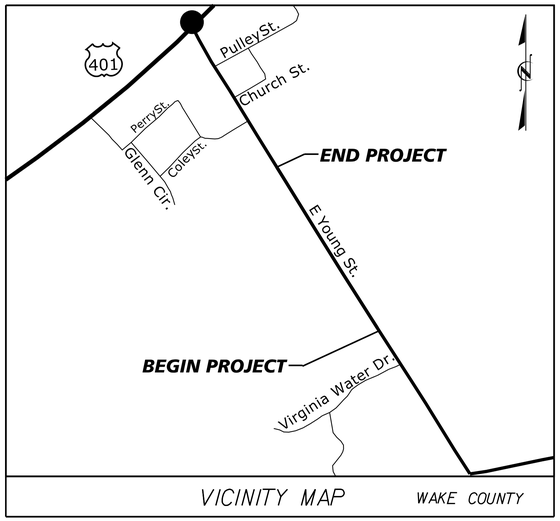
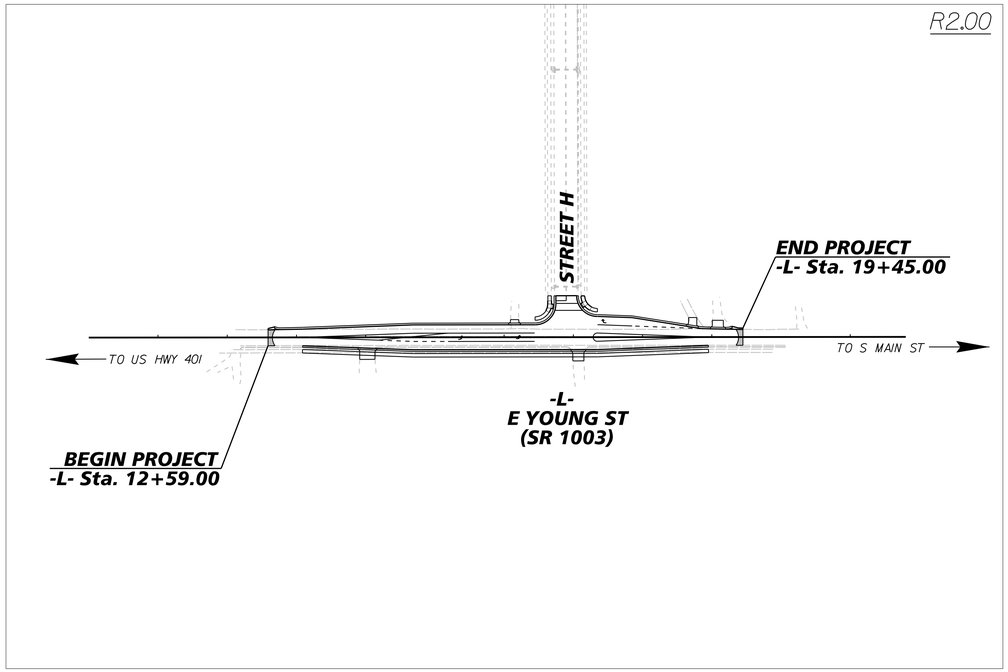
PARKER RIDGE
OFFSITE IMPROVEMENTS
ROLESVILLE, NC
LOCATION: E. YOUNG STREET (SR 1003) FROM APPROX. 2100' NORTH OF THE INTERSECTION OF US HWY 401 AND E YOUNG ST (SR 1003) TO APPROX. 1400' SOUTH OF THE INTERSECTION OF S MAIN ST AND E YOUNG ST (SR 1003)





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MICHAEL TAYLOR
919.465.5903
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TYLER WHITE, P.E.
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crice@advancedcivildesign.com

INDEX OF SHEETS

BEFORE YOU DIG
STOP
CALL 1 800 632-4949
N.C. ONE-CALL CENTER
IT'S THE LAW

CITY OF RALEIGH – PLANS AUTHORIZED FOR CONSTRUCTION

Plans for the proposed use have been reviewed for general compliance with applicable codes. This limited review, and authorization for construction is not to be considered to represent total compliance with all legal requirements for development and construction. The property owner, design consultants, and contractors are each responsible for compliance with all applicable City, State and Federal laws. This specific authorization below is not a permit, nor shall it be construed to permit any violation of City, State or Federal Law. All Construction must be in accordance with all Local, State, and Federal Rules and Regulations. This approval of this electronic document is only valid if the document has not been modified and the digital signature below is valid:

City of Raleigh Development Approval _____

GRAPHIC SCALE
20 0 40
PLANS
20 0 40
PROFILE (HORIZONTAL)
5 0 10
PROFILE (VERTICAL)

No.	REVISIONS	DATE	BY
1	FIRST SUBMITTAL TO TOWN	06/27/23	TDW

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PHONE: 919-682-3583
WWW.KIMLEY-HORN.COM
NC LICENSE #: F-0102

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 047105 TYLER D. WHITE
PRELIMINARY PLANS – DO NOT USE FOR CONSTRUCTION

KHA PROJECT	013829007
DATE	9/27/2023
SCALE	AS SHOWN
DESIGNED BY:	TDW
DRAWN BY:	JHV
CHECKED BY:	TDW

TITLE SHEET

PARKER RIDGE OFFSITE IMPROVEMENTS
NORTH CAROLINA
WAKE

SHEET NUMBER
R0.00

K:\DUR_Roadway\013829007 - Parker Ridge OS\Plan\Plan Sheets\013829007_tsht.dgn
9/27/2023

GENERAL NOTES

1. WORK IN THIS PROJECT SHALL CONFORM TO THESE PLANS, THE LATEST EDITIONS OF THE NORTH CAROLINA DEPARTMENT OF TRANSPORTATION (NCDOT) ROAD AND BRIDGE SPECIFICATIONS, THE NCDOT ROAD AND BRIDGE STANDARDS, THE NORTH CAROLINA EROSION AND SEDIMENT CONTROL HANDBOOK, THE NORTH CAROLINA EROSION AND SEDIMENT CONTROL REGULATIONS, TOWN OF ROLESVILLE SPECIFICATIONS, AND GENERAL DESIGN STANDARDS. IN THE EVENT OF CONFLICT BETWEEN ANY OF THESE STANDARDS, SPECIFICATIONS, OR PLANS, THE MOST STRINGENT SHALL GOVERN UNLESS OTHERWISE NOTED IN THESE PLANS.
2. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR ALL JOBSITE SAFETY, INCLUDING BUT NOT LIMITED TO TRENCH SAFETY, DURING ALL PHASES OF CONSTRUCTION.
3. THE LOCATION AND SIZE OF EXISTING UTILITIES AS SHOWN IS APPROXIMATE ONLY. THE CONTRACTOR IS RESPONSIBLE FOR HORIZONTALLY AND VERTICALLY LOCATING AND PROTECTING ALL PUBLIC OR PRIVATE UTILITIES (SHOWN OR NOT SHOWN) WHICH LIE IN OR ADJACENT TO THE CONSTRUCTION SITE. AT LEAST 72 HOURS PRIOR TO ANY DEMOLITION, GRADING, OR CONSTRUCTION ACTIVITY, THE CONTRACTOR SHALL NOTIFY THE NORTH CAROLINA ONE-CALL UTILITIES LOCATION SERVICE (ULOCO) AT 1-800-632-4949 FOR PROPER IDENTIFICATION OF EXISTING UTILITIES WITHIN THE SITE.
4. THE CONTRACTOR SHALL SALVAGE AND PROTECT ALL EXISTING POWER POLES, SIGNS, MANHOLES, TELEPHONE RISERS, WATER VALVES, ETC. DURING ALL CONSTRUCTION PHASES. THE CONTRACTOR SHALL REPAIR, AT HIS OWN EXPENSE, ANY EXISTING UTILITIES DAMAGED DURING CONSTRUCTION.
5. TRAFFIC MANAGEMENT ON PUBLIC STREETS IS THE RESPONSIBILITY OF THE CONTRACTOR AND SHALL BE IN CONFORMANCE WITH THE TRAFFIC CONTROL PLAN, THE 'MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES,' AND AS FURTHER DIRECTED BY THE TOWN AND STATE INSPECTORS.
6. ALL MANUFACTURERS' PRODUCTS SPECIFIED IN THESE PLANS OR USED AS APPROVED ALTERNATES SHALL BE INSTALLED PER THE MANUFACTURERS' SPECIFICATIONS.
7. ANY DISCREPANCIES FOUND BETWEEN THE DRAWINGS AND SPECIFICATIONS AND SITE CONDITIONS OR ANY INCONSISTENCIES OR AMBIGUITIES IN DRAWINGS OR SPECIFICATIONS SHALL BE IMMEDIATELY REPORTED TO THE ENGINEER, IN WRITING, WHO SHALL PROMPTLY ADDRESS SUCH INCONSISTENCIES OR AMBIGUITIES. WORK DONE BY THE CONTRACTOR AFTER HIS DISCOVERY OF SUCH DISCREPANCIES, INCONSISTENCIES, OR AMBIGUITIES SHALL BE DONE AT THE CONTRACTOR'S RISK.
8. CONSTRUCTION STAKEOUT FOR THIS PROJECT SHALL BE PROVIDED BY THE CONTRACTOR.
9. A PRE-CONSTRUCTION CONFERENCE SHALL BE HELD PRIOR TO THE START OF CONSTRUCTION. THE CONTRACTOR SHALL ARRANGE THE MEETING WITH NCDOT AND THE TOWN OF ROLESVILLE.
10. CONTRACTOR IS RESPONSIBLE FOR VERIFYING OR OBTAINING ALL REQUIRED PERMITS AND APPROVALS PRIOR TO COMMENCING CONSTRUCTION. NCDOT ENCROACHMENTS SHALL BE OBTAINED BY THE ENGINEER.
11. THE FRAMES AND COVERS OF ALL EXISTING AND PROPOSED DRAINAGE, SANITARY SEWER, WATER MAIN, GAS, AND WIRE UTILITY STRUCTURES SHALL BE ADJUSTED TO MATCH PROPOSED FINISHED ELEVATIONS AND SLOPES.
12. ROADWAYS MUST BE CAPABLE OF SUPPORTING FIRE APPARATUS DURING CONSTRUCTION.
13. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH CURRENT NCDOT STANDARDS, SPECIFICATIONS, DETAILS AND ENCROACHMENT AGREEMENTS.
14. NO CHANGES TO ANY ASPECT OF THIS ROADWAY PLAN, INCLUDING BUT NOT LIMITED TO, LANDSCAPING, GRADING, BUILDING ELEVATIONS, LIGHTING, OR UTILITIES WILL BE MADE WITHOUT THE APPROVAL OF NCDOT.
15. CONTRACTOR TO ENSURE THAT ALL STREETS WITHIN THE LIMITS OF THE PROJECT AND IN FRONT OF THE PROJECT ARE KEPT CLEAN AT ALL TIMES OR A WASH STATION WILL BE REQUIRED.
16. LIMITS OF OFFSITE IMPROVEMENTS NOT WITHIN FLOODPLAIN.

UTILITY NOTES

1. WATER VALVE BOXES THAT ARE ENCOUNTERED WITHIN THE PROJECT LIMITS ARE TO BE RAISED OR LOWERED TO MATCH THE ADJACENT FINISHED WORK.
2. WATER METER BOXES THAT ARE ENCOUNTERED WITHIN THE PROJECT LIMITS OUTSIDE THE PROPOSED PAVEMENT SECTION ARE TO BE RAISED OR LOWERED TO MATCH THE ADJACENT FINISHED WORK.
3. WATER METER BOXES THAT ARE ENCOUNTERED WITHIN THE PROPOSED PAVEMENT SECTION ARE TO BE RELOCATED OUT OF THE PROPOSED PAVEMENT.

GRADING

1. THE GRADE LINES SHOWN DENOTE THE FINISHED ELEVATION OF THE PROPOSED SURFACING AT GRADE POINTS SHOWN ON THE TYPICAL SECTIONS. GRADE LINES MAY BE ADJUSTED AT THEIR BEGINNING AND ENDING AND AT STRUCTURES AND EXISTING PAVEMENT AS DIRECTED BY THE ENGINEER IN ORDER TO SECURE A PROPER TIE-IN.
2. REFER TO EROSION CONTROL SHEETS FOR CLEARING LIMITS AND TEMPORARY EROSION CONTROL DEVICES TO BE INSTALLED PRIOR TO COMMENCING CONSTRUCTION.
3. EROSION AND SEDIMENT CONTROL MEASURES SHALL BE MAINTAINED CONTINUOUSLY, RELOCATED WHEN AND AS NECESSARY, AND SHALL BE CHECKED AFTER EVERY RAINFALL. SEEDED AREAS SHALL BE CHECKED REGULARLY AND SHALL BE WATERED, FERTILIZED, RESEEDED, AND MULCHED AS NECESSARY TO OBTAIN A DENSE STAND OF GRASS.
4. ALL AREAS SHALL BE GRADED FOR POSITIVE DRAINAGE, AND AS SHOWN ON THESE PLANS. THE CONTRACTOR SHALL MAINTAIN ADEQUATE SITE DRAINAGE DURING ALL PHASES OF CONSTRUCTION. IN ADDITION TO THE MEASURES SHOWN IN THESE PLANS, THE CONTRACTOR SHALL USE INTERIM SILT FENCES, DIVERSION DITCHES, BERMS, OR OTHER METHODS AS REQUIRED TO DIRECT DRAINAGE AS SHOWN ON THESE PLANS, TO BEST UTILIZE THE EROSION CONTROL DEVICES IN PLACE, AND TO PREVENT SILT AND CONSTRUCTION DEBRIS FROM FLOWING ONTO ADJACENT PROPERTIES. CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE STATE AND LOCAL EROSION, CONSERVATION, AND SILTATION ORDINANCES. CONTRACTOR SHALL REMOVE ALL TEMPORARY EROSION CONTROL DEVICES UPON COMPLETION OF PERMANENT DRAINAGE FACILITIES AND THE ESTABLISHMENT OF A STAND OF GRASS OR OTHER GROWTH TO PREVENT EROSION.
5. GRADING CONTRACTOR SHALL COORDINATE WITH THE UTILITY COMPANIES FOR ANY REQUIRED UTILITY ADJUSTMENTS AND/OR RELOCATIONS.
6. ALL MATERIALS USED FOR BACKFILL SHALL BE FREE OF WOOD, ROOTS, ROCKS, BOULDERS, OR ANY OTHER NON-COMPATIBLE SOIL TYPE MATERIAL. UNSATISFACTORY MATERIALS ALSO INCLUDE MAN-MADE FILLS AND REFUSE DEBRIS DERIVED FROM ANY SOURCE.
7. ALL GRADING / SOIL COMPACTION OPERATIONS WITHIN THE LIMITS OF STATE RIGHT OF WAYS SHALL ADHERE TO NCDOT REQUIREMENTS, IN ACCORDANCE WITH AASHTO T99 AS MODIFIED BY THE DEPARTMENT. COPIES OF THESE MODIFIED TESTING PROCEDURES ARE AVAILABLE UPON REQUEST FROM THE DEPARTMENT'S MATERIALS AND TESTS UNIT.
8. ALL DEMOLITION DEBRIS AND OTHER EXCESS MATERIAL SHALL BE HAULED OFF-SITE AS DIRECTED BY THE OWNER AND PROPERLY DISPOSED OF.
9. PROPOSED CONTOURS AND GUTTER GRADIENTS ARE APPROXIMATE. PROPOSED ROADWAY PROFILES/SUPERELEVATIONS ARE TO BE USED IN CASE OF DISCREPANCY.
10. REFER TO ROADWAY PLAN FOR HORIZONTAL DIMENSIONS.
11. WHERE FILL IS TO BE PLACED ON EXISTING SLOPES STEEPER THAN 4:1, CONTRACTOR SHALL EXCAVATE BENCHES WITH A MAXIMUM DEPTH OF 3'.
12. THE CONTRACTOR SHALL OBTAIN ALL PERMITS REQUIRED FOR BLASTING ROCK IF BLAST ROCK IS ENCOUNTERED. CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR COMPLYING WITH ALL BLASTING AND SAFETY REQUIREMENTS.
13. TREE PROTECTION FENCING SHALL BE INSTALLED AND INSPECTED BEFORE THE GRADING PERMIT IS ISSUED.
14. CROSS SLOPES AND ELEVATIONS SHOWN ON CROSS SECTIONS ARE APPROXIMATE. PROPOSED PAVEMENT CROSS SLOPES ARE TO BE BASED ON EXISTING CROSS SLOPE DETERMINED IN FIELD. IF FIELD CONDITIONS VARY FROM THOSE SHOWN ON PLANS, NOTIFY ENGINEER IMMEDIATELY.

PAVING/CURBING

1. WHERE PROPOSED CURB AND GUTTER TIES TO EXISTING CURB OR CURB AND GUTTER, A TRANSITION OF 10' SHALL BE MADE TO CONFORM TO THE EXISTING HEIGHTS AND SHAPES.
2. BEFORE ANY EARTHWORK IS DONE, THE CONTRACTOR SHALL STAKE OUT AND MARK THE LIMITS OF PAVEMENT AND OTHER ITEMS ESTABLISHED IN THE PLANS. THE CONTRACTOR SHALL PROVIDE ALL NECESSARY ENGINEERING AND SURVEYING FOR LINE AND GRADE CONTROL POINTS RELATED TO EARTHWORK.
3. ALL PAVEMENT SUB GRADES SHALL BE SCARIFIED TO A DEPTH OF 8 INCHES AND COMPACTED TO A MINIMUM DENSITY OF 100 PERCENT OF ASTM D-1557 DENSITY AT OPTIMUM MOISTURE CONTENT UNLESS OTHERWISE SHOWN ON THE CONSTRUCTION PLANS OR AS DIRECTED BY THE GEOTECHICAL ENGINEER. FILL SHALL BE PLACED AND COMPACTED IN MAXIMUM 8" LIFTS. IN AREAS WHERE ROCK IS ENCOUNTERED AT FINAL SUB GRADE ELEVATION, THE EXPOSED ROCK SHALL BE TOPPED WITH A LEVELING COURSE OF SANDY CLAY OR CLAYEY SAND (P.I. BETWEEN 4 AND 15) AS NEEDED TO PROVIDE A SMOOTH SURFACE FOR PAVING.
4. THE CONTRACTOR SHALL CLEAR AND GRUB THE SITE AND PLACE, COMPACT, AND MOISTURE CONDITION ALL FILL PER THE PROJECT GEOTECHNICAL ENGINEER'S SPECIFICATIONS. THE FILL MATERIAL TO BE USED SHALL BE APPROVED BY THE GEOTECHNICAL ENGINEER PRIOR TO PLACEMENT.
5. ALL CURB JOINTS SHALL EXTEND THROUGH THE CURB. MINIMUM LENGTH OF OFFSET JOINTS AT RADIUS POINTS IS 1.5 FEET. ALL JOINTS SHALL BE SEALED WITH JOINT SEALANT.
6. TESTING OF MATERIALS REQUIRED FOR THE CONSTRUCTION OF THE PAVING IMPROVEMENTS SHALL BE PERFORMED BY AN APPROVED AGENCY FOR TESTING MATERIALS. THE NOMINATION OF THE TESTING LABORATORY AND THE PAYMENT OF SUCH TESTING SERVICES SHALL BE MADE BY THE OWNER. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO SHOW BY STANDARD TESTING PROCEDURES THAT THE WORK CONSTRUCTED DOES MEET THE REQUIREMENTS OF THE NCDOT SPECIFICATIONS.
7. ALL REINFORCING STEEL SHALL BE NEW DOMESTIC BILLET STEEL CONFORMING TO ASTM A-615, GRADE 60, AND SHALL BE SUPPORTED BY BAR CHAIRS.
8. ALL SIGNS, PAVEMENT MARKINGS, AND OTHER TRAFFIC CONTROL DEVICES ON PUBLIC STREETS SHALL CONFORM TO MUTCD, AND NCDOT STANDARDS.
9. ALL HANDICAP RAMPING, STRIPING, AND PAVEMENT MARKINGS SHALL CONFORM TO ADA REQUIREMENTS AND THE 'NORTH CAROLINA STATE BUILDING CODE, VOL I-C ACCESSIBILITY CODE.' ALL RAMPS SHALL COMPLY WITH THE LATEST NCDOT STANDARDS. WHEELCHAIR RAMPS ARE SHOWN ON THE PLANS AT APPROXIMATE LOCATIONS.
10. CONTRACTOR SHALL SAWCUT & REMOVE ANY THE EXISTING PAVEMENT WHEN THE EXISTING PAVEMENT IS BEING WIDENED OR WHERE NEW CURB AND GUTTER IS PROPOSED.
11. ALL CURVES ON THIS PROJECT SHALL BE SUPERELEVATED IN ACCORDANCE WITH STD. 225.04 & 225.05 USING THE RATE OF SUPERELEVATION AND RUNOFF SHOWN ON THE PLANS. SUPERELEVATION IS TO BE REVOLVED ABOUT THE GRADE POINTS SHOWN ON THE TYPICAL SECTIONS.

