAGED AREAS IMMEDIATELY.

**SEEDING SCHEDULE**

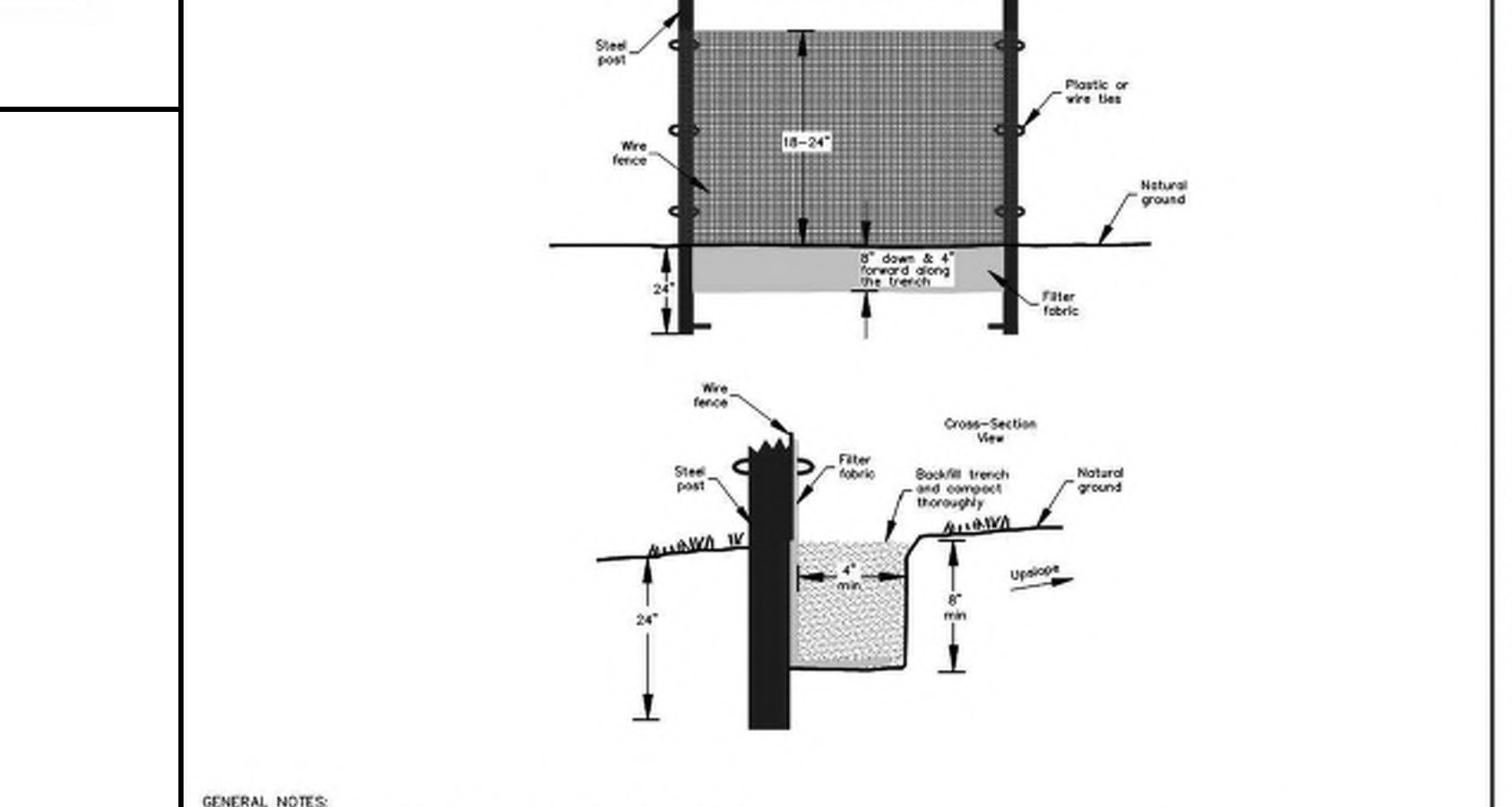
- CHISEL COMPACTED AREAS AND SPREAD TOPSOIL 3 INCHES DEEP OVER ADVERSE SOIL CONDITIONS, IF AVAILABLE.
- RIP THE ENTIRE AREA TO 6 INCHES DEPTH.
- REMOVE ALL LOOSE ROCK, ROOTS, AND OTHER OBSTRUCTIONS LEAVING SURFACE REASONABLY SMOOTH AND UNIFORM.
- APPLY AGRICULTURAL LIME, FERTILIZER, AND UNIFORMLY MIX WITH SOIL (SEE BELOW).
- SEED ON A FRESHLY PREPARED SEEDBED AND SEED LIGHTLY WITH SEEDING EQUIPMENT OR CULTIPACK.
- MULCH IMMEDIATELY AFTER SEEDING.
- INSPECT ALL SEEDED AREAS AND MAKE NECESSARY RESEEDINGS WITHIN THE PLANTING SEASON, IF POSSIBLE. STAND SHOULD BE OVER 60% DAMAGED, REESTABLISH WITH ORIGINAL LIME, FERTILIZER AND SEEDING RATES.
- CONSULT CONSERVATION INSPECTOR ON MAINTENANCE AND FERTILIZATION AFTER PERMANENT COVER IS STABILIZED.

**SEEDBED PREPARATION**

**MAINTENANCE:**  
NEW SEEDLINGS SHOULD BE INSPECTED FREQUENTLY AND MAINTENANCE PERFORMED AS NEEDED. IF RILLS AND GULLIES DEVELOP, THEY MUST BE FILLED, RE-SEED, AND MULCHED AS SOON AS POSSIBLE. DIVERSIONS MAY BE NEEDED UNTIL NEW PLANTS TAKE HOLD. DAMAGE TO VEGETATION FROM DISEASE, INSECTS, TRAFFIC, ETC., CAN OCCUR AT ANY TIME. HERBICIDES AND REGULAR MOWING MAY BE NEEDED TO CONTROL WEEDS. DUST AND SPRAYS MAY BE NEEDED TO CONTROL INSECTS. WEEK OR DAMAGED SPOTS MUST BE RELIEME, FERTILIZED, MULCHED, AND RESEED AS PROMPTLY AS POSSIBLE.



**Inlet Protection**  
Not to scale



**SILT FENCE OUTLET**  
NOT TO SCALE

**TEMPORARY SEEDING IN NORTH CAROLINA**

SEEDING MIXTURE SPECIES	RATE (LB/ACRE)
RYE (GRAIN)	120
ANNUAL LESPEDEZA (KOB IN PIEDMONT AND COASTAL PLAIN, KOREAN IN MOUNTAINS)	50
GERMAN MILLET	40
OMIT ANNUAL LESPEDEZA WHEN DURATION OF TEMPORARY COVER IN THE PIEDMONT AND MOUNTAINS, A SMALL-STEMMED SUNDAGRASS	
RYE (GRAIN)	120
IS NOT TO EXTEND BEYOND JUNE. MAY BE SUBSTITUTED AT A RATE OF 50 LB/ACRE.	

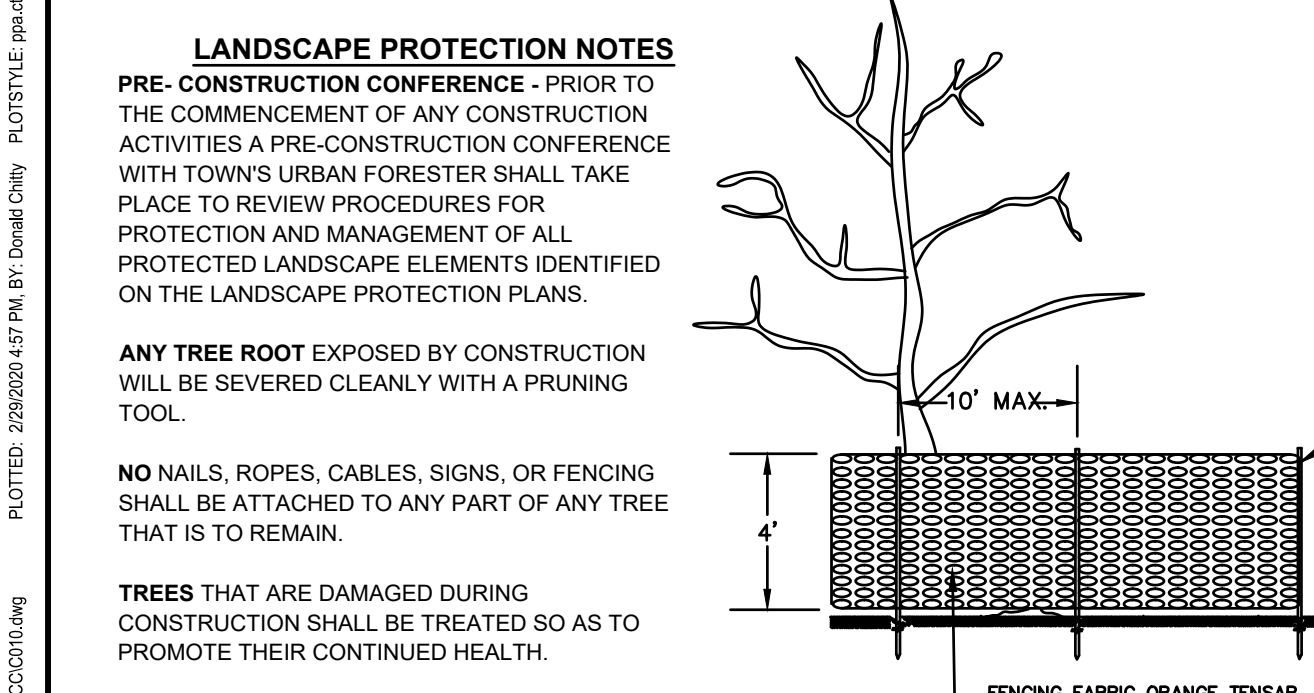
**SEEDING DATES:**

SEASON	RECOMMENDATIONS
LATE WINTER & EARLY SPRING	MOUNTAINS - ABOVE 2500 FT. FEB. 15 - MAY 15 PIEDMONT - JAN. 1 - AUG. 15 COASTAL PLAIN - DEC. 1 - APR. 15
SUMMER	MOUNTAINS - MAY 15 - AUG. 15 PIEDMONT - MAY 1 - AUG. 15 COASTAL PLAIN - APR. 15 - AUG. 15
FALL	MOUNTAINS - AUG. 15 - DEC. 15 COASTAL PLAIN AND PIEDMONT - AUG. 15 - DEC. 30

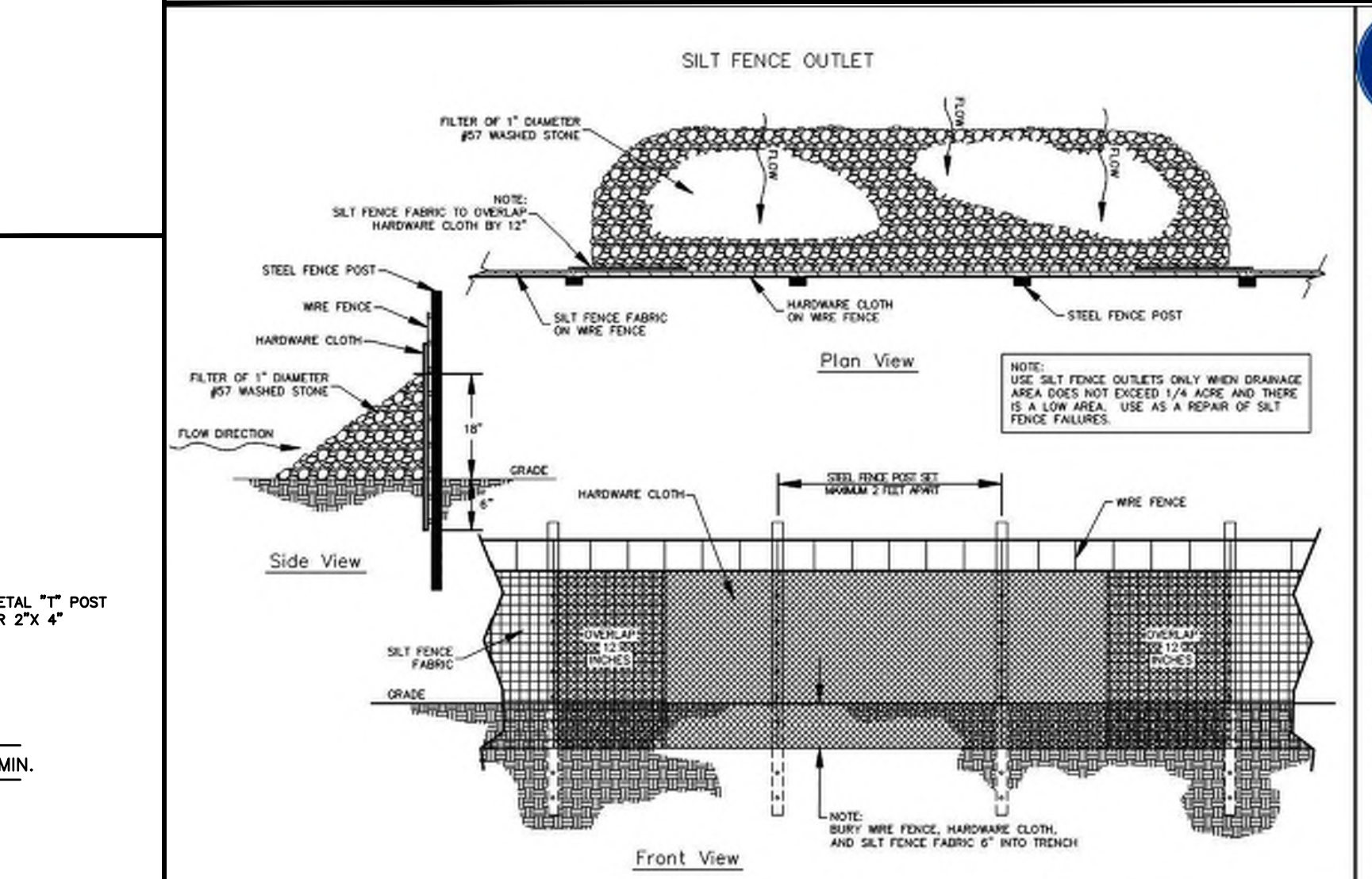
**SOIL AMENDMENTS:**  
FOLLOW RECOMMENDATIONS OF SOIL TESTS OR APPLY 2,000 LB/ACRE GROUND AGRICULTURAL LIMESTONE AND 750 LB/ACRE 10-10-10 FERTILIZER

**MULCH:**  
APPLY 4,000 LB/ACRE STRAW. ANCHOR STRAW BY TACKING WITH ASPHALT, NETTING OR A MULCH ANCHORING TOOL. A DISK WITH BLADES SET NEARLY STRAIGHT CAN BE USED AS A MULCH ANCHORING TOOL.

