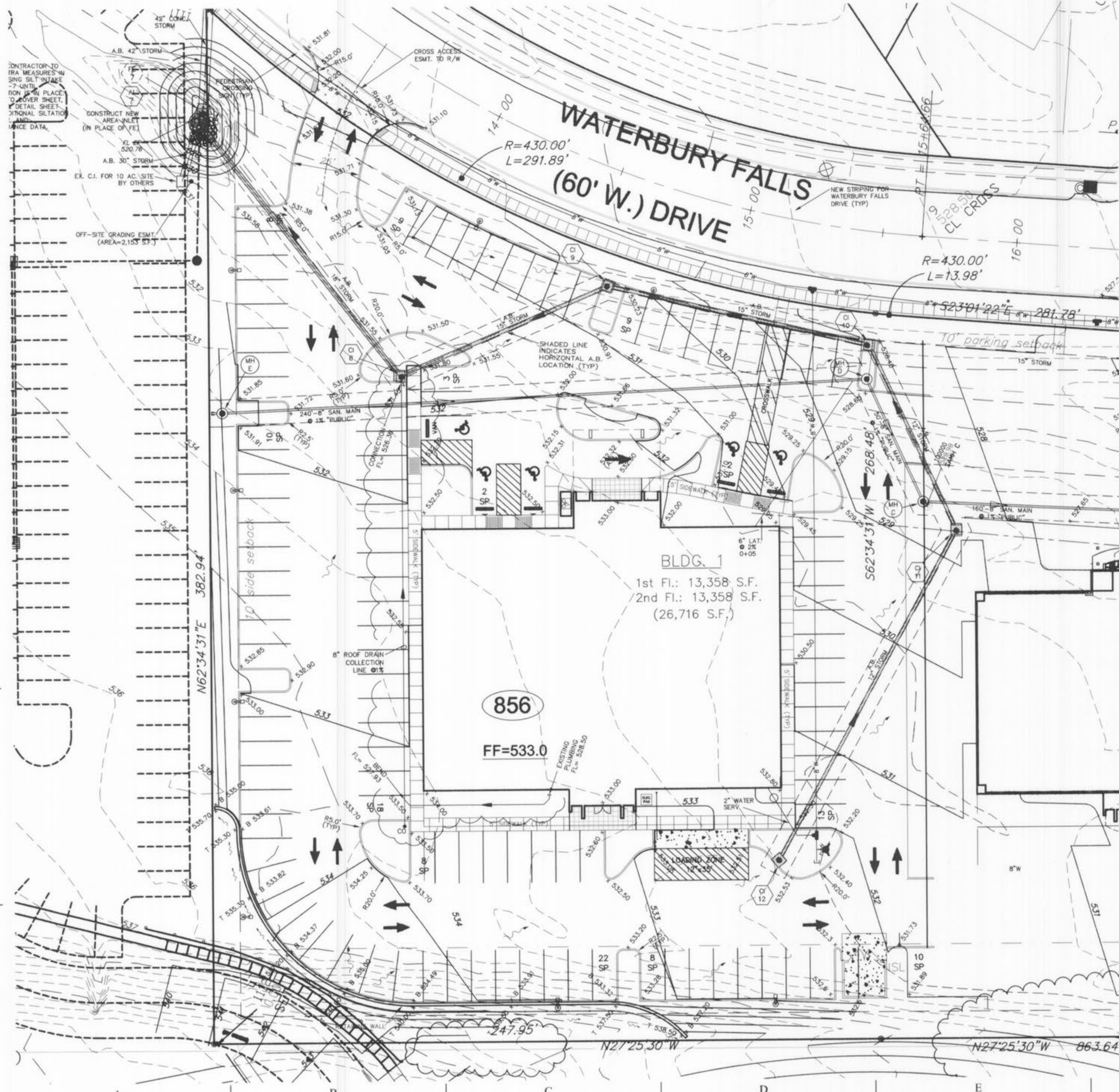
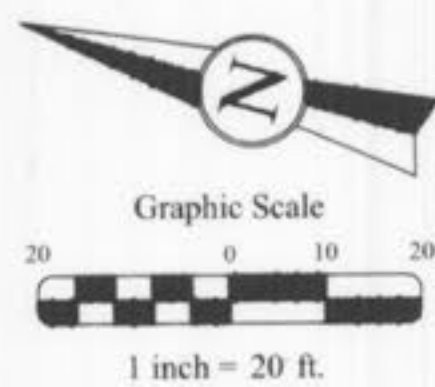