CITY OF RALEIGH – PLANS AUTHORIZED FOR CONSTRUCTION

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City of Raleigh Development Approval _____

No.	REVISIONS	DATE	BY

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WWW.KIMLEY-HORN.COM
NC LICENSE #: F-0102

NORTH CAROLINA PROFESSIONAL SEAL 049161 ENGINEER TYLER D. WHITE
PRELIMINARY PLANS – DO NOT USE FOR CONSTRUCTION

KHA PROJECT 013829007			
DATE 9/27/2023	SCALE	NTS	
	DESIGNED BY:	TDW	
	DRAWN BY:	JHV	
	CHECKED BY:	TDW	

PROJECT NOTES

PARKER RIDGE OFFSITE IMPROVEMENTS
WAKE NORTH CAROLINA

SHEET NUMBER
R0.01

9/27/2023 K:\DUR_Roadway\013829007 - Parker Ridge OS\Plan\Plan Sheets\013829007_1stu.dgn

Note: Not to Scale

***S.U.E. = Subsurface Utility Engineering**

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

CONVENTIONAL PLAN SHEET SYMBOLS

BOUNDARIES AND PROPERTY:

- State Line
- County Line
- Township Line
- City Line
- Reservation Line
- Property Line
- Existing Iron Pin — EIP
- Property Corner
- Property Monument — ECM
- Parcel/Sequence Number — 123
- Existing Fence Line
- Proposed Woven Wire Fence
- Proposed Chain Link Fence
- Proposed Barbed Wire Fence
- Existing Wetland Boundary — WLB
- Proposed Wetland Boundary — WLB
- Existing Endangered Animal Boundary — EAB
- Existing Endangered Plant Boundary — EPB

BUILDINGS AND OTHER CULTURE:

- Gas Pump Vent or U/G Tank Cap
- Sign — S
- Well — W
- Small Mine
- Foundation
- Area Outline
- Cemetery
- Building
- School
- Church
- Dam

HYDROLOGY:

- Stream or Body of Water
- Hydro, Pool or Reservoir
- Jurisdictional Stream — JS
- Buffer Zone 1 — BZ 1
- Buffer Zone 2 — BZ 2
- Flow Arrow
- Disappearing Stream
- Spring
- Swamp Marsh
- Proposed Lateral, Tail, Head Ditch — FLOW
- False Sump

RAILROADS:

- Standard Gauge — CSX TRANSPORTATION
- RR Signal Milepost — MILEPOST 35
- Switch — SWITCH
- RR Abandoned
- RR Dismantled

RIGHT OF WAY:

- Baseline Control Point
- Existing Right of Way Marker
- Existing Right of Way Line
- Proposed Right of Way Line — R/W
- Proposed Right of Way Line with Iron Pin and Cap Marker — R/W
- Proposed Right of Way Line with Concrete or Granite Marker — R/W
- Existing Control of Access — C/A
- Proposed Control of Access — C/A
- Existing Easement Line — E
- Proposed Temporary Construction Easement — E
- Proposed Temporary Drainage Easement — TDE
- Proposed Permanent Drainage Easement — PDE
- Proposed Permanent Utility Easement — PUE
- Proposed Public Access Easement — PAE

ROADS AND RELATED FEATURES:

- Existing Edge of Pavement
- Existing Curb
- Proposed Slope Stakes Cut — C
- Proposed Slope Stakes Fill — F
- Proposed Wheel Chair Ramp — WCR
- Curb Cut for Future Wheel Chair Ramp — CCFR
- Existing Metal Guardrail
- Proposed Guardrail
- Existing Cable Guiderail
- Proposed Cable Guiderail
- Equality Symbol
- Pavement Removal

VEGETATION:

- Single Tree
- Single Shrub
- Hedge
- Woods Line
- Orchard
- Vineyard — Vineyard

EXISTING STRUCTURES:

MAJOR:

- Bridge, Tunnel or Box Culvert — CONC
- Bridge Wing Wall, Head Wall and End Wall — CONC WW

MINOR:

- Head and End Wall — CONC HW
- Pipe Culvert
- Footbridge
- Drainage Box: Catch Basin, DI or JB — CB
- Paved Ditch Gutter
- Storm Sewer Manhole — S
- Storm Sewer — S

UTILITIES:

POWER:

- Existing Power Pole
- Proposed Power Pole
- Existing Joint Use Pole
- Proposed Joint Use Pole
- Power Manhole — P
- Power Line Tower
- Power Transformer
- U/G Power Cable Hand Hole — H
- H-Frame Pole
- Recorded U/G Power Line — P
- Designated U/G Power Line (S.U.E.*) — P

TELEPHONE:

- Existing Telephone Pole
- Proposed Telephone Pole
- Telephone Manhole — T
- Telephone Booth
- Telephone Pedestal — T
- Telephone Cell Tower
- U/G Telephone Cable Hand Hole — H
- Recorded U/G Telephone Cable — T
- Designated U/G Telephone Cable (S.U.E.*) — T
- Recorded U/G Telephone Conduit — TC
- Designated U/G Telephone Conduit (S.U.E.*) — TC
- Recorded U/G Fiber Optics Cable — T FO
- Designated U/G Fiber Optics Cable (S.U.E.*) — T FO

WATER:

- Water Manhole — W
- Water Meter
- Water Valve
- Water Hydrant
- Recorded U/G Water Line — W
- Designated U/G Water Line (S.U.E.*) — W
- Above Ground Water Line — A/G Water

TV:

- TV Satellite Dish
- TV Pedestal — C
- TV Tower
- U/G TV Cable Hand Hole — H
- Recorded U/G TV Cable — TV
- Designated U/G TV Cable (S.U.E.*) — TV
- Recorded U/G Fiber Optic Cable — TV FO
- Designated U/G Fiber Optic Cable (S.U.E.*) — TV FO

GAS:

- Gas Valve
- Gas Meter
- Recorded U/G Gas Line — G
- Designated U/G Gas Line (S.U.E.*) — G
- Above Ground Gas Line — A/G Gas

SANITARY SEWER:

- Sanitary Sewer Manhole
- Sanitary Sewer Cleanout
- U/G Sanitary Sewer Line — SS
- Above Ground Sanitary Sewer — A/G Sanitary Sewer
- Recorded SS Forced Main Line — FSS
- Designated SS Forced Main Line (S.U.E.*) — FSS

MISCELLANEOUS:

- Utility Pole
- Utility Pole with Base
- Utility Located Object
- Utility Traffic Signal Box — S
- Utility Unknown U/G Line — ?UTL
- U/G Tank; Water, Gas, Oil
- A/G Tank; Water, Gas, Oil
- U/G Test Hole (S.U.E.*)
- Abandoned According to Utility Records — AATUR
- End of Information — E.O.I.

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K:\DUR_Roadway\013829007 - Parker Ridge OS\PlanPlan Sheets\013829007_tshdgn

9/27/2023

No.	REVISIONS	DATE	BY

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© 2023
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WWW.KIMLEY-HORN.COM
NC LICENSE #: F-0102

NORTH CAROLINA PROFESSIONAL SEAL 049165 ENGINEER TYLER D. WHITE
PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

KHA PROJECT 013829007
DATE 9/27/2023
SCALE NTS
DESIGNED BY: TDW
DRAWN BY: JHV
CHECKED BY: TDW

CONVENTIONAL SYMBOLS

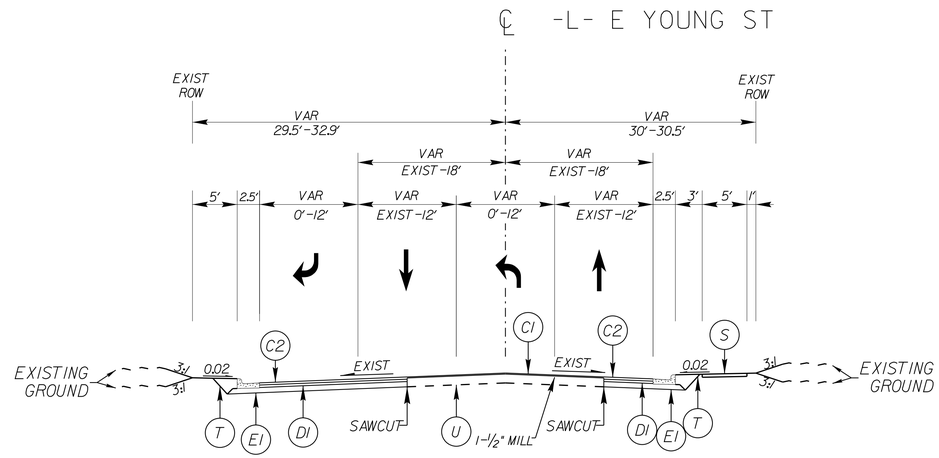
PARKER RIDGE OFFSITE IMPROVEMENTS
WAKE NORTH CAROLINA

SHEET NUMBER
R0.02

PAVEMENT SCHEDULE

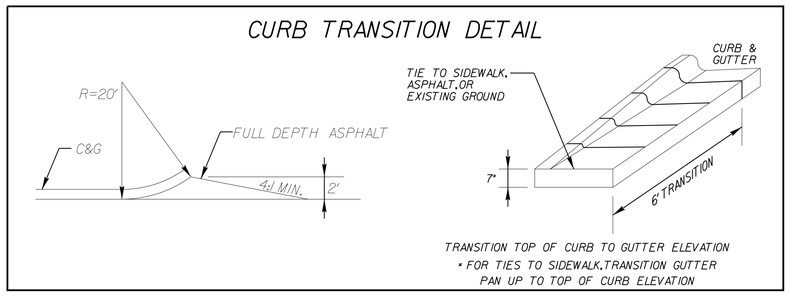
C1	PROPOSED APPROX 1.5" ASPHALT CONCRETE SURFACE COURSE TYPE S9.5C, AT AN AVERAGE RATE OF 168 LBS. PER SQ.YD.
C2	PROPOSED APPROX. 3" ASPHALT CONCRETE SURFACE COURSE TYPE S9.5C, AT AN AVERAGE RATE OF 168 LBS. PER SQ.YD. IN EACH OF TWO LAYERS
D1	PROPOSED APPROX. 4" ASPHALT CONCRETE INTERMEDIATE COURSE TYPE I19.0C, AT AN AVERAGE RATE OF 456 LBS. PER SQ.YD.
E1	PROPOSED APPROX. 5" ASPHALT CONCRETE BASE COURSE TYPE B25.0C, AT AN AVERAGE RATE OF 570 LBS. PER SQ.YD.
S	PROPOSED 4" CONCRETE SIDEWALK
T	EARTH MATERIAL
U	EXISTING PAVEMENT

NOTES:
1. REFER TO PLAN SHEETS FOR VARIABLE WIDTHS.
2. PAVEMENT EDGE SLOPES ARE 1:1 UNLESS OTHERWISE INDICATED



TYPICAL SECTION NO. 1

-L- STA.12+59.00 TO STA.19+45.00



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NORTH CAROLINA PROFESSIONAL SEAL
PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION
ENGINEER
TYLER D. WHITE

KHA PROJECT	013829007		
DATE	9/27/2023		
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DESIGNED BY:	TDW	DRAWN BY:	JHV
CHECKED BY:	TDW		

TYPICAL SECTION

PARKER RIDGE OFFSITE IMPROVEMENTS

NORTH CAROLINA
WAKE

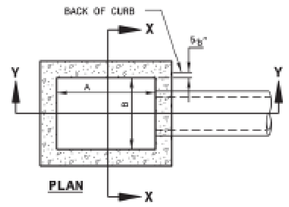
SHEET NUMBER
R1.00

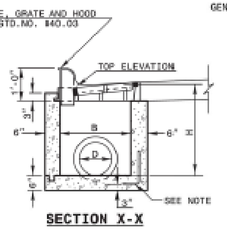
9/27/2023 K:\DUR_Roadway\013829007 - Parker Ridge OS\Plan\Plan Sheets\013829007_typdgn

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

ENGLISH DETAIL DRAWING FOR
MINIMUM DEPTH
CONCRETE CATCH BASIN
12" THRU 84" PIPE

SHEET 1 OF 2
840D02





GENERAL NOTES:

USE CLASS "B" CONCRETE THROUGHOUT.

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

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

USE FORMS FOR THE CONSTRUCTION OF THE BOTTOM SLAB.

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

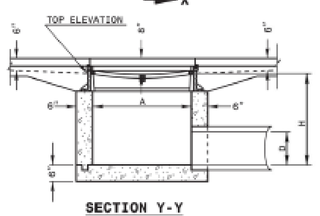
USE TYPE "E", "F" AND "G" GRATES UNLESS OTHERWISE INDICATED.

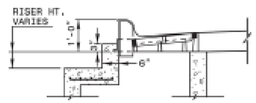
FOR 8'-0" IN HEIGHT OR LESS USE 6" WALLS AND BOTTOM SLAB. OVER 8'-0" TO 16'-0" IN HEIGHT USE 8" WALLS AND BOTTOM SLAB. ADJUST QUANTITIES ACCORDINGLY.

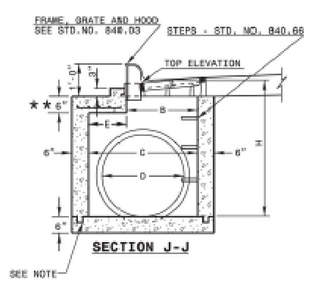
CONSTRUCT WITH PIPE CROWNS MATCHING.

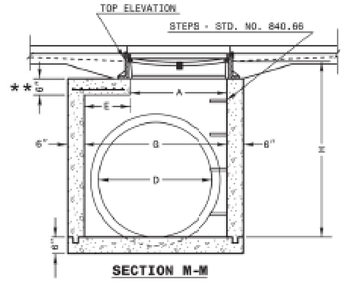
CHAMFER ALL EXPOSED CORNERS 1".

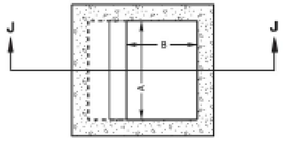
** FOR STRUCTURES WITH PIPE LARGER THAN 54", MAKE THE TOP SLAB 8" THICK.

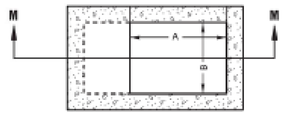












STATE OF
NORTH CAROLINA
DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.

