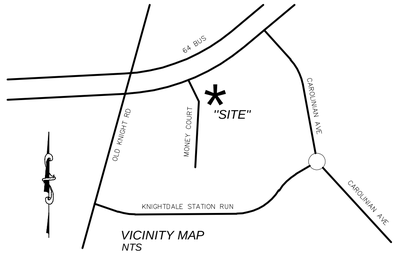

VICINITY MAP
NTS

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KNIGHTDALE CRAFT KITCHEN
310 ARCHITECTS
706 MONEY COURT
KNIGHTDALE, NORTH CAROLINA

7-8-2020 SKETCH PLAN SUBMITTAL
7-7-2020 MASTER PLAN SUBMITTAL

INDEX OF SHEETS

CE-01 EXISTING CONDITIONS
CE-02 DEMOLITION PLAN
CE-03 SITE AND UTILITY PLAN
CE-04 GRADING AND DRAINAGE PLAN
CE-05 NOTES AND DETAILS
CE-06 SURROUNDING TOPO (GIS)

Owner/Developer:

Money Court Property Holding, LLC
5317 Pomfret Point
Raleigh, NC 27612
Contact: Kip Downer

Surveyor:

STOKES SURVEYING & MAPPING PLLC
1425-105B Rock Quarry Rd.
Raleigh, NC 27610
Phone: 1.919.977.7825
Contact: Mike Stokes

Engineer:

STOCKS ENGINEERING
801 EAST WASHINGTON STREET, NASHVILLE, N.C. 27856
P.O. BOX 1108, PHONE: (252) 459-8196
WWW.STOCKSENGINEERING.COM

Contact: J. Michael Stocks, PE
mstocks@stocksengineering.com

SITE INFORMATION

LOCATION: 706 MONEY COURT KNIGHTDALE, NC
COUNTY: WAKE COUNTY
TOTAL SITE ACREAGE: 1.73 Ac.
ZONING: HB (HIGHWAY BUSINESS)

MINIMUM BUILDING SETBACKS: (PROPOSED)
FRONT: 40'
SIDE STREET: 50'
SIDE: 35'
REAR: 20'

EXISTING USE: CURRENT GYM AND VACANT
PROPOSED USE: GYM AND RESTAURANT
TOTAL BUILDING SIZE: ±8,000 Sq. Ft.

PARKING CALCULATIONS:
BURN BOOT CAMP (INDOOR REC): MAX: 34 (1 PER 3 PERSON CAPACITY)
MIN: 17 (1/2 OF MAXIMUM)
(CH. 10.3.D.5.H)

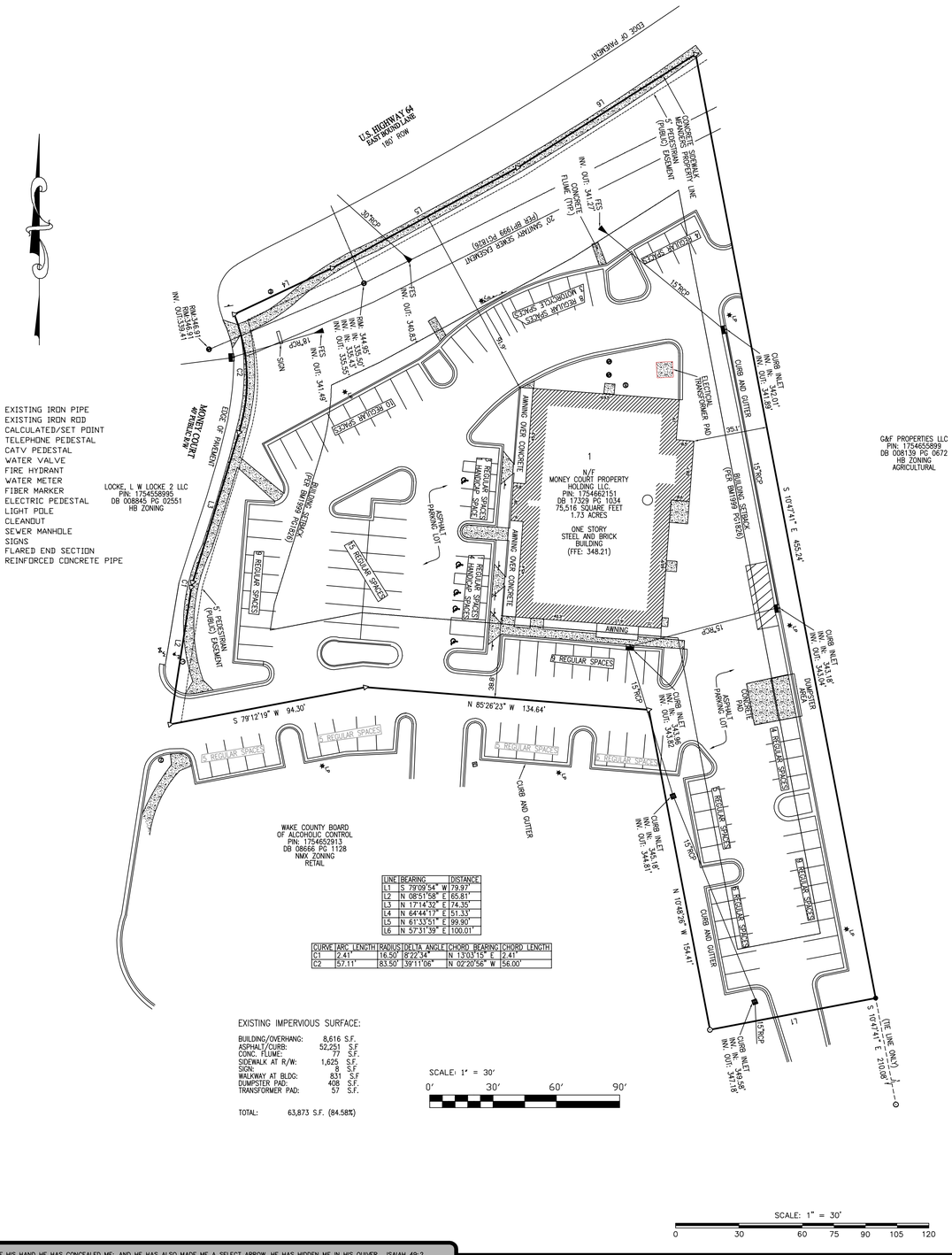
CRAFT KITCHEN (RESTAURANT): MAX: 46 (15 PER 1,000 SF GFA)
MIN: 23 (1/2 OF MAXIMUM)
(CH. 10.3.D.4.C)