'AS BUILT' STORM SEWERS
LOT 4C - BLDG. 1

WATERBURY BUSINESS PARK

REVISED SITE PLAN FOR SIDEWALK AND LOADING ZONE



GENERAL NOTES

- REFER TO SHEET 10 FOR FIRM MAP INFORMATION.
- RIP RAP SHOWN AT FLARED ENDS WILL BE EVALUATED IN THE FIELD AFTER INSTALLATION FOR EFFECTIVENESS AND FIELD MODIFIED IF NECESSARY TO REDUCE EROSION ON AND OFF-SITE.
- DEVELOPER MUST SUPPLY CITY CONSTRUCTION INSPECTORS WITH SOILS REPORTS PRIOR TO OR DURING SITE SOIL TESTING.
- THE CONTRACTOR SHALL ASSUME COMPLETE RESPONSIBILITY FOR CONTROLLING ALL SILTATION AND EROSION OF THE PROJECT AREA. THE CONTRACTOR SHALL USE WHATEVER MEANS NECESSARY TO CONTROL EROSION AND SILTATION INCLUDING, BUT NOT LIMITED TO, STAKED STRAW BALES AND/OR SILTATION FABRIC FENCES (POSSIBLE METHODS OF CONTROL ARE DETAILED IN THE PLAN). CONTROL SHALL COMMENCE WITH GRADING AND BE MAINTAINED THROUGHOUT THE PROJECT UNTIL ACCEPTANCE OF THE WORK BY THE OWNER AND/OR THE CITY OF O'FALLON AND/OR MODOT. THE CONTRACTORS RESPONSIBILITIES INCLUDE ALL DESIGN AND IMPLEMENTATION AS REQUIRED TO PREVENT EROSION AND THE DEPOSITING OF SILT. THE OWNER AND/OR COUNTY OF O'FALLON AND/OR MODOT MAY AT THEIR OPTION DIRECT THE CONTRACTOR IN HIS METHODS AS DEEMED FIT TO PROTECT PROPERTY AND IMPROVEMENTS. ANY DEPOSITING OF SILT OR MUD ON NEW OR EXISTING PAVEMENT SHALL BE REMOVED IMMEDIATELY. ANY DEPOSITING OF SILT OR MUD IN NEW OR EXISTING STORM SEWERS OR SWALES SHALL BE REMOVED AFTER EACH RAIN AND AFFECTED AREAS CLEANED TO THE SATISFACTION OF THE OWNER AND/OR THE CITY OF O'FALLON AND/OR MODOT.
- SIDEWALKS, CURB RAMPS, RAMP AND ACCESSIBLE PARKING SPACES SHALL BE CONSTRUCTED IN ACCORDANCE WITH CURRENT APPROVED "AMERICAN WITH DISABILITIES ACT ACCESSIBILITY GUIDELINES" (ADAAG) ALONG WITH THE REQUIRED GRADES, CONSTRUCTION MATERIALS, SPECIFICATIONS AND SIGNAGE. IF ANY CONFLICT OCCURS BETWEEN THE ABOVE INFORMATION AND THE PLANS, THE ADAAG GUIDELINES SHALL TAKE PRECEDENCE AND THE CONTRACTOR PRIOR TO ANY CONSTRUCTION SHALL NOTIFY THE PROJECT ENGINEER.
- AT LEAST 1'-8" WIDE HANDICAP ACCESS AISLE IS PROVIDED AND CURB RAMPS DO NOT PROJECT INTO HANDICAP ACCESS AISLE.
- SANITARY SEWER BUILT WITH BLDG. 3 TO BE OPERATIONAL AND EXTENDED TO PROPERTY LINE PRIOR TO BLDG. 1 CONNECTING TO THE SYSTEM.