ENGLISH DETAIL DRAWING FOR
MINIMUM DEPTH
CONCRETE CATCH BASIN
12" THRU 84" PIPE

SHEET 1 OF 2
840D02

No.	REVISIONS	DATE	BY

Kimley»Horn
© 2023
300 MORRIS STREET, DURHAM, NC 27701, SUITE 200
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WWW.KIMLEY-HORN.COM
NC LICENSE #: F-0102

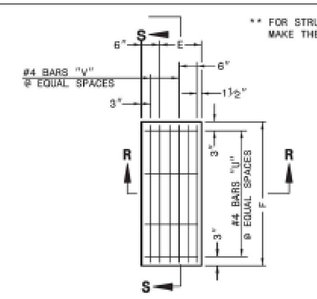
NORTH CAROLINA PROFESSIONAL SEAL
PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION
ENGINEER
TYLER D. WHITE

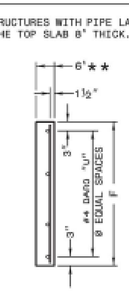
KHA PROJECT	013829007
DATE	9/27/2023
SCALE	NTS
DESIGNED BY:	TDW
DRAWN BY:	JHV
CHECKED BY:	TDW

DETAILS

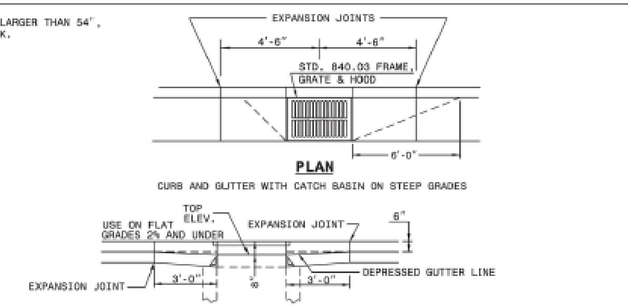
PARKER RIDGE
OFFSITE
IMPROVEMENTS
WAKE NORTH CAROLINA

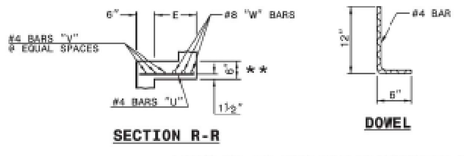
SHEET NUMBER
R1.01

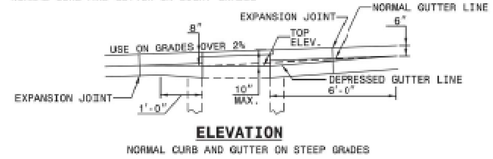




** FOR STRUCTURES WITH PIPE LARGER THAN 54", MAKE THE TOP SLAB 8" THICK.







* RISER HAS .226 CUBIC YARDS OF CONCRETE PER FOOT HEIGHT

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

DIMENSIONS OF BOX AND PIPE						COVER DIMENSION		BARS-U		BARS-V		BARS-W		TOTAL LBS.	CU.YDS. CONC. IN BOX		DEDUCTIONS ONE PIPE	
PIPE	SPAN	WIDTH	WIDTH	SPAN	MIN. HEIGHT			NO.	LENGTH	NO.	LENGTH	NO.	LENGTH		TOP SLAB	BOTTOM SLAB	EXT. CONC FOR MINIMUM HEIGHT, H	C.M.	R.C.
D	A	B	C	G	H	E	F												
12"	3'-0"	2'-2"	--	--	2'-0"	--	--	--	--	--	--	--	--	--	--	0.235	0.772	0.015	0.026
15"	3'-0"	2'-2"			2'-3"											0.235	0.829	0.023	0.036
18"	3'-0"	2'-2"			2'-6"											0.235	0.887	0.033	0.049
24"	3'-0"	2'-2"			3'-1"											0.235	1.001	0.059	0.085
30"	3'-0"	2'-2"	3'-4"	3'-4"	3'-10"	1'-2"	4'-4"	4	1'-5"	2	4'-1"	3	4'-1"	38	0.123	0.347	1.433	0.092	0.127
36"	3'-0"	2'-2"	3'-10"	3'-10"	4'-6"	1'-8"	4'-10"	4	1'-11"	3	4'-7"	3	4'-7"	43	0.161	0.432	1.714	0.132	0.178
42"	3'-0"	2'-2"	4'-6"	4'-5"	4'-11"	2'-2"	5'-5"	5	2'-5"	4	5'-2"	3	5'-2"	47	0.200	0.543	1.738	0.180	0.243
48"	3'-0"	2'-2"	5'-0"	5'-0"	5'-6"	2'-10"	6'-0"	5	3'-1"	4	5'-9"	3	5'-9"	51	0.235	0.657	2.052	0.235	0.317
54"	3'-0"	2'-2"	5'-7"	5'-7"	6'-0"	3'-5"	6'-7"	6	3'-8"	5	6'-4"	3	6'-4"	56	0.289	0.802	2.387	0.297	0.401
60"	3'-0"	2'-2"	6'-3"	6'-3"	6'-6"	4'-1"	7'-3"	6	4'-4"	5	7'-0"	3	7'-0"	61	0.340	0.973	2.722	0.363	0.546
66"	3'-0"	2'-2"	6'-11"	6'-11"	7'-0"	4'-8"	7'-11"	7	5'-0"	6	7'-8"	3	7'-8"	66	0.391	1.160	3.057	0.440	0.655
72"	3'-0"	2'-2"	7'-6"	7'-6"	7'-6"	5'-3"	8'-6"	7	5'-6"	6	8'-3"	3	8'-3"	72	0.442	1.340	3.392	0.524	0.774
78"	3'-0"	2'-2"	8'-1"	8'-1"	8'-0"	5'-11"	9'-1"	8	6'-2"	7	8'-10"	3	8'-10"	78	0.493	1.530	3.727	0.615	0.893
84"	3'-0"	2'-2"	8'-9"	8'-9"	8'-8"	6'-7"	9'-9"	8	6'-10"	7	9'-6"	3	9'-6"	84	0.544	1.760	4.062	0.713	1.010

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

ENGLISH DETAIL DRAWING FOR
MINIMUM DEPTH
CONCRETE CATCH BASIN
12" THRU 84" PIPE

SHEET 2 OF 2
840D02

CITY OF RALEIGH – PLANS AUTHORIZED FOR CONSTRUCTION

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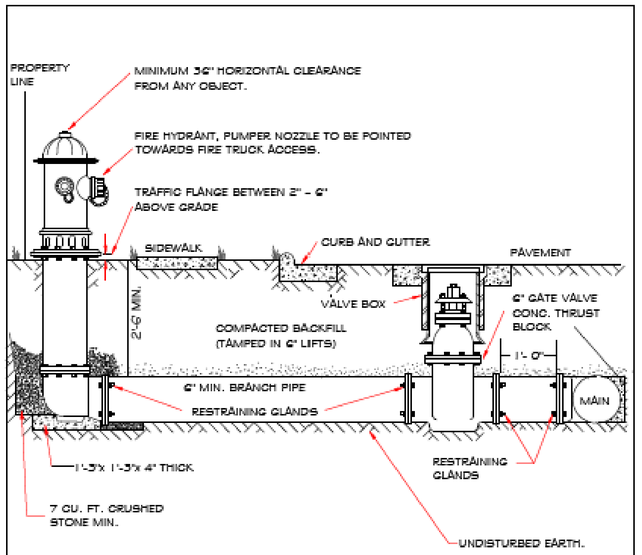
City of Raleigh Development Approval _____

9/27/2023 K:\DUR_Roadway\013829007 - Parker Ridge OS\Plan\Plan Sheets\013829007_typdgn

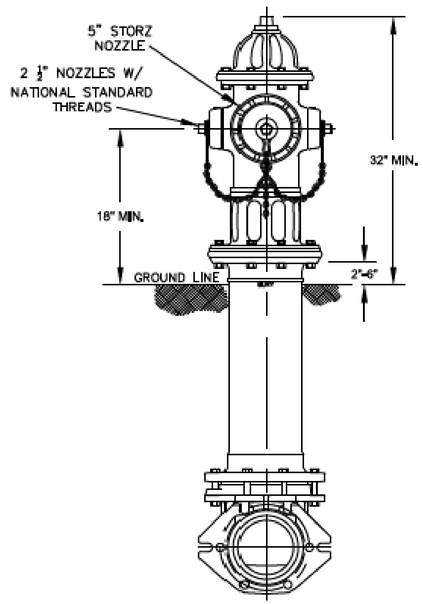


NOTES:
1. FIRE HYDRANT SHALL BE AS MANUFACTURED: MUELLER, AMERICAN DARLING, KENNEDY, M&H, WATEROUS, CLOW, EAST JORDAN IRON WORKS, OR US PIPE.
2. BRANCH PIPE SHALL BE DUCTILE IRON AWWA C150-80
3. 6" GATE VALVE SHALL BE AWWA C500-80 OPEN LEFT
4. STEEL RODS AND BOLTS SHALL BE ¾" HOT DIPPED GALVANIZED
5. FIRE HYDRANTS WILL BE INSTALLED IN TRUE VERTICAL POSITION
   RODS SHALL NOT BE COUPLED MORE THAN ONCE. IF THE LENGTH FROM THE VALVE TO THE HYDRANT EXCEEDS 20' THEN A MECHANICAL RESTRAINING GLAND WITH A REBAR CAGE SHALL BE INSTALLED NO MORE THAN 10' FROM HYDRANT AND POURED IN CONCRETE.
   FIRE HYDRANTS TO BE LOCATED IN ROW OR 2 FOOT EASEMENT ADJACENT TO ROW

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

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

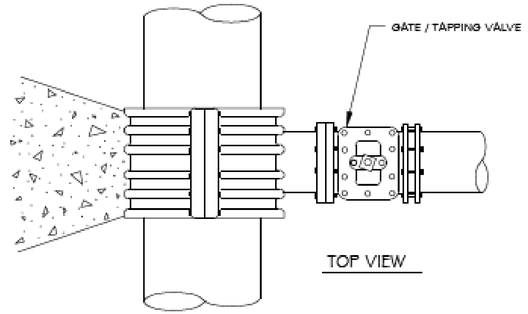
DWG. NO.	REVISIONS	DATE	REVISIONS	DATE
W-4	ABB	4-6-04	FAP	2/17/09
	DHL	2/14/08		



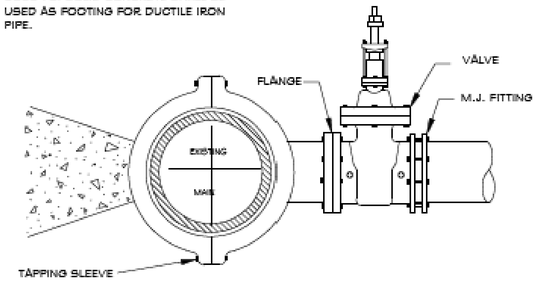
NOTES:
1. ALL PUBLIC FIRE HYDRANTS IN THE CITY OF RALEIGH AND THE MERGER TOWNS OF GARNER, ROLESVILLE, WAKE FOREST, KNIGHTDALE, WENDELL AND ZEBULON SHALL BE PAINTED CHROME YELLOW WITH HIGH REFLECTIVE ALUMINUM SILVER CAPS, BONNETS AND OPERATING NUTS.
2. ALL PRIVATE FIRE HYDRANTS SHALL BE RED.

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

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



3000 PSI SOLID CONCRETE SHALL BE USED AS FOOTING FOR DUCTILE IRON PIPE.



SIDE VIEW

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

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

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

No.	REVISIONS	DATE	BY

Kimley»Horn
© 2023
300 MORRIS STREET, DURHAM, NC 27701, SUITE 200
PHONE: 919-682-3583
WWW.KIMLEY-HORN.COM
NC LICENSE #: F-0102

NORTH CAROLINA PROFESSIONAL SEAL
PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION
ENGINEER
TYLER D. WHITE

KHA PROJECT	013829007
DATE	9/27/2023
SCALE	N.T.S
DESIGNED BY:	TDW
DRAWN BY:	JHV
CHECKED BY:	TDW

DETAILS

CITY OF RALEIGH – PLANS AUTHORIZED FOR CONSTRUCTION

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PARKER RIDGE OFFSITE IMPROVEMENTS
NORTH CAROLINA
WAKE

SHEET NUMBER
R1.02

9/27/2023 K:\DUR_Roadway\013829007 - Parker Ridge OS\Plan\Plan Sheets\013829007_typdgn

LL23574

COMPUTED BY: JHV DATE: 8/14/2023

CHECKED BY: TDW DATE: 8/14/2023

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

PROJECT NO.	SHEET NO.
13829007	3D-1

Note: Invert Elevations indicated are for Bid Purposes only and shall not be used for project construction stakeout. See "Standard Specifications For Roads and Structures, Section 300-5".

LIST OF PIPES, ENDWALLS, ETC. (FOR PIPES 48 INCHES & UNDER)

LINE & STATION	OFFSET		STRUCTURE NUMBER FROM	TO	TOP ELEVATION FT.	INVERT ELEVATION FT.	INVERT ELEVATION FT.	MINIMUM REQUIRED SLOPE %	R. C. PIPE CLASS IV 15	R. C. PIPE CLASS IV 18	R. C. PIPE CLASS IV 24	DRAINAGE STRUCTURE 0' THRU 5' EACH	C.B. STD. 840.01 OR STD. 840.02	GRATE TYPE E	GRATE TYPE F	GRATE TYPE G	REMARKS
L 18+83	14	RT	0100		425.1							1	1			1	
			0100	0101		422.1	420.3		152								
L 17+30	20	RT	0101		423.3							1	1			1	
			0101	0102		420.3	419.3		128								
L 16+00	20	RT	0102		422.1							1	1			1	
			0102	0103		419.3	418.7		124								
L 14+75	20	RT	0103		421.2							1	1	1			
			0103	0104		418.7	418.2			96							
L 13+80	17	RT	0104		421.3							1	1	1			
			0104	0106		418.1	417.9				48						
L 13+18	14	RT	0105		421.5							1	1		1		
L 13+82	17	LT	0107		422.1							1	1	1			
			0107	0104		418.6	418.5	0.5		32							
L 13+82	26	LT	0108		421.8												
			0108	0107		421.8	419.1	0.4									
L 14+50	19	LT	0109		422.0							1	1	1			
			0109	0107		419.0	418.6			68							
L 15+00	20	LT	0110		422.0							1	1		1		
			0110	0109		419.2	419.0			52							
L 15+00	29	LT	0111		421.7												
			0111	0110		421.7	419.2	0.7									
L 16+42	20	LT	0112		422.5							1	1		1		
			0112	0110		419.9	419.2		144								
L 17+33	32	LT	0200		423.0							1	1		1		
			0200	0201		420.0	419.7		52								
L 1+20	32	RT	0000							28							Pipe Under Driveway
SHEET TOTALS									600	276	48	11	11	4	4	3	
PROJECT TOTALS									600	276	48	11	11	4	4	3	

Other columns (no entries): SIZE / THICKNESS OR GAUGE; Drainage Pipe (RCP, CSP, CAAP, HDPE, PVC, or PP PIPE) 12, 15, 18, 24, 30, 36, 42, 48, DO NOT USE RCP, DO NOT USE CSP, DO NOT USE CAAP, DO NOT USE HDPE, DO NOT USE PVC; C. S. PIPE 12 (.064), 15 (.064), 18 (.064), 24 (.064), 30 (.079), 36 (.079), 42 (.109), 48 (.109); R. C. PIPE CLASS III 12–48; R. C. PIPE CLASS IV 12, 30, 36, 42, 48; R. C. PIPE CLASS V 12–48; ENDWALLS STD. 838.01 OR STD. 838.11 (UNLESS NOTED OTHERWISE) CY; REINFORCED ENDWALLS CY; DRAINAGE STRUCTURE MASONRY CY; QUANTITIES FOR DRAINAGE STRUCTURES (NOTE: TOTAL LIN. FT. FOR PAY QUANTITY SHALL BE A + (1.3 X B)) A 5' THRU 10' LIN. FT., B 10' AND ABOVE LIN. FT.; FRAME, GRATES, AND HOOD STD. 840.03; CONCRETE TRANSITIONAL SECTION D.I. STD. 852.04 OR STD. 852.06, C.B. STD. 852.05; OPEN THROAT C.B. STD. 840.04 OR STD. 840.05; CONCRETE BRIDGE APPROACH D.I. STD. 840.13; D.I. STD. 840.14 OR STD. 840.15; D.I. FRAME AND GRATES STD. 840.16; G.D.I. TYPE "A" STD. 840.17 OR STD. 840.26; G.D.I. TYPE "B" STD. 840.18 OR STD. 840.27; G.D.I. TYPE "D" STD. 840.19 OR STD. 840.28; G.D.I. (W.S. FLAT) FRAME WITH GRATE STD. 840.20; MODIFIED CONC. FLUME; PREFORMED SCOUR HOLE (PER EACH); ENERGY DISSIPATION BASIN; FLOWABLE FILL CY; CONCRETE COLLARS CL. "B" STD. 840.72 CY; CONCRETE AND BRICK PIPE PLUG STD. 840.71 CY; PIPE REMOVAL LIN. FT.

ABBREVIATIONS

C.A.A.	CORRUGATED ALUMINIUM ALLOY
C.B.	CATCH BASIN
C.S.	CORRUGATED STEEL
D.I.	DROP INLET
G.D.I.	GRATED DROP INLET
H.D.P.E.	HIGH DENSITY POLYETHYLENE
J.B.	JUNCTION BOX
M.H.	MANHOLE
N.S.	NARROW SLOT
P.V.C.	POLYVINYL CHLORIDE
R.C.	REINFORCED CONCRETE
T.B.D.I.	TRAFFIC BEARING DROP INLET
T.B.J.B.	TRAFFIC BEARING JUNCTION BOX
W.S.	WIDE SLOT

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No.	REVISIONS	DATE	BY

Kimley»Horn
© 2023
300 MORRIS STREET, DURHAM, NC 27701, SUITE 200
PHONE: 919-682-3583
WWW.KIMLEY-HORN.COM
NC LICENSE #: F-0102

NORTH CAROLINA PROFESSIONAL SEAL 049165 ENGINEER TYLER D. WHITE
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION

KHA PROJECT 013829007
DATE 9/27/2023
SCALE NTS
DESIGNED BY: TDW
DRAWN BY: JHV
CHECKED BY: TDW

DRAINAGE SUMMARY SHEET

PARKER RIDGE OFFSITE IMPROVEMENTS
WAKE NORTH CAROLINA

SHEET NUMBER
R1.03

K:\DUR_Roadway\013829007 – Parker Ridge OS\Plan\Plan Sheets\013829007_typ.dgn
9/27/2023

PATSY V & HARRIET D YOUNG
PIN: 1768194694
DB 20-E PG 207

PATSY V YOUNG
PIN: 1768193779
DB 20-E PG 2069

TOWN OF ROLESVILLE
PIN: 1768098727
DB 018568 PG 00660

TOWN OF ROLESVILLE
PIN: 1769102240
DB 018568 PG 00660

ROBIN B WOOD
PIN: 1769101390
DB 11-E PG 3702

WILLIAM C YOUNG
PIN: 1768199509
DB 015475 PG 01740

MICHAEL C YOUNG
PIN: 1769109389
DB 017514 PG 00618

YOUNG MEADOW
INVESTMENTS LLC
PIN: 1769105712
DB 019069 PG 02767

STEVEN, LAWRENCE,
& REBECCA P YOUNG
PIN: 1769104481
DB 019120 PG 01000

E. YOUNG STREET (S.R. 1003)
(60' PUBLIC R/W)

APPROXIMATE LOCATION OF FM FROM GIS

EX. CURB INLET
TC: 422.22
INV OUT: 418.81' (NE)

INVERT: 418.91'
33.63' 18" RCP @ 0.68%

47.92' 18" RCP @ 1.27%

24.14' 18" RCP @ 3.31%

47.60' 15" RCP @ 0.48%

213.88' 15" RCP @ 0.48%

222.64' 15" RCP @ 0.94%

EX. CURB INLET
TC: 426.94'
INV OUT: 424.99' (SE)

INVERT: 420.69'

INVERT: 421.51'

ROCK WALL

EX. GRAVEL DRIVE

EX. CONC. DRIVE

EX. CURB INLET
TC: 422.39'
INV IN: 419.56' (NW)
INV OUT: 419.44' (SE)

EX. CURB INLET
TC: 422.24'
INV IN: 419.05' (NW)
INV OUT: 418.95' (SE)

77.35' 15" RCP @ 0.50%

INVERT: 419.26'

INVERT: 418.54'

EX. CURB INLET
TC: 422.32'
INV IN: 418.72' (NW)
INV IN: 418.68' (SW)
INV OUT: 418.48' (E)

INVERT: 417.87'

INVERT: 418.01'

INVERT: 421.89'
ELEC. PED. (2)

INVERT: 422.04'

182.37' 15" RCP @ 1.04%

EX. CURB INLET
TC: 424.16'
INV IN: 420.82' (NW)
INV OUT: 420.58' (SE)

EX. CURB INLET
TC: 426.24'
INV IN: 422.89' (NW)
INV OUT: 422.71' (SE)

GRAPHIC SCALE
20 0 40
PLANS

CITY OF RALEIGH – PLANS AUTHORIZED FOR CONSTRUCTION

Plans for the proposed use have been reviewed for general compliance with applicable codes. This limited review, and authorization for construction is not to be considered to represent total compliance with all legal requirements for development and construction. The property owner, design consultants, and contractors are each responsible for compliance with all applicable City, State and Federal laws. This specific authorization below is not a permit, nor shall it be construed to permit any violation of City, State or Federal Law. All Construction must be in accordance with all Local, State, and Federal Rules and Regulations. This approval of this electronic document is only valid if the document has not been modified and the digital signature below is valid:

City of Raleigh Development Approval _____

No.	REVISIONS	DATE	BY

Kimley»Horn
© 2023
300 MORRIS STREET, DURHAM, NC 27701, SUITE 200
PHONE: 919-682-3583
WWW.KIMLEY-HORN.COM
NC LICENSE #: F-0102

NORTH CAROLINA PROFESSIONAL SEAL
PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION
ENGINEER
TYLER D. WHITE

KHA PROJECT	013829007
DATE	9/27/2023
SCALE	1"=40'
DESIGNED BY:	TDW
DRAWN BY:	JHV
CHECKED BY:	TDW

EXISTING CONDITIONS

PARKER RIDGE OFFSITE IMPROVEMENTS

NORTH CAROLINA
WAKE

SHEET NUMBER
R1.04

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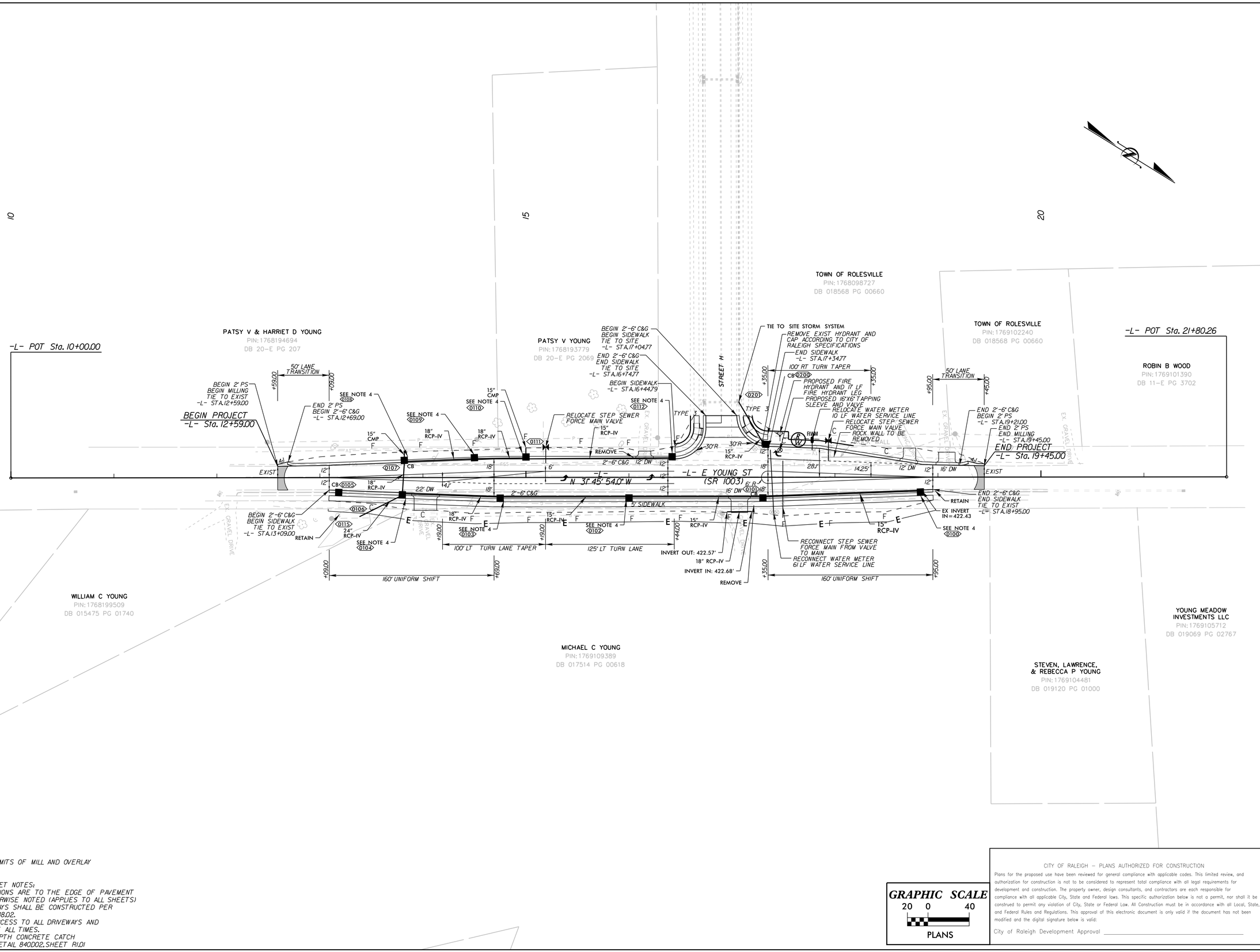
9/27/2023



LIMITS OF MILL AND OVERLAY

GENERAL SHEET NOTES:
1. RADII DIMENSIONS ARE TO THE EDGE OF PAVEMENT UNLESS OTHERWISE NOTED (APPLIES TO ALL SHEETS)
2. ALL DRIVEWAYS SHALL BE CONSTRUCTED PER NCDOT STD.848.02.
3. MAINTAIN ACCESS TO ALL DRIVEWAYS AND MAILBOXES AT ALL TIMES.
4. MINIMUM DEPTH CONCRETE CATCH BASIN SEE DETAIL 840D02, SHEET R1.01

GRAPHIC SCALE
20 0 40
PLANS

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ENGINEER
TYLER D. WHITE

KHA PROJECT 013829007
DATE 9/27/2023
SCALE 1"=40'
DESIGNED BY: TDW
DRAWN BY: JHV
CHECKED BY: TDW

PLAN VIEW

PARKER RIDGE OFFSITE IMPROVEMENTS
WAKE NORTH CAROLINA

SHEET NUMBER
R2.00

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9/27/2023

TRAFFIC NOTES

ALL TRAFFIC CONTROL SHALL CONFORM TO THE LATEST MUTCD AND 2024 NCDOT STANDARDS

ADAPT THE TRAFFIC CONTROL CONCEPTS, WHEN DIRECTED BY THE ENGINEER, TO MEET FIELD CONDITIONS TO PROVIDE SAFE AND EFFICIENT TRAFFIC MOVEMENT. CHANGES MAY BE REQUIRED WHEN PHYSICAL DIMENSIONS IN THE DETAIL DRAWINGS, STANDARD DETAILS AND ROADWAY DETAILS ARE NOT ATTAINABLE, OR RESULT IN DUPLICATE, OR UNDESIRED OVERLAPPING OF DEVICES. MODIFICATION MAY INCLUDE: MOVING, SUPPLEMENTING, COVERING OR REMOVAL OF DEVICES.

THE FOLLOWING GENERAL NOTES APPLY AT ALL TIMES FOR THE DURATION OF THE CONSTRUCTION PROJECT, EXCEPT WHEN OTHERWISE NOTED IN THE PLAN, OR DIRECTED BY THE ENGINEER.

TIME RESTRICTIONS
A) DO NOT CLOSE OR NARROW TRAVEL LANES AS FOLLOWS:

ROAD NAME	DAY AND TIME RESTRICTIONS
1. E YOUNG STREET	MONDAY THROUGH FRIDAY FROM 7 AM TO 9 AM AND FROM 4 PM TO 6 PM

B) DO NOT CLOSE OR NARROW TRAVEL LANES DURING HOLIDAYS AND SPECIAL EVENTS AS FOLLOWS:

ROAD NAME
1. E YOUNG STREET

HOLIDAY

1. FOR ANY UNEXPECTED OCCURRENCE THAT CREATES UNUSUALLY HIGH TRAFFIC VOLUMES, AS DIRECTED BY THE ENGINEER.
2. FOR NEW YEAR'S DAY, BETWEEN THE HOURS OF 7:00 A.M. DECEMBER 31st AND 6:00 P.M. JANUARY 2ND. IF NEW YEAR'S DAY IS ON A FRIDAY, SATURDAY, SUNDAY, OR MONDAY THEN UNTIL 6:00 P.M. THE FOLLOWING TUESDAY.
3. FOR EASTER, BETWEEN THE HOURS OF 7:00 A.M. THURSDAY AND 6:00 P.M. MONDAY.
4. FOR MEMORIAL DAY, BETWEEN THE HOURS OF 7:00 A.M. FRIDAY AND 6:00 P.M. TUESDAY.
5. FOR INDEPENDENCE DAY, BETWEEN THE HOURS OF 7:00 A.M. THE DAY BEFORE INDEPENDENCE DAY AND 6:00 P.M. THE DAY AFTER INDEPENDENCE DAY.

   IF INDEPENDENCE DAY IS ON A FRIDAY, SATURDAY, SUNDAY OR MONDAY THEN BETWEEN THE HOURS OF 7:00 A.M. THE THURSDAY BEFORE INDEPENDENCE DAY AND 6:00 P.M. THE TUESDAY AFTER INDEPENDENCE DAY.
6. FOR LABOR DAY, BETWEEN THE HOURS OF 7:00 A.M. FRIDAY AND 6:00 P.M. TUESDAY.
7. FOR THANKSGIVING DAY, BETWEEN THE HOURS OF 7:00 A.M. TUESDAY AND 6:00 P.M. MONDAY.
8. FOR CHRISTMAS, BETWEEN THE HOURS OF 7:00 A.M. THE FRIDAY BEFORE THE WEEK OF CHRISTMAS DAY AND 6:00 P.M. THE FOLLOWING TUESDAY AFTER THE WEEK OF CHRISTMAS.
9. HOLIDAYS AND HOLIDAY WEEKENDS SHALL INCLUDE NEW YEAR'S, EASTER, MEMORIAL DAY, INDEPENDENCE DAY, LABOR DAY, THANKSGIVING, AND CHRISTMAS. THE CONTRACTOR SHALL SCHEDULE HIS WORK SO THAT LANE CLOSURES WILL NOT BE REQUIRED DURING THESE PERIODS, UNLESS OTHERWISE DIRECTED BY THE ENGINEER.

C) DO NOT STOP TRAFFIC AS FOLLOWS:

ROAD NAME	DAY AND TIME RESTRICTIONS
1. E YOUNG STREET	MONDAY THROUGH FRIDAY FROM 7 AM TO 9 AM AND FROM 4 PM TO 6 PM

D) DO NOT STOP TRAFFIC FOR MORE THAN 15 MINUTES AS FOLLOWS:

ROAD NAME	DAY AND TIME RESTRICTIONS	OPERATIONS
1. E YOUNG STREET	MONDAY THROUGH FRIDAY FROM 7 AM TO 9 AM AND FROM 4 PM TO 6 PM	TRAFFIC SHIFTS

E) DO NOT CONDUCT ANY HAULING OPERATIONS AGAINST THE FLOW OF TRAFFIC OF AN OPEN TRAVELWAY UNLESS THE WORK AREA IS PROTECTED BY BARRIER OR GUARDRAIL OR OTHERWISE DIRECTED BY THE ENGINEER.

LANE AND SHOULDER CLOSURE REQUIREMENTS

F) REMOVE LANE CLOSURE DEVICES FROM THE LANE WHEN WORK IS NOT BEING PERFORMED BEHIND THE LANE CLOSURE OR WHEN A LANE CLOSURE IS NO LONGER NEEDED, OR AS DIRECTED BY THE ENGINEER.

G) WHEN PERSONNEL AND/OR EQUIPMENT ARE WORKING WITHIN 40 FT OF AN OPEN TRAVEL LANE, CLOSE THE NEAREST OPEN SHOULDER USING ROADWAY STANDARD DRAWING NO. 1101.04 UNLESS THE WORK AREA IS PROTECTED BY BARRIER OR GUARDRAIL.

H) WHEN PERSONNEL AND/OR EQUIPMENT ARE WORKING ON THE SHOULDER ADJACENT TO AN UNDIVIDED FACILITY AND WITHIN 5 FT OF AN OPEN TRAVEL LANE, CLOSE THE NEAREST OPEN TRAVEL LANE USING ROADWAY STANDARD DRAWING NO. 1101.02 UNLESS THE WORK AREA IS PROTECTED BY BARRIER OR GUARDRAIL.

I) WHEN PERSONNEL AND/OR EQUIPMENT ARE WORKING WITHIN A LANE OF TRAVEL OF AN UNDIVIDED OR DIVIDED FACILITY, CLOSE THE LANE ACCORDING TO BY THE ENGINEER. CONDUCT THE WORK SO THAT ALL PERSONNEL AND/OR EQUIPMENT REMAIN WITHIN THE CLOSED TRAVEL LANE.

J) DO NOT WORK SIMULTANEOUSLY, ON BOTH SIDES OF AN OPEN TRAVELWAY, WITHIN THE SAME LOCATION, ON A TWO-LANE, TWO-WAY ROAD.

K) DO NOT PERFORM WORK INVOLVING HEAVY EQUIPMENT WITHIN 15 FT OF THE EDGE OF TRAVELWAY WHEN WORK IS BEING PERFORMED BEHIND A LANE CLOSURE ON THE OPPOSITE SIDE OF THE TRAVELWAY.

PAVEMENT EDGE DROP OFF REQUIREMENTS

L) BACKFILL AT A 6:1 SLOPE UP TO THE EDGE AND ELEVATION OF EXISTING PAVEMENT IN AREAS ADJACENT TO AN OPENED TRAVEL LANE THAT HAS A DROP-OFF AS FOLLOWS:

BACKFILL DROP-OFFS THAT EXCEED 3 INCHES ON ROADWAYS WITH POSTED SPEED LIMITS LESS THAN 45 MPH.

BACKFILL WITH SUITABLE COMPACTED MATERIAL, AS APPROVED BY THE ENGINEER.

M) DO NOT EXCEED A DIFFERENCE OF 1.5 INCHES IN ELEVATION BETWEEN OPEN LANES OF TRAFFIC. INSTALL ADVANCE WARNING "UNEVEN LANES" SIGNS (W8-11) 500 FT IN ADVANCE OF THE UNEVEN AREA.

SIGNING

N) INSTALL ADVANCE WORK ZONE WARNING SIGNS WHEN WORK IS WITHIN 100 FT FROM THE EDGE OF TRAVEL LANE AND NO MORE THAN THREE (3) DAYS PRIOR TO THE BEGINNING OF CONSTRUCTION.

WHEN NO WORK IS BEING CONDUCTED FOR A PERIOD LONGER THAN ONE WEEK, REMOVE OR COVER ALL ADVANCE WORK ZONE WARNING SIGNS, AS DIRECTED BY THE ENGINEER.

O) PROVIDE PERMANENT SIGNING.

P) ENSURE ALL NECESSARY SIGNING IS IN PLACE PRIOR TO ALTERING ANY TRAFFIC PATTERN.

TRAFFIC CONTROL DEVICES

Q) SPACE CHANNELIZING DEVICES IN WORK AREAS NO GREATER THAN TWICE THE POSTED SPEED LIMIT (MPH), EXCEPT 10 FT ON-CENTER IN RADII, AND 3 FT OFF THE EDGE OF AN OPEN TRAVELWAY, WHEN LANE CLOSURES ARE NOT IN EFFECT.

R) PLACE SETS OF THREE DRUMS PERPENDICULAR TO THE EDGE OF THE TRAVELWAY ON 300 FT CENTERS WHEN UNOPENED LANES ARE CLOSED TO TRAFFIC. THESE DRUMS SHALL BE IN ADDITION TO CHANNELIZING DEVICES.

PAVEMENT MARKINGS AND MARKERS

S) INSTALL PAVEMENT MARKINGS AS SHOWN ON PLAN SHEETS.

T) REFER TO SECTION 1205 OF THE NCDOT STANDARD SPECIFICATIONS FOR ROADS AND STRUCTURES DATED JANUARY 2018 FOR APPLICATION TIMES AND TEMPERATURE CONDITIONS FOR PAVEMENT MARKINGS.

U) PLACE AT LEAST TWO APPLICATIONS OF PAINT PAVEMENT MARKINGS ON THE FINAL WEARING SURFACE ON NEW ASPHALT PAVEMENT. PLACE ADDITIONAL APPLICATIONS OF PAINT UPON SUFFICIENT DRYING TIME, AS DETERMINED BY THE ENGINEER.

V) TIE PROPOSED PAVEMENT MARKING LINES TO EXISTING PAVEMENT MARKING LINES.

W) REPLACE ANY PAVEMENT MARKINGS THAT HAVE BEEN DAMAGED BY THE END OF EACH DAY'S OPERATION.

X) PLACE AT LEAST TWO APPLICATIONS OF PAINT ON NEW ASPHALT WITH TEMPORARY TRAFFIC PATTERNS WHICH WILL REMAIN IN PLACE OVER THREE (3) MONTHS. PLACE ADDITIONAL APPLICATIONS OF PAINT UPON SUFFICIENT DRYING TIME, AS DETERMINED BY THE ENGINEER.

Y) CONTRACTOR SHALL MAINTAIN ALL TEMPORARY PAINT PAVEMENT MARKINGS UNTIL COMPLETION OF THERMOPLASTIC PAVEMENT MARKING INSTALLATION.

Z) BEFORE SHIFTING TRAFFIC TO NEW LOCATIONS, CONTRACTOR SHALL REMOVE ANY MARKINGS WHICH CONFLICT WITH THE NEW TRAFFIC PATTERN(S).

AA) CHANGES TO THE TRAFFIC CONTROL REQUIRE APPROVAL FROM CITY OF DURHAM AND NCDOT PRIOR TO COMMENCING FIELD OPERATIONS.

PEDESTRIAN AND BICYCLIST SAFETY

BB) PEDESTRIAN AND BICYCLIST SAFETY MUST BE MAINTAINED AT ALL TIMES BY ADEQUATE PROJECT LIMITS, FENCING, AND SIGNAGE.

MISCELLANEOUS

CC) POLICE MAY BE USED TO MAINTAIN TRAFFIC THROUGH INTERSECTIONS.

DD) STOCKPILE EXISTING SIGNS FOR USE WHEN NEEDED IN TEMPORARY LOCATIONS DURING CONSTRUCTION.

EE) ACCESS SHALL BE MAINTAINED TO ALL RESIDENCES, MAILBOXES, AND BUSINESSES AT ALL TIMES.

FF) IN THE EVENT A TIE-IN CANNOT BE MADE IN ONE DAY'S TIME, BRING THE TIE-IN AREA TO AN APPROPRIATE ROADWAY ELEVATION AS DETERMINED BY THE ENGINEER. PLACE BLACK ON ORANGE "LOOSE GRAVEL" SIGNS (W8-7) AND BLACK ON ORANGE "PAVEMENT ENDS" SIGNS (W8-3) AND RESPECTIVELY IN ADVANCE OF THE UNEVEN AREAS. USE DRUMS TO DELINEATE THE EDGE OF ROADWAY ALONG UNPAVED AREAS.