TOTAL PARKS: MAX: 80 SPACES
MIN: 40 SPACES

BICYCLE PARKING CALCULATIONS:
CRAFT KITCHEN (RESTAURANT): MIN OF 2 SPACES FOR 15 TO 40 VEHICLE SPACES
CRAFT KITCHEN MINIMUM VEHICLE SPACES = 23
(CH. 10.3.C.2)

PARKING PROVIDED:
EX. SPACES: 88
PROPOSED SPACES: 79
9 SPACES ARE BEING REPLACED WITH AN OUTDOOR SEATING PATIO.
H.C. (VAN ACCESSIBLE) 5
BICYCLE PARKING SPACES 2

PIN: 1754662151
EX. IMPERVIOUS AREA: 63,873 SF (1.47 Ac.) (84.76%)
PRO. IMPERVIOUS AREA: 63,950 SF (1.47 Ac.) (84.86%)
LANDSCAPE AREA: 0.26 Ac. (15.14%)
RIVER BASIN: LOWER NEUSE RIVER
DISTURBED AREA: ±0.15 AC.



LINE	BEARING	DISTANCE
L1	S 79°09'54" W	79.97'
L2	N 08°51'58" E	65.81'
L3	N 17°14'32" E	74.35'
L4	N 64°44'17" E	51.33'
L5	N 61°33'51" E	99.90'
L6	N 57°31'39" E	100.01'

CURVE	ARC LENGTH	RADIUS	DELTA ANGLE	CHORD BEARING	CHORD LENGTH
C1	2.41'	16.50'	8°22'34"	N 13°03'15" E	2.41'
C2	57.11'	83.50'	39°11'06"	N 02°20'56" W	56.00'

HE HAS MADE MY MOUTH LIKE A SHARP SWORD, IN THE SHADOW OF HIS HAND HE HAS CONCEALED ME, AND HE HAS ALSO MADE ME A SELECT ARROW, HE HAS HIDDEN ME IN HIS QUIVER. ISAIAH 49:2

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BLN-C-1874

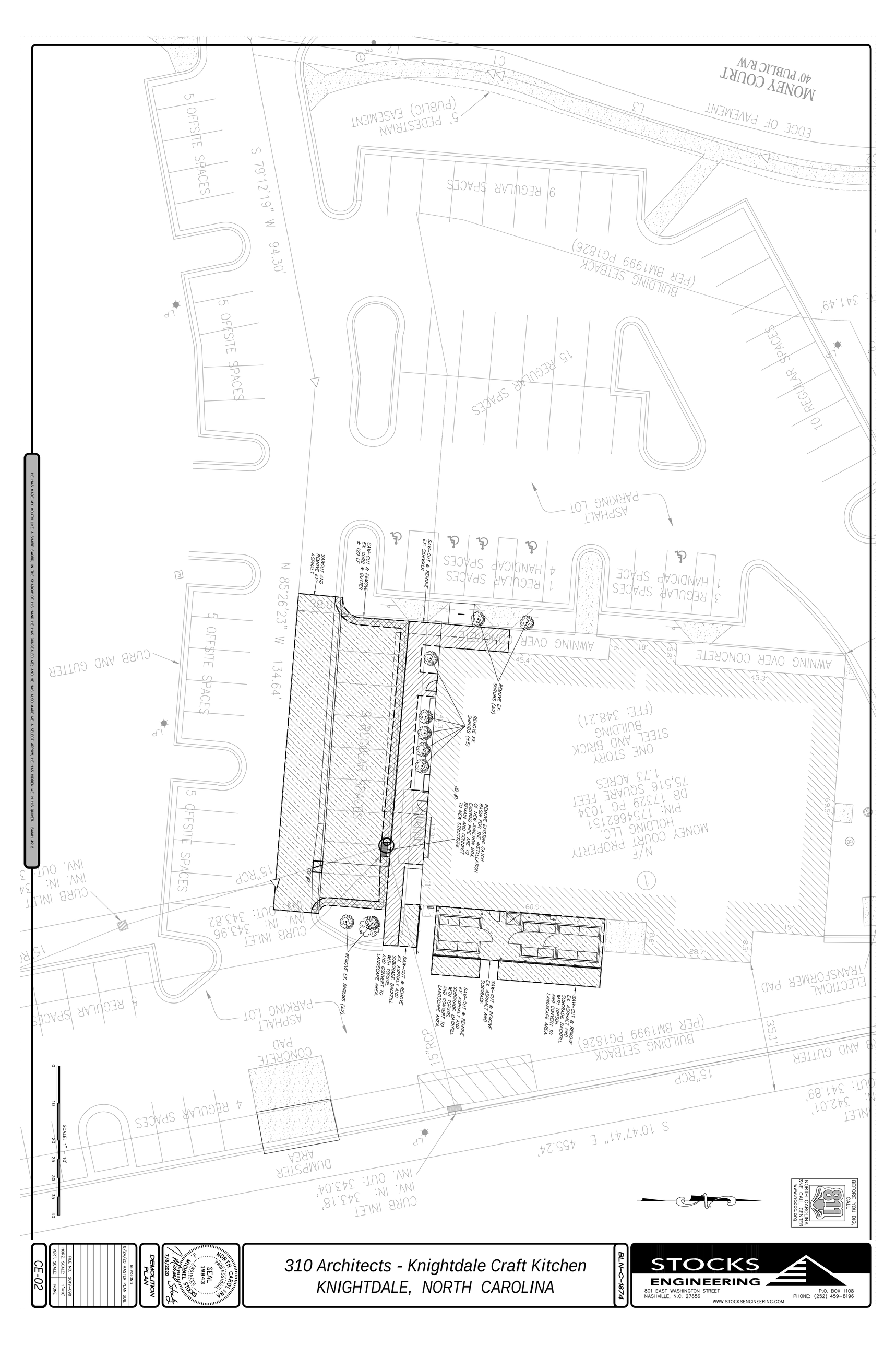
310 ARCHITECTS - KNIGHTDALE CRAFT KITCHEN
KNIGHTDALE, NORTH CAROLINA

NORTH CAROLINA PROFESSIONAL SEAL 19843 ENGINEER J. MICHAEL STOCKS
7/8/2020

EXISTING CONDITIONS

REVISIONS
8/24/20 MASTER PLAN SUB.
FILE NO. 2019-098
HORZ. SCALE: 1"=30'
VERT. SCALE: NONE

CE-01



WE HAS MADE MY MOUTH LIKE A SHARP SWORD; IN THE SHADOW OF HIS HAND HE HAS CONCEALED ME, AND HE HAS ALSO MADE ME A SELECT ARROW; IN HIS QUIVER HE HAS HIDDEN ME. IN HIS QUIVER (ISAIAH 49:2)

