

**GENERAL NOTES:**

- EXCAVATE AT UPPER LIMITS OF EXCAVATION TO ELEVATION INDICATED. MAINTAIN A MINIMUM DISTANCE OF 5' FROM EXISTING RETEVMENTS AND STRUCTURES.
- RELOCATE EXISTING SANITARY SEWER AS INDICATED WITHIN THE LIMITS OF DISTURBANCE. REPLACE EXISTING SEWER PER THE REQUIREMENTS OF THE CITY OF RALEIGH UTILITY DEPARTMENT. FOR RIM AND INVERT ELEVATION INFORMATION, SEE SHEET U-05 FOR SEWER PIPING PROFILES.
- THE CONTRACTOR SHALL LOCATE ALL SEWER LATERALS PRIOR TO REPLACING THE SEWER. THE CONTRACTOR SHALL MAINTAIN SERVICE AT ALL TIMES.
- EXISTING STORM SEWER PIPE COULD NOT BE FOUND AND IS ASSUMED BURIED. THE ALIGNMENT IS ASSUMED TO BE IN THE CENTER OF THE EXISTING DRAINAGE EASEMENT.
- THE CONTRACTOR SHALL INSTALL A 12' WIDE DOUBLE GATE CENTERED ON THE SANITARY SEWER. SEE SHEET D-04, DETAIL 5. MATCH MATERIAL TO EXISTING FENCE.
- THE CONTRACTOR SHALL SUBMIT A SEPARATE SEWER BYPASS PLAN SEALED BY A NC PROFESSIONAL ENGINEER TO THE PUBLIC UTILITIES DEPARTMENT PRIOR TO PUMPING OPERATIONS. PUMPING OPERATIONS MUST BE MONITORED 24 HOURS A DAY FOR EACH DAY OF PUMPING BY QUALIFIED PERSONNEL IN ORDER TO RESPOND TO PROBLEMS OR FAILURES. 100% REDUNDANCY IS REQUIRED FOR PUMPING OPERATIONS. BACK UP PUMPS SHALL BE CONNECTED TO THE BYPASS FORCE MAIN TO FACILITATE IMMEDIATE USE UPON FAILURE OF THE PRIMARY PUMPS.
  - BYPASS FROM MH 1 TO MH 6
    - o PEAK FLOW = 450 GPM
    - o TDH = 57 FEET WITH A 4-INCH FORCE MAIN
  - BYPASS FROM MH 5 TO MH 6
    - o PEAK FLOW = 1750 GPM
    - o TDH = 78 FEET WITH A 6-INCH FORCE MAIN
- PROPOSED CONTOUR INTERVAL IS 1 FOOT.
- THE CONTRACTOR SHALL NOT REPLACE FENCE WITHIN EXISTING EASEMENT.

**KEY NOTE:**  
 ① TRANSITION EXCAVATION ELEVATION FROM 262.5 TO 262.0 IN THIS AREA.

**CITY OF RALEIGH**  
 All Construction must be in accordance with all Local, State, and Federal Rules and Regulations.

- TRANSPORTATION SERVICES \_\_\_\_\_
- PUBLIC UTILITIES \_\_\_\_\_
- STORMWATER \_\_\_\_\_
- PLANNING \_\_\_\_\_
- FIRE \_\_\_\_\_
- URBAN FORESTRY \_\_\_\_\_

**MANHOLE COORDINATE TABLE**

MANHOLE NUMBER	NORTHING	EASTING
EX SS MH NO. 1	761026.83	2122845.66
NEW SS MH NO. 2	761041.20	2122835.72
NEW SS MH NO. 3	761182.78	2122841.49
NEW SS MH NO. 4	761189.54	2122675.35
EX SS MH NO. 5	761220.16	2122711.72
EX SS MH NO. 6	761155.97	2122635.15

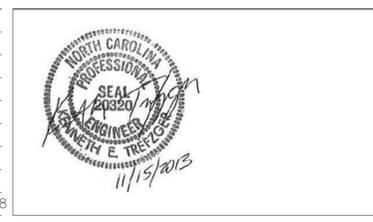
**SEWER COLLECTION / EXTENSION SYSTEM**  
 THE CITY OF RALEIGH CONSENTS TO THE CONNECTION AND EXTENSION OF THE CITY'S PUBLIC SEWER SYSTEM AS SHOWN ON THIS PLAN. THE MATERIAL AND CONSTRUCTION METHODS USED FOR THIS PROJECT SHALL CONFORM TO THE STANDARDS AND SPECIFICATIONS OF THE CITY'S PUBLIC UTILITIES HANDBOOK.  
 CITY OF RALEIGH  
 PUBLIC UTILITIES DEPARTMENT PERMIT # \_\_\_\_\_  
 AUTHORIZATION TO CONSTRUCT \_\_\_\_\_  
 DATE \_\_\_\_\_

\$FILES\$ \$TIMES\$ \$DATES\$ \$USERS\$ \$MVS\$

**HDR**  
 HDR Engineering, Inc.  
 of the Carolinas  
 3733 National Drive, Suite 207 | Raleigh, NC 27612  
 N.C.E.L.S. License Number: F-0116

ISSUE	DATE	DESCRIPTION
A	11/2013	ISSUED FOR BID

PROJECT MANAGER	K. TREFZGER, PE
	P. BLANDFORD, PE
	J. POWERS
	G. BLUE
PROJECT NUMBER	010913-52595-018



**City of Raleigh**  
 Northshore  
 Lake and Dam  
 Rehabilitation

**GRADING AND UTILITY PLAN**

0 1" 2"  
 FILENAME: OOC-06.dgn  
 SCALE: 1" = 40'  
 SHEET: **C-06**