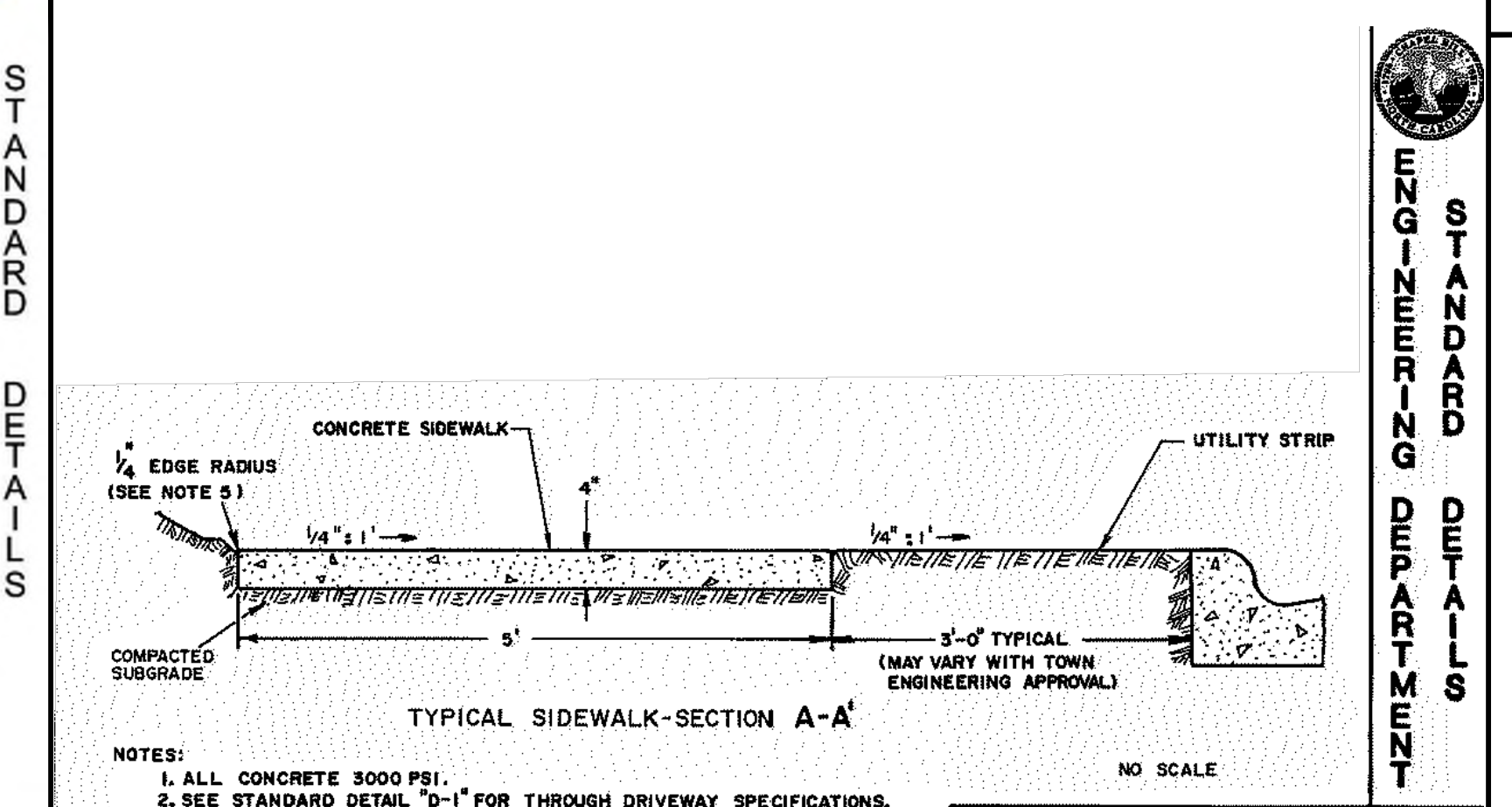
**MAINTENANCE:**  
REFERTILIZE IF GROWTH IS NOT FULLY ADEQUATE. RESEED, FERTILIZE AND MULCH IMMEDIATELY FOLLOWING EROSION OR OTHER DAMAGE.



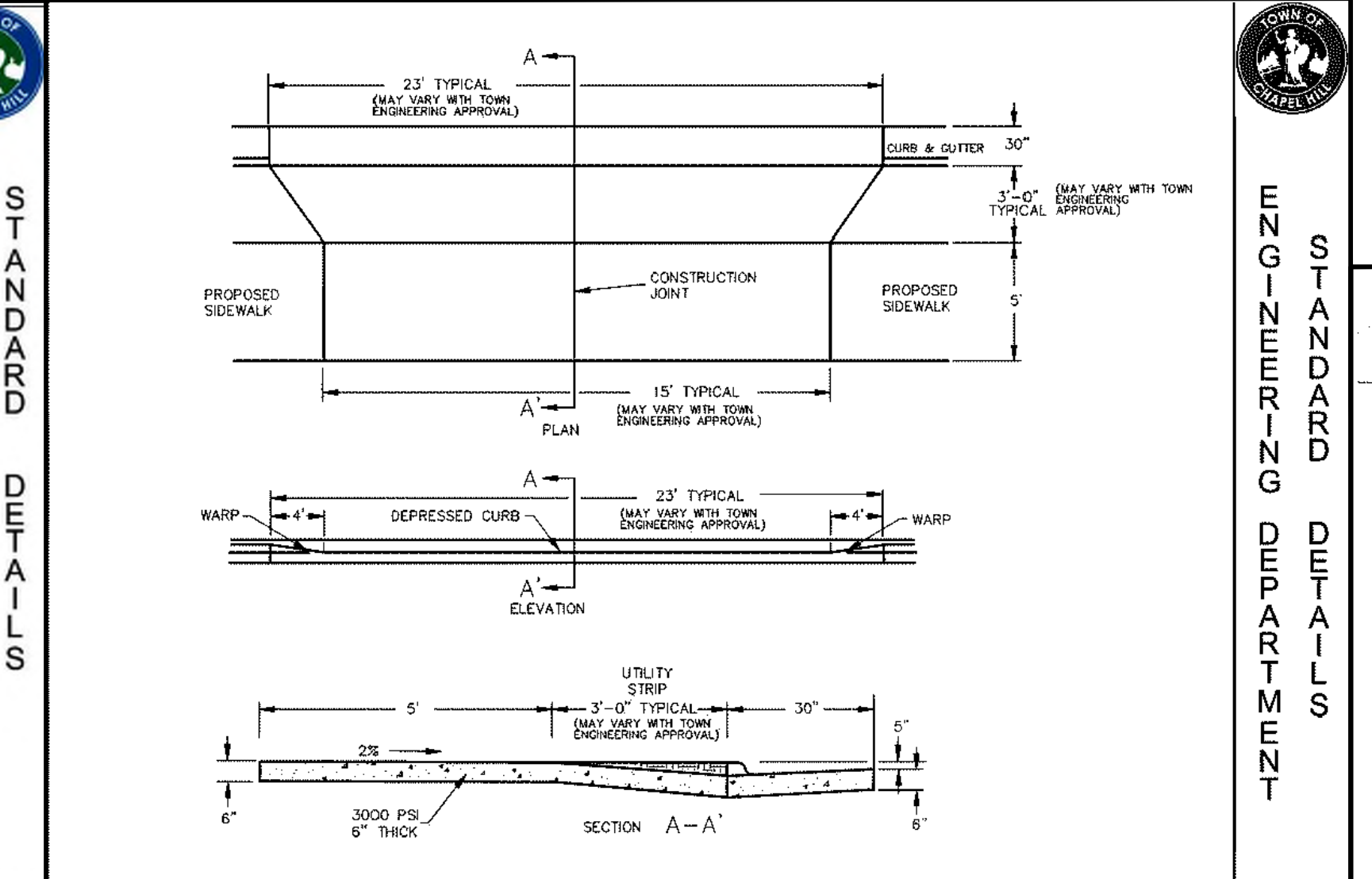
**Tree Protection Fence Detail**  
Not to scale



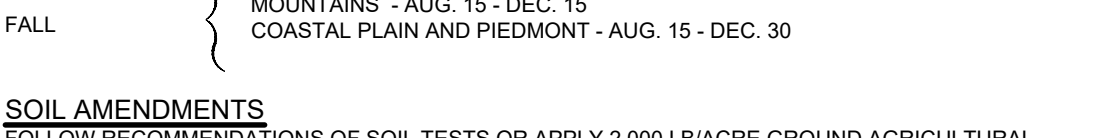
**SILT FENCE OUTLET**  
NOT TO SCALE



**TYPICAL SIDEWALK SECTION A-A'**  
NO SCALE



**FAN TYPE DRIVEWAY ENTRANCE**  
NOT TO SCALE



**CONCRETE WASHOUT PIT**

**NOTES:**

- INSTALL CONCRETE WASHOUT PIT AT LOCATIONS SHOWN ON PLANS.
- LINE PIT WITH IMPERVIOUS FABRIC OR POLYETHYLENE SHEET. ANCHOR FABRIC INTO GROUND CURB SIDE PIT AS SHOWN.
- MAXIMUM WATER AND SEDIMENT DEPTH IS 12". PIT MUST BE EXCAVATED AND RE-LINED WHEN DEPTH OF SEDIMENT REACHES 12" OR COMBINED WATER/SEDIMENT DEPTH EXCEEDS 12" FOLLOWING WASHOUT OF CONCRETE TRUCK.
- ALLOW WATER TO EVAPORATE COMPLETELY PRIOR TO EXCAVATING PIT.
- WASHOUT PIT MAY BE LOCATED NO CLOSER THAN 50' TO DRAINAGE INLETS OR SURFACE WATERS.

**CHRIST COMMUNITY CHURCH**  
141 ERWIN ROAD, CHAPEL HILL, N.C. 27514  
PHONE 9799-39-9116 AND 9799-46-0235

**CHRIST COMMUNITY CHURCH**  
1528 E. FRANKLIN STREET, SUITE 201  
CHAPEL HILL, N.C. 27514

**APPLICANT:** PHILIP POST ENGINEERING FIRM, C-347

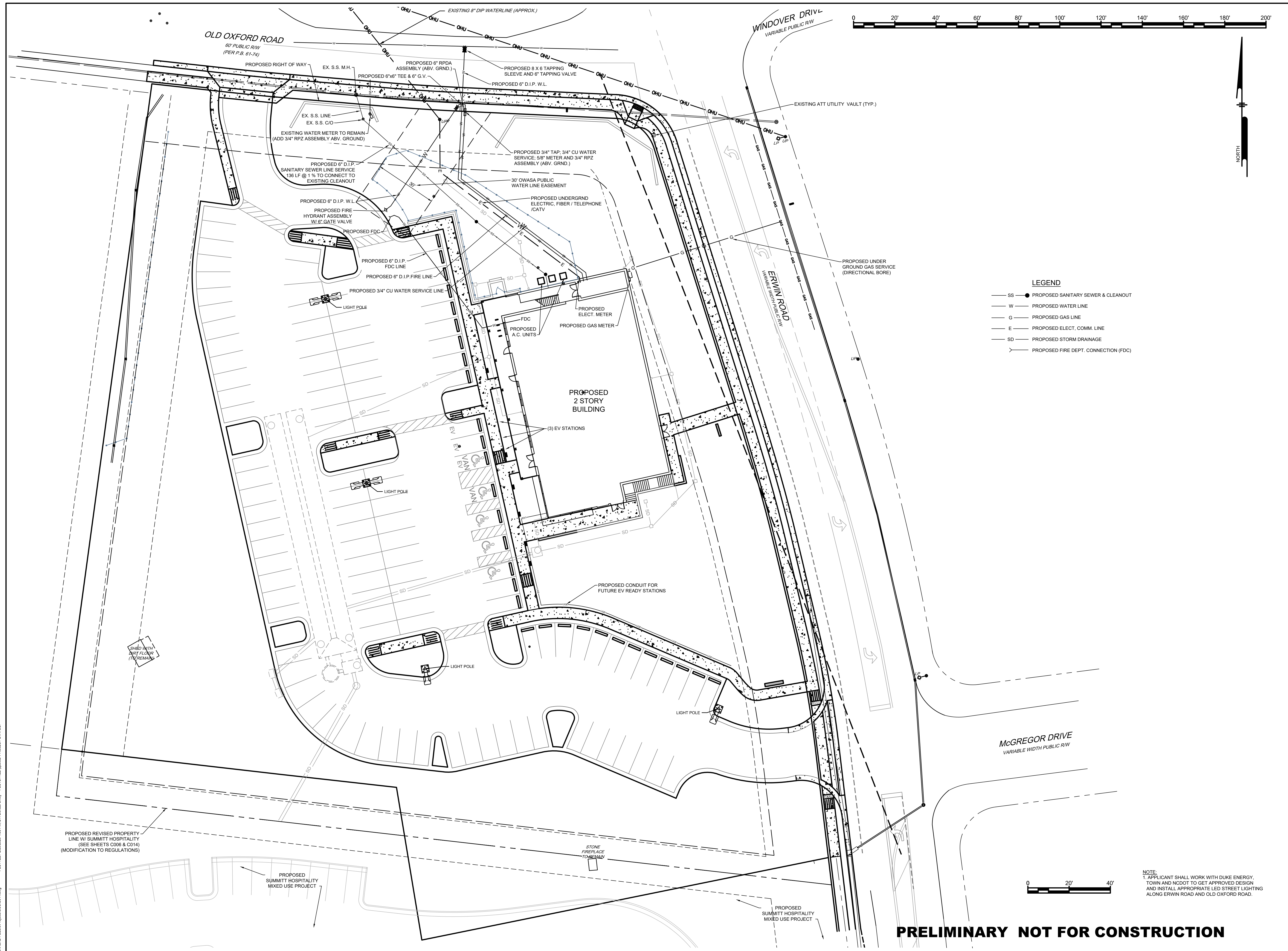
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philip.n.post@gmail.com  
PO Box 4932  
Chapel Hill, NC 27515

ALL DIMENSIONS MUST BE VERIFIED BY CONTRACTOR AND OWNER MUST BE NOTIFIED OF ANY DISCREPANCIES BEFORE PROCEEDING WITH WORK.