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CE-02

FILE NO.	2019-098
HORZ. SCALE	1"=10'
VERT. SCALE	NONE

REVISIONS
8/24/20 MASTER PLAN SUB

DEMOLITION PLAN

NORTH CAROLINA REGISTERED LANDSCAPE ARCHITECT SEAL 19843 MATTHEW STOCKS
7/6/2020

310 Architects - Knightdale Craft Kitchen
KNIGHTDALE, NORTH CAROLINA

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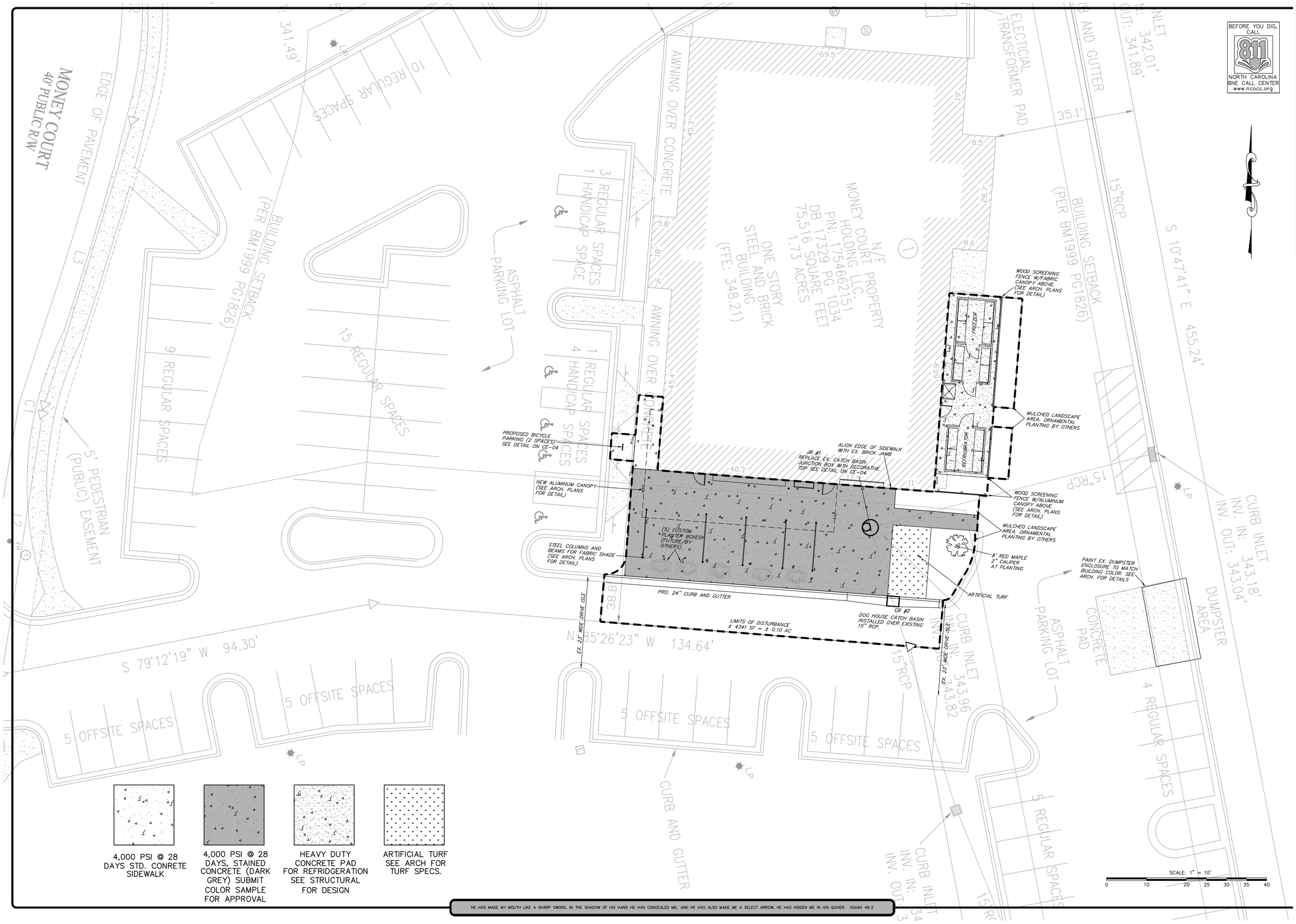

4,000 PSI @ 28 DAYS STD. CONRETE SIDEWALK

4,000 PSI @ 28 DAYS, STAINED CONCRETE (DARK GREY) SUBMIT COLOR SAMPLE FOR APPROVAL

HEAVY DUTY CONCRETE PAD FOR REFRIDGERATION SEE STRUCTURAL FOR DESIGN

ARTIFICIAL TURF SEE ARCH FOR TURF SPECS.

HE HAS MADE MY MOUTH LIKE A SHARP SWORD, IN THE SHADOW OF HIS HAND HE HAS CONCEALED ME; AND HE HAS ALSO MADE ME A SELECT ARROW, HE HAS HIDDEN ME IN HIS QUIVER. ISAIAH 49:2

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310 Architects - Knightdale Craft Kitchen
KNIGHTDALE, NORTH CAROLINA

NORTH CAROLINA PROFESSIONAL SEAL 19843 ENGINEER J. MICHAEL STOCKS
7/8/2020

SITE, and UTILITY PLAN

REVISIONS
8/24/20 MASTER PLAN SUB.

FILE NO.	2019-098
HORZ. SCALE:	1"=10'
VERT. SCALE:	NONE

CE-03

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310 Architects - Knightdale Craft Kitchen
KNIGHTDALE, NORTH CAROLINA

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 19843 J. MICHAEL STOCKS
7/8/2020

GRADING PLAN

REVISIONS
8/24/20 MASTER PLAN SUB.