GRADING NOTES

- NOTIFY CITY OF O'FALLON BUILDING DEPARTMENT AND BUILDING DEPARTMENT 48 HOURS PRIOR TO THE STARTING OF GRADING AND/OR CONSTRUCTION.
- ALL FILLS PLACED UNDER PROPOSED STORM AND SANITARY SEWER, PROPOSED ROADS, AND/OR PAVED AREAS SHALL BE COMPACTED TO 90% OF MAXIMUM DENSITY AS DETERMINED BY THE MODIFIED AASHTO T-180 COMPACTION TEST OR 95% OF MAXIMUM DENSITY AS DETERMINED BY THE STANDARD PROCTOR TEST AASHTO T-99. ALL FILL PLACED IN PROPOSED ROADS SHALL BE COMPACTED FROM THE BOTTOM OF THE FILL UP. ALL TESTS SHALL BE VERIFIED BY A SOILS ENGINEER CONCURRENT WITH GRADING AND BACKFILLING OPERATIONS. ENSURE THE MOISTURE CONTENT OF THE SOIL IN FILL AREAS IS TO CORRESPOND TO THE COMPACTIVE EFFORT AS DEFINED BY THE STANDARD OR MODIFIED PROCTOR TEST. OPTIMUM MOISTURE CONTENT SHALL BE DETERMINED USING THE SAME TEST THAT WAS USED FOR COMPACTION. SOIL COMPACTION CURVES SHALL BE SUBMITTED TO THE CITY OF O'FALLON PRIOR TO THE PLACEMENT OF FILL. PROOF ROLLING MAY BE REQUIRED TO VERIFY SOIL STABILITY AT THE DISCRETION OF THE CITY OF O'FALLON.
- EROSION AND SILTATION CONTROL SHALL BE INSTALLED PRIOR TO ANY GRADING AND BE MAINTAINED THROUGHOUT THE PROJECT UNTIL ACCEPTANCE OF THE WORK BY THE OWNER AND/OR CONTROLLING REGULATORY AGENCY AND ADEQUATE VEGETATIVE GROWTH INSURES NO FURTHER EROSION OF THE SOIL.
- SEDIMENT AND EROSION CONTROL SHALL NOT BE LIMITED TO THE MEASURES SHOWN ON THE PLANS. THE CONTRACTOR, WITH THE APPROVAL OF THE CITY INSPECTOR, SHALL UTILIZE BEST MANAGEMENT PRACTICES TO PREVENT SEDIMENT FROM ENTERING ADJACENT PROPERTIES, ROADWAYS, STORM SEWERS, AND DRAINAGEWAYS.
- REFER TO DETAIL SHEETS FOR ADDITIONAL NOTES AND INFORMATION ON GRADING AND SILTATION CONTROL.
- THE STREETS SURROUNDING THIS DEVELOPMENT AND ANY STREET USED FOR CONSTRUCTION ACCESS THERE TO SHALL BE CLEANED THROUGHOUT THE DAY.
- ALL TRASH AND DEBRIS ON-SITE, EITHER EXISTING OR FROM CONSTRUCTION, MUST BE REMOVED AND PROPERLY DISPOSED OF OFF-SITE.
- DEBRIS AND FOUNDATION MATERIAL FROM ANY ON-SITE BUILDING OR STRUCTURE THAT IS SCHEDULED TO BE RAZED FOR THIS DEVELOPMENT MUST BE PROPERLY DISPOSED OF OFF-SITE.
- PROPOSED STORM SEWERS SHALL COMPLY WITH ALL CITY, COUNTY & STATE STORMWATER MANAGEMENT ORDINANCES.
- ALL GRADES TO BE WITHIN 0.20± FEET OF PROPOSED CONTOURS AND ELEVATIONS SHOWN ON THE GRADING PLAN.
- ALL NON-PAVED AREAS OF THIS DEVELOPMENT TO BE SEEDED OR COVERED WITH SOD.
- ALL EXCAVATIONS, GRADING OR FILLING SHALL HAVE A FINISH GRADE NOT TO EXCEED A 3:1 SLOPE [3 HORIZONTAL TO 1 VERTICAL] (33%) UNLESS SPECIFICALLY APPROVED OTHERWISE.
- ALL EROSION CONTROL SYSTEMS TO BE INSPECTED AND NECESSARY CORRECTIONS TO BE MADE WITHIN 24 HOURS OF ANY RAINSTORM RESULTING IN ONE-HALF INCH OF RAIN OR MORE.
- ANY GRADED AREA THAT ARE TO REMAIN BARE FOR MORE THAN TWO WEEKS ARE TO BE SEEDED AND MULCHED.
- CONTRACTOR TO TURN IN GRADING APPLICATION AND PLANS AFTER SITE APPROVAL.
- ALL PAVING TO BE IN ACCORDANCE WITH ST. CHARLES COUNTY STANDARDS AND SPECIFICATIONS EXCEPT AS MODIFIED BY THE CITY OF O'FALLON ORDINANCES.
- GRADING FOR ALL THREE PARCELS WILL BE REQUIRED TO COMPLETE A BALANCED SITE.