**REVISIONS**

NO.	DATE	BY	REVISIONS
1			
2			
3			
4			
5			
6			

**PROJECT** 401801  
**DATE** 8/28/2019  
**DRAWING SCALE** -  
**DRAWN BY** DC  
**APPROVED BY** PP



**PRELIMINARY NOT FOR CONSTRUCTION**

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**PHILIP POST ENGINEERING**  
FIRM: C-347

**CHRIST COMMUNITY CHURCH**  
141 ERWIN ROAD, CHAPEL HILL, N.C. 27514  
PH# 9799-39-9116 AND 9799-49-0235

**UTILITY PLAN & FIRE DEPT. FDC**

APPLICANT:  
**CHRIST COMMUNITY CHURCH**  
1528 E. FRANKLIN STREET, SUITE 201  
CHAPEL HILL, N.C. 27514

#	DATE	NO.	BY	REVISIONS
2/26/2020	6			NCDOT AND TOWN COMMENTS
2-9-2020	5			TOWN COMMENTS
1-27-2020	4			PROPERTY LINE SWAP
1-17-2020	3			SUBMITTAL #2 COMMENTS
12-27-2019	2			OWASA 11/13/2019 COMMENTS
11-17-2019	1			SUBMITTAL #1 COMMENTS

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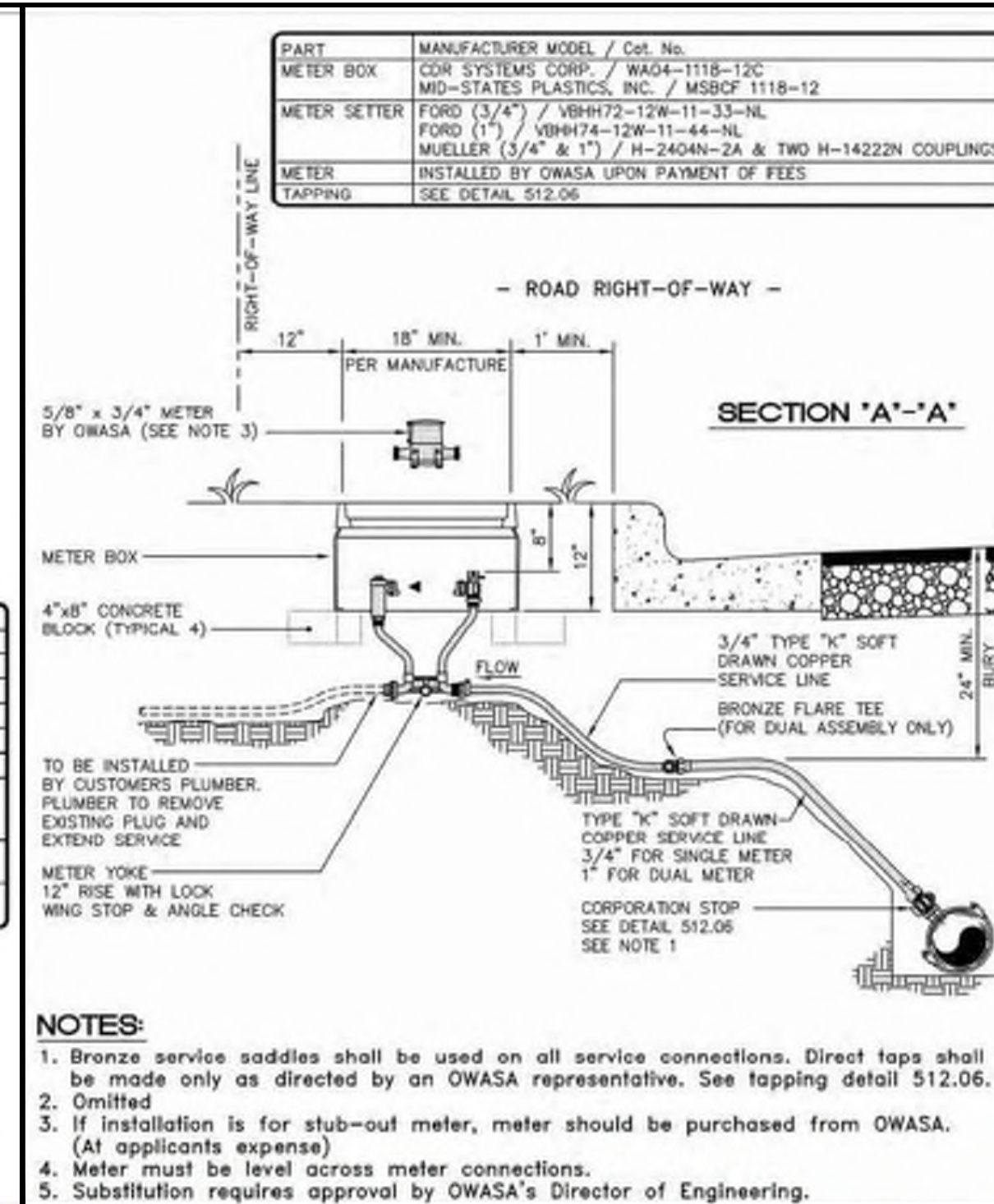
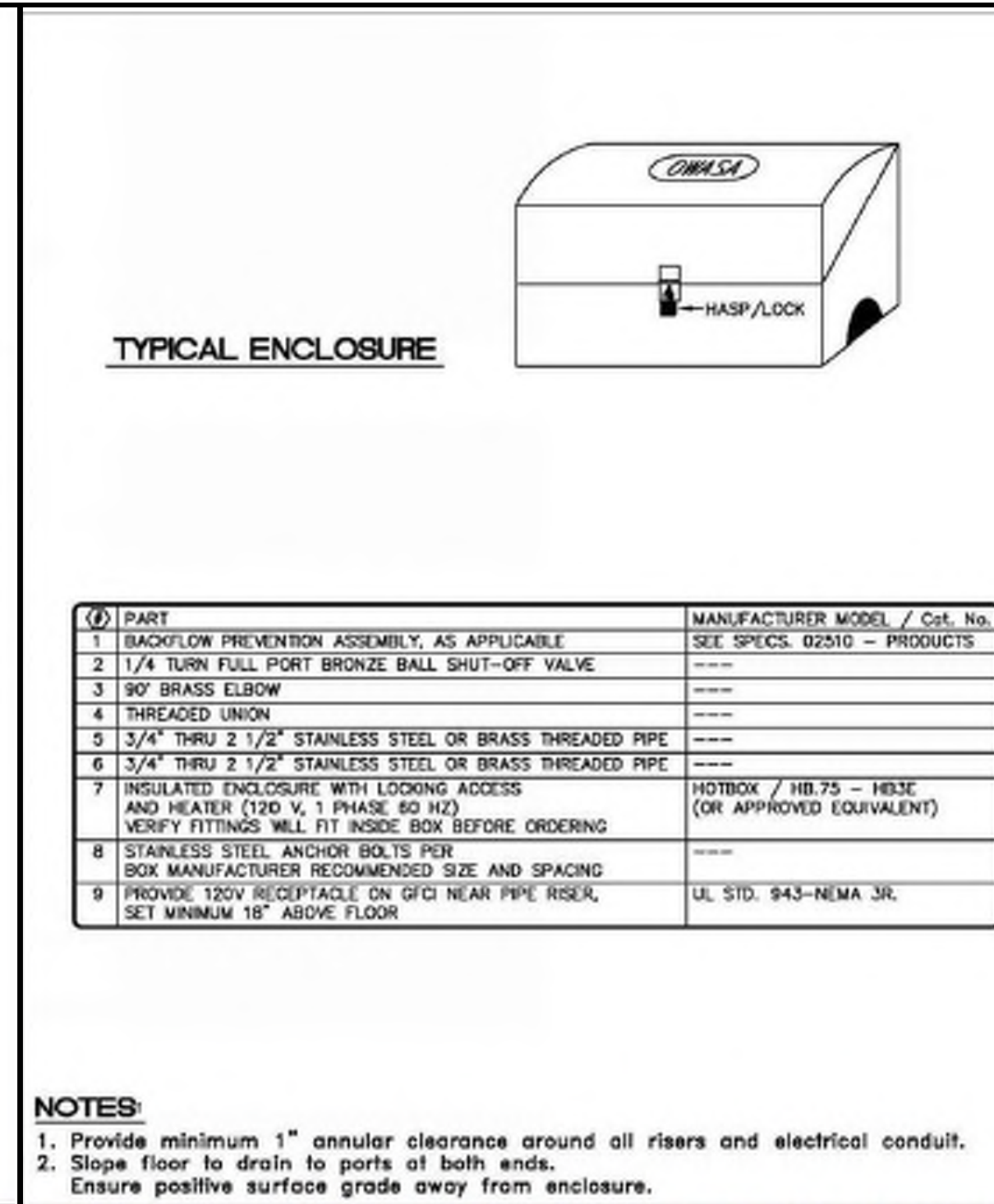
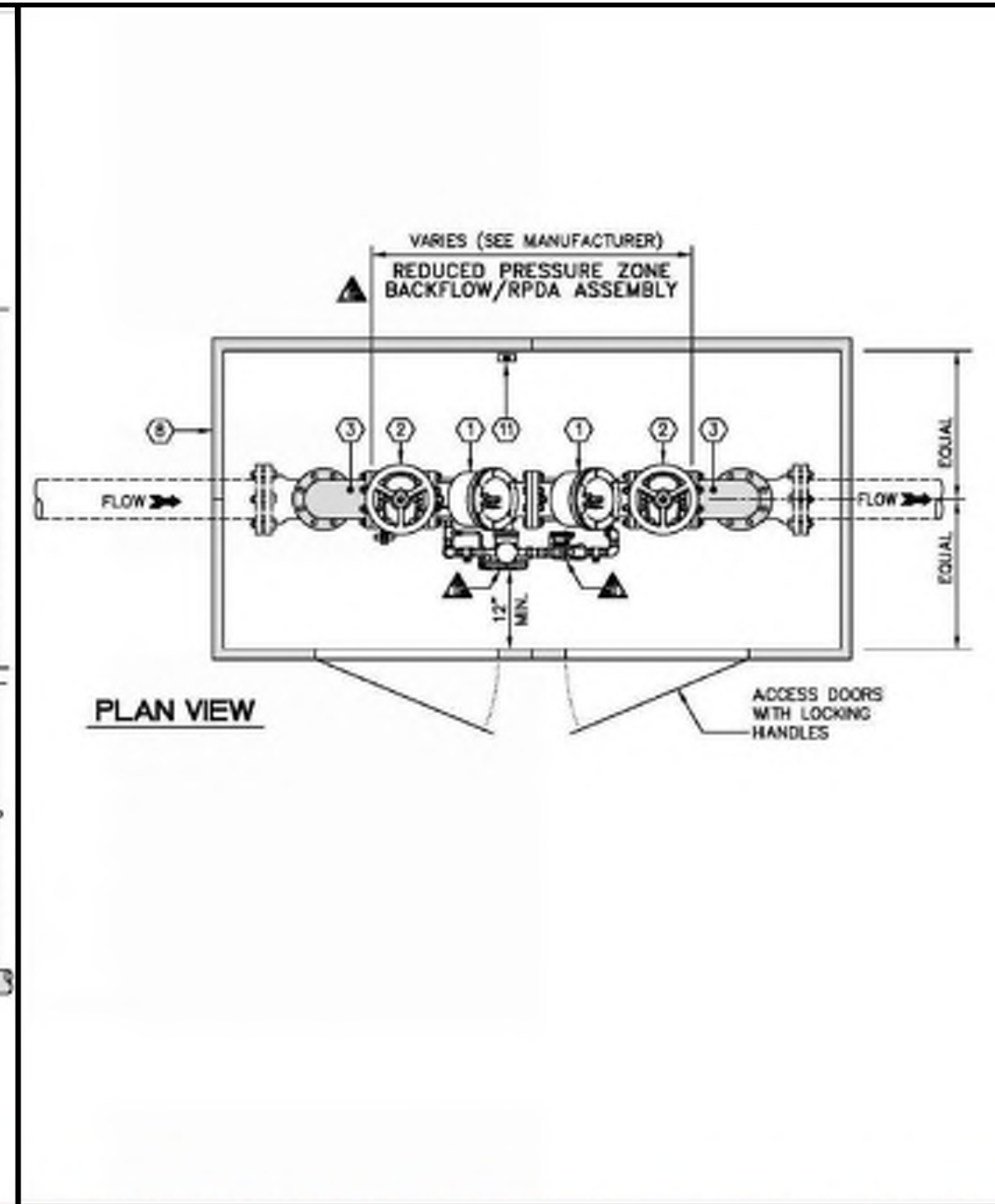
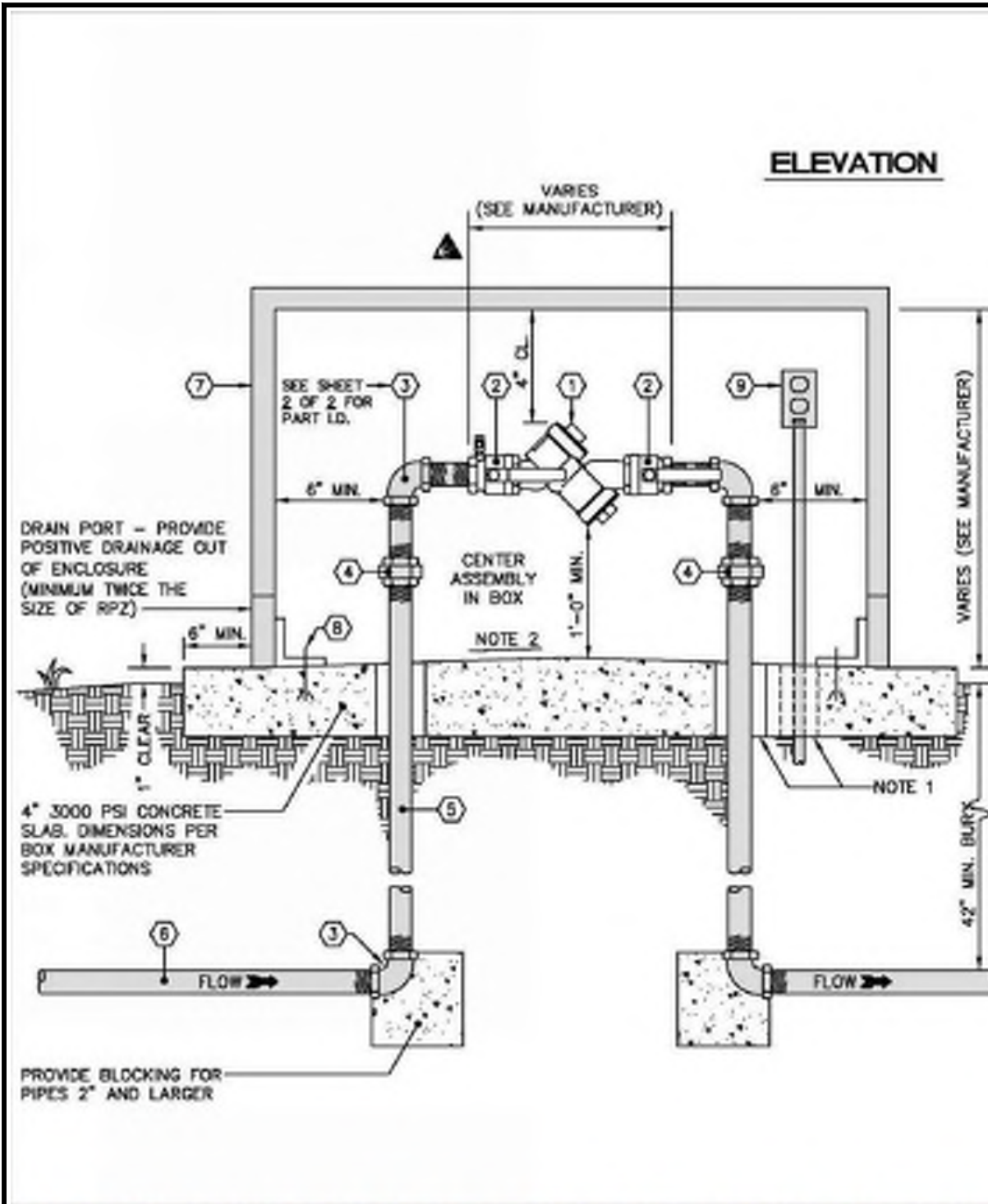
PROJECT	401801
DATE	8/28/2019
DRAWING SCALE	1" = 20'
DRAWN BY	DC
APPROVED BY	PNP

**C011**

SHEET 12 OF 16

C:\ACAD\Projects\19082019\19082019.dwg PLOTFILE: 20190820\_19082019.dwg PLOTFILE: 19082019.dwg PROJECT STATUS: —

**NOTE:**  
1. APPLICANT SHALL WORK WITH DUKE ENERGY, TOWN AND NCDOT TO GET APPROVED DESIGN AND INSTALL APPROPRIATE LED STREET LIGHTING ALONG ERWIN ROAD AND OLD OXFORD ROAD.