FILE NO.	2019-098
HORZ. SCALE:	1"=10'
VERT. SCALE:	NONE

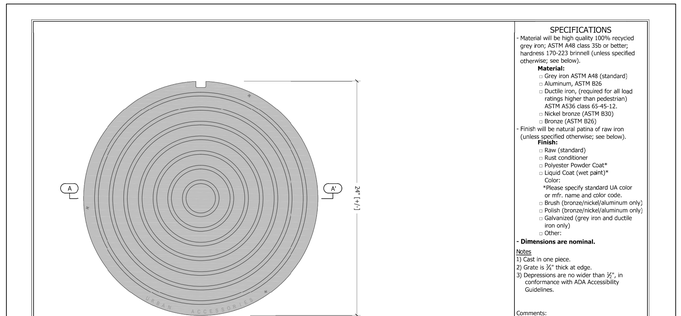
CE-04

SCALE: 1" = 10'
0 10 20 25 30 35 40

HE HAS MADE MY MOUTH LIKE A SHARP SWORD, IN THE SHADOW OF HIS HAND HE HAS CONCEALED ME; AND HE HAS ALSO MADE ME A SELECT ARROW, HE HAS HIDDEN ME IN HIS QUIVER. ISAIAH 49:2

City of Raleigh Standard Utility Notes

1. *All materials & construction methods shall be in accordance with City of Raleigh design standards, details & specifications (reference: CORPUD Handbook, current edition)*
2. *Utility separation requirements:*
   a) *A distance of 100'shall be maintained between sanitary sewer & any private or public water supply source such as an impounded reservoir used as a source of drinking water. If adequate lateral separation cannot be achieved, ferrous sanitary sewer pipe shall be specified & installed to waterline specifications. However, the minimum separation shall not be less than 25'from a private well or 50'from a public well*
   b) *When installing water &/or sewer mains, the horizontal separation between utilities shall be 10'. If this separation cannot be maintained due to existing conditions, the variation allowed is the water main in a separate trench with the elevation of the water main at least 18"above the top of the sewer & must be approved by the Public Utilities Director. All distances are measured from outside diameter to outside diameter*
   c) *Where it is impossible to obtain proper separation, or anytime a sanitary sewer passes over a watermain, DIP materials or steel encasement extended 10'on each side of crossing must be specified & installed to waterline specifications*
   d) *5.0'minimum horizontal separation is required between all sanitary sewer & storm sewer facilities, unless DIP material is specified for sanitary sewer*
   e) *Maintain 18"min. vertical separation at all watermain & RCP storm drain crossings; maintain 24"min. vertical separation at all sanitary sewer & RCP storm drain crossings. Where adequate separations cannot be achieved, specify DIP materials & a concrete cradle having 6"min. clearance (see CORPUD details W-41 & S-49)*
   f) *All other underground utilities shall cross water & sewer facilities with 18"min. vertical separation required*
3. *Any necessary field revisions are subject to review & approval of an amended plan &/or profile by the City of Raleigh Public Utilities Department prior to construction*
4. *Contractor shall maintain continuous water & sewer service to existing residences & businesses throughout construction of project. Any necessary service interruptions shall be preceded by a 24 hour advance notice to the City of Raleigh Public Utilities Department*
5. *3.0'minimum cover is required on all water mains & sewer forcemains. 4.0'minimum cover is required on all reuse mains*
6. *It is the developer's responsibility to abandon or remove existing water & sewer services not being used in redevelopment of a site unless otherwise directed by the City of Raleigh Public Utilities Department. This includes abandoning tap at main & removal of service from ROW or easement per CORPUD Handbook procedure*
7. *Install 2" water services with meters located at ROW or within a 2'x2'Waterline Easement immediately adjacent. NOTE: it is the applicant's responsibility to properly size the water service for each connection to provide adequate flow & pressure*
8. *Install 4"PVC sewer services @ 1.0% minimum grade with cleanouts located at ROW or easement line & spaced every 75 linear feet maximum*
9. *Pressure reducing valves are required on all water services exceeding 80 psi; backwater valves are required on all sanitary sewer services having building drains lower than 1.0'above the next upstream manhole*
10. *All environmental permits applicable to the project must be obtained from NCDWQ, USACE &/or FEMA for any riparian buffer, wetland &/or floodplain impacts (respectively) prior to construction.*
11. *NCDOT / Railroad Encroachment Agreements are required for any utility work (including main extensions & service taps) within state or railroad ROW prior to construction*
12. *Grease Interceptor / Oil Water Separator sizing calculations & installation specifications shall be approved by the CORPUD FOG Program Coordinator prior to issuance of a Building Permit. Contact Tim Beasley at (919) 996-2334 or timothy.beasley@raleighnc.gov for more information*
13. *Cross-connection control protection devices are required based on degree of health hazard involved as listed in Appendix-B of the Rules Governing Public Water Systems in North Carolina. These guidelines are the minimum requirements. The devices shall meet American Society of Sanitary Engineering (ASSE) standards or be on the University of Southern California approval. The devices shall be installed and tested (both initial and periodic testing thereafter) in accordance with the manufacturer's recommendations or the local cross-connection control program, whichever is more stringent. Contact Joanie Hartley at (919) 996-5923 or joanie.hartley@raleighnc.gov for more information*



Plan

Section A-A'

SPECIFICATIONS
- Material will be high quality 100% recycled grey iron; ASTM A48 class 35b or better; hardness 170-223 brinnell (unless specified otherwise; see below).
  - **Material:**
  - ☐ Grey iron ASTM A48 (standard)
  - ☐ Aluminum, ASTM B26
  - ☐ Ductile iron, (required for all load ratings higher than pedestrian) ASTM A536 class 65-45-12.
  - ☐ Nickel bronze (ASTM B30)
  - ☐ Bronze (ASTM B26)
- Finish will be natural patina of raw iron (unless specified otherwise; see below).
  - **Finish:**
  - ☐ Raw (standard)
  - ☐ Rust conditioner
  - ☐ Polyester Powder Coat*
  - ☐ Liquid Coat (wet paint)*
  - Color:
  - *Please specify standard UA color or mfr. name and color code.
  - ☐ Brush (bronze/nickel/aluminum only)
  - ☐ Polish (bronze/nickel/aluminum only)
  - ☐ Galvanized (grey iron and ductile iron only)
  - ☐ Other:
- **Dimensions are nominal.**

Notes
1) Cast in one piece.
2) Grate is ½" thick at edge.
3) Depressions are no wider than ½", in conformance with ADA Accessibility Guidelines.