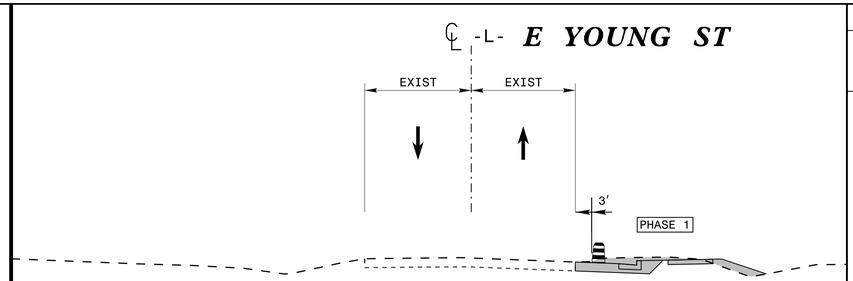
ADVANCE WARNING SIGNS

- USE FLUORESCENT ORANGE SHEETING (TYPE VII OR HIGHER) ON ALL ADVANCED WORK ZONE SIGNS.
- DO NOT INSTALL ADVANCE WARNING SIGNS MORE THAN 3 DAYS PRIOR TO BEGINNING OF WORK.
- SIGNS SHOWN ARE REQUIRED FOR WORK ZONES THAT WILL REMAIN IN EFFECT OVERNIGHT. FOR SHORT-TERM DAILY MAINTENANCE TYPE OPERATIONS, THIS SIGNING APPLICATION IS OPTIONAL; MAY USE ONLY APPLICABLE ROADWAY STANDARD DRAWINGS INSTEAD. HOWEVER, IF THIS SIGNING APPLICATION IS USED, SIGNS MAY BE PORTABLE MOUNTED.
- ADVANCE WARNING SIGN SPACING IS RECOMMENDED TO BE THE FOLLOWING:
  -E YOUNG ST - 500' BEFORE CONSTRUCTION LIMITS
- ALL SIGN SPACING DIMENSIONS ARE APPROXIMATE, FIELD ADJUST AS NECESSARY OR AS DIRECTED.
- USE 3 LB STEEL U-CHANNEL POST OR 4" X 4" WOOD POST FOR ALL WORK ZONE SIGNS. 3 LB STEEL U-CHANNEL POSTS MUST MEET THE REQUIREMENTS OF STANDARD SPECIFICATION SECTION 1094-1(B), MAY BE GALVANIZED STEEL, OR MAY BE PAINTED GREEN BY THE POST MANUFACTURER. SQUARE STEEL TUBING POSTS HAVING EQUIVALENT STRENGTH OF THE 3 LB STEEL U-CHANNEL POST ARE ALSO ACCEPTABLE FOR USE. ERECT SIGNS PER ROADWAY STANDARD DRAWING 1110.01. PAYMENT FOR WOOD POSTS, 3 LB STEEL U-CHANNEL AND SQUARE STEEL TUBING POSTS WITH SIGNS WILL BE MADE ACCORDING TO STANDARD SPECIFICATION "WORK ZONE SIGNS" SECTION 1110.
- WHEN NECESSARY, USE SPLICING IN ACCORDANCE WITH ROADWAY STANDARD DRAWING NO. 1110.01. REMOVE ENTIRE POST WHEN REMOVING SIGNS WITH SPLICED POSTS.
- DO NOT BACK BRACE SIGN SUPPORTS.

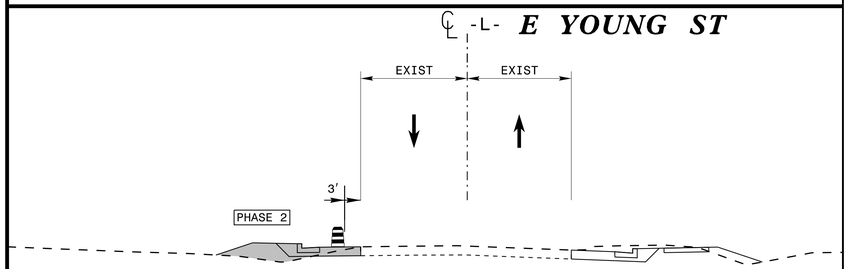
ROADWAY STANDARD DRAWINGS

THE FOLLOWING ROADWAY STANDARDS AS SHOWN IN "ROADWAY STANDARD DRAWINGS" - PROJECT SERVICES UNIT - N.C. DEPARTMENT OF TRANSPORTATION - RALEIGH, N.C., DATED JANUARY 2024 ARE APPLICABLE TO THIS PROJECT AND BY REFERENCE HEREBY ARE CONSIDERED A PART OF THESE PLANS:

STD. NO.	TITLE
1101.01	WORK ZONE WARNING SIGNS
1101.02	TEMPORARY LANE CLOSURES
1101.04	TEMPORARY SHOULDER CLOSURES
1101.11	TRAFFIC CONTROL DESIGN TABLES
1110.01	STATIONARY WORK ZONE SIGNS
1110.02	PORTABLE WORK ZONE SIGNS
1115.01	FLASHING ARROW BOARDS
1130.01	DRUMS
1135.01	CONES
1145.01	BARRICADES
1150.01	FLAGGING DEVICES
1180.01	SKINNY DRUM
1205.01	PAVEMENT MARKINGS - LINE TYPES AND OFFSETS
1205.02	PAVEMENT MARKINGS - DIVIDED AND UNDIVIDED ROADWAYS
1205.04	PAVEMENT MARKINGS - INTERSECTIONS
1205.05	PAVEMENT MARKINGS - TURN LANES
1205.07	PAVEMENT MARKINGS - PEDESTRIAN CROSSWALKS
1205.08	PAVEMENT MARKINGS - SYMBOLS AND WORD MESSAGES
1205.09	PAVEMENT MARKINGS - PAINTED ISLANDS
1205.13	PAVEMENT MARKINGS - NEW INTERCHANGES AND INTERSECTIONS
1250.01	PAVEMENT MARKER SPACING
1251.01	RAISED PAVEMENT MARKERS - PERMANENT AND TEMPORARY
1253.01	SNOWPLOWABLE RAISED PAVEMENT MARKERS



–L– STA 12+59.00 TO STA 19+45.00



–L– STA 12+59.00 TO STA 19+45.00

PHASING NOTES

PHASE 1

THE CONTRACTOR SHALL PLACE ALL ADVANCE WARNING SIGNS PRIOR TO BEGINNING WORK ACCORDING TO NCDOT STANDARD DRAWING NO. 1101.01. SIGNS SHALL REMAIN IN PLACE UNTIL CONSTRUCTION IS COMPLETED.

WHILE MAINTAINING EXISTING TRAFFIC AND USING NCDOT STANDARD DRAWING 1101.02, SHEET 1 OF 19 FOR TEMPORARY LANE CLOSURES AS NEEDED, THE CONTRACTOR SHALL CONSTRUCT PROPOSED NORTHBOUND E YOUNG STREET IMPROVEMENTS INCLUDING:

1. PAVEMENT WIDENING
2. STORM DRAINAGE
3. CURB AND GUTTER INSTALLATION
4. MILLING

UP TO BUT NOT INCLUDING THE FINAL LAYER OF SURFACE COURSE PAVEMENT.

PHASE 2

WHILE MAINTAINING EXISTING TRAFFIC AND USING NCDOT STANDARD DRAWING 1101.02, SHEET 1 OF 19 FOR TEMPORARY LANE CLOSURES AS NEEDED, THE CONTRACTOR SHALL CONSTRUCT PROPOSED SOUTHBOUND E YOUNG STREET IMPROVEMENTS INCLUDING:

1. PAVEMENT WIDENING
2. STORM DRAINAGE
3. CURB AND GUTTER INSTALLATION
4. MILLING

UP TO BUT NOT INCLUDING THE FINAL LAYER OF SURFACE COURSE PAVEMENT.

PHASE 3

WHILE MAINTAINING EXISTING TRAFFIC AND USING NCDOT STANDARD DRAWING 1101.02 SHEET 1 OF 19 FOR TEMPORARY LANE CLOSURES AS NEEDED, THE CONTRACTOR SHALL INSTALL THE FINAL ASPHALT SURFACE COURSE, FINAL PAVEMENT MARKINGS, PLACE TRAFFIC ONTO FINAL PATTERN, AND REMOVE ALL TRAFFIC CONTROL DEVICES.

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CHECKED BY:	TDW

TRAFFIC MANAGEMENT PLAN

PARKER RIDGE OFFSITE IMPROVEMENTS
NORTH CAROLINA
WAKE

SHEET NUMBER
R3.00

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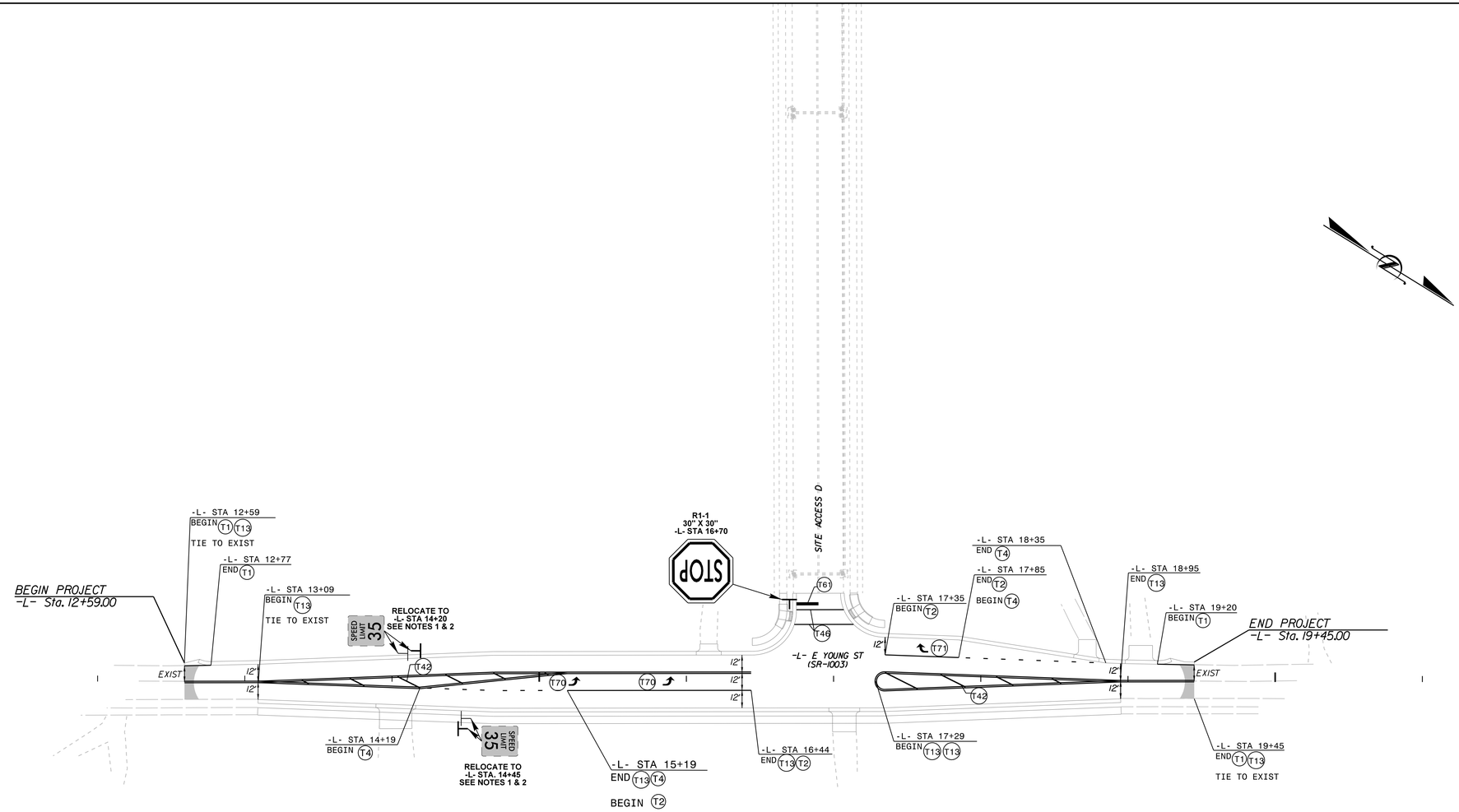
9/27/2023



SIGNING LEGEND

- DENOTES EXISTING SIGN
- DENOTES NEW "U" CHANNEL POST/PROPOSED SIGN LOCATION
- DENOTES EXISTING "U" CHANNEL POST/EXISTING SIGN LOCATION
- DENOTES SIGNALIZED INTERSECTION
- DENOTES EXISTING SIGNAL

SIGNING NOTES

1. REMOVE AND DISPOSE OF EXISTING "U" CHANNEL POST.
2. ERECT EXISTING SIGN ON NEW "U" CHANNEL POST.
3. REMOVE AND DISPOSE OF EXISTING SIGNS AND "U" CHANNEL POST.
4. THE BACKGROUND FOR TYPE E & F SIGNS SHALL BE TYPE C REFLECTIVE SHEETING.
5. ALL STREET NAME SIGNS SHALL ADHERE TO 2009 MUTCD. ALL STREET NAME SIGNS SHALL BE APPROVED BY THE TRANSPORTATION AND FACILITIES DEPARTMENT STAFF PRIOR TO INSTALLATION.

PAVEMENT MARKER LEGEND

- CRYSTAL / RED PAVEMENT MARKER
- YELLOW / YELLOW PAVEMENT MARKER
- DIRECTION OF TRAFFIC FLOW

PAVEMENT MARKING

NOTES:
1. CONTRACTOR TO TIE PROPOSED MARKINGS TO EXISTING MARKINGS AT PROJECT LIMITS.
2. CONTRACTOR SHALL MILL ANY EXISTING MARKINGS OR SYMBOLS IN CONFLICT WITH PROPOSED MARKINGS.
3. RAISED REFLECTIVE PAVEMENT MARKERS ARE TO BE PLACED ACCORDING TO NCDOT ROADWAY STANDARD DRAWINGS.
4. ALL RAISED REFLECTIVE PAVEMENT MARKERS TO BE SNOWPLOWABLE

PAVEMENT MARKING LINES

T1 - THERMOPLASTIC (4" WHITE, 90 MILS) EDGE LINE
T2 - THERMOPLASTIC (4" WHITE, 90 MILS) LANE LINE
T4 - THERMOPLASTIC (4" WHITE, 90 MILS) 3' - 9'/SP MINISKIP
T13 - THERMOPLASTIC (4" YELLOW, 90 MILS) YELLOW DOUBLE CENTER
T42 - THERMOPLASTIC (8" YELLOW, 90 MILS) DIAGONAL LINE
T46 - THERMOPLASTIC (8" WHITE, 90 MILS) CROSSWALK LINE
T61 - THERMOPLASTIC (24" WHITE, 90 MILS) STOPBAR

PAVEMENT MARKING SYMBOLS

T70 - THERMOPLASTIC (LEFT TURN ARROW) (90 MILS)
T71 - THERMOPLASTIC (RIGHT TURN ARROW) (90 MILS)

GRAPHIC SCALE
20 0 40
PLANS

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CHECKED BY:	TDW

PAVEMENT MARKING AND SIGNING PLAN

PARKER RIDGE OFFSITE IMPROVEMENTS

NORTH CAROLINA
WAKE

SHEET NUMBER
R4.00

K:\DUR_Roadway\013829007 - Parker Ridge OS\Plan\PMP & SignIrng\013829007_pmp_psh_4.dgn
9/27/2023

PATSY V & HARRIET D YOUNG
PIN: 1768194694
DB 20-E PG 207

PATSY V YOUNG
PIN: 1768193779
DB 20-E PG 2069

TOWN OF ROLESVILLE
PIN: 1768098727
DB 018568 PG 00660

TOWN OF ROLESVILLE
PIN: 1769102240
DB 018568 PG 00660

ROBIN B WOOD
PIN: 1769101390
DB 11-E PG 3702

WILLIAM C YOUNG
PIN: 1768199509
DB 015475 PG 01740

MICHAEL C YOUNG
PIN: 1769109389
DB 017514 PG 00618

YOUNG MEADOW INVESTMENTS LLC
PIN: 1769105712
DB 019069 PG 02767

STEVEN, LAWRENCE, & REBECCA P YOUNG
PIN: 1769104481
DB 019120 PG 01000

SITE ACCESS D

TEMPORARY SILT FENCE (TYP.)

TEMPORARY WATTLE AT 50' SPACING (TYP.)

LIMITS OF DISTURBANCE (TYP.)

BLOCK AND GRAVEL INLET PROTECTION (TYP.)

ROCK WALL

RWM

-L- E YOUNG ST (SR 1003)

N 31° 45' 54.0" W

BLOCK AND GRAVEL INLET PROTECTION (TYP.)

TEMPORARY WATTLE AT 50' SPACING (TYP.)

LIMITS OF DISTURBANCE (TYP.)

TEMPORARY SILT FENCE (TYP.)

EROSION CONTROL MEASURES

INLET PROTECTION	
TEMPORARY SEDIMENT FENCE	
TEMPORARY WADDLE	C

NOTES:
1. TOTAL DISTURBED AREA FOR OFFSITE IMPROVEMENTS = 0.65 AC.
3. ALL PUBLIC STREETS TO BE KEPT CLEAN OF SEDIMENT AT ALL TIMES OR A WASH STATION WILL BE REQUIRED.

GRAPHIC SCALE
20 0 40
PLANS

CITY OF RALEIGH – PLANS AUTHORIZED FOR CONSTRUCTION

Plans for the proposed use have been reviewed for general compliance with applicable codes. This limited review, and authorization for construction is not to be considered to represent total compliance with all legal requirements for development and construction. The property owner, design consultants, and contractors are each responsible for compliance with all applicable City, State and Federal laws. This specific authorization below is not a permit, nor shall it be construed to permit any violation of City, State or Federal Law. All Construction must be in accordance with all Local, State, and Federal Rules and Regulations. This approval of this electronic document is only valid if the document has not been modified and the digital signature below is valid:

City of Raleigh Development Approval _____

No.	REVISIONS	DATE	BY

Kimley»Horn
© 2023
300 MORRIS STREET, DURHAM, NC 27701, SUITE 200
PHONE: 919-682-3583
WWW.KIMLEY-HORN.COM
NC LICENSE #: F-0102

NORTH CAROLINA PROFESSIONAL SEAL
PRELIMINARY PLANS – DO NOT USE FOR CONSTRUCTION
ENGINEER TYLER D. WHITE

KHA PROJECT	013829007
DATE	9/27/2023
SCALE	1"=40'
DESIGNED BY:	TDW
DRAWN BY:	JHV
CHECKED BY:	TDW

EROSION CONTROL

PARKER RIDGE OFFSITE IMPROVEMENTS
NORTH CAROLINA
WAKE

SHEET NUMBER
R5.00

K:\DUR_Roadway\013829007 - Parker Ridge OS\Plan\Erosion Control\013829007_ero_psh_4.dgn
9/27/2023

CONSTRUCTION SEQUENCE

CONSTRUCTION SPECIFICATIONS

1. Request preconstruction meeting.

2. Obtain grading permit;

3. Install all erosion control measures as shown;

4. Obtain certificate of compliance through on-site inspection by Erosion Control Officer;

5. Proceed with grading;

6. Clean sediment basins when one-half full;

7. Seed and mulch denuded area within 15 days or duration shown on ground stabilization requirements, whichever is shorter, after any phase of grading;

8. Maintain soil erosion control measures until permanent ground cover is established;

9. Request final approval by Erosion Control Officer;

10. Remove soil erosion control measures and stabilize these areas.

MAINTENANCE

Follow the construction sequence throughout project development. When changes in construction activities are needed, amend the sequence schedule in advance to maintain management control.