**ORANGE WATER AND SEWER AUTHORITY**  
 800 Jones Ferry Road, PO Box 366, Cary, NC 27510-0366  
 (919) 968-4422 / (919) 968-4444 / (919) 968-4444  
 www.owasa.org

**3/4" to 2" RPZ ASSEMBLY (ABOVE GROUND)**

SCALE: Not To Scale  
 REVISION DATE: December 20, 2016  
 SHEET # 2 OF 3

**ORANGE WATER AND SEWER AUTHORITY**  
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 www.owasa.org

**2 1/2" to 10" RPZ, RPDA ASSEMBLY (ABOVE GROUND)**

SCALE: Not To Scale  
 REVISION DATE: December 20, 2016  
 SHEET # 2 OF 3

**ORANGE WATER AND SEWER AUTHORITY**  
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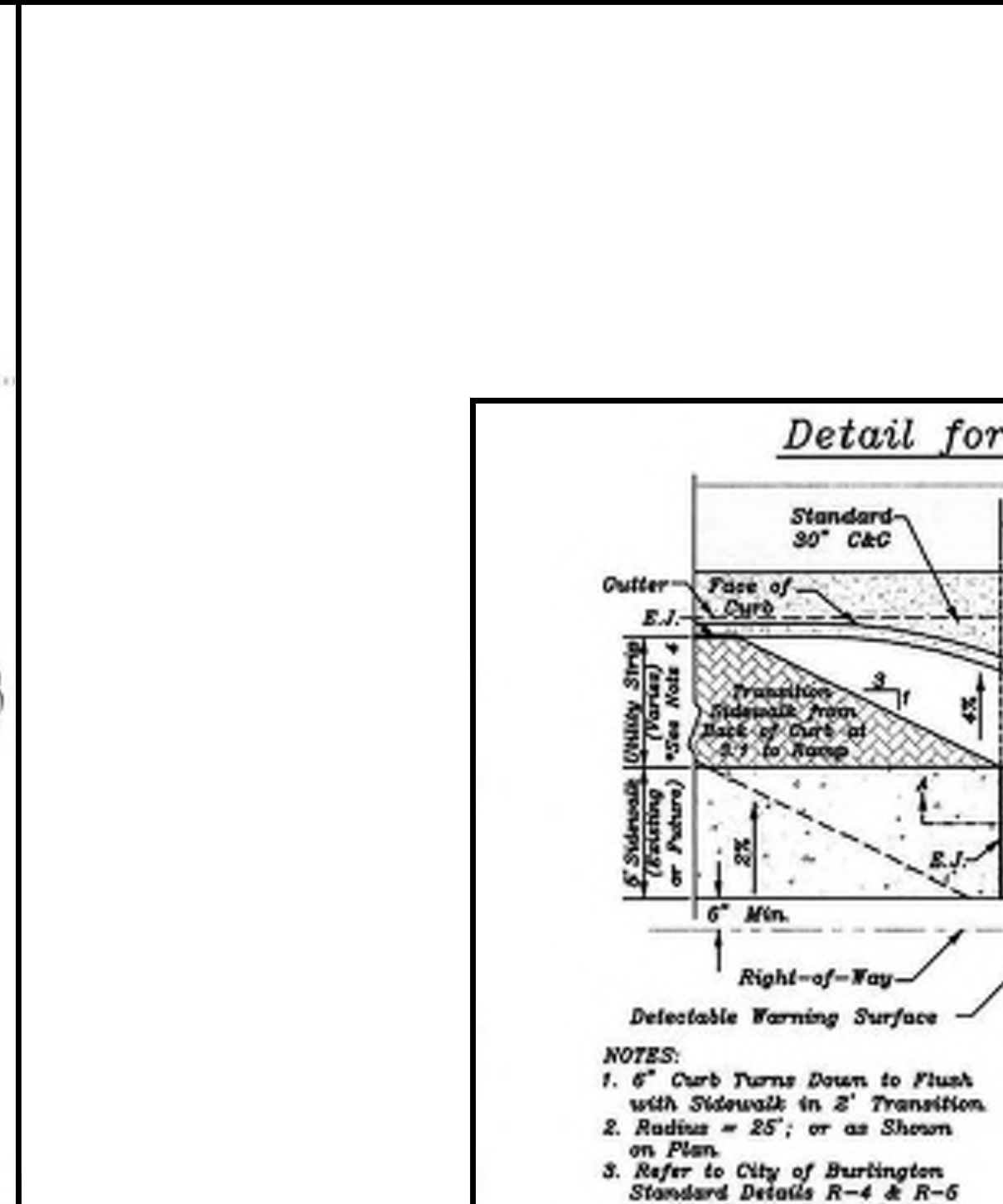
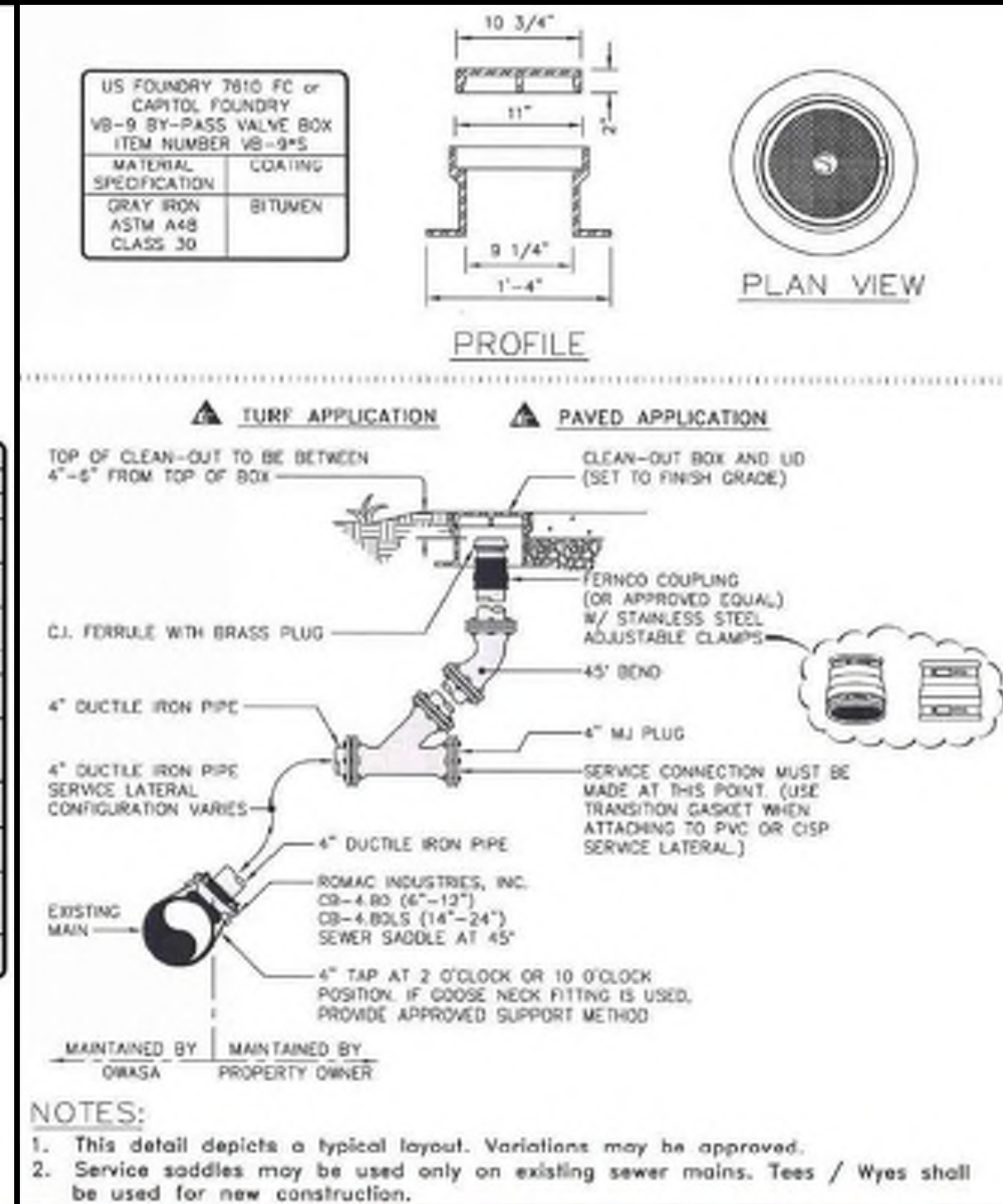
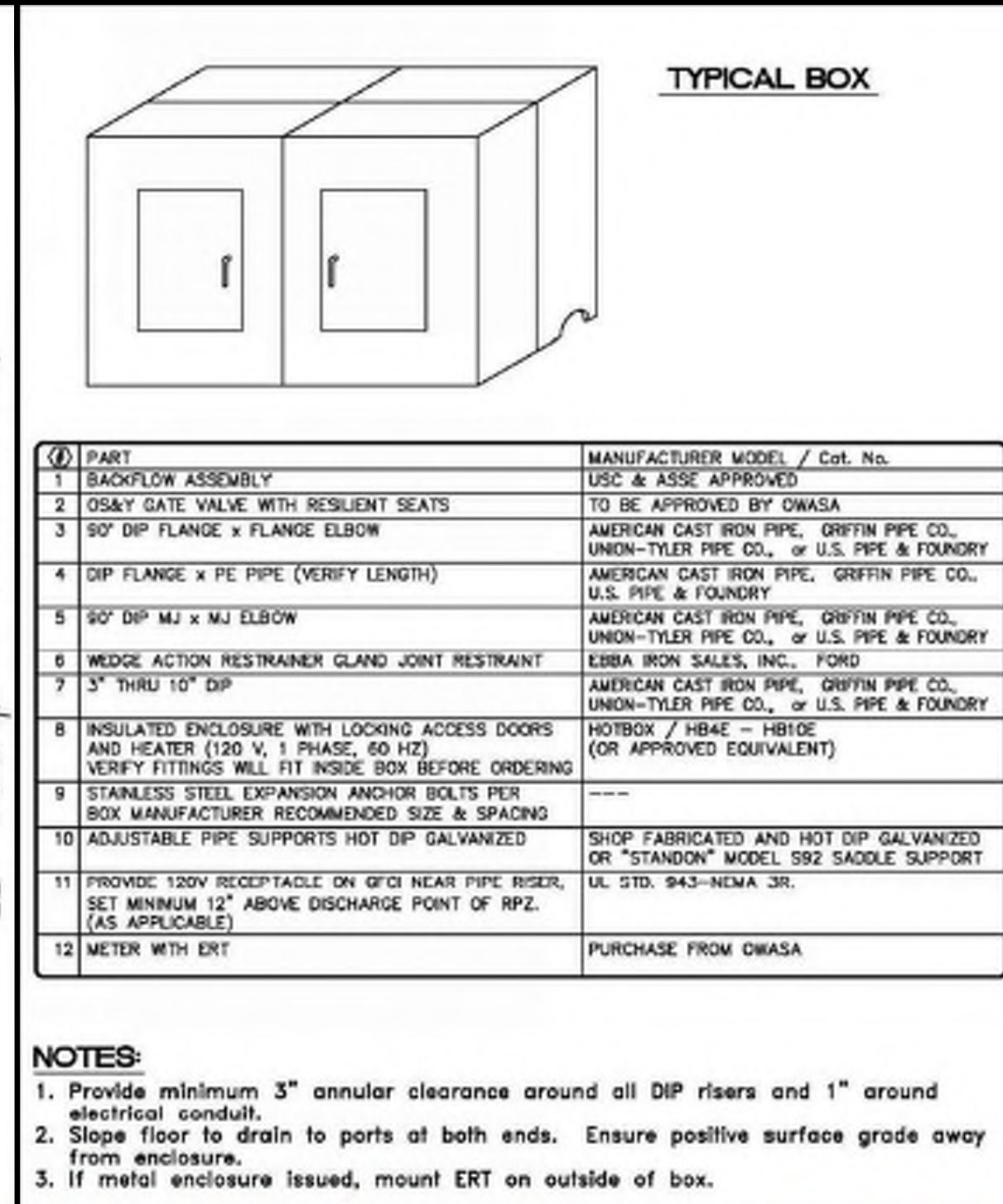
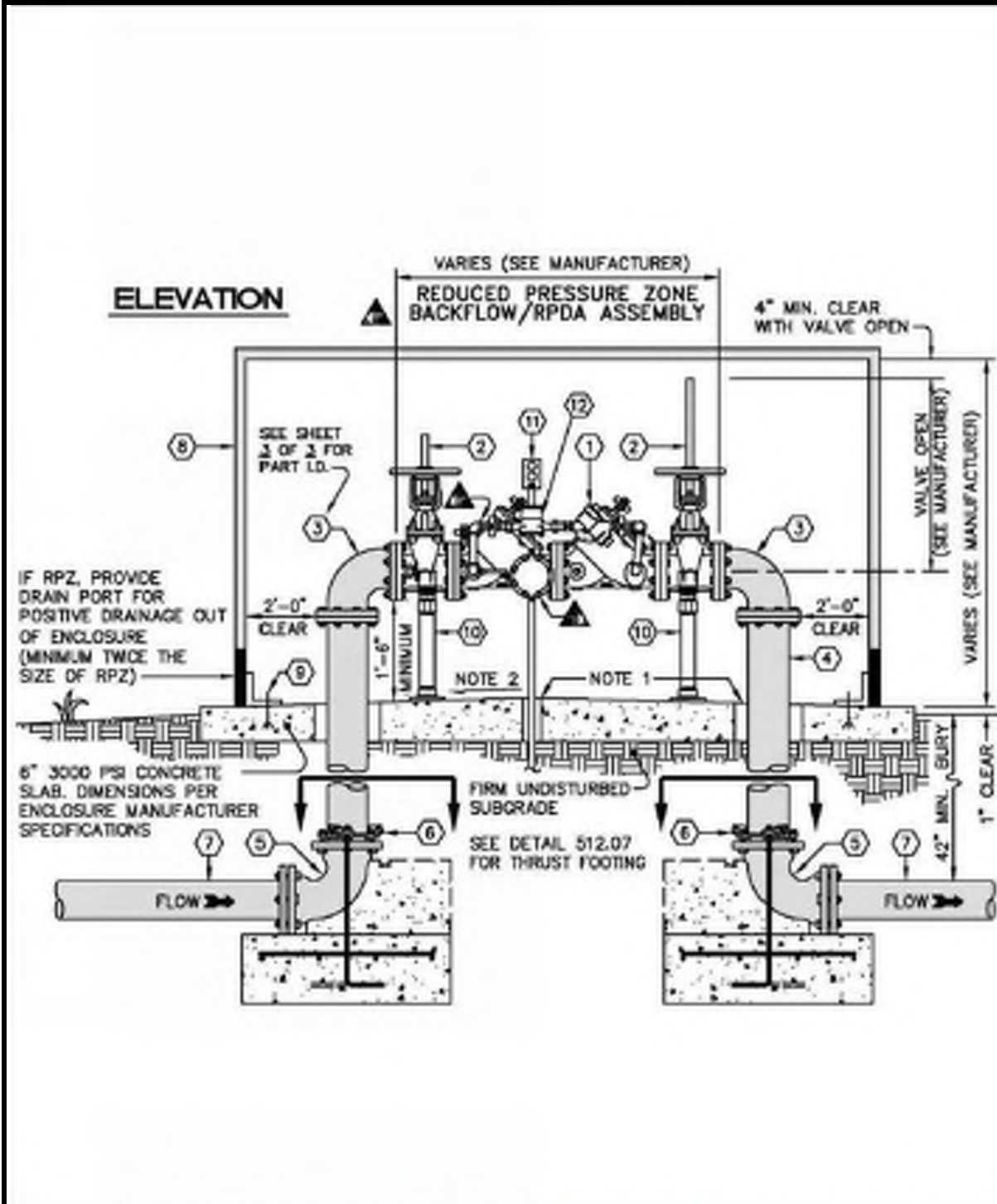
**3/4" to 2" RPZ ASSEMBLY (ABOVE GROUND)**