Comments:

Manhole Cover
24" Rd. Rainbow

Page 1 of 1 Date: 4/16/12

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Concrete and Asphalt Testing

Portland Cement Concrete Testing Requirements
Initial Test: The initial test (from first ready-mix truck) is to be taken after the second cubic yard is dispensed from the mixer and is to consist of the following:
1. One slump test
2. Three cylinders pulled, prepared and stored on-site for 24 hours
3. Temperature recording

Subsequent Tests: After the above tests are pulled from the initial truck, every 5th truck thereafter is to be tested in the same manner as noted above.

Asphalt Concrete Testing Requirements
Compaction: Testing for asphalt density is to follow NCDOT "Standard Specifications for Roads and Structures", Section 609-9, "Field Compaction Quality Management," latest revision.
Thickness: The minimum frequency of coring for thickness testing shall be on the basis of test sections consisting of not more than 1500 linear feet of lay down width, exclusive of intersections and irregular areas. The test sample is to be a 6-inch cored sample. The sample is to be numbered and logged for identification purposes.
Contractor's Quality Control System: Follow NCDOT "Standard Specifications for Roads and Structures", Section 609-5, "Contractor's Quality Control System," latest revision.
Mixture and Job Mix Formula Adjustments: Follow NCDOT "Standard Specifications for Roads and Structures", Section 609-4. "Field Verification of Mixture and Job Mix Formula Adjustments", latest revision.
General: All other applicable sections of Section 609 of the NCDOT "Standard Specifications for Roads and Structures" shall apply relating to Quality Control Plan, mix design, control limits, corrective action, equipment and measurement.
Testing Cost: Site Contractor is responsible for cost of testing.

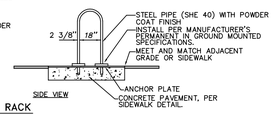
Concrete Notes

1. All construction, placing, pouring and curing concrete is to conform to the latest edition of ACI 318.
2. All reinforcing steel is to be cold cut and bent in conformance with the latest edition of ACI 318 and ASTM A-615.
3. Portland Cement Concrete shall have a minimum 28-day compressive strength of 4,000 PSI (or noted), a non-vibrated slump between 2.5 and 4-inches, a minimum cement content of 545 pounds per cubic yard, an air entrainment of 5-7-percent and a maximum water-cement ratio of 0.545 in accordance with Class B concrete as described in the NCDOT Standard Specifications for Roads and Structures unless otherwise specified.
4. Do not use chloride in any concrete which has reinforcing steel or wire fabric.
5. Reinforcing steel shall meet ASTM A-615, Grade 60. Welded wire fabric shall meet ASTM A-185. Tie wire shall conform to ASTM A-82.
6. Lap welded wire fabric a minimum of one mesh. Lap all bars a minimum of 24 inch. Alternate adjacent bar splices a minimum of 48".
7. Use only approved chairs with sand plates to support reinforcing on grade.
8. All crossings of reinforcement are to be tied. Supports for reinforcing to hold bars against movement during pour and finish operation. Supports for reinforcing bars to be a minimum of 48 inches apart.
9. Concrete shall be only plant-mixed, transit-mixed or ready-mixed concrete. The time elapsing from mixing to placing the concrete shall not exceed ninety (90) minutes.
10. Concrete shall not be deposited on frozen subgrade and shall not be poured when the air temperature for the succeeding 24-hour period is less than 32 degrees F.
11. All concrete when placed in forms shall have a temperature between 50 degrees F and 90 degrees F and shall be maintained at a temperature of not less than 50 degrees for at least 72 hours for normal concrete and 24 hours for high early strength concrete.
12. Do not place fresh concrete during summer on a dry subgrade. Moisten subgrade before placing concrete.
13. Subgrade is to be firm, free of water and/or silt and undisturbed or compacted properly. Consult Engineer if soft or yielding subgrade is encountered for improvement directions. If ground water is entering subgrade, consult Engineer for instructions.
14. Areas of concrete to be removed shall be saw cut before removing. The saw cut shall provide a smooth, straight edge approximately two (2) inches deep before breaking away the adjacent concrete.
15. Immediately after the forms have been removed and all honeycombed areas are repaired, backfill to prevent underwash.
16. Brooming of the concrete surface shall be done transverse to the direction of traffic for all pedestrian areas.
17. Joint spacing shall be no less than 8-feet. Where existing sidewalks are being widened, transverse joints shall be located so as to line up with existing joints in the adjacent existing sidewalk. Grooved joints shall not be sealed.
18. Concrete Sub shall be responsible for all score joints and expansion joints. A preliminary score joint pattern and expansion joint pattern shall be submitted to the project engineer for review prior to pouring concrete.
19. Expansion joints shall be one-half (1/2) inch in width and shall be placed between all rigid objects at a distance of no more than thirty (30) feet apart and shall extend the full depth of the concrete with the top of the filler one-half (1/2) inch below the finished surface.
20. The edges of the curb/sidewalk shall be finished with an approved edging tool one-half (1/2) inch radius. Joints shall be similarly finished immediately after templates have been removed.
21. Saw control joints as soon as fresh concrete will retain coarse aggregate against the sawing action.
22. Contractor SHALL NOT POUR any concrete before forms are inspected by the project engineer and/or the owner. Any concrete that has not been approved by the engineer and/or owner will be the responsibility of the contractor.

Drainage Notes

1. Boxes may be reinforced masonry, masonry, precast concrete or cast-in-place reinforced concrete.
2. The maximum height of an un-reinforced masonry drainage structure with 8" walls shall be limited to 8' – 0" from invert of the outlet pipe to the top of the casting. Depths greater than 8' – 0" shall have walls 12" thick. Basins over 12' in total depth shall be designed by a NC Professional Engineer. 49" walls are not allowed on drainage structures.
3. Steps are to be provided on all basins deeper than 42".
4. Steps are to be PS1-PF as manufactured by M. A. Industries or an approved equal. Locate on non-pipe walls.
5. Mortar in masonry boxes is to be type M.
6. Clay brick structures are not allowed.
7. Concrete pipe is to be minimum Class III reinforced concrete meeting ASTM C-76, latest revision.
8. Concrete building brick is to meet ASTM C-55, Grade N, Type 1.
9. All iron castings are to be drilled and lagged to the drainage structure. The drainage structure as well is to be drilled.
10. All cast-in-place or precast concrete drainage structures located in paved areas accessible to truck loadings to be designed to meet AASHTO HS 20-44 loading. See manufacturers details for wall, top and bottom thickness.
11. All frames, grates, and hoods to receive a bituminous coating.

