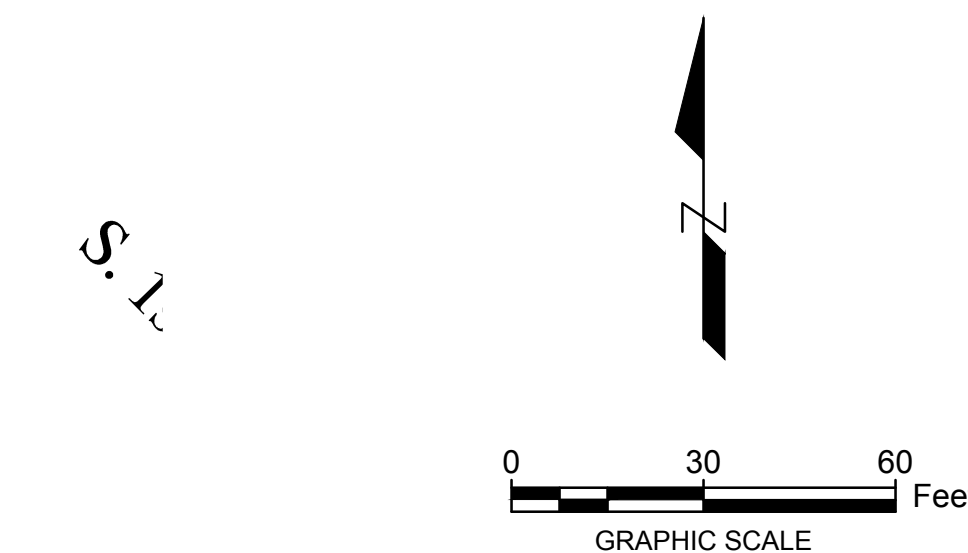
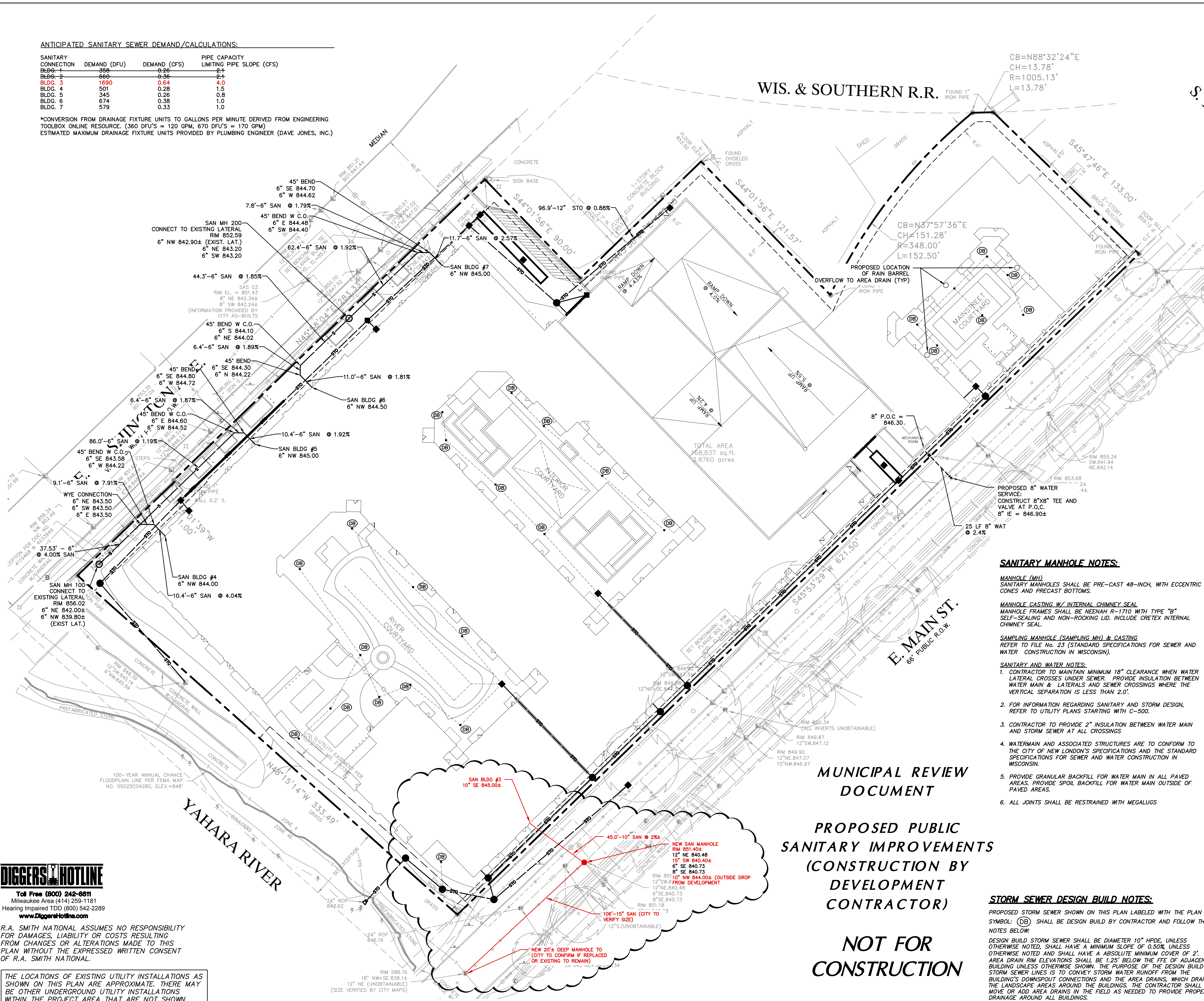