SCALE: Not To Scale  
 REVISION DATE: December 20, 2016  
 SHEET # 2 OF 3

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**3/4" SINGLE & 1" DUAL SERVICE INSTALLATION**

SCALE: Not To Scale  
 REVISION DATE: December 20, 2016  
 SHEET # 2 OF 3



**ORANGE WATER AND SEWER AUTHORITY**  
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 www.owasa.org

**2 1/2" to 10" RPZ, RPDA ASSEMBLY (ABOVE GROUND)**

SCALE: Not To Scale  
 REVISION DATE: December 20, 2016  
 SHEET # 2 OF 3

**ORANGE WATER AND SEWER AUTHORITY**  
 800 Jones Ferry Road, PO Box 366, Cary, NC 27510-0366  
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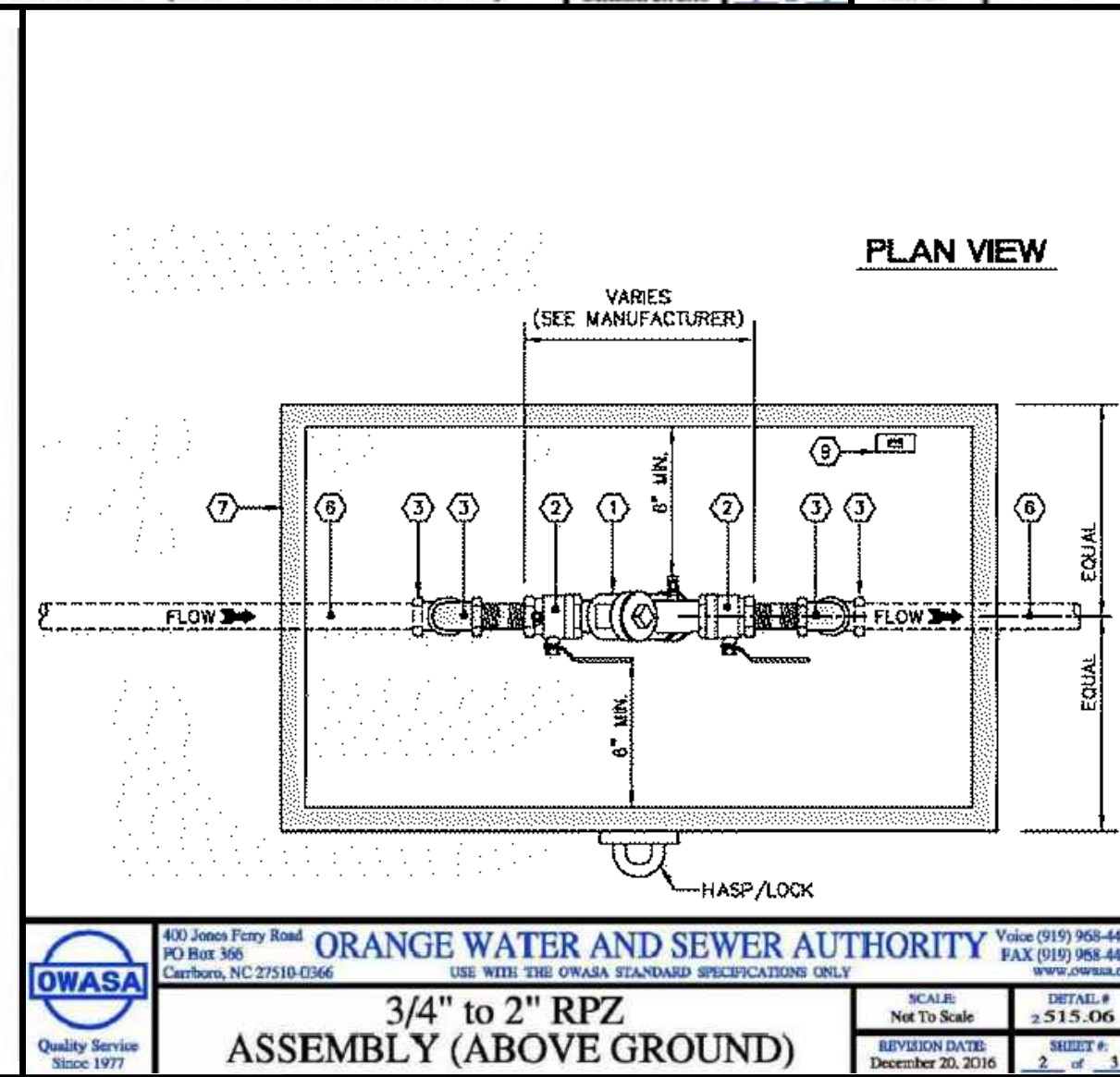
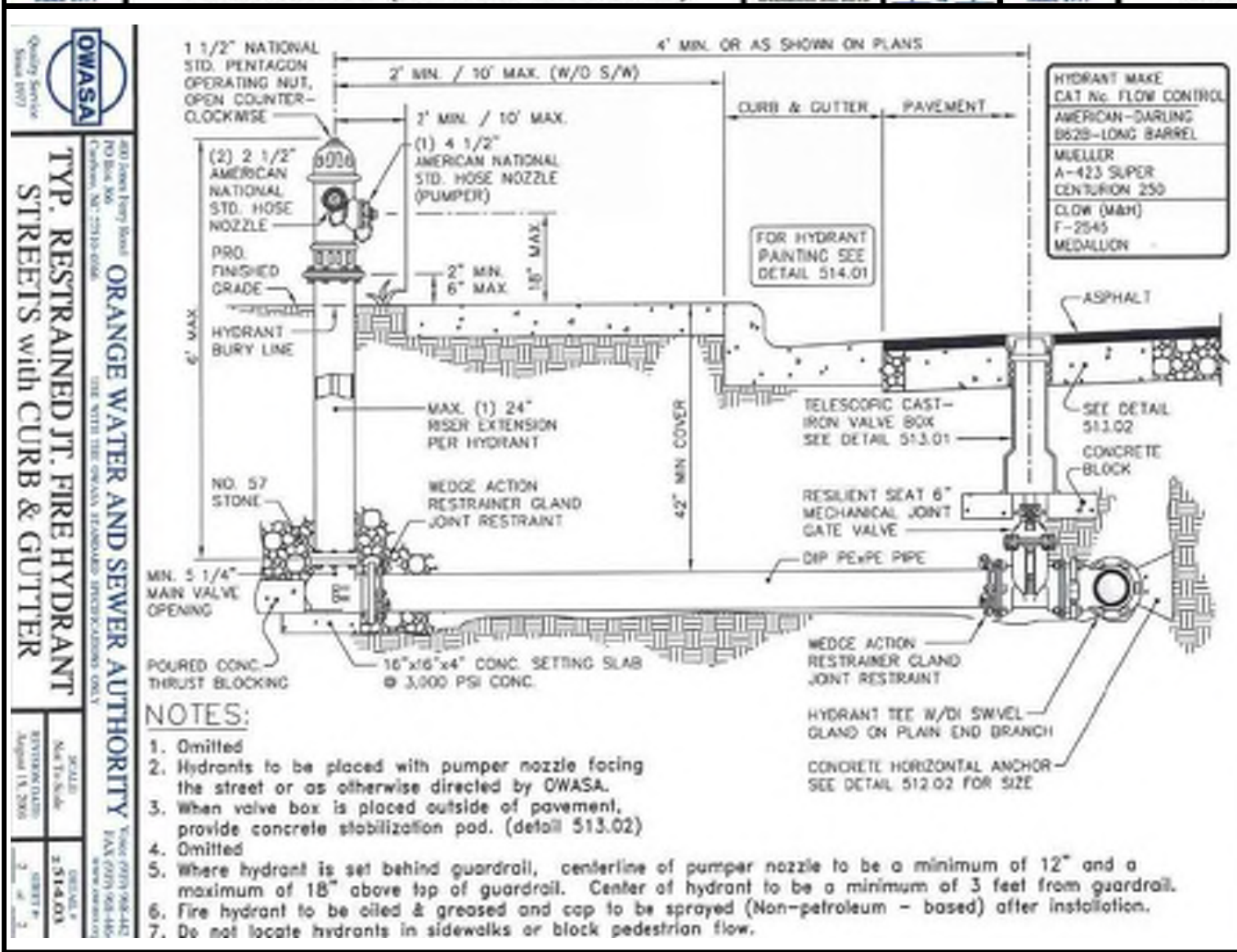
**2 1/2" to 10" RPZ, RPDA ASSEMBLY (ABOVE GROUND)**

SCALE: Not To Scale  
 REVISION DATE: December 20, 2016  
 SHEET # 2 OF 3

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 800 Jones Ferry Road, PO Box 366, Cary, NC 27510-0366  
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 www.owasa.org

**4" SEWER TAP AND STUB-OUT PAVED APPLICATION CLEAN OUT**

SCALE: Not To Scale  
 REVISION DATE: April 18, 2017  
 SHEET # 1 OF 1



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 800 Jones Ferry Road, PO Box 366, Cary, NC 27510-0366  
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 www.owasa.org

**3/4" to 2" RPZ ASSEMBLY (ABOVE GROUND)**

SCALE: Not To Scale  
 REVISION DATE: December 20, 2016  
 SHEET # 2 OF 3

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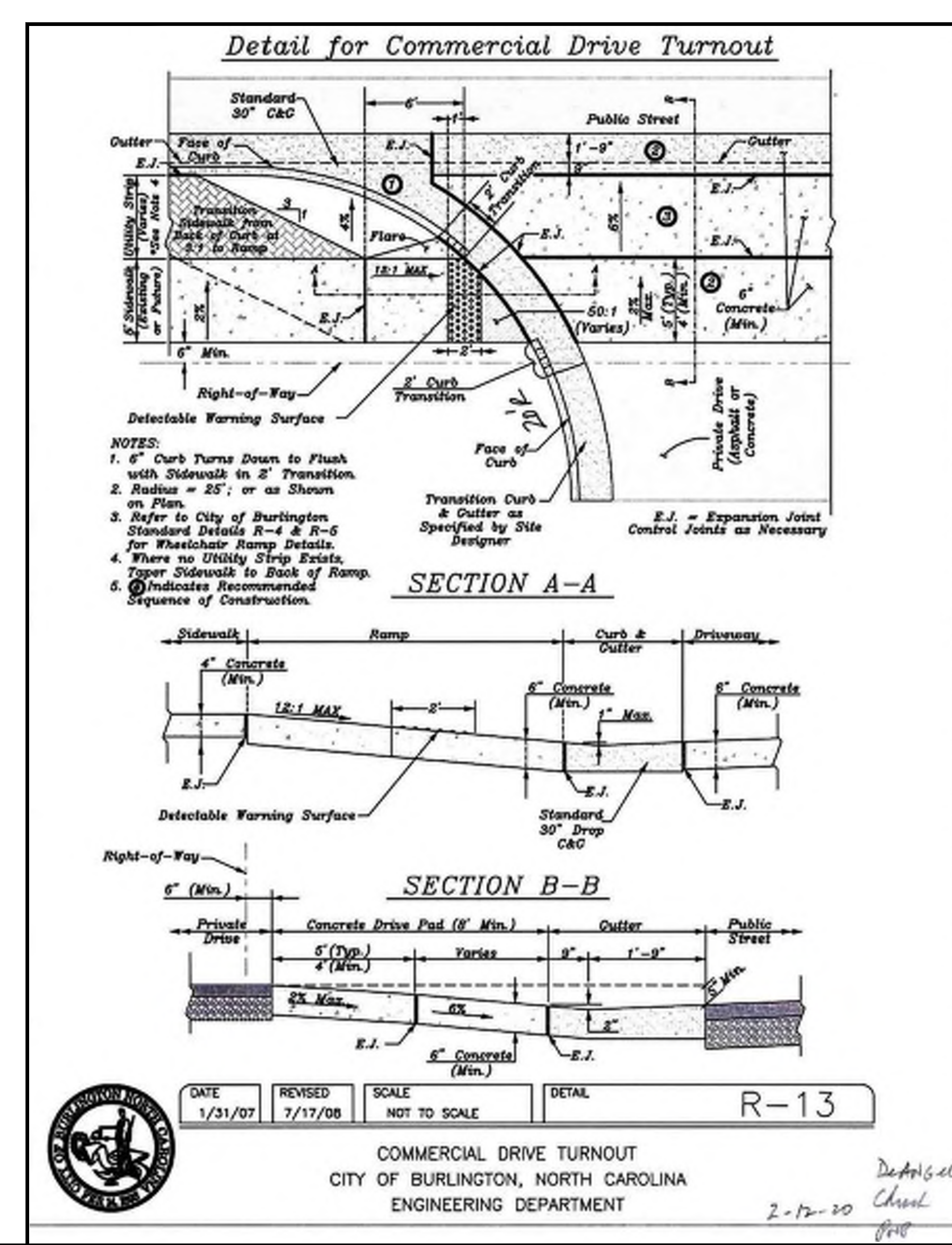
**3/4" to 2" RPZ ASSEMBLY (ABOVE GROUND)**

SCALE: Not To Scale  
 REVISION DATE: December 20, 2016  
 SHEET # 2 OF 3

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**3/4" to 2" RPZ ASSEMBLY (ABOVE GROUND)**

SCALE: Not To Scale  
 REVISION DATE: December 20, 2016  
 SHEET # 2 OF 3



**PHILIP POST ENGINEERING**  
 PHILIP POST  
 ENGINEERING  
 FIRM: C-347

**Philip N. Post, PE, PLS**  
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**CHRIST COMMUNITY CHURCH**  
 141 ERWIN ROAD, CHAPEL HILL, N.C. 27514  
 PHONE 979-99-9116 AND 979-99-46-0235