NOTES:
1. PRE-MANUFACTURED BIKE RACKS TO BE INSTALLED PER MANUFACTURER'S SPECIFICATIONS.
2. INVERTED U STYLE BIKE RACK 2 3/8" STEEL PIPE BIKE RACKS W/IN GROUND PERMANENT MOUNTED, 1 BIKES PER RACK. POWDER COAT FINISH, STND. COLOR (YELLOW) TO BE APPROVED BY OWNER.
   APPROVED MANUFACTURED:
   1) GAMETIME
   1) LANDSCAPE STRUCTURE
   1) KAY PARK
   1) OR APPROVED EQUAL
3. SUBMIT SHOP DRAWINGS FOR APPROVAL.



BICYCLE RACK
SCALE: N.T.S.

Grading Notes

1. Site Contractor to inform General Contractor to verify finished grade at building before digging footings. Some portions of the building foundation wall may, of necessity, need to retain building pad fill to allow exterior grades to be dropped. In this case, step footings may be necessary to achieve the desired grade variations.
2. New finished contours shown are top of future paving in areas to receive pavement and top of topsoil in areas to be seeded or sodded.
3. Areas outside of the parking lot perimeters shown to be seeded shall receive 4 inches of topsoil. This topsoil to be placed and leveled by the Contractor.
4. Dimensions on buildings are for grading purposes only and are not to be used to lay-off footings. See Architectural Plans.
5. Contractor shall notify and cooperate with all utility companies or firms having facilities on or adjacent to the site before disturbing, altering, removing, relocating, adjusting or connecting to said facilities. Contractor shall raise or lower tops of existing manholes, as required, to match finished grades.
6. All catch basin grate and frames are to be Vulcan or approved equal. Verify that dimension heights on castings are not exceeded in critical areas before ordering substitute castings.
7. All areas not covered by an impervious surface or landscaped planting beds are to be grassed.
8. Unusable excavated materials and all waste resulting from clearing and grubbing shall be disposed of off-site by Contractor.
9. All excavation is unclassified and shall include all materials encountered.
10. Before any machine work is done, Contractor shall stake out and mark the items established by the Site Plan. Control points shall be preserved at all times during the course of the project. Lack of proper working points and grade stakes may require cessation of operations until such points and grades have been placed to the Owner's satisfaction.

Parking, Roadway and Building Subgrade Preparation

1. Subgrade on Precompacted Original Soil
   a. Remove all the topsoil and all questionable organic soil and extend a minimum of four (4) feet beyond the outside edge of the pavement. Stockpile all topsoil that is free from trash and debris for re-use.
   b. Precompact the exposed grade with a vibratory roller weighing a minimum of ten (10) tons (static load) or of the type to stabilize the initial settlement of the top strata of the soil. The stability of the subgrade will be considered adequate when the total settlement after the last four (4) complete passes by the vibratory roller does not exceed 1/8". Any area that settles excessively and fails to stabilize under continued rolling should be further undercut and replaced with properly compacted select granular fill.

2. Subgrade on Certified Compacted Fill
   a. Prepare the site following the same procedures as outlined in items 1 and 2 above.
   b. Using the same compaction equipment as outlined above, compact new fill soil in +/-8-inch layers to a minimum 98-percent of the maximum dry density at its optimum moisture content in accordance with the Standard Proctor Method, ASTM Standard D 698-78 and field controlled in accordance with ASTM Standard D 2167-84, or equal. The top one (1) foot of the prepared fill subgrade should be compacted to 100-percent of the maximum dry density using the Standard Proctor Method.
   c. The end of the fill should be terminated at the minimum slope of two (2) horizontal to one (1) vertical measured from three (3) feet beyond the outside edge of the pavement to the toe of the fill. The fill soil is to be select granular soil weighing a minimum of 110 pcf at its optimum moisture content.

Site Plan Notes

1. Contractor to provide full water service to site including meter, setting, and connection fees in his bid.
2. The Site Contractor is to assume responsibility for all water and sewer utilities from a point 5' outside of the building to the point of public connection.
3. Contractor to furnish all paint striping.
4. Owner to purchase or lease dumpsters & recycle bins. These will not be provided by Town.
5. A Geotechnical Investigation was prepared for this project. Contractor is responsible for digging site, if desired prior to bid. Contact Engineer at 252.459.8196 at least 48 hours prior to want to gain access.
6. All site plumbing is to meet the NC State Building Code, Volume II, Plumbing.
7. Water service lines to be HDPE 1 1/4 inch w/1 inch meter and backflow preventor.
8. Sewer service lines to be PVC, schedule 40 service weight. Minimum grades for 4-inch lines to be 2.08-percent.
9. Pressure reducing valve, if needed, to be located in building and is not Site Contractor's responsibility.
10. Provide handicap signs, markings and ramp per the details.
11. All signs, pavement markings, and other traffic control devices are the Site Contractor's responsibility and shall conform to: Manual on Uniform Traffic Control Devices, current edition, as amended; ADA guidelines; and, ANSI A117.1.
12. All dimensions are to face of curb unless indicated otherwise. Staking plan coordinates are to back of curb.
13. Contractor shall coordinate installation of all signs, pavement markings, and other traffic control devices with other Contractors on the site.
14. Contractor shall saw-cut to provide smooth transition at tie-in to existing edge of pavement when applicable.
15. Do not pour any concrete before forms are inspected and approved by Engineer/Owner.
16. Contractor shall comply with all pertinent provisions of the "Manual of Accident Prevention in Construction" issued by AGC of America, Inc., and the Safety and Health Regulations for Construction issued by the U.S. Department of Labor.
17. Storm drainage pipe is to be Class III reinforced concrete meeting ASTM C-76, latest revision.
18. All handicap ramps are to meet "ADA Accessibility Guidelines for Buildings and Facilities" as detailed in Federal Register, Vol. 56, No. 144, dated July 26, 1991, rules and regulations activated January 26, 1992, latest revision. Also, refer to North Carolina State Building Code Volume I-C, "Making Buildings and Facilities Accessible To and Useable by the Physically Handicapped", 1991, latest edition and ANSI A117.1, current edition, as amended.