Notification of Land Resources Sediment and Erosion Control Self-Inspection Program:

The Sedimentation Pollution Control Act was amended in 2006 to require that persons responsible for land-disturbing activities inspect a project after each phase of the project to make sure that the approved erosion and sedimentation control plan is being followed. Rules detailing the documentation of these inspections took effect October 1, 2010. The self-inspection program is separate from the weekly self-monitoring program of the NPDES Stormwater Permit for Construction Activities. The focus of the self-inspection report is the installation and maintenance of erosion and sedimentation control measures according to the approved plan. The inspections must be conducted after each phase of the project, and continue until permanent ground cover is established in accordance with NCGS 113A-54.1 and 15A NCAC 4B.0131. The Self-Inspection Report form is available as an Excel spreadsheet from http://portal.ncdenr.org/web/lr/erosion. If you have questions or cannot access the form, please contact NCDENR Division of Land Resources at (919) 791-4200.

MAINTENANCE PLAN

1. The Contractor shall inspect all erosion and sediment control practices for stability and operation within 24 hours following every runoff producing 0.5" rainfall (in a 24 hour period) but in no case less than once every week. Any needed repairs will be made immediately by the Contractor to maintain all practices as designed. Also per National Pollutant Discharge Elimination System (NPDES) general stormwater permit, a rain gauge must be installed on site. The rain gauge must be kept onsite and inspections by the Contractor must be made and logged after every half inch of rainfall and once a week.

2. The Contractor shall remove sediment from sediment basin when storage capacity has been approximately 50% filled. Gravel will be cleaned or replaced when the sediment pool no longer drains properly.

3. The Contractor shall remove sediment from behind silt fence when it becomes 0.5 feet deep at the fence. Silt fence will be repaired as necessary to maintain a barrier.

4. The Contractor shall fertilize, reseed as necessary, and mulch all seeded areas according to specifications in the vegetative plan to maintain a vigorous, dense vegetative cover.

5. The Contractor must inspect all outlets where stormwater runoff leaves the site and evaluate the effect on nearby streams or wetlands. Corrective action must be taken if sediment is deposited off site or into stream or wetland, or causes a visible increase in turbidity of any waterbody.

6. The Contractor shall provide ground cover on exposed slopes or other areas within the timeframe speficied in the stabilization table or sooner of completion of any phase of grading.

GROUND STABILIZATION REQUIREMENTS

Contractor shall stabilize (temporary or permanent) all disturbed areas within 7 or 14 days of termination of grading operations per the following guidlines.

Perimeter dikes, swales, ditches and slopes- 7 days
High Quality Water Zones- 7 days
Slopes 2:1 or steeper- 7 days
Slopes between 2:1 and 3:1 greater than 10' in length- 7 days
Slopes between 2:1 and 3:1 less than 10' in length- 14 days
Slopes between 3:1 and 4:1 less than 50' in length-14 days
Slopes between 3:1 and 4:1 greater than 50' in length- 7 days
Slopers flatter than 4:1- 14 days

VEGETATIVE PLAN (NCDENR 6.11)

SEEDING AND MULCHING

The kinds of seed and fertilizer, and the rates of application of seed, fertilizer, and limestone shall be as stated below. During periods of overlapping dates, the kind of seed to be used shall be determined by the Engineer.

Date	Type	Planting Rate
Mar.1-Aug.31	Tall Fescue	50 lbs./acre
	Centipede	5 lbs./acre
	Hulled Common Bermudagrass	25 lbs./acre
	Fertilizer	500 lbs./acre
	Limestone	4000 lbs./acre
Sep.1-Feb.28	Tall Fescue	50 lbs./acre
	Centipede	5 lbs./acre
	Unhulled Common Bermudagrass	35 lbs./acre
	Fertilizer	500 lbs./acre
	Limestone	4000 lbs./acre
Slopes (2:1 and steeper) and Waste & Borrow Locations		
Jan.1-Dec.31	Tall Fescue	75 lbs./acre
	Unhulled Common Bermudagrass	35 lbs./acre
	Fertilizer	500 lbs./acre
	Limestone	4000 lbs./acre

Approved Tall Fescue Cultivars

Adventure	Adventure II	Amigo	Anthem
Apache	Apache II	Arid	Austin
Brookstone	Bonanza	Bonanza II	Chapel Hill
Chesapeake	Chieftain	Coronado	Crossfire II
Debutante	Duster	Falcon	Falcon II
Finelawn Petite	Finelawn	Finelawn I	Genesis
Grande	Guardian	Hawk	Houndog
Jaguar	Jaguar III	Kentucky 31	Kitty
Monarch	Montauk	Mustang	Olympic
Pacer	Phoenix	Pixie	Pyramid
Rebel	Rebel Jr.	Rebel II	Renegade
Safari	Shenandoah	Tempo	Titan
Tomahawk	Trailblazer	Tribute	Vegas
Wolfpack	Wrangle		

SEEDING AND MULCHING

On cut and fill slopes 2:1 or steeper, add 30# (23kg) Sericea Lespefeza January 1-December 31.

Fertilizer shall be 10-20-20 analysis. Upon written approval of the Engineer, a different analysis of fertilizer may be used provided the 1-2-2 ratio is maintained and the rate of application adjusted to provide the same amount of plant flood as a 10-20-20 analysis.

SEEDBED PREPARATION

The Contractor shall cut and satisfactorily dispose of weeds or other unacceptable growth on the areas to be seeded. Uneven and rough areas outside of the graded section, such as crop rows, farm contours, ditches, and ditch spoil banks, fence line and hedgerow soil accumulations, and other minor irregularities which cannot be obliterated by normal seedbed preparation operations, shall be shaped and smoothed as directed by the Engineer to provide for more effective seeding and for ease of subsequent mowing operations.

The soil shall then be scarified or otherwise loosened to a depth of not less than 5 inches except as otherwise provided below or otherwise directed by the Engineer. Clods shall be broken and the top 2 to 3 inches of soil shall be worked into an acceptable seedbed by the use of soil pulverizers, drags, or harrows; or by other methods approved by the Engineer. All rock and debris 3 inches or larger shall be removed on median, shoulder, and ditch cut or fill slopes which are 3:1 or flatter, prior to the application of seed and fertilizer.

On cut slopes that are 2:1 and steeper, both the depth of preparation and the degree of smoothness of the seedbed may be reduced as permitted by the Engineer, but in all cases the slope surface shall be scarified, grooved, trenched, or punctured so as to provide pockets, ridges, or trenches in which the seeding materials can lodge. Contractor shall be responsible for providing the required seed bed. It may be necessary to seed these sections with a hydro-seeded.

On cut slopes that are either 2:1 or steeper, the Engineer may permit the preparation of a partial or complete seedbed during the grading of the slope. If at the time of seeding and mulching operations such preparation is still in a condition acceptable to the Engineer, additional seedbed preparation may be reduced or eliminated.

Seedbed preparation within 2 feet of the edge of any pavement shall be limited to a depth of 2 to 3 inches.

The preparation of seedbeds shall not be done when the soil is frozen, extremely wet, or when the Engineer determines that it is an otherwise unfavorable working condition.

APPLYING AND COVERING LIMESTONE, FERTILIZER, AND SEED

A) GENERAL:

Seasonal limitation for seeding operations; the kinds of grades of fertilizers; the kinds of seed; and the rates of application of limestone, fertilizer, and seed shall be as stated in the special provisions.

Equipment to be used for the application, covering, or compaction of limestone, fertilizer, and seed shall have been approved by the Engineer before being used on the project. Approval may be revoked at any time if equipment is not maintained in satisfactory working condition, or if the equipment operation damages the seed.

Limestone, fertilizer, and seed shall be applied within 24 hours after completion of seedbed preparation unless otherwise permitted by the Engineer, but no limestone or ferilizer shall be distributed and no seed shall be sown when the Engineer determines the weather and soil conditions are unfavorable for such operations.

During the application of fertilizer, adequate precautions shall be taken to prevent damage to traffic, structures, guardrails, traffic control devices, or any other appurtenances. The Contractor shall either provide adequate drainage covering or change methods of application as required to avoid such damage. When such damage occurs the Contractor shall repair it, including any cleaning that may be necessary.

APPLYING AND COVERING LIMESTONE, FERTILIZER, AND SEED

B) LIMESTONE AND FERTILIZER:

Limestone may be applied as a part of the seedbed preparation, provided it is immediately worked into the soil. If not so applied, limestone and fertilizer shall be distributed uniformly over the prepared seedbed at the specified rate of application and then harrowed, raked, or otherwise thoroughly worked or mixed into the seedbed.

If liquid fertilizer is used, storage containers for the liquid fertilizer shall be located on the project and shall be equipped for agitation of the liquid prior to its use. The storage containers shall be equipped with approved measuring or metering devices which will enable the Engineer to record at any time the amount of liquid that has been removed from the container. Application equipment for liquid fertilizer, other than a hydraulic seeder, shall be calibrated to ensure that the required rate of fertilizer is applied uniformly.

C) SEED:

Seed shall be distributed uniformly over the seedbed at the required rate of application, and immediately harrowed, dragged, raked, or otherwise worked so as to over the seed with a layer of soil. The depth of covering shall be as directed by the Engineer. If 2 kinds of seed are to be used which require different depths of covering, they shall be sown separately.

When a combination seed and fertilizer drill is used, fertilizer may be drilled in with the seed after limestone has been applied and worked into the soil. If 2 kinds of seed are being used which require different depth of covering, the seeding requiring the lighter covering may be sown broadcast or with a special attachment to the drill, or drilled lightly following the initial drilling operation.

When a hydraulic seeder is used for application of seed and fertilizer, the seed shall not remain in water containing fertilizer for more than 30 minutes prior to application unless otherwise permitted by the Engineer.

Immediately after seed has been properly covered the seedbed shall be compacted in the manner and degree approved by the Engineer.

MULCHING

A) GENERAL:

All seeded areas shall be mulched unles otherwise indicated in the special provisions or directed by the Engineer.

Grain straw may be used as mulch at any time of year. If permissions to use material other than grain straw is requested by the Contractor and the use of such material is approved by the Engineer, the seasonal limitations, the methods and rates of application, the type of binding material, or other conditions governing the use of such material will be established by the Engineer at the time of approval.

B) APPLYING MULCH:

Mulch shall be applied within 24 hours after completion of seeding unless otherwise permitted by the Engineer. Care shall be exercised to prevent displacement of soil or seed or other damage to the seeded area during the mulching operations. Mulch shall be uniformly spread by hand or by approved mechanical spreaders or blowers that will provide an acceptable application. An acceptable application will be that which will allow some sunlight to penetrate and air to circulate but will also partially shade the ground, reduce erosion, and conserve soil moisture.

C) HOLDING MULCH:

Mulch shall be held in place by applying a sufficient amount of asphalt or other approved binding material to assure that the mulch is properly held in place. The rate and method of application of binding material shall meet the approval of the Engineer. Where the binding material is not applied directly with the mulch it shall be applied immediately following the mulch application.

During the application of asphalt binding material, or other approved binding materials which may cause damage, adequate precautions shall be taken to prevent damage to traffic, structures, guardails, traffic control devices, or any other appurtenances. The Contractor shall either provide adequate covering or change methods of application as required to avoid such damage. When such damage occurs the Contractor shall repair it, including any cleaning that may be necessary.

The Contractor shall take sufficient precautions to prevent mulch from entering drainage structures through displacement by wind, water, or other causes and shall promptly remove any blockage to drainage facilities that may occur.

TOPSOILING (6.04)

CONSTRUCTION SPECIFICATIONS

MATERIALS

Determine whether the quality and quantity of available topsoil justifies selective handling. Quality topsoil has the following characteristics:

Texture - loam, sandy loam, and silt loam are best; sandy clay loam, silty clay loam, clay loam, and loamy sand are fair. Do not use heavy clay and organic soils such as peat or muck as topsoil.

Organic matter content - (sometimes referred to as "humic matter") should be greater than 1.5% by weight.

Acidity - pH should be greater than 3.6 before liming, and liming is required if it is less than 6.0.

Soluble salts - should be less than 500 ppm.

Sodium - sodium adsorption ratio should be less than 12.

The depth of material meeting the above qualifications should be at least 2 inches. Soil factors such as rock fragments, slope, depth to water table, and layer thickness affect the ease of excavation and spreading of topsoil.

Generally, the upper part of the soil, which is richest in organic matter, is most desirable; however, material excavated from deeper layers may be worth storing if it meets the other criteria listed above.

Organic soils such as mucks and peats do not make good topsoil. They can be identified by their extremely light weight when dry.

STRIPPING

Strip topsoil only from those areas that will be disturbed by excavation, filling, roadbuilding, or compaction by equipment. A 4 to 6-inch stripping depth is common, but depth varies depending on the site. Determine depth of stripping by taking soil cores at several locations within each area to be stripped. Topsoil depth generally varies along a gradient from hilltop to toe of the slope. Put sediment basins, diversions, and other controls into place before stripping.

STOCKPILING

Select stockpile location to avoid slopes and natural drainageways, avoiding traffic routes. On large sites, respreading is easier and more economical when topsoil is stockpiled in small piles located near areas where they will be used. All stockpile areas used shall be stabilized with silt fence and seeded.

Sediment barriers - Use sediment fences or other barriers where necessary to retain sediment.

Temporary seeding - Protect topsoil stockpiles by temporarily seeding as soon as possible, no more than 30 working days or 120 calendar days after the formation of the stockpile.

Permanent vegetation - If stockpiles will not be used within 12 months they must be stabilized with permanent vegetation to control erosion and weed growth.

SITE PREPARATION

Before spreading topsoil, establish erosion and sedimentation control practices such as diversions, berms, dikes, waterways, and sediment basins.

Grading - Maintain grades on the areas to be topsoiled according to the approved plan and do not alter them by adding topsoil.

Liming of subsoil - Where the pH of the existing subsoil is 6.0 or less, or the soil is composed of heavy clays, incorporate agricultural limestone in amounts recommended by soil tests or specified for the seeding mixture to be used. Incorporate lime to a depth of at least 2 inches by disking.

Roughening - Immediately prior to spreading the topsoil. loosen the subgrade by disking or scarifying to a depth of at least 4 inches, to ensure bonding of the topsoil and subsoil. If no amendments have been incorporated, loosen the soil to a depth of at least 6 inches before spreading topsoil.

SPREADING TOPSOIL

Do not spread topsoil while it is frozen or muddy or when subgrade is wet or frozen. Correct any irregularities in the surface that result from topsoiling or other operations to prevent the formation of depressions or water pockets.

Compact the topsoil enough to ensure good contact with the underlying soil, but avoid excessive compaction, as it increases runoff and inhibits seed germination. Light packing with a roller is recommended where high-maintenance turf is to be established.

On slopes and areas that will not be mowed, the surface may be left rough after spreading topsoil. A disk may be used to promote bonding at the interface between topsoil and subsoil.

After topsoil application, follow procedure for seedbed preparation, taking care to avoid excessive mixing of topsoil into the subsoil.

RIP RAP (6.15)

CONSTRUCTION SPECIFICATIONS

Subgrade Preparation - Prepare the subgrade for riprap and filter to the required lines and grades shown on the plans. Compact any fill required in the subgrade to a density approximating that of the surrounding undisturbed material or overfill depressions with riprap. Remove brush, trees, stumps and other objectional material. Cut the subgrade sufficiently deep that the finished grade of the riprap will be at the elevation of the surrounding area. Channels should be excavated sufficiently to allow placement of the riprap in a manner such that the finished inside dimensions and grade of the riprap meet design specifications.

Sand and gravel filter blanket - Place the filter blanket immediately after the ground foundation is prepared. For gravel, spread filter stone in a uniform layer to the specified depth. Where more than one layer of filter material is used, spread the layers with minimal mixing.

Synthetic filter fabric - Place the cloth filter directly on the prepared foundation. Overlap the edges by at least 12 inches, and space anchor pins every 3 ft along the overlap. Bury the upstream end of the cloth a minimum of 12 inches below ground and where necessary, bury the lower end of the cloth or overlap with the next section as required. Take care not to damage the cloth when placing riprap. If damage occurs remove the riprap and repair the sheet by adding another layer of filter material with a minimum overlap of 12 inches around the damaged area. If extensive damage is suspected, remove and replace the entire sheet.

Where large stones are used or machine placement is difficult, a 4-inch layer of fine gravel or sand may be needed to protect the filter cloth.

Stone Placement - Placement of riprap should follow immediately after placement of the filter. Place riprap so that it forms a dense, well-graded mass of stone with a minimum of voids. The desired disbribution of stones throughout the mass may be obtained by selective loading at the quarry and controlled dumping during final placement. Place riprap to its full thickness in one operation. Do not place riprap by dumping through chutes or other methods that cause segregation of stone sizes. Take care not to dislodge the underlying base or filter when placing the stones.

The finished slope should be free of pockets of small stone or clusters of large stones. Hand placing may be necessary to achieve the proper distribution of stone sizes to produce a relatively smooth, uniform surface. The finished grade of the riprap should blend with the surrounding area. No overfall or protrusion of riprap should be apparent.

MAINTENANCE

Inspect channels at regular intervals as well as after major rains, and make repairs promptly. Give special attention to the outlet and inlet sections and other points where concentrated flow enters. Carefully check stability at road crossings and look for indications of piping, scour holes, or bank failures. Make repairs immediately. Maintain all vegetation adjacent to the channel in a healthy, vigorous condition to protect the area from erosion and scour during out-of-bank flow. Control of weed and brush growth may be needed in some locations.

LAND GRADING (6.02)

CONSTRUCTION SPECIFICATIONS

1. Construct and maintain all erosion and sedimentation control practices and measures in accordance with the approved sedimentation control plan and construction schedule.

2. Remove good topsoil from areas to be graded and filled, and preserve it for use in finishing the grading of all critical areas.

3. Scarify areas to be topsoiled to a minimum depth of 2 inches before placing topsoil.

4. Clear and grub areas to be filled to remove trees, vegetation, roots, or other objectionable material that would affect the planned stability of the fill.

5. Ensure that fill material is free of brush, rubbish, rocks, logs, stumps, building debris, and other materials inappropriate for constructing stable fills.