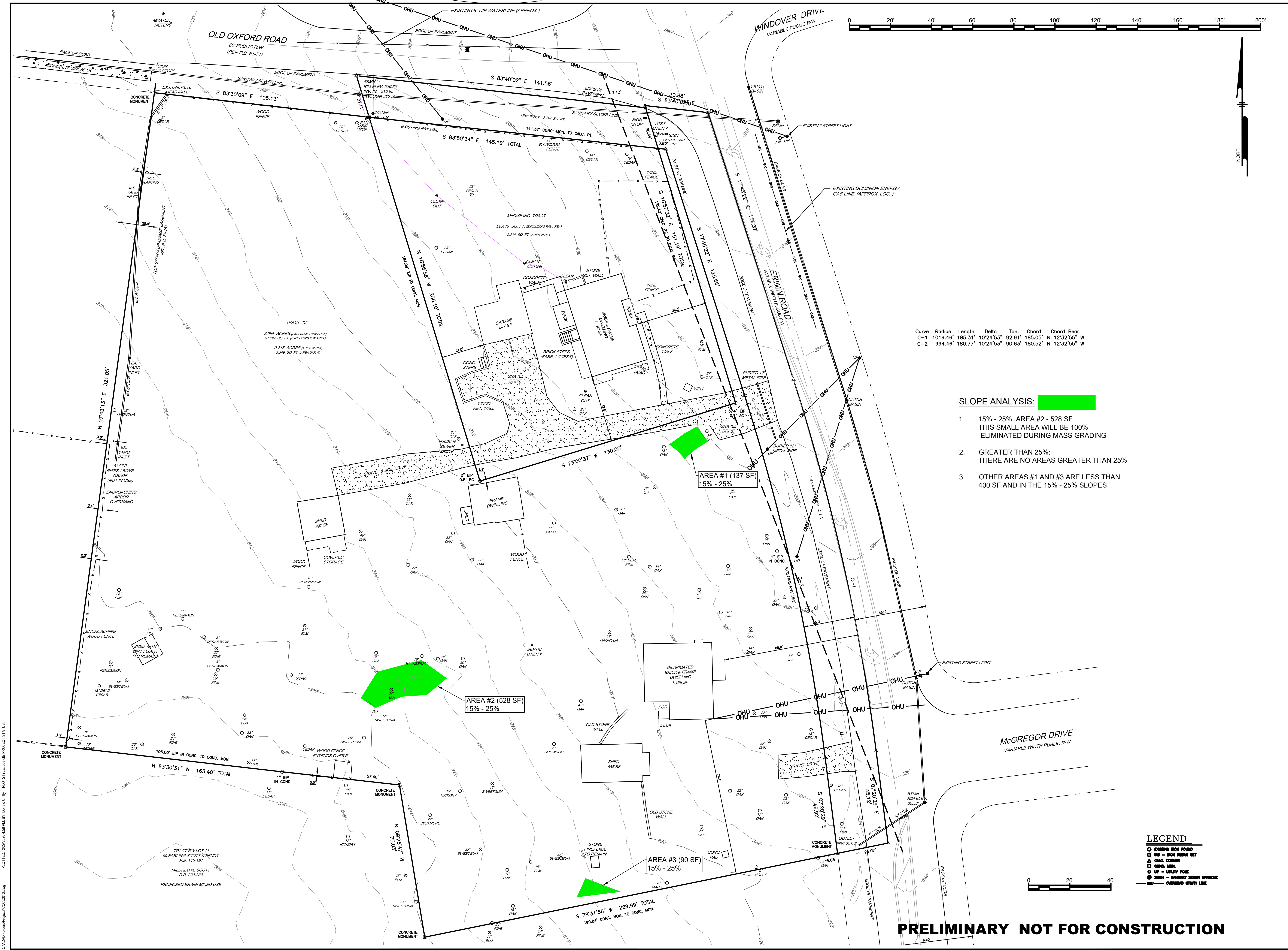
**UTILITY AND DRIVEWAY ENTRANCE DETAILS**

APPLICANT:  
**CHRIST COMMUNITY CHURCH**  
 1528 E. FRANKLIN STREET, SUITE 201  
 CHAPEL HILL, N.C. 27514

#	DATE	DESCRIPTION	BY
1	11-17-2019	REVISIONS	PP
2	11-17-2019	COMMENTS	PP
3	11-17-2019	COMMENTS	PP
4	1-17-2020	COMMENTS	PP
5	2-9-2020	COMMENTS	PP
6	2/26/2020	COMMENTS	PP

PROJECT: 401801  
 DATE: 8/28/2019  
 DRAWING SCALE: -  
 DRAWN BY: DC  
 APPROVED BY: PP

**C012**  
 SHEET 13 OF 16



Curve	Radius	Length	Delta	Tan. Chord	Chord Bear.
C-1	1019.46'	185.31'	1024°53'	92.91'	185.05' N 12°32'55" W
C-2	994.46'	180.77'	1024°53'	90.63'	180.52' N 12°32'55" W

**SLOPE ANALYSIS:**

- 15% - 25% AREA #2 - 528 SF  
THIS SMALL AREA WILL BE 100%  
ELIMINATED DURING MASS GRADING
- GREATER THAN 25%:  
THERE ARE NO AREAS GREATER THAN 25%
- OTHER AREAS #1 AND #3 ARE LESS THAN  
400 SF AND IN THE 15% - 25% SLOPES

**LEGEND**

- EXISTING TREE FOUND
- HPI - HIGH HINDER NET
- ▲ CONC. MON.
- CONC. MON.
- UP - UTILITY POLE
- SHAW - UNKNOWN BARRIER WALL
- OHU - OVERHEAD UTILITY LINE

**PRELIMINARY NOT FOR CONSTRUCTION**

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**CHRIST COMMUNITY CHURCH**

141 ERWIN ROAD, CHAPEL HILL, N.C. 27514  
 P/N# 9799-39-9116 AND 9799-49-0235

**SLOPE ANALYSIS PLAN**

APPLICANT:  
**CHRIST COMMUNITY CHURCH**  
 1528 E. FRANKLIN STREET, SUITE 201  
 CHAPEL HILL, N.C. 27514

#	DATE	NO.	BY	REVISIONS
1	11-17-2019			SUBMITTAL #1 COMMENTS
2	11-17-2019			OWASA 11/13/2019 COMMENTS
3	1-17-2020			SUBMITTAL #2 COMMENTS
4	2-9-2020			PROPERTY LINE SWAP
5	2-9-2020			TOWN COMMENTS
6	2/26/2020			NCDOT AND TOWN COMMENTS

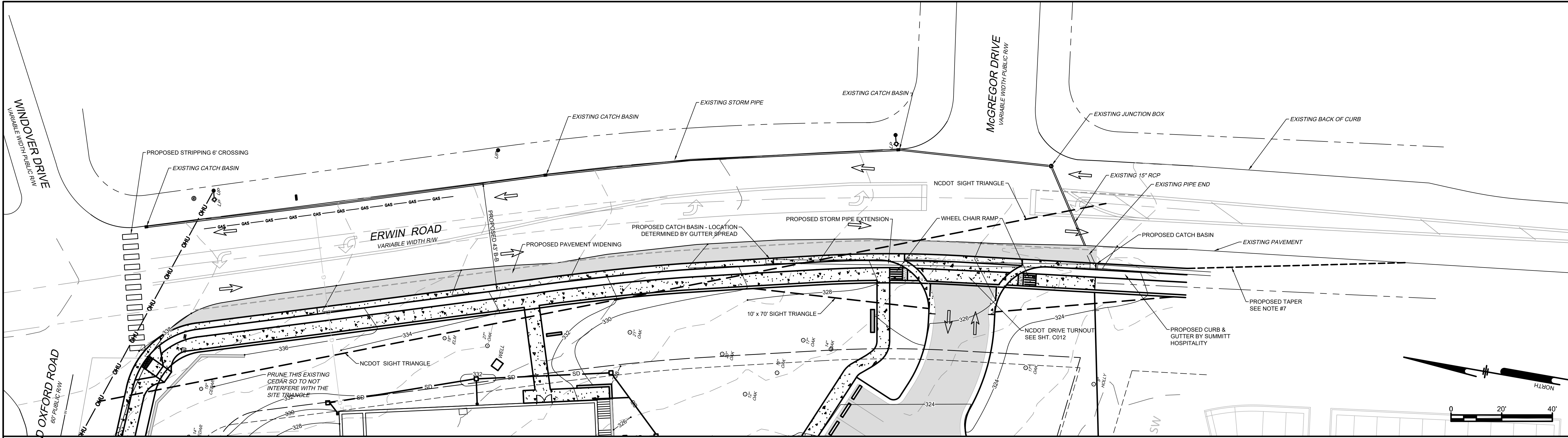
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PROJECT	401801
DATE	8/28/2019
DRAWING SCALE	1" = 20'
DRAWN BY	DC
APPROVED BY	PP

**C013**

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PHILIP POST ENGINEERING  
 FIRM: C-347

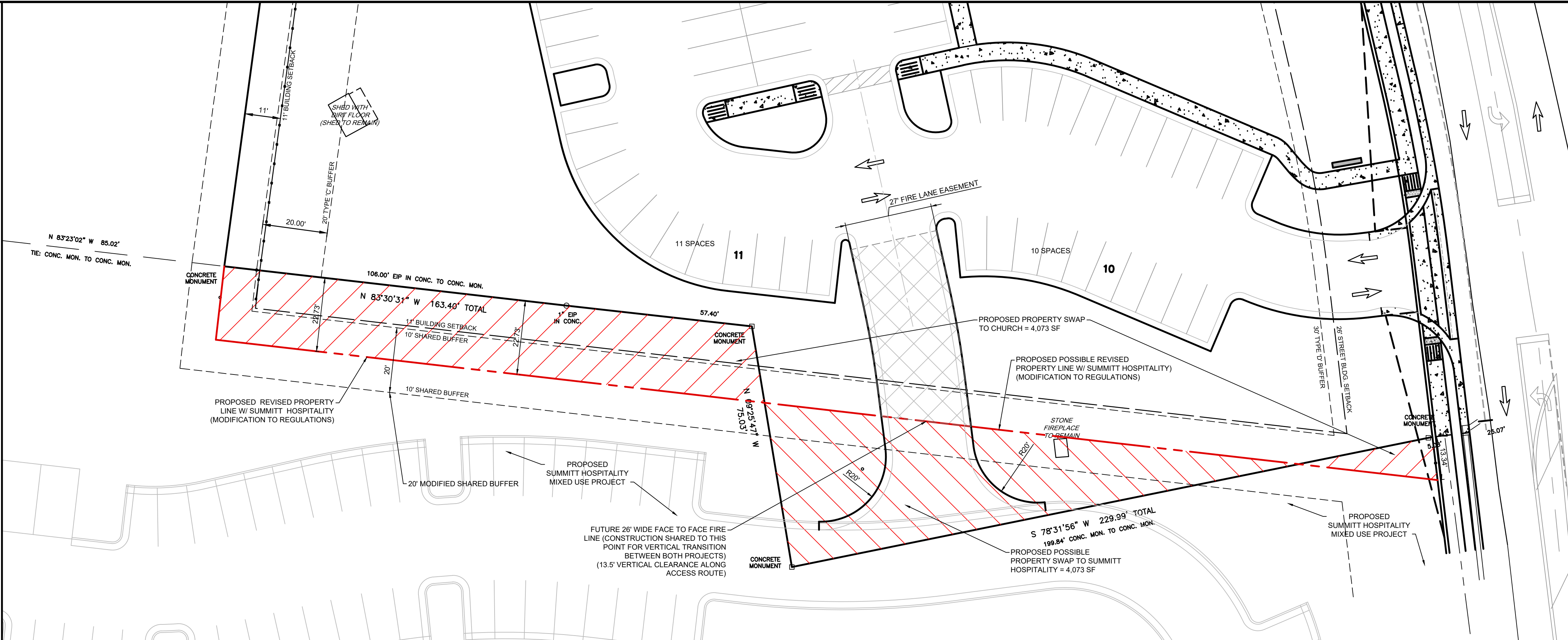


ERWIN ROAD - NCDOT PLAN

**NCDOT/ERWIN ROAD NOTES:**

- A. FOR CONSTRUCTION PLAN APPROVAL FROM NCDOT, APPLICANT MUST SUBMIT:
1. DRIVEWAY PERMIT APPLICATION AND \$50 CHECK AND COMPLETE CONSTRUCTION PLANS.
  2. 3 PARTY ENCROACHMENT AGREEMENT (EA 16.6) FOR SIDEWALK AND LANDSCAPING.
  3. "STREET" TYPE DRIVEWAY ENTRANCE ALIGNED AS FOURTH LEG TO MCGREGOR AS SHOWN HEREON AND ON SHEET C012.
  4. FOR NORTHBOUND LEFT TURN LANE, 150 FEET OF FULL STORAGE.
  5. COMPLETE DRAINAGE DESIGN FOR WIDENING (OR TAPERS) INCLUDING GUTTER SPREAD CALCULATIONS.
  6. DETAILED ROAD WIDENING, PAVEMENT MARKING AND MILLING AND OVERLAY LIMITS, FOR TURN LANES, STORAGE LENGTHS, TAPER LENGTHS, LANE WIDTHS, SHOULDER WIDTHS, BIKE LANES, APPROACH, DEPARTURE, BAY TAPERS, LANE ARROWS, WITH SPACING AND STRIPING FOR EDGE, LANES, ISLAND, MINI SKIPS, COLOR, ETC.
  7. COMPLETE DETAIL OF HOW ROADWAY, CURB AND SIDEWALK WILL CONNECT AT SOUTH END OF PROJECT TO EITHER THE SUMMITT HOSPITALITY PROJECT OR TO EXISTING CONDITIONS.

- CCC AND SUMMITT HOSPITALITY FIRE LANE NOTES:**
1. CCC CHURCH WILL COOPERATE WITH SUMMITT HOSPITALITY TO LEGALLY ADJUST THE SOUTHERN PROPERTY LINE AND GRANT CONSTRUCTION EASEMENTS FOR BUILDING EITHER AN EMERGENCY ONLY OR A FULL ACCESS 26' DRIVEWAY, CONNECTING THE TWO PROJECTS.
  2. ALL EXPENSES FOR THE FIRE LANE WILL BE PAID BY SUMMITT HOSPITALITY FOR BOTH CONSTRUCTION AND EASEMENT/RECOMBINATION/DEEDS/RECORDATION.
  3. CCC CHURCH WILL SWAP LAND WITH SUMMITT HOSPITALITY SUCH THAT THE GLA FOR CCC REMAINS EQUAL TO OR GREATER THAN 122,810 SF.
  4. SPECIFIC DETAILS FOR FIRE LANE AND LAND SWAP AND DEDICATION OF MODIFIED BUFFERS WILL BE PART OF A PHASING PLAN FOR THE CCC ZCP CONSTRUCTION PLANS, AS APPROVED BY THE TOWN MANAGER, AND AS AUTHORIZED BY COUNCIL AS A MODIFICATION TO REGULATIONS.