General Notes:

1. This plan must be approved by the Town of KNIGHTDALE prior to construction of any street, water, storm drainage or other site improvements on this plan.
2. All improvements shall conform to the Town of KNIGHTDALE Standards and Specifications or NCDOT, as applicable.
3. Disturbed area is greater than 1 acre and formal Sedimentation & Erosion Control plan approval is required as a condition of construction plan approval. Measures shown on the approved Erosion & Sedimentation Control Plan should be regarded as minimum requirements; additional measures shall be put in place as needed to insure that no sediment is released from the site.
4. The General Contractor is responsible for installing and maintaining all measures necessary to ensure that all sediment is contained on-site.
5. Omitted.
6. Stormwater detention and nutrient management does not apply.
7. Water and sewer service fees are due on this site prior to setting of taps or meters. Contact Town of KNIGHTDALE for payment information.
8. Contractor shall make arrangements with the local utility authority for connection to existing mains. Do NOT operate any existing valves without permission of the Town of KNIGHTDALE.
9. Water meters supplied by contractors shall contain encoder register and module for radio transmitted meter reading per Town of KNIGHTDALE Standard.
10. For the installation of electrical services, location of pad-mounted transformer if needed and to coordinate electrical temporary service, contact Public Utilities at Town of KNIGHTDALE.
11. Any relocation of existing utilities will be at the cost of the General Contractor. The Town will not accept responsibility for damages to curb and gutter or street improvements if installed prior to underground services, nor will the Town absorb the cost for pavement patching, damages to landscaping or borings to install underground services.
12. Contractor shall be responsible for all work zone traffic control in or adjacent to ROW. All signs, pavement markings and other traffic control devices shall conform to the Manual on Uniform Traffic Control Devices (MUTCD), latest edition as amended.
13. Fire Protection water supply system including fire hydrants, shall be installed and in service prior to recording the subdivision, or, if no subdivision is involved, shall be installed prior to the placing of combustible building materials for structures or combustible pre-tested fabricated building assemblies on the project site or utilizing them in the construction of building structures. If phased coordination is planned, coordinate installation of the fire protection water system is permitted.
14. Fire department vehicular access to all structures under construction shall be provided at all times. In areas where ground surfaces are soft or likely to become soft, hard all weather surface roads shall be provided and maintained.
15. Every street will utilize a complete Street Name consisting of a Base Name and Type Suffix (e.g., Main Street). Assigned Address must be issued via Downing and Associates, Inc. ADDRESSING CERTIFICATE completed by the Town of KNIGHTDALE Planning Dept. Addressing Agent and will be verified through the Town of KNIGHTDALE 9-1-1 Coordinators Office. General Contractor to coordinate.
16. Commercial property Address Numbers shall be a minimum of ten (10) inches in height with a minimum stroke width of one (1) inch. These numbers shall contrast with their background and shall be Arabic style numerals.
17. Address Numbers must be posted on the front of the structure nearest to the main entrance in a position to be plainly legible, visible and unobstructed from the street or road fronting the property.
18. Any change or deviation from this plat, prior to or during construction, will cause addressing and/or street names to be re-evaluated with possible subsequent change.
19. Plans are based on an actual field survey performed by Downing and Associates, Inc. Reference horizontal datum is NAD 83, reference vertical datum is NAVD 88.
20. Contractor to verify all building dimensions and/or location(s) with architectural drawings before beginning construction. If discrepancies are found, cease construction and consult the architect and civil site engineer for resolution.
21. Omitted.
22. All HVAC equipment shall be screened from the view of all public street rights-of-way for their entire length along those streets, except for necessary access.
23. For the installation of gas services, contact Public Utilities.
24. The customer is required to provide an outside lockable disconnect.
25. Right-of-Way Easement must be signed prior to installation of utilities.
26. Call NC One Call Center at (800) 632-4949 before digging to locate existing utilities.
27. If overhead primary electric lines are present, mature tree height shall not exceed 15 feet.
28. Copies of all permits and approved plans must be kept on site in a permit box that is conspicuously located and easily accessible during construction. This includes approved construction plans, approved erosion control plans, encroachment agreements, driveway permits, water/sewer permits, etc.
29. Plan approval is valid for two (2) years from approved date.

Sewer Notes

1. No Sewer line installation shall take place until an approved Site Plan has been issued.
2. Sewer Pipe:
   a. SDR-35 SMOOTHWALL: Pipe shall conform to ASTM D-3034 Type PSM, SDR-35.
3. Pipe bedding shall be Class B modified (i.e. stone to top of pipe).
4. Any well pointing, dewatering, etc. needed during sewer construction is to be included in the cost of the line laid. Utilize select fill from on-site for trench borrow when needed. If material of a select nature is not available, bring in from off-site.
5. The minimum clearances for water, sewer and storm drainage lines shall be as follows:

Between	Horizontal	Vertical
Water and Sewer	10'	18" w/water above sewer
Water and StormDrainage	–	12" w/water above storm drainage
Sewer and Storm Drainage	–	24" w/storm drainage above sewer

6. The Contractor shall make arrangements with the local utility authority when connecting to existing manholes or mains.
7. Location, size and invert elevations of clean outs shown on "private" services are to be coordinated with the approved Plumbing Plans for the building. All plumbing is to meet the requirements of the NC State Building Code, Volume II, Plumbing, latest revision.
8. Contractor shall seed, mulch and tack all disturbed areas within 7 days after backfilling trench. All sedimentation control measures shall be kept in operable condition until a stand of grass is established and the area is capable of resisting erosion by wind and rain. All erosion control measures shall be removed when authorized by the Engineer at the completion of the project.
9. All excavated wood and rocks shall be disposed of offsite by the Contractor. Bury will not be permitted onsite.
10. Contractor shall take proper precautions not to disturb existing property corner markers. All disturbed property corner markers shall be replaced by a Registered Land Surveyor.
11. All cost for the provision of erosion control rip rap, jute matting, grass seeding and silt fence shall be included in total base bid.
12. Manholes or Wetwells qualify as "confined" and require compliance with OSHA "Confined Access Entry" requirements. Certified equipment, proper notification and other applicable equipment and or devices may be necessary to protect workers, after system is operational, from hydrogen-sulfide gas build-up or otherwise oxygen-less environment.
13. The contractor shall provide to Engineer, upon completion of water and sewer construction, record drawings of the sewer installation specifically showing/depicting any deviations from the permitted plans. Plans are to be marked surveyed and submitted to Engineer. The final payment request will not be submitted to the owner nor will a "certificate of substantial completion" be issued until these "surveyed plans" have been completed and received by the Engineer.
14. Utility contractor is responsible for notifying local authority of time and date he plans to commence construction.
15. Where lines cross gravel/asphalt driveways, Contractor is to restore driveways to the original condition. Drives shall be repaired within 7-days of open cut.
16. All Sanitary Sewer shall be in accordance to Town of KNIGHTDALE Standards and Specifications.
17. All Frames and Lids to receive a bituminous coating.