ANTICIPATED SANITARY SEWER DEMAND/CALCULATIONS:

SANITARY CONNECTION	DEMAND (DFU)	DEMAND (CFS)	PIPE CAPACITY LIMITING PIPE SLOPE (CFS)
BBG-1	356	0.26	2.1
BLDG-2	660	0.36	2.1
BLDG-3	1690	0.64	4.0
BLDG-4	501	0.28	1.5
BLDG-5	345	0.26	0.8
BLDG-6	674	0.38	1.0
BLDG-7	579	0.33	1.0

\*CONVERSION FROM DRAINAGE FIXTURE UNITS TO GALLONS PER MINUTE DERIVED FROM ENGINEERING TOOLBOX ONLINE RESOURCE. (360 DFU'S = 120 GPM, 670 DFU'S = 170 GPM)  
ESTIMATED MAXIMUM DRAINAGE FIXTURE UNITS PROVIDED BY PLUMBING ENGINEER (DAVE JONES, INC.)



LEGEND

	EXISTING SANITARY MANHOLE
	EXISTING POWER POLES
	EXISTING WATER VALVE
	EXISTING FIRE HYDRANT
	EXISTING SANITARY SEWER
	EXISTING WATER MAIN
	EXISTING GAS LINE
	EXISTING TELEPHONE LINE
	EXISTING UNDERGROUND ELECTRIC
	EXISTING OVERHEAD ELECTRIC
	EXISTING STORM SEWER
	PROPOSED STORM SEWER
	PROPOSED 10" DESIGN BUILD STORM SEWER
	PROPOSED SANITARY SEWER
	PROPOSED WATER MAIN
	PROPOSED STORM SEWER MANHOLE WITH GRATE
	PROPOSED STORM SEWER MANHOLE
	PROPOSED STORM SEWER AREA DRAIN
	PROPOSED FLARED END SECTION
	PROPOSED SANITARY SEWER MANHOLE
	PROPOSED SANITARY SEWER CLEANOUT
	PROPOSED HYDRANT
	PROPOSED GATE VALVE WITH VALVE BOX
	PROPOSED GATE VALVE WITH VAULT
	PROPOSED ELECTRIC TRANSFORMER

UTILITY NOTES

BEFORE PROCEEDING WITH ANY UTILITY CONSTRUCTION, THE CONTRACTOR SHALL EXCAVATE EACH EXISTING LATERAL OR POINT OF CONNECTION AND VERIFY THE SIZE, LOCATION AND ELEVATION OF ALL UTILITIES.

ALL EXISTING UNUSED SANITARY AND WATER SERVICE LATERALS SERVING THE SITE SHALL BE ABANDONED.

PRIVATE SANITARY SEWER PROPOSED SHALL BE INSTALLED TO APPLICABLE CITY OF MADISON CONSTRUCTION STANDARDS.

**STORM SEWER NOTES:**  
1. CONTRACTOR TO MAINTAIN MINIMUM 18" CLEARANCE WHEN WATER MAIN CROSSES ABOVE OR BELOW STORM SEWER.  
2. CONTRACTOR TO MAINTAIN MINIMUM 18" CLEARANCE WHEN WATER SERVICE CROSSES ABOVE OR BELOW STORM SEWER.  
3. BEFORE PROCEEDING WITH ANY UTILITY CONSTRUCTION, THE CONTRACTOR SHALL EXCAVATE EACH EXISTING LATERAL OR POINT OF CONNECTION AND VERIFY THE LOCATION AND ELEVATION OF ALL UTILITIES. IF ANY EXISTING UTILITIES ARE NOT AS SHOWN ON THE DRAWINGS, THE CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY FOR POSSIBLE REDESIGN.  
4. CONTRACTOR IS RESPONSIBLE FOR VERIFYING REQUIRED CASTING IS COMPATIBLE WITH SPECIFIED STRUCTURE. IF NOT COMPATIBLE, CONTACT ENGINEER IMMEDIATELY.  
5. RIM ELEVATIONS FOR CURB INLETS IS TO THE TOP OF THE CAST IRON INLET COVER.  
6. ALL STORM SEWER AREA DRAINS ARE SHOWN FOR REFERENCE ONLY. CONTRACTOR SHALL DESIGN-BUILD STORM BUILDING LATERALS AND ASSOCIATED AREA DRAINS. CONTRACTOR SHALL MATCH DESIGN-BUILD STORM SEWER PIPE TYPE, SIZE AND SLOPE AS SHOWN ON THIS PLAN.