SITE NOTES

- CONTRACTOR TO NOTIFY THE CITY OF O'FALLON BLDG. DEPT. 48 HOURS PRIOR TO THE COMMENCEMENT OF GRADING AND/OR PRIOR TO THE COMMENCEMENT OF CONSTRUCTION.
- REFER TO ARCHITECTURAL PLANS FOR DIMENSIONS AND DETAILS ON PROPOSED BUILDING.
- REFER TO ARCHITECTURAL PLANS FOR DETAILS AND SPECIFICATIONS ON SITE LIGHTING, SIGNAGE FOR BUILDING, ETC.
- ALL DIMENSIONS ARE TO FACE OF CURB.
- ENTRANCES TO BE CONSTRUCTED PER O'FALLON SPECIFICATIONS.
- THE STREETS SURROUNDING THIS DEVELOPMENT AND ANY STREET USED FOR CONSTRUCTION ACCESS THERETO SHALL BE CLEANED THROUGHOUT THE DAY.
- ALL TRASH AND DEBRIS ON-SITE, EITHER EXISTING OR FROM CONSTRUCTION, MUST BE REMOVED AND PROPERLY DISPOSED OF OFF-SITE.
- DEBRIS AND FOUNDATION MATERIAL FROM ANY ON-SITE BUILDING OR STRUCTURE THAT IS SCHEDULED TO BE RAZED FOR THIS DEVELOPMENT MUST BE PROPERLY DISPOSED OF OFF-SITE.
- PROPOSED STORM SEWER SHALL COMPLY WITH ALL CITY, COUNTY & STATE STORMWATER MANAGEMENT ORDINANCES.
- ALL NON-PAVED AREAS OF THIS DEVELOPMENT TO BE SEEDED OR COVERED WITH SOD.
- REFER TO GRADING PLAN FOR ADDITIONAL NOTES AND INFORMATION.
- CONTRACTORS TO VERIFY QUANTITIES BETWEEN ARCHITECTURAL AND CIVIL PLANS FOR BIDDING.
- EXTERIOR LIGHTING TO COMPLY WITH SECTION 400.277 OF THE CITY OF O'FALLON CODES AND REGULATIONS.
- ALL SIGNAGE TO REQUIRE SEPARATE REVIEW, APPROVAL AND PERMIT THROUGH PLANNING DIVISION. MONUMENT SIGN TO BE PROPOSED WHEN TENANT HAS BEEN ACQUIRED.
- BRICK SHALL NOT BE USED IN THE CONSTRUCTION OF SANITARY SEWER STRUCTURES.
- WATER METER LOCATION TO BE COORDINATED WITH MISSOURI AMERICAN WATER COMPANY PRIOR TO INSTALLATION.
- ALL SIGN LOCATIONS AND SIZES MUST BE APPROVED SEPARATELY THROUGH THE PLANNING DIVISION.
- ALL SIGN POST AND BACKS AND BRACKET ARMS SHALL BE PAINTED BLACK USING CARBOLINE RUSTBOND PENETRATING SEALER SO AND CARBOLINE 133 HB PAINT (OR EQUIVALENT AS APPROVED BY CITY AND MODOT). SIGNS DESIGNATING STREET NAME SHALL BE ON THE OPPOSITE SIDE OF THE STREET FROM TRAFFIC CONTROL SIGNS.
- ASPHALT PAVEMENT TO BE PLACED TO ALLOW PARKING AND STRIPING ON LOT 4C TO BE COMPLETED.