Water Notes

1. No existing valves and fire hydrants shall be operated without the explicit permission from the Public Utility Owner. The contractor shall make arrangements with the local utility authority prior to connecting to existing mains.
2. Contractor shall seed, mulch, and tack all disturbed area within 7 days after backfilling trench. All sedimentation control measures shall be kept in operable condition until a stand of control measures shall be removed when authorized by the Engineer at the completion of the project.
3. All excavated wood and rocks shall be disposed off-site by the Contractor. Bury will not be permitted on-site.
4. Water line crossing existing asphalt pavement shall be installed by the Open Cut method.
5. Where lines cross gravel/asphalt driveways, Contractor is to restore driveways to the original condition. Drives shall be repaired within 7-days of open cut.
6. Contractor shall take proper precautions not to disturb existing property corner markers. All disturbed property corner markers shall be replaced by a Registered Land Surveyor.
7. All cost for the provision of erosion control rip rap, jute matting, grass seeding and silt fence shall be included in the total base bid.
8. Utility contractor is responsible for notifying local authority of time and date he plans to commence construction.
9. Any well pointing, dewatering, etc. needed during construction shall be the responsibility of the contractor. Trench borrow needed during construction shall be included in the cost of the line laid, unless otherwise specified.
10. Valve box to be 3 piece telescopic with concrete collar when not in pavement.
11. The contractor shall provide all the material and appurtenances necessary for the complete installation of the utilities. All pipe and fittings shall be inspected prior to being covered.
12. Lines shall be flushed thoroughly to remove all dirt and debris. Chlorine shall be applied to all water lines in sufficient concentration to leave an overall residual of 50 ppm. The chlorinated water shall remain in the lines for 24 hours at the end of which time the chlorine residual shall be at least 10 ppm. The lines shall then be flushed until there is normal chlorine residual present and samples shall be collected for bacteriological analysis.
13. The contractor to conduct bacteriological testing of water lines, which have successfully passed hydrostatic testing and have been disinfected in conformance with AWWA Standards. This procedure requires (5) days to complete.
14. No contractors are authorized to use un-metered water during construction. All pipe and appurtenances shall be thoroughly cleaned prior to placement. Pipe shall be laid with straight lines and even grades and all joints shall be perfectly fitted. During periods when pipe is not being laid, open ends shall be securely blocked.
15. All excavation is unclassified and shall include all materials encountered.
16. All concrete used for blocking and concrete collars is to be minimum 3,000 psi at 28 days, air entrained.
17. Contractor shall saw-cut to provide smooth transitions where existing asphalt is to be removed.

Gospel Notes

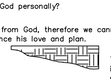
The following notes do not represent the belief of any municipality, government organization, or client of Stocks Engineering. The detail is included to show the foundation of Stocks Engineering and its employees. Our prayer is that through the truth outlined below you will clearly see what it means to have a personal relationship with Christ.

1. GOD'S LOVE

God loves you and he created you to know him personally.
He has a wonderful plan for you life.
John 3:16 "For God so loved the world that he gave his only son, that whoever believes in him shall not perish but have eternal life."
What prevents us from knowing God personally?

2. OUR CONDITION

People are sinful and separated from God, therefore we cannot know him personally and experience his love and plan.



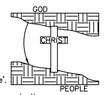
Romans 3:23 "For all have sinned and fall short of the glory of God."
Romans 6:23 "For the wages of sin is death" (Spiritual separation from God)

This diagram illustrates that God is Holy and people are sinful. A great gulf separates the two. The arrows illustrate people continually trying to reach God through our own efforts, but we inevitably fall.

There is only one way to bridge this gulf...

3. GODS RESPONSE

Jesus Christ is God's only provision for sin, Through him alone we can know God personally and experience his love and plan.



Romans 5:8 "But God demonstrated His own love for us in this: While we were still sinners, Christ died for us.
John 14:6 Jesus answered, 'I AM the way the Truth and the Life. No one comes to the Father except through me'.

This diagram illustrates that God has bridged the gulf that separates us from Him by sending His son, Jesus Christ, to die on the cross in our place to pay the penalty for our sins.

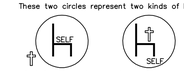
It is not enough just to know these truths...

4. OUR RESPONSE

We must individually receive Jesus Christ as Savior and Lord; only then can we know God personally and experience His love and plan.

Ephesians 2:8-9 "For it is by grace you have been saved, through faith – and this is not from yourselves, it is the gift of God – not by works, so no one can boast."
John 1:12 "Yet to all who received Him, to those who He gave the right to become children of God."

These two circles represent two kinds of lives...



Self-Directed Life
Self is in the center and on the throne; Christ is outside.

Christ-Directed Life
Christ is in the center and on the throne; self yelds to Christ.

Which circle best represents your life?
Which circle would you like to have represent your life?

You can receive Christ right now by faith in prayer.
"Lord Jesus, I need you. Thank you for dying on the cross for my sins. I open the door to my life and receive You as my Savior and Lord. Thank you for forgiving my sins and giving me eternal life. Take control of the throne of my life. Make me the kind of person You want me to be."
If this prayer expresses the desire of your heart, then you can pray this prayer and Christ will come into your life as he promised.

For more information on what it means to have a relationship with God, or if you have any questions or prayer request please submit them to stocksengineering@gmail.com, call us at 252.459.8196, or visit our web site, www.stocksengineering.com

LET ME GET YOU SOMETHING TO EAT, SO YOU CAN BE REFRESHED AND THEN GO ON YOUR WAY..... GENESIS 18:5

STOCKS ENGINEERING
801 EAST WASHINGTON STREET
NASHVILLE, N.C. 27856
P.O. BOX 1108
PHONE: (252) 459-8196
WWW.STOCKSENGINEERING.COM

BLN-C-1874

KNIGHTDALE, NORTH CAROLINA

NORTH CAROLINA PROFESSIONAL SEAL 19843 ENGINEER J. MICHAEL STOCKS
7/8/2020

SITE NOTES AND DETAILS

REVISIONS
8/24/20 MASTER PLAN SUB.

FILE NO.	2019-098
HORZ. SCALE:	AS NOTED
VERT. SCALE:	NONE

CE-05