6. Place all fill in layers not to exceed 9 inches in thickness, and compact the layers as required to reduce erosion, slippage, settlement, or other related problems.

7. Do not incorporate frozen material or soft or highly compressible materials into fill slopes.

8. Do not place fill on a frozen foundation, due to possible subsidence and slippage.

9. Keep diversions and other water conveyance measures free of sediment during all phases of development.

10. Handle seeps or springs encountered during construction in accordance with approved methods.

11. Permanently stabilize all graded areas immediately after final grading is completed on each area in the grading plan. Apply temporary stabilization measures on all graded areas when work is to be interrupted or delayed for 15 working days or longer.

12. Show topsoil stockpiles, borrow areas, and spoil areas on the plans, and make sure they are adequately protected from erosion. Include final stabilization of these areas in the plan.

MAINTENANCE

Periodically check all graded areas and the supporting erosion and sedimentation control practices, especially after heavy rainfalls. Promptly remove all sediment from diversion and other water-disposal practices. If washouts or breaks occur, repair them immediately. Prompt maintenance of small eroded areas before they become significant gullies is an essential part of an effective erosion and sedimentation control plan.

GRASS-LINED CHANNELS (6.30)

CONSTRUCTION SPECIFICATIONS

1. Remove all trees, brush, stumps, and other objectionable material from the foundation area and dispose of properly.

2. Excavate the channel and shape it to neat lines and dimensions shown on the plans plus a 0.2-ft overcut around the channel perimeter to allow for bulking during seedbed preparations and sod buildup.

3. Remove and properly dispose of all excess soil so that surface water may enter the channel freely.

4. The procedure used to establish grass in the channel will depend upon the severity of the conditions and selection of species. Protect the channel with mulch or a temporary liner sufficient to withstand anticipated velocities during the establishment period.

MAINTENANCE

During the establishment period, check grass-lined channels after every rainfall. After grass is established, periodically check the channel; check it after every heavy rainfall event. Immediately make repairs. It is particularly important to check the channel outlet and all road crossings for bank stability and evidence of piping or scour holes. Remove all significant sediment accumulations to maintain the designed carrying capacity. Keep the grass in a healthy, vigorous condition at all times, since it is the primary erosion protection for the channel.

No.	REVISIONS	DATE	BY

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NC LICENSE #: F-0102

NORTH CAROLINA PROFESSIONAL SEAL 049165 ENGINEER TYLER D. WAITE
PRELIMINARY PLANS — DO NOT USE FOR CONSTRUCTION

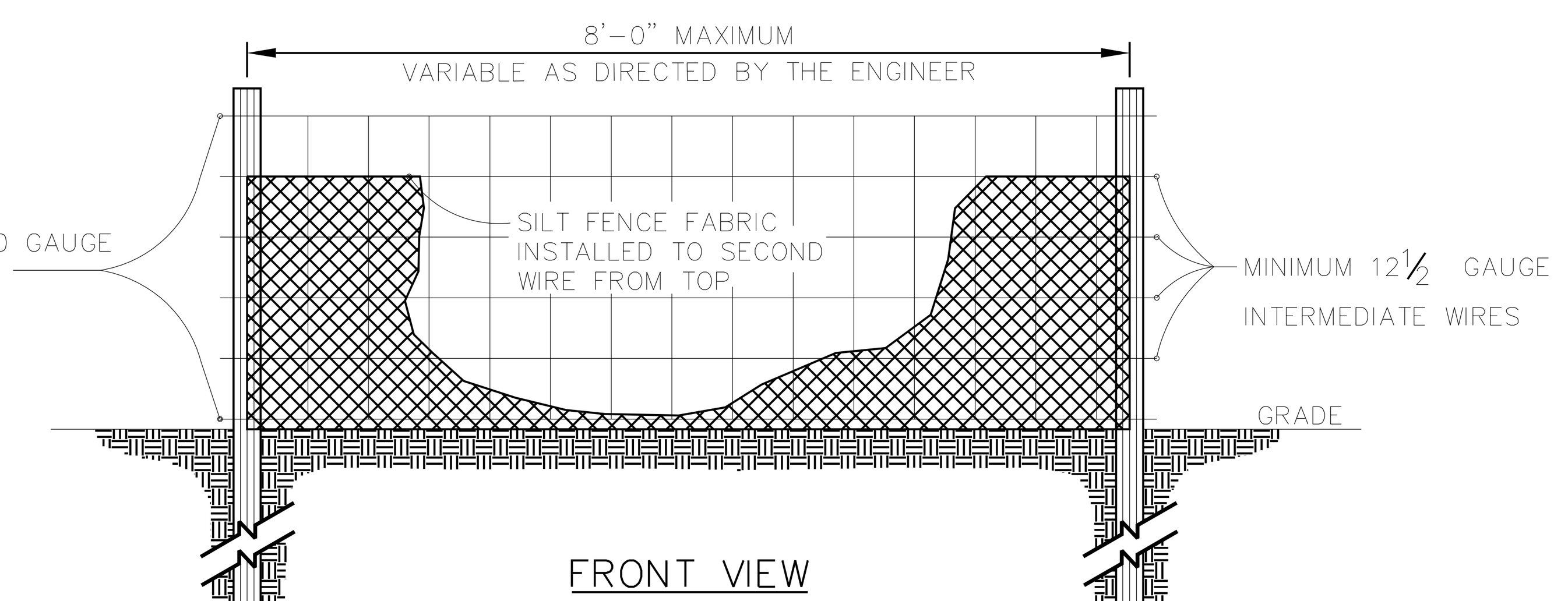
KHA PROJECT	DATE	SCALE	DESIGNED BY:	DRAWN BY:	CHECKED BY:
013829007	9/27/2023	1"=40'	TDW	JHV	TDW

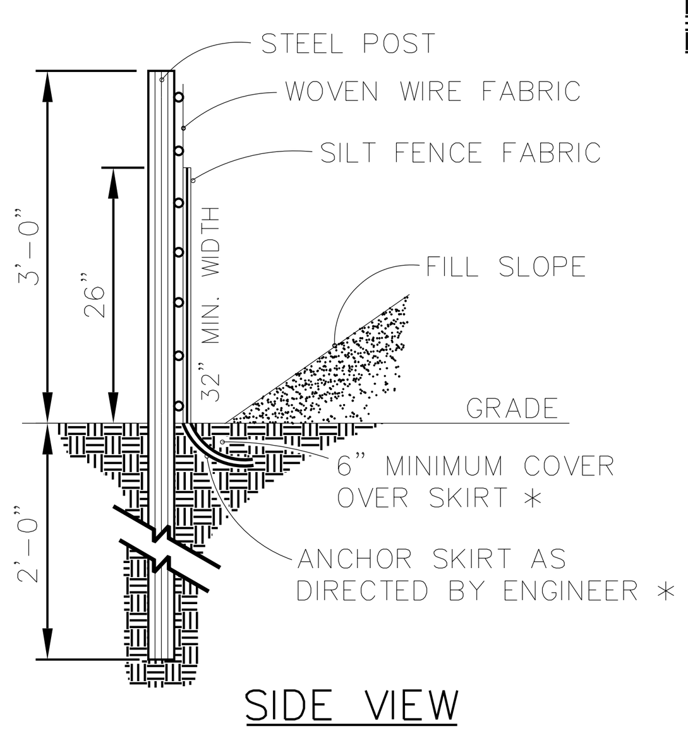
EROSION CONTROL DETAILS

PARKER RIDGE OFFSITE IMPROVEMENTS
WAKE NORTH CAROLINA

SHEET NUMBER
R5.01

STANDARD TEMPORARY SILT FENCE



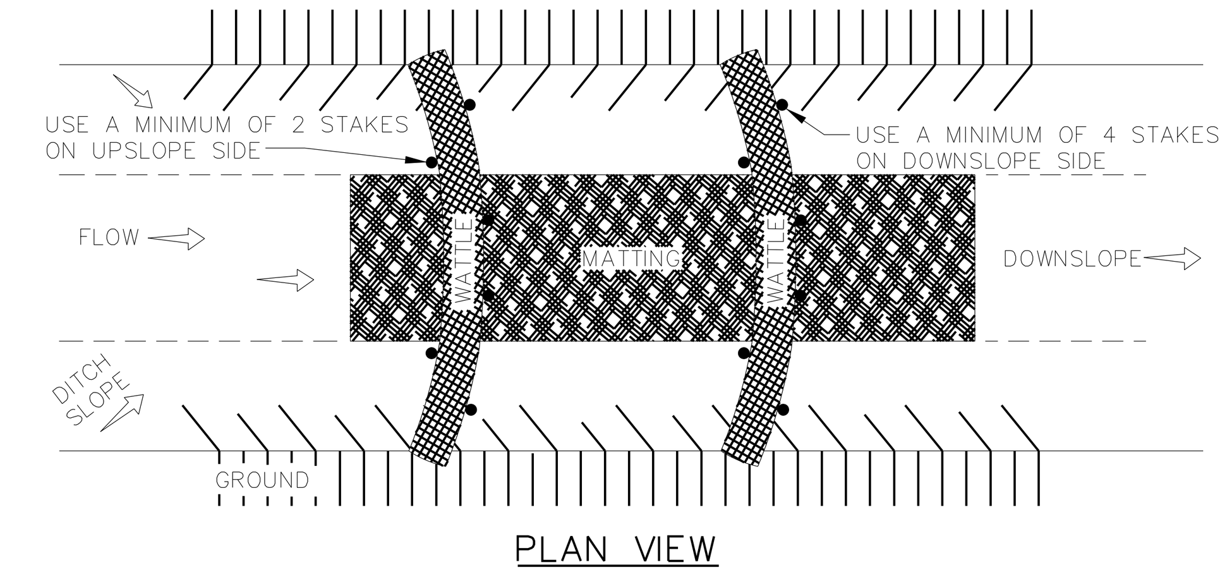


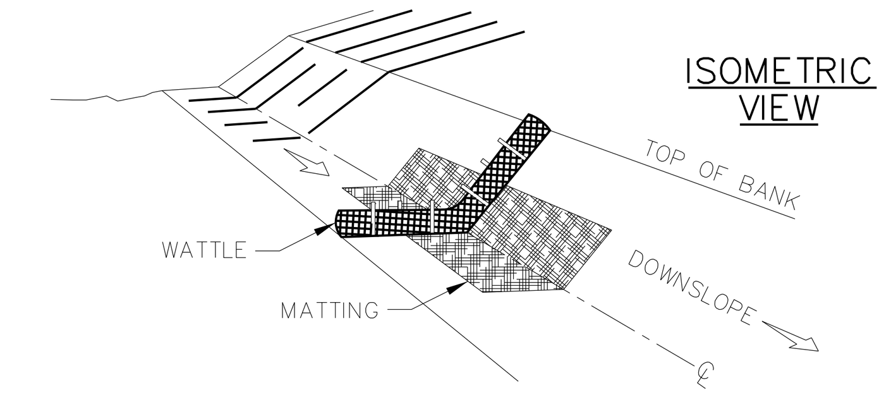
NOTE:
USE SILT FENCE ONLY WHEN DRAINAGE AREA DOES NOT EXCEED 1/4 ACRE AND NEVER IN AREAS OF CONCENTRATED FLOW.

* FOR REPAIR OF SILT FENCE FAILURES USE REINFORCED SILT FENCE OUTLET DETAIL

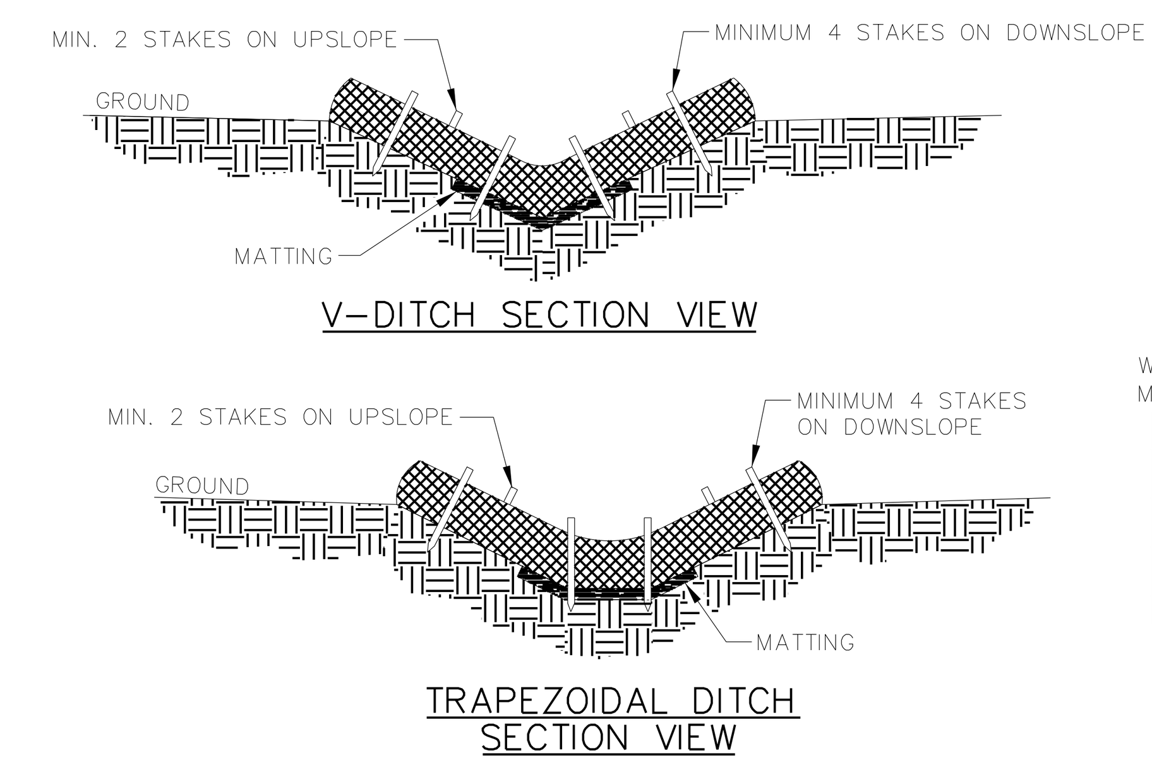
STANDARD TEMPORARY SILT FENCE

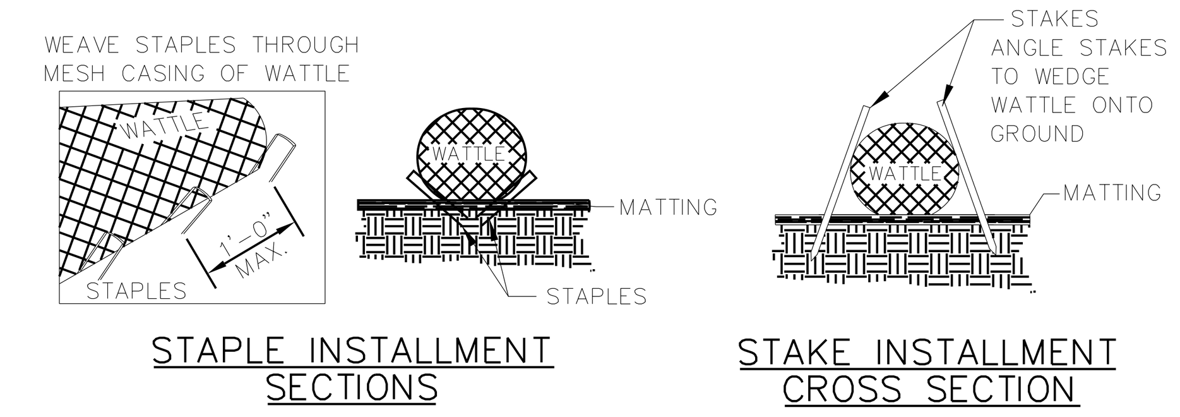
WATTLE





NOTES:
1) USE A MINIMUM 12 INCH DIAMETER EXCELSIOR WATTLE.
2) USE 24 INCH LONG WOODEN STAKES WITH A 2"x2" NOMINAL CROSS SECTION.
4) INSTALL WATTLE(S) TO A HEIGHT ON SLOPE SO FLOW WILL NOT WASH AROUND WATTLE AND SCOUR SLOPES, OR AS DIRECTED.
5) INSTALL A MINIMUM OF TWO UPSLOPE STAKES AND FOUR DOWNSLOPE STAKES AT AN ANGLE TO WEDGE WATTLE TO GROUND AT BOTTOM.
6) PROVIDE STAPLES MADE OF 0.125 INCH DIAMETER STEEL WIRE FORMED INTO A U-SHAPE NOT LESS THAN 12 INCHES IN LENGTH.
7) INSTALL STAPLES APPROXIMATELY EVERY 1 LINEAR FOOT ON BOTH SIDES OF WATTLE AND AT EACH END TO SECURE IT TO THE SOIL.
8) AFTER INSTALLATION OF STAPLES, CHINK ANY GAPS BETWEEN WATTLE AND GROUND WITH MATTING.





WATTLE

BLOCK AND GRAVEL INLET PROTECTION (6.52)

NOTES:

1. Use block and gravel inlet protection when inlet is at existing pavement locations.

2. Use block & gravel device or acceptable alternative over grate drain holes.

CONSTRUCTION SPECIFICATIONS

1. Lay one block on each side of the structure on its side in the button row to allow pool drainage. The foundation should be excavated at least 2 inches below the crest of the storm drain. Place the bottom row of blocks against the edge of the storm drain for lateral support and to avoid washouts when overflow occurs. If needed, give lateral support to subsequent rows by placing 2x4 wood studs through block openings.

2. Carefully fit hardware cloth or comparable wire mesh with ½-inch openings over all block openings to hold gravel in place.