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(1-800-344-7483)

All the improvements & facilities & utilities, above ground and underground shown herein were plotted from available information and do not necessarily reflect the actual existence, nonexistence, elevation, size, type, number or location of these or other improvements, facilities, or utilities. The General Contractor and/or owner shall be responsible for verifying the actual location & elevation of all improvements, facilities, & utilities, shown or not shown, and said improvements, facilities, & utilities shall be located in the field prior to any grading, excavation or construction of any improvements. These provisions shall in no way absolve any part from complying with the Underground Facility Safety & Damage Prevention Act, Chapter 319, RSMo.

STORM SEWER AND SANITARY SEWER MEASUREMENTS
 The existing sewer lengths, sizes, flowlines, depths of structures and sewer and locations with respect to the proposed plans have been measured. The results of those measurements are shown on this set of FINAL MEASUREMENT PLANS.



by: Richard G. Wachmann
 PE 2003015059

O'FALLON P & Z FILE NO.: (9950.08)

10/04/07 'AS BUILT' STORM SEWERS

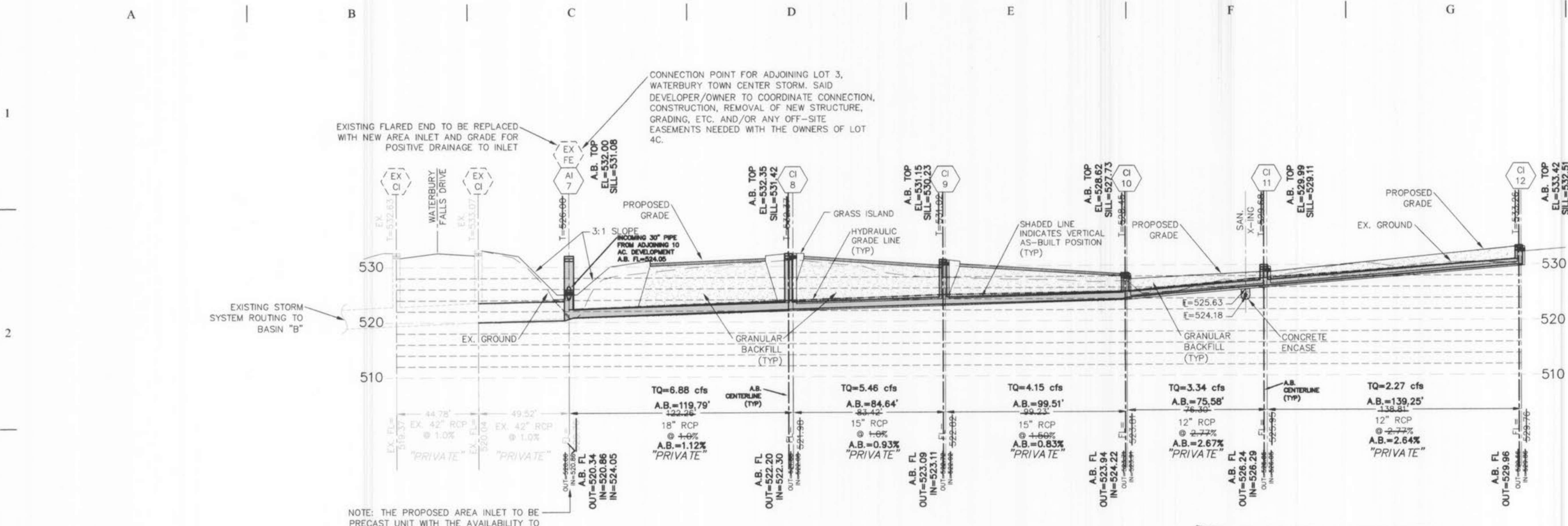
The Professional Engineer and/or Professional Land Surveyor shall be responsible for the accuracy of the information shown on this set of plans and other documents associated with this project, whether this information appears on this set of plans or not.