PROPOSED LAND SWAP AND FIRE LANE

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 Chapel Hill, NC 27515

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 FIRM: C-347

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**CHRIST COMMUNITY CHURCH**  
 141 ERWIN ROAD, CHAPEL HILL, N.C. 27514  
 PIN# 9799-39-9116 AND 9799-49-0235  
**ERWIN ROAD - NCDOT PLAN**  
**PROPOSED LAND SWAP AND FIRE LANE**  
 APPLICANT:  
**CHRIST COMMUNITY CHURCH**  
 1526 E. FRANKLIN STREET, SUITE 201  
 CHAPEL HILL, N.C. 27514

#	DATE	NO.	REVISIONS	BY
2/26/2020	6	NCDOT AND TOWN COMMENTS		
2-9-2020	5	TOWN COMMENTS		
1-27-2020	4	PROPERTY LINE SWAP		
1-17-2020	3	SUBMITTAL #2 COMMENTS		
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PROJECT: **401801**  
 DATE: 8/28/2019  
 DRAWING SCALE: 1" = 20'  
 DRAWN BY: DC  
 APPROVED BY: PNP  
 DATE: **C014**  
 SHEET 6 OF 16

Swanson + Associates, pa  
landscape architect

100 East Carr Street  
Carrboro, NC 27510  
david@swansonlandscapearchitecture.com  
919.929.9000

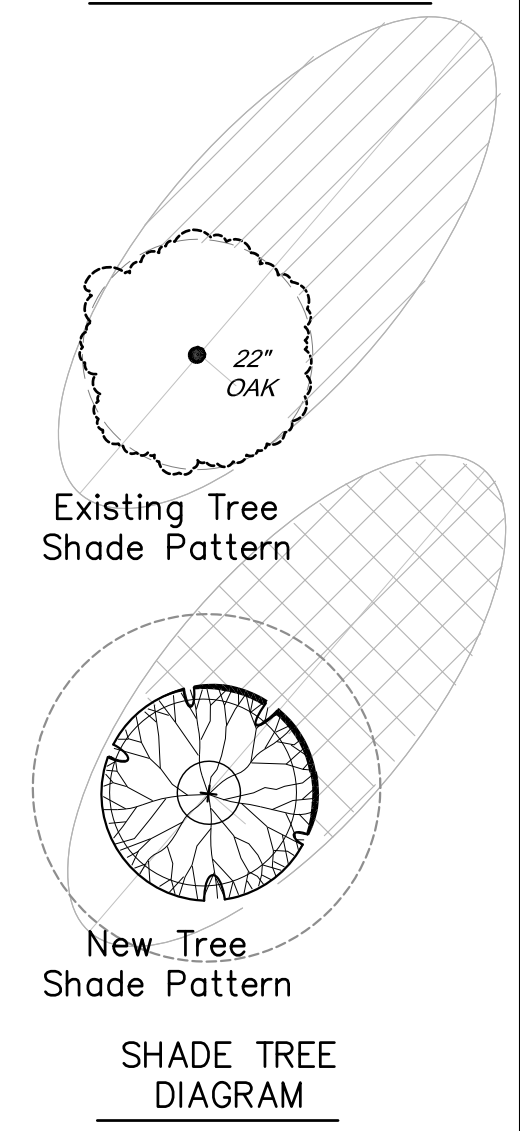
Philip M. Post, PE, PLS  
919.818.7862  
philip.m.post@gmail.com  
PO Box 4937  
Chapel Hill, NC 27515

ALL DIMENSIONS MUST BE VERIFIED BY CONTRACTOR AND OWNER MUST BE NOTIFIED OF ANY DISCREPANCIES BEFORE PROCEEDING WITH WORK

DAVID T. SWANSON  
July 18, 2019

SHADE TREE REQUIREMENTS/PROVIDED:

TOTAL PARKING AREA:	34,825 SF
TOTAL SHADE TREE REQUIRED: 35% OF PARKING AREA	12,188 SF
TOTAL ENTRY DRIVE PAVED AREA:	4,070 SF
TOTAL SHADE TREE REQUIRED: 35% OF SERVICE PAVED AREA	1,425 SF
TOTAL PAVED AREA: (excluding entrance drive)	38,895 SF
Number of shade trees required: 38,895 sf/2000 sf =	19 trees
TOTAL SHADE TREE REQUIRED: 35% OF PAVED AREA	13,613 SF
TOTAL SHADE TREE PROVIDED: 35%+ of Parking & Entry Area new trees shade area = 15,305 sf extg. trees shade area = 5,910 sf (calculated as shown graphically)	21,215 SF
Number of shade trees provided 27 trees x's 2000 sf / 2 =	27 trees 54,000 sf



LEGEND for TREE - SHRUB - GRASS PLANTING

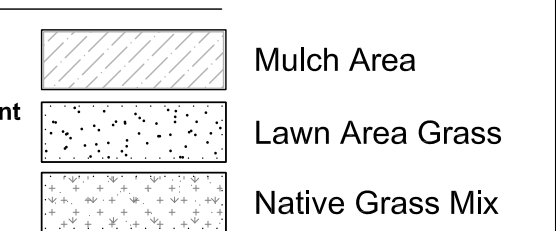
OUTER DASHED CIRCLE REPRESENTS A MATURE SIZED CANOPY WIDTH PLANT BASED ON EXPECTATIONS. ACTUAL GROWING CONDITIONS WILL VARY DEPENDING ON SOIL CONDITIONS, AMOUNT OF WET/DRY CONDITIONS, EXISTING TREE CANOPY COVERAGE AND SUNLIGHT, ROOT COMPETITION AND OTHER ENVIRONMENTAL FACTORS.

- |   |  |
|---|--|
| Pin Oak<br><i>Quercus palustris</i>                                       | Tulip Poplar<br><i>Liriodendron tulipifera</i>             |
| Swamp Chestnut Oak<br><i>Quercus michauxii</i>                            | Black Gum<br><i>Nyssa sylvatica</i>                        |
| Bald Cypress<br><i>Taxodium distichum</i>                                 | Chinese Pistache<br><i>Pistacia chinensis</i>              |
| Red Maple<br><i>Acer rubrum</i>   | Red Cedar<br><i>Juniperus virginiana</i>                   |
| Persimmon<br><i>Diospyros virginiana</i>                                  | Loblolly Pine<br><i>Pinus taeda</i>                        |
| Southern Magnolia<br><i>Magnolia grandiflora</i>                          | Greenleaf Holly<br><i>Ilex opaca 'Greenleaf'</i>           |
| River Birch<br><i>Betula nigra</i>  | Nellie Stevens Holly<br><i>Ilex x Nellie R Stevens</i>     |
| Pecan<br><i>Carya illinoensis</i>   | Arborvitae<br><i>Thuja occidentalis</i>                    |
| Ginkgo<br><i>Ginkgo biloba</i>  | Carolina Cherry Laurel<br><i>Prunus caroliniana</i>        |
| Red Bud<br><i>Cercis canadensis</i>                                       | Hornbeam (Ironwood)<br><i>Carpinus caroliniana</i>         |
| Peggy Clarke Japanese Apricot<br><i>Prunus mume 'Peggy Clarke'</i>        | Flowering Quince<br><i>Chaenomeles speciosa</i>            |
| Fringe Tree<br><i>Chionanthus virginicus</i>                              | Wax Myrtle<br><i>Myrica cerifera</i>                       |
| Crape Myrtle Natchez White<br><i>Lagerstromia faurei 'Natchez'</i>        | Winter Honeysuckle<br><i>Lonicera fragrantissima</i>       |
| Chindo Viburnum<br><i>Viburnum awabuki 'Chindo'</i>                       | Grey Owl Juniper<br><i>Juniperus virginiana 'Grey Owl'</i> |
| Carolina Jasmine (vine trained on fence)<br><i>Gelsemium sempervirens</i> | Abelia<br><i>Abelia grandifolia</i>                        |
|   | Glossy Abelia<br><i>Glossy Abelia</i>                      |
|   | Carissa<br><i>Ilex cornuta 'Carissa'</i>                   |
|   | Tree Saucer (mulch ring - typ.)                            |

GRASS PLANTING NOTES

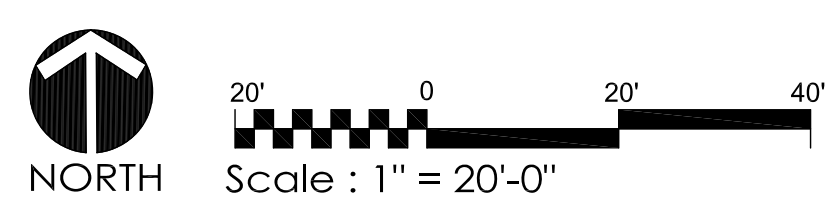
**Native Vegetation Stabilization Mix**  
Recommended application rate: 20-25 lbs. per acre

Species Common Name	Percent
Elymus virginicus Virginia wild rye	15
Tripsacum dactyloides Eastern gammagrass	13
Panicum virgatum Switchgrass	12
Agrostis perennans Autumn bentgrass	12
Carex vulpinoidea Fox sedge	10
Tridens flavus Purple top	10
Schizachyrium scoparium Little bluestem	8
Coreopsis lanceolata Lance leaf tickseed	5
Sorghastrum nutans Indian grass	5
Elymus hystrix Bottlebrush grass	5
Festuca ovina var. duriuscula Hard fescue	4
Rudbeckia hirta NC Ecotype Blackeyed susan	1
	100



Source for Native Seed Mix  
<https://www.mellownmarshfarms>

Site Triangle  
(10 ft X 70 ft typ.)



PRELIMINARY NOT FOR CONSTRUCTION

CHRIST COMMUNITY CHURCH  
141 ERWIN ROAD, CHAPEL HILL, N.C. 27514  
PIN# 9799-99-9116 AND 9799-48-0235

LANDSCAPE PLAN AND DETAILS

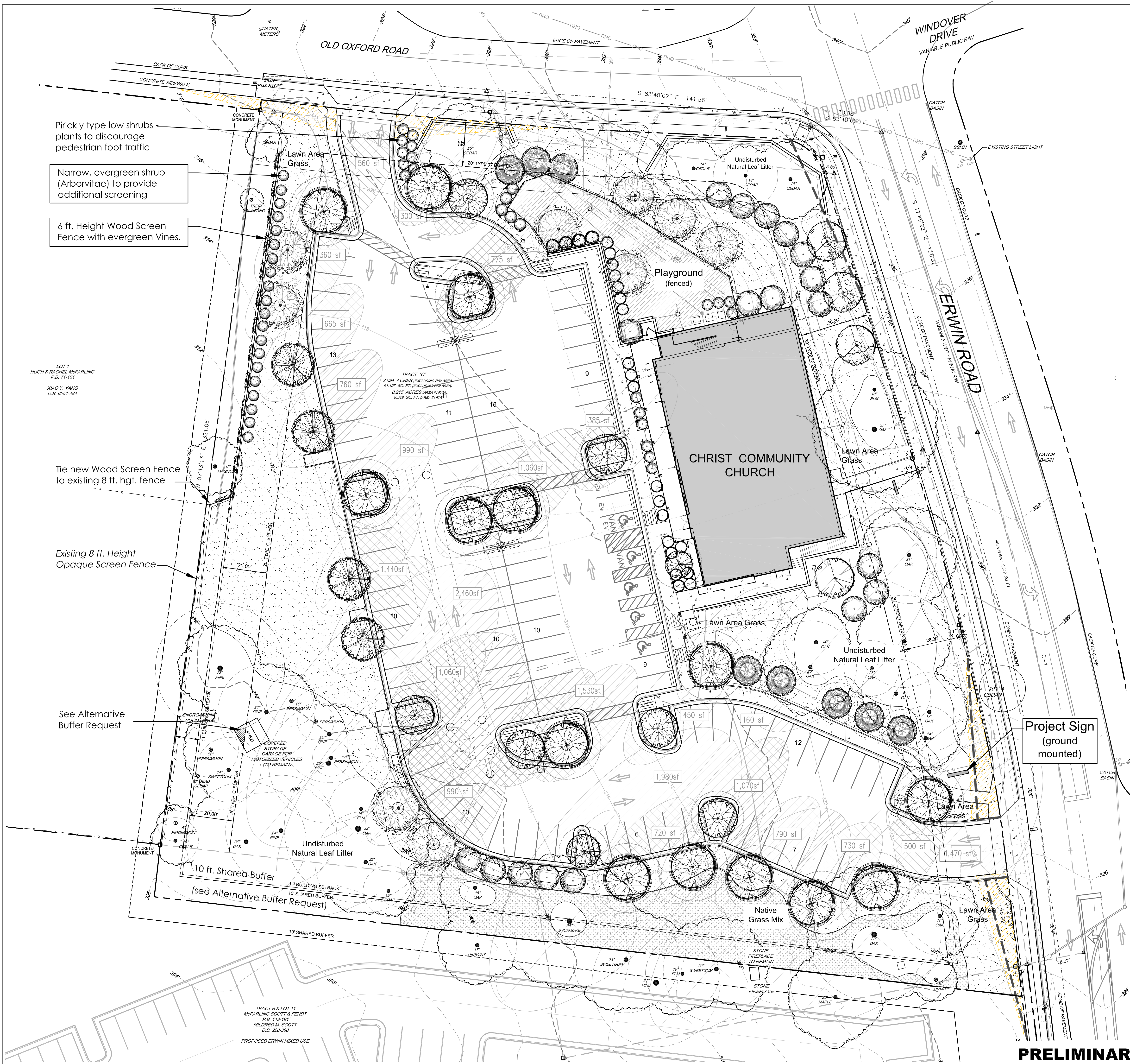
APPLICANT:  
CHRIST COMMUNITY CHURCH  
1526 E. FRANKLIN STREET, SUITE 201  
CHAPEL HILL, N.C. 27514

NO.	DATE	REVISIONS	BY
1	03-05-20	ADD SCREENING PLANTS	DS
2	02-03-20	SUBMITTAL #2 TOWN COMMENTS	DS
3	11-17-19	SUBMITTAL #1 TOWN COMMENTS	DS

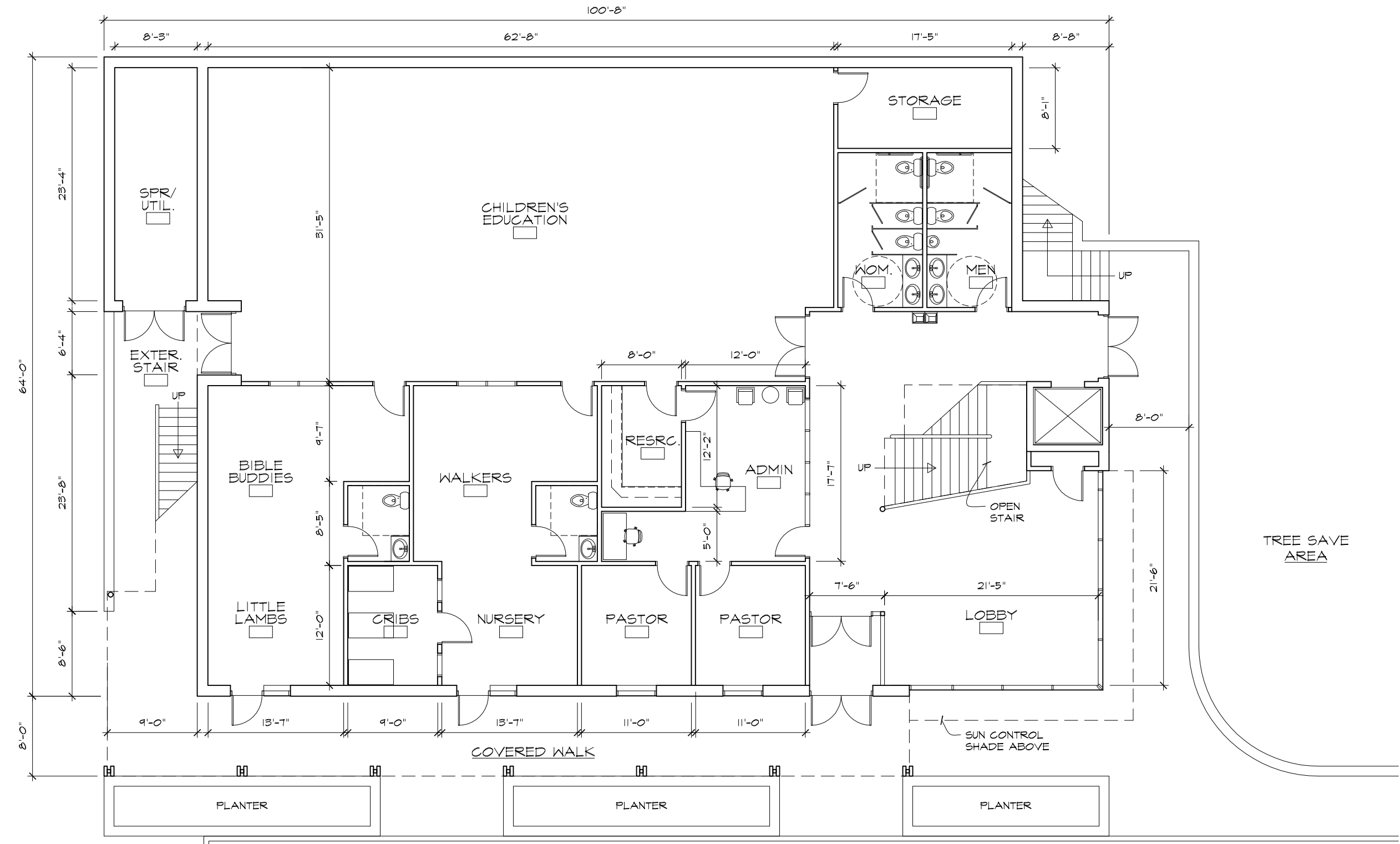
ALL DOCUMENTS PREPARED BY PHILIP POST ENGINEERING ARE INSTRUMENTS OF SERVICE IN RESPECT OF THE PROJECT. THEY ARE NOT INTENDED OR REPRESENTED TO BE SUITABLE FOR REUSE BY OTHERS OR OTHERS ON THE EXTENSION OF THE PROJECT OR ON ANY OTHER PROJECT. ANY REUSE WITHOUT WRITTEN PERMISSION OR ADAPTATION BY PHILIP POST ENGINEERING FOR THE SPECIFIC PURPOSE INTENDED WILL BE AT USER'S SOLE RISK AND WITHOUT LIABILITY OR LEGAL EXPOSURE TO PHILIP POST ENGINEERING AND OTHER SHALL INDEMNIFY AND HOLD HARMLESS PHILIP POST ENGINEERING FROM ALL CLAIMS, DAMAGES, LOSSES AND EXPENSES ARISING OUT OF OR RESULTING THEREFROM.

