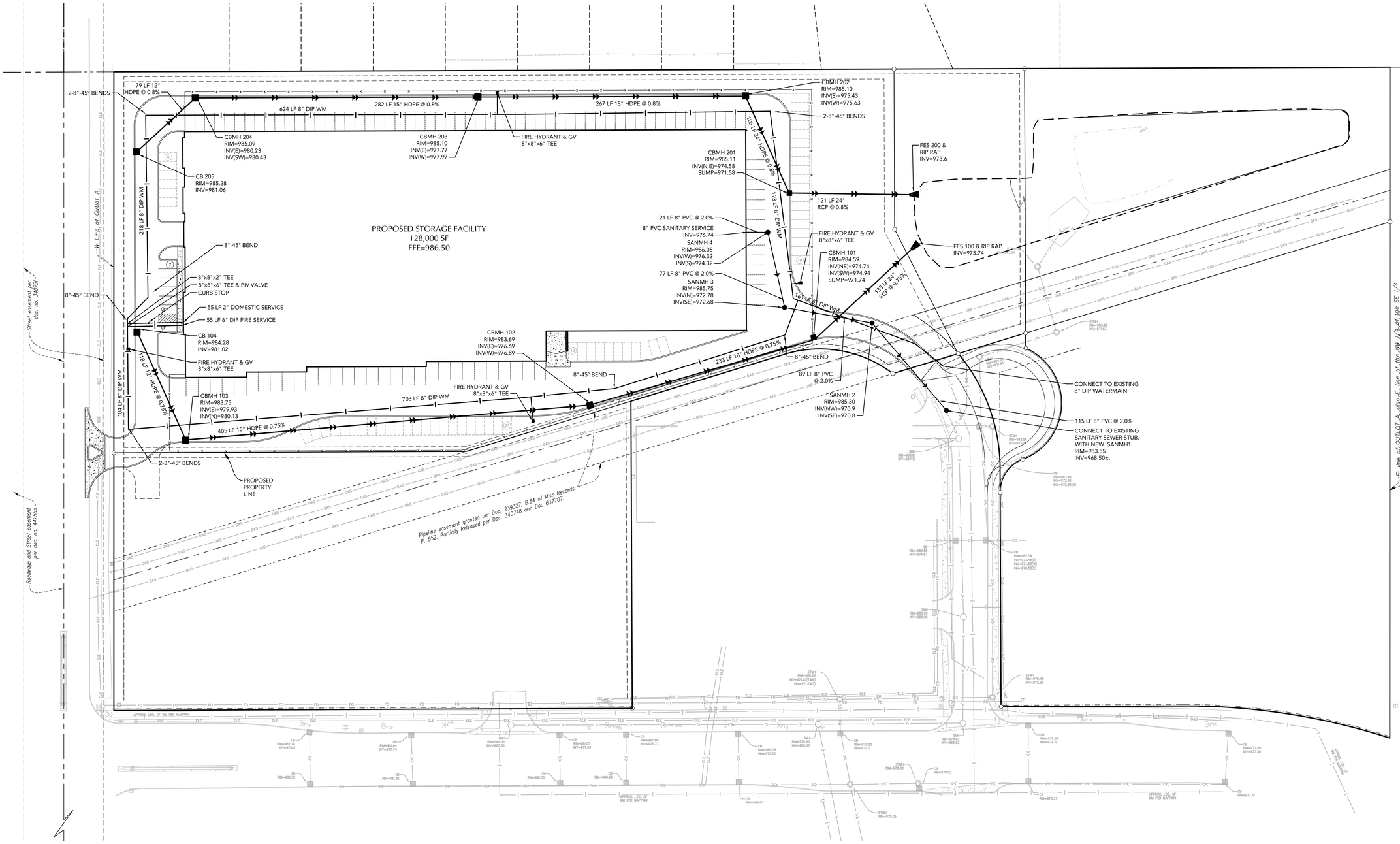


EXISTING	CIVIL LEGEND	PROPOSED
	SANITARY MANHOLE	
	STORM MANHOLE	
	CATCH BASIN	
	CULVERT	
	HYDRANT	
	GATEVALVE	
GV	POST INDICATOR VALVE	GV
	LIGHT POLE	
	POWER POLE	
	SIGN	
BM #3	BENCHMARK	
SB1	SOIL BORINGS	SB1
	WATER MANHOLE	
	TELEPHONE MANHOLE	
	UTILITY MANHOLE	
	ELECTRIC MANHOLE	
W	WATER SERVICE	
S	SANITARY SERVICE	
	HANDICAP PARKING	
10%	DIRECTION OF FLOW	10%
959.4	SPOT ELEVATION	959.4
960	CONTOURS	960
S	SANITARY SEWER	
S	STORM SEWER	
W	WATERMAIN	W
FM	FORCEMAIN	FM
DT	DRAINTILE	DT
	SILT FENCE	
	CURB & GUTTER	
	RETAINING WALL	
	TREELINE	
	EASEMENT LINE	
	SETBACK LINE	
	FENCE LINE	
TEL	UNDERGROUND TELE	
GAS	UNDERGROUND GAS	
OH	OVERHEAD UTILITY	

STORM SEWER SCHEDULE

STRUCTURE NO.	CASTING	MANHOLE SIZE
CBMH 101	R-3067	48" PRECAST
CBMH 102	R-3067	48" PRECAST
CBMH 103	R-3067	48" PRECAST
CB 104	R-3067	2'x3' PRECAST
CBMH 201	R-3067	48" PRECAST
CBMH 202	R-3067	48" PRECAST
CBMH 203	R-3067	48" PRECAST
CBMH 204	R-3067	48" PRECAST
CB 205	R-3067	2'x3' PRECAST

UTILITY NOTES

1. ALL SANITARY SEWER, STORM SEWER AND WATERMAIN UTILITIES SHALL BE FURNISHED AND INSTALLED PER THE REQUIREMENTS OF THE SPECIFICATIONS,THE MINNESOTA PLUMBING CODE, THE LOCAL GOVERNING UNIT , AND THE STANDARD UTILITIES SPECIFICATION OF THE CITY ENGINEERS ASSOCIATION OF MINNESOTA (CEAM), 2013 EDITION.
2. ALL UTILITY PIPE BEDDING SHALL BE COMPACTED SAND OR FINE GRANULAR MATERIAL. ALL COMPACTION SHALL BE PERFORMED PER THE REQUIREMENTS OF THE CEAM SPECIFICATION AND THE GEOTECHNICAL REPORT.