No.	Date	Revisions/Issues

Waterbury Business Park, Lot 4C - Bldg 1
As-Built Site/Grading Plan
Zavradinos & Polk inc.
 engineers & surveyors
 17724 Edison Ave., Suite 207 • Chesterfield, MO 63005
 636-946-5555 • 636-449-0148 Fax • www.zavradinos.com

C B & E Construction Group
 17724 Edison Avenue
 Chesterfield, MO 63005
 314-781-2700
 314-781-2748

City/County Job No:
 O'Fallon File # 9950.08
 MSD P-
 BASEMAP
 Proj Manager
 JRE
 jre@zavradinos.com
 CAD Filename
 Original Issue Date
 10-04-07
 Project No.
 04166
 Sheet
 2



STORM SEWER PROFILES (NORTH SYSTEM)
 (ALL PRIVATE) SCALE: HORIZ. - 1"=30'
 VERT. - 1"=10'

NOTE: REFER TO HYDRAULIC CALCULATION FOR WATERBURY BUSINESS PARK, LOTS 4A, 4B & 4C "NORTH SYSTEM - 7 THRU 12" FOR FREEBOARD, HYDRAULIC GRADELINE, ETC.
 NOTE: REFER TO HYDRAULIC CALCULATIONS THIS SHEET.

HYDRAULIC DATA SHEET																												
FORMULAR										NOTES																		
FRICTION LOSS										HYDRAULIC LOSS																		
HEAD LOSS										HEAD LOSS																		
HEAD LOSS										HEAD LOSS																		
8	8	7	520.20	520.86	1.34	120	0.0112	18	1.77	11.11	1.42	6.88	3.89	0.24	1.62	0.51	0.15	77	0.15	523.70	522.87	522.36	0.0043	523.85	522.35	8.50	0.013	
9	9	8	523.09	522.30	0.79	85	0.0093	15	1.23	6.24	1.31	5.46	4.45	0.31	1.86	0.60	0.23	0.12	37	0.35	524.34	524.45	523.85	0.0071	524.80	521.15	6.35	0.013
10	10	9	523.94	523.11	0.83	100	0.0093	15	1.23	5.90	0.81	4.15	3.38	0.18	0.74	0.41	0.09	52	0.09	525.19	525.21	524.80	0.0041	525.30	528.62	3.32	0.013	
11	11	10	524.34	524.22	2.02	76	0.0267	12	0.79	5.82	1.07	3.34	4.25	0.28	0.94	0.66	0.28	0.14	54	0.40	527.24	525.97	525.30	0.0088	527.84	529.99	2.35	0.013
12	12	11	529.96	526.29	3.67	139	0.0264	12	0.79	5.78	2.27	2.27	2.89	0.13	0.29	0.57				530.96	528.20	527.84	0.0041	530.96	533.42	2.46	0.013	

AS-BUILT HYDRAULIC CALCULATIONS for WATERBURY BUSINESS PARK LOTS 4A, 4B & 4C North System - 7 thru 12
 Original calculations issued August, 2005
 Revised for As-BUILTS, October, 2007

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 (1-800-344-7483)

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 CALL MISSOURI ONE-CALL, 1-800-DIG-RITE.