PROJECT	401801
DATE	07/18/2019
DRAWING SCALE	1" = 20'
DRAWN BY	DD
APPROVED BY	PP

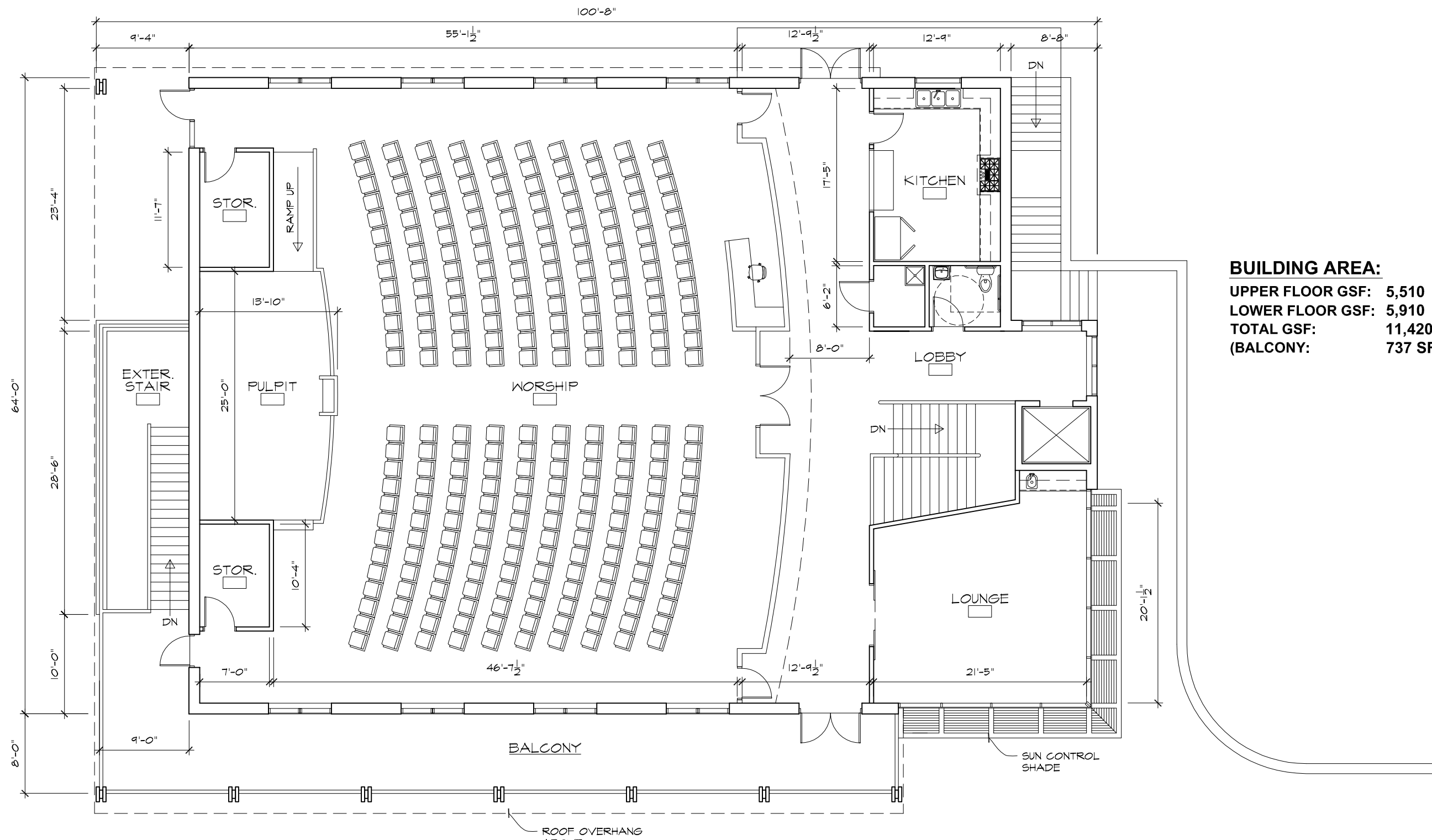
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SHEET 15 OF 16



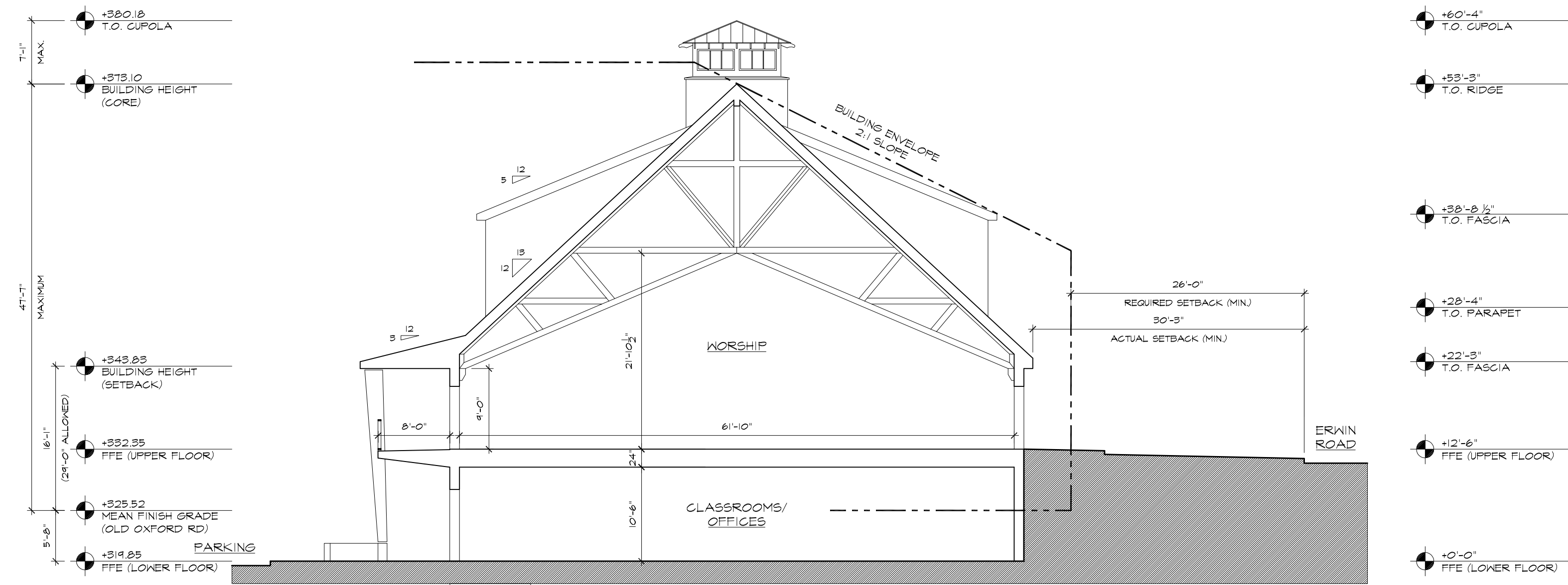
**BUILDING AREA:**  
 UPPER FLOOR GSF: 5,510  
 LOWER FLOOR GSF: 5,910  
 TOTAL GSF: 11,420  
 (BALCONY: 737 SF)



**1 LOWER FLOOR PLAN**  
 A-003 3/32" = 1'-0"



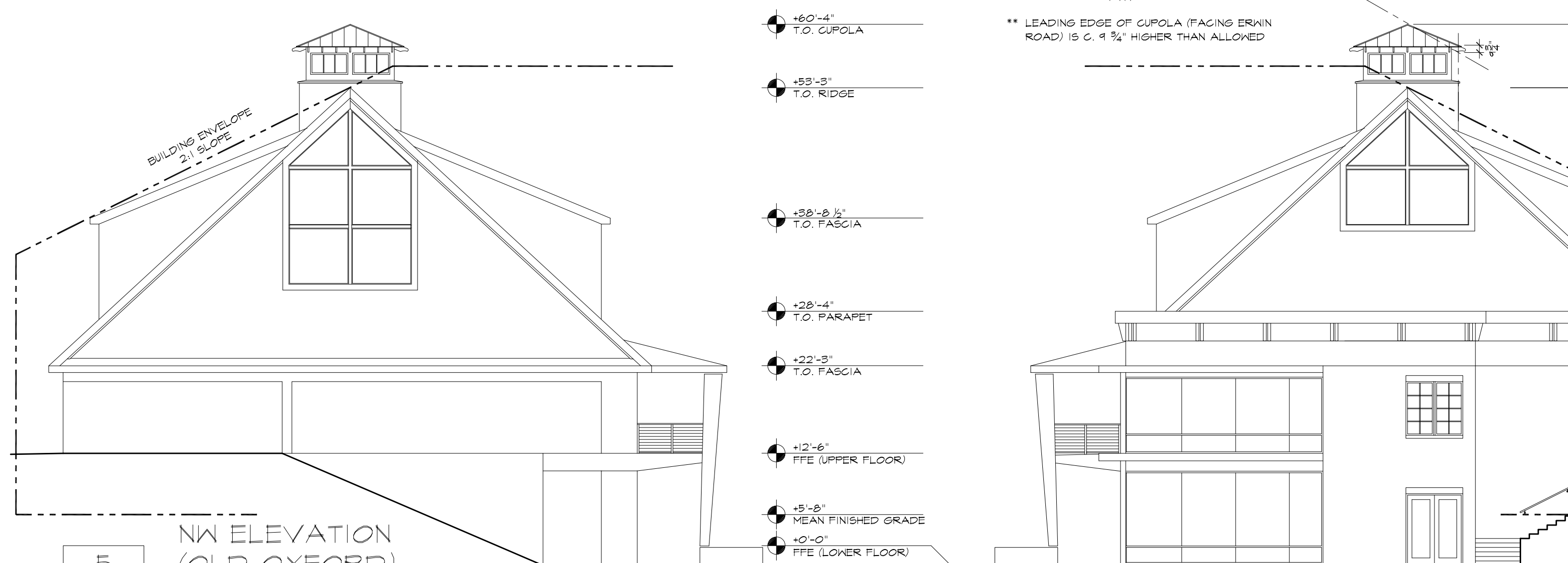
**2 UPPER FLOOR PLAN**  
 A-003 3/32" = 1'-0"



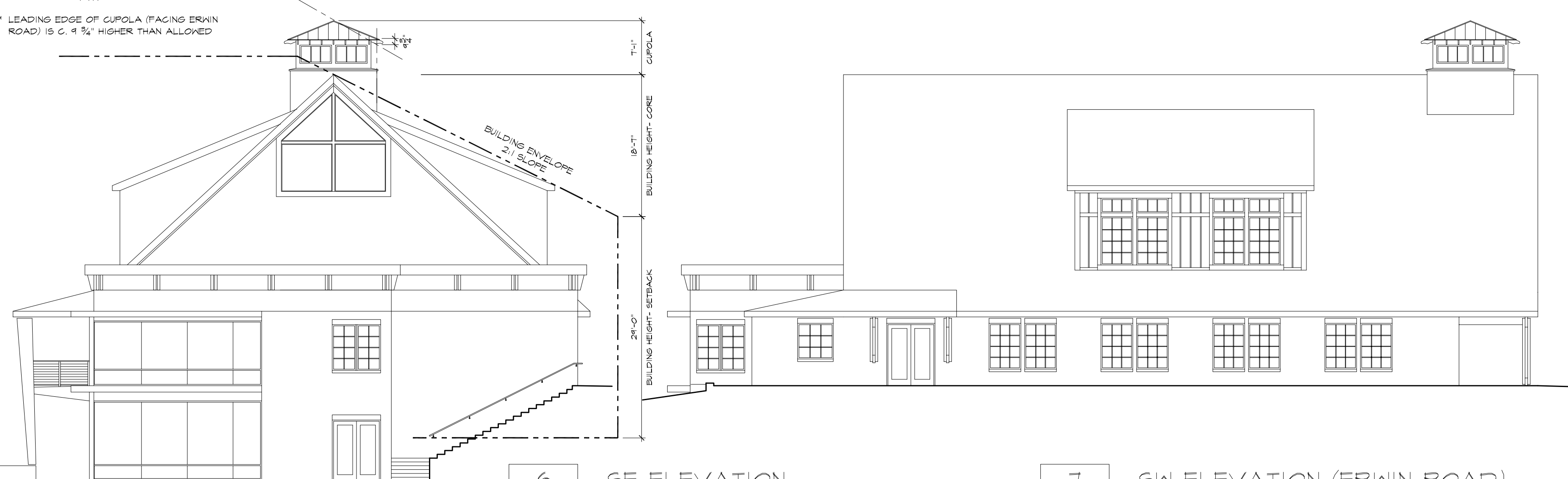
**3 BUILDING SECTION**  
 A-003 3/32" = 1'-0"



**4 NE ELEVATION (PARKING)**  
 A-003 3/32" = 1'-0"



**5 NW ELEVATION (OLD OXFORD)**  
 A-003 3/32" = 1'-0"



**6 SE ELEVATION**  
 A-003 3/32" = 1'-0"

**7 SW ELEVATION (ERWIN ROAD)**  
 A-003 3/32" = 1'-0"

**FOR REVIEW ONLY  
 NOT FOR CONSTRUCTION**

prepared for  
**SUP SUBMITTAL**  
 project name  
**CHRIST COMMUNITY CHURCH**  
 141 ERWIN ROAD  
 CHAPEL HILL, NC 27514  
 project number  
**201801-CCC**  
 drawing title  
**BLDG PLANS  
 BLDG SECTION  
 BLDG ELEVATIONS**  
 drawing scale

AS NOTED  
 orientation  
 revision history

Mark	Date	Description
	11/23/2018	CONCEPT PLAN
	09/02/2019	SUP SUBMITTAL
	12/12/2019	SUP SUBMITTAL 1st REVISION
	02/05/2020	SUP SUBMITTAL 2nd REVISION

Issue/Revision  
 CAD File Name  
 Drawn By  
 Checked By  
 Plot Date  
 Reviewed by  
 Designed by  
 Submitted By  
 Drawing Code

issue date  
 02/05/2020  
 sheet index

**A 003**