3. ALL CONNECTIONS TO EXISTING UTILITIES SHALL BE PERFORMED PER THE REQUIREMENTS OF THE STATE AND LOCAL JURISDICTIONS. THE CITY DEPARTMENT OF ENGINEERING AND BUILDING INSPECTIONS DEPARTMENT AND THE CONSTRUCTION ENGINEER MUST BE NOTIFIED AT LEAST 48 HOURS PRIOR TO ANY WORK WITHIN THE PUBLIC RIGHT OF WAY, OR WORK IMPACTING PUBLIC UTILITIES.
4. ALL STORM SEWER , SANITARY SEWER AND WATER SERVICES SHALL TERMINATE 5' FROM THE BUILDING FACE UNLESS OTHERWISE NOTED.
5. A MINIMUM OF 18 INCHES OF VERTICAL SEPARATION AND 10 FEET OF HORIZONTAL SEPARATION IS REQUIRED FOR ALL UTILITES UNLESS OTHERWISE NOTED.
6. ALL NEW WATERMAIN AND SERVICES MUST HAVE A MINIMUM OF 7.5 FEET OF COVER. EXTRA DEPTH MAY BE REQUIRED TO MAINTAIN A MINIMUM 18" VERTICAL SEPARATION TO SANITARY OR STORM SEWER LINES. THE CONTRACTOR SHALL FIELD ADJUST WATERMAIN TO AVOID CONFLICTS WITH SANITARY SEWER, STORM SEWER, AND SERVICES AS REQUIRED. INSULATION OF WATER AND SANITARY SEWER LINES SHALL BE PROVIDED WHERE 7.5 FEET MINIMUM DEPTH CAN NOT BE ATTAINED.
7. ALL FIRE HYDRANTS SHALL BE LOCATED 5 FEET BEHIND BACK OF CURB OR EDGE OF PAVEMENT UNLESS OTHERWISE NOTED.
8. PROPOSED PIPE MATERIALS:

WATERMAIN	COPPER TYPE K	2" DIAMETER
WATERMAIN	DIP	6" TO 8" DIAMETER
SANITARY SEWER	PVC SDR 35	8" DIAMETER
STORM SEWER	DUAL WALL HDPE	12" TO 24" DIAMETER
STORM SEWER	RCP, CLASS V	24" & 36"