- STORM SEWER NOTES:**
- PROPOSED STORM LAYOUT IS CONNECTING TO EXISTING STORM SYSTEM DESIGNED FOR THE OVERALL WATERBURY COMMERCIAL AND RESIDENTIAL DEVELOPMENT.
 - EXISTING STORM SYSTEM HAS BEEN VERIFIED BY BAX ENGINEERING FOR ADEQUATE CAPACITY.
 - REFER TO DETAIL SHEETS FOR SILTATION CONTROL STANDARDS AND PRACTICES TO BE EMPLOYED FOR THIS SITE.
 - CONTRACTOR TO TURN IN WEEKLY REPORT OF SILTATION AND EROSION MEASURES.
 - REFER TO "OVERALL GRADING PLAN" AND "DRAINAGE AREA MAP" FOR ADDITIONAL INFORMATION.
 - REFER TO SITE/GRADING PLAN FOR ADDITIONAL NOTES.
 - SANITARY SEWER TO BE CONCRETE ENCASED TO PROTECT FROM DAMAGE.
 - ENTIRE SANITARY RUN TO BE CONSTRUCTED AS PART OF BUILDING 3 CONSTRUCTION. NO CONNECTION TO SANITARY WILL BE ALLOWED UNTIL SANITARY SEWER IS ACCEPTED BY DUCKETT CREEK SEWER DISTRICT.
 - AS-BUILT INFORMATION ON STORM AND SANITARY TO BE PROVIDED TO CITY OF O'FALLON BUILDING DEPARTMENT ONCE CONSTRUCTION IF THIS SYSTEM IS COMPLETE.
 - REFER TO HYDRAULIC REPORT FOR WATERBURY BUSINESS PARK, LOTS 4A, B & C, NORTH SYSTEM - 7 THRU 12 FOR ADDITIONAL HYDRAULIC DATA.
 - STORM SEWER CURB INLETS AND AREA INLETS TO HAVE SILT SCREENING BY PROPOSED INLET PROTECTION FABRIC w/SILT SOCK. REFER TO SHEET 10 FOR DETAILS.
 - PROPOSED AREA INLET 7 TO BE UTILIZED AS A TEMPORARY SILTATION BASIN UNTIL PROJECT COMPLETION. PENDING ADJOINING DEVELOPMENT FOR LOT 3 MAY EVENTUALLY ALTER THE STRUCTURE AND OR ITS APPURTENANCES.
 - PROPOSED 4" GRASS LINED SWALE TO DIRECT STORM RUNOFF TO INLETS 9 AND 10 UNTIL PAVEMENT AND PARKING LOT IS COMPLETE. CONTRACTOR TO MAINTAIN SWALE FROM ANY DEBRIS AND SILT.
 - PIPE RUNS FOR STORM EXTENSION NOT BUILT FOR BUILDING 3 TO BE CAPPED AND PROTECTED FOR FUTURE CONNECTION.

STORM SEWER AND SANITARY SEWER MEASUREMENTS
 The existing sewer lengths, sizes, flowlines, depths of structures and sewer and locations with respect to the proposed plans have been measured. The results of those measurements are shown on this set of FINAL MEASUREMENT PLANS.



by: Richard G. Wischmann
 PE 2003015059

O'FALLON P & Z FILE NO.: (9950.08)
10/04/07 'AS BUILT' STORM SEWERS

The Professional Engineer and/or Professional Land Surveyor's responsibility is limited to plans and other documents prepared by him or her, or under his or her direct supervision and control. He or she is not responsible for the accuracy of data furnished to him or her, or for the consequences of the use of such data. This sheet is a part of a set of plans and shall not be used in any other project without the written consent of the Professional Engineer and/or Professional Land Surveyor.

No.	Date	Revision/Issue

Waterbury Business Park, Lot 4C - Bldg 1
 As-Built Storm Profile
Zavradinos & Polk inc.
 engineers & surveyors
 17813 Edison Ave. Suite 201 • Chesterfield, MO 63005
 636-946-5555 • 636-449-0148 Fax • www.zavradinos.com

C B & E Construction Group
 17724 Edison Avenue
 Chesterfield, MO 63005
 314-781-2700
 314-781-2746

City/County Job No: O'Fallon file # 9950.08	Sheet 3
MSD P - BASEMAP	
Proj Manager JRE jre@zavradinos.com	04166
CAD Filename	
Original Issue Date 10-04-07	Project No.
Project No.	