SANITARY MANHOLE NOTES:

- MANHOLE (MH)**  
SANITARY MANHOLES SHALL BE PRE-CAST 48-INCH, WITH ECCENTRIC CONES AND PRECAST BOTTOMS.
- MANHOLE CASTING W/ INTERNAL CHIMNEY SEAL**  
MANHOLE FRAMES SHALL BE NEEHAH R-1710 WITH TYPE "B" SELF-SEALING AND NON-ROCKING LID. INCLUDE CRETEX INTERNAL CHIMNEY SEAL.
- SAMPLING MANHOLE (SAMPLING MH) & CASTING**  
REFER TO FILE NO. 23 (STANDARD SPECIFICATIONS FOR SEWER AND WATER CONSTRUCTION IN WISCONSIN).
- SANITARY AND WATER NOTES:**
- CONTRACTOR TO MAINTAIN MINIMUM 18" CLEARANCE WHEN WATER LATERAL CROSSES UNDER SEWER. PROVIDE INSULATION BETWEEN WATER MAIN & LATERALS AND SEWER CROSSINGS WHERE THE VERTICAL SEPARATION IS LESS THAN 2'0".
  - FOR INFORMATION REGARDING SANITARY AND STORM DESIGN, REFER TO UTILITY PLANS STARTING WITH C-500.
  - CONTRACTOR TO PROVIDE 2" INSULATION BETWEEN WATER MAIN AND STORM SEWER AT ALL CROSSINGS.
  - WATERMAIN AND ASSOCIATED STRUCTURES ARE TO CONFORM TO THE CITY OF NEW LONDON'S SPECIFICATIONS AND THE STANDARD SPECIFICATIONS FOR SEWER AND WATER CONSTRUCTION IN WISCONSIN.
  - PROVIDE GRANULAR BACKFILL FOR WATER MAIN IN ALL PAVED AREAS. PROVIDE SPOIL BACKFILL FOR WATER MAIN OUTSIDE OF PAVED AREAS.
  - ALL JOINTS SHALL BE RESTRAINED WITH MEGALUGS.

STORM SEWER DESIGN BUILD NOTES:

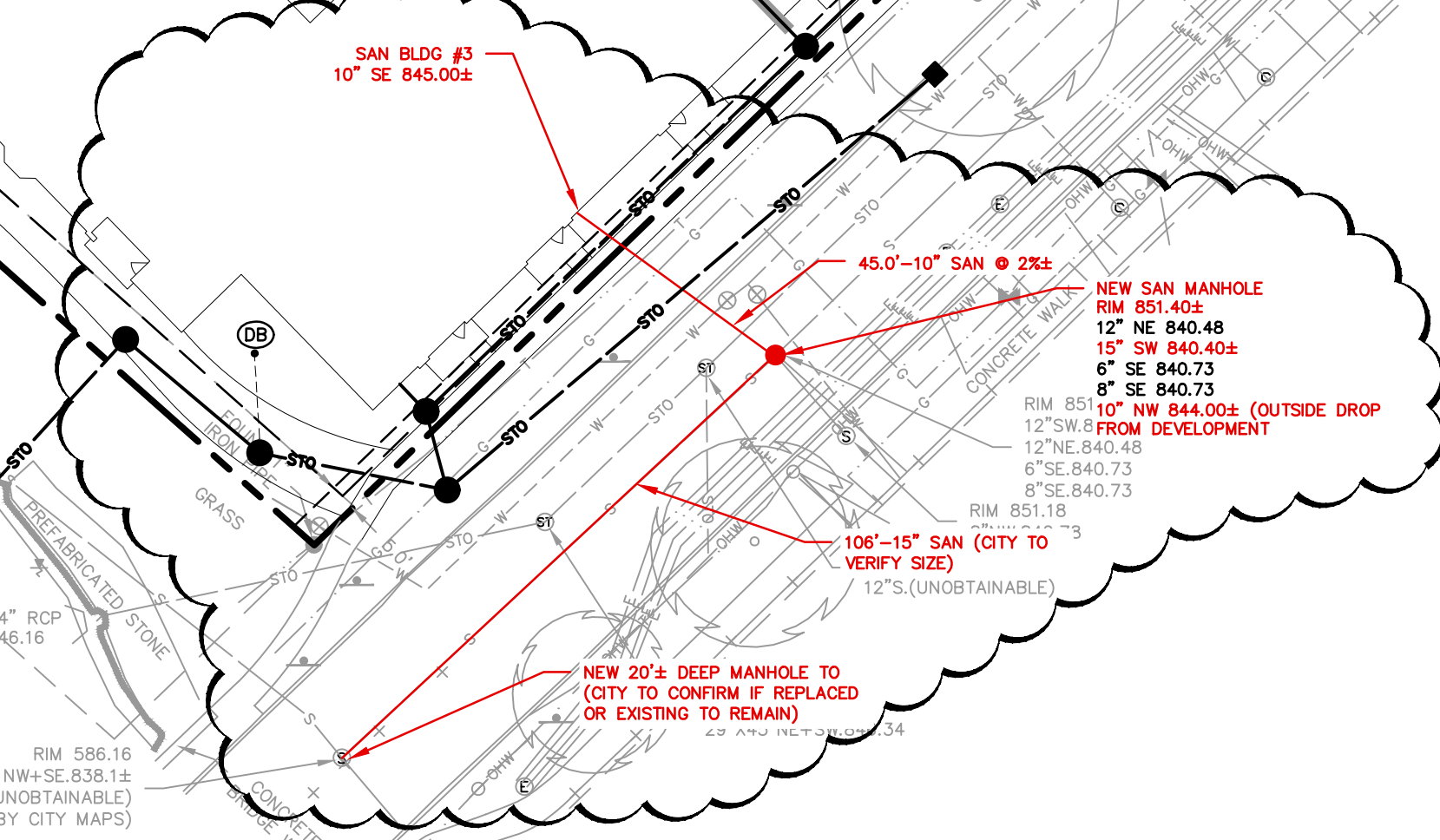
PROPOSED STORM SEWER SHOWN ON THIS PLAN LABELED WITH THE PLAN SYMBOL: (DB) SHALL BE DESIGN BUILD BY CONTRACTOR AND FOLLOW THE NOTES BELOW:

DESIGN BUILD STORM SEWER SHALL BE DIAMETER 10" HDPE, UNLESS OTHERWISE NOTED, SHALL HAVE A MINIMUM SLOPE OF 0.50% UNLESS OTHERWISE NOTED AND SHALL HAVE A ABSOLUTE MINIMUM COVER OF 2'. AREA DRAIN RIM ELEVATIONS SHALL BE 1.25' BELOW THE FFE OF ADJACENT BUILDING UNLESS OTHERWISE SHOWN. THE PURPOSE OF THE DESIGN BUILD STORM SEWER LINES IS TO CONVEY STORM WATER RUNOFF FROM THE BUILDING'S DOWNSPOUT CONNECTIONS AND THE AREA DRAINS, WHICH DRAIN THE LANDSCAPE AREAS AROUND THE BUILDINGS. THE CONTRACTOR SHALL MOVE OR ADD AREA DRAINS IN THE FIELD AS NEEDED TO PROVIDE PROPER DRAINAGE AROUND ALL BUILDINGS.

**DIGGERS HOTLINE**  
Toll Free (800) 242-8811  
Milwaukee Area (414) 259-1181  
Hearing Impaired TDD (800) 542-2289  
www.DiggersHotline.com

R.A. SMITH NATIONAL ASSUMES NO RESPONSIBILITY FOR DAMAGES, LIABILITY OR COSTS RESULTING FROM CHANGES OR ALTERATIONS MADE TO THIS PLAN WITHOUT THE EXPRESSED WRITTEN CONSENT OF R.A. SMITH NATIONAL.

THE LOCATIONS OF EXISTING UTILITY INSTALLATIONS AS SHOWN ON THIS PLAN ARE APPROXIMATE. THERE MAY BE OTHER UNDERGROUND UTILITY INSTALLATIONS WITHIN THE PROJECT AREA THAT ARE NOT SHOWN.



**MUNICIPAL REVIEW DOCUMENT**

**PROPOSED PUBLIC SANITARY IMPROVEMENTS (CONSTRUCTION BY DEVELOPMENT CONTRACTOR)**

**NOT FOR CONSTRUCTION**

DESCRIPTION	
DATE	
<b>R.A. Smith National</b> <i>Beyond Surveying and Engineering</i> www.rasmithnational.com	
1801 WASHINGTON CITY OF MADISON, WI	<b>SANITARY &amp; WATER UTILITY PLAN</b>
© COPYRIGHT 2016 R.A. Smith National, Inc. DATE: 12/05/2016 SCALE: 1" = 30' JOB NO. 3150290 PROJECT MANAGER: MICHAEL A. BACH, P.E. DESIGNED BY: MAB CHECKED BY: CDH <b>SHEET NUMBER</b> C400	