9. ALL SANITARY SEWER WYES, TEES AND SERVICES SHALL BE 8" PVC SDR 35.
10. ALL PORTIONS OF THE STORM SEWER SYSTEM, INCLUDING CATCH BASINS, LOCATED WITHIN 10 FEET OF THE BUILDING OR WATER SERVICE LINE MUST BE TESTED ACCORDANCE WITH MINNESOTA RULES, PART 4715.2820
11. ALL JOINTS AND CONNECTIONS IN THE STORM SEWER SYSTEM SHALL BE GASTIGHT OR WATERTIGHT (SEE MINNESOTA RULES, PART 4715.0700). APPROVED RESILIENT RUBBER JOINTS MUST BE USED TO MAKE WATERTIGHT CONNECTIONS TO MANHOLES, CATCHBASINS, AND OTHER STRUCTURES.
12. HIGH-DENSITY POLYETHYLENE (HDPE) STORM DRAINS MUST COMPLY WITH MINNESOTA RULES, PART 4715.0540:
    a. PIPES 4-INCH TO 10-INCH IN SIZE MUST COMPLY WITH AASHTO M252.
    b. PIPES 12-INCH TO 60-INCH IN SIZE MUST COMPLY WITH ASTM F2306.
    c. ALL FITTINGS MUST COMPLY WITH ASTM D3212.
    d. WATER-TIGHT JOINTS MUST BE USED AT ALL CONNECTIONS INCLUDING STRUCTURES.

0 40 80
SCALE IN FEET

CALL BEFORE YOU DIG!
Gopher State One Call
TWIN CITY AREA: 651-454-0002
TOLL FREE: 1-800-252-1166

WARNING:

THE CONTRACTOR SHALL BE RESPONSIBLE FOR CALLING FOR LOCATIONS OF ALL EXISTING UTILITIES. THEY SHALL COOPERATE WITH ALL UTILITY COMPANIES IN MAINTAINING THEIR SERVICE AND / OR RELOCATION OF LINES.

THE CONTRACTOR SHALL CONTACT GOPHER STATE ONE CALL AT 651-454-0002 AT LEAST 48 HOURS IN ADVANCE FOR THE LOCATIONS OF ALL UNDERGROUND WIRES, CABLES, CONDUITS, PIPES, MANHOLES, VALVES OR OTHER BURIED STRUCTURES BEFORE DIGGING. THE CONTRACTOR SHALL REPAIR OR REPLACE THE ABOVE WHEN DAMAGED DURING CONSTRUCTION AT NO COST TO THE OWNER.

WASATCH STORAGE FACILITY

APPLE VALLEY, MN

WASATCH STORAGE PARTNERS

LOUCKS
PLANNING
CIVIL ENGINEERING
LAND SURVEYING
LANDSCAPE ARCHITECTURE
ENVIRONMENTAL
7200 Hemlock Lane, Suite 300
Maple Grove, MN 55369
763.424.5505
www.loucksinc.com

CADD QUALIFICATION

CADD files prepared by the Consultant for this project are instruments of the Consultant professional services for use solely with respect to this project. These CADD files shall not be used on other projects, for additions to this project, or for completion of this project by others without written approval by the Consultant. Any such use or reuse, or any modification of the permitted or deletion of the CADD drawing files for information and reference only. All intentional or unintentional revisions, additions, or deletions to these CADD files shall be made at the full risk of that party making such revisions, additions or deletions and that party shall hold harmless and indemnify the Consultant from any & all responsibilities, claims, and liabilities.

SUBMITTAL/REVISIONS

08/23/17	CITY SUBMITTAL
10/5/17	REVISED CITY SUBMITTAL
10/10/17	REVISED CITY SUBMITTAL

PROFESSIONAL SIGNATURE

I hereby certify that this plan, specification or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the State of Minnesota.

Jonathan J. Donovan - PE
License No. 44613
Date --

QUALITY CONTROL

Loucks Project No.	07112-01
Project Lead	JJD
Drawn By	DDL
Checked By	JJD
Review Date	08/23/17

SHEET INDEX

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UTILITY PLAN
C4-1

Plotted: 10/11/2017 9:51 AM W:\2007\07112\CADD DATA\CIVIL\..dwg Sheet Files\C4-1