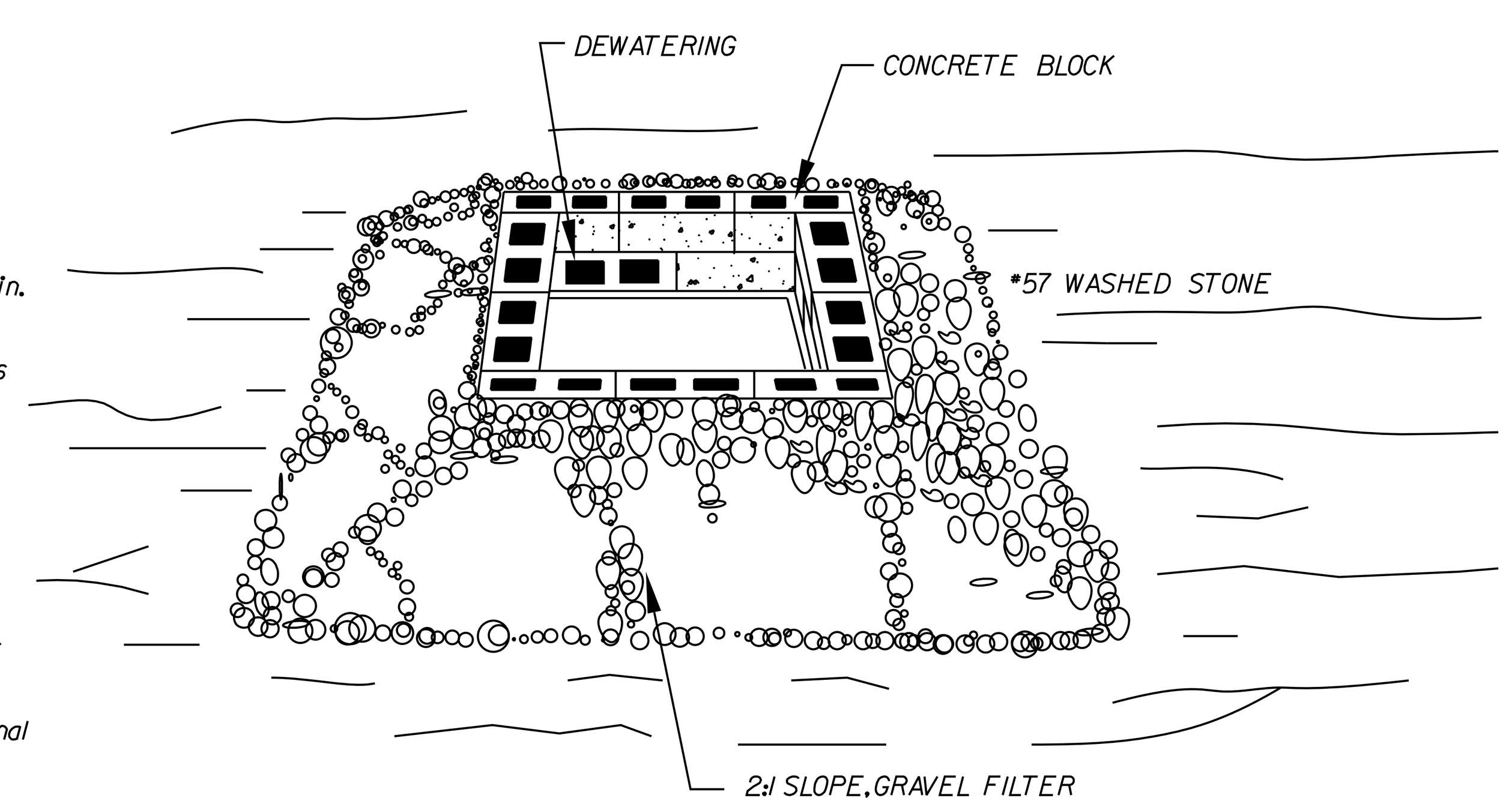
3. Use clean gravel, ¾ to ½-inch diameter, placed 2 inches below the top of the block on a 2:1 slope or flatter and smooth it to an even grade. Use DOT #57 washed stone.

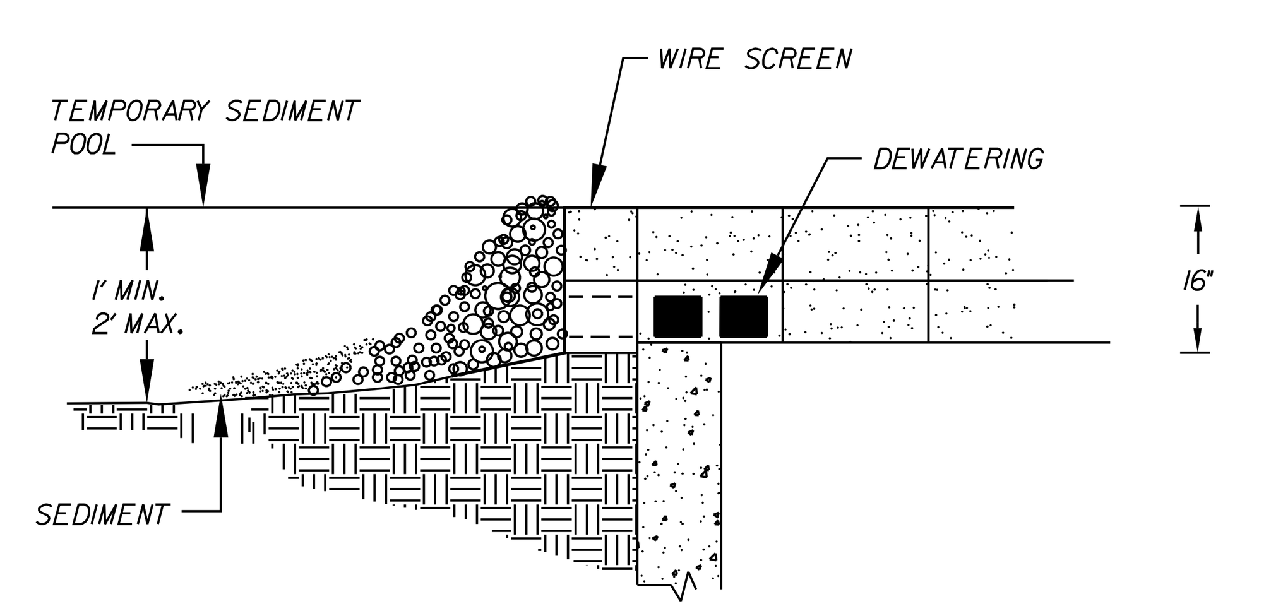
4. The structure shall be inspected after each rain and repairs made as needed.

5. Sediment shall be removed and the trap restored to its original dimensions when the sediment has accumulated to ½ the design depth of the trap. Removed sediment shall be deposited in a suitable area and in such a manner that it will not erode.

6. Structures shall be removed and the area stabilized when the remaining drainage area has been properly stabilized.

7. No.57 stone shall be paid for at the contract unit price per ton "Sediment Control Stone".





K:\DUR_Roadway\013829007 - Parker Ridge OS\Plan\Erosion Control\013829007_ero_psh_4 _dtl.dgn
9/27/2023

No.	REVISIONS	DATE	BY

Kimley»Horn
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300 MORRIS STREET, DURHAM, NC 27701, SUITE 200
PHONE: 919-682-3583
WWW.KIMLEY-HORN.COM
NC LICENSE #: F-0102

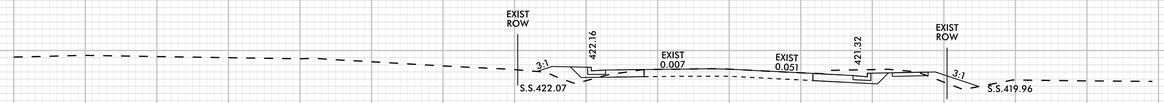
NORTH CAROLINA PROFESSIONAL SEAL ENGINEER TYLER D. WAITE
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION

KHA PROJECT 013829007
DATE 9/27/2023
SCALE 1"=40'
DESIGNED BY: TDW
DRAWN BY: JHV
CHECKED BY: TDW

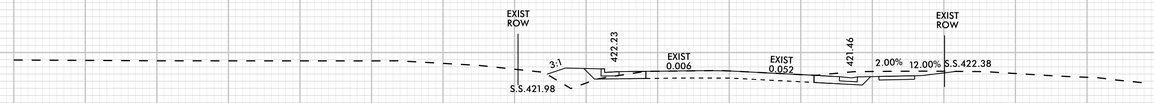
EROSION CONTROL DETAILS

PARKER RIDGE OFFSITE IMPROVEMENTS
WAKE NORTH CAROLINA

SHEET NUMBER
R5.02



14+50.00



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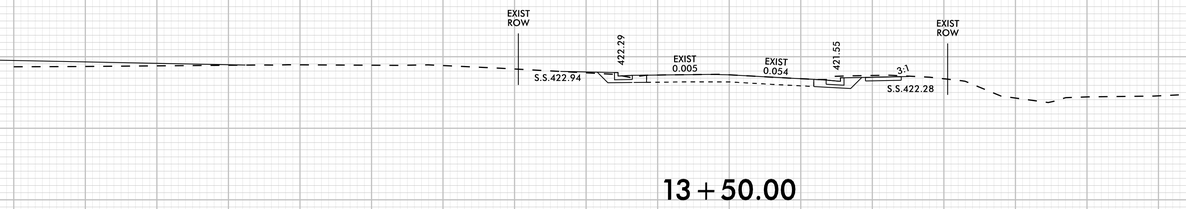
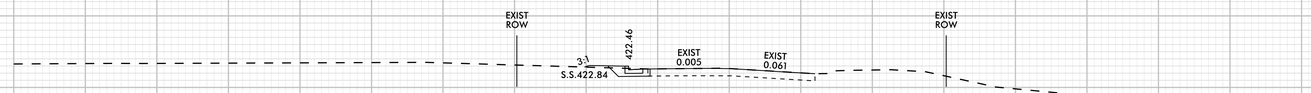


13+50.00



13+00.00

12+50.00

-L- E YOUNG STREET

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

435 430 425 420 415 410 440

CITY OF RALEIGH – PLANS AUTHORIZED FOR CONSTRUCTION

Plans for the proposed use have been reviewed for general compliance with applicable codes. This limited review, and authorization for construction is not to be considered to represent total compliance with all legal requirements for development and construction. The property owner, design consultants, and contractors are each responsible for compliance with all applicable City, State and Federal laws. This specific authorization below is not a permit, nor shall it be construed to permit any violation of City, State or Federal Law. All Construction must be in accordance with all Local, State, and Federal Rules and Regulations. This approval of this electronic document is only valid if the document has not been modified and the digital signature below is valid:

No.	REVISIONS	DATE	BY

Kimley»Horn
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WWW.KIMLEY-HORN.COM
NC LICENSE #: F-0102

NORTH CAROLINA PROFESSIONAL SEAL
PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION
ENGINEER
TYLER D. WHITE

KHA PROJECT 013829007	DATE 9/27/2023	SCALE 1"=10'	
		DESIGNED BY:	TDW
		DRAWN BY:	JHV
		CHECKED BY:	TDW

ROADWAY CROSS-SECTIONS

PARKER RIDGE OFFSITE IMPROVEMENTS

NORTH CAROLINA
WAKE

SHEET NUMBER
R6.00

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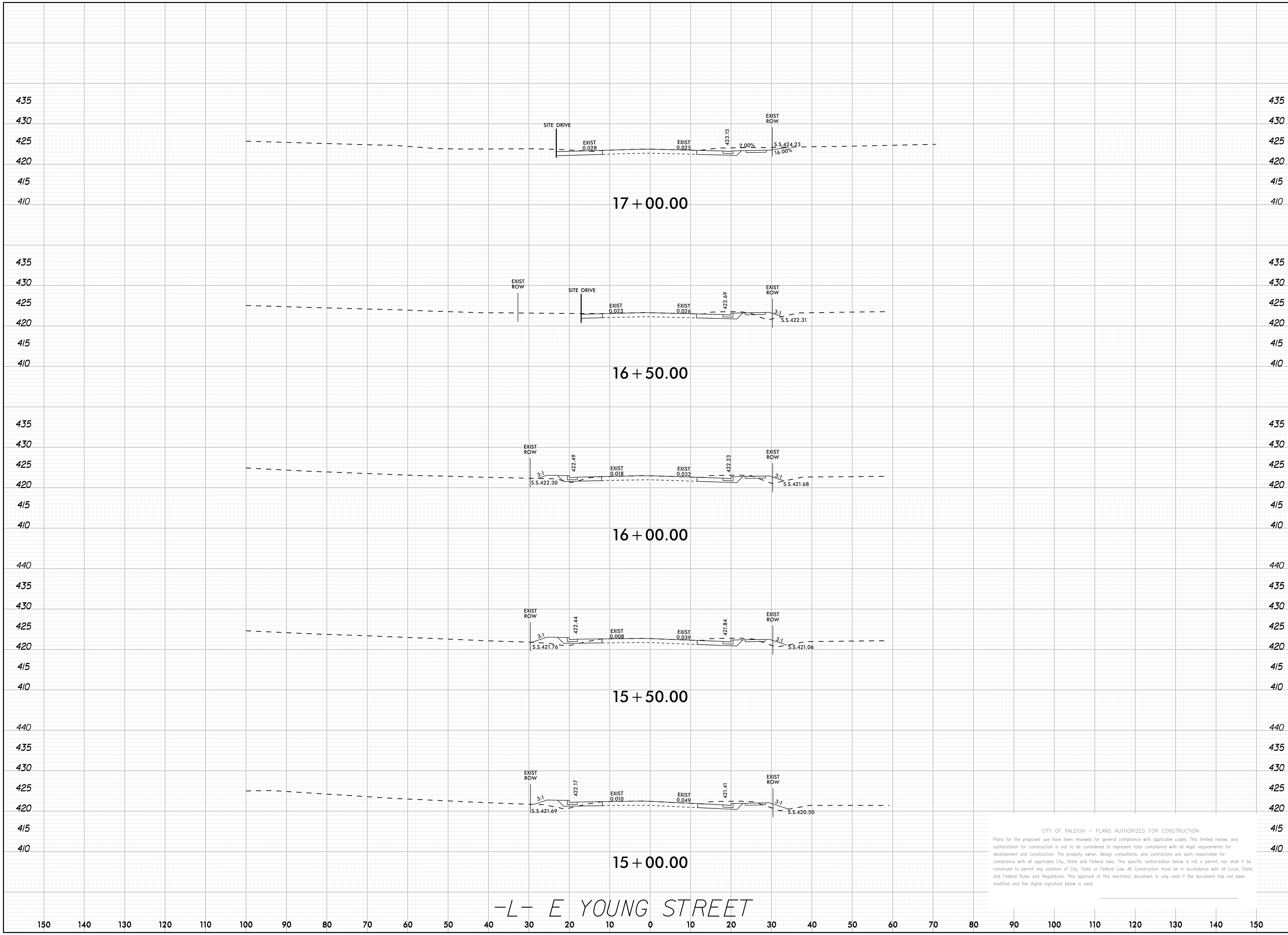
9/27/2023



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K:\DUR_Roadway\013829007 – Parker Ridge OS\Plan\Cross-Sections\013829007_xpl_L.dgn

9/27/2023

No.	REVISIONS	DATE	BY

Kimley»Horn

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PHONE: 919-682-3583
WWW.KIMLEY-HORN.COM
NC LICENSE #: F-0102

NORTH CAROLINA PROFESSIONAL SEAL 049165 ENGINEER TYLER D. WHITE

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

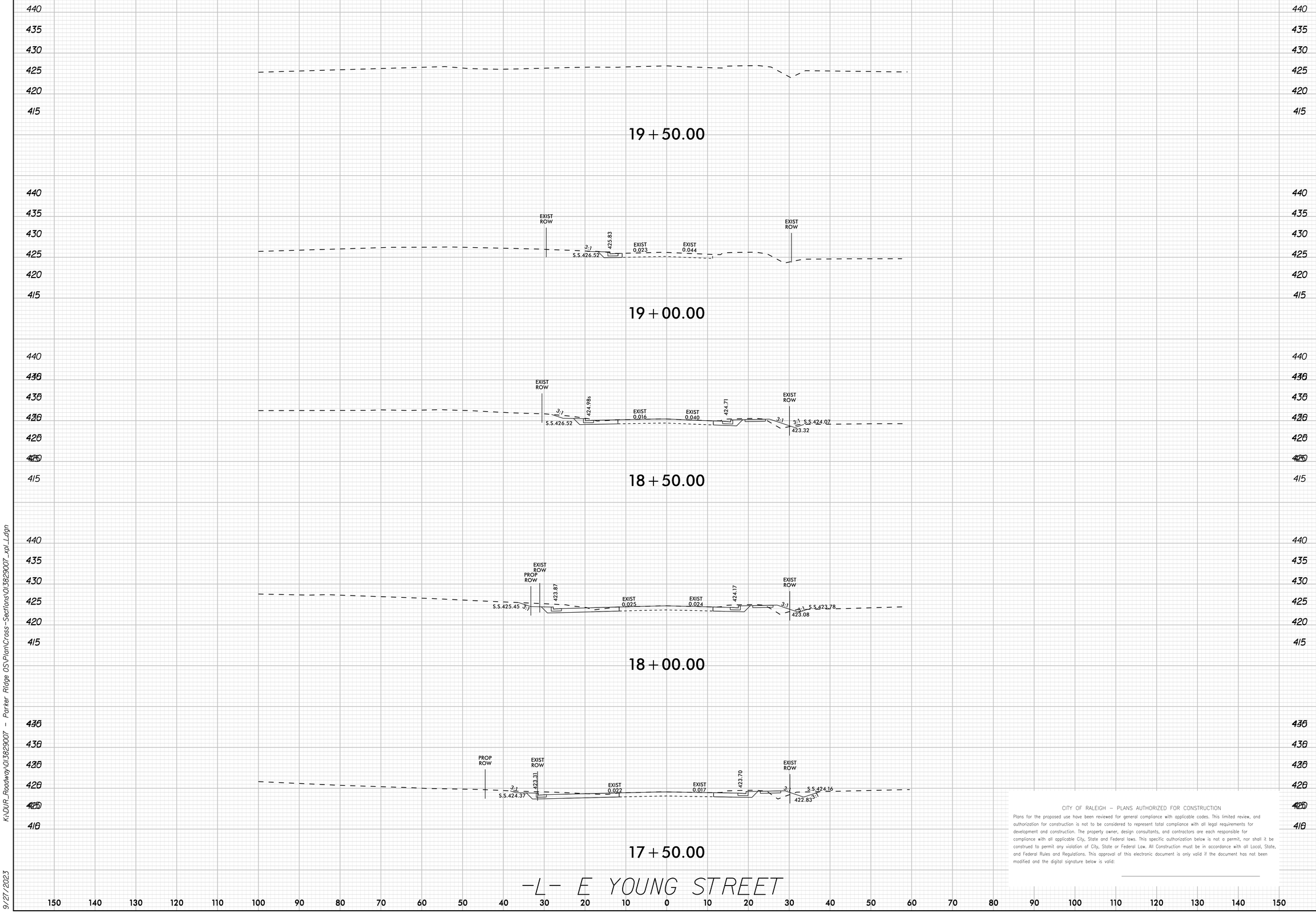
KHA PROJECT	013829007
DATE	9/27/2023
SCALE	1"=10'
DESIGNED BY:	TDW
DRAWN BY:	JHV
CHECKED BY:	TDW

ROADWAY CROSS-SECTIONS

PARKER RIDGE OFFSITE IMPROVEMENTS

WAKE NORTH CAROLINA

SHEET NUMBER
R6.01



CITY OF RALEIGH – PLANS AUTHORIZED FOR CONSTRUCTION

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NORTH CAROLINA PROFESSIONAL SEAL 049161 ENGINEER TYLER D. WHITE

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

KHA PROJECT	013829007
DATE	9/27/2023
SCALE	1"=10'
DESIGNED BY:	TDW
DRAWN BY:	JHV
CHECKED BY:	TDW

ROADWAY CROSS-SECTIONS

PARKER RIDGE OFFSITE IMPROVEMENTS

WAKE COUNTY, NORTH CAROLINA

SHEET NUMBER
R6.02

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